

OIL SPILL PUBLIC INFO. CENTER



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EVOS
GC
1552
.P75
S42
1990
v.24

[Shoreline evaluations, 1990].

NA-05 – NY-01

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SHORELINE EVALUATION

SEGMENT ST/ NA-05 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. Avoid disturbance/damage to unoiled substrate and biota.

SHPO SIGNATURE: Charles H. Dine DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 9 m: V. Light 363 m: No Oil 1971 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Manual pickup of ^{Pooled oil} mousse patties and tar balls as indicated on sketch section "D" map only. Work after 6/1 based on herring constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUER
EXXON ANDY VAN FOSC: DEL DATE: 4-26-90
NOAA B. W. W. W.
USCG G. A. REITER

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA-5 SUBDIVISION: A DATE 4-1-90

USCG

NAME CWO2 J. MC NAB SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

1. Area contained splashes, some light coating - very sparse
2. No Human Use

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

CONFINED TREATMENT TO AREA SHOWN ON SKETCH MAP D THAT CONTAINS POOLED OIL AND TAR PATCHES. THE POOLED OIL OCCURS BETWEEN BOULDERS WHERE IT IS SHELTERED FROM WAVES. TREATMENT SHOULD LEAVE AS LITTLE RESIDUE AS POSSIBLE SO THAT POLISHING TECHNIQUES CAN BE USED.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]

ADNR - NEMA

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Minimal impacts area. Resource use referenced as deer harvesting (hunting) no other human use. Not referenced as a high priority area by either PWS or plan or by Volney 1988 priority listing

SHORELINE OILING SUMMARY

REVISION NO. 05/20/90

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-5
 BIO D. Rider LAND REP M. Bennett ONE SUBDIVISION A (1 OF 1)
 EXXON S. Neuman ADEC G. Winters TIME 9:30 to 12:45
 TEAM NO.: 15 TIDE LEVEL: 150 to 0 Low DATE Apr 12 / 1990
 EST. SUBDIVISION LENGTH: 2471 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South to North
 SURFACE SEDIMENTS: R 15 % B 30 % C 35 % P 5 % G 5 % S 5 % M 5 % V 5 %
 SLOPE: Long 20 % Hang 70 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N 5 m VL 360 m NO 2106 m

SURFACE OIL

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

PAVEMENT: H F S sq. m by cm

PATTIES / TARBALLS 1 Bag 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. #1

Frames 4-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-ON)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	1	2	3	4	SU	U	M	L		
1	30					X	-								X				Pebbles / Sand
2	45					X	-								X				Pebbles / Sand / Cobble
3	20					X	-								X				Pebbles / Gravel at depth
4	30					X	-								X				Sand / Pebbles
5	45					X	-								X				Sand / Pebbles
6	40					X	-									X			Cobble

COMMENTS

REVIEWER

FW

DATE 4-5-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02-22-90

Segment ST/NA-05 Subdivision A Date (mo/day/yr) 4/1/90

Time (24 hr) 9:25 Biologist DANIEL RAIDER

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

(B) Overall % cover of biota (% of segment): Dense 2 Moderate 5 Low 93

(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. 1

Frames 4-24

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:

- Ducks
- Ravens
- Crow

in localized areas

Ecological Considerations:

Priority 4

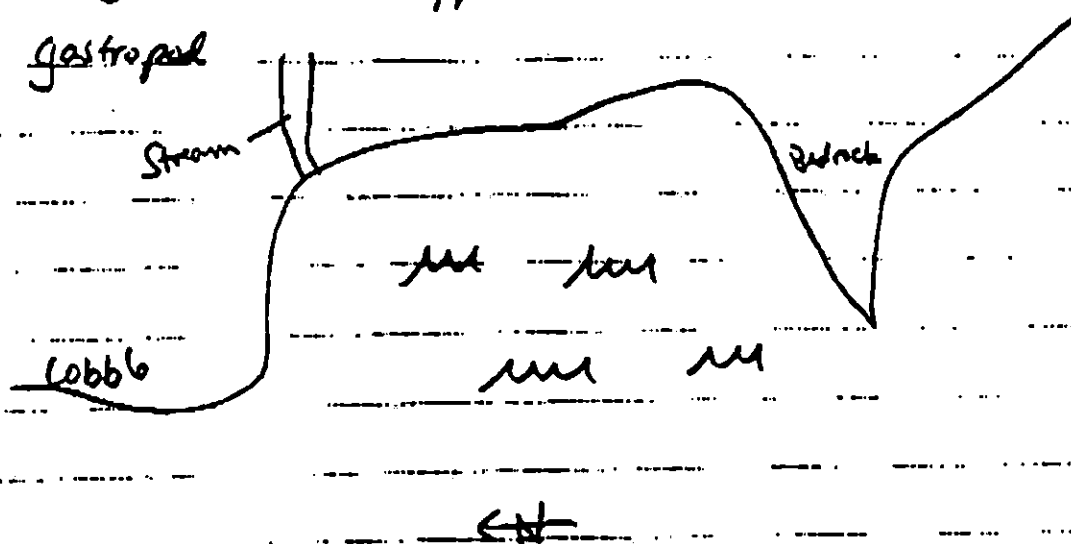
711 Deer Harvesting 8/15 - 3/1 → no sightings or tracks.

Daniel Raider

NA-05, Subdivision A, Biological Comments, 4/1/90

- Started survey at high tide and could not access the Lower Intertidal Zone; only can access Upper Intertidal Zone and Upper Mid-Intertidal Zone
- Localized areas especially on bedrock outcrops with sparse to rare in Upper Intertidal Zone - Focus
- Moderate/Sparse and rare Barnacle spat over entire segment; Localized sections
- It was a huge segment and traversed multiple geologic types and biota densities; all generalization will have a series of exceptions and have inaccuracies - this was (is) a difficult segment to lump into one category and specific examples only exemplify very small section of the entire segment
- Sitka spruce + Grass in Upper intertidal zone
- Sparse Biota in Camping area (frame 12, Roll 2)
 - Focus sparse in Mid intertidal Zone
 - Barnacles to rare in Mid Intertidal Zone
 - Rare Mytilus
- Moderate Barnacles in Upper Intertidal Zone
- Dense localized focus where they can still reach water even when tide table has receded
- Open (rare) clam shells
- Thick green filamentous algae sheath in core containing pit #4 (cross reference w/ OG)
 - Rare Barnacles, Mytilus, Gastropods in Mid-Middle Inter

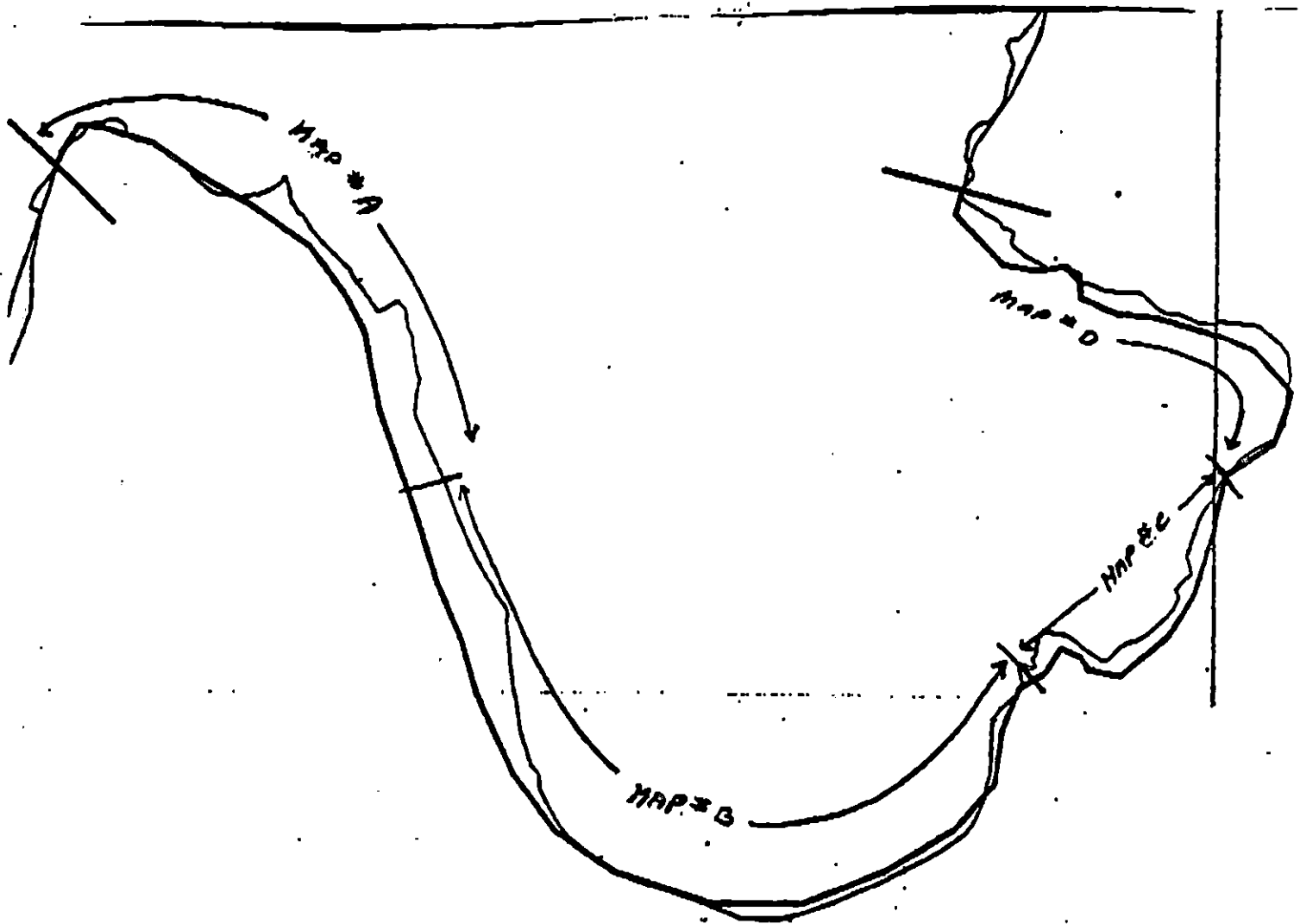
- last $\frac{1}{2}$ of segment is cobbly - bouldery high energy beach with a broad Mid Intertidal Zone & Upper Intertidal Zone
- Moderate Barnacles on Upper Mid - Intertidal Zone
- Rare gastropod



Bedrock area in last Westly Cove of segment is a small stream from snow melt; starting approx. 50 meters above Upper Intertidal

- Barnacles moderate to dense in last 400 yards
- Cobbly embankment at last 500 yards of segment on furthest Westly edge; there are healthy mussels and barnacle spot loca to a depth of at least 20 centimeters, as it put #6. This and cobble beach has many far spots at the Mid Intertidal Zone & top of focus zone; also:
 - moderate $\rightarrow$ dense barnacles
 - green filamentous algae
 - moderate dried-out / dead focus - no apparent connection to oiling, but should not be ruled out.
 - Moderate Barnacles on boulders on Upper Intertidal Zone

NA-5 MAP LOCATIONS



NA-5

ADEC Segment Length: 2343m



3 FitzGerald
 SEGMENT ST/ NA-5
 DIVISION A
 DATE Apr 1 1 90

SKETCH MAP A.

CHECKLIST

N Arrow
 Approx. Scale
 Seg/Sub Dry
 Oil Dist.
 Wash
 Length
 % Cover
 Substrate Character
 Est. HMA/LWL
 SSL
 Profile Location(s)
 Profile(s)
 PB Location(s)
 Photo Location(s)

LEGEND

1 A
 PB - No Subsurface Oil

2 A
 PB - Subsurface Oil

CT/C
 Continuous Distribution

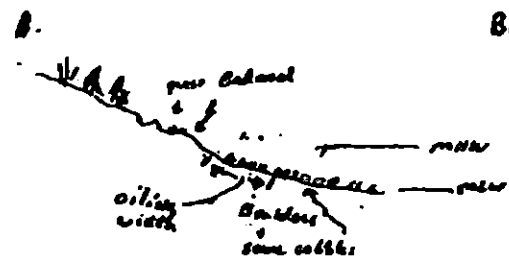
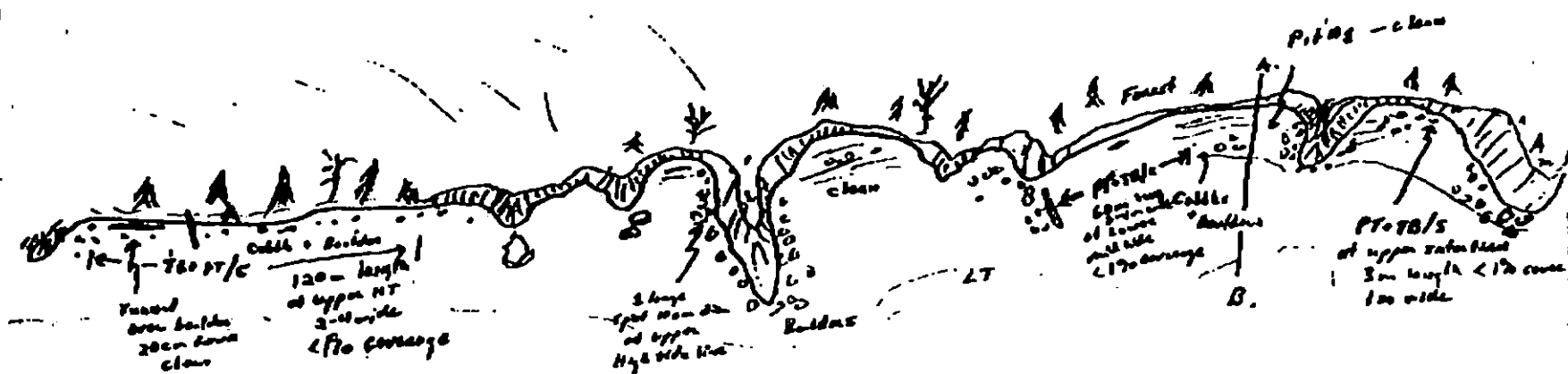
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Spotted Distribution

Oil Vegetation

1 A
 Photo location, direction,
 and number



Character Length (m): AP _____ PO _____ CV _____ OT _____ BT _____ MS _____ PT 80 TB 103 FL _____ NO 517

REVISIONS

SKETCH AP B.

3MENT ST/ NAS

BDIVISION A

TE Apr 1 1 90

HECKLIST

N Arrow
Approx. Scale
Seg/Sub Body
On Dist.
Width
Length
% Cover
Substrate Character
Est. HWA/LWA
SSL
Profile Location(s)
Profile(s)
Pk Location(s)
Photo Location(s)

LEGEND

1 **Δ**
1 - No Subsurface Oil

2A
(- Subsurface CH

CT/C
Small Claims Division

CT/B
Return Distribution

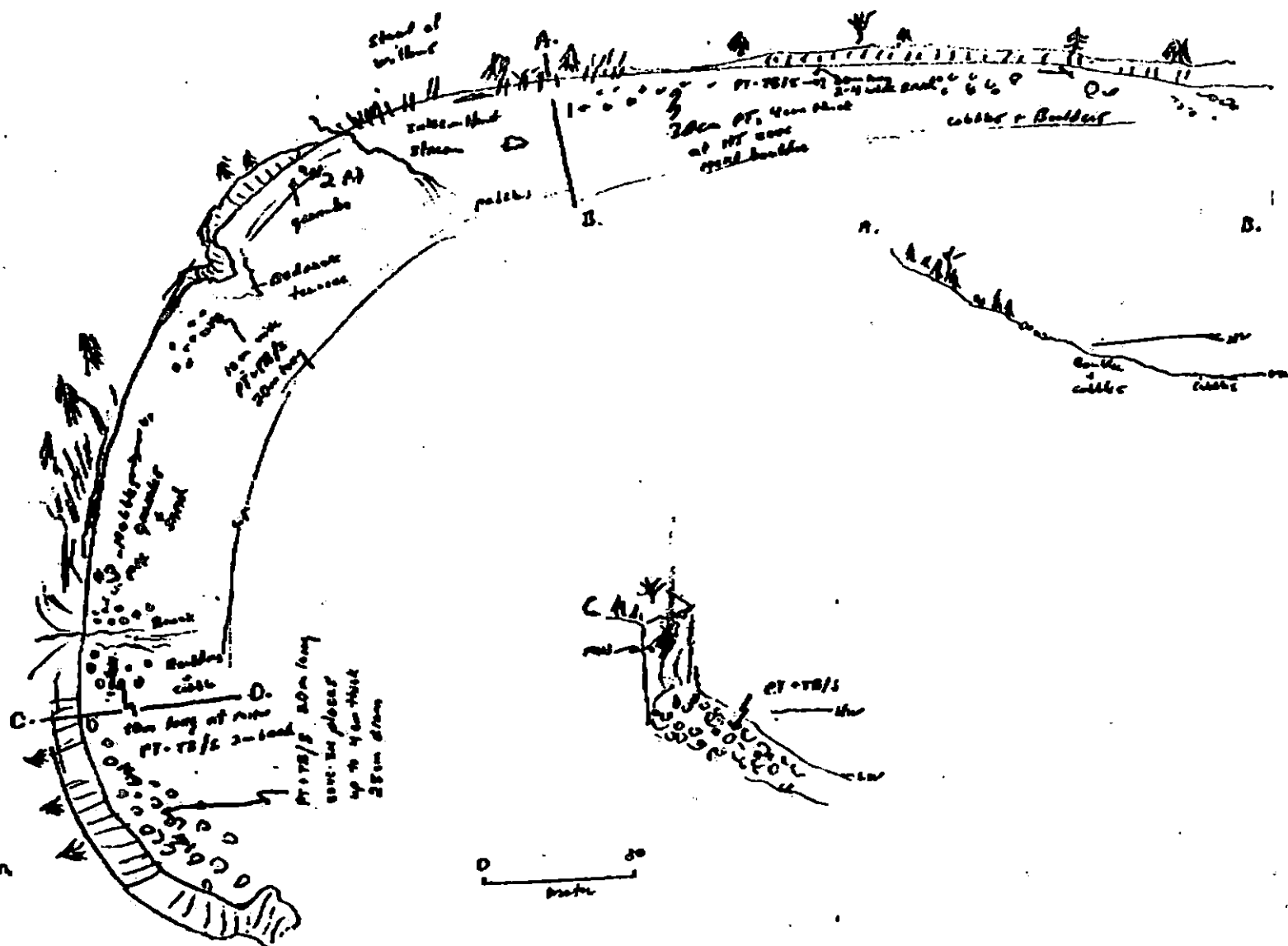
CT/P

Water Distribution

CT/S
Classified Distribution

Med Vegetation

Photo location, direction,
and number



1 Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT 50 TB 10 FL _____ NO 810

Keywords: *Self-esteem, self-esteem threat, self-esteem threat sensitivity, self-esteem threat sensitivity scale, self-esteem threat sensitivity scale-2*

FILE # 66666

SKETCH MAP C.

SEGMENT ST/ NA-5

DIVISION A

DATE Aug 11 90

CHECKLIST

☐ M Arrow
☐ Apprx. Scale
☐ Dep/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LWL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ PI Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
1 - No Subsurface Oil

2 Δ
2 - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

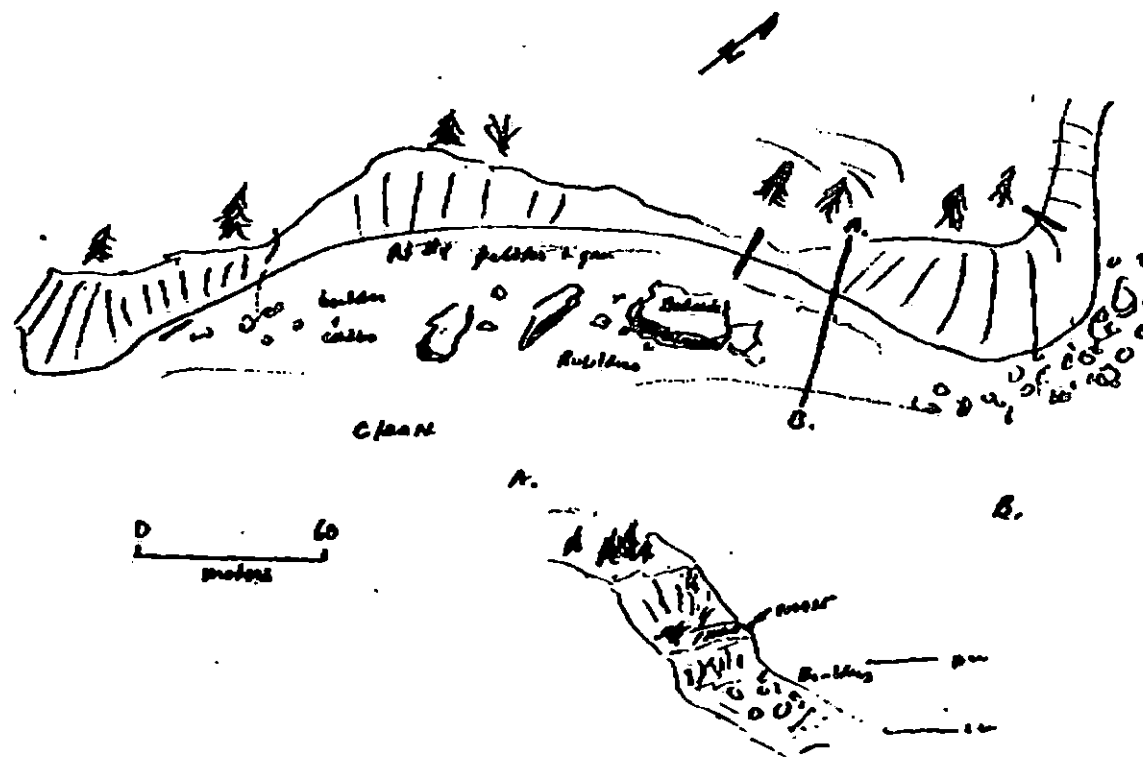
$\boxed{CT/S}$
Island Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

3 Δ
3 - Vegetation

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



Character Length (m): AP _____ PO _____ CV _____ CT _____ BT _____ MS _____ PT _____ TB _____ FL _____ NO 360

REVISION 000000

OG File 6A

SKE I MAP 0.

SEGMENT ST/ NA-5

SUBDIVISION A

DATE Apr 1 1 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA WL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pile Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

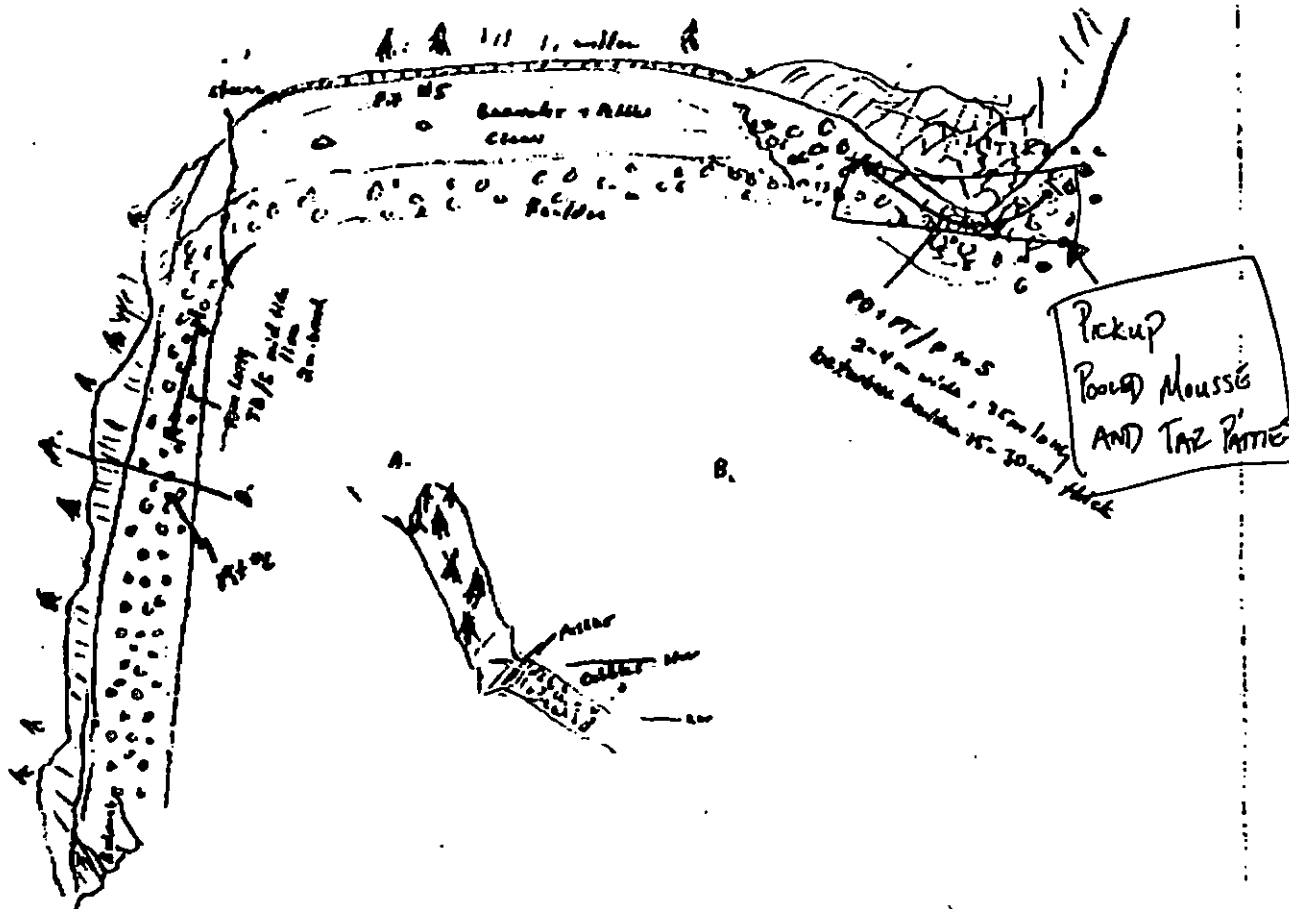
CT/S

Splashed Distribution

Oil on Vegetation

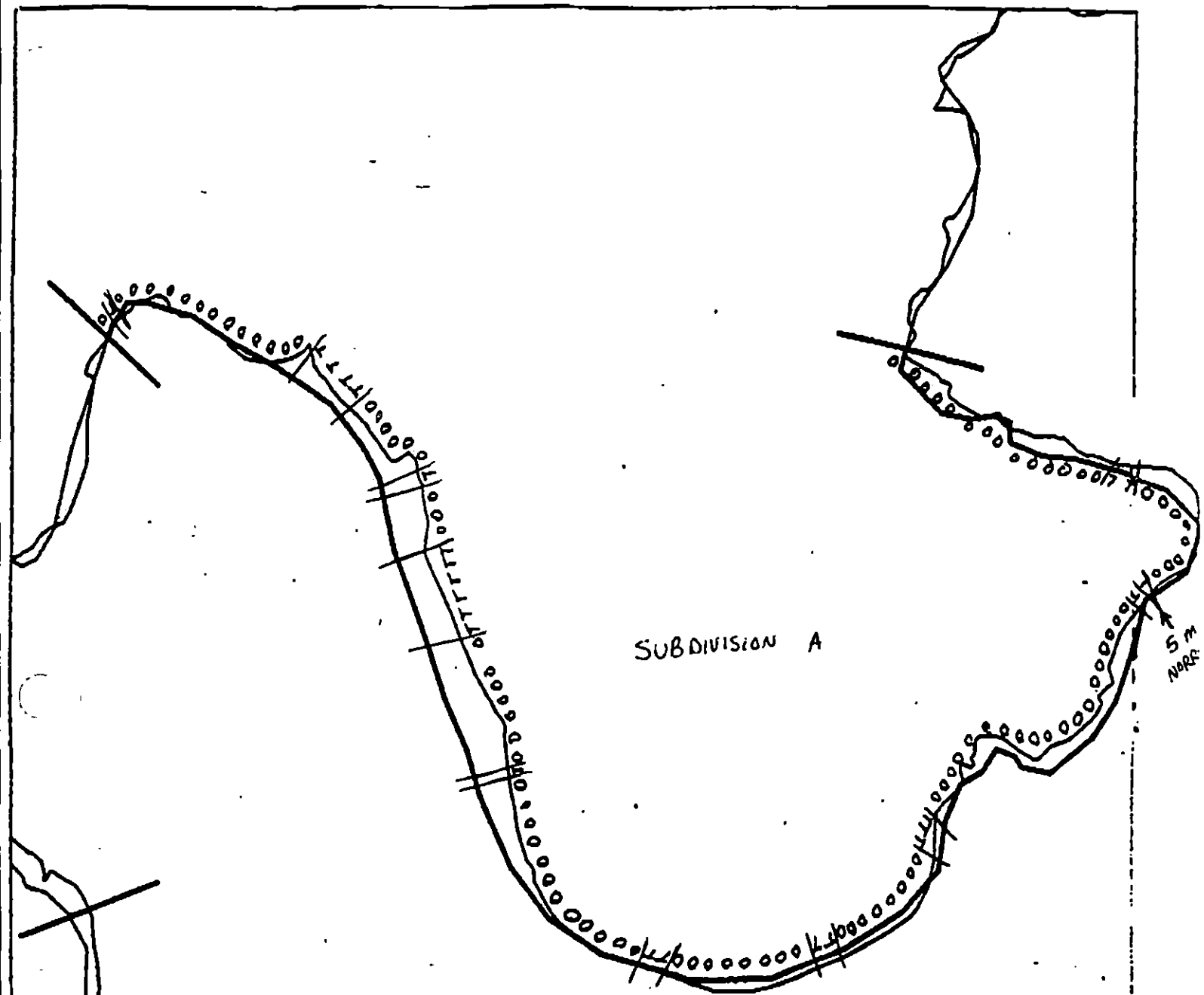
1 →

Photo location, direction,
and number



Oil Character Length (m): AP 15 CV 15 CT 15 ST 15 MS 15 PT 20 TB 10 FL 15 NO 455

REVISION 1.0



NA-05

XX Wide
 TTTT Medium
 --- Narrow
 TTTT Very Light
 OOOO No Oil

NA-5 A

ADEC Segment Length: 2343m



Map Key: PWS-496a

Name: E. R. G. 18

Date: April 1 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-5 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

No constraint 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.

7II Subsistence: Deer Harvesting

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum before 6/15 and after 8/15. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

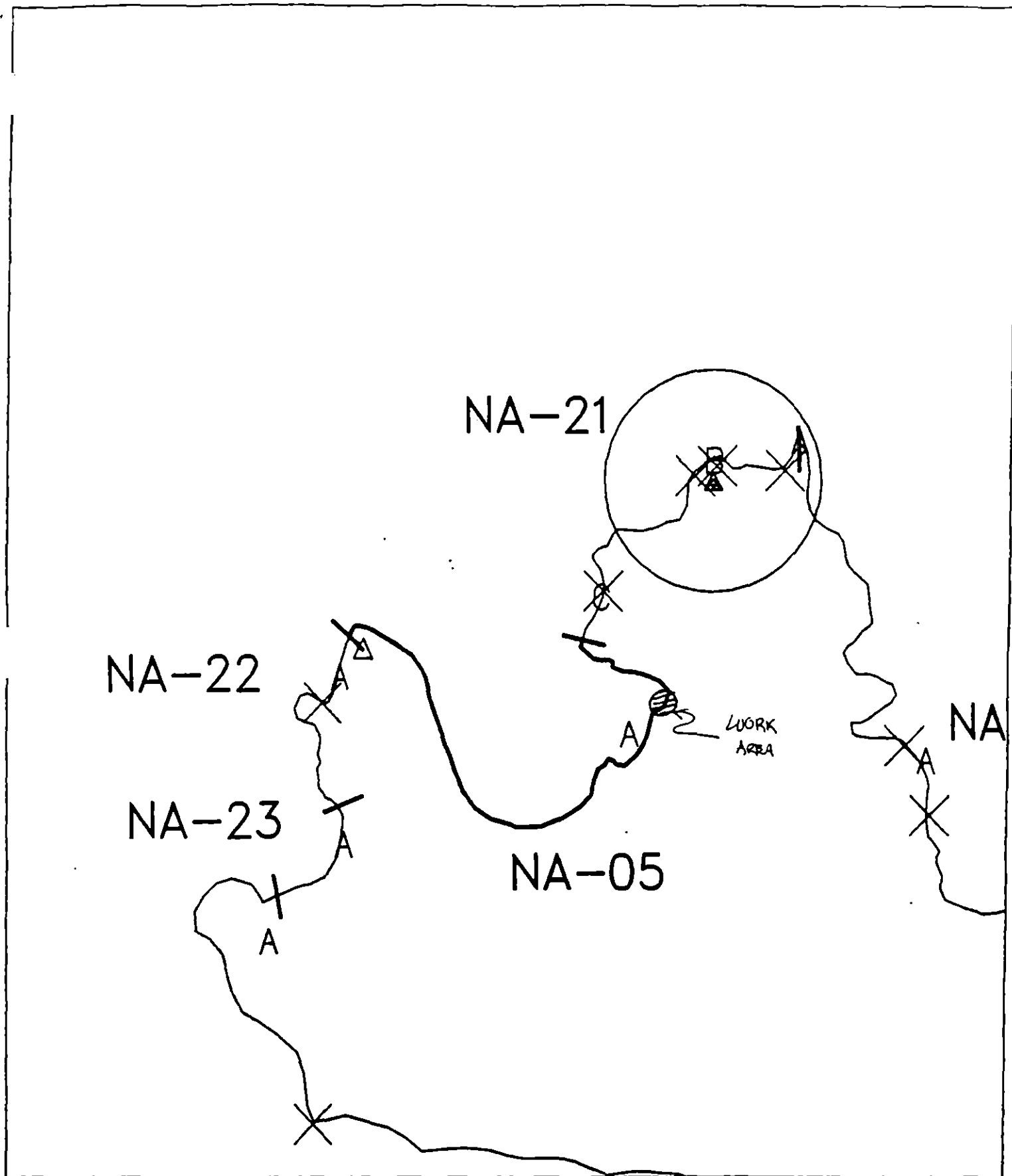
Date

6-12-90

Prepared by

Date

6/1/90



Exxon Company, USA
Map Key: PMS-NA-5
June 09, 1990



ECOLOGY MAP
SEGMENT NA-5
SUBDIVISION A (1 of 1)
METERS
0 400 800

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

1 inch = 1574 feet

NA-06 A

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 Sewmill 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 (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

EGMENT ST/NA006 SUBDIVISION: A DATE 04/05/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I suggest the removal of the asphalt by hand.

ADEC

NAME Michele Baer SIGNATURE MBaer

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

although sub-segment A is a low-energy shoreline the B fields and first section of B + C beach appeared free of oil, determined by pits in the SUTZ and MITZ, and inspection of the B field.

The area behind the R hold. on the B.C beach, had a 20M x 15M AP/C area underlying the cobble and CT to ST on top of the cobble. Tarballs were also found. Treatment recommended for this beach is pick-axing the area up to break up the asphalt and removal of tarballs.

LAND MANAGER NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND MANUALLY BREAKING UP THE ASPHALT AND PATROLLING THE BEACH TO CHIP OFF TAR BALLS AND SPLATTER

SHORELINE OILING SUMMARY

REVISION NO. 00/23/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ NA 006
 IO P. Crank LAND REP D. Logan SUBDIVISION A(1043)
 EXON T. Tomblin ADEC M. Baker TIME 16:45 to 17:45
 TEAM NO.: 5 TIDE LEVEL: +1 to +1 DATE 04/05/90
 EST. SUBDIVISION LENGTH: 950 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock metasediments & pebbles
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 30 % B 45 % C 20 % P 5 % G — % S — % M — % V — %
 SLOPE: Long 10 % Hang 80 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 20 m M 2 m N 2 m VL 120 m NO 1197 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	U	M	U
ASPHALT PAVEMENT		X							X		X		
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS				X				X			X		
FILM													
NO OIL										X	X	X	

PAVEMENT: H F S 60 sq. m by 2 cmPATTIES / TARBALLS 10 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. _____

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	OP	NO		NO	UC	30	40	50	60	70	SU	U	M	U		
1	30					X	.		X						X					PV
2	30					X	.		X							X				CPGS
3	30					X	.		X						X					CP5M
4	30					X	.		X						X					CPGS + shells
							.													
							.													

COMMENTS

15

SHORELINE ECOLOGICAL SUMMARY pg 1 of 2

REVISION: 08/25/90

Segment ST/NA 16 Subdivision A Date (mo/day/yr) 4/5/90

Time (24 hr) 1645-1730 Biologist Crank Tide Height +1 ft
Length 950 m

(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 25 Moderate 50 Low 25

(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			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 Otter - Adult Land Otter and Deer Seal on beach
6 Harlequins

1 Land Otter - Adult

Ecological Considerations:

6 Y - Special Use Destination

6 U - Tent Sites

6 V - Anchorages

ST - Active Bald Eagle Nest (did not observe)

7H - Deer Harvesting

2M - Herring Spawning

- Most of LITZ unexposed

- 10m x 25m Dense Intergravel/Kobble Mussel bed foot traffic should be avoided in this area. (See OG Map)

- Headlands dense, mature communities

- Seastar and predatory snail populations dense.

- Beach is healthy. 17

SEGMENT: ST/ NA 6 SUBDIVISION A LENGTH 950m BIOLOGIST Crand

pg 2 of 2

DATE 4/5/74 TIME 11:57 TIDE HEIGHT +1 ft

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

	SPECIES	UTZ	MITZ	UTZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA		1		
	CALLIARTHRON/CORALLINA		1		
	CLADOPHORA SPP		1		
	OOSTARIA SPP				
	ENDOCLADIA MURICATA				
	FILAMENTOUS GREENS				
	FILAMENTOUS REDS			1	
	GLOIOPELTIS FURCATA		123	123	
	BALOSAOCION GLANDIFORME		1		
	LAMINARIA SPP			1	
	LITHOTHAMNION		1	1	
	NEREOCYSTIS SPP				
	PORPHYRA SPP				
	RALPHSIA/HILDENBRANDIA				
	RHODOMELA LARIX		1		
	RHODOMENIA PALMATA			123	
	SCYTOSIPHON SPP			2	
	ULVA SPP				
	ZOSTERA MARINA				
	<i>Alaria</i>			1	
FAUNA:	ANTHOPELURA SPP		12		
	(SEM) BALUNUS CARIOSUS		1	1	
	B. GLANDULA	12	123	123	
	BRYOZOANS				
	CHITONS (OTHER THAN K. TUNICATU)				
	CLAMS				
	CRABS				
	DERMASTERIAS IMBRICATA		1	1	<i>Redup' in MITZ</i>
	KATHARINA TUNICATA			1	
	LEPTASTERIAS HEXACTIS				
	LIMPETS		12	1	
	LITTORINA SPP	12	123	123	
	NUCELLA SPP		1		
	PAGURUS SPP		1		
	PISASTER OCHRACEUS				
	POLYCHAETES				
	PYDNOPODIA HELIANTHOIDES			1	
	SEAFLESLIA DIRA				
	SERPULIDS		1		
	SIPHONARIA THERESITES				
	TEALIA		1		<i>Redup' in</i>
	<i>Amphipods</i>		234	34	

OG S. SPRINGER

SEGMENT ST/NA-006

SUBDIVISION A

DATE 04 105/80

CHECKLIST

- ☒ H Area
- ☒ Approx. Scale
- ☒ Top/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Ext. H/W/L/A/V/L
- ☒ VSS
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

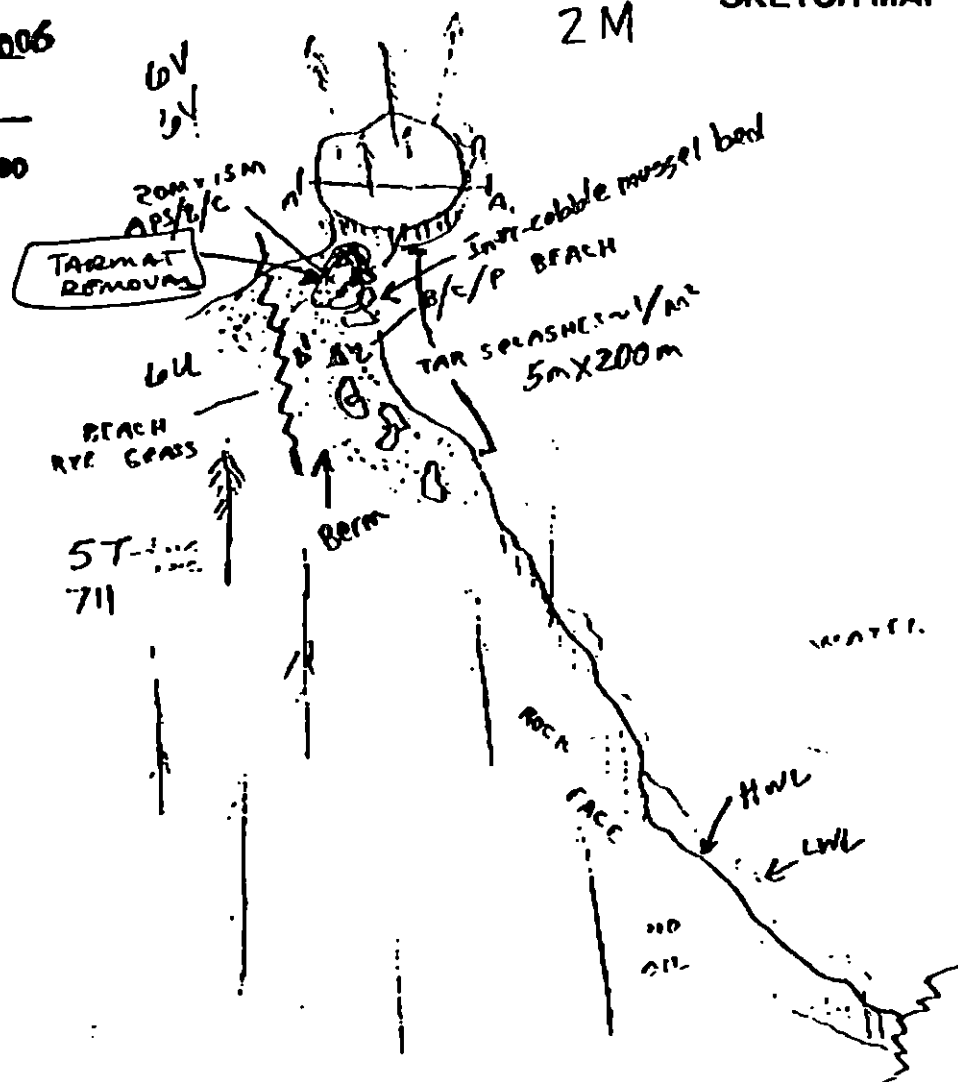
Dispersed Distribution

Oil Vegetation

1 66

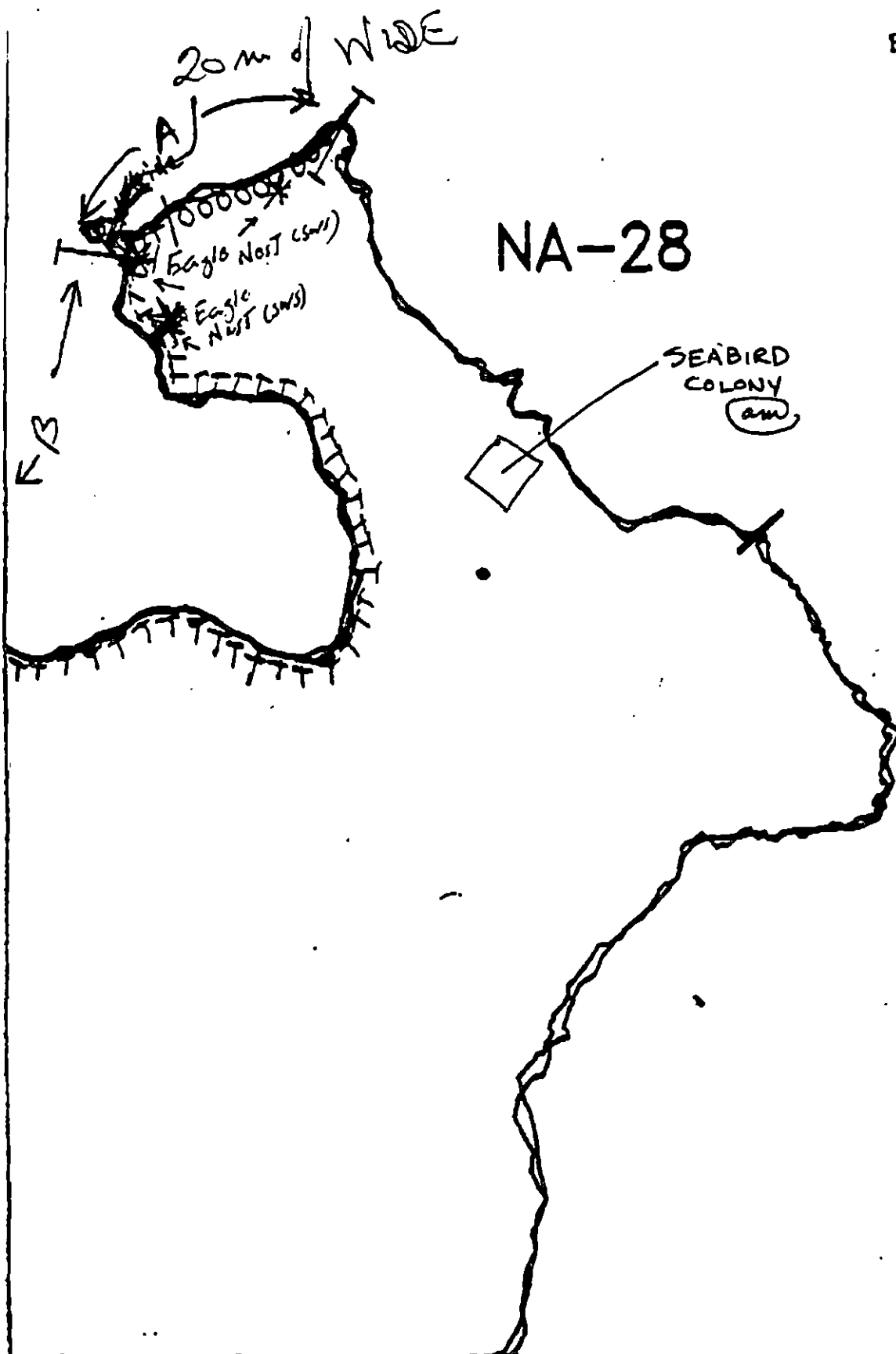
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 20 PO CV CT ST MS PT TB 200 FL NO 730

ECOLOGY MAP



42

XXXX Wide

//// Medium

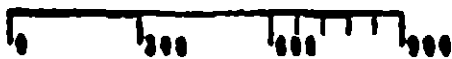
--- Narrow

TTTT Very Light

.....

NA-6

ADEC Segment Length: 12413m



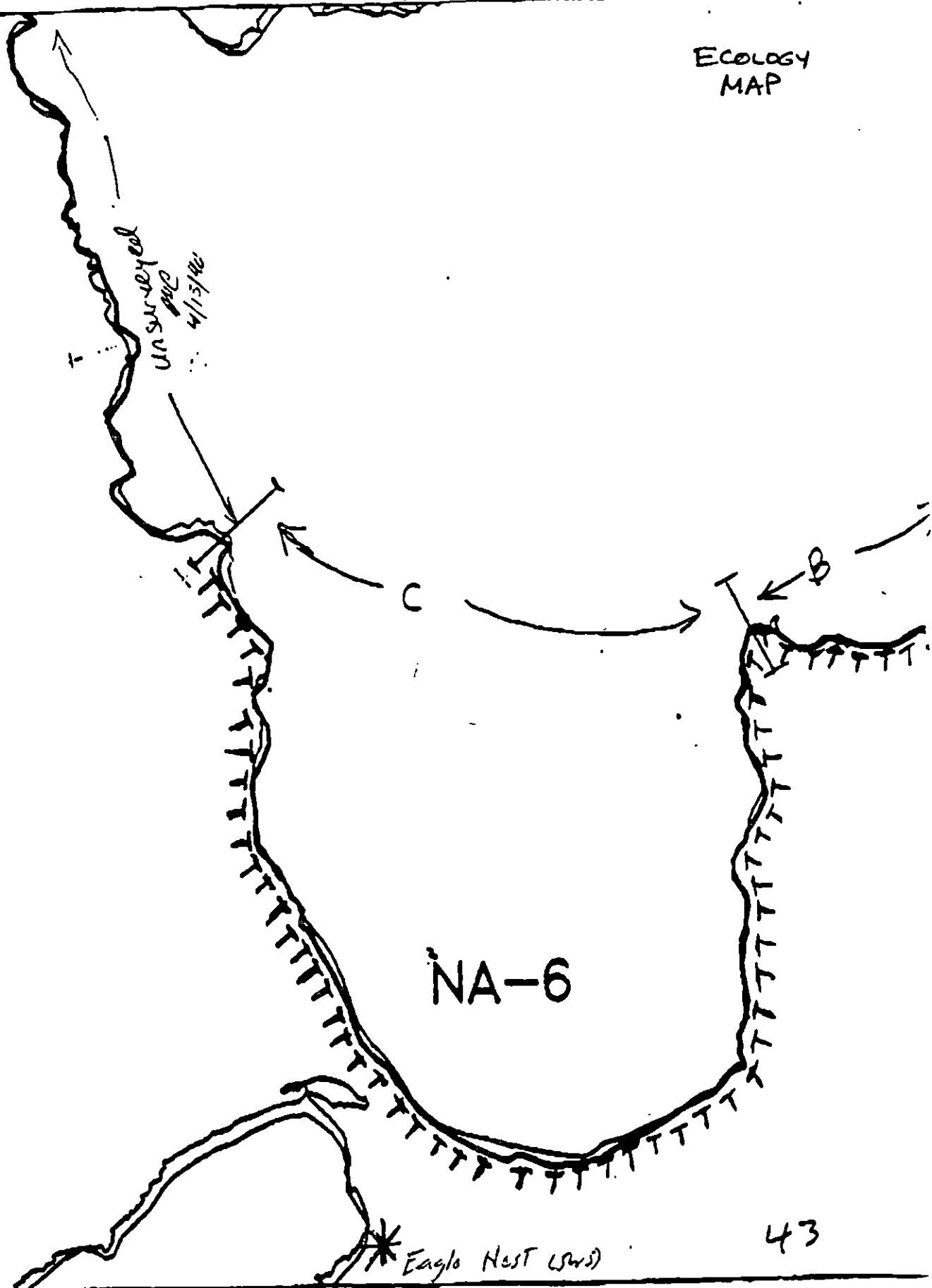
Map Key: PWS-NA-6b

Name: James Springer

Date: 4/7/90

Data Entered:

ECOLOGY MAP



KXXX Wide

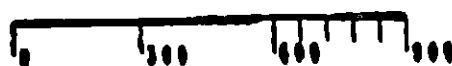
//// Medium

--- Narrow

TTTT Very Light

NA-6

ADEC Segment Length: 12415m

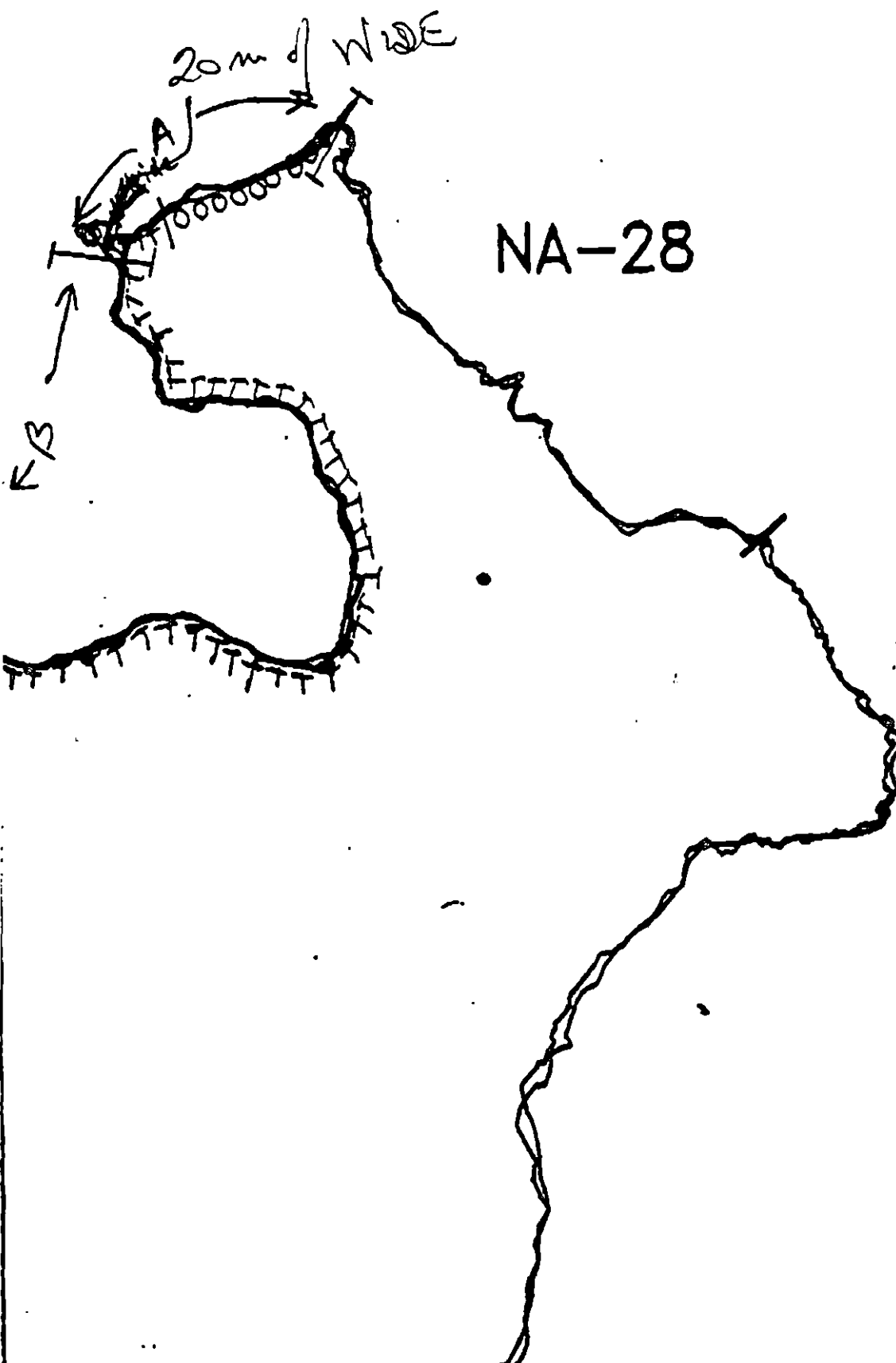


Map Key: PWS-NA-60

Name: James Springe

Date: 4/7/90

Data Entered:



NA-28

42

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

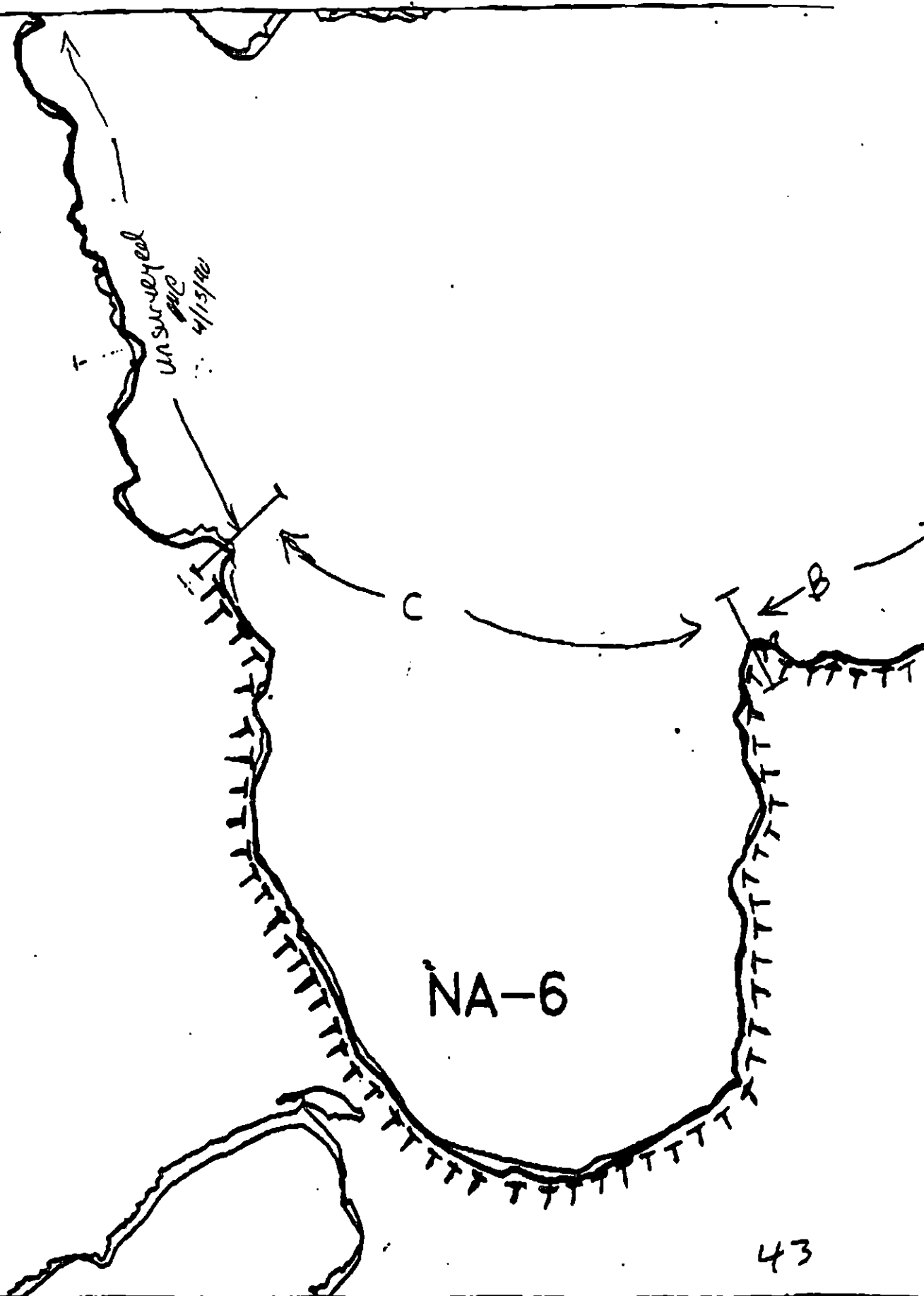
NA-6

ADEC Segment Length: 12415m

0 500 1000 1500



Map Key: PWS-NA-6b
 Name: James Springer
 Date: 4/7/90
 Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

NA-6

ADEC Segment Length: 12415m

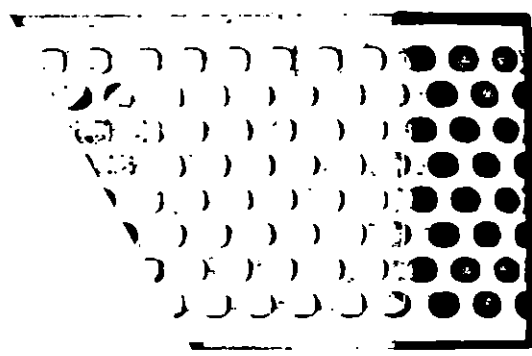
Map Key: PWS-NA-60

Name: James Springs

Date: 4/7/90



PK-1



NA-6

DEC Segment Length: 12415m
1500 1000 500 METERS

Map Key: PMS-NA-6c
Name: James Springer (410)
Date: 4/2/90
Data Entered: 4/13/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-6 SUBDIVISION A (1 of 3)

WORK WINDOW

Tarmat Removal

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to tarmat removal.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to tarmat removal within 400m of active nest. No constraint to tarmat removal more than 400m from active nest.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

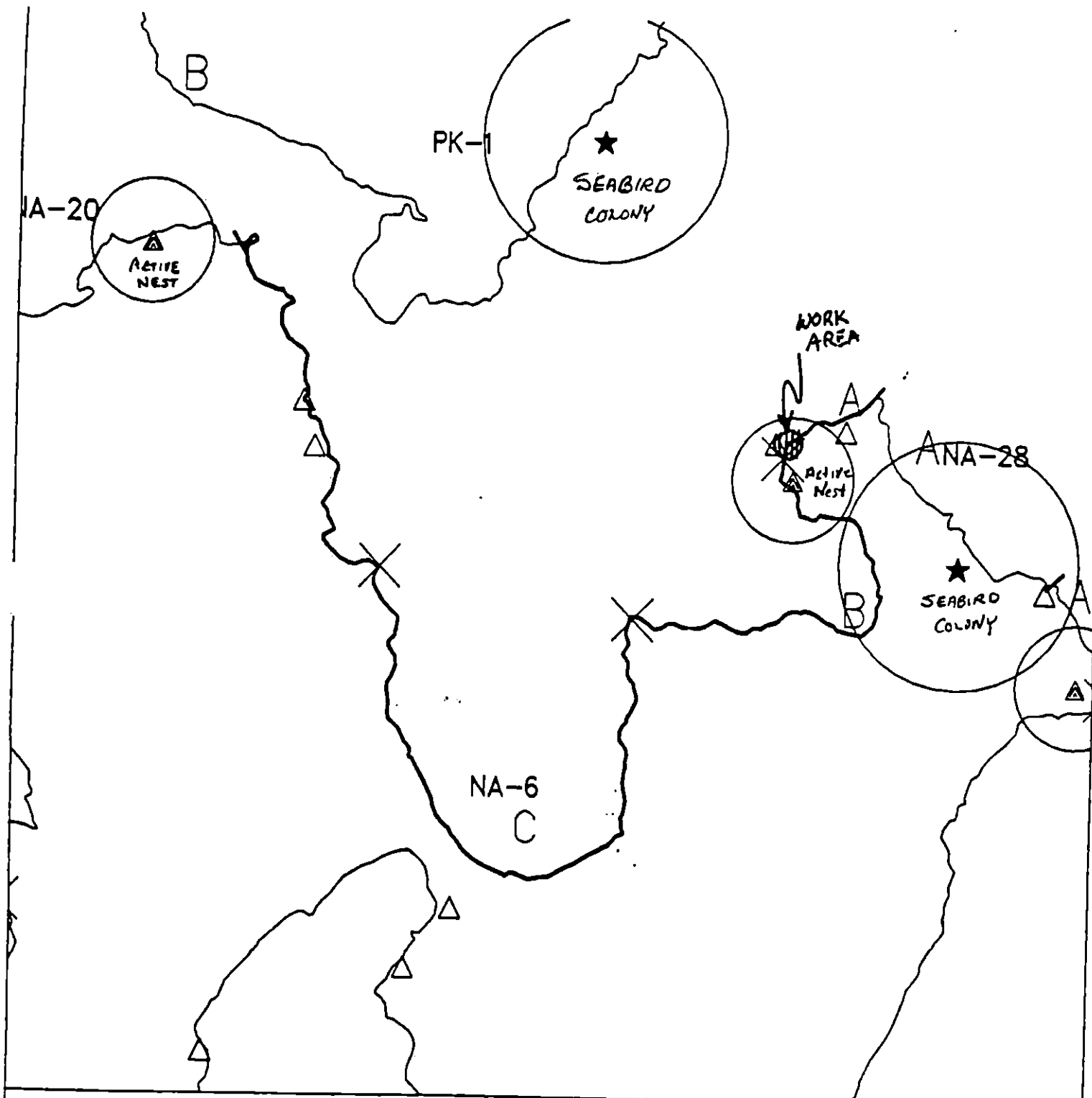
6/14/90

Prepared by

[Signature]

Date

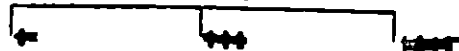
6/14/90



Exxon Company, USA
Map Key: PWS-NA-6
June 04, 1990



ECOLOGY MAP
SEGMENT NA-6
SUBDIVISION A (1 of 3)
METERS



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



SHORELINE EVALUATION

SEGMENT ST/ NA-06 SUBDIVISION B (2 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-5 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
5R Seabird colony (5/1 to 9/1) within 1/2 mile
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unholed biota and substrate. Do not damage or contaminate clam bed. 1 eagle nest in Subdivision B; one eagle nest near Subdivision A/B border. Seabird colony in segment NA-28 may be within 800 m.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 3369 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: MANUAL PICK UP OF TARBALLS DUE TO HIGH HUMAN USE

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC ART WEINER
EXXON Amy
NOAA [Signature]
USCG M.J. HALL

FOSC: [Signature] DATE: 5-11-90

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 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)
 7H-H Finfish harvesting
 7I Deer harvesting (8/15 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 / _____ SUBDIVISION: _____ DATE _____

USCG

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

I recommend no treatment for this sub.

ADEC

NAME Michelle Bae SIGNATURE M Bae☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Sub-segment C has a 5 m band of tar splashes & T/B's throughout the segment. I would concentrate treatment primarily on the N side of the segment. Shovels or axes could be used to remove the splatters and occasional T/B's from the rocks. They occur about 3 every 2 M on the NE side, 1 every 7 M, and on the south side, only occasionally. No subsurface oil was found in the pits dug throughout the band.

LAND MANAGER

NAME DAN LOSAN SIGNATURE Dan☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I RECOMMEND PATROLLING THE BEACH WITH A 2-3 PERSON CREW AND REMOVING TAR BALLS AND SPLATTER.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-6 SUBDIVISION B (2 of 3)

WORK WINDOW

Manual Pickup	
Less Than 400m From Active Nest	CLOSED
More Than 400m From Active Nest	OPEN
Manual Pickup	
Less Than 800m From Seabird Colony	CLOSED
More Than 800m From Seabird Colony	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to manual pickup.
5R	Seabird Colony	Closed to manual pickup less than 800m from colony. No constraint to manual pickup more than 800m from colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest. No constraint to manual pickup more than 400m from active nest.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

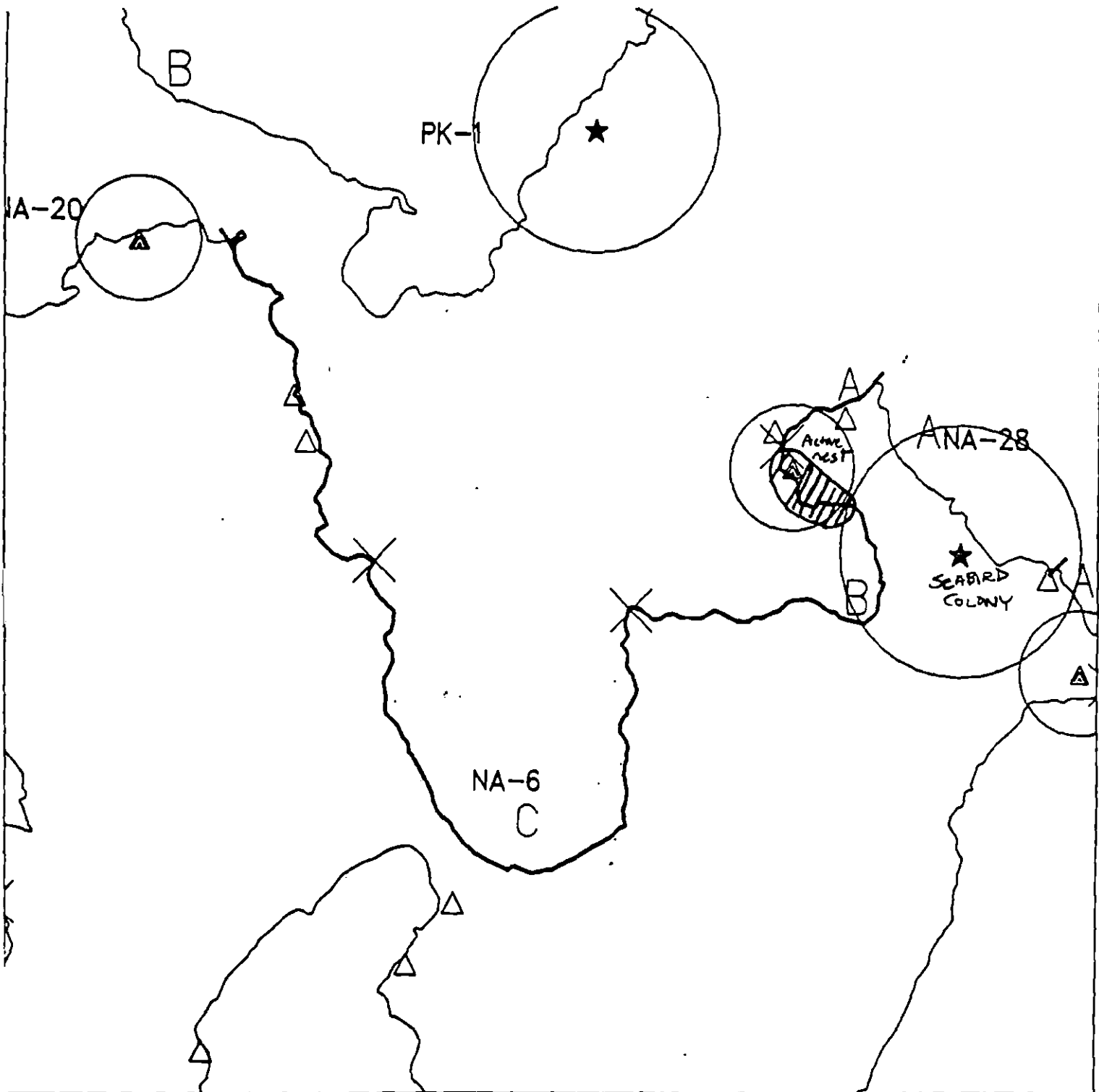
Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unloiled substrate and biota especially intertidal and subtidal algae and seagrass. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat traffic and beach disturbance to essential minimum after 8/15.

FOSC

Date

Prepared by

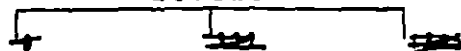
Date



Exxon Company, USA
Map Key: PWS-NA-6
June 04, 1990



ECOLOGY MAP
SEGMENT NA-6
SUBDIVISION B (2 of 3)
METERS



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



SHORELINE EVALUATION

SEGMENT ST/ NA-06 SUBDIVISION C (3 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-5 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
5R Seabird colony (5/1 to 9/1) within 1/2 mile
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 2 bald eagle nests in adjacent unsurveyed portion of NA-06; 2 bald eagle nests in nearby segment NA-27.

SHPO SIGNATURE: J. David McMan DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 4859 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: MANUAL PICKUP OF TAR BALLS DUE TO HIGH HUMAN USE.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90.

ADEC ART WEINER

EXXON AMY TAYLOR

NOAA JOSEPH TELLER

USCG M. J. HALL

FOSC: W L DATE: 5-12-90

- ✓ 1A
✓ 1B
- Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- ✓ 1J
✓ 1K
1L
Gill net area (5/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (8/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 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. 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 267-2206
- 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

SHORELINE EVALUATION

SEGMENT ST/ NA-06 SUBDIVISION C (3 of 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

~~Sensitivity code and general time constraints.~~ See attached sheet for specific constraints and contacts. ST-5 (3/1-9/1)

SR (within 1/2 mile, 5/1-9/1) 219 (4/1-6/15) 64V (6/1-9/15)
711 (8/15-2/28) 6Y

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

2 Bald eagle nests in adjacent unsurveyed portion of NA-06; 2 bald eagle nests in nearby segment NA-27.

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 4859 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON WES _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

SHORELINE OILING SUMMARY

REVISION NO. 08/22/98

OG J. Springer USCG R. Vandepels SEGMENT ST/ NA 006
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3 of 3)
 OXON T. Tomplin ADEC M. Baker TIME 07:30 to 08:00
 EAM NO.: 5 TIDE LEVEL: +4 to +6 DATE 04/06/90
 EST. SUBDIVISION LENGTH: 300 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NE to SW
 SURFACE SEDIMENTS: R 10 % B 40 % C 25 % P 15 % G 5 % S 5 % M 5 % V 5 %
 SLOPE: Long 90 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 5 m M 5 m N 5 m VL 2300 m NO 5 m

SURFACE OIL

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

PAVEMENT: H F S 5 sq. m by 5 cmPATTIES / TARBALLS 100 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-oz)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	5	SU	U	M	V		
1	15					X	-										X			PG S M V
2	60					X	.									X				PG S M V
3	28					X	.											X		G S M
							.													
							.													
							.													

COMMENTS

37

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/88

Segment ST/NA 6 Subdivision C Date (mo/day/yr) 4/11
 Time (24 hr) 0745-0900 Biologist Crank Tide Height +5.2 +3 ft
 Length 2300 m

- (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 5 Moderate 80 Low 15
- (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 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 X 2	2 2 2
3 3 3	3 3 3	3 X 3	3 3 3
4 4 4	4 4 4	4 4 4	4 4 4
5 5 5	5 5 5	5 5 5	5 5 5
6 6 6	6 6 6	6 6 6	6 6 6

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- 1- Eagle (early AM coastward obs) 2- Glaucous-wing Gulls
 Part of an otter skeleton Heard - Chickadees; Thrush
 2- unidentified Marine Birds

Ecological Considerations:

- 6Y - Special Use Designation
 6U - Tent Sites
 6V - Anchorages
 ST-4 - Active Bald Eagle Sites - (not obs)
 7H - Deer Harvesting
 2M - Heron spawning

- LITZ unexposed

- Juvenile mussels only, found on the underside on boulders and cobbles.

- Fucus concentrations increase on the point

- Clam shells were obs on beach, however unable to verify clam habitat of LITZ due to tide - suspect area is clam habitat and appropriate precautionary

SEGMENT: ST/ NA 4 SUBDIVISION C LENGTH 2300 BIOLOGIST CrankDATE 4/6/90 TIME 0745-0900 TIDE HEIGHT +5 → +7 ft

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

FLORA:

SPECIES	UTZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FLAMENTOUS GREENS				
FLAMENTOUS REDS				
GLOIOPELTIS FURCATA		2		
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHISIA/HILDENBRANDIA				
RHODOMELA LARIX		2		
RHODOMENIA PALMATA				
SCYTOSIPHON SPP		2		Rare
ULVA SPP				
ZOSTERA MARINA				
<i>Hydrocolea</i>	2	23		Abundant

FAUNA:

ANTHOPELURA SPP				
(SEMI) BALANUS CARIOSUS				
B. GLANDULA				
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATU)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTES		2		
LIMPETS	23	23		
LITTORINA SPP	23	21		Dense
NUCELLA SPP	23	23		
PAGURUS SPP				
PIRATER OCHRACEUS				
POLYCHAETES				
PYGNOPODIA HELIANTHOIDES				
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				
<i>Ribbon Worm</i>		3		
<i>Amphipods</i>	23	23		

ECOLOGY MAP

Eagle
Nest
(SW)

NA-6

Eagle Nest (SW)

43

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

NA-6

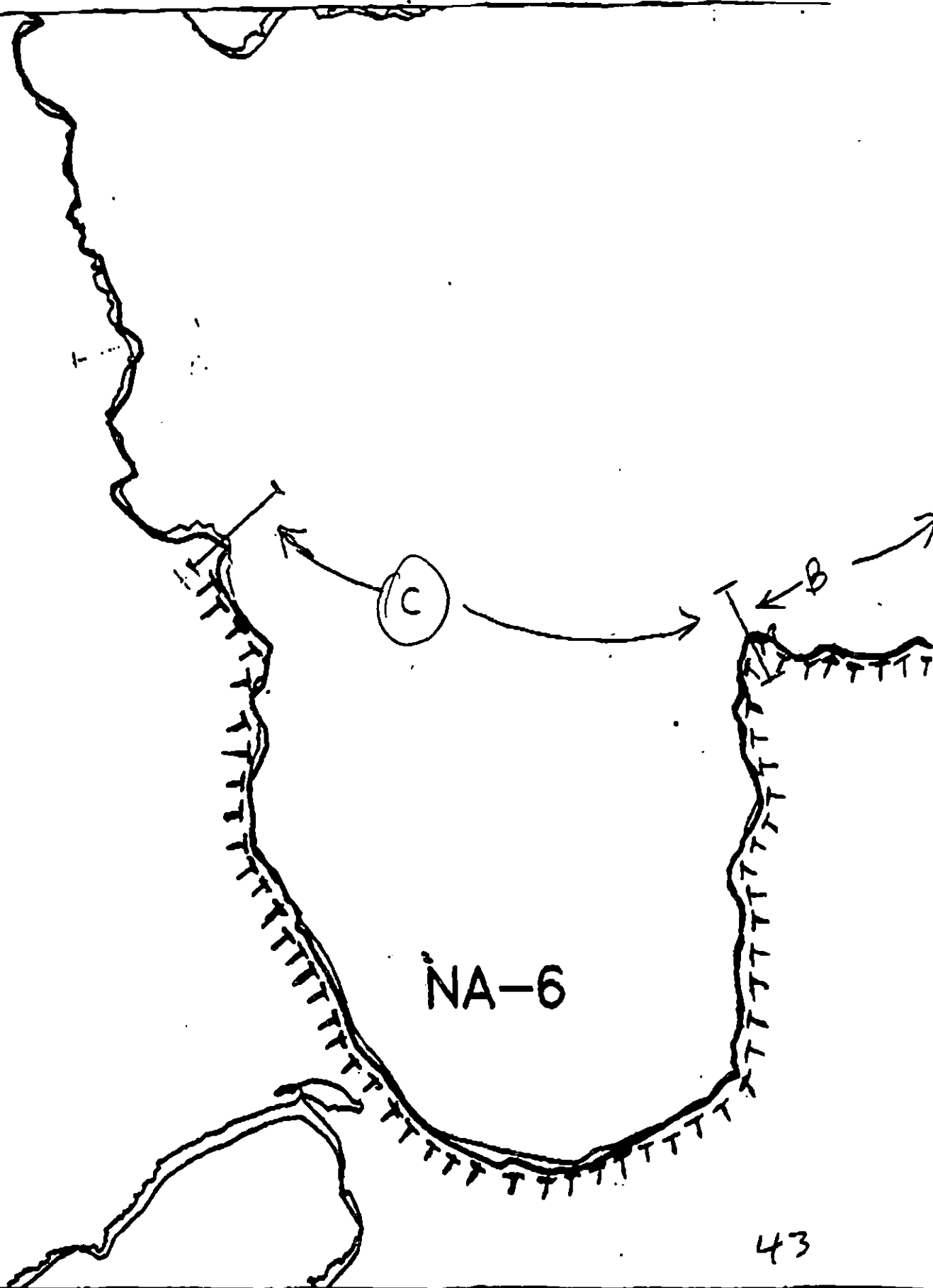
ADEC Segment Length: 12415m

Map Key: PHS-NA-60

Name: James Spring

Date: 4/7/90





XXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-6

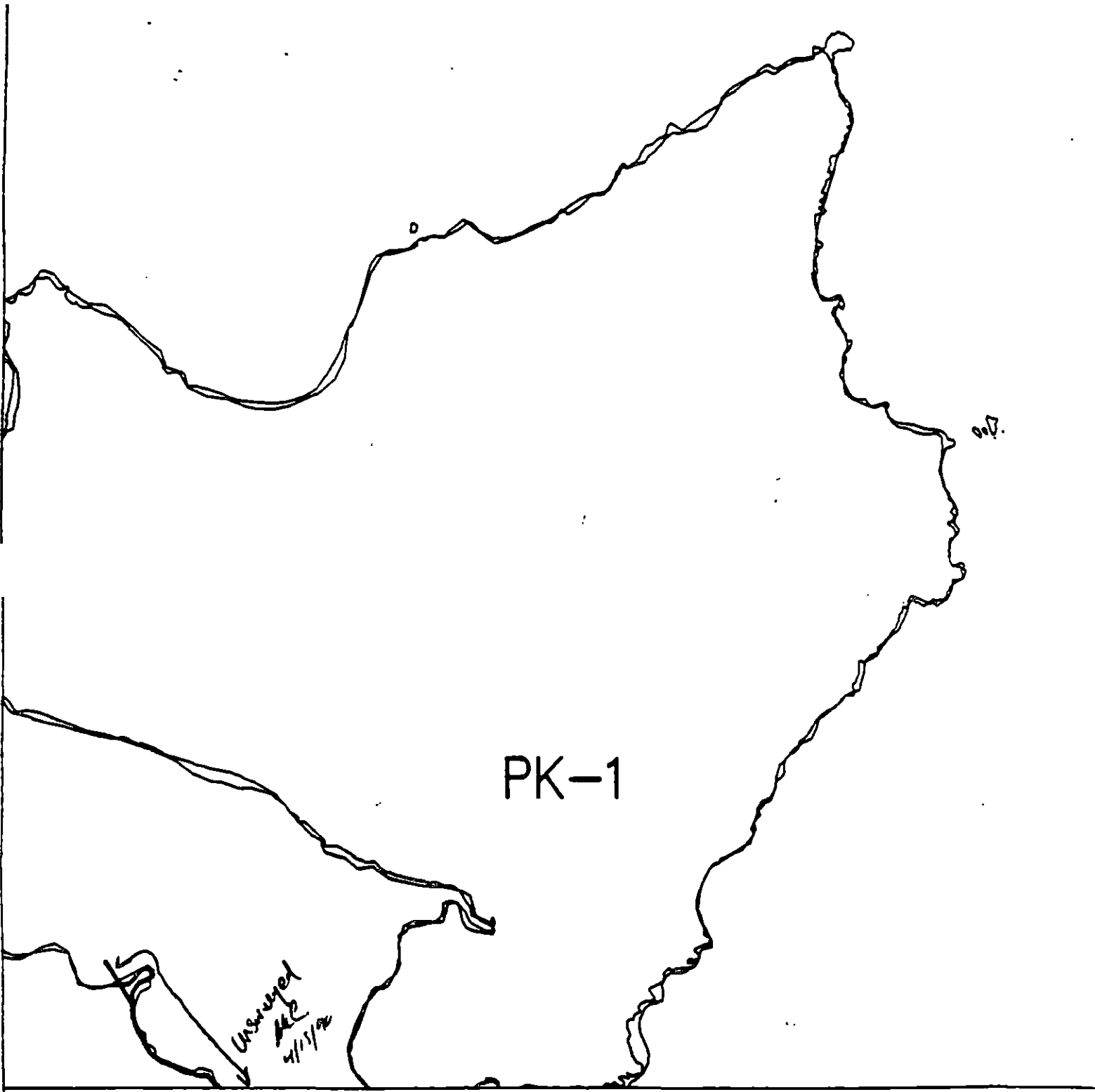
ADEC Segment Length: 12415m



Map Key: PWS-NA-50

Name: James Springer

Date: 4/7/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NA-6

ADEC Segment Length: 12415m



Map Key: PWS-NA-6c

Name: James Springer (AIC)
4/15/90

Date: 4/7/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-6 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to manual pickup.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum prior to 6/15 and after 8/15. Avoid any unnecessary disturbance or damage to uncolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

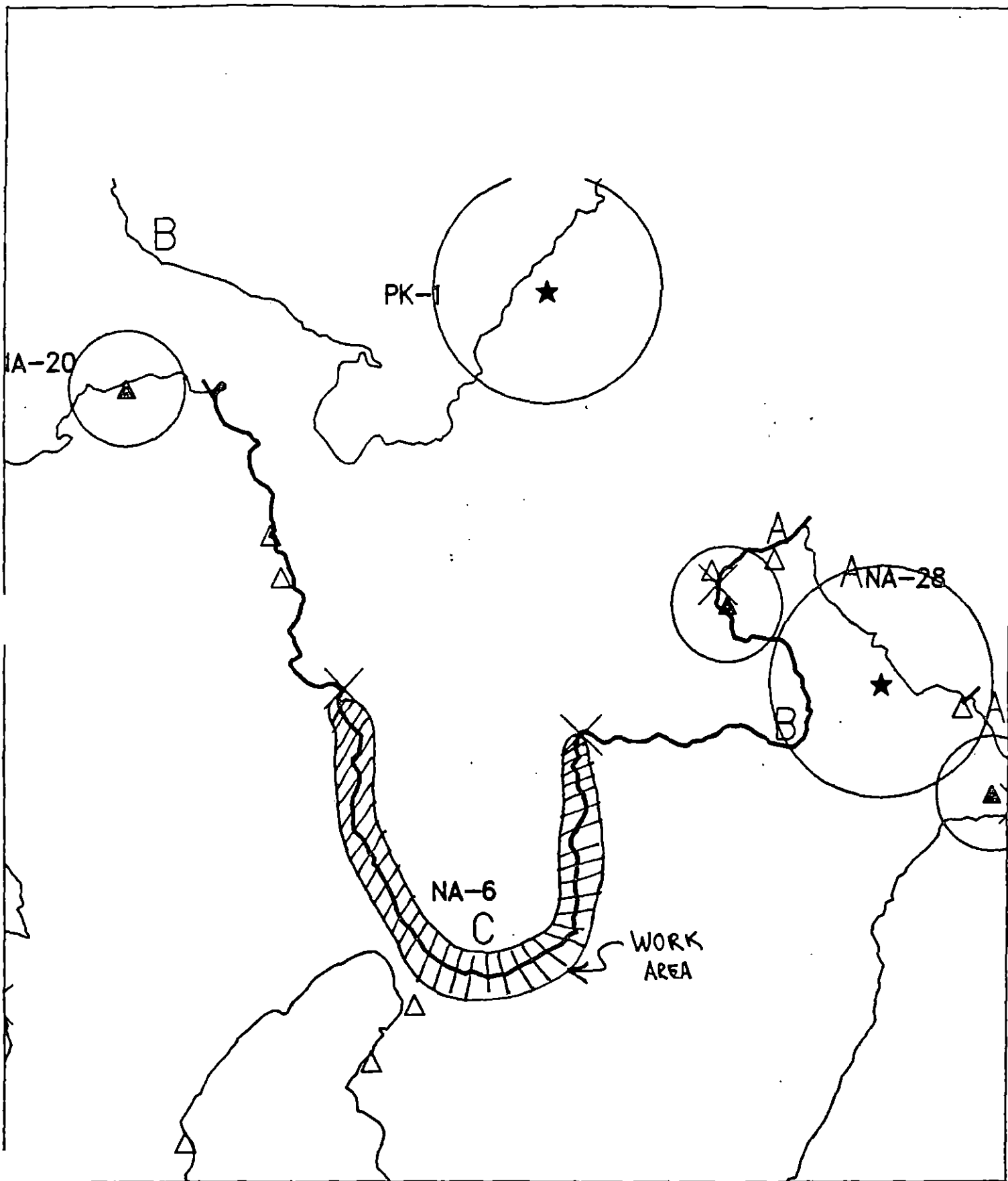
Date

6-10-90

Prepared by

Date

J.P. Phillips
6/10/90



Exxon Company, USA
NEW BRUNSWICK, NJ 08901



ECOLOGY MAP
SEGMENT NA-6
SUBDIVISION C (3 of 3)
METERS

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

7/27/90

ADDENDUM: SUBDIVISION CONSTRAINTS**SEGMENT NA-6 SUBDIVISION C (3 of 3)**

WORK WINDOW	
Manual Pickup & TARMAT REMOVAL	OPEN
MANUAL LAKE/TILL & BIOREMEDIATION	OPEN

* BIOREMEDIATION WITH CUSTOMER FOLLOWED BY WIPOL.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to manual pickup.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum prior to 6/15 and after 8/15. Avoid any unnecessary disturbance or damage to unloosed substrate and biota especially intertidal and subtidal algae and seagrass.

ADD TARMAT REMOVAL,
MANUAL LAKE/TILL &
BIOREMEDIATION AS
PER WORK PLAN
ADDENDUM DATED
7/11/90

7/27/90

7-27-9

FOSC

Date

6-10-90

Prepared by

J.P. Phillips

Date

6/10/90

WORK PLAN ADDENDUM

Segment

NA 6

Subdivision

C

Dated

7/11/90

MODIFICATION

1. REASON FOR MODIFICATION

- ADDITIONAL OIL FOUND DURING TREATMENT. BEYOND THE WORK PLAN. REQUEST FROM FIELD FOR ADDITIONAL WORK EFFORT AS DISCUSSED IN ATTACHED RECOMMENDATION.

2. ADJUSTMENT TO WORK PLAN

- ADD MANUAL PICKUP OF TARMATS + MOUSEE FOLLOWED BY BIOREMEDIATION - CUSTOMER FOLLOWED BY INPOL TO PREPARE OILED AREAS FOR BIOREMEDIATION MANUALLY RAKE/TILL WHERE FEASIBLE.

SHPO APPROVAL NEEDED YES

X

SHPO SIGNATURE

Michael Ostrogorsky
Michael Ostrogorsky

NO

TAG APPROVAL DATE

7/11/90

ADEC

JOHN BAUER

John Bauer

EXXON

ANDY TEAL

Andy Teal

NOAA

Bud Wescott

Bud Wescott

USCG

G.A. REITER

G.A. Reiter

FOSC

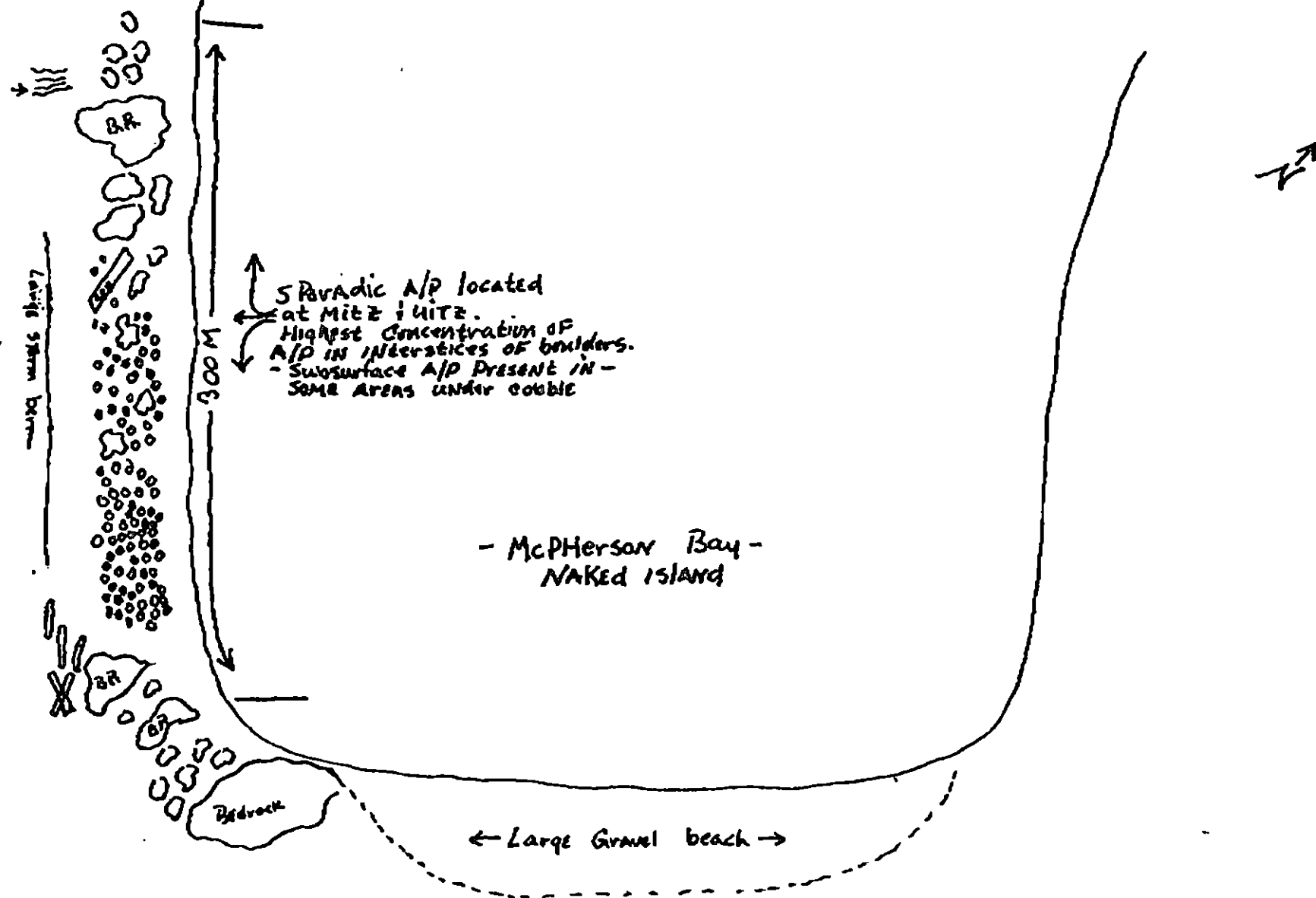
[Signature]

DATE

7-11-90

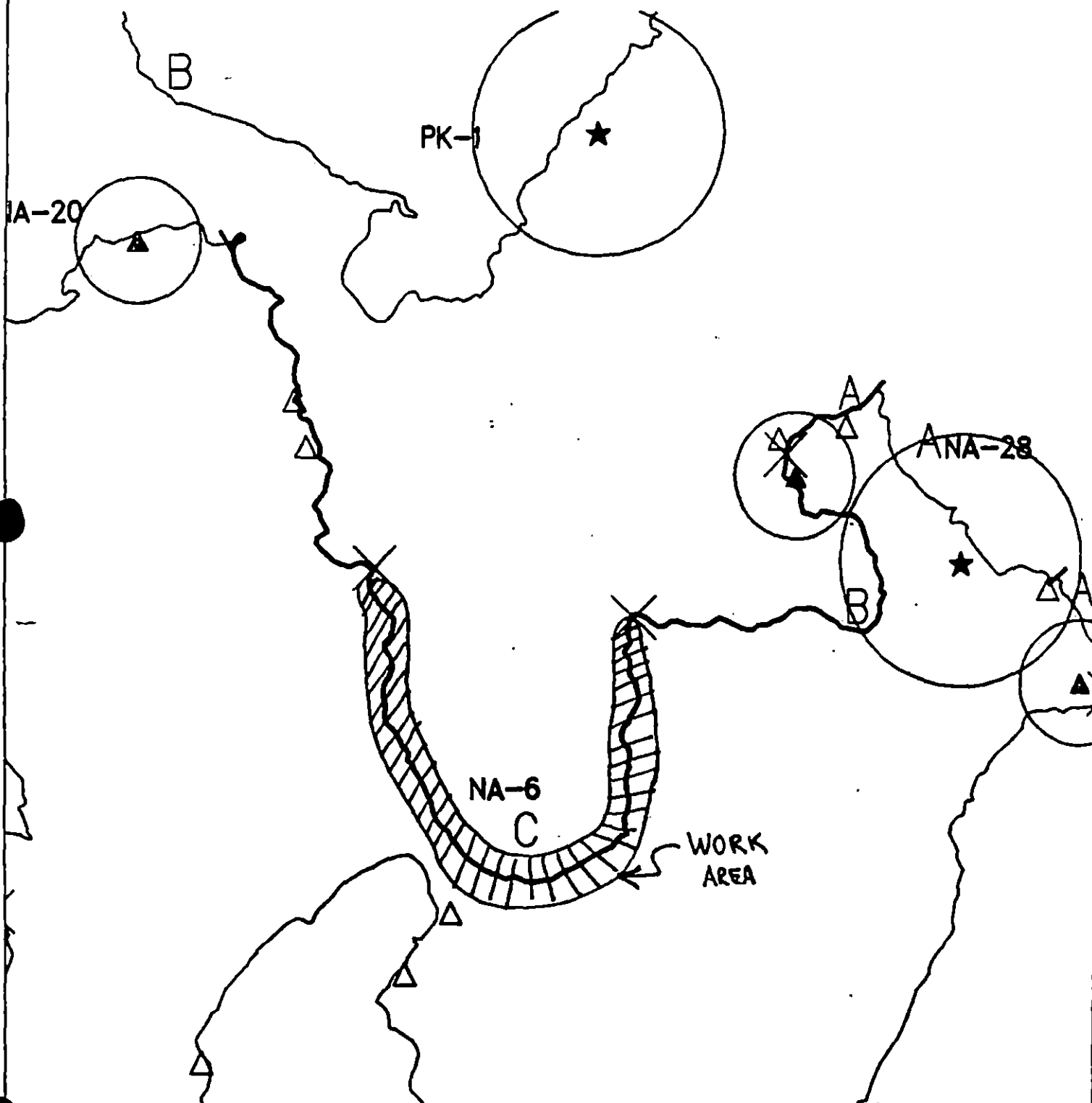
NA-6 C

7/10/90



MAP SHOWS AREA OF OIL Concentration -

Wesley Ghorntley  ADEC



Exxon Company, USA
Map Key: PLS-NA-6



ECOLOGY MAP
SEGMENT NA-6
SUBDIVISION C (3 of 3)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ NA-20 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; Anchorages (6V) - 6/1 to 9/15; Special use designation
(6Y) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep disturbance to a minimum.

SHPO SIGNATURE: Rachel Jean Oate DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 262 m: No Oil 42 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended as only very light splashes of
tar balls and patties found. Does not warrant intrusion. See
Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC JOHN BAUER EXXON ANDY RAL NOAA Burt Westcott USCG G.A. REITER FOSC: DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA-20 SUBDIVISION: A DATE 3/31/90

USCG

NAME

WO2 J. McAlister

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

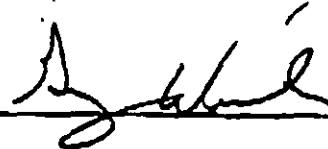
1. Oil observed was ~~old~~ old, asphalt (inert), and although NA20 (A) experienced a slightly larger count of patty the area doesn't warrant an incursion of a work party to clean-up.
2. Patties should continue decompose during summer.

ADEC

NAME

GREG WINTER

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

SINCE TAR PATTIES ARE LARGE (UP TO 20 CM) AND 1-5 CM THICK AND ARE FREQUENTLY ENCOUNTERED IN TYPE-64 UPPER INTERTIDAL ZONE. THESE ARE FRILABLE AND EASILY REMOVED BY MECHANICAL CLEANING. THEY SHOULD BE REMOVED AND BAGGED.

LAND MANAGER

NAME

Mike Bennett

SIGNATURE



ADNR - NRW

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Area use is mixture of herping spawning, deer harvest & subsistence. Noted wildlife in area did not appear to be stressed. Oil was present in small, infrequent asphalt patches. Amount of oil present would not require treatment. Plus area plan uses met with small amount of oil present. Have to consider the harm vs. good argument on this segment & don't believe that segment should be treated. Noted eagles in the area and would not be beneficial to treat. Oil was in small asphalt patches.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 08/2

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-20
 BIO D. Laidlaw LAND REP DNR M. Bennett SUBDIVISION A (10F1)
 EXXON S. Newman ADEC G. Winter TIME 11:28 to 12:30
 TEAM NO.: 215 TIDE LEVEL: 0 to 20m ^{above mean} DATE 3/31/90
 EST. SUBDIVISION LENGTH: 250 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 5 % B 50 % C 30 % P 5 % G 5 % S 5 % M 5 % V 5
 SLOPE: Long 75 % Hang 20 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 5 m M 5 m N 5 m VL 180 m NO 70 m

SURFACE OIL

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

PAVEMENT: H F S None sq. m by
 PATTIES / TARBALLS < 1/4 bag BAG:
 NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

None

 DEBRIS COLLECTED
☐ YES ☒ NO
TYPE #BAGS

Photographs: Camera Broken
 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
		OF	OR	OL	OF	NO			BR	OR	OL	OF	NO	TL	SU	U	M	U		

COMMENTS

Priority 3

- Band of tarballs and patties adhering to boulders along a band 2-4m at the upper intertidal zone, particularly at the base of a small scarp in the middle of the segment
- No pits dug due to the overall lack of oil and the composition (boulders and cobbles) of the upper beach.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02.

Segment ST / NA-20 Subdivision A Date (mo / day / yr) 3/31/90Time (24 hr) 11:30 Biologist DANIEL RAIDER(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 50 (3) Cobble 30 (4) Pebble 10 (5) Sand 5 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense <10 Moderate 60 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. none taken

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:

- Shorebird
- *Saxidomus giganteus*
- Eagles Flying

Ecological Considerations:

- ST (3/1 - 6/1) Eagles Nest
- 711 (8/15 - 3/1) Deer Harvesting
- 6V,Y (6/1 - 9/15) Recreation
- 2M (4/1 - 6/15) Herring Spawning

Positive I.D.

seen flying in area

ADEL. 1

NA-20 Subdivision A, Biology Comments

- Some open *Mytilus* shells in Lower Intertidal Zone
- Moss (moderate to dense) in Upper Intertidal Zone on Boulders
- Tall grass in Upper Intertidal Zone
- Much green filamentous algae in Lower Intertidal Zone
- Many open clam shells (3-5" in diameter) in Lower Intertidal
- Red 'fucus' in Lower Intertidal Zone; evidence of sparse new col.
- Many large kelp (Brown algae) dead in Upper Intertidal Zone
- Evidence (scat) of animals using Upper Intertidal Zone as feeding area.

OG FLORIDA

SEGMENT ST/ NA-20

SUBDIVISION A

DATE 31 Mar 90

SKETCH MAP

CHECKLIST

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

LEGEND



Pit - No Subsurface Oil



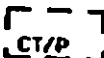
Pit - Subsurface Oil



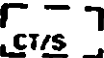
Continuous Distribution



Broken Distribution



Patchy Distribution

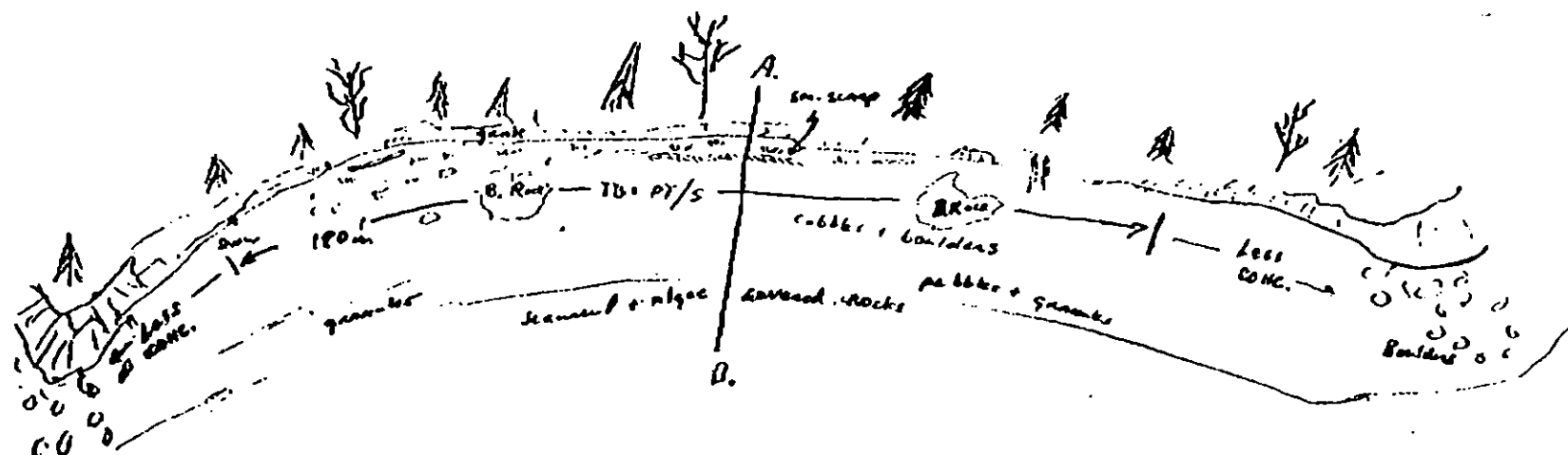


Splashed Distribution

Oiled Vegetation

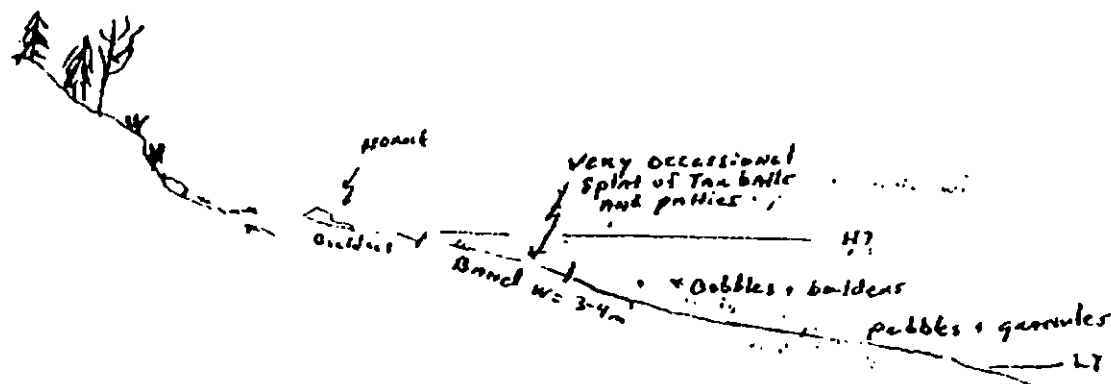


Photo location, direction, and number

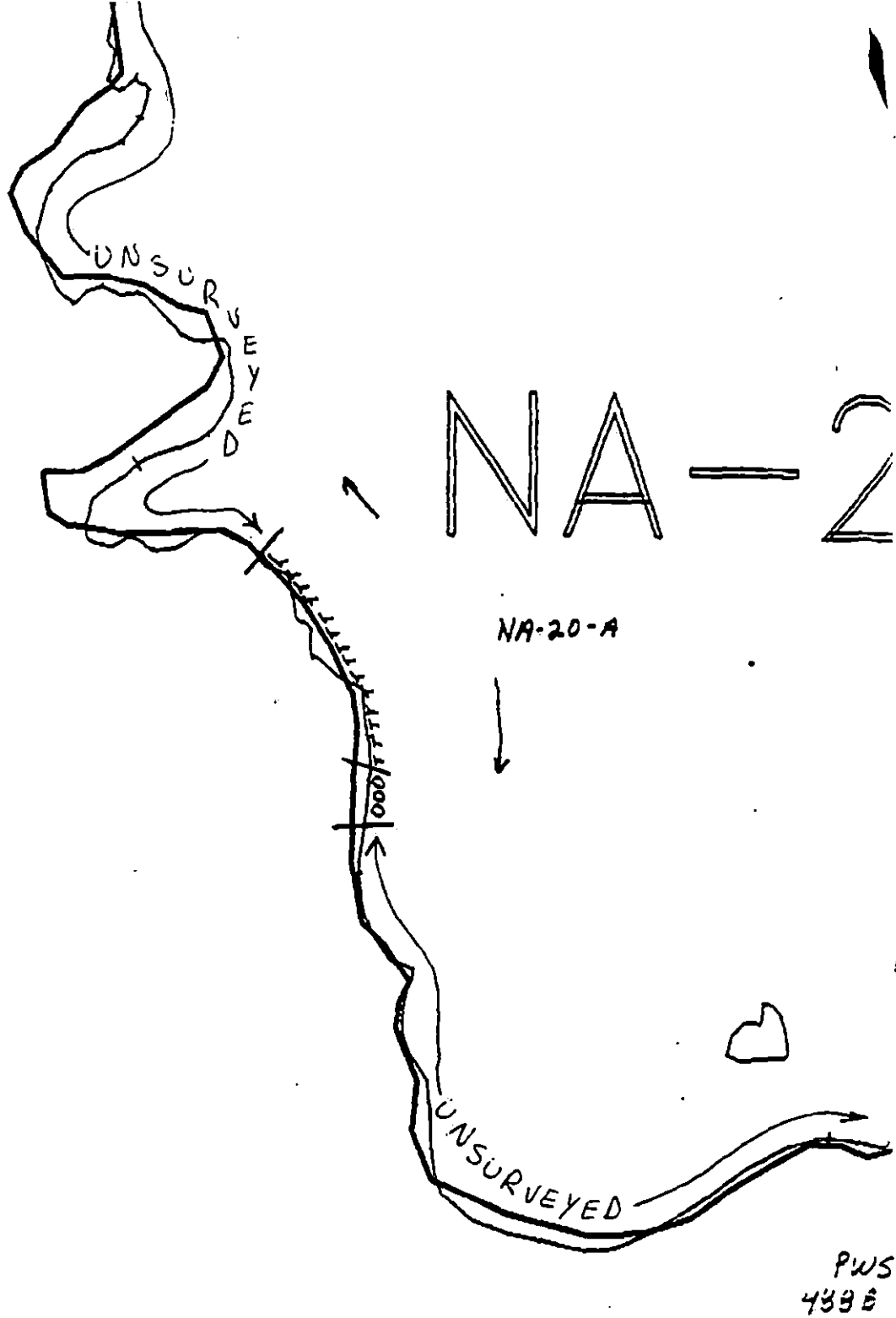


A.

B.



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT 100 TB 80 FL _____ NO 70 m



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

NA-20

ADEC Segment Length: 4433m



Map Key: PWS-488a

Name: D. Fitzgerald

Date: 31 Mar 90

Date Entered:

ADEC 6W

SCAT TEAM P.14

TO

CORROU

FROM

01:08

01-1990

SHORELINE EVALUATION

SEGMENT ST/ NA-21 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Bald eagle nest (5T) - 3/1 to 6/1; Special use designation (6Y) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28. Destination

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums. (2M) - Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for exact dates and locations.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 27 m: No Oil 68 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN H. BAUER DDH
EXXON ANDY TEAR DDH FOSC: DATE: 4-20-90
NOAA Bryl Wescott DDH
USCG G.P. BEITER G.A. Dutton

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA-21 SUBDIVISION: _____ DATE 3-31-90

USCG

NAME CWO2 J. MC MATHEW SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

1. Amount oil found was old (inert) and doesn't warrant treatment, not cost effective, would cause more harm than good to effect removal.
2. Oil (inert) does not pose a problem to fish, fowl or animals in its present form - it may decompose over the summer and dissipate.

ADEC

NAME GREG WINTER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SPARSE DISTRIBUTION OF OIL SPLASHES AND TAR PATCHES MAKES TREATMENT INFEASIBLE. I DISAGREE WITH THE COMMENT THAT THIS OIL DOES NOT POSE A PROBLEM OR THREAT TO WILDLIFE AS WE HAVE NO DATA TO SUBSTANTIATE THAT CLAIM. WE KNOW THAT MANY POLYNUCLEAR AROMATICS PERSIST EVEN IN WEATHERED OIL.

LAND MANAGER

NAME Mike Bennett

SIGNATURE [Signature]

AREA - NRMS

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Concur with USCG comments - oil occurred as small splashes. Area is a high priority due to deer harvesting, herring spawning, special use designation and active bald eagle nests. Oil found was inert and would not pose any problem to fish, marine mammals, or deer. No recreational use referenced in PWS area plan. No treatment recommended.

SHORELINE OILING SUMMARY

REVISION NO. 08/22A

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-21
 BIO D. Riden LAND REP DNR M. Bennett SUBDIVISION A (1 OF 1)
 EXXON S. Neuman ADEC E. Winter TIME 12:45 to 13:15
 TEAM NO.: #15 TIDE LEVEL: 60 to 120 cm above DATE 3/1 March 1990
 EST. SUBDIVISION LENGTH: 80 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to Southwest
 SURFACE SEDIMENTS: R 25 % B 35 % C 30 % P 5 % G 5 % S 0 % M 0 % V 0
 SLOPE: Long 50 % Hang 30 % Ven 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 20 m NO 60 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	BR	WH	GY	BL	GR	TL	LR	LR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES				X		X							X			
TARBALLS				X		X							X			
FILM																
NO OIL													X	X	X	

PAVEMENT: H F S NONE sq. m by 0 cPATTIES / TARBALLS < 1/8 bag BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0Photographs: Camera Broken TodayRoll No. 0Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UG	UC	BR	WH	GY	BL	GR	TL	LR	LR	SU	U	M	L		
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS - Priority 3
 - Oil found at two locations, at the corners of the cusped beach
 - Oil occurs as patties and tar balls encrusting boulders
 - No pits dug due to boulder and large cobble texture of the beach and the low overall oiling condition

SHORELINE ECOLOGICAL SUMMARY

REVISION: 002

Segment ST / NA2 / Subdivision A Date (mo / day / yr) 3 / 31 / 90

Time (24 hr) 12:45 Biologist DANIEL TRAIDER

(A) Substrate type and % of segments:
(1) Bedrock 25 (2) Boulder 35 (3) Cobble 30 (4) Pebble 10 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 10 Low 85

(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. None

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:

Otter (30 yards off-shore)

Eagles (100 yards off-shore and then into tree tops)

Limulus (gastropods) here; none in other locations

Ecological Considerations:

Category	Time frame	Positive sightings
6Y	(6/1 - 9/15)	
ST-2	(3/1 - 6/1)	→ Eagle in tree tops
7H	(8/15 - 3/1)	
2H	(4/1 - 6/15)	

Priority 2

ADEC

OG F. h. 2212

SEGMENT ST/ NA-21

SUBDIVISION A

DATE 31 / PM 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Job Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. FHW/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

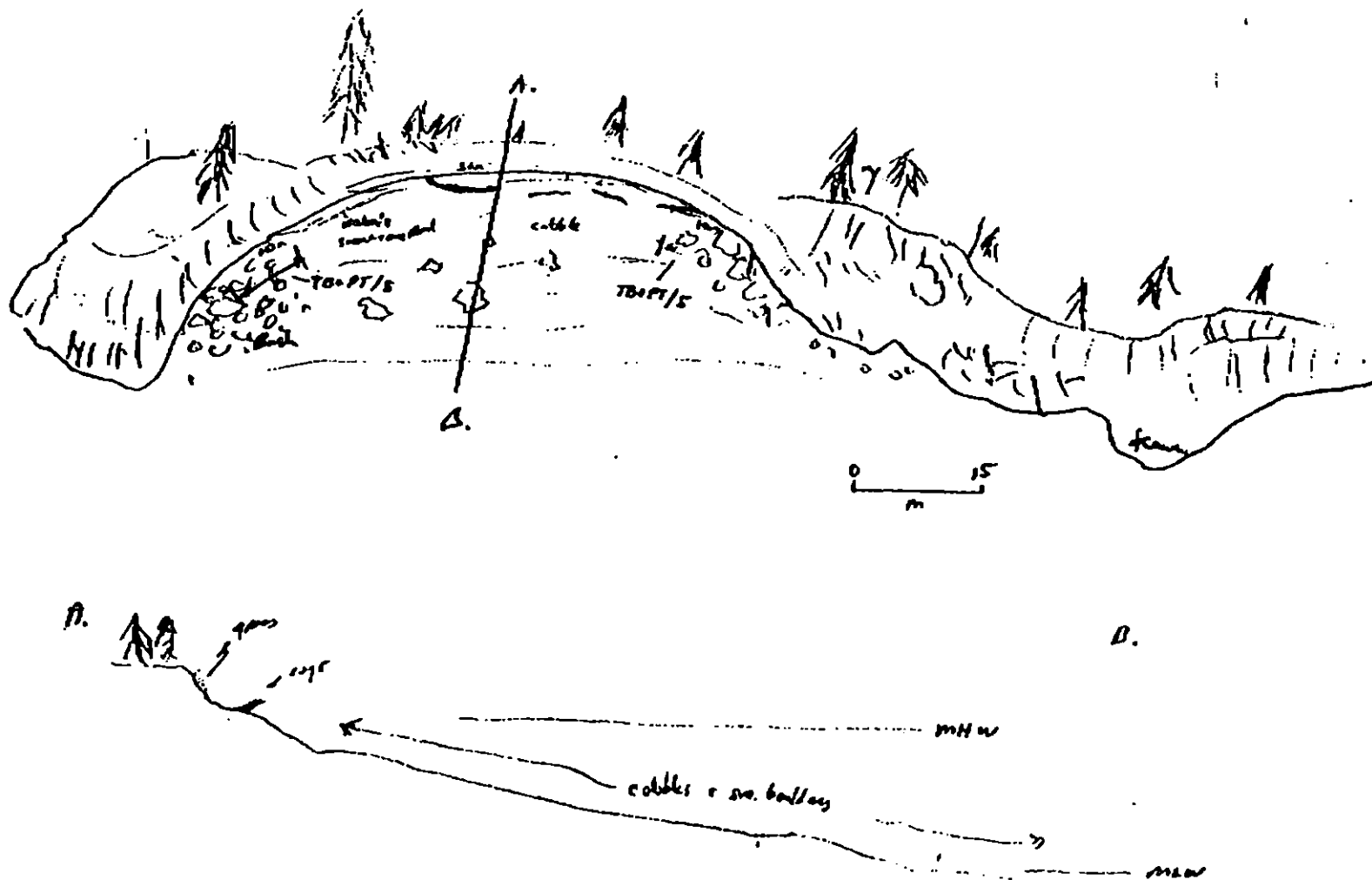
Spotted Distribution

Oil Vegetation

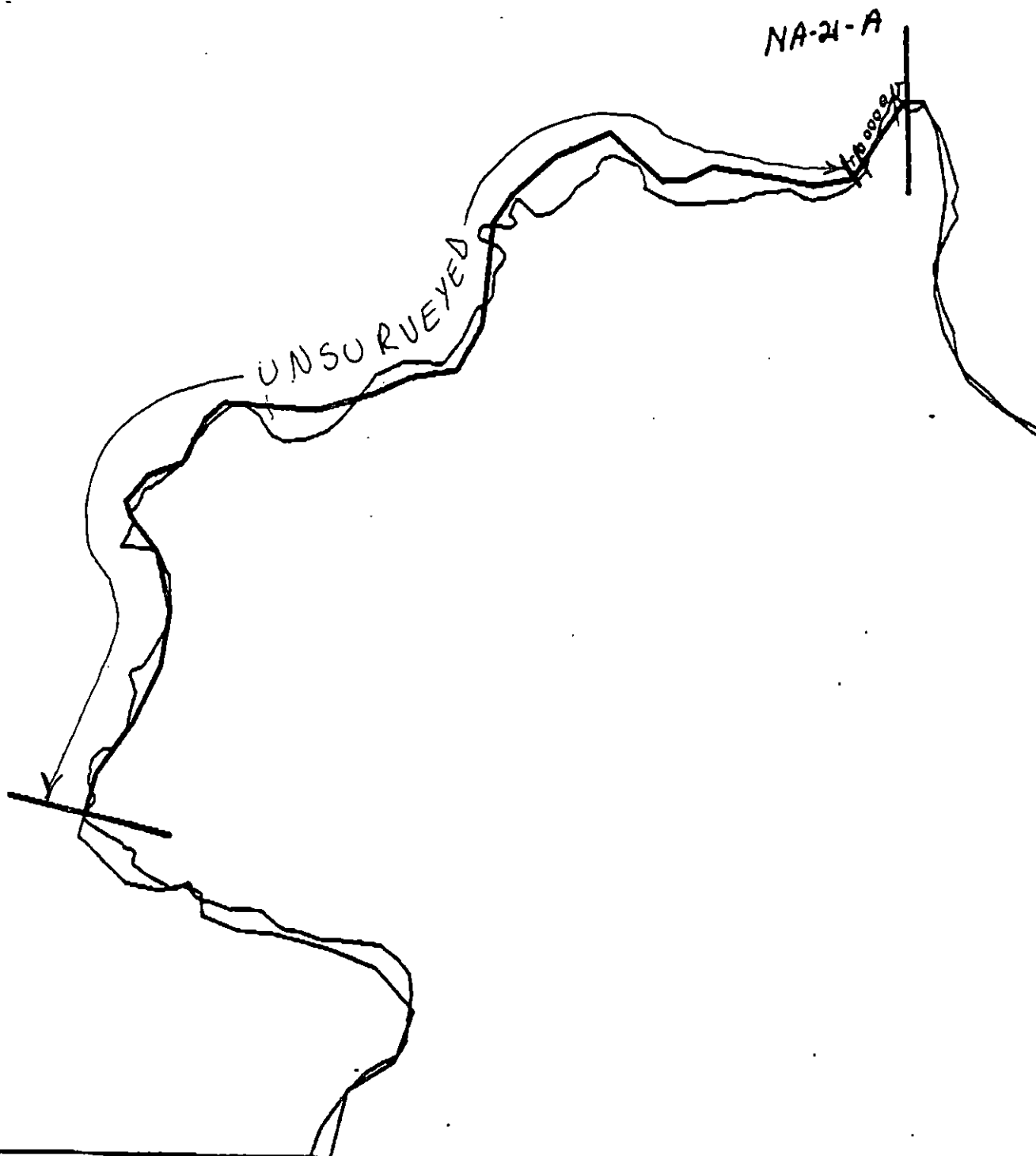
1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT 10 TB 10 FL _____ NO 60



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NA-21

ADEC Segment Length: 1364m



Map Key: PWS-487

Name: FitzGerald

Date: 31 Mar 90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ NA-21 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Bald eagle nest (5T) - 3/1 to 6/1; Special use designation (6Y) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28. destination

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and aviodance minimums. (2M) - Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for exact dates and locations.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 21 m: Narrow 0 m: V.Light 22 m: No Oil 53 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Manual pickup of mousse/tar patties shown on map. Work
after 6/1.

BIOREMEDIATE WHERE APPROPRIATE WITH CUSTOMER

TAG COMMENTS:_____

TAG APPROVAL DATE: 4/13/90
 ADEC JOHN BAUER
 EXXON ANDY TAN FOSC: DATE: 4-10-90
 NOAA Burt W. Wright
 USCG G.A. REITER

SHORELINE OILING SUMMARY

REVISION NO. 02/89

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-21
 BIO D. Rader LAND REP M. Bennett SUBDIVISION B (2 OF 3)
 EXXON S. Newman ADEC G. Winter TIME 12:45 to 14:15
 TEAM NO.: #12 TIDE LEVEL: 30 to 60 on shore DATE Apr 1 / 1990
 EST. SUBDIVISION LENGTH: 120 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Northeast to southwest
 SURFACE SEDIMENTS: R 15 % B 40 % C 40 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 40 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 20 m N 0 m VL 5 m NO 95 m

SURFACE OIL

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

PAVEMENT: H F S NONE sq. m by 0 cmPATTIES / TARBALLS 1 Bag BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0Photographs: NONE TAKENRoll No. 0Frames 0

SUBSURFACE OIL

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

COMMENTS

Priority 2

- Oil conc. at Northwest end of beach next to Sea arch EN a 20m long segment
- Oil found on flat boulders and pooled between and underneath them
- Oiling extends from mid to high tide
- Tar balls and patties EN rocks EN southend of beach
- Boulders and cobbles turned over to define extent of oil.

FIELD SHORELINE COMMENT SHEET

EGMENT ST / NA 21 SUBDIVISION: _____ DATE 4-1-90

USCG

NAME 0602. J. MC Mahon SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. Several pooled areas greater than 1 cm warrant manual clean-up. (arch-area)
2. recommend work-party of 5, 1/2 hr with trowels clean-up. Also suggest absorbent pads for inaccessible area.

ADEC

NAME GREG WINTERSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

RECOMMEND REMOVAL OF POOLED MOUSSE IN BOULDER AREA OUTLINED ON MAP. TREATMENT SHOULD INCLUDE METHODS THAT WILL LEAVE AS LITTLE RESIDUE AS POSSIBLE SO THAT A POLISHING TREATMENT SUCH AS BIO REMEDIATION CAN BE USED, AS THIS IS A LOW ENERGY AREA.

LAND MANAGER

NAME Mike Bennett
ADUR. VINESIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

The resource sensitivities for the area consist of bald eagle nesting, special use designation, herring spawning and deer harvesting. Oiling consists of mousse in arch area. 10% surface coverage, patchy to sporadic. Area is accessible. Treatment suggested in accordance with resource window time frame, after 1 June. Suggest manual removal with shovels/trowels. Arch also offers an aesthetic quality to the area. PWS area plan considerations show it is not within a special use area.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST / NA-21 Subdivision B Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 13:45 Biologist DANIEL TANCER(A) Substrate type and % of segments:
(1) Bedrock 75 (2) Boulder 40 (3) Cobble 40 (4) Pebble 5 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 75

(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 NONE

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:

- Antelope
- Eel Blenny

Ecological Considerations:

Priority 2

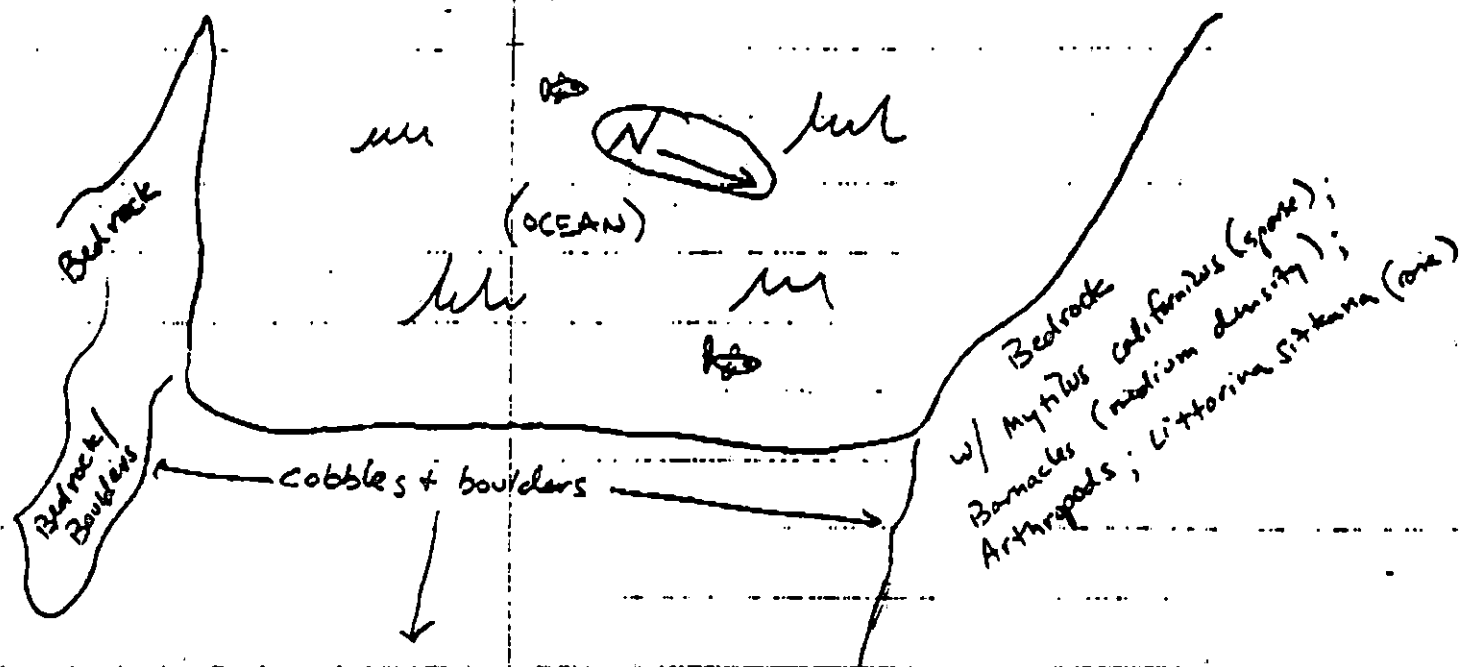
Consistency	Key Description	Dates of restriction	Positive Sighting
6Y	Special use Designation	6/1 - 9/15	
ST-2	Active Bald Eagle Nest	3/1 - 6/1	
711	Dear Harvesting	8/15 - 3/1	
2M	Human Spawning	4/1 - 6/15	

ADEK

Daniel Parker

NA-21, Subdivision B, Biological comments

4/1/90



Moderate amount of Barnacle spat in the northern boulder/bedrock area - especially located on underside of rocks in mid and Upper Intertidal Zone; no sign of biota in oiled areas in Upper Intertidal Zone + Splash zone - not necessarily connected to oil conditions, but could be the case.

- Moss pockets in Bedrock in Upper Intertidal Zone
- Dense Rhodomya sp. in Upper Intertidal Zone and at base of northern bedrock outcrops
- Moderate Ulva in northern bedrock outcrops mixed w/ Rhodomya + Fucus

ADEL

00 FL 2

SEGMENT ST/ NA 21

SUBDIVISION B

DATE Apr 11 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LWL
- ☐ SSI
- ☐ 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

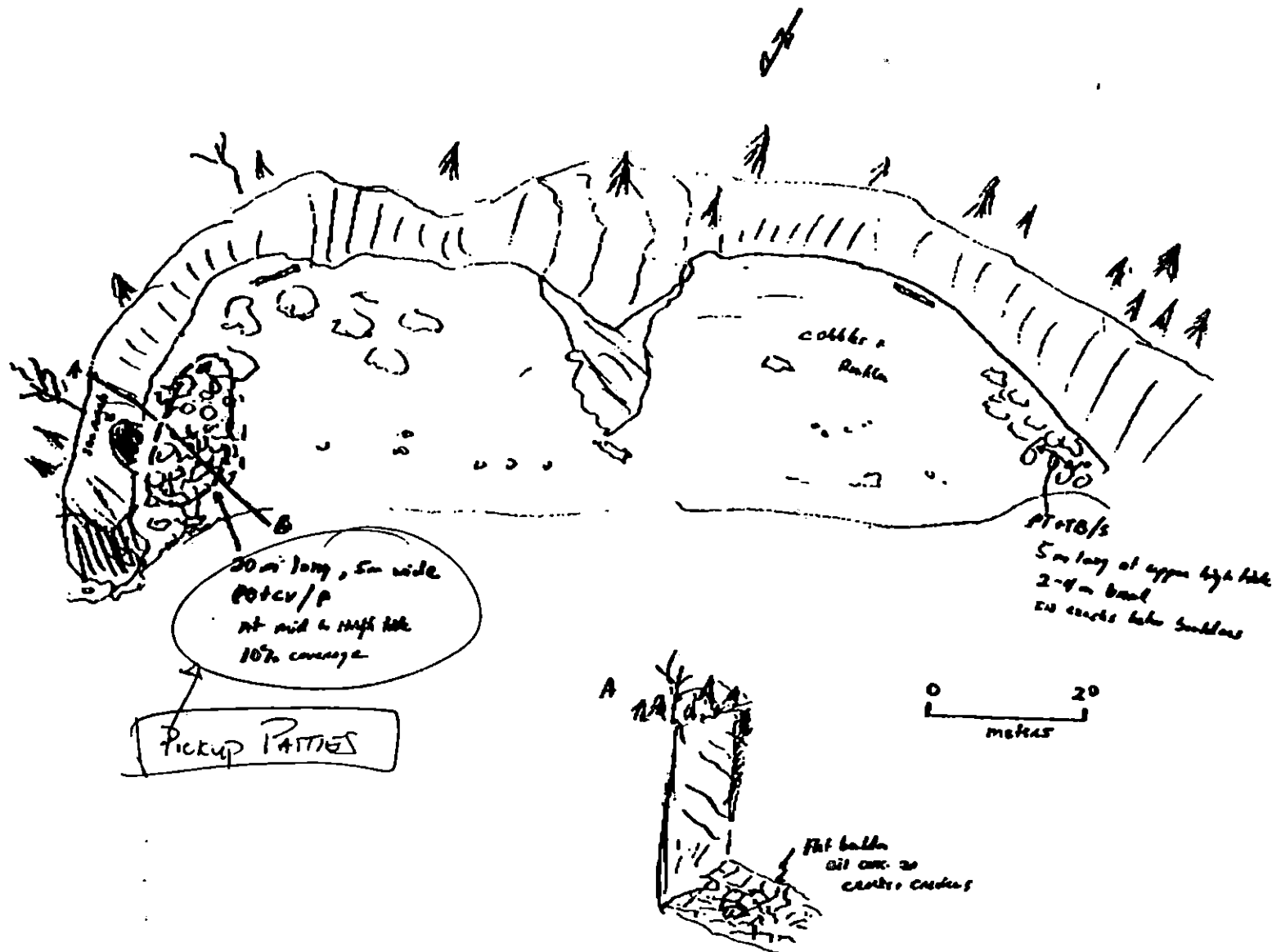
$\boxed{CT/P}$
Pecdy Distribution

$\boxed{CT/S}$
Splashed Distribution

Cited Vegetation

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

SK...H MAP



Oil Character Length (m): AP _____ PO 10 CV 10 CT _____ ST _____ MS _____ PT 3 TB 2 FL _____ NO _____

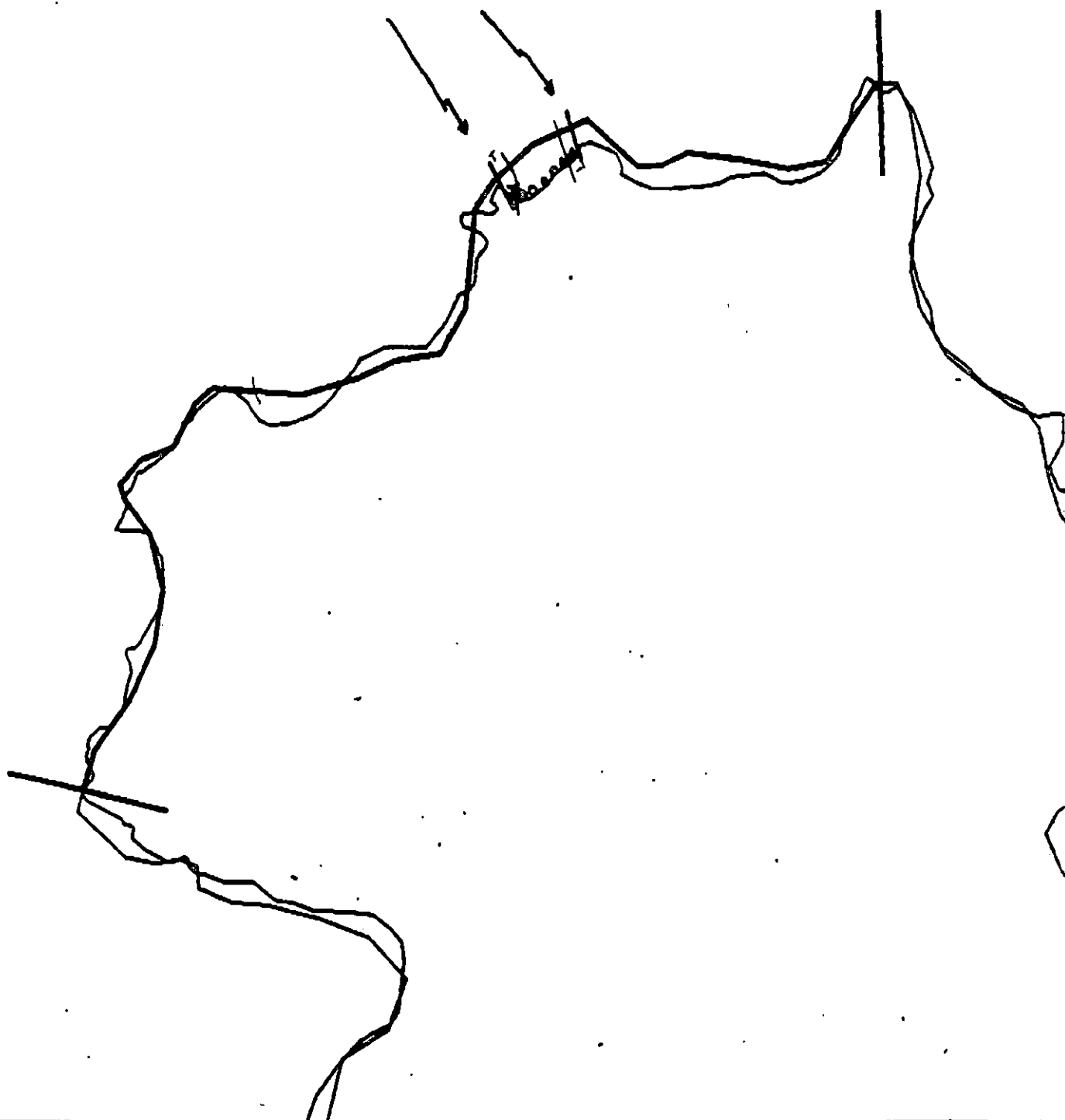
REVISION: 02/04/00

APR-02-1990 22:48 FROM CURBURN

SCM TECH P.05

ADCL (54)

NA-21-B



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

NA-21

ADEC Segment Length: 1364m



Map Key: PWS-487

Name: FITZGERALDDate: 1 Apr. 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-21 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to approved treatments within 400m of active nest. No constraint to approved treatments more than 400m from active nest.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

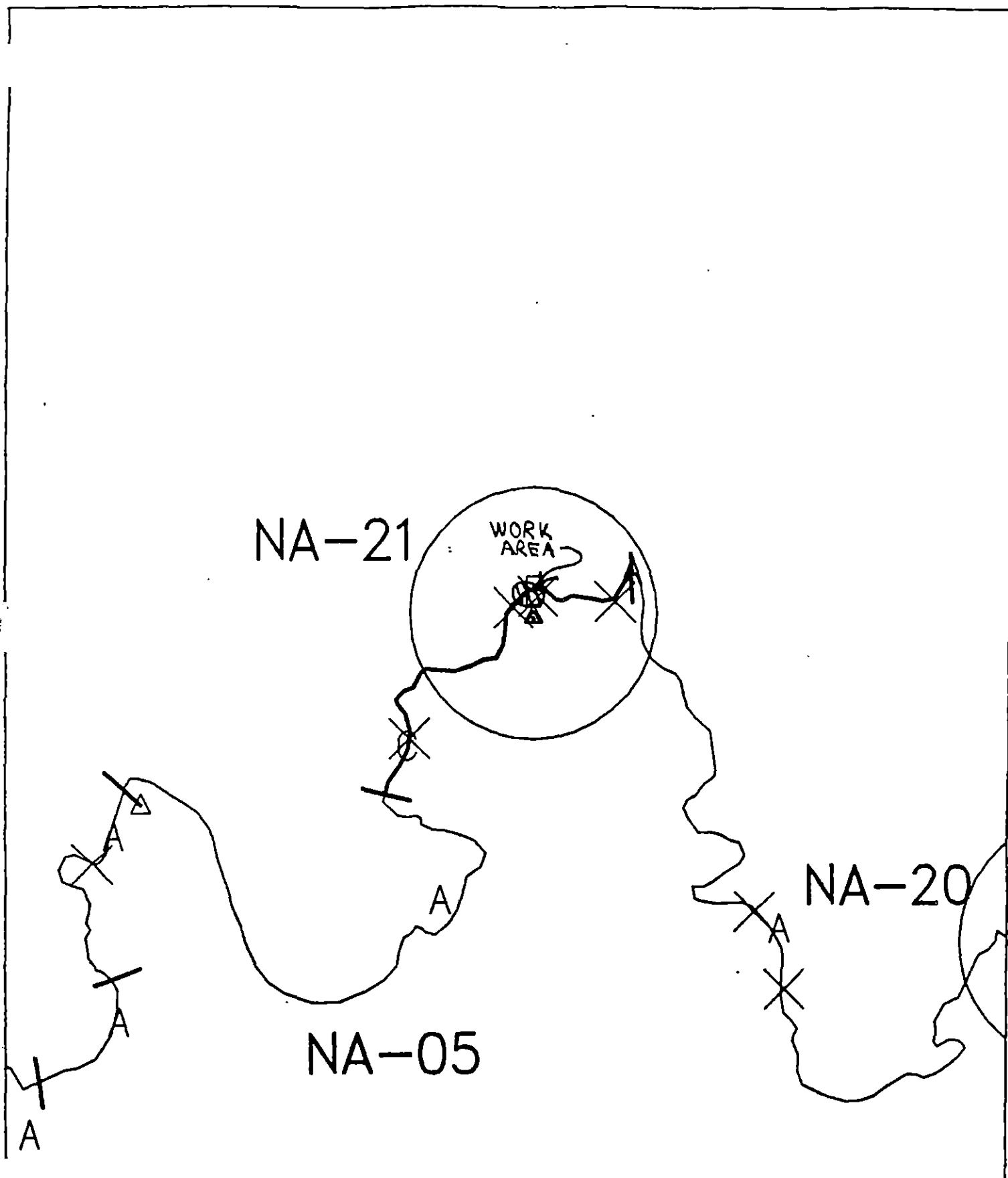
Date

6-10-90

Prepared by

Date

6/10/90



Exxon Company, USA
Map Key: PWS-NA-21



ECOLOGY MAP
SEGMENT NA-21
SUBDIVISION B (2 of 3)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ NA-21 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Bald eagle nest (5T) - 3/1 to 6/1; Special use destination (6Y) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums. (2M) - Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for exact dates and locations.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 85 m: No Oil 116 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAKER [Signature]

EXXON ANDY TATZ [Signature]

NOAA Bud Wickett [Signature]

USCG G.A. KEITER [Signature]

FOSC: [Signature] DATE: 4-10-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA 21 C SUBDIVISION: C DATE 4/1/90

USCG

NAME OWOZ J. McMAHONSIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

1. Area had patches of oil, some coastal surfaces
2. NO Human use
3. Low Priority

ADEC

NAME GREG WINTERSIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

OILING TOO SPORADIC AND LIGHT TO WARRANT TREATMENT.

LAND MANAGER

NAME Mike BennettSIGNATURE [Signature]ADDR - NEW☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

minimal oil impact to the area. Several resources referenced but treatment would probably cause more harm than good.

SHORELINE OILING SUMMARY

REVISION NO. 045570

OG D. F. + Gerald USCG J. McMahon SEGMENT ST/ NA-21
 BIO D. Kideas LAND REP M. Rammatt DNR SUBDIVISION C (3 of 3)
 EXXON S. Nauman ADEC G. Winter TIME 12:20 to 12:20
 TEAM NO.: #15 TIDE LEVEL: 0 to 0 DATE Apr 1 / 1 / 1990
 EST. SUBDIVISION LENGTH: 240 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 25 % B 20 % C 45 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 40 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 80 m NO 160 m

SURFACE OIL

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

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS 1 bag 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. 1Frames #26

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	UO	1	2	3	4	5	SU	U	M	L		
1	45					X	•													Pebbles / Gravel / Cob.
							•													
							•													
							•													
							•													
							•													

COMMENTS

Priority #2

- Oiling of this beach occurs at two primary locations as coatings:
 - on large cobble, boulders & bedrock at the southern end of the segment
 - on the boulders and bedrock at the northern end of the cove
- Pit dug on the upper portion of the beach exhibited no apparent oil.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/25/90

Segment ST / NA-21 Subdivision C Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 12:50 Biologist DANIEL RAINER

(A) Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 20 (3) Cobble 45 (4) Pebble 10 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 0 Moderate <10 Low 20 80-90% exposed for

(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. 1Frames #26

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:

- Substantial Eel Bleamy population in lower intertidal zone
- Inspected during low intertidal zone exposure
- Abundant green filamentous algae on cobble and boulders in lower intertidal zone

Ecological Considerations:

PRIORITY 2

Sensitivity	Key	Restriction dates
GY	Special Use Designation	6/1 - 9/15
ST-2	Active Bald Eagle Nests	3/1 - 6/1
711	Deer Harvesting	8/15 - 2/28
2M		4/1 - 6/1

ADEL 644

DATE Apr 11 80

STITCH MAP

12:50 - 1320

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil

2-A
PR - Subsurface On

CT/C
Continued Discussion

CT/B

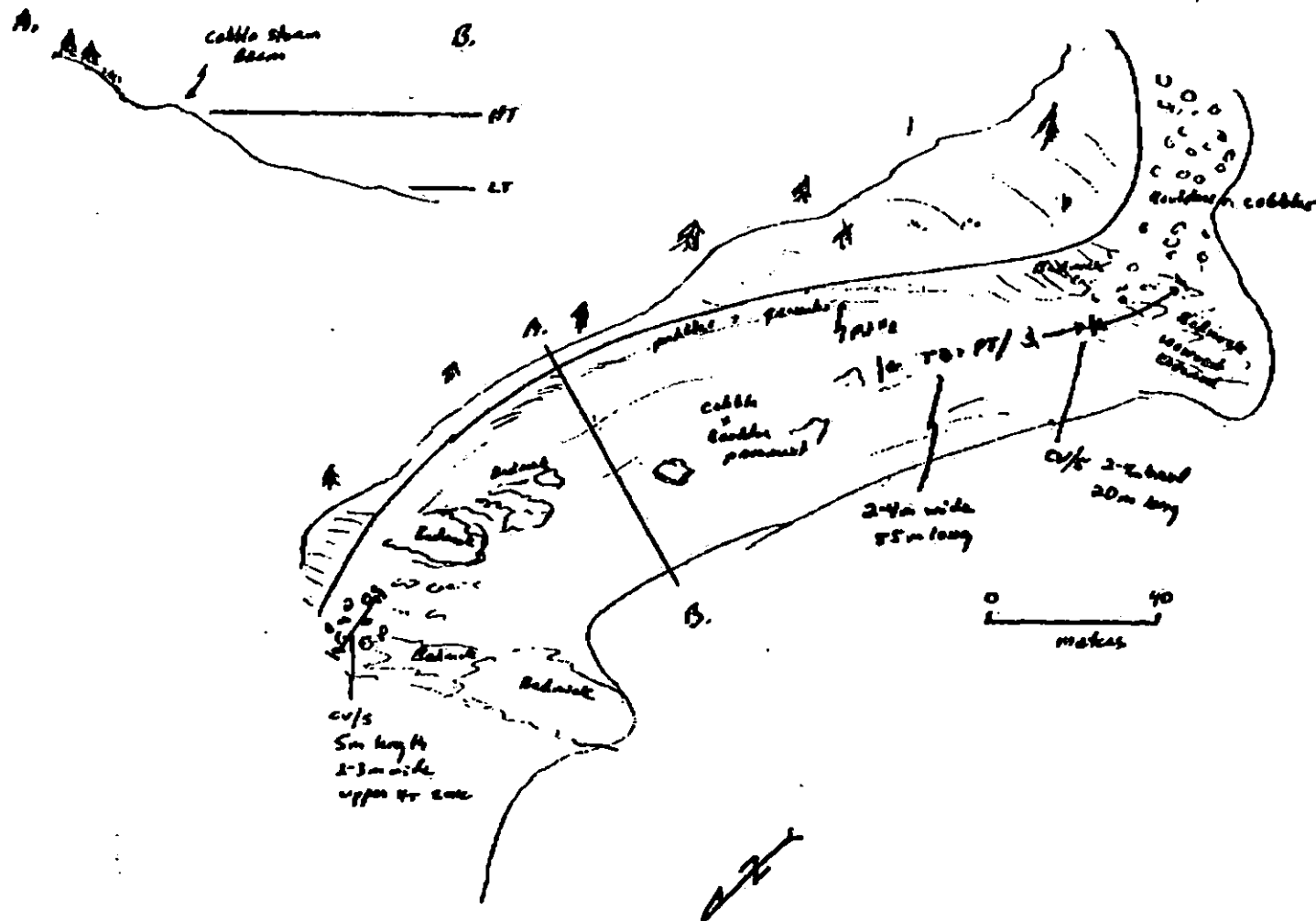
CT/P

Patchy Distribution


Splitbed Distribution

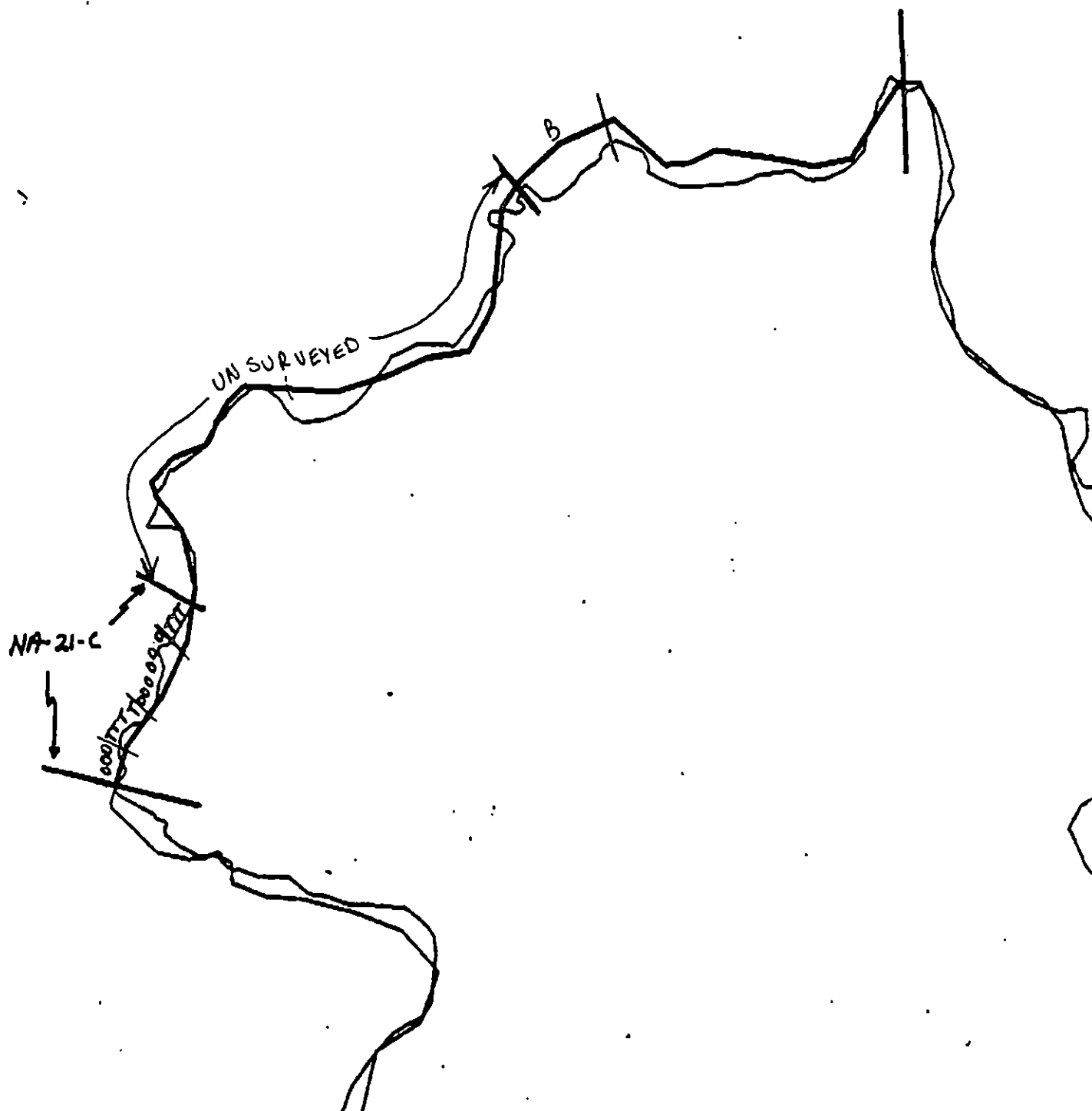
Cold Vegetables

**Print location, direction,
and number**



Oil Character Length (m): AP _____ PO _____ CV 25 CT _____ ST _____ MS _____ PT 25 TB 30 FL _____ NO _____

FIVE YEAR COMPLETION



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

NA-21

ADEC Segment Length: 1384m



Map Key: PWS-487

Name: Fitzgerald

Date: 1 Apr 90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ NA-22 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Anchorages (6V) - 6/1 to 9/15;
Special use designation (6Y) - 6/1 to 9/15; Deer harvesting (7II) -
8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No specific subdivision con-
straints identified.

SHPO SIGNATURE: Rachel Jean Dain DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 121 m: No Oil 162 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended based on sporadic, very light
oiling. See Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Burt Wescott

USCG G.A. REITER

FOSC: by L

DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA 22 SUBDIVISION: _____ DATE 3-31-96

USCG

NAME Chris J. McHatten SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

1. Oil found is old, asphalt (inert) and poses little if any environment problems -
2. This area does not warrant an intrusion into the environment to clean-up

GREG WINTER

ADEC

NAME [Signature] SIGNATURE _____

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

OILING TOO SPARSE TO TREAT.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]
AONR NEMT

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Area use sensitivities are deer harvesting, anchorage, special use designation and herring spawning. No human use recreational presence noted. Oil found was sporadic and asphalt - does not pose any threat to species utilizing the area. pws area plan emphasis is on general use. Fish & wildlife habitats do not appear to be impacted. NO treatment recommended.

SHORELINE OILING SUMMARY

REVISION NO. 02/23/90

OG D. E. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-22
 BIO D. Reider LAND REP ONR M. Bennett SUBDIVISION A (10F1)
 EXXON S. Newman ADEC G. Winter TIME 13:30 to 14:25
 TEAM NO.: #15 TIDE LEVEL: 150 to 190 cm above mean DATE 31 / MAR / 90
 EST. SUBDIVISION LENGTH: 910 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☒ Helo WORKING DIRECTION: Southwest to Northeast
 SURFACE SEDIMENTS: R 20 % B 50 % C 25 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 790 m

SURFACE OIL

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

PAVEMENT: H F S NONE sq. m by 0 crPATTIES / TARBALLS < 1/8 bag BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0Photographs: Camera BrokenRoll No. 0Frames 0

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	SW	U	M	U		SW	U	M	U		
#1	15					X	.													Pebbles / Cobbles
							.													
							.													
							.													
							.													
							.													

COMMENTS

Priority 2

- Oil occurs as tar balls and patties on boulders near large bedrock outcrops at northeast and middle of segment

- Pit dug at southwest end of embayment, no sheen or oil observed

SHORELINE ECOLOGICAL SUMMARY

REVISION 8/21

Segment ST / NA 22 Subdivision A Date (mo / day / yr) 3/31/90Time (24 hr) 13:30 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:

(1) Bedrock 20 (2) Boulder 50 (3) Cobble 25 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 0 Moderate 10-15 Low 85-90

(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. NONEFrames

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:

- Very small Littorina saxatilis in rare locations; much green filamentous algae
- Staggled starfish (Hippasteria sp. (?)); two found dead in Upper Intertidal Zone
- Eagle spotted a low altitude, spread wings at tree tops

Ecological Considerations: Seal 50 yards off shore

711 - Deer Harvesting

6V,Y - Recreation (Anchorage, special Use Destination)

2M - Herring Spawning

ADEC
CV

NA22 Subdivision A Biological Comments

- Could not reach Lower Intertidal Zone; only Upper-mid Intertidal Zone and Upper Intertidal Zone
- Umbelliferous in snow line at headland
- Evidence of dead barnacles in Upper Intertidal zone and Upper-mid-Intertidal Zone
- Patches of moss in bedrock in Upper Intertidal Zone
- Scat found on beach with evidence of muscles being eaten

OG 1. GERNP

SKETCH MAP

SEGMENT ST/ NA-22

SUBDIVISION A

DATE 31 Jan 90

CHECKLIST

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

LEGEND

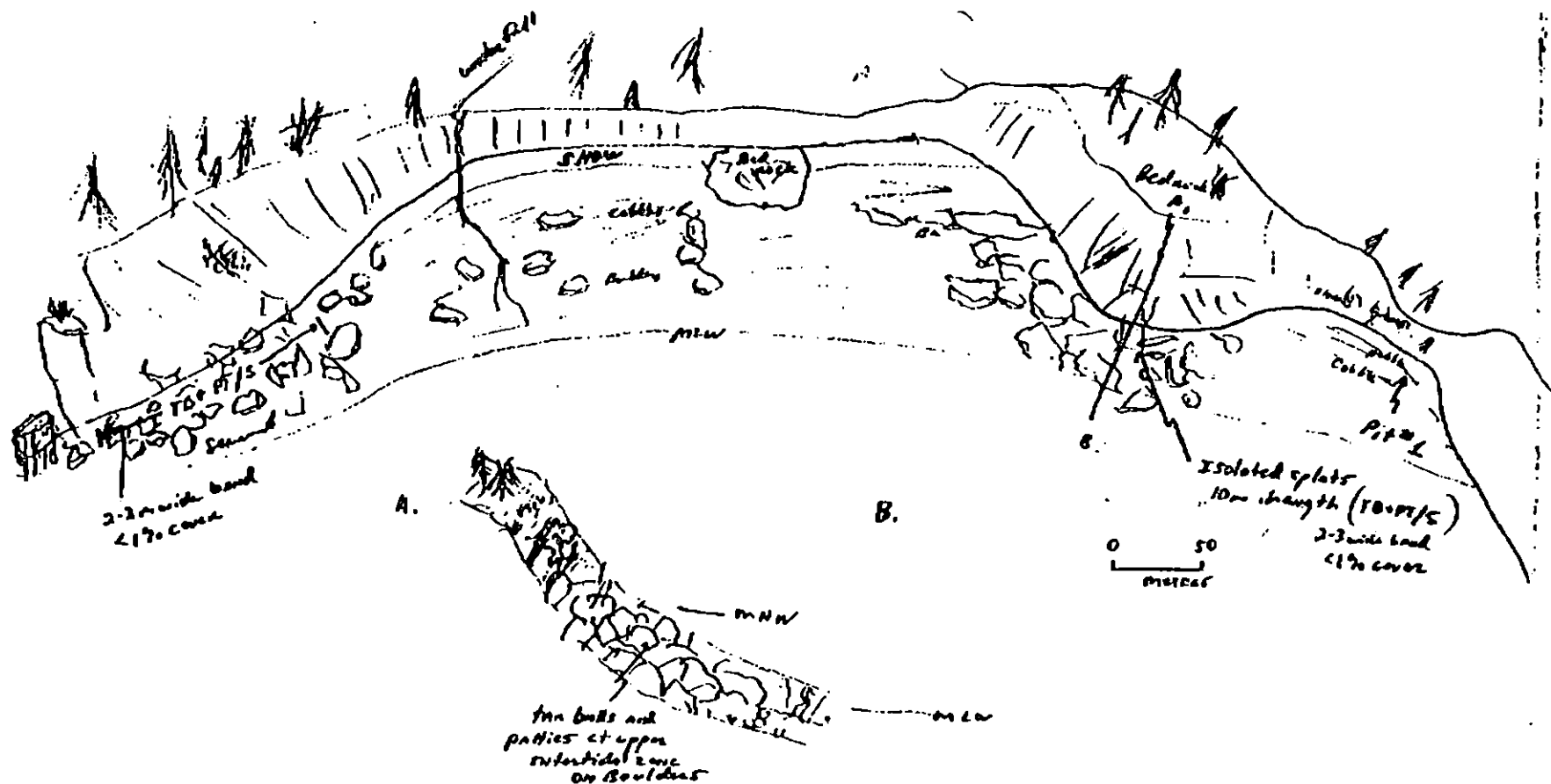
- 1 Δ
Pt - No Subsurface Oil
- 2 Δ
Pt - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT 60 TB 60 FL _____ NO 790

REVISION 280499

ADER

NA-22-A

UNSURVEYED

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

NA-22

ADEC Segment Length: 874m



Map Key: PWS-489

Name: Fitzgerald

Date: 31 Mar 90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ NA-23 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Recreation anchorage (6V) and special use destination. (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 18 m: V. Light 127 m: No Oil 330 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: Manual pickup of isolated mousse and bioremediation of areas shown on attached sketch map. Treatment activities should be conducted after 6/15.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BANER
EXXON ANDY TATE
NOAA Burt W. [Signature]
USCG G.A. REITER
FOSC: [Signature] DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NA-23 SUBDIVISION: _____ DATE 4-1-90

SCG
NAME ANDREW MCMAHON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

1. ALTHOUGH small pools were observed along with strong coating, a clean-up on a 2 priority (Herring) would not be effective for the work done. Pool is less than 1 cm.
2. No human use

ADEC
NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

CONFINE TREATMENT TO 6 X 10 METER AREA W/ POOLED MOUSSE SHOWN ON SKETCH MAP. TREATMENT SHOULD LEAVE VERY LITTLE RESIDUE SO THAT POLISHING TECHNIQUES MIGHT WORK.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]
ADNR-NR43

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Small pooled areas were observed. Resource sensitive area special use designation, herring spawning, tentacles. Areas impacted has no special use for humans. Would not be effective to remove existing oil.

SHORELINE OILING SUMMARY

REVISION NO. 08/23/98

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-23
 BIO D. Raider LAND REP Mike Bennett SUBDIVISION A (10E1)
 EXXON S. Nauman ADEC B. Winton TIME 15:30 to 17:00
 TEAM NO.: #15 TIDE LEVEL: 120 to 190 cm ^{above} mean DATE Apr 1 / 1 / 1990
 EST. SUBDIVISION LENGTH: 493 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to Southwest
 SURFACE SEDIMENTS: R 10 % B 35 % C 50 % P 5 % G % S % M % V %
 SLOPE: Long 40 % Hang 45 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W m M m N 10 m VL 170 m NO 313 m

SURFACE OIL

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

PAVEMENT: H F S NONE sq. m by cmPATTIES / TARBALLS / bag 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. 3 / Frames 28-33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	BR	OR	OL	BL	GR	TL	LR	SU	U	M	L				
1	25					X	-																	Grav / Peb / Sand
2	15					X	.																	Grav / Cob / Sand
							.																	
							.																	
							.																	
							.																	

COMMENTS

Priority #3

- Greatest oil concentration at the southwest end of beach where mousse is found between and under boulders and cobbles along a 10m length of beach. width ~ 5m
- Coatings occur along the upper intertidal zone on boulders and cobbles.
- Extent of the pooled oil (mousse) was determined by removing surface boulders and cobbles and digging away sediment

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

Segment ST / NA 23 Subdivision A Date (mo / day / yr) 4/1/90Time (24 hr) 14:30 Biologist DANIEL RADEE(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 35 (3) Cobble 50 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 0 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 (3)Photographs:
Roll No. 1Frames 28-33

BARNACLES

Dense			Moderate			X 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

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			X 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			X 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: Priority 3

Sensitivity	Key Description	Restriction dates	Positive Siting
711	Deer Harvesting	8/15 - 7/1	
6 VY	Anchorage, special use Desig.	4/1 - 7/15	
2M	Herring Spawning	4/1 - 6/15	

ADEL GW

OG Fiber

SWITCH MAP

SEGMENT ST/ NA-22

SUBDIVISION A

DATE Apr 11 90

CHECKLIST

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

LEGEND

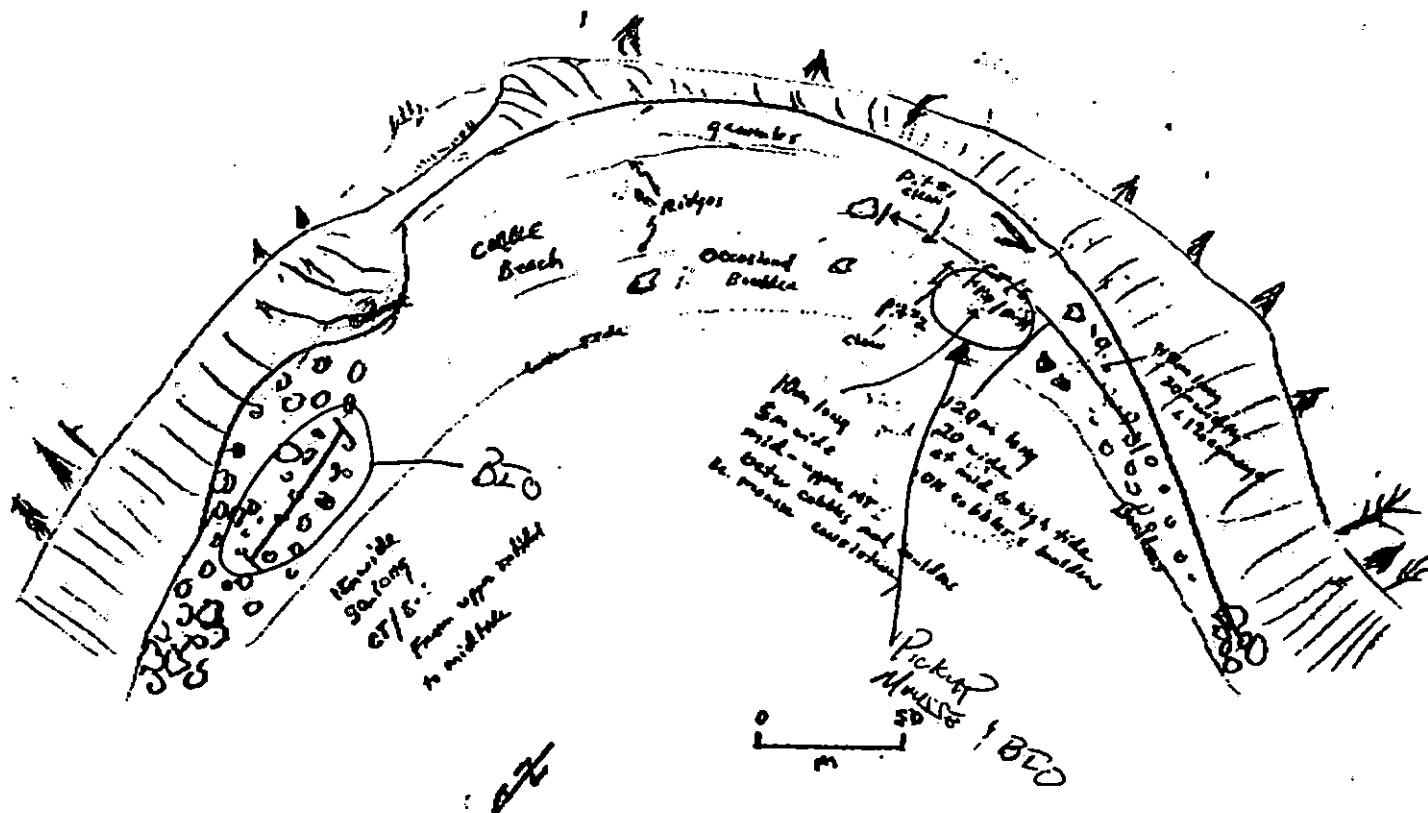
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\bullet \rightarrow$
Oiled Vegetation
- 1 $\bullet \rightarrow$
Photo location, direction, and number



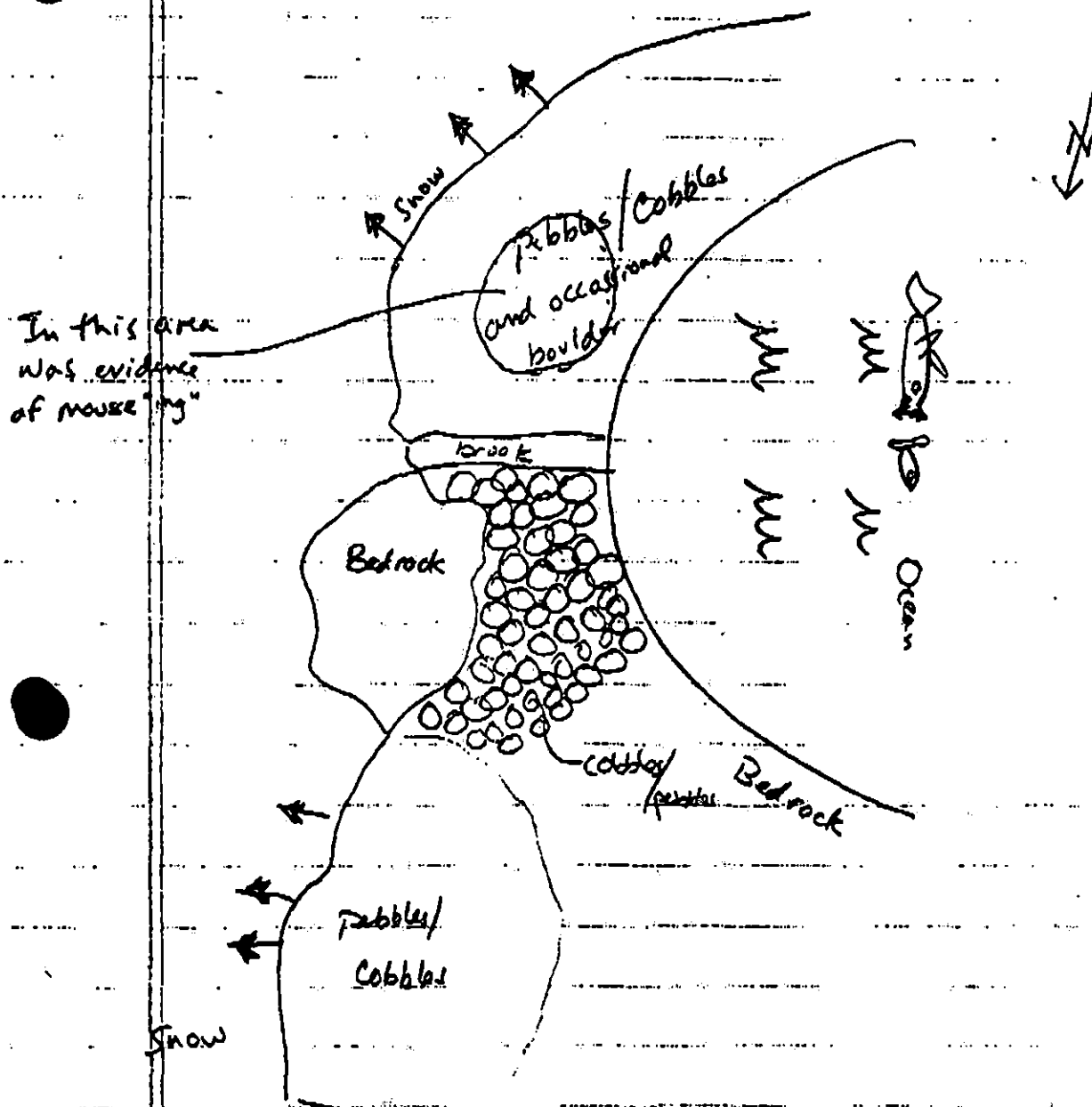
Oil Character Length (m): AP PO 10 CV CT 170 ST MS PT TB FL NO 313

ADEC
GW

REVISION 000000

Daniel Paider

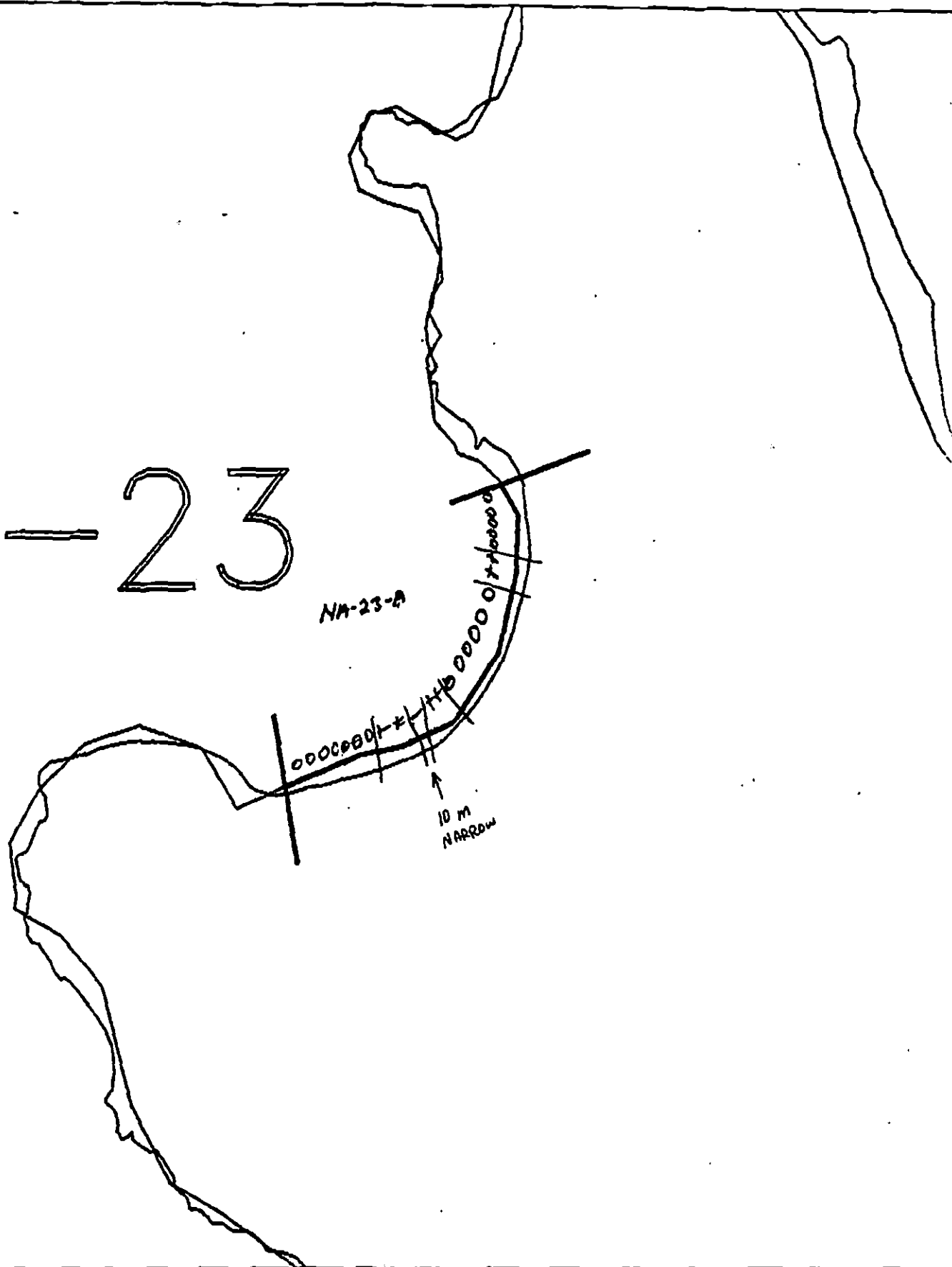
NA 23 Subdivision A, 4/1/90, Biological Comments.



- Barnacles dead in areas with oil splatter in southern portion of segment
- Rare fucus in Upper Intertidal Zone; much dead, but no evidence of oiling
- Much dead kelp in northern half of segment at Lower Intertidal Zone
- Brook from melting snow on southern side of bedrock in the middle of segment (see Roll 1 frame 29), approximately 10 yards in width

ADEL

NA-23



ADEC

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 M. 0000

NA-23

ADEC Segment Length: 47.5m



Map Key: PWS-490

Name: Fitzgerald

Date: Apr 1 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-23 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

OPEN

Bioremediation

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum prior to 6/15 and after 8/15. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

[Signature]

Date

6/14/90

Prepared by

[Signature]

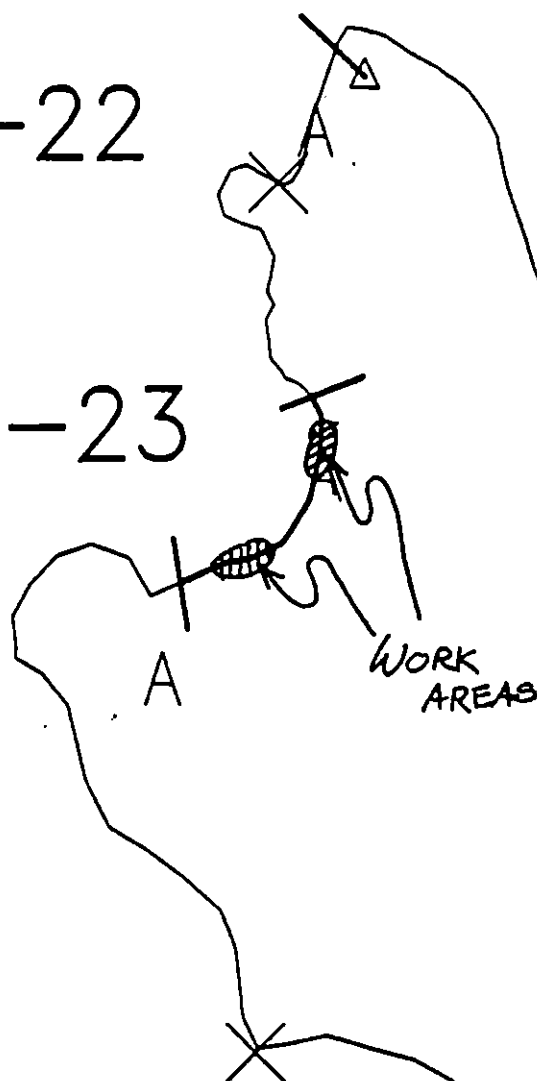
Date

6/14/90

NA-22

NA-23

NA-05



Exxon Company, USA
Map Key: PMS-NA-23
June 04, 1990



ECOLOGY MAP
SEGMENT NA-23
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION A (1 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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: [Signature] DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 141 m: No Oil 1206 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: 1/4 AVAL PUP OF POOL OIL HIGH HUMAN USE

TAG APPROVAL DATE: 4/25/90
ADEC ART WENNER [Signature]
EXXON AMY TELL [Signature] FOSC: [Signature] DATE: 5-9-90
NOAA Joseph Talbott [Signature]
USCG KENNETH KEANE [Signature]

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

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

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 NA 24 SUBDIVISION: A DATE 4-3-90

USCG

NAME JOE J. MCMAHON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

1. AREA SHOWED OCCASIONAL COATING AND SPLATES.
2. DESPITE SOME ENVIRONMENTAL CONSTRAINTS, AREAS DO NOT WARRANT TREATMENT, AS IT MIGHT DO MORE HARM THAN GOOD.

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

TREATMENT TO REMOVE OIL OCCURRING AS POOLED OIL / MOUSSE BETWEEN COBBLES AND Boulders SHOULD BE PERFORMED IN THE AREA SHOWN ON SKETCH MAP A. THIS IS A NARROW BAND OF MOUSSE MIXED WITH PEBBLES AND SAND - TYPICAL OF MIST OILING OBSERVED ON WESTERN NAKED I.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]
ADDR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS NA-24 A

Priority 1 segment with minimal amount of oiling. Occasional spots and mousse. Minimal environmental impact - area use a mixture of herring spawning, minimal human use, marine mammals, nesting. Due to minimal oiling, may cause more harm than good to treat.

SHORELINE OILING SUMMARY

REVISION NO. 02/23/98

OG D. Fitz Gerald USCG J. McMahon SEGMENT ST/ NA-24
 BIO D. Rader LAND REP M. Barrett SUBDIVISION A (1 OF 6)
 EXXON S. Newman ADEC G. Winkler TIME 15:10 to 16:30
 TEAM NO.: 15 TIDE LEVEL: 70cm to 135cm DATE Apr 12 1990
 EST. SUBDIVISION LENGTH: 1170 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 40 % B 40 % C 20 % P _____ % G _____ % S _____ % M _____ % V _____ %
 SLOPE: Long _____ % Hang 40 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 160 m NO 1010 m

SURFACE OIL

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

PAVEMENT: H F S None 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

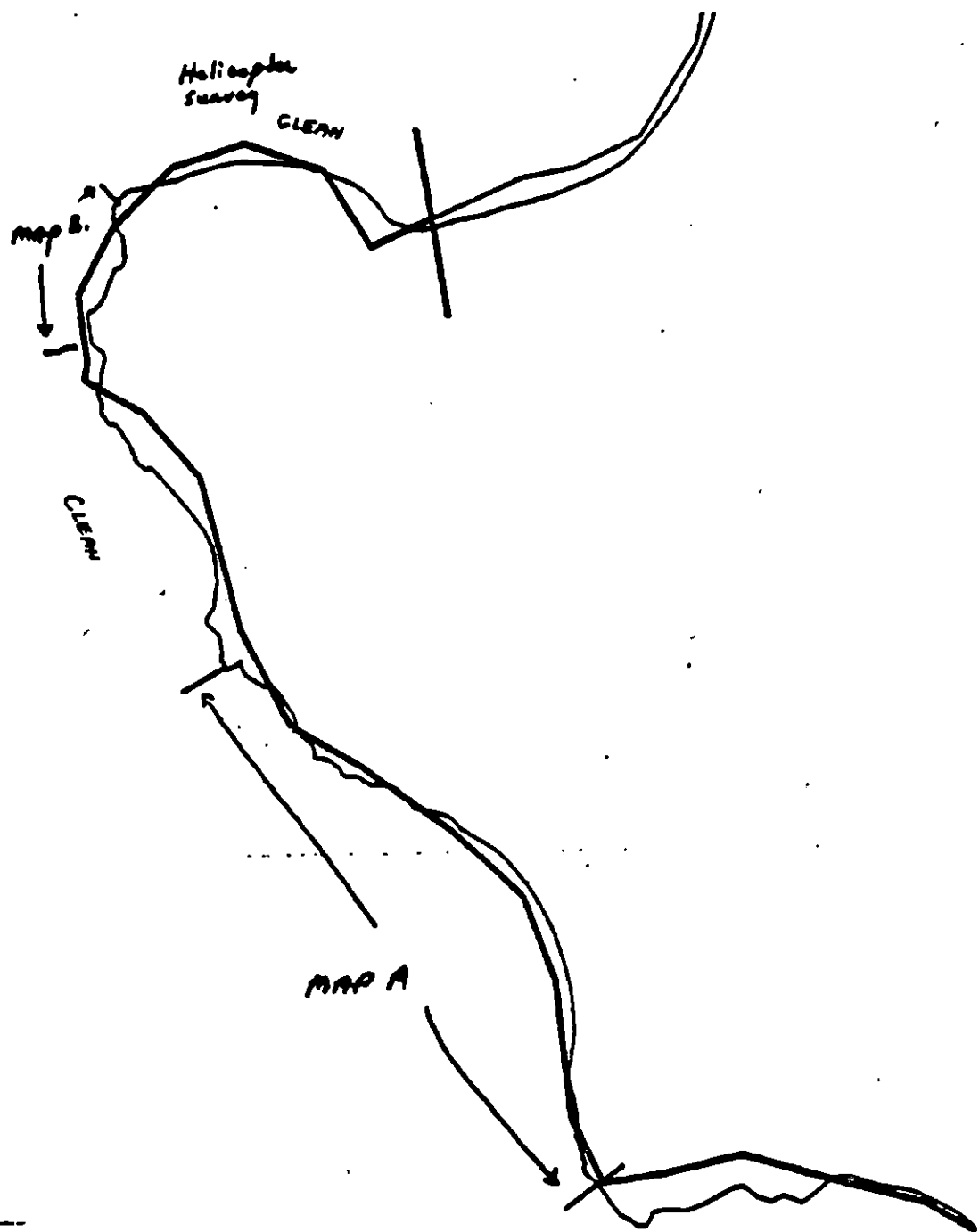
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	BU	U	M	U		
1	10					X	-												X				Cob / Sand / boulder
2	30					X	-												X				Gravel / Peb / Cob
3	40					X	-												X				Gravel / Peb / Cob
							-																
							-																
							-																

COMMENTS Priority 2

Most of the oiling of this beach occurs at the southern end of the segment and consists of 60m long stretch of cobble and boulder beach with fine sand splot and occasional weathered mounds between the rocks. The oil does not appear to penetrate the substrate underlying the cobbles and boulders which consist of sand, granules, pebbles and cobbles.

NA-24-A MAP LOCATIONS

NA-24-A MAP LOCATIONS



NA-24A

ADEC Segment Length: 10478m



OG Fi 12

SEGMENT ST/ NA-24

SUBDIVISION A

DATE Apr 12 90

SKETCH MAP 1

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

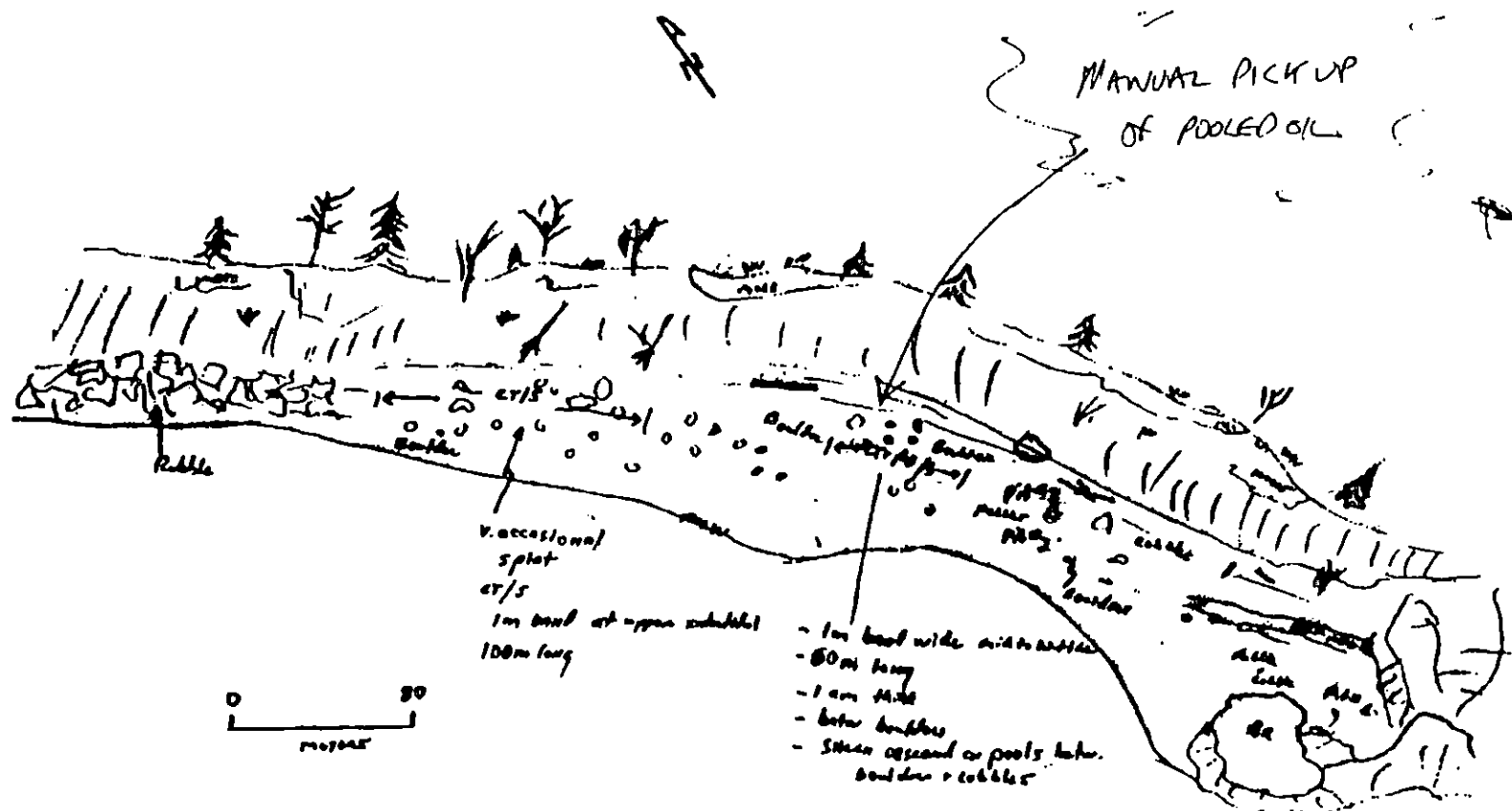
$\boxed{CT/D}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

Oiled Vegetation

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



ADEC GW

Oil Character Length (m): AP 30 CV 130 ST MS PT TB FL NO 470

REVISIONS

OG F. will

SKETCH MAP B.

SEGMENT ST/ NW-24

SUBDIVISION A

DATE Apr 12 80

CHECKLIST

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

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

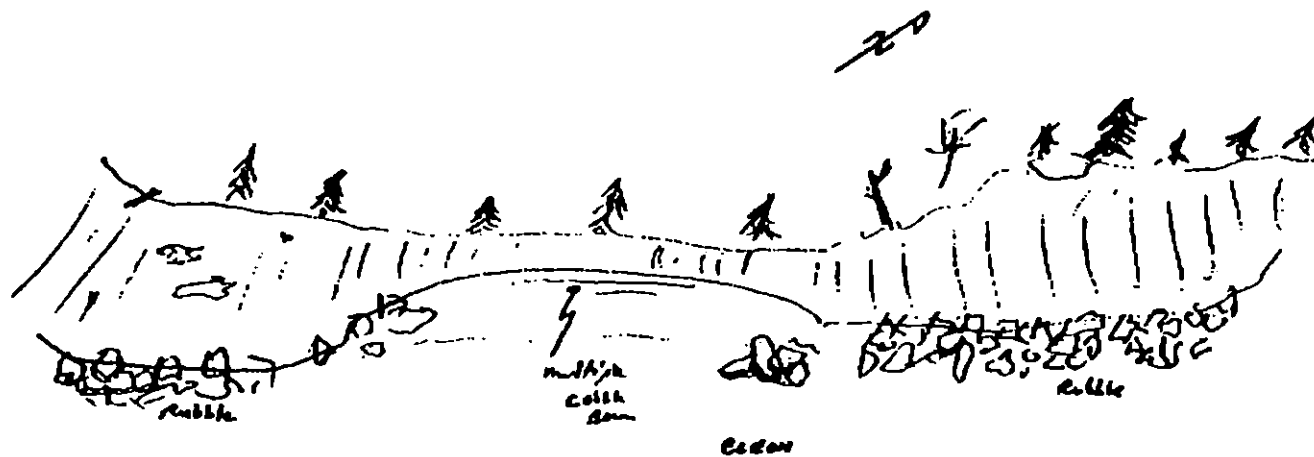
CT/S

Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



0 25
METERS

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 160

ADEC GW

REVISION 00000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST/ NA 24 Subdivision A Date (mo / day / yr) 4 / 2 / 90

Time (24 hr) 15:10 Biologist DANIEL RAIDER

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

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 2 Low 4

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

Photographs:
Roll No. 3

Frames 3-15

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

On underside of rocks

Wildlife Observations/ General Comments:

- Eagles
- Loon
- Anemones

Ecological Considerations:

Sensitivity	Key	Date of Destruction	Positive I.D.
SS	Chowbird waterfowl	4/25 - 5/15	
6Y	Special Use Design	6/1 - 9/15	
6U	Tent Sites	6/1 - 9/15	
ST	Active Bald Eagles Nest	3/1 - 6/1	
7H	Deer Harvesting	8/15 - 9/1	
2M	Herring spawning	4/1 - 6/15	

yes

ECOLOGY MAP

↑ PWS

NA-24-B

NA-24

Eagle
Nest (WS)

PWS
4915

ADEC W

↓ PWS 4915

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

NA-24

ADEC Segment Length: 10478m

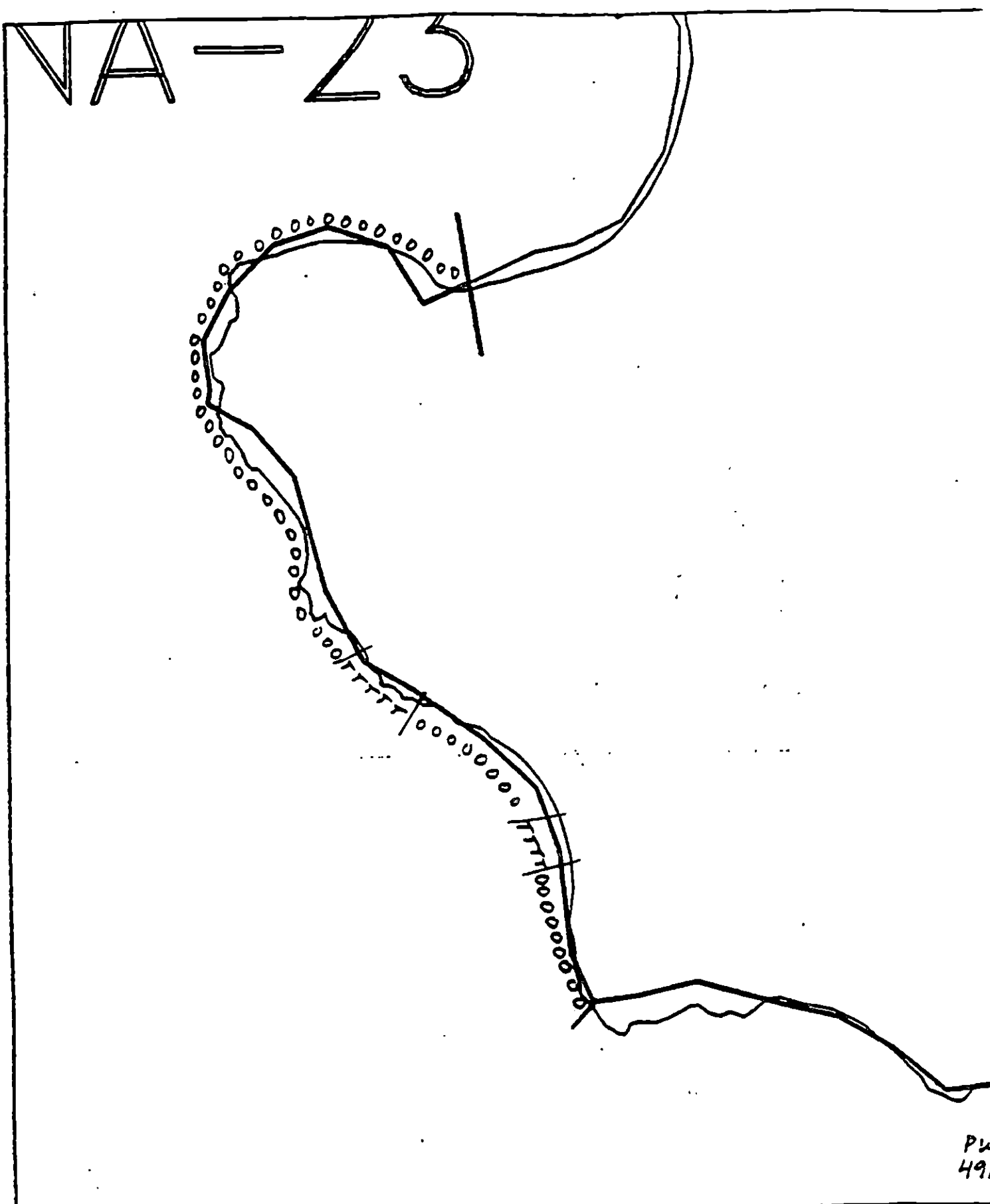


Map Key: PWS-4910

Name: FitzGerald

Date: Apr 2 1990

Data Entered:



PW
491

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-24 A

ADEC Segment Length: 10478m



Map Key: PWS-491g

Name: Fitzgerald

Date: 2 Apr. 1990



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-24 SUBDIVISION A (1 of 6)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

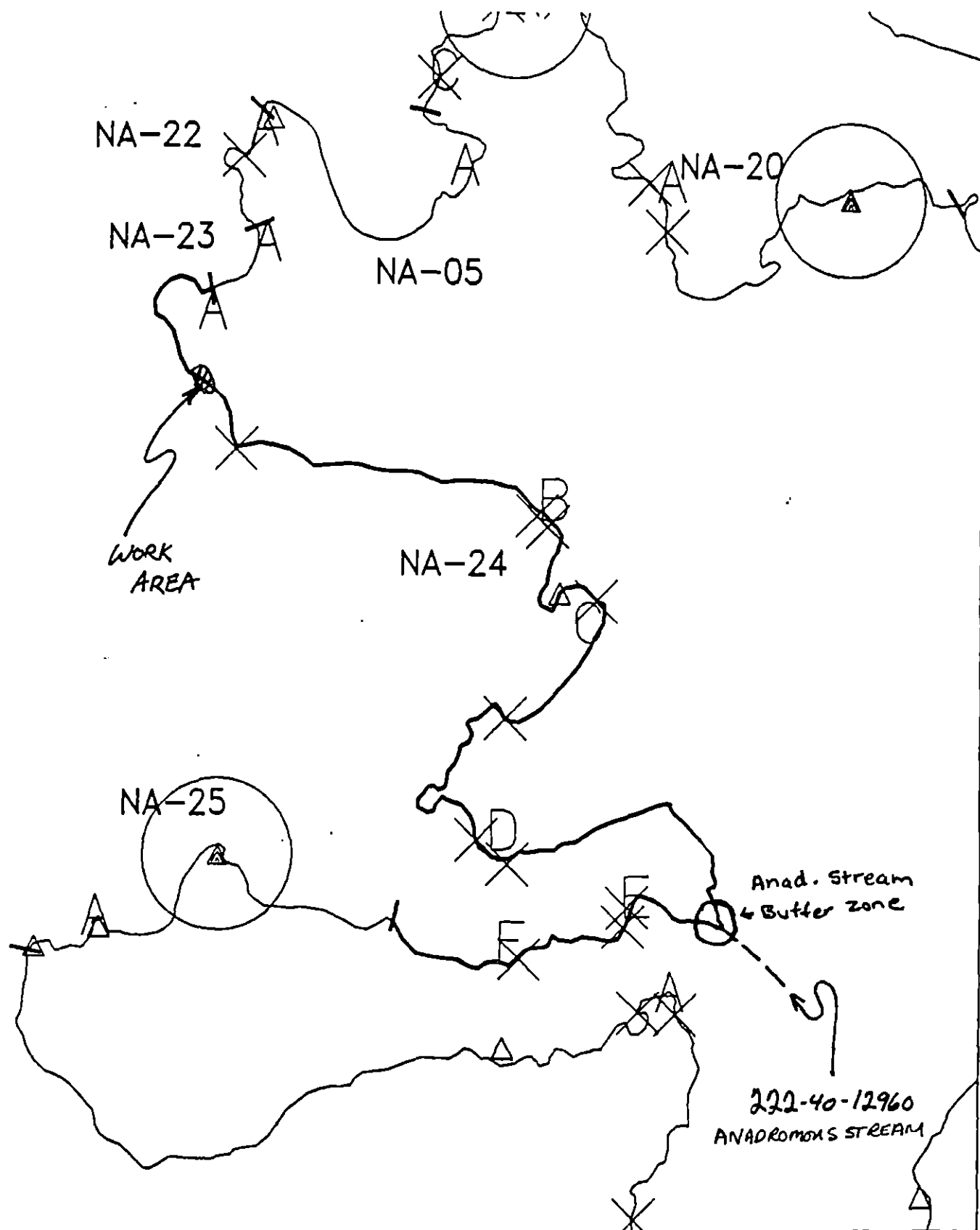
1A,1B	Salmon Stream	ADF&G catalogued anadromous stream is more than 100m from work site. No constraint to manual pickup.
2M	Herring Spawning	No constraint to manual pickup.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unloiled substrate and biota especially intertidal and subtidal algae and seagrass. Restrict air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

FOSC Date 6-10-90

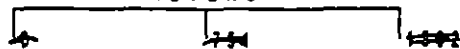
Prepared by J. P. Phillips ⁶⁻¹⁰⁻⁹⁰ _{adm} Date 6/10/90



Exxon Company, USA
Map Key: PMS-NA-24
June 04, 1990



ECOLOGY MAP
SEGMENT NA-24
SUBDIVISION A (1 of 6)
METERS



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



SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION B (2 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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 B.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 136 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: 4/25/90

ADEC ART WEINER

EXXON ANDY GIL

NOAA Joseph Talbot

USCG KENNETH KERR

FOSC:

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

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

7H-H

Finfish harvesting

7I

Deer harvesting (8/15 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 / NA 24 SUBDIVISION: B DATE 4-3-90**USCG**NAME Capt. J. McNamee SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

1. Only one coated rock could be found.
2. Does not warrant treatment.

ADECNAME Glen Winter SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

ONLY ONE TAR SPLASH FOUND. NO NEED FOR TREAT.

LAND MANAGERNAME Mike Bennett SIGNATURE [Signature]

ADNR

☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS NA-24B.

Priority 1 segment. Oiling present was one drip on a boulder mixture of uses for segment - note - well weathered oil.

SHORELINE OILING SUMMARY

OG D. Fitzgerald USCG J. McMahon SEGMENT STI NA-24
 BIO D. Raider LAND REP M. Bennett SUBDIVISION B (2 OF 6)
 EXXON S. Nanman ADEC G. Winter TIME 17:00 to 17:35
 TEAM NO.: 15 TIDE LEVEL: 140 to 150 cm ^{NGVD} DATE Apr 1 / 1 / 90
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: southeast to northwest
 SURFACE SEDIMENTS: R 40 % B 20 % C 30 % P 10 % G % S % M % V %
 SLOPE: Lang 40 % Hang 60 % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 1 m NO 99 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	S	P	B	SP	OR	OL	OF	NO		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 NONE sq. m by crPATTIES / TARBALLS NONE BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

NONE

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. #3Frames 16-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP	OR	OL	OF	NO		SU	U	M	U		
1	20					X	.									X					Pub/Cob
							.														
							.														
							.														
							.														
							.														

COMMENTS

Priority #1

This beach was clean of oil except for one tiny drip on a boulder on the northern side of the beach.

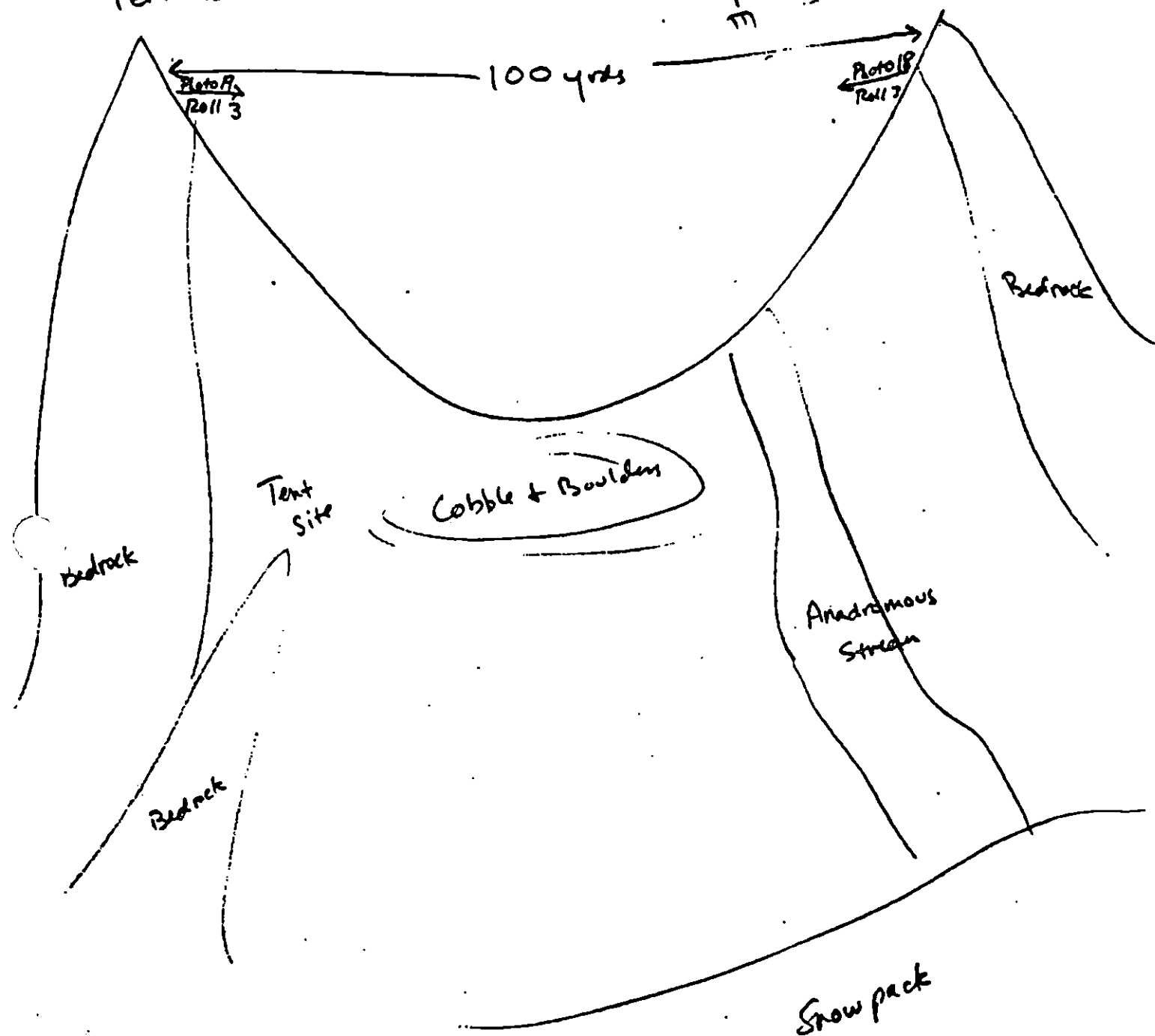
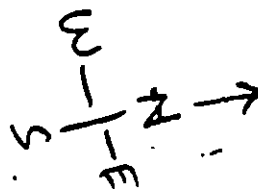
NA24-13

DANIEL RAINER

BIO-SKETCH

2 April, 1990; 17:00

TEAM IS



SKETCH MAP

3 Fikebald
 GMENT ST/ NA-24
 DIVISION B
 TE Apr 1 2 90

CHECKLIST

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

LEGEND

1 ☐ No Subsurface Oil

2 ☐ Subsurface Oil

☐ CT/C
 Continuous Distribution

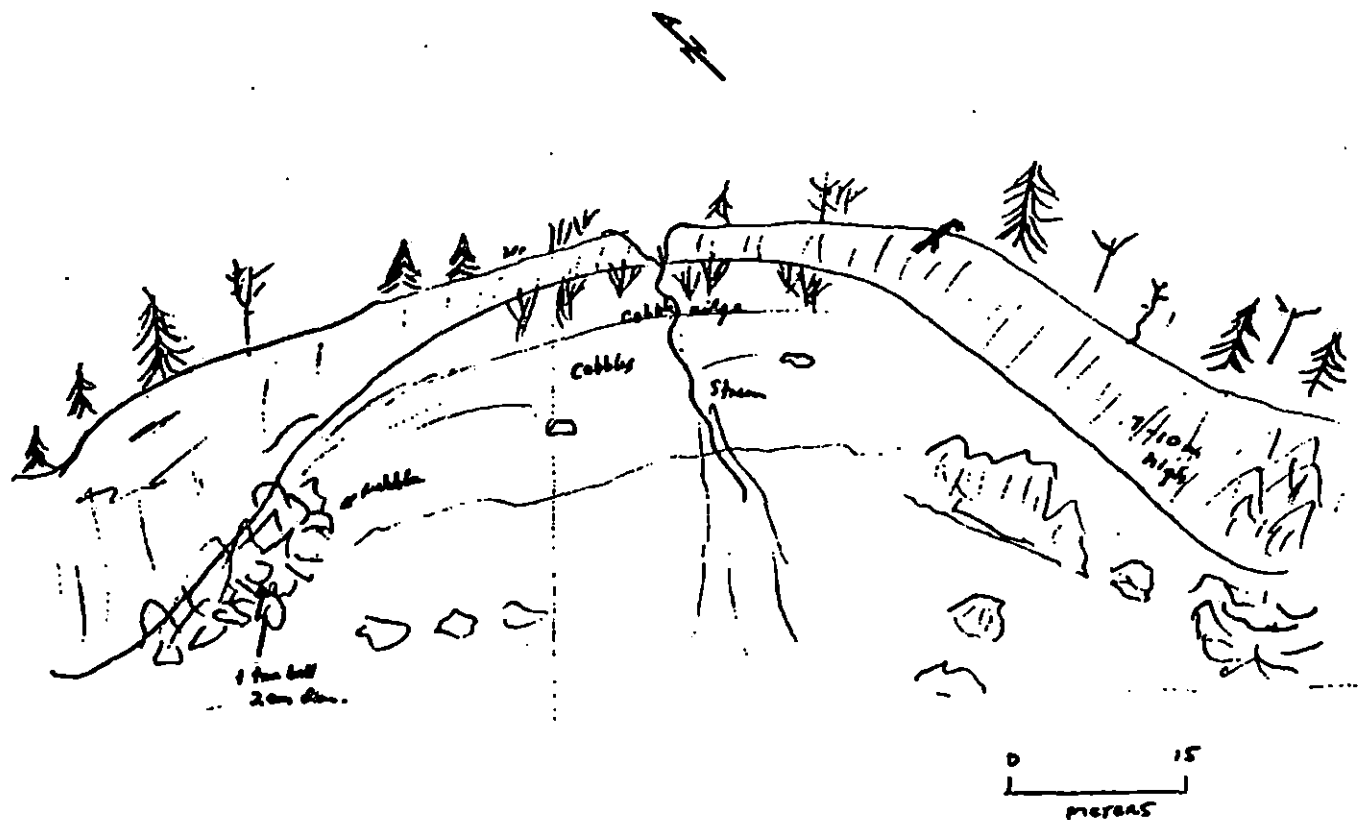
☐ CT/B
 Broken Distribution

☐ CT/P
 Patchy Distribution

☐ CT/S
 Stashed Distribution

Red Vegetation

1 ☐ Photo location, direction,
 and number



Character Length (m): AP _____ PO _____ CV _____ CT 1m ST _____ MS _____ PT _____ TB _____ FL _____ NO 99

ADEC 6J

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/NA 24 Subdivision B Date (mo / day / yr) 4/2/90Time (24 hr) 17:00 Biologist DANIEL RAIDER(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 20 (3) Cobble 30 (4) Pebble 0 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 0 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 (3)

Photographs:
Roll No. 3Frames 15-19

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:

— shore birds off-shore; concentration

Ecological Considerations:

Priority 1

Positive T.D.

NASB	ST	ST	ST
NASB	ST	ST	ST
NASB	ST	ST	ST
NASB	ST	ST	ST
NASB	ST	ST	ST

Special Use Designation Tent sites → Tent sites
 Active Bald Eagles Nest
 Deer Harvesting
 Flamingo Spawning
 Shorebirds Waterfowl concentration → yes.

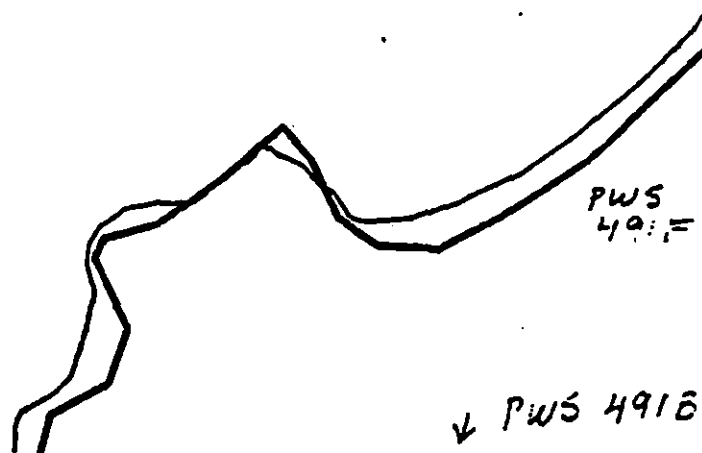
ECOLOGY MAP

↑ PWS
4916

NA-24-B

NA-24

Eagle
Nest (SW)



ADEC 6W

↓ PWS 4916

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-24

ADEC Segment Length: 10478m

Map Key: PWS-4916

Name: Fitzgerald

Date: Apr 2 1990



SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION C (3 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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 H. H. H.* DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 586 m: No Oil 343 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: MONITORS TO ASSESS PRESENCE OF TARBALLS AS INDICATED
ON SKETCH WHILE IN AREA.

TAG APPROVAL DATE: 4/25/90.
ADEC ART LOEWEN
EXXON ANDY TGA
NOAA Joseph Talbot
USCG KENNETH KEANE

FOSC: W L DATE: 5-3-90

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 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 NA 24 SUBDIVISION: C DATE 4-3-90

USCG

NAME AD2 MC NATION SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

1. Some mouse and weathered splatter were located.
2. Clean-up is not warranted despite priority 1 coding, treatment would do more harm than good.

ADEC

NAME GREG WINTER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

OILING TOO SPARSE TO WARRANT TREATMENT.

LAND MANAGER

NAME Mike Bennett SIGNATURE Mike Bennett

ADNR

☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS NA-24C

Priority 1 segment. Occasional very light oiling consisting of splatters and mouse. Area use a mixture of herring spawning minimal human use, marine mammals, nesting. Weathered oil that may cause more harm than good to remove.

SHORELINE OILING SUMMARY

REVISION NO. 0028/90

CG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-24
 IO D. Rader LAND REP M. Bennett SUBDIVISION C 3 of 6
 XXON S. HANCOCK ADEC G. Winter TIME 9:50 to 11:20
 TEAM NO.: 215 TIDE LEVEL: 190 cm to 120 cm DATE 2 / Apr / 90
 EST. SUBDIVISION LENGTH: 1345 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Northeast to southwest
 SURFACE SEDIMENTS: R 15 % B 35 % C 40 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 60 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 621 m NO 724 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	AC	AB	AP	AS	1	2	3	4	5	6	7	8	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES				X		X								X		
TARBALLS				X		X								X		
FILM																
NO OIL																

PAVEMENT: H F S none sq. m by cmPATTIES / TARBALLS < 1/4 bag BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			
	SM	MD	LG	
Logs				DEBRIS COLLECTED ☐ YES ☒ NO
Vegetation				
Trash				
Debris				
				TYPE <u> </u>
				#BAGS <u> </u>

Photographs:

Roll No. #2Frames 1-15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	5	6	7	8			
1	40					X	-											X		Peb/ Grn/ Sand
2	45					X	-											X		Peb/ Cobble
3	30					X	-											X		Peb/ Cob/ Grn/ Sand
							-													
							-													
							-													

COMMENTS

Priority 1

- The oiling of this shoreline consisted of hardened tar balls and patties adhering to boulders and cobbles.

ADEC W

ADEC - GJ

OG Fitz6

SKETCH MAP B.

SEGMENT ST/ NA-24

SUBDIVISION G

DATE Apr 12 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

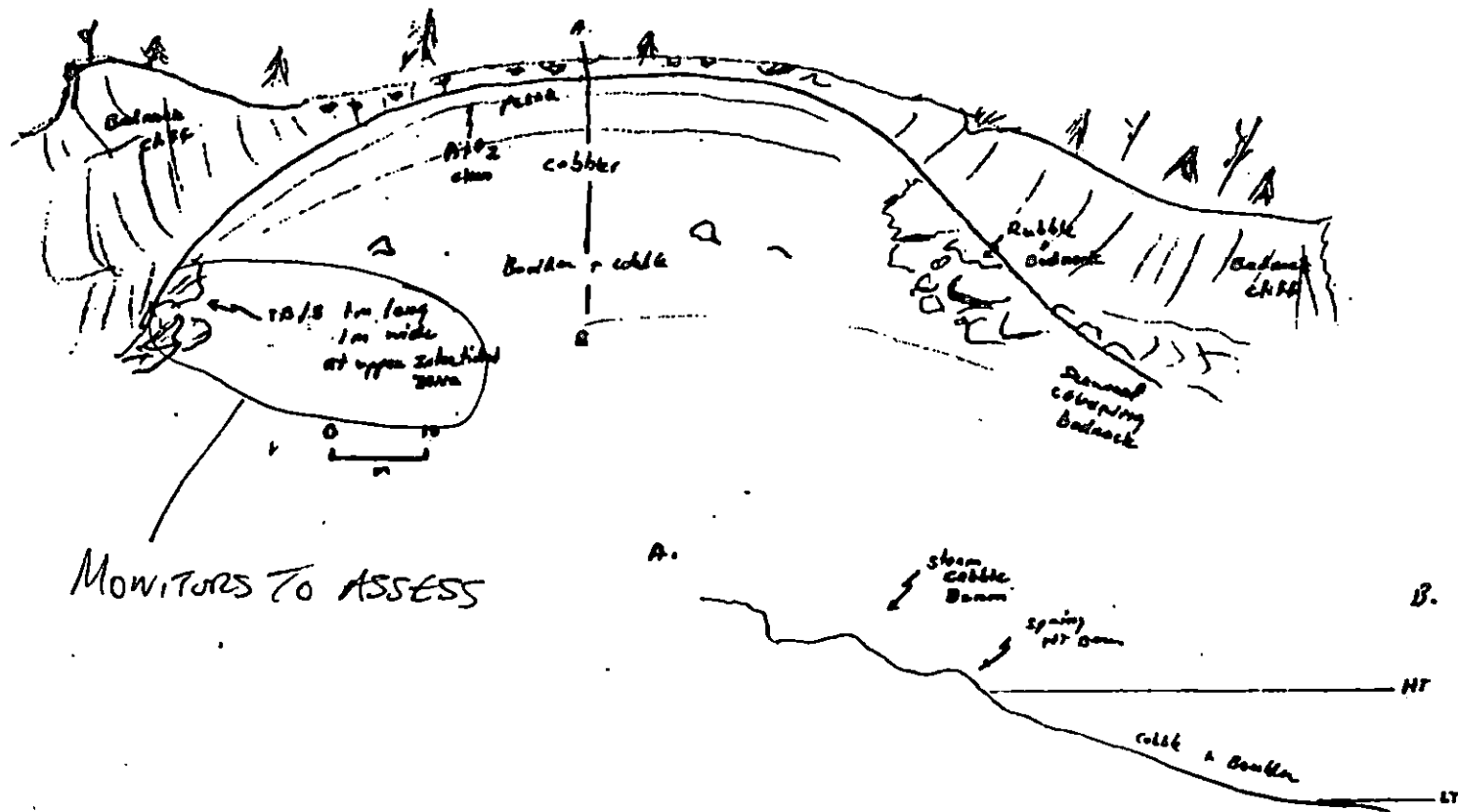
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil'd Vegetation

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



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 119

ADEC 6
REVISION 000000

HF-04-1350 17:04 FROM CURDISH TO SCOT TEAM F.20

DATE Apr 11 90

C

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Endry
- ☐ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/L/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Plt - No Subsurface Oil

2 ▲
PK - Subsurface Oil

CT/C
Continuous Distribution

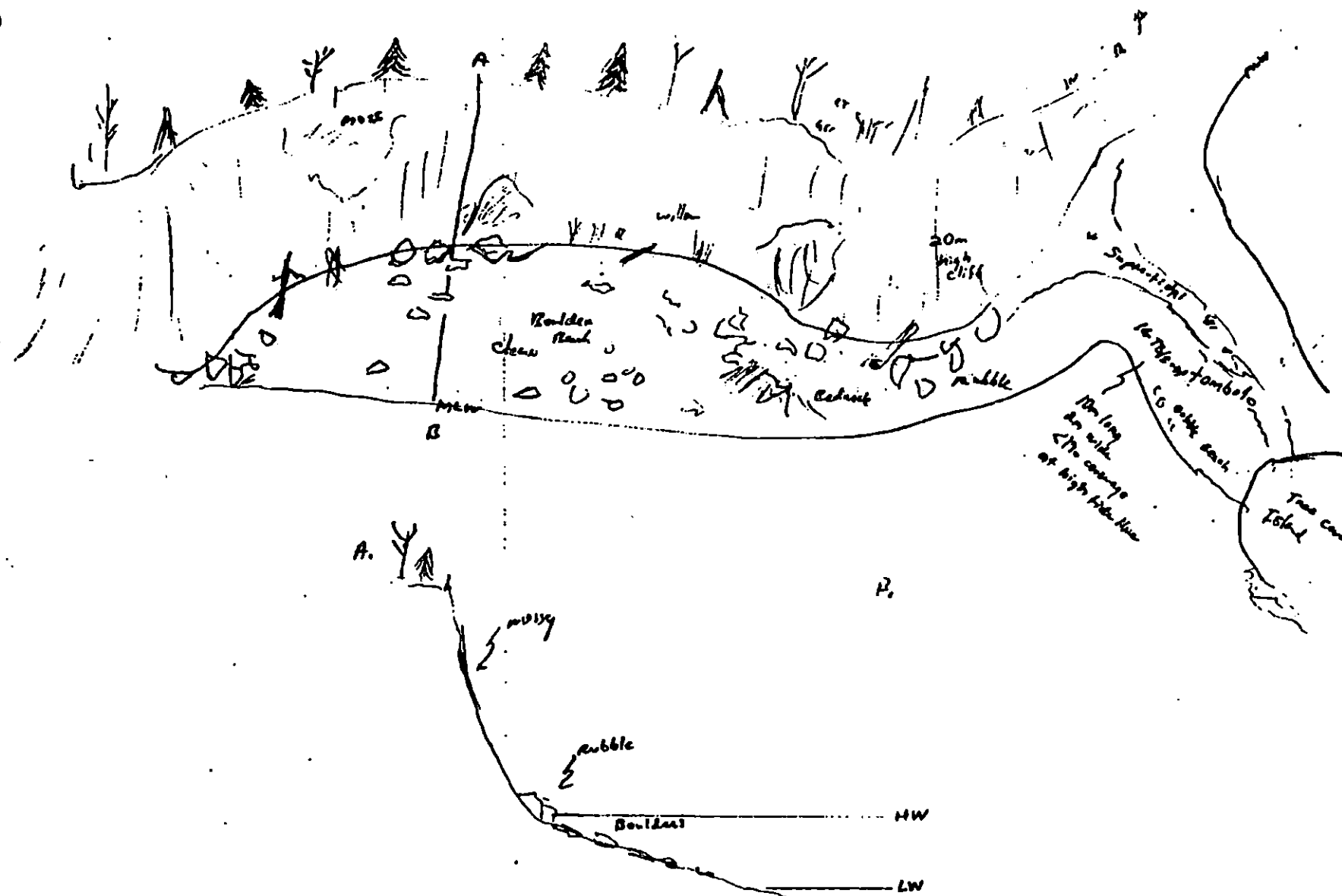
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Spashed Distribution

Older Vegetation

Photo location, direction,
and number



Oil Character Length (m): AP PO CV CT ST MS PT TB 10 FL NO 380

ADEC (م)

REVISED: 06/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/07/90

Segment ST / NA-24 Subdivision C Date (mo / day / yr) April 2, 1990

Time (24 hr) 9:50 Biologist DANIEL RAIBER

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 35 (3) Cobble 40 (4) Pebble 10 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 3 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. 2

Frames 1-15

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:

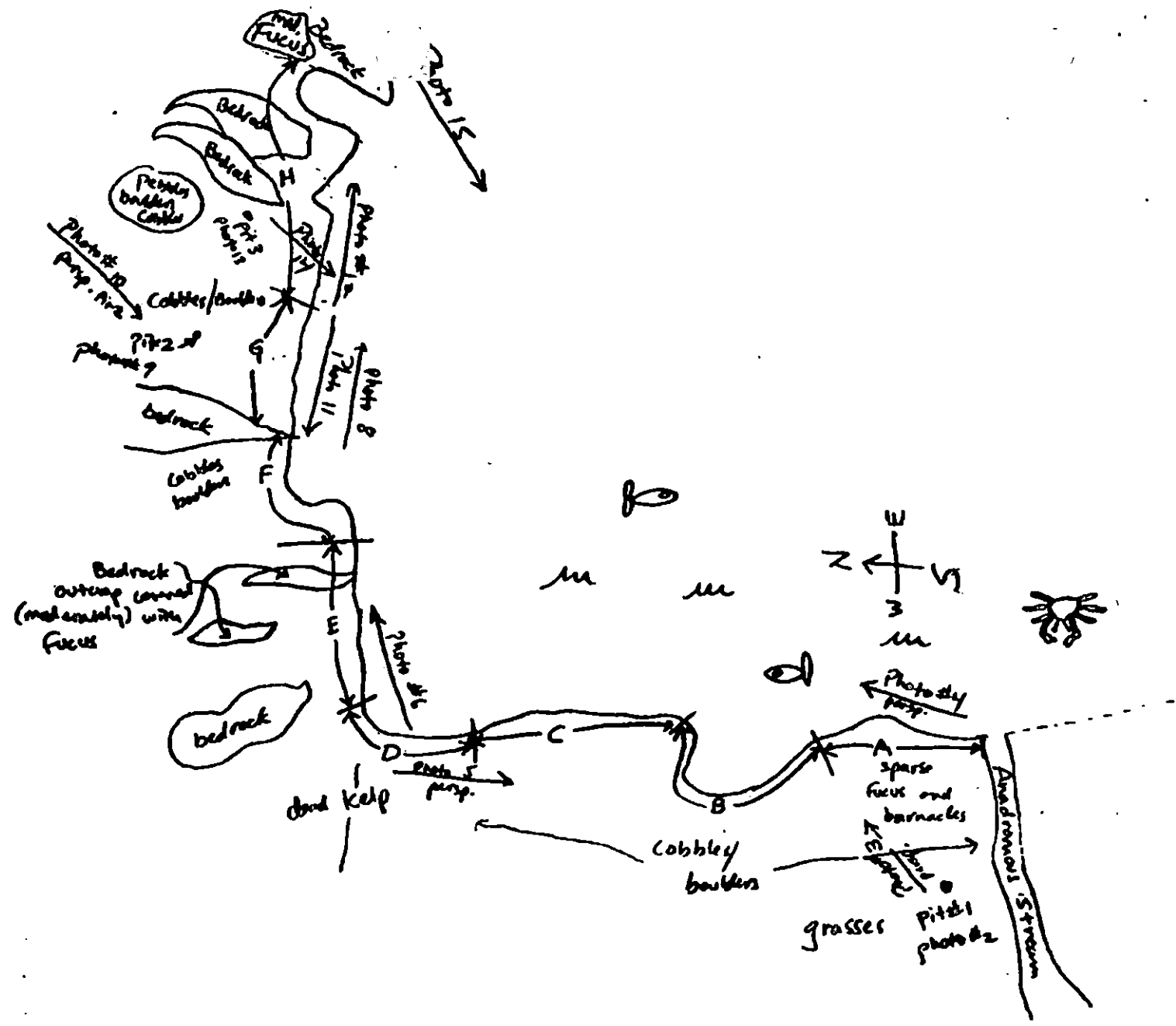
- Seal ~ 50 meters off shore
- Eagles (3)
- ducks
- Shorebirds

Ecological Considerations: Priority 1

Sensitivity	Key	Dates of Restriction	Positive S.O.
5S	Shorebird waterfowl conc.	7/5 - 9/15	yes
6Y	Special Use Designation	6/1 - 9/15	
V	Tent sites	6/1 - 9/15	
5T	Active Bald Eagle Nest	3/1 - 6/1	yes
7II	Deer Harvesting		

NA 24C - Biological map
Team 15, DANIEL TRIDER
2 April 1990

Note: This area is broken down into sub-subdivisions and referred to in Photo log - Roll 2, frames 1-15. They are called "sub sub" in Photo log.



Angle: From Top looking down

ECOLOGY MAP

↑ PWS
4910

NA-24-B

NA-24

Eagle
Nest (WS)

PWS
4910

ADEC 6W

↓ PWS 4910

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-24

ADEC Segment Length: 10478m

0 100 200 300

Map Key: PWS-4910

Name: FITZGERALD

Date: Apr 2 1990

Data Entered:

NA 24-C - Key to map

DANIEL RAIDER

2 April 1990

9:50 am

Walking the transect from North to South

I - Stream in Western portion of ~2 meters, flowing rapidly
~ 8 cm in depth; Anadromous Stream

- Here at high tide and cannot reach or see Lower Intertidal Z

II Sub-Subdivision A

- sparse fucus
- sparse broken open mytilus; none attached to substrate

III Sub-subdivision B

- moderate Littorina (periwinkle) } On cobble in Mid-Inter
- moderate adult/juvenile barnacles } Zone
- No fucus sighted

IV Sub-Subdivision C

- sparse barnacles in Mid-Intertidal Zone
- Occasional boulders in Mid-Intertidal Zone w/ dense Barnacles
adult and juvenile
- rare fucus in Mid-Intertidal Zone
- rare red algae in Mid Intertidal Zone
- rare barnacle spat on cobbles/boulders in Mid-Intertidal Zone
- rare barnacle in Upper Intertidal Zone on boulders; no other biot
- limpets - sparse } on underside of cobbles/boulders
- Arthropods - sparse } in Mid-Intertidal Zone
- rare Littorina

I Subsubdivision D

- rare focus at Mid-Intertidal zone
- rare barnacles
- " " spat submerged
- moderate barnacles on large boulders at Mid-Intertidal zone (M.I.T.)
- rare focus in M.I.T. zone
- long dead kelp
- no M. tilus sp.
- rare gastropod
- sparse green filamentous algae in lower Mid-Intertidal zone.

II Sub-subdivision E

- moderate barnacles (adult) at bedrock outcrop near North end
- sparse focus (adult)
- outcrop covered w/ moderate focus (adult + new) ~ 20 net x 16 net only on boulders not on cobbles; extends from lower Mid-Intertidal zone to Upper-Upper Intertidal zone
- red algae rare on S. outcrop + moss - rare

VII Sub-subdivision F

- Clear area w/ boulders + cobble
 - moderate barnacles (adult) in Mid I.T. zone
 - rare in Upper-Upper I.T. zone
- sparse focus in Upper-MIT zone + U.I.T. zone
- moderate barnacles (adult) in M.I.T. zone

VIII

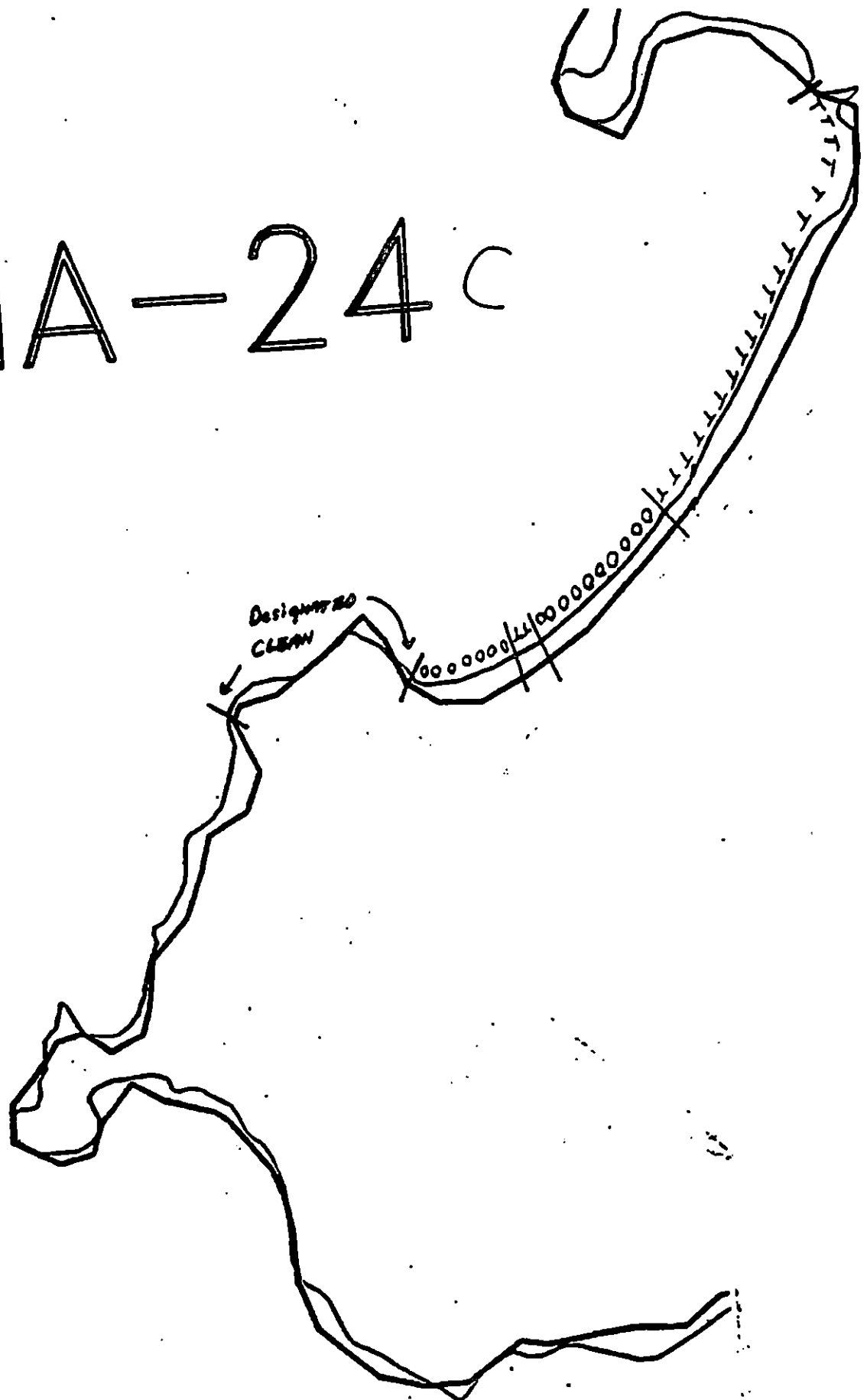
- Cobblely / bouldery beach with no biota except at boulders
- moderate fucus in M.I.T.Z & U.I.T.Z. on boulders, partially submerged

11:10IX

Boulders at East end with moderate Barnacles (adult + juv.)

- Sparse fucus in U.I.T.Z.
- Signs of dead barnacles in M.I.T.Z - profuse
- Bed rock w/ moderate Fucus coverage
- Sparse barnacles in M.I.T.Z

NA-24C



ADEC m

XXXX Wide
 //// Medium
 --- Narrow

NA-24 C

ADEC Segment Length: 10478m

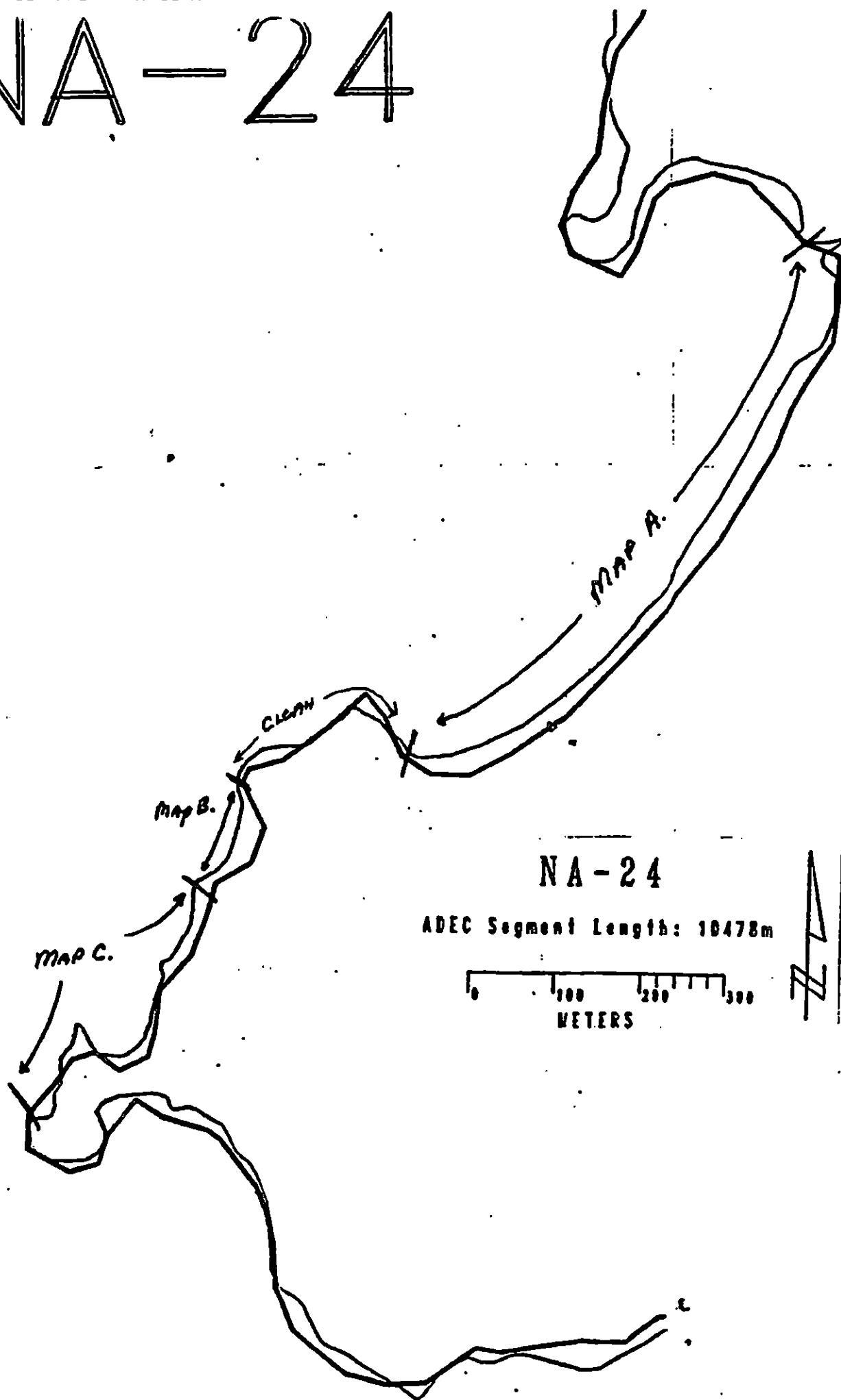


Map Key: PWS-4911

Name: D. Fitzgerald

Date: 2 Apr 1990

NA-24



SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION D (4 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 228 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: 4/25/90

ADEC Art Wenger [Signature]

EXXON Andy Teaz [Signature]

NOAA Norm Talbot [Signature]

USCG Kenneth Connor [Signature]

FOSC: [Signature] DATE: 5-3-90

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 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 NA 24 SUBDIVISION: D DATE 4-3-90

USCG

NAME C. M. I. MC NATION SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

1. NO OIL PRESENT.

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oil PRESENT.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]
ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oiling present in subsegment - environmentally
clean.

SHORELINE OILING SUMMARY

REVISION NO. 000000

G D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-24
 BIO O. Rades LAND REP M. Barnett SUBDIVISION 0 (4 of 6)
 EXXON S. Neuman ADEC G. Winter TIME 11:35 to 11:42
 TEAM NO.: 515 TIDE LEVEL: 105 to 100 ^{above} _{mean} DATE Apr 1 2 / 90
 EST. SUBDIVISION LENGTH: 230 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Northwest to Southeast
 SURFACE SEDIMENTS: R 80 % B 15 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 230 m

SURFACE OIL

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

PAVEMENT: H F S NONE sq. m by 0 cm
 PATTIES / TARBALLS 0 BAGS
 NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO
 TYPE 0
 #BAGS 0

Photographs:

Roll No.

Frames

SUBSURFACE OIL

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

COMMENTS

Priority 1
 - This beach exhibited no apparent oil.
 - Boulders and cobbles were overturned in the search of oil.

ADEC 61

DATE 4/13/90

00 F261 1

SKETCH MAP

SEGMENT ST/ NA-21

SUBDIVISION D

DATE Apr 12 90

CHECKLIST

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

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

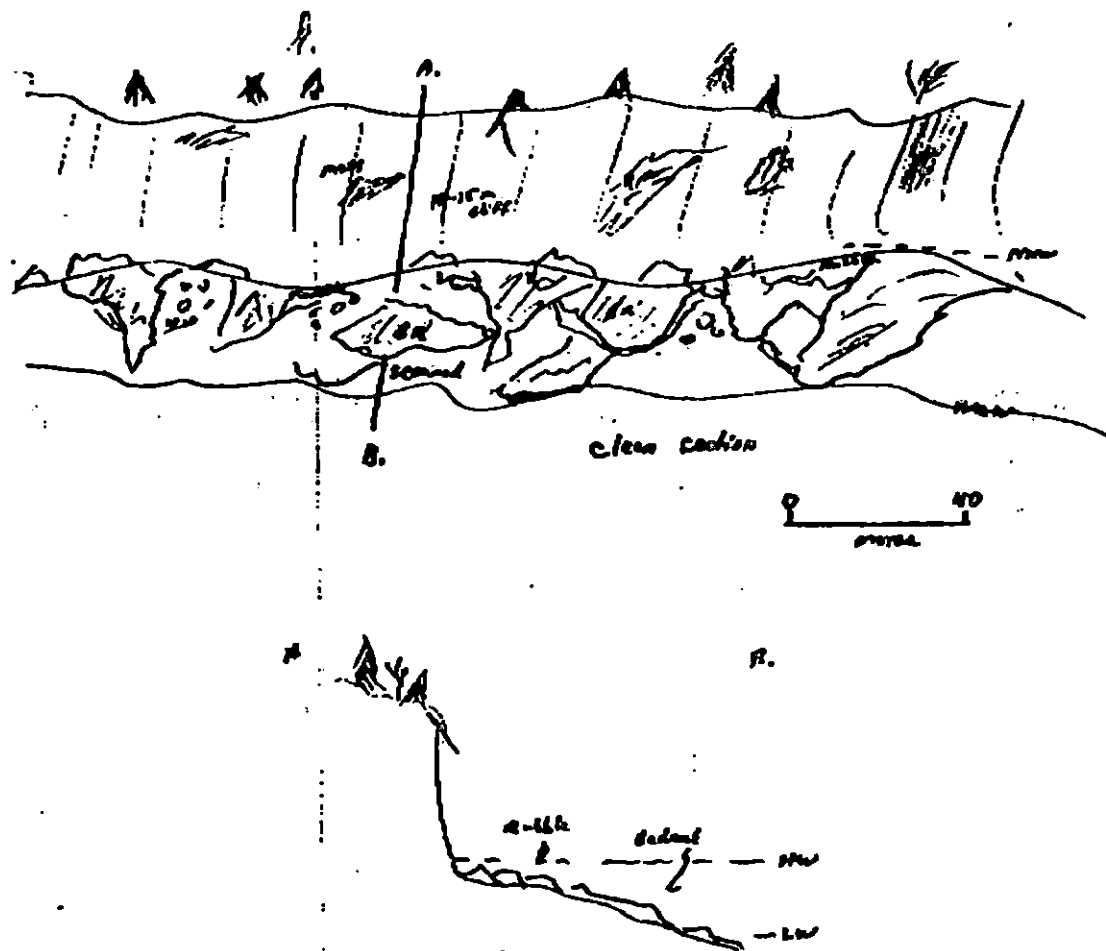
CT/S

Splashed Distribution

Circled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 230m

ADEC GJ

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/2/90

Segment ST / NA 24 Subdivision D Date (mo / day / yr) 4/2/90

Time (24 hr) 11:40 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
(1) Bedrock 80 (2) Boulder 15 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 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. 2

Frames 16-19

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:

- Other

Ecological Considerations: Priority 1

Sensitivity	Key	Dates of Restriction	Positive I.O.
5S	Shorebird waterfowl conc.	7/1 - 3/15	
6Y	Special Use Designation	6/1 - 9/15	
6Y	Tent sites	6/1 - 9/15	
5T	Active Bald Eagle Nest	3/1 - 6/1	
7H	Deer Harvesting		
2H	Herring Spawning		

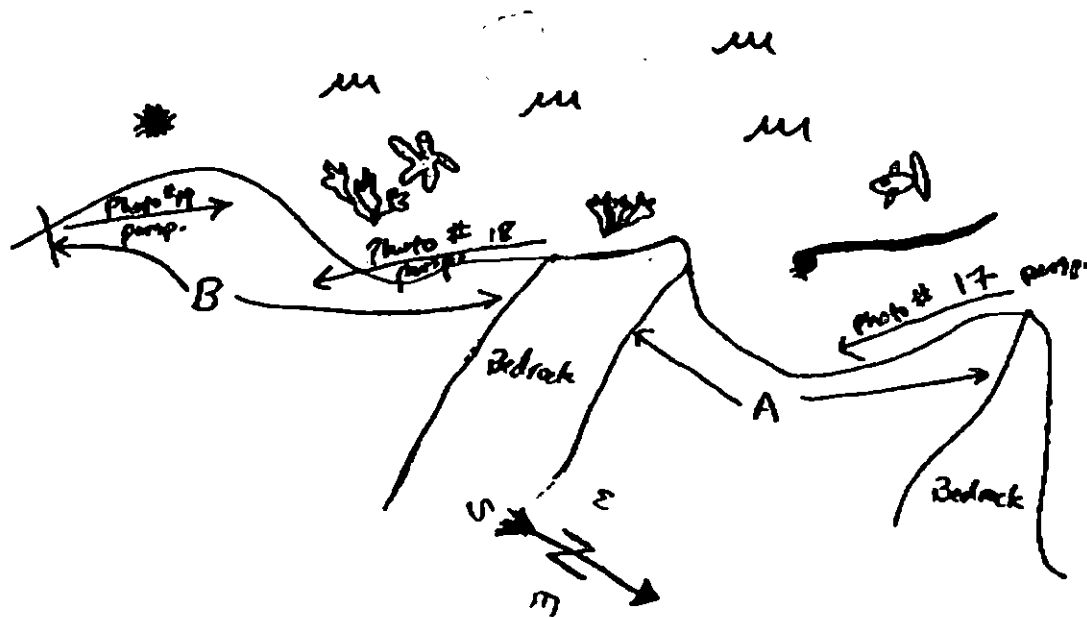
NA-247

11:40, 2 April 1990

DANIEL RAIDER

TEAM 15

BIOLOGY SKETCH



- NO Streams

① - Moderate to sparse focus on bedrock
in N. W. Corner of sub-subdivision

- Moderate Barnacles in Mid-Intertidal Zone (I.T.Z.)
- rare Barnacle spat in Upper I.T.Z. and M.I.T.Z.

② - Rare gastropod in M.I.T.Z.

- Mod barnacles (adult + spat) in M.I.T.Z. + U.I.T.Z.
- sparse focus at M.I.T.Z.

ECOLOGY MAP

↑ PWS
4917

NA-24-B

NA-24

Eagle
Nest (SW)

PWS
4915

ADEC 6W

↓ PWS 4916

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-24

ADEC Segment Length: 10478m

0 100 200 300

Map Key: PWS-4910

Name: FITZGERALD

Date: Apr 2 1990

data entered:

↑ PWS: 117: E

NA-24-D

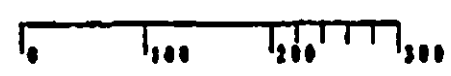
PWS
4/9/90

ADEC 6/1

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

NA-24 D

ADEC Segment Length: 10478m



Map Key: PWS-491b

Name: Fitzgerald

Date: 2 Apr 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION E (5 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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 in unsurveyed portion of segment adjacent to subdivision E.

SHPO SIGNATURE: [Signature]

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 12 m: No Oil 94 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: 4/25/90

ADEC ART WENGER
EXXON ANDY TOL
NOAA Joseph Talbot
USCG KENNETH KEANE

FOSC: Y L

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

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

6S

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)

7-HH

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 NA 24 SUBDIVISION: E DATE 4-30-90

USCG

NAME CWO2 J. MCMAHON SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

1. AREA Displayed Asphalt and tarballs on cliffs.
2. All material was weathered and treatment is NOT recommended for treatment.

ADEC

NAME GREG WINTER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

OILING TOO SPARSE TO WARRANT TREATMENT.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]

ADNR

☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

NA-24E

Priority 1 segment with use referenced as nesting, low impact human use, spawning marine mammals. Oiling noted as being in small 2x2 meter area on high angle rock face - well weathered & minimal environmental impact.

ADEC cd

SHORELINE OILING SUMMARY

REVISION NO. 002878

D. Fitzgerald USCG J. McArthur SEGMENT ST/ NA-24
 D. Rader LAND REP M. Bennett SUBDIVISION E (5046)
 S. Newman ADEC G. Winter TIME 12:10 to 12:30
 TEAM NO.: 15 TIDE LEVEL: 90 to 60 cm above mean DATE Apr 1 / 1990
 EST. SUBDIVISION LENGTH: 110 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: south to north
 SURFACE SEDIMENTS: R 10 % B 20 % C 20 % P 45 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 2 m NO 108 m

SURFACE OIL

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

PAVEMENT: H F S None sq. m by 0 cm

PATTIES / TARBALLS None BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	NO		UO	VO	1	2	3	4	5	6	7	8	SU	U	
1	40					X	.											X		Pebble / Cobble / Sand
							.													
							.													
							.													
							.													
							.													

COMMENTS

Priority 1

This beach appeared to be clean of oil except for a 2m long tarball splot at the northern end of the segment. At this site oil occurs on boulders and rubble (splash) next to a small bedrock headland

國際社會與公共衛生

00 Feb 1

SEGMENT ST/ NA-21

SUBDIVISION E

DATE Apr 12 80

CHECKLIST

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

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/D

Patchy Distribution

CT/S

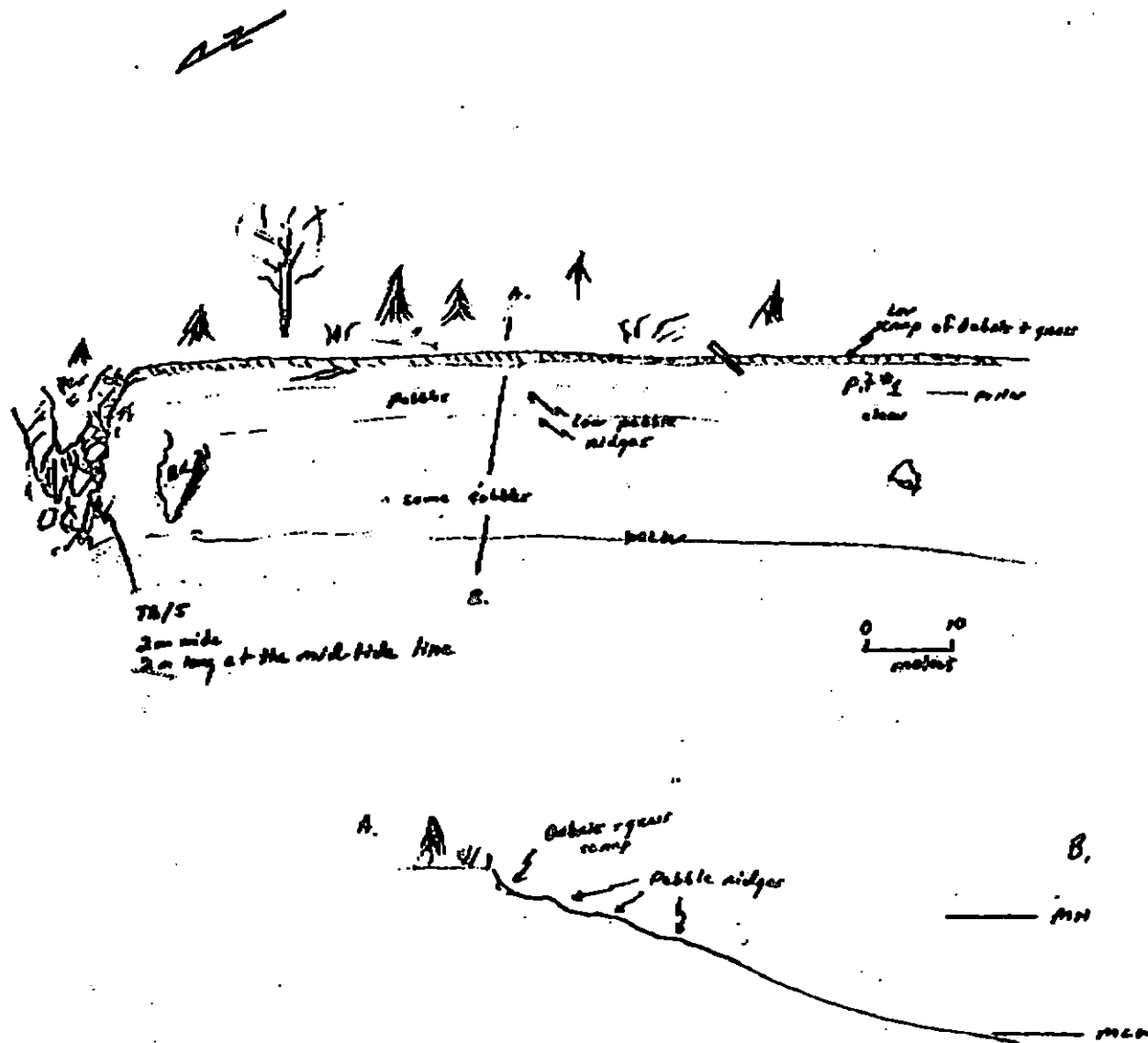
Splashed Distribution

Oil'd Vegetation

1 $\Rightarrow$

Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB 2 FL _____ NO 108

REVISION 05/80

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/NA 24 Subdivision E Date (mo / day / yr) 4/2/90Time (24 hr) 12:10 Biologist DANIEL RAMER(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 20 (3) Cobble 20 (4) Pebble 50 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 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 (3)

Photographs:
Roll No. 2Frames 20-24

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:

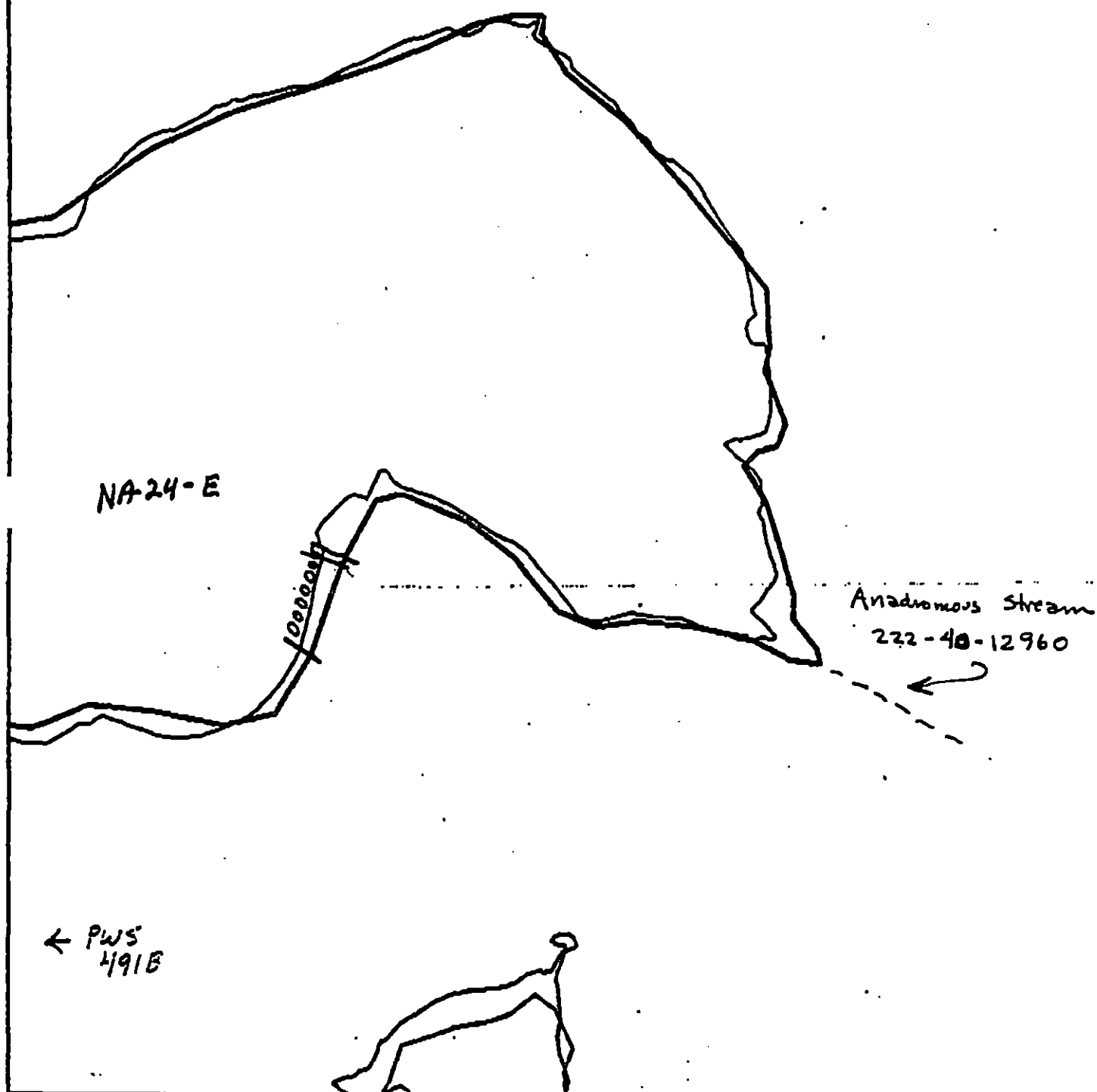
NONE OBSERVED

Ecological Considerations: Priority 1

Designation	Key	Dates of Restoration	Positive T.O.
SS	Shoreland waterfowl conc.	7/5 - 9/5	
LY	Special Use Designation	6/1 - 9/5	
V	Tent sites	6/1 - 9/5	
ST	Active Bald Eagle Nest	3/1 - 6/1	
7H	Deer Harvesting		
2M	Herring Spawning		

↑ PWS - 491B

ECOLOGY MAP



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

NA-24

ADEC Segment Length: 10478m

0 100 200 300
METERS

Map Key: PWS-491c

Name: FitzgeraldDate: 2 Apr 1990

Date Entered:

↑ PWS - 0.5

NA-24-E

1000000

← PWS
491B

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Data

NA-24

ADEC Segment Length: 10478m

0 100 200 300

Map Key: PWS-491c

Name: FitzGeraldDate: 2 Apr 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ NA-24 SUBDIVISION F (6 OF 6) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12960.

- 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)
- 5S Shorebird/Waterfowl concentration (4/1 to 5/15)
- 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
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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. Hoffman DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 38 m: Narrow 23 m: V.Light 218 m: No Oil 526 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>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u>X</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> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) removal of mousse and oiled fucus, 2) blot pooled oil with pom poms absorbents, and 3) bioremediate pooled oil, coat and cover. Work should be conducted between 5/16 and 7/9 with approval from ADF&G concerning salmon and herring constraints and USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90

ADEC Art Wagner D. L. Wagner

EXXON Andy Ten Paul

NOAA Joseph Tallant J. Tallant

USCG Kenneth K. Kohn Kenneth K. Kohn

FOSC: DATE: 5-1-90

Do not use JAW, pol - custom blend O.K.
JAW Lm's desire.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (8/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (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-HH	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 NA 24 SUBDIVISION: F DATE 4-3-90

USCG

NAME CDZ J. MC NALLY SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. Fucus is heavily oiled, needs to be manually removed.
2. pools of mousse exist in cracks + crevices of rock outcrop and need to be treated with absorb material.
3. Other portions of NA 24F contain splashes, sporadic and need NO treatment.

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

WHILE, THE POURED OIL AND OIL COATED FUCUS NEED TO BE REMOVED AT WEST EN OF NA 24F, THERE IS A BROKEN BAND OF HIGH PATCHY OR SPLASHED MOUSSE OCCURRING BELOW THE TOP LAYER OF BOULDERS AND COBBLE ALONG MUCH OF THIS SUBSEGMENT. IF POSSIBLE, A ~~STAG~~ STAG FIELD TEAM SHOULD LOOK AT OILING IN THIS SUBSEGMENT.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]

ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Treatment suggested for the 10 x 30 meter portion of segment with oiled fucus - rec. removing all oiled fucus. Environmental concern for marine mammals about the fucus. Rest of the subsegment shows occasional mousse in a small band, no treatment suggested on this portion due to minimal use and oil in well weathered state.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-24
 BIO D. RAIDER LAND REP Mr. Bennett SUBDIVISION F (6 of 6)
 EXXON S. Newman ADEC B. Winter TIME 12:30 to 14:15
 TEAM NO.: #15 TIDE LEVEL: 60 to 50 cm DATE Apr 2 1990
 EST. SUBDIVISION LENGTH: 850 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
 SURFACE SEDIMENTS: R 20 % B 35 % C 30 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 30 m N 30 m VL 200 m NO 620 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	SP	OR	OL	OC	OT	SU	U	M	L
ASPHALT PAVEMENT													
POOLED			X	X				X		X	X		
COVER													
COAT				X		X				X			
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM			X				X			X			
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			

None

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#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	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	SP	OR	OL	OC	OT	SU	U	M	L		
1	35					X	-								X					Cob / Sand / Grm / Feb
							.													
							.													
							.													
							.													
							.													

COMMENTS

Priority 1

- Considerable oil found at the western end of the segment on the bedrock headland. Oil is found in the cracks and crevices betw. rock layers. Oil coats films in these areas and oil pools to 1-6 cm
- The splot (coat) is also found in the central portion of the beach at the mid to high tide zone. Within this segment occasional weathered mussels occurs between cobbles and boulders. Does not penetrate the substrate

ADEC fw

OG F W

SEGMENT ST/ NA-24

SUBDIVISION F

DATE Apr 12 90

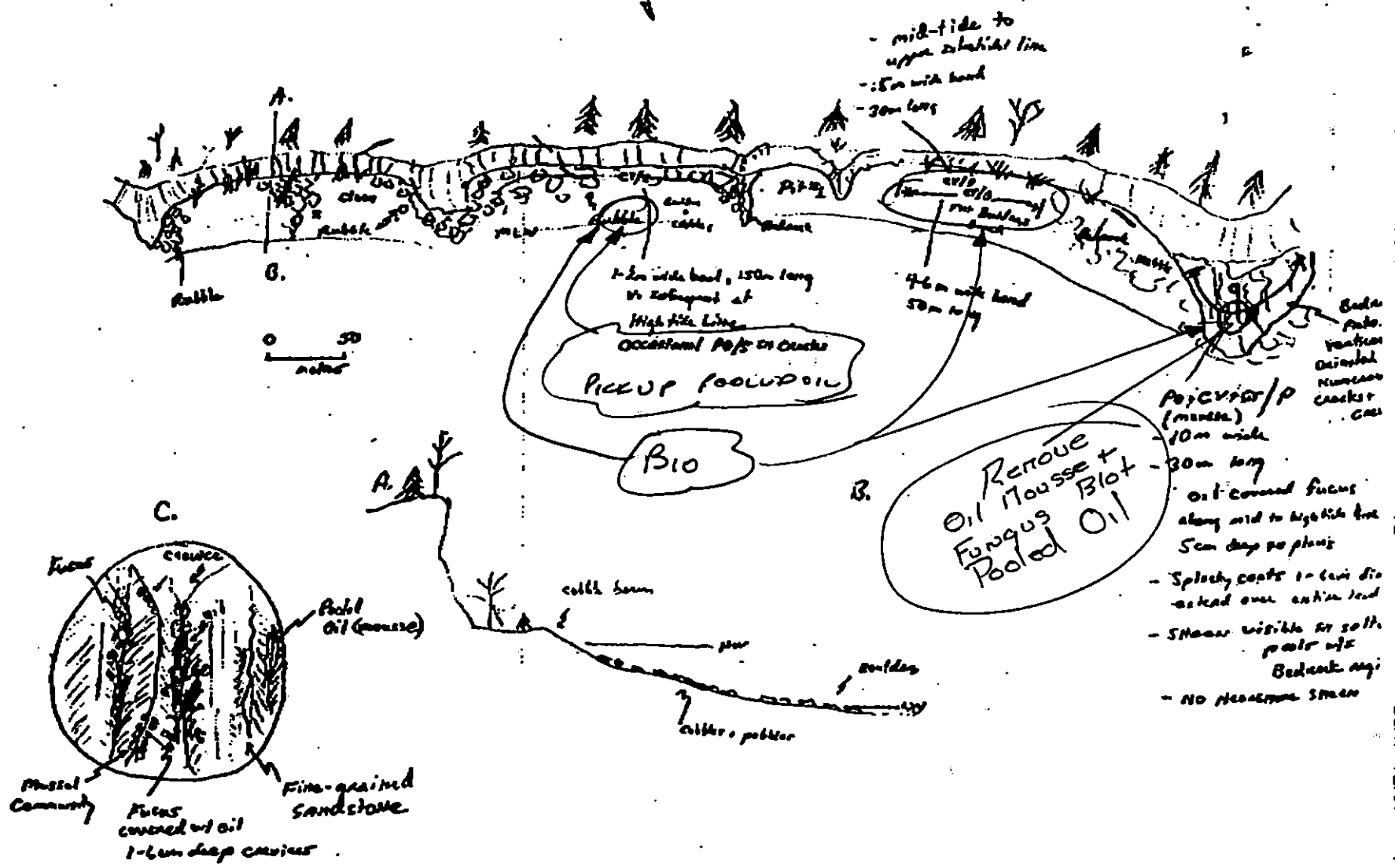
SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HWT/LVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
PR - No Subsurface Oil
- 2 Δ₁
PR - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 ●
Photo location, direction, and number



Oil Character Length (m): AP _____ PO 30 CV 30 CT 200 ST _____ MS _____ PT _____ TB _____ FL _____ NO 620

ADEL (W)
REVISION 030400

APR-04-1990 17:17 FROM CORDOVA TO SCAT TEAM P.18

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/NA 24 Subdivision F Date (mo/day/yr) 4/2/90Time (24 hr) 12:35 Biologist DANIEL RAIDER

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 35 (3) Cobble 30 (4) Pebble 15 (5) Sand (6) Silt
 (B) Overall % cover of biota (% of segment): Dense 0 Moderate 7 Low 0 (assoc. w/ fucus)
- (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. 2Frames 25-38

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:

Priority 1

Sensitivity	Key	Factor of Restriction	Positive I.D.
SS	Shacktown waterfowl conc.	4/5 - 5/5	
LY	Special Use Designation	6/1 - 9/5	
V	Tent sites	6/1 - 9/5	
ST	Active Bald Eagle Nest	3/1 - 6/1	
711	Dear Harvesting		
2M	Herring Spawning		

NA-24 F

12:10, 2 April 1990

DANIEL RAIDER

TEAM 15

BIOLOGY COMMENTS

①

- ARRIVED AND SCOUTING DURING LOW TIDE AND LOW INTERTIDAL ZONE ACCESSIBLE

- Green filamentous Sheath in Lower Intertidal Zone
- Oiled focus in Eastern limit of subdivision; focus is moderately dense and very obviously dead - In Upper-Mid & Upper-Intertidal Zone; moderate focus cover in Lower Mid-and lower-Intertidal Zone is void of oil. The oiled section comprises a section of roughly a 10 meter band by 30 meters long.
- Evidence of dead barnacles in the Upper intertidal zone in oil, as well
- Cobbles and boulders north of oiled section and extending west into Mid-Intertidal Zone have evidence of many living limpets, arthropods and barnacle spat on underside (not oiled).

②

- Sparse focus in Lower-Intertidal zone & Mid Intertidal zone
- Dense green filamentous algae in Lower-Intertidal zone

③

Moderate Barnacle coverage

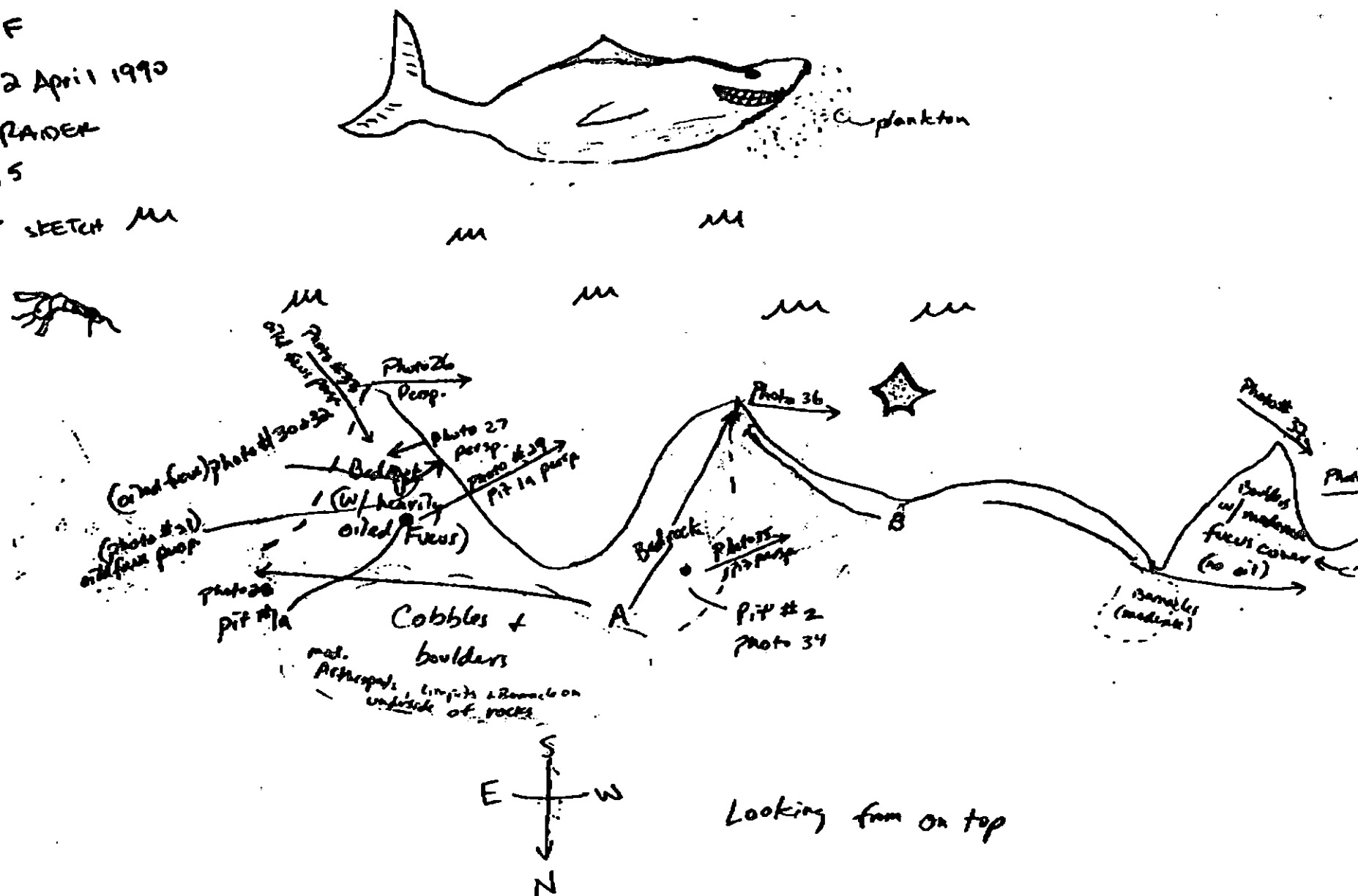
NA24-F

12:10, 2 April 1990

DANIEL RADER

Team 15

BIOLOGY SKETCH M1



ECOLOGY MAP

↑ PWS
4915

NA-24-B

NA-24

Eagle
Nest (WS)

PWS
4915

ADEC W

↓ PWS 4915

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NA-24

ADEC Segment Length: 10478m



Map Key: PWS-4915

Name: FitzGerald

Date: Apr 2 1990

↑ PWS 41916

← NA-24-F

PWS
41916

ADEC (m)

XXXX Wide

//// Medium

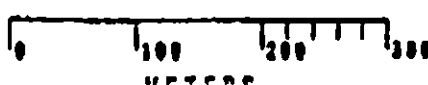
---- Narrow

TTTT Very Light

0000 No Oil

NA-24

ADEC Segment Length: 10478m



Map Key: PWS-491b

Name: FitzgeraldDate: 2 Apr 1990

Data Entered:

NA-24-F

* Gilling categories added using info from 1/1/1995

Y/W 4/13/90

PWS
4/2/10 →

ADEC Ltd

0000 No 011

NA - 24

ADEC Segment Length: 10478m



Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-24 SUBDIVISION F (6 of 6)

WORK WINDOW

Manual Pickup

OPEN

Bioremediation
Other Approved Treatment

WORK 6/15 - 8/15*

*Do not use Inipol - custom blend ok (FOSC comment)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (222-40-12960) is more than 100m from work site. No constraint to manual pickup, bioremediation and other approved treatment.
2M	Herring Spawning	Closed to bioremediation and other approved treatment prior to 6/15. No constraint to manual pickup.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup, bioremediation and other approved treatment.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision F work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unloiled substrate and biota especially intertidal and subtidal algae and seagrass. Restrict air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

FOSC

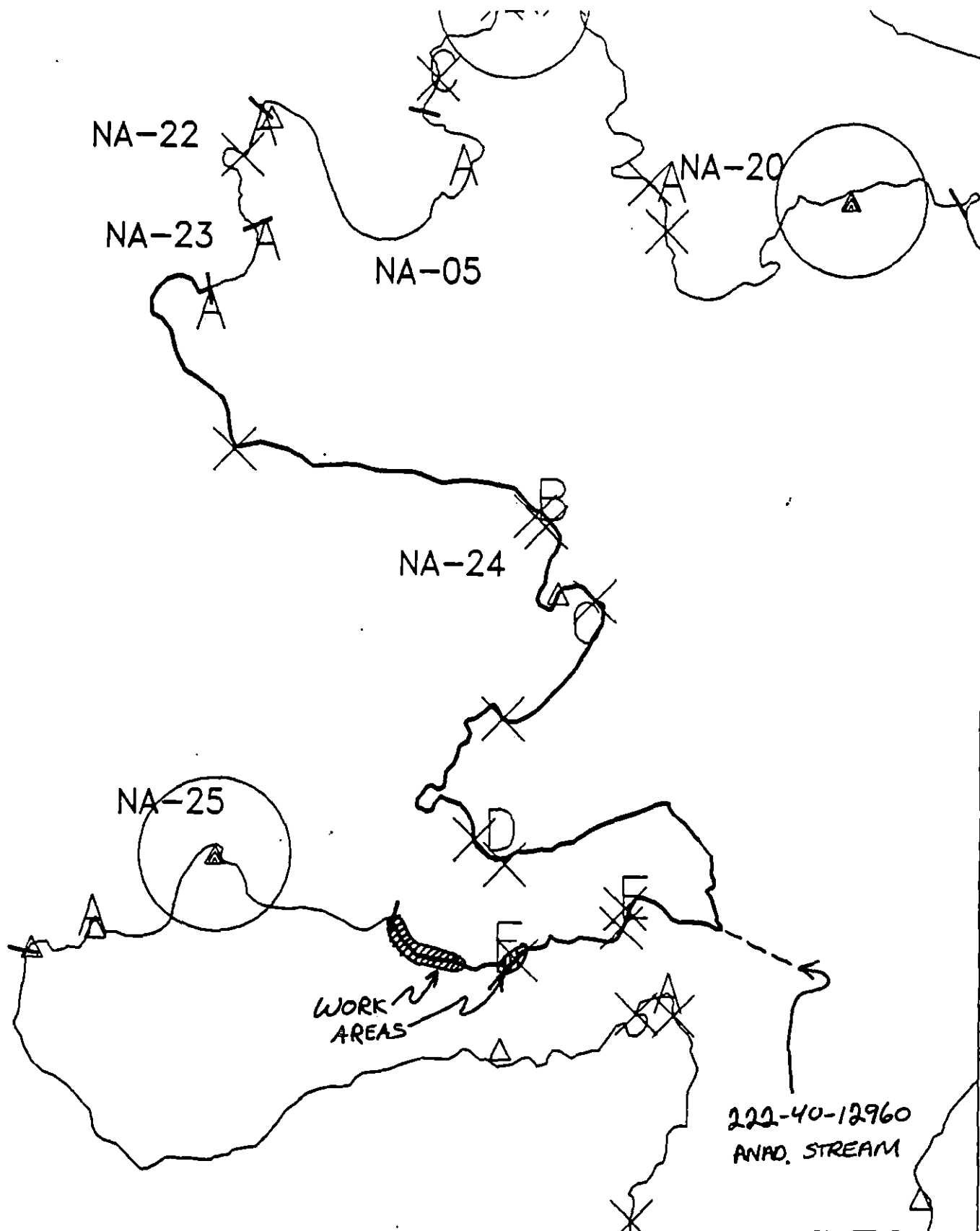
Date

Prepared by

Date

6/14/90

6/14/90



Exxon Company, USA

Map Key: PWS-NA-24

June 04, 1990



ECOLOGY MAP
SEGMENT NA-24
SUBDIVISION F (6 of 6)
METERS



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



SHORELINE EVALUATION

SEGMENT ST/ NA-25 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5S Shorebird/Waterfowl concentration (4/1 to 5/15)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
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 Zeff DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 40 m: Narrow 0 m: V.Light 482 m: No Oil 2164 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: Recommended treatment includes 1) manual removal of asphalt + Boils
shown on attached sketch map. Work should be conducted after 6/15 due
to herring constraints, after approval of USFWS and ADF&G regarding
eagle nests.
oil

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner
EXXON Andy Earl
NOAA Bull Wescott
USCG Kenneth Keane

FOSC: DATE: 4-27-90

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

FIELD SHORELINE COMMENT SHEET

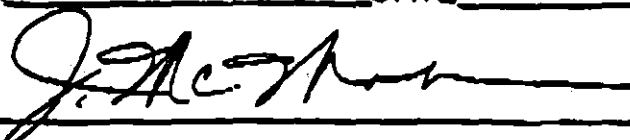
SEGMENT ST1 NA 25 SUBDIVISION: A DATE 4/8/90

USCG

NAME

CWO J. MC NATION

SIGNATURE

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

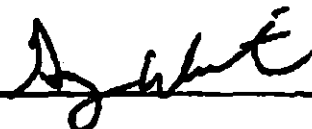
1. Large asphalt tar mats remain and suggest they be manually removed. area of Pit #1.
2. Could be combined with treatment of NA-24, oily focus area.

ADEC

NAME

GREG WINTER

SIGNATURE

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

ASPHALT (MAP A) SHOULD BE MANUALLY REMOVED AS SHOULD THE POOLED MOUSSE (MAP A) THAT OCCURS APPROX 400 METERS WEST OF ASPHALT.

LAND MANAGER

NAME

MIKE BENNETT

SIGNATURE



ADNR

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Treatment suggested on NA-25 - Map A, at beginning of section located near pit #1. Remove the oil in the 20x5 + 10x2 meter areas. Recommend that this area have oil removed while a group could be working the oiled focus area in NA-24 that adjoins this site. No treatment suggested for the remainder of the segment due to none to limited oiling. The ecological consideration could be met with this limited clean up. Priority 1 of herring spawning, deer harvesting, seabird colony & limited human use. Manual removal recommended for the two areas referenced.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-25
 BIO D. Reiden LAND REP M. Barnett (ADNR) SUBDIVISION A
 EXXON S. Newman ADEC B. Winter TIME 15:00 to 18:40
 TEAM NO.: 215 TIDE LEVEL: 180 to 25m High DATE Apr 16 /90
 EST. SUBDIVISION LENGTH: 3049 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
 SURFACE SEDIMENTS: R 20 % B 60 % C 10 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 70 % Vert 15 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 20 m N 0 m VL 250 m NO 2779 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	Gr	Br	Bl	Wh	Yl	Or	Dr	Grn	SU	U	M	L
ASPHALT PAVEMENT				X		X								X		
POOLED				X					X					X		
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS				X		X								X		
FILM																
NO OIL													X		X	X

PAVEMENT: H (F) S 100^{30% coverage} sq. m by 3 cmPATTIES / TARBALLS < 1/4 bags BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			None
	SM	MD	LG	
Logs				DEBRIS COLLECTED ☐ YES ☒ NO
Vegetation				
Trash				
Debris				TYPE <u>0</u>
				#BAGS <u>0</u>

Photographs:

Roll No. _____

Frames _____

Roll # 4, 26-37 - map 1
 Roll # 4, 18-19 - map 1
 Roll # 5, 1-6 - map 1

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	UD	Gr	Br	Bl	Wh	Yl	Or	Dr	Grn	SU	U			M	L
1	20					X	-											X					Gran / Cob / Peb
2	70					X	-											X					Peb / Cob / Gran
							-																
							-																
							-																
							-																

COMMENTS

Priority 1

- Along this entire segment the most important oiling was found at the eastern end (map A) of the shoreline where variable pavement occurred at the upper intertidal zone. Of the 100-m² present, there was approximately 30% coverage.
- Sporadic pooled mousse was along found at several sites in map A, occurring between boulders and cobbles.
- The pits dug at this segment showed no evidence of oil.
- Numerous boulders were overturned to search for oil.

Segment ST/NA 25 Subdivision A Date (mo/day/yr) 4/6/90

Time (24 hr) 8:00 Biologist DANIEL TRAIDER

(A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 60 (3) Cobble 10 (4) Pebble 10 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 30 Low 40 (Low to none found)

(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: 4
 Roll No. 4

Frames 26-37

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:

- Eagle
- Duck

Ecological Considerations: Priority 1

- 2M Spawning Herring 4/1 - 4/5
- 7II Deer Harvesting 8/15 - 9/1
- 5R Seabird Colony 5/1 - 9/1
- 5S Shorebird/Waterfowl conc. 4/25 - 5/15

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/88

Segment ST/ NA 25 Subdivision B. A May B Date (mo/day/yr) 5 April 1990

Time (24 hr) 17:45 Biologist DANIEL RAIDER

A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 60 (3) Cobble 5 (4) Pebble 5 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 25 Moderate 25 Low 15

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

Photographs:

Roll No. 4

Frames 18 + 19

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:

- ducks

Ecological Considerations: Priority I

- 2M Spawning Herring 4/1 - 4/15

II Deer Harvesting 8/15 - 9/1

III Seabird Colony 5/1 - 9/1

- 55 Shorebird/waterfowl conc. 4/25 - 5/15

Segment ST/NA25 Subdivision @ A Map C Date (mo/day/yr) 4/6/1990

Time (24 hr) 15:00 Biologist Daniel Rader

(A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 70 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 25 Low 35

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

Photographs: Roll No. 5

Frames 1-6

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:

- Eagle

Ecological Considerations: Priority I

- 2M Spawning Herring 4/1 - 4/15

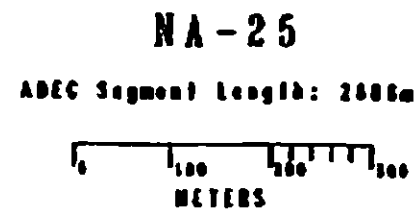
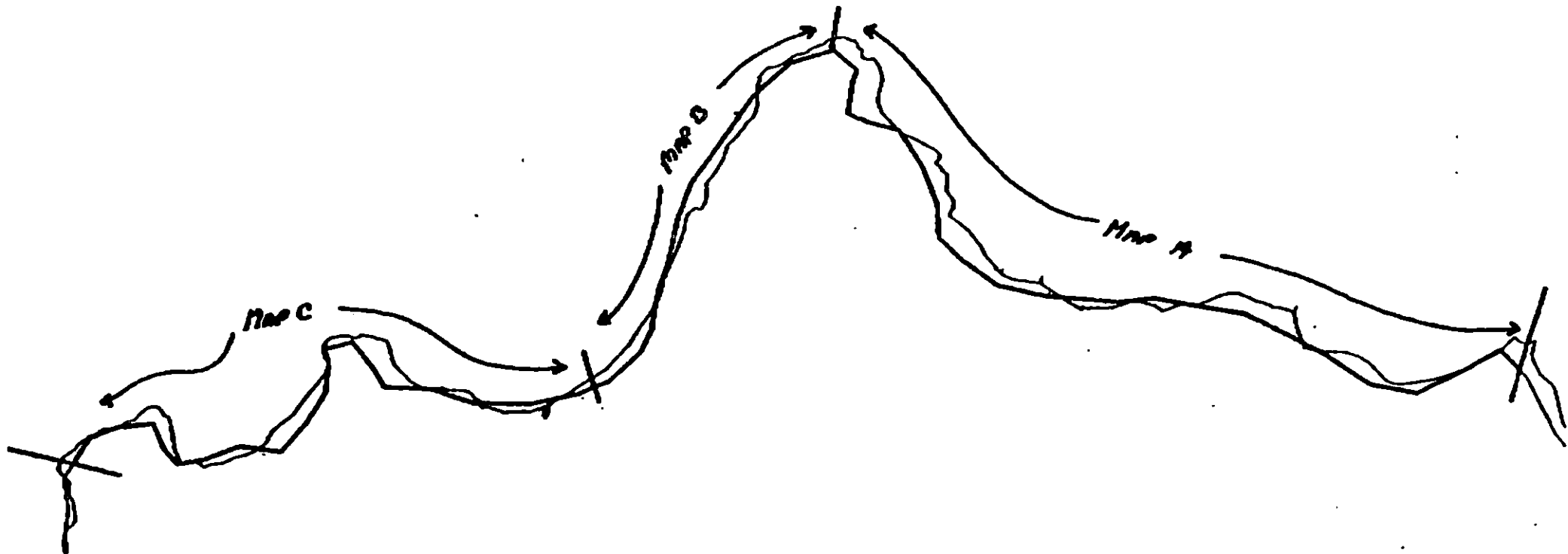
- 7II Deer Harvesting 8/15 - 9/1

- 5R Seabird Colony 5/1 - 9/1

- 5S Shorebird/waterfowl conc. 4/25 - 5/15

NA-25

MAP LOCATIONS FOR NA-25-A



OG F.12(4) L
 SEGMENT ST. 9.25
 SUBDIVISION A
 DATE Apr 15 90

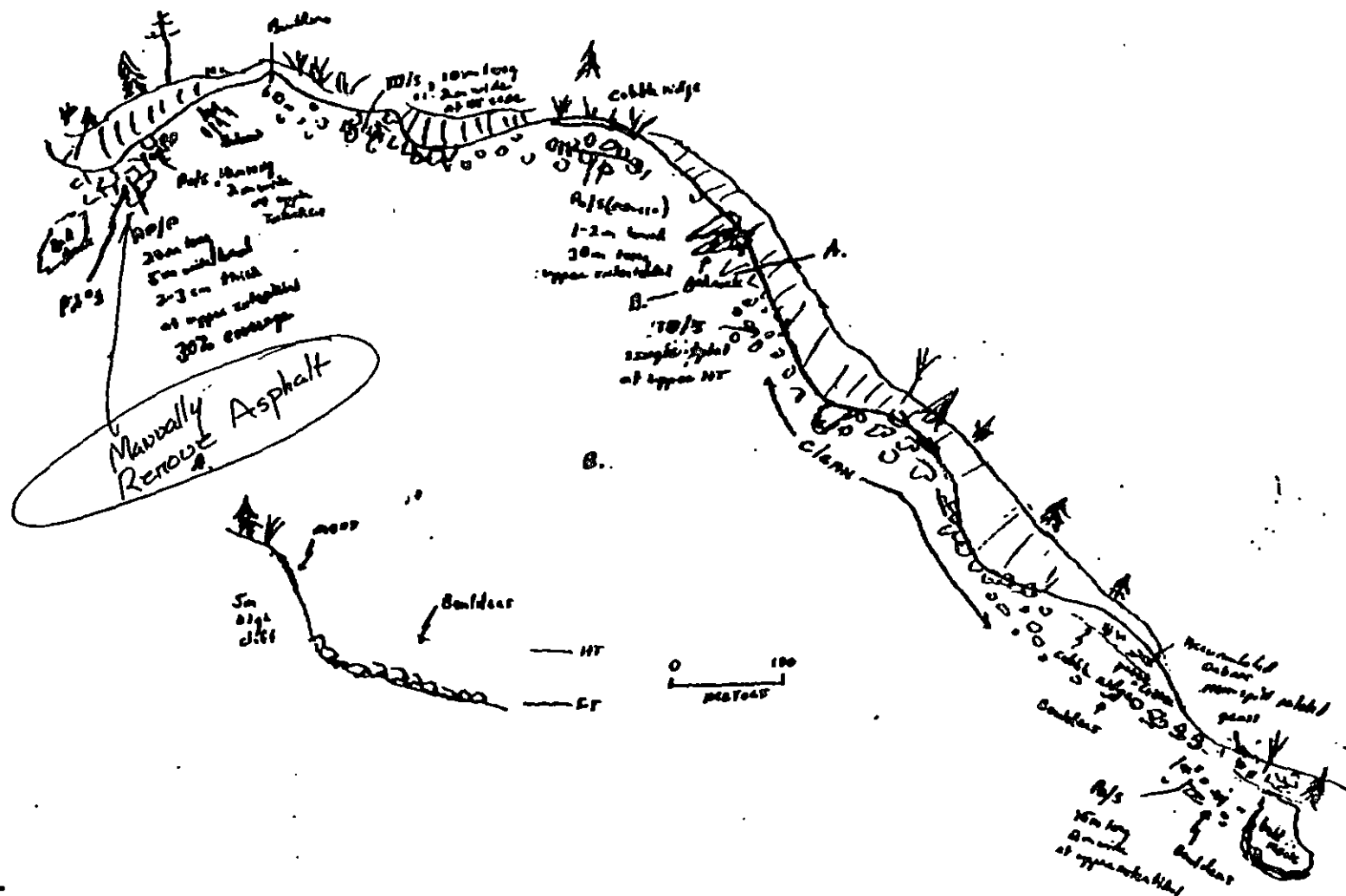
SK H MAP A.

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Segment Endy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/M
- ☐ SSI
- ☐ 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/O
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oil Vegetation
- 1 ●
Photo location, direction, and number



Oil Character Length (m): AP 20 PO 55 CV CT ST MS PT 11 TB FL NO 1464

REVISIONS

00 FA 01R

SEGMENT ST/ MA-25

SUBDIVISION A

DATE Apr 16 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HYAL/WL
- ☐ SBL
- ☐ 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

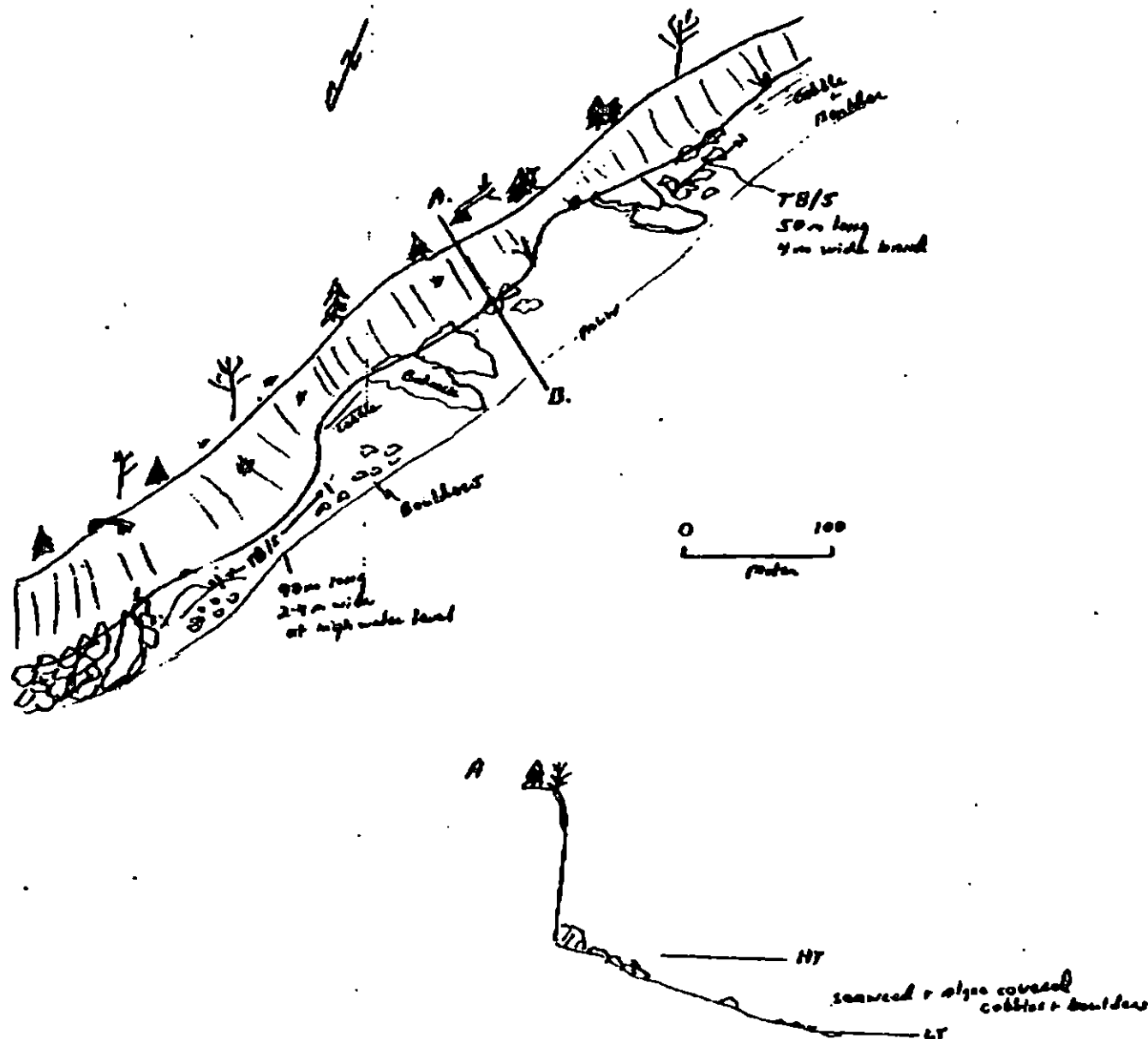
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\bullet \rightarrow$
Oiled Vegetation
- $\bullet \rightarrow$
Photo location, direction, and number

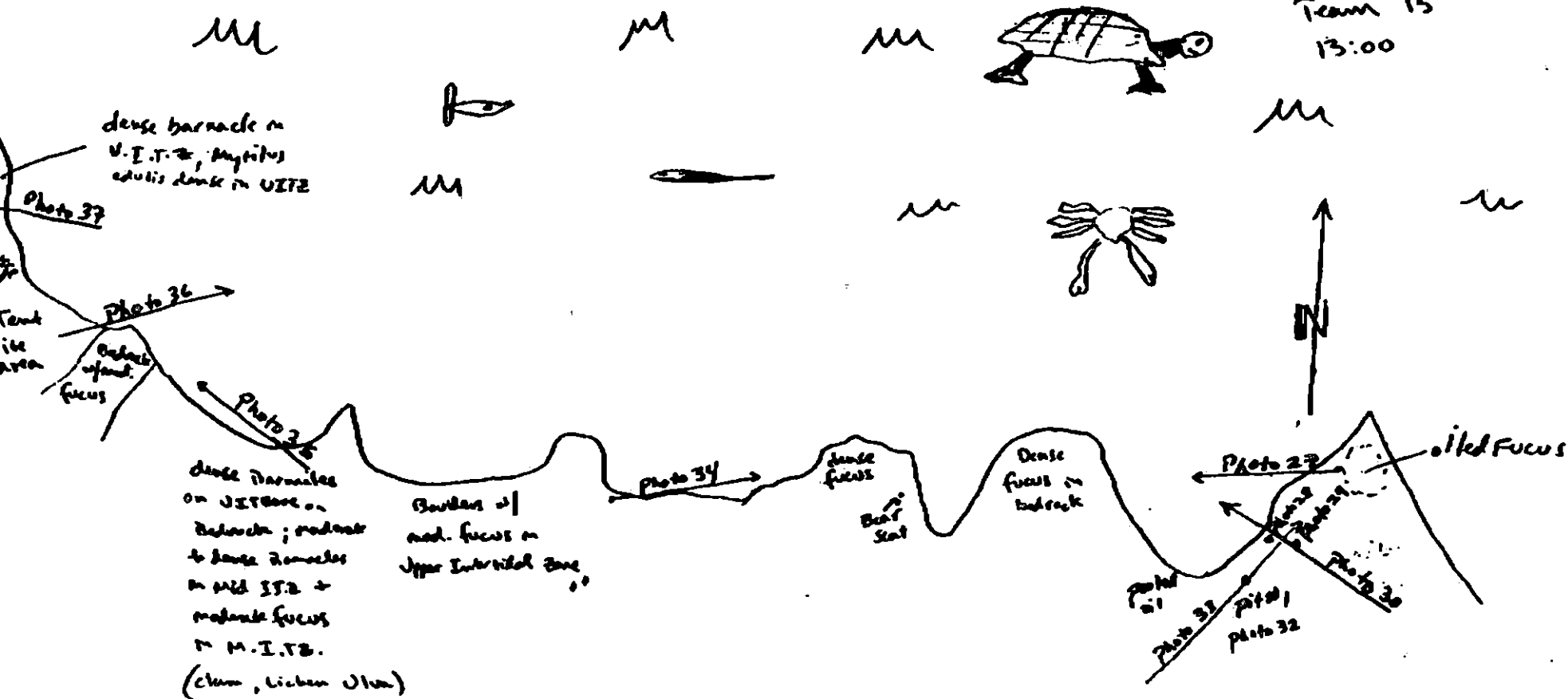
SKETCH MAP B.



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT 140 TB _____ FL _____ NO 590

REVISED 08/94

NA 25
5 April, 1990
Team 15
13:00

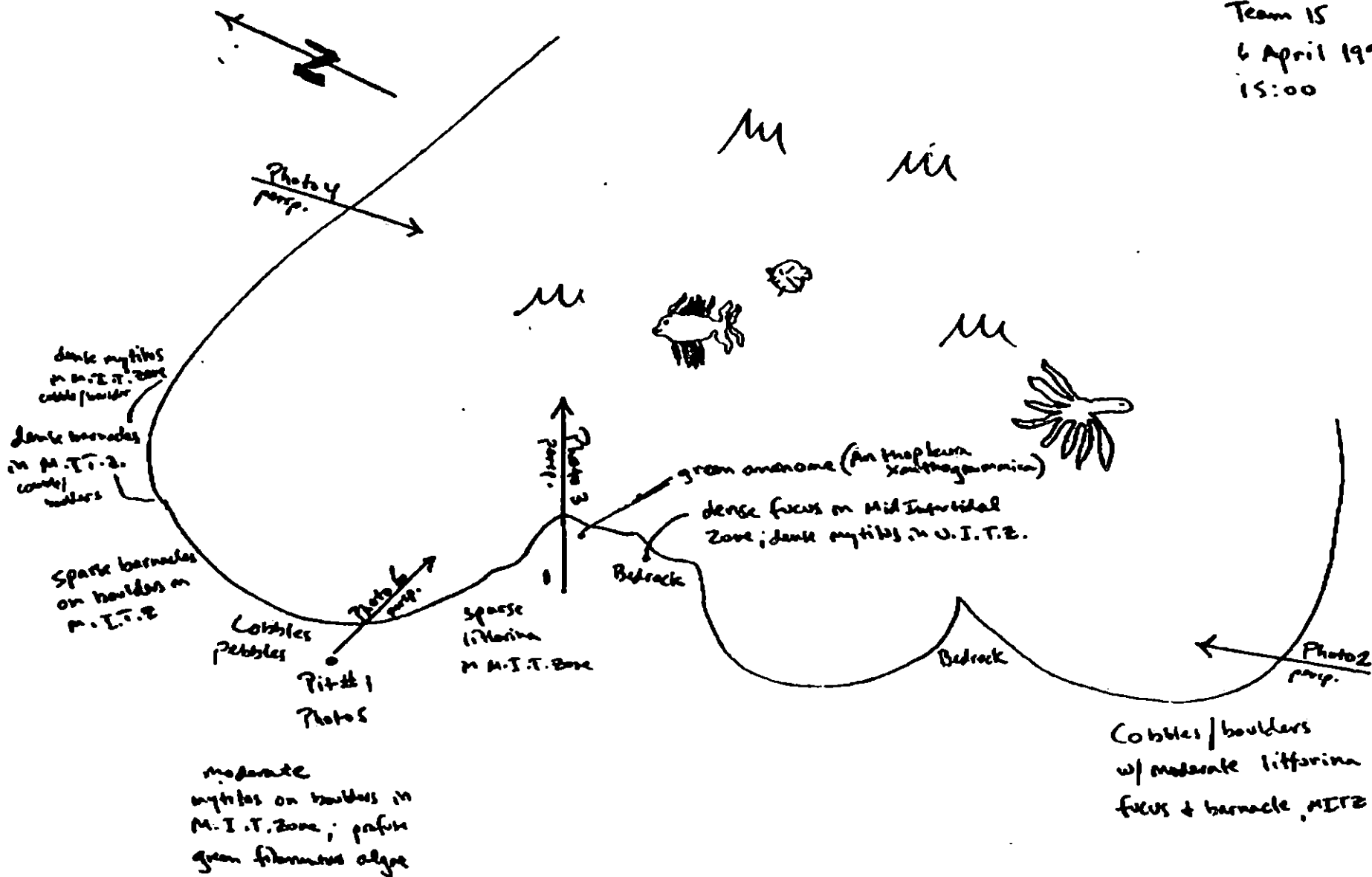


NAZSC

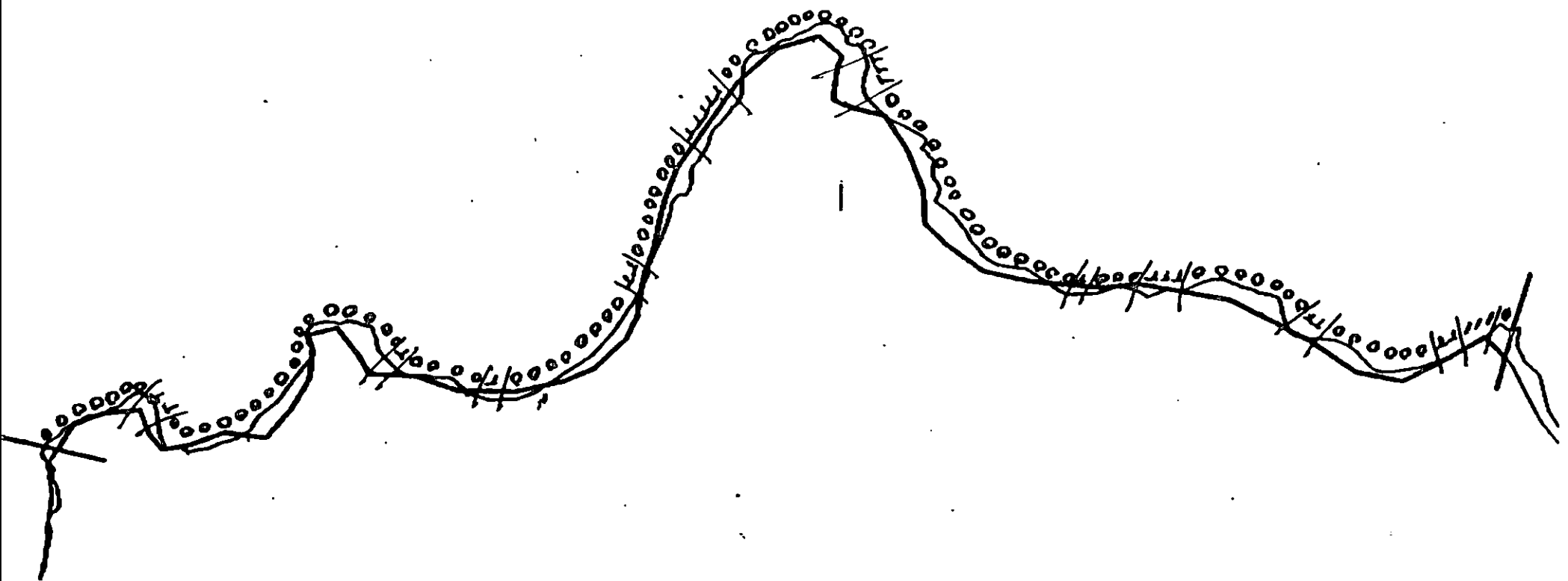
Team 15

6 April 1990

15:00



NA-25



XXXX Wide	NA-25	Map Key: PWS-492a
//// Medium		Name: <u>D. F. F. F. F.</u>
---- Narrow	ABEC Segment Length: 2606m	Date: <u>6 Apr 1970</u>
TTTT Very Light		Date Entered:
0000 No Oil	 METERS	

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-25 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to manual pickup and tarmat removal.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup and tarmat removal within 400m of active nest.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.

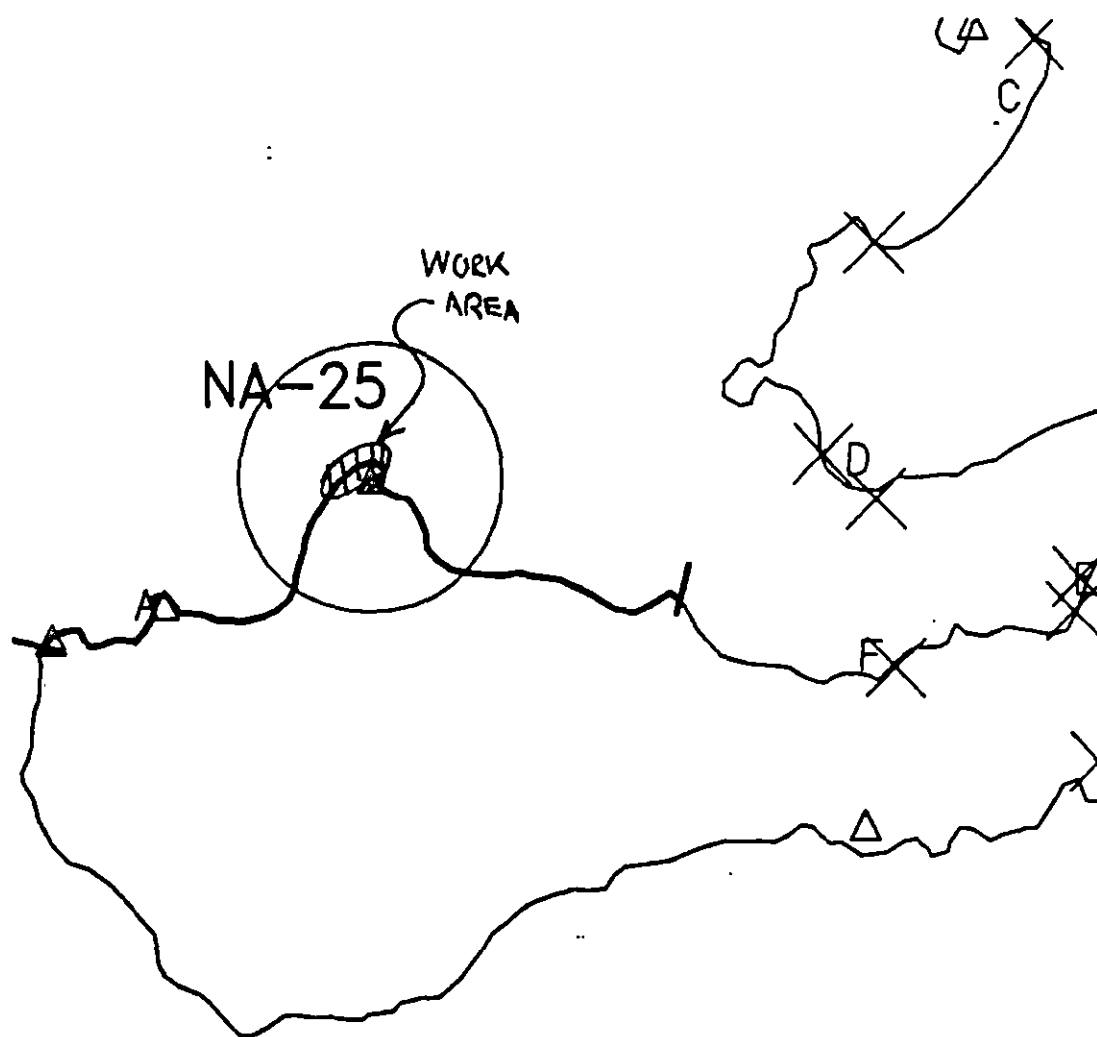
OTHER ECOLOGICAL CONSIDERATIONS

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

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

FOSC h y l Date 6-10-90

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



Exxon Company, USA
Map Key: PWS-NA-25



ECOLOGY MAP
SEGMENT NA-25
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ NA-26 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12950

- 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-3 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)
- 6V Recreation: Anchorages (6/1 to 9/15)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

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. [Signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 342 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Remainder of segment is scheduled for Phase II assessment.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER Art Weiner
EXXON ANDY [Signature]
NOAA Bur [Signature]
USCG KENNETH [Signature]

FOSC: [Signature] L DATE: 4-26-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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
3O, 3Q

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

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

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

5R

Seabird colony (5/1 to 9/1)

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

5S

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

Restrict all activity to essential minimum, especially air traffic.

5T

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

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

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

6U

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

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

7HH

Finfish harvesting

7II

Deer harvesting (8/15 to 2/28)

7JJ

Invertebrate harvesting

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 NA 26 SUBDIVISION: A DATE 4-3-90

USCG

NAME Capt J. Mc Martin SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

1. Only several weathered splashes were detected
2. No human use
3. No clean-up warranted.

ADEC

NAME Greg Winter SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

OILING TOO SPARSE TO WARRANT TREATMENT.

LAND MANAGER

NAME Mike Bennett SIGNATURE Mike Bennett

ADNR

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Priority 1 segment with mixture of use. Oiling was well weathered and consisted of 3 tar splats. Minimal human use - very aesthetically pleasing bay with low lying marsh. Noted Dams & Moore test site # 12 on segment.

SHORELINE OILING SUMMARY

REVISION NO. 02/02/90

OG D. F. F. Gerald USCG J. McMahon SEGMENT ST/ NA-26
 BIO D. Raider LAND REP B. Bennett SUBDIVISION A
 EXXON S. Neuman ADEC G. Winter TIME 17:45 to 18:20
 TEAM NO.: 15 TIDE LEVEL: 150 to 210 cm DATE April 2 1990
 EST. SUBDIVISION LENGTH: 460 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: southeast to west
 SURFACE SEDIMENTS: R 10 % B 10 % C 25 % P 40 % G 10 % S 5 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1 m NO 459 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	10	15	10	15	10	15	10	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 cm

PATTIES / TARBALLS None BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☐ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 3

Frames 20-28

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	HO			10	15	10	15	10	SU	U	M	U		
1	40					X	.									X			Grass / Peb / Sand / Cob.
1	30					X	.									X			Peb / Grass / Sand / Cob
							.												
							.												
							.												
							.												

COMMENTS Priority 1

This segment is free of oil with the exception of three tan splats (diam. $\approx$ 1-3cm) along the rubble at the eastern side of the cove.

SKETCH MAP

DATE Jan 2 80

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Endry
- ___ Of Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HMLAYVL
- ___ SSS
- ___ Profile Location(s)
- ___ Profile(s)
- ___ PR Location(s)
- ___ Photo Location(s)

LEGEND

Fig. - No Subsurface Oil

2 ▲
Pg - Subsurface CR

CT/C
Confidential Distribution

CT/B
Broken Distribution

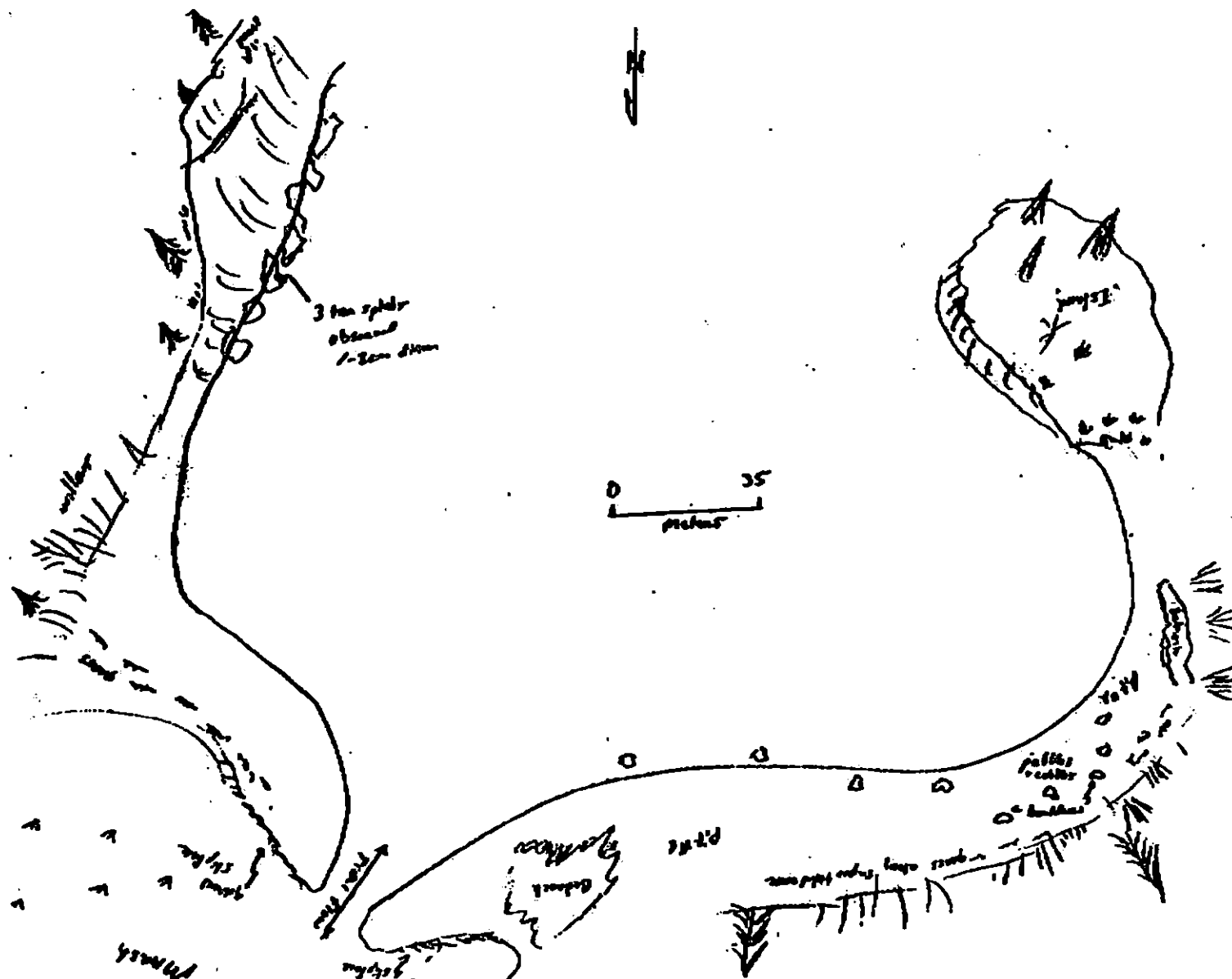
[CT/P]
Patent Distribution

CT/S
Splashed Distribution

Cold Vegetation

1 02

Photo location, direction,
and number



Oil Character Length (in): AP _____ PO _____ CV _____ CT 1m ST 1 MS _____ PT _____ TB _____ FL _____ NO 459

ADEC 4

PRELIMINARY CONCLUSIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 12/22/90

Segment ST/NA 26 Subdivision A Date (mo/day/yr) 4/2/90Time (24 hr) 17:45 Biologist DANIEL RAIDER

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 10 (3) Cobble 25 (4) Pebble 50 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 20 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. 3Frames 20-28

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:

- many Mytilus shells (opened) on mid Intertidal zone and Upper Intertidal zone

Ecological Considerations: Priority 1

WATER	SW	WT	WT
WATER	SW	WT	WT
WATER	SW	WT	WT
WATER	SW	WT	WT
WATER	SW	WT	WT
WATER	SW	WT	WT

 Pests: Active Bald Eagles Nest
 Deer Harpings
 Herring spawning
 Seabird colony
 Deer Habitat

Positive I.D.

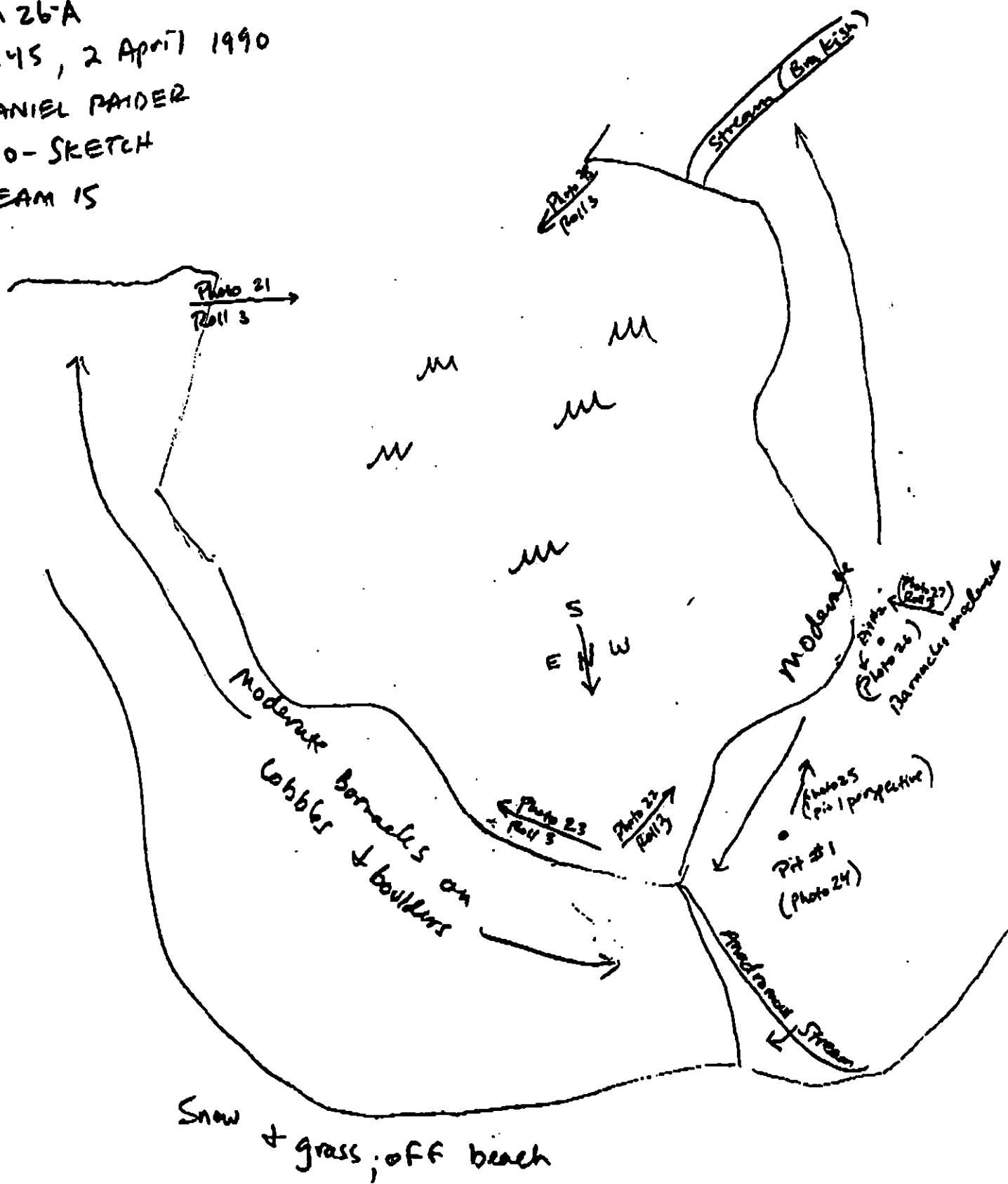
NA 26-A

17:45, 2 April 1990

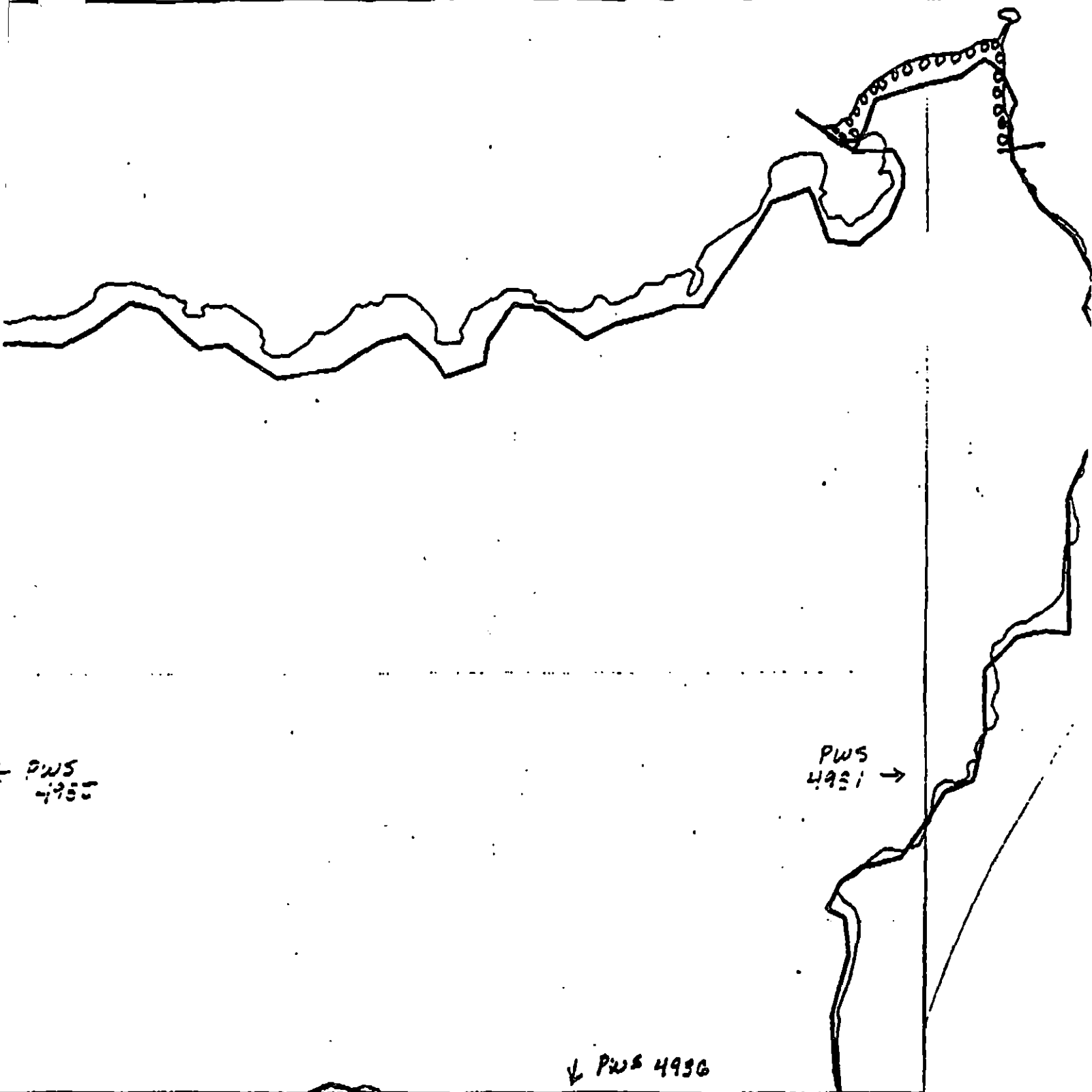
DANIEL PAIDER

BIO-SKETCH

TEAM 15



NA-26-A



X v v X Wide
 / / Medium
 - - - Narrow
 T T T T Very Light
 0 0 0 0 No Oil

NA-26

ADEC Segment Length: 12986m



Map Key: PWS-495k
 Name: Fitzgerald
 Date: 2 Apr 1990
 Date Entered:

REC-4

SHORELINE EVALUATION

SEGMENT ST/ NA-26 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 222-40-12950.

- 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-3 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)
- 6V Recreation: Anchorages (6/1 to 9/15)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. One bald eagle nest in Subdivision B. See ecology map. Only one anadromous stream catalogued by ADF&G in this segment, but it is considerably more than 100m from work area.

SHPO SIGNATURE: Rechel Jan Oan DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 776 m: No Oil 4026 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>X</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)

+ TARBALLS / TARPATTIES

COMMENTS: Recommend manual removal of pooled oil and bioremediation as indicated on attached sketch map. Work should be conducted after 6/15 due to herring constraint but with approval of USFWS regarding eagle nests.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90
ADEC ART WENGER
EXXON ANDY TELL
NOAA Joseph Talbot
USCG KENNETH KEANE
FOSC: W L DATE: 6-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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 (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/ NA 26 SUBDIVISION: B DATE 4/5/90

USCG

NAME W02 J. McNamee SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

1. Oil stains & oil coverings are weathered - ask people no further harm.
2. No human use area.
3. Any treatment of area would not effectively be useful. (more harm than good).

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

CONFINE TREATMENT TO 40 METER BAND OF POOLED OIL MIXED W/ FINE GRAINED SEDIMENT SHOWN ON MAP E. THIS OIL SHOULD BE MANUALLY REMOVED.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]

ADNR

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Limited oiling throughout the segment. Existing oil was primarily weathered with no stains present. Segment contains some campsite areas that are not impacted - appears to be low human use. Remainder of use is bald eagle nesting, deer harvesting, spawning & seasonal colonies. Several shorebirds & marine mammals were present in the area. Believe that any treatment would cause more harm than good.

SHORELINE OILING SUMMARY

REVISION NO. 00/00/90

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ NA-26
 BIO D. RAICES LAND REP M. Bennett SUBDIVISION 8
 EXXON S. Newman ADEC G. Winter TIME 13:20 to 17:20
 TEAM NO.: 515 TIDE LEVEL: 185 to 30 DATE Apr 15 1990
 EST. SUBDIVISION LENGTH: 3120 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Northeast to Southwest
 SURFACE SEDIMENTS: R 25 % B 30 % C 25 % P 10 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 726 m NO 2394 m

SURFACE OIL

NONE

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

PATTIES/TARBALLS < 1/4 bag BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	S	E	W	SP	BP	GP	WP	BP	SU	SR	SE	SW
ASPHALT PAVEMENT													
POOLED			X	X				X		X			
COVER													
COAT			X	X	X					X			
STAIN													
MOUSSE													
PATTIES				X	X					X			
TARBALLS				X	X					X			
FILM													
NO OIL										X	X	X	

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. #3

Frames 29-36

#4
 1-17

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		BO	WO	SP	BP	GP	WP	BP	SU	SR	SE	SW		
1	30					X	-								X					Rel. / Cobble
2	35					X	-								X					Rel. / Gravel / Cob / Sand

COMMENTS

- Priority 1
- Most of this segment was free of oil and locations that oil was present, it consisted primarily of the splot at the upper intertidal zone
 - One exception to this trend was a region w/ Map E where pooled oil (mousse) was found below boulders and the cracks of bedrock

YW 4/11/90

SHORELINE ECOLOGICAL SUMMARY

4/5/90 REVISION: 02/23/90

Segment ST/ NA 26 Subdivision B Date (mo/day/yr) April 5, 1990
 Time (24 hr) 13:00 Biologist DANIEL TANDER

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 30 (3) Cobble 25 (4) Pebble 15 (5) Sand 5 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 25 Moderate 25 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. 3

Frames 29-36

BARNACLES

+ Roll No. 4 Frames 1-17

Dense			Moderate			X Sparse			X 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:

- ducks
- otter
- Seal
- Shorebirds
- Eagles (3)

Ecological Considerations: Priority 1

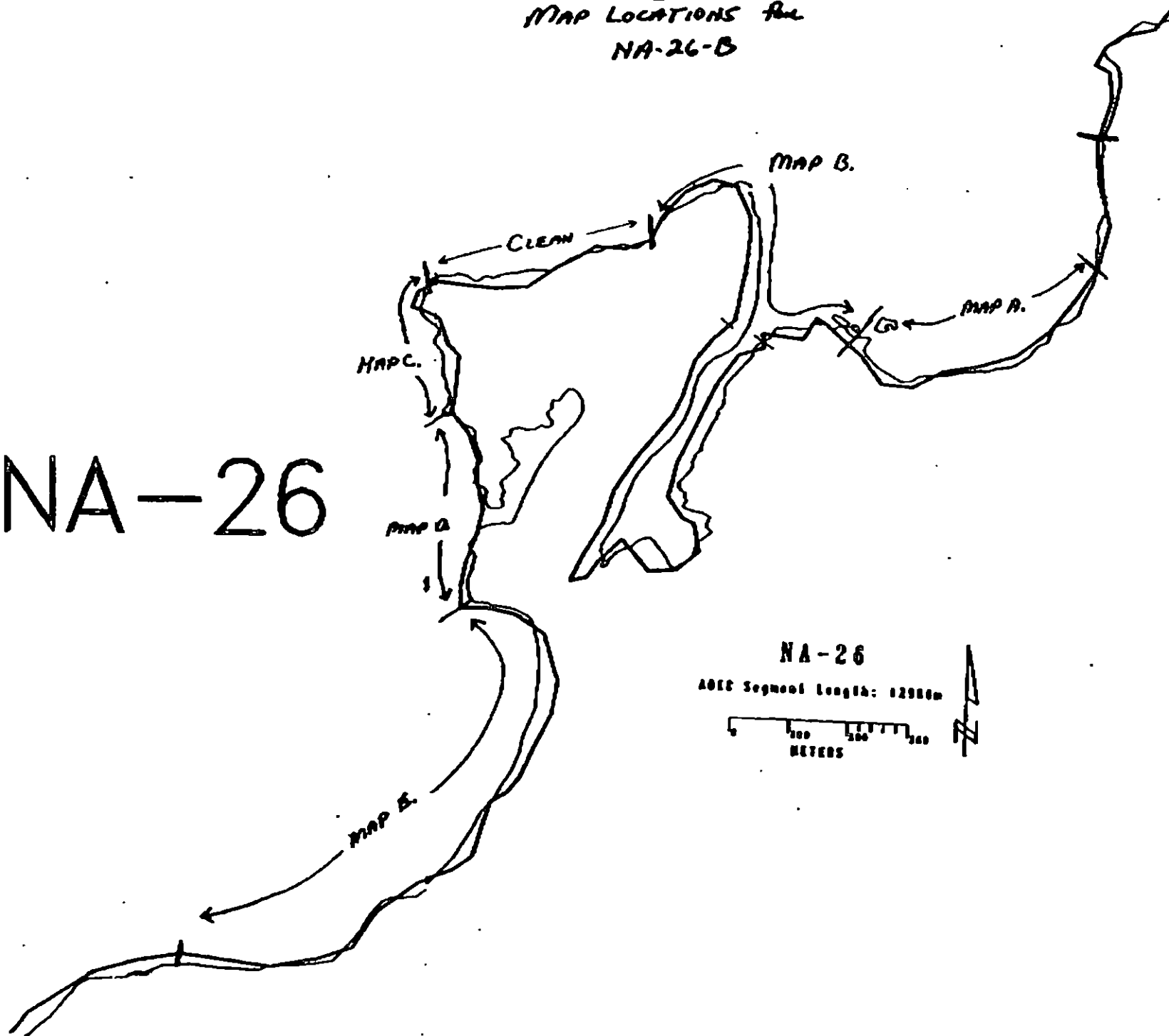
Positive 3.0.

- 6 U; V - Tent Sites, Anchorages
- ST-3 - Bald Eagle Nests, Active
- 7II - Deer Harvesting
- 2M - Hermit Spawning
- 5R - Seabird Colony
- QFF - Deer Habitat

4/1 - 9/15
 3/1 - 6/1 → 3 eagles seen
 8/15 - 3/1
 4/1 - 6/15
 5/1 - 7/1 → seen flying off-chore
 8/1 - 6/1

MAP LOCATIONS FOR
NA-26-B

NA-26



ADEE GW

SKETCH MAP A.

SUBDIVISION 8

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/VOL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ FR Location(s)
- ☐ Photo Location(s)

LEGEND

1

PR - No Subsurface Oil

2A

FIG - Subsurface Oil

CT/C

Continued Distribution

CT/O

Broken Distribution

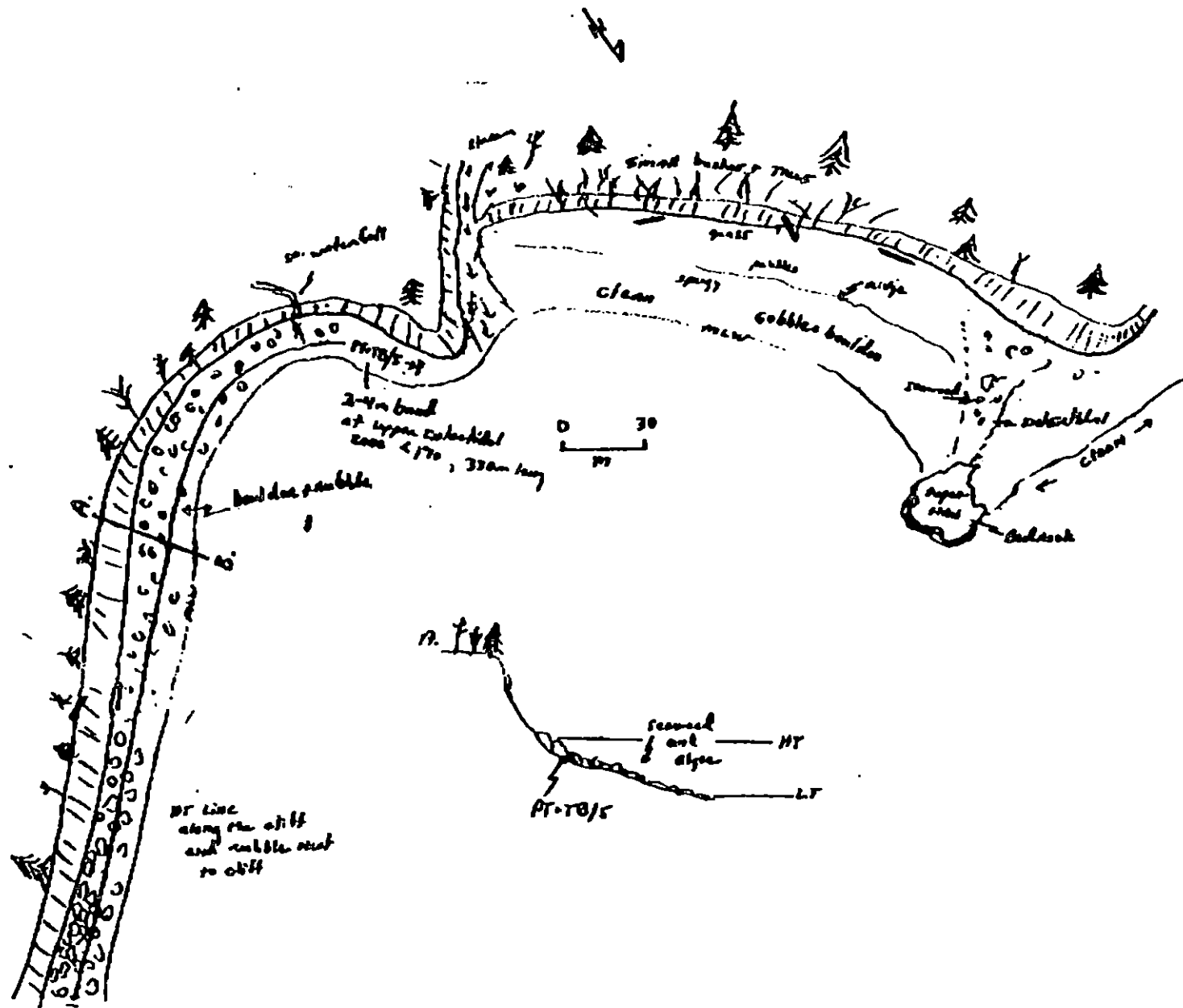
CT/P

Patchy Distribution

CT/3

Splined Distribution

Cold Vegetation

1. **Introduction****Photo location, director,
and number**

Oil Character Length (in): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 80 TB 250 FL 0 NO 180

ADIC GJ
REDACTED

REF ID: A57500

SKETCH MAP B.

DATE Apr 1 5, 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Bag/Tube Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LML
- ☐ SOL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ FR Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ**
Fig - No Subsurface Oil

- 2 ▲**
Pt - Subsurface CH

CT/C

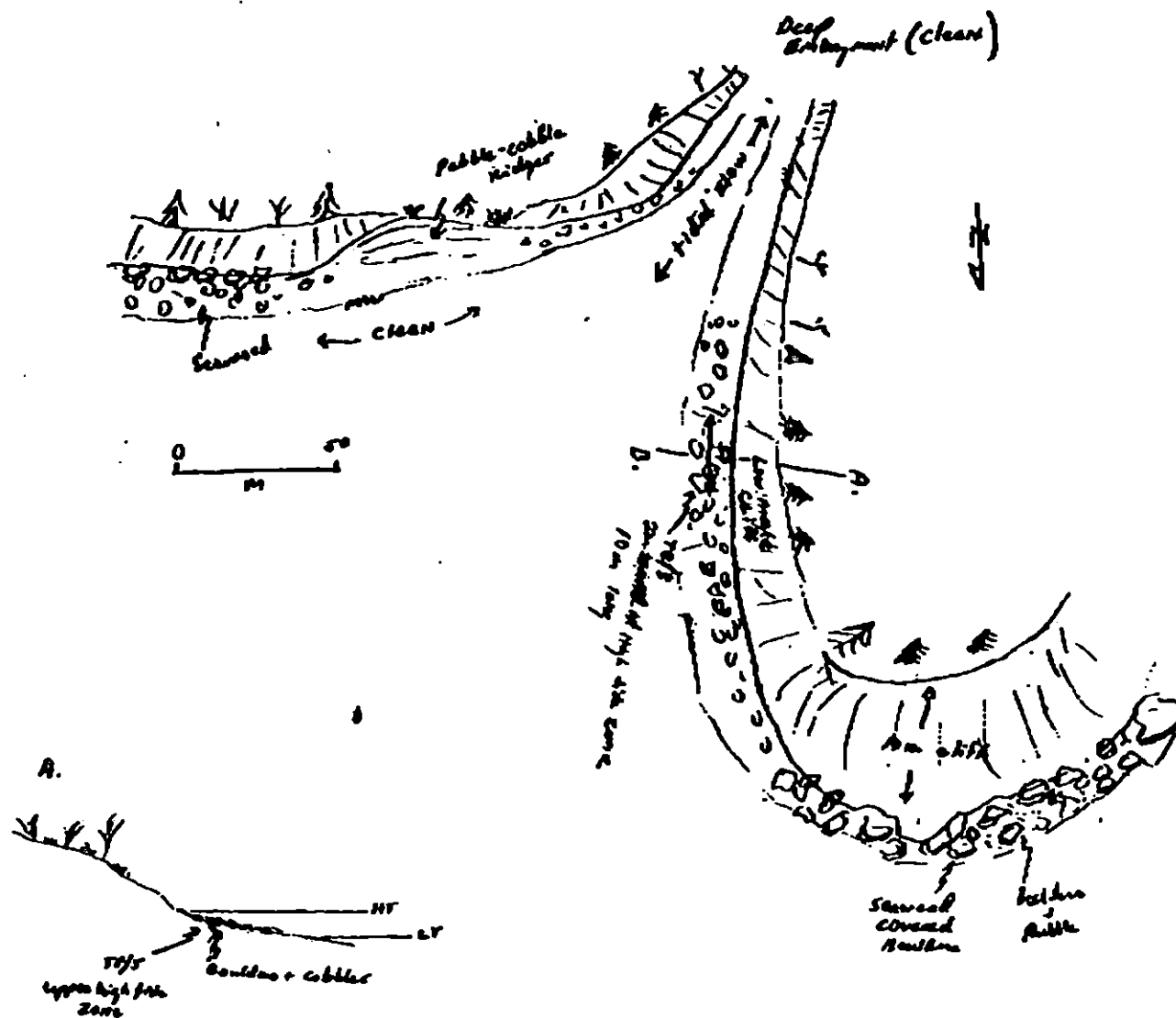
CT/D
Random Distribution

Patchy Distribution

Scheduled Classification

Cited Vegetation

- Photo location, direction,
and number



Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 10 FL 0 NO 720

ADSC 6W

OG Ft. ...

SKETCH MAP C.

SEGMENT ST/ NA-26

SUBDIVISION B

DATE Apr 15 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LM
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

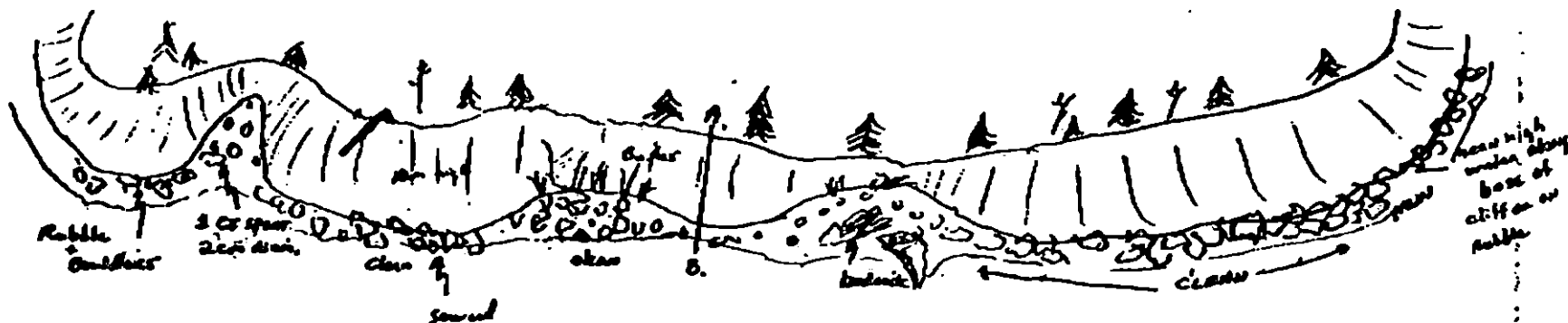
CT/S

Spotted Distribution

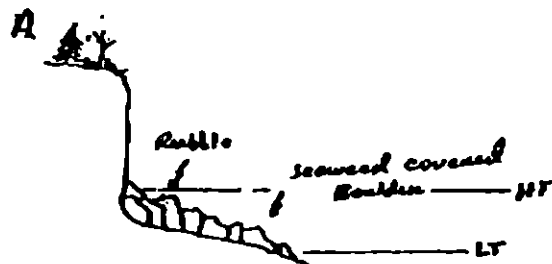
Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



0 70
m



ADAC 6W

Oil Character Length (m): AP $\circ$ PO $\circ$ CV $\circ$ CT $\frac{1}{m}$ ST $\circ$ MS $\circ$ PT $\circ$ TB $\circ$ FL $\circ$ NO 299

71

ECOLOGY MAP

NA026

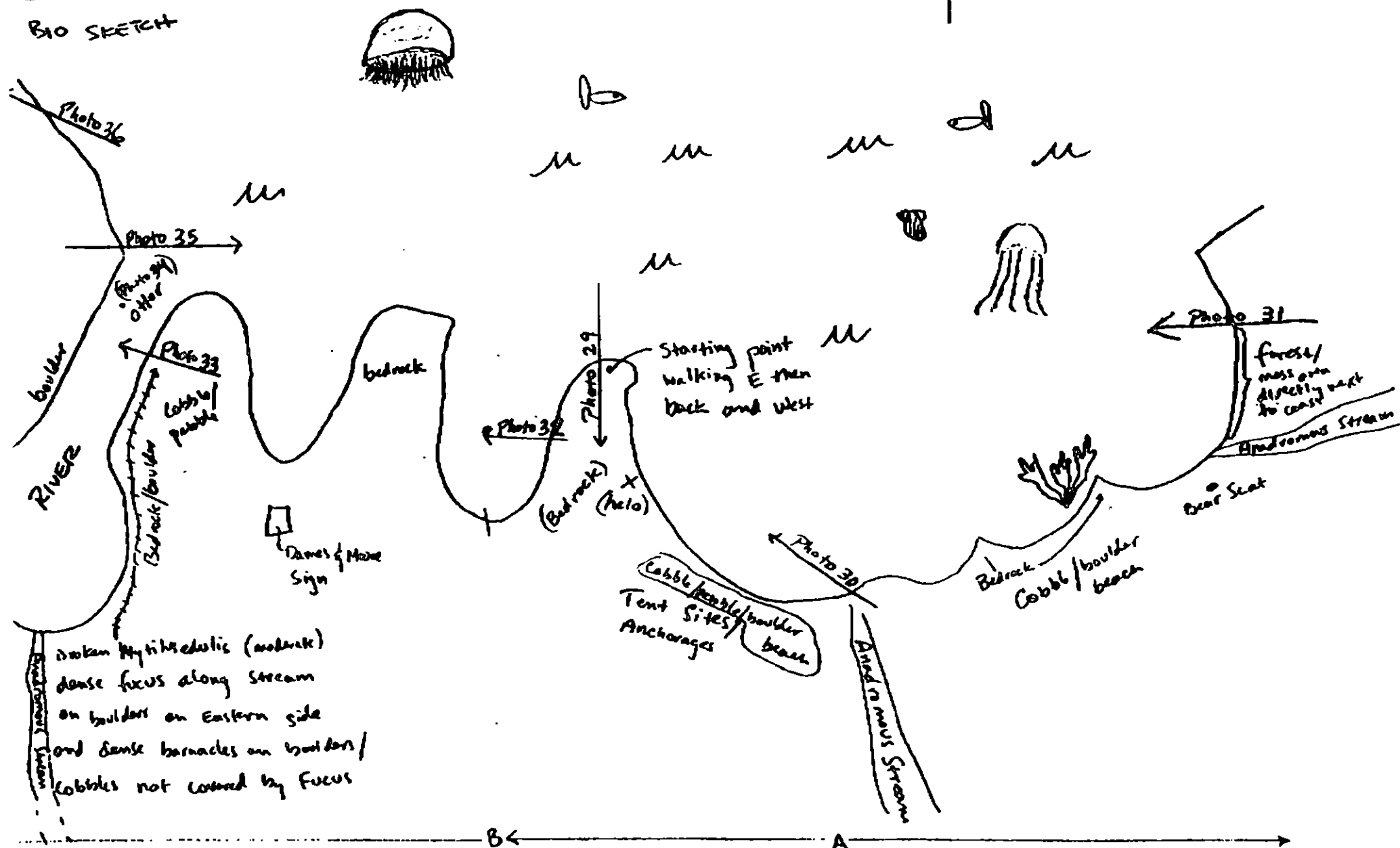
500.0

SUBDIVISION B

Anadromous stream
222-40-12950

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

NA 26 B
 5 APRIL, 1990
 13:00 - 17:35
 DANIEL RAIDER
 BIO SKETCH



NA 26 B
 5 APRIL, 1990
 13:00 - 17:35
 DANIEL RAIDER
 BIO SKETCH

TO

SUN TERN P. 25

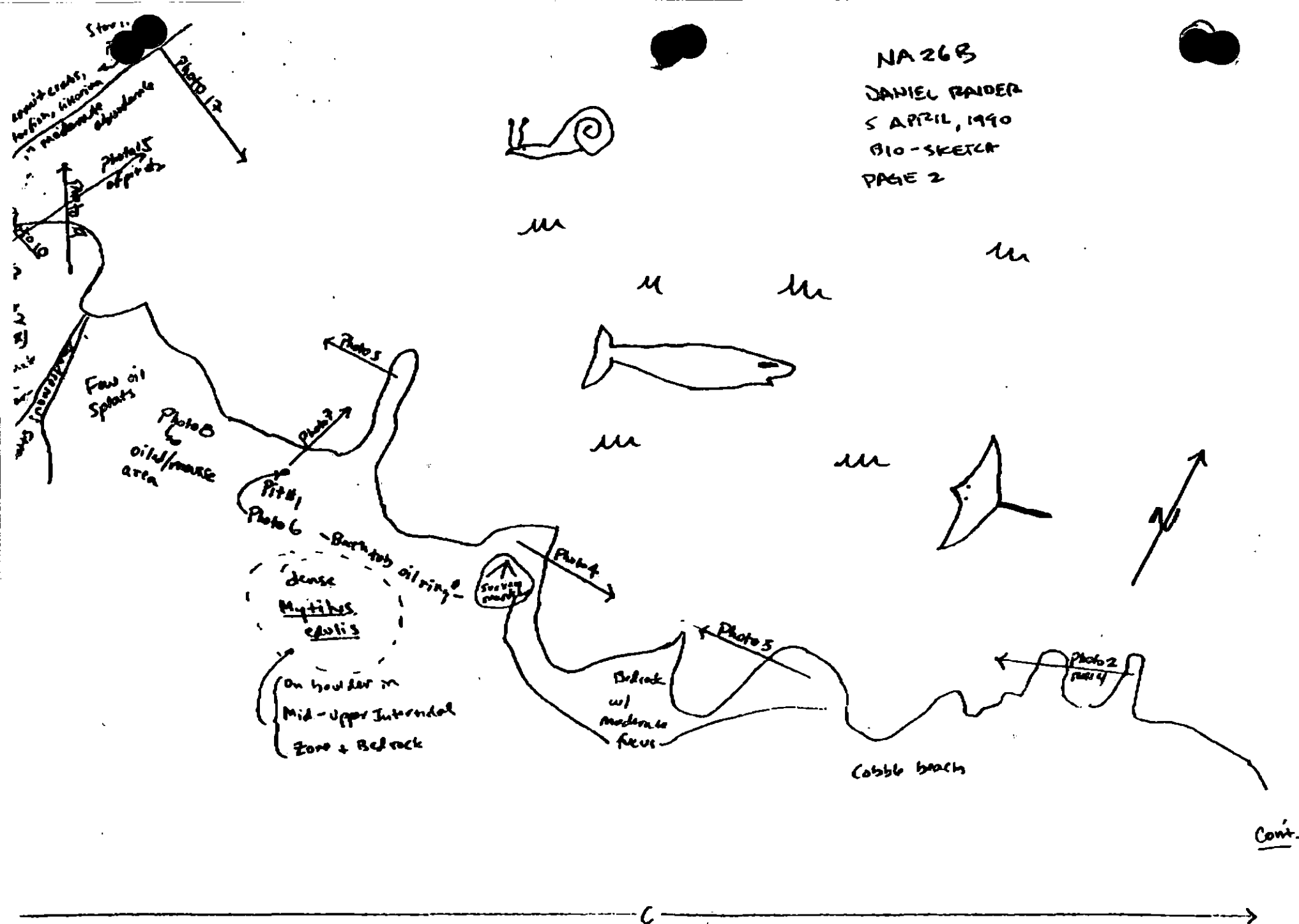
NA 26 B

DANIEL RAIDER

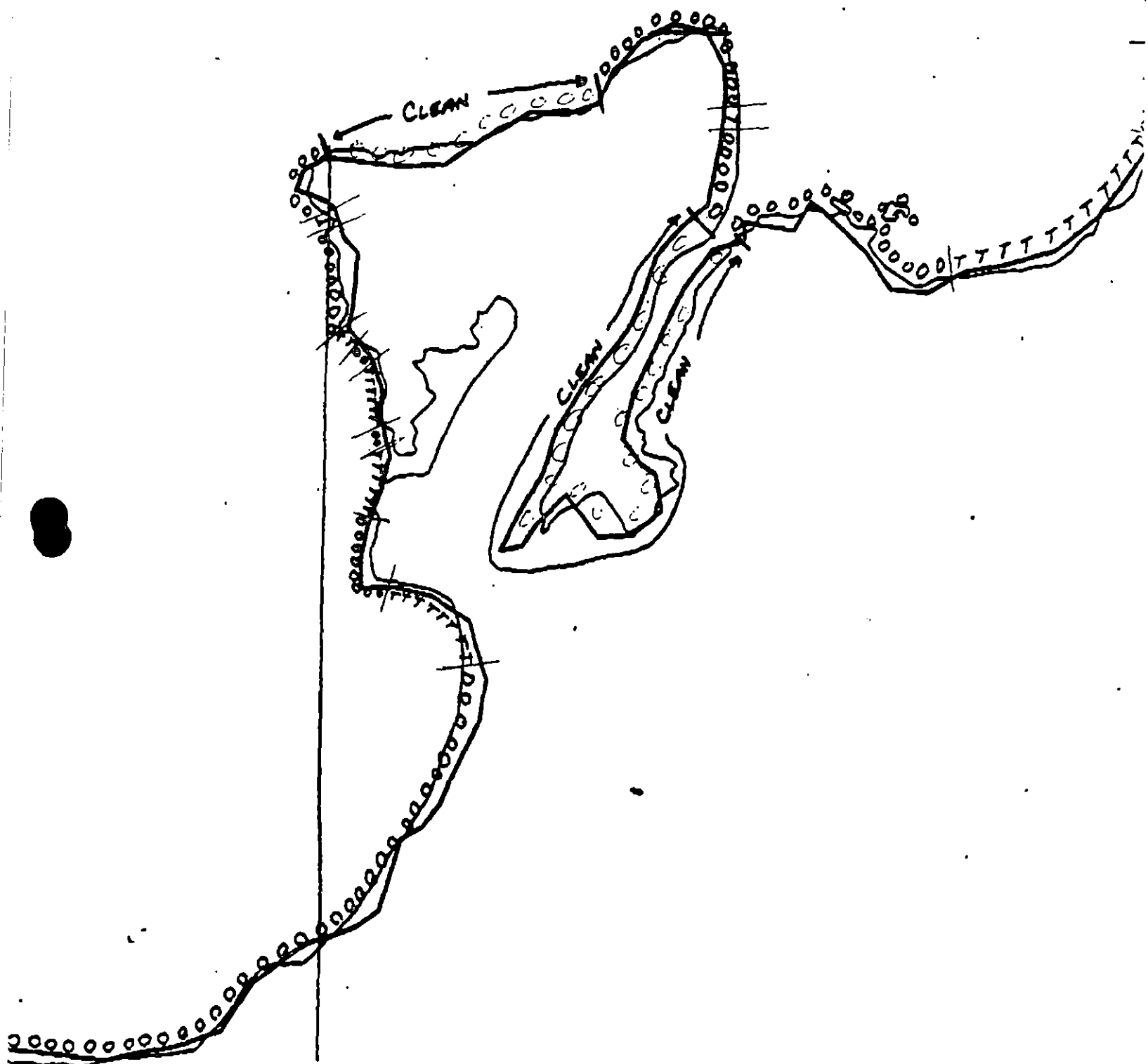
5 APRIL, 1990

BIO-SKETCH

PAGE 2



NA-26-B



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

NA-26

ADEC Segment Length: 12986m



Map Key: PWS-493b

Name: FILE-NADate: Apr 5 1990

Date Entered:

DEC 62

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-26 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup

OPEN

Bioremediation and Other Approved Treatment
Less Than 100m From Stream

WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)

Bioremediation and Other Approved Treatment
More Than 100m From Stream

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (222-40-12950) is in Subdivision B. This subdivision is closed to bioremediation and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and other approved treatment more than 100m from stream. No constraint to manual pickup.

2M Herring Spawning

NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.

5R Seabird Colony

NO CONSTRAINT. Work site is more than 800m from seabird colony.

5T Bald Eagle Nest

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

**7II Subsistence:
Deer Harvesting**

Closed to bioremediation and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict air traffic and beach disturbance to essential minimum after 8/15. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 222-40-12950)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

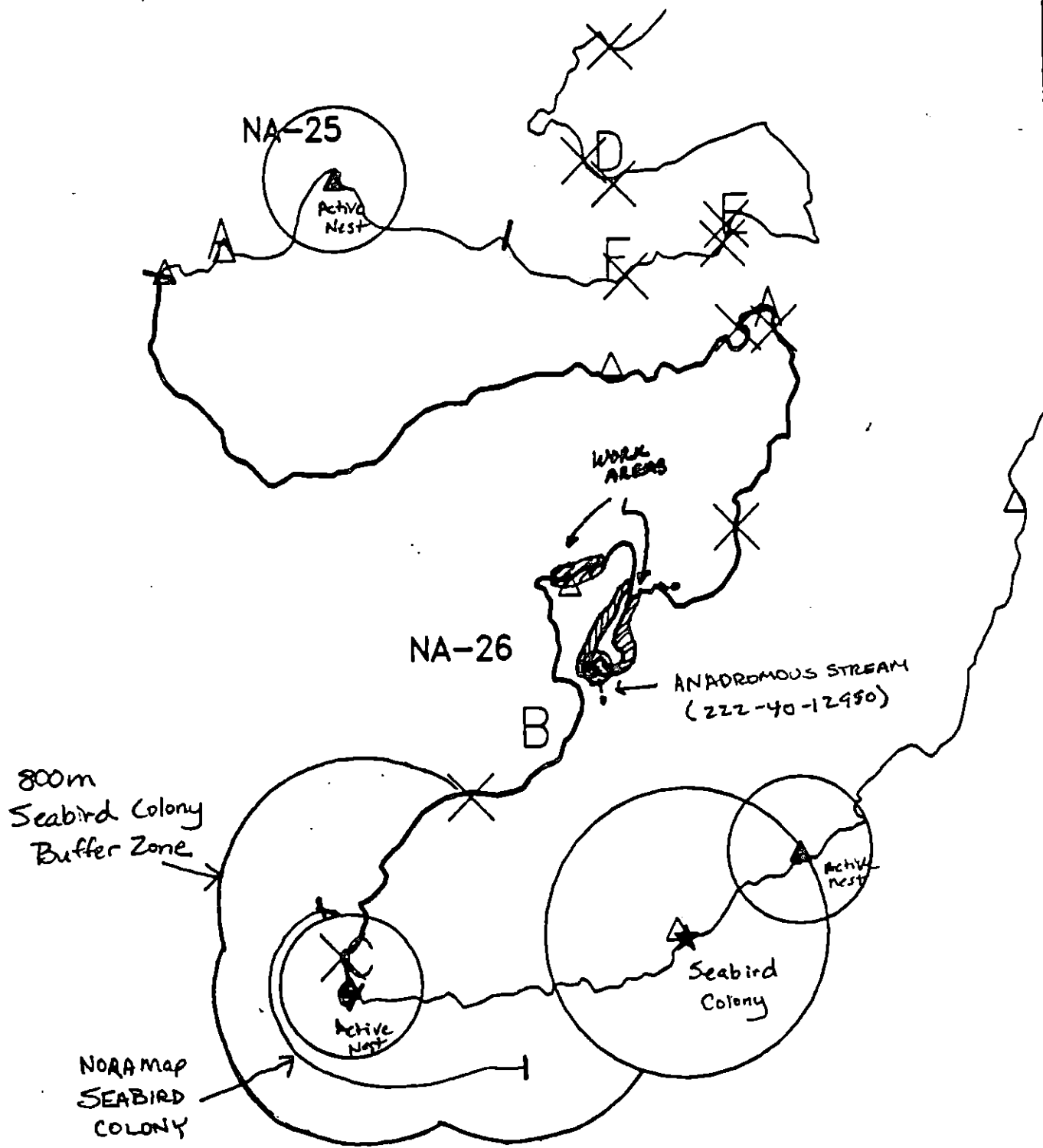
Date

6/16/90

Prepared by

Date

6/14/90



Exxon Company, USA
Map Key: PWS-NA-26
1:250,000

ECOLOGY MAP SEGMENT NA-26 SUBDIVISION B (2 of 2)

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

1 inch = 2735 feet

SHORELINE EVALUATION

SEGMENT ST/ NA-27 SUBDIVISION A (1 OF 1) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5R Seabird colony (5/1 to 9/1)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
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 J. Hume* DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 76 m: V.Light 30 m: No Oil 826 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: PICKUP TARMAT ON INDICATED ON SKETCH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Paul Wessett
USCG G.A. BEILER

FOSC: *W L* DATE: 4-27-90

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 unhoiled 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-H Finfish harvesting
7I Deer harvesting (8/15 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 / NA-27-A SUBDIVISION: A DATE 4/8/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

733/USCGR

I RECOMMEND NO TREATMENT FOR THIS SUBDIVISION. DEGREE OF OIL WAS VERY LIGHT THROUGHOUT SUBDIV, CONSISTING OF ONLY PATCHY, VERY LIGHT STAIN & COAT IN SEVERAL SMALL AREAS. THE EXTREMELY EXPOSED NATURE OF THIS SHORELINE TO HIGH ENERGY WAVE ACTION WILL RESULT IN NATURAL CLEAN AND DISPERSAL OF REMAINING OIL. CLEAN-UP RESOURCES CAN BE BETTER UTILIZED IN OTHER LOCATIONS OF HIGHER OIL IMPACT.

(Handwritten initials)

ADEC NAME Petr / Montesano SIGNATURE Petr / Montesano

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED > N/A

COMMENTS reconsider appropriate treatments after Supratidal snow has melted. The soft asphalt patch should be removed if working in vicinity. The 2x20 oiled area (see map) is trapped in interlocking boulders and is not recoverable.

LAND MANAGER

NAME Jaretha Pritchard SIGNATURE Jaretha Pritchard

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

This is a high energy beach. The sporadic coal found on the boulder slope will probably be washed away during the next stormy season. This area does not have any recreational value and does not provide easy access to the uplands.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ NA-22
 BIO J. BARRY LAND REP J. FLITCHARD (DNR) SUBDIVISION A (1 of 1)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 14:15 to 16:00
 TEAM NO.: 6 TIDE LEVEL: +5.5 to +2 DATE 04/1/95 190
 EST. SUBDIVISION LENGTH: 1250 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 35 % B 40 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 45 % Hang 40 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 95 m VL 25 m NO 1130

SURFACE OIL

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

PAVEMENT: H F (S) 30cm sq. ft by 10

PATTIES / TARBALLS 0 BAK

NEAR SHORE SHEEN? (NO) BR RW SL T

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECT ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. NONE

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		NO	DC	W	WN	N	NE	W	WN	U	U		
1	12	X					0-10		X				X			X			P/G (30cm sq. soft asphalt pavement)

COMMENTS SUBDIVISION IS VERY HIGH WAVE EXPOSURE SHORELINE CONSISTING OF A 60m LONG COBBLE BEACH AT THE N. END WHICH IS UNOILED, FOLLOWED BY 100m HANG BOULDER SLOPE AND 100m VERT. ROCK-ALSO UNOILED. A LONG C/P/B BEACH IN THE CENTER HAS A 25m LONG BOULDER AREA IN THE CENTER WITH A VL PATCHY STAIN ACROSS THE UITSZ SURFACE. THE S'ma 75m OF THE BEACH IS B/C WITH A BROKEN STAIN 3m WIDE ACROSS UITSZ SURFACE. SUBDIVISION ENDS WITH 500m LONG HANG BOULDER SLOPE WITH 1-2m WIDE BY 20m LONG PATCHY STAIN AND SPORADIC COAT ON UITSZ FOLLOWED BY VERT. ROCK-UNOILED

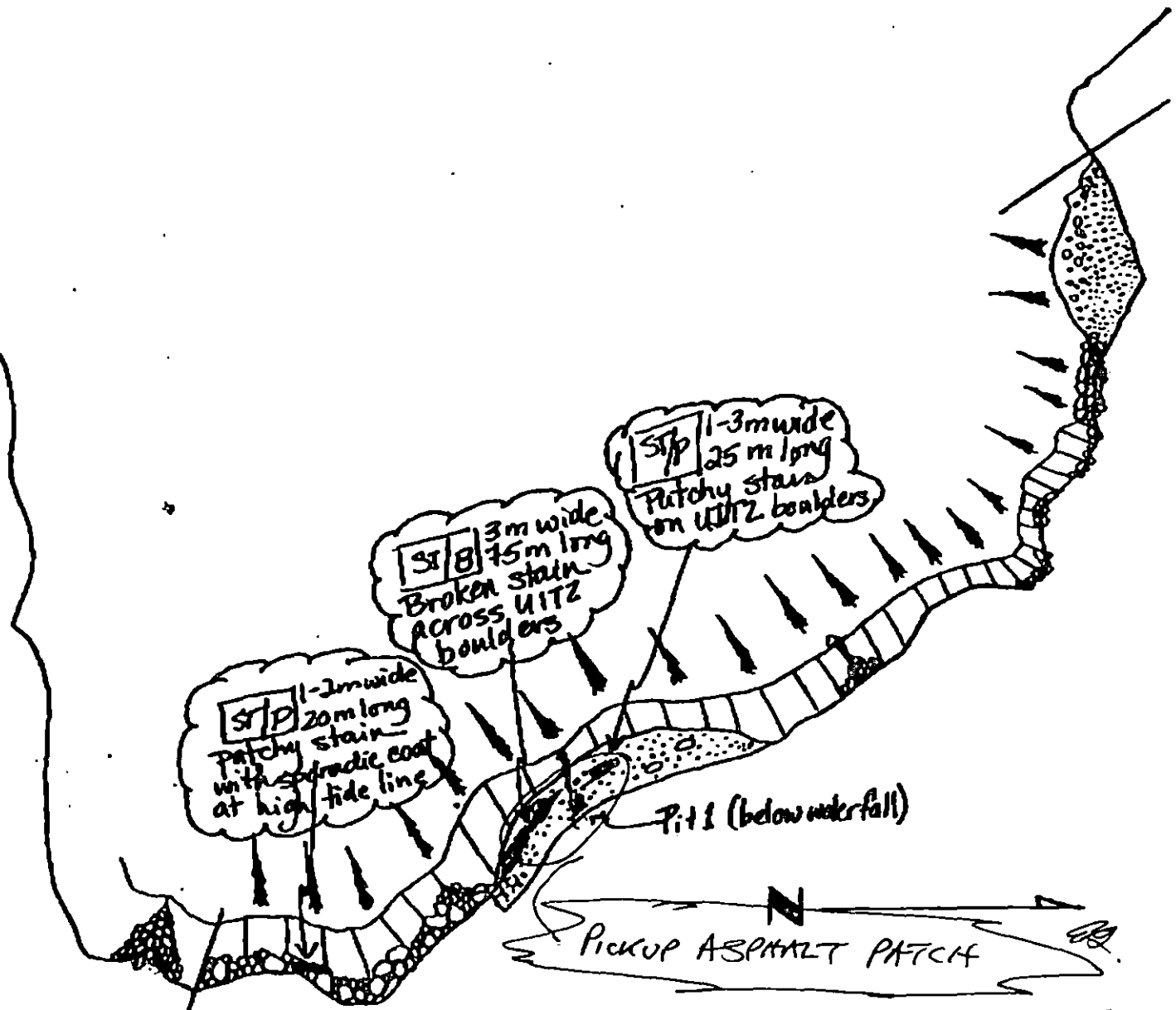
OG C. DILLON
SEGMENT ST/ NA-27
SUBDIVISION A
DATE 05 / APRIL 90

SKETCH MAP

SEGMENT NA-27
SUBDIVISION A
LENGTH 1,250 meters

- CHECKLIST
- ☐ N Arrow
 - ☐ Approx. Scale
 - ☐ Seg/Sub Only
 - ☐ Oil Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. HWM/LWM
 - ☐ SSL
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ PH Location(s)
 - ☐ Photo Location(s)

- LEGEND
- ☐ Δ - No Subsurface Oil
 - ☐ Δ - 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 0 PO 0 CV 0 CT 20 ST 100 MS 0 PT 0 TB 0 FL 0 NO 1130

SCHNEIDER
REVISION 000490

Page 2 of 5

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/82/1

Segment ST NA027 Subdivision A Date (mo / day / yr) 5 APRIL '90

Time (24 hr) 1415-1600 Biologist JIM BARRY Length 1250 m

(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 35 Moderate 45 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 NO PHOTO

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

BALD EAGLES - 3 PELAGIC CORMORANT CAVERN
SEA OTTER - 1 BORAU'S GONDWINE
GLAUCOUS GULLS PIGEON GUILLMOT

Ecological Considerations: ST-10 EAGLE NEST - NONE OBSERVED IN NA027-A

711 DEER HAWKSTING -

2M FISH HARKING SPAWN - POTENTIAL, BUT UNLIKELY OFFSHORE NA0:

5R SEA BIRD COLONY - NOT IN SUBDIVISION A

9FF DEER HARKING - BEACH ACCESS BY DEER UNLIKELY IN SUBDIVISION

1) Beach shows little effects of oil. Murrel beds re-emerged primarily of small adults or juveniles, but have high numbers of spat and small juveniles

NA027-A

April 6 1990

2

TIME 1415-1600 TIDE WINDOW +5 → +2

I General Comment

NA027-A includes a short cobble beach and a ~~px~~ highly exposed boulder coast. The cobble beach is a high to moderate wave exposed location with scoured cobble. sessile biota are scarce, except on larger boulders where mussels, barnacles, and Fucus are occasionally dense. Littorine snails, however, are dense on the cobbles from the upper-mid intertidal to the lower zone. The boulder habitat also has dense Littorines, and generally higher cover of ~~numerous~~ algae.

Neither habitat shows evidence of heavy oiling. Both have relatively high cover of the major species, and few individuals of all species.

II Ecological Considerations.

None of the sensitivities listed for this segment (NA027) appear to be important for this subdivision.

III MAJOR SPECIES

- A. BARNACLES - *Semibalanus cariosus*, the large acorn barnacle is abundant on boulders in the mid zone. Little evidence of oil related mortality could be found. There remains dense cover of adults in the boulder field. Smaller species also are abundant and present as adults and sp-out

B. MYTILUS -

Mussels are somewhat patchy, & but often dense, particularly in the boulderfield. Along the beach they are dense on some large cobble & boulders.

C. GASTROPODS -

Littorina scutulata and *L. sitkana* are unusually dense on this subdivision, particularly on the cobble beach where densities ~~are~~ reach as high as $\sim 2500 / m^2$ (estimate). Egg cases are present, as well as spat, juveniles and adults.

D. FUCUS. FUCUS is most abundant where the ~~beach~~ ^{beach} is lowest. The cobble field has high FUCUS only on large boulders, whereas the boulder coast has high ^{infrequent} FUCUS cover in the mid and low zones.

Species List.

A. MARINE PLANTS

1) DIATOMS - BLUE GREEN ALGAE - M 23

2) Green Algae - Chlorophyta

* Spangmora/Aerobithemia M12

Ulva M12

Ulva M12

Cladophora S12

Enteromorpha M12

Green Grout S12

3) Red ALGAE - RHODOPHYTA

Porphyra - M12

Petrocladus - S12

Rhodospira Lax - S12

Rhodospira polymorpha - M12

Boswellia sp. - S12

Callianthron - S12

Coralina - S12

Cryptosiphonia & M12

Endocladia S12

Halosaccion - M12

Irudaea - M12

Lithothamnion & S12

Membranoptera M12

Dilcocladia ? S12

Protocarpus M12

* spat or juveniles present

D Dense

M moderate

S Sparse

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

NAO27-A

April 6 1990

4/4

4) BROWN ALGAE - PHAEOPHYTA

- FUCUS DISTICHUS - D12
- LAMINARIA spp - M12
- HILDEBRANDIA - D12
- RALPHSIA - S12
- ALARIA - D12
- COSTARIA - S12
- SARGASSUM - S12

B. ANIMALS

1) BARNACLES

- Semibalanus cariosus * D12
- Balanus glandula * M12
- CHTHAMALUS DALLI * M12

2) CRABS

- HERMIT CRABS - PAGURIDAE - D23
- Hemigrapsus - S2

3) Amphipods - Copepoda? - M23

4) Beach Hoppers - Isopoda S12

5) Mussels - Mytilus edulis D12

6) SNAILS

- L. HERRICKI scutulata D23
- L. SIKAKA D23
- Nucella lamellosa M23
- N. emarginata M23
- Scutellastra diara S23

7) Limpets

- Tectarius dentatus S23
- T. panama S23 *
- Siphonaria D12 *
- Lottia digitalis S12 *
- L. persana S12 *

8. CHITONS

- Katharina tunicata M12 *
- Tonicella lineata S12 *

9) Sea Stars

- Pycnopoda helianthodes M12 *
- Ophiaster spp. S12 *
- Dumetia S12
- Pisaster ochraceus M12 *
- ~~Lepidaster~~ M12 *
- Lepidaster S23 *

10 WORMS

POLYCHAETE

- Unknown spp 2 to 5:23

11 Fish

- Pholis S23 *
- Cottidae S12

12 Anemones

- Antropoda xanthopneuma B12
- A. elegantissima B12
- A. artemesia S12
- Epiroctis sp M12
- Tealia sp S12

Page 3 of 3

← NA-27-A

← NA-27 (No oil - not surveyed)

XXXX Wide

/// Medium

----- Narrow

TTTT Very light

NA-27

Exxon Segment Length: 25617m
ADEC Segment Length: 25617m

ADEC Segment Length: 25617

Map Key: PWS-NA-27g

Name: C. DILLON

Date: 4/5/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-27 SUBDIVISION A (1 of 1)

WORK WINDOW

Tarmat Removal

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to tarmat removal within 400m of active nest.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

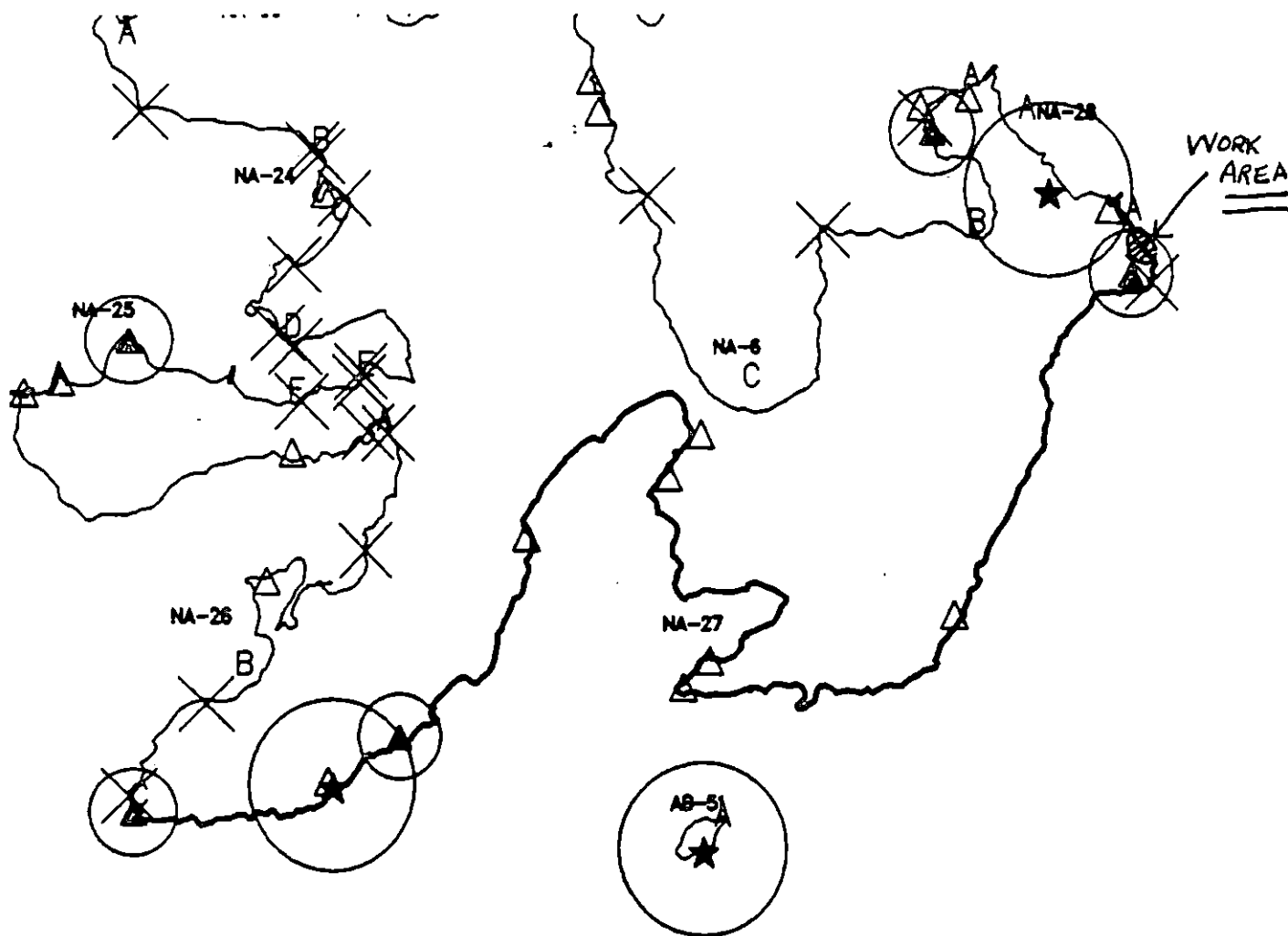
Date

6-12-90

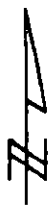
Prepared by

Date

6/11/90



Exxon Company, USA
Map Key: PMS-NA-27
line no. 1000



ECOLOGY MAP
SEGMENT NA-27
SUBDIVISION A (1 of 1)
METERS



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

1:100,000 - 2000 Feet

SHORELINE EVALUATION

SEGMENT ST/ NA-28 SUBDIVISION A (1 OF 1) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

5R Seabird colony (5/1 to 9/1)

7II Subsistence area: Deer harvesting (8/15 to 2/28)

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 Hoffman DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 32 m: Narrow 192 m: V.Light 0 m: No Oil 1862 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	<u> </u> Snare/Absorbent Booms
☒ Treatment Recommended	<u> </u> Oil Snares (pom poms)
☒ Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<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: PICKUP BOOM

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90

ADEC ART WEINER

EXXON ANDY TEA

NOAA Burt Wescott

USCG KENNETH KENNY

FOSC: W L DATE: 5-3-90

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 unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7HJ 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 NAOZB SUBDIVISION: A (1 of 1) DATE 04-05-90

USCG

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

I agree with the ADEC + Land manager. Access for
Hot water wash would be unsafe.

ADEC

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

COMMENTS

The NW side of the 1st beach requires treatment. Hot Water Wash would be the first suggestion, but the area is difficult to access and has high waves. Therefore a small crew with backpacks of inipol would be more appropriate. The area under the Bs is 2-3' shell fragments and the oil can be seen penetrating down to 75cm (2 1/2 ft). Refer to photo #30 and #31. The adjoining cove requires no treatment due to high energy of the area. The problem area is 2m x 5m wide of Ft underneath the Bs. A 20 foot sorbent boom was left behind on the beach for the Alaska Conservation of Alliance to pick up. 3/4's of the way through the segment A-B-C has a 4x7 CT/B with occasional ~~patches~~ patches. The area is high energy and difficult to access. I would recommend manual ^{beach} scrubbing/unpicking and/or fertilizer application.

LAND MANAGER

NAME DAN LORAN SIGNATURE Dan Loran☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I AGREE WITH ADEC. FROM A SAFETY STANDPOINT I DO
NOT RECOMMEND HOT WATER WASH ON THIS HIGH ENERGY BEACH.

SHORELINE OILING SUMMARY

REVISION NO. 002378

OG J. Springer USCG R. Vandepels SEGMENT ST/ NA 28
 IO P. Crank LAND REP D. Logan SUBDIVISION A(10P1)
 EXXON T. Gambler ADEC M. Bader TIME 14:20 to 16:45
 TEAM NO.: 5 TIDE LEVEL: +5 to +1 DATE 09/05/80
 EST. SUBDIVISION LENGTH: 2287 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Meta sediments and gneiss
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 40 % B 35 % C 20 % P 5 % G - % S - % M - % V - %
 SLOPE: Long 10 % Hang 80 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M 27 m N 218 m VL - m NO 695 m

SURFACE OIL

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

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

 PATTIES / TARBALLS 0 BAGS

 NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED

☐ YES ☒ NO

 TYPE Boom

 #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	UD	1	2	3	4	5	SV	U	M	U		
1	40					X	-									X				BCV
2	60					X	-									X				BFSV
3	20					X	-								X					CPV
4	40					X	-								X					CPSV
5	30					X	-								X					CPGS
6	45					X	-								X					BCV

COMMENTS Access limited. May be difficult and unsafe for cleanup personnel. M&S is under boulders in the same place as FLP/LBR. Exxon and ADEC maps conflict? The rest of NA28 is mapped as NA006, subdiv. A.

OG J. Caringer

SEGMENT NA 28

SUBDIVISION A

DATE 04/05/90

CHECKLIST

- ☒ All Areas
- ☒ Approx. Scale
- ☒ Log/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ FL HWL/LWL
- ☒ SL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

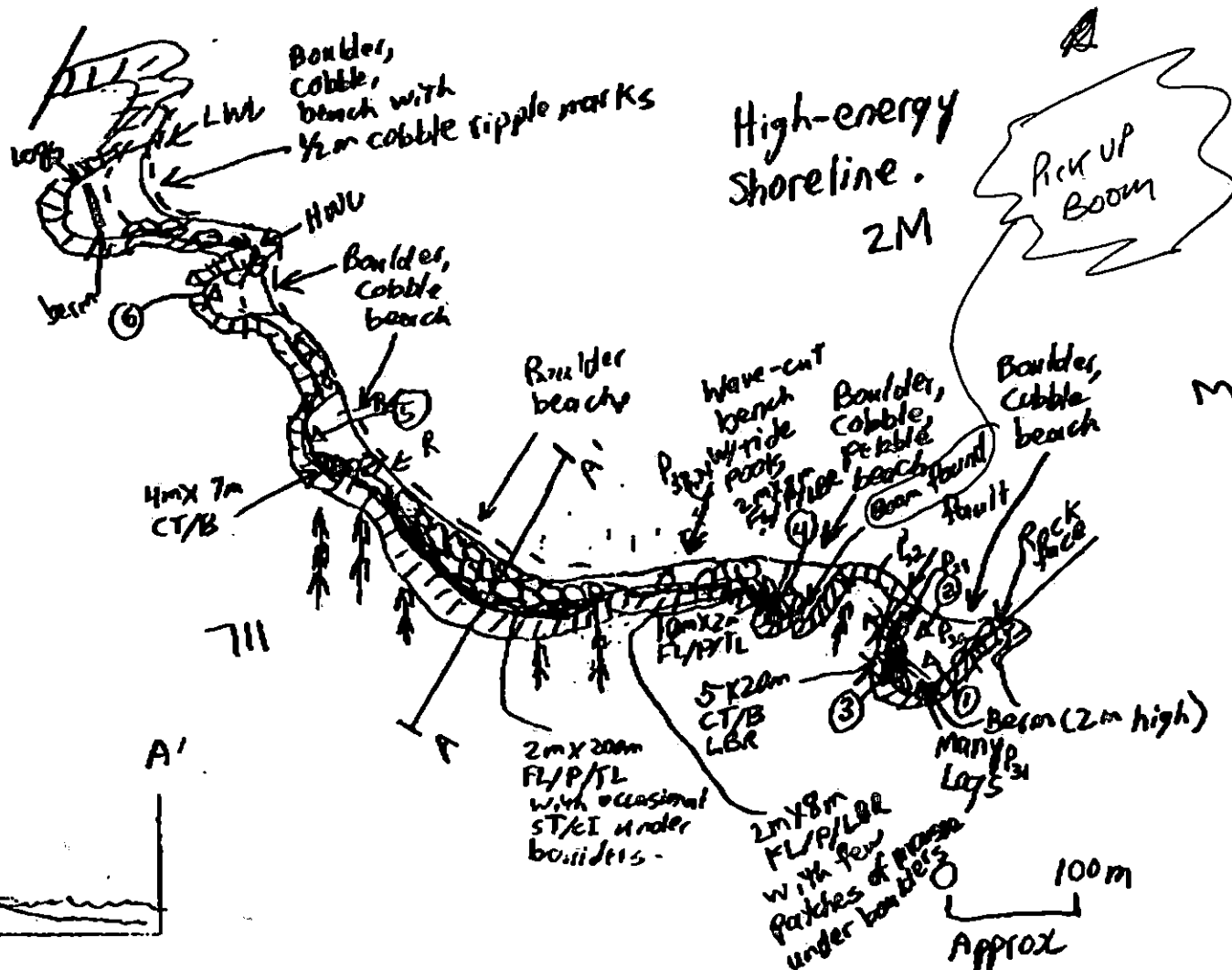
Splashed Distribution

Oil Vegetation

1 ●

Photo location, direction, and number

ETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT 27 ST _____ MS _____ PT _____ TB _____ FL 218 NO 695

REVISION: 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/29/90

Segment ST/ NA 28 Subdivision A Date (mo / day / yr) 4 / 5 / 90

Time (24 hr) 1420-1445 Biologist Crank Length 2287m plot 3
Tide Height +5.2m ft

(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 35 (3) Cobble 20 (4) Pebble 5 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 20 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-S-3

Frames 29, 32-35

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:

4 - Pigeon Guillemots 3 - Bald Eagles - Adults
1 - White-wing Scoter 3 - Ravens
3 - Glaucous-wing Gulls 2 - Marine birds (Duck) - unidentified

most of LITZ unexposed

Ecological Considerations:

2M - Herring Spawn
711 - Deer Harvesting

SEGMENT: ST/ NA 28 SUBDIVISION A LENGTH 2287 BIOLOGIST C. Cant

DATE 4/5/90 TIME 1420-1645 TIDE HEIGHT +5 → +1 ft

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

	SPECIES	UTZ	MITZ	UTZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA		2		Tide pool
	CALLIARTHRON/CORALLINA		2		Lg Tide pool
	GLADOPHORA SPP	1	2		
	GOSTARIA SPP				
	ENDOCLADIA MURICATA	1	1		
	FILAMENTOUS GREENS	12	12		Sparse
	FILAMENTOUS REDS				
	GLOIOPELTIS FURCATA		12		
	HALOSACCION GLANDIFORME		12		
	LAMINARIA SPP				
	LITHOTHAMNION		1		
	NEREOCYSTIS SPP				
	PORPHYRA SPP	12	12		
	RALPHISIA/HILDENBRANDIA		1		
	RHODOMELA LARIX		2		Tide pool
	RHODOMENIA PALMATA		12		
	SCYTOSIPHON SPP				
	ULVA SPP				
	ZOSTERA MARINA				
	Alaria			1	
	Petrascelis	1	1		
	Cryptosiphonia		12		
	Odonthalia		1		Tide pool
FAUNA:	ANTHOPELURA SPP		2		
	(SEM) BALANUS CARIOSUS		21	12	
	B. GLANDULA	123	123		
	BRYOZOANS				
	CHITONS (OTHER THAN K. TUNICATU)		21		Tenacella
	CLAMS				
	CRABS				
	DERMASTERIUS IMBRICATA				
	KATHARINA TUNICATA		21		Dense on beach 3
	LEPTASTERIAS HEXACTIS		1		Brooding, Tide pool
	LIMPETS	123	23		On K
	LITTORINA SPP	123	123		Dense
	NUCULA SPP	1	12		Dense concentration
	PAGURUS SPP		23		
	PISASTER OCHRACEUS		2		
	POLYCHAETES		3		
	PYDNOPODIA HELIANTHOIDES				
	SEARLESIA DRA				
	SERPULIDS				
	SIPHONARIA THERSITES		21		
	TEALIA		2		
	Isopods		3		
	Ribbon Worm		3		
	Epiatis		21		Dense in Tide pools
	Hydrail		21		Tide pool
	Orange Sponges		21		Several small, one first size
	Tidepool Sculpin		21		

NA 28 A

Time 1420-1645

Tide High +5 $\Rightarrow$ +1

Date 4/5/90

2287m

CONT F.00
17 - - -

Comments -

- Segment is difficult to access; high exposure and heavy surf.
- Segment is most abundant, diverse area I've seen this year.
- Segment has high recruitment.

Beach 1*

- Rounded large cobble/small boulder beach with Rocky Headlands
- High mussel recruitment and Littorina recruitment on headlands.
- Dense Littorina spot on boulders.
- Moderate barnacle recruitment on headland boulders; cobble.
- Beach appears to be a drift pocket, lots of logs in SUPRA
- Nereocystis and Laminaria spp. in drift line.
- Two Bald Eagles circling, - one high above trees, one low. Not able to spot a nest - maybe carrion in area?
- Beach appears healthy.

Beach 2

- High energy, small slit beach with rounded boulder/cobble.
- Biota dense on rock outcrops, headland faces and big boulders, sparse on small boulders and cobble.

Beach 3

- Area is terraced bedrock with large tidepools.
- Healthy, well diversified population inhabiting each niche available
- Most prolific area I've seen this year.

Beach 4

- Angular boulder/cobble beach with moderate biota, headland dense
- Weather was encroaching so survey was made at a fast pace. Only a few rocks were turned - biota made have been more dense than survey implies.
- Many drift logs in SUPRA

Beach 5

- Round cobble and low biota
- High energy, exposed beach.

6

* Segment was surveyed W to E, beach numbers follow accordingly.

NA-28

PWS
-1958 →

8

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NA-28

ADEC Segment Length: ²²⁸⁷~~2405~~m

0 100 200 300
METERS

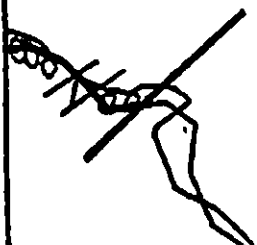
Map Key: PWS-495a

Name: James Springer

Date: 4/7/90

Date Entered:

← PWS
495A



9

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NA-28

ADEC Segment Length: 2085m



Map Key: PWS-495b

Name: James Springe

Date: 4/7/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NA-28 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.
5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

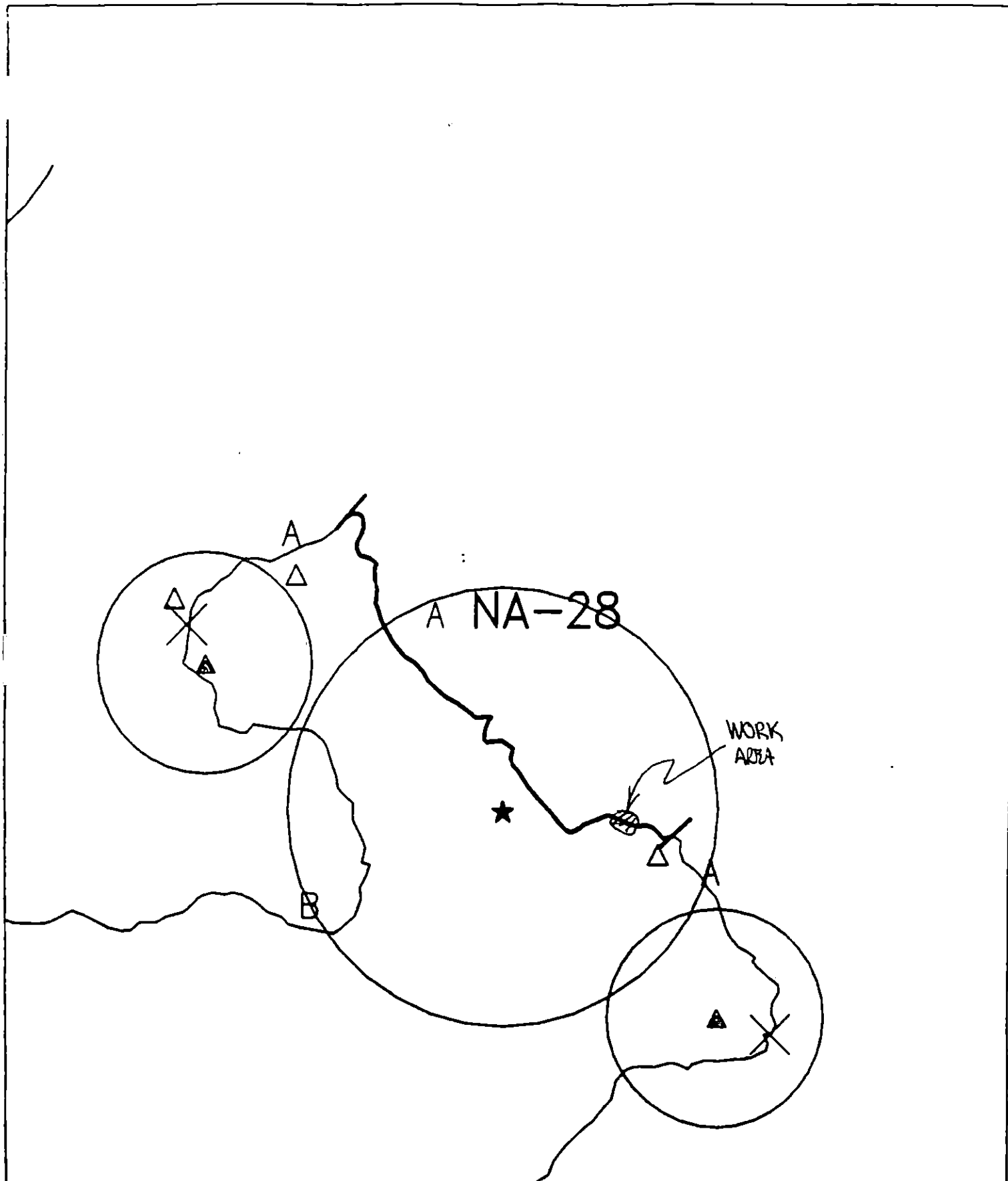
Date

6-12-90

Prepared by

Date

6/11/90



Exxon Company, USA
Map Key: PMS-NA-28
June 09, 1990



ECOLOGY MAP
SEGMENT NA-28
SUBDIVISION A (1 of 1)
METERS
0 488 972

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

1 inch = 1594 feet

SHORELINE OILING SUMMARY

REVISION NO. 34-13-85

OG Team Name Samples USCG Stephen LEHMANN SEGMENT ST/ NB-1-D
 BIO Shannon Shannon LAND REP M. K. Goodwin SUBDIVISION 2 (4 OF 6)
 EXXON — ADEC Tony F. O'Connell TIME 02:35 to 14:31
 TEAM NO. 19 TIDE LEVEL +7.5' to +5.0' DATE May 1, 1990
 EST. SUBDIVISION LENGTH: 10000 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 10 % C 10 % P 10 % G 10 % S 30 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 40 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 6122 m NO 3212 m

SURFACE OIL

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

PAVEMENT H F S 100 sq. m by 0 cmPATTIES / TARBALLS 5 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED (any debris)	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS —

Photographs:

Roll No. ST-19(3)-1Frames 12-13

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		VO	UC	SL	DL	OL	TL	LR	SU	U	M	U				
1	20					X	0-0		X						X							Pb/g.
2	30					X	0-0		X								X					Pb/cl
3	20					X	0-0		X									X				Pb/g.

COMMENTS

REVIEWED BAT DATE 24 MAY 90

NB-1-D, Neketa Bay, May 13, 1990

Subdivision D of segment NB-1 includes shores of the headland located on the north side of Neketa Bay and half of the south shore of the same bay, on southwestern Shuyak Island. The subdivision is relatively long (~10 km) and includes many small pocket beaches, small coves, and large embayments on its northeastern side. As a result, some parts of this subdivision are exposed to the long fetch of Shelikof Strait while other sections are very sheltered and the shoreline sediment distribution show a corresponding complexity. This subdivision was observed on May 13, 1990, between 0735 and 1421 h, and corresponding 7.5' to 5.0' tidal levels.

At its northwestern extremity, the shoreline consists of very poorly sorted angular mixed sediments with a 1 m high bedrock bluff in the backshore. Oil is present as very discontinuous coatings on the sediments of the upper intertidal zone and a few small areas of weathered mousse/sediment patches, mostly within a 50 m long by 3 m wide band with an approximate 5% coverage. The maximum continuous patch size observed is less than 20 cm in diameter and less than 1 cm thick.

To the south, the above sediments are overlain by a thick (4 m) steep sided pebble bar deposit that restricts the entrance of the channel. Oil becomes very sporadic in this area and only a few small patches were found.

This bar deposit gives way to the south to a gently sloping intertidal zone of subrounded cobbles and pebbles with a well developed storm berm of pebbles. Coarse sediments are segregated to the middle and lower intertidal zones between low outcrops of bedrock. Oil was found on this section within a 20 m wide, 50 m long band of the upper intertidal zone. It occurs as discontinuous patches with maximum diameter of 1 meter, maximum thickness of 1 cm, and less than 1% coverage.

Between this location and the prominent cliffs forming the headland to the south, the shoreline consists of small bedrock headlands separating pocket beaches of pebble/cobble, often with angular boulders in the lower intertidal zone and a well defined storm berm of well sorted pebbles in the upper intertidal zone.

Oil was found in these pocket beaches within a 50 x 20 m and 20 x 5 m area. In both cases, coverage was equal to or less than 1% and maximum patch size and thickness were less than 20 cm and 1 cm respectively.

East of the prominent cliff headland, a long section of angular mixed sediments showed no oil except for a few patties and splatters at its northeastern extremity.

This section gives way to a long talus of angular boulders and a section of angular mixed sediments, both devoid of oil. Further to the east, the shoreline forms a well defined projection made up of a well sorted pebble/gravel beach with well a defined, steep storm berm, where a few small patties were found.

The shores of a large cove to the northeast show an intertidal zone of angular poorly sorted sediments including mud in the lower intertidal zone. A few patties were found scattered in the upper intertidal zone of this area.

Southwest of a small embayment forming the southern end of this cove, the shoreline consists of a talus of angular boulders landward of coarse sediments in the lower intertidal zone. A patch of tarry coating with small weathered mousse/sediment accumulations occur within a 2 x 2 m with 60% cover between the coarse sediments at this location along with 2 bands 20 cm wide by 1 m long and 1 cm thick. A similar area 3 x 2 m with 20% coverage was found in the upper intertidal zone at the head of a small embayment immediately to the southwest, and a 10 x 3 m area with 5% coverage occurs

further to the south.

The remainder of this subdivision includes a section of low cliffs followed by a longer section of poorly sorted angular mixed sediments where a few small splatters were found.

Small
splatters

Small
splatters

SEGMENT: B-1

SUBDIVISION D

DATE: May 11/3/90

CHECKLIST

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

LEGEND

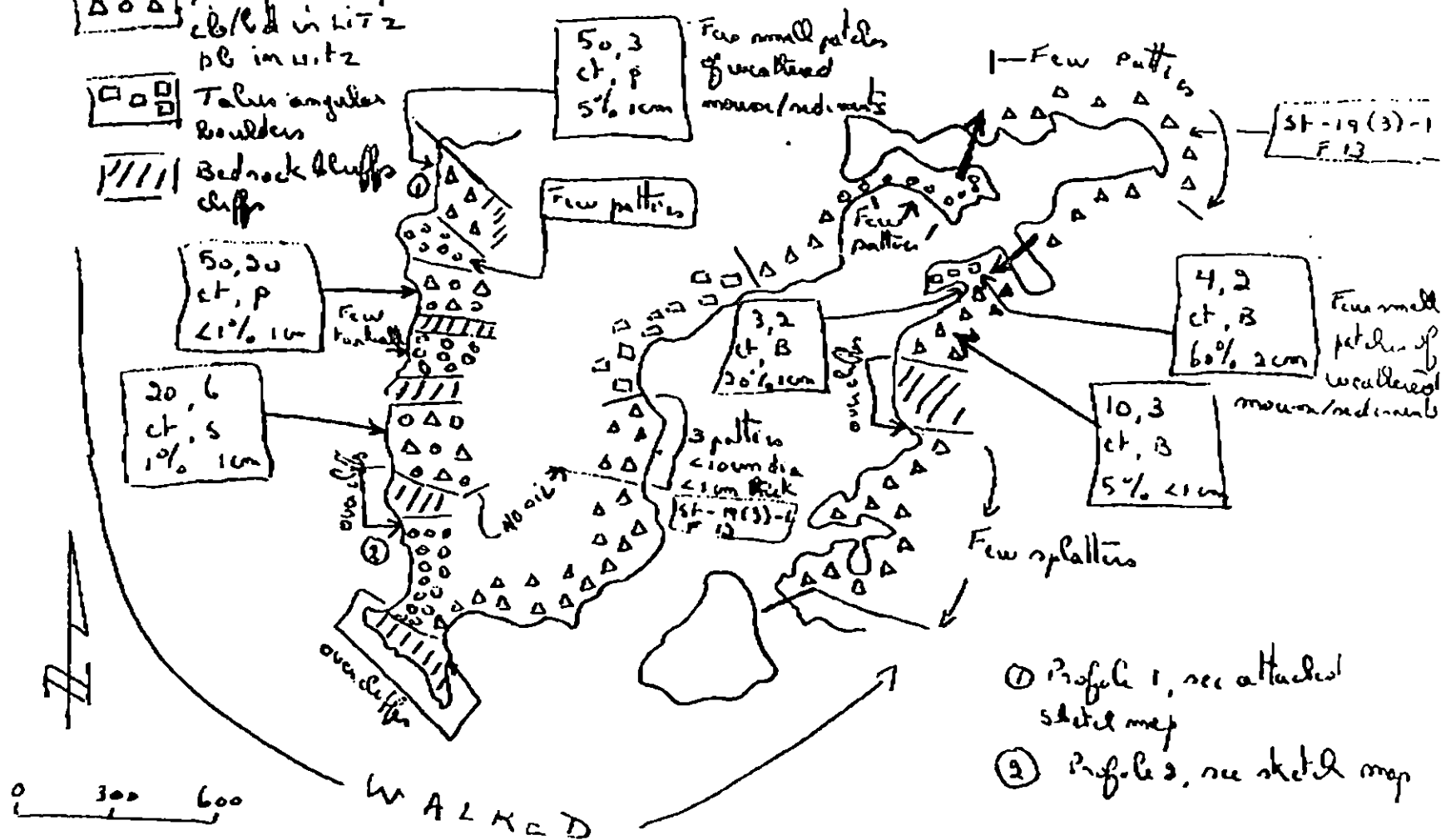
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oil Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

Legend

- $\Delta \Delta$ angular mixed sediments
- $\circ \circ \circ$ moderately to well sorted p/c
- $\Delta \Delta \Delta$ poorly sorted p/c/l/d
cb/l/d in LITZ
p/c in LITZ
- $\square \square \square$ Talcum angular boulders
- ||||| Bedrock bluffs cliffs

SKETCH MAP

length character coverage
width distribution thickness (max)
50, 3
ct, 5
5%, 10m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 137 ST 0 MS 60 PT 150 TB 50 FL 0 NO 3863

CHECKLIST

- ☒ N Arrow
☒ Approx. Scale
☒ Top/Soil Bdry
☒ Oil Dist.
☒ Width
☒ Length
☒ % Cover
☒ Substrate Character
☒ Ext. FRA/LM
☒ SCL
☒ Profile Location(s)
☒ Profile(s)
☒ Photo Location(s)
☒ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oil Vegetation

1 →
 Photo location, direction,
 and number

Legend

Δ Δ angular mixed sediments

○ ○ ○ moderately to well sorted
 p/c

○ ○ ○ poorly sorted p/c/l/d
 Δ ○ Δ c/b/l/d in LIT 2
 p/c in u.t.z

□ □ □ Talus angular
 boulders

||||| Bedrock bluffs
 cliffs

50, 3
 ct, p
 5% 1cm

Few small patches
 of weathered
 material

50, 20
 ct, p
 1% 1cm

Few patches

20, 6
 ct, s
 1% 1cm

Few patches

3, 2
 ct, B
 20% 1cm

3 patches
 < 10m dia
 < 1cm thick
 (ST-19(3)-1
 F. 12)

4, 2
 ct, B
 60% 2cm

Few small
 patches of
 weathered
 material

10, 3
 ct, B
 5% < 1cm

Few splatters

0 300 600

WALKED

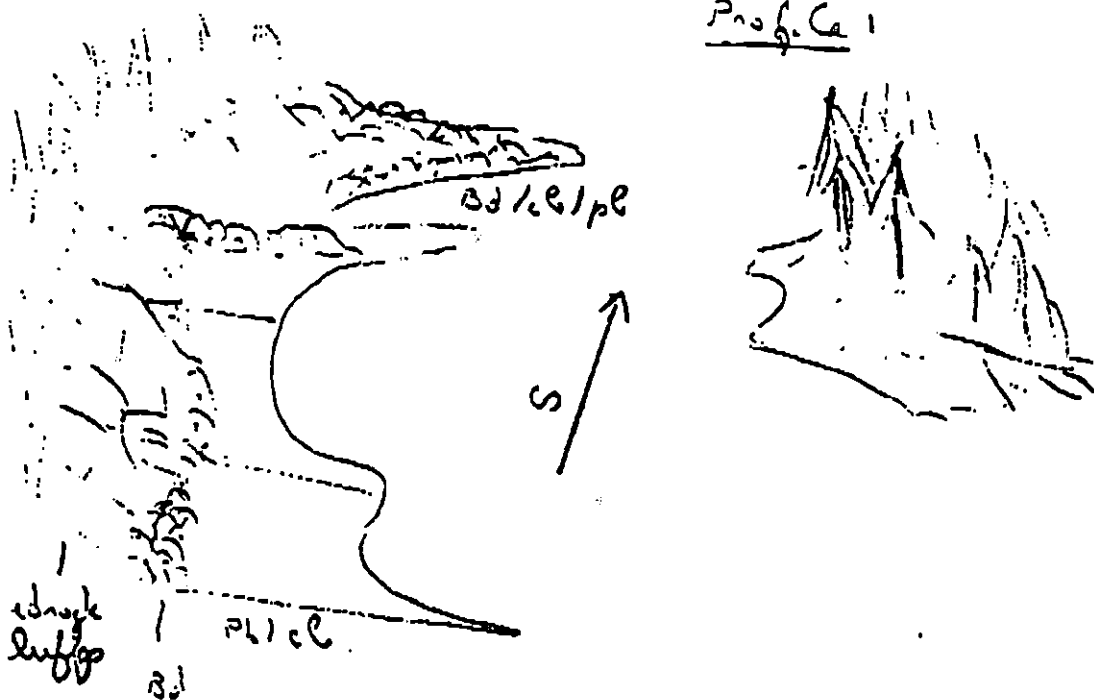
① Profile 1, see attached
 sketch map
 ② Profile 2, see sketch map

BIOREMEDIATE

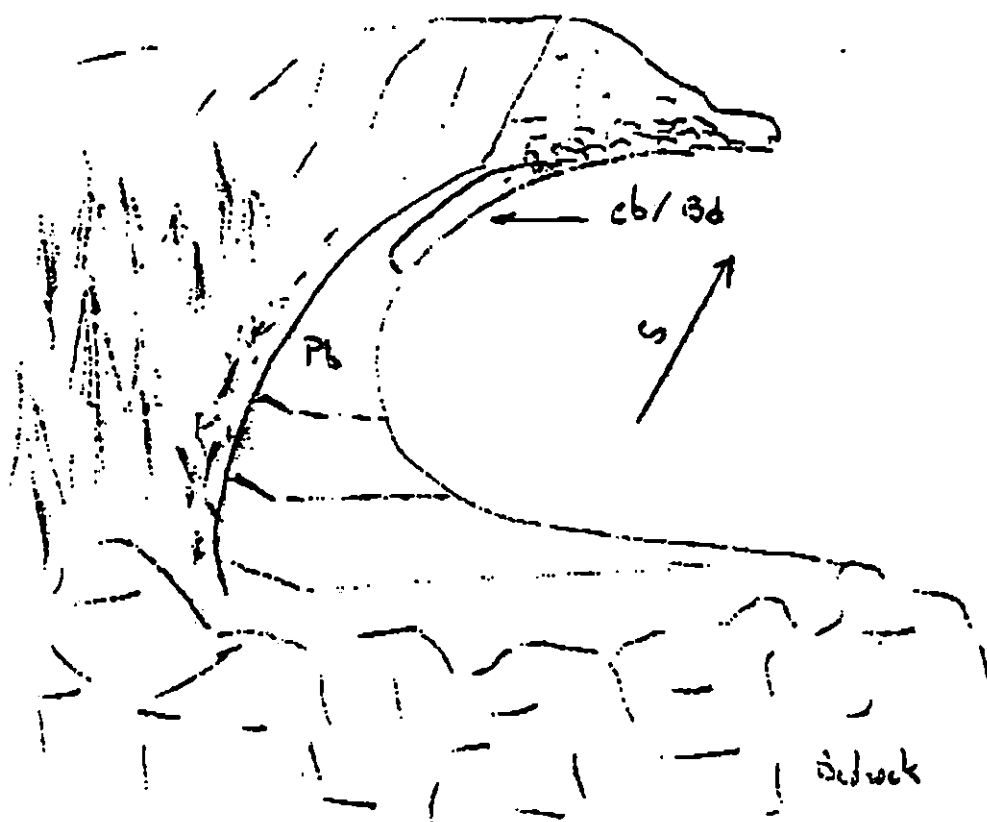
NB-1-D. May 13, 1990

Lean Terra Sempels

Profile 1



Profile 2



Segment ST / NB-1 Subdivision D Date (mo / day / yr) 5/13/90Time (24 hr) 0745-1420 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 10 (2) Boulder 10 (3) Cobble 10 (4) Pebble 40 (5) Sand 30 (6) Silt 0 + granules(B) Overall % cover of biota (% of segment): Dense 10 Moderate 85 Low 5
SUBDIV.

(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-19 (VII)-1Frames 12, 13

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (NUCCULA, LITTORINA, LYMAEUS)

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 adult eagles, 1 subadult eagle, 4 pairs red-breasted mergansers, 4 Vancouver Canada geese, 4 semipalmated plovers, 12 dark-winged teal, ~40 glaucous-winged gulls, 2 pairs oystercatchers, 3 surf scoters, 5 pigeon guillemots, varied + herring thrushes singing in forest, for sparrows foraging in intertidal zone. Very abundant deer tracks + scat in forest, on grassy bluff margin, well in supratidal & UTE. Duck bones are common (cont.)

Ecological Considerations:

Please see Eco. Map. No bald eagle nests observed in this subdivision, but there are nests nearby in subdivisions A + B, and at the extreme S. boundary of the segment. There are also presently active gull colonies on nearshore islets off the E. portion of the subdivision (it is likely that other seabird species are or will be nesting on these islets also). There are extremely productive LTE communities in the narrow "necks" at the upper reaches of the subdivision - these communities have developed in very protected lagoons that at the same time benefit from strong tidal action. The primary ecological sensitivity here is the apparently regular use (according to DNR rep Mike Goodwin) in the upper lagoons by sea otters in very high concentrations (see previous page). These otters moved out of the area, possibly due to disturbance by us.

Sharman
5/13/90General Comments (cont.):

in the forest and on the beach. 1 bear scat in the forest, bear tracks in UTE sand. Rare scattered otter houses (old) in UTE, otter tracks + scat in the supratidal and UTE, as well as on bluff fringes. Red squirrels common in the forest. Fox scats occasional in the forest and on bluff fringes (one with deer hair), one set of fox tracks in UTE sand. 500cm² diggings, 10cm deep, for worms or clams, are common in the sand/mud flats (fox? bear? sea otter?). 2 harbor seals, ~ 30 sea otters (15 with pups). These otters were concentrated in the protected "lagoon" portion of the subdivision - see Eco. Map. Clearly, the sea otters are eating a lot of cobbles here - perhaps even specializing on them. Cobble shell fragments are abundant in the intertidal zone. Occasional short, thin reaches of drained forest along the shoreline indicate some amount of subsidence occurred here (as elsewhere on Shuyak Is. where we have been) during the 1964 earthquake. We found one sand lance stranded on an intertidal cobble/pebble beach. The intertidal communities along this subdivision are varied, healthy, and productive. Typically they display quite successful recruitment, normal mortality, and seem to be perfectly normal in all respects. There is locally dense Fucus coverage with good recruitment where adults are well established. Same for barnacles, with excellent spring spat set (even on pebbles). Littorina are locally extremely dense (10,000's per m²) including many young-of-the-year. Joining Fucus on beach/large boulder shores are Odonthallia and Chloropeltis (usually higher + on more exposed beaches). LTE dominant algae are Sargassum, Enteromorpha, Halosaccaria, + Ulva - again primarily on the more exposed giant boulder/beach shores. Beneath MTE boulders are littorines with egg masses, limpets, amphipods, pricklebacks, Nephtys. Beneath LTE boulders are littorines with egg masses, limpets (many large Totanus scutellum), amphipods, pricklebacks, Leptasterias (some brooding), Katharina, and Halichondria. LTE tidepools contain the typical + now-familiar assemblage of Fittolthamnium, foliose corallines, Katharina, limpets, littorines, Odonthallia, tidepool sculpin, Epiplatys, Anthopleura (artemisia, elegantissima, Xanthogramma), Pagurus, Margarita, Halichondria, Halimeda, etc. Mussels are generally rare overall in rocky portions, in their discontinuous bands, but they are successfully recruiting where adults are established (MTE) - also in the rocky MTE are sparse Nucella and fine red algae (Polysiphonia/Parasiphonia?). Amongst the boulders are shells of Saxidomus, Mya spp., and Protothaca. In the upper, protected portions of the embayment, the beaches are predominantly fine-grained + low angle. Often there is a MTE boulder/cobble band supporting Fucus / Enteromorpha / Sargassum / Ulva / Acrospira (?) / brown or red filamentous forms, subtended by sandy sediments supporting locally very dense populations of sparrowgrass (Echinia) and assorted bivalves (mostly Mya spp. - also Protothaca, Saxidomus, small Chione) with discontinuous stands of sparse eelgrass. Anthopleura are common in this LTE sandy zone (attached to submersed pebbles + cobbles). An extremely diverse LTE community exists in the narrow "nooks" into the upper

Sherman
3/13/90General Comments (cont.):

lagoon - well flushed by tidal races. Here there are all the usual LTB species, plus hydroids, sponges, bryozoan (foliose species), and turritella - and very lush with laminarians. In the drift line of this area were several large 10-20 cm dia. Annelids and abundant Telmessus Carapaces/molts.

Addition to MTE rocky zone comments: in several areas Nucella was quite abundant, with clusters of egg capsules not uncommon among boulders.

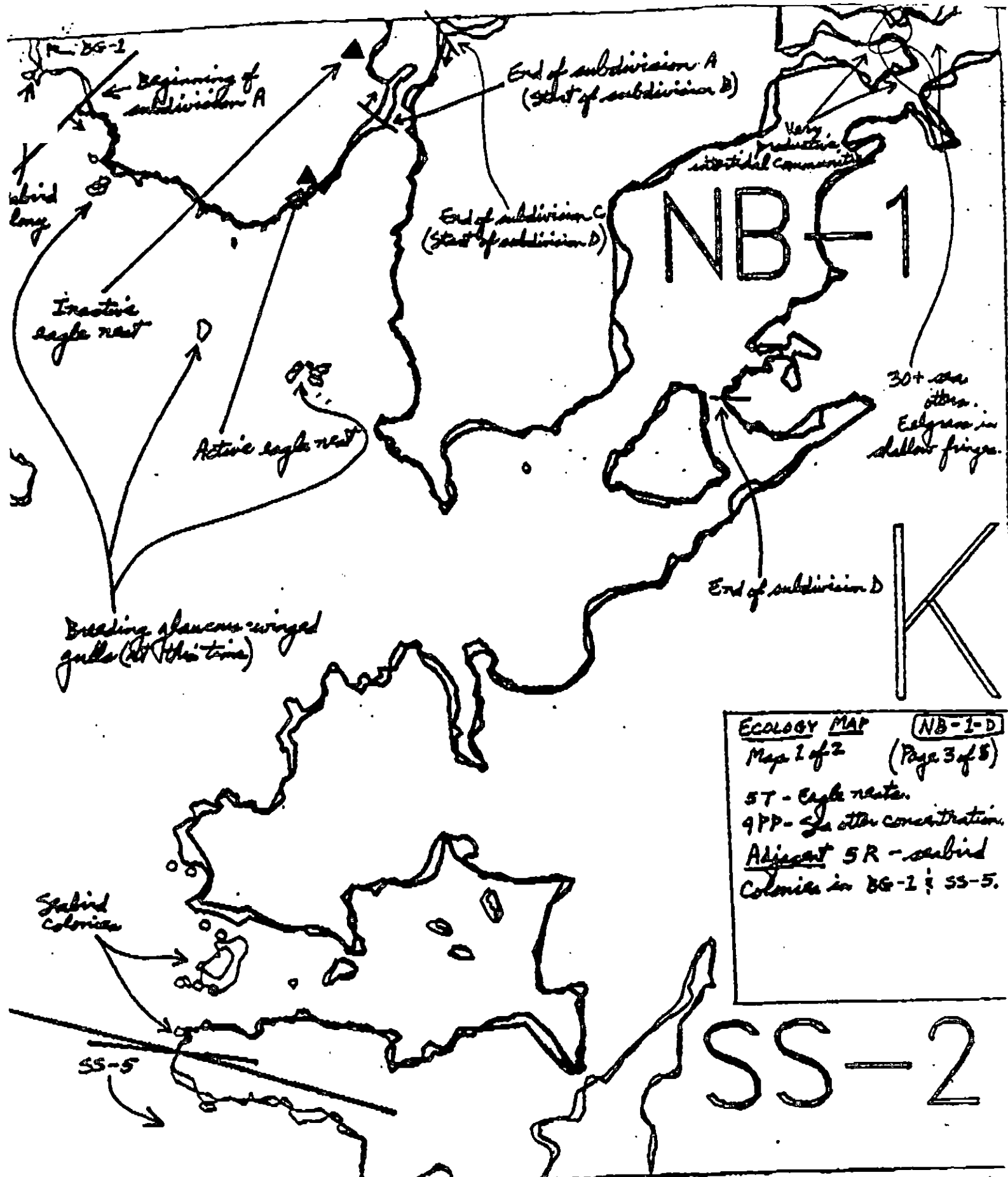
Ecological Considerations (cont.):

This is one of the densest sea otter concentrations (clearly a breeding population - with significant numbers of pups) I have seen during the 1990 SSAT. This protected and productive area is likely quite important to the regional otters for foraging, and probably protection during rough weather. They appear to be not particularly tolerant of human intrusion.

LCS = SHARMAN

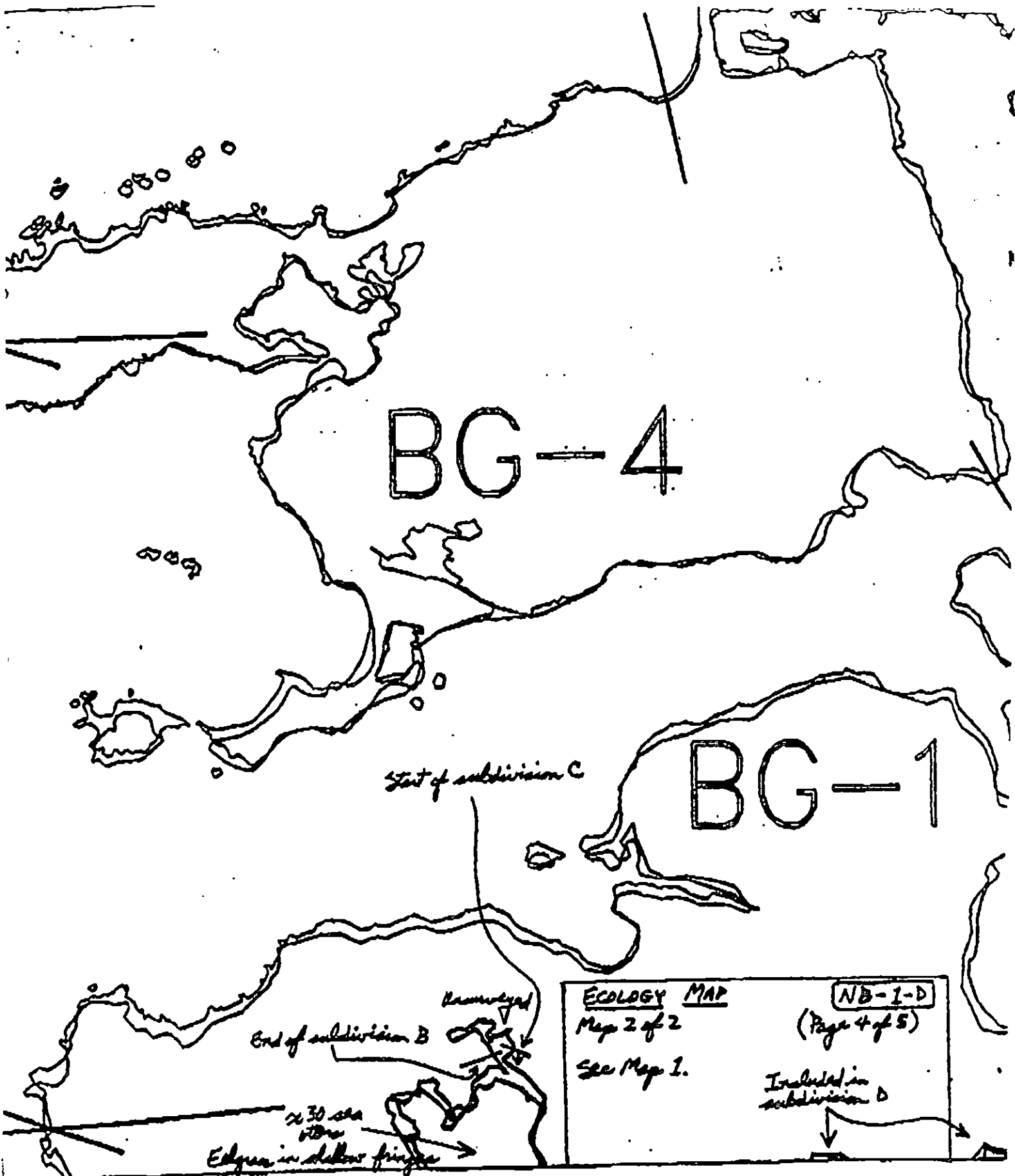
ROLL NO. ST-M(III)-1 FROM 5/4/90 TO _____
TEAM NO. 19 PWS / KENAI / KODIAK AK. PENINSULA

FRAME NUMBER	PHOTO GRAPHER	DATE	SITE	LOCATION/COMMENTS
1	LCS	5/4/90	CC-4	Black myxomycete growing through tarball.
2	LCS	5/5/90	CD-15	Just-yeast <i>Dictyonema</i> caught in HTA CT/CV on bedrock.
3	LCS	5/9/90	SI-15	Looking W. up into entrance of STA/HTA grotto where oil has accumulated. See also frame # 4.
4	LCS	5/9/90	SI-15	Closeup of myxomycete segmented between boulders, behind large boulder in frame # 3.
5	LCS	5/10/90	NA-1	Myxomycete patty in HTA, head of Toluca River.
6	LCS	5/11/90	AS-2	Myxomycete asphalt among surface cobbles/pbbles.
7	LCS	5/12/90	SB-5	Myxomycete beneath cobbles in HTA.
8	LCS	5/12/90	SB-5	Overview to W.
9	LCS	5/12/90	SB-5	Overview to E.
10	LCS	5/12/90	FB-10	Overview to W. (S. side). Vertical photo.
11	LCS	5/12/90	FB-10	Dil Coat (soft on wet road) on boulder surfaces, HTA.
12	LCS	5/13/90	NA-1-D	Myxomycete patty on surface cobbles/pbbles in HTA.
13	LCS	5/13/90	NA-1-D	Asphalt patty in HTA cobbles.



ECOLOGY MAP **NB-1-D**
 Map 1 of 2 (Page 3 of 5)
 ST - Eagle nests.
 9PP - Sea otter concentration.
 Adjacent SR - seabird colonies in SS-1 & SS-5.

SS-2



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

NB-1-D

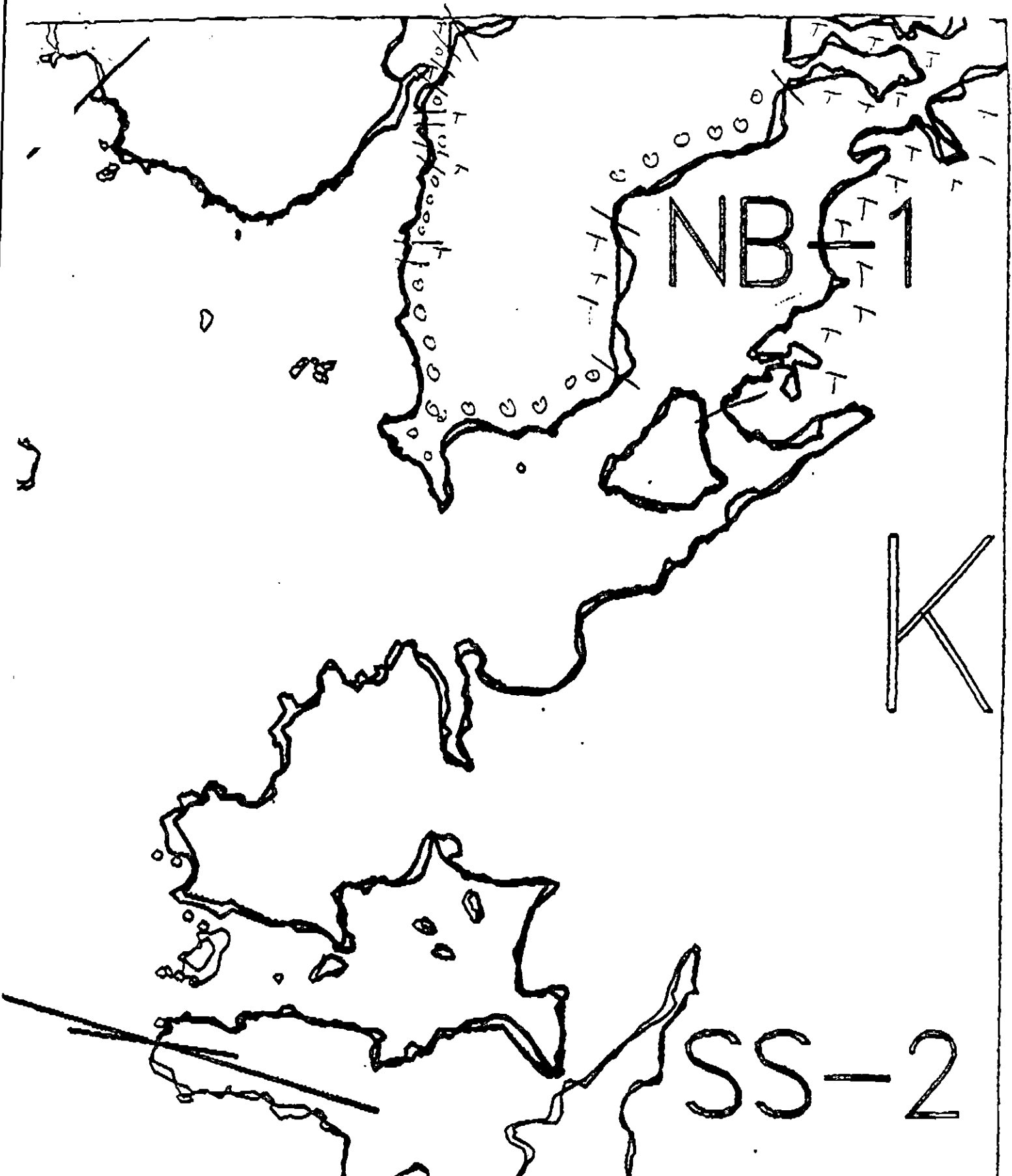
Approx. Segment Length: 26978m

Map Key: KOD-NB-1c

Name: _____

Date: _____

Data Entered: _____



XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 OOOO No ~~il~~

K0104-NB-1-D

Approx. Segment Length: 26978m

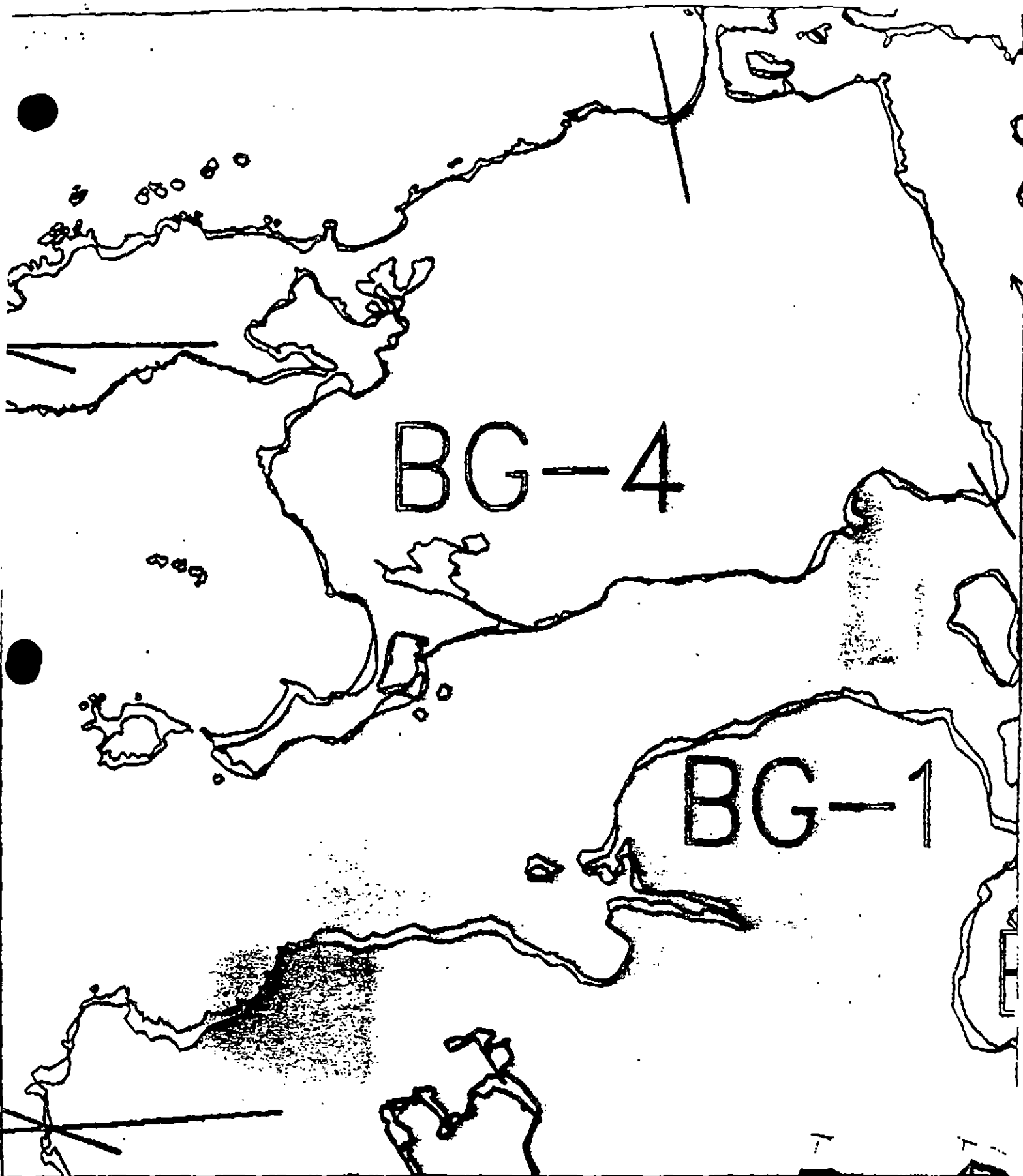


Map Key: K00-NB-1a

Name: Deep Water Sound

Date: May 13/90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Data

K41d4- NB-1-D

Approx. Segment Length: 20978m

0 500 1000
meters

Map Key: K08-NB-1c

Name: San Francisco Bay

Date: May 12/92

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ NC-01 SUBDIVISION A (1 OF 1) DATE 4/26/90

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)
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: [Signature]

DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 3067 m: No Oil 5688 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90
ADEC Art Weimer
EXXON Amy Bal
NOAA Gary Petros
USCG G.A. Reiter

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NC 001 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/26/

USCG NAME Jerry Schultz SIGNATURE Jerry Schultz

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC NAME Mike Ebel

SIGNATURE Michael Ebel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NC-01-A: This segment is comprised of a 9429m perimeter of an unnamed bay having mostly steep bedrock cliffs with high angle debris slopes. The southern shore extending around in an arcuate manner to the eastern shore was found to be clean. By remainder of the eastern shore (forming the bay's head) and extending around into the northern shoreline were found to contain tarballs, patties and mouse in a splash distribution (all were picked up) along with covers and coat splashes (very infrequent; refer to sketch). No further impact recommended.

LAND MANAGER

NAME Mike Tetreault NPS SIGNATURE Mike Tetreault

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Good survey. Very sparse contamination in the form of tarballs, patties and splashes of coat/cover. We picked up all retrievable oil during the survey. The staining left behind is ~~very~~ very sparse. It appears that no further treatment of this site is needed. Very difficult to survey due to large boulders - no access - lot of

SHORELINE OILING SUMMARY

REVISION NO 01

OG RANDY SIEGEL USCG Jerry Schulte SEGMENT ST/ NC-001
 BIO Lewis Shaiman LAND REP Mike Tetras (WPS) SUBDIVISION A (1 OF 1)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 08:00 to 12:30
 TEAM NO. 12 TIDE LEVEL -3.5' to 8.2' DATE 4/25/90
 EST SUBDIVISION LENGTH: 9429 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 60 % B 35 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 15 % Hang 75 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH W 0 m M 0 m N 0 m VL 3060 m NO 6369

SURFACE OIL

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

 PAVEMENT H F S 0 sq. m by 0

 PATTIES / TARBALLS 0 BAI

 NEAR 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 TB + P

 #BAGS 1

 Photographs None

 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 (VIN)	↓	SURFACE SUBSURF SEDIMENT
		OP	OR	OL	OC	NO		US	UC	1	2	3	4	5	SU	U	M	U				
1	20					X	0-0		X							X				-	-	S
2	20					X	0-0		X						X					-	-	P
3	35					X	0-0		X						X					-	-	C
							.															
							.															
							.															

COMMENTS Large unraned bay surrounded by hi-angle granite cliffs and granite boulders along beach. Southern beach had no observable oiling. Eastern and northern beaches had occasional (< 1%) tarballs, patties, cover, coat or stain on/under boulders. We picked up all of them that we observed.

 REVIEWED W DATE 4/27/90

Handy Sieg
 3MENT ST/ NC-1
 DIVISION A
 TE 4/25/90

CHECKLIST

N Area
 Approx. Scale
 Bag/Gub Entry
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HWA/LWA
 SSI
 Profile Location(s)
 Profile(s)
 Pn Location(s)
 Photo Location(s)

GENU

1 Δ
 No Subsurface Oil

2 Δ
 Subsurface Oil

CT/C
 Current Distribution

CT/B
 on Distribution

CT/P
 by Distribution

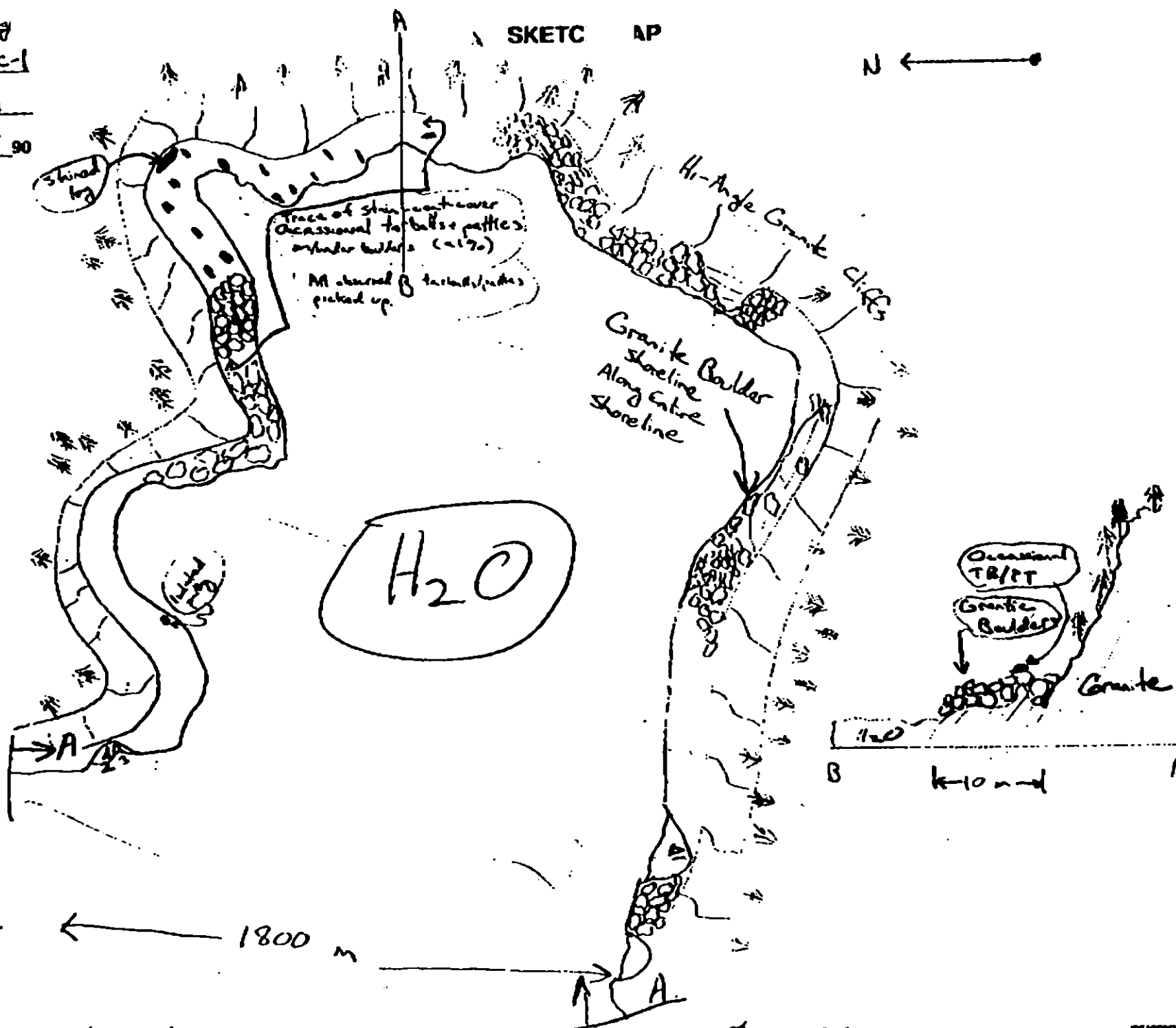
CT/S
 shed Distribution

VEG
 Vegetation

Location, direction,
 number

SKETCH AP

N ←



Character Length (m): AP ϕ PO ϕ CV 1000 CT 3000 ST 3000 MS 2000 PT 3000 TB 3000 FL ϕ NO 6369

REVISIONS

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

Segment ST / NC-1 Subdivision A Date (mo / day / yr) 4/25/90

Time (24 hr) 0610-1245 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 6 (2) Boulder 35 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense X Moderate Low
SUBDIV.

(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 (ALICELLA, LITTORINA, LIMAEAE)

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: 6 sea lions, 4 adult eagles, 2 crows, 2 Steller's jays, 6 pairs harbor seal. Winter wrens, hermit thrushes, varied shorebirds, 4 Chialobus singing in forest. 1 pair river otter swimming + in intertidal zone. River otter seen in longitudinal zone. The general area apparently subsided 122 m in the 1964 earthquake - dead trees along upper margins of intertidal zone. (cont.)

Ecological Considerations:
We received no information regarding previously identified resource sensitivities for this segment. We observed no eagle roasts, anadromous streams, important pinkish sandstone, seabird colonies, etc. As with all highly productive and diverse intertidal communities, this one is probably sensitive to human-induced physical disturbance. No ecological map attached - no species sensitivities. This segment

NC-1

Shoreline Ecological Summary (cont.)
(Page 2 of 2)Sharman
4/25/90General Comments (cont.):

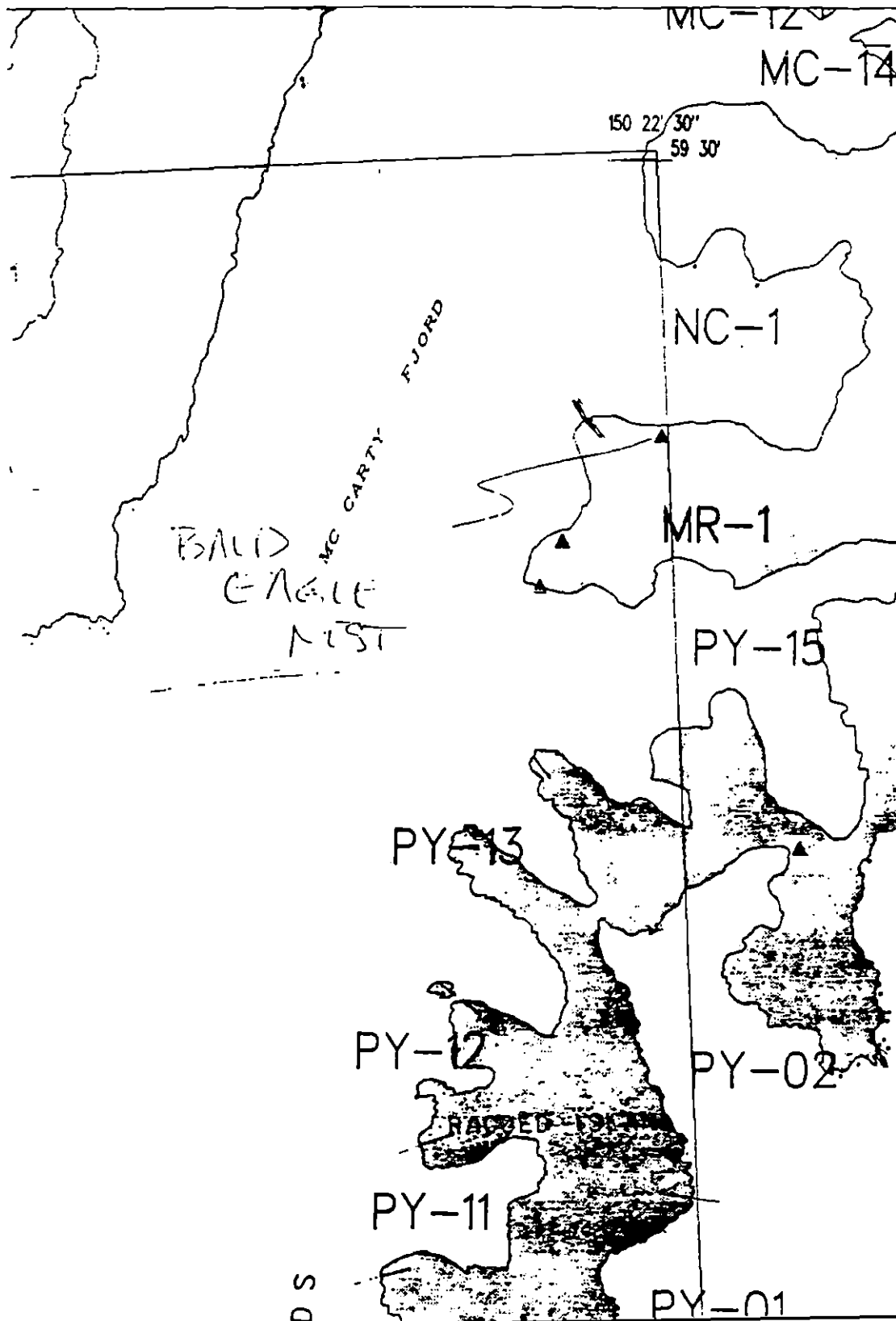
The Shoreline Ecological Summary form data is probably not reflective of the very great diversity and abundance of intertidal life in this segment. This area is no less rich than any area in the oil-impacted portion of PWS I have observed since the spill. There are good stands of last year's Nereocystis off the rocky points, supporting a diverse benthic community including an abundance of Melibe leonina. Nerolox waters also have a great abundance of ctenophores at this time, + occasional Aurelia. Fucus is largely confined to MTE and UTE bedrock because of competition with the profusion of other algae. These are discontinuous rather than bands of MTE mussels. Fucus and mussels seem to be recruiting well (especially mussels) locally where populations are established. Littorines and limpets also are recruiting well. Barnacle settlement is relatively sparse compared to PWS, and is confined mainly to the MTE and UTE. Spat set seems to be lagging behind PWS, since there are sparse cyprids but very few actual metamorphosed spat. Judging from the appearance of the water and profusion of ctenophores, however, the bloom is + has been well underway. The dominant bedrock/large boulder beaches are extremely diverse. Benthic boulders are numerous pricklebacks, Spiroble, Bryozoans, limpets, Halichondria, Amphisa, scaleworms, nemertean, Idotea, brooding Leptasterias, etc. The entire UTE is covered 100% by a diversity of algae: Costaria, various laminarians, ulvalae, Enteromorpha, Pterosiphonia/Polydora, filamentous greens (Acrosiphonia), Sargassum, coralline algae (Filothamnion + erect articulated forms), Gracilaria, Petrocellia forms, several foliose reds. Animals include Panopeus, Pinnat, Dermasteria, Mediaster, Henricia, Orthasterias, Tucella lanellata, N. lineis, Semidosia, Acropora, Katherina, Tonicella, Mopalia, Galathea, Anthopleura (3 spp.), Podocarpus, Protolaea, serpulids, bryozoans, Cucumaria miniata, Medusae, etc. etc. Exceedingly healthy and productive intertidal zone.

45/6:

COLONIES

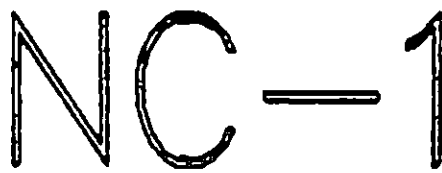
ECCOLOGICAL
MAP

ST(13)



DS

2. 0. 1. 1. 1.



Map Key: KEN-NC-1

/// Medium

Name: Edy Dell

--- Narrow

Approx. Segment Length: 9092m

Date: 04/25/90

TTTT Very Light

SHORELINE EVALUATION

SEGMENT ST/ NJ-01 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1K Purse seine hook-off (7/20 to 9/30)

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

6V 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 substrate and biota.

SHPO SIGNATURE: J. David McMillan DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 38 m: No Oil 2736 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

PICKUP TAR PATCHES AS INDICATED ON MAP/SKETCH.

TAG COMMENTS:

HIGH HUMAN USE

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER D. Weiner

EXXON ANDY TEH Andy Teh

NOAA Burt Wesscott Burt Wesscott

USCG G.A. Reiter G.A. Reiter

FOSC: nyh 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 (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 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.
- 6U ~~Seabird colony (5/1 to 9/1)~~
6V ~~Seabird colony (5/1 to 9/1)~~
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 / NJ-01 SUBDIVISION: A-10F1 DATE 04/06/90

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 mats - Vt oiling observed.
Regulatory Fishing Marker observed. Supertidal not
observed due to snow cover.

LAND MANAGER

NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

POM Pom collected in area marked Lagoon on
map.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick Gillie USCG BM 1 Thomas SEGMENT ST/ NJ-01
 NO DAVE Lohr LAND REP Marsha Martin SUBDIVISION A, 1 of 1
 EXXON FRANK ADEC Clara Crosby (ADNR) TIME 07:00 to 08:40
 TEAM NO.: 13 TIDE LEVEL: +3 to +6 DATE 04/06/90
 EST. SUBDIVISION LENGTH: 2,968 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW, snow to +10' TIDE
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 30 % C 30 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 80 % Hang 15 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 10 m NO 2,958 m

SURFACE OIL

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

PAVEMENT: H F S JA sq. m by 0 cmPATTIES / TARBALLS 0.5 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE T#BAGS 0.5

Photographs:

Roll No. ST-13-2Frames 30-34

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		VO	UC	1	2	3	4	5	6	7	8			
1	20					X	.													C, S
2	20					X	.													P, S
3	20					X	.													P
4	20					X	.													P
							.													
							.													

COMMENTS

- SCATTERED PATTIES FOUND ON BEDROCK IN UPPER INTERTIDAL AT LOCATION OF "JUAN" B.M.
- REMAINDER OF SEGMENT HAS NO OIL
- COLLECT POM-POM TEASH (SM AMT)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / NJ001 Subdivision A Date (mo / day / yr) 4-6-90
 Time (24 hr) 7:15 Biologist David Lohr

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 30 (3) Cobble 30 (4) Pebble 15 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 25 Low 65
- (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-13-2
 Frames 30-34

BARNACLES

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

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
3	3	3	3	3	3	3	3	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

FUCUS

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

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

K, 6U, 6V - no comment

Shoreline Ecological Summary

Zotz

Segment ST-NS001

Subdivision A

4-6-90

Biologist: David Lohr

Wildlife Observation/General Comments

1. low intertidal not sampled
2. present in mid intertidal: Anthopleura, Coralline algae, Enteromorpha, Ulva, Ralfsia
high intertidal: Enteromorpha
3. many shore birds (water fowl), ravens spotted in area
4. 1 mature bald eagle spotted in area
5. Slightly south of site 2 (see OG map) there was 50% mortality of mussels on mid-intertidal bedrock, 75% mortality on high intertidal bedrock
6. Near bench mark Juan (see OG map), there was ~50% mortality of mussels on mid-intertidal bedrock. Many of these shells were crushed.
7. 1 sea otter spotted in area
8. Many deer tracks, and what appeared to be lynx or wolverine tracks were spotted above the high tide line
9. Several salmon fishing regulatory signs observed in segment
10. Two small streams, apparently feeding off either small lagoons or lakes, were observed in segment. No oil found. No indication of ecological sensitivity in the sensitivity tables.

to Rick BLUE

SEGMENT ST/ NV-01

SUBDIVISION A-10F1

DATE 04/06/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Grid
- ☒ Oil Det.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LML
- SSL
- 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
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splotched Distribution

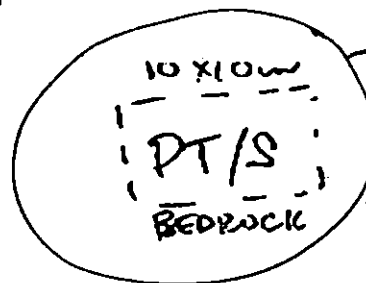
Oil Vegetation

1 ●
Photo location, direction,
and number

SKE MAP

1,600 m

PORT NEHE JUAN



MANUAZ PICKUP

REVISION:000000

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 5 TB 0 FL 0 NO 2,963

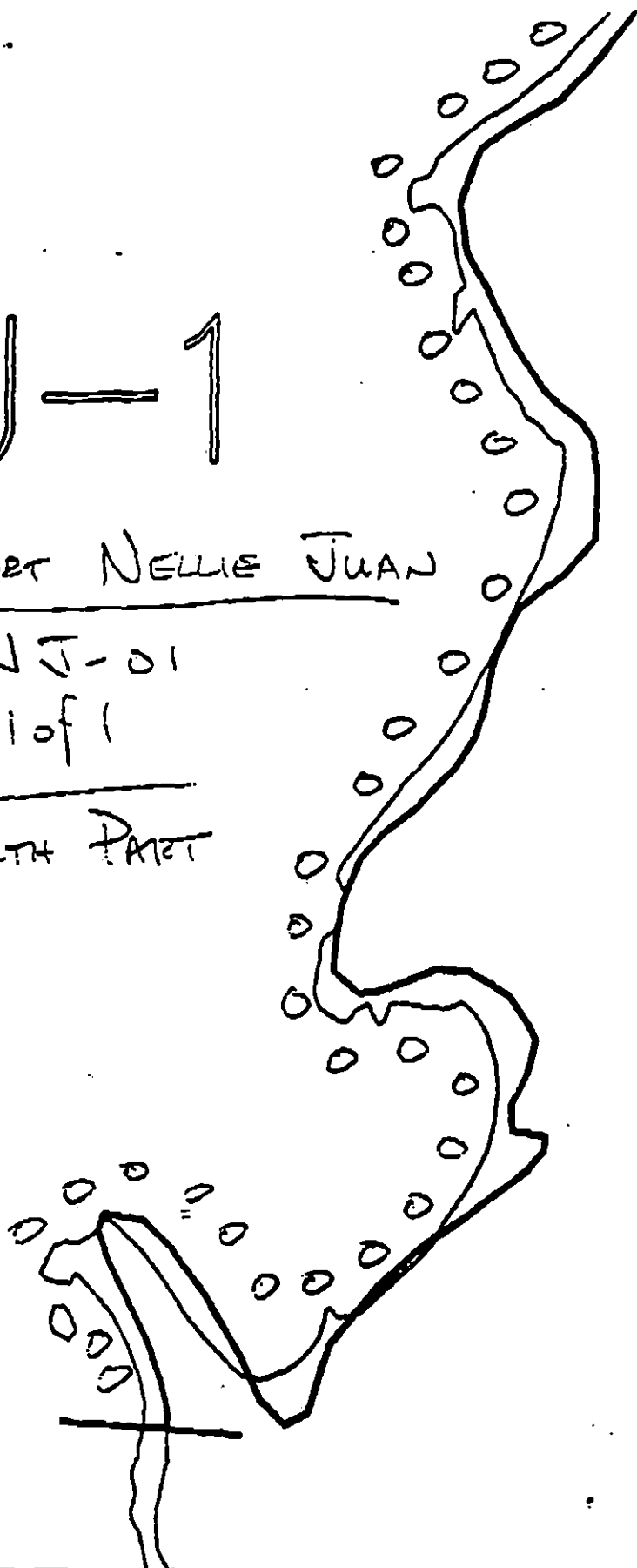
PWS 498C

NJ-1

PORT NELLIE JUAN

ST/NJ-01
A, 1 of 1

OUTH PAET



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

NJ-1

ADEC Segment Length: 2774m

Map Key: PWS-498C

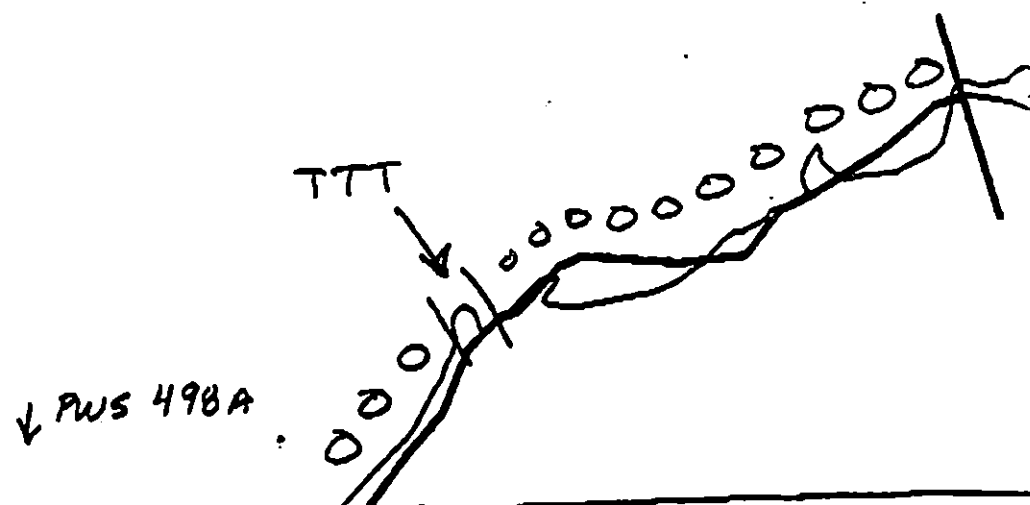
Name: R. GILLIE

Date: 4/6/90

PORT NELLIE JUAN

SEGMENT : NJ-01
SUBDIVISION : A-1 of 1

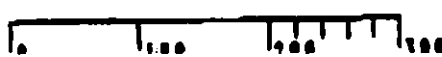
NORTH PART



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

NJ-1

ADEC Segment Length: 2774m



Map Key: PWS-498c
Name: R. GILLIE
Date: 4/6/90

SHORELINE EVALUATION

SEGMENT ST/ NJ002 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific ecological time constraints have been identified for this subdivision.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Kathleen Wren DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 6 m: V.Light 230 m: No Oil 1877 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is manual removal of pooled oil as shown on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6/20/90

ADEC Ray Wieros
EXXON Arny TGA FOSC: W L DATE: 7-10-90
NOAA Joseph Talbot
USCG G.A. HEITER

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NJ-2 SUBDIVISION: A DATE 5-31-90CG
NAME J. FASIOU SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manu. - p. 1 - 1
Agree with OG sheet

ADEC
NAME D. Munson SIGNATURE _____☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

NOT PRESENT THIS SURVEY

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ NJ-2 SUBDIVISION: A DATE 5-31-90**USCG**NAME J. FASIOU SIGNATURE _____☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**
NAME D. MUNSON SIGNATURE Dianne Munson☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- Primarily bedrock cliff with several pocket beaches.
- The heaviest oil within this segment is in a pebble, cobble channel at the high intertidal zone. Pooled / splashy oil was observed to a depth of 2 cm.
- The majority of the segment contained sporadic tar balls, coats and covers.
- Recommended treatment includes manual removal of oil in the pebble / cobble channel.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

NOT PRESENT THIS SURVEY

SHORELINE OILING SUMMARY

REPORT NO. 4 10

OG G. MACDONALD USCG J. FAZIO SEGMENT ST/ NJ-2
 BIO S. BAN LAND REP — SUBDIVISION A (1 OF 1)
 EXXON — ADEC D. MUNSON TIME 11:50 to 13:35
 AM NO. 99 TIDE LEVEL +3 FT to +1 FT DATE 5/31/90
 EST. SUBDIVISION LENGTH: 2,000 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 70 % B 5 % C 10 % P 10 % G 5 % S — % M — % V — %
 SLOPE: Long 10 % Hang 15 % Vert 75 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N 5 m VL 250 m NO 1745 m

SURFACE OIL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE oily s/s.#BAGS 1

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	OP	NO		UO	UC	1	2	3	4	5	SW	U	M	U						
1	12					X	.									X							10	PGM
2	15					X	.										X						12	PGM
3	7					X	.										X						—	CM.
4	23					X	.									X							22	PS.
5	20					X	.										X						17	CPG
							.																	

COMMENTS steep rocky shore w/ occasional cob-peg beach. Single area of P/Lo oil @ NE of isls plus some v. light et/s. No

subsurface oil.

Some of the P/Lo oil was collected by the survey team; sufficient oil remains to justify ≤5 manhours manual removal.

REVIEWED BAT DATE 5 June 90

OG ACDONALD
 SEGMENT ST/NJ-2
 SUBDIVISION A
 DATE 5/31/90

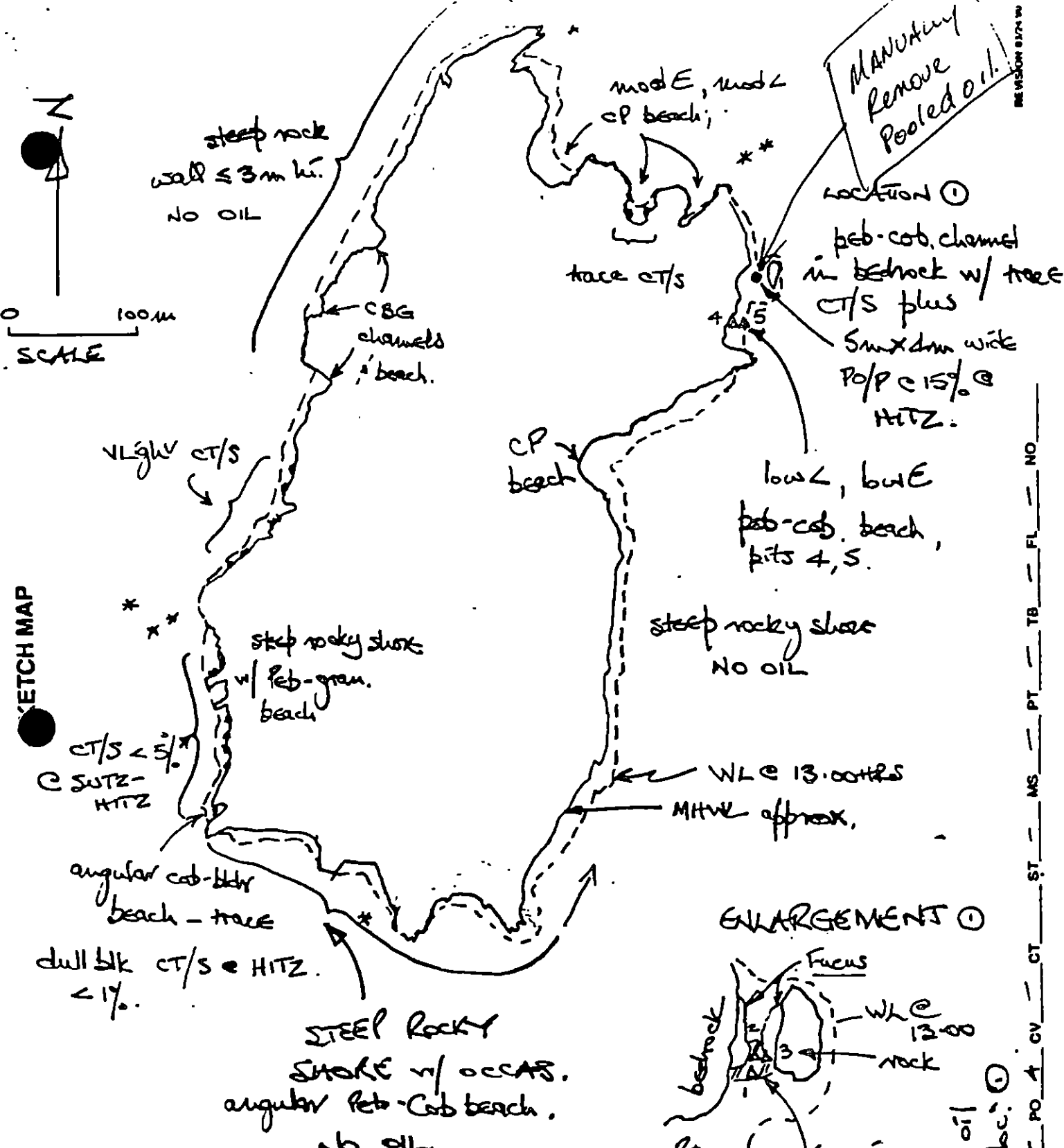
- CHECKLIST**
- ☐ N Arrow
 - ☐ Approx. Scale
 - ☐ Sep/Sub Bndry
 - ☐ Oil Dist.
 - ☐ Wash
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. HWT/LWT
 - ☐ SSI
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ P/L Location(s)
 - ☐ Photo Location(s)

LEGEND

- 1 Δ Pt. - No Subsurface Oil
- 2 Δ Pt. - Subsurface Oil
- CT/C Contiguous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Stippled Distribution
- * Rock
- $\odot$ Cited Vegetation
- 1 $\leftrightarrow$ Photo location, direction, and number

$\leftrightarrow$ v. light CT/S oil
 $\square$ Po/P oil bc: ①

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



SHORELINE ECOLOGICAL SUMMARY

REVISION: 12/22/90

Segment ST / 105-2 Subdivision None A Date (mo / day / yr) 5/31/95Time (24 hr) 1150 Biologist Ban(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense X 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. NAFrames

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

Littorines dense on Fucus fronds

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

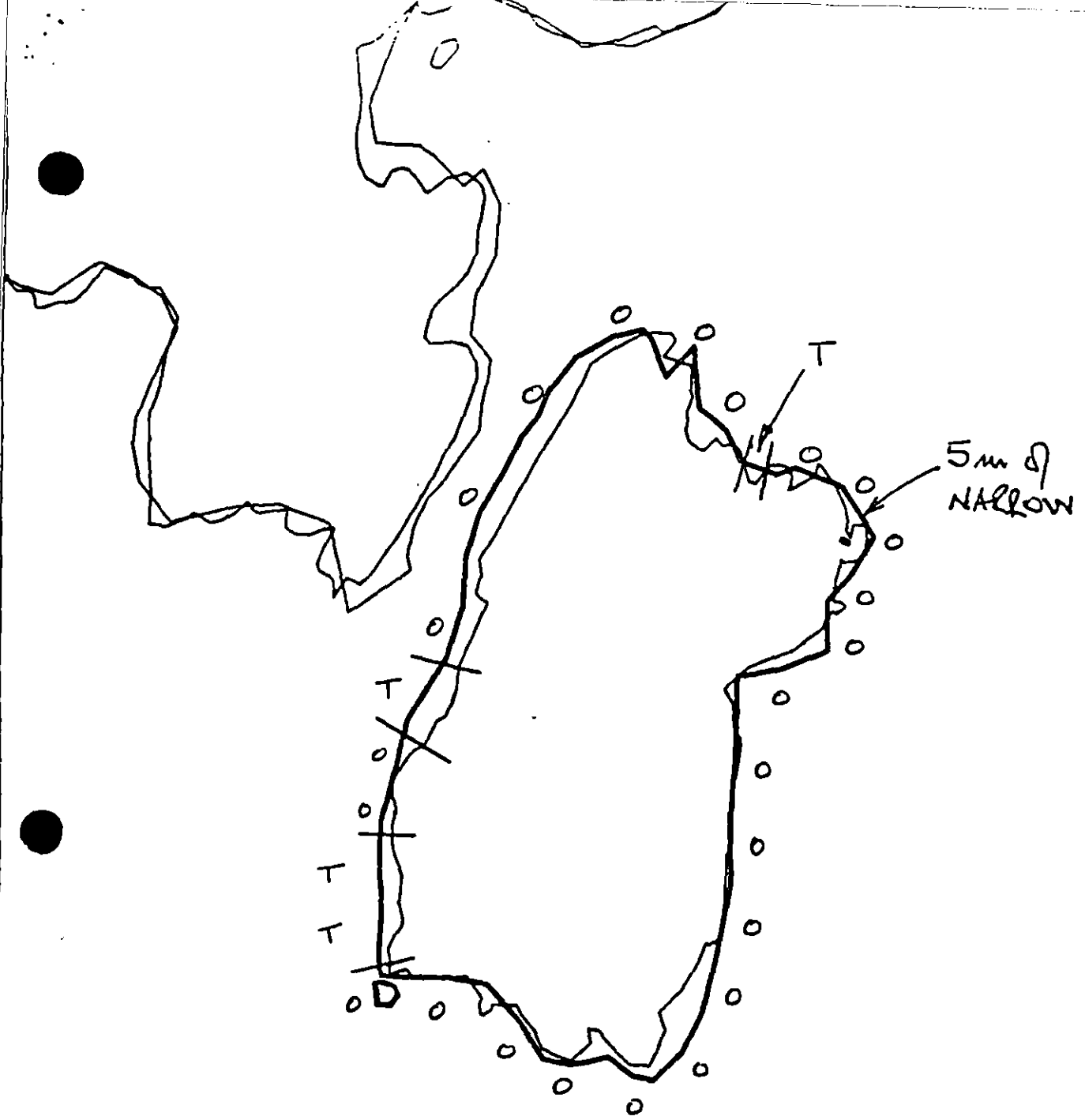
NOT PRESENT

Wildlife Observations/ General Comments: *Pisaster*, *Pycnospira* & *Urosalpinx* present.*Balanus* & *Mytilus* sp. dense on boulders. *Fucus* beds dense & healthyNo oiled or stressed organisms. *Littorines* patchy & dense to v. dense on *Fucus*

No eagles or eagle nests observed on the Island

Ecological Considerations:

Not walk on *Fucus* beds.Eagles not a problem for access



XXXX Wide

//// Medium

--- Narrow

TTT Very Light

OOO No Oil

NJ-2

ADEC Segment Length: 2031m



Map Key: NJ-2

Name: G. MACDONALD

Date: 5-21-90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NJ-2 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No applicable ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

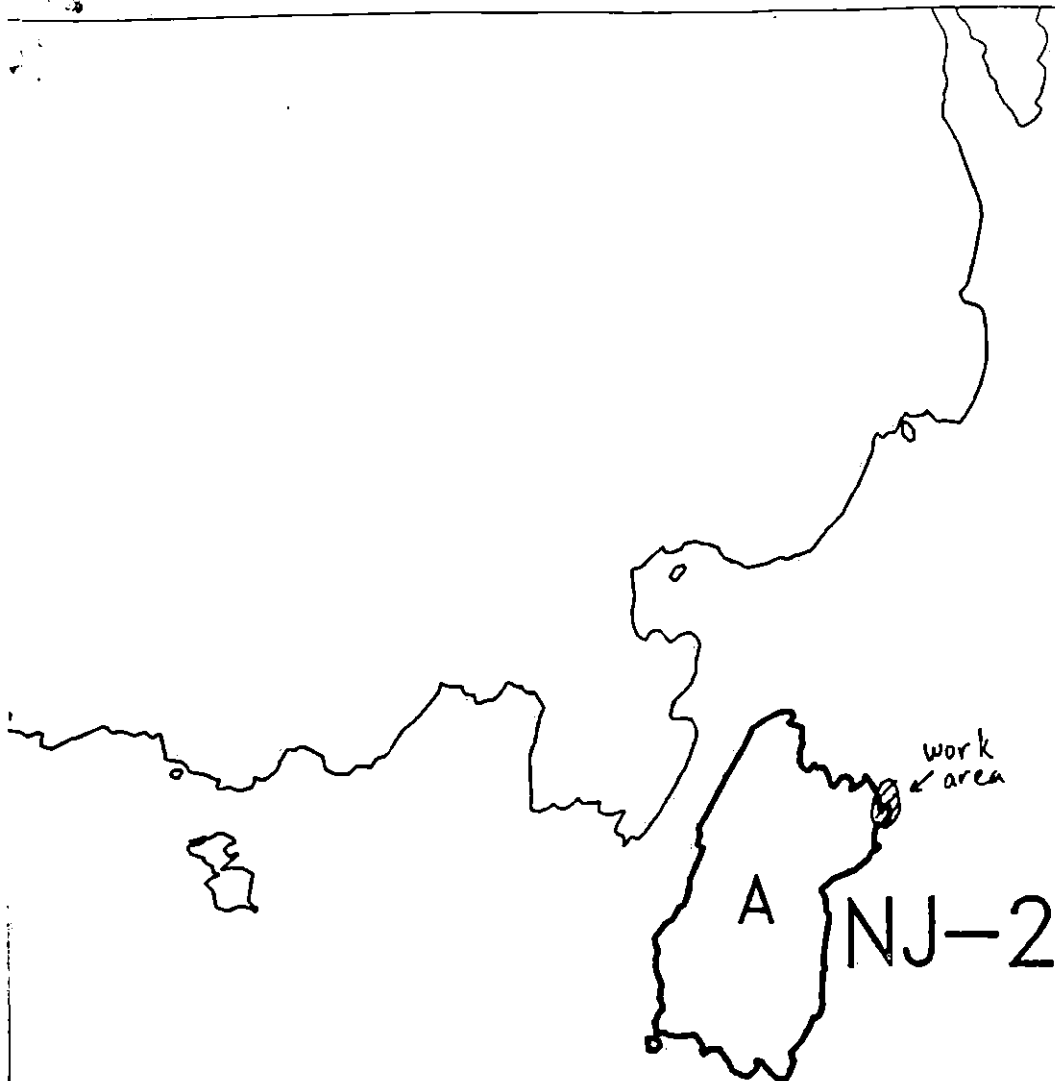
Date

7-12-90

Prepared by

Date

7/12/90



Exxon Coastline
Exxon Company, USA
Map Key: PMS-NJ-2
July 11, 1990



ECOLOGY MAP
SEGMENT NJ-2
SUBDIVISION A (1 of 1)
METERS
0 383 765

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

1 inch = 1255 feet

SHORELINE EVALUATION

SEGMENT ST/ NK-001 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird Colony (5/1 to 9/1)
5T Active Bald Eagle Nest (3/1 to 6/1)
4GG Alaska State Park

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to
uncoiled substrate and biota.

SHPO SIGNATURE: K. Marken E. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 56 m: Narrow 0 m: V. Light 360 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> </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: Recommend tarmat removal by shovel and hand trowels in asphalt area indicated on attached sketch map. Treatment activities should be conducted prior to May 1 and/or only after obtaining clearances from ADF&G and DNR.

TAG COMMENTS:

REVIEW AND EXAMINE UITS/SUITZ FOR OILED DEBRIS BY MONITORS.

TAG APPROVAL DATE: 4/14/90.

ADEC Art Weider Dittmann

EXXON Andy Tan FOSC: DATE: 5-1-90

NOAA Bull Worcott Bull Worcott

USCG G.A. Reiter G.A. Reiter

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/20 to 5/10)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to 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.
- 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.
- 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 / NK 01 SUBDIVISION: A DATE 4/7/90

USCG / NOAA
NAME JACQUI MICHEL SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

This area has two main zones of oil contamination: 1) very discrete patches of widely spaced pavements along the U I TZ of the main beach; 2) a smaller beach on NE side w/ larger pavements. The NE pocket beach had some sheens, even though the ground was frozen in places. These pavements should be removed manually. There is little / no concern for erosion. Care should be taken to not disturb the lower intertidal zone on the NE shore.

ADEC
NAME JOAN R. REED SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I recommend using shovels and hand trowels to pickup the spread asphalt pavements. The main beach is very low angle and has an anadromous stream on the N/E end. The U I TZ was mostly covered with snow and I feel like we were missing some of the contamination. ~~There is no evidence of contamination on the beach or in the stream.~~ I have read and agree with all data on S.S.A.T. Report.

LAND MANAGER-DNR/DNR
NAME J. Ray S. Johnson SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Concur with above comments; concerned about saw covered U I TZ + recommend another look over later. No problem with intrusive methods this segment, but manual pickup of mats probably best. noted no oil debris or driftwood, except for 1 surfact pad. Note segment is a DNR priority due to STATE PARK designation, though access is limited by good weather, because of SE exposure.

SHORELINE OILING SUMMARY

REVISION NO. 02/28/90

OG Mann USCG Michel SEGMENT ST/ NK-1
 RIO Carr LAND REP Tahson - DNR SUBDIVISION A
 XON Boyer ADEC Reed TIME 6:45 to 2:55
 CAM NO.: 18 TIDE LEVEL: +1 to +3 DATE 4/17 1990
 EST. SUBDIVISION LENGTH: 800 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: all to over
 SURFACE SEDIMENTS: R 5 % B 5 % C 40 % P 40 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 50 m N 0 m VL 350 m NO 400 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	CG	FB	FP	FR	SB	SB	SB	SB	SB	SB	SB	SB	SU	U	M	U
ASPHALT PAVEMENT		✓		✓									✓			
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES				✓									✓	✓		
TARBALLS																
FILM *																
NO OIL													SN	SN	✓	

PAVEMENT: H F (S) 200 sq. m by 6 cmPATTIES / TARBALLS 10 bags of asphalt BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE asphalt#BAGS 1

Photographs:

Roll No. ST 18-4Frames (9-18)

* probably present but can not see under these conditions
 SUBSURFACE OIL conditions JU out

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-10)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SB	SB	SB	SB	SB	SB	SB	SB	SU	U	M	U		
1	20					✓												✓				NO	PGS throughout
2	25					✓												✓				"	"
3*	30					✓												✓				"	"
4*	25					✓												✓				"	"
5	25					✓												✓				"	PG throughout
6	30					✓												✓				"	PGS throughout

COMMENTS * pit has oil on surface (an asphalt)

An temperature in upper 20's ° F. Beach face is frozen tight. We are unable to
 achieve about 1/2 of the UITE and supra-tidal ^{ZONE} due to snow cover.

Oiling is mostly in the form of remnant mouse accumulations that now
 exist as patches of asphalt. Widely - scattered, remnant mouse patches
 exist throughout the Middle and UITE. This shoreline is very low -

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/98

SEGMENT ST/ NK-1 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1/2	3/4	1/2	3/4	1/2	3/4	BU	U	M	L		
7	25					✓	.									✓				NO	CP over PGC
8	30					✓	.									✓				"	CBP over PGC
9	25					✓	.									✓					"
10	25					✓	.										✓				"
							.														
							.														
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COMMENTS

No burial of oil was evident

angled. The size of the storm berm suggests that waves, at least occasionally, move sediment on and across the beach. Most of NK-1 consists of the intertidal portion of a pebble-cobble-small boulder delta formed by 2 streams at the head of a long, narrow cove. Our survey was not at an ideal time because of the snow cover in the upper portion of the UITE.

REVIEWED _____ DATE _____

XG Mann

SKI MAP

SEGMENT ST/ NK-1

SUBDIVISION A

DATE 4-7-90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dial
- ☒ Width
- ☒ Length
- ☒ S Cover
- ☒ Substrate Character
- ☒ Seal HML/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Fit Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 A**
Fig - No Subsurface Cl

- 2A**
Fig - Subsurface Oil

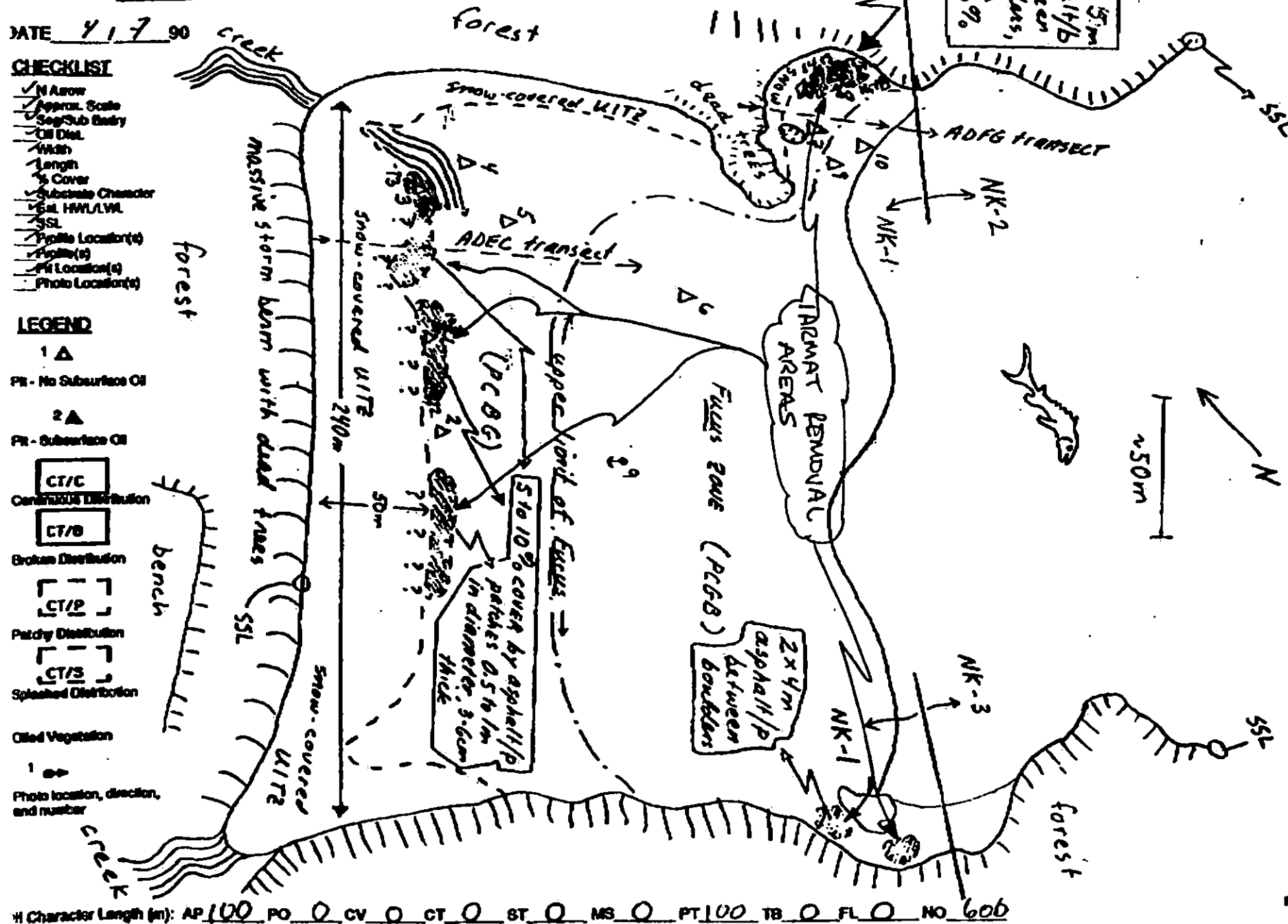
CT/C
Controlled Distribution

CT/O
Broken Distribution

CT/P
Patching Distribution

CT/S
Selected Distribution

Cultivated Vegetation

Photo location, direction,
and number

* Character Length (in): AP 100 PO 0 CV 0 CT 0 ST 0 MS 0 PT 100 TB 0 FL 0 NO 606

REVISION: 03/14/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / NK 1 Subdivision A (of A) Date (mo / day / yr) 4 / 7 / 90
 ne (24 hr) 0645 Biologist M. CARR

(A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 5 (3) Cobble 40 (4) Pebble 50 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 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: 4
 Roll No.

Frames 9-18

BARNACLES

	Dense	Moderate	Sparse	Rare	
1U	2	2	2	2	1L } BED ROCK & BOULDER DID NOT EXTEND INTO LOWER ZONE
2	3	3	3	3	2
3	4	4	4	4	3
4	5	5	5	5	4
5	6	6	6	6	5
6	6	6	6	6	6

NOT PRESENT

MYTILUS

	Dense	Moderate	Sparse	Rare	
1U	2	2	2	2	1L } BED ROCK & BOULDER DID NOT EXTEND INTO LOWER ZONE
2	3	3	3	3	2
3	4	4	4	4	3
4	5	5	5	5	4
5	6	6	6	6	5
6	6	6	6	6	6

NOT PRESENT

NOT PRESENT IN UPPER ZONE OF ANY SUBSTR.

GASTROPODS

	Dense	Moderate	Sparse	Rare	
1U	2	2	2	2	1L } BED ROCK & BOULDER DID NOT EXTEND INTO LOWER ZONE
2	3	3	3	3	2
3	4	4	4	4	3
4	5	5	5	5	4
5	6	6	6	6	5
6	6	6	6	6	6

NOT PRESENT

NOT PRESENT IN UPPER ZONE OF ANY SUBSTR.

FUCUS

	Dense	Moderate	Sparse	Rare	
1U	2	2	2	2	1L } BED ROCK & BOULDER DID NOT EXTEND INTO LOWER ZONE
2	3	3	3	3	2
3	4	4	4	4	3
4	5	5	5	5	4
5	6	6	6	6	5
6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

LAND OTTER (1)

HARBOR SEAL, *Phoca vitulina* (1)

Ecological Considerations:

Sensitivity codes: 4-EG (Alaska State Parks), 5-T (Bald eagle nest),
 5-R (Seabird colonies).

ONLINE ECOLOGICAL SUMMARY

REVISION: 2.0

Segment ST UK 1 Subdivision A (of A) Date (mo / day / yr) 4 / 7 / 90
Time (24 hr) 0645 Biologist M. LARR

- (A) Substrate type and % of ^{subdivision} segments:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 40 (4) Pebble 40 (5) Sand 10 (6) Silt 0
- (B) Overall % cover of biota (% of ^{subdivision} segment): Dense 50 Moderate Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low L; L-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. 4
Frames 9-17

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	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	

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	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	

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	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			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	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	

Wildlife Observations/ General Comments:

LAND OTTER (1)
HARBOR SEAL (1)

Ecological Considerations:

Sensitivity codes: 4-GB (Alaska State Park), 5-T (Bald Eagle Nest)
5-R (Seabird colony)

good luck!

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

NK-1

ADEC Segment Length: 1947m



Map Key: KEN-64a

Name: Mann/NK-1

Date: 4/7/90

Auto Release

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NK-1 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation More Than 100m From Stream WORK PRIOR TO 7/20	
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 Streams | Four ADF&G catalogued anadromous streams (232-21-2010, 232-21-2006, 232-21-10240 and 232-21-10230) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal. |
| 1J Purse Seine Hook-off | No constraint to tarmat removal. Closed to bioremediation after 7/20. |
| 5R Seabird Colony | No constraint; colony is outside of Segment NK-01A and more than 800m from recommended treatment area. |
| 5T Bald Eagle Nest | NO CONSTRAINT. Eagle nest more than 400m from recommended treatment area. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to uncoiled blots and substrate.

FOSC

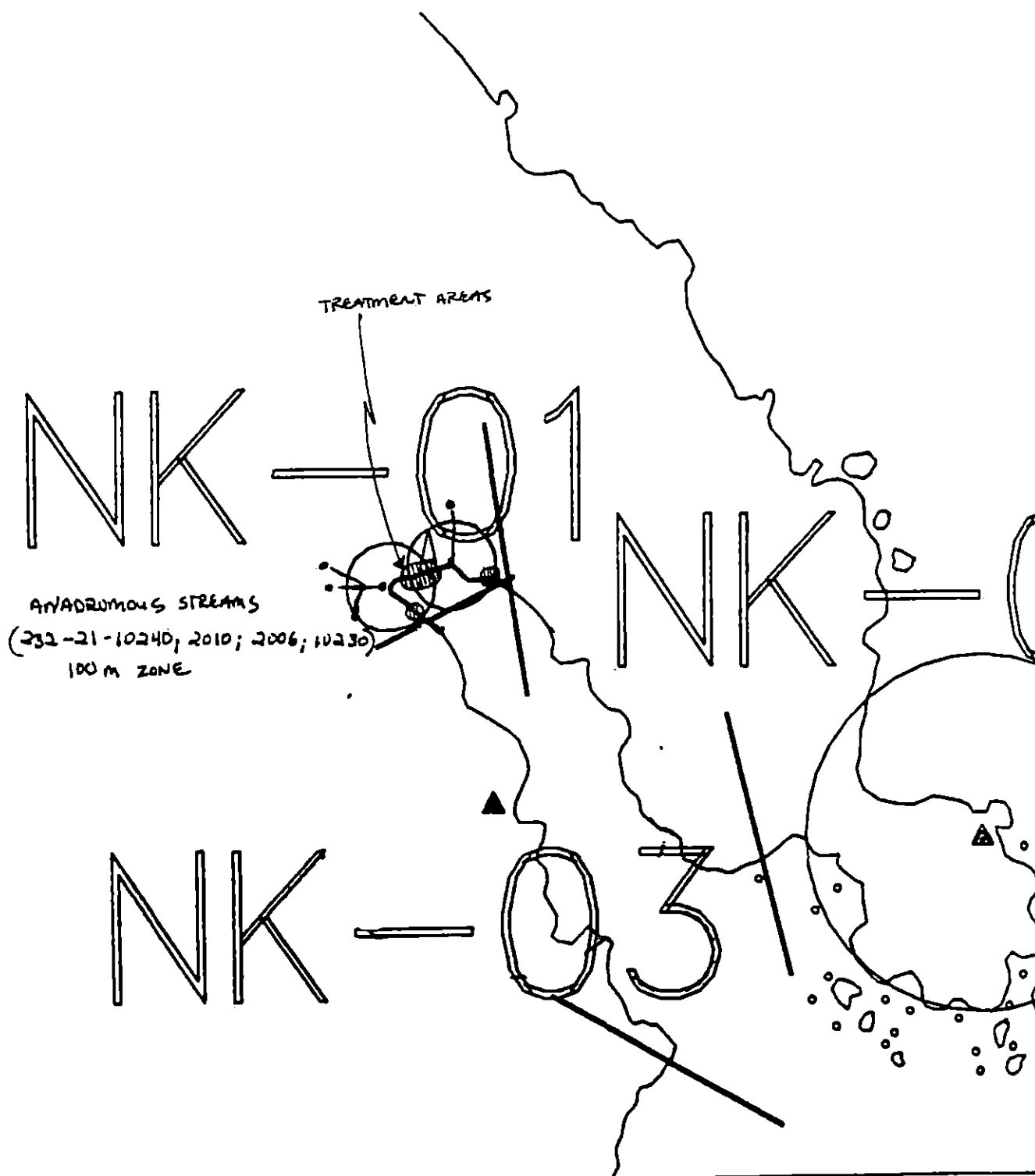
Date

6/16/90

Prepared by

Date

6/14/90



Exxon Company, USA

ANADROMOUS FISH STREAM EVALUATION

232-21-10230

SEGMENT ST/ NK-001 STREAM NO: 232-21-10240 A DATE 4/30/90

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)
1J Purse seine area (7/1 to 8/30)
4GA State Marine Park Alaska State Wilderness Park

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject streams are located within subdivision A (1 of 1). No additional ecological constraints.

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

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat in the UITZ as indicated on the attached sketch map. Contact ADNR for Wilderness Permit. Work form 5/16 to 7/1.

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

TAG APPROVAL DATE: 5/18/90.

ADEC Art Wehner Art Wehner

EXXON Andy Carl

NOAA Gary Petree

USCG G.A. REITER

FOSC [Signature]

DATE: MAY 25 1990

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 8/15)
 1F Sawmill Bay Hatchery release (4/15 to 8/1)
 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
- ✓ 4664 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 (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)
 - 1H Finfish harvesting
 7U Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

7/1
SEGMENT ST / NK-1 SUBDIVISION: _____ DATE 4/30/90

USCG

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADP for

~~ADP~~

NAME Doug Hill SIGNATURE Douglas D. Hill

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS *Recommend Manual pickup and removal of tarballs and tar patties/tar mat from North shore and from West shore (tar patties near South Salmon stream mouth). (SEE Attached maps).*

Two Salmon streams exist at the head of NE Cove Nuka.

- A substantial amount of oil still exist at the eastern end of NK-1 (Beach was pressure washed in 1989).

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NK-1

EXXON COMMAND CENTER (HOMER)

P.O. Box 4848
4014 Lake St.
Homer, AK 99603
Tel: 235-6444
Fax: 235-5960

DEC 1990

The attached is a copy of SSAT NK-001 plus comments from ANAD.
stream #232-21-10230 and 232-21-10240. This should be used
NAKA Es-001. Refer to SSAT NK-001 file for operations notes.

[Handwritten signature]
DEC 4/20/90

*This was typed by Darryl Yoles but very difficult to
read after being faxed. garb.*

GROUP A

ADFG MULTI-ASSESSMENT DATA FORM

Prescreening

1 SURVEY TYPE: BS SS OS TS AVS SCVA HWS PTA _____ 2 REGION: PWS JP, CI K, AP _____

METHOD: Aerial Ground Boat _____

3 DATE: 4-14-90 15 HIGH TIDE TIMES: 1706 21 TEAM RECORDED: Doug Hill

4 START TIME: 0933 16 HIGH TIDE HTS: 9.6 22 OBSERVERS: S. McLaughlin J. P. ...

5 STOP TIME: 1046 17 LOW TIDE TIMES: 1053 23 AGENCY: ADFiG

6 SEGMENT #: NK-1 18 LOW TIDE HTS: 0.2 24 PHOTOS TAKEN: Y N
900DH004-N
 Roll #: _____ From: 1, 2, 3, 4, 5, 6

7 STATION #: _____ 19 TIDE HT AT SURVEY: Low 25 VIDEO TAKEN: Y N TAPED: _____

8 K-UNIT: _____ EDB Stack Flood Stack 26 VIDEOS TAKEN: Y N TAPED: _____

9 STAT AREA: 232-21 20 USCG QUAD: _____ Starts: _____ Ends: _____

10 LAT: 59° 23.6 N 11 LONG: W 150° 38.4 28 SAMPLES TAKEN: Y N Number _____

12 SOURCE: Map Loran 011 NK-1-0045m-4/14/90-1

13 LOCATION: AFS-232-21-10230, Nuka Island, NW portion of NE Cove Sediment

14 DESCRIPTION: North Corner of Bay / NE Point 90° Biological _____
 Extent of Oil _____ Water _____

27 SURFACE COVERAGE

--	--	--	--	--	--	--	--

28 SURFACE THICKNESS

--	--	--	--	--	--	--	--

29 PENETRATION

--	--	--	--	--	--	--	--

30 OVERALL OIL IMPACT: M VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain
Coating on rock walls

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 30 Boulder 10 Cobble 30
 Gravel 30 Sand _____ Mud/silt _____

36 CATALOGED ANNO. FISH SKEWT Y N

37 CATALOG 232-21-10230
10240
NE COVE - NUKA ISLAND

38 STREAM NAME: NE Cove

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N
 Where: North and NE shore

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: N.E. Nuka seems little changed since last Fall.
There were fewer observed tar mats in the stream channel
but the side pocket beaches contain significant amount
of mousse between rocks and on rock walls. No difference
was observed between before & after amounts of oil on beach & rock faces spray

FRAME(S)

DESCRIPTION

1. 2.	Aerials at Tide Flats & AFS mouth/outlet/Head of NE Cove at
3.	Overturned Boulder - mussels, shells & Todd Lin. peds (with common on
5, 6, 7.	Deep Melane (ADEG) holding oiled pom-pom "airhost" kept on Pressure
8.	Washed beach.

NK-1

NE NUKA
ISLAND COVEANADROMOUS STREAM
CATALOG NUMBER

232-21-10230

232-21-10240

TAR PATTIES
 4" x 4" to
 12" x 12"
 < 1/2 thick

LITZ

TARMIN'S
TAR PATTIESoil coated Rock
FACE

"oiled Pom Po"

Pressure
washed in
1989

TAR PATTIES, Mo
 Found beneath
 Cobble and Boulder
 and visible in
 Interstices

ANADSCAT-Recommended

- Sample taken
- Photo frame # and

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NOS. 232-21-10230 & 232-21-10240

SEGMENT NK-001 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal

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 streams (232-21-10230 and 232-21-10240) are in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

1J Purse Seine Area

Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Injoi to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic to essential minimum 7/20.

SEE SUBDIVISION CONSTRAINT ADDENDUM NK-001A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]
[Signature]

Date

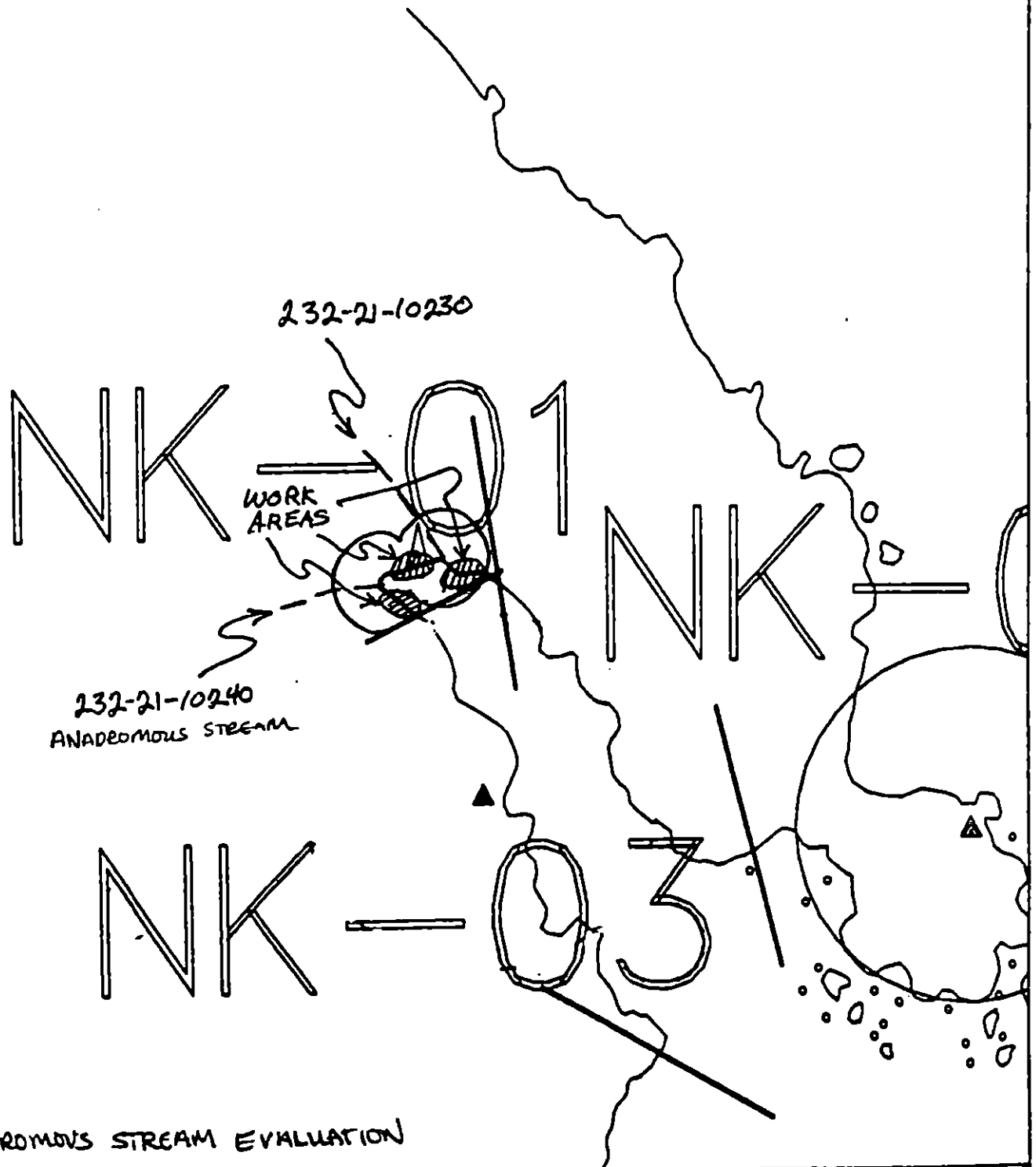
6/13/90

Prepared by

[Signature]

Date

6/12/90



Exxon Company, USA
Map Key: KEN-NK-1



ECOLOGY MAP
SEGMENT NK-1
SUBDIVISION A (J-01-L)
METERS

★ Seabird Colony
▲ Eagle Nest

1 inch = 1144 feet

SHORELINE EVALUATION

SEGMENT ST/ NK-002 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T Bald eagle nest (3/1 to 6/1)
4GG Alaska State Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles Z. H. [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 182 m: Narrow 204 m: V. Light 0 m: No Oil 163 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal in areas shown on attached sketch map and bioremediation in areas of broken cover and coat, also shown on map. Work to be conducted after 6/1 based on above eagle constraint and with approval of ADF&G and USFWS concerning seabird colony.

TAG COMMENTS:

MONITORS TO ASSESS SUITZ FOR OILING (SNOW COVERED AT TIME OF SURVEY).

TAG APPROVAL DATE: 4/17/90.

ADEC [Signature]
EXXON ANDY TEAL
NOAA Paul Wascott
USCG KENNETH PETER

FOSC: [Signature] DATE: 4-26-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ UK 02 SUBDIVISION: A DATE 4/1/90

USCG/NOAA

NAME JACQUES MICHEL SIGNATURE Michel

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The oil bands on the rocky headlands do not warrant further treatment. However, the pavements should be removed manually. There were abundant sheens (w/ 20°F air temps) on the intertidal sediments. On some beaches, the pavements were 10-12 cm thick and very soft. These areas will be difficult to clean because of the scattered veneer of cobbles. It is as if the upper half of the oil was removed (during "B" cleanup last year?), leaving behind a thin, lower zone. Penetration is limited to 4-12 cm in well-packed sediments.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Asphalt pavements should be removed manually with a shovel or hand trowel. This area was warm water washed last summer. There is an unsoiled layer of cobbles sitting on top of the 8-10 cm thick pavements that would need to be moved in order to get to the asphalt. Some sheening was noticed. LITZ was covered with snow. I have read and agree with all data on SSAT forms.

LAND MANAGER/DNR

NAME John S. Johnson SIGNATURE John S. Johnson

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Agree with SSAT data, and concur with the above comments. Manual removal recommended, but will be difficult. May want to use pump pons in the oil warms up + thins more. No opposition to intrusive treatment, but should be careful not to disturb healthy mytilus + balanus in the LITZ. No oiled driftwood or debris. Oil band high in the bedrock indicates a strong possibility of oil in the snow covered LITZ as well.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mann USCG NORA Michel SEGMENT STI NK-2
 BIO Carl LAND REP Johnson DNR SUBDIVISION A
 ION BOYER ADEC DEED TIME 7:55 to 8:45
 IAN NO.: 18 TIDE LEVEL: +3 to +4 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 545 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 50 % B 10 % C 30 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 240 m N 240 m VL 0 m NO 65 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SP	OR	OT	SL	TL	LA	SU	U	M	U		
ASPHALT PAVEMENT		✓	✓	✓					✓			✓				
POOLED																
COVER		✓	✓	✓		✓		✓				✓				
COAT		✓	✓	✓		✓		✓				✓				
STAIN				✓		✓						✓				
MOUSSE																
PATTIES																
TARBALLS																
FILM		✓	✓	✓			✓					✓				
NO OIL											SN	SN	✓	✓		

PAVEMENT: H F (S) 200 sq. m by 6 cmPATTIES / TARBALLS NONE 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE NA C...#BAGS 0

Photographs:

Roll No. 18-4Frames #19-26

SUBSURFACE OIL See separate map of segment for pit locations

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		UG	UC	BL/BR	BL/BR	OL/OP	OL/OP	BL/BR	BL/BR	SU	U	M	U				
1	30					✓	-		✓								✓				NO	CPG throughout	
2	30					✓	-		✓								✓				"	" "	
3	25					✓	-		✓								✓				"	" "	
4	30					✓	-		✓								✓				"	" "	
5	25					✓	-		✓								✓				"	" "	
6	30					✓	-		✓								✓				"	CBPG throughout	
7	25					✓	-		✓								✓				"	" "	
COMMENTS																							

COMMENTS

The coastline here consists of small (20-50m wide) coves separated by steep bedrock headlands. The coves have oil, the headlands do not - except on some seaward faces. The oil in the coves is partly hidden under a ^{scattered} armoring of cobbles and small boulders. This situation makes the oil hard to see without a shovel and will complicate clean-up efforts. (continued)

Mann 4/7/90

NK-2

A

(continued)

Note that the UITZ was partly ($\sim 1/3$ of width) covered by snow during this survey. Air temperatures were in the upper 20° F so that ice covered much of the beach face.

Pits were usually placed in areas of surface oiling.

In regard to subsurface oiling, remember that where an asphalt exists, the subsurface begins below the haulment. It is possible that buried oil could exist in recent berms now covered by snow in the UITZ.

OG Man

SKETCH MAP

SEGMENT ST/ NK-2

SUBDIVISION A

DATE 4, 7 90

CHECKLIST

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

LEGEND

1 

PK - No Subsurface Oil

2 

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spaced Distribution

Oil Vegetation

1 

Photo location, direction,
and number

No sketch map

Oil Character Length (m): AP 180 PO 0 CV 240 CT 240 ST 50 MS 0 PT 0 TB 0 FL 180 NO 125

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST / NK-2 Subdivision A (of A-B) Date (mo / day / yr) 4 / 7 / 90
 Time (24 hr) 0800 Biologist M. LARR

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 10 (3) Cobble 30 (4) Pebble 10 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate — Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: 4
 Roll No. —
 Frames 19-26

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

NOT PRESENT IN UPPER ZONE

GASTROPODS

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

NOT PRESENT

NOT PRESENT IN UPPER ZONE

NOT PRESENT IN ANY ZONE

FUCUS

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

NOT PRESENT

NOT PRESENT IN UPPER ZONE

Wildlife Observations/ General Comments:

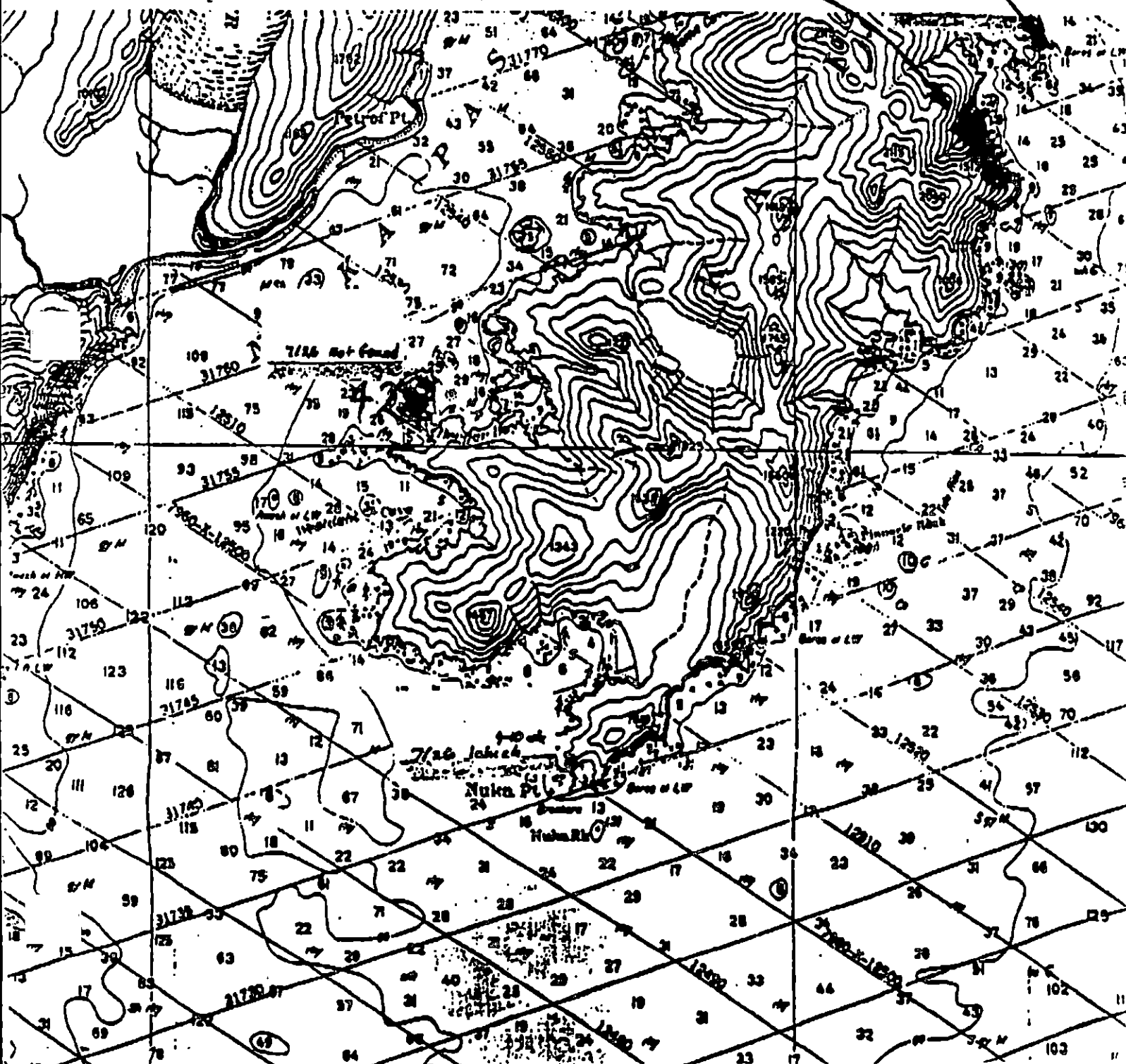
Steller's jay (1)
 Bald eagle (1)
 Cormorant (1)

Ecological Considerations:

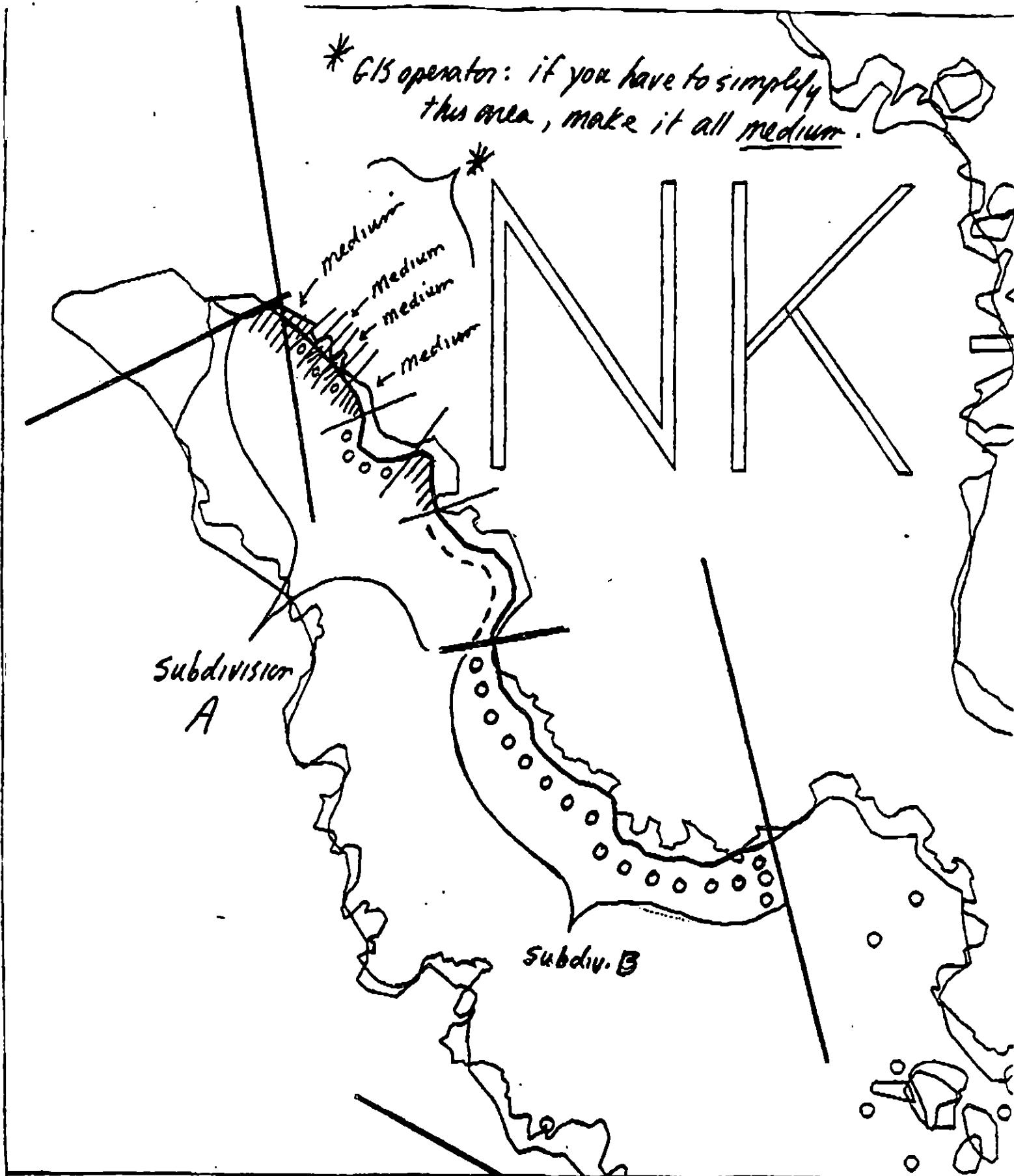
Sensitivity codes: 4-GG (Alaska State Parks), 5-T (Bald eagle nest),
 5-R (Seabird colonies)

SEA BIRD COLONY

BALD EAGLE NEST



* G/S operator: if you have to simplify this area, make it all medium.



XXX Wide

/// Medium

----- Narrow

TTTT Very Light

NK - 2

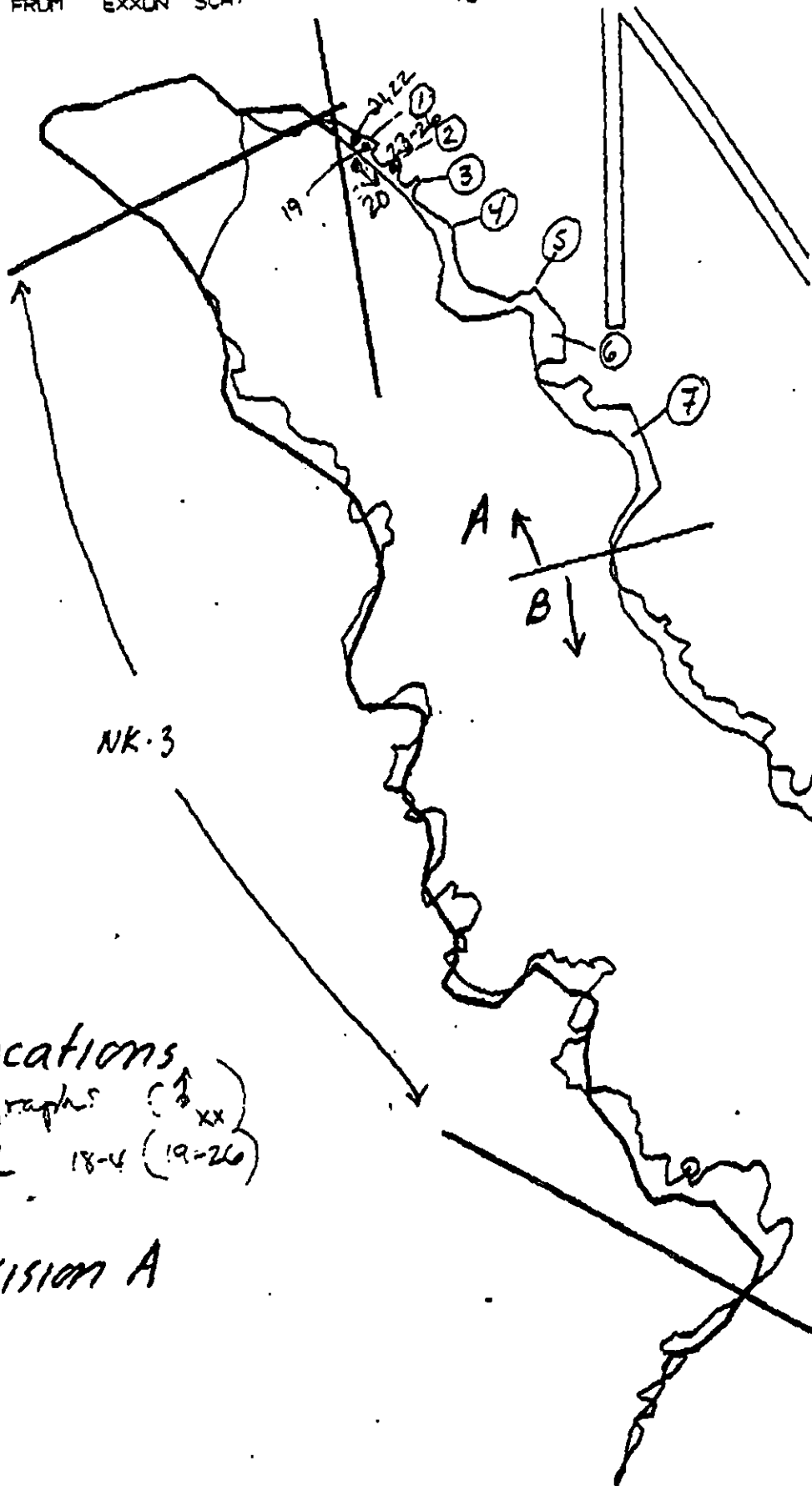
ADEC Segment Length: 1958m



Map Key: PWS-NK-2

Name: Naan

Date: 4/7/70



Pit Locations
+ photographs (1/2 xx)
NK-2 18-4 (19-26)

Subdivision A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NK-1

ADEC Segment Length: 1947m



Map Key: KER-640

Name: Marr

Date: 4/7/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NK-2 SUBDIVISION A (1 of 2)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	WORK BEFORE 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|----|------------------|--|
| 1J | Purse Seine Area | Closed to bioremediation after 7/20. No constraint to tarmat removal. |
| 5R | Seabird Colony | NO CONSTRAINT. Work site is more than 800m from seabird colony. |
| 5T | Bald Eagle Nest | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site. |

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

Date

6-10-90

Prepared by

Date

6-10-90
6/10/90

NK-01

WORK
AREAS

NK-02

NK-03

ACTIVE
NEST

BALD EAGLE
Buffer Zone



Exxon Company, USA

ECOLOGY MAP

SEGMENT NK-2

SUBDIVISION A (1 of 2)

METERS



Seabird Colony



Eagle Nest

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT NK-2 SUBDIVISION A DATED 8/3/90

MODIFICATION CLASS I X CLASS II CLASS III

1. REASON FOR MODIFICATION

OP AND OR OIL STILL REMAINING IN THIS SUBDIVISION.
LIGHT SHEEN COMING FROM SUBDIVISION

2. SUGGESTED ADJUSTMENT TO WORK PLAN

MANUAL PICK UP OF OP OIL AND TATMATS

3. TIMING ISSUES

N/A

ADEC

EXXON

USCG

LAND MANAGER

John R. Ford
Keith Miller if resources permit
HP Sullivan
OK (DNR) (If field rep is on scene)

TAG FOLDER

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / NK-02 SUBDIVISION: A SITE: 01 DATE 3 Aug 1990

USCG

NAME SCHULTZ GREGORY J SIGNATURE Gregory J. Schultz

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THERE IS STILL A MODERATE AMOUNT OF OILY SEDIMENT IN THIS SUBDIVISION. THERE ARE 4 ANAD STREAM IN THIS BAY AND THIS SUBDIVISION IS A LOW ENERGY AREA.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Sheen, Mousse, tar patches, and surface OR still remains at this site. These sites are protected and get very little wave action. Angular broken shale.

LAND MANAGER

NAME David K. Kenney ADNR SIGNATURE David K. Kenney

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Several areas observed in this subdivision with OP oil and pooled mousse. There are four anadromous streams (listed by ADF#4) at the head of the bay and adjacent to this subdivision. Sediments consist of fragmented shale, with only small amounts of rounded gravels. The subdivision is generally low energy; oil remaining will likely be present in 1991.

EXXON

NAME Keith Miles SIGNATURE Keith Miles

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This low energy area is still producing ^{silver} sheen in moderation. Some manual pickup (< 50 bags) should halt the sheening. Due to resource availability I would put a low priority on this site. We took a helio in and could not pickup any more weight.

100

SURFACE OIL

SITE 2

SITE 3

[illegible][illegible]

Photographs:

Roll No. _____

Frames _____

REVISION NO. 7/27/90

ASAP TAG REVIEW SHEET

Segment: NK02 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH MEDIUM X LOW NTR

Treatment
Recommended:

MANUAL REMOVE ASPHALT & MOUSSE
BIO-SOR

Priority Site For Reassessment In 1991

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

TAG 13AUG90
Manual Remove Asphalt &
Mousse & BIO
Medium Priority

NK-01

NK-03

WORK
AREAS

Some mousse/tar
patches in small
pockets + broken SOR
in a ~3m band from
LITZ-UITZ. Some sheen
coming off.
RM 08/03/90

NK-02

ACTIVE
NEST

BALD EAGLE
Buffer Zone

ASAP
Sketch map
08/03/90



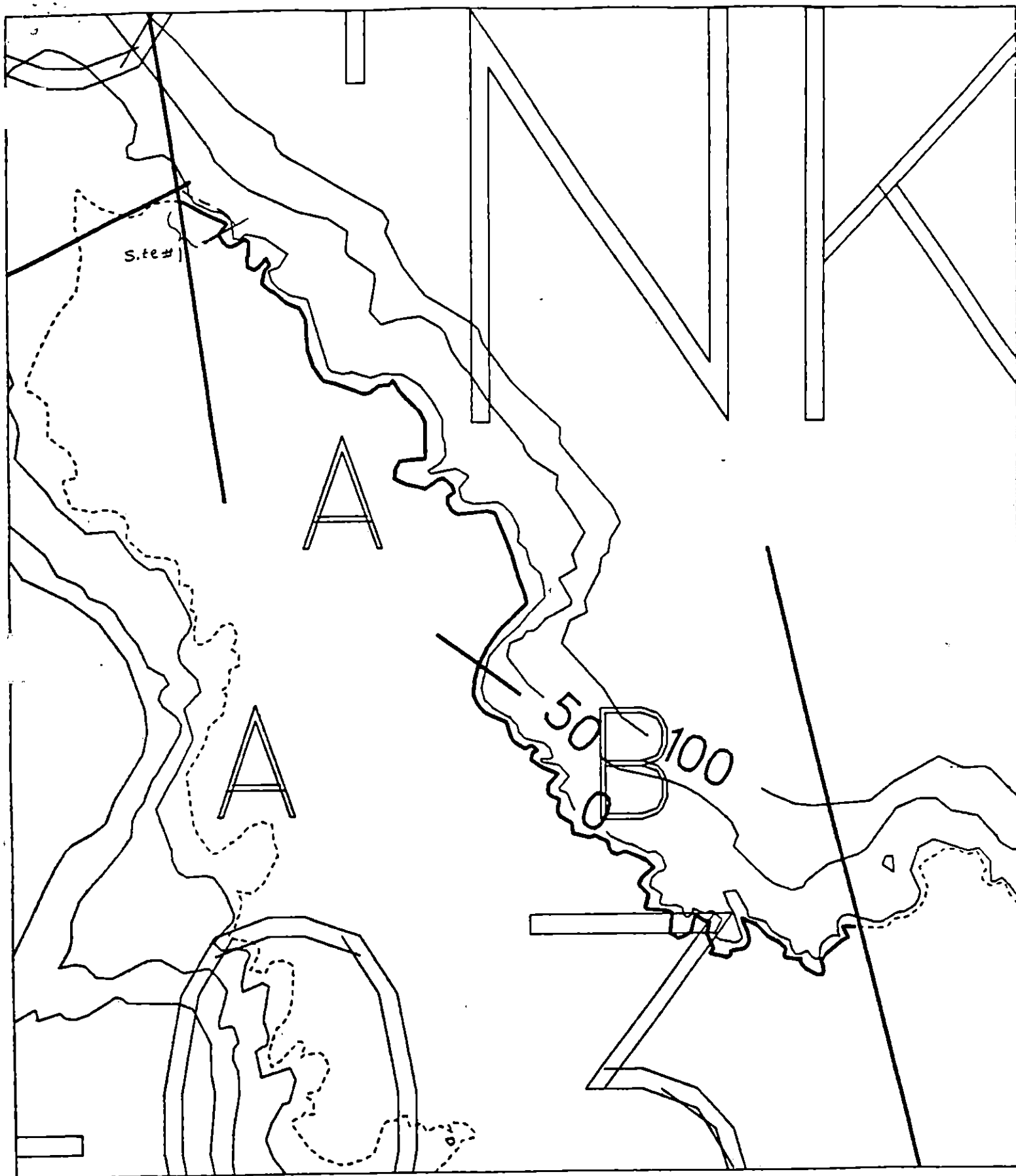
Exxon Company, USA
Map Key: NK-NK-2
May 17, 1990

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



- ★ Seabird Colony
- ▲ Eagle Nest

- RRRRR - RRRRRRRRR



SEGMENT NK-2

Segment Location Map

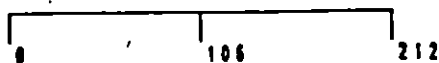
Map Key: KENNK-2

July 18, 1990

1:4180



METERS



SHORELINE EVALUATION

SEGMENT ST/ NK-002 SUBDIVISION B (2 OF 2) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T Bald eagle nest (3/1 to 6/1)
4GG Alaska State Park

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles H. Adams DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 486 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC Art Weiser Dxt Weiser
EXXON ARMY TGM Beck
NOAA Burt Werroft Burt Werroft
USCG KENNETH KEANE Kenneth Keane

FOSC: [Signature] DATE: 4-20-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 NK 02 SUBDIVISION: B DATE 4/7/90

USCG/NORAA

NAME JACOBI MICHAEL SIGNATURE Michael☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil was observed, even in the very few/small pocket boulder beaches. The rocky shores are exposed to moderate wave energy, with numerous caves and eroded slots in the bedrock.

ADEC

NAME JOHN R. REED SIGNATURE John R Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil was observed. I have read and agree with all data on S.S.A.T. Forms.

LAND MANAGER/DNR

NAME JERRY S Johnson SIGNATURE Jerry S Johnson☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Bedrock faces, no obvious oiling. State Park segment.
Agree with SSAT observations, moderate to high energy rock faces.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

BOG Mann USCG NOAA Michel SEGMENT ST/ NK-2
 IO Carr LAND REP Jehason DUR SUBDIVISION B
 EXXON BOVER ADEC Reed TIME 8:45 to 9:00
 TEAM NO.: 18 TIDE LEVEL: +4 to +5 DATE 4 / 1 / 90
 EST. SUBDIVISION LENGTH: 515 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 90 % B 8 % C 2 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 5 % Hang 15 % Vert 80 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 515 m
513

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES					
	G	B	P	R	20% OR	DBL FW	GY	SL	DBR	TL	LDR	SU	U	M	U
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT															
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
FILM															
NO OIL												SN	SV	✓	✓

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

PATTIES / TARBALLS NA BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE NA

#BAGS NA

Photographs:

Roll No. none

Frames none

SUBSURFACE OIL No pits dug because of inaccessibility and bedrock substrate

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	VC	BR	OR	OL	OF	NO	SV	U	M	U	SV	U	M	U	
0																							

COMMENTS

This is a cliff-lined shore with a few small, pocket beaches. Kelp beds border much of the shoreline. No oil was observed during out inspection by boat.

OG nr

ETCH MAP

SEGMENT SI NK-2

SUBDIVISION B

DATE 4, 7 90

CHECKLIST

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

No sketch map.

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

Cited Vegetation

1 ➡

Photo location, direction,
and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 515

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/ NK-2 Subdivision B (of A-B) Date (mo / day / yr) 4 / 7 / 90

(24 hr) Biologist M. CARR

(A) Substrate type and % of ^{SUBDIVISION} segments:
(1) Bedrock 100 (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 70 Moderate 20 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 NONE

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	

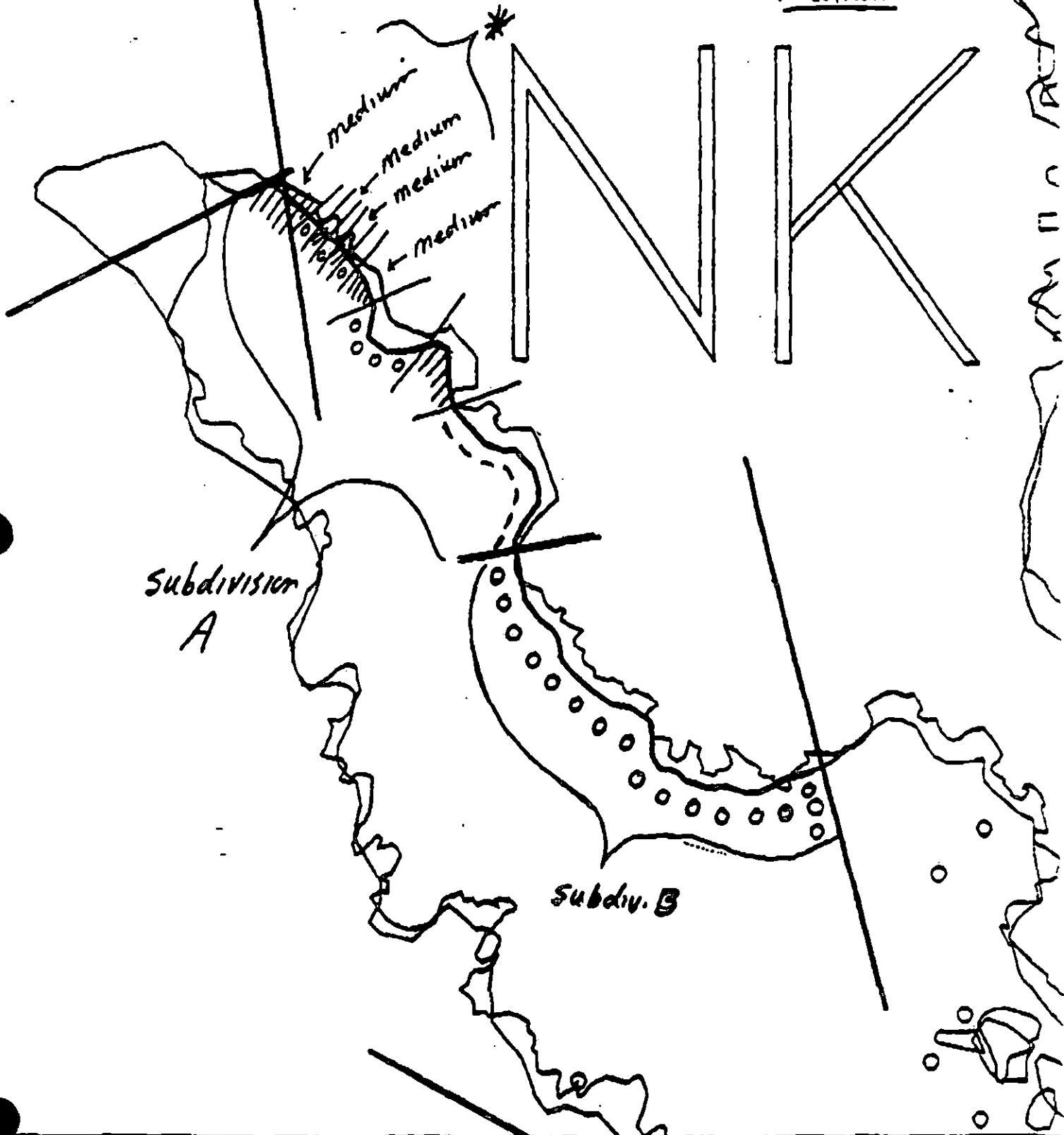
Wildlife Observations/ General Comments:

NONE

Ecological Considerations:

Sensitivity codes: see NK-2 A sheet.

*GIS operator: if you have to simplify this area, make it all medium.



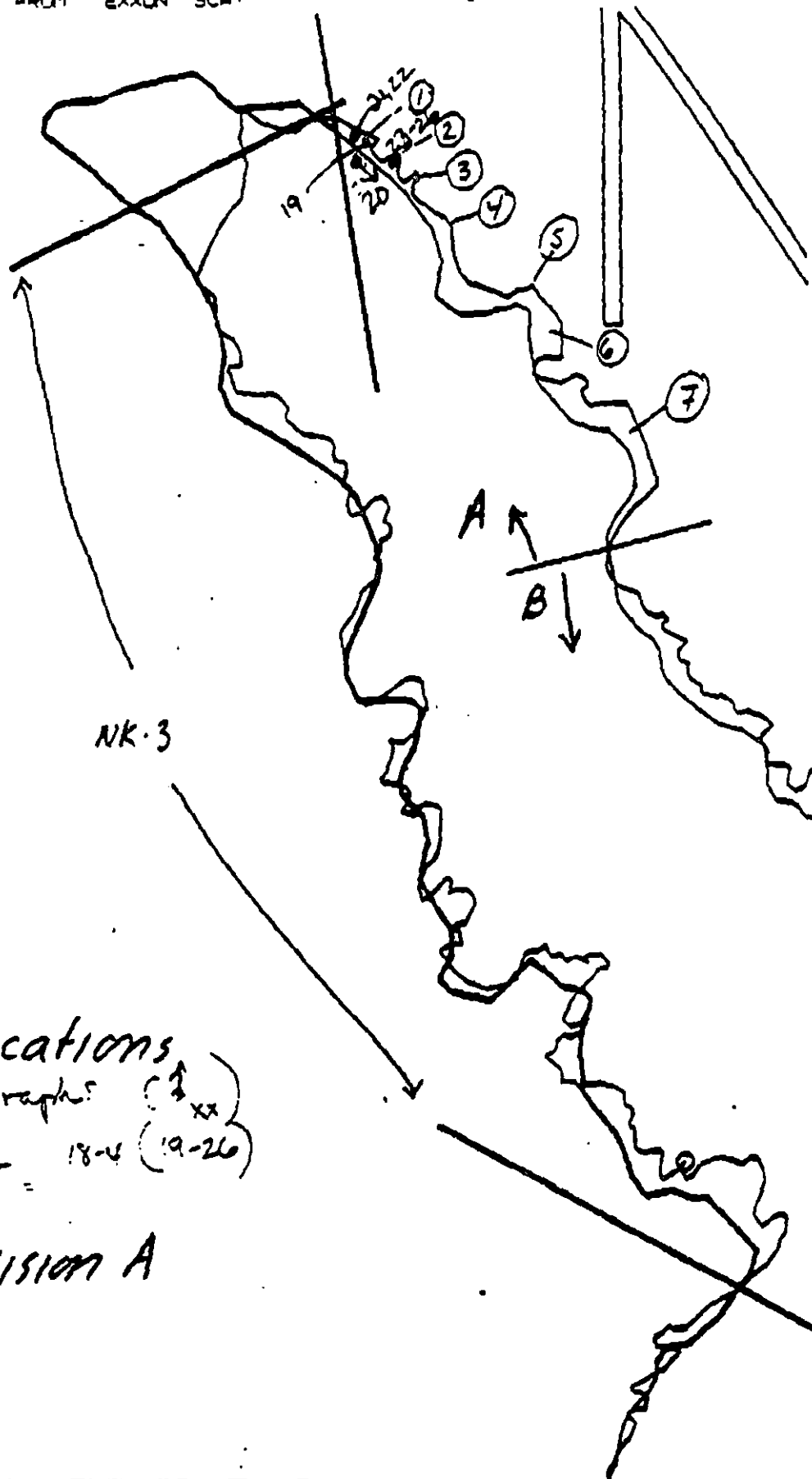
XXXX Wide
//// Medium
--- Narrow

NK-2

ADEC Segment Length: 1058m

Map Key: PWS-NK-2

Name: Maun



Pit Locations
+ Photographs (1^{xx})
NK-2 18-4 (19-26)

Subdivision A

~~XXXXXXXX~~

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

NK-1

ADEC Segment Length: 1967m

Map Key: KER-640

Name: Marr

Date: 4/7/90

SHORELINE EVALUATION

SEGMENT ST/ NK-03 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Wilderness Park

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 uncoiled biota and substrate.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 605 m: No Oil 817 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended
☐ Treatment Recommended
☐ Manual Pickup
☐ Bioremediation
☐ Tarmat Removal

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: May 5, 1990

ADEC ART WENGER Art Wenger

EXXON Mark N. Silbert Mark N. Silbert

NOAA Gary Petrac Law Office

USCG G.A. KEITER G.A.

FOSC:

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 unopened 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)
7HH	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 / NK-03 SUBDIVISION: A (1 of 1) DATE 4/22/90

~~NOAA~~
~~USCG~~

NAME Donald A. MacDonald SIGNATURE Donald A. MacDonald

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Most of the segment was vertical bedrock with a few pocket beaches. Some boulder and banding present at northern end of segment. One sea was spotted toward the southern end of segment. Flourishing intertidal zone.

ADEC

NAME John R. Reed SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Very scattered coat of splatters and band on protected vertical walls, Does not warrant treatment. I agree with data on SSAT Forms.

LAND MANAGER

NAME Shirley Mathew-Loney (ADNR) SIGNATURE Shirley Mathew-Loney

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Nuka Island Segment 3 - Northeast Cove lies within Kachemak Bay State Wilderness Park. This segment receives continuously flushing with the wave action. Only two of the pocket beaches can be safely surveyed by small helicopters. Shoreline is accessible only with good water conditions.

SHORELINE OILING SUMMARY

REVISION NO. 02/13/92

OG Sawyer NOAA uses MacDonald SEGMENT ST/ NK-3
 BIO Carr LAND REP Mathven-Taney SUBDIVISION A (1 OF 1)
 EXXON Boyer ADEC Reed TIME 15:00 to 16:45
 TEAM NO. 18 TIDE LEVEL +6 to +1.5 DATE Apr 22, 1990
 EST. SUBDIVISION LENGTH: 1752 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 10 % C 5 % P 5 % G 0 % S 5 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 0 % Vert 75 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 750 m NO 100.2 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	V	SW	W	BL	GR	BR	SW	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Mousse#BAGS 1

Photographs:

Roll No. ST-18-8Frames 13+14

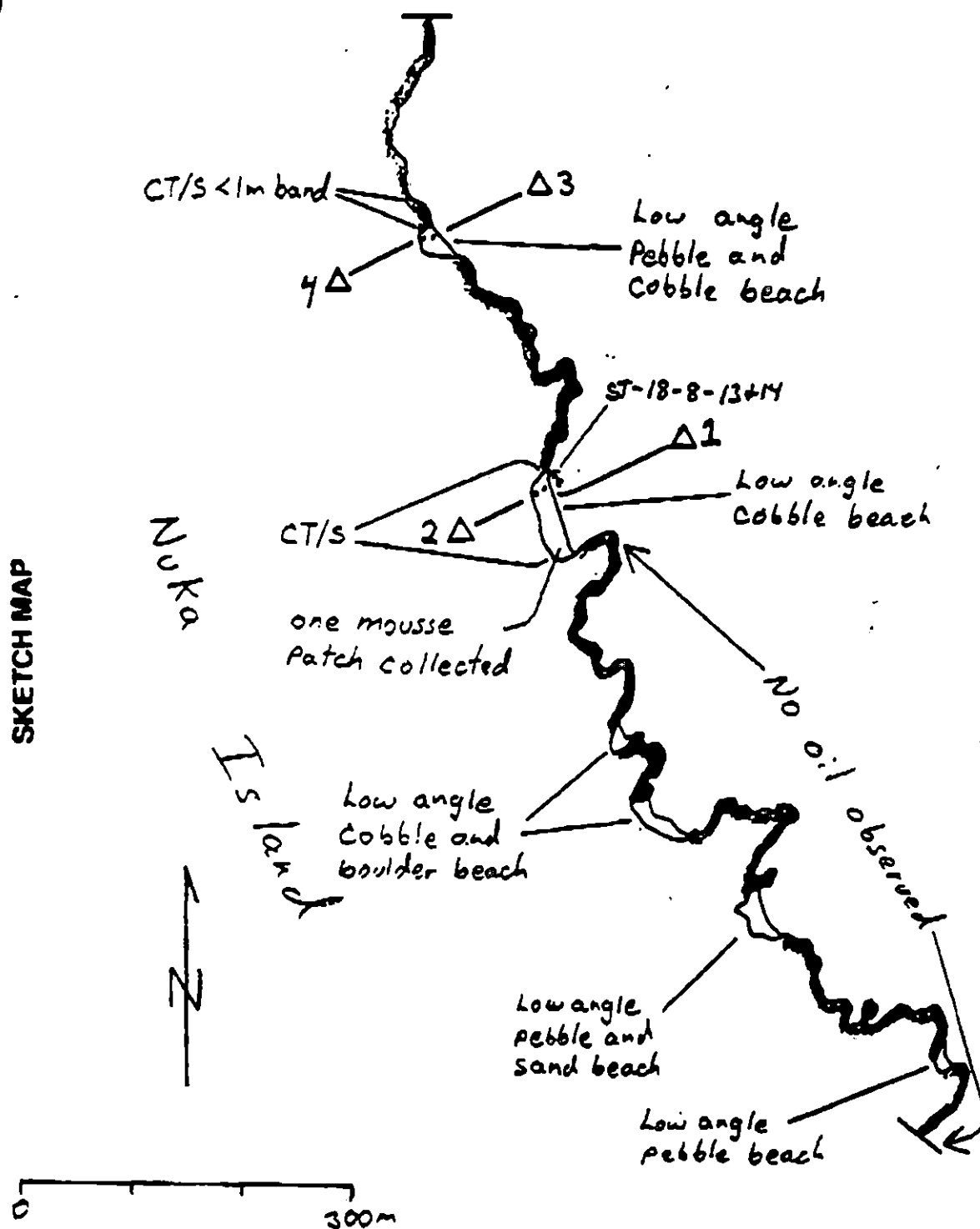
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	SW	W	BL	GR	BR	SW	U	M	U				
1	20																					C-G
2	25																					C-P, G, C
3	20																					P-G, C
4	20																					P-S, F

COMMENTS ST/NK3 (Nuka Island) comprises mostly bedrock cliffs with several low angle pocket beaches. No oil was observed along the south half of this segment, whereas a discontinuous, less than 1 meter wide band of splatters was observed along the northern half.

REVIEWED BA7 DATE 23 Apr 90

SKETCH MAP



OG Sauger
 SEGMENT ST/HK-1
 SUBDIVISION A
 DATE Apr 1 22 90

CHECKLIST

☐ N Area
☐ Aerial Photo
☐ Seismic Data
☐ Oil Data
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. 1980/1981
☐ SCL
☐ Profile Location(s)
☐ Profile(s)
☐ PI Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 PI - No Substrate Oil
 2 Δ
 PI - Substrate Oil
 CT/C
 Confirmed Distribution
 CT/B
 Suspect Distribution
 CT/P
 Suspect Distribution
 CT/S
 Suspect Distribution
 RLL
 Other Vegetation
 1 Δ
 Photo location, direction, and number

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / NK-3 Subdivision A Date (mo / day / yr) 4-22-90

Time (24 hr) 1520 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 75 (2) Boulder 10 (3) Cobble 5 (4) Pebble 5 (5) Sand 5 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 20 Low 10

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

Photographs:
Roll No. ST-18-8

Frames 13, 14

BARNACLES

	Dense			Moderate			Sparse			Rare		
	1U	1M		1U	1M	1L	1U	1M	1L	1U	1M	1L
350	2	2		2	2	2	2	2	2	2	2	2
300	3	3		3	3	3	3	3	3	3	3	3
250	4	4		4	4	4	4	4	4	4	4	4
200	5	5		5	5	5	5	5	5	5	5	5
150	6	6		6	6	6	6	6	6	6	6	6

NOT PRESENT IN UPPER ZONE

NOT PRESENT

NOT PRESENT IN ANY ZONE

MYTILUS

	Dense		Moderate				Sparse				Rare	
	1U	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
1	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT IN UPPER ZONE
2	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
3	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN UPPER & MID INTERTIDAL ZONE
4	5	5	5	5	5	5	5	5	5	5	5	
5	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
BOD	1	1	1	1	1	1	1	1	1	1	1	1
DOULD	2	2	2	2	2	2	2	2	2	2	2	2
LOB	3	3	3	3	3	3	3	3	3	3	3	3
ACSB	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

NOT PRESENT IN ANY ZONE

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 IN UPPER ZONE.
 NOT PRESENT
 NOT PRESENT IN ANY ZONE.

Wildlife Observations/ General Comments:

glaucous-winged gull (10) sea otter (1) adult.
commensal (1) oyster-catcher (5)

Ecological Considerations:

Sensitivity codes: ST, 4GG



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

NK-3

ADEC Segment Length: 1752m



Map Key: PWS-NK-3

Name: T. Sawyer

Date: 4-22-90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ NK-04 SUBDIVISION A (1 OF 2) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
4GG State Wilderness Park
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6NN Recreation area: Sportfishing
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
6X Recreation: Lodge (6/1 to 9/15)
9BB Privately developed land

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. Johnson DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 314 m: No Oil 14901 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC JOHN BAUER
EXXON ANDY TOL
NOAA GARY PETRUS
USCG KENNETH KENNE

FOSC: W L DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream reach - fry outmigration (3/1 to 5/15)
1B Salmon stream reach - 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.
- 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** [REDACTED] (5/1 to 9/15)
- 6V** [REDACTED] (5/1 to 9/15)
- 6W** Forest Service cabins (6/1 to 9/15)
- 6X** [REDACTED] (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/ NK 4 SUBDIVISION: A DATE 4/9/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Only five small areas were observed to have a very light oiling. However, this subdivision has a highly irregular coastline, the original contamination was light and discontinuous, and the shoreline is composed of dark meta sedimentary rock. We could have missed some oiled spots, but they would be small. ^{we did survey by foot areas of potential oil accumulation.} The northern part of this subdivision is very low energy so any oil from last year would still be present.

ADEC However, no further treatment is warranted.

NAME JOHN R. REED SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Very light scattered oiling in this very long segment. No oil was observed around the anadromous stream. No treatment was recommended for this segment. I have read and agree with all information on S.S.A.T. forms.

LAND MANAGER DNA/DPOR

NAME Jeffrey S. Johnson SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Agree with SSAT + comments on forms; very light oiling, mostly rock + rocky cliffs with few beaches. No oiled debris found, surface or subsurface oil was found, virtually no visual indications of any past treatment activities.

SHORELINE OILING SUMMARY

REVISION NO. 63/0000

OG MANN USCG/NOAA MICHEL SEGMENT ST/ NK 4
 BIO CARR LAND REP JOHNSON - STATE PARK SUBDIVISION A
 EXXON BOYER ADEC REED (DNR) TIME 07:12 to 11:30
 TEAM NO.: 18 TIDE LEVEL: -0.4 to +6.0 DATE 4 / 9 / 90
 EST. SUBDIVISION LENGTH: 19,980 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
 SURFACE SEDIMENTS: R 57 % B 10 % C 15 % P 15 % G 0 % S 0 % M 2 % V 1 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 270 m NO 19,710 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	FC	FB	FP	FS	BR	RW	SL	TL	LR	SU	U	M	U			
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S NO sq. m by 0 cm

PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE None

#BAGS 0

Photographs:

Roll No. 5T18-5

Frames (14-20)

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CA)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	BR	RW	SL	TL	LR	SU	U	M	U		
1	35																			GP throughout
2	40																			"
3	30																			PC throughout
4	50																			" "
5	25																			" "
6	35																			GP throughout

COMMENTS

This subdivision includes a diversity of shoreline types ranging from intertidal mud flats to sea stacks. Its only common feature is the scarcity of oil. The shoreline is intricate from Westdahl Cove northward. The present segment boundaries are unfortunately placed. Dark bedrock makes oil detection difficult and slow work. The northern part of NK-4 remains to be

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/98

SEGMENT ST/ NK-4 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	BR	BN	BL	BY	BU	BT	LB	LU	SU	U	M	U		
7	25					✓	.											✓					GPC throughout
8	30					✓	.											✓					GPC throughout
							.																
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COMMENTS

We stopped at pocket beaches that were accessible by skiff and that had accumulations of some drift material. No subsurface (or surface) oil was found nor was any oiled debris.

REVIEWED BA7 DATE 2 Apr 90

OG NN

SEGMENT ST/NK 04

SUBDIVISION A

DATE 4, 9 90

CHECKLIST

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

LEGEND

1 

Pt - No Subsurface Oil

2 

Pt - Subsurface Oil

 CT/C

Continuous Distribution

 CT/B

Broken Distribution

 CT/P

Patchy Distribution

 CT/S

Splashed Distribution

Oil Vegetation

1 

Photo location, direction,
and number

SKETCH MAP

NO SKETCH MAP.

Oil Character Length (m): AP 0 PO 0 CV 0 CT 25 ST 10 MS 0 PT 0 TB 0 FL 0 NO 19945

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ NK-4 Subdivision A (of A-B) Date (mo / day / yr) 4/9/90
 ne (24 hr) 0705 Biologist M. CARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 10 (2) Boulder 10 (3) Cobble 15 (4) Pebble 15 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 70 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. 5
 Frames 14-20

BARNACLES

	Dense			Moderate			Sparse			Rare			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Densd	2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT IN LOWER 2
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Pebb	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN ANY 30
	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			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Densd	2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT IN UPPER 1
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Pebb	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN ANY 20
	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			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Densd	2	2	2	2	2	2	2	2	2	2	2	2	
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Pebb	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN ANY 2
	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			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Densd	2	2	2	2	2	2	2	2	2	2	2	2	
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Pebb	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN ANY 30%
	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:

LAND OTTER (TRACKS) DOUBLE-CRESTED Cormorant (17) BALD EAGLE (2), NATURE
 HARLEQUIN DUCKS (34) OYSTER CATCHER (3) N.W. CROWS (11)
 SEA OTTER (3) GLAUCOUS-WINGED GULL (11) HARBOR SEAL (1)
 SURF-SCOTER (12)

Ecological Considerations:

Sensitivity codes: 4-GG (Alaska State Park), 5-T (Bald Eagle Nest),
 5-R (Sea Bird Colony)

NK-04

Pit Location
-5

NK-0

XX Wide

// Medium

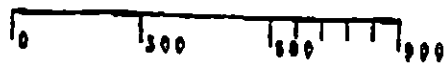
--- Narrow

TTTT Very Light

0000 No Oil

NK-4

ADEC Segment Length: 27376m

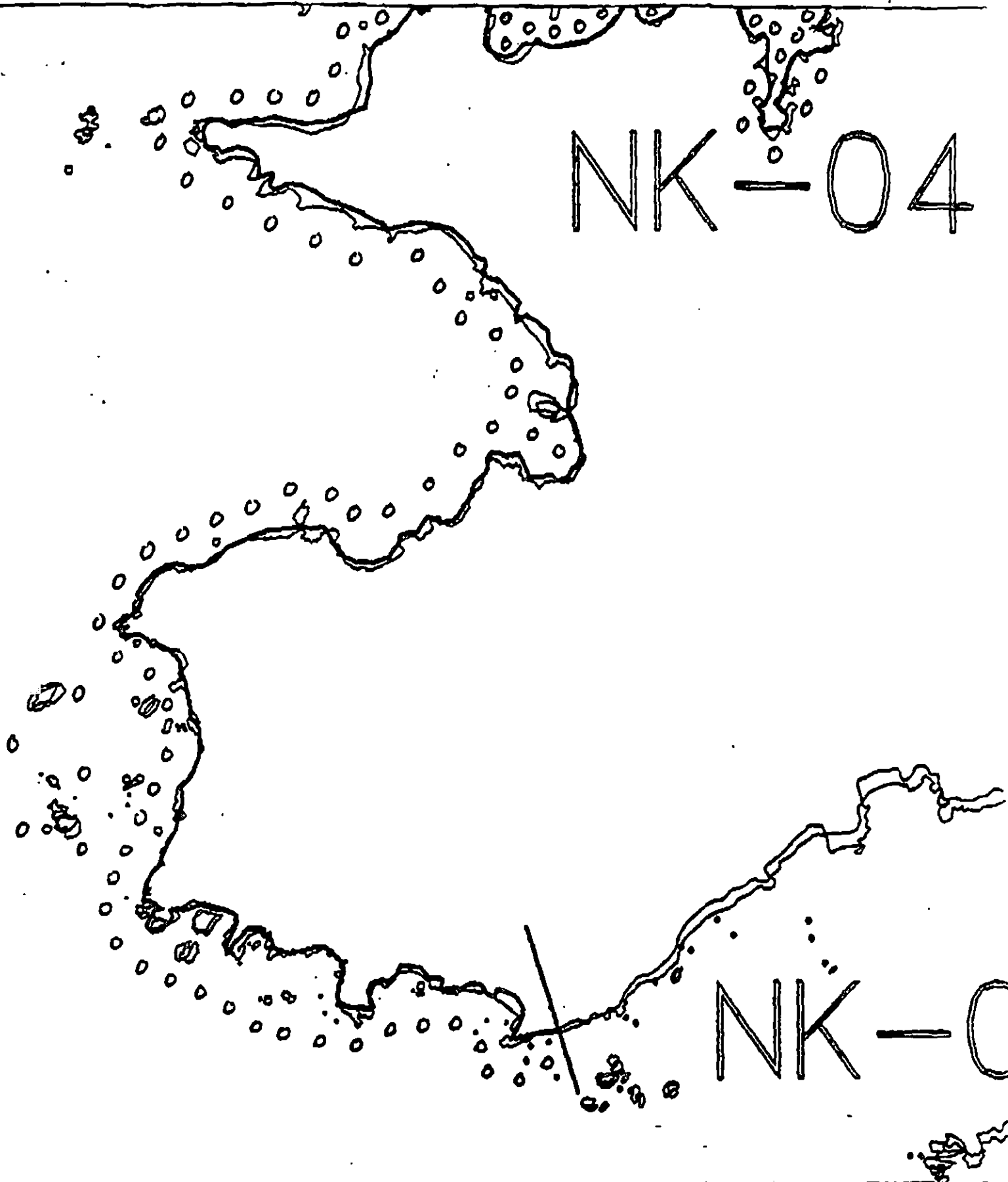


Map Key: PWS-592a

Name: Namr

Date: 4/8/90





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

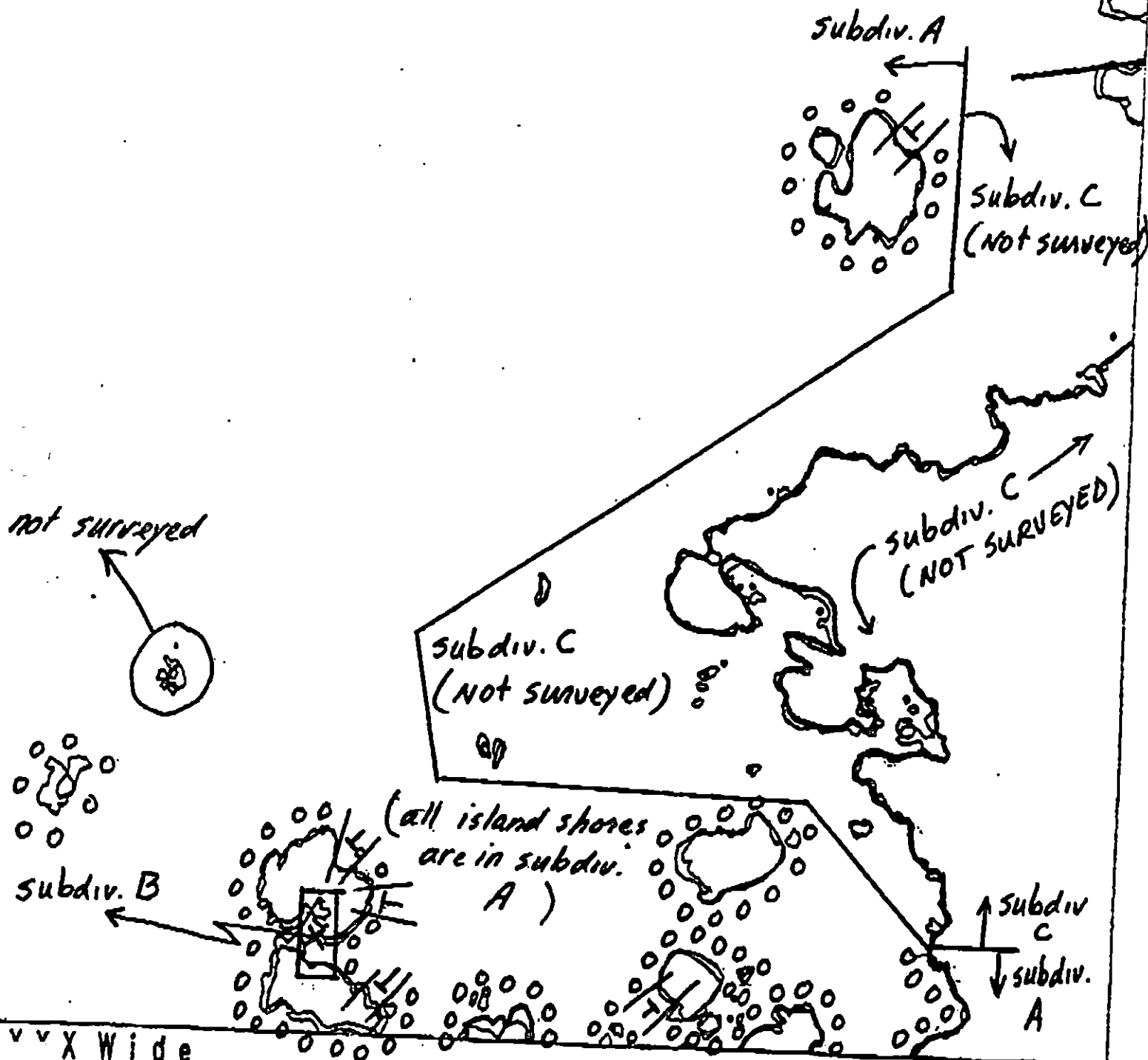
NK-4

ADEC Segment Length: 27376m

0 500 1000



Map Key: PWS-592a
 Name: Mann
 Date: 4/8/90



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

NK-4

ADEC Segment Length: 27376m

0 300 600 900

Map Key: PWS-592c

Name: Man

Date: 4/9/90

SHORELINE EVALUATION

SEGMENT ST/ NK-04 SUBDIVISION B (2 OF 2) DATE 4/10/90

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)
4GG State Wilderness Park
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6NN Recreation area: Sportfishing
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
6X Recreation: Lodge (6/1 to 9/15)
9BB Privately developed land

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 F. Holman DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 90 m: No Oil 258 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of mousse and patties, 3) bioremediation of surface coat areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on salmon constraints after consulting ADF&G and USFWS regarding eagle nest and possible seabird colony.

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY TAYLOR
NOAA GARY PETRAE
USCG KENNETH KETNER
FOSC: DATE: 5-6-90

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 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.
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.
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
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/ NK 4 SUBDIVISION: B DATE 4/9/90

USCG/NOAA

NAME SACQUI MICHEL SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
The asphalt pavement and scattered mousse on the southern beach and the small area of subsurface oil on the northern beach should be manually removed. This is a very low energy lagoon, and manual removal of these thick oil deposits would be slow. The remaining oil is too light to warrant further treatment.

As a wilderness park, removal of this oil should be a high priority.

ADEC

NAME JOHN R. REED SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
Asphalt pavement and mousse on southern shore should be picked up manually. Shovels or Hand Trowels should do the trick. This is a low energy lagoon that will need help cleaning itself. This is also a site with high Recreational value. I have read and agree with all data on S.S.A.T. Forms.

LAND MANAGER DNR/DOPOR

NAME Jeffrey S. Johnson SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
This segment was previously treated, + needs more work. I agree with SSAT comments on forms. Manual methods should work. Drift logs that were cut during past treatment efforts should either be removed, or visually mitigated. Portions splintering ends with explosives. Report saw cuts have significant negative visual impact in wilderness areas, and more must be taken care of, especially on the south lagoon beach (for the sketch map).

SHORELINE OILING SUMMARY

REVISION NO. 02/23/90

OG MANN USCG/NOAA MICHEL SEGMENT ST/ NK 4
 BIO GARR LAND REP JOHNSON DNR SUBDIVISION B
 EXXON BOYER ADEC REED TIME 07:00 to 11:30
 TEAM NO.: 18 TIDE LEVEL: +0.3 to +6.0 DATE 4/19/90
 EST. SUBDIVISION LENGTH: 440.570m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 50 % B 10 % C 30 % P 5 % G 0 % S 0 % M 5 % V 0 %
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 110 m NO 330 m

SURFACE OIL

DHM 4/10/90

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	N	SP	BP	OT	SL	TL	LS	LS	LS	SU	U	M	U
ASPHALT PAVEMENT			✓	✓		✓								✓		
POOLED																
COVER																
COAT				✓		✓								✓		
STAIN																
MOUSSE				✓										✓		
PATTIES				✓			✓	✓						✓		
TARBALLS																
FILM				✓		✓								✓		
NO OIL													✓		✓	✓

PAVEMENT: H (F) S 10 sq. m by 3 crPATTIES / TARBALLS 4 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE patties/moss#BAGS 1

Photographs:

Roll No. ST 18-SFrames (21-34)

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	SP	BP	OT	SL	TL	LS	LS	LS	SU	U	M	U		
1	25					✓																Y	PGC over peat
2	25					✓																Y	" " "
3	30					✓																Y	" " "
4	20					✓																Y	" " "
5	25		✓				0.3			✓								✓				Y	PGC over peat
6	15					✓																Y	" " " (10-25cm)

COMMENTS Subdivision B occupies a lagoon nearly enclosed by 2 islands. Wave energy is low and floating debris accumulates here. On the north side, oil persists in the subsurface of a 2m² area and several smaller "film patches". Most of the remnant oil is on the southern pocket beach where CT/15 lines a rock wall; a line of mousse patties extends across the lower UITE and an area of scattered asphalt exists. Natural cleaning will be slow here.

REVIEWED PAKDATE 12 Apr 90

SEGMENT ST/ NK-4 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

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	SL	SL	SL	SL	SL	SL	SU	U	M	L		
7	20					✓	-									✓				Y	PG over peat
8	30					✓	-									✓				Y	"
9	40					✓	-									✓				N	PG throughout
10	45					✓	-									✓				N	PCG
11	35					✓	-									✓				N	PCG
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COMMENTS

None of the oil on the southern pocket beach is subsurface. However most of the 2m² oil spot on the north side cove is subsurface.

REVIEWED

BAG

DATE

12 Apr 96

OG *11/11/90*

SEGMENT ST/ *AK-4*

SUBDIVISION *B*

DATE *4/19/90*

CHECKLIST

M Areas
 Aspect Data
 Sample Data
 OR Data
 Length
 % Cover
 Substrate Character
 Est. HML/ML
 SBL
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

1 Δ

Pt. No. Substrate OR

2 Δ

Pt. Substrate OR

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

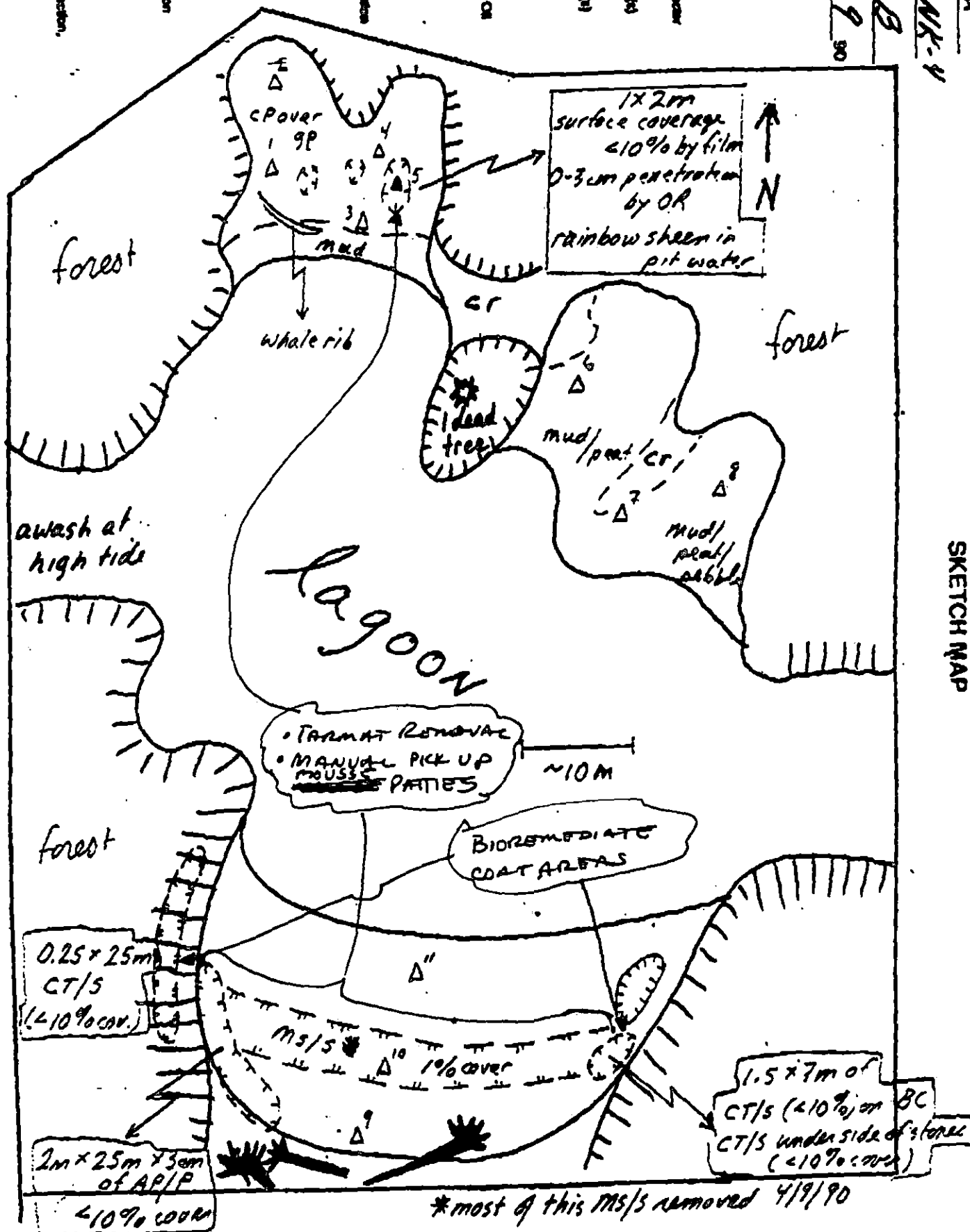
Specified Distribution

Other Vegetation

1 ←

Photo location, direction,
 and number

SKETCH MAP



ON Character L. m: AP 25 PO 0 CV 0 CT 32 ST 0 MS 0 0 TB 0 FL 2 NO 351

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/23/88

Segment ST/ NK-4 Subdivision 3 (of A-B) Date (mo/day/yr) 4-9-90Time (24 hr) _____ Biologist M. LARR

- A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 50 (2) Boulder 10 (3) Cobble 30 (4) Pebble 5 (5) Sand 5 (6) Silt _____
- B) Overall % cover of biota (% of ^{SUBDIVISION} 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. 5Frames 21-34

BARNACLES

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
Bed	2	2	2	2	2	2	2	2	2	2	2	2
Bould	3	3	3	3	3	3	3	3	3	3	3	3
Cobb	4	4	4	4	4	4	4	4	4	4	4	4
Pebb	5	5	5	5	5	5	5	5	5	5	5	5
Sand	6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT IN UPPER 5
LOWER 50%
NOT PRESENT

NOT PRESENT IN ANY 2

MYTILUS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
Bed	2	2	2	2	2	2	2	2	2	2	2	2
Bould	3	3	3	3	3	3	3	3	3	3	3	3
Cobb	4	4	4	4	4	4	4	4	4	4	4	4
Pebb	5	5	5	5	5	5	5	5	5	5	5	5
Sand	6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT IN LOWER 50%
NOT PRESENT

NOT PRESENT IN ANY 50%
NONE.

ASTROPODS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
Bed	2	2	2	2	2	2	2	2	2	2	2	2
Bould	3	3	3	3	3	3	3	3	3	3	3	3
Cobb	4	4	4	4	4	4	4	4	4	4	4	4
Pebb	5	5	5	5	5	5	5	5	5	5	5	5
Sand	6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

NOT PRESENT IN ANY 5

FUCUS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
Bed	2	2	2	2	2	2	2	2	2	2	2	2
Bould	3	3	3	3	3	3	3	3	3	3	3	3
Cobb	4	4	4	4	4	4	4	4	4	4	4	4
Pebb	5	5	5	5	5	5	5	5	5	5	5	5
Sand	6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

NOT PRESENT IN UPPER 50%
LOWER 50%NOT PRESENT IN
ANY 50%.

Wildlife Observations/ General Comments:

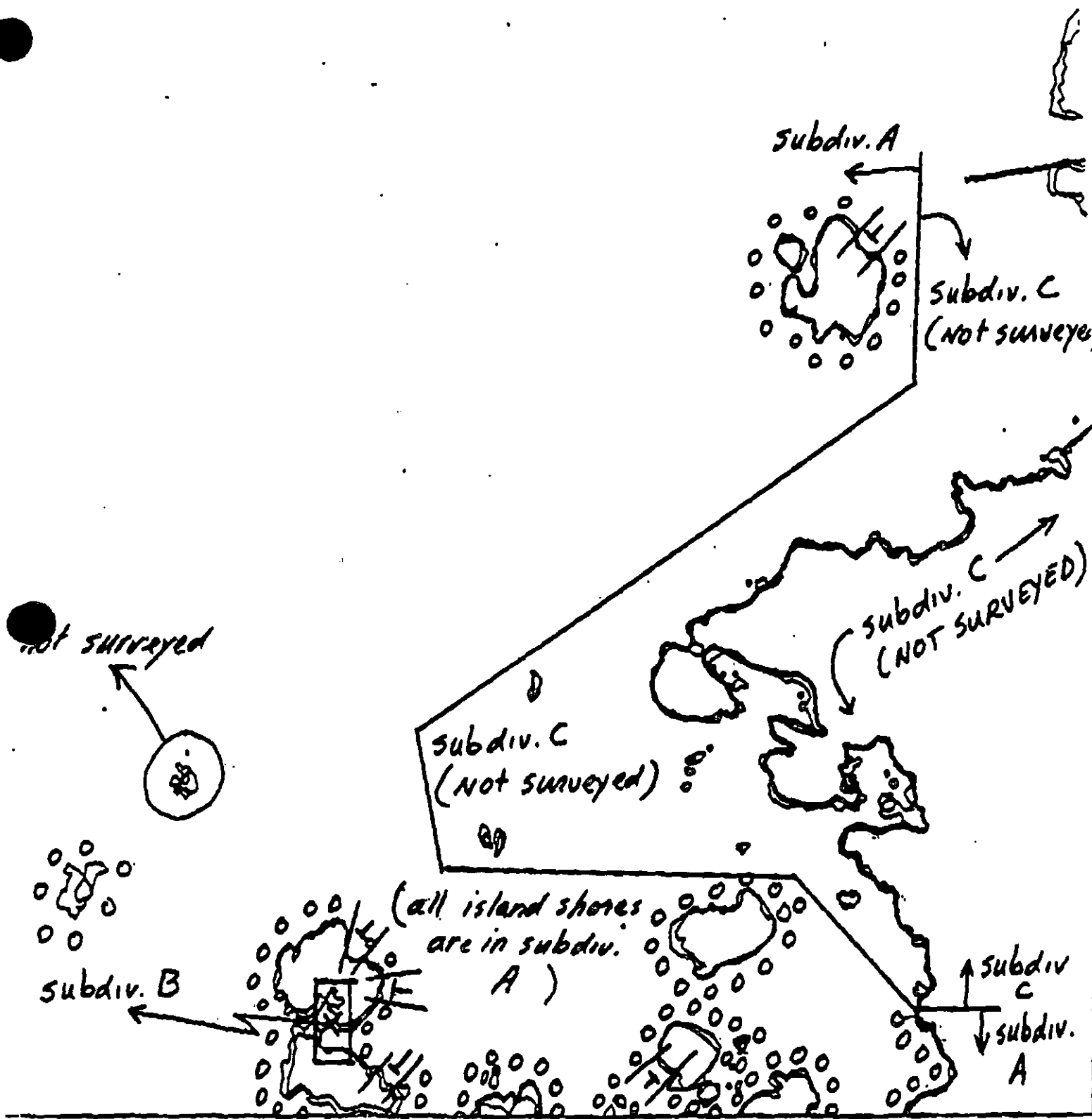
NONE

Ecological Considerations:

Sensitivity codes: (see NK-4 A sheet)

NK-4

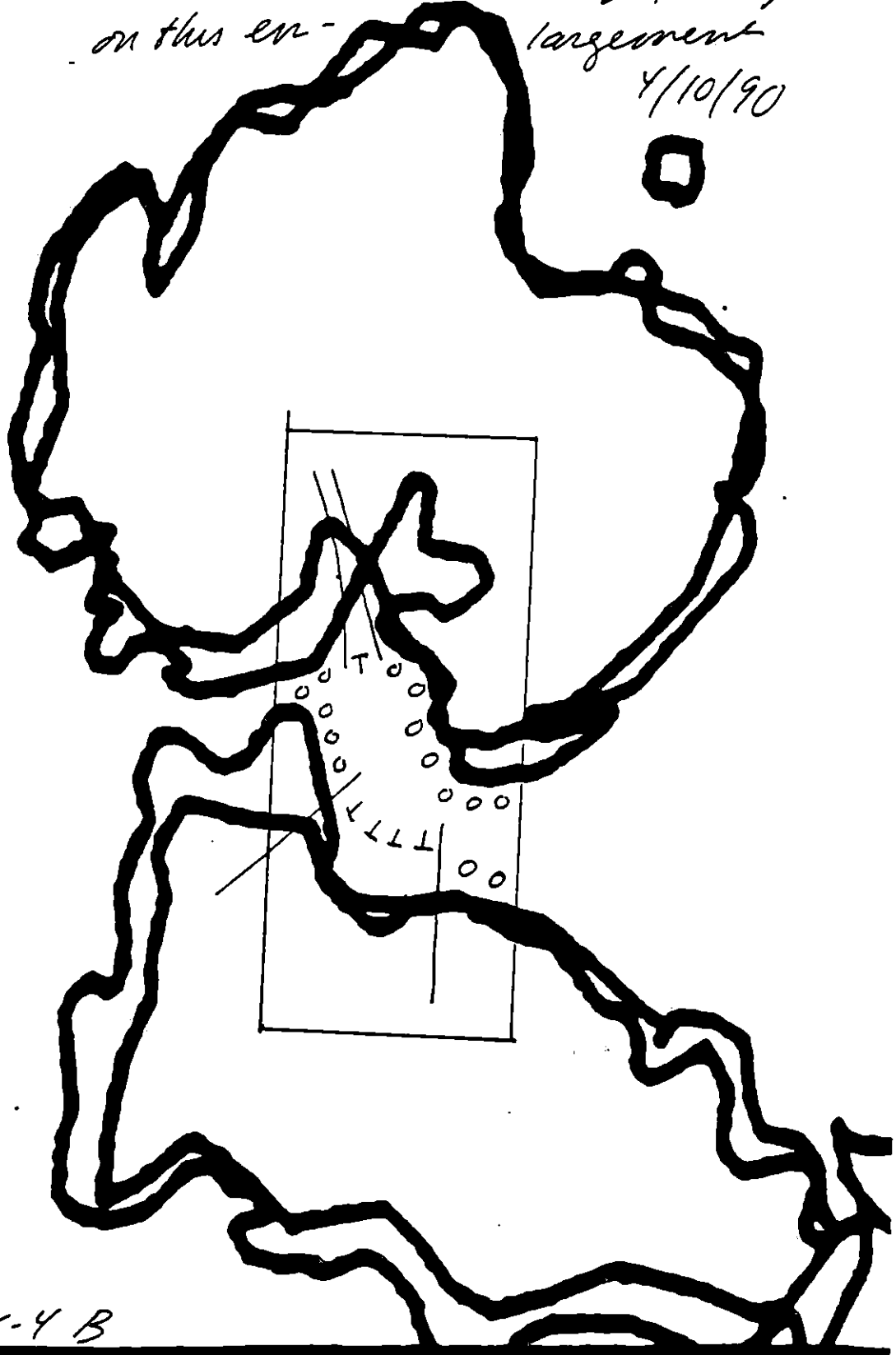
BALD EAGLE NEST



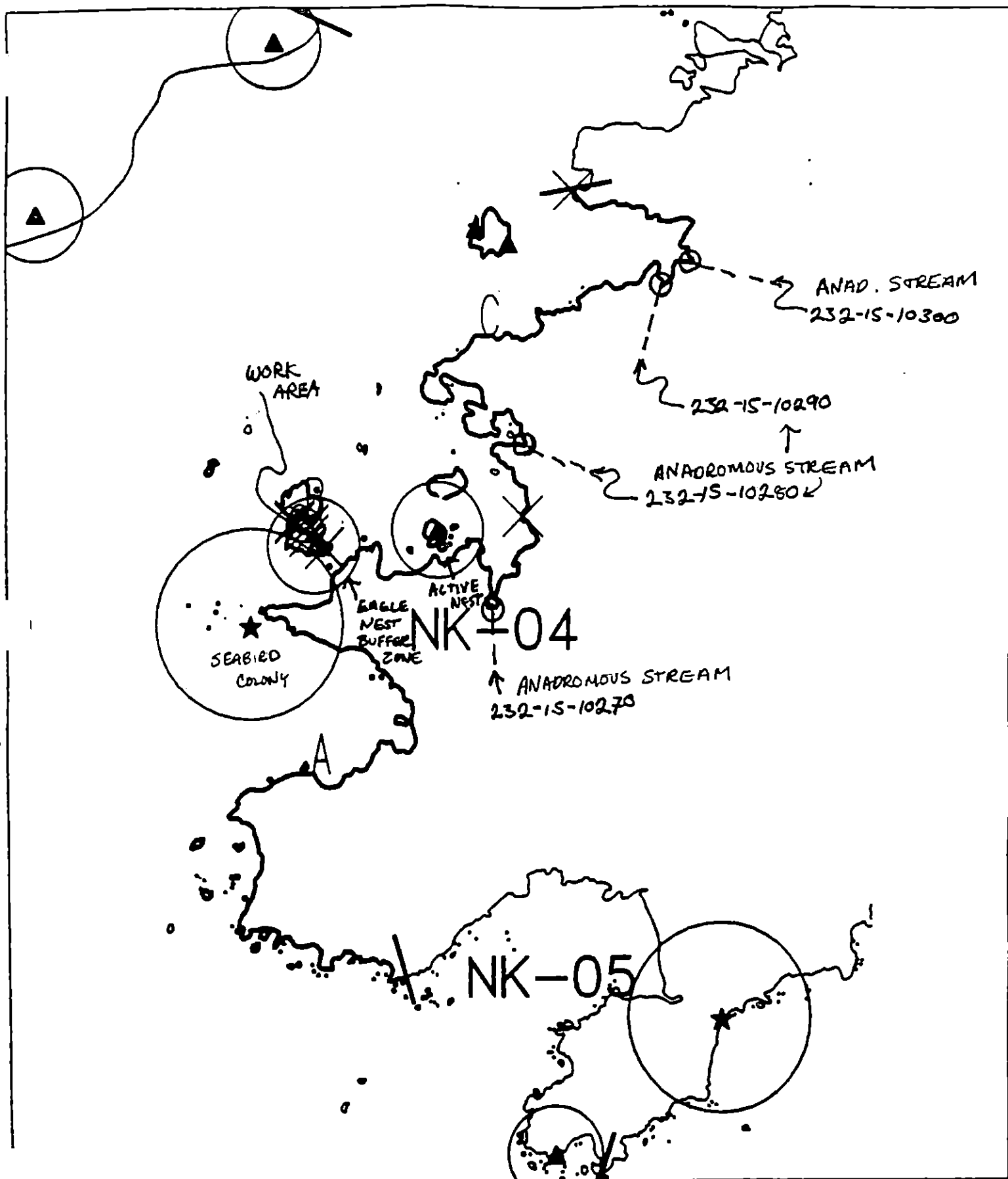
NK-4
subdiv. B

Mann
revised to show oil category lengths
on this en-
largement
4/10/90

(~3000x mag)



Attachment to NK-4 B



Exxon Company, USA

Map Key: KEN-NK-4

ECOLOGY MAP
SEGMENT NK-4
SUBDIVISION B (2 of 3)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT NK-4 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|-------|------------------|---|
| 1A,1B | Salmon Stream | NO CONSTRAINT. ADF&G catalogued anadromous streams (232-15-10270, 232-15-10280, 232-15-10290, and 232-15-10300) are in Subdivision B and are more than 100m from the work site. |
| 1J | Purse Seine Area | Closed to bioremediation after 7/10. No constraint to manual pickup and tarmat removal. |
| 5T | Bald Eagle Nest | USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, and bioremediation within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation more than 400m from active nest. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

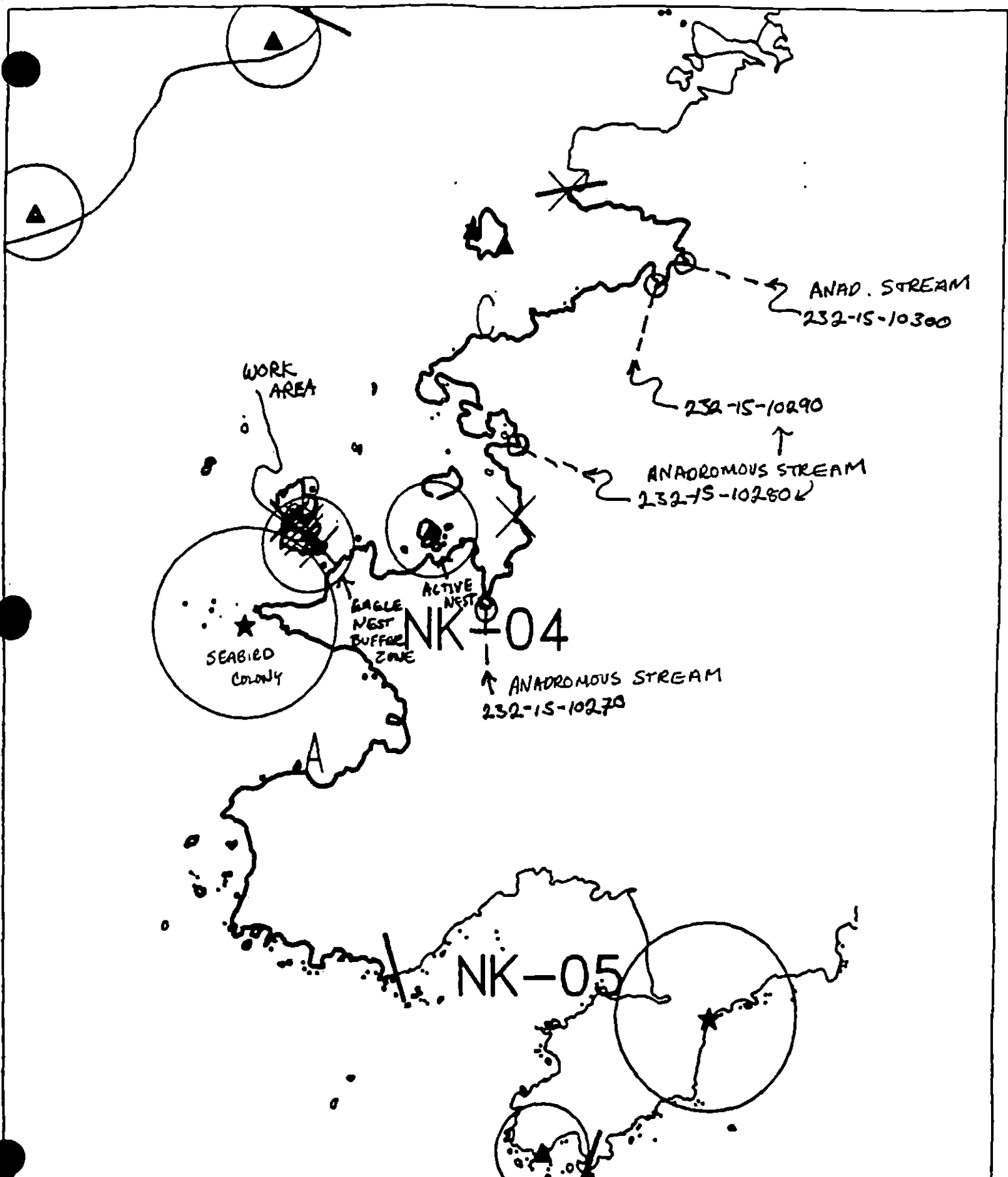
6/14/90

Prepared by

[Signature]

Date

6/14/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT NK-4
SUBDIVISION B (2 of 3)

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ NK-05 SUBDIVISION A (1 OF 1) DATE 4/23/90

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)
4GG	Alaska State Park
5T	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)
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.

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 8861 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:

DEC	ART WELMER	Art Welmer
EXXON	AMOT T&T	Beal
NOAA	Gary Petrac	Gary Petrac
USCG	KEANE KIRKOWITZ	Kirkowitz

FOSC: DATE: 5-6-90

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 uncultivated 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 / NK 005 SUBDIVISION: A DATE 4/23/90

NOAA
USCG

NAME Donald A. MacDonno SIGNATURE Donald A. MacDonno

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Most of the segment consisted of bedrock faces which were viewed from the bluff. Large quantities of *Nannocystis* were present and sea otters and sea lions were seen in the water. In addition, possible river otter tracks of at least 3 animals were found on the beach at the back of the segment core. At the south southeast end of the beach is an anadromous stream. The beach was fairly thoroughly surveyed and no signs of oiling were seen. While offshore rocks and bays have been restricted viewing of the bedrock faces, these areas were subject to moderate to high wave action and would be expected to be cleaned by natural action.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

NK-05 consists of bedrock cliffs on East and West shores with a long sand beach making up the majority of the north shore. There is an anadromous stream on the eastern end of the sand beach. No oil was observed in this segment. I agree with information on SSAT Forms.

LAND MANAGER

NAME SHARIE Methven SIGNATURE Sharie Methven-Joney

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS Nuka Island Segment 5 Northend has numerous catchment beaches, exposed to high wave action, no oil was observed. To the east is a long black sand beach, the southern end is an anadromous stream, at this time no oil was observed and it gets high wave action. The beach can be accessible for landing planes. The area offers hiking, camping, fishing and clam digging. Wildlife in the area: stellar sea lions, harbor seals, harlequin ducks, scoters, gulls, merganser, buffle head, oyster catcher, commorants, sea otters and bald eagles. At this time no treatment is recommended; would recommend a helicopter scat in May and June to survey the beach area near the anadromous stream. In May-July 1989 the southern end of the beach received mousse patties.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG: T. Sawyer NOAA USCG Mac Donald SEGMENT ST/NK-5
 BIO: M. Carr LAND REP: Mathven-Teney DNE SUBDIVISION A (1 OF 1)
 EXXON: R. Boyer ADEC: R. Reed TIME: 06:45 to 09:30
 TEAM NO. 18 TIDE LEVEL: +1.0 → +6.0 DATE: Apr 122 / 90
 EST. SUBDIVISION LENGTH: 15656 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 75 % B 10 % C 5 % P 0 % G 0 % S 10 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 5 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 15656 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☒ NO ☐ TYPE <u>buoy & plastic containers</u> #BAGS <u>2</u> <u>Collected</u>
Vegetation				
Trash				
Debris				

Photographs:

Roll No. ST-18-8Frames 10 to 12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		VO	UC	10	15	10	15	10	SW	U	M	U				
1	30																					S-C, S
2	40																					S-S
3	35																					S-S
4	40																					S-S
5	35																					S-S
6	45																					S-S

COMMENTS ST/NK-5: Is a large embayment with one large beach at the east end and several small "pocket" beaches on either side. There is an anadromous stream at the southern end of the large beach. No oil was observed in this segment.

REVIEWED BAT DATE 23 Apr 90

REVISION 04/12/99

REVIEWED BAT DATE 23 Apr 90

OG T.S. 101

SEGMENT STALKS

SUBDIVISION A

DATE Apr 122 90

CHECKLIST

- ___ N Area
- ___ Approx. Scale
- ___ Segment Body
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSL
- ___ Profile Location(s)
- ___ Photo Location(s)
- ___ Photo Location(s)

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

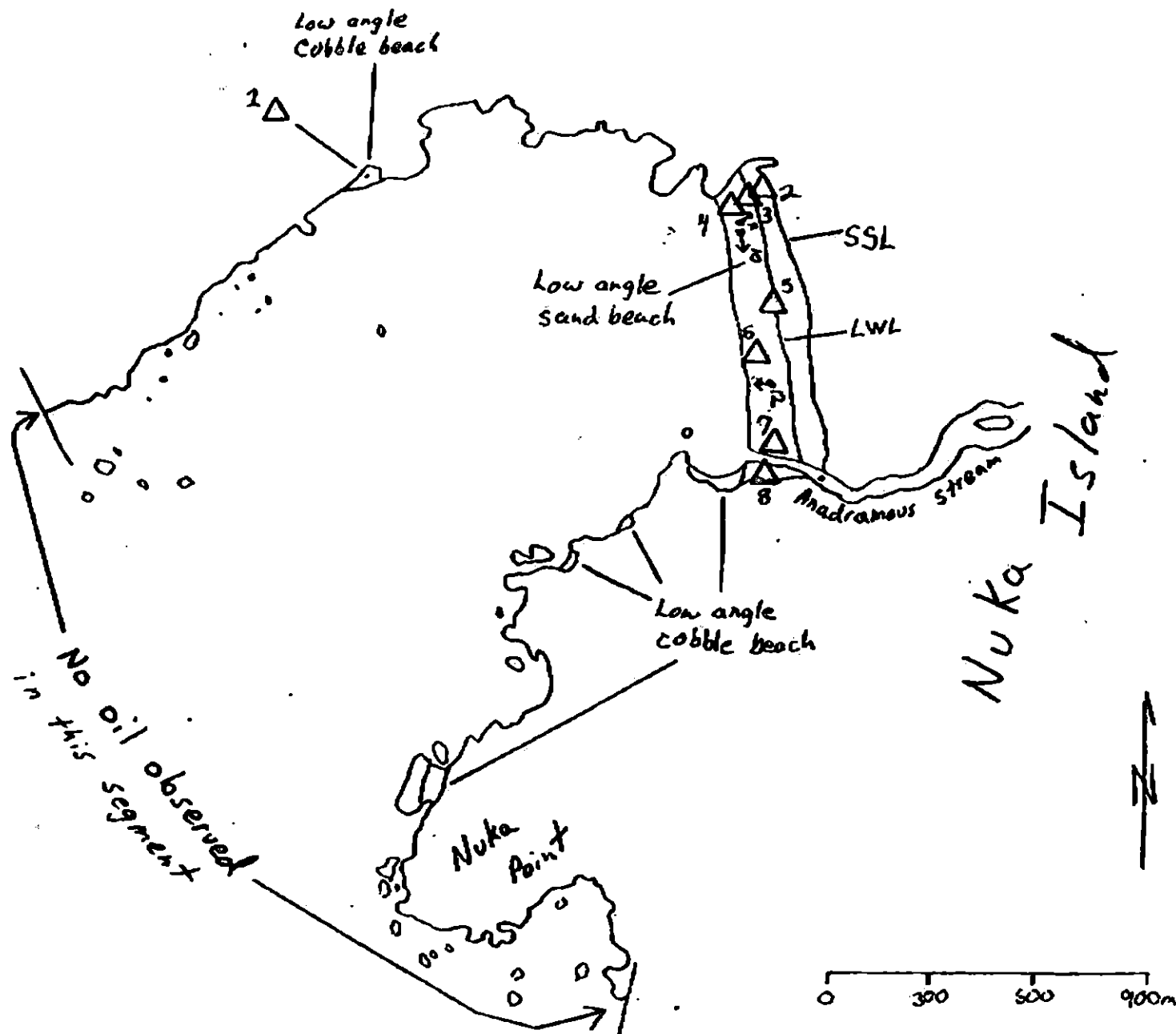
Splashed Distribution

Oil Vegetation

1 →

Photo location, direction,
and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/78

Segment ST / NK-5 Subdivision A Date (mo / day / yr) 4-22-80

Time (24 hr) 0647 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 75 (2) Boulder 10 (3) Cobble 5 (4) Pebble 0 (5) Sand 10 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 20 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:
Roll No. ST-18-8

Frames 10 TO 12

BARNACLES

	Dense			Moderate			Sparse			Rare			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bould	2	2	X	O	O	2	2	2	2	2	2	2	
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	
Sand	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT AT ANY TIDAL ZONE.
	6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

	Dense			Moderate			Sparse			Rare			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bould	2	2	2	2	O	2	2	2	2	O	2	X	
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Sand	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT AT ANY TIDAL ZONE.
	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			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bould	2	2	2	O	O	2	2	2	X	2	2	2	
Cobb	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
Sand	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT AT ANY TIDAL ZONE.
	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	

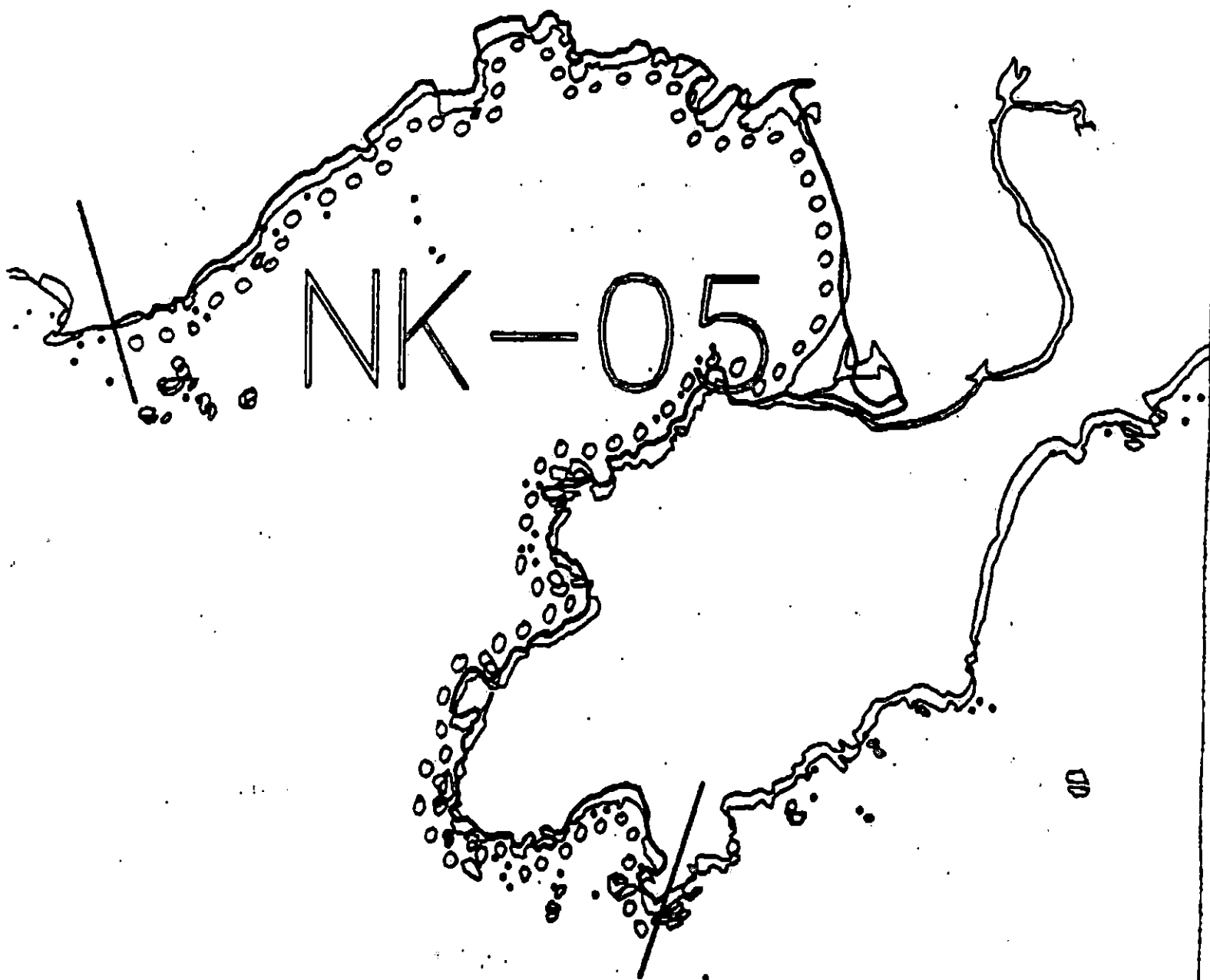
FUCUS

	Dense			Moderate			Sparse			Rare			
Bed	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bould	2	2	2	2	2	2	O	O	2	2	2	X	
Cobb	3	3	3	3	3	3	3	3	3	X	X	X	NOT PRESENT
Sand	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT IN ANY TIDAL ZONE.
	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:

Stellar sea lions (3), seater (34), harbor seal (4), harlequin duck (5), glaucous-winged gulls (20), sea otter (2), bufflehead (3), merganser (3), Bald eagle (1), immature, oyster catcher (2), commorant (1)
Ecological Considerations: Dense *Nereocystis* beds in shallow subtidal zone.

Sensitivity codes: unavailable ST, 1A, 1B, 4GG, 6U, 6V, 6NN



XX Wide

// Medium

--- Narrow

TTTT Very Light

0000 No Oil

NK-5

ADEC Segment Length: 8861m



Map Key: KEN-70

Name: T. Sawyer

Date: Apr. 22, 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ NY-01 SUBDIVISION A (1 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1K Purse seine hook-off (7/20 to 9/30)

5R Seabird colony (5/1 to 9/1)

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

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

Sensitivity code and general time constraints. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not damage mussel beds.

SHPO SIGNATURE: Charles Z. Horne DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 592 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER Art Weiner

EXXON ANDY TALL Andy Tall

NOAA Bruce Wescott Bruce Wescott

USCG GA. HEITER GA. Heiter

FOSC: Hy L DATE: 4-22-90

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 8/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U [REDACTED] (5/1 to 9/15)
6V [REDACTED] (5/1 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 / NY-1 SUBDIVISION: A DATE 4/5/90

DA
CG

NAME Jeffrey Dakin SIGNATURE Jeffrey Dakin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

The small islands were very similar to the main part of NY Island.
~~The islands~~ The shoreline was mostly bedrock with lots of oiled rock most common in the sheltered areas.

ADEC

NAME Lori Stratton SIGNATURE Lori Stratton

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

The narrow coat (broken) at UI zone on bedrock has low potential for receding other shorelines, so no treatment is recommended.

The islets are divided into a separate subdivision in this segment because of ecological considerations, i.e., dense mussel populations and presence of other haulouts.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG K. DEBUSSCHERE ~~OGGS~~ ^{NOTA} Jeffrey Rubin SEGMENT ST/ NY-1
 BIO Don Reed LAND REP Subdivision A
 ON TONY DIAZ ADEC Lori Stratton TIME 13:55: N. to 14:50 15:20
 TEAM NO.: 9 TIDE LEVEL: 6-5 FT to 4-3 FT DATE 4/5/90
 EST. SUBDIVISION LENGTH: 1242 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 25 % B 15 % C 5 % P 5 % G 0 % S — % M — % V — %
 SLOPE: Long 5 % Hang 80 % Vert 15 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 1242 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	N	N	N	N	N	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	

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-9-2Frames 6, 7, 8, 9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		VO	VO	1	2	3	4	5	SU	U	M	U		
1	35					X	.								X					P/C
2	25					X	.									X				P/C
							.													
							.													
							.													
							.													

COMMENTS

SUBDIVISION CONSISTS OF 3 ISLANDS CLOSE TO NEW YORK ISLAND
 THE MAJORITY OF THE SUBDIVISION IS HIGH RIGID BEDROCK
 LING CONSISTS OF A BROKEN COAT (NARROW) IN THE UPPER
 INTERTIDAL AREA. EXPOSED ROCKFACES HAVE BEEN CLEANED. NATURAL
 OILING IS CONCENTRATED IN PROTECTED GULLIES & CREVICES.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / NY-1 Subdivision A Date (mo / day / yr) 04/04/90
 Time (24 hr) 13:55-14:25 Biologist D. REED

(A) Substrate type and % of segments:
 (1) Bedrock 75 (2) Boulder 15 (3) Cobble 5 (4) Pebble 5 (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 (⊙)

Photographs: ST-9-2
 Roll No. —
 Frames 6, 7, 8, 9

BARNACLES

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

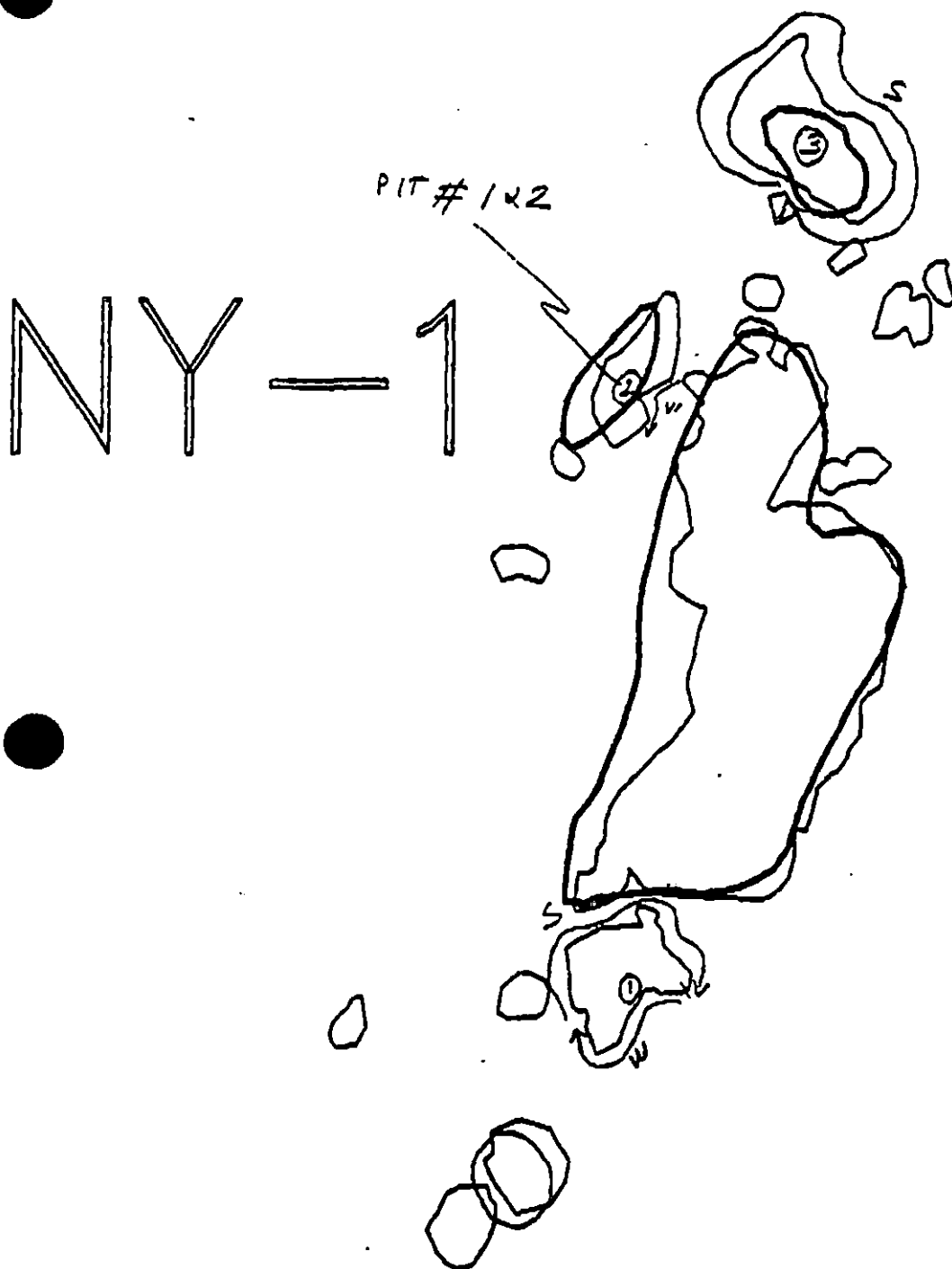
NOT PRESENT

Wildlife Observations/ General Comments:

3 SEA OTTERS. DENSE MUSSEL BEDS ON THE SOUTH SIDES OF 2 OF THE ISLETS WITHIN HAD NARROW OIL. SEA OTTER SCAT ABUNDANT IN HIGH ZONE ON BEDROCK ABOVE MUSSEL BEDS. SCAT COMPOSED

Ecological Considerations: ALMOST ENTIRELY OF MUSSELS. SUGGESTING THAT OTTERS FREQUENTLY USE THESE AREAS FOR FEEDING AND HAULING OUT. CERTAIN CLEANING ACTIVITIES MAY DISRUPT MUSSEL BEDS AND SEA OTTER FORAGING PATTERNS.

S = SKIFF
W = WALK



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-NY-1-A

ADEC Segment Length: 2642 ~~1000~~m



Map Key: PWS-499

Name: K. DEBUSSCHERE

Date: 4/5/90

Data Entered:

OIL MAP

NY - 1



XXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 N. 0:1

ST-NY-1-A

ADEC Segment Length: ~~1000m~~ 200m



Map Key: PWS-499

Name: K. DERUSSCHERF

Date: 4/5/90

Nota Continua.

SHORELINE EVALUATION

SEGMENT ST/ NY-01 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1K Purse seine hook-off (7/20 to 9/30)

5R Seabird colony (5/1 to 9/1)

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

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

6V 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. Do not damage mussel beds. Probable eagle nest.

SHPO SIGNATURE: Charles J. Hines DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1291 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC ART WEINER
EXXON ANDY TCH
NOAA Burt Wasscott
USCG KENNETH KEANE

FOSC: DATE: 4-26-90

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / NY-1 SUBDIVISION: B DATE 4/5/90

VQA

~~1000~~NAME Jeffrey RubinSIGNATURE Jeffrey Rubin☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil was found mostly on the sheltered sides of the Redrock. The oil was very weathered and there was very little or no oil on the more exposed areas of Redrock.

ADEC

NAME

Lori Stratton

SIGNATURE

Lori A. Stratton☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Main Squirrel Island has ^{narrow} broken oil coat at UI zone with mostly high angle bedrock. The oil is fairly well weathered so that its low potential for reoiling other shorelines does not warrant treatment. Oil is mostly found in pocket beaches.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG K. DERUSSCHER ^{NAM} 0000 Jeffrey G. Hlin SEGMENT ST/ NY-1
 RIO De Reed LAND REP 13 SUBDIVISION 13
 XXON TONY DIAZ ADEC Loai Stratton TIME 14:25 to 14:50
 EAM NO.: 9 TIDE LEVEL: 5 to 4 DATE 4/15/90
 EST. SUBDIVISION LENGTH: 1400 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N (CLOCKWISE)
 SURFACE SEDIMENTS: R 75 % B 15 % C 5 % P 5 % G 0 % S — % M — % V — %
 SLOPE: Long 5 % Hang 80 % Vert 15 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 1400 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	1	2	3	4	5	6	7	8	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 — sq. m by — cmPATTIES / TARBALLS — BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs (FALLEN)	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. —Frames NONE

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	OP	NO		VO	UC	1	2	3	4	5	6	7	8			
1	±70					X	.											X		B
							.													
							.													
							.													
							.													
							.													
							.													

COMMENTS

- SUBDIVISION IS DOMINATED BY HIGH ANGLE BED ROCK
- OILING CONSISTS OF A NARROW BAND OF BROKEN COAT IN UI. OIL IS CONCENTRATED IN PROTECTED GULLIES/CREVICES
- WHILE MORE EXPOSED AREAS HAVE BEEN CLEANED NATURALLY

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / NY-1 Subdivision B Date (mo / day / yr) 04/05/90
 Time (24 hr) 1425-1450 Biologist D. REED

- (A) Substrate type and % of segments:
 (1) Bedrock 17 (2) Boulder 15 (3) Cobble 5 (4) Pebble 5 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 50 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 NONE

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:

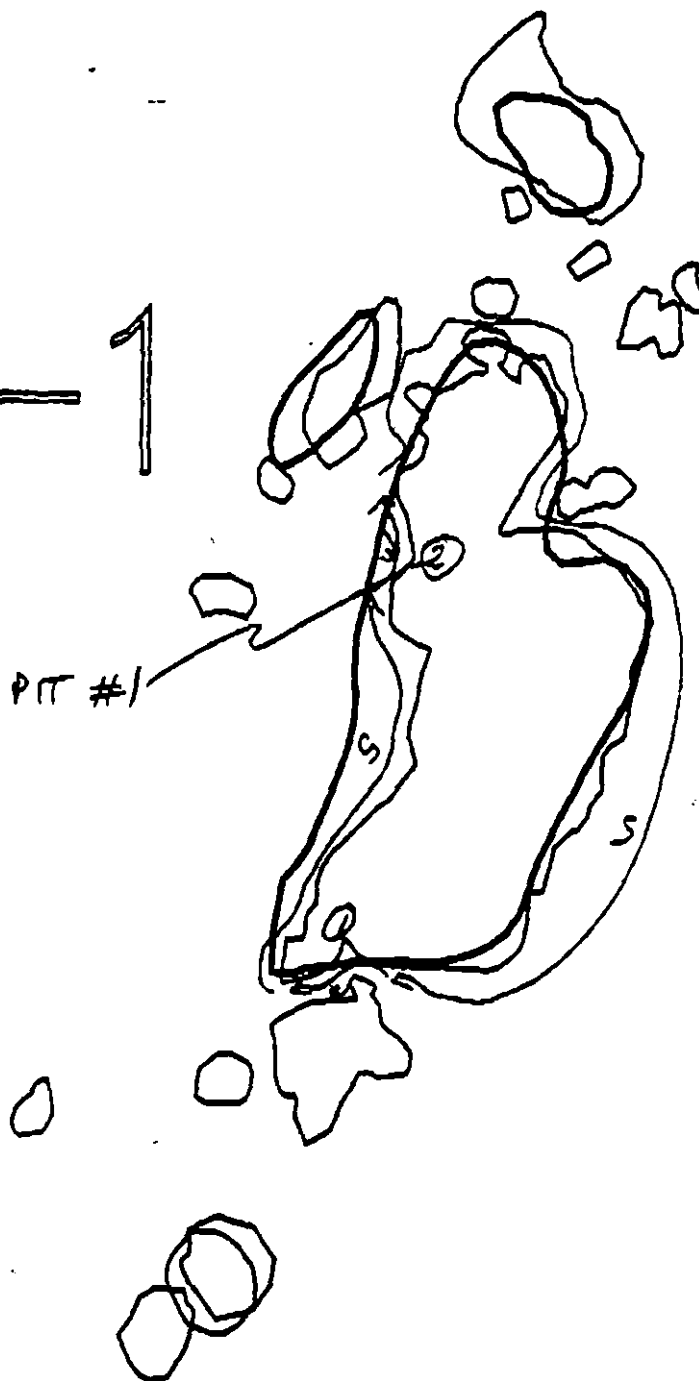
1 SEA OTTER, 1 EAGLE, 1 EAGLE NEST
 Dense mussel beds are sporadic in low zone

Ecological Considerations:

S=SKIFF

V=WALK

NY-1



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-NY-1-B

2642

ADEC Segment Length: ~~4000~~ m



Map Key: PWS-499

Name: K. DEBUSSCHER

Date: 4/5/90

Date Entered:

OIL MAP

NY-1



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-NY-1-B

ADEC Segment Length: 2642 ~~1000~~ m

0 100 200 300
METERS



Map Key: PWS-499

Name: K. DEBUSSCHERE

Date: 4/5/90

Data Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska