

OIL SPILL PUBLIC INFO. CENTER



3 6653 00006449 7

EVOS
GC
1552
.P75
S42
1991
v.53

[Shoreline evaluations, 1991].

Prince William Sound KN-134 to KN-204

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ASAP TAG REVIEW SHEET

Segment: Kn 134 Subd: A Site: 1 Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR X None

Treatment
Recommended:

m/p of A Spent SDR
Low energy beach

Not to be reassessed in 91
if work done this year?

Priority Site For Reassessment In 1991

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

TAB 2/AV6
Manual Pickup AP patches in vicinity
of stream & BIO area outside
of ANAD STREAM
(LOW)

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KV-134 Subd.: A Site: 1 Date: 8-10-90 1990

Conditions Observed: Band of Patchy AP, OP, OR oiling approx 50 in x 30m across beach. Subsample penetration to 3-5cm.

Followup Recommendations: Manual removal of AP, OP, OR. See below for comments and treatment recommendations.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC Bob McCreedy
(name)

Robert E. McCreedy
(signature)

Comments: HP-HW with floodline is recommended for hauldred patches w/ heavy Oiling Port with MS. Areas of AP, MS, OP, OR should be manually removed.

Exxon John Dean
(name)

John Dean
(signature)

Comments: Area would benefit from additional Manual Pick-Up/Break-Up and Retreatment w/ P210

USCG Don Ovisom
(name)

Don Ovisom
(signature)

Comments: Large area of oiling (50m x 15m) should be manually removed, RAKED and "BLOPPED". HOT WATER WASHING WOULD BE DIFFICULT BECAUSE OF THE WIDE BEACH AREA. MODERATE WORK PROJECT FOR 1990.

Land Rep. LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: AGREE WITH ADEC COMMENTS. MANUAL REMOVAL & WASHING NEEDED. SEE SSAT SKETCH MAP FOR OIL DISTRIBUTION. NEED TO TREAT IN 1990.

8/4/90

SEGMENT AS / VN-134 SUBDIVISION: A SITE: 1 DATE 10 AUG 90

USCG

NAME Don Davis, CM USCG
Don Davis, NOAA

SIGNATURE Don Davis

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

LARGE PATCH 50m x 15m BROKEN AREA OF "SOR", ASPHALT, COUGH, STAIN, LOCATED IN U/I (MIDDLE OF BEACH AREA). TWO PITS DUG @ 5cm DEPTH w/ OILING TO 3cm. LIGHT FILM OBSERVED ON SURFACE RUN-OFF. SOME SPORADIC PATCHES OF ASPHALT AND TAN PATCHES OBSERVED IN GRAVEL / ROCK BEACH AREA. MODERATE PRIORITY FOR WORK IN 1990. HIGH PRIORITY REASSESSMENT IN 1991.

ADEC

NAME Bob McCarty

SIGNATURE Bob McCarty

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

A band of AP, OP, and OR is present on the shoreline and within/gravel beach. Area is approx 50m x 15m and subsurface oil to penetrate to between 5cm-10cm. Area has been recommended by ASAP/Summary team for further treatment in '90. I have recommended the removal of AP, MS, OP, and OR oil to be followed by HP-HA washing utilizing a flocculant.

MANAGER

NAME LORA JOHNSON

SIGNATURE Lora L. Johnson

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

AGREE WITH ADEC COMMENTS. MANUAL REMOVAL OF OIL NEEDED. SEE SSAT SKETCH MAP FOR OIL DISTRIBUTION ALSO. NEED TO TREAT IN 1990 & 1991.

EXXON

NAME JOHN DEAN

SIGNATURE John Dean

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oil Presence

DATE 8 / 10 / 90 TIME 11:25 10 / 34 TIDE LEVEL +0.5 10 +0.5
TOTAL EST LENGTH OF SHORELINE SURVEYED: 170 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
NL CATEGORY LENGTH: W 65 m M m N m VL 25 m NO m US 62 m

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			X			X		
S.O.R.			X			X		
POOLED								
COVER		X				X		
COAT		X				X		
STAIN		X				X		
MOUSSE								
PATTIES/T.B.								
FILM				X		X		
NO OIL					X		X	X
EST. SITE LENGTH					142 m			

SUBSURFACE OIL

[illegible]

Photographs

COMMENTS

THE CONSISTS OF A SHAL. RE-ENTRANT WITH AN ANAD. STREAM (226-30-16865)
- JOR/AN/CU/CT/ST ARE PRESENT IN THE VICINITY OF THE STREAM, WHEREAS, CT/ST OCCUR
ON THE VERTICAL ROCK/LARGE BOULDERS THAT FORM THE SIDES OF THE RE-ENTRANT,
REVISION NO. 715740

SEGMENT ST 134

SUBDIVISION 11

DATE 3 130 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg. of Entry
- ☐ On Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/AML
- ☐ SS
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Continuous Distribution

CT/B
Isolated Distribution

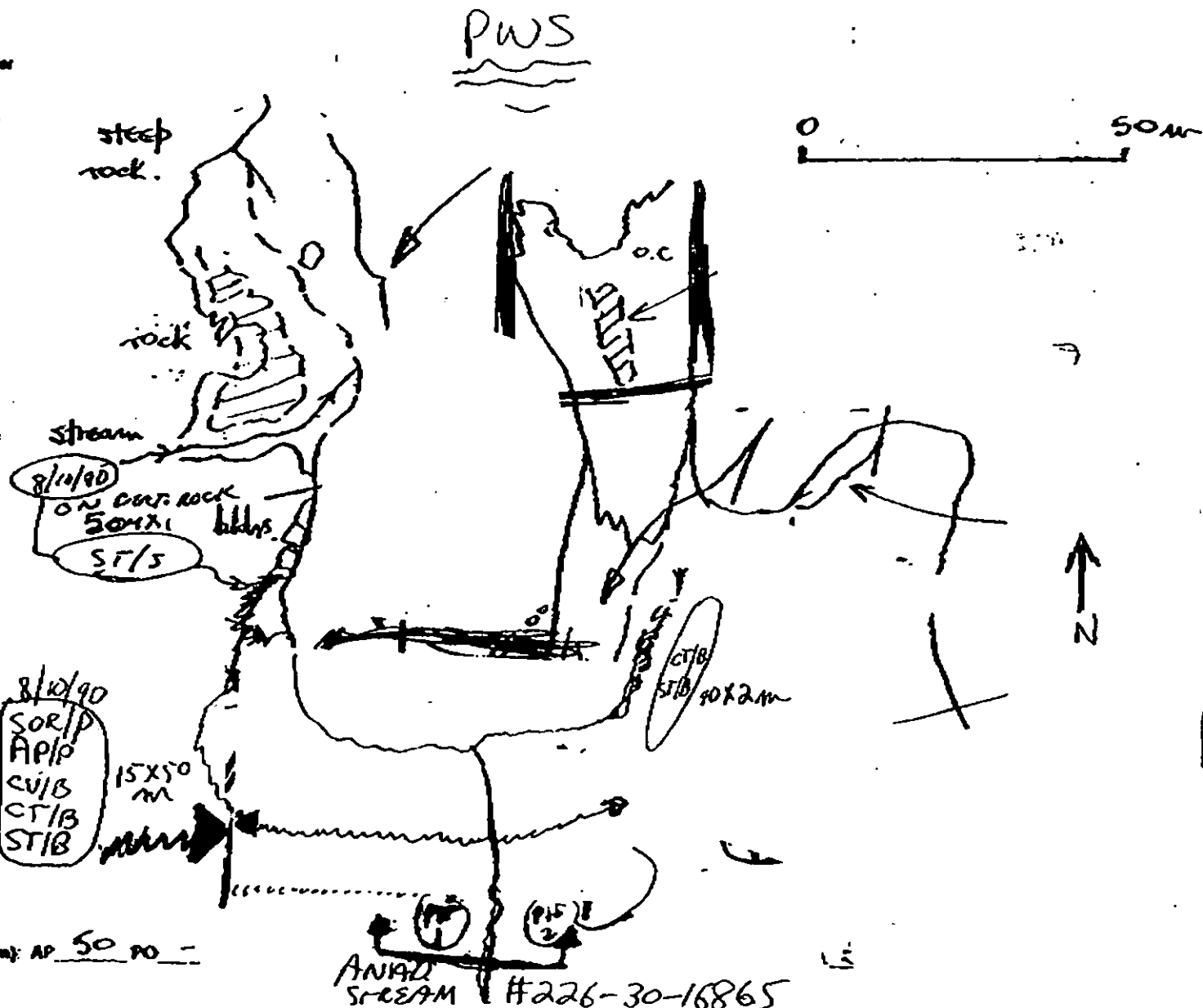
CT/P
Patchy Distribution

CT/S
Patched Distribution

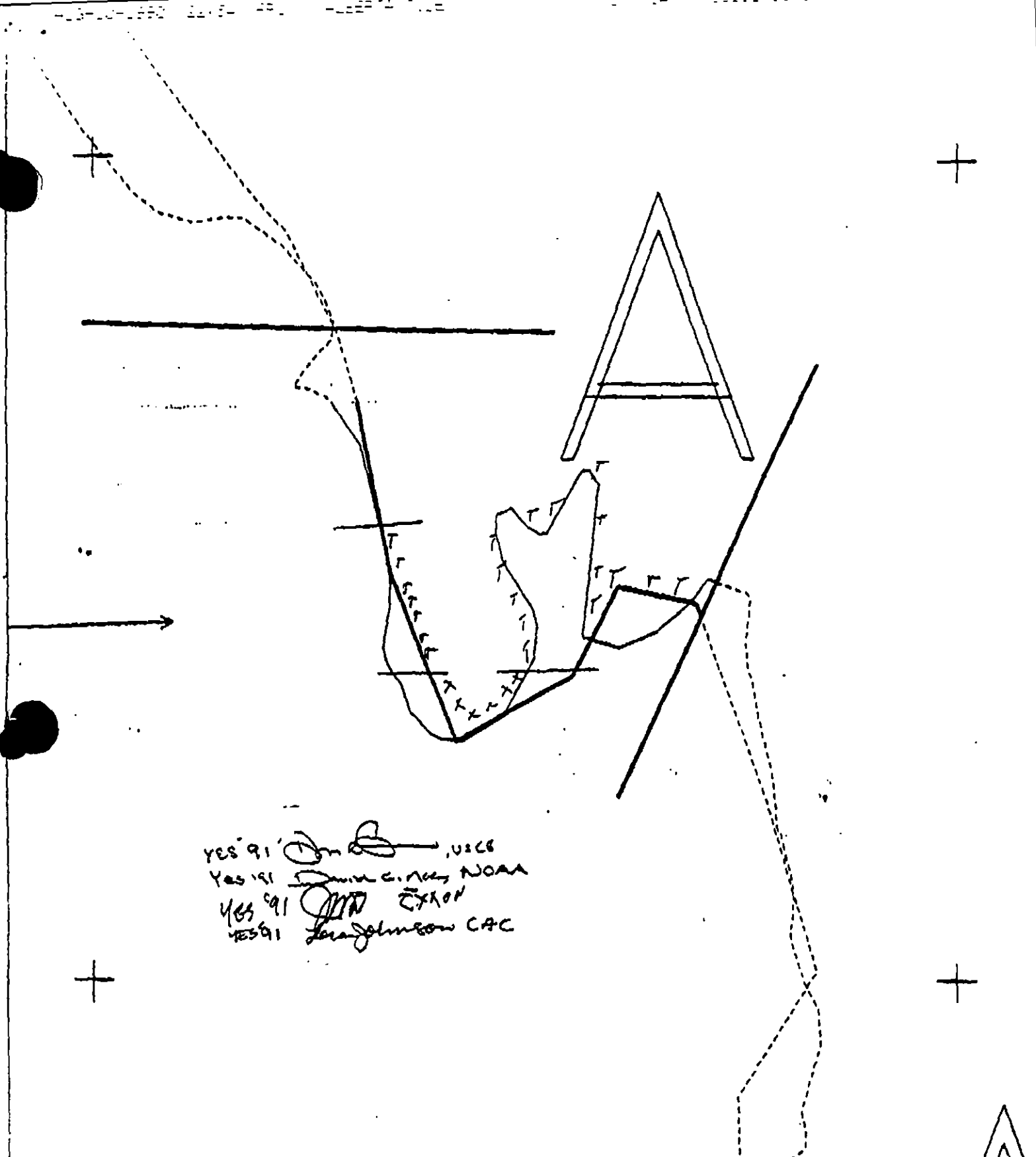
Red Vegetation

1 →
Photo location, direction
and number

Character Length (m): AP 50 PO -



8/10/90
CT 90
AP 50
SOR 50
ST 150
CV 50



YES 91 *[Signature]* USCG
 YES 91 *[Signature]* NOAA
 YES 91 *[Signature]* EXXON
 YES 91 *[Signature]* CAC

XXXX Wide
 //// Medium
 [Symbol] Narrow
 [Symbol] Very Light
 0000 No Oil

KN-134 A
 ADEC Subsegment Length: 232m
 METERS
 0 45 90
 AK State Plane Zone 4 1:1765
 kn-1340

Subdivision Field Map
 Map Key: KNKN-134A
 Name: NAKASHIMA
 Date: 8/90/90
 Data Entered:



ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-134 STREAM NO: 226-30-16865 DATE 4/22/90

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)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

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: Ricki Dan Durr DATE: 5/22/90

Subsurface Oil Observed: Yes ☐ No ☒ Maximum Depth

RECOMMENDATIONS:

☐ No Treatment Recommended

☒ Treatment Recommended

☒ Manual Pickup

☒ Bioremediation

☒ Tarmat Removal

☐ Snare/Absorbent Booms

☐ Oil Snares (pom poms)

☐ Absorbents (pads, rolls, etc)

☐ Spot Washing: Wands

☐ Beach Cleaner

☐ Other (see comments)

COMMENTS: Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from 6/16 to 7/9.

TAG COMMENTS: Bioremediation to include INIPOL AS INDICATED IN
AREAS OF "COVER" + CUSTOMER AS REQUIRED FOLLOWING
TARMAAT REMOVAL

TAG APPROVAL DATE: 5/18/90.

ADEC ART WEINER Art Weiner

EXXON ANDY ER

NOAA GARY PETRAE Gary Petrae

USCG G.A. REITER G.A. Reiter

FOSCH [Signature]

DATE: MAY 25 1990

¹SUBSURFACE ON STEP 4 MARKER

95M

МЛЗ

PUTZ

STREAN

ad

REVISIONS

Revised

cryptic
2x2x5cm

14-00000

✓



卷一

2

11



陳

1

10



10



1

100

W2FALZ

only rope under snow

SUBSURFACE OIL STUDY MARKER

70M

18/01/2018

**DIED
GRASS**

DEAD
FALL

Stop

PRFT
LOGS

1/4/11
40X8X30"

WAITING FOR ALL DOCS 1/1/68

$$72 \times 2m$$

MS 2 PT 3



10

27/43

43 PHOTOLOG

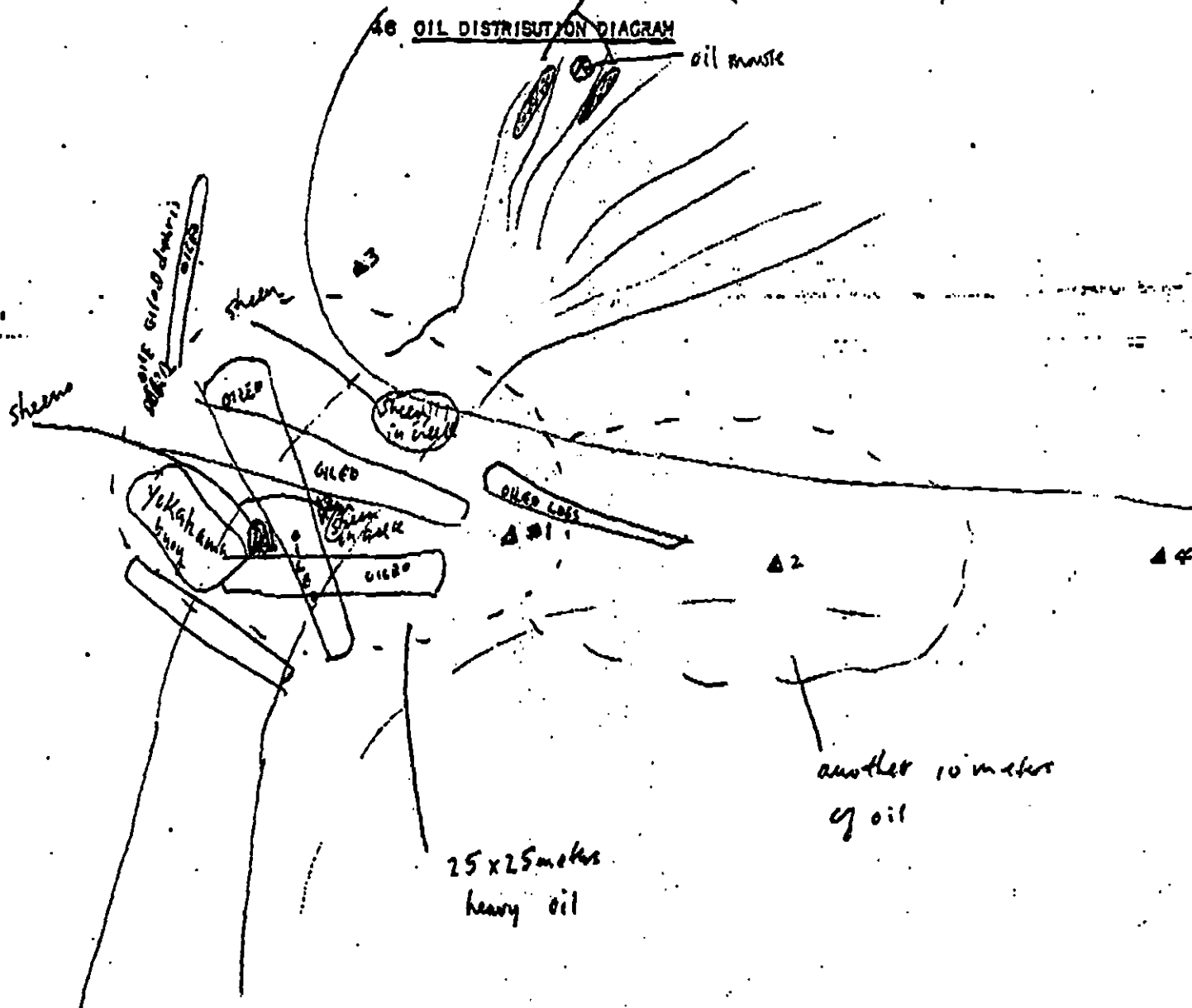
NAME(S)

DESCRIPTION

pit #1 45cm oil continues deeper than 45 subsurface oil fine oil
 pit #2 34cm deep (oil surface down 4cm deep) coat of oil
 pit #3 weathered oil in some small gravel in hole 18cm deep hole
 pit #4 some oil channel rock found cable/gravel random filling 25cm
 oil on bottom of rocks. coat. on random throughout.

lean wall (some feathered too patches) on lower LIT

46 OIL DISTRIBUTION DIAGRAM



394

ECCLESICAL PATH

1A, 1B

2 M

KN-134

SUBJECT
ADVANCED
STATION

226-30-16865
(13, 12/29)
LOCATED WITHIN
KN-134 - A
(1 of 1)

~~KN-12~~

XXXX Wide
//// Medium
--- Narrow
TTT

KN-134

ADEC Segment Length: 258m
Exxo " " : 421

Map Key: PWS-317
Name: G. MACDONALD
Date: 8/20/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-210

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-210 SUBDIVISION B (2 OF 3) DATE 4/20/90

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)
6U Recreation: Tent sites (6/1 to 9/15)
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 treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 469 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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.
- J 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)
 J 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 / 210 SUBDIVISION: 8 DATE 04/20/90

USCG
NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME Michele Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oil was observed throughout the sub-segment.

LAND MANAGER
NAME Carol S Huber SIGNATURE Carol S Huber ¹⁵

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

*No oil observed.
Resources sensitivities include: eagle nests
(eagles observed) Special use destination and
tenting (beware of beaches terminating at
active avalanche shoots).*

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-210
 BIO P. Crank LAND REP C. Huber SUBDIVISION B (2 OF 3)
 EXXON T. Temblin ADEC M. Baer TIME 14:55 to 15:55
 TEAM NO. 5 TIDE LEVEL 2 1/2 to 1 1/2 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 550m ☒ 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 15% C 25% P 25% G 0% S 0% M 0% V 0%
 SLOPE: Long 55% Hang 35% Vert 10% WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 550 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

PAVEMENT H F S 0 sq. m by 0 c

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

55 gal diu
TYPE plastic & fishing fl

#BAGS

Photographs:

Roll No. ST-S-6

Frames 15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SHEEN (Y/N)	↓	SURFACE SUBSURF / SEDIMENT
		OP	OR	OL	OF	NO		VO	VO	1	2	3	4	5	6	7	8					
1	70					X	.	X	X									X				P/P
2	35					X	.	X	X													P/P
3	50					X	.	X	X									X				CP/PC
4	35					X	.	X	X													P/P
							.															
							.															
							.															
							.															

COMMENTS

REVIEWED 7w

DATE 4/23/90

OG J. S. Sanger
 SEGMENT ST/ KN-210
 SUBDIVISION B
 DATE 04/20/90

CHECKLIST

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

LEGEND

1 Δ
 PH - No Subsurface Oil

2 Δ
 PH - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

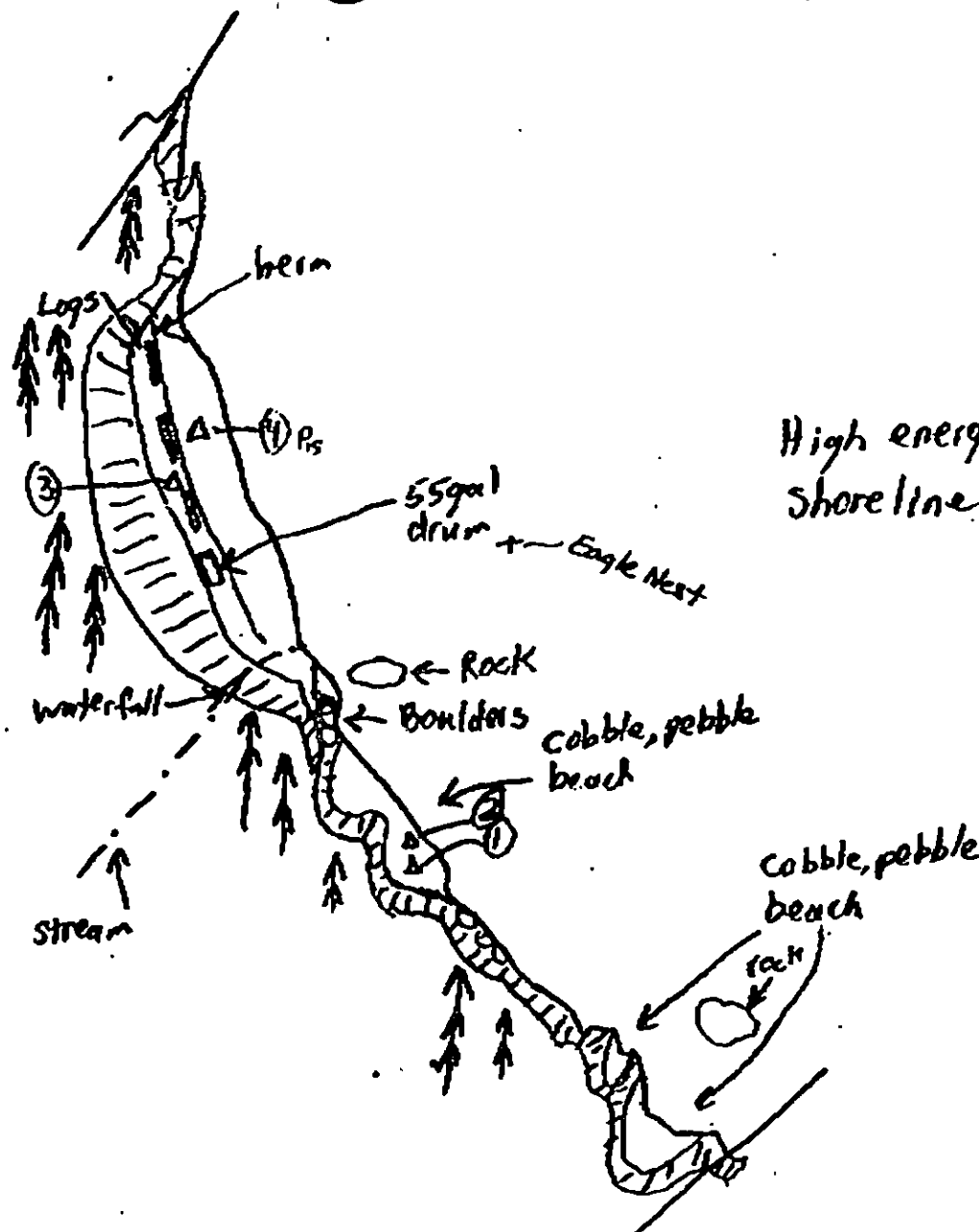
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Old Vegetation

1 →
 Photo location, direction,
 and number

ATCH MAP



High energy
 shoreline.

0 100m
 Approx

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 550

REVISION: 000000

SHORELINE ECOLOGICAL SUMMARY

pg 1 of 2

REVISION: 02/22

Segment ST / KN 210 Subdivision B Date (mo / day / yr) 4/20/90
 Time (24 hr) 1455-1600 Biologist Crank Length: 550 m
 Tide Height: +3 → +1.5 ft

- (A) Substrate type and % of segments:
 (1) Bedrock 35 (2) Boulder 15 (3) Cobble 25 (4) Pebble 25 (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 (3)
 Photographs: No photos
 Roll No.
 Frames

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESE
34

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 PRESE
34

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 PRESE
34

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 PRESE
234

Wildlife Observations/ General Comments:

A pair of Mergansers

Eagle Nest

Deer Skeleton in SUPRA

Ecological Considerations:

6U - Tenting

6Y - Special Use Destination

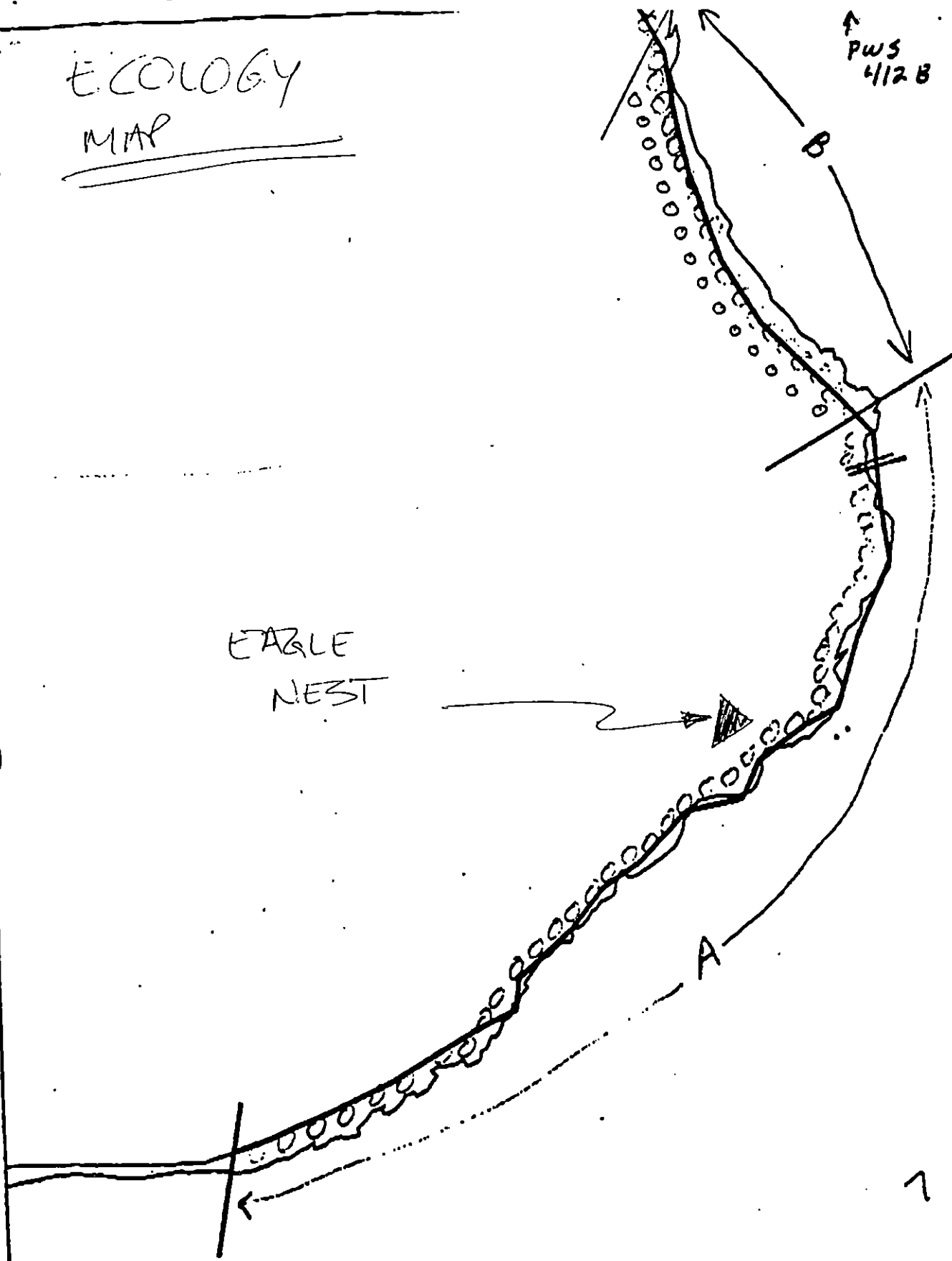
ST - Active Eagle Nest

- Dense patches of Mussels in MITZ forming discontinuous 2m band on vertical rock faces and boulders
- Discontinuous dense Fucus band along MITZ w/sparse Spar
- Barnacles continuous and dense with adults, new growth and recruitment.
- Low mortality - 5% or less in biota.
- Subdivision appears healthy; similar to KN2
- No oil observed.

ECOLOGY MAP

PWS
4/28

EAGLE
NEST



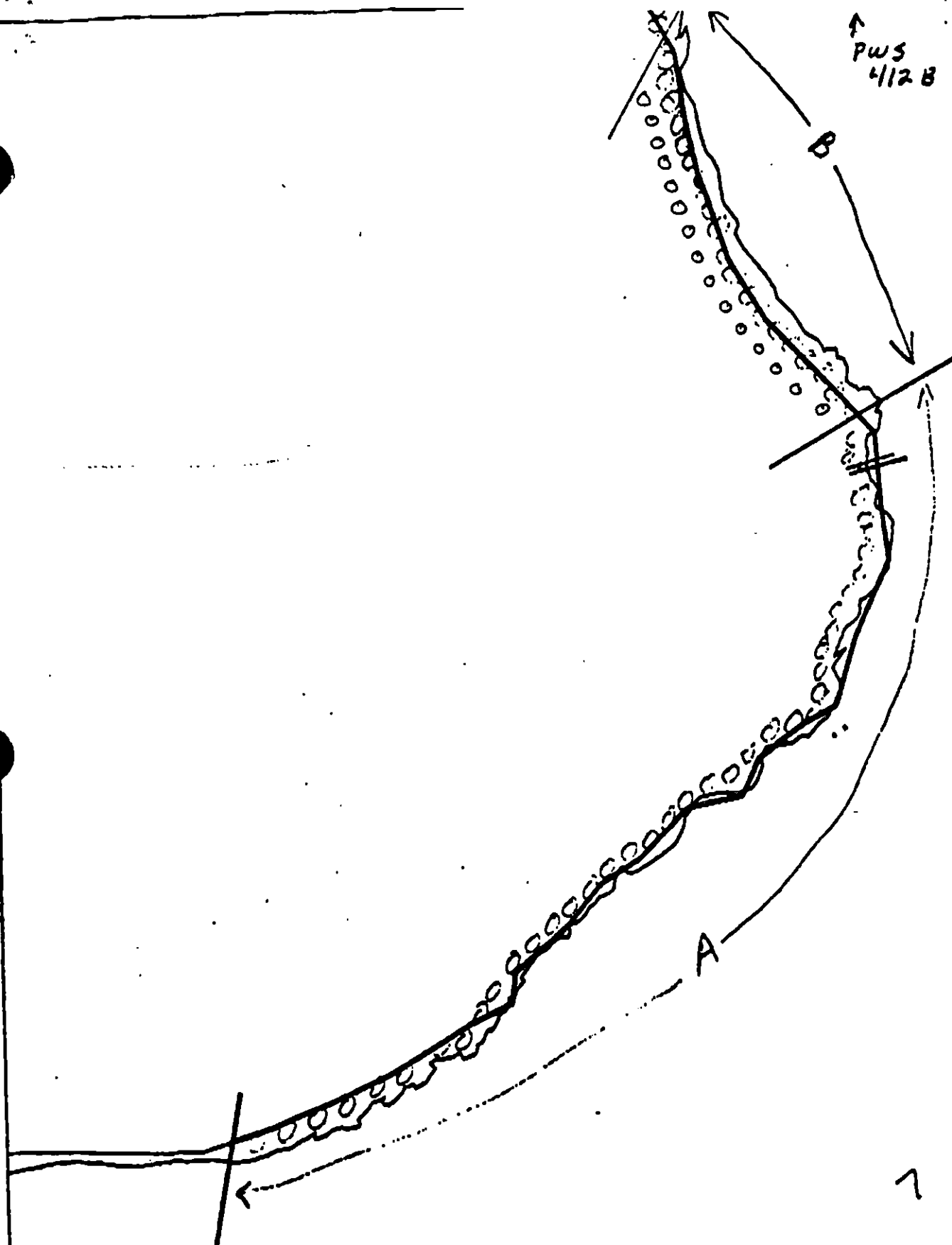
XXXX Wide
 //// Medium
 ----- Narrow
 TTTT Very Light
 0000 No Oil

KN-210

ADEC Segment Length: 2624m



Map Key: PWS-412a
 Name: James Smith
 Date: 4/28/90
 Date Entered:



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

KN-210

ADEC Segment Length: 2624m



Map Key: PWS-412a
 Name: James Smith
 Date: 4/26/90
 Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-134

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium
use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: Cultural resource survey in
progress. Shoreline treatment cannot proceed until field
data have been assessed and a formal archaeological con-
straint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 46 m: Medium 0 m: Narrow 0 m: V. Light 186m: No Oil 26 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth _____

RECOMMENDATIONS:

____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms/ Sorbents X Tarmat Breakup/Removal
X Bioremediation SPOT WASHING _____ Other _____
____ Wands
____ Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map.
Recommend tar mat breakup and removal and manual cleanup with
pom-pom sorbents in areas shown. Also recommend manual raking of
sediments followed by bioremediation in all 3 areas as shown on
sketch. Recommend all work begin after 6/15/90 based on ecological
constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-134 SUBDIVISION: A DATE 3/30/90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MSTI

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This segment needs both manual & mechanical attention. The asphalt patties need to be physically removed. Do to the cobble, pebble make up of the beach and a gradual grade I think a Hot H2O Flood system would work excellent on this area. The surface coverage consists of 4cm thick soft mousse and should flow easily when the Hot H2O Flood system is applied.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

RESURVEY NEEDED FOR UPLANDS UNDER SNOW.

"<10% COVER" AREAS HAD SUBSTANTIAL CONCENTRATIONS THAT COULD RAISE PERCENTAGE.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KN-134
 BIO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION A
 EXXON J. BUTLER ADEC W. GORMLEY TIME 07:10 - 10:09:00
 TEAM NO.: 3 TIDE LEVEL: +4 to -1 FT DATE 3 / 30 / 90
 EST. SUBDIVISION LENGTH: 250 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 5 % C 30 % P 30 % G 10 % S - % M 5 % V - %
 SLOPE: Long 20 % Hang 70 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 50 m M - m N - m VL 170 m NO 30 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	BR	OR	OL	OF	NO	DB	TL	LR	SU	UI	M	U
ASPHALT PAVEMENT		X									X			X	X	
POOLED																
COVER			X								X			X	X	
COAT																
STAIN																
MOUSSE																
PATTIES			X								X			X		
TARBALLS																
FILM			X								X		X	X	X	
NO OIL																X

PAVEMENT: H F (S) 650 sq. m by 4 cm

PATTIES / TARBALLS 5 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-3-1

Frames 10, 11

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	OR	OL	OF	NO	DB	TL	LR	SU	UI	M	U		
1	10					X	-		X									X				N	G, P
2	25					X	-		X										X			N	P, C, M
3	30					X	-		X										X			N	P, C, M
4	25					X	-		X											X		N	P, M
5	35					X	-		X												X	N	M, feet.
6	25					X	-		X												X	N	C, P, M.

COMMENTS SURFACE OIL AS 4cm th. soft mousse AP/B ≠ PT/P;
 no subsurface oil except surface film which seeps into
 pits ~ v. high water table over peat bed. Beachface
 flushed by stream & meltwater. Pits 2 & 4 had DBN oil drops
 and sheen; pit 4 had silver sheen.

04/11

11/1/90

OG G.M.A. NAD

SEGMENT ST/ 134

SUBDIVISION A

DATE 3 130 90

CHECKLIST

- Narrow
- Approx. Scale
- Seq. of Bdry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

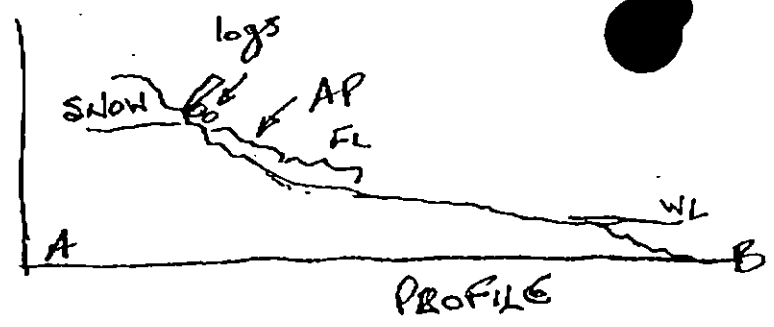
CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

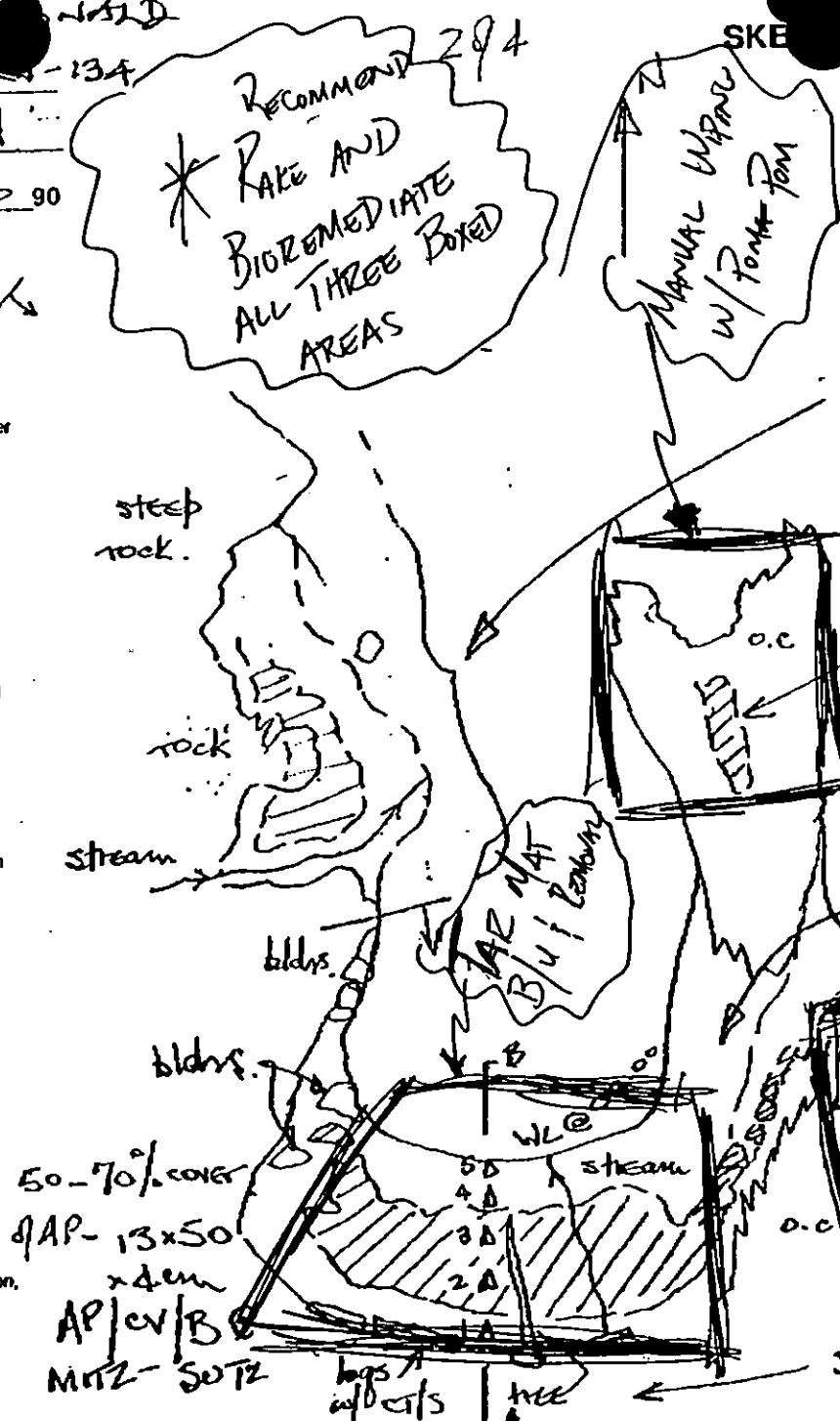
Oil Character Length (m): AP 50 PO - CV 55 CT - ST - MS - PT 100 TB - FL 50 NO -

SKE MAP



KN-125

0 50m approx. scale.



2m x 5m x 1cm DBR MS as ev
between cobs. in rock channel,
< 10% cover.

KN-134

steep rock walls

4m x 20m x 2cm.
MS/cv/p e HRTZ
< 10% cover; between
cob-peb armor.

REMOVE
TAR PATTIES
HERE

REVISION 03/24/90

494

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN-134 Subdivision A Date (mo / day / yr) 3/30/90Time (24 hr) 7:00 - Biologist MASETH

(A) Substrate type and % of segments:

(1) Bedrock 20 (2) Boulder 5 (3) Cobble 30 (4) Pebble 30 (5) Sand 10 (6) Silt 5(B) Overall % cover of biota (% of segment): Dense 0 Moderate 2 Low 4

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

Photographs:

Roll No. _____

Frames _____

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

2 blue gnatcatchers
20-30 "shore birds" feeding in Fucus bed on small island

Ecological Considerations:

394

KN-134

~~KN-12~~

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

KN-134

ADEC Segment Length: 258m
Exxo " " : 42'



Map Key: PWS-317
Name: G. Macdonald
Date: 8/30/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-134 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal Other Approved Treatment	OPEN
Bioremediation More Than 100m From Stream Manual Raking Spot Washing	OPEN
Bioremediation Less Than 100m From Stream Manual Raking Spot Washing	PERMIT REQUIRED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16865) is in the Subdivision. Subdivision is closed to bioremediation, manual tilling, and spot washing less than 100m from stream without ADF&G authorization. No constraint to bioremediation, manual tilling, and spot washing more than 100m from stream. No constraint to manual pickup, tarmat removal, and other approved treatment.

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

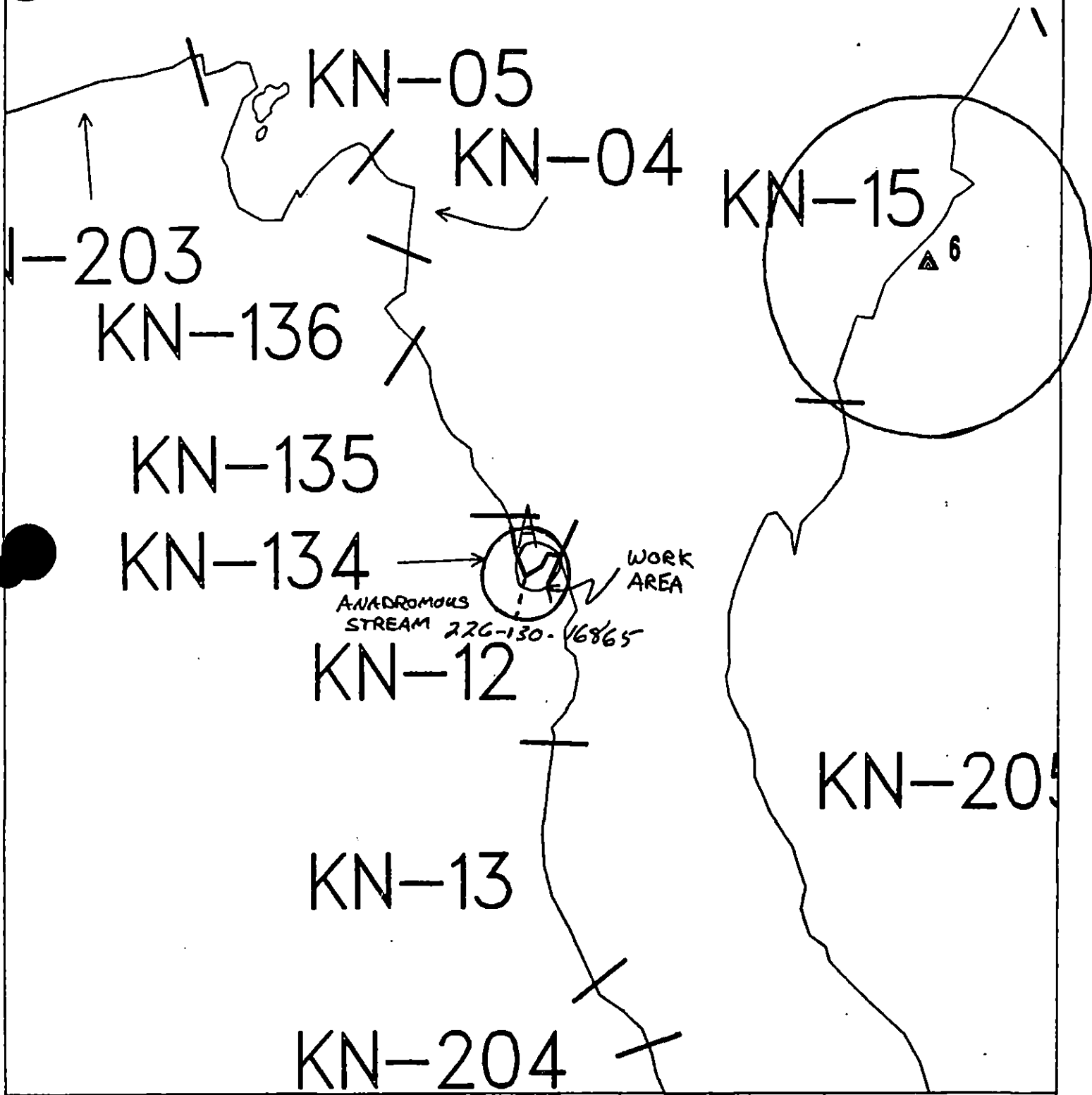
TAG ADDENDUM DATE 5/21/90.
ADEC Art Wagner
EXXON Amy Tear
NOAA Isabel Talbot
USCG M. J. Hall

FOSC W L

DATE 5-21-90

Prepared by: Claudia Slater

Date: 5/20/90



EXXON
 Exxon Company, USA
 Map Keys: KN1-KN-134
 May 11, 1990

ECOLOGY MAP
 SEGMENT KN-134
 SUBDIVISION *H* (1 of 1)
 METERS
 0 350 600

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1082 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium
use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles J. Adams DATE: April 8, 1990

OILING CATEGORIZATION:

Wide 46 m: Medium 0 m: Narrow 0 m: V.Light 186m: No Oil 26 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth _____

RECOMMENDATIONS:

_____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms Sorbents X Tarmat Removal
X Bioremediation SPOT WASHING _____ Other _____
X Wands
_____ Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map.
Recommend tar mat ~~removal~~ and manual cleanup with
pom-pom sorbents in areas shown. Also recommend manual raking of
sediments followed by bioremediation in all 3 areas as shown on
sketch. Recommend all work begin after 6/15/90 based on ecological
constraints. SEE ADDENDUM DATED 5/20/90

TAG COMMENTS: Add spot wash as necessary due to snow
cover in SUITZ. ~~assess~~ assess need to extend treatment to
snow covered area unsurveyed.

TAG APPROVAL DATE: 4-6-90

ADEC John Bauer
EON ANDY TEN FOSC: HL DATE: 4-22-90
A Buel Wescott
USCG G.A. REITER G.A. Kanten

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-134 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS**1A,1B Salmon Stream**

ADF&G catalogued anadromous stream (226-30-16865) is in the Subdivision. This subdivision is closed to bioremediation and manual raking less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking more than 100m from stream. No constraint to manual pickup, tarmat removal, spot washing, and other approved treatment.

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16865)
FOR ADDITIONAL CONSTRAINT INFORMATION**

TAG ADDENDUM DATE 6/04/90
 ADEC Ran Morris
 EXXON ANDY TEAL
 NOAA Joseph Talbot
 USCG G. H. Benter

FOSC

[Signature]

DATE

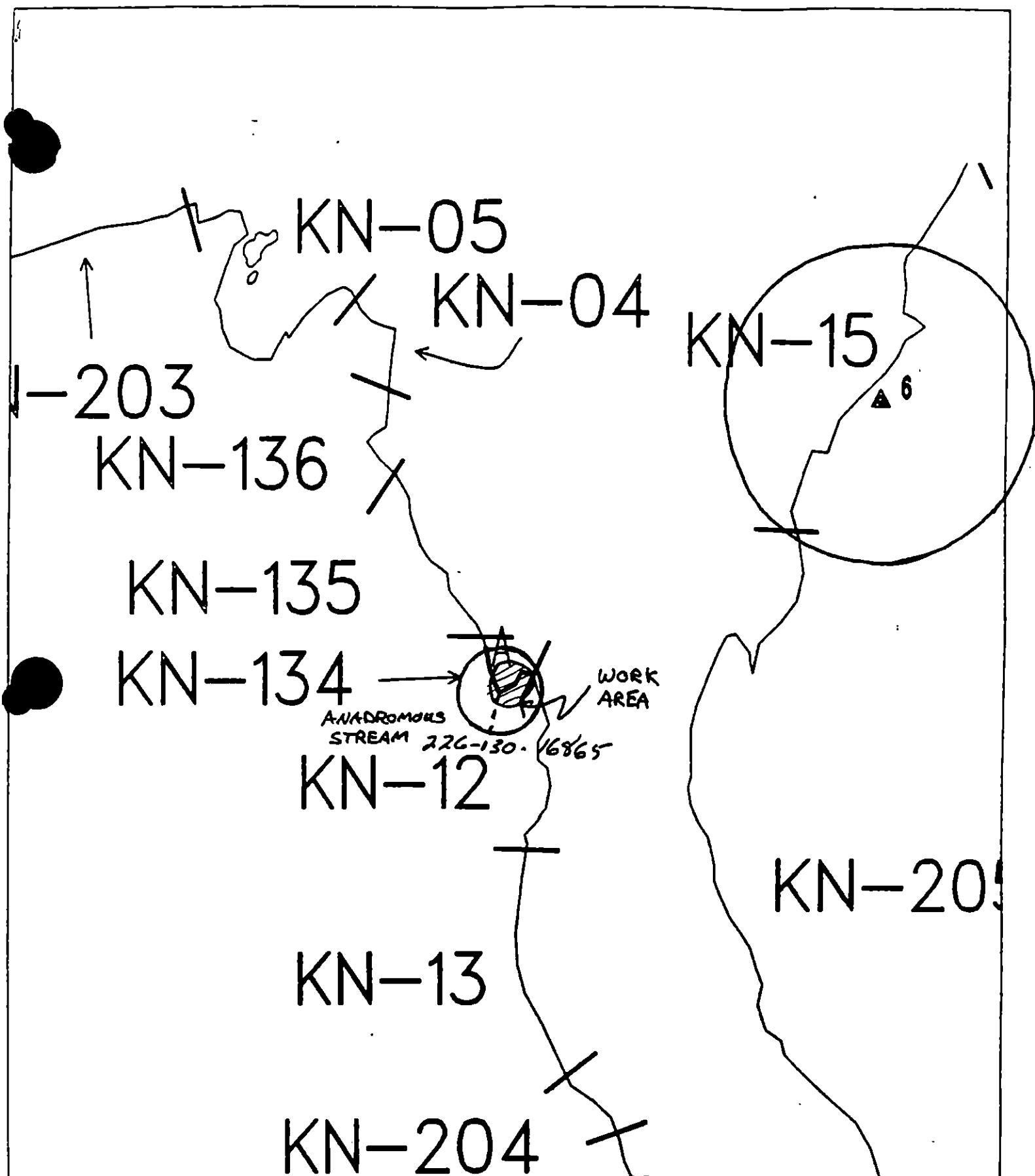
6/5/90

Prepared by:

[Signature] PP

Date:

6/4/90



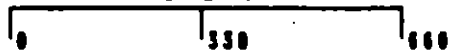
Exxon Company, USA

Map Key: KNI-KN-134

May 11, 1990



ECOLOGY MAP
SEGMENT KN-134
SUBDIVISION *H* (1 of 1)
METERS



Seabird Colony



Eagle Nest

1 inch = 1082 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium
use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles J. Adams DATE: April 8, 1990

OILING CATEGORIZATION:

Wide 46 m: Medium 0 m: Narrow 0 m: V. Light 186 m: No Oil 26 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms Sorbents X Tarmat Removal
X Bioremediation SPOT WASHING Other
X Wands
 Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map.
Recommend tar mat ~~removal~~ removal and manual cleanup with
pom-pom sorbents in areas shown. Also recommend manual raking of
sediments followed by bioremediation in all 3 areas as shown on
sketch. Recommend all work begin after 6/15/90 based on ecological
constraints.

SEE REVISION 1, Addendum dated 6/4/90 pp 1-2

TAG COMMENTS: Add spot wash as necessary due to snow
cover in SUITZ ~~area~~ assess need to extend treatment to
snow covered area unsurveyed.

TAG APPROVAL DATE: 4-6-90

ADEC JOHN BAUER
EXON ANDY TEN
JAA Bruce Wescott
USCG G.A. REITER

FOSC: DATE: 4-22-90

SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium
use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles J. Adams DATE: April 8, 1990

OILING CATEGORIZATION:

Wide 46 m: Medium 0 m: Narrow 0 m: V.Light 186m: No Oil 26 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms (Sorbents) X Tarmat (Removal)
X Bioremediation SPOT WASHING Other
X Wands
 Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map.
Recommend tar mat ~~removal~~ removal and manual cleanup with
pom-pom sorbents in areas shown. Also recommend manual raking of
sediments followed by bioremediation in all 3 areas as shown on
sketch. Recommend all work begin after 6/15/90 based on ecological
constraints.

TAG COMMENTS: Add spot wash as necessary, due to snow
cover in SUITZ. ~~assess~~ assess need to extend treatment to
snow covered area unsurveyed.

TAG APPROVAL DATE: 4-6-90
ADEC John Bauer
XON ANDY TEN FOSC: KL DATE: 4-22-90
DAA Burt Wascott
USCG G.A. REITER

OG G. MASON 134

SEGMENT ST 134

SUBDIVISION A

DATE 3 130 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg. Endry
- ☒ Off Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Em. HWL/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

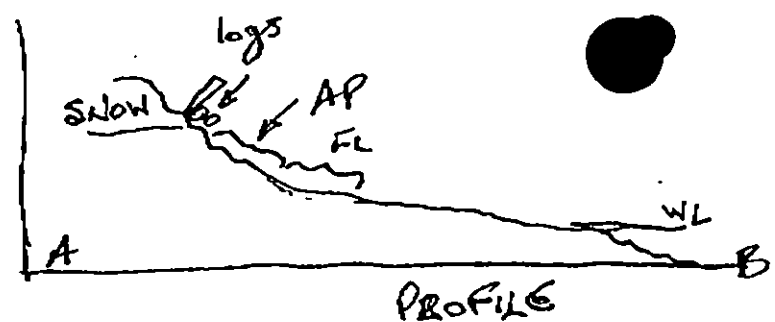
1 →

Photo location, direction, and number

Oil Character Length (m): AP 50 PO - CV 55 CT - ST - MS - PT 100 TB - FL 50 NO -

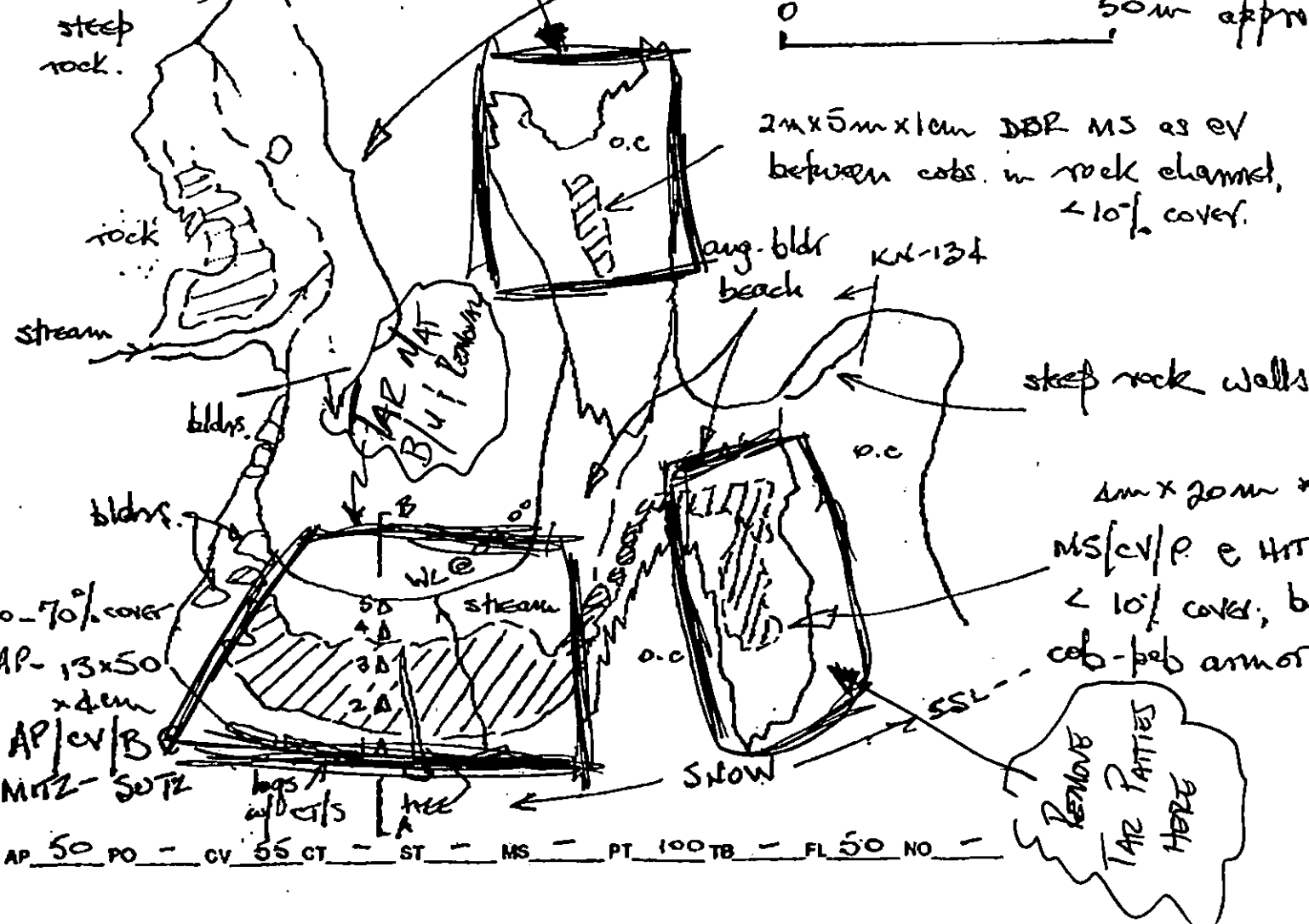
RECOMMEND 294
* TAKE AND
BIOREMEDIATE
ALL THREE BOXED
AREAS

SKETCH MAP
Natural Water
w/ Foul-Tan



KN-125

0 50m approx. scale.



REVISION: 8/24/90

NAF-30-1390 23152 FROM M1 BELTCH CHANGES TO 14-101307523714 P.02

394

KN-134

KN-12

VL
VL
VL
X X

KN-134

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

ADEC Segment Length: 258m

Exxo " " : 421

0 100 200 300

Map Key: PWS-317

Name: G. MACDONALD

Date: 8/30/90

1991 MAYSAP EVALUATION

SEGMENT: KN 134 SUB: A REGION: PWS SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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. 3 SEGMENT KN/134 SUBDIVISION A DATE 5/13/91

ADEC/ADP/G

NAME Aimee Weerman/Wesley Ghanty SIGNATURE Aimee Weerman/Wesley Ghanty

☐ NTR ☒ Treatment/Recommended - The treatment of the ANAD fish stream portion of this subsegment should consist of the manual removal & tilling of remnant mousse patches & other HSOR sediments in areas A+B sketch. Though thoroughly tilled in the fall of 90 by local response group, tarmats have reformed overwinter. The other area of concern is small cove to south (D+E) which contains retrievable HSOR sed. & subsurface oil (HOR). Manual removal of oilier sediments followed by manual tilling on incoming tide, using sorbent & snare boom to recover oil is recommended.

☒ TREATMENT RECOMMENDED (ADEC) FOLLOW ADP/G TREATMENT RECOMMENDATIONS FOR ANAD PORTION AND COVE TO THE SOUTH. REMOVAL OF COBBLE ON SOME TARMATS WILL HAVE TO BE CONDUCTED TO BE SURE ALL TARMAT IS REMOVED. OILED CLEAN-UP DEBRIS WERE REMOVED ALSO (POM-PUMS) OIL WOULD BE VERY EASILY RETRIEVED, COBBLES ARE SMALL SO WORK WOULD NOT BE DIFFICULT.

EXXON

NAME Jon P. CzarneckiSIGNATURE Jon P. Czarnecki

☐ NTR The mouth of the stream appears to be clean however there are some areas of silt that could have been picked up if man power was available. The stream bed is clean and mudflat area next to the stream are clean. The patches of silt are not on the stream bed. However the beach life in L173 and M173 appearing healthy and thriving I am not sure clean up would be in the best interest of the beach recovery.

LANDMANAGER

NAME Ed HaltnessOF CACSIGNATURE Edmund E. Haltness

☐ NTR The north portion of this segment where the anad. stream lies is still abundant in tar mats and removable oily residue. The south portion is the most consistently oil surface I have come upon this survey to date.

USCG/NOAA

NAME Jeffrey Dahlia/Peter J. Gleason LTJG SIGNATURE Jeffrey Dahlia/Peter J. Gleason

☐ NTR There is still a ~~recoverable~~ recoverable oil present, and the site is at an anadromous fish stream. I have no objection to oil cleanup should it be deemed necessary. Anadromous fish stream appears to be the controlling factor for this subdivision. (add)

this site is an anadromous stream, there is recoverable oil present (USCG)

TEAM NO. 3SEGMENT KN-134OG HARPERBIO STOKERSUBDIVISION AADEC GHORMLEYLANDMANAGER HALTNESS for CACDATE 13 MAY 1991EXXON CZARNECKIUSCG/NOAA GLEASON / DAHLINTIME 16:30 to 17:30TIDE LEVEL 6.28 ft. to 4.40 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 20 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 30 m N 0 m VL 95 m NO 76 m US 31 m

L O C	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				P							PGS	M	3	5		X			SOR/H
B				S							PGS	M	5	5			X		SOR/H
C						S					B, R	MH	1	30		X			
D ₁				S							B, R, C	M	<6	15		X	X		SOR/H
D ₂						S					B, C, P	M	<6	15		X	X		
E				C							P, C, B	M	4	5		X	X		SOR/H HOR IN SAME AREA
F						T					P, C	M	2	30		X			
G						T					P, C, B	M	5	30		X	X		PATTIES COLLECTED
H						S					R	V	1	10		X			RESIDUAL COATS,

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- 3 - 13 FRAMES 1-6

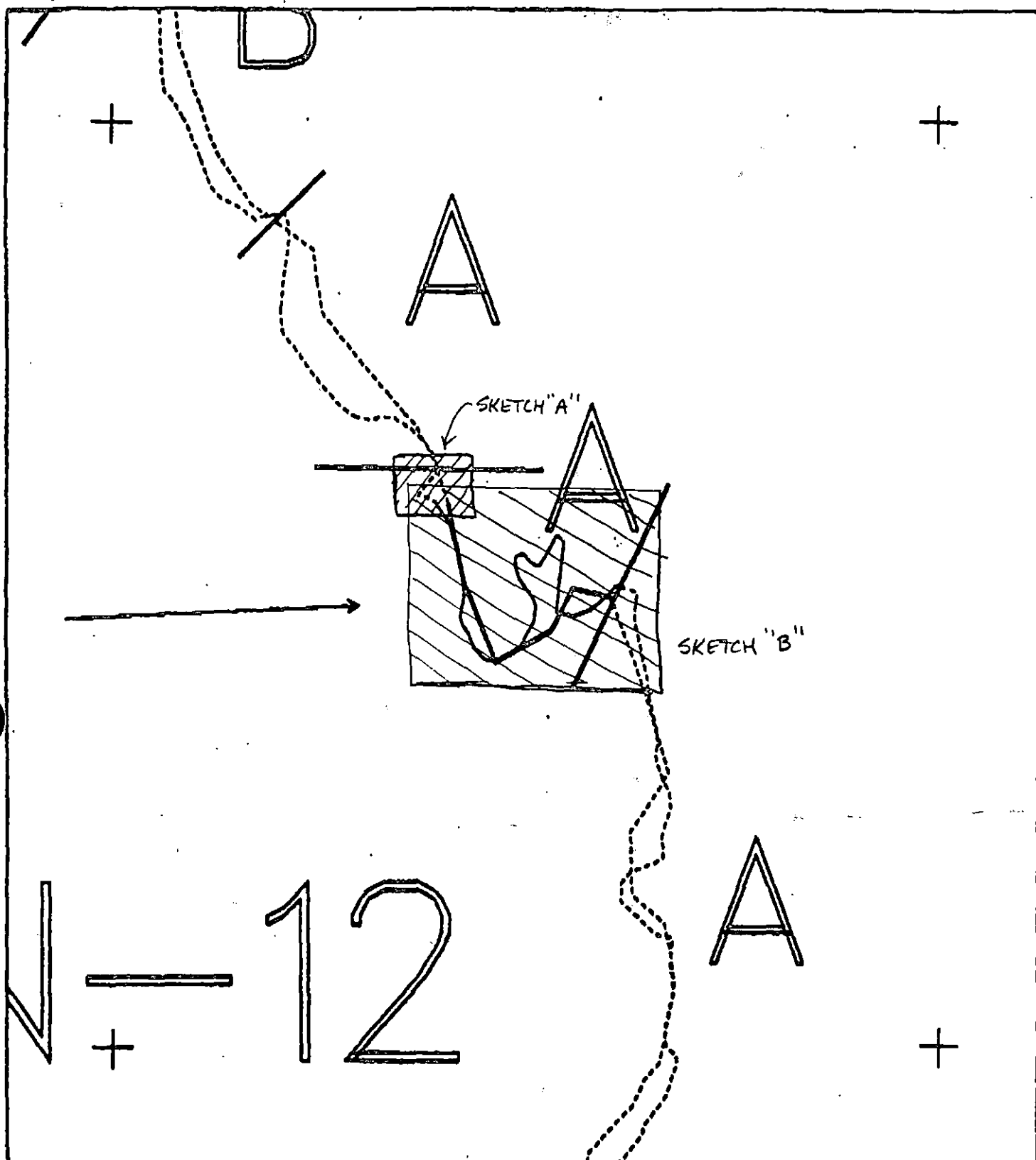
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	35							X	-					X			P/SG	LHTS
2	20							X	-						X		P/SG	SOR AREA
3	15							X	-						X		P/SG	SOR AREA
4	10				X				0-5	Y	-	-		X			PC/SG	
5	15		X						0-10	Y	-	-		X			PC/SG + Peak	
6	20							X	-					X			PC/SG	LHTS
7	20				X		X		0-5	Y	-	-		X			P/SG	HOR AREA
8	15		X						0-15	N	-	-			X		PG/S MAT	4x5m
9	15							X	-						X		PC/S PEAT	

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

OG COMMENTS: This subdivision is primarily a low-wave exposure cobble/boulder pocket beach. An anadromous fish stream is located within the northern portion of the segment.

Surface oiling is complex with several areas of "significant" oil concentration. Two patches of remnant mousse patches occur near the stream; there is evidence of treatment in these areas such as overturned boulders and cobbles. Some of this

EL revised 5/17 OG 1 of 6
REVIEWED CB 18 MAY



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

KN0134 A
 ADEC Subsegment Length: 232m
 METERS

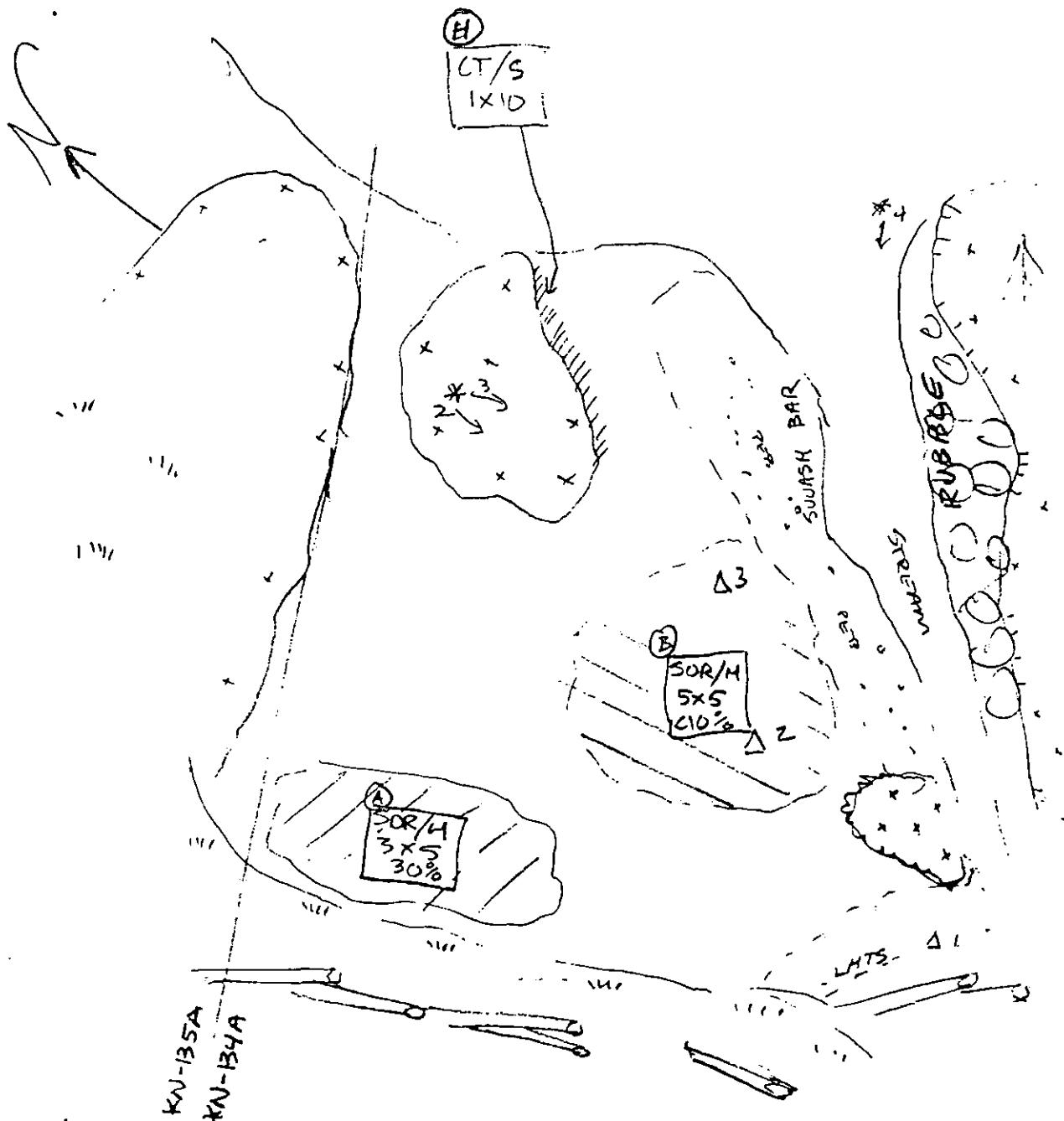
5 100 200
 AK State Plane Zone 4
 1440134

Subdivision Field Map
 Map Key: KNKN0134A
 Name: HARPER
 Date: 13 MAY 91
 Data Entered:

LOCATION MAP

26 revised 5/17
 REVIEWED CP 10 MAY

06 3 of 6



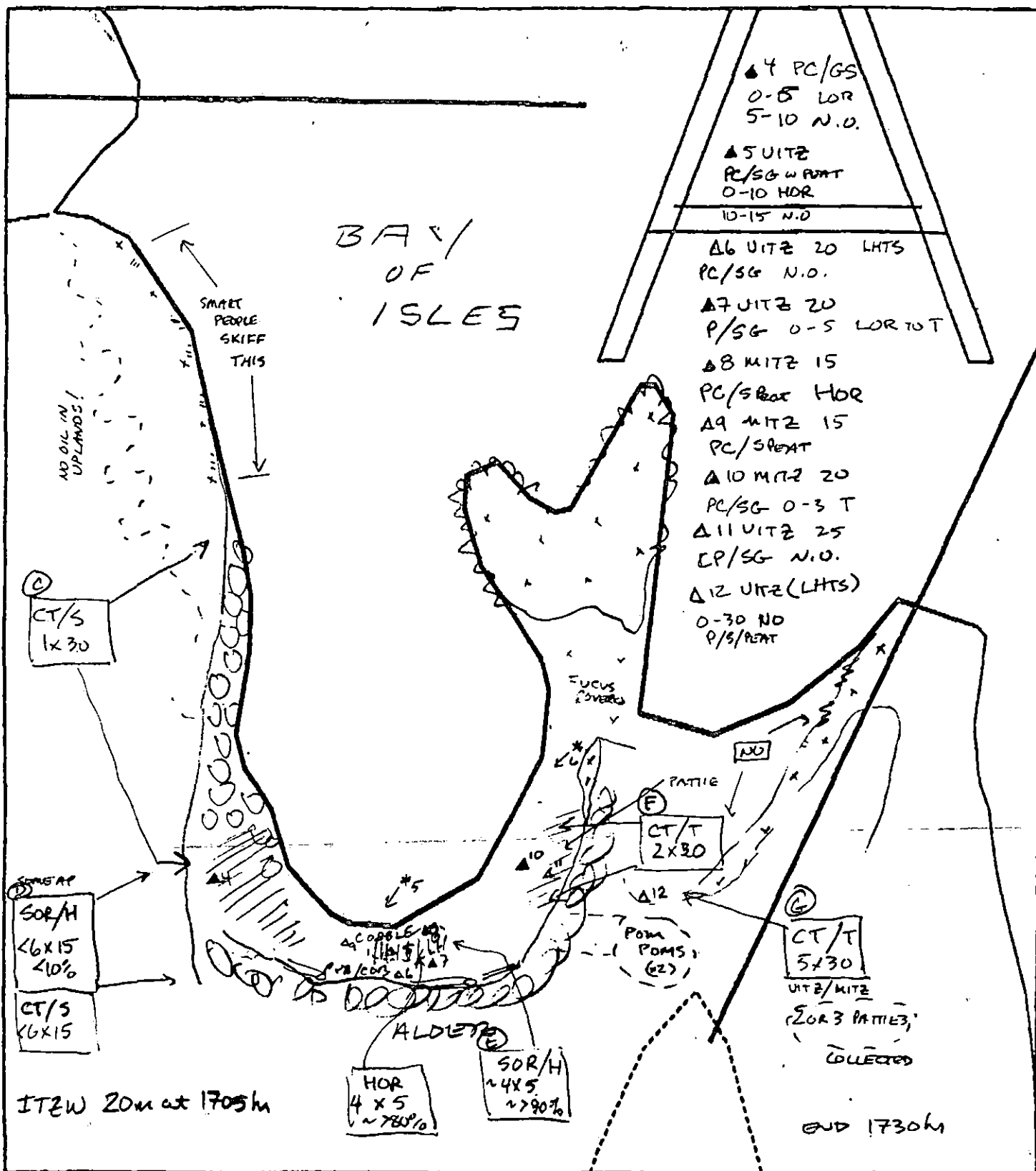
Δ¹ VITZ 35 (LHTS)
P/SG N.O.

Δ² VITZ 20
P/SG N.O.
Δ³ VITZ 15
P/SG N.O.

KN-134A
SHARPER 13 MAY 1991
ORIGINAL FIELD
SKETCH 1 of 2

REVIEWED 18 MAY
ESTIMATED 5/17
SKETCH A

OG 4 of 6

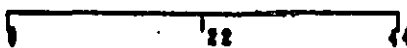


KN0134A

13 MAY 1991

JHARPER

METERS



AS State Plane Zone 4

Segment Reference Map

Map Key: KN0134



EAGLE NEST

ORIGINAL FIELD SKETCH 2 of 2

SKETCH "B"

OG 5 of 6
REVIEWED CO 18 MAY 91 REVISED 5/17

NAVSAP BIOLOGICAL SUMMARY FORM

TEAM #	3	DATE	5/13/91
SEGMENT #	KN 134	TIDAL HEIGHT(Range)	4-6'
SUBDIVISION	A	BIOLOGIST	Stoker
SEA STATE	Calm	WIND SPEED/DIRECTION	E 5
PHOTOGRAPHS: ROLL #		FRAME #	

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

Segment consists of low energy core beaches of pebble/cobble/boulder banded and separated by bedrock headlands. An anadromous stream (Pink Salmon) transects the NW beach.

Lower intertidal unobserved due to tide height. Mid & upper intertidal biota on bedrock outcrops/headlands consists in general of patchy and moderately dense to dense barnacles, sparse Fuens and Mytilus, moderately dense limpets. Pebble/cobble/boulder substrate supports patchy Fuens of variable density, filamentous green algae, sparse Mytilus, sparse to moderate density Littorina with egg masses, sparse to moderate density limpets, and sparse amphipods. On all substrates, abundance and diversity increases downslope and from W to E.

The area of highest abundance in the segment is the low bedrock outcrop and pebble/cobble tombola to the E, which supports an abundant community of dense Fuens, barnacles, Littorina with egg masses, and interbedded Mytilus.

Biota within & proximal to surface oil areas A & B is sparse or absent, and remains relatively sparse downslope to the mid intertidal.

Biota within & proximal to surface oil areas C-G consists, when present at all, of sparse barnacles, limpets, Littorina, amphipods and Oligochaetes. With the exception of the outcrop and tombola discussed above, biota downslope remains relatively sparse.

If additional cleaning takes place, the outcrop & tombola should be

WILDLIFE OBSERVATIONS avoided by personnel and equipment.

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	None Observed	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

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

Shoreline subdivision map showing important biological features attached.

REVIEWED CO 16 MAY
Reviewed M.B. 5/13/91

1 P. 51
Bio Map

Area of
enhanced
abundance
(Fucus, Mytilus,
Littorina,
barnacles)

KN0134 A

13 MAY 1991

METERS



AK State Plane, Zone 4
6606134

Segment Reference Map

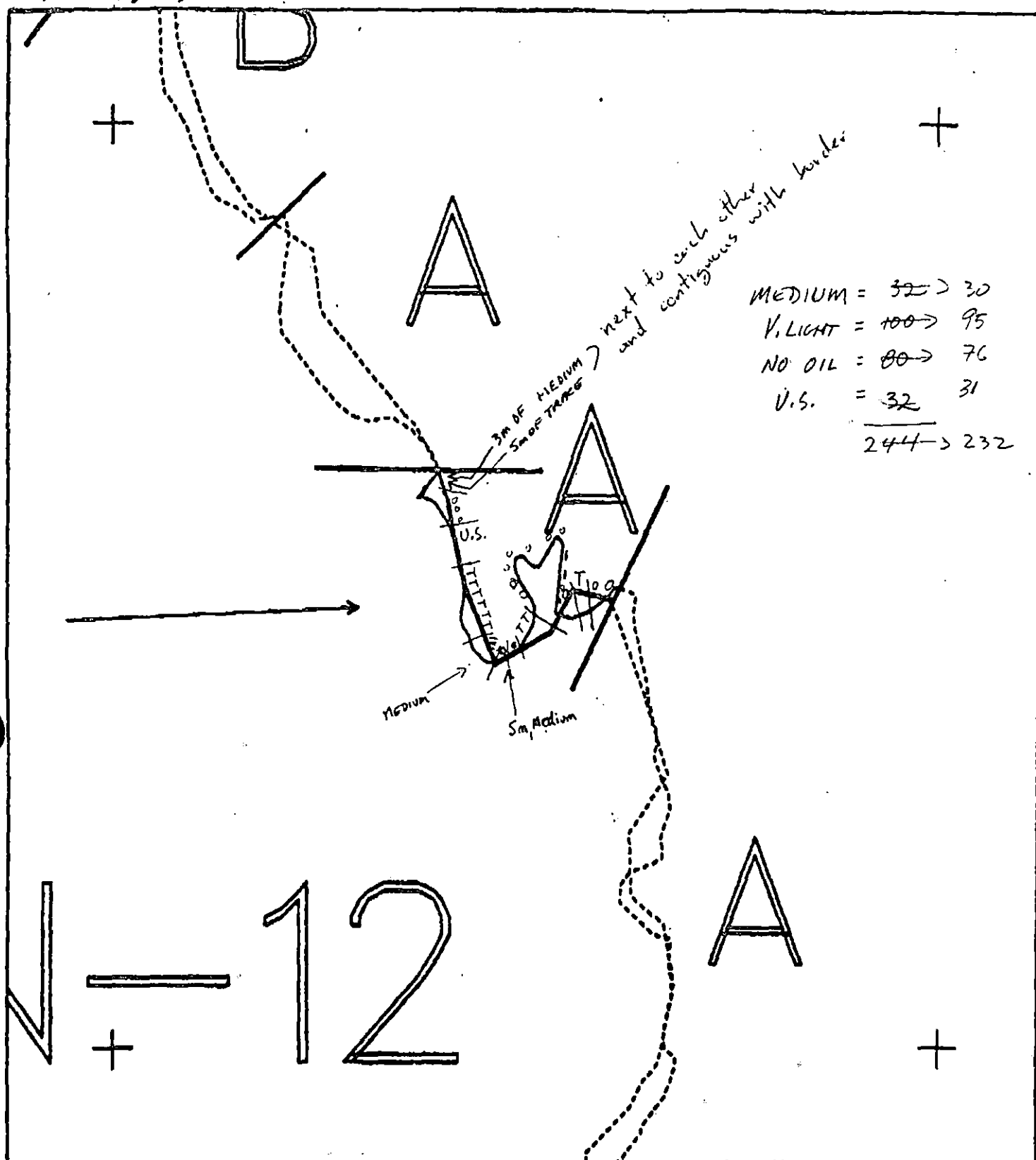
Map Key: KNEN0134



EAGLE NEST

ES revised 5/17

Reviewed A.B. 3/17/91



1991 MAYSAP EVALUATION

SEGMENT: KN 134 SUB: A REGION: PWS SURVEY DATE: 5/13/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 7/10 - 9/15Ecological/Constraints (see page two for details) Anadromous streamARCHAEOLOGICAL 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; 564-3657; (Anchorage) or 229-1514 (24 hrs.) *CEH*

*for SHPO**Charles E. H. Jones**5/30/91*RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>_____</u>	<u>X</u>	<u>X</u>
Spot Washing	<u>_____</u>	<u>_____</u>	<u>_____</u>
Bio-Customblen Only	<u>_____</u>	<u>X</u>	<u>X</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: MANUAL PICKUP OF H + M SOR AT LOCATIONS A + B FOLLOWED BY RAKE IN CUSTOMBLEN
MANUAL PICKUP OF AP / HSOR AT LOCATIONS D + E

FOSC: _____

TAG APPROVAL DATE: MAY 29 1991 FOSC APPROVAL DATE: 6/5/91ADEC *[Signature]*FOSC *[Signature]*EXXON *[Signature]*E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG *[Signature]*NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3SEGMENT KN134SUBDIVISION ADATE 5/13/91

ADEC/ADP/G

NAME Aimee Weseman/Wesley Ghant SIGNATURE Aimee Weseman/Wesley Ghant

☐ NTR ~~Treatment/Recommended~~ - The treatment of the ANAD fish stream portion of this subsegment should consist of the manual removal & tilling of remnant mousse patches, tar mats & other HSOR sediments in areas A+B sketch. Though thoroughly tilled in the fall of 90 by local response group, tar mats have reformed overwinter. The other area of concern is small cove to south (D+E) which contains retrievable HSOR sed. & subsurface oil (HOR). Manual removal of oilier sediments followed by manual tilling on incoming tide, using sorbent & snare boom to recover oil is recommended.

☒ TREATMENT RECOMMENDED (ADES) FOLLOW ADF/G TREATMENT RECOMMENDATIONS FOR ANAD PORTION AND COVE TO THE SOUTH. REMOVAL OF COBBLE ON SOME TAR MATS WILL HAVE TO BE CONDUCTED TO BE SURE ALL TAR MAT IS REMOVED. OILED CLEAN-UP DEBRIS WERE REMOVED ALSO (POM-PUMS) OIL WOULD BE VERY EASILY RETRIEVED, COBBLES ARE SMALL SO WORK WOULD NOT BE DIFFICULT.

EXXON

NAME Jon P. CzarnackiSIGNATURE Jon P. Czarnacki

☐ NTR The mouth of the stream appears to be clean. However there are some areas of silt that could have been picked up if man power was available. The stream bed is clean and immediate area next to the stream are clean. The patches of silt are not on the stream bed. However the beach life in Litz and Mitz appearing healthy and thriving I am not sure clean up would be in the best interest of the beach recovery.

LANDMANAGER

NAME Ed Haltness OF CACSIGNATURE Edmund E. Haltness

☐ NTR The north portion of this segment where the quad. stream lies is still abundant in tar mats and removable oily residue. The south portion is the most consistently oil surface I have come upon this survey to date.

USCG/NOAA

NAME Jeffrey Lohla/Peter J. Gleason LTJG SIGNATURE Jeffrey Lohla/Peter J. Gleason

☐ NTR There is still a ~~recoverable~~ oil present, and the site is at an anadromous fish stream. I have no objection to cleanup should it be deemed necessary. Anadromous fish stream appears to be the controlling factor for this subdivision. (Jed) This site is an anadromous stream, there is recoverable oil present (Jed) (USCG)

TEAM NO. 3OG HARPERBIO STOKERSEGMENT KN-134ADEC GHORMLEYLANDMANAGER HALTNESS for CACSUBDIVISION AEXXON CZARNECKIUSCG/NOAA GLEASON / DAHLINDATE 13 MAY 1991TIME 16:30 to 17:30TIDE LEVEL 6.78 ft. to 4.40 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER:  SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 201 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 30 m N 0 m VL 95 m NO 76 m US 31 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				P							PGS	M	3	5		X			SOR/H
B				S							PGS	M	5	5			X		SOR/H
C						S					B,R	MH	1	30		X			
D ₁				S							B,RCP	M	<6	15		X	X		SOR/H
D ₂						S					B,C,P	M	<6	15		X	X		
E				C							PCB	M	4	5		X	X		SOR/H HOR IN SAME AREA
F						T					P,C	M	2	30		X			
G						T					P,C,B	M	5	30		X	X		PATTIES COLLECTED
H						S					R	V	1	10		X			RESIDUAL COATS,

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- 3 - 13 FRAMES 1-6

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/SG	LHTS
2	20							X	-						X		P/SG	SOR AREA
3	15							X	-						X		P/SG	SOR AREA
4	10				X				0-5	Y	-	-		X			PC/SG	
5	15		X						0-10	Y	-	-		X			PC/SG + Peat	
6	20							X	-					X			PC/SG	LHTS
7	20				X		X		0-5	Y	-	-		X			P/SG	HOR AREA 4x5m >80'
8	15		X						0-15	N	-	-			X		PG/S PEAT	
9	15							X	-						X		PC/S PEAT	

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

OG COMMENTS: This subdivision is primarily a low-wave exposure cobble/boulder pocket beach. An anadromous fish stream is located within the northern portion of the segment.

Surface oiling is complex with several areas of "significant" oil concentration. Two patches of remnant mousse patches occur near the stream; there is evidence of treatment in these areas such as overturned boulders and cobbles. Some of this

EG revised 5/17 OG 1 of 6
REVIEWED CD 18 MAY

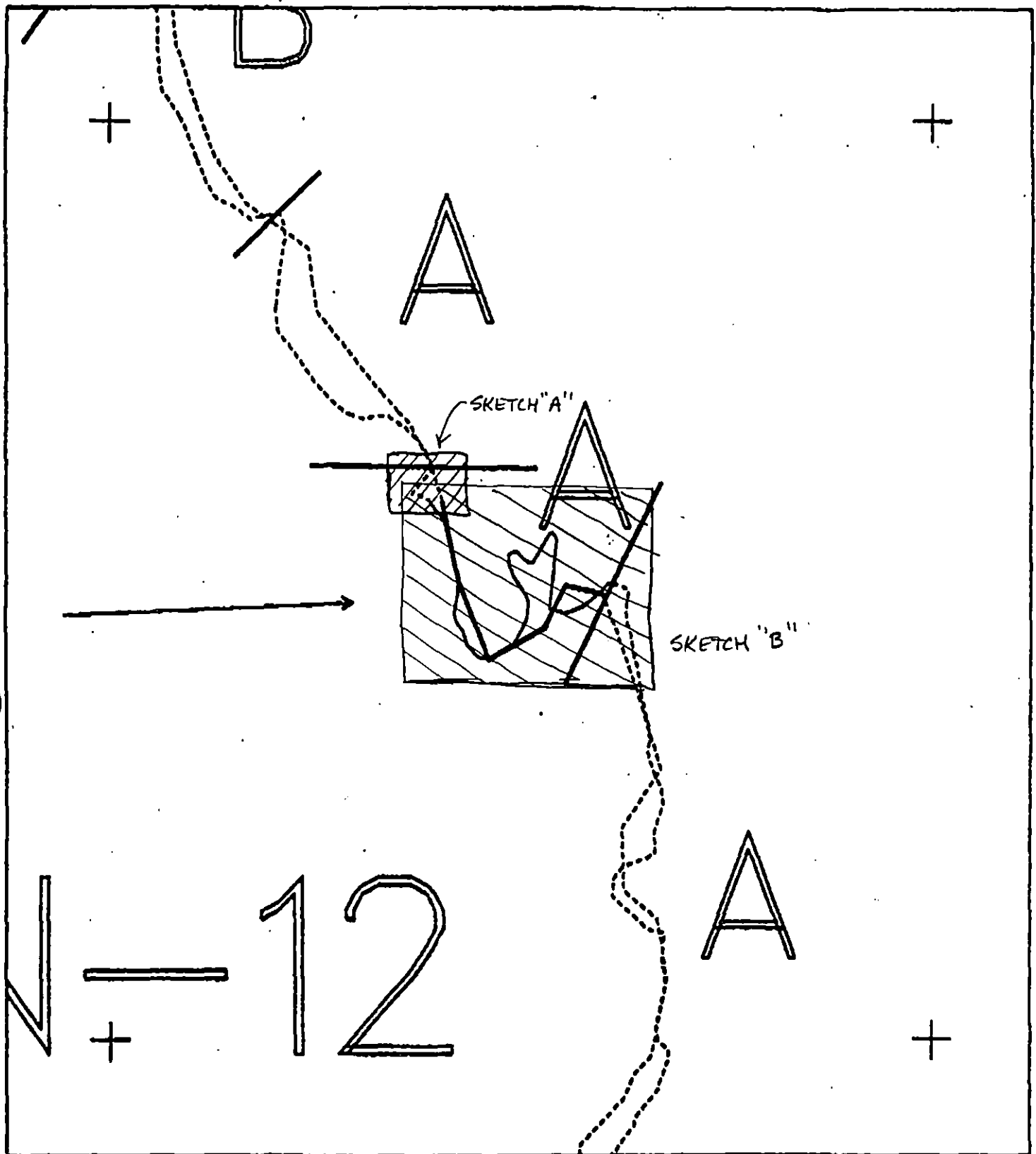
PAGE 2 OF 2

DATE 13 MAY 1911

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

The survey crew was accompanied by ADOT officials and ^{an} Associated Press photographer.

25 reviewed 5/17
REVIEWED 18 MAY
06 2 of 6



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

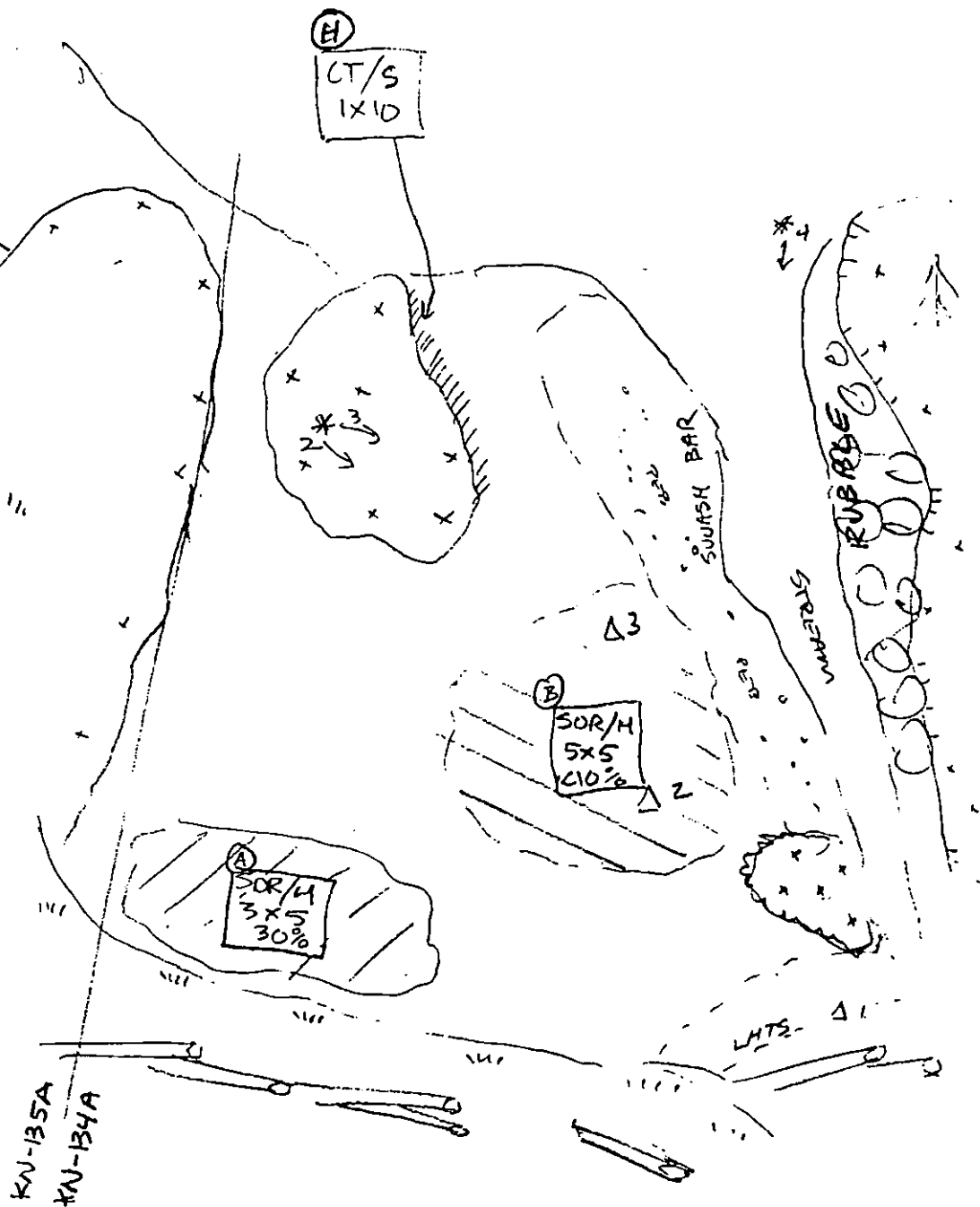
KN0134 A
ADEC Subsegment Length: 232m
METERS
AK State Plane Zone 4
440134a

Subdivision Field Map
Map Key: KN1KN0134A
Name: HARPER
Date: 13 MAY 91
Data Entered:

LOCATION MAP

OB 3 of 6

ES reviewed 5/17
REVIEWED 10 MAY



Δ¹ VITZ 35 (LHTS)
P/SG N.O.

Δ² VITZ 20
P/SG N.O.

Δ³ VITZ 15
P/SG N.O.

KN-134A
SHARPER 13 MAY 1991
ORIGINAL FIELD
SKETCH 1 of 2

REVIEWED CD 18 MAY
ES revised 5/17
SKETCH A

OB 4 of 6

BAY OF ISLES.

▲ 4 PC/GS
0-5 LOR
5-10 N.O.

▲ 5 UITE
PC/SG W PENT
0-10 HOR
10-15 N.O.

▲ 6 UITE 20 LHTS
PC/SG N.O.

▲ 7 UITE 20
P/SG 0-5 LOR 10 T

▲ 8 MITE 15
PC/SG HOR

▲ 9 MITE 15
PC/SG PENT

▲ 10 MITE 20
PC/SG 0-3 T

▲ 11 UITE 25
EP/SG N.O.

▲ 12 UITE (LHTS)
0-30 NO
P/S/PENT

SMART
PEOPLE
SKIFF
THIS

NO OIL IN
UPLANDS!

CT/S
1x30

SOR/H
6x15
10%

CT/S
6x15

IT&W 20m at 1705h

HOR
4x5
~780%

SOR/H
~4x5
~790%

CT/T
2x30

CT/T
5x30

UITE/MITE
(20x3 PATIES)
COLLECTED

END 1730h

KN0134A

13 MAY 1991 JHARPER

METERS

22 44

AT Photo Point Zone 4

Segment Reference Map

Map Key: KN0134



EAGLE NEST

ORIGINAL FIELD SKETCH 2 of 2

SKETCH "B"

OG 5 of 6

REVIEWED ON 10/20/91 BY revised 5/17

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/13/91
 SEGMENT # KN 134 TIDAL HEIGHT(Range) 4-6'
 SUBDIVISION A BIOLOGIST Stoker
 SEA STATE calm WIND SPEED/DIRECTION E 5
 PHOTOGRAPHS: ROLL # FRAME #

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

Segment consists of low energy core beaches of pebble/cobble/boulder bounded and separated by bedrock headlands. An anadromous stream (Pink Salmon) transects the NW beach.

Lower intertidal unobserved due to tide height. Mid & upper intertidal biota on bedrock outcrops/headlands consists in general of patchy and moderately dense to dense barnacles, sparse Fuens and Mytilus, moderately dense limpets. Pebble/cobble/boulder substrate supports patchy Fuens of variable density, filamentous green algae, sparse Mytilus, sparse to moderate density Littorina with egg masses, sparse to moderate density limpets, and sparse amphipods. On all substrates, abundance and diversity increases downslope and from W to E.

The area of highest abundance in the segment is the low bedrock outcrop and pebble/cobble tombolo to the E, which supports an abundant community of dense Fuens, barnacles, Littorina with egg masses, and interbedded Mytilus.

Biota within & proximal to surface oil areas A & B is sparse or absent, and remains relatively sparse downslope to the mid intertidal.

Biota within & proximal to surface oil areas C-G consists, when present at all, of sparse barnacles, limpets, Littorina, amphipods and Oligochaetes. With the exception of the outcrop and tombolo discussed above, biota downslope remains relatively sparse.

If additional cleaning takes place, the outcrop & tombolo should be

WILDLIFE OBSERVATIONS avoided by personnel and equipment.

TO BE COMPLETED IN ALL SUBDIVISIONS

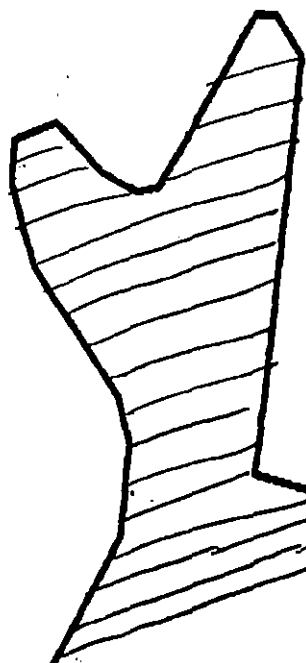
BIRDS	None Observed	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

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

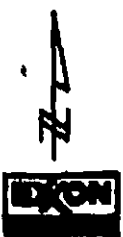
Shoreline subdivision map showing important biological features attached.

REVIEWED CO 18 MAY
 Reviewed M.B. 5/17/91

Bio Map



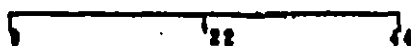
Area of
enhanced
abundance
(Fucus, Mytilus,
Littorina,
barnacles)



KN0134 A

13 MAY 1991

METERS



AK State Plane Zone 4
6660134

Segment Reference Map

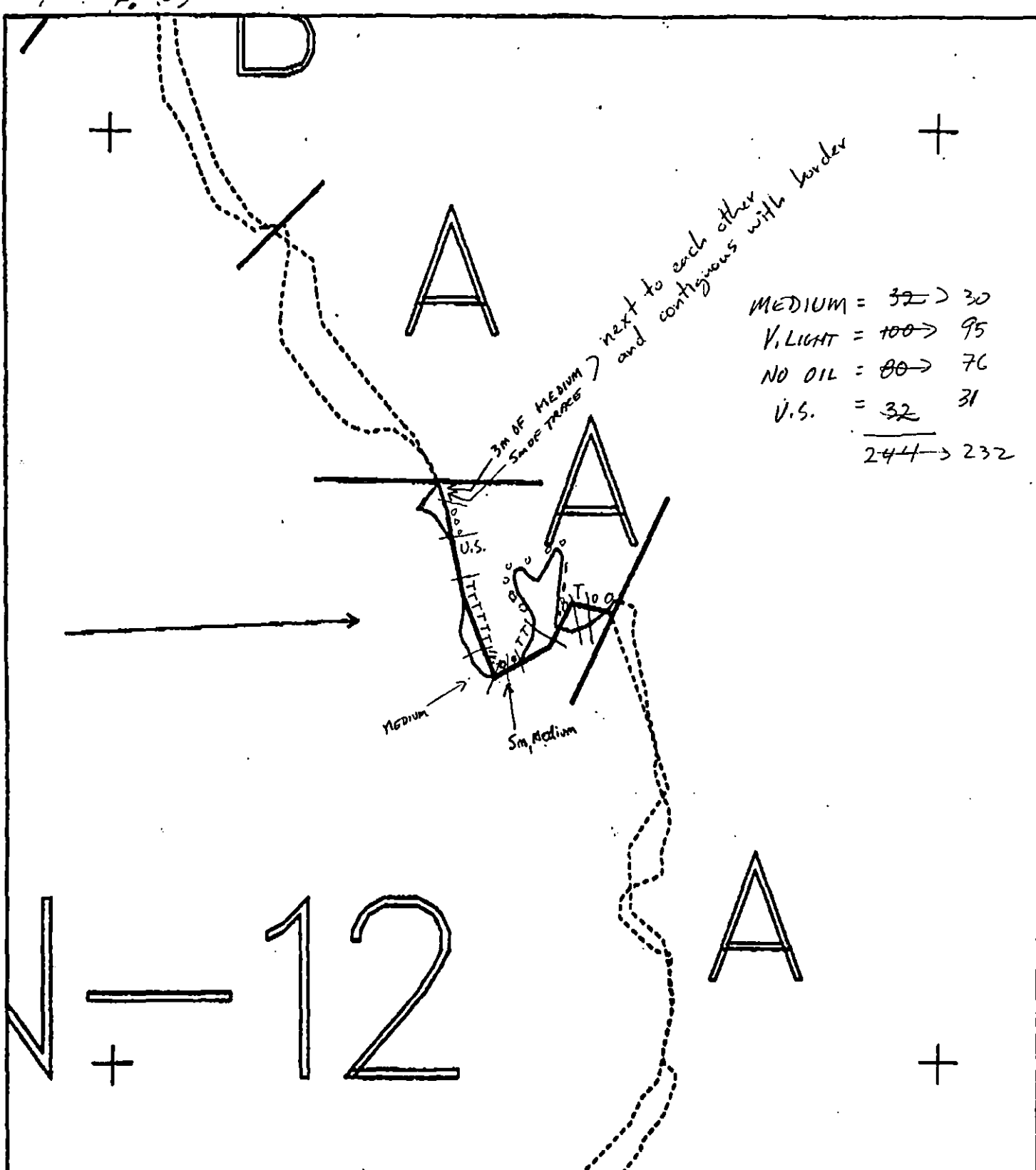
Map Key: ENIKN0134



EAGLE NEST

ES revised 5/17

Reviewed A.B. 3/17/91



MEDIUM = 32 → 30
 V. LIGHT = 100 → 95
 NO OIL = 80 → 76
 U.S. = 32 31
 244 → 232

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

KN0134 A
 ADEC Subsegment Length: 232m
 METERS
 0 100 200
 AK State Plane Zone 4
 480134a

Subdivision Field Map
 Map Key: KN1KN0134A
 Name: HARPER
 Date: 13 May 91
 Date Entered:

OG 6 of 6
 EX revised 5/17
 REVISED CO 12 MAY TOTAL P 30

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16865

SEGMENT KN-134 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Less Than 100m From Stream WORK 6/15 to 7/10 (ADF&G MONITOR REQ.)	

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

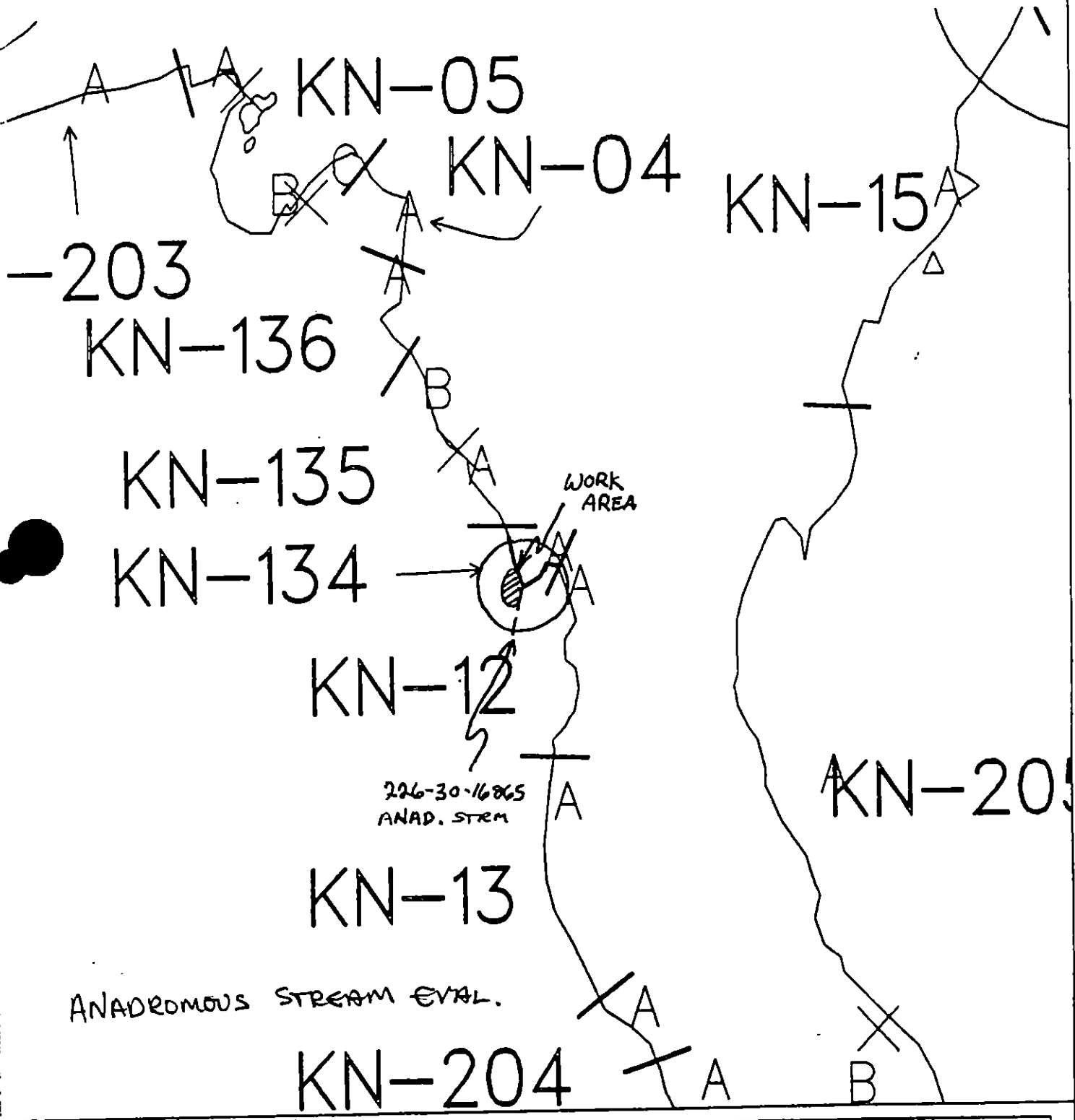
- | | |
|---------------------|---|
| 1A,1B Salmon Stream | ADF&G catalogued anadromous stream (226-30-16865) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal. |
| 2M Herring Spawning | Closed to bioremediation prior to 6/15. No constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-134A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC [Signature] Date 6-10-90
Prepared by [Signature] Date 6/10/90



226-30-16865
ANAD. STRM

ANADROMOUS STREAM EVAL.

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

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-134 STREAM NO: 226-30-16865 DATE 4/22/90

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

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: Reke Dan Dale DATE: 5/22/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from (6/16 to 7/9)

SEE ANAD. FISH ADDENDUM dated 6/19/90 RP

TAG COMMENTS: Bioremediation to include INIPOL AS INDICATED IN
ARGGS OF "COVER" + CUSTOMER AS REQUIRED FOLLOWING
Tarmat Removal

TAG APPROVAL DATE: 5/18/90.

ADEC ART WEINER Art Weiner

EXXON ANDERSON

NOAA GARY PETRAE Gary Petrae

USCG G.H. REITER G.H. Reiter

FOSC [Signature] DATE:

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-134

SUBDIVISION: A

STREAM NO: 226-30-16865

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-134 STREAM NO: 226-30-16865 DATE 4/22/90

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)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☐ No Treatment Recommended

☒ Treatment Recommended

☒ Manual Pickup

☐ Bioremediation

☒ Tarmat Removal

☐ Snare/Absorbent Booms

☐ Oil Snares (pom poms)

☐ Absorbents (pads, rolls, etc)

☐ Spot Washing: _____ Wands

☐ Beach Cleaner

☐ Other (see comments)

COMMENTS: Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from 6/16 to 7/9.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

43/
43

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN-134 SUBDIVISION: ^{ASC#} 226-30-16860 DATE 22 APR 90

USCG

NAME

Kerwin L. Dreher

SIGNATURE

CWO K. L. Dreher☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I agree with clean up methodology except; I would also consider bioremediation.

ADP&G

ADEC

NAME

Aimee Weseman

SIGNATURE

Aimee Weseman☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Remove oiled tar mats, patties and crusted oiled gravels on intertidal flat on north side of stream - the majority lie in the M to UITZ

Remove oiled debris along banks - taking particular notice of U.ITZ and Supra ITZ - now snow covered

Remove oiled organic material from knoll on north side of stream
- cut off stump & roots & other oiled parts of 2 trees
- oiled grasses

No bioremediation recommended.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04/13/90

2A/43

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ KN13A
 BIO KEN CRITCHLOW LAND REP STREAM 22630-16865 (OF)
 EXXON DARLHL YOE3 ADFG RAKAWITIN-AIMEE WEZEMAN TIME 17:10 to 18:05
 TEAM NO. 14 TIDE LEVEL .5 FT DATE 4/22/90
 EST. SUBDIVISION LENGTH: 110 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 20 % B 20 % C 20 % P 20 % G 10 % S 10 % M 10 % V 10 %
 SLOPE: Long 50 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 90 m M 10 m N 10 m VL 20 m NO 10 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	D	R	P	B	W	Y	OR	BL	SU	U	M	U
ASPHALT PAVEMENT	✓					✓				✓	✓	✓
POOLED												
COVER		✓				✓			✓	✓	✓	
COAT	✓					✓			✓	✓		
STAIN												
MOUSSE												
PATTIES	✓		✓			✓					✓	✓
TARBALLS												
FILM												
NO OIL												

PAVEMENT H F (S) 457 sq. m by .3 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

 Did you collect DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	W	Y	OR	BL	SU	U	M	U			
1	15					✓	•							✓						CB, PB, GR / CBP
2	8					✓	•			✓					✓					CB, PB, GR / CBP
3	12					✓	•							✓						CB, PB, GR / CBP
							•													
							•													
							•													

COMMENTS NO OIL OBSERVED IN STREAM BED. ON WEST SIDE OF SITE
 CLIFF, SMALL BOLDER BEACH. NEW SPAT SET IN LOWER INTERTIDAL
 ZONE. UPPER SUPRAZONE SNOW COVERED W/ SOME OILED
 DEBRIS UNDER SNOW

REVIEWED TWDATE 5-1-90

26/43

ADPEC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCH HHS PTA2 REGION: PK KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4-22-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: R. Gustin4 START TIME: 154016 HIGH TIDE HTS: 122 OBSERVERS: A. W. Wynn5 STOP TIME: 170717 LOW TIDE TIMES: 123 AGENCY: DDG6 SEGMENT #: KN21118 LOW TIDE HTS: 124 PHOTOS TAKEN: Y 0

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frames: _____

8 K-UNIT: _____

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPES: 90A140 of 555

9 STAT AREA: _____

20 USCG QUAD: _____

Start: 0235 End: 0346

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y 0 Number: _____12 SOURCE: Har Loren

Oil

13 LOCATION: Alone Bay Is.

Sediment

14 DESCRIPTION: Knight Is.

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H ²	4	L	V	H ²	4
27 SURFACE COVERAGE					60 ft	20 ft		

36 CATALOGED ANAD. FISH SKEWT Y N37 CATALOG #: 16875

38 STREAM NAME: _____

28 SURFACE THICKNESS

1-4 mm

39 OIL IN STREAM BED? Y N

29 PENETRATION

45 cm - no bottom point found

40 OIL ON STREAM BANKS? Y N

30 OVERALL OIL IMPACT: N VL L M H

41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)31 OIL TYPE: Roots Seaweed Tar Asphalt Sticky Stain42 OIL WITHIN 1 MILE OF STREAM? Y N32 OILED DEBRIS? Y N much

Where: _____

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

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock Boulder 60% Cobble 40%

Gravel _____ Sand _____ Mud/silt _____

Species	Aerial	Ground

COMMENTS: Outlet of lake is choked with oiled logs, needles, kelp, mussels
 sheen on gulf. Thick layers of oiled vegetation / Eucalyptus etc.
 Some sheen down stream from log jam in braided stream on beach.
 (Copper sheen) Oiled debris continues in MITE on both sides

27/43

45 PHOTOLOG

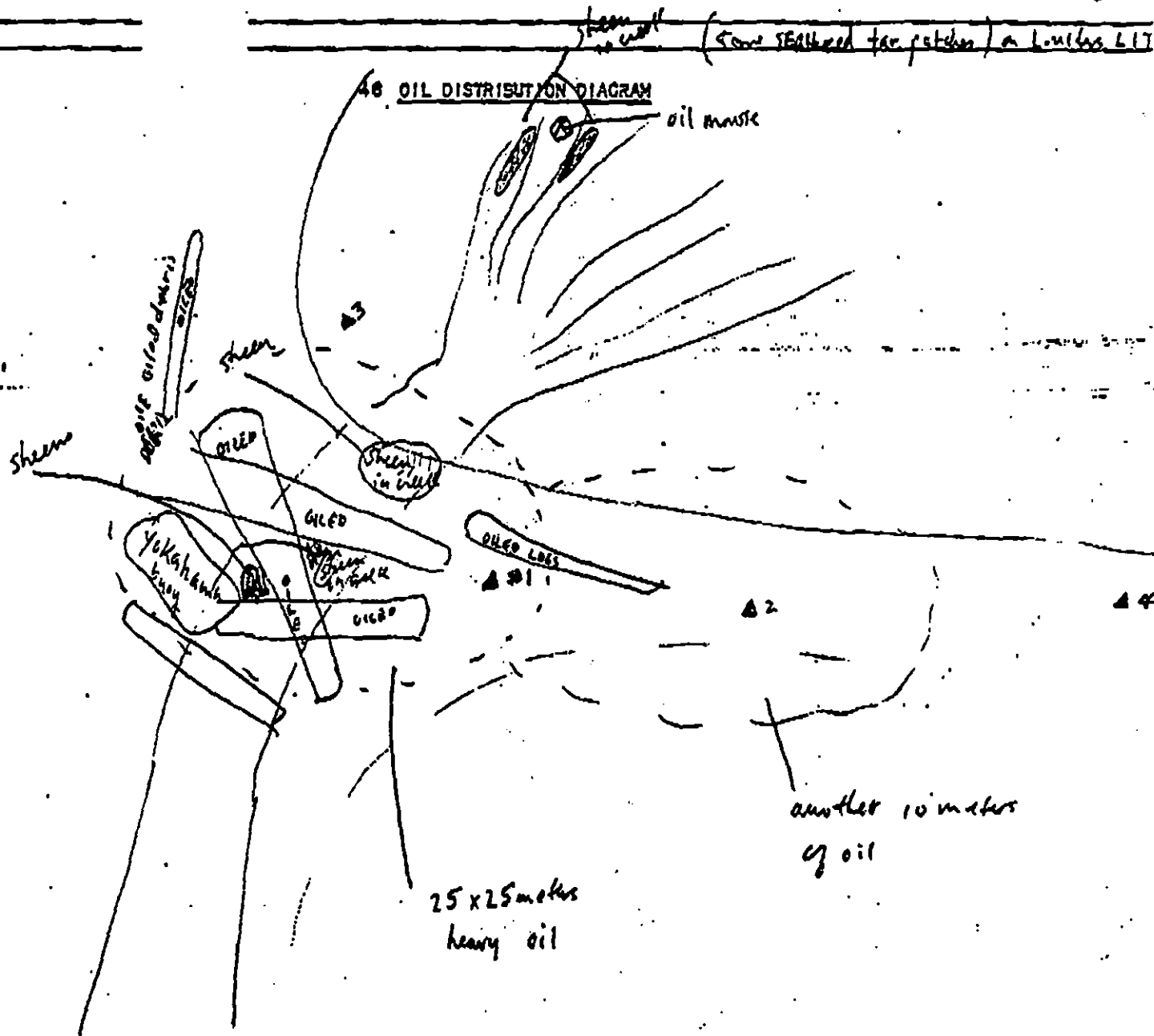
NAME(S)

DESCRIPTION

pit #1. 45cm oil continues deeper than 45. Subsurface oil fine oil
 pit #2. 34cm deep (oil surface down 4cm deep) coat of oil
 pit #3. weathered oil in some small gravel in hole 18cm deep hole
 pit #4. some oil stained rock found. Cobble/gravel read as oiling 25 and
 oil on bottom of rocks. coat. oil random throughout.

stem
 (some sealed for petech) a number 11

46 OIL DISTRIBUTION DIAGRAM



25x25meters
 heavy oil

another 10 meters
 of oil

29/43

Recommendations

Perform work during proper tidal window.
Remove as much oiled debris manually as possible prior to removing logs.

Remove oiled logs, branches, needles, kelp etc debris from creek mouth and burn on site, preferably at a high ground site. A tracked caterpillar tractor with winch + blade or spring tooth rake would make this job quicker + more effective.

Shovel removal or other manual removal, after logs have been cleared, of oiled gravels and finer gravels, particularly within 25 meters of either side of stream. Throw larger oiled rocks after wiping down up into supratidal areas.

Resurvey beach area and remove any oiled debris or obvious farmatts, patties etc.

- Lay out pompan material if possible along banks of stream to prevent oil from bleeding into stream bed. Do this prior to beginning of work.

* Main point to observe is to remove as much of the oiled debris between logs and around the log jams before disturbing the logs. This will prevent a lot of oiled debris from falling into the stream.

Comments by Ken Critchlow: ADG recommendations are reasonable and should be effective in cleaning beach. Burning on high ground may not be acceptable. KRC

28/43

debris between, on, and around the log jams
before disturbing the logs. This will prevent
a lot of oiled debris from falling into the stream.
No bto remediation recommended.

394

ECCLESIASTICAL

1A, 1B

2M

KN-134

SUBJECT
ADDITIONAL
STATION

20-50-1666
(1, 12/97)
LOCATED WITHIN
KN-134 - A
(1 CTI)

~~KN-12~~

XXXX Wide
//// Medium
--- Narrow

KN-134

ADEC Segment Length: 258m
Exxo " : 421

Map Key: PWS-317

Name: G. Macdonald

3/30/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-135 SUBDIVISION A (1 of 2)

WORK WINDOW

Bioremediation
Tarmat Removal
Spot Washing
Manual Tilling

OPEN PRIOR TO 8/15

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater, ADF&G, 5/10/90 to Exxon/Tom Kelley.

3N,3P Pinniped Pupping
3O,3Q Pinniped Molting

CONSTRAINT 8/15 to 9/15. 5/15 to 7/1 constraint waived for bioremediation and site monitoring by Lloyd Lowry, ADF&G, per conversation with Exxon/John Wilkinson, 5/8/90; vessels will navigate slowly staying near the north side of the entrance. Steve Zimmerman, USNMFS, deferred to ADF&G (phone conversation with Exxon/J. Wilkinson 5/8/90).

OTHER ECOLOGICAL CONSIDERATIONS

Restrict disturbance of unrolled fucus, barnacles and gastropods in M and UITZ.

IF CULTURAL RESOURCES ARE UNCOVERED, PHONE 564-3274.

TAG APPROVAL DATE - 5/11/90
ADEC ART WILKINSON
EXXON ANDY TERRY
NOAA JOHN WILKINSON
USCG D. D. ROME

FOSC [Signature]

DATE 5-12-90

Prepared by: [Signature]

Date: 5/10/90

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, O) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled fucus, barnacles and gastropods in M and UITZ.

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). progress. been on the

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

OILING CATEGORIZATION:

Wide 0 m: Medium 134 m: Narrow 0 m: V.Light 0 m: No Oil 151 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat breakup and removal in areas as shown on sketch map, manual tilling of area where subsurface oil found, and bioremediation of areas shown. All work between 7/1 and 8/15 based on constraints. SPOT WASH AS INDICATED ON SKETCH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER

EXXON Andy Katz

NOAA Burt Wassett

USCG G.A. REITER

FOSC: DATE: 5-6-90

CG/Adec monitors survey UITZ and SITZ for oil during work. Provide 24 hour notice to CAC prior to beginning work. Upon request, CG ICP supervisor transport and berth CAC monitor.

See Addendum (5/10/90) for revised dates. WK

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-135 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup
Bioremediation
Tarmat Removal
Spot Washing
Small Mechanical Equipment

OPEN PRIOR TO 8/15

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater, ADF&G, 5/10/90 to Exxon/Tom Kelley.
3N,3P 3O,3Q	Pinniped Pupping Pinniped Molting	CONSTRAINT 8/15 to 9/15. 5/15 to 7/1 constraint waived for bioremediation and site monitoring by Lloyd Lowry, ADF&G, per conversation with Exxon/John Wilkinson, 5/8/90; vessels will navigate slowly staying near the north side of the entrance. Steve Zimmerman, USNMFS, deferred to ADF&G (phone conversation with Exxon/J. Wilkinson 5/8/90).

OTHER ECOLOGICAL CONSIDERATIONS

Restrict disturbance of uncoiled fucus, barnacles and gastropods in M and UITZ.

IF CULTURAL RESOURCES ARE UNCOVERED, PHONE 564-3274.

TAG APPROVAL DATE 5/11/90

ADEC ART WEINER Art Weiner

EXXON ANDY TGA Andy TGA

NOAA Joseph J. Koval Joe Koval

USCG D. D. ROME D. D. Rome

FOSC [Signature]

DATE 5-11-90

Prepared by: Anders Mays

Date: 5/10/90

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled fucus and barnacles in MITZ.

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). progress. been on the

SHPO SIGNATURE: [Signature] DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 77 m: Medium 112 m: Narrow 0 m: V.Light 70 m: No Oil 5 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend ~~bioremediation~~ removal of tarmats, as well as manual pickup of ~~tarmats~~ in areas shown on sketch map. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints. SPOT WASH AS REQUIRED AS INDICATED ON SKETCH.

See Addendum (5/10/90) for revised dates. WPK

TAG COMMENTS: FOR TARMAT REMOVAL SMALL MECHANICAL EQUIPMENT MAY BE USED AS DETERMINED BY FIELD OPS.

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER
EXXON ANDY TGA
NOAA Burt Wapsett
USCG G.A. REITER

FOSC: [Signature] DATE: 5-6-90

CG/Adec monitors survey SITZ and UITZ during work. Provide 24 hour notice to CAC prior to work. CG ICP supervisor transport and berth CAC monitor upon request.

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and
sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor
seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G
to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled
fucus, barnacles and gastropods in M and UITZ.

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). progress.
been
on the

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

OILING CATEGORIZATION:

Wide 0 m: Medium 134 m: Narrow 0 m: V.Light 0 m: No Oil 151 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat breakup and removal in areas as shown
on sketch map, manual tilling of area where subsurface oil found,
and bioremediation of areas shown. All work between 7/1 and 8/15
based on constraints. SPOT WASH AS INDICATED ON SKETCH

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER
EXXON Andy Tetz
NOAA Burt Wassett
USCG G.A. REITER

FOSC: DATE: 5-6-90

CG/ADEC monitors survey UITZ and SITZ for oil during work. Provide 24 hour notice to CAC prior to begin work. upon request, CG ICP supervisor transport an berth CAC monitor.

OG MCDONALD

SEGMENT ST/KN-135

SUBDIVISION A

DATE 3/30/90

CHECKLIST

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

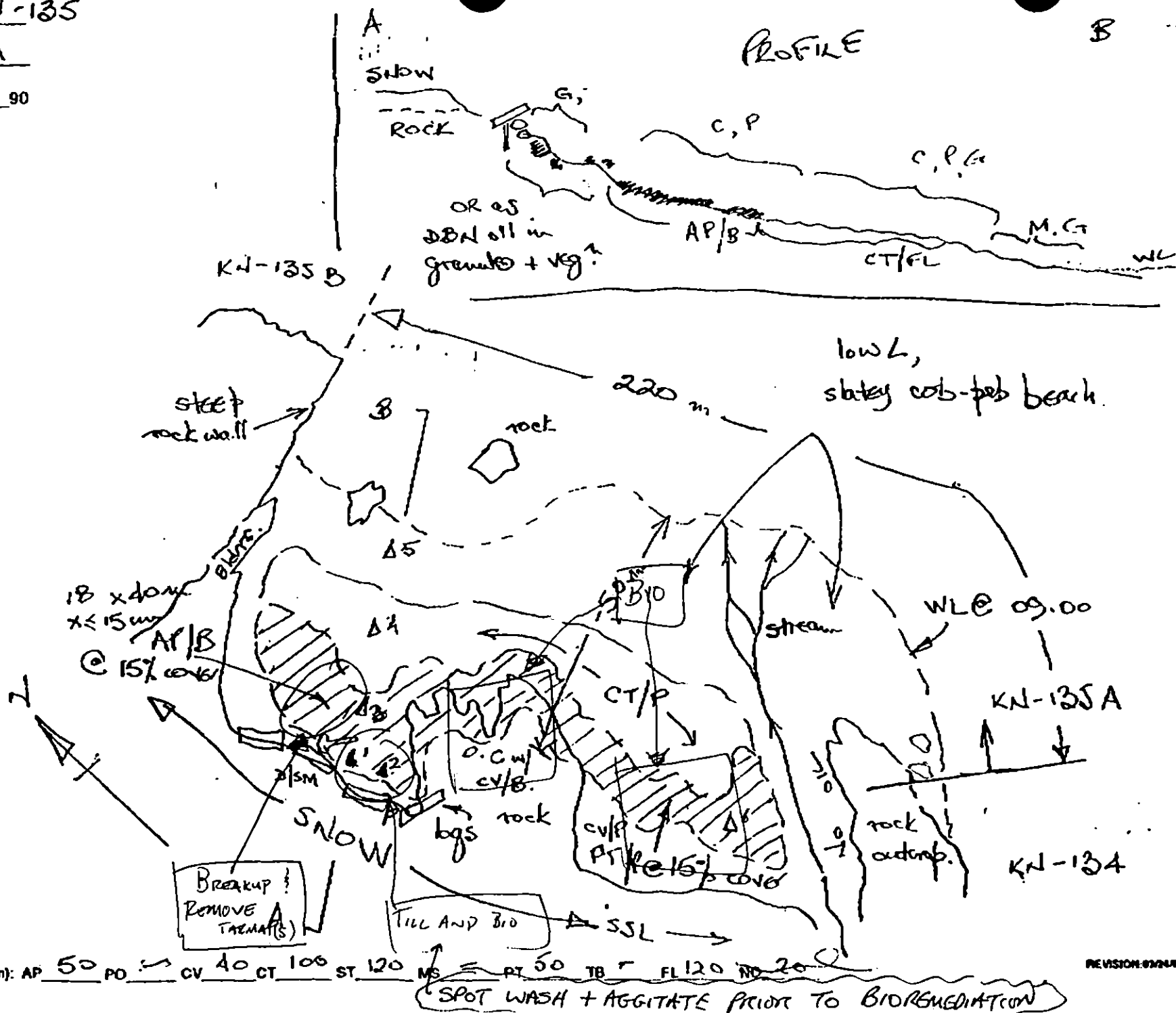
LEGEND

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

SKETCH MAP

PROFILE

B



KN-04

KN-135

KN-12

SUBDIV. B →

SUBDIV. A →

10 m
No oil
in this area

KN-135

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

ooo " "

ADEC Segment Length: 483m

Exxon " " 511m

0 100 200 300

Map Key: PWS-318

Name: G. Macdonald

Date: 3/30/90

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled fucus and barnacles in MITZ.

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). progress. been on the

SHPO SIGNATURE: [Signature] DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 77 m: Medium 112 m: Narrow 0 m: V.Light 70 m: No Oil 5 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend ~~breakup~~ and removal of tarmats, as well as manual pickup of ~~tarmats~~ in areas shown on sketch map. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints. SPOT WASH AS REQUIRED AS INDICATED ON SKETCH

TAG COMMENTS: FOR TARMAT REMOVAL SMALL MECHANICAL EQUIPMENT MAY BE USED AS DETERMINED BY FIELD OPS.

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Burt Wescott

USCG G.A. REITER

FOSC: [Signature]

DATE: 5-6-90

CG/Adec monitors survey SITZ and UITZ during work. Provide 24 hour notice to CAC prior to work. CG ICP supervisor transport and berth CAC monitor upon request.

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled fucus and barnacles in MITZ.

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 77 m: Medium 112 m: Narrow 0 m: V.Light 70 m: No Oil 5 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30 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 breakup and removal of tarmats shown^e, as well as manual pickup of tarballs. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints.

in areas shown on sketch map

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

OG EDONALAD

SEGMENT ST/KN-135

SUBDIVISION B

DATE 3/30/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

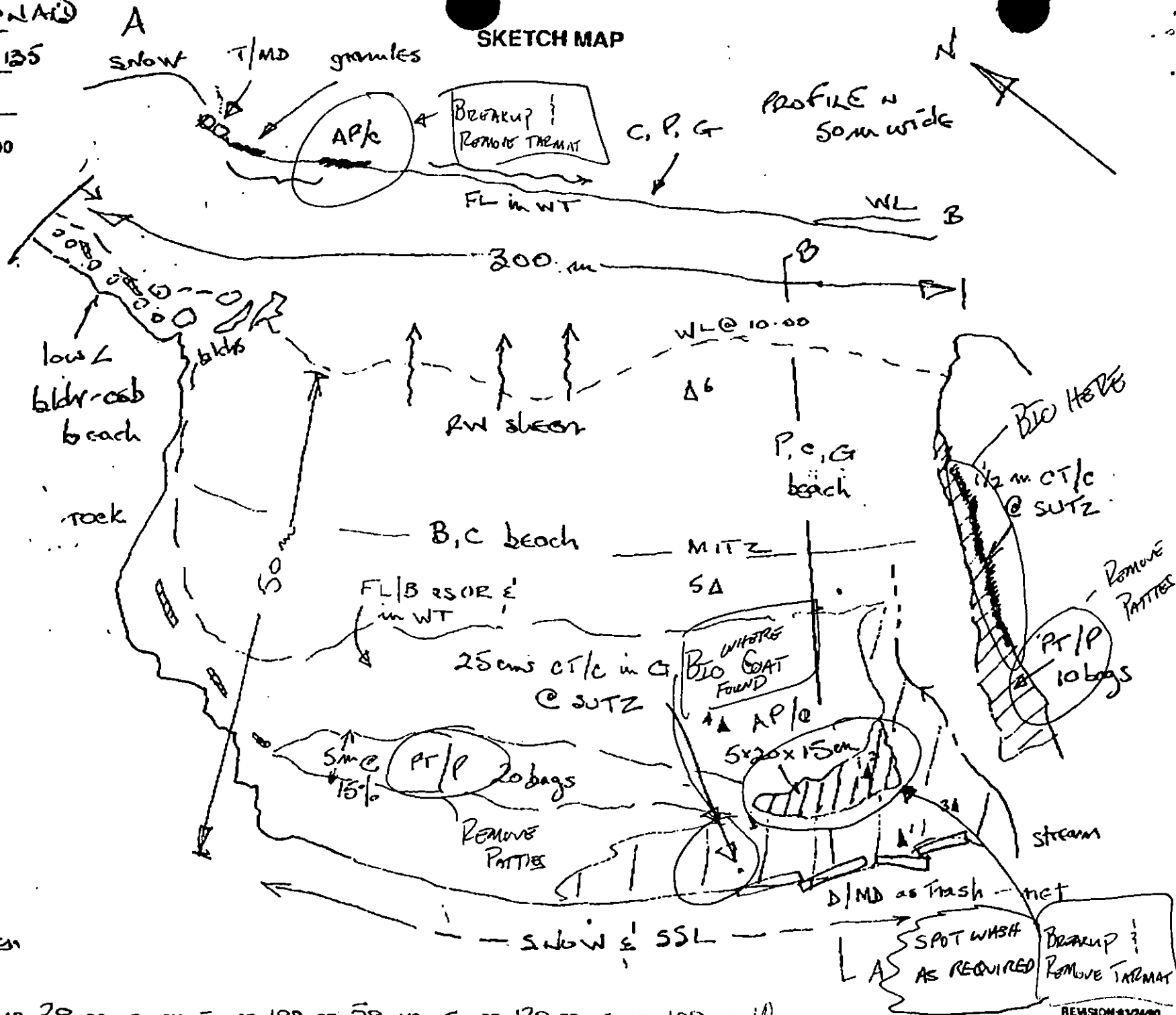
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Obd Vegetation

Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 20 PD - CV - CT 100 ST 50 MS - PT 120 TB - FL 100 NO 10

REVISION #3/24/90

KN-04

KN-135

KN-12

SUBDIV. B

SUBDIV. A

KN-135

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ADEC Segment Length: 483m

Exxon " " " 511m

0 100 200 300

Map Key: PWS-318

Name: G. Macdonald

Date: 3/30/90

SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B(2 of 2) DATE 4/1/90

ECOLOGICAL CONSTRAINTS:

TIME SENSITIVITY _____ TO _____

Herring spawning (2M): 4/1-6/15; May be near harbor seal & sea lion pupping areas
(3N, P): 5/15-7/1; May be near harbor seal and sea lion molting areas (3Q, Q):
8/15-9/15. Ask ADF&G to clarify pupping & molting locations. Restrict disturbance
of moiled & sucua & barnacles in MIT 2.

ARCHAEOLOGICAL CONSTRAINTS:

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:

77 m Wide, 112 m Medium, 0 m Narrow, 70 m V. Light, 5 m No Oil
 Oil Subsurface observed X Yes _____ No Maximum Depth 30 cm

RECOMMENDATIONS:

_____ No Treatment Recommended
☒ Treatment Recommended
☒ Manual Pickup _____ Snare Booms/Sorbents ☒ Tarmat Breakup/Removal
☒ Bioremediation _____ Spot Washing _____ Other
 _____ Wands _____ Beach Cleaner

COMMENTS: RECOMMEND BREAKUP & REMOVAL OF TARMATS SHOWN, AS WELL AS
MANUAL PICKUP OF TARMATS. IN ADDITION, BIOREMEDIATION IS RECOMMENDED
IN THOSE AREAS WHERE A COAT IS SHOWN ON OG MAP. CLASS 3^{with} WORK DONE
ALL WORK 7/1 TO 8/15 BASED ON PUPPING & MOLTING CONSTRAINTS
 TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC
 EXXON
 NOAA
 USCG

FOSC: _____ DATED: _____

1991 MAYSAP EVALUATION

SEGMENT: KN 135 SUB: B 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: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other Manual Rake/Tilling

Other _____

X

X

COMMENTS:

INITIAL: Remove accessible asphalt at locations A and B. Rake Customblen and Inipol into sediments at locations A and B after asphalt removal.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

BEACH FIELD SHORELINE COMMENT SHEET

TEAM NO. THREE SEGMENT KNO 135 SUBDIVISION B DATE 5/3/91

ADEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley

☐ NTR ☒ TREATMENT RECOMMENDED. (EQUIPMENT easily unloaded, NO biota IN oiled ZONE)
OG ESTIMATES 1600M² area of patchy AP. Area was bled IN 1990, ONCE again. NOAA
DECISION tree STATES REMOVE AP. AP IS IN SOME places, 15cm thick. I imagine it will
turn liquid in the HOT summer sun if NOT removed.

RECOMMENDATION- Manually remove all AP, roll cobble/boulders (or pile) to the
side to expose Patchy AP towards the N.W. side of beach.
Aggressive Mechanical Tilling/agitating w/incoming tide, collect oil w/
snare boom, contain escaping oil with curtain boom. Rework NUMEROUS
times to release very heavily oiled sediment. Two dead deer were found
on beach w/ oiled area. It makes one wonder what they died from.

EXXON

NAME JON CZARNECKI SIGNATURE Jon Czarnicki

☐ NTR This segment has recoverable A/P and noticeable MOR TID OF
in 8 of the 10 pits. The A/P is on steel map as 2-
20 X 40 areas.

LANDMANAGER

NAME John Johnson OF Chesapeake SIGNATURE John Johnson

☐ NTR 1

☒ Helmat recommended to remove All oil

USCG/NOAA

NAME MOONEY / Barts SIGNATURE Tim Mooney / Barts

☐ NTR THIS SEGMENT COMPRISES OF Boulder, Cobble, Pebble WITH A
LARGE AREA OF A/P. SUBSURFACE CONDITIONS RANGE FROM LOR TO HOR.
MANUAL TILLING COULD ENHANCE THE RECOVERY RATE OF THE
SEGMENT. OTHER DEER CARCASSES HAVE BEEN OBSERVED ON
NON-OILED BEACHES.

DATE 3 MAY 1991

183

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 71-80%; S = 61-70%; T = <60%

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

PHOTO ROLL # MAYBAP-3 - 09

FRAMES **22-24**

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

REVIEWED ~~CO~~ 10 MAY
E raised, May 7

OG 1 of 5

DATE 5 May / 1991

[illegible]

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

Subsurface silt is generally coincident with the asphalt distribution. Pits #3 and #8 identified HOR condition, which is assumed to underlie most of Location B (est. 20x40-m area with broken distribution). Pits #5, 6, 7 delineate an MOR condition which is assumed to be coincident with Location A (20x40, sporadic distribution $\therefore < 80 \text{ m}^2$).

REVIEWED CO 10 MAY
E revised May 9

OG Zyl 5

KN-1358
3 MAY 91
MEM-1200
JHR:PLR

REVIEWED CO 10 MAY

1 VITZ 15
N.O.

2 VITZ 20

/GP

-15 MOR

3 MITZ 30

/SG

15 HOR

20 O.T.

IT 10 B

4 VITZ 20

/GP

5 OF

(B)
P/B
X40

VITZ PG/SG/R
10 LOR

MITZ BC/SG

5 LOR S,G

20 N.O S,M

MITZ C/SG

15 MOR

20 OF

10 MITZ/LITZ

OF/LOR

35 N.O.

MITZ

30 MOR

25 B

06/05

AB VITZ PC/SG

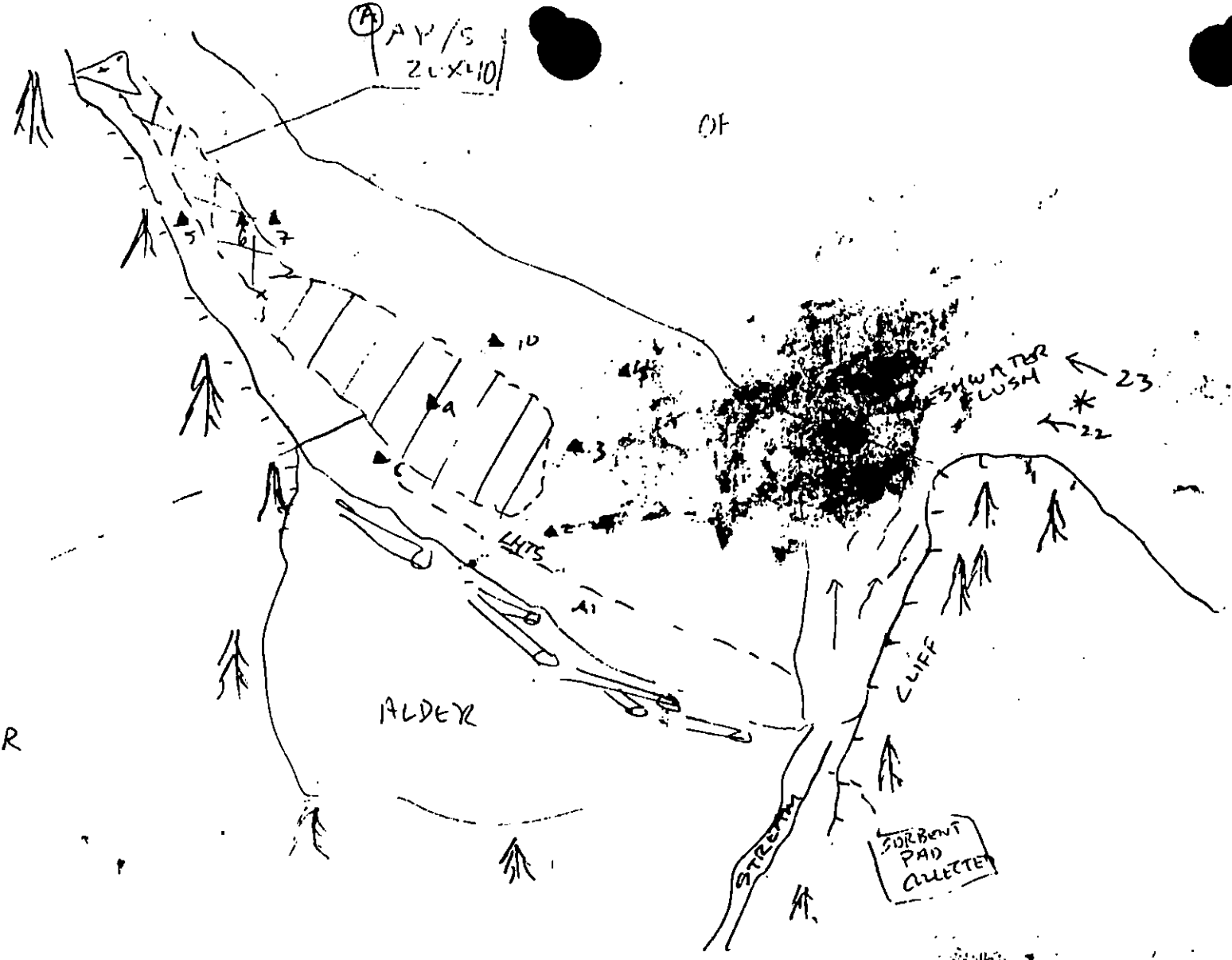
HOR 0-15

MOR 15-35

NOT CL

(A) AP/S
20 X 10

OF



25m

SORBENT
PAD
COLLECTOR

KN-135B
3 MAY
HARPER

FIELD NOTES

ET revised May 9
REVIEWED CD
HP MA

MAISAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # KN 135 TIDAL HEIGHT(Range) 0-1
 SUBDIVISION 8 BIOLOGIST STOKER
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach at pebble/cobble/boulder/bedrock transected by a small stream.

Biota generally sparse in upper intertidal, increasing downslope in both abundance and diversity. Biota varies considerably across subdivision, probably due to substrate characteristics. Biota on SE third of subdivision (pebble/cobble) is relatively sparse, consisting primarily of barnacles and Littorina. Biota increases rapidly in both abundance and diversity to NW on cobble/boulder/bedrock, characterized by patchily dense barnacles, Eucypris, interbedded and attached Mytilus, Littorina with egg masses, limpets (often in dense clusters), Scapharia/Nucella in dense clusters, clusters of small Leptasterias, and clam shells (Saxidomus). Patches of asphalt were observed scattered throughout this community.

Biota within/adjacent to surface oil area B and subsurface pits 2-10 consists of patchy barnacles and spat, moderately dense Littorina with egg masses, limpets, and interbedded Mytilus in the MZ. Biota increases in diversity and abundance from S to N and downslope.

Biota within/adjacent to area A (subsurface pit 6) similar to above.

If treatment is undertaken, it is suggested that the beach be accessed from the S. end of the subdivision, where biota is minimal.

WILDLIFE OBSERVATIONS

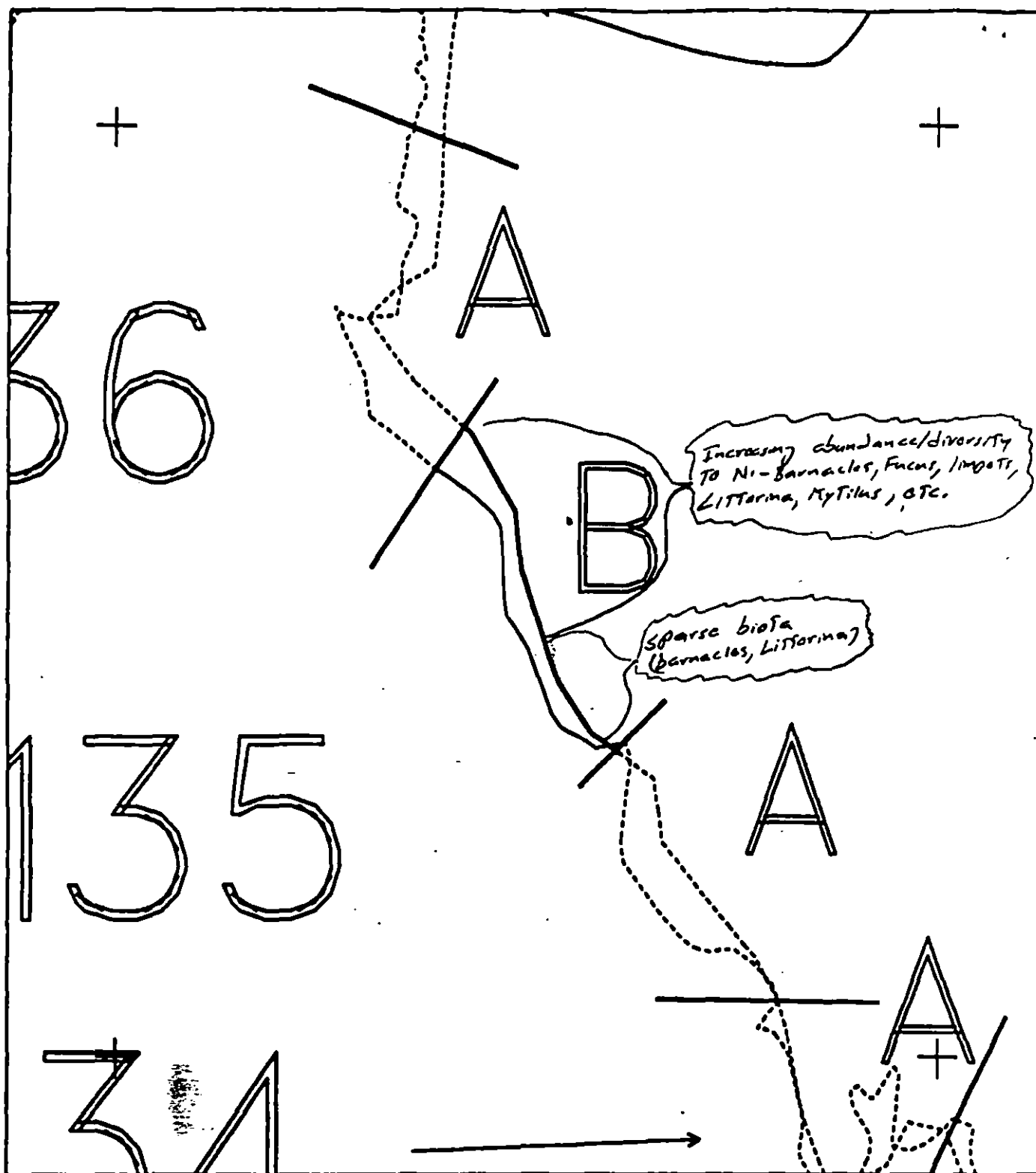
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
<u>None observed</u>			
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		(2 Deer skeletons)	
Pinnipeds (specify)			
Carnivores (specify)			

Shoreline subdivision map showing important biological features attached.

Revised 5/10/91

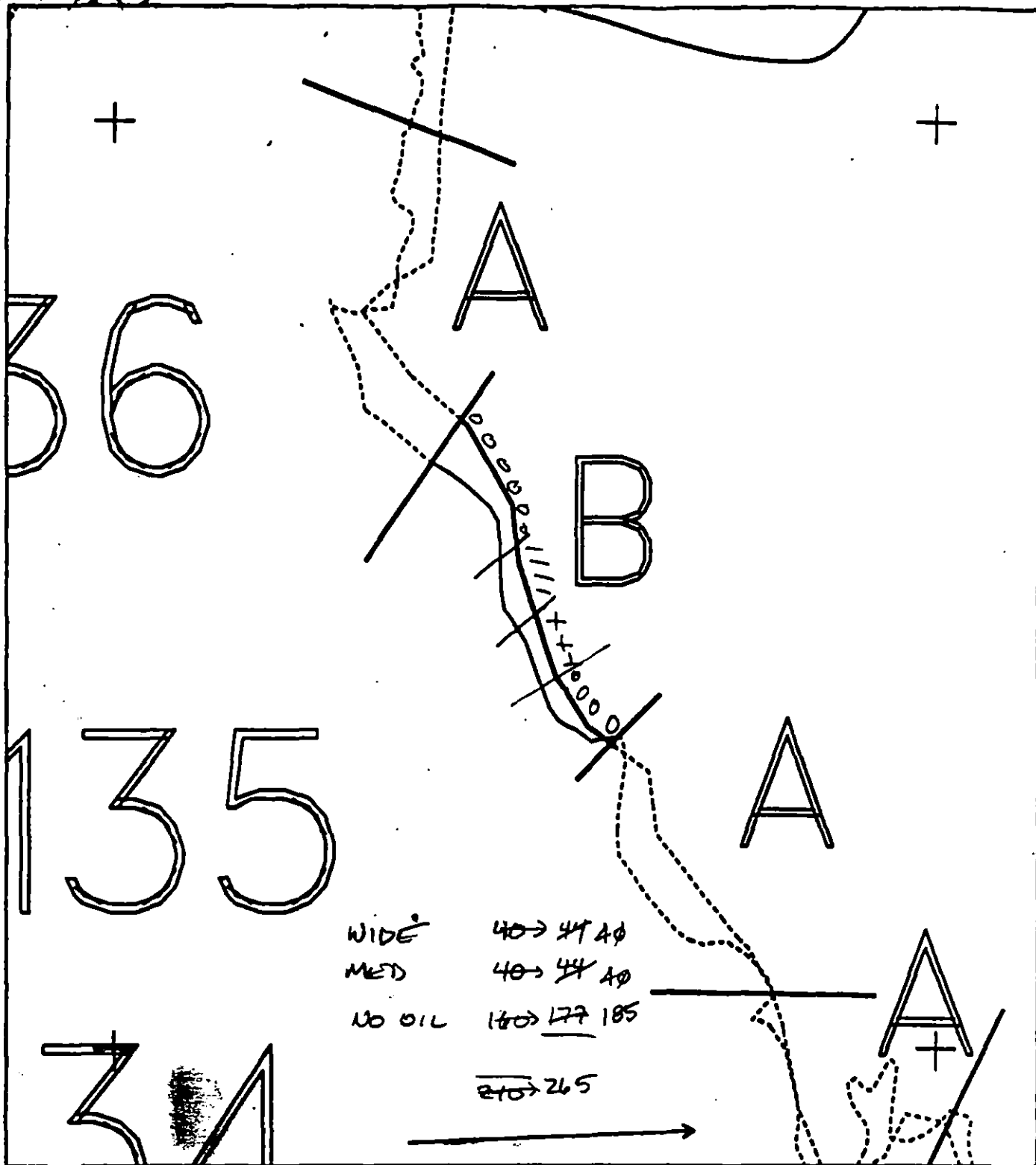


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

KN0135 B
 ADEC Subsegment Length: 205m
 METERS
 0 100 200
 AK State Plane Zone 4
 4800135b

Subdivision Field Map
 Map Key: KNKN0135B
 Name: S. Stoker
 Date: 5/3/91
 Date Entered:





XXXX	Wide	KN0135 B ADEC Subsegment Length: 285m METERS AK State Plane Zone 4 660135B	Subdivision Field Map
////	Medium		Map Key: KNKN0135B
----	Narrow		Name: <u>HARPER</u>
TTTT	Very Light		Date: <u>3 MAY 91</u>
0000	No Oil		Date Entered:

SURFACE OILING SUMMARY
 MAP

ET revised, May 3
 REVIEWED CB 4 MAY
 DG 5 of 5

1991 MAYSAP EVALUATION

SEGMENT: KN 135 **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:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

X

Other

Other

COMMENTS:

INITIAL: Remove asphalt at locations A, B, C, D, and H. Apply Customblen and Inipol at locations A, B, C, D, E, F and H and in areas of pits 4, 5, 6, 8, 9, and 10.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT KN0135 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Ghormley

SIGNATURE

Wesley Ghormley☐ NTR ☒ TREATMENT RECOMMENDED

THERE IS AP (MASS MIXED w/gravel) scattered thru out this segment. AP adjacent to stream needs removed manually. Western side of beach (Past Bedrock) has a significant amount of Asphalt. It was also hard to determine the consistency of the subsurface oil in this area due to the amount of run-off from the uplands. However pits fill w/ black oil so I suspect OP is subsurface.

Recommend removal of all AP. Mechanically till area where the majority of the AP is (was after removal) Biota is sparse in oiled area. Work when Litz is covered by water. Agitate on an incoming tide. Collect/contain oil w/ware broom. Rework numerous times due to heavy oil.

EXXON

NAME Jon Czarnocki

SIGNATURE

Jon Czarnocki☐ NTR

this beach has some recoverable AP. The sub-surface oil is in the sand as op and hor. A/P is in fine pockets as shown on sketch map.

HANDMANAGER

NAME

Sol Soler

OF

Chugach

SIGNATURE

[Signature]☐ NTRAK COOP

X All Remaining oil Should be Removed

USCG/NOAA

NAME MooneyBaratz

SIGNATURE

[Signature]☐ NTR

THIS SEGMENT HAS A STREAM ON THE WESTERN END WITH SWASH BARS. THREE MAIN AREAS A, B, & C HAVE EXTENSIVE ASPHALT COVERING 3-5 CM THICK AND SOME SUBSURFACE HOR & OP. MANUAL TILLING AND REMOVAL OF THIS AREA WOULD ENHANCE THE RECOVERY RATE OF THE SHORELINE.

OG 1 of 6

DATE 31 May 191

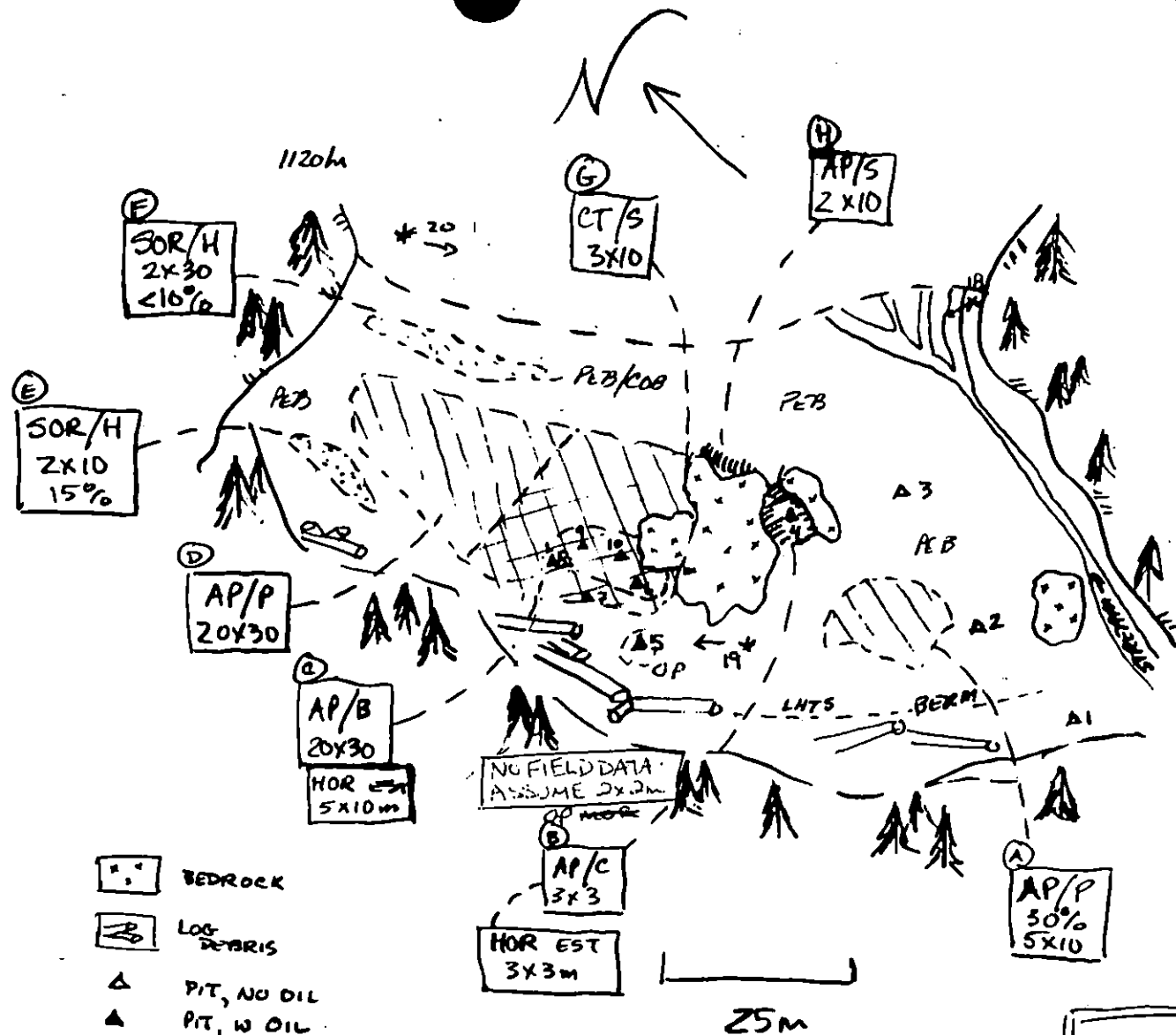
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

estimated 5 x 10¹⁰ m area within location C. The latter area, location C, appears to be discontinuous as per the distribution of the AP.

5/9/91 فيسند ١٢٥١

Ob 2af 6

05 3 of 6
 revised sketch



REVISED
 FIELD SKETCH

KN-135A
 1045-1120
 3 MAY 91
 J HARPER

REVIEWED: MC 5/10/91

▲ U172 30

0-15 MOR BC/SG
15- WT B
> N.O.

▲ U172 20

0-20 OF BC/SG
WT 15 R

▲ U172

BC/SG

MOR 0-5

5-15 MOR

15-25 N.O.

WT B

▲ U172

0-15 MOR - MOR

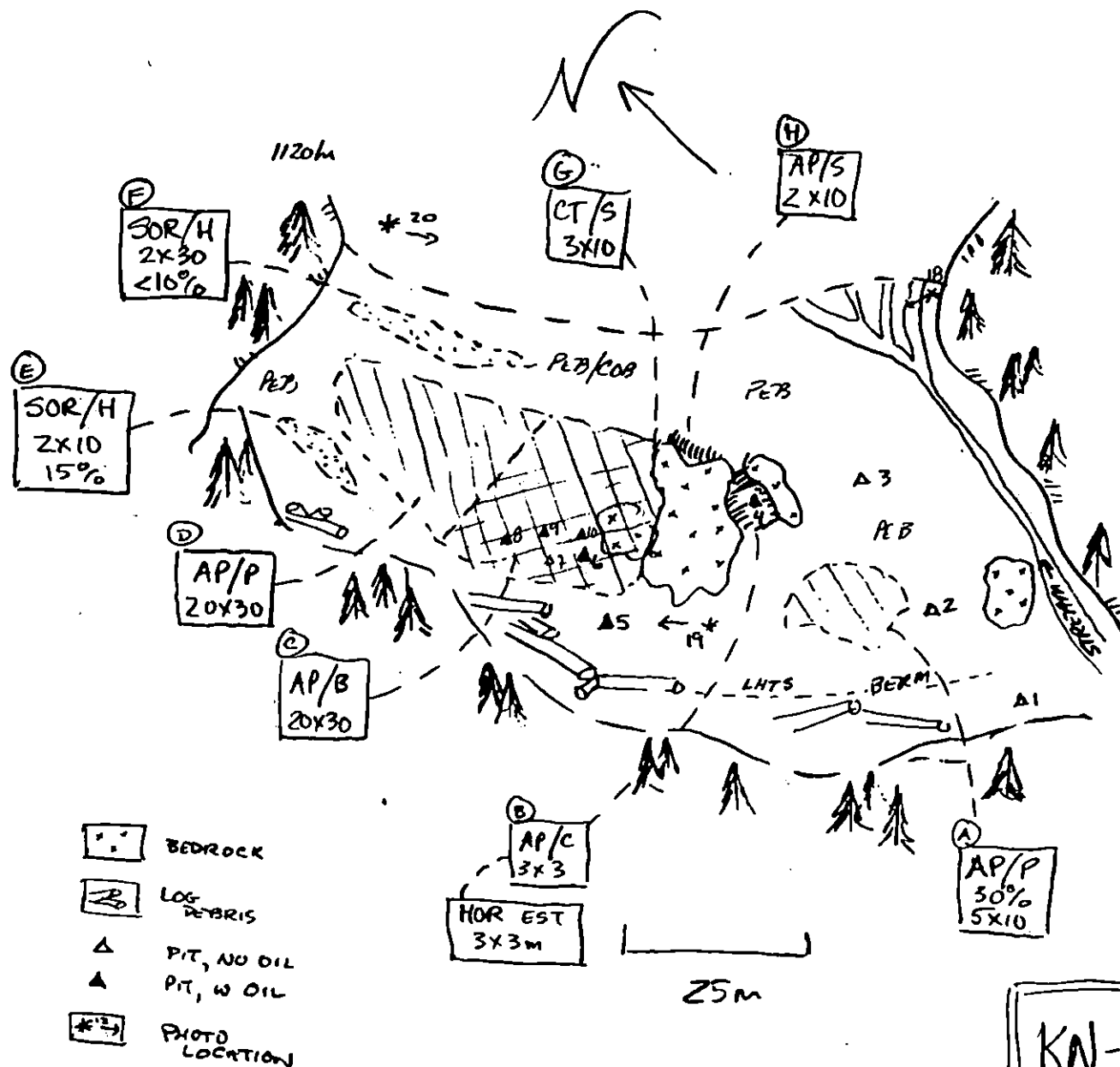
15-17 URANGE (WIDIRU)

17-25 N.O.

▲ U172

0-10 MOR SG

10-25 OF/N.O. P



SUPPLEMENTARY
PIT LOCATIONS

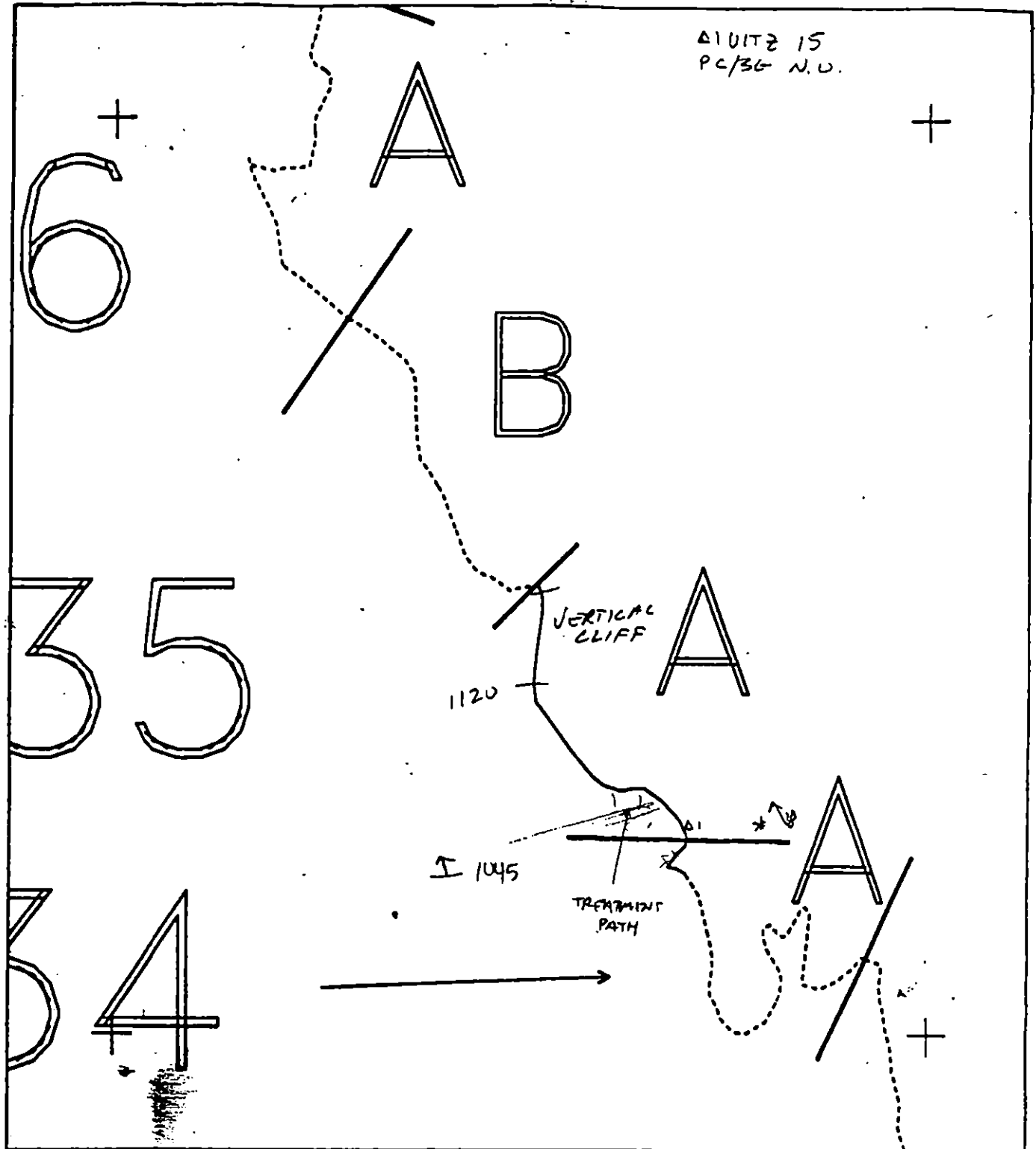
REVISED
FIELD SKETCH

KN-135A
1045-1120
3 MAY 91
J HARPER

SUPPLEMENTARY
FIELD NOTES
FEBRUARY 91

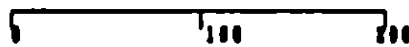
OG 5/96

Δ10172 15
PC/36 N.O.



KN0135 A

METERS



AK State Plane Zone 4
GCSN1550

Subdivision Field Map

Map Key: KN\KN0135A

Name: _____

Date: _____

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # HN 135 TIDAL HEIGHT(Range) 0-0
 SUBDIVISION A BIOLOGIST STOKER
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach of pebble/cobble/boulder/bedrock bordered on S. by an anadromous stream.

Biota generally sparse in the upper intertidal, increasing downslope in both abundance and diversity. Mid to lower intertidal biota consists of patchy and moderately dense Fucus, filamentous green & red algae, moderate to dense barnacles, patchy Spirorbis, patchy Mytilus (interbedded and attached), amphipods, Littorina and egg masses, limpets (some dense clusters), and patchy clusters of small Leptasterias.

Biota within/adjacent to surface and subsurface oil (A-H, PIT 5) consists of sparse densities of Fucus, barnacles, Mytilus, Littorina and amphipods, with scattered clusters of limpets. Biota downslope from oiled zone similar in composition (with addition of Leptasterias and Spirorbis), greater in overall abundance. Fairly extensive patches of dense interbedded Mytilus occur downslope from bedrock outcrop in central portion of subdivision.

If treatment is planned, care should be taken to minimize disturbance/destruction of the more abundant downslope community, particularly mussel beds described above.

WILDLIFE OBSERVATIONS

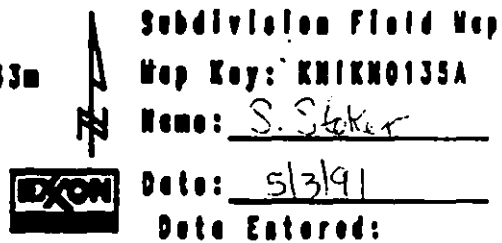
TO BE COMPLETED IN ALL SUBDIVISIONS

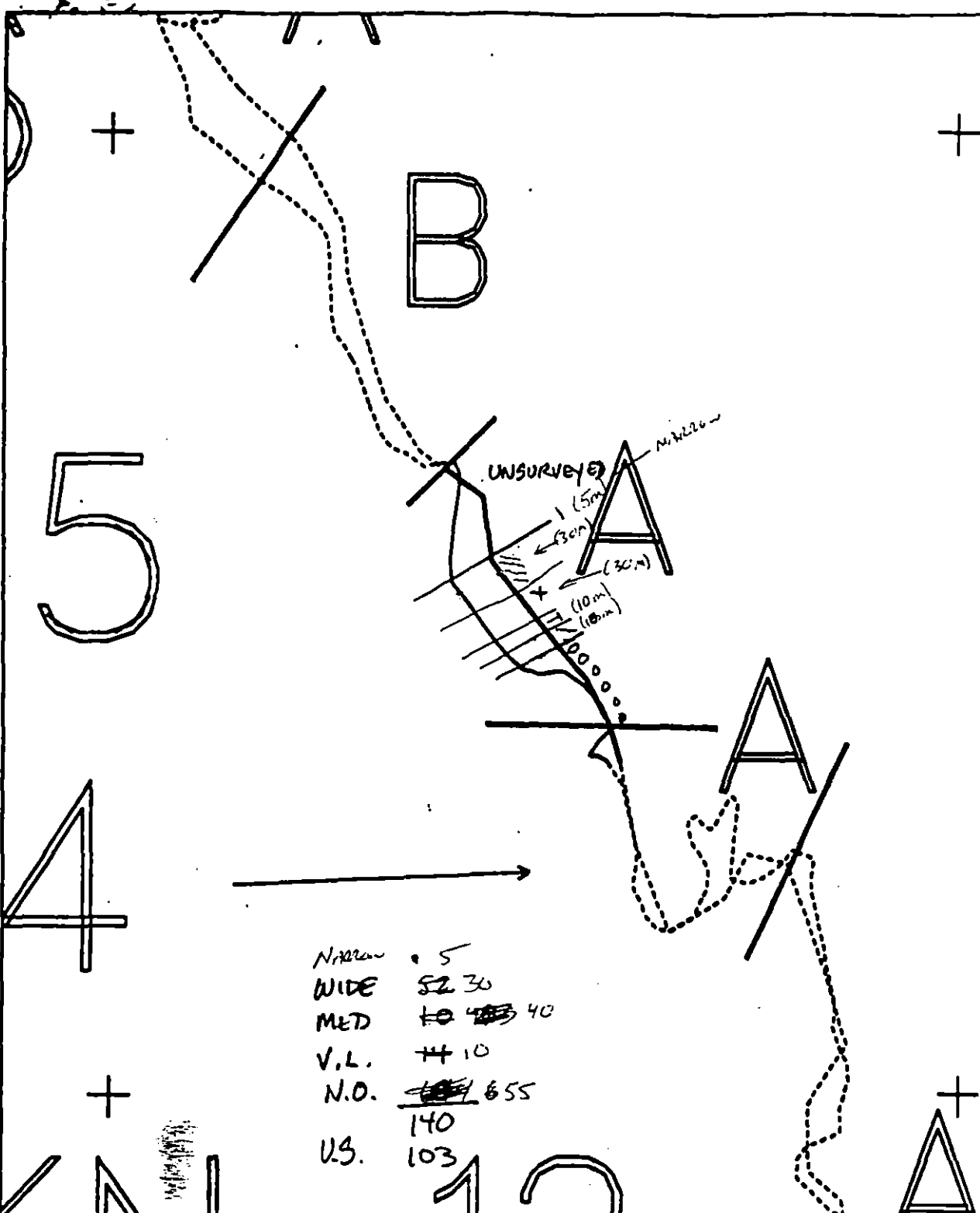
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	Mergansers	2	
Gulls/kittiwakes			
Shorebirds	Surfbirds, Oystercatchers	14	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Revised 5/10/91
 David Stoker





Narrow 5
 WIDE 52 30
 MED 40
 V.L. 10
 N.O. 655
 140
 U.S. 103

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

KNO135 A
 ADEC Subsegment Length: 243m
 METERS
 AR State Plane Zone 4
 880135A



Subdivision Field Map
 Map Key: KNO135A
 Name: HARPER
 Date: 3 MAY 91
 Date Entered:

SURFACE OILING SUMMARY
 MAP

REVISED 5/10/91 KC
 revised 5/9/91 KC

OG 601-6

1991 MAYSAP EVALUATION

SEGMENT: KN 135 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 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; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *Am*

Rebel Dan Dan

5/17/91

RECOMMENDATIONS:

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

COMMENTS:

+ H50R
INITIAL: Remove asphalt at locations A, B, C, D, and H. Apply Customblen and Inipol at locations A, B, C, D, E, F and H and in areas of pits 4, 5, 6, 8, 9, and 10.

TAG: MANUAL RAKE/TILL IN AREAS OF PIT 4, 5, 9+10
IN AREA OF PITS 9+10 ROLL COBBLES/SMALL BOULDERS
TO EXPOSE SUBSURFACE PRIOR TO BIO.

FOSC:

TAG APPROVAL DATE: MAY 17 1991 FOSC APPROVAL DATE: 25 MAY 1991

ADEC

EXXON

USCG

NOAA

FOSC

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT KN 0135 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED

THERE IS AP (Mousse mixed w/gravel) scattered thru out this segment. AP adjacent to stream needs removed manually. Western side of beach (Past Bedrock) has a significant amount of Asphalt. It was also hard to determine the consistency of the subsurface oil in this area due to the amount of run-off from the uplands. However pits fill w/ black oil so I suspect OP is subsurface.

Recommend removal of all AP. Mechanically till area where the majority of the AP is (was after removal) Biota is sparse in oiled area. Work when Litz is covered by water. Agitate on an incoming tide. Collect/contain oil w/ware worn. Rework numerous times due to heavy oil.

EXXON

NAME Jon Czarnacki SIGNATURE Jon Czarnacki

☐ NTR The beach has some recoverable A/P. The sub surface oil is in the sand as op and hor. A/P is in fine packets as shown on sketch map.

LANDMANAGER

NAME Scholar OF Chugach SIGNATURE [Signature]

☐ NTR

D All Remaining oil Should be Removal

USCG/NOAA

NAME Mooney Barratt SIGNATURE Mooney Barratt

☐ NTR THIS SEGMENT HAS A STREAM ON THE WESTERN END WITH SWASH BARS. THREE MAIN AREAS A, B, & C HAVE EXTENSIVE ASPHALT COVERING 3-5 CM THICK AND SOME SUBSURFACE HOR & OP. MANUAL TILLING AND REMOVAL OF THIS AREA WOULD ENHANCE THE RECOVERY RATE OF THE SHORELINE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 2 OF 2TEAM NO. 3OG HARPERBIG STOKERSEGMENT KN-135ADEC GHORMLEYLANDMANAGER JOHNSON for CVCSUBDIVISION AXXON CZARNICKIUSCG/NOAA MOONEY / BARATSDATE 3 MAY 1991TIME 10:45 to 11:20TIDE LEVEL .53 ft. to 1.32 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 140 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 30 m M 40 m N 5 m VL 10 m NO 55 m US 103 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	P										PG	M-L	5	10		X	X		
B	C										PG	M	3	3			X		BETWEEN OUTCROPS
C	B										PG	M	20	30		X	X		
D	P										PG	M	20	30		X	X		
E				P							PG	M	2	10		X			
F				S							PG	L	2	30				X	
G						S					PG	V	3	10		X			
H	S										PG		2	10			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- 3 - 09 FRAMES 18-20

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	~30							X	-	Y	-	-		X			P/Sg	
2	~30							X	-	Y	-	-			X		P/Sg	
3	~30							X	-	Y	-	-		X			P/Sg	
4	20		X						0-20	N	-	-			X		P/G	EST 3X3M AREA
5	15	X							0-5	Y	0	B		X			P/Sg	
6	30			X					0-15	Y	15	B		X			BC/Sg	
7	20					X			0-20	Y	-	-		X			DC/Sg	
8	25			X					5-15	Y	-	-		X			13C/Sg	
9	25		X						0-15	Y	-	-		X			BC/Sg	
10	25		X						0-10	Y	-	-	NONE		X		Be/Sg	

OG COMMENTS:

This low energy pebble/cobble beach has relatively extensive oil covers. An estimated 1200 m² of the beach contains about 500 m² of asphalt and an additional 80 m² of beach contains about 10 m² of SOR/H.

HOR was identified in the subsurface at two locations (Band C) with an estimated 3x3 m area at location B and an

REVISED 5/9/91 LG

REVISED 5/10/91 MC

OG 10/6

PAGE 2 OF 2

TEAM NO. 3

SEGMENT KN-135

SUBDIVISION 4

DATE 3 MAY 1991

[illegible]

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

LOG COMMENTS:

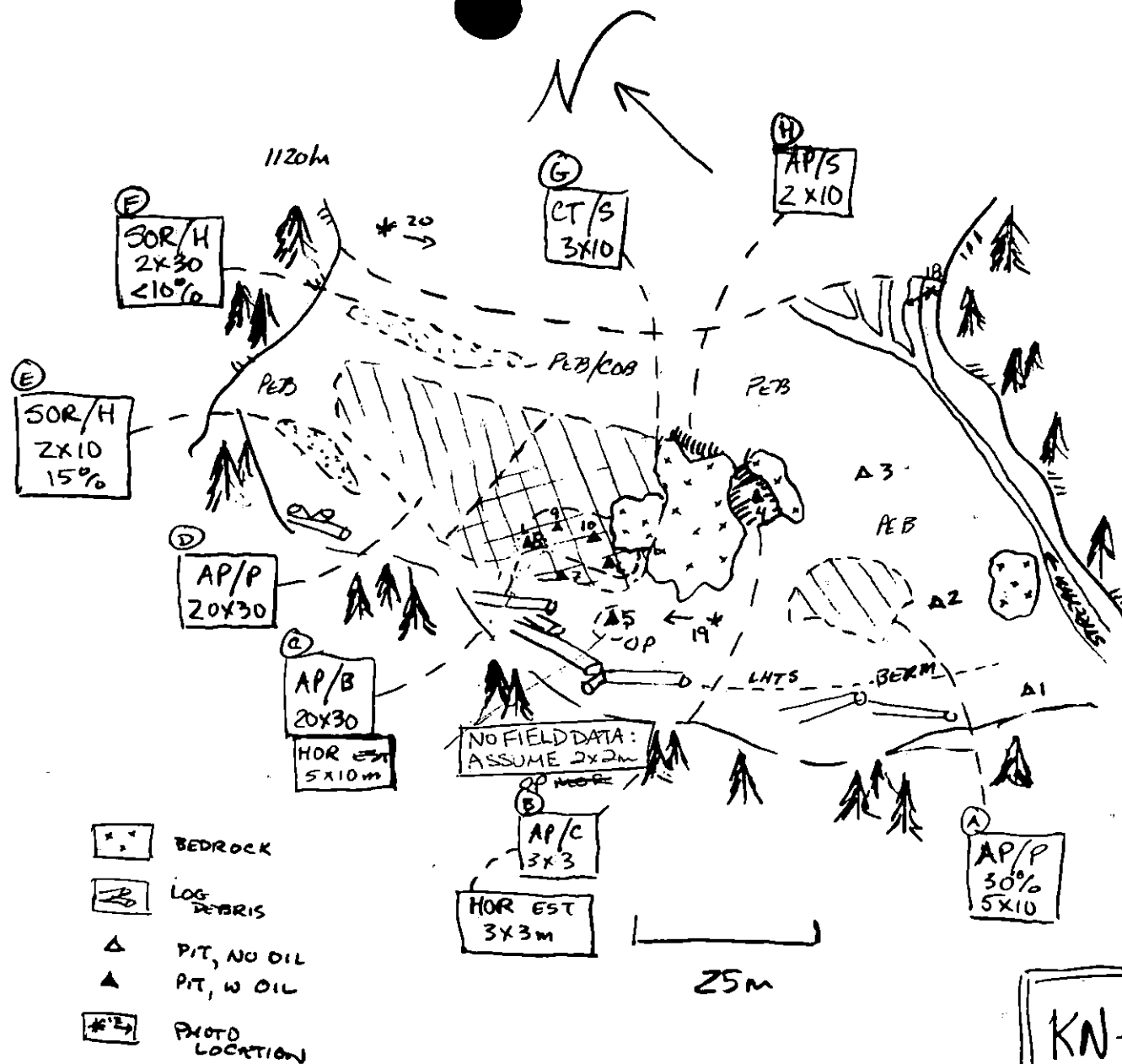
estimated 5×10^6 m area within location C. The latter area, location C, appears to be discontinuous as per the distribution of the AP.

Reviewed: MC 5/10/91
reviewed 5/9/91 KG

reviewed 5/9/91 K.G.

Ob Zapf

05 346
 revised sketch



REVISED
 FIELD SKETCH

KN-135A
 1045-1120
 3 MAY 91
 HARPER

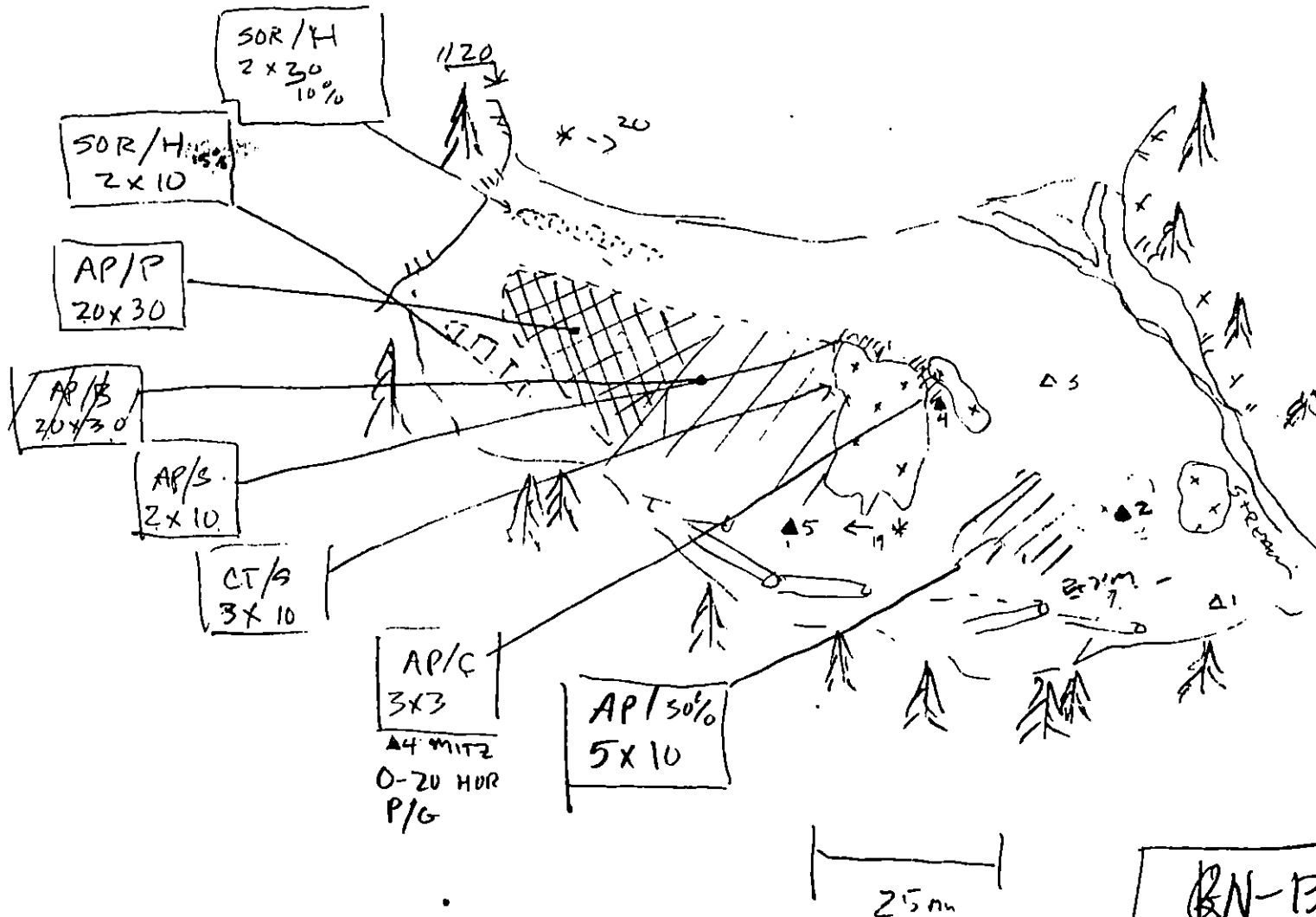
REVIEWED: MC 5/10/91

A1 VIT
 P/SG
 A2 MITZ
 P/SG N.O.
 A3 VITZ
 P/SG N.O.

A5 VITZ
 P/SG
 0-5 OP/HOR
 5-15 N.O.
 WT O B

ORIGINAL
 FIELD
 NOTES

08446



BN-135A
 3mm
 1035-1120
 JARPER
 FIELD SKETCH

▲6 VITZ 30
0-15 MOR BC/SG
15- WT B
> N.O.

▲7 VITZ 20
0-20 OF BC/SG
WT 15 R

▲8 VITZ BC/SG

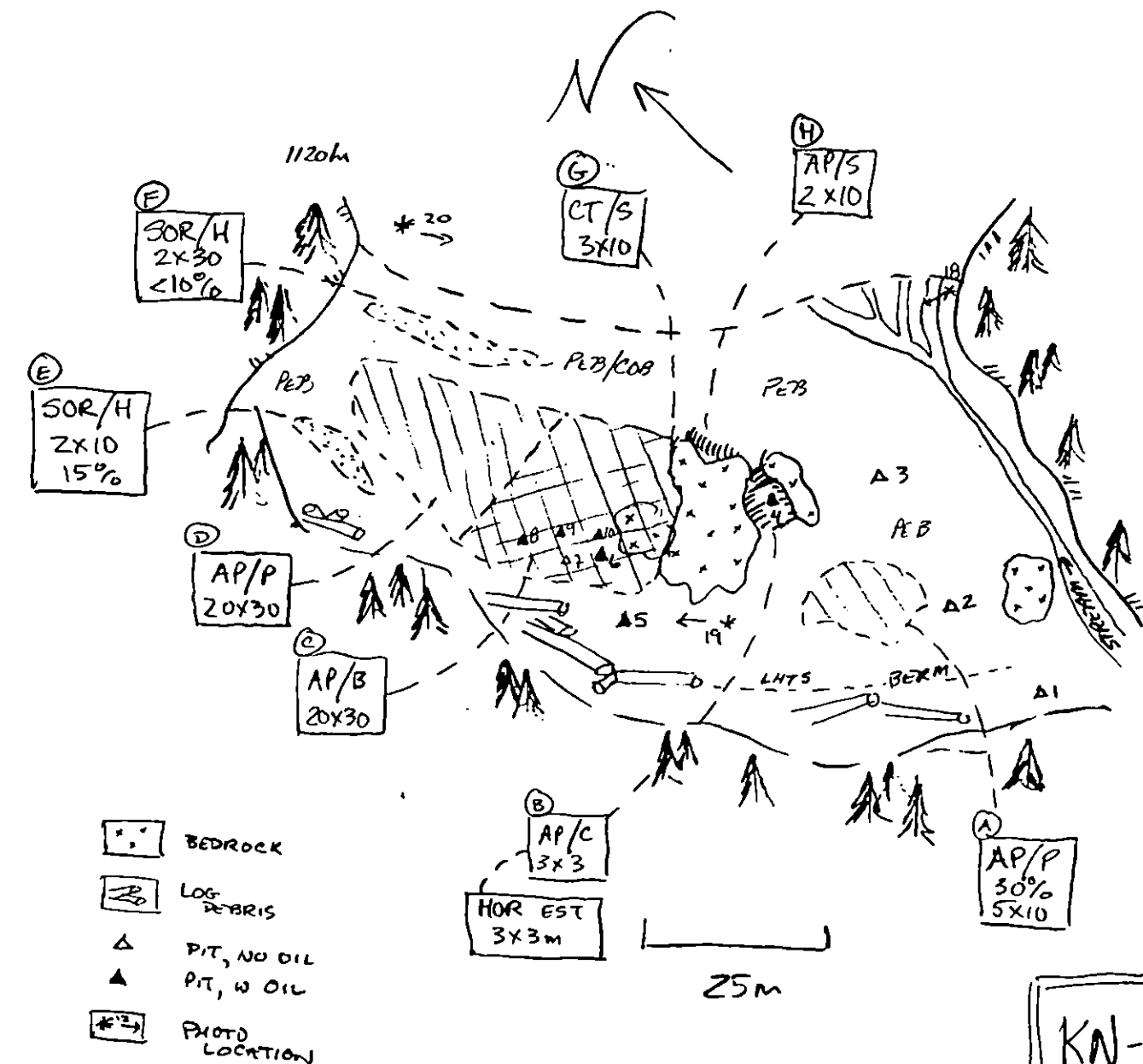
HOR 0-5
5-15 MOR
15-25 N.O.
WT B

▲9 VITZ
0-15 MOR-HOR
15-17 URANGE UNDIRV
17-25 N.O.

▲10 VITZ
0-10 HOR SG
10-25 OF/N.O. P

SUPPLEMENTARY
FIELD NOTES
MAY 91

OG 5/9/96

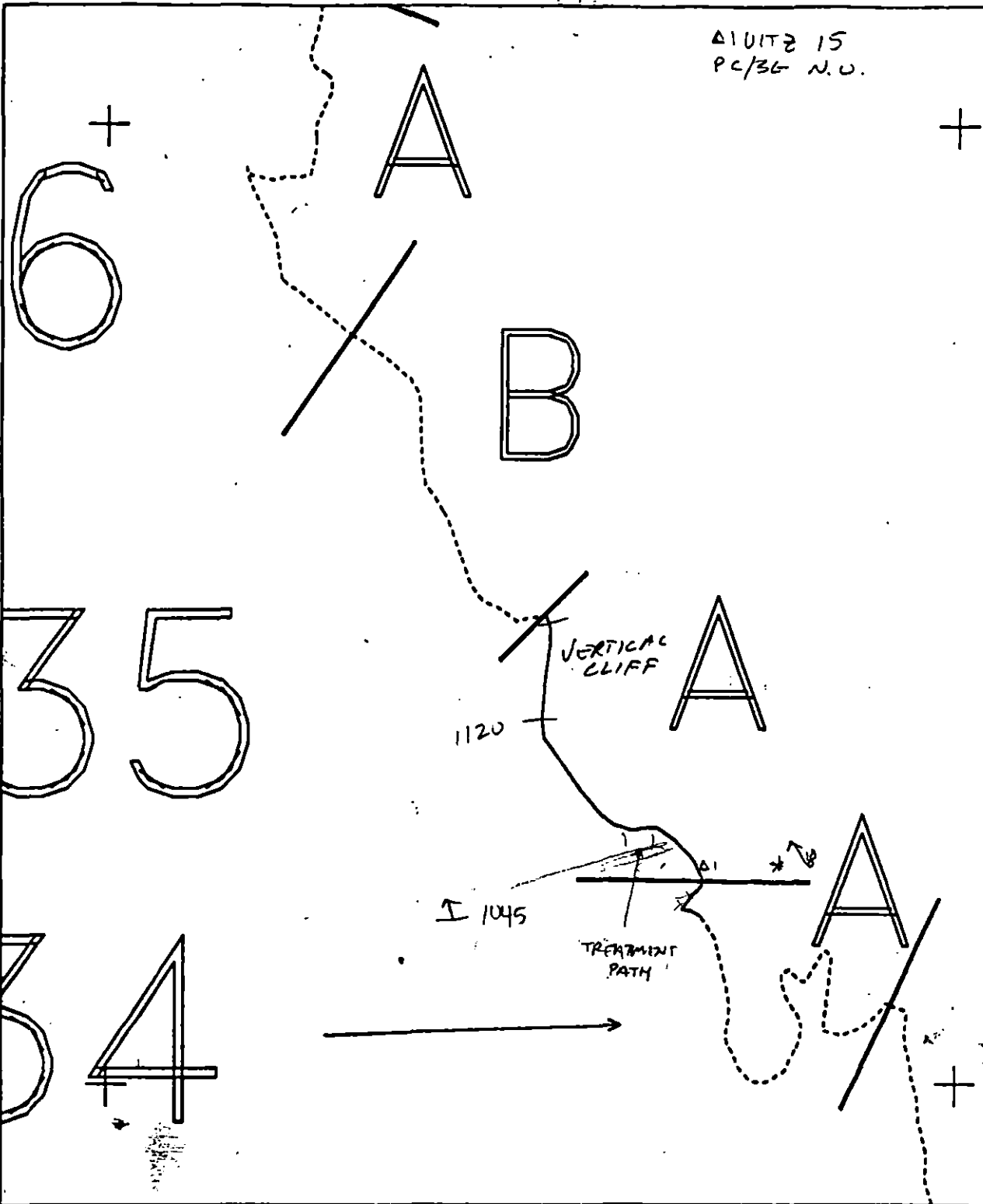


SUPPLEMENTARY
PIT LOCATIONS

REVISED
FIELD SKETCH

KN-135A
1045-1120
3 MAY 91
HARPER

Δ10172 15
PC/36 N.O.



KN0135 A

Subdivision Field Map

Map Key: KNIX0135A

Name: _____

Date: _____

METERS

0 100 200

AK State Plane Zone 4
1983-1988



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # HN 135 TIDAL HEIGHT(Range) 0-0
 SUBDIVISION A BIOLOGIST S. Tokor
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach of pebble/cobble/boulder/bedrock bordered on S. by an anadromous stream.

Biota generally sparse in the upper intertidal, increasing downslope in both abundance and diversity. Mid to lower intertidal biota consists of patchy and moderately dense *Fucus*, filamentous green & red algae, moderate to dense barnacles, patchy *Spirorbis*, patchy *Mytilus* (interbedded and attached), amphipods, *Littorina* and egg masses, limpets (some dense clusters), and patchy clusters of small *Leptasterias*.

Biota within/adjacent to surface and subsurface oil (A-H, PIT 5) consists of sparse densities of *Fucus*, barnacles, *Mytilus*, *Littorina* and amphipods, with scattered clusters of limpets. Biota downslope from oiled zone similar in composition (with addition of *Leptasterias* and *Spirorbis*), greater in overall abundance. Fairly extensive patches of dense interbedded *Mytilus* occur downslope from bedrock outcrop in central portion of subdivision.

If treatment is planned, care should be taken to minimize disturbance/destruction of the more abundant downslope community, particularly mussel beds described above.

WILDLIFE OBSERVATIONS

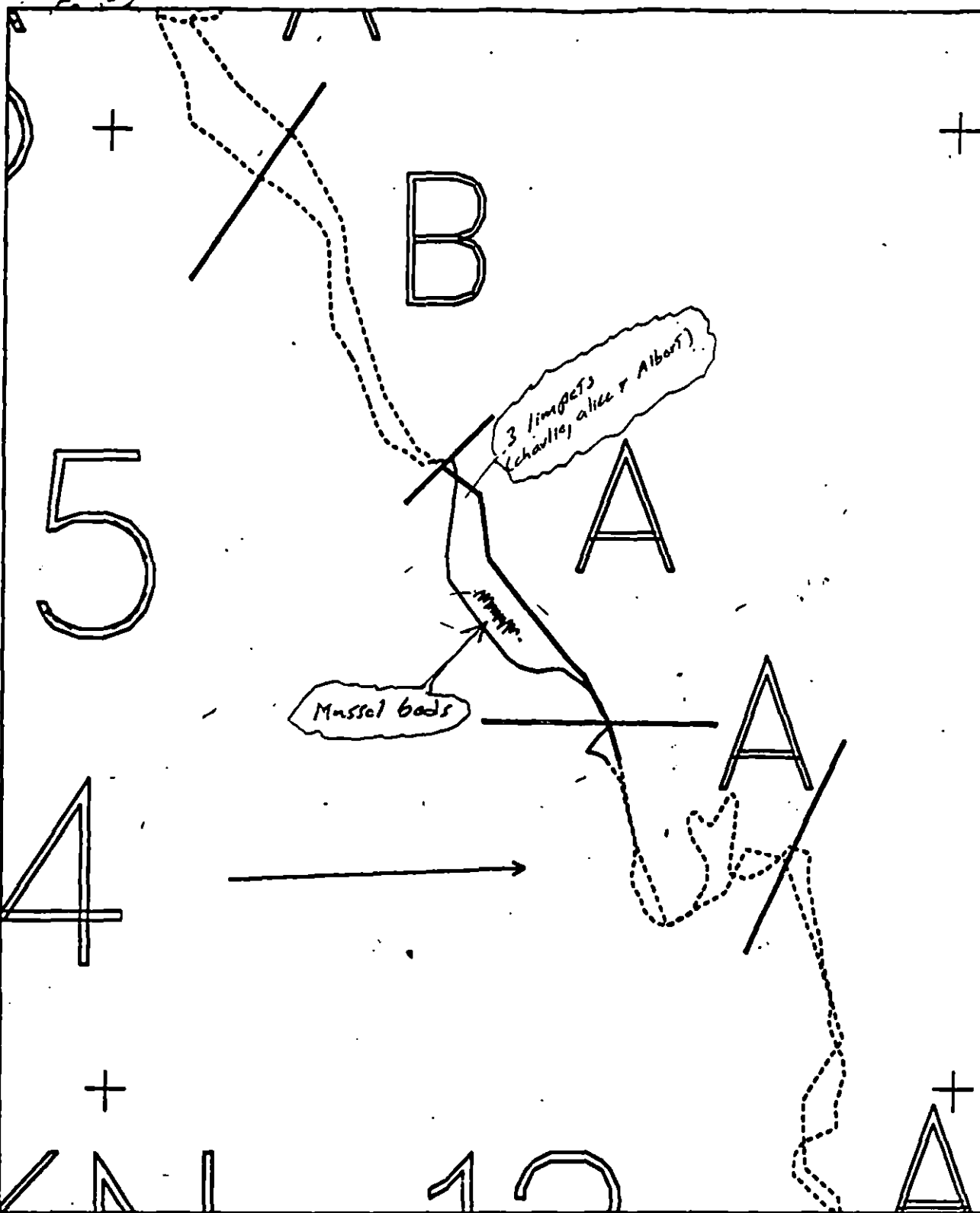
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	Mergansers	2	
Gulls/Kittiwakes			
Shorebirds	Surfbirds, Oystercatchers	14	
Corvids			
Other Birds			

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

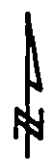
Shoreline subdivision map showing important biological features attached.

REVIEWED 5/10/91 MC
 0 1 1 1 1



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

KN0135 A
 ADEC Subsegment Length: 243m
 METERS
 0 100 200
 AK State Plane Zone 4
 660135a



Subdivision Field Map
 Map Key: KN0135A
 Name: S. Stoker
 Date: 5/3/91
 Date Entered:



1991 MAYSAP EVALUATION

SEGMENT: KN 135 SUB: B REGION: PWS SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPENEcological/Constraints (see page two for details) NONE

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; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *En*

RECOMMENDATIONS:

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

COMMENTS:

EASILY + HSOR BENEATH AP. *A.*
INITIAL: Remove accessible asphalt at locations A and B. Rake
Customblen and Inipol into sediments at locations A and B after
asphalt removal.

TAG: PRIOR TO BIOREMEDIATION ROLL SMALL BOULDERS *A.*
TO EXPOSE AREA REQUIRING BIO.

FOSC: TAG APPROVAL DATE: MAY 17 1991FOSC APPROVAL DATE: 25 MAY 1991ADEC *[Signature]*FOSC *[Signature]*EXXON *[Signature]*E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG *[Signature]*NOAA *[Signature]*

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. THREE SEGMENT KNO135 SUBDIVISION B DATE 5/3/91

ADEC

NAME Wesley Ghormsley SIGNATURE Wesley Ghormsley

☐ NTR ☒ TREATMENT RECOMMENDED. (EQUIPMENT easily unloaded, NO biota in oiled zone)
OG estimates 1600m² area of patchy AP. Area was bided IN 1990, ONCE again NOAA decision tree states REMOVE AP. AP is in some places, 15cm thick. I imagine it will turn liquid in the hot summer sun if not removed.

RECOMMENDATION- Manually remove all AP, roll cobble/boulders (or pile) to the side to expose patchy AP towards the N.W. side of beach.

Aggressive Mechanical Tilling/agitating w/incoming tide, collect oil w/ snare boom, contain escaping oil with contain boom. Rework numerous times to release very heavily oiled sediment. Two dead deer were found on beach w/ oiled area. It makes one wonder what they died from.

EXXON

NAME Jon Czarnicki SIGNATURE Jon Czarnicki

☐ NTR This segment has recoverable A/P and noticeable mor tide in 8 of the 10 pits. The A/P is on steel map as 2-20 x 40 areas.

LANDMANAGER

NAME John Johnson OF Chesapeake SIGNATURE John Johnson

☐ NTR 1

☒ Helmet recommended to remove all oil

USCG/NOAA

NAME MOONEY / BARTZ SIGNATURE Tim Mooney / Amy Bartz

☐ NTR THIS SEGMENT COMPRISES OF Boulder, Cobble, Pebble WITH A LARGE AREA OF AP. SUBSURFACE CONDITIONS RANGE FROM LOE TO HOR. MANUAL TILLING COULD ENHANCE THE RECOVERY RATE OF THE SEGMENT. OTHER DEER CARCASSES HAVE BEEN OBSERVED ON NON-OILED BEACHES.

PAGE 1 OF 2

OG 1 of 5

PAGE 2 OF 2

SEGMENT KN-135

SUBDIVISION B

DATE 3 / May / 91

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

Subsurface ciling is generally coincident with the asphalt distribution. Pits #3 and #8 identified MOR condition, which is assumed to underlie most of Location B (est. 20x40-m area with broken distribution). Pits #5, 6, 7 delineate an MOR condition which is assumed to be coincident with Location A (20x40, sporadic distribution $\therefore$ $< 80 \text{ m}^2$).

REVIEWED 10 MAY
E5 revised May 9

OG 295

1 VITZ 15
G N.O.

2 VITZ 20

P/GP

0-15 MOR

3 MITZ 30

PC/SG

15 MOR

20 O.T.

WT 10 B

4 VITZ 20

P/GP

25 OF

4P/B

0X40

5 VITZ PG/SG/R
20 LOR

6 MITZ BC/SG

-5 LOR S.G

-20 N.O S.M

6 MITZ E/SG

-15 MOR

5-20 OF

10 MITZ/LITZ

-5 OF/LOR

-35 N.O.

1 MITZ

30 MOR

WT 25 B

8 VITZ PC/SG

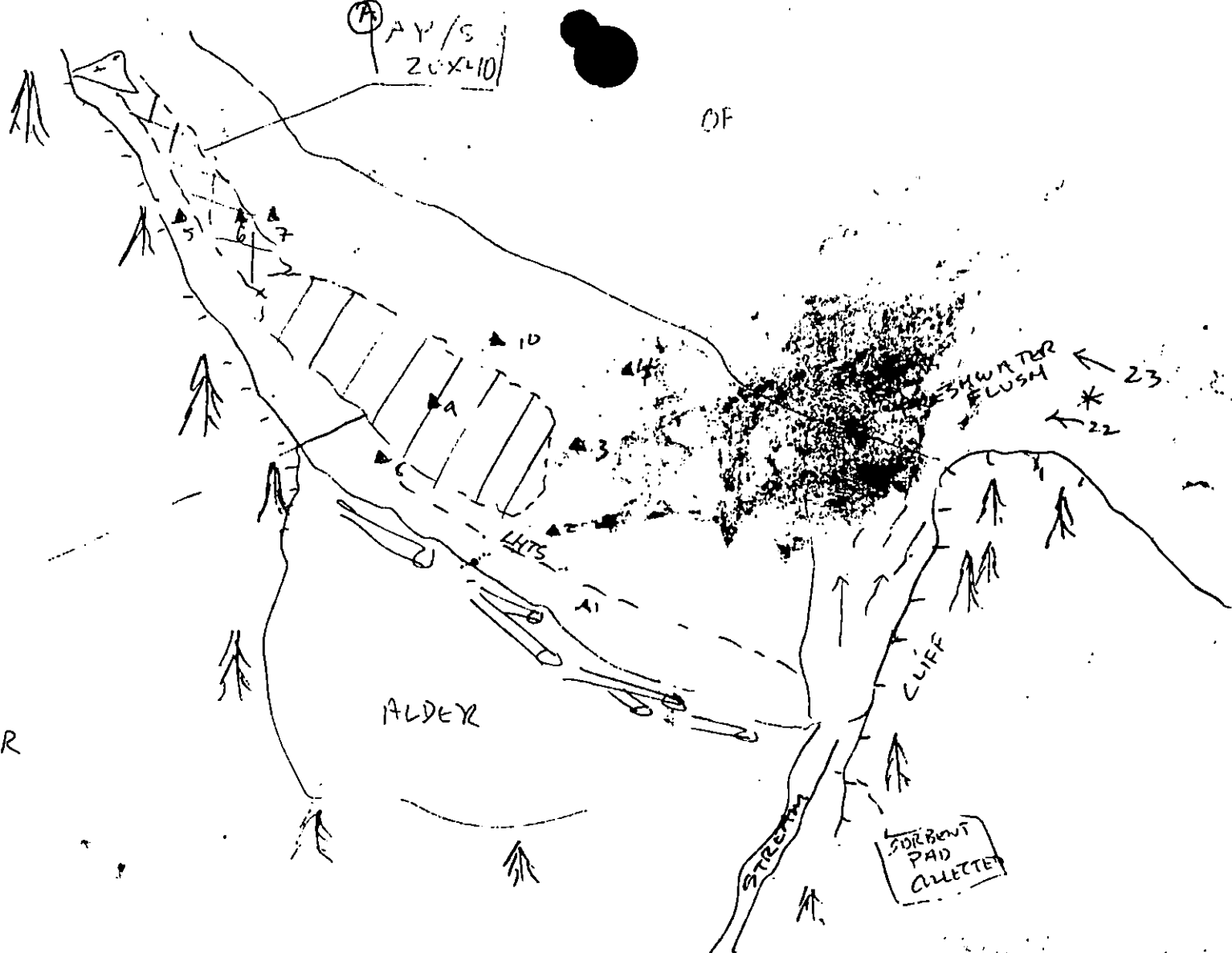
MOR 0-15

MOR 15-35

NOT CL

A AP/S
20X40

OF



KN-135B
3 MAY
HARPER
FIELD NOTES

ET revised May 9
REVIEWED CD
18 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # KN 135 TIDAL HEIGHT (Range) 0-1
 SUBDIVISION 8 BIOLOGIST STOKOR
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach at pebble/cobble/boulder/bedrock transected by a small stream.

Biota generally sparse in upper intertidal, increasing downslope in both abundance and diversity. Biota varies considerably across subdivision, probably due to substrate characteristics. Biota on SE third of subdivision (pebble/cobble) is relatively sparse, consisting primarily of barnacles and Littorina. Biota increases rapidly in both abundance and diversity to NW on cobble/boulder/bedrock, characterized by patchily dense barnacles, Fucus, interbedded and attached Mytilus, Littorina with egg masses, limpets (often in dense clusters), scarletia/Nucella in dense clusters, clusters of small Leptasterias, and clam shells (Saxidomus). Patches of asphalt were observed scattered throughout this community.

Biota within/adjacent to surface oil area B and subsurface pits 2-10 consists of patchy barnacles and spat, moderately dense Littorina with egg masses, limpets, and interbedded Mytilus in the MTZ. Biota increases in diversity and abundance from C to H and downslope.

Biota within/adjacent to area A (subsurface pit 6) similar to above.

If treatment is undertaken, it is suggested that the beach be accessed from the S. end of the subdivision, where biota is minimal.

WILDLIFE OBSERVATIONS

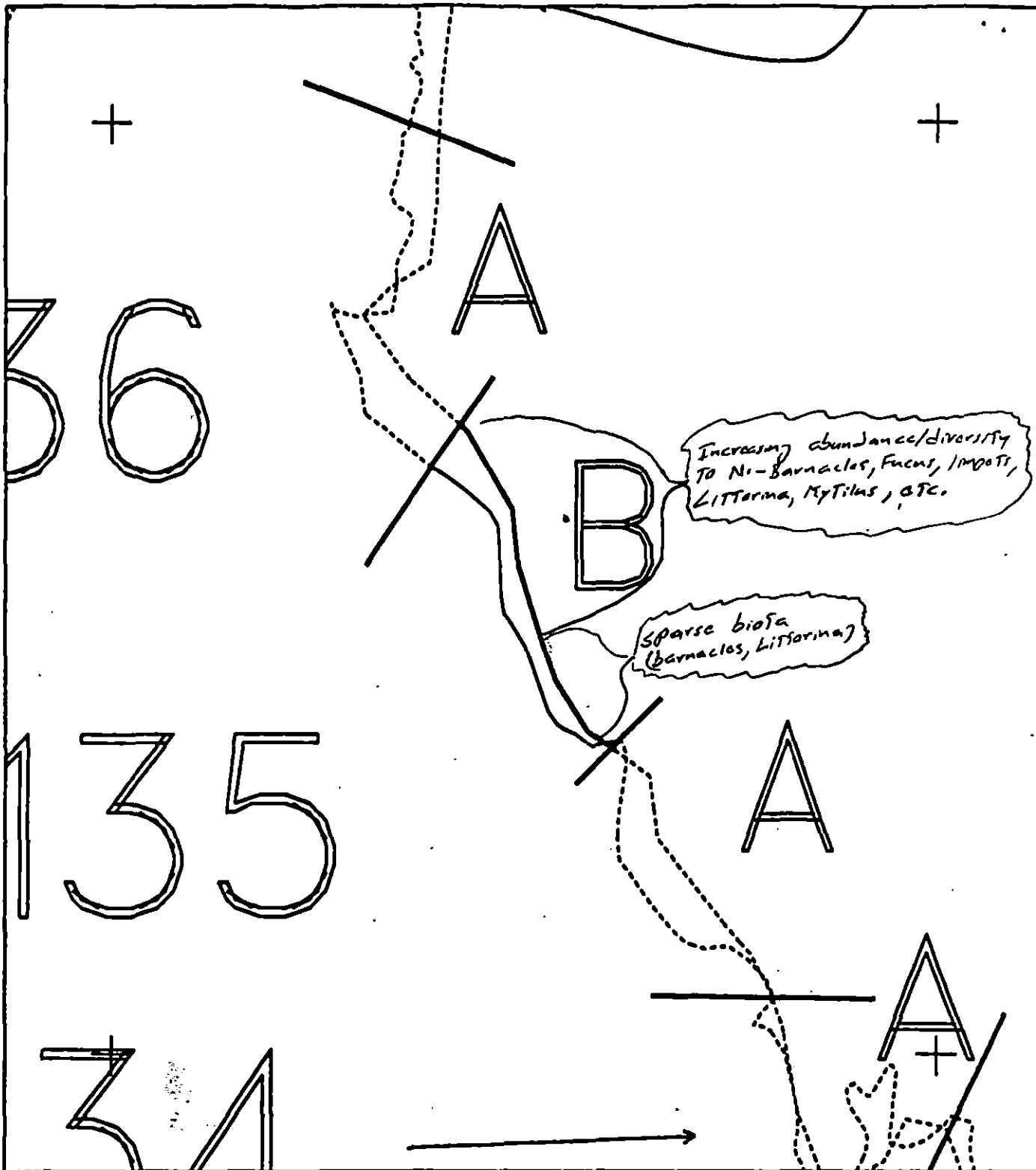
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	None observed	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters		(2 Deer skeletons)	
Pinnipeds (specify)			
les (specify)			

Shoreline subdivision map showing important biological features attached.



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

KN0135 B

ADEC Subsegment Length: 205m
 METERS

AK State Plane Zone 4
 660135b



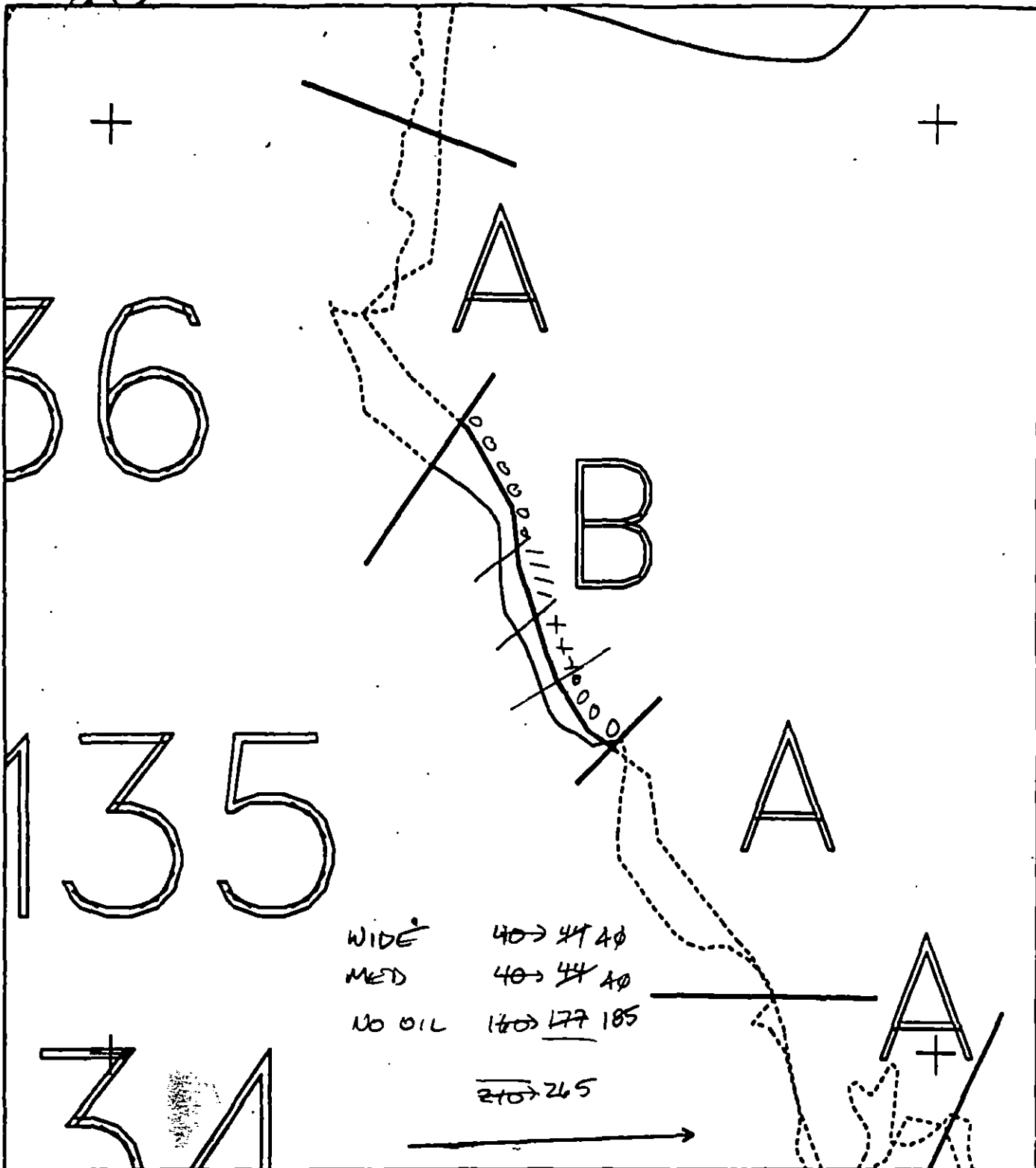
Subdivision Field Map

Map Key: KN0135B

Name: S. Stoker

Date: 5/3/91

Date Entered:



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

KN0135 B
 ADEC Subsegment Length: 265m
 METERS
 0 100 200
 AK State Plane Zone 4
 620135B

Subdivision Field Map
 Map Key: KN0135B
 Name: HARPER
 Date: 3 MAY 91
 Date Entered:

SURFACE OILING SUMMARY
 MAP

ET revised, May 9
 REVIEWED CE 10 MAY
 DG 5 of 5

ASAP TAG REVIEW SHEET

Segment: Kn135 Subd: A Site: 1 Date
PRE-Review 17 Aug 90

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR X none

Treatment
Recommended:

m/p of Asphalt

1) 48x10 AP/B

243 meters long

2) 15x10 AP/P

33

matrix on Spanish Asphalt

11 NTR

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
CG ADEC EXXON LAND MGR

TAG 23 Aug 90

(already

NTR-

ReBIO)

Reassess 9/1

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KU-135 Subd.: A Site: _____ Date: 8-10-90 1990

Conditions Observed: Band of Continuous Coal Area AP OR and OR
oil with dimensions of approx 12m x 50m. Subsurface oil
penetration to between 5cm and 10cm. A lens of oil along South
bank of stream from 8cm-10cm. Survey well suggests there
is heavier and widespread across 1152 at South end
of segment.

Followup Recommendations: Manual removal of AP, residual AP, MS,
OR and OR subsurface sediments. See below for comments and
recommended treatments.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☐ Med ☐

ADEC Bob M. Peasly
 (name)

Robert B. M. Peasly
 (signature)

Comments: HP-HW washing w/ Hacks would be effective in breaking up Heavy
oil and oil and MS. Along 7 in along South stream bank has been
oil which will need to mechanically spread and either removed
or washed with HP-HW. twin fork.

Exxon John Dean
 (name)

John Dean
 (signature)

Comments: This Area would benefit from additional Manual Pick-Up/Break
up and Retreatment w/ BID

USCG Don Davis
 (name)

Don Davis
 (signature)

Comments: A large area of subsurface oiling appears present in area of
anadromous stream. High water table could allow hot water washing.
potential for biological damage in area.

and Rep. Lora Johnson
 (name)

Lora L. Johnson
 (signature)

Comments: AGREE WITH ADEC. REFER TO SSAT SKETCH MAP
FOR OIL LOCATIONS AS WELL.

SEGMENT AS / KN-135 SUBDIVISION: A SITE: 1 DATE 10 AUG 90

USCG

Don Davis, USCG SIGNATURE [Signature]
Don Davis, NOAA

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: LARGE AREA OF COAT/STAIN OBSERVED INTERSTITIAL IN LARGE BOULDER AREA. (U/E)
SOME ASPHALT PATCHES IN EXPOSED AREAS BETWEEN ROCKS. SOME AREAS APPEARED TO
HAVE BEEN TREATED, BUT ASPHALT, COAT, FILM, AND MOUSSE REMAINS IN LARGE
AREA APPROX 40m x 2m. SEVERAL PITS WERE DUG ALL SHOWING OILING AT DIFFERENT
INTERVALS. AT EDGE OF ANONYMOUS STREAM, EXPOSED BANK SHOWS A LINE OF OILING
APPROX 8cm DOWN SIDE. THIS APPEARS TO SHOW SUBSURFACE OILING IN GRAVEL SHOAL
BETWEEN STREAM BRANCHES @ 8-10 cm. SOME TREATMENT REQUIRED IN 1990.

ADEC

NAME Bob McLennan SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: North end of segment has AP, MS, OP, and OR in a continuous
distribution. Areas of oiling range from MITZ- HITZ and is approx.
12m x 80m. ASAP/Survey crew has submitted recommendation for
further work in '90. I have recommended HP-HW washing utilizing
a Hander float line. Also a lens of oil is present at LITZ at South
border of segment. To expose this lens, mechanical equipment is
necessary. Exposed OP sediments should be removed or washed using
HP-HW.

MANAGER

NAME LORA JOHNSON SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. SEE SSAT SKETCH
MAP ALSO. NEEDS WORK IN 1990. AND 1991.

XXON

NAME John Dean SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: SHUTTERED AREA, PRESENCE OF OIL JUSTIFIED '91 ASSESSMENT

NAME: JOHN DEAN SUBDIVISION: KN135-A
 ADDRESS: USCG - OON OARIS / NOAA TOTAL NO SITES: 1
 DATE: 8/10/90 TIME: 0570 11 20
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 243 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 CATEGORY LENGTH: W m M 65 m N 128 m VL m NO 50 m US m

SURFACE OIL									SITE 1									SITE 2									SITE 3								
CHARACTER	DISTRIBUTION				OILED ZONES					DISTRIBUTION				OILED ZONES					DISTRIBUTION				OILED ZONES												
	/C	/B	/P	/S	SU	UI	MI	LI		/C	/B	/P	/S	SU	UI	MI	LI		/C	/B	P	/S	SU	UI	MI	LI									
ASPHALT			X			X																													
S.O.R.																																			
POOLED																																			
COVER		X				X																													
COAT		X				X																													
STAIN				I		X																													
MOUSSE				I		X																													
PATTIES/T.B.																																			
FILM						X	X																												
NO OIL						X		X																											
EST. SITE LENGTH					243m																														

SUBSURFACE OIL													
SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	8		X			0.8	N	X				P/B/C
1	2	5		X			0.3	Y	X				P/B/C
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs _____
 Roll No _____
 Frames _____

COMMENTS
 - OIL GRADES FROM WIDE TO NONE IN A NORTH-SOUTH DIRECTION. SUBSURFACE OIL OCCURS AT EACH END OF THE SITE
 - THE STREAM BANK AT THE SOUTHERN END OF THE SITE EXHIBITS A LENS OF OIL ABOUT 10 TO 15 CM THICK

SKETCH MAP

SEGMENT **KN-135**

SUBDIVISION **A**

DATE **3/30/90**

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Top/Sub Entry
- ☐ OP Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSA
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PA Location(s)
- ☐ Photo Location(s)

LEGEND

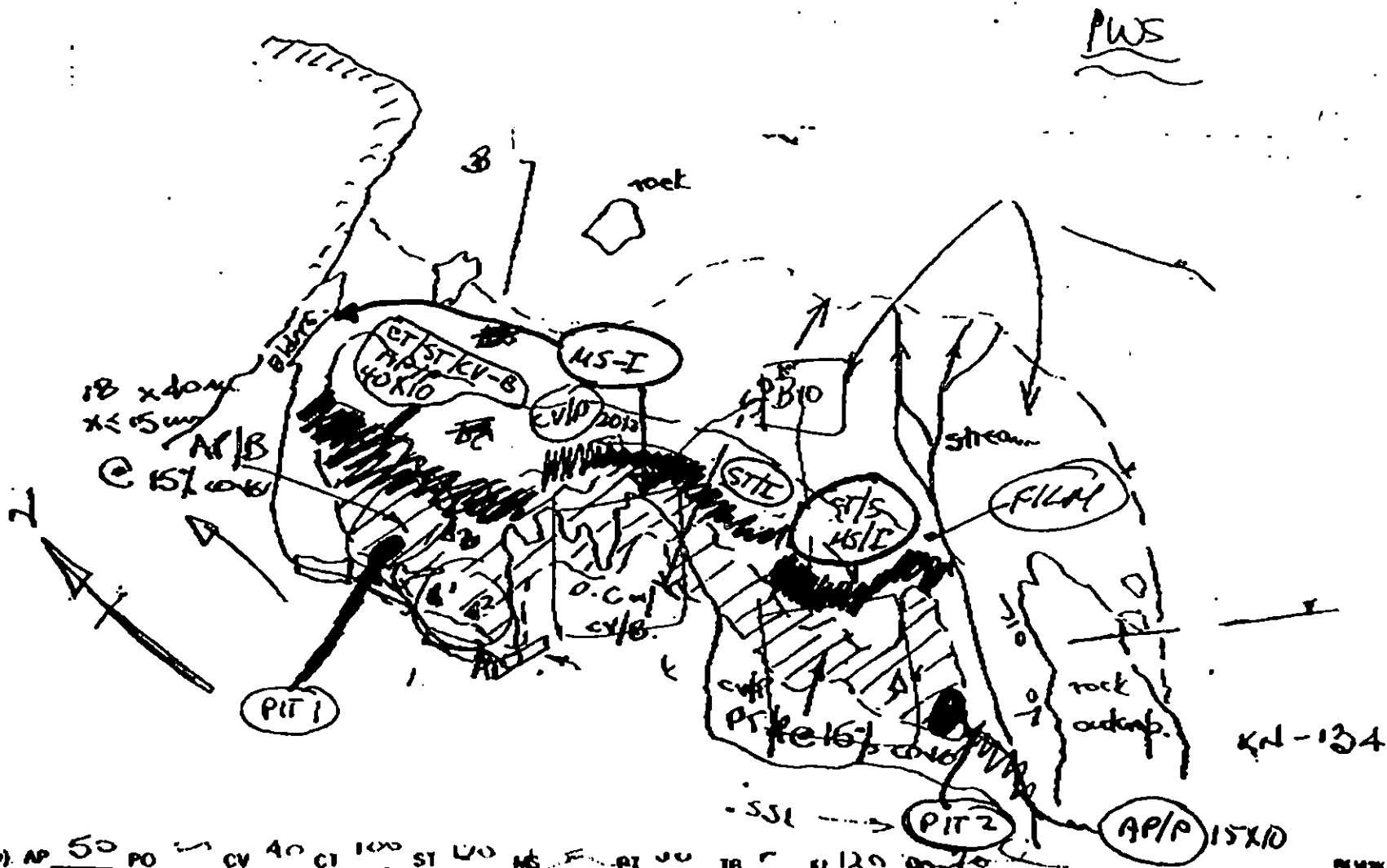
- 1 Δ
Pd - Subsurface Oil
- 2 Δ
Pd - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Spotted Distribution
- Other Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP 50 PO CV 40 CT 100 ST 100 MS F AT 50 TB F FIL 20 AD 20

SPOT WASH + ACETONE AS TO REMOVAL

Yes 191 Sample. No. Nona
 YES 91 *[Signature]* USG
 YES 91 *[Signature]* CAC
 YES 91 *[Signature]* EXXON

SITE

KN-135 A

ADEC Subsegment Length: 243m

METERS

0 40 80

AK State Plane Zone 4 1:1034



Subdivision Field Map

Map Key: KNKN-135A

Name: NAKASHIMA

Date: 8/10/90

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

Wide
 Medium
 Narrow
 Very Light
 No Oil

ASAP TAG REVIEW SHEET

Segment: Kn135 Subd: B Site: 1 Date 14 Aug 90
 PRE-Review

Priority For Addressing In 1990

 HIGH MEDIUM X LOW NTR X None

Treatment
 Recommended:

m/p of SOR if it is High
if not then NTR

SOR only if it is High!!

Low energy beach

Not to be reassessed in '91
if work is done

Priority Site For Reassessment In 1991

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

TAG 21 AUG 90

BIO

ASAP FOLLOWUP RECOMMENDATIONS

ment: AS/KN-135 Subd.: B Site: 1 Date: 8-10-90 1990

Conditions Observed: Area has at MITZ-HITZ a large area of AP, residual AP/SOR, and OP/OR subsurface oil to 5cm. Storm berm is saturated with OP to OR oil with subsurface penetration to 20cm.

Followup Recommendations: Manual removal of AP, OP, and OR. See below for additional recommendations regarding storm berm.

Completed by Pickup Crew: ☐ YES ☒ NO

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

DEC

Bob McCready
(name)

Robert B. McCready
(signature)

Comments: Complete removal of all AP, OP, OR oil is recommended. Storm berm should be mechanically relocated with heavy machinery removed and residual oil bioremediated.

Exxon

John Dean
(name)

JM Dean
(signature)

Comments: TIME PERMITTING, A LIMITED AMOUNT OF ADDITIONAL OIL CAN BE REMOVED MANUALLY. RECOMMEND RETREATING w/ BID

USCG

Don Ovie, GM
(name)

Don Ovie
(signature)

Comments: AGREE w/ ADEC COMMENTS. MONITOR PROGRESS 1990. DIFFICULT AND TIME CONSUMING MANUAL REMOVAL.

Land Rep.

LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: AGREE WITH ADEC COMMENTS. NEEDS MECHANICAL & MANUAL TREATMENT IN 1990. SEE SSAT SKETCH MAP ALSO.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / KN-135 SUBDIVISION: B SITE: 1 DATE 10 AUG 90

NAME Don Davis, GM, USCG SIGNATURE Don Davis
Don Davis, NOAA☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Segment contains a Pom-Pom Boom laying on beach which is totally ineffective. Should be removed. Sheening could be contained by solvent sweep. Additional oiling was interstitial mousse in rock boulders and outcrops. One large patch approx. 15m x 2m located in the center of segment contains coat/stain/sol w/ some asphalt patches around boulders. Moderate/moderate priority for work this year. High priority reassessment in 1991.

ADEC

NAME Bob McReady SIGNATURE Robert G. McReady☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: MS, CT, CV on hauler beach at north portion of segment. Southern half of segment has large area of AP, OP, and OR which will need to receive further treatment in '90. In addition, storm berm is saturated with OP. Will require mechanical relocation - then sediments should then be washed using the Twin Peaks or removed.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

AGREE WITH ADEC COMMENTS. NEEDS MECHANICAL AND MANUAL TREATMENT IN 1990. SEE SSAT SKETCH MAP ALSO.

EXXON

NAME John Dean SIGNATURE John Dean☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

REASSESSMENT will be necessary due to SWEETENED NATURE OF AREA.

3
 NAME: JOHN DEAN SUBDIVISION: KN 135 B
 ADDRESS: USCG - CONCORDIA/NOAA
 ADEC: BOB MCGREGG LAND REP: LAURA JOHNSON TOTAL NO. SITES: 1
 DATE: 5/10/90 TIME: 10:35 to 10:55 TIDE LEVEL: -0.2 to +0.5
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 100 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 75 m M 25 m N — m VL — m NO — m US 65 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X	X			X		
POOLED COVER								
COAT		X	X			X		
STAIN		X	X			X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					100 M			

SITE 2

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

SITE 3

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO		SU	UI	MI	LI	
1	1	15		X			0.5	Y	X			G/S/P/C
1	2	10			X		0.2	Y	X			P/G/C
1	3	20				X	.		X			P/G/S
1	4	20		X			0.18	Y	X			P/G/S
							.					
							.					
							.					
							.					
							.					
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Photographs

Roll No

Frames

REMARKS

- A 10 M-WIDE ZONE OF SORP/IST OCCURRED IN THE PEBBLE/CORAL ROCKY BEACH AT THE SOUTHERN EXTREMITY OF THE SITE. OIL DISTRIBUTION GRABBED FROM MEDIUM TO A WIDE DISTRIBUTION FROM THE N TO S.

REVISION NO. 7/27/90

ST 100
SOR 100
CT 100
NO 0
US -0

Feb '91 David C. Roe, NOAA
 Feb '91 Z.B. M.
 Feb '91 J.M. Exxon
 Feb '91 D.R. USCG

Subdivision Field Map
Map Key: KNIK-1358
Name: NAKASHIMA
Date: 8/9/90
Date Entered:

ASAP TAG REVIEW SHEET

Segment: Kn 136 Subd: A Site: 1 Date 14 Aug 90
 PRE-Review

Priority For Addressing In 1990

☒ HIGH ☒ MEDIUM ☐ LOW ☐ NTR

Treatment
Recommended:

m/p of Asphalt, SOR

WHAT Type of SOR???

Not to be reassessed in 91
if work done this year

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
☒ CG ☐ ☒ ADEC ☐ ☒ EXXON ☐ ☒ LAND MGR ☐

TAB 21 AUG 90

NTR - Reassess 91

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KU-136 Subd.: A Site: 1 Date: 8-10-90 1990

Conditions Observed: Heavily Piled segment. Boulder/cobble sections of beach have a band of heavy coat and cover from L172-H172 with interstitial MS and subbase OP and OR oil. Marsh has oil saturated peat (actively seeping) and is surrounded by cobbles and boulders with heavy coat and cover. These cobbles and boulders appear to have been placed there by Kongsen

Followup Recommendations: Manual removal of all removable AP, MS, OP, and OR oil. See below comments for specific recommended treatment techniques.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod ☐

ADEC Bob McCreary
(name)

Robert E. McCreary
(signature)

Comments: Extensive nature of this will require a substantial commitment. HP HW washing would greatly facilitate cleaning of KU-136. Manual removal alone will not be enough to adequately treat segment. In addition, mechanical treatment should be seriously considered.

Exxon John Deen
(name)

John Deen
(signature)

Comments: I CONCUR W COMMENTS BY USCG BEHAV. DIFFICULT AREA TO RECOMMEND TECHNIQUES, REASSESSMENT IN SPRING MAY BE OUR BEST APPROACH.

USCG Don Davis
(name)

Don Davis
(signature)

Comments: DIFFICULT MANUAL AREAS SOME W/ HEAVY INTERSTITIAL OILING. SOME DEPOSITS OF ASPHALT / MOUSSE AND "SUD" IN DARKER PATCHES. SUGGEST MODERATE PRIORITY THIS YEAR WITH HIGH PRIORITY REASSESSMENT IN 1991. HOT WATER WASHING A GOOD POSSIBILITY.

Land Rep. LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: AGREE WITH ADEC. SEE SSAT SKETCH MAPS.

SEGMENT AS / KN-136 SUBDIVISION: A SITE: 1 DATE 10 AUG 90

NAME DAVID ROE, USCG SIGNATURE David Roe
David Roe, NOAA

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: THIS AREA CONTAINS SEVERAL PORTS OF "SOL" WITH A LIGHT FILM ON THE SURFACE OF ROCK / GRAVEL BEACH. IN ADDITION, THIS SEGMENT INCLUDES A LARGE TIDAL WASH BASIN WITH A GRAVEL AND PEAT BED. THE WHOLE BASIN CONTAINED A LIGHT FILM ON THE SURFACE WATER WITH AN ANASTOMOSING STREAM RUNNING DOWN THE MIDDLE. THE SURROUNDING BANKS WERE HEAVILY OILED W/ COAT AND SOME ASPHALT AND MOUSSEL. THIS AREA APPEARS TO BE A CANDIDATE FOR HOT WATER WASHING. HIGH GROUND WATER WOULD ALLOW OILING TO RUN DOWN TO SMALL COVE FOR RECOVERY.

ADEC NAME Bob McCaskey SIGNATURE Robert B. McCaskey

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Heavily oiled segment requires further treatment. Oiling is heavy and continuous throughout with AP, MS, CU, CT, OP, OR oiling from 14172-21. Despite efforts of cleanup crews in Summer 90 cleanup, a substantial commitment and effort will be required to adequately clean KN-136. Treat techniques recommended are HWR HP washing with Healer line. Manual removal of AP, MS, OP, & OR. Further manual removal of OP saturated Peat in Marsh or Biremeachon, and long term monitoring. If further treatment is required it should occur until KN-136 is free of AP, MS, OP, and OR oil.

LAND MANAGER NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. SEE SSAT SKETCH MAPS.

EXXON NAME JOHN DEAN SIGNATURE John Dean

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: / AGREE W/ USCG/NOAA COMMENTS ABOVE.

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT		X				X		
S.O.R.	X	X				X		
POOLED COVER								
COAT		X				X		
STAIN		X				X		
MOUSSE				X		X		
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					259m			

SURFACE OIL

[illegible]

Photographs

25. Mr.

James

MENTS

— OIL OCCURS THROUGHOUT THIS SITE — A PRACTICALLY UNDISTURBED AREA IS THE STREAM/
FLOOD FLAT AREA IN THE CENTER OF THE SITE. CRUSTS OCCUR ON THE FLANKS
OF THE STREAM

REVISION NO. 7/27/88

REVISION NO. 2/27/99

-OTHERWISE THE DISTRICTS ARE COMPOSED OR COMBINED/ADMINISTRATIVE PURPOSES ONLY

24 (SM) [REDACTED], KN-136

SUBDIVISION

DATE 3/30 90

CHECKLIST

- ☐ Narrow
- ☒ Approx. Scale
- ☐ Seg/Sub Entry
- ☒ On Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LVL
- ☒ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ**
P1 No Subsurface Oil

- 2 ▲
Pl Subsurface Of

CT/C
Continuous Distribution

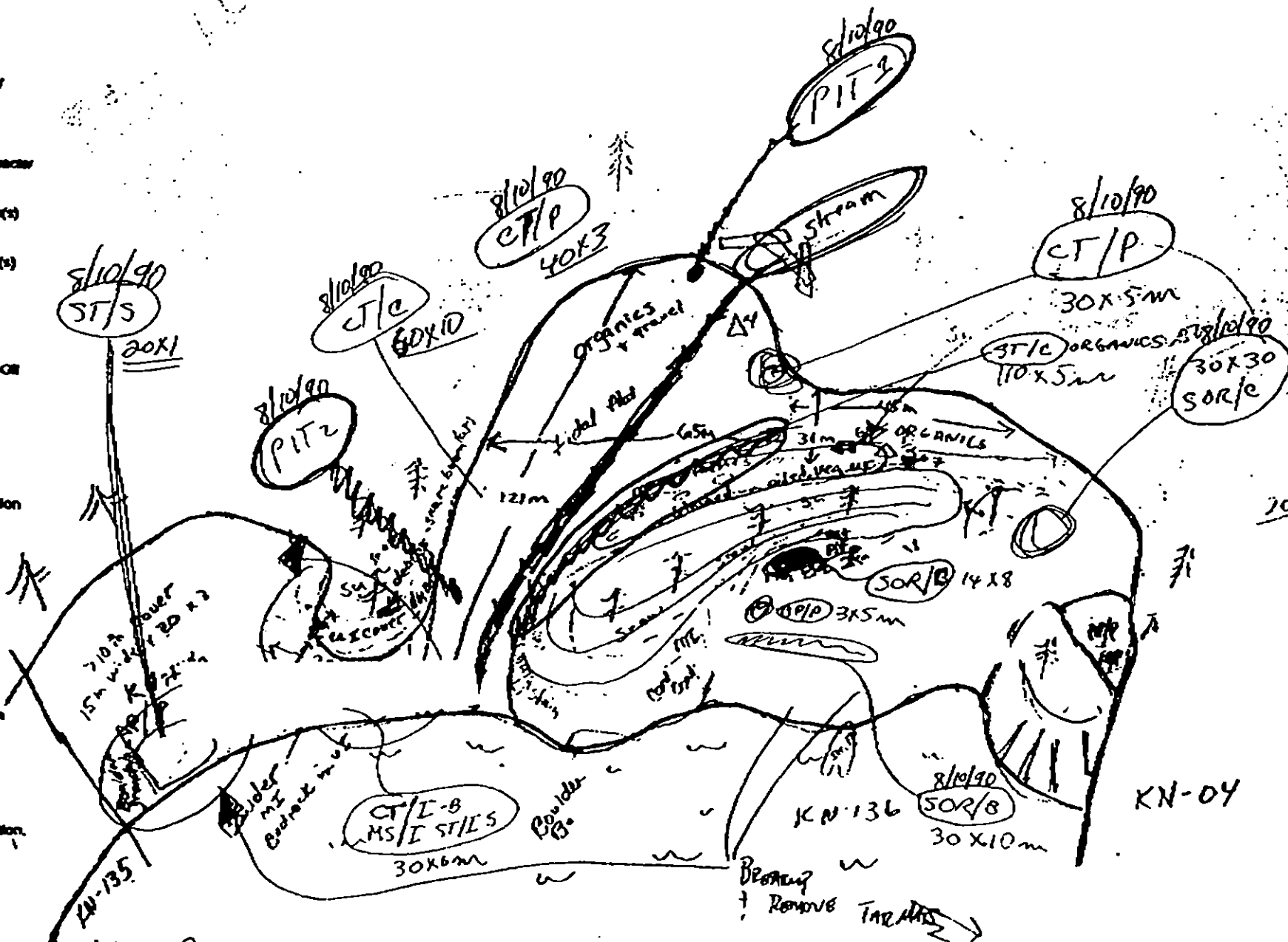
CT/O
Broken Distribution

CT/P
Patchy Distribution

CT/S
Soleished Distribution

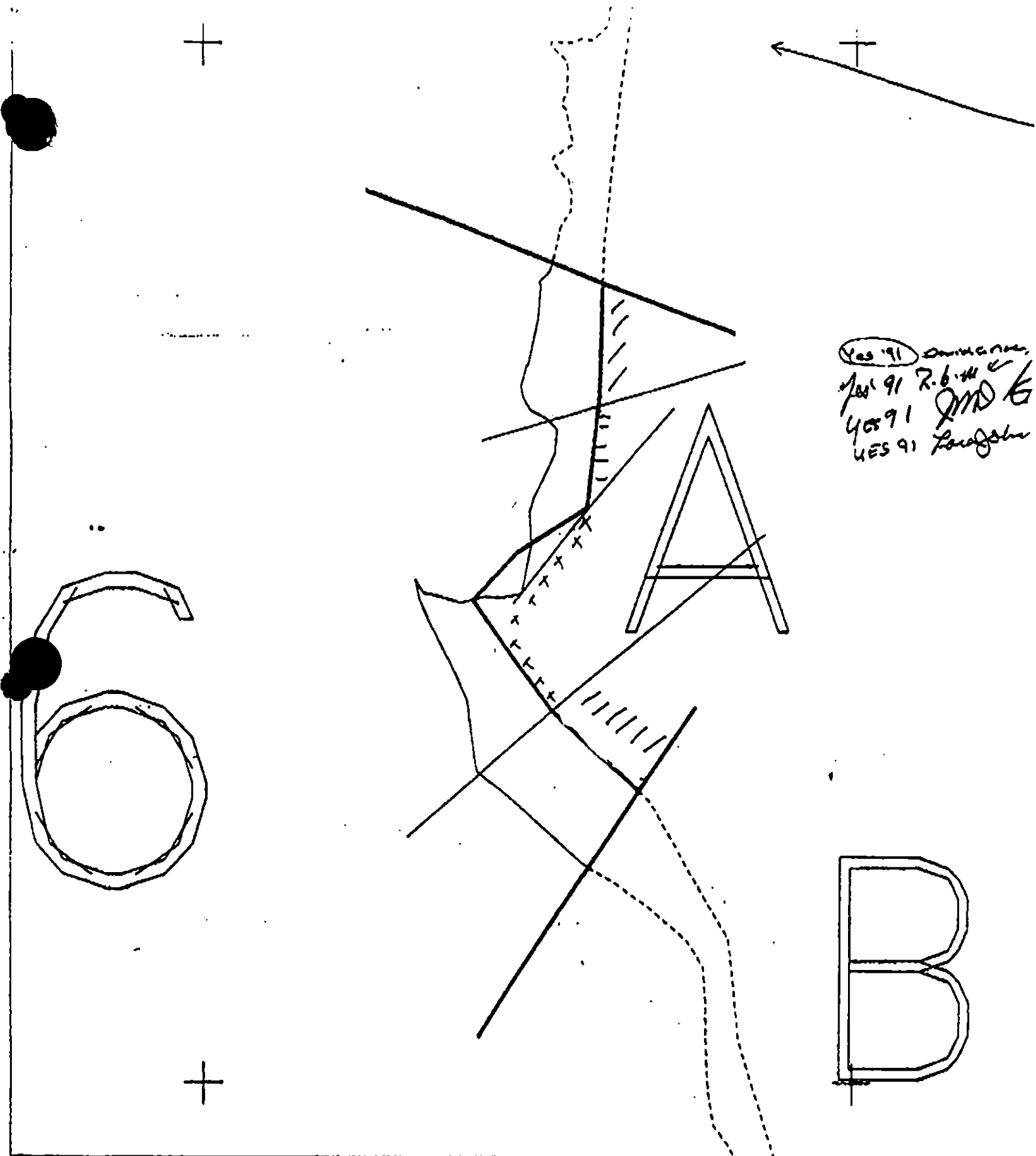
Field Vegetation

Photo location, direction,
and number



Character Length: AP 181 PO 0 CV 136 CT 136 ST 136 MS 65 PT 15 TB 0 FL 27 NO 0

THE VISION OF 2020



Yes 91 *Amman*
 Jan 91 R.6.44
 40591 *MD E*
 40591 *Longhorn*

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

KN-136 A
 ADEC Subsegment Length: 259m
 METERS

0 54 107
 AK State Plane Zone 4 1:2115



Subdivision Field Map
 Map Key: KNKN-136A
 Name: NAKASHIMA
 Date: 8/9/90
 Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-141

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting
(3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential
minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance
of unoiled substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 34 m: V.Light 201 m: No Oil 359 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: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 141 SUBDIVISION: B DATE 3-31-90

USCG

NAME Patrick Malay SIGNATURE Patrick Malay☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

This subsegment consisted of 2 bedrock islands that had areas of continuous and broken stain and weathered coating in the U.I. zone. Debris may exist in the storm berm but it is not evident at this time (due to the snow) so I can not recommend treatment.

ADEC

NAME Michael Cunningham SIGNATURE Michael Cunningham☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

→ as per guidelines for "coat"
(see pg 6 flow diagram)

[High Angle bedrock w/ patchy stain & coat; both very weathered (very hard)]
All debris observed = removed by SSAT

LAND MANAGER

NAME Steven Phillips SIGNATURE Steven Phillips☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual Pickup of debris in Storm Berm (under snow)
watch bathtub rings for deterioration

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Greg Chaney USCG Patric Malay SEGMENT ST/ 141
 BIO Jim Roth LAND REP Mike Cunningham SUBDIVISION B
 EXXON Ray Sotelo ADEC Steve Phillips TIME 13:50 to 14:10
 TEAM NO.: 7 TIDE LEVEL: 5.4 ft to 5.5 ft DATE Mar 13 / 1990
 EST. SUBDIVISION LENGTH: 580 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 60 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 35 m VL 170 m NO 375 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	R	P	S	SP	SR	GT	SL	TL	LR	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT			X				X						X	
STAIN	X		X				X						X	
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL														

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Net#BAGS 1

Photographs:

Roll No. ST-7-1Frames 13, 14

SUBSURFACE OIL No pits dug due to bedrock substrate.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP	SR	GT	SL	TL	LR	SU	U	M	L		

COMMENTS

Subsegment consisted of 2 small islands which were very simple bedrock knolls. Oil stain bands were evident but some cracks contained coated oil.

SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN-141 Subdivision B Date (mo / day / yr) 31 MAR 90
 (24 hr) ARR 1350 Biologist ROTH

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 10 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: ST-7-1
 Roll No. ST-7-1
 Frames 13-14

BARNACLES

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

TIDE WAS ~ +4 FT. WHEN WE ARRIVED — THEREFORE NO LOWER ZONE OBSERVATIONS POSSIBLE.
 ISLAND WAS SURVEYED FROM BOAT ONLY — GASTROPODS NOT VISIBLE

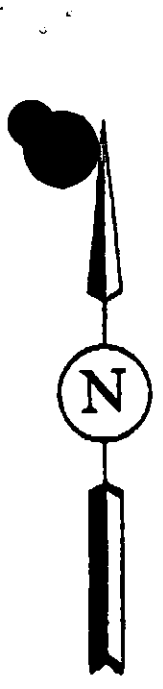
Ecological Considerations:

REV. 10/08/00 002/04/90

SKE MAP

OG Greg Ch...
SEGMENT ST/...
SUBDIVISION B

DATE Mar 13/90



100 METERS

DUE TO
BEDROCK SUBSTRATE
NO PITS WERE DUG.

ROUNDED BEDROCK SHORELINE

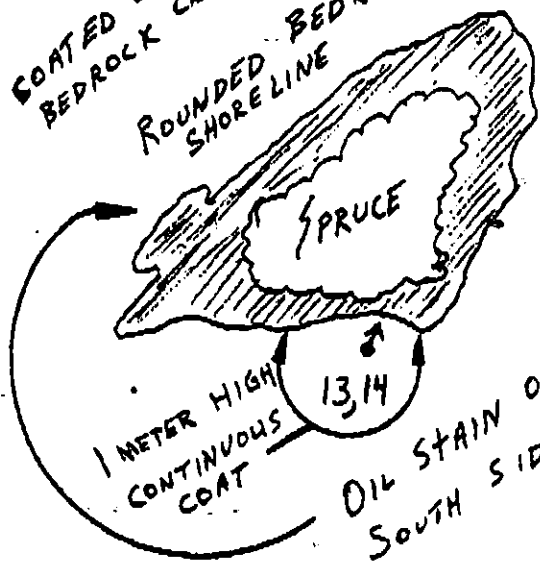
141A
141B

HERRING BAY

COATED OIL IN
BEDROCK CRACKS

ROUNDED BEDROCK
SHORELINE

OIL STAIN ON BEDROCK
SOUTH SIDE OF ISLAND



OIL STAIN ON BEDROCK
SOUTH SIDE OF ISLAND

CHECKLIST

- AI Arrow
- Approx. Scale
- Seg/Sub Entry
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LWA
- SSZ
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Cilled Vegetation

1 ●

Photo location, direction, and number

Oil Character Length (m): AP — PO — CV — CT 35 ST 205 MS — PT — TB — FL — NO 375

DEC-11-1989 10:16 FROM YUKON RIVER

TO

P.15

~~KN-121~~



100 141501

KN-141B

XX Wide
// Medium
-- Narrow
TT Very Light

ADEC Segment Length: 1148m
EXXON Segment Length: 1291m

Map Key: PWS-321

Name: Greg Chaney

REVISION 1 6/10/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Manual Raking/Tilling	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,P,O,Q	Harbor Seal and Sea Lion Pupping and Molting Area	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation and manual raking/tilling within 400m of active nest.

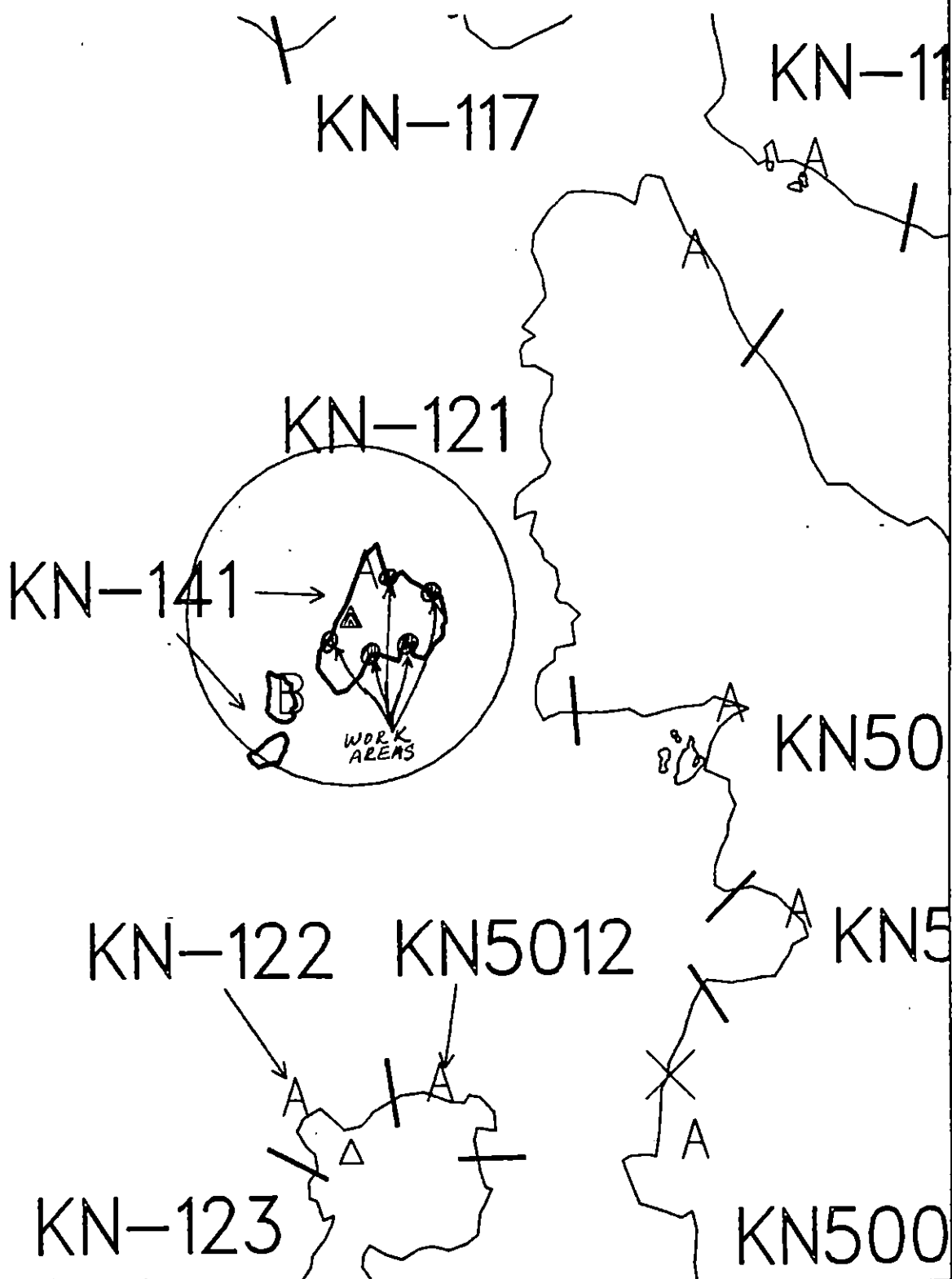
OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC Date 6-10-90

Prepared by J.P. Phillips ⁶⁻¹⁰⁻⁹⁰ Date 6/10/90

Handwritten notes:
 1. ...
 2. ...
 3. ...



Exxon Company, USA
 Map Key: PMS-KN-141
 1 of 2

ECOLOGY MAP
 SEGMENT KN-141
 SUBDIVISION A (1 of 2)
 METERS

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

Handwritten signature: ...

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3Q, 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 26 m: Medium 161 m: Narrow 119 m: V. Light 712 m: No Oil 130 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 8/15 based on pupping constraints.

[See Constraint Addendum Dated 5/22/90] WKS

CONSTRAINTS
SFR REVISION 1, ADDENDUM dated 6/10/90 JPP

TAG COMMENTS: MANUALLY TILL/RACE WHERE APPROPRIATE PRIOR TO BIOREMEDIATION

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY GERTZ
NOAA Bruce Wessett
USCG M. J. Hall

FOSC:

DATE: 4-11-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking/Tilling	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,P,O,Q

Harbor Seal and Sea Lion
Pupping and Molting Area

NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

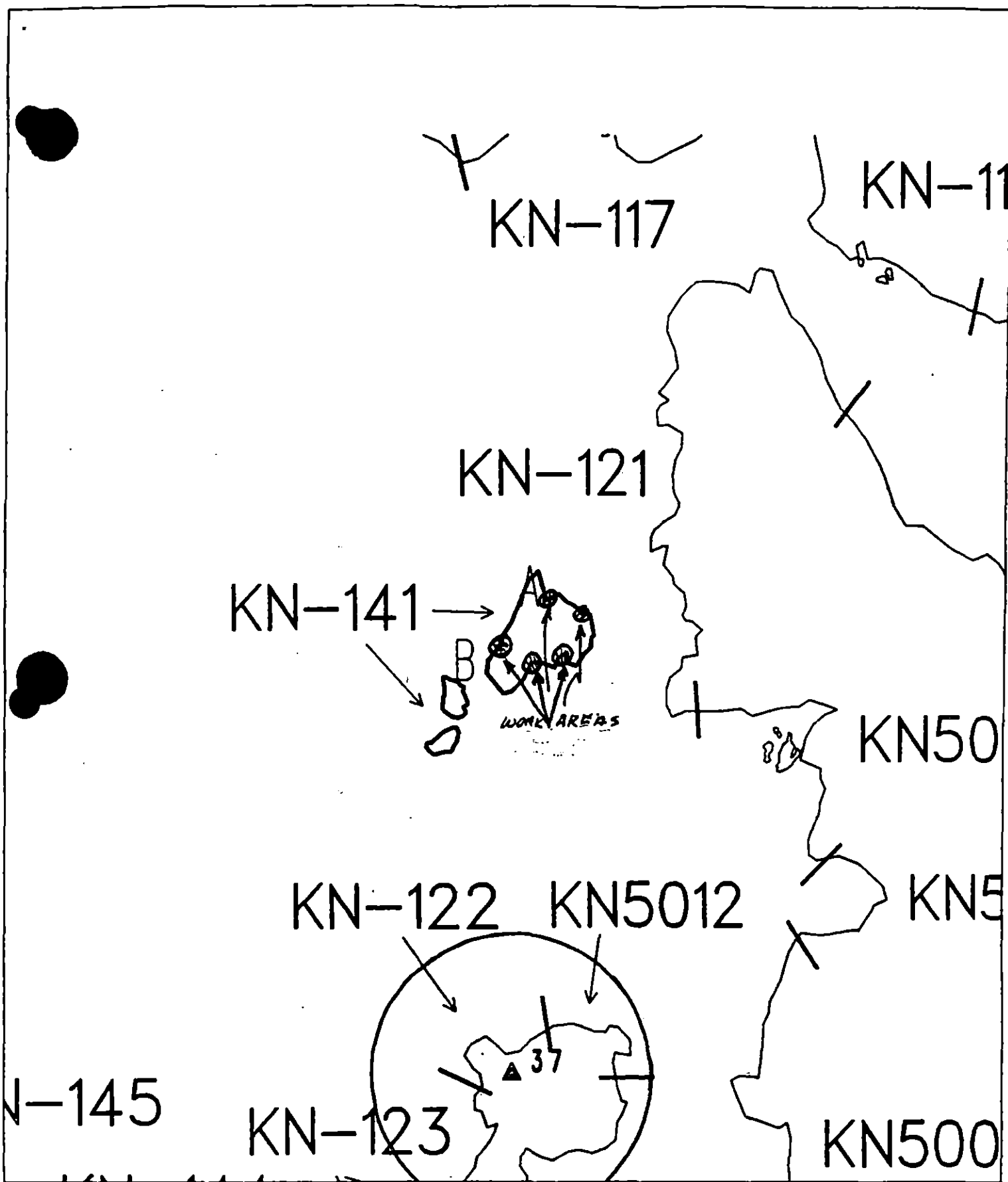
TAG APPROVAL DATE 5/24/90
ADEC Art Wawer
EXXON Andy USA
NOAA B. W. Smith
USCG M. J. Hall

FOSC W L

DATE 5-24-90

Prepared By: Andrea Meyer Wtk

Date 5/22/90



Exxon Company, USA
 Map Keys: KNI-KN-141
 May 11, 1990



ECOLOGY MAP
 SEGMENT KN-141
 SUBDIVISION A (L of A)
 METERS
 0 380 761

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1248 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 26 m: Medium 161 m: Narrow 119 m: V. Light 712 m: No Oil 130 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 8/15 based on pupping constraints.

[See Constraint Addendum Dated 5/22/90] LK

TAG COMMENTS: MANUALLY TILL/RACE WHERE APPROPRIATE PRIOR TO BIOREMEDIATION

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY GATZ
NOAA Bert Wesscott
USCG M. J. Hall

FOSC:

DATE: 4-14-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal and Sea Lion
Pupping and Molting Area

NO TIME CONSTRAINT. Authorized per
memorandum dated 5/14/90 from Kathryn
Frost/ADF&G to Mark Kuwada/ADF&G.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG ADDENDUM DATE

5/21/90

ADEC

Art Weiner

EXXON

Andy Gar

NOAA

Joseph Tebbott

USCG

M. J. Hall

FOSC

DATE

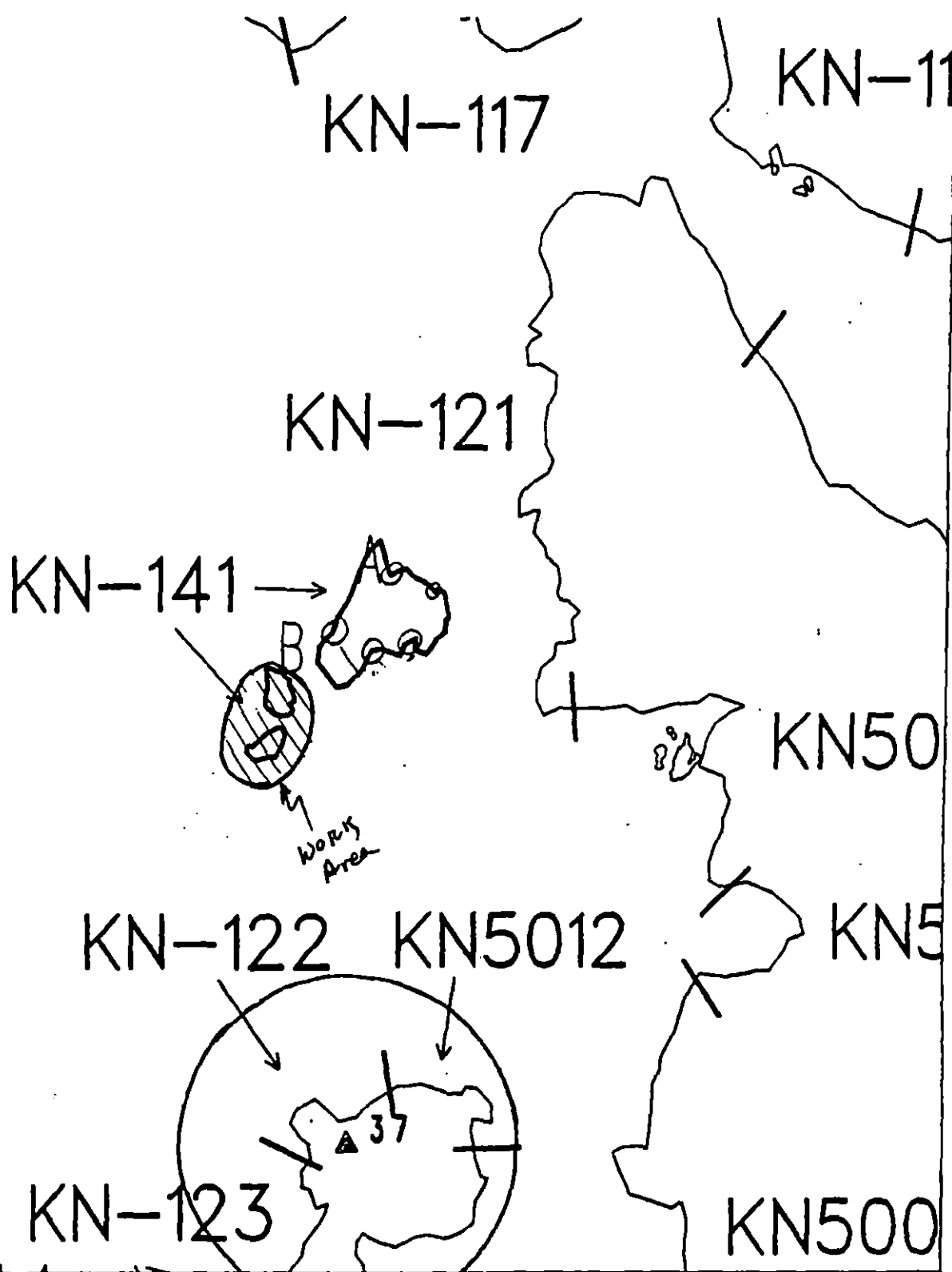
5-21-90

Prepared by:

Anders Meyer

Date:

5/20/90



Exxon Company, USA
 Map Key: KN-141
 May 11, 1990



ECOLOGY MAP
 SEGMENT KN-141
 SUBDIVISION B (2 of 2)
 METERS
 0 300 700

★	Seabird Colony
▲	Eagle Nest

1 inch = 1248 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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

Cultural Resource

SHPO SIGNATURE: Charles E. H. Mc... DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 34 m: V. Light 201 m: No Oil 359 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	☐ <u> </u> Beach Cleaner
☐ <u> </u> Removal	☐ Other (see comments)

COMMENTS: WORK DATE CHANGE SEE ADDENDUM
DATED 5/20/90 DEC.

TAG COMMENTS: PRIOR CLEANUP TEAM MOVEMENT TO THIS LOCATION
INSPECTION BY MONITORS FOR DETERMINATION OF
PRESENCE OF DEBRIS.

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wiercott
USCG M. J. HALL

FOSC: DATE: 4-19-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

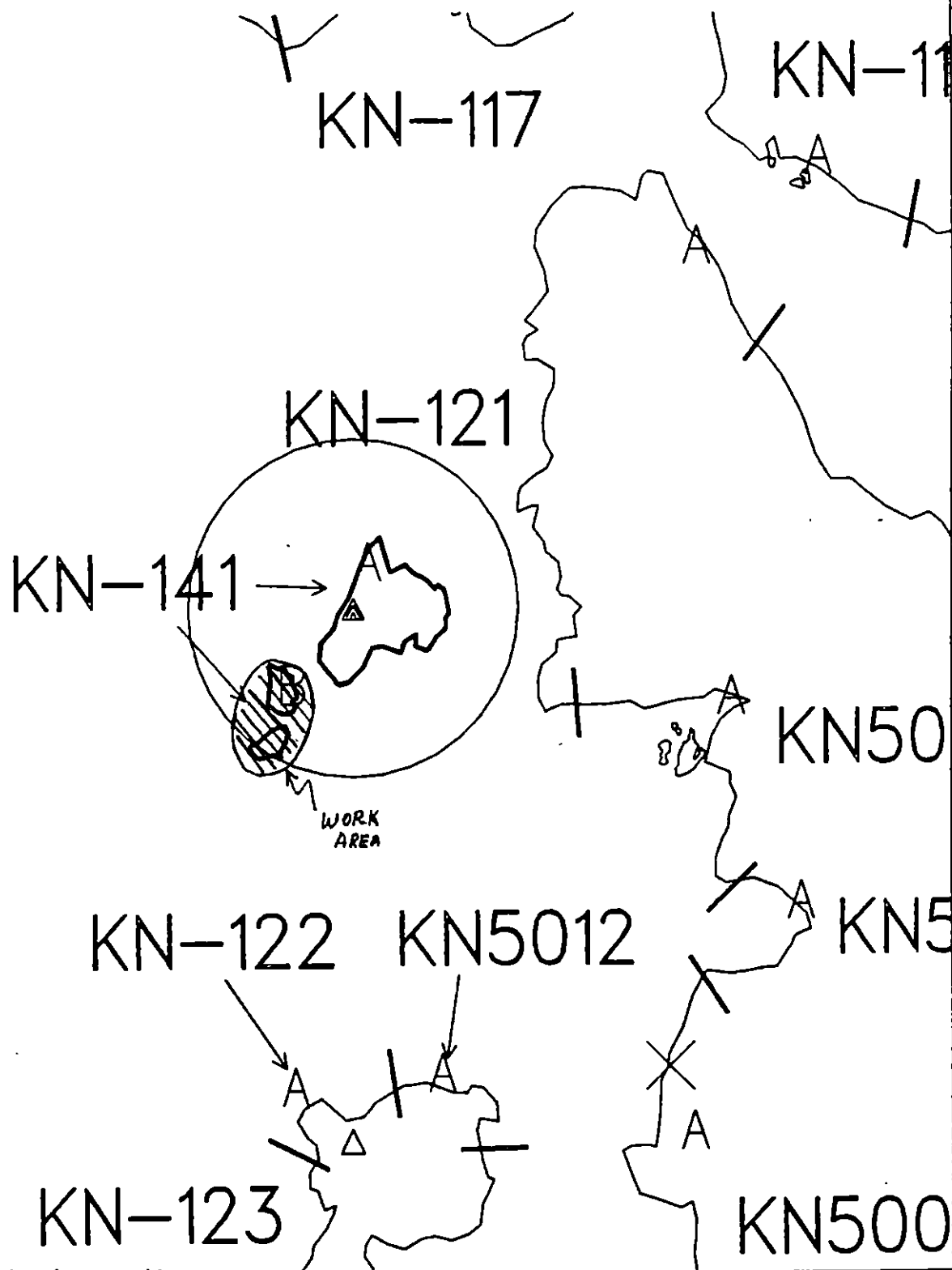
3N,O,P,Q	Harbor Seal and Sea Lion Pupping and Molting Area	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest. No constraint to manual pickup more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC Date 6-10-90

Prepared by ⁶⁻¹⁰⁻⁹⁰ Date 6/10/90



Exxon Company, USA
Map Key: PWS-KN-141



ECOLOGY MAP
SEGMENT KN-141
SUBDIVISION B (2 of 2)

METERS



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

1 inch = 1248 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of uncoiled substrate and biota.

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

Cultural Resource

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 34 m: V.Light 201 m: No Oil 359 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	☐ <u> </u> Beach Cleaner
☐ <u> </u> Removal	☐ Other (see comments)

COMMENTS: WORK DATE CHANGE SEE ADDENDUM
DATED 5/20/90 DRLG.

SEE REVISION 1, CONSTRAINT ADDENDUM 6/10/90

TAG COMMENTS: PRIOR CLEANUP TEAM MOVEMENT TO THIS LOCATION
INSPECTION BY MONITORS FOR DETERMINATION OF
PRESENCE OF DEBRIS.

TAG APPROVAL DATE: 4/12/90
DEC JOHN BAUER
EXXON ANDY TEAL
NOAA Bar/Werrett
USCG M. J. HALL

FOSC: DATE:

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 26 m: Medium 161 m: Narrow 119 m: V. Light 712 m: No Oil 130 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 8/15 based on pupping constraints.

TAG COMMENTS: MANUALLY TILL/RACE WHERE APPROPRIATE PRIOR TO BIOREMEDIATION

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY GALT
NOAA Bruce Wescott
USCG M. J. HALL

FOSC:

DATE: 4-19-90

MAP
SKE



HERRING BAY

INTERMITTENT LIGHT STAIN

SNOW STEEP BEDROCK

OPEN

FILM ON SEDIMENTS MOBILE OIL

SPLATTER ON BEDROCK BROWN & RAINBOW SHEEN

RAINBOW & SILVER SHEEN

LOW ROUNDED BEDROCK

SILVER SHEEN

PATCHES SUBSURFACE OIL IN VICINITY OF GRASS MATS

7x9 METER BOULDER POCKET WITH OVER 10% COAT.

ALDER SSL HWL

MARSH SILVER SHEEN

ALDER SNOW

SNOW

PATCHY STAIN BEDROCK & BOULDERS

THIN OIL BAND ON BEDROCK

FOREST

FOREST

FOREST

OIL COAT ON BEDROCK UP TO ONE METER HIGH; DISCONTINUOUS DULL BLACK

100 METERS

OG Greg Choy
SEGMENT ST/ HW

SUBDIVISION A

DATE Nov 31 90

CHECKLIST

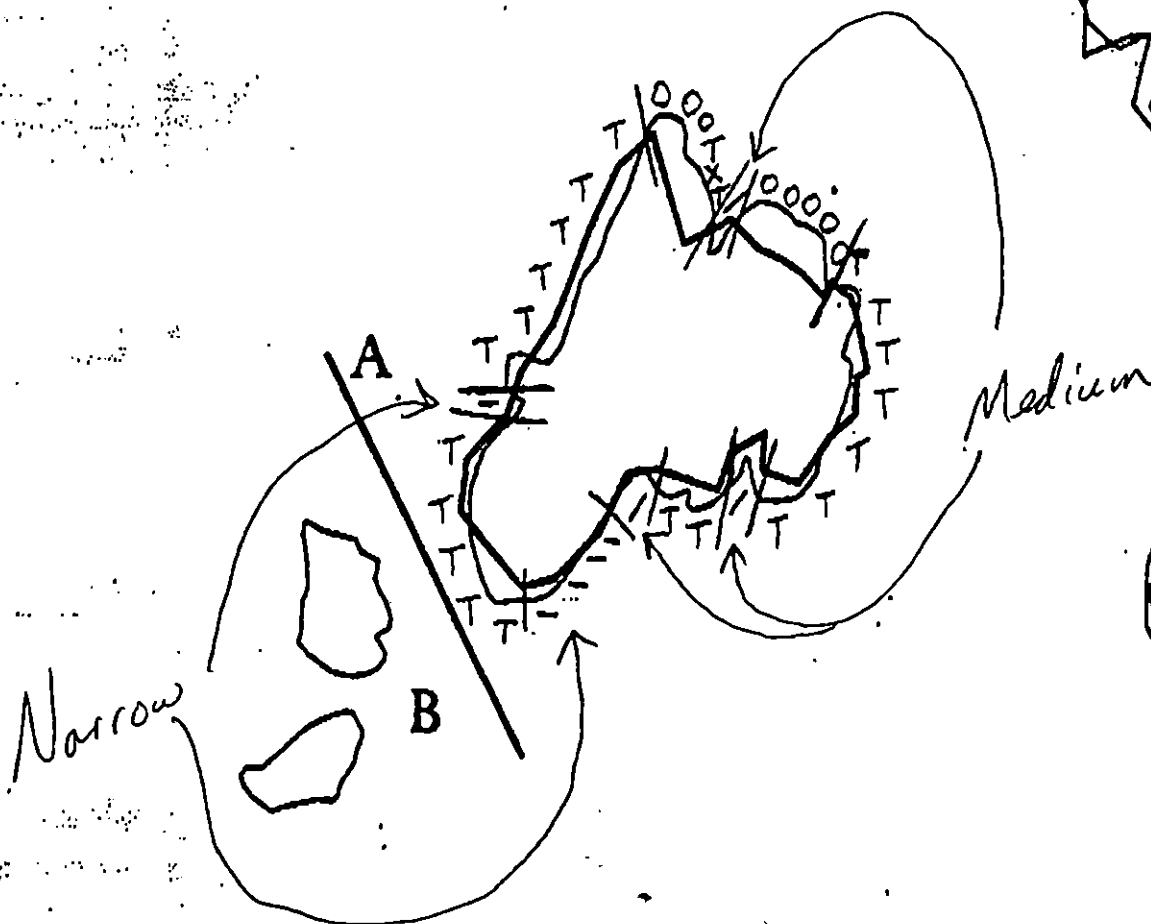
- ☐ In Arrow
- ☐ Approx. Scale
- ☐ Seg/Side Bathy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

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

Oil Character Length (m): AP — PO — CV 10 CT 300 ST 780 MS — PT — TB — FL 80 NO 141

0
~~KN-121~~



KN 100 141501

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-141A

ADEC Segment Length: 1148m

Exxon Segment Length: 1891m



Map Key: PWS-321

Name: Greg Chaney

Date: March 31, 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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

ural re-

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 34 m: V.Light 201 m: No Oil 359 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:

TAG COMMENTS: PRIOR CLEANUP TEAM MOVEMENT TO THIS LOCATION
INSPECTION BY MONITORS FOR DETERMINATION OF
PRESENCE OF DEBRIS.

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY TELL
NOAA Burt Wescott
USCG M. J. HALL

FOSC: DATE: 4-19-90

100 METERS

DUE TO
BEDROCK SUBSTRATE
NO PITS WERE DUG.

ROUNDED BEDROCK SHORELINE

141A
141B

HERRING
BAY

COATED OIL IN
BEDROCK CRACKS

ROUNDED BEDROCK
SHORELINE

OIL STAIN ON BEDROCK
SOUTH SIDE OF ISLAND

1 METER HIGH
CONTINUOUS
COAT

OIL STAIN ON BEDROCK
SOUTH SIDE OF ISLAND

LEGEND

1 Δ

Pt - No Substrate Oil

2 Δ

Pt - Substrate Oil

CT/C

Continuous Distribution

CT/B

Bushes Distribution

CT/P

Peachy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ●

Photo location, direction,
and number

CHECKLIST

- At Arrow
- Approx. Scale
- Seg/Sub Bdry
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LWL
- SSC
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

DATE Mar 13/90

SEGMENT ST/1/1

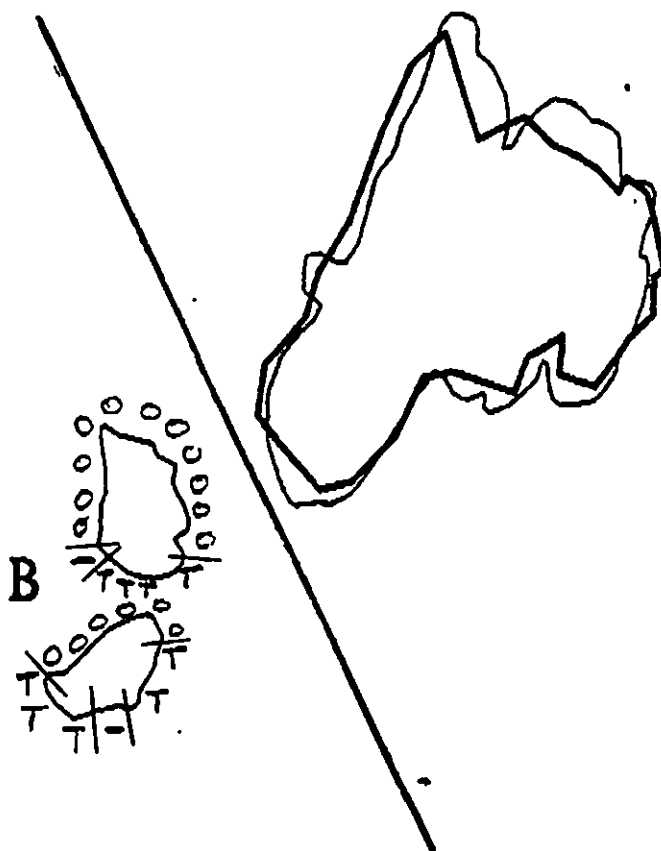
SUBDIVISION B

OG Greg Ch

Oil Character Length (m): AP - PO - CV - CT35 ST205 MS - PT - TB - FL - NO375

REVERSE SIDE

~~KN-121~~



B

100 150 1

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-141B

ADEC Segment Length: 1148m
EXXON Segment Length: 1291m

0 100 200 300

Map Key: PWS-321

Name: Grey Chaney

Date: March 31 1990

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 141 SUB: B 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)

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.

ADEC

NAME

JEFF GIVAHAS

SIGNATURE

[Signature]



NTR

NO TREATMENT; NO OIL.

EXXON

NAME

LARRY D. OLSON

SIGNATURE

[Signature]



NTR

No treatable oiling conditions were found.

LANDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE

[Signature]



NTR

No pocket beaches - All high angle ROCK - CT, ST at most

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

[Signature]



NTR

NO TREATABLE OIL FOUND

TWO SMALL ISLANDS w/ High Angle Rounded BEACH SHORELINES

D.G. REPORTED TRACE OF SURFACE OIL ON NLY ISLAND @ HI ZONE

SEGMENT KN-141

SUBDIVISION 3

DATE 5 / 19 / 9.

ENERGY LEVEL: ☐ H ☐ M ☒ X

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

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 20 m NO 574 m US 1 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- 1 - 26 FRAMES 10~1

[illegible]

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

OG COMMENTS: Two small rock islets; low relief, rounded R walls w/ local steep wall.

Trace of surface oil @ SWTZ on North side. Evidence of prior oiling as "oil shadow" diaphane @ SWTZ lichen band. No pits possible here.

REVISED: F.W. 5/21/91

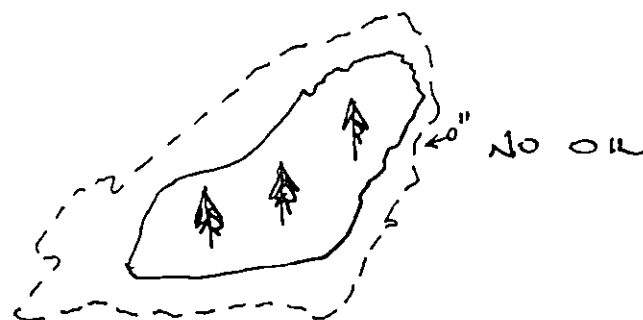
0 approx. 100m



KN-141B

G MASONARD

5.19.91



TEAM # 1 DATE 19 May 91
 SEGMENT # KN 141 TIDAL HEIGHT(Range) +0.2
 SUBDIVISION B BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft WIND SPEED/DIRECTION NE 0-5 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

No oil found except traces of CT in SUTZ on North
islet, above all biota except lichen. The shoreline on both
islets is nearly all steep bedrock with dense barnacles and
rockweed in MTZ-UTZ

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

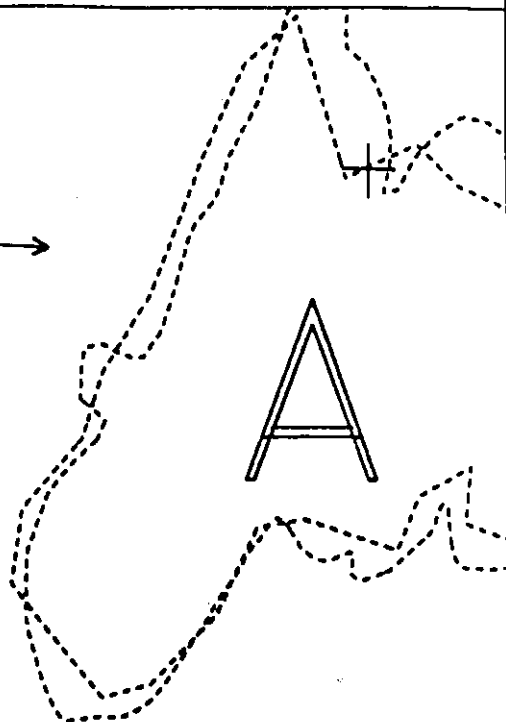
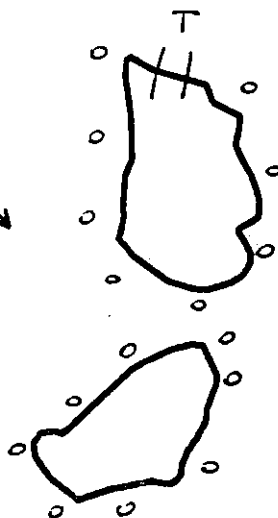
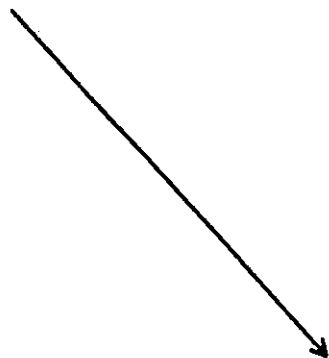
KN141A 5/19/91 Fawcett
1050 - skiffed around north islet -
all sloping or walked BR on north
islet -

South Islet - same as north

dense Fucus, barnacles, fil gp

no oil seen on either except Tr CT
and 1100 SWTZ

141



A

B



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

KN0141 B
ADEC Subsegment Length: 504m
METERS

0 100 200
AK State Plane Zone 4
440141b



Subdivision Field Map

Map Key: KN1KN0141B

Name: G. MACDONALD

Date: 5-19-91

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 141 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: Timothy A. Smith Date: 6/8/91

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
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: 6/8/91

ADEC DDH/Bane FOSC led

EXXON Beal E. E. PAGE, CDR, USCG

USCG ED Mac CHIEF OF STAFF, FOSC

NOAA J. Tan

**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. 1 SEGMENT KN 141 SUBDIVISION A DATE 5/19/91

ADEC
NAME JEFF GINARIS SIGNATURE [Signature]

NTR ☒ TREATMENT RECOMMENDED

MANUAL TREATMENT AT CG MAP SITES C1 AND D. SITE C1 HAS HISSOR ACROSS MOST OF PEBBLE/COBBLE UIZ. INTERMIXED, BEST TREATMENT MIGHT BE TILLING RATHER THAN REMOVAL. WOULD RECOMMEND TILLING DOWN 5-5 CM TO RELEASE SUBSURFACE LENS. SAME PROCEDURE RECOMMENDED AT SITE D, THOUGH OIL IS JUST BELOW SURFACE. SMALL CREW, PART OF A DAY. EASY ACCESS.

EXXON
NAME LARRY D. OLSON SIGNATURE Larry D. Olson

☒ NTR No treatable oiling conditions were located. Patches of oiling was found as indicated on O.G. sketch map but any treatment efforts could damage the already stable and healthy conditions that exist.

MANAGER
NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☐ NTR ☒ TREATMENT

Area C1 would improve greatly if a team could till the surface sediments using manual crew. Till with tide. Biota here is dense on vertical walls, minimal life in pocket. Area D could be addressed in similar manner possibly requiring a higher tide.

USCG/NOAA
NAME SCHULTZ / CHILDS SIGNATURE [Signature] / [Signature]

☒ NTR NOTHING OF TREATABLE NATURE FOUND. FURTHER TREATMENT WOULD NOT BE WARRANTED.

SMALL ISLAND w/ BED ROCK SHORELINE CONTAINING CBP POCKET BEACHES. SURFACE OIL CONSISTED OF CT, ST & CV @ HEI SI ON VERTICAL RK FACES + ADDITIONALLY ON LOWER ANGLE RK OUTCROPS. HISSOR OBSERVED IN "C" TO A DEPTH OF ~3 CM (PHOTO 6) - ASSOCIATED w/ MOR FROM 5~8 CM DEEP. LOW SOR IN "B" WAS ~3 THRU 8 CM DEEP. IS PART OF A BAND OF LOR WHICH IS 15~25 CM DEEP, THIS WAS ON TOP OF A MUDDY ORGANIC LAYER. SUBSURFACE OILING WAS GENERALLY LIMITED TO THE UIZ ZONE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FANCETT

SEGMENT KN-141

ADEC J. GINAZIAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5 / 19 / 91

TIME 09 : 00 to 10 : 45

TIDE LEVEL +5 1/2 ft. to +0.5 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☐ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1150 m

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

EST. OIL CATEGORY LENGTH: W - m M 10 m N - m VL 410 m NO 730 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1					S	S	S				R	V	2	50	x	x			
A2				S							CBV	M	5	8		x			on boat, 10 SOL
A3				S							CB	M	2	4		x			2-5m deep.
B1					S	S					R	H	1	10	x				
B2				P							BC	M	3	8		x			grades into LOR.
C1				P	T	T					PBL	M	14	2			x		hi SOL
C2				P	T	T					PBL	M	2	10		x			10 SOL
D										X	CP	M							subsurface oil only
E							S				PM	L	2	6			x		
F						T					R	H	<1	190	x				
G						T					R	L	<1	130	x				

DISTRIBUTION: C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 26 FRAMES 229

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	10							x	-		-		x				BC - CV	
2	20							x	-		10	N		x			CB - PMV	
3	20							x	-		8	N			x		P - PGM	
4	20							x	-		-20	N				x	PG - PG	
5	10							x	-		-			x			PB - PV	grassroots
6	30				x				15-25	Y	20	RB		x			CB - PMV	organic
7	20						x		5-10	Y	10	S			x		CP - PGMV	"
8	10						x		3-8	Y	3	R			x		BC - CPM	
9	25							x	-		-			x			P - PMV	peat, 10 SOL

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

OG COMMENTS: Low rocky island w/ deep CBP-filled channels.

Surface oil as (i) CT, CV, ST @ up. HITZ-SUTZ; on steep & low angle R.

(ii) 10 SOL @ (A), (B) & (C2), HITZ in R channel

(iii) hi SOL @ (C1), stranded in a curving band down the beachface; to a depth of 3m.

"Oil shadows" in SUTZ lichen band.

PAGE 2 OF 2

DATE 5 / 19 / 81

Subsurface oil @ (B), (C) & (D); typically as Mol-TR;
associated with ssk deposits; ranging from 5-25
cms deep, with an average thickness of about 8cms.
fits sheered readily w/ some B globules amongst
thinner shears. The oil distribution was limited
to the upper intertidal zones, and perched on top of
a mud or peaty layer.

[illegible]

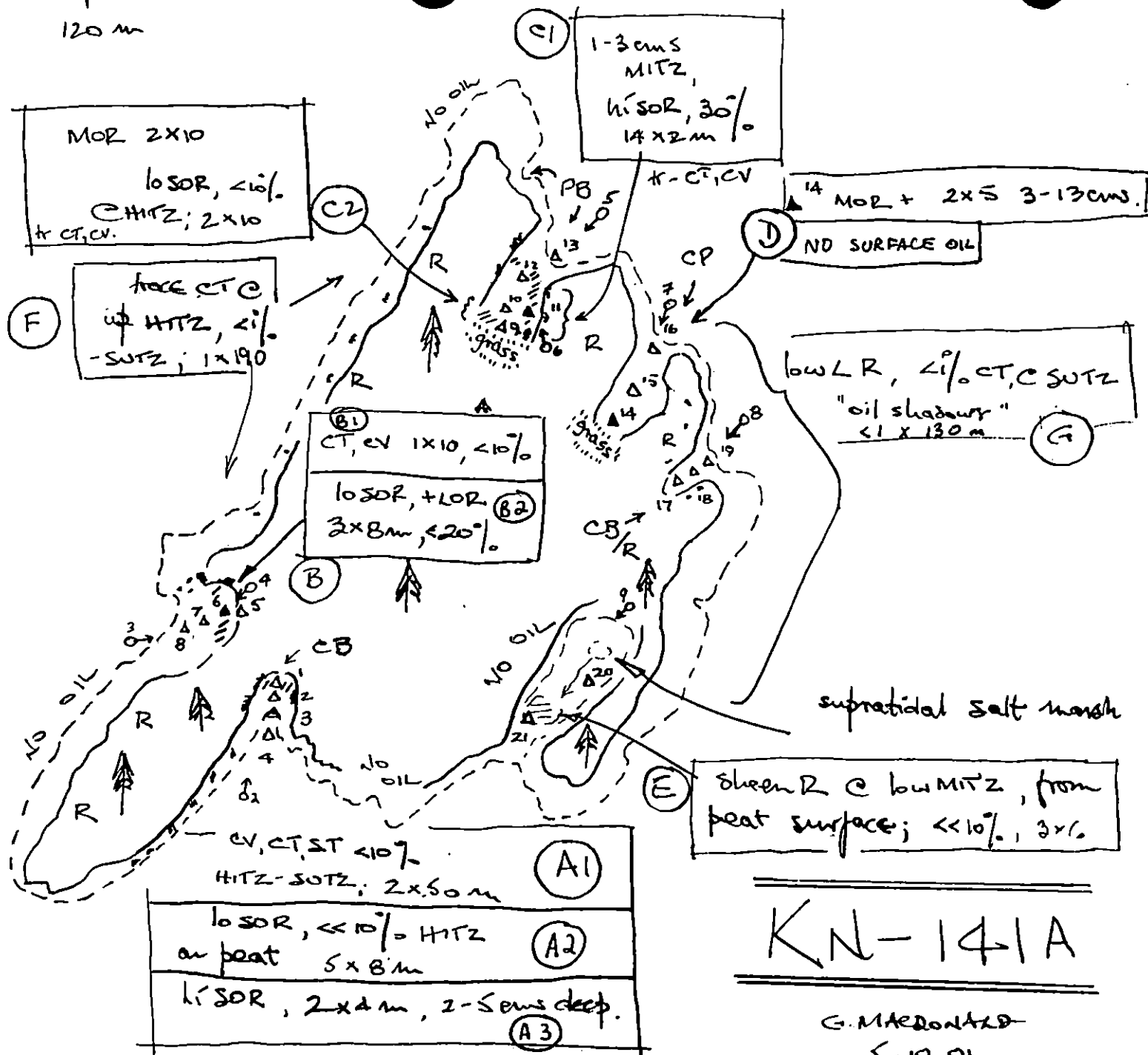
REVIEWED: F.W. 5/21/91

0 60 120 m



KEY

- * . n. CT, CV, ST
- " " SOR
- ♂ PHOTO LOC



KN-141A

G. MACDONALD
5.19.91

EDS 10.45422

REVISION: F.W. 5/21/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 19 May 91
 SEGMENT # KN 141 TIDAL HEIGHT (Range) +0.5 to +5.6 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft WIND SPEED/DIRECTION NE 0-5 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

This subdivision encircles a small island--mostly steep or vertical rock shoreline, with several small pocket beaches. A small salt marsh and pool occurs in the supra-tidal area at site E on sketch map. Small sediment (gravel-pebble) portions of pocket beaches are rather depauperate except for algae and infaunal clams in LTZ. Biota generally far more dense on larger boulders and rock walls. See sketch map for descriptions of biota near oiled areas

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 -flew over	black prickleback
Seabirds			
Waterfowl			
Gulls/kittiwakes	2 (Glaucous-winged gull)	6-8 (many kittiwakes in bay)	
Shorebirds	1 (black oystercatcher)	1	
Corvids			
Other Birds	1 Arctic tern	3-4	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	3 Sea lions		
_____ (specify)			
_____ (specify)			

Shoreline subdivision map showing important biological features attached.

Doug Stine (USFWS) revision, Doug monitored nest during MAYSAP survey.

KN-MI-1 ACTIVE

NOT Here
Here



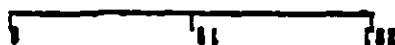
B

KN0141

Segment Reference Map
Map Key: KN0141



METERS



18 Black Plains, June 4
1998



EAGLE NEST

ATTACHMENT 1

KN 141A 19 May 91 Fawcett
Start 0900 NE 0-5, light rain

0900 pocket B/P S/P +8, CT ST
on walls - No bryozoa ^{except worms} = sparse
barn larvae - dense barn to to
+ 4 ft on walls & lg boulders at sides
- sparse Fucus in B/C below +1 ft -
more gravel below 1.0, deep pink
SOR - down to +1.0 - scattered sparse
Quiet core - no fish barn, mussels

0915 NW side: more exposed pocket
(still low E) - denser Fucus barn
MTZ-LTZ - 3 sea lion markings
- Littorinids breeding - dense eggs MTZ -
Amphipods, limp, scattered mussels
- fil. green algae MTZ-UTZ
Tr. SOR-LOA? UTZ ^{SUTZ} B/C/P ^{+10-12 ft} - no bryozoa
except lichens, worms, and dense barn Fucus,
- deer bones SUTZ
- UTZ tide pool - Litho, many sculpins,
large old sculpin & mussels (50 mm)
litt., hermits, surf grass
- CT on walls 8-10 ft above barnacles
- customble pellets UTZ

KN 141a (cont) 5/19/91 Fawcett

0940. quiet long pocket - line of pink
crabgrass stuff on walls - RT +8-12ft
on walls

- heard eagle voice once - none sighted,
nest not seen - Doug still watching

- tunnel out in P/C/P down to +
among sparse barn, breeding Littorinids
etc - but lots mussels near scales on
bigger rocks, very sparse in C/P
vertical walls have dense barn +1 - +7.9,
whelks (Lamellana) breeding below (+0.0)
sparse Fucus, dense red & brown
- seaweed, Lept. under LTZ boulders

1010 - 50 m red last pocket - similar
P/C/P back but w/ dense mussels
in MTZ, rounded sloping BR
wall, not cliff - dense Fucus
on BR 0 to +6ft - also patches
dense young mussels, dense barn
- some clams (Protothaca) ^{small ones} in LTZ
hitt. eggs MTZ, some hatched -
mod dense juv/adult MTZ -
sparse limp (Scalium) LTZ - MTZ
near barn spot MTZ
SOR - MOR - SUTZ - amph, worms

KN 141a (cont)

3 ferns -

1025 - Tr. st walk - sm pocket

Kath., corals, dense barn, dense
Fucus LTZ on walls

1030 - Marsh behind pocket - SUTZ
pool w/ algae, Fucus, Littorinids,
mussels - @ eagle flew over

- oyster catchers heard nearby

- no oil near marsh

light SOR downshore in MTZ mound
bed - dense mussels all over +1 to +8

- dense barn, Fucus, patches mussels

on BR sides +1 - +8 ft also long
litt, Rhodospira

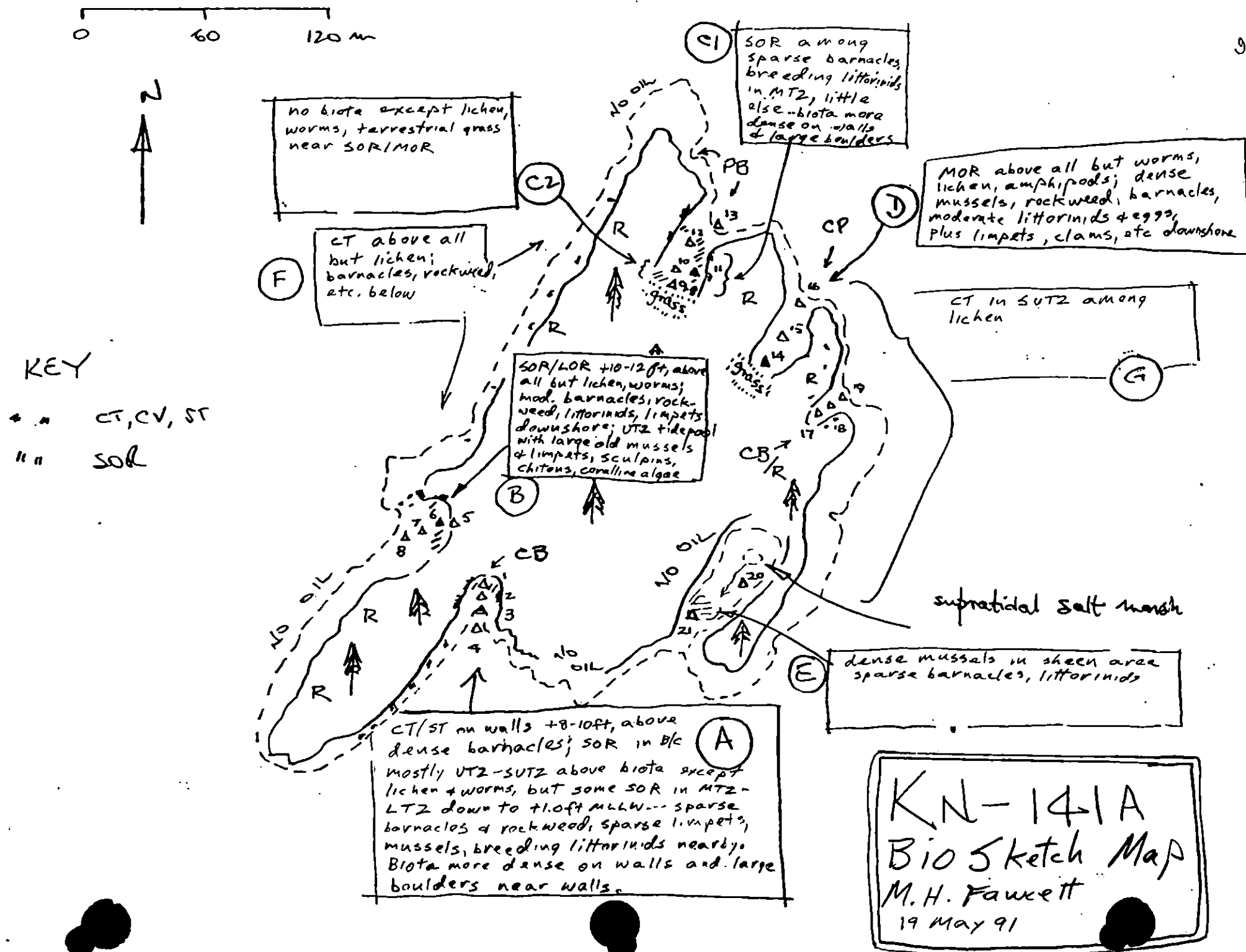
- GW gulls, several

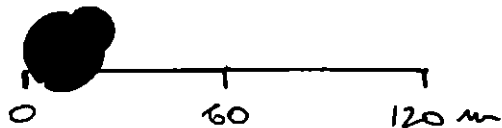
- Terns

- clams & many others in LTZ

- Kath, Lept

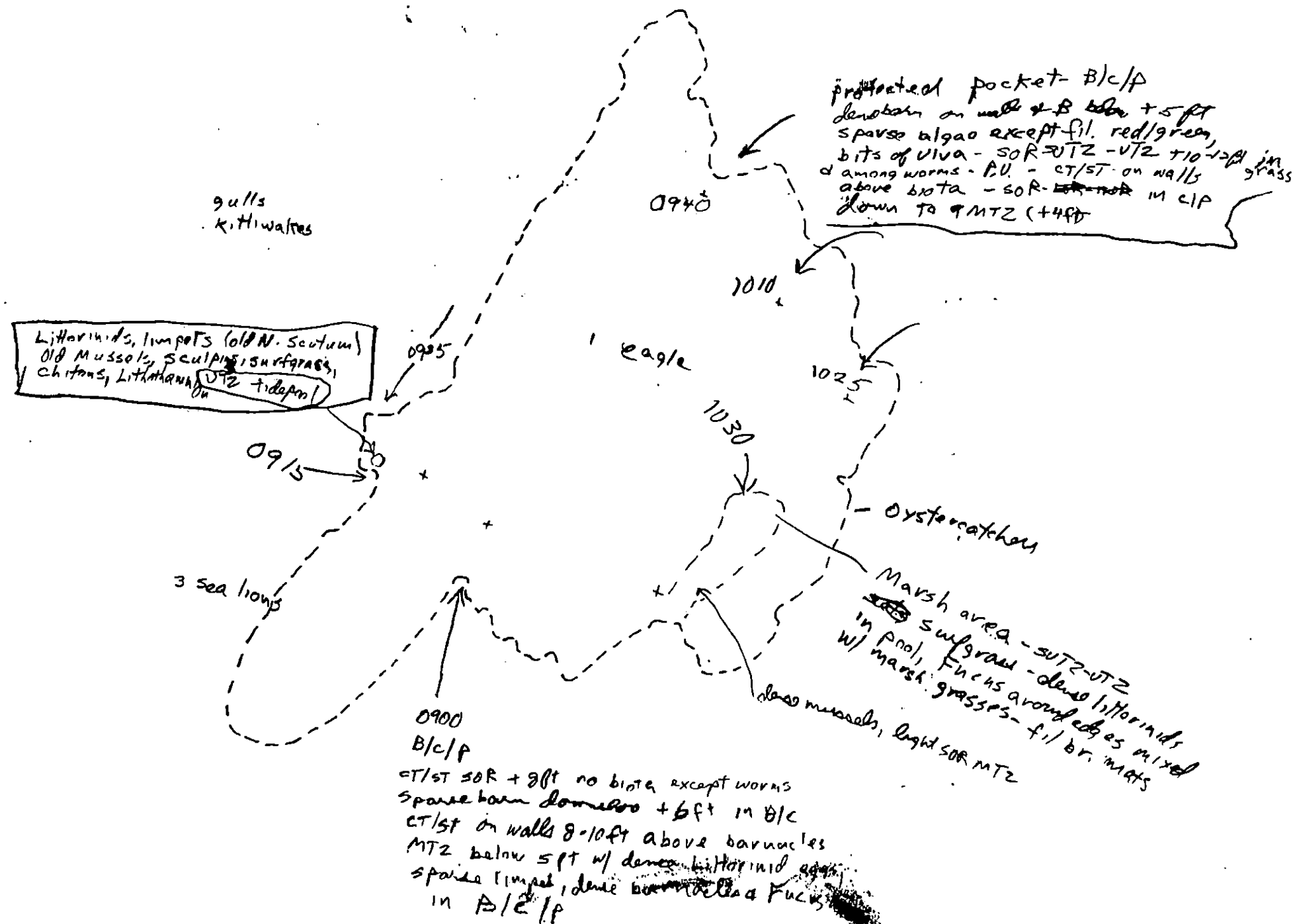
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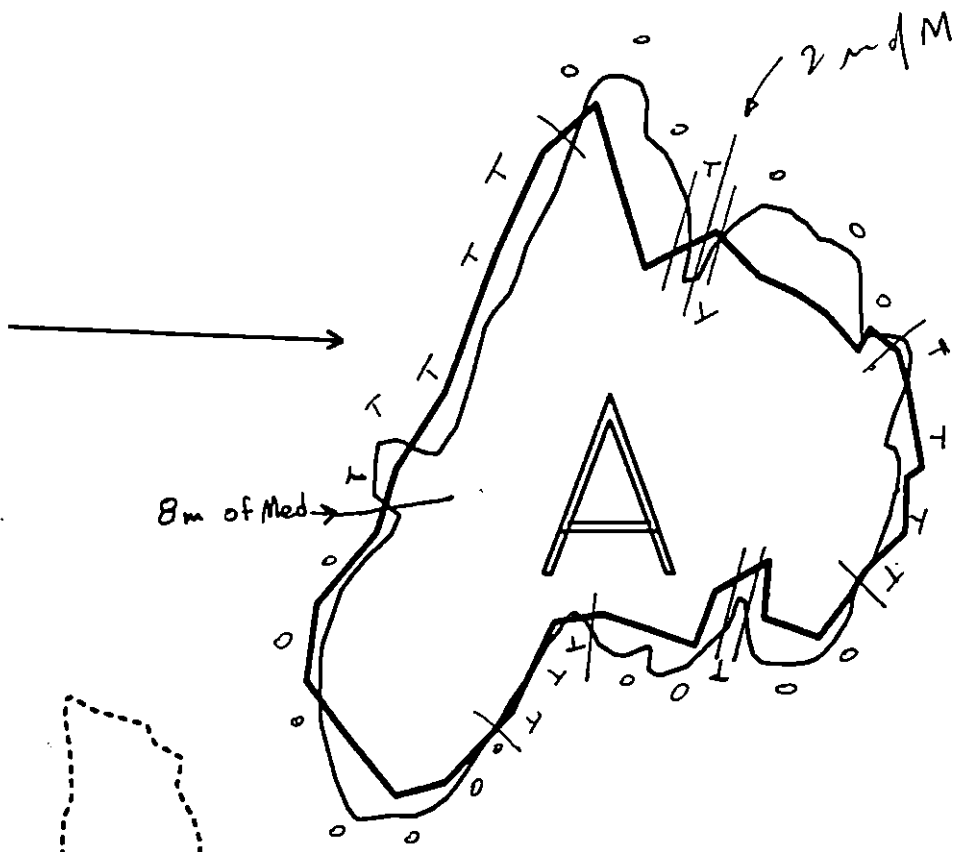




Wcett KN141A field map
5/19/91

KN - 141A





B



XXXX	Wide	KN0141 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 1148m	Map Key: KNKN0141A
----	Narrow	METERS	Name: <u>GM</u>
TTTT	Very Light	0 100 200	Date: <u>5.19.91</u>
0000	No Oil	AK State Plane Zone 4 840141a	Date Entered:



1991 MAYSAP EVALUATION

SEGMENT: KN 141 **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)

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. 1SEGMENT KN 141SUBDIVISION ADATE 5/19/91

ADEC

NAME JEFF GINAHASSIGNATURE [Signature]

NTR

☒ TREATMENT RECOMMENDED

MANUAL TREATMENT AT OG MAP SITES C1 AND D. SITE C1 HAS HI SUR ACROSS MOST OF PEBBLE/COBBLE UIZ. INTERMIXED, BEST TREATMENT MIGHT BE TILLING RATHER THAN REMOVAL. WOULD RECOMMEND TILLING DOWN 5-5 CM TO RELEASE SUBSURFACE LENS. SAME PROCEDURE RECOMMENDED AT SITE D, THOUGH OIL IS JUST BELOW SURFACE. SMALL CREW, PART OF A DAY. EASY ACCESS.

EXXON

NAME LARRY D. OLSONSIGNATURE [Signature]

NTR

No treatable oiling conditions were created. Patches of oiling was found as indicated on O.G. sketch map but any treatment efforts could damage the already stable and healthy conditions that exist.

NDMANAGER

NAME MARSHA HALL OF DNRSIGNATURE [Signature]

NTR

☒ TREATMENT

Area C1 would improve greatly if a team could till the surface sediments using manual crew. Till with tide. Biota here is dense on vertical walls, minimal life in pocket. Area D could be addressed in similar manner possibly requiring a higher tide.

USCG/NOAA

NAME SCHULTZ / CHILDSSIGNATURE [Signature]

NTR

NOTHING OF TREATABLE NATURE FOUND. FURTHER TREATMENT WOULD NOT BE WARRANTED.

SMALL ISLAND w/ BED ROCK SHORELINE CONTAINING CBP POCKET BEACHES. SURFACE OIL CONSISTED OF CT, STICK @ HEE SI ON VERTICAL RK FACES + ADDITIONALLY LOWER ANGLE RK OUTCROPS. HI SUR OBSERVED IN "C" TO A DEPTH OF ~3 CM (PHOTO 6) - ASSOCIATED w/ NOR FROM 5~8 CM DEEP. LOW SUR IN "B" WAS ~3 THRU 8 CM DEEP AND IS PART OF A BARR OF LOR WHICH IS 15~25 CM DEEP, THIS WAS ON TOP OF A MUDDY ORGANIC LAYER. SUBSURFACE OILING WAS GENERALLY LIMITED TO THE UI ZONE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FANCETT

SEGMENT KN-141

ADEC J. GINARAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5 / 19 / 91

TIME 09 : 00 to 10 : 45

TIDE LEVEL +5 1/2 ft. to +0.5 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☐ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1150 m

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

EST. OIL CATEGORY LENGTH: W - m M 10 m N - m VL ~410 m NO ~730 m US - 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	
A1					S	S	S				R	V	2	50	x	x			
A2				S							CBV	M	5	8		x			on boat, 10 sol
A3				S							CB	M	2	4		x			2-5cm deep.
B1					S	S					R	H	1	10	x				
B2				P							BC	M	3	8		x			grades into LOR.
C1				P	T	T					PBL	M	14	2			x		hi sol
C2				P	T	T					PBL	M	2	10		x			lo sol
D										X	CP	M							subsurface oil only
E								S			PM	L	2	6			x		
F						T					R	H	<1	190	x				
G						T					R	L	<1	130	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- 1 - 26 FRAMES 2~9

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	10							x	-		-		x				BC-CV	
2	20							x	-		10	N		x			CB-PMV	
3	20							x	-		8	N			x		P-PGM	
4	20							x	-		-20	N				x	RG-PG	
5	10							x	-		-		x				PB-PV	grassroots
6	30								15-25	Y	20	RB		x			CB-PMV	organic
7	20							x	5-10	Y	10	S			x		CP-PGMV	
8	10							x	3-8	Y	3	R			x		BC-CPM	
9	25							x	-		-		x				P-PMV	peat, 10 sol

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

OG COMMENTS: Low rocky island w/ deep CBP-filled channels.

Surface oil as (i) CT, CV, ST @ up. HRTZ-SUTZ, on steep & low angle R.

(ii) lo sol @ (A), (B), (C2), HRTZ in R channel

(iii) hi sol @ (C1), stranded in a curving band down the beachface; to a depth of 3 cm.

"Oil shadows" in SUTZ lichen band.

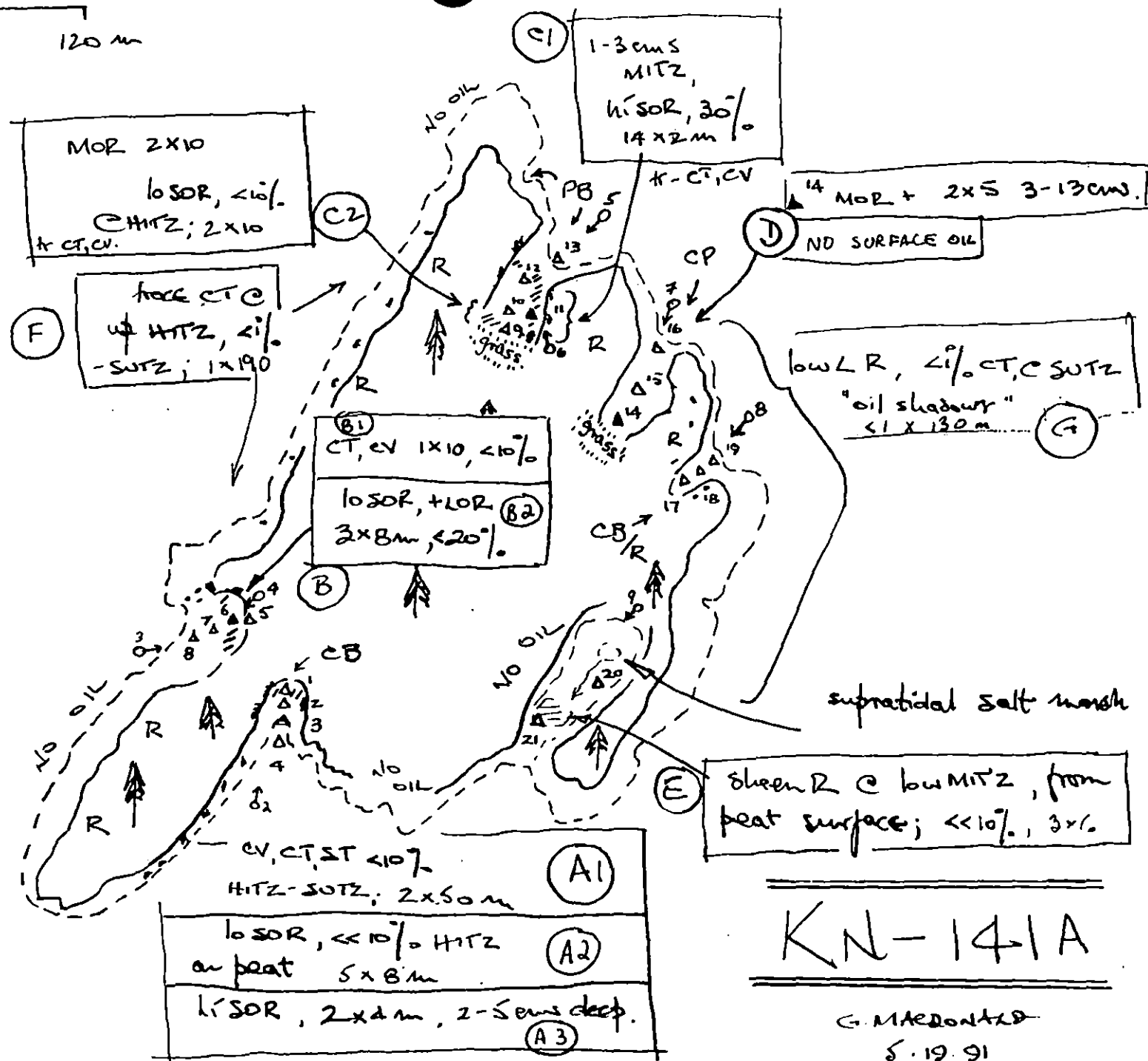
DATE 5 / 19 / 91

Subsurface oil @ (B), (C) & (D); typically as mol-TR;
associated with s&l deposits; ranging from 5-25
cms deep, with an average thickness of about 8cms.
lits sheered readily w/ some B globules amongst
thinner shears. The oil distribution was limited
to the upper intertidal zones, and perched on top of
a mud or peaty layer.

[illegible]

REVIEWED: F.W. 5/21/91,

0 60 120 m



KEY

- n. CT, CV, ST
- " " SOR
- o PHOTO LOC

EDS 10.45422

KN-141A

G. MARDONTO
5.19.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

19 May 91

SEGMENT #

KN 141

TIDAL HEIGHT (Range) +0.5 to +5.6 ft MLLW

SUBDIVISION

A

BIOLOGIST Michael Fawcett

SEA STATE

1/2 ft

WIND SPEED/DIRECTION NE 0-5 knots

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision encircles a small island--mostly steep or vertical rock shoreline, with several small pocket beaches. A small salt marsh and pool occurs in the supra-tidal area at site E on sketch map. Small sediment (gravel-pebble) portions of pocket beaches are rather depauperate except for algae and infaunal clams in LT20. Biota generally far more dense on larger boulders and rock walls. See sketch map for descriptions of biota near oiled areas.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 flew over	black prickleback
Seabirds			
Waterfowl			
Gulls/kittiwakes	2 (Glaucous-winged gull)	6-8 (many kittiwakes in bay)	
Shorebirds	1 (black oystercatcher)	1	
Corvids			
Other Birds	1 Arctic tern	3-4	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	3 sea lions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Doug Stine (USFWS) revision, Doug monitored nest during MAYSAP survey.

KN-MI-1 ACTIVE

NOT Here
Here

1

B

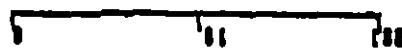
KN0141

Segment Reference Map

Map Key: KNIN0141



METERS



US State Planning Agency
1990/01



EAGLE NEST

ATTACHMENT 1

KN 141 A 19 May 91 Fawcett
Start 0900 NE 0-5, light rain

0900 pocket B/F P SP +8, CT ST
on walls - No biota ^{except worms} - sparse
barn down to +4 ft on walls & lg boulders at sides
- sparse Fucus in B/C below +1 ft -
more gravel below 1.0, deep pink
SOR - down to +1.0 - surfhnt sparse
Quiet cove - no fish barn, mussels

0915 NW side: more exposed pocket
(still low E) - denser Fucus barn
MTZ-LTZ - 3 sea lion watching
- Litho. ds. breeding - dense eggs MTZ -
Amphipods, limp, scattered mussels
- fil. green algae MTZ-UTZ
TV. SOR-LOA? UTZ ^{50% + 10-12%} B/C/P - no biota
except lichens, worms, and dense barn Fucus
- denser biota 50%
- UTZ tide pool - Litho, many sculpins,
large old scutum & mussels (50 mm)
Litt., hermits, surfgrass
- CT on walls E - 10 ft above barnacles
- customble pellets UTZ

KN 141a (cont) 5/19/91 - Fawcett

0940 - quiet long pocket - line of pink
crustacean stuff on walls - CT +8-10 ft
on walls

- heard eagle voice once - none sighted,
nest not seen - Doug still watching
- buried out in P/C/P down to +

among sparse barn, breeding Littorinids
etc - but lotsa mussels near sides on
bigger rocks, very sparse in C/P
vertical walls have dense barn +1 - +7.8,
whelks (Littorina) breeding below (+2.0).

sparse Fucus, dense ful red barn
- some Lept. under LTZ boulders

1010 - 50 m red last pocket - similar
P/C/P back but w/ dense mussels
in MTZ, rounded sloping BR
walls, not cliff - dense Fucus
on BR 0 to +6 ft - also patches
dense young mussels, dense barn
- some clams (Protothaca) in LTZ

litt. eggs MTZ, some hatched -
mod dense juv/adult MTZ -

sparse limp (Scallop) LTZ - MTZ
mod. barn spot MTZ
SOR - MOR - SUTZ - amph, worms

KN 141a (cont)

3 terms -

1025 - Tr. st wall - 5 m pocket

Kath., catallinas, dense barn, dense
Fucus LTZ on wall

1030 - Marsh behind pocket - S, LTZ
pool w/ soft grass, Fucus, Littorinids,
mussels - eagle flew over

- oyster catches heard nearby

- no oil near marsh

light SOR dominates in MTZ upward
bed - dense mussels along +1 to +8

- dense barn, Fucus, patchy mussels

on BR sides +1 - +8 ft also limp
litt, Rhodospira

- GW gulls, several

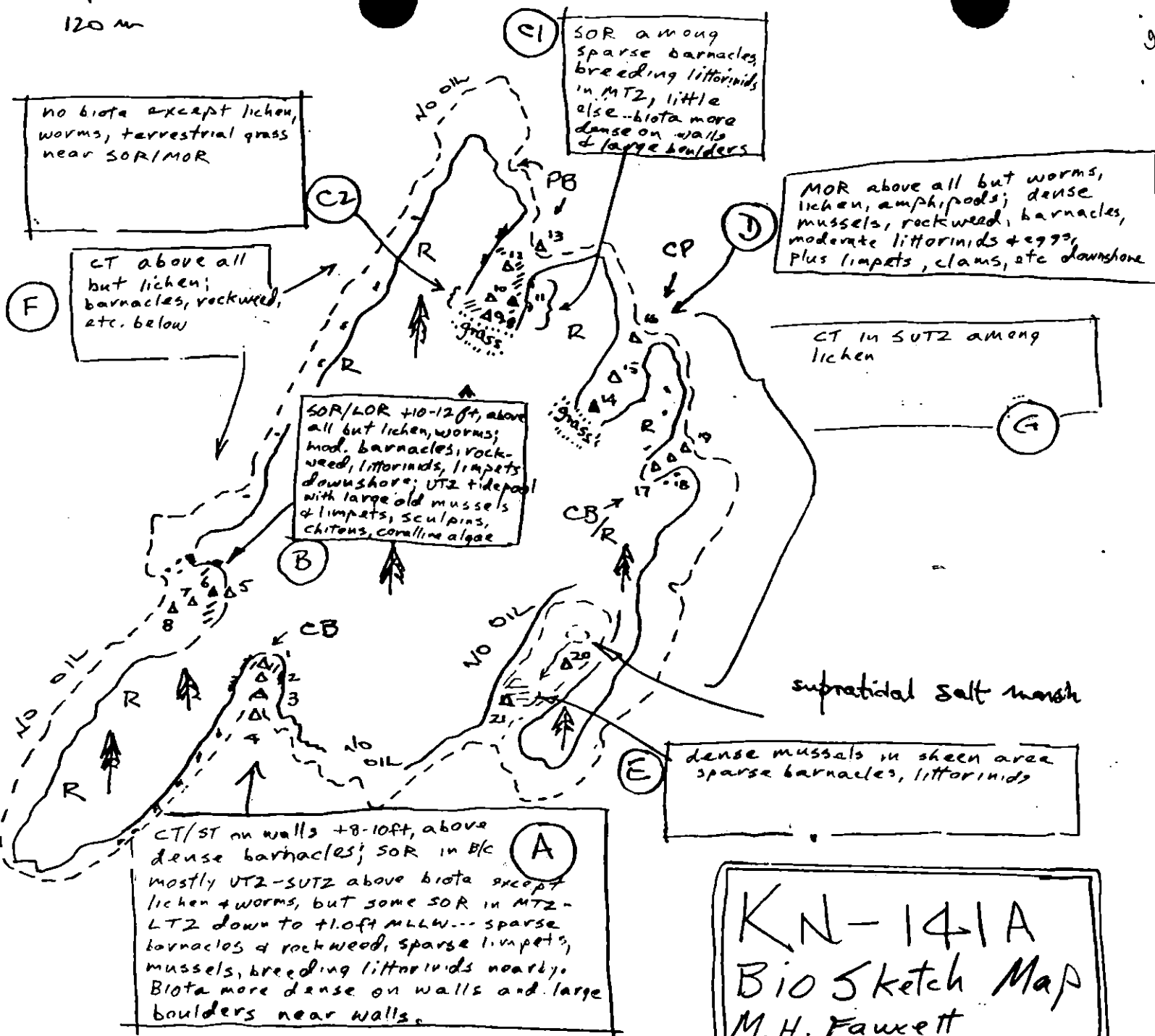
- Tarns

- clams & many others in LTZ

- Kath, Lept

end 1045

60 120 m

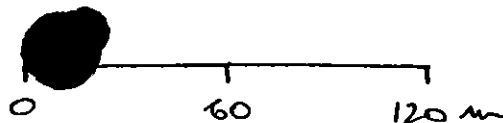


KEY

• CT, CV, ST

" " SOR

KN-141A
Bio Sketch Map
M.H. Fawcett
19 May 91



Wcett KN141A field map
5/19/91

KN - 141

protected pocket - B/c/p
denobarn on wall 2-3 ft + 5 ft
sparse algal except fil. red/green,
bits of ulva - SOR 30TZ - VTZ + 10-12 ft in
among worms - P.U. - CT/ST on walls
above biota - SOR - ~~not~~ in CIP
down to 9MTZ (+4ft)

gulls
& Hwa/tes

0940

1010

eagle

1025

1030

Oystercatchers

Marsh area - 30TZ-UTZ
in pool, surfgraw - dense Littorinids
w/ marsh grasses - fil br. mats
dense mussels, light SOR MTZ

Littorinids, limpets (old N. Scutum)
Old Mussels, Sculpin, surfgrass,
Chitons, Lithothamnion, UTZ tidepool

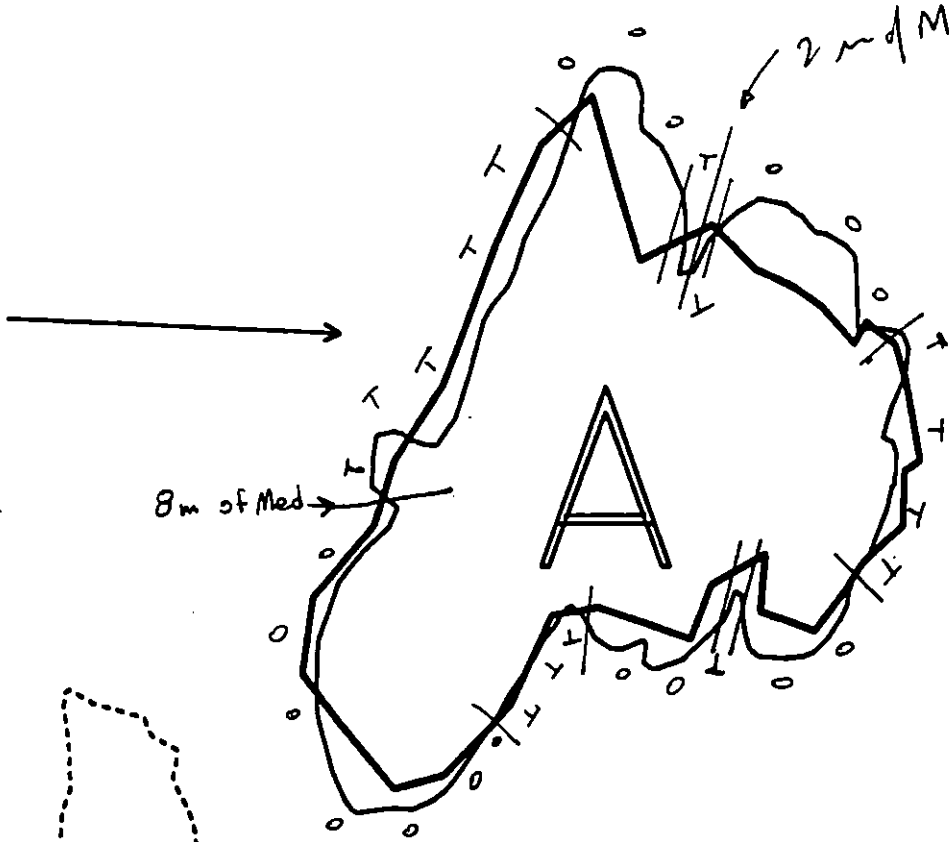
0915

3 sea lions

0900

B/c/p

CT/ST SOR + 9ft no biota except worms
sparse barn domes + 6ft in B/c
CT/ST on walls 8-10ft above barnacles
MTZ below 5ft w/ dense Littorinid eggs
sparse limpet, dense barnacles & Fucus
in A/c/p



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0141 A
ADEC Subsegment Length: 1148m
METERS
0 100 200
AK State Plane Zone 6
hkn0141a



Subdivision Field Map
Map Key: KNKN0141A
Name: GM
Date: 5.19.91
Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 141 SUB: B 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: 6/13/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

1

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL, DATE: May 31 1991

FOSC APPROVAL DATE: 6/3/91

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.

MAYDAY FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 141 SUBDIVISION B DATE 5/19/91

ADEC

NAME JEFF GIVAGIAS SIGNATURE [Signature]

☒ NTR

NO TREATMENT; NO OIL.

EXXON

NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR

No treatable oiling conditions were found.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR

No pocket beaches - All high angle ROCK - CT, STAYMOST

USCG/NOAA

NAME SCHULTZ / CHILD SIGNATURE [Signature] / [Signature]

☒ NTR

NO TREATABLE OIL FOUND

Two Small ISLANDS w/ High Angle. Rounder BEACH SHORELINES
D.G. REPORTED TRACE OF SURFACE OIL ON N'ly ISLAND @ HI ZONE

PAGE 1 OF 1

DATE 5 / 19 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 20 m NO 574 m US 1 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- 1 - 26 FRAMES 10~11

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

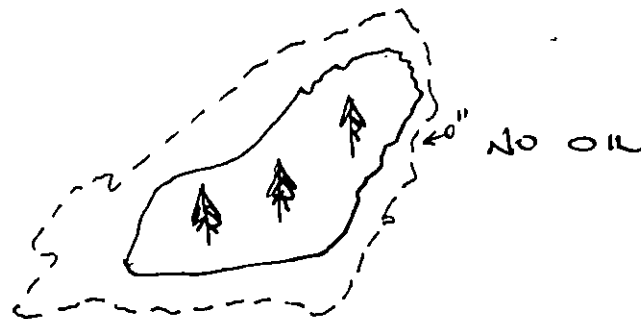
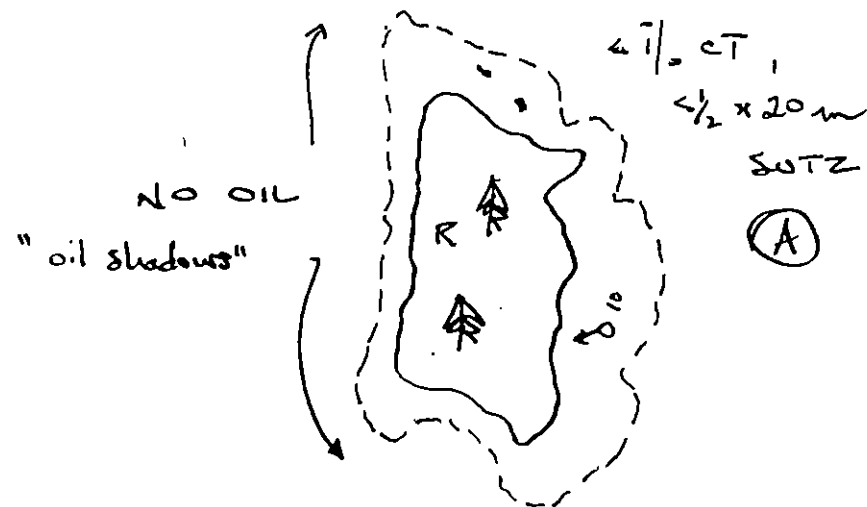
OG COMMENTS: Two small rock islets; low relief, rounded R walls w/ local steep wall.
Trace of surface oil @ SWTZ on North isle. Evidence of prior oiling as "oil shadow" diaphane @ SWTZ lichen band.
No pits possible here.

REVISED: F.W. 5/21/91

KN-141B

G. MASONARD

5.19.91



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 19 May 91
 SEGMENT # KN 141 TIDAL HEIGHT(Range) +0.2
 SUBDIVISION B BIOLOGIST Michael Fawcett
 STATE 1/2 ft WIND SPEED/DIRECTION NE 0-5 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

No oil found except traces of CT in SUTZ on North
islet, above all biota except lichen. The Shoreline on both
islets is nearly all steep bedrock with dense barnacles and
rockweed in MTZ-UTZ

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

KM141 5/19/91 Fawcett

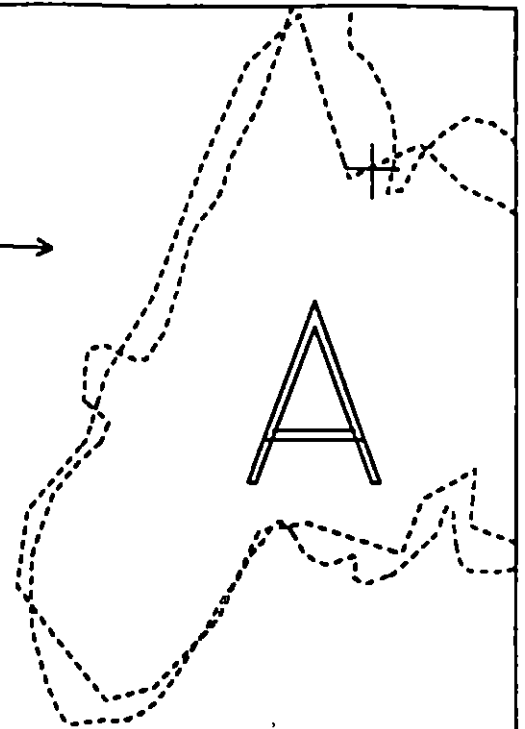
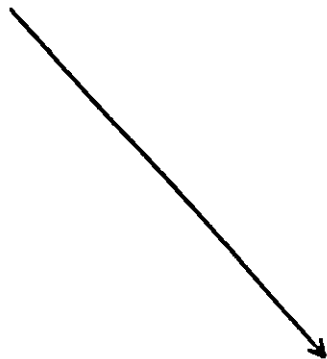
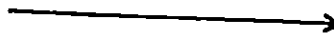
1050 - skipped around north islet -
all sloping or valed BR on north
islet -

South Islet - same as north

dense Fucus, barnacles, fil/g

no oil seen on either except Tr CT
end 1100 SWTZ

141



A



B



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

KN0141 B
 ADEC Subsegment Length: 594m
 METERS

0 100 200
 AK State Plane Zone 4
 660141b



Subdivision Field Map
 Map Key: KNIK0141B
 Name: G. MACDONALD
 Date: 5-19-91
 Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-144

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)

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 59 m: Narrow 91 m: V.Light 225 m: No Oil 305 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: _____

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 144 SUBDIVISION: None DATE 31 MAR 90

CG

NAME

Patrick Malay

SIGNATURE

Patrick Malay☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Small pocket beach on W side of the island is the only area with a treatable condition. It has a continuous broken area of cover that is a candidate for bioremediation. The other areas of broken coat and patchy stain are very weathered and would be impractical to remove.

ADEC

NAME

M. CUNNINGHAM

SIGNATURE

M. Cunningham☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Rich biological communities present w/ animals in and around oil contaminated sediments.
"More harm than good" scenarios.
Debris pickup if evidence later warrants.

LAND MANAGER

NAME

Steve Phillips

SIGNATURE

Steve Phillips☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Search storm berm for trash / oiled debris.

Tars were getting baked on south exposures - need to scrape off when thicker than 2mm to speed up deterioration
Note that some hard layers were found on vertical rock.

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG Greg Chaney USCG Patrick Malay SEGMENT ST/ KN-144
 BIO Jim Roth LAND REP Mike Cunningham SUBDIVISION A(1062)
 EXXON Rey Sotelo ADEC Steve Phillips TIME 09:20 to 10:45
 TEAM NO.: 7 TIDE LEVEL: 0 ft to -1 ft DATE Mar 13 / 1990
 DIST. SUBDIVISION LENGTH: 1542 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 70 % B 20 % C 10 % P — % G — % S — % M — % V — %
 SLOPE: Long 10 % Hang 20 % Vert 50 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M 95 m N 215 m VL 260 m NO 572 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	NO	BR	OR	OL	OF	NO	BR	OR	OL	SU	U	M	U
ASPHALT PAVEMENT																	
POOLED																	
COVER	X																
COAT		X															
STAIN			X														
MOUSSE																	
PATTIES																	
TARBALLS																	
FLM																	
NO OIL																	

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Rope

#BAGS less than 1

Photographs:

Roll No. ST-7-1

Frames 8, 9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO			VO	UC	BL	BR	BL	BR	GY	Y	BL	BR	BL	BR			SU	U
1	15					X	- - -		X										X					PC
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS



B

SMALL POCKET
BEACH

BAND OF OIL COAT UP TO
80 cm. HIGH ON BEDROCK.
THICKEST IN CRACKS

100 METERS

ICH MAP

A

FOREST

spontic foot at base of
boulders. Translucent sheen.

FOREST

FOREST
BAND OF OIL COVER UP
TO ONE METER HIGH.
15 METERS LONG. 2 MM
THICK ON BEDROCK
WALL

LOW ROUNDED
ROCKS

Translucent Sheen

FOREIGN

POCKET OF BOULDERS WITH
COAT OF OIL AT BASE

SPORATIC COAT
ON BEDROCK

BAND OF
OIL COVER UP TO
140 cm HIGH
2mm thick.

FOREST

Cobbles & Boulders

24

2 ▲
PM - Subsurface Oil
CT/C

2 ▲
PM - Subst. CT/C

CT/C

Contents

CP/D

1

[CIP]

1

Partial Distribution

1

Spliced Intron
5' 3'

Spills

1-4

1

**Photo location, direction,
and number**

Final

Oil Character Length (m): AP — PO — CV 20 CT/PS^{AL} ST 270 MS — PT — IB — FL/00 NO 572

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/KN-144 Subdivision Date (mo / day / yr) 31 March 70

Time (24 hr) ARR 0915 LV 1100 Biologist ROTH

Substrate type and % of segments:

(1) Bedrock 70 (2) Boulder 20 (3) Cobble 10 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 60 Low 20

(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-7 1

Frames 8-1

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	XU	XM	1L	1U	1M	1L	1U	1M	XL
2	2	2	X	X	2	2	2	2	2	2	X
3	3	3	X	3	3	X	X	3	3	3	X
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	XU	XM	1L	1U	1M	XL	1U	1M	1L
2	2	2	X	X	2	2	2	X	2	2	2
3	3	3	X	3	3	X	X	3	3	3	X
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

STROPODS

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

MANY MYTILUS < 1cm

MANY LITTORINIDS EVIDENTLY NEWLY SETTLED (1-2mm)

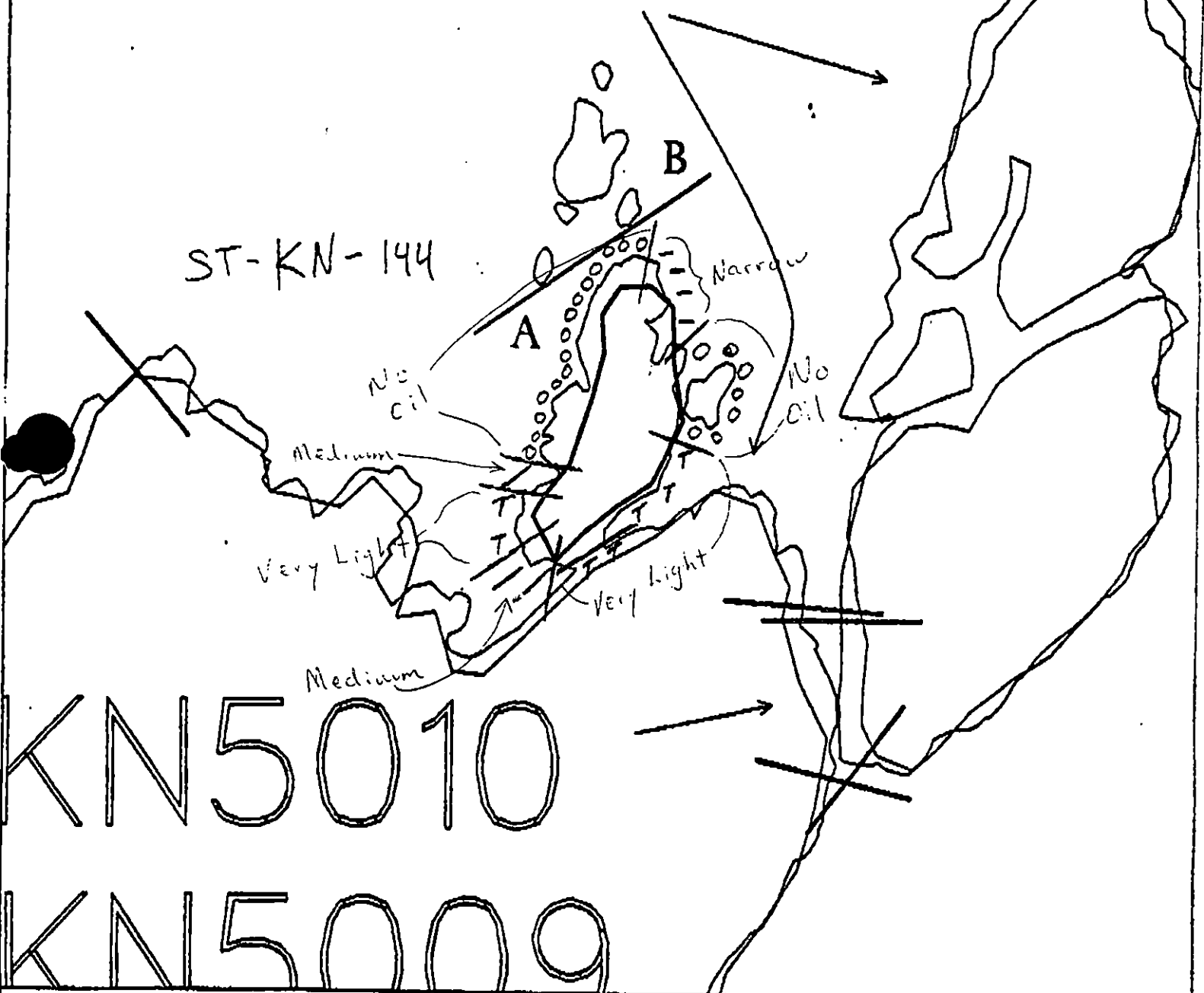
LIMPETS MODERATE TO DENSE ON COBBLE IN LOWER INTERTIDAL

Ecological Considerations:

3 N, P } SEA LION AND HARBOR SEAL MOVING - PUPPING
O, Q }

~~KN-123~~

ST-KN-144



KN-144

XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 681m
EXXON Segment Length: 1542



Map Key: PWS-322

Name: Greg Chaney

Date: March 31, 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-144

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)

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 308 m: V.Light 0 m: No Oil 473 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: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map.
Work should be conducted between 7/2 and 8/14.

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 / KN144 SUBDIVISION: B DATE 01 APR 90

USCG

NAME Patrick Mahoney SIGNATURE Patrick Mahoney

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Small bedrock island with weathered coat & stain. Removal would be impractical. There was one area in the U.I. zone of grass, about 10m² that ~~was~~ was oiled and should be removed, lightly tilled and bioremediated.

* There was a Bald Eagle on the island that fled before we beached the Zodiac. There were no signs of nesting on the island but it should be taken into consideration.

ADEC

NAME M. CUNNINGHAM SIGNATURE M. Cunningham

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of oiled grass & weed at site where Pit #1 was dug. Till to airate sediments then bioremediate area... (no more than 10 sq m)

Tar present on angular boulders & headlands well weathered & hardened making removal unlikely by current technology. No treatment re

LAND MANAGER

NAME Steven Phillips SIGNATURE Steven Phillips

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Small bioremediation possible
Tar on bedrock not currently treatable
could experiment with citrasol or other tarry removal
This tar not thick enough to scrape and not worth using a harsh dissoluant.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Greg Chaney USCG Patrick Malay SEGMENT ST/ KN-144
 BIO Jim Rath LAND REP Steve Phillips SUBDIVISION R(20f2)
 XXON Ray Sotelo ADEC Mike Cunningham TIME 10:00 to 10:30
 TEAM NO.: TIDE LEVEL: 4 ft to 3 ft DATE April 1, 1990
 EST. SUBDIVISION LENGTH: 400 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: EAST to WEST
 SURFACE SEDIMENTS: R 100 % B 0 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 180 m VL 0 m NO 220 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES				
	C	B	P	R	SP	OR	RY	SC	DR	TL	LS	SU	UI	ME	U
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT	X	✓				X	✓					X	✓		
STAIN			X	✓		X	✓					X	✓	✓	
MOUSSE															
PATTIES															
TARBALLS															
FILM		X			X	X								X	
NO OIL												X			X

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR FW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-7-1Frames 16, 17, 18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	SP OR	OR FM	CL OR	DR TL	LS	SU	U	M	U						
1	20				X		0-10		X	X	X									X				CM
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

Pit #1 was dug in small pocket of sediment at southern edge of hollow. Brown sheen observed in water which filled in the pit and on sediment. Total area of sediment roughly 7 square meters.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/25/90

Segment ST / KN 144 Subdivision B Date (mo / day / yr) Apr 1, '90Time (24 hr) ARR 0955
LV 1032 Biologist ROTH

- (A) Substrate type and % of segments:
(1) Bedrock 100 (2) Boulder _____ (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 50 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
Roll No. ST-7-1Frames 16-18

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	XU	XM	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	XU	XM	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	XU	XM	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	XU	XM	1L	XU	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

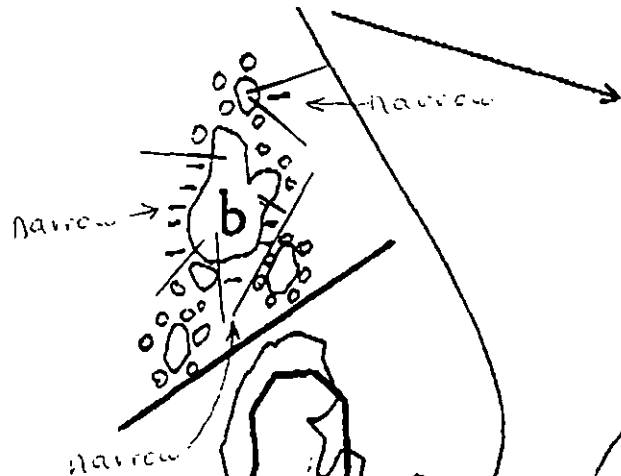
1 BALD EAGLE PERCHED ON STUDY ISLET ON OUR ARRIVAL.
TIDE ~ +4'; SO CAN'T SEE MUCH OF LOWER ZONE; THEREFORE ONLY FUCUS ESTIMATED.
SOME MUSSELS VERY SMALL (CA. 5mm)
MANY LITTORINES TINY

Ecological Considerations:

3 NPOQ. SEA LION AND HARBOR SEAL PUPPING AND MOLTING.

KN-123

KN-144



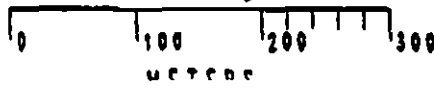
KN5010

KN5009

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

KN-144b

ADEC Segment Length: 681m
 Exxon Segment Length 1542



Map Key: PWS-322
 Name: Greg Chaney
 Date: April 1 1990
 Data Entered:

KN-122 KN5012

KN-145

KN-123

KN-144

WORK
AREA

KN5011

KN-124

KN5010

KN5009

KN5008

KN 126

ECOLOGY MAP

SEGMENT KN-144

SUBDIVISION B (2 of 2)

METERS

0 340 680



Seabird Colony



Eagle Nest

1 inch = 1115 feet

Exxon Company, USA

Map Key: KN1-KN-144

May 11, 1990

SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Jones

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 308 m: V.Light 0 m: No Oil 473 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map.
Work should be conducted between 7/2 and 8/14.

See Constraint Addendum 5/22/90
WPK

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER

EXXON Arvid G. Smith

NOAA Joseph C. Tallent

USCG M. J. HALL

FOSC: myl

DATE: 5-3-90

SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 59 m: Narrow 91 m: V.Light 225 m: No Oil 305 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

 Treatment Recommended

 Manual Pickup

 Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS:

TAG COMMENTS: REMAINING OIL ON VERTICAL BEDROCK, RICH INTERTIDAL BIOTA
THEFORE NTR RECOMMENDED

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER Art Weiner

EXXON ANDY TON Andy Ton

NOAA Joseph Talbot Joseph Talbot

USCG M. J. HALL M. J. Hall

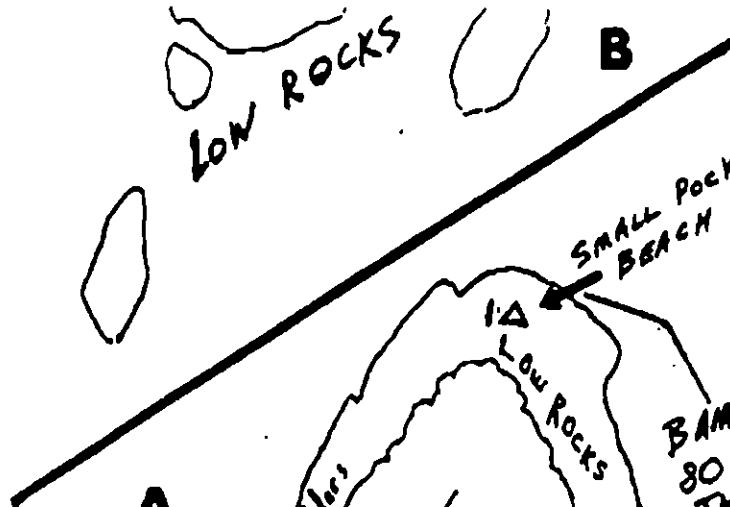
FOSC: [Signature]

DATE: 5-3-90



100 METERS

ATCH MAP



SMALL POCKET BEACH

BAND OF OIL COAT UP TO 80 CM. HIGH ON BEDROCK. THICKEST IN CRACKS

FOREST

FOREST

BAND OF OIL COVER UP TO ONE METER HIGH. 15 METERS LONG. 2 mm THICK ON BEDROCK

Translucent Sheen

SPORATIC COAT ON BEDROCK

BAND OF OIL COVER UP TO 140 CM HIGH 2 mm thick

SPORATIC COAT OIL AT BASE OF BEDROCK UP TO 50 CM. HIGH

POCKET OF BOULDERS WITH COAT OF OIL AT BASE

FOREST

LOW ROUNDED ROCKS

Cobbles & Boulders

Steep Rock

FOREST

FOREST

FOREST

FOREST

FOREST

FOREST

FOREST

FOREST

FOREST

KN-144

KN-123

DATE Nov 13/ 90

SUBDIVISION A

SEGMENT S1/KN 144

Oil: 6 m

CHECKLIST

- M Arrow
- Approx. Scale
- Says Sub Entry
- Oil Out
- Width
- Length
- % Cover
- Substrate Character
- Est. Height
- SSI
- Profile Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

1 A

2 A

3 A

4 A

5 A

6 A

7 A

8 A

9 A

10 A

11 A

12 A

13 A

14 A

15 A

16 A

17 A

18 A

19 A

20 A

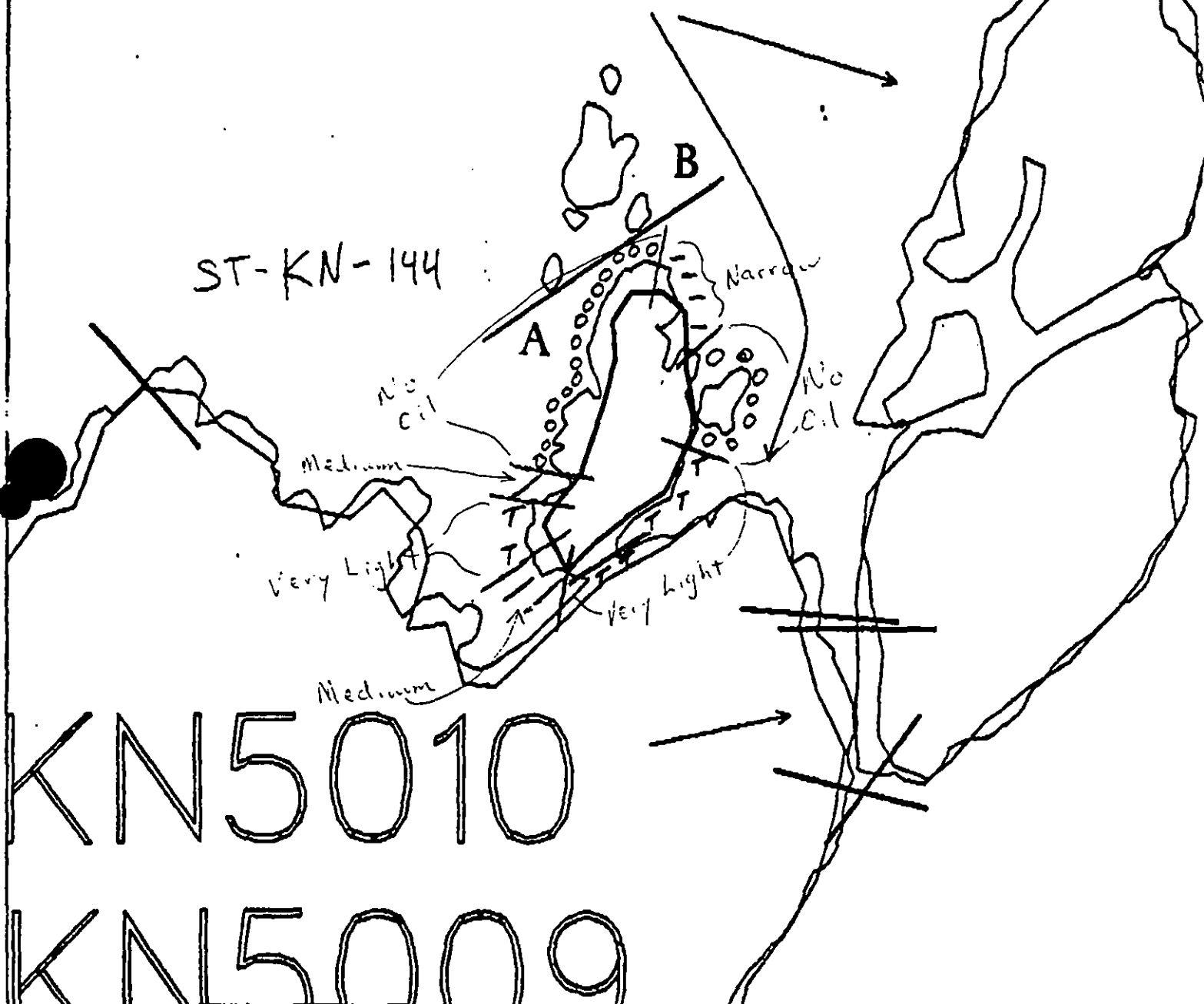
21 A

22 A

23 A

KN-123

ST-KN-144



XXXX Wide	KN-144	Map Key: PWS-322 Name: <u>Greg Chaney</u> Date: <u>March 31 1990</u> Data Entered:
/// Medium	ADEC Segment Length: 681m	
-- Narrow	EXXON Segment Length: 1542	
TTTT Very Light	0 100 200 300	
0000 No Oil	METERS	

SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 308 m: V.Light 0 m: No Oil 473 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map.
Work should be conducted between 7/2 and 8/14.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC ART WENGER

EXXON ANDY GEM

NOAA Joseph C. Talbot

USCG M. J. HALL

FOOSC: [Signature] DATE: 5-3-90

OG GIBBY HANEY

SEGMENT SIX 1/1/44

SUBDIVISION B

DATE April 1 1990

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/AWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pk Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ RI - No Subsurface Oil

A

2 Δ PI - Subsurface Oil

CT/C

Contributor Distribution

CT/B

Broken Disk Buffon

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oil Vegetation

1 $\bullet$

Photo location, direction, and number

ATCH MAP



90% TAR COVER IN ROCK CREVASSE 1x14meters

50 METERS



CARE SHOULD BE TAKEN NOT TO CONFUSE BLACK LICHEN WITH COATED TAR.

50% COVERAGE 1x5 meters TAR

Low Rock

30% COVERAGE. 50CM BAND 5 METERS LONG TAR

Rounded Rock

80CM x 6 METER VERTICAL BAND ON ROCK FACE

Low Rock

Low Rock Remove oiled Bio B Debris

~2 meters 2 tar in rock crack

Low Rock

KN-123

KN-144

Narrow

Narrow

a

b

KN5010

KN5009

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-144b

ADEC Segment Length: 681m
Exxon Segment Length: 1542



Map Key: PWS-322

Name: Greg Chaney

Date: April 1, 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-145 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

NO TIME CONSTRAINT. Authorized per
memorandum dated 5/14/90 from Kathryn
Frost/ADF&G to Mark Kuwada/ADF&G

5T

Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in
Subdivision A. Closed to bioremediation within
400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

6-10-90

Prepared By:

W. Kelley

Date

6/9/90

N-301

KN-12

KN-145

KN-123

WORK
AREA

KN-144

KN-133

KN-124

KN-125

KN5010

KN5009

KN5008



Exxon Company, USA

Map Key: PMS-KN-145

1:50,000

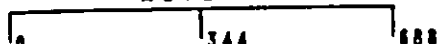


ECOLOGY MAP

SEGMENT KN-145

SUBDIVISION A (1 of 1)

METERS



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

1 inch = 1128 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-145 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3Q, 3Q) - 8/15 to 9/15; Active eagle nest (5T) - 3/1 to 6/1; Anchorages (6V) - 6/1 to 9/15. Restrict air and boat traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to any activity re: seals and sea lions and USF&WS re: eagle nest. Cleanup should be completed before 5/15 or between 7/1 - 8/15 unless otherwise approved by ADF&G.

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

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

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

OILING CATEGORIZATION:

Wide 119m: Medium 20 m: Narrow 329 m: V.Light 291 m: No Oil 140 m
Subsurface Oil Observed: Yes ☒ No ☐ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas of surface coat on low angle pocket beaches only. See sketch map for work areas. Work dates 7/1 to 8/15 based on seal, sea lion constraints.

→ [See Constraint Addendum 6/9/90] WRC ←

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC

EXXON

NOAA

USCG

JOHN BAKER

ANDY TGA

Burt Wescott

M. J. HALL

FOSC: ML

DATE: 4-19-90

1991 MAYSAP EVALUATION

SEGMENT: KN 144 SUB: B REGION: PWS SURVEY DATE: 5/23/91

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. 1 SEGMENT KN 144 SUBDIVISION B DATE 5/23/91

ADEC

NAME JEFF GINATIAS SIGNATURE [Signature]

☒ NTR

NO RECOVERABLE OIL ON SEGMENT. ISLAND CONTAINS
NUMEROUS NESTING BIRDS & ~~2~~ HARBOUR SEALS (WITH PUP) OBSERVED
HARLED OUT.

EXXON

NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR

no treatable oiling conditions exist.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☒ NTR

Rock islands. M. Fawcett and G. Macdonald were on
site at high tide for segment scope out. Oyster Catcher nests
and tern nests were observed as were the gulls. They
recorded the oiling. We skiffed by at low tide, seals
were hauled out and the birds present. M. Fawcett requested
the crew not get on island since we'd chase the birds off
their nests, leaving the eggs exposed.

USCG/NOAA

NAME SCHULTZ/CITILDS SIGNATURE [Signature]

☒ NTR

DO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND.

McDONALD & FAWCETT SURVEYED EARLIER - SEAL HAULOUT & ACTIVE BIRD
NESTS PREVIOUS INSPECTION

PAGE 1 OF 1

DATE 5, 23 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ X ☐ L

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

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

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

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

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 15

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

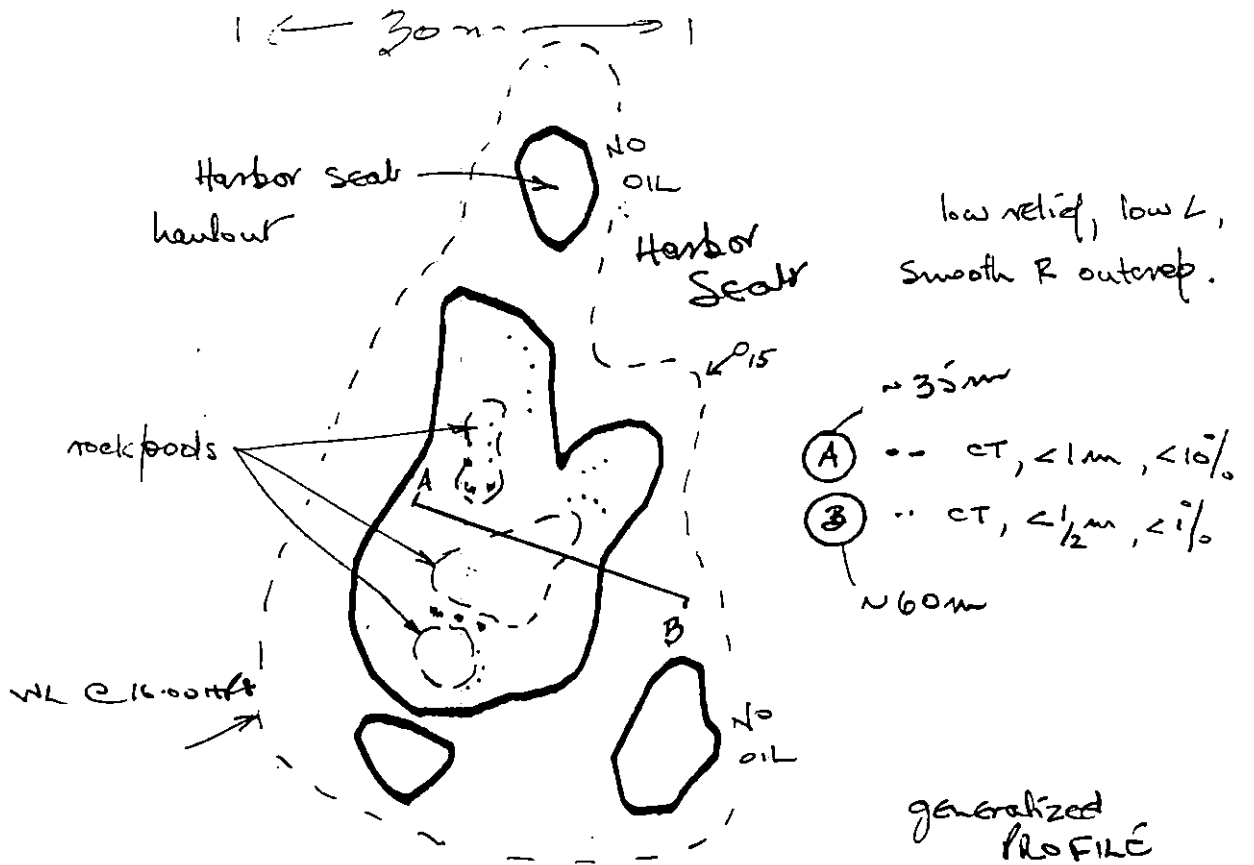
OG COMMENTS: cluster of rounded bedrock outcrops, the largest, central islet having shallow rock pools in a depression in its center. Trace of well weathered cr on the largest island; No substrate was available for pitting. The cluster hosts nesting birds and a few Harbor seals.

REVIEWED: F.W. 5/25/71

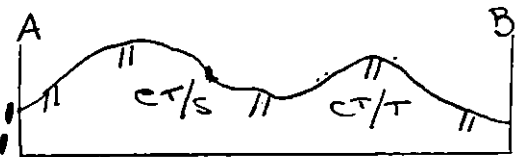
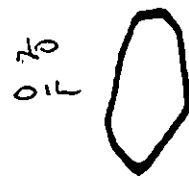
KN-144B

G. MACDONALD

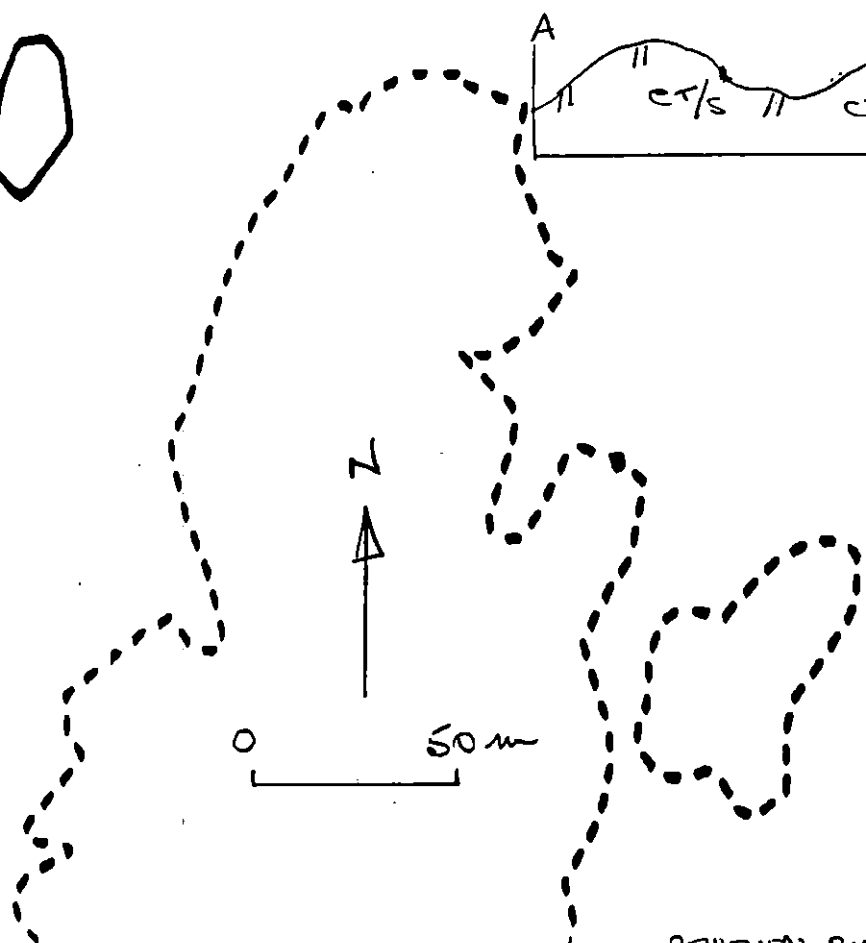
5.23.91



generalized profile



"oil shadows"
common on R
throughout
subdivision.



REVIEWED: R.W. S/25/41

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 23 May 91
 SEGMENT # KN 144 TIDAL HEIGHT(Range) +2.4ft MLLW
 SUBDIVISION B BIOLOGIST Michael Fawcett
 STATE WIND SPEED/DIRECTION NW 5 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This bedrock islet was pre-surveyed this AM. by G.M. and M.F. at which time an oystercatcher nest and several tern nests were discovered. As soon as the birds flushed, gulls began circling the nesting area, looking for eggs, and were harassed by the terns. We quickly examined oil condition & intertidal biota, then left the islet. Terns & oystercatchers immediately returned to nests. In the after noon survey, the MAYSAP team skiffed by the islet, staying offshore-- nesting birds did not flush. We also observed 3 harbor seals hauled out on the islet, one of which was a pup. Oiling consisted of traces of CT near tidepools (see sketch map)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

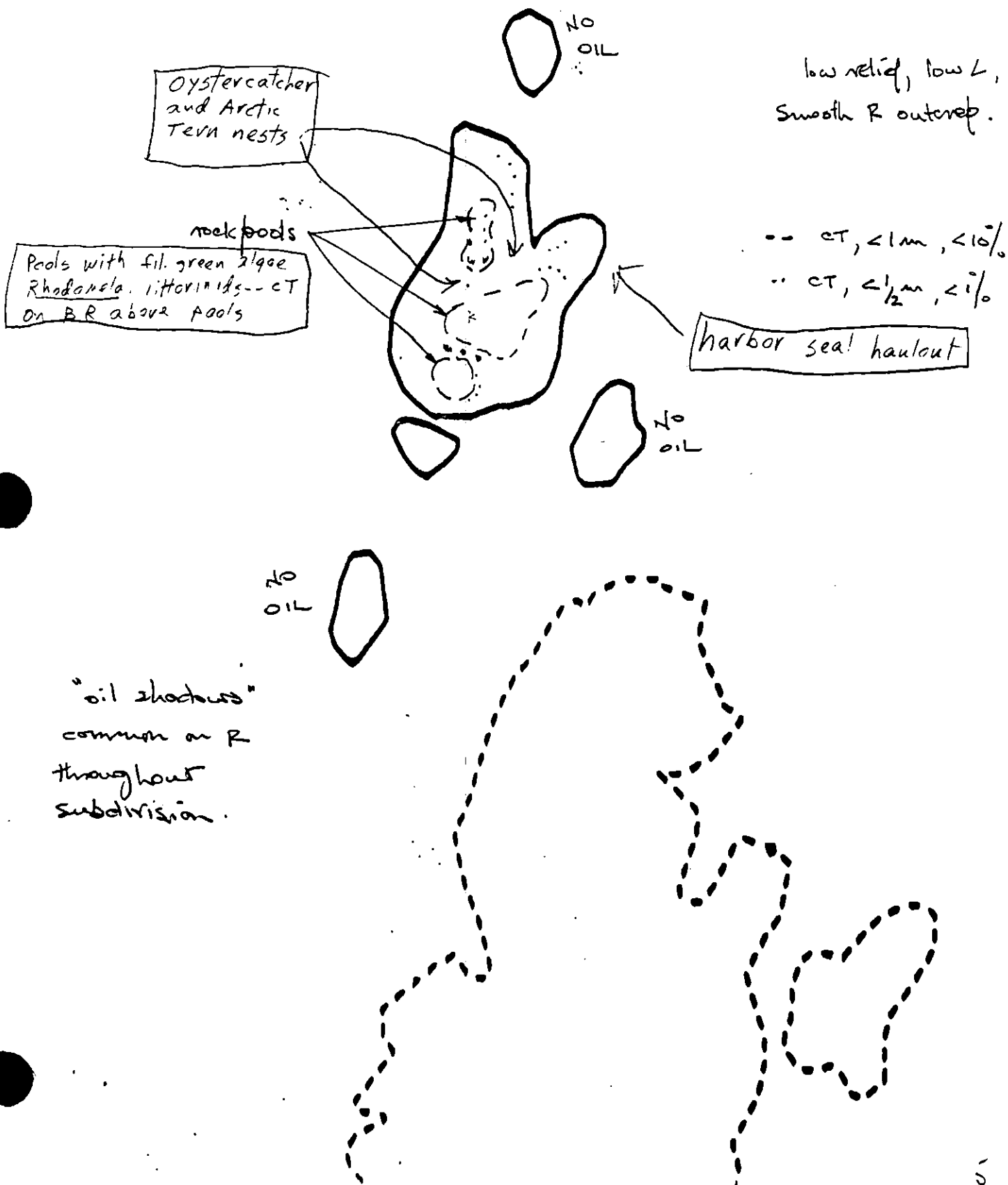
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	2 (GW Gulls black-legged Kittiwake ~10)		
Shorebirds	1 (black oystercatcher)	2 (nesting pair, 3 eggs)	
Corvids			
Other Birds	1 (Arctic tern)	several nests 10-12 birds	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Harbor seals	3		
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

Bio Sketch Map
 KN 144 B
 M. Fawcett
 5/23/91

← 30m →



5/23/91

Fowcett

- Pre-survey GM & MF

KN 144(6) Sm Islet w/ oyst. catcher mat (3 eggs) & terns - several nests - as soon as terns flushed, gulls approached & were chased by terns - we checked out ail, then left - Oystercatchers & terns returned immediately after we left

KN 145A 5/23/91 Fawcett

- 3 harbor seals hauled out at KN 144B

- eagle sitting on edge of nest
with grass sticking out - not chattered

- decided to abort survey & assume
it's an active nest - will contact
Doug Stine later - (plotted as
an inactive nest -- may still be)

KN 144B - 1550 - seals went

in water, terns still on
nests, Kittiwakes all around

- did not go ashore, will use data
from GM & MF survey earlier this AM

- debris is all bedrock with a
couple of SUTZ pools filled
w/ green algae, Littorina, Rhodomeles
w/ CT nearby - MTZ - LTZ dense
Fucus & other algae - much
quartz in SUTZ + UTZ, may inhibit
barnacles, etc

+ KN-12+3

44

B

A

A

A

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

KN0144 B

ADEC Subsegment Length: 627m

METERS

0 100 200
 AK State Plane Zone 4
 kn0144b



Subdivision Field Map

Map Key: KNKN0144B

Name: GM

Date: 5.23.91

Date Entered:

REVIEWED: F.W. 5/25/91

1991 MAYSAP EVALUATION

SEGMENT: KN 144 SUB: A REGION: PWS SURVEY DATE: 5/23/91

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: 6/04/91

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 4 1991 FOSC APPROVAL DATE: 6/08/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 144 SUBDIVISION A DATE 5/23/91

ADEC

NAME JEFF GINARLAS SIGNATURE [Signature]

☒ NTR ☒ TREATMENT RECOMMENDED

MANUAL WORK, OG MAP SITES A2, B1, C1. MOSTLY TROWEL WORK. AT C2 (HEAVIEST OILED AREA) LOW TO HI SOR COVERS CONTINUOUS 6-8 M BAND HIIZ UNDER Boulders/Cobbles. WORK WOULD REQUIRE MOVING Boulders, REMOVING HEAVIEST & RAKING/AGITATING REMAINDER. PATCH IS A SHARP INCLUDE NARROW COVE (8 M wide) WITH EASY SKIFF ACCESS, BUT COULD ALSO BE EASILY BOOMED TO CONTAIN SHEEN. WOULD BE TEDIOUS. SITE B2 HAS HEAVY SOR AT CONCENTRATED AREA AT DEPRESSION IN BEDROCK. COULD EASILY BE REMOVED. NOT ALOT OF ARMOR PROTECTING OIL; IF NOT TREATED WAVE ACTION WILL MOST LIKELY DIMINISH THIS AREA WITHIN A YEAR. SITE A2 HAS LOW SOR w/ OCCASIONAL HEAVY PATCH UNDER Boulder/Cobble ARMOR. IF TREATING C1 & B2, LOOK AT A2. WOULD BENEFIT FROM EXPOSURE (ROLLING Boulder/Cobble AND RAKING. EASY 1/2 C

EXXON

NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR NO recoverable oil was located.

NDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☐ NTR ☒ TREATMENT only at Area C1. Oiling varies from LO SOR - HI SOR and is under big cobbles, angular. The surface rocks will need to be moved out of the way to tend to oiled sediments. Remove heavy patches. Rake/Agitate LO SOR, or just agitate whole area. Since in area, tend to area B2, manual removal.

USCG/NOAA

NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR NO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND

STEEP ROUNDED BED ROCK SHORELINE w/ CREVICES FILLED WITH B.C.'S. DECEITABLE OIL IN MS/I & SOR MAINLY IN CREVICES & WAVE ENERGY PROTECTED AREAS. CT & CV SW & SPOTTY BUT AROUND MOST OF SEGMENT. NO SUBSURFACE OIL FOUND.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1TEAM NO. 1OG G. MARDONALDBIO M. FAWCETTSEGMENT KN-144ADEC J. GINAWAYLANDMANAGER M. HALL for DNRSUBDIVISION AEXXON L. OLSONUSCG/NOAA SCHULTZ/CHILDSDATE 5/23/91TIME 16:40 to 17:35TIDE LEVEL +2.1 ft. to +3.0 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 700 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 1 m M 6 m N 23 m VL 491 m NO 180 m US 1 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	
A1						S					R	H	0.2	20	X				
A2				P							CBR	H	1	4	X				10 SOR
B1				P							BR	M	3	1	X				Lo SOR
B2				P							CRB	M	1/2	1	X				H, SOR
C1				P							CB	M	6	5	X				10 SOR
C2						S					R	H	1	110	X				
D						T					R	H	51	250	X				5 sites totalled
E		S				S					RB	M	1/2	1	X				
F					P	P					L	H	1 1/2	20	X				
											RB	H	2	3	X				MS/I } R
V				S							RBV	H	1	3					10 SOR } channel.

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 10-14

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	18							X	-		-		X				PG-GPM	
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS: Rocky shore w/ small B-filled clefts and BC channel. Surface oil only, as SOR/I & MS/I in R crevices and between BC & an earthy peat layer in the channel.

REVISED: F.W. 5/25/91

REVISED: MC 5/28/91

KN-144A

G. MACDONALD

5.23.91

KEY

- - CT $< 10\%$

... CT $< 1\%$

○ PHOTO LOC.

CT is well weathered,
slightly tacky at most,

① CT, $< 1\%$, $\leq 1m$
total 275 m for the
subdivision (*)

location.

$< 10\%$
+ CT, $< 1 \times 110$ (C2) (C1)
10 SOR/IW local hi.
patches, 6x5, HTZ-
SWTZ; 30%
in earthy peat.

⑤ M&I in R
overices, SWTZ,
 $< 1/2 m^2$, assoc.
W/ $\leq 1m$ CT line

⑥ $1 1/2 \times 20 m$,
CT, CV 20%
 2×3 , M&I 20%
CB/R; 10 SOR w/
organic 1x3; 5%
SWTZ.

⑧ $1/2 \times 2$, 10 SOR, 30% SWTZ

⑨ 3×1 , 10 SOR, SWTZ, 30%.

⑩ 10 SOR; 1x4, 20%.

⑪ CT, $< 10\%$; $0.2 \times 30 m$

⑫ CT, CV, $\leq 20\%$
 $\leq 1 \times 180 m$
SWTZ



0 60m

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

23 May 91

SEGMENT #

KN 144

TIDAL HEIGHT(Range) +2.3 to +3.0 ft MLLW

SUBDIVISION

A

BIOLOGIST Michael Fawcett

STATE

ca/m

WIND SPEED/DIRECTION ca/m

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision contains mostly steep or moderately steep bedrock with small boulder/cobble pocket beaches. Wave energy is low to moderate. Residual oil CT, CV and patches of MS or SOR are scattered throughout much of the subdivision; most of the oil is supratidal, above intertidal biota (except lichen & worms), and the remainder is in the upper part of the high intertidal zone, among sparse barnacles and sometimes dense limpets (*Notacmea personata*). See sketch map for descriptions of biota near oiled sites.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Osmerids (Hooligan?)
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1 (G-W gulls)	2	
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.

KN 144A 5/23/91 Fawcett

start 1640, proceed North around island

- boat landing site C/B/BR/P -

- dense barn +3 to +7 ft; mod.

Fucus up to +5

CT, CV, SOR SUTZ - no birk

mod barnacles, Fucus 10 m down shore - ^{also sparse} mussels

- 30 m north, more SOR UTZ-SUTZ

near 3-purse barn +10 ft - dense

Fucus 3-4 m down shore - sparse

mussels under rocks

- 2 ropes across inlet in 123 B

GW Gulls 11

1700 hr - B/C pocket beach - SOR in

SUTZ, dense interstitial mussels, mod
barnacles, lump, sparse algae down shore
many Littorina eggs

1710 - CT - SUTZ BR along

barnacles

1715 - BR - dense algae (Fucus & lots of
fil. dm, gr, m. LTZ-UTZ - sparse
barn. above algae - Tr CT above barn

1730 - +10 m depth - benthos - CT/CV

+ 8-11 ft, among sparse barn.

dense periwinkle, sparse mussels

& Litt, sparse Fucus

144A (cont) 23 May 91 Fawcett

1720 (cont) - most barnacles in MTZ

+ 3-6 ft --- dense mat of fl. brown
covering Fucus & something else
in LTZ

1730 - CT/CV/MS/I + 8-10 C/P/AR

- finish 1735 - same as 1720

noticed large schools of 4-6"
smelt-type fish in several near
shore places throughout Herring Bay
today - Haddock?

KN-144A
Bio Sketch Map
M. Fawcett
23 May 91

KEY

- CT < 10%

... CT < 1%

CT above nearly all biota except occasional sparse barnacles, limpets (*N. persona*) - same at all sites with circled star → (*) location

CT
SOR above biota except worms, barnacles, limpets, mussels begin 5m downshore; dense mussels, moderate barnacles 10 m down; also littorinid eggs, large, old limpets (2 spp.) in earthy peat.

CT/MS among B/C with dense limpets, sparse barnacles, mussels, littorinids, and rockweed; mod. barnacles in MTZ; dense filamentous, brown algal mats covering everything in LTZ

same description as (E)

SUTZ - above biota; barnacles, mussels, *Fucus*, limpets, Littorinids, dolans

SUTZ - above biota

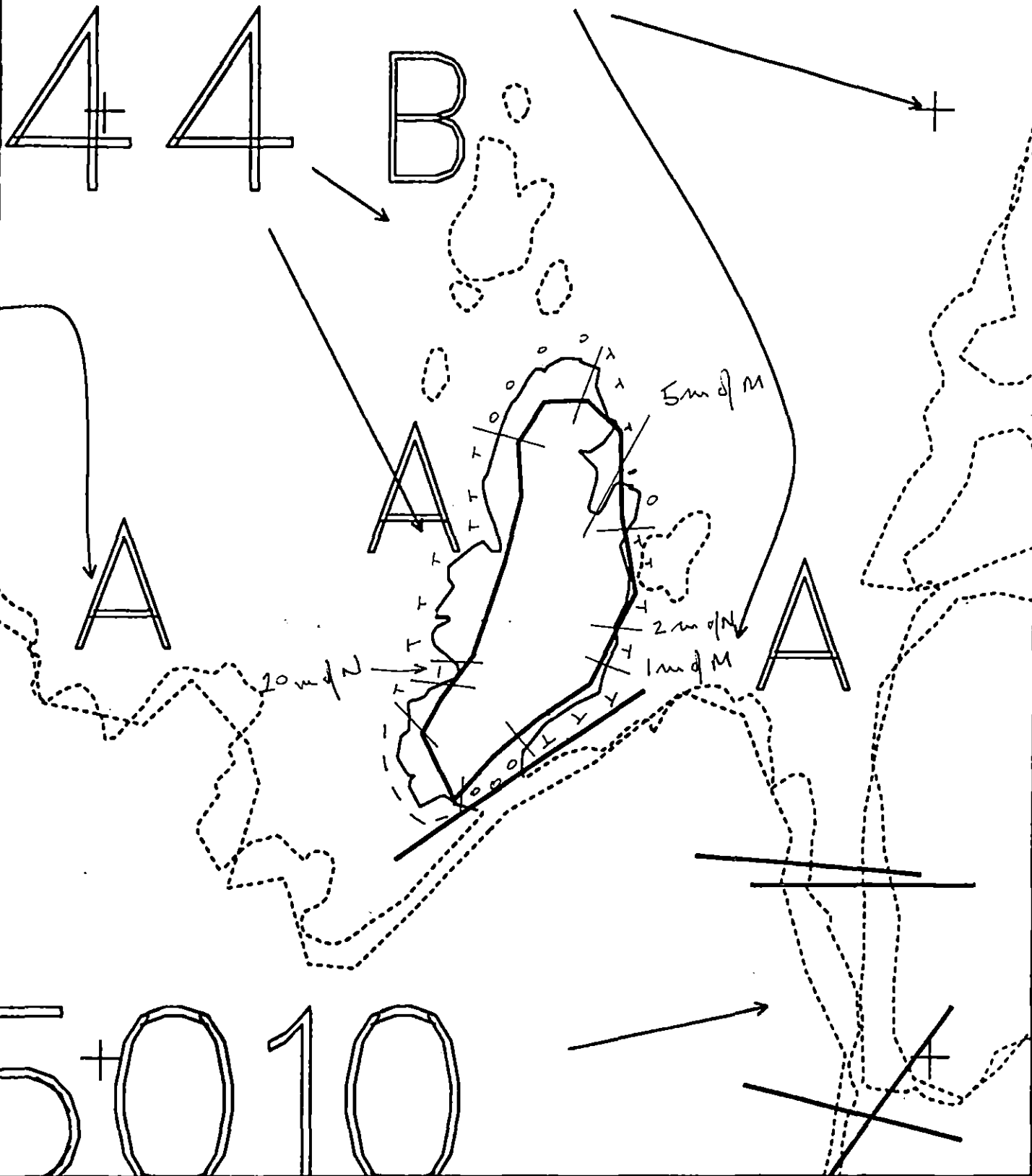
SOR near sparse barn, dense *Fucus* downshore

same as (A2).

same description as (E) & (F)

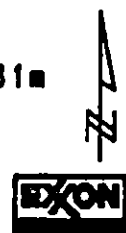


0 60 m



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

KN0144 A
 ADEC Subsegment Length: 681m
 METERS
 0 100 200
 AK State Plane Zone 4
 2200144a



Subdivision Field Map
 Map Key: KNIKNO144A
 Name: GM
 Date: 5.23.91
 Date Entered:

REVISER: F.W. 5/25/91

1991 MAYSAP EVALUATION

SEGMENT: KN 144 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/23/91

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 _____

MATSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 144 SUBDIVISION A DATE 5/23/91

DEC

NAME JEFF GIVARAS

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL WORK, OG MAP SITES A2, B1, C1 MOSTLY TROWEL WORK. AT C2 (HEAVIEST OILED AREA) LOW TO HI SOR COVERS CONTINUOUS 6-8 M BAND HIDE UNDER BOULDERS/COBBLERS. WORK WOULD REQUIRE MOVING BOULDERS, REMOVING HEAVIEST & RAKING/AGITATING REMINDER. BEACH IS A SHARP INCLINE NARROW COVE (8 M WIDE) WITH EASY SKIFF ACCESS, BUT COULD ALSO BE EASILY BEACHED TO CONTAIN SHEEP. WOULD BE TEDIOUS. SITE B2 HAS HEAVY SOR AT CONCENTRATED AREA AT DEPRESSION IN BEDROCK. COULD EASILY BE REMOVED. NOT ALOT OF ARMOR PROTECTING OIL; IF NOT TREATED WAVE RETURN WILL MOST LIKELY DIMINISH THIS AREA WITHIN A YEAR. SITE A2 HAS LOW SOR w/ OCCASIONAL HEAVY PATCH UNDER BOULDER/COBBLE ARMOR. IF TREATING C1 & B2, LOOK AT A2. WOULD BENEFIT FROM EXPOSURE (POLING BOULDER/COBBLE AND RAKING. EASY 1/2

EXXON

NAME LARRY D. OLSON

SIGNATURE [Signature]

☒ NTR no recoverable oil was located.

LANDMANAGER

NAME MARSHA HALL OF DNR

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT only at Area C1. Oiling varies from LO SOR - HI SOR and is under big cobbles, angular. The surface rocks will need to be moved out of the way to tend to oiled sediments. Remove heavy patches. RAKE/AGITATE LO SOR, or just agitate whole area. Since in area, tend to area B2, manual removal.

USCG/NOAA

NAME SCHULTZ / CHILOS

SIGNATURE [Signature]

☒ NTR NO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND

STEEP ROUNDED BED ROCK SHORELINE w/ CREVICES FILLED WITH B&C'S. DECEITABLE OIL MS/I & SOR MAINLY IN CREVICES & WAVE ENERGY PROTECTED AREAS. CT & CV
② SW & SPOTTY BUT AROUND MOST OF SEGMENT. NO SUBSURFACE OIL FOUND.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 1

OG G. MARDONARD

BIO M. FAWCETT

SEGMENT KN-144

ADEC J. GINAWAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5/23/91

TIME 16:40 to 17:35

TIDE LEVEL +2.1 ft. to +3.0 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 700 m

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

EST. OIL CATEGORY LENGTH: W 1 m M 6 m N 23 m VL 491 m NO 180 m US 1 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	
A1						S					R	H	0.2	20	X				
A2				P							CBR	H	1	4	X				10 sor
B1				P							BR	M	3	1	X				40 sor
B2				P							CB3	M	1/2	1	X				H. sor
C1				P							CB	M	6	5	X				10 sor
C2						S					R	H	1	110	X				
D						T					R	H	1	250	X				5 sites totalled
E		S				S					RB	M	1/2	1	X				
F1					P	P					L	H	1 1/2	20	X				
F2		P									RB	H	2	3	X				MS/I } R
V				S							RBV	H	1	3					10 sor } channel

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 10-14

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	18							X	-			-		X				OG-GPM	
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										

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

OG COMMENTS: Rocky shore w/ small B-filled clefts and BC channel. Surface oil only, as sor/I & MS/I in R crevices and between BC & an earthy peat layer in the channel.

REVISED: F.W. 5/25/91

KN-144A

G. MASONARD

S. 23.91

KEY

- - CT $< 10\%$

... CT $< 1\%$

⊙ PHOTO LOC.

CT is well weathered,
slightly tacky at most.

⑤ CT, $< 1\%$, $\leq 1m$
totals 275 m for the
subdivision *

location.

$< 10\%$
+ CT, $< 1 \times 110$ (C2) (C1)
10 SOR/IW local h.
patches, 6x5, Horiz-
SUTZ; 30%
in earthy part.

⑥ M&I in R
textures, SUTZ,
 $< 1/2 m^2$, assoc.
W/ $\leq 1m$ CT line

$1 1/2 \times 20 m$,
CT, CV 20%
 2×3 , M&I 20%
CB/R; 10 SOR w/
organic 1x3; 5%
SUTZ.

SUTZ.

⑧ $1/2 \times 2$, W SOR, 30% SUTZ

⑨ 3×1 , 10 SOR, SUTZ, 30%.

⑩ 10 SOR; 1x4, 20% SUTZ.

⑪ CT, $< 10\%$; $0.2 \times 30 m$

⑫ CT, CV, $\leq 20\%$
 $\leq 1 \times 180 m$
SUTZ



0 60 m

REVIEWED: F.W. 5/25/4

TEAM #

1

DATE

23 May 91

SEGMENT #

KN 144

TIDAL HEIGHT(Range)

+2.3 to +3.0 ft MLLW

SUBDIVISION

A

BIOLOGIST

Michael Fawcett

SEA STATE

calm

WIND SPEED/DIRECTION

calm

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision contains mostly steep or moderately steep bedrock with small boulder/cobble pocket beaches. Wave energy is low to moderate. Residual oil CT, CV and patches of MS or SOR are scattered throughout much of the subdivision; most of the oil is supratidal above intertidal biota (except lichen & worms), and the remainder is in the upper part of the high intertidal zone, among sparse barnacles and sometimes dense limpets (*Notoacmea personata*). See sketch map for descriptions of biota near oiled sites.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Osmerids (Hooligan?)
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1 (G-W gulls)	2	
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.

4
Round 5/20/91

KN 144A 5/23/91 Fawcett

start 1640, proceed North along shore

- boat landing site C/B/BR/P -

- dense barn +3 to +7 ft; mod.

From up to 15

CT, CV, SOR SUTZ - no birk -

mod barnacles, Fucus 10 m dense - ^{also sparse} mussels

- 30 m north, more SOR VTZ - SUTZ

near 3-finger barn +10 ft - dense

Fucus 3-4 m dense - sparse
mussels under rocks

- 2 ropes across inlet in 123 B

6W Gulls 11

1700 hrs - B/C pocket beach - SOR in

SUTZ, dense interstitial mussels, mod
barnacles, limp, sparse algae low down
many Littorinids

1710 - CT - SUTZ BR along

barnacles

1715 - BR - dense algae (Fucus & lots of

fil. dm, qz, M. LTZ-MTZ - sparse

barn above algae - Tr CT above barn

1720 - Timm's et - barnacles - CT/CV

+ 8-11 ft, among sparse barn.

dense periwinkle, sparse mussels

& Litt, sparse Fucus

144 A (cont) 23 May 91 Fourth

1720 (cont) - mod barnacles on MTZ

+ 3-6 ft --- dense mat of al. brown
covering Fucus of everything else
in LTZ

1730 - CT/CV/ MS/E + 8-10 C/P/AR

- finish 1735 - same as 1720

noticed large schools of 4-6"
smelt + po fish in several near
shore places throughout Herring Bay
today - Haddock?

KN-144A
Bio Sketch Map
M. Fawcett
23 May 91

KEY

- CT < 10%
... CT < 1%

① CT above nearly all biota except occasional sparse barnacles, limpets (*N. parsona*) - same at all sites with circled star → (*)
Location

CT ② SOR above biota except worms, barnacles, limpets, mussels begin 5m downshore; dense mussels, moderate barnacles 10 m down; also littorinid eggs, large, old limpets (2 spp.) in earthy part.

③ CT/MS among B/C with dense limpets, sparse barnacles, mussels, littorinids, and rockweed; mod. barnacles in MTZ; dense filamentous, brown algal mats covering everything in LTZ

same description as ③

④ SUTZ - above biota; barnacles, mussels, *Fucus*, limpets, Littorinids down

SUTZ - above biota

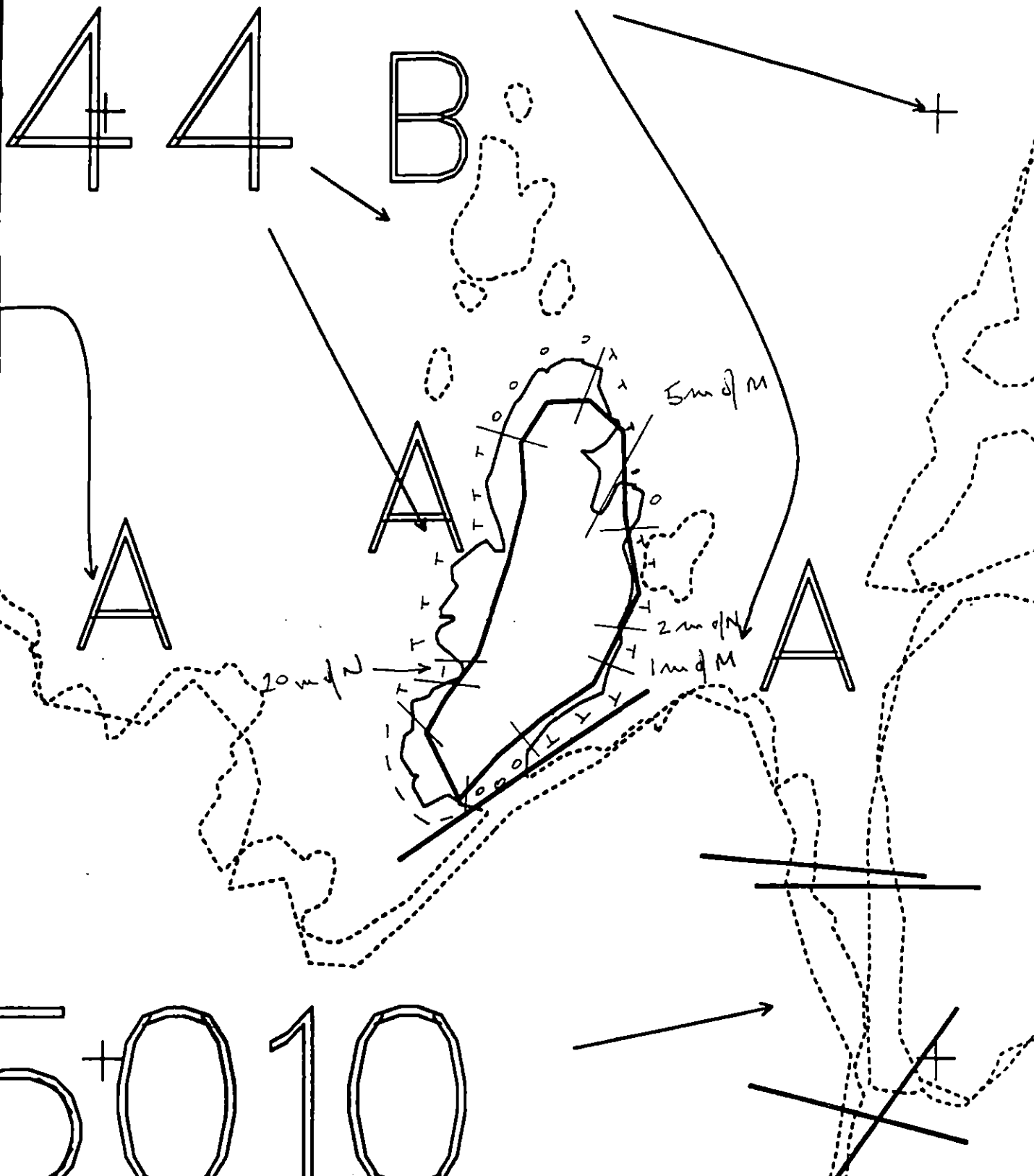
⑤ SOR near sparse barn, dense *Fucus* downshore

same as ⑤

same description as ③ + ④



0 60m



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

KN0144 A
 ADEC Subsegment Length: 681m
 METERS
 5 100 200
 AK State Plane Zone 6
 680144a



Subdivision Field Map
 Map Key: KNIK0144A
 Name: GM
 Date: 5.23.91
 Date Entered:

REVISER: F.W. 5/25/91

1991 MAYSAP EVALUATION

SEGMENT: KN 144 SUB: B REGION: PWS SURVEY DATE: 5/23/91

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

ADEC

NAME ~~Jeff~~ Jeff Ginalias SIGNATURE [Signature]

☒ NTR

NO RECOVERABLE OIL ON SEGMENT. ISLAND CONTAINS
NUMEROUS NESTING BIRDS & ~~SE~~ HARBOR SEALS (WITH PUP) OBSERVED
HAULED OUT.

EXXON

NAME LARRY D OLSON SIGNATURE [Signature]

☒ NTR

no treatable oiling conditions exist.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☒ NTR

Rock islands. M. Fawcett and G Macdonald were on site at high tide for segment scope out. Oyster Catcher nests and tern nests were observed as were the gulls. They recorded the oiling. We skiffed by at low tide, seals were hauled out and the birds present. M Fawcett requested the crew not get on island since we'd chase the birds off their nests, leaving the eggs exposed.

USCG/NOAA

NAME SCHULTZ/CITIZOS SIGNATURE [Signature]

☒

NTR DO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND.

McDONALD & FAWCETT SURVEYED EARLIER - SEAL HAULOUT & ACTIVE BIRD NESTS PREVENTED INSPECTION

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-144

ADEC J. GINAZIAS

LANDMANAGER M HALL for 2 NR

SUBDIVISION B

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDERS

DATE 5 / 23 / 91

TIME 15 : 50 to 16 : 05

TIDE LEVEL + 2.2 ft. to + 2.2 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ X

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO
a.m. b.m.

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

TOTAL LENGTH SHORELINE SURVEYED: 625 m

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

EST. OIL CATEGORY LENGTH:

W m M m N m VL 95 m NO m US m

[illegible]

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

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

PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 15

[illegible]

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

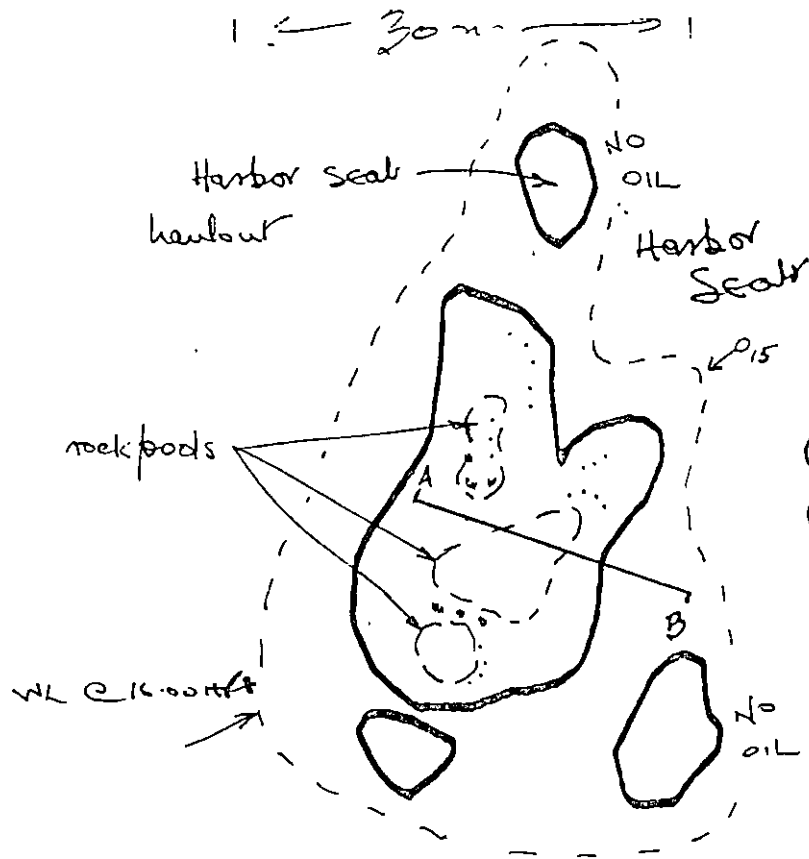
OG COMMENTS: cluster of rounded bedrock outcrops, the largest, central islet having shallow rockpools in a depression in its center. Trace of well weathered CT on the largest island; No substrate was available for pitting. The cluster hosts nesting birds and a few Harbor Seal.

REVIEWED: F.W. 5/25/91

KN-1445

G. MACDONALD

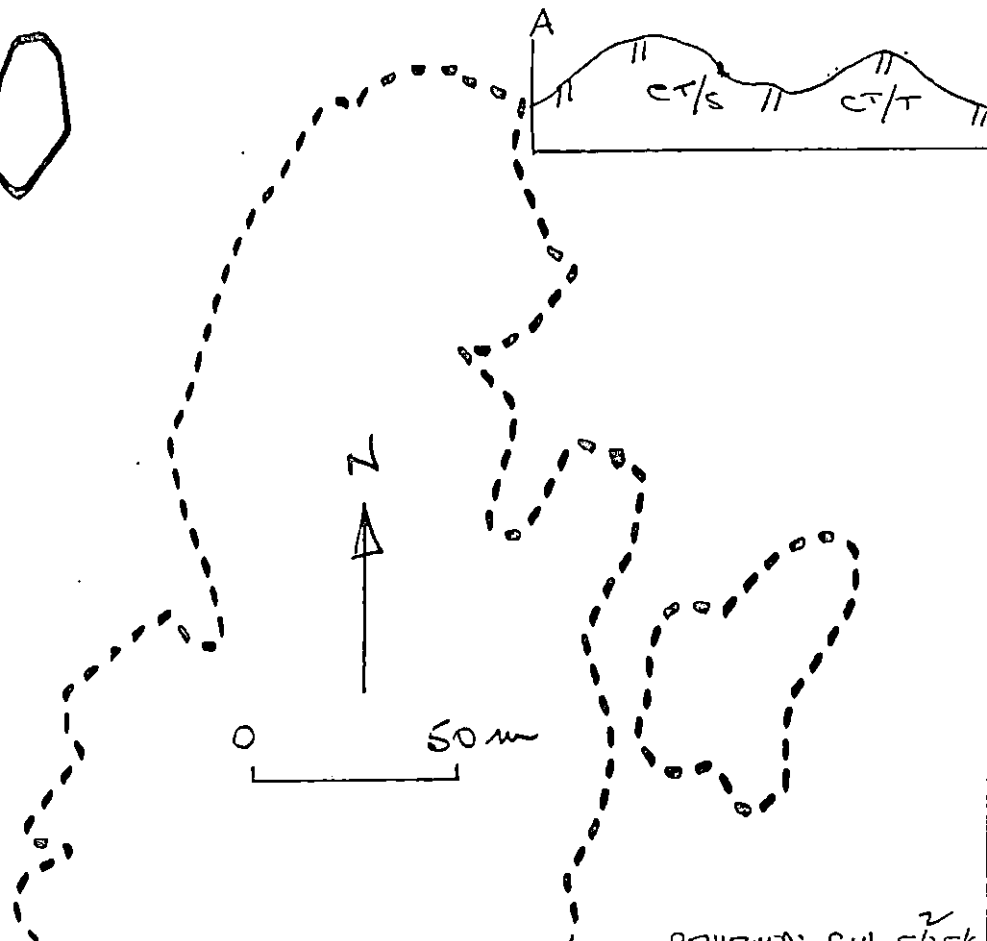
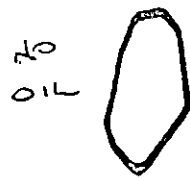
8.23.91



low relief, low L,
Smooth R outcrop.

generalized
PROFILE

"oil shadows"
common on R
throughout
subdivision.



REVIEWED: P.W. 5/25/91

TEAM # 1
 SEGMENT # KN 144
 SUBDIVISION B
 SEA STATE
 PHOTOGRAPHS: ROLL #
 DATE 23 May 91
 TIDAL HEIGHT (Range) +2.4ft MLLW
 BIOLOGIST Michael Fawcett
 WIND SPEED/DIRECTION NW 5 knots
 FRAME #

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

This bedrock islet was pre-surveyed this A.M. by G.M. and M.F. at which time an oystercatcher nest and several tern nests were discovered. As soon as the birds flushed, gulls began circling the nesting area, looking for eggs, and were harassed by the terns. We quickly examined oil condition & intertidal biota, then left the islet. Terns & oystercatchers immediately returned to nests. In the afternoon survey, the MAYSA P team skiffed by the islet, staying offshore -- nesting birds did not flush. We also observed 3 harbor seals hauled out on the islet, one of which was a pup. Oiling consisted of traces of CT near tidepools (see sketch map)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	2 (GW 94113 black-legged Kittiwake ~10)		
Shorebirds	1 (black oystercatcher)	2 (nesting pair, 3 eggs)	
Corvids			
Other Birds	1 (Arctic tern)	several nests 10-12 birds	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)	3		

shoreline subdivision map showing important biological features attached.

Bio Sketch Map
 KN 144 B
 M. Fawcett
 5/23/91

← 30m →

low relief, low L,
 Smooth R outcrop.

-- CT, < 1m, < 10%

.. CT, < 1/2 m, < 1%

harbor seal haulout

Oystercatcher
 and Arctic
 Tern nests

rock pools

Pools with fil. green algae
 Rhodospirillum, Horridus -- CT
 or BR across pools

NO
 OIL

NO
 OIL

NO
 OIL

"oil shadows"
 common on R
 throughout
 subdivision.

5/23/91

Fawcett

- Pre-survey GM & ME

KN 144(6) SM Islet w/ 4 sks
catcher nest (3 eggs) & terns - several
nests - as soon as terns flushed,
gulls approached & were chased by terns.
we checked out oil, then left -
Oystercatchers & terns returned
immediately after we left

KN 145A 5/23/91 Farnett

- 3 harbor seals hauled out at KN 144B
- eagle sitting on edge of nest with grass sticking out - not chattered
- decided to abort survey & assume it's an active nest - will contact Doug Stine later - (plotted as an inactive nest -- may still be)

KN 144B - 1550 - seals went

in water, terns still on nests, Kittiwakes all around - did not go ashore, will use data from GM & MF survey earlier this AM.

- Islet is all bedrock with a couple of SUTZ pools filled w/ green algae, Littorina, Rhodomeles w/ CT nearby - MTZ - LTZ dense Fucus & other algae - much guano in SUTZ + UTZ, may inhibit barnacles, etc

+ KN-12+3

44

B



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

KN0144 B

ADEC Subsegment Length: 627m

METERS

0 100 200

AK State Plane Zone 4
 kn0144b



Subdivision Field Map

Map Key: KNIK0144B

Name: GM

Date: 5.23.91

Date Entered:

REVIEWED: F.W. 5/25/91

SHORELINE EVALUATION

SEGMENT ST/ KN-145 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3Q, 3Q) - 8/15 to 9/15; Active eagle nest (5T) - 3/1 to 6/1; Anchorages (6V) - 6/1 to 9/15. Restrict air and boat traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to any activity re: seals and sea lions and USF&WS re: eagle nest. Cleanup should be completed before 5/15 or between 7/1 - 8/15 unless otherwise approved by ADF&G.

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

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

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

OILING CATEGORIZATION:

Wide 119m: Medium 20 m: Narrow 329 m: V.Light 291 m: No Oil 140 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas of surface coat on low angle pocket beaches only. See sketch map for work areas. Work dates 7/1 to 8/15 based on seal, sea lion constraints.

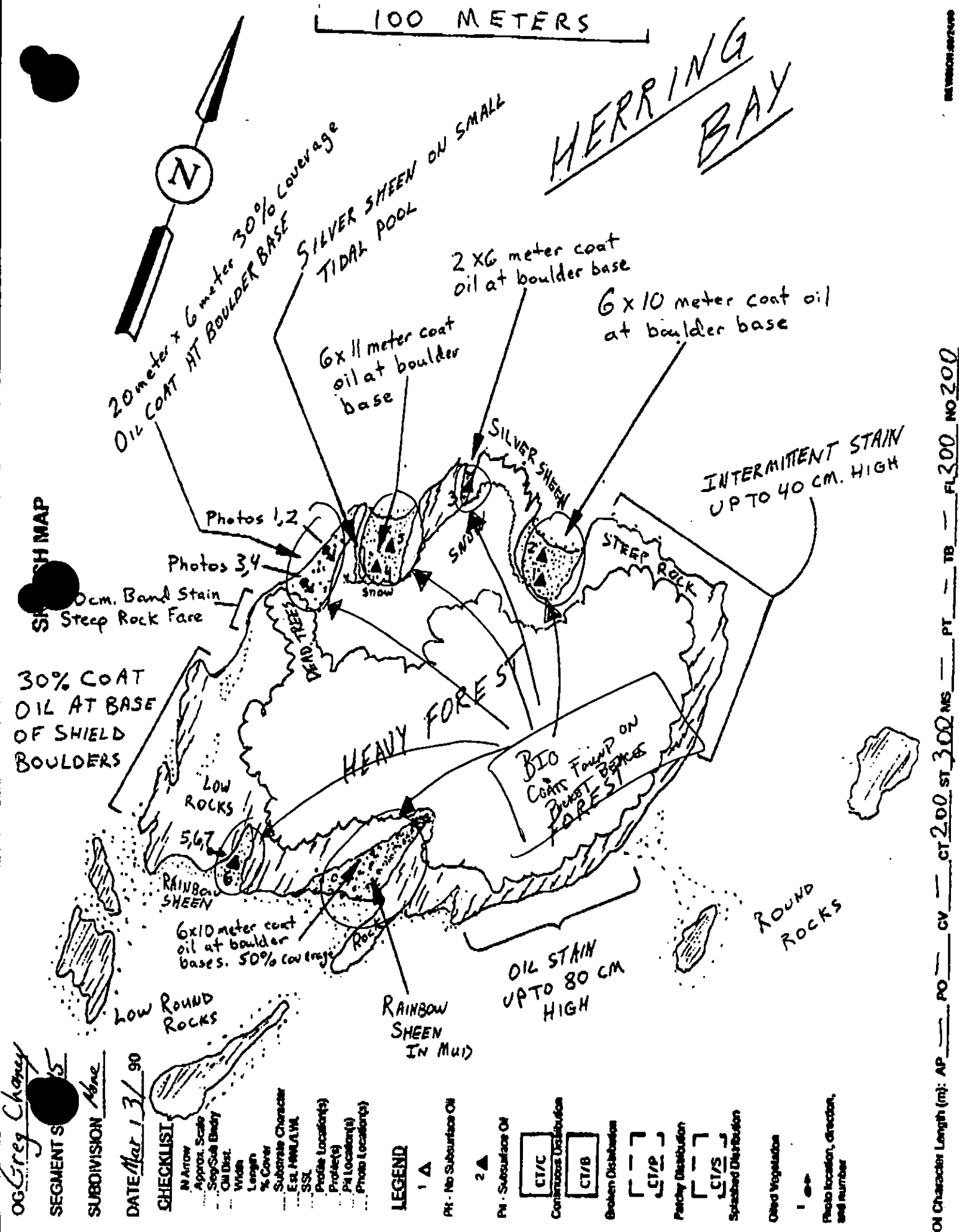
TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAKER
EXXON ANDY TERA
NOAA Burt Wescott
USCG M. J. HALL

FOSC:

DATE: 4-19-90



KN-145

KN-1

KN-124

Note Narrow for
small islet & Wide
for main land
(Exxon Data Base)

KN9

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-145

ADEC Segment Length: 384m
Exxon Segment Length: 962

0 100 200 300
METERS

Map Key: PWS-323

Name: Gary Chaw

Date: April 1, 1990

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 145 SUB: A REGION: PWS SURVEY DATE: 5/24/91

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: 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 6 1991 FOSC APPROVAL DATE: 6/10/91

ADEC John Bauer FOSC E. E. Page

EXXON E. E. PAGE, CDR, USCG

USCG Ed Mader CHIEF OF STAFF, FOSC

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. 1 SEGMENT KN 145A SUBDIVISION A DATE 5/24/91ADEC
NAME JEFF GUNLINS SIGNATURE [Signature]

NTR

NO RECOVERABLE OIL TO BE TREATED MINIMAL SURFACE OIL IS TRAPPED IN CREVICES; INACCESSIBLE. SOME SUSSURFACE AT SOUTHERN END OF ISLAND BENEATH CORAL ARMOR AND SEDIMENTS (DOWN 10-15 CM), BUT NOT ENOUGH SUSSURFACE TO JUSTIFY AGGRESSIVE INTRUSION. FOR TREATMENT MANUAL EXPOSURE/TREATMENT WILL NOT WORK, NOT ENOUGH FOR MECHANICAL ACTION PROBABLY BETTER LEFT ALONE.

EXXON
NAME LARRY D. OLSON SIGNATURE [Signature]☒

NTR

No recoverable oil remains.

MANAGER
NAME MARSHA HALL OF DNR SIGNATURE [Signature]☒

NTR

Remaining oil best left as is.

USCG/NOAA
NAME SCHULTZ / CHIEF SIGNATURE [Signature]☒

NTR

Nothing of significance remains

BEDROCK CONTROLLED SHORELINE ON SMALL ISLAND. "JOINT" CONTROLLED CHUTES COMPOSED OF BCP'S OVER BED ROCK "BASEMENT" - CHUTES GENERALLY TRAP OIL ON BENCHES THAT ACCUMULATE FINE SEDIMENTS IN THE SUTZ. SURFACE OIL AS CT, CV & SOL BODIES. SUSSURFACE OIL IS MORE LOC IN THE HITE & LITE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-145

ADEC J. GINALIAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5/24/91

TIME 14:05 to 15:50

TIDE LEVEL +6.3 ft. to +3.2 ft.

ENERGY LEVEL: ☐ H ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 26.14 m

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

EST. OIL CATEGORY LENGTH: W - m M 1 m N - m VL *555 m NO *58 m US - m

* lengths from high resolution shoreline

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					R	H	51	70	X				
B				J							R	V	51	25	X				3 patches totalled.
						S								60	X				
C		P				P	P				R	H	5	1	X				MS/I.
D						S					R	H	51	55	X				peeling CT.
E				S							R	L	3	60		X			10 SOL
F						S							51	165	X				remainder of island
H						S							51	120	X				" "

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

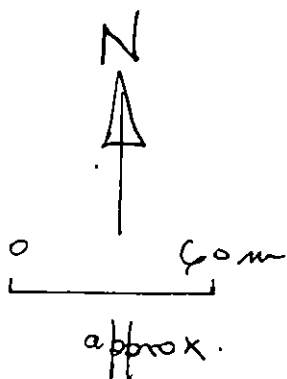
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 30 FRAMES 2-8

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				CP-PCMV	
2	25				X				3-17	Y	21	B	X				CPB-PMB	
3	20							X	5-10	Y	10	S		X			EC-PC	trace sheen
4	12							X	-		8	N			X		EC-PCG	
5	33			X					20-33	N	30	B		X			BP-PMB	
6	15			X					8-12	Y	-		X				PV-MR	
7	15				X				11-14	Y	13	B	X				PG-	
8	20				X				10-20	N?	8	R,B			X		GM-MGR	B globules
									-									

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

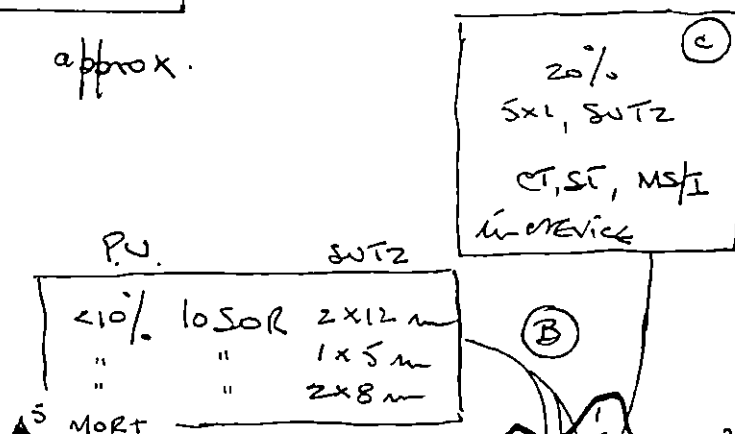
OG COMMENTS: Small, rounded rock island w/ mud filled gullies in the R wall. Surface oil as sporadic CT and patchy SOL. Subsurface oil, LOR-MOR typical, in the gullies. CT is peeling off lichen band, leaving "oil shadows" @ SUTZ.

revised 5-27-97



KN-145A
G MARDONALY
5.24.91

"oil shadows" throughout.



SUBSURFACE

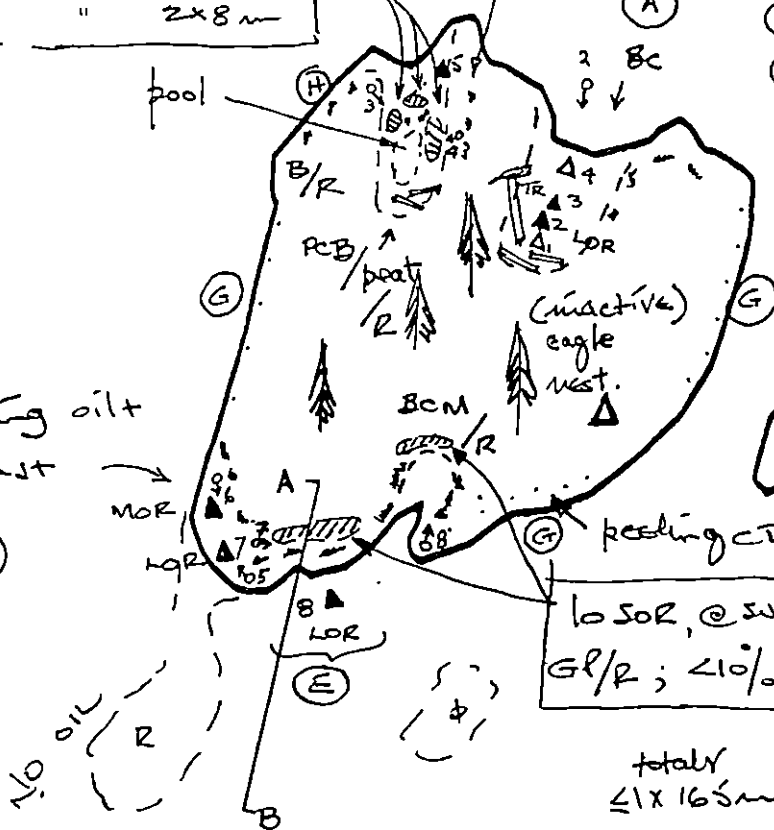
- (A) LOR-10x5, HTZ, SWTZ.
- (B) MOR-4x1, " "
- (D) MOR-3x2; } on R
LOR-3x7. } bench;



- (E) LOR 4x3 MITZ
LOR 3x5 HTZ

peeling oil +
lichen crust

(D)

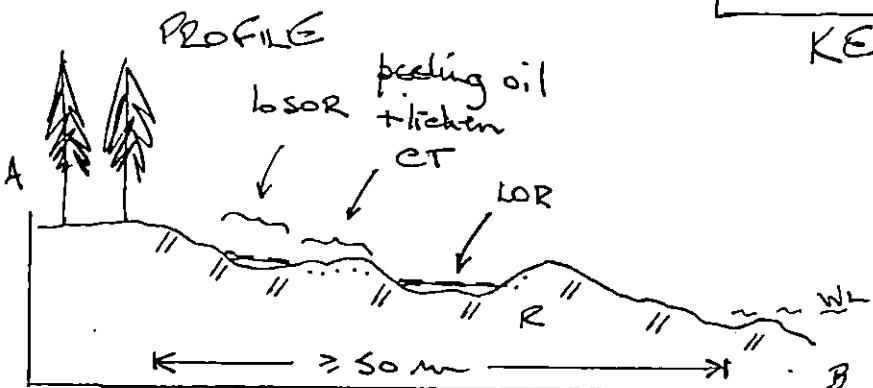


lo sor, @ SWTZ, 3x60 total,
GR/R; <10%, + HTZ. (F)

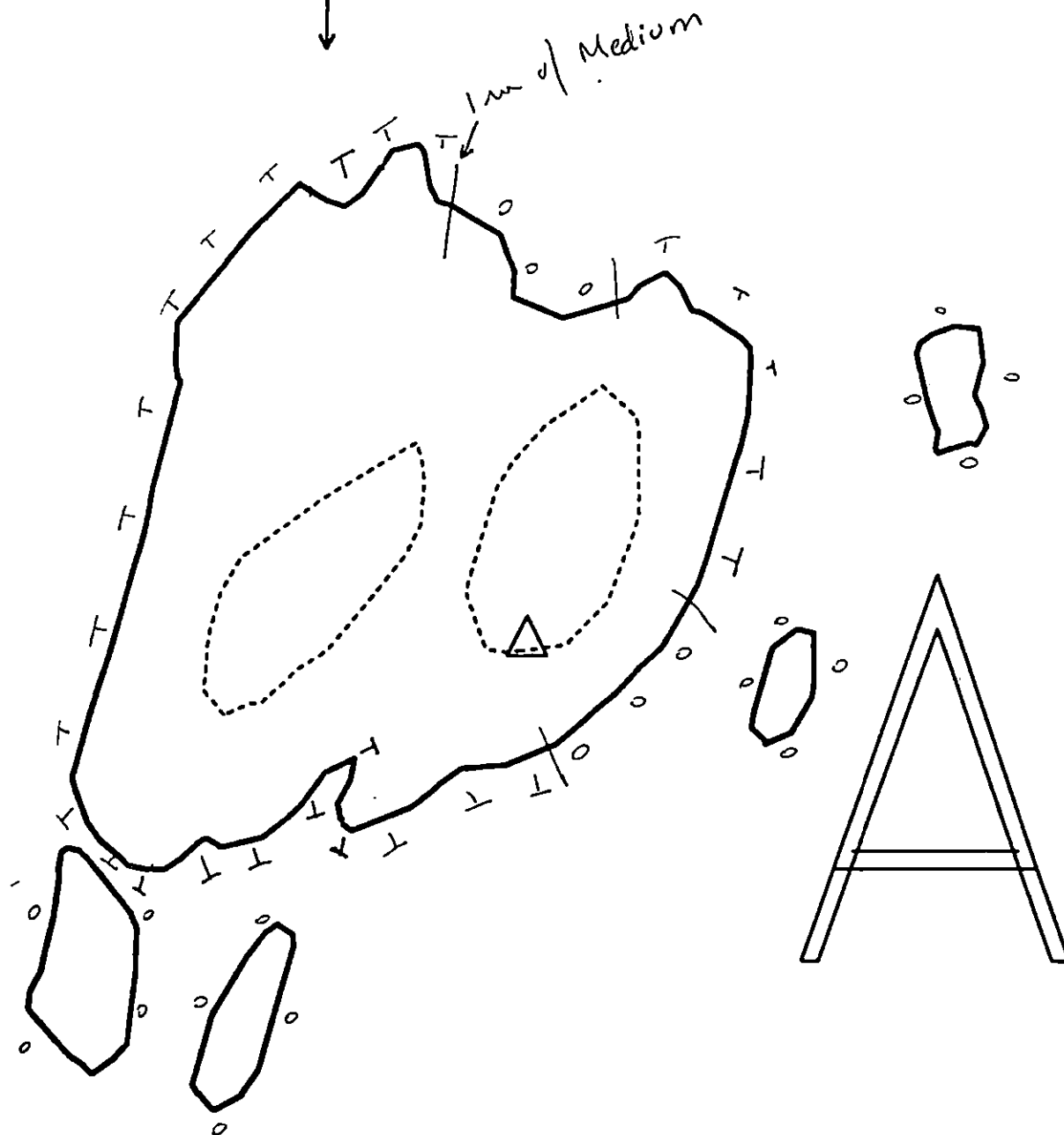
total
≤ 1x165m
≤ 1x120 m

... CT <10% (G)
-- CT <10% (H)

KEY



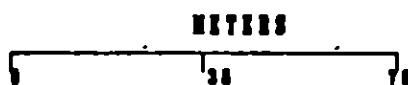
reviewed 5.27 Aug 2



Note: Substitute map
 — No dual shoreline map



KN0145



AK State Plane Zone 4
 KN0145

Segment Reference Map
 Map Key: KN1KN0145



EAGLE NEST

revised 5.27 9y 3

TEAM # 1 DATE 5/24/91
 SEGMENT # KN 145 TIDAL HEIGHT(Range) +3.2 to +6.0ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE Calm WIND SPEED/DIRECTION N 0-5 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision includes two north-facing coves exposed to moderate to high wave energy and a sheltered complex of benches and channels at the southern end of the island. Some buried oil and surficial oil remains at each of these sites and traces of coat remain in VTZ-SUTZ bedrock on most of the rest of the island's shoreline. At areas A & B (see sketch map) the buried oil is upshore from most of the intertidal biota. At area D the buried oil lies on a VTZ shelf overlain by pebbles and gravel, near barnacles, algae, and sometimes pools containing various species of algae, hermit crabs, sculpins, and large masses of littorinid eggs. At area E some of the buried oil is in the MTZ in a G/P/S channel with infaunal clams, polychaete worms, etc., and mussels, shore crabs (*Hemigrapsus*), helmet crabs, etc. on the surface. see sketch map for descriptions of biota near each oiled site

The eagle nest (designated "inactive") was monitored by MF during at least 1/2 the time the survey party was on the island, & the crew worked as quietly as possible (as per Doug Stine's instructions), because an eagle was seen sitting on the edge of the nest yesterday afternoon. No activity was seen in or near the nest or the island during [redacted]'s survey, nor during an A.M. pre-survey by G.M. & M.F. The nest appears covered with foot-high grass, and is probably still inactive.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			tidepool sculpin
Seabirds	1 (pigeon guillemot)	1	
Waterfowl			
Gulls/Kittiwakes	1 (bl. Kittiwake)	1	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 (♀ + pup)		
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

KN-145A

BIO Sketch Map

M. Fawcett
5/24/91

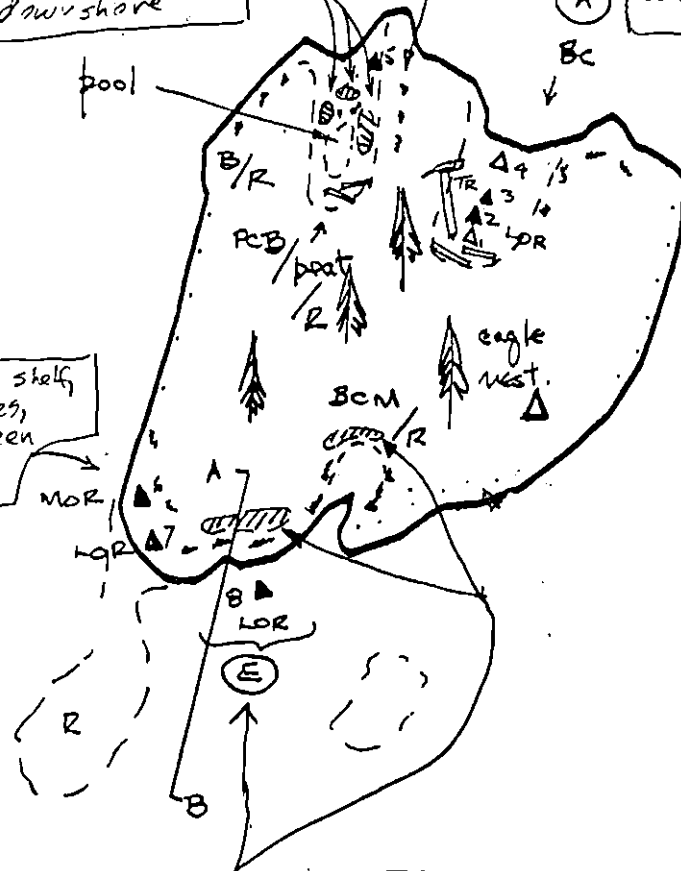
N
↑

CT, MTZ in SUTZ,
above biota;
dense barnacles,
Fucus downshore

SOR in SUTZ. N+11 ft, above
biota; barnacles, littorinids, limpets
begin 4-5m downshore, dense
mussels 10m downshore

LOR in SUTZ, above biota; barnacles,
limpets, littorinids begin 5m downshore;
MTZ has littorinids & eggs, hermit crabs,
amphipods, limpets, barnacles

LOR +8-12 ft on shelf,
sparse barnacles,
dense filamentous green
& brown algae, pools
with littorinids & eggs



KEY

... CT < 1%
- - CT < 10%

SOR in UTZ-SUTZ near or above
filamentous green algae, sparse barnacles,
Littorinids limpets; buried oil in
MTZ gravel/pebble channel with
mussels on surface, clams below---
barnacles, limpets on isolated cobble
on gravel

24 May 91 KN 145A Fawcett

1410 hrs

- no sign of eagles near nest - none at 10 AM today either - skipped around to North end 1st cove - cove faces north - long fish, moderate high surge - boulders bank CT on walls +9-11 ft, upper edge of sparse barn -- dense barn below +7-8 ft - dense Fucus, patchy dense mussels +4-6 ft

MTZ boulders w/mod 1/2 Hermit (eggs) barns, amph., lamp, barn (moo)

- light subsurface oil in boulders ~~the~~ - SVTZ - no biota +12 ft sparse barn, litt, 1 long slant 5m downshore at +9 ft
- 1 sea otter & pup
- 1 Kittiwake

- 2nd cove on Northwest 1435 -

BK MTZ-VTZ, peat & R/B/C/P in SVTZ near pool - CT-Slan, grass (terrestrial) growing out of peat - no inlet/dal broken - the cove is under, more exposed than 1st cove

SOR +7 ft (below pool, but 4-5 m upshore from sparse barn, litt, lamp, 10 m above dense mussels & Fucus, - walls & outcrop refs w/ dense barn, Fucus - also Scyto, Ulva, Enteromorpha, Rhod, Fil barn (all this at +4-7 ft - Cladophora - none on opposite (west))

- 1 Pigeon guillemot feeding

1510 hrs - rugged shelf & ridge over CT & buried oil in upper part of

+9 ft to +12 - buried oil in p/c on BK +8-10 ft near sparse barnacles, dense Enteromorpha & Fil barn algae in pools & damp gravel

- "phantom drift" in the making - (dead lichen peeling off VTZ rocks near buried & CT oil, area was likely in peat tread)
- VTZ Pools have fil. green, Scytosiphon, mod. Littorinids (and large masses of eggs under boulders in pools), hermit, sculp
- some buried oil in G/S MTZ +6 to +4 ft - clams, etc below, barn (dense) on scattered cobbles on gravel?

KN 145A (cont) 24 May 91 Fawcett

- dense barn, Fucus, mussels on BR
each side of S/G w/ buried oil

- Heterosiphonia, barnacle, litt & eggs
under Boulder MTZ - fil. algae,
clams LTZ in S/G/P - dense
piles of Green Enteromorpha sp

wide, 5-8cm wide blades crinkly like
Crepaspora, 1-2 ft long) in MTZ - young

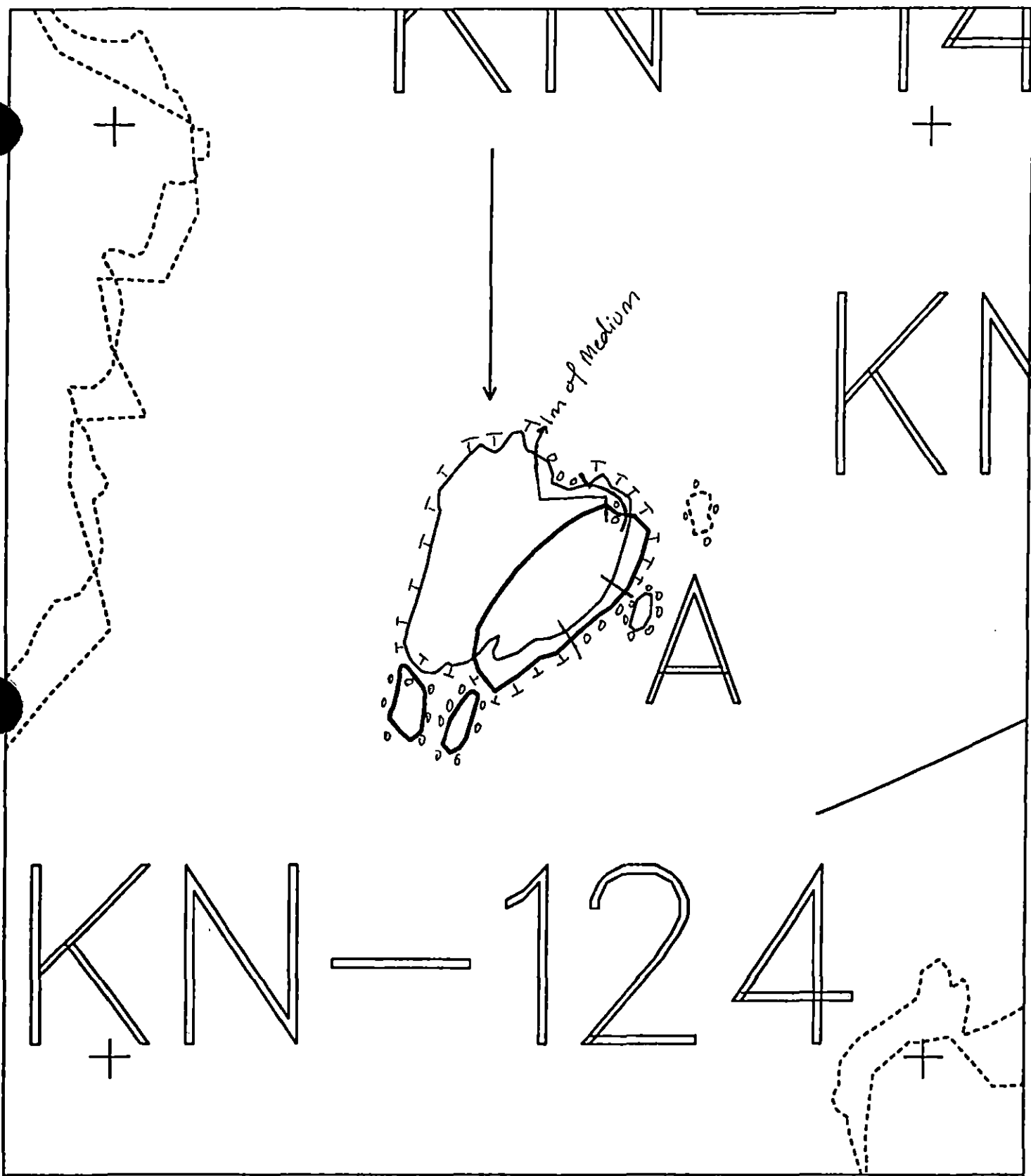
ones look like Cladophora, then get
long & shrubby

finish 1545

- monitored eagle's nest about half
the time we were on the island.

no sign of owl

1 eagle soaring 1/2 mile to west,
being harassed by 2 kittiwakes



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

KN0145 A
 ADEC Subsegment Length: 614m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0145a



Subdivision Field Map
 Map Key: KNKN0145A
 Name: G. McDonald (J.Y)
 Date: 5.24.91
 Data Entered:

redrawn 5.28 94

1991 MAYSAP EVALUATION

SEGMENT: KN 145 SUB: A REGION: PWS SURVEY DATE: 5/24/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

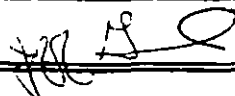
TEAM NO. 1 SEGMENT KN 145A SUBDIVISION A DATE 5/24/91

ADEC

NAME

JEFF GINALIAS

SIGNATURE

☒ NTR

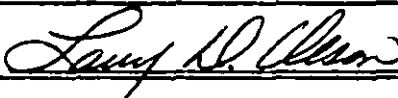
NO RECOVERABLE OIL TO BE TREATED MINOR SURFACE OIL IS TRAPPED IN CREVICES; INACCESSIBLE SOME SUBSURFACE AT SOUTHERN END OF ISLAND BENEATH COBBLE ARMOR AND SEDIMENTS (DOWN TO 15' CH), BUT NOT ENOUGH SUBSURFACE TO JUSTIFY AGGRESSIVE INTRUSION. FOR TREATMENT MANUAL EXPOSURE/TREATMENT WILL NOT WORK, NOT ENOUGH FOR MECHANICAL ARMOR PROBABLY BETTER LEFT ALONE.

EXXON

NAME

LARRY D. OLSON

SIGNATURE

☒ NTR

No recoverable oil remains.

NDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE

☒ NTR

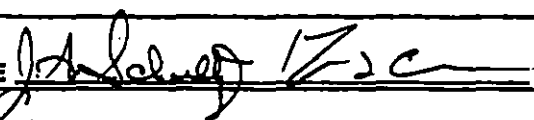
Remaining oil best left as is.

USCG/NOAA

NAME

SCHULTZ / CHLHDS

SIGNATURE

☒ NTR

NOTHING OF SIGNIFICANCE REMAINS

BEDROCK CONTROLLED SHORELINE ON SMALL ISLAND. "JOINT" CONTROLLED CHUTES COMPOSED OF BCP'S OVER BED ROCK "BASEMENT" - CHUTES GENERALLY TRAP OIL ON BEACHES BUT ACCUMULATE FINE SEDIMENTS IN THE SUTZ. SURFACE OIL AS CT, CV & SOL ADDIES. SUBSURFACE OIL IS MORE/LON IN THE HITE & LITE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-145

ADEC J. GINALIAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5/24/91

TIME 14:05 to 15:50

TIDE LEVEL +6.3 ft. to +3.2 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 26.14 m

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

EST. OIL CATEGORY LENGTH: W - m M - m N - m V - 555 m NO - 58 m US - m

* lengths from high resolution shoreline

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					R	H	51	70	x				
B				3		S					R	V	51	25	x				3 patches totalled.
C		P				P	P				R	H	5	1	x				MS/I.
D						S					R	H	51	55	x				peeling CT.
F				3							R	L	3	60		x			10 SOL
G						S							51	165	x				remainder of island
H						S							51	120	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

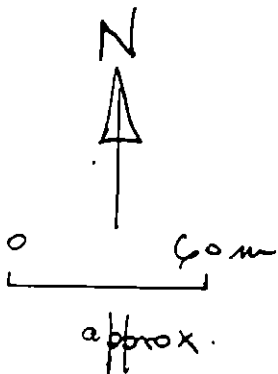
PHOTO ROLL # MAYSAP- 1 - 30 FRAMES 2-8

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				CP-PCMV	
2	25					X			3-17	Y	21	B	x				CPB-PMB	
3	20							X	5-10	Y	10	S		x			BC-PC	trace sheen
4	12							X	-		8	N			x		BC-PCG	
5	33					X			20-33	N	30	B		x			BP-PMB	
6	15					X			8-12	Y	-		x				PV-MR	
7	15					X			11-14	Y	13	B	x				PG-	
8	20					X			10-20	N?	8	R,B			x		GM-MGR	B globules

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

OG COMMENTS: Small, rounded rock island w/ mud filled gullies in the R wall. Surface oil as sporadic CT and patchy SOL. Subsurface oil, LOR-MOR typical, in the gullies. CT is peeling off lichen band, leaving "oil shadow" @ SUTZ.

revised 5.27.91

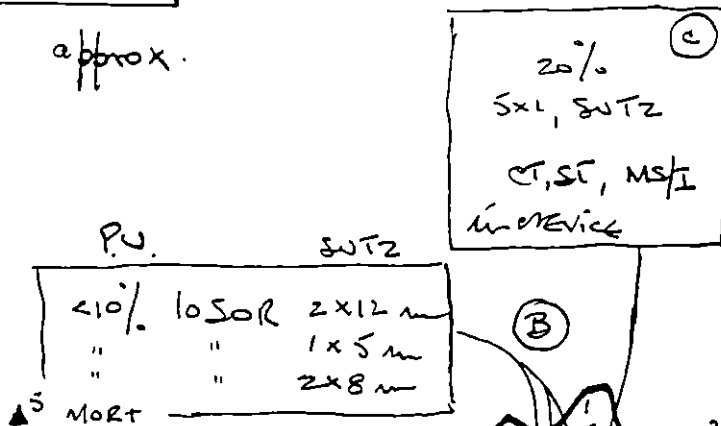


KN-145A

G. M. ADONIS

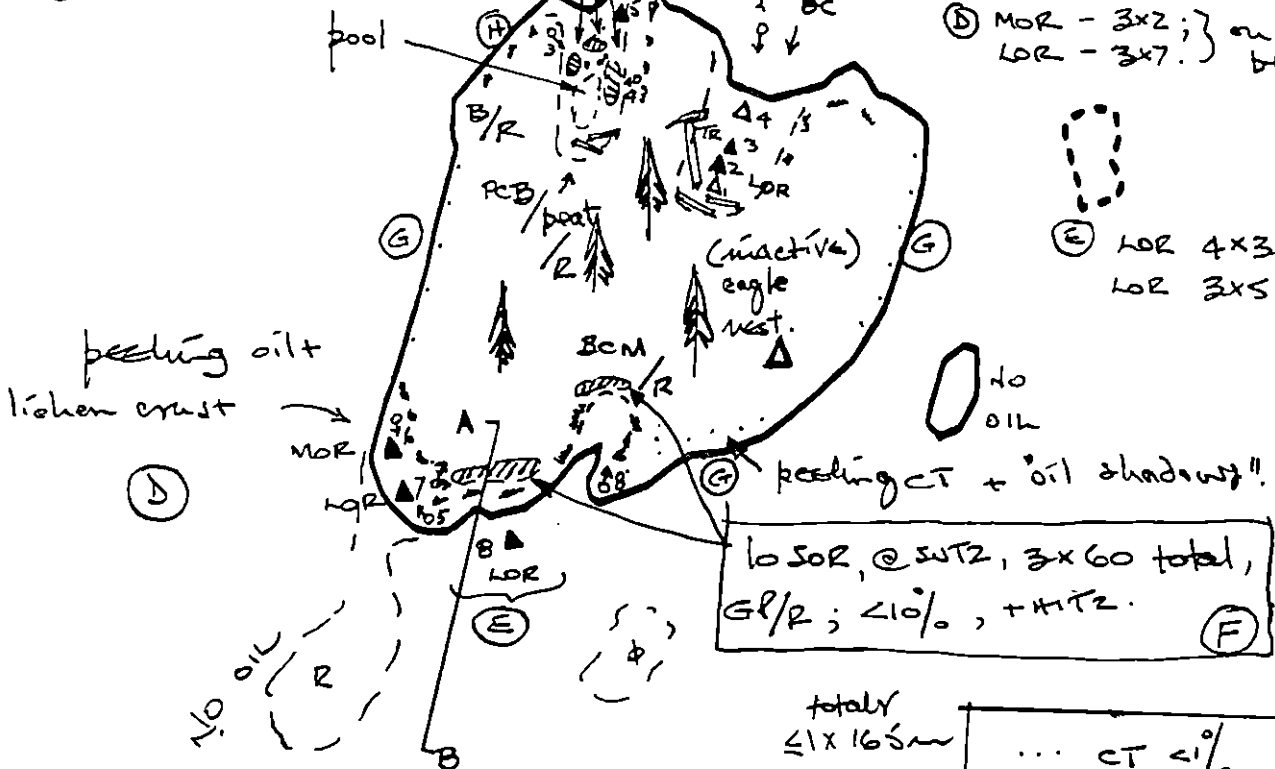
5.24.91

"oil shadows" throughout.



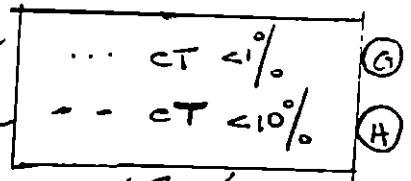
SUBSURFACE

- ① LOR - 10x5, HITZ, SUTZ
- ② MOR - 4x1, " "
- ③ MOR - 3x2; } on R bench
- ④ LOR - 3x7

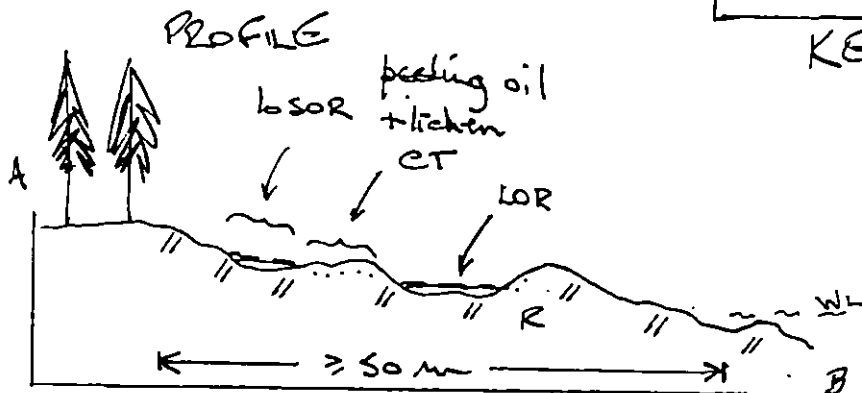


totaly
≤ 1x165m

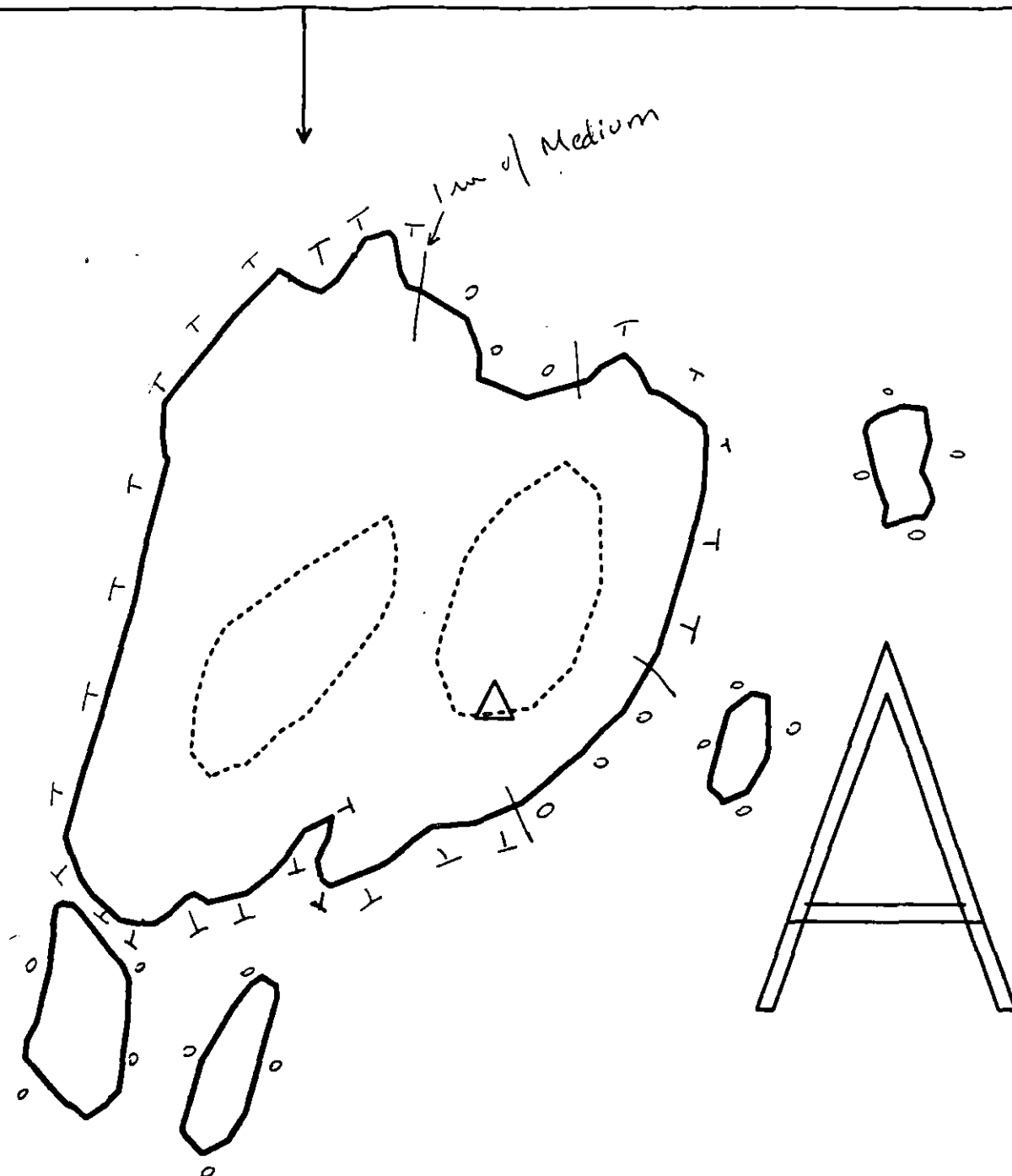
51x120 m



KEY



reviewed 5.27.92



Notes: Substitute map
 — No dual shoreline map



KN0145

Segment Reference Map

Map Key: KN1KN0145



AK State Plane Zone 4
 6000145



EAGLE NEST

revised 5.27 9g 3

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 5/24/91
 SEGMENT # KN 145 TIDAL HEIGHT (Range) +3.2 to +6.0ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE Calm WIND SPEED/DIRECTION N 0-5 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision includes two north-facing coves exposed to moderate to high wave energy and a sheltered complex of berches and channels at the southern end of the island. Some buried oil and surficial oil remains at each of these sites and traces of coat remain in VTZ-SVTZ bedrock on most of the rest of the island's shoreline. At areas A & B (see sketch map) the buried oil is upshore from most of the intertidal biota. At area D the buried oil lies on a VTZ shelf overlain by pebbles and gravel, near barnacles, algae, and somer tidepools containing various species of algae, hermit crabs, sculpins, and large masses of littorinid eggs. At area E some of the buried oil is in the MTZ in a G/P/S channel with infaunal clams, polychaete worms, etc., and mussels, shore crabs (*hemigrapsus*), helmet crabs, etc. on the surface. see sketch map for descriptions of biota near each oiled site

The eagle nest (designated "inactive") was monitored by MF during at least 1/2 the time the survey party was on the island, & the crew worked as quietly as possible (as per Doug Stine's instructions), because an eagle was seen sitting on the edge of the nest yesterday afternoon. No activity was seen in or near the nest or the island during today's survey, nor during an A.M. pre-survey by G.M. & M.F. The nest appears covered with foot-high grass, and is probably still inactive.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			tidpool sculpin
Seabirds	1 (pigeon guillemot)	1	
Waterfowl			
Gulls/Kittiwakes	1 (bl. Kittiwake)	1	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 (♀ + pup)		
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

24 May 91 KN 145 A Fawcett
1410 hrs

- no sign of eagles near
nest - none at 10. A m today
either - skipped around to
North end 1st cove - cone
faces north - long fish, middle -
high eagle - boulders here
CT on walls + 9-11 ft, upper edge
of sparse barn -- dense barn below
+ 7-8 ft - dense Fucus, patchy
dense mussels + 4-6 ft

MTZ boulders w/ mod 1/2 Herring (or eggs)
hermits, amph., lamp, barn (mod)

- light submergence in boulders
~~there~~ - SVTZ - no biota + 12 ft
sparse barn, litt, limp, slat
5m downshore at + 9 ft
- 1 sea otter & pup
1 Kittiwake

- 2nd cove on Northwest 1435 -

BK MTZ-VTZ, part of R/B/K/P in
SVTZ near pool - CT-Slan, grass
(terrestrial) growing out of peat -
no inlet, dead biota - thin cone
is under, more exposed than 1st one

SOR + 7 ft (below pool, but 4-5
m upshore from sparse barn, litt,
lamp, 10 m above dense mussels
& Fucus, - walls & outcrop reefs
w/ dense barn, Fucus - also Scyto,
Ulva, Enter, Rhod, Fil barn (all
this at + 4-7 ft - Cladophora
- crabs are off shore (nest)

- 1 Pigeon guillemot feeding

1510 hrs - rugged shelf & ridge area

CT & buried out in upper part of

+ 9 ft + 10 + 12 - buried out in

plg on BK + 8-10 ft near sparse

barnacles, dense enteromorpha & fil

in algae in pools & damp gravel

- "phantom drift" in the making -

(dead lichens peeling off VTZ

rocks near buried & CT out,

area was likely in peat tread

- VTZ pools have fil. green,

Scytosiphon, mod. Littorinids (and

large masses of eggs under boulders

in pools), hermit, Sculp

- some buried in 6/5 MTZ

+ 6 to + 4 ft - clams, etc below,

barn (dense) on scattered cobbles

on gravel?

KN 145A (cont) 24 May 91 Fawcett

- dense barn, fucus, mussels on BR
each side of SLG w/ buried oil

- Hamograpus, barnacle, litt & eggs
under Bothers MTZ - Sil algae,
clams LTZ in SLG/p - dense

piles of Green Enteromorpha sp
wide, 5-8cm wide blades, crinkly like

Crepe paper, 1-2 ft long) in MTZ - young
ones look like cladophora, then get

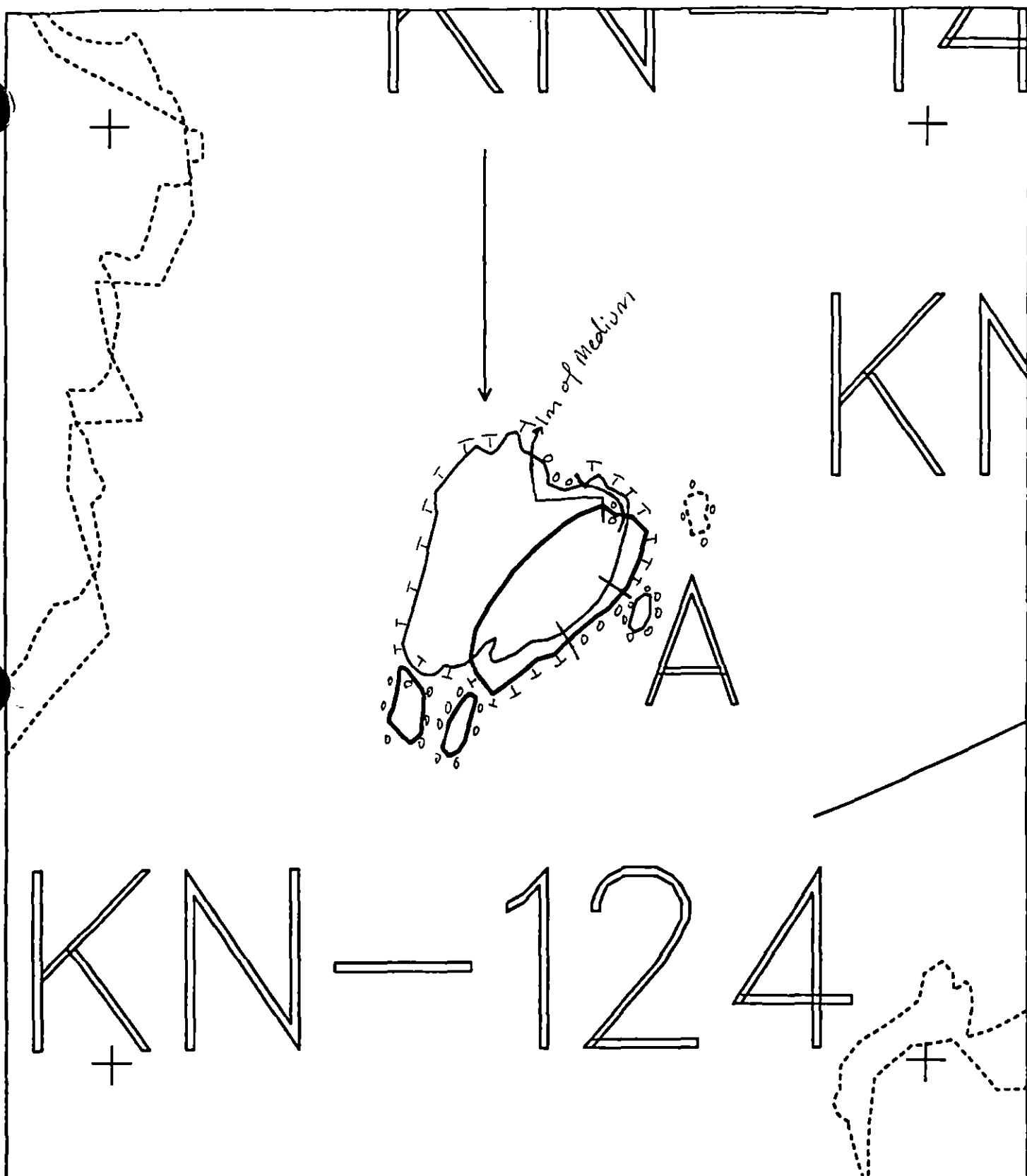
long & stringy

Finish 1545

- monitored eagle's nest about half
the time we were on the island.

no sign of activity

1 eagle soaring 1/2 mile to west,
being harassed by 2 Kittiwakes



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

KN0145 A

ADEC Subsegment Length: 614m

METERS

AK State Plane Zone 4
 hkn0145a



Subdivision Field Map

Map Key: KNKN0145A

Name: G. McDonald (J.Y)

Date: 5.24.91

Data Entered:

redrawn 5.28 24

SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (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. Anadromous stream within 100m in KN201. Do not trample or otherwise damage mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMahon DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 129 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bio-remediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

TAG COMMENTS: MONITORS TO ASSES SUITZ

TAG APPROVAL DATE: 4/28/90.
ADEC ART WEINSTEIN
EXXON AMY TEAL
NOAA GARY PETRO
USCG KENNETH KENNY

FOSC: W L DATE: 5-12-90

OG RICHIE TILLIE
SEGMENT KN-200
SUBDIVISION A-1 of 1
DATE 04, 19/90

SKETCH MAP



100m

CHECKLIST

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

LEGEND

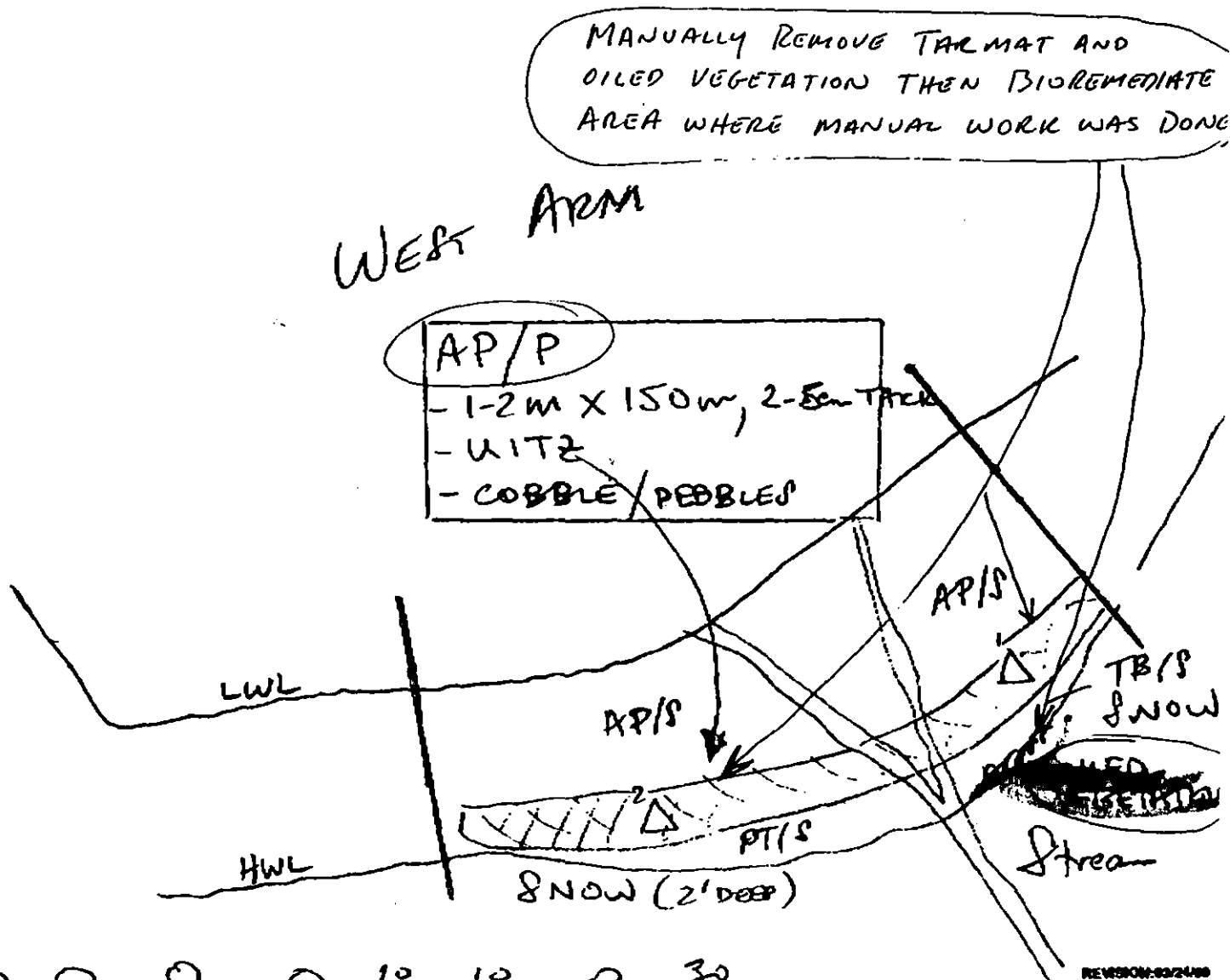
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP 100 PO 0 CV 0 CT 0 ST 0 MS 0 PT 10 TB 10 FL 0 NO 30

REVISION: 03/24/90

KN-07

N-201

ANADROMOUS
226-20-16864 STREAM
(MN-201)

Area of ~~bank~~ - ~~down~~ mussels in
mid-intertidal zone

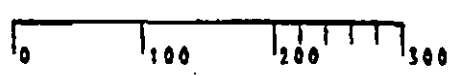
ECOLOGY MAP 1 of 1
RESOURCE CONES FOR ENTIRE SEGMENT
6V
NOTE: No bioremediation or other
chemical application within 100 meters
of ~~stream~~.

KN-200

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

KN-200

ADEC Segment Length: 162m



Map Key: PWS-401

Name: _____

Date: _____

KN-U

N-201

KN-200

Subdivision A-10f1

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-200

ADEC Segment Length: 162m

0 100 200 300

Map Key: PWS-401

Name: Rick Glue

Date: 04/19/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 200 SUB: A REGION: PWS SURVEY DATE: 5/2/91

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 SHOEBLINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN 200 SUBDIVISION A DATE 5/2/91

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley☒ NTR ☐ TREATMENT RECOMMENDED

- SEEMS to be a healthy environment, Patties removed by survey team. ALSO NON EXON trash collected.

EXXON

NAME

Jon P. Carnechi

SIGNATURE

Jon Carnechi☒ NTR

This section is healthy, clear with a few small sea patties we pick up what we saw during survey. Also if necessary they were removed from the beach

LANDMANAGER

NAME

John Johnson

OF

CAC

SIGNATURE

John Johnson☐ NTR2
0

415 PATTIES NOTED,

USCG/NOAA

NAME

MOONEY / Barab

SIGNATURE

Tim Mooney☒ NTR

THIS SEGMENT WAS MANUALLY CLEANED AND LOOKED SURPRISINGLY GOOD. ANY TAR PATTIES THAT WERE PRESENT, WERE REMOVED BY SURVEY TEAM.

REVIEWED CL 11 MAY

201

A

A

A

KN-200

200

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

KN0201 A
 ADEC Subsegment Length: 1016m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0201a



Subdivision Field Map
 Map Key: KNIK0201a
 Name: HARPER
 Date: 2 MAY 91
 Date Entered: _____

Revised

SURFACE OIL SUMMARY MAP 06 of 2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	3	DATE	5/2/91
SEGMENT #	KN 200	TIDAL HEIGHT (Range)	0-0
SUBDIVISION	A	BIOLOGIST	STAKOV
SEA STATE	0-1'	WIND SPEED/DIRECTION	E 15-20
PHOTOGRAPHS: ROLL #		FRAME #	

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

Low energy, low profile beach of pebbles/cobbles/boulder, crossed by a small stream.

Biota in the form of barnacles, Mytilus and limpets (all generally sparse) ranges well into the upper intertidal. Abundance, though not necessarily diversity, increases downslope through the mid intertidal and is characterized by moderate to dense barnacle populations, interbedded Mytilus, limpets (often dense), patchy Fucus, sparse Littorina (with some egg masses) and sometimes amphipods and eel blennies.

No significant "mappable" oil remains on this subdivision.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	No birds	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				eel blennies
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

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

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 11 MAY

201

A

A

A

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0200 A

ADEC Subsegment Length: 129m

METERS

5 100 200
AK State Plane Zone 4
hkn0200a



Subdivision Field Map

Map Key: KNIKNO200A

Name: JHARPER

Date: 2 May 91

Date Entered:

ES revised May 9
REVIEWED CC: 11 MAY

1991 MAYSAP EVALUATION

SEGMENT: KN 200 SUB: A REGION: PWS SURVEY DATE: 5/2/91

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: Rachel D. Orr Date: 5/21/91

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 21 1991

FOSC APPROVAL DATE: 6/1/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN 200 SUBDIVISION A DATE 5/2/91

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley☒ NTR ☐ TREATMENT RECOMMENDED

- SEEMS to be a healthy environment, Patties removed by survey team. ALSO NON EXON trash collected.

EXXON

NAME

Jon P Garnecki

SIGNATURE

Jon Garnecki

☒ NTR This section is healthy, clean with a few small SR patties we broke up what we saw during survey. Also if necessary they were removed from the beach

LANDMANAGER

NAME

John Johnson OF CAC

SIGNATURE

John Johnson☐

NTR

2
0

has patties noted,

USCG/NOAA

NAME

MOONEY / BARAB

SIGNATURE

Tim Mooney☒

NTR

THIS SEGMENT WAS MANUALLY CLEANED AND LOOKED SURPRISINGLY GOOD. ANY TAR PATTIES THAT WERE PRESENT, WERE REMOVED BY SURVEY TEAM.

TEAM NO. _____

OG HARPER

BIO STOKER

SEGMENT KN-200

ADEC ~~FORMERLY~~

LANDMANAGER JOHNSON for CVC

SUBDIVISION A

EXXON CZARNEK/

LUSCG/NOAA MOONEY / BARATS

DATE 2 MAY 1991

TIME 0:400 to 09:15

TIDE LEVEL -1.57 ft. to -1.63 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 129 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 129 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-

3 - 08

FRAMES 18

[illegible]

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

OG COMMENTS:

Several mouse paths that were observed during the survey were collected or broken up - no "mapable" oil remains.

Skiff operators collected several bags of non-spill related debris in this area.

ET revised, May 9

OG 10/2

REVIEWED ☒ 11/11/11

201

A

A

A

KN-200

200

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

KN0201 A
 ADEC Subsegment Length: 1016m
 METERS
 0 100 200
 AK State Plane Zone 4
 tbn0201a

Subdivision Field Map
 Map Key: KNIK0201Aa
 Name: HARPER
 Date: 2 MAY 91
 Date Entered:



Revised

SURFACE OIL SUMMARY MAP 06 of 2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/2/91

SEGMENT #/KN 200

TIDAL HEIGHT(Range) 0-0

SUBDIVISION A

BIOLOGIST STAKOV

SEA STATE 0-1'

WIND SPEED/DIRECTION E 15-20

PHOTOGRAPHS: ROLL #

FRAME #

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

Low energy, low profile beach of rubble/cobble/boulder, crossed by a small stream.

Biota in the form of barnacles, Mytilus and limpets (all generally sparse) ranges well into the upper intertidal. Abundance, though not necessarily diversity, increases downslope through the mid intertidal and is characterized by moderate to dense barnacle populations, interbedded Mytilus, limpets (often dense), patchy Fucus, sparse Littorina (with some egg masses) and sometimes amphipods and eel blennies.

No significant "mappable" oil remains on this subdivision.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	No birds	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				eel blennies
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 11 MAY

201

A

A

A

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

KN0200 A
ADEC Subsegment Length: 129m
METERS

AK State Plane Zone 4
kt0200a



Subdivision Field Map
Map Key: KNIK0200A
Name: SHARPER
Date: 2 May 91
Data Entered:

EG revised, May 9
REVIEWED CD 11 MA

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-200

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (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. Anadromous stream within 100m in KN201. Do not trample or otherwise damage mussel beds.

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 129 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bio-remediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

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 (8/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (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 (8/1 to 9/15)
6V	Anchorage (8/1 to 9/15)
6W	Forest Service cabins (8/1 to 9/15)
6X	Lodge (8/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7H-H	Finfish harvesting
7I	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

MENT ST / KN-200 SUBDIVISION: A-10f1 DATE 04/19/90

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

1. Manual Removal of Asphalt -
2. Supratidal should be reassessed - due to limited view (snow cover) -
3. DI zone near stream mouth - oiled grass - manual removal -

LAND MANAGER

NAME Peter Zellers SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Concur with manual removal of mousse, tarballs, and asphalt. Clos proximity of anadromous stream, and lesser mlt streams, should remove bio. AS A consideration.

SHORELINE OILING SUMMARY

REVISION NO. 24-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-200
 RIO DAVE LOHSE LAND REP PETER ZOLLAR (CAE) SUBDIVISION A (1 OF 1)
 IXON FRANK BOX ADEC CLARA CROSBY TIME 1345 to 1615
 TEAM NO. 13 TIDE LEVEL +2 to +2 DATE 04/19/90
 EST SUBDIVISION LENGTH: 162 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow in Supratidal
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 10 % B 10 % C 30 % P 30 % G 10 % S 5 % M 0 % V 5 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 162 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR										IMPACTED ZONES			
	C	B	P	S	1	2	3	4	5	6	7	8	9	10	SU	U	M	L
ASPHALT PAVEMENT			X	✓								X	✓		X	✓		
POOLED																		
COVER																		
COAT																		
STAIN																		
MOUSSE																		
PATTIES				X							X			X				
TARBALLS				X							X			X	X			
FILM																		
NO OIL																		X

PAVEMENT H F (S) 20 sq. m by 4 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ . NO ☒
Vegetation	X			
Trash				TYPE <u>0</u>
Debris				#BAGS <u>0</u>

Photographs:

Roll No. ST-13-4Frames 10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR										PIT ZONE	A N A	SHEEN (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	VO	1	2	3	4	5	6	7	8	9	10					
1	15					X	.		X											X				G/P/M
2	15					X	.		X											X				S/M
							.																	
							.																	
							.																	
							.																	

COMMENTS

- ① GEOMORPHOLOGY: SEGMENT COMPRISES LOW ANGLE COBBLE / PEBBLES SHORELINE ON STREAM DELTA
- ② OILING: AP TO 5cm DEPTH. PATCHY BAND OF ASPHALT PAVEMENT IN UI AND MITE ALONG MOST OF SHORELINE.

REVIEWED 700 DATE 4/29/90

OG RICK GILLIE
SEGMENT ST/ KN-200
SUBDIVISION A-1 of 1
DATE 04, 19/90

ATCH MAP

AN

100m

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ➡

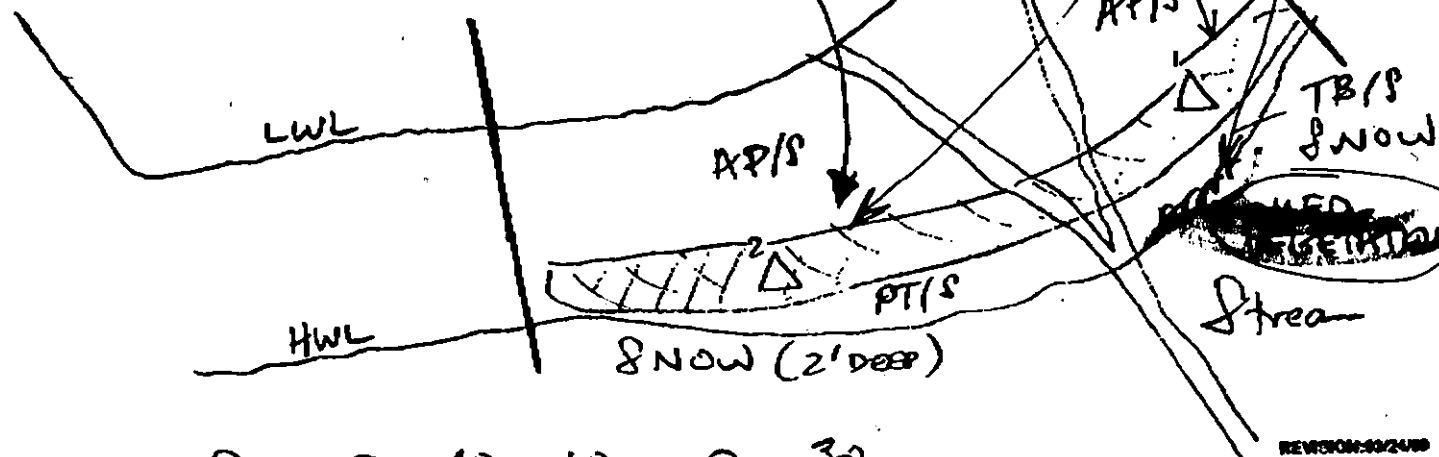
Photo location, direction,
and number

MANUALLY REMOVE TAR MAT AND
OILED VEGETATION THEN BIOREMEDIATE
AREA WHERE MANUAL WORK WAS DONE

WEST ARM

AP/P

- 1-2m X 150m, 2-5m TACK
- U1T2
- COBBLE/PEBBLES



Oil Character Length (m): AP 100 PO 0 CV 0 CT 0 ST 0 MS 0 PT 10 TB 10 FL 0 NO 30

REVISION: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN200 Subdivision A Date (mo / day / yr) 4-19-90
 Time (24 hr) 15:45 Biologist David Lohr

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 10 (3) Cobble 30 (4) Pebble 30 (5) Sand 15 (6) Silt 5
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 30 Low 55
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
 juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST-13-4

Frames 10

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	X	2	2	2	2	2
3	3	3	3	3	3	X	X	3	3	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	X	3	3	3	3	3	3	3
4	4	4	4	4	4	4	X	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	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	X	X	2
3	3	3	3	3	3	3	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1. Low intertidal not sampled
2. present in mid-intertidal: Enteromorpha

Ecological Considerations:

1A, B: Anadomus stream located within 100 m of segment boundary in adjacent segment KN201.

6V: no comment

Madame - Dense mussels in mid-intertidal cobble would be susceptible

KN-07

N-201

ANADROMOUS
226-20 - 16869 STREAM
(MN-201)

Area of moderate - dense mussels in
mid-intertidal zone

ECOLOGY MAP 1 of 1
RESOURCE CONES FOR ENTIRE SEGMENT
6V

NOTE: No bioremediation or other
chemical application within 100 meters
of ~~stream~~.

KN-200

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-200

ADEC Segment Length: 162m

0 100 200 300

Map Key: PWS-401

Name: _____

Date: _____

Data Entered: _____

KN-U

N-201

KN-200

Subdivision A-10f1

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

KN-200

ADEC Segment Length: 162m

0 100 200 300

Map Key: PWS-401

Name: Rick Glue

Date: 04/19/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS**SEGMENT KN-200 SUBDIVISION A (1 of 1)**

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS**1A,1B Salmon Stream**

ADF&G catalogued anadromous stream (226-30-16869) is present in adjacent Segment KN-201 and is within 100m of recommended treatment area. 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. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to uncollected biota and substrate. Avoid walking on or damaging mussel beds.

TAG ADDENDUM DATE 6/04/90
 ADEC Ray M... R...
 EXXON ANDY TEAL
 NOAA Jesse T...
 USCG G.A. Reiter

FOSC

[Signature]

DATE

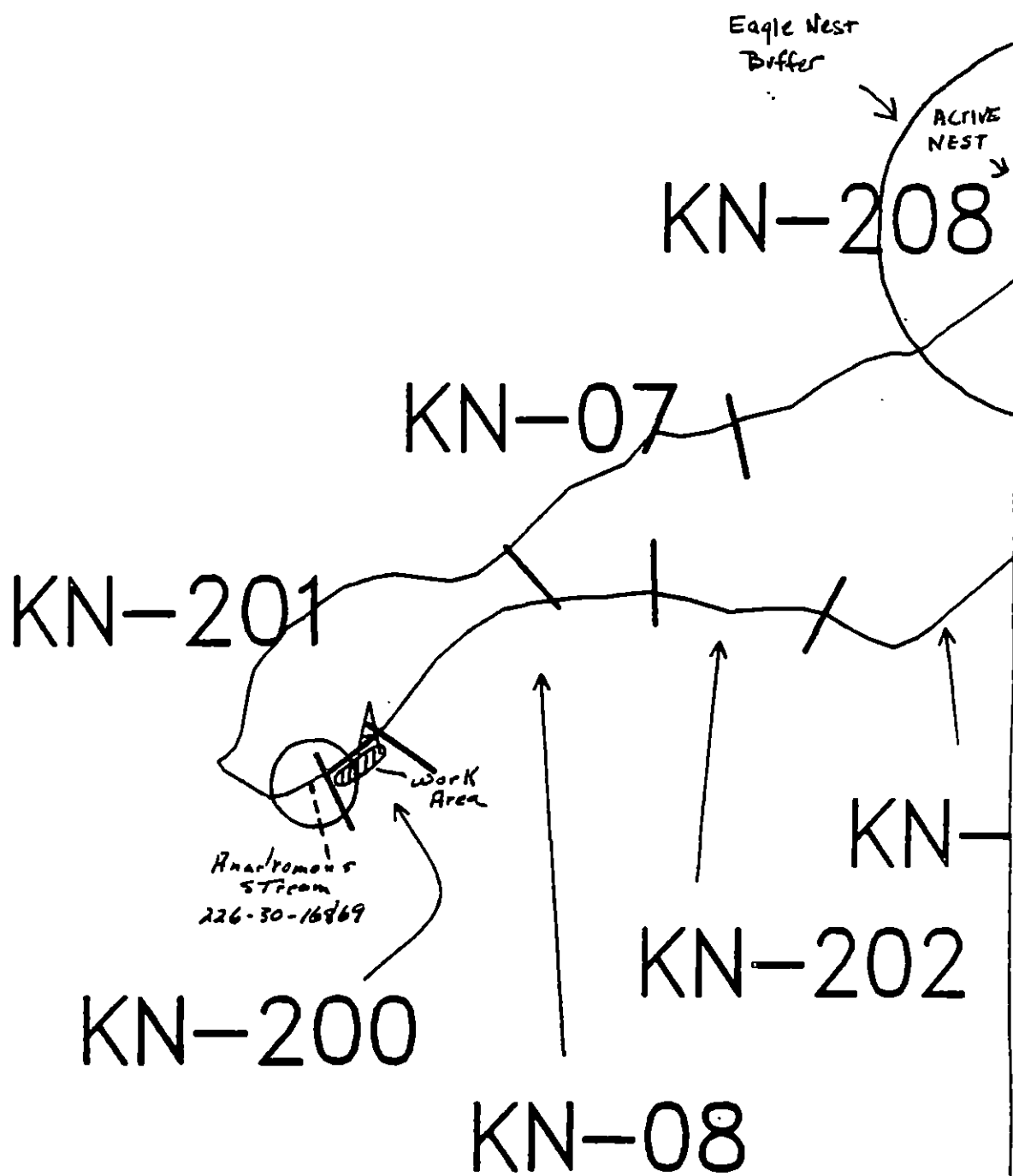
6/5/90

Prepared by:

[Signature]

Date:

6/4/90



Incorporates USFWS 6/1/90
map of Active Bald Eagle Nests.



Exxon Company, USA
Map Key: KNI-KN-200



ECOLOGY MAP
SEGMENT KN-200
SUBDIVISION *A* (-L- of -L-)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (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. Anadromous stream within 100m in KN201. Do not trample or otherwise damage mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David M. Mahan

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 129 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bio-remediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

SEE ATTACHED ADDENDUM DATED 5/20

REVC.
SEE REVISION 1, Addendum dated 6/4/90

TAG COMMENTS: MONITORS TO ASSES SUITZ

TAG APPROVAL DATE: 4/28/90

ADEC ART WILSON

EXXON AMY TATE

NOAA GARY PETERSON

USCG KENNETH KATZ

FOSC: W L

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-200 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Over 100m From Stream Bioremediation Less Than 100m From Stream	OPEN PERMIT REQUIRED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16869) is present in adjacent Segment KN-201 and is within 100m of recommended treatment area. Subdivision is closed to bioremediation less than 100m from stream without ADF&G authorization. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Avoid walking on or damaging mussel beds.

TAG ADDENDUM DATE

5/21/90

ADEC

AET Weimer

D. Weimer

EXXON

AND T&E

Boal

FOSC

DATE

5-21-90

NOAA

Joseph Takahashi

ST. George

USCG

Mr. J. Hall

Mr. J. Hall

Prepared by:

Anda May

Date:

5/20/90

KN-208

KN-07

KN-201

Anadromous Stream
226-30-16869

Work Area

KN-

KN-202

KN-200

KN-08



Exxon Company, USA
Map Keys KNT-KN-200



ECOLOGY MAP
SEGMENT KN-200
SUBDIVISION *A* (1 of 1)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (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. Anadromous stream within 100m in KN201. Do not trample or otherwise damage mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David M. Mahan DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 129 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bio-remediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

SEE ATTACHED ADDENDUM DATED 5/20
REKLC.

TAG COMMENTS: MONITORS TO ASSES SUITZ

TAG APPROVAL DATE: 4/28/90.
ADEC ART WILSON
EXXON AMY TALL
NOAA GARY PETER
USCG KENNETH KOTAR

FOSC: W L DATE: 5-12-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-201

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.

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

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

6V Recreation: Anchorages (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. 3 anadromous streams. Avoid trampling or otherwise damaging mussel beds.

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 89 m: Narrow 167 m: V.Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map, 2) manual removal of tar-mats in areas indicated on sketch map, 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A
1B
1C
1D
1E
1F
1G
1H
1I
1J
1K
1L
2M
3N, 3P
3O, 3Q
5R
5S
5T
6U
6V
6W
6X
6Y
7Z
7H-H
7I
7J
- Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- Salmon fry nursery area (4/31 to 7/31)
- Esther Hatchery release (4/15 to 6/1)
- Main Bay Hatchery release (4/20 to 5/10)
- Sawmill Bay Hatchery release (4/15 to 6/1)
- Cannery Creek Hatchery release (4/21 to 6/1)
- Remote release site
- Gill net area (6/7 to 8/31)
- Purse seine area (7/20 to 9/30)
- Purse seine hook-off (7/20 to 9/30)
- Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 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.
- 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.
- 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.
- Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 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.
- Recreation: Tent sites (6/1 to 9/15)
- Anchorage (6/1 to 9/15)
- Forest Service cabins (6/1 to 9/15)
- Lodge (6/1 to 9/15)
- Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
- Finfish harvesting
- Deer harvesting (8/15 to 2/28)
- Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-201 SUBDIVISION: A-1 of 1 DATE 04/19/90**USCG**NAME David S. ThomasSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED**ADEC**NAME Clara S. CrosbySIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual removal of asphalt tarballs - Especially around streams & on deltas - warm water flush would work well at NE. end of Segment Bedrock - High angle Beach - No other specific techniques recommended due to sensitivity of area.

LAND MANAGERNAME Peter ZollarsSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Due to the close proximity of ANADAMOUS streams I recommend manual removal only.

SHORELINE OILING SUMMARY

REVISION NO. 04-15-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-201
 BIO DAVE LUNSE LAND REP PETER COLLARI (CAC) SUBDIVISION A (LOF)
 EXXON FRANK BOB ADEC CLARA CROSBY TIME 13:55 to 15:30
 TEAM NO. 13 TIDE LEVEL +3 to +2 DATE 04/19/90
 EST. SUBDIVISION LENGTH: 1,007 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow in Supratidal
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 20 % C 20 % P 20 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Lang 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 300 m VL 607 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SP	BR	OR	OL	OP	NO	UC	UC	SU	U	M	U
ASPHALT PAVEMENT		*	✓	X									D	X	✓	X
POOLED																
COVER																
COAT			X	✓												
STAIN																
MOUSSE																
PATTIES				X									X			
TARBALLS				X							X		X	X		
FILM				X							X		X	X		
NO OIL																

PAVEMENT H F (S) 30 sq. m by 4 cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ . NO ☒
Vegetation	X			
Trash				
Debris				
				TYPE <u>C</u>
				#BAGS <u>0</u>

Photographs:

Roll No. ST-13-4Frames 8,9

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		UC	UC	SP	BR	OR	OL	OF	NO	SU	U	M	L						
1	15					X	.		X							X									P/M
2	20					X	.		X									X							G/S
3	15					X	.		X							X									G/P/M
4	15					X	.		X							X									G/P
							.																		
							.																		

COMMENTS

① GEOMORPHOLOGY: PREDOMINANTLY HIGH ANGLE COBBLE/BOULDER SHORELINE. LOW ANGLE BEACHES LOCATED ON STREAM DELTAS.

② OILING: CONCENTRATED IN UITE AS AP/P/S
 TB AND PT DISTRIBUTED THROUGHOUT SHORELINE

REVIEWED YU DATE 4/20/90

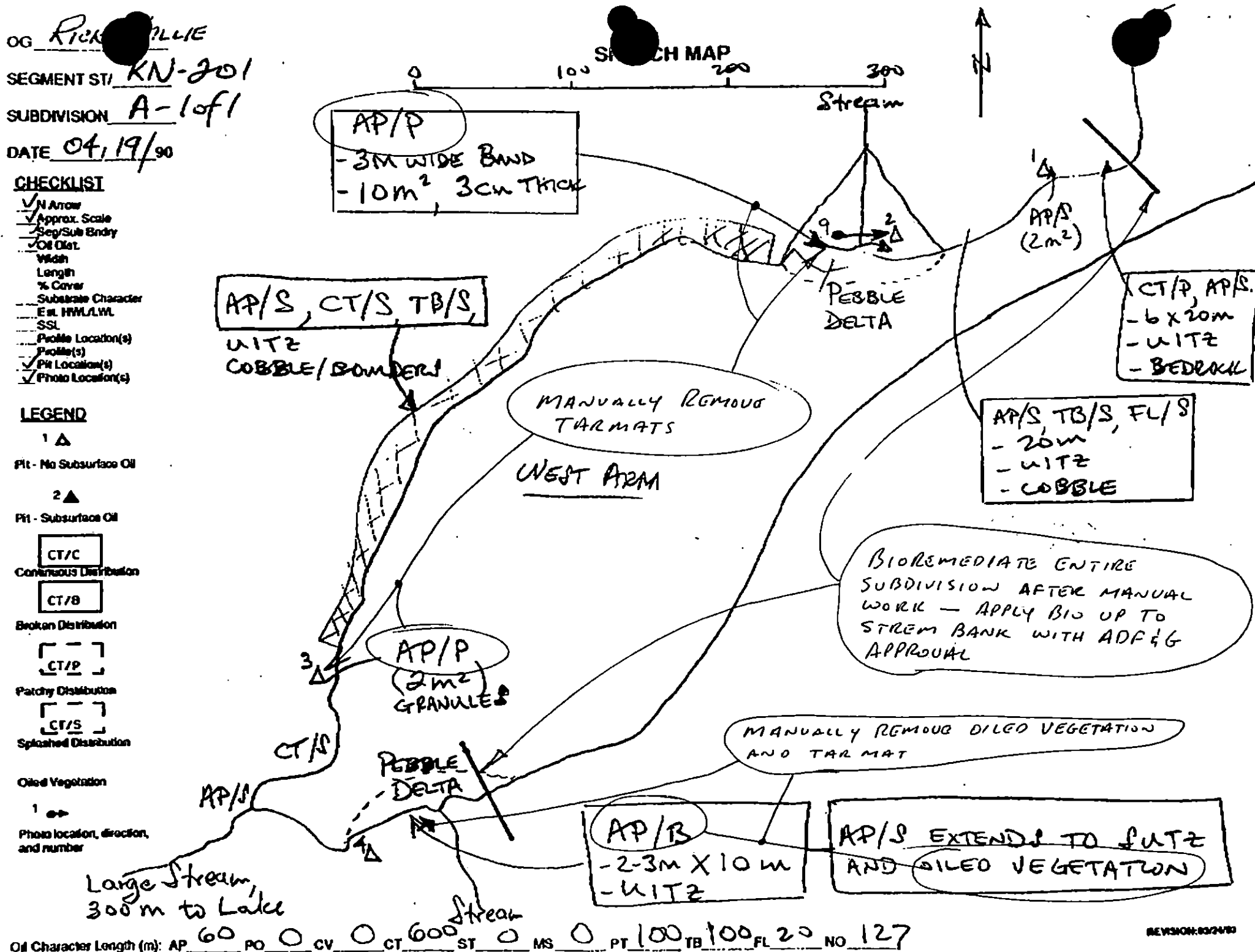
OG RICK MILLIE
 SEGMENT ST/ KN-201
 SUBDIVISION A-1 of 1
 DATE 04/19/90

CHECKLIST

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

LEGEND

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



Oil Character Length (m): AP 60 PO 0 CV 0 CT 600 ST 0 MS 0 PT 100 TB 100 FL 20 NO 127

REVISION: 8024/80

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST / KN201 Subdivision A Date (mo / day / yr) 4-19-90
 Time (24 hr) 14:00 Biologist David Lohr

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand 20 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 45 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 (O)

Photographs:
 Roll No. ST-13-4

Frames 8,9

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	<u>2</u>	2	2	<u>2</u>	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

- 18 226-30-16872: oil present (Asphalt pavement)
 226-30-16870: oil present (oil mousse patty)
 226-30-16869: oil present

6V - no comment

Moderate - Dense mussels present in mid intertidal cobble near mouth of stream

Shoreline Ecological Summary

Segment KN201

Subdivision A

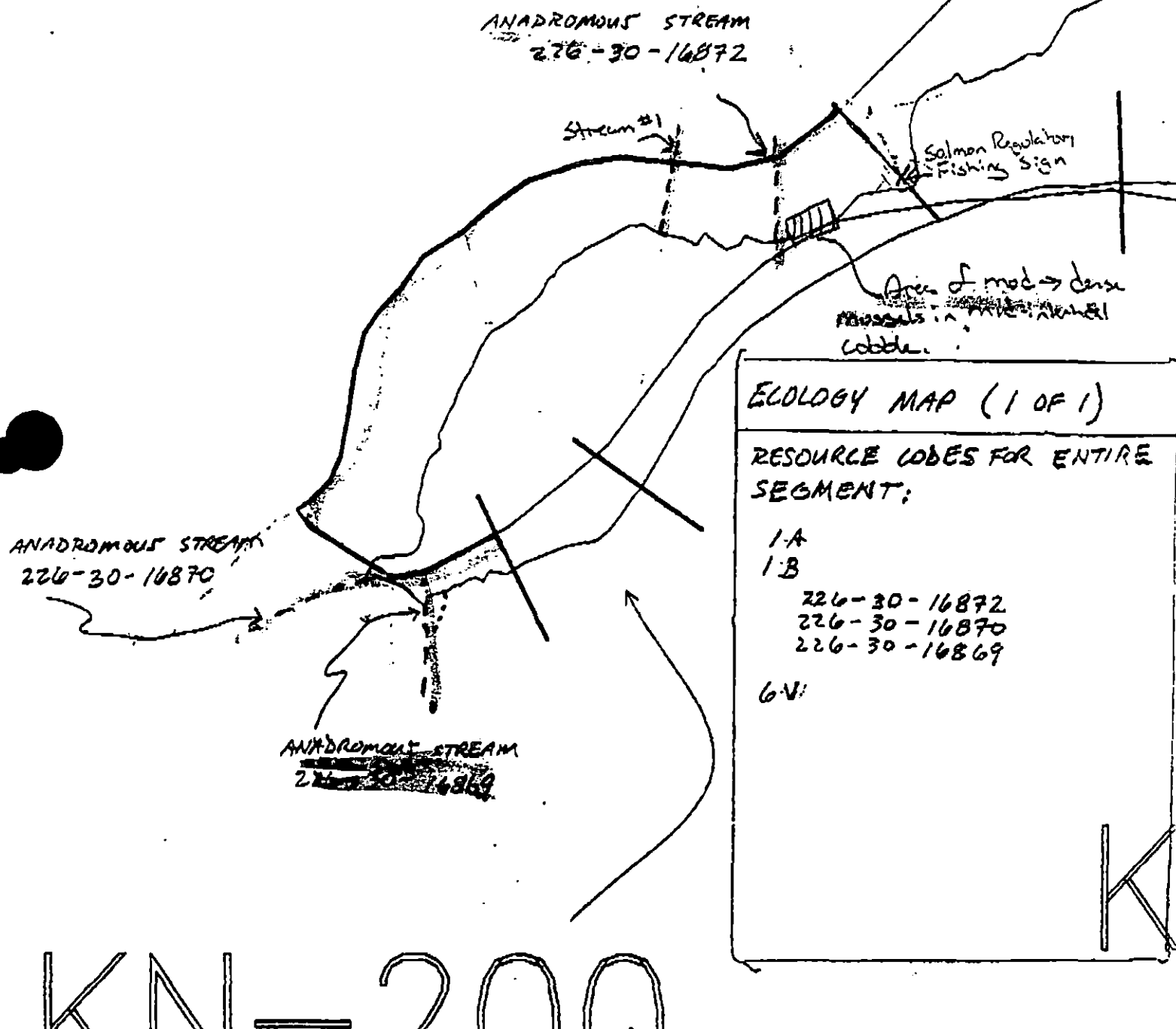
4-19-90

Biologist David Lohse

Wildlife Observations/General Comments:

1. Low intertidal not sampled
2. present in mid intertidal: Ulva, Enteromorpha, Ectocarpus, unidentified branching red alga (Rhodomania?)
high intertidal: isopods found under cobble
3. One mature bald eagle spotted in area being harassed by a raven
4. One sandpiper and one other raven spotted in area. Flock of geese observed flying west high overhead
5. One salmon ~~egg~~ fishing regulatory marker found in segment. (see Ecology Map)
6. In some areas of the mid-intertidal Fucus was reduced to just stipes - ~~on~~
very few or no blades were evident
7. In area near the northern segment boundary patchily distributed oil-covered boulders were found on high intertidal bedrock. Mortality of oil-covered boulders was ~50%, Mortality of non-oiled boulders was ~10%.
8. Boulder mortality reached ~20% on mid-intertidal boulders.
9. In addition to the 3 anadromous streams indicated on the Ecology map, one additional stream was located in segment (Stream #1 on Ecology map). Oil (asphalt pavement) was present near mouth of stream.

KN-07



KN-2000

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO M - 0:1

KN-201

ADEC Segment Length: 1007m

0 100 200 300

Map Key: PWS-402

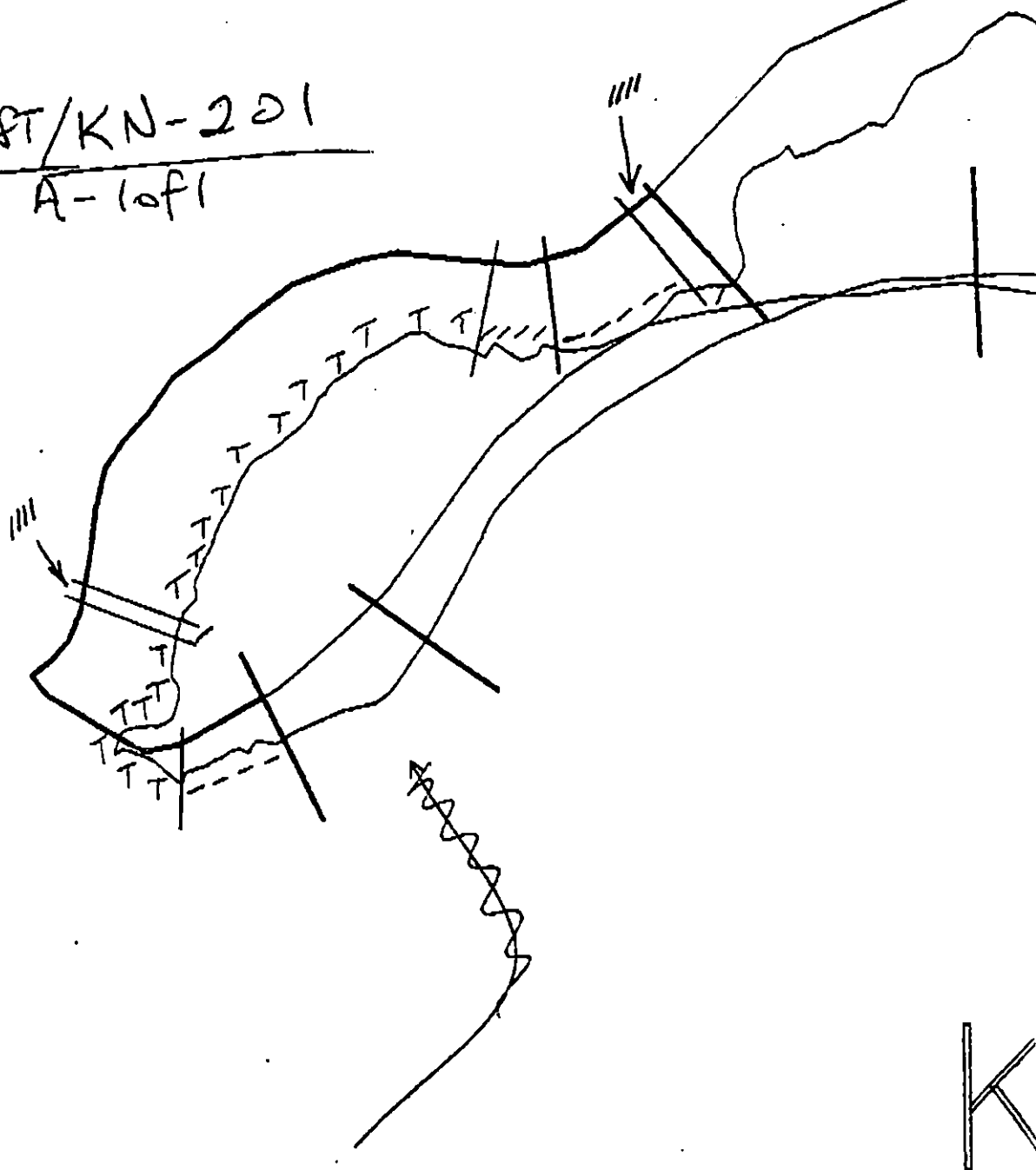
Name: _____

Date: _____

Data Entered: _____

KN-07

SEGMENT: ST/KN-201
 SUBDIVISION: A-10f1



KN-200

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-201

ADEC Segment Length: 1007m

Map Key: PWS-402

Name: R. Grille

Date: 04/19/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-201 SUBDIVISION A (1 of 1)

WORK WINDOWManual Pickup
Tarmat Removal**OPEN**

Bioremediation More Than 100m From Stream

OPENBioremediation Less Than 100m From Stream **WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)****ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS**1A,1B Salmon Stream**

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). 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. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to uncolled biota and substrate. Avoid dense mussel beds during bioremediation; do not walk on or damage mussel beds.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16872)
FOR ADDITIONAL CONSTRAINT INFORMATION**

TAG ADDENDUM DATE 6/04/90
 ADEC Ray Means
 EXXON Andi Galt
 NOAA Joseph Talbot
 USCG G.H. Reiter

FOSC

[Signature]

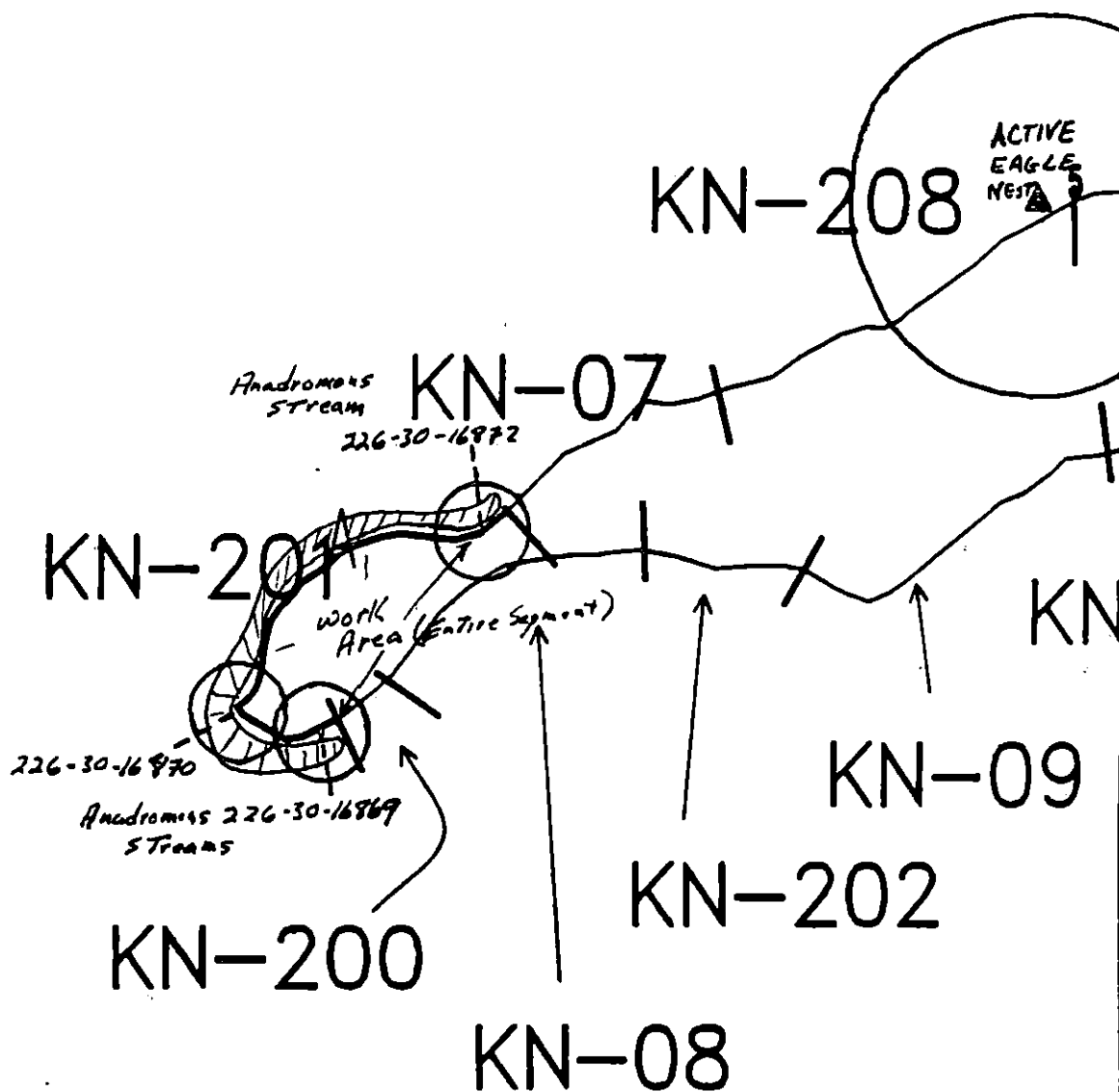
DATE

6/5/90

Prepared by:

Andi Means JPPDate: 6/4/90

* Incorporates USFWS 6/11/90
map of ACTIVE EAGLE NESTS.



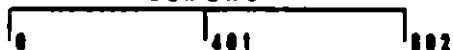
Exxon Company, USA

Map Key: KN1-KN-201

May 11, 1990



ECOLOGY MAP
SEGMENT KN-201
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1316 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.

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

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

6V Recreation: Anchorages (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. 3 anadromous streams. Avoid trampling or otherwise damaging mussel beds.

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. Holmes

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 167 m: V.Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes. 1) manual removal of oiled vegetation in area indicated on sketch map. 2) manual removal of tar-
mats in areas indicated on sketch map. 3) bioremediation of entire
subdivision following manual work. Apply bioremediation up to stream
bank with ADF&G approval. Work should be conducted between 5/15 and
7/10 due to salmon stream constraint. SEE APPENDUM DATED 5/20/90

SEE REVISION 1, Appendix dated 6/4/90, Rev. C.

TAG COMMENTS: AVOID PENSE MUSSEL BEDS DURING B.O.

TAG APPROVAL DATE: 5/4/90

ADEC ART WENGER Art Wenger

EXXON ANDY LINTZ Andy Lintz

NOAA Greg Betts Greg Betts

USCG G.A. REITER G.A. Reiter

FOSC: ky L

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-201 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Over 100m From Stream Bioremediation Less Than 100m From Stream	OPEN PERMIT REQUIRED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). Subdivision is closed to bioremediation less than 100m from stream without ADF&G authorization. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unloiled biota and substrate. Avoid dense mussel beds during bioremediation; do not walk on or damage mussel beds.

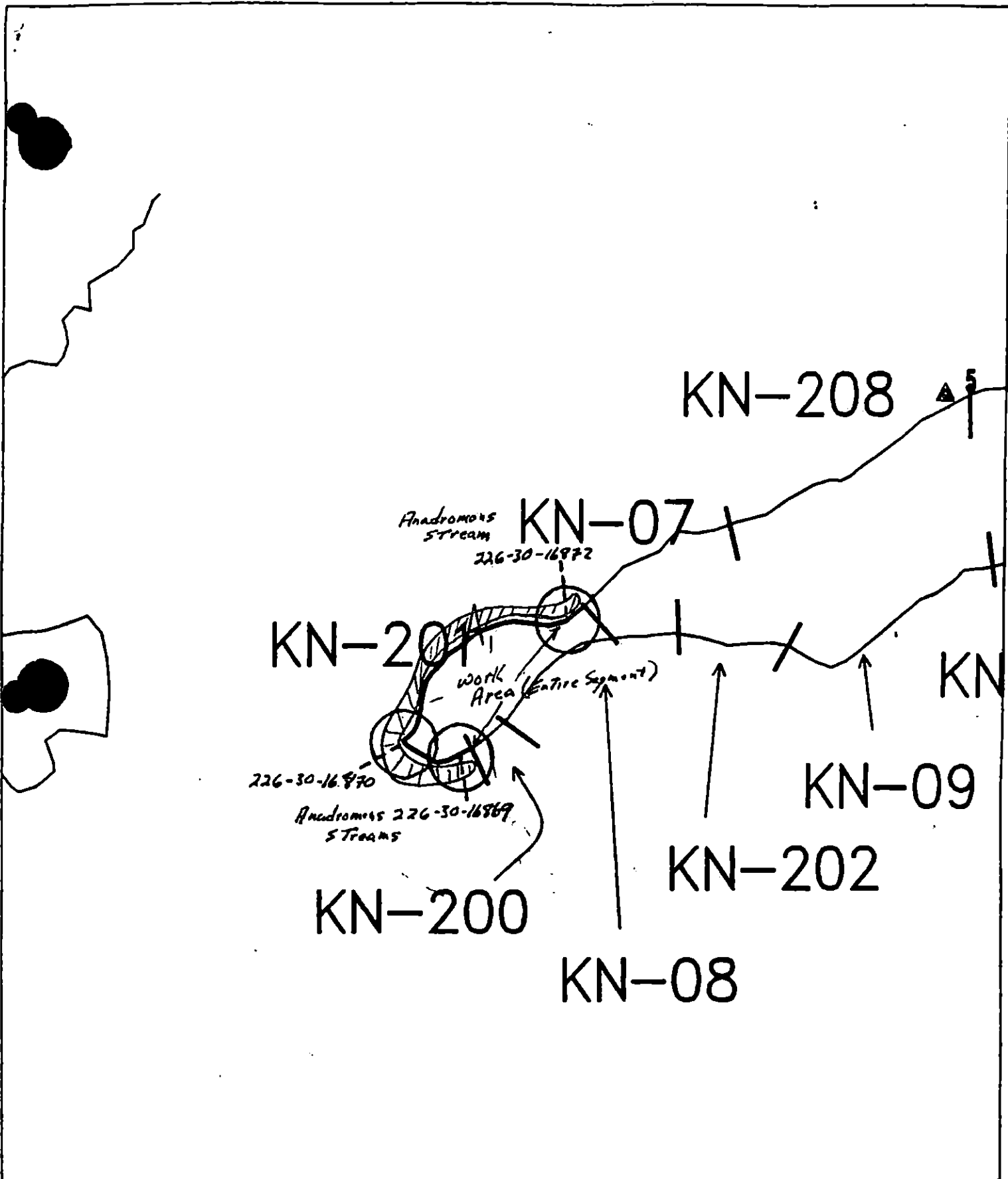
TAG ADDENDUM DATE 5/21/90.
ADEC ART WEINGER
EXXON ANDY TEAL
NOAA Joseph Tallant
USCG M. J. Hall

FOSC

DATE 5-21-90

Prepared by: Anders Meyer

Date: 5/20/90



Exxon Company, USA
 Map Key: KNI-KN-201
 May 11, 1990



ECOLOGY MAP
 SEGMENT KN-201
 SUBDIVISION A (1 of 2)
 METERS
 0 401 802

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1316 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.

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

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

6V Recreation: Anchorages (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. 3 anadromous streams. Avoid trampling or otherwise damaging mussel beds.

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. Hines

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 167 m: V. Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

COMMENTS: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map, 2) manual removal of tar-mats in areas indicated on sketch map, 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

SEE APPENDUM DATED 5/20/90
Box C.

TAG COMMENTS: AVOID DENSE MUSSEL BEDS DURING BXO

TAG APPROVAL DATE: 5/4/90

ADEC Art Wewer Det Wewer

EXXON Andy Ten

NOAA Gary Petree Gary Petree

USCG G.A. REITER G.A. Reiter

FOSC: h L

DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.

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

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

6V Recreation: Anchorages (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 unopened biota and substrate. 3 anadromous streams. Avoid trampling or otherwise damaging mussel beds.

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. Hines DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 167 m: V. Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map, 2) manual removal of tar-mats in areas indicated on sketch map, 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

TAG COMMENTS: AVOID DENSE MUSSEL BEDS DURING BIO

TAG APPROVAL DATE: 5/4/90

ADEC ART WENGER Art Wenger

EXXON ANDY TAYLOR Andy Taylor

NOAA GARY PETRAE Gary Petrae

USCG G.A. REITER G.A. Reiter

FOSC: hy L DATE: 5-12-90

OG RI 77LLIE
 SEGMENT ST/ KN-201
 SUBDIVISION A-1 of 1
 DATE 04/19/90

CHECKLIST

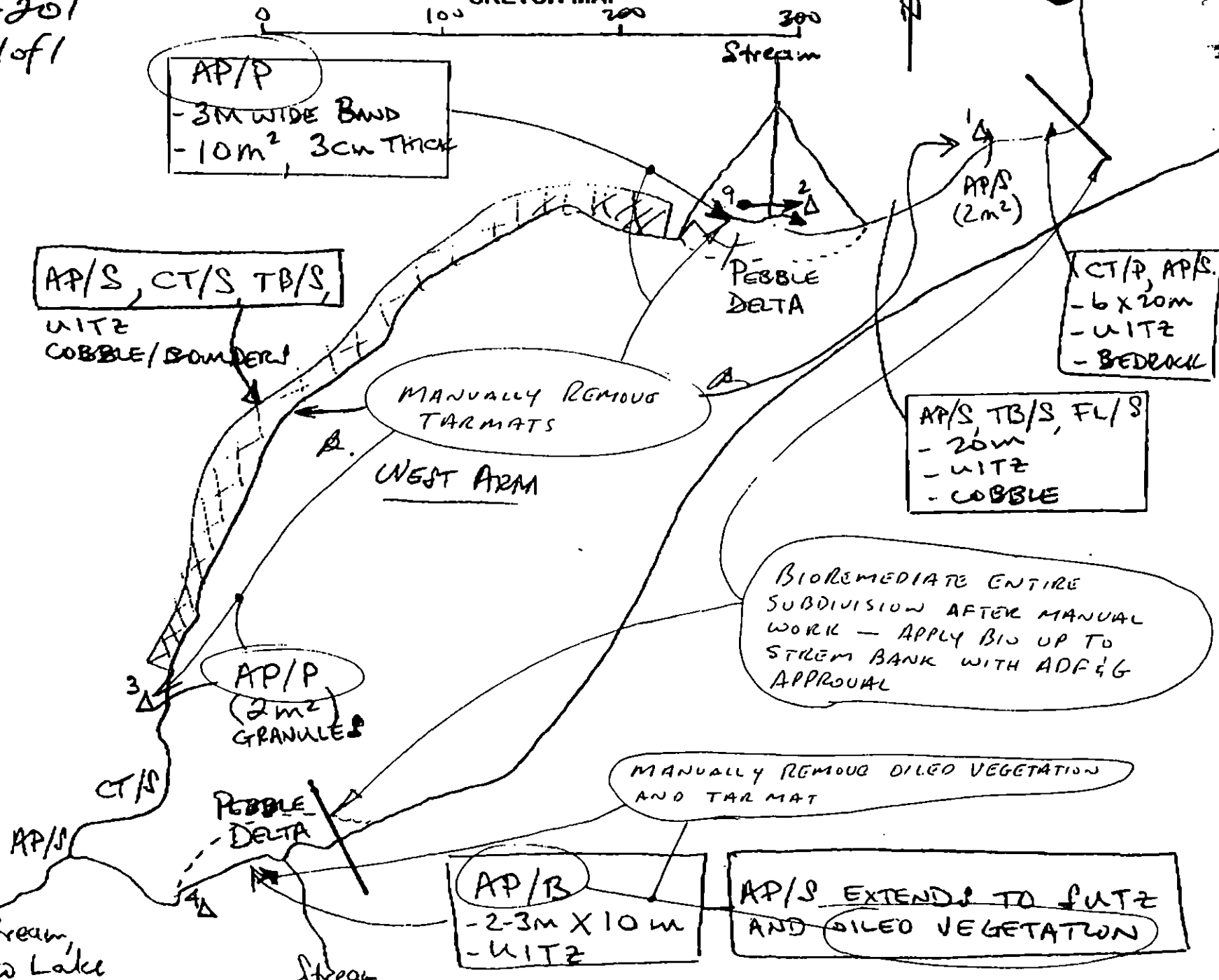
- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil (Est.)
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

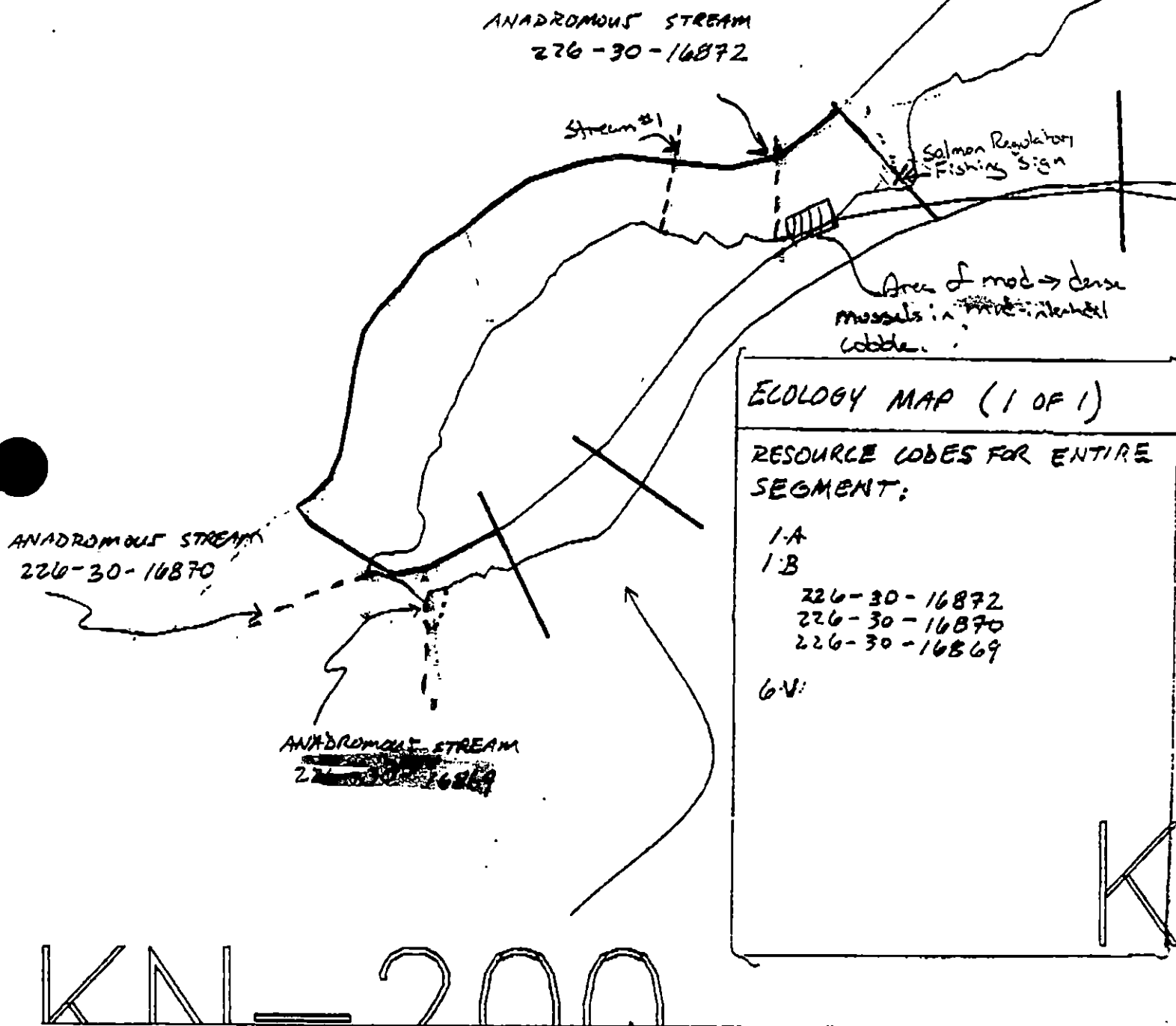
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 $\rightarrow$
Photo location, direction, and number

Oil Character Length (m): AP 60 PO 0 CV 0 CT 600 ST 0 MS 0 PT 100 TB 100 FL 20 NO 127

SKETCH MAP



KN-07



Map Key: PWS-402

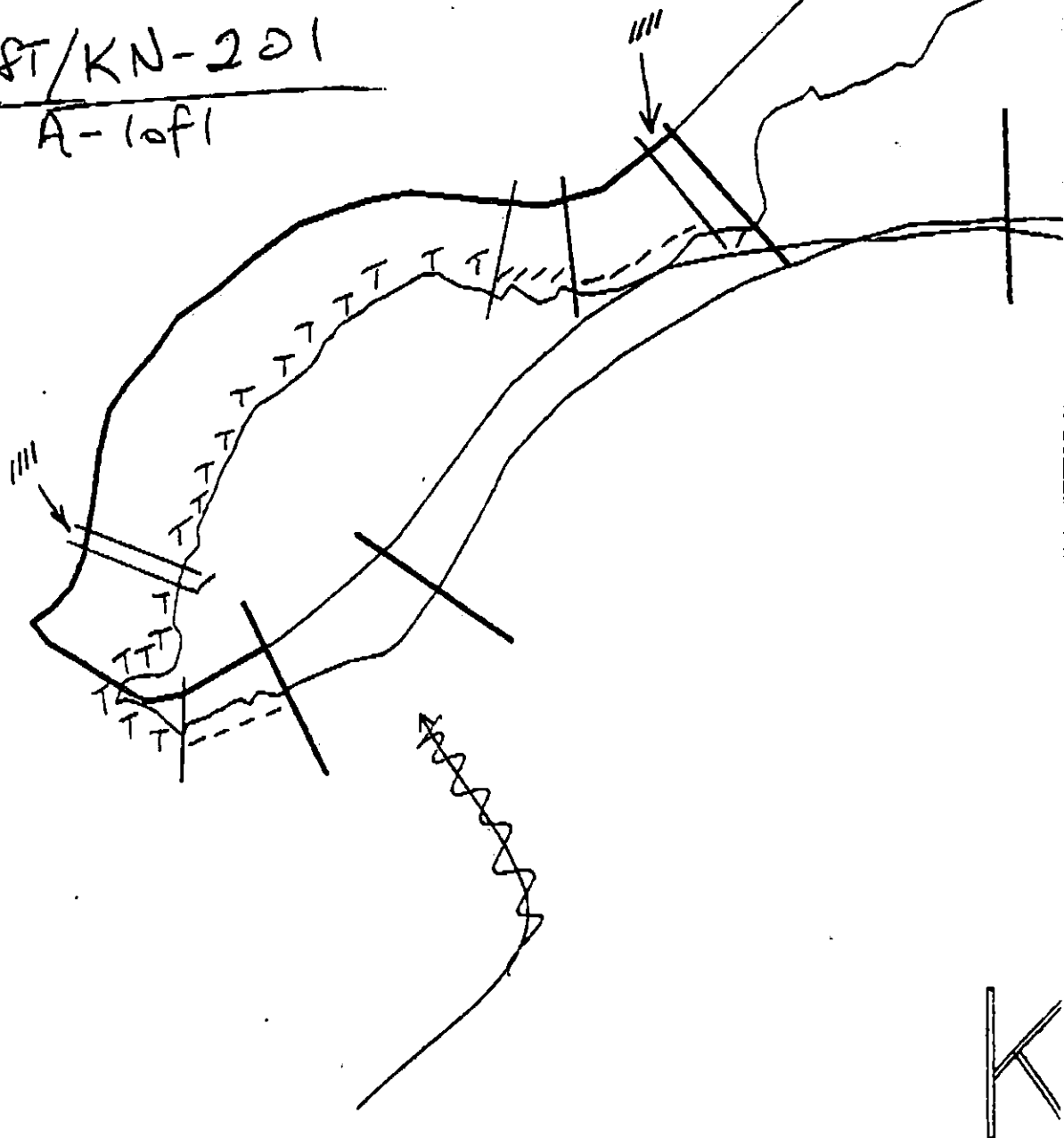
Name: _____

Date: _____

Data Entered: _____

KN-07

SEGMENT: ST/KN-201
SUBDIVISION: A-10f1



KN-200

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KN-201

ADEC Segment Length: 1007m



Map Key: PWS-402

Name: R. Grille

Date: 04/19/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 201 SUB: A REGION: PWS SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rebel Jan Doe Date: 5/17/91

RECOMMENDATIONS:

INITIAL**TAG**

FOSC

TREATMENT REQUIRED (Y or N)

N

N

2

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

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN 201 SUBDIVISION A DATE 5/2/91

ADEC

NAME Wesley Ghormley

SIGNATURE Wesley Ghormley

☒ NTR ☐ TREATMENT RECOMMENDED

Past work on segment in 1990 was a very good job. Only small amounts of patties were visible which we either retrieved or broke up. Overall a very recovering environment. No Further treatment.

EXXON

NAME Jon P. Gaurich

SIGNATURE Jon P. Gaurich

☒ NTR this was a long segment. the only major oil and that is not very much as the set a side site. The beach is clean and what we saw was either picked up or broken up.

LANDMANAGER

NAME Solomon OF CR

SIGNATURE [Signature]

☐ NTR

3

has patties noted

USCG/NOAA

NAME MOONEY / Barats

SIGNATURE Timothy / Tony Barats

☒ NTR SEGMENT WAS MANUAL TILLED IN 1990. ANY REMAINING TAR PATTIES WERE BROKEN UP OR REMOVED. VERY CLEAN SEGMENT.

PAGE 1 OF 1

DATE 2 MAY 191

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 50 m NO 966 m US m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 3-08 FRAMES 12-16

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

Skiff operators collected several bags of non-spill related debris.

reviewed 5/9/91 LG OG 1 of 4
Reviews: 5/9/91 mc

201



ANADROMOUS
FISH STREAM

ANADROMOUS
FISH STREAM

SORBENT
PAD
COLLECTED

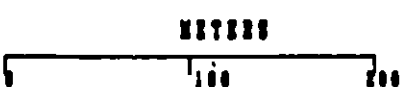
BASIN

MOUSSE
PATTIES
[COLLECTED]

MOUSSE
PATTIES
[PICKED
UP]

SOR/H
2x50
<10%
A

MOSTLY
BROKEN



AK State Plane Zone 4
NAD83/1983

KN0201 A

Subdivision Field Map

Map Key: KN1KN0201Aa

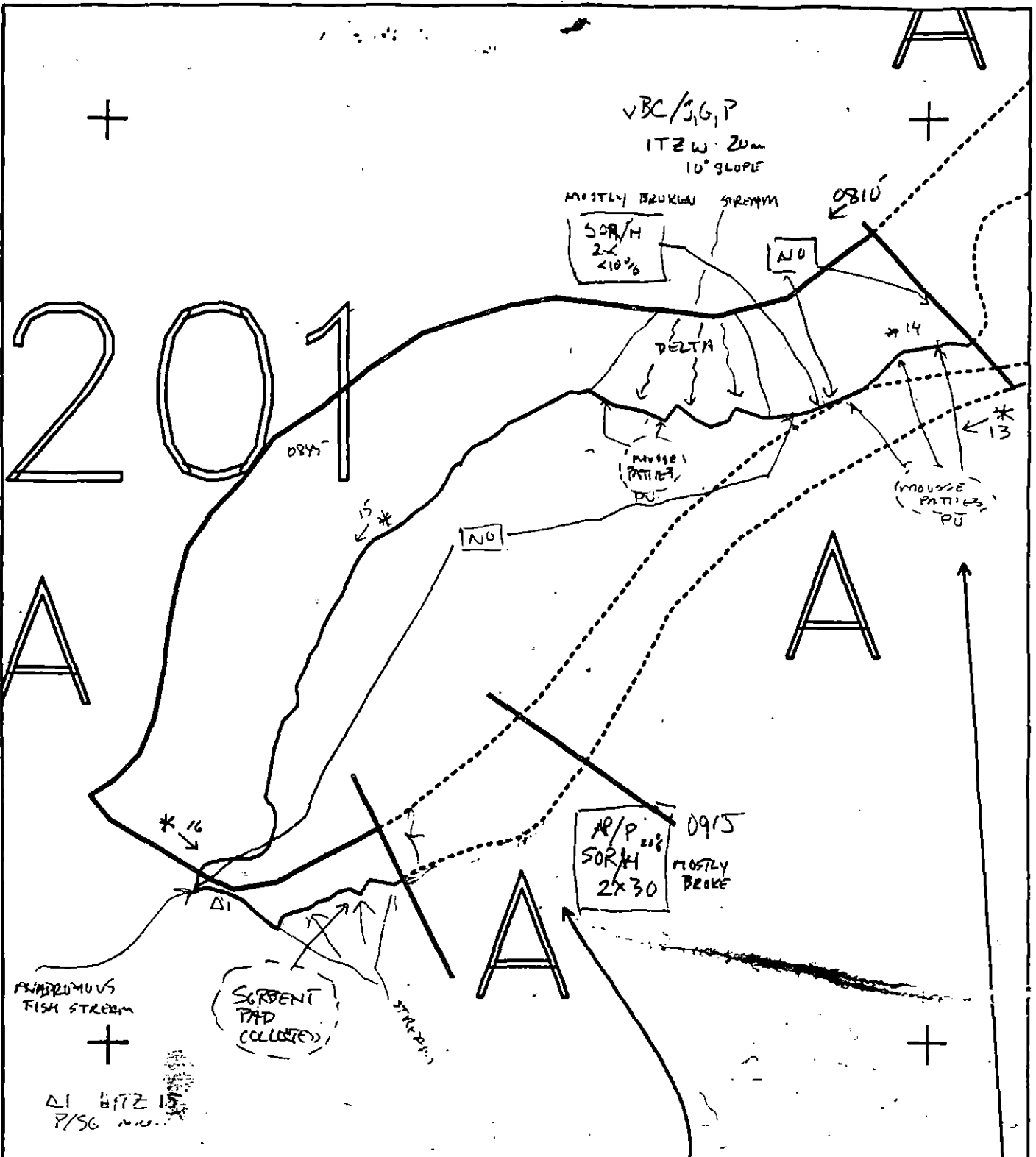
Name: HARPER

Date: 2 MAY 91

REVISED FIELD MAP

REVIEWED: MC 5/19/91
revised 5/19/91 KG

OG 2 of 4



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

KN0201 A
 ADEC Subsegment Length: 1016m

100 METERS
 200



Subdivision Field Map
 Map Key: KNIK0201Aa
 Name: Hanger
 Date: 2 May 91
 Date Entered:

FIELD MAP

OG 3 of 4

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/2/91
 SEGMENT # KN 201 TIDAL HEIGHT (Range) 0-3'
 SUBDIVISION A BIOLOGIST STOKER
 SEA STATE 0-1' WIND SPEED/DIRECTION E 10-20
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy shore varying from fairly steep cobble/boulder/bedrock to low angle pebble/cobble. Segment is crossed by 4 small streams (at least one of which is anadromous) and 1 major stream (anadromous).

Biota in the form of barnacles, limpets and Mytilus (all generally sparse) extends well into the upper intertidal in most areas. Biota generally increases in abundance, though not necessarily in diversity, downslope through the mid intertidal and is characterized by moderate to dense populations of barnacles, moderate to dense Mytilus (both attached and interbedded), patchy and variable Fucus, dense limpets, generally sparse Littorina (+ some Littorina egg masses), and sometimes amphipods and eel blennies. Pebble/cobble flats dominated by interbedded Mytilus, barnacles, limpets, Fucus.

Biota in the remaining small area of surface all consists of sparse barnacles, limpets. Adjacent + downslope area characterized by moderate to dense barnacle populations, interbedded Mytilus, patchy Fucus, dense limpets and sparse Littorina.

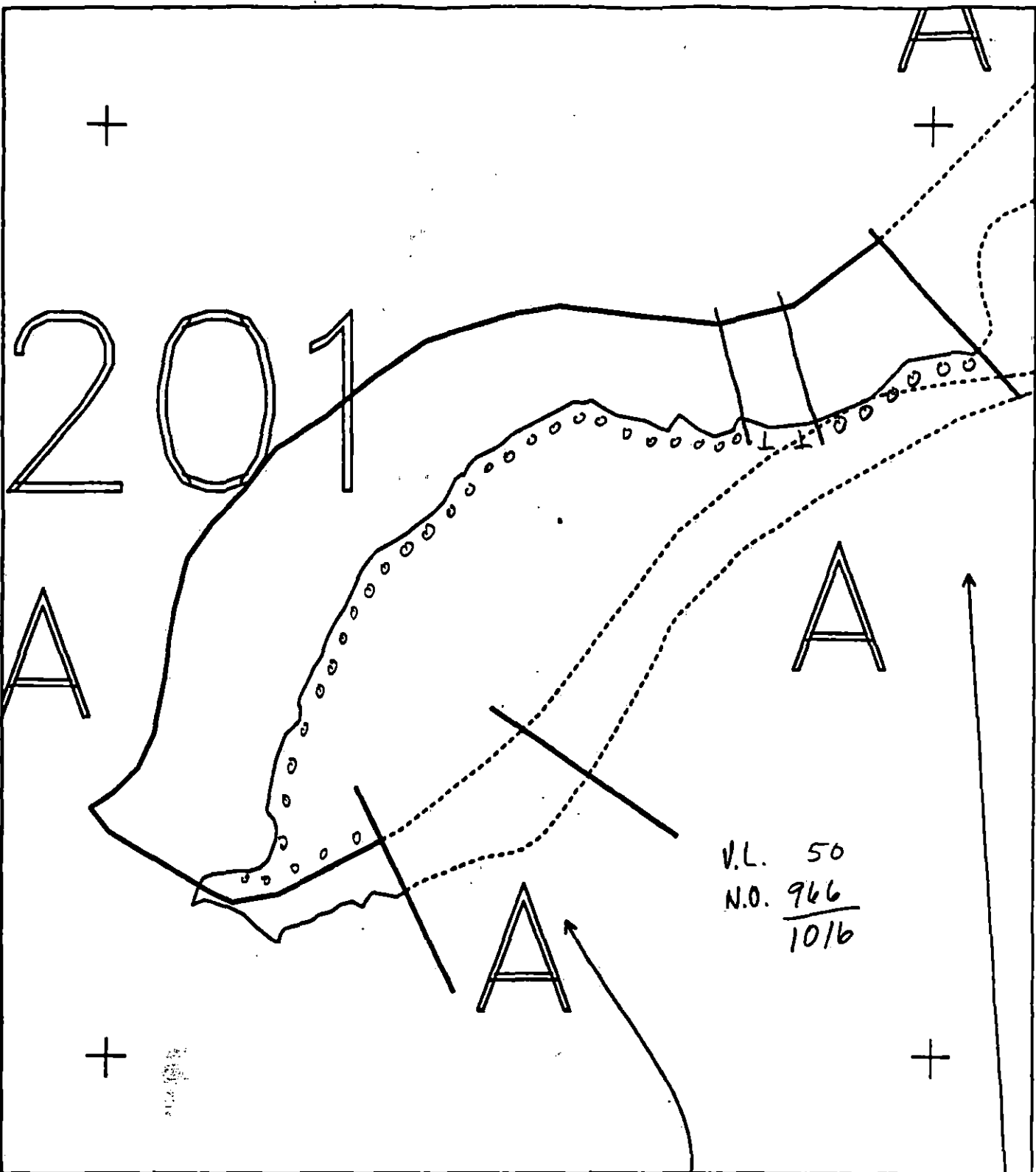
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			eel blennies
Seabirds			
Waterfowl	Goldeneyes	12	
Gulls/Kittiwakes	Glaucon-wing	±10	
Shorebirds			
Corvids	Raven	1	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.



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

KN0201 A
 ADEC Subsegment Length: 1016m
 METERS
 100 200
 AK State Plane Zone 4
 640201a



Subdivision Field Map
 Map Key: KNKN0201Aa
 Name: HARPER
 Date: 2 MAY 91
 Date Entered:

SURFACE OILING MAP
 reviewed 5/9/91 KG

Reviewed: MC 5/9/91

OG 4 of 4

1991 MAYSAP EVALUATION

SEGMENT: KN 201 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/2/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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. 3 SEGMENT KN 201 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Gharmsley SIGNATURE Wesley Gharmsley 

☒ NTR ☐ TREATMENT RECOMMENDED

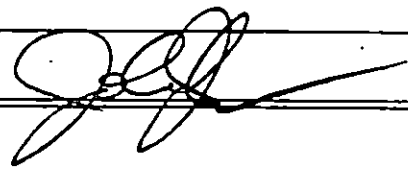
Past work on segment in 1990 was a very good job. ONLY small amounts of patties were visible which we either retrieved or broke up. Overall a very recovering environment. No Further treatment.

EXXON

NAME Jon P Czarniecki SIGNATURE Jon P Czarniecki

☒ NTR this was a long segment. the only major oil and that is not very much is the jet a side site. The beach is clean and what SCR we saw was either picked up or broken up

LANDMANAGER

NAME John Egan OF CAE SIGNATURE 

☐ NTR

3

has patties noted

USCG/NOAA

NAME ROONEY / Bant SIGNATURE Timothy Bant

☒ NTR SEGMENT WAS MANUAL TILLED IN 1990. ANY REMAINING TAR PATTIES WERE BROKEN UP OR REMOVED. VERY CLEAN Segment.

PAGE 1 OF 1

DATE 2 MAR 1991

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL 50 m NO 966 m US — m

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

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

PHOTO ROLL # MAYSAP- 3-08 FRAMES 12-16

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

This subdivision is essentially free of oil - one 50m long section of SOR/H was identified (Location A, $<10m^2$) and much of this was broken up during the survey.

No subsurface oil was identified or is likely to be found due to the fine subsurface sediments.

Skiff operators collected several bags of non-spill related debris.

reviewed 5/9/91 LG OG 1 of 4
Reviews: 5/9/91 MC

201

A

MADEMONOUS
FISH STREAM

MADEMONOUS
FISH
STREAM

NO

BASIN

MOUSSE
PATTIES
[COLLECTED]

SILBERT
PAD
COLLECTED

MOUSSE
PATTIES
[COLLECTED]

SOR/H
2 x 30
< 10%

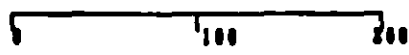
MOSTLY
BROKEN

A



KN0201 A

METERS



AK State Planning Zone 4
KN020100

Subdivision Field Map

Map Key: KN1KN0201Aa

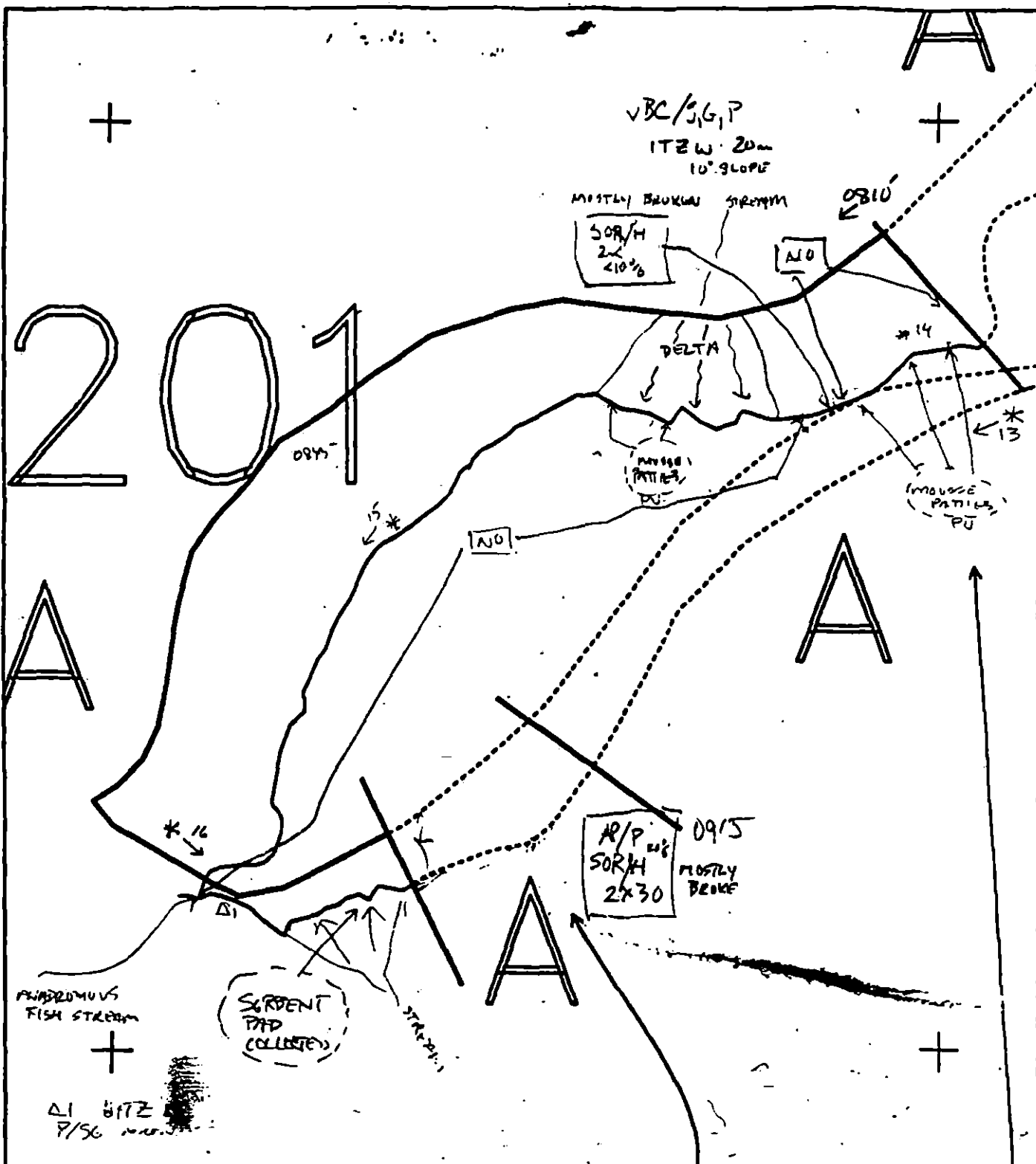
Name: HARPER

Date: 2 MAY 91

REVISED FIELD MAP

REVIEWED BY: MC 5191
reviewed 5/19/91

OG 2 of 4



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

KN0201 A
 ADEC Subsegment Length: 1016m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn020100

Subdivision Field Map
 Map Key: KNKN0201A0
 Name: Hansen
 Date: 2 May 91
 Date Entered:

FIELD MAP

OG 3 of 4

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3
 DATE 5/2/91
 SEGMENT # KN 201
 TIDAL HEIGHT(Range) 0-3'
 SUBDIVISION A
 BIOLOGIST Stoker
 SEA STATE 0-1'
 WIND SPEED/DIRECTION E 10-20
 PHOTOGRAPHS: ROLL #
 FRAME #

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

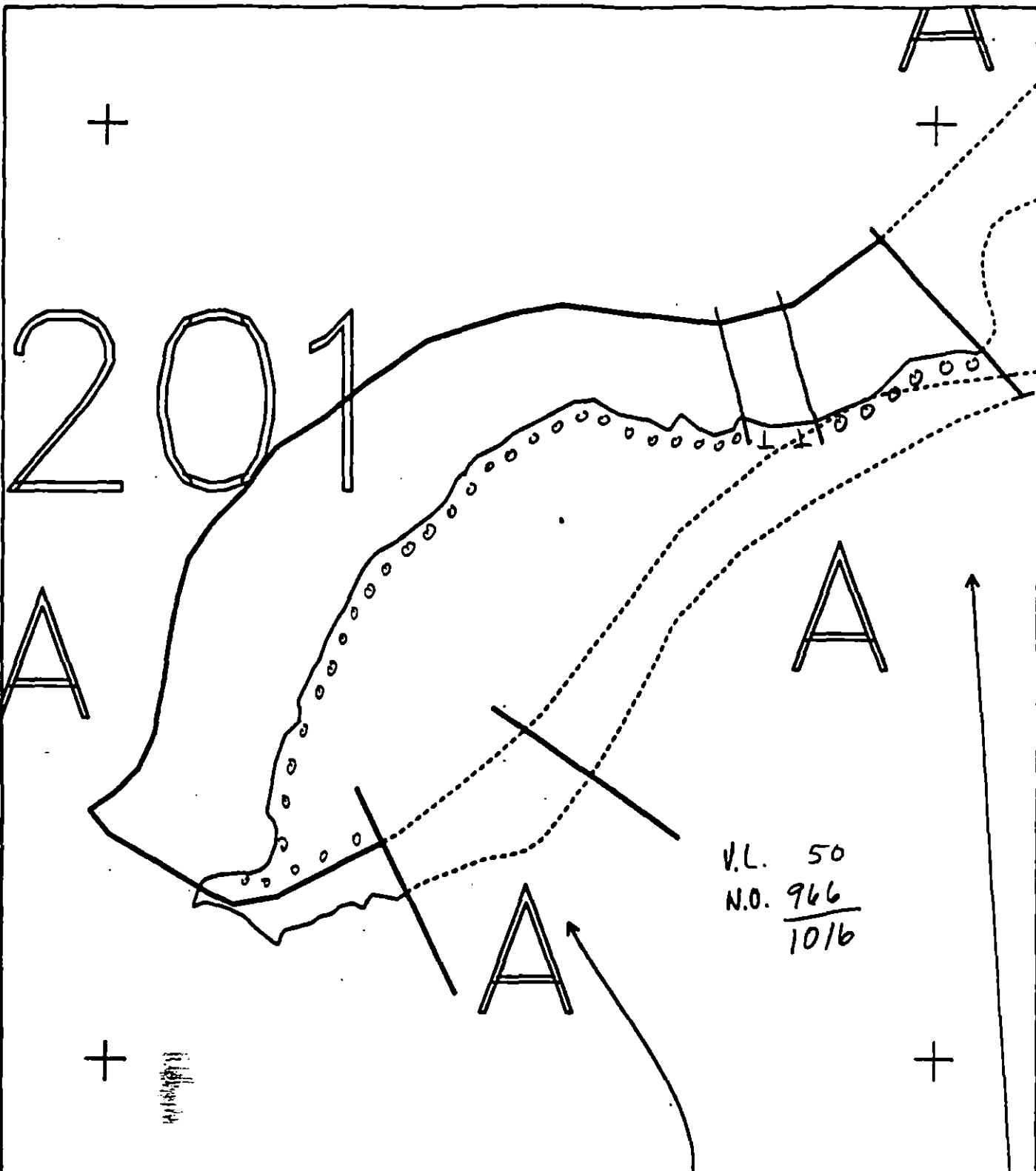
Low energy shore varying from fairly steep cobbles/boulder/bedrock to low angle pebbles/cobbles. Segment is crossed by 4 small streams (at least one of which is anadromous) and 1 major stream (anadromous).
 Biota in the form of barnacles, limpets and Mytilus (all generally sparse) extends well into the upper intertidal in most areas. Biota generally increases in abundance, though not necessarily in diversity, downslope through the mid intertidal and is characterized by moderate to dense populations of barnacles, moderate to dense Mytilus (both attached and interbedded), Patchy and variable Fucus, dense limpets, generally sparse Littorina (+ some Littorina egg masses), and sometimes amphipods and eel blennies. Pebble/cobble flats dominated by interbedded Mytilus, barnacles, limpets, Fucus.
 Biota in the remaining small area of surface oil consists of sparse barnacles, limpets. Adjacent downslope area characterized by moderate to dense barnacle populations, interbedded Mytilus, patchy Fucus, dense limpets and sparse Littorina.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			eel blennies
Seabirds			
Waterfowl	Goldeneye	12	
Gulls/kittiwakes	Glaucopteryx	±10	
Shorebirds			
Corvids	Raven	1	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.



XXXX	Wide	KN0201 A ADEC Subsegment Length: 1010m METERS 0 100 200 AK State Plane Zone 4 44020100	Subdivision Field Map
////	Medium		Map Key: KNKN0201Aa
----	Narrow		Name: <u>HARPER</u>
TTTT	Very Light		Date: <u>2 MAY 91</u>
0000	No Oil		Date Entered:

SURFACE OILING MAP
reviewed 5/9/91 KG

Reviewed: MC 5/9/91
OG 4 of 4

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16872

SEGMENT KN-201 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). Only stream no. 226-30-16872 had a specific Anadromous Fish Stream Evaluation conducted. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-201A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/01/90

ADEC R. M. Mearns

EXXON AMY. LEAD

for NOAA G. A. Reiter

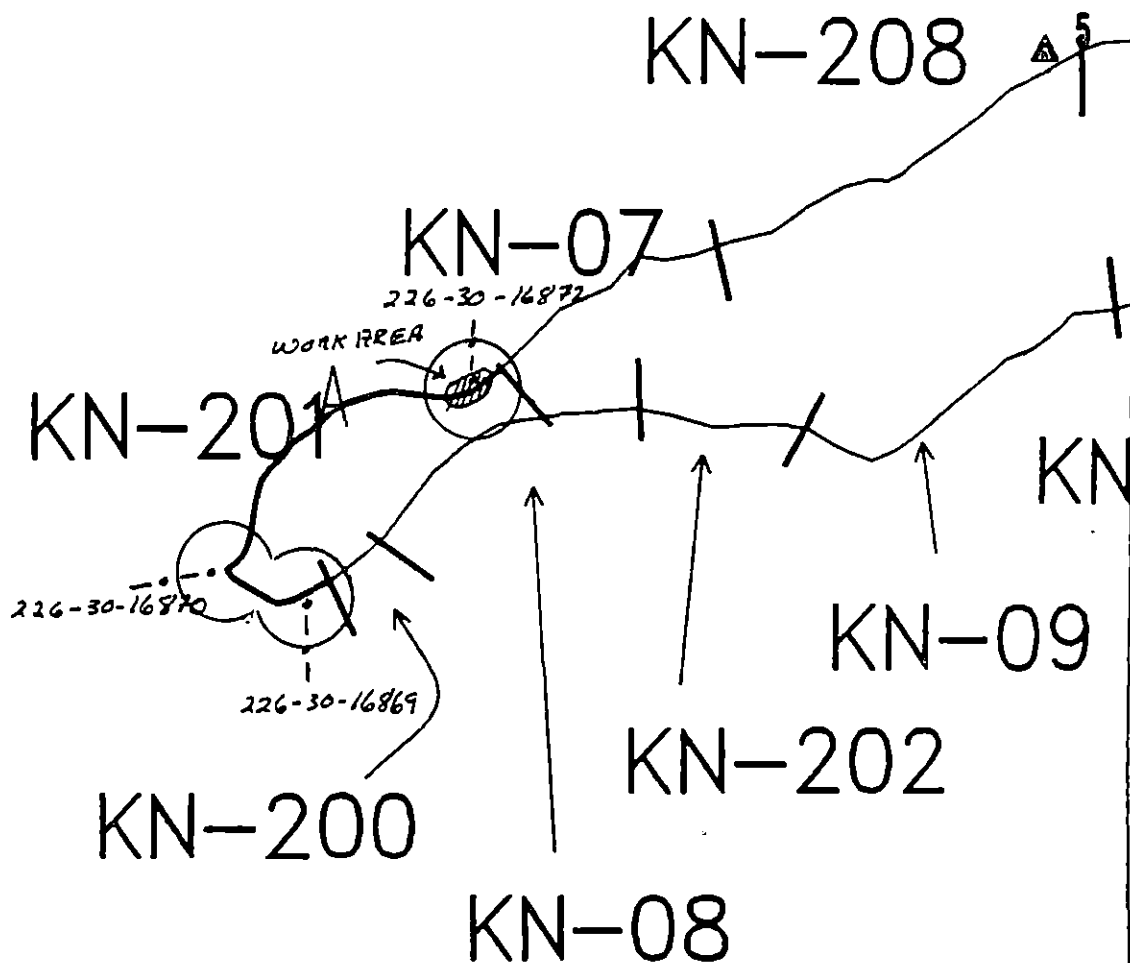
USCG G. A. Reiter

FOSC W. D. Rame, CDR, USCG DATE 6/2/90

Retiring

Prepared By: Anders Mjølhus WIK

Date 5/31/90



Anadromous Stream Evaluation: 226-30-16872

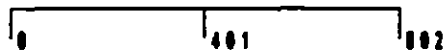


Exxon Company, USA
Map Key: KN1-KN-201
May 11, 1990



ECOLOGY MAP SEGMENT KN-201 SUBDIVISION A (1 of 1)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1316 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Three anadromous streams in KN-201: 226-30-16872, 226-30-16869, 226-30-16870.

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

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

6V Recreation: Anchorages (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. No ecological constraints re: intertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/4/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tar patties as indicated on sketch map, 2) removal of tarmat where indicated. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

[See Constraint Addendum Dated 5/31/90] WK

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90

ADEC Art Weisner [Signature]

EXXON Andy Tera [Signature]

NOAA Bruce Wescott [Signature]

USCG D.D. Rome [Signature]

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

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Three anadromous streams in KN-201: 226-30-16872, 226-30-16869, 226-30-16870.

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

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

6V Recreation: Anchorages (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 unhoiled biota and substrate. No ecological constraints re: intertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Daniel McManus DATE: 5/9/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tar patties as indicated on sketch map, 2) removal of tarmat where indicated. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90

ADEC Art Weimer Art Weimer

EXXON Art Weimer Art Weimer

NOAA Burt Wescott Burt Wescott

USCG D.D. Rome D.D. Rome

FOSC: My L DATE: 5-18-90

SEGMENT ST/ KN 201

STREAM: 226-30-16872

DATE 1 122 90

CHECKLIST

- ☐ RI Answer
- ☐ Approx. Scale
- ☐ Seq/Beh. Entry
- ☐ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/L/WL
- ☐ SPL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

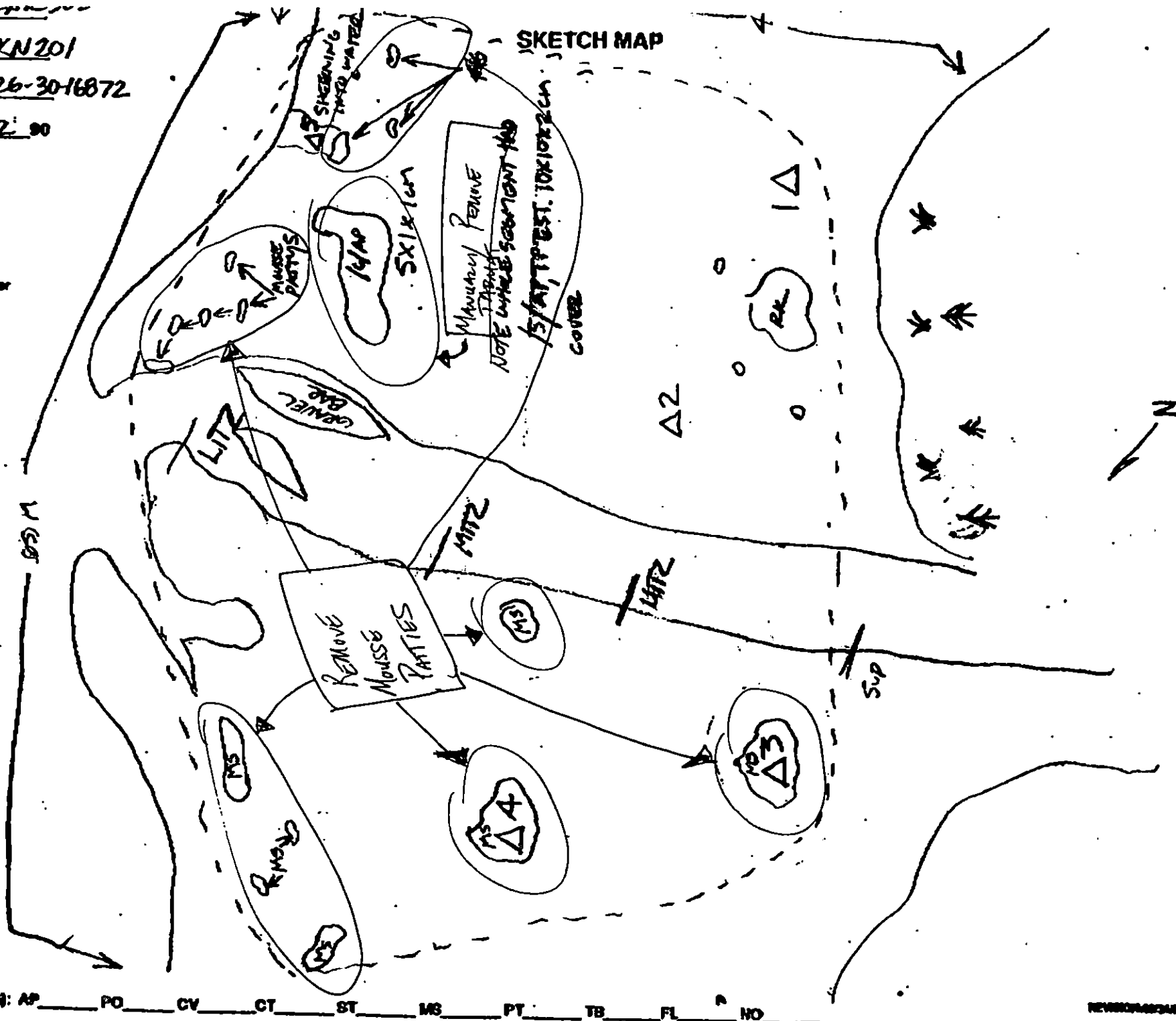
LEGEND

- 1 
 P1 - No Subsurface Oil
- 2 
 P1 - Subsurface Oil ..
- 
 Continuous Distribution
- 
 Broken Distribution
- 
 Patchy Distribution
- 
 Spashed Distribution
- 
 Old Vegetation
- 1 
 Photo location, direction,
 and number

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

NEW ORLEANS, La.

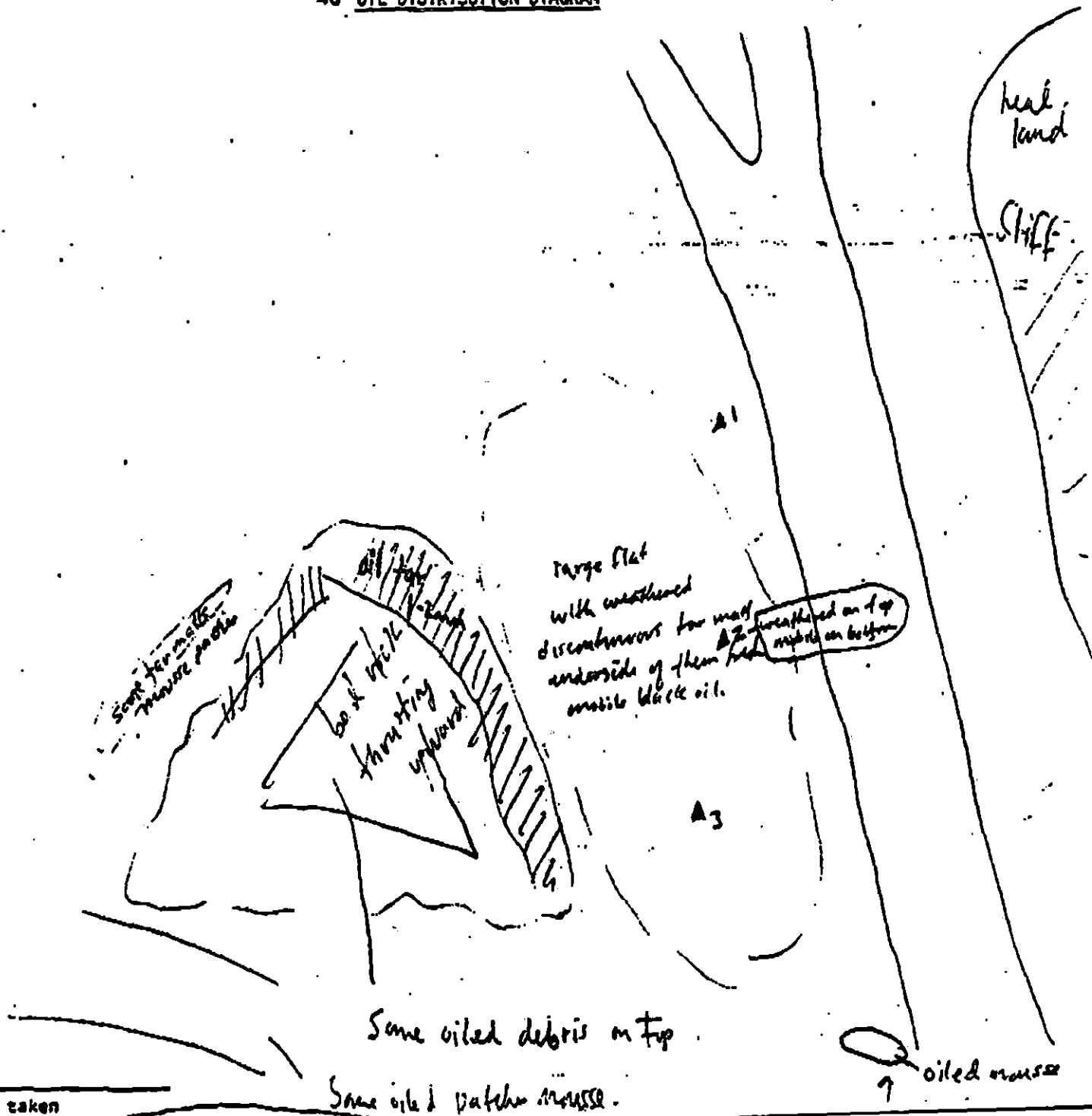
SKETCH MAP

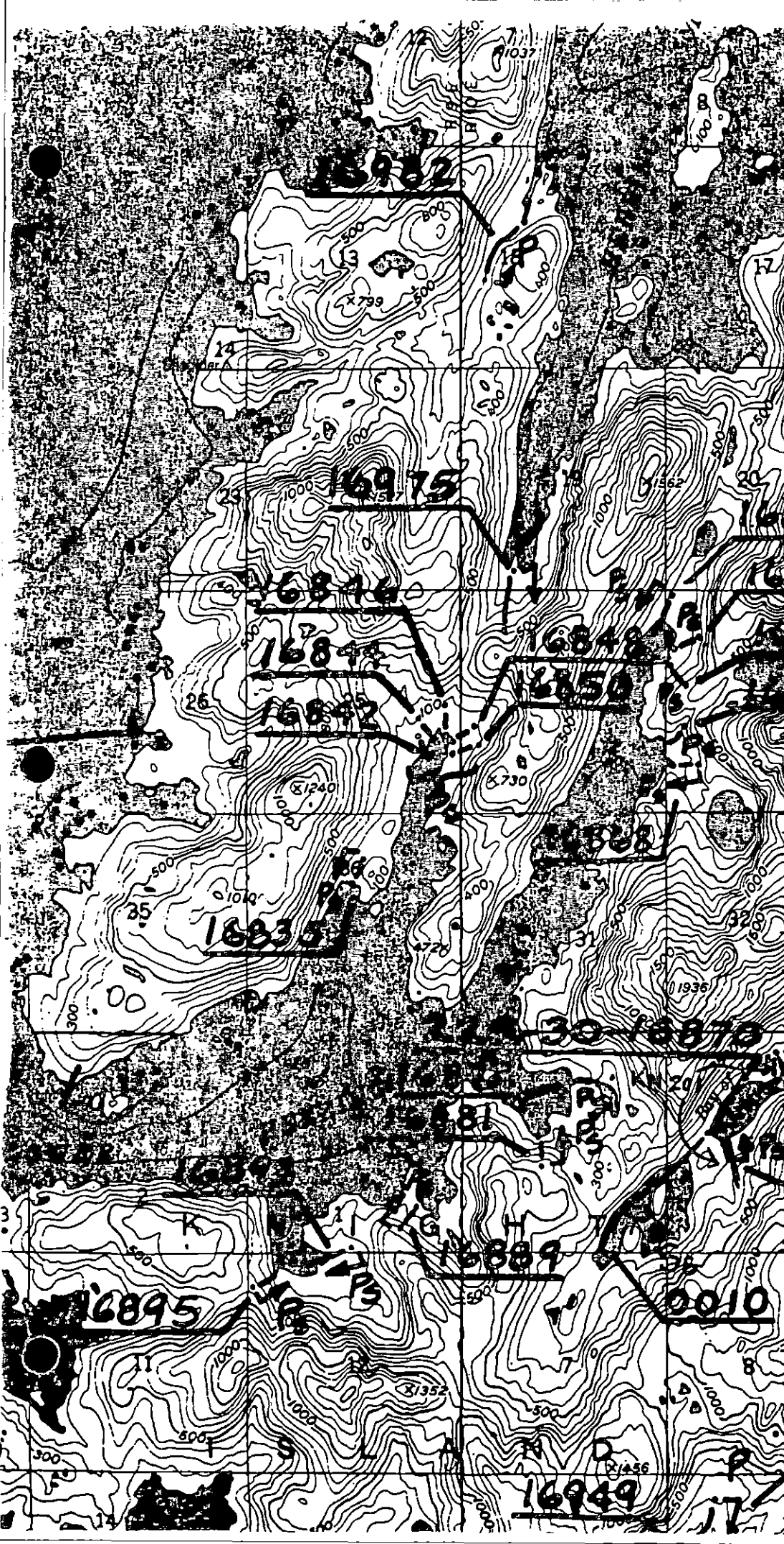


48 PHOTOLOG

FRAME(S)	DESCRIPTION
pit #1	15cm deep no oil observed
pit #2	8cm deep hole 3cm oil from top down
pit #3	12cm deep pit oil surface down 4cm oil
Top of Knoll North of Green has 2 partially oiled trees (stumps) also oiled grasses/kelp/debris. Also the LITZ and SUPRA IT are still partly covered in snow and have thick areas of oiled debris/mousse etc.	

49 OIL DISTRIBUTION DIAGRAM





16982

16975

16846

16844

16842

16835

16870

16893

16889

16895

16949

16862

16863

16864

16866

1687211

4 N.

3 N.

(SEWARD B-2)

16869

16950

16952

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-201 A

STREAM NO: 226-30-16872

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Three anadromous streams in KN-201: 226-30-16872, 226-30-16869, 226-30-16870.

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

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

6V Recreation: Anchorages (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 unhoiled biota and substrate. No ecological constraints re: itnertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

X Manual Pickup

_____ Bioremediation

X Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

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

FIELD SHORELINE COMMENT SHEET

39/43

SEGMENT ST / KN-201 SUBDIVISION: ASC* 226-30-16872 DATE 22 APR 90

USCG
NAME Kerwin L. Drohen SIGNATURE K. L. Drohen

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Agree.

ADEC → ADF&G
NAME Rick Gustin SIGNATURE Richard Gustin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS Perform work at a minimum of (0.7 tide)
Remove scattered broken tar matts which cover areas ranging from upper intertidal to lower intertidal on both east and west sides of creek.
There are a few scattered patties west of the creek near a smaller creek - these should be manually removed.
The flat on the ^{east} side of the creek in the upper inter-

LAND MANAGER → None
NAME Rick Gustin SIGNATURE Richard Gustin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
tidal zone has scattered bands of matts needing removal.
Perform a survey of the entire ITZ prior to work to get a feel for the distribution of matts.
Remove any oiled debris found.
Also be careful not to remove matts.

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04/73

OG EAL LARSON USCG DREHER, CWE SEGMENT ST/ KN201 4/A
 BIO KEN CLITCHLOW LAND REP STREAM 226-30-16872 (OF)
 EXXON DALLYN YVES ADFG 22K 0-21N-11MEK WISEMAN TIME/LH :10 to 18 :50
 TEAM NO. 14 TIDE LEVEL + DATE 4/22/90
 EST. SUBDIVISION LENGTH: 65 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 5 % P 10 % G 60 % S 20 % M 5 % V 5
 SLOPE: Long 100 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 55 m M 55 m N 55 m VL 10 m NO 55 m

SURFACE OIL

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

PAVEMENT H F (S) 10 sq. m by 2 c

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW (S) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS ☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	Y	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		NO	UC	1	2	3	4	SU	U	M	U				
1	8					✓	•							✓							10, 45, 50, 10, 60
3	9					✓	•							✓							60, 30, 60, 50
2	16					✓	•							✓							10, 60, 30, 80
4	14					✓	•							✓							50, 60, 50, 50
5	10					✓	•									✓		Y			

COMMENTS

REVIEWED JW DATE 4-24-90

SEGMENT ST/KN201

STREAM 226-30-16872

DATE 1 122 90

CHECKLIST

☐ H Area
☐ Approx. Scale
☐ Seg/Dist Study
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HULL/VOL
☐ SBL
☐ Profile Location(s)
☐ Profile(s)
☐ PH Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

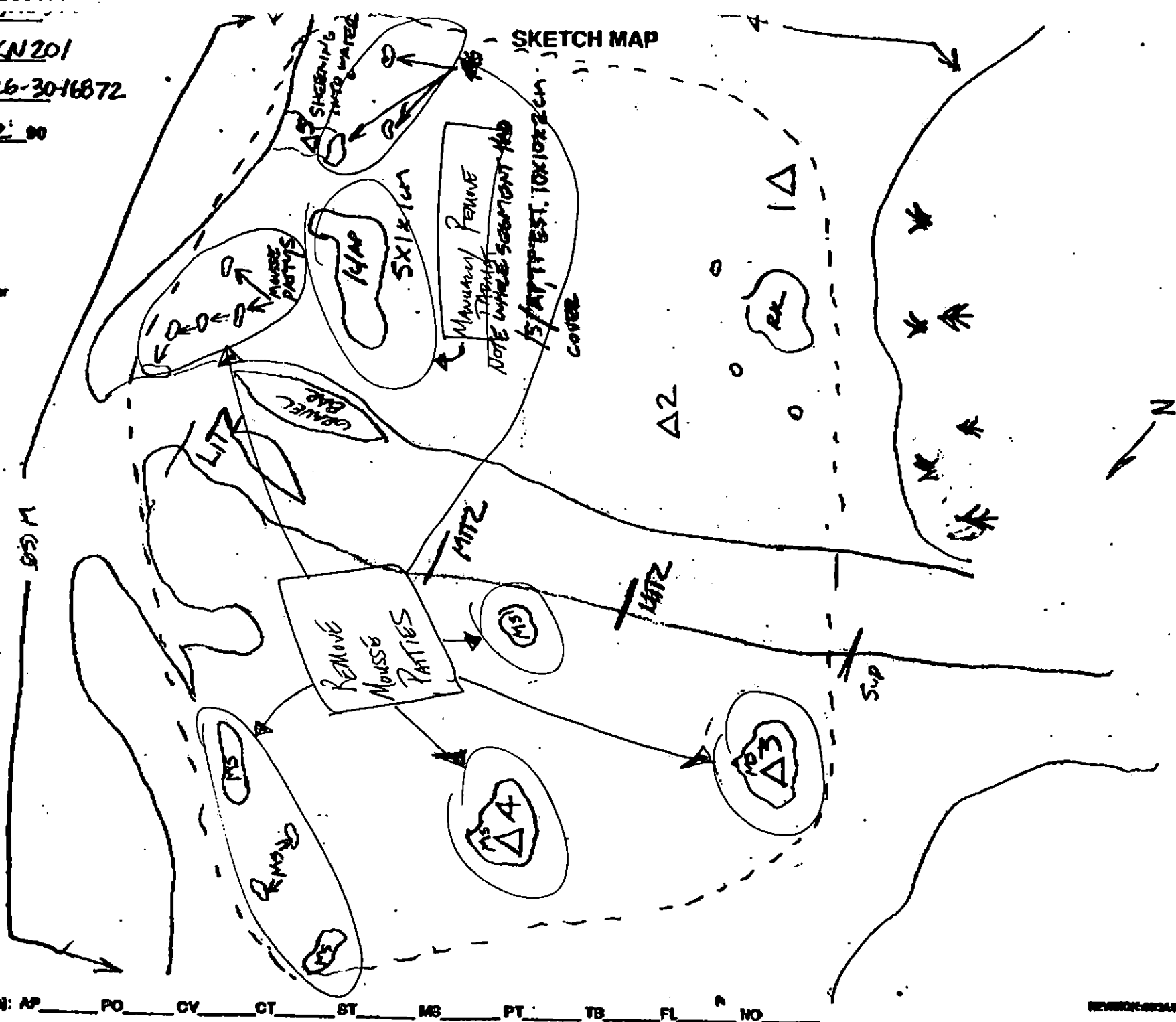
CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Old Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



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

REVISION: 08/24/90

40/43

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: SS ☒ OS TS AYS SCHA HNS PTA 2 REGION: ☒ PWS KP, CI K, AP

METHOD: Aerial ☒ Ground Boat

3 DATE: 4/22/90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: R. Gustin

4 START TIME: 1710 16 HIGH TIDE HTS: 1 22 OBSERVERS: A. Weseman

5 STOP TIME: 1810 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG

6 SEGMENT #: KN134 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y ☒

7 STATION #: 19 TIDE HT AT SURVEY: 25 VIDEOS TAKEN: ☒ N TAPES: 90 AJW 01 555

8 K-UNIT: Ebb Slack Flood Slack 26 STAT AREA: 27 USCG QUAD: Starts: 0387 Ends: 0416

9 LAT: 11 LONG: 28 SAMPLES TAKEN Y ☒ Numbers:

12 SOURCE: Map Locan Oil

13 LOCATION: Knight Is. Sediment

14 DESCRIPTION: Bay Is. between West & South Arm Biological

15 WATER Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	%	L	V	H	%
27 SURFACE COVERAGE				30%				
28 SURFACE THICKNESS	3-4cm							
29 PENETRATION	3-4cm							
30 OVERALL OIL IMPACT:	N	VL	L	N	H			
31 OIL TYPE:	☒ Pooled	☒ Mousse	☒ Tar	Asphalt	Sticky	Stain		
32 OILED DEBRIS:	☒ Y	N						
33 SHORELINE TYPE:	Headland	Low-lying Rocks	Beach	☒ Cove				
		Lagoon	Marsh					
34 WAVE EXPOSURE:	High	☒ Moderate	Low					
35 SUBSTRATE TYPE:	Bedrock 25%	Boulder 10%	Cobble 15%					
	Gravel 50%	Sand	Mud/silt					

36 CATALOGED ANAD. FISH SKELET? ☒ N

37 CATALOG #: 16865

38 STREAM NAME:

39 OIL IN STREAM BED? Y ☒ N

40 OIL ON STREAM BANKS? ☒ Y N

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

42 OIL WITHIN 1 MILE OF STREAM? ☒ Y N

Where:

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

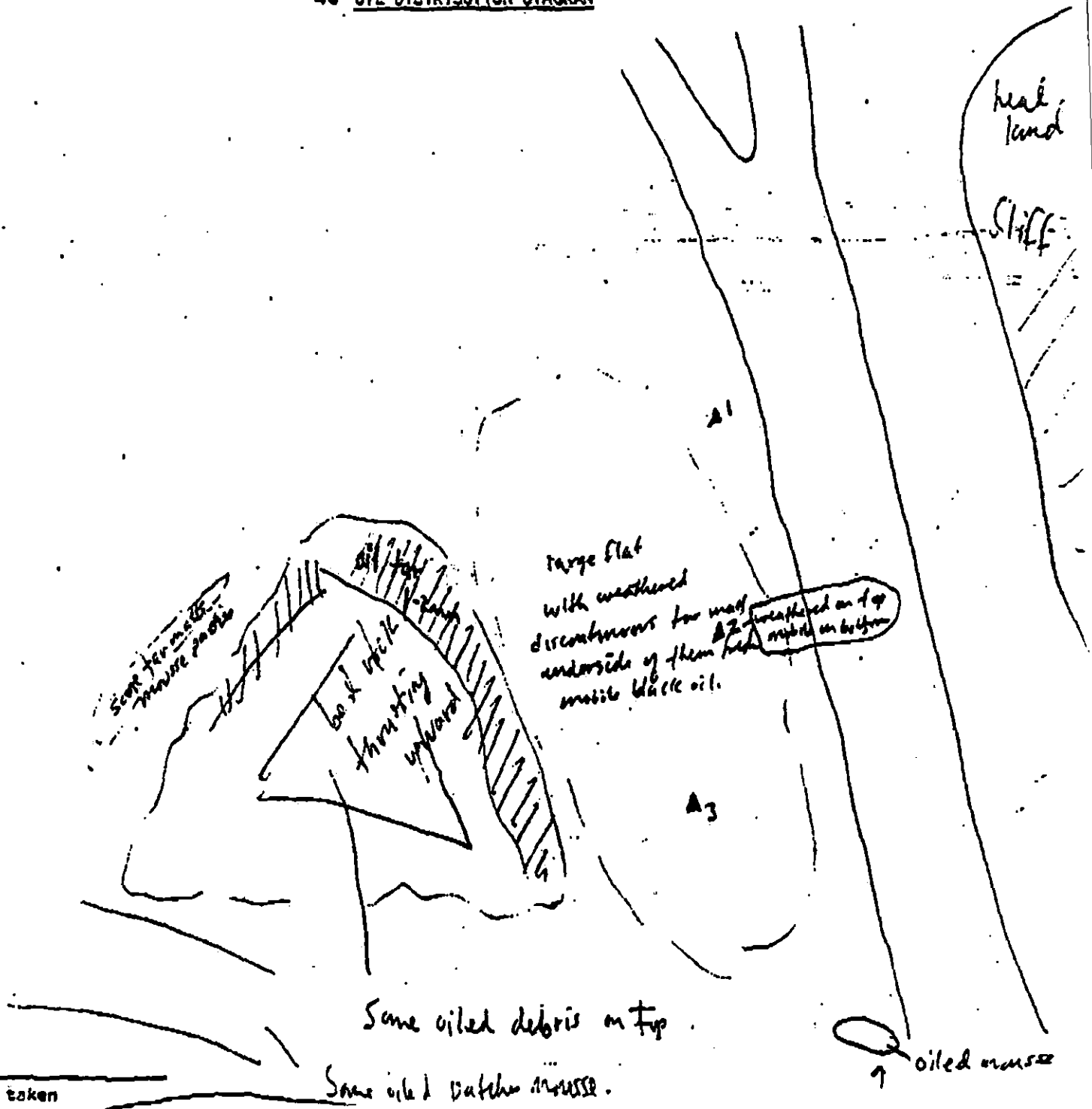
Species	Aerial	Ground

COMMENTS: (ATTN) Priming oil of concern is flat on north side of creek - 3-4cm thick tarballs - very mobile on underside. Some 1-2mm coating on bedrock. Some mousse patches 40-450 North in INTZ. Some oiled debris + debris

43 PHOTOLOG

FRAME(S)	DESCRIPTION
	pit #1 15cm deep no oil observed
	pit #2 8cm depth 3cm oil from top down
	pit #3 12cm deep pit oil surface down 4cm oil
	Top of Knoll North of Green has 2 partially oiled trees / stumps also oiled grasses / kelp / debris. Also the LITZ and SUPRA IT are still partly covered in snow and have thick areas of oiled debris / mousse etc.

46 OIL DISTRIBUTION DIAGRAM



42/43

Recommendations

Perform all work during proper tidal window
Remove via shovel or other mechanical means, oiled
tar mats, patties, crusted oiled gravels. on flat
north of stream. This flat runs from VITZ to LITZ.
Majority of tar mats lie in middle to upper ITZ.

Remove oiled debris, (ropes, grasses, sticks, branches
etc.)

Remove oiled grasses, cut off stump + roots
and other oiled parts of 2 trees on 12 well
and remove.

Perform survey of banks North + South of
stream bed and remove any oiled debris.

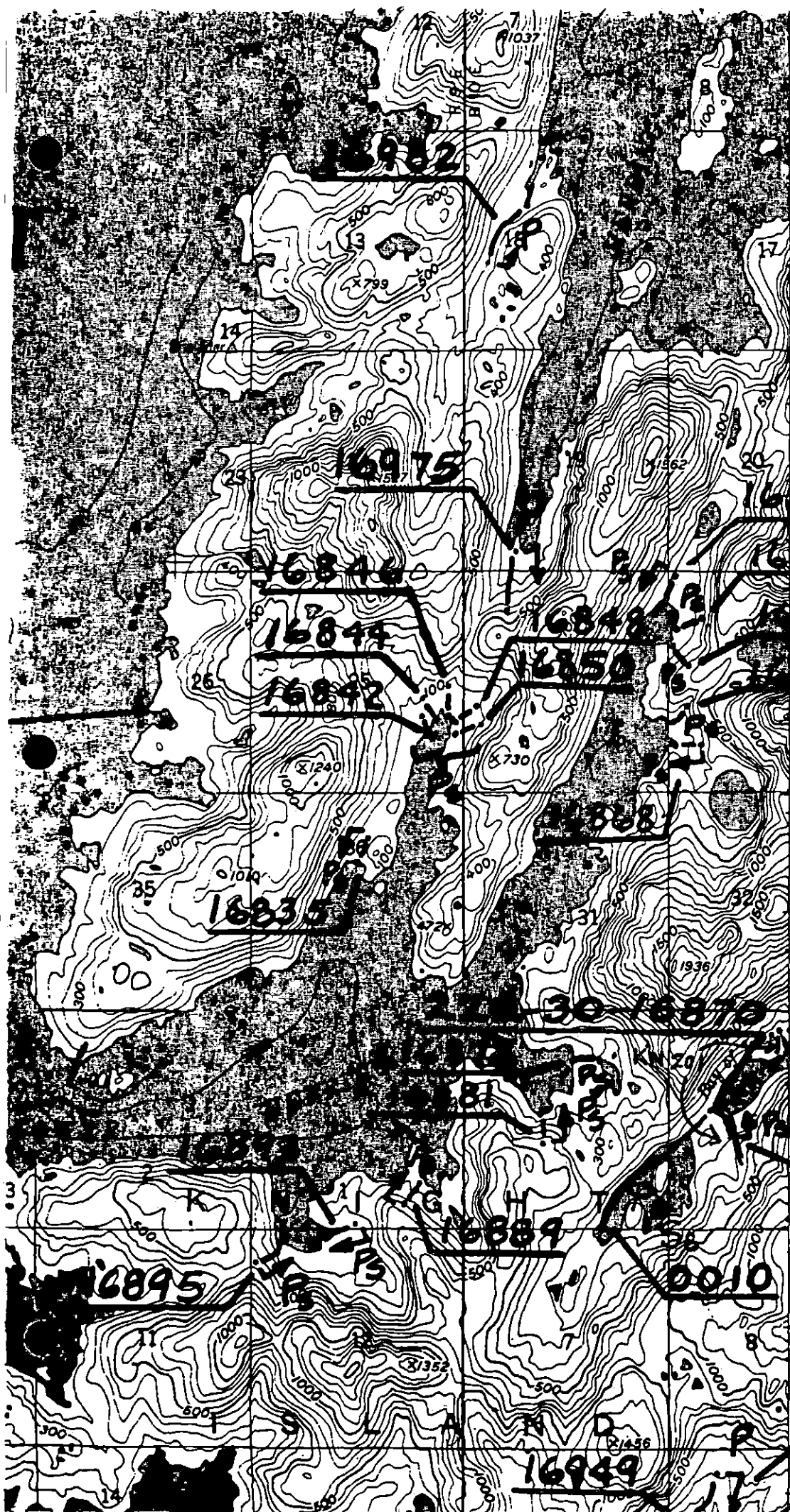
Take particular notice of U.I.T.Z. and
Supra I.T.Z. for oiled debris, moose,
etc and remove any thing found.

No bio remediation recommended.

Comments by Ken Critchlow:

Agree with ADFG recommendations

KRC



(SEWARD B-2)

4 N.
3 N.

(SEWARD B-2)

ASAP TAG REVIEW SHEET

Segment: KN201

Subd: A

Site: 1

Date

PRE-Review 11 AUG 90

Priority For Addressing In 1990

HIGH

~~X~~ MEDIUM

LOW

NTR

Treatment

Recommended:

MANUAL REMOVE AP

As per
ASAP
Followup Rec.
Sheet

Priority Site For Reassessment In 1991

YES

NO

~~X~~

CG

YES

NO

~~X~~

ADEC

YES

NO

~~X~~

EXXON

YES

NO

~~X~~

LAND MGR

TAB 13 AUG 90
Manual pickup AP

(med priority)

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASAP KN-201 Subd.: A Site: _____ Date: 8-9-90 1990

Conditions Observed: Two points at east end of segment (and
point west to KN-017) are areas containing a moderate
amount of AP, n3 (between boulders), OP, and OR subsurface
oil. Area appears to have received some local manual
removal and bioremediation during the summer 90 cleanup.

Followup Recommendations: Due to large areas of removable AP
and subsurface oil remaining, manual removal is
recommended to be followed by bioremediation.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Bob McCann
(name)

Robert M. C. - 1
(signature)

Comments: Above described oiling should be removed in 1990.
Treatment performed during summer of 1990 was inadequate.
Oil did not remove area of heaviest oiling because it was not characterizing
as a "Work Site" on maps provided by Exxon for ASAP project.

Exxon

John Dean
(name)

JN Dean
(signature)

Comments: I DID NOT PARTICIPATE IN SURVEY OF REFERENCED
Area. Nor I identified as Work Area

USCG

Don Davis
(name)

Don Davis
(signature)

Comments: Large area (80-100 m) of mousse asphalt, tar mat, etc. which requires
removal. Section is too large for removal by VECs. Treatment will have to
include removal and application of "oil" peeling manual removal.

Land Rep.

Lora Johnson
(name)

Lora L. Johnson
(signature)

Comments: AGREE WITH ADEC RECOMMENDATIONS. CAG IS NOT TAKING
A POSITION ON BIOREMEDIATION. SHOULD BE FURTHER TREATMENT
IN 1990.

SEGMENT AS / KN-201 SUBDIVISION: A SITE: 1 DATE 8-9-90

SCG

NAME David N. NOAA SIGNATURE David N. NOAA
DON DEWIS, GM, USCG

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This area consists of a gravel beach to the west and a rocky promontory to the east. Patties and sor-oil on the beach were broken up by the ASAP crew. The promontory was not checked by myself, but apparently contains more severe oiling. Would recommend checking the rocky area for remaining oil in 1991.

ADEC

NAME Bob McCreary SIGNATURE Robert B. McCreary

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Rocky point at East of segment was not surveyed. by OG because was not a designated work site on maps provided for Exxon ASAP Survey. However, I located a substantial amount (with CAC up) of AP, MS, OP, OR. * This area was not referred to on Oil Status or Oiling Map. However, ASAP has agreed to recommend further manual removal. Particular attention should be paid rocky point at East end of segment. * The Exxon policy of surveying only workable marked on the maps is greatly jeopardizing the integrity of the ASAP project.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. SEE SSAT SKETCH MAP ALSO. MANUAL REMOVAL OF OIL RECOMMENDED.

EXXON

NAME JOHN DEAN SIGNATURE John Dean

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

I AGREE FOR NEED FOR REASSESSMENT BASED ON ADEC AND CAC RECOMMENDATION. I DID NOT PERSONALLY SURVEY REFERENCED AREA. THE AREA IDENTIFIED FOR ASAP EVALUATION CONTAINED SPORADIC PATTIES WHICH WERE BROKEN UP BY ASAP TEAM AND WOULD REQUIRE NO FURTHER TREATMENT OR RE-ASSESSMENT.

SUBC VISION 17

TOTAL NO. SITES 1

TIDE LEVEL -1.510 - 0.8

OIL CATEGORY LENGTH: W m M 45 m N m VL 650 m NO 321 n US 0 m

SITE 3

[illegible][illegible]

James O

3/10/90

- PRIMARILY CT/ST-3 & CT/P ON THE NORTH SHORE OF THE EMBAYMENT.
- THE PEBBLES/CORALS BEACH TO THE WEST OF ANAD. STREAM 16872 HAS A VERY SPORADIC DISTRIBUTION OF CT/ST & ISOLATED PATCHES OF LISON WEATHERED BEDROCK NO. 102790 MOUNTAIN.
- THE ROCK CLIFF/OUTCROP TO THE WEST AND NOT SHOWING
- THE TWO ANAD. STREAMS ON THE SOUTH SHORE SHOWED VERY SPORADIC PATCHES

OG Rick Illie

SEGMENT ST/ KN-201

SUBDIVISION A-1 of 1

DATE 04/19/90

CHECKLIST

- ☒ Area
- ☒ Approx. Scale
- ☒ Any Club Entry
- ☒ Oil (lit)
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HRR/AM
- ☒ SST
- ☒ Profile Ltr
- ☒ Profile
- ☒ Pit Length
- ☒ Photo taken

LEGEND

1 Δ
No. No. Subsurface Oil

2 Δ
No. Subsurface Oil

CT/C
Automated Unit

CT
Inches

CT
Inches

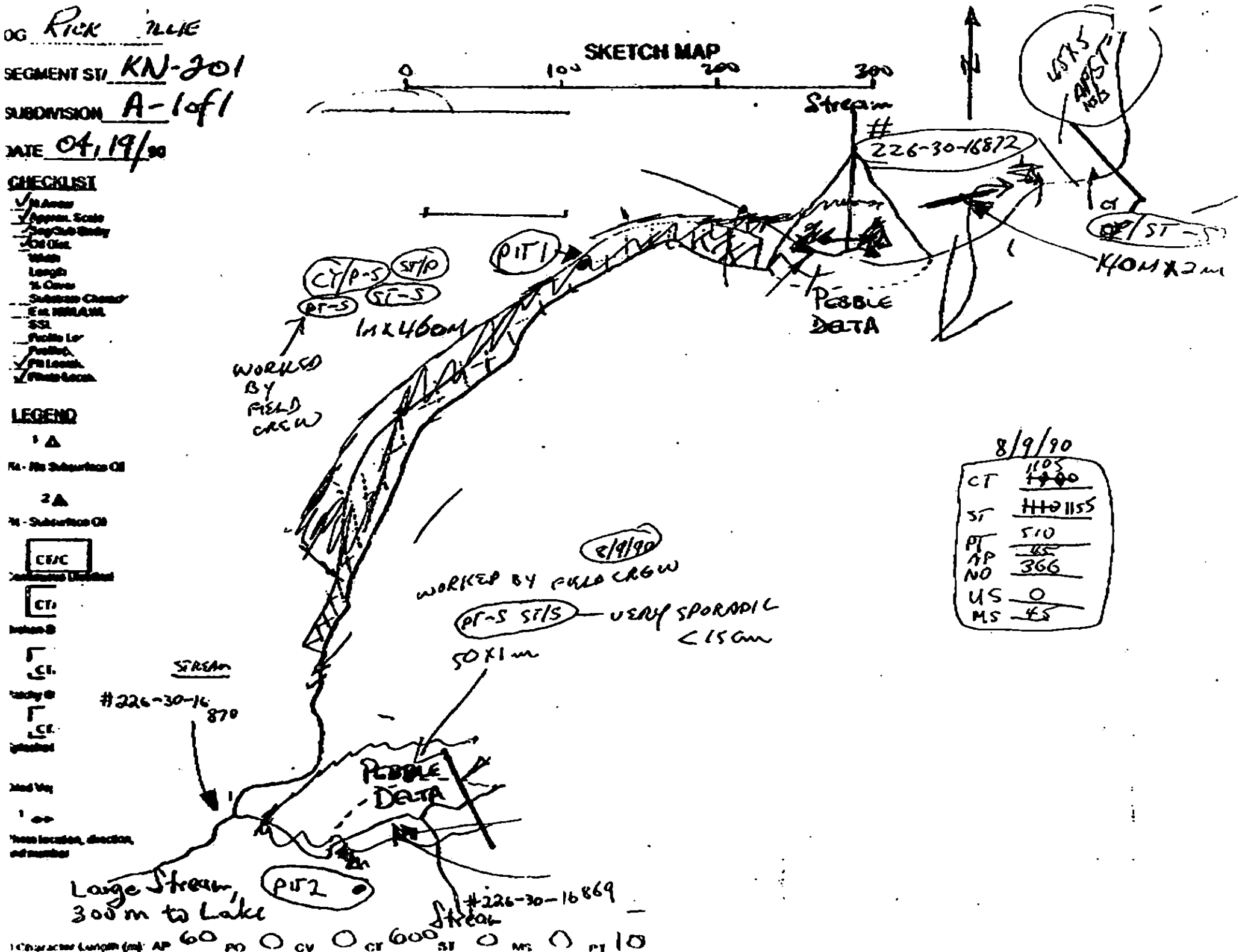
CT
Inches

CT
Inches

Notes location, direction, and number

Character Length (m): AP 60 PO 0 CV 0 CT 600 ST 0 MS 0 PT 10

SKETCH MAP



SITE #1
YES

201

A

A

A

yes '91 Dred
yes '91 R. B. M. G. H. ADEC
yes '91 JMD EXXON

XXXX
///

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

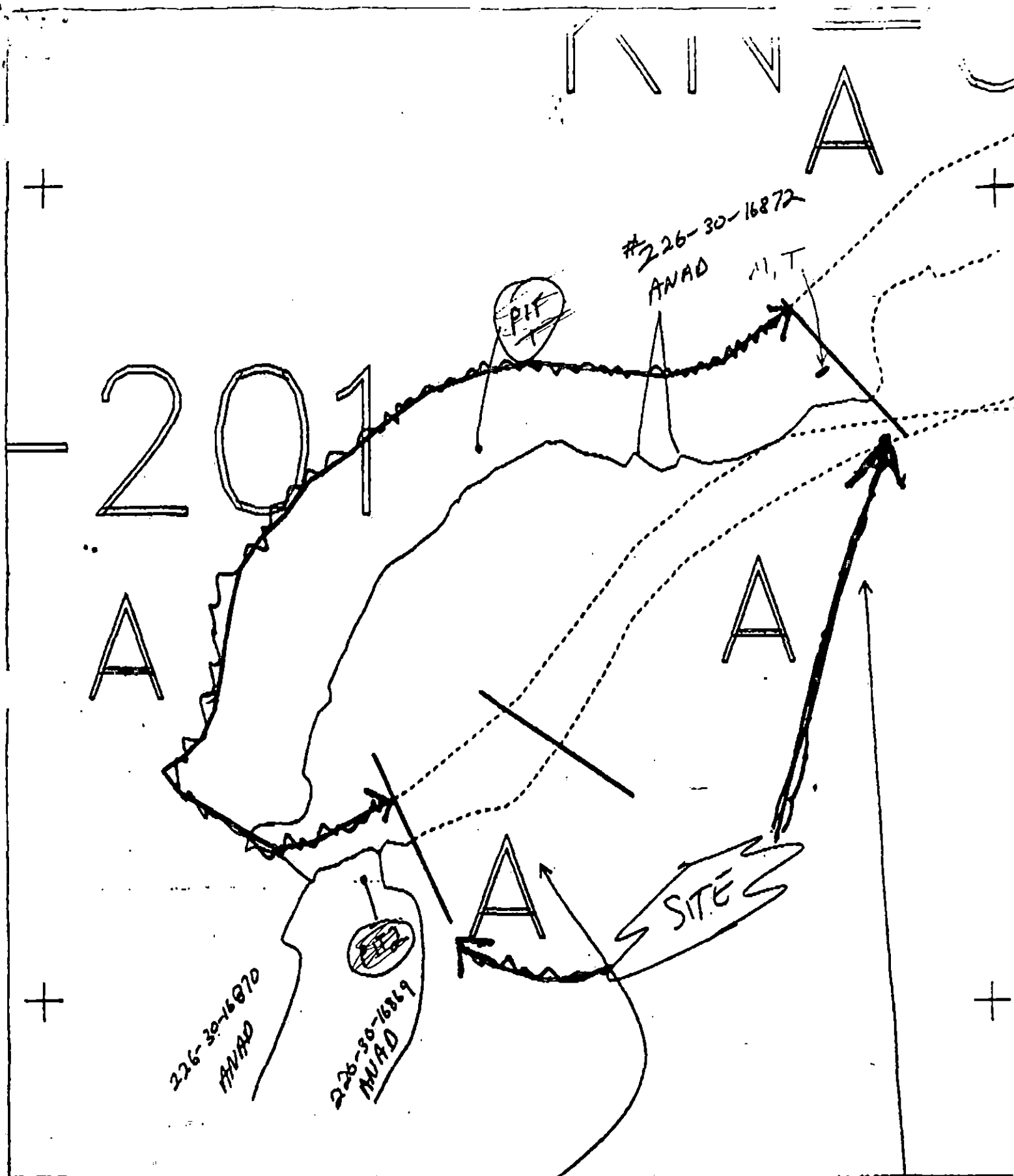
KN-201 A
ADEC Subsegment Length: 1016m
METERS

0 116 220

AK State Plane Zone 4 1:4692
116-2010



Subdivision Field Map
Map Key: KNIK-201A
Name: NAKASHIMA
Date: 8/9/90
Date Entered:



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

KN-201 A
 ADEC Subsegment Length: 1018m
 METERS

0 114 228
 AK State Plane Zone 6 114492
 kn-201a



Subdivision Field Map
 Map Key: KNIK-201A
 Name: NAKASHIMA
 Date: 8/9/90
 Data Entered:

ASAP Follow-Up Recommendations
TAG Recommendations - August 13, 1990

SEGMENT

CH-09	B	Site 1	Manual pickup of tarmats, rake and bioremediate*	A.P.	<i>A</i>
		Site 2	Manual pickup of tarmats, rake and bioremediate*	H.P.	
EL-52	B		NTR		
EL-55	A		Manual till - mop up mobile oil with snare and bioremediate - low priority		
EL-56	C		Storm berm relocation (mechanical if necessary)		
EL-58	C		NTR - Reassessment in '91		
EL-58	D		Customblen application and reassessment in '91		
ER-07	A	Site 1	NTR		
		Site 2	Manual pickup of tarmat and bioremediation (low priority)		
EV-05	A		Limited manual pickup followed by bioremediation - Customblen (low priority)		
EV-05	B		Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)		
EV-12	A		Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediate		
EV-15	A		Manual removal of MS/AP/OP/HOR where accessible - bioremediate (H.P.)		
EV-26	A		Manual removal of AP and bioremediate (M.P.)		
EV-37	A		Manual pickup of OP/HOR sediments (relocate armor to access)		
EV-39	A		Bioremediate		
FL-01	A		NTR - work done		
GR-301	B	Site 1	Manual pickup of mousse (H.P.)		
		Site 2	NTR		
		Site 3	NTR		
GR-301	B	New Site	Manual pickup of mousse (H.P.)		
KN-07	A		Manual pickup of AP/OP/mousse and bioremediate (H.P.) both areas		
KN-08	A		Manual pickup followed by bioremediation (L.P.)		
KN-201	A		Manual removal of AP followed by bioremediation (M.P.)		
KN-211	E	Site 1	Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.		
		Site 2	NTR		
		Site 3	NTR		
		Site 4	NTR		
KN-400	A	Site 1	Manual removal of accessible AP followed by rake and bioremediation (L.P.)		
		Site 3	NTR		
KN-404	A		Bioremediate and assessment in '91		
KN-405	A		Further TAG evaluation - bioremediate and assessment in '91		
NK-02	A		Manual pickup AP/mousse - bioremediation (M.P.)		
PD-04	A		Manual pickup of mousse patties and bioremediation, Inipol and Customblen (M.P.)		
PN-01	A		Manual pickup of AP and bioremediation (L.P.)		

* ANADROMOUS STREAM CONSTRAINT

TAG

EXXON

ADEC

USCG

NOAA

DATED

FOSC

DATED

Aug 15 1990

(See attached Archaeological Constraintsheet) *with 8/16/90*

[Signature]

17 August 1990

work with land manager in effecting the abn

DATE 04, 19/90

CHECKLIST

☒ ✓ Area
☒ ✓ Approx. Scale
☒ ✓ Day Job Study
- Od. Dist.
- Width
- Length
- % Cover
- Substrate Character?
- Est. NUMBER
- SSI
- Profile Lr
- Polling
✓ Full Length
✓ Photo Log

LEGEND

FM - The Subsurface Of

2 ▲
PM - Subscriptions Q4

CHAC
Continuous Health Assessment Center



5. **Cl.**

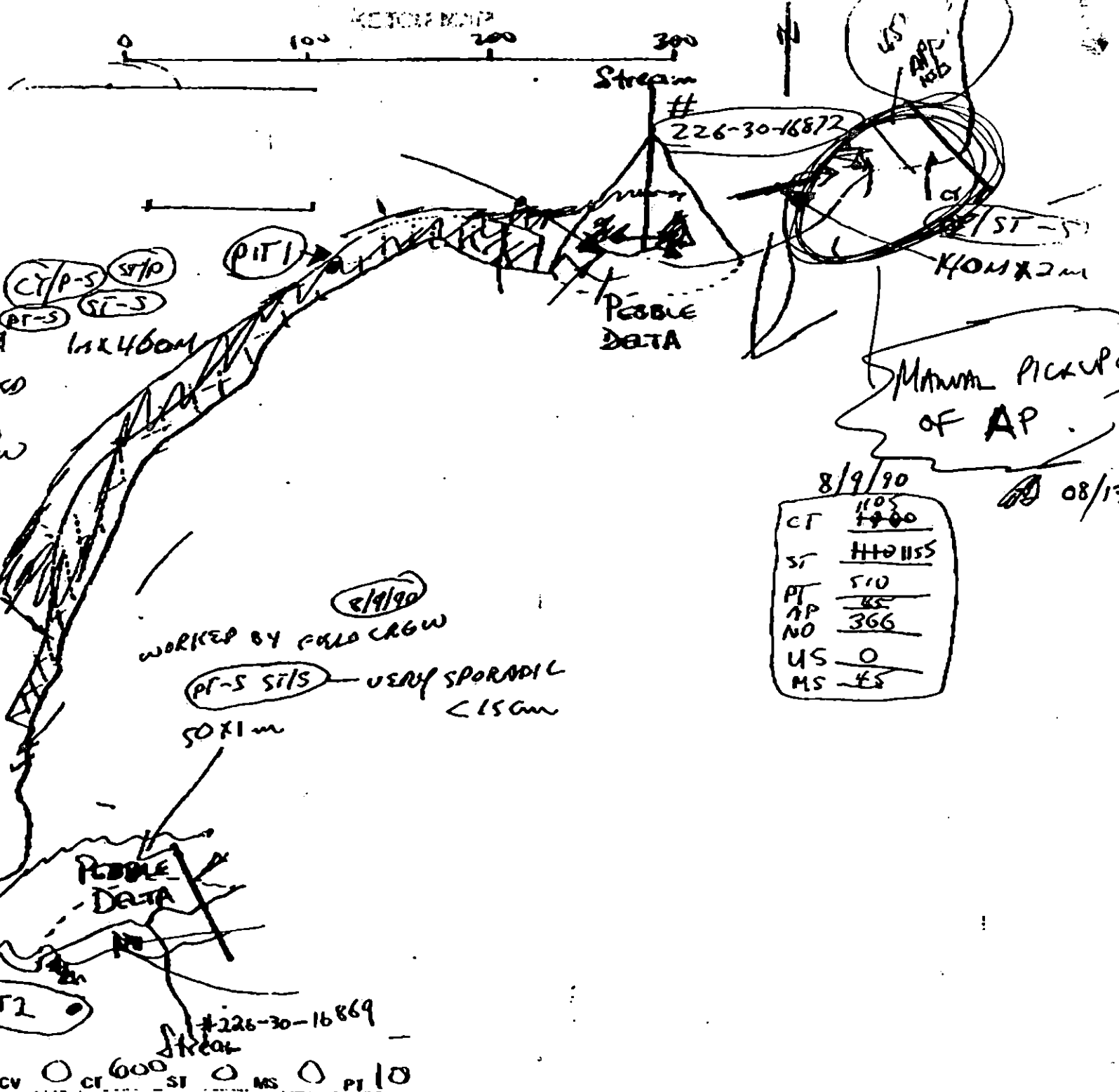
Patching the
 F
 CR
 System

Quesada Vay

Phase location, direction,
and number

Large Stream, (300 m to Lake)

Character Length (in): AP 60 PO 0 CV 0 CF 600 SI 0 MS 0 PT 10



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-202

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-202 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 351 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN- 202 SUBDIVISION: A DATE 3/30/90USCGNAME SCOTT RAINFORD SIGNATURE Scott Rainford MST☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME Wesley Ghormley SIGNATURE Wesley Ghormley☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Mousse patties that are scattered thru-out this segment with a thickness up to 1" could be easily picked up and discarded using manual labor with shovels and trowels.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

JG St. Michaels, AK USCG S. RAINSFORD SEGMENT ST/ KN-202
 BIO M.A. Scott LAND REP L. Johnson SUBDIVISION A
 EXXON J. BUTLER ADEC W. GORMLEY TIME 13:00 to 13:30
 TEAM NO.: 3 TIDE LEVEL: +5 to +6 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 354 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 50 % B 30 % C 15 % P - % G 5 % S - % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 350 m NO - m
2.19

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	1C	1B	1P	1S	2B	2C	2D	2E	2F	2G	2H	2I	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER				X									X			
COAT				X					X	X	X					
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT: H F S - sq. m by - cm

PATTIES / TARBALLS - 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. -

Frames -

SUBSURFACE OIL - NO ITS THINK THERE IS NO SUBSTRATE HERE

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	2B BN	2C BN	2D RW	2E OV	2F TL	2G TL	2H LO	SU	UI	MI		
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS steep rocky shore w/ patchy splats of mousse as
at @ surfz. Ice w/ oil from water end of
the arm is melting and releasing oil as fine RW
sheen. (rainbow)

SHORELINE OILING SUMMARY

REVISION NO. 03/22/80

OG G. MACDONALD USCG S. DAINSFORD SEGMENT ST/ KN-202
 BIO MA SCOTT LAND REP L. JOHNSON SUBDIVISION A
 EXXON J. BUTLER ADEC W. GORMLEY TIME 13:00 10:13:30
 TEAM NO.: 3 TIDE LEVEL: +5 10 +6 DATE 3/30 / 90
 EST. SUBDIVISION LENGTH: 350 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 50 % B 30 % C 15 % P - % G 5 % S - % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 350 m NO - m
217

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	R	B	P	S	BR	OR	OL	OP	NO	LA	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT				X						X X X				
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE -#BAGS -

Photographs:

Roll No. -Frames -

SUBSURFACE OIL — NO ITS SINCE THERE IS NO SUBSTRATE HERE

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		VO	UC	BR	OR	OL	OP	NO	LA	SU	U	M	U		

COMMENTS

steep rocky shore w/ patchy splotch of mussels on
 at c surf. See w/ oil from west end of
 the arm is melting and releasing oil as fine RW
 sheen.
 (rainbow)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN 202 Subdivision A Date (mo / day / yr) 3/30/90

Time (24 hr) 1300 Biologist MATSON

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 5 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.

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:

1 bald eagle
low tidal zone not observed

Ecological Considerations:

OG G. MACDONALD

SEGMENT ST/ KN-202

SUBDIVISION A

DATE 3/30/90

243

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

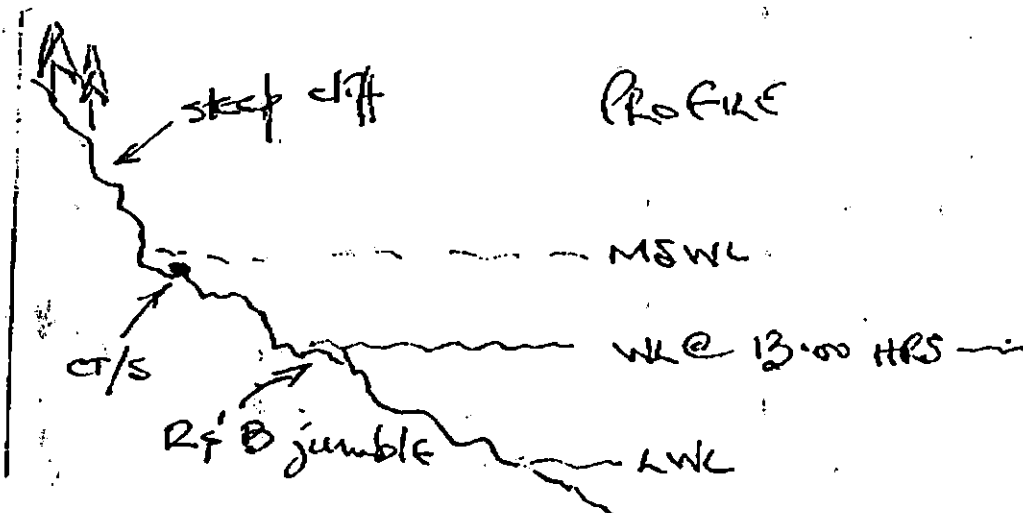
Splashed Distribution

Oil on Vegetation

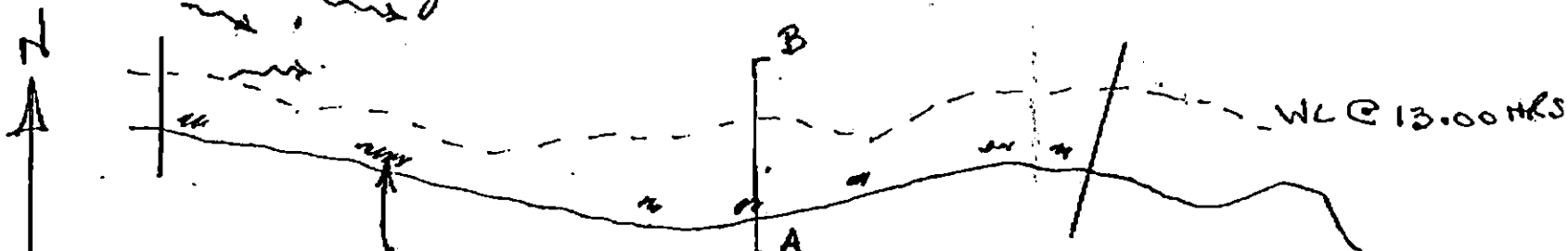
1 $\bullet$

Photo location, direction,
and number

$\rightarrow$ sheen



drops & wisps of RW
seen w/ ice from
west end of bay.



un = occasional CT/S < 1%

@ SUTZ ; LBN & DBN, soft,
sticky mouse ; typically trapped in rock & boulder crevices.

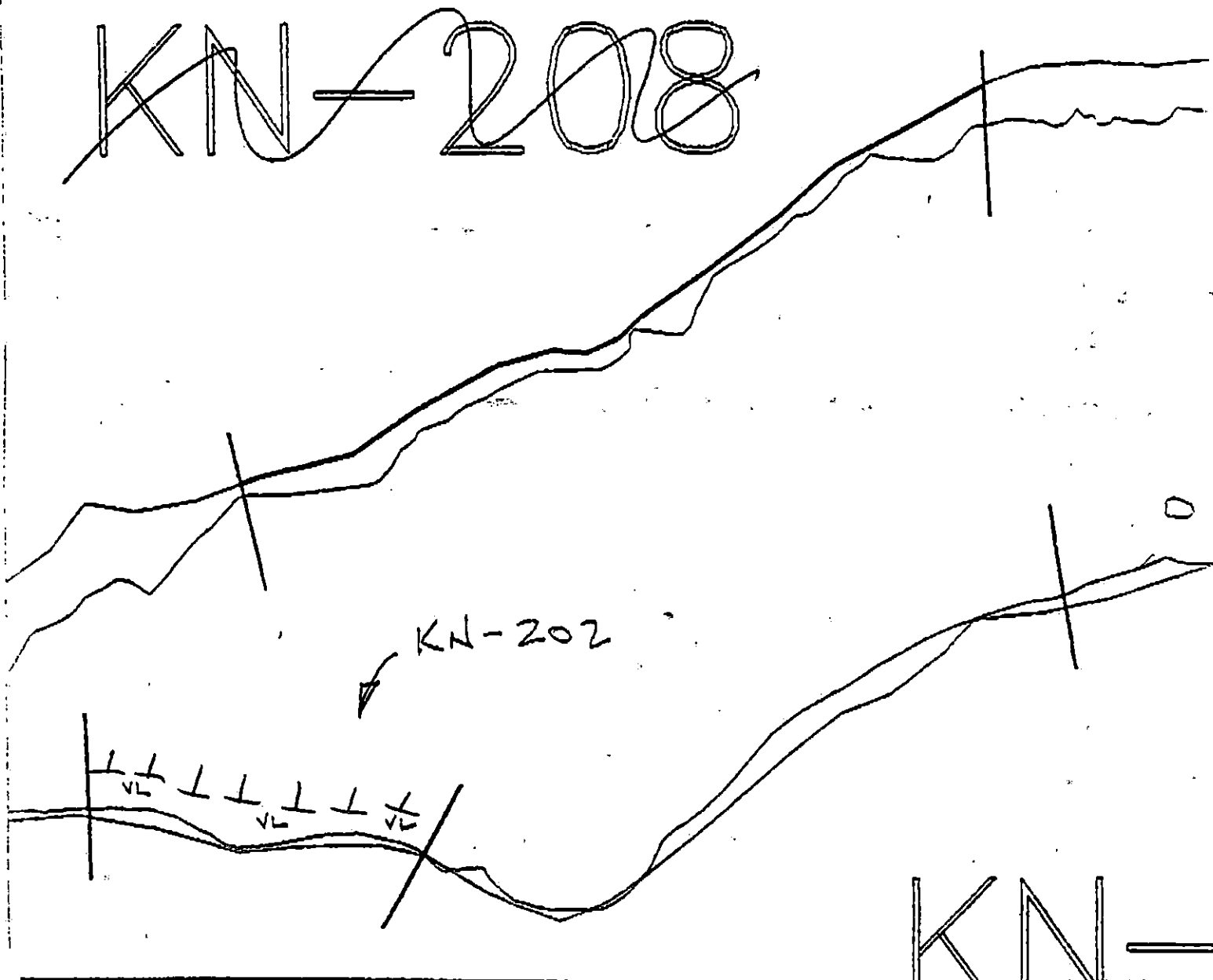
Oil Character Length (m): AP — PO — CV — CT 350 ST — MS — PT — TB — FL — NO —

REVISION: 01/24/90

393

K

KN-2018



KN-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-202

EXXON

Segment Length: 351m



Map Key: PWS-335

Name: G. MARSHALL

Date: 3/30/90



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-202 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

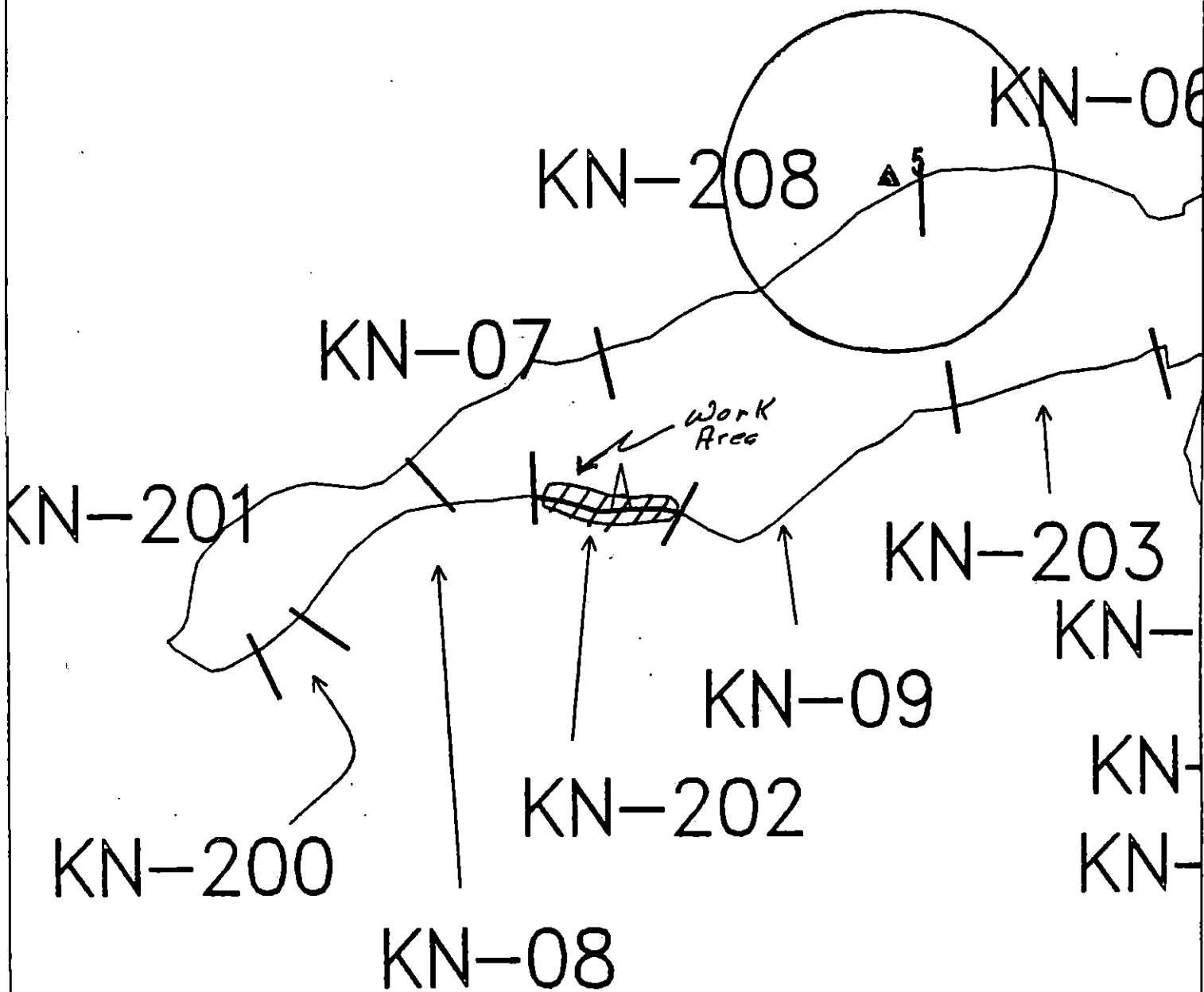
ADEC Art Weiner Det. Weiner
EXXON Andy T. M.
NOAA B. Warratt
USCG W. J. Hall, AD

FOSC

DATE 5-24-90

Prepared By: Anden Meyer WKK

Date 5/22/90



Exxon Company, USA
Map Key: KNI-KN-202



ECOLOGY MAP
SEGMENT KN-202
SUBDIVISION A (1 of 1)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-202 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

SHPO SIGNATURE: Charles E. Hume DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 351 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

[See Constraint Addendum Dated 5/22/90] WJK

TAG COMMENTS: MOUSSE PATTIES INDICATED BY ADEC REP.
PRIOR TO MOBILIZING CLEANUP TEAM TO THIS LOCATION
MONITORS TO CHECK FOR THE NEED TO RETRIEVE
THE PATTIES INDICATED.

TAG APPROVAL DATE:

4/12/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Paul Wescott
USCG M. J. HALL
FOSC: WJK DATE: 5-6-90

SHORELINE EVALUATION

SEGMENT ST/ KN-202 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

SHPO SIGNATURE: Charles E. Hume DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 351 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MOUSSE PATTIES INDICATED BY ADEC REP.
PRIOR TO MOBILIZING CLEANUP TEAM TO THIS LOCATION
MONITORS TO CHECK FOR THE NEED TO RETRIEVE
THE PATTIES INDICATED.

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER FOSC: W L DATE: 5-6-90
EXXON ANDY TEAL
NOAA Burt Wescott
USCG M. J. HALL

OG E. DONALD

243

SKETCH MAP

SEGMENT ST/ KN-202

SUBDIVISION A

DATE 3/30/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

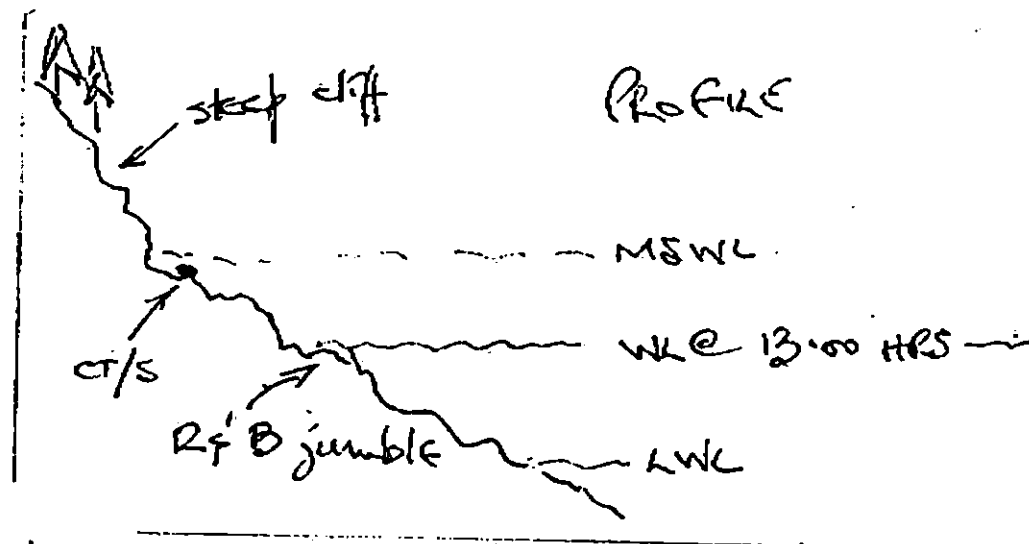
$\boxed{CT/P}$
Patched Distribution

$\boxed{CT/S}$
Splashed Distribution

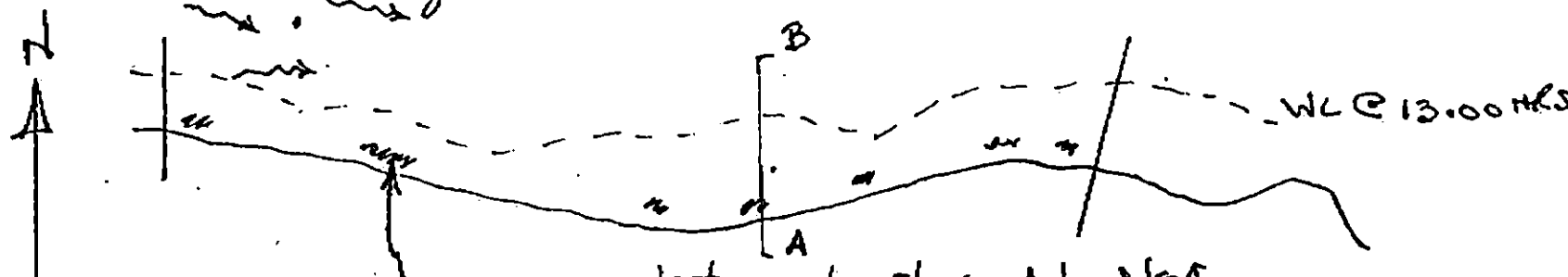
Oiled Vegetation

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

$\rightsquigarrow$ sheen



drops & wisps of RW
sheen w/ ice from
west end of bay.



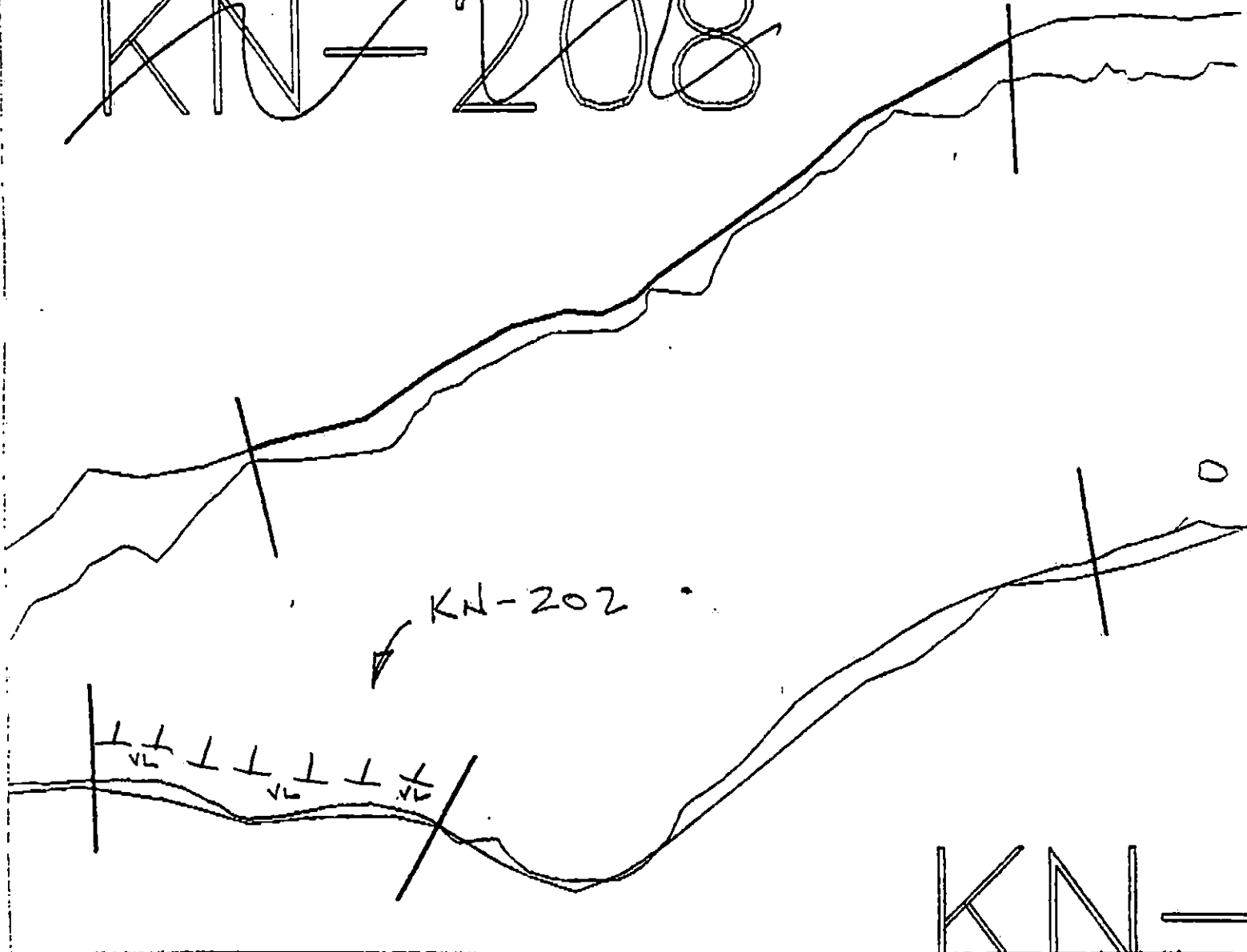
un = occasional CT/S < 1%
@ SUTZ; LBN f' DBN, soft,
sticky mouse; typically trapped in rock f' boulder cracks.

Oil Character Length (m): AP — PO — CV — CT 350 ST — MS — PT — TB — FL — NO —

393

K

KN-2018



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KN-202

EXXON

~~KN-202~~

Segment Length: 351m

0 100 200 300



Map Key: PWS-335

Name: G. M. ARDANAL

Date: 3/20/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-203 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
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)
6V Recreation: Anchorages (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 Charles E. H. D. M.

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 487 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER

EXXON AMY GEL

NOAA Burt Wescott

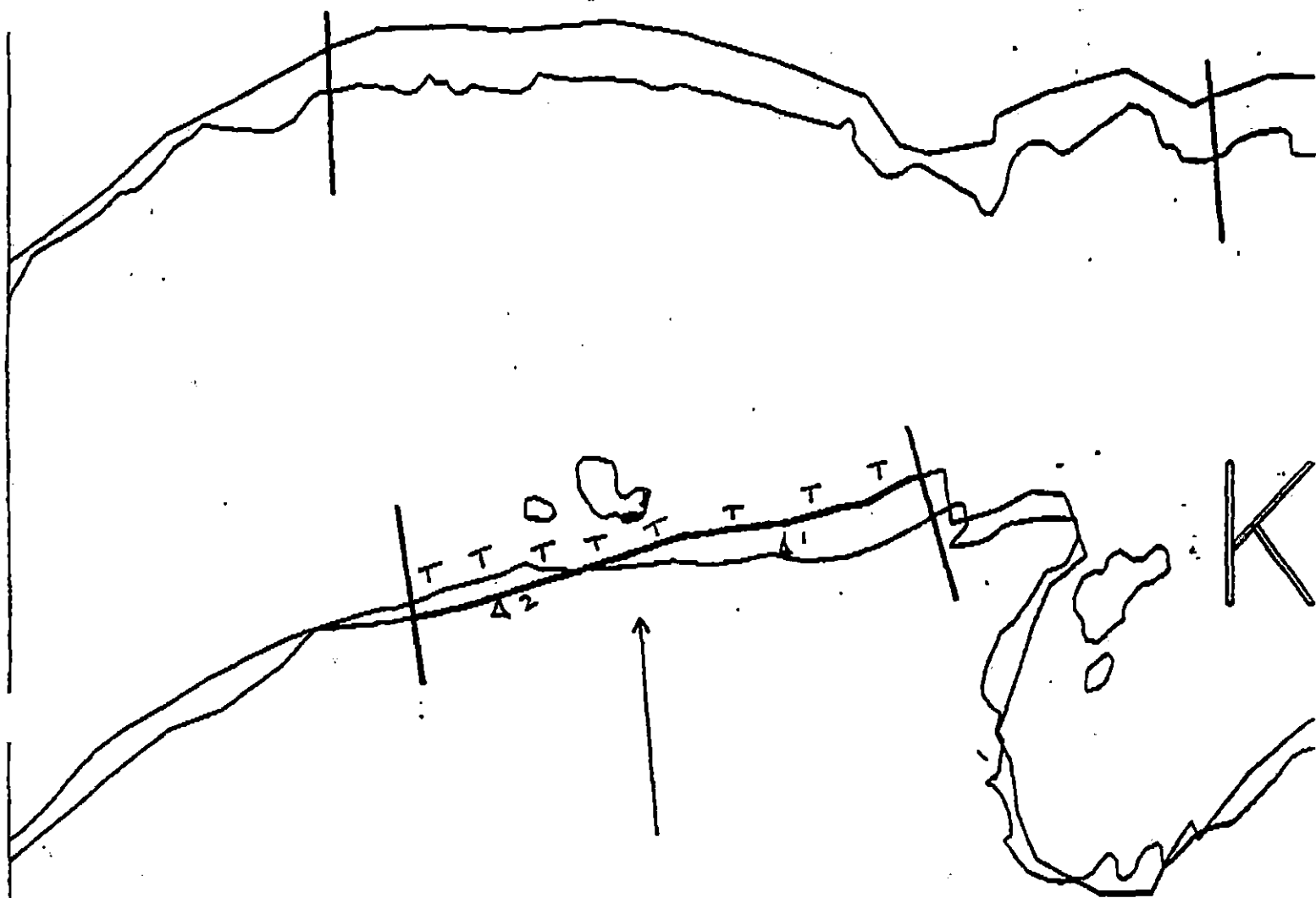
USCG KENNETH KEANE

FOSC: W L

DATE: 5-12-90

Resurvey UITZ and SUITZ.

KN-06



KN-203

KN-136

262

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-203

ADEC Segment Length: 487m



Map Key: PWS-330

Name: G. Macdonald

Date: 4/4/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-203

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-203 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
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)
6V Recreation: Anchorages (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 0 m: V.Light 487 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

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 / KW-203 SUBDIVISION: A DATE 4/4/90

USCG

NAME SCOTT RAINFORD SIGNATURE Scott Rainford

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

3 oiled Pom-poms removed from area -

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SNOW IN UPLANDS (SITE) INHIBITED SURVEY.

SHORELINE OILING SUMMARY

REVISION NO. 02/28/98

OG G. MACDONALD USCG J. RAINFORD SEGMENT ST/ KJ-203
 BIO MA SCOTT LAND REP L. JOHNSON SUBDIVISION A 1 of 1
 EXXON J. BUTLER ADEC W. GORMLEY TIME 15:25 to 15:55
 TEAM NO.: 3 TIDE LEVEL: to DATE 4/4/90
 EST. SUBDIVISION LENGTH: 500 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 25 % C 20 % P 10 % G 5 % S - % M - % V - %
 SLOPE: Long - % Hang - % Vert - % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 500 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	OR	OC	OP	OS	OT	OL	OT	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X	X						X			X			
STAIN																
MOUSSE																
PATTIES				X						X			X			
TARBALLS																
FILM																
NO OIL															X	X

 PAVEMENT: H F S 0 sq. m by 0 cm

 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 plastic

 #BAGS 1

Photographs:

 Roll No. ST-3-2

 Frames -

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	SOL PR	OR TR	OL EL	OR TL	OL LT	SU	U	M	U			
1	10					X	-									X			N	B.C.G	
2	15					X	-									X			N	C.P.	
							.														
							.														
							.														
							.														

COMMENTS Med. - steep & rocky shore w/ BC over bedrock.
 Surface oil only 22 cm / 5:1 P @ SURT on granules
 between bldr: cbl. Trace of RT @ URT.

SHORELINE ECOLOGICAL SUMMARY

REVISION 02/22/80

Segment ST 1 K01203 Subdivision A Date (mo / day / yr) 4 / 4 / 90Time (24 hr) 1530-1600 Biologist MAScott(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 25 (3) Cobble 30 (4) Pebble 15 (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense 5% Moderate — Low —

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

Photographs:
Roll No. ST-3-2Frames —

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	X	3	X	3	X	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	X	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

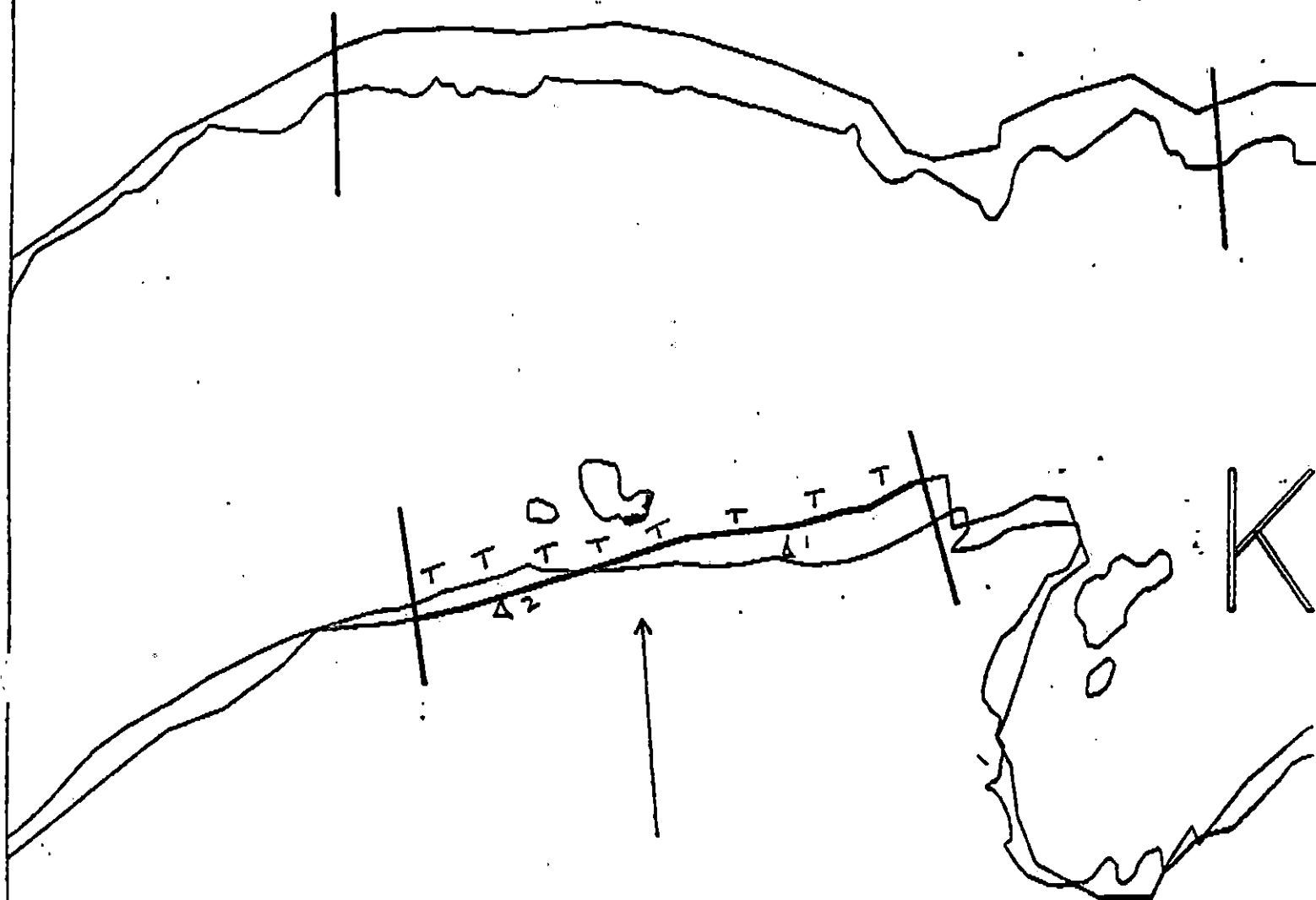
NOT PRESENT

Wildlife Observations/ General Comments:

2 gulls
4 mergansers
1 eagle
2 bottle heads
1 dead deer
2 goshawks
1 otter

Ecological Considerations:

KN-06



KN-203

KN-136

202

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-203

ADEC Segment Length: 487m



Map Key: PWS-330

Name: G. Macdonald

Date: 4/4/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-204

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6V Recreation: Anchorages (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 197 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
 No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior
 to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/20 to 5/10)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed 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-204 SUBDIVISION: 7 DATE 4/4/90

USCG

NAME MARION J. SHARPE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- * SNOW COVERED MOST OF HITZ
- PAVEMENT/PATCHY → NEAR KN-14 SEG-LINE [MANUAL REMOVAL] NEAR RUN STREAM
 - PATCHY COVER NEAR MID-POINT (AREA) OF SEG-204 [MANUAL REMOVAL]
 - MOOSSE PADDIES ALONG UPPER MITZ → TO SNOW LINE OF HITZ [MANUAL REMOVAL]

LAND MANAGER

NAME M.C.T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-204
 BIO G. RENN LAND REP M. SMITH (CAC) SUBDIVISION A 121
 EXXON S. Reid ADEC S. Ferguson TIME 3:55 to 4:30
 TEAM NO.: 4 TIDE LEVEL: 7.5' to 1.5' DATE 4/4/90
 EST. SUBDIVISION LENGTH: 196 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 1 % B 30 % C 50 % P 9 % G 10 % S — % M — % V — %
 SLOPE: Long 97 % Hang 3 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 196 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	B	SP	OR	OL	OP	NO	SU	U	M	L
ASPHALT PAVEMENT			X					X		X			
POOLED													
COVER			X					X		X			
COAT										MONS			
STAIN													
MOUSSE													
PATTIES			X								X		
TARBALLS													
FILM				X				X		X			
NO OIL												X	X

* Partly covered by snow
 PAVEMENT H F 9 sq. m by — cm

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 0

#BAGS 0

Photographs:

Roll No. —

Frames —

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	OP	NO		LO	UC	SP	OR	OL	OP	NO	SU	U	M	L	SU	U	M	L	

COMMENTS: This was a low angle boulder beach. Most of the UT was covered in snow so it was hard to tell the distribution of asphaltting + cover. There were patches of mousse patties scattered throughout and a film on the rocks close to the snow line where indicated on map.

SEGMENT S1 N-204
 SUBDIVISION A
 DATE 4, 4 90

CHECKLIST

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

LEGEND

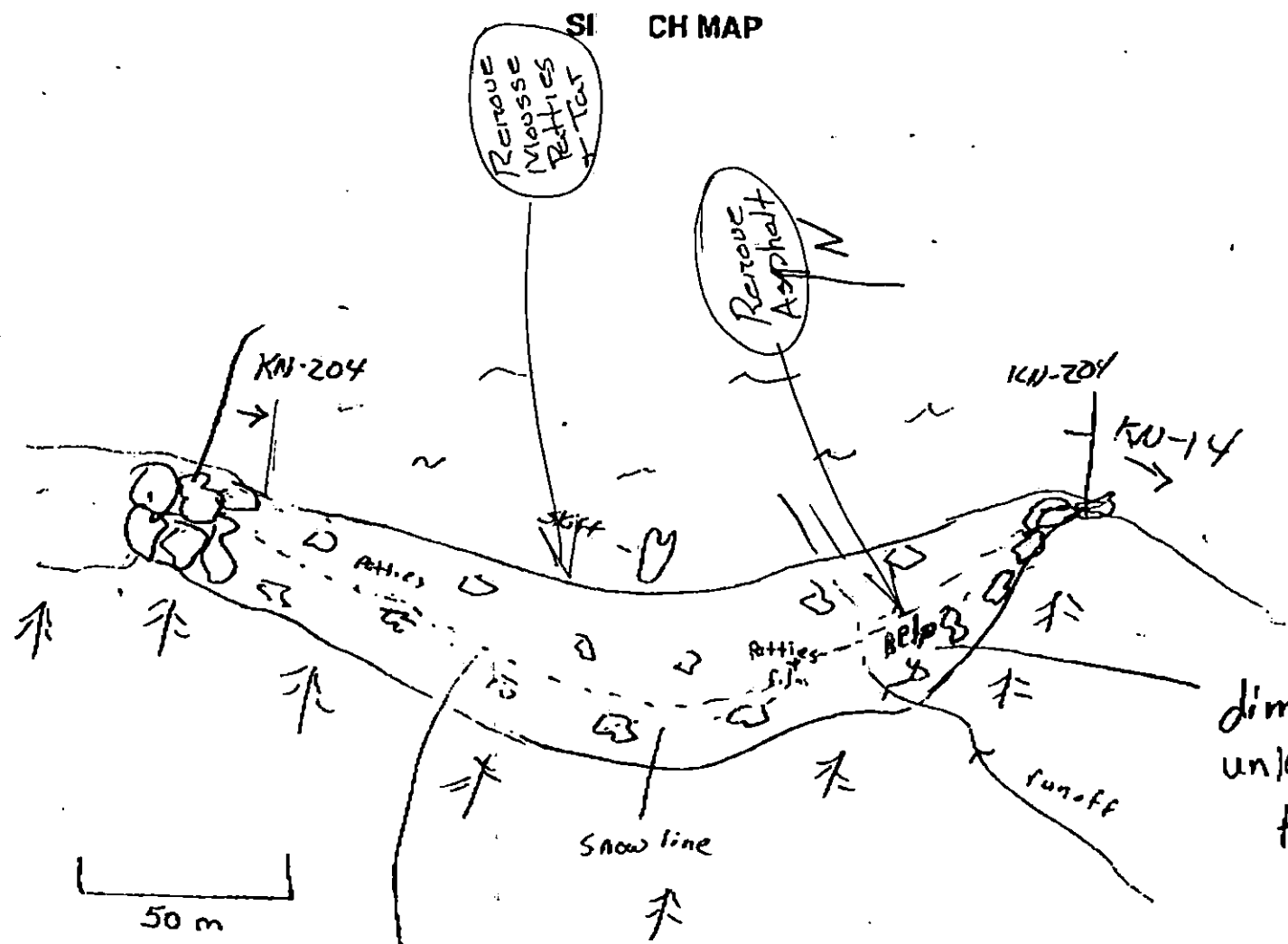
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\bullet$
Oiled Vegetation
- $\bullet \rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP ? PO 0 CV ? CT 0 ST 0 MS 0 PT 196 TB 0 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/82

Segment ST / KN-204 Subdivision A Date (mo / day / yr) 04/04/90

Time (24 hr) 1555 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 1 (2) Boulder 3 (3) Cobble 50 (4) Pebble 9 (5) Sand 10 (6) Silt -

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

(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. -
Frames -

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

KN-14

KN-204 →

K

XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-204

ADEC Segment Length: 197m

0 100 200 300
METERS

Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6V Recreation: Anchorages (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 J. Palmer

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat: 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 of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90.

ADEC ART WILSON
EXXON ARMY TEAL
NOAA BILL WESATT
USCG KENNETH KENNY

FOSC: WJL

DATE: 5-12-90

Monitor to assess UITS and SUITS during clean-up.

SHORELINE EVALUATION

 SUBDIVISION A (1 OF 1) DATE 4/4/90

AL SENSITIVITIES AND TIME CONSTRAINTS:

ing (4/1 to 6/15)
anchorage (6/1 to 9/15)
Ecological Constraint sheet for specific constraints and

AN ECOLOGICAL CONSTRAINTS:

y unnecessary disturbance or damage to unoiled biota and
ce.

CHAEOLOGICAL CONSTRAINTS:

f 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 197 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal
of tar mats. Work should be conducted after 6/15 due to herring spawn-
ing constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/19/90.
ADEC ART WENNER
EXXON ARMY TGAZ
NOAA Paul Wescott
USCG KENNETH KETWIT

FOSC: _____ DATE: _____

SEGMENT: N-204

SUBDIVISION: A

DATE: 4, 4 90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HNT/LWR
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PFI 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

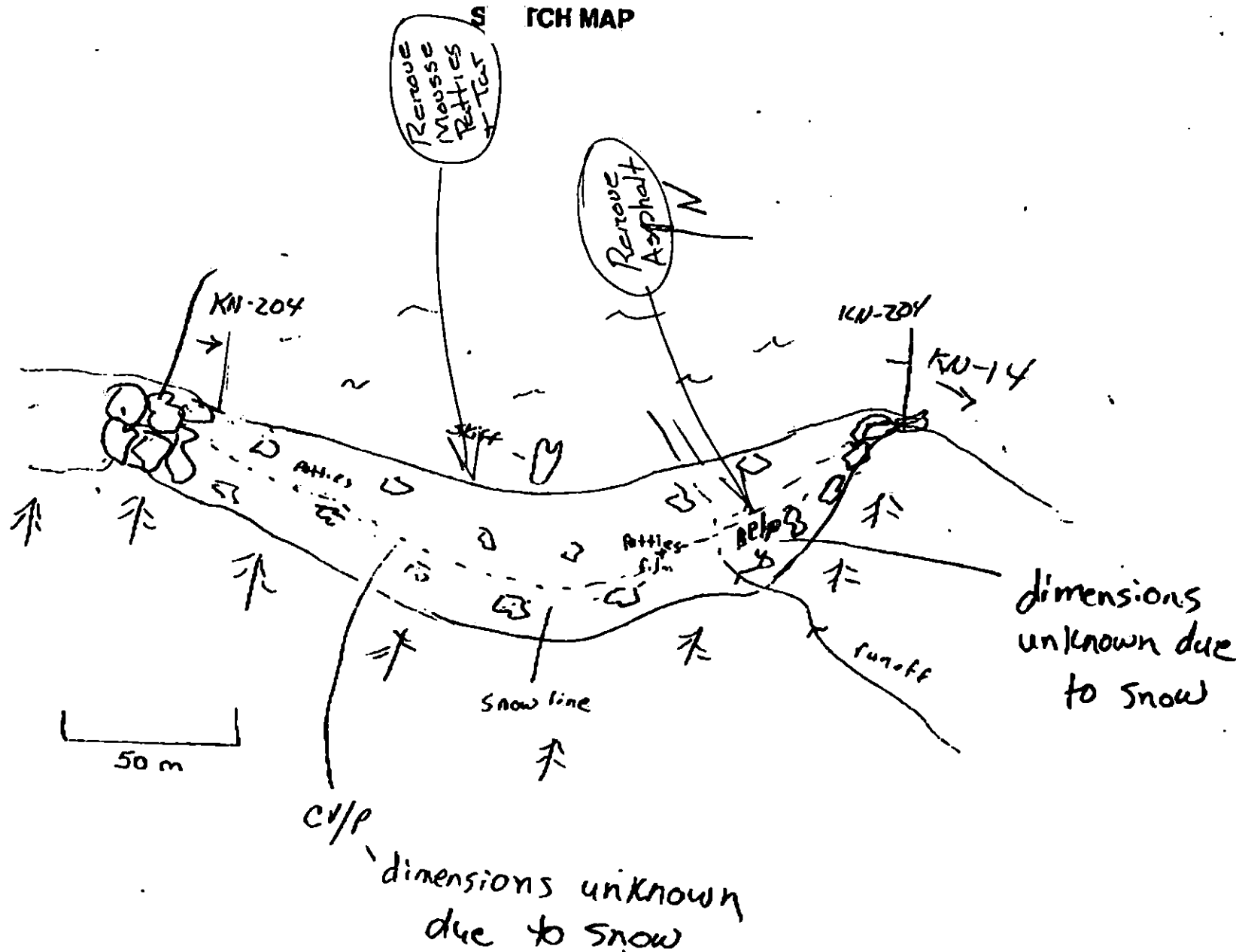
CT/P
Patchy Distribution

CT/S
Splotched Distribution

Oil Vegetation

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

ITCH MAP



Oil Character Length (m): AP ? PO 0 CV ? CT 0 ST 0 MS 0 PT 196 TB 0 FL 0 NO 0

KN-14

KN-204 →

XXXX Wide

//// Medium

---- Narrow

TTT Very Light

0000 No Oil

KN-204

ADEC Segment Length: 197m



METERS

Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:

KL

APR 16 1990

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-204

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6V Recreation: Anchorages (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 197 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/20 to 5/10)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed 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-204 SUBDIVISION: 7 DATE 4/4/90

USCG

NAME MARKER J. SHARP SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- * SNOW COVERED MOST OF HITZ
- PAVEMENT/PATCHY ⇒ NEAR KN-14 SEG-LINE [MANUAL REMOVAL] NEAR ROAD-STREAM
 - PATCHY COVER NEAR MID-POINT (AREA) OF SEG-204 [MANUAL REMOVAL]
 - MOOSSE PADDIES ALONG UPPER MITZ ⇒ TO SNOW LINE OF HITZ [MANUAL REMOVAL]

LAND MANAGER

NAME M.C.T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 06-02/88

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-204
 BIO G. RENN LAND REP M. SMITH (CAC) SUBDIVISION A 131
 EXXON S. Reid ADEC S. Ferguson TIME 3:55 to 4:30
 TEAM NO.: 4 TIDE LEVEL: 7.5' to 1.5' DATE 4/4/90
 EST. SUBDIVISION LENGTH: 196 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 1 % B 30 % C 50 % P 9 % G 10 % S — % M — % V — %
 SLOPE: Long 97 % Hang 3 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 196 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	R	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT			X										X			
POOLED																
COVER			X										X			
COAT																
STAIN																
MOUSSE																
PATTIES			X										X			
TARBALLS																
FILM				X									X			
NO OIL															X	X

* Partly covered by snow
 PAVEMENT H F 3 sq. m by — cm

PATTIES / TARBALLS 2 BAGSNEAR SHORE SHEENT NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☐ NOTYPE 0#BAGS 0

Photographs:

Roll No. —Frames —

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	L		

COMMENTS: This was a low angle boulder beach. Most of the UT was covered in snow so it was hard to tell the distribution of asphaltting + cover. There were patches of mousse patties scattered throughout and a film on the rocks close to the snow line where indicated on map.

SEGMENT S: N-204

SUBDIVISION A

DATE 4/4 90

CHECKLIST

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

LEGEND

- 1 Δ
PR - No Subsurface Oil
- 2 Δ
PR - Subsurface Oil
- CT/C

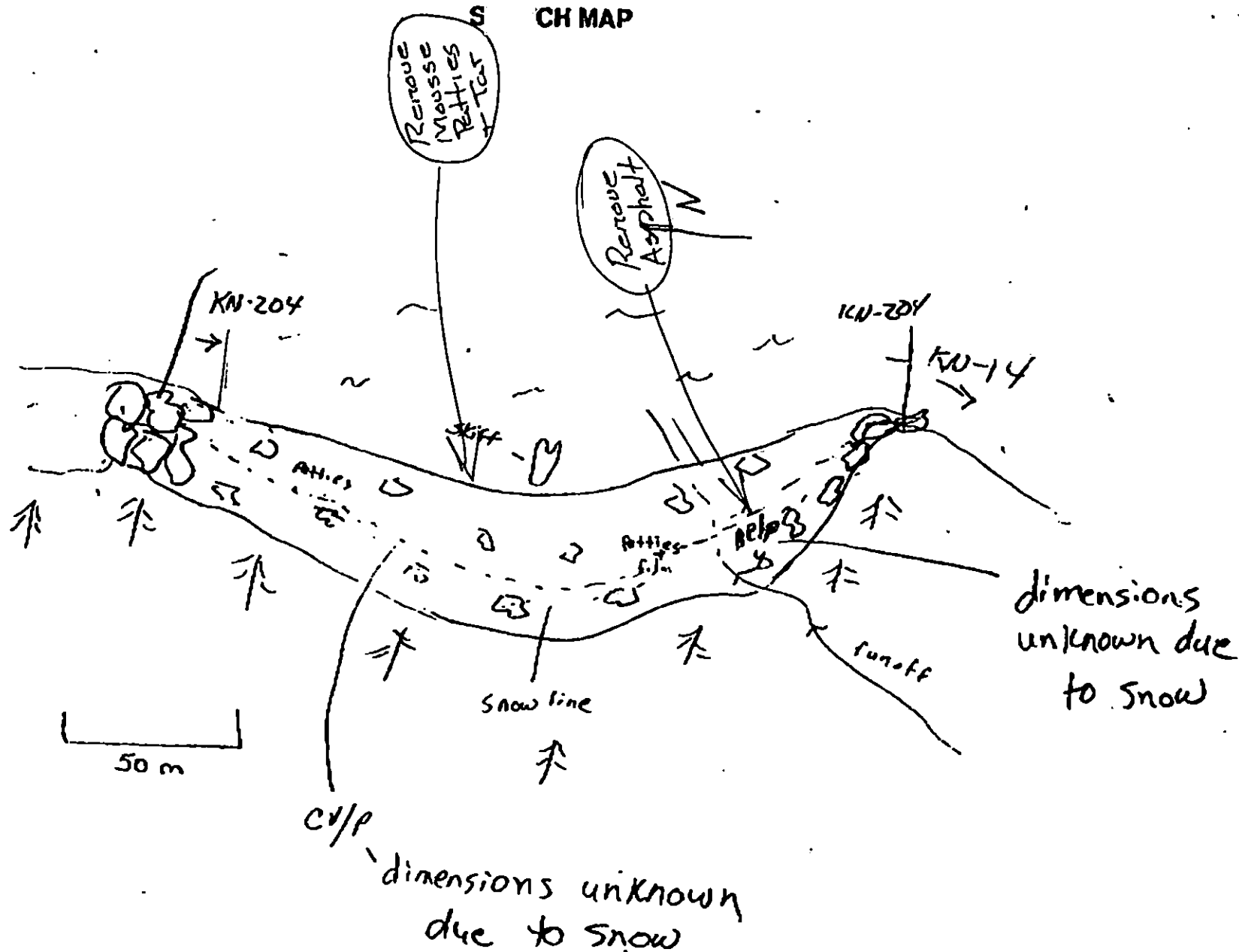
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\odot \Rightarrow$
Oiled Vegetation
- 1 $\odot \Rightarrow$
Photo location, direction, and number

CH MAP



Oil Character Length (m): AP ? PO 0 CV ? CT 0 ST 0 MS 0 PT 196 TB 0 FL 0 NO 0

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/82

Segment ST / KN-204 Subdivision A Date (mo / day / yr) 04/04/90

Time (24 hr) 1555 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 1 (2) Boulder 3 (3) Cobble 50 (4) Pebble 9 (5) Sand 10 (6) Silt -

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

(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. -

Frames -

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

KN-14

KN-204 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-204

ADEC Segment Length: 197m

0 100 200 300
METERS

Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:



MEMORANDUM

APR 20 1990

STATE OF ALASKA**Department of Natural Resources****TO:** United States Coast Guard
Federal On-Scene Coordinator**DATE:**

4/20/90

FROM: State of Alaska
Department of Natural Resources

The Department has reviewed the shoreline treatments proposed by the Technical Advisory Group for the shoreline segments listed below. As land owner/manager for the state lands within these shoreline segments, we accept the treatment proposed. This acceptance does not infer approval of final treatment necessary to meet the state cleanup standards.

Prince William Sound - CH-013, EB-01A, EB-01B, ER-003, ER-07,
ER-09, ER-26, ER-27, FL-001, GR-103C, KN-116,
KN-204, KN-207A, KN-207B, KN-401A, KN-401B, KN-50P,
KN-552, KN-603, KN-5004, KN-5009, LA-24, LA-42,
MA-02, MA-03, SQ-04A, SQ-04B

Kodiak - K01-01-SI-009A, K01-01-SI-009B,
K01-01-SI-009C

Kenai - US-002, WB-02A, WB-02B, WB-02C, WB-02E,
WB-02F, WB-06, WB-07

The Department does not concur with the treatment proposed by the Technical Advisory Group for the shoreline segments listed below.

N/A

Comments:William H. Aguilera

Signature

SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6V Recreation: Anchorages (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: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner
EXXON Arny Teal
NOAA Bruce Wescott
USCG Kenneth Kewie

FOSC: [Signature] DATE: 5-12-90
Monitor to assess UITS and SITS during clean-up.

SEGMENT: KN-204

SUBDIVISION A

DATE 4/4 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWT/LWR
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PR 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

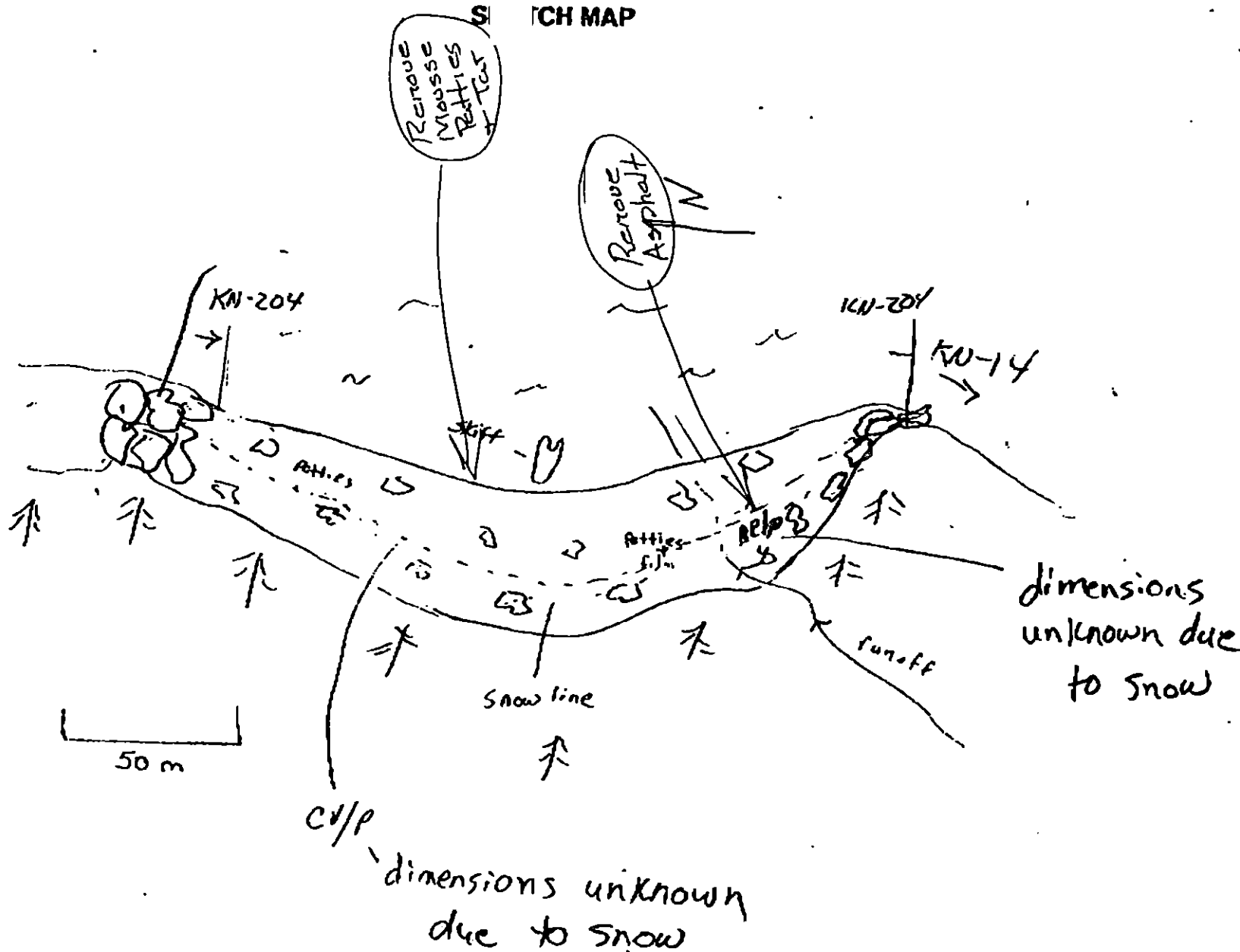
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

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

CH MAP



Oil Character Length (m): AP ? PO 0 CV ? CT 0 ST 0 MS 0 PT 1/9 TB 0 FL 0 NO 0

REVISION: 00/00/00

KN-14

KN-204 →

K

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-204

ADEC Segment Length: 197m

0 100 200 300
METERS

Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-204 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/24/90.
ADEC Art Weiner
EXXON Art Weiner
NOAA Burt
USCG Art J. Hall

FOSC

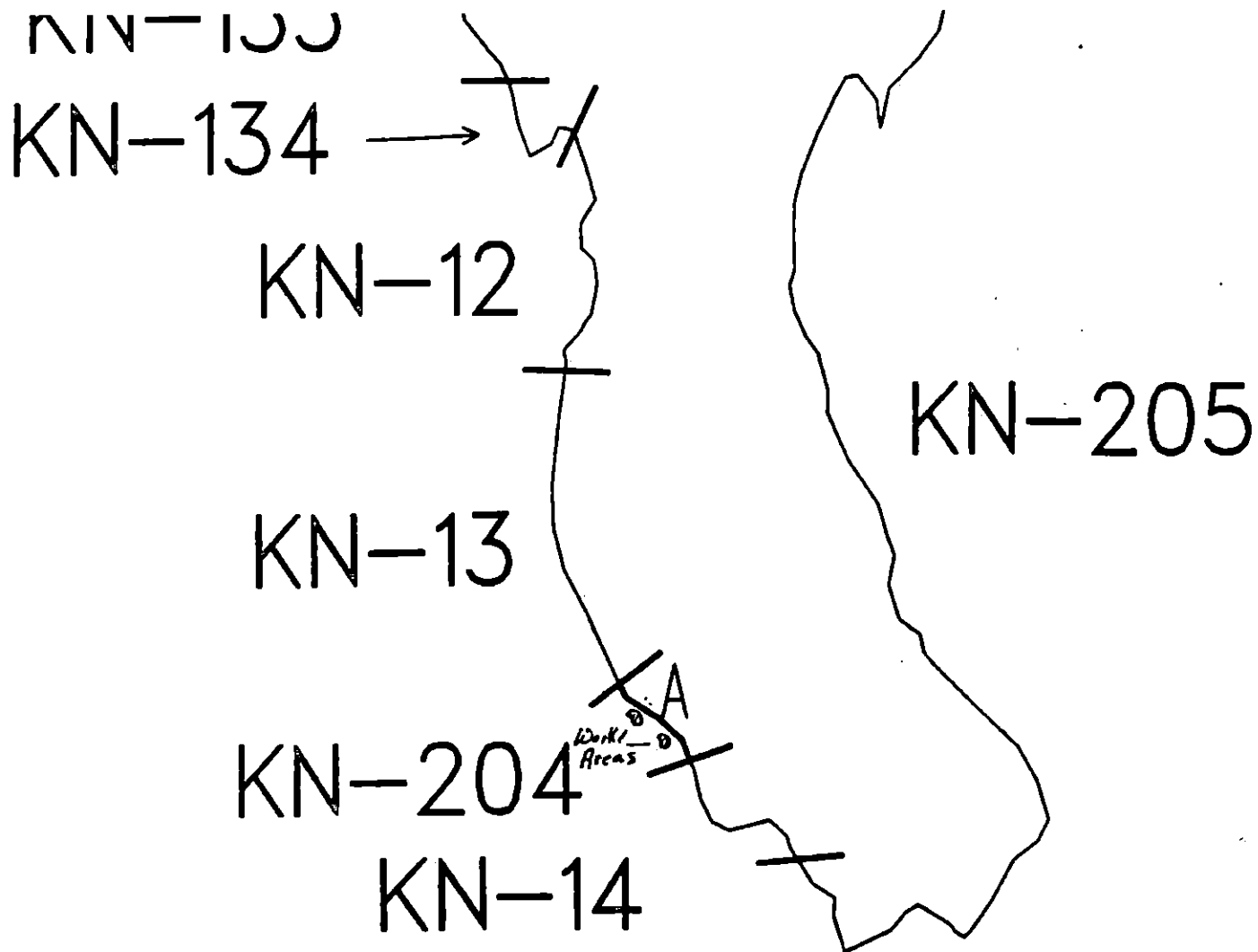
DATE 5-24-90

Prepared By:

Claudia Slater

Date

5/22/90



Exxon Company, USA
Map Key: KN1-KN-204



ECOLOGY MAP
SEGMENT KN-204
SUBDIVISION *A* (1 of 1)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6V Recreation: Anchorages (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 J. Holmes

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup
 Bioremediation
X Tarmat: 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 of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

[See Constraint Addendum Dated 5/22/90] WSK

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.

ADEC AET WILSON
EXXON ARMY TELL
NOAA Bruce Wessett
USCG KENNETH KEANE

FOSC: WJL

DATE: 5-12-90

Monitor to assess UITS and SUITS during clean-up.

1991 MAYSAP EVALUATION

SEGMENT: KN 204 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: Lube de Ove Date: 5/17/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>2</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 17 1991 FOSC APPROVAL DATE: 5/25/91

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. THREE SEGMENT KN0204 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NTR ☐ TREATMENT RECOMMENDED

THE only oiling on this short segment consisted of an area
5x15m MOR in loose sediment. A small RUNOFF stream was present
& I believe it should flush itself clean in time.

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

☒ NTR This beach is clean and requires no additional work or
time.

LANDMANAGER

NAME John John OF Chesapeake Bay SIGNATURE John John

☐ NTR

☒ Any oil present should be removed.

USCG/NOAA

NAME MOONEY / Barata SIGNATURE Tim Mooney / Barata

☒ NTR SEGMENT IS MADE UP OF BOULDER, COBBLE, PEBBLE SMALL AREA OF
MOR FOUND. NOT ECONOMICAL TO TREAT SUCH A SMALL AREA.

PAGE 1 OF 2

SEGMENT KN-204

SUBDIVISION A

DATE 3 / MAY / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 197 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- 3 - 09 FRAMES 14-16

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	25							X	-	Y	-	-		X			G/R	LHTS
2	~20							X	-	Y	-	-			X		SG/SG/SM	
3	30							X	-	Y	-	-				X	CP/SG	
4	10			X					0-10	Y	-	-		X			B/G/R	
5	20			X					5-10	Y	15	R		X			B/G	
6	30							X	-	Y	-	-			X		CG/SG	
7	20							X	-	Y	-	-		X			GP/SG	
8	20							X	-	Y	-	-		X			GP/SG	
9	~20							X	-	Y	-	-		X			P&S 15	

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

OG COMMENTS:

This is a low mean exposure granule pebble beach at the south end of the South Arm of the Bay of Isles.

No surface ailing was noted

An area of mor, 5 m wide and 15 m in length, subsurface caving was documented.

RECEIVED: MC 5/9/91

EF revised May 8

06 9 of 4

PAGE 2 OF 2

TEAM NO. 3

SEGMENT KN-204

SUBDIVISION A

DATE 3 / May / 91

SHARPER

[illegible]

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

OG COMMENTS:

REVIEWED: MC 5/9/91
EG revised May 8

OG 2 of 4

3

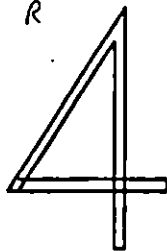
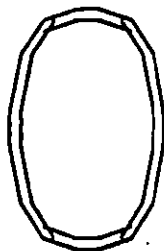
A1 UITE/LATS
G/R 25 N.O.

A2 UITE ~20
SG/SG/SM N.O.

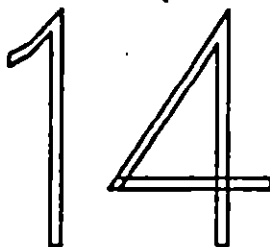
A3 LITE 30
CP/SG N.O.

A4 UITE 10
B/G/R
O-10 MOR

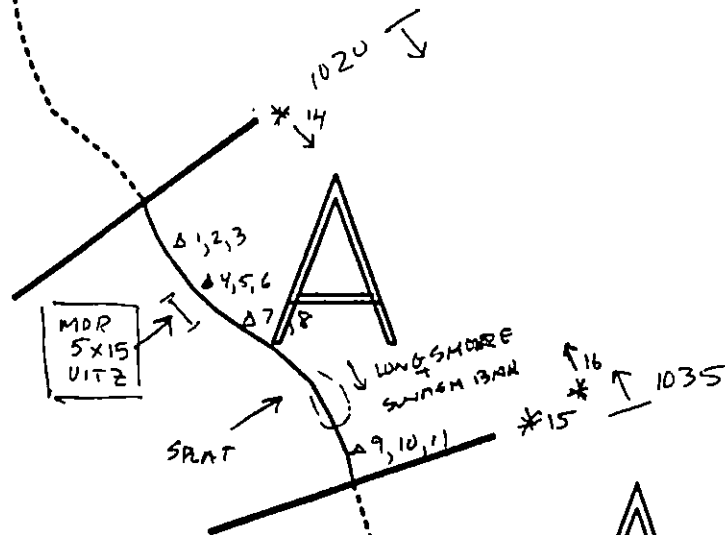
A5 UITE 20
B/G' MOR 5-10/15
WT R



A6 UITE 30
CG/SG N.O.
A7,8 UITE 20
CP/SG N.O.



A9,10 UITE, M, L
PG/SG N.O.



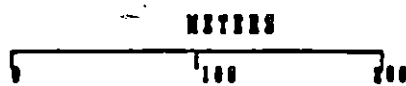
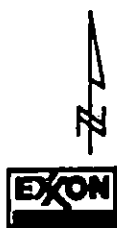
KN0204 A

Subdivision Field Map

Map Key: KNKN0204A

Name: HARPER

Date: 3 May 91



AK State Plane Zone 4
NAD 83

REVIEWED: MC 5/9/91
EG revised, May 8

OG 3 of 4

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # KN 204 TIDAL HEIGHT(Range) 0-1'
 SUBDIVISION A BIOLOGIST
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Low exposure beach of pebble/cobble/boulder/bedrock. Transected by a small stream.

Biota extends from the upper intertidal downward, increasing downslope in both abundance and diversity. Lower UIZ, MIZ and LIZ characterized by moderately dense Fucus, barnacles and spat, limpets Mytilus (both attached and interbedded), Littorina and egg masses, and, in the mid intertidal and below, Nucella and amphipods.

Biota within and proximal to the one small area of subsurface silt/mud includes patchy barnacles, Fucus, limpets, amphipods, Littorina and Mytilus.

Extensive and dense interbedded Mytilus in vicinity of stream. Don't trample or disturb.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	None seen	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

MARINE MAMMALS

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

Shoreline subdivision map showing important biological features attached.

3

A

+

04

A

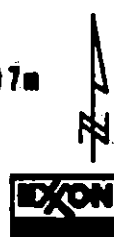
A

N-14

+

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

KN0204 A
 ADEC Subsegment Length: 197m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0204a



Subdivision Field Map
 Map Key: KN1KN0204A
 Name: HARPER
 Date: 3 MAY 91
 Date Entered:

REVIEWED: 5/9/91 MC ES reviewed, May 8

SURFACE OILING SUMMARY

OG 4 of 4

1991 MAYSAP EVALUATION

SEGMENT: KN 204 **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:** _____

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 _____

NATSAF FIELD SHORELINE COMMENT SHEET

TEAM NO. THREE SEGMENT KN0204 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Gharmler SIGNATURE Wesley Gharmler

☒ NTR ☐ TREATMENT RECOMMENDED

THE only oiling on this short segment consisted of an area
5x15m MOR in loose sediment. A small RUNOFF stream was present
I believe it should Flush itself clean in TIME.

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

☒ NTR This beach is clean and requires no additional work or
time.

LANDMANAGER

NAME John John OF Chapel Hill SIGNATURE John John

☐ NTR

☒ Any oil present should be removed.

USCG/NOAA

NAME Monry / Barab SIGNATURE Monry / Barab

☒ NTR SEGMENT IS MADE up OF Boulder, Cobble, Pebble SMALL AREA OF
MOR FOUND. NOT ECONOMICAL to TREAT SUCH A SMALL AREA.

DATE 3 / MAY / 91

OG HARPER

BIG STOKER

ADEC GORMLEY

LANDMANAGER JOHNSON for CVC

EXXON **CZARNY**

USCG/NOAA MOONEV / BARATS

TIME 10:20 to 10:35

TIDE LEVEL 13 ft. to 32 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 197 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 197 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	DATE	TIME	NOTES	
	AP	MS	TB	SO	CV	CT	ST	FL	DB	NO					
											X				
NO SURFACE OILING															

NEEDS
TYPE
& PHOTO

DISTRIBUTION: C = 81-100%; S = 61-80%; P = 11-50%; B = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE · PHOTO ROLL # MAYSAP- 3 - 09 FRAMES 14-16

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R G N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	25							X	-	Y	-	-		X			G/R	LHTS
2	~20							X	-	Y	-	-			X		SG/SG/SM	
3	30							X	-	Y	-	-				X	CP/SG	
4	10			X					0-10	Y	-	-		X			B/G/R	
5	20			X					5-10	Y	15	R		X			B/G	
6	30							X	-	Y	-	-			X		CG/SG	
7	20							X	-	Y	-	-		X			GP/SG	
8	20							X	-	Y	-	-		X			GP/SG	
9	~20							X	-	Y	-	-		X			P83/5	

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

OG COMMENTS:

This is a low mass exposure granule pebble beach at the south end of the South Arm of the Bay of Islands.

No surface ailing was noted

An area of MOR, 5 m wide and 15 m in length, subsurface drilling was documented.

RECEIVED: MC5/9/91

Ed revised May 8

06 7 of 4

DATE 3 / May / 91

OG 274

3

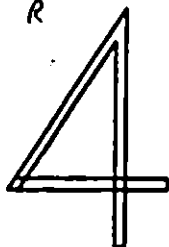
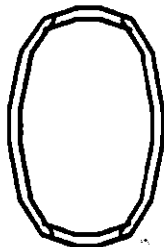
A1 UITE/LITS
G/R 25 N.O.

A2 MITZ ~20
SG/SG/SM N.O.

A3 LITZ 30
CP/SG N.O.

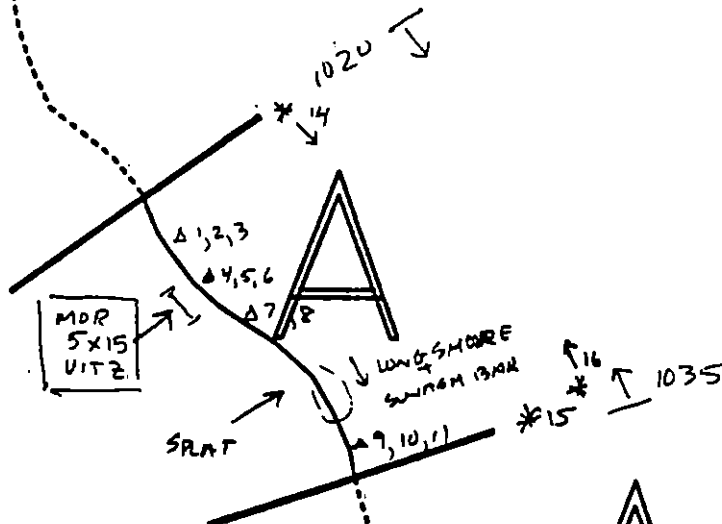
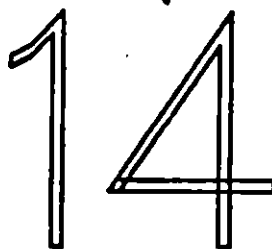
▲ 4 UITE 10
B/G/R
0-10 MOR

▲ 5 UITE 20
B/G MOR 5-10 M15
WT R



▲ 6 MITZ 30
CG/SG N.O.
▲ 7,8 UITE 20
CP/SG N.O.

▲ 9,10 UITE, M, L
PG/SG N.O.



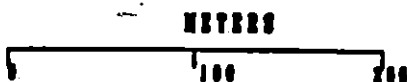
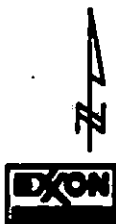
KN0204 A

Subdivision Field Map

Map Key: KN0204A

Name: HARPER

Date: 5 May 91



AS State Plans, Zone 4

Reviewed: MC 5/9/91
EG revised, May 8

OG 3 of 4

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 **DATE** 5/3/91
SEGMENT # KN 204 **TIDAL HEIGHT (Range)** 0-1'
SUBDIVISION A **BIOLOGIST**
SEA STATE Calm **WIND SPEED/DIRECTION** Calm
PHOTOGRAPHS: ROLL # **FRAME #**

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

Low exposure beach of pebble/cobble/boulder/bedrock, transected by a small stream.

Biota extends from the upper intertidal downward, increasing downslope in both abundance and diversity. Lower LIZ, MIZ and LIZ characterized by moderately dense Fucus, barnacles and spat, limpets Mytilus (both attached and interbedded), Littorina and egg masses, and, in the mid intertidal and below, Nucella and amphipods.

Biota within and proximal to the one small area of subsurface silt includes patchy barnacles, Fucus, limpets, amphipods, Littorina and Mytilus.

Extensive and dense interbedded Mytilus in vicinity of stream. Don't trample or disturb.

WILDLIFE OBSERVATIONS

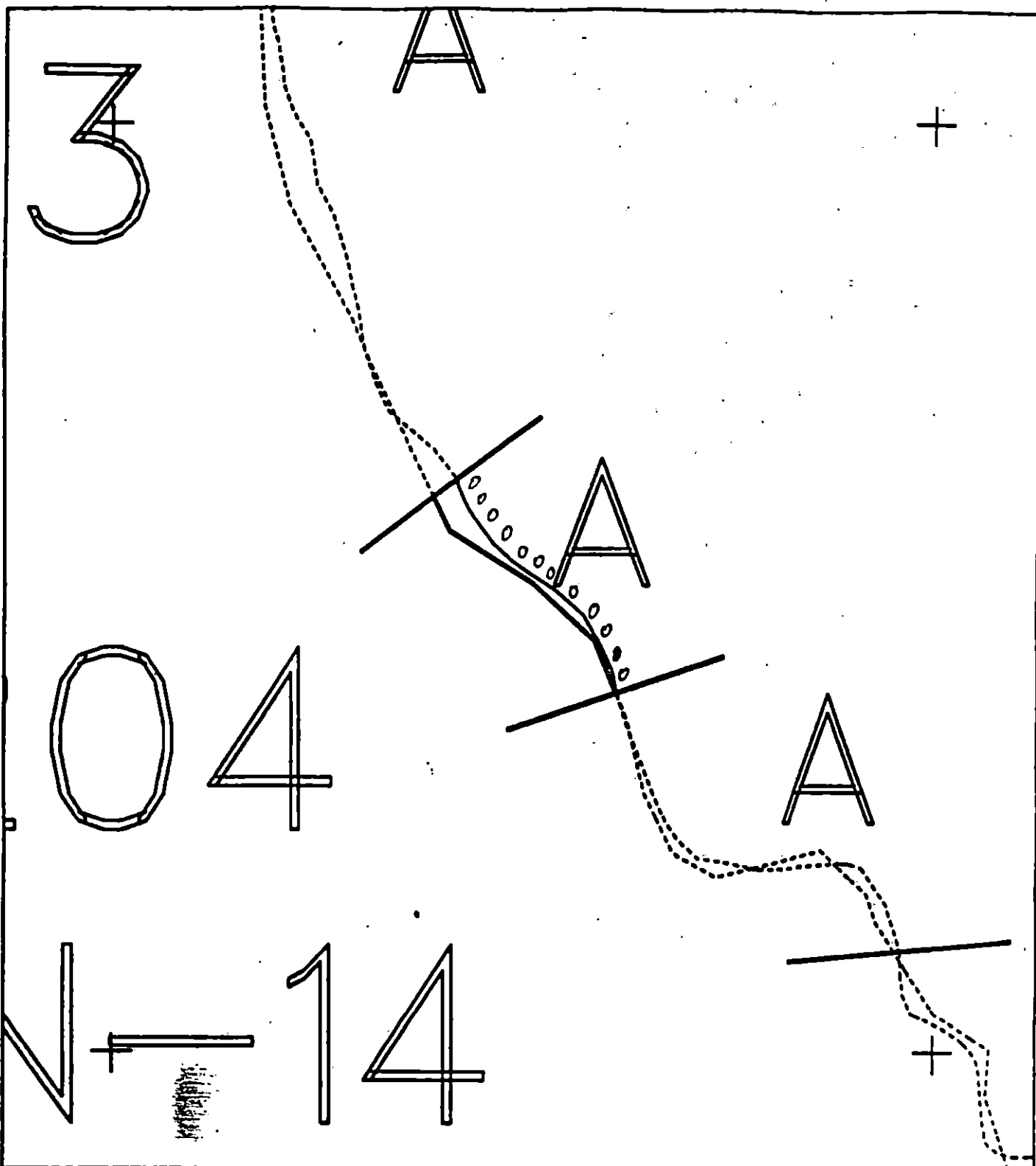
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	None seen	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

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

Shoreline subdivision map showing important biological features attached.

Revd 5/19/91



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

KN0204 A
 ADEC Subsegment Length: 107m
 METERS
 0 100 200
 AK State Plane Zone 6
 660204a

Subdivision Field Map
 Map Key: KNKN0204A
 Name: HARPER
 Date: 3 May 91
 Date Entered:



REVIEWED: 5/9/91 MC ES Carawood May 8

SURFACE OILING SUMMARY

OG 4 of 4

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK