



EVOS
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1552
.P75
S42
1991
v.48

[Shoreline evaluations, 1991].

Prince William Sound KN-26 to KN-104

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-26

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-26 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific sensitivities or time constraints identified.

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 43 m: Medium 82 m: Narrow 35 m: V.Light 526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 50+ cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☒ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☒ Spot Washing: <u>4</u> Wands
☒ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes; 1) manual removal of oiled vegetation and cleanup debris in areas indicated on sketch map, 2) manual tilling and spot hot water washing using snares to recover oil in areas indicated on sketch map, 3) manual removal of tarmat in area indicated on sketch map and 4) bioremediation of areas indicated on sketch map. Work should be conducted after 5/1.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-26 SUBDIVISION: A - 1 of 1 DATE 04/20/90

USCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

WITH consideration of subsurface oiling - which appeared to be continuous from initial pits to pit #10 - this is a heavily oiled beach. - Spot washing recommended to clean rock face / oiled driftwood - Storm berm under oiled driftwood is oiled to 2 ft. or greater. This consisted of MS/CV. - Possible warm flush for treatment or Dredge? wash. Treatment of subsurface oiling is difficult - Consideration could be given to mechanical filling followed by Bio. Removal of oiled debris -

[warm flush will undoubtedly contaminate clean surface cobble in lower tidal zones unless care is taken when working tides]

LAND MANAGER

NAME Peter Zallars SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

It has been suggested that oil has saturated to a depth of 3' in the Area of Pit #1. The OG map shows that test pits immediately south of pit #1 are areas of very light oiling. This is quite an extreme in oil quantities for such a small area. I recommend further assessment, even as cleanup crews address the pit #1 area this summer. I can see the use of a lot of boom material for the northern half of this segment. Extensive warm water flush may create the need for a skimmer. This segment is heavily oiled in the areas described.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-26
 BIO DAVE LOHJE LAND REP PETER ZOLLAR (CA) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA CROSBY TIME 13:15 to 15:20
 TEAM NO. 13 TIDE LEVEL +6 to +2 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 612 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 30 % B 30 % C 30 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 20 m M 50 m N 30 m VL 512 m NO 0 m

SURFACE OIL

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

PAVEMENT H F (S) 10 sq. m by 5 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-13-4Frames 12-18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UC	10/20	10/30	10/40	10/50	10/60	10/70	10/80	SU	U	M					U	
1	50	X					10-50	X							X		X								C- P, C
2	40		X				30-40	X			X							X							C- P, S, G
3	40		X				20-40	X					X					X							C- P, S, G
4	50				X		40-50	X			X									X					C- G, S
5	40					X	.		X								X								C- C, P
6	40				X		30-40	X					X					X							P- G, S, C

COMMENTS

- ① LARGE AMOUNT OF OILED LOGS AND DEBRIS
- ② WIDE EXTENT OF SUBSURFACE OIL AT NORTH END
- ③ COAT ON ROCK AND SHELTERED BOULDERIS

REVIEWED YW DATE 4/22/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06-13-90

SEGMENT ST/ KN-26 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		UC	UC	SP	SP	SP	SP	SP	SP	SP	SP	SU	U	M	U						
7	30	X					15-30	X							X			X									C-P, G
8	50				X		40-50	X			X							X									P-P
9	30				X		5-30	X			X									X							C-G, C
10	25		X				5-25	X			X							X									P-P
11	20				X		5-20	X			X							X									B-C, B
							.																				
							.																				
							.																				
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							.																				
							.																				

COMMENTS

- ① - SURFACE OF COBBLE BEACH IS "CLEAN"
 - HOWEVER SUBSURFACE OIL TO 50cm + DEPTH.
 OVER LARGE PART OF NORTH END OF
 SEGMENT. (PITS 1, 2, 3, 4,) AND TO A
 LESSER EXTENT (PITS 6, 7, 8, 9)

REVIEWED YW DATE 4/22/90

OG RICK MILLIE
 SEGMENT ST/ KN-26
 SUBDIVISION A-1 of 1
 DATE 04/20/90

SURFACE MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LM
- ☒ 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

CV/C (90%)
 - 5x20m
 - PU + WITZ
 - COBBLE BERM

OILED LOGS AND
 DEBRIS (LG)

- PU + WITZ

MANUALLY
 REMOVE OILED
 DEBRIS

CT/B, ST/S, 30M
 - ROCKS + BOULDERS
 - WITZ

AFTER REMOVAL OF OILED DEBRIS,
 MOVE SUPRA ITZ DOWN TO
 MID ITZ, SPOT HOT WATER WASH,
 THEN BIOREMEDIATE

BIOREMEDIATE

CT/C, 3-6M WIDE, 50M
 - ROCK CLIFF / BOULDERS
 - OILED LOGS (SM)

COBBLE/BOULDER BEACH
 - ST/S ON SURFACE COBBLES
 - SUB-SURFACE OIL TO 50 CM +

MANUALLY REMOVE TARMAT

AP/S (1x5m)
 - 2 BANDS COBBLES
 - WITZ

CT/S, ST/S, 100M
 - ANGULAR BOULDERS
 - WITZ

SURFACE

Oil Character Length (m): AP 5 PO 0 CV 0 CT 180 ST 100 MS 0 PT 0 TB 0 FL 0 NO 327

REVISION: 02/20/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN026 Subdivision A Date (mo / day / yr) 4-20-90Time (24 hr) 13:00 Biologist David Lohse

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 30 (3) Cobble 30 (4) Pebble 10 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 30 Moderate 35 Low 35
- (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-13-4Frames 12-18

BARNACLES

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

Moderate to Dense algae, barnacles, mussels on mid-intertidal boulders in southern section of segment would be susceptible to disturbances. (area 2 on Ecology map).

Shoreline Ecological Summary

2 of 2

Segment ST-KN026

Subdivision A

4-20-90

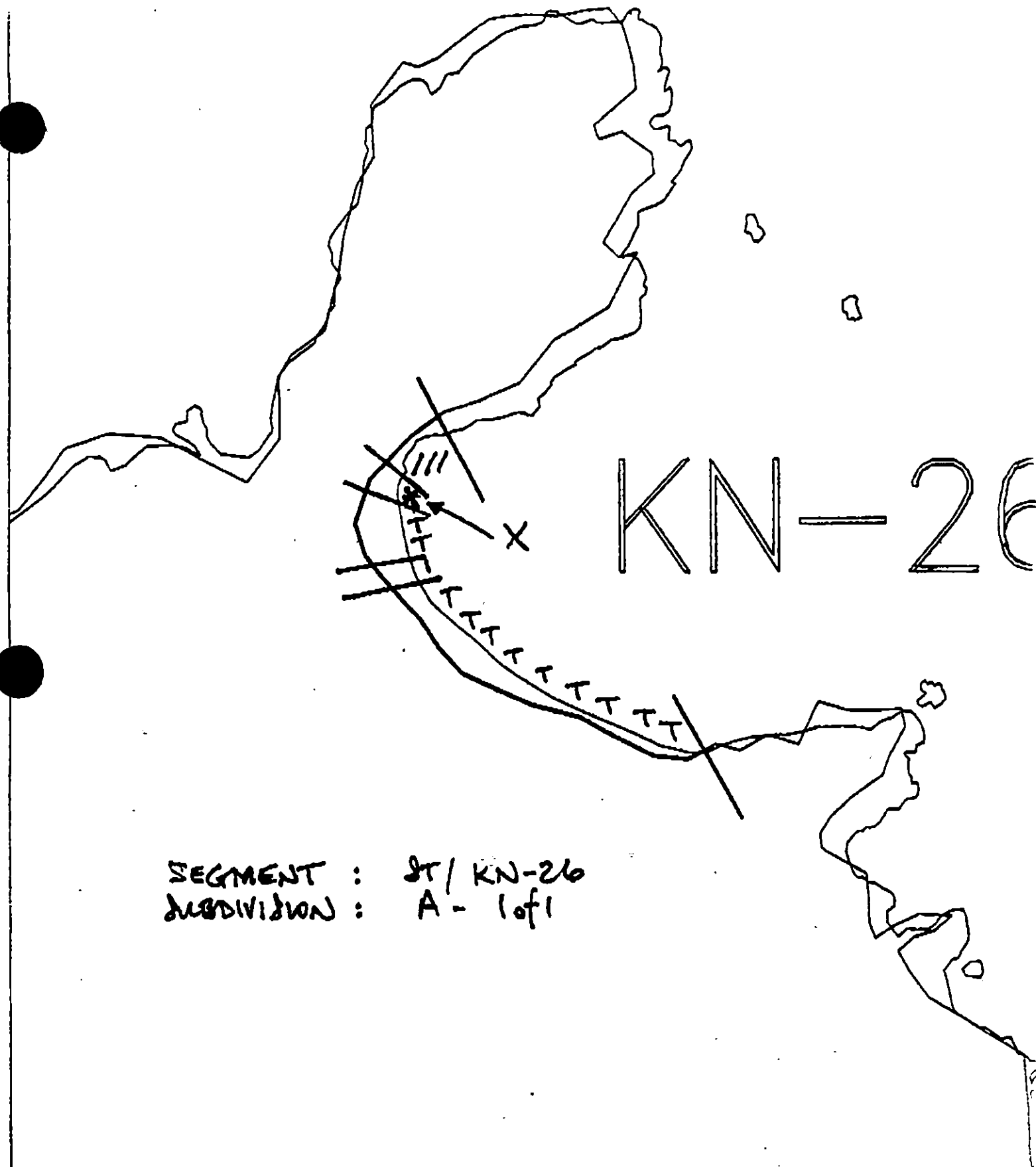
Biologist: David Loefer

Wildlife observations / General Comments

1. Low intertidal not sampled
2. present in mid intertidal: Porphyra, Ulva, Enteromorpha, Endocladia, Noodle, Emplexonema, Halosaccus, Cladophora, Scytosiphon, Alaria, Katharina tunicata, unidentified red algal branch (Rhodomenia?), unidentified red "blade".

high intertidal: Enteromorpha, Cladophora

3. Boulders / rubble in area 1 (see Ecology map) were virtually barren except for (rare) gastropods and patchily dense Enteromorpha. Species richness and abundances gradually increased moving south of area 1. Near southern segment boundary there were moderate densities of mussels, barnacles (^{mainly} Semibalanus cariosus) and Fuus. Algal cover (~6 species) reached 90%, with the algae covering the mussels, barnacles and primary substrate.
4. 2 deer skeletons were found above high tide line
5. 4 dead Pisaster ochraceus found washed up at high tide line
6. Oil-covered barnacles found on high intertidal boulders at northern segment boundary. Barnacle mortality was ~80%. Oiled vegetation and oil covered mosses found in supralittoral ~~at same~~ in same area.
7. Several screws anchored into mid-intertidal boulders were found in the segment.



SEGMENT : ST/KN-26
SUBDIVISION : A - 1 of 1

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

KN-26

ADEC Segment Length: 687m



Map Key: PWS-347
Name: Rich Galbraith
Date: 04/20/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-26 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual Tilling Spot Washing Other Approved Treatment	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90.
ADEC Art Weissen
EXXON Andy Galt
NOAA Joseph Talbot
USCG Mr. J. Hall, etc.

FOSC

DATE 5-21-90

Prepared by: Andu Meye

Date: 5/20/90

SHORELINE EVALUATIONSEGMENT ST/ KN-26 SUBDIVISION A (1 OF 1) DATE 4/20/90**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

No specific sensitivities or time constraints identified.

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: Shirley H. H. H.DATE: 5/2/90**OILING CATEGORIZATION:**Oil 43 m: Medium 82 m: Narrow 35 m: V. Light 526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ cm**RECOMMENDATIONS:**

<u> </u> No Treatment Recommended	<u>X</u> Snare/Absorbent Booms <u>B</u>
<u>X</u> Treatment Recommended	<u>X</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>4</u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes: 1) manual removal of oiled vegetation and cleanup debris in areas indicated on sketch map, 2) manual tilling and spot hot water washing using snares to recover oil in areas indicated on sketch map, 3) manual removal of tarmat in area indicated on sketch map and 4) bioremediation of areas indicated on sketch map. Work should be conducted after 5/1. SEE ADDENDUM DATED 5/20/90
Rex C.

TAG COMMENTS: STORM BERM RELOCATION - USE SPOT WASH WITH
SORBENTS DURING RISING TIDE FOLLOWING RELOCATION.TAG APPROVAL DATE: 5/1/90ADEC JOHN BAUEREXXON ANDY TAYLORNOAA GARY PETRAEFOSC: W LDATE: 5-14-90

CAC 106 to be on site.

10

KN-207

KN-26

KN-212

28

WORK
AREAS



Exxon Company, USA
Map Key: KNI-KN-26
May 11, 1990



ECOLOGY MAP
SEGMENT KN-26
SUBDIVISION A (1 of 1)
METERS

0 369 739

★ Seabird Colony
▲ Eagle Nest

1 inch = 1212 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-26 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific sensitivities or time constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are unexamined during the project, they should be examined before any construction begins.

SHPO SIGNATURE: [Signature] DATE: 5/2/90

OILING CATEGORIZATION:

Wide 43 m: Medium 82 m: Narrow 35 m: V.Light 526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☒ Snare/Absorbent Booms <u>AL</u>
☒ Treatment Recommended	☒ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☒ Spot Washing: <u>4</u> Wands
☒ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes; 1) manual removal of oiled vegetation and cleanup debris in areas indicated on sketch map, 2) manual tilling and spot hot water washing using snares to recover oil in areas indicated on sketch map, 3) manual removal of tarmat in area indicated on sketch map and 4) bioremediation of areas indicated on sketch map. Work should be conducted after 5/1.

TAG COMMENTS: STORM BERM RELOCATION - USE SPOT WASH WITH
ABSORBENTS DURING RISING TIDE FOLLOWING RELOCATION.

TAG APPROVAL DATE: 5/1/90
ADEC JOHN BAUER [Signature]
EXXON ANDY TEAL [Signature]
NOAA GARY PETRAE [Signature]
USCG KENNETH KEENE [Signature]

FOSC: [Signature] DATE: 5-14-90
CAC rep to be on site.

OG RIO TILLIE

SEGMENT ST/ KN-26

SUBDIVISION A-1 of 1

DATE 04/20/90

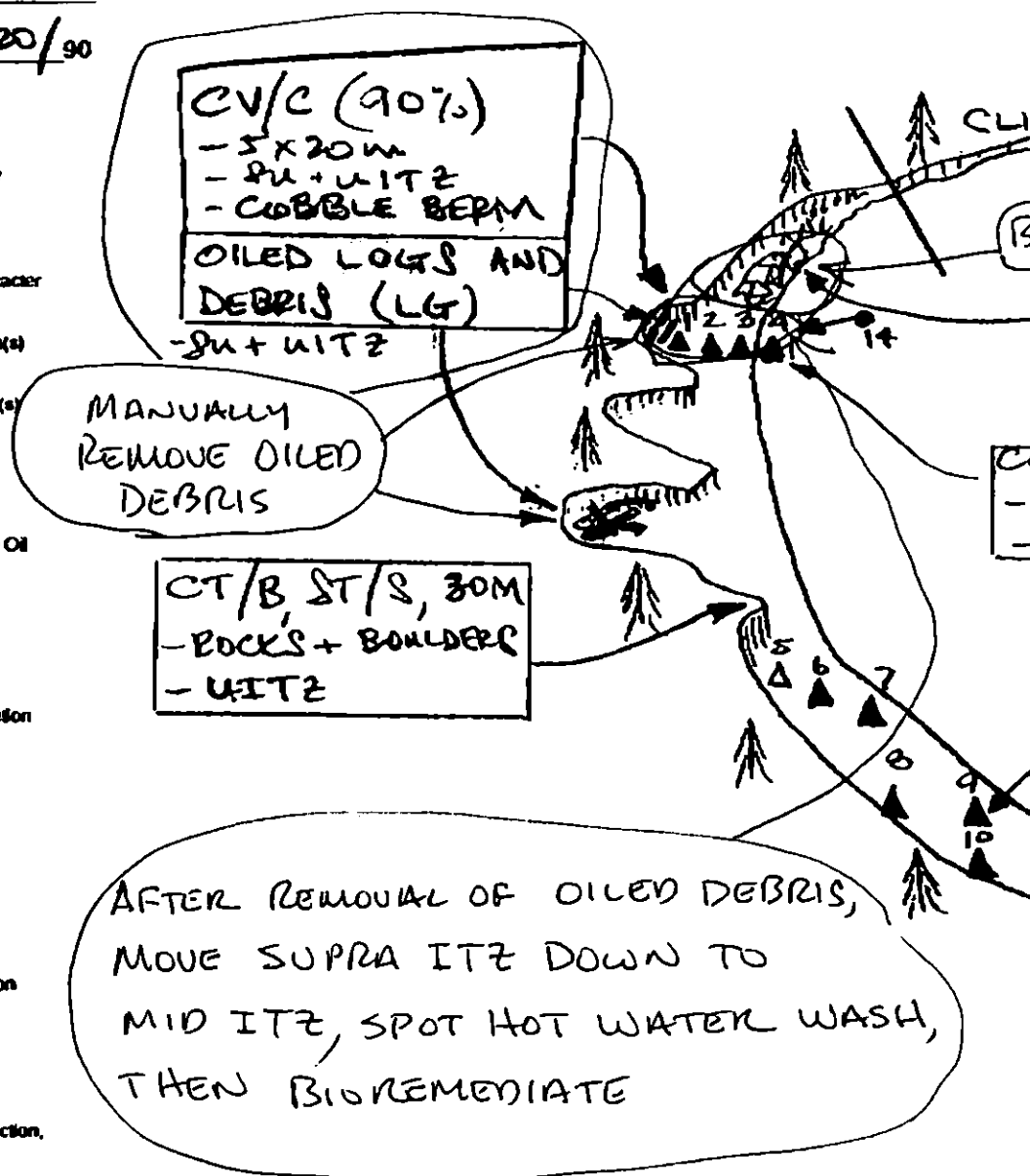
CHECKLIST

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

LEGEND

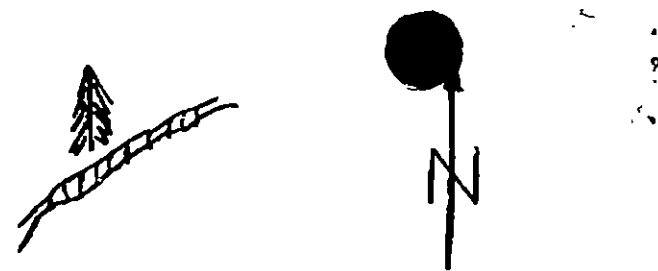
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

SKETCH MAP



SURFACE

Oil Character Length (m). AP 5 PO 0 CV 0 CT 180 ST 100 MS 0 PT 0 TB 0 FL

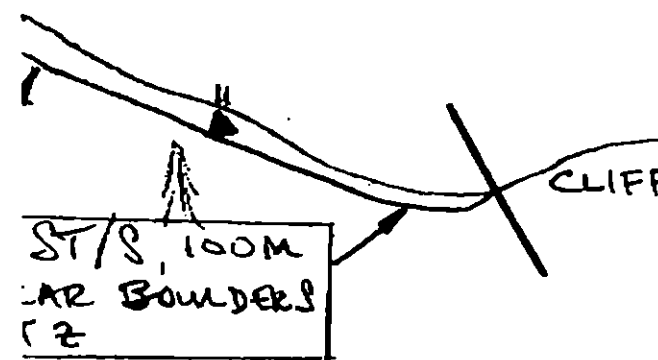


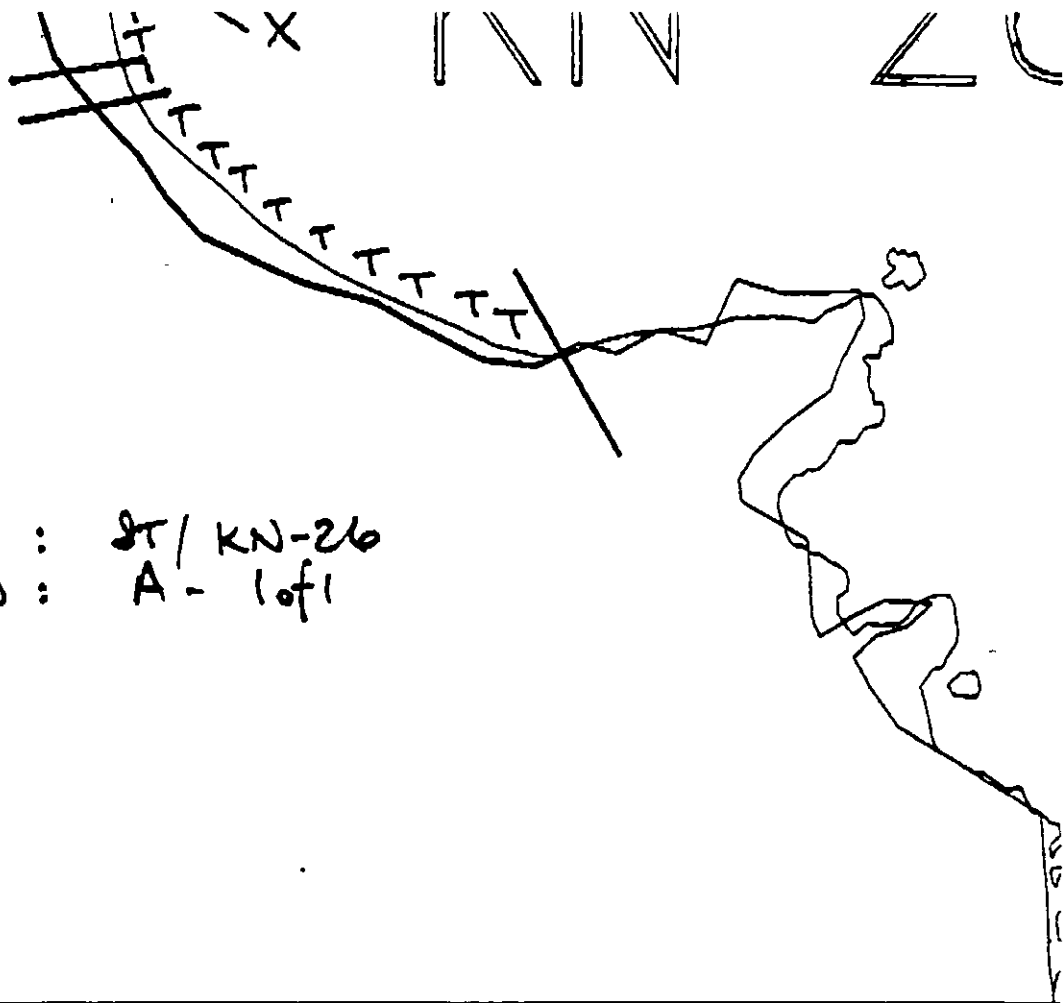
DATE

3-6M WIDE, 50M
CLIFF / BOULDERS
OILED LOGS (JM)

UNDER BEACH
SURFACE COBBLES
UPPER OIL TO 50cm +

MANUALLY REMOVE TARMAT
AP/S (1x5m)
- 2 BANDS, COBBLES
- UITE





SEGMENT : JT/KN-26
SUBDIVISION : A - 1 of 1

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-26

ADEC Segment Length: 687m



Map Key: PWS-347

Name: Rich Gille

Date: 04/20/90

Data Entered:

ASAP TAG REVIEW SHEET

Segment: KNO26 Subd: A Site: 1 Date
PRE-Review 14 AUG 90

Priority For Addressing In 1990

HIGH

X MEDIUM

LOW

NTR

Treatment
Recommended:

Manual Pickup - AP
and BIO

OG / SKETCH - AP

Recommendation Sheet - STORM BERM
RELOCATION

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 21 AUG 90

Reassess in 91
(Was REBIOED) 8/19

*As per
Recommendation
Sheet*

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KV-026 Subd.: A Site: 1 Date: 8-11-90 1990

Conditions Observed: Storm berm with undetected subsurface
OR oil. Area is coarse sand. Seasonal prohibit in core
has a 2m x 2m of boat with subsurface oil to 10m. Gravel
cobble beach with deep OR subsurface oil ranging from
30cm (pit) to a 8m-60cm bank of oil.

Followup Recommendations: See below for treatment techniques.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADBC: Bob McCreary
 (name)

Robert G. McCreary
 (signature)

Comments: Mechanical relocation of storm berm needs to be completed.
ie. OP/OR sediments spread down beach. Mechanically expose
very large area of subsurface oil and spread across beach for
high energy of this beach will help to clean exposed sediment.

Baxon: John Dean
 (name)

John Dean
 (signature)

Comments: ASAP WORK CREW ASSIGNED TO ADDRESS LIMITED MANUAL, OTHERWISE
RECOMMEND REASSESSMENT SPRING '91.

JSCG: Don Davis GM
 (name)

Don Davis
 (signature)

Comments: A LARGE AREA OF OILING WAS NOTED WITH VARIOUS DEGREES OF OILING. THE AREA
IS ESTIMATED AT 80 X 10 M. DUE TO SEASONAL TIME RESTRAINTS. SUGGEST WORK CREW RETURN
REMOVAL OF HEAVY OILS AND ALLOW WEATHERING FOR REASSESSMENT IN 1991.

and Rep. Lora Johnson
 (name)

Lora L. Johnson
 (signature)

Comments: RECOMMEND MECHANICAL/MANUAL EXPOSURE OF OP/OR
SEDIMENTS TO ALLOW FOR WINTER WEATHERING. AGREE
W/ ADEP.

SURFACE OIL					SITE 1			
CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT		I	X			X		
SEAL								
POOLED								
COVER								
COAT		I				X		
STAIN			I	X		X		
MOUSSE								
PAINTS/T.B.								
FILM								
NO OIL					X	X	X	
SITE LENGTH					687m			

SITE 2							
DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	LI

SUBSURFACE OIL

[illegible]

Photographs

Ref: No 0

Frames ϕ

COMMENTS

- COMMENTS
- OIL WAS FOUND IN THE NORTHERN PORTION OF THE SITE PRINCIPALLY AS CT/ST - BROKEN, PATCHY AND INTERSTITIAL
 - 3 OF 4 PIDS EXHIBITED SUB
- REVISION NO. 781

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / KN-026 SUBDIVISION: A SITE: 1 DATE 11 AUG 90

U.S. G.

NAME DON OAVIS, GM³ USCG SIGNATURE Don Oavis
David Moe, NOAA

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

VARIOUS PATCHES OF INTERSTITIAL COAT, COVER, AND STAIN ON BEDROCK AND BOULDERS. IN ADDITION, BROKEN ASPHALT AND COAT IN LARGE PATCHES ALONG SEGMENT. SEGMENT IS SPREAD OUT, BUT CAN BE MANUALLY TREATED BY A SMALL CREW IN A FAIRLY SHORT AMOUNT OF TIME. SOME REMOVAL SHOULD BE ATTEMPTED THIS YEAR WITH REASSESSMENT IN 1991.

ADEC

NAME Bob McCREARY SIGNATURE Bob McCreary

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Storm berm at North end of segment has OR and OR oiling and should be relocated down beach faced. In addition several patches of AP and Coat are present. Gravel beach has a lease of sub-sample oil which appears to run from bottom of HITZ → Sea. More pits will need to be dug to ascertain parameters of lease of OR and OR oiling. After this is done, lease should be mechanically exposed, tilled and spread over beach and exposed to wave action on the high energy beach.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

AGREE WITH ADEC RECOMMENDATIONS. SEE SSAT SKETCHES ALSO.

EXXON

NAME Joan Dean SIGNATURE Joan Dean

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ASAP WORK CREW ASSIGNED PICK-UP/BROOK-UP SHOULD ACCOMPLISH ACCESSIBLE OIL R/ '90. THIS IS NOT A HIGH PRIORITY SITE R/ '91 DUE TO EXPOSURE.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KV-026 Subd.: A Site: 1 Date: 8-11-90 1990

Conditions Observed: Storm berm with substantial subsurface OR oil. Area is approx 500x20m. Second ditch in crew has a 2m x 20m of boat with subsurface oil to 10m. Some cable beach with deep OR subsurface oil ranging from 20cm (pit 1) to a 8m-60cm bank of oil.

Followup Recommendations: See below for treatment techniques.

Completed by Pickup Crew: ☐ YES ☒ NO

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

AP: Bra McCrean
(name)

Robert B. McCrean
(signature)

Comments: Mechanical relocation of storm berm needs to be completed (i.e. OR/OR sediments spread down beach). Mechanically expose very large area of subsurface oil and spread across beach for high energy of this beach will help to clean exposed sediment.

Exxon: JOHN DEAN
(name)

[Signature]
(signature)

Comments: ASAP WORK CREW ASSIGNED TO ADDRESS LIMITED MANUAL, OTHERWISE / RECOMMEND REASSESSMENT SPRING '91

USCG: DON OZVIS, GM
(name)

[Signature]
(signature)

Comments: A LARGE AREA OF OILING WAS NOTED WITH VARIOUS DEGREES OF OILING. THE AREA IS ESTIMATED AT 80 X 100 M. DUE TO SEASONAL TIME RESTRAINTS, SUGGEST WORKCREW REMOVAL OF HEAVY OILS AND ALLOW WEATHERING FOR REASSESSMENT IN 1991.

Land Rep: LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: RE RECOMMEND MECHANICAL/MANUAL EXPOSURE OF OR/OR SEDIMENTS TO ALLOW FOR WINTER WEATHERING. AGREE WITH ADEL.

OG
SEGMENT ST/026

SUBDIVISION A

DATE 11 / AUG 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Sep/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/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

Oil Vegetation

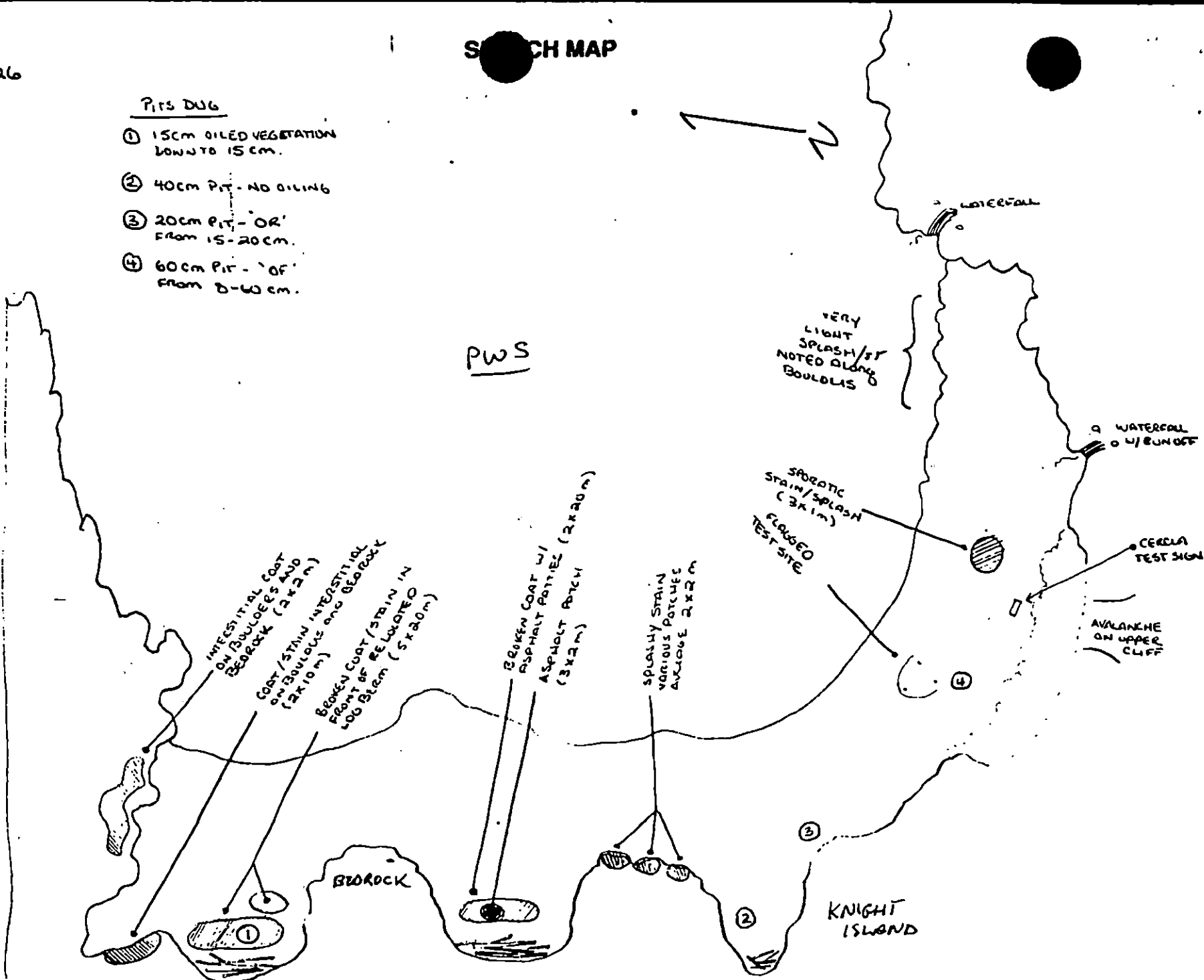
Photo location, direction, and number

SEARCH MAP

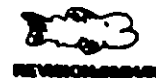
PITS DUG

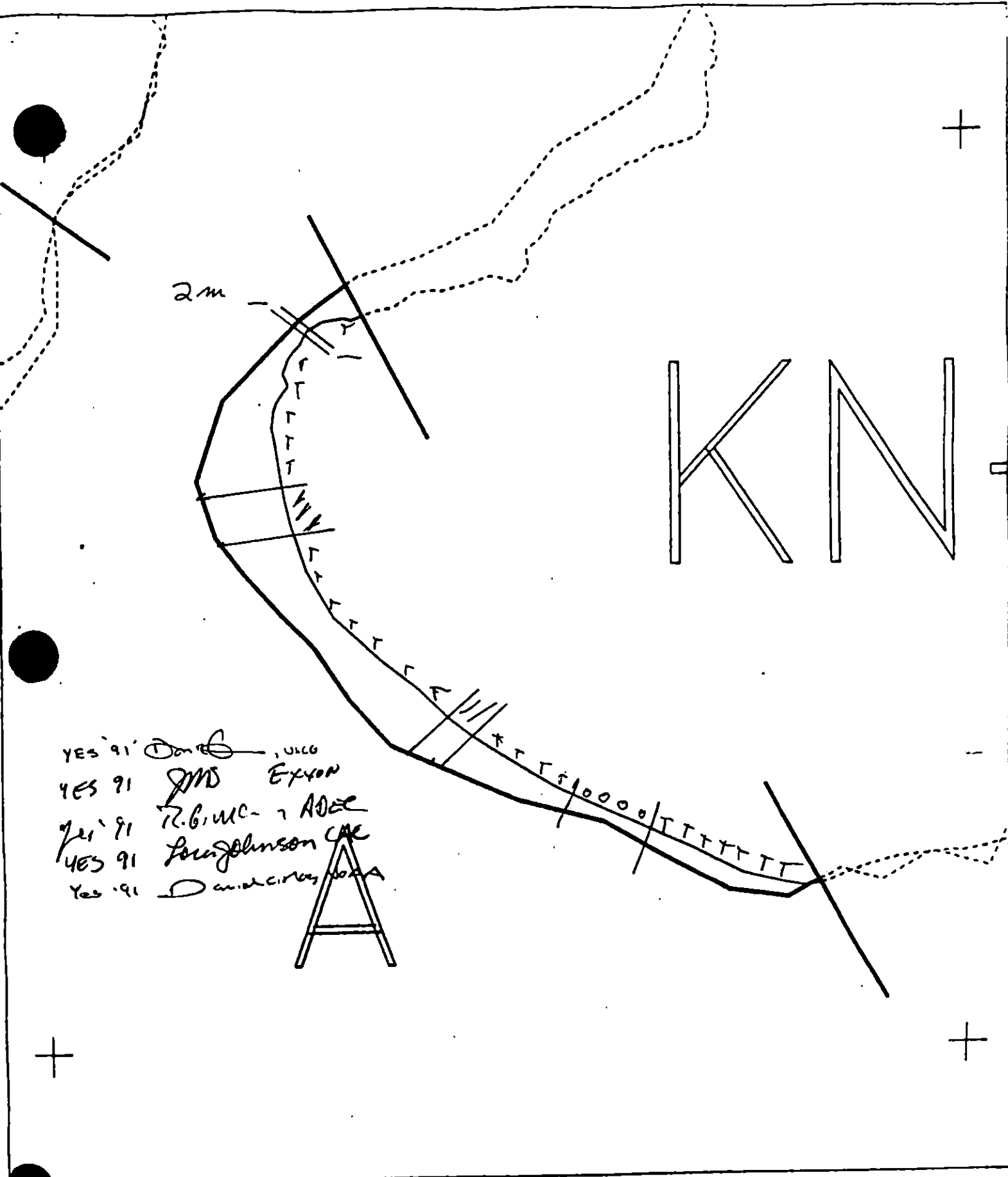
- ① 15cm OILED VEGETATION DOWN TO 15cm.
- ② 40cm PIT - NO OILING
- ③ 20cm PIT - 'OR' FROM 15-20cm.
- ④ 60cm PIT - 'OF' FROM 0-60cm.

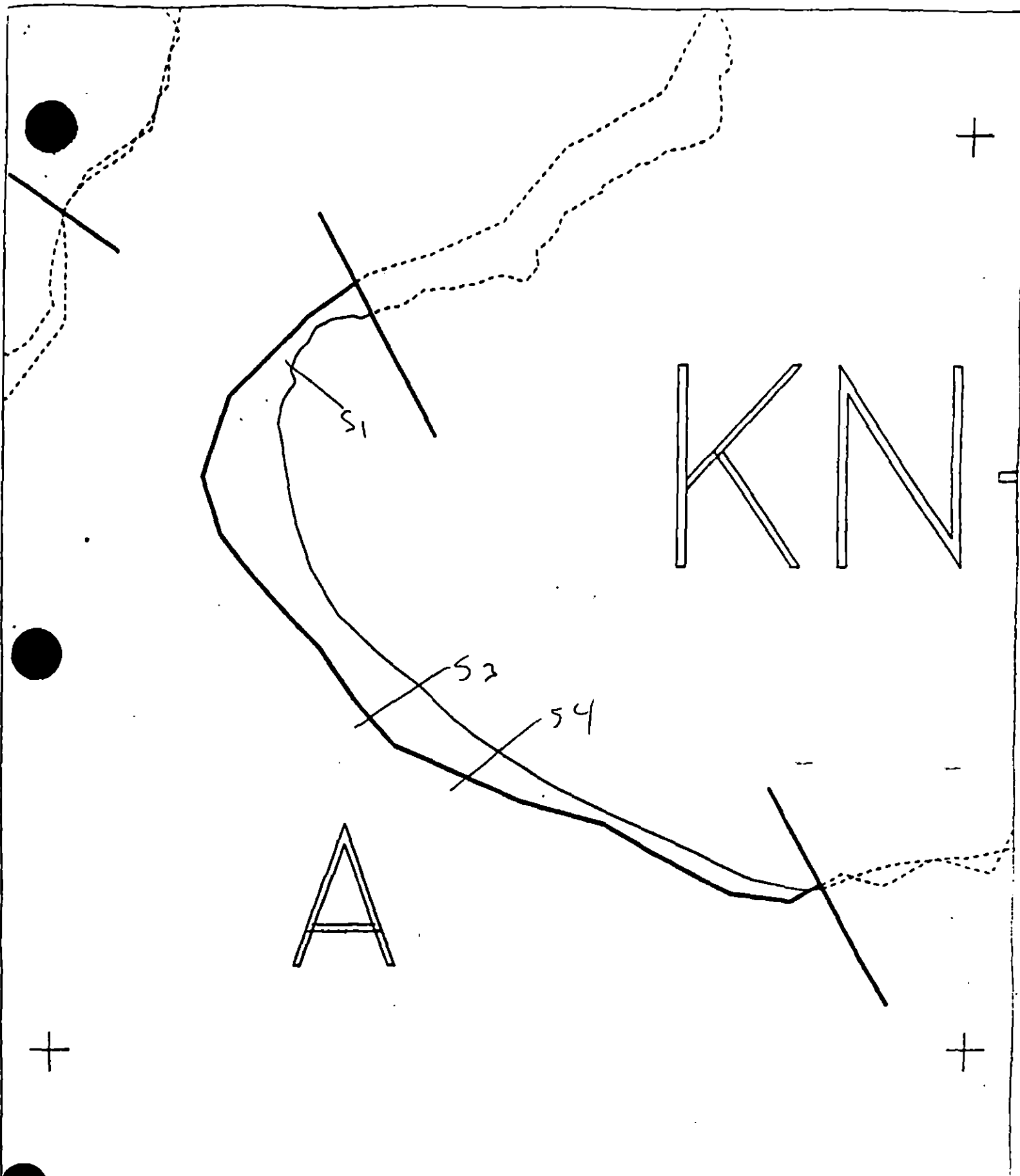
PWS



Oil Character Length (m): AP 22 PO CV CT 2 ST 60 MS PT TB FL NO 56







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

KN-26 A
 ADEC Subsegment Length: 687m
 METERS

0 50 100

EXON

Subdivision Field Map

Map Key: KN1KN-26A

Name: NAKASHIMA

Date: 8/11/90

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2

SEGMENT ID: KA026 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 15 OIL CHARACTER OF OIL INTVAL: FROM 0 TO 15
CLEAN BELOW: N PIT ZONE: SU - UI X MI - LI -

SUBSURF SEDIMENT: BRK - BLD - COB - PEB X GRN X SAN - MUD - VEG X

PIT # 2 PIT DEPTH 40 OIL CHARACTER NO OIL INTVAL: FROM - TO -
CLEAN BELOW: - PIT ZONE: SU - UI X MI - LI -

SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN - SAN - MUD - VEG -

PIT # 3 PIT DEPTH 20 OIL CHARACTER OR OIL INTVAL: FROM 15 TO 20
CLEAN BELOW: N PIT ZONE: SU - UI X MI - LI -

SUBSURF SEDIMENT: BRK - BLD - COB X PEB X GRN - SAN - MUD - VEG -

PIT # 4 PIT DEPTH 60 OIL CHARACTER OF OIL INTVAL: FROM 0 TO 60
CLEAN BELOW: N PIT ZONE: SU - UI X MI - LI -

SUBSURF SEDIMENT: BRK - BLD - COB X PEB X GRN X SAN - MUD - VEG -

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

ASAP DATA ENTRY FORM

PAGE 1 OF 2GENERAL DATA

SEG ID: KN026 SBOV: A SITE: 1 TEAM: 3 DATE: 5/11/90
SITE LGTH 687 OIL CATEGORIES: W - M 40 N 2 VL 589 NO 56 U -
1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT - BRKN - PTCH 2 SPLH 20
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 2 OIL CHAR: CT OIL DIST: CONT - BRKN 20 PTCH 12 SPLH -
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 3 OIL CHAR: ST OIL DIST: CONT - BRKN - PTCH 12 SPLH 589
TIDAL ZONE: SU - UI X MI - LI -

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

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

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

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

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

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

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

1991 MAYSAP EVALUATION

SEGMENT: KN 026 SUB: A REGION: PWS SURVEY DATE: 5/3/91

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: _____

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

WATER FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KW 26 SUBDIVISION A DATE 5/3/91

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED - Sparse to no biota in area of subsurface oil. Mechanical Equipment easily unloaded on this beach. 5X60M "MOUSSE" lens under cobble. Mechanically remove clean sediment, Mechanically remove MOUSSE lens. leave exposed (oil residue) agitate w/ incoming tide, stretch snare to contain/collect sheens. Mechanically explore under storm berm & logs for MOUSSE band that is sure to be present. (Remove it Mechanically)
Pile logs to the side if necessary to explore under berm.

EXXON
NAME Jon Czarniecki SIGNATURE Jon Czarniecki

☒ NTR 9 of fifteen pits ~~were~~ had oil present. Surface oil was only slightly visible. The subsurface is primarily ~~oil~~ in one location not throughout the whole beach. for a beach with high energy it had a much life as would stand the pounding of it waves.

LANDMANAGER
NAME John Johnson of Cheryl AK WP SIGNATURE [Signature]

☐ NTR ☒ treatment recommended to remove remaining oil

USCG/NOAA
NAME MOONEY / BARTS SIGNATURE Tim Mooney / [Signature]

☐ NTR SEGMENT CONSISTS OF COBBLE, PEBBLE MATERIAL WITH A CONCENTRATION OF MOD TO HOR SUBSURFACE oiling. THIS SEGMENT IS A HIGH ENERGY SHORELINE WITH VERY LITTLE MARINE BIOTA. MECHANICAL OR ~~at~~ tilling will NOT HARM NOR ~~ENHANCE~~ ENHANCE MARINE BIOTA OR LIFE.

PAGE 2 OF 2

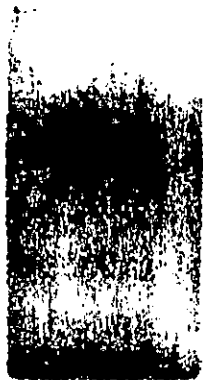
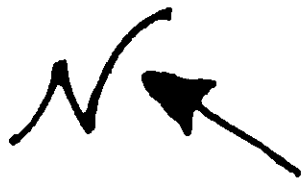
DATE 3 / APR / 91

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

Subsurface oiling was variable but the most significant concentrations appeared in the west part of the subdivision. An area of "significant" oiling was defined in Pits #3 and #14 - the HOR area was estimated at 5×60 m.

REVIEWED: MC 5/5/91

Revised, May 7



No FISH DUMP
Assume:
5 X 10 M. HOLE

REBAR IN
ROCK (USED?)

THE ADJ. EXT. 5X10M

W.L. @ 0730

COBBLE
A8

A9

A11

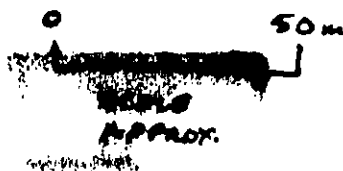
STATE OF ADJ.
COBBL. SIGN

300/M
0.704
PICKED UP

CLIFF

SIBR SITE

CT/P
5X8
UNDER
LOGS



KN-26A
3 MAY 91
0705-0805
J. HARPER

REVISED FIELD SKETCH

REVISOR: 5/8/91 MC
SC 100-0-11a. 7

A1 UITE (LHTS)
 0-40 PC N.O.
 40-80 CPG BROWN
 PETROLEUM SMELL BUT
 LARGELY WATER SOLUBLE
 CLASSIFY AS LOR

A2 STZ 40
 0-40 COB UGRAN; ORGANICS
 N.O.

A3 MITZ 60
 P/C/SG
 0-10 G NO
 10-25 SG MOR (ONE LITTLE
 HOR PACKET)
 25-60 N.O.
 WT. 50 3 GLASS

A4 MITZ/LITZ
 C/SG
 40-50 LOR
 WT 78 B

A5 UITE
 C/P/SG
 0-5 NO
 5-10 LOR
 10-40 U.O.

A6 MITZ
 P/SG/MSG
 0-10 N.O.
 10-20 HOR
 20-30 N.O.
 *4

A7 UITE (LHTS)
 P/SG
 0-30 N.O.
 30-40 LOR
 LIGHT COAT
 ON PEBBLE

A8 MITZ/LITZ
 P/SG
 0-30 N.O.
 LOR 40

A9 MITZ/LITZ 40
 P/P N.O.
 WT. 75 S

A10 UITE -30
 P/P N.O.

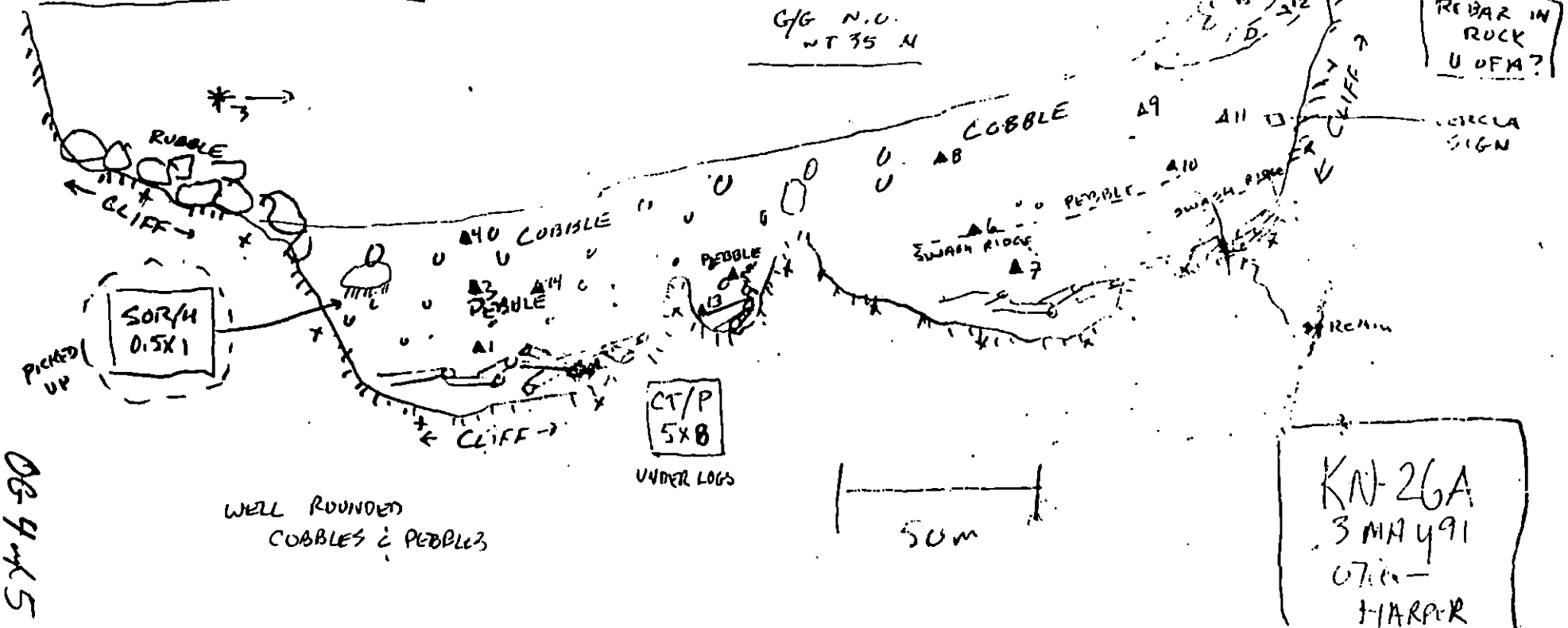
A11 UITE 40
 G/G N.O.
 WT 35 N

A12 UITE
 RUB/B/G N.O.

A13 STZ 40
 BC/BC N.O.

A14 UITE MITZ 75
 BC/OC
 5-20 HOR
 20-40 CLEFT
 40 LOR

A15 UITE
 B/SG N.O.



MAYSAF BIOLOGICAL SUMMARY FORM

TEAM #	3	DATE	5/3/91
SEGMENT #	KN 26	TIDAL HEIGHT (Range)	3-6'
SUBDIVISION	A	BIOLOGIST	STAKOR
STATE	1-2'	WIND SPEED/DIRECTION	NE 5-10
PHOTOGRAPHS: ROLL #		FRAME #	

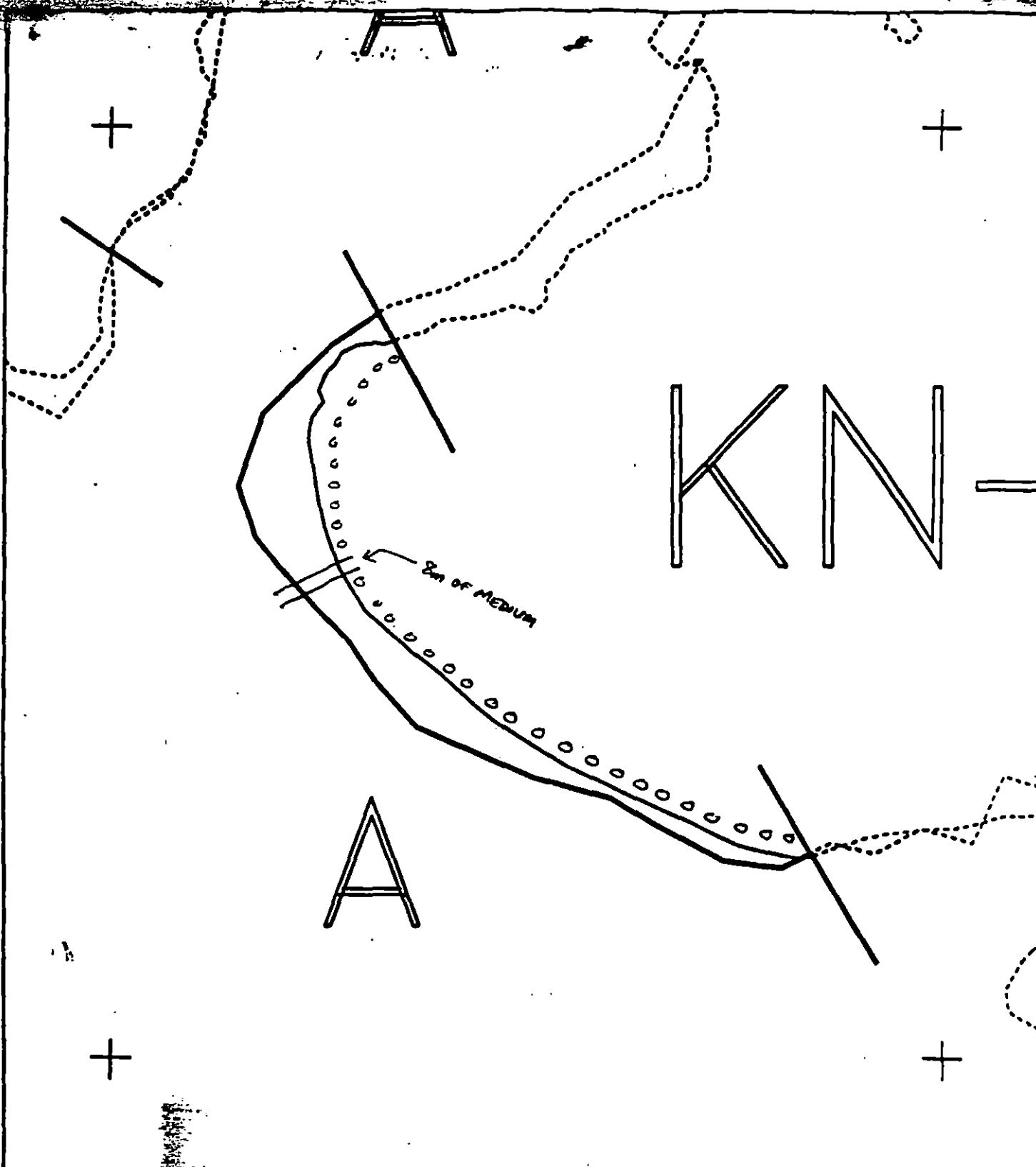
COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
 High energy cave beach of cobble/boulder/bedrock.
 Biota very sparse or absent on cobble/boulder above MSL due to substrate instability in central & NW portion of segment. Bedrock in the vicinity colonized by sparse barnacles and Mytilus, with small Littorina and limpets in protected crannies. Biota increased in both overall abundance and diversity in the SE on all substrates due to more sheltered aspect, characterized by patchily dense barnacles and spat, Mytilus, Littorina, limpets, Nucella, Fucus, and filamentous red alga.
 Biota within/adjacent to oiling on west portion of segment (Location A, Pits 3 & 14) is sparse or absent, and remains sparse down slope to MTL. Essentially, there is little intertidal biota in this area to be impacted or benefited by further treatment.

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds			
Waterfowl	1 Harlequin	2	
Gulls/Kittiwakes	Kittiwake, G. wing, Mew	10-12	
Shorebirds			
Corvids	1 Jay	1	
Other Birds			

MARINE MAMMALS		LAND MAMMALS	
	# OBSERVED	SPECIES	# OBSERVED
Sea Otters		Deer Skeleton	
Marine Mammals (specify)			
Land Mammals (specify)			

Shoreline subdivision map showing important biological features attached.



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

KN0026 A
 ADEC Subsegment Length: 687m
 METERS
 0 100 200
 AK State Plane Zone 4
 66080200

Subdivision Field Map
 Map Key: KNKN0026A
 Name: HARPER
 Date: 3 MAY 91
 Date Entered:



ES reviewed, May 7
 REVIEWED: MC 5/8/91

AR 5 of 5

1991 MAYSAP EVALUATION

SEGMENT: KN 026 SUB: A REGION: PWS SURVEY DATE: 5/3/91

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: 5/31/91

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: MAY 31 1991 FOSC APPROVAL DATE: 6/15/91

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. 3 SEGMENT KW 26 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Gormanley SIGNATURE Wesley Gormanley

☐ NTR ☒ TREATMENT RECOMMENDED - Sparse to no biota in area of subsurface oil. Mechanical equipment easily unloaded on this beach. 5x60M "MOUSSE" lens under cobble. Mechanically remove clean sediment; Mechanically remove MOUSSE lens. leave exposed (oil residue) agitate w/ incoming tide, stretch snare to contain/collect sheens. Mechanically explore under storm berm & logs for MOUSSE band that is sure to be present. (Remove it Mechanically) Pile logs to the side if necessary to explore under berm.

EXXON

NAME Jon Casarotti SIGNATURE Jon Casarotti

☒ NTR 9 of fifteen pits ~~were~~ had oil present. Surface oil was only slightly visible. The subsurface is primarily ~~oil~~ in one location not throughout the whole beach. for a beach with high energy it had a much less oil as would stand the possibility of it receding.

LANDMANAGER

NAME Shirley Shawa OF Chesapeake Bay SIGNATURE Shirley Shawa

☐ NTR ☒ treatment recommended to remove remaining oil

USCG/NOAA

NAME MOOREY / BARATS SIGNATURE Tim Moorey / Amy Barats

☐ NTR SEGMENT CONSISTS OF COBBLE, PEBBLE MATERIAL WITH A CONCENTRATION OF MOA TO HOR SUBSURFACE OILING. THIS SEGMENT IS A HIGH ENERGY SHORELINE WITH VERY LITTLE MARINE BIOTA. MECHANICAL OR MANUAL TILLING WILL NOT HARM NOR ENHANCE MARINE BIOTA OR LIFE.

PAGE 1 OF 2

Revised: MC 5/8/91 OG 1 of 5
ES revised May 7

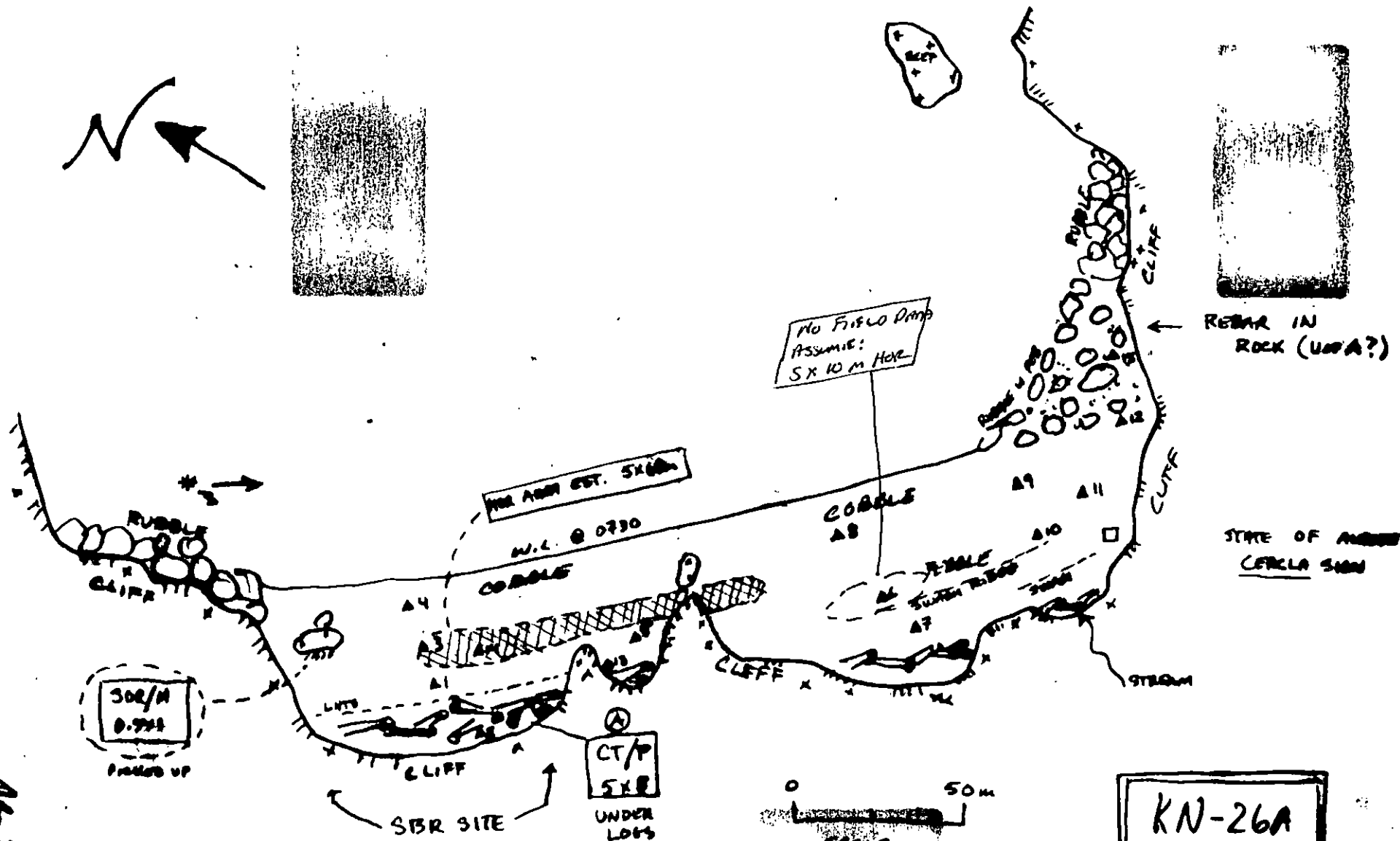
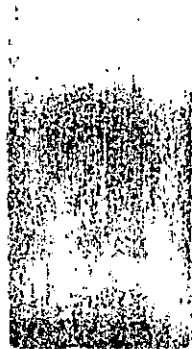
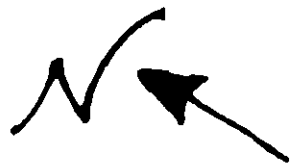
PAGE 2 OF 2

DATE 3 / APR / 91

[illegible]

Subsurface oiling was variable but the most significant concentrations appeared in the west part of the subdivision. An area of "significant" oiling was defined in Pits #3 and #14 - the HOR area was estimated at 5×60 m.

OG 2 auf 5



0530/5

Δ1 U (LHTS)
0-40 PCG/G N.D.
40-80 CPG BROWN
PETROLEUM SMELL BUT
LARGELY WATER SOLUBLE
CLASSIFY AS LOR

Δ2 STZ 40
0-40 COB U GRAY; ORGANICS ROOTS
N.D.

Δ3 MITZ 60
PGC/SG
0-10 G NO
10-25 SG MOR (ONE LITTLE
HOR PACKET)
25-60 N.D.
WT. 50 3 GLUBS

Δ4 MITZ/LITZ
C/SG
40-50 LOR
WT 78 B

Δ5 MITZ
C/P/SG
0-5 NO
5-16 LOR
10-40 N.D.

Δ6 MITZ
P/SG/MSG
0-10 N.D.
10-20 HOR
20-30 N.D.
*4

Δ7 MITZ (LHTS)
P/P
0-30 N.D.
30-40 LOR
LIGHT COAT
ON PEBBLE

Δ8 MITZ/LITZ
P/SG
0-30 N.D.
LOR 40

Δ9 MITZ/LITZ 40
P/P N.D.
WT. 75 S

Δ10 MITZ ~30
P/P N.D.

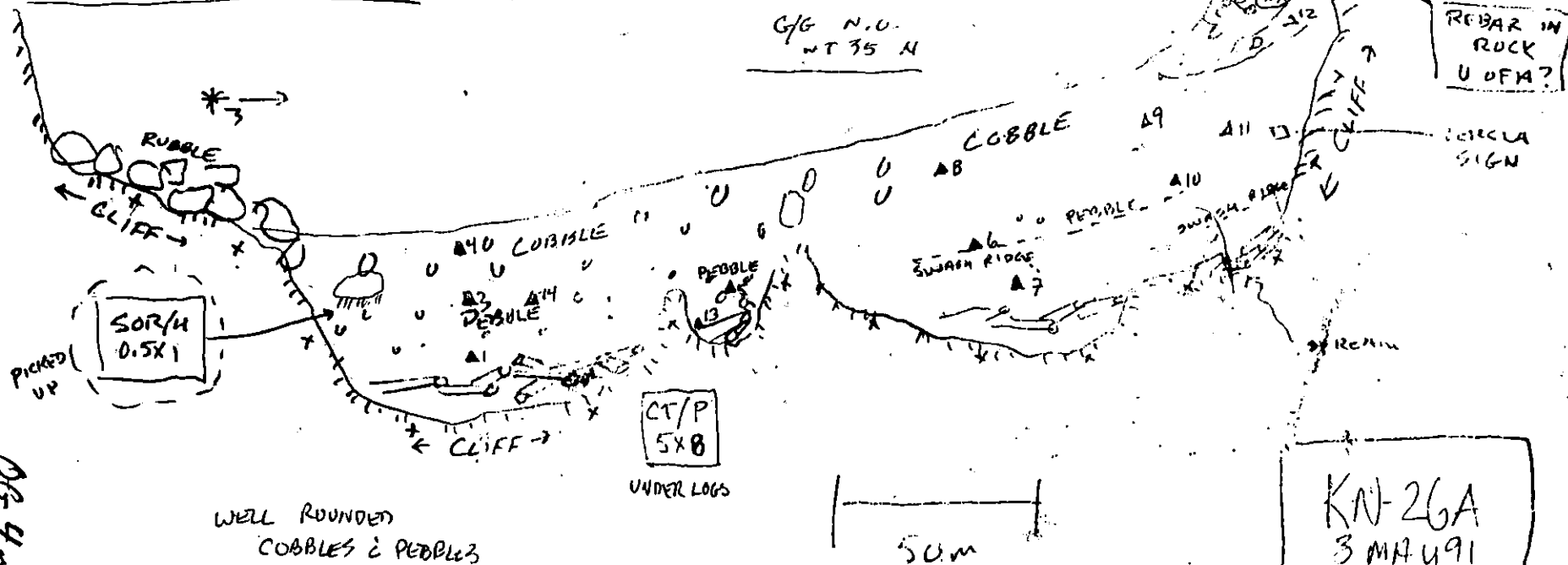
Δ11 MITZ 40
G/G N.D.
WT 35 N

Δ12 MITZ
RUB/B/G N.D.

Δ13 STZ 40
BC/SC N.D.

Δ14 MITZ 45
BC/GC
5-20 HOR
20-40 CLETT
40 LOR

Δ15 MITZ
B/SG N.D.



KN-26A
3 MAY 91
UTIC -
HARRAR

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/13/91
 SEGMENT # KN 26 TIDAL HEIGHT(Range) 3-6'
 SUBDIVISION A BIOLOGIST STAKOR
 AREA STATE 1-2' WIND SPEED/DIRECTION NE 5-10
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

High energy cave beach of cobble/boulder/bedrock.
Biota very sparse or absent on cobble/boulder above MSL due to
substrate instability in central & NW portion of segment. Bedrock in the
vicinity colonized by sparse barnacles and Mytilus, with small Littorina
and limpets in protected cravices. Biota increases in both overall
abundance and diversity in the SE on all substrates due to more
sheltered aspect, characterized by patchily dense barnacles and spat,
Mytilus, Littorina, limpets, Nucella, Eucos, and filamentous red algae.
Biota within/adjacent to oiling on west portion of segment
(Location A, Pits 1 & 14) is sparse or absent, and remains sparse
downslope to PIT 2. Essentially, there is little intertidal biota in
this area to be impacted or benefited by further treatment.

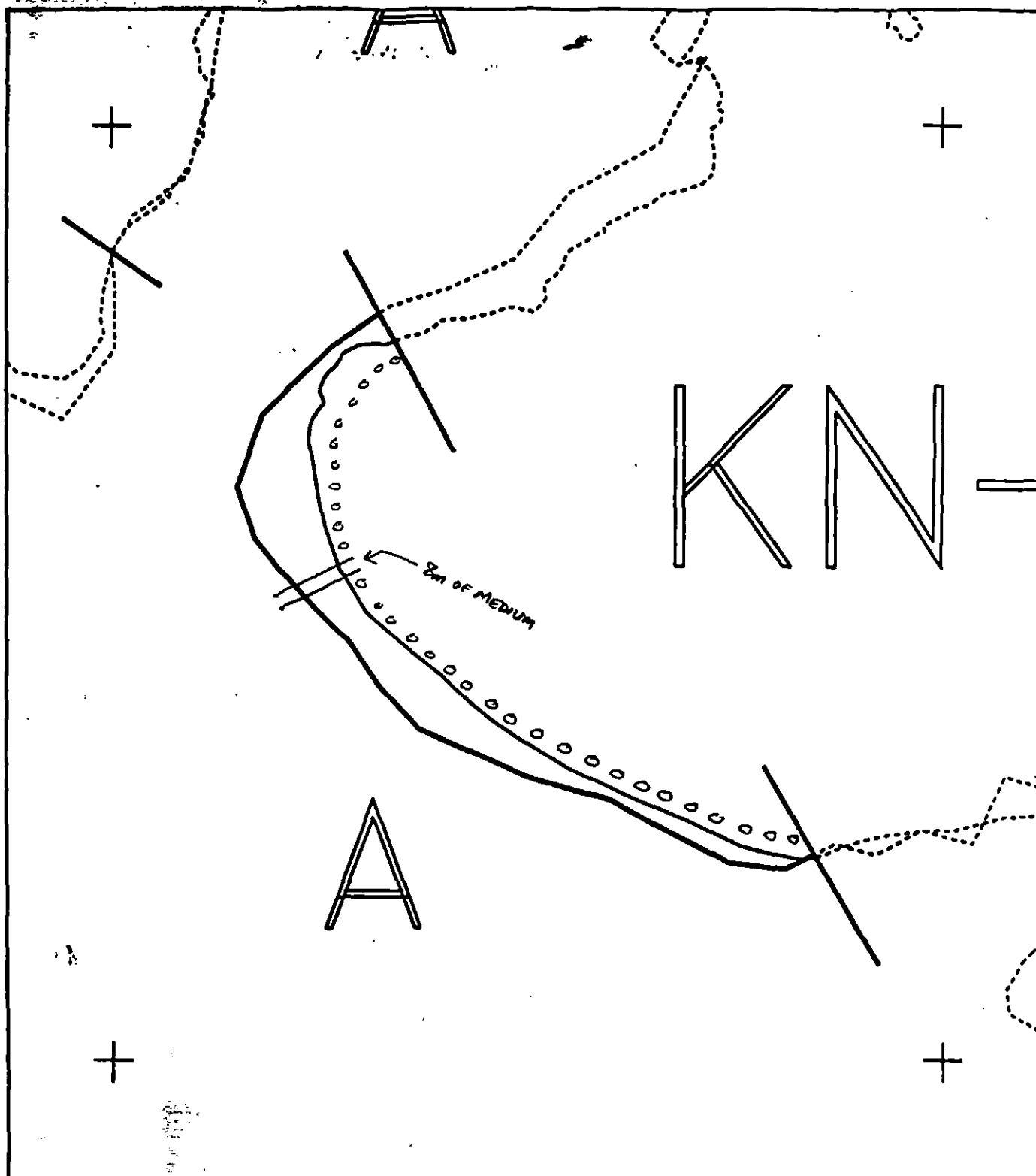
WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds			
Waterfowl	1 Harlequin	2	
Gulls/Kittiwakes	Kittiwake, G. Wing, Mew	10-12	
Shorebirds			
Corvids	1 Jay	1	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		Deer Skeleton	
Pinnipeds(specify)			
es(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/8/91 MK



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

KN0026 A

ADEC Subsegment Length: 687m

METERS

0 100 200

AZ State Plane Zone 4
 bkn0026a



Subdivision Field Map

Map Key: KNKN0026A

Name: HARPER

Date: 3 MAY 91

Date Entered:

25 reviewed, May 7
 REVIEWED: MC 5/8/91

OB 5 of 5

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-101

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-101 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 29 m: Narrow 298 m: V.Light 543 m: No Oil 36 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 bioremediation of oil-coated areas, avoid eel grass during treatment. Work should be conducted after 6/1 and only with permission of USFWS due to eagle nest constraint.

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 unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST KN-101-A SUBDIVISION: A DATE 4/10/90

USCG

NAME

David A. Schneider

SIGNATURE

David A. Schneider☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

PSS/USCGR

I concur with ADEC's Land Manager's comments below.
 This subdivision should have ^{its} various areas of impact
 cleaned manually to remove concentrations of cover
 and mousse & tar patties.

MS

ADEC

NAME

Peter Montesano

SIGNATURE

Peter J. Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Comments as moving S along Subdivision:

At First Pocket beach, the large Rocks outcropping at shore
 requires Scraping of Cover (thick, Black), especially on North
 Side.

The Few Tar/mousse patties on the 40x3m + 3x75 Ct/B beaches
 should be removed and could use some additional
 Scraping.

Spotty wiping/Scraping would be appropriate on the various bands
 along this segment.

LAND MANAGER

NAME

Janeta Pritchard

SIGNATURE

Janeta Pritchard☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Scrap: heavy coating/cover on rock outcroppings.
 Manually remove tar patties and mousse.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ KN-101
 BIO J. BARRY LAND REP J. FRITCHARD SUBDIVISION A
 EXXON A. SNOOK ADEC P. MONTESANO TIME 18:30 to 19:30
 TEAM NO.: 6 TIDE LEVEL: +1 to +5 DATE 04/08/90
 EST. SUBDIVISION LENGTH: 1006 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 65 % B 34 % C 1 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 2 % Hang 33 % Vert 65 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 40 m N 280 m VL 656 m NO 30 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0

(PATTIES) / TARBALLS 1 BAG:

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE TRASH

#BAGS 1

Photographs: Debris collected

Roll No. NONE

Frames 0

SUBSURFACE OIL NO SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (COLOR)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		VO	UC	1	2	3	4	5	SU	U	M	L		
							.													
							.													
							.													
							.													
							.													
							.													
							.													

COMMENTS SUBDIVISION IS ENTIRELY VERTICAL AND HANG ROCK AND BOULDER SLOP WITH A BROKEN DARK STAIN AND BROKEN, PATCHY OR SPORADIC COAT ACROSS THE HIGH TIDE LINE UP TO 1m WIDE.

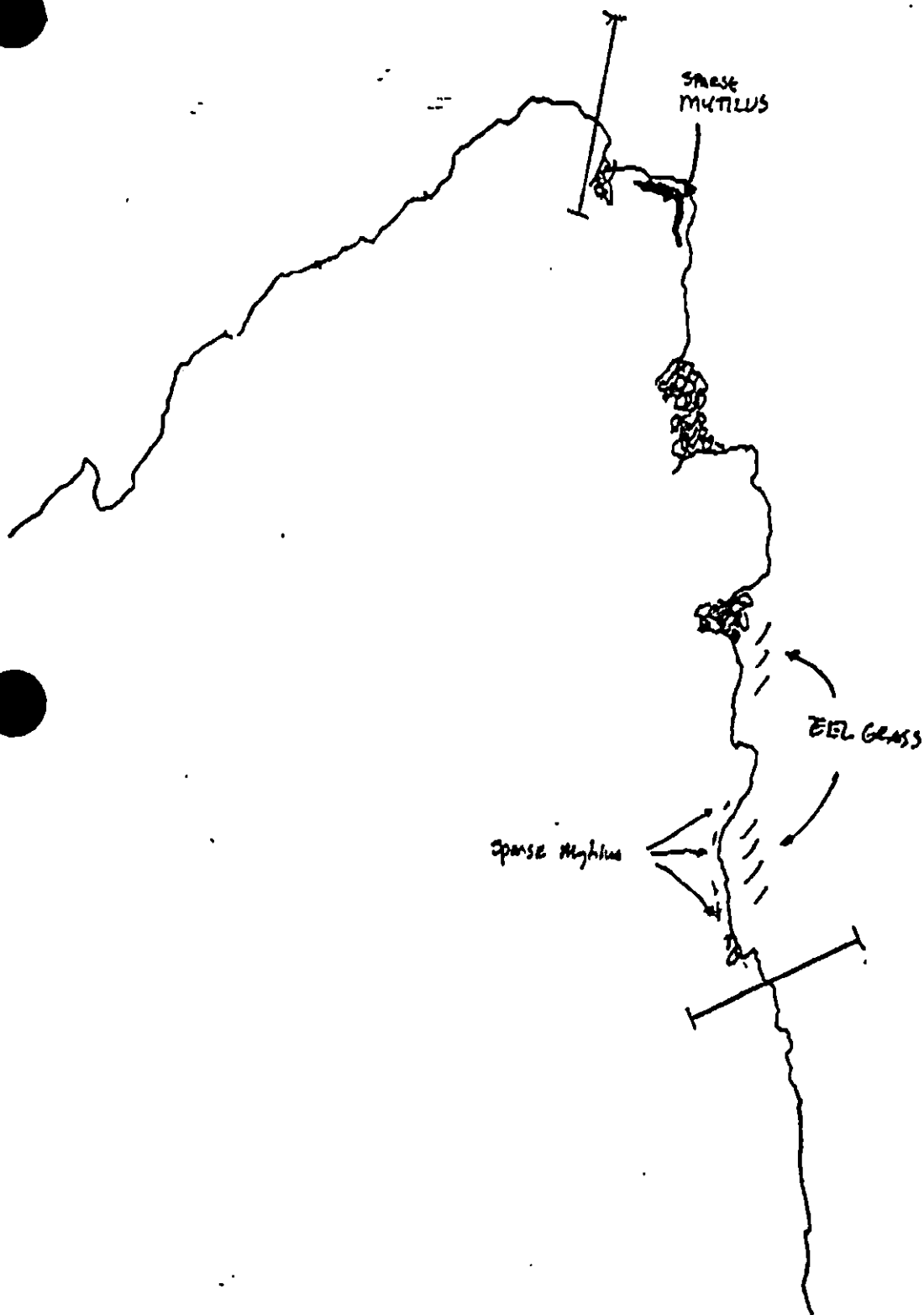
A SMALL LANG B/R/C AREA AT THE NORTH END OF THE SUBDIVISION HAS A NARROW PATCHY COAT ALONG 25m OF THE UICZ WITH SPORADIC OIL COVER ON THE SIDES AND UNDERSIDES AND BETWEEN INTERSTICES OF SOME BOULDERS.

No sketch map attached due to lack of variation in geomorphology and oil characteristics and width. REVIEWED CES DATE 4/11/90

KN101

APRIL 9 1990

6



KN101



SHORELINE ECOLOGICAL SUMMARY

REVISION: 001

Segment ST / KN101 Subdivision A = all Date (mo / day / yr) 8 APRIL 1990Time (24 hr) 1830 - 1930 Biologist Jim Barry Length - ?

- (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 15 Moderate 80 Low 5
- (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. NO PHOTOS
- Frames _____

BARNACLES

~~Dense~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Moderate~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Sparse~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Rare~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

MYTILUS

~~Dense~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Moderate~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Sparse~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Rare~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

GASTROPODS

~~Dense~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Moderate~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Sparse~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Rare~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

FUCUS

~~Dense~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Moderate~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Sparse~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

~~Rare~~

1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Sea Otter - 2
 Pigeon guillemot chick

Ecological Considerations: ST - Eagle nest -

1 nest was observed across adjacent to KN103 in KN104 - This may be the nest on geococcons. Eagles were observed several times during the survey. A small clean up crew should have no adverse effects on the eagle foraging activity.

KN101

APRIL 8 1990

2/6

START 1930

TIDE WINDOW - +1 to +0.5

STOP 1930

I General Comments.

- A. KN101 encompasses the NW coastline of Lewis Bay. The northern end of the segment is ^{highly} exposed to moderately exposed to swell. Most of the segment is vertical cliffs and boulder beaches. Cover of biota is moderate to dense. Mussels occur in exposed regions, and algae generally are denser below.
- B. Oil related patterns of biota are nearly undetectable, except for the cover of oil in the high upper zone, where oil cover may interfere with lichens. Low zone effects, if any, may will likely recover with no additional treatment.

II Major Species.

- A. Barnacles - Moderate Cover by 3 species. Percentage of dead individuals is low for all 3 species.
- B. Mytilus. Dense beds of mussels characteristic of most headland areas were less evident at this segment than in several others. This may be a consequence of oil-related activity, or a natural pattern.
- C. Gastropods - Littorine snails are moderate in density, but whelks are dense on low intertidal and mid intertidal zones. Limpets also are moderate.
- D. Pucus - Juveniles and sporlings are ~~more~~ more abundant than adults in the high zone.

III Other Species.

Several species of red algae, composed by a group of finely branched or filamentous species, cover the low zone. Sea Stars, are dense in the extreme low zone and subtidal. Kelps and other large brown algae are abundant in the subtidal. Eel grass beds are patchy and sparser in the sub-tidal zone.

APRIL 8 1990

III Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA M 123

CLADOPHORA S 12

ENTEROMORPHA M 12

~~GREEN CRUST~~

ULVA M 12

ULROSPORA M 123

3) RED ALGAE - RHODOPHYTA

BOSSIOLA S 12

CALLIARTHRON S 12

CORALLINA S 12

CRYPTOSIPHONIA M-D 123

ENDOCLADIA MURICATA S 12

HALOSACCION GLANDIFORME M 12

IRIDABA S 12

MASTOCARPUS S 12

MEMBRANOPTERA M 123

MICROCLADIA M-D 123

LITHOTHAMNION PACIFICUM S 12

PETROCELLIS MIDDENDORFFII S 12

PORPHYRA spp. S-M 12

RHODOMELA LAMINATA M 123

RHODOMELA PALMATA M 123

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA D U

AGARUM spp. D U

COSTARIA M U

FUCUS DISTICHUS M 123

HEDOPHYLLUM SESSILE M U

HILDONBRANDIA M 12

LAMINARIA M U

NERIOCYSTIS S U

RALPSIA S 12

SCYTOSIPHON COMENTARIA S 123

* SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

B MARINE INVERTEBRATES

1) ANEMONES

- EPIACTIS RITTERI ? S12 *
- UPTICINA GRASSICORNIS R1
- Anthopleura elegantissima R1
- A. artimisa S12
- ~~A. programma~~

2) Annelid Worms

- Polychaetes
- Nereidae S12
- Neptfyidae S12
- Serpulidae
- Serpula S1
- Cirratifera S1
- Spirorbidae
- Spirorbis M-D23 *

3) Peanut Worms - Sipunculid

- Phascolosoma theresites S23

4) MOLLUSCS

a) CHITONS

- CATHARINA TUNICATA M12
- TONICELLA LINIATA S12
- MOPALIA spp. R1

b) Snails - GASTROPODS

- Littorina scutulata M123 *
- L. sitkana M123 *
- Nucella lamellosa D12 *
- N. emarginata D12 *
- Scutissa dirca S-M 23
- Amphissa columbiana R23
- Tachyrrhynchus spp. R23

c) Nudibranchs

- Lamellidoris fusca S1

d) Limpets

- Lottia digitalis M1 *
- Acmaea mitra S1 R1
- Lottia persona S12 *

d) Limpets (cont)

- Tectura scutum M123 *
- T. persona S2
- Siphonaria thersites M12
- ~~Diastrea aspera~~

e) Mussels

- Mytilus edulis R1, 12 *

f) Clams

- Single - PISCOSSMUS SEPPIO S1
- Hiatella spp. ?
- Protothaca staminea ?
- Macoma spp. ?

g) Crustaceans

1) BARNACLES

- Semibalanus cariosus M-D12
- Balanus glandula M-D12 *
- Chthamalus dalli M-D123 *

2) Crabs

- Haplogaster spp S-M 23 *
- Hemigrapsus oregonensis S2
- Pagurilla spp. S-R 23
- Hermid Crabs - Paguridae M12

3) Beach Hopper

- ISOPODA - S23 *
- AMPHIPODA
- Orchestra? M23 *

h) Bryozoans

- Schizoporella spp? D23 *

i. Echinoderms

- 1) Sea Stars
- * D234 Pycnopoda helianthoides
- * D234 Dermasterias imbricata
- * M23 Leptasterias hexactis
- S123 Evertesia trachelii
- R23 Orthasterias koehleri
- * M12 Pisaster ochraceus.

SPECIES LIST (cont)

2 Echinoderms (cont)

2) Brittle Star

Ophiodon spp? ?

3) Sea Cucumber

Cucumaria miniata ?

3) Sea urchin

Strongylocentrotus droebachiensis R23

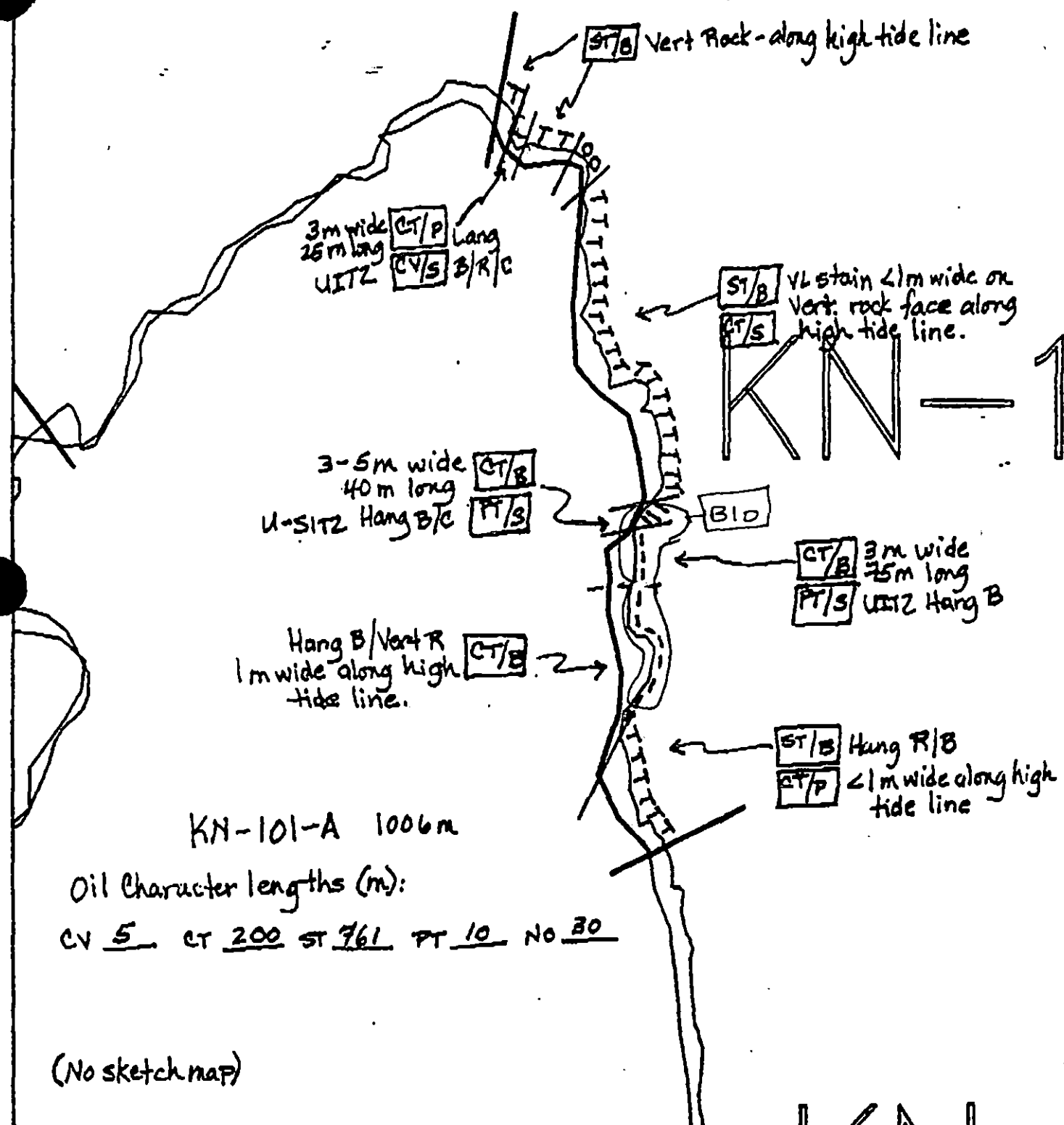
C. Marine Invertebrates

1) Fish PHOLIDAE M 23

COTTIDAE S12

Other Specimens

Unknown Orange Sponge. - 1 R23



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

KN-101
 Exxon Segment Length: 1006
 ADEC Segment Length: 906m



Map Key: PWS-281
 Name: C. DILLON
 Date: 4/8/90
 Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-101 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSTRAINTS

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

FOSC

DATE

6-10-90

Prepared By:

Edm P Phillips

Date

6/9/90

↑↑

KN-108

KN-101

WORK
AREA

KN-102

D

KN-110

KN-103



Exxon Company, USA
Map K-61 PMS-KN-101



ECOLOGY MAP

SEGMENT KN-101

SUBDIVISION A (1 of 1)

METERS

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

SHORELINE EVALUATION

SEGMENT ST/ KN-101 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 29 m: Narrow 298 m: V.Light 543 m: No Oil 36 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> </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: Recommend bioremediation of oil-coated areas. avoid eel grass during treatment. Work should be conducted after 6/1 and only with permission of USFWS due to eagle nest constraint.

SEE ADDENDUM dated 6/9/90

TAG COMMENTS: MONITORS TO ASSESS PRIOR TO BIOREMEDIATION
THE PRESENCE OF TAR PATTIES AND THE NEED FOR
PICK UP.

TAG APPROVAL DATE: 4/26/90
ADEC ART WEINER Art Weiner
EXXON ANDY TATE Andy Tate
NOAA Burt Wescott Burt Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC: [Signature] DATE: 4-27-90

SHORELINE EVALUATION

SEGMENT ST/ KN-101 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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SHPO SIGNATURE: *Charles E. Hume*

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 29 m: Narrow 298 m: V.Light 543 m: No Oil 36 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> </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: Recommend bioremediation of oil-coated areas, avoid eel grass during treatment. Work should be conducted after 6/1 and only with permission of USFWS due to eagle nest constraint.

TAG COMMENTS: MONITORS TO ASSESS PRIOR TO BIOREMEDIATION
THE PRESENCE OF TAR PATCHES AND THE NEED FOR
PICKUP.

TAG APPROVAL DATE: 4/20/90

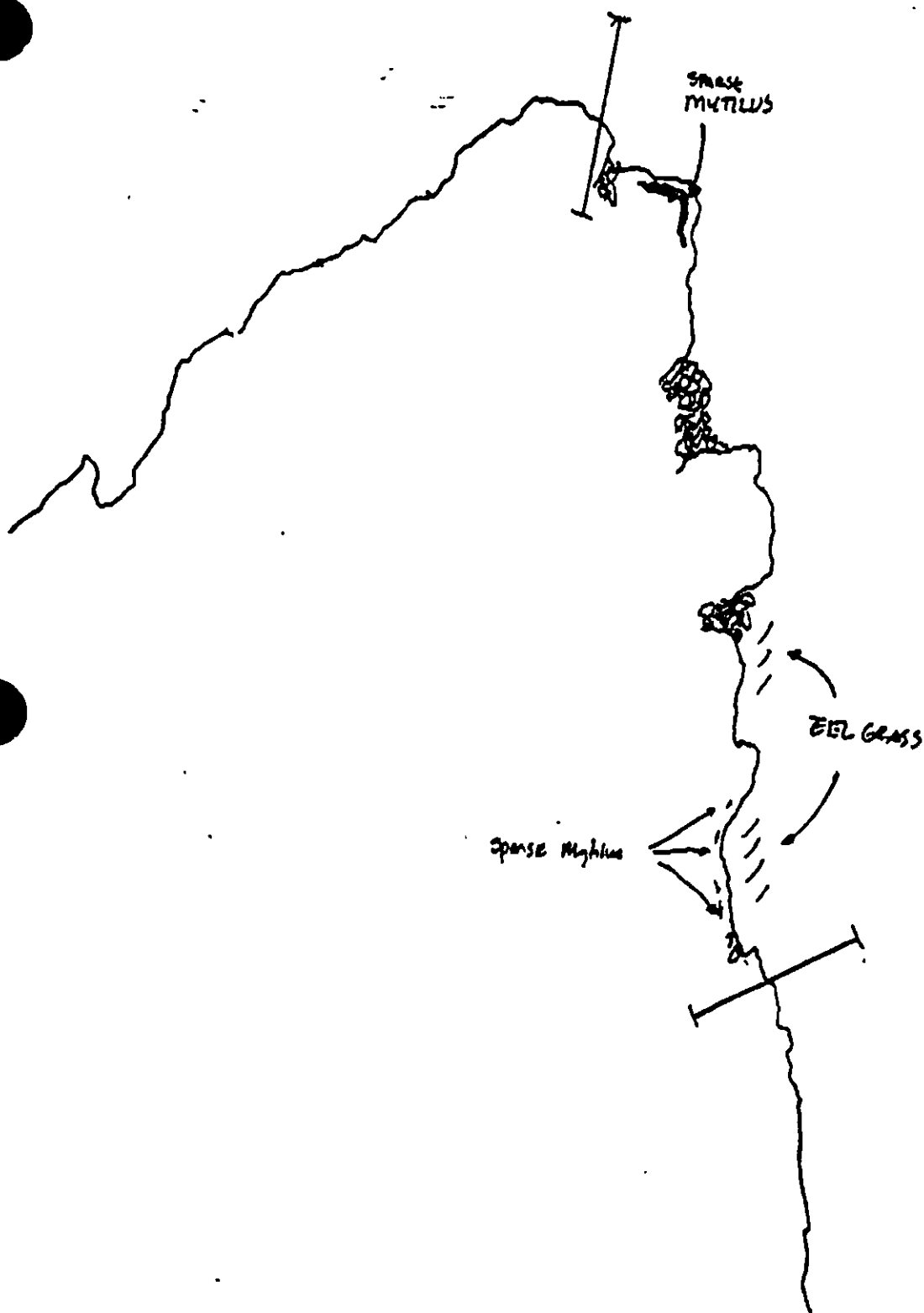
ADEC ART WEINER Art Weiner
EXXON ANDY TGAZ Andy TGAZ
NOAA Burt Wescoat Burt Wescoat
USCG KENNETH KEANE Kenneth Keane

FOSC: *W L*

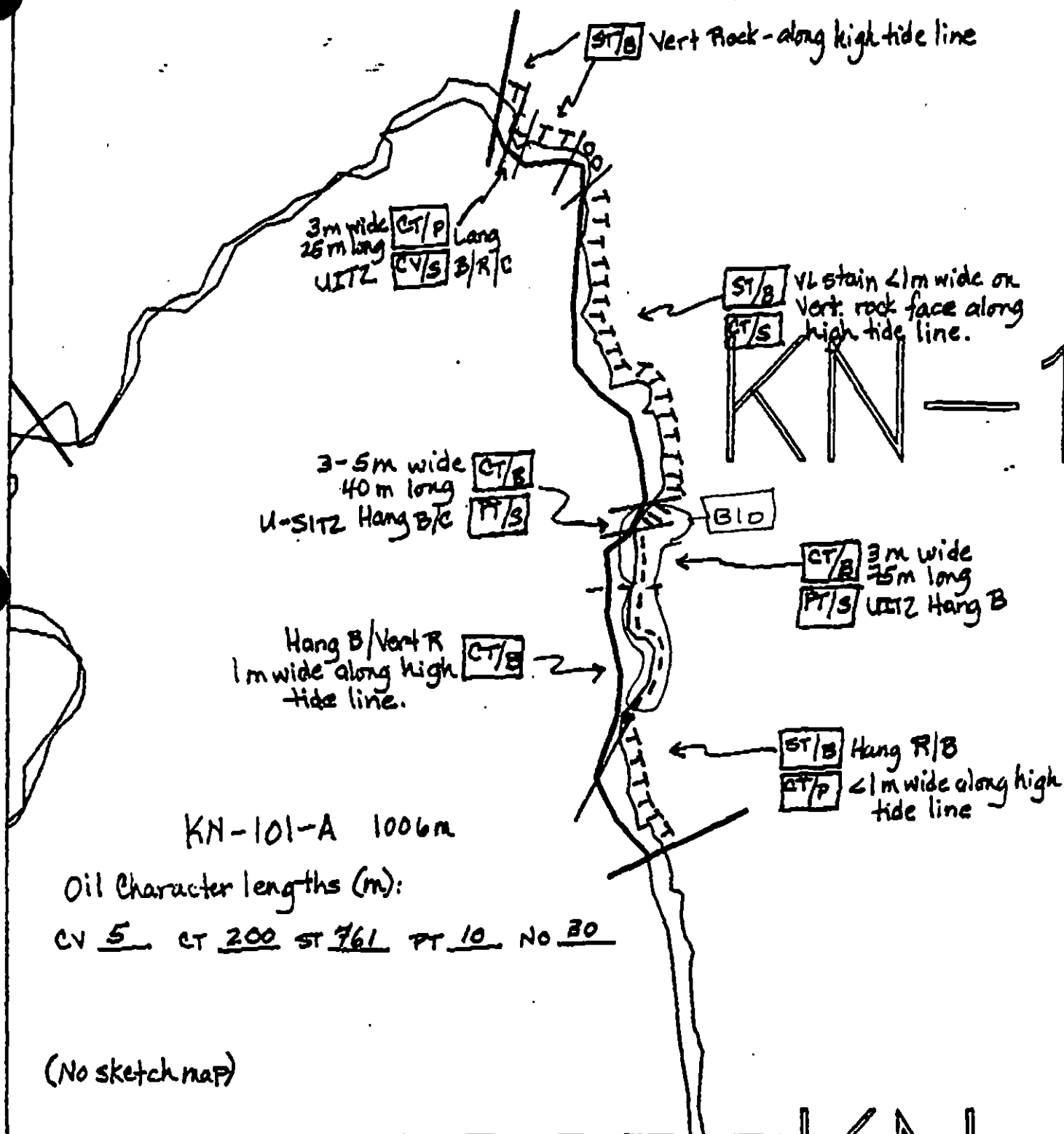
DATE: 4-27-90

KN101

APRIL 9 1990



KN101



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

KN-101
 Exxon Segment Length: 1006
 ADEC Segment Length: 906m

0 100 200 300
 METERS

Map Key: PWS-281

Name: C. DILLON

Date: 4/8/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 101 SUB: A REGION: PWS SURVEY DATE: 5/17/91

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 A. Smith Date: 6/09/91

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 4 1991

FOSC APPROVAL DATE: 6/09/91

ADEC John Bane

FOSC E. E. Page

EXXON Beal

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

USCG Ed Mall

NOAA John Smith

**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. 2 SEGMENT KAL-101 SUBDIVISION A DATE 5/17/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☒ NTR



TREATMENT RECOMMENDED

The HOR w/in area "E" is largely inaccessible under Boulder and is not treatable. Like wise, area H is inaccessible in jagged rocks.
 → The Southern end of this Subdivision was not surveyed because the eagle flew just as we neared completion. At that point the AP/SOR appeared to pick up slightly, ahead of mapped area. Most of the AP/SOR to that point was inaccessible, however the data should be reconsidered when survey is completed.
 The cover in area "C" is thick and shows little change from my SSAT Visit. This cover is remarkable but w/ difficult footing. The breakdown of this cover will be slow since it is protected by the outcrop that is mapped to the North.

EXXON

NAME C.M. Katsimpalis

SIGNATURE C.M. Katsimpalis

☒ NTR

NO TREATABLE OIL REMAINS ON THIS SEGMENT.
 ACCURATE INFO. IN OG REPORT.

LANDMANAGER

NAME Dennis S. Kennedy OF USFS

SIGNATURE D.S. Kennedy

☒ NTR

Only 2 people were given access to beach as directed by USFWS eagle monitor. OG and ADEC rep. went thru this, thus Bio info. is missing.
 Eagle is nesting and was disturbed by survey - did return to nest after crew left area.

USCG/NOAA D. SIMONEAU-BENTLEY NOAA

NAME Bruce M. P. Zenone USCG

SIGNATURE Bruce M. P. Zenone

☐ NTR

As the OG noted, most of the remaining oil is a discontinuous band of coat, cover and stain in the HIRZ. The covering in area C could be physically limiting the growth of barnacle spot. Directly beneath this area, anemones were observed. Since this is a relatively small oiled area near a diverse habitat, no treatment is recommended D3-B

CG - No TREATMENT RECOMMENDED. Good OG Rpt. 3

MATSAP SHORELINE OILING SUMMARY

PAGE 1 OF 5TEAM NO. 2OG ReimerBIO S. BanSEGMENT KN 101ADEC P. MontesanoLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON C. KatsimpalisUSCG/NOAA BMI ZENONE
D. Simecek-BentleyDATE 5/17/91TIME 11:27 to 12:57TIDE LEVEL -1.81 ft. to 2.04 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 566 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M 25 m N 34 m VL 492 m NO 15 m US 340 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					S	S					R	V	0.5	45		X			
B						S					R	V	0.5	20		X			
C					B						R	V	2	4		X			
D					P	P					R	V	1	4		X			
E				S		S	S				B/R	N	4	20		X			
F						S	S				R	V	1	30		X			
G						S	S				R/B	N	2	30		X			
H				S		S					B	M	5	10		X			
I	S			S		S	S				B	H	4	15		X			
J						B	B				R	V	1	6		X			
K							P				R	V	1	20		X			
L				S		S	S				R/B	H	4	20		X			
M						S	S				R/B	V	0.5	450		X			

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

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	7				X				0-7	N	-	-		X			B-CP	See Below
2	10		X						0-10	N	-	-		X			B-GPG	See Below
3	10		X						0-5	Y	-	-		X			B-PFC	See Below
4A	10				X				0-5	Y	-	-		X			B-G	See Below
4B			X						7-9		-	-						
									-									
									-									
									-									
									-									

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

OG COMMENTS:

Pit #1 - interstitial (crevice) between boulders and bedrock, angular material hindered further digging

Pit #2,3 - interstitial between boulders - does not appear to be a subsurface layer, but oil trapped in finer sediments between and partially under boulders

Pit #4 - crevice between boulder and bedrock outcrop (continued)

revised 5.21.94
REVIEWED: 5/11/94, m.

DATE 5/17/91

[illegible]

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

OG COMMENTS:

This segment is predominantly rock cliff with occasional boulder / lag deposits. Three shoreline sections, where access was possible were surveyed by foot. The remainder was near vertical Rock and was surveyed by skiff.

Note: The southern $\frac{1}{3}$ of the Segment was Not Surveyed due to Eagle constraints.

The majority of the oiling found was the remains of BTR on rock cliffs and boulders along the HITE. Most of these are sporadic in nature and are highly weathered. There are a few exceptions where cover with pine needles was found on the sheltered sides of rock faces.

REVIEWERS: 5/17/91
reviewed 5.21/94

Segment Boundary

SITE #1 (walk)

M
CT/ST 1-5%
Discontinuous BTR
NITZ along Rock cliff
and Boulder Lag
1/2 m x 450m

skiff cliff
(Rock cliff)

walk
(Rock-
BLD Lag)

skiff cliff
(Rock cliff)

Site #2

UNSURVEYED
(EAGLE)

Segment Boundary

HOR
1x4m
est. no
field data

#10

1 HOR
2 LOR

STEEP BLD
BEACH

PK

A
CT/CU 1/2 x 45m (<2%)
Remains of BTR on
VERTICAL Rock NITZ

B
CT 1/2 x 20 m (2%)
Remains BTR - VERT Rock

C
CU 2 x 4 m 80%
Pine needles - VERT Rock

D
CU/CT 1 x 4 m 20%
VERT Rock - Pine Needles

E
CT/ST 5% - SOR 1%
4 x 20 m
Rock and Boulders

F
CT/CU 1 x 30 m <5%
Remains of BTR on
Vertical Rock

HOR
5x10m
est. no
field data

(North)

(South)

High Angle
Rock/Bld

Boulder
Beach

VERT CLIFF

SEA
SLIP

G
CT/CU 2 x 30 m <5%
discontinuous BTR
on Rock/BLD NITZ

H
CT 2% 5 x 10 m
SOR (Heavy) 10% between
Boulders. (interstitial)

I
CT/ST 10% BLD/ROCK
SOR/AP 2% patchy
between Boulders (4x15m)

J
CT/CU 1 x 6 m 60%
VERT. Rock - Pine needles

K
CT 1 x 20 m 20%
VERTICAL Rock

L
CT/ST 5%
SOR 1%
4 x 20 m
BLD/ROCK

SURVEY
STOPPED
DUE TO
EAGLE

(UNSURVEYED
BEYOND THIS
LINE

OG SKETCH
KN-101-A
MAY 17, 1991
11:27 - 12:57
Doug Reimer

AVERAGE BEACH WIDTH = 20 meters

Reviewed: 5/22/91 me
revised 5.21 gy

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
 SEGMENT # KN-101A
 SUBDIVISION A
 SEA STATE Calm
 PHOTOGRAPHS: ROLL # — FRAME # —
 DATE 17 May 91
 TIDAL HEIGHT(Range) -2 to +2
 BIOLOGIST SM BAN
 WIND SPEED/DIRECTION Calm

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

A+B: CT/LV in lichen + green algae zone, lower ITZ with dense algae, barnacles

C: CV on this rock is in the Barnacle zone. If removed, area could be open for recolonization by barnacle sp. However, area immediately beneath rock supports a diverse habitat including anemones, Nuccella, spot, littorines, limpets. This area should be protected.

D: As documented on map. Barnacles, space mussels and littorines on boulders below oil. Not as sensitive as "C".

E: As documented, Area seaward of Pils has Fucus recruits + adults, littorines and mussels.

F, G, H: CT/CV high in ITZ. Lower intertidal dense + diverse.

I, J, K, L: These areas not walked by bird due to eagle constraint. Obv. ADEC reported that CT/CV/ST was situated high in ITZ in the lichen + green algae zone. Oil also found at upper edge of Fucus zone.

If treatment is recommended at "C", care should be taken to protect the surrounding ITZ from physical disturbance.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 ♂, 1 ♀ (juv)	2	
Seabirds	Cormorant	2	
Waterfowl			
Gulls/kittiwakes	Tern	1	
Shorebirds			
Corvids			
Other Birds	Parasitic Jaeger	1	

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

Sea Otters			
Pinnipeds (specify)			
Es (specify)			
Sealion	2		

Shoreline subdivision map showing important biological features attached.

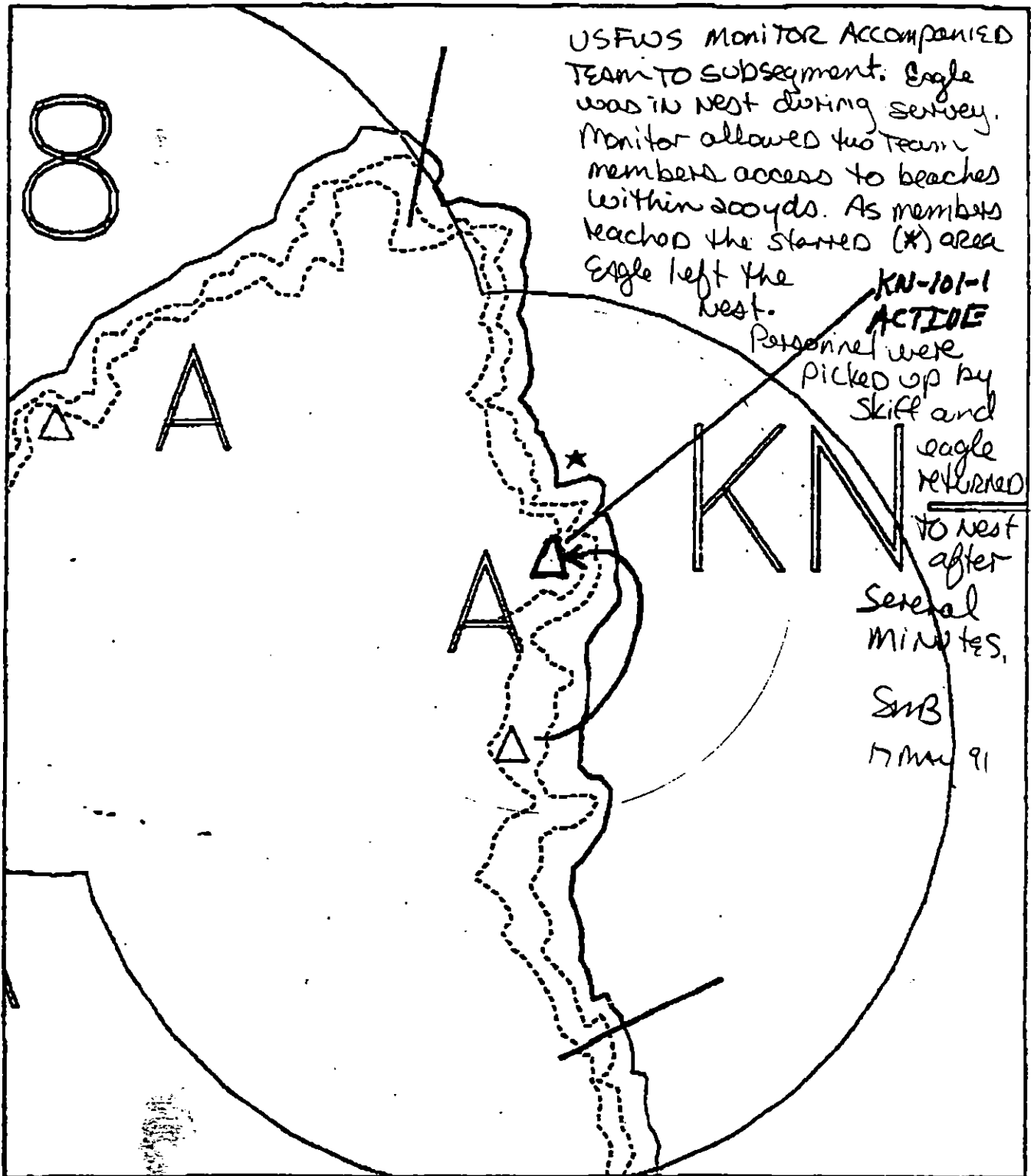
8

USFWS MONITOR ACCOMPANIED
TEAM TO SUBSEGMENT. Eagle
was in nest during survey.
Monitor allowed two team
members access to beaches
within 200 yds. As members
beach the started (*) area
Eagle left the
nest.

**KN-101-1
ACTIVE**

Personnel were
picked up by
skiff and
eagle
returned
to nest
after
several
minutes.

SNB
17 May 91



KN0101

Segment Reference Map

Map Key: KN/KN0101

METERS

0 110 232

AT State Plane Zone 4
NAD83



EAGLE NEST

ATTACHMENT 1

Segment Boundary

SITE #1 (walk)

mr: Lichen only

skiff cliff (rock cliff)
walk (rock log) (BLD log)
skiff cliff (rock cliff)

E: CT/ST IN
Lichen & moss
zone: SOR
with Fucus
Adjacent
Amphipods under
rocks

Fucus
recruits
littorines
& mussels

2 Horz
1 Lor

STEEP BLD
BEACH

A+B: Green algae & lichen

C: Diving littorines & limpets on cv. Barnacle shells within cv. Area immediately below cv supports *Sparta Nucella*. Boulders at base of lg rock have enormous Fucus littorines & limpets

D: Lichen in CT/cv zone, sparse barnacles beneath

F: Lichen & Algae

Site #2

UNSURVEYED (EAGLE)
Segment Boundary

High Arch Rock (BLD log)
Boulder Beach
Vertical cliff
SURVEY STOPPED DUE TO EAGLE (UNSURVEYED BEYOND THIS LINE)

G: Lichen near CT/cv

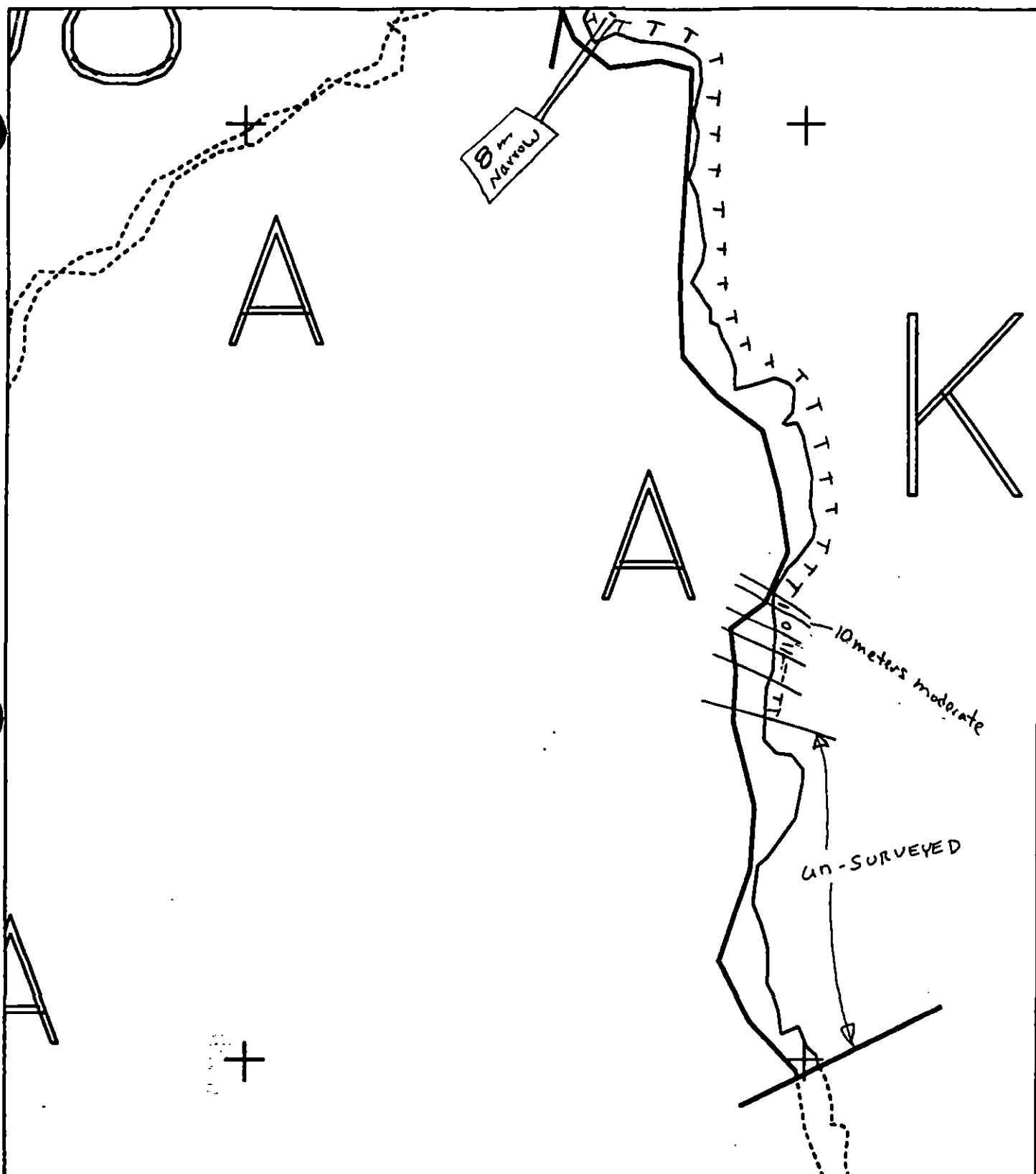
H: No biota

recently settled spot

I, J, K, L: Lichen + green algae upper edge of Fucus zone

OG SKETCH
KN-101-A
MAY 17, 1991
11:27 - 12:57
D. Reimer

AVERAGE BEACH WIDTH = 20 meters



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

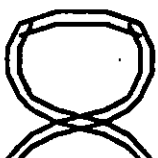
KN0101 A
 ADEC Subsegment Length: 900m
 METERS

5 100 200
 AK State Plane Zone 4
 kn0101a



Subdivision Field Map
 Map Key: KNKN0101Aa
 Name: Reimer
 Date: 5/17/91
 Date Entered:

Reviewed: MC 5/22/91
 revised 5.21 94



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0101 A

ADEC Subsegment Length: 906m

METERS

5 100 200

AK State Plane Zone 4
kn0101ab



Subdivision Field Map

Map Key: KNKN0101Ab

Name: Reimer

Date: 5/17/91

Date Entered:

Reviewed: mc 5/22/91
Initials: mc 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: KN 101 SUB: A REGION: PWS SURVEY DATE: 5/17/91

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:

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

COMMENTS:

INITIAL: _____

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.

MATSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN-101 SUBDIVISION A DATE 5/17/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☒ NTR



TREATMENT RECOMMENDED

The NOR w/in area "E" is largely in accessible under Boulders and is not treatable. Like wise, area H is inaccessible in jagged rocks.

→ The Southern end of this Subdivision was not surveyed because the eagle flew just as we neared completion. At that point the AP/SIR appeared to pick up slightly, ahead of mapped area. Most of the AP/SIR to that point was inaccessible, however the data should be recommended when survey is completed.

The cover in area "C" is thick and shows little change from my SSAT visit. This cover is removable, but w/ difficult footing. The breakdown of this cover will be slow since it is protected by the outcrop that is mapped to the north.

EXXON

NAME C.M. Katsim Palis

SIGNATURE C.M. Katsim Palis

☒ NTR

NO TREATABLE OIL REMAINS ON THIS SEGMENT.
ACCURATE INFO. IN OG REPORT.

LANDMANAGER

NAME Dennis S. Kennedy OF USFS

SIGNATURE D.S. Kennedy

☒ NTR

Only 2 people were given access to beach as directed by USFWS eagle monitor. OG and ADEC rep. went thru this, thus Bio info. is missing.
Eagle is nesting and was disturbed by survey - did return to nest after crew left area.

USCG/NOAA D. SIMONE-BENTLEY NOAA

D. Simone-Bentley NOAA

NAME Bruce M. P. Zenone USCG

SIGNATURE Bruce M. P. Zenone

☐ NTR

As the OG noted, most of the remaining oil is a discontinuous band of coat, cone and stain in the CHITZ. The covering in area C could be physically limiting the growth of barnacle spot. Directly beneath this area, anemones were observed. Since this is a relatively small oiled area near a diverse habitat, no treatment is recommended D3-B

6- NO TREATMENT RECOMMENDED. Grab OG Rpt. 3

TEAM NO. 2OG ReimerBIO S. BanSEGMENT KN 101ADEC P. MontesanoLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON C. XatsimpalisUSCG/NOAA BMI ZEHONE
D. Simecek-BaattyDATE 5/17/91TIME 11:27 to 12:57TIDE LEVEL -1.81 ft. to 2.04 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 566 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M 25 m N 34 m VL 49 m NO 15 m US 340 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					S	S					R	V	0.5	45		X			
B						S					R	V	0.5	20		X			
C					B						R	V	2	4		X			
D					P	P					R	V	1	4		X			
E				S		S	S				B/R	H	4	20		X			
F						S	S				R	V	1	30		X			
G						S	S				R/B	H	2	30		X			
H				S		S					B	M	5	10		X			
I	S			S		S	S				B	H	4	15		X			
J						B	B				R	V	1	6		X			
K							P				R	V	1	20		X			
L				S		S	S				R/B	H	4	20		X			
M						S	S				R/B	V	0.5	450		X			

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 —

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	7				X				0-7	N	—	—		X			B-CP	See Below
2	10		X						0-10	N	—	—		X			B-CPG	See Below
3	10		X						0-5	Y	—	—		X			B-PG-C	See Below
4A	10				X				0-5	Y	—	—		X			B-G	See Below
4B			X						7-9		—	—						
									—									
									—									
									—									
									—									

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

OG COMMENTS:

Pit #1 - interstitial (crevice) between boulders and bedrock, angular material hindered further digging

Pit #2,3 - interstitial between boulders - does not appear to be a subsurface layer, but oil trapped in finer sediments between and partially under boulders

Pit #4 - crevice between boulder and bedrock outcrop (continued)

revised 5.21.98
REVIEWED: 5/22/91 MC

TEAM NO. 4

SEGMENT KN 101

SUBDIVISION A

DATE 5, 17, 191

[illegible]

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

OG COMMENTS:

This segment is predominantly rock cliff with occasional boulder / lag deposits. Three shoreline sections, where access was possible were surveyed by foot. The remainder was near vertical Rock and was surveyed by skiff.

Note: The southern 1/4 mile

Note: The southern $\frac{1}{3}$ of the Segment was Not surveyed due to Eagle constraints.

The majority of the oiling found was the remains of BTR on rock cliffs and boulders along the AITC. Most of these are sporadic in nature and are highly weathered. There are a few exceptions where cover with pine needles was found on the sheltered sides of rock faces.

Reviews: 5/11/91
reviewed 5.21/94

Segment Boundary

SITE #1 (walk)

M
CT/ST 1-5%
Discontinuous BTR
NITZ along Rock cliff
and Boulder Lag
1/2 m x 450m

skiff cliff
(Rock cliff)

walk
(Rock-
BLD Lag)

skiff cliff
(Rock cliff)

Site #2

UNSURVEYED
(EAGLE)

Segment Boundary

OG SKETCH
KN-101-A
MAY 17, 1991
11:27 - 12:57
Doug Reimer

AVERAGE BEACH WIDTH = 20 meters

HOR
1x4m
est. no
field data

HOR
5x10m
est. no
field data

High Ark
Rock/BLD

Boulder
Beach

VERT CLIFF

SEA
CUT

SURVEY
STOPPED
DUE TO
EAGLE

(UNSURVEYED
BEYOND THIS
LINE)

A
CT/CV 1/2 x 45m (<2%)
Remains of BTR on
VERTICAL ROCK NITZ

B
CT 1/2 x 20 m (2%)
Remains BTR - UPRT ROCK

C
CV 2 x 4 m 80%
Pine needles - UPRT ROCK

D
CV/CT 1 x 4 m 20%
VERT ROCK - Pine Needles

E
CT/ST 5% - SOR 1%
4 x 20 m
Rock and Boulders

F
CT/CV 1 x 30 m <5%
Remains of BTR on
VERTICAL ROCK

G
CT/CV 2 x 30 m <5%
discontinuous BTR
on ROCK/BLD NITZ

H
CT 2% 5 x 10 m
SOR (Heavy) 10% between
Boulders (interstitial)

I
CT/ST 10% BLD/ROCK
SOR/AP 2% patchy
between Boulders (4x15)

J
CT/CV 1 x 6 m 60%
VERT. ROCK - Pine needles

K
CT 1 x 20 m 20%
VERTICAL ROCK

L
CT/ST 5%
SOR 1%
4 x 20 m
BLD/ROCK

REVIEWED: 5/21/91
revised 5.21 94

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 17 May 91
 SEGMENT # KN-101A TIDAL HEIGHT (Range) -2 to +2
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

A+B: CT/LV in lichen + green algae zone, lower ITZ with dense algae, barnacles

C: CV on this rock is in the Barnacle zone. If removed, area could be open for recolonization by barnacle spat. However, area immediately beneath rock supports a diverse habitat including anemones, Nucella, spat, littorines, limpets. This area should be protected.

D: As documented on map. Barnacles, sparse mussels and littorines on boulders below oil. Not as sensitive as "C".

E: As documented, Area seaward of Pils has Fucus recruits + adults, littorines and mussels.

E, G+H: CT/CV high in ITZ. Lower intertidal dense + diverse.

I+J+K+L: These areas not walked by bio due to eagle constraint. OGE ADEC reported that CT/CV/ST was situated high in ITZ in the lichen + green algae zone. Oil also found at upper edge of Fucus zone.

→ If treatment is recommended at "C", care should be taken to protect the surrounding ITZ from physical disturbance.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 ♂, 1 ♀ (invest)	2	
Seabirds	Cormorant	2	
Waterfowl			
Gulls/Kittiwakes	Tern	1	
Shorebirds			
Corvids			
Other Birds	Parasitic Jaeger	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
er (specify)			
Sealion	2		

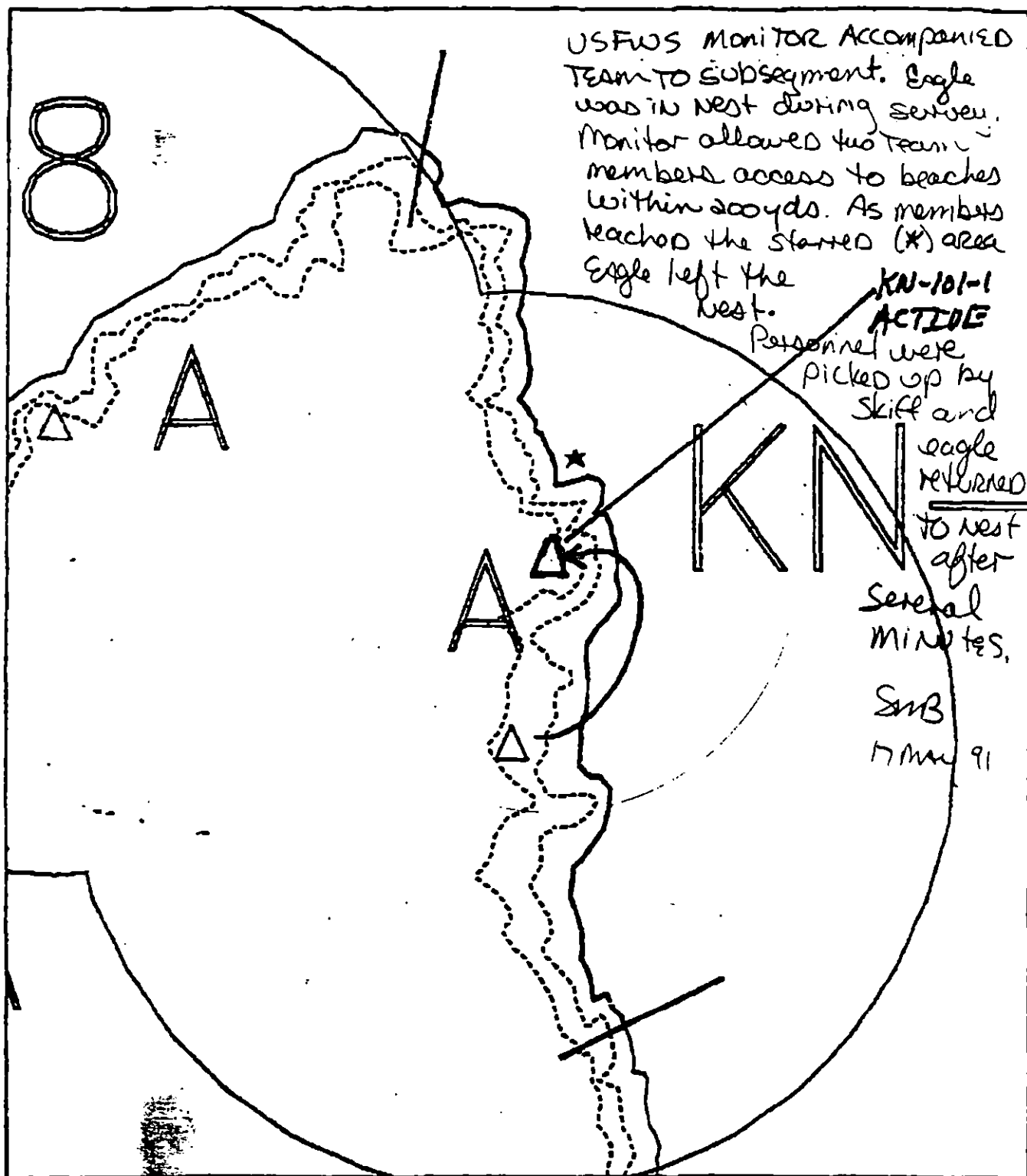
Shoreline subdivision map showing important biological features attached.

USFWS Monitor Accompanied
Team to Subsegment. Eagle
was in nest during service.
Monitor allowed two team
members access to beaches
within 200 yds. As members
leached the started (*) area
Eagle left the
nest.

KN-101-1
ACTIVE

Personnel were
picked up by
skiff and
eagle
returned
to nest
after
several
minutes.

SMB
17 Mar 91



KN0101

Segment Reference Map

Map Key: KHIKHO:OI

HT888

110

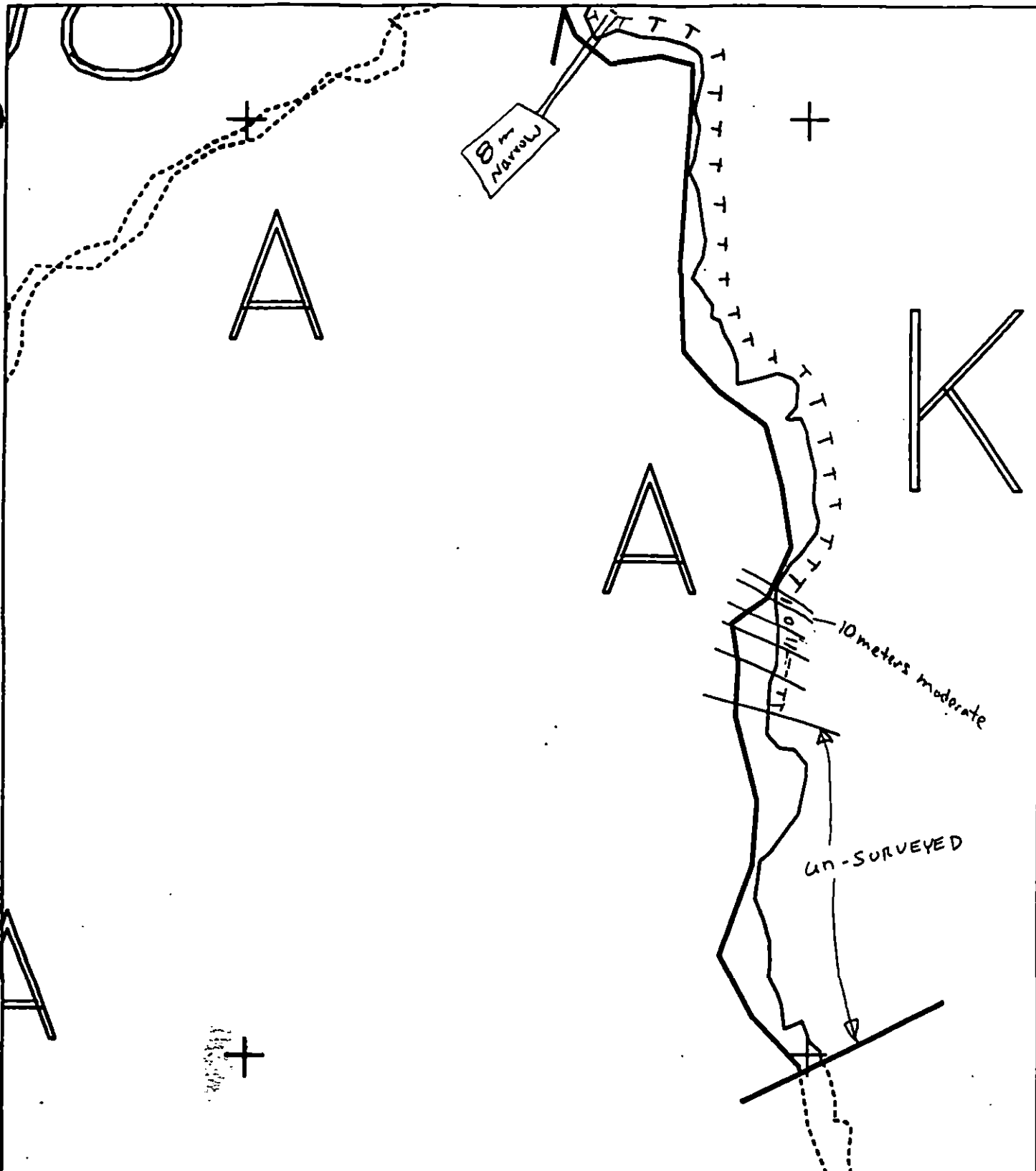
42

AK State Plane Zone 4
440101

△

EAGLE NEST

ATTACHMENT,



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

KN0101 A
 ADEC Subsegment Length: 906m
 METERS
 0 100 200
 AK State Plane Zone 4
 1480101a

Subdivision Field Map
 Map Key: KNKN0101Aa
 Name: Reimer
 Date: 5/17/91
 Date Entered:
 EXON

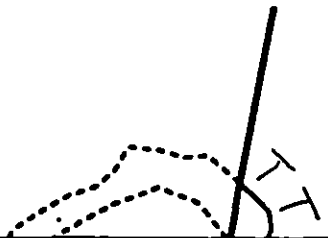
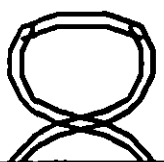
Reviewed: MC 5/22/91
 revised 5.21.94

+

+

+

+



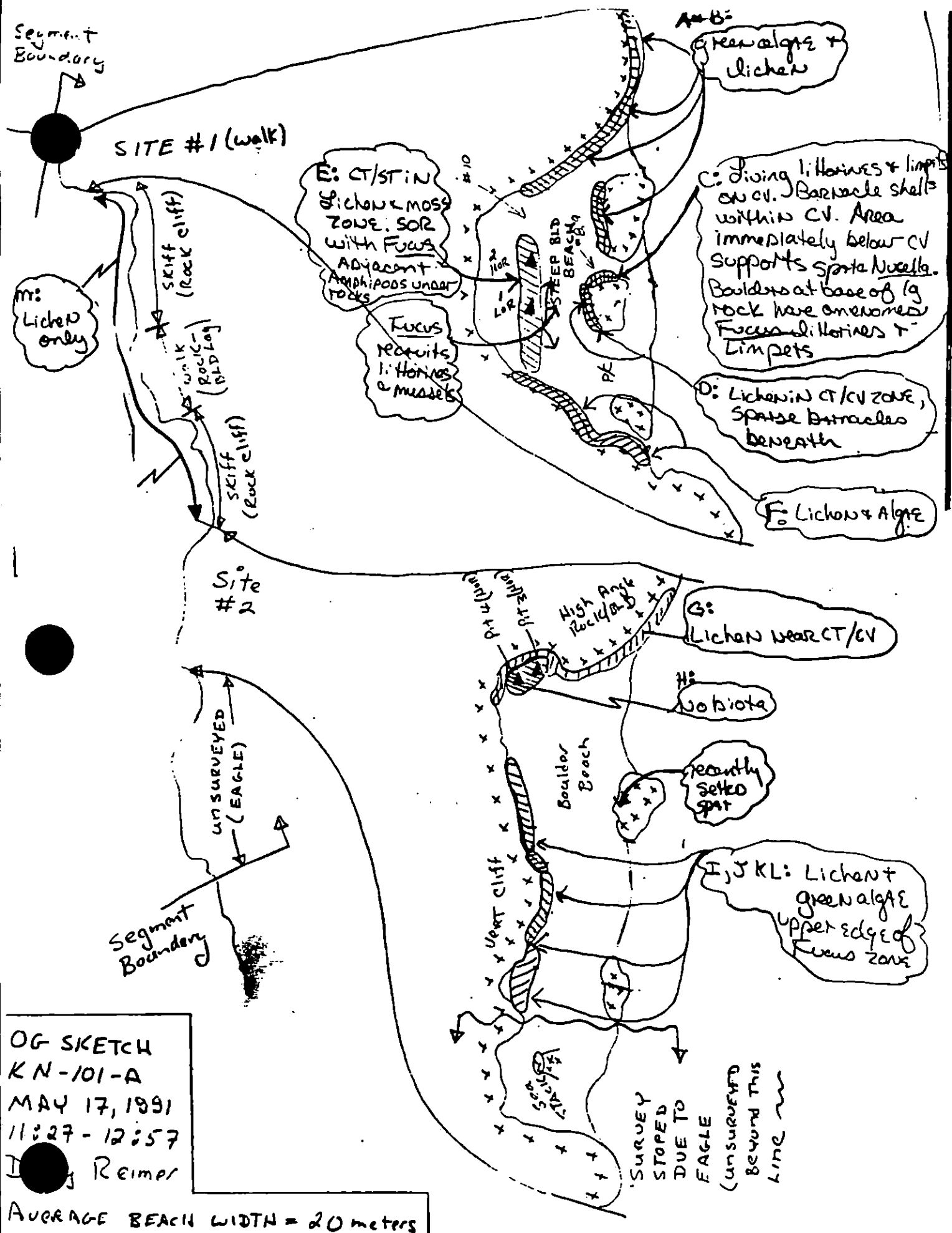
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

KN0101 A
ADEC Subsegment Length: 908m
METERS
0 100 200
AK State Plane Zone 4
kn0101ab



Subdivision Field Map
Map Key: KNKN0101Ab
Name: Reimer
Date: 5/17/91
Date Entered:

Reviewed: me 5/24/91
reviewed 5.21.94



OG SKETCH
 KN-101-A
 MAY 17, 1991
 11:27 - 12:57
 Reimer

AVERAGE BEACH WIDTH = 20 meters

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-102

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-102 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
No specific constraints identified.

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 13 m: Medium 0 m: Narrow 12 m: V.Light 830 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 18 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 removal of surface and subsurface tarmat, 2) manual pick up of mousse, 3) bioremediation of areas shown on attached sketch map. No specific work window constraints.

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 / KN-102-A SUBDIVISION: A DATE 4/10/90

USCG NAME David A. Schneider SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED IS3/USCGR

I concur with both ADEC's & the Land Manager's comments below. Cobble/Pebble beach at the southern end of the subdiv will require extensive manual clean up measures to remove ^{large} asphalt patch and scrapping of large boulders and rock faces. Band of coat on Hang. and vert ^{coat off} rock faces should be scrapped off by ^{using a skiff} (along rest of subdiv).

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Remove extensive (20x15m) soft Asphalt area which is illustrated on Sketch map. Note that the Asphalt continues under clean sediments to the North on beach as well as under the UITE berm. This is easily shoveled away and is in the process of continued hardening. Supratidal is snow covered above Asphalt and may cover part of oiling.

LAND MANAGER

NAME JANETIA PRITCHARD SIGNATURE Janetia Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual removal of tar patches. Scrap continuous coat off large boulders. Remove surface. Boulders, clear up large asphalt patch and replace rocks. Area in Supratidal.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ KN-102
 BIO J. BARRY LAND REP J. FRITCHARD SUBDIVISION A
 EXXON A. SNOOK ADEC P. MONTESANO TIME 19:30 to 20:15
 TEAM NO.: 6 TIDE LEVEL: + .5 to + 1 DATE 04/08/90
 EST. SUBDIVISION LENGTH: 816 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 35 % B 60 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 20 % Hang 65 % Vert 15 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 10 m M 0 m N 40 m VL 266 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	N	S	E	W	1	2	3	4	5	6	7	8	SW	SE	NE	NW
ASPHALT PAVEMENT		X											X	X		
POOLED																
COVER																
COAT	X	X		X		X									X	
STAIN		X	X							X					X	
MOUSSE				X						X					X	
PATTIES																
TARBALLS																
FILM																
NO OIL																X

Snow on beach only

PAVEMENT: H F (S) 150 sq. m by 2-6PATTIES / TARBALLS 0 BAGNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTE
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-6-5Frames 11, 12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5	6	7	8			
1	25			X			15-18	X					X				X		P/G (buried asphalt layer - soft)
2	12	X					5-10	X				X					X		P/G
							.												
							.												
							.												
							.												

COMMENTS SUBDIVISION IS ENTIRELY HANG AND VERT ROCK AND BOULDER WITH A PATCHY OR BROKEN STAIN AND SPORADIC COAT UP TO 1m WIDE ACROSS THE HIGH TIDE LINE.

A LANG COBBLE/PEBBLE BEACH, WITH LANG BOULDERS AT THE NORTH END AND A VERTICAL ROCK FACE AT THE SOUTH END, IS MORE HEAVILY OILED WITH A VARIETY OF OIL CHARACTERS. THIS BEACH IS SHOWN ON THE ATTACHED SKETCH MAP. 2 PITS ON THIS BEACH.

00 C. LON

SEGMENT ST/ KN-102

SUBDIVISION A

DATE 04/08/90

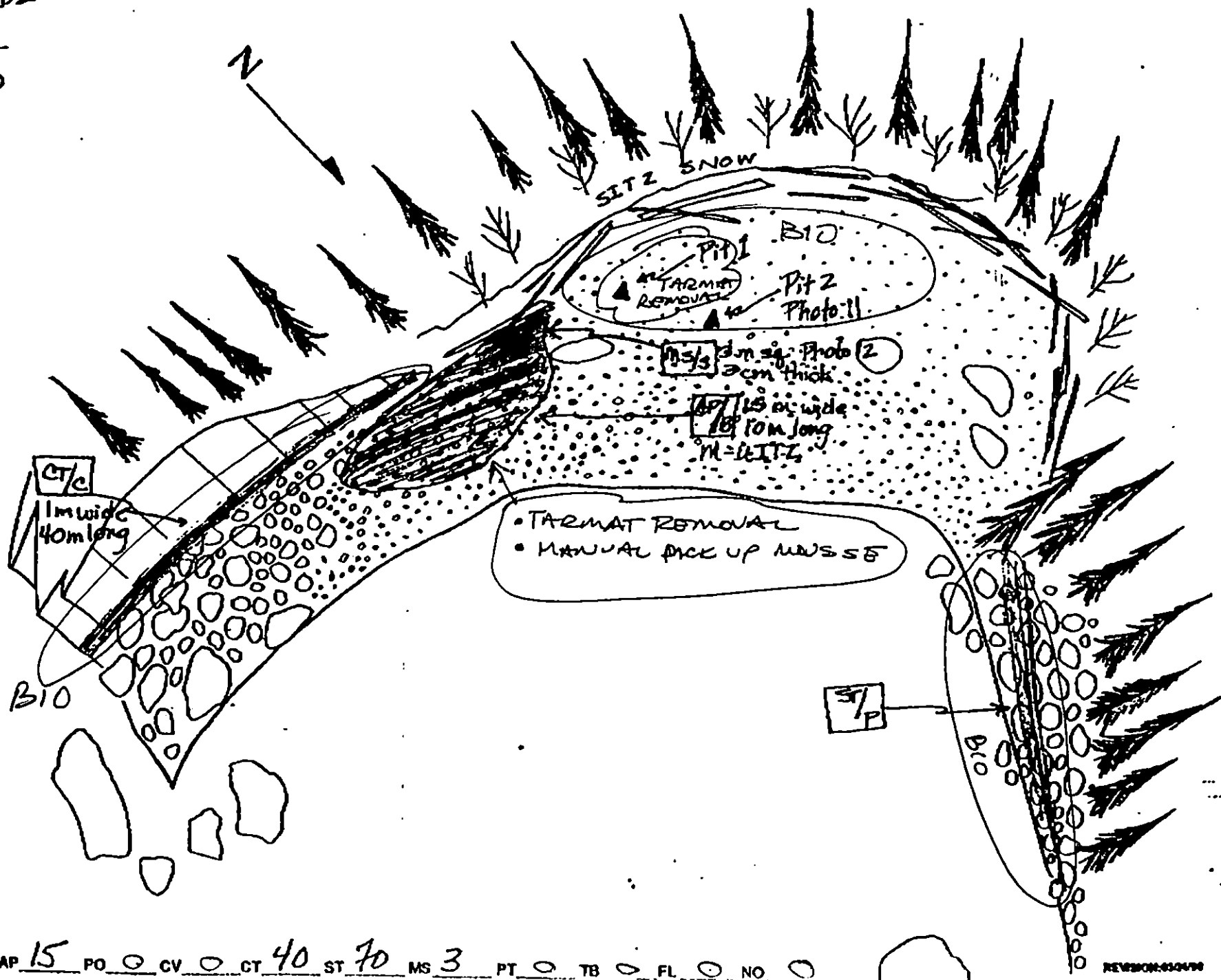
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Side Entry
- ☐ Oil Desc.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/CWL
- ☐ 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
- Oil & Vegetation
- Photo location, direction, and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 6/72

Segment ST / KN 102 Subdivision A - ALL Date (mo / day / yr) 8 APRIL 1990Time (24 hr) 1930 - 2045 Biologist JIM BARRY(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 10 Moderate 80 Low 10

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

Photographs:
Roll No. NO PHOTO

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:

EAGLES - 3 Common Merganser - 2 Pigeon Guillemot
Seal - 2

Ecological Considerations: 64 - Special Use designation

No special considerations relevant to cleaning operations

START 1930 TIDE WINDOW +0.5 → +10
STOP 2045

I General Comments.

Segment includes a section of moderately exposed ~~coast~~ coastline with vertical cliffs and boulder beaches as the primary habitat types. Biotra are generally moderate in abundance. This segment is typical of other segments with similar topography and exposure.

Oil related distributions of biotra exist only in the high upper zone where oil is present as a cover that may inhibit lichen & high intertidal organisms. Oil-related activities last summer may have impacted the intertidal to a minor degree. ~~However, the~~

II Major Species

A. Barnacles - generally, moderate to high abundance for 3 major species.

B. Mussels. Mussels are moderate to sparse along most of the segment, and denser in small patches. Their rarity may be caused by oil-related activity, but it is very unlikely unless ~~clear~~ oil contamination and cleaning operations were extensive. One beach and one headland at the south end of the segment has ~~some~~ moderate to dense mussels.

C. Gastropods - moderate periwinkles and limpets, but high densities (~40/m²) in some areas, of whelks (*Nucella lamellosa*) (This entire area has been this way)

Fucus. Generally denser in the mid to low zone for juveniles adults, and sporlings.

~~KN102~~ KN102

April 8 1990

3/6

III. Other Species

"Slime-forming" algae ~~are~~ abundant in the low zone. Several species of red and green algae comprise this group including *Acosphenia*, *Cryptosiphonia*, diatoms, *Enteromorpha*, *Ulva*, and others.

B MARINE INVERTEBRATES

1) ANEMONES

- EPIACTIS RITZELI ? S12*
- URTICINA CRASSICORNIS ?
- Anthopleura elegantissima ?
- A. artemesia S12
- A. xanthogrammica?

2) Annelid Worms

Polychaetes

Nereidae ?

Nephtyidae ?

Serpulidae

Serpula S12*

Crucigera S12*

Spirorbidae

Spirorbis M-D123*

3) Peanut Worms - Sipunculid

Paiscolosema theesites ?

4) MOLLUSCS

a) CHITONS

CATHARINA TUCATA S12*

Tonicella LINATA R12

MORRISIA spp. ?

b) Snails - Gastropods

Littorina scutulata M123*

L. sitkana M123*

Nucella lamellosa D123*

N. emarginata D123

Scarlissa dira M123

Amphissa columbiana R12

Tachyrrhynchus spp. R12

c) Nudibranchs

Lamellideris fusca R12

d) Limpets

Lottia digitalis S12*

Acmaea mitra R12*

Lottia persena M12*

d) Limpets (cont)

Tectura scutum S12

T. persena S-R12

Bipharosia theesites R-S12

Diadema aspera ?

e) Mussels -

Mytilus edulis M-S12

f) Clams

Single - PODOSSMUS Sepio S12

Hiatella spp. ?

Prototheca staminea ?

Macoma spp. ?

g) Crustaceans

1) BARNACLES

Sembalanus cariosus M-D123

Balanus glandula M123*

Chthamalus dalli M123*

2) Crabs

Haplogaster spp S23

Hemigrapsus oregonensis S23

Pagurilla spp. R23

Hermit Crabs - Paguridae M12

3) Beach Hopper

ISOPODA ?

AMPHIPODA

Orchestra ? S23*

h) Bryozoans

Schizoporella spp. M-D23

i) Echinoderms

1) Sea Stars

M D23* Pycnopoda helianthoides

M D23* Dermasterias imbricata

M123* Leptasterias hexactis

R23 Cleasterias traskeli

R23 Orthosternus koehleri

M12* Pisaster ochraceus.

KN102

April 8 1990

APRIL 8 1990

5/6

3/

IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACRODIPHONIA D123

CLADOPHORA S12

ENTEROMORPHA M123

GREEN CRUST. ?

ULVA M123

UROSPORA M-D123

3) RED ALGAE - RHODOPHYTA

BOSSIELLA R12

CALLIARTHROD R12

CORALLINA R12

CRYPTOSIPHONIA D123

ENDOCCLADIA MURICATA S12

HALOSACCION GLANDIFORME M123

IRIDASA M-D123

MASTOCARPUS S12

MEMBRANOPTERA D123

MICROCLADIA D123

LITHOTHAMNION PACIFICUM S12

PETROCELLIS MIOENDORFFII M12

PORPHYRA spp. S-M12

RHODOMELA CANIK M-D12

RHODOMELA PALMATA M-D12

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA M-D U

AGARUM spp. M-D U

COSTARIA S-M U

FUCUS DISTICHUS D123

HEDOPHYLLUM SESSILE M U

HILDONBRANDIA M12

LAMINARIA M U

NERIOCHYSIS SLL

RALPSIA M12

SEXTOSIPHON COMENTARIA S12

★ SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

SPECIES LIST (cont)

2 Echinoderms (cont)

2) Brittle Star

Ophiodon spp.??

3) Sea Cucumber

Cucumora miniata?

3) Sea urchin

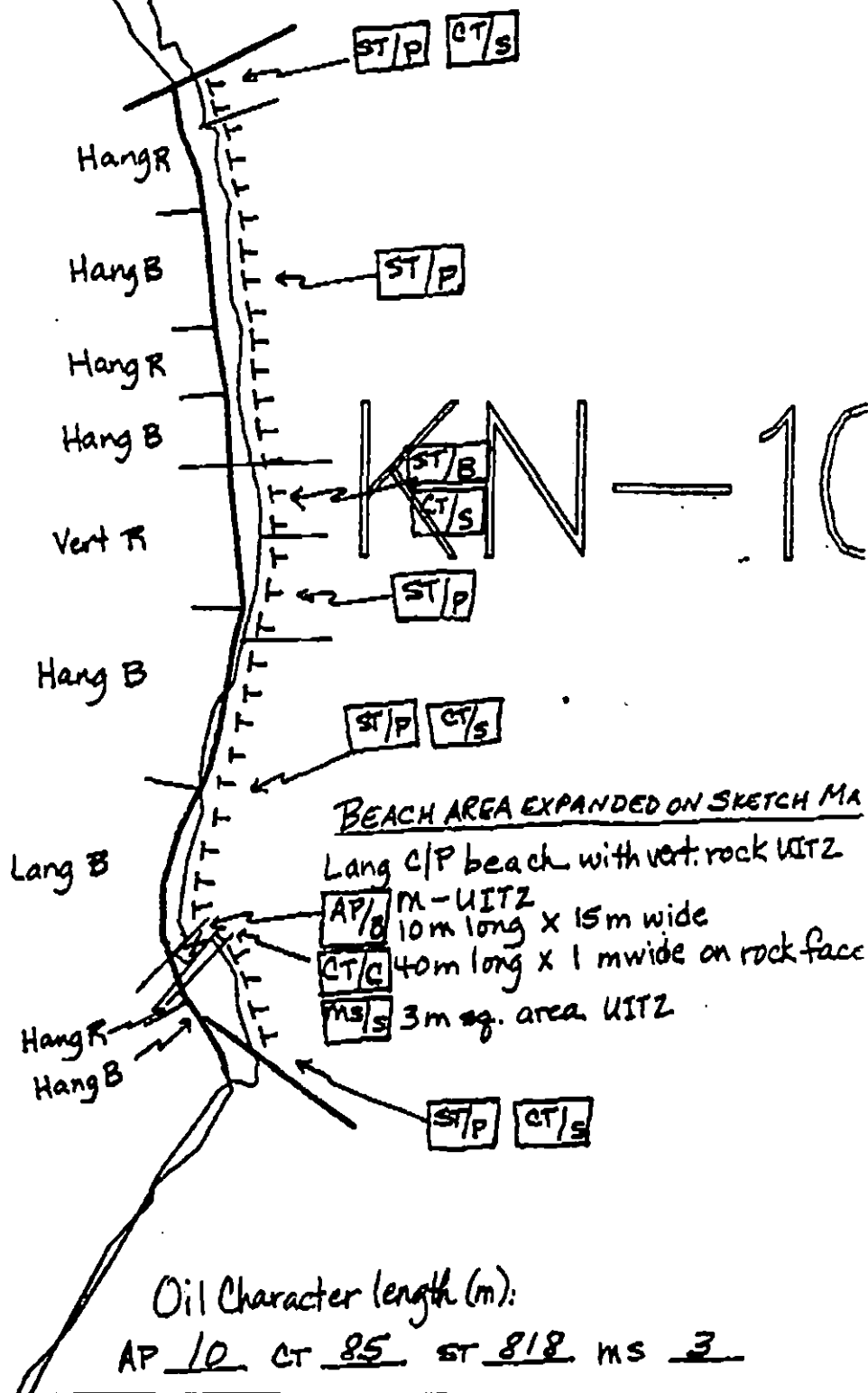
Strongylocentrotus droebachiensis R23*

C. Marine Vertebrates

1) FISH: PARUIDAE M-023*

COTTIDAE S12*

KN-102-A
916m



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

KN-102

EXXON Segment Length: 916m
ADEC Segment Length: 916m

0 100 200 300
METERS

Map Key: PWS-353

Name: C. DILLON

Date: 4/8/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-102 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual Raking	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Bald eagle nest present in this Subdivision is not within 400m of recommended treatment area.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE

ADEC

EXXON

NOAA

USCG

5/16/90
Art Weimer
Andy Seal
Joseph Tabolt
G.A. NEETER

FOSC

DATE 5-17-90

Prepared by:

WIK

Date:

5/14/90



KN-108

N-109



KN-101



A KN-102

DI-

KN-110

TREATMENT AREA

KN-103

DI-66



KN-104



Exxon Company, USA
Map Key: KNI-KN-102
May 11, 1990



ECOLOGY MAP
SEGMENT KN-102
SUBDIVISION A (L-01-1-1)
METERS
0 332 664

★	Seabird Colony
▲	Eagle Nest

1 inch = 1090 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-102 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
No specific constraints identified.

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. H. G. M. DATE: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 0 m: Narrow 12 m: V. Light 830 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 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>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 surface and subsurface tarmat, 2) manual pick up of mousse, 3) bioremediation of areas shown on attached sketch map. No specific work window constraints.

MANUAL RAKING IN AREA OF PIT. 1+2 FOLLOWING TARMAT REMOVAL AND PRIOR TO BIOREMEDIATION.

TAG COMMENTS: MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/20/90

ADEC Art Weiner
EXXON Andy Tetz
NOAA Burt Wessett
USCG Kenneth K...

FOSC: DATE: 4-26-90

SHORELINE EVALUATION

SEGMENT ST/ KN-102 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
No specific constraints identified.

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. H. Hines

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 0 m: Narrow 12 m: V. Light 830 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 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>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 surface and subsurface tarmat, 2) manual pick up of mousse, 3) bioremediation of areas shown on attached sketch map. No specific work window constraints.

MANUAL RAKING IN AREA OF PIT 1+2 FOLLOWING TARMAT REMOVAL AND PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/20/90

ADEC Art Weiner

EXXON Andy Tetz

NOAA Burt Werscott

USCG Kenneth Keane

FOSC: W L

DATE: 4-26-90

DATE 04/08 90

SKETCH MAP

CHECKLIST

_____ N Arrow
 _____ Approx. Scale
 _____ Seg/Side Endry
 _____ Off Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HML/LWL
 _____ SSL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ PH Location(s)
 _____ Photo Location(s)

LEGEND

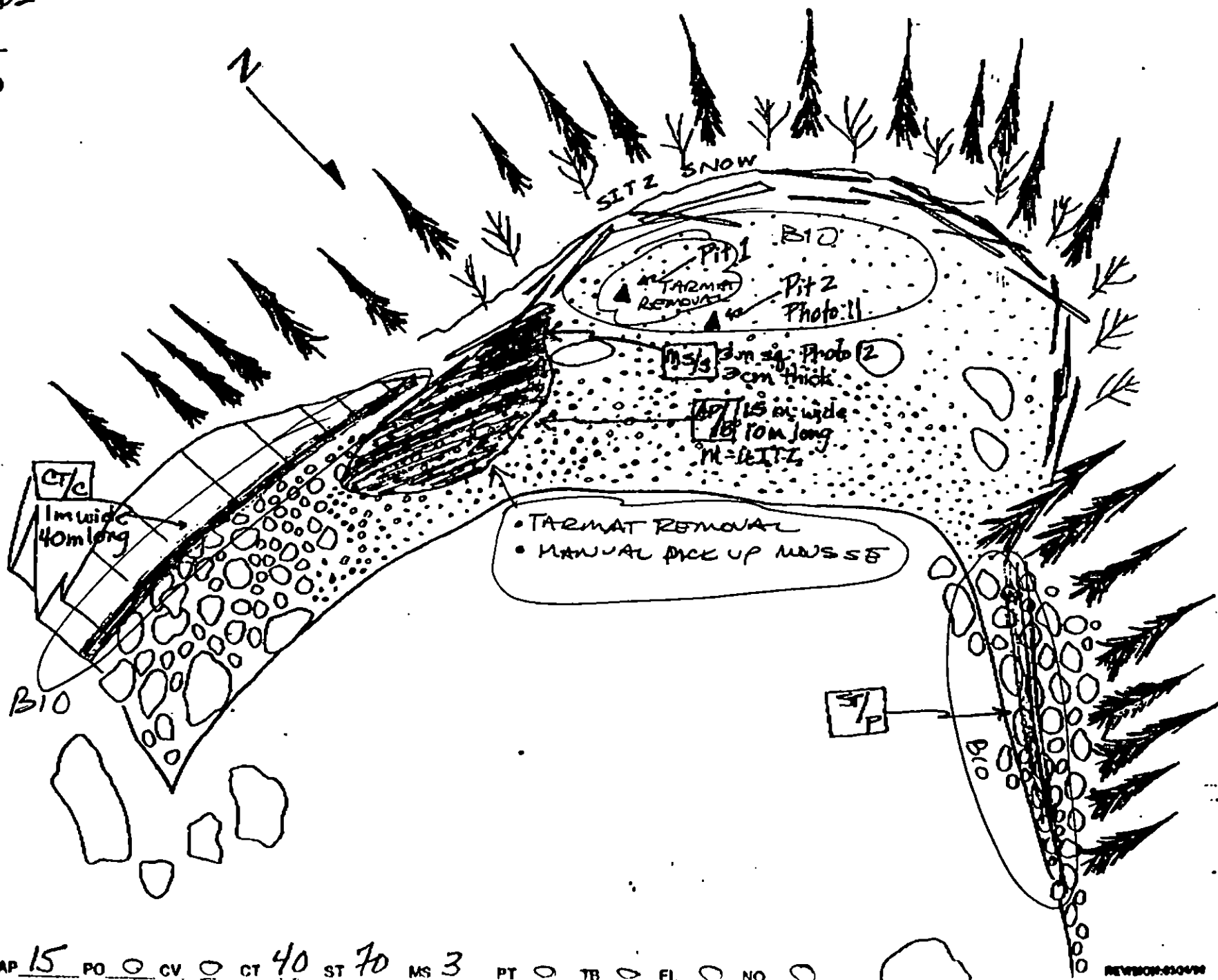
1 
 P1 - No Subsurface Oil
 2 
 P1 - Subsurface Oil

 CT/C
 Continuous Distribution

 CT/B
 Broken Distribution

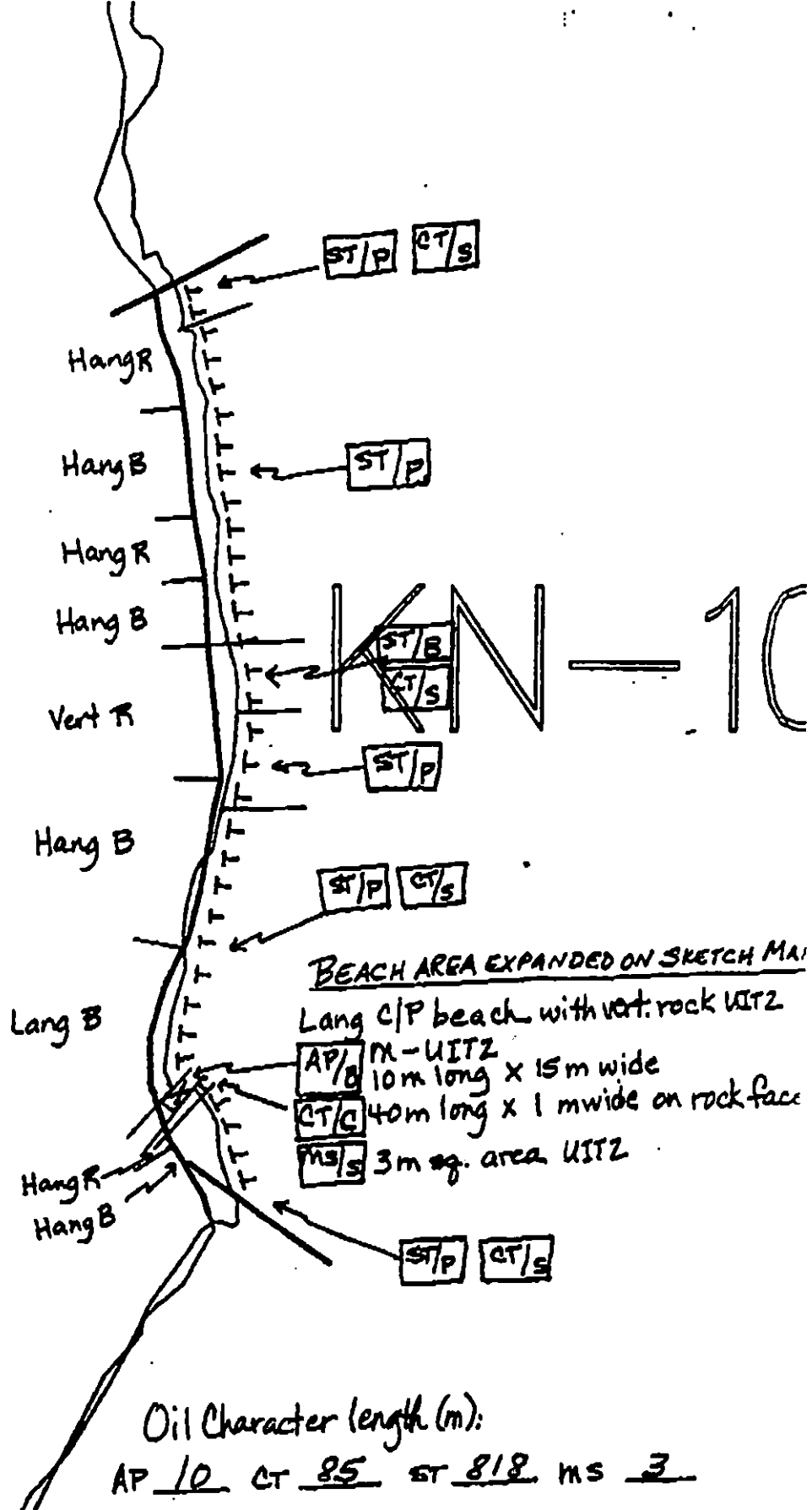
 CT/P
 Patchy Distribution

 CT/S
 Splashed Distribution
 Offed Vegetation
 3 
 Photo location, direction
 and number

Off Character Length (m): AP 15 PO 0 CV 0 CT 40 ST 70 MS 3 PT 0 TB 0 FL 0 NO 0

REVENUE-GROWING

KN-102-A →
916m



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

KN-102
 Exxon Segment Length: 916m
 ADEC Segment Length: 916m



Map Key: PWS-353
 Name: C. DILLON
 Date: 4/8/90
 Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 102 SUB: A REGION: PWS SURVEY DATE: 5/22/91

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 Smith Date: 6/07/91

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: JUNE 7 1991

FOSC APPROVAL DATE:

ADEC

FOSC

~~E. E. PAGE, CDR, USCG~~

CHIEF OF STAFF, FOSC

EXXON

USCG

NOAA

The State will evaluate the need to treat this subdivision. JDR

**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. 2 SEGMENT KN 102 SUBDIVISION A DATE 5/22/91

ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

The oiling on this Subdivision is well documented. Areas E+D both have remaining SOR and AP which warrants further treatment. Only a portion of the oiling in E was removed by the crew, with the vast majority remaining. The oiling is in a thin Boelder Cover and very accessible for shovel and shovel work. This would not be an extensive undertaking, but it would be simple.

EXXON

NAME Frank P.

SIGNATURE [Signature]

☐ NTR

The area of heavy SOR in section E was pretty well removed and broken up. If any remaining activity is unutilized I would possibly recommend the application of isopropyl.

LANDMANAGER

NAME DENNIS S. Kennedy OF USFS

SIGNATURE [Signature]

☐ NTR

Much of the SOR in location [E] was picked up and/or broken up by crew. This was the only area that would have benefited from treatment. There still is SOR left in [E] that is workable but it is now a low priority for future action. active eagle north of Subdivision.

USCG/NOAA NOAA D. Simecek-Beddy

NAME SMI M.P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR

Section E had the heaviest concentrations of SOR, however, VECO manually broke up the AP. They also removed all of the visible SOR and filled four clean up bags with oiled surface sediments from section E. As only scattered surface oil was observed on the rest of the segment, no treatment is recommended. DSB

CGT No TREATMENT RECOMMENDED. 3

DATE 5 / 22 / 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 35 m N 3 m VL 556 m NO 260 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- 2 - 24 FRAMES 6 - 10

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

OG COMMENTS: Steep Rocky and boulder lag shoreline with one pocket beach at the south end. Oiling consists of sporadic Coat (BTR) along bld/Rock shorelines decreasing in concentration from the beach. The East side of Pocket beach has a 2-7' x 20' band of SOR in boulders, this is the heaviest oiling on the Segment. One pit with MOR was found in boulders on the west side of the beach, but appears to be an isolated pocket draped behind bld, 1' x 2'.

Revised: MC 5/30/91
revised 5.29 94

○○○ - BOULDERS

✱ - BEDROCK

⊙ - LANDING SITE
BEACH CHECK

⌒ - LOGS

⊙ - PHOTO LOCATIONS

Boundary KN 101A

Rock cliff
(SKIFF)

CT (BTR-DRIPS) ^A
L 1% (HITZ)
1/2 x 200 meters

BOULDER
LAG

VERT. ROCK
CLIFF
(SKIFF)

SAME AS
LOCATION "B"
(continued)

KNIGHT
ISLAND

STEEL BLD LAG
ROCK SHORELINE
SKIFF

CT 1-2% (BTR) ^B
SPORADIC ON
ROCK / BLDS
(DRIP LINES)
VERY SPORADIC
PATCHES SOR (Heavy)
BETWEEN BLDS 1%
1/2 x 300 m

CT 5-10% ^G
TB 1%
2 x 30 m

CT 10% ^F
SOR/AP 5%
3 x 15 m
Boulders

CT/ST 10% ^E
SOR (Heavy) 30%
2-7 x 20 m
Boulders

CT 20% ^D
AP 10%
Boulder Packet
on Rock Platform
2 x 3 m

CT/CV L 5% ^C
ROCK / BLDS
SOR L 1%
(INTERSTITIAL)
5 x 70 m

Boulder mantal over
Rock Platform
steep Rock backshore

Boundary
KN 103A



OG SKETCH
KN - 102A
MAY 22, 1991
15:30 - 16:35
Doug Reimer

Reviewed: MC 513491
Reviewed 5.29.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 5/24/91

SEGMENT # KN-102A

TIDAL HEIGHT(Range) +2 to +2.5

SUBDIVISION A

BIOLOGIST S m B m

SEA STATE Calm

WIND SPEED/DIRECTION 2 kts

PHOTOGRAPHS: ROLL #

FRAME #

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

A: CT/BTZ high in ITZ within lichen zone. The BTZ sporadically reaches to the upper edge of the barnacle zone. Recently, aethers barnacle spicule found below the CT zone.

B: Intertidal SOR encountered in the barnacle zone. No oiled barnacles were observed. CT/DIPLINE observed near dense patches of diatoms. Lower zones support dense algae growth

C: CT/AP/upper barnacle zone - No oiled barnacles noted. Lower ITZ of the rock platform supports dense Fucus, barnacles + sparse mussels. Tide pools with mussels, coralline algae + AN

E: CT/SOR in lichen/barnacle zone. Patches of green algae observed growing on CT upper + mid ITZ of pebble/cobble beach is noticeably carpeted, lower zones (more cobble) moderately dense + diverse as mapped.

F: Oil is high in ITZ, above + within lichen zone, occasionally reaching to upper edge of barnacles - lower zones support dense Fucus - mussels.

As team approached the north end of subsegment, the 1 eagle on the west in segment. KN-101 became agitated and left the nest. Both skiffs immediately headed offshore + the eagle returned to the nest within 3 minutes.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

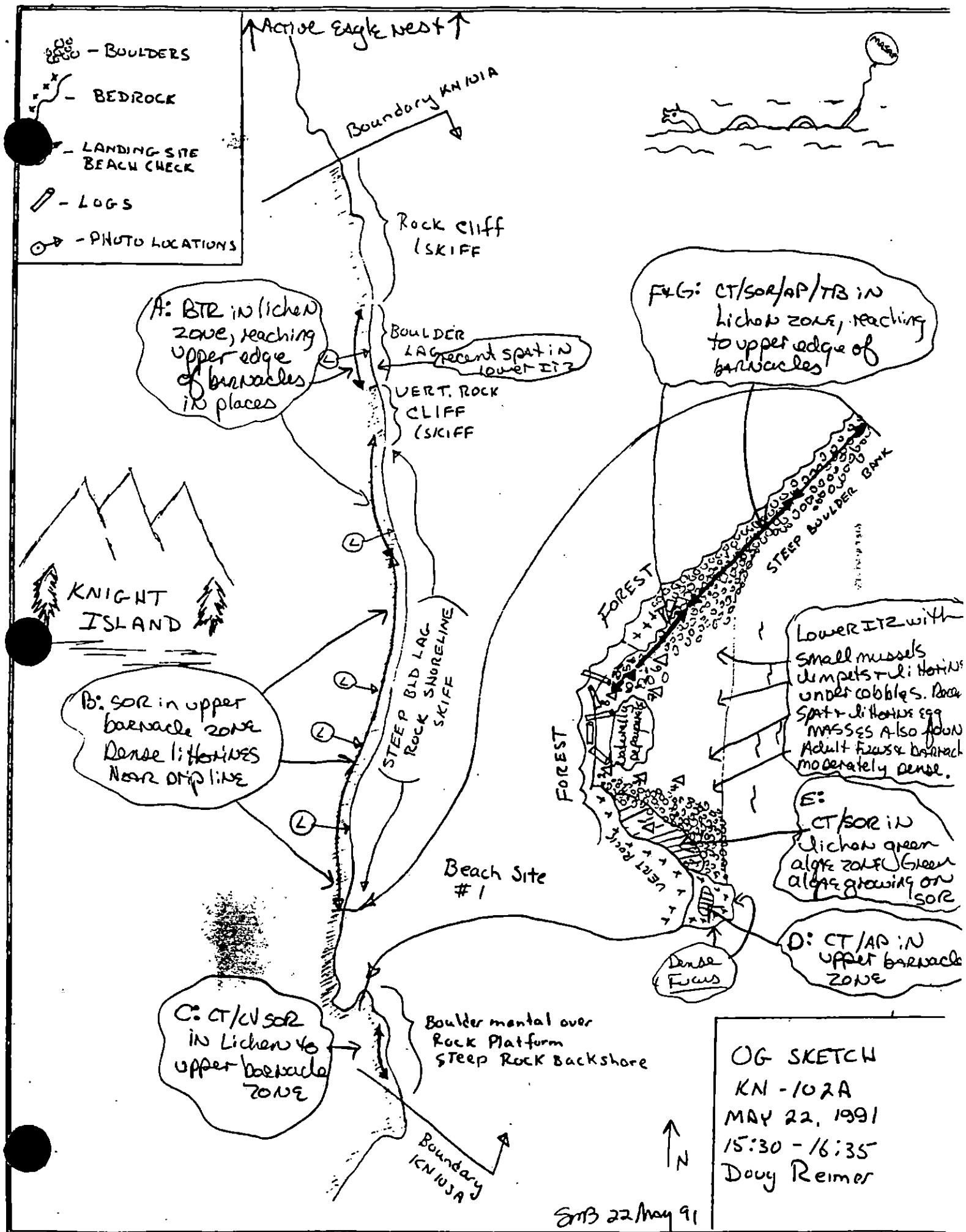
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	7 + 0	2	
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds(specify)			
Ceals(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.C. 5/30/91

Reviewed M.B. 5/20/91

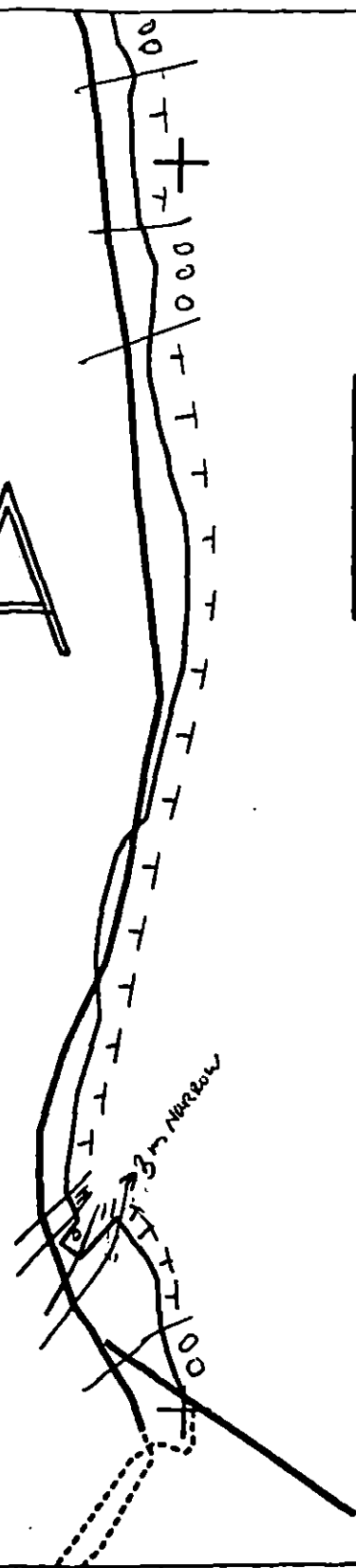


Reviewed M.B. 5/24/91

+

A

K



XXXX
////

TTTT
00

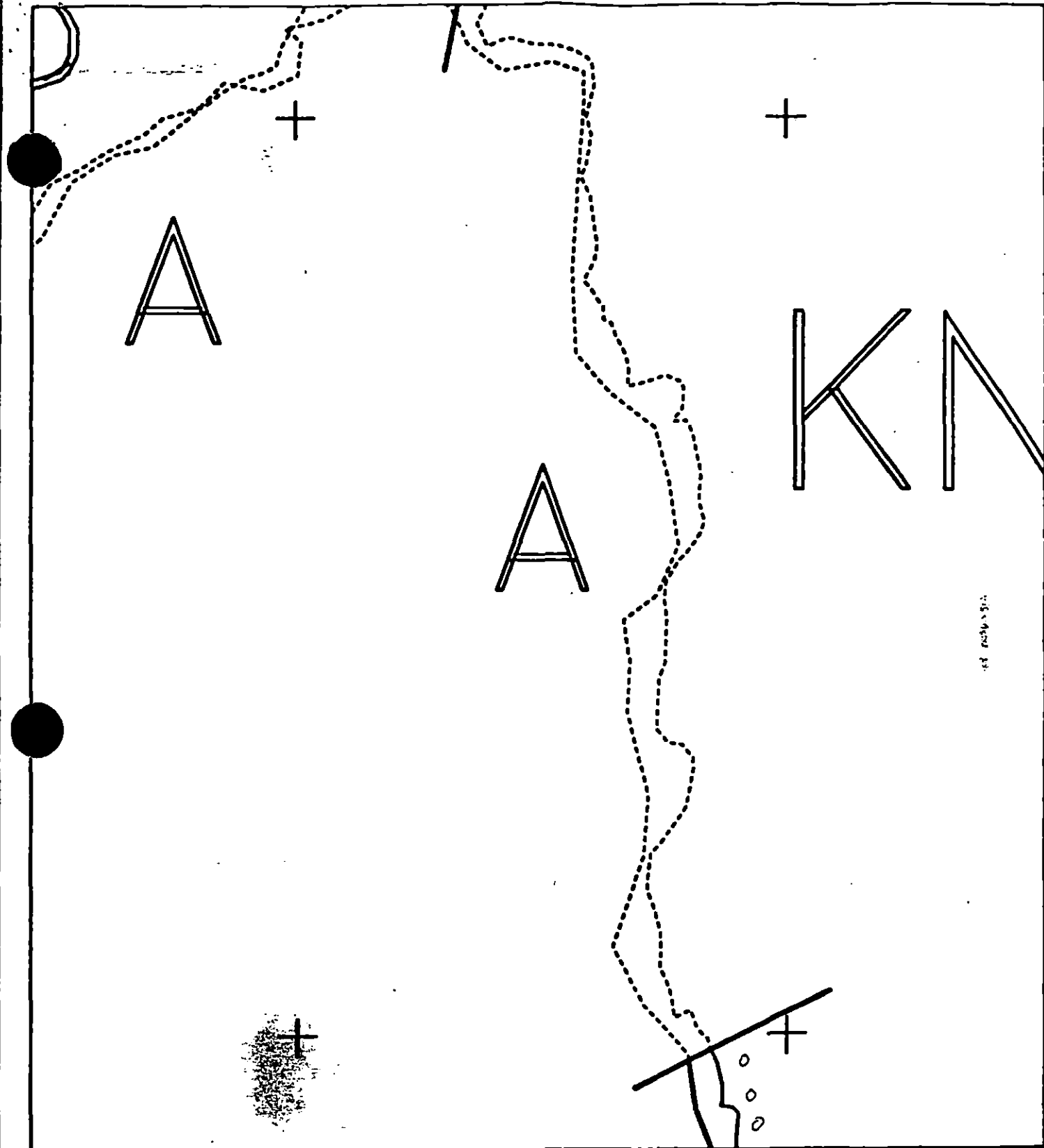
Wide
Medium
Narrow
Very Light
No Oil

KN0102 A
ADEC Subsegment Length: 854m
METERS
0 100 200
AK State Plane Zone 4
hkn010200



Subdivision Field Map
Map Key: KNKN0102Aa
Name: Reimer
Date: 5/22/91
Data Entered:

Reviewed: MC 5130/91
reviewed 5.29.94



XXXX
////

TTT
000

Wide
Medium
Narrow
Very Light
No Oil

KN0102 A
ADEC Subsegment Length: 854m
METERS
0 100 200
AZ State Plane Zone 4
kn0102ab



Subdivision Field Map
Map Key: KNKN0102Ab
Name: Reimer
Date: 5/22/91
Data Entered:

Reviewed: MC 5/30/91
reviewed 5.27.92

1991 MAYSAP EVALUATION

SEGMENT: KN 102 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/22/91

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.

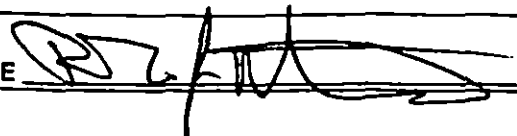
TEAM NO. 2 SEGMENT KN 102 SUBDIVISION A DATE 5/22/91

ADEC

NAME

Peter Montesano

SIGNATURE

☐ NTR☒ TREATMENT RECOMMENDED

The oiling on this Subdivision is well documented. Areas E+D both have remaining SOR and AP which warrants further treatment. Only a portion of the oiling in E was removed by the crew, with the vast majority remaining. The oiling is in a thin Boulder Cover and very accessible for shovel and shovel work. This would not be an extensive undertaking, but it would be simple.

EXXON

NAME

Exxon

SIGNATURE

☐ NTR

The area of lining SOR in section E was p. the well removed and broken up. If any remaining activity is on until I would possibly recommend the application of isopropyl.

LANDMANAGER

NAME

Dennis S. Kennedy OF USFS

SIGNATURE

☐ NTR

Much of the SOR in location [E] was picked up and/or broken up by crew. This was the only area that would have benefited from treatment. There still is SOR left in [E] that is workable but it is now a low priority for future action. active eagle north of Subdivision.

USCG/NOAA

NAME

R. Daniel - Batt

NAME

Eni M.P. Z...

SIGNATURE

☐ NTR

Section E had the highest concentration of SOR, however, UECO manually broke up the AP. They also removed all of the visible SOR and filled four clean up bags with oiled surface sediments from section E. As only scattered surface oil was observed on the rest of the segment, no treatment is recommended. DSB

No TREATMENT RECOMMENDED. 3

Revised: MC 5/30/91
revised 5.29.94

- BOULDERS
- BEDROCK
- LANDING SITE BEACH CHECK
- LOGS
- PHOTO LOCATIONS



CT (BTR-DRIPS) ^A
 $< 1\%$ (HITZ)
 1/2 x 200 meters

Boundary KN 101A

Rock cliff (SKIFF)

BOULDER LAG

VERT. ROCK CLIFF (SKIFF)

STEEL BAD LAG-ROCK SHORELINE SKIFF

Beach Site #1

Boulder mental over Rock Platform
 STEEP ROCK BACKSHORE

Boundary KN 103A

SAME AS LOCATION "B" (CONTINUED)

CT 5-10% ^G
 TB 17.
 2 x 30 m

CT 10% ^F
 SOR/AP 5%
 3 x 15 m
 Boulders

CT/ST 10% ^E
 SOR (Heavy) 30%
 2-7 x 20 m
 Boulders

CT 20% ^D
 AP 10%
 Boulder Pocket
 on Rock Platform
 2 x 3 m

CT 1-2% (BTR) ^B
 SPORADIC ON ROCK/BLDS
 (DRIP LINES)
 VERY SPORADIC
 PATCHES SOR
 BETWEEN BLDS
 1/2 x 300 m

CT/CV $< 5\%$ ^C
 ROCK/BLDS
 SOR $< 1\%$
 (INTERSTITIAL)
 5 x 70 m



OG SKETCH
 KN-102A
 MAY 22, 1991
 15:30 - 16:35
 Doug Reimer

Reviewed: MC 5/29/91
 reviewed 5.29.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 5/24/91

SEGMENT # KN-102A

TIDAL HEIGHT(Range) +2 to +2.5

SUBDIVISION

BIOLOGIST S.M.B.N

SEA STATE 4

WIND SPEED/DIRECTION 52 kts

PHOTOGRAPHS: ROLL #

FRAME #

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

A: CT/BTZ high in ITZ within lichen zone. The BTZ sporadically reaches to the upper edge of the barnacle zone. Recently, a lichen barnacle spatium found below the CT zone.

B: Interstitial SOR encountered in the barnacle zone. No oiled barnacles were observed. CT/OMPLINE observed near dense patches of li. LICHENS. Lower zones support dense algae growth.

C/D: CT/AP for upper barnacle zones - No oiled barnacles noted. Lower ITZ of the rock platform supports dense Fucus, barnacles & upshore mussels. Tide pools with mussels, coralline algae & AN.

E: CT/SOR in lichen/barnacles zone. Patches of green algae observed growing on CT upper & mid ITZ of pebble/cobble beach's. Venerably oiled patches, lower zones (more cobble) moderately dense & diverse as mappers.

FG: Oil is high in ITZ, above & within lichen zone, occasionally reaching to upper edge of barnacles - lower zones support dense Fucus - mussels.

As team approached the north end of subsegment, the ♀ eagle on the west is segment KN-101 became agitated and left the nest. Both skiffs immediately headed offshore & the eagle returned to the nest within 3 minutes.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED

SPECIES PRESENT

Eagles	♀ + ♂	2	
Seabirds			
Waterfowl			
Gulls/Kittiwake			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

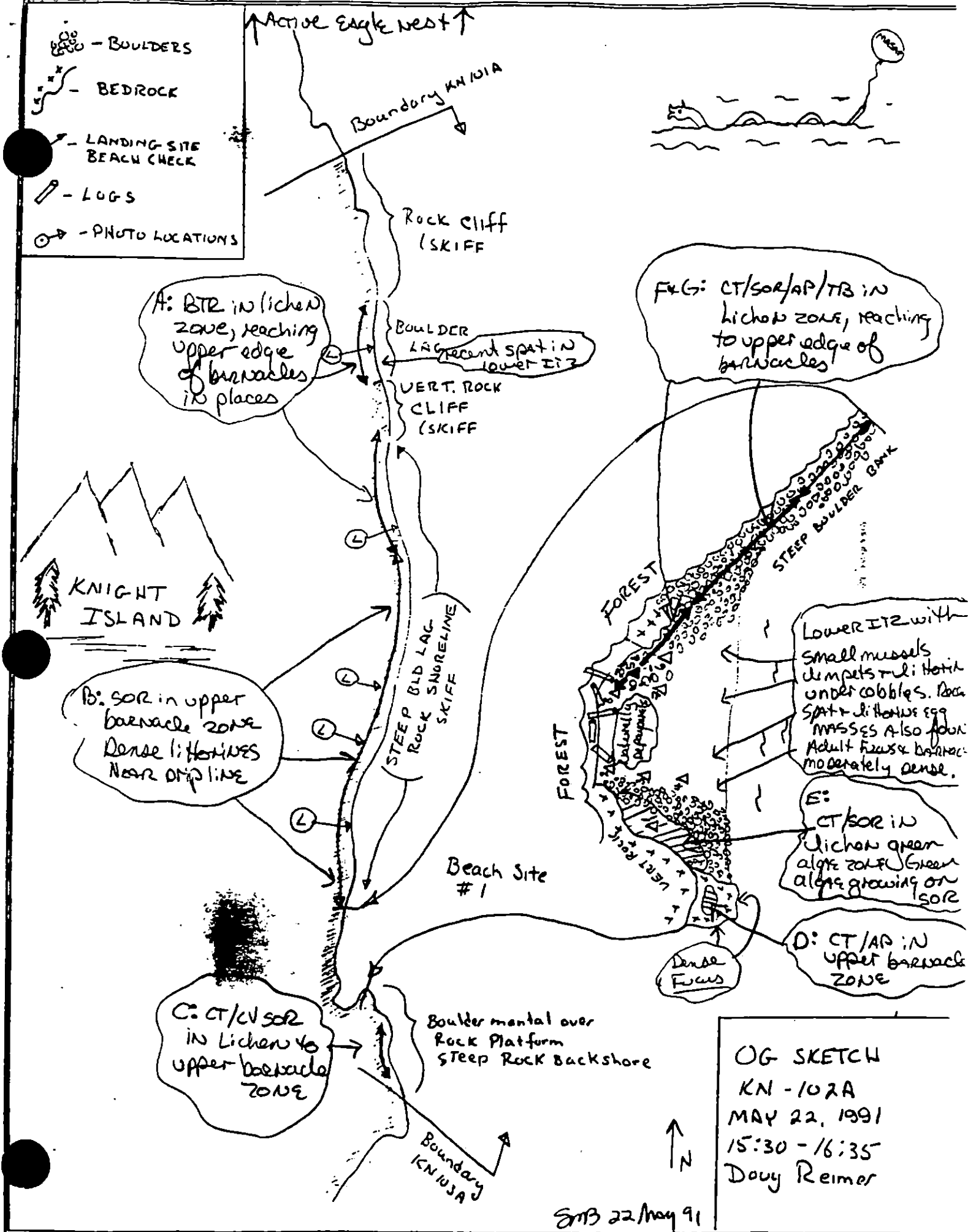
OBSERVED

Sea Otters	1		
Pinnipeds(specify)			
Carnivores(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.C. 5/30/91

Reviewed M.B. 5/24/91



Reviewed M.B. 5/22/91

A

K

3m Narrow

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

KN0102 A

ADEC Subsegment Length: 854m
METERS

0 100 200

AK State Plane Zone 4
kn010200



Subdivision Field Map
Map Key: KNKN0102Aa
Name: Reimer
Date: 5/22/91
Data Entered:

Reviewed: AC 5/30/91
reviewed 5.27.91

A

A

KN

XXXX

Wide

KN0102 A

Subdivision Field Map

////

Medium

ADEC Subsegment Length: 854m

Map Key: KNKN0102Ab

Narrow

METERS

Name: Reimer

TTTT

Very Light

0 100 200

Date: 5/22/91

000

No Oil

AZ State Plane Zone 4
kn0102ab



Date Entered:

Reviewed: MC 5/30/91
reviewed 5.29.92

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-103

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-103 SUBDIVISION A (1 OF 1) DATE 4/9/90

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 All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 74 m: Medium 0 m: Narrow 744 m: V.Light 1044m: 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 removal of tarmats and manual pick up of
patties and tarballs. Work should be conducted from 5/16 to 7/9 based
on salmon constraints and with approval from ADF&G and 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. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
- 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-103-A SUBDIVISION: A DATE 4/10/90

USCG

NAME

David A. Schneider SIGNATURE David A. Schneider

PSS/USCGK

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS:

Manual removal of asphalt matting, tar patties and tar balls throughout the MITZ & UITZ of the entire subdivision. Areas where boulders and rock faces are accessible to workers should be wire brushed/scrapped of coating. Area that borders the anadromous stream should be carefully cleaned prior to salmon runs. Supra ITZ reaccessed after the snow. ~~AS~~

ADEC

NAME

Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

In varying degrees, this entire segment has a soft Asphalt lining the UITZ (some MITZ), which lessens past the Stream Area. Only the E Side of this Stream has the AP band extending back of the beach. This stream is Anadromous and is above an extended fertile LITZ. ADF+G should examine the stream for specific treatment recommendations. All of the AP is easily shoveled and removed.

LAND MANAGER

NAME

JANETIA Pritchard SIGNATURE Janetia Pritchard

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of tar balls, matting and patties. There is an anadromous stream which has a coat adjacent to it and appears to never have been. Adversely cleaned. This area should be addressed during the ADF+G survey. Area in the SUPRA this beach would be a nice recreational area.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ KN-103
 BIO J. BARRY LAND REP J. PRITCHARD (FS) SUBDIVISION A (1041)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 07:45 to 09:15
 TEAM NO.: 6 TIDE LEVEL: -0.5 to +0.5 DATE 04/09/90
 EST. SUBDIVISION LENGTH: 2282 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock ANADROMOUS STREAM
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 10 % C 45 % P 30 % G 5 % S 0 % M 0 % V 5
 SLOPE: Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 50 m M 0 m N 840 m VL 1392 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	N	P	S	W	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT		X		X					X			X		
POOLED														
COVER														
COAT		X	X	X		X						X		
STAIN		X	X	X				X				X		
MOUSSE														
PATTIES				X				X				X		
TARBALLS				X				X				X	X	
FILM	X					X						X		
NO OIL	Snow on SITZ of beaches										S			X

PAVEMENT: (H) F (S) 215 sq. m by 4 c

PATTIES / TARBALLS 2 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NO

TYPE Trash

#BAGS 1

Photographs:

Roll No. NONE

Frames

SUBSURFACE OIL NO SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	5	SU	U	M	L		

COMMENTS MAJORITY OF SUBDIVISION IS A LONG, WIDE LANG COBBLE AND PEBBLE BEACH WITH SCATTERED SMALL AND LARGE BOULDERS. THE LITZ. HAS A NARROW TO VL BAND OF STAIN AND COAT AS WELL AS OCCASIONAL AREAS OF SPORADIC TB, TAR PATTIES, AND ASPHALT PAVEMENT. THESE CONDITIONS EXIST HOMOGENEUSLY ALONG THE SUBDIVISION VARYING ONLY SLIGHTLY IN DISTRIBUTION.

Page 1 of THE LONG, WIDE COVE WITH THE ANADROMOUS STREAM IS SHOWN REVIEWED 7W DATE 4/11/90

C. DILLON

MENT ST/KN-103

DIVISION A

TE 04, 09 90

CHECKLIST

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

LEGEND

- 1 Δ
- 1 - No Subsurface Oil
- 2 Δ
- 1 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

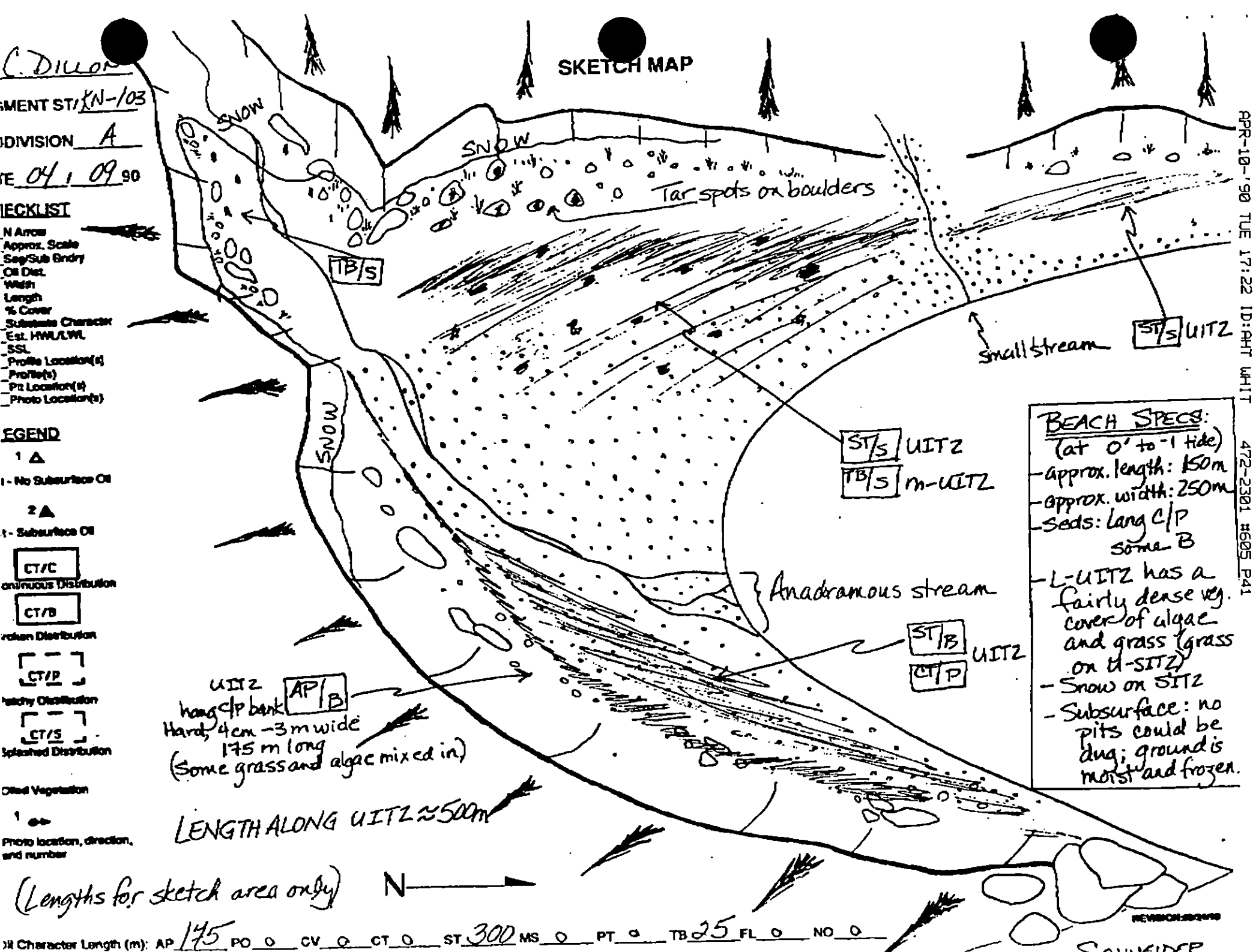
CT/S
Splashed Distribution

CT/V
Oiled Vegetation

1 $\bullet$

Photo location, direction, and number

SKETCH MAP



BEACH SPECS:
(at 0' to -1 tide)

- approx. length: 150m
- approx. width: 250m
- Seds: Long C/P
- some B
- L-UITZ has a fairly dense veg. cover of algae and grass (grass on ti-SITZ)
- Snow on SITZ
- Subsurface: no pits could be dug; ground is moist and frozen.

UITZ hangup bank
Hard, 4cm - 3m wide
175 m long
(Some grass and algae mixed in)

LENGTH ALONG UITZ $\approx$ 500m

(Lengths for sketch area only)

Character Length (m): AP 175 PO 0 CV 0 CT 0 ST 300 MS 0 PT 0 TB 25 FL 0 NO 0

REVISION 02/90

C. DILLON

KN103 - A (ALL)

APRIL 9, 1990

2/8



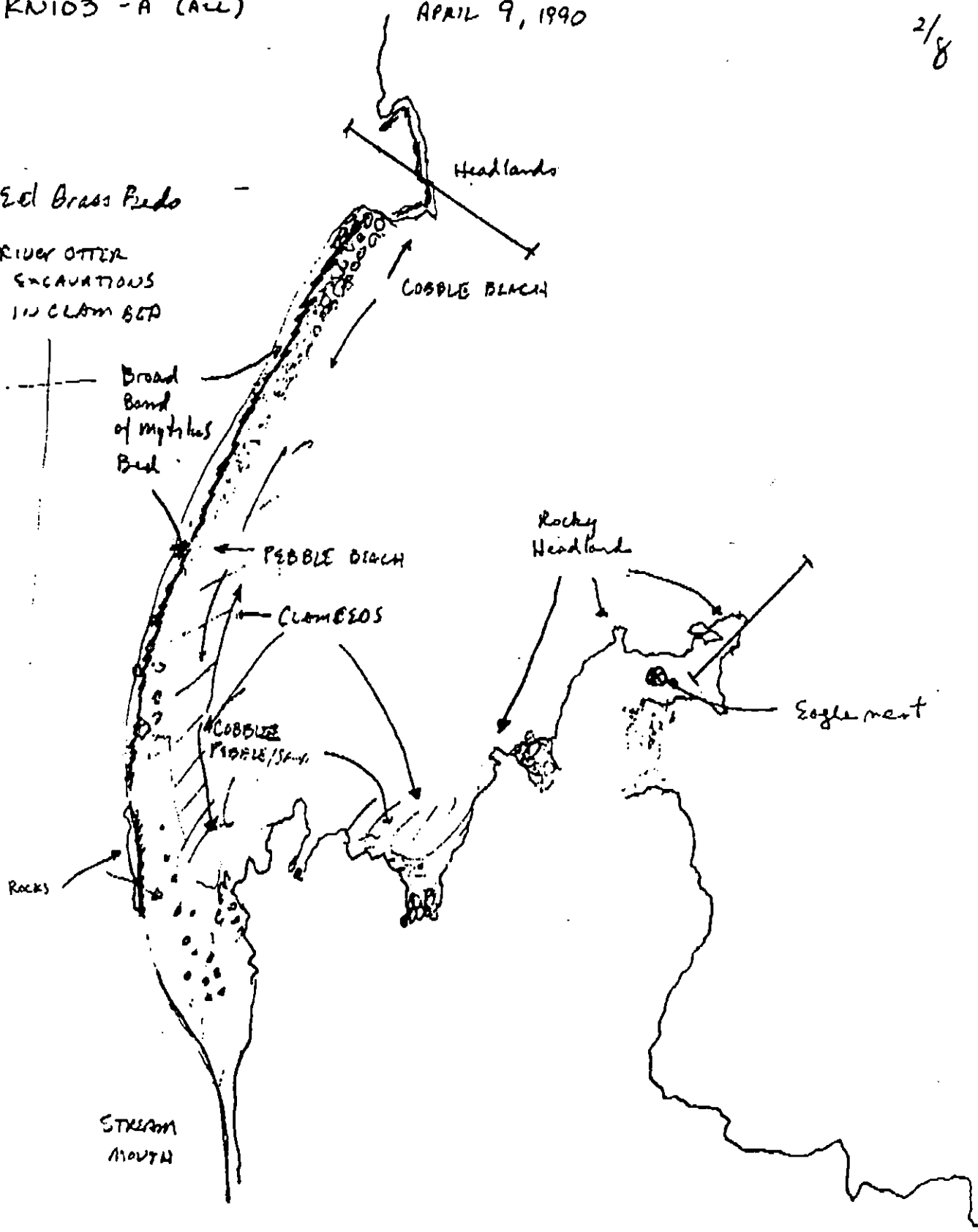
Eel Grass Bed



RIVER OTTER
EXCAVATIONS
IN CLAM BED



Broad
Band
of Mytilus
Bed



Oil Character Lengths (m):

AP 215 CT 485 ST 215 TB 45 FL 5PT 25

LANG C/P (some B/R)

UITZ 2-3m wide
ST on tops of seeds ST/B
CT on sides and bottoms of seeds CT/P
AP to 50 cm diameter, 4cm thick AP/S

Remove
Tarnish/Pattie
on whole
Subsection

KN-103-A

2282 m

UITZ tops
of C/P
6-8m wide
50m long

ST/P CT/P PT/S UITZ

UITZ C/P/B
2-3m wide x 25m long
AP soft, 2-3 cm thick

On backsides
of large B
on UITZ

CT/B

ST/S UITZ Lang R

SKETCH MAP AREA

UITZ ST/S PT/S

UITZ ST/S CT/S

UITZ Lang C/P ST/B

ST/S
UITZ
Lang C/P/B

UITZ ST/S TB/S

M-UITZ
Tar splatters on UITZ B
Tar balls at head of stream

TB/S
ST/B CT/P
Hang C/P/B
UITZ

ST/P UITZ
TB/S Hang R
FLC 5m long

ST/B Hang grassy
C/P bank
CT/P UITZ
AP/B 4cm-3m wide
175m long
Hard AP to 4cm thick

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-103

EXXON SEGMENT LENGTH: 2282m

ADEC Segment Length: 1862m

Map Key: PWS-283

Name: C. DILLON

Date: 04/0/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / KN103 Subdivision A - ALL Date (mo/day/yr) 9 APRIL 1990

Time (24 hr) 0750-0930 Biologist Jim Barry Length - 1862m 1/6

(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 50 Moderate 40 Low 10

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

Photographs: Roll No. ST-6-5

Frames 15-20

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:

RIVER OTTER SURF BIRDS Pelagic Cormorant
SEA OTTER Common merganser
Bald Eagle Great Blue Heron or Crane?

Ecological Considerations: 64, 1B

64 - Special use destination
1B - Stream mouth spawning - this is probably an important site for spawning as well as foraging for piscivorous predators.

KN103-A

April 9 1990

TIME 0750-930

TIDE -1-43

3/8

and into the subtidal zone, eel grass is abundant - I suspect the eel grass continues into slightly deeper water where it helps them begin to dominate. Eel grass beds are important for spawning.

- 3) Stream outlet. The stream outlet flows from out in an area with relatively fine sediments. Clam beds are present in this area. Biologically, this segment is significant due to the presence of these habitats. River otter activities are evident throughout the beach area where otters spearate clams and mussels. Sea otters also may utilize this as a feeding habitat. The outlet stream is probably used as a spawning habitat by Salmon. Thus, the high concentration of food serves as a foraging area for other species as well. Bald eagles nest on this segment (see map). Eagles, bears, and deer are likely to utilize the beach resources for food. Migratory shorebirds & resident birds also utilize this habitat.

II Wildlife Observations.

Deer - dead on beach

River otter - scat, feeding traces

Eagles - nest, 3-4 in air

Shore birds - surfbends - foraging on rocky headlands and islands

Great Blue heron or some crane species - foraging on beach.

Common merganser - 1 pair

Pelagic cormorant.

KN103-A (all)

April 9 1990

4/9

TIME 0750-0930

TIDE

I General Comments.

- a. Habitat description. KN103 is an interesting segment. It includes 2 or 3 major habitat types. 1) Rocky headlands with mussels, ~~and~~ macroalgae, and barnacles. 2) Small cobble and pebble beaches that are flat and contain poorly sorted, but fine grain sediments. 3) Stream mouth with pebble/sand flats and peat deposits. All of these habitats contain a distinct fauna and flora that have important effects on the local environment.
- b. Oil pollution and removal activities have had minor effects relative to many other segments. The flat intertidal beach and stream outlet have been impacted, but appear to be recovering.
- c. ~~Pro~~ Biotic Characteristics of major habitats.
 - 1) Rocky headlands - this habitat type is common on the Sound near Knight & Elson Island. Mineral beds are moderate to dense, with a ~~high~~ moderate to dense cover of *Fucus* and several other macroalgae.
 - 2) Cobble Pebble Beach. The flat intertidal beach ~~at the~~ begins as large cobble at the mouth end of the segment and grades into finer sediments towards the stream outlet. Several interesting biological features occur along this beach. ~~the beds~~ In the middle to high grain mussels form ^{nearly} a conspicuous band and on pebble beaches and on cobble and boulders. Although the ~~the~~ bed is broken, spat and juveniles appear to be replenishing damage caused by human and non-human disturbances. Lower in the beach a clam bed is present, with moderate to densities of clams and associated fauna (eg. *Urechis* worms; *Echeurus* *acheneis*). ~~the~~ This clam bed is denser towards the SW portion. Still lower in the intertidal

KW103-A

April 19, 1990

8/8

III Major Species

- A. F. R. LARVAE - Abundant (moderate to dense) on headlands and on cobble & pebble beaches.
- B. Mytilus - Abundant throughout segment - this species is present as mussel beds on the intertidal beach. Heavy traffic may disturb the bed. Avoid placing machinery on beach if possible and minimize foot traffic.
- C. Gastropods - moderate densities
- D. Fucus - Sparse on the beach, but more abundant on the headland.

IV Other species

In addition to the above discussion of clams and sea urchins, sand gobies are particularly dense on this beach.

Clams are present, but I could not find any live individuals of Saxidomus (butter clams), even though large shells are found on the beach. The source of mortality for the individuals is unclear. No identifying marks were found on 10 individuals. One related cause can not be ruled out, but one is not clearly the cause. This species may be present in the sub-tidal zone. Steam clams (Protothaca) and benton clams (Pisidium) are present as adults, juveniles and protothaca is present as small juveniles. Hiatella, another species, also is found as small juveniles.

KN103-A

APRIL 8 1990

IV Species List

A. MARINE PLANTS

- 1) DIATOMS / BLUE GREEN ALGAE M-D 123
- 2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA D23 R
 CLADOPHORA R1
 ENTEROMORPHA M234
 GREEN CRUST. ?
 ULVA D234
 URDOPHORA D3

3) RED ALGAE - RHODOPHYTA

BOSSIELLA R1
 CALLIARTHRON R1
 CORALLINA R1
 CRYPTOSIPHONIA D23
 ENDOLADIA MURICATA R1
 HALOSACCION GLANDIFORME M123
 IRIDAEA M123
 MASTOCARPUS R-S 12
 MEMBRANOPTERA M123
 MICROCLADIA M123
 LITHOTHAMNION PACIFICUM R1
 PETROCELLIS MIODENDORFFII R1
 PORPHYRA SPP. S123
 RHODOMELA LAMINATA M12
 RHODOMELA PALMATA M123

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA M14
 AGARUM SPP. M14
 COSTARIA S R14
 FUCUS DISTICHUS M123
 HEDOPHYLLUM SESSILE M14
 HILDONBRANDIA S12
 LAMINARIA M14
 NEREOCYSTIS S14
 RALPSIA M12
 SCYTOSIPHON COMENTARIA R12

★ SPAT OR JUVENILES
 PRESENT

D DENSE
 M MODERATE
 S SPARSE
 R RARE
 1 BEDROCK
 2 BOULDER
 3 COBBLE
 4 PEBBLE
 U. SUBTIDAL

B MARINE INVERTEBRATES

1) ANEMONES

- EPIACTIS RITTERI ? S12A
 URTICINA CRASSICORNIS ?
 ANTHOPLEURA ELEGANS (Sima) S-R12
 A. ANTONISEA S12
 A. XANTHOGRAMMICA ?

2) Annelid Worms

- Polychaetes
 Nereidae 1234
 Nephtyidae 234
 Serpulidae
 Serpula S12A
 Crucifera S12A
 Spirobrachidae
 Spirobrachis M-1, 123

3) Peanut Worms - Sipunculid

- PHASCOLOSOMA HERBERTI S123A

4) MOLLUSCS

a) CHITONS

- CATHARINA TUNICATA S12A
 TORICELLA LINSATA R12A
 MOPALIA spp. ?

b) Snails - GASTROPODS

- LITTORINA SCUTULATA M123A
 L. SITKANA M123A
 NUCELLA LAMELLOSA M12A
 N. EMARGINATA M12A
 SCARLETTA DREA M123A
 AMPHISCA COLUMBIANA S-1234A
 TACHYRHYNCHUS spp. ?

c) Nudibranchs

- LAMELLIDORIS FUSCA ?

d) Limpets

- LOTIA DIGITALIS S-M12A
 AEMEA MITRA R12A
 LOTIA PERSICINA ?

d) Limpets (cont)

- TECTURA SCUTUM M123A
 T. PERSICINA S12
 SIPHONARIA HERBERTI S12
 DIADORA ASPERA ?

e) Mussels -

- MYTILUS EDULIS D-M123A

f) Clams

- SINGLE - PODOCYSTUS CEPHO S12A
 HIAELLA spp. S-M1234A
 PROTOTHECA STERMINA M123A
 MACOMA spp. M1234A

g) Crustaceans

1) BRANCHIOPODS

- SEMIBALANUS CARINATUS M-1, 12
 BALANUS GLANDULA M-123A
 CHTHAMALUS DALLI M123A

2) Crabs

- HAPLOGASTER spp. ?
 HEMIGRAPSUS OREGONENSIS S3
 PUZZETIA spp. ? S-M12A
 HERMIT CRABS - PAGURIDAE D1

3) Beach Hopper

- ISOPODA ?
 AMPHIPODA
 ORCHESTRA ? M-1234

h) Bryozoans

- SCHIZOPORELLA spp. ? M-23A

i. Echinoderms

- 1) Sea Stars
 23 S-M Pycnopoda helianthoid
 M-23 DUMASTRIAS IMBRICATA
 M23A LEPTASTERIAS HEXACTIS
 R121 EVASTERIAS TRUSCHELI
 R122 ORTHOSTERIAS KOECHERI
 S12A PISASTIR OCHRAEUS.

7/8

8/8

SPECIES LIST (cont)

2. Echinoderms (cont)

2) Brittle Star

Ophiurus spp? R-S-12

3) Sea Cucumber

~~Cucumaria~~ ~~intestina~~ #12

3) Sea urchin

Strongylocentrotus drobachensis 12-12?
234

C. Marine Vertebrates

1) Fish: PHOLIDAE - M-23*

COTTIDAE S 12*

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-103 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup and Tarmat Removal
Outside Active Eagle Nest Buffer Zone

OPEN

Manual Pickup and Tarmat Removal
Inside Active Eagle Nest Buffer Zone

CLOSED

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16922) is in Subdivision A. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

USFWS bald eagle impact assessment conducted on 5/27/90 by Mike Lockhart indicates an active eagle nest in Subdivision A. Closed to manual pickup and tarmat removal within the active nest buffer zone established by USFWS. No constraint to manual pickup and tarmat removal outside the buffer zone.

OTHER ECOLOGICAL CONSIDERATIONS

No personnel or boats within the active eagle nest buffer zone. Restrict air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain ~~300m~~ 300m horizontal, 300m vertical distance from active nests. No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to rich lower intertidal.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-10-16922)
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 6/04/90
ADEC Ran Morris
EXXON Andy TEAR
NOAA Jason Talbot
USCG GA. KETTER

FOSC

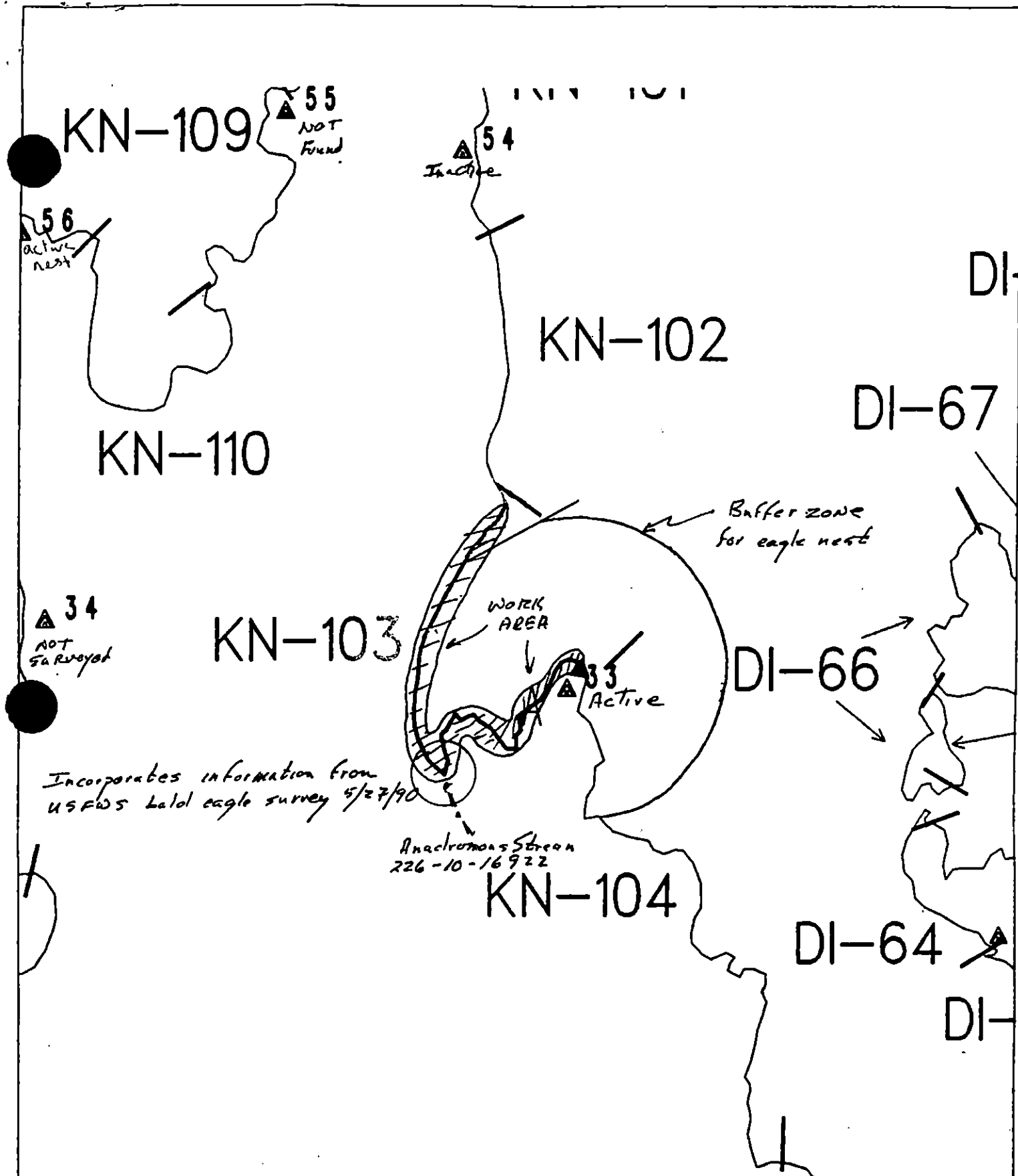
Date

6/4/90

Prepared by

Date

6/3/90



Exxon Company, USA
Map Key: KNI-KN-103
May 11, 1990

ECOLOGY MAP
SEGMENT KN-103
SUBDIVISION B (1 of 1)
METERS

0 407 814

★ Seabird Colony
▲ Eagle Nest

1 inch = 1336 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-103 SUBDIVISION A (1 OF 1) DATE 4/9/90

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 All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

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

rk
of
4-

SHPO SIGNATURE: Rachel Joan Oale DATE: 5/22/90

OILING CATEGORIZATION:

Wide 74 m: Medium 0 m: Narrow 744 m: V.Light 1044m: 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: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual removal of tarmats and manual pick up of patties and tarballs. Work should be conducted from 5/16 to 7/9 based on salmon constraints and with approval from ADF&G and USFWS regarding eagle nest.

See Addendum dated 6/3/90

TAG COMMENTS: DUE TO RICH LOWER INTERIORAL NO BIORECOMMENDS

MONITORS TO REMOVED SOUTZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER Art Weiner
EXXON ARTY TEL
NOAA Burt Weinst
USCG G.A. REITER G.A. Reiter

FOSC J. J. J.

DATE: MAY 25 1990

SHORELINE EVALUATION

SEGMENT ST/ KN-103 SUBDIVISION A (1 OF 1) DATE 4/9/90

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 All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

rk
of
4-

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

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

OILING CATEGORIZATION:

Wide 74 m: Medium 0 m: Narrow 744 m: V.Light 1044m: 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: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual removal of tarmats and manual pick up of patties and tarballs. Work should be conducted from 5/16 to 7/9 based on salmon constraints and with approval from ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: DUE TO RICH LOWER INTERIORAL NO BIORECOMMENDS

MONITORS TO REASSESS SOITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC Art Weimer Art Weimer

EXXON Andy Teal Andy Teal

NOAA Bruce Weimer Bruce Weimer

USCG S.A. Reiter S.A. Reiter

FOSC [Signature]

DATE: MAY 25 1990
MAY 25 1990

APR-10-1980 TUE 17:22 10:48T WHIT 472-2301 #605 P41

C. DILLON

MENT ST/KN-103

DIVISION A

E 04, 09 90

ECKLIST

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

EGEND

- 1 Δ
- 1 - No Subsurface Oil
- 2 Δ
- 1 - Subsurface Oil

CT/C
omnibus Distribution

CT/B
when Distribution

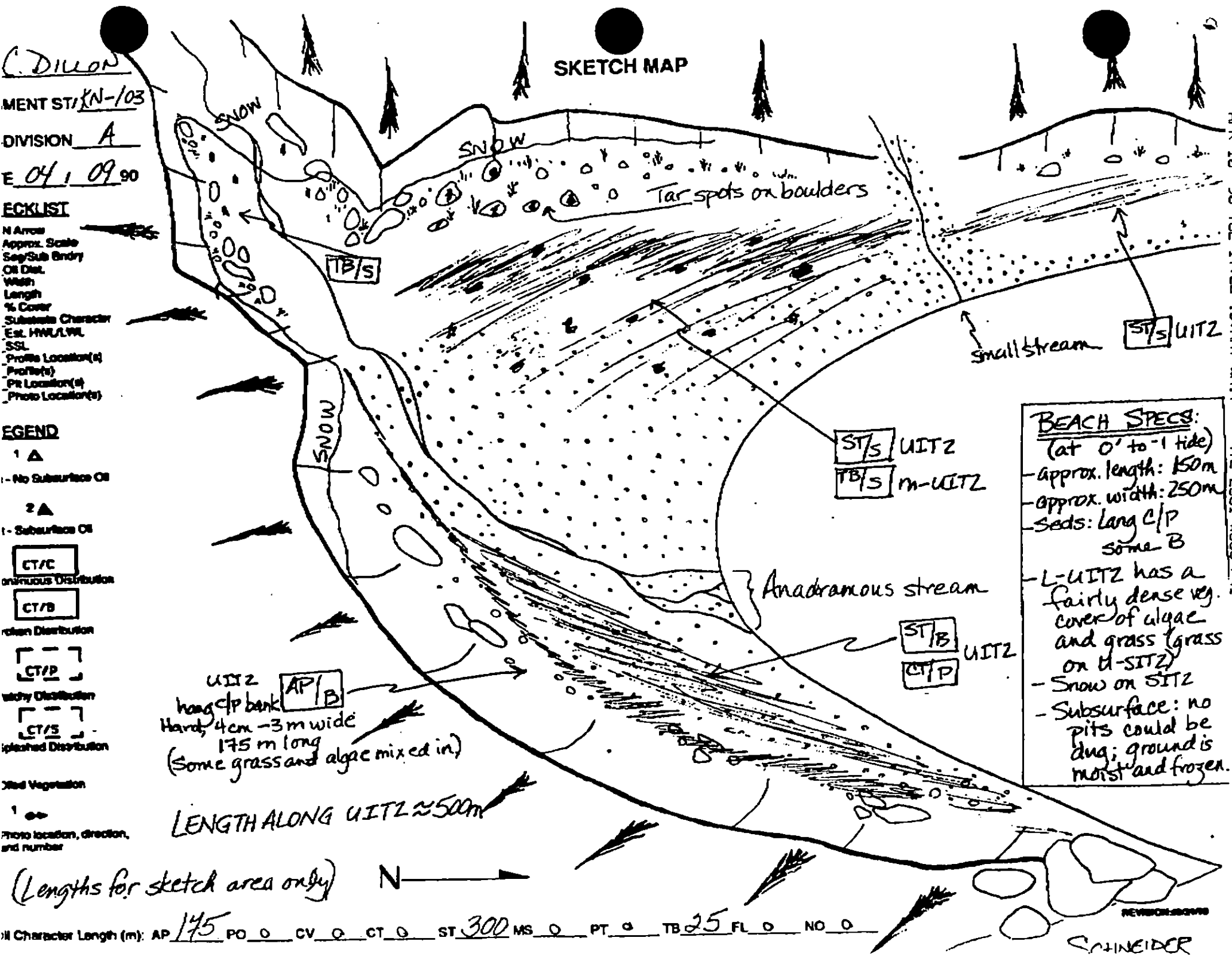
CT/P
wchy Distribution

CT/S
pleached Distribution

Dead Vegetation

1 ●
Photo location, direction, and number

SKETCH MAP



BEACH SPECS:
(at 0' to -1 tide)
- approx. length: 150m
- approx. width: 250m
- sed: Long C/P
some B
- L-UITZ has a fairly dense veg. cover of algae and grass (grass on H-SITZ)
- Snow on SITZ
- Subsurface: no pits could be dug; ground is moist and frozen.

LENGTH ALONG UITZ ≈ 500m

(Lengths for sketch area only)

Character Length (m): AP 145 PO 0 CV 0 CT 0 ST 300 MS 0 PT 0 TB 25 FL 0 NO 0

SCHNEIDER

KN103 - A (ALL)

APRIL 9, 1990

2/8

 Eel Grass Bed RIVER OTTER
EXCAVATIONS
IN CLAM BED Broad
Band
of Mytilus
Bed

PEBBLE BEACH

CLAM BEDS

COBBLE
Pebbles/Sand

Rocks

STREAM
MOUTH

Headlands

COBBLE BEACH

Rocky
Headland

Eagle nest



Oil Character Lengths (m):

AP 215 CT 485 ST 215 TB 45 FL 5PT 25

LANG C/P (some B/R)

UITZ 2-3m wide
ST on tops of seeds
CT on sides and
bottoms of seeds
AP to 50 cm
diameter, 4cm thick

ST/B

CT/P

AP/S

Remove
Tarmat/Patties
on whole
Subsection

KN-103-A

2282m

UITZ tops
of C/P
6-8m wide
50m long

ST/P

ST/P

CT/P

PT/S

UITZ

ST/P

AP/B

UITZ C/P/B
2-3m wide x 25m long
AP soft, 2-3 cm thick

ST/S

UITZ Lang R

On backsides
of large B
on UITZ

CT/B

UITZ

ST/S

PT/S

UITZ

ST/S

CT/S

SKETCH MAP AREA

UITZ

Lang C/P

P/B

UITZ

ST/S

UITZ

Lang C/P/B

UITZ

ST/S

TB/S

M-UITZ
Tar splatters on UITZ B
Tar balls at head of stream

ST/B

CT/B

TB/S

Hang C/P/B

UITZ

ST/P

UITZ

TB/S

Hang R

FL/C

5m long

ST/B

CT/P

AP/B

UITZ

4cm-3m wide

175m long

Hard AP to 4cm thick

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-103

EXXON SEGMENT LENGTH: 2282m

ADEC Segment Length: 1862m

Map Key: PWS-283

Name: C. DILLON

Date: 04/0/90

1991 MAYSAP EVALUATION

SEGMENT: KN 0103 SUB: A REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Anadromous stream

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Adams Date: 5/10/91

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 10 1991 FOSC APPROVAL DATE: 5/14/91

ADEC  FOSC 

EXXON

USCG J. J. Mac

NOAA James P. [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT KN-103-A SUBDIVISION A DATE 5/1/91

ADEC/USFS

NAME TOM CROWE

SIGNATURE *Tom Crowe*

☒ NTR

THE EXISTING SURFACE OILING AT THIS SEGMENT WAS PICKED UP OR MANUALLY TILLED DURING THE MAYSAP SURVEY.

EXXON

NAME Scott A. Nauman

SIGNATURE *Scott A. Nauman*

☒ NTR

The survey results speak for themselves - no further treatment needed.
Lots of wildlife (eagle, otter, heron, waterfowl) observed.

LANDMANAGER

NAME Aimee Weseman OF ADEFG

SIGNATURE *Aimee Weseman*

☒ NTR

The majority of the SOR remaining on the ANAD portion of subdivision were removed during the survey. Remaining SOR was manually tilled. No subsurface oil was detected.

USCG/NOAA

NAME CWO Spurr / Rebecca Hoff

SIGNATURE *R. Hoff*

☒ NTR

AP picked-up by workers during segment survey (B), SOR manually tilled (A).
No further treatment required.

PAGE 1 OF 2

reviewed 5/3/91 KG
REVISED: 5/3/91 M.C.

PAGE 2 OF 2

DATE 05/01/91

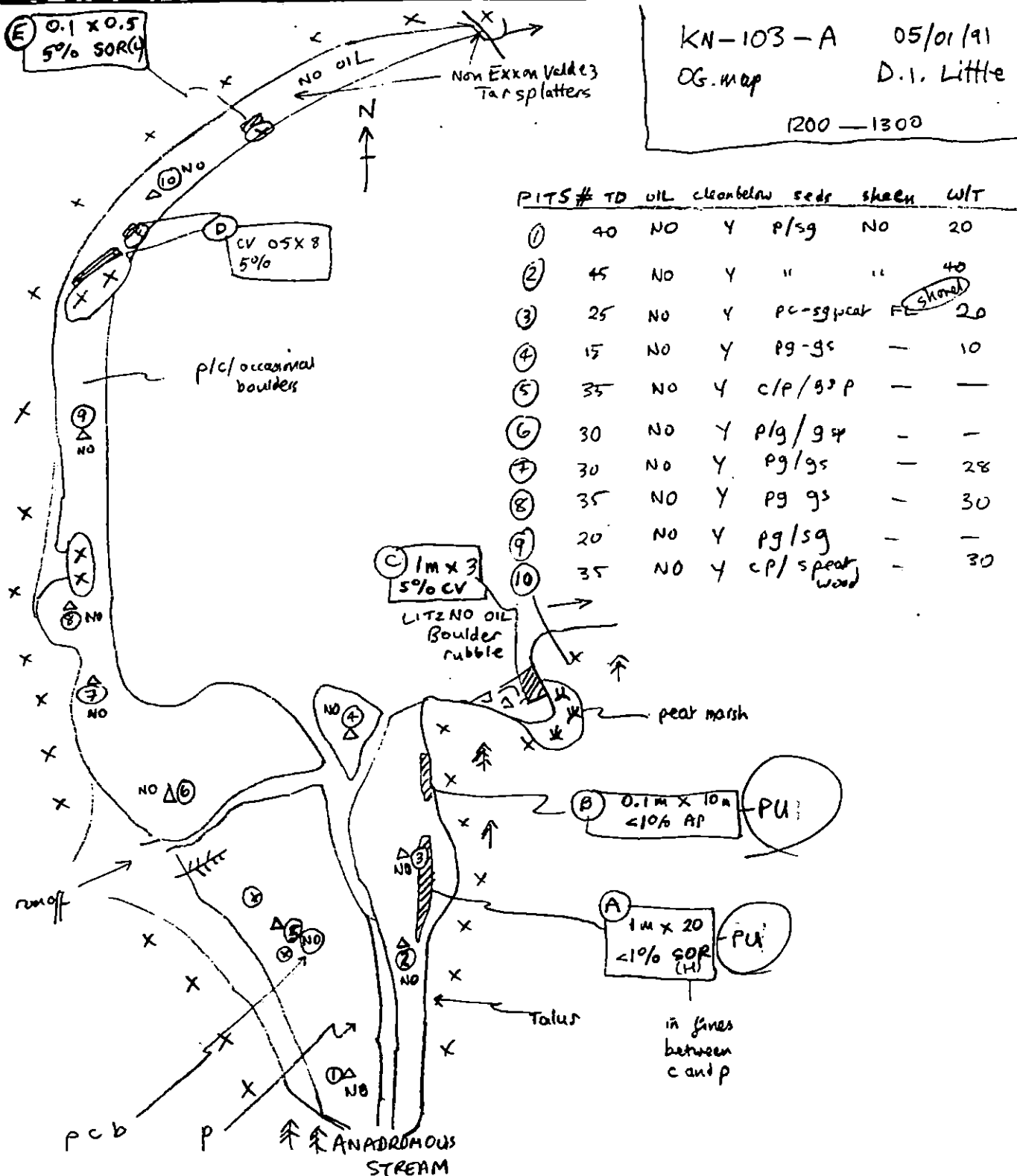
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

reviewed 5/3/91 JLG
Reviewed: 5/3/91 MC

(E) 0.1 x 0.5
5% SOR(4)

KN-103-A 05/01/91
OG. map D.I. Little

1200 — 1300



0 25 50
meters

reviewed 5/3/91 KLG
REVIEWED: 5/3/91 M.C.

Photo Locations

(E) 0.1 x 0.5
50% SOR(V)

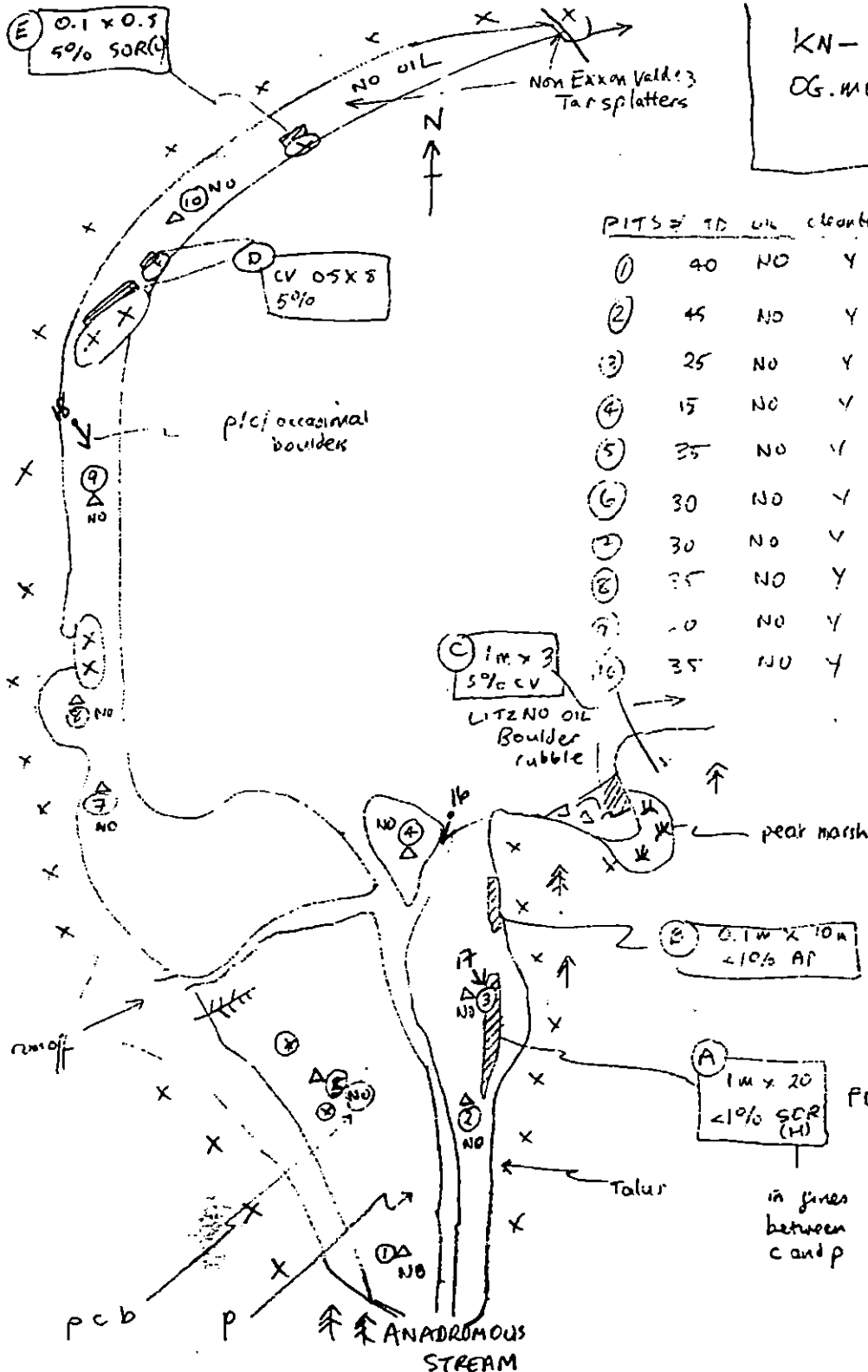
KN-103-A

05/01/91

OG map

D.I. Little

1200 - 1300



PITS	TD	oil	countdown	code	shock	wf
①	40	NO	Y	P/gg	NO	20
②	45	NO	Y	"	"	40
③	25	NO	Y	PC-sg/pear	FL	20
④	15	NO	Y	fg-gs	-	10
⑤	35	NO	Y	c/p/gsf	-	-
⑥	30	NO	Y	p/g/gsf	-	-
⑦	30	NO	Y	fg/gs	-	28
⑧	35	NO	Y	fg/gs	-	30
⑨	10	NO	Y	pg/gg	-	-
⑩	35	NO	Y	c/p/spear	-	30

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/1/91
 SEGMENT # KN-103 TIDAL HEIGHT (Range) +2 1/4 to +5 1/2 feet
 SUBDIVISION A BIOLOGIST T.A. Schroeder
 SEA STATE light chop WIND SPEED/DIRECTION N.E. 10-15 mph
 PHOTOGRAPHS: ROLL # FRAME #

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

Intertidal spawning area of this stream is very productive for salmon. Fucus help and filamentous algae growth provides excellent cover and food source for spawning salmon. Entire western shore of section is extremely lush and is supporting dense communities of fucus, mussels, snails, etc.

Remaining oil does not appear to be affecting the health or productivity of the intertidal organisms and any removal or treatment should use the least intrusive method possible.

WILDLIFE OBSERVATIONS

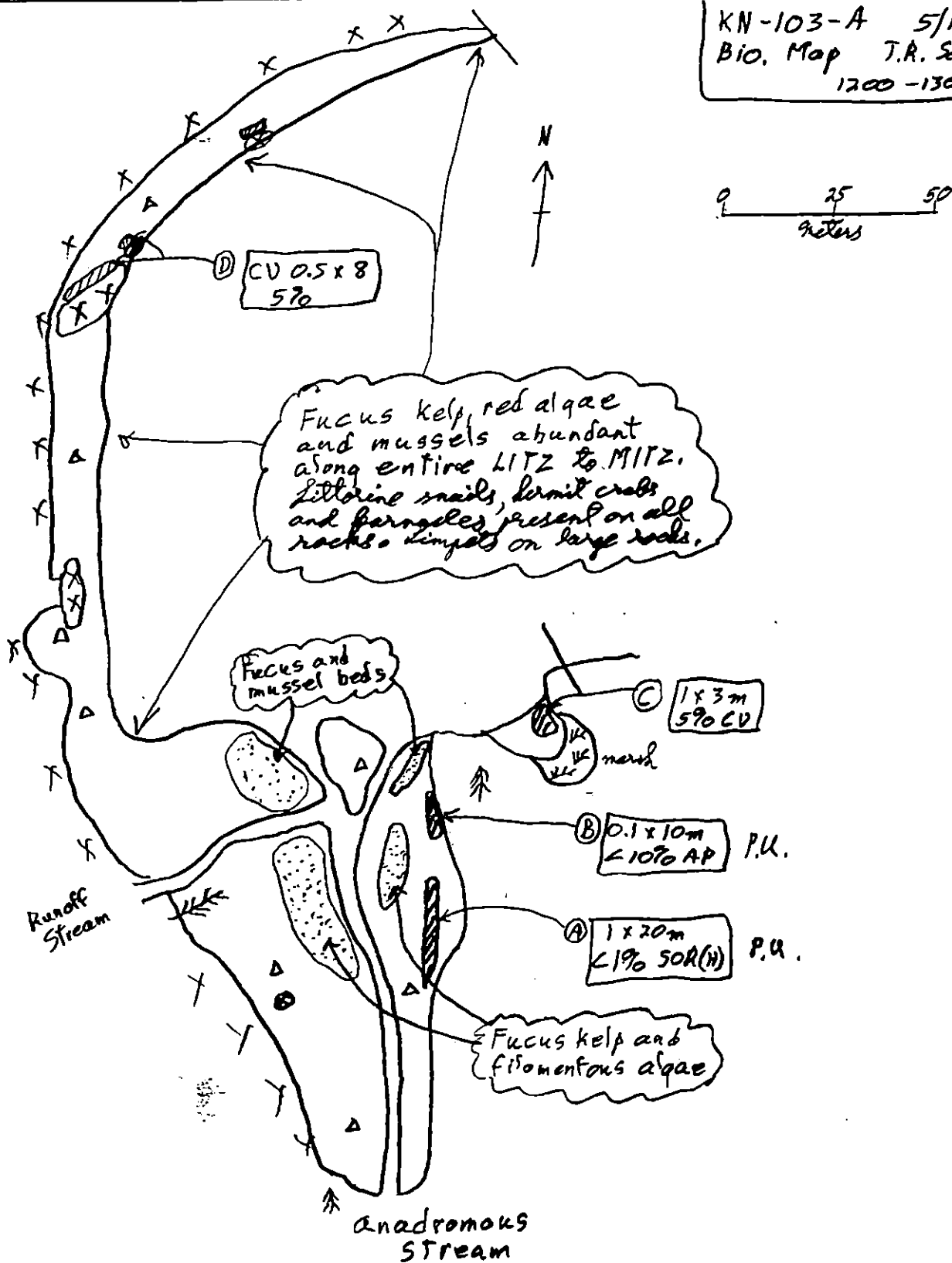
TO BE COMPLETED IN ALL SUBDIVISIONS

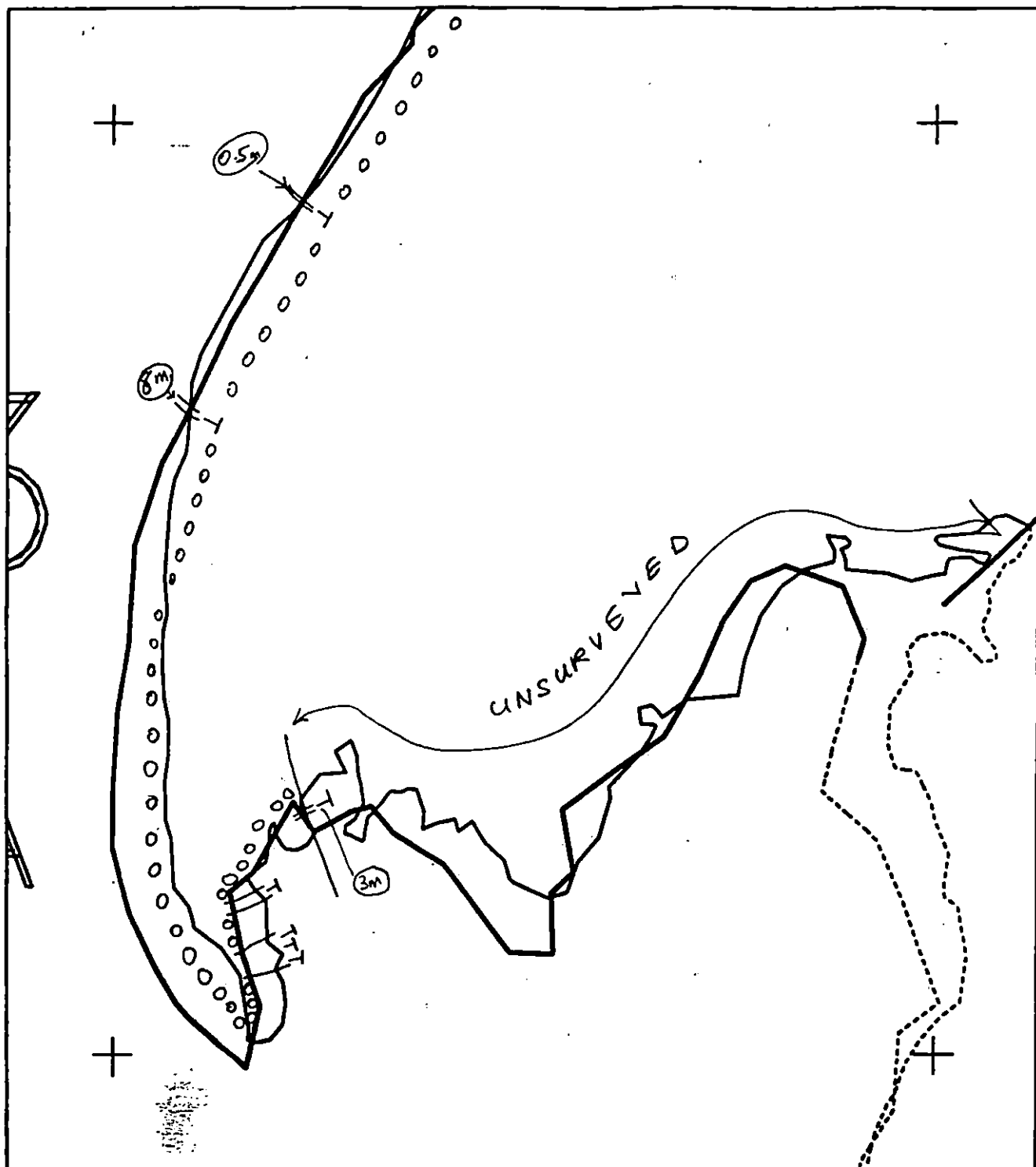
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	4	
Gulls/Kittiwakes			
Shorebirds	1 (Heron)	1	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

KN-103-A 5/1/91
 Bio. Map T.R. Schroeder
 1200-1300





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

KN0103 A

ADEC Subsegment Length: 1867m

METERS

0 100 200

AK State Plane Zone 4
 14N010300



Subdivision Field Map

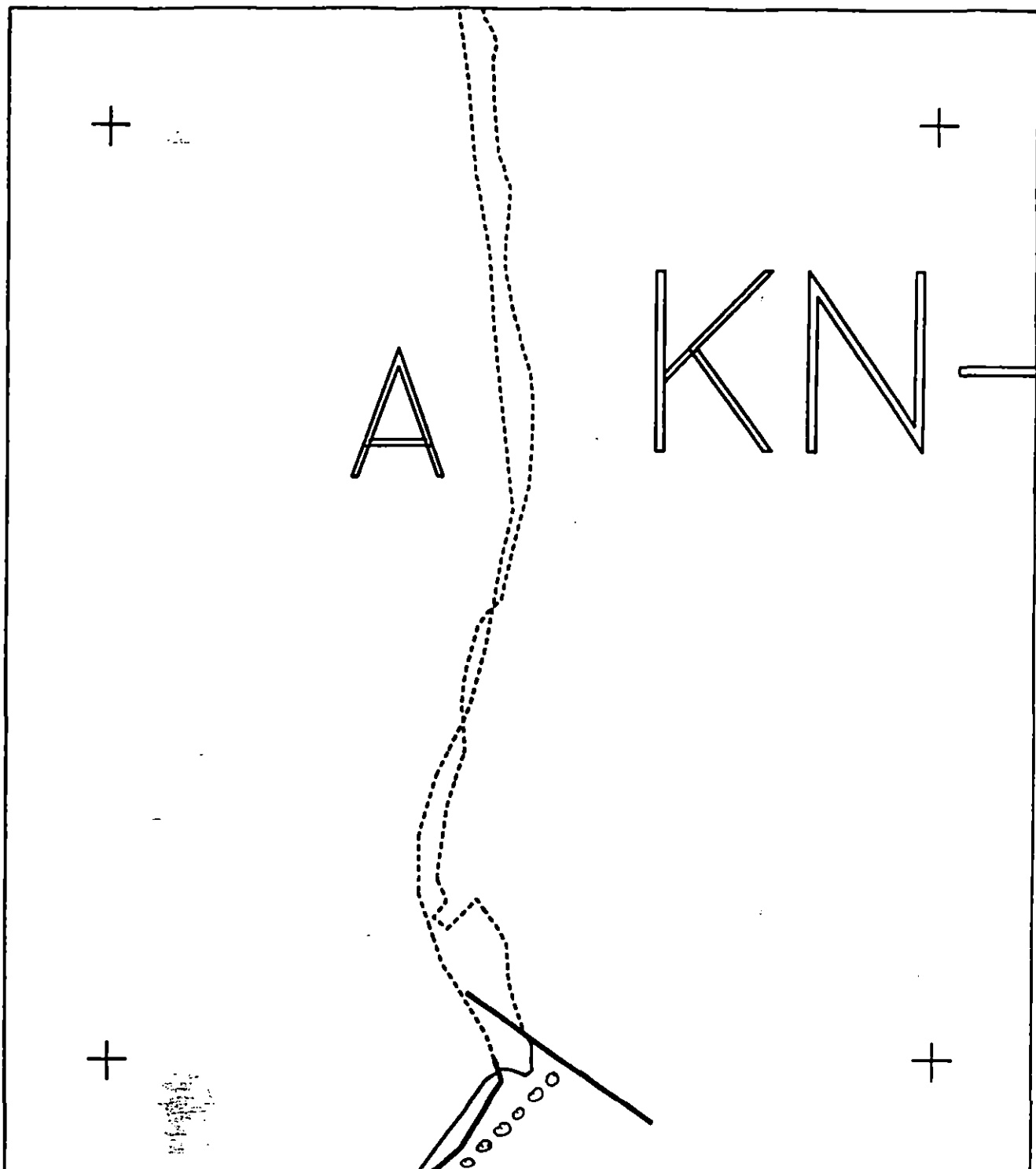
Map Key: KNKN0103Ae

Name: DAVID I. LITTLE

Date: 05/01/91

Date Entered:

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



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

KN0103 A
 ADEC Subsegment Length: 1867m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0103ab



Subdivision Field Map
 Map Key: KNKN0103Ab
 Name: DAVID I. LITTLE
 Date: 05/01/91
 Date Entered:

reviewed 5/3/91 KG
 REVIEWED: 5/3/91 MC

1991 MAYSAP EVALUATION

SEGMENT: KN 0103 SUB: A REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
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**

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

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

TEAM NO. 6 SEGMENT KN-103-A SUBDIVISION A DATE 5/1/91

ADEC/USFS

NAME TOM CROWESIGNATURE *Tom Crowe*☒ NTR

THE EXISTING SURFACE OILING AT THIS SEGMENT WAS PICKED UP OR MANUALLY TILLED DURING THE MAVSAP SURVEY.

EXXON

NAME Scott A. NaumanSIGNATURE *Scott A. Nauman*☒ NTR

The survey results speak for themselves - no further treatment needed.
Lots of wildlife (eagle, otter, heron, waterfowl) observed.

LANDMANAGER

NAME Aimee Weseman OF ADEFGSIGNATURE *Aimee Weseman*

☒ NTR The majority of the SOR remaining on the AVAD portion of subdivision were removed during the survey. Remaining SOR was manually tilled. No subsurface oil was detected.

USCG/NOAA

NAME CWO Spurr / Rebecca HoffSIGNATURE *R. P. Spurr / Rebecca Hoff*

☒ NTR AP picked-up by workers during segment survey (B), SOR manually tilled (A).
No further treatment required.

REVISOR: 5/3/91 M.C.

TEAM NO. 6

SEGMENT KN-103

SUBDIVISION A

DATE 05/01/91

[illegible]

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

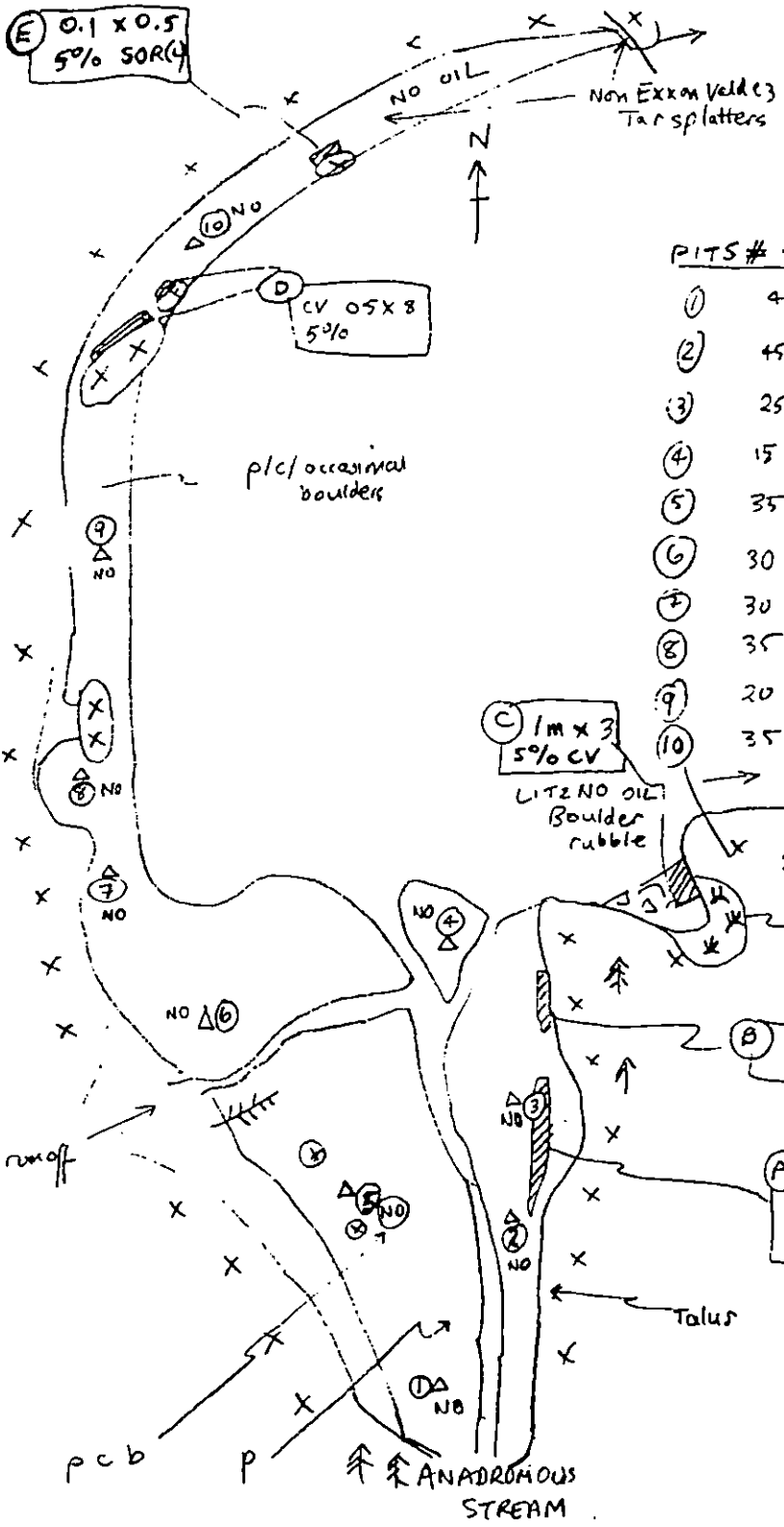
OG COMMENTS:

REVIEWED: 5/3/91 MC

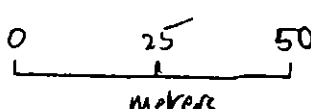
(E) 0.1 x 0.5
5% SOR(4)

KN-103-A 05/01/91
OG map D.I. Little

1200 — 1300



PITS#	TD	OIL	channel	beds	shale	W/T
①	40	NO	Y	P/sq	NO	20
②	45	NO	Y	"	"	40
③	25	NO	Y	PC-sgpear	FL	20
④	15	NO	Y	PG-gs	-	10
⑤	35	NO	Y	C/P/B/P	-	-
⑥	30	NO	Y	P/g/gs	-	-
⑦	30	NO	Y	pg/gs	-	28
⑧	35	NO	Y	pg/gs	-	30
⑨	20	NO	Y	pg/sq	-	-
⑩	35	NO	Y	C/P/spear	-	30

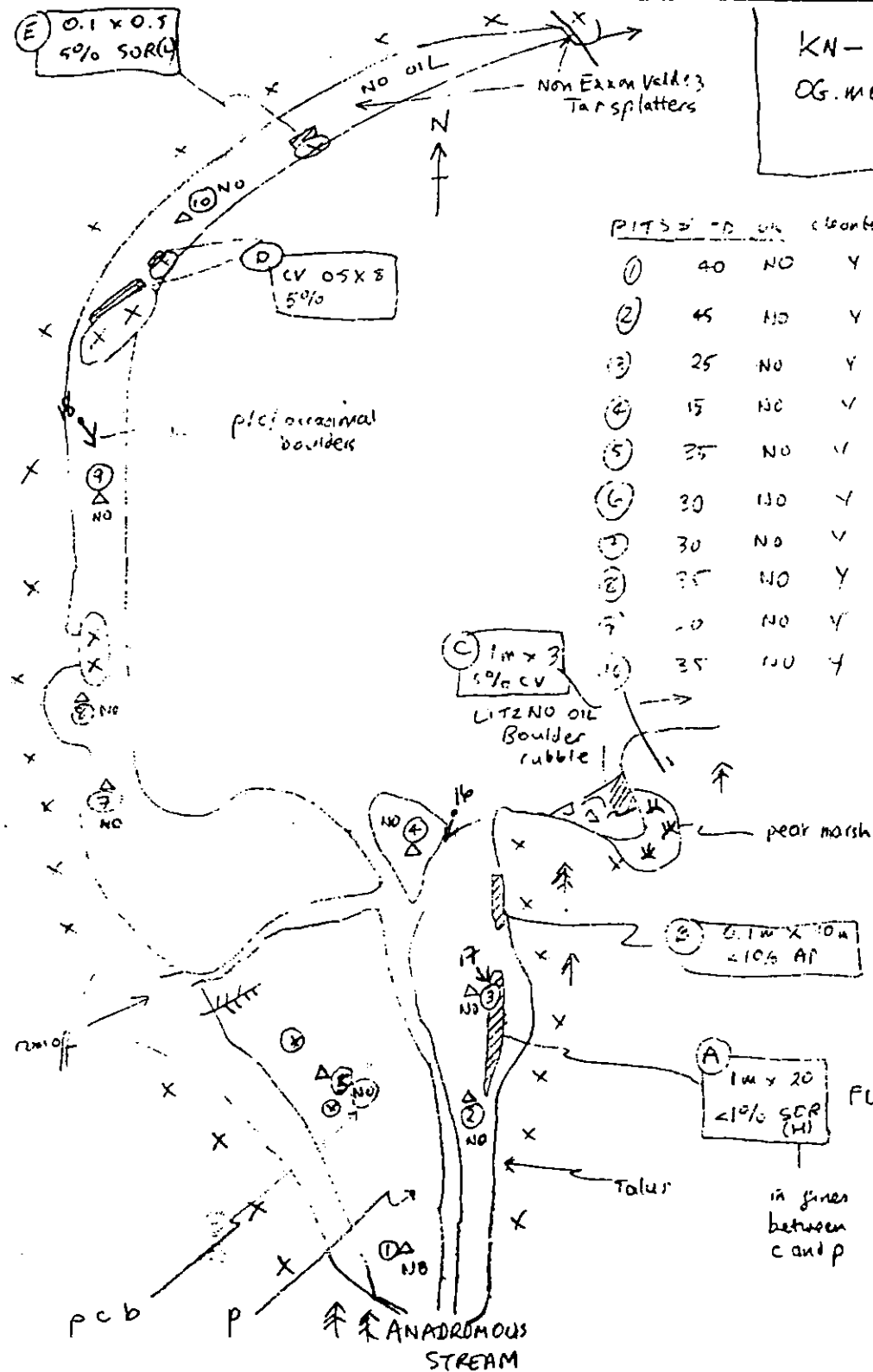


reviewed 5/3/91 E.C.
REVIEWED: 5/3/91 M.C

E 0.1 x 0.5
50% SOR(L)

KN-103-A 05/01/91
OG map D.I. Little

1200 — 1300



PITS #	D	Oil	clean below	code	chuck	wt
①	40	NO	Y	P/sg	NO	20
②	45	NO	Y	"	"	40
③	25	NO	Y	PC-sg-pair	FL	20
④	15	NO	Y	pg-gs	-	10
⑤	35	NO	Y	c/p/sgf	-	-
⑥	30	NO	Y	p/g/gg	-	-
⑦	30	NO	Y	pg/gs	-	20
⑧	35	NO	Y	ig/gs	-	30
⑨	10	NO	Y	pg/sg	-	-
⑩	35	NO	Y	c/p/speak	-	20

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 SEGMENT # KN-103
 SUBDIVISION A
 SEA STATE light chop
 PHOTOGRAPHS: ROLL #
 DATE 5/1/91
 TIDAL HEIGHT (Range) +2 1/4 to +5 1/2 feet
 BIOLOGIST T.A. Schroeder
 WIND SPEED/DIRECTION N.E. 10-15 mph
 FRAME #

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

Intertidal spawning area of this stream is very
 productive for salmon. Eucalyptus and filandulus
 algae growth provides excellent cover and food
 source for young salmon. Entire western shore
 of stream is extremely lush and is supporting
 dense communities of fungus, mussels, snails, etc.

Remaining oil does not appear to be affecting the
 health or productivity of the intertidal organisms
 and removal or treatment should use
 the least intrusive method possible.

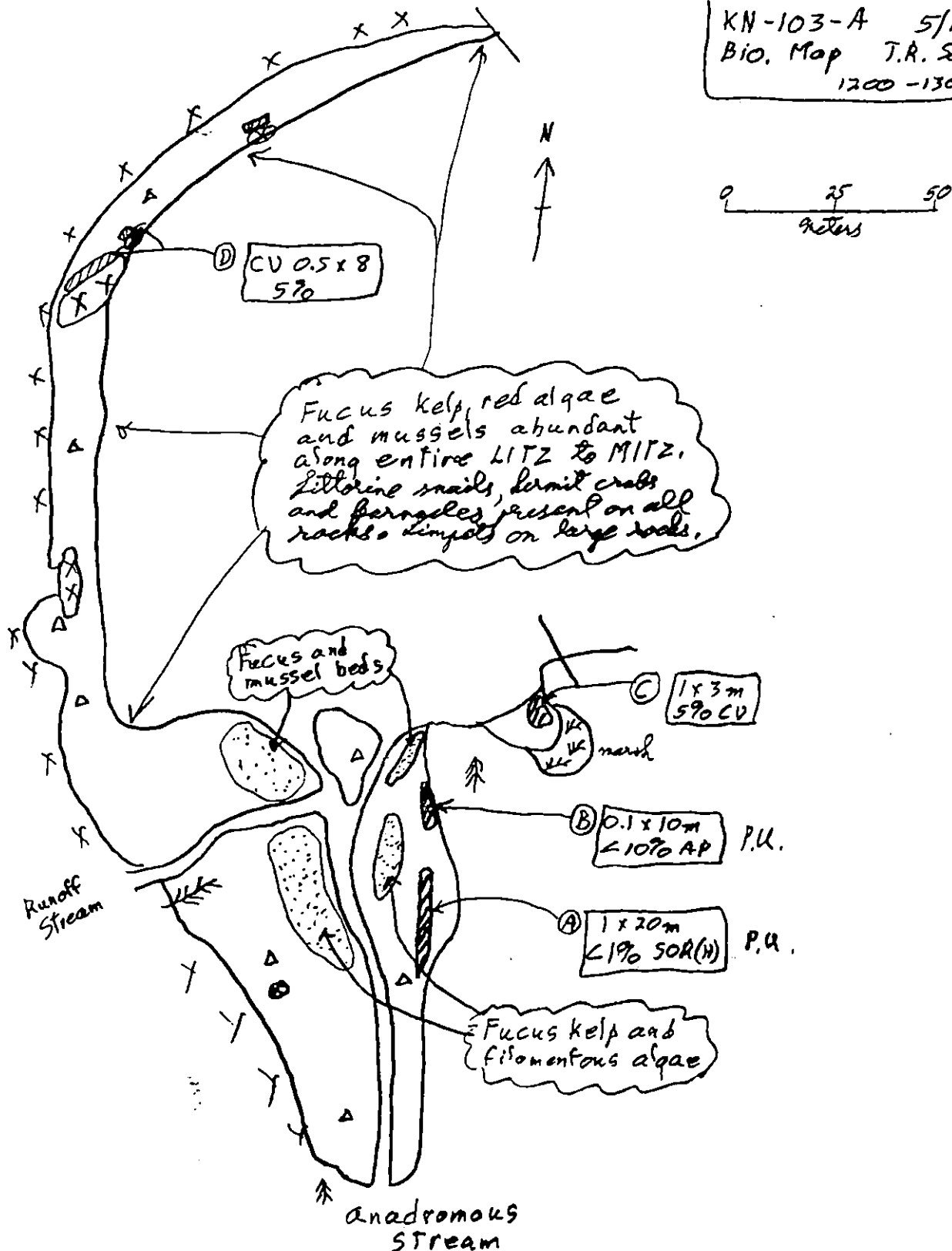
WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

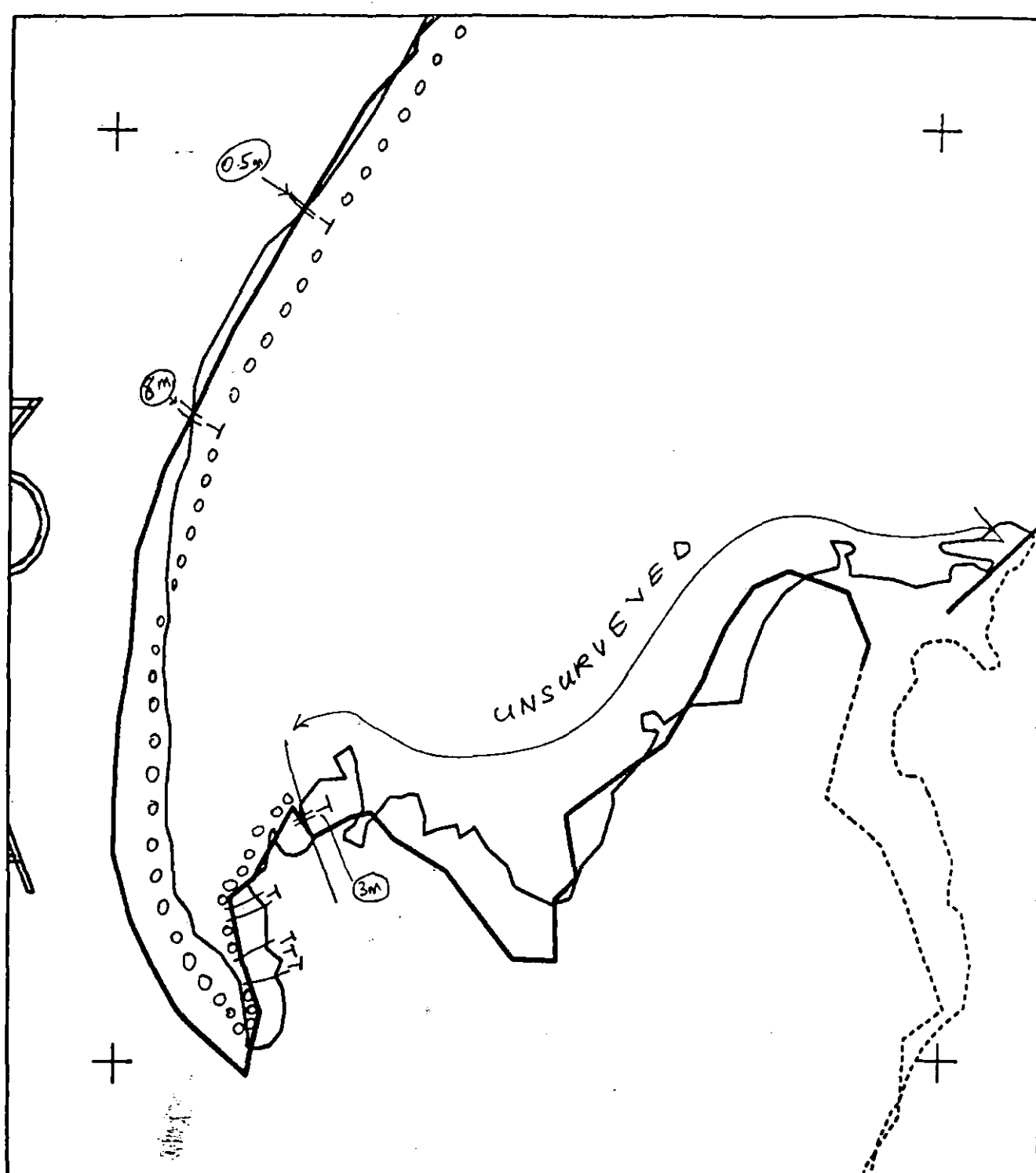
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	4	
Gulls/Kittiwakes			
Shorebirds	1 (Heron)	1	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

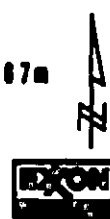
KN-103-A 5/1/91
 Bio. Map T.R. Schroeder
 1200-1300





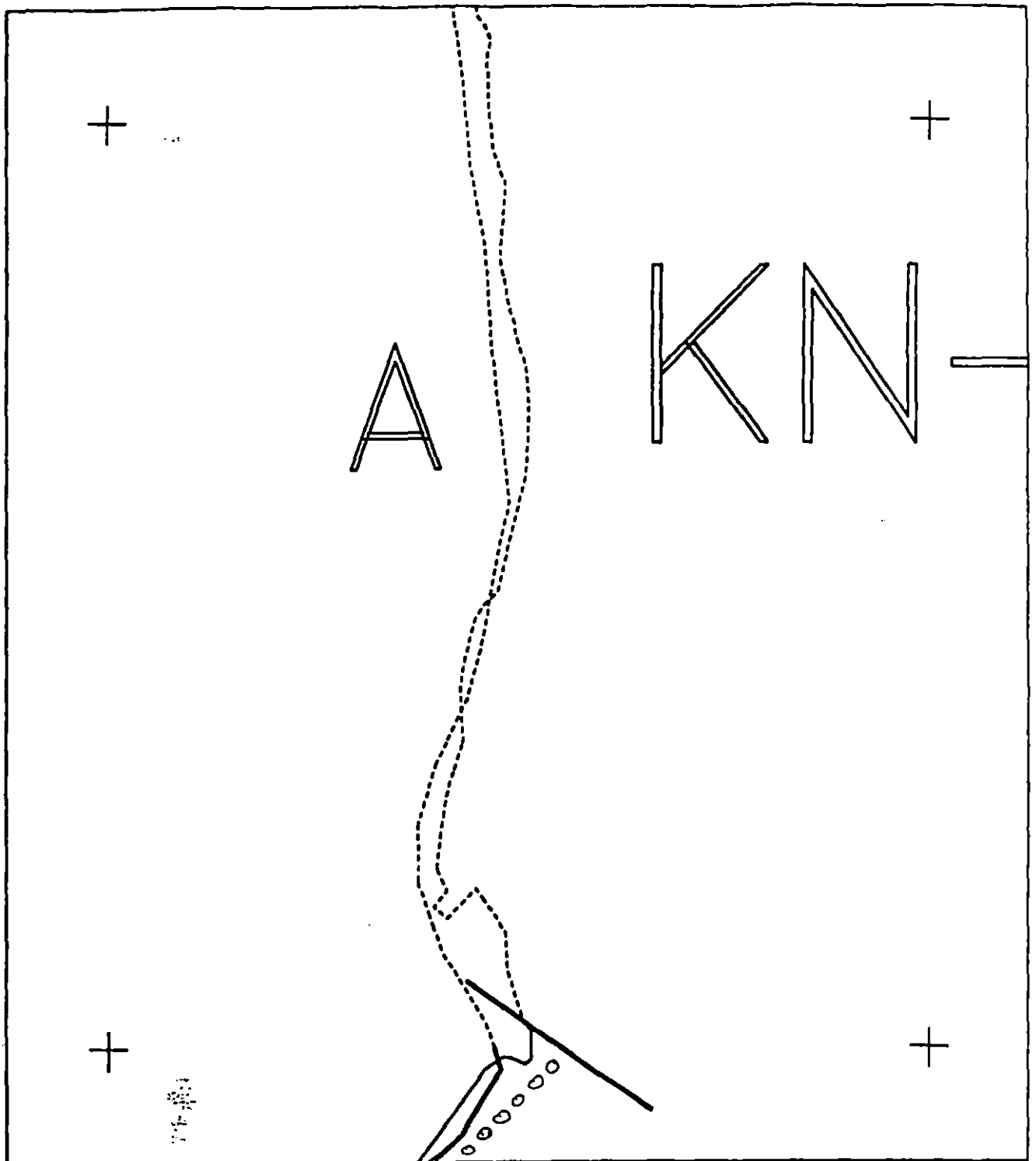
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

KN0103 A
 ABEC Subsegment Length: 1867m
 METERS
 0 100 200
 AK State Plane Zone 4
 450010300



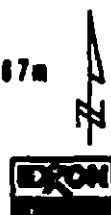
Subdivision Field Map
 Map Key: KNKN0103Aa
 Name: DAVID I. LITTLE
 Date: 05/01/91
 Date Entered:

reviewed 5/31/91 HG
 Reviewed: 5/3/91 MC



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

KN0103 A
 ADEC Subsegment Length: 1867m
 METERS
 0 100 200
 AK State Plane Zone 6
 kn0103ab



Subdivision Field Map
 Map Key: KNKN0103ab
 Name: DAVID I. LITTLE
 Date: 05/01/91
 Date Entered:

reviewed 5/3/91
 REVIEWED: 5/3/91 MC

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-103 STREAM NO: 226-10-16922 DATE 4/21/90

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) within 400m
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject 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: Reche Jan Oau DATE: 5/22/90

Subsurface Oil Observed: Yes X No Maximum Depth 8cm

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: Recommend manual removal of pavement in the UITZ and bark from oiled log in the UITZ as indicated on the attached sketch map. Work from 6/2 to 7/9 with approval of USFWS regarding eagle nest.

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

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON Andy Tan Andy Tan

NOAA Gary Petrac Gary Petrac

USCG G.A. Reiter G.A. Reiter

FOSC

DATE: MAY 25 1990

15/51

SEGMENT STIEN 105

STREAM 226-10-16922

DATE 4 121 90 2 →

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt 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

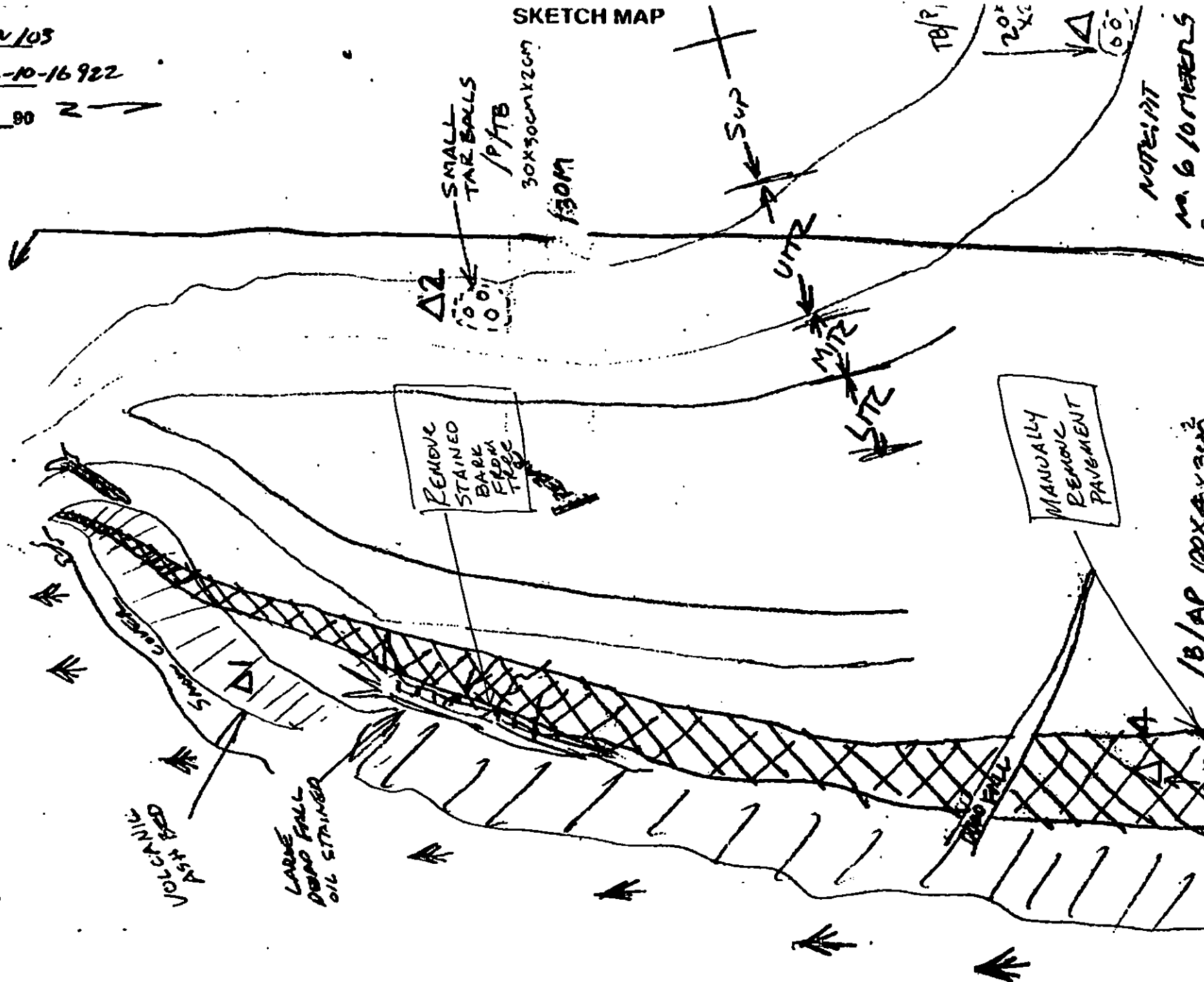
CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT/20 ST _____ MS _____ PT _____ TB 6 @ 10cm FL _____ NO _____

KN-103 35/51

43 PHOTOLOG

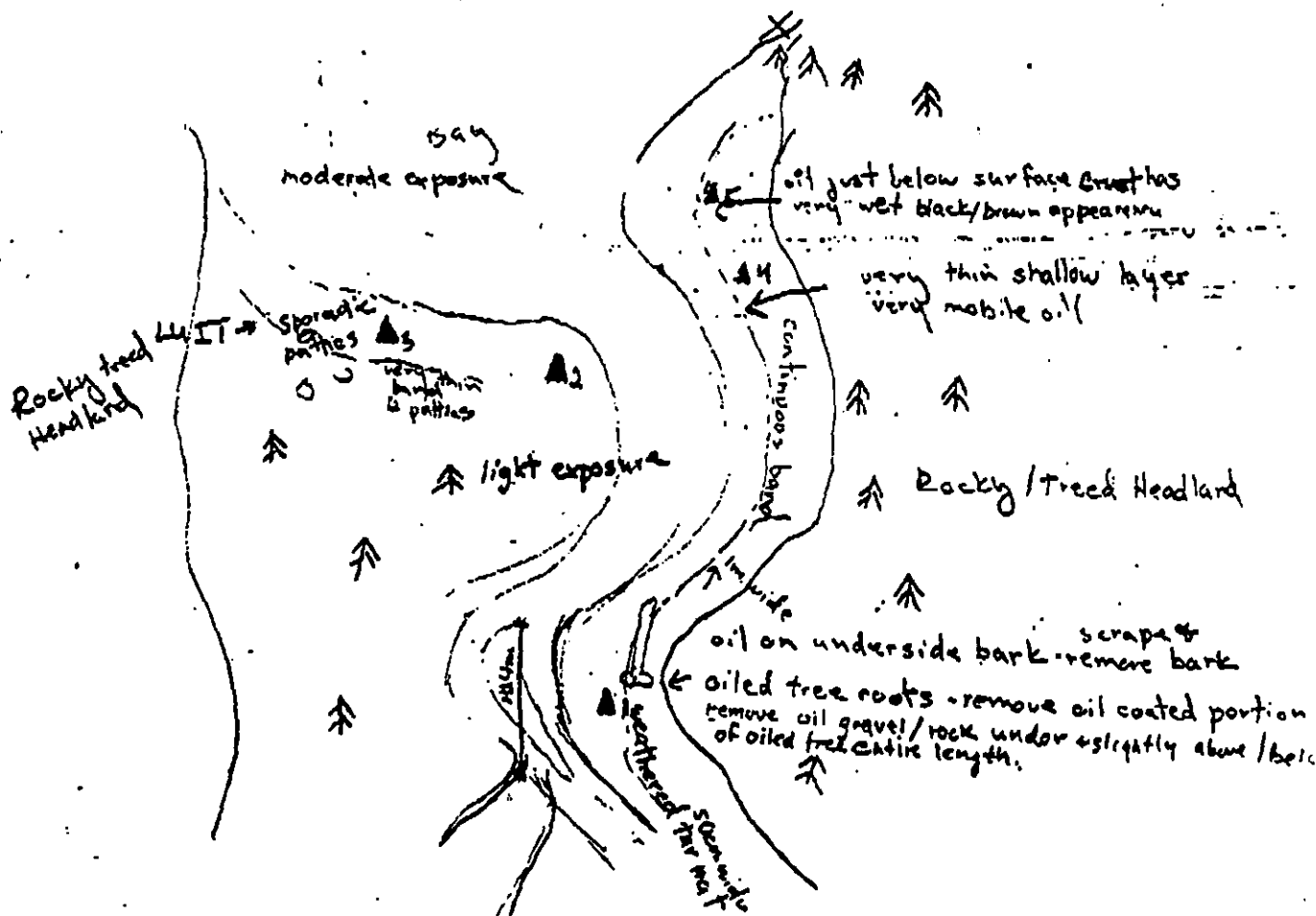
TIME(S)

DESCRIPTION

Pit 1 - 38cm - no vis oil Pit 2 - 20cm - no vis oil
 Pit 3 - 20cm - no vis oil Pit 4 - 2cm - no subsurface 2cm surface
 Pit 5 - 28cm - 5-8 oil penetration - sheen on pooled water
 Pit 6 - 12cm - less oil penetration

130 meters from X to dead fall

46 OIL DISTRIBUTION DIAGRAM



Treatment Recommendations

remove & wipe larger rocks in oiled band on east side of stream then scrape up thin oil layer with rake or shovel & remove

Remove oiled parts of downed tree on east bank

Remove sporadic tar patties & discontinuous oiled tar band on west side

The majority of work needs to be done on the east side

Treat during window period.

Sample taken
 Photo frame # and

Agree with ADFG recommendations

AP 215 CT 485 ST 215 TB 45 FL 5
PT 25

FEEDBACK

UITZ 2-3m wide ST/B
ST on tops of seeds CT/P
CT on sides and
bottoms of seeds AP/S
AP to 50 cm
diameter, 4cm thick

1A, 1B
ST-1
6Y

KN-103-A
2282 m

Utz top
of clip ST/P
6-8m wide
50m long

ST/P CT/P PT/S UITZ

ST/P AP/B URTZ C/P/G
2-3 m wide x 25 m long
AP soft, 2-3 cm thick

On backsides
of large B
on U1T2

WITZ

S	S
P	S

WITZ

ST/S
CT/S

UITZ ST/s
m-UITZ TB/s

m-UITZ 15/5
Tar splatters on UITZ B
Tar balls at head of stream

SKETCH MAP AREA

UITZ
Lang CP
P/E/U

UIT 2
Lang C/P/B

But
Elli
Nest

ST/p	WITZ
IB/s	HangR
PL/c	Sm Tong

Hand grassy
C/P bank
LITZ

4 cm - 3 m wide
175 m long
Hard AP to 4 cm thick

SUBJECT SYLLABUS

$\therefore (1 - 10^{-10})^{10^9} \approx e^{-1}$

$$i = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2} \quad (1 \text{ to } 1)$$

XXXX Wide

//// Medium

----- Narrow

TTTT Verv linked

KN-103

EXXON SEGMENT LENGTH : 2282m
ADEC Segment Length: 1862m

Map Key: PWS-283

Name: C. DILLON

04/09/90

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16922

SEGMENT KN-103 SUBDIVISION A

WORK WINDOW

Manual Pickup Tarmat Removal	CLOSED (Eagle Nest Buffer Prevents Access)
Bioremediation More Than 100m From Stream	CLOSED (Eagle Nest Buffer Prevents Access)
Bioremediation Less Than 100m From Stream	CLOSED (Eagle Nest Buffer Prevents Access)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- 1A,1B Salmon Stream** ADF&G catalogued anadromous stream (226-10-16922) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.
- 5T Bald Eagle Nest** USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, and bioremediation. Eagle nest buffer zone prevents access to treatment area.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-103A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

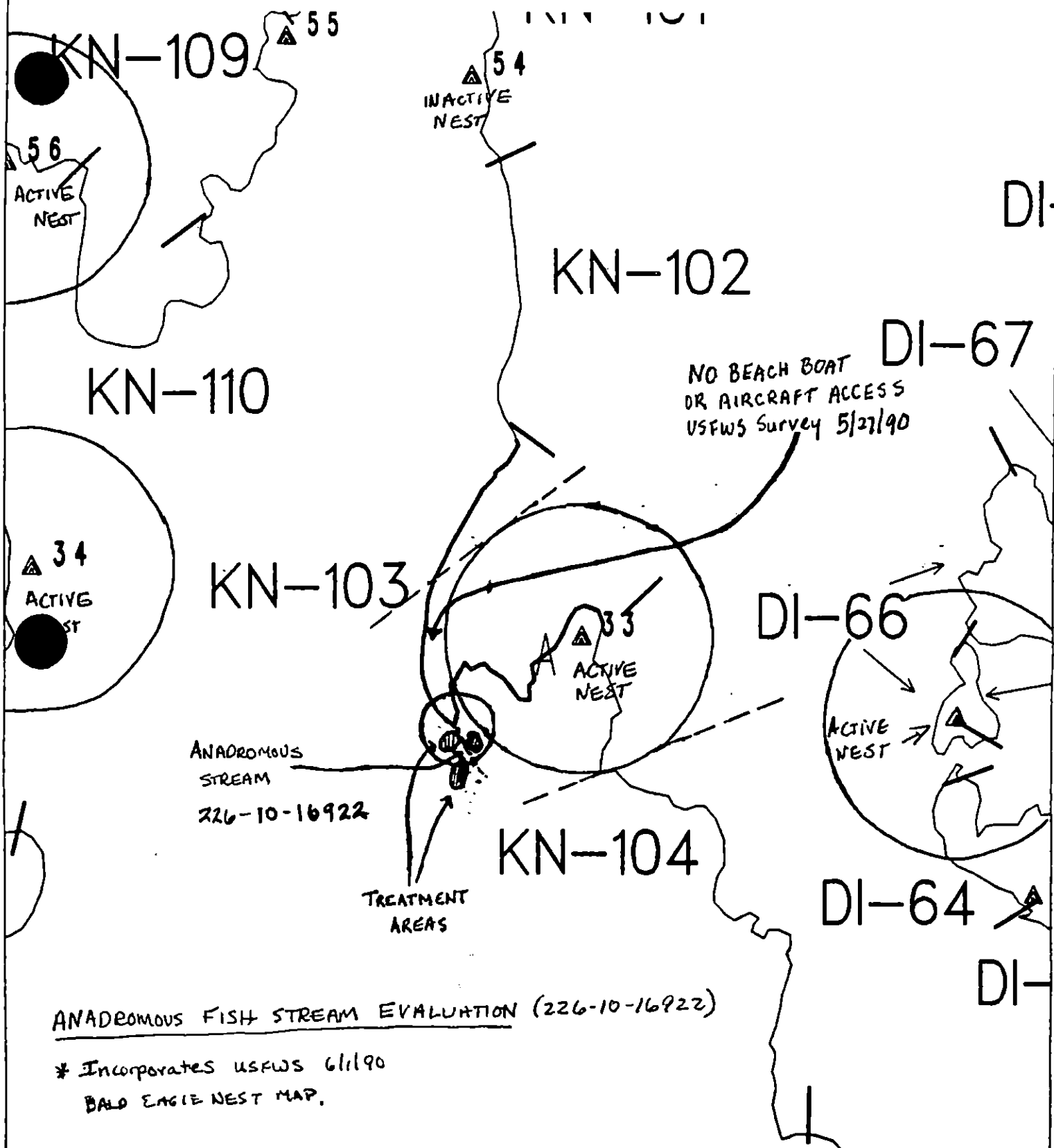
Date

6-10-90

Prepared by

Date

6/9/90



Exxon Company, USA
 Map Key: KNI-KN-103
 May 11, 1990



ECOLOGY MAP
 SEGMENT KN-103
 SUBDIVISION A (1 of 1)
 METERS
 0 407 814

★	Seabird Colony
▲	Eagle Nest

1 inch = 1336 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-103 STREAM NO: 226-10-16922 DATE 4/21/90

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) within 400m
- 6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject 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: Rache Jan Ome DATE: 5/22/90

Subsurface Oil Observed: Yes X No Maximum Depth 8cm

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: Recommend manual removal of pavement in the UITZ and bark from oiled log in the UITZ as indicated on the attached sketch map. Work from 6/2 to 7/9 with approval of USFWS regarding eagle nest.

See Addendum Dated 6/9/90 WTK

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

TAG APPROVAL DATE: 5/18/90

ADEC ART WEINER Art Weiner

EXXON AMY TAYLOR AMY TAYLOR

NOAA GARY PATRICK GARY PATRICK

USCG G.A. REITER G.A. REITER

FOSC: DATE:

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-103

SUBDIVISION: A

STREAM NO: 226-10-16922

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-103 STREAM NO: 226-10-16922 DATE 4/21/90

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) within 400m
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject 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 X No _____ Maximum Depth 8cm

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: _____ Wands
<u> X </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend manual removal of pavement in the UITZ and bark from oiled log in the UITZ as indicated on the attached sketch map. Work from 6/2 to 7/9 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 8/30)
 1K Purse seine hook-off (7/20 to 8/30)
 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 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 8/1)
 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 (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y: Special use destination
- 7Z Subistence 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 267-2359

FIELD SHORELINE COMMENT SHEET

50/51

SEGMENT ST / KN-103 SUBDIVISION: ^{ASC#} 226-10-16922 DATE 4-21-90

USCG

NAME Kerwin L. Drahan SIGNATURE CWO 2 K. L. Drahan☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTEDAgree~~ADEG~~ → ADPdgNAME Rick Gustin SIGNATURE Richard J. Gustin☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS We recommend removal + wiping of larger rocks in oiled band on the east side of the stream, followed by scraping up the thin oil layer with rake or shovel and remove.

Remove oiled parts of downed tree on east bank.

Remove sporadic tar patties + discontinuous oiled tar band on west side

The majority of work needs to be done on the east side.
Treat during window period.~~LAND MANAGER~~ → NONE

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAO)

REVISION NO. 04/13/

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ KN103 1A/C
 BIO KEN CRITCHLOW LAND REP STREAM 226-10-16922 (OF)
 EXXON DARBYL YONES ADFG RAKAVIN-AIMEE WEXEMAN TIME 12:55 to 1:00
 TEAM NO. 14 TIDE LEVEL +6 FT DATE 4/21/90
 EST. SUBDIVISION LENGTH: 230 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 55 % P 10 % G 20 % S 10 % M 0 % V
 SLOPE: Long 50 % Hang 70 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 120 m N 0 m VL 0 m NO 110 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	A	B	C	D	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT	✓				✓			✓	✓			
POOLED												
COVER												
COAT	✓				✓							
STAIN												
MOUSSE												
PATTIES												
TARBALLS			X		✓				✓			
FILM												
NO OIL									✓	✓	✓	

PAVEMENT H F (3) 480 sq. m by .3 cPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				AN A	REMARKS (M)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	SU	U	M	V				
1	30					✓	•							✓					N	✓	ASH/ASH
2	30					✓	•							✓					N	✓	GR/SO/GR
3	20					✓	•							✓					N	✓	GR, GR/SO/GR
4	28					✓	•							✓					N		GR, GR/SO/GR
5	28	✓	✓				5-8	✓	✓					✓					Y	✓	GR, GR/SO/GR
6	12					✓	•							✓					N		GR, GR/SO/GR

COMMENTS WEST SIDE OF COVE OILED BAND EXTENDING BEYOND 120 METER
 NO SHEEN OBSERVED. VOLCANIC ASH OBSERVED UPPER U/TZ.

REVIEWED FWDATE 5-1-90

15/51 SEGMENT STIKN 105

STREAM 226-10-16 922

DATE 4 121 90 2

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ₁
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

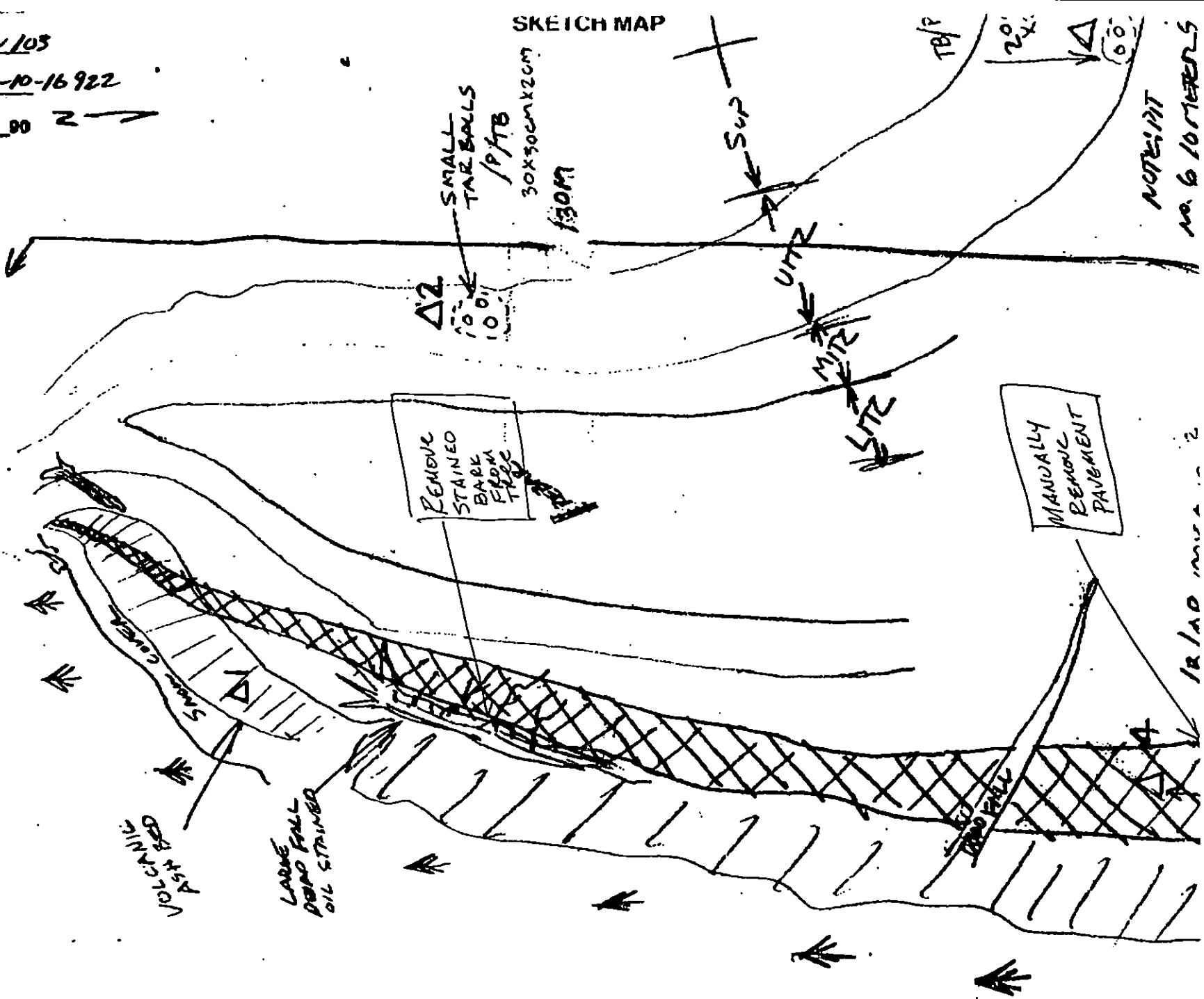
CT/P
Patched Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT/20 _____ ST _____ MS _____ PT _____ TB 6 @ 10cm _____ FL _____ NO _____

34/51

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS DS TS AVS SCHM HAMS FTA2 REGION: PWS KP,CI K,APMETHOD: Aerial Ground Boat3 DATE: 4-21-9015 HIGH TIDE TIMES: 121 TEAM RECORER: Aimee Wesemo4 START TIME: 130016 HIGH TIDE HTS: 122 OBSERVERS: Rick Gustin5 STOP TIME: 140517 LOW TIDE TIMES: 173023 AGENCY: ADFG6 SEGMENT #: KN-10318 LOW TIDE HTS: 124 PHOTOS TAKEN: Y (N)

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frames: _____

8 K-UNIT: _____

ESS Slack Flood Slack25 VIDEO TAKEN: (Y) N TAPES: 90RL66HSS5

9 STAT AREA: _____

20 USCG QUAD: S B AStarts: 1356 Ends: 1490

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y (N) Number12 SOURCE: Map Loran

Oil _____

13 LOCATION: Knight Island

Sediment _____

14 DESCRIPTION: NE tip south of passage pnt

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	Y	H	N	L	Y	H	N
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION	5-8	2	1					

36 CATALOGED ANAD. FISH SKELET? (Y) N37 CATALOG #: 226-10-1692238 STREAM NAME: Opal Creek39 OIL IN STREAM BED: Y (N)40 OIL ON STREAM BANKS? (Y) N41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 30 meters)42 OIL WITHIN 1 MILE OF STREAM? (Y) NWhere: East west banks30 OVERALL OIL IMPACT: N YL (L) (N) H31 OIL TYPE: Pooled Housee Tar Asphalt Slack Stain32 OILED DEBRIS: (Y) N Tree33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh34 WAVE EXPOSURE: High Moderate Low35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 55Gravel 30 Sand 15 Hard/silt43 ANADROMOUS FISH PRESENT? (Y) N Presume44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

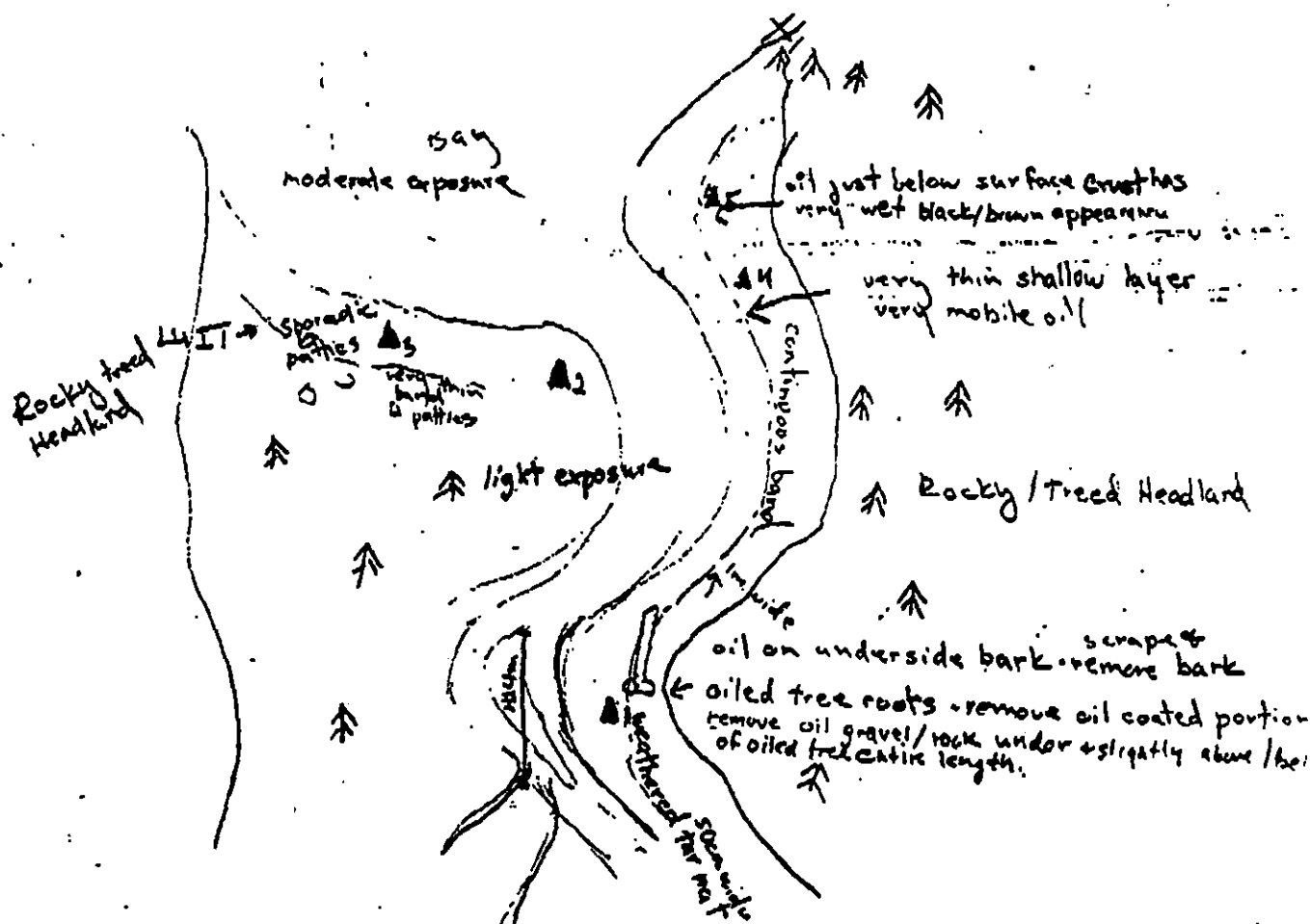
Comments: shallow surface 50cm-1m wide oiled band on east side of stream
in UTTZ. When crust is broken oil appears dark black/brown, very mobile
sporadic 30cm wide band running in UTTZ on west side - no penetration

KN-103 35/51

43 PHOTOLOG

DATE(S)	DESCRIPTION
	Pit 1 - 38cm - no vis oil
	Pit 2 - 20cm - no vis oil
	Pit 3 - 20cm - no vis oil
	Pit 4 - 2cm - no subsurface 2cm surface
	Pit 5 - 28cm - 5-8cm oil penetration - sheen on pooled water
	Pit 6 - 12cm - 1cm oil penetration
	120 meters from X to dead fall

46 OIL DISTRIBUTION DIAGRAM



Treatment Recommendations

remove & wipe larger rocks in oiled band on east side of stream then
scrape up thin oil layer with rake or shovel & remove

Remove oiled parts of downed tree on east bank

Remove sporadic tar patches & discontinuous oiled tar band on west side

The majority of work needs to be done on the east side

Treat during window period.

Sample taken

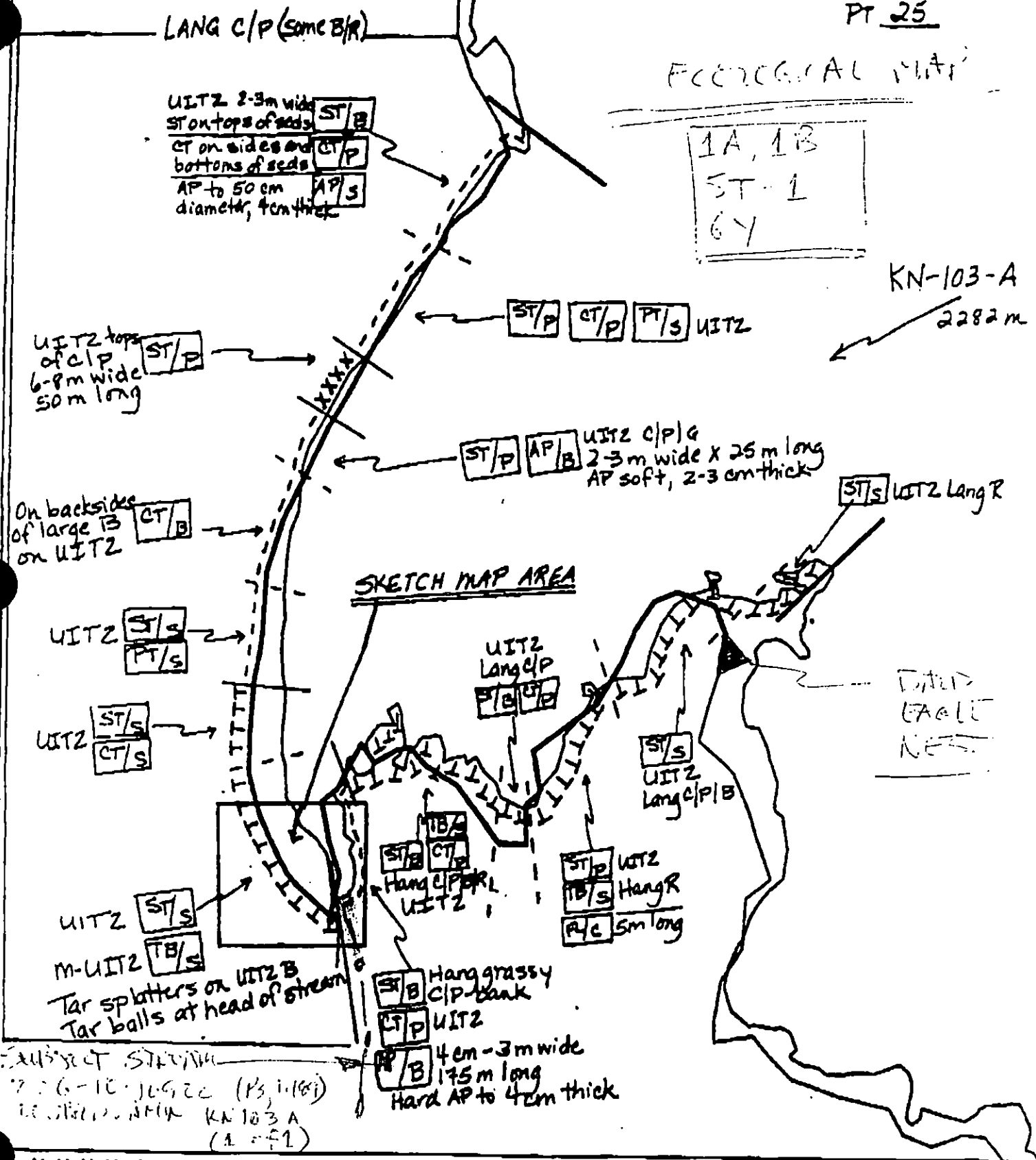
Done with ATER recommendations

Oil Character Lengths (m):
 AP 215 CT 485 ST 215 TB 45 FL 5
 PT 25

ECOLOGICAL MAP

1A, 1B
 ST-1
 6Y

KN-103-A
 2282 m



XXXX Wide

/// Medium

--- Narrow

TTTT Very narrow

KN-103

EXON SEGMENT LENGTH: 2282m
 ADEC Segment Length: 1862m

Map Key: PWS-283

Name: C. DILLON

Date: 04/09/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-104

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

An Exxon archaeological monitor is required on-site during shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 118 m: Narrow 648 m: V.Light 285 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tarmats, tar balls and oiled debris. Bioremediate areas indicated in sketch map. Work should be conducted after 6/1 with ADF&G and USFWS approval regarding eagle nest constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-104-A SUBDIVISION: A DATE 4/10/90

USCG NAME: DAVID A. SCHNEIDER SIGNATURE: David A. Schneider

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

PS3/USCSR

COMMENTS

This subdiv will require extensive manual treatment and bioremed. Tar balls should be removed throughout the MITZ. Surface and subsurface oiled cobble and pebble should be removed. UITS should be tilled and bioremediated. Tar mats located throughout the subdiv in the UITS and MITZ should be broken up and removed. On the pocket beach ~~the~~ drawn on sketch #2, tar mat extends beneath the UITS berm. Top lying sediments should be moved, far removed and then surface sediments replaced. Debris in SITZ should be removed.

ADEC NAME: Peter Montesano SIGNATURE: Pete J. Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

See Attached

LAND MANAGER

NAME: JANETTA PITCHARD SIGNATURE: Janetta Pitchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manually remove coal on vertical rocks adjacent to the beach ~~that~~ the asphalt and tar mats in the MITZ and UITS. Tar penetrates the subsurface. Tilling and bioremediation is recommended. Remove clean up debris. Snow on the Supra. Beach on Map 1 would provide access to the uplands.

KN 104-A Peter Montesano ADEC

Besides the areas to be described in detail, KN 104-A is best characterized as patchy stain / Sporadic coat with random 2-3cm accumulations of oiled sediments trapped in boulders and bedrock.

On the map of the entire segment, the northernmost medium slash (" / ") is a small pocket beach requiring some handwork. The majority of the scraping is to be done on the "covered" rock outcropping at the central shoreline - most oil on North Face.

Sketch map #1: Not shown is an area at the NE corner where a coat + surface penetration need some scraping and removal. Otherwise, soft asphalt extends on either side of the central rock outcropping. Several of the large cobbles at the base of this bedrock showed SB oil when flipped. When the AP is removed, the large cobbles in the vicinity should be checked underneath and wiped accordingly.

Sketch map #2: The N end of this beach has a coat which could use some minimal handwork. Toward the S half of this beach is an extensive AP area to be removed. The concentration and dimensions of this oiling are not evident by the sketch. It is important to note that the AP at its N end and under the berm, gravel / pebbles cover the AP. The snow covered supratidal should be inspected for additional. Finally, remove the oiled snare and spill debris in the locations indicated on the sketch.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ KN-104
 BIO J. BARRY LAND REP J. PRITCHARD (FS) SUBDIVISION A (1042)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 09:15 to 11:00
 TEAM NO.: 6 TIDE LEVEL: +0.5 to +5.5 DATE 04/09/90
 EST. SUBDIVISION LENGTH: 1375 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 85 % B 5 % C 5 % P 3 % G 1 % S 1 % M 6 % V 0
 SLOPE: Lang 15 % Hang 55 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 975 m VL 350 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	N	P	R	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT		X		✓						X			X	✓		
POOLED																
COVER			✓	X					X				X	X		
COAT		X	X	X		X			X				X			
STAIN			X	X					X				X			
MOUSSE																
PATTIES				X					X				X			
TARBALLS																
FILM																
NO OIL	Snow on SITZ of beaches												S			X

PAVEMENT: (H) F (S) 225 sq. m by 4-6 c(PATTIES) TARBALLS 1 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE trash, pompos
#BAGS 1

Photographs:

Roll No. ST-6-6Frames 20, 21, 23, 24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS			
		OP	OR	OL	OF	NO			UO	UC	1	2	3	4	5	6	7	8			SU	U	M
1	25			X			7 - 10		X						X			X					P/G (soft AP layer)
							.																
							.																
							.																
							.																
							.																

COMMENTS MAJORITY OF SUBDIVISION IS HANG/VERT ROCK WITH NARROW AND VL COAT/STAIN BAND ACROSS THE HIGH TIDE LINE /UITZ. THERE ARE TWO LANG C/P/G/S BEACHES WITH MEDIUM WIDTH COVERAGE INCLUDING ASPHALT PAVEMENT AND COVER. THESE AREAS ARE SHOWN ON THE 2 ATTACHED SKETCHES. AN OTTER CARCASS WAS COLLECTED FROM THE NORTHERNMOST BEACH. OILING IS SUSPECTED BUT QUESTIONABLE.

Page 1 of

PIT 1 AND TRASH/DEBRIS ARE ON THE SOUTHERNMOST BEACH

REVIEWED

✓W

DATE

4/11/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/1

Segment ST/ KN104 Subdivision A Date (mo/day/yr) 9 APRIL 1990

Time (24 hr) 1000-1100 Biologist Jim Barry Length = 1/7

(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 20 Moderate 75 Low 5

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

Photographs: ST-6-5
Roll No. 22
Frames 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:

EAGLES, SHOREBIRDS (SURFBIRDS ~200)

PELAGIC COX-MEDIAN

STELLAR'S JAW - 2

Ecological Considerations: ST- EAGLE NEST - 1 NEST SITED AT THE JUNCTION OF KN103 and KN104 -

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 unloiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

KN104-A

APRIL 9-1990

3/7

Time 1000-1100

DE +3 → +5.5

I General Comments -

A. Habitat types - 3 primary habitat types are found in this segment.

- 1) Rocky headlands with patchy mussel cover, moderate barnacle and gastropod densities, and moderate to high cover of algae in the lower zones.
- 2) Cobble/Boulder shorelines with similar abundances of biota to (1).
- 3) Cobble/Pebble Beaches, some with mussel beds, and generally sparse algal cover.

B. Oil Effects - Vertical cliffs and rocky shores generally show only mild effects of oil in the upper zones. Pebble beaches have more severe oil effects, including asphalt pavement.

II Major Species

A. Barnacles - All 3 species present.

B. Mussels - Patchy in abundance, particularly on vertical bedrock walls. 1 or 2 beaches have broken mussel beds in the middle to high zone, with some trampling damage evident - Recovery in progress as indicated by recruiting juveniles and spat.

C. Gastropods - Periwinkles (*Littorines*) moderate limpets and whelks are similarly moderate in abundance.

D. Fucus - Sparse upper zone, though some juveniles are present. Moderate to sparse in the lower zones.

KN104-A

April 9 1990

III. Other Species

Filamentous and finely branched ~~at~~ red algae are abundant in the lower zone. - Eel grass beds are present adjacent to some shores.

KN104-A

APRIL 9 1990

5/7
8/IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA D13

CLADOPHORA S12

ENTEROMORPHA M123

GREEN CRUST. ?

ULVA M123

ULROSPORA M123

3) RED ALGAE - RHODOPHYTA

BOSSIELLA R1

CALLIARTHRON R1

CORALLINA R1

CRYPTOSIPHONIA M-D 123

ENDOCCLADIA MURICATA S12

HALOSACCION GLANDIFORME M123

IRIDAEA M123

MASTOCARPUS S12

MEMBRANOPTERA M123

MICROCLADIA D123

LITHOTHAMNION PALIFILUM S12

PETROCELLIS MIDDENDORFFII S12

PORPHYRA SPP. S123

RHODOMELA LORIX M123

RHODYMENIA PALMATA M-D 123

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA MU

AGARUM SPP. MU

COSTARIA MU

FUCUS DISTICHIUS M-D 123

HEDOPITYLLUM SESSILE MU

HILDONBRANDIA S12

LAMINARIA MU

NERIOCYSTIS SU

RALPSIA S12

SCYTOSIPHON COMENTARIA S12

A SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

KN104-A

April 9 1990

B. MARINE INVERTEBRATES

1) ANEMONES

EPIACTIS RITTERI ? S12

URTICINA CRASSICORNIS ?

Anthopleura elegantissima ?

A. artemesia ?

A. xanthogrammica ?

2) Annelid Worms

Polychaetes

Nereidae ?

Nephtyidae ?

Serpulidae ~~D13A~~

Serpula S12*

Crucifera S12*

Spirorbidae

Spirorbis D13*

3) Peanut Worms - Sipunculid

Phascolosoma thersites ?

4) MOLLUSCS

a) CHITONS

KATHARINA TUCATA S12*

TORICELLA LINSATA R1

MOTALIA spp. R1

b) Snails - GASTROPODS

LITTORINA SCUTULATA M123A

L. SITKANA M123A

NUCULLA LAMELLOSA M123A

N. EMARGINATA M123A

SEARLSEA DIRA M123A

AMPHISSA COLUMBANA R12

TACHYRHYNCHUS spp. R12

c) Nudibranchs

LAMELLIDORIS FUSCA S12*

d) Limpets

LOTIA DIGITALIS M12*

ACMAEA MITRA ?

LOTIA PERSANA ?

d) Limpets (cont)

TECTURA SCUTUM M123*

T. PERSANA ?

BIPHONAREA THERAILES S12*

DIADORA ASPERA ?

e) Mussels -

MYTILUS EDULIS M123*

f) Clams

SINGLE - PODOCYSMUS CEPHO S12

HIAELLA spp. S12*

PROTHACA STAMINEA ?

MACOMA spp. ?

g) Crustaceans

1) Barnacles

SEMIBALANUS CORIOSUS M-D123*

BALANUS GLANDULA M D123*

CHTHAMALUS DALLI M-D123*

2) Crabs

HAPLOGASTER spp. ?

HEMIGRAPUS OREGONENSIS S12*

PUGETIA spp. ?

HERMIT CRABS - PAGURIDAE M-D123

3) Beach Hopper

ISOPODA ?

AMPHIPODA

ORCHESTRA ? M123A

h) Bryozoans

SCHIZAPORELLA spp. ? M123A

i. Echinoderms

1) Sea Stars

* M123 Pycnopoda helianthoides

* M12 Dermasterias imbricata

* M123 Leptasterias hexactis

? EASTERIA truschedi

? OROSTHEDEA KOCHERI

S12* PISASTER OCHRAEUS.

6/7

KN104-A

April 9 1990

7/1

SPECIES LIST (cont)

2 Echinoderms (cont)

2) Brittle Star

Ophiodon spp? ?

3) Sea Cucumber

Cucumera miniata ?

3) Sea Urchin

Strongylocentrotus droebachiensis ?

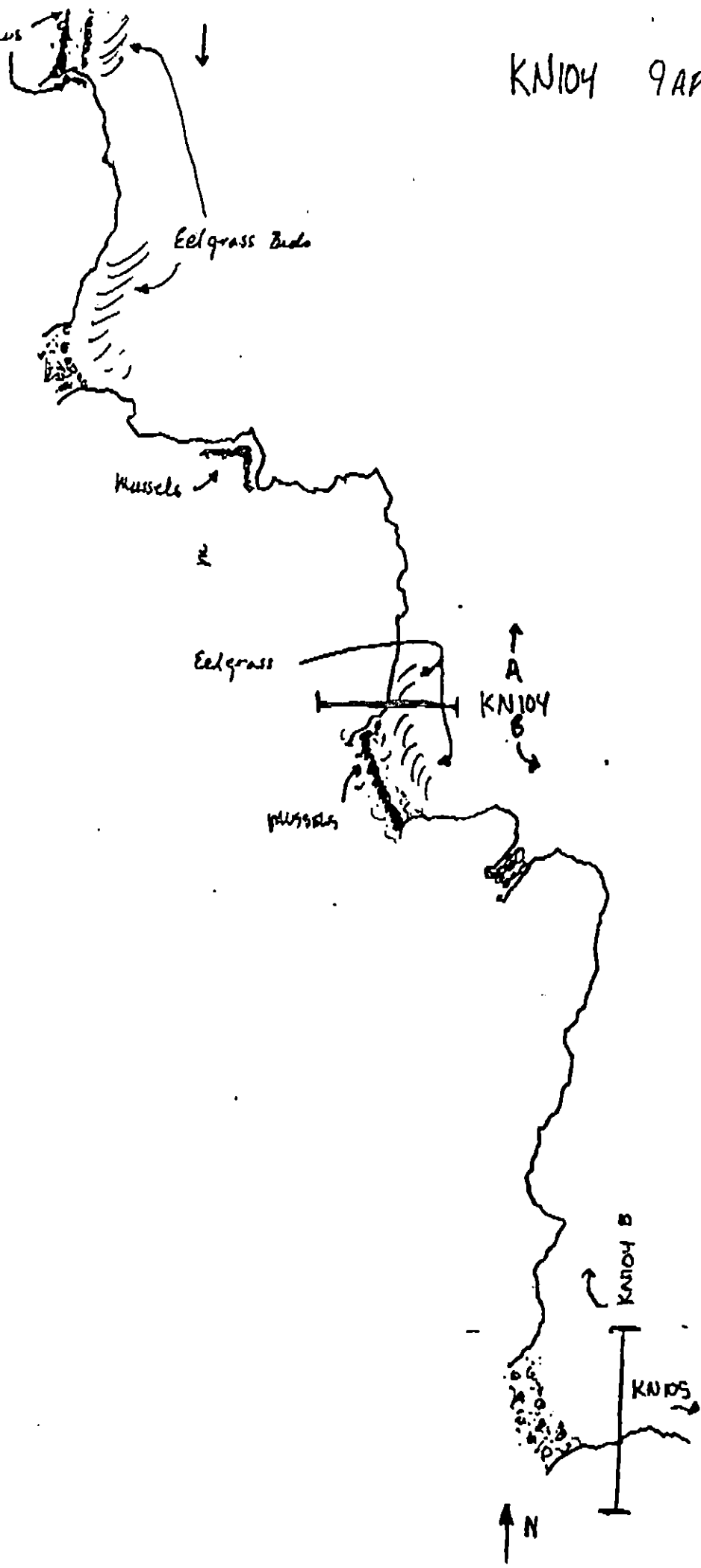
C. Marine Vertebrates

1) Fish: PLOIDAE 1123A

COTTIDAE 512A

SPARSE
MUSSELS

KN104 9 APRIL 1990 2/.



C. DILLON

SKETCH MAP #1

N

SEGMENT ST/KN-104

DIVISION A

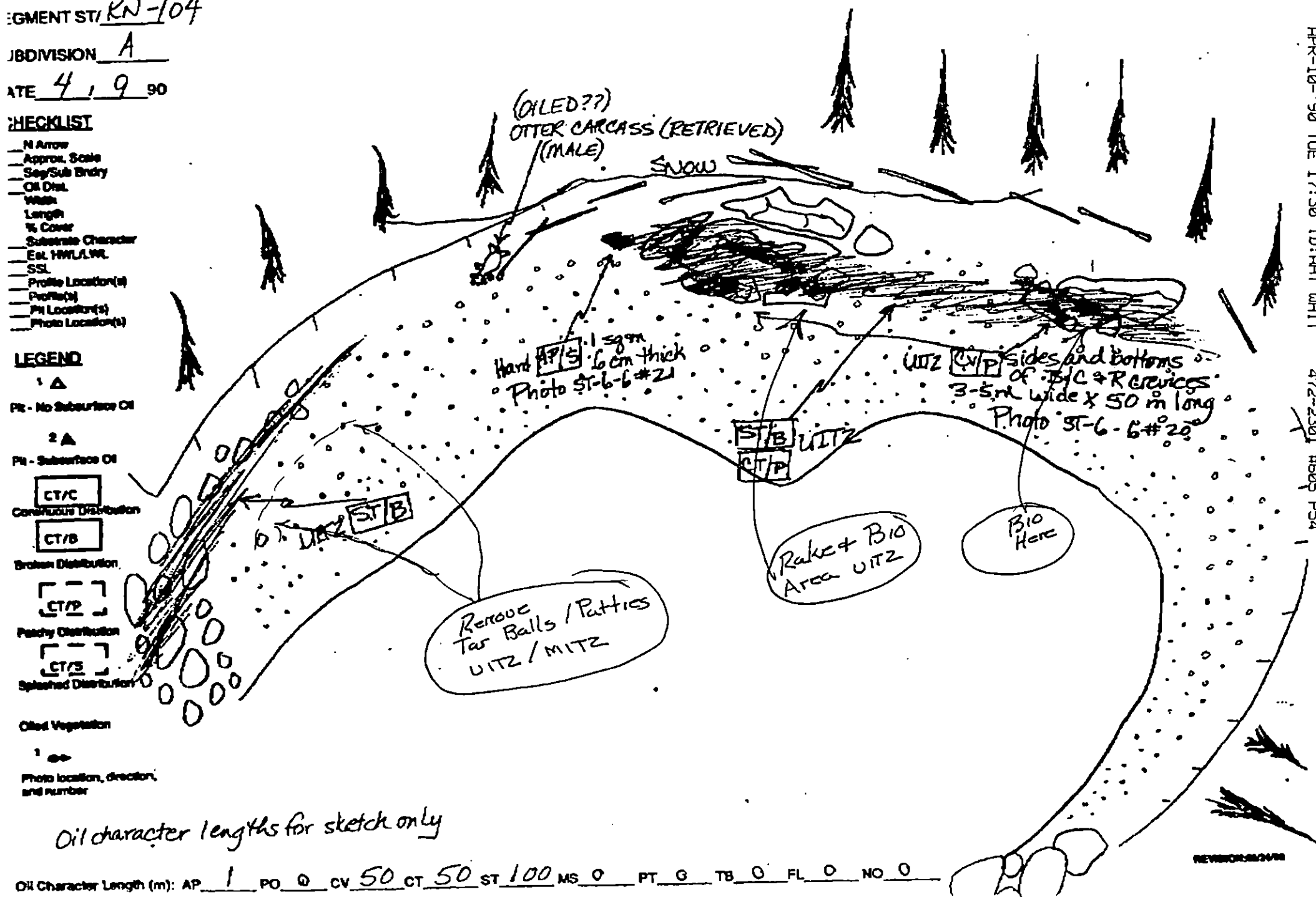
DATE 4, 9 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(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 →
- Photo location, direction, and number



HR-10-90 TUE 17:30 10:41 WHIT 472-2301 8605 P54

REVISION 02/24/90

C. D. L.

SKETCH MAP #2

N

AFR-10-130 TUE 17:31 ID: HHT WHIT 472-2301 #605 PSS

MENT ST/KN-104

BDIVISION A

TE 4, 9 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 No Subsurface Oil

1 Subsurface Oil

Continuous Distribution

Broken Distribution

Patchy Distribution

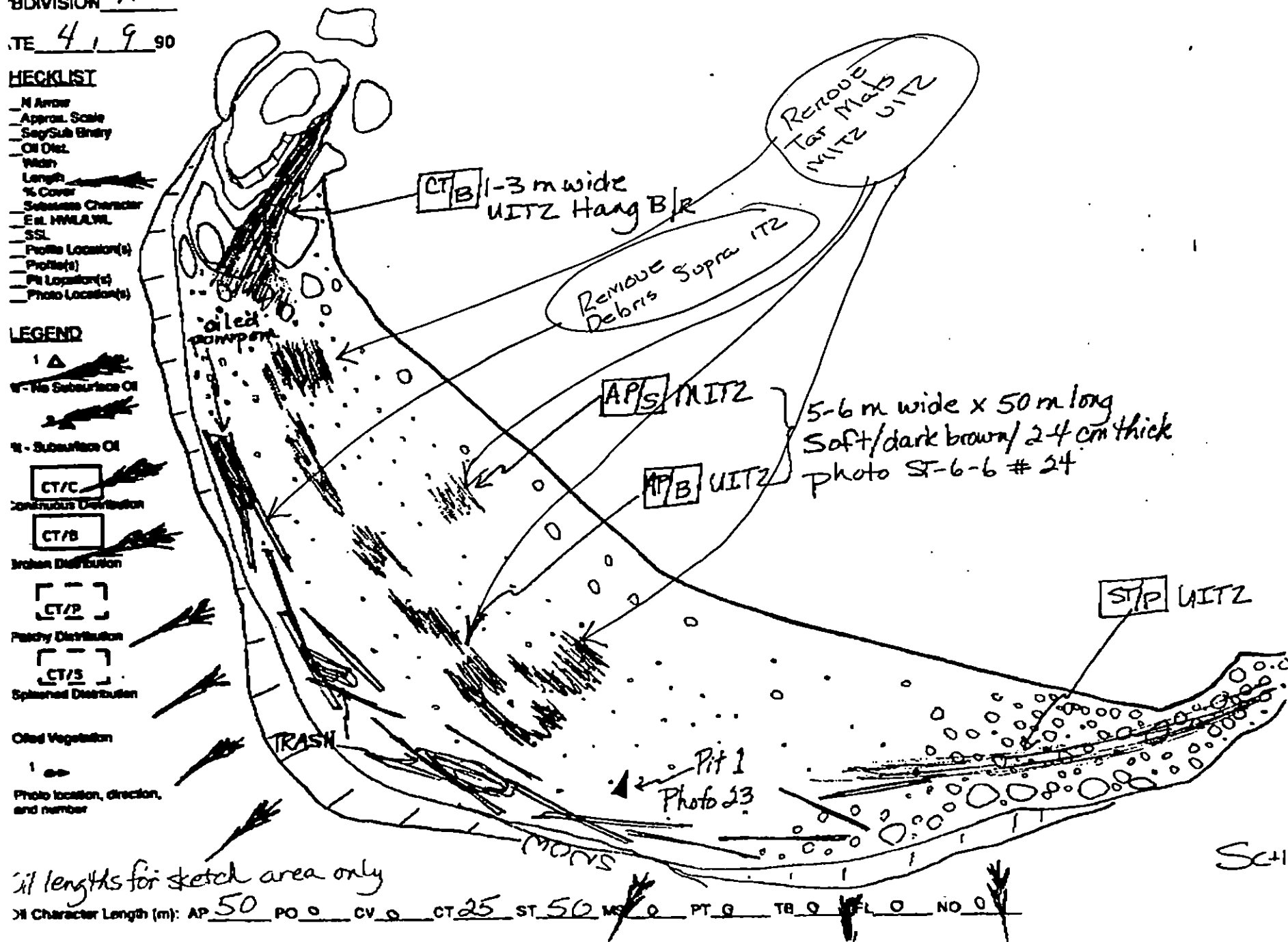
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

Oil lengths for sketch area only

Oil Character Length (m): AP 50 PO 0 CV 0 CT 25 ST 50 MS 0 PT 0 TB 0 FL 0 NO 0



SCHNEIDER

REVISION 05/04/90

KN-102

KN-104-A Oil Character lengths (m)

AP 50 CV 50 CT 915 ST 350 PT 10

KN-104-A
1375 m

BOXED AREA ON
SKETCH MAP #1

Hang Rock

CT/P PT/S 1-3m wide UITZ

CV/S 5m wide
1m long

M-UITZ in rock fracture

Long C/P/S with hang R in center of UITZ

ST/B CT/P CV/P AP/S Other carcass collected - U

CT/B UITZ Hang Rock

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-104

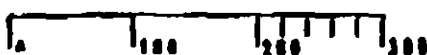
EXXON SEGMENT LENGTH: 2450m

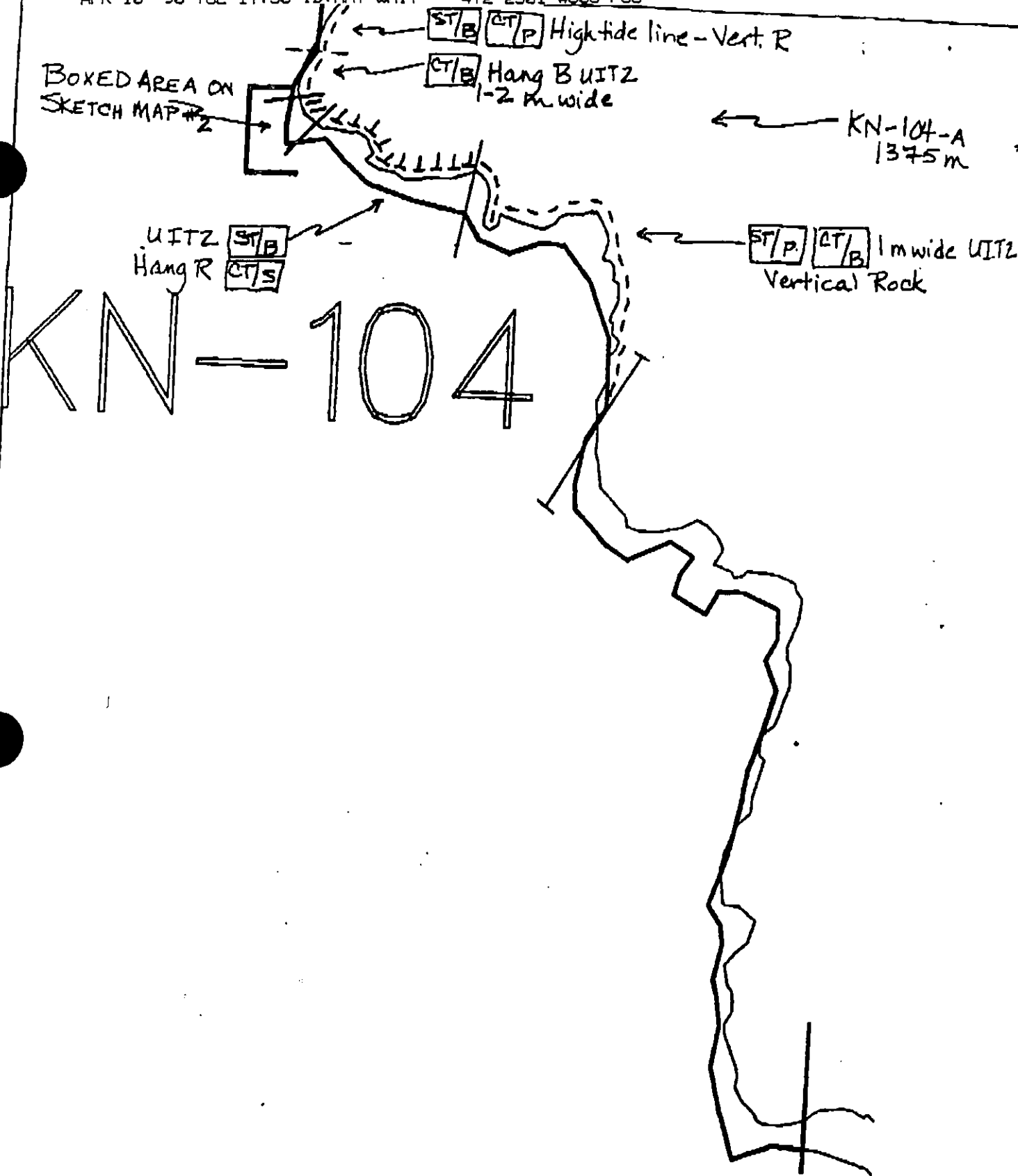
ADEC Segment Length: 2211m

Map Key: PWS-284b

Name: C. Dillon

Date: 4/9-10/90





XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-104

EXXON Segment Length: 2450m

ADEC Segment Length: 2211m

Map Key: PWS-284a

Name: C. Dillon

Date: 4/9-10/90



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-104

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION B (2 OF 2) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 31 m: Medium 27 m: Narrow 124 m: V.Light 978 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up and removal of mousse and tar mats
as indicated on sketch map. Work should be conducted after 6/1 with
ADF&G and USFWS approval regarding eagle nest constraint.

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 Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T ~~All Bald Eagle nests (3/1 to 6/1)~~
~~Active Bald Eagle nests (3/1 to 9/1)~~
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-104-B SUBDIVISION: B DATE 4/10/90

USCG NAME David A. Schneider SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED 783/USCGR

The three pocket beaches in this subdivision will require manual treatment. Sporadic deposits of tar balls, asphalt mats and mousse should be removed. Where accessible, coating should be scrapped from exposed rock faces and boulders. Human traffic in the middle and lower intertidal zones should be minimized as much as possible to protect concentrations of mussels in these areas.

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The OB's comments and maps thoroughly depict the oiling on this Subdivision. The various locations of asphalt and coating can all be addressed by hand work and removal. The oiling on the sketch map is washable (after Ap removal), however, the wide mussel bed should be considered before such treatment occurs. A hand crew could better protect the mussels by avoiding them ~~entirely~~ entirely. The mussel bed is on an unusually flat and walkable area and mussel beds are not common in this Segment.

LAND MANAGER

NAME JANETIA PRITCHARD SIGNATURE Janetia Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with ADEC's comments.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ KN-104
 BIO J. BARRY LAND REP J. PRITCHARD (FS) SUBDIVISION B (2042)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 08:15 to 09:45
 TEAM NO.: 6 TIDE LEVEL: -1 to +0.5 DATE 04/10/90
 EST. SUBDIVISION LENGTH: 1075 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 65 % B 20 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 20 % Hang 25 % Vert 55 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 7 m M 20 m N 25 m VL 1023 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	N	P	B	1	2	3	4	5	SU	U	M	V
ASPHALT PAVEMENT		X							X	X	X		
POOLED													
COVER													
COAT		X	X	X		X					X		
STAIN		X	X	X				X			X		
MOUSSE		X						X			X		
PATTIES													
TARBALLS				X		X					X		
FILM													
NO OIL	Snow on B slope and S. beach										S	X	X

PAVEMENT: (H) F (S) 70 sq. m by 3

PATTIES / (TARBALLS) 1 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-6

Frames 25-27

SUBSURFACE OIL * oiled interval < 5 cm in pit * 1 does not constitute subsurface oil.

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

COMMENTS THE SUBDIVISION IS PRIMARILY VERTICAL AND HANG ROCK AND BOULDER SLOPES. THERE IS A LANG C/R/B BEACH AT THE NORTH END OF THE SUBDIVISION WHICH IS SIGNIFICANTLY OILED AND IS SHOWN ON THE SKETCH MAP. THERE IS A SECOND LANG C/P BEACH AT THE SOUTH END OF THE SUBDIVISION WHICH HAS ONLY A VL SPORADIC STAIN ON SOME LARGER SEDIMENTS. THIS BEACH REVIEWED 7W DATE 4/11/90
 HAD (SNOW) ON THE STY AND THE M-LITTER WERE

OG C. D. Dillon

SEGMENT ST/ RN-104

SUBDIVISION B

DATE 4, 10 90

CHECKLIST

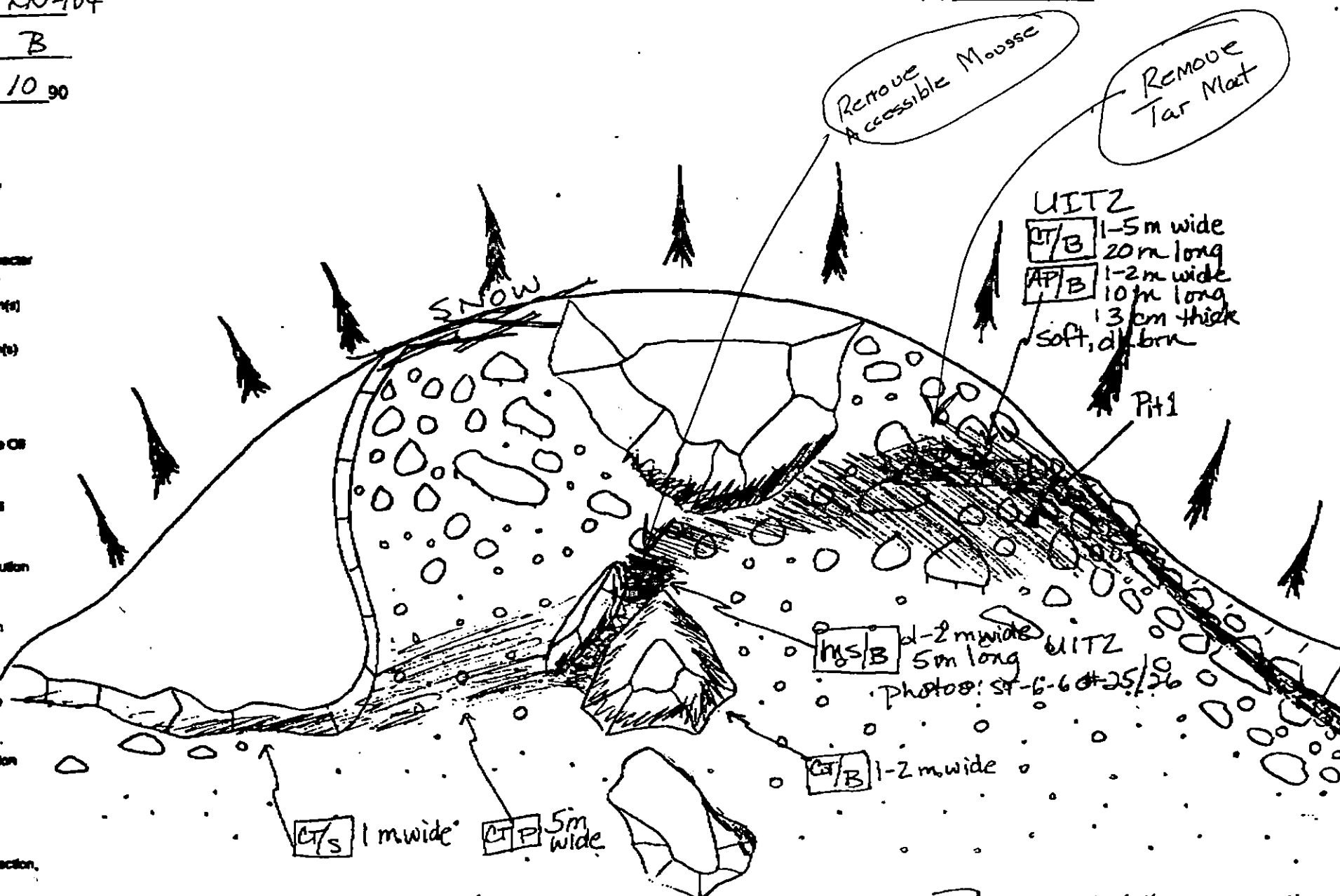
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
PR - No Subsurface Oil
- 2 Δ
PR - Subsurface Oil
- $\boxed{CT/C}$
Continuous Distribution
- $\boxed{CT/B}$
Broken Distribution
- $\boxed{CT/P}$
Patchy Distribution
- $\boxed{CT/S}$
Splashed Distribution
- $\bullet$
Oil on Vegetation
- $\rightarrow$
Photo location, direction, and number

SKETCH MAP

N $\rightarrow$



Oil Character Lengths for sketch area only (total length of beach ~100m) Photo ST-6-6 #27 Overall beach view

Oil Character Length (m): AP 10 PO 0 CV 0 CT 85 ST 0 MS 5 PT 0 TB 0 FL 0 NO 0

DILLON/SCHNEIDER

REVISION: 03/04/90

(ORELINE ECOLOGICAL SUMMARY)

Segment ST KN104 Subdivision B Date (mo/day/yr) 10 APRIL 1990
 Time (24 hr) 0830-1100 Biologist JIM BARRY Length - See 06 Form 1/7

- (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 20 Moderate 75 Low 5
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)
- Photographs: ST-6-5
 Roll No. 25-26
 Frames 25-26

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Sea Otter, Steller's Jay
 Bald Eagle, Pigeon Guillemot

Ecological Considerations: ST - Eagle nest - this nest is located at the

northern end of Subdivision KN104-A.

KW104-B

APRIL 10 1990

2/7

TIME 0830-945

TIDAL WINDOW -1 → +1

I General Comments

A. HABITAT TYPES - Rocky Vertical Cliffs and cobble beaches are the primary habitat types. Mod vertical cliffs have moderate to dense cover of barnacles, little *Mytilus*, and moderate ~~thick~~ *Fucus* with a thick cover of filamentous and blade-like red algae on the lower zone.

Cobble beaches (3) ~~to~~ had a sparse to moderate cover of mussels. *Mytilus* was most abundant where fresh water run off streams washed over the intertidal zone. *Fucus* is ~~to~~ sparse to moderate on these beaches. Gastropods often are dense.

B. Oil-related activities comments. As in KW104-A, oil is generally restricted to the upper and supra intertidal zones where it may interfere with ~~the~~ lichens and other minor elements of the intertidal zone.

II MAJOR SPECIES

A. BARNACLES - All 3 major species present on adults and spat

B. *Mytilus* - Patchy on vertical walls with occasional dense patches. ~~In~~ On cobble beaches *Mytilus* appears to be forming a band of mussels in the middle to upper zone.

C. Gastropods - *Littorina* often dense, *Urosalpinx* usually dense, with counts of up to approximately 60-100/m²!

KN104-B

(10 April 1990 (

3/
7

Major Species - (cont.)

0: Fucus - moderate to dense in all but cobble/pebble beaches where it is usually sparser.

III Other Species

Sea Stars very abundant (Lion Star, Pycnopodia)

Gumbofoot chitons (4) (*Cryptochiton stelleri*?) was found on the middle to low zone on rocks. 2 individuals were found ~ 1/2 m apart. Each was releasing gametes (♂, ♀)

~~IV. Wildlife -~~

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IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA D123

CLADOPHORA S-M123

ENTEROMORPHA M-D123

GREEN CRUST?

ULVA M123

ULROSPORA M23

3) RED ALGAE - RHODOPHYTA

BOSSIELLA S12

CALLIALTHRON S12

CORALLINA S12

CRYPTOSIPHONIA D23

ENDOCALADIA MURICATA S12

HALOSACCION GLANDIFORME M123

IRIDAEA M123

MASTOCARPUS S12

MEMBRANOPTERA D123

MICROCLADIA D123

LITHOTHAMNION PACIFICUM S12

PETROCELIS MIDDENDORFFII S12

PORPHYRA spp. S12

RHODOMELA LORIX M123

RHODOMELA PALMATA D123

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA D12

AGARUM spp. D12

COSTARIA M12

FUCUS DISTICHUS D-M123

HEDOPHYLLUM SESSILE ?12

HILDEBRANDIA M12

LAMINARIA M1212

NERIOCYSTIS S12

RALPSIA S123

SCYTOSIPHON COMENTARIA S12

A SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

KN 104-B

5/7

B MARINE INVERTEBRATES

1) ANEMONES

- EPIACTIS RITTEI ? S12A
 URTICINA CRASSICORNIS ?
 ANTHOPLEURA ELEGANTISSIMA S12
 A. artemisa M12A
 A. xanthogrammica ?

2) Annelid Worms

- Polychaetes
 Nereidae M23A
 Nephtyidae ?
 Serpulidae
 Serpula M12A
 Crucifera M12A
 Spirorbidae
 Spirorbis D23A

3) Peanut Worms - Sipunculid

- PHASCOLOSOMA HERESITES ?

4) MOLLUSCS

a) CHITONS

- CATHARINA TUNICATA S12A
 TONICELLA LINSATA S12A
 MOTALIA spp. R12

b) Snails - GASTROPODS

- LITTORINA SCUTULATA M-D123A
 L. SITKANA M-D123A
 NUCELLA LAMELLOSA D12A
 N. EMARGINATA D12A
 SCARISSEA DREA M123A
 AMPHISSEA COLUMBIANA R12A
 TACHYRHYNCHUS spp. R123A

c) Nudibranchs

- ~~LAMELLIDORIS FUSCA~~

d) Limpets

- LOTIA DIGITALIS S12A
 ACMAEA MITRA R12A
 LOTIA PERSONA S12A

1 man chiton - Cryptochiton stelleri S12A

d) Limpets (cont)

- TECTURA SCUTUM M23A
 T. PERSONA S12A
 BIPHOMARA HERESITES ?
 DIADORA ASPERA ?

e) Mussels -

- MYTILUS EDULIS S-M123A

f) Clams

- SINGLE - PODODISMUS SEP10 S12
 HIALILLA spp. S23A
 PROTHESIA STAMINEA S-M23
 MACOMA spp. ?

g) Crustaceans

1) BARNACLES

- SEMIBALANUS CARIOSUS M-D23A
 BALANUS GLANDULA M-D123A
 CHTHAMALUS DALLI M-D123A

2) Crabs

- HAPLOGASTER spp. S23A
 HEMIGRAPHUS OREGONENSIS S2
 PUGETIA spp. ?
 HERMIT CRABS - PAGURIDAE R123

3) Beach Hopper

- ISOPODA ?
 AMPHIPODA
 ORCHESTRA ? M-D23

h) Bryozoans

- SCHIZOPORELLA spp. D23

i. Echinoderms

- 1) Sea Stars
 0123A PTEROPODIA HELICANTHOID
 0123A DERMASTRIAS IMBRICATA
 M23A LEPTASTRIAS HEXACTIS
 R23A EVASTRIAS TRUSCHELI
 ? ORTHOSTRIAS KOECHERI
 M23A PISASTER OCHROCEUS.

1CN104-B

SPECIES LIST (cont)

6/7

2 Echinoderms (cont)

2) Brittle Stars
Ophiurus spp? ..?

3) Sea Cucumbers

Cucumora miniata S12 u

3) Sea Urchins

Strongylocentrotus droebachiensis 5923 +

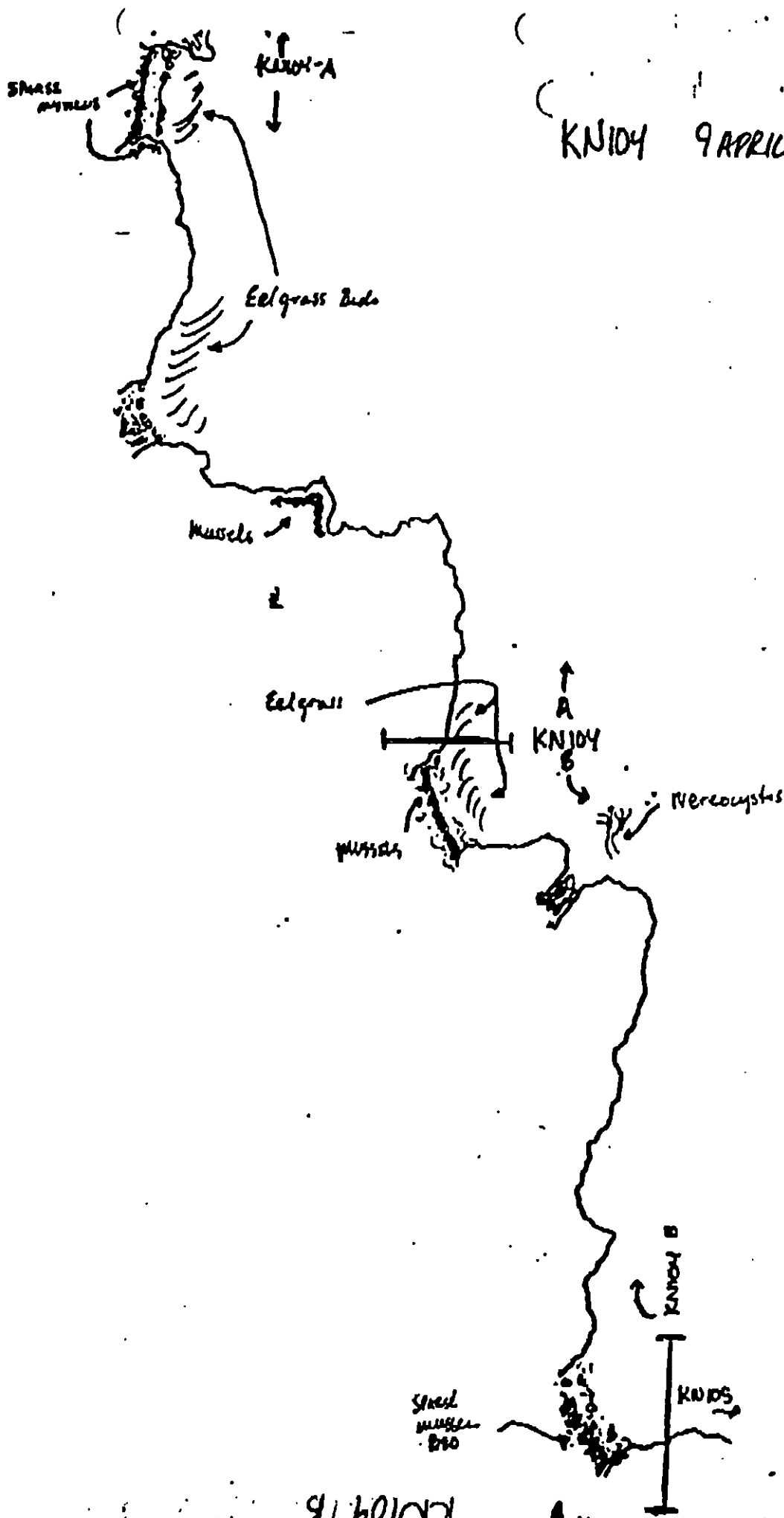
C. Marine Vertebrates

1) Fish: PHOLIDAE D23+
COTTIDAE S12

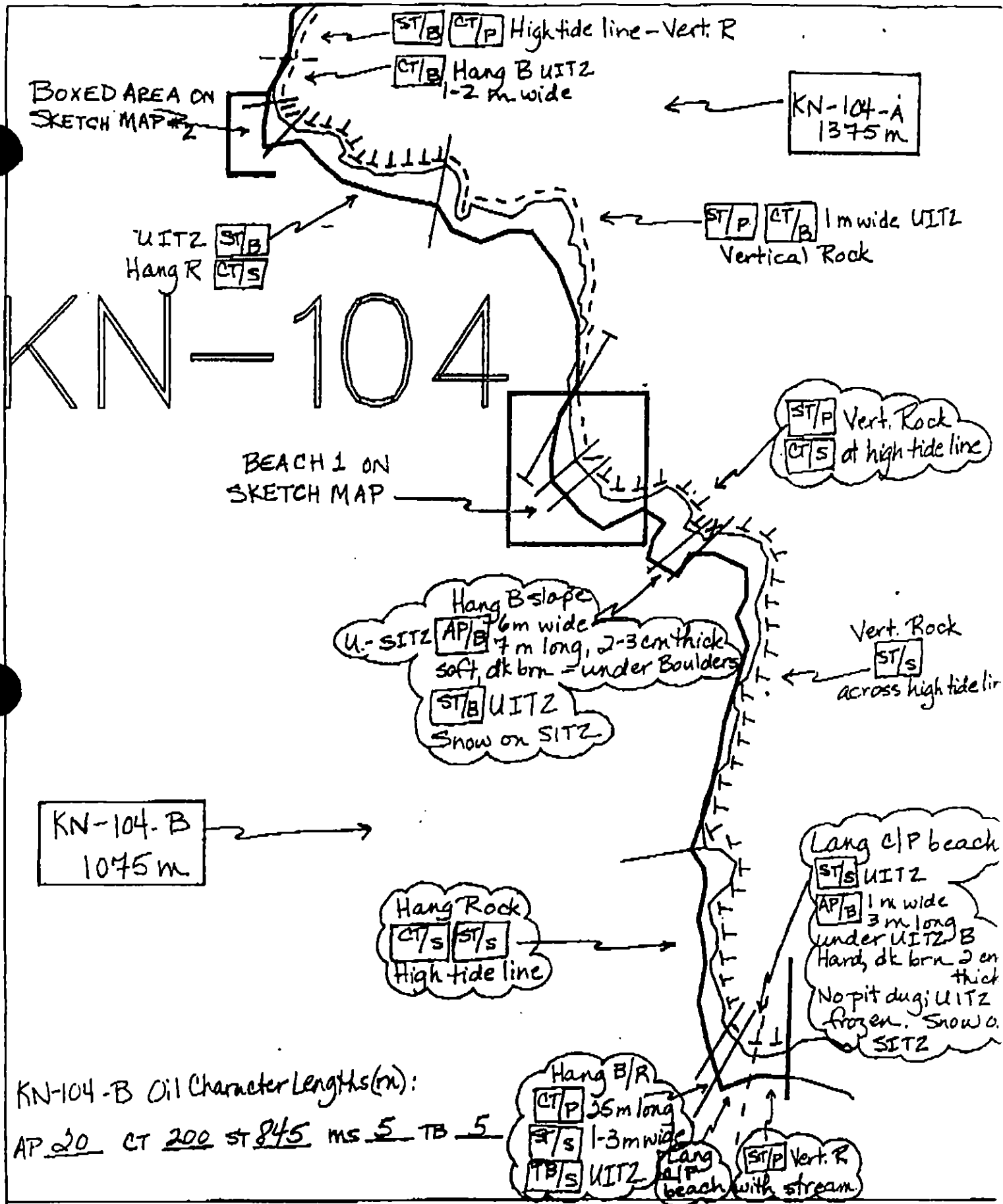
7/7

KN104 9 APRIL 1990

KN104-B



KN104-B



KN-104-B Oil Character Lengths(m):

AP 20 CT 200 ST 845 MS 5 TB 5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-104

EXXON SEGMENT LENGTH: 2450m
ADEC Segment Length: 2211m

Map Key: PWS-2840

Name: C. Dillon

Date: 4/9-10/90



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-104 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, bioremediation, and manual raking within USFWS designated buffer zone per 5/27/90 survey conducted by Mike Lockhart (see map).

OTHER ECOLOGICAL CONSIDERATIONS

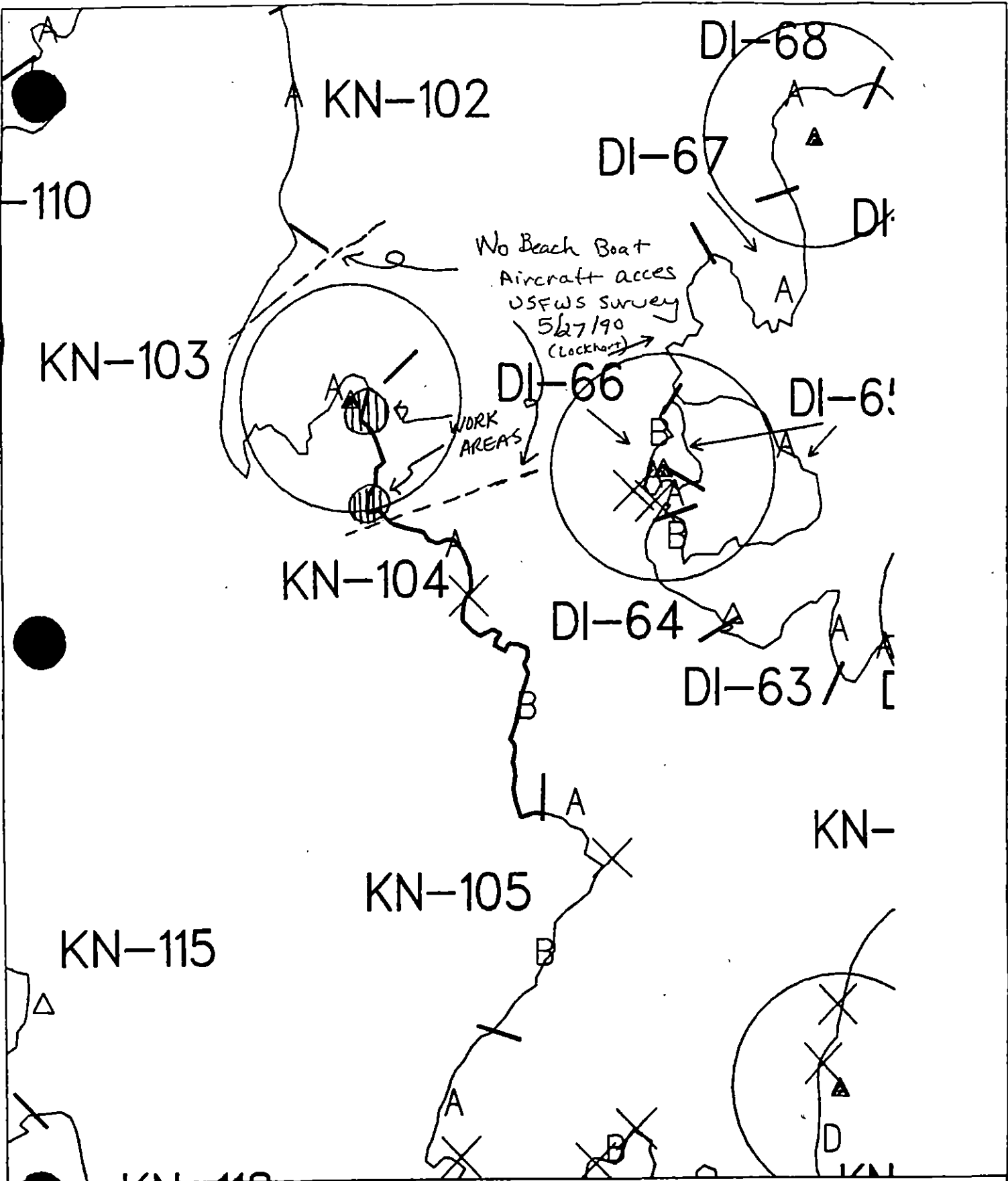
Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota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

FOSC

DATE 6-10-90

Prepared By: W. Kelley

Date 6/9/90



Exxon Company, USA
Map Key: PWS-KN-104

ECOLOGY MAP
SEGMENT KN-104
SUBDIVISION A (1 of 2)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

An Exxon archaeological monitor is required on-site during shoreline treatment.

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 118 m: Narrow 648 m: V.Light 285 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>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>X</u> Other (see comments)

COMMENTS: Recommend manual pick up of tarmats, tar balls and oiled debris. Bioremediate areas indicated in sketch map. Work should be conducted after 6/1 with ADF&G and USFWS approval regarding eagle nest constraint. RMXG PRIOR TO BIO AT INDICATED ON SKETCH

See Addendum Dated 6/9/90 WJK

TAG COMMENTS: MONITORS TO CHECK NE CORNER OF POCKET BEACH

SHOWN ON SKETCH 1 TO DETERMINE NEED TO EXTEND BIO

MONITORS ALSO TO ASSESS NEED FOR AVOIDANCE OF RICH LITZ

TAG APPROVAL DATE: 4/23/90.

ADEC ART WEINER [Signature]

EXXON ANDY TEAL [Signature]

NOAA Joseph Gilbert [Signature]

USCG KENNETH KEARNEY [Signature]

FOSC: [Signature] DATE: 4-27-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-104 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision ^{work} site.
----	-----------------	---

OTHER ECOLOGICAL CONSIDERATIONS

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

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

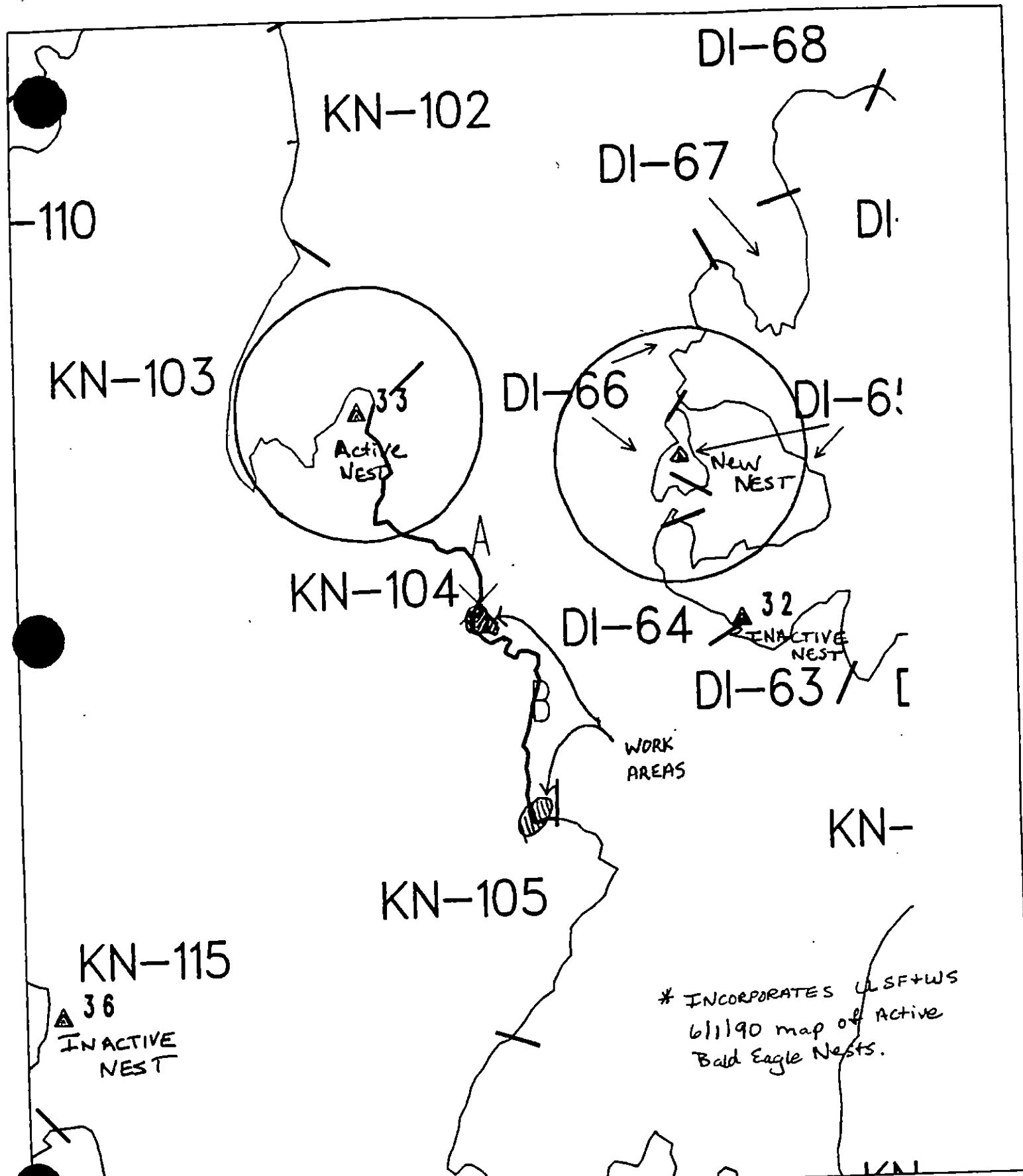
FOSC

DATE 6-10-90

Prepared By: WPK

Date

6/8/90



Exxon Company, USA

ECOLOGY MAP
SEGMENT KN-104
SUBDIVISION B (2 of 2)
METERS _____

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION B (2 OF 2) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled 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.)).

ed
al

SHPO SIGNATURE: J. Daniel McWhorter

DATE: 5/10/90

OILING CATEGORIZATION:

Wide 31 m: Medium 27 m: Narrow 124 m: V.Light 978 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up and removal of mousse and tar mats as indicated on sketch map. Work should be conducted after (6/1) with ADF&G and USFWS approval regarding eagle nest constraint.

[See Constraint Addendum 6/8/90]

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC Art Weimer

EXXON Wayton

NOAA Joseph Talbot

USCG Kenneth Keane

FOSC: DATE: 5-15-90

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION B (2 OF 2) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled 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.)).

eed
cal

SHPO SIGNATURE: J. David McMahon

DATE: 5/10/90

OILING CATEGORIZATION:

Wide 31 m: Medium 27 m: Narrow 124 m: V.Light 978 m: No Oil 0 m

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat: Breakup

 X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up and removal of mousse and tar mats as indicated on sketch map. Work should be conducted after 6/1 with ADF&G and USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER Art Weiner

EXXON ANDY TGA Andy TGA

NOAA Joseph Talbot Joseph Talbot

USCG KENNETH KERNE Kenneth Kerne

FOSC: DATE: 5-15-90

OG C.D.
 SEGMENT ST KN-104
 SUBDIVISION B
 DATE 4, 10 90

SKETCH MAP

N →

CHECKLIST

☐ H Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/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

Oil Vegetation

1 →

Photo location, direction, and number

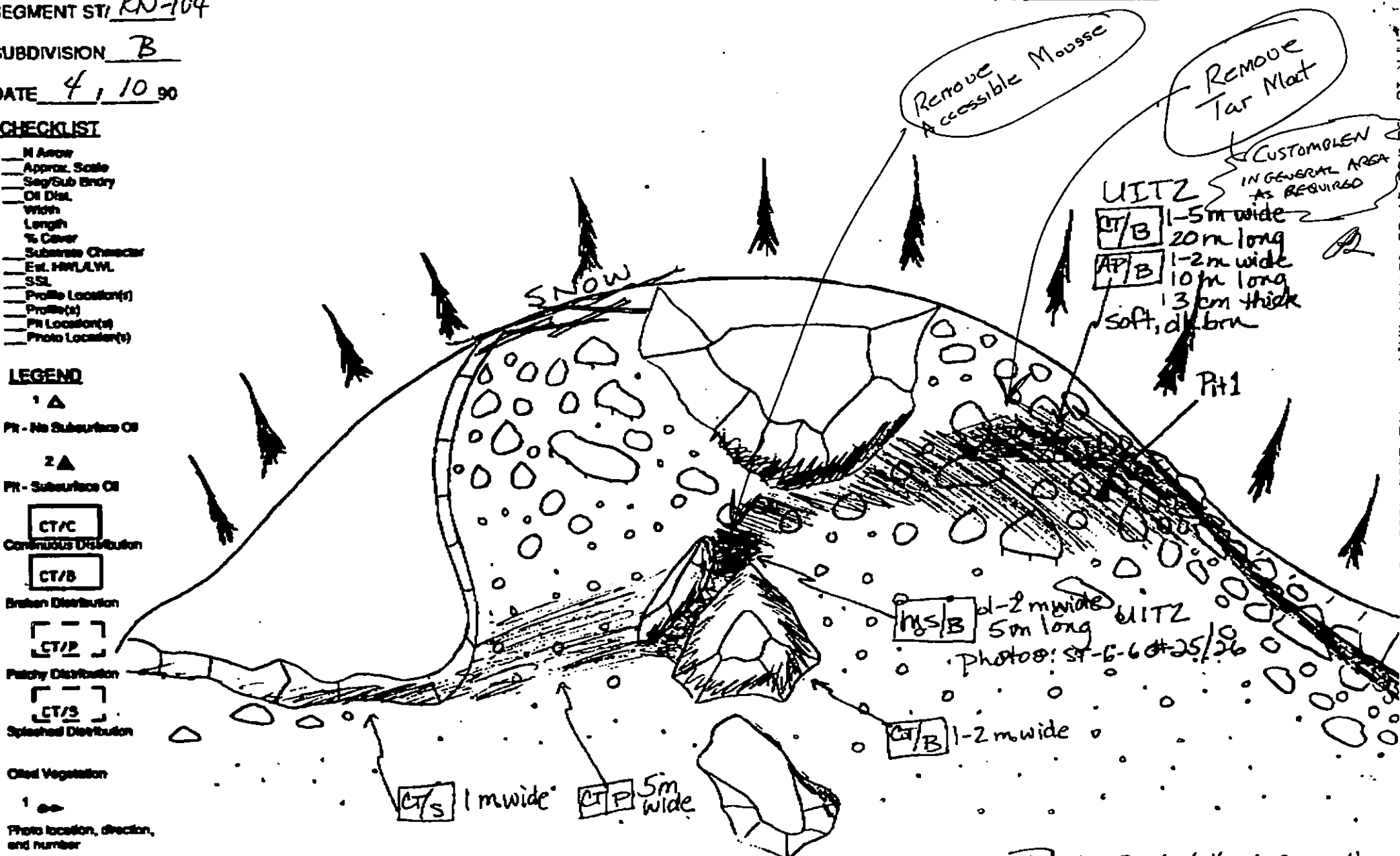
Oil Character Lengths for sketch area only (total length of beach ~100 m) Photo ST-6-6*27 Overall beach view

Oil Character Length (m): AP 10 PO 0 CV 0 CT 85 ST 0 MS 5 PT 0 TB 0 FL 0 NO 0

DILLON/SCHNEIDER

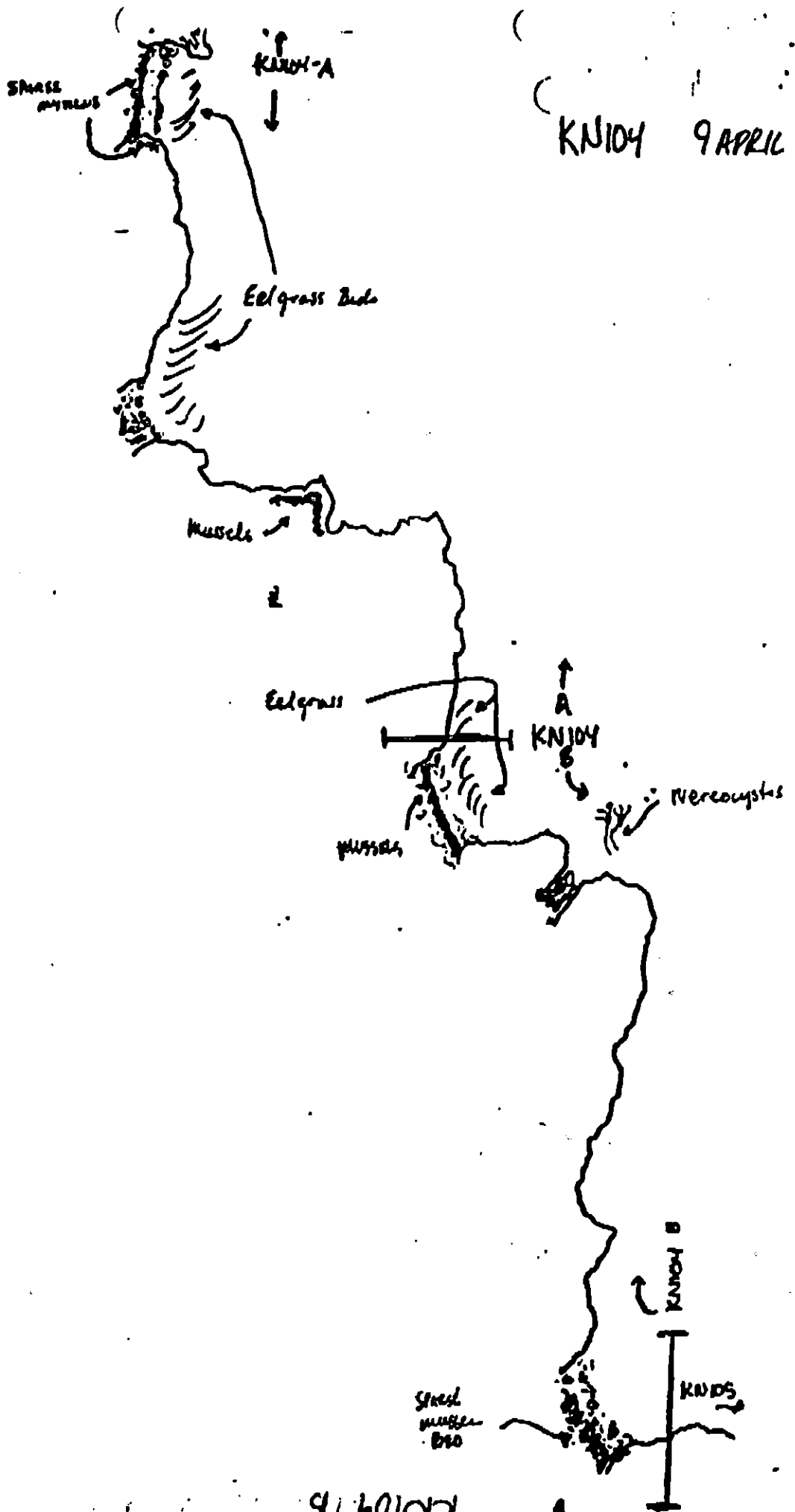
REVISION: 03/04/90

HFR-10-1000 DE 17:38 10:00:01 WHIT 472-2301 RB05 P07

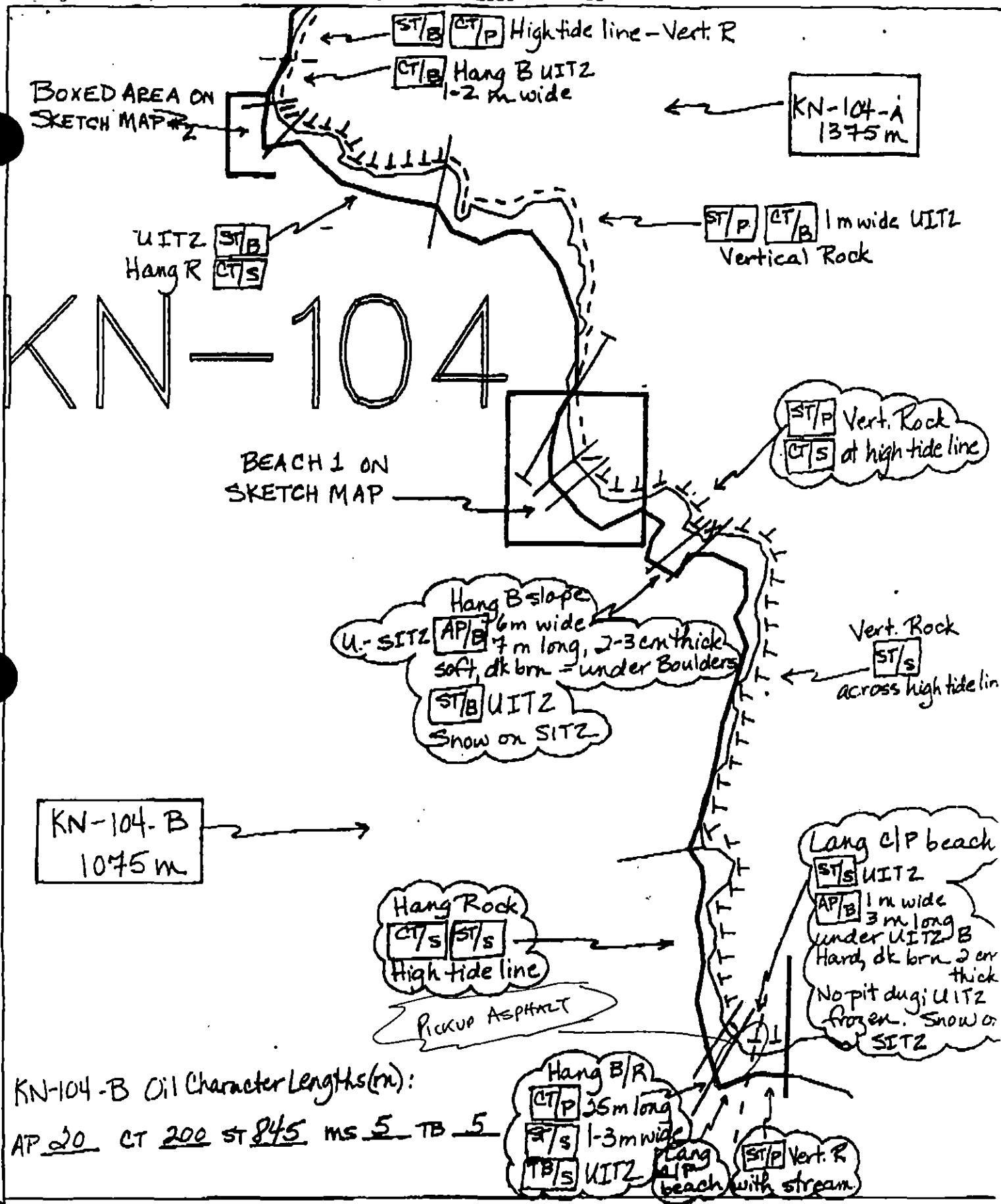


KN104-B

7/7
KN104 9 APRIL 1990



KN104-B



KN-104-B Oil Character Lengths(m):

AP 20 CT 200 ST 845 MS 5 TB 5

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

KN-104

EXXON SEGMENT LENGTH: 2450m
 ADEC Segment Length: 2211m

0 100 200 300

Map Key: PWS-284a

Name: C. Dillon

Date: 4/9-10/90

Data Colored:

SHORELINE EVALUATION

SEGMENT ST/ KN-104 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

An Exxon archaeological monitor is required on-site during shoreline treatment.

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 118 m: Narrow 648 m: V.Light 285 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>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>X</u> Other (see comments)

COMMENTS: Recommend manual pick up of tarmats, tar balls and oiled debris. Bioremediate areas indicated in sketch map. Work should be conducted after 6/1 with ADF&G and USFWS approval regarding eagle nest constraint. RACE PRIOR TO BIO AT INDICATED ON SKETCH

TAG COMMENTS: MONITORS TO CHECK NE CORNER OF POCKET BEACH
SHOWN ON SKETCH 1 TO DETERMINE NEED TO EXTEND BIO
MONITORS ALSO TO ASSESS NEED FOR AVOIDANCE OF RICH LITZ

TAG APPROVAL DATE: 4/23/90.

ADEC ART WEINER Art Weiner

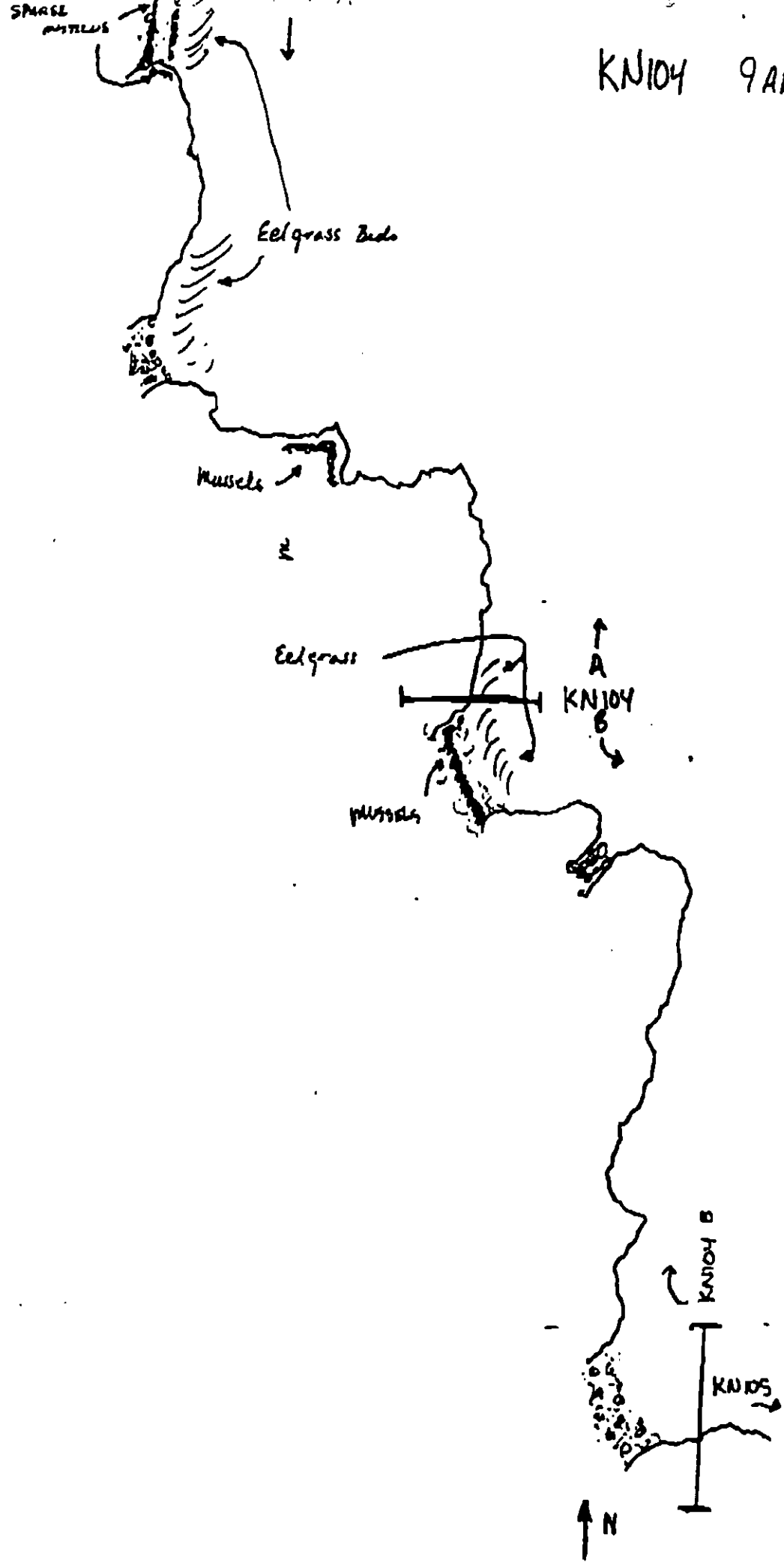
EXXON ANDY TATE Andy Tate

NOAA JOSEPH LIBOTTI Joseph Libotti

USCG KENNETH KEANE Kenneth Keane

FOSC: [Signature] DATE: 4-27-90

KN104 9 APRIL 1990 7/



OG C. DILLON

SKETCH MAP #1

N

SEGMENT ST/ KN-104

SUBDIVISION A

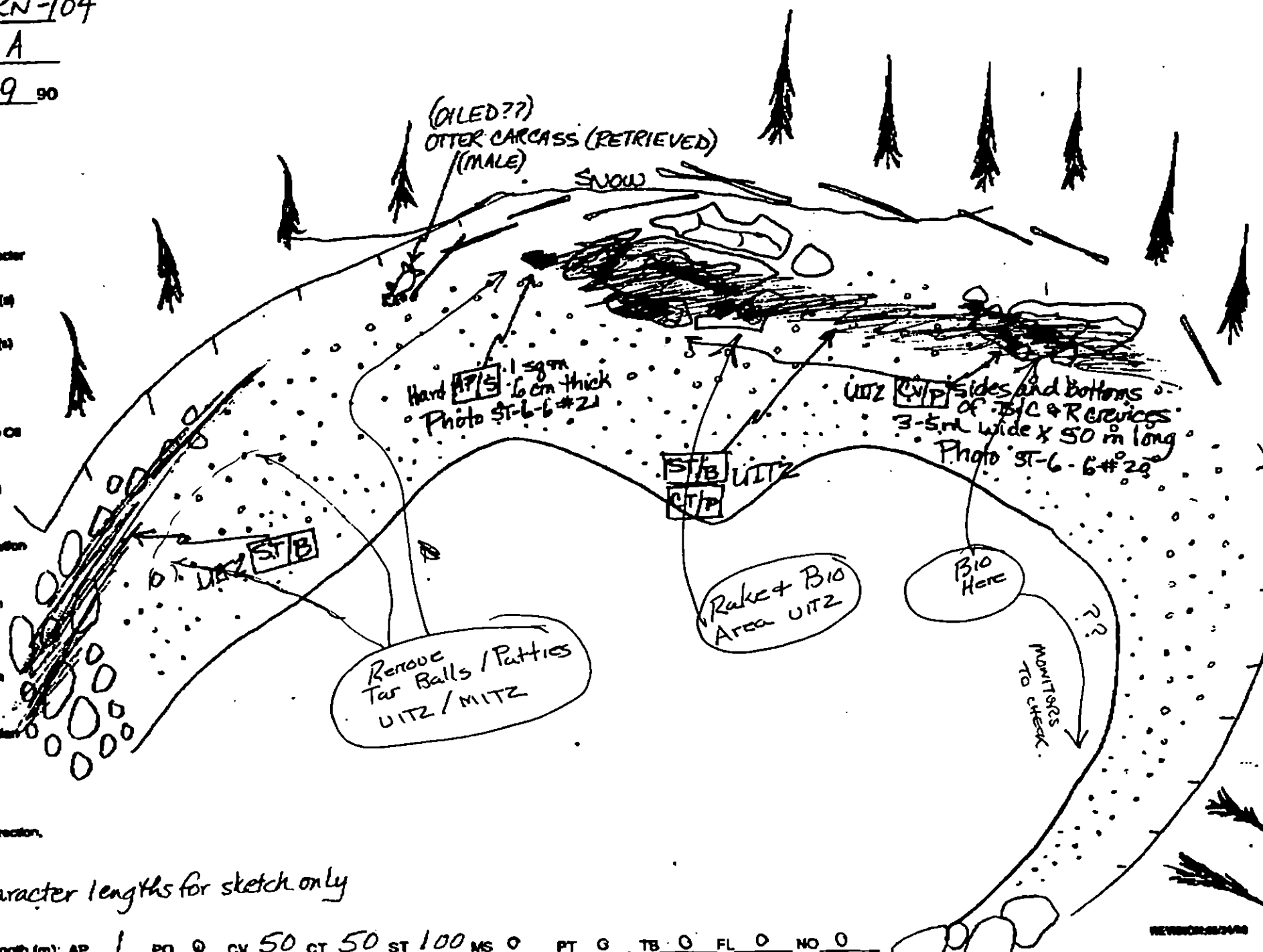
DATE 4, 9 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ P/L 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
- Splashed Distribution
- Oil Vegetation
- 1 $\bullet$
- Photo location, direction, and number



Oil character lengths for sketch only

Oil Character Length (m): AP 1 PO 0 CV 50 CT 50 ST 100 MS 0 PT 0 TB 0 FL 0 NO 0

APR-10-90 TUE 17:30 ID:AMT WHIT

472-2301 #625 P54

REVISION: 05/04/90

OG C. Di...

SKETCH MAP #2



SEGMENT ST/KN-104

SUBDIVISION A

DATE 4, 9 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Substrate Oil

Pit - Substrate Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Pecchy Distribution

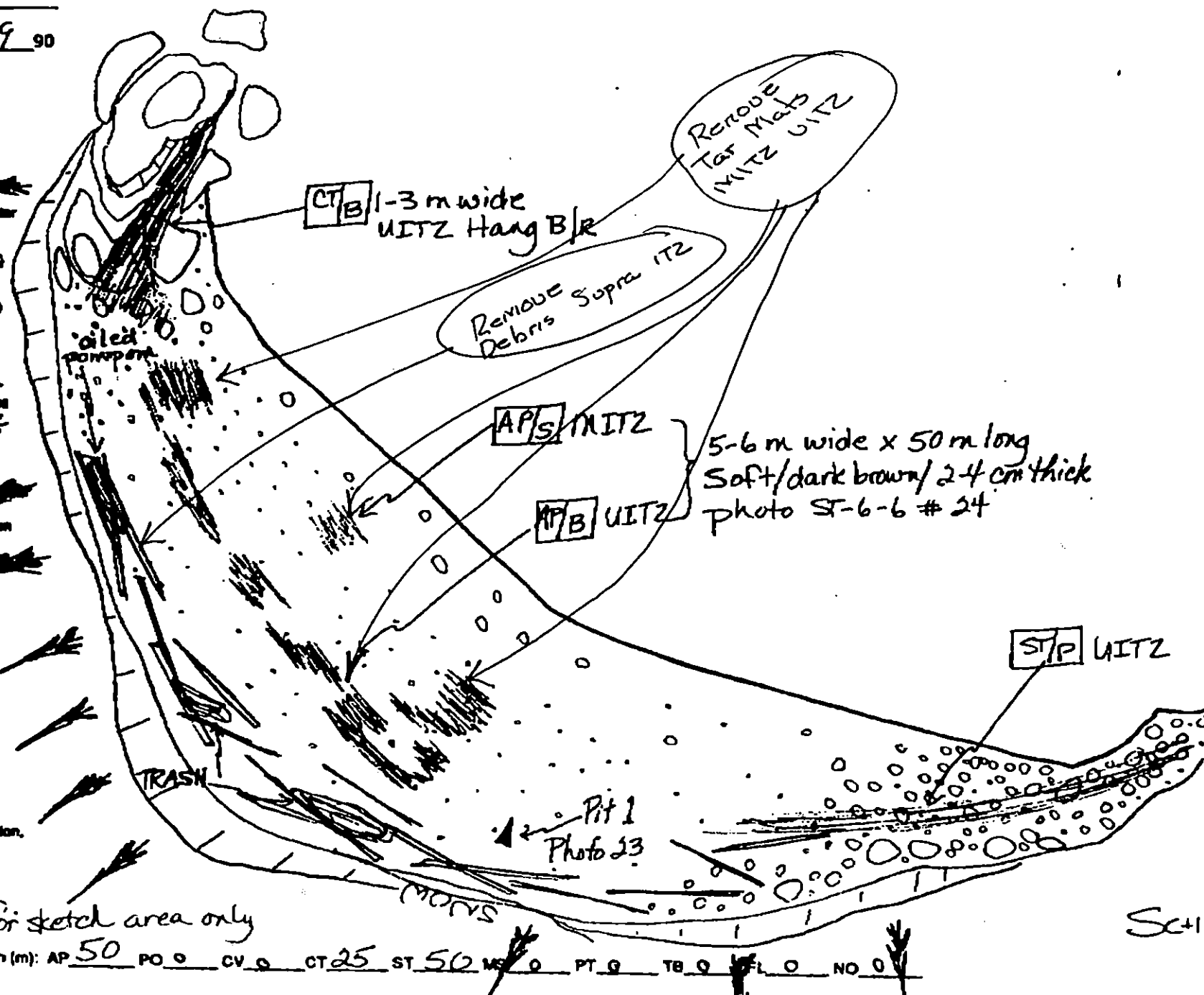
CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Oil lengths for sketch area only

Oil Character Length (m): AP 50 PO 0 CV 0 CT 25 ST 50 MS 0 PT 0 TB 0 FL 0 NO 0



SCHEIDER

REVISION 02/04/00

KN-102

KN-104-A Oil Character lengths (m)

AP 50 CV 50 CT 915 ST 350 PT 10KN-104-A
1375 mBOXED AREA ON
SKETCH MAP #1

Hang Rock

CT/P PT/S 1-3m wide UITZ

CV/S 5m wide
1m long

M-UITZ in rock fracture

Lang C/P/S with hang R in center of UITZ
ST/B CT/P CV/P AP/S Other carcass collected - UI

CT/B UITZ Hang Rock

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 N - 0:1

KN-104

EXXON SEGMENT LENGTH: 2450m

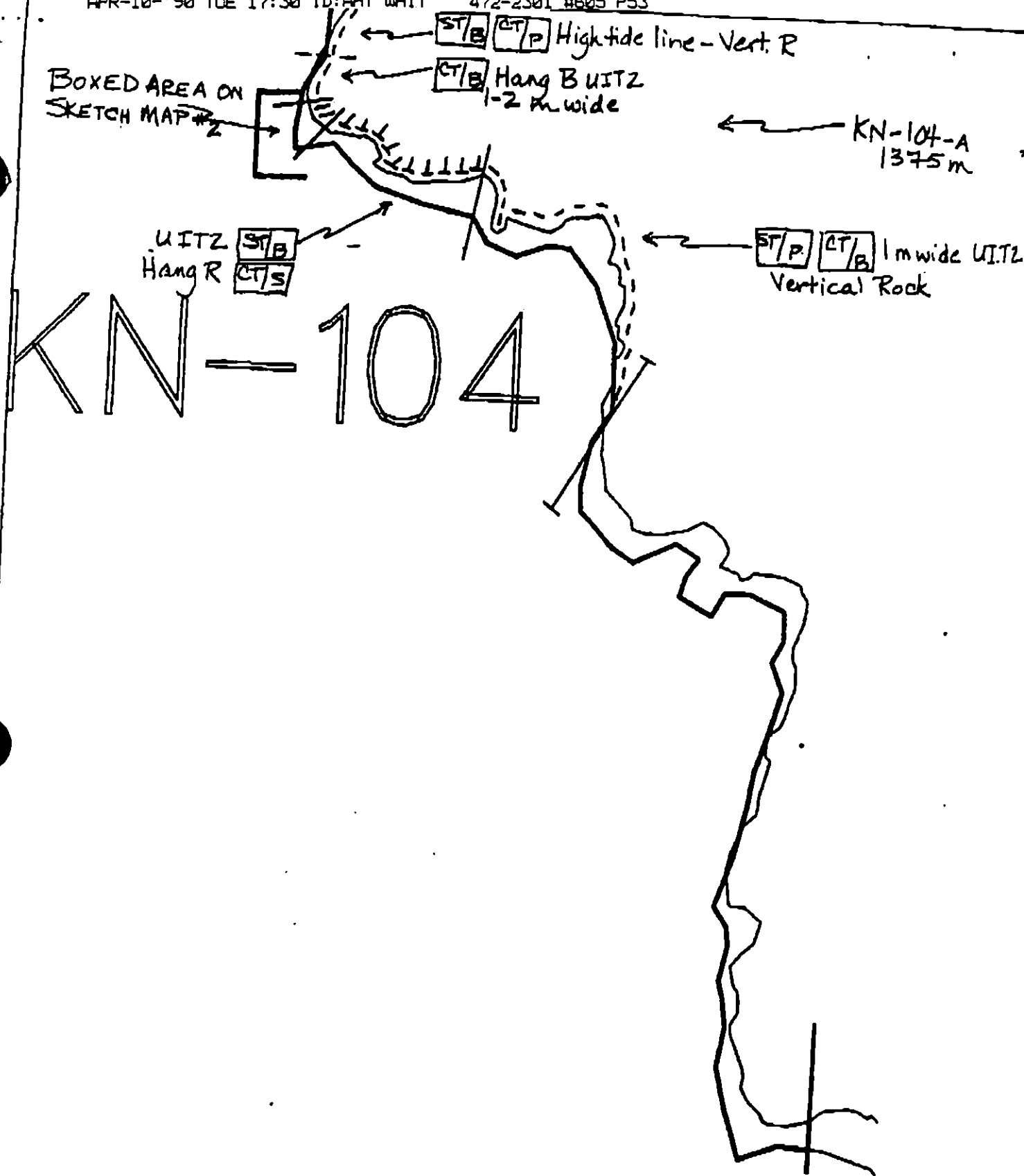
ADEC Segment Length: 2211m

0 100 200 300
METERS

Map Key: PWS-284b

Name: C. DILLONDate: 4/9-10/90

Data Entered:



XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 AAAA " " "

KN-104
 Exxon Segment Length: 2450m
 ADEC Segment Length: 2211m



Map Key: PWS-2840

Name: C. Dillox

Date: 4/9-10/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 104 SUB: A REGION: PWS SURVEY DATE: 5/19/91

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: [Signature] Date: 6/07/91

RECOMMENDATIONS:

INITIAL**TAG**

FOSC

TREATMENT REQUIRED (Y or N)

N

2

1

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 6 1991 FOSC APPROVAL DATE: 6/10/91

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.

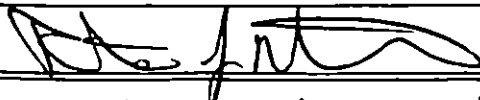
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN-104 SUBDIVISION A DATE 5/19/91

ADEC

NAME Peter Montesano

SIGNATURE



☐ NTR

☒ TREATMENT RECOMMENDED

The Survey of this subdivision should be completed when the eagle restrictions are lifted.

Areas D+E have a low distribution and difficult access in Boulders - NTR.

Area K has a near surface lens from L/SOR to MS which is largely not visible from the surface, covered w/ smaller sediments. The covering is easily raked back for access. The heavier oiling is in distinct layers and is easily removed. The lighter oiling should be raked. Limited removal w/ trowels/shovels is possible in areas L+m and could easily be incorporated w/ the treatment of K.

EXXON

NAME FRANK BOY

SIGNATURE



☐ NTR

Recommend raking away of 20' - 30' of surface oil covering the oil line on the area indicated as heavy. Once exposed then scraping up the oil line and treating with inopiol. This is the only area on the segment I would recommend activity.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE



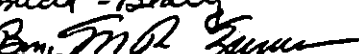
☐ NTR

Did not survey north beach as there is an active eagle nest. Areas with remaining SOR EAP could use some hand removal and raking/Bio. I believe this will be marginally successful as size of rocks and boulders will make this difficult. Any large scale operation would make the beach look disturbed for quite a long time as this is a mod. energy beach.

USCG/NOAA NOAA - SYMONEK-BEATTY D. Symonek-Beatty

NAME BH. M. P. ZENONE USCG

SIGNATURE



☐ NTR

Within this segment section K has the greatest amount of surface and subsurface oiling. However, this section is not very active (moderate energy). As this beach is naturally mobile, physical disturbance by clean-up work will be likely to remain for sometime. DSB

4- NO TREATMENT RECOMMENDED. AGREE W/ USFS + NOAA REPS. ENVIRONMENTAL DAMAGE CERTAINLY ~~IS~~ OUTWEIGHS THE NEED TO REMOVE MINOR AMOUNTS OF OILING IN THIS SEGMENT. 3

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2TEAM NO. 2OG D. ReimerBIO S. GanSEGMENT KN-104ADEC P. MontesanoLANDMANAGER D. Kennedy for USFSSUBDIVISION ADOXON F. BoyUSCG/NOAA Bm. Zanon
P. Simeciak-BoothDATE 5/19/91TIME 14:00 to 15:15TIDE LEVEL 1.30 ft. to 4.21 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1046 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 35 m M 15 m N 225 m VL 140 m NO 290 m US 341 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
H					S	S					B	H	2.0	15		X			
O						P					R	V	0.5	140		X			
C						S					R	V	1.0	120		X			
D				S		S					B	H	2.0	5		X			
E				S		S					B	H	1.0	5		X			
F						T					R	V	1.0	10		X			
G					S	S					B/R	H	1.0	20		X			
H	S				P	P					B	H	2.5	20		X			
I				S	S	S					B	H	2.0	10		X			
J						S	S				B	H	2.0	5		X			
K				B							PC	M	10.0	35		X	X		
L	S	S		S	P	P					B	H	4.0	15		X			
M	S				P	P					B	H	2.5	15		X			

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-

2 - 24FRAMES 20-24

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20							X	-					X			C - PG	See comments
2	15		X						5 - 11	Y	6	S					PC - PG	
3	10			X					5 - 7	Y	6	S			X		PC - PG	
4	20			X					5 - 10	Y	8	S		X			PG - PG	
5	14		X						8 - 12	Y	13	S			X		P - PG	
6	15					X			6 - 13	Y	12	S			X		P - PG	
7	12					X			5 - 8	Y	7	S		X			P - PG	
									-									
									-									

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

OG COMMENTS: This Segment is predominately a rocky shoreline with small high angle pocket boulder beaches. Oiling along these sections consists of Bath Tub Ring (BTR) at the NITZ (CT/CV). Some interstitial SOR/AP/MS was found forming a matrix in finer material on some of the Boulder beach sections. A large portion of the Segment was surveyed by skiff (vertical Rock), however Landings were made where ever possible. The Northern Section of the Segment was NOT surveyed →

Revised 5.24.94
REVIEWED: F.W. 5/27/91

PAGE 2 OF 2

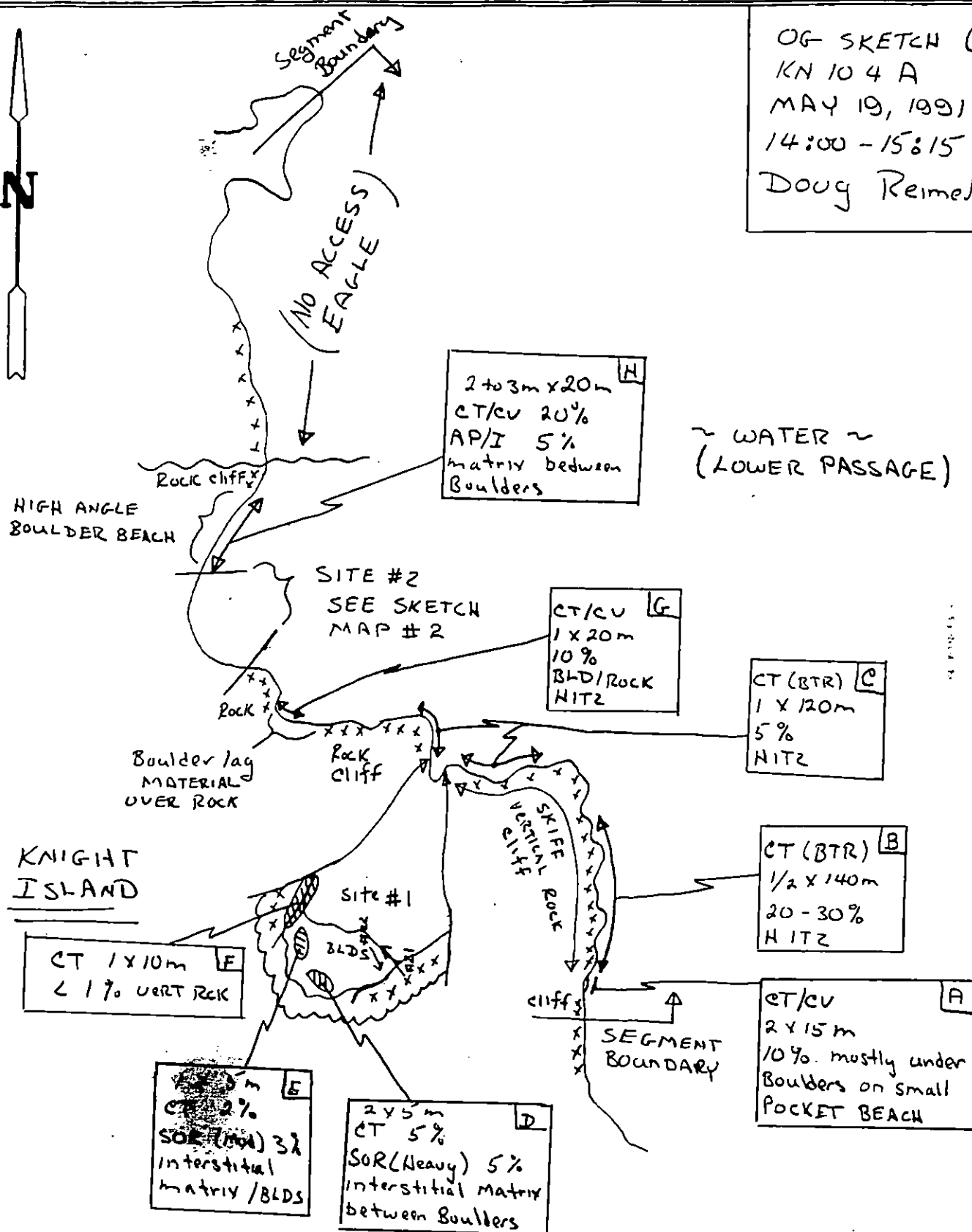
DATE 5 11 9 191

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

due to Eagle constraints. Site # 2 (see OG sketch #2) is a pebble/cobble beach with boulder banks on either side. Oil was found as coat/cover on boulders and SOR/MS/AP forming part of the finer matrix material between boulders, similar to the other pocket boulder beaches on the segment. Across the center of the beach in pebble/grainal; a "layer" of SOR was found which was exposed on the surface toward the South, and was buried by 3-4 cm of sediment toward the North end. Several pits were dug to determine the thickness of the layer, which appears to be 5-8 cm on average. Technically this area is both surface and subsurface oiling, however it is all the same layer. The extent of the area was determined by scraping off the top 3-4 cm to expose the underlying oiled sediments.

reviewed 5.24 9y
REVIEWED: F.W. 5/27/91

OG SKETCH (#1)
 KN 104 A
 MAY 19, 1991
 14:00 - 15:15
 Doug Reimer



OG SKETCH (#2)
KN 104 A
MAY 19, 1991
14:00 - 15:15
Doug Reimer

10 x 35 meters
SOR 60% (light-heavy)
THIS AREA HAS A LENS
of SOR which is
Exposed near the S end
and is covered by 3-4 cm
of Pebble / Gravel down
The North - Extent of oiling
was determined by scraping
off surface cover

CT/ST 5%
on BIDS
2 x 5 m

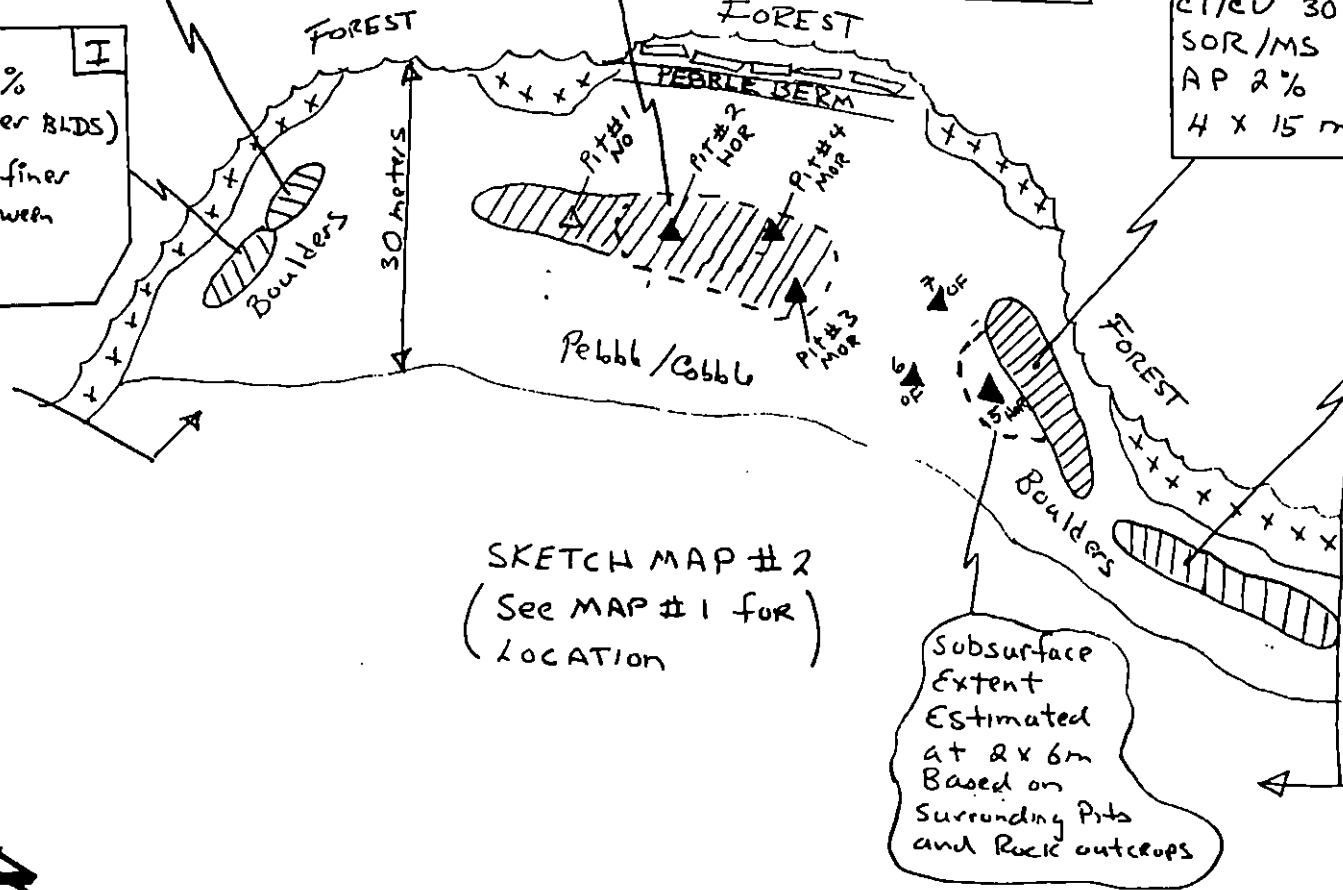
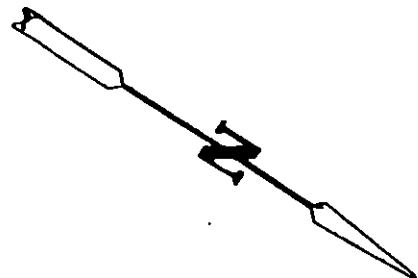
CT/CV 5%
(mostly under BIDS)
SOR 5% finer
matrix between
Boulders
2 x 10 m

CT/CV 30%
SOR/MS 5% } matrix between
AP 2% } Boulders
4 x 15 meters

2 to 3 x 15 m
CT/CV 20%
AP/I 5%
(matrix between
Boulders - This
continues along
coast see Sights
MAP #1)

SKETCH MAP #2
(See MAP #1 for
LOCATION)

Subsurface
Extent
Estimated
at 2 x 6 m
Based on
Surrounding Pits
and Rock outcrops



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 18 May 91
 SEGMENT # KN-104 TIDAL HEIGHT (Range) +1 to +4 ft
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

AB+C: All CT or CV is high in ITZ. "A+C" consist of rock face with BTR in lichen zone. A is a small rocks & beach with CT/CV in Algae & lichen zone and at upper edge of the barnacle zone. "A" has sparse Fucus and Fucus recruits in the LITZ

DEF: CT+SOR ALSO IN HITZ. Lower zones support Fucus, Ulva, Dictyota. Recently settled barnacle spot also observed.

G+H: As represented on map

I+J: CT/CV/ST in lichen & Algae zone high in ITZ. SOR observed adjacent to Fucus recruits. Several tide pools observed at base of boulders. Pools support dense Littorina & limpets, Pagurus & algae.

K: The pebble/cobble beach does not sustain dense biota as expected. Upper areas are naturally depauperate, however oligochaetes can be found under rocks in the oiled area.

L: CT/CV/SOR generally in lichen zone, lower ITZ with sparse Fucus & barnacles

M: oil here is in lichen zone but reaches to upper edge of barnacle-limpet zone. Boulders closer to the water support mussel beds & dense patches of Fucus

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	<u>wandering T. Noddy</u>	<u>1</u>	

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

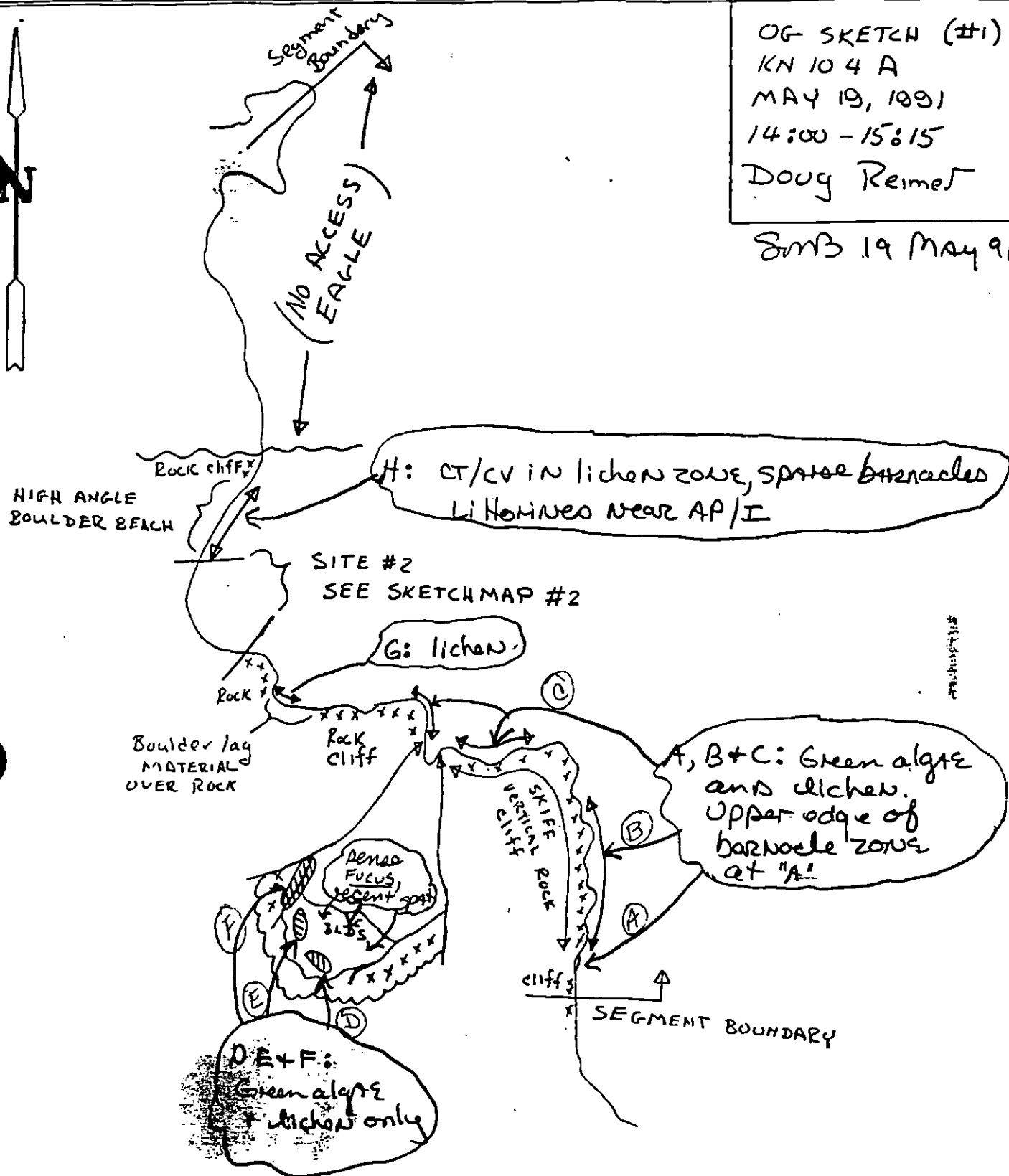
Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/24/91



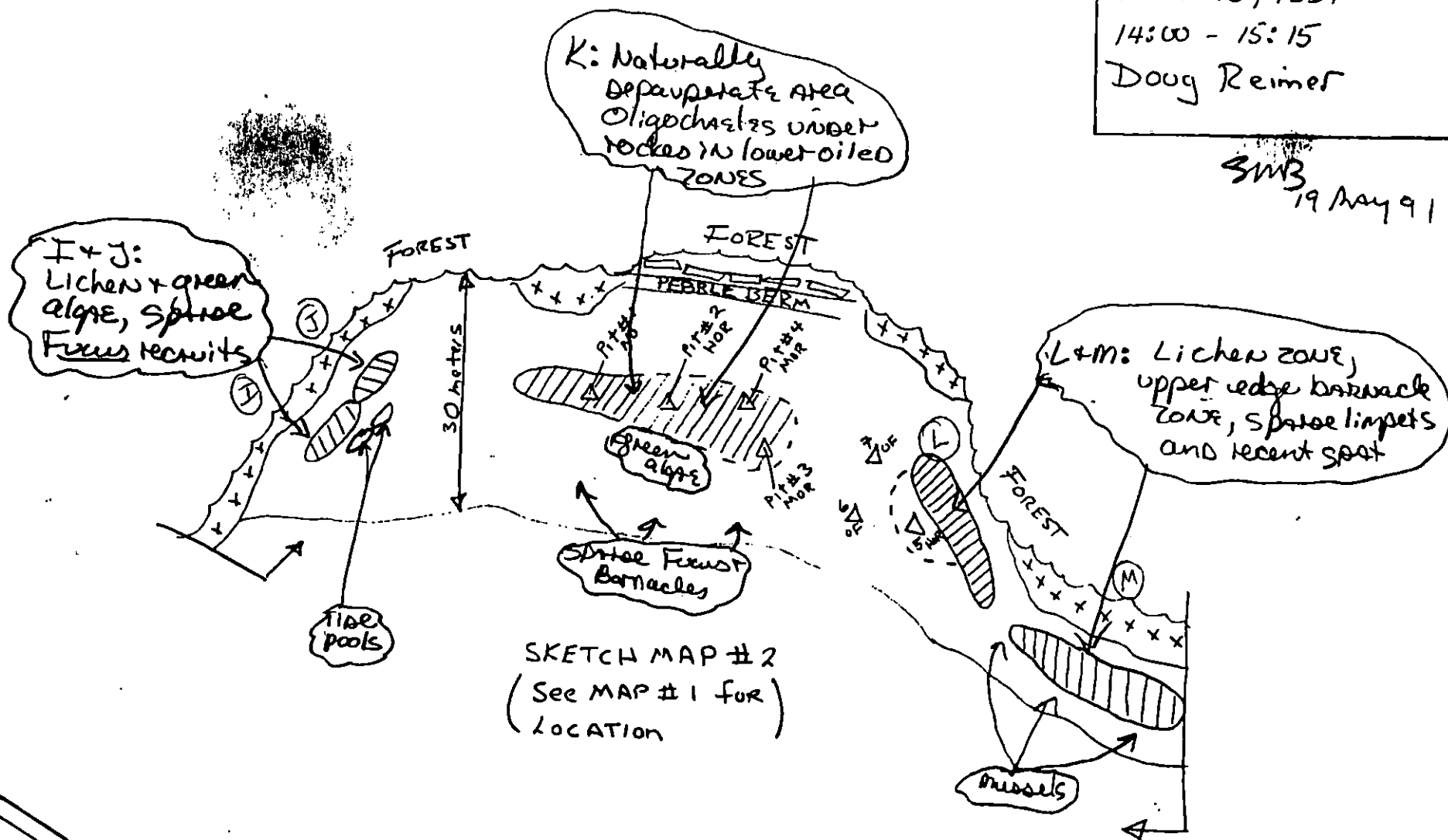
OG SKETCH (#1)
KN 104 A
MAY 19, 1991
14:00 - 15:15
Doug Reimer

SMB 19 May 91

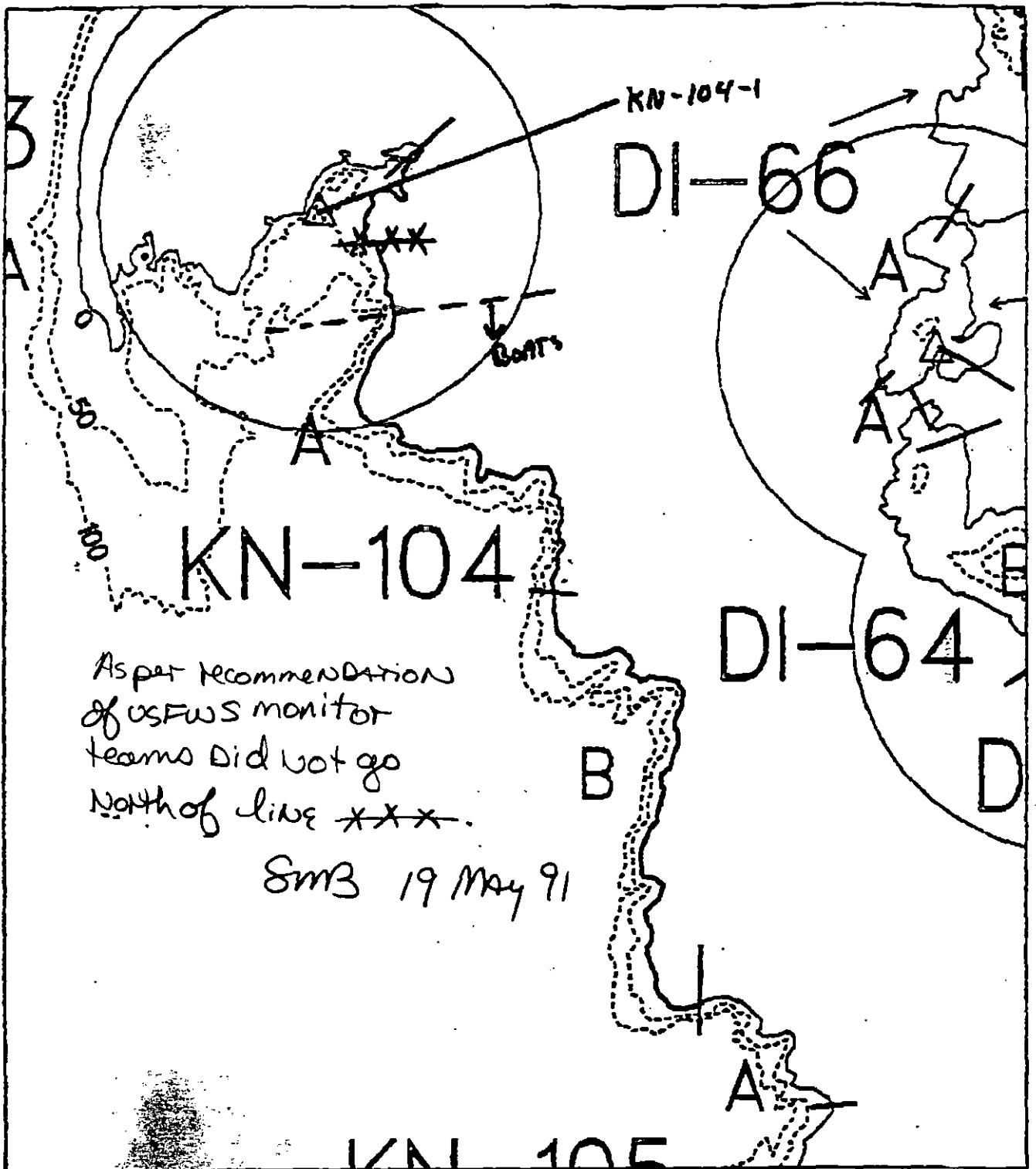


OG SKETCH (#2)
 KN 104 A
 MAY 19, 1991
 14:00 - 15:15
 Doug Reimer

SMB
 19 May 91

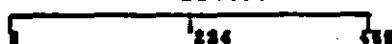


Revised M.B. 5/24/91



KN0104A

METERS

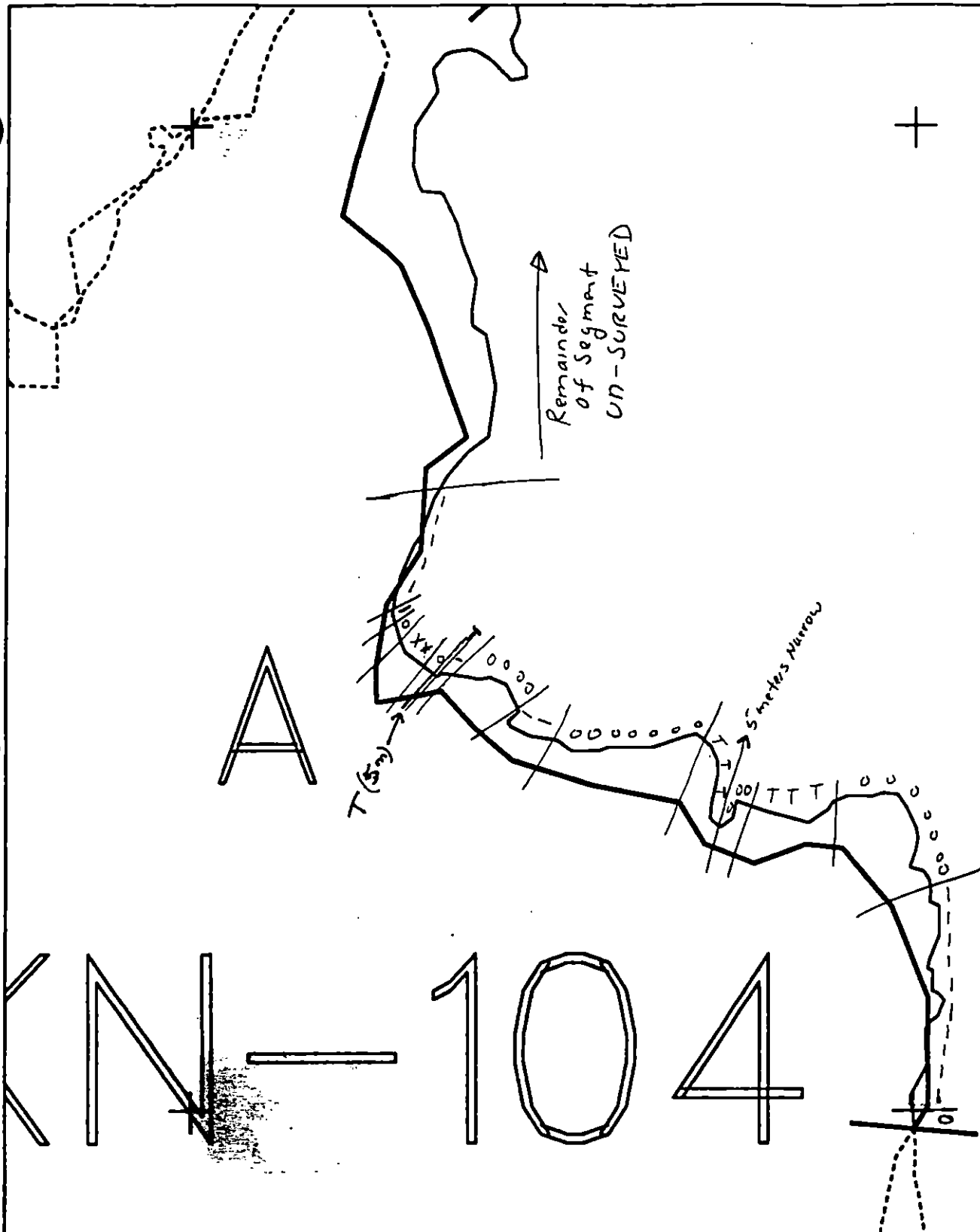


AK State Planning Zone 4
EN0104

Segment Reference Map
Map Key: ENIXN0104



EAGLE NEST



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

KN0104 A
 ADEC Subsegment Length: 1048m
 METERS

0 100 200
 AK State Plane Zone 4
 42N010400



Subdivision Field Map
 Map Key: KNKN0104Aa
 Name: Reimer
 Date: 5/19/91
 Date Entered:

Revised 5.24 99
 REVIEWED: F.W. 5/27/91

1991 MAYSAP EVALUATION

SEGMENT: KN 104 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/19/91

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)	<u>N</u>	_____	_____
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.

MAT SAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN-104 SUBDIVISION A DATE 5/19/91

ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

The survey of this subdivision should be completed when the eagle restrictions are lifted.

Areas D+E have a low distribution and difficult access in Boulders - NTR.

Area K has a near surface lens from L/SOR to MS which is largely not visible from the surface, covered w/ smaller sediments. The covering is easily raked back for access. The heavier oiling is in distinct layers and is easily removed. The lighter oiling should be raked. Limited removal w/ trowels/shovels is possible in areas L+m and could easily be incorporated w/ the treatment of K.

EXXON

NAME FRANK POX

SIGNATURE [Signature]

☐ NTR

Recommend raking along at 20' - amount of surface layer covering the oil line in the area is dictated as heavy. Once exposed then scraping up the oil line and treating with inopol. This is the only area on the segment I would recommend activity.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D. S. Kennedy

☐ NTR

Did not survey north beach as there is an active eagle nest. Areas with remaining SOR&AP could use some hand removal and raking/Bio. I believe this will be marginally successful as size of rocks and boulders will make this difficult. Any large scale operation would make the beach look disturbed for quite a long time as this is a mod. energy beach.

USCG/NOAA NAME BOAT USCG

NAME BOAT USCG

SIGNATURE [Signature]

☐ NTR

Within this segment section K has the greatest amount of surface and subsurface oiling. However, this section is not very active (moderate energy). As this beach is not very mobile, physical disturbances by clean-up work are likely to remain for sometime. D+B.

4. No TREATMENT RECOMMENDED. AGREE w/ USFS+NOAA REPS ENVIRONMENTAL DAMAGE CERTAINLY ~~AND~~ OUTWEIGHS THE NEED TO REMOVE MINOR AMOUNTS OF OILING IN THIS SEGMENT. 3

TEAM NO. 2OG D. ReimerBIO S. RANSEGMENT KN-104ADEC P. MontesanoLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON F. BoxUSCG/NOAA Bm. Zanolini
D. Simeciak-BaughDATE 5/19/91TIME 14:00 to 15:15TIDE LEVEL 1.30 ft. to 4.21 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1046 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 35 m M 15 m N 225 m VL 140 m NO 290 m US 341 m

L O C	SURFACE OIL CHARACTER										SURFACE		AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SEDIMENT TYPE	SHORE SLOPE VHML	WIDTH	LENGTH	S	UI	MI	LI	
													m	m					
H					S	S					B	H	2.0	15		X			
B						P					R	V	0.5	140		X			
C						S					R	V	1.0	120		X			
D				S		S					B	H	2.0	5		X			
E				S		S					B	H	1.0	5		X			
F						T					R	V	1.0	10		X			
G					S	S					BR	H	1.0	20		X			
H	S				P	P					B	H	2.5	20		X			
I				S	S	S					B	H	2.0	10		X			
J						S	S				B	H	2.0	5		X			
K				B							PC	M	10.0	35		X	X		
L	S	S		S	P	P					B	H	4.0	15		X			
M	S				P	P					B	H	2.5	15		X			

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 # MAYSAF-

2-24 FRAMES 20-24

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20							X	-					X			C-PG	See comments
2	15		X						5-11	Y	6	S					PC-PG	
3	10			X					5-7	Y	6	S			X		PC-PG	
4	20			X					5-10	Y	8	S		X			PG-PG	
5	14		X						8-12	Y	13	S			X		P-PG	
6	15							X	6-13	Y	12	S			X		P-PG	
7	12							X	5-8	Y	7	S		X			P-PG	
									-									
									-									

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

OG COMMENTS: This Segment is predominately a rocky shoreline with small high angle pocket boulder beaches. Oiling along these sections consists of Bath Tub Ring (BTR) at the HITZ (CT/CV). Some interstitial SOR/AP/MS was found forming a matrix in finer material on some of the Boulder beach sections. A large portion of the Segment was surveyed by Skiff (Vertical Rock), however Landings were made where ever possible. The Northern Section of the Segment was NOT surveyed →

Revised 5.24.94
REVIEWED: F.W. 5/27/91

[illegible]

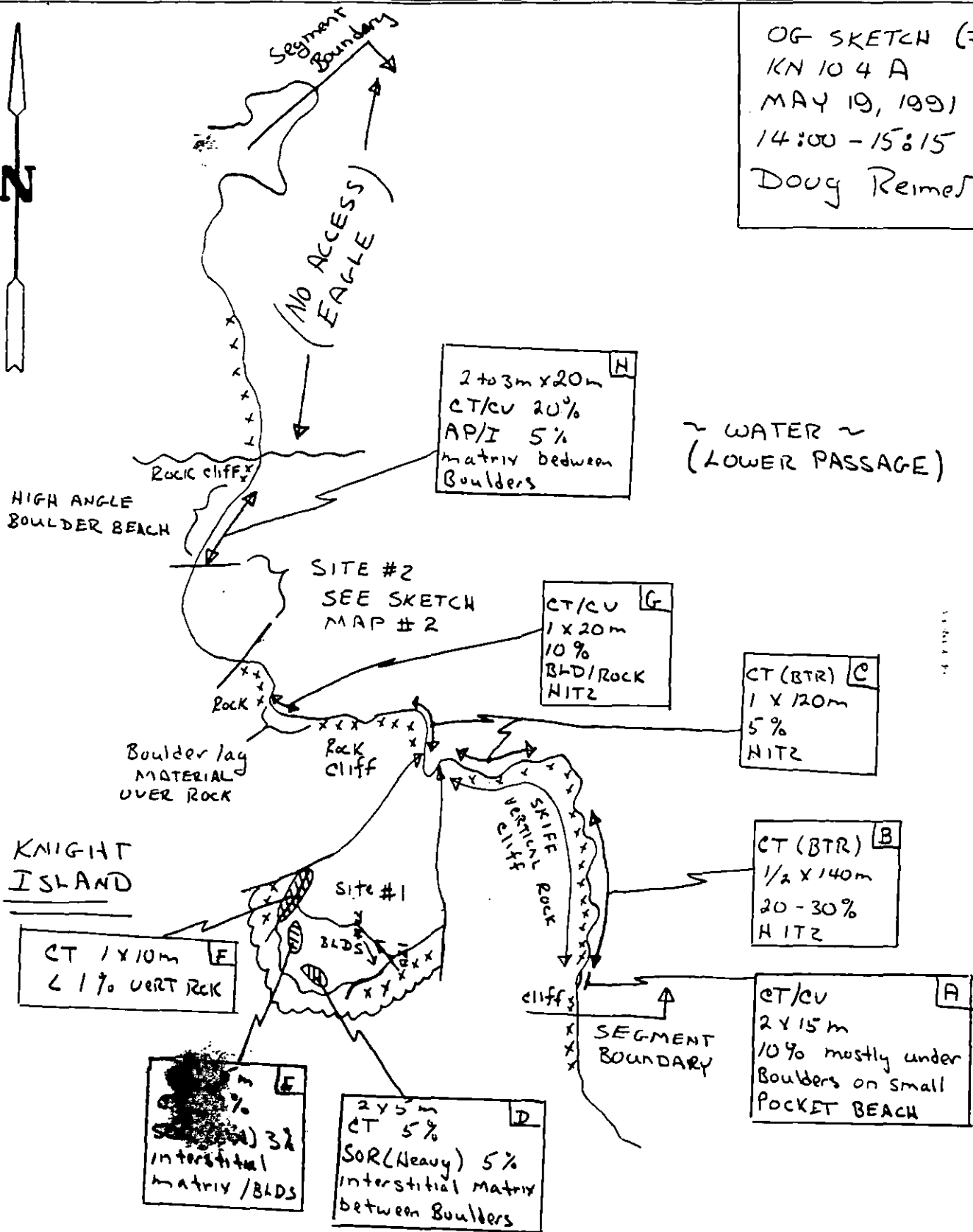
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS:

due to Eagle Constraints. Site # 2 (see OG sketch #2) is a pebble/cobble beach with boulder banks on either side. Oil was found as coat/cover on boulders and SOR/MS/AP forming part of the finer matrix material between boulders, similar to the other pocket boulder beaches on the segment. Across the center of the beach ~~the pebble/gravel~~; a "layer" of SOR was found which was exposed to the surface toward the South, and was buried by 3-4 cm of sediment toward the North end. Several pits were dug to determine the thickness of the layer, which appears to be 5-8 cm on average. Technically this area is both surface and subsurface oiling, however it is all the same layer. The extent of the area was determined by scraping off the top 3-4 cm to expose the underlying oiled sediments.

reviewed 5.24 9y
REVIEWED: F.W. 5/27/91

OG SKETCH (#1)
KN 104 A
MAY 19, 1991
14:00 - 15:15
Doug Reimer



Reviewed S.244y
REVIEWED: 5/27/91 F.W.

OG SKETCH (#2)
KN 104 A
MAY 19, 1991
14:00 - 15:15
Doug Reimer

10 x 35 meters
SOR 60% (light-heavy)
THIS AREA HAS A LENS
of SOR which is
Exposed near the S end
and is covered by 3-4cm
of Pebble / Gravel downward
The North-Extent of oiling
was determined by scraping
off surface cover

CT/ST 5%
on BLDS
2 x 5 m

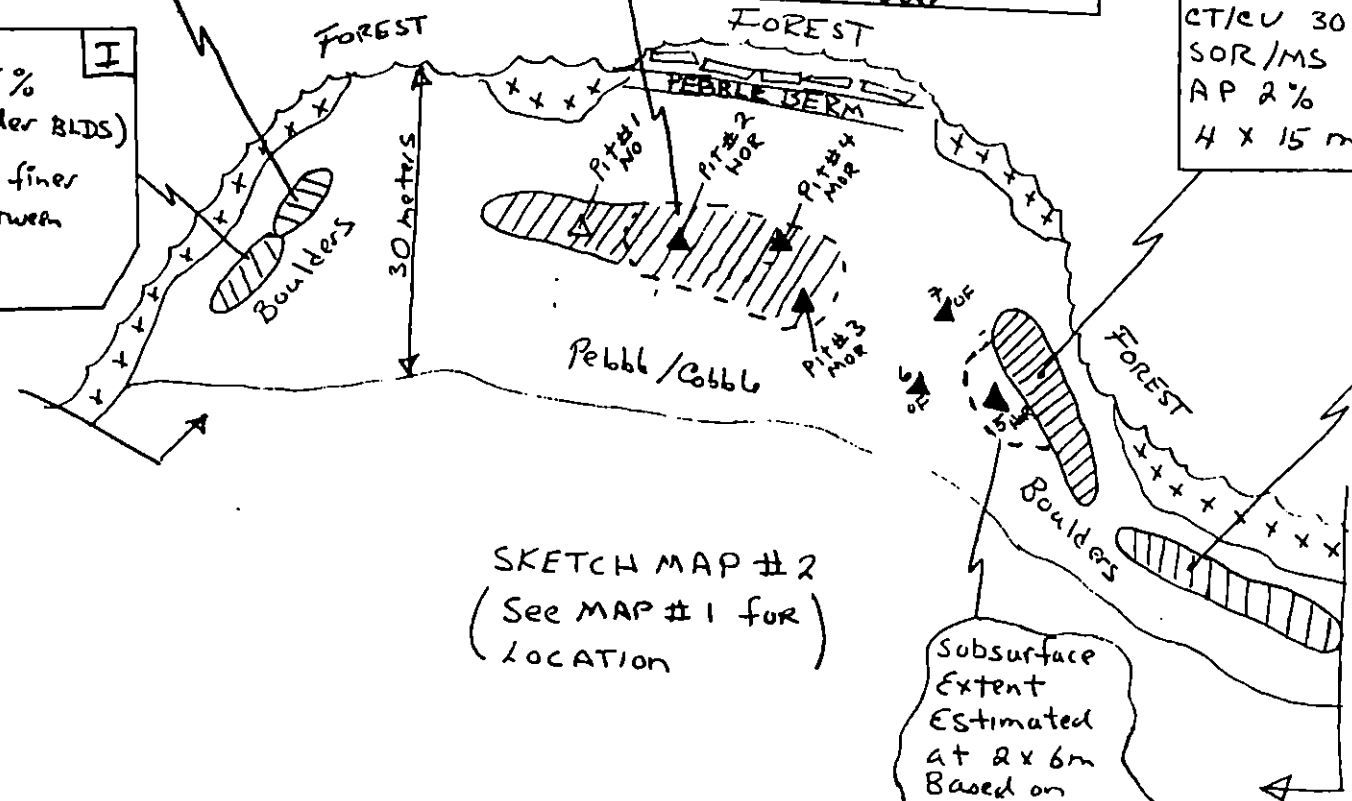
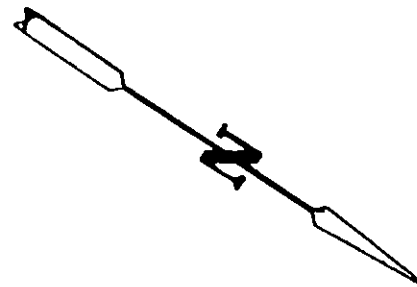
CT/CV 5%
(mostly under BLDS)
SOR 5% finer
matrix between
Boulders
2 x 10 m

CT/CV 30%
SOR/MS 5% } matrix between
AP 2% } Boulders
4 x 15 meters

2 to 3 x 15 m
CT/CV 20%
AP/I 5%
(matrix between
Boulders - This
continues along
coast see SITES
MAP #1)

SKETCH MAP #2
(See MAP #1 for
LOCATION)

Subsurface
Extent
Estimated
at 2 x 6 m
Based on
Surrounding Pits
and Rock outcrops



Reviewed S.24 Qy
REVIEWED: F.W. 5/27/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 18 May 91
 SEGMENT # KN-104 TIDAL HEIGHT (Range) +1 to +4 ft
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

AB+C: All CT or CV is high in ITZ. "B+C" consist of rock face with BTR in lichen zone. A is a small pocket beach with CT/CV in ALGAE & lichen zone and at upper edge of the barnacle zone. "A" has sparse Fucus and Fucus recruits in the LITZ.

DEF: CT & SOR also in NITZ. Lower zones support Fucus, Ulva, Ulvospores. Recently a thin barnacle sp. also observed.

G&H: As represented on map

I+J: CT/CV/ST in lichen & ALGAE zone high in ITZ. SOR observed adjacent to Fucus recruits. Several tide pools observed at base of boulders. Pools supported dense Littorina & limpets, Agardhi & ALGAE.

K: The pebble/cobble beach does not sustain dense biota as expected. Upper areas are naturally depauperate, however oligochaetes can be found under rocks in the oiled area.

CT/CV/SOR generally in lichen zone, lower ITZ with sparse Fucus & barnacles

M: Oil here is in lichen zone but reaches to upper edge of barnacle-limpet zone. Boulders closer to the water support mussel beds & dense patches of Fucus

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	According to Hiera	1	

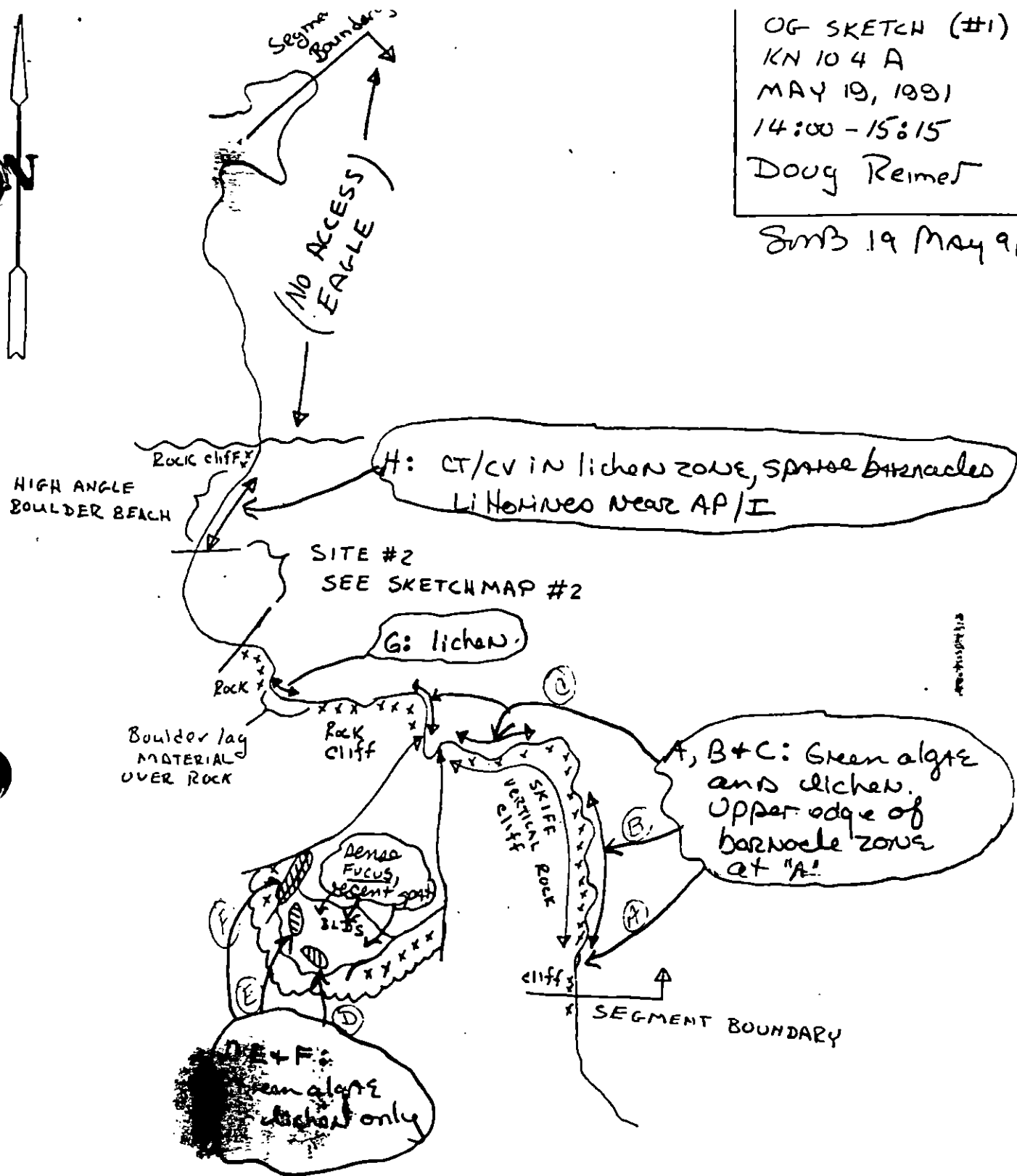
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			/
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/24/91

OG SKETCH (#1)
 KN 104 A
 MAY 19, 1991
 14:00 - 15:15
 Doug Reimer

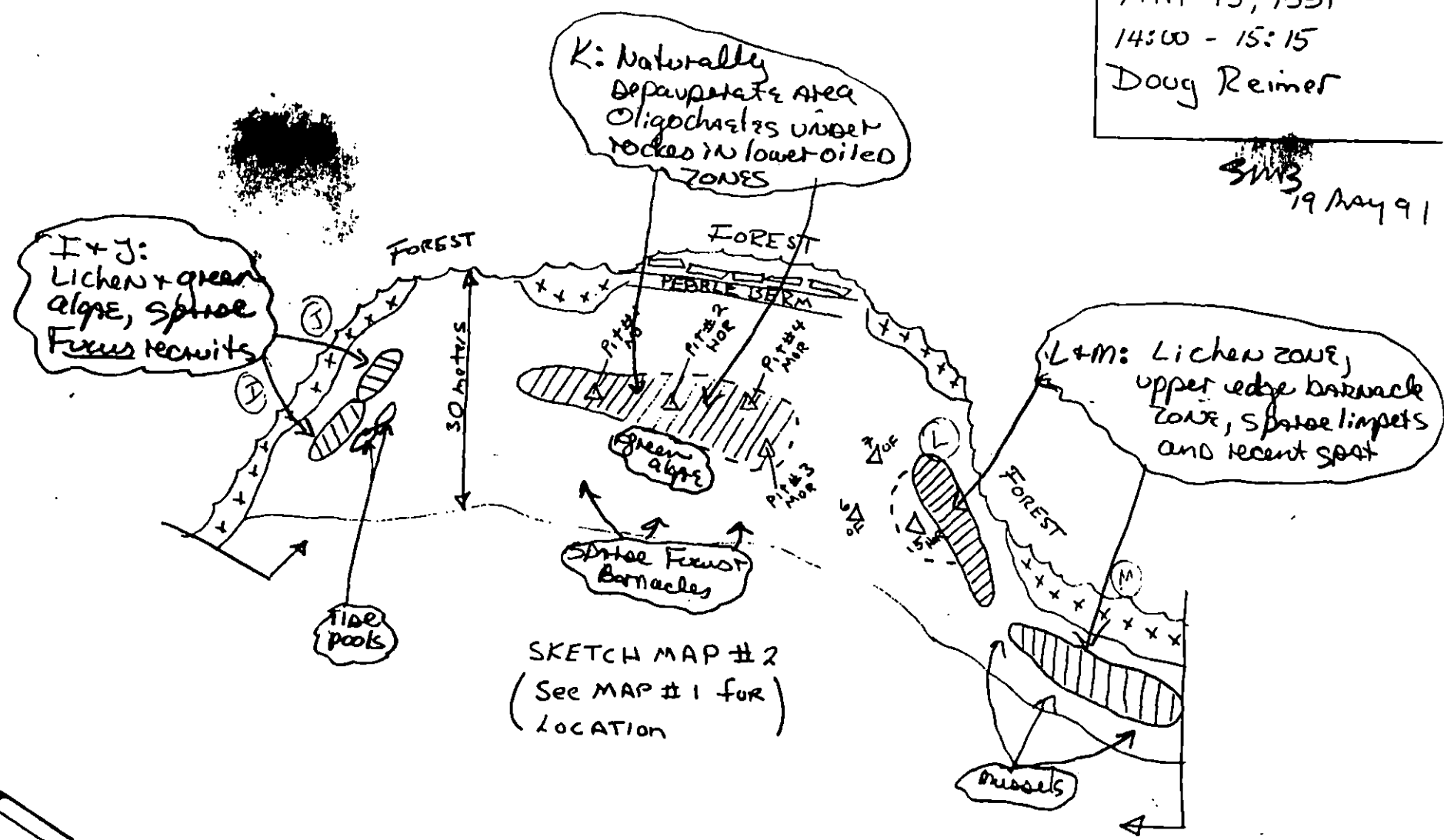
SMB 19 May 91



Reviewed M.B. 5/24/91

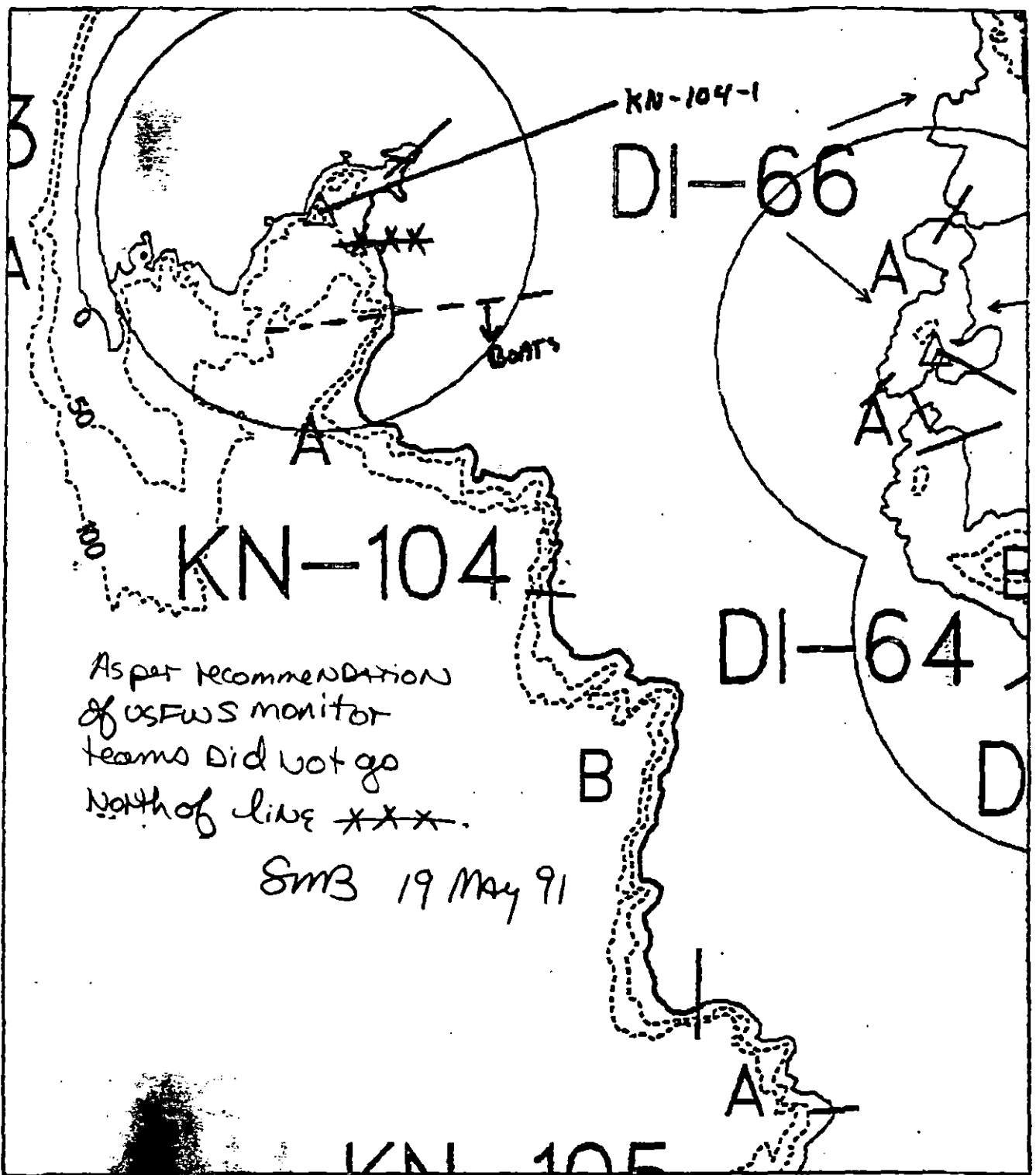
OG SKETCH (#2)
 KN 104 A
 MAY 19, 1991
 14:00 - 15:15
 Doug Reimer

SM3
 19 May 91



SKETCH MAP #2
 (See MAP #1 for
 Location)

Revised M.B. 5/19/91



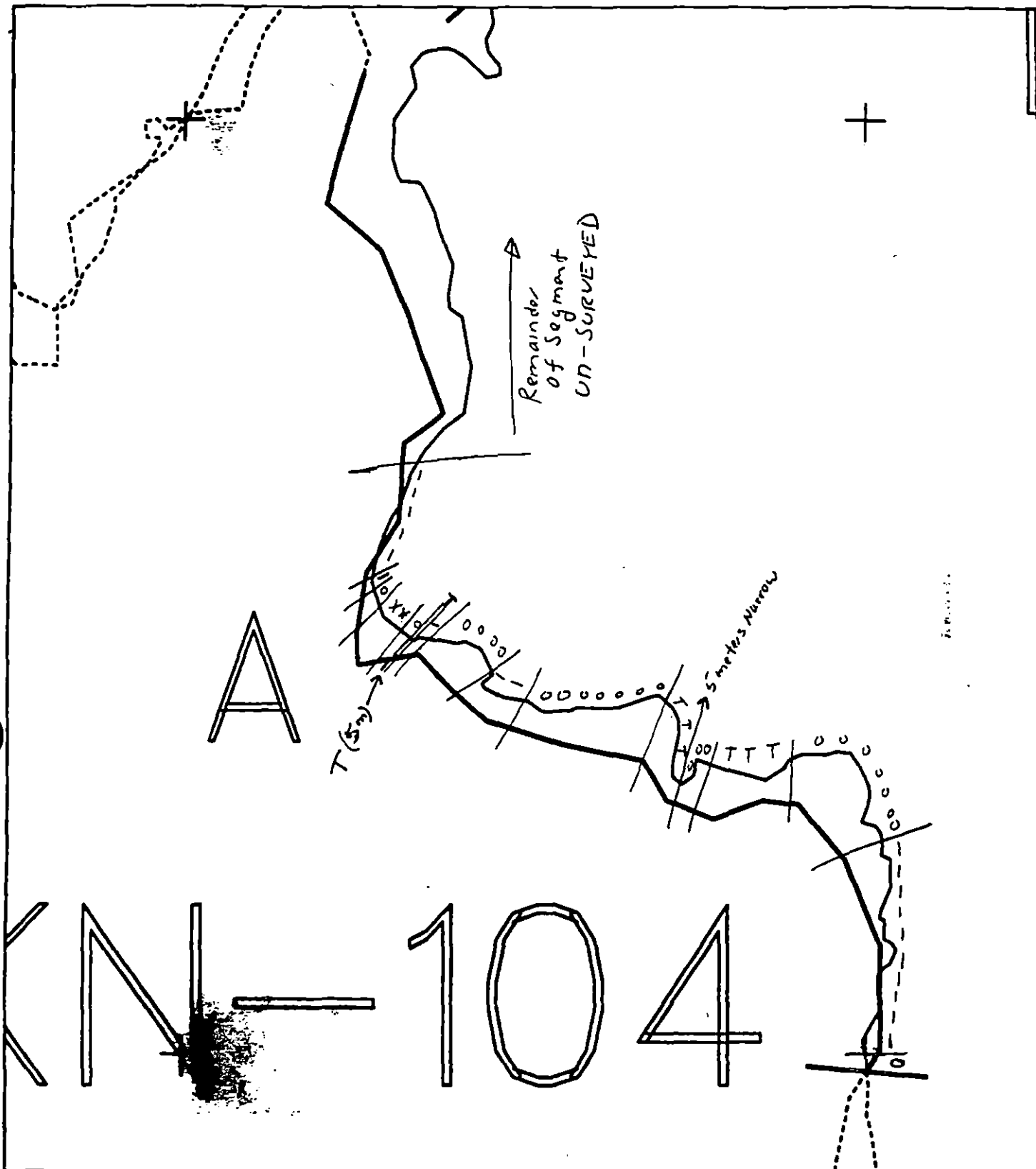
KN0104A

Segment Reference Map
Map Key: KNIX0104



EAGLE NEST

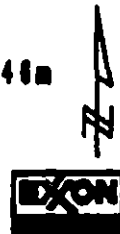
AK State Plane Zone 4
GCSNAD83



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

KN0104 A
 ADEC Subsegment Length: 1048m
 METERS

0 100 200
 AK State Plane Zone 4
 kn0104a



Subdivision Field Map
 Map Key: KNKN0104Aa
 Name: Reimer
 Date: 5/19/91
 Date Entered:

Revised 5.24 91
 REVIEWED: F.W. 5/27/91

1991 MAYSAP EVALUATION

SEGMENT: KN 104 SUB: B REGION: PWS SURVEY DATE: 5/19/91

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN-104 SUBDIVISION B DATE 5/18/91

ADEC NAME Peter Montesano SIGNATURE [Signature]

☒ NTR **TREATMENT RECOMMENDED**
 area "H" has a small area of SOR/AP/MS combination which could be removed along with the same combination of oiling in area "K". Area "K" has a small % over a large area while the overall amount of oil is sufficient for warrant removal. Some of the above oiling is not visible from looking at the surface proper.
 The SOR/MS in area "E" is inaccessible in jagged sediments and w/o sufficient distribution for treatment. Area "T" has sufficient degree, distribution, and accessibility around boulders for treatment. This area is a SOR/MS/AP combination w/ some of the removable oiling dipping out of side under clean sediment.

EXXON NAME FRANK Box SIGNATURE [Signature]

☐ NTR I recommend the manual removal of the small area of Heavy SOR and then followed by bio.

MANAGER NAME Dennis S Kennedy OF USFS SIGNATURE D. S. Kennedy

☐ NTR This subdivision had an extremely good survey. A band of SOR with some mouse pockets were found most of this would be nonworkable. Area [H] would be the most workable although still very difficult. Possibly hand treat with Bio remediation.

USCG/NOAA NAME BMI M.P. Zenone OF USCG SIGNATURE [Signature]

☐ NTR Observed a discontinuous band of interstitial mouse patches and SOR along the entire segment. In general, the oil is found between larger boulders in the HITZ. Removal and breaking up of oil within this section would very labor intensive due to the oil's patchiness and location - D3-B3

CG. 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. THE AMOUNT OF OILING IN AREA H WOULD BE VERY LABOR INTENSIVE AS INDICATED BY NOAA. HAND TROWLES AND SORBENT PADS WOULD BE THE ONLY TOOLS ABLE TO BE USED. A CLEANUP CREW COULD SPEND THE WHOLE DAY AND THE AREA WOULD LOOK AS IF IT HAD NOT BEEN TOUCHED. 3 AND VERY LITTLE IF NOT, NO BENEFIT WOULD BE GAINED.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 2OG ReimerBIO BANSEGMENT KN 104ADEC MontesanoLANDMANAGER Kennedy for USFSSUBDIVISION BEXXON BoxUSCG/NOAA Sinecek-BeattyDATE 5/19/91TIME 12:10 to 14:00TIDE LEVEL -0.91 ft. to 1.29 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1160 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 150 m N 46 m VL 250 m NO 714 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
H					S	S					RB	H	1.0	40		X			
B						T					R	V	0.5	30		X			
C						S					R	V	1.0	40		X			
D					S	S					R	V	1.0	15		X			
E		P		P	P						B	H	2.5	6		X			
F				S	S						B	H	2.0	10		X			
G					B						R	V	1.0	15		X			
H		P		P	P	P					B	H	3.0	30		X			
T						S					R	V	1.0	20		X			
J						S					R	V	1.0	20		X			
K		S		S	S	S					B	H	5.0	50		X			
L						S					RB	H	4.0	10		X			
M						S					CB	M	4.0	40		X			
N						T					R	H	1.0	20		X			
O				S	S	S					B	M	7.0	8		X			
P						T					R	V	1.0	8		X			

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-

2-21 FRAMES 13-19

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	35							X	-					X			P-7G	
2	25						X		5-10	Y	B	S		X			C-6P	
3	35							X	-					X			P-7G	BEEM
4	10							X	-					X			CP-7G	surface oiling only
5	15		X						7-14	Y	-	-		X			PG-PG-C	cracks between boulders
6	20							X	-					X			B-PG-S	
									-									
									-									
									-									

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

OG COMMENTS: Rocky Shoreline with pocket B/C beaches. Oiling consists of coat along sections of Rock cliff in the form of weathered Bath Tub Ring (BTR). Boulder aprons along sides of beach areas have higher concentrations of Coat with some Cover, mostly on under sides of boulders. These areas usually have SUR (Light-heavy) and small patches of MS forming part of the matrix material between boulders.

 revised 5.24 9/4
 REVIEWED: F.W. 5/27/91

(SKIFF) VERTICAL ROCK CLIFF

F

C

Pit #4
No

F

D

13

SEE
SKETCH MAP #2

A

SEGMENT
BOUNDARY

reviewed 5.24.91
REVIEWED: F.W. 5/24/91

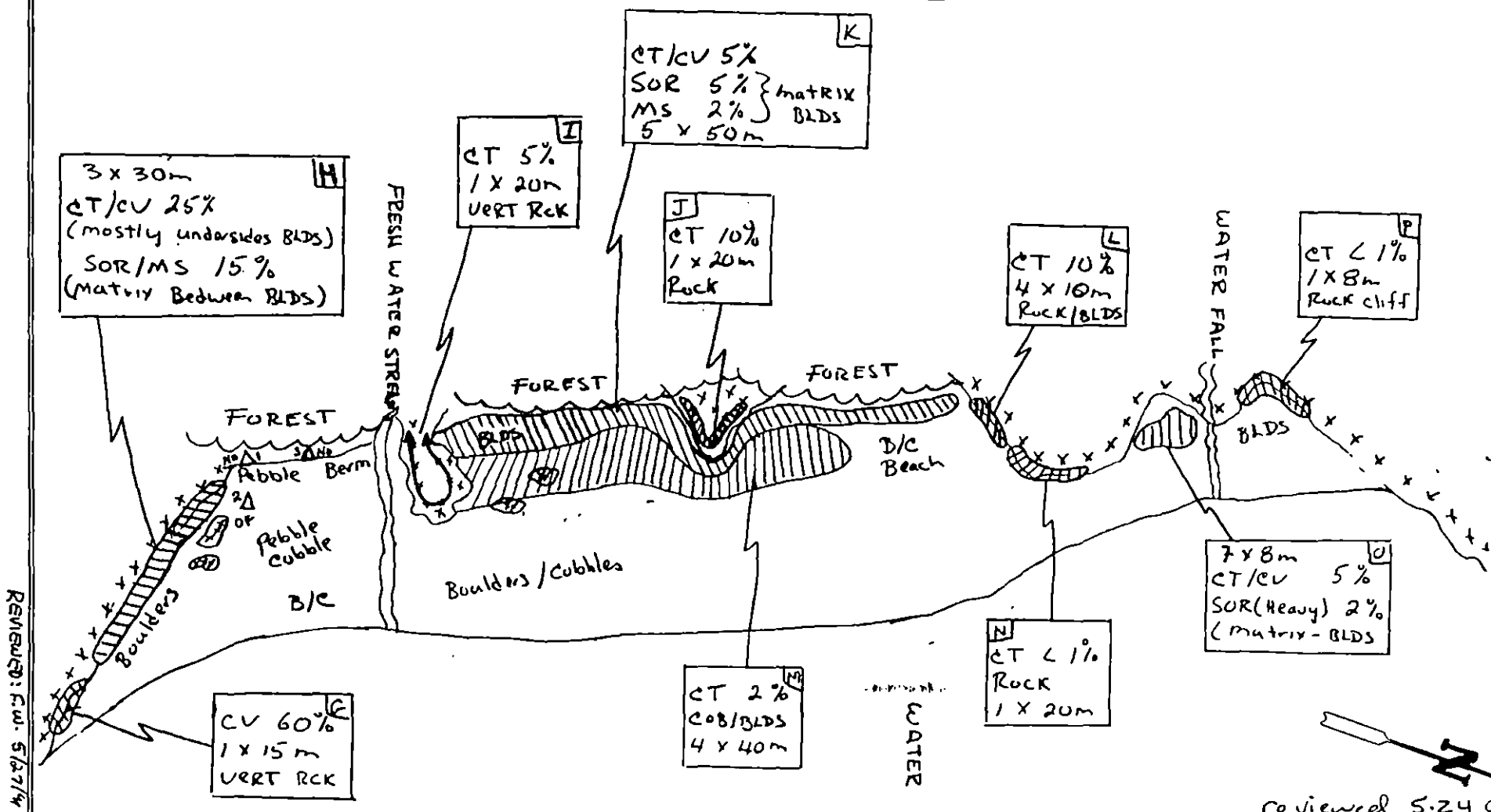
revised

OG SKETCH (#2)
 KN 1048
 MAY 19, 1991
 12:10 - 14:00
 Doug Reimer.

Beach width = 30m

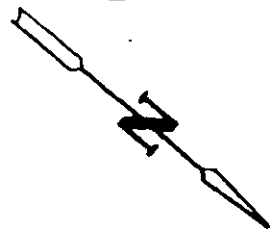
LAND
 (KNIGHT ISLAND)

SKETCH MAP #2
 (See sketch map #1 for location)

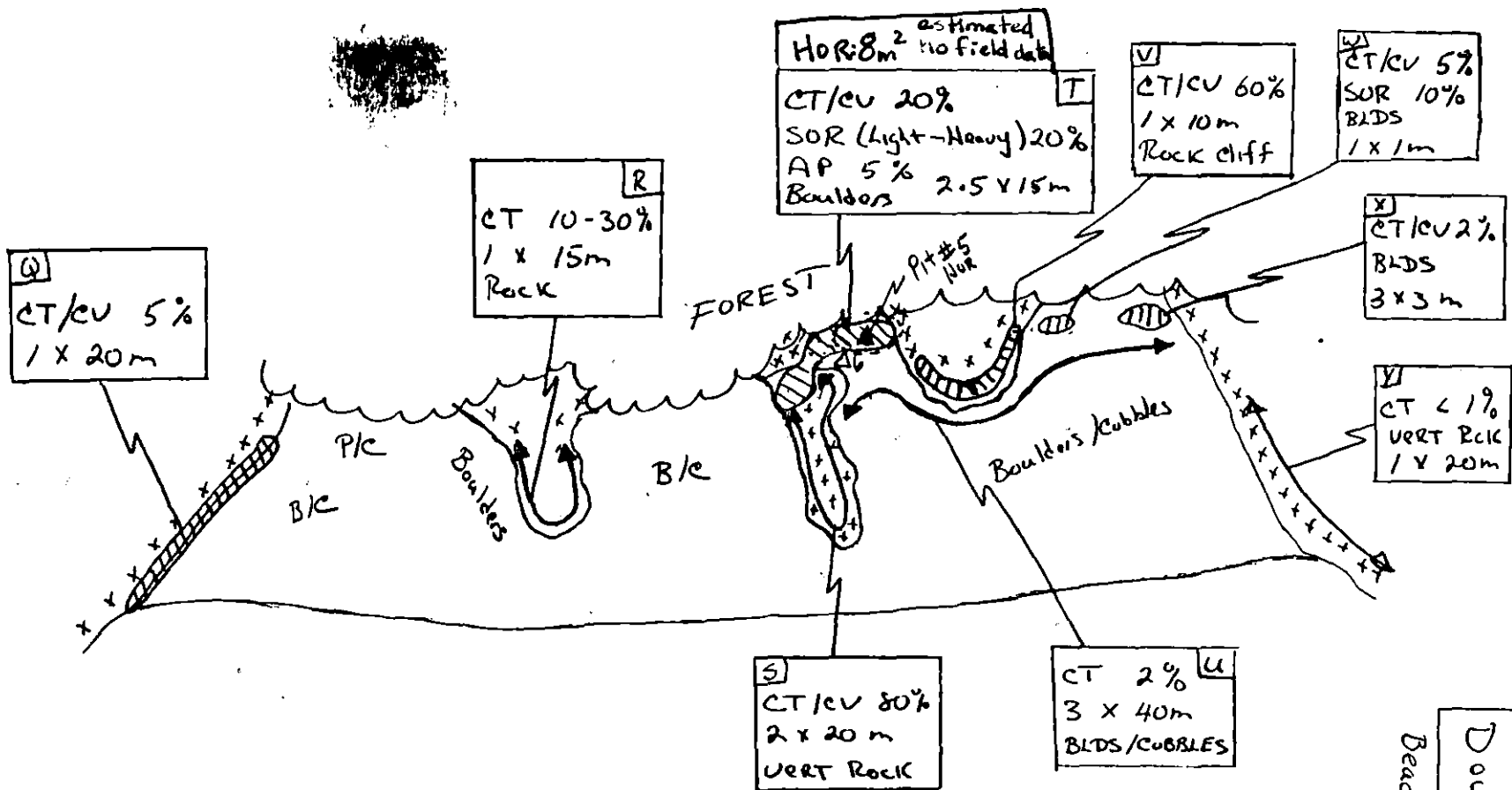


reviewed 5.24.94

REVIEWED: C.W. 5/27/94



SKETCH MAP #3
(See Sketch Map #1 for location)



Beach width = 30m

OG SKETCH (#3)
KN 104 B
MAY 19, 1991
12:10 - 14:00
Doug Reimer

revised 5.24 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 19 May 91

SEGMENT # KN-104

TIDAL HEIGHT (Range) +1 ft

SUBDIVISION B3

BIOLOGIST S.M.B.N

SEA STATE Calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

ABC: CT/CV is high on vertical rock faces in lichen zone, recent spout and dense algae immediately below oiled zone

D: AS "ABC" but Fucus recruits below oiled zone

E&F: AS recorded on map - lower ITZ on boulders dense with algae spout, barnacles & large limpets

H: AS noted on map Pebble area adjacent to pits is naturally depauperate

IJKLNP: These areas are high in ITZ as indicated on map

M: CT reaches to upper edge of barnacles

O: CT/CV reaches to barnacles, Fucus recruits and Littorines

QRTWXY: Oil is high in ITZ as indicated

Z: CT is thick on sides of several large boulders. If the CT is removed it may open up the area for additional barnacle settlement. Areas beneath the oiled boulders support mussels and recolonizing Fucus plants. These areas should be protected.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Revised 5/26/91 DM

OG SKETCH (#1)

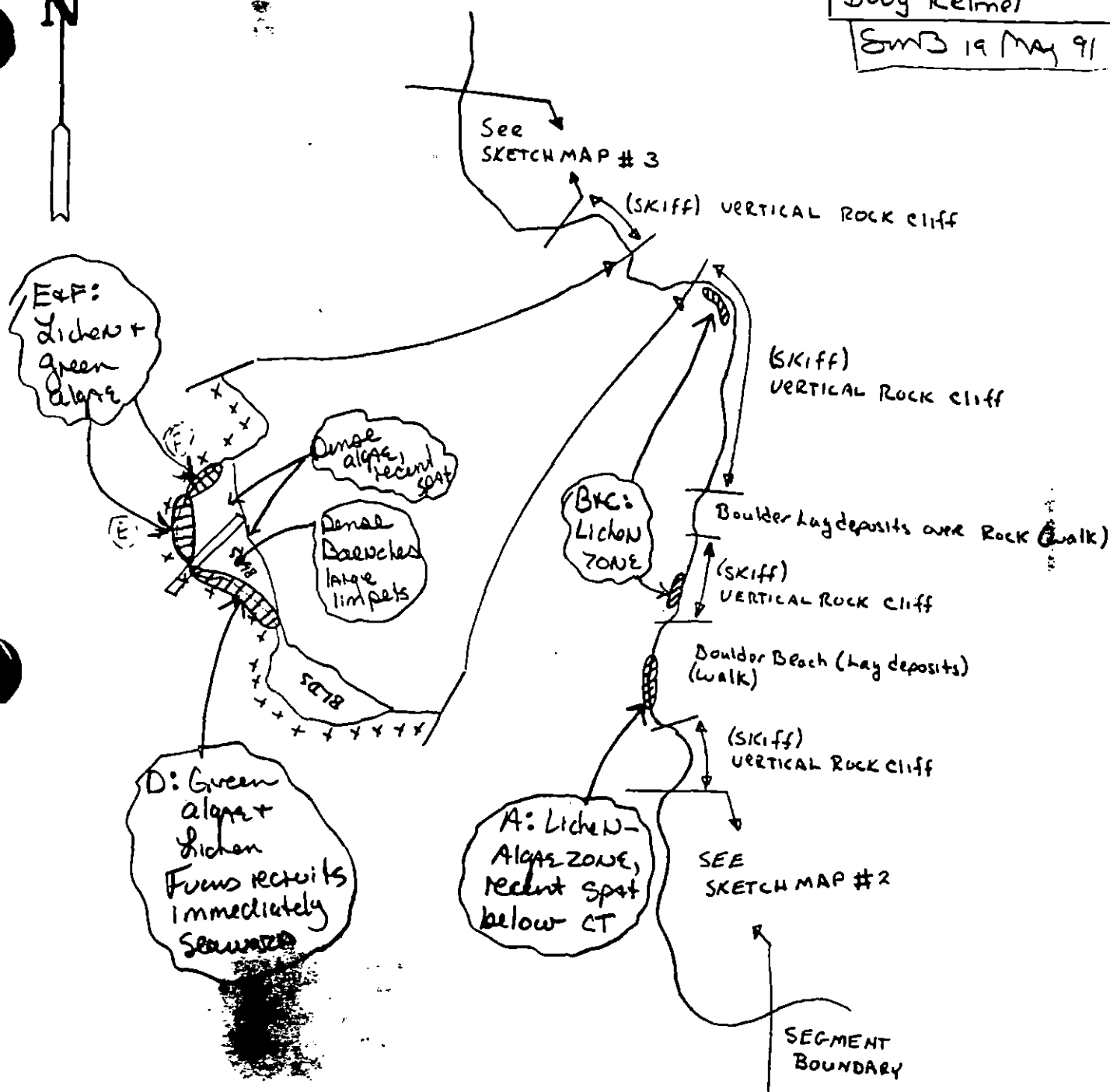
KN 104 B

MAY 19, 1991

12:10 - 14:00

Doug Reimer

SWB 19 May 91



OG SKETCH (#2)

KN 104 B

MAY 19, 1991

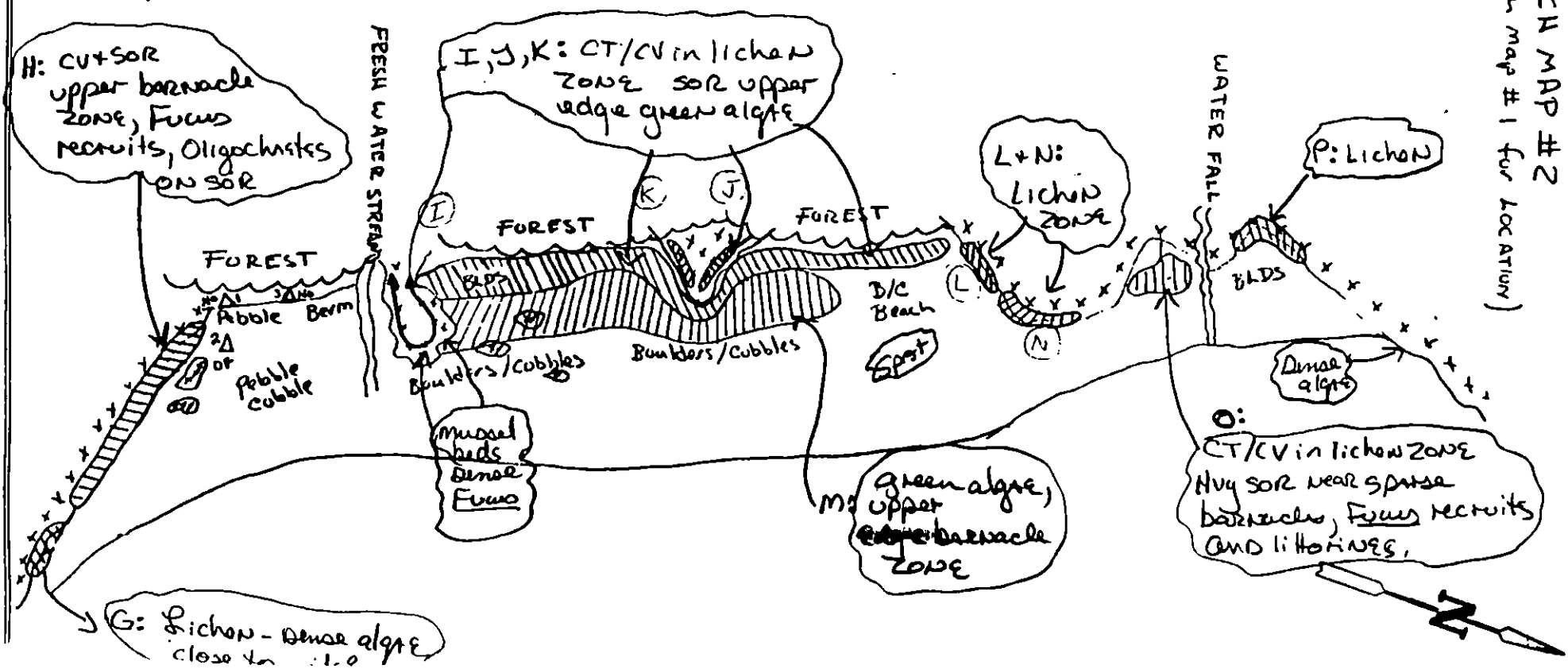
12:10 - 14:00

Doug Reimer

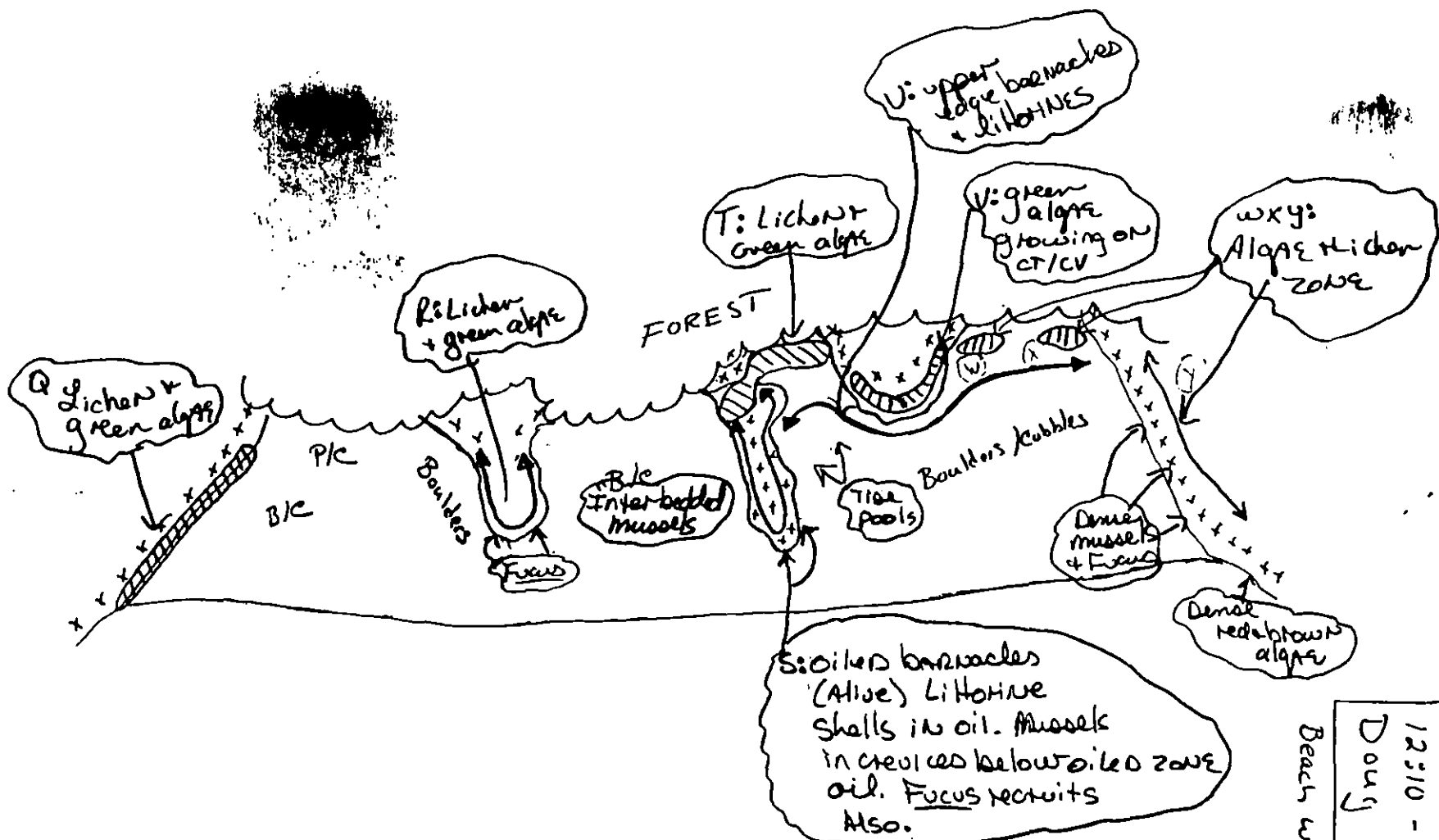
Beach width = 40m

Swms 19 May 91

SKETCH MAP #2
(See sketch map #1 for location)



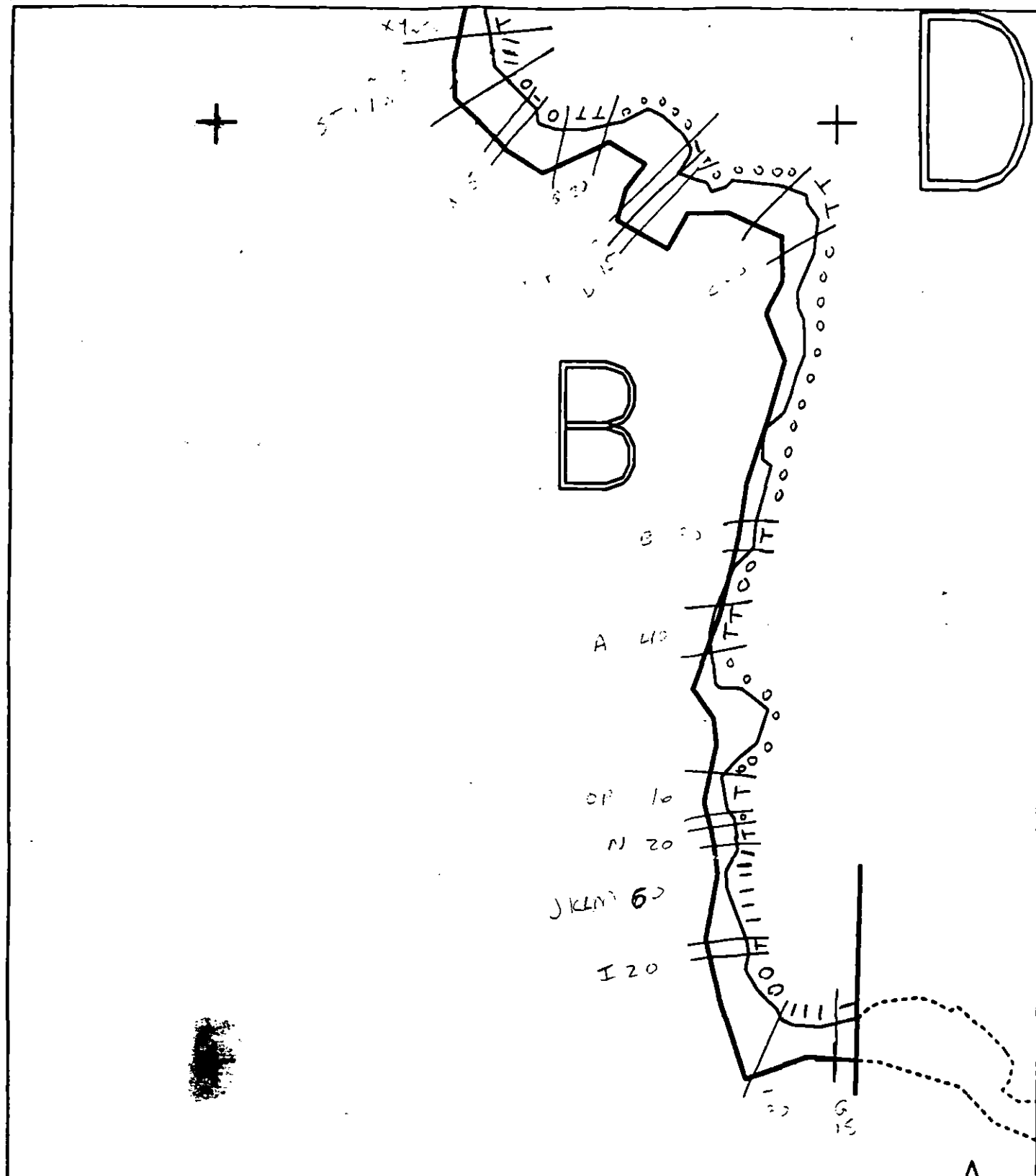
SKETCH MAP #3
(See Sketch Map #1 for location)



Beach width = 30 m

OG SKETCH (#3)
KN 104 B
MAY 19, 1991
12:10 - 14:00
Doug Reimer

SNB 19 May 91



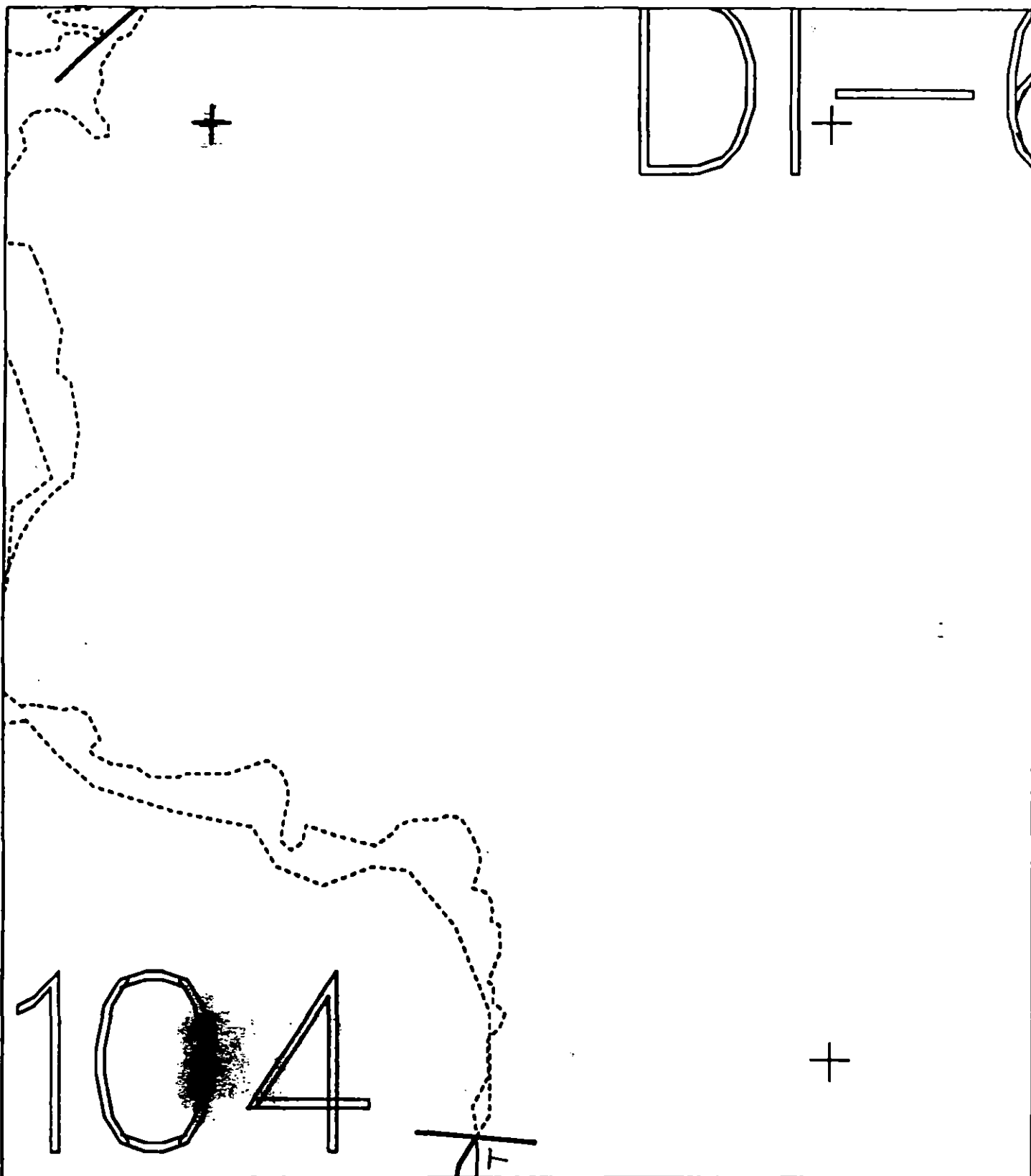
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

KN0104 B
 ADEC Subsegment Length: 1160m
 METERS
 0 100 200
 AK State Plane Zone 4
 550104b



Subdivision Field Map
 Map Key: KNKN0104B
 Name: Reina
 Date: 5/19/91
 Date Entered:

revised 6.24 91
 REVIEWED: R.W. 5/27/91



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0104 B

ADEC Subsegment Length: 1160m

METERS

0 100 200

AK State Plane Zone 4
42N0104bb



Subdivision Field Map

Map Key: KNIK0104Bb

Name: Reimer

Date: 5/19/91

Date Entered:

reviewed 5.24 94

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: KN-104 SUB: A REGION: PWS SURVEY DATE: 6/26/91

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN-104 SUBDIVISION A DATE 5/26/91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR

☐ Treatment Recommended

oiling of concern consisted of soft AP or HSOR near area of pit #3 in a 2X30 meter area. Most was removed leaving some LOR. Recommend reassessment later this summer as it may be possible for new AP to form. 10 Super Gee Bags collected and stored for pickup by another crew.

EXXON

NAME Mike Barker SIGNATURE Mike Barker

☒ NTR

Not bad, but we filled 10 sacks. The team did a good job. Rich biota. Eagles looked fine. We got all of the oil.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

ORIGINAL COPY

USCG/NOAA

NAME + VAN NANCE, LTJG ^{USCGA} SIGNATURE Van Nance

☒ NTR

ALL SIGNIFICANT OILING WAS REMOVED & BAGGED, WHEN THE BAGS ARE PICKED UP IT MAY BE DESIREABLE TO APPLY REMEDIATION

PAGE 1 OF 1

SEGMENT KN-104

SUBDIVISION A

DATE 6 / 26 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

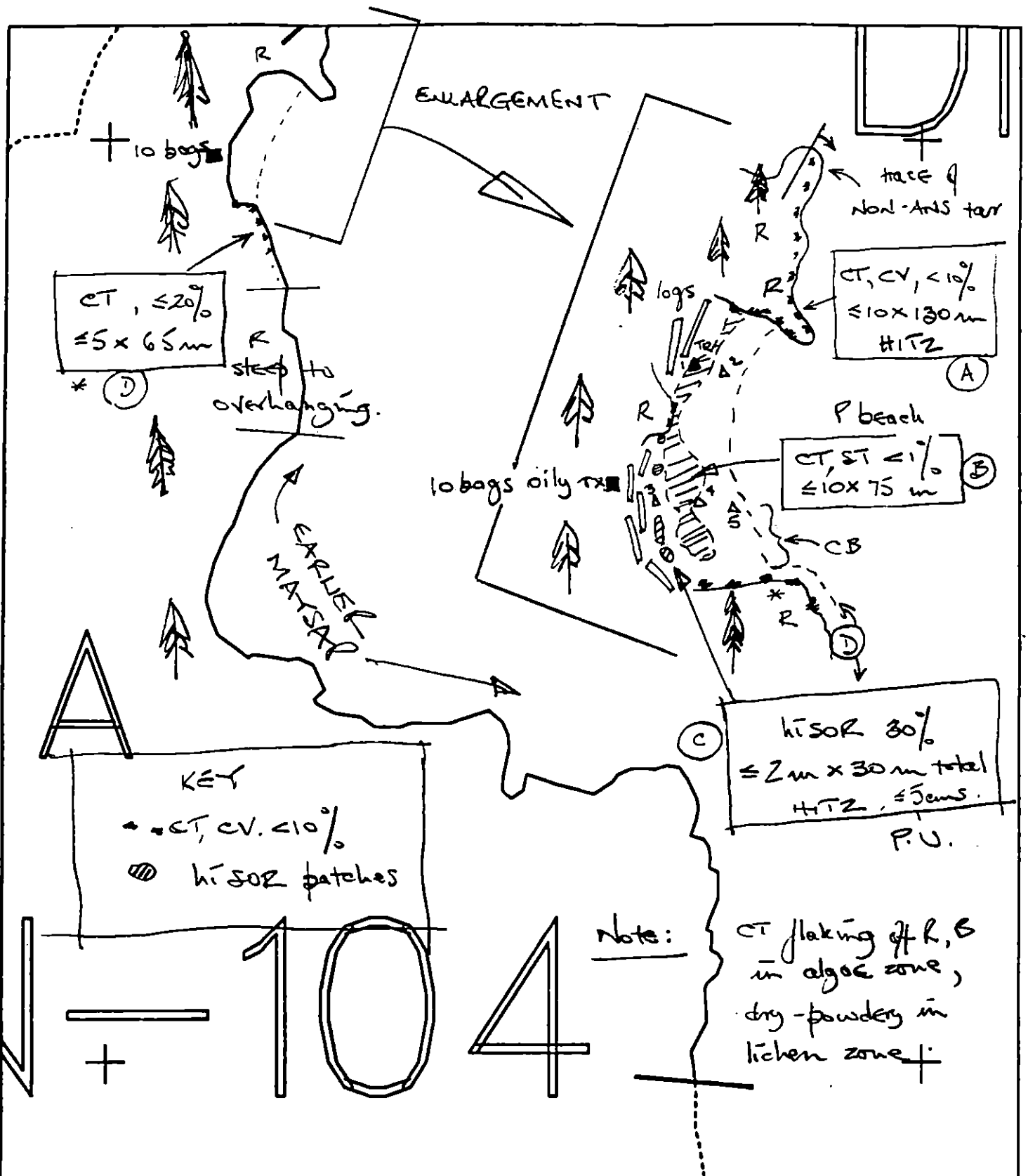
EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 65 m VL 120 m NO 1 m US 90 m

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

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

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

OG COMMENTS: P beach between steep rock wall. Surface oil only, as (i) CT, CV bands on R and as (ii) to SOL across P beach/face. Coated pebbles were noted across the beach/face, while the SOL/soft A^P was collected between B & HITZ. 10 bags cached for future retrieval.



KN0104 A
supplementary
NOTES

100 200

AS State Plane Zone 4
KN0104A

Subdivision Field Map

Map Key: KNKN0104Ac

Name: G. MACDONALD

Date: 6-26-91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/26/91
 SEGMENT # KN-104 TIDAL HEIGHT(Range) 4.1' ~ 6.3'
 SUBDIVISION A BIOLOGIST D. McCoemick
 SEA STATE Calm WIND SPEED/DIRECTION None
 PHOTOGRAPHS: ROLL # MAYSAP-00-04 FRAME # 15-18

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

(Hand 1) Bedrock faces support the only significant biota in this part of the subdivision. Species (as indicated on map) show no impacts from remaining CT/CV.

(Band 2) Other than amphipods and Aligochaete worms under the surface, no biota occurs until the LFTZ. Even here, the fauna (barnacles, gastropods, Fucus and other algae) are sparse. This appears to be a naturally depauperate beach, probably due to inevitable substrate.

Subtidally, Fucus ulva, filamentous green algae, and filamentous brown algae were present in sparse concentrations.

The jellyfish Cyanea capillata occurred in the nearshore area of this beach (a few washed up).

The remaining oil (including the SOK at location C (picked up)) poses no threat to what little fauna occurs on this beach.

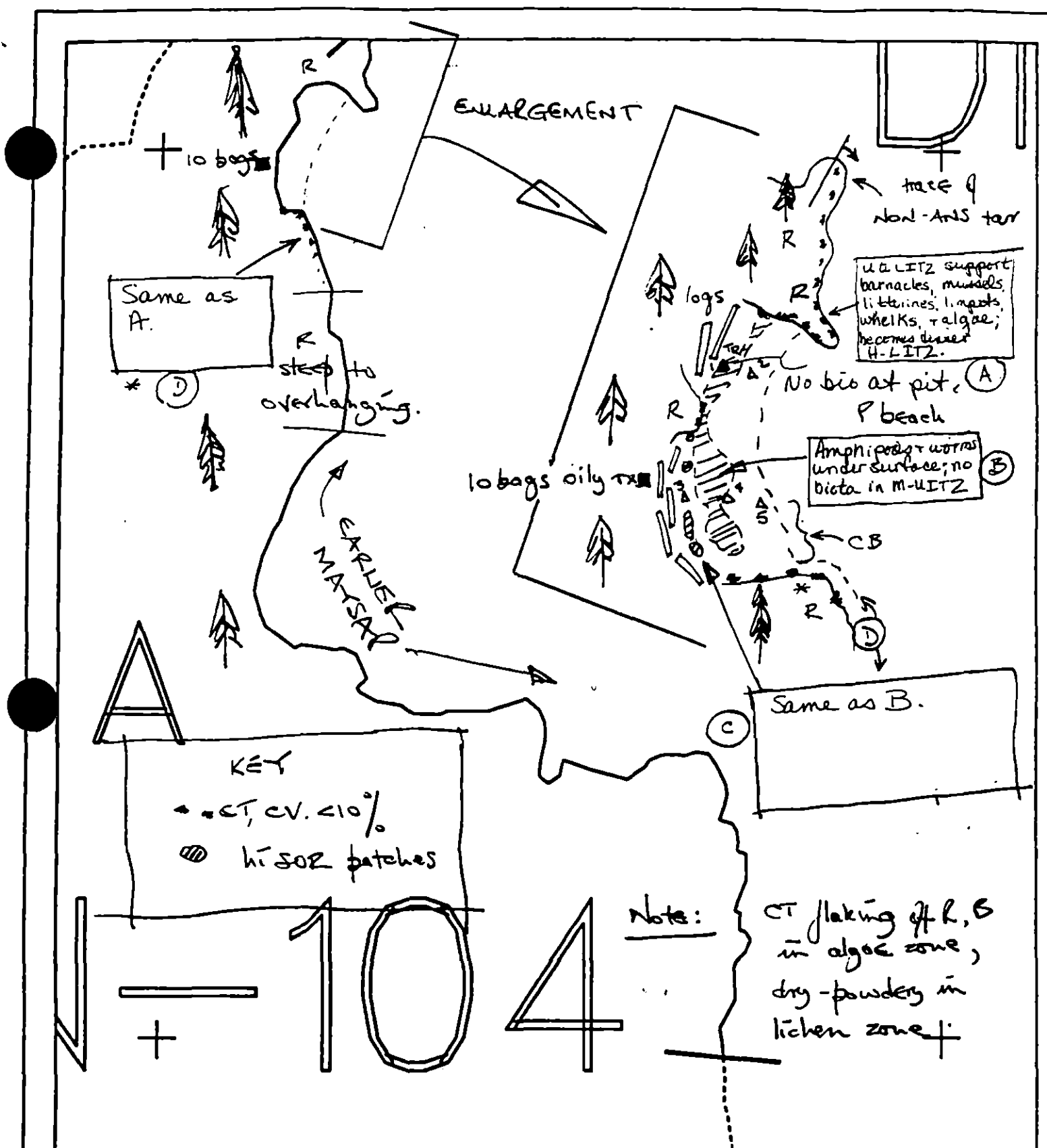
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults + 1-2 chicks	
Seabirds			
Waterfowl			
Gulls/kittiwakes	1	4	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify) <u>H. seal</u>	1		
<u>1. ops</u> ies (specify)	2		
Dall's Porpoise	2		

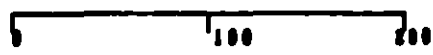
Shoreline subdivision map showing important biological features attached.



KN0104 A

supplementary

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KN0104A

Name: D. McCormick

Date: 6-26-91

Bio Sketch

Eagle Map
6/26/91
FWS monitor present

DI-66

Active nest
2 adults +
1-2 chicks

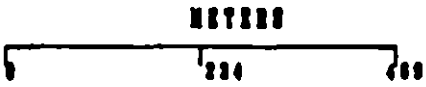
KN-104

DI-64

KN 105

KN0104A

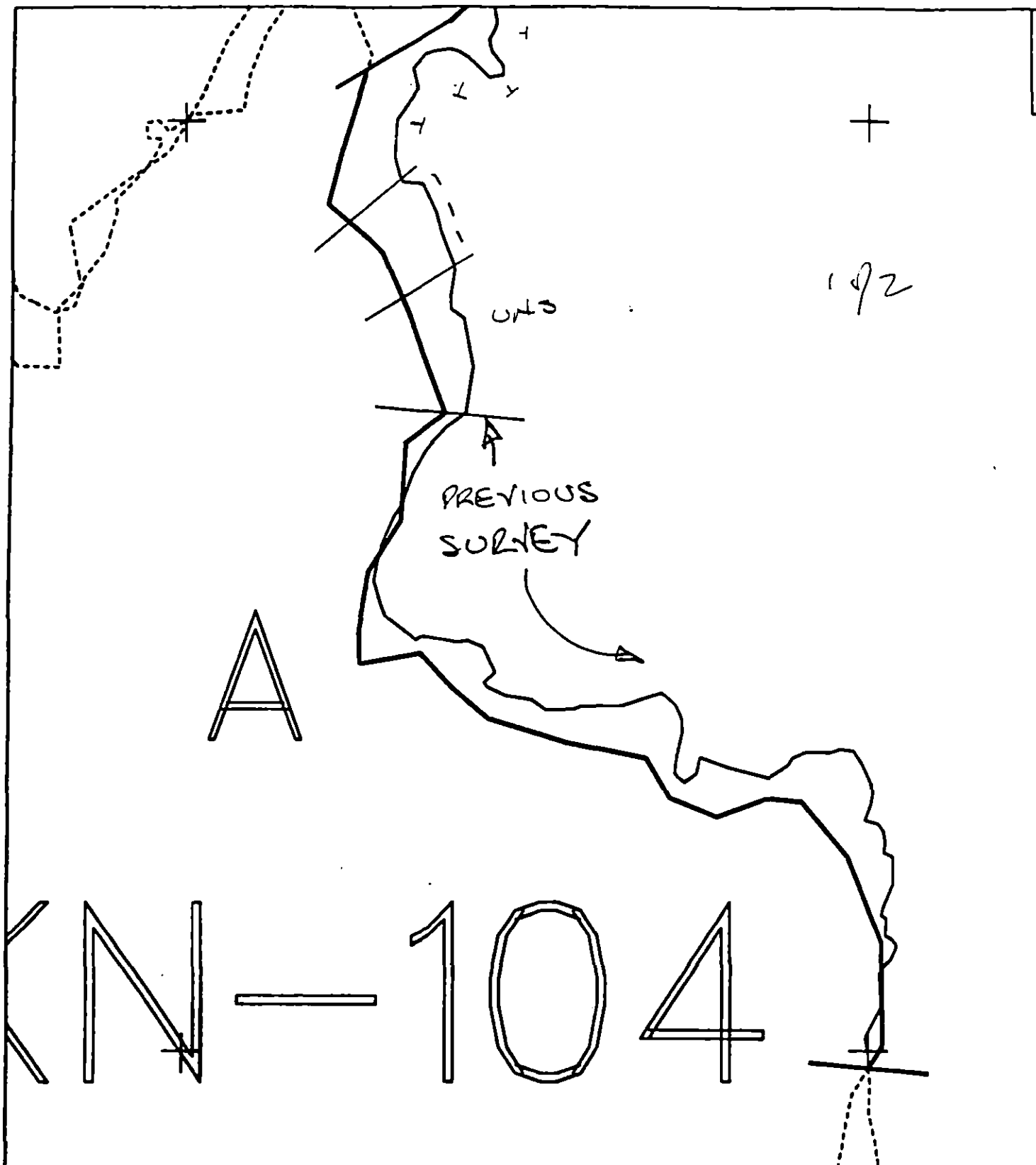
Segment Reference Map
Map Key: KNKN0104



AK State Plane Zone 4
630104



EAGLE NEST



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

KN0104 A
 ADEC Subsegment Length: 1048m
 METERS
 0 100 200
 AK State Plane Zone 4
 hkn0104a

Subdivision Field Map
 Map Key: KNKN0104Aa
 Name: GN
 Date: 6.26.21
 Data Entered:

+

+

292

+

+

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0104 A

ADEC Subsegment Length: 1046m
METERS

0 100 200

AK State Plane Zone 4
kha0104ab



Subdivision Field Map

Map Key: KNKN0104Ab

Name: GNI

Date: 2-26-91

Date Entered:

RECEIVED

SUPPLEMENTAL

1991 MAYSAP EVALUATION

JUL 18 1991

SEGMENT: KN-104 SUB: A REGION: PWS SURVEY DATE: 6/26/91

ANCHORAGE-A00/A

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 P. Smith Date: 7/2/91

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: July 2 1991

FOSC APPROVAL DATE: 7/8/91

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.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN-104 SUBDIVISION A DATE 6/26/91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR

☐ Treatment Recommended
oiling of concern consisted of soft AP or HSDR near area of pit #3 in a 2x30 meter area. Most was removed leaving some LOR. Recommend reassessment later this summer as it may be possible for new AP to form. 10 Super Gee Bags collected and stored for pickup by another crew.

EXXON

NAME Mike Barker SIGNATURE Mike Barker

☒ NTR

Not bad, but we filled 10 sacks. The team did a good job. Rich biota. Eagles looked fine. We got all of the oil.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME IVAN NANCE, LTJG USCGA SIGNATURE Ivan Nance

☒ NTR

ALL SIGNIFICANT OILING WAS REMOVED^{4"} BAGGED, WHEN THE BAGS ARE PICKED UP IT MAY BE DESIREABLE TO PPL¹ REMEDIATION

PAGE 1 OF 1

SEGMENT K2-104

SUBDIVISION A

DATE 6 / 7 / 91

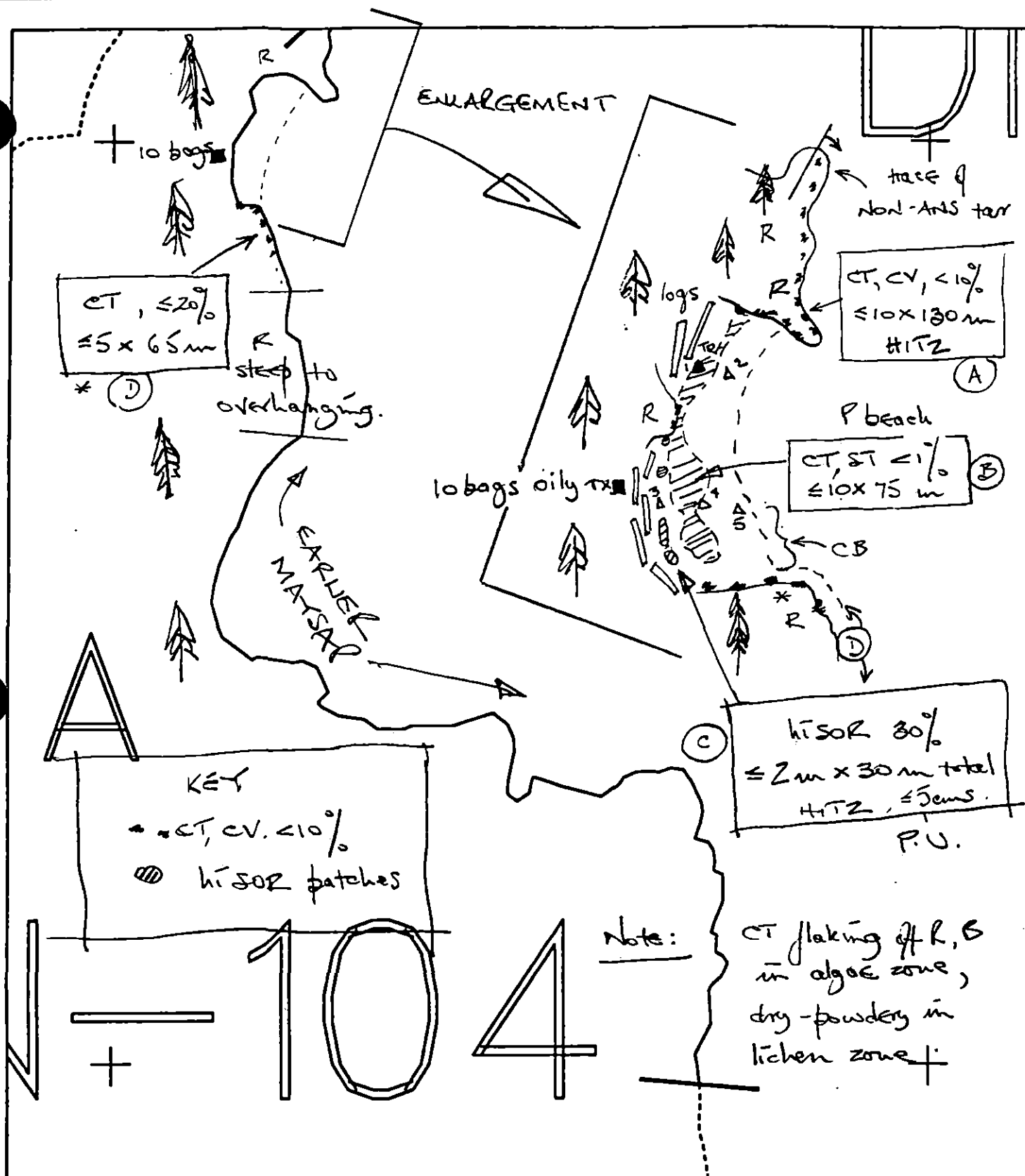
ENERGY LEVEL: ☐ H ☒ M ☐ L

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

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

OG COMMENTS: P beach between steep rock wall. Surface oil only, as (i) CT, CV bands on R and as (ii) to soil across P beach face. Coated pebbles were noted across the beach face, while the soil/sft AP was collected between B & HITZ. 10 bags cached for future retrieval.



KN0104 A
supplementary
METERS

0 100 200

AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KN1KN0104Ac

Name: G. MACDONALD

Date: 6.26.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/26/91
 SEGMENT # KN-104 TIDAL HEIGHT (Range) 4.1' ~ 6.3'
 SUBDIVISION A BIOLOGIST D. McCORMICK
 SEA STATE Calm WIND SPEED/DIRECTION None
 PHOTOGRAPHS: ROLL # MAYSAP-00-04 FRAME # 15-18

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

(A and D) Bedrock faces support the only significant biota in this part of the subdivision. Species (as indicated on map) show no impacts from remaining CT/CL.

(B and C) Other than amphipods and Oligochaete worms under the surface, no biota occur under the LFTZ. Even here, the fauna (barnacles, gastropods, Fucus and other algae) are sparse. This appears to be a naturally depauperate beach, probably due to inevitable substrate.

Subtidally, Fucus ulva, filamentous green algae, and filamentous brown algae were present in sparse concentrations.

The jellyfish Cyanea capillata occurred in the nearshore area of this beach (a few washed up).

The remaining oil (including the SOK at location C (picked up)) poses no threat to what little fauna occurs on this beach.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults + 1-2 chicks	
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	4	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

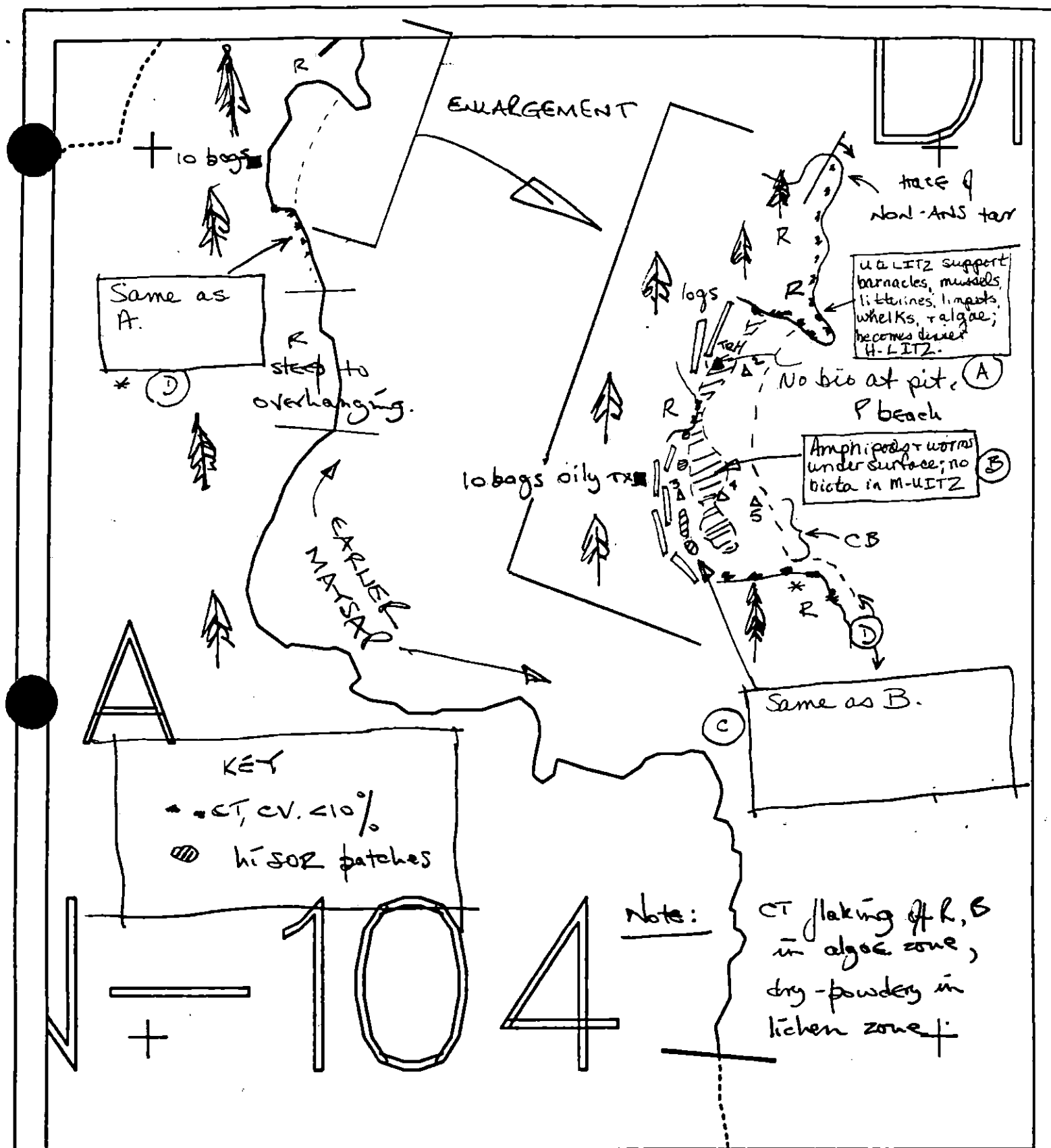
LAND MAMMALS

SPECIES

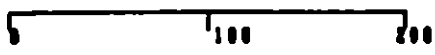
OBSERVED

Sea Otters	1		
Pinnipeds (specify) <u>H. seal</u>	1		
<u>Lions</u>	2		
<u>es (specify)</u>			
Dall's Porpoise	2		

Shoreline subdivision map showing important biological features attached.



KN0104 A
supplementary
METERS



AK State Plane Zone 4
82010400

Subdivision Field Map
Map Key: KN0104Ac
Name: D. McCormick
Date: 6-26-91

Bio Sketches

Eagle Map
6/26/91
FWS monitor present

DI-66

Active nest
2 adults +
1-2 chicks

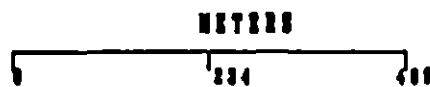
KN-104

DI-64

KN 105

KN0104A

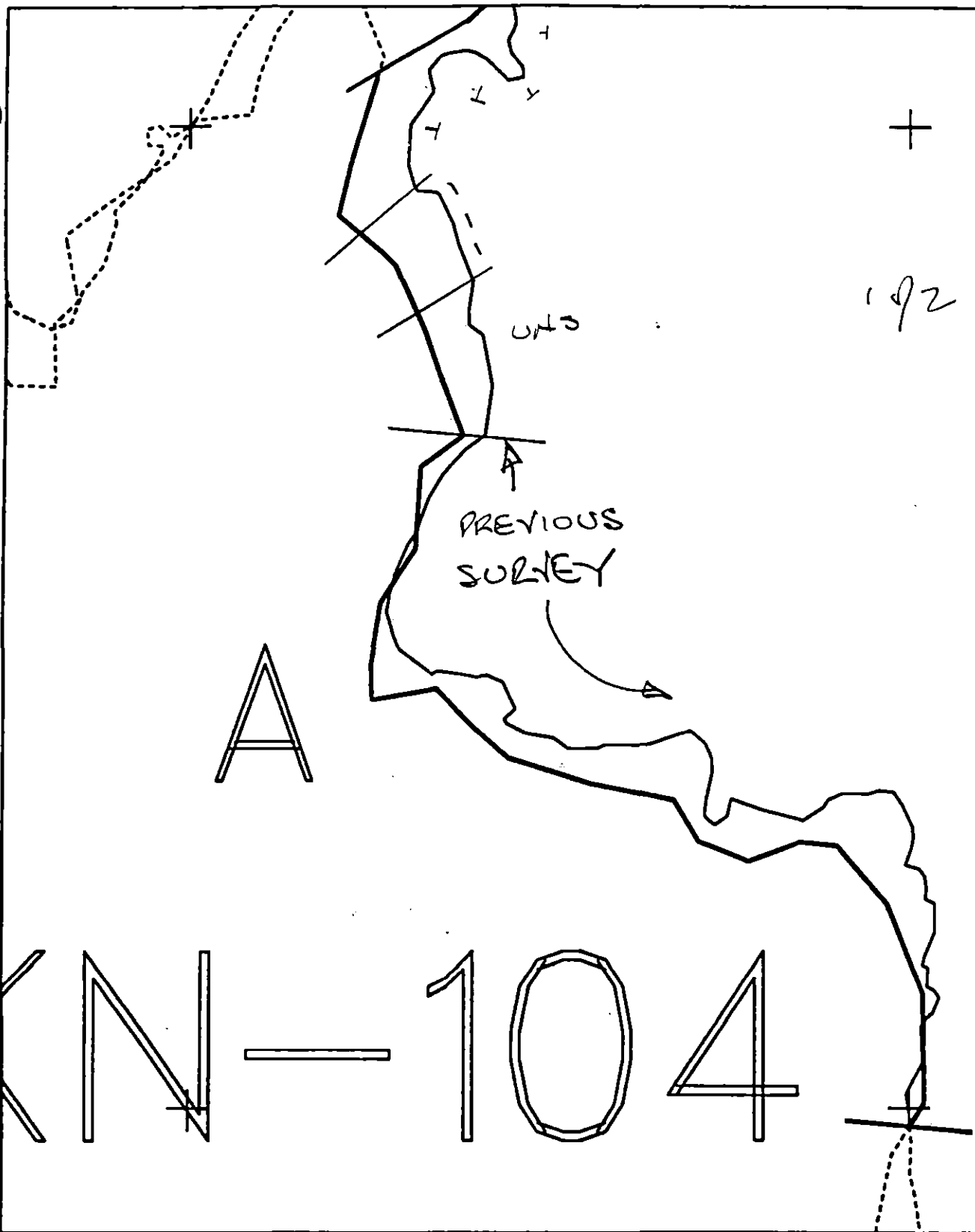
Segment Reference Map
Map Key: KN100104



AK State Plane Zone 4
600104



EAGLE NEST



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

KN0104 A

ADEC Subsegment Length: 1046m
 METERS

5 100 200

AK State Plane Zone 4
 kn0104a



Subdivision Field Map

Map Key: KNKN0104Aa

Name: GN

Date: 6.26.21

Date Entered:

+

+

282

+

+

XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

KN0104 A

ADEC Subsegment Length: 1046m

METERS

0 100 200

AK State Plane Zone 4
kka0104ab

Subdivision Field Map

Map Key: KNIKNO104Ab

Name: GMDate: 6-26-91

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 104 SUB: B REGION: PWS SURVEY DATE: 5/19/91

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)

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 6 1991

FOSC APPROVAL DATE: 6/10/91

ADEC

FOSC

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

EXXON

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN-104 SUBDIVISION B DATE 5/19/91

ADEC Peter Montesano

SIGNATURE [Signature]

☐ NTR

TREATMENT RECOMMENDED

area "H" has a small area of SOR/AP/MS combination which could be removed along with the same combination of oiling in area "K". Area "K" has a small % over a large area while the overall amount of oil is sufficient to warrant removal. Some of the above oiling is not visible from looking at the surface proper.

the SOR/MS in area "E" is inaccessible in jagged sediments and w/o sufficient distribution for treatment. Area "T" has sufficient degree distribution and accessibility around boulders for treatment. This area is a SOR/MS/AP combination w/ some of the removable oiling dipping out of side under clean sediments.

EXXON

NAME FRANK BOY

SIGNATURE [Signature]

☐ NTR

Recommend the manual removal of the small area of Heavy SOR. and then followed by bio.

LANDMANAGER

NAME DENNIS S KENNEDY OF USFS

SIGNATURE [Signature]

☐ NTR

This subdivision had an extremely good survey. A band of SOR with sm. mouse pockets were found most of this would be nonworkable. Area [H] would be the most workable although still very difficult. Possibly hand treat with Bio remediation.

USCG/NOAA NOAA DEBRA SINGLER-BENTLEY D. Singler-Bentley

NAME BRI M. P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR

Observed a discontinuous band of interstitial mouse patches and SOR along the entire segment. In general, this oil is found between larger boulders in the HITZ. Removal and breaking up of oil within this section would very labor intensive due to the oil's patchiness and location - D3-B3

6. 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. THE AMOUNT OF OILING IN AREA H WOULD BE VERY LABOR INTENSIVE AS INDICATED BY NOAA. HAND TROWLES AND SORBENT PADS WOULD BE THE ONLY TOOLS ABLE TO BE USED. A CLEANUP CREW COULD SPEND THE WHOLE DAY AND THE AREA WOULD LOOK AS IF IT HAD NOT BEEN TOUCHED. 3 AND VERY LITTLE IF NOT, NO BENEFIT WOULD BE GAINED.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2TEAM NO. 2OG: ReimerBIO: BANSEGMENT KN 104ADEC: MontesanoLANDMANAGER: Kennedy for USFSSUBDIVISION BEXXON: BoxUSCG/NOAA: Sinecek-BeattyDATE 5/19/91TIME 12:10 to 14:00TIDE LEVEL -0.91 ft. to 1.29 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1160 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 150 m N 46 m VL 250 m NO 714 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					S	S					RB	H	1.0	40		X			
B						T					R	V	0.5	30		X			
C						S					R	V	1.0	40		X			
D					S	S					R	V	1.0	15		X			
E		P		P	P						B	H	2.5	6		X			
F				S	S						B	H	2.0	10		X			
G					B						R	V	1.0	15		X			
H		P		P	P	P					B	H	3.0	30		X			
I						S					R	V	1.0	20		X			
J						S					R	V	1.0	20		X			
K		S		S	S	S					B	H	5.0	50		X			
L						S					RB	H	4.0	10		X			
M						S					CB	M	4.0	40		X			
N						T					R	H	1.0	20		X			
O				S	S	S					B	M	7.0	8		X			
P						T					R	V	1.0	8		X			

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- 2-21 FRAMES 13-19

SLOPE: V=VERTICAL, H=HIGH ANGLE, M=MEDIUM ANGLE, L=LOW ANGLE																				PHOTO REFLECTANCE				FRAME NO.			
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES									
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI											
1	35							X	-						X			P-PG									
2	25					X			5-10	Y	8	S			X			C-6P									
3	35							X	-						X			P-PG	BERM								
4	10							X	-						X			CP-PG	SURFACE oiling only								
5	15		X						7-14	Y	-	-			X			PC-PGC	cracks between boulders								
6	20							X	-						X			B-PGS									
									-																		
									-																		
									-																		

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

OG COMMENTS: Rocky Shoreline with pocket B/C beaches. Oiling consists of coat along sections of Rock cliff in the form of Weathered Bath Tub Ring (BTR). Boulder aprons along sides of beach areas have higher concentrations of Coat with some cover, mostly on under sides of boulders. These areas usually have SOR (light-heavy) and small patches of MS forming part of the matrix material between boulders.

revised 5.24 94
REVIEWED: F.W. Slatk

MAYSAP SHORELINE OILING SUMMARY

PAGE 2 OF 2

TEAM NO. 2

OG Reimer

ADEC Montesano

EXXON Box

BIO BAN

LANDMANAGER Kennedy for USFS
zone

USCG/NOAA Simecek-Bearry

SEGMENT KN 104

SUBDIVISION 13

DATE 5 1 19 191

TIME: 2 : 10 to 14 : 00

TIDE LEVEL - 0.91 ft. to 1.29 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1160 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 110 m N 70 m VL 340 m NO 640 m US 0 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-

2 - 21 FRAMES 7-9

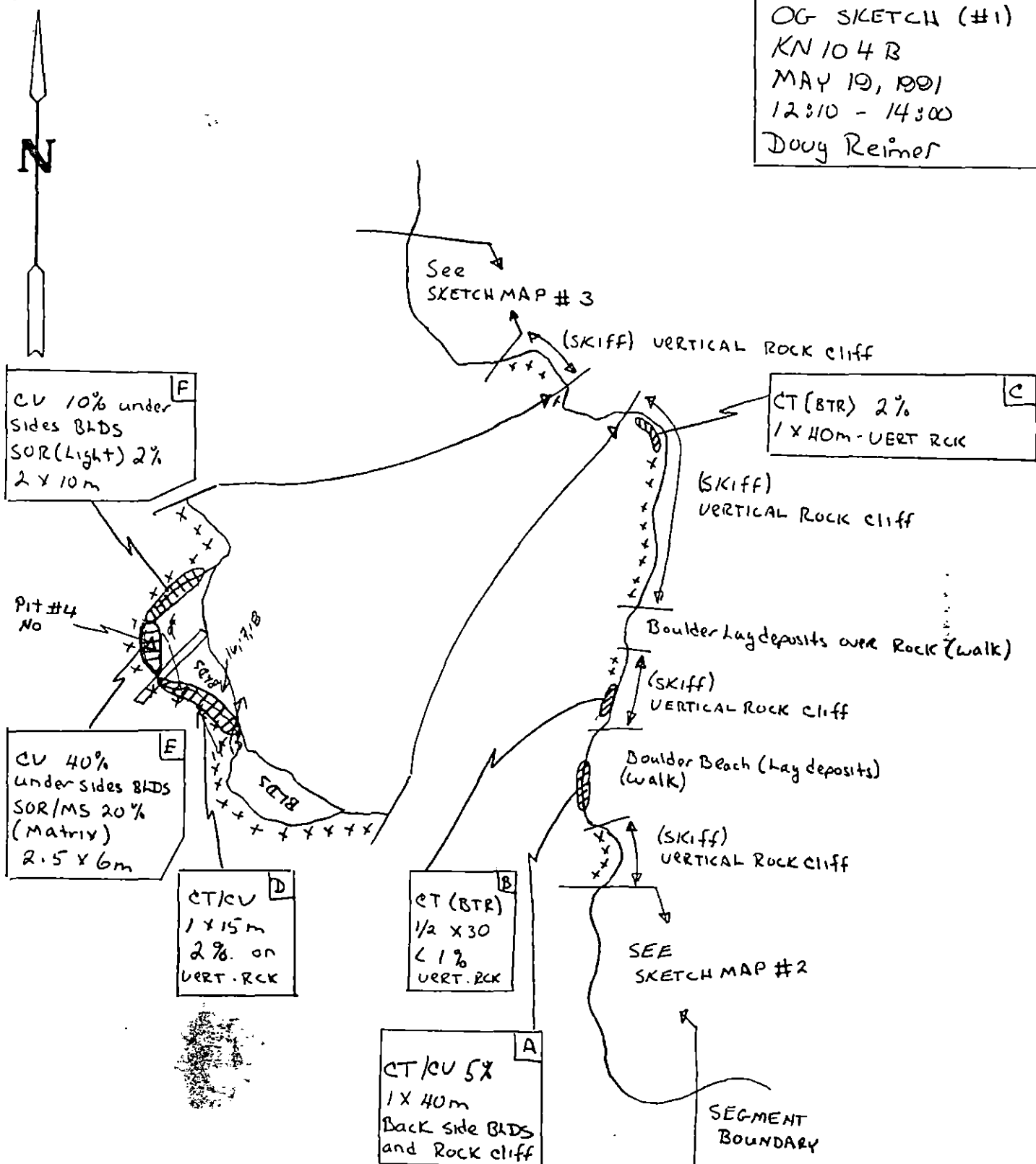
[illegible]

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

OG COMMENTS:

REVIEWED: F.W. 5/27/91

OG SKETCH (#1)
 KN 104 B
 MAY 19, 1991
 12:10 - 14:00
 Doug Reimer



revised 5/24/94

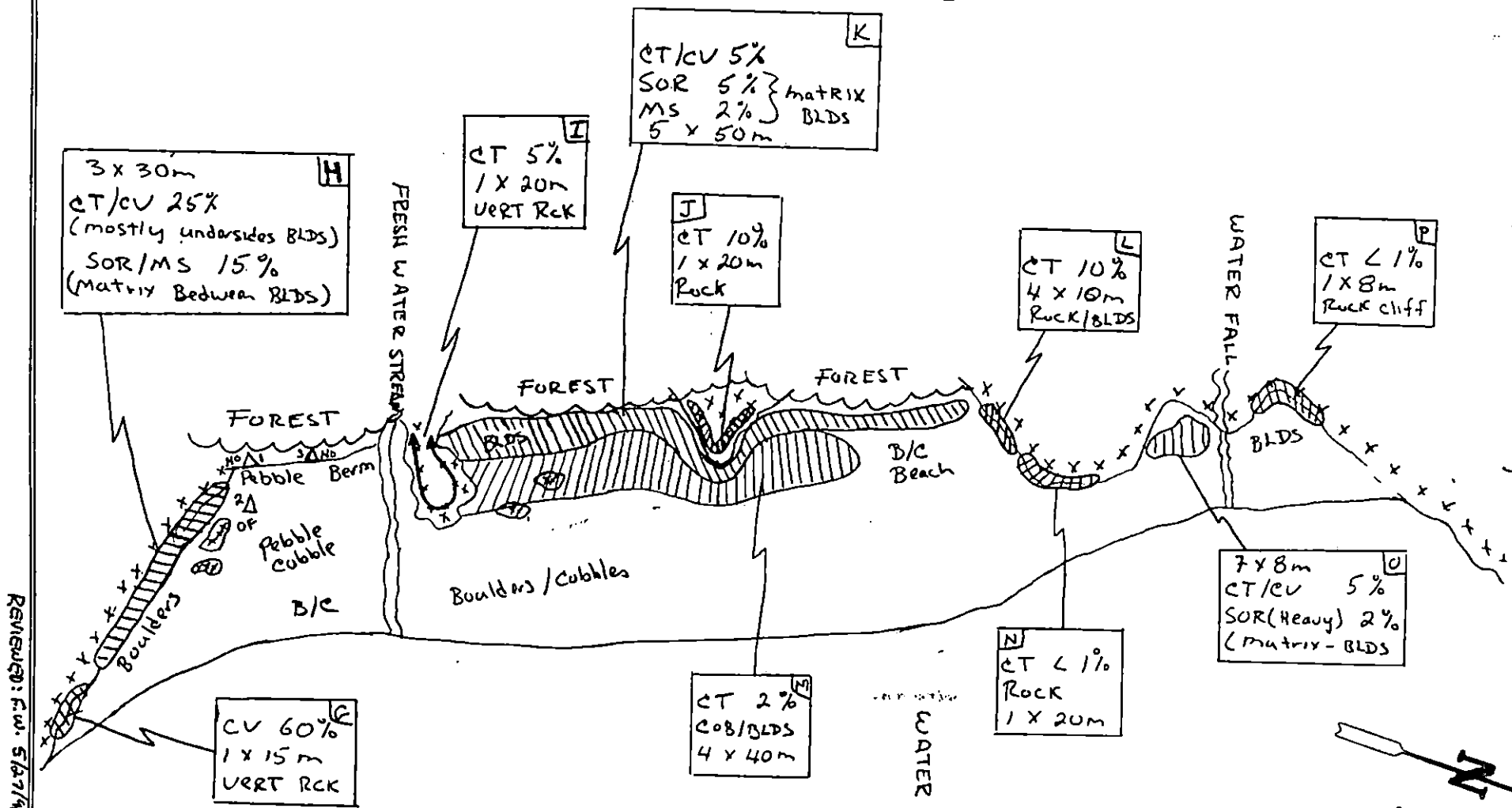
revised 5/24/94
 REVIEWED: F.W. 5/24/94

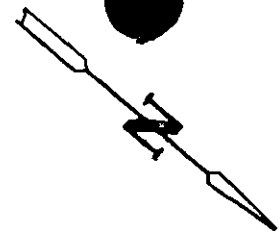
OG SKETCH (#2)
 KN 104 B
 MAY 19, 1991
 12310 - 14300
 Doug Reimer

Beach width = 30m

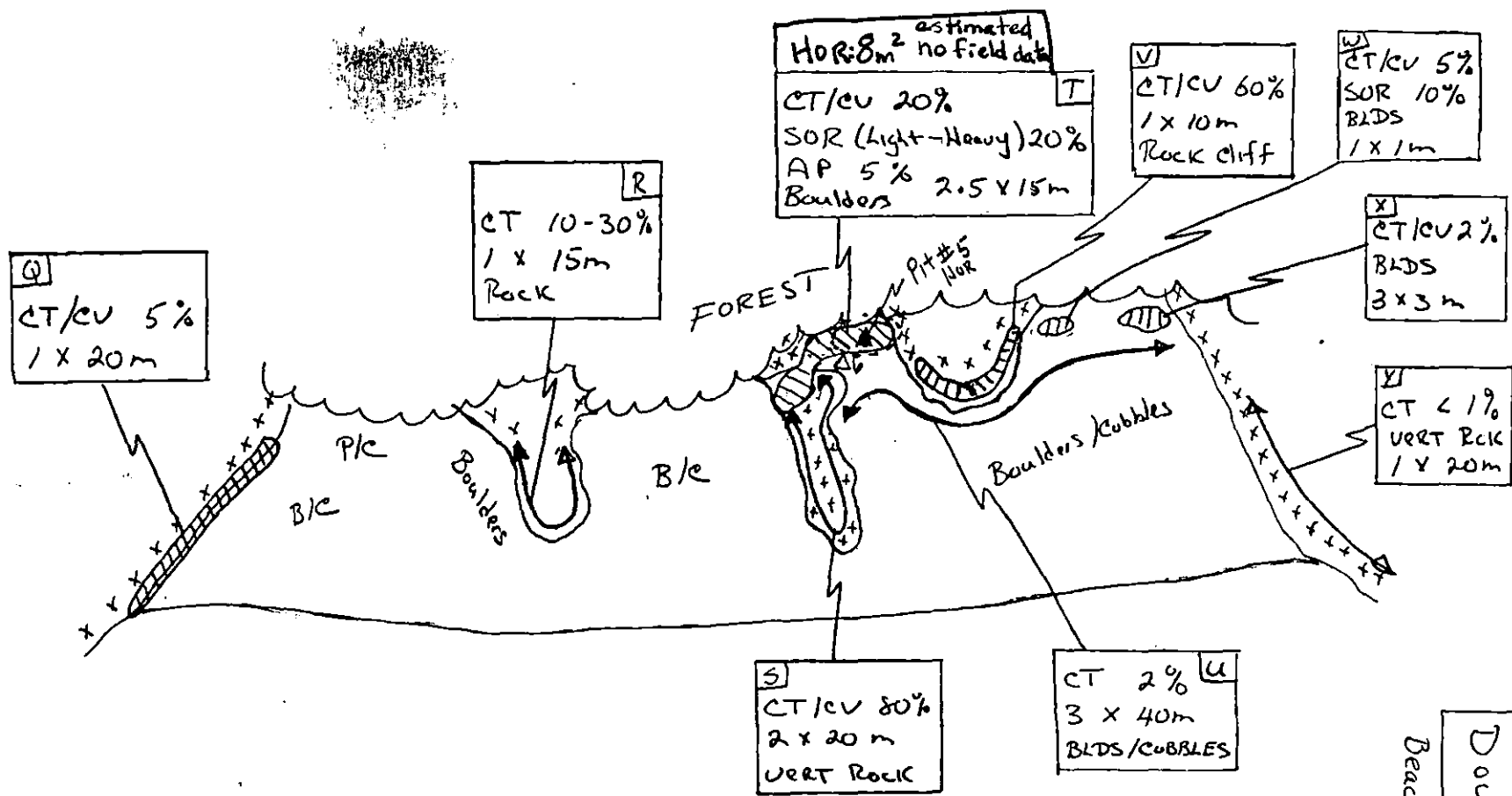
LAND
 (KNIGHT ISLAND)

SKETCH MAP #2
 (See sketch map #1 for location)





SKETCH MAP #3
(See Sketch Map #1 for location)



OG SKETCH (#3)
KN 104 B
MAY 10, 1981
12:10 - 14:00
Doug Reimer
Beach width = 30m

revised 5.24 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 19 May 91

SEGMENT # KN-104

TIDAL HEIGHT(Range) +1 ft

SUBDIVISION B

BIOLOGIST S.M.B.N.

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

ABC: CT/CV is high on vertical rock faces in lichen zone, recent spat and dense algae immediately below oiled zone

D: AS "ABC" but *Fucus* recruits below oiled zone.

E&F: AS recorded on map - lower ITZ on boulders dense with algae spat, barnacles & large limpets

H: AS noted on map Pebble area adjacent to pits is naturally depauperate

IJKLNP: These areas are high in ITZ as indicated on maps

M: CT reaches to upper edge of barnacles

O: CT/CV reaches to barnacles, *Fucus* recruits and littorines

QRTWXYZ: Oil is high in ITZ as indicated

CT is thick on sides of several large boulders. If the CT is removed it may open up the area for additional barnacle settlement. Areas beneath the oiled boulders support mussels and recolonizing *Fucus* plants. These areas should be protected.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	in flight	1	
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.

Printed at 17:01 NM

OG SKETCH (#1)

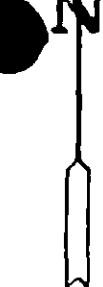
KN 104 B

MAY 19, 1991

12:10 - 14:00

Doug Reimer

SWB 19 May 91



See
SKETCH MAP # 3

(SKIFF) VERTICAL ROCK CLIFF

(SKIFF)
VERTICAL ROCK CLIFF

Boulder lag deposits over Rock (walk)

(SKIFF)
VERTICAL ROCK CLIFF

Boulder Beach (Lag deposits)
(walk)

(SKIFF)
VERTICAL ROCK CLIFF

SEE
SKETCH MAP # 2

SEGMENT
BOUNDARY

E&F:
Lichen +
green
algae



Unise
algae,
recent
spot

Dense
Baeobes
large
limpets

S&T

D: Green
algae +
Lichen
Fucus recruits
immediately
seawater

A: Lichen-
Algae zone,
recent spot
below CT

OG SKETCH (#2)

KN 1048

MAY 19, 1991

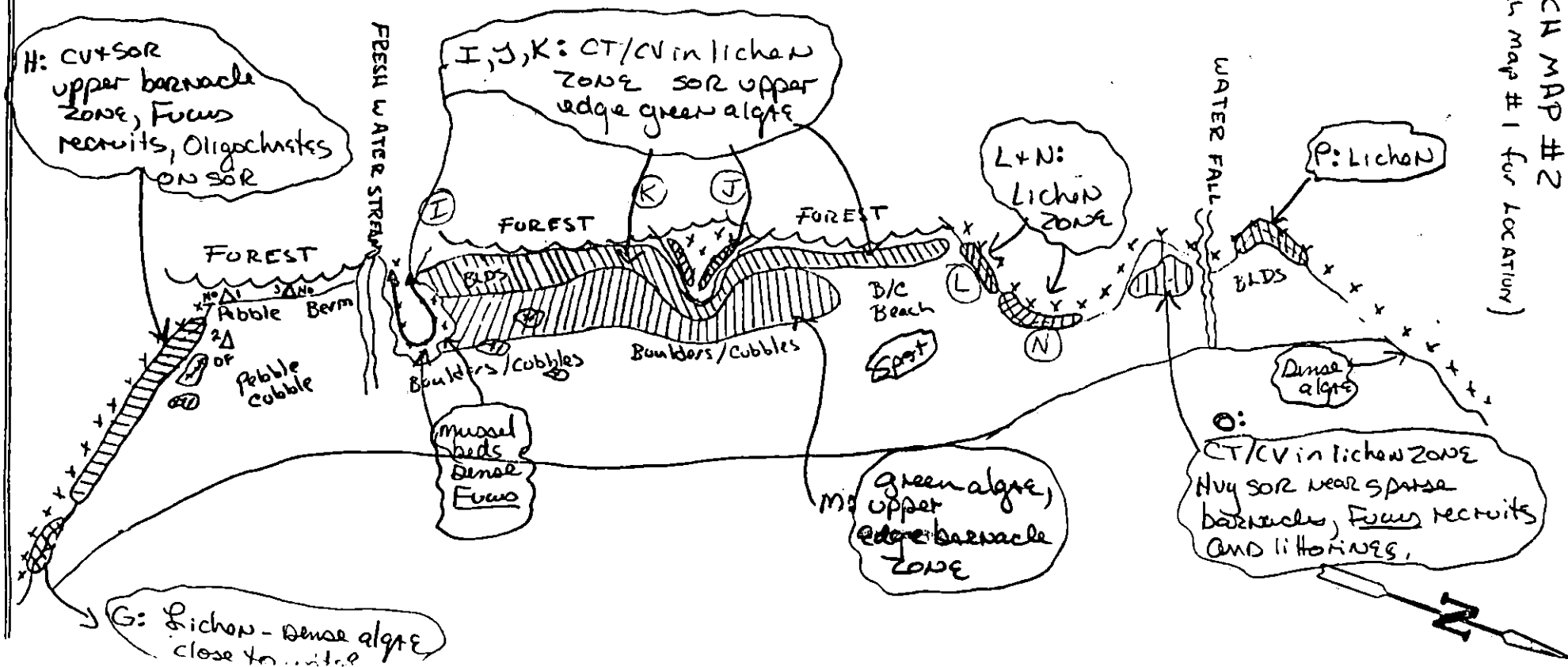
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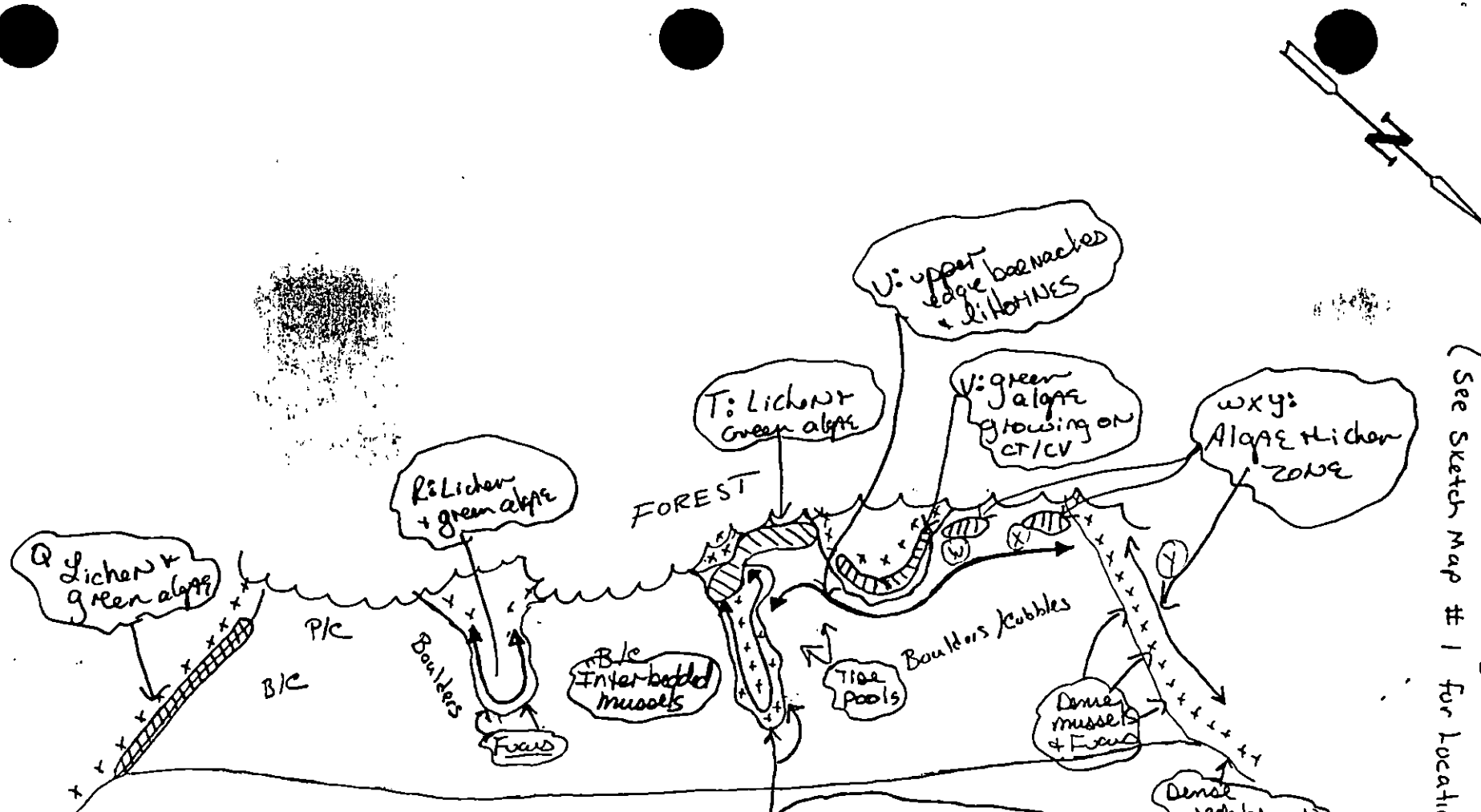
Doug Reimer

Beach width = 40m

Site 19 May 91

SKETCH MAP #2
(See sketch map #1 for location)





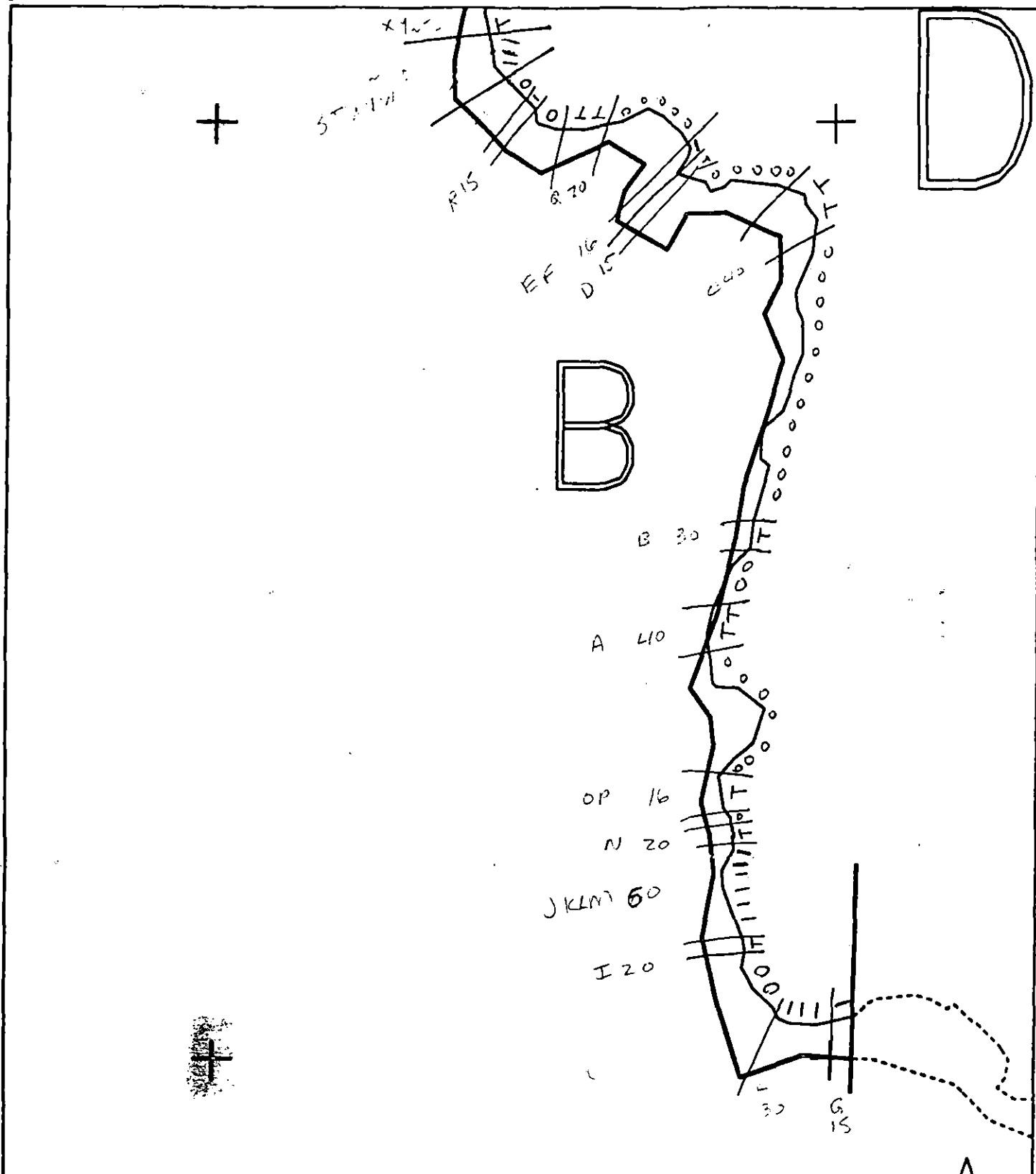
SKETCH MAP #3
(See sketch map #1 for location)

OG SKETCH (#3)
KN 104 B
MAY 19, 1981
12:10 - 14:00
Doug Reimer

Beach width = 30m

SNB 19 May 91

S: oiled barnacles
(ALIVE) Lithomine
shells in oil. Mussels
in crevices below oiled zone
oil. Fucus recruits
Also.

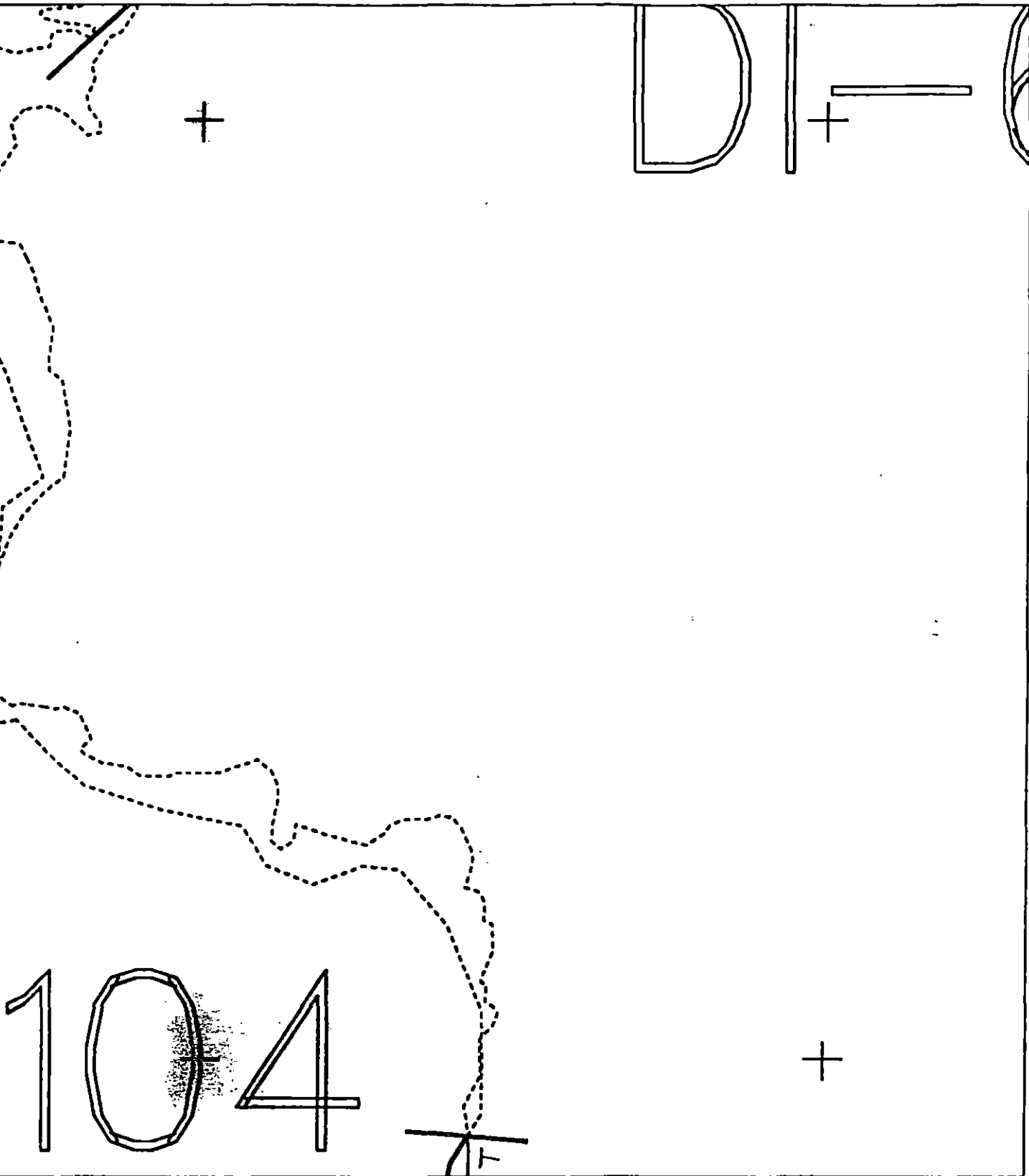


XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

KN0104 B
 ADEC Subsegment Length: 1100m
 METERS
 0 100 200
 AK State Plane Zone 4
 h200104b

Subdivision Field Map
 Map Key: KNKN0104Bc
 Name: Reina
 Date: 5/18/91
 Date Entered:

revised 5.24 9y
 REVIEWED: A.W. 5/27/91



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0104 B

ADEC Subsegment Length: 1180m

METERS

0 100 200

AK State Plane Zone 4
4400104bb



Subdivision Field Map

Map Key: KNKN0104Bb

Name: Reimer

Date: 5/19/91

Date Entered:

reviewed 5.24 94

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION B (2 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 611 m: No Oil 145 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 pick up of debris and mousse, 2) tarmat removal and 3) bioremediation of oil-coat and stain areas (see attached sketch map for locations).

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90.

ADEC Art Weiner Art Weiner

EXXON Amy Tate Amy Tate

NOAA Joseph Labott Joseph Labott

USCG M. J. Hall M. J. Hall

FOSC: W L DATE: 5-8-90

OG J. pringer

SEGMENT ST KN05

SUBDIVISION B

DATE 04/09/90

CHECKLIST

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

LEGEND

1 ▲

Pt - No Subsurface Oil

2 ▲

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

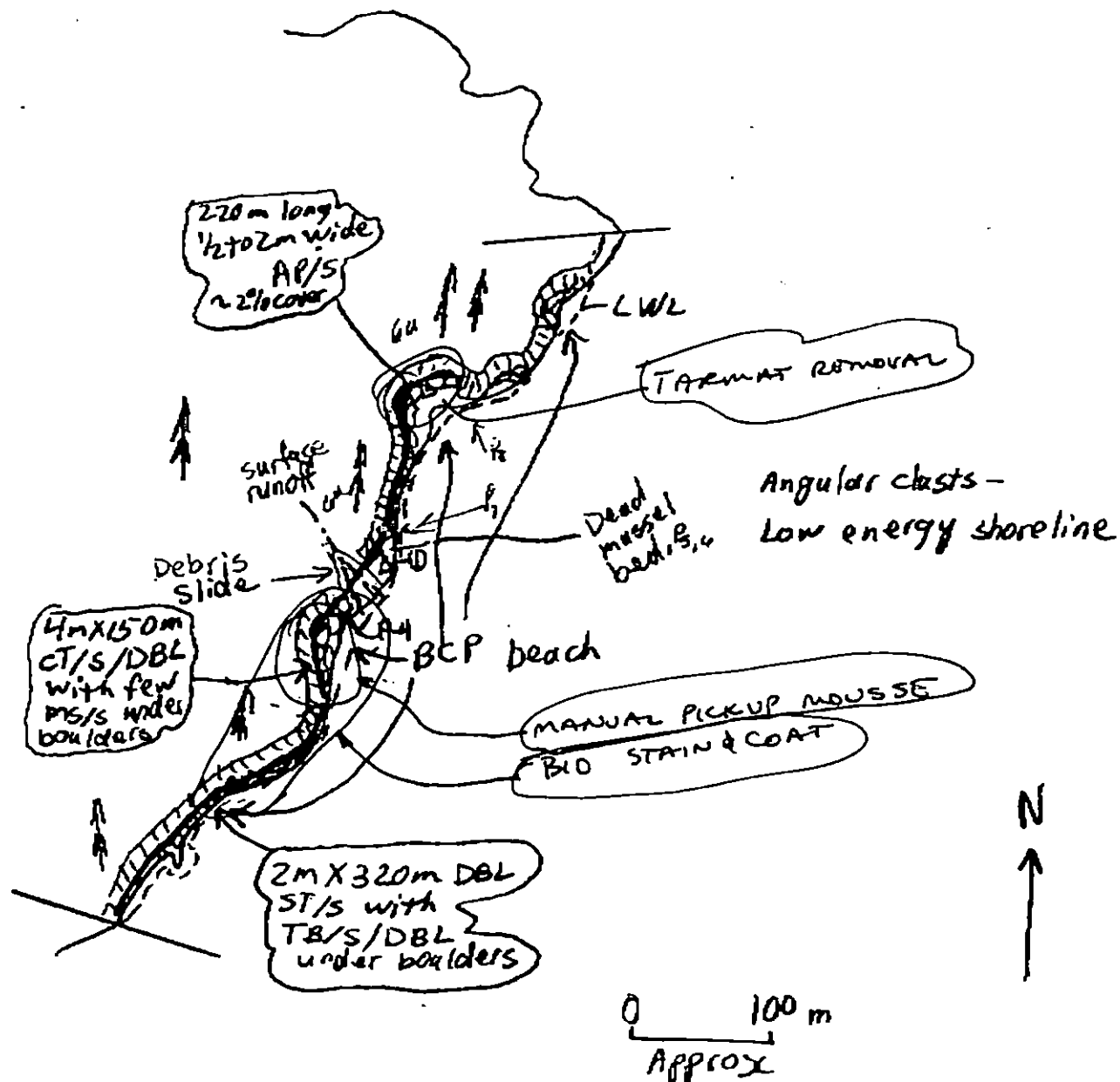
Splashed Distribution

Oil Vegetation

1 ●→

Photo location, direction,
and number

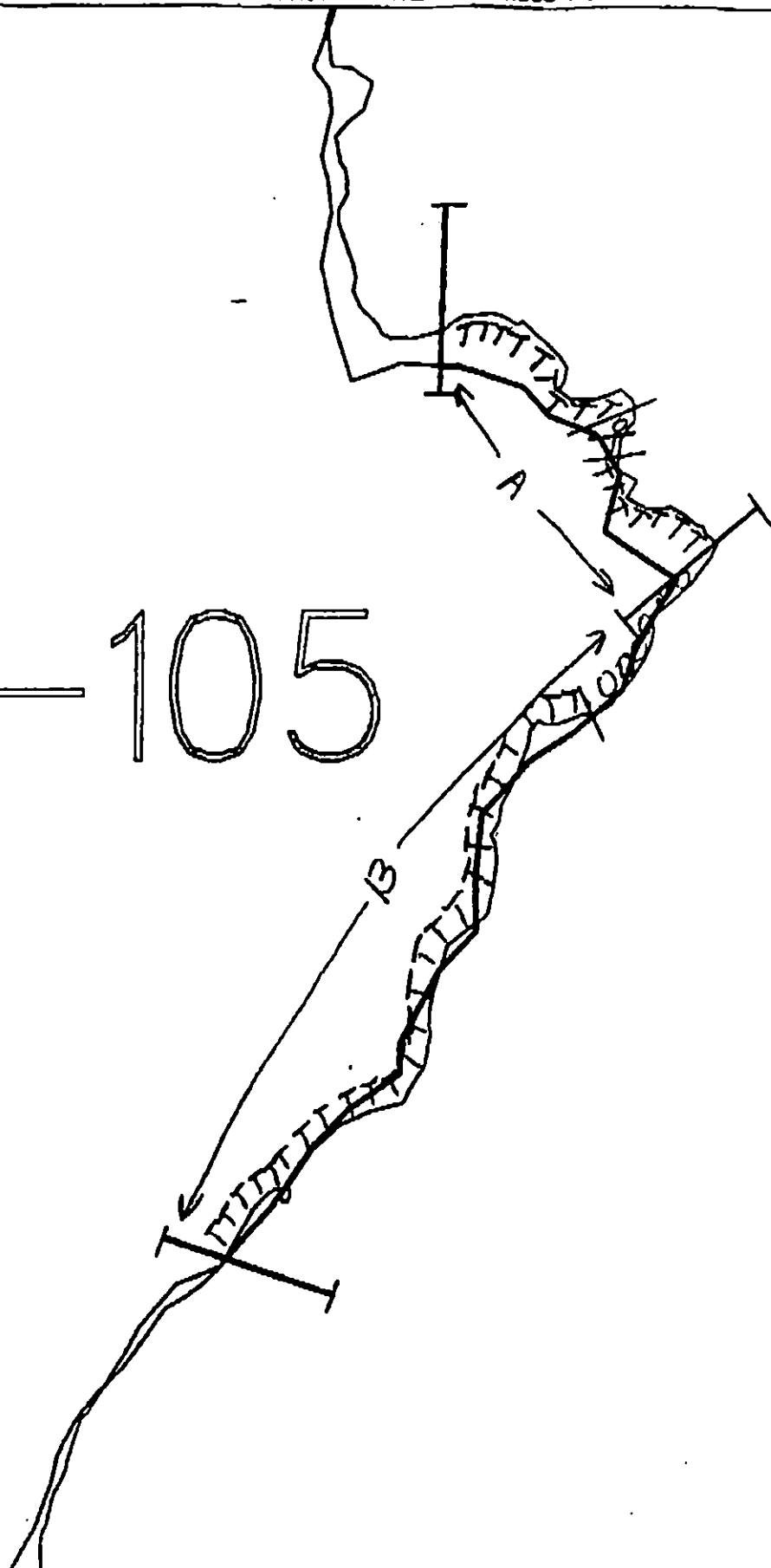
ETCH MAP



Oil Character Length (m): AP 220 PO CV CT 150 ST 320 MS PT TB FL NO 240

REVISION 03/04/90

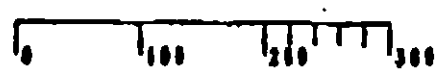
KN-105



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

KN-105

ADEC Segment Length: 1304



Map Key: PWS-285
 Name: James Springer
 Date: 4/9/90

1991 MAYSAP EVALUATION

SEGMENT: KN 105 SUB: B REGION: PWS SURVEY DATE: 5/19/91

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 Admire

Date: 6/03/91

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 31 1991

FOSC APPROVAL DATE: 6/12/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

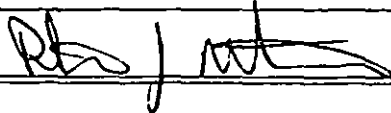
TEAM NO. 2 SEGMENT KN-105 SUBDIVISION B DATE 5/19/91

ADEC

AME

Peter Montesano

SIGNATURE



NTR



TREATMENT RECOMMENDED

well documented. Area "L" has SOR that has settled into boulders on a plateau. and is inaccessible. most of the other oiling is a CT ring.

EXXON

NAME

Frank Box

SIGNATURE



NTR

Not enough oiling to warrant activity on this site.

LANDMANAGER

NAME

DENNIS S. KENNEDY OF USFS

SIGNATURE



NTR

a light amount of oiling was found along most of the subdivision. no treatment is required.

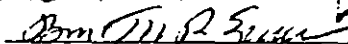
USCG/NOAA NOAA D. SINCER - BOATY

Admiral - Boat

NAME

BMI MP. ZENONE USCG

SIGNATURE



NTR

Oiling in this segment is mostly a discontinuous patchy ring along a rocky shoreline. As the oiling is mostly trace to spatter, no treatment is recommended. - DS.B

CG - NO TREATMENT RECOMMENDED. 3

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 2OG D. ReimerBIO S M BANSEGMENT KN 105ADEC A MontesanoLANDMANAGER P. Kennedy for USFSSUBDIVISION BEXXON F. BoxUSCG/NOAA BMI ZENON
D. Simeick - BeattyDATE 5.1.91TIME 10:00 to 11:16TIDE LEVEL 2.74 ft. to 0.15 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 756 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 140 m VL 580 m NO 36 m US 0 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	S		T	S		S					RB	H	3	10		X			
B						T					RB	H-V	1/2	160		X			
C						S					RB	H	1/2	130		X			
D						T					RB	H	1/2	80		X			
E			T			P					RBC	H	1	100		X			
F				S		S					BC	M	2	20		X			
G					P						R	V	1	10		X			
H		T				S					RBC	H	1	60		X			
I						S					R	V	1	70		X			
J				S	P	P	P				CBR	H	2	20		X			
K					P	P					R	V	1	10		X			
L				B							PCF	M	1	2		X			
M						S					R	V	1	60		X			

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

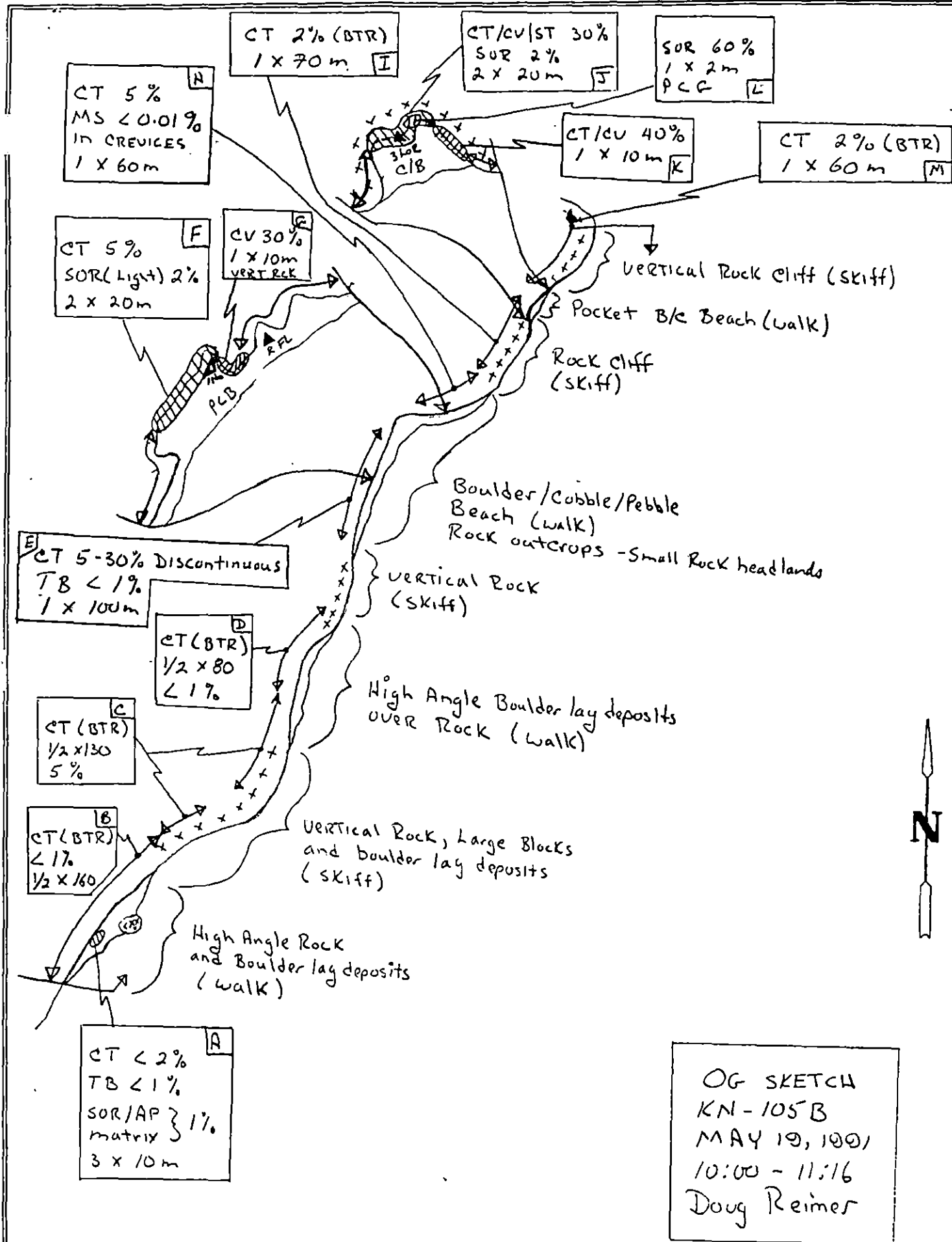
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- FRAMES

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15							X	-	Y				X			C-PCF	
2	15					X			-	Y	9	B		X			C-PC	Brown drops
3	8				X				-	Y	-	-		X			BC-CB	CT/CV on clasts
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS: Rocky Shoreline with narrow Boulder Beaches and Lag deposits. Oil consists mainly of narrow < 1m BTR along NITZ. It varies from sporadic drips up to 30% coverage along the Coast. Three sections of cover with pine needles were found along sheltered beach faces (G, J, K). Small patches of SOR were found at A, f, J, L.

revised 5.22 94

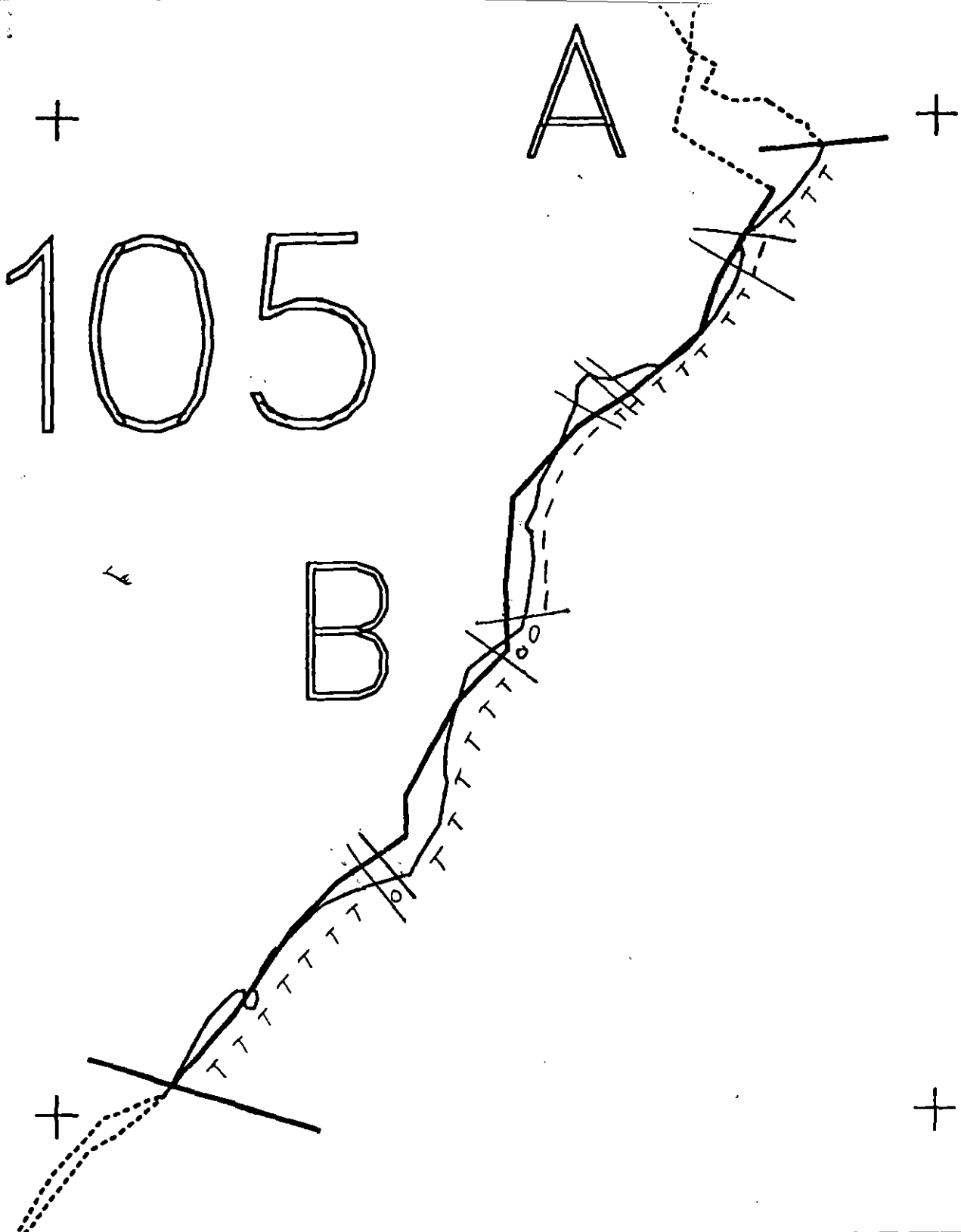


reviewed 5.22 04

105

A

B



XXXX Wide
//// Medium
--- Narrow
TTT Very Light
.O No Oil

KN0105 B
ADEC Subsegment Length: 750m
METERS
5 100 200
AK State Plane Zone 4
kn0105b

Subdivision Field Map
Map Key: KN0105B
Name: Reimer
Date: 5/19/91
Data Entered:



reviewed 5.22 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 5/19/91

SEGMENT # 16-105

TIDAL HEIGHT(Range) 2 to 0 ft

SUBDIVISION B

BIOLOGIST S. M. BAN

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

A: Oil here is high in ITZ reaching only the uppermost edge of the barnacle zone. Fucus recruits were encountered near CT & TB areas. Amphipods, small mussels & spat were found on and between boulders lower in the ITZ.

BCD & E: As represented on map. Rock face and steep boulder areas support dense Algae & barnacles in lower zones.

F Light SOR & CT in upper to upper mid ITZ. Biota as mapped in oiler zone. PCB bedch below-bilers zone supports dense Fucus clumps Ulva & Ulvospora. Lithothamnion egg masses & recent spat also found.

GHIJKL: Oil is high in ITZ, generally in lichen zone. One area ("H") extends to upper edge of Lithothamnion & barnacles. Dense gastropods were encountered on the west small cove.

WILDLIFE OBSERVATIONS

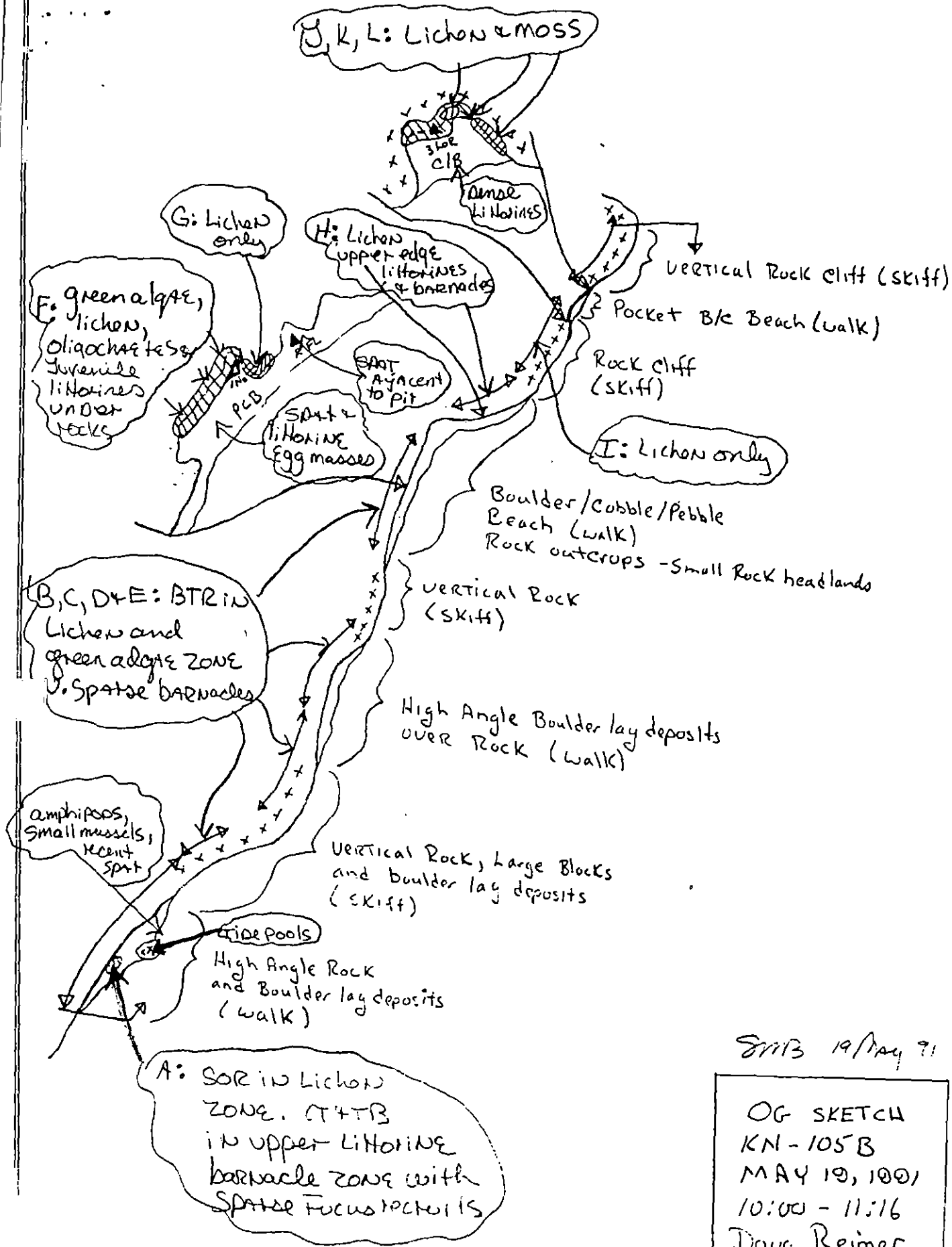
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	geese	± 5	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	wandering Tattlers	1	

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/20/91



SP113 19/May 91

OG SKETCH
KN-105B
MAY 19, 1991
10:00 - 11:16
Doug Reimer

Reviewed M.B. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: KN 105 SUB: A REGION: PWS SURVEY DATE: 5/19/91

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN105 SUBDIVISION A DATE 5/19/91ADEC NAME Peter Montesano SIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

Many pits, NO SS oil found, CT ON Surface.

EXXON NAME FRANK Box SIGNATURE [Signature]☒ NTR Due to the small amount of oiling observed on
on this segment, I feel that any activity would not
produce any benefit.LANDMANAGER NAME DENNIS S. Kennedy OF USFS SIGNATURE D.S. Kennedy☐ NTR Very light oiling was found along the entire
subdivision. No work is called for.USCG/NOAA NAME BMI M.P. ZENONE USCG SIGNATURE [Signature]☐ NTR Untrace amounts of oil observed in 107.125.1.1. Recommended DS. 12

CON. NO TREATMENT RECOMMENDED. 3

Reviewed: MG 5/22/91
reviewed 5.22.94

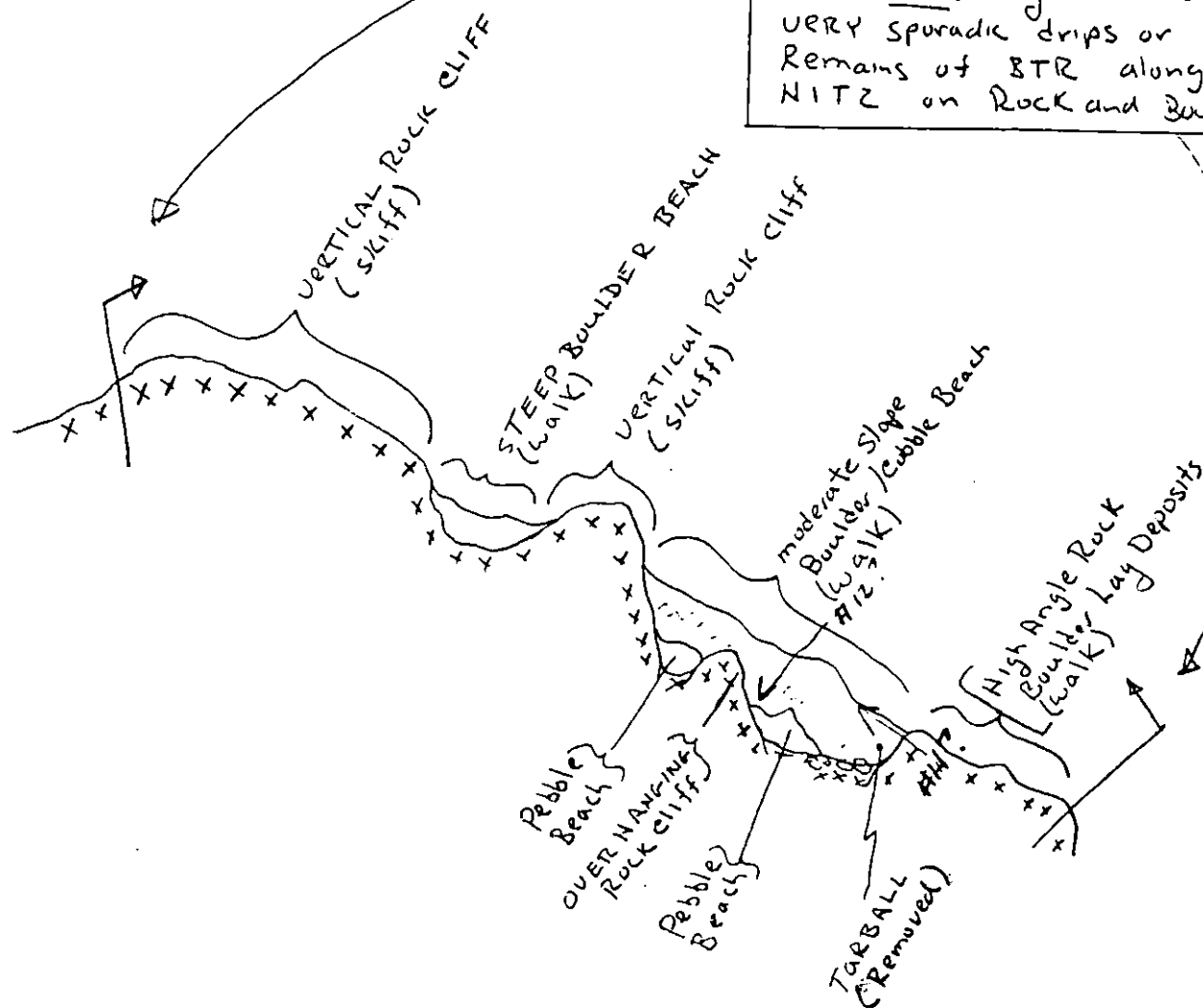
OG SKETCH
KN 105 A
MAY 19, 1991
11:18 - 11:42
Doug Reimer

A

CT $< 1\%$

1m x 327m

The Entire Segment had
VERY sporadic drips or
Remains of BTR along
NITZ on Rock and Boulders



Beach width $\approx$ 5-20 meters

Reviewed: 5/24/91 me
reviewed 5.22.9

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 19 May '91
 SEGMENT # Kb-105 TIDAL HEIGHT(Range) 0 to -1 ft
 SUBDIVISION A BIOLOGIST SM Ben
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

Minimal oil in this segment - all oil high to very high in ITZ

Biota as indicated on MAP.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			<u>Sand lance 1</u>
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds	<u>tattler</u>	<u>1</u>	

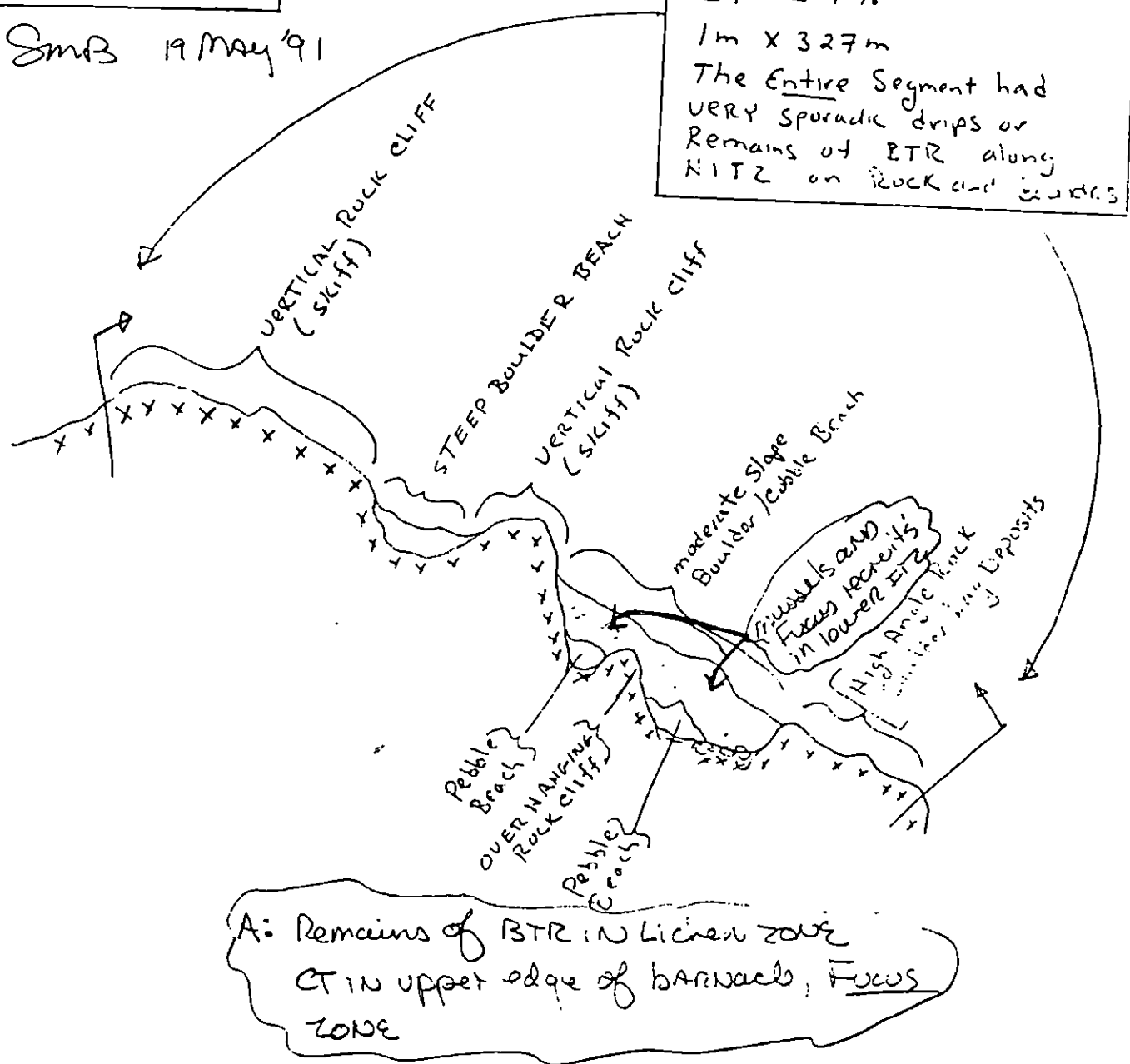
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

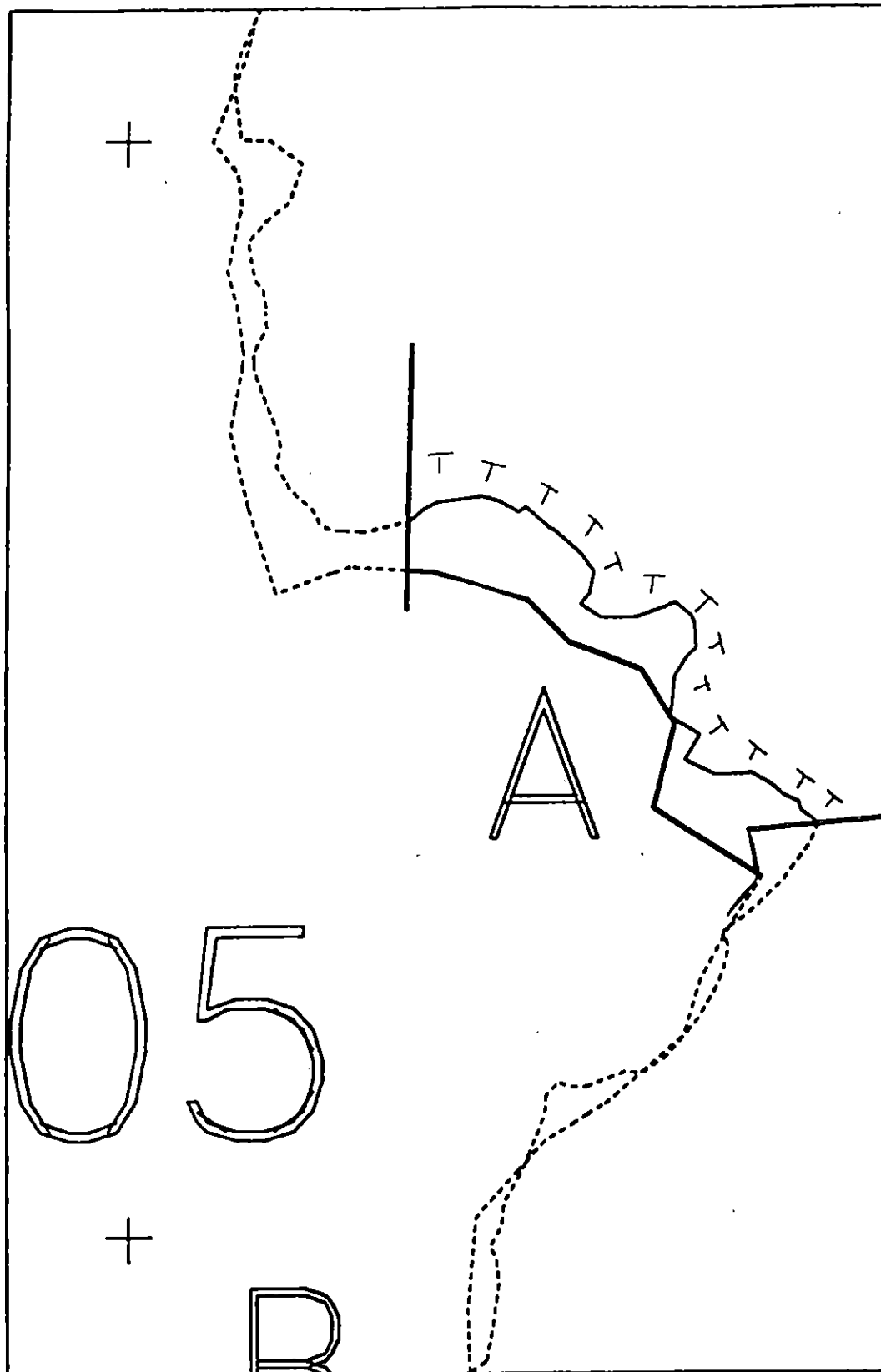
Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

OG SKETCH
KN 105 A
MAY 19, 1991
11:18 - 11:42
Doug Reimer

SMB 19 May '91





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

KN0105 A
 ADEC Subsegment Length: 327m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0105a



Subdivision Field Map
 Map Key: KN0105A
 Name: D. Reimer
 Date: 5.19.91
 Date Entered:

Reviewed: MC 5/22/91
 reviewed 5.22.91

1991 MAYSAP EVALUATION

SEGMENT: KN 105 SUB: B REGION: PWS SURVEY DATE: 5/19/91

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 _____

MAYSAP FIELD SHORELINE COMMENT SHEET

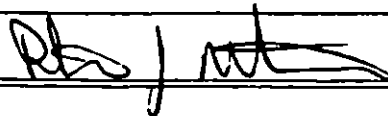
TEAM NO. 2 SEGMENT KN-105 SUBDIVISION B DATE 5/19/91

ADEC

NAME

Peter Montesano

SIGNATURE

☒ NTR

TREATMENT RECOMMENDED

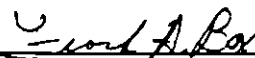
well documented. Area "L" has SOR that has settled into boulders on a plateau. and is inaccessible. most of the other oiling is a CT ring.

EXXON

NAME

Frank Ray

SIGNATURE

☒ NTR

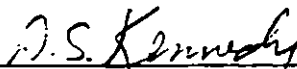
Not enough oiling to warrant activity on this site.

LANDMANAGER

NAME

DENNIS S KENNEDY OF USFS

SIGNATURE

☒ NTR

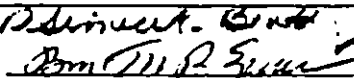
a light amount of oiling was found along most of the subdivision. No treatment is required.

USCG/NOAA NOAA D. SINGLER - BERTY

NAME

BRI MP. ZENONE USCG

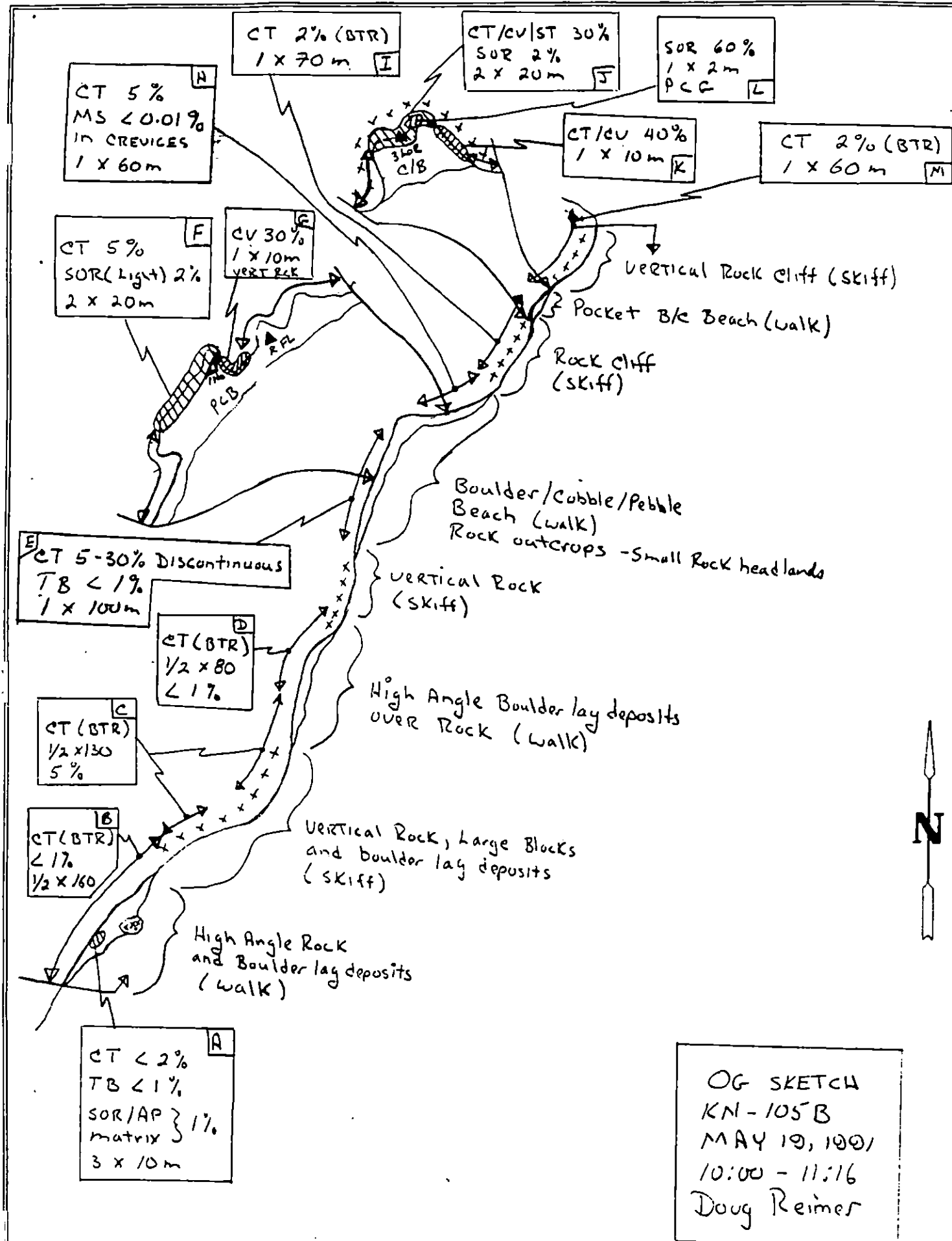
SIGNATURE

☐ NTR

Oiling in this segment is mostly a discontinuous patchy ring along a rocky shoreline. As the oiling is mostly trace & spotty, no treatment is recommended. - DS/BZ

CG - NO TREATMENT RECOMMENDED. 3

revised 5.22 9y



reviewed 5.22 04

105

A

B

XXXX

Wide

////

Medium

Narrow

TTT

Very Light

NO

No Oil

KN0105 B

ADEC Subsegment Length: 758m

METERS

0 100 200

AK State Plane Zone 4
660105b

Subdivision Field Map

Map Key: KNKN0105B

Name: Reimer

Date: 5/14/91

Date Entered:



reviewed 5.22.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 5/19/91
 SEGMENT # KN-1C5 TIDAL HEIGHT(Range) 2 to 0 ft
 SUBDIVISION 13 BIOLOGIST SMR
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # - FRAME # -

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

A: Oil here is high in ITZ reaching only the uppermost edge of the binnacle zone. Four recruits were encountered near CT & TB areas. Amphipods, small mussels & spat were found on and between boulders lower in the ITZ.

B C D & E: As represented on map. Rock face and steep boulder areas support dense Algae & barnacles in lower zones.

F Light SOR & CT in upper to upper mid ITZ. Biota as mapped in oiled zone. PCB bedch below biler zone supports dense Fucus clumps Ulva & Ulvospira. Littorine egg masses & recent spat also found.

G H I J K L: Oil is high in ITZ, generally in lichen zone. One area ("H") extends to upper edge of Littorine & barnacles. Dense gastropods were encountered on the last small cove.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	geese	± 5	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds	wandering tattler	1	

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/20/91

J, K, L: Lichen & moss

G: Lichen only

F: green algae, lichen, oligochaetes, juvenile Littorines under rocks

H: Lichen upper edge Littorines & barnacles

BART adjacent to pit

Spart + Littorine egg masses

I: Lichen only

Boulder/cobble/pebble Beach (walk)

Rock outcrops - Small Rock headlands

B, C, D & E: BTR in Lichen and green algae zone w. sparse barnacles

Vertical Rock (skiff)

High Angle Boulder lag deposits over Rock (walk)

amphipods, small mussels, recent spurt

Vertical Rock, large blocks and boulder lag deposits (skiff)

tide pools

High Angle Rock and Boulder lag deposits (walk)

A: SOR in Lichen zone. AT & TB in upper Littorine barnacle zone with sparse *Fucus* patches

SP113 19/May 91

OG SKETCH
KN-105B
MAY 19, 1991
10:00 - 11:16
Doug Reimer



Reviewed M.B. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: KN 105 SUB: A REGION: PWS SURVEY DATE: 5/19/91

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 J. Smith

Date: 6/03/91

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 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT KN105 SUBDIVISION A DATE 5/19/91

ADEC NAME Peter Montesano SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

Many pits, NO SS oil found, CT ON Surface.

EXXON NAME FRANK BAY SIGNATURE [Signature]

☒ NTR Due to the small amount of oiling observed on on this segment, I feel that any activity would not produce any benefit.

LANDMANAGER NAME DENNIS S. Kennedy OF USFS SIGNATURE [Signature]

☐ NTR Very light oiling was found along the entire subdivision. No work is called for.

USCG/NOAA NAME Bruce M.P. ZENONE USCG SIGNATURE [Signature]

☐ NTR No trace amounts of oil observed. No treatment recommended PS 12

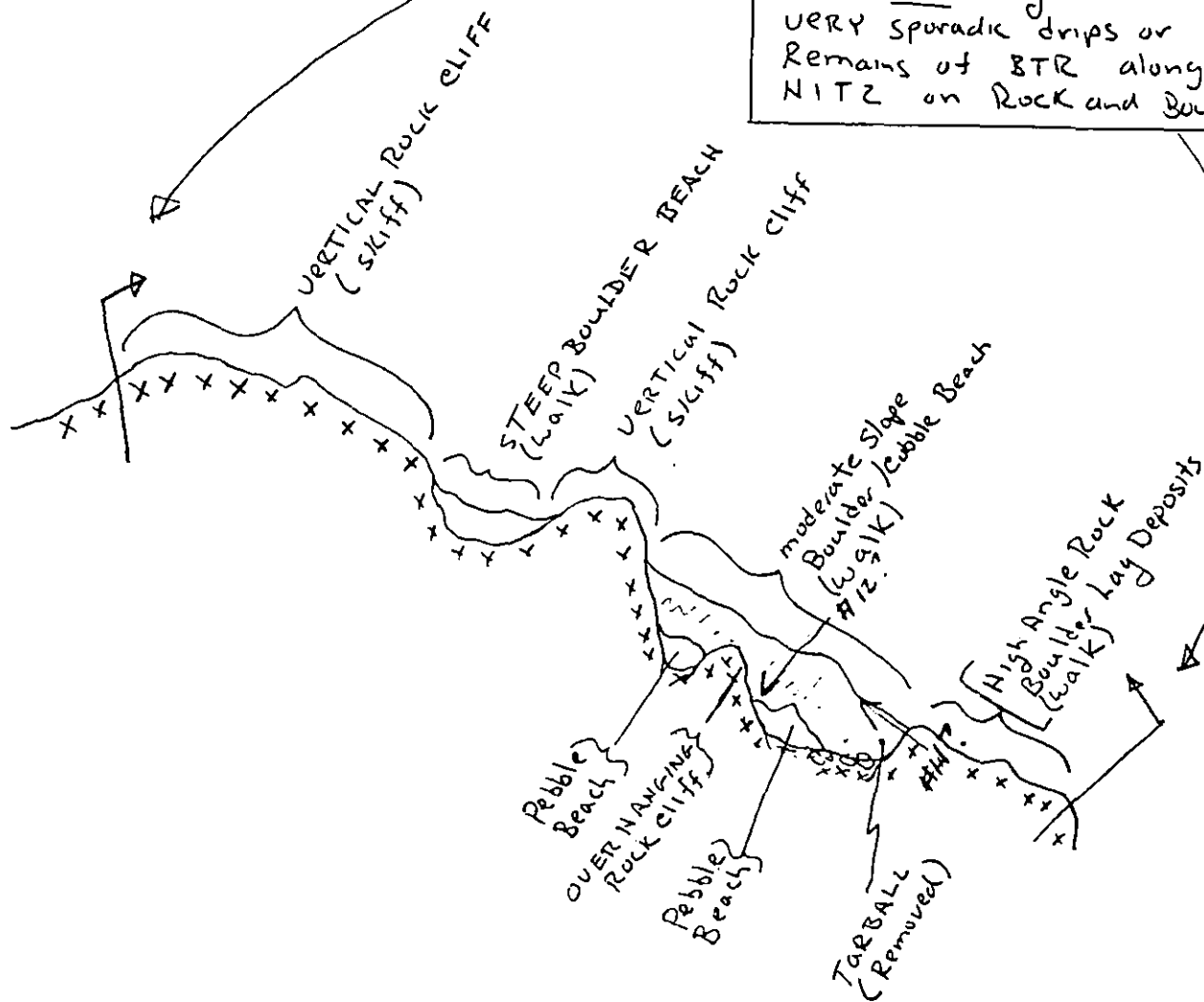
CG. NO TREATMENT RECOMMENDED. 3

OG SKETCH
KN 105 A
MAY 19, 1991
11:18 - 11:42
Doug Reimer

CT < 1%

1m x 327m

The Entire Segment had
VERY sporadic drips or
Remains of BTR along
NITZ on Rock and Boulders



Beach width ≈ 5-20 meters

Reviewed: 5/22/91 me
reviewed 5.22 98

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 19 May '91
 SEGMENT # K6-105 TIDAL HEIGHT(Range) 0 to -1 St
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

Minimal oil in this segment - all oil high to very high in ITZ.

Biota as indicated on MAP.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			<u>Sand lance 1</u>
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	<u>tattler</u>	<u>1</u>	

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

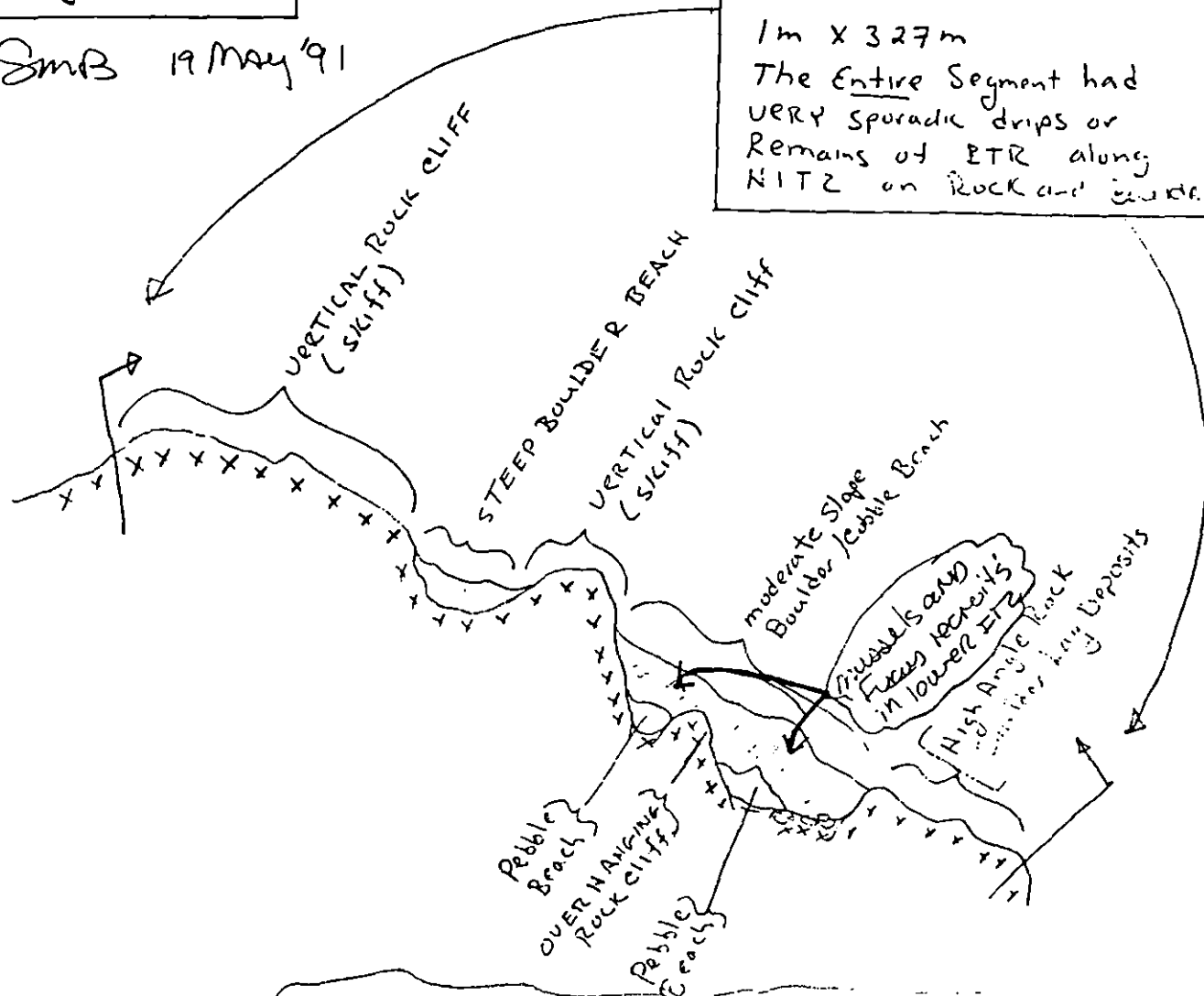
OG SKETCH
KN 105 A
MAY 19, 1991
11:18 - 11:42
Doug Reimer

SMB 19 May '91

CT < 1%

1m x 327m

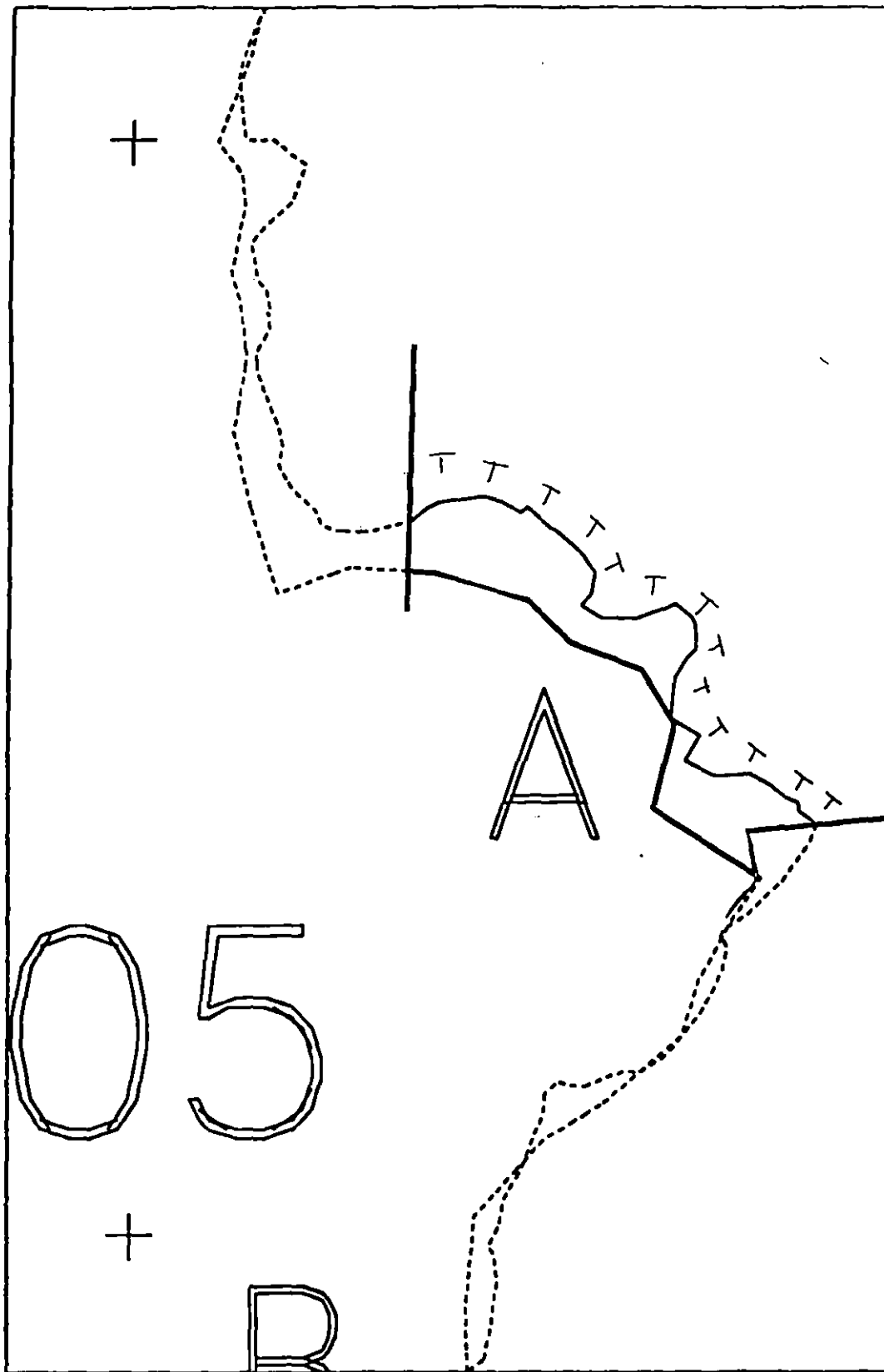
The Entire Segment had
VERY sporadic drips or
Remains of BTR along
NITZ on Rock and boulders



A: Remains of BTR in Lichen zone
CT in upper edge of barnacle, Fucus
zone

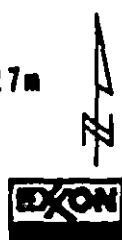
Bea width $\approx$ 5-20 meters

Reviewed M.B. 5/22/91



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

KN0105 A
 ADEC Subsegment Length: 327m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0105a



Subdivision Field Map
 Map Key: KN1KN0105A
 Name: D. Reimer
 Date: 5.19.91
 Date Entered:

Reviewed: MC 5/24/91
 reviewed 5.22 91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-105

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 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 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 22 m: V. Light 290 m: No Oil 15 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> 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: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

SEGMENT ST / KN105 SUBDIVISION: A (1 of 2) DATE 04-09-90

USCG

NAME AFC Vandepels SIGNATURE AFC Vandepels

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment. To labor intensive for such little gain.

ADEC

NAME Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- Manually remove asphalt splashes.*
- On SE part of section, the band of CT/s expands to 7m in width. Scrubbing of B's is recommended.*
- No subsurface oil was found in between smaller shale.*

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

MANUALLY REMOVE ASPHALT SPLASHES AND SCRUB CT/S SECTIONS

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-105
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (1042)
 EXXON T. Tomblin ADEC M. Bager TIME 19:00 to 19:20
 TEAM NO.: 5 TIDE LEVEL: +1 to +1/2 DATE 04/09/90
 EST. SUBDIVISION LENGTH: 404 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 70 % B 25 % C 5 % P % G % S % M % V %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 364 m NO 20 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IB	IF	IS	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT				X		X					X		
POOLED													
COVER													
COAT		X		✓		X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F (S) 40 sq. m by 2 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. 57-5-5Frames 9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			UO	UC	100% BK	75% BK	50% BK	25% BK	25% GR	SU	U	M		
							-													
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS

No pits dug boulders too big.

OG J. Pringers

SEGMENT ST/ KN-105

SUBDIVISION A

DATE 04/09/90

CHECKLIST

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

LEGEND

1 ▲

Ph - No Subsurface Oil

2 ▲

Ph - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

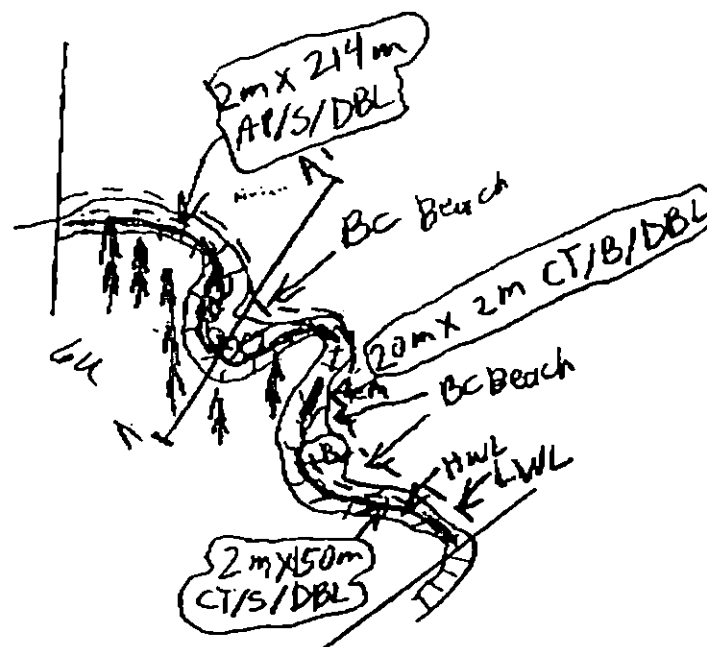
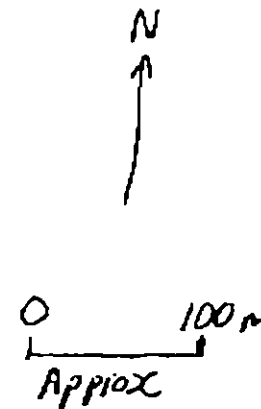
Splashed Distribution

Old Vegetation

1 ➡

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 214 PO CV CT 170 ST MS PT TB FL NO 20

REVISIONS DOWN

Segment ST / KN 105 Subdivision A Date (mo / day / yr) 4/9/90Time (24 hr) 1900 - 2020 Biologist Crank

pg 1 of 2

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 25 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 Low 50

(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. 5-5-5Frames 9

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

1 - Other Adult

4 - Alcids - unidentified

2 - Mergansers

Ecological Considerations:

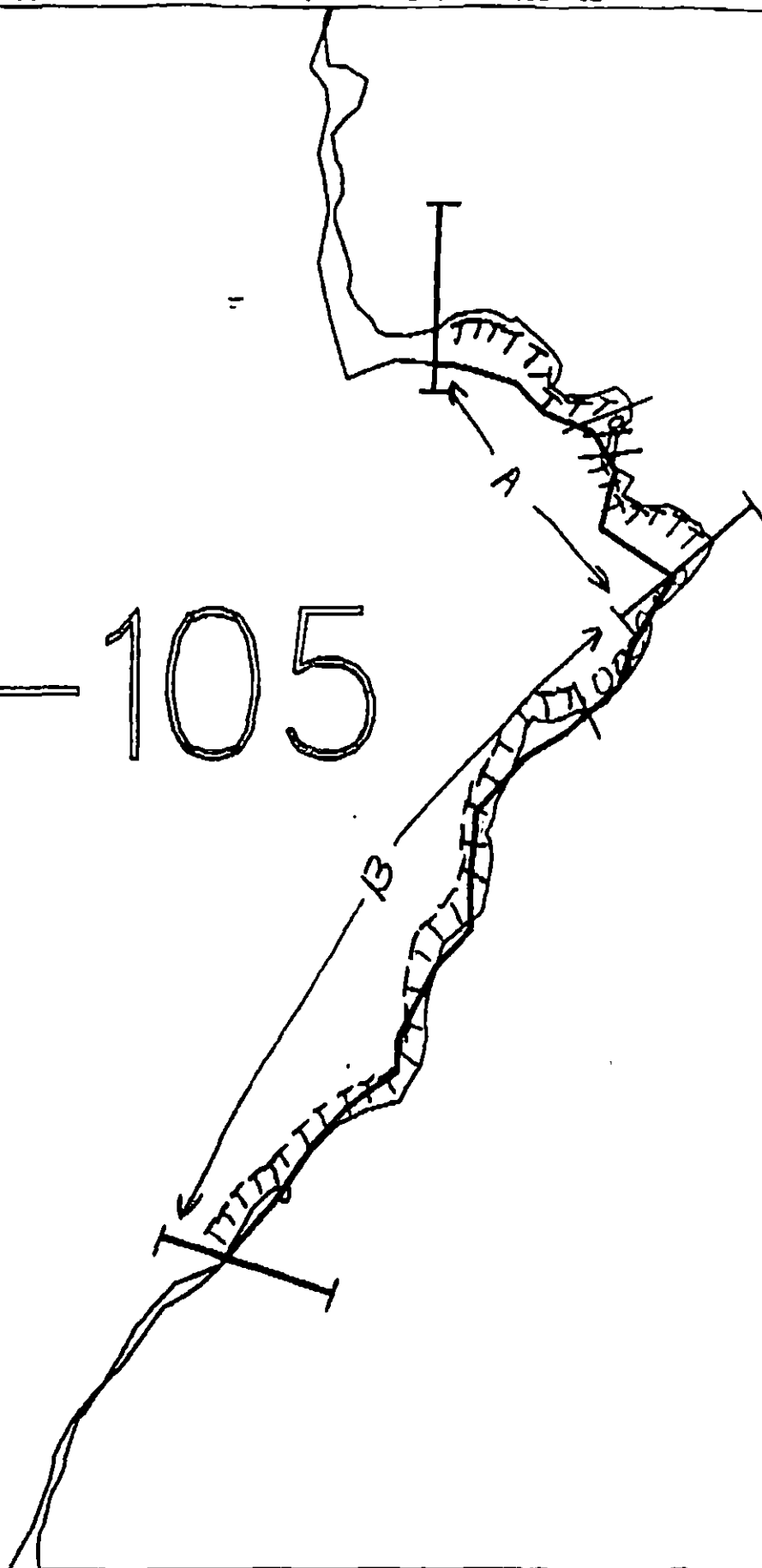
6U - Tent Sites

- This subdivision has a high Fucus recruitment; gastropods are dense throughout zones.
- Agurris were in dense congregations under cobble in the LIT2 and MIT2 (see picture ST-5-5 #9)
- Mytilus are sparse throughout most of subdivision. There is a 50m x 3m discontinuous dense band on the steep boulder slope at the Northern end. (see OG map).

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 Harbor seal and sea lion pupping (5/15 to 7/1) ;
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

KN-105



XXXX Wide

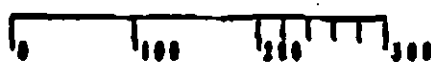
//// Medium

---- Narrow

TTTT Very Light

KN-105

ADEC Segment Length: 1304



Map Key: PWS-285

Name: James Springs

Date: 4/9/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-105

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION B (2 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 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 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 611 m: No Oil 145 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 pick up of debris and mousse, 2) tarmat removal and 3) bioremediation of oil-coat and stain areas (see attached sketch map for locations).

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN105 SUBDIVISION: B DATE 04-09-90USCGNAME AEC Vandepels SIGNATURE AEC Vandepels☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment. Too labor intensive
for what would be gained.

ADECNAME Michelle Baer SIGNATURE MBaer☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

KN105B is a low energy zone with B fields and E, C beach.
A bathtub ring of STs and ~~the~~ continues throughout the segment.
The ring is about 5 cm wide. Areas of AP/P were found
in the Northern part of the segment. I recommend manual
removal of the asphalt patches, scrubbing (with a wire brush)
the areas of heavier coat on the boulders, and ~~the~~ tar splashes.
No subsurface oil was found.

LAND MANAGERNAME DAN LOGAN SIGNATURE D Logan☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

MANUALLY REMOVE TAR SPLASHES / ASPHALT SPLASHES.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/91

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-105
 BIO P. Crank LAND REP D. Lopen SUBDIVISION B (2 of 2)
 EXXON T. Tomblin ADEC M. Baer TIME 17:45 to 19:00
 TEAM NO.: 5 TIDE LEVEL: +3 to +1 DATE 04/09/90
 EST. SUBDIVISION LENGTH: 900 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock metaconglomerate & pillow lava
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 20 % B 50 % C 20 % P 10 % G % S % M % V %
 SLOPE: Long 30 % Hang 60 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 690 m NO 210 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT				X		X							X			
POOLED																
COVER																
COAT				X		X							X			
STAIN																
MOUSSE				X		X							X			
PATTIES																
TARBALLS				X		X							X			
FILM																
NO OIL													X		X	X

PAVEMENT: H F 4 sq. m by 2 on

PATTIES / TARBALLS 10 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-5-5

Frames 4-8

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
		OF	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	7	8	SU	U	M	L		
1	20					X	.		X												X		PGSM
							.																
							.																
							.																
							.																
							.																

COMMENTS Surveyed the first ~200 m of KN-106 during first ~1/2 hour.

OG J. Springer

SEGMENT KN405

SUBDIVISION B

DATE 04/09/90

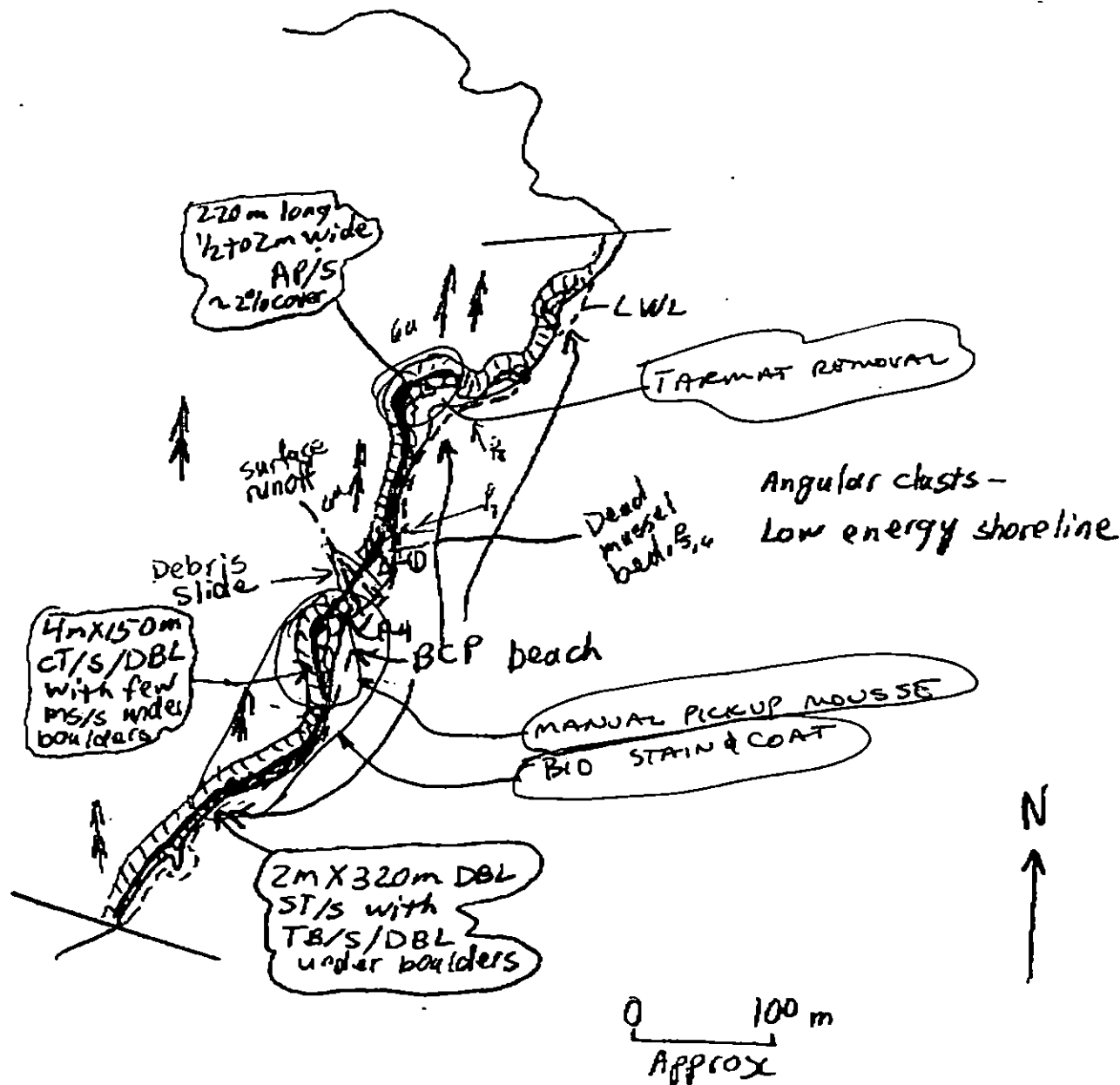
CHECKLIST

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

LEGEND

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

ETCH MAP



Oil Character Length (m): AP 220 PO CV CT 150 ST 320 MS PT TB FL NO 210

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST 111105 Subdivision B Date (mo/day/yr) 4/9/92Time (24 hr) 750 - 1900 Biologist Grant

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 50 (3) Cobble 10 (4) Pebble 10 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 30 Moderate 50 Low 40
- (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-5-5Frames 5, 6

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

- 1 - Other
 1 - Grebe
 1 - Bald Eagle - Adult
 1 Duck, unidentified

Ecological Considerations:

6 U - Tent Sites

- There is a dense forest of poplars in adjacent
 dunes, most are dead in 1977
 - There are some patches of grass in the
 M172 - no adults found in this subdivision
 - There is a 10-30% Barnacle mortality in the
 subdivision in both old and newly exposed
 - There is a primary gastropod population
 - Freshwater influence on beach
 - Clay - shells on beach, digging for shells
 - There is a 10x5m crushed, dead Mytilus
 Bed shaped like a - See Map.

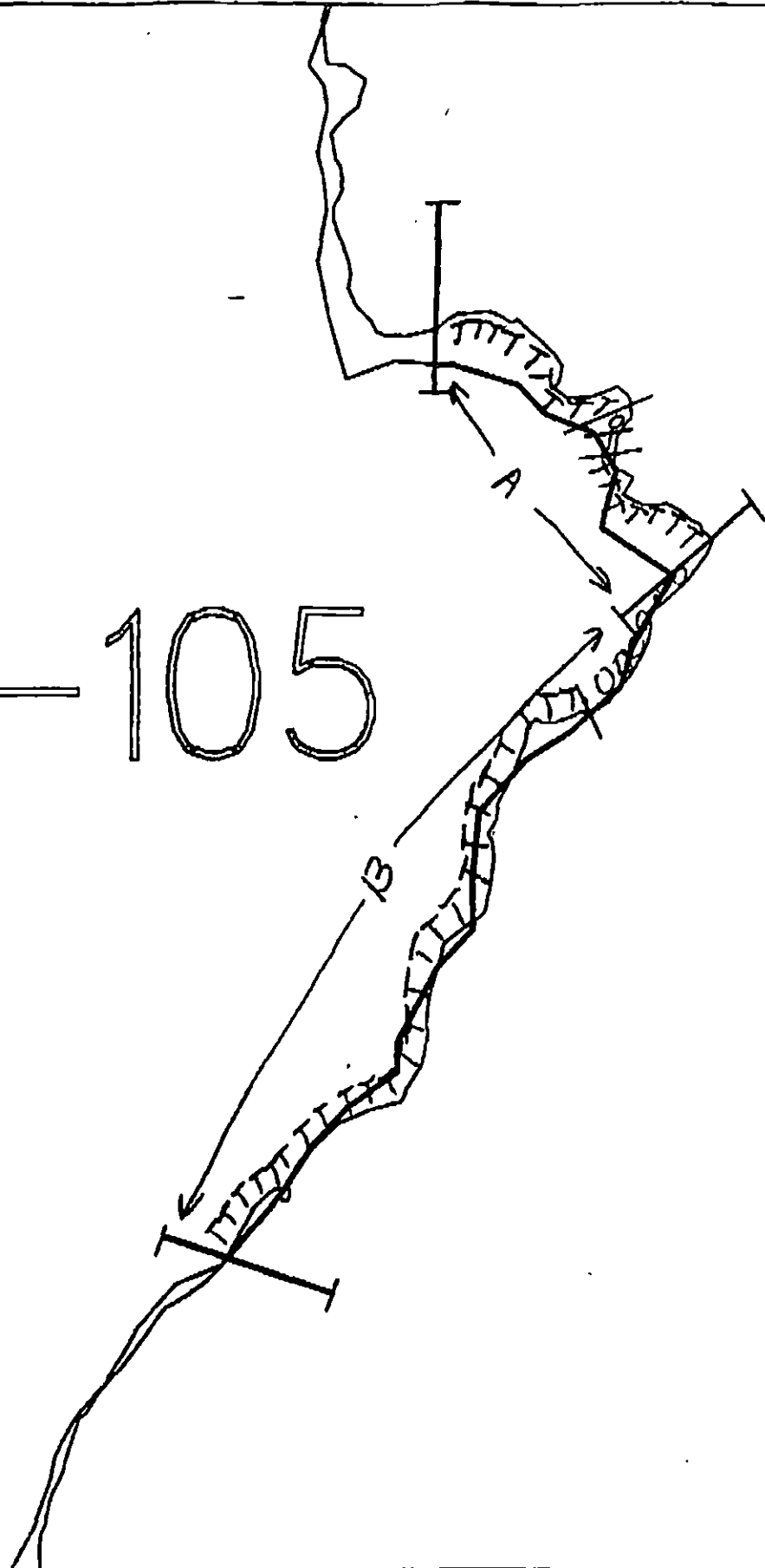
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 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 unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1) ;
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

[illegible]

KN-105



XXXX Wide

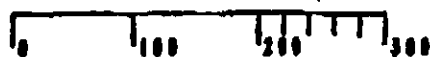
//// Medium

--- Narrow

TTTT Very Light

KN-105

ADEC Segment Length: 1304



Map Key: PWS-285

Name: James Springs

Date: 4/9/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-105 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/24/90
ADEC Art Weiner
EXXON Amox TGA
NOAA B. W. Scott
USCG M. J. Hall

FOSC

DATE 5-24-90

Prepared By: Andru Mays wic

Date 5/22/90

KN-104

DI-64

DI-63

DI-

KN-10

KN-105

Work
Areas

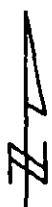
N-118

KN-10

KN-119



Exxon Company, USA
Map Key: KNI-KN-105
May 11, 1990



ECOLOGY MAP
SEGMENT KN-105
SUBDIVISION A (1 of 2)

METERS

0 378 757



Seabird Colony



Eagle Nest

1 inch = 1241 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

OU Recreation: Tent sites (6/1 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

~~required prior~~

SHPO SIGNATURE: Charles E. Hume DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 22 m: V. Light 290 m: No Oil 15 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

MANUAL PICKUP OF TARMATS AND BIOREMEDIATION OF COAT. AS
INDICATED ON SKETCH

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90.

ADEC ART WELER
EXXON Amey G. Hall
NOAA Joseph Tallant
USCG M. J. Hall

FOSC: h L DATE: 5-8-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-105 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

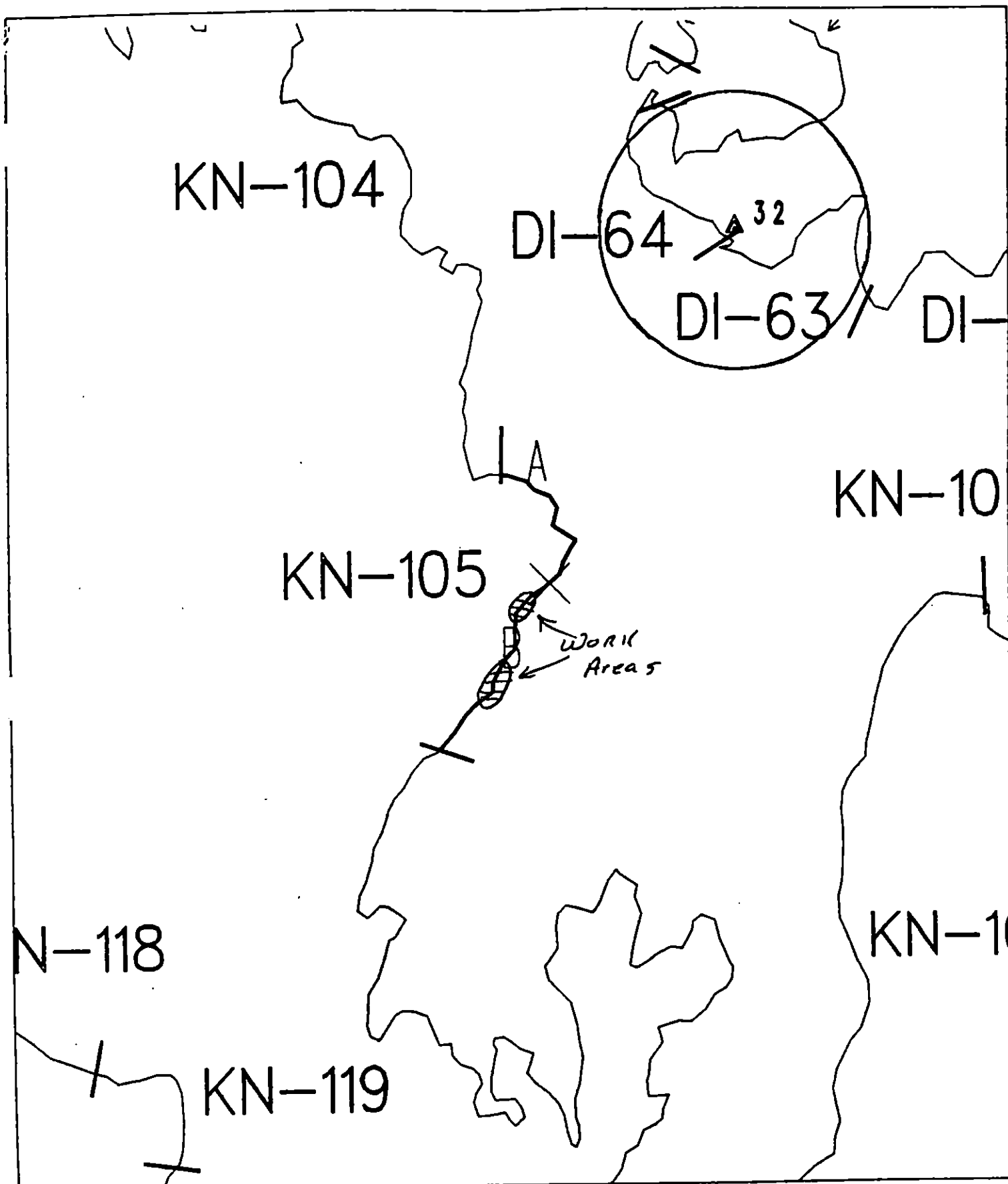
TAG APPROVAL DATE 5/24/90.
ADEC Art Wauer
EXXON Andy TGA
NOAA B. Wiercott
USCG Mr. J. Hall

FOSC [Signature]

DATE 5-24-90

Prepared By: Andrew Meyer

Date 5/22/90



Exxon Company, USA
Map Keys KNI-KN-105
May 11, 1990



ECOLOGY MAP
SEGMENT KN-105
SUBDIVISION B (2 of 2)
METERS

0 378 757

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1241 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION B (2 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles Z. Hume DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 611 m: No Oil 145 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 pick up of debris and mousse, 2) tarmat removal and 3) bioremediation of oil-coat and stain areas (see attached sketch map for locations).

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC Art Weiner
EXXON Andy Galt
NOAA Joseph L. Bott
USCG M. J. Hall

FOSC: W L DATE: 5-8-90

SHORELINE EVALUATION

SEGMENT ST/ KN-105 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276). required prior

SHPO SIGNATURE: Charles E. Hume DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 22 m: V. Light 290 m: No Oil 15 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: <u> </u> Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS:

MANUAL PICKUP OF TARMATS AND BIOREMEDIATION OF COAT. MS
INDICATED ON SKETCH

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER

EXXON Amey G. Hall

NOAA Joseph T. Elliott

USCG M. J. Hall

FOSC: h L DATE: 5-8-90

OG J. Ringer

SEGMENT ST/ KN-105

SUBDIVISION A

DATE 04/09/90

CHECKLIST

- ☒ A Arrows
- ☒ Approx. Scale
- ☒ Map/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

Pt - No Subsurface Oil

2 ▲

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

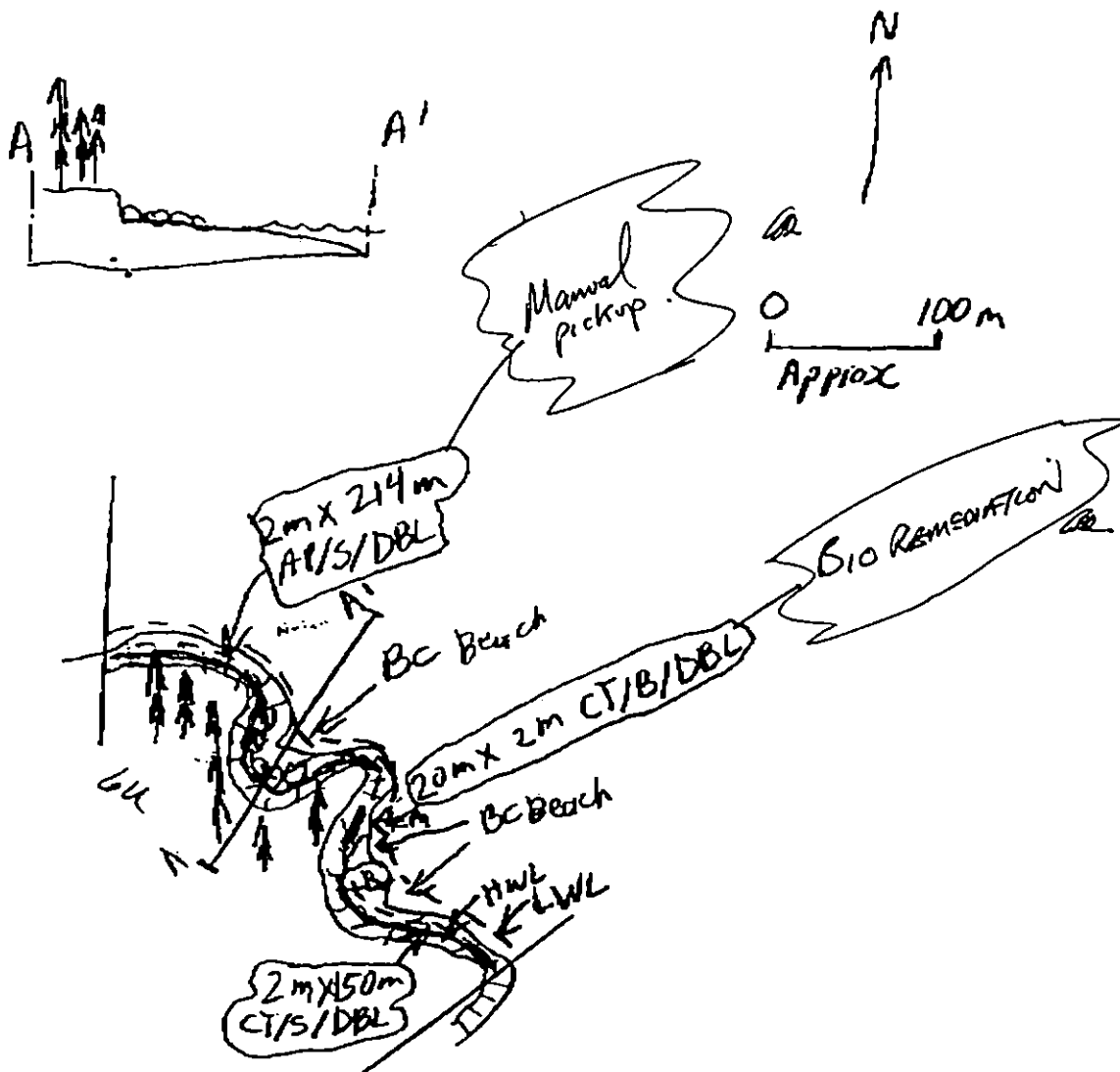
Splashed Distribution

Old Vegetation

1 ●

Photo location, direction, and number

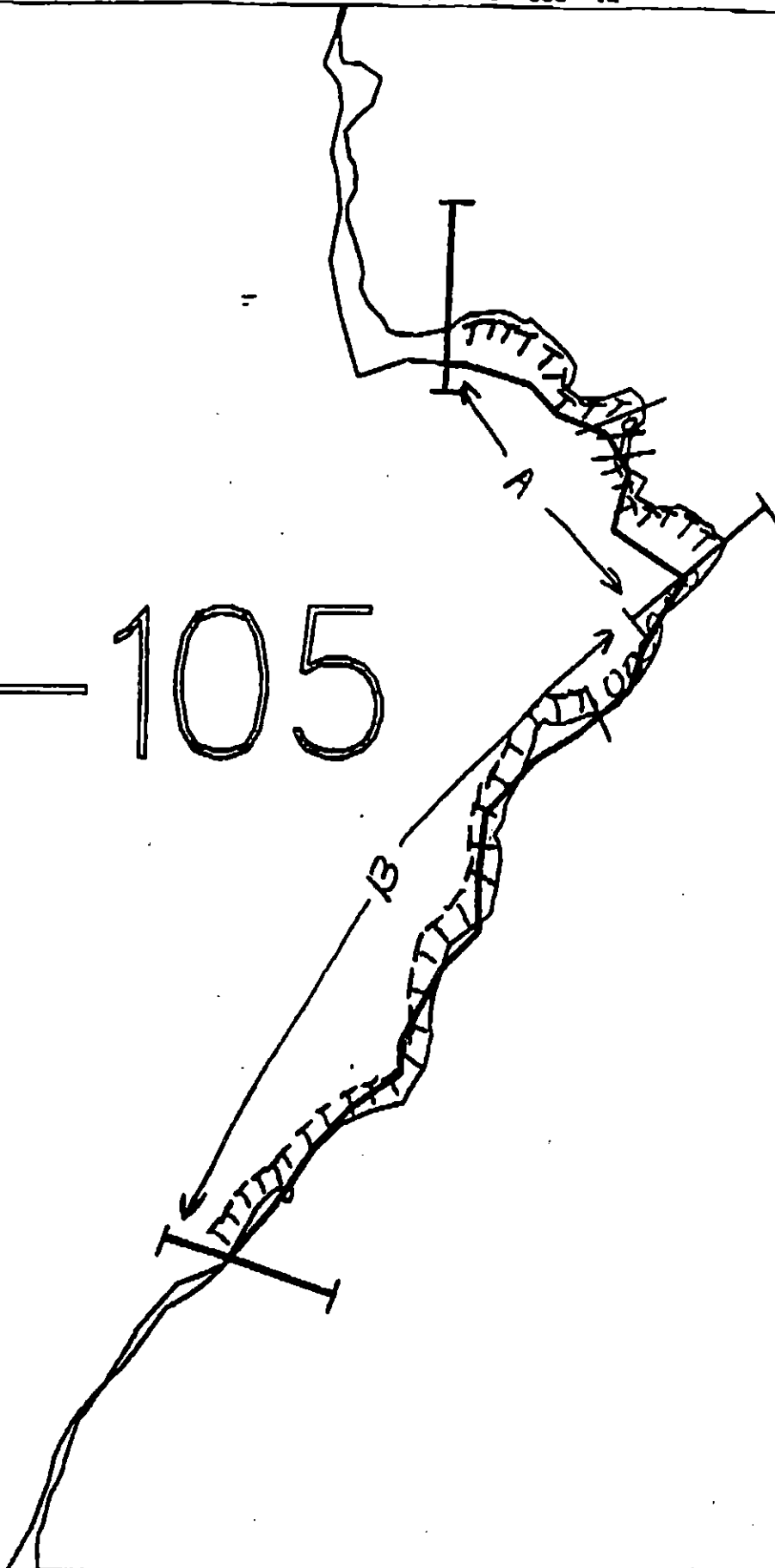
ETCH MAP



Oil Character Length (m): AP 214 PO _____ CV _____ CT 170 ST _____ MS _____ PT _____ TB _____ FL _____ NO 20

REVISIONS

KN-105



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-105

ADEC Segment Length: 1304
484m

0 100 200 300

Map Key: PWS-285

Name: James Springs

Date: 4/9/90

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