

OIL SPILL PUBLIC INFO. CENTER



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1990
v.15

[Shoreline evaluations, 1990].

KN-200 – KN-260

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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.

SHPO SIGNATURE: J. Daniel 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 WIGGERS
EXXON AMY TALL
NOAA GARY PETER
USCG KENNETH KENNEDY

FOSC: W/L DATE: 5-12-90

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 (5/7 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 uncolled 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 (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7-HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT 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 [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- 1) Manual Removal of Asphalt -
- 2) Supratidal should be reassessed - due to limited view (snow cover) -
- 3) VI zone near stream mouth - oiled grass - manual removal -

LAND MANAGER

NAME Peter Zellars

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Concur with manual removal of mousse, tarballs, and asphalt. Clo proximity of anadromous stream, and lesser melt streams, should remove bio. as a consideration.

SHORELINE OILING SUMMARY

REVISION NO 24 11 90

G RICK GILLIE USCG DAVE THOMAS SEGMENT STI KN-200
 BIO DAVE LUNSE LAND REP PETER ZOLAR (CAE) SUBDIVISION A (1 OF 1)
 EXXON 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	R	SW	BR	OR	OL	OF	NO	SV	U	M	U		
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		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-13-4Frames 10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR.								PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW BR	OR BW	OL W	OF L	NO L	SV	U	M	U							
1	15					X	.		X							X									G/S/M
2	15					X	.		X							X									S/M
							.																		
							.																		
							.																		
							.																		

COMMENTS

① GEOMORPHOLOGY: SEGMENT COMPRISES LOW ANGLE COBBLE / PEBB SHORELINE ON STREAM DELTA

② OILING: AP TO 5CM DEPTH. PATCHY BAND OF ASPHALT PAVEMENT IN UI AND MITE KLOI MOST OF SHORELINE.

7/00 DATE 4/20

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN200 Subdivision A Date (mo / day / yr) 4-19-90Time (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-13-4Frames 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:

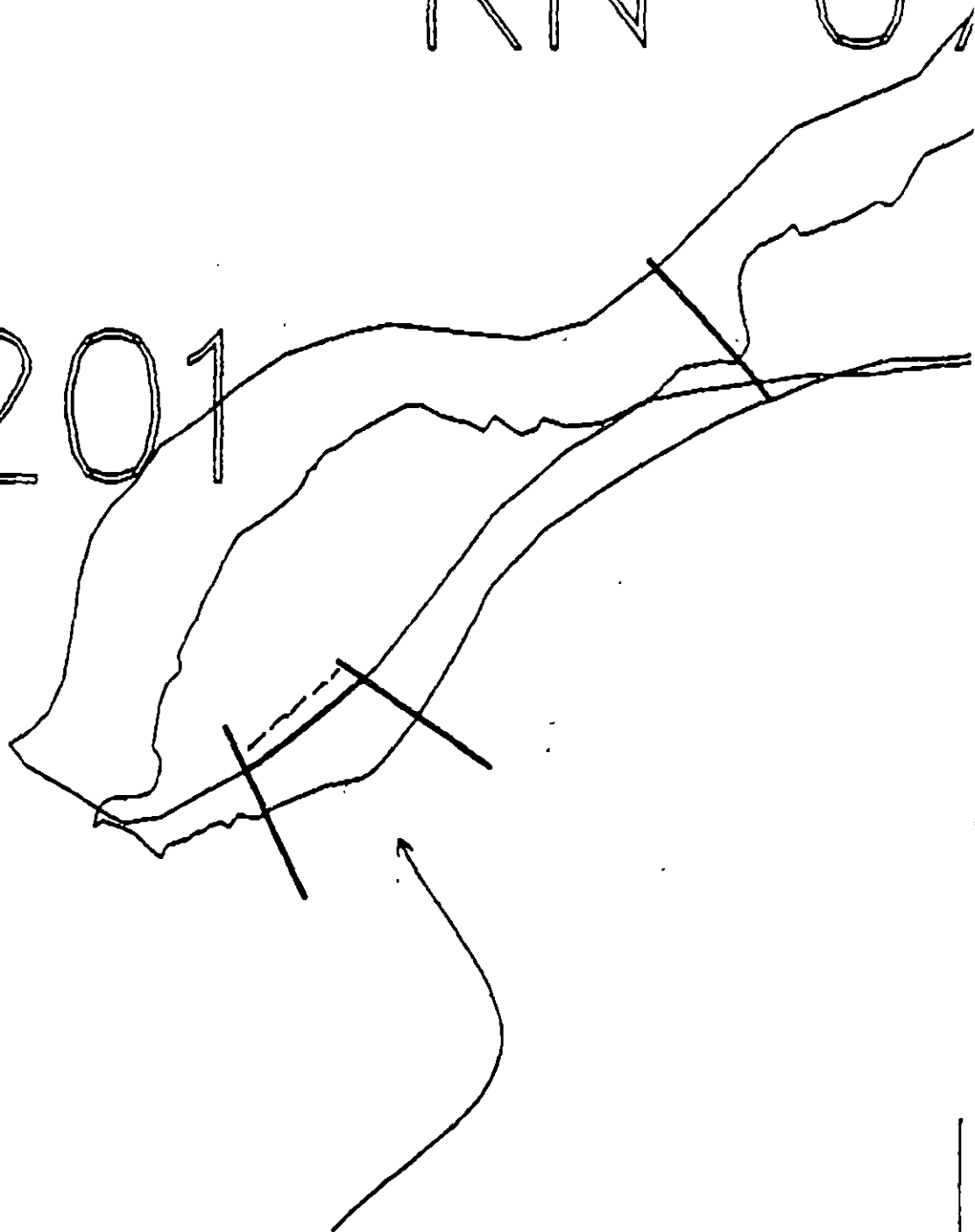
1. Low intertidal not sampled
2. present in mid-intertidal: Enteromorpha

Ecological Considerations:

- 1A,B: Anadomus stream located within 100m of synest banding in adjacent segment KN201.
- 6V: no comment

KN-U

N-201



KN-200

Subdivision A-1 of

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-200

ADEC Segment Length: 162m

0 100 200 300

Map Key: PWS-601

Name: Rick GILUE

Date: 04/19/90



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 unloiled biota and substrate. Avoid walking on or damaging mussel beds.

TAG ADDENDUM DATE 6/04/90
 ADEC Ray Morris
 EXXON Andy Teal
 NOAA Joseph Tullant
 USCG G. A. Reiter

FOSC

[Signature]

DATE

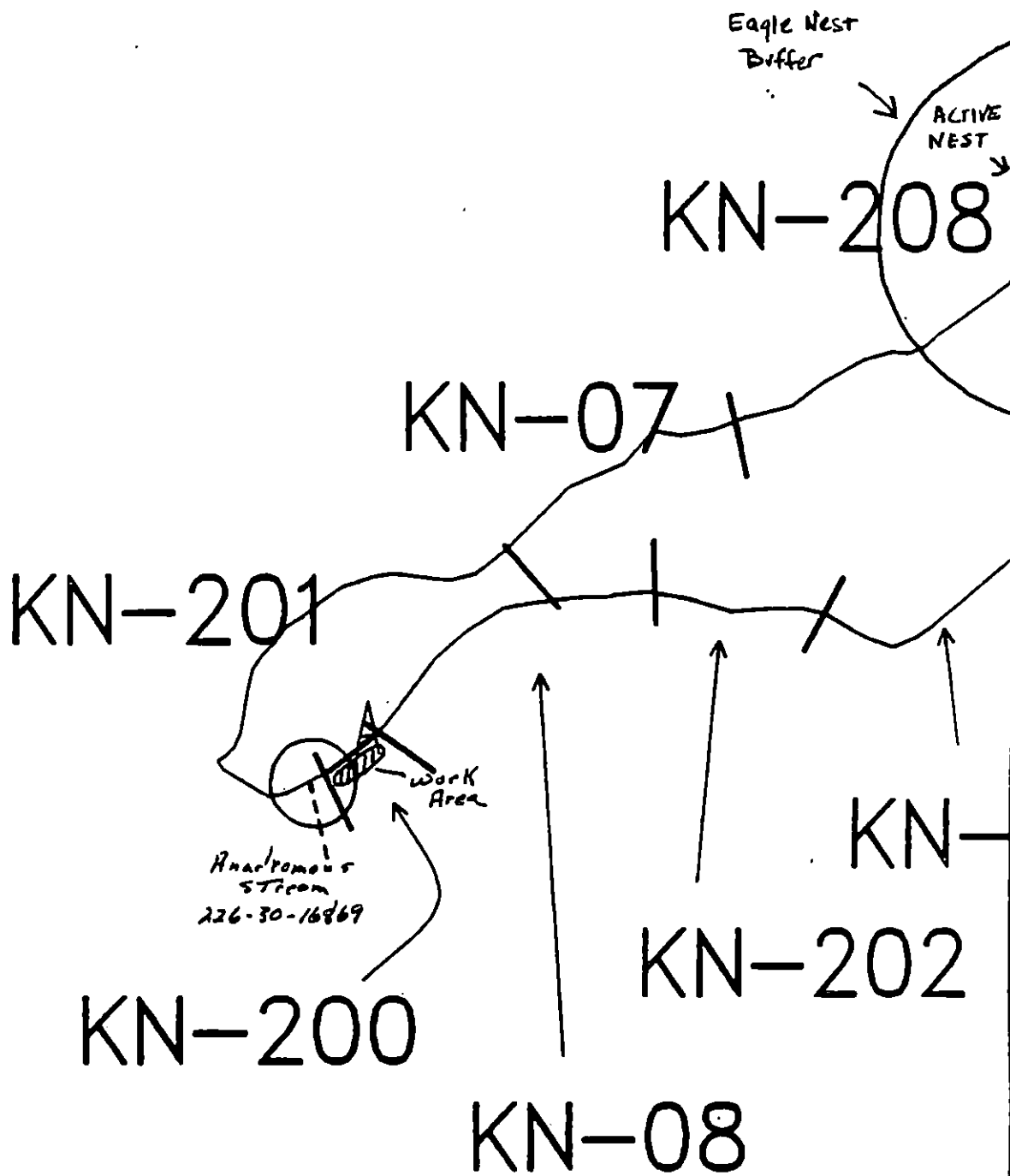
6/5/90

Prepared by:

[Signature]

Date:

6/4/90



Incorporates USFWS 6/1/90
Map of Active Bald Eagle Nests.



Exxon Company, USA
Map Key: KN1-KN-200



ECOLOGY MAP
SEGMENT KN-200
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

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.

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:

<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 WANNER Art Wanner

EXXON ANDY TATE Andy Tate

NOAA GARY PETROE Gary Petroe

USCG G.A. REITER G.A. Reiter

FOSC: h L DATE: 5-12-90

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
- 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

SEGMENT ST, KN-201 SUBDIVISION: A-1 of 1 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

Manual removal of asphalt tarballs - Especially around streams & on ditches - 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 MANAGER

NAME Peter Zellers SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Due to the close proximity of ANADYAMOUS streams I recommend manual removal only.

SHORELINE OILING SUMMARY

REVISION NO 24-13-90

RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-201
 DIV DAVE LOHSE LAND REP PETER COLLARD (CAE) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOB ADEC CLARA CROSBY TIME 13:55 10/15/90
 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: Long 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	S	P	B	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT		*	✓	✗									✗	✗	✗	✗
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 cm

PATTIES / TARBALLS 2 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE G

#BAGS 0

Photographs:

Roll No. ST-13-4

Frames 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		UO	UC	1	2	3	4	5	6	7	8				
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/BOWLER SHORELINE. LOW ANGLE BEACHES LOCATED ON STREAM DELTAS.

② OILING: CONCENTRATED IN UITE AS AP/P, S
 TB AND PT DISTRIBUTED THROUGHOUT SHORELINE
 W 4/20/90

RICK C. IE
 SEGMENT ST/ KN-201
 SUBDIVISION A-1 of 1
 DATE 04/19/90

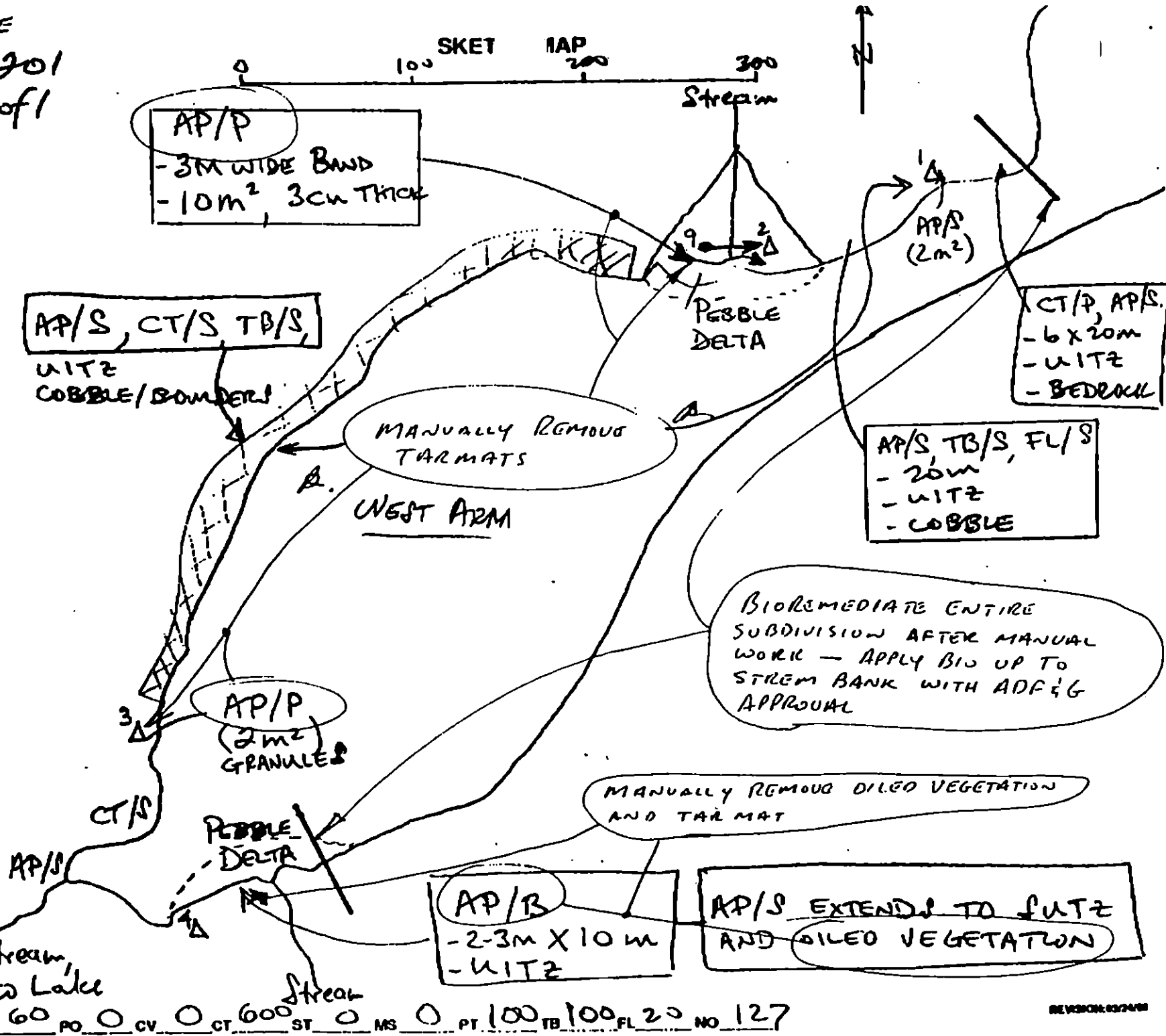
CHECKLIST

☒ N Arrow
☒ Approx. Scale
☒ Beg/Sub Endry
☒ Oil Out
☒ Width
☒ Length
☒ % Cover
☒ Substrate Character
☒ Est. HMM/LWL
☒ SSL
☒ Profile Location(s)
☒ Profile(s)
☒ PH Location(s)
☒ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil
 2 Δ⁺
 PH - 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

Large Stream, 300m to Lake
 Stream
 Character Length (m): AP 60 PO 0 CV 0 CT 600 ST 0 MS 0 PT 100 TB 100 FL 20 NO 127



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN201 Subdivision A Date (mo / day / yr) 4-19-90Time (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 (3)

Photographs:
Roll No. ST-13-4Frames 8,9

BARNACLES

	Dense		Moderate		Sparse		Rare	
1U	1M	1L			1U	1M	1L	
2	2	2	X	X	X	<u>1M</u>	2	2
3	3	3	X	X	X	3	3	3
4	4	4	X	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1A, B 226-30-16872: o.i present (Asphalt pavement)
 226-30-16870: o.i present (one mouse patty)
 226-30-16869: o.i present
 6V - no comment

Shoreline Ecological Summary

2 of 2

Segment KN201

Subdivision A

4-19-90

Zoologist David Lohse

Wildlife Observations/General Comments:

1. Low intertidal not sampled

2. present in mid intertidal: Ulva, Enteromorpha, Ectocarpus, unident. red branching red alga (Rhodomannia?)

high intertidal: isopods found under cobbles

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

ANADROMOUS STREAM
226-30-16872

Stream #1

Salmon Regulatory
Fishing SignArea of mod → dense
mussels in intertidal
cobble.

ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE
SEGMENT:

1.A

1.B

226-30-16872

226-30-16870

226-30-16869

6.V:

ANADROMOUS STREAM
226-30-16870ANADROMOUS STREAM
~~226-30-16869~~

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-201

ADEC Segment Length: 1007m

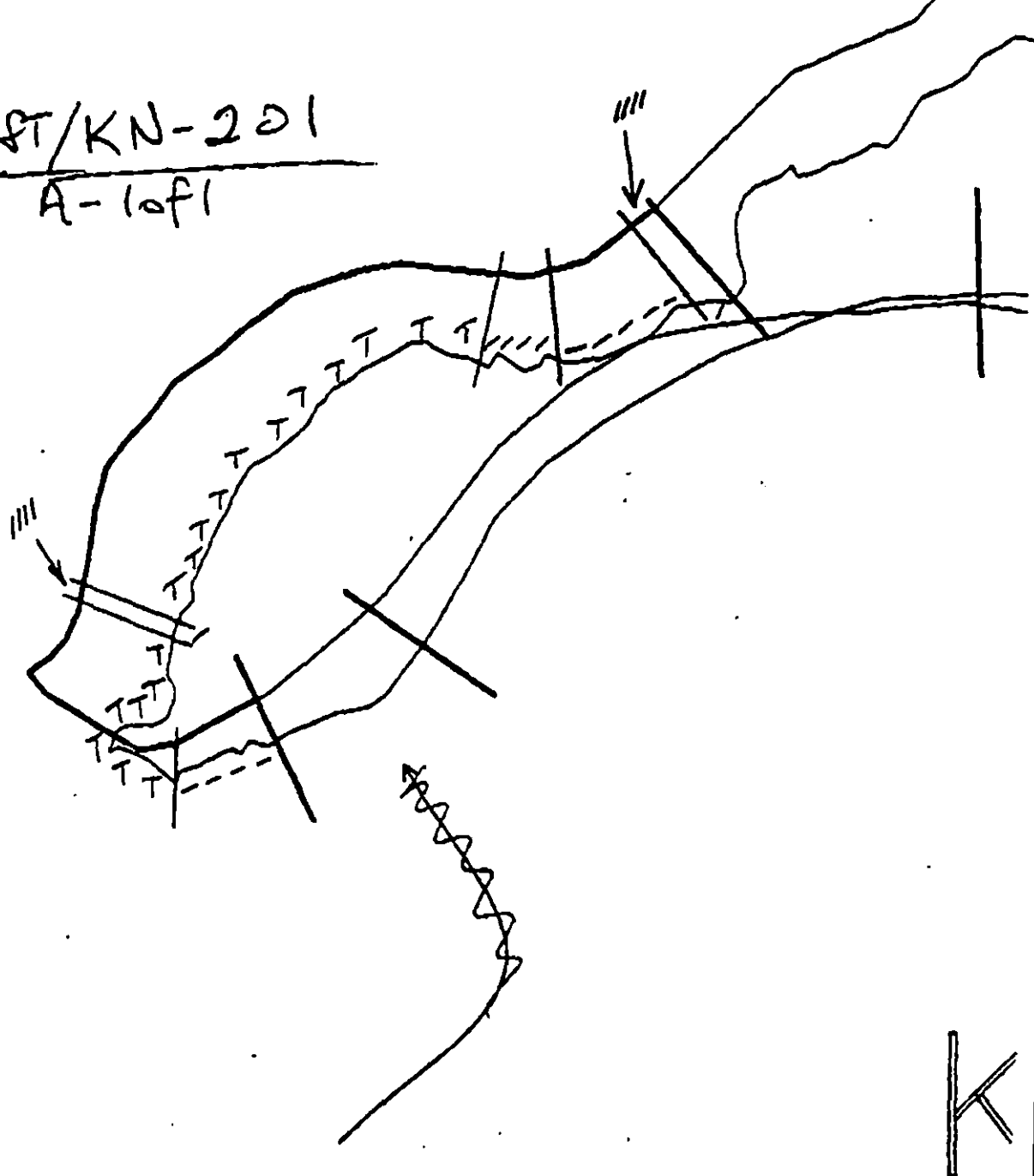
Map Key: PWS-402

Name: _____

Date: _____

KN-07

SEGMENT: ST/KN-201
 SUBDIVISION: A-1 of 1



KN-200

XXXX Wide

///// Medium

---- Narrow

TTTT Very Light

KN-201

ADEC Segment Length: 1007m

Map Key: PWS-402

Name: R. GrilleDate: 04/19/90

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 Eddy M... 6/4/90
EXXON Andy (EA) 6/4/90
NOAA Donna Talbot 6/4/90
USCG B. H. Reiter 6/4/90

FOSC

[Signature]

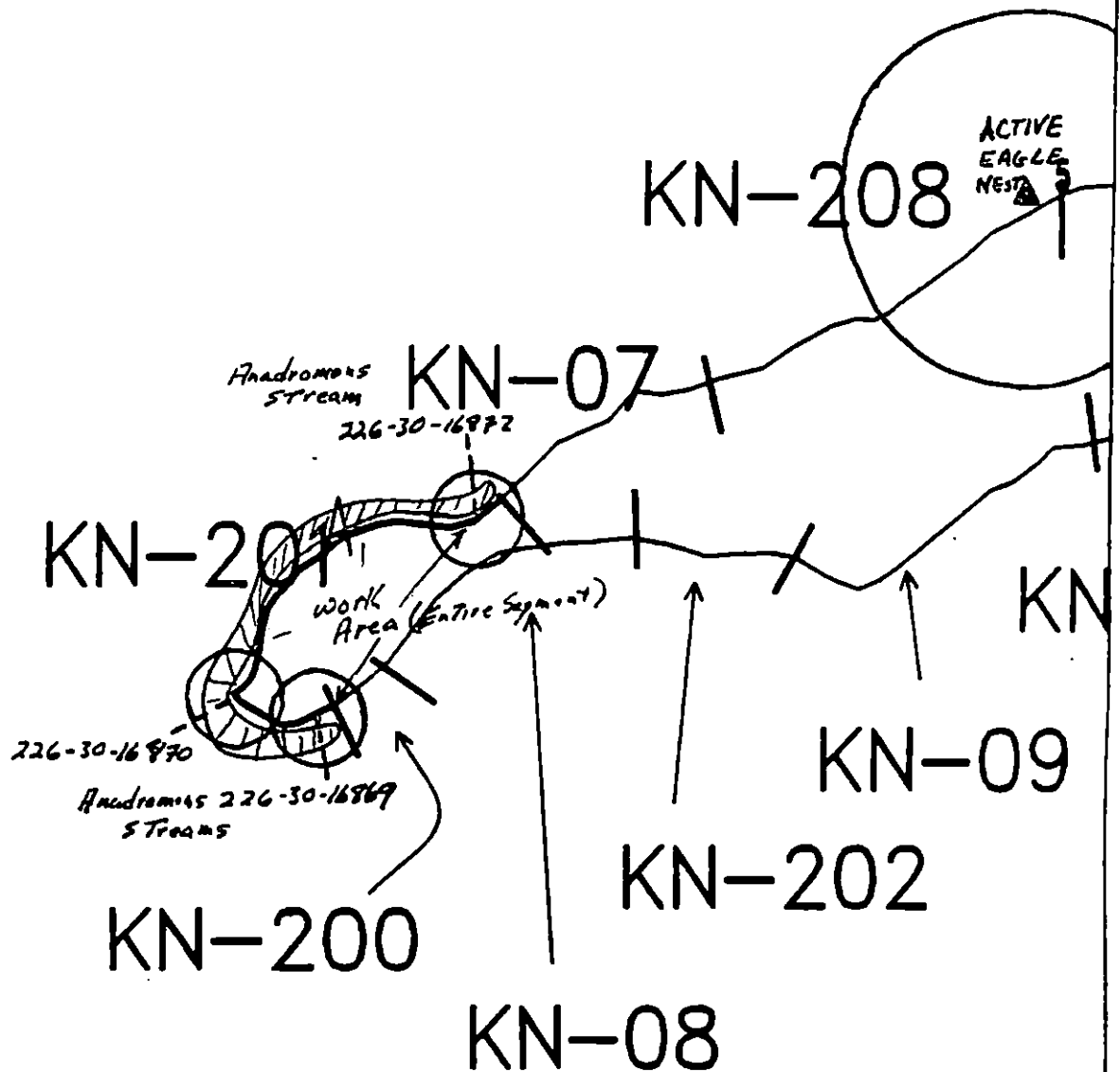
DATE

6/5/90

Prepared by:

[Signature]Date: 6/4/90

* Incorporates USFWS 6/11/90
Map of ACTIVE EAGLE NESTS.



Exxon Company, USA
Map Keys 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

ASAP FOLLOWUP RECOMMENDATIONS

Segment: A9 KN-201 Subd.: A Site: _____ Date: 8-9-90 1990

Conditions Observed: Two points at east end of segment (and
extending west to KN-07) are areas containing a moderate
amount of AP, HP (between boulders), OP, and OR subsurface
oil. Area appears to have received some level of 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 Robert H. McCann
(name) (signature)

Comments: Phase described oiling should be removed in 1990.
Treatment performed during summer of 1990 was inadequate.
OB did not survey area of heaviest oiling because it was not characterizing
as a "Work Site" on maps provided by Exxon for ASAP project.

Exxon John Dean John Dean
(name) (signature)

Comments: I DID NOT PARTICIPATE IN SURVEY OF REFERENCED
AREA. NOT IDENTIFIED AS WORK AREA

USCG Don Davis Don Davis
(name) (signature)

Comments: Large area (80-100m) of coarse, ASPHALT, TARMAT, etc. which requires
removal. Section is too large for excavation via CASE. Treatment will have
include bowing and application of "OW" Pecking manual removal.

Land Rep. Lora Johnson Lora L. Johnson
(name) (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

USCG

NAME David N. NOAA SIGNATURE David N. NOAA
DON DEVIS, 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 McCready SIGNATURE Robert B. M' C

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Rocky point at East of segment was not surveyed. by OB because was not a designated work site on maps provided for Exxon ASAP survey. However, I located a substantial amount (with CAC rep) of AP, MS, OP, OR. * This area was not referred to on Oil Status or Oiling Map. However, ASAP he agreed to recommend further manual removal. Particular attention to the point rocky point at East end of segment. * The Exxon policy of surveying only work site marked on the map 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.

2
 4300 USCG - OCEANOGRAPHIC SURVEILLANCE
 DATE 5/8/90 TIME 9:43 to 10:25
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 1016 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W m M 45m N m VLS 50m NO 22/ n US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			X			X		
S.O.R.								
POOLED								
COVER								
COAT			X	X		X		
STAIN			X	X		X		
MOUSSE				X		X		
PATTIES/T.B.	REMOVED					X		
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					1016m			

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				OILED INTERVAL (CM)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	8				X	.	Y	X				P/G/B/C
1	2	15				X	.	Y	X				P/G/C
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs

201 No. 0

Frames 0

RECOVERED

3/10/90

COMMENTS

- PRIMARYLY CT/ST-3 & CT/A ON THE NORTH SHORE OF THE EMBAYMENT.
- THE PEGS/CORALS BEACH TO THE WEST OF ANA. STREAM 16872 HAS A VERY SPORADIC DISTRIBUTION OF CT/ST & ISOLATED PATCHES OF 15cm WEATHERED MOUSSE.
- THE ROCK CLIFF/OUTCROP TO THE WEST DO NOT SHOW OIL
- THE TWO ANA. STREAMS ON THE SOUTH SHORE SHOWED VERY SPORADIC PATCHES

#226-30-16869

SITE #1
YES

201

A

A

A

yes '91 Dues
yes '91 Rick McQuay
yes '91 JMD
EXXON

XXXX
///

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN-201 A

ADEC Subsegment Length: 1018m
METERS

0 110 220
AK State Plane Zone 4 1:4402
KN-201A



Subdivision Field Map
Map Key: KNKN-201A
Name: NAKASHIMA
Date: 8/9/90
Data Entered:

201

#226-30-16872
ANAD

PIF

A

A

A

SITES

226-30-16870
ANAD

226-30-16869
ANAD

KN-201 A

ADEC Subsegment Length: 1016m
METERS

0 100 200

AK State Plane Zone 4 1:4492
100-2010



Subdivision Field Map

Map Key: KNKN-201A

Name: NAKASIMA

Date: 8/9/90

Date Entered:

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

Segment: KN201 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

 HIGH ~~X~~ MEDIUM LOW NTR

MANUAL REMOVE: AF

8 per
KSAO
mowup Rec.
Sheet

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

TAB 13 AUG 20
Manual pickup AP

(med Priority)

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.

SHPO SIGNATURE: [Signature] DATE: 5/9/90

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: 5/9/90

ADEC Art Wagner [Signature]

EXXON Art Teller [Signature]

NOAA Burl Wescott [Signature]

USCG D.D. Rome [Signature]

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

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 (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom 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 (5/1 to 9/15)
 ✓ 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

39/43

SEGMENT ST / KN-201 SUBDIVISION: ASC* 226-30-16872 DATE 22 APR 90

USCG
NAME Kenwin L. Drohan SIGNATURE Ken L. Drohan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Agree.

~~ADEC~~ → ADFSG
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~~ → NAME
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.

No bioremediation recommended.

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 1

OG EAL LARSON USCG DREHER, CWE SEGMENT ST/ KN201 4/1
 BIO KEN CLITCHLOW LAND REP STREAM 226-30-16872 OF
 EXXON DARLHL YVES ADFG 22K 227N-21MEE WHEZMAN TIME/B: 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 5 m M 5 m N 5 m VL 10 m NO 55

SURFACE OIL

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

PAVEMENT H F (S) 10 sq. m by .2

PATTIES / TARBALLS 1 BAK

NEAR SHORE SHEEN? NO BR RW (S) T.

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)	V	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		SO	SC	1	2	3	4	W	M	N	U				
1	8					☒	.							☒							10, 20, 30, 40
3	9					☒	.							☒							60, 30 / 60, 50
2	16					☒	.							☒							10, 20, 30, 40
4	14					☒	.							☒							50, 60 / 50, 40
5	10					☒	.								☒			Y			

COMMENTS

REVIEWED JW

DATE 4-24-90

SEGMENT S N201

STREAM 240-30-16872

DATE 1 122 90

CHECKLIST

___ N Area
 ___ Approx. Scale
 ___ Ssp/Sub Study
 ___ CR Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. HURL/VL
 ___ SSI
 ___ Profile Location(s)
 ___ Profile(s)
 ___ PR Location(s)
 ___ Photo Location(s)

LEGEND

1 Δ
FM - No Subsurface ON

2 A
PH - Subsurface Oil

CTAC
Controlled Distribution

CT/B
Broken Distribution

CT/P
Priority Distribution



 GPO

Old Vegetation

Photo location, direction,
and number

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

[illegible]

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS DS TS AVS SCHA MMS PTA2 REGION: PKS KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4-22-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: P. Gustin4 START TIME: 181516 HIGH TIDE HTS: 122 OBSERVERS: A. Wasserman5 STOP TIME: 185517 LOW TIDE TIMES: 123 AGENCY: ADFG6 SEGMENT #: KN20118 LOW TIDE HTS: 124 PHOTOS TAKEN: Y (N)

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frame: _____

8 K-UNIT: _____

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPES: 90AJW01555

9 STAT AREA: _____

20 USCG QUAD: _____

Start: 0446 End: 0451

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y (N) Number _____12 SOURCE: Map Loran _____

Oil _____

13 LOCATION: Knight Is.

Sediment _____

14 DESCRIPTION: West Arm

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	N	L	V	H	N
27 SURFACE COVERAGE								

28 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #: 16872

38 STREAM NAME: _____

28 SURFACE THICKNESS 3cm39 OIL IN STREAM BED? Y (N)29 PENETRATION 3-4cm40 OIL ON STREAM BANKS? (Y) N

30 OVERALL OIL IMPACT: N VL L M H

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 50 meters)31 OIL TYPE: Pooled House Tar Asphalt Sticky Sealn42 OIL WITHIN 1 MILE OF STREAM? (Y) N32 OILED DEBRIS? Y (N)

Where: _____

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

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock _____ Boulder 15% Cobble 20%Gravel 65% Sand _____ Mud/silt _____

Species	Aerial	Ground

COMMENTS: Primary area of oiling in upper intertidal on both
sides of stream E.W. thin broken random tar mats 2-4cm thick.
No apparent oil in stream lower intertidal
Small scattered marsh vegetation right down to low tide (0.3)

40/A.

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (S) DS TS AVS SCH MMS PTA 2 REGION: (P) XP, CI XAP

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 #: KN154 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (M)

7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: (M) N TAPES: 90 AJW 01 555

9 STAT AREA: _____ 20 USCG QUAD: _____ Station: 0387 End: 0446

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN: Y (M) Number

12 SOURCE: (Pop) Loran 011 _____

13 LOCATION: Knight Is Sediment _____

14 DESCRIPTION: Bay Isls. between West + South Arm Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	M	S	L	V	M	S
27 SURFACE COVERAGE				30%				
28 SURFACE THICKNESS	3-4cm							
29 PENETRATION	3-4cm							

30 OVERALL OIL IMPACT: N VL L M N

31 OIL TYPE: (Foiled) (Mass) (Top) Asphalt Sticky Seal

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% Gravel 50% Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH BREAST (M) N

37 CATALOG #: 16865

38 STREAM NAME: _____

39 OIL IN STREAM BED: Y (M) N

40 OIL ON STREAM BANKS: (Y) N

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

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

Where: _____

43 ANADROMOUS FISH PRESENT: Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

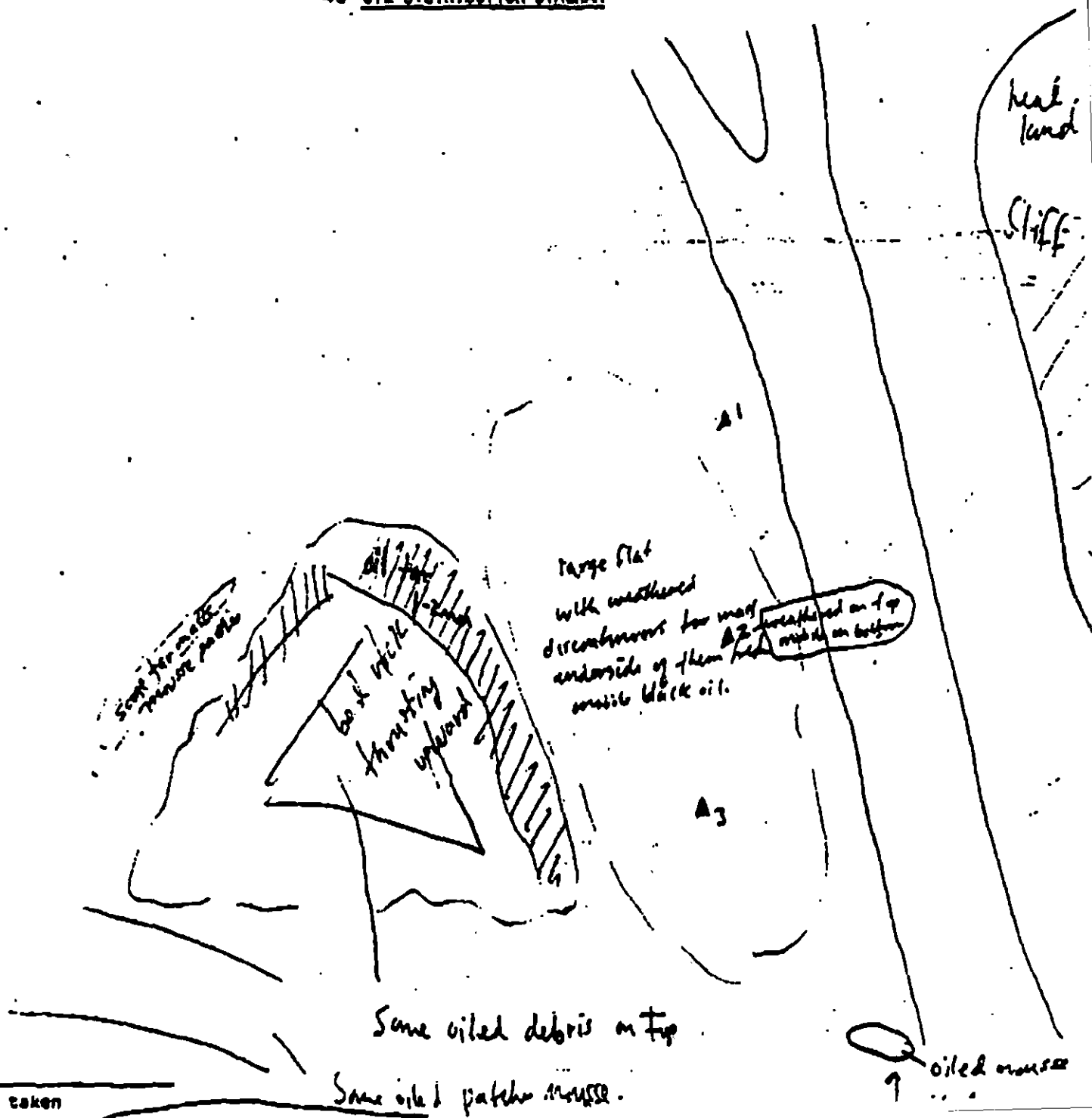
(ATTN).
Primary oil of concern is flat on north side of
creek - 3-4cm thick tarballs - very mobile on underside.
Some 1-2mm coating on bedrock. Some immersed patches
40-yds North in water. Some oiled grasses + debris

4/4

45 PHOTOLOG

NAME(S)	DESCRIPTION
Pit #1	15cm deep no oil observed
Pit #2	1cm deep hole 3cm oil from top down
Pit #3	12cm deep pit oil surface down 4cm oil
Top of Knoll North of Oregon has a partially oiled tree / stump. Also oiled grasses / kelp / debris. Also the UTTZ and SUPRA 2 are still partly covered in snow and have thick areas of oiled debris / mousse etc.	

46 OIL DISTRIBUTION DIAGRAM



Recommendations

42/43

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 UITE to LITE. Majority of tar mats lie in middle to upper ITE.

Remove oiled debris, (ropes, grasses, sticks, branches, etc.)

Remove oiled grasses, cut off stump + roots and other oiled parts of 2 trees on road and remove.

Perform survey of banks North + South of stream bed and remove any oiled debris.

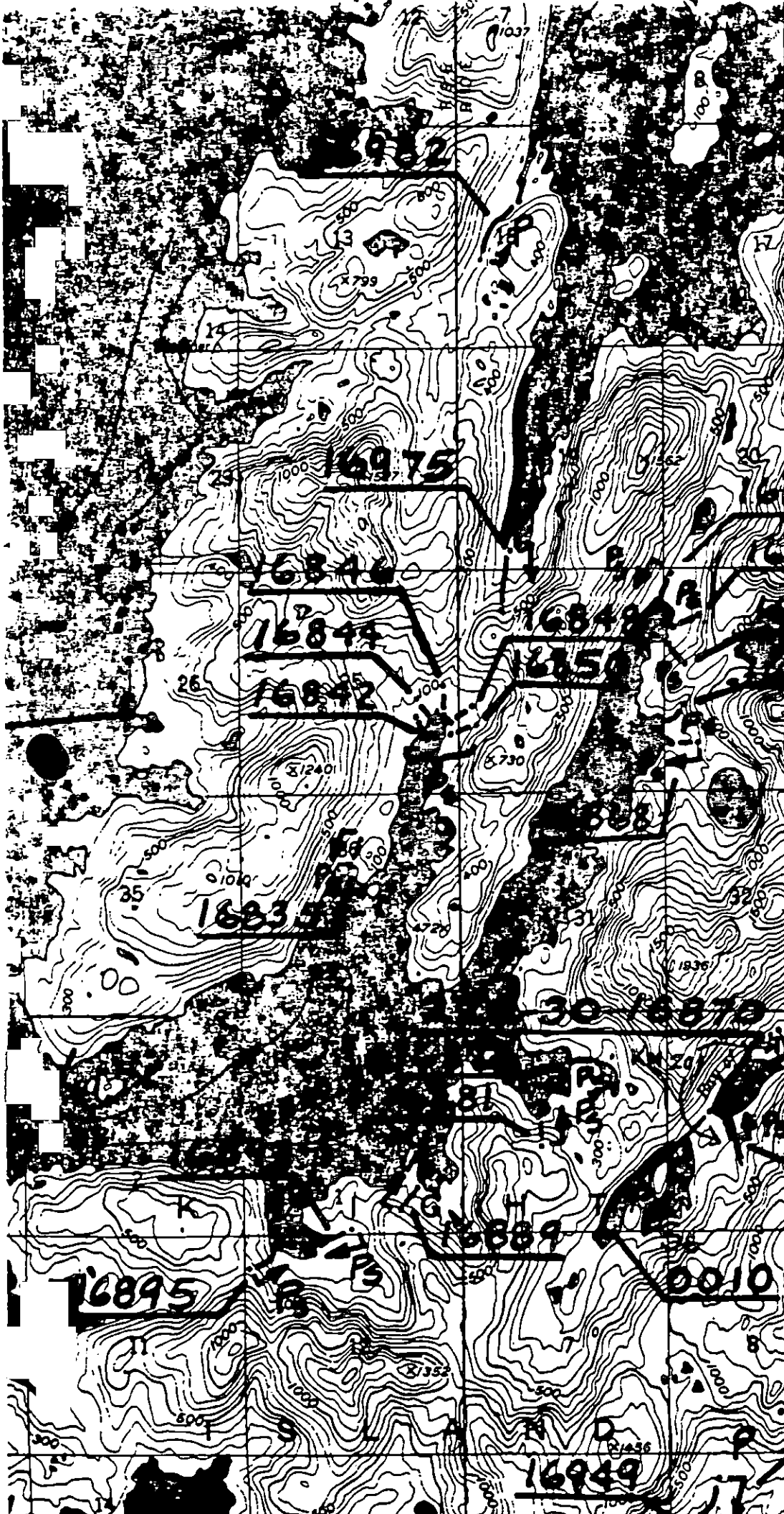
Take particular notice of U.I.T.E and Supra I.T.E. for oiled debris, moose, etc and remove any thing found.

No bio remediation recommended.

Comments by Ken Critchlow:

Agree with ADFG recommendations

KRC



16862

16863

16864

16866

~~16870~~

4 N.

3 N.

(SEWARD B-2)

16869

16950

16952

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 uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-201A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/01/90

ADEC Ron M. Haggard

EXXON AMY TEAL

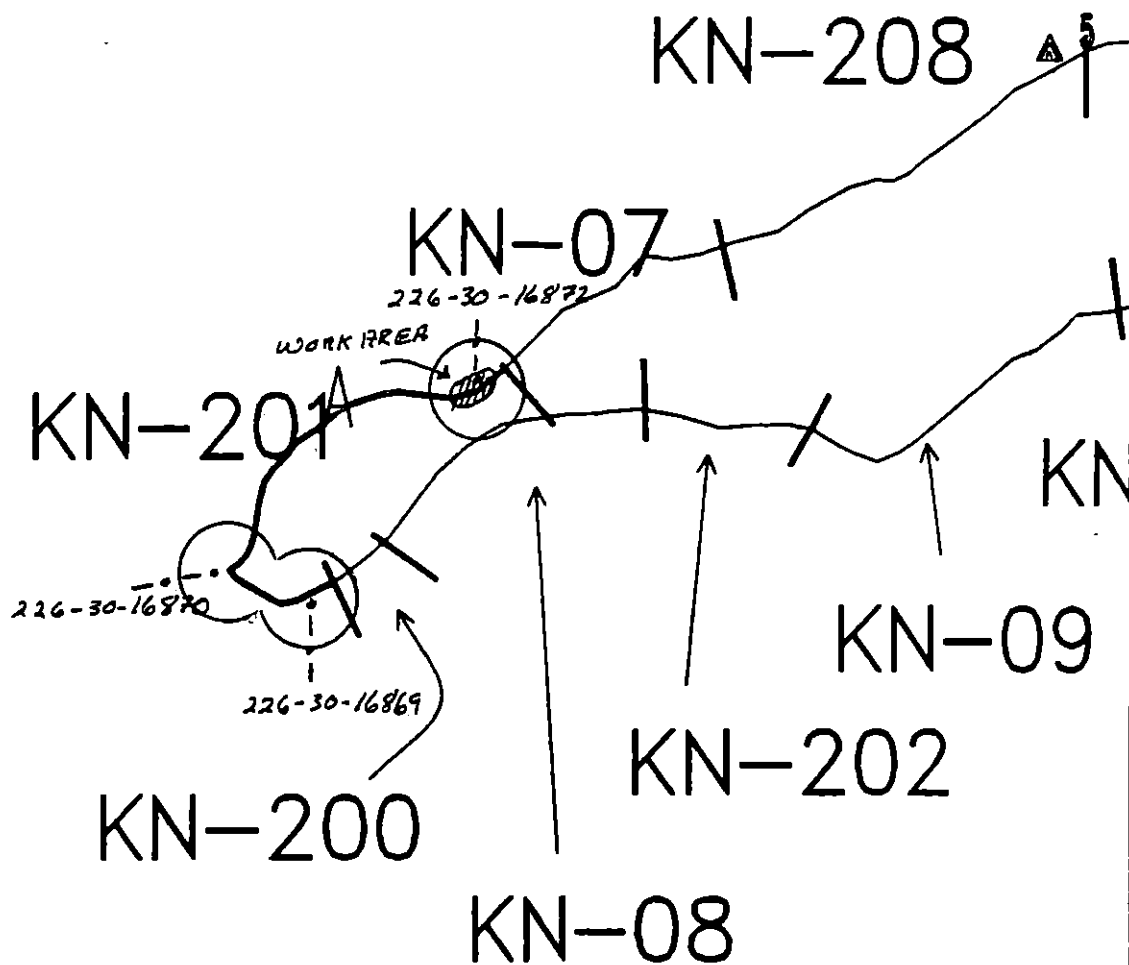
NOAA G.H. Frenter

USCG G.A. REITER

FOSC A.D. Rome, CDR, USCG DATE 6/2/90
Acting

Prepared By: Anders Meyer WPK

Date 5/31/90



Anadromous Stream Evaluation: 226-30-16872



Exxon Company, USA
Map Key: KNI-KN-201
May 11, 1990



ECOLOGY MAP
SEGMENT KN-201
SUBDIVISION A (1 of 1)
METERS
0 401 802

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1316 feet

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.

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	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> 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
EXXON ANDY TEAL
NOAA Paul Wescott
USCG M. J. HALL
FOSC: WJL DATE: 5-6-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN-202 SUBDIVISION: A DATE 3/30/90

USCG

NAME SCOTT RAINFORD SIGNATURE Scott Rainford MST

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 06/22/89

OG St. Michaels Bay USCG J. DAINSFORD SEGMENT ST/ KN-202
 BIO M.A. Scott LAND REP L. Johnson SUBDIVISION A
 ON J. BUTLER ADEC W. GORMLEY TIME 13:00 to 13:30
 TEAM NO.: 3 TIDE LEVEL: +3 to +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
2 < 1%

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SW WH	DBL RM	GY BL	DMK TL	LR	SU	U	M	U	
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 BECAUSE 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	SW BR	ORL WY	GY BL	ORL PL	LR	SU	U	M	U			
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

steep rocky shore w/ patchy splats of mousse as
 at c SURF. Ice w/ oil from w/ok end of
 the arm is melting and releasing oil as fine RW
 sheen. (rainbow)

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

G. McDONALD 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 to 13:30
 TEAM NO.: 3 TIDE LEVEL: +5 to +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
 0.21%

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	R	BR	OR	OL	OP	NO	TL	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 - 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 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	VC	BR	OR	OL	OP	NO	TL	SU	U	M	U		

COMMENTS steep rocky shore w/ patchy splotch of mousse as
 at a surf. Sec w/ oil from west end of
 the arm is melting and releasing oil as fine RR
 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 MASCOY

(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 0 Low 0

(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 bad angle
low tidal zone not observed

Ecological Considerations:

OG G CDONARD

243

ETCH MAP

SEGMENT ST/ KN-202

SUBDIVISION A

DATE 3/30/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ C&D Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Becken Distribution

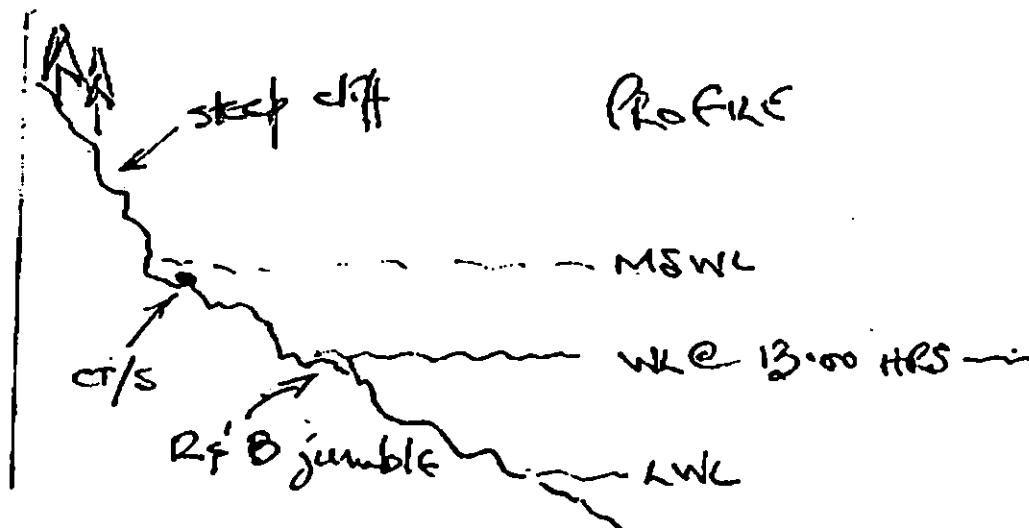
CT/P
Patchy Distribution

CT/S
Splashed Distribution

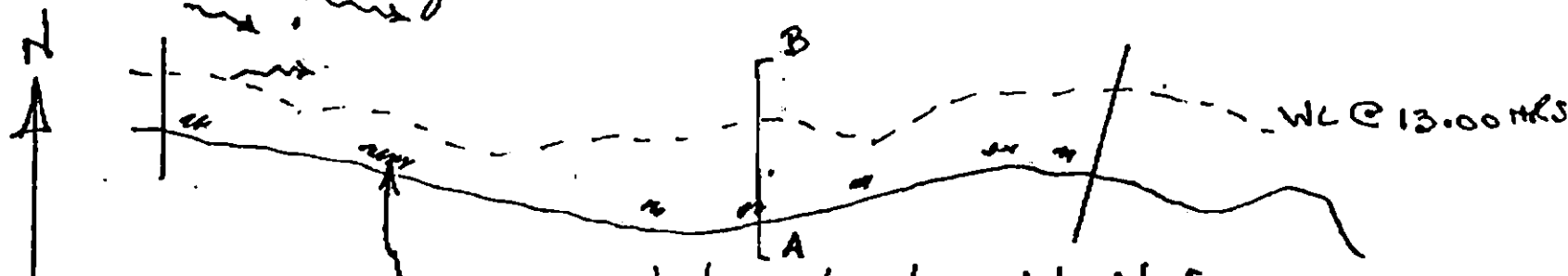
Other Vegetation

Photo location, direction,
and number

~ ~ ~ ~ ~ screen



drops & wisps of RW
screen w/ ice from
west end of bay.



~ ~ ~ ~ ~ = occasional CT/S < 1/2
@ SUTZ; LBN & DBN, soft,
sticky mousse; typically trapped in rock & boulder crevices.

Oil Character Length (m): AP — PO — CV — CT 350 ST — MS — PT — TB — FL — NO —

REVISION 02/24/90



KN-2008

KN-202

KN -

0000 No Oil

KN-202

Segment Length: ~~0000~~ 0000

354

A horizontal scale bar with markings at 0, 100, 200, and 300 meters.

Date 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 uncoiled biota and substrate.

SHPO SIGNATURE

Charles E. H. [Signature]

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:

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:

TAG APPROVAL DATE: 4/20/90

ADEC

ART WEINER

EXXON

ANDY [Signature]

NOAA

BRI [Signature]

USCG

KENNETH KEANE

FOSC:

[Signature]
Resurvey

DATE:

5-12-90

UITZ and SUITZ

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)
- 7MH Finfish harvesting
- 7H Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KJ-203 SUBDIVISION: A DATE 4/4/90

USCG

NAME SCOTT RAMSFOED SIGNATURE Scott Ramsford

☒ 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. 002878

OG G. MACDONALD USCG 3. RAINFORD SEGMENT ST/ KN-203
 IO MA SCOTT LAND REP L. JOHNSON SUBDIVISION A 10F1
 XXON J. BUTLER ADEC W. GIBBNEY 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 30 % 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			
	C	B	P	R	SW	W	W	W	W	W	W	W	SW	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 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE brim
#BAGS 1

Photographs:

Roll No. ST-3-2Frames -

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-OS)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			SW	W	W	W	W	SW	U	M	U		
1	10					X	-								X			N	BCG
2	15					X	-							X				N	CR
							-												
							-												
							-												
							-												

COMMENTS Med. - steep & rocky shore w/ BC over bedrock.
 Surface oil only 02 CT/S: P @ SURT on granules
 between bldr: cbb. Trace of R @ URTZ.

SHORELINE ECOLOGICAL SUMMARY

SP-1000-1000-10

Segment ST K01203 Subdivision A Date (mo / day / yr) 4 / 4 / 90

Time (24 hr) 1530-1600 Biologist MAScott

A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 25 (3) Cobble 20 (4) Pebble 15 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 50 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. 57-3-2

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

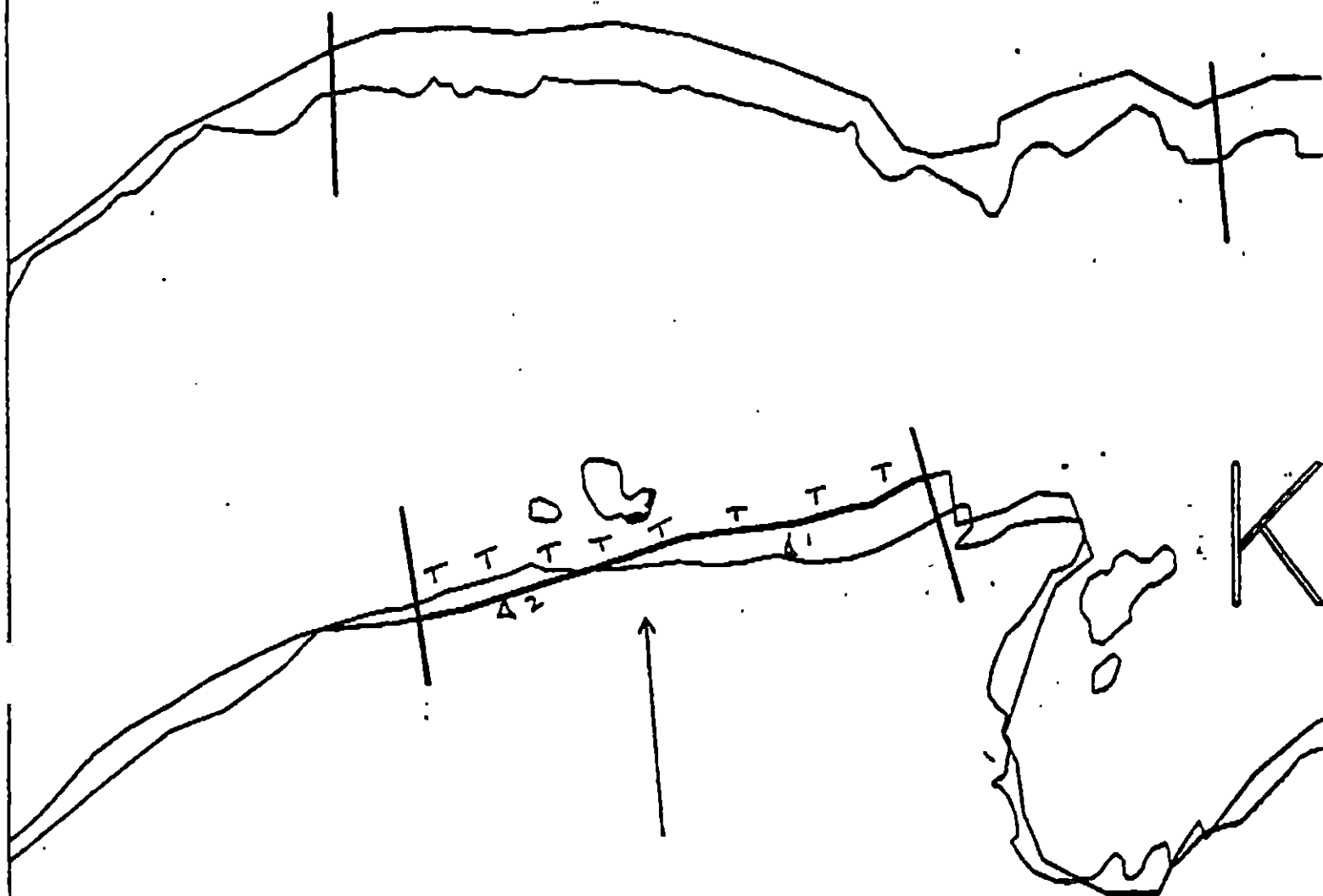
NOT PRESENT

Wildlife Observations/ General Comments:

2 gulls
4 mergansers
1 eagle
2 bottle heads
1 dead deer
2 goldfinches
1 other

Ecological Considerations:

KN-06



KN-203

KN-136

292

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

Date 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 uncoiled biota and substrate.

SHPO SIGNATURE: Charles J. Horman 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 W. Bower
EXXON ARMY TENZ
NOAA Bruce Wescott
USCG KENNETH KETWIE

FOSC: W L

DATE: 5-12-90

Monitor to assess UITS and SUITS during clean-up.

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 (5/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-204 SUBDIVISION: 7 DATE 4/4/90

USCG

NAME MAURICE 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 RUN STREAM
 - PATCHY COVER NEAR MID-POINT (AREA) OF SEG-204 [MANUAL REMOVAL]
 - MOOSE 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. 000000

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-204
 BIO G. PENN 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	B	P	S	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT			X										X			
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. 9 sq. m by —

PATTIES / TARBALLS 2 BAGS

NEAR SHORE SHEENT 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-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UC	UC	OP-OR	OR-OL	OL-OF	OF-NO	UC	UC	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 patches scattered throughout and a film on the rocks close to the snow line where indicated on map.

SEGMENT ST/

04

SUBDIVISION A

DATE 4, 4 80

CHECKLIST

- ☒ H Arrow
- ☒ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWT/LWR
- ☐ 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/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

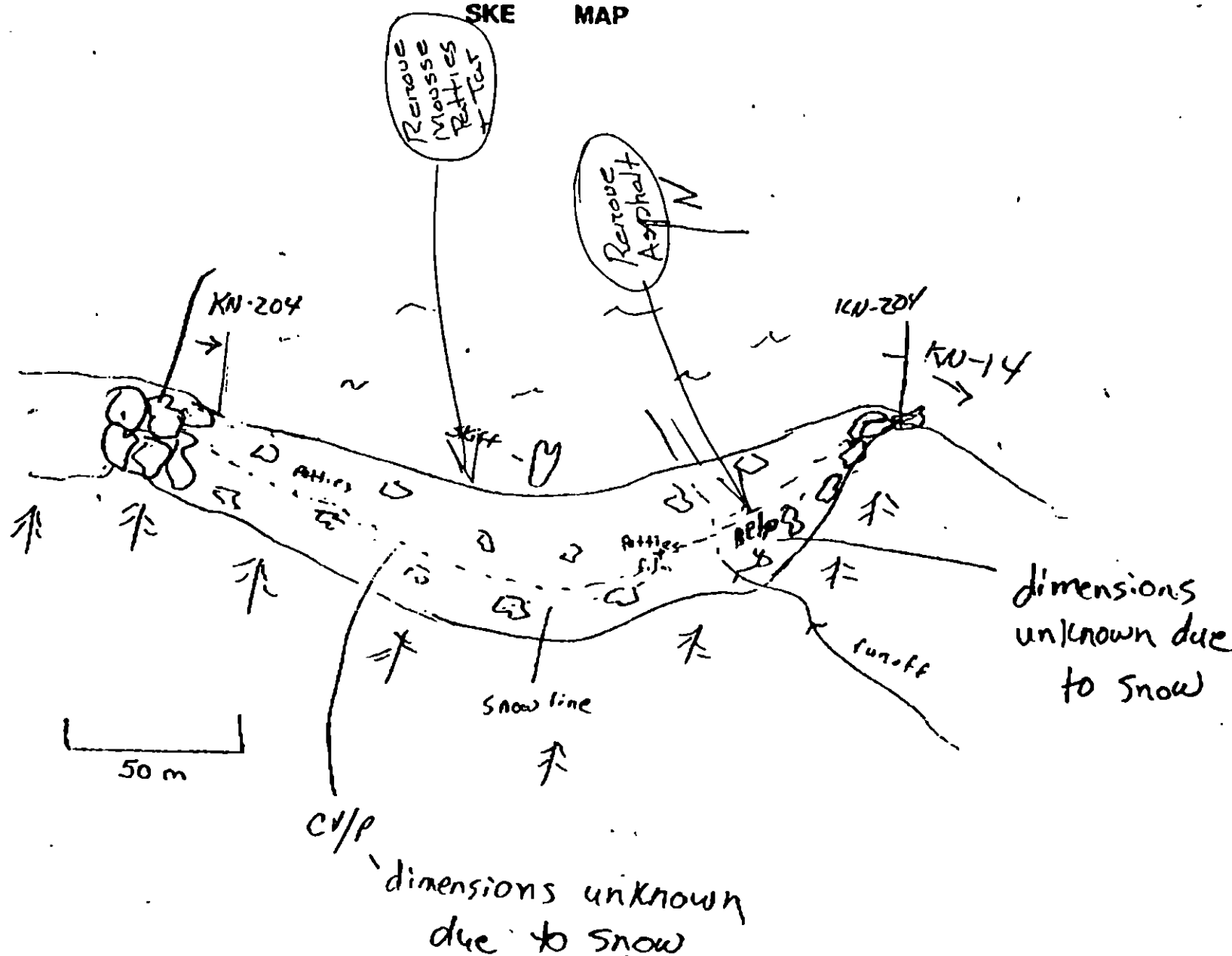
Splashed Distribution

Other Vegetation

1 ●

Photo location, direction, and number

SKE MAP



Oil Character Length (m): AP ? PO 0 CV ? CT 0 ST 0 MS 0 PT 19 TB 0 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 004

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) Sil -

(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 (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 PRESEN

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 PRESEN

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 PRESEN

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 PRESEN

Wildlife Observations/ General Comments:

Ecological Considerations:

KN-14

KN-204 →

XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-204

ADEC Segment Length: 197m



Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-205 SUBDIVISION A (1 OF 2) DATE 4/4/90

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)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. [Signature]*

DATE: 7/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 616 m: No Oil 1206 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: MONITORS TO ASSESS SUITZ AND DETERMINE THE
NEED TO REMOVE PATTIES.

TAG APPROVAL DATE: 4/24/90

ADEC ART WILSON

EXXON ANDY [Signature]

NOAA Joseph Talbot

USCG MIJ. HALL

FOSC: [Signature]

DATE: 5-12-90

Assess SUITZ prior to

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-205 SUBDIVISION: 7 DATE 4/4/90

USCG

NAME MARION J. SHANK

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

WALK ALONG SHORELINE TO PICK UP SPORADIC MOUSSE PADDIES
ALONG HITZ - UPPER MITZ / HITZ WAS 80% COVERED UP BY
RECENT SNOW FALL.

LAND MANAGER

NAME M.C.T. SMITH

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OVERNIGHT SNOW COVERED UPPER MITZ & HITZ. COULD NOT ACCURATELY DETERMINE
UPPER EXTENT OF OILING. ALSO, SNOW (DEEP) COVERED STORM BEAMS AT HEAD
OF SMALL CREEK PREVENTING DETERMINATION OF AMT. OF OILED DEBRIS IN BEAMS.

SHORELINE OILING SUMMARY

REVISION NO. 63/22/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-205
 BIO G. PENN LAND REP M. SMITH SUBDIVISION A 10.2
 EXXON S. REID ADEC S. Ferguson TIME 12:45 to 2:37
 TEAM NO.: 4 TIDE LEVEL: 6.5 to 5' DATE 4/14 /90
 EST. SUBDIVISION LENGTH: 1109 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 90 % B 5 % C — % P — % G — % S — % M — % V — %
 SLOPE: Long 1 % Hang 3 % Vert 90 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 600 m NO 509 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	10	15	10	15	10	15	10	15	10	15	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S — sq. m by — crPATTIES / TARBALLS — / — BAGS

NEAR 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

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	10	15	10	15	10	15	10	15	SU	U	M	U		

COMMENTS - mainly bedrock with boulder coves.

The upper Intertidal area was covered in fresh snow. Therefore, it was hard to tell exactly what was going on. However, there was a translucent nearshore sheen coming until the point indicated on map. By the coat + stain on the face of the vertical Bedrock + occasional Mousse patty, it appeared that it was a continuation of KN-15, however since there was so much snow it was hard to see. The rounded the

SKETCH

DIVISION A

4,4 90

CKLISI

Access
 Spec. Scales
 10 Sub Entry
 1 Dist.
 10 High
 Cover
 Access Character
 1. HWA 10
 1
 of the Location(s)
 of the(s)
 1 Location(s)
 10 Location(s)

END

Subsurface Oil

2A

Surface Oil

7/C

Joint Distribution

: T/O

Discussion

T/P

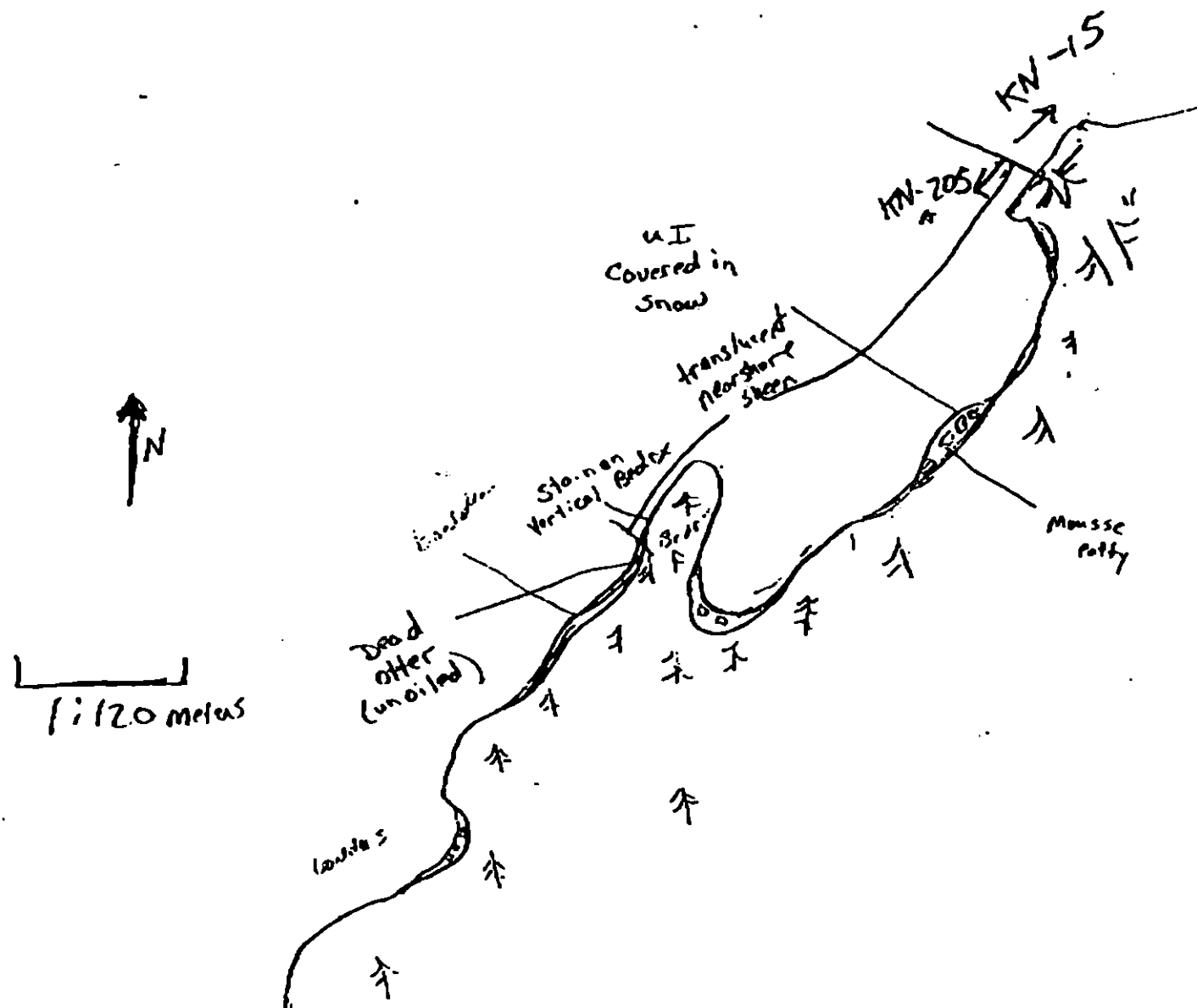
Distribution

T/S

and Distribution:

Operation

location, direction,
size



Tracer Length (m): AP 0 PO 0 CV 0 CT 0 ST 1 MS 0 PT 6 TB 0 FL 0 NO 509

REVISED: 02/24/99

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/02/90

Segment ST / KN-205 Subdivision A Date (mo / day / yr) 04/04/90

Time (24 hr) 12:45 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 5 (3) Cobble - (4) Pebble - (5) Sand - (6) Silt -

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 10 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. -

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-15

N

KN-205A

A

XXXX Wide

//// Medium

--- Narrow

TTTT

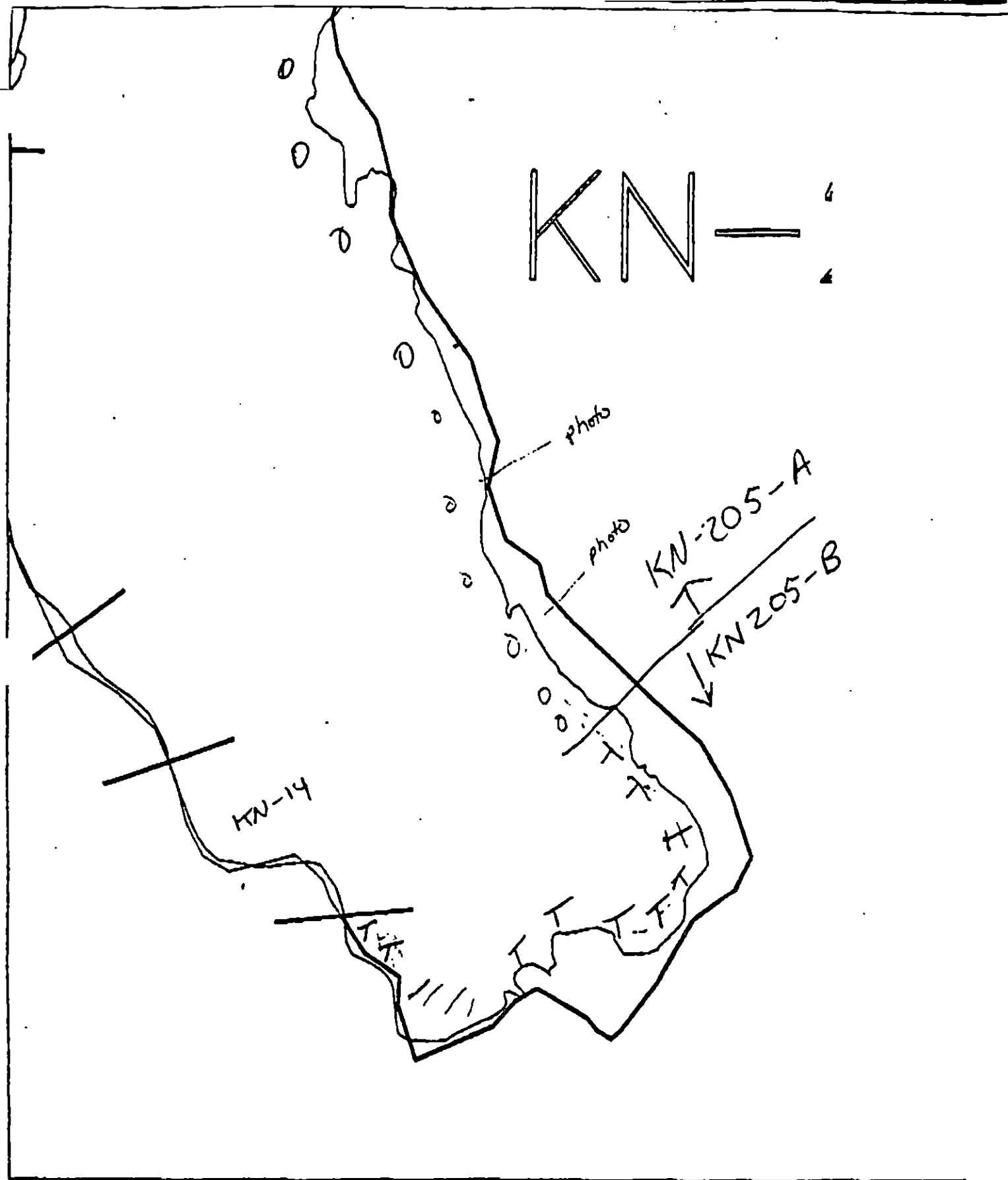
KN-205A

ADEC Segment Length: 2830m

Map Key: PWS-332b

Name: K. Ramsey

Date: 4/4/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-205A

ADEC Segment Length: 2830m



Map Key: PWS-332a

Name: K RAMSEY

Date: 4/4/90

Date Entered:

WORK PLAN ADDENDUM

Segment ST/KN-205

Subdivision A

Dated 6/8/90

MODIFICATION

1. REASON FOR MODIFICATION

- FOSC Request

2. ADJUSTMENT TO WORK PLAN

Manual pick up of tarmats, patties and oiling debris

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO APPROVAL NEEDED YES X

SHPO SIGNATURE

NO _____

The above constraint applies!

TAG APPROVAL DATE 6/8/90

ADEC

RAY MORRIS R. Morris

EXXON

HANSO. JAHNS Hans O. Jahns

FOSC

[Signature]

DATE

6/15/90

NOAA

Joseph Talbot J. Talbot

USCG

G.A. REITER G.A. Reiter

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-205 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (226-30-16860) is more than 100m from work site. No constraint to manual pickup.
2M	Herring Spawning	No constraint to manual pickup.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unloosened substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

D. D. Rome

Date

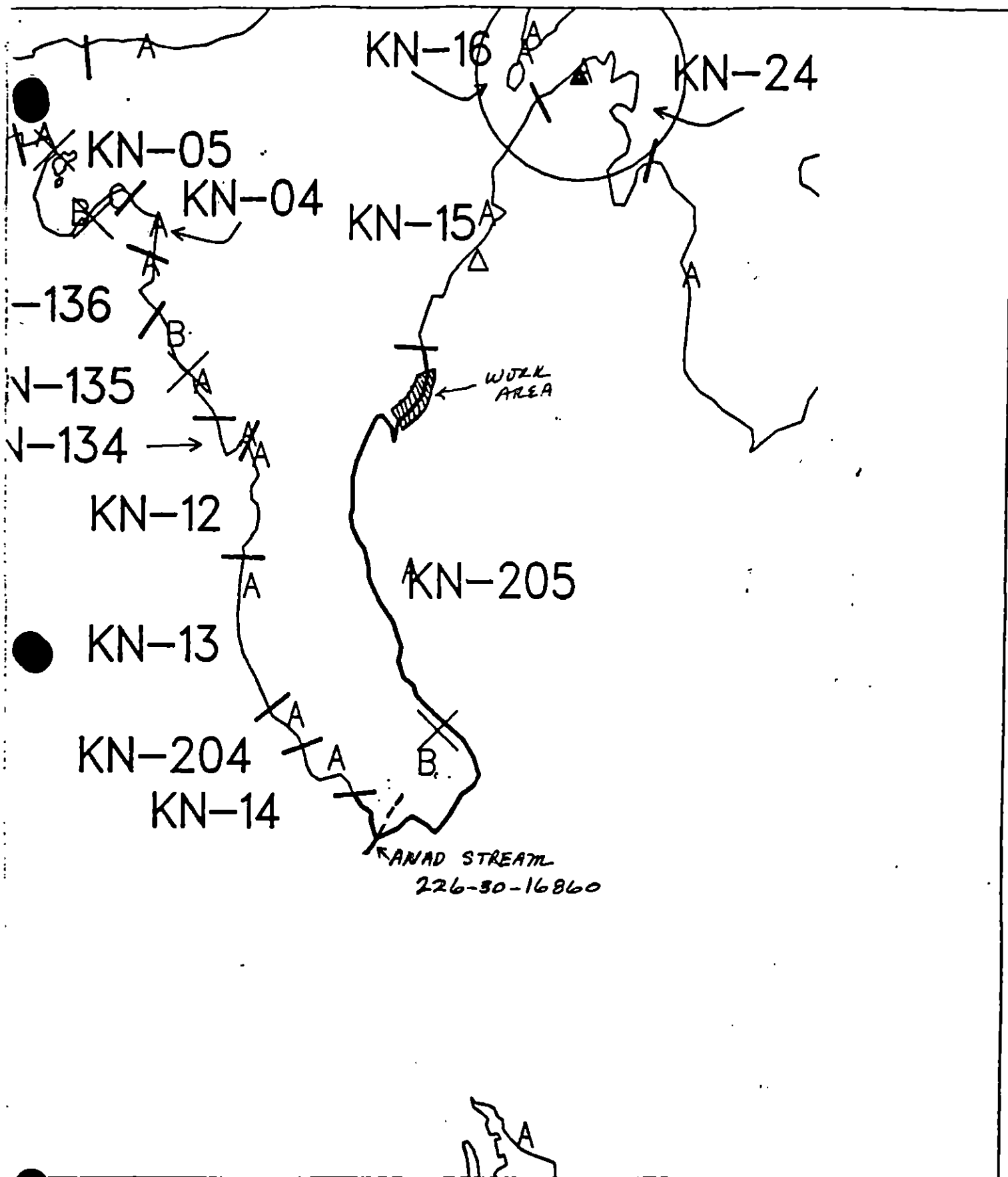
6/24/90

Prepared by

J. Phillips

Date

6/22/90



EXXON
 Exxon Company, USA
 Map Key: PMS-KN-205
 June 09, 1990

ECOLOGY MAP
 SEGMENT KN-205
 SUBDIVISION A (1 of 2)
 METERS
 0 502 1005

- | | |
|---|---------------------|
| ★ | Seabird Colony |
| ▲ | Active Eagle Nest |
| △ | Inactive Eagle Nest |
- 1 inch = 1648 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-205 SUBDIVISION B (2 OF 2) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (1A and 1B)

SHPO SIGNATURE *Charles E. Adams*

DATE: *4/25/90*

OILING CATEGORIZATION:

Wide 0 m: Medium 233 m: Narrow 0 m: V.Light 775 m: No Oil 0 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>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2)
manual pick up of tarballs and patties, 3) bioremediation of subsurface
oil shown on attached sketch map. Work should be conducted between
6/15 and 7/10 based on herring and salmon constraints after approval of
USFWS regarding eagle nest.

TAG COMMENTS: MANUAL RAKE/TILL AREA OF PIT 1+2 PRIOR TO BID

MONITORS TO CHECK SUITZ AT TIME OF TREATMENT.

TAG APPROVAL DATE: 4/24/90

ADEC Art Weiner Dpt. of Marine

EXXON Arvo (G) Arvo

NOAA Jean Talbott

USCG M. J. Hall

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

CAC Rep to be on scene. Assess
KN205A while work being conducted
on KN205B.

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 (8/11 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
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 205 SUBDIVISION: B DATE 4/4/90

USCG

NAME MARILYN J. SHARPE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- F HITZ HAD SUBSTANTIAL SNOW COVERAGE**
- SALMON STREAM HAD PATCHES OF MOUSE PADDIES ON SOUTH-^{END}
 - BANK [MANUAL REMOVAL]
 - STREAM AT NORTH END HAD PAVEMENT ^{CONTINUED} 3 METERS WIDE X 40 METERS LONG
 - [MANUAL REMOVAL]
 - PAVEMENT/BROKEN DIS → NE CORNER AREA 1 METER WIDE X 45 METERS LONG
 - [MANUAL REMOVAL]
 - PATCHES OF MOUSE BALLS ALONG UPPER HITZ - LOWER HITZ [MANUAL REMOVAL]

LAND MANAGER

NAME M.C.T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

RECENT SNOW COVERS UNITS AND HITZ SO UPWARD EXTENT OF OILING
COULD NOT BE ACCURATELY DETERMINED. THE 2' DEEP OLD SNOW BANKS
COVERED THE STORM BANKS IN COVES AND AT S. END OF ARM. THUS,
OBSERVANCE OF OILING DEGREE COULD NOT BE DETERMINED.

SHORELINE OILING SUMMARY

REVISION NO. 06/78

OG K. RAMSEY USCG R. SHARPE SEGMENT ST/ KN-205
 BIO G. PENN LAND REP M. SMITH SUBDIVISION B
 EXXON S. REID ADEC S. FERGUSON TIME 2:37 to 3:55
 TEAM NO.: 4 TIDE LEVEL: 5' to 1.5' DATE 7/14 / 90
 EST. SUBDIVISION LENGTH: 1934 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 2 % B 63 % C 5 % P — % G 30 % S — % M — % V —
 SLOPE: Long 98 % Hang 2 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M 267 m N — m VL 1667 m NO — m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	N	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT	X					X							X	X		
POOLED																
COVER																
COAT				X				X					X			
STAIN				X				X					X			
MOUSSE																
PATTIES			X					X					X	X		
TARBALLS			X					X					X	X		
FILM																
NO OIL																X

PAVEMENT: H (P) s 135 sq. m by 3 cPATTIES / TARBALLS 2 a guess due to BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NOTYPE #BAGS

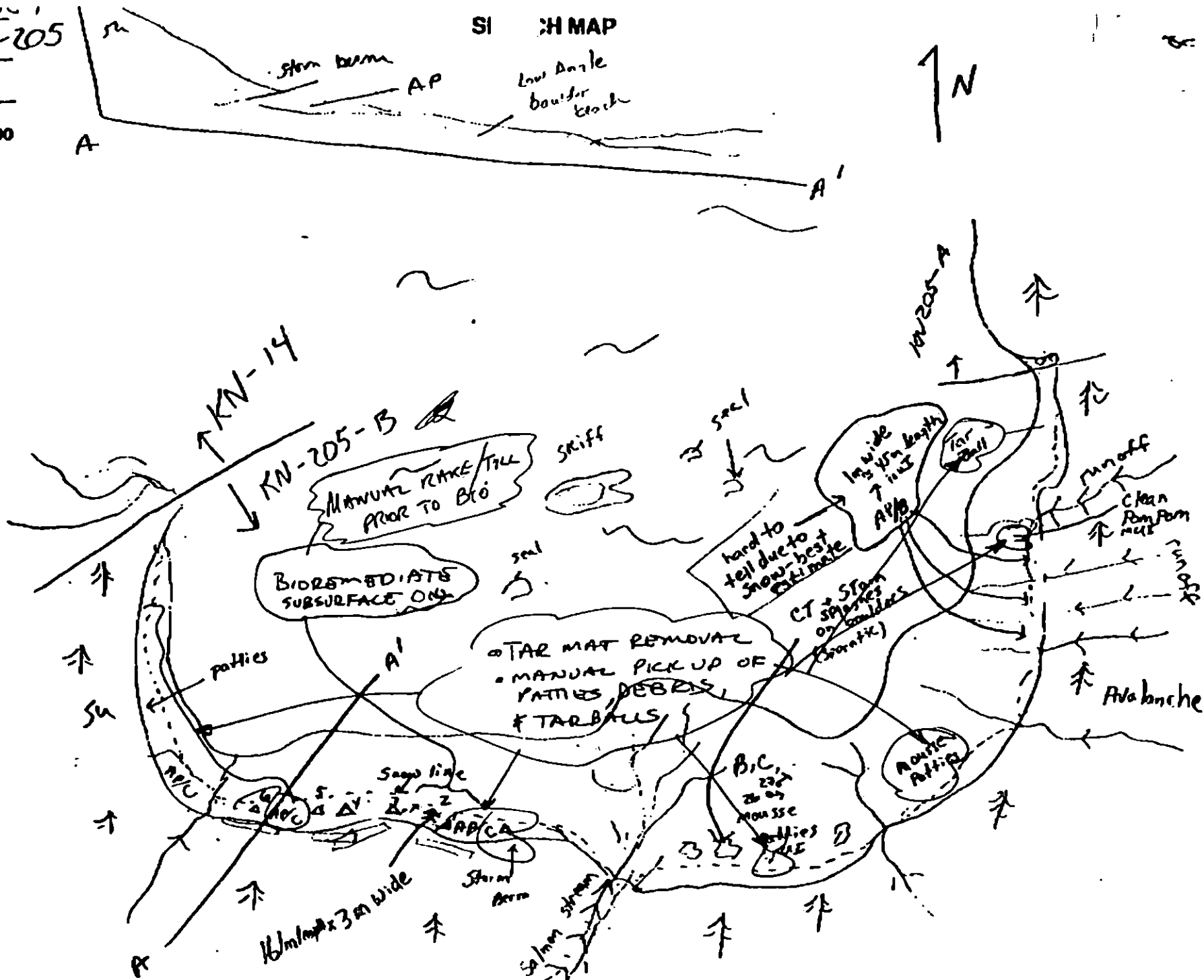
Photographs:

Roll No. ST-4-1Frames 26, 27

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DB)	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			
1	30	X					5-30	X	X	X								X	N	P
2	25	X					5-25	X	X	X								X	N	P
3	15					X	.	X	X	X								X	N	P
4	15					X	.	X	X	X								X	N	P
5	15					X	.	X	X	X								X	N	P
6	20					X	.	X	X	X								X	N	P

COMMENTS



SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/2

Segment ST / KN-205 Subdivision B Date (mo / day / yr) 04/04/90Time (24 hr) 1437 Biologist PENN(A) Substrate type and % of segments:
(1) Bedrock 2 (2) Boulder 0 (3) Cobble 5 (4) Pebble 30 (5) Sand - (6) Silt -(B) Overall % cover of biota (% of segment): Dense 5 Moderate 10 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. ST-4-1Frames 25

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 PRESEN

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 PRESEN

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 PRESEN

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 PRESEN

Wildlife Observations/ General Comments:

1 - sea otter

3 murrelets

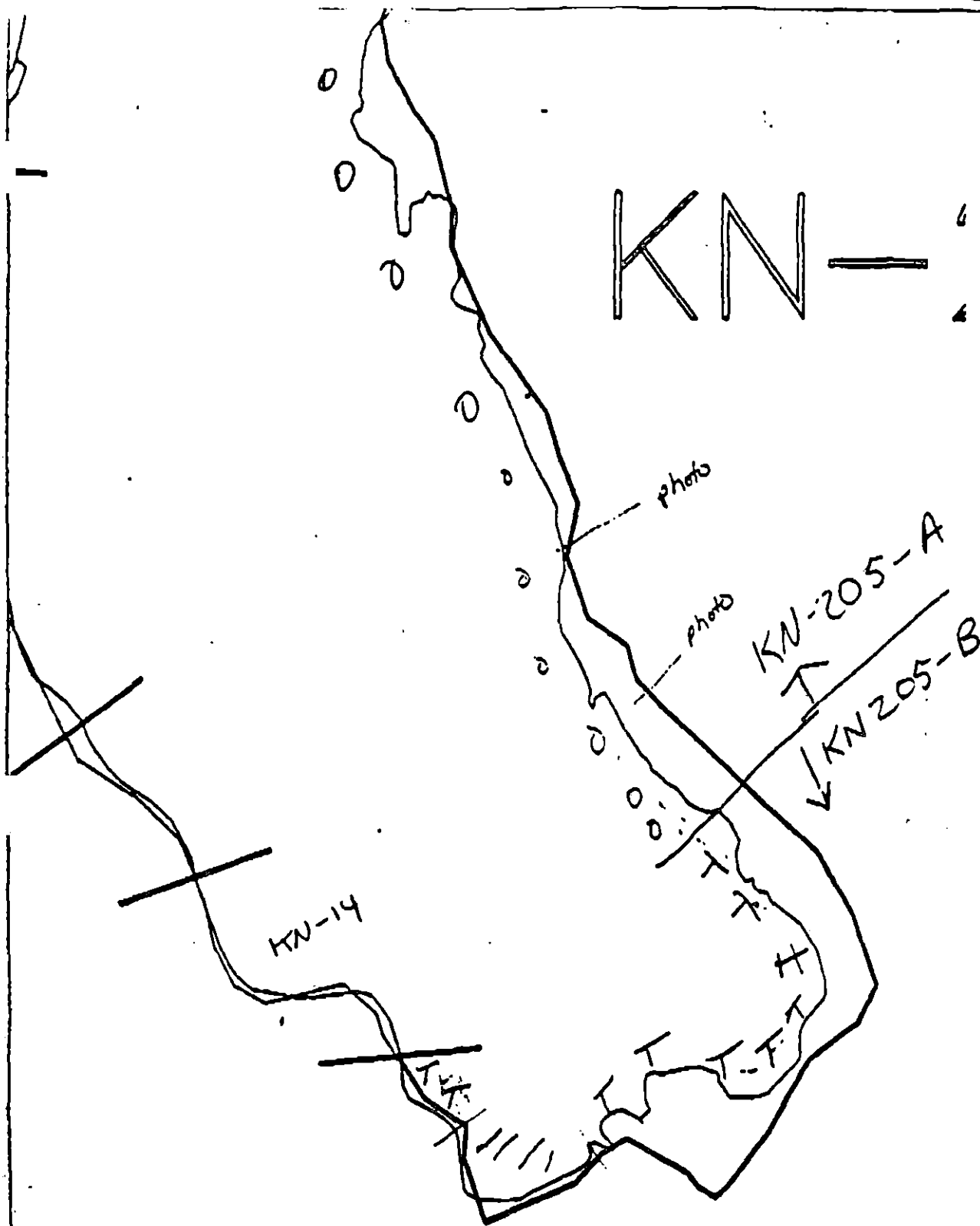
3 - seals

1 dead sea otter - no visible oiling

56 - Barrow Gull - eyes

Ecological Considerations:

KN- 6



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

KN-205

ADEC Segment Length: 2830m



Map Key: PWS-332a

Name: K RAMSEY

Date: 4/4/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS**SEGMENT KN-205 SUBDIVISION B (2 of 2)**

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation and Manual Raking/Tilling More Than 100m From Stream	OPEN
Bioremediation and Manual Raking/Tilling 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 (226-30-16860) is present in Subdivision. This subdivision is closed to bioremediation and manual raking/tilling less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual raking/tilling are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking/tilling more than 100m from stream. No constraint to manual pickup and tarmat removal.
- 2M Herring Spawning** NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
- 5T Bald Eagle Nest** NO CONSTRAINT. No bald eagle nests in Segment.

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.

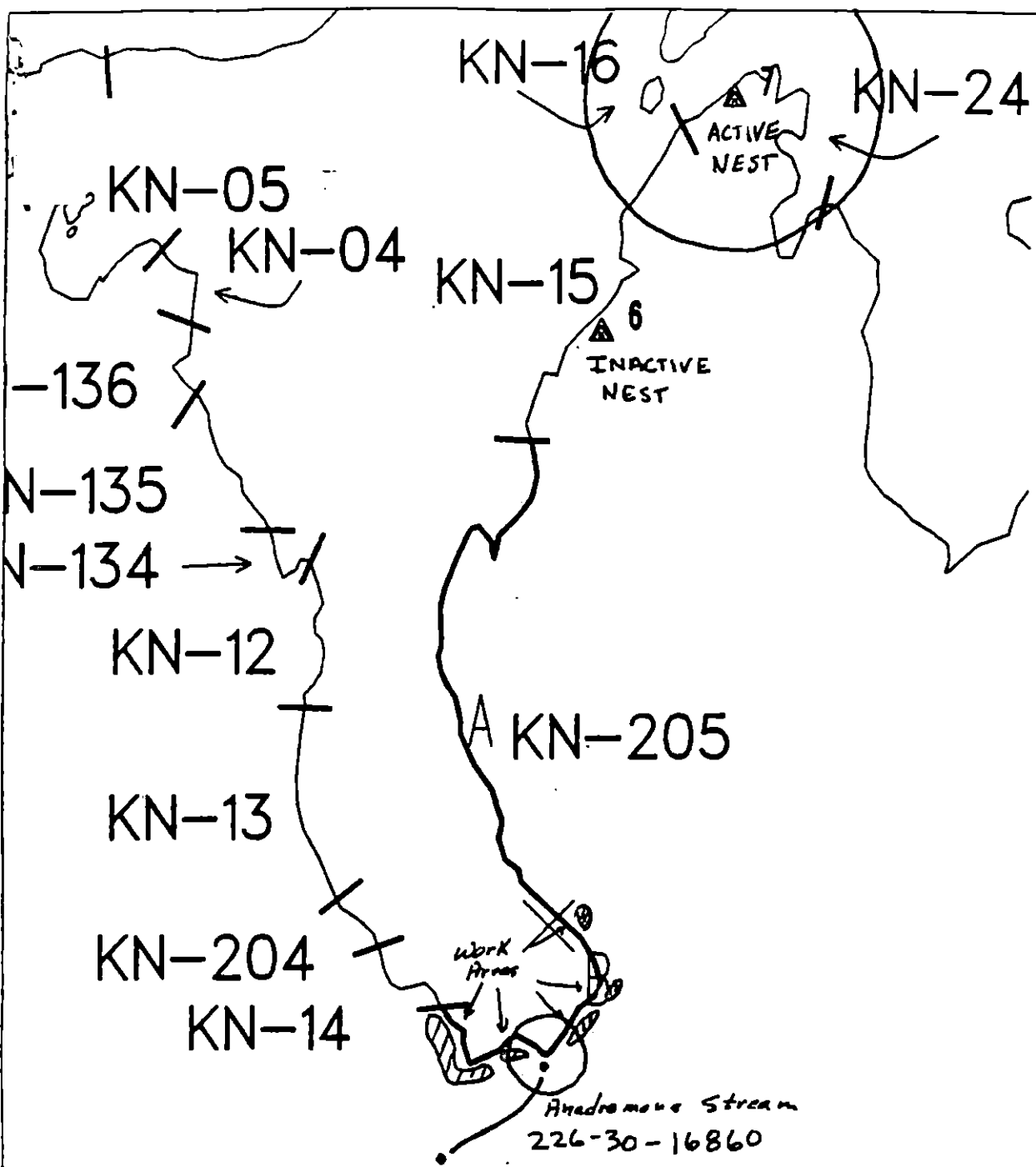
**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16860)
FOR ADDITIONAL CONSTRAINT INFORMATION.**

TAG APPROVAL DATE 6/04/90
 ADEC RAY Morris
 EXXON ANDY GEAR
 NOAA JOSEPH KILBATT
 USCG G. H. Becker

FOSC [Signature] DATE 6/8/90

Prepared By: Andru Meyer

Date 6/4/90



INCORPORATES USFWS 6/1/90
map of Active Eagle Nests.



Exxon Company, USA
Map Key: KN1-KN-205
May 11, 1990



ECOLOGY MAP
SEGMENT KN-205
SUBDIVISION B (2 of 2)
METERS
0 435 870

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1427 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16860

SEGMENT KN-205 SUBDIVISION B

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous stream (226-30-16860) is in subdivision B. No constraint to manual pickup and tarmat removal.
2M Herring Spawning	No constraint to manual pickup and tarmat removal.

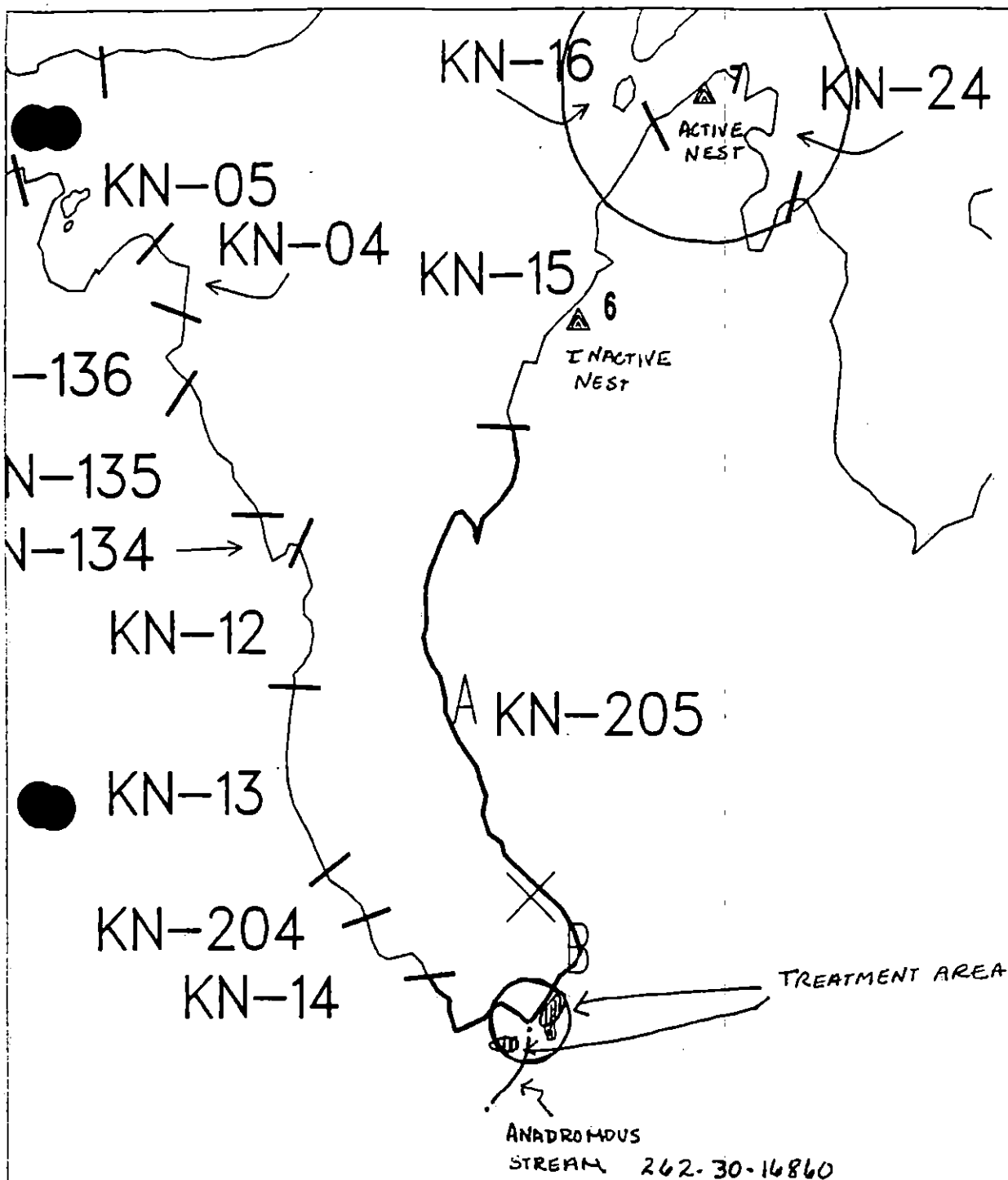
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat traffic to essential minimum. Avoid damage to unoiiled intertidal and subtidal algae and seagrass. Avoid any unnecessary disturbance or damage to unoiiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-205B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC WJL Date 6-10-90

Prepared by W. Kelley Date 6/8/90



ANADROMOUS FISH STREAM EVALUATION (226-30-16860)

*Incorporates USFWS 6/1/90
map of ACTIVE bald
eagle nests.

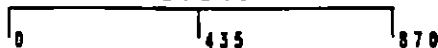


Exxon Company, USA
Map Key: KNI-KN-205
May 11, 1990



ECOLOGY MAP
SEGMENT KN-205
SUBDIVISION B (1 of 2)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1427 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-206 SUBDIVISION A (1 OF 1) DATE 4/2/90

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)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Zeffman DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 28 m: Narrow 0 m: V.Light 804 m: No Oil 3411 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of small areas with covers and coats as indicated on sketch map.

MANUALLY PICK UP TAR PATTLES + TAR BALLS AS INDICATED ON SKETCH.
MONITORS CHECK SUITZ FOR OIL (SNOW COVER DURING SURVEY)
TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC ART WERNER Dix Weines
EXXON AMY TEAL Real FOSC: h L DATE: 5-6-90
NOAA Byrd Wescott Bud Hyllegard
USCG G.A. TRITEL G.A. Tritel

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 (8/11 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)
7HH	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

SEGMENT ST 1 KN-206 SUBDIVISION: A DATE 4/2/90ICG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MSTI☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDDEC
ME Wesley Ghamley SIGNATURE Wesley Ghamley☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

THIS segment needs no further treatment with the exception of two areas. One area has a patch of pavement/cover approx. 12m x 25m x 1-2cm that has rainbow sheen in pools of water that I believe could be manually removed using shovel. IF this area is allowed to stay as it is it may cause problem when the weather warms up. It is located on a gradual grade with a minute tor flow that has rainbow sheen in it already. Bioremediation might also be consideration for this area. IN the back of this segment from the shipwreck to the avalanche chute mousse patches are located periodically throughout the 2 hour period a team of possibly between 4-6 workers could either rake the patches up or better yet, pick them up using shovels. Also to take into consideration for this area is a possible seal haul-out area, for numerous seals & waterfowl were present during inspection.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

RESURVEY OF SOME UPLAND AREAS MAY BE NEEDED DUE TO SNOW COVER.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG G. MACDONALD USCG J. RAINSFORD SEGMENT ST/ KN-206
 BIO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION A
 EXON J. BUTLER ADEC W. GORMLEY TIME 16:30 to 19:00
 AM NO.: 3 TIDE LEVEL: +5 to +8 DATE 4/2/90
 T. SUBDIVISION LENGTH: 4395 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 55 % B 15 % C 15 % P 10 % G 5 % S - % M - % V - %
 SLOPE: Long 25 % Hang 40 % Vert 35 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M 25 m N - m VL 800 m NO 2570 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SP	BP	CP	GP	SL	TL	BL	BR	SW	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER			X		X		X						X			
COAT			X	X	X		X						X			
STAIN																
MOUSSE																
PATTIES				X					X				X			
TARBALLS																
ILM																
NO OIL													X	X	X	

PAVEMENT: H F S - sq. m by - cm

PATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE uniform
#BAGS 1/2

Photographs:

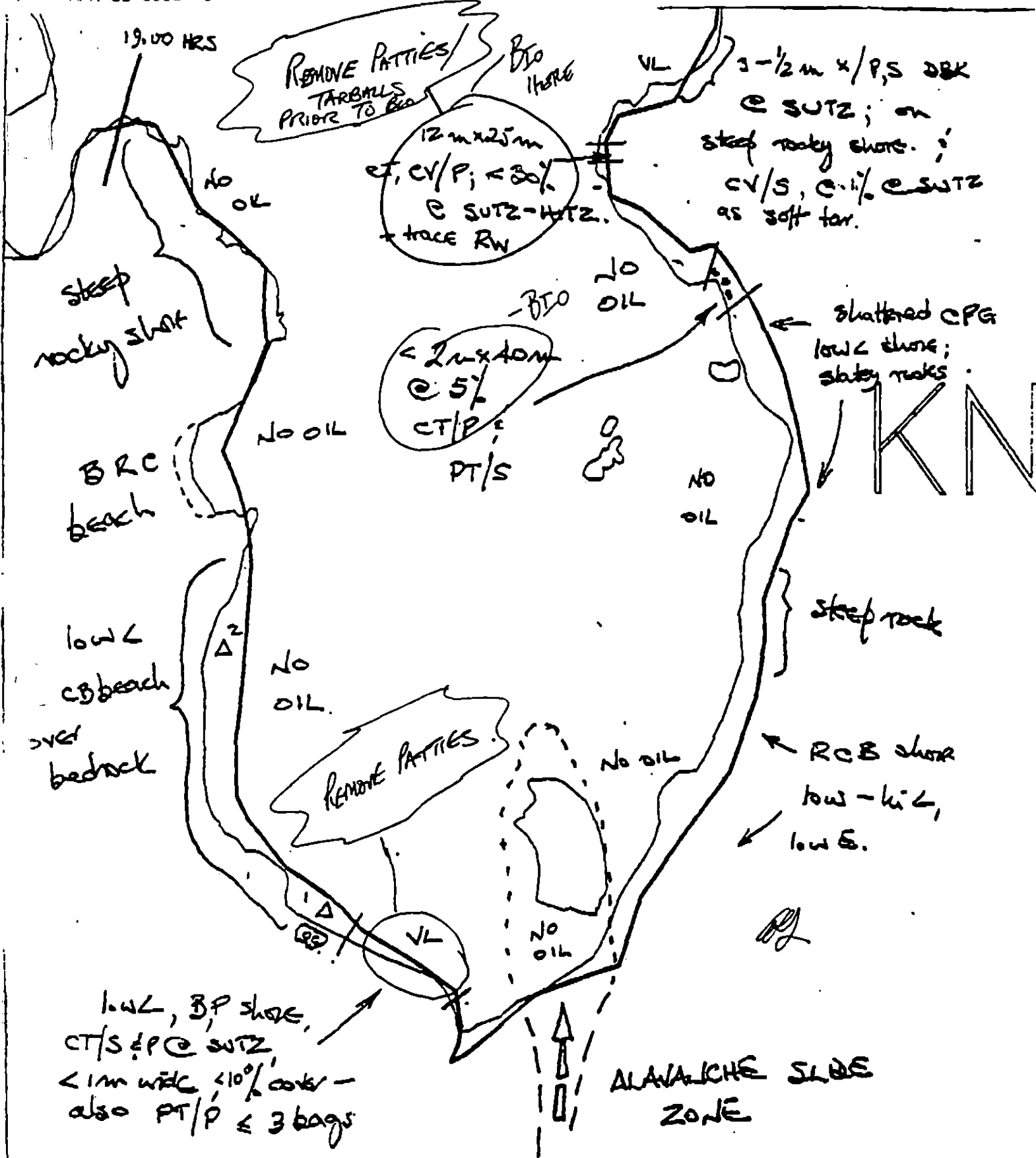
Roll No. ST-3-2

Frames -

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	CP	NO		UO	UC	SP	BP	CP	GP	SL	TL	BL	BR			
1	20					X	.											X	N	PGP
2	20					X	.											X	N	PGC
							.													
							.													
							.													
							.													
							.													

COMMENTS Sheltered bay w/ steep, low relief rock walls & some C, R, B. beaches. Areas of oiling are typically traces of T, CP/S and PT/S @ SURZ. Effective treatment of steep rocky shore is evident. Remaining patties could be removed or broken up in 1 man hour.



XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 No Oil

KN-206

ADEC Segment Length: 4243m

Map Key: PWS-333a

Name: G. Macdonald

Date: 4/2/90

Date Entered:

5.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/07/90

Segment ST/206 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 1630-1900 Biologist W. J. OTT

) Substrate type and % of segments:
(1) Bedrock 55 (2) Boulder 15 (3) Cobble 15 (4) Pebble 15 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate 2 Low 3

(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			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

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

STROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

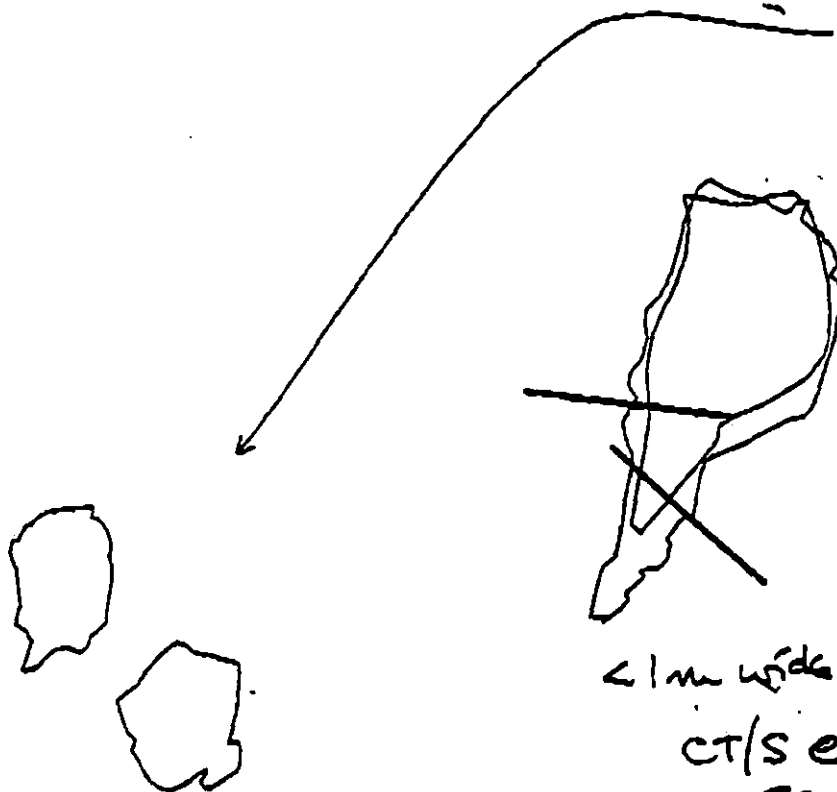
5 bald eagles
2 sea otters
~12 seals
20 golden eyes
2 mergansers
2 oystercatchers
1 cormorant

Observation - some areas lim-
to these from the boat
H + Mrg. only

Ecological Considerations:

possible haulout area

KN-



< 1 m wide, < 5% covered.

CT/S e
JUTZsteep rocky shore,
No oil

NO OIL



VL

Boyer
R. beach

KN-24

CT/S, trace →

VL

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-206

ADEC Segment Length: 4243m



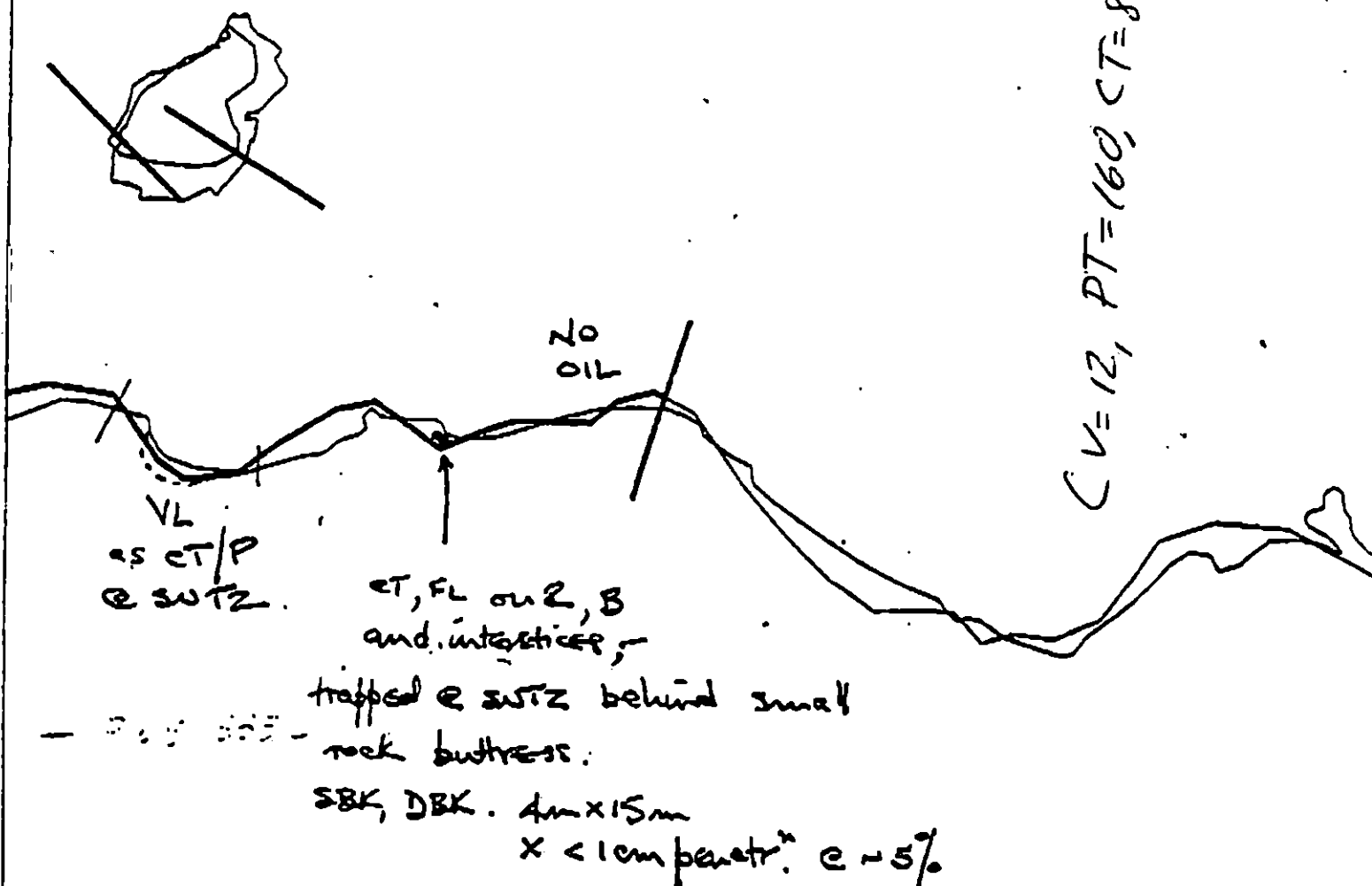
Map Key: PWS-333c

Name: G. MacdonaldDate: 4/2/90

Data Entered:



CV=12, PT=160, CT=800, FL=50, NO=3375



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-206

ADEC Segment Length: 4243m

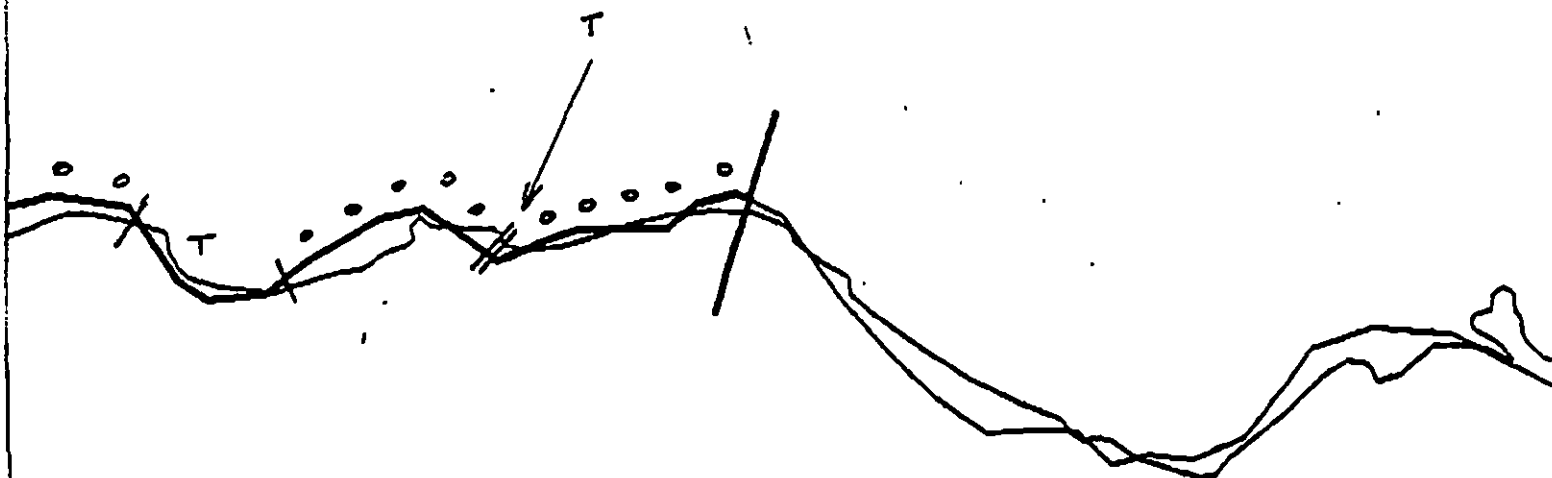
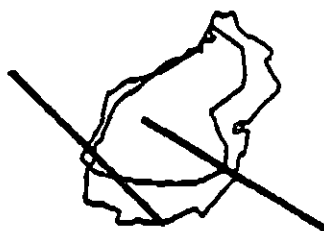


Map Key: PWS-333d

Name: G. MACDONALD

Date: 4/2/90

Data Entered:



← PWS 333C

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-206

ADEC Segment Length: 4243m



METERS

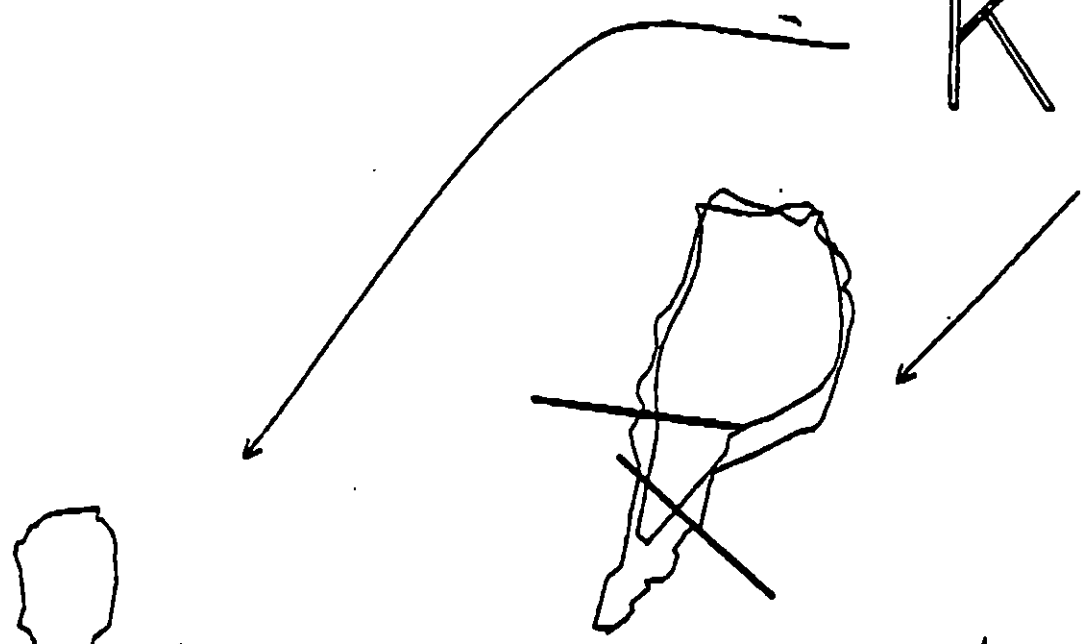


Map Key: PWS-333C

Name: Gr. MacdonaldDate: 4/2/90

Data Entered:

KN-



< 1 m wide & < 5% covered.

CT/S e
SWTZ

steep rocky shore,
No oil

No oil

B-over
R. beach

KN-24

CT/S, trees → VL

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

KN-206

ADEC Segment Length: 4243m



Map Key: PWS-333c

Name: G. Macdonald

Date: 4/2/90

Date Entered:

↑
PWS
333-L25m d
Medium

KN

v XXX Wide

. / / / Medium

- - - - Narrow

TTTT Very Light

0000 No Oil

KN-206

ADEC Segment Length: 4243m



Map Key: PWS-333a

Name: E. MACDONALDDate: 2/2/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-207 SUBDIVISION A (1 OF 2) DATE 3/31/90

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. If treatment is planned restrict disturbance of barnacles and fungus in MITZ and IITZ

SHPO SIGNATURE: Charles H. Hume

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 649 m: No Oil 753 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:

TAG APPROVAL DATE: 4/19/90.

ADEC ART WEINER

EXXON ANDY TATE

NOAA BILL WEAVER

USCG KENNETH KEANE

FOSC:

DATE: 5-12-90

Revised UITZ & SUTZ while conducting
ON THIS
SHORELINE

work on KN-207B.

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 (8/11 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 8/15)
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 Storage (8/1 to 8/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
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

SEGMENT ST / KN-207 SUBDIVISION: A DATE 3/31/90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainford

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SUB DIVISION WAS STEEP ROCK FACE.

SHORELINE OILING SUMMARY

REVISION NO. 02/2000

OG G. MACDONALD USCG 3. RAINSFORD SEGMENT ST/ KN-207
 IO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION A
 XXON J. BUTLER ADEC W. GORMLEY TIME 12:30 to 13:10
 TEAM NO.: 3 TIDE LEVEL: +3 to +3.5 FT DATE 3/21/90
 EST. SUBDIVISION LENGTH: 1520 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 90 % B 5 % C 5 % P -0 % G -0 % S -0 % M -0 % V -0 %
 SLOPE: Long 0 % Hang 30 % Vert 70 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W -0 m M -0 m N -0 m VL 820 m NO 700 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs: _____

Roll No. ST-3-1Frames 32, 33

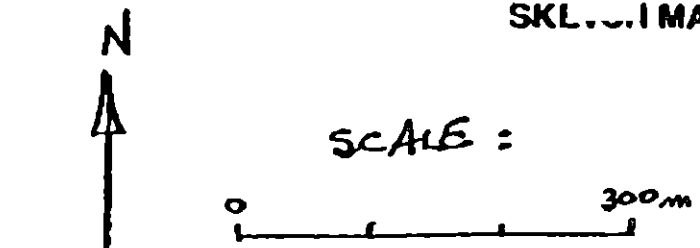
SUBSURFACE OIL - NO PITS - ALL ROCK, BOULDER & COBBLE

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

COMMENTS Headland of steep cliffs w/ trace of tar as dull black splat @ up. HITZ

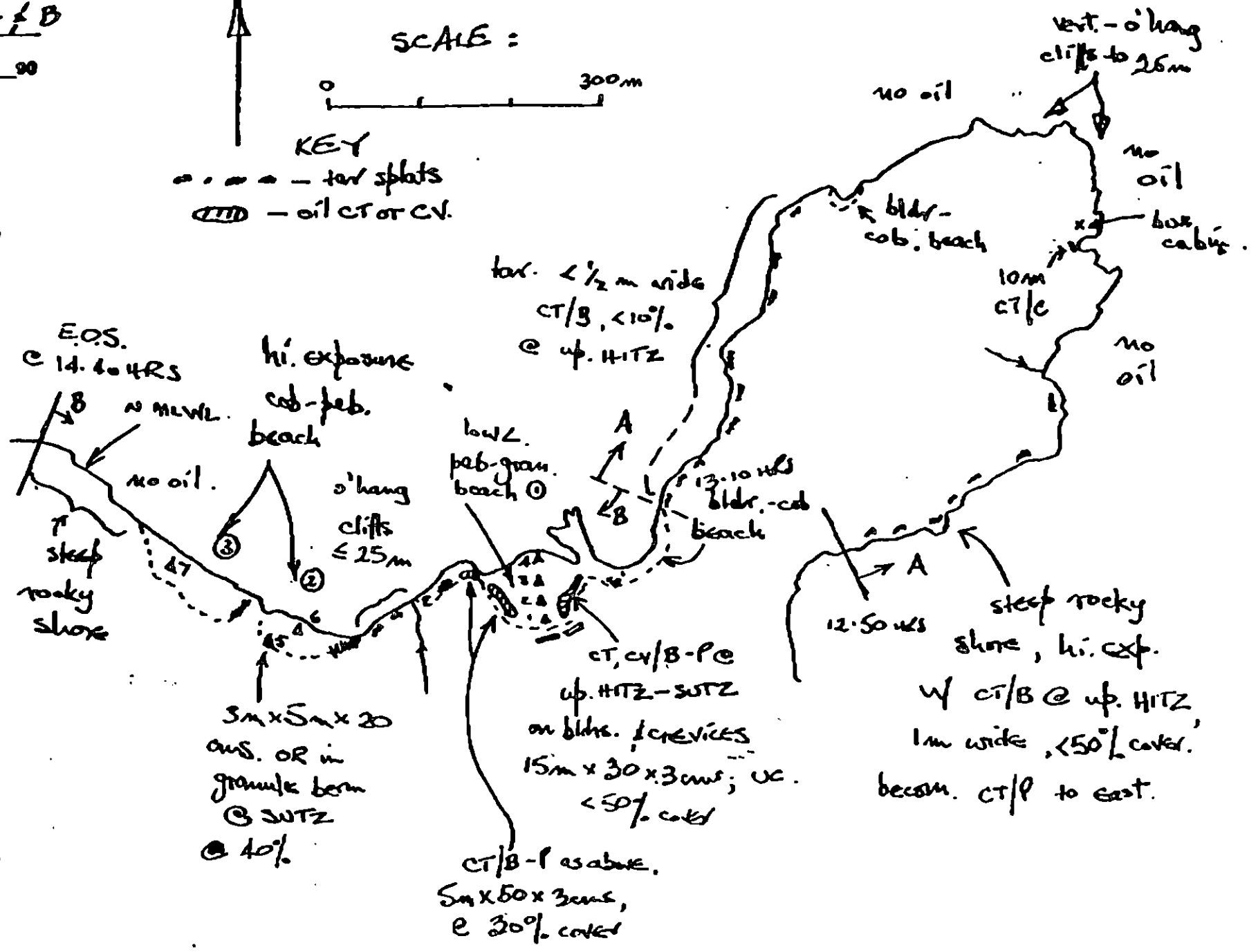
SEGMENT ST/ KN-207
 SUBDIVISION A/B
 DATE 3/31/90

SKETCH MAP



- CHECKLIST**
- M Area
 - Approx. Scale
 - Seg/Sub Entry
 - Oil Dist.
 - Width
 - Length
 - % Cover
 - Substrate Character
 - Est. MWL/LWL
 - SSL
 - Profile Location(s)
 - Profile(s)
 - Pt Location(s)
 - Photo Location(s)

- LEGEND**
- 1 Δ Pt - No Subsurface Oil
 - 2 Δ Pt - Subsurface Oil
 - CT/C Continuous Distribution
 - CT/B Broken Distribution
 - CT/P Patchy Distribution
 - CT/S Splashed Distribution
 - Oil on Vegetation
 - 1 → Photo location, direction, and number



Oil Character Length (m): AP — PO — CV 30 CT 650 ST — MS — PT — TB — FL — NO 1905 A/B

SHORELINE ECOLOGICAL SUMMARY

REVISION: 11/1/78

Segment ST / 207 Subdivision A Date (mo / day / yr) 3/31/90

Time (24 hr) 1250 Biologist MASOTT

- A) Substrate type and % of segments:
 (1) Bedrock 95 (2) Boulder 5 (3) Cobble (4) Pebble (5) Sand (6) Silt
- B) Overall % cover of biota (% of segment): Dense 15 Moderate 15 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. 57-3-1

Frames 32-33

BARNACLES

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

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	M	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	

IASTROPODS

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

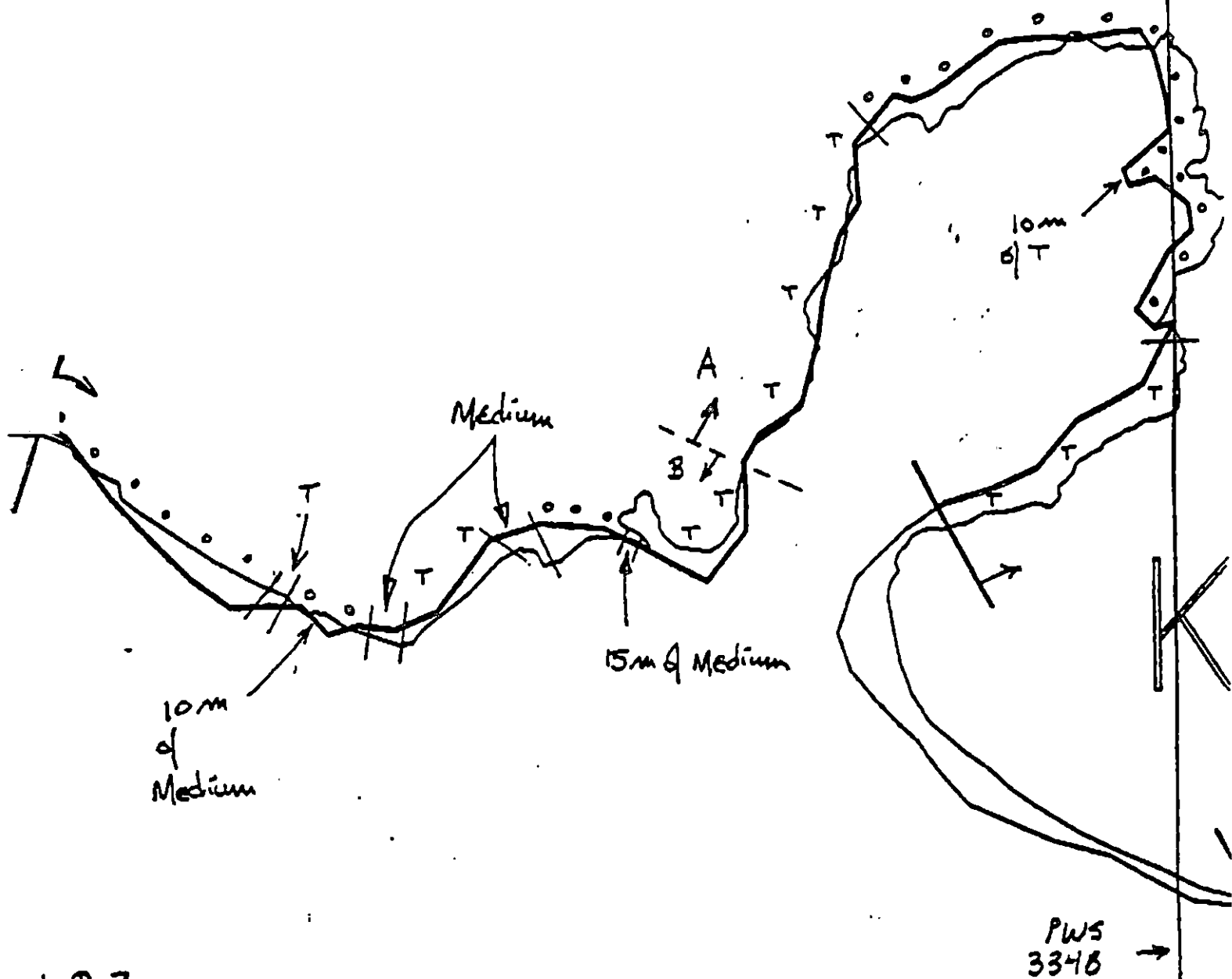
FUCUS

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

Wildlife Observations/ General Comments:
2 seals

Ecological Considerations:

mid + lower tidal zones appear to be very densely covered
 (observations limited - high tide)

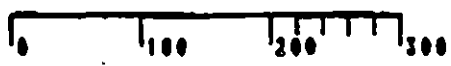


49.7

X Wide
 // Medium
 --- Narrow
 TT Very Light
 100 No Oil

KN-207A

ADEC Segment Length: 2331m
 Exxon " " : 2594



Map Key: PWS-3348
 Name: Gr. MACDONALD
 Date: 3/31/90
 Note: PWS-3348

SHORELINE EVALUATION

SEGMENT ST/ KN-207 SUBDIVISION B (2 OF 2) DATE 3/31/90

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.

SHPO SIGNATURE: Charles E. Adams DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 106 m: Narrow 0 m: V.Light 374 m: No Oil 449 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> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of area indicated on the sketch map. Work should be conducted between 7/2 and 8/14 due to above listed constraints.

MONITORS TO ASSESS SUITZ DURING/PRIOR TO TREATMENT.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC ART WEINER
EXXON ANDY TEAL
NOAA BILL WESCOTT
USCG KENNETH KEANE

FOSC: WJL

DATE: 5-12-90

Recovery KN-207A UITS and SUITS while conducting work on this segment.

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 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 (5/15 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 ~~Recreation: Tent sites (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 Subistence area: Salmon harvesting (5/1 to 9/30)
7HH 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

SEGMENT ST / KN-207 SUBDIVISION: B DATE 3/31/90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The southern end of subdivision B has an area consisting of Coat, cover and small patches of mobile mousse that might be hard to recover with mechanical application due to large boulders. For this reason I recommend bioremediation or further review. Droplets of water on flat rocks have sheen in them so the oil I believe, is mobile in small amounts during tidal fluctuations. Oiled rock is present up to the SUTZ and snow line. When snow melts exposing more of the SUTZ it should be reviewed to see if more ~~more~~ oiled debris is exposed.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

RESURVEY OF UPLANDS NEEDED DUE TO SNOW COVER.

SHORELINE OILING SUMMARY

REVISION NO. 05-2/88

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KN-207
 BIO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION 8
 XXON J. BUTLER ADEC W. CHARMLEY TIME 13:10 to 14:40
 EAM NO.: 3 TIDE LEVEL: 3.5 to +7 FT DATE 3/31/90
 EST. SUBDIVISION LENGTH: 1075 m ☒ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow ☒ HAIL
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 10 % C 20 % P 30 % G 15 % S 5 % M -0 % V -0 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W -2 m M 15 m N -2 m VL 470 m NO 490 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	E	S	P	N	SW	SE	NE	NW	SW	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER		X	X				X		X	X		
COAT				X	X	X	X		X	X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL											X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

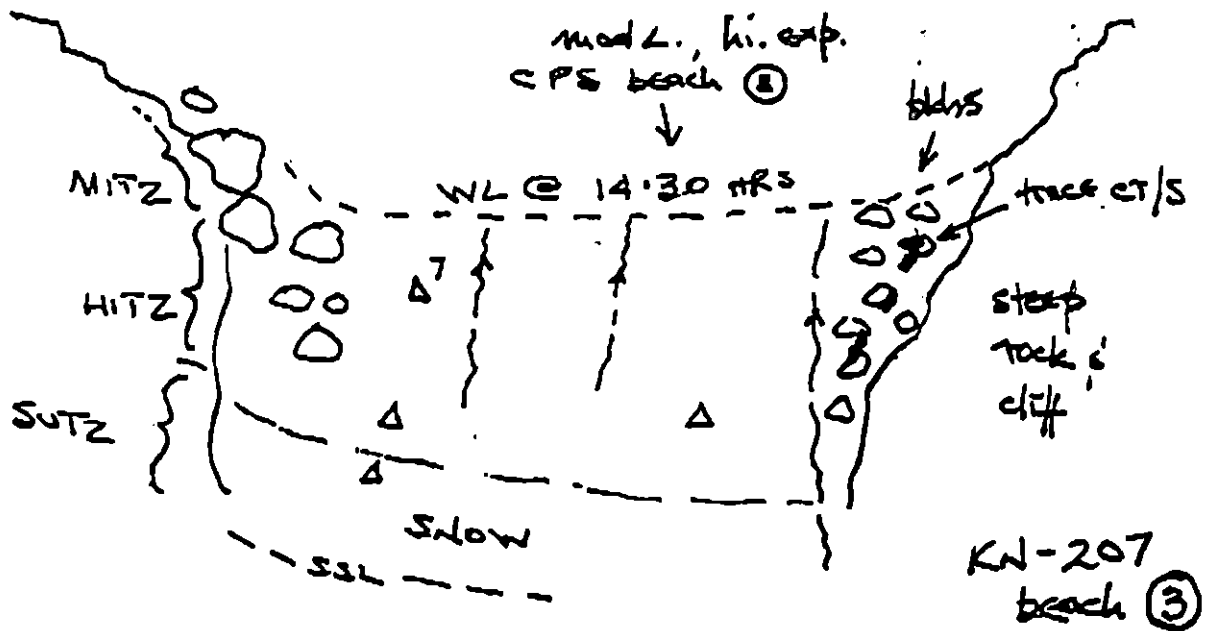
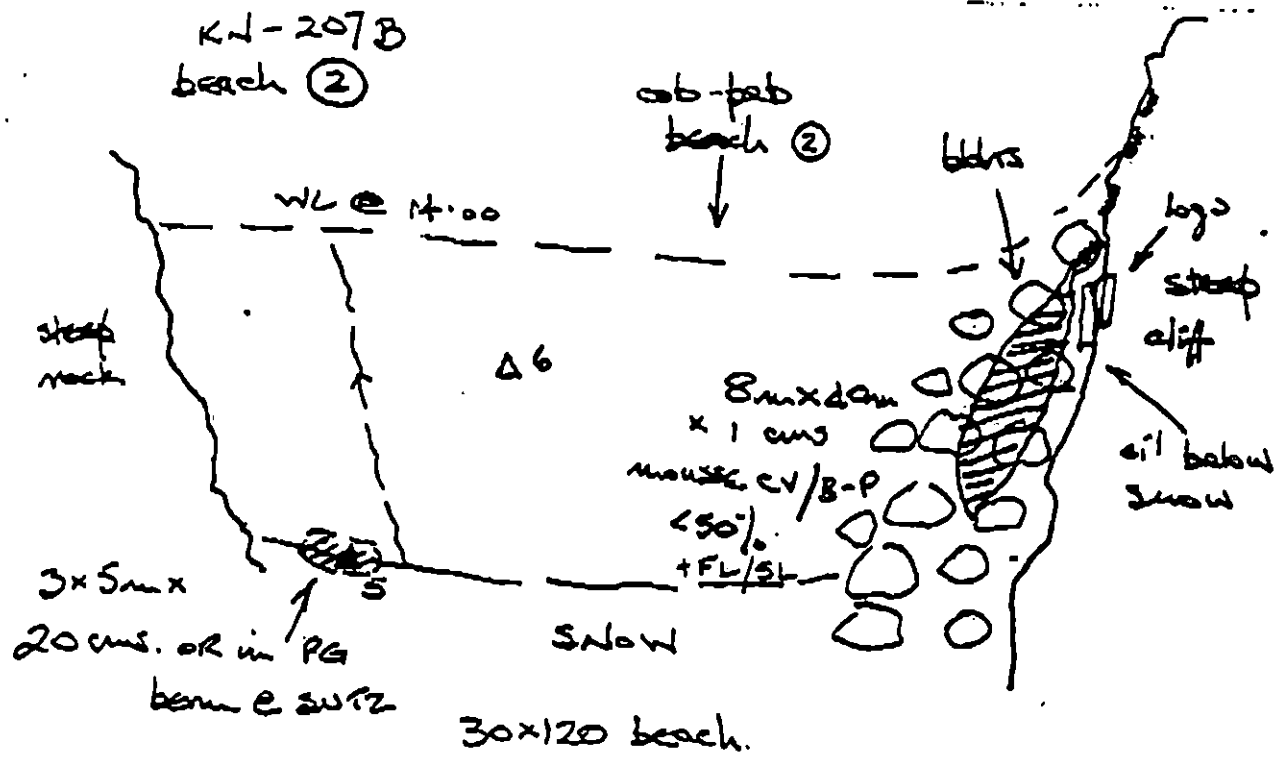
Roll No. ST-3-1Frames 34-37

SUBSURFACE OIL

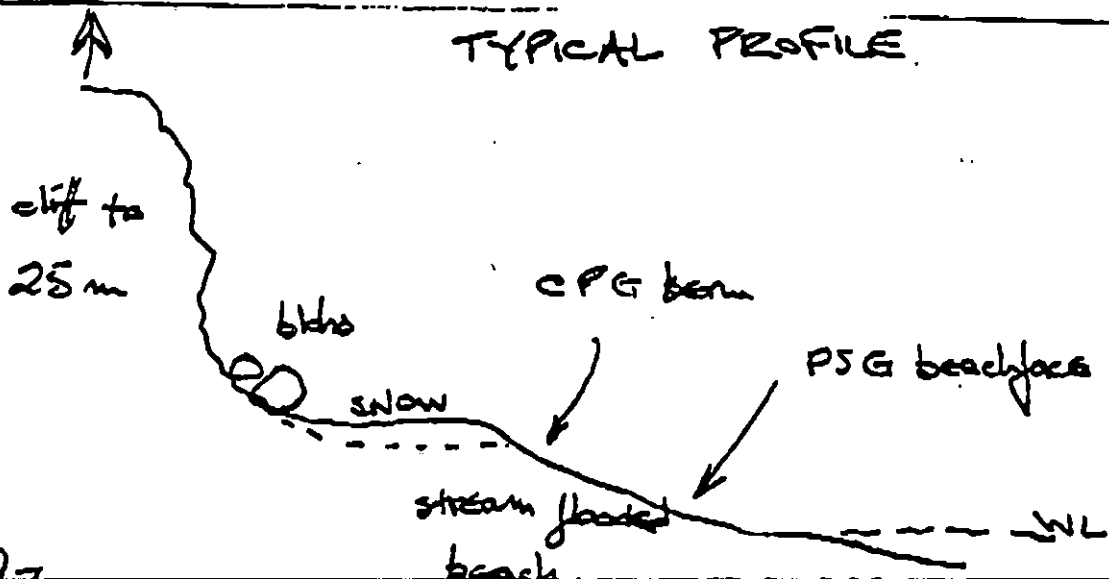
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	50L BA	200L PW	OL SL	200R TL	LR	BU	U	M	U				
1	30				X		5-20		X					X		X				N	PG	
2	30				X		5-20		X					X			X			N	GS	
3	35					X	.											X		N	GS	
4	30					X	.												X	N	GS	
5	35		X				5-20		X					X		X				N	PG	
6	25					X	.											X		N	PG	

7 20
COMMENTS

Cobble - pebble beaches bounded by rugged outcrop & cliffs; Oil as weathered CT, CV @ up. H12-S12. One small patch of subsurface oil on SW side of beach # ② and is indicated by brown stained snow.



TYPICAL PROFILE



SHORELINE ECOLOGICAL SUMMARY

Segment ST / 207- Subdivision B Date (mo / day / yr) 3/3/92
 Time (24 hr) 1310 Biologist MAScott

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 10 (3) Cobble 20 (4) Pebble 45 (5) Sand 5 (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense Moderate 1 Low 4
<5%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. 57-3-1

Frames 34-36

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

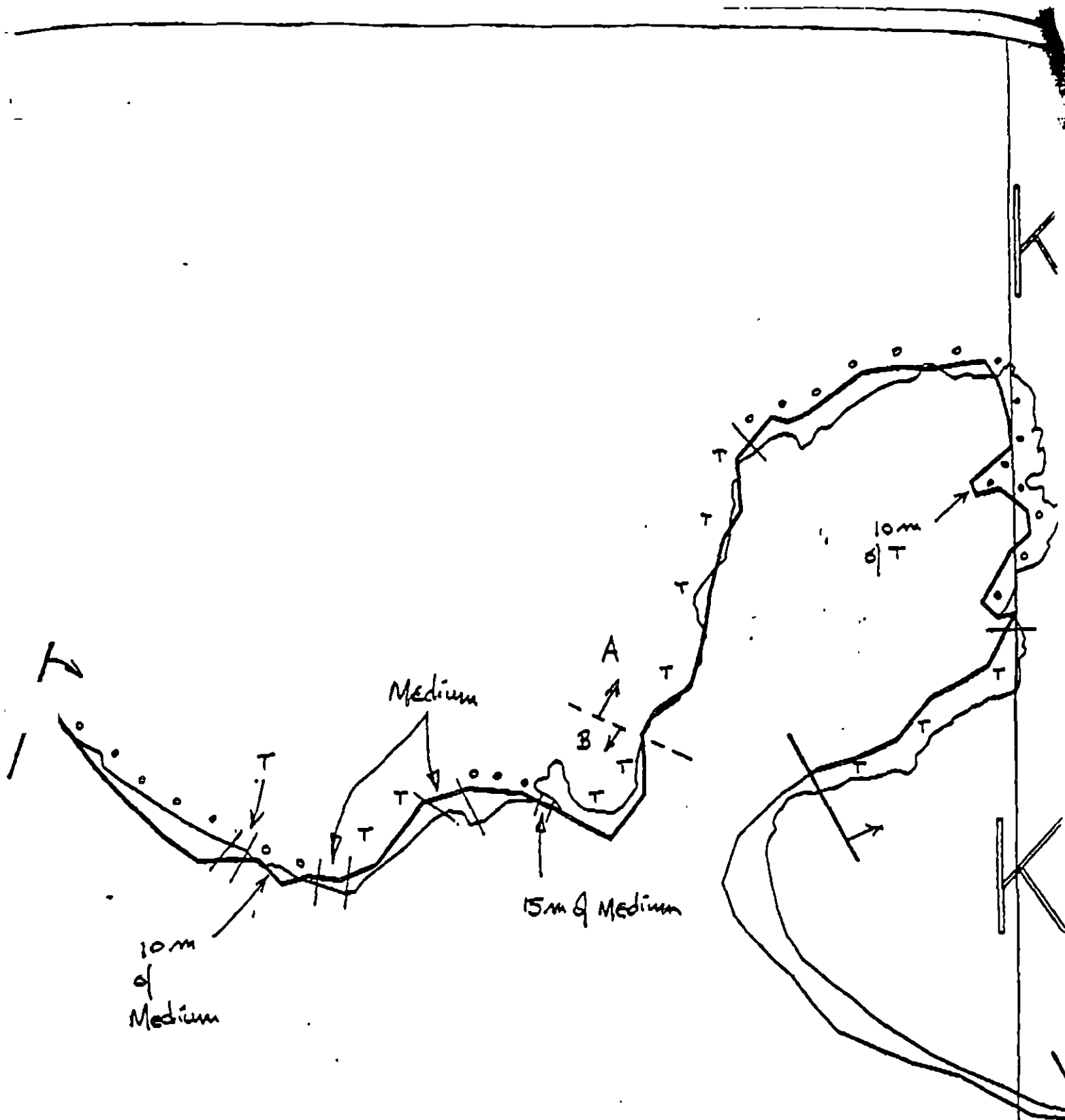
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1 bald eagle

Ecological Considerations:



PWS
3348 →

49.7

X Wide
/ Medium
--- Narrow
TT Very Light
100 No Oil

KN-207B

ADEC Segment Length: 2331m
Exxon " " : 2594



Map Key: PWS-3348
Name: G. MACDONALD
Date: 3/31/90
Date Entered: 29

X
/
-
T
O

SKETCH MAP

SEGMENT ST/KN-207

SUBDIVISION A/B

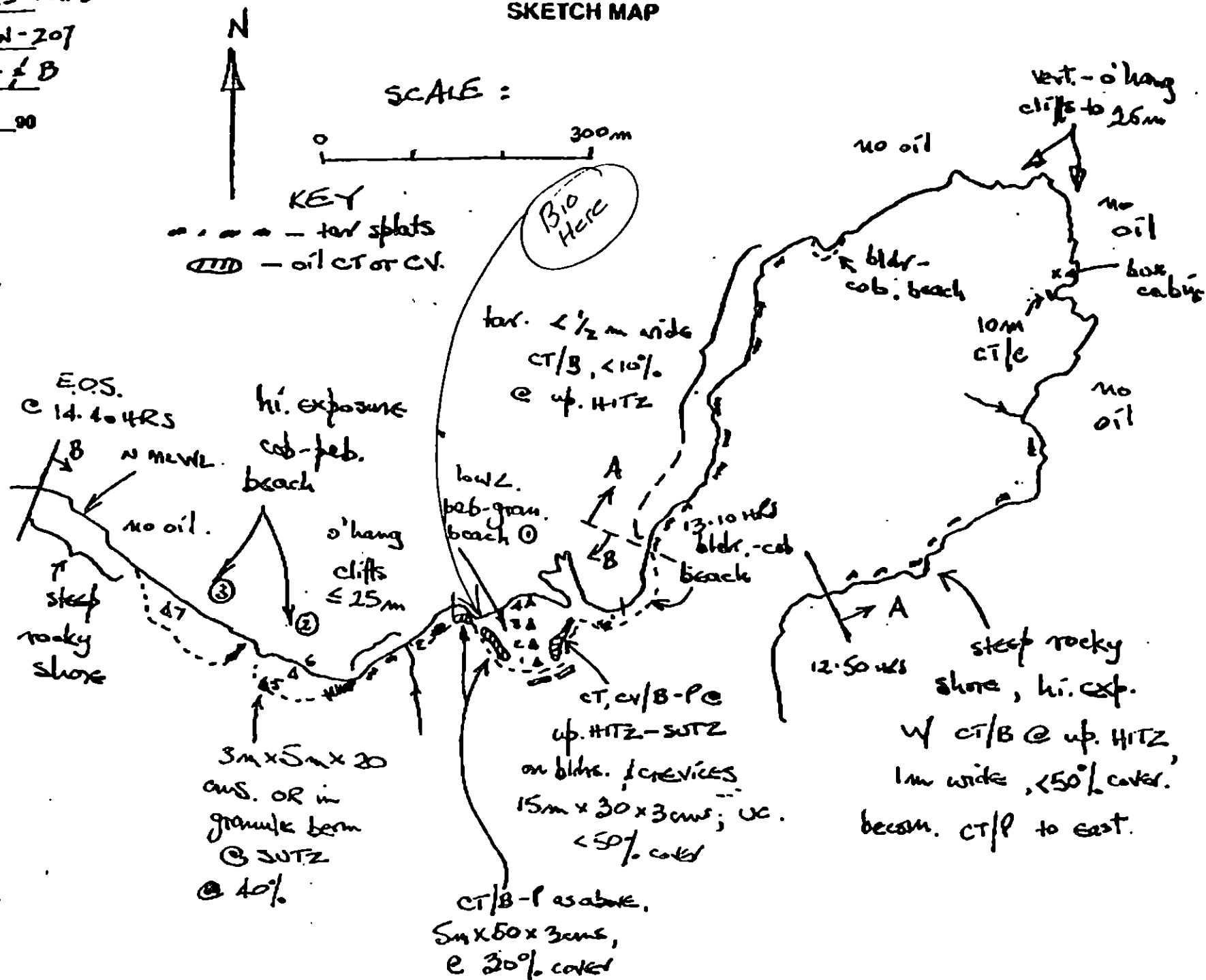
DATE 3/31/90

CHECKLIST

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

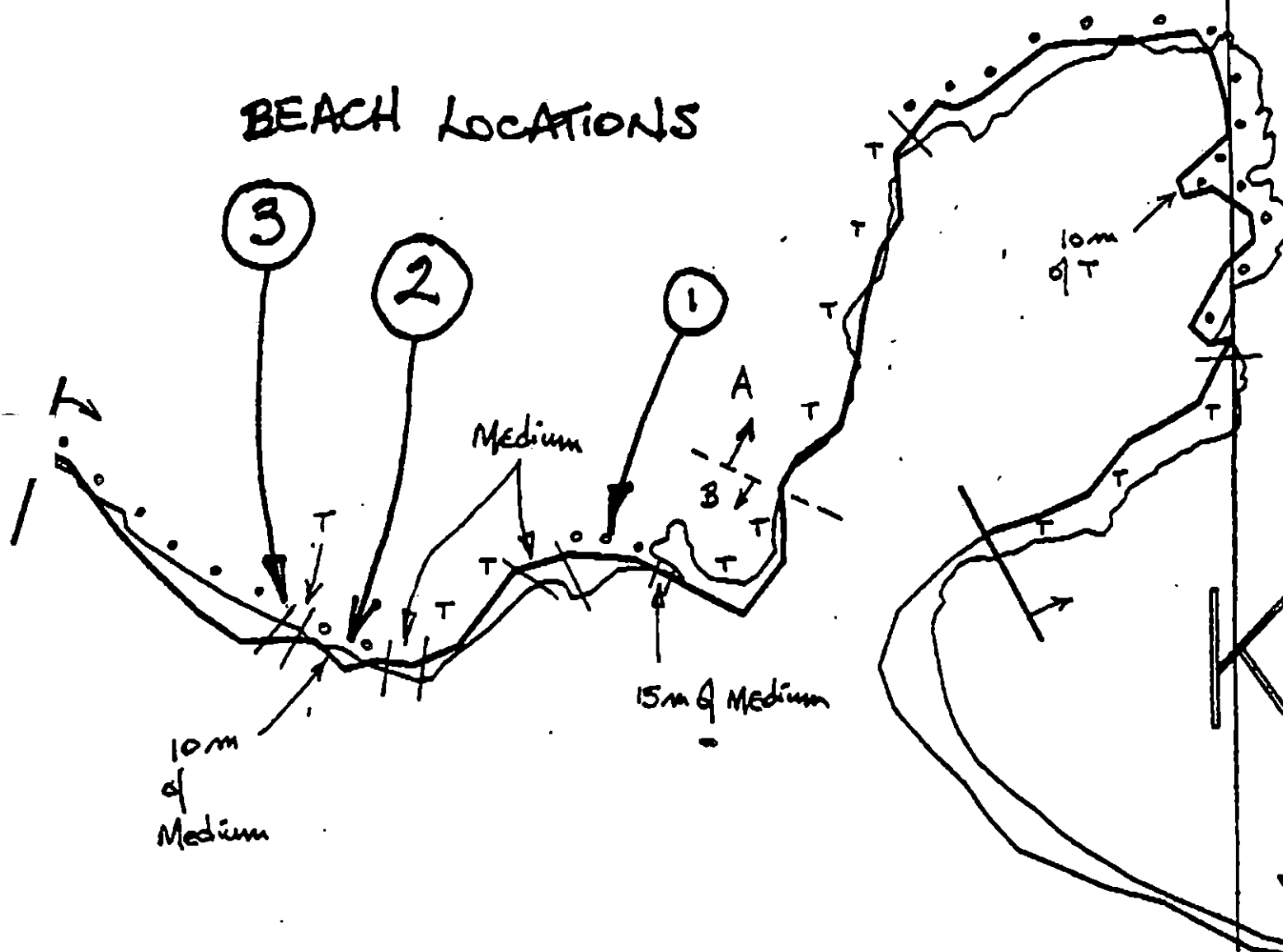
LEGEND

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



Oil Char. Length (m): AP — PO — CV 30 CT 650 ST — MS — PT — TB — FL — NO 1905 A/B

BEACH LOCATIONS



PWS
3346 →

49.7

KN-207B

\\ Wide
// Medium

--- Narrow

TTT Very Light

OOO No Oil

ADEC Segment Length: 2331m
Exxon " " : 2594



Map Key: PWS-3346

Name: G. MACDONALD

Date: 2/21/90

Date Entered: 2

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-207 SUBDIVISION B (2 of 2)

WORK WINDOW	
Bioremediation	OPEN

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.

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

FOSC

St. Zaroofski

Date

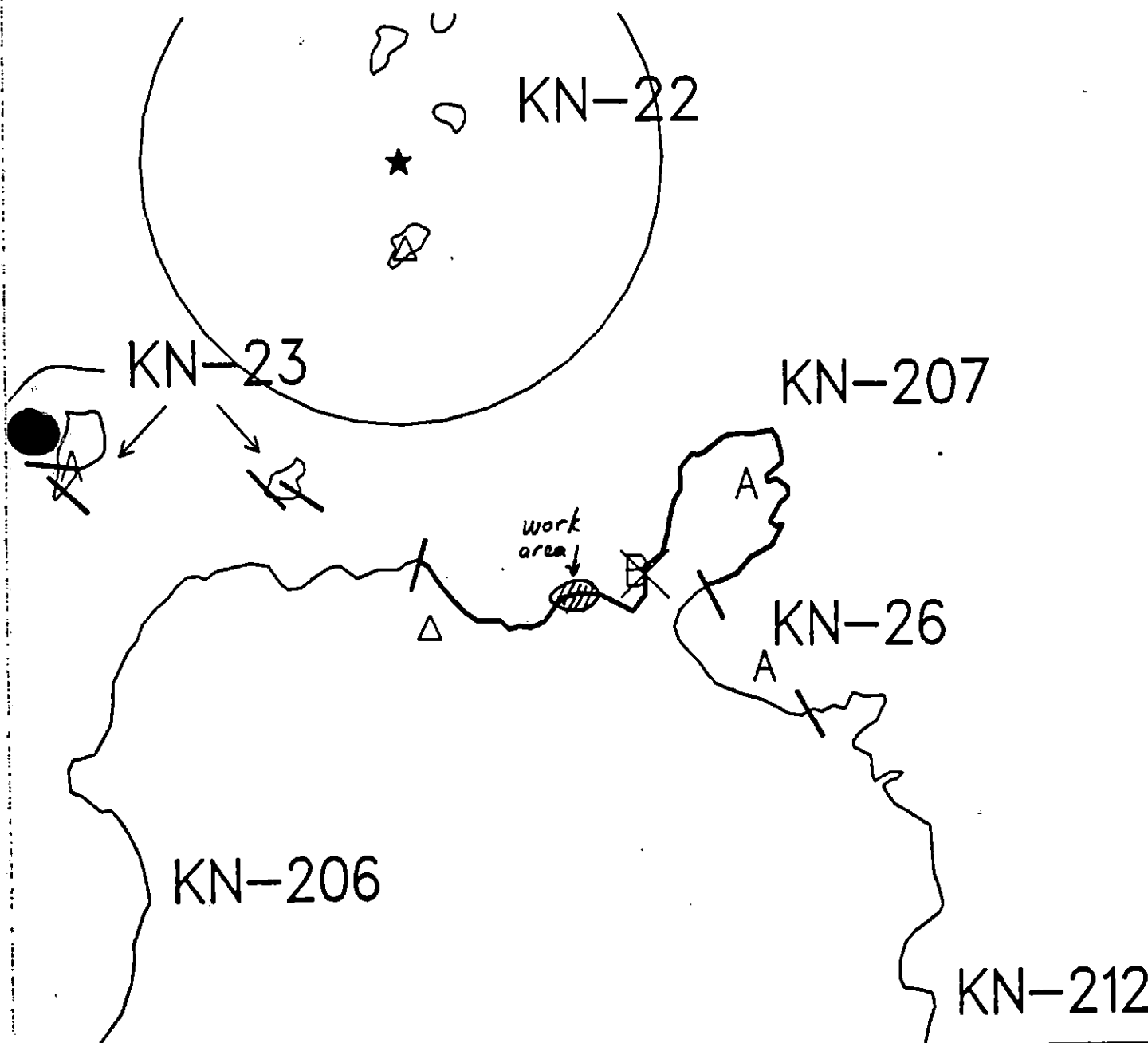
7/7/90

Prepared by

W. Kelley

Date

7/2/90



Exxon Company, USA
 Map Key: PWS-KN-207
 June 09, 1990



ECOLOGY MAP
 SEGMENT KN-207
 SUBDIVISION B (2 of 2)
 METERS
 0 478 956

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

1 inch = 1569 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-208 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Active bald eagle nest
(5T) - 3/1 to 6/1. Check with ADF&G for specific bald
eagle site location.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: Charles E. Holmes DATE: April 6, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 61 m: Narrow 0 m: V. Light 797 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

Comments: The following activities are recommended: 1) Spot wash-
ing with wands and sorbents (see attached map), 2) Bioremediation
after spot washing (see map), 3) Possible cover/patty ~~breakup~~ and
removal, 4) Reassessment of segment after supra tidal snow melt,
5) Work after 6/15/90 based on above ecological constraints.

TAG COMMENTS: Due to snow cover in SITZ assess need
to extend treatment to snow covered area unsurveyed.

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER John Bauer
CXON ANNY TEAL Ann Teal
JAA Bart Wescott Bart Wescott
USCG G.A. REITER G.A. Reiter
*See comments FOSC: L DATE: 4-28-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-208 SUBDIVISION: A DATE 3/30/90

USCG
NAME SCOTT RAINFORD SIGNATURE Scott Rainford MST

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

DUE TO SNOW COVERAGE IN SUTZ AND BELOW
RE SURVEY MAY BE NEEDED.

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

THIS segment Needs to be reassessed at a later date at the
SUTZ do to snow coverage. There was a 1.5m band that ran thru out the segment
at the SUTZ that was sometimes visible & sometimes obscured by snow.
Thru-out the segment mosses patties were visible and manual pickup would
work well. ON the rocky point in the middle of the segment is a heavier
oiled area consisting of bedrock & slated bedrock where mechanical clean-up
is needed. Possibly Hot H2O steam unit.

LAND MANAGER
NAME LORA JOHNSON SIGNATURE Lora Johnson

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

RE SURVEY NEEDED FOR UPLANDS UNDER SNOW

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

G. MACDONALD USCG S. RAINFORD SEGMENT ST/ KN-208
 MA 360TH LAND REP L. JOHNSON SUBDIVISION A
 EXXON T. BUTLER ADEC W. GORMLEY TIME 11:50 10 13:00
 TEAM NO.: 3 TIDE LEVEL: +2 10 +4 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 900 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W 10 E
 SURFACE SEDIMENTS: R 25 % B 25 % C 20 % P 10 % G 10 % S 10 % M - % V - %
 SLOPE: Lang 50 % Hang 50 % Ven 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W -0 m M 30 m N -0 m VL 870 m NO -0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	R	B	P	S	BR	BL	FW	GY	SL	TL	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER		X	X							X	X	X		
COAT			X	✓						X	X	X		
STAIN														
MOUSSE														
PATTIES			X							X	X	X		
TARBALLS														
FILM														
NO OIL												X	X	

PAVEMENT: H F S -0 sq. m by -0 cm

PATTIES / TARBALLS 5 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NO

TYPE Baffles

#BAGS 1

Photographs:

Roll No. ST-3-

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	FW	GY	SL	TL	SU	U	M	L		
1						X	.									X				N	C, P, G
2						X	.											X		N	P, G, S, M
3						X	.									X				N	C, P, G
4						X	.											X		N	C, P, G, S
5						X	.									X				N	G, B
6	5					X	.										X			N	B, R, G.

COMMENTS Surface oil only as CT/S @ SURT along low - high rocky shore. A rock promontory @ mid-segment has 30 m of CV/B in the bedrock and in granules trapped in rock crevices.

OG G. MACDONALD

21/3

KETCH MAP

SEGME KN-208

SUBDIVISION A

DATE 3 / 30 / 90

PROFILES

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/LA/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

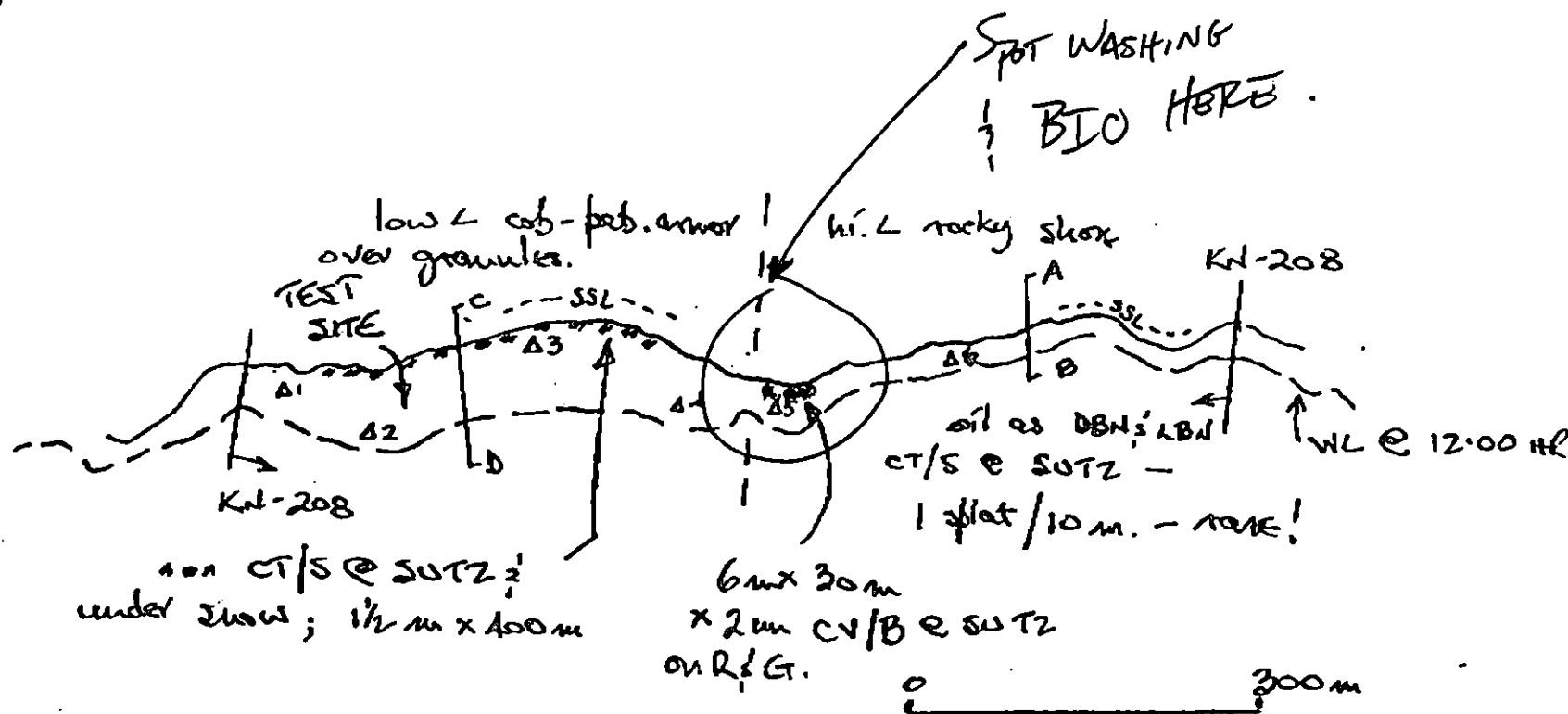
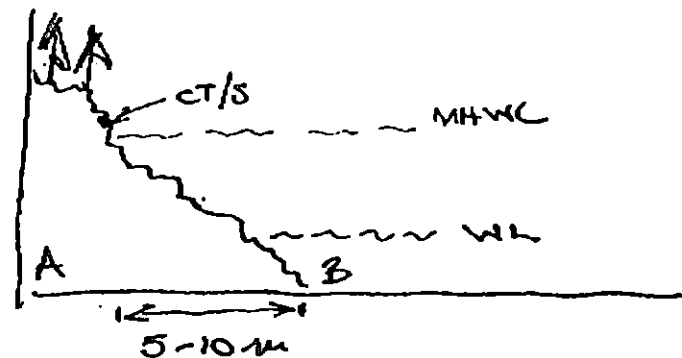
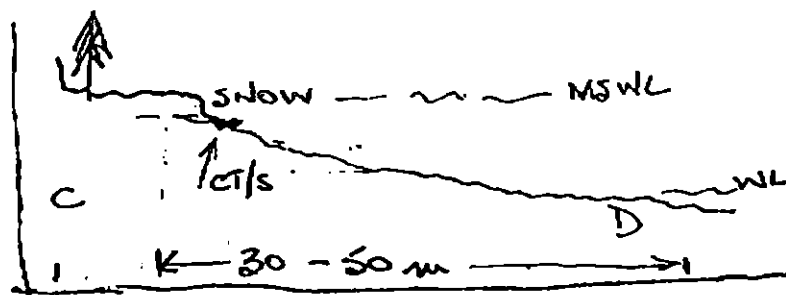
$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

Offed Vegetation

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



Oil Character Length (m): AP — PO — CV 30 OT B50 ST — MS — PT 20 TB — FL — NO —!

REVISION 06/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

 ment ST / KN-208 Subdivision A Date (mo / day / yr) 3/30/90

 time (24 hr) 1210 Biologist MAScott

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 25 (3) Cobble 20 (4) Pebble 20 (5) Sand 10 (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	X	2	2	2	2	NOT PRESENT
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	

MYTILUS

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	2	2	2	NOT PRESENT
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	

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	2	X	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	X	2	2	2	2	NOT PRESENT
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	

Wildlife Observations/ General Comments:

2 cormorants (pelagic)
 1 red-breasted merganser
 2 golden eyes

1-seal 1-dead otter - no visible sign of oil
 lower tidal zone not observed

Ecological Considerations:

SEGMENT: KN-208
SUBDIVISION: A

THIS SUBDIVISION NEEDS

FIELD CORRECTIONS

Pit depths for 1-5 - send through
network, don't hold up

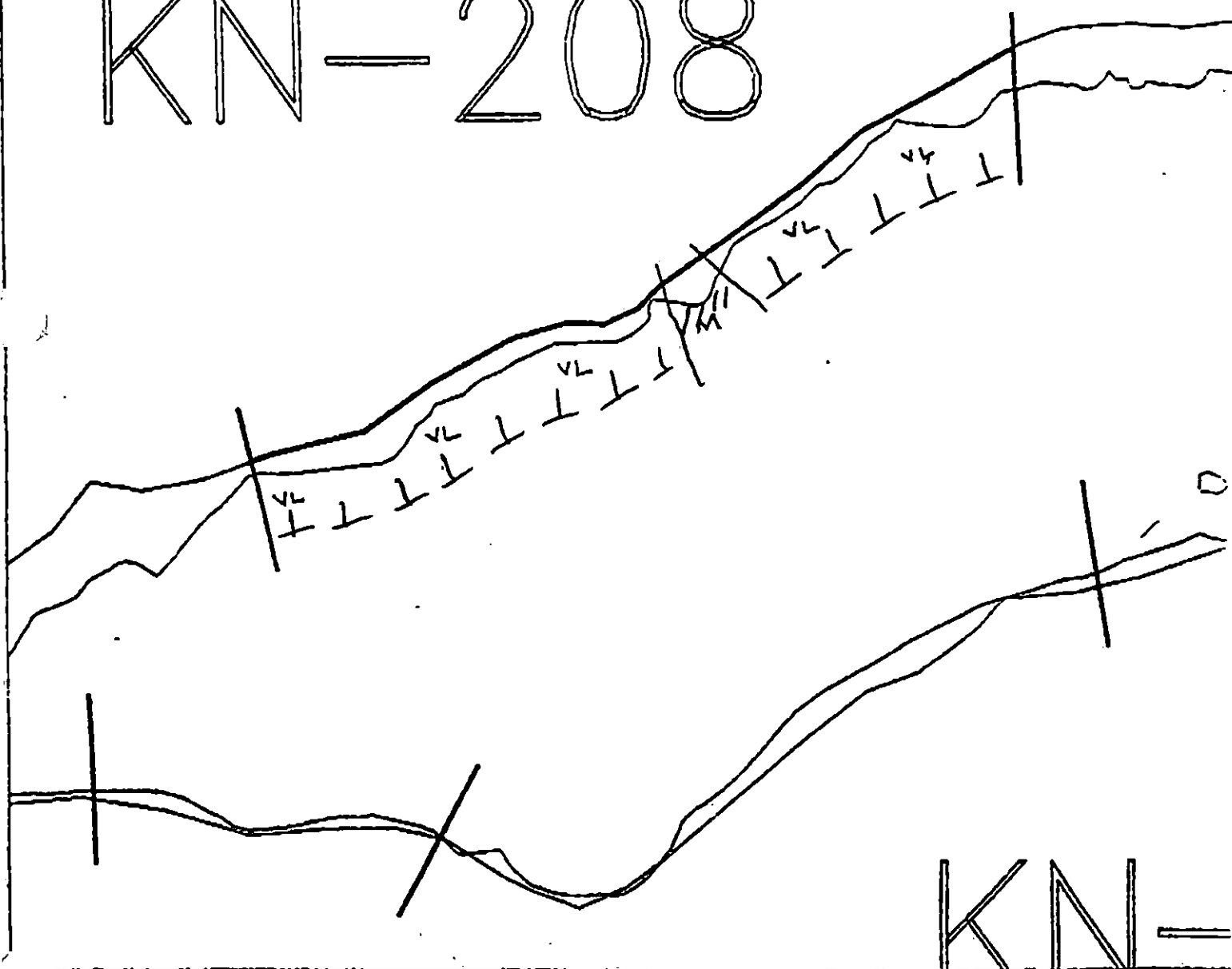
ALL QUESTIONS RESOLVED ON

INITIALS:

3 of 3

K

KN-208



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-208

ADEC Segment Length: 858m

Exxon " " : 906



Map Key: PWS-335

Name: G. MACDONALD

Date: 2/30/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-208 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	CLOSED
Bioremediation Spot Washing Other Approved Treatment	CLOSED

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.
3N,P	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 eagle nest in Subdivision A. Closed to tarmat removal, bioremediation, spot washing, and other approved treatment within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Roy Morris
EXXON Andy
NOAA John Talbot
USCG C. A. Reiter

FOSC

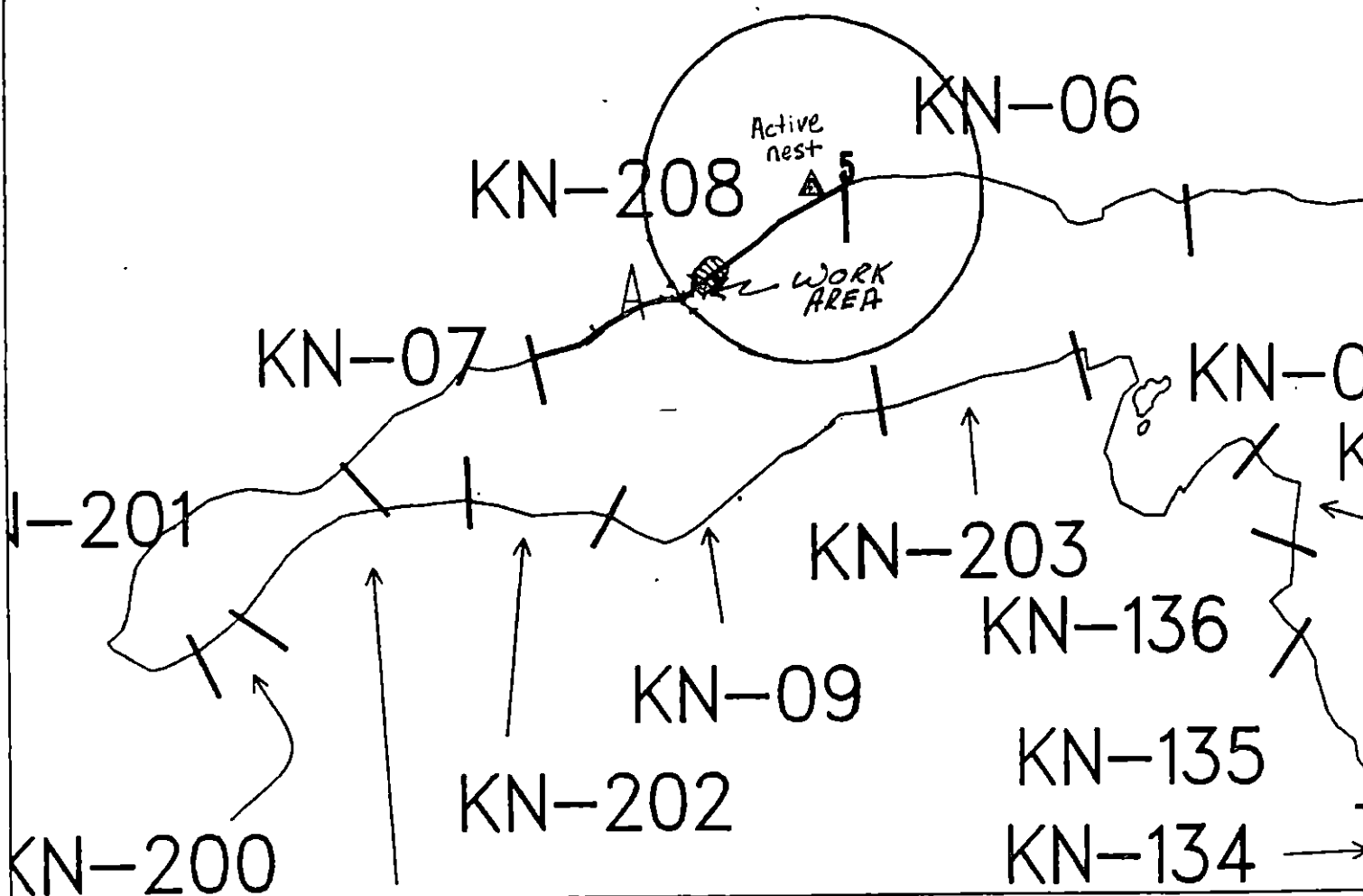
DATE

Prepared By:

Date

6/4/90

Incorporates information from
USFWS 6/1/90 Active Bald
Eagle Map data.



Exxon Company, USA
Map Key: KN1-KN-208
May 11, 1990



ECOLOGY MAP
SEGMENT KN-208
SUBDIVISION A (1 of 1)
METERS
0 417 834

★ Seabird Colony
▲ Eagle Nest

1 inch = 1368 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-209 SUBDIVISION A (1 OF 1) DATE 4/9/90

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)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE Charles E. Holmes

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 170 m: Medium 52 m: Narrow 0 m: V.Light 43 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 35+ cm

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: ☐ Breakup	☐ Beach Cleaner
☒ Removal	☒ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of pooled oil, mousse, oiled debris, vegetation and trash, 3) mechanically relocate SUTZ (25cm) to UITZ and MITZ, 4) bio-remediate UITZ to LITZ for surface and subsurface oil in areas shown on attached sketch map. Work should be conducted after 6/1 based on eagle nest constraint and after approval of ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: 2) RELOCATE STORM BEAM TO ACCESS OIL WASH + RELOCATE, USE SNARES AND ABSORBENTS 3) MECHANICALLY SCARIFY / RAKE M → UITZ TO ACCESS OILED SEDIMENTS, HOT WATER WASH. USE SORBENTS + SNARES. PRIOR TO BIOREMEDIATION. WORK WITH THE RISING TIDE. LARGER VOLUME HOT WATER SHOULD BE CONSIDERED

TAG APPROVAL DATE: 4/21/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Burt Wescott

USCG KENNETH KEANE

FOSC:

DATE: 4-27-90

Obtain concurrence from CTAG for mechanical relocation method on the Shoreline.

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 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 (8/1 to 9/15)
- 6V Anchorages (8/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7I Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

DRAFTGMENT ST / KN-209SUBDIVISION: 5DATE 4/9/90**USCG**NAME CWO2 J. M. C. MathesonSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. This beach displayed a heavily oiled area at the extreme high tide level.
2. Area above high tide between pit 1 and just past pit 4 should be evacuated.
3. Remove pom-pom debris and other oil soaked debris.
4. Recommend bio remediation of entire site after evacuation at high tide level & above.

ADECNAME Glen WinterSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

WE HAD SURVEYED ONLY A SMALL SECTION OF THIS SEGMENT DUE TO ^{RELOCATED} ACCESS PROBLEMS. THIS SECTION WAS HEAVILY OILED AND DUE TO THE EXTENT OF THE SURFACE AND SUBSURFACE OILS INTENSIVE TREATMENT SUCH AS REMOVAL OF OILED SEDIMENT MAY BE THE ONLY EFFECTIVE TREATMENT. THE NORTH HALF OF BEACH IS LOW ANGLE W/OUT LARGE Boulders - SOUTH HALF HAS LARGE Boulders AND OUTCROPS BUT IS NOT AS HEAVILY OILED. AN EFFORT SHOULD BE MADE TO SURVEY THE REST OF KN 209 IF THIS IS INDICATIVE OF OILING. CONDITIONS ON OTHER AREAS OF THE SEGMENT. ALSO THERE IS CONSIDERABLE AMOUNT OF OILED DEBRIS INCLUDING ~~2~~ LARGE PICKS OF OIL SOAKED SNARE BOON.

LAND MANAGERNAME Mike Bennett - NRMSIGNATURE [Signature]

ADNR

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS Treatment suggested as follows: on heavily oiled portion in northwest portion of segment, extending along the upper intertidal zone between pits no. 1 and 4 - remove oiled cobble then bioremediate. Note - continue cleaning by removal of oiled portion along north-south storm berm. Remove all oiled pom-pom & hose debris located in two areas along upper intertidal area adjacent to cobble ridges. Bioremediation suggested along mid intertidal area of northern portion of segment as identified on sketch as a 70x20 mtr. sand. Note that oiled dead eagle & decomposed otter were found along the upper storm berm. Also note that this segment was not assessed during ADEC's fall walk-a-thon. Noticed eagles in immediate area. Human use appeared to be minimal.

SHORELINE OILING SUMMARY

REVISION NO. 002/90

OG D. Fitz Gerald USCG S. McMahon SEGMENT ST/ KN-209
 BIO D. Raider LAND REP M. Bennett SUBDIVISION A
 EXXON S. Newman ADEC G. Winters TIME 19:00 to 19:30
 TEAM NO: #15 TIDE LEVEL: 110 to 30 cm above mean DATE Apr 19 1990
 EST. SUBDIVISION LENGTH: 320 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 5 % B 80 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 60 % Vert 35 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 110 m M 60 m N 0 m VL 150 m NO 0 m

US 1380

SURFACE OIL

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

PAVEMENT: H F (S) 54 sq. m by 12 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

But high potential on winter days.

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 9

Frames 1-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	1 OR DR	2 OR FW	3 OR SL	4 OR FL	5 OR DR	SU	U	DR	U						
1	50		X				5-25		X						X	X								Cob / Rb / Grn Sand
2	25	X					5-25	X						X			X							Cob / Grn
3	30					X	-												X					Cob / Boulder / Rb / Grn
4	40	X	X				5-25 25-25		X				X	Y		X								Cob / Grn / Rb
5	30	X					20-30	X					X			X								Cob / Rb / Boulder / Grn
6	35		X				25-35	X							X				X					Boulder / Cob / Rb / Grn

COMMENTS Priority #1

- This is a heavily oiled beach. Most of the oil is concentrated in the upper inter-tidal and supratidal zones along the northern 2/3 of the beach. Asphalt occurs at the far north end of the beach and oil clumps and coats are found on cobble and boulders along most of the upper high tide area and supratidal zone. A splashy to patchy stain covers the mid-tide region of the beach.
- There is subsurface oil under a large portion of this beach extending from the supratidal zone to the mid-tide area in the northern 2/3 of the beach. The oil is found from

W 4/12/90

SEGMENT ST/ KN 909 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-FT)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VC	OC	OC	OC	OC	OC	OC	BU	U	M	LI		
7	25				X		5-10		X		X								X		Bould / Cob / AL / Co / Sand
8	30		X				5-7		X						X		X				Peb / Cob / Sand
9	35	X					20-25		X				X					X			Bould / Peb / Grain
10	25					X	.											X			Bould / Peb / Grain /
11	30	X					20-30	X					X					X			Peb / Cob
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

REVIEWED

7W

DATE

4/12/90

OG F126 '10

SEGMENT S' D-209

SUBDIVISION A

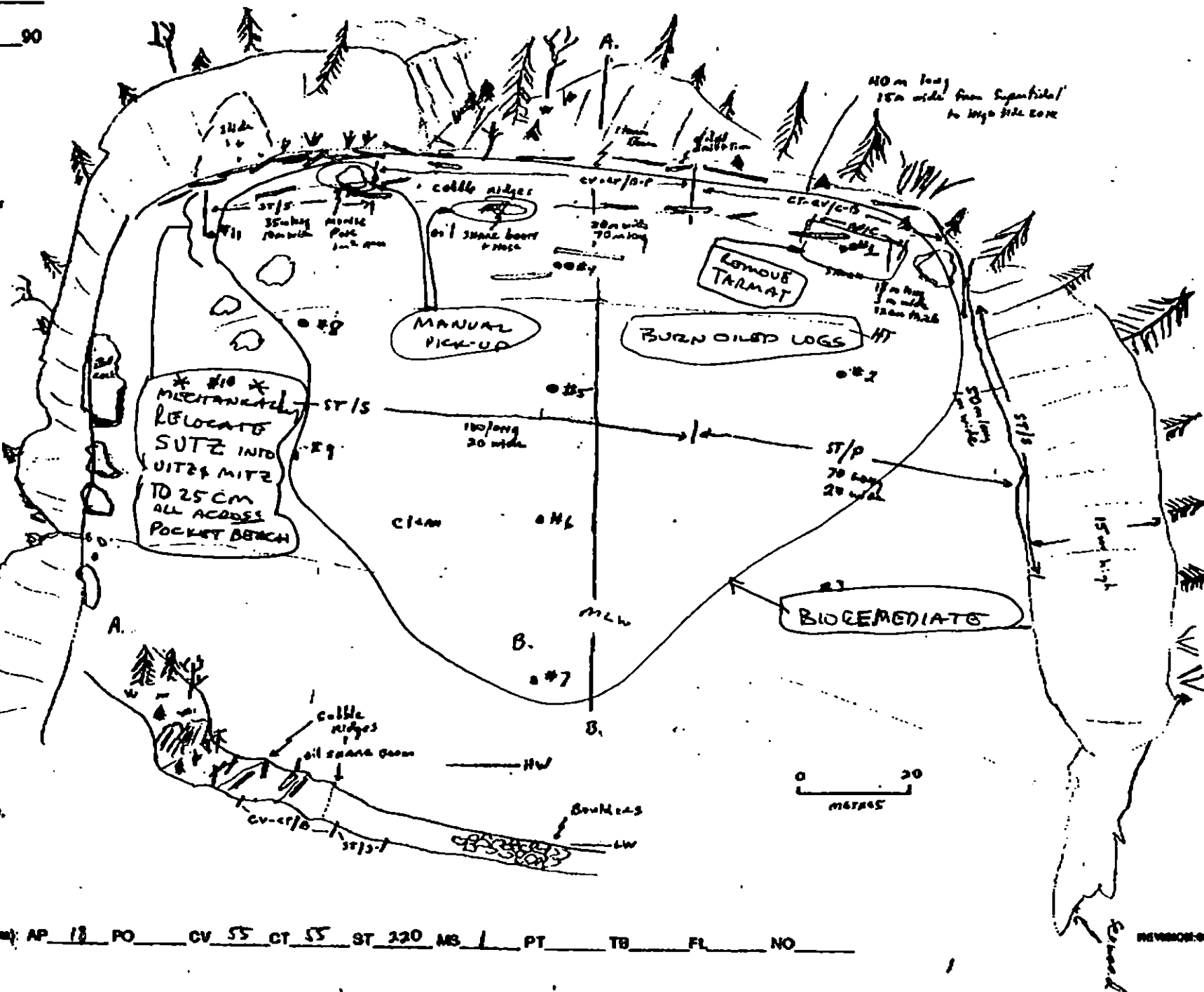
DATE Apr 9 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/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 Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP 12 PO CV 55 CT 55 ST 220 MS 1 PT TB FL NO

REVISION: 03/24/98

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/12/98

Segment ST / KN 209 Subdivision A Date (mo / day / yr) 4 / 9 / 90

Time (24 hr) 18:00 Biologist DANIEL ZANDER

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

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 5 Low 90
↳ to none

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

Photographs: Roll No. 9

Frames 1-28

BARNACLES

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

NOT PRESENT

MYTILUS

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

- OILED DEAD BALD EAGLE IN SUPER TIDAL ZONE
- CARCASS (OTTEA MULLERY) ALSO IN SUPER TIDAL ZONE

Ecological Considerations:

PRIORITY 2

6U - Special Designation Use 6/ - 9/15
ST - Active Bald Eagle Nests 3/1 - 6/1

KN209 -A

4/9/90

Bio COMMENTS

TWO CARCASSES WERE FOUND IN THE SUPER TIDAL ZONE.

- 1) OILED BALD EAGLE
- 2) POSSIBLE OTTER CARCASS

WE WERE NOT ABLE TO COLLECT THESE ANIMALS AS WE DID NOT HAVE ANY PLASTIC BAGS AVAILABLE TO USE IN ORDER TO TRANSPORT THEM IN THE HELICOPTER. SCOTT NAUMAN INFORMED ME THAT ARRANGEMENTS WOULD BE MADE TO HAVE THE CARCASSES RETRIEVED AND STORED ON THE ARCTIC SALVER, TO BE TURNED INTO THE FISHERY DEPARTMENT.

KN-21

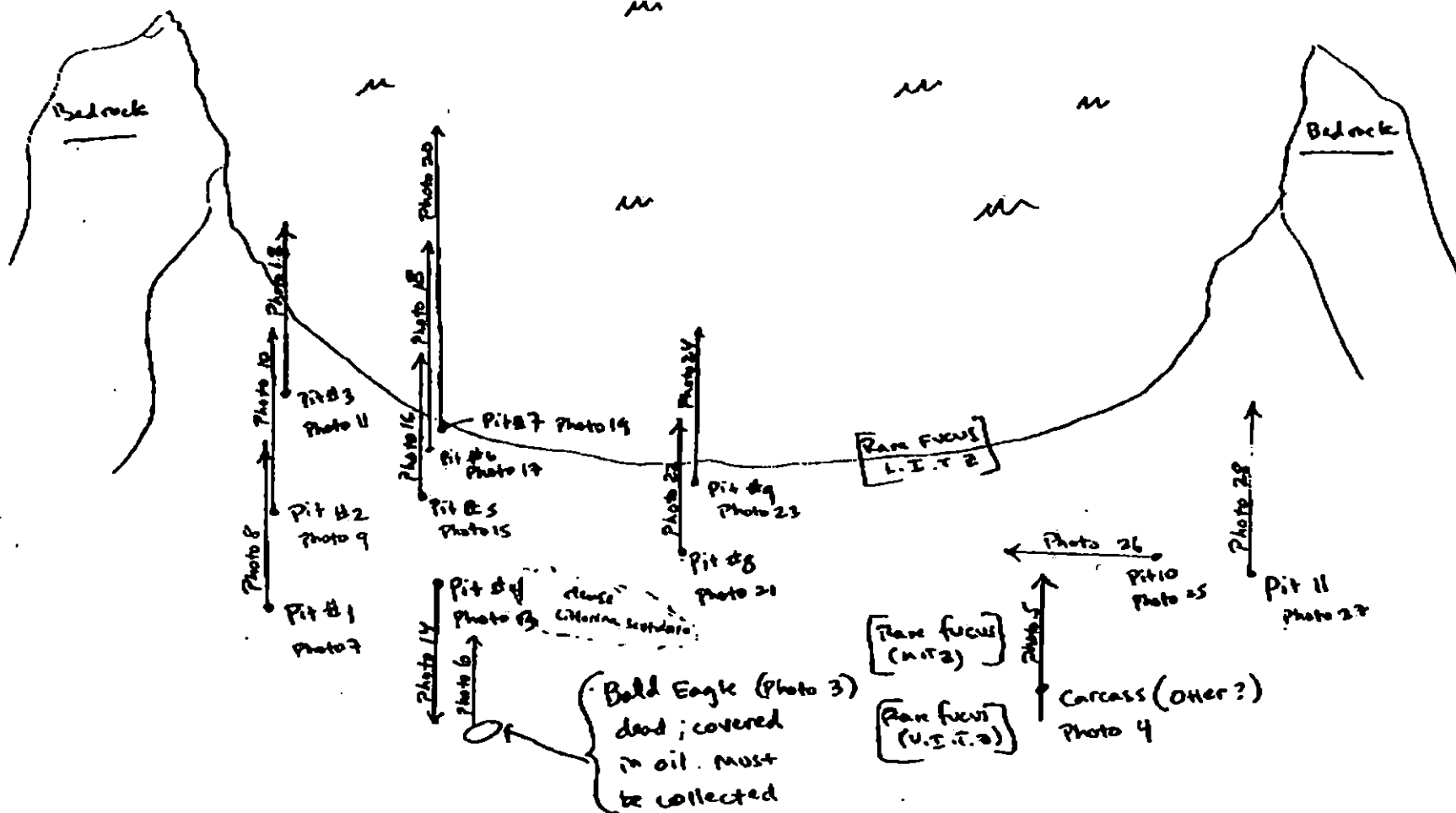
TEAM 15

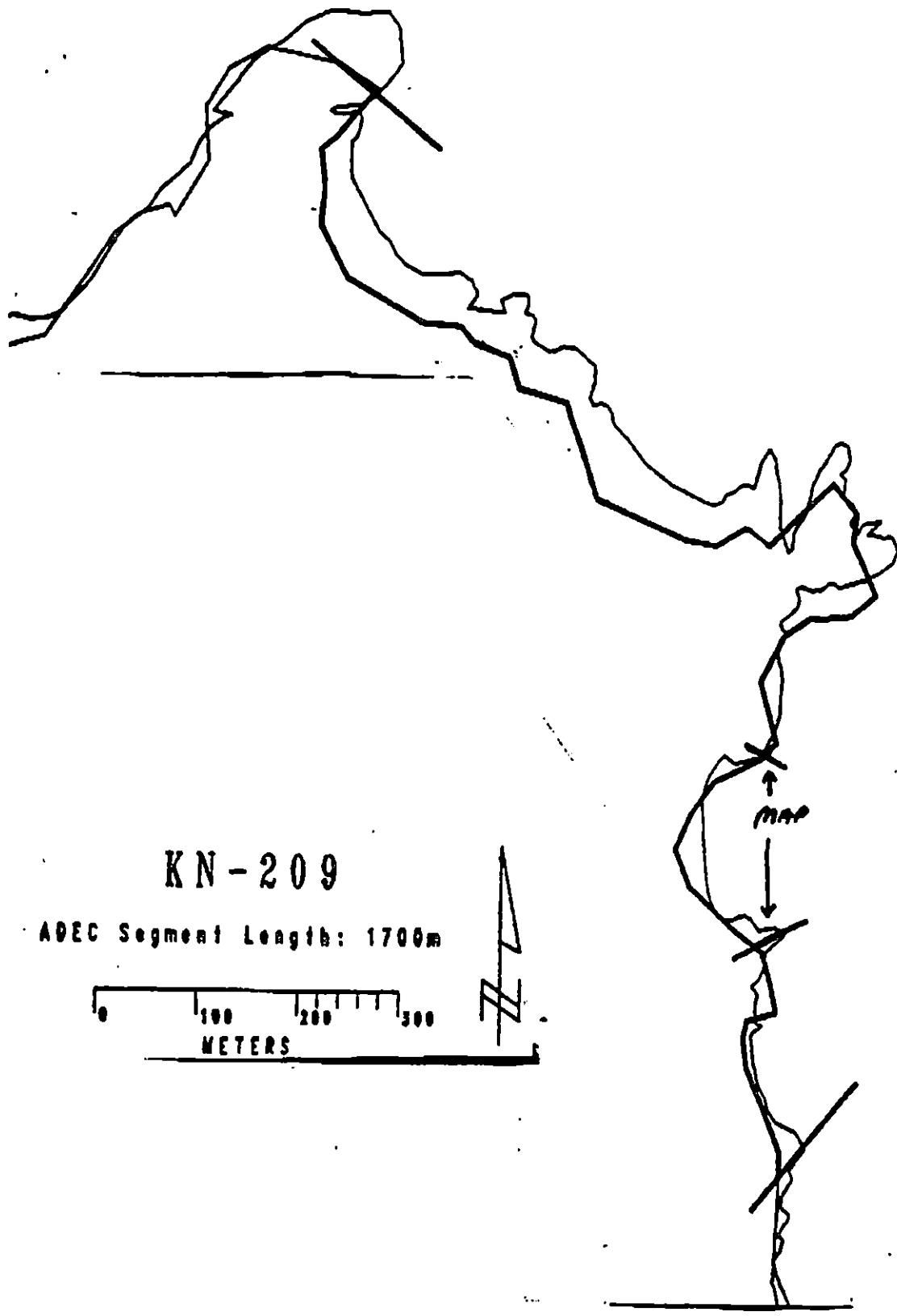
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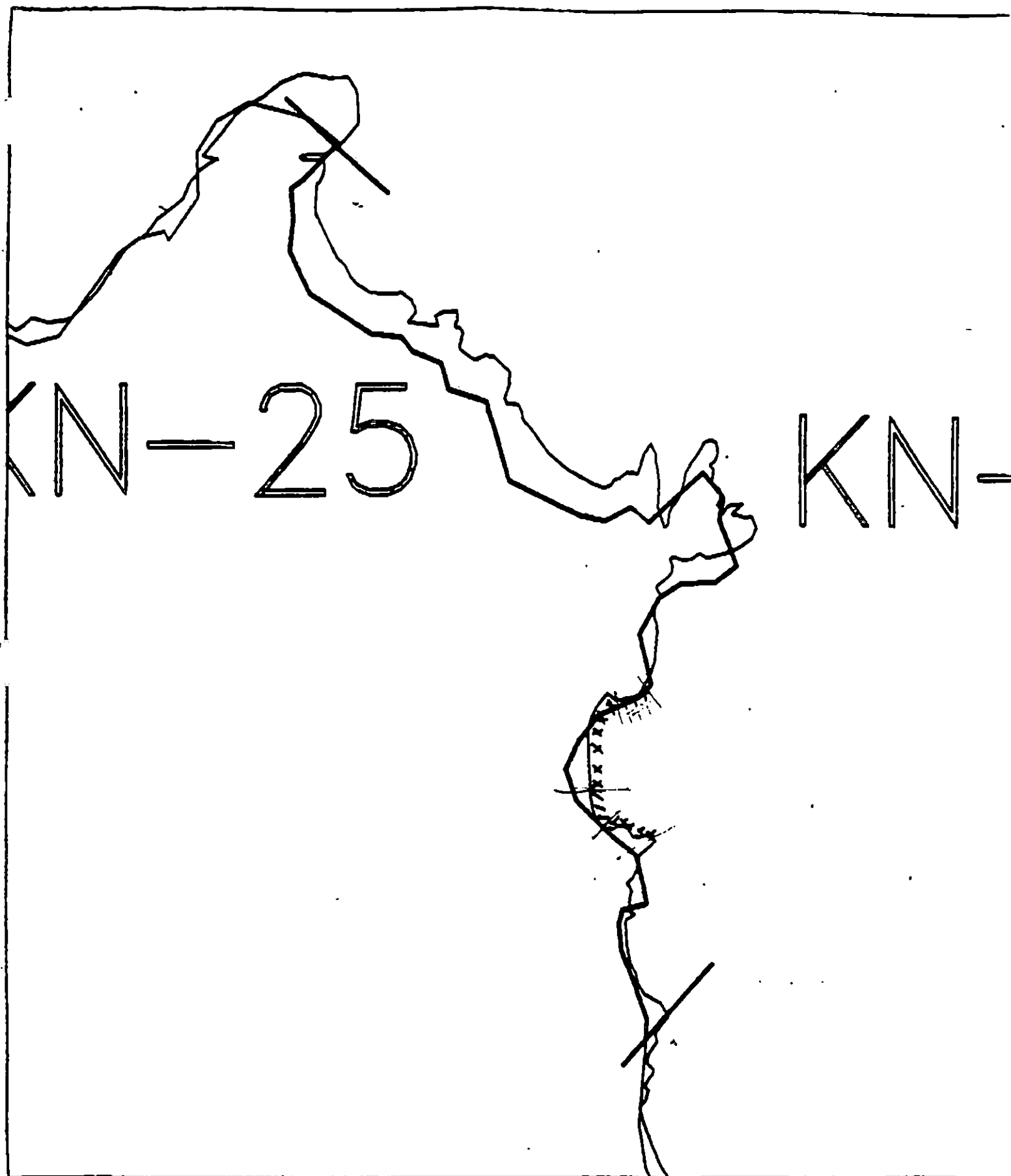
BW-SKETCH

DANIEL PAINEZ

18:00







XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-209

ADEC Segment Length: 1700m



Map Key: PWS-336

Name: FitzgeraldDate: 10 Apr 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-209 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal Other Approved Treatment	CLOSED
Bioremediation Mechanical Relocating/Raking Spot Washing	CLOSED

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, other approved treatment, bioremediation, and mechanical relocating/raking and spot washing within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/24/90
ADEC Ray Morris
EXXON Anna T. [Signature]
NOAA John C. [Signature]
USCG G. A. [Signature]

FOSC

[Signature]

DATE

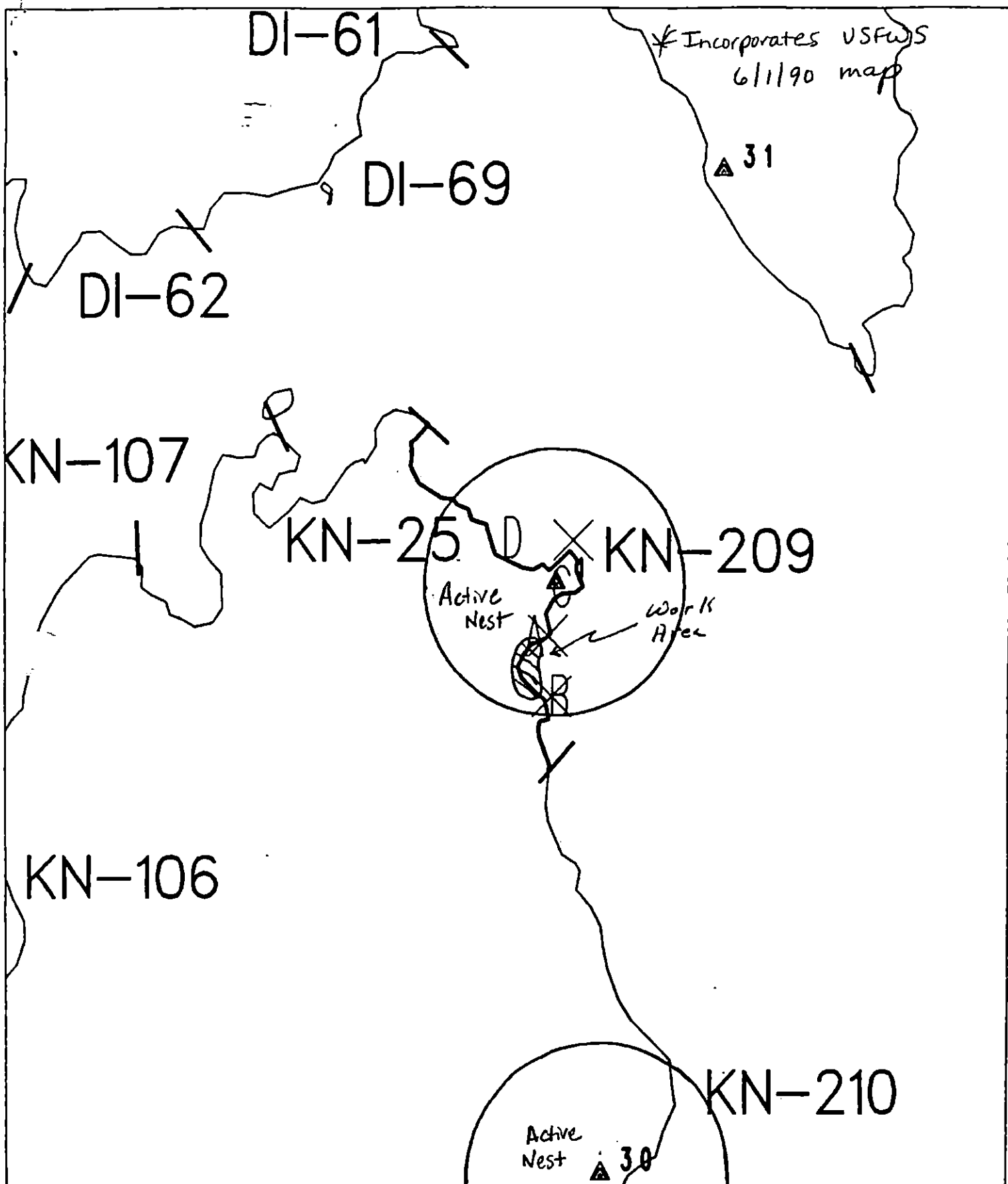
6/5/90

Prepared By:

Anda May [Signature]

Date

6/4/90



Exxon Company, USA
Map Keys: KN1-KN-209



ECOLOGY MAP
SEGMENT KN-209
SUBDIVISION A (1 of 1)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-209 SUBDIVISION B (2 OF 4) DATE 4/21/90

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)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in Subdivision C - see ecology map.

SHPO SIGNATURE: Charles E. H. H. H. DATE: 5/5/90

OILING CATEGORIZATION:

Wide 20 m: Medium 17 m: Narrow 10 m: V.Light 0 m: No Oil 211 m
Subsurface Oil Observed: Yes X No Maximum Depth 33 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes manual pickup of debris and isolated tar balls, and bioremediation where shown on sketch map. Work should be conducted after 6/1 and with approval of USFWS based on eagle constraints.

TAG COMMENTS: Consider use of both NIPOL and Customblen for bioremediation. Consider removal of oiled material at the base of boulders near pit 5

TAG APPROVAL DATE: May 5, 1990

ADEC ART WEINER D. H. H.
EXXON Mark N. Silbert Mark N. Silbert FOSC: DATE: 5-9-90
NOAA Gary Peterson Gary Peterson
USCG CA REITER CA Reiter

- 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 (5/7 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 (5/11 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
- 3A, 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 8/1)
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 (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7-H Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7-J Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-209 SUBDIVISION: B DATE 4-21-9

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

- 1) At pit #2-4 rake cobble to expose OR down to 35 cm. then fertilize. Stream below this spot is not a spawning area and ^{possibly does} ~~may~~ not exist year round.
- 2) At pit #5 remove OR layer (10 cm) (2 M x 1 1/2 M). The layer is gravel and could be removed w/a shovel and 2-3 plastic bags. Replace the cobble and Boulder afterwards.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

For northern half of segment KN209-13.
Remove debris in storm berm.

Concur with 1) Expose OR and bioremediate.

Resources sensitivities include eagle nests and tent sites.

On the South end is an easily recognized active avalanche shoot - not recommended for tent site.

SHORELINE OILING SUMMARY

REVISION NO. 1

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-209
 BIO P. Crank LAND REP C. Huber SUBDIVISION B (1 OF 4)
 EXXON T. Tomblin ADEC M. Boer TIME 15:20 to 16:45
 TEAM NO. 5 TIDE LEVEL +3 to +1 DATE 04/21/90
 EST. SUBDIVISION LENGTH: 270 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 20 % C 40 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 20 m M 18 m N 2 m VL 0 m NO 230

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 3 BAGNEAR SHORE SHEEN? ☒ BR RW SL T

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-5-6Frames 23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A	N	SHEEN (Y/N)	↓	SURFAC SUBSURF. SEDIMENT
		OP	OR	OL	OF	NO		SW	W	1	2	3	4	SW	W	M	U					
1	60					X	.		X					X								CP/P
2	30		X				5-25		X			X		X								C/C
3	10		X				0-7		X					X					TL	7		C/C
4	35		X				10-33		X			X		X								C/C
5	15		X				0-10		X			X										B/P
							.															

COMMENTS * Subdiv. A was done by another team during phase
 most oil occurs among rocks where wave energy is large
 attenuated.

REVIEWED _____ DATE _____

00 J. Springer
SEGMENT ST/KN-209

SUBDIVISION B

DATE 04/21/90

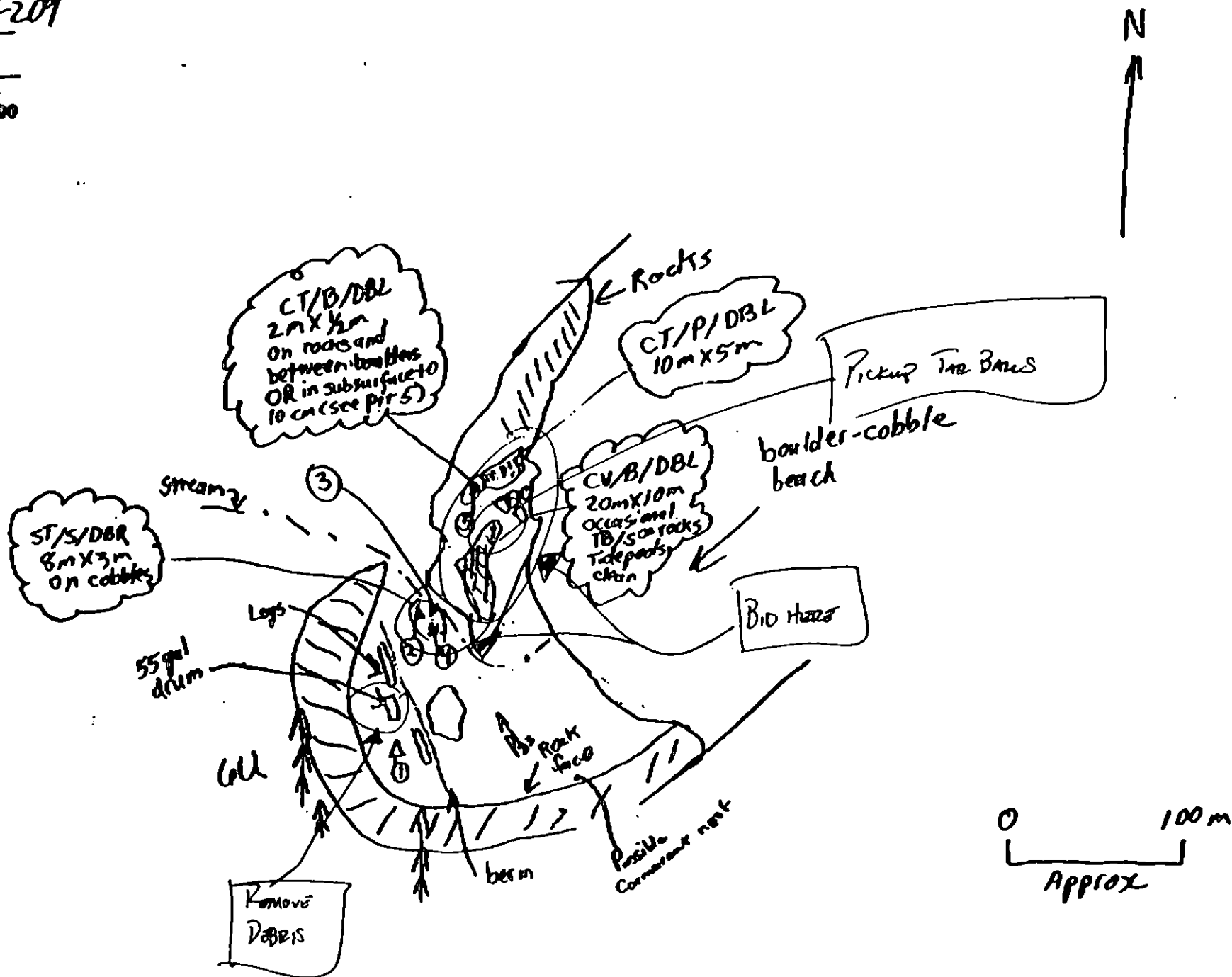
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMT/LMT
- ☐ SSR
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
- PR - No Substrate Oil
- 2 Δ
- PR - Substrate Oil
- CT/C
- Continuous Distribution
- CT/D
- Graben Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- eee
- Other Vegetation
- 1 ●●
- Photo location, direction, and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN 209 Subdivision B Date (mo / day / yr) 4/21/90

Time (24 hr) 1525-1145 Biologist Crank

pg 1 of 2

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

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 45 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: Roll No. ST-5-6

Frames 23

BARNACLES - Dense: Conf. New Growth; recruitment or bedrock headlands
mod on boulder; sparse on cobble. 10% mortality, unfiled areas

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

4

MYTILUS - 75% of population is New Growth, 20% recruitment. Mortality less than 1%.

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

34

GASTROPODS Recruitment and New Growth dense and continuous throughout subdivision. Mortality not observed.

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 - Seedlings 10% of population. Fronds are reproductive. Mortality less than 1%.

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

3

Wildlife Observations/ General Comments:

30 Her

1 Eagle

4 Cormorants (possible Nest on Cliff birding E)

Ecological Considerations:

6U - Test Site

ST - Active Eagle Nest (did not locate)

- Mussels are concentrated in small dense clusters along bedrock and boulder. 95% of population new growth or recruitment.
- Fucus also in small patches w/ 90% mature reproductive plants.
- Rock bench in front of rounded cobble beach forming tidepools with several species of algae and fauna including a dense concentration of pulmonate snails.

- LITZ appears healthy.

DATE ^{IN 207} 4/21/90 TIME 1525-1645 TIDE HEIGHT +3 → +1 ft

1-BEDROCK 2-BOULDER 3-COBBLE 5-SAND

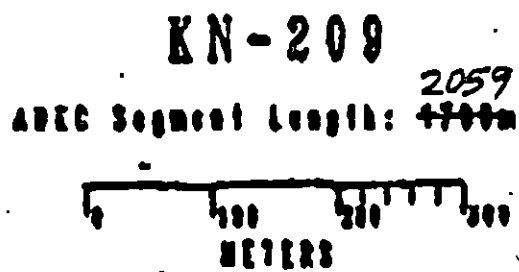
SILT pg 2 of 4

FLORA:

SPECIES	UITZ	MUTZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA		1		Tidepool
CALLIARTHRON/CORALLINA		1		Tidepool
CLADOPHORA SPP			1	
COSTARIA SPP				
ENDOCLADIA MURICATA		1		
FILAMENTOUS GREENS		1	1	Spore
FILAMENTOUS REDS			1	
GLOIOPELTIS FURCATA		1		
HALOSACCION GLANDIFORME		1	1	
LAMINARIA SPP				
LITHOTHAMNION			1	
NEREOCYSTIS SPP				
PORPHYRA SPP	2			
RALPHSIA/HILDENBRANDIA			1	
PHODOMELA LARIX		1		
RHOHOMENIA PALMATA		1		
SCYTOSIPHON SPP				
ULVA SPP			1	
ZOSTERA MARINA				
ENTOROMORPHA				
Odonthalia		1		
Iridaea			1	
Alaria			1	
Laminaria		1		

FAUNA:

ANTHOPELURA SPP		1		Tidepool
(SEMI) BALUNUS CARIOSUS		12		
B. GLANDULA	12	12	12	
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS Tidepool Sculpin		1		10 cm long
DERMASTERIAS IMBRICATA			1	
KATHARINA TUNICATA		1		
LEPTASTERIAS HEXACTIS				
LIMPETS		12	1	
LITTORINA SPP	123	123	123	Dense conc. of new growth; recruited
NUCELLA SPP		1	1	
PAGURUS SPP				
PISASTER OCHRACEUS		1		Tidepool
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES			1	
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THOROSUS		1		
TEALIA		1		Tidepool
Epigastis		1	1	Tidepool
A. b. m. v. m. s.		12		



James Springer
4/21/90

SHORELINE EVALUATION

SEGMENT ST/ KN-209 SUBDIVISION C (3 OF 4) DATE 4/21/90

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)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Eagle nest in Subdivision C - see ecology map.

SHPO SIGNATURE: Charles E. H. Hines DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 101 m: V.Light 0 m: No Oil 248 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ 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> <u>MAJ</u> <u>X</u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> * Other (see comments)

COMMENTS: Recommended treatment includes *manually raking storm berm to MITZ and bioremediate as shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nesting constraint.

TAG COMMENTS: Use spot wash with sorbents during rising tide following relocation of storm berm. Monitor to reassess logs.

TAG APPROVAL DATE: May 5 1990

ADEC ART WEINER/D. D. Hines

EXXON Mark N. Wilbert

NOAA Gary Peters Ray D. Hines

USCG G. A. BEITER G. A. Hines

FOSC: W L DATE: 5-9-90

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- SR 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
- SS Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- ST 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 (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7H 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 267-2350

SEGMENT ST/ KN-209 SUBDIVISION: C DATE 4-22-

USCG

NAME

AEC Vandepels

SIGNATURE

AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest moving cobble of UITZ to MITZ & LITZ and bioremediating oiled area, 20 x 20 to 30 M area.

Also burn oiled logs & move some of the logs to see how much oiling is below them. Logs were too large to allow our team to dig under them.

ADEC

NAME

Michele Baer

SIGNATURE

Michele Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS (By pits #1-4):

Boulder, cobble beach is borderline in substrate size for tilling. Subsurface oiling appears to be uniform throughout the beach. Remove the 1st layer down to the LITZ exposing the OR layer. Apply fertilizer and allow the wave action to remove the remaining oil and replace the cobble. In the storm berm, haul away the oiled debris under lying the logs, then replace the logs. Burning would work here as well. The beach has very high headlands and little exposure to other vegetation.

LAND MANAGER

NAME

Carol S Huber

SIGNATURE

Carol S Huber

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Considerable oiling in one small beach, rest of subd. C rocky headlands. Recommend allowing natural cleansing to continue on headlands, where oil is weathered and stable.

Burning of storm berm logs and debris should be considered as the berm appears to contain considerable oiled spruce needles.

Bioremediation may work in this high to medium energy beach after top layer of clean rocks are removed by hand methods. (more)

- Listed resource sensitivities - tent sites, however this subdivision does not appear to lend itself to this usage.

SHORELINE OILING SUMMARY

REVISION NO. 1

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-209
 BIO P. Crank LAND REP C. Huber SUBDIVISION C 13 OF 4
 EXXON T. Tomblin ADEC M. Baer TIME 17:05 to 18:05
 TEAM NO. 5 TIDE LEVEL +1 to +1 1/2 DATE 04/21/90
 EST. SUBDIVISION LENGTH: 460 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 75 % B 20 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 15 % Hang 50 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 80 m VL 0 m NO 380

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 0 BANEAR SHORE SHEEN? (NO) BR RW SL T

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			X
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE Q#BAGS 0

Photographs:

Roll No. ST-5-6Frames 24, 25

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		BO	BC	1	2	3	4	5	BU	M	W	U				
1	30	X					15-29		X				X				X					B/PGS
2	25	X					10-12		X				X				X					B/CP
3	40	X					10-40	X					X		X							C/CP
4	30	X					10-30	X					X	X								C/CP
							.															
							.															

COMMENTS * Subdiv. A was done by another team during phase I.
 Most oil is subsurface. The heaviest concentration is in the storm berm. Logs above the berm are also oiled.

REVIEWED YWDATE 4/23/90

00 J. Springer
SEGMENT ST/ KN-209

SUBDIVISION C

DATE 04/21/80

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Sep/Sub Entry
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 A

PH - No Subsurface Oil

2 A

PH - Subsurface Oil

CT/C

Concentrated Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

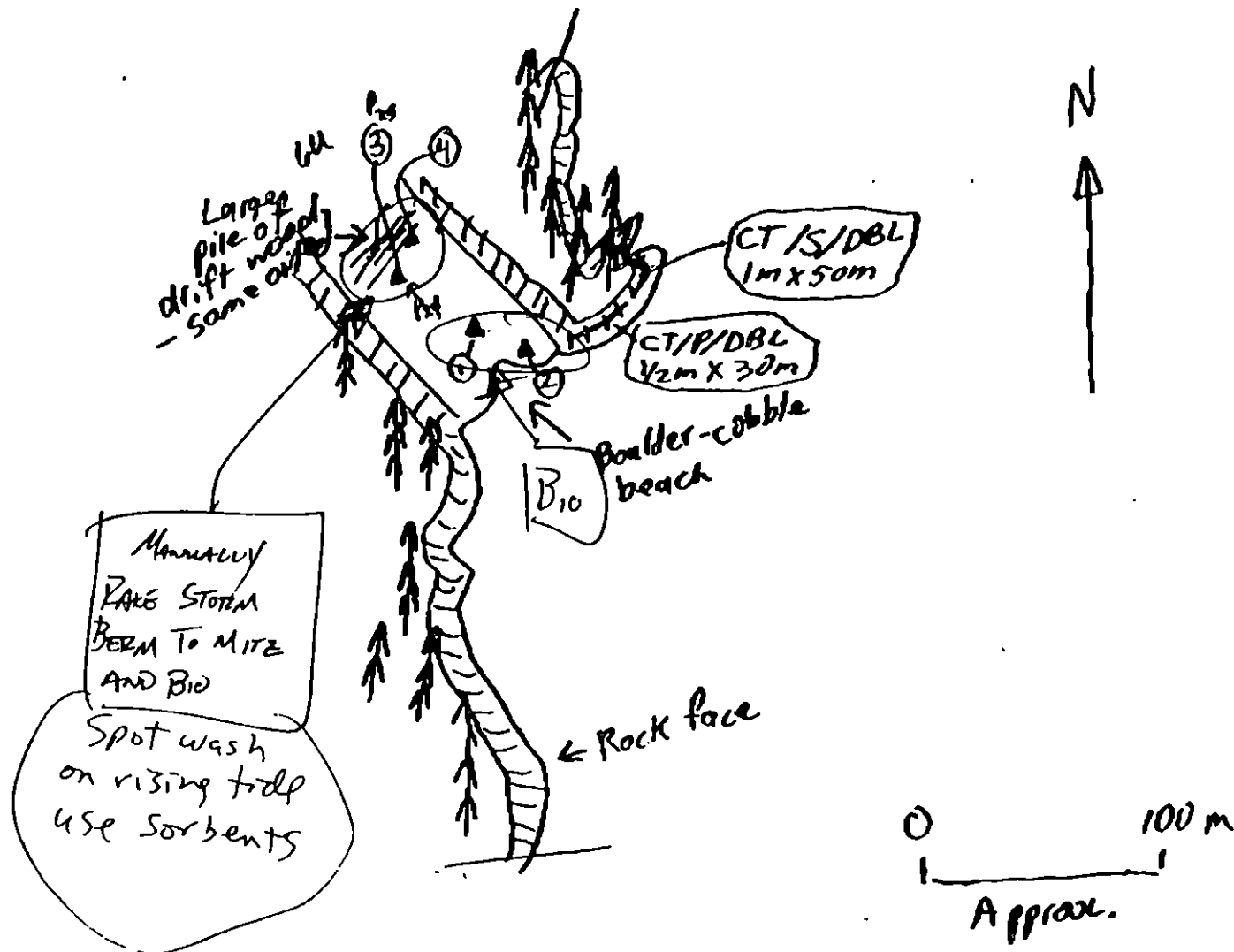
eee

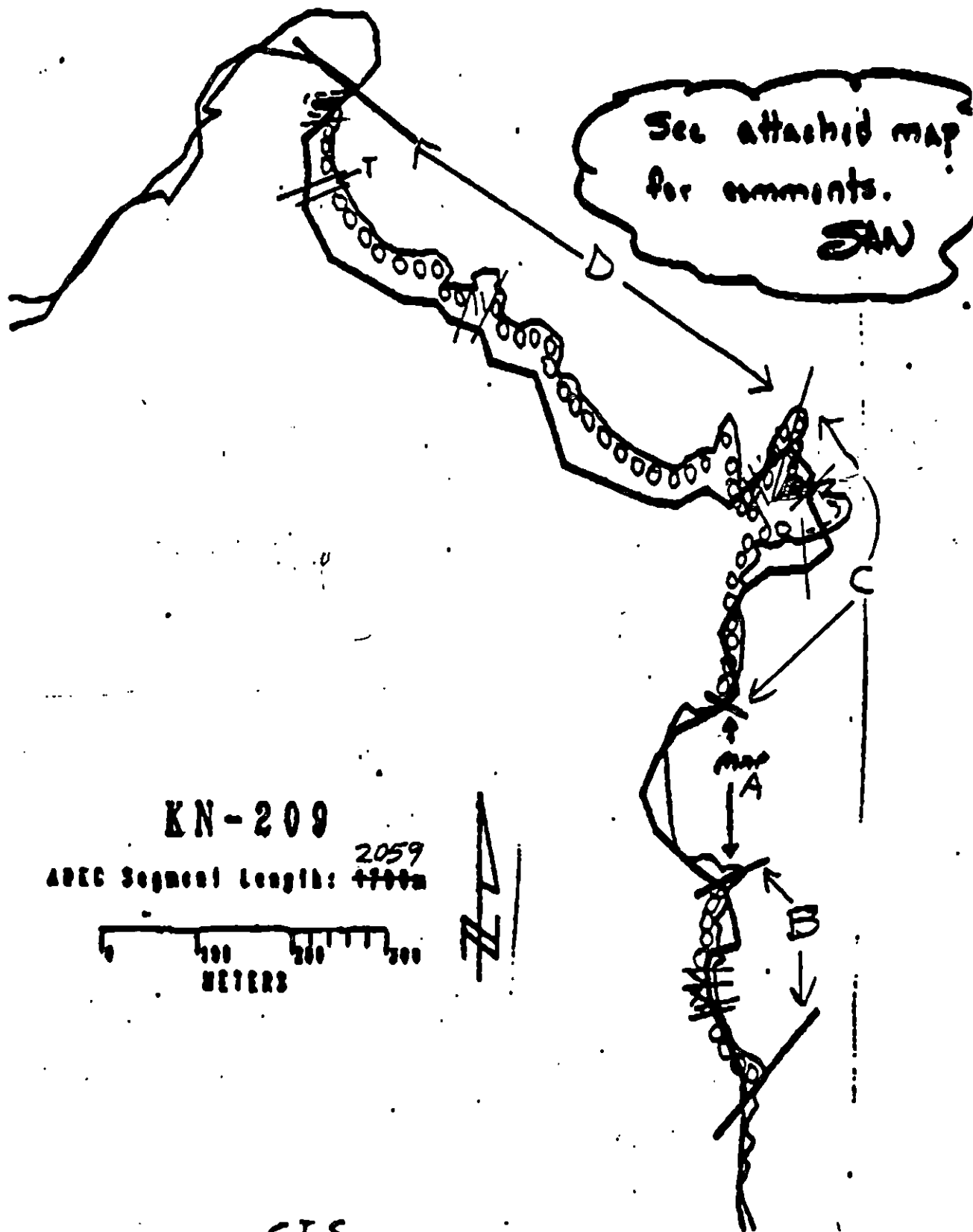
Old Vegetation

1 00

Photo location, direction,
and number

SKETCH MAP





See attached map
for comments.
SAN

KN-209
ADEC Segment Length: 2059
4700m

0 100 200 300
METERS



GIS
Surface oiling map.

James Springer
4/21/90

SHORELINE ECOLOGICAL SUMMARY pg 1 of 2

Segment ST/ KN 209 Subdivision C Date (mo/day/yr) 4/21/90
 Time (24 hr) 1705-1810 Biologist Crank Length: 460m
 Tide Height: +1 to +1.5 ft

- (A) Substrate type and % of segments:
 (1) Bedrock 75 (2) Boulder 20 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 30 Moderate 60 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: No eval. 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 PRESEN

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 PRESEN

3

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 PRESEN

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 PRESEN

Wildlife Observations/ General Comments:

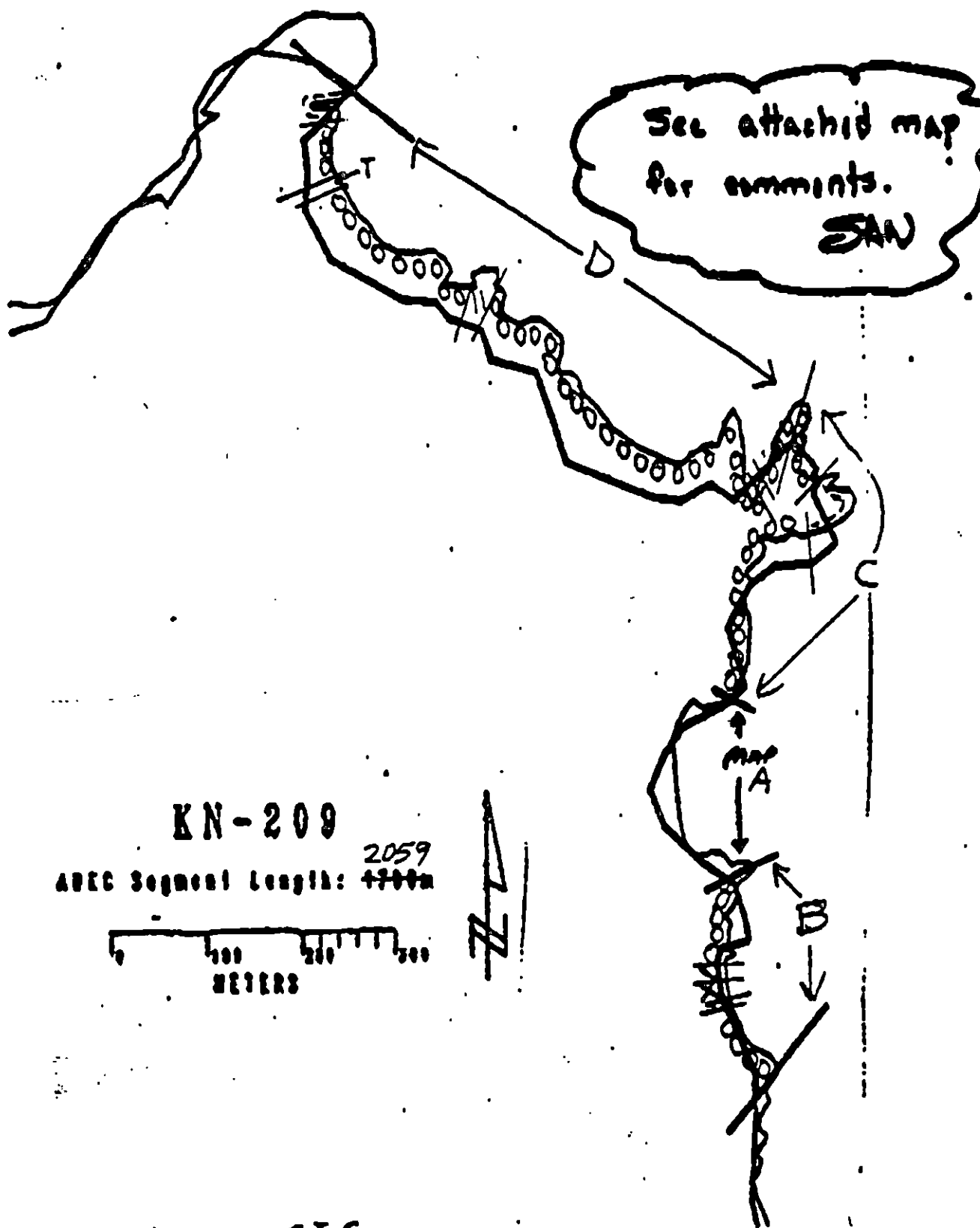
- 1- Magpie
- 4- Crows

1) Subdivision consists of rocky headlands with one small slit-pocket angular beach
 - unable to make general determination of distribution of taxa or their vertical zonation
 reflect only the beach and not the entire subdivision.

Ecological Considerations:

1) Rich LITZ algal cover on boulder and rock, green filamentous or

- 2) Mussels: a few dense 2m² patches on vertical wall and some recruitment with the crevices of boulders. No mortalities observed on boulders. Unable to determine mortality on headlands.
- 3) Fucus: continuous 2m band on headlands - unable to make sporeling determination. Fronds on boulders are regrowing.
- 4) Barnacles: dense, continuous apart on LITZ both in oil stained and unsoiled surfaces with 30% adult mortality.



See attached map
for comments.
SAN

KN-209

2059

ABEC Segment Length: 4700m



GIS
Surface oiling map:

James Springer
4/21/90

DATE ²⁰⁷4/21/90 TIME 1715^C 1810 TIDE HEIGHT 740mm +1 → 7.54^C ^{CRANE}

1 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT pg 2 of 1

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS		23	123	Dense cond
FILAMENTOUS REDS			12	Dense cond
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION			1	
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA		12	12	
RHODOMELA LARIX				
RHOHOMENIA PALMATA			12	Dense
SCYTOSIPHON SPP				
ULVA SPP			12	Dense discontinuous band 1m wide
ZOSTERA MARINA				
ENTOMORPHA				
Alaria			12	
Cryptosiphonia			12	Dense patches
Mastocarpus			1	

FAUNA:

ANTHOPLEURA SPP				
(SEMI) BALUNUS CARIOSUS		1		
B. GLANDULA				
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA			1	
KATHARINA TUNICATA			1	
LEPTASTERIAS HEXACTIS			1	
LIMPETS				
LITTORINA SPP			23	
NUCELLA SPP				
PAGURUS SPP				
PISASTER OCHRACEUS			1	
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES			1	
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THESITES			12	Moderate and continuous
TEALIA				
Henricia leviuscula			1	
Evasterlos troschelii			1	

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-209 SUBDIVISION C (3 of 4)

WORK WINDOW	
Bioremediation Spot Washing Manual/Mechanical Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to bioremediation, spot washing, and manual/mechanical raking within 400m of active nest. No constraint to bioremediation, spot washing and manual/mechanical raking more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

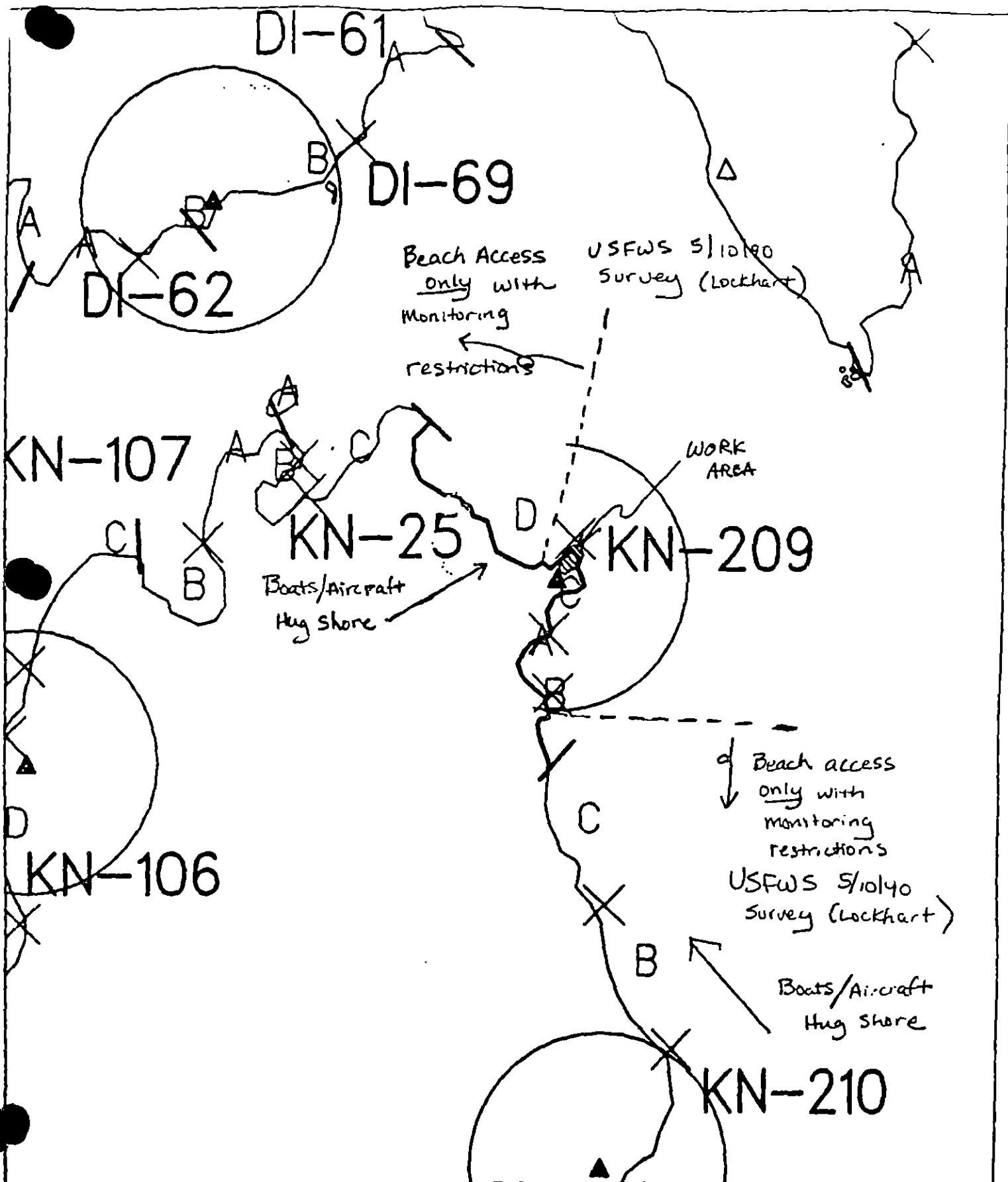
6/13/90

Prepared by

[Signature]

Date

6/12/90



ECOLOGY MAP
 SEGMENT KN-209
 SUBDIVISION C (3 of 4)

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

SHORELINE EVALUATION

SEGMENT ST/ KN-209 SUBDIVISION D (4 OF 4) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-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)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest within 400m in Subdivision C - see ecology map.

SHPO SIGNATURE: Charles H. Homan DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 31 m: Narrow 40 m: V. Light 16 m: No Oil 741 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manually raking SUTZ to MITZ in pocket beach shown on sketch map and bioremediate. 2) manual pickup of mousse patties and tarballs in areas shown on map and 3) re-removal of tarmats where indicated on map. Work should be conducted after 6/1 and with USFWS approval based on eagle constraint.

TAG COMMENTS: Use spot wash and Sorbents after berm relocation.

TAG APPROVAL DATE: May 5 1990

ADEC ACT WINTER D. H. Homan
EXXON Mark N. Miller Mark N. Miller FOSC: W L DATE: 5-9-90
NOAA Greg Pattee Greg Pattee
USCG G.A. Reiter G.A. Reiter

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 (5/7 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 (5/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- ST** 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 (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (5/15 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

SEGMENT ST KN-209 SUBDIVISION: D DATE 04-21-

USCG

NAME

AEC Vandepels SIGNATURE AEC Vandepels☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I suggest tilling + bio. of 3x20M band in
UITZ on northern most beach of KN-209 Sub.D.

ADEC

NAME

NAME Michelle Baer SIGNATURE Mbaer☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- 1) By pit #3, rake area to expose OR patch, then fertilize.
- 2) By pit #5-7, no treatment, no oil found.
- 3) By pit #8, no treatment, no oil found.
- 4) By pit #9, In area of storm berm and above, that leads to the
next beach, remove 30 cm of OR subsurface substrate. Rake
and bio may not work here because the area is protected
from wave energy and may be washed infrequently. In
addition, remove TBs + MS.
- 5) No treatment by pit #12 due to no oil found.
- 6) By pit #13-15, fill beach below storm berm, good substrate
for tilling, oil appears throughout most of the beach. Bio. after
tilling leave area to North to natural wave energy

LAND MANAGER

NAME

NAME Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Oil band on headlands appears stable (weather
Generally band not distinctive, locally heavier in
some protected areas. Recommend continued natural
Concur with ADEC 1-6. ^{handlen} cleansing for rocky headlan
Consider spot washing for Northern most
end of segment, with pooled oil (see OG map).
Resource values/sensitivities include eagle
nests and tent sites.

SHORELINE OILING SUMMARY

REVISION NO. 04

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-209
 BIO P. Cook LAND REP C. Huber SUBDIVISION D (4 OF 4)
 EXXON T. Tamblin ADEC M. Baer TIME 18:10 to 20:40
 TEAM NO. 5 TIDE LEVEL +1 1/2 to +5 1/2 DATE 04/21/90
 EST. SUBDIVISION LENGTH: 960 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 35 % B 25 % C 20 % P 10 % G 7 % S 3 % M 0 % V 0
 SLOPE: Long 40 % Hang 35 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 48 m N 55 m VL 5 m NO 907

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	R	P	S	SW	W	M	U	SW	W	M	U
ASPHALT PAVEMENT			X		X				X			
POOLED												
COVER	X				X				X			
COAT		X	✓		X				X			
STAIN												
MOUSSE			X						X		X	
PATTIES				X					X			X
TARBALLS				X	X				X			
FILM												
NO OIL									X			X

PAVEMENT H F S 1 sq. m by 3PATTIES / TARBALLS 5 BACNEAR SHORE SHEEN? (NO) BR RW SL TI

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

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)	F	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		SS	US	SW	W	M	U	SW	W	M	U				
1	25					X	.		X					X							BC/CP
2	30				X		0-30	X			X			X					TL	28	B/CF
3	20	X					10-18	X			X			X							B/CP
4	20					X	.		X							X					C/PG
5	30					X	.		X					X							GS/G
6	30					X	.		X					X					N	27	B CP/I

COMMENTS * Subdiv. A done by another team during phase 1.
 most of oil is in the subsurface.

REVIEWED 7WDATE 4/23/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06-134

SEGMENT ST/ KN-209 SUBDIVISION D (4 OF 4)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (VND)	↓	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		SO	SC	1	2	3	4	5	6	W	U	M	U				
7	30					X	.		X								X						P/PG
8	10					X	.		X										X				P/P
9	40		X				10-40	X						X	X								C/CPV
10	40					X	.		X								X						CP/CP
11	30					X	.		X							X					N	20	CP/CPG
12	30					X	.		X									X					BS/PG
13	40					X	.		X									X			N	20	CP/CPG
14	30	X					15-25		X			X				X				X	RW	20	P/PG
15	30		X				5-25		X			X				X					TL	27	CP/P
16	50					X	.		X							X							CP/PV
17	60		X				30-45		X				X							X			CP/CP
18	30					X	.		X										X				BC/CP
							.																
							.																

COMMENTS

REVIEWED

7W

DATE

4/23/90

DOCUMENTS **V-209**

SUBDIVISION **D**

DATE **04/21/90**

CHECKLIST

- ☐ M Area
- ☐ Approx. Size
- ☐ Substrate Entry
- ☐ C/D Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. INSLAW
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

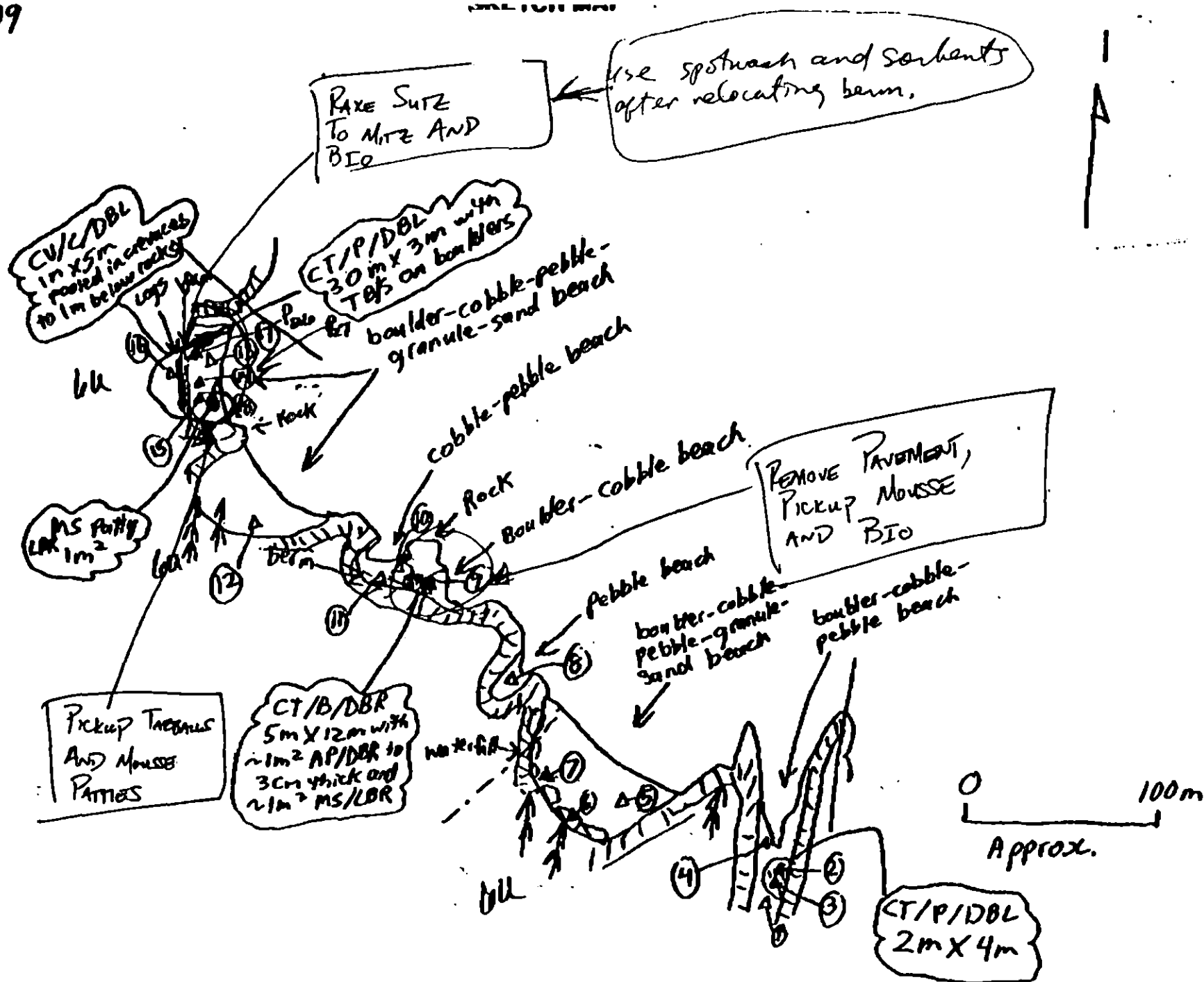
- 1 Δ
Pit - No Substrate C/D
- 2 Δ
Pit - Substrate C/D
- CT/C

Current Distribution
- CT/B

Broken Distribution
- CT/P

Pebble Distribution
- CT/S

Splash Distribution
- lll
Old Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP 1 PO 5 CV 5 CT 46 ST 1 MB 1 PT 1 TB 1 FL 1 NO 907

REVISIONS

Segment ST/ KN209 Subdivision D Date (mo/day/yr) 4/21/90Time (24 hr) 1810 - 2040 Biologist Crank Length 960 m
Tide Height +1.5 → +5.5(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 25 (3) Cobble 20 (4) Pebble 10 (5) Sand 10 (6) SM(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:
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	NOT PRESENT
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	

45

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	NOT PRESENT
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	

5

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	NOT PRESENT
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	

5

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	NOT PRESENT
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	

2345

Wildlife Observations/ General Comments:

- 1- Pigeon Guillemot
- 1- Cormorant
- 1- Otter

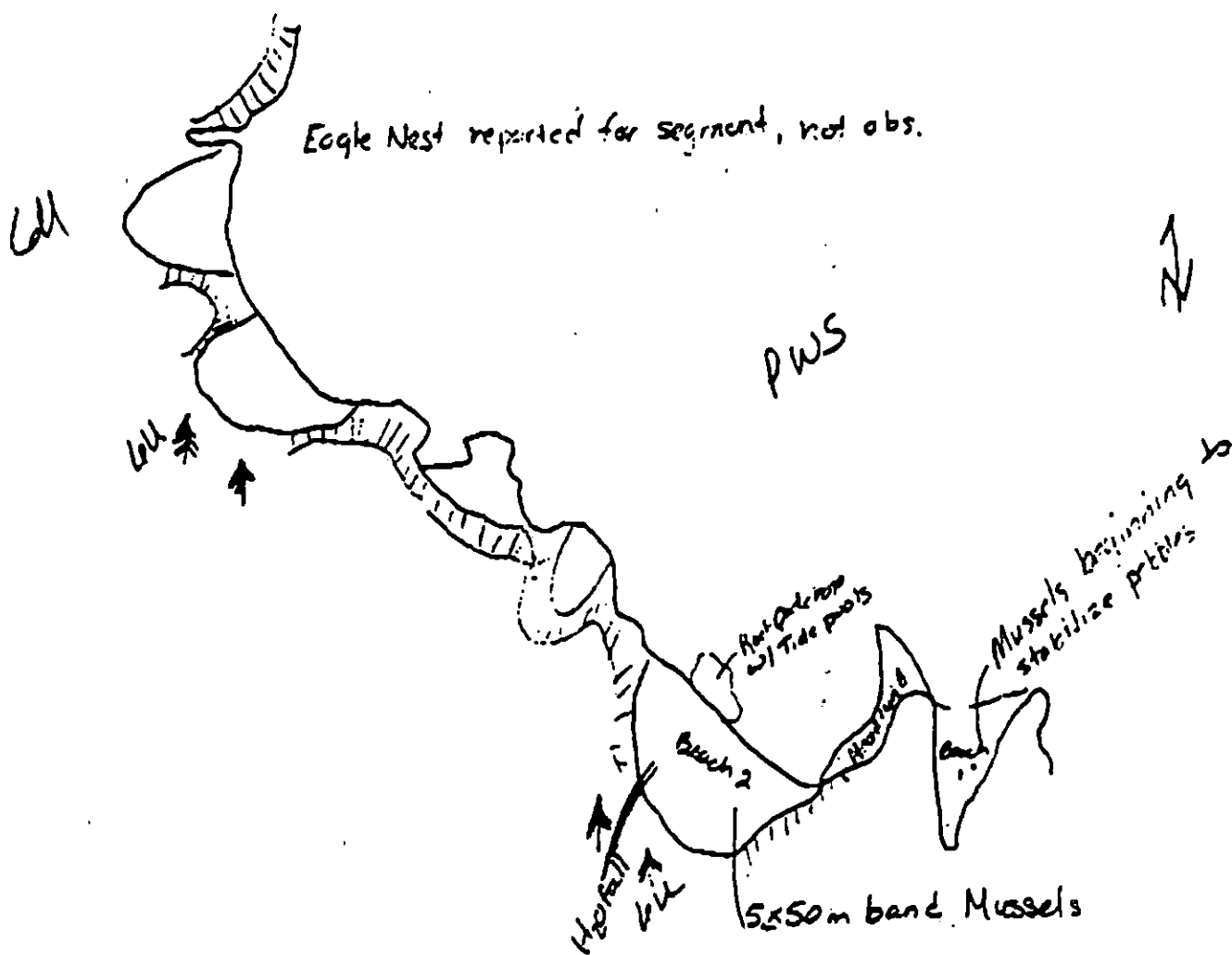
- 6- Gulls
- 1- Raven
- 1- Bald Eagle - Adult

School ≈ 300 fish fringe

Ecological Considerations:

- LU - Tent Sites
- ST - Active Eagle Nest reported for Segment not observed.
- Beach below falls has high continuous recruitment - Mussels, Littorina and barnacles.

Tide Height $+1.5 \rightarrow +5.5 \text{ ft}$



General Comments:

- Headland have a moderate continuous 2m band of *Fucus* - replaced by *Alaria* in the lower intertidal zone. Sparse - 1 pole.
- Biota is dense and appears healthy on headlands.
- Mussels - on beach 1 mussels are beginning to invade and stabilize pebble near boulders. Adults found sporadically in small dense patches on boulders. Mortality less than 1%.
- Below H₂O fall on beach 2 there is a continuous moderate 5x50m band with moderate new growth and dense recruitment. Mortality < 1%.
- Mussels in sporadic patches throughout rest of subdivision. Mortality less than 1%. 50% of mortality present was recent with flesh in the shell.
- *Littorina* recruitment was dense and continuous on beach 2; throughout r. of subdivision: Moderate in LITZ, Sparse in MITZ; LITZ. Mortality not observed.
- Mussels dense on beach 2, Rare throughout rest of subdivision.
- Barnacle recruitment ^{and new growth} dense; cont on vertical rock face, moderate on boulders in LITZ; MITZ, but low in LITZ - may be due to space competition w/ algae. Sparse on

DATE 4/21/90 TIME 1810-2040 TIDE HEIGHT +1.5 → +5.5 ft

1-BEDROCK 2-BOULDER 3-COBBLE 5-SAND

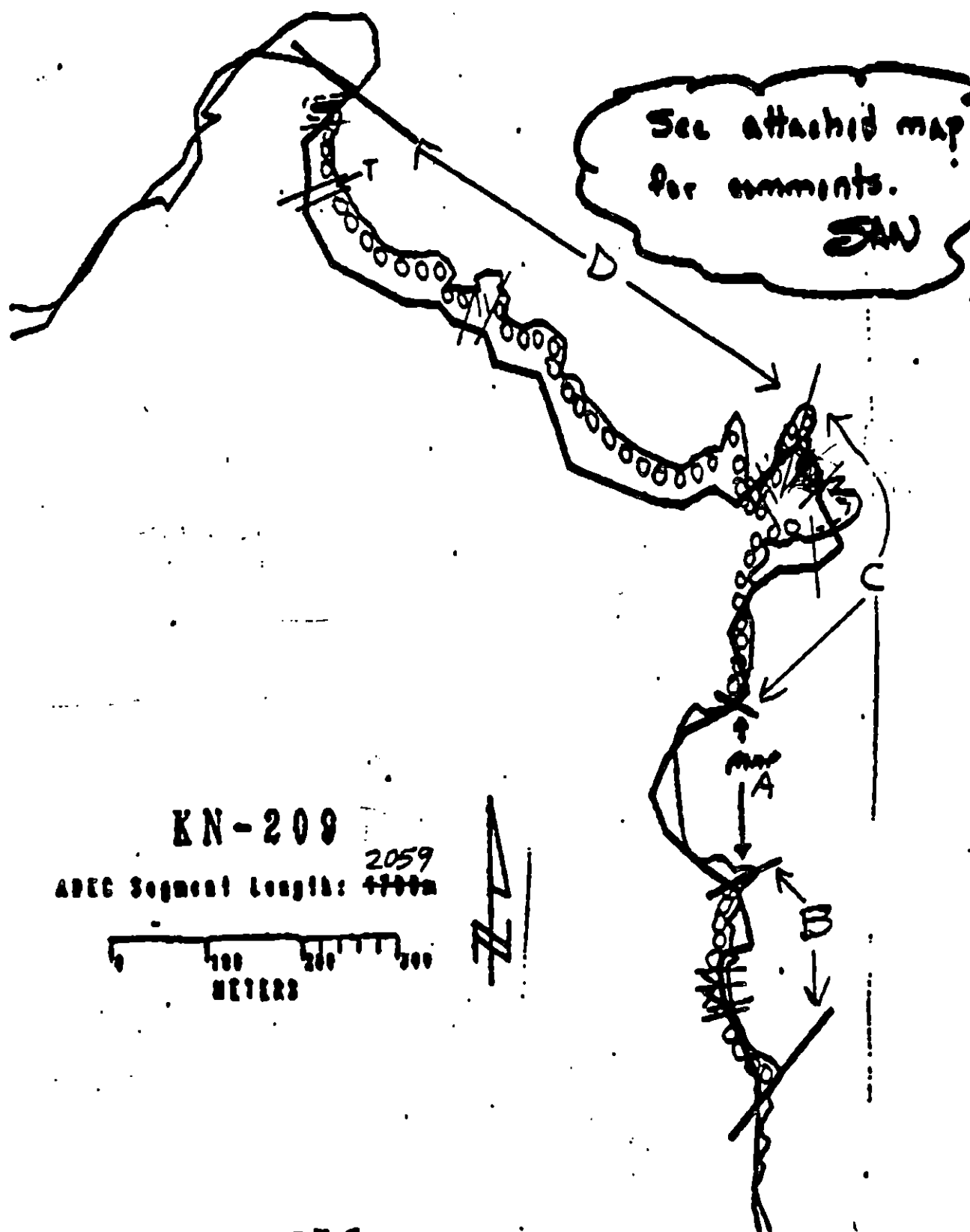
6-SILT pg 2 of 3

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
GLADOPHORA SPP		2 1		
COSTARIA SPP				
ENDOCLADIA MURICATA	2	12		
FILAMENTOUS GREENS		2	12 3	
FILAMENTOUS REDS			12	
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION			12	
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA			12	
PHODOMELA LARIX				
RHOHOMENIA PALMATA			12	
SCYTOSIPHON SPP				
ULVA SPP				
ZOSTERA MARINA				
ENTOROMORPHA				
Alaria			1	Continues band
Odontosticta		12		

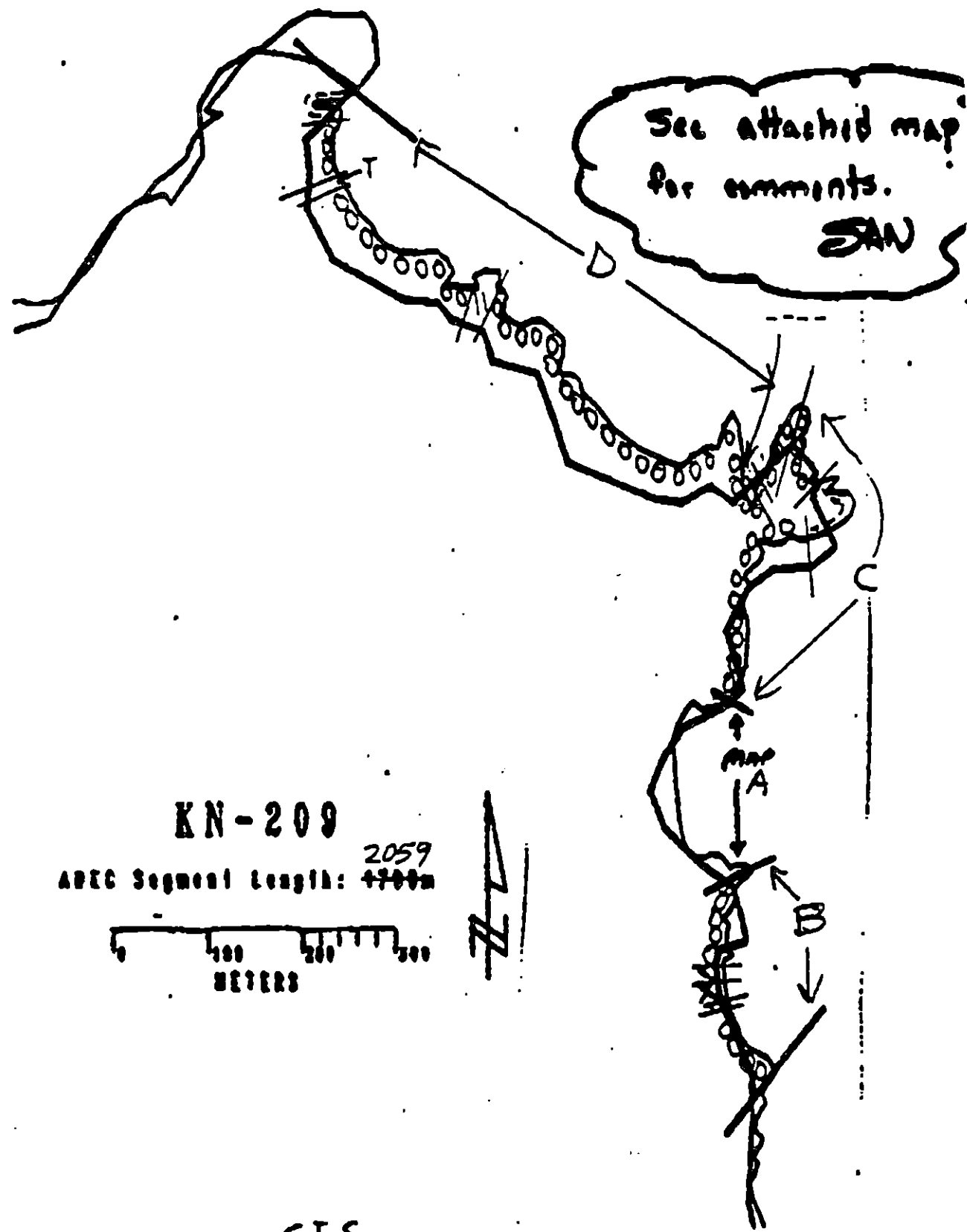
FAUNA:

ANTHOPELURA SPP		1		Tidepool
(SEMI) BALANUS CARIOSUS		12		
B. GLANDULA	12 3	12 3	12 3	
BRYOZOANS				
CHITONS (other than K. TUNICATA)		1		Live chiton in tidepool
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA		1	12	
LEPTASTERIAS HEXACTIS				
LIMPETS	12	12 3	2 13	
LITTORINA SPP	12	12 3 4	12 3 4	
NUCELLA SPP		2 3 4		Dense clusters below H ₂ O fall
PAGURUS SPP		1		Tidepool
PISASTER OCHRACEUS			1	
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES			12	
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES			12	
TEALIA		2		Tidepool
Epiactis		1		Tidepool
juv Eol			3	



GIS
Surface oiling map:

James Springer
4/21/90



KN-209
ABEC Segment Length: 2059 4700m
METERS

GIS
Surface oiling map.

James Springer
4/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-209 SUBDIVISION D (4 of 4)

WORK WINDOW

Manual Pickup and Tarmat Removal Less Than 400m From Active Nest	CLOSED
Manual Pickup and Tarmat Removal More Than 400m From Active Nest	OPEN
Bioremediation, Spot Washing, Manual/Mechanical Raking, and Other Approved Treatment Less Than 400m From Active Nest	CLOSED
Bioremediation, Spot Washing Manual/Mechanical Raking, and Other Approved Treatment More Than 400m From Active Nest	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision 1. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual/mechanical raking, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual/mechanical raking and other approved treatment more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

FOSC

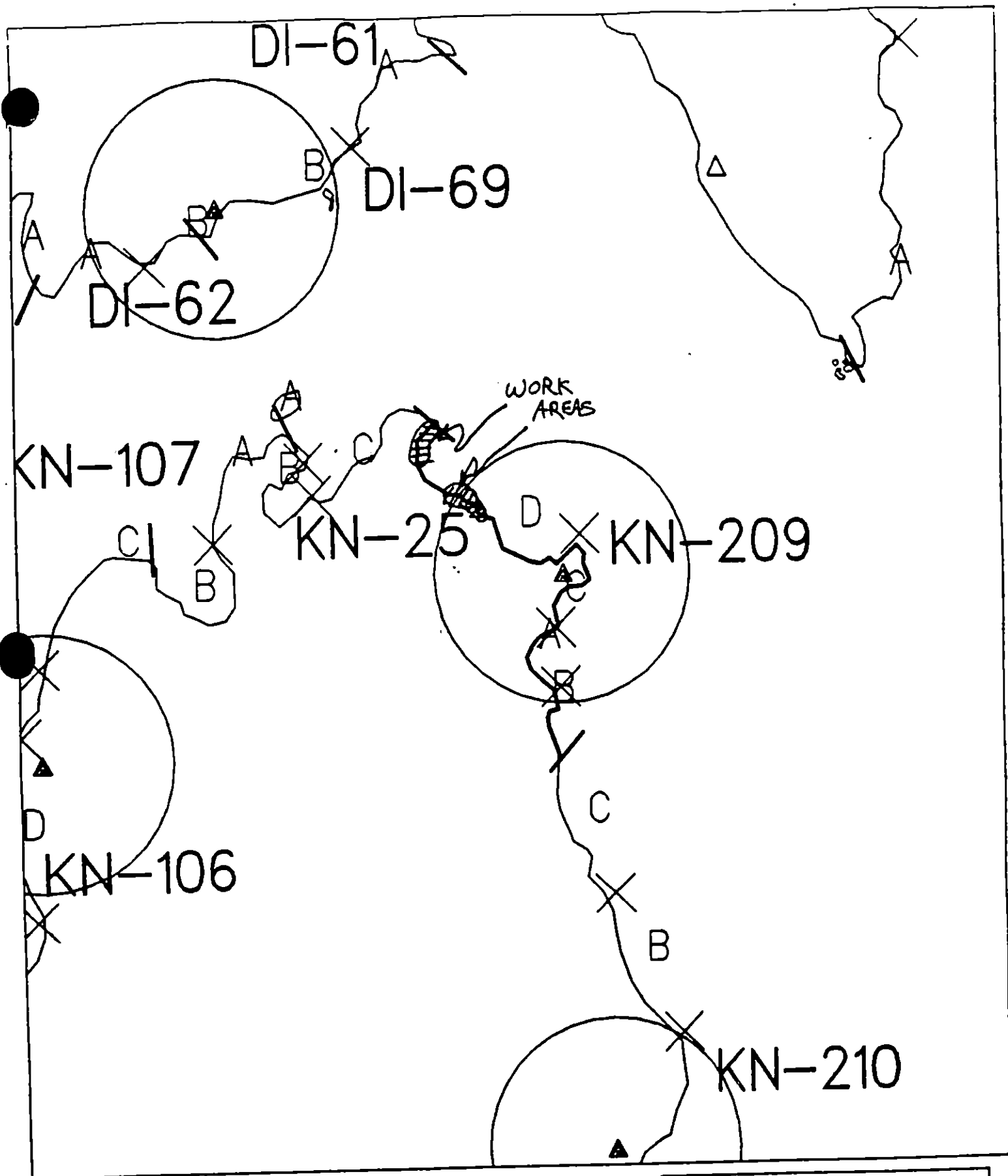
Date

6-12-90

Prepared by

Date

6/11/90



Exxon Company, USA
Map Key: PWS-KN-209
June 09, 1990



ECOLOGY MAP
SEGMENT KN-209
SUBDIVISION D (4 of 4)
METERS
0 402 803

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

1 inch = 1318 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-210 SUBDIVISION A (1 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)
Eagle nest in adjacent subdivision to the north
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.

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 5 m: V.Light 0 m: No Oil 1171 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: 7L DATE: 5-1-90

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.
6T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (6/1 to 9/15)
6V	Anchorage (6/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (6/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7-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

SEGMENT ST 1 KN210 SUBDIVISION: A DATE 04/20/90

USCG

NAME

AEC Vandepels SIGNATURE AEC Vandepels☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME

Michelle Baer SIGNATURE M Baer☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Except for 3 m patch on headland of CT, no oil was found

LAND MANAGER

NAME

Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Recommend continued natural
cleansing. Very minor oil observed on rock
headland.
(Few) Small beaches present possible good
anchorage.
2 Eagles + 4 otters observed.

23

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-210
 BIO P. Crank LAND REP C. Huber SUBDIVISION 4 (1 OF 3)
 EXXON T. Tomblin ADEC M. Baer TIME 14:00 14:50
 TEAM NO. 5 TIDE LEVEL +4 to +3 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 1300 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 90 % B 7 % C 2 % P 1 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 3 % Hang 12 % Vert 85 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m. M 0 m N 3 m VL 0 m NO 1297 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	N	E	S	W	SW	SE	NE	W	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT	X				X				X			
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X	X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☐TYPE 0#BAGS 0

Photographs: No photos

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)	V	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		S	W	1	2	3	4	5	6	BU	U	M				
1	40					X	.		X						X					N	38	CP/CP
							.															
							.															
							.															
							.															
							.															

COMMENTS

18

 REVIEWED ZW DATE 4/23/90

00 J. Springer

SEGMENT ST/ KN-210

SUBDIVISION A

DATE 04/20/00

CHECKLIST

- ☒ Area
- ☒ Approx. Scale
- ☒ Top/Sub Study
- ☒ Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pk Location(s)
- ☒ Photo Photo Location(s)

LEGEND

1 Δ

Pk - No Subsurface Oil

2 Δ

Pk - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

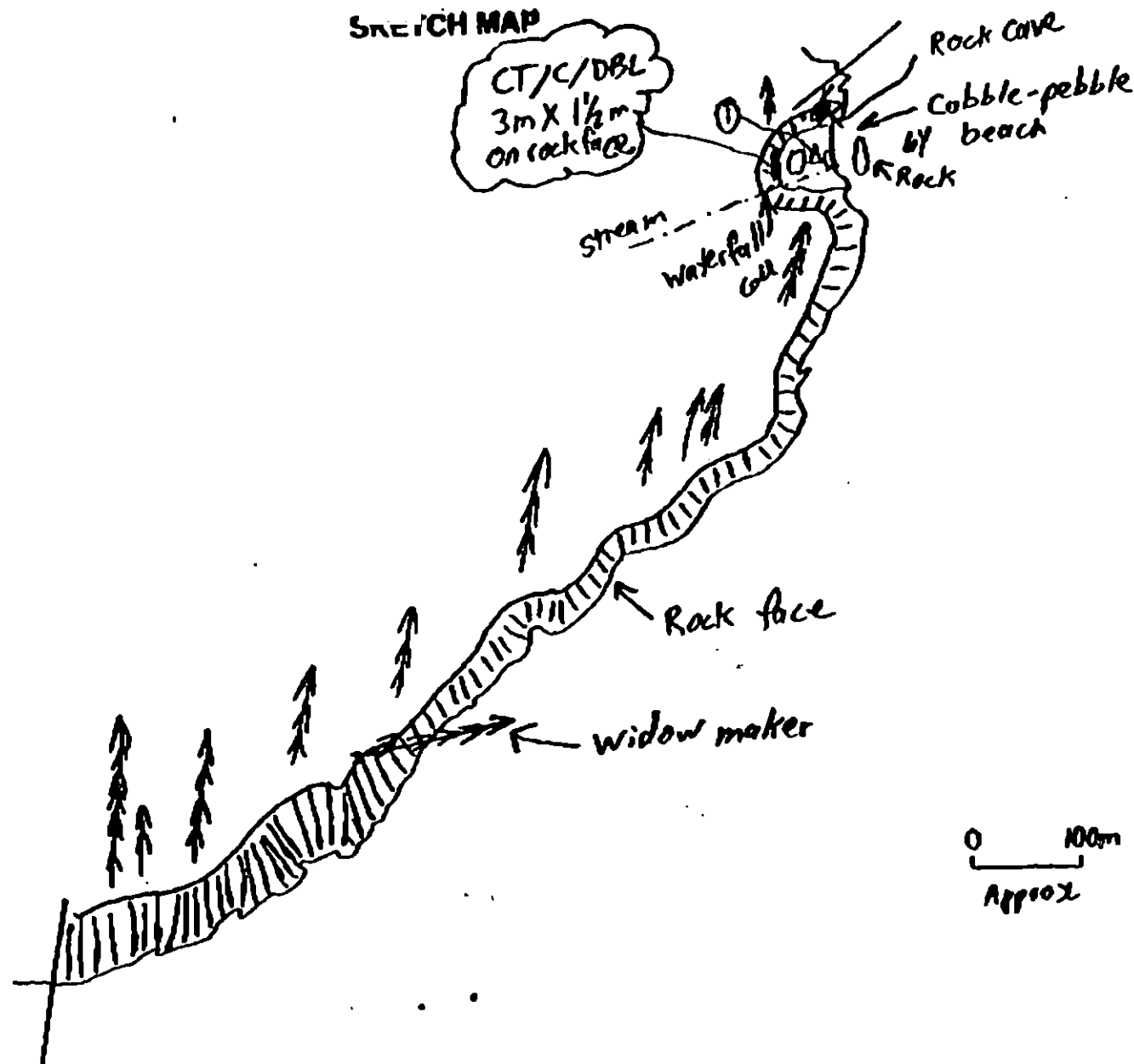
eee

Old Vegetation

1 @

Photo location, direction,
and number

SKETCH MAP



0 100m
Approx

Segment: ST/KN 210 Subdivision: A Length: 1300m Pg 3 of 3
 Date: 4/20/90 Time: 1400 - 1455 Tide Height: +4 → +3 Bio: Crust

Additional Wildlife Observations:

[Obs. made by Rich Vandepels and John Gaughan in the AM]

- 6 - Otter
- 2 - Eagles
- 1 - Cormorant
- Flock of Ducks - ≈ 30 individuals

Comments

- Subdivision consists of Vertical Rock and steep Boulder headlands with pocket rounded cobble beaches. Substrate not oiled. LITZ unexposed.
- Only one 3m x 1m coat patch of oil - No organisms.
- Continuous dense 2m band of barnacles with patches of scarring, up to 30% of an area. Dense; cont. growth and recruitment.
- Dense patches of Mussels throughout MITZ on bedrock and boulders. 30% of patches are New GROWTH and 10% Recruitment. Less than 5% mortality.
- Landed on one beach only - Gastropod concentration extrapolated from this site.
- Nucella egg cases found in tight concentrations 5cm x 8cm; 2cm x 5cm
- Tidepools were small 1m² w/ Lithothamnion, Rhodomela larix, Constantia, and dense concentrations of Littorina.
- Subdivision appears healthy.

pg 1 of 3

SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN 210 Subdivision A Date (mo / day / yr) 4 / 20 / 90

Time (24 hr) 1400 - 1455 Biologist Crank Length 1300 m
Tide Height +4 → +3 ft

(A) Substrate type and % of segments:
(1) Bedrock 97 (2) Boulder 2 (3) Cobble 1 (4) Pebble - (5) Sand - (6) Silt -

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 Low 50

(C) Density, substrate preference (by number from A. above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (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	X	2	2	2	2	2	2	2	NOT PRESENT 3
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

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

GASTROPODS

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

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	NOT PRESENT 3
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 1- Raven

1-Bald Eagle- Adult

3- Cormorants - 1 Relic in breeding plumage

2-Harbor Seal

2-Glaucous-winged Gulls

12 Otter - includes one pup

3-Sea Lions - at least

2-Pigeon Guillemot - summer plumage

Note: Obs. include skiff ride from Artic Salvor to Site

Ecological Considerations:

6U - Tenting

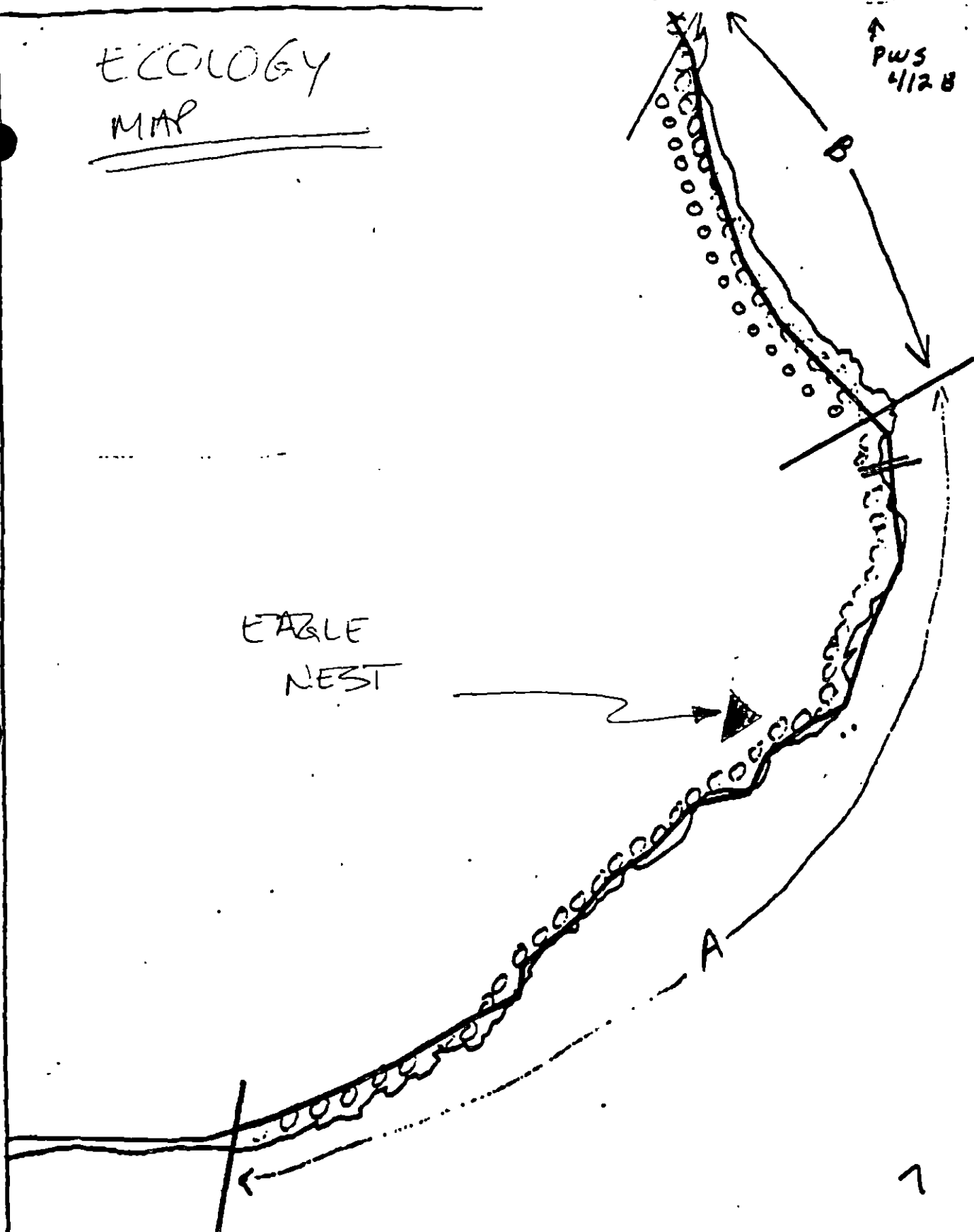
6Y - Special Use Destination

Dense patches of Mussel beds w/ high % of new growth; recruits along haul and on boulders

ECOLOGY MAP

PWS
4/12/8

EAGLE
NEST



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-210

ADEC Segment Length: 2624m

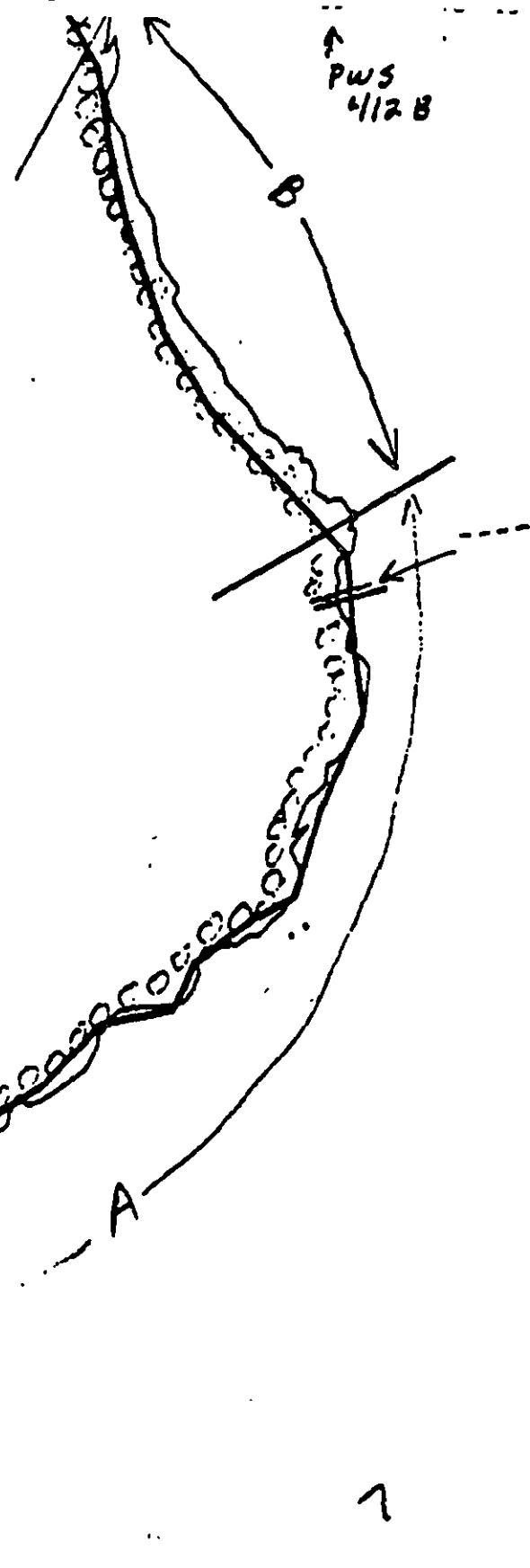


Map Key: PWS-412a

Name: Jones S. III

Date: 4/25/90

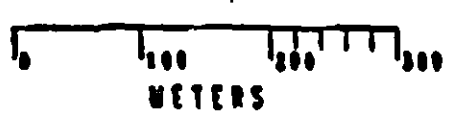
Date Entered:



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

KN-210

ADEC Segment Length: 2624m



Map Key: PWS-412a
 Name: James Smith
 Date: 4/20/90
 Date Entered:

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 uncoiled biota and substrate.

SHPO SIGNATURE: *J. David McMan* DATE: 5/1/90

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:

<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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC ART WEINER
EXXON ARON TETL
NOAA GARY DELORE
USCG KENNETH HARRIS

FOSC: *W L* DATE: 5-9-90

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 unholed 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.
6T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (6/1 to 9/15)
6V	Anchorage (6/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (6/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7II	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 210 SUBDIVISION: 8 DATE 04/20/90

USCG
NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME Michelle Baer SIGNATURE MBaer

☒ 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. Crouth LAND REP C. Huber SUBDIVISION 8 (2 of 3)
 EXXON T. Temblin ADEC M. Boer 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			
	N	E	S	W	U	W	W	W	W	W	W	W	W	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

PATTIES / TARBALLS 0 BAG

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 ☐

TYPE 55 gal dr

plastic

fishing

#BAGS

Photographs:

Roll No. ST-S-U

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)	↓	SURFAC SUBSURF. SEDIMEN
		OP	OR	OL	OF	NO		W	W	W	W	W	W	W	W	W	W	W				
1	70					X	.	X							X							P/P
2	35					X	.	X								X						P/P
3	50					X	.	X							X							CP/P
4	35					X	.	X								X						P/P
							.															
							.															

COMMENTS

REVIEWED

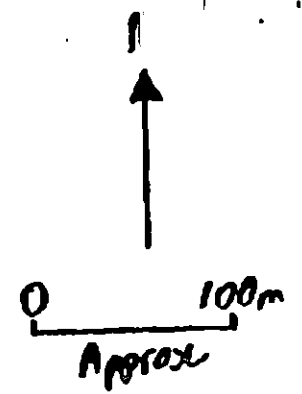
7W

DATE

4/23/90

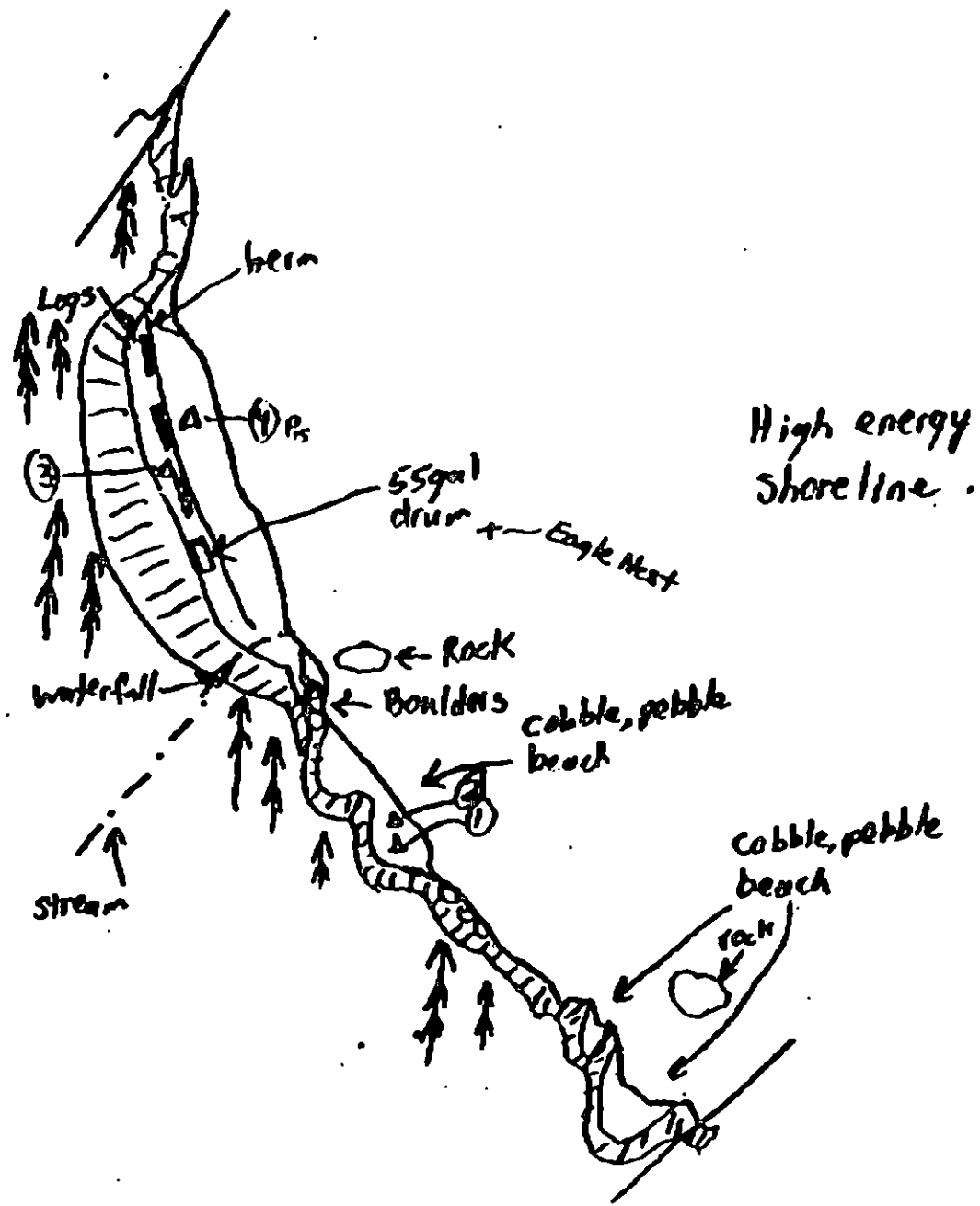
00 J. Spr er
SEGMENT ST/ KN-210
SUBDIVISION B
DATE 04/20/00

SKI MAP



- CHECKLIST
- ☐ N Arrow
 - ☐ Approx. Scale
 - ☐ Seg/Sub Entry
 - ☐ Oil Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. INTRAVL
 - ☐ SRL
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ Pt Location(s)
 - ☐ Photo Location(s)

- LEGEND
- 1 Δ
Pt - No Substrate Oil
 - 2 Δ
Pt - Substrate Oil
 - CT/C
Continuous Distribution
 - CT/B
Broken Distribution
 - CT/P
Paddy Distribution
 - CT/S
Splashed Distribution
 - eee
Oiled Vegetation
 - 1 00
Photo location, direction, and number



SHORELINE ECOLOGICAL SUMMARY

pg 1 of 2

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 SUPAA

Ecological Considerations:

6U - Tenting

6Y - Special Use Destination

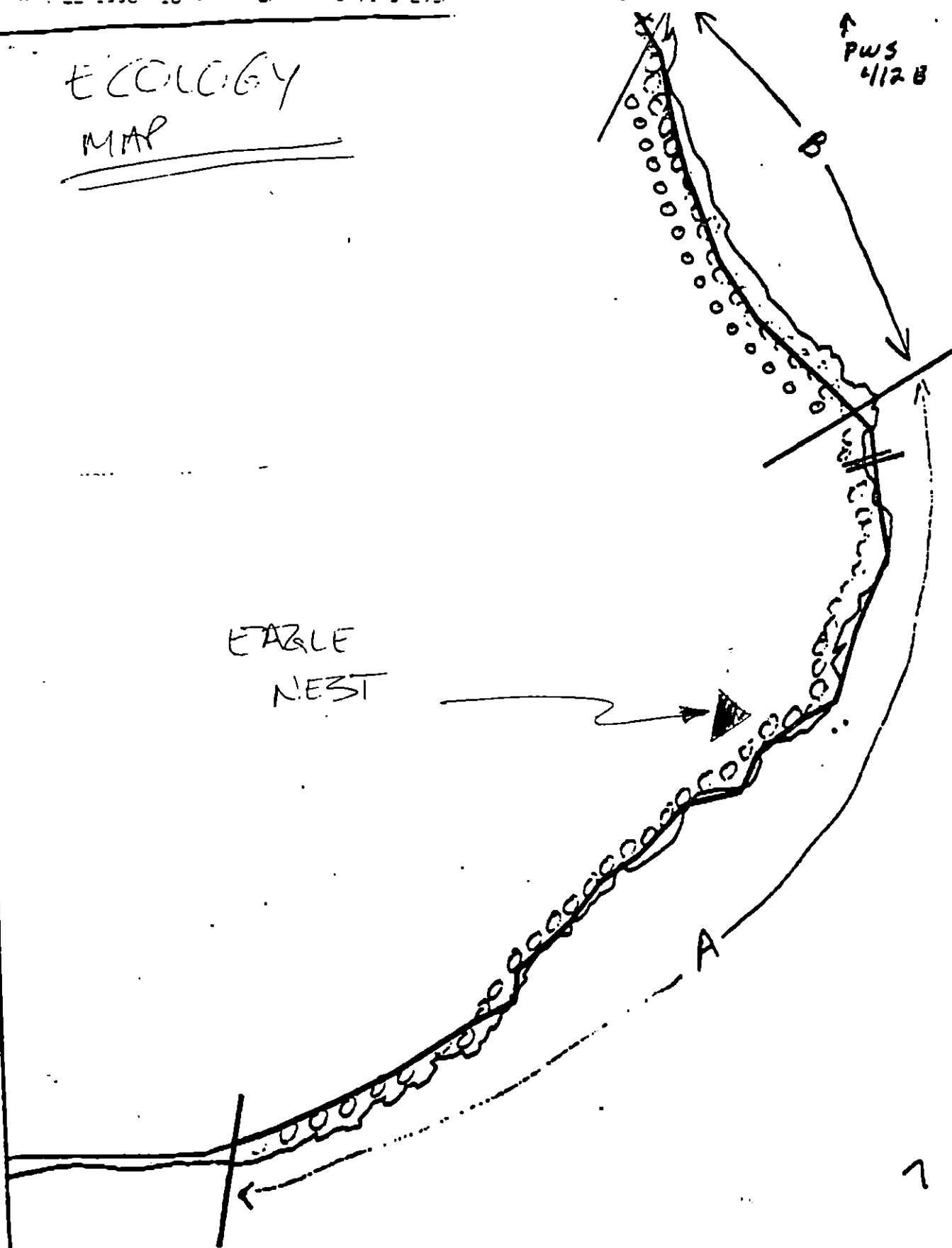
ST - Active Eagle Nest

- Dense patches of Mussels in MITZ forming discontinuous 2m band on vertical rock faces and boulders
- Discontinuous dense Fucus band along MITZ w/sparse sp
- 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
4/12/8

EAGLE
NEST



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-210

ADEC Segment Length: 2624m



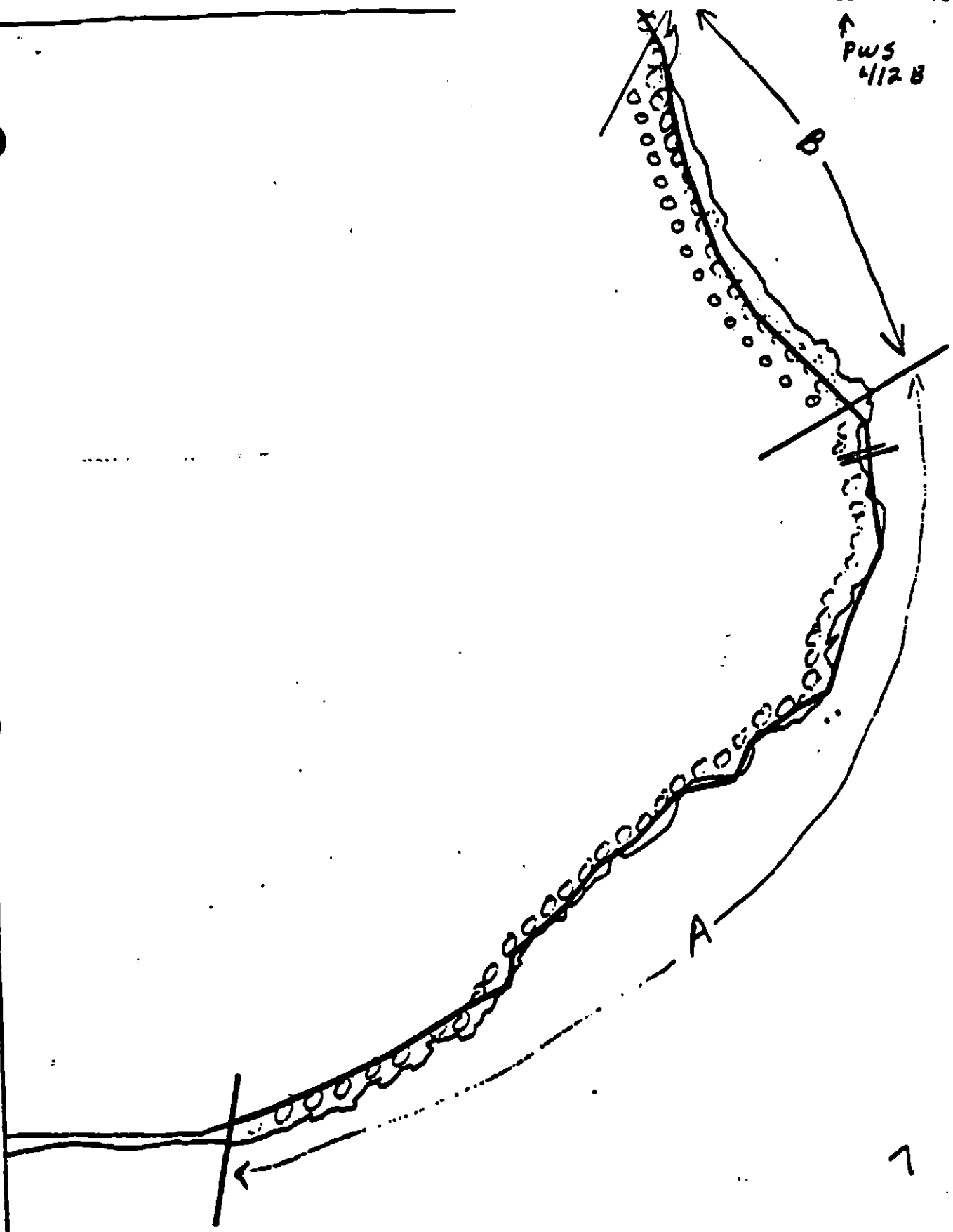
Map Key: PWS-4120

Name: James S. Smith

Date: 4/20/90

Date Entered:

PWS
412B



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

KN-210

ADEC Segment Length: 2524m



Map Key: PWS-4120
Name: Jones Sam
Date: 4/25/70
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-210 SUBDIVISION C (3 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 uncoiled biota and substrate. Eagle nest is in subdivision B to the south.

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 517 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC Art Weiner
EXXON Andy Gm
NOAA Gary Petrov
USCG Kenneth Korne

FOSC: [Signature] DATE: 5-9-90

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 (5/7 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 (5/11 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 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.
6J	Recreation: Tent sites (5/1 to 9/15)
6V	Anchorage (5/1 to 9/15)
6W	Forest Service cabins (5/1 to 9/15)
6X	Lodge (5/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	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

SEGMENT ST 1 KN210 SUBDIVISION: C DATE 04-20-9**USCG**

NAME

AEC Vandepels SIGNATURE AEC Vandepels☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**

NAME

Michele Baer SIGNATURE Michele Baer☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo oil observed.**LAND MANAGER**

NAME

Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo oil observed.

0

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-210
 BIO P. Cook LAND REP C. Huber SUBDIVISION C (3 OF 3)
 EXXON T. Tamblin ADEC M. Baer TIME 15:53 to 17:10
 TEAM NO. 5 TIDE LEVEL +2 +10 +12 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 7711 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 40 % B 15 % C 30 % P 15 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 22 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 771

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	N	P	S	W	Y	OR	BL	W	M	N	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X	X	X	X

PAYEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 0 BA

NEAR SHORE SHEEN? (NO: BR RW SL 1

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☒ NO ☐ TYPE <u>SP/PC</u> #BAGS <u>2</u>
Vegetation				
Trash			X	
Debris				

Photographs:

Roll No. ST-5-2Frames 16-18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFA SUBSUR SEDIME
		OP	OR	OL	OF	NO			W	Y	OR	BL	W	W	M	N	U			
1	60					X	.	X						X						CP/C
2	45					X	.	X						X						CP/
3	30					X	.	X								X		N	2E	BC/
							.													
							.													
							.													

COMMENTS

2

REVIEWED 7WDATE 4/23/9

J. Springer
 SEGMENT ST/ KN-210
 SUBDIVISION C
 DATE 04/20/90

CHECKLIST

N Area
 Approx. Scale
 Seg/Sub Entry
 OS Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HPA/LAME
 SSI
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

1 Δ
 1 - No Subsurface OS

2 Δ
 2 - Subsurface OS

CT/C
 Catenation Distribution

CT/B
 Catenation Distribution

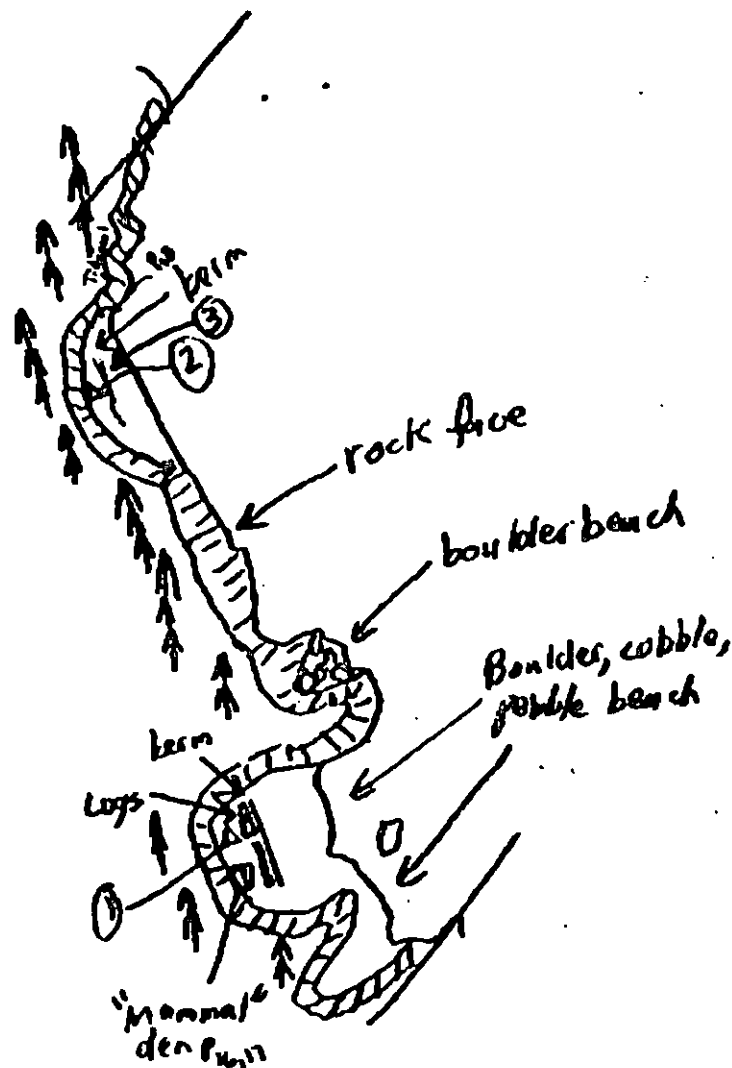
CT/P
 Catenation Distribution

CT/S
 Catenation Distribution

eee
 Dead Vegetation

1 ●
 Photo location, direction,
 and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

pg 1 of 2

REVISION: 0022

Segment ST / KN 210 Subdivision C Date (mo / day / yr) 4 / 20 / 90
 Time (24 hr) 1600-1725 Biologist Crank Length 774m
 Tide Height +1.5 to +2 ft

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 15 (3) Cobble 30 (4) Pebble 15 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 40 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-5-6Frames 16, 17, 18

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	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

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

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

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

4 3

Wildlife Observations/ General Comments:

- Unknown fur-bearing Mammal
- Bear trail
- Pair of Mergansers

- 1- Harbor Seal
- 1- Cormorant
- 5- Canadian Geese

1 Bald Eagle - Adult

Ecological Considerations:

- 6U - Tenting
- 6Y - Special use Destination

- No oil observed.
- Tidepool on large rock bench w/ dense anemone concentration
- Congregation of Plover in LIT.
- Unknown mammal appeared to be close to its den. It observed us for approx 20 minutes.
- Subdivision similar to rest of segment; appears new

ECOLOGY

↑
PWS
4/12/8

TABLE NEST

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

KN-210

ADEC Segment Length: 262cm



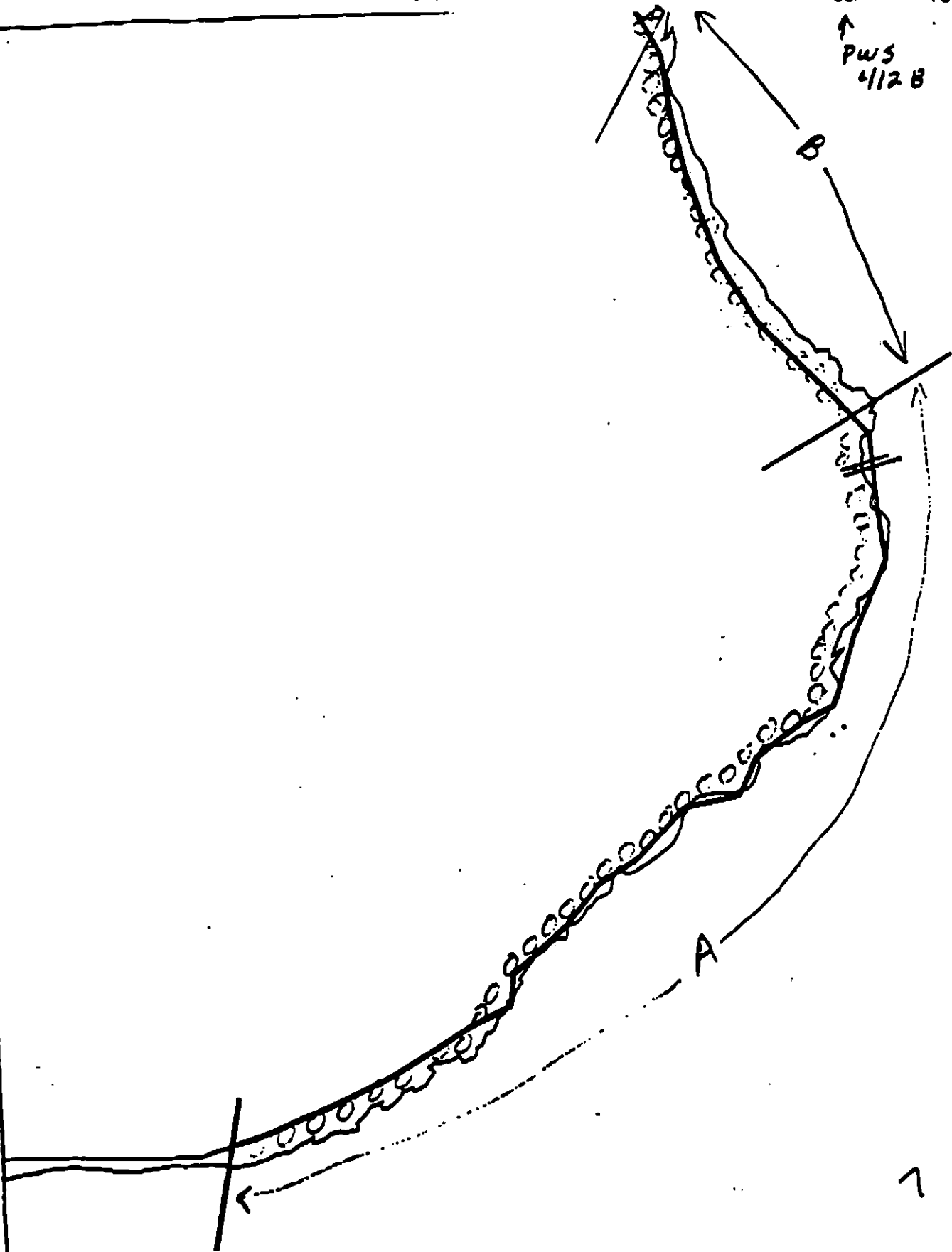
Map Key: PWS-412a

Name: James Smith

4/20/70

Date Entered:

PWS
4/128



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-210

ADEC Segment Length: 2524m



Map Key: PWS-412a

Name: James S. Smith

Date: 4/25/90

Date Entered:

KN-

8

↓ PWS 412 A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-210

ADEC Segment Length: 2624m



Map Key: PWS-412b

Name: Jones Sr.

Date: 4/25/91

Date Entered:



SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION A (1 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. One bald eagle nest in Subdivision A.

SHPO SIGNATURE: *Charles J. H. [Signature]* DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 549 m: No Oil 348 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY TEAR
NOAA Cary Petrone
USCG KENNETH KETNER

FOSC: *WJL* DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS



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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M

Herring spawning (4/1 to 6/15)

Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
3O, 3Q

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R

Seabird colony (5/1 to 9/1)

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

5S

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

Restrict all activity to essential minimum, especially air traffic.



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

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

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

6U

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

6V

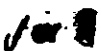
Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)



Special use destination

7Z

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

7HH

Finfish harvesting

7I

Deer harvesting (6/15 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-211 SUBDIVISION: A DATE 4/2/90

ICG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER
NAME LORRA JOHNSON (CARE) SIGNATURE Lorra L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

THIS IS USFS LANDS.

SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ K4-211
 BIO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION A
 EXXON J BUTLER ADEC W. GHORMLEY TIME 10:20 10:11:00
 TEAM NO.: 3 TIDE LEVEL: +6 to +4 DATE 4/2 / 90
 EST. SUBDIVISION LENGTH: 915 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 15 % G 5 % S - % M - % V - %
 SLOPE: Long 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 550 m NO 345 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	S	P	N	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT				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. ST-3-2Frames 2

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	1	2	3	4	5	6	7	8	SU	U	M	V		
1	30					X	.											X				N	CP
2	30					X	.												X			N	CP
							.																
							.																
							.																
							.																

COMMENTS Steep rocky shore w/ boulder jumble and coral strand. Oil as CT/S @ up. HRTZ. Wave energy here is Medium and could be High.

SHORELINE ECOLOGICAL SUMMARY

REVISED: 1988

Segment ST 211 Subdivision A Date (mo / day / yr) 7/2/90

Time (24 hr) 1020-1100 Biologist M.A. SCOTT

A) Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand - (6) Silt -

(B) Overall % cover of biota (% of segment): Dense - Moderate 4 Low 1

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

Photographs:

Roll No. 57-3-2

Frames 2

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

ASTROPODS

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

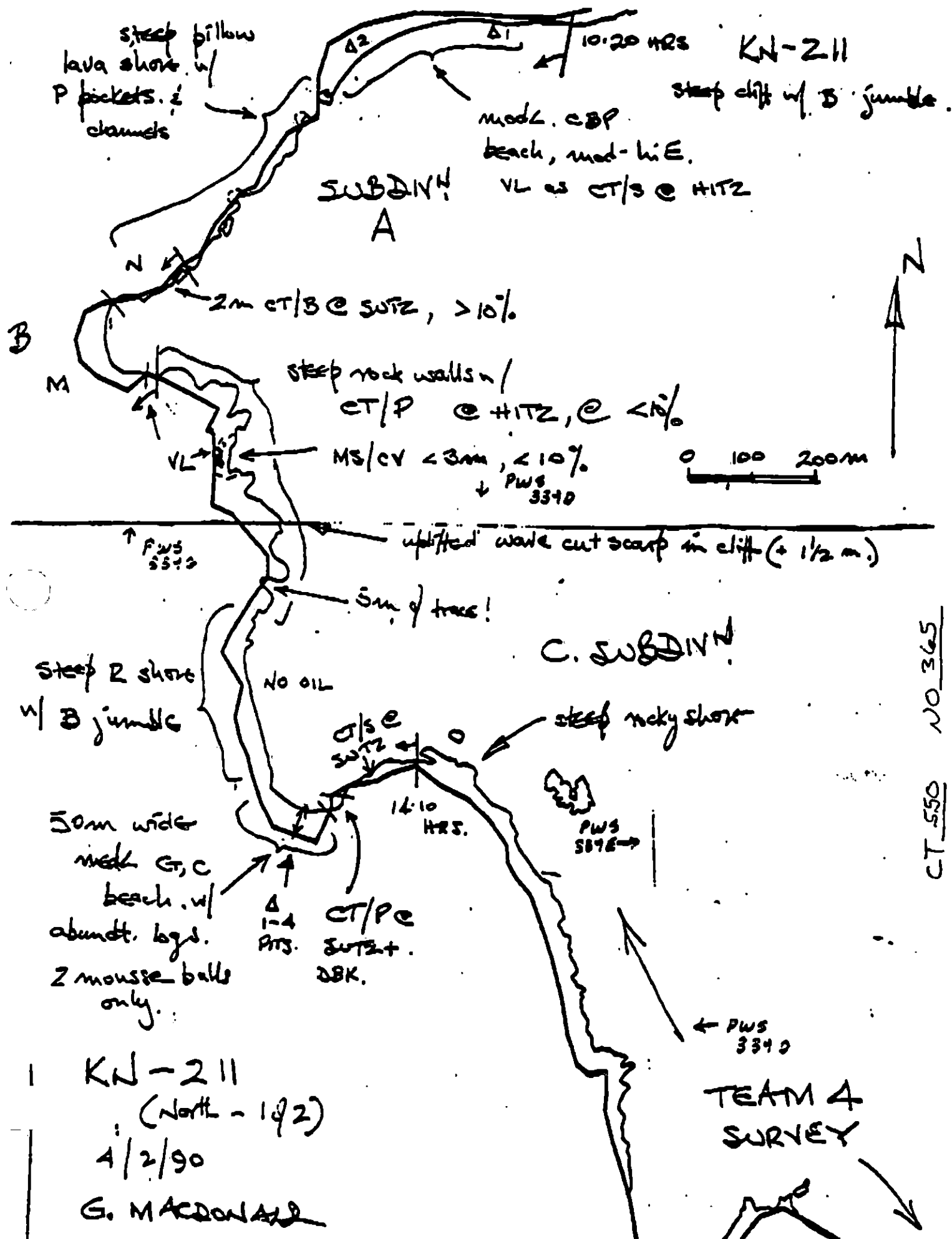
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Observations from boat; only high and some mid tidal zone exposed
rare patches: barnacle scars - bare

Ecological Considerations:



G. MACDONALD

4/2/90

Date

Entered: _____



Medium

SUBDIVN B.

↓ PWS 3340

SUBDIVISION C.

↑ PWS 3340

5m
9T

ANADROMOUS STREAM

226-10-16880

SUBDIVN
BOUNDARY

oil category
boundary.

SUBDIVISION
D

PWS 3340

KN-211

(North) 192

TEAM 4
SURVEY

← PWS 3340

SUBDIVISION
E

ANADROMOUS STREAM

226-10-16880

17

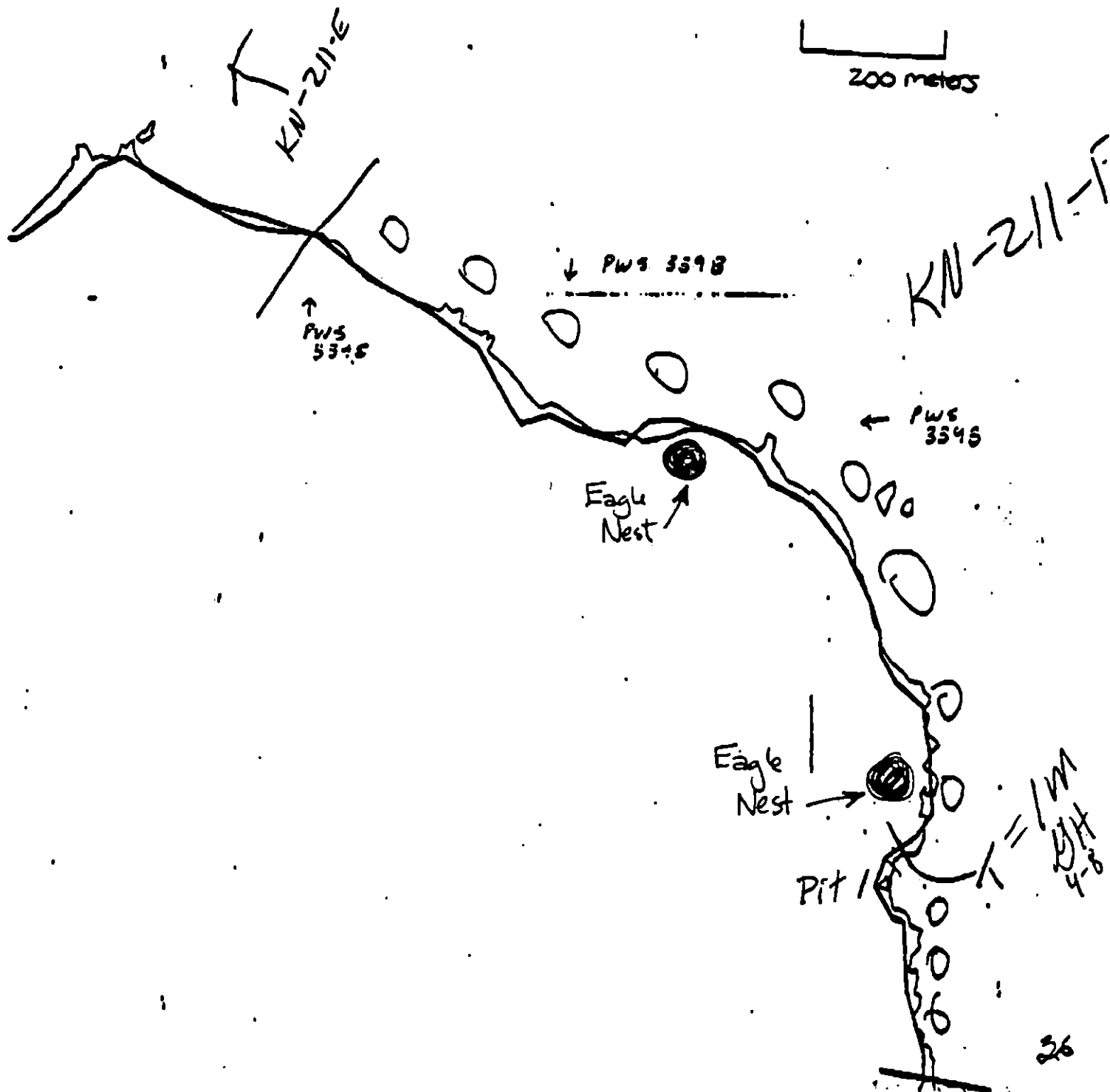
KN-211

South (20fa)

ECOLOGY
MAP

← PWS
3340

200 meters



oil character Length.

AP 0 PO 0 CV 0 CT 0 ST 1 445 0 PT 0 TB 0 FI 0 NO 1

36

21

SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION B (2 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 272 m: Narrow 136 m: V.Light 23 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 35+ 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> Removal	<u> </u> Beach Cleaner
	<u>X</u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints, after approval of USFWS regarding eagle nests.

TAG COMMENTS: MECHANICALLY TILL PRIOR TO BIO ON CENTRAL AREA OF BEACH WHERE SUBSURFACE OIL EXISTS - SEE SKETCH

TAG APPROVAL DATE: 4/26/90

ADEC JOHN BAKER
EXXON ANDY TATE
NOAA GARY PETERSON
USCG KENNETH KIRBY

FOSC: ML DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

-  **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 (8/11 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.
-  **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)**
-  **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-211 SUBDIVISION: B DATE 4/2/90

USCG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainford MST1

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Heavily impacted beach with significant subsurface oil. The subsurface oil is located thru-out beach, located by digging numerous pits over the entire beach. The oil is between 5' & 30cm in depth & seems to be quite heavy in places. IF this oil is to be removed some type of mechanical operation needs to be deployed. Surface mussel patches & numerous tur balls need to be removed manually. This beach also acquires quite the collection of debris. There is quite a bit of oiled debris that needs to be removed. I highly recommend a team from Anchorage visit this site for further review if need be. It is quite a unique beach in terms of different types of oil makeup and a decision might be easier to make once the subsurface oil is studied more.

LAND MANAGER
NAME LORA JOHNSON (CAC) SIGNATURE Lora Johnson

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

THIS IS USFS LAND. RESURVEY OF UPLANDS RECOMMENDED
DUE TO SNOW COVER.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG E. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KJ - 211
 RIO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION 3
 CXON J. BUTLER ADEC W. G. HORNLEY TIME 11:00 to 13:00
 TEAM NO.: 3 TIDE LEVEL: +5 to +1 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 350 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 15 % B 10 % C 35 % P 25 % G 10 % S 5 % M - % V - %
 SLOPE: Long 80 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M 150 m N 120 m VL 70 m NO - m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	C	N	SW	U	M	V	NO	SW	U	M	V
PAVEMENT				X							X	X		
POOLED			X								X	X	X	
COVER			X								X	X	X	
COAT				X							X	X		
STAIN			X								X	X		
MOUSSE														
PATTIES														
TARBALLS			X								X	X	X	
FILM				X							X	X	X	
NO OIL														X

PAVEMENT: H F (S) <5 sq. m by <10 cmPATTIES / TARBALLS <1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE TS, type, pow
#BAGS 1

Photographs:.

(1 drift buoy)

Roll No. ST-3-2Frames 3-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM OR)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	CP	NO		VO	UC	SW	U	M	V	NO	SW	U	M	V		
1	30					X	.								X				N	GC3
2	35					X	.								X				N	PGS
3	30					X	.								X				N	PG
4	30			X			10-15	X							X	X			N	PG
4	30		X				15-30	X							X				N	G: -
5	35		X				20-36	X							X	X			N	GC

COMMENTS Pocket beach of considerable aesthetic and recreational value, set in steep rocky shore. Remains of wide surface oiling as medium category CT, ST, PO, CV @ MTTZ-SWTZ. Intensive subsurface oiling as OL/P, OR/FL, CT mixed w/ organics. Sticky light brown mousse sheens very sparingly.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

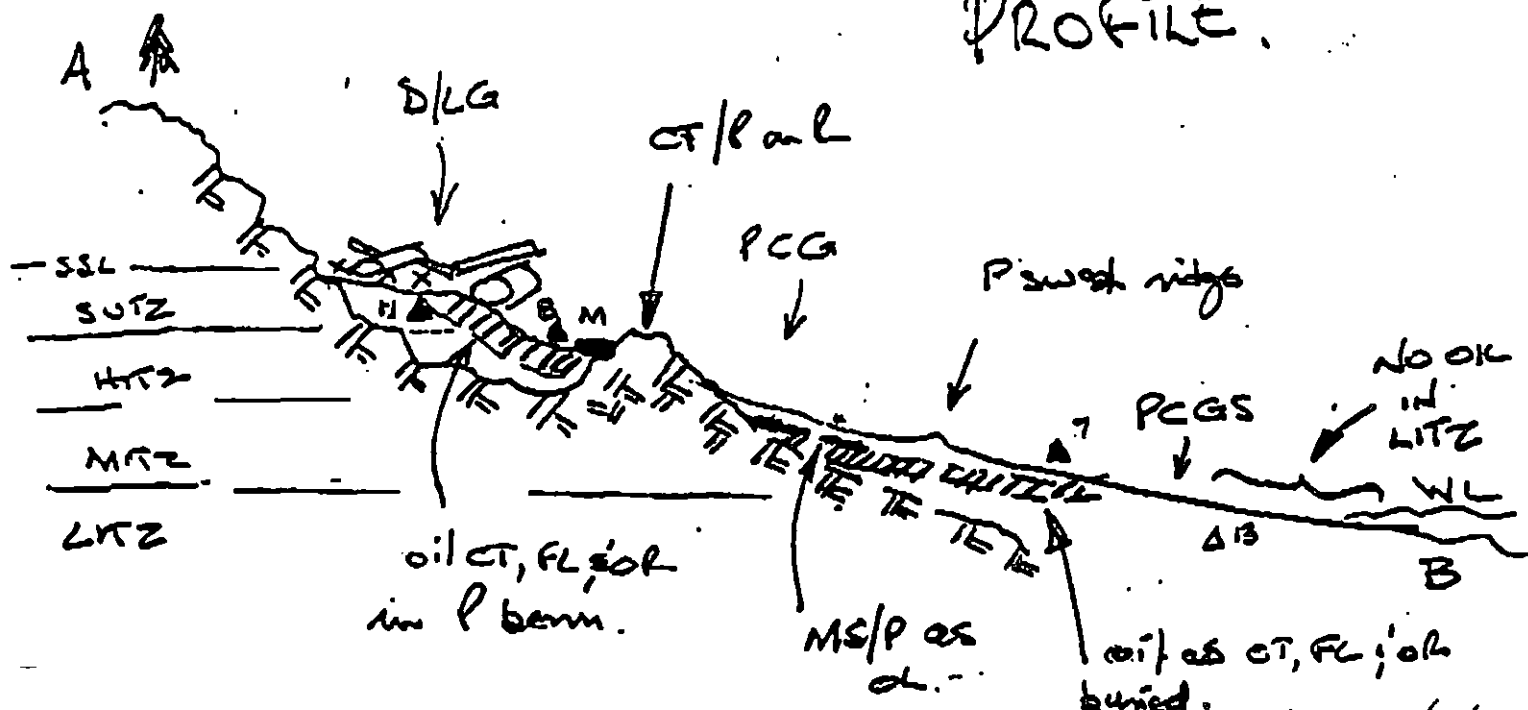
REVISION 02/23/88

SEGMENT ST/ KN-211 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

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		UO	UC	1	2	3	4	5	SU	U	M	U			
6	35		X				25 - 35	X						X			X		N	GSC	
7	35		X				30 - 35	X						X			X		N	PGS	
8	30		X				25 - 30	X						X		X			N	GP	
9	30		X				10 - 30	X						X	X				N	PG	
10	40		X				5 - 30		X				X			X			N	G.P bent	
11	20		X		X		5 - 20	X					X		X				N	P	
12	25		X				20 - 25	X						X		X			N	GP	
13	35					X	.											X	N	PGS	
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

REVIEWED Y W DATE 4/7/90

20/3

13

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / 2-11 Subdivision B Date (mo / day / yr) 4/2/90

Time (24 hr) 11:10-1320 Biologist MA SCOTT

(A) Substrate type and % of segments:

(1) Bedrock 15 (2) Boulder 10 (3) Cobble 35 (4) Pebble 45 (5) Sand 5 (6) Silt —

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

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

Photographs:

Roll No. ST-3-2

Frames 3-10

BARNACLES

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

NOT PRESENT

STROPODS

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

HTB barnacles - oiled covered in HTB (w/20%)
cobble &
water out.

Ecological Considerations:

SEGMENT ST/ KJ-211

SUBDIVISION B

DATE 4/2/90

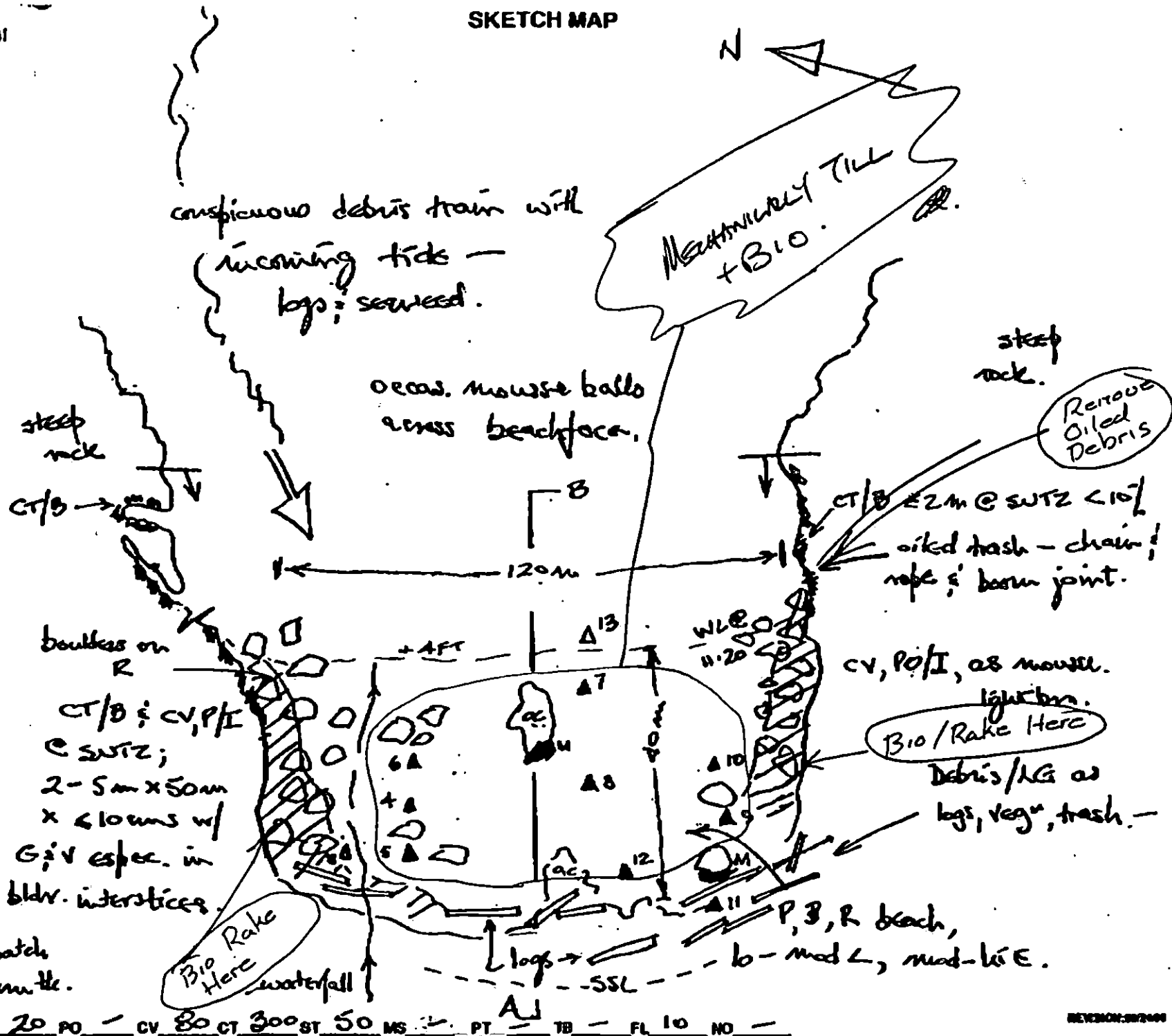
SKETCH MAP

CHECKLIST

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

LEGEND

- 1 Δ
- FX - No Subsurface Oil
- 2 Δ
- PH - 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



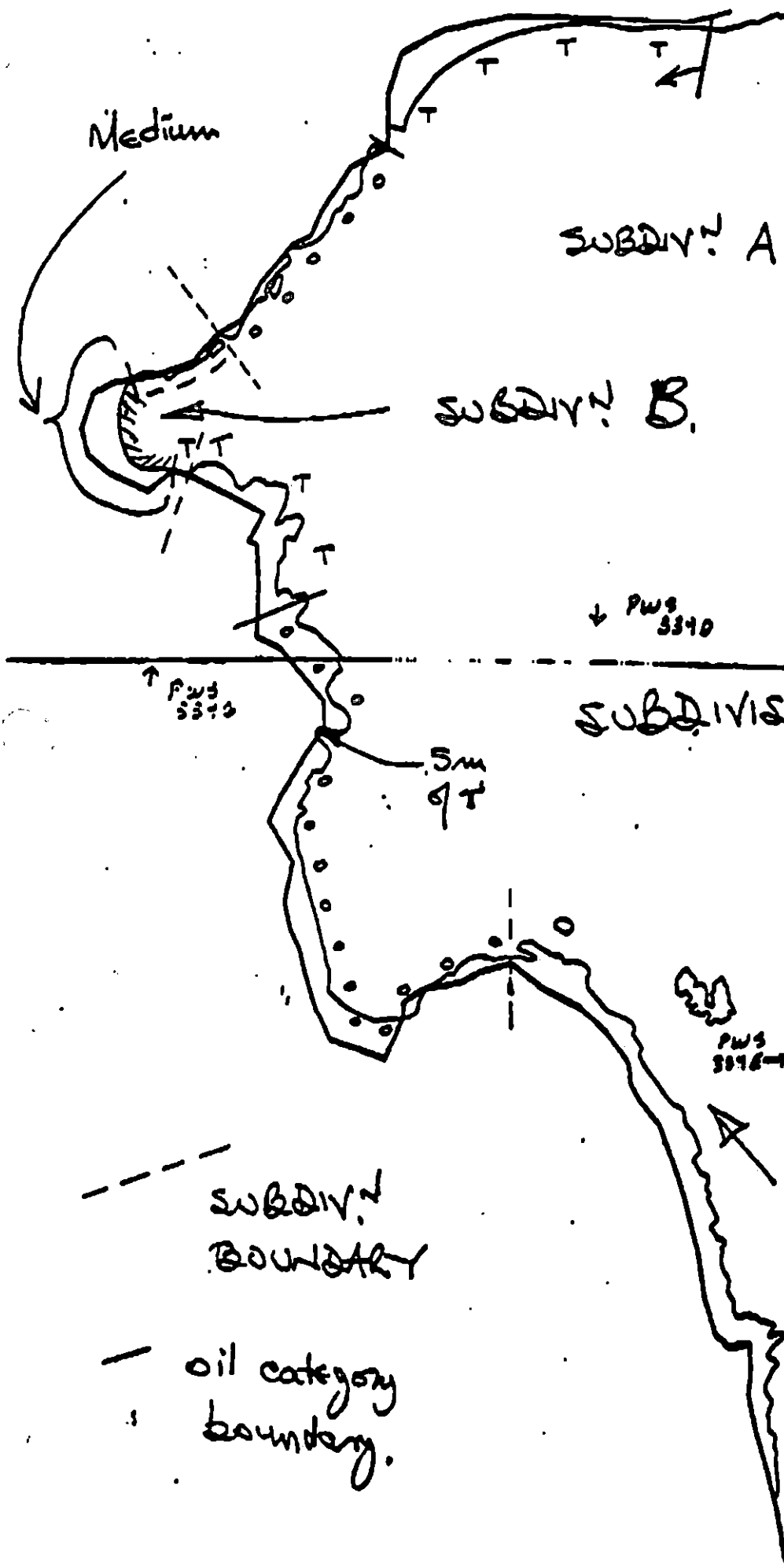
Oil Character Length (m): AP 20 PO - CV 80 CT 300 ST 50 MS - PT - TB - FL 10 NO -

REVISION: 00/000

30/2

G. MACDONALD
4/2/90

Date
Entered: _____



KN-2

(North) 142

TEAM 4
SURVEY

PWS 3340

Eagle Nest

G. MACDONALD

4/2/90

Date Entered: _____



SUBDIV. A



↓ PWS 3340

SUBDIVISION C.

↑ PWS 3340

5m
9T

ANADROMOUS STREAM
226-10-16880

SUBDIV. BOUNDARY

oil category boundary.

SUBDIVISION D

PWS 3076

KN-211

(North) 192

TEAM 4 SURVEY
← PWS 3340

SUBDIVISION E

ANADROMOUS STREAM
226-10-16880

KN-211

South (20fa)



← PWS
3310

200 meters

KN-211-E

↑ PWS
5345

↓ PWS 3398

KN-211-F

← PWS
3545

Eagle
Nest

Eagle
Nest

Pit 1

1 m
4-8

26

21

oil character Length.

AP 0 PO 0 CV 0 CT 0 ST 1 MS 0 PT 0 TB 0 FI 0 NO 1

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-211 SUBDIVISION B (2 of 6)

WORK WINDOW

Manual Pickup

OPEN

Bioremediation Less Than 100m From Stream

~~CLOSED~~ WORK 5/15 TO 8/10 @
ADF&G MONITOR REQ

Bioremediation More Than 100m From Stream

~~WORK 5/15 TO 7/10~~
~~(ADF&G MONITOR REQ.)~~ OPEN GAR

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16880) is in Subdivision B. This subdivision is closed to bioremediation and manual/mechanical raking less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual/mechanical raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual/mechanical raking more than 100m from stream. No constraint to manual pickup.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Injipol 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. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-10-16880)
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

Prepared by

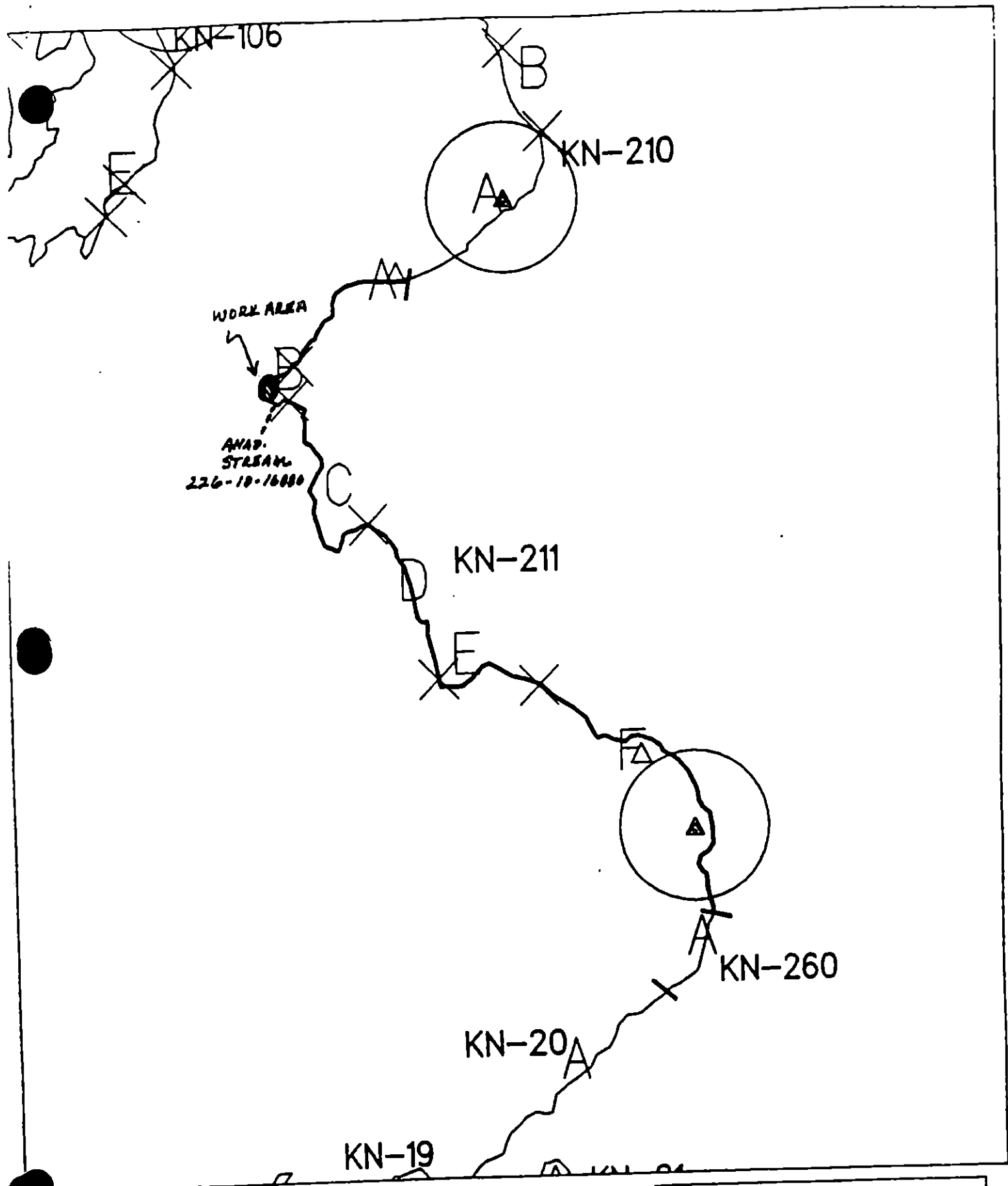
Date

[Signature]

6/14/90

[Signature]

6/14/90



Exxon Company, USA
Map Key: PLS-KN-211



ECOLOGY MAP
SEGMENT KN-211
SUBDIVISION B (2016)



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

1 inch = 2276 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16880

SEGMENT KN-211 SUBDIVISION B

WORK WINDOW	
Manual Pickup Tarnat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous streams (226-10-16880 and 226-10-16875) are in Subdivision B. No constraint to manual pickup and tarnat removal.
5T Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-211B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]

Date

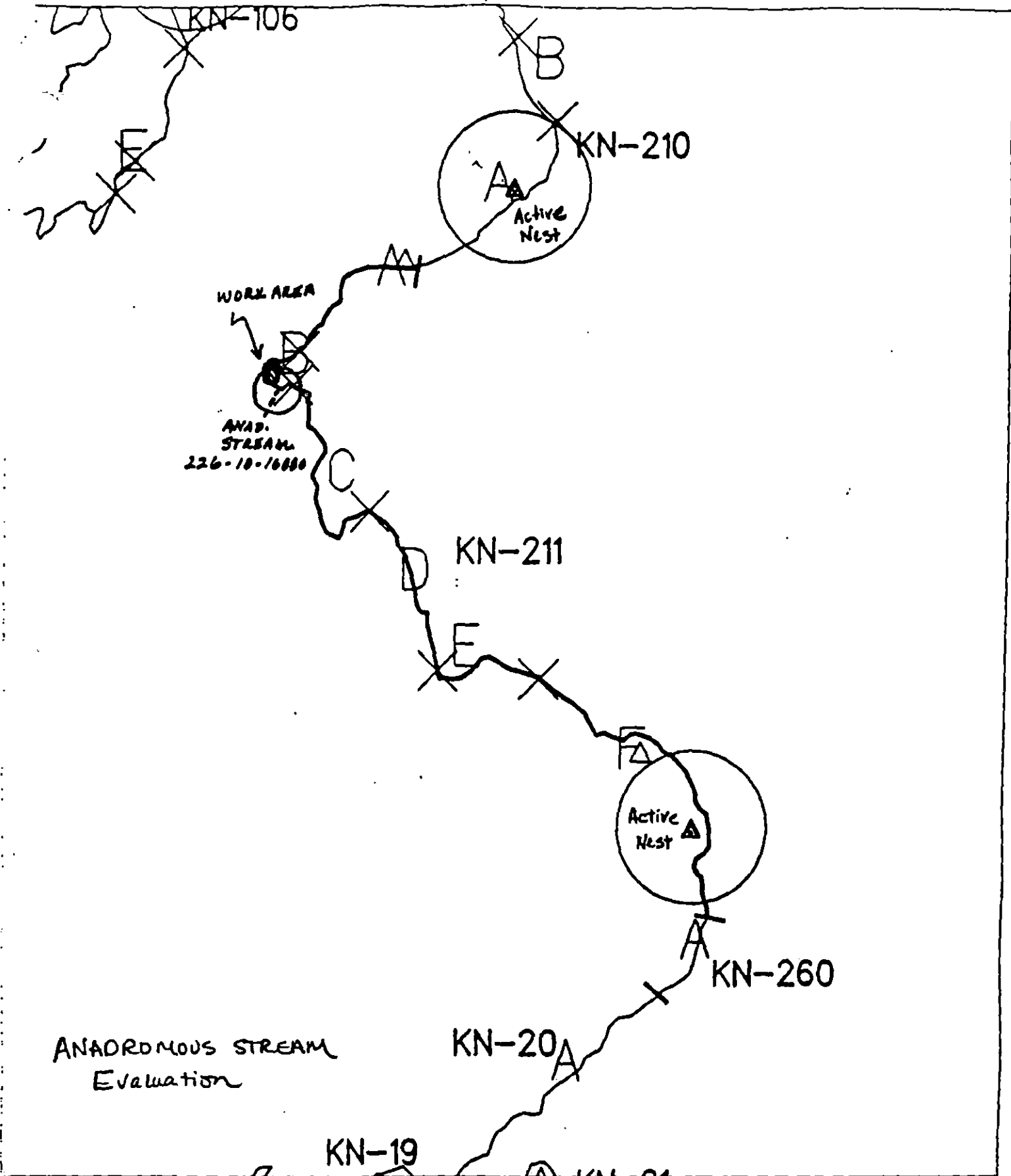
6/4/90

Prepared by

[Signature]

Date

6/14/90



Exxon Company, USA
Map Key: P&S-KN-211
June 09, 1990



ECOLOGY MAP
SEGMENT KN-211
SUBDIVISION B (2016)
METERS
0 600 1300

★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

1 inch = 2276 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION C (3 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 1A, 1B. Anadromous stream no. 226-10-16880 is in Subdivision C.

SHPO SIGNATURE: [Signature]

DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 285 m: No Oil 960 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> Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC JOHN BAUER [Signature]

EXXON ANDY TAYLOR [Signature]

NOAA GARY PETERSON [Signature]

USCG KENNETH KEANE [Signature]

FOSC: W L

DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 (5/7 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 (5/11 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 (5/15 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.

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 (5/1 to 9/15)

6V Anchorages (5/1 to 9/15)

6W Forest Service cabins (5/1 to 9/15)

6X Lodge (5/1 to 9/15)

Special use destination

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

7H-H Finfish harvesting

7I Deer harvesting (5/15 to 2/28)

7J 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 1 KN-211 SUBDIVISION: C DATE 4/2/90USCG
NAME SCOTT RAMSFORD SIGNATURE Scott Ramsford MS1☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADEC
NAME Wesley Ghermley SIGNATURE Wesley Ghermley☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDLAND MANAGER
NAME LORA JOHNSON (CAL) SIGNATURE Lora L. Johnson☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SNOW COVER IN THE UPLANDS. THIS IS KSPS LANDS.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG G. MADDON USCG S. RANSFORD SEGMENT ST/ KN-211
 IO MA. SCOTT LAND REP L. JOHNSON SUBDIVISION C
 XXON I. BUTLER ADEC W. GHORMLEY TIME 13:00 to 14:10
 TEAM NO.: 8 TIDE LEVEL: +1 to +1 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 1290 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 50 % B 20 % C 15 % P 10 % G 5 % S TL % M - % V - %
 SLOPE: Long 25 % Hang 35 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 400 m NO 890 m

SURFACE OIL

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

PAVEMENT: H F S - sq. m by - cmPATTIES / TARBALLS < 1/2 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

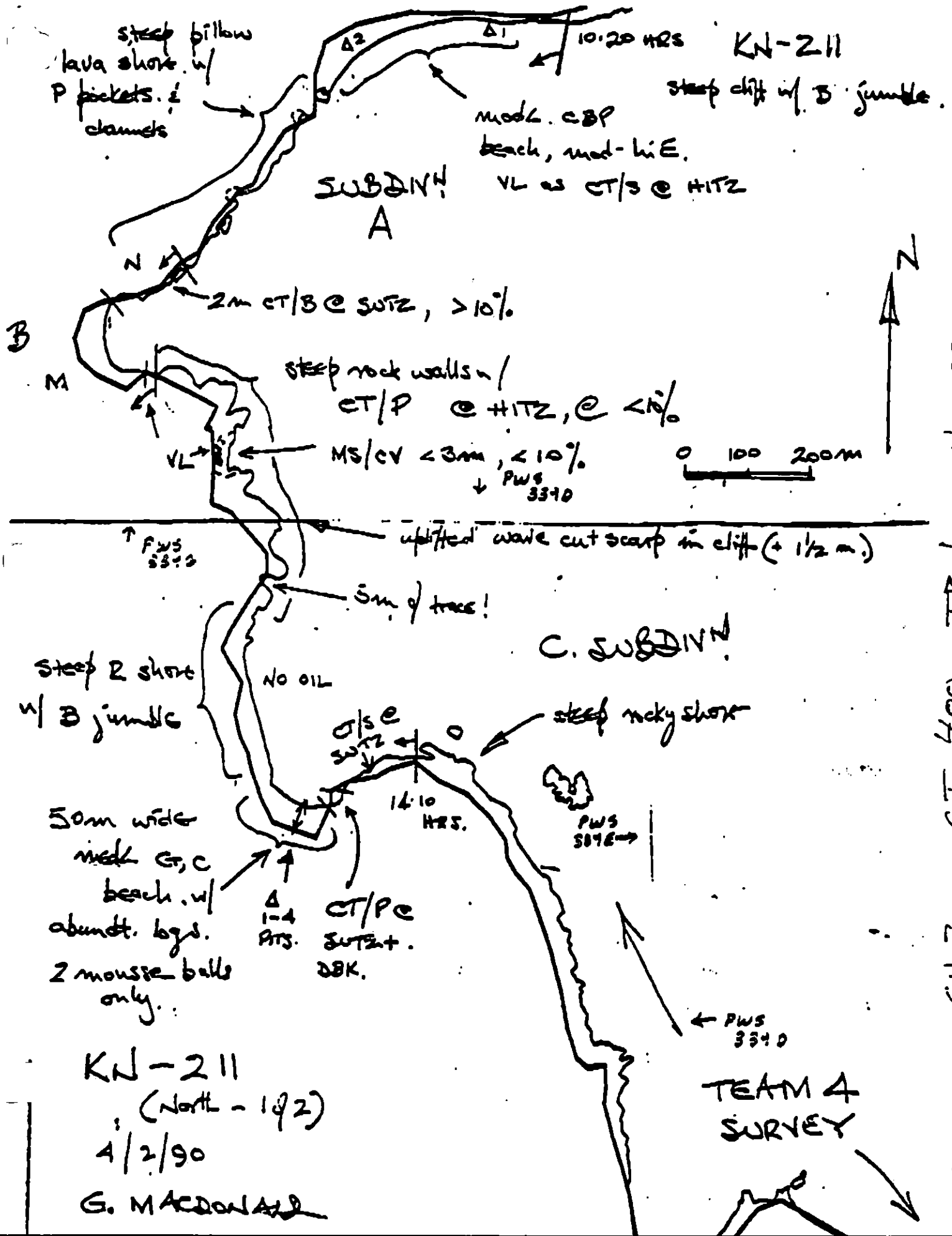
OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE -#BAGS -Photographs: (2 ANCHORS)Roll No. -Frames -

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	DO	1	2	3	4	5	SU	W	M	U		
1	20					X	-								X				N	PG
2	15					X	-									X			N	PGS
3	25					X	-										X		N	GSP
4	20					X	-										X		N	GS
							-													
							-													

COMMENTS Steep rocky shore w/ pristine GC beach. Trace of surface oil @ CT/S @ SUTZ on steep rock walls and 2 mouseballs @ SUTZ berm on beach.



Eagle Nest

G. MACDONALD
4/2/90

Date
Entered: _____



Medium

SUBDIV. A

SUBDIV. B.

↓ PWS
3340

SUBDIVISION C.

↑ PWS
3340

5m
qt

ANADROMOUS STREAM
226-10-1688

SUBDIV. BOUNDARY

SUBDIVISION D

PWS
3340 →

KN-211

(North) 192

TEAM 4
SURVEY

← PWS
3340

oil category
boundary.

SUBDIVISION E

ANADROMOUS STREAM
226-10-16880

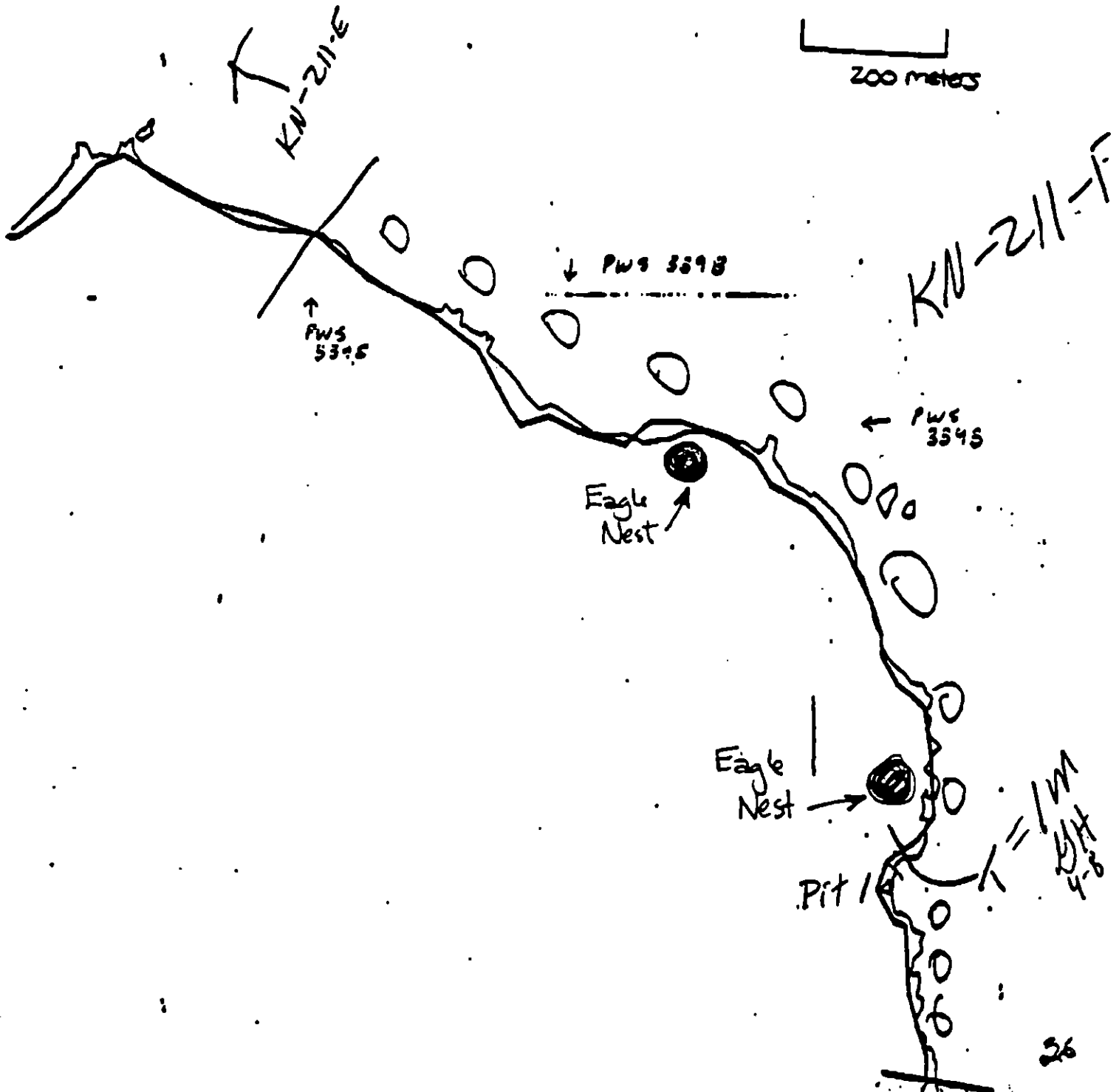
KN-211

South (20 ft)



← PWS
3342

200 meters



oil character Length.

AP 0 PO 0 CV 0 CT 0 ST 1 MS 0 PT 0 TB 0 FI 0 NO. 1

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/ 211 Subdivision C Date (mo / day / yr) 4/2/90Time (24 hr) 1320 - 1410 Biologist MASCOFF(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 20 (3) Cobble 15 (4) Pebble 15 (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense — Moderate ~2% Low 1

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

Photographs:
Roll No. ST-3-2Frames 8

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 common mergansers

Ecological Considerations:

possible spawning stream

G. MACDONALD

4/2/90

Dactor

Entered:

Medium

SUBDIV? A

SUBVY B.

↓ PWs
3370

↑ FWS
3312

SUBDIVISION C.

5m
9 T

PWS
3016-7

KN-2

(north) 152

TEAM 4 SURVEY

← PWS
3345

SUBDIV.
BOUNDARY

oil category boundary.

SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION D (4 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream no. 226-10-16880 on border of Subdivision D/E.

SHPO SIGNATURE: *Charles J. Adams* DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 963 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC John Bauer
EXXON Andy
NOAA Gary Retnae
USCG Kenneth Keane

FOSC: *myl* DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 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.

6T 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

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

SEGMENT ST / KN-211 SUBDIVISION: 0 DATE 7.2.90

USCG

NAME MANUEL J. SERRA SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME G. FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME M. C. T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-211
 BIO G. Denn LAND REP M. Smith SUBDIVISION 2 496 Sq. ft.
 IXON S. Reid ADEC S. Ferguson TIME 1:45 to 2:00
 EAM NO.: 4 TIDE LEVEL: 1.0' to 1.5' DATE 4/12/90
 EST. SUBDIVISION LENGTH: 1281 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 95 % B 5 % C — % P — % G — % S — % M — % V — %
 SLOPE: Long — % Hang — % Vert 100 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 1281 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	S	R	B	W	1	2	3	4	5	SW	U	SE	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL	c. br. exp.										X	X	X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW	OIL / FILM COLOR										PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5	6	7	8	9	10			

COMMENTS

This segment was all vertical bedrock. No oil was observed from the skiff. Limited to distance from pier able to observe due to rocks in the surf.

OG K. ROSEY
SEGMENT ST/ KN-211
SUBDIVISION D
DATE 4/2/80

SEARCH MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Approx. Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Pl - No Subsurface Oil

2 Δ

Pl - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

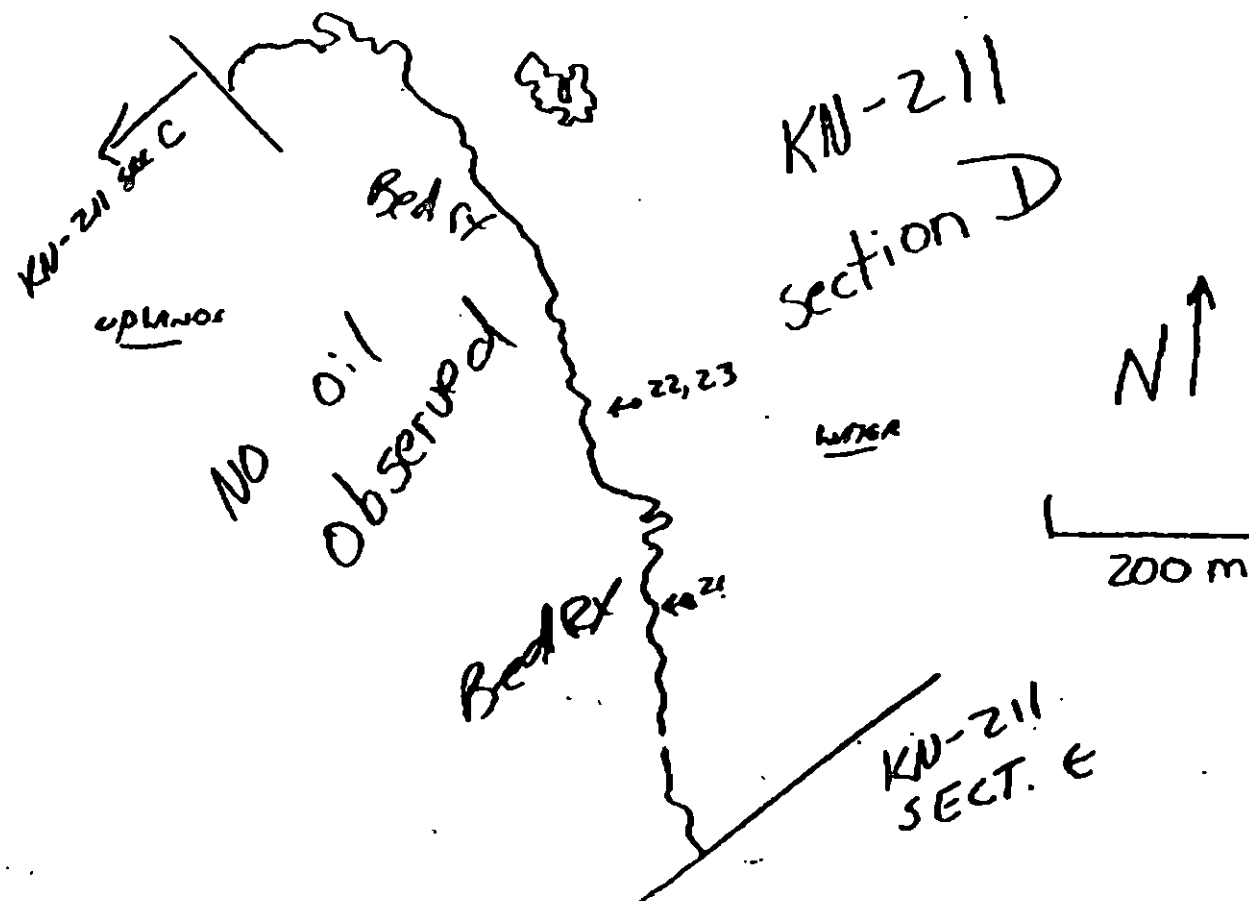
Splashed Distribution

Oil on Vegetation

1 ●→

Photo location, direction,
and number

> no pit locations



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 128

REVISION 230488

SHORELINE ECOLOGICAL SUMMARY

Revision 000000

Segment ST KN-211 Subdivision D Date (mo / day / yr) 04 / 02 / 90
 No (24 hr) 1345 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 95 (2) Boulder 5 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 1 Moderate 3 Low 70
- (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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

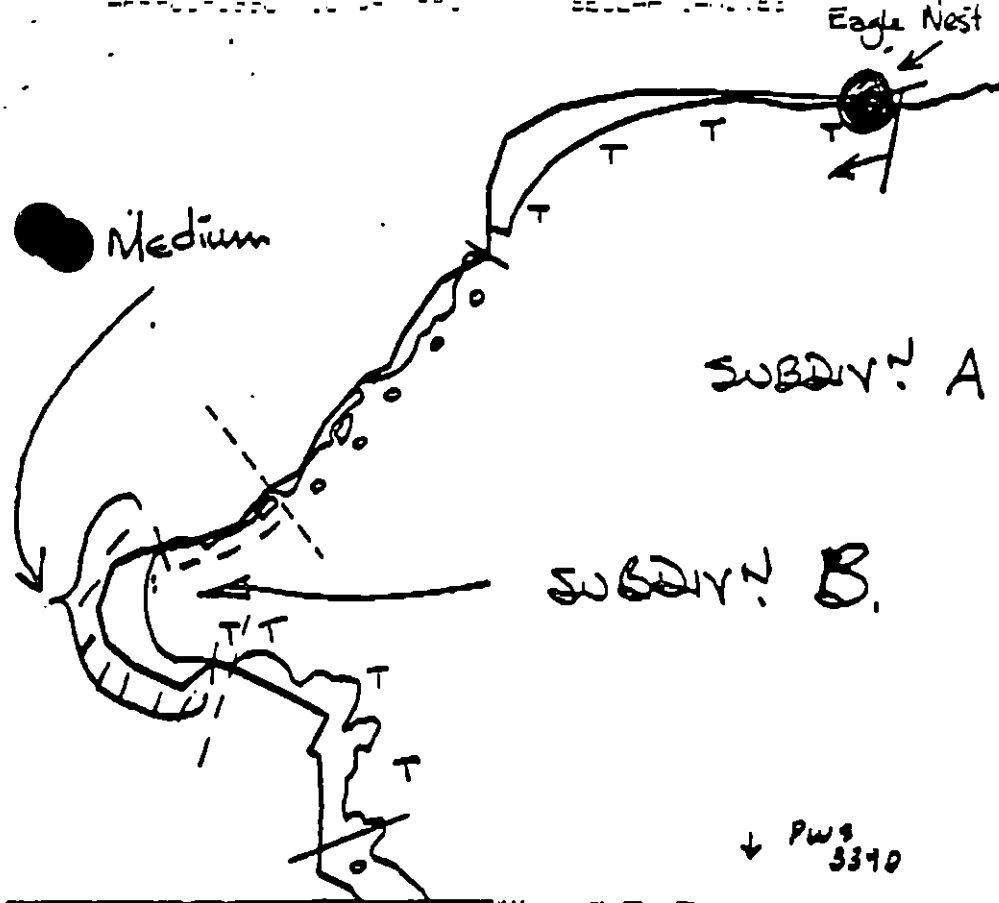
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

Ecological Considerations:



G. MACDONALD

4/2/90

Date _____
Entered: _____

ECOLOGY
MAP

SUBDIV. A

SUBDIV. B.

↓ PWS 3340

SUBDIVISION C.

↑ PWS 3340

5m
of T

ANADROMOUS STREAM
226-10-16880 →

SUBDIV. BOUNDARY

oil category boundary.

PWS 3340 →

KN-211

(north) 192

TEAM 4 SURVEY

← PWS 3340

SUBDIVISION E

ANADROMOUS STREAM
226-10-16880 →

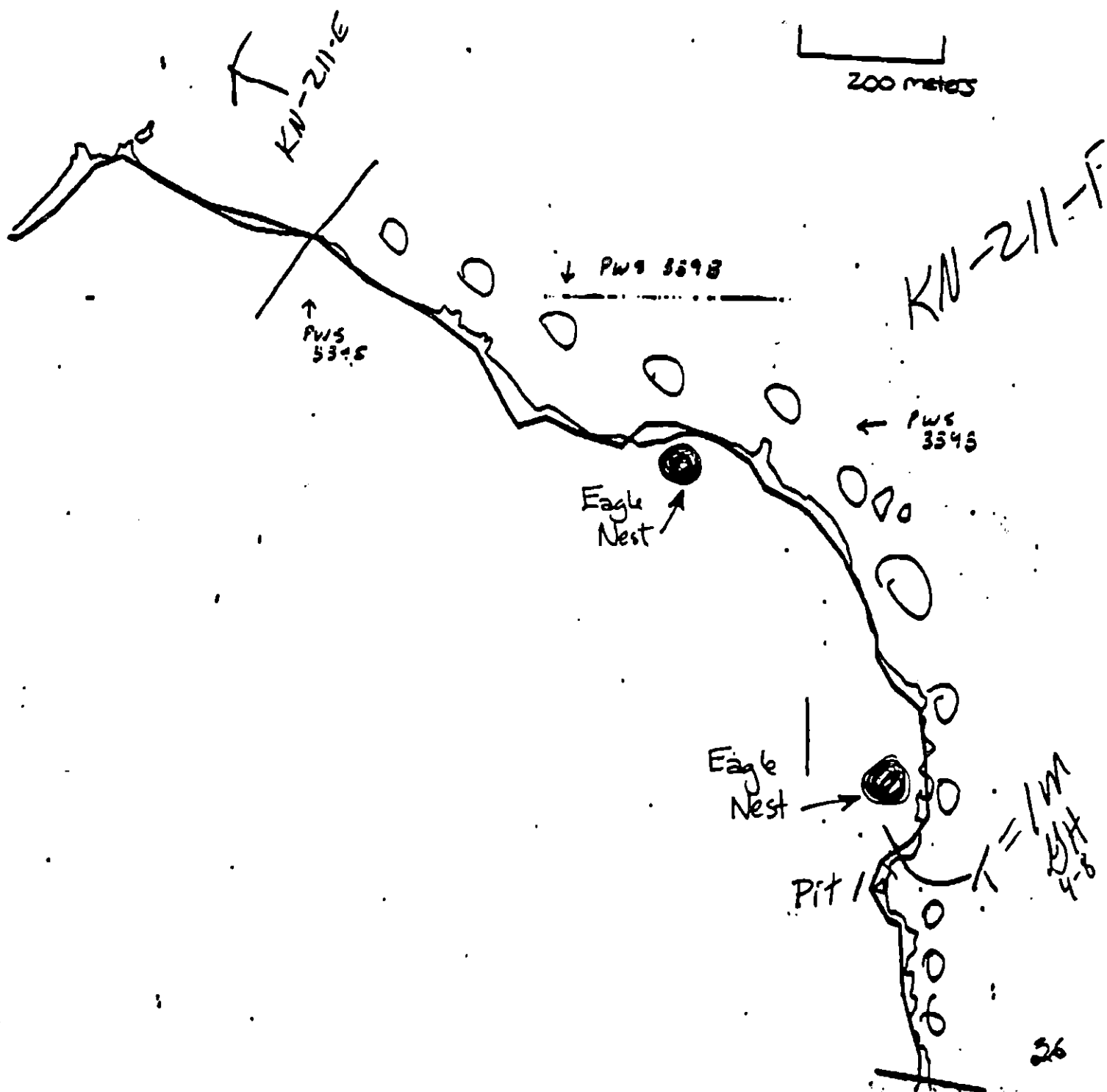
KN-211

South (20fa)

ECOLOGY
MAP

← PWS
3342

200 meters

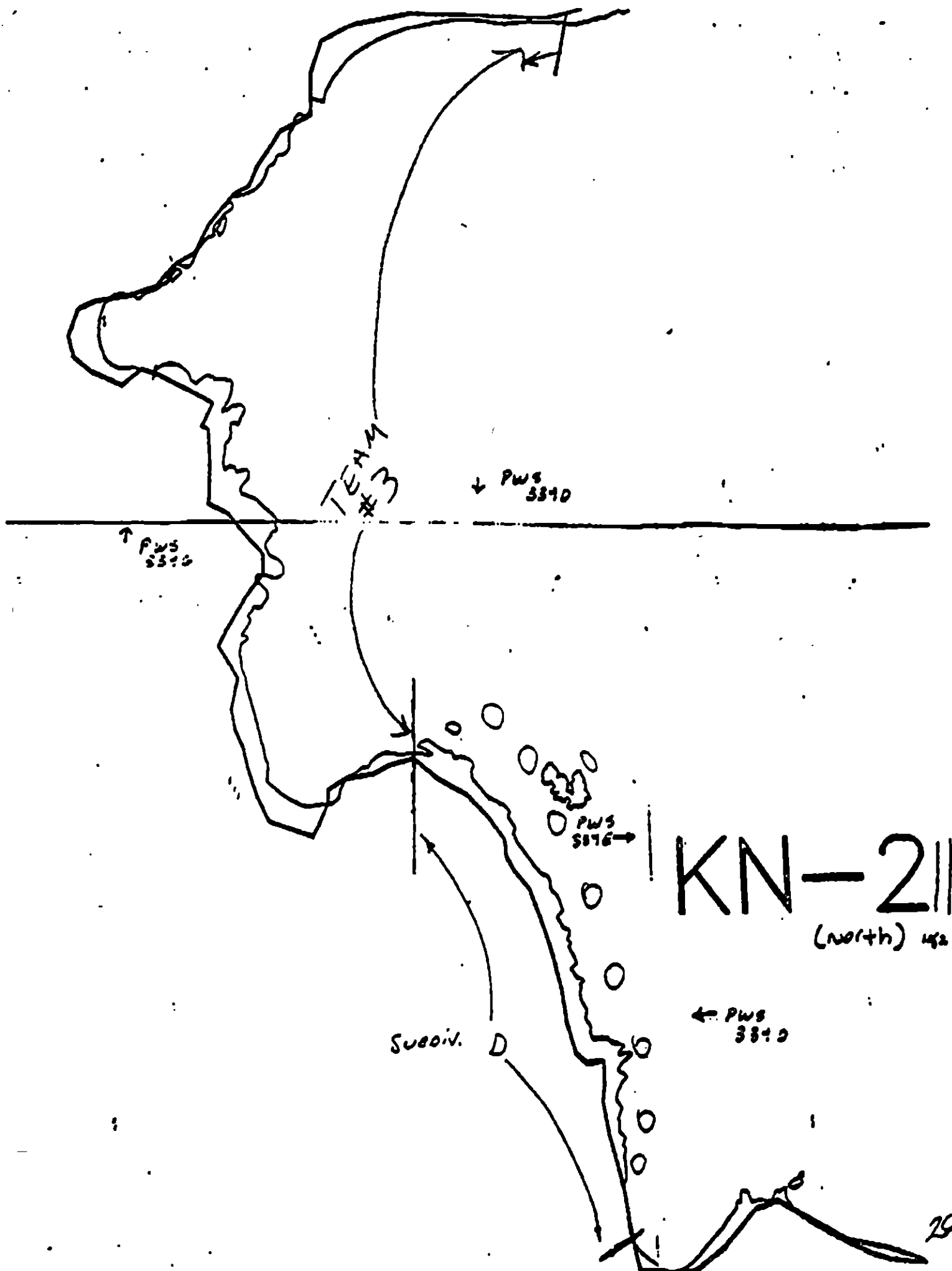


oil character Length.

AP 0 PO 0 CY 0 CT 0 ST 1 MS 0 PT 0 TO 0 FI 0 NO 1

26

21



SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION E (5 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Anadromous stream no. 226-10-16880 on border of Subdivision D/E.

SHPO SIGNATURE: Charles E. Holmes DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 515 m: Narrow 133 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 32+ cm

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>X</u> Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse patties, 2) bioremediation of areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints, after approval of USFWS regarding eagle nests. Do not bioremediate within 100m of anadromous stream without approval from ADF&G.

TAG COMMENTS: MONITORS TO ASSESS SOUTZ DURING TREATMENT.

TAG APPROVAL DATE: 4/26/90.

ADEC JOHN BAUER
EXXON ANDY TEEB
NOAA GARY PETRAE
USCG KENNETH KLANE

FOSC: NYL DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 (8/11 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.

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 Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

Special use destination

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

7HH Finfish harvesting

7H Deer harvesting (8/15 to 2/28)

7JJ Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 11K211 SUBDIVISION: E DATE 2 APR 90

USCG

NAME MAURICE J SHAW SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. F. F. KAN SIGNATURE [Signature]

* OILED PALLE CARROS WAS COLLECTED

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THE STORM BEACH EXPOSED NEAR THE HITZ (NO SNOW COVERAGE AS ON REST SW) HAD A LIGHT FILM (100M) ON THE SURFACE WITH OR FURTHER DOWN → DEPTH OF THE OIL PENETRATION WAS > 1 1/2 (1). DUE TO THE SNOW ON COVERAGE, WOULD NOT RECOMMEND WASHING, RATHER MANUAL REMOVAL OF CO SURFACE OILING. [SPEC] THE BEACH PROFILE IN FRONT OF THIS STORM BEACH AREA [MITZ] HAD (OR → UP TO 20 CM). [TREATMENT IS NEEDED → BEACH OF BEACH STRATA BK WITH FRAMES IN INTERACTIVES UNCLURE AS TO WHAT TYPE OF TREATMENT WOULD WORK HERE. SUGGEST MANUAL CLEAN-UP OF MOUSSE PADDIES + PAUPEMENT IN HITZ OF SOUTH BEACH. → ALSO SAME TREATMENT FOR NORTH BEACH AREA. CONT. MOUSSE REMOVAL IN AREA BETWEEN N+S BEACHS IS ALSO POSSIBLE.

LAND MANAGER (STAND IN FOR USFS)

NAME M. G. T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SNOW ATOP STORM BEACHS MADE ASSESSMENT OF OILED DEBRIS, AND IN SOME CASES OF UPLAND EXTENT OF OILING, IMPOSSIBLE. THESE AREAS SHOULD BE REASSESSED AFTER SNOW HAS MELTED.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG K. RAMSEY USCG R. SHARPE SEGMENT STI KN-211
 BIO G. PENN LAND REP P. SMITH SUBDIVISION E 396 sq. mts
 EXXON S. Reid ADEC S. FERGUSON TIME 11:30 to 1:45
 TEAM NO.: 4 TIDE LEVEL: 4' to 1' DATE 2/2/90
 ST. SUBDIVISION LENGTH: 822 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5 % B 50 % C 23 % P 2 % G 10 % S 10 % M — % V .5 %
 SLOPE: Long 95 % Hang 5 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M 122 m N 200 m VL — m NO — m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	N	E	S	W	U	SW	SE	NE	NW	W	SW	SE	NE	NW
ASPHALT PAVEMENT			X			X	X	X	X	X	X	X	X	X
POOLED														
COVER	•	X				•	X		X	X	•	X		•
COAT		•	X	X		X	X		X	X		X	X	
STAIN			X	X		X	X		X	X		X	X	
MOUSSE			X						X	X		X	X	
PATTIES			X						X	X		X	X	
TARBALLS														
FILM	X					X	X		X	X		X	X	
NO OIL														X

PAVEMENT: ☒ F 821 sq. m by 5 cmPATTIES / TARBALLS 5 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

HOWEUP Some sheen from stream coming from Tidal flats RW to a SL

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

DEBRIS COLLECTED

☐ YES ☒ NOTYPE gom gom#BAGS 1

Photographs:

Roll No. ST-4-1Frames 18, 19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			SW	SE	NE	NW	W	SW	SE	NE	NW		
1	15					X	0-5	X	X	X				X				N	P, G
2	32	X					0-32	X	X	X				X				N	C, P, G
3	20	X					0-30	X	X	X						X		N	C, P, G
4	17.5	X					0-10	X	X	X						X		N	C, P, G
5	20					X	0-5	X	X	X						X		N	C, P, G
6	17.5	X					0-17.5	X	X	X				X				N	P, C, P, G

COMMENTS

Rainbow sheen in water coming from Tidal flat but the flat itself is covered in snow. All the UF in front from beach outcrop to the flat has oil stain splash. Mousse in area around Rocky over 100 ft. 2-3m wide x 40m length - 6.5cm deep C/P in storm berm by oiler. Coiled POUPOMS - no oiled logs.

SEGMENT ST/ KN-211 SUBDIVISION E

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1/2	3/4	S	1/2	3/4	S	SU	U	M	U		
7	17.5		X				0 - 17.5	X			X						X			N	S, P, G
8	6.5					X	0 - 2.5	X			X						X			N	S, P, G
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
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							.														
							.														
							.														
							.														

COMMENTS

This section had a coat + stain all in the U.I.

Mousse patties in U.I. + M.I. A 2-3m wide 40m length of CV/P in ^{to + 8} storm beam by the oiled otters. On the Bedix outcrop, coat + stain splashes were found in U.I.

REVIEWED _____ DATE _____

Polymer Chemistry

SHORELINE ECOLOGICAL SUMMARY

REVISION 03/88

Segment ST-211 Subdivision E Date (mo / day / yr) 04/02/90
 Time (24 hr) 11:30 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 50 (3) Cobble 23 (4) Pebble 12 (5) Sand 10 (6) Silt 0.5
- (B) Overall % cover of biota (% of segment): Dense 1 Moderate 3 Low 70
- (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-4-1
 Roll No. 20, 21, 22, 23
 Frames 20, 21, 22, 23

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
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	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

1 Dead eagle - oiled - retrieved
 1 Dead Deer - no visible oiling

2 Dead Otter - ^{Previously} tagged w/ flags & tape

Ecological Considerations:

1 - Humpback whale
 3 Sea Lions
 3 eagles
 2 murrelets
 1 Cormorant
 2 Osprey
 6 Herring gulls
 2 seals

Eagle Nest

G. MACDONALD

4/2/90

Date

Entered: _____

ECOLOGY
MAP

Medium

SUBDIV. A

SUBDIV. B.

↓ PWS
3340

SUBDIVISION C.

↑ PWS
3340

5m
qt

ANADROMOUS STREAM
226-10-16880

SUBDIV. N
BOUNDARY

oil category
boundary.

SUBDIVISION
D

PWS
3046

KN-211

TEAM 4
SURVEY

← PWS
3340

(north) 152

SUBDIVISION
E

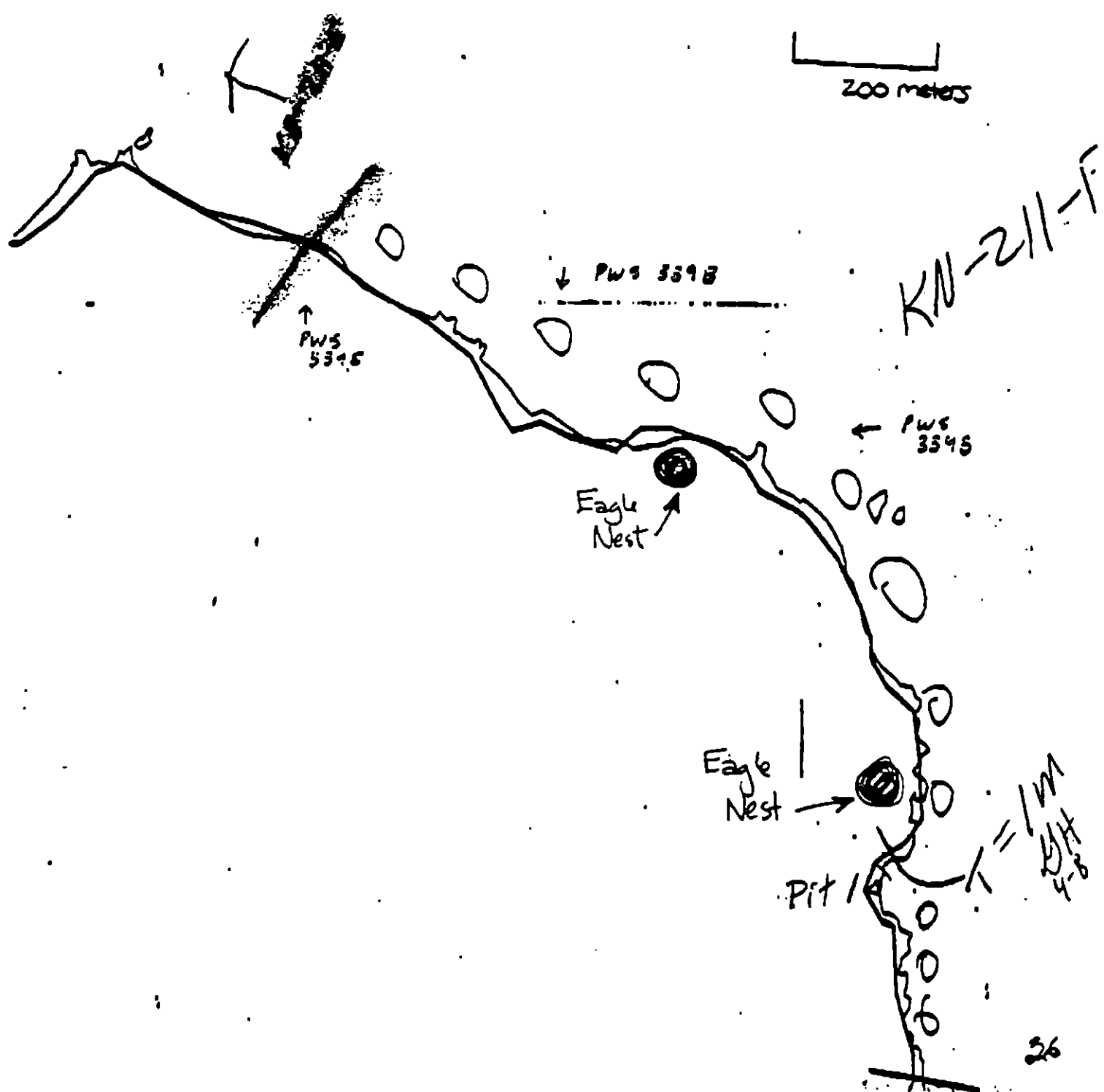
ANADROMOUS STREAM
226-10-16880

KN-211

South (2082)

ECOLOGY
MAP

← PWS
3343



oil character Length.

AP 0 PO 0 CV 0 CT 0 ST 1 MS 0 PT 0 TB 0 FI 0 NO 1

26

21

500.0

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

AMC Sea/Gex 1988 Survey

KN-211-D

KN-211-E

KN211

KN-211-F

↑ PWS
339G

PWS
339E →

211-E
4-9-90

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-211E

ADEC Segment Length: 6061m

0 100 200 300
METERS

Map Key: PWS-339d

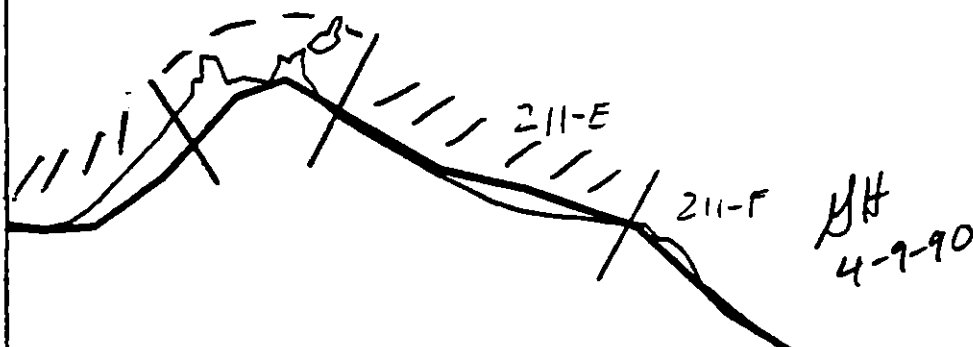
Name: _____

Date: _____

Data Entered: _____

KN-211

← PWS
337.3



↓ PWS 337.3

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-211E

ADEC Segment Length: 6061m



METERS

Map Key: PWS-339a

Name: _____

Date: _____

Date Entered: _____

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16875

SEGMENT KN-211 SUBDIVISION E

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

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16875) is in Subdivision E. This subdivision is closed to manual tilling and bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, manual tilling and bioremediation are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to manual tilling and bioremediation more than 100m from stream. No constraint to manual pickup, tarmat removal or spot washing.

5T Bald Eagle Nest

NO CONSTRAINT. Work area is more than 400m from nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-211E
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 5/29/90.
ADEC ART WEINER
EXXON AMY USAL
NOAA Burt Wasscott
USCG B.A. REITER

FOSC

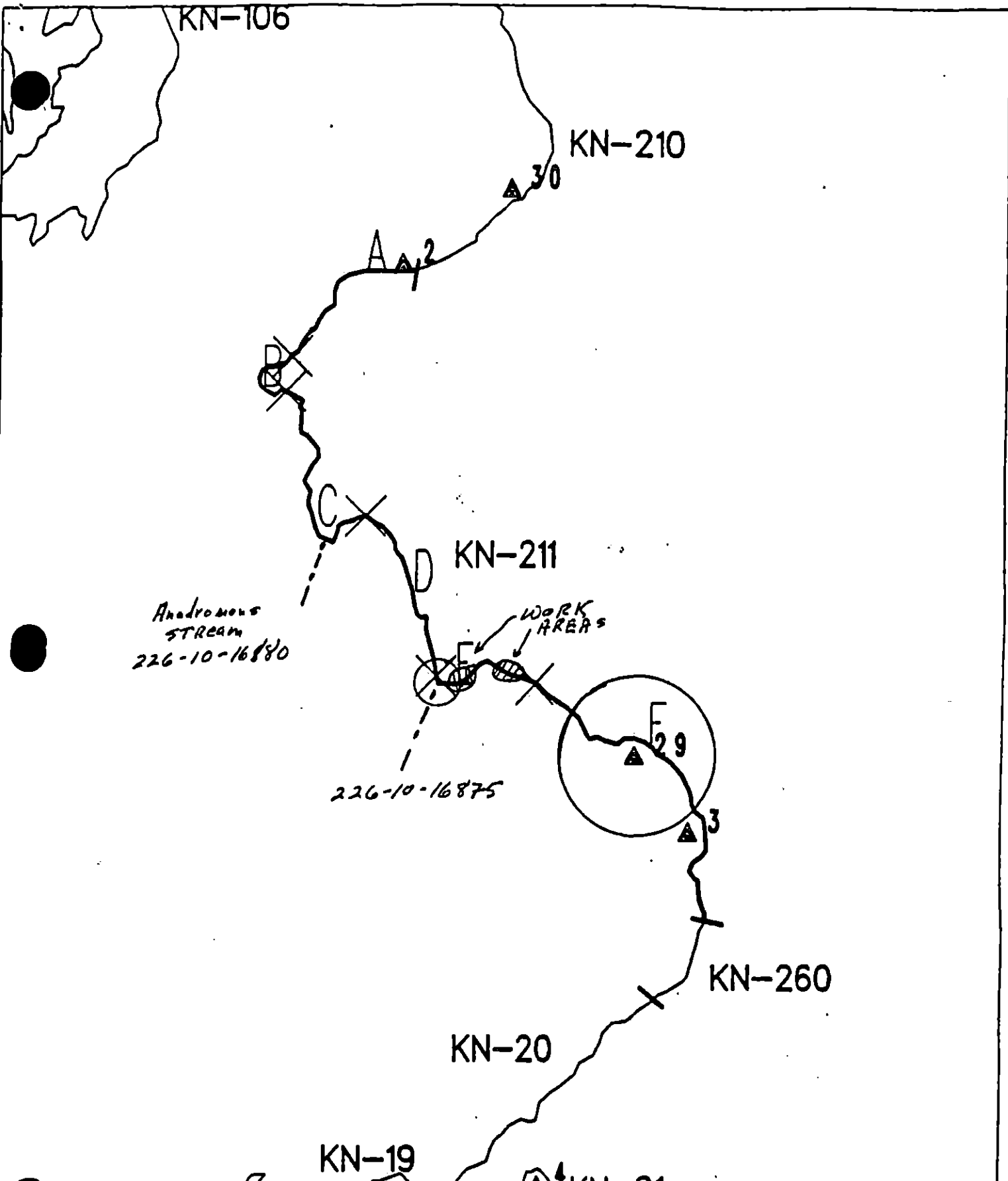
DATE

MAY 29 1990

Prepared By: Andru Mue - lue

Date

5/29/90



Exxon Company, USA
Map Key: KN1-KN-211



ECOLOGY MAP
SEGMENT KN-211
SUBDIVISION E (5 of 6)
METERS

★	Seabird Colony
▲	Eagle Nest

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT KN 211

SUBDIVISION E SITE # 1

DATE 8-3-90

MODIFICATION

1. REASON FOR MODIFICATION

SIGNIFICANT AMOUNT OF SUBSURFACE OIL. NUMEROUS PITS REVEALED "OR" OIL THAT RELEASED CAPIOUS AMOUNTS OF OIL. WATER FLOWING THROUGH TIDELANDS FROM LAKE IN UPLANDS PICKS UP OIL FROM SEDIMENTS WHICH APPEARS AS A SURFACE SHEEN. MAP IN SPRING SAT REPORT DEPICTED A 170x30 METER AREA PROPOSED FOR BIOREMEDIATION BUT ONLY A FEW PELLETS WERE DISCOVERED. DECISION TREE CALLS FOR TAG EVALUATION OF RECURRENT SHEEN. EVALUATION OF BIOREMEDIATION WAS NOT POSSIBLE BECAUSE IT DID NOT TAKE PLACE. SITE CONTAINS A CATALOGED ANODRAMOUS STREAM THAT MAY BE RECEIVING OIL FROM THESE SEDIMENTS.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

- a) TAG "ON-SCENE" EVALUATION, AS PER DECISION TREE. REDEFINE PROBLEM AREA.
- b) MECHANICALLY TILL AREA OF SUBSURFACE SEDIMENTS DOWN TO LOWER LIMIT OF OIL PENETRATION.
- + c) HOT WATER FLOOD WITH ABSORBENT BOOM AND CONTAINMENT BOOM.
- d) TREAT WITH CUSTOMBLEND.
- e) REASSESS IN 1991.

K TAG should evaluate situation with oiled drift wood & oiled logs
x as Ghormley ADEC (AONR)

3. TIMING ISSUES

COORDINATE WITH ADF+G ON USE OF CUSTOMBLEND IN STREAM AREA.

ADEC Wesley Ghormley

EXXON Ray Sater + I DON'T SUGGEST WE USE HOT WATER FLOOD.

NOAA/USCG Art Weiner

LAND MANAGER Toka Ebel (if field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT KN-211 SUBDIVISION E (Site 2) DATE 8/3/90

MODIFICATION

1. REASON FOR MODIFICATION
Small patches of A/P, OP & MUXSE between boulders
Tarmats have reformed.
2. SUGGESTED ADJUSTMENT TO WORK PLAN
Manual removal of accessible Heavily saturated sediments
- Apply Custom blend upon removal-
3. TIMING ISSUES

ADEC Wesley Isherwood

EXXON Ray Smith Note: I do not agree with this plan because of
the accountability of oil that remains.

NOAA USCG Det Wexler

LAND MANAGER John Ebel (if field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT KN-211 SUBDIVISION E (site 3) DATE 8/4/90

MODIFICATION CLASS III

1. REASON FOR MODIFICATION

Heavy OR, OP; Mousse Present both Surface and subsurface
Heavily saturated materials and sediment present
Subsurface under Massive storm berm.

- STORM berm relocation -

Oil Consistency goes From OP, OR to OF towards the water line
Leading to believe the highest consistency is present in the Storm
berm and Uitz.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

16 X 2m area of heavy OR sediment - Remove either manually OR
Mechanically all heavy OR sediment.

- Large area of Subsurface oil present under storm berm. Mechanically
Excavate area of Subsurface oil (SEE MAP) Remove all High OR, OP and
Mousse from area. Remove all saturated debris, remove all oiled log.
SPread storm berm to Mitz for natural cleaning, Sorbant boom
should be used as a primary boom, numerous strands of SWARE
boom should be strung to absorb any mobile oil. Hot H2O Flood with
CNHP Hoses may have to be used depending on the amount of oil
that is exposed. Custom blend on completion of work.

3. TIMING ISSUES

ADEC

Wesley Shornley 

EXXON

NOAA

USCG Art Weimer

LAND MANAGER

John Ebel (if field rep is on scene)

SEGMENT AS1 KN-211 SUBDIVISION: E SITE: 2 DATE 8/3/90

USCG/NOAA PSI Leo Bersalona, uscg Leo Bersalona

NAME ART WEINER SIGNATURE Art Weiner☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

WINTER WORKING SHOULD REMOVE ALL REMAINING OIL.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

oil is present in the form of small patches of A/P
OP & mussels in interstices of boulders. A work modification
form has been sent. Coat/stain on backs of boulders
are present.

- Reassessment to determine the effects of Custom blend.

LAND MANAGER

NAME John Fbel SIGNATURE John Fbel☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Determine if A/P, MS/CP remains after winter.

Evaluate effectiveness of Bio Treatment.

Determining if CT/st have remained after winter. CT/st may need removed in spring 91.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

No further treatment or reassessment is necessary on this site.

CG CHANEY, GREG USGS WEINER, PERSALINA SUBDIVISION E
 ADEC GHORMIEL WES LAND REP EBEL, JOHN TOTAL NO. SITES 4
 DATE Aug 13 & 14 1980 TIME Several Intervals TIDE LEVEL 0 to +2.2 ft
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 15 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 40 m M 75 m N 450 m V 34 m NO 0 m US 0 m

SURFACE OIL SITE 1 NOT OBSERVED SITE 2 NOT OBSERVED SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UM	ML	LI
ASPHALT								
S.O.R.	X				X			
POOLED								
COVER			X	X	X	X		
COAT		X	X		X	X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM		X			X	X		
NO OIL								
EST. SITE LENGTH					110			

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UM	ML	LI
ASPHALT			X			X		
S.O.R.			X			X		
POOLED								
COVER								
COAT		X				X		
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH					95			

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UM	ML	LI
ASPHALT								
S.O.R.		X				X		
POOLED								
COVER								
COAT		X	X	X		X	X	
STAIN				X		X	X	
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								X
EST. SITE LENGTH					60			

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	UM	ML	LI	
1	1	60		H			35-45	Y	X			BG-BCG
1	2	15		M			0-15	N		X		PB-BP
1	3	30				X	.	-		X		B-BPG
3	4	25			M		5-10	Y		X		B-PCG
3	5	30		M			5-30	N		X		B-PB
3	6	40		H			0-40	N	X			LOGS-PYB
3	7	30		H			0-20	Y		X		BP-BGP
							.					
							.					
							.					
							.					
							.					

Photographic: ASAP #2

Roll No. #2

Frames 3 to 7

Brown Sheen

Light Silver Sheen

COMMENTS

SEE ATTACHED PAGES.

ASAP SHORELINE CILING SUMMARY

SEGMENT AS/ 1.1.1 SUBDIVISION 1

SURFACE OIL (CONTINUED)

[illegible]

SUBSURFACE OIL (CONTINUED).

[illegible]

COMMENTS

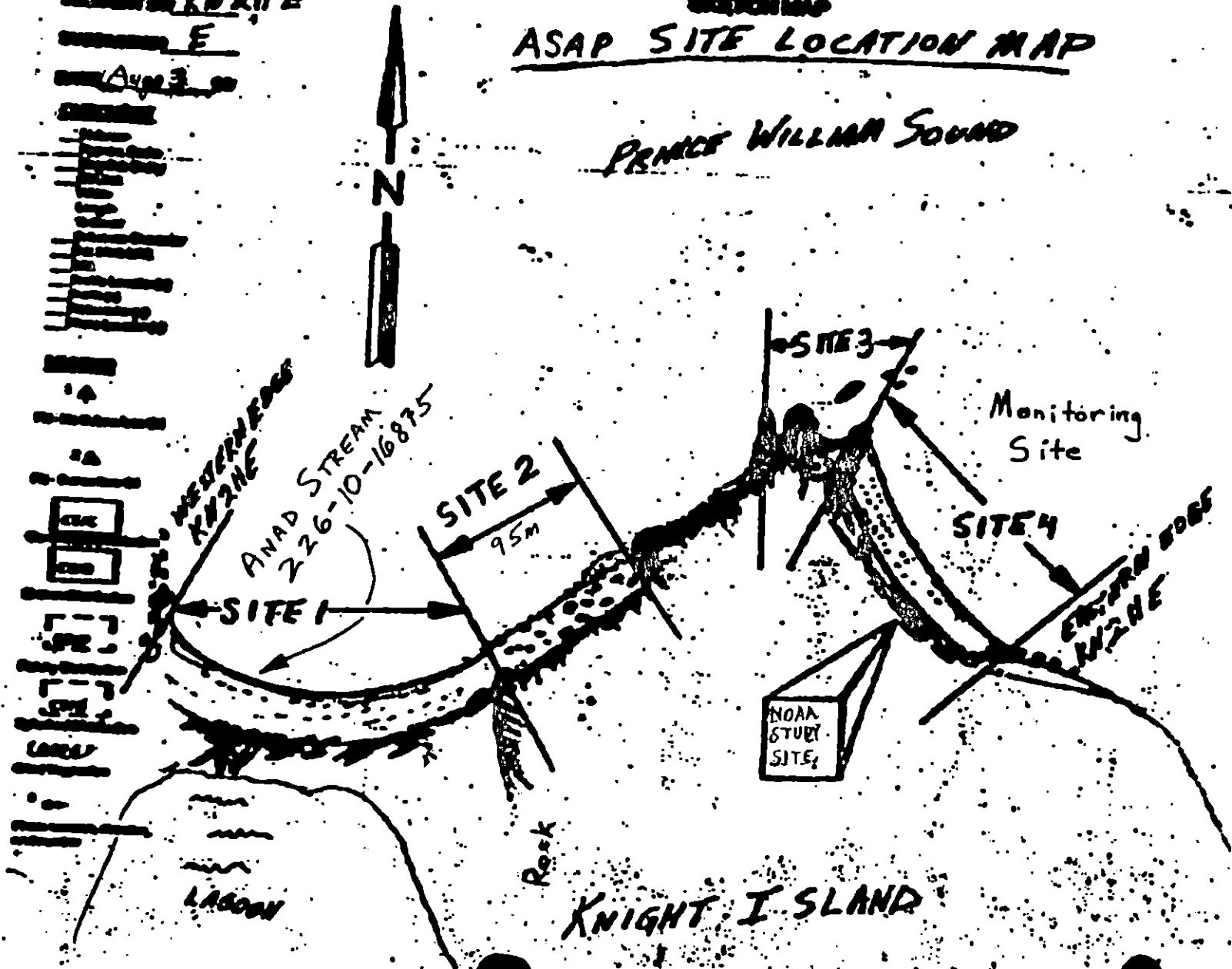
SEE ATTACHED PAGES.

ASAP ORIENTATION MAP

by Greg Chancy
revision KN 11 E
revision E
date Aug 3, 90

ASAP SITE LOCATION MAP

PRINCE WILLIAM SOUND



COMMENTS KN-211-E

GREG CHANEY
ASAP #2
AUGUST 3 1990

SITE #1
ANAD STREAM 226-10-16875

This site has a complex history. Unfortunately, the 1989 SCAT survey, DEC fall survey, and 1990 FASST survey are not at my disposal but may provide additional information for consideration. However documentation since the SSAT survey seems to be fairly complete. A SSAT survey of the site was conducted on April 2 1990 by K. Ramsey. Ramsey noted patchy cover along the beach, some mousse patches, and silver sheen which seemed to be coming from the snow covered supra tidal. The next survey was an ANAD SSAT on April 22 1990. Cal Larson mapped the area in much greater detail due to the narrower scope of the survey. Some of the snow in the supra tidal had melted by that time and the area of oiled logs in the stream channel was documented. The area of sheening is clearly identified on this map as well. The rest of the beach was noted to have patchy coats and 4 sq. meters of AP/8 in the MITZ. One square meter of pooled oil was noted in the stream channel under the log dam. The region was visited by the BAT team of Riemer & Chaney on May 29 1990. Although the region was prepared for bioremediation, the application was halted due to concerns that the application might alter the test results on the adjacent monitoring site. The oiled logs were noted at this time, as well as the region of sheening on the beach. Although a sketch map was drawn, it was not submitted because bioremediation was not conducted. The region was mapped again by Dan Mann on June 11 1990 as part of the "Supratidal Resurvey Program." This map once again clearly depicts the location of the oiled logs, and indicates additional oil in the supra tidal. July 1 1990 a work order modification was filed requesting the removal of a 10 by 15 meter area of oiled logs. The logs were not removed from the site but were stacked along the western side of the stream channel. Manual removal of some oiled sediments appears to have taken place. The area cleared of logs is approximately 11 by 12 meters. The manual work was completed and custombren was applied on July 9 1990. Custombren application was restricted to the area of log removal and the area of sheening in the MITZ. The majority of the beach was not bioremediated.

On August 3 1990, the site was visited by ASAP team #2. The following observations were made:

The area in the MITZ still produced a patchy rainbow sheen. Other members of the ASAP team dug over 6 pits in the sheening area while I was examining the storm berm. When I

did look at the pits the pits had filled with water, however they all contained a brown sheen with brown droplets of oil. Additional attempts to gage the depth of oil penetration were unsuccessful due to rapid filling of the pits by flowing ground water. Subsurface oil concentration seemed to be greater in the HITZ. Although Customblen had been applied less than a month before, very little was observed. It seems to have mostly dissolved. In the supra tidal, SOR/H sediments were exposed where removal had taken place, but appear to continue under the remaining logs. The open stream channel seems to be generally free of surface oil. Customblen seems to have dissolved along the banks adjacent to the stream as well. In general the region has been mapped extensively and oiling conditions are well represented at this time. The mousse reported on the original SSAT survey seems to have been removed. An additional pit was dug at the base of the storm berm near the center of the beach. The pit was 60 cm. deep and heavy OR sediments were observed from 35 to 45 cm.

The manual removal of mousse and oiled sediments has eliminated some of the oil which was present, however the documented sheening of the beach for the last 4 months indicates that a reservoir of subsurface oil remains. Since the Customblen pellets have dissolved, it appears that effectiveness of the first application has largely been expended. It should be noted that the April 22 ANAD SSAT request for bioremediation of the entire beach face (170 by 30 meters) was never conducted. Additional oil remains in the supratidal, however it's extent is difficult to determine due to the presence of logs. Mobile oil in the BUTZ may be contributing to sheening observed in the HITZ & MITZ.

11111111
 SEGMENT ST. KJ1211
 SUBDIVISION E
 DATE AUG 15 90

MAP ADOPTED
 FROM STORM BERM
 SURVEY MAP BY
 MANW 11-6-90

SKETCH MAP JUST WHEN YOU THOUGHT
 IT WAS OVER...
 COMES THE
 KNIFE MONST.

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

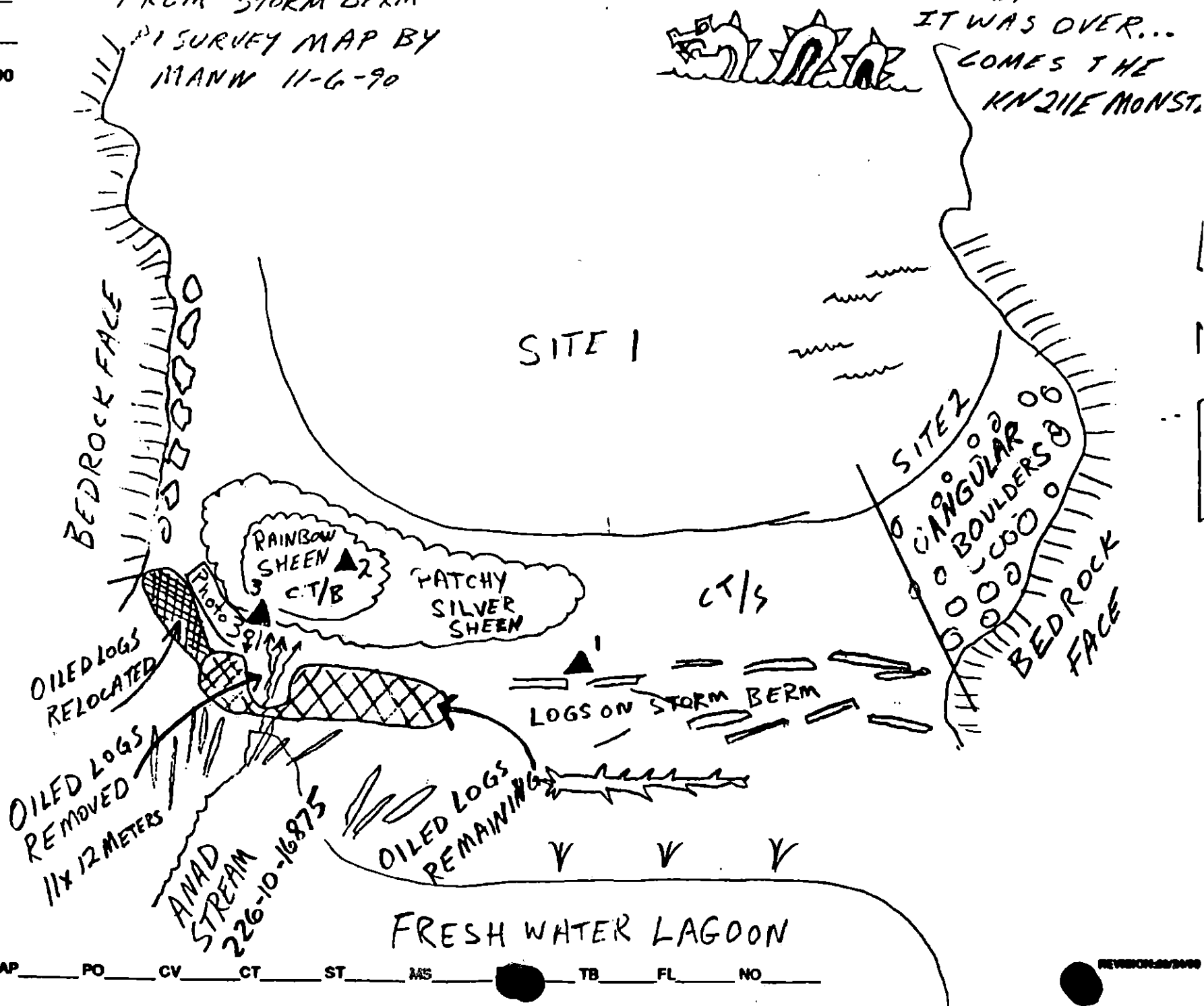
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 ●→
 Photo location, direction,
 and number



COMMENTS KN-211-E

GREG CHANEY
ASAP #2
AUGUST 3 1990

SITE #2

Site 2 is composed of a rugged boulder beach east of Site 1. This stretch is approximately 95 meters long. The high intertidal has broken coats on boulder faces. Formerly patches of mousse were reported. Manual removal has taken place however AP to heavy SOR/I patches remain at the base of boulders along the edges of the removal areas. These patches are rare but distinctive. They tend to be more concentrated on the western edge of the site and taper out toward the rock face in the east.

SITE #3

AUGUST 4 1990

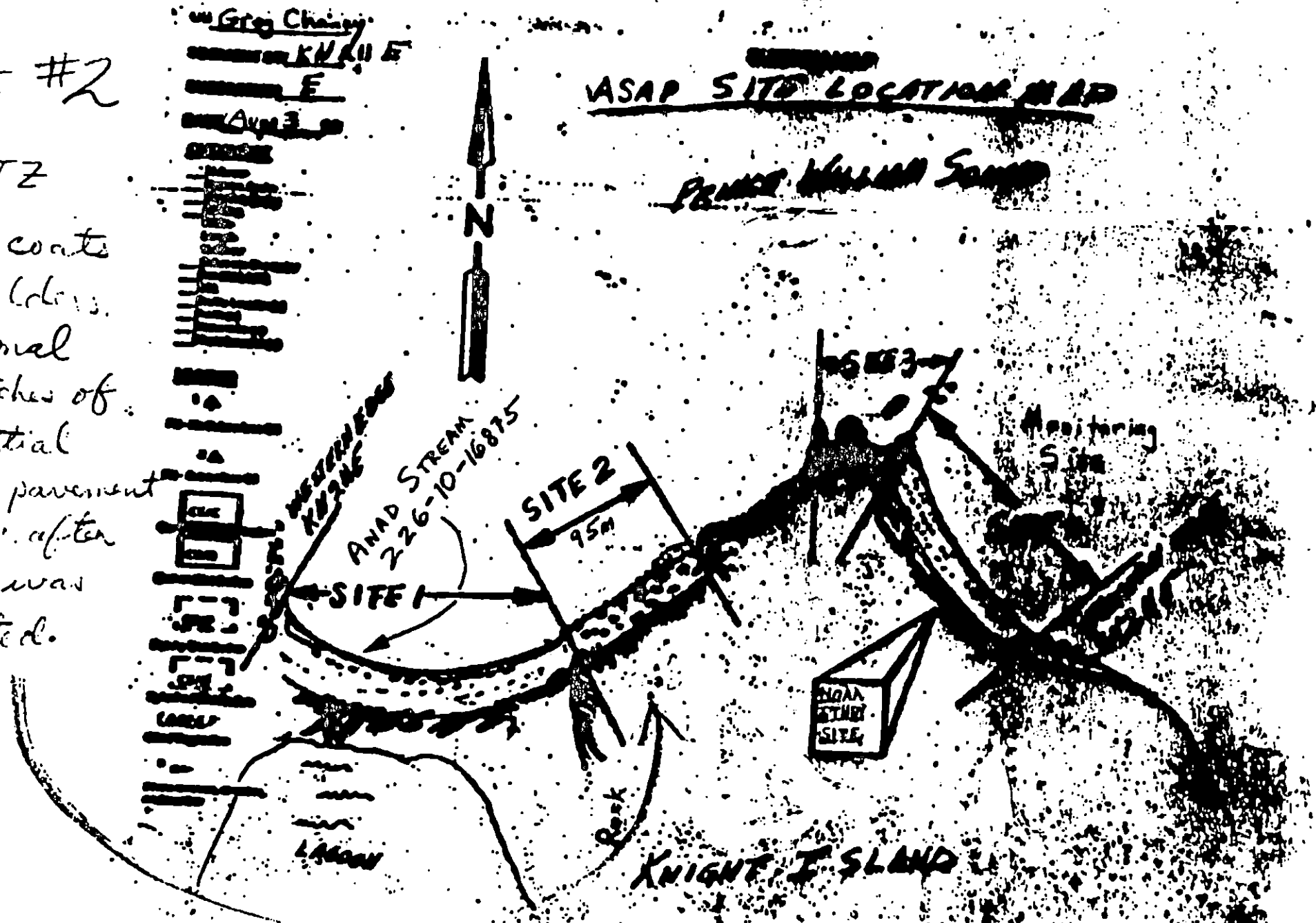
This site is located between the rock outcrops on the west of the NOAA monitoring site. Although the site is exposed to significant wave energy, prominent bedrock outcrops in the area protect high intertidal sediments from wave attack. Therefore oiled boulders and pebbles remain in the upper intertidal. There are three oiled bands approximately 2 to 3 meters wide and 8 to 9 meters long. The surface sediments are composed of broken coats, while the subsurface retain moderate to heavy residual oil. Subsurface oil is black, shiny and does not appear weathered. Boulders in the mid intertidal have patchy coats and sporadic stains. These coats imply a time when oiling was more extensive. Active mechanical weathering seems to be taking place in the mid and lower intertidal zones. Furthermore, the supratidal zone retains black shiny oil mixed with spruce needles, branches, etc. which are overlain by drift logs. Oiling in this area was noted on Reimer's bioremediation map on May 29 1990. This condition was further documented by Dan Mann during the June 11 1990 Storm Berm Survey. Our investigation included a pit in this area which revealed heavy residual oil over 40 cm. deep. Although the deposit's extent is difficult to estimate due to the drift logs overlaying the site, our team estimated the oiled drift material extended over 60 square meters while Mann estimated only 10 square meters.

ASAP ORIENTATION MAP

SITE #2

in HITZ

when coats
a boulders.
occasional
patches of
thin stial
except pavement
for car. after
moral was
completed.



OG CHAN

SEGMENT ST/KN 211

SUBDIVISION E SITE 3

DATE Aug 14 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSI
- ☐ Profile 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
Pecchy Distribution
- CT/S
Splashed Distribution
- eee
Oiled Vegetation
- 1 ●→
Photo location, direction, and number

EXTENT OF OILING IN SUPRA LOGS UNKNOWN, DUE TO DIFFICULTY OF DIGGING THROUGH LOGS.

PIT #6: HEAVY O.R. SEDIMENTS UNDER SUTZ LOG PILE. OILED SPRUCE NEEDLES, STICKS, BOULDERS & COBBLES

BAND OF H OR SEDIMENTS

IN THE VICINITY OF PIT 5, BLACK SHINEY O.R. SEDIMENTS

Monitoring Site CT/B on back of boulders

ROCKY OUTCROP

HIGH ROCKY OUTCROP

BOULDERS

HIGH ROCKY

SITE 3

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

COMMENT8 KN-211-E

GREG CHANEY
ABAP #2
AUGUST 4 1990

SITE #4

Due to time limitations and the extensive monitoring program which is on going at this location, the survey was brief in nature. Since pit digging is discouraged on the site due to concerns over the impact on the monitoring wells, no pits were dug during this survey. Nine pits were dug along the beach face before bioremediation was conducted on May 29 1990 and all of them contained subsurface oil at that time. Residual oil was present at this time along the base of the storm berm and lined the sides of remnant pits from former surveys. The combination of SSAT, BAT, and Storm Berm Survey have documented well the nature of the oiling on the site. Little surficial change seems to have taken place. This is not surprising since the area had little surface oiling to begin with.

DATE 11, 6 80 CHANEY

CHECKLIST

30 Avenue
 Avenue, Suite
 Southeast Group
 CH 200
 West
 Large
 1/2 Owner
 Suburban Community
 E. M. PEARSON
 200
 Pacific Landings
 Pacific
 Pacific Landings
 Pacific Landings

LEGEND

1. **Introduction**

PA
FD-36 (Rev. 5-22-64)



CTAD

15

1. **Penalty**

SECRET

Old Vegetables 3

Phone number, location
and number

04 Chester 12/20/94

ASAP MAP

ADOPTED

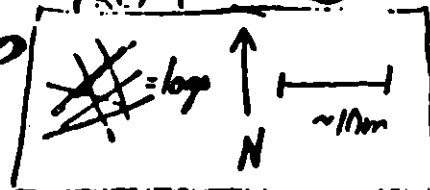
FROM

STORM
ZEPHYRUS

BERM
REASS

JUNE 6 '90

KEY



SKETCH MAP.

SITE #4

a 10m² area of especially abundant
oiled material in the SUTZ: ~10 oiled logs,
a large quantity of
oiled wood debris; and
oiled trash

angular boulders

steep hillside in trees

Site

Site
3

Rock Outcrop

Site

~5m² of cobbles in CT and ST;
oiled wood and debris

$$CT/s \quad GT/s$$

sorbent beam
in ref. ITC

Working in
SUITE, only
Specialist called
about in SUITE

had.
rock

Cross

— swale

Forest

10 x 5 meter extension of oiled wood debris.

CP stone barn covered in drift logs; patches of several m² of CT and ST on stones incorporated into seaward face of this barn.

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

ASAP TAG REVIEW SHEET

Segment: KN211 Subd: E Site: 1,2,3 Date 11 AUG 90
44 PRE-Review

Priority For Addressing In 1990

 HIGH MEDIUM LOW X NTR

Treatment
Recommended:

NTR

Sheets show some
subsurface oil.

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90
TAG VISIT — site 1,2,3
~~TAG~~ site 4 — NTR

SHORELINE EVALUATION

SEGMENT ST/ KN-211 SUBDIVISION F (6 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Two bald eagle nest in Subdivision F.

SHPO SIGNATURE: [Signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 33 m: No Oil 1844 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> Removal | ☐ Beach Cleaner |
| | ☐ Other (see comments) |

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ARMY T&E
NOAA GARY PETROE
USCG KENNY THOMAS

FOSC: WJL DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 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.

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.

6J 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)

7-H Finfish harvesting

7I Deer harvesting (8/15 to 2/28)

7J Invertebrate harvesting

For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-211 SUBDIVISION: F DATE 1.2.90

BCG
NAME MAURICE J. SHARP SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

ADEC
NAME S. FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME M. C. T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 00-0000

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-211
 BIO G. PENN LAND REP M. Smith SUBDIVISION F 696
 EXXON S. Reid ADEC S. Ferguson TIME 10:30 to 11:30
 TEAM NO.: 4 TIDE LEVEL: 6 to 9 DATE 4/2 / 90
 ST. SUBDIVISION LENGTH: 2101 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 87 % B 5 % C 3 % P - % G - % S - % M - % V - %
 SLOPE: Long - % Hang 5 % Vert 90 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1 m NO 2100 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS			
		OP	OR	OL	OF	NO			UO	UC	1	2	3	4	5	6	U	M			L		
1	10					X	-										X						C, Bedrx
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

Small stain ^{1m in length + 2-3m width trace} on Vert. bedrx where indicated on map.
 No oil observed ^{otherwise.} ~~on~~ vertical bedrock. Skiff into
 - Pocket beaches + found no oil

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/90

Segment ST KN-211 Subdivision F Date (mo / day / yr) 04 / 02 / 90

Time (24 hr) 10:30 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 87 (2) Boulder 5 (3) Cobble 3 (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 1 Moderate 3 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. —
 Frames —

BARNACLES

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

MYTILUS

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

ISTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

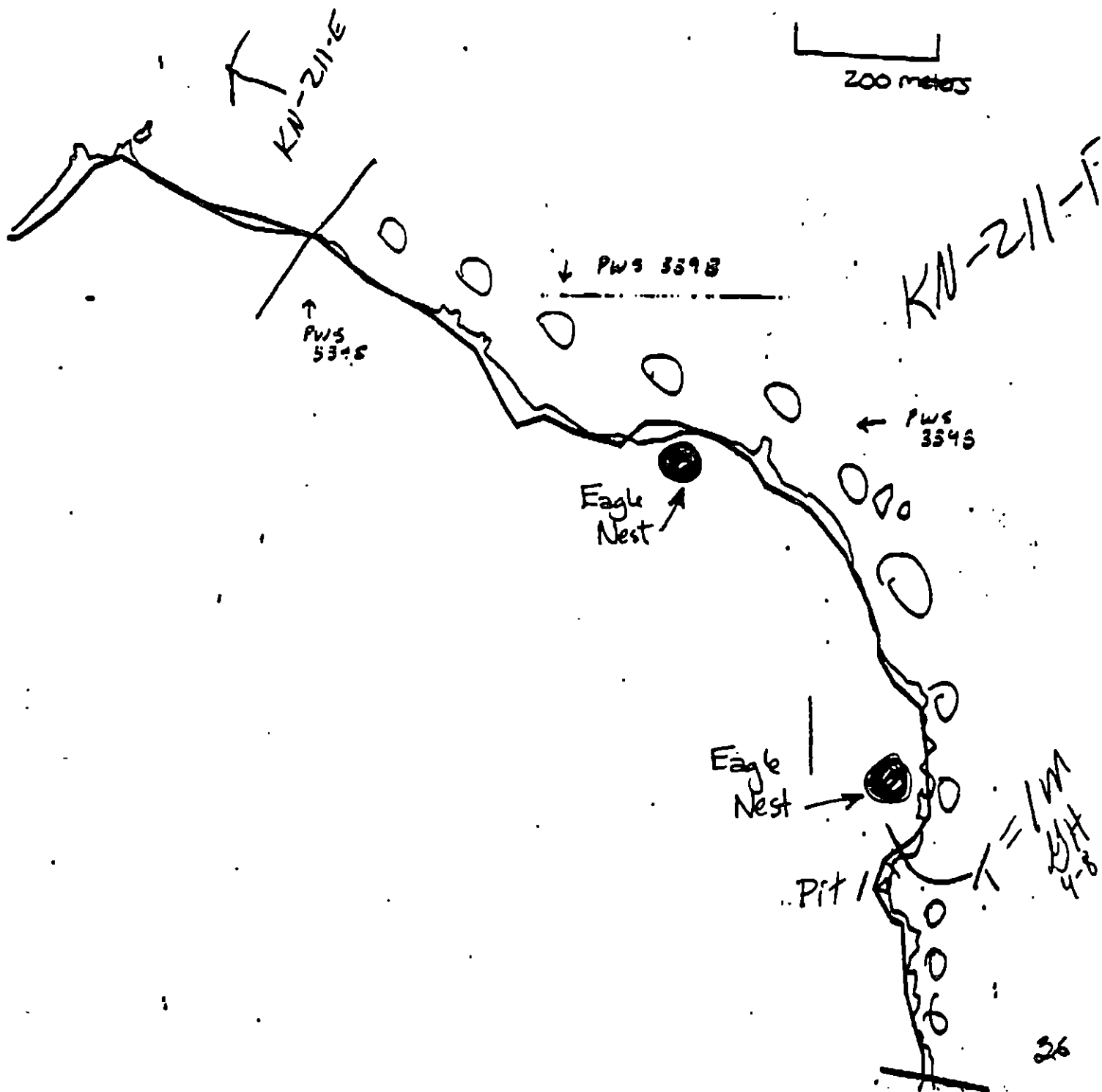
Ecological Considerations:

KN-211

South (2092)

ECOLOGY
MAP

← PWS
3342



oil character Length.

AP 0 PO 0 SV 0 CT 0 ST 1 MS 0 PT 0 TB 0 FI 0 NO 1

26

21

G. MACDONALD

4/2/90

Date Entered: _____

ECOLOGY
MAP

Medium

SUBDIV. A

SUBDIV. B.

↓ PWS 3340

SUBDIVISION C.

↑ PWS 3340

5m
9T

ANADROMOUS STREAM
226-10-16880

SUBDIV. BOUNDARY

oil category boundary.

SUBDIVISION D

PWS 3340 →

KN-211

(North) 142

TEAM 4
SURVEY
← PWS 3340

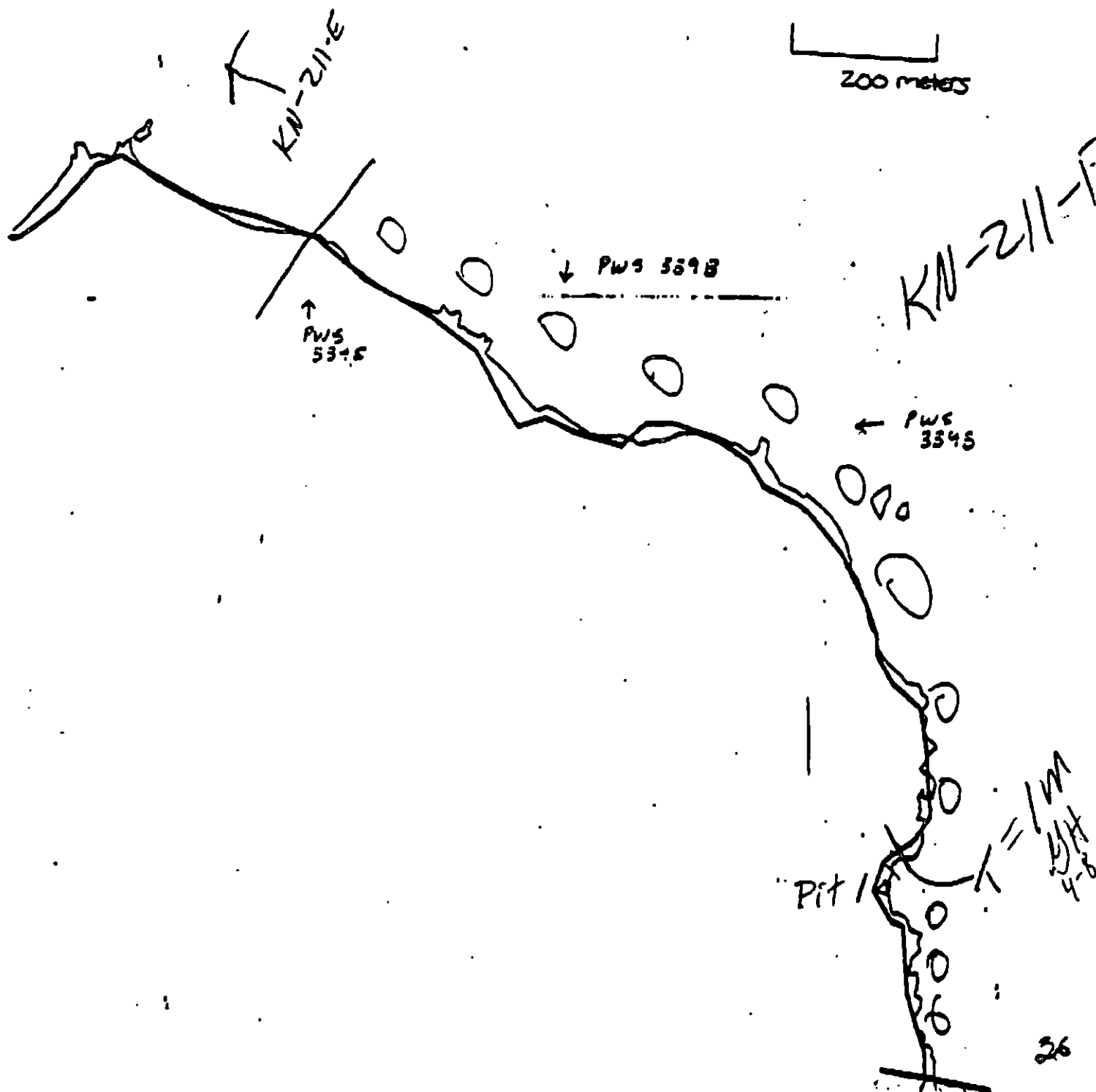
SUBDIVISION E

ANADROMOUS STREAM
226-10-16880

KN-211

South (20 ft)

← PWS
3342



Oil character Length.

AP 0 PO 0 CV 0 CT 0 ST 1 MS 0 PT 0 TB 0 FI 0 NO 1

SHORELINE EVALUATION

SEGMENT ST/ KN-212 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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. Two small streams not catalogued by ADF&G are noted by biologist in segment; one appears to be due to snow melt.

SHPO SIGNATURE: J. Paul McManus DATE: 5/1/90

OILING CATEGORIZATION:

Wide 60 m: Medium 59 m: Narrow 495 m: V.Light 1497 m: No Oil 797 m
Subsurface Oil Observed: Yes X No Maximum Depth 35 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> X </u> Spot Washing: <u>4</u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of oiled debris in areas indicated on sketch map, 2) spot hot water wash in areas indicated on sketch map, and 3) bioremediate in areas indicated on sketch map. No specific ecological time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/1/90

ADEC Art Wainwright
EXXON Andy TGA
NOAA Gary Petros
USCG Kenneth Keane

FOSC: W/L DATE: 5-12-90

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 (8/11 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.
- SR 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.
- SS Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- ST 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 Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 212 SUBDIVISION: A-10F1 DATE 04/20/90

USCG

NAME David S. Thomas

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara Crosby

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

(Please note nearshore sheen on sketch map)

ENTIRE Segment - oiling predominately under B/C -
Difficult to recover.

At pit #3 site. $\approx 1m^2$ of asphalt/mousse sat. sed. which should
be manually removed - located around bedrock - oiling at this.
Site is also up into BU under clean drift.

Spot washing is also recommended.

LAND MANAGER

NAME [Signature]

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I can concur with spot washing + manual removal techniques
in segment KN-212.

SHORELINE OILING SUMMARY

REVISION NO 24-13-9

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-212
 BIO DAVE LOHJE LAND REP PETER ZOLLAR SUBDIVISION A (1 OF 1)
 EXXON FRANK BAY ADEC CLARA CENBY TIME 15:30 to 18:45
 TEAM NO. 13 TIDE LEVEL +2 to +3 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 3491 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 50 % B 35 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 40 m M 30 m N 500 m VL 1,600 m NO 1331 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	A	B	P	R	S	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT	*	0	X	✓										
STAIN			X	✓										
MOUSSE														
PATTIES														
TARBALLS														
FILM			X								X	X		
NO OIL											X			X

PAVEMENT H F S 0 sq. m by 0 crPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL L

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE T#BAGS 1

Photographs:

Roll No. ST-13-4Frames 19-21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A	N	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	US	1	2	3	4	5	SU	U	M	U					
1	30		X				5.30	X							X								C-C, P
2	40					X	.		X						X								P-P, C
3	40					X	.		X						X								C-G, J
4	35				X		5.35	X							X								C-P, G
5	30					X	.		X							X							C-C, P, C
6	40					X	.		X						X								C-C, P

COMMENTS

(1) GEOMORPHOLOGY: PREDOMINANTLY ROCK CLIFF COAST WITH SMALL (100m) POCKET BEACHES.

(2) OIL: PREDOMINANTLY AS SURFACE COAT ON COBBLES AND Boulders AND ROCK AT CORNERS OF BEACHES AND HEADLANDS.

REVIEWED 7W DATE 4/22/90

SHORELINE OILING SUMMARY (PAGE 2)
 SEGMENT ST/ KN-212 SUBDIVISION A (1 OF 1)

REVISION 04-12-90

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	!	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		SO	UC	1/2	3/4	1/2	3/4	1/2	3/4	BU	U	M	U				
7	30		X				10-30	X		X							X						C-C
8	30					X	.		X								X						P-P, C
							.																
							.																
							.																
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							.																

COMMENTS

SUBSURFACE

- ① LIGHT OIL REGION IN PITS 1 AND 7.
- ② LITTLE SUBSURFACE OIL EXCEPT IN CONCENTRATED PACKETS OF COBBLES BEHIND BEDROCK / Boulders.

REVIEWED 7W DATE 4/22/91

South Porton Sketch Map

OG Rick Willie

SEGMENT ST/ KN-212

SUBDIVISION A-16f1

DATE 04/02/90

CHECKLIST

- ☒ No Access
- ☒ Approx. Scale
- ☒ Seg/Sub Bdry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

Pg - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Section Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Oil Vegetation

Photo location, direction, and number

NORTH PORTON

CT/S, Boulders

STREAM

SPOT HOT WATER WASH
AND BIOREMEDIATE
BEACH AREA

CT/C, 30X10M
BOULDERS, BEDROCK
WITZ - MITZ

SURVEY BY ROAT
VERTICAL ROCK CLIFF
NO OIL

ST/S ON SURFACE
CT/B (10 M²)
SUB-SURFACE: POCKETS OF
COBBLES IN BEDROCK

CT/B FL/P
10 X 40 M
COBBLE/BOULDERS

NEARHODE JHEEN

ST/S

COBBLE BEACH (NO OIL)

CT/P, 5X20M
BASE OF BOULDERS
POCKETS OF OILED
COBBLES

SPOT HOT WATER WASH
AND BIOREMEDIATE
BEACH AREA

ROCK HEADLAND

0 100 200 300 M

N

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

NORTH PORTION

SKETCH MAP

SURVEYED BY BOAT
VERTICAL BEDROCK CLIFF
NO OIL

0 100 200 300 m



MANUALLY REMOVE
OILED DEBRIS

MANUAL PICKUP OF TAIL PATCH

BOULDER OVER BEDROCK
PLATFORM, 100 M LONG
- CT/P AT NORTHEAST
- ~~OILED EDGES (CM)~~

BOULDER/Cobble PATCH
- CT/P ON BEDROCK
- ~~OILED EDGES (CM)~~
- 3 X 10 M

BOULDER/Cobble COVE
- CT/2, ST/P
- ~~SMALL POCKET OF OILED~~

BIOREMEDIATE
BEACH AREAS

SURVEYED BY BOAT
VERTICAL BEDROCK CLIFF
ST/S

CT/B ON ROCK (UI)
ST/S ON ROCK CLIFF
- NORTHEAST

COVE 200 M LONG
BOULDER/Cobble VENEER
OVER BEDROCK PLATFORM

SOUTH PORTION

OG Rick C LIE
SEGMENT ST/ KN-212
SUBDIVISION A-141
DATE 04/20/90

CHECKLIST

- ☒ A Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWT/LWT
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt. Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt. - No Subsurface Oil

2 Δ

Pt. - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Sporadic Distribution

Oiled Vegetation

Photo location, direction, and number

Oil Character Length (m): AP 0 CT 300 ST 300 MS 0 PT 0 TB 0 FL 10 NO 2381

SHORELINE ECOLOGICAL SUMMARY

REVISION: 001

Segment ST / KN212 Subdivision A Date (mo / day / yr) 4-20-90

Time (24 hr) 15:30 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 35 (3) Cobble 10 (4) Pebble 5 (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 (3)

Photographs: Roll No. ST-13-4

Frames 19-21

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

64- no comment

1. moderate to dense barnacles and mussels on mid intertidal boulder/boulders, and moderate to dense barnacles on low intertidal boulders near stream #1 would be susceptible to disturbances.

2. moderate to dense mussels and barnacles on mid intertidal boulder/boulders.

Shoreline Ecological Summary

2 of 2

Segment ST-KN2R2

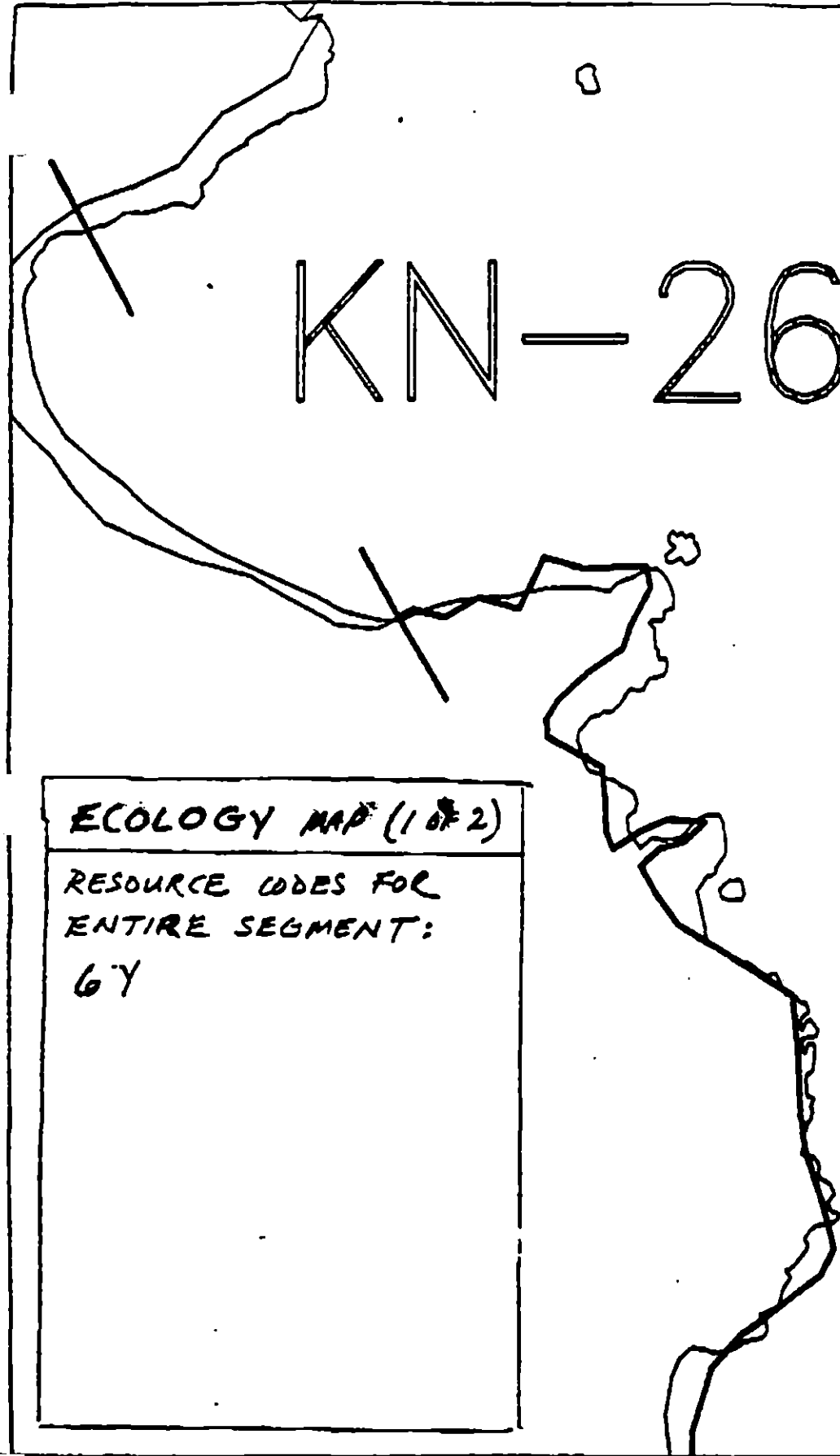
Subdivision A

4-20-90

logist: David Lohr

Wildlife Observations / General Comments

- present in low intertidal: *Alaria*, *Halosaccion*, *Enteromorpha*, *Ulva*, *Katharina tunicata*, *Ceramium*/*Polysiphonia*, *Pisaster ochraceus*, *Annelips*, *Nuella* unidentified branching red alga (*Rhodomena*?), Unidentified "bleed" red alga, *Nuella* egg cases (empty)
mid intertidal: *Callithamnion*, *Ulva*, *Enteromorpha*, *Orchestoidea* (under cobble), *Scytosiphon*, *Porphyra*, *Cladophora*, coralline algae, *Endocladia*, *Annelips*, *Nuella*, *Anthopleura*, *Sulpiria*, *Pagurus*, *Katharina tunicata*, *Tonicella*, *Pisaster ochraceus*, *Leptasterias*
high intertidal: *Enteromorpha*, *Cladophora*
- Algal cover in low intertidal was ~70%. In many areas this was due to dense cover of *Enteromorpha*.
- 3 mature bald eagles and 3-4 sea lions spotted in area.
- 2 streams located in segment. Stream #1 appeared to be due to snow melt.
- Oil-covered boulders in mid-intertidal were observed at sites 1 and 2 (see Ecology map). Those at site 2 were ~~the~~ very lightly oiled and patchily distributed. There was no obvious difference in mortality between oiled and non-oiled boulders at this site. Unfortunately mortality observations were not made at site 1 where the oiling was heavier.
- Abundances in this segment were patchy, especially on boulders. For example at site 3 boulders and mussels were overall moderate (patchily dense) on mid-intertidal boulders, while at site 2 (see Ecology map) mussels were rare and boulders sparse.



KN-26

ECOLOGY MAP (1 of 2)

RESOURCE CODES FOR
ENTIRE SEGMENT:

6Y

↓ PWS 340A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-212

ADEC Segment Length: 2908m



Map Key: PWS-340b

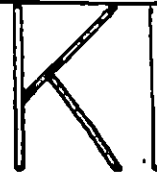
Name: _____

Date: _____

Data Entered: _____

↑ PWS
3408

Stream #1



ECOLOGY MAP 22

Site #1 → X

Site #3 — X

Site #2 → X



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-212

ADEC Segment Length: 2908m



Map Key: PWS-340a

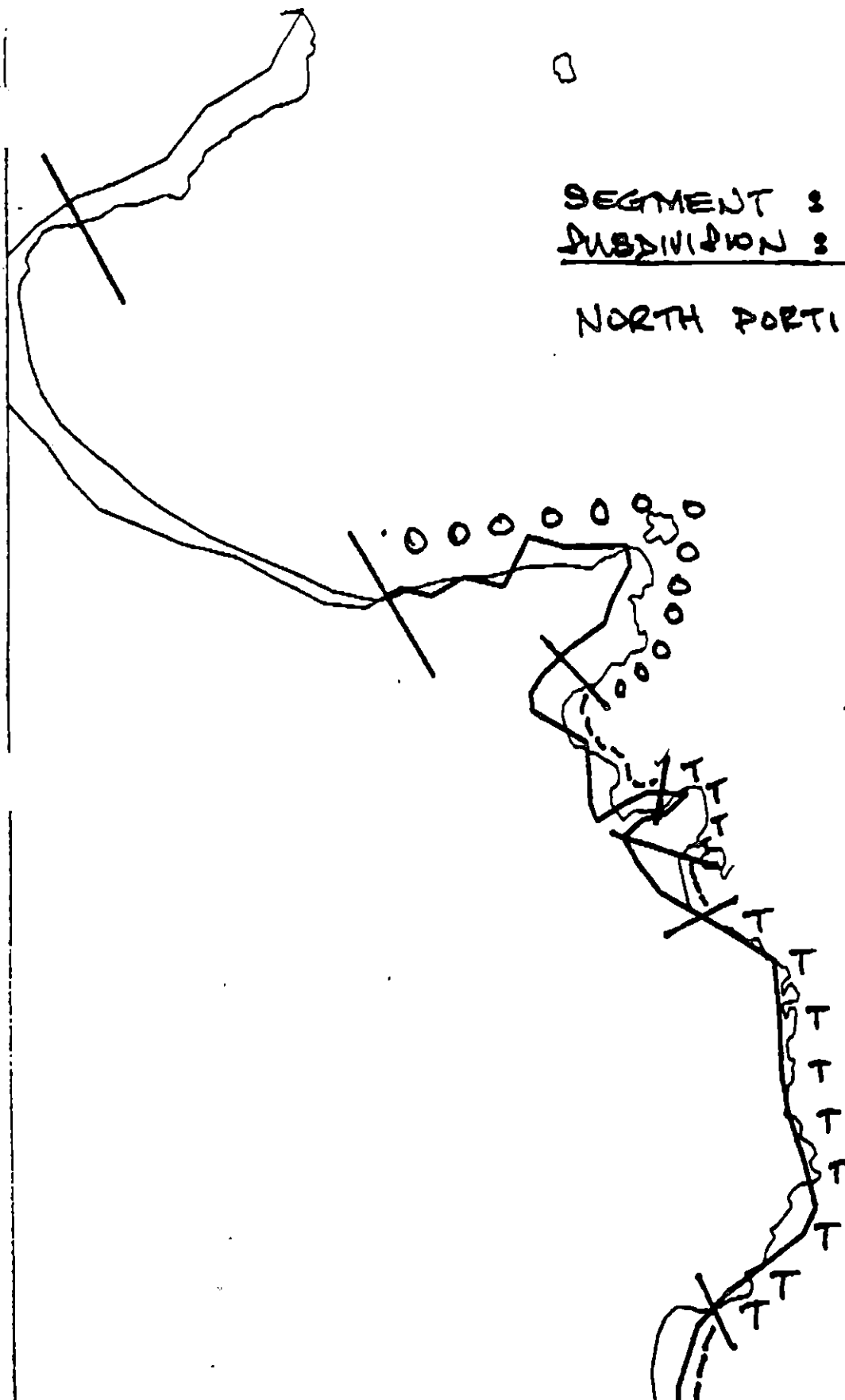
Name: _____

Date: _____

Data Entered: _____

SEGMENT : ST/KN-212
SUBDIVISION : A-1 of 1

NORTH PORTION



↓ PWS 340F

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KN-212

ADEC Segment Length: 2908m

0 100 200 300

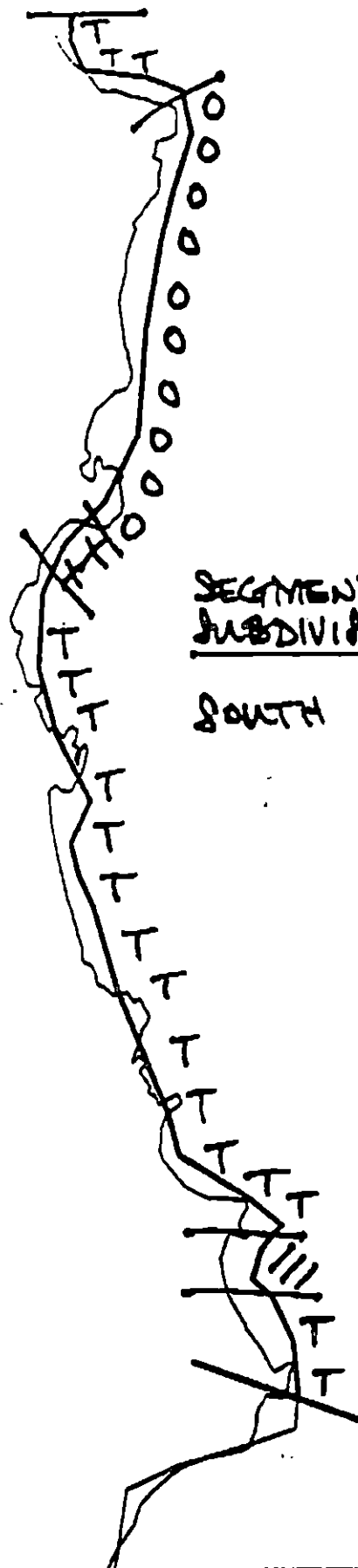
Map Key: PWS-340b

Name: Rick Gillie

Date: 04/20/90

Date Entered:

↑
PWS
3-108

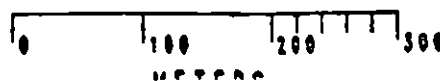


SEGMENT : ST/KN-212
SUBDIVISION: A-10f1
SOUTH PORTION

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

KN-212

ADEC Segment Length: 2908m



Map Key: PWS-340a
Name: Rick Gillie
Date: 04/20/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-212 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Spot Washing	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No applicable ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

D. J. Janssen

Date

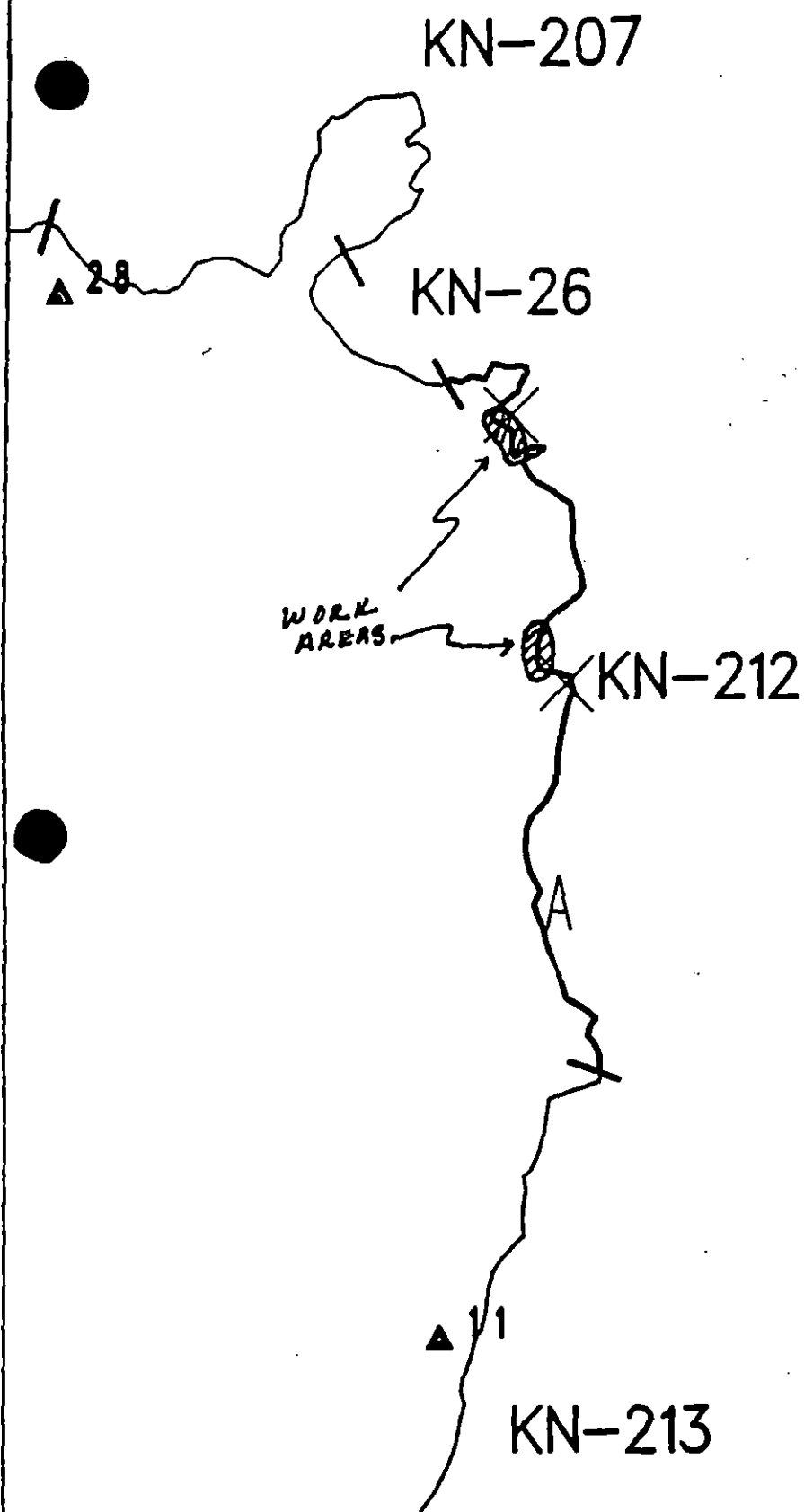
7/3/90

Prepared by

W. Kelly

Date

7/3/90



Exxon Company, USA
Map Key: KN1-KN-212
May 11, 1990



ECOLOGY MAP
SEGMENT KN-212
SUBDIVISION A (1 of 1)
METERS
0 657 914

★	Seabird Colony
▲	Eagle Nest

1 inch = 1499 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-213 SUBDIVISION A (1 of 5) DATE 03/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G Stream #226-30-16853

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

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

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

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Hume DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 417 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:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER Art Weiner

EXXON ANDY TOL Andy Tol

NOAA Bert Wescott Bert Wescott

USCG KENNETH KEDW Kenneth Kedw

FOSC: DATE: 5-12-90

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)
- 7H-I Finfish harvesting
- 7J Deer harvesting (8/15 to 2/28)
- 7J Invertebrate harvesting
 For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-213 SUBDIVISION: A DATE 3/31/90

USCG
NAME SCOTT CAULSFORD SIGNATURE Scott Caulsford MST

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME Wesley Gahormley SIGNATURE Wesley Gahormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 00/20/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KN-213
 BIO MA. SCOTT LAND REP JOHNSON L (CAC) SUBDIVISION A/1043
 EXXON J. BUTLER ADEC W. GORMLEY TIME 07:30 to 08:00
 TEAM NO.: 3 TIDE LEVEL: 5 to 4 FT DATE 3 / 31 / 90
 EST. SUBDIVISION LENGTH: 425 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90 % B 5 % C 5 % P — % G — % S — % M — % V — %
 SLOPE: Long — % Hang 20 % Vert 80 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 425 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	S	E	W	1	2	3	4	5	SW	SE	NE	NW
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
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. ST-3-1Frames 17-20

SUBSURFACE OIL NO PITS — ALL ROCK & LARGE BOULDERS

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5	SW	SE	NE	NW		

COMMENTS steep rocky shore w/ occasional boulder pocket over bedrock. NO OIL

+ 4 ft tide prevented examination of LITZ.
vertical - overhanging cliffs to 20m.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST KN213 Subdivision A Date (mo / day / yr) 3/31/90

Time (24 hr) 4:30 Biologist MASOTT

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 5 (3) Cobble 5 (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense — Moderate — Low —
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. 57-3-1
 Frames 17-20

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

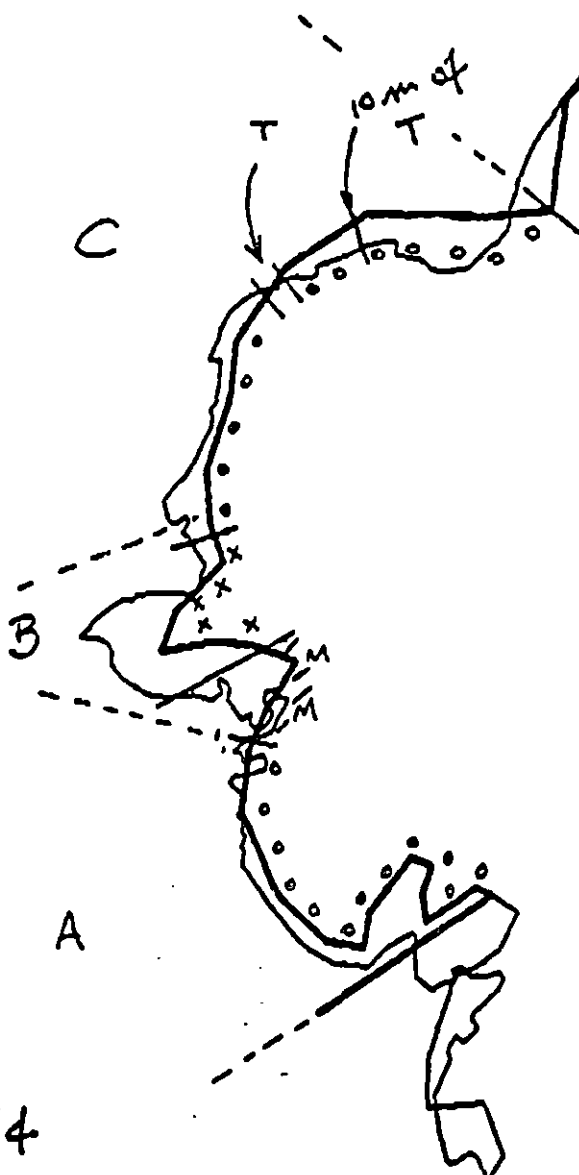
Wildlife Observations/ General Comments:

2 seals
 1 bald eagle

Ecological Considerations:

diverse, moderate density MTZ

↑ 2003
2410



494

12

KN-213

ADEC Segment Length: 3351m

Exon 4 : 3662m

METERS



Name: G. MACDONALD

Date: 3/31/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-213 SUBDIVISION B (2 of 5) DATE 03/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16853

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

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

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

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

SHPO SIGNATURE: Charles J. Hume DATE: 4/20/90

OILING CATEGORIZATION:

Wide 189 m: Medium 95 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 20cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual pick-up of mousse patties, 2) Removal of tarmats and 3) Bioremediation of areas shown on the attached sketch map but not within 100m of anadrmous stream. Work should be conducted between 6/1 and 7/9 based on above salmon constraints and with approval from ADF&G and USFWS regarding eagle nests.

TAG COMMENTS: MONITORS TO ASSESS SUITZ + LOGS AT TIME OF TREATMENT.

TAG APPROVAL DATE: 4/20/90.

ADEC ART WEINER

EXXON ANDY TEA

NOAA Burl Wescott

USCG KENNETH KEANE

FOSC: W L DATE: 5-12-90

CAC Rep to be on scene. Recovery KN213C UITZ and SUITZ while working the shoreline.

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 (5/7 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 (5/11 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 unrolled 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.
- 6J Recreation: Tent sites (5/1 to 9/15)
- 6V Anchorages (5/1 to 9/15)
- 6W Forest Service cabins (5/1 to 9/15)
- 6X Lodge (5/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7H Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-213 SUBDIVISION: B. DATE 3/31/90

JSCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This segment has major patches of asphalt pavement thru-out segment that go to a depth of 15cm. Other areas are highly contaminated by a coat & cover greater than 50% of area. I recommend this area be excavated by some type of small mechanical device (perhaps a bobcat?) which I think would work extremely well in this terrain. The terrain consists of small boulders & cobble & a bobcat could maneuver well in this area as it stripped the top 10-15cm of contaminated material. Manual removal would take a massive assault by numerous workers removing numerous bags of contaminated waste. Also snow covers oily logs at the site and should be reassessed at a later date when snow melts to see exactly what the logs show.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

RESURVEY OF UPLANDS NEEDED DUE TO SNOW COVER.

SHORELINE OILING SUMMARY

REVISION NO. 06/22

OG G. MacDONALD USCG S. RAINSFORD SEGMENT ST/ KN-213
 BIO MA. Scott LAND REP L. Johnson (CAC) SUBDIVISION B (2 of 5)
 EXXON T. BUTLER ADEC W. GARNLEY TIME OB: 061019:00
 TEAM NO.: 3 TIDE LEVEL: +4 to -1 FT DATE 3/31/90
 EST. SUBDIVISION LENGTH: 375 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 15 % B 20 % C 20 % P 30 % G 10 % S 5 % M 0 % V 0
 SLOPE: Long 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 235 m M 120 m N 0 m VL 0 m NO 20 m

SURFACE OIL

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

PAVEMENT: H F (S) 1,200 sq. m by 10PATTIES / TARBALLS > 20 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED: ☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-3-1Frames 21-29

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	1	2	3	4	5	SU	U	M	L		
1	25					X	.								X				N	G P C
2	20					X	.								X				N	C P G
3	20					X	.								X				N	G P
4	20					X	.								X				N	C B
5	30		X				5-20		X			X			X				N	P.C.R
6	30					X	.									X			N	C P G
7	20					X	.												X	C P G

COMMENTS

low L B.P beach between bordered by ragged steep rocky shore; Mainly surface oil as 15 cm thick Al trapped behind rock outcrop, plus PT & pervasive mousse cover.

SEGMENT **KN-213 B**

SUBDIVISION **B**

DATE **3/31/90**

CHECKLIST

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

LEGEND

- 1 Δ
P1 - No Subsurface Oil
- 2 Δ
P2 - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

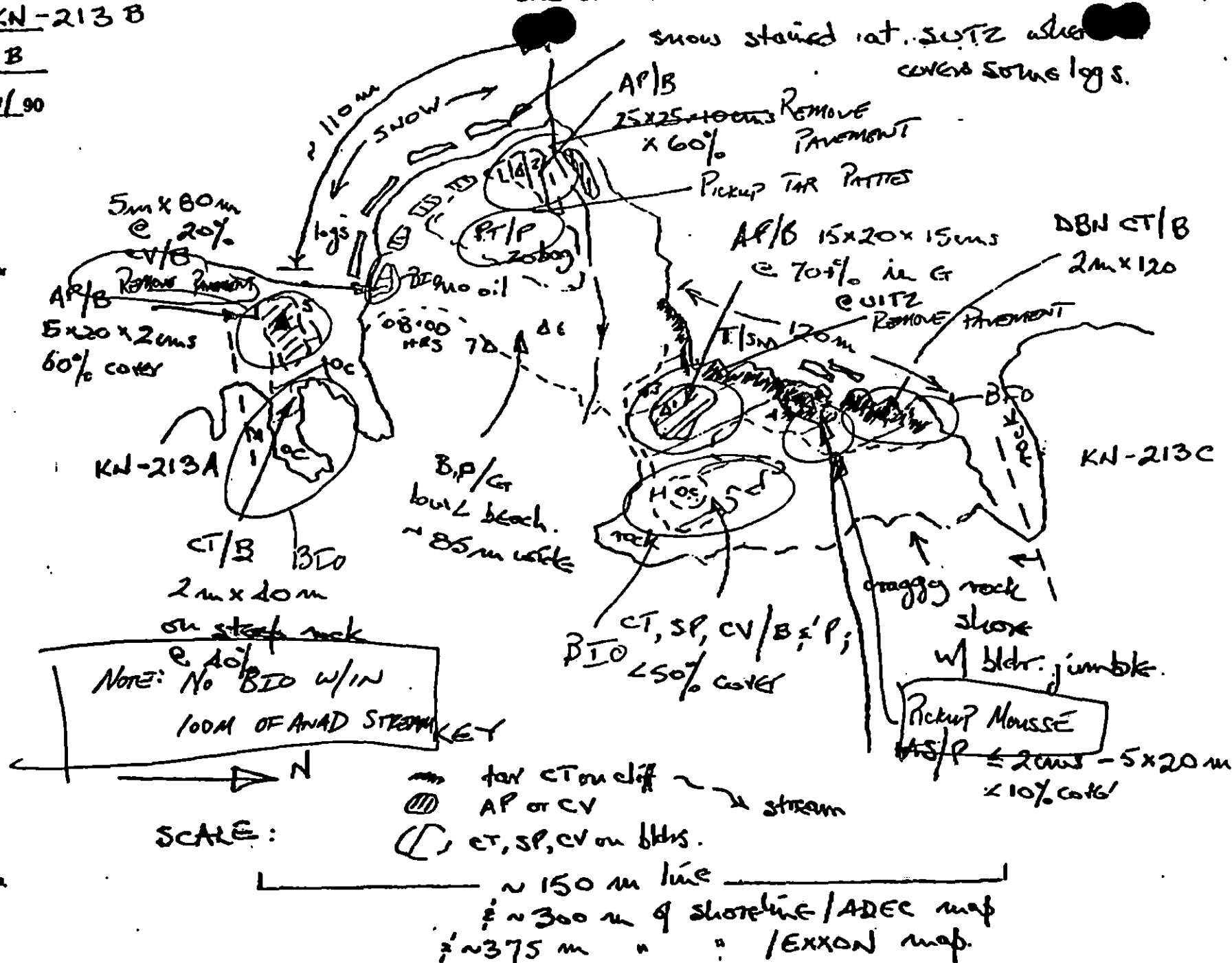
Patchy Distribution
- CT/S

Speckled Distribution

Oiled Vegetation

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

SKETCH MAP



Character Length (m): AP 45 PO 0 CV 220 CT 280 ST 0 MS 0 PT 100 TB 0 FL 0 NO 20

REVISION 03/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/80

Segment ST/KN213 Subdivision B Date (mo / day / yr) 3/31/97

Time (24 hr) 8:15 Biologist MASCOTH

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 20 (3) Cobble 20 (4) Pebble 40 (5) Sand 5 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense — Moderate — Low —
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. 37-3-1

Frames 21-28

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:

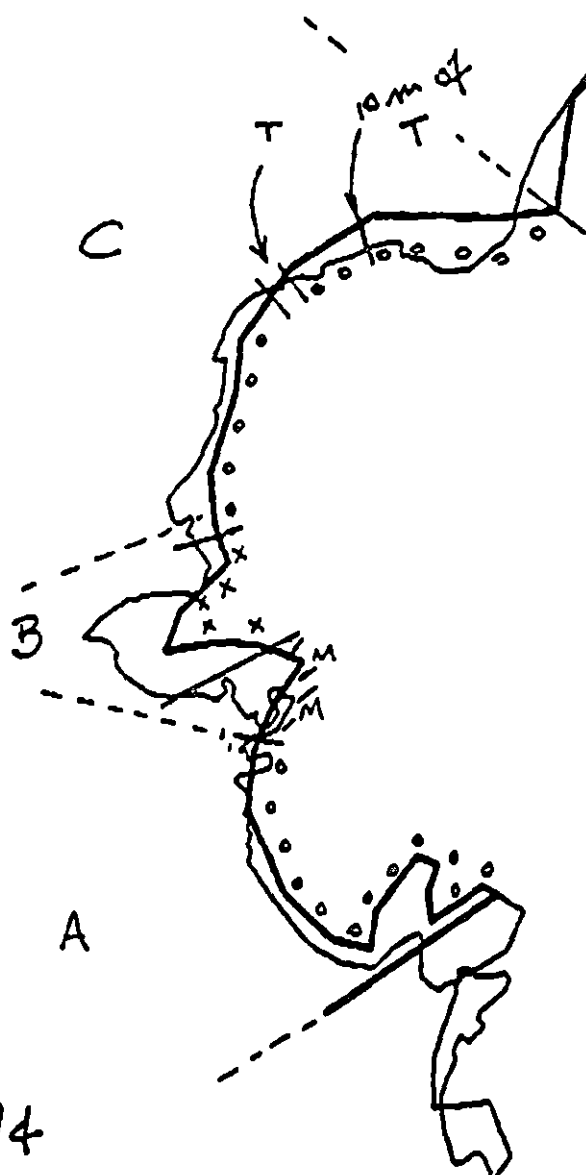
3 deer at snow line in cove

Ecological Considerations:

mid tidal - bedrock + boulder dense covering of algae

1260 m

↑ PWS
3410



4 of 4

XXXX Wide

/// Medium - M

--- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m

EXXON " " : 3662m

0 100 200 300
METERS

Map Key: PWS-3410

Name: G. MACDONALD

Date: 3/31/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-213 SUBDIVISION B (2 of 5)

WORK WINDOW

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | |
|---------------------|---|
| 1A,1B Salmon Stream | ADF&G catalogued anadromous stream (226-30-16853) is in Subdivision B. 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. |
| 5T Bald Eagle Nest | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site. |

OTHER ECOLOGICAL CONSIDERATIONS

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

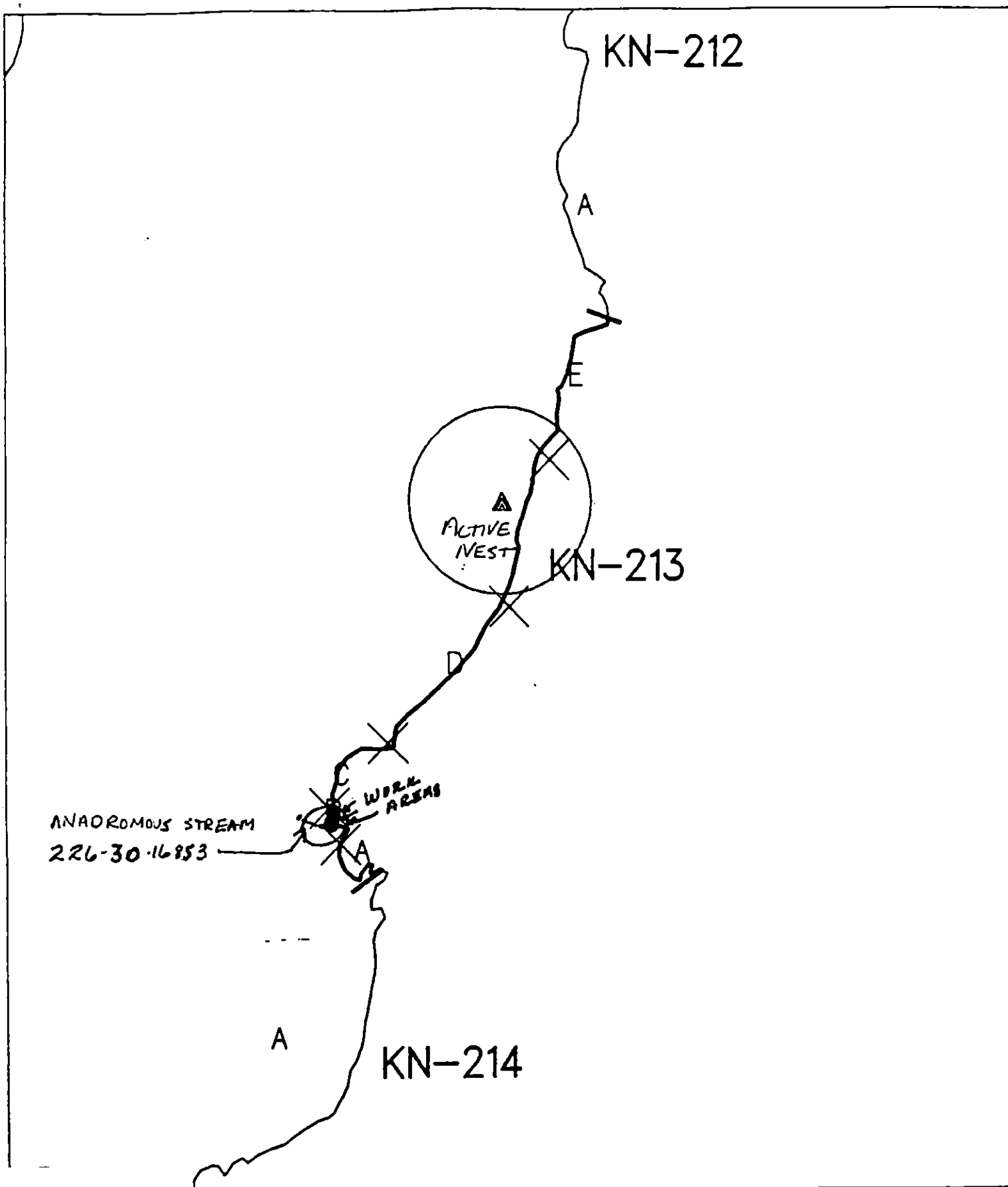
SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16853)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

Date

Prepared by

Date



Exxon Company, USA
Map Key: PMS-KN-213



ECOLOGY MAP
SEGMENT KN-213
SUBDIVISION B (2 of 5)
METERS

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

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-213 STREAM NO: 226-30-16853 DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All Bald Eagle nests (3/1 to 6/1)
6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Avoid trampling and oiling of biologically rich MITZ AND LITZ.

SHPO SIGNATURE: Rachel D. Dora DATE: 5/20/90

Subsurface Oil Observed: Yes X No Maximum Depth 20cm

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 tarmat and patties, 2) remove oiled vegetation and boom SUTZ and 3) bioremediate continuous cover in UITZ as indicated on attached sketch map. Work from 6/1 to 7/9 with approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/29/90
ADEC ART WEINER Art Weiner
EXXON ANDY TGM Andy TGM
NOAA BILL WEGERT Bill Wegert
USCG G.A. REITER G.A. Reiter

FOSC [Signature] DATE: 5/31/90

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 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)
74H Finfish harvesting
74I Deer harvesting (8/15 to 2/28)
74J 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

7/6

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN 213 SUBDIVISION: 30-16-153 DATE 4/27/90

USCG

NAME

CWO MCMAHON

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUAL CLEAN-UP: REMOVE MOUSSE & TAR PATCHES (PER MAP)
2. SPOT WASH (PER MAP)
3. BIOREMEDIATE (PER MAP)

ADF-16

ADEG

NAME

TOM CRAWL

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

THIS AREA SHOULD BE TREATED IN SEVERAL STEPS. FIRST STEP WOULD BE TO REMOVE ALL TAR AND ASPHALT AS POSSIBLE FROM STORM BERM, ARE #1, #2, #3 AND TAR FROM BETWEEN BOULDERS. SECOND STEP WOULD BE TO HOT WATER WASH ALL OILED AREAS IN THE COVE INCLUDING TARED CL AREAS AND BOULDERS. ONCE THIS HAD BEEN COMPLETED AREA #1 AND #3 SHOULD BE TILLED WITH PICK AND SHOVEL OR WITH USE OF A DOZER & RIPPER BAR ATTACHED. STEP #4 WOULD BE TO HOT WATER WASH T AREAS AGAIN. THE LAST STEP IS TO BURY SOLID FERTILIZE PELLETS IN UPPER INTERIOR STORM BERM TO INHANCE BIOREMEDIATION.

LAND MANAGER

NAME

~~NO~~

INIPOL IS RECOMMENDED FOR USE HERE.

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

2/63

Alaska Department of Fish and Game
ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

27 April 1990

ASC # 226-30-16853

Segment KN-213

Observations The intertidal zone surrounding this channel is sheltered from wave action by large bedrock outcrops guarding either side of the stream mouth. Very heavy oiling remains at this site. Additionally, large volumes of mobile oil near the stream will act as a source of chronic re-oiling if not thoroughly treated.

North of the channel (the right side of ADF&G's Multi-Assessment Data Form diagram), a very heavy tar mat covers an extensive portion of the upper-intertidal zone, coating boulders and cobbles. Closer to the channel and further upstream, large tar patties are trapped between boulders. Bedrock walls bordering the beach are coated with a thick layer of tar.

Immediately adjacent to the south of the channel, tar mats cover and penetrate into a cobble substrate. Beyond this patch, scattered tar patties occur throughout the mid- and upper-intertidal zone. The gravel storm berm contains buried oil and oiled debris (logs and pom-poms). Tar splatters occur on the boulders at the southern edge of the cove.

Approximately 100 meters north of the channel, a protected cove contains large amounts of mobile oil trapped between boulders.

Treatment Recommendations Manually remove all surface tar mats and patties. Remove oiled debris from storm berm. Hot water wash oiled large boulders and bedrock walls. Displace clean gravel from the storm berm to expose zone of oil. Remove oil sediments, hot washing if necessary. Till heavily oiled areas after surface oil removal to speed weathering of remaining contaminated substrate. See ADF&G's Multi-Assessment Data Form for additional treatment suggestions.

The large volume of mobile oil 100 meters north of the channel must be thoroughly treated to prevent the chronic re-oiling of this stream.

SUMMARY OILING SUMMARY (ANAD.)

OG William Reid USCG McMAHON SEGMENT ST/ KN213
 BIO MICHAEL FAWCETT LAND REP TOM CLOWE ADET STRAID 226-30-16831 OF
 EXXON Gus Garcia ADFG Mike Wierner TIME 7:30
 TEAM NO. 15 TIDE LEVEL +1 FT DATE 27 APR 1990 10/6
 EST. SUBDIVISION LENGTH: 70 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 30 % B 30 % C 50 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ H
 OIL CATEGORY LENGTH: W 30 m M 0 m N 2 m VL 0 m NO 38

SURFACE OIL

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

PAVEMENT H (F) (S) 375 sq m by 2PATTIES / TARBALLS 1

NEAR SHORE SHEEN? (NO) BR RW SL

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

Did you Co
DEBRIS
☐ YES ☒ NO
TYPE
#BAGS

Photographs:

Roll No. AS-15-6Frames 25-31

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	T	SURF/ SUBSUR SEDIMENT						
		OP	OR	OL	OF	NO		US	SO	1	2	3	4	5	SU	M	W	U										
1	40			X			10-20		X					X					X					N			P/C	
2	25		X				0-10		X					X						X					N			P/G
3	35		X				0-7		X					X						X					N			P/G

COMMENTS

* OILED INTERVAL < 5 cm IN PIT NOS. 2 AND 3. DOES NOT CONSTITUTE SUBSURFACE OIL.

REVIEWED FWDATE 5-1-90

5-11-64

8/63 ±

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: DS 33 DS TS AVS SCW H998 PTA2 REGION: PR KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: April 27 199015 HIGH TIDE TIMES: 121 TEAM RECORDER: TOM CROWL4 START TIME: 072616 HIGH TIDE HTS: 122 OBSERVERS: MIKE WIDOMER5 STOP TIME: 084917 LOW TIDE TIMES: 123 AGENCY: ADFG ANAD SCOT6 SEGMENT #: KN21318 LOW TIDE HTS: 124 PHOTOS TAKEN: Y (N)

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frames: _____

8 K-UNIT: _____

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y (N) TAPES: _____

9 STAT AREA: _____

20 USGS QUAD: SEWARD B/2

Starts: _____ Ends: _____

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y (N) Number

12 SOURCE: Map Loran

Oil _____

13 LOCATION: BUA COVE

Sediment _____

14 DESCRIPTION: KNIGHT ISLAND

Biological _____

EXTENT OF OIL

Water _____

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	M	H	S	L	M	H	S

36 CATALOGED ANAD. FISH STREAM? (Y) N

28 SURFACE THICKNESS

37 CATALOG #: 226-30-16853

29 PENETRATION

38 STREAM NAME: BUA CREEK30 OVERALL OIL IMPACT: N VL L M (H)

39 OIL IN STREAM BED? Y N

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain40 OIL ON STREAM BANKS? (Y) N32 OILED DEBRIS? (Y) N41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 30 meters)33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cave

42 OIL WITHIN 1 MILE OF STREAM? Y N

Lagoon Marsh

Shore: _____

34 WAVE EXPOSURE: High Moderate Low

43 ANADROMOUS FISH PRESENT? Y N

35 SUBSTRATE TYPE: Bedrock _____ Boulder X Cobble _____

44 ANADROMOUS FISH OBSERVATION

Gravel X Sand _____ Mud/silt _____

Species	Aerial	Ground

COMMENTS:

NOTE: LARGE EAGLE NEST LEFT SIDE OF CREEK

APR-27-1990

19:07

FROM

EXXON GMD CORPUS

TO

SUBJ TERM

P.08

the proviso that absorbent booms and pom-pom be carefully placed to prevent runoff of waste 19 to biologically rich MTZ-LTZ areas. Also, minimize trampling in those areas. *M. H. Fawcett*

9/63

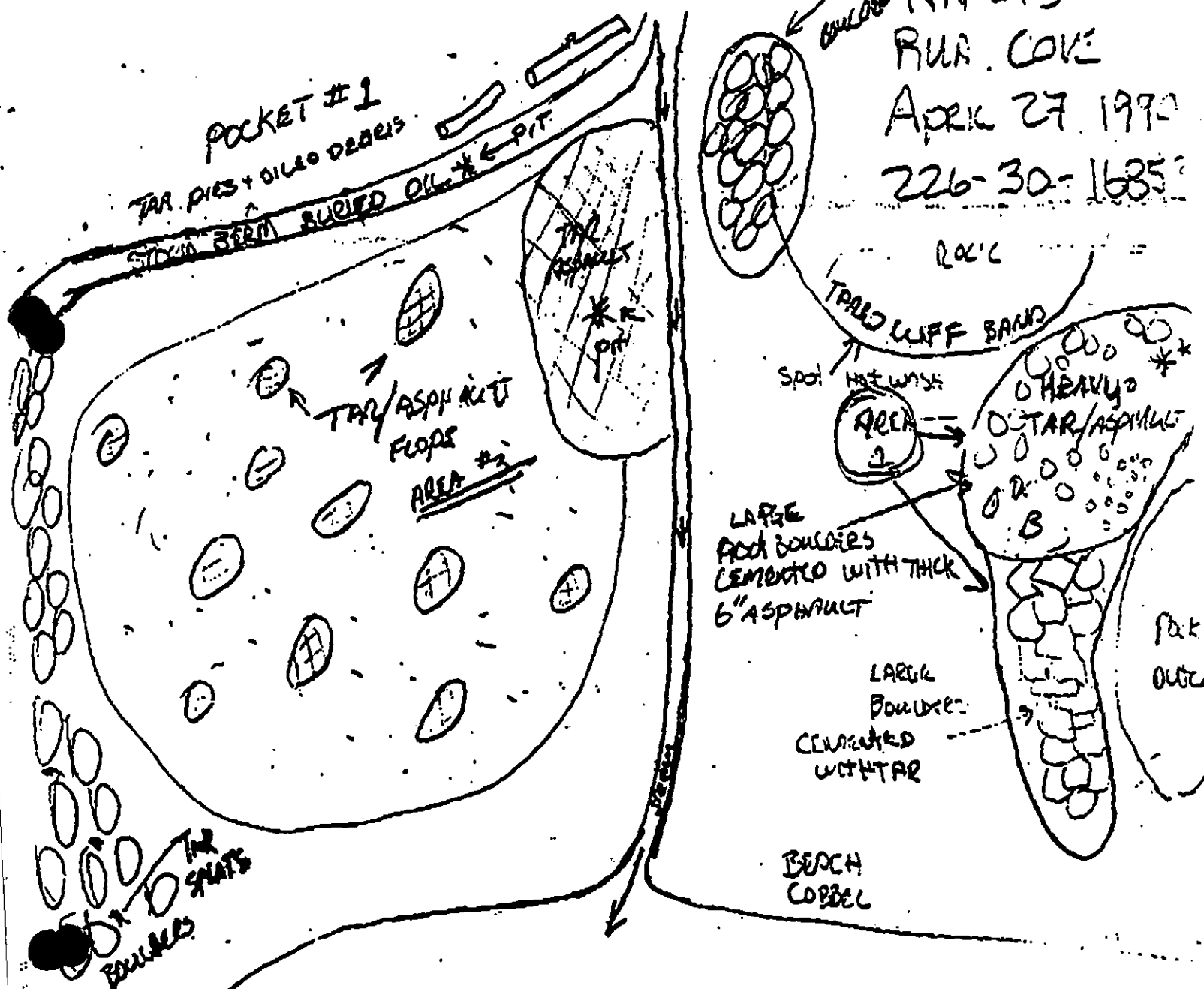
NAME(S)

RECOMMENDATION:

DESCRIPTION

THIS COVE SHOULD BE TREATED IN STEPS. THE 1ST STEP WOULD BE TO MANUALLY REMOVE ALL ASPHALT ON AREA (A) RIGHT SIDE OF CREEK & LEFT SIDE OF AREA (B) AND RESTORE NATURAL TAR PIES AND OILY DEPOS. STEP TWO NOT WASH AREAS OF LARGE ROCKS, ISLANDS AND CLIFF ON AREA 1, 2, 3. STEP III TILL AREAS WITH CAT & DOG BAR AND HOT WATER WASH STORM BERM AND AREA 1 A SECOND TIME. STEP IV BURY SOLID FERTILIZER PELLETS IN A FURROW AT STORM BERM (SEE ATTACHED MAP).

INITIAL IS NOT RECOMMENDED
OIL DISTRIBUTION DIAGRAM



KN 213
RUA COVE
APRIL 27 1990
226-30-1635

P 1 of 2 14/6

Segment KN 213

27 April 90

Stream 226-30-16333

Michael Fawcett

Ecological Summary

This medium-size stream has an intertidal portion about 60m long, partially sheltered from waves by bedrock outcrops at the mouth of the cove. The heaviest remaining oil is an asphalt pavement area among UTZ boulders directly behind the bedrock outcrop that forms the NE part of the mouth of the cove.

Other asphalt and buried oil was found on the south side of the stream in the UTZ. Below the oiled areas is a biologically rich MTZ and LTZ, especially near the stream mouth. The sand/pebble LTZ has infaunal clams, moon snails, worms, etc, and shows signs of a lot of recent sea otter activity (craters in the bottom and broken clam shells). Dense populations of barnacles, *Fucus*, littorines, and whelks occur on boulders and bedrock, and a dense mussel bed exists below the asphalt area on the north side of the stream. Tilling, hot wash, manual removal and bio-remediation are recommended for removing the remaining oil. These activities should be conducted with careful attention to placement of absorbent

segment KN213
stream 226-30-16853

P 2. of 2 15/1
27 Apr 90

close supervision of workers to minimize
trampling and disturbance in the mussel
beds and the rich lower intertidal area.

M. J. Fawcett

1260 m

ECOLOGICAL DATA

1A 1B
ST
64

PWS
3410
OIL
TALL
ALST

WIDE
MEDIUM
NARROW

SUBJECT PROPERTIES
OIL
= 276-50 / 1053
100/101
100/101
SUBDIVISION
B (7 at 5)

10m of
T

B

KN-213

A

4/4

XXXX Wide

//// Medium - M

--- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m

EXON " " : 3662m

0 100 200 300
METERS

Map Key: PWS-3410

Name: Gr. MACDONALD

Date: 3/31/90

Date Entered:

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16853

SEGMENT KN-213 SUBDIVISION B

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16853) is in Subdivision B. 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.

5T Bald Eagle Nest

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

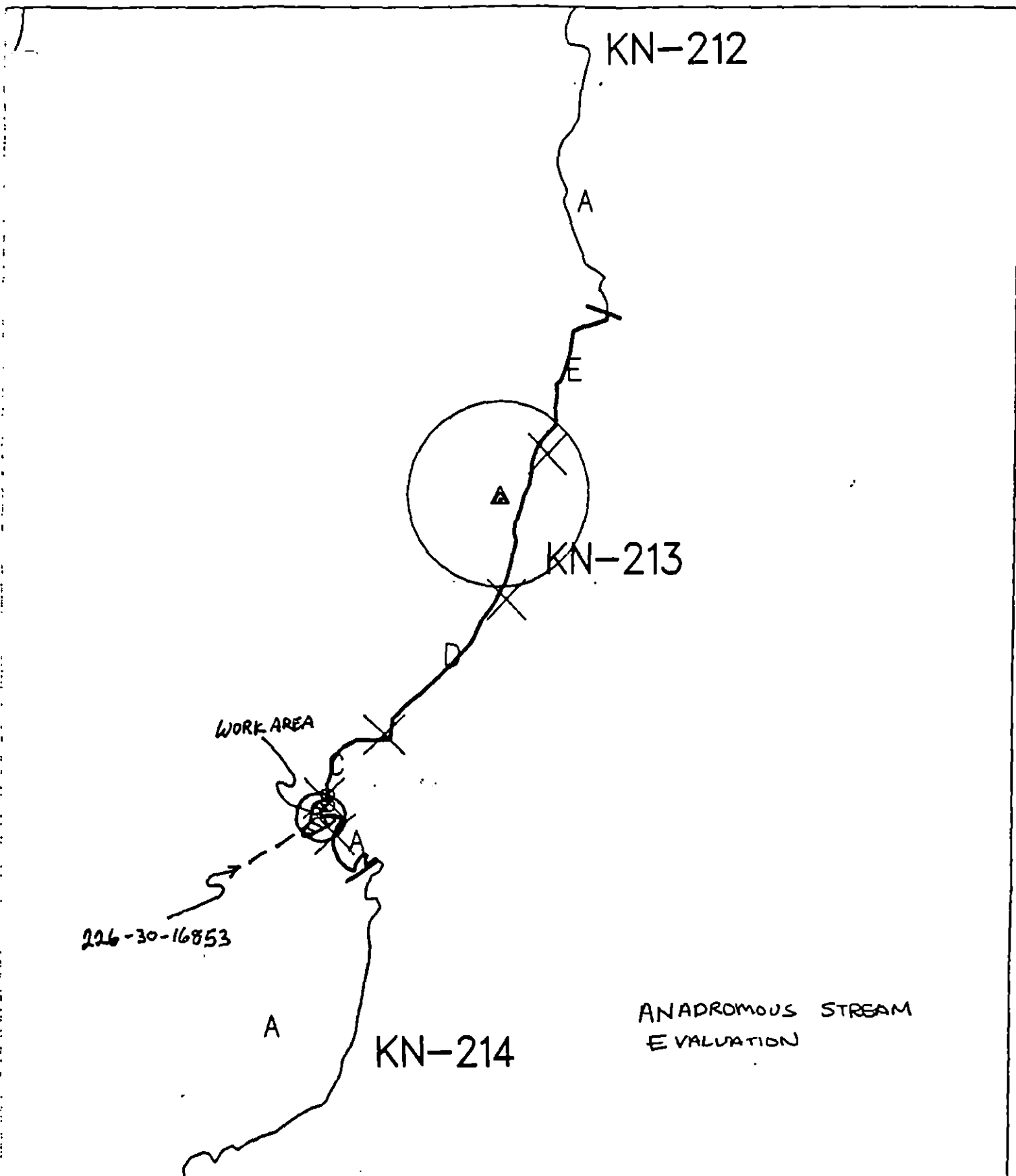
OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-213B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC [Signature] Date 6-10-90

Prepared by [Signature] Date 6/10/90



Exxon Company, USA
 Map Key: PWS-KN-213
 June 05, 1990



ECOLOGY MAP
 SEGMENT KN-213
 SUBDIVISION B (2 of 5)
 METERS



★	Seabird Colony
△	Active Eagle Nest
△	Inactive Eagle Nest



SHORELINE EVALUATION

SEGMENT ST/ KN-213 SUBDIVISION C (3 of 5) DATE 03/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16853

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

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

5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

SHPO SIGNATURE

[Signature]

DATE:

4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 32 m: No Oil 406 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ 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:

TAG APPROVAL DATE: 4/20/90

ADEC ART WOODZ D. J. Wilson

EXXON AMM TSK Beal

NOAA Bruce Wescott Bruce Wescott

USCG Kenneth K. King James King

FOSC:

W. L.

DATE: 5-12-90

U1T2 and SUI T2 requires resurvey.
Perform while working on KN-213 B.

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 unholed 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 (5/1 to 9/15) |
| 6V | Anchorage (5/1 to 9/15) |
| 6W | Forest Service cabins (5/1 to 9/15) |
| 6X | Lodge (5/1 to 9/15) |
| 6Y | Special use destination |
| 7Z | Subsistence area: Salmon harvesting (5/1 to 9/30) |
| 7JH | Finfish harvesting |
| 7I | Deer harvesting (5/15 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-213 SUBDIVISION: C DATE 3/30/90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainford MST1

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SNOW COVER NEAR STREAM INHIBITED SURVEY
OF UPLANDS.

394

SHORELINE OILING SUMMARY

REVISION NO. 06/23/90

OG G. MacDONALD USCG S. RAINSFORD SEGMENT ST/ KJ-213
 BIO MA. SCOTT LAND REP L. JOHNSON (CAC) SUBDIVISION C (3 of 5)
 EXXON J. BUTLER ADEC W. GORNLEY TIME 10:00 10:10 10:45
 TEAM NO.: 3 TIDE LEVEL: -1 10 -1 FT DATE 3 / 31 / 90
 EST. SUBDIVISION LENGTH: 460 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S 10 N
 SURFACE SEDIMENTS: R 15 % B 5 % C 35 % P 35 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 10 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 10 m NO 450 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-3-1Frames 30-31

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	BR	OR	OL	OF	NO	TL	LR	LR	SU	U	M	U		
1	15					X	.											X				N	CL
2	15					X	.												X			N	CL
3	25					X	.											X				N	PG
4	15					X	.												X			N	CL
							.																
							.																

COMMENTS: Rugged rock & cliff shore w/ 2 low L cob-ped. beaches.
 Southern beach has small cabin; trace of oil as CL/P @
 up. HRTZ on boulder, rock & crevices.
 Pit locations representative of H1-SUTZ; no sketch nec.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST 16A-213 Subdivision C Date (mo / day / yr) 2/21/90

Time (24 hr) 10:10 Biologist MAScott

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 5 (3) Cobble 35 (4) Pebble 45 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense Moderate 2 Low 2

(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 (⊙)

Photographs:
Roll No. ST-3-1

Frames 20-31

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

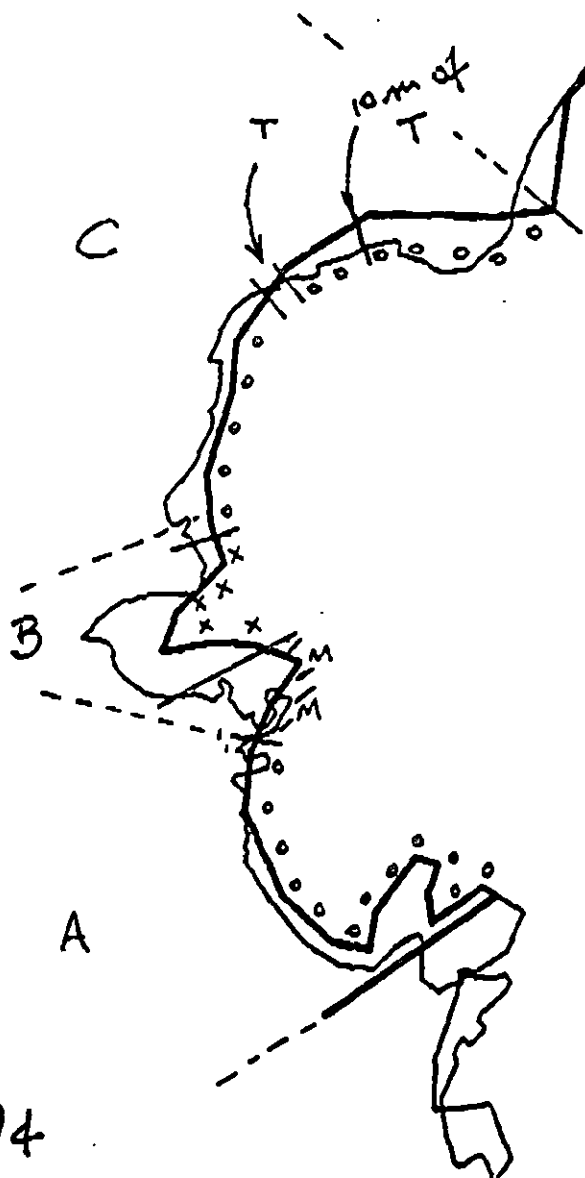
Wildlife Observations/ General Comments:

Ecological Considerations:

LTE - dense, diverse algal cover

1260 m

↑ PWS
E41C



4 of 4

12

XXXX Wide

//// Medium - M

---- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m

Exon " " : 3662m



Map Key: PWS-341a

Name: Gr. MACDONALD

Date: 3/31/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-213 SUBDIVISION D (4 of 5) DATE 03/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16853

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

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

5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to uncoiled substrate and biota.

SHPO SIGNATURE: Charles Ziffme

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 792 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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: Recommend manual pick up of small amount of oil spill re-
sponse debris (sorbent boom) shown on attached sketch map.

TAG COMMENTS: Prior to mobilization of cleanup team monitors
to locate boom indicated on this subdivision

TAG APPROVAL DATE: 4/20/90

ADEC Art Weiner Art Weiner

EXXON Amy Teal Amy Teal

NOAA Burl Wesote Burl Wesote

USCG Kenneth Koval Kenneth Koval

FOSC: ML

DATE: 5-12-90

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 (5/7 to 6/31)
- 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 (5/1 to 9/15)
- 6V Anchorages (5/1 to 9/15)
- 6W Forest Service cabins (5/1 to 9/15)
- 6X Lodge (5/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH 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

SEGMENT ST KN213 SUBDIVISION: D DATE 3/31/90

SCG

NAME M. A. S. SHARP SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

4 SAUSAGE BOOM SECTIONS AT HITZ (SHOWN
ON MAP) (DEBRIS PICK-UP)

LAND MANAGER

NAME M. C. T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/27/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KU-213
 BIO G. Penn LAND REP m. Smith (CAC) SUBDIVISION D 4055
 EXXON S. Reid ADEC S. Ferguson TIME 9:25 to 11:30
 TEAM NO.: 4 TIDE LEVEL: 0 to -1 DATE 3/31/90
 EST. SUBDIVISION LENGTH: 1441 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 0 % B 0 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 20 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1441 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SO BR	DBL RW	GY	R TBR	TL LSP	SU	U	M	U	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	X

PAVEMENT: H F N/A sq. m by 0 crPATTIES / TARBALLS N/A BAGSNEAR SHORE SHEEN? (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-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SD BR	OR RW	OT BL	DR TL	LR	SU	UR	ME	LI			
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / KN-213 Subdivision 0 Date (mo / day / yr) 03/31/90
 Time (24 hr) _____ Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock _____ (2) Boulder _____ (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 2 Moderate 3 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. _____

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

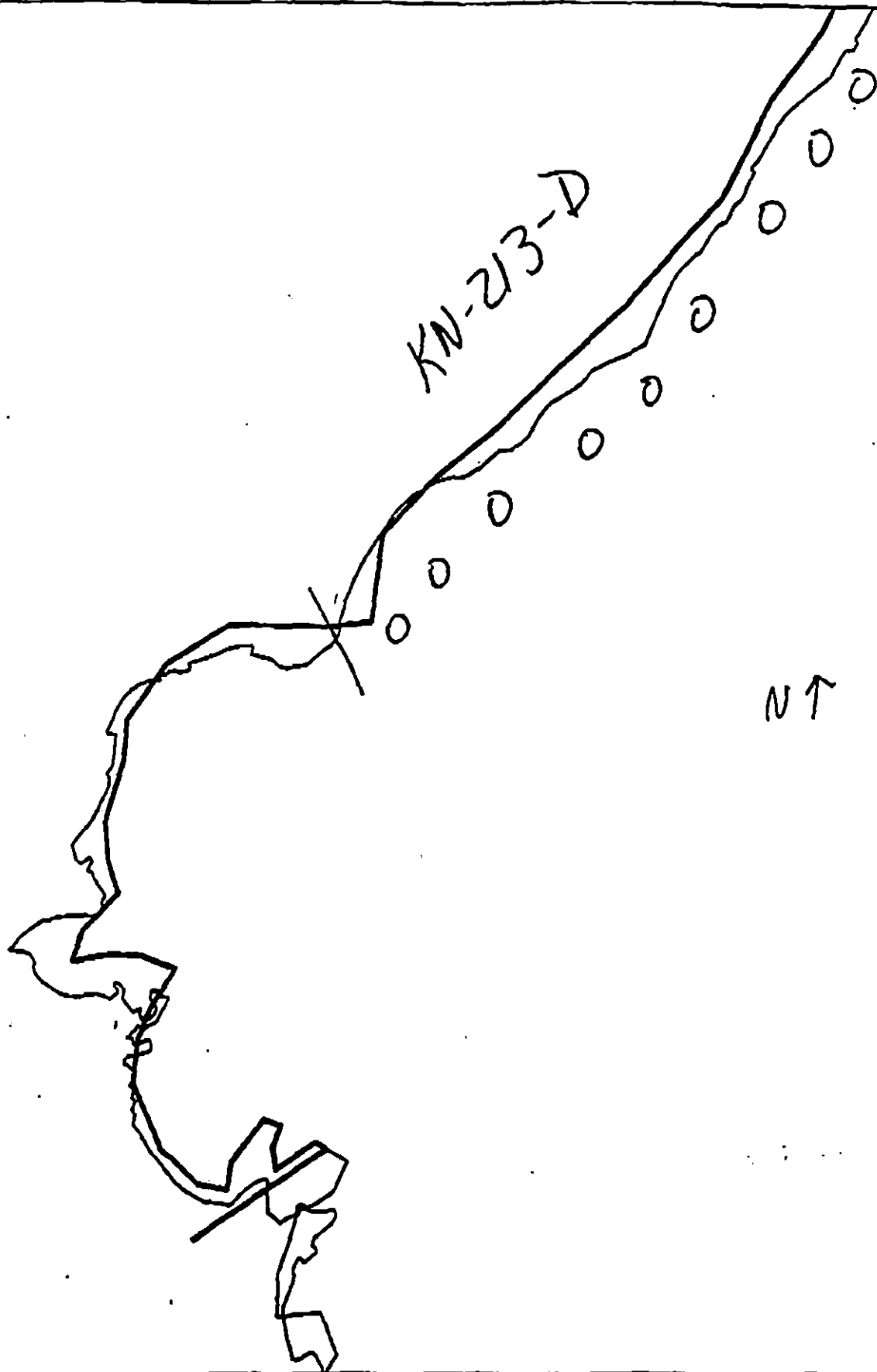
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1 Harbor Seal 2 eagles
 1 Cormorant 1 Song Sparrow

Ecological Considerations:



N ↑

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m

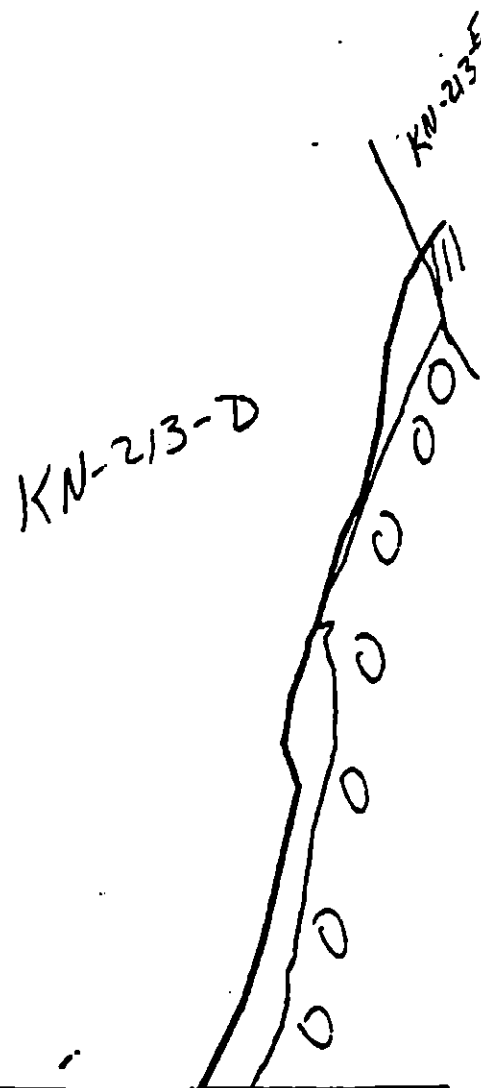


Map Key: PWS-341a

Name: Ramsey

Date: 3/31/90

Data Entered: _____



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m



METERS



Map Key: PWS-341c

Name: Ramsey

Date: 3/31/90

Data Entered: 24

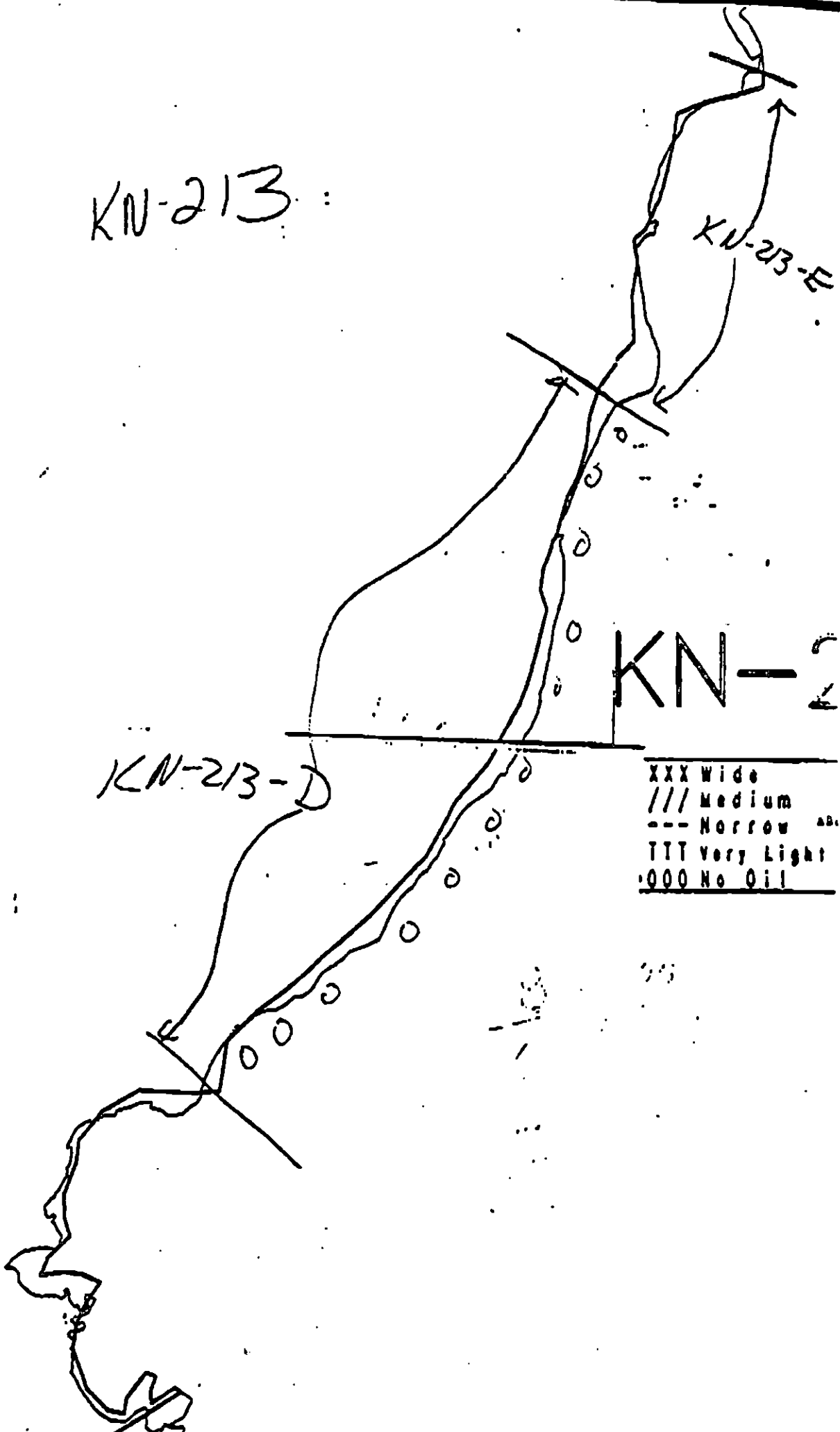
KN-213 :

KN-213-E

KN-2

KN-213-D

XXX Wide
/// Medium
--- Narrow
TTT Very Light
000 No Oil



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-213 SUBDIVISION D (4 of 5)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (226-30-16853) is more than 100m from work site.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision D work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

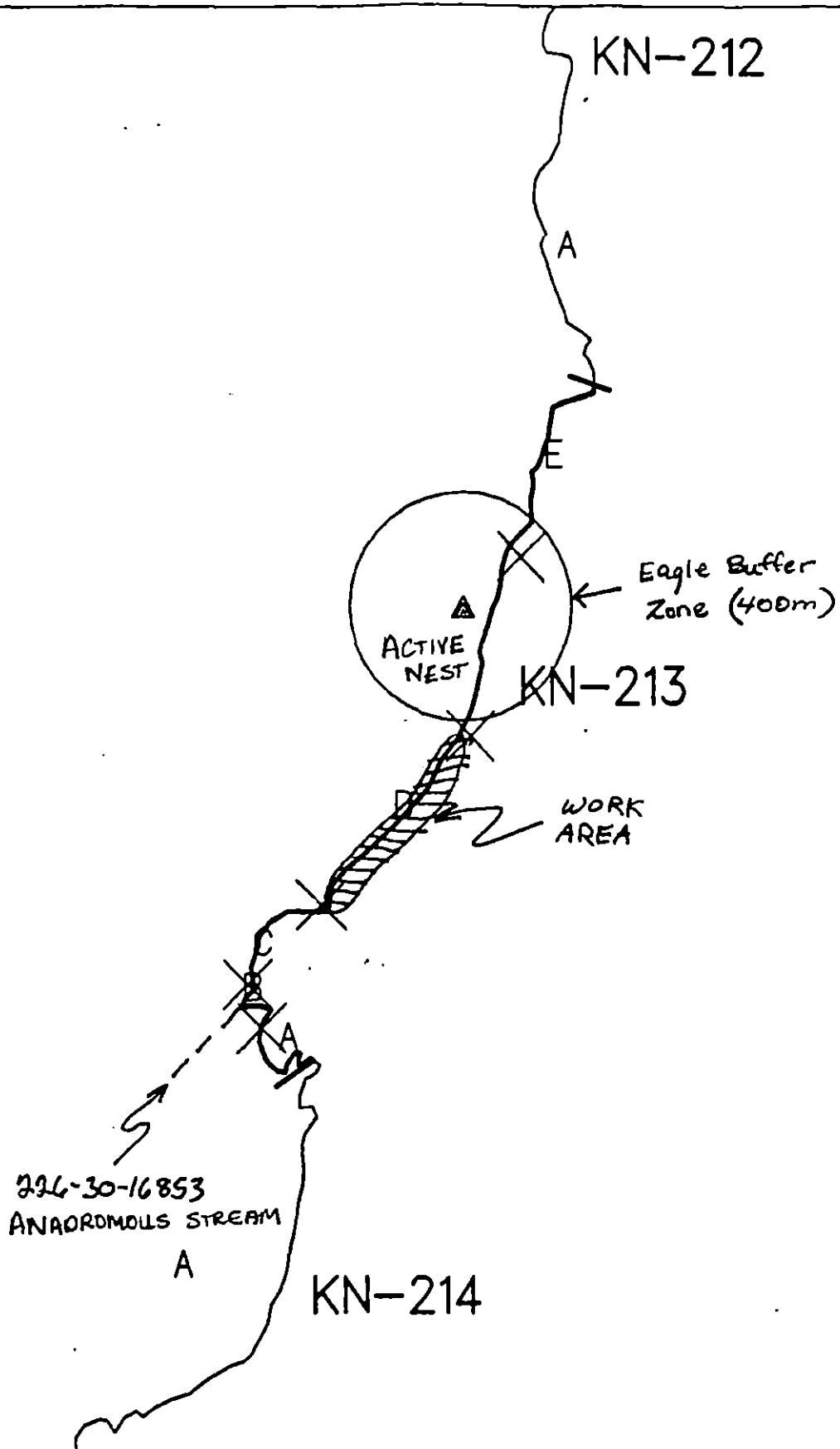
DATE 6-10-90

Prepared By:

P. Phillips 6-10-90

Date

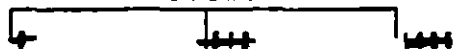
6/10/90



Exxon Company, USA
Map Key: PMS-KN-213
June 05, 1990



ECOLOGY MAP
SEGMENT KN-213
SUBDIVISION D (4 of 5)
METERS



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



SHORELINE EVALUATION

SEGMENT ST/ KN-213 SUBDIVISION E (5 of 5) DATE 03/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16853

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

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

5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to uncoiled substrate and biota.

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 0 m: V.Light 213 m: No Oil 381 m
Subsurface Oil Observed: Yes X No Maximum Depth 9 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation in area of surface cover. Work 6/1 - 7/10 based on salmon constraints, and with approval from ADF&G and USFWS regarding eagles.

TAG COMMENTS: MONITORS TO ASSESS SUITZ PRIOR TO TREATMENT
AND DETERMINE NEED TO PICKUP TARBALLS OR PICK UP
TAR BALLS DURING ASSESSMENT.

TAG APPROVAL DATE: 4/20/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] **DATE:** 5-12-90
Assess SUITZ also -

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 (8/11 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
- 7I Deer harvesting (8/15 to 2/25)
- 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-213 SUBDIVISION: E DATE 3/31/90

SCG
NAME MAURICE J. SHARP SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS ☒ TREATMENT SUGGESTED

ADEC
NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS ☒ TREATMENT SUGGESTED

MANUAL AND MECH. IF POSSIBLE ON WIDE AREA
OF OILING

LAND MANAGER
NAME M. C. T. SMITH SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

SNOW COVER PREVENTED ADEQUATE SURVEY OF OILED DEBRIS.
NEED TO RESURVEY FOR DEBRIS AFTER SNOW MELT.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-213
 BIO G. Penn LAND REP M. Smith (AK) SUBDIVISION E 5.45
 EXXON S. Reid ADEC S. Ferguson TIME 7:40 to 9:25
 TEAM NO.: 4 TIDE LEVEL: 3.5' to 0 DATE 3/31/90
 ST. SUBDIVISION LENGTH: 1661 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 48 % B 48 % C 10 % P 2 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 2 % Hang 88 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 28 m NO 0 m VL 0 m NO 623 m

SURFACE OIL

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

PAVEMENT: H F S 12/1 m by 0 cm

PATTIES / TARBALLS 0 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 0

#BAGS 0

Photographs:

Roll No. 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	CL	OF	NO		UC	UC	1	2	3	4	5	SU	U	M	L		
2	9cm	X					5-9	X			X				X				N	B, C, P

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/88

Segment ST / KN-213 Subdivision E Date (mo / day / yr) 03/31/90

Time (24 hr) _____ Biologist Penn

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

(B) Overall % cover of biota (% of segment): Dense <1 Moderate 5 Low 10

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

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	X	X	X	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	X	X	X	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

ASTROPODS

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	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	X	X	X	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- Pelagic Cormorant

2 Ravens

1 Deer (LWS)

2- Cormorants

1 Harbor Seal

1 Deer - Cliff Fall killed?

2- Common Merganser

1 immature eagle

1 Sea Otter (LWS)

Ecological Considerations:

1 Song Sparrow

00 K-213
 SEGMENT ST/ K-213
 SUBDIVISION E
 DATE 3/31/90

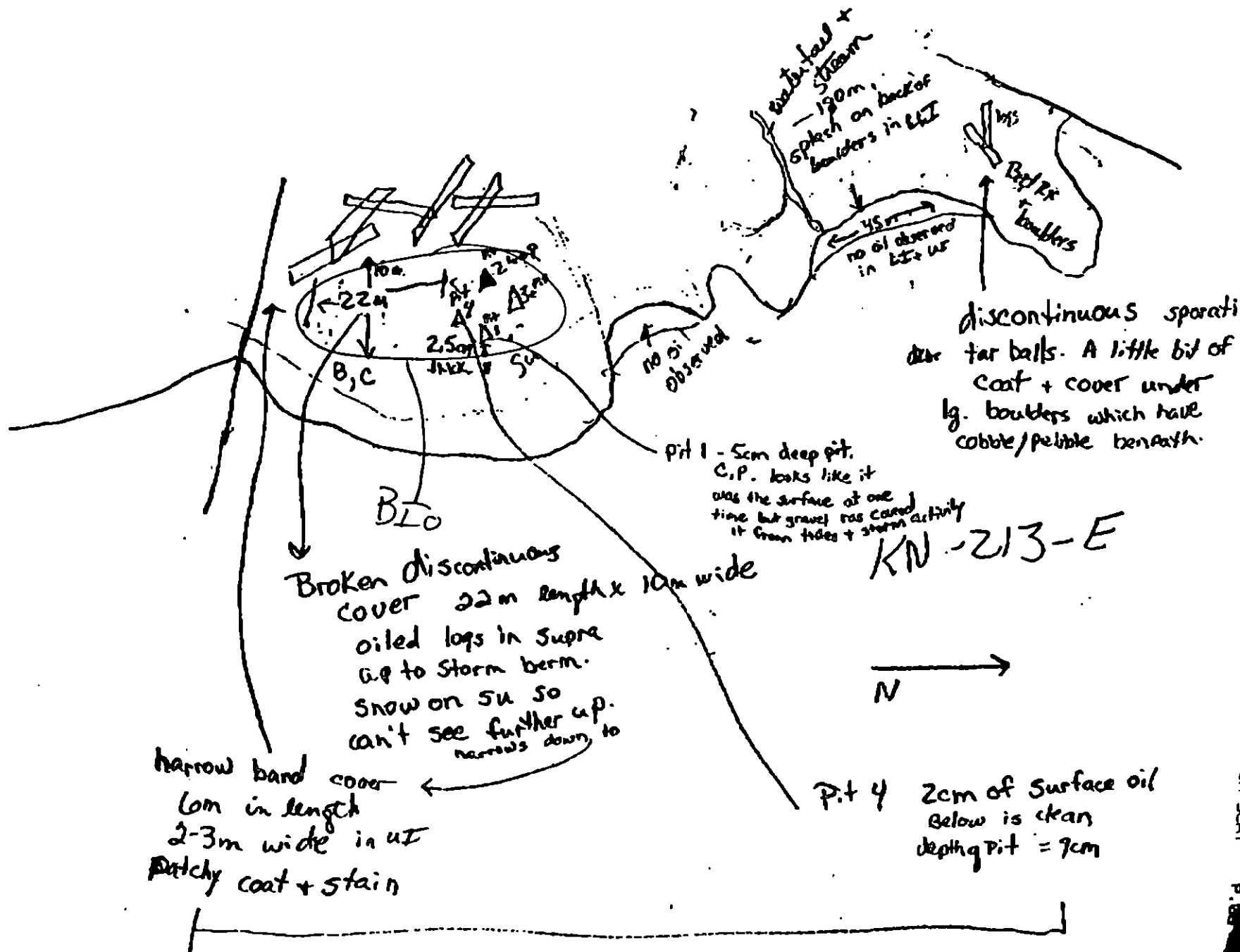
CHECKLIST

- ☒ N Arrow
- ☐ Approx. Scale
- ☐ Background Bathy
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 28 CT 0 ST 28 MS 0 PT 0 TB 2 FL 0 NO 6 23

REVISIONS

KN-213-E

KN-213

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-213

ADEC Segment Length: 3351m



Map Key: PWS-341d

Name: Ramsey

Date: 3/31/90

Data Entered: Z:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-213 SUBDIVISION E (5 of 5)

WORK WINDOW	
Bioremediation Less Than 400m From Active Nest	CLOSED
Bioremediation More Than 400m From Active Nest	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16853) is more than 100m from work site. No constraint to bioremediation.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to bioremediation within 400m of active nest. No constraint to bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

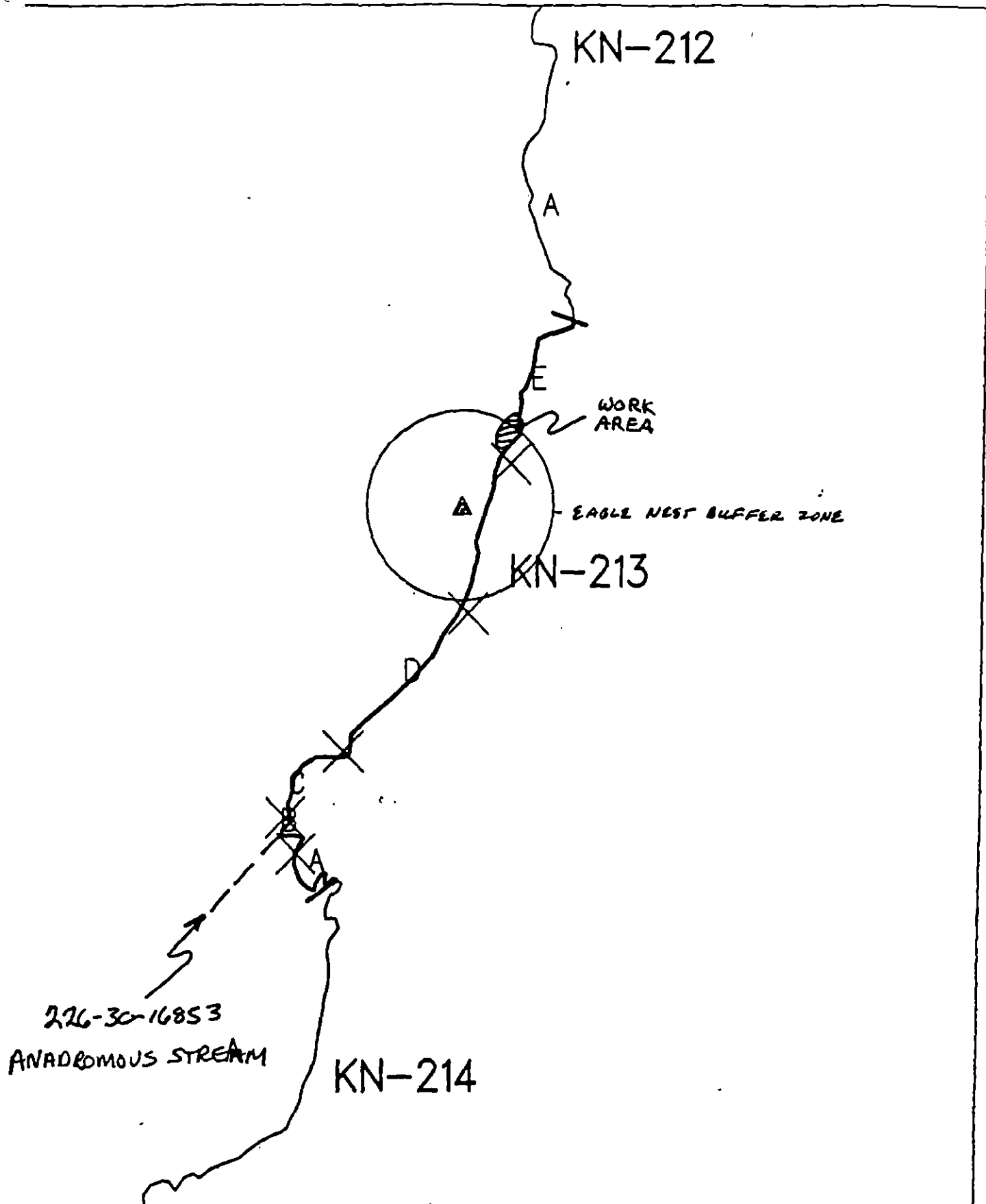
Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota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

FOSC

[Signature]

Date

6/12/00



Exxon Company, USA



ECOLOGY MAP
SEGMENT KN-213
SUBDIVISION E (5 of 5)

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

SHORELINE EVALUATION

SEGMENT ST/ KN-214 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Two small streams in segment not catalogued in ADF&G anadromous stream catalogue.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2178 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90
ADEC ART WEINER
EXXON AMY KATZ
NOAA Gary Petrone
USCG G.A. REITER

FOSC: YL DATE: 5-12-90

SEGMENT ST/ KN-214 SUBDIVISION: A-1 of 1 DATE 04/21/9

NAME David S. Thomas

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS

TREATMENT SUGGESTED

NAME Clara S. Crosby

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Area AT Northern END OF Segment previously designated
Heavily oiled - (ADEC WALKATHON) - No oil observed on protected
sides of B/c or Bedrock - Observed what appeared to be
Black lichen - no oil observed - High energy

NAME Peter Zallars

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

I concur with the SSAT team's observations.

SHORELINE OILING SUMMARY

REVISION NO 04-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-214
 BIO DAVE LCHSE LAND REP PETER ZOLLAR (PAC) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA CENBY TIME 13:50 to 15:30
 TEAM NO. 13 TIDE LEVEL +6 to +3 DATE 04/21/90
 EST. SUBDIVISION LENGTH: 2350 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION N to S
 SURFACE SEDIMENTS: R 70 % B 20 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 40 % Vert 50 % WAVE EXPOSURE ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2350 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	S	1	2	3	4	5	SU	U	M	L
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 cr

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE

#BAGS

Photographs:

Roll No. 21-13-4

Frames 22-25

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SO	UC	1	2	3	4	5	SU	U	M	L				
1	30					X	.		X						X							C-C
2	30					X	.		X								X					C-C, G
3	30					X	.		X						X							C-C, P
4	35					X	.		X						X							C-C, P, S
							.															
							.															

COMMENTS

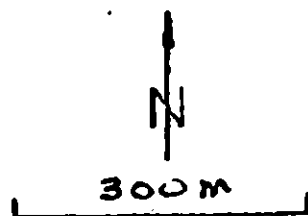
REVIEWED

FW

DATE 4-23-90

OG RICK LIE
 SEGMENT ST/ KN-214
 SUBDIVISION A-1 of 1
 DATE 04/21/90

SKE MAP



VERTICAL CLIFF
 (PILLOW LAVAS)

NO OIL
 30 X 50 M
 W/ MITZ
 COBBLE / Boulders

BOAT SURVEY

- HIGH ANGLE TO
 VERTICAL CLIFF
 - V. LARGE Boulders

NO OIL
 LAND AND WALK 100 M

BOAT SURVEY

NO OIL
 100 M LONG,
 COBBLE BEACH

NO OIL
 COBBLE BEACH, ROCK HEADLANDS

CHECKLIST

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

LEGEND

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

Rock
 HEADLAND

Rock
 HEADLAND

Oil Character Length (m) AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 2,380

SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN214 Subdivision A Date (mo / day / yr) 4-21-90

Time (24 hr) 13:45 Biologist David Cohn

(A) 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 40 Moderate 40 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-13-4

Frames 22-25

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

None

Shoreline Ecological Summary

2 of 2

Segment ST-KNZ14

Subdivision A

4-21-90

Biologist: David Lohse

Wildlife Observations/General Comments

1. Low intertidal not sampled
2. present in mid intertidal: Porphyra, Ulva, Endocladia, Scytosiphon, Cladophora
Anelipes, Ectocarpus
high intertidal: Enteromorpha
3. One raven, one sea lion, many gulls, and one marmot spotted in area
4. All mid/high intertidal cobble observed was barren except for Enteromorpha which reached 50% cover
5. At site A (see Ecology map) mid/high cobble was as in #4 above, and high intertidal boulders were bare. On mid-intertidal boulders, barnacles and mussels were present in low numbers but only on protected sides of boulders, or in cracks and crevices. Porphyra and Ulva were abundant on these rocks. Barnacle mortality was ~75%
6. Much of this segment was comprised of impassable cliffs and boulders which were ~~not~~ surveyed by boat. Much of this area appeared to be inhabited by only barnacles in the mid and high intertidal. One stop was made in this region revealed these barnacles to be Balanus glandula and Chthamalus both of which were fairly small in size and dense in numbers. However other areas of this ~~section~~ region of cliffs had large, dense Semibalanus cariculus, sparse mussels, and moderate to dense Fuus. There was no obvious pattern to the intermixing of these two "communities".
7. Two small streams located in segment.
8. Some areas of mid intertidal boulder contained mostly Ulva, Cladophora, Ectocarpus, and Scytosiphon. Mostly barnacles, gastropods and Fuus were all rare.

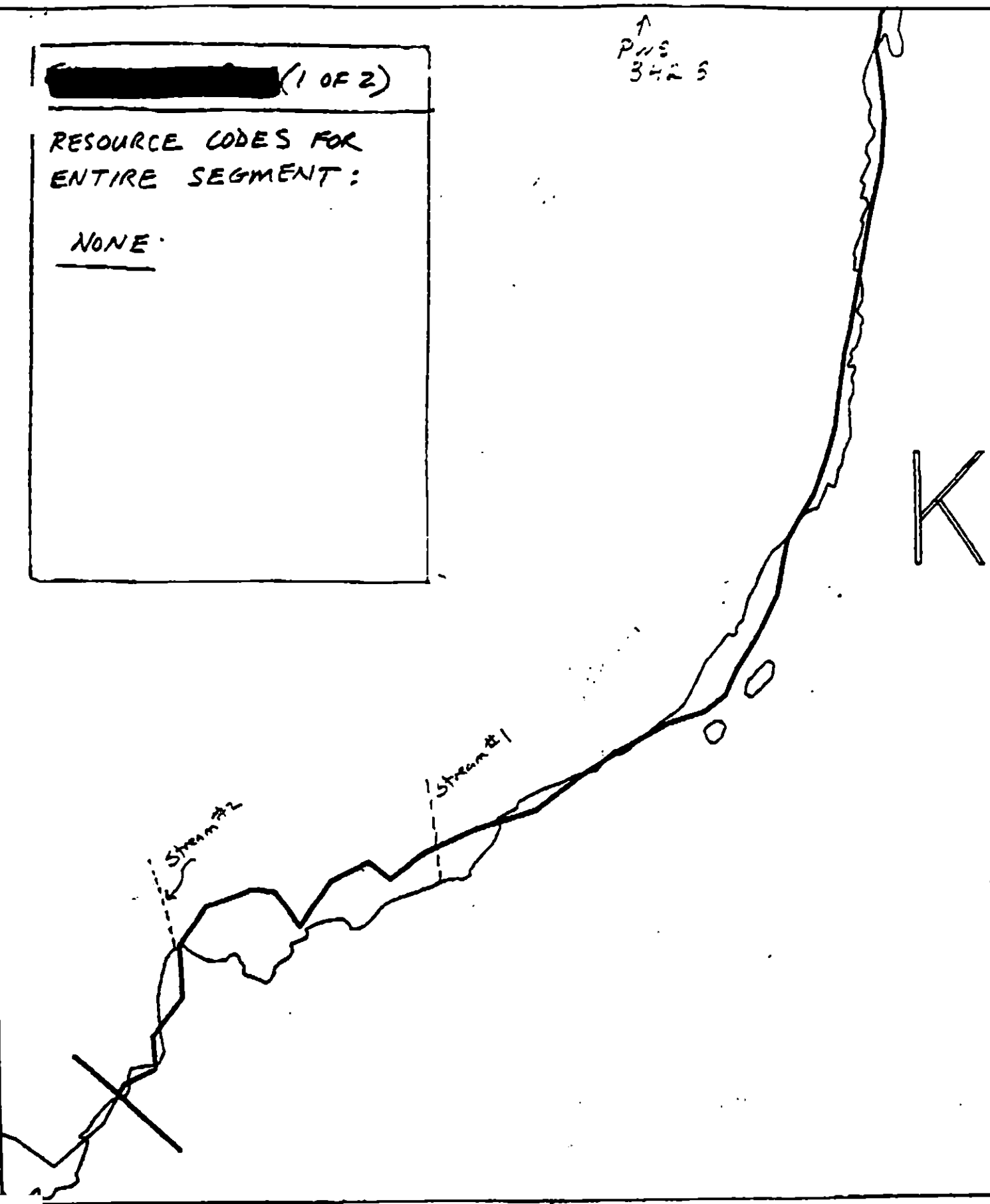
↑
PWS
342 S

[REDACTED] (1 OF 2)

RESOURCE CODES FOR
ENTIRE SEGMENT:

NONE

K



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO " " "

KN-214

ADEC Segment Length: 2178m



Map Key: PWS-342a

Name: _____

Date: _____

Not to Scale

~~_____~~



PWS 342A

↓

XXXX Wide

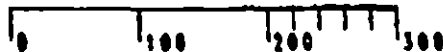
//// Medium

----- Narrow

TTTT Very Light

KN - 214

ADEC Segment Length: 2178m

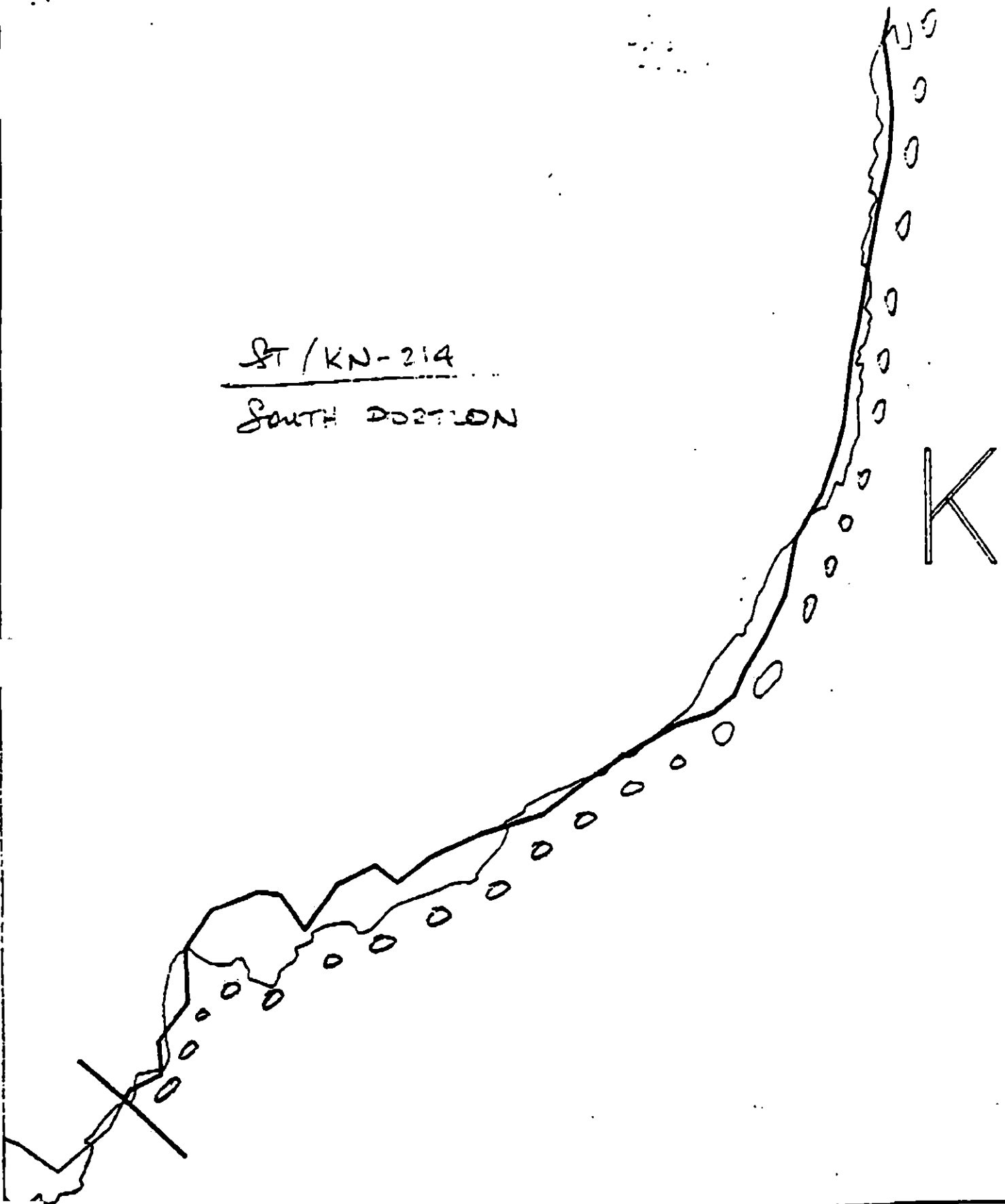


Map Key: PWS-342b

Date:

ST / KN-214

SOUTH PORTION



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KN-214

ADEC Segment Length: 2178m

0 100 200 300

Map Key: PWS-342a

Name: Rick G. G. G.

Date: 04 / 21 / 90

Date Entered:

ST/KN-214

NOR-2020N



PWS 3426



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-214

ADEC Segment Length: 2178m

0 100 200 300



Map Key: PWS-3426

Name: Rick G. W. E.

Date: 04/21/90

Not Entered.

SEGMENT ST/ KN-260 SUBDIVISION A (1 OF 1) DATE 4/25/90

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

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

SHPO SIGNATURE: Charles E. Johnson DATE: 5/3/90

Wide 0 m: Medium 0 m: Narrow 18 m: V.Light 0 m: No Oil 507 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/3/80.
 ADEC Art Weiner Art Weiner
 EXXON Andy Tate Andy Tate
 NOAA Gary Petrac Gary Petrac
 USCG Kenneth Kauer Kenneth Kauer

FOSC: _____ DATE: 5-8-90

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 Inpol 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 (6/31 to 7/31)

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

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

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

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

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

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

1L Set net sites (8/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpol 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 unloiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpol 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 Inpol 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

✓ 6A All Bald Eagle nests (3/1 to 6/1)

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

6V Tent sites (8/1 to 9/15)

6W Anchorages (8/1 to 9/15)

6X Forest Service cabins (8/1 to 9/15)

6Y Lodge (8/1 to 9/15)

Special use destination

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

7H1 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 Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-260 SUBDIVISION: A DATE 4/25/90

USCG

NAME BM3 David A. Sykes SIGNATURE David A. Sykes☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

one small patch of coat in a Cliff & Bolder area

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

- Primarily vertical bedrock cliff.
- Patchy coat observed at one location
- very little oil within this segment.

LAND MANAGER

NAME David Mondrella SIGNATURE David Mondrella☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

- Primarily Vertical Rock Cliff.
- Minimal patchy coat noted in small area.

SHORELINE OILING SUMMARY

REVISION NO. 04-13/90

OG Alan Pittenger USCG Dave Culverter SEGMENT ST/ KN 260
 RIO John Benson LAND REP Vicki Mandretha SUBDIVISION A (1 OF 1)
 XON Chris Katsimpalis CADEC Diane Muncey TIME 17:30 to 19:35
 AM NO. #8 TIDE LEVEL 6-18 ft. DATE 4/25/90
 EST. SUBDIVISION LENGTH: 645 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTIC : South to North
 SURFACE SEDIMENTS: R 80 % B 10 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 15 % Vert 80 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 10 m VL 0 m NO 635 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE Algae#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

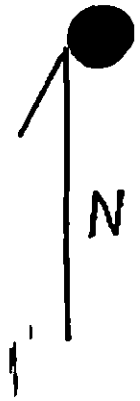
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
1	30					X	.													N > 30		P-PG, S
2	35					X	.													N > 30		P-P
							.															
							.															
							.															
							.															

COMMENTS

 REVIEWED 7/0 DATE 4/26/90

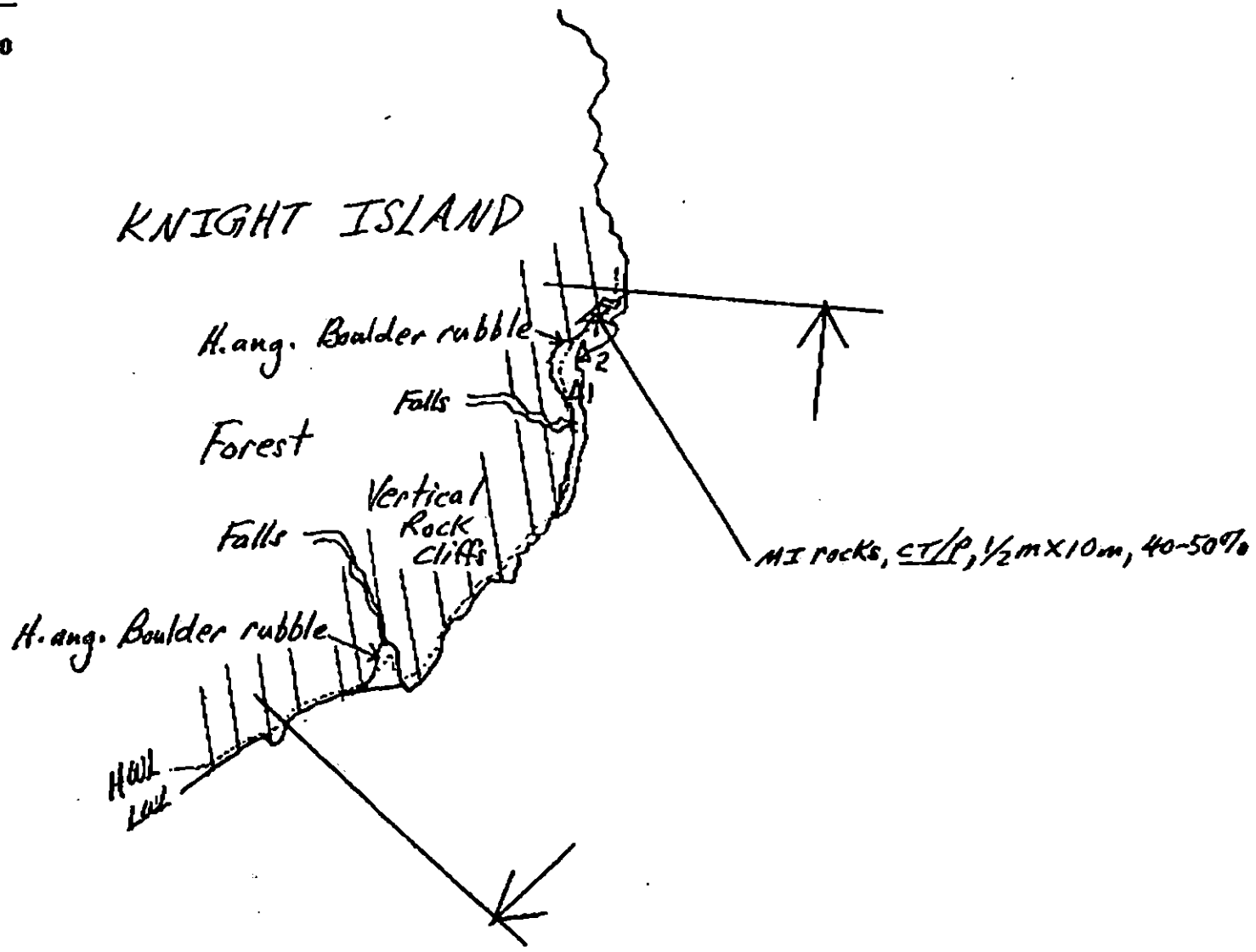
OG Alan P. Henger
 SEGMENT ST. KAL 260
 SUBDIVISION A
 DATE 4/25/90

SKETCH MAP



- CHECKLIST**
- ☐ N Area
 - ☐ Approx. Scale
 - ☐ Seg/Sub Entry
 - ☐ Oil Char.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. H. W. L. A. W. L.
 - ☐ SSI
 - ☐ Profile Location(s)
 - ☐ Photo(s)
 - ☐ P/L Location(s)
 - ☐ Photo Location(s)

- LEGEND**
- 1 Δ
 - P/L - No Subsurface Oil
 - 2 Δ
 - P/L - Subsurface Oil
 - CT/C
 - Continuous Distribution
 - CT/B
 - Broken Distribution
 - CT/P
 - Patchy Distribution
 - CT/S
 - Splashed Distribution
 - lll
 - Old Vegetation
 - 1 ●→
 - Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 0 MS 0 PT 0 TB 0 FL 0 NO 635

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN260 Subdivision A Date (mo / day / yr) Apr 25, 1990

Time (24 hr) 1730-1925 Biologist Benson

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 10 (3) Cobble 5 (4) Pebble 0 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 60 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 (3)

Photographs: _____
 Roll No. _____

Frames _____

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

- 1 mature bald eagle (Haliaeetus leucocephalus)
 6 harbor seals (Phoca vitulina)
 diving bird (murre?)

Ecological Considerations: 6Y (special use destination)

This segment is predominantly vertical bedrock walls that are exposed to wave energy. There are numerous barnacle scars that suggest the occurrence of battering by floating objects (e.g., logs). The % of the segment densely covered by biota would have been much higher without this apparent damage. The number of species present is high to moderate.

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

6Y

BALD EAGLE NEST $\leq$ 400m
OF SEGMENT.



BALD EAGLE NEST



unrecorded bald eagle nest
(could not determine whether
this nest is active)

runoff

runoff
water fall

KN-2

93

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-260

ADEC Segment Length: 525m



Map Key: PWS-348

Name: Benson

Date: 4/25/90

Data Entered:

DATE 4/25/90 TIME 1730 - 1925 TIDE HEIGHT 6' to 1.5'

1 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT

SE INT ST. KN260 SUBDIVISION A LENGTH 645 m BIOLOGIST Benson

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA	Alaria		1,2	1,2	
	BOSSIELLA/CORALLINA 2 erect				
	CALLIARTHRON/CORALLINA		1		
	CLADOPHORA SPP		1		
	COSTARIA SPP				
	ENDOCLADIA MURICATA		2		
	FILMAENTOUS GREENS		1	1,2	
	FILAMENTOUS REDS		1	1	
	GLOIOPELTIS FURCATA				
	HALOSACCION GLANDIFORME		1	1	
	LAMINARIA SPP				
	LITHOTHAMNION encrusting		1 (pool)	1,2	
	NEREOCYSTIS SPP				drift
	PORPHYRA SPP		2	1,2	
	RALPHSIA/HILDENBRANDIA		1		
	PHODOMELA LARX		1	1,2	
	RHOHOMENIA PALMATA				
	SCYTOSIPHON SPP			1,2	
	ULVA SPP			1,2	
	ZOSTERA MARINA				
	ENTOROMORPHA				
	Verrucaria	1,2			
	Salaster dawsoni			1	
	sea cucumber		1 (pool)		
FAUNA	* ANTHOPLEURA SPP		1 (pool)		A. artemisia
	(SEMI) BALUNUS CARIOSUS		1,2	1,2	
	B GLANDULA	1,2	1,2	1,2	
	BRYOZOANS			2	encrusting
	CHITONS (other than K TUNICATA)				Tonicella lineata
	CLAMS				
	CRABS				
	DERMASTERIAS IMBRICATA		1 (pool)	1	
	KATHARINA TUNICATA		1	1,2	
	LEPTASTERIAS HEXACTIS		1		
	LIMPETS				
	LITTORINA SPP				
	NUCELLA SPP		2	1	
	PAGURUS SPP				
	PISASTER OCHRACEUS		1	1	
	POLYCHAETES (pink - 4" long)			1	
	PYCNOPODIA HELIANTHOIDES		1	1,2	
	SEARLESIA DIRA				
	SERPULIDS			1	
	SIPHONARIA THERSITES				
	TEALIA				
	tidepool sculpin		2 (pool)		

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

6Y

BALD EAGLE NEST $\leq$ 400m
OF SEGMENT.

BALD EAGLE NEST

KN-2

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

^ ^ ^ ^ " ^ ^ ^

KN-260

ADEC Segment Length: 525m

Exxon Segment Length: 645m

0 100 200 300

Map Key: PWS-348

Name: Alan Pittenger

Date: 4/25/90

Data Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska