

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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1991
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[Shoreline evaluations, 1991].

Prince William Sound KN-120 to KN-127

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-120

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-120 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream (catalogue no. 226-10-16940)

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 577 m: No Oil 1121 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN 120 SUBDIVISION: NONE DATE 4/4/90

USCG
NAME Pat Malay SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

→ SICK LEAVE

ADEC
NAME M. CUNNINGHAM SIGNATURE M. Cunningham

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Segment in good shape. Occasional splatters and stain on vertical bedrock and little trash noted (removed). Bioremediation of uncertain benefit.

LAND MANAGER
NAME Steven Phillips SIGNATURE Steven Phillips

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Scout for trash /debris.

No ~~oil~~ treatments for oil except pickup tar balls/patties.

* Notify ADF&G of 8x8 plywood shack 50' up stream is breaking down. Is it theirs?

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Greg Chaney USCG Patrick Malaya SEGMENT ST/ KN-120
 BIO Jim Bath LAND REP Steve Phillips SUBDIVISION Area A (1 of 1)
 EXXON Reg Satele ADEC Mike Cunningham TIME 16:00 to 17:40
 TEAM NO.: 7 TIDE LEVEL: 1.0 ft to 2.0 ft DATE April 1 / 4 / 90
 EST. SUBDIVISION LENGTH: 1789 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SNOW
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
 SURFACE SEDIMENTS: R 10 % B 30 % C 30 % P 30 % G — % S — % M — % V — %
 SLOPE: Long 30 % Hang 60 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 555 m NO 1234 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	S	P	R	SP	BP	CP	OP	BP	CP	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT				X					X		X	X	X	X
STAIN				X		X					X	X	X	X
MOUSSE														
PATTIES				X	X						X			
TARBALLS														
FILM		X				X							X	X
NO OIL														

PAVEMENT: H F S — sq. m by — cmPATTIES / TARBALLS less than 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Green Pom pom#BAGS 1

Photographs:

Roll No. NONEFrames —

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	BP	CP	OP	BP	CP	SU	U	M	U		
1	25					X	—	X											X		M
2	25					X	—	X											X		PM
3	20					X	—	X										X			PM
4	20					X	—	X										X			PM

COMMENTS

Ice dam across bay seems to have trapped sheen. "Bathub ring" of rainbow sheen was observed around embayment.

REVISIONS:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST / KN 120 Subdivision — Date (mo / day / yr) Apr 4, '90

Time (24 hr) ARR 1555 Biologist ROTH

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

Photographs: NONE
 Roll No. —

Frames —

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

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	X	2	2	X	2	X
3	3	3	3	X	3	X	3	3	X	3	X
4	4	4	4	X	4	X	4	4	X	4	X
5	5	5	5	X	5	X	5	5	X	5	X
6	6	6	6	X	6	X	6	6	X	6	X

NOT PRESENT

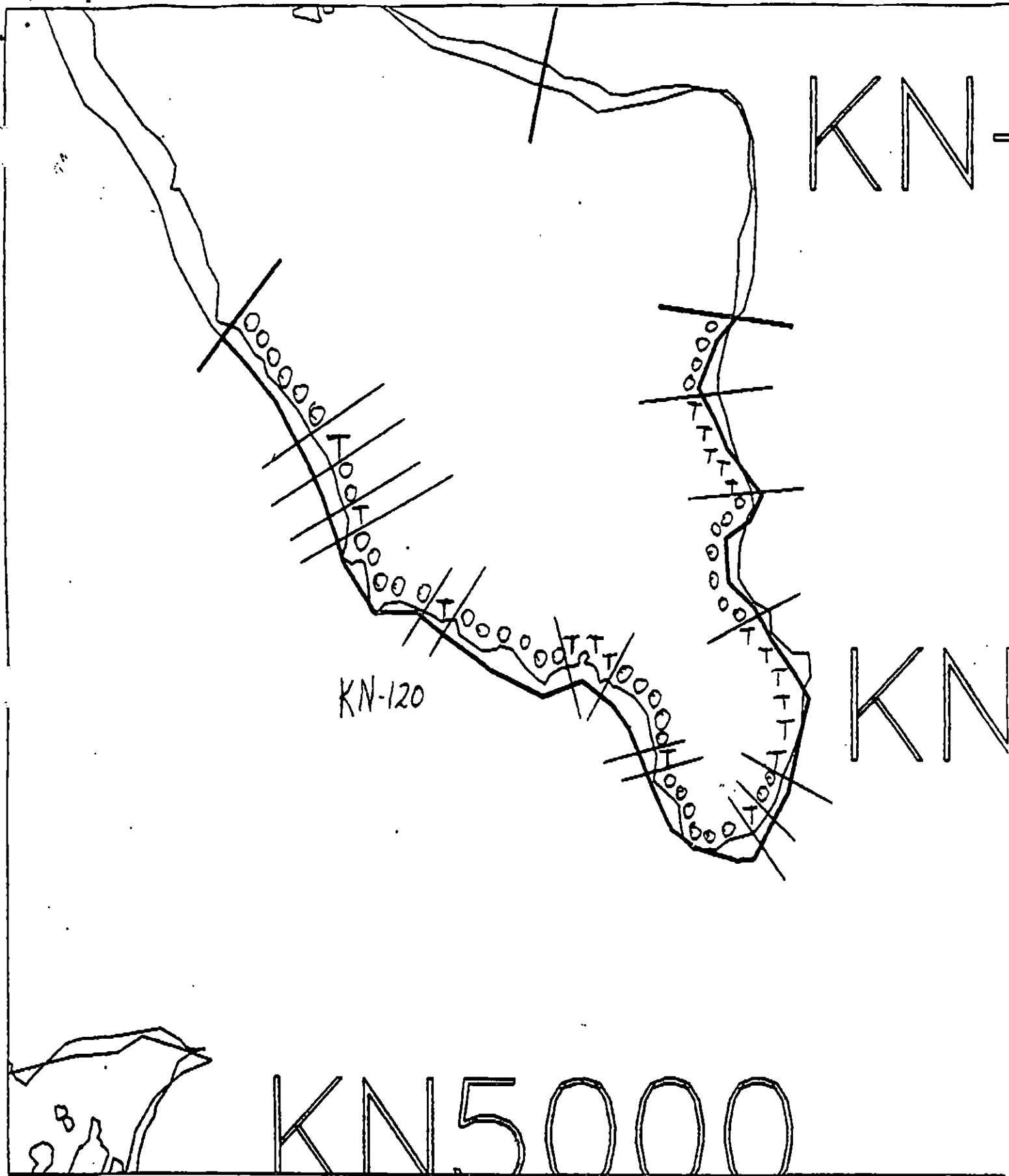
Wildlife Observations/ General Comments:

A LOW ENERGY SITE

Ecological Considerations:

GV - RECREATION ANCHORAGES

1B - SALMON SPAWNING



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

KN-120

ADEC Segment Length: 1698m
Exxon Segment Length 1789m



Map Key: PWS-302
Name: Greg Chaney
Date: April 4 1990
Data Entered:

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.
- 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 (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**
 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.

1991 MAYSAP EVALUATION

SEGMENT: KN 121 SUB: A REGION: PWS SURVEY DATE: 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

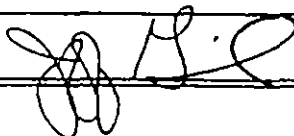
NOAA _____

ADEC

NAME

JEFF GINGHAR

SIGNATURE



NTR

OILING CONDITIONS ON THIS SEGMENT CONSIST MAINLY OF STAIN/COAT ON Boulders AT U12. MUCH OF SEGMENT IS STEEP ROCKY SHORELINE. NO RECOVERABLE OIL.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE



NTR

SOME COATINGS IDENTIFIED IN WAVE SHADOWS ALONG THE SHORELINE. NO TREATABLE OIL FOUND. NO FURTHER REASSESSMENT IS NECESSARY. LIVING CREATURES AND ORGANISMS CAN BE FOUND ABOVE AND BELOW ROCKY SURFACES.

LANDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE



NTR

Boulder bench pockets having REMNANT COAT AND STAIN.

USCG/NOAA

NAME

SCHULTZ

SIGNATURE



NTR

NO RECOVERABLE OIL FOUND, NO FURTHER INSPECTION WARRANTED

HIGHLY RUGGED ROCKY SHORELINE WITH GULLIES OF Boulder COBBLE & PESSIM OILING DETECTED AS CT, LV, & ST AT U1 & SI ZONES. OIL HEAVILY WEATHERED & LOCATED ON SHELTERED SIDES OF GULLIES & ROCK WALLS.

MAYSAP SHORELINE SURVEY SUMMARY

PAGE 1 OF 2

TEAM NO. 1OG G. MACDONALDBIO M. FAWCETTSEGMENT KN-121ADEC J. GINARIASLANDMANAGER M. HALL for DNRSUBDIVISION AEXXON R. BOYELUSCG/NOAA SCHULTZ/CHILDSDATE 5/17/91TIME 10:30 to 12:05TIDE LEVEL -2.8 ft. to +2.2 ft.ENERGY LEVEL: ☐ H ☒ ~~KE~~ XSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: ~2500 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M 30 m N 60 m VL 2,250 m NO ~400 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S		T	T				RCP	V	1	~750	X				10 soil
B1						T	T				RFB	V	1	~600	X				
B2						P					RB	V	10	30	X	X			in ke channel.
C1						T	T				RB	V	1	~775	X				10 soil
C2						P					RB	V	≤1	10	X				on lee side of Rock
C3						P					RB	V	≤1	15	X				"
C4						P					RB	V	≤1	10	X				"
C5						P					RB	V	≤1	10	X				"
C6						P					RB	V	≤1	15	X				"

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1-24 FRAMES 2-9

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	40							X	-		-			X			PG-CR	
2	20							X	-		-				X		CG-SG	
3	20							X	-		S	N		X			PG-GC	
4	30							X	-		S	N			X		CP-GMV	boat
5	15							X	-		-				X		EPB-PM	
6	20							X	-		-		X				P-P	
7	20							X	-		-			X			PB-PB	
8	30							X	-		10	N			X		CP-PBR	
9	30							X	2-A	Y	-				X		PG-BGM	tr. surface oil

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

OG COMMENTS: Steep rocky shore w/ Bcl filled channels, generally low exposure, but moderate fetch on NW aspects, @ W side of segment. Surface oil only, at CT, ST, CV traces @ 20TZ, with lee rock walls of channels harboring local patchy CT & CV bands & trace 10. soil.

The oil is well weathered, typically black, powdery when

revised 5/21/91
REVIEWED: MC 5/22/91

scraped off w/ fingernail, and is missing from the
SUTZ black lichen zone as evident by oil & lichen free
dripline shaped lichen zones ("oil shadows") - common
along the N & W shoreline. Aspect has little effect
on the apparent degree of weathering - even tax in
the darker recesses is desiccated & easily scraped off.

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

revised 5.21.94
Reviewed: 5/24/94 mc

SUTZ A-A'
 CT, CV,
 $\leq 1/2 m \times 600$
 $< 1\%$ common.

2 TB, PU

No OIL

CT, ST, $< 1\%$
 $\leq 1 m$ C
 SUTZ

CT @ SUTZ
 $< 1\%$ typical

R, CPY/R

"oil shadows" common
 throughout.

B1

B2
 CT in lee of
 R channel
 $\leq 20\%$; $10 \times 30 m$

within A
 10 SOR
 $< 1\%$
 1×1 C
 SUTZ

10.30 HRS

C2
 CT $\leq 50\%$ on lee R.
 $\leq 1 \times 10$

PU - 1m oiled
 sorbent boom

CBP

Stream
 $\leq 1 \times 15$ CT $\leq 50\%$
 on lee R.

KEY

CT, ST, CV
 $< 10\%$

C1

C4
 trace 10 SOR @ SUTZ
 CT on R; lee; $< 10\%$
 $< 1\%$ common.

KN-121A

G. MACDONALD

5-17-91

$\leq 1 \times 10$
 CT $\leq 50\%$
 on lee R

C6
 $\leq 1 \times 15$
 CT $\leq 50\%$

140m approx.

No OIL

steep R

EOS
 13.06 488

REMARKS: MC 5/20
 revised 5.21 9
 per gm
 3

TEAM # 1 DATE 17 May 91
 SEGMENT # KN 121 TIDAL HEIGHT (Range) -2.8 to +2.1 ft. MLL
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION E 5-10 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision has mostly narrow steep shoreline of vertical bedrock and jumbled large boulders, with numerous small pocket beaches of boulders, cobble, & pebbles. The shallow subtidal and low intertidal floor is mostly gravel and mud, occupied by eelgrass, laminarians, and infauna consisting of several species of clams (*Saxidomus*, *Protothaca*, *Mya*, *Clinocardium*, *Macoma*, and others), moon snails, echinoids, crabs (*Hemigrapsus oregonensis*), and other burrowing animals. Hundreds of craters along the LTZ made by sea otters in search of clams indicate recent otter use of the area, although none were observed during the survey. MTZ boulders, cobble, and bedrock typically have dense barnacles, patchy rockweed & mussels (mussels also in pebbles & gravel, often forming dense beds), mats of filamentous red, green, & brown algae, and snails such as limpets, littorinids, *Calliostoma*, and whelks. Breeding littorinids, whelks, and sea slugs (*Lamellideris*) commonly seen beneath boulders, along with fish (pricklebacks).

see sketch map for descriptions of biota near residual oil.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 1 juv. 1 adult	black prickleback
Seabirds			
Waterfowl			
Gulls/kittiwakes	1 (black-legged kittiwake)	30-40	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Round station 5M

CT, CV among or above
limpets, barnacles; littorinids,
Rockweed, mussels, clams,
etc downshore

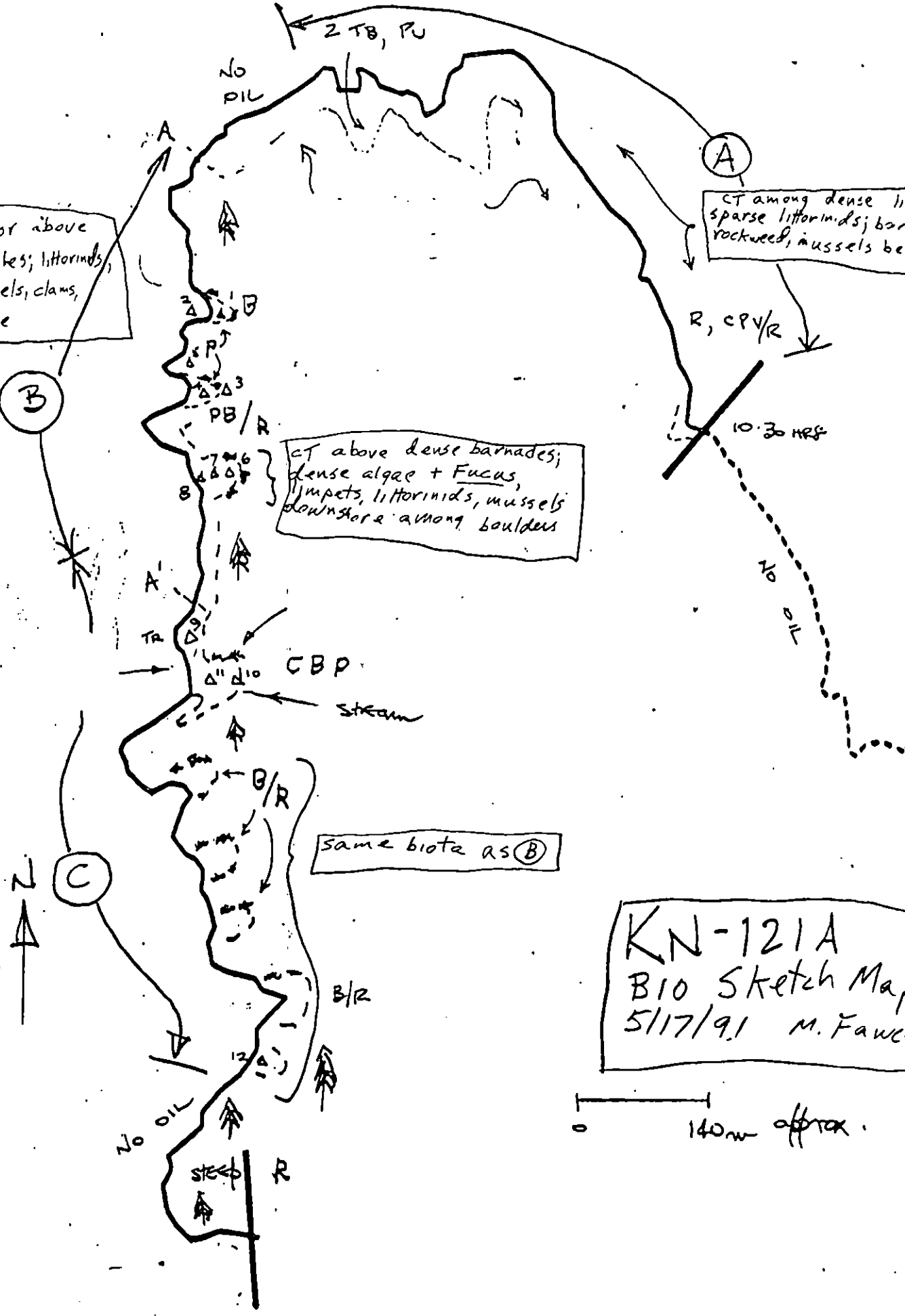
CT above dense barnacles;
dense algae + Fucus,
limpets, littorinids, mussels
downshore among boulders

CT among dense
sparse littorinids; bar
rockweed, mussels be

same biota as (B)

KN-121A
BIO Sketch Map
5/17/91 M. Fawc

0 140m approx.



4

KN 121A 5/17/91 Fawcett

start 1033ms at pocket 5/9/p
beach south end

- Clams, macrobenthos & eggs LTZ
- patches Fucus throughout MTZ-LR,
- dense on boulders & BR at surface +2-18 ft
- dense N. perena + 6-9 ft
- mod. Litt
- no oil

- substrate & biota similar to KN119
- dense barn & mussels on MTZ BR
- B/c/p/g boulders, clams, & grass below
- Trace CT VTZ 1050 among
- dense limpets, sparse litt

- huge colony of large Metridium
1110 on reef in middle of bay
LTZ & subtidal

- pocket beach, BR outcrop
- many otter holes, clam shells & broken
- CT in VTZ - subVTZ + 10 ft on overhang
- ing boulders ~~on~~ just above mod. barnacles
- limpets - Fucus, litt, fil rad, Ulva, etc.
- below on boulders

- some perena above CT
1120 - next pocket same stuff
dense Laminaria setchellii LTZ-subtidal

KN 121 (Cont) 17 May 91 Fawcett

1200 hr (see sketch) - two eagle flying
pocket w/ heavy CT trapped
behind massive boulders + 8-10 ft
above dense barnacles - droids in MIZ
are dense F-l gr, red alga and Fucus,
limp, litt, patchy young mussels,
proules etc under boulders

1220 another pocket - high cliffs - mussel
bed on spit connecting BR reefs -
heavy CT on walls + 8-10 ft all along -
sparse to dense barnacles below CT
Kittiwakes 30-40 nearby

- just pink shellfish-bagel stuff
(looks like fish fecal pellets) all over
the place - gull puke also full
of pink crustacean parts - maybe
related to stranded Euphausiids
we saw earlier

1250 BR/B/C pockets (2)

1 eagle
sparse barn, Fucus limp litt in boulders
all dense on BR walls - also mod
litt helbs

end 1300

1991 MAYSAP EVALUATION

SEGMENT: KN 121 SUB: A REGION: PWS SURVEY DATE: 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 6/03/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/5/91

ADEC John Bauer

FOSC E. E. Page

EXXON Edmond

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

USCG Edmond

NOAA Ray Kelly

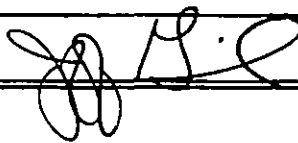
TEAM NO. 1SEGMENT KN 0121SUBDIVISION ADATE 5/17/91

ADEC

NAME

JEFF GINGRAS

SIGNATURE

☒ NTR

OILING CONDITIONS ON THIS SEGMENT CONSIST MAINLY OF STAIN/COAT ON BORDERS AT U12. MUCH OF SEGMENT IS STEEP ROCKY SHORELINE. NO RECOVERABLE OIL.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

SOME COATINGS IDENTIFIED IN WAVE SHADOWS ALONG THE SHORELINE. NO TREATABLE OIL FOUND. NO FURTHER REASSESSMENT IS NECESSARY. LIVING CREATURES AND ORGANISMS CAN BE FOUND ABOVE AND BELOW ROCKY SURFACES.

LANDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE

Marsha Hall☒ NTR

Boulder beach pockets having remnant coat and stain.

USCG/NOAA

NAME

SCHULTZ

SIGNATURE



☒ NTR NO RECOVERABLE OIL FOUND, NO FURTHER INSPECTION WARRANTED

HIGHLY RUGGED ROCKY SHORELINE WITH GULLIES OR BOWEN COBBLE PRODUCE OILING DETECTED AS CT, LV, & ST AT U1 & SI ZONES. OIL HEAVILY WEATHERED & LOCATED ON SHELTERED SIDES OF GULLIES & ROCK WALLS.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-121

ADEC J. GINKLAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON R. BOYEL

USCG/NOAA SCHULTZ/CHILDS

DATE 5/17/91

TIME 10:30 to 12:05

TIDE LEVEL -2.8 ft. to +2.2 ft.

ENERGY LEVEL: ☐ H ☒ ~~M~~ ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: ~2500 m

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

EST. OIL CATEGORY LENGTH: W — m M 30 m N 60 m VL 2,25 m NO ~400 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S		T	T				RCP	V	1	~750	X				10 soil
B1						T	T				RFB	V	1	~600	X				
B2						P					2B	V	10	30	X	X			in lee channel.
C1						T	T				RB	V	1	~775	X				10 soil
C2						P					RB	V	≤1	10	X				on lee side of Rocks
C3						P					RB	V	≤1	15	X				"
C4						P					RB	V	≤1	10	X				"
C5						P					RB	V	≤1	10	X				"
C6						P					RB	V	≤1	15	X				"

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1-24 FRAMES 2-9

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	40							X	-		-			X			PCC-CR	
2	20							X	-		-				X		CG-SG	
3	20							X	-		S	N		X			PC-GC	
4	30							X	-		S	N			X		CP-GMV	boat
5	15							X	-		-				X		EPB-PH	
6	20							X	-		-		X				P-P	
7	20							X	-		-			X			PB-PB	
8	30							X	-		10	N			X		CP-PBR	
9	30						X		2-A	Y	-				X		PG-BGM	tr. surf. oil

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

OG COMMENTS: steep rocky shore w/ bed filled channels, generally low exposure, but moderate fetch on NW aspects, @ W side of segment. Surface oil only, as CT, ST, CV traces @ SURT, with lee rock walls of channels harboring local patchy CT & CV banding trace 10. soil.

The oil is well weathered, typically black, powdery when

revised 5.21.91

DATE 5, 17, 91

scraped off w/ fingernail, and is missing from the
SUTZ black lichen zone as evident by oil & lichen free
dripline shaped lichen zones ("oil shadows") - common
along the N & W shoreline. Aspect has little effect
on the apparent degree of weathering - even tar in
the darker recesses is desiccated & easily scraped off.

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

revised 5.21.94
Reviews: 5/24/94 me

SUTZ A-A'
CT, CV,
≤ 1/2 m x 600
≤ 1% common.

2 TB, PU

No OIL

CT, ST, < 1%
≤ 1 m C
SUTZ

A

CT @ SUTZ
≤ 1% typical

R, CPV/R

10-30 HRS

"oil shadows" common
throughout.

B2
CT in lee of
R channel
≤ 20%; 10x30 m

within A
10 Sop
≤ 1%
1x1 C
SUTZ

C2
CT ≤ 50% on lee R.
≤ 1x10

PU - 1m oiled
sorbent boom

CBP

Stream
≤ 1x15 CT ≤ 50%
on lee R.

C4
trace 10 Sop @ SUTZ
CT on R; lee; < 10%
≤ 1% common.

KEY

CT, ST, CV
≤ 10%.

KN-121A

G. MACDONALD
5-17-91

140m approx.

≤ 1x10
CT ≤ 50%
on lee R

No OIL

steep R

EOS
13.06 488

REVISOR: JMC 5/21/91
revised 5.21.94
per G.M.
3

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 17 May 91
 SEGMENT # KN 121 TIDAL HEIGHT(Range) -2.8 to +2.1 ft. MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION E 5-10 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision has mostly narrow steep shoreline of vertical bedrock and jumbled large boulders, with numerous small pocket beaches of boulders, cobble, & pebbles. The shallow subtidal and low intertidal floor is mostly gravel and mud, occupied by eelgrass, *Laminarians*, and infauna consisting of several species of clams (*Saxidomus*, *Protothaca*, *Mya*, *Clinocardium*, *Macoma*, and others), moon snails, echinoids, crabs (*Hemigrapsus oregonensis*), and other burrowing animals. Hundreds of craters along the LTZ made by sea otters in search of clams indicate recent otter use of the area, although none were observed during the survey. MTZ boulders, cobble, and bedrock typically have dense barnacles, patchy rockweed & mussels (mussels also in pebbles & gravel, often forming dense beds), mats of filamentous red, green, & brown algae, and snails such as limpets, littorinids, *Calliostoma*, and whelks. Breeding littorinids, whelks, and sea slugs (*Lamellideris*) commonly seen beneath boulders, along with fish (pricklebacks).

see sketch map for descriptions of biota near residual oil.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 1 adult	black prickleback
Seabirds			
Waterfowl			
Gulls/kittiwakes	1 (black-legged kittiwake)	30-40	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

CT, CV among or above limpets, barnacles; littorinids, Rockweed, mussels, clams, etc downshore

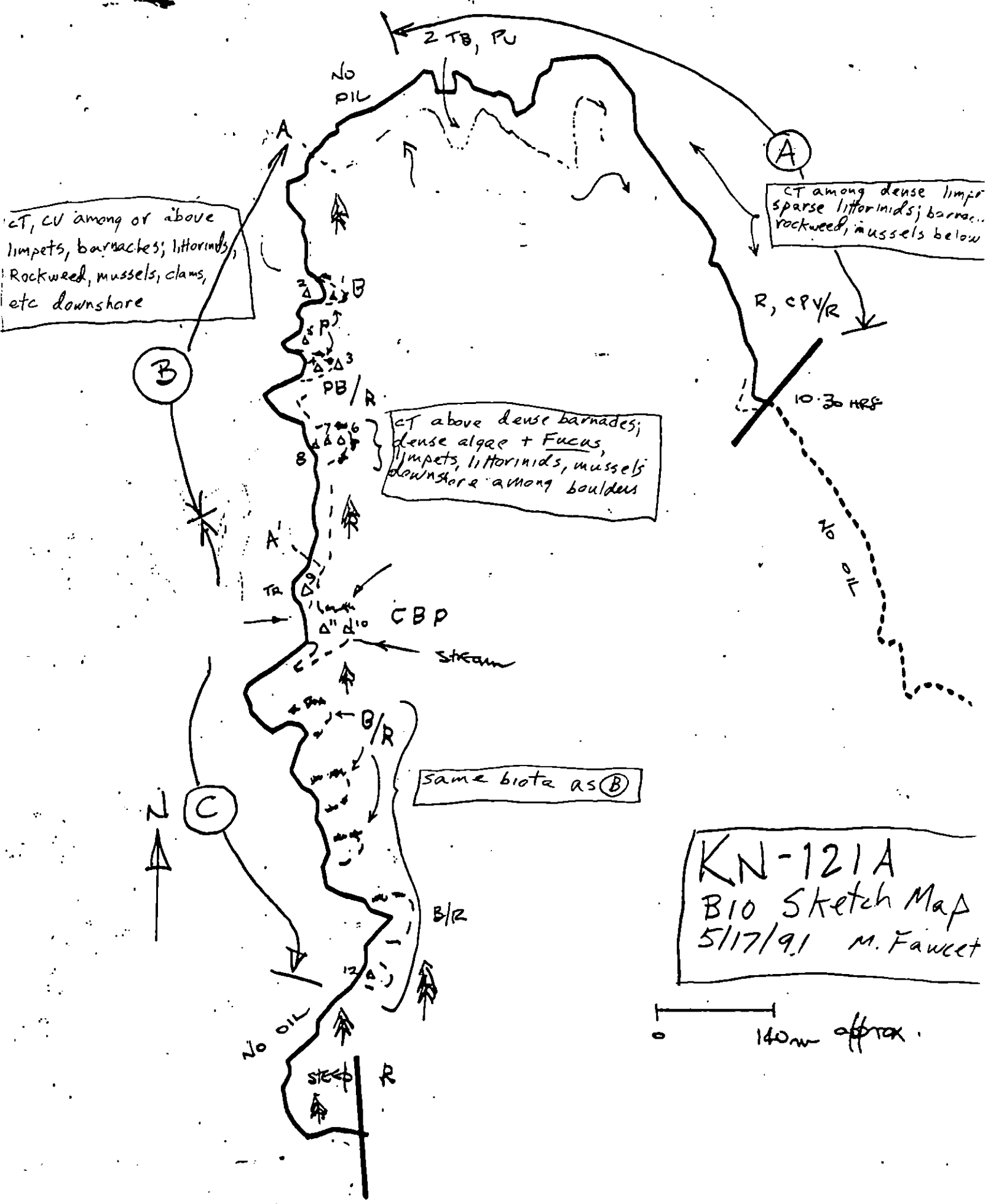
CT among dense limps; sparse littorinids; barnacles; rockweed, mussels below

CT above dense barnacles; dense algae + Fucus, limpets, littorinids, mussels downshore among boulders

same biota as (B)

KN-121A
BIO Sketch Map
5/17/91 M. Fawcett

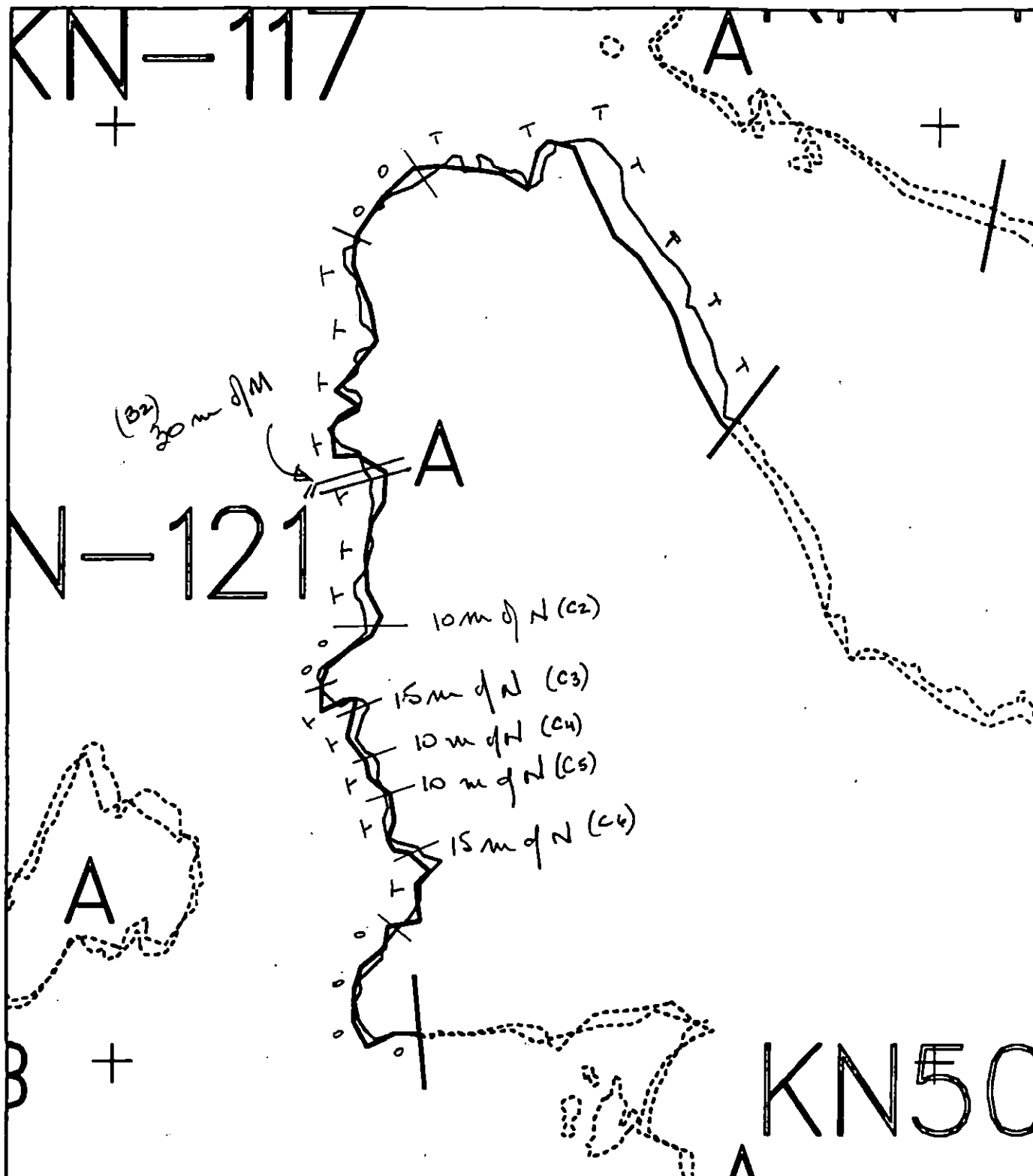
0 140m approx.



KN-117

N-121

KN50



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

KN0121 A
 ADEC Subsegment Length: 2488m
 METERS
 0 200 400
 AR State Plane Zone 4
 kn0121a



Subdivision Field Map
 Map Key: KNKN0121A
 Memo: GM
 Date: 5.17.91
 Date Entered:

REVIEWED: 5/27/91 MC
 Revised 5.21 GY

KN 121A 5/17/91 Fawcett

start 1033ms at pocket 5/9/p
beach south end

- Clams, mussels & eggs LTZ

patches Fucus throughout MTZ-CR,

dense on boulders & BR at surface +2-18ft

dense *N. peruviana* + 6-9ft

mod. Litt

no oil

- substrate & biota similar to KN 119

- dense barn & mussels on MTZ BR

- B/c/p/g beaks, clams, & grass below

- Trace CT VTZ 1050 among
dense limpets, a sparse Litt

- huge colony of large *Metridium*
1110 on reef in middle of Bay
LTZ & subtidal

- pocket beach, BR outcrop

- many other holes, clam shells & rubble

CT in VTZ-SVTZ + 10ft on overhang

ing ~~beak~~ ~~an~~ ~~just~~ ~~above~~ mod. barnacles

limpets - Fucus, litt, fil red, *Ulva*, etc,
below on boulders

- some *peruviana* above CT

1120 - next pocket same stuff

dense *Laminaria setchellii* LTZ-subtidal

KN 121 (cont) 17 May 91 Fawcett

1200 hr (see sketch) - 1 juv eagle flying
pocket w/ heavy CT trapped
behind massive boulders + 8-10 ft
above dense barnacles - double in M12
are dense Fulgs, red alga mod Fucus,
limp, litt, patchy young mussels,
probers etc under boulders

1220 - another pocket - high cliffs - mussel
bed on spit connecting BR reefs -
heavy CT on walls + 8-10 ft all along -
sparse to dense barnacles below CT
Kittiwakes 30-40 nearby

- pink shellfish-banded stuff
(looks like fish fecal pellets) all over
the place - gull pake also full
of pink crustacean parts - maybe
related to shrimped Euphausiids
we saw earlier

1250 BR/B/C pockets (2)

1 eagle
sparse barn, Fucus limp, litt in boulders
all dense on BR walls - also mod
limp

end 1300

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-121

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-121 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 411 m: Narrow 399 m: V.Light 1471 m: No Oil 208 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 60+cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual raking and bioremediation of areas shown on sketch map. Work should be conducted prior to 5/15 or between 7/2 and 7/31 based on pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 121 SUBDIVISION: A 1 of 1 DATE 4-20-90

USCG

NAME

Patrick Malay

SIGNATURE

Patrick Malay☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS This segment had a continuous bath tab ring stain almost the full length of the upper intertidal zone. The coated boulders in areas other than the pocket beaches might present a problem for bioremediation due to the steep angle of the rocks. The thick subsurface residual oil in the vicinity of pits 4 & 7 is of concern but I'm not sure what to suggest because of its depth (40-60 cm).

ADEC

NAME

Michael CUNNINGHAM

SIGNATURE

M. Cunningham☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This long segment consisted of steep vertical cliffs w/ numerous pocket beaches composed of high-angle interlocking sediments (boulder + cobble) which would pose problems for hand filling crews. However an attempt should be made to turn over the rocks to expose undersides to bioremediation. Recommend extensive bioremed along entire segment w/ emphasis incl. filling @ sites 1-3. Biota not that critical a consideration except where recruitment noted (NE end segment). Bedrock coats pose visual eye sore however treatment not yet defined to effectively remove.

LAND MANAGER

NAME

Steven Phillips

SIGNATURE

Steven Phillips☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

There wasn't much debris on this segment but storm berms on west aspect pockets should be rechecked after the snow melts.

Tar bands on bedrock and boulders was very visible from the water. Most tar was on vertical surfaces, bioremediation would do little. Surfaces were too rough for effective scraping. Consider a type B method for removing or at least reducing visibility of bands. Worst locations were near pits #1, #2, #3 and vertical rocks on the south 1/4 of the segment. Bioremediate Cercle #1522 beach, beach at Pit 1.

Subsurface oil was found deep on small pockets - best chance to treat is when the sediments recede - who knows when this will be. 2. Bioremediate subsurface oil show pits indicated less than 30 cm deep.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Greg Chaney USCG Pat Malay DNR
 BIO Jim Roth LAND REP Steve Phillips SEGMENT ST/ KN-121
 EXXON Rey Sotelo ADEC Mike Cunningham SUBDIVISION A (1 OF 1)
 TEAM NO. 7 TIDE LEVEL 5.0 to 1.5 DATE April 1 2010
 EST. SUBDIVISION LENGTH: 2573 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock SNOW
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 50 % B 40 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 412 m N 912 m VL 1544 m NO 205 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	R	P	B	SP	BP	CP	GP	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT	X	X	X	X	X	X	X	X	X	X	X	X
STAIN	X	X	X	X	X	X	X	X	X	X	X	X
MOUSSE												
PATTIES												
TARBALLS												
FILM			X		X	X					X	X
NO OIL												

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

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

DID YOU COLLECT DEBRIS?

YES ☒ . NO ☐
 Styrofoam cup, Black ro
 TYPE Pom-pom Strands
 Sorbent Pads
 #BAGS less than 1

Photographs:

Roll No. ST-7-4Frames 1,2,3,4,5,6,7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	CP	GP	SU	U	M	V				
1	25	X					0-10		X							X			Y	20	B-BCGM
2	20	X					0-15		X							X			Y	10	B-BCM
3	45					X	.								X				N	0	CP-GP
4	60	X					40-60	X						X					Y	55	CP-GPB
5	40					X	.								X				N	15	PG-GPB
6	35					X	.								X				N	30	PG-BPG

COMMENTS

See attached page.

REVIEWED TwDATE 4/23/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ KN-121 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				ANALYSIS	SCREEN (mm)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	MA	GY	BL	GR	LT	LEA	SU	U	M	U				
7	50		X				40-50	X		X								X					Y	45	P-GPB
8	40					X	.											X					N	0	P-GPB
9	30					X	.											X					N	20	P-GP
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COMMENTS

REVIEWED Yw DATE 4/23/90

SKETCH MAP 1 of 2

CONTINUED ON NEXT PAGE

CONTINUOUS
TAR COAT BAND
130 CM HIGH ON
BEDROCKBOULDER PEBBLE BEACH.
TAR COAT ON BOULDERS.
PEBBLES WITH STAIN. RANDOMSMALL POCKET OF LARGE
BOULDERS. RAINBOW SHEEN
IN TIDE POOLSBLACK TAR BAND 20CM. HIGH
BLACK TAR COAT ON BOULDERS ~3 METERS
WIDE. LESS THAN 10% COVERAGE.RAINBOW SHEEN ON LOWER MITZ MOBILE
BROWN OIL IN MATRIXBLACK TAR COAT ON
BOULDERS ~3 METERS WIDE
30% COVERAGE.BLACK TAR COAT ON
BOULDERS. ~4 METER
BAND 40% COVERAGE
2, 3, 4, 52 METER BAND
PATCHY COAT
30% COVERAGE1 METER DISCONTINUOUS
TAR BAND 50% COVERAGE
ON BEDROCK FACESSPECIAL SYMBOLHEXAGONS MARK. 00000
TRACE SPLASHED TAR COAT ON BEDROCK

200 METERS

STATE OF
ALASKA
CERCLA
STUDY SITE
1522

N

RAGE &
BIO
HEREBIO
HEREBAND TAR COAT
4 METERS WIDE
70% COVERAGE
BROWN TAR UNDER-
NEATH BOULDERSSMALL POCKET OF
LARGE BOULDERS
PATCHES COAT &
STAIN ON PROTECTED
BOULDER FACES

SNOW

TREES

KN-121A (SOUTH)

OG Greg 2294

SEGMENT ST/ 121

SUBDIVISION A

DATE April 12 1990

CHECKLIST

N Arrow
Approx. Scale
Seg/Sub Entry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est. HML/LWL
SSZ
Profile Location(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

Splotched Distribution

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

C/V

See next page for

Total for both maps

Oil Character Length (m): AP

← Next page

NO

FL

TB

MS

ST

CT

CV

PO

SKETCH MAP 2 of 2

CONTINUED

FROM LAST PAGE

OG Grey Kacey

SEGMENT ST/121

SUBDIVISION A

DATE April 12 1990

CHECKLIST

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

LEGEND

1 A

Pt - No Subsurface Oil

2 A

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

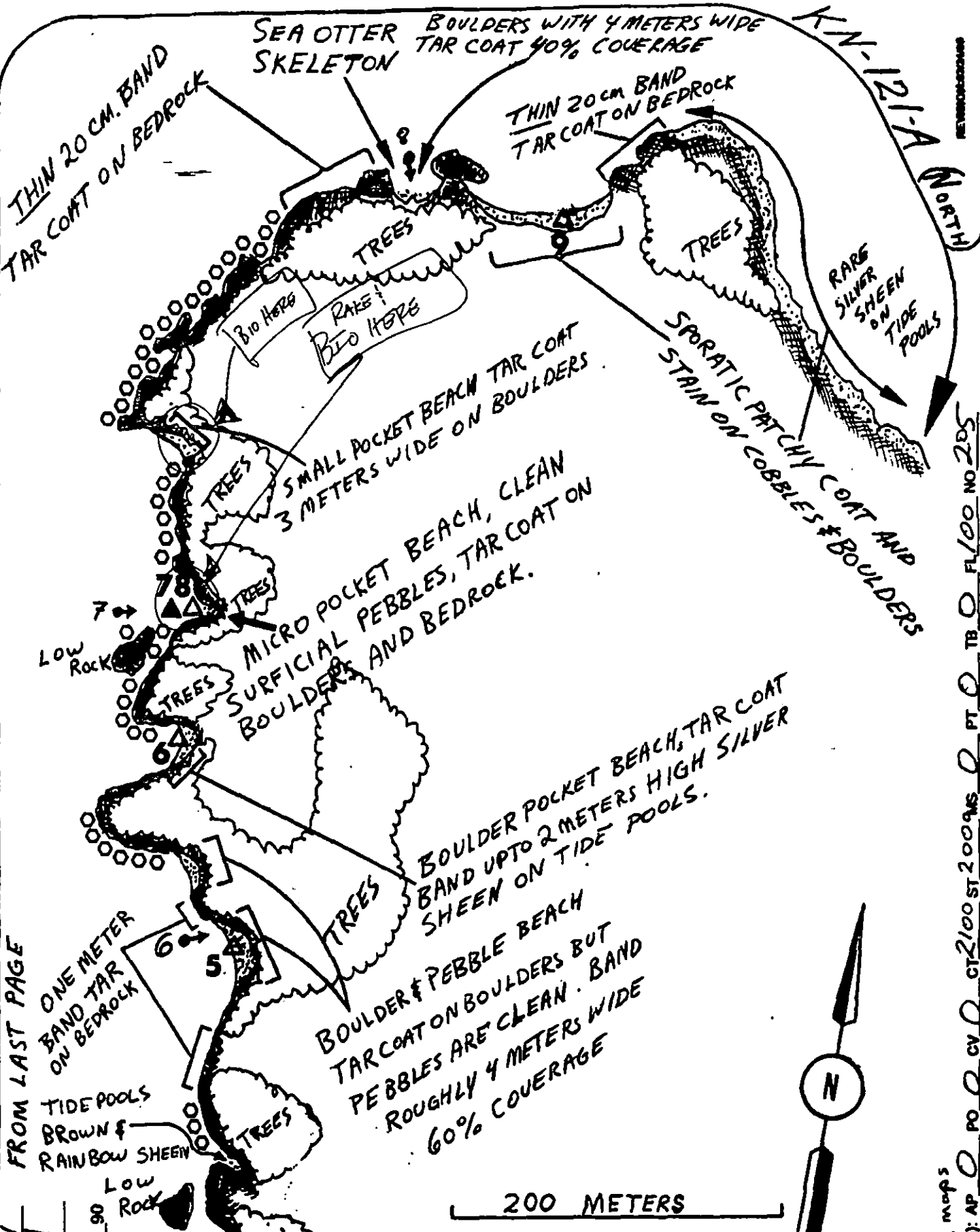
CT/S

Spattered Distribution

Oil Vegetation

1 2

Photo location, direction, and number



Total for both maps

Oil Character Length (m): AP 0 PO 0 CV 0 CT 2100 ST 2000 AS 0 FT 0 TB 0 FL 100 NO 205

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN 121 Subdivision A Date (mo / day / yr) APR 20, 90Time (24 hr) 1322-1735 Biologist ROTH(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 40 (3) Cobble 5 (4) Pebble 5 (5) Sand - (6) Silt -(B) Overall % cover of biota (% of segment): Dense 5 Moderate 30 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: ST-7-4
Roll No. ST-7-4Frames 1-8

BARNACLES

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

MYTILUS

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

FUCUS

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

Wildlife Observations/ General Comments:

SOMEWHAT LIMITED VARIETY OF PLANTS AND ANIMALS SEEN, WHICH PROBABLY REFLECTS BOTH THE SHELTERED NATURE OF THE SITE AND THE LIMITED OBSERVATION TIME AVAILABLE IN THE LOWER INTERTIDAL ZONE. SOME OF THE BOULDER/COBBLE BEACHES

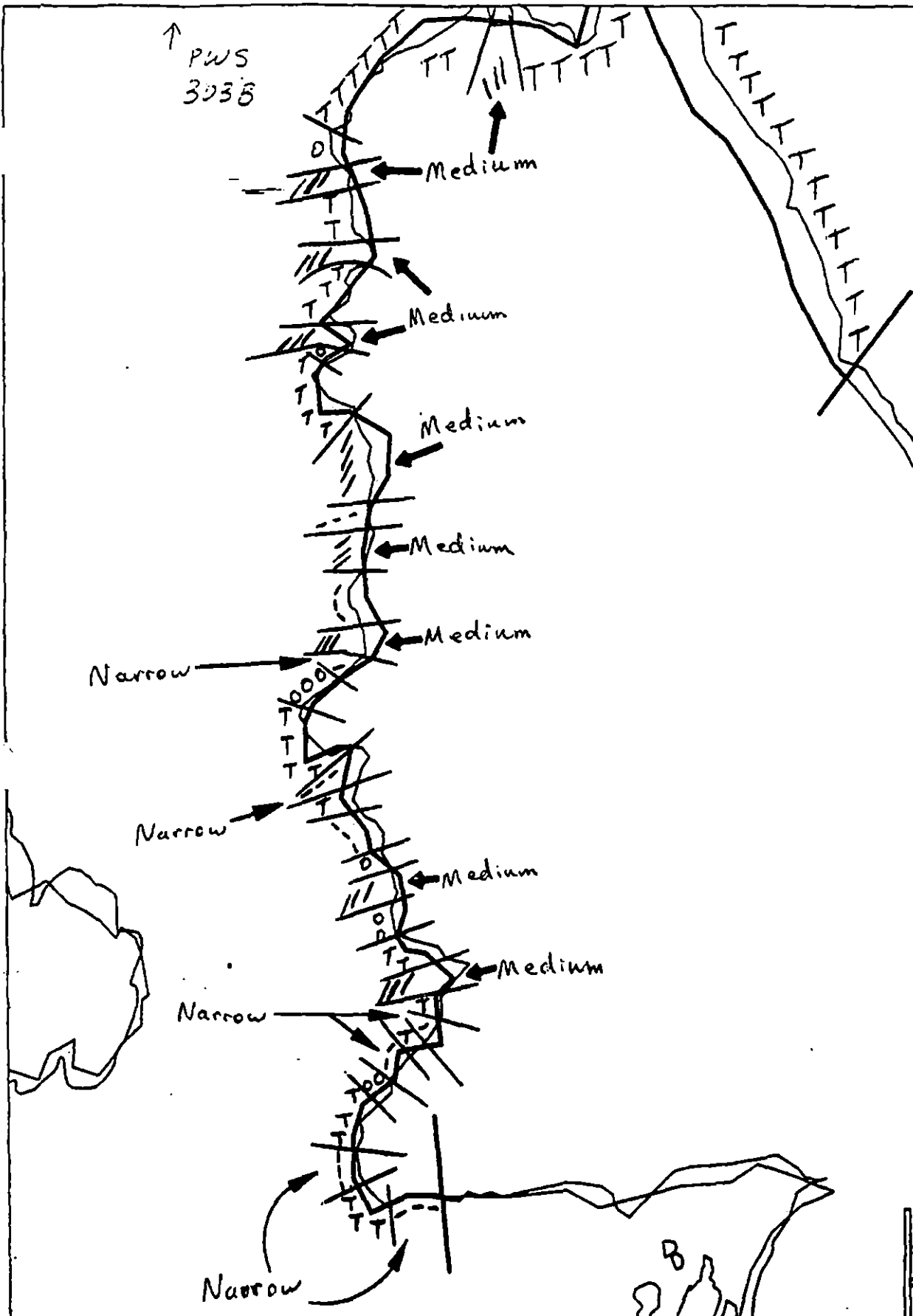
Ecological Considerations: HAD LOW BIOTA COVER — EVIDENCE OF HOT-WATER FLUSHING DURING 1985

NONE; SEGMENT INCLUDES "STATE OF ALASKA CERCLA STUDY SITE # 1522"

COMMENTS
SEGMENT ST-KN-121-A

Greg Chaney
April 20 1990

Segment ST-KN-121-A consisted of a long pillow lava bedrock face with several small and "micro" pocket boulder beaches. The bedrock headlands retained sporadic tar coats and occasionally a clearly defined tar "bath tub ring." The tar on these faces appeared very stable. The pocket boulder beaches seemed to harbor the most significant oil still present in the segment. The boulders retained tar on their exposed faces and often had thin mobile brown and black oil on the bottom of these boulders. In a few instances a small amount of cobbles, pebbles and granules formed an interstitial matrix between the boulders. While the boulders often retained tar and stain on their exposed faces, the cobbles/pebbles were usually quite clean. This appeared to have resulted from the mechanical cleaning of storm waves. Pits 4 & 7 in these cobbles/pebbles revealed oil at depths between 40 - 60 cm. The buried oil seemed to be concentrated near the same level as the tar "bath tub ring" on the adjacent bedrock faces. The oil located in pit 7 was very thick and did not sheen when placed in the bay (although some sheen occurred in the pit.) A sea otter skeleton was located at the northern point of the segment. The only flesh present was the skin which did not appear to have been oiled (due to state of decay this was difficult to determine.)



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

KN-121

ADEC Segment Length: 2487m
 Exxon Segment Length: 2573m

0 100 200 300
 METERS

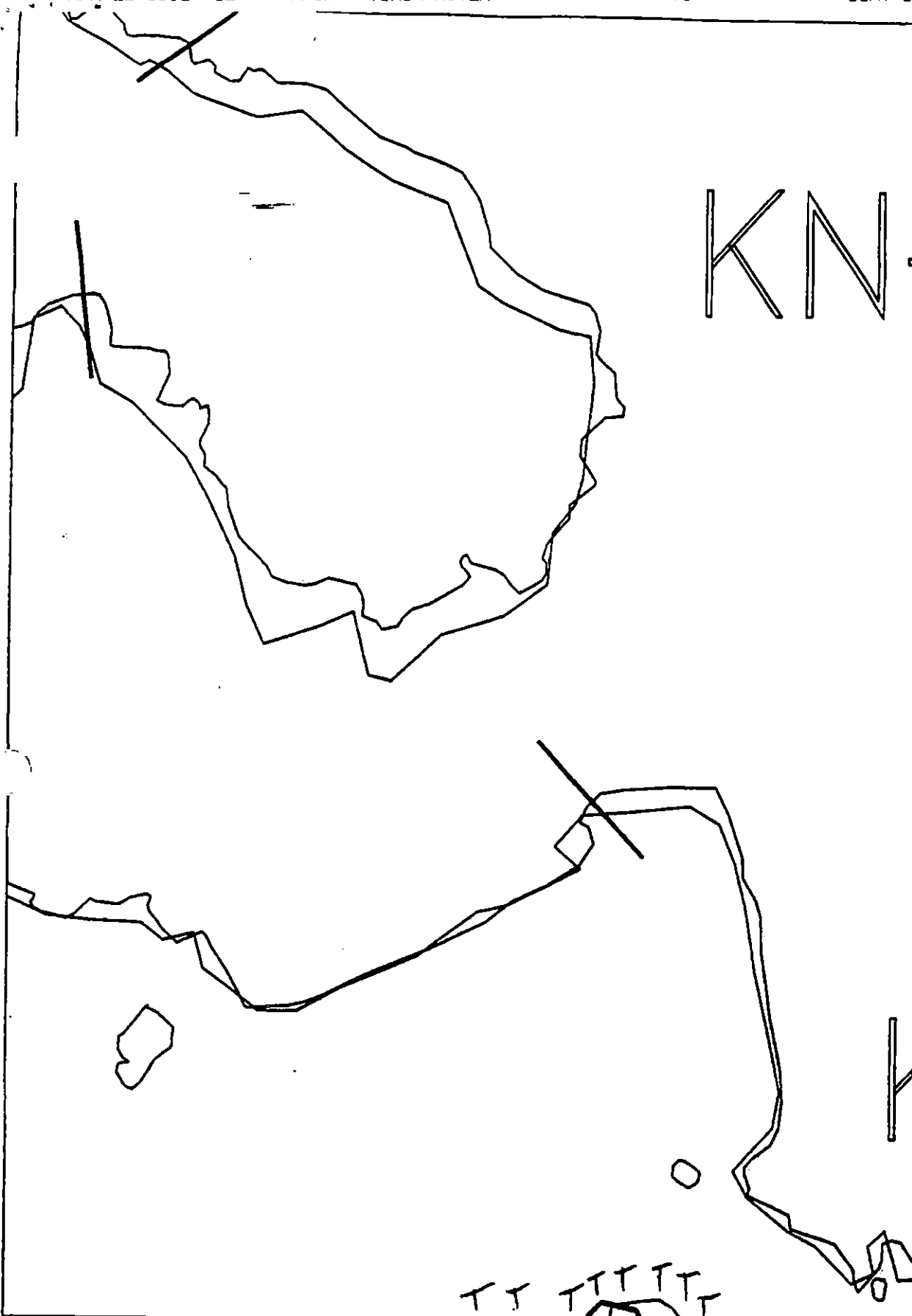
Map Key: PWS-303a

Name: Greg Chaney

Date: April 20 1990

Data Entered:

KN =



TT TTTT

PWS
↓ 303A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-121

ADEC Segment Length: 2487m
Exon Segment Length: 2573m



Map Key: PWS-303b

Name: Greg Chaney

Date: April 20 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-121 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Manual Raking Spot Washing Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/30/90

ADEC Art Weiner Det. Weiner

EXXON Andy Teal

NOAA G.H. Deiter G.H. Deiter

USCG G.H. Deiter G.H. Deiter

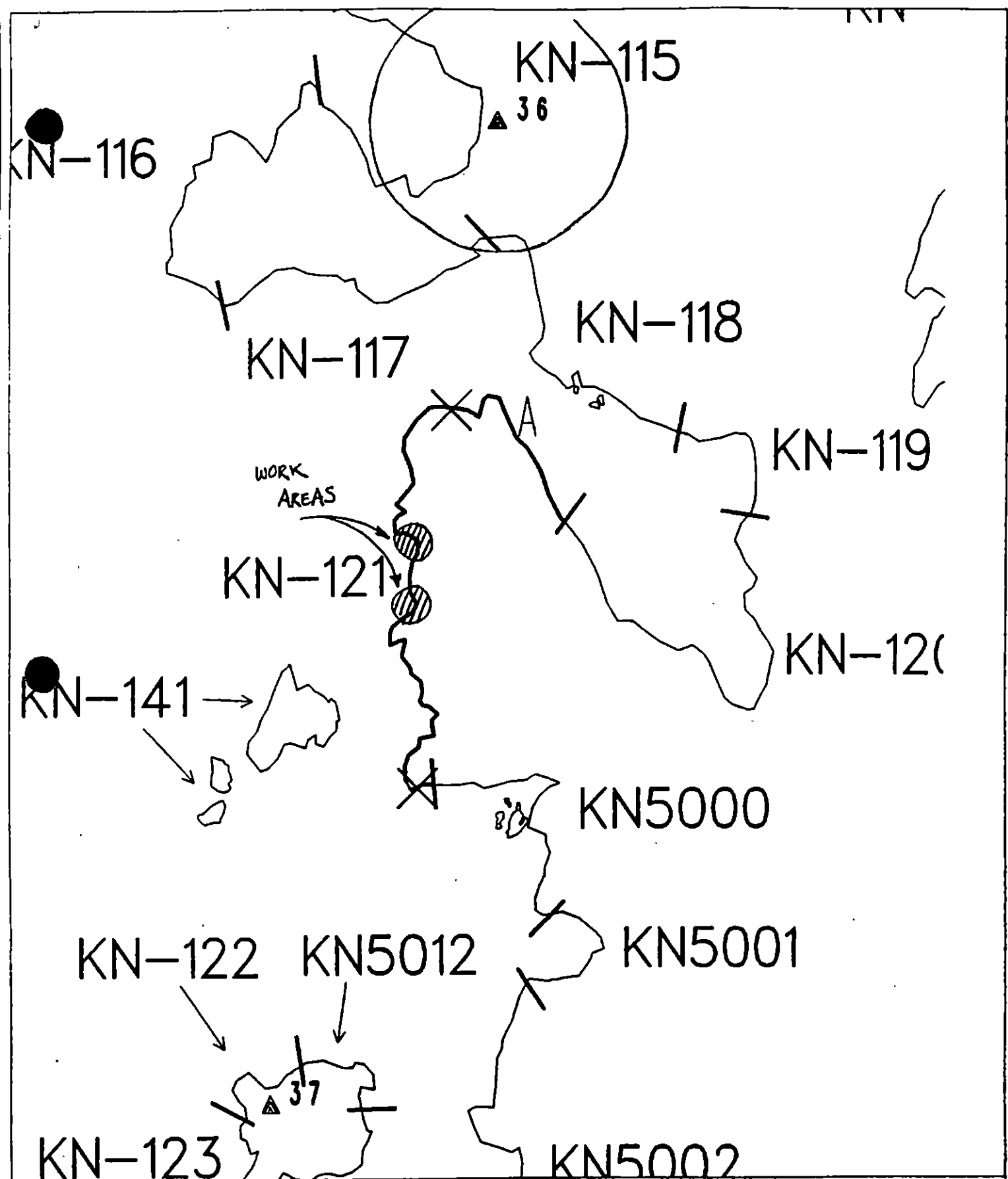
FOSC

DATE

Prepared By: Andin Meyer WTK

Date

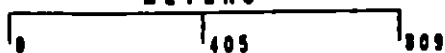
5/29/90



Exxon Company, USA
Map Keys KN1-KN-121
May 11, 1990



ECOLOGY MAP
SEGMENT KN-121
SUBDIVISION A (1 of 1)
METERS



★ Seabird Colony
▲ Eagle Nest

1 inch = 1327 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-121 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 411 m: Narrow 399 m: V.Light 1471 m: No Oil 208 m
Subsurface Oil Observed: Yes X No Maximum Depth 60+cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 * Other (see comments)

COMMENTS: Recommended treatment includes manual raking and bioremediation of areas shown on sketch map. Work should be conducted prior to 5/15 or between 7/2 and 7/31 based on pinniped constraints.

MANUAL PICKUP OF DEBRIS.

SEE CONSTRAINT APPENDIX DATED 5/29/90 WTK

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90

ADEC ART WEINER

EXXON ANDY KAT

NOAA GARY REESE

USCG KATHY KIRBY

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

attempt spot washing for this high human use area. If impractical, continue as per comments above.

SHORELINE EVALUATION

SEGMENT ST/ KN-121 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 411 m: Narrow 399 m: V.Light 1471 m: No Oil 208 m
Subsurface Oil Observed: Yes X No Maximum Depth 60+cm

RECOMMENDATIONS:

No Treatment Recommended

X	Treatment Recommended
---	-----------------------

X Manual Pickup

X Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: _____ **Wands** _____

Beach Cleaner

* Other (see comments)

COMMENTS: Recommended treatment includes manual raking and bioremediation of areas shown on sketch map. Work should be conducted prior to 5/15 or between 7/2 and 7/31 based on pinniped constraints.

MANUAL PICK UP OF DEBRIS

TAG COMMENTS:_____

TAG APPROVAL DATE: 5/3/90.

ADEC ART WEINER Dtg Keenes

EXXON Andy TGAZ Real

NOAA Gary Refraser Gary Refraser

USCG KENNETH K. AND - Linda Renee

FOSC: NYC DATE: 5-12-90

Attempt spot washing for this high human use area. If impractical, continue as per comments above.

SKETCH MAP 1 of 2

CONTINUED ON NEXT PAGE

CONTINUOUS TAR COAT BAND 130 CM HIGH ON BEDROCK

BOULDER PEBBLE BEACH TAR COAT ON BOULDERS. RANDOM PEBBLES WITH STAIN.

SMALL POCKET OF LARGE BOULDERS. RAINBOW SHEEN IN TIDE POOLS

BLACK TAR BAND 20 CM. HIGH BLACK TAR COAT ON BOULDERS ~ 3 METERS WIDE. LESS THAN 10% COVERAGE. RAINBOW SHEEN ON LOWER MITZ MOBILE BROWN OIL IN MATRIX

BLACK TAR COAT ON BOULDERS ~ 3 METERS WIDE 30% COVERAGE.

BLACK TAR COAT ON BOULDERS ~ 4 METER BAND 40% COVERAGE 2, 3, 4, 5

STATE OF ALASKA CERCLA STUDY SITE 1522

BIO HERE

BAND TAR COAT 4 METERS WIDE 70% COVERAGE BROWN TAR UNDERNEATH BOULDERS

SMALL POCKET OF LARGE BOULDERS PATCHES COAT & STAIN ON PROTECTED BOULDER FACES

2 METER BAND PATCHY COAT 30% COVERAGE

SNOW

1 METER DISCONTINUOUS TAR BAND 50% COVERAGE ON BEDROCK FACE

SPECIAL SYMBOL
HEXAGONS MARK. 00000
TRACE SPLASHED TAR COAT ON BEDROCK

200 METERS

N

← Next page

OG Greg hasey
SEGMENT STI 121

SUBDIVISION A

DATE April 12 0 90

CHECKLIST

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

Other Vegetation

1 ●

Photo location, direction, and number

See next page for

Total for both maps

Oil Character Length (m): AP

NO FL TB PT MS ST CT CV PO

REVISIONS

SKETCH MAP 2 of 2

OG Cee Haney

SEGMENT ST/121

SUBDIVISION A

DATE April 12 90

CHECKLIST

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

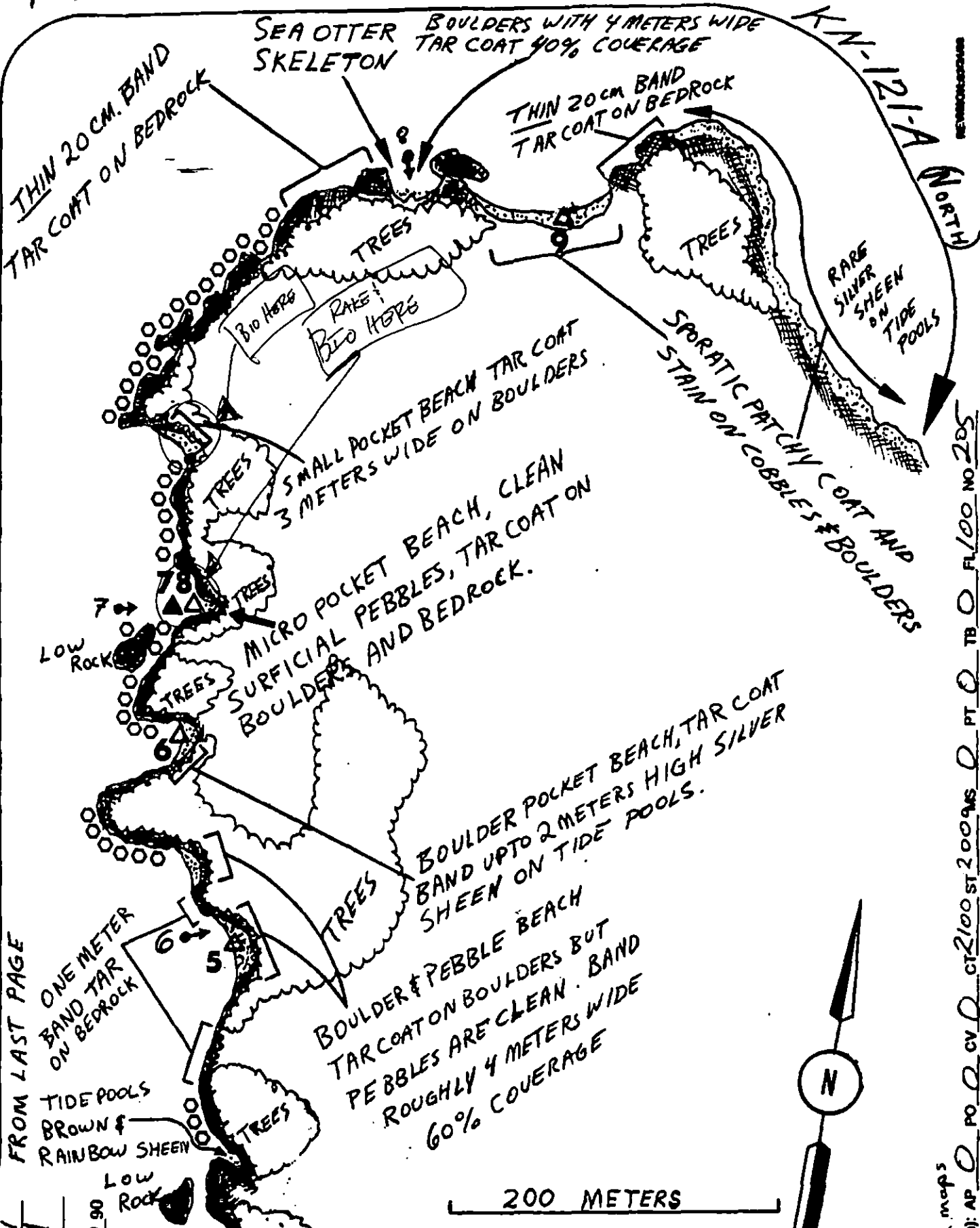
CT/P Patchy Distribution

CT/S Splintered Distribution

Oil'd Vegetation

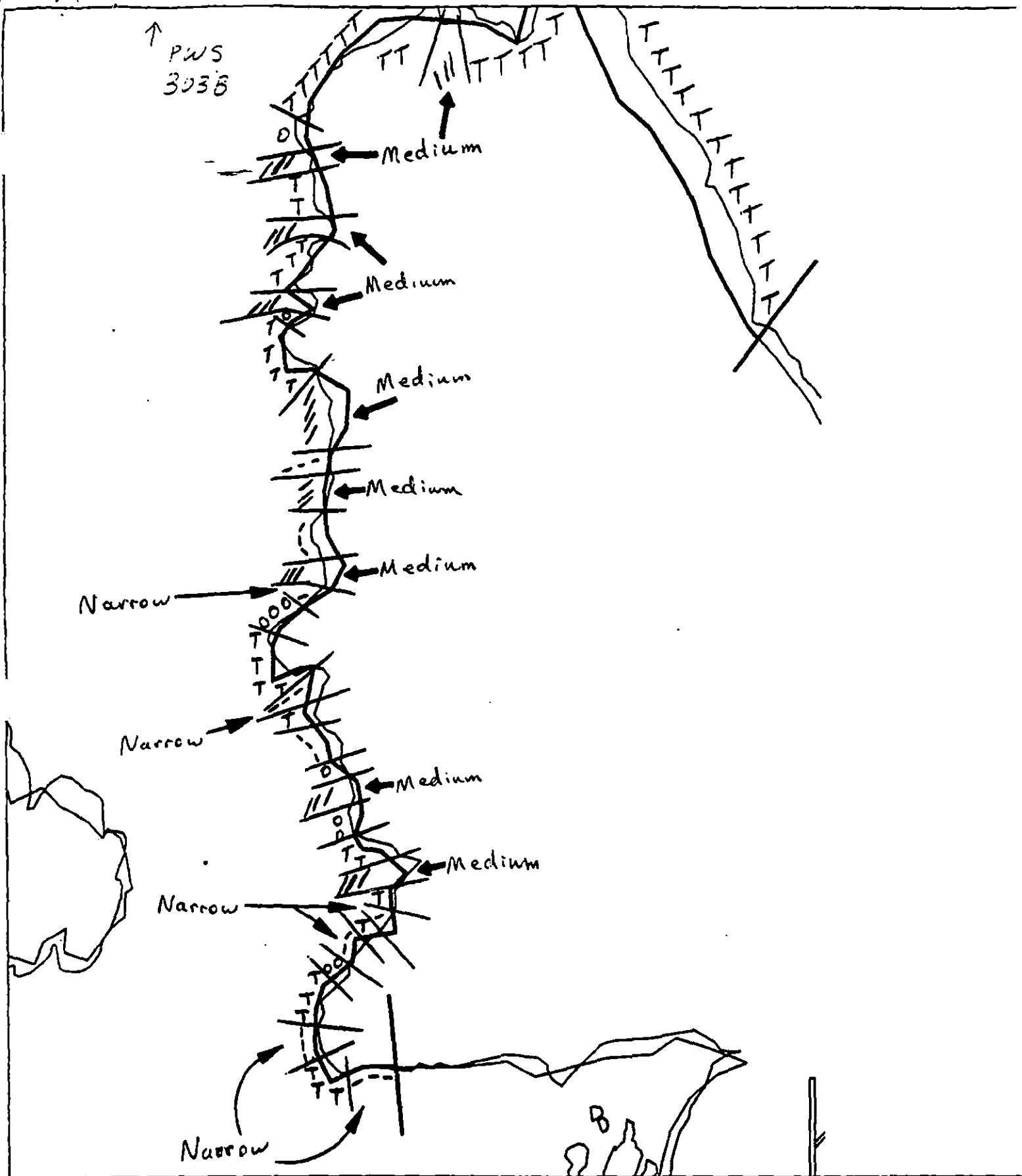
1 Photo location, direction, and number

Photo location, direction, and number



Total for both maps

Oil Character Length (m): AP 0 PO 0 CV 0 CT 2100 ST 200 QS 0 PT 0 TB 0 FL/00 NO 205



XXXX Wide

///// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-121

ADEC Segment Length: 2487m

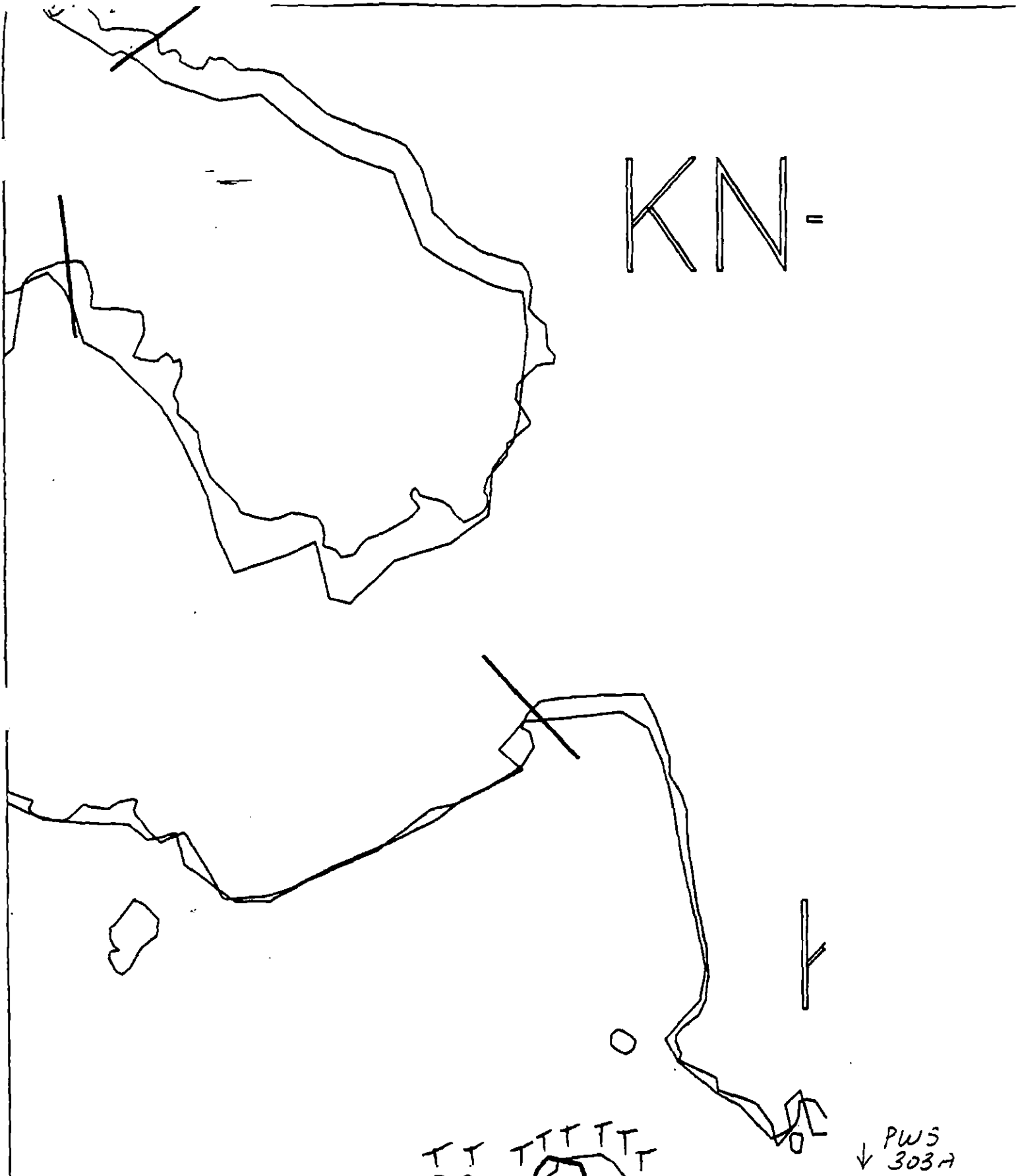
Exxon Segment Length: 2573m

0 100 200 300
METERS

Map Key: PWS-303a

Name: Greg ChaneyDate: April 20 1990

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-121

ADEC Segment Length: 2487m
 Exposed Segment Length: 2573m



Map Key: PWS-303b

Name: Greg Chaney

Date: April 20 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-120 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream (catalogue no. 226-10-16940)

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Jones DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 577 m: No Oil 1121 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: 4/18/90.
ADEC ART WEINER
EXXON ANDY TER FOSC: Hy L DATE: 4-22-90
NOAA Burt Wescott
USCG G.A. BEITER

OG Greg Chaney
 SEGMENT KN-120

SUBMISSION NONE

DATE April 14 90

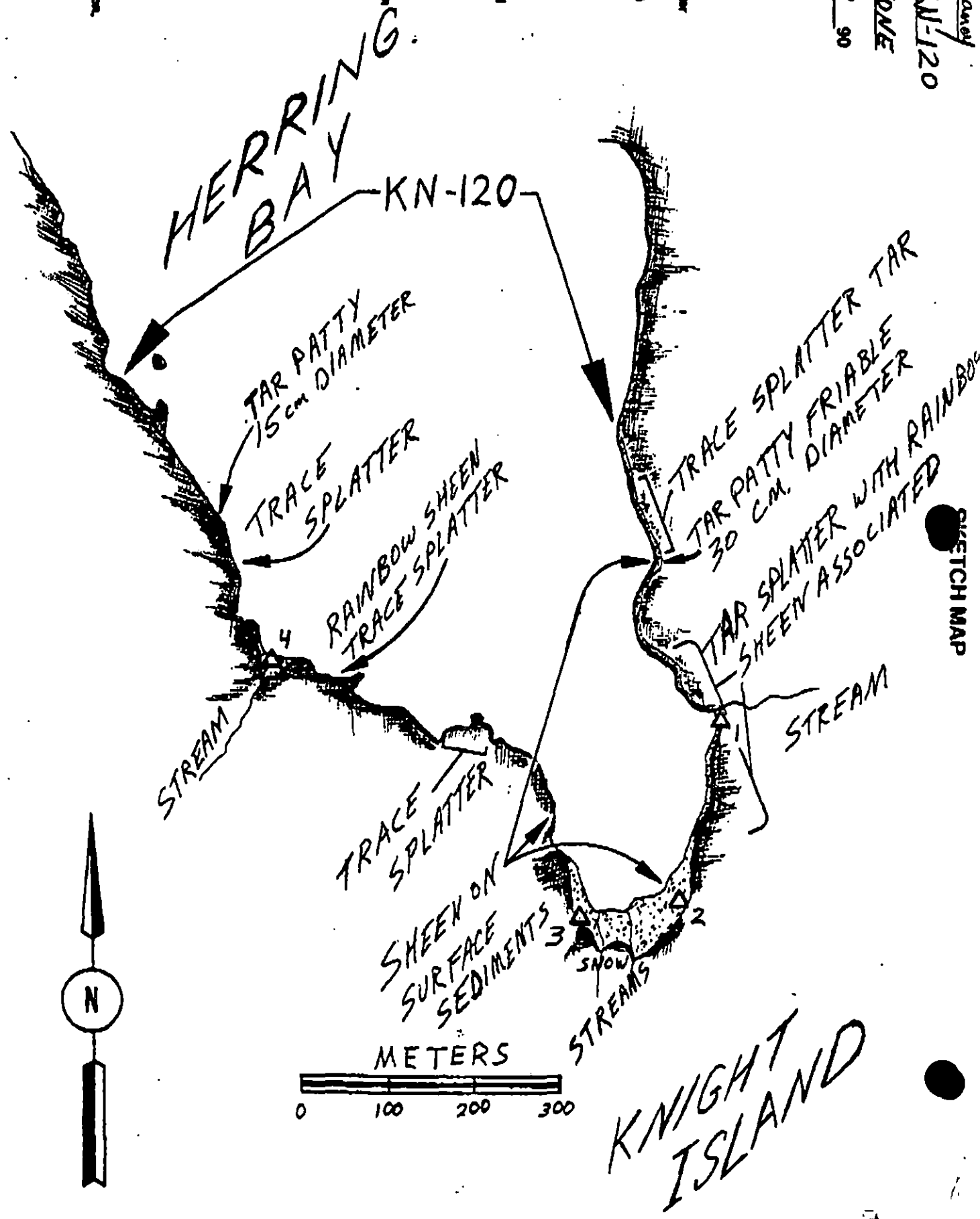
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sediment Profile
- ☐ Oil Ditch
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ E. H. H. M. A. M.
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P. Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ P. No. Substrate Oil
- 2 Δ P. Substrate Oil
- ☐ CT/C Coarse Distribution
- ☐ CT/B Broken Distribution
- ☐ CT/P Patchy Distribution
- ☐ CT/S Selected Distribution
- ☐ Dead Vegetation
- ☐ Photo location, direction, and number

Oil Character Length (m): AP — PO — CV — CT 150 ST 300 NB — PT — TB — FL 550 NO 1234



SKETCH MAP



KN-

KN-120

KN

KN5000

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-120

ADEC Segment Length: 1698m
Exxon Segment Length 1787m

0 100 200 300

Map Key: PWS-302

Name: Greg Chaney

Date: April 4 1990

Date Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-120 STREAM NO: 226-10-16940 DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

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 unoiiled biota and substrate. Subject stream is located within subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *J. David McManis* DATE: 5/8/90

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: 5/9/90.

ADEC ART WEINER

EXXON ANDY TETZ

NOAA Barl Wesscott

USCG D.D. ROME

FOSC: *W L* DATE: 5/15/90

STREAM 226 P 16940

DATE 4 127 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ See/Sub Study
- ___ Of Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HULL/VOL
- ___ STL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Fit Location(s)
- ___ Photo Location(s)

LEGEND

1 
FR - No Subsurface Oil

2 
FR - Subsurface Oil


CT/C
Concentric Distribution


CT/B
Broken Distribution


CT/P
Patchy Distribution


CT/S
Spashed Distribution


Oiled Vegetation

3 
Photo location, direction,
and number

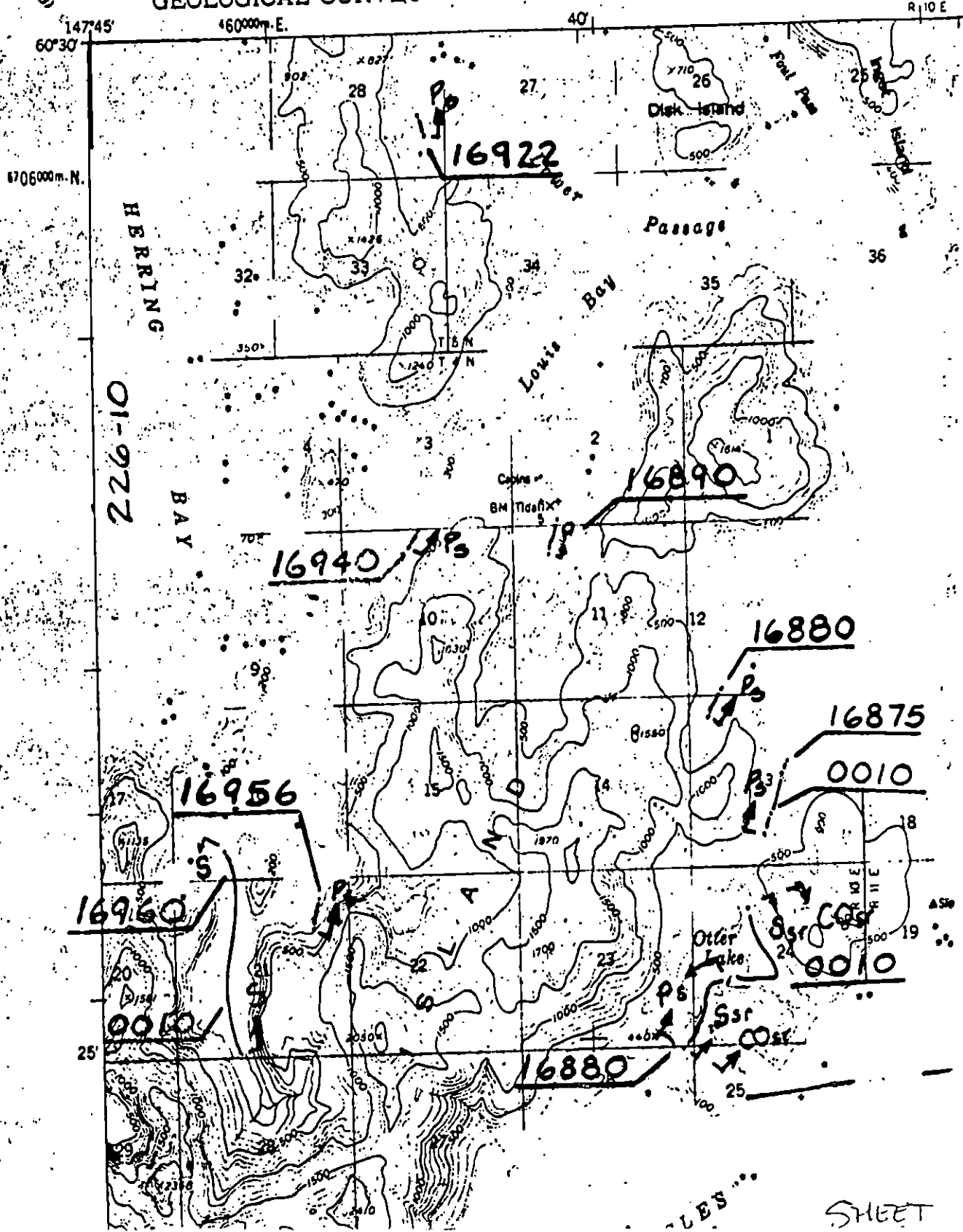
Of Character Length (in): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL 2 NO 73

PREVIOUS WORK

KN-12.0-A
(Sheet 2 of 2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SEWARD C-3

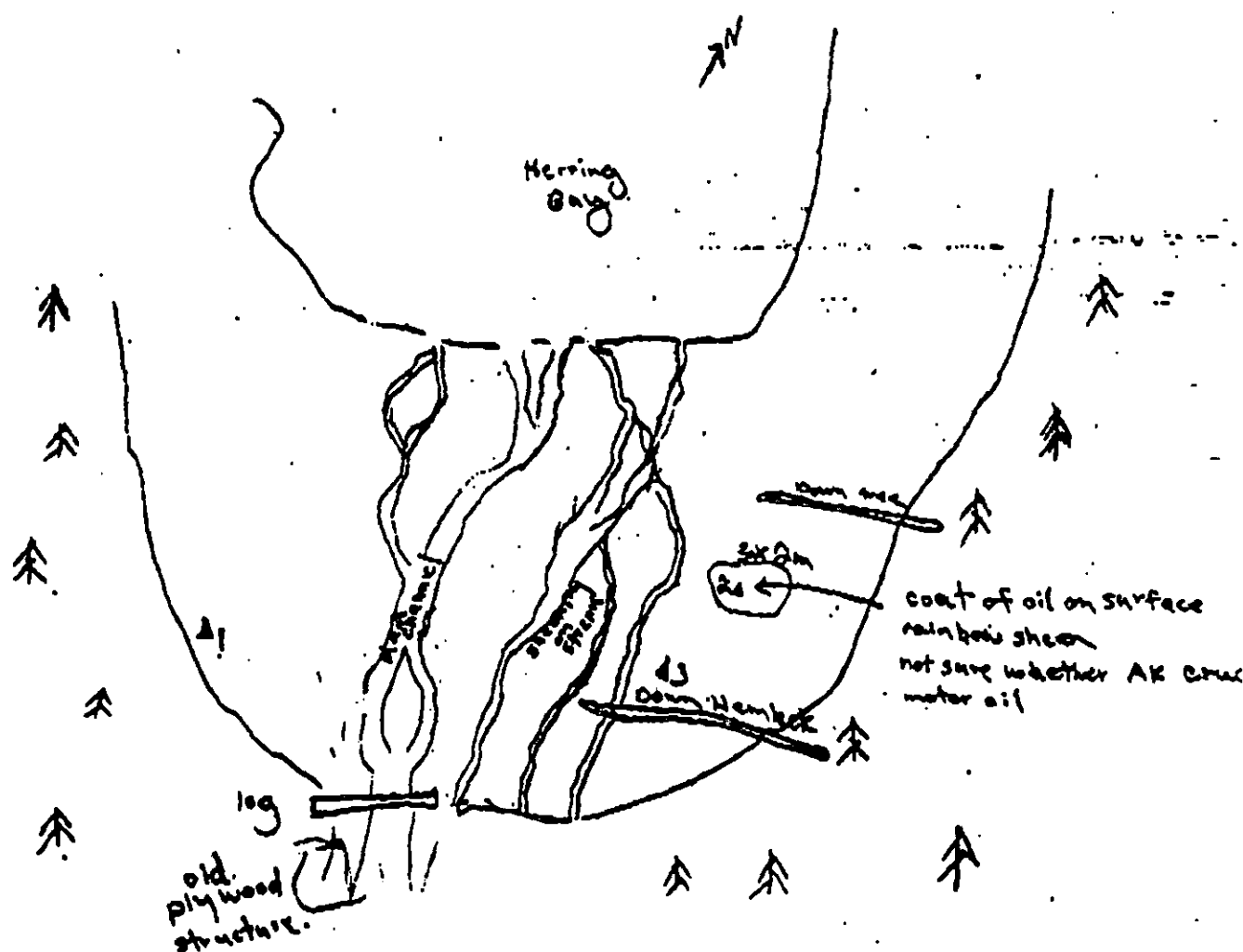


DESCRIPTION

504505(5)

pit 1 - 16cm deep - no visible oil
pit 2 - 24cm deep - 2-3cm oil penetration
pit 3 - 8cm deep - no visible oil

48 OIL DISTRIBUTION DIAGRAM



Treatment Recommendations -
treat during window period.

If still present. manually remove oiled material in 3m x 2m x 2.5cm patch on NE side of stream - in MSTRZ between 2 down trees.

Check for sheening in stream channels & surface water. Agitate substrate with rake and shovels where sheening encountered & let self flush.

Do not use in pop

was taken

these frame 8 and

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-120

STREAM NO: 226-10-16940

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-120 STREAM NO: 226-10-16940 DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located within subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

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: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

14/53

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-120 SUBDIVISION: ASC¹⁰ 226-16940 DATE 27 APR 90

USCG

NAME Kerwin L. Dreher SIGNATURE CWO K. R. Dreher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Agree.

~~ADEG~~ → APF/GNAME Aimee Weseman SIGNATURE Aimee Weseman☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Treat during window period

If still present at time of treatment - shovel remove oiled material in 3m x 2
2.3cm area on NE side of stream in MITZ between down trees.Check for sheening in stream channels & on surface water. Agitate substrat.
with rakes and shovels where sheening encountered & let self flush

Do not use Inipol.

~~LAND MANAGER~~ → NONE

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAU)

REVISION NO.

OG CAL LARSON USCG DREHER, CWE SEGMENT STI LN/20 23
 BIO KEN CLITCHLOW LAND REP STREAM 226-10-16 9401 OF
 EXXON AL SHOOK ADFG 226-10-16 9401 TIME 10:00 to 10:30
 TEAM NO. 19 TIDE LEVEL -2 FT DATE 4/27/90
 EST. SUBDIVISION LENGTH: 70 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 50 % P 20 % G 15 % S 10 % M 0 % V 0
 SLOPE: Long 0 % Hang 100 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ Hi
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 2 m NO 60

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 0NEAR SHORE SHEEN? ☒ NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did You Co
 DEBRIS
☐ YES ☒ NO

TYPE 0#BAGS 0

Photographs:

Roll No. 9
 Frames 28-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	V	SURF. SUBSURF. SEDIM.
		OP	OR	OL	OF	NO		SO	SD	1	2	3	4	5	SW	M	M	U				
1	16					✓	•								✓							CB/PO, P, G
2	24					✓	•									✓				Y	✓	CB/PO, P, G
3	0					✓	•								✓							CB/PO, P, G
							•															
							•															
							•															

COMMENTS SLIGHT RAINBOW SHEEN OBSERVED AT THIS SITE.

REVIEWED JW DATE 4-24

SEGMENT STI KN 120

STREAM 226 P 16940

DATE 4 127 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Sec/Sub Study
- ☐ OS Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HURLINE
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt. Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
FR - No Substrate OS

2 Δ
FR - Substrate OS

CT/C
Continuous Distribution

CT/B
Broken Distribution

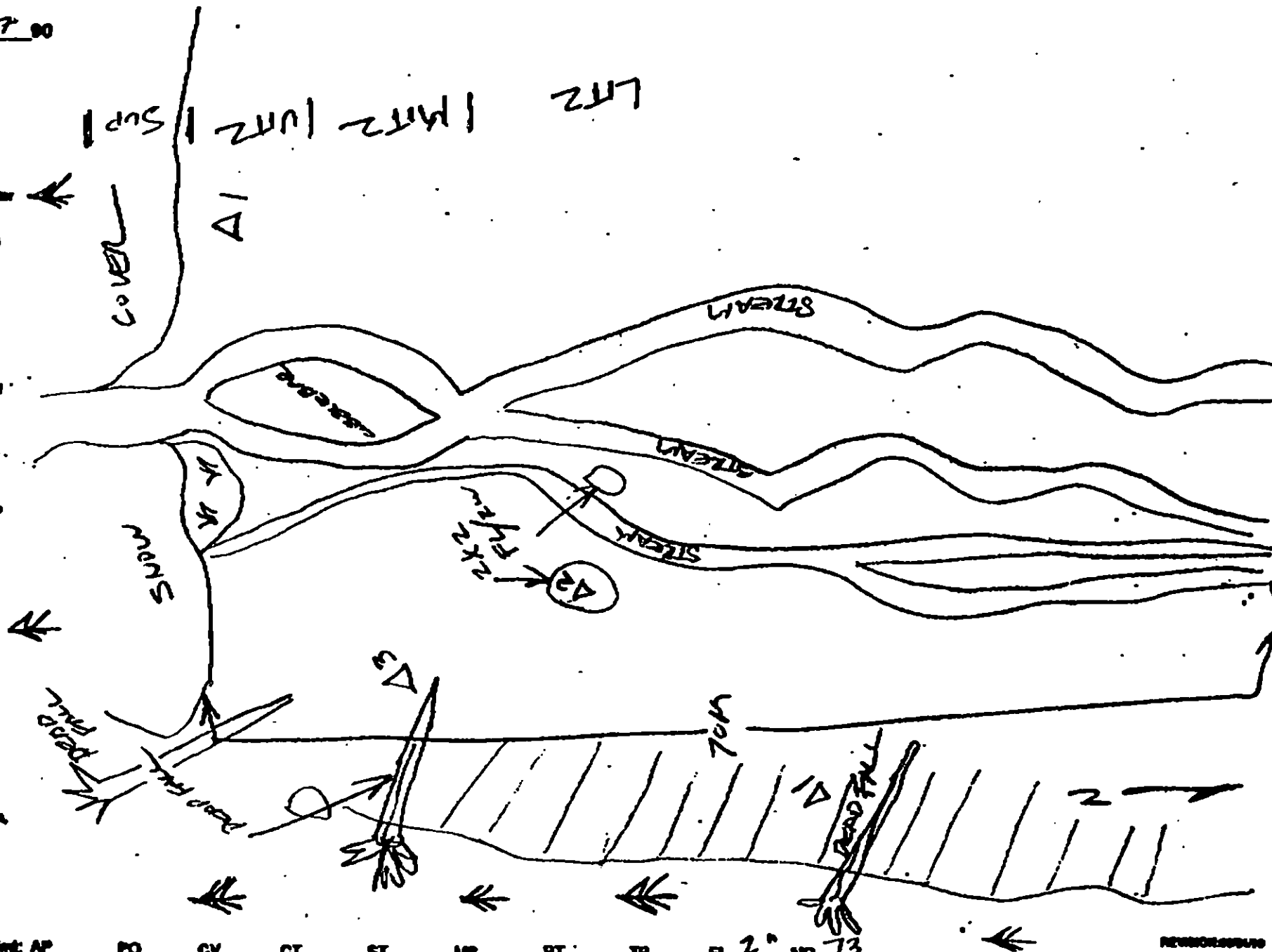
CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Old Vegetation

Photo location, direction,
and number

Of Character Length (in): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL 2" NO 73



REVISIONS

207/5
Seg ID: KN-120 Subdiv: 226-10-16940

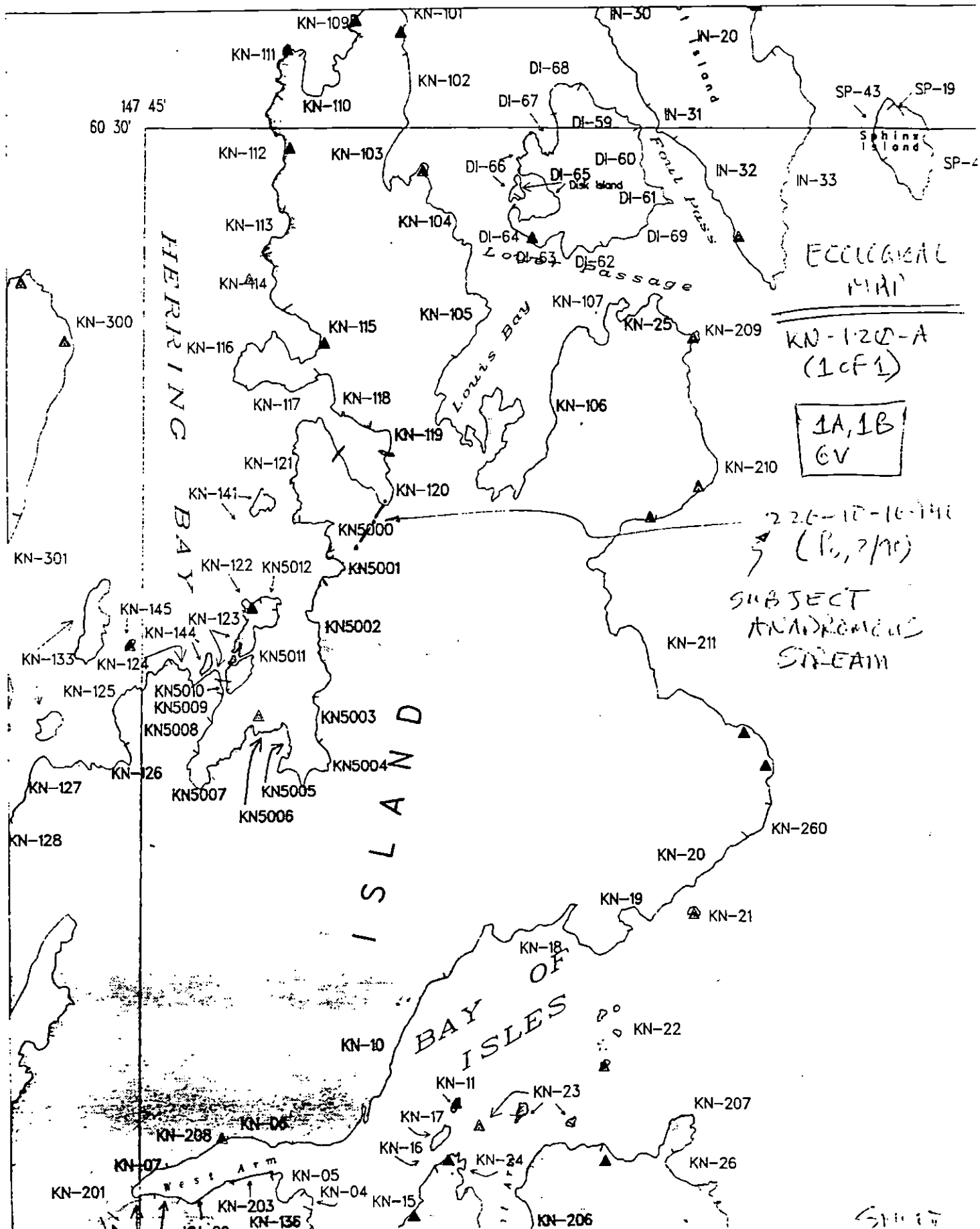
Survey Date: 4/27/90

Comments by: Ken Critchlow

The only oil observed on this site was a film in the MITZ and LITZ along the left side of the stream. Cleanup of this minor source of contamination could be accomplished by two persons using shovels in less than two hours. I don't recommend that a special effort be made to treat this site; however, other cleanup efforts are likely in the general area so that this site could be treated as part of the larger effort.

KR Critchlow

SEWARD EAGLE NESTS AND S



4/5

ACFEG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS DS TS AVS SCM MMS PTA 2 REGION: PR KP,CI K,AP
 METHOD: Aerial Ground Boat
 3 DATE: 4-22-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: Aimee J. Jegem
 4 START TIME: 1000 16 HIGH TIDE HTS: 1 22 OBSERVERS: Rick Gustin
 5 STOP TIME: 1035 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG
 6 SEGMENT #: KN120 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)
 7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____
 8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: _____
 9 STAT AREA: _____ 20 USCG CHAD: S-B2 Start: 1057 End: 1110
 10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN: Y (N) Major
 12 SOURCE: Net Loran _____ Oil _____
 13 LOCATION: Knight I - eastern arm Herring Bay Sediment _____
 14 DESCRIPTION: _____ Biological _____
 Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	N	NE	S	L	N	NE	S
27 SURFACE COVERAGE	2m	2m						
28 SURFACE THICKNESS								
29 PENETRATION	2-3							

30 OVERALL OIL IMPACT: N VL (E) H H
 31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain
 32 OILED DEBRIS: Y (N)
 33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
 Lagoon Marsh
 34 WAVE EXPOSURE: High Moderate Low
 35 SUBSTRATE TYPE: Bedrock Boulder 40 Cobble 30
 Gravel 25 Sand 5 Mud/silt _____

36 CATALOGED ANAD. FISH STREAM (Y) N
 37 CATALOG #: 226-10-16940
 38 STREAM NAME: _____
 39 OIL IN STREAM BED: Y (N)
 40 OIL ON STREAM BANKS: (Y) N
 41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
 (within 50 meters)
 42 OIL WITHIN 1 MILE OF STREAM (Y) N
 Where: _____
 43 ANADROMOUS FISH PRESENT? Y N
 44 ANADROMOUS FISH OBSERVATION
 Species Aerial Ground

COMMENTS: oil noted includes a 3m x 2m x 2.3m deep coat on the north eastern side of stream. This area produces a rainbow sheen on surface water when agitated. It does not look like typical Alaskan crude oil. It could be motor oil. Some sheening was also noted within the braided stream channel. Also some oil was noted in the channel.

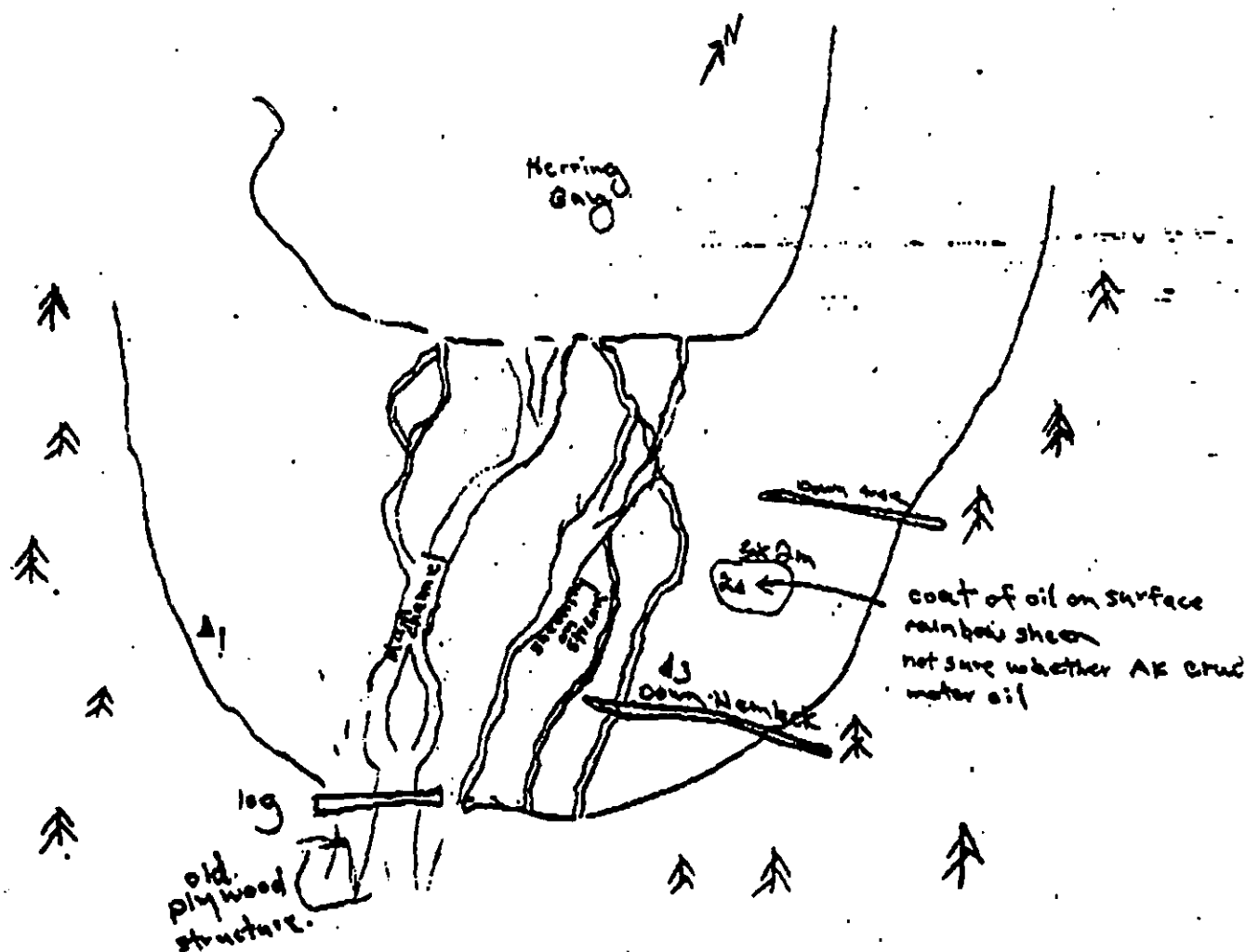
22/51
KN 12051

48 PHOTOLOG

226-10-1694

FRAME(S)	DESCRIPTION
	pit 1 - 16cm deep - no visible oil
	pit 2 - 24cm deep - 2-3cm oil penetration
	pit 3 - 8cm deep - no visible oil

48 OIL DISTRIBUTION DIAGRAM



Treatment Recommendations -
treat during window period.

If still present. manually remove oiled material in 3m x 2m x 2-3cm patch on
NE side of stream - in MSTRZ between 2 down trees.

Check for sheening in stream channels & surface water. Agitate substrate with rakes
and shovels where sheening encountered & let self flush.

Do not use snipol

photo taken

photo frame 8 and

SHORELINE EVALUATION

SEGMENT ST/ KN-122 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15; Active eagle nests (5T) - 3/1 to 6/1.
Restrict air and boat traffic and general disturbance to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G Habitat division re: seals/sea lions and USF&WS re: eagle nests prior to treatment.

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

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

SHPO SIGNATURE: Charles E. Hines DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 96 m: Narrow 45 m: V.Light 194 m: No Oil 88 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate pocket beaches as shown on sketch map.
Pick up any debris. Work between 7/1 and 8/15 due to constraints.

TAG COMMENTS: MANUALLY TILL/RAKE + SPOT WASH (WITH SORBENTS)
BIOREMEDIATION WITH INIPOL OR ~~USE~~ RAKE IN CUSTOMER.

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON ANDY TEAR
NOAA Burl Westcott
USCG M.J. HALL

FOSC:

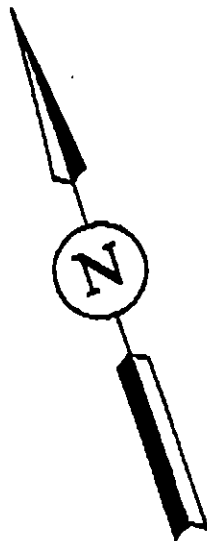
DATE: 4-19-90

SI CHMAP

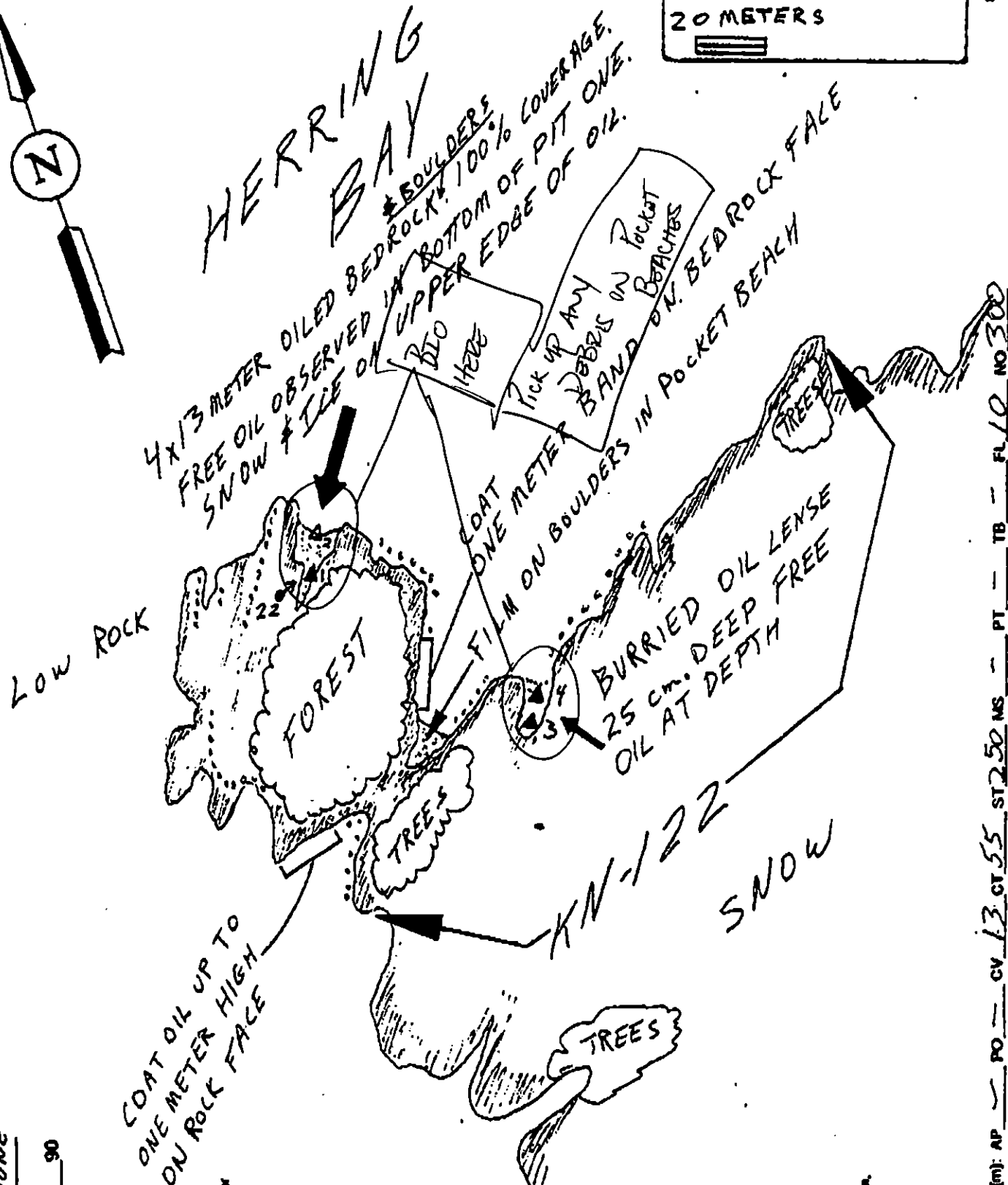
30 CM VERTICAL BAND IS NOTED WITH DOTTED LINE

 20 METERS

REVISION: 000000



HERRING BAY



OG: Greg Chaney
 SEGMENTS: KN-122
 SUBDIVISION: NONE

DATE: April 1 90

CHECKLIST

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

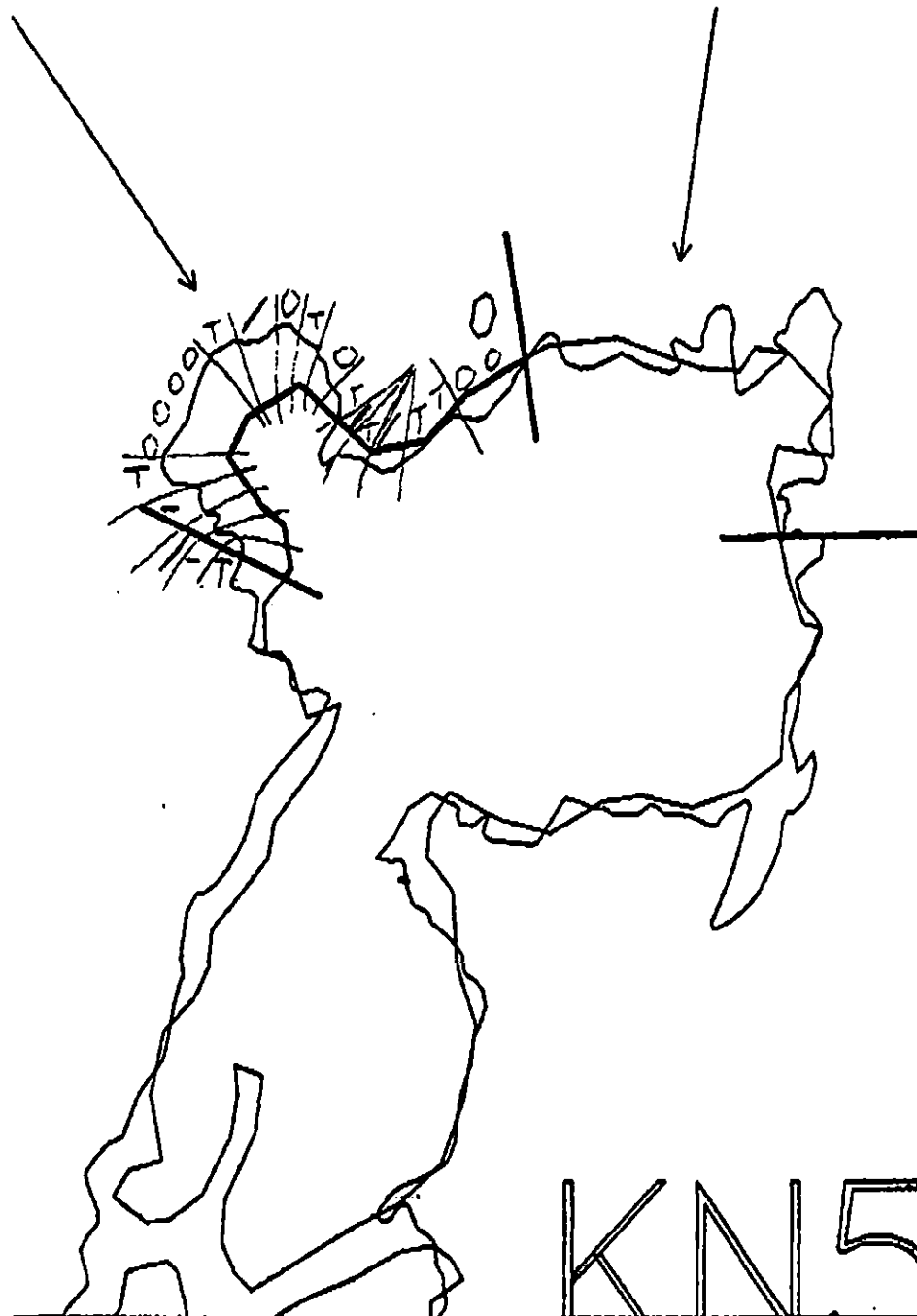
LEGEND

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

Oil Character Length (m): AP — PO — CV 13 CT 55 ST 250 MS — PT — TB — FL 10 NO 300

KN-122

KN50



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-122

ADEC Segment Length: 423m
Exxon Segment Length: 628m



Map Key: PWS-304

Name: Grey Chaney

Date: April 1, 1990

Data Entered:

WORK PLAN ADDENDUM

Segment KW122

Subdivision A.

Dated 07/30/90.

MODIFICATION

1. REASON FOR MODIFICATION

- MECHANICAL TILLING RECOMMENDED - MANUAL NOT FEASIBLE

2. ADJUSTMENT TO WORK PLAN

- MECHANICAL TILL IF FEASIBLE
- BIOREMEDIATION - CUSTOMBLEND + INIPOL
- IF MECHANICAL TILLING NOT FEASIBLE
- RAKE IN CUSTOMBLEND

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Rachel Jean Olen 2 Aug/90

STANDARD CONSTRAINT APPLIES

TAG APPROVAL DATE 07/30/90.

ADEC Ray Meares R. Meares

EXXON ANNY TEAL Teal

NOAA Burl Wescott Burl Wescott

USCG D. D. ROME D. D. Rome

FOSC [Signature] DATE 8/2/90

[F2] - Complete edit, [Esc] - Cancel edit, Ctrl-U - Undo last change
[Ins] - Insert a record

EXXON VALDEZ CULTURAL RESOURCES PROGRAM
SSAT DATABASE

Record No: 811

Segment: KN-0122A Afs: ADD Quad: Map: Region: PWS

Block: Sector: Landowner: NFS

Ahrs:

SCAT Person: WILSON SCAT Length: 400
SCAT Method: G SCAT Time: 25

SSAT Person: SSAT Length: 0
SSAT Method: SSAT Time: 0

1989 CONSTRAINTS: Standard X Evaluation Pre-Evaluation & Monitor
Other Monitor Monitoring
Incidents Post-Cleanup Assessments Bioremediation

SSAT WORK PROGRAM: Bioremediation X Manual/Mechanical MECH ADDED
Treatment Intensity Class 1 No Treatment Recommended

Page Down for Next Screen

[F2] - Complete edit, [Esc] - Cancel edit, Ctrl-U - Undo last change
[Ins] - Insert a record

SSAT DATABASE Cont..

Record No: 811

1990 CONSTRAINTS: Deferred Standard X Inspection Monitor
Required Survey Subdivision Survey Judgmental Survey

STATUS: Received 7/31/90 Survey Out Survey_Back

CTAG: To Returned Completed
SHPO FOSC

Cleanup Team Treatment Dates: From
Manager Informed To

MONITORING DATES MONITOR(S)

Cleanup
Bioremediation
Bio Assessment Team
Dames & Moore

Comments

Page Up for Previous Screen

1991 MAYSAP EVALUATION

SEGMENT: KN 122 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy O. Smith Date: 6/8/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/15/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 1 SEGMENT KNO ^{RLB} 123 122 SUBDIVISION A DATE 5/18/91

ADEC NAME JEFF GINALIAS SIGNATURE [Signature]

☒ NTR
NO REMAINING RECOVERABLE OIL (OG MAP SITE E HAS 1X1M H1 SOR SPOT WHICH VECO MAYSAP CREW WILL RECOVER). REST IS ALL STAIN/COAT ALONG HITZ-UTZ, WITH NO DETRIMENTAL ENVIRONMENTAL PRESENCE. LEAVE WELL ENOUGH ALONE.

EXXON NAME RANDALL K. BOYER SIGNATURE Randall K. Boyer

☒ NTR
NO RECOVERABLE OIL WAS RECOGNIZED ON THIS SUBDIVISION. COATINGS ON BOULDERS AND VERTICLE BEDROCK WERE PRESENT. SUBSURFACE OIL RESIDUE WAS FOUND IN THE VITE OF POCKETS OF PEBBLE & COBBLE BEACHES. TREATMENT WOULD SERVE NO FURTHER NET BENEFIT ENVIRONMENTALLY. ONE SMALL POKER BEACH CONTAINED A SORT PRAT AREA ABUNDANT WITH MUSSELS, ~~SEA~~ ALGAE, SNAILS AND SMALL FISH.

LANDMANAGER NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☒ NTR ☐ TREATMENT
I AM REAL PLEASED WITH THE PROGRESS OF AREA B. LAST AUGUST THIS BEACH WAS TILLED WITH MECHANICAL MEANS. GHORMLEY WAS ADEC MONITOR. IT CAUSED OIL RELEASE AND WAS CONTAINED WITH boom - sheer WAS DARK BROWN AND THICK AFTER TREATMENT. IT LOOKS GREAT NOW. AREA E HAS RETRIEVABLE OIL SEDIMENTS. VECO OPERATIONS WILL REMOVE IT PRIOR TO A SURVEYS COMPLETION. HUMAN USE - RECREATIONAL ANCHORAGE AREA.

USCG/NOAA NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR
NO RECOVERABLE OIL REMAINS, NO FURTHER TREATMENT IS WARRANTED
ROCKY BEOROCK OL SHORELINE CONTAINING BLP OPENINGS. NW'LY END HAD A BEOROCK EXPOSURE w/ POOLS IN THE CRACKS & CREVICES OF THE ROCK. OILY OBSERVATION WAS LIMITED TO CT, ST, & CV WHICH IS TYPICALLY FOUND AT UTESI. A LOCALIZED PATCH OF MS / I FOUND @ E WHICH IS SCHEDULED TO BE CLEANED BY OUR CREW.

PAGE 1 OF 2

SEGMENT KN-122

SUBDIVISION A

DATE 5 / 18 / 91

ENERGY LEVEL: ☐ H ☒ ~~X~~ L

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 205 m NO 220 m US 1 m

PICKED
UP

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 25 FRAMES 13-16

A

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

OG COMMENTS: Steep, low relief, rocky shore w/ deep rock channels filled w/ coarse sediments. Rock platform to the west is atypical in that it has tidepools in deep channels which harbor mud and some organics, especially to the SW.

Surface oil only, as CV 8' CT @ HTZ thro' SWTZ.

REVIEWED: F.W. 5/21/91

DATE 5 / 18 / 91

A local patch of MS/I, hi sol on a R trap was PV, and only a trace of oil remains here.

REVIEWED: F.W. 5/21/91

KN-122A

G. MACDONALD

5.18.91

rock platform
w/ tidepool
channels

ASAL site #2
not surveyed -
no oil visible during
skiff recon.

SEG. BNDY.

NWL @ 0.0'

NHWL

KEY

- • oil
- ▮ logs
- ⊗ MS, SOR
- ♂ photo loc.

hand-sized
splats of CV, CT
@ up. HITZ,
< 10% ;
w/ per 20m -
w/ sparse sheen,
slightly tacky;
weathered.
< 1/2 x ~ 110m

CT, CV
< 1x30
< 10%

> HITZ, patchy
CT, ST,
≤ 1 x 55m total
≤ 10%, [local ≤ 20%]

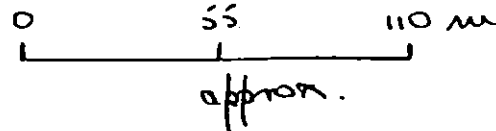
CT, < 10%
@ HITZ;
< 1 x 10m

local hi SOR/MS/L
≤ 5cm thick, ~ 1m²
@ JUTZ, on R trap.

PCB/R

CP

PU



REVIEWED: C.W. S/14/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

18 May 91

SEGMENT #

KN 122

TIDAL HEIGHT (Range)

-1.9 to -0.5 ft MLLW

SUBDIVISION

A

BIOLOGIST

Michael Fawcett

SEA STATE

2 ft seas

WIND SPEED/DIRECTION

NE 20, higher gusts, rain

PHOTOGRAPHS: ROLL #

FRAME #

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

Two pocket beaches (A & B) have dense barnacles on vertical walls in MTZ-UTZ with dense algae below (*Fucus*, *Rhodomela*, *Ulva*, *Halosaccion*, *Scytosiphon*, filamentous reds & browns), sparse animals (limpets) among the algae. The beaches within the pockets are B/C/P/G with dense barnacle spat, sparse adult barnacles and young *Fucus*, sparse limpets & littorinids in cobble & pebbles. Larger boulders near walls have dense algae, sparse barnacles, littorinids, limpets, breeding littorinids & fishes below (black pricklebacks, crescent gunnels).

Bedrock shelf & channel area on west side (C) has rich tidepool & channel biota, includes one quite large im deep pools. Bits of CT & CV remaining on walls are inconsequential to the biota and should be left alone.

Pocket beach (B) has B/C/P/G sediments with filamentous red & green algae, traces of barnacles & rockweed, a little e/s. Walls have dense barnacles & patchy rockweed just below CT, dense algae below.

One juvenile eagle sitting in tree above site (A) watched us for a few minutes, then left.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED

SPECIES PRESENT

Eagles	1	1 (juvenile)	black prickleback
Seabirds	1 Pigeon guillemot	1	crescent gunnel
Waterfowl	Harlequin	2	tidepool sculpin
Gulls/kittiwakes	2 Gull arctic tern	7	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS

OBSERVED

SPECIES

OBSERVED

Sea Otters			
Pinnipeds (specify)			
Is (specify)			

Shoreline subdivision map showing important biological features attached.

Revised SM 5/21/91
Reviewed M.B. 5/21/91

KN 122A 5/18/91 Fawcett

start 0945

seas 2 ft wind NE 20 rain

1st pocket DR/B/C/P/C

lamin spat, sparse barn, Fucus
on isol. cobble or gravel

dense barn on walls +9 to +5 ft
mixed algae below

CT on walls +8-10 ft rock heights
dense barn below on walls

then boulders below w/ dense
mixed algae, sparse barn, muss,
Litt, Limp, fish etc breezy L/H

1030 - lee side of rugged outcrop

large tidal pool - CT + barn

alone - rock fauna in pool -

- dense mussels & clam pit

below - rocky holes - sea urchins

in pool - chitons, sea urchins

5 Terns

1 f. w. Lark

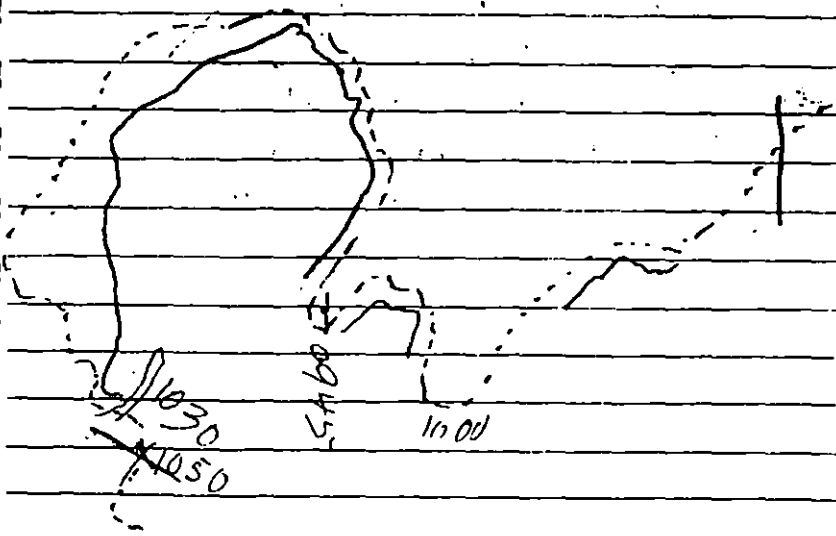
1 f. gull

2 Lark

6 SN Gull

KN 122A

N
↑



1050 last pocket in 122 -

gravel/pebbles - no water exc

fil of red algae, traces barn

& Fucus - dense barn & Fucus

mod. Fucus on walls below CT -

dense mixed algae m/z LT2 on

halts

Bio Sketch map
KN 122a
18 May 91
M. H. Fawcett



rock platform
v/ tidepool
channels

(C)
CT & CV on sides of channels
holding rich MTZ-UTZ
tidepools: surfgrass, rockweed,
encrusting & erect corallines,
chitons, limpets, whelks, fishes,
anemones, nudibranchs, etc.

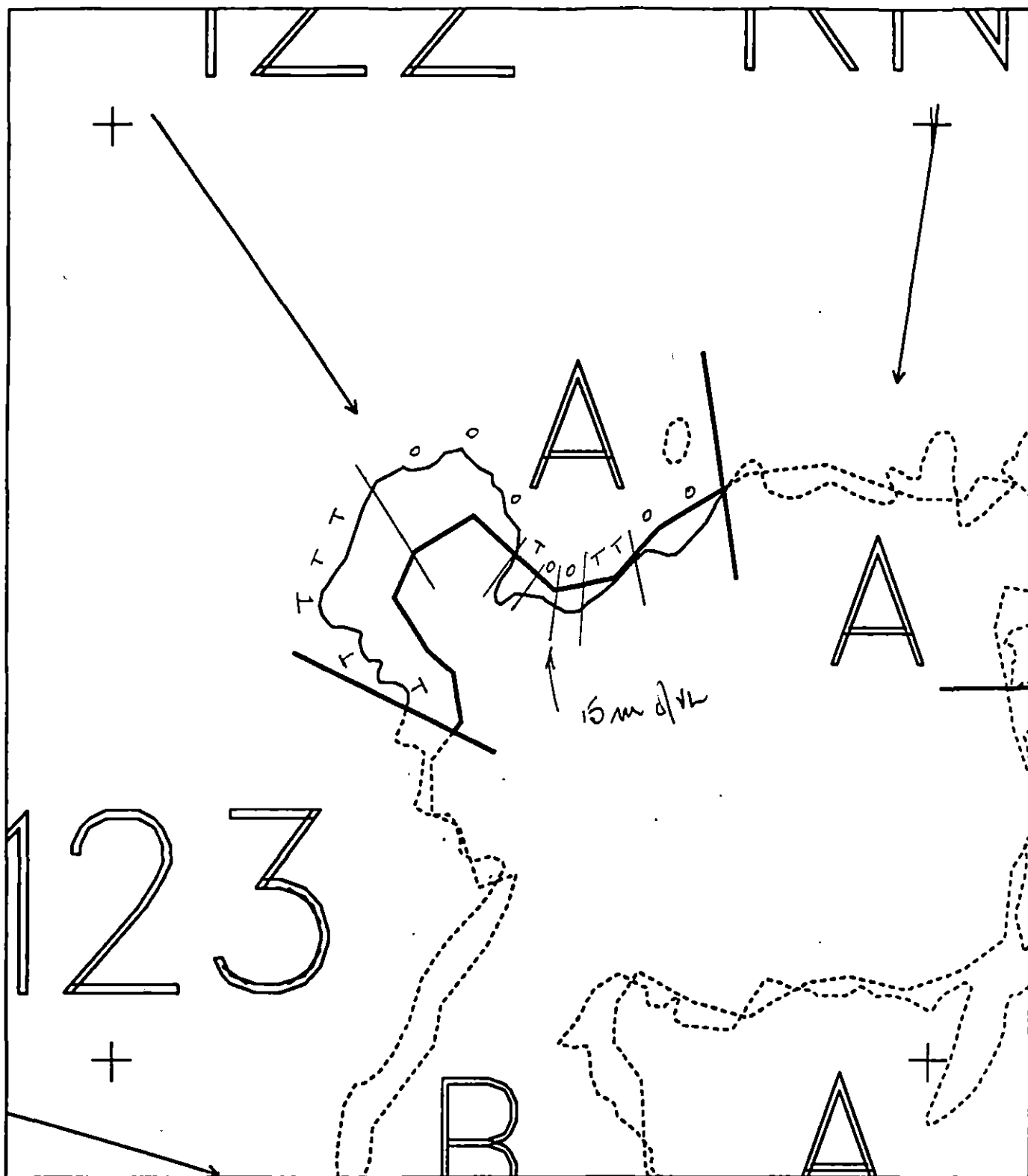
(E)
MS in SUTZ depression
no biota except lichen

PCB/R



(A+B)
CT & CV on walls just above dense
barnacles; boulders below walls with
dense, mixed algae, sparse barnacles,
mussels, limpets, littorines -- breed.
littorines plus gannets & pricklebacks
under boulders

(D)
filamentous red & green algae,
sparse barnacles & rockweed on
pebble/cobble; dense barnacles, patches
of rockweed on walls just below CT;
dense in red algae lower on walls



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

KN0122 A
 ADEC Subsegment Length: 423m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0122a

Subdivision Field Map
 Map Key: KNKN0122A
 Name: GM
 Date: 5-18-91
 Data Entered:

REVIEWED: F.W. 5/24/91

ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT KN-122 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	OPEN
Bioremediation Manual Raking	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q Harbor Seal & Sea Lion
Pupping and Molting

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

5T Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/27/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

6-10-90

Prepared by

Date

6/9/90

KN-141 →

*Incorporates information from
USFWS bald eagle survey 5/27/90
and agrees with 6/1/90 USFWS Map.*

KN-122 KN5012

WORK
AREAS

37
Inactive

KN-123

-145

KN-144

03

KN5011

KN5010

KN5009

KN5

KN

KN50



Exxon Company, USA
Map Keys: KNI-KN-122



ECOLOGY MAP 5/31
SEGMENT KN-122
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-122 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15; Active eagle nests (5T) - 3/1 to 6/1. Restrict air and boat traffic and general disturbance to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G Habitat division re: seals/sea lions and USF&WS re: eagle nests prior to treatment.

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

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

SHPO SIGNATURE: Charles E. Hines DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 96 m: Narrow 45 m: V.Light 194 m: No Oil 88 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate pocket beaches as shown on sketch map.
Pick up any debris. Work between (7/1) and (8/15) due to constraints.

→ See Constraint Addendum Dated 6/9/90
LTK

TAG COMMENTS: MANUALLY TILL/RAKE + SPOT WASH (WITH SORBENTS)
BIOREMEDIATION WITH INIPOL OR ~~USE~~ RAKE IN CUSTOMER'S.

TAG APPROVAL DATE: 4/12/20.

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAR JR.

NOAA Burl Weerts Burl Weerts

USCG M. J. HALL ~~my~~

FOSC: _____ DATE: _____

DATE: _____

1991 MAYSAP EVALUATION

SEGMENT: KN 122 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME

JEFF GIMLIAS

SIGNATURE

[Signature]

NTR

NO REMAINING RECOVERABLE OIL (OG MAP SITE E HAS 1X1M H1 S02 SPOT WHICH UECO MAYSAO CREW WILL RECOVER). REST IS ALL STAIN/COAT ALONG HITZ-UTZ, WITH NO DETRIMENTAL ENVIRONMENTAL PRESENCE. LEAVE WELL ENOUGH ALONE.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer

NTR

NO RECOVERABLE OIL WAS RECOGNIZED ON THIS SUBDIVISION. COATINGS ON BOULDERS AND VERTICLE BEDROCK WERE PRESENT. SUBSURFACE OIL RESIDUE WAS FOUND IN THE UTEZ OF ROCKETS OF PEBBLE & COBBLE BEACHES. TREATMENT WOULD SERVE NO FURTHER NET BENEFIT ENVIRONMENTALLY. ONE SMALL ROCKET BEACH CONTAINED A 50FT DEEP AREA ABUNDANT WITH MUSSELS, ~~SEA~~ ALGAE, SNAILS AND SMALL FISH.

LANDMANAGER

NAME

MARSHA HALL

OF

DNR

SIGNATURE

Marsha Hall

NTR

☐ TREATMENT

I AM REAL PLEASED WITH THE PROGRESS OF AREA B. LAST AUGUST THIS BEACH WAS TILLED WITH MECHANICAL MEANS. GHORMLEY WAS ADEC MONITOR. IT CAUSED OIL RELEASE AND WAS CONTAINED WITH boom - sheer WAS DARK BROWN AND THICK AFTER TREATMENT, IT LOOKS GREAT NOW. AREA E HAS RETRIEVABLE OIL SEDIMENTS. UECO PERSONS WILL REMOVE IT PRIOR TO SURVEYS COMPLETION. MARINA USE - RECREATIONAL ANCHORAGE AREA.

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

[Signature]

NTR

NO RECOVERABLE OIL REMAINS, NO FURTHER TREATMENT IS WARRANTED

ROCKY BEACH OF SHORELINE CONTAINING BLP OPENINGS. NW'LY END HAD A BEDROCK EXPOSURE W/ POOLS IN THE CRACKS & CREVICES OF THE ROCK. OILY OBSERVATION WAS LIMITED TO CT, ST, & CV WHICH IS TYPICALLY FOUND AT UTESI. A LOCALIZED PATCH OF MS/I FOUND @ E WHICH IS SCHEDULED TO BE CLEANED BY OUR CREW.

TEAM NO. 1OG G. MACDONALDBIO M. FAWCETTSEGMENT KN-122ADEC J. GINALIASLANDMANAGER M. HALL for DNRSUBDIVISION AEXXON R. BOYERUSCG/NOAA SCHULTZ/CHILDSDATE 5/18/91TIME 09:45 to 10:50TIDE LEVEL +1.0 ft. to -1.9 ft.ENERGY LEVEL: ☐ H ☒ XSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 425 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 205 m NO 220 m US 1 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					S	S					R	H	<1	30	X				well weathered tar.
B						S	S				RB	H	<1	55	X	X			rock gully + channel.
C					S	S					R	H	<1/2	110		X			
D						S						H	<1	10		X			
E		T									RC	H	1	1	X				posl P.O.

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 25 FRAMES 13-16

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
									-									
1	20							X	-		10	2	X				BP-GMV	organic
2	25							X	-		20	2		X			PG-GV	
3	33							X	-		30	1		X			PG-GSM	
4	30							X	-		15	2			X		PC-GSPC	
5	25							X	-		20	2				X	PC-GSC	
									-									
									-									
									-									

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

OG COMMENTS: Steep, low relief, rocky shore w/ deep rock channels filled w/ coarse sediments. Rock platform to the west is atypical in that it has tidepools in deep channels which harbor mud and some organics, especially to the SW.

Surface oil only, as CV & CT @ HRTZ thro' SWTZ.

REVIEWED: F.W. 5/21/91

KN-122A

G. MACDONALD

5.18.91

ASAP site #2
not surveyed -
no oil visible during
skiff recon.

rock platform
w/ tidepool
channels

(C)
hand-sized
splats of cv, ct
@ up-HITZ,
< 10%;
w/ per 20m -
w/ sparse sheen,
slightly tacky;
weathered.
< 1/2 x ~110m

local li sor/MS/I
≤ 5cm thick, ~1m²
@ SUTZ, on R trap. (E) PU

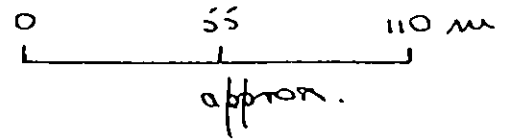
(A)
G, cv
< 1x30
< 10%

(D)
ct, < 10%
@ HITZ;
< 1x10m

(B)
> HITZ, patchy
ct, st,
≤ 1x55m total
≤ 10%, [local ≤ 20%]

KEY
- - - oil
= logs
⊙ MS, sor
♂ photo loc.

SEG. BNDY.
~ NWL @ 0.0'
~ HWL



REVIEWED: C.W. S/2/91

TEAM # 1 DATE 18 May 91
 SEGMENT # KN 122 TIDAL HEIGHT(Range) -1.9 to -0.5 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 2ft seas WIND SPEED/DIRECTION NE 20, higher gusts
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Two pocket beaches (A & B) have dense barnacles on vertical walls in MTZ-UTZ, with dense algae below (*Fucus*, *Rhodomela*, *Ulva*, *Halosaccion*, *Scytosiphon*, filamentous reds & browns), sparse animals (limpets) among the algae. The beaches within the pockets are B/C/P/G with dense barnacle spat, sparse adult barnacles and young *Fucus*, sparse limpets & littorinids in cobble & pebbles. Larger boulders near walls have dense algae, sparse barnacles, littorinids, limpets, breeding littorinids & fishes below (black pricklebacks, crescent gunnels).

Bedrock shelf & channel area on west side (C) has rich tidepool & channel biota, includes one quite large im deep pools. Bits of CT & CV remaining on walls are inconsequential to the biota and should be left alone.

Pocket beach (D) has B/C/P/G sediments with filamentous red & green algae, traces of barnacles & rockweed, a little e/s. Walls have dense barnacles & patchy rockweed just below CT, dense algae below.

One juvenile eagle sitting in tree above site (A) watched us for a few minutes, then left.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 (juvenile)	black prickleback
Seabirds	1 Pigeon guillemot	1	crescent gunnel
Waterfowl	1 Harlequin	2	tidepool sculpin
Gulls/Kittiwakes	2 Gw gull arctic tern	7	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed SM 5/21/91
 Reviewed M.B. 5/21/91

KN 122A 5/18/91 Fawcett

start 0945

seas 2 ft wind NE 20 rain

1st pocket BR/B/C/P/C

barn spot, sparse barn, Fucus
on isol. cobble or gravel

dense barn on walls +9 to 15 ft
mixed algae below

CT on walls +8-10 ft both heights
dense barn below on walls

then boulders below w/ dense
mixed alga, sparse barn, muss.
111, 111 mp, fur at break, 111

10:30 - lee side of rugged outcrop

large tidal pool - CT + traces
alone - red barn in pool -

- dense mussels & clam pit

below - rocky holes - shallow dics
in pool - chitons, sculpin, etc.

5 Terns

1 juv. 2972

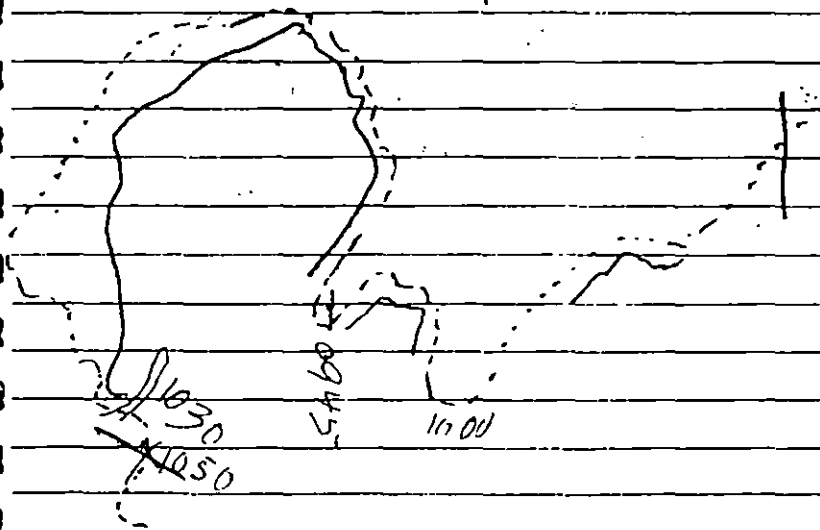
1 P. gull

2. K. gull

6 B. W. gull

KN 122A

N
↑



1050 last pocket in 122 -

gravel/pebbles - no silt or c

ful of red algae, traces barn

& Fucus - dense barn & Fucus

mod. Fucus on walls below CT -

dense mixed algae in LTZ on
beaches

Bio Sketch Map

KN 122a

18 May 91

M. H. Fawcett



rock platform
v/ tidepool
channels

(C)
CT & CV on sides of channels
holding rich MTZ-UTZ
tidepools: surfgrass, rockweed,
encrusting & erect corallines,
chitons, limpets, whelks, fishes,
anemones, nudibranchs, etc.

(E)
MS in SVTZ depression
No biota except lichen

PCB/R

(D)

filamentous red & green algae,
sparse barnacles & rockweed on
pebble/cobble; dense barnacles, patches
of rockweed on walls just below CT;
dense un. red algae over on walls

big tidepool
N + 7 ft MLLW

(A)

(5)

4

3

2

1

R

CP

(B)

10

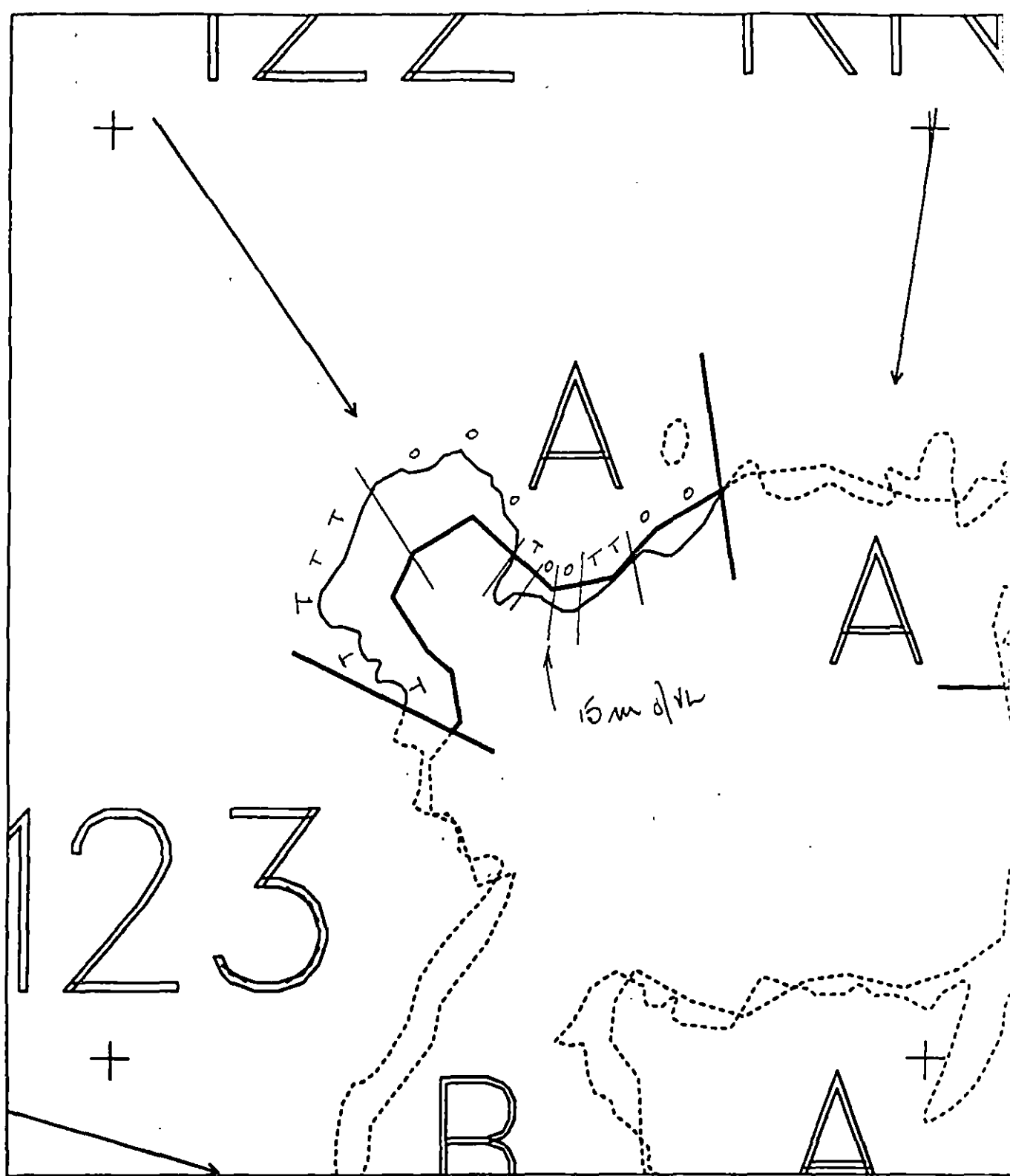
9

8

7

6

(A+B)
CT & CV on walls just above dense
barnacles; boulders below walls with
dense, mixed algae, sparse barnacles
mussels, limpets, littorines -- bree
littorines plus gannets & pricklebacks
under boulders



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

KN0122 A
 ADEC Subsegment Length: 423m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0122a



Subdivision Field Map
 Map Key: KNKN0122A
 Name: GM
 Date: 5.18.91
 Date Entered:

REVIEWED: F.W. S.

1991 MAYSAP EVALUATION

SEGMENT: KN 123 SUB: B REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature:

Date:

RECOMMENDATIONS:

INITIAL

TAG

FOSC,

TREATMENT REQUIRED (Y or N)

N

A

/

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:

FOSC APPROVAL DATE:

ADEC

FOSC

EXXON

USCG

NOAA

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

CHIEF OF STAFF, FOSC
The State will evaluate the
need to treat this
subdivision BlueBase ✓

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

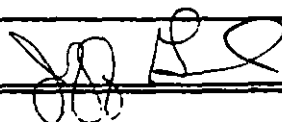
TEAM NO. 1SEGMENT KN0123SUBDIVISION BDATE 5/18/91

ADEC

NAME

JEFF GINAMAS

SIGNATURE

☐ NTR☒ TREATMENT RECOMMENDED

MANUAL WORK SITES A & C. SMALL CREW, ONE DAY COULD COMPLETE.
 SHOVELS, TRAWLS, RAKES. AT SITE C, OILED SEDIMENTS HAS TRAPPED PINE NEEDLES,
 DETRITUS AND IS STICKY AROUND BOULDERS. BOTH SITES EASY ACCESS BY SKIFF.
 IMPACT AT REST OF SEGMENT DOES NOT LEAD FOR EASY REMOVAL (NOT AS
 DEFINABLE), BUT MAY FORM MORE VISCOUS, BOUNDED GLOBES AS SUMMER TIDES.
 EASY SEGMENT TO TREAT; ~~NOT~~ TREATMENT WOULD NOT HARM BLOTH.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

TREATMENT HERE WOULD NOT SERVE ANY ENVIRONMENTAL
 BENEFIT. SURFACE RESIDUE WAS LIGHT ON THE SURFACE AND
 MEDIUM UNDERNEATH BOULDERS IN THE UITE IN 2 SMALL POCKETS.
 SOME SUBSURFACE RESIDUE EXISTED BUT HARDLY DETECTABLE IN
 SOME PITS. HEALTHY INTERTIDAL ZONE WITH LIVING CREATURES ABOVE
 AND BELOW BOULDER SURFACES.

LANDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE

Marsha Hall☐ NTR☒ treatment

Tilling with ^{incoming} tide A in AREAS A, C. MANUAL WORK
 WITH shovels/Rakes. Great area for kayaking, anchorage

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

J. A. Schultz / J. C.☒ NTR

FURTHER REMOVAL OPERATIONS WOULD PROVE ^{MORE} ENVIRONMENTAL
 HARMFUL THAN THE OIL TO BE REMOVED.

BEACH SHORLINE w/ DEEP CUTS CONTAINING ROCK DEBRIS & ORGANICS.
 THE DEEP CUTS STILL CONTAIN SIGNIFICANT OIL AS SOR/I IN THE SMALLER
 ROCK DEBRIS & ORGANICS IN THESE VOIDS UNDER & BETWEEN B & C'S. THIS OIL IS FAIRLY
 DEGRADED BUT STILL SHEENS UPON AGITATION. COULD BE RECOVERED BY A SMALL CONTIGUOUS
 DESIGNED w/ THAT INTENT. REMAINING OILING WAS CT, CV, & ST ON B, C, & VERT BR FACES IN ME-UI in,
 OIL CONTINUOUS STAINS.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-123

ADEC J. GINAWAS

LANDMANAGER M. HALL for DNR

SUBDIVISION B

EXXON R. BOYER

USCG/NOAA SCHULTZ/CHILDS

DATE 5/18/91

TIME 10:55 to 12:00

TIDE LEVEL -1.9 ft. to -1.8 ft.

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

TOTAL LENGTH SHORELINE SURVEYED: 1050 m

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

EST. OIL CATEGORY LENGTH: W - m M 20 m N 220 m VL 670 m NO 140 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1				P							BC	M	6	5	x	x			in R channel trap.
A2					S	S					R	H	<1	15		x			well weathered.
B					S	S					R	V	1	20	x				under overhang.
C				P	P	P	P				BCR	M	3	5		x			W. SOR; R sheen
D1				S	S						RB	H	<1	225	x	x			R trap.
D2				P							RB	M	3	5		x			
E1				P							RB	M	2	3		x			
E2					P	P					PCM	M	1	50					
F1				P							PCR	M	6	5		x			
F2				P							PC	L	1	2	x				

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 25 FRAMES 17-23

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	10							x	3-7	Y	0	RB	x				CP-PGR	W. SOR 3-7
2	23							x	10-20	Y	15	R		x			PB-GR	
3	40							x	7-10	Y	30	S		x			P-PGB	
4	10							x	3-6	Y	1	B			x		PB-PGM	W. SOR
5	10							x	2-5	Y	5	RB			x		PC-GM	
6	15							x	0-5	Y	10	B		x			BC-PVR	
7	25							x	2-15	Y	5	B		x			BC-PVR	R. traps.
8	15							x	0-5	Y	5	B		x			BC-PVR	

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

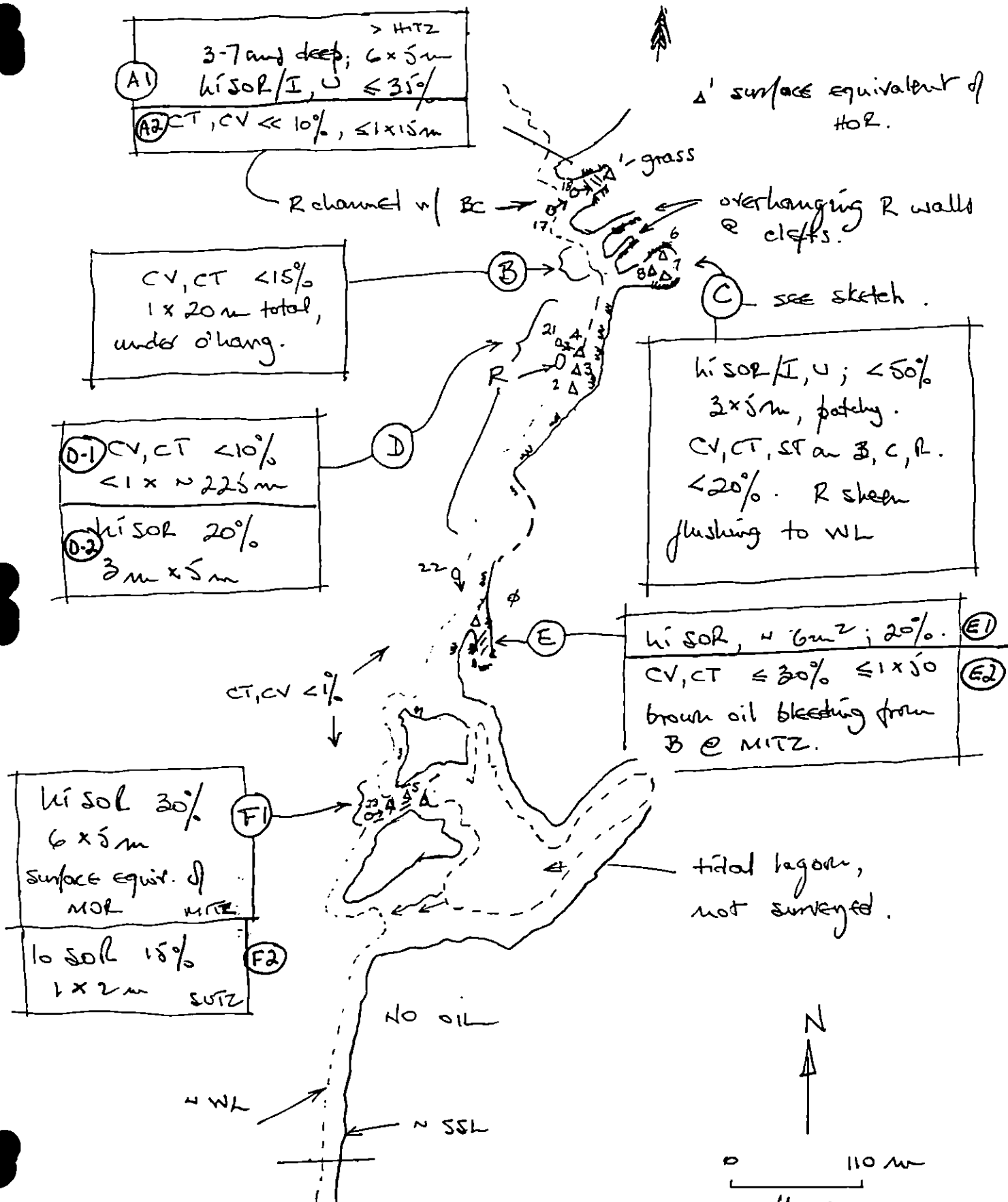
OG COMMENTS: Sheltered rocky shore w/ deep rock channel.
 Surface oil only, as (i) CR, CV, CT @ HTZ-SWZ, well weathered;
 greatest % cover found under R overhangs.
 (ii) patches of SOR, water saturated, in R
 channels on coarse, poorly sorted sediments, and on
 low angle traps associated w/ channels.

REVIEWED: F.W. 5/21/91

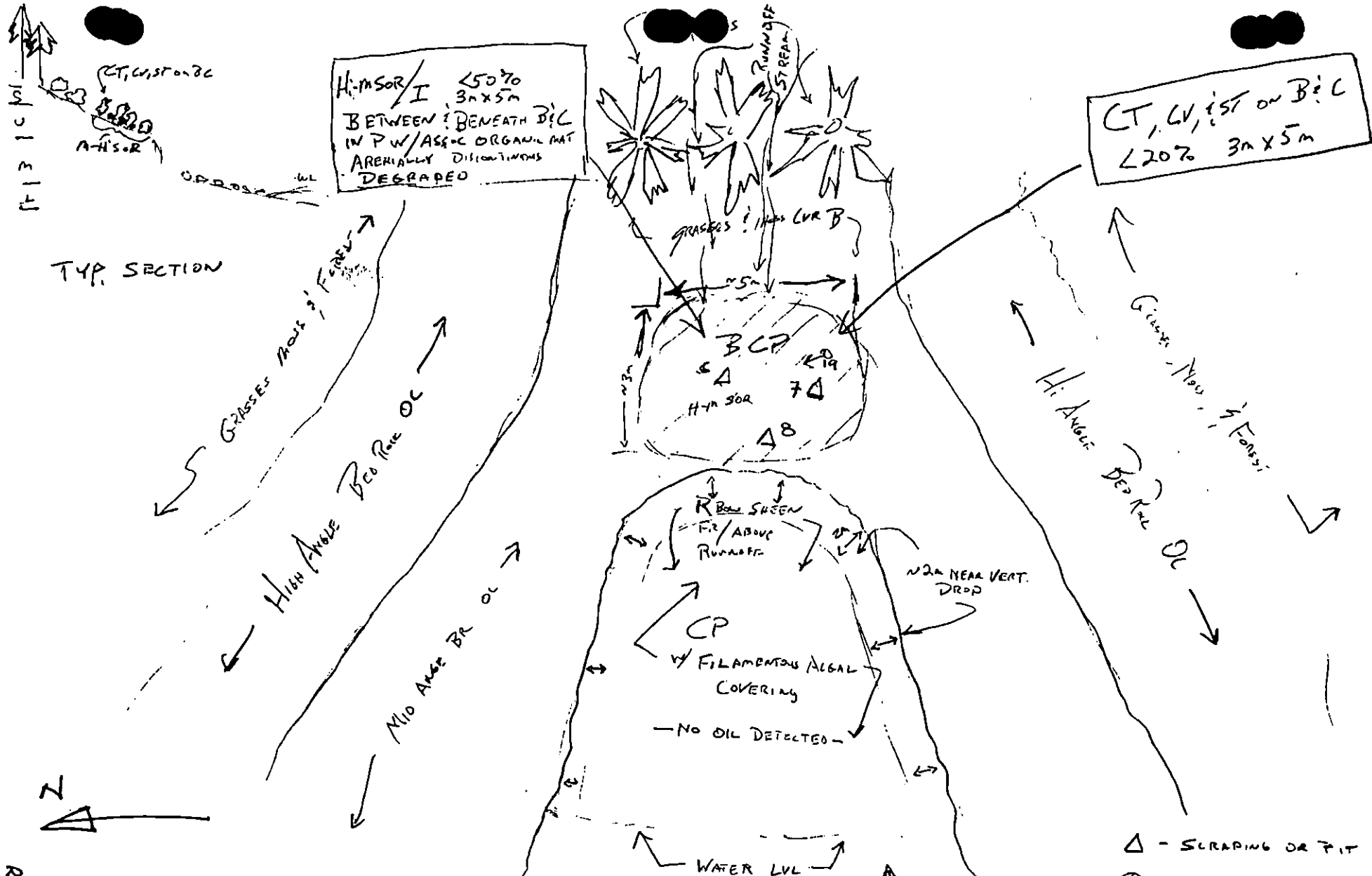
KN-123B

G. MACDONALD

5.18.91



REVISED: F.W. 5/2/91 ~



#6	~15cm	MSOR	BC-PVR MOD SLOPE	1m x 2m	UI	B SHEEN
#7	~25cm	H1 SOR	BC-PVR MOD SLOPE	2m x 3m	UI	B "
#8	~15cm	H1 SOR	BC-PVR MOD SLOPE	2m x 3m	UI	B "

- △ - SCRAPING OR FIT
- ◐ - SOR ZONE
- ♂ - PHOTO LOC

KN-123 B . B. CHAND
5.18.91

Site C

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

18 May 91

SEGMENT #

KN 123

TIDAL HEIGHT (Range)

-1.9 to -0.7 ft MLLW

SUBDIVISION

B

BIOLOGIST

Michael Fawcett

SEA STATE

2 1/2 ft seas

WIND SPEED/DIRECTION

NE 15-20, gusts 30

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision has steep bedrock shoreline with several narrow sheltered pocket beaches and a lagoon with two entrances on the west side. The first pocket (A) at the north end of the subdivision has boulder/cobble sediments with some SOR in the UTZ-SUTZ at +10 ft, about 5 m upshore of the highest biota (sparse rockweed). Further downshore are dense littorinids (many new recruits), dense rockweed, and sparse barnacles, mussels, and limpets. LTZ in boulders/cobble has dense cover of red, green, and brown algae, breeding whelks (*Nucella lamellosa*), dive whelks (*Searlesia diva*), nud. branches, pricklebacks, and breeding pairs of crescent gunnels. CT and CV on walls at +9-10 ft is among or just above sparse to dense barnacles. Sites (B) & (C) are similar to (A). Site (D) is also similar except that SOR extends down into MTZ into the middle of a dense bed of mussels. The mussels appear to be from 0 to about 3 yrs old, and are growing among & on top of SOR --- destroying them to remove SOR would seem unwise. Sparse rockweed, littorinids, and barnacles also occur among the SOR. Larger boulders on sides of beach have breeding whelks & gunnels, starfish, bryozoans, sponges, sabellid (tube-dwelling) worms, anemones, etc, and there are clams in LTZ & shallow subtidal zones. Site (E) similar to (D), but SOR in UTZ above most biota. Site (F) in lagoon mouth similar to (D) including SOR in dense mussel bed, clams downshore.

See sketch for descriptions of biota near each oiled site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED
SPECIES PRESENT

Eagles			black prickleback
Seabirds			crescent gunnel
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS

OBSERVED

SPECIES

OBSERVED

Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/20/91

KN 1236 18 May 91 Fawcett
start 1053

1st long narrow patch
SDR SUTZ no 500 -

young from sparse start 5 m
down in C/O

CT on walls + 9-10 VTZ-SUTZ

among sparse barnacles

- MTZ in B/C w/ dense Fucus,
dense LIT (many new)

LIT dense mixed algae -

breeding N. LAM - Seabirds
pouches

1120 see sketch 1

3rd site - same as above

but covered in MTZ

under dense mussels in ground
pebble/cobble - sparse barn

alt Fucus - dense on walls

- larger boulders w/ breeding

whelks, breeding crescent

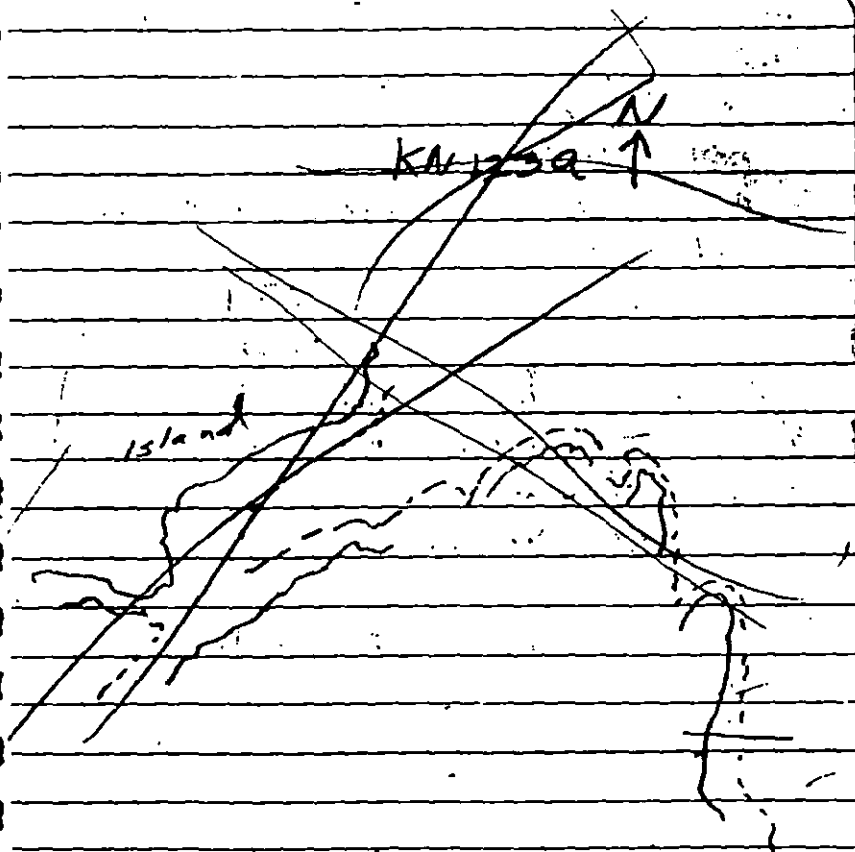
gulls, Periwinkles,

Pycnopodia, Myxozoon etc -

just below SDR - have alone

1155 - near lagoon - same as 1120

- covered in dense mussels
cores of small other



1236 (cont) - LTZ - MTZ
whelks, clams, variety of algae -
Pycnopodia - bryozoans
old N. scutum

Bio Sketch Map
KN 123 B, 5/18/91
M. H. Fawcett

(A) no biota near SOR; sparse young Fucus 5m downshore; dense Fucus, 1, Porinids, sparse barnacles, mussels, limpets further downshore; ct on walls among sparse barnacles
Dense algae & under-rock fauna in LTZ --- breeding whelks, fish
R channel w/ BC →

biota same as (A)

Biota same as (A), but SOR extends into dense mussel bed

biota similar to (D), including dense mussels among & on top of SOR; clams downshore

grass
overhanging R walls & clefts.

(C) see sketch

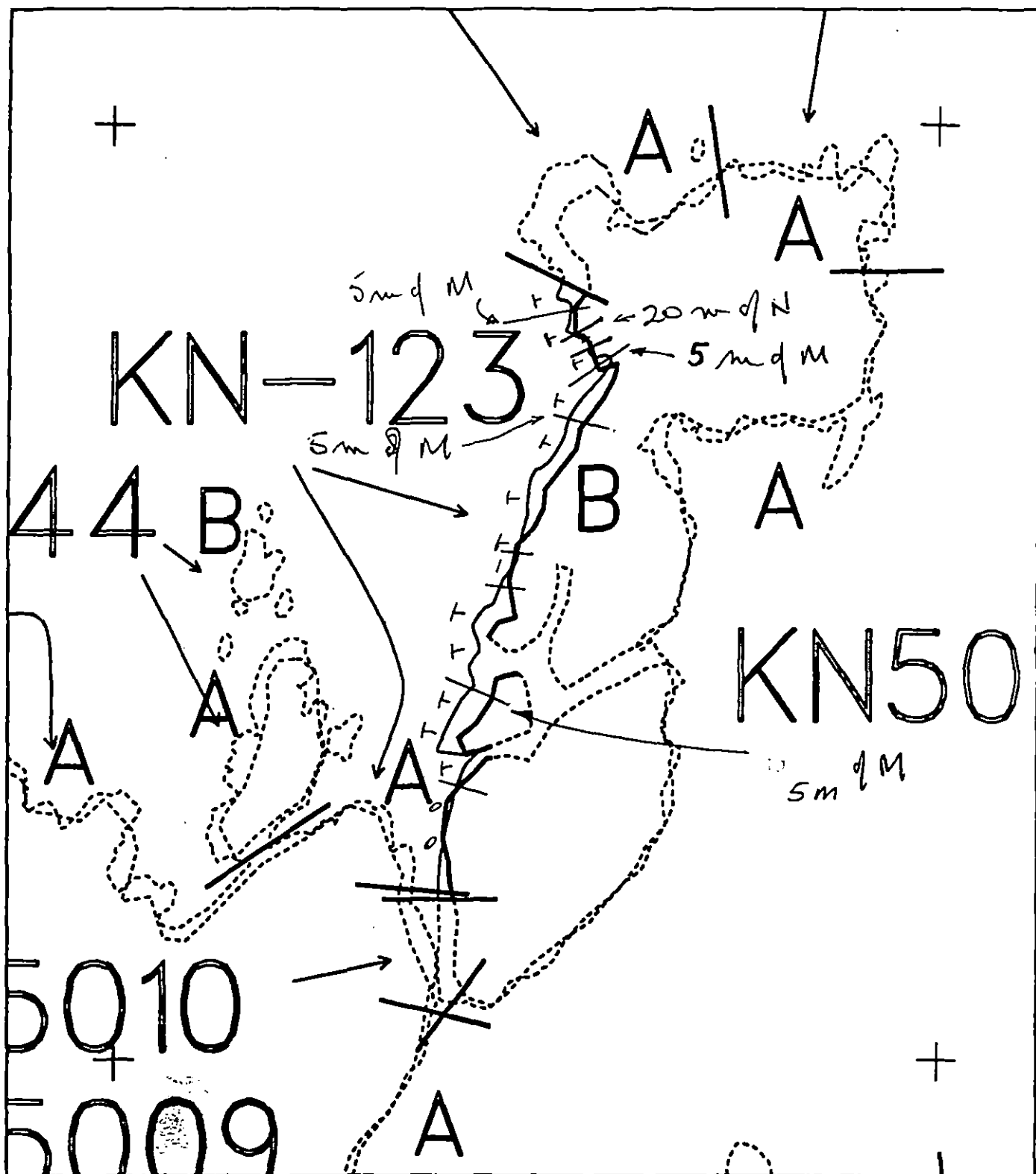
Biota same as (A)

Biota same as (D) (mussel bed, clams, etc. on beach) but SOR only in VTZ-SVTZ above most biota

NWL

NO OIL

NSSL



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

KN0123 B
 ADEC Subsegment Length: 1050m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0123b

Subdivision Field Map
 Map Key: KNIK0123B
 Name: G. MACDONALD
 Date: 5.18.91
 Date Entered:

REVISED: Fw. 5/24/91

A

1991 MAYSAP EVALUATION

SEGMENT: KN 123 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 6/04/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/04/91

ADEC John Bane

FOSC E. E. PAGE

EXXON Beal

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

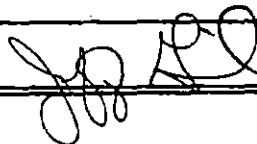
USCG Z.M. Murphy LT

NOAA J. T. Smith

NATURAL FIELD SHORELINE COMMENT SHEET

TEAM NO. 1SEGMENT KNO 123SUBDIVISION ADATE 5/18/91ADEC
NAMEJeff Ginalias

SIGNATURE

☒ NTR

NO REMAINING RECOVERABLE OIL IN SEGMENT. COVES & SEDIMENTS RETAIN LOW SUR, BUT NOT RECOVERABLE AND DOES NOT APPEAR TO BE THREATENING ENVIRONMENT. PATCH OF MOUSSE AT SITE B1 SITS HIGH ON SUITE BEDROCK PLATFORM, WEATHERING AND IS CAUGHT UP IN CREVICES IN ROCK. RECOVERABLE OIL IN THIS SPOT MINIMAL WHEN COMPARED TO POTENTIAL THREAT IMPOSED AS WELL AS RESOURCES NECESSARY TO REMOVE TREAT.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

NO TREATABLE OILING CONDITIONS FOUND ON THIS SUBDIVISION. Light oily residue on the SURFACE AND SUBSURFACE IN ONE FLAT BRIDGE AT THE BASE OF A BROAD POINT WERE IDENTIFIED. THE BEACH FACE APPEARED HEALTHY WITH FOCUS AND MUSSEL BEDS. NO FURTHER REASSESSMENT WARRANTED.

LANDMANAGER

NAME

MARSHAHALLOF DNR

SIGNATURE

Marsha Hall☒ NTR

Area B1 has small amount of oil. Not worth the effort.

USCG/NOAA

NAME

SCHULTZ/CHILDS

SIGNATURE

J. Schultz / T. 2 C☒ NTR

NO RECOVERABLE OIL REMAINS.

STEEP BEDROCK OUTCROP SHORELINE, A TIDAL CHANNEL TO THE NW & A STEEP POCKET TO THE EAST. TYPICAL HIGH/LOW CT, CV/E WERE FOUND ON THE EAST IN B1 & A2. MS/E DETECTED ON B1 ROCK BEACH ON B1. NO SUBSURFACE OILING FOUND.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-123

ADEC J. GINALIAS

LANDMANAGER M. HALL for DNL

SUBDIVISION A

EXXON R. BOYER

USCG/NOAA SCHWITZ/CHILDS

DATE 5/18/1991

TIME 12:05 to 12:45

TIDE LEVEL -1.8 ft. to +0.5 ft.

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

TOTAL LENGTH SHORELINE SURVEYED: 370 m

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 15 m VL 35 m NO 320 m US 1 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							CB/L	M	1	6		X			
B1		P			P	P					R	M	1	5	X				
2					P	P					R	M	0.2	10	X				
3					S						R	M	6 1/2	20	X				
C				S							PC	M	2	4			X		10 SOL
D1				S							PC	L	7	10			X		10 SOL
D2						T					R	H	4	10	X				

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

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

PHOTO ROLL # MAYSAP-

1 - 25 2425

1 - 26 FRAMES 12413

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES	
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI			
1	20							X	-		-				X			PC-PGM	
2	20							X	-		6	2			X			PC-G	
3	20							X	4-7	Y	8	5				X		PC-GM	10 SOL.
4	20							X	-		10	2					X	P-PGM	
									-										
									-										
									-										
									-										
									-										
									-										

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

OG COMMENTS: Steep rocky shore w/ low intertidal neck between cliffs.
 Surface oil only, as (i) CV, CT, MS/I & CT, CV on R wall & platform.
 (ii) 10 SOL @ either side of neck @ MITZ and
 @ South wall of neck @ HITZ.

All oiling is sporadic. Pits 1-4 on SW side of neck were logged for
 KN-124A

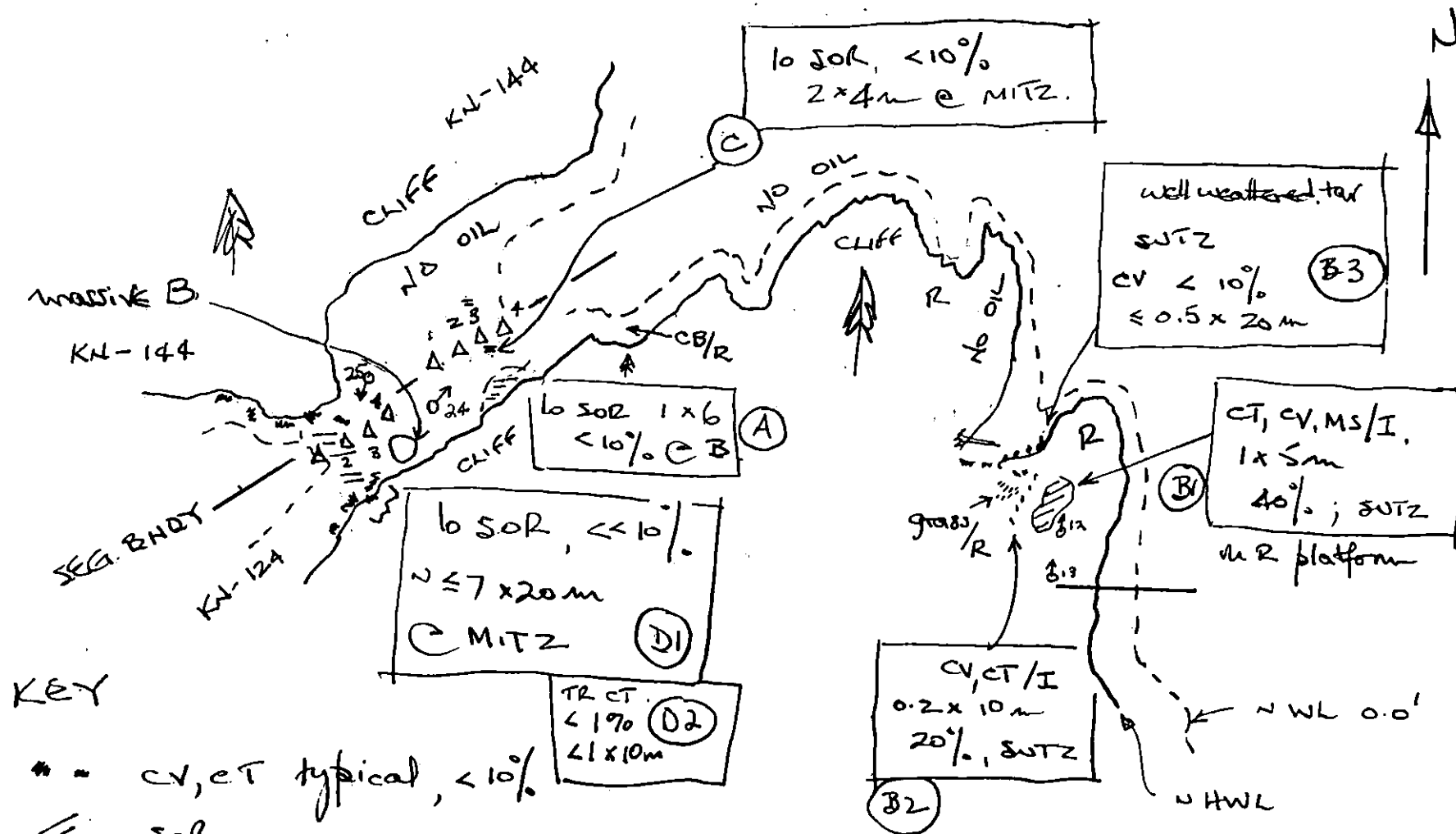
DEVELOPED BY: 5/21/91

KN-123A

G. MACDONALD

5.18.91

0 approx. 100m



KEY

- * - cv, et typical, < 10%
- /// sor
- ⊙ cv, et, patch.

REVISED: F.W. SLA/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 18-19 May 91
 SEGMENT # KN 123 TIDAL HEIGHT (Range) -0.6 to +0.0, -0.2 to +0.2 ft
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 2 1/2 ft 5/18, 1/2 ft 5/19 WIND SPEED/DIRECTION NE 15-30, N.O-5
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

The main area of concern in this subdivision is the intertidal B/C/P neck where 123A meets KN 124a and 144a. The neck rises to SUTZ, with boulder/cobble beach sloping downshore on each side. The general distribution of biota on the beach on either side is: sparse barnacles & mussels in VTZ; moderate to dense barnacles, mussels & *Fucus* in MTZ with sparse to moderate littorinids & limpets; mussels, clams, mixed algae, and typical under-rock fauna (fishes, 6-arm starfish, Littorinid eggs, etc.) in LTZ. See sketch map for descriptions of biota near each oiled site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			black pricklyback
Seabirds	1 (Pigeon guillemot)	13	
Waterfowl			
Gulls/kittiwakes	2 black-legged Kittiwake GW gull	N 100	
Shorebirds			
Corvids			
Other Birds			

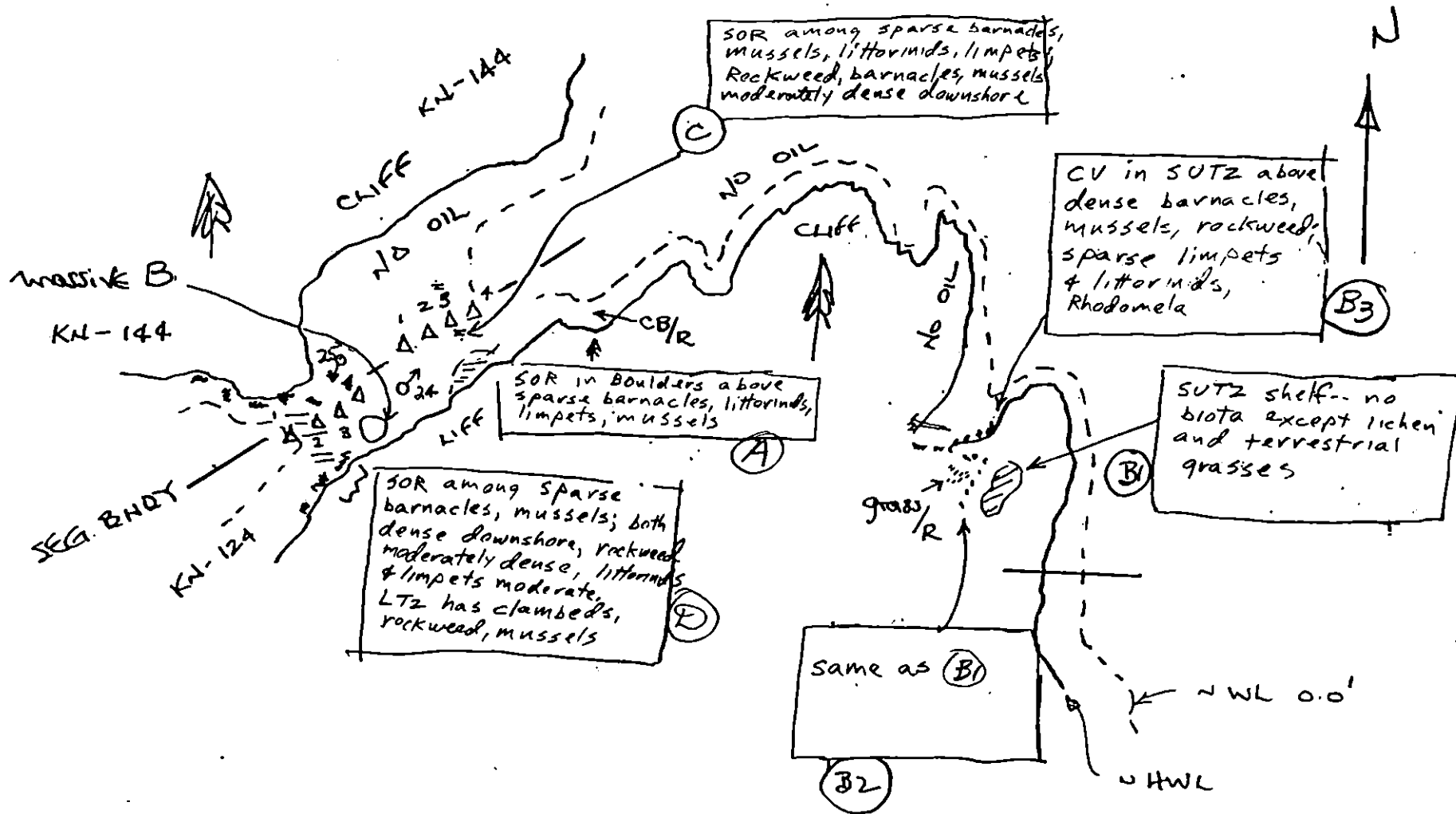
LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Bio Sketch Map
 KN-123A
 M. Fawcett
 5/18/91

0 approx. 100m



KN 123a - app 6 Fawcett

5/18/91 start 1205

B/C P/G -

climbed LTZ - missed Fucus

MTZ CT on walls + 8 ft above

garrison barn

- SOR in C/P/G VIZ - 5/18/91

long mussel, dense downshore

mod Fucus downshore

Out Qui + 123a

~~Start KN 123a~~ 1226

~~Start KN 123a~~ 1236

25 Kittiwakes on island nearby

12 Pigeon guillemots - in bay

26 Gull gulls

1110 hrs 19 May - returned

to 123a to finish

checking cracks on South side

~ 100 Kittiwakes on island in

middle of bay

- 6-8 mottled mussels

- ~~even~~ Pocket beach - B/C P/G

- dense barn, Fucus, mussels on

walls below Tr CT & CV

- grassy knoll above wall on

Seaward side - CT in pockets

123a (cont) 19 May

on top of BR shelf - SVTZ -

no biota except lichen nearby on

downshore

returned to 124a 1140 hrs 5/19/91

1145 - app. by beach - B/C P/G 30 m up

biota as at opp. beach - dense barn

on larger cobble & boulders MTZ

also mussel chips Fucus, mod. downshore

more Rhodonele than Fucus LTZ

- CT on North wall + 7 ft above

above dense barnacles - sparse mussels,

than B/C P/G below

- SOR in B/C near stream on South

side + 11-12 ft SVTZ - no biota

- CT on South wall 8-10 ft - mostly

no biota, but downshore end of

it above dense barnacles - boulders

below upped w/ r. prism,

sparse barn

- Rhodonele, rockweed, barn extend

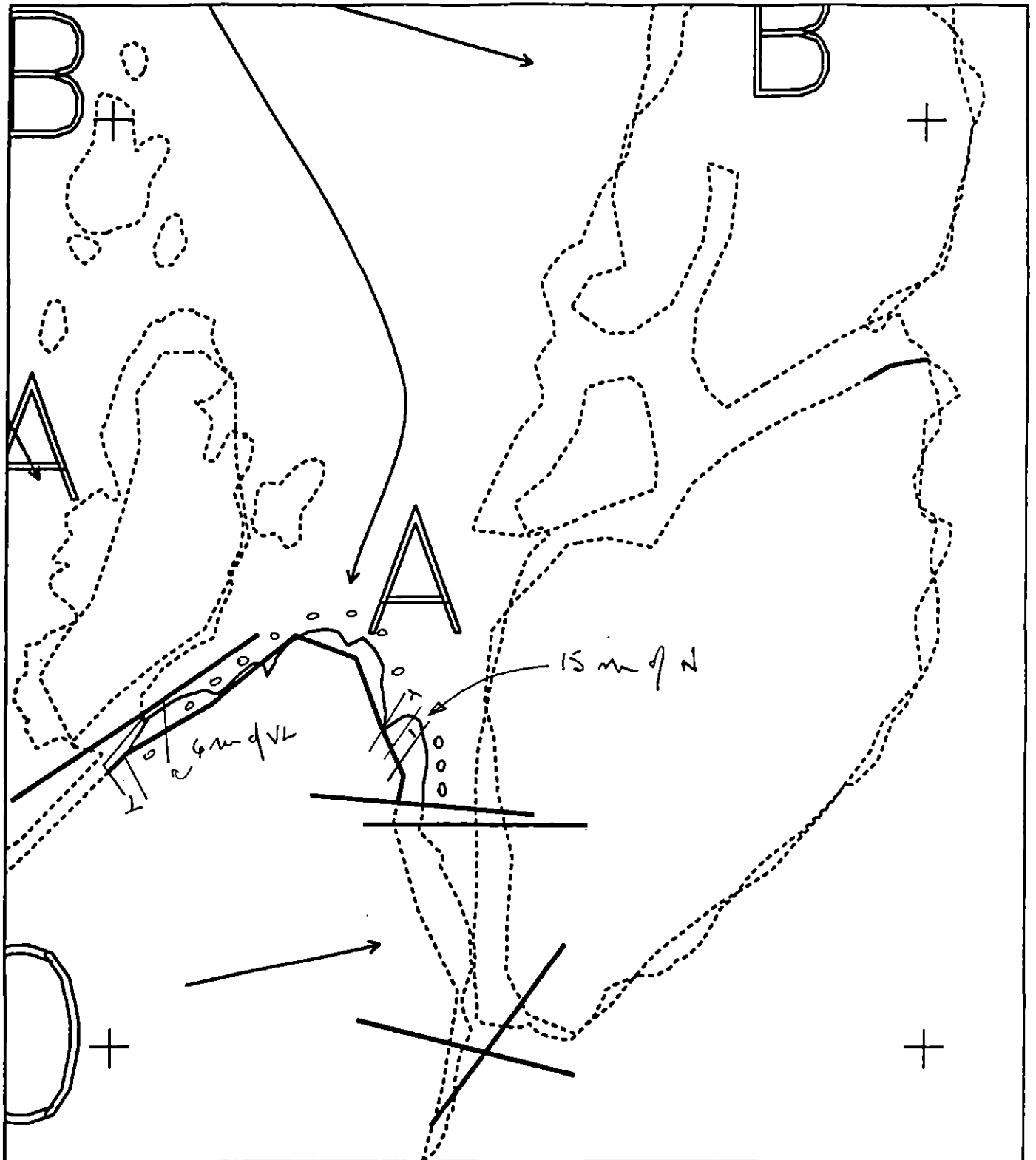
up shore in stream to + 8 ft on

so, higher than elsewhere

- some SOR in B/C ~ 10 ft. among sparse

barn, lump, Politt., - some sparse

downshore for 5 m on so



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

KN0123 A
 ADEC Subsegment Length: 370m
 METERS

0 100 200
 AK State Plane Zone 4
 24N0123a



Subdivision Field Map
 Map Key: KNKN0123A
 Name: GM
 Date: 5-19-91
 Date Entered:

REVISED: F.W. 5/21/91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-123 SUBDIVISION B (2 of 2)

WORK WINDOW	
Bioremediation Spot Washing	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Sea & Sea Lion
Pupping and Molting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

ADEC Art Weiler

EXXON Art Weiler

NOAA B. Wright

USCG G.A. REITER

FOSC

DATE

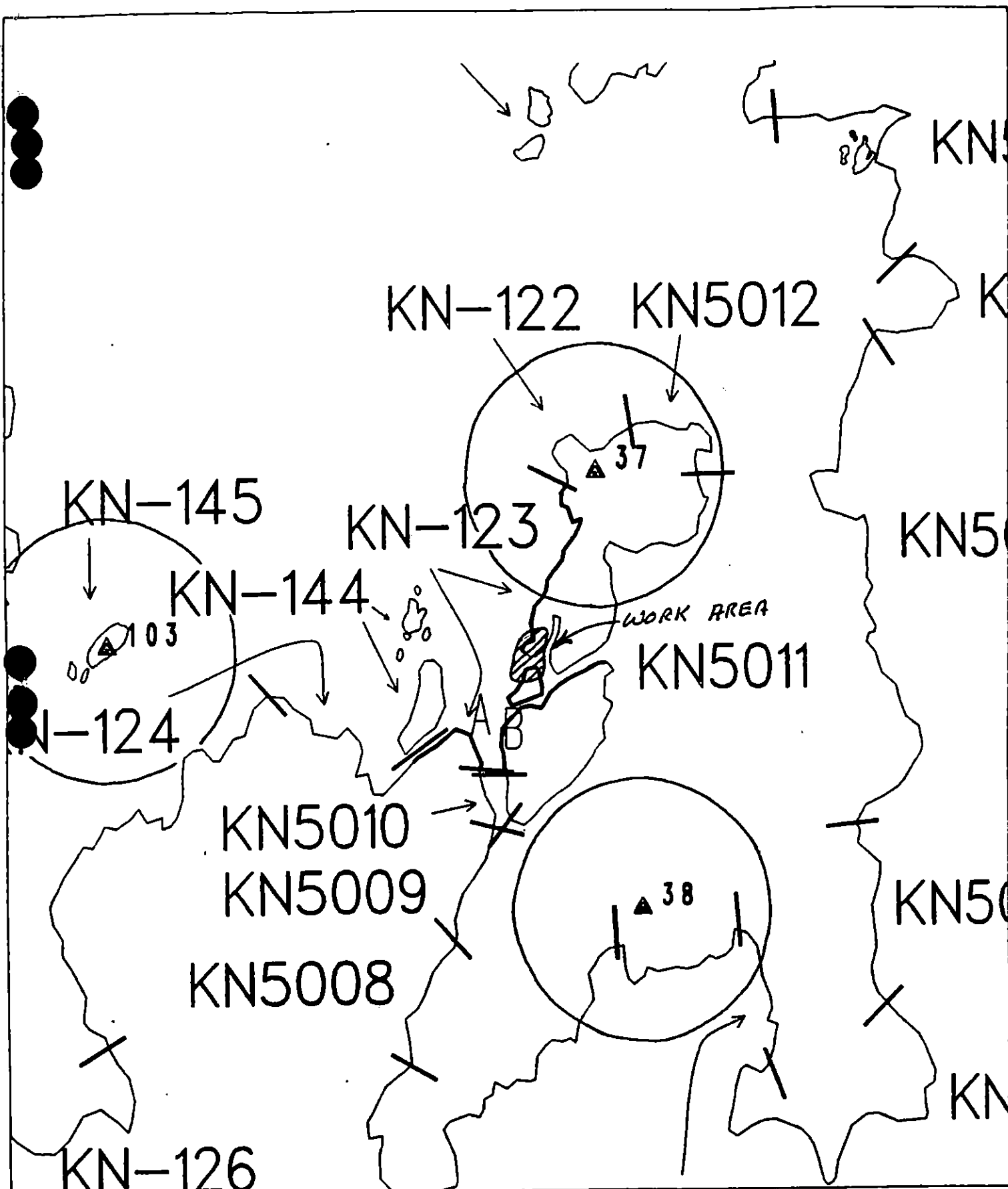
MAY 29 1990

Prepared By:

Anden Meyer WTK

Date

5/24/90



EXXON
 Exxon Company, USA
 Map Keys KN1-KN-123
 May 11, 1990

ECOLOGY MAP
 SEGMENT KN-123
 SUBDIVISION B (2 of 2)
 METERS
 0 399 798

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1309 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-123 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance/damage to unoiled biota and substrate.
See attached Ecological Constraint Sheet.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: April 18, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 257 m: Narrow 220 m: V.Light 370 m: No Oil 205 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend spot washing followed by bioremediation of cobble beach areas as shown on attached sketch map. Conduct treatment before 5/15 and/or between 7/1 and 8/15 unless otherwise approved by ADF&G.

→ See Constraint Addendum dated 5/24/90 WK

TAG COMMENTS: MONITORS TO CHECK FOR OILED DEBRIS IN SUIT 2

TAG APPROVAL DATE: 4/14/90

ADEC [Signature]
EXXON [Signature] FOSC: [Signature] DATE: 4-20-90
NOAA [Signature]
USCG G.A. REITER

SHORELINE EVALUATION

SEGMENT ST/ KN-123 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P: 5/15 to 7/1) and molting (8/15 to 9/15: 30, 3Q) area. Limit boat and air traffic to essential minimum. Contact ADF&G Habitat Division prior to any activity. Complete treatment before 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 27 m: Narrow 42 m: V.Light 85 m: No Oil 170 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

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

00 Greg ~~_____~~ ney

SEGMENT STI KN123

SUBDIVISION A

DATE April 1 90

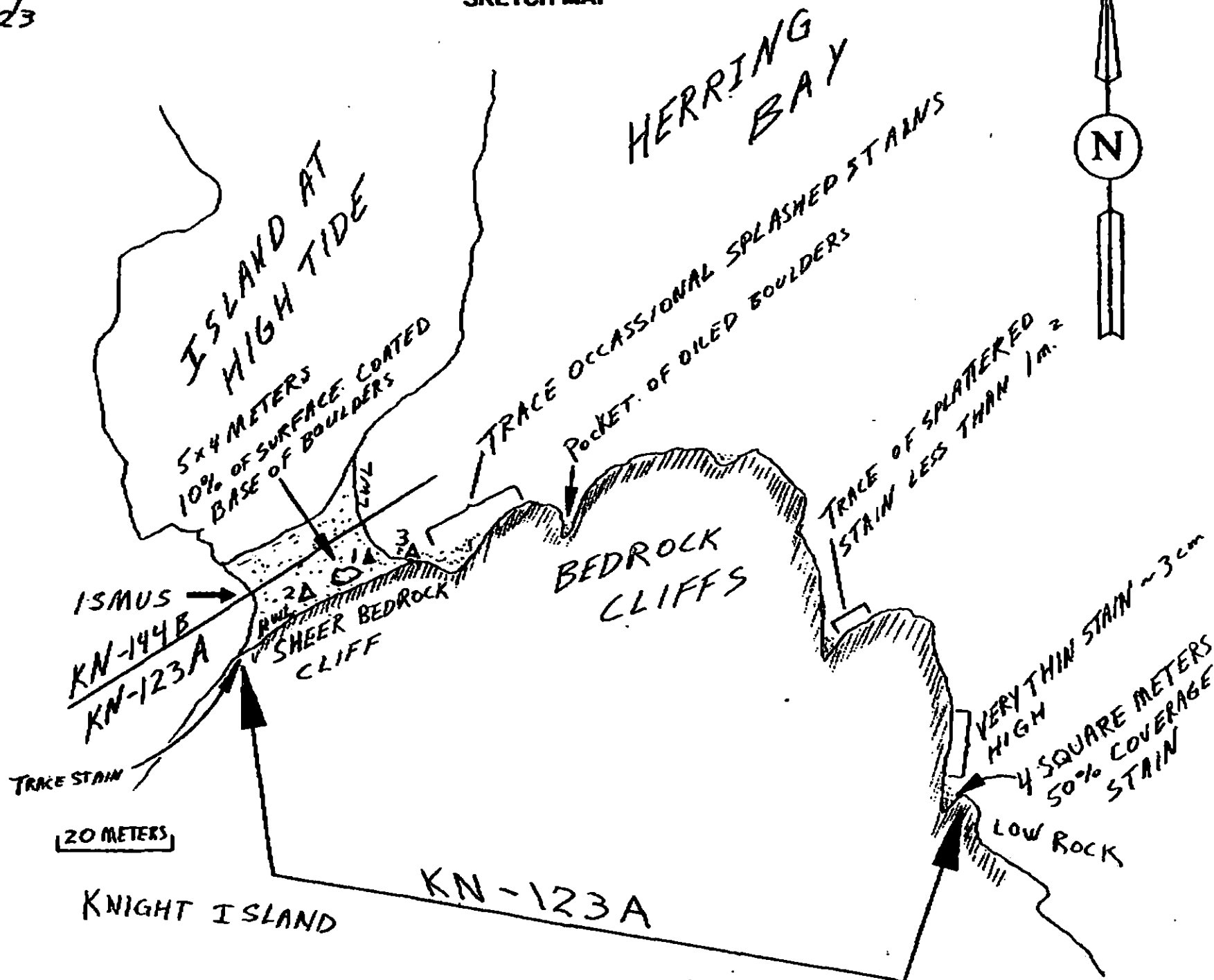
CHECKLIST

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

LEGEND

- 1 ▲
PH - No Subsurface Oil
- 2 ▲
PH - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Pecchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

SKETCH MAP



DEC-12-1989 14:17 FROM TUKON RIVER

TO

P.08

Oil Character Length (m): AP — PO — CV — CT 9 ST 45 MS — PT — TB — FL 5 NO 301

REVISION 03/01/90

KN-123

KN



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-123A

ADEC Segment Length: 1837m
Exxon Segment Length: 1467



Map Key: PWS-305

Name: Greg Chaney

Date: April 1 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-123 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance/damage to unoiled biota and substrate.
See attached Ecological Constraint Sheet.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Shaw

DATE: April 18, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 257 m: Narrow 220 m: V. Light 370 m: No Oil 205 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend spot washing followed by bioremediation of cobble beach areas as shown on attached sketch map. Conduct treatment before 5/15 and/or between 7/1 and 8/15 unless otherwise approved by ADF&G.

TAG COMMENTS:

MONITORS TO CHECK FOR OILED DEBRIS IN SUITZ

TAG APPROVAL DATE: 4/14/90

ADEC J. D. [Signature]

EXXON ANN [Signature]

NOAA Burt [Signature]

USCG G.A. REITER

FOSC: [Signature]

DATE: 4-20-90

HERRING BAY



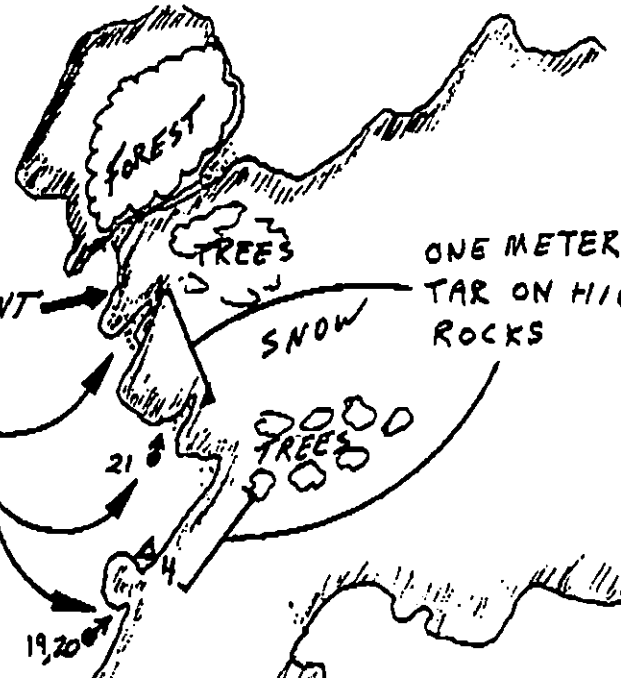
SKETCH MAP

NORTHEGE SEGMENT

OIL COAT ON BEDROCK
UP TO 2 METERS HIGH.
OVER 2mm THICK
WITH HEMLOCK NEEDLES
~ 30 METERS LONG
TOTAL

ONE METER BAND
TAR ON HIGH OUTER
ROCKS

SNOW



LOW ROCK

SPORATIC
BAND UP TO
80 CM HIGH

BAND 30cm HIGH

BLACK LICHEN IN VICINITY.
SMALL ROCK BASIN WITH UP
TO 1 METER WIDE 12 METERS
LONG. BROWN OIL FLOATS
WHEN SEDIMENT
DISTURBED

LOW CHANNEL
ICE ON POND

LOW ROCK

TAR COAT ON BEDROCK
AND COBBLES. ~35m?
THICKEST IN CRACKS

DISCONTINUOUS
BAND TAR COAT
UP TO 20 CM.



RANDOM SPLATTERS

CONTINUOUS TAR
COAT ON CLIFF
60cm. HIGH

100 METERS

SOUTH EDGE
SEGMENT

BEDROCK CLIFF

HERRING BAY

OG Chaney
SEGMENT STI KN123
SUBDIVISION B
DATE APRIL / 90

- CHECKLIST
- ☐ Arrow
 - ☐ Approx. Scale
 - ☐ Sag/Club Entry
 - ☐ Oil Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. NW/SE/NE/SW
 - ☐ SSI
 - ☐ 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

Spotted Distribution

Oil Vegetation

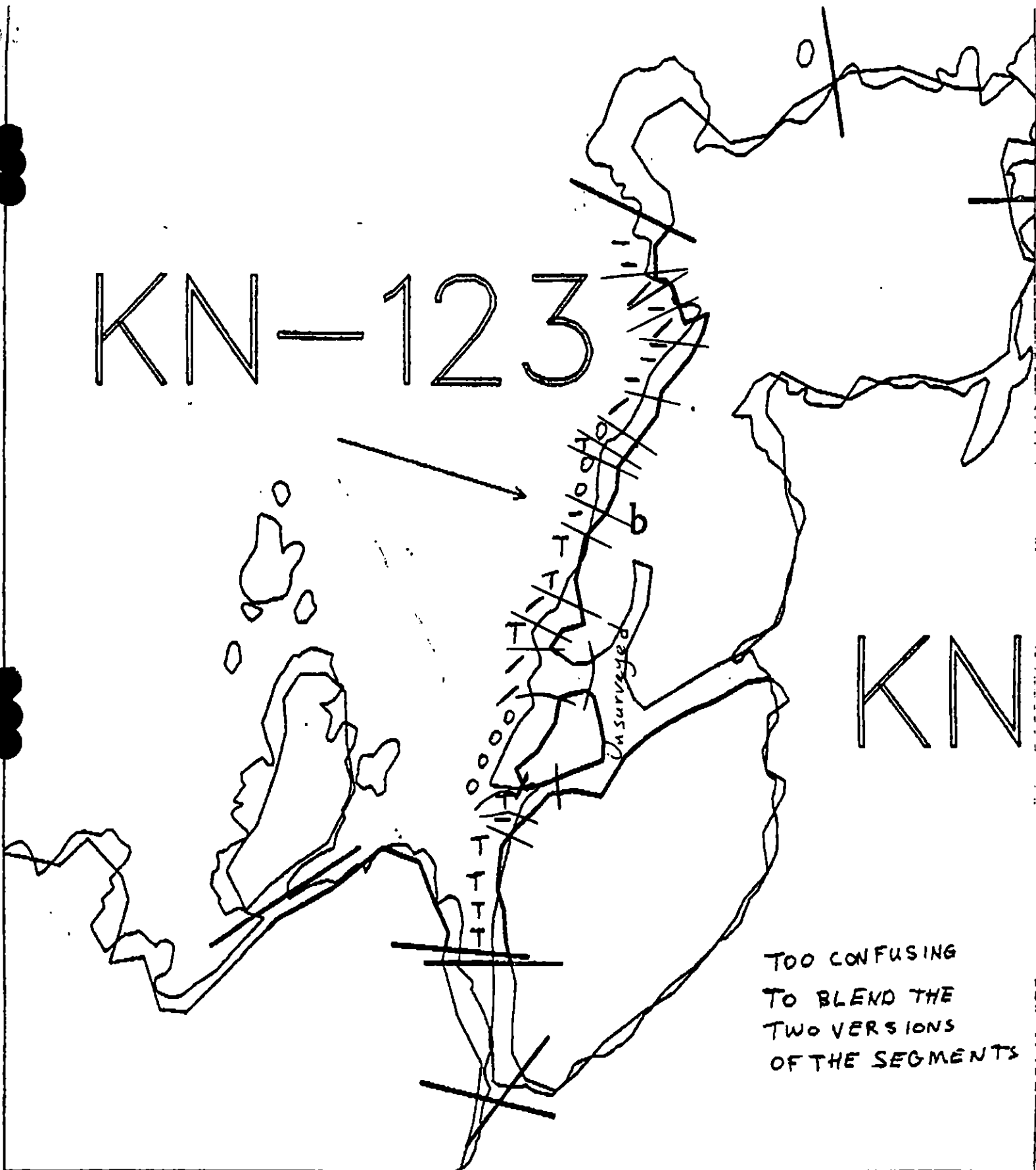
1 0+

Photo location, direction, and number

Oil Character Length (m): AP — PO — CV 50 CT 380 ST 557 MS — PT — TB — FL 20 NO 390

KN-123

KN



TOO CONFUSING
TO BLEND THE
TWO VERSIONS
OF THE SEGMENTS

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-123b

ADEC Segment Length: 1837m
Exxon Segment Length: 1467



Map Key: PWS-303

Name: Greg Chaney

Date: April 1 1990

Data Entered:



REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-123

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-123 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance/damage to unoiled biota and substrate.
See attached Ecological Constraint Sheet.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 257 m: Narrow 220 m: V.Light 370 m: No Oil 205 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend spot washing followed by bioremediation of cobble beach areas as shown on attached sketch map. Conduct treatment before 5/15 and/or between 7/1 and 8/15 unless otherwise approved by ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE: _____
ADEC _____
EXXON _____
NOAA _____

FOSC: _____ DATE: _____

OG. Chancy
 SEGMENT ST. KN123
 SUBDIVISION B
 DATE APRIL 1 / 90

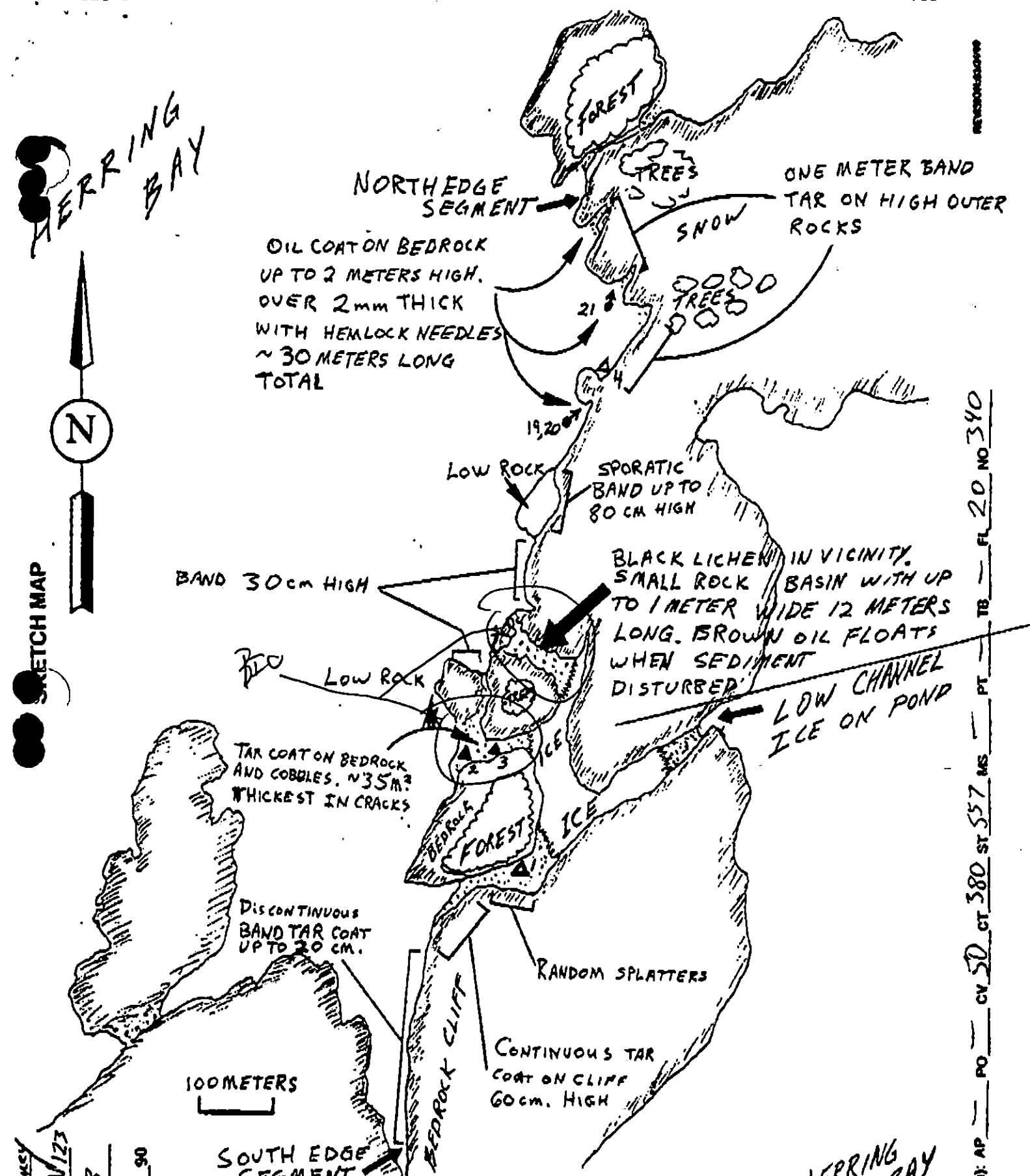
CHECKLIST

- ☐ Narrow
- ☐ Approx. Scale
- ☐ Substrate Body
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/A/W
- ☐ 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

HERRING BAY
 Photo location, direction, and number



Oil Character Length (m): AP — PO — CV 50 CT 380 ST 557 MS — PT — TB — FL 20 NO 340

KN-123

KN

TOO CONFUSING
TO BLEND THE
TWO VERSIONS
OF THE SEGMENTS

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-123b

ADEC Segment Length: 1837m
Exxon Segment Length: 1467

0 100 200 300
METERS

Map Key: PWS-305

Name: Greg ChaneyDate: April 1 1990

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-123

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-123 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P: 5/15 to 7/1) and molting (8/15 to 9/15: 3O, 3Q) area. Limit boat and air traffic to essential minimum. Contact ADF&G Habitat Division prior to any activity. Complete treatment before 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 27 m: Narrow 42 m: V.Light 85 m: No Oil 170 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 123 B SUBDIVISION: A DATE 4/1/90NAME Patrick May SIGNATURE Patrick May☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I do not recommend treatment of this ~~area~~ segment. The one very small area of splashy coat does not warrant the damaging impact of a cleanup party.

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

COMMENTS

Only area where possible treatment might be appropriate is on ismus blwn KU 123 A + 144 B and in my judgement more harm than good would be the result of tromping around on the rich biological communities found there. The thin coat & stain on the vertical headlands is there to stay - but it should not harm seals etc as its quite hard

LAND MANAGER

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

COMMENTS

Only worthwhile treatment is check for debris and check tar on vertical faces when temperature rises. Not much collectable now.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Greg Chaney USCG Patrick Malay SEGMENT ST/ 123
 BIO Jim Roth LAND REP Steve Phillips SUBDIVISION A
 XXXON Ray Setelo ADEC Mike Cunningham TIME 10:40 to 11:10
 TEAM NO.: 7 TIDE LEVEL: 2 ft to 1 ft DATE April 1 / 1 / 90
 EST. SUBDIVISION LENGTH: 360 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: West to East
 SURFACE SEDIMENTS: R 80 % B 15 % C 5 % P - % G - % S - % M - % V - %
 SLOPE: Long 20 % Hang - % Vert 80 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N 9 m VL 45 m NO 306 m

SURFACE OIL

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

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	X		
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE fork, rope#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	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			UO	UC	SP BR	OR TR	OL TR	OT SL	OR TL	OL LR	SU	U	M	U		
1	20				X		5 - 20		X					X				X			PGS	
2	15					X	- - -		X									X			PGS	
3	20					X	- - -		X									X			GSM	
							.															
							.															
							.															

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/86

Segment ST/ KN 123 Subdivision A Date (mo / day / yr) Apr 1, 90Time (24 hr) Apr 1040 LV 1105 Biologist ROTH

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 30 (3) Cobble 20 (4) Pebble 20 (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense 10 Moderate 30 Low 60

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

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	X	X	2	2	2	2	2	2	2
3	3	3	X	X	3	3	3	3	3	3	3
4	4	4	X	X	4	X	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	X	2	2	2	2
3	3	3	3	3	3	X	X	3	X	X	3
4	4	4	4	4	4	X	4	4	X	4	4
5	5	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	X	X	2	2	2	2	2	2	2
3	3	3	3	3	3	X	X	3	3	3	3
4	4	4	4	4	4	X	4	4	4	4	4
5	5	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	X	X	X	2	2	2	2	2	2	2
3	3	X	X	X	3	3	3	3	3	3	3
4	4	X	X	X	4	4	4	4	4	4	4
5	5	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 HARBOR SEALS SEEN IN WATER EN ROUTE TO SUBDIVISION.

1 BALD EAGLE FLEW OVERHEAD.

CAN'T SEE MUCH OF THE LOWER ZONE YET, SO ONLY FUCUS ESTIMATED.

Ecological Considerations:

3 N.P. } SEA LION AND HARBOR SEAL MOLTING AND PUPPING.
 3 O.Q. }

OG Grease

SEGMENT SY KN123

SUBDIVISION A

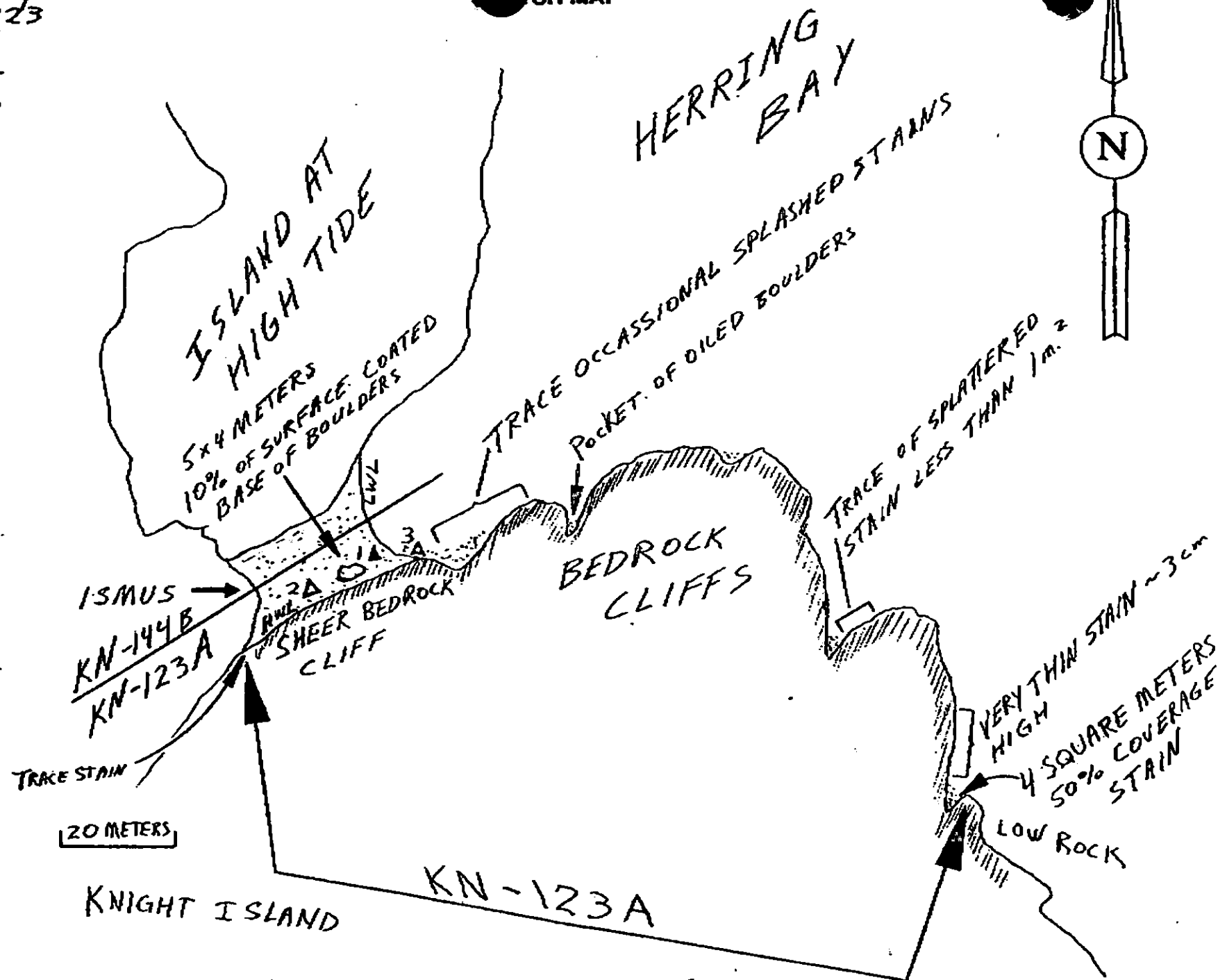
DATE April 1 90

CHECKLIST

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

LEGEND

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

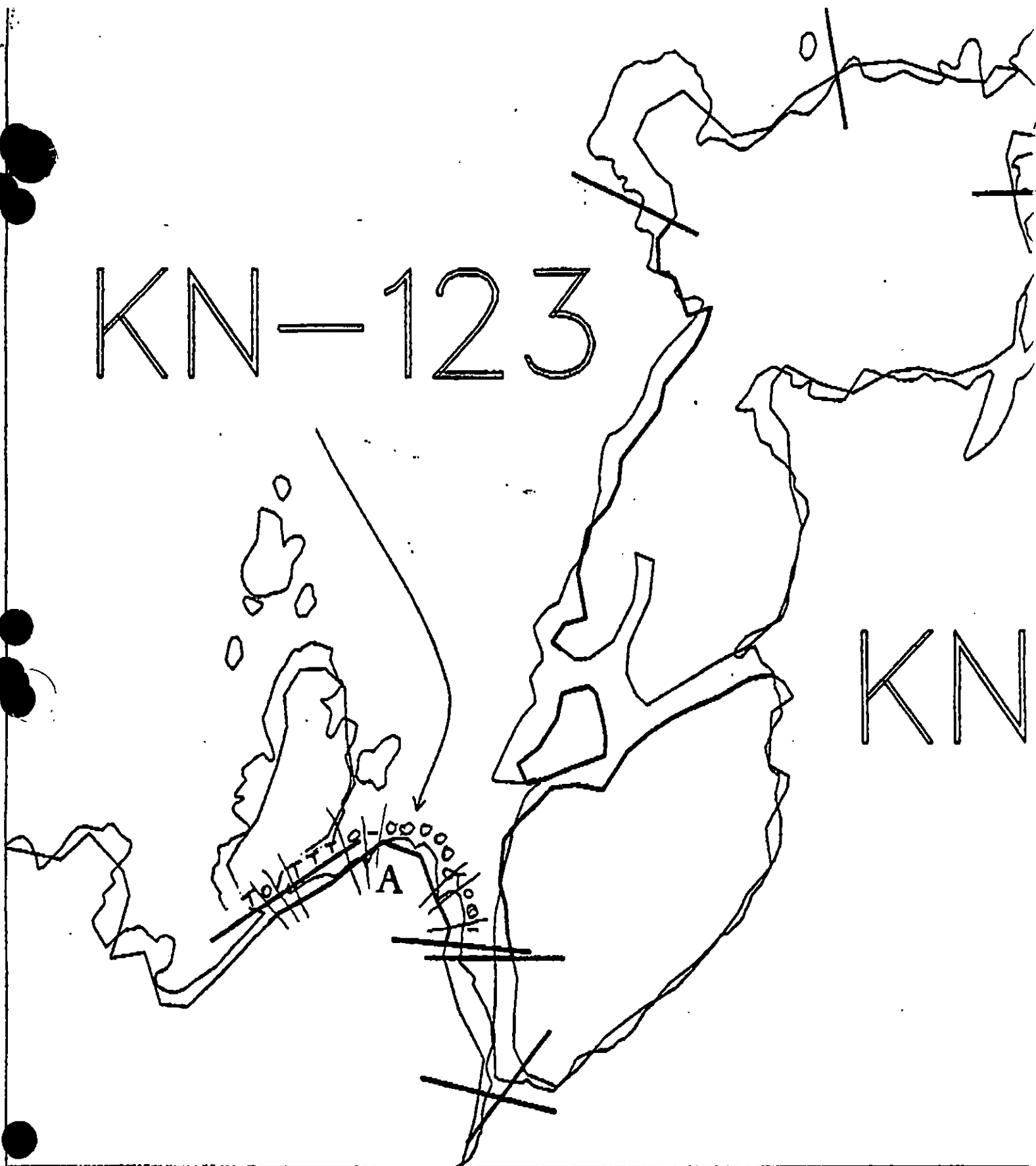


Oil Character Length (m): AP — PO — CV — CT 9 ST 45 MS — PT — TB — FL 5 NO 30/

REVISION 03/24/90

KN-123

KN



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-123A

ADEC Segment Length: 1837m

Exxon Segment Length: 1467



Map Key: PWS-305

Name: Greg Chaney

Date: April 1 1996

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 123 SUB: B REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

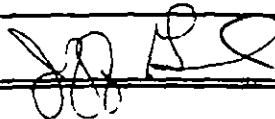
TEAM NO. 1SEGMENT KNO123SUBDIVISION BDATE 5/18/91

ADEC

NAME

JEFF GINAWAS

SIGNATURE

☐ NTR☒ TREATMENT RECOMMENDED

MANUAL WORK SITES A & C. SMALL CREW, ONE DAY COULD COMPLETE.
SHOVELS, TROWELS, RAKES. AT SITE C, OILED SEDIMENTS HAS TRAPPED PINE NEEDLES,
DETRITUS AND IS STICKY AROUND Boulders. BOTH SITES EASY ACCESS BY SKIFF.
IMPACT AT WEST OF SEGMENT DOES NOT LEAD FOR EASY REMOVAL (NOT AS
DEFINABLE), BUT MAY FORM MORE VISCIOUS, BONDED GLOBULES AS SUMMER TIDES.
EASY SEGMENT TO treat; ~~more~~ TREATMENT WOULD NOT HARM BLOTH.

EXXON

NAME

RANDALL E. BOYER

SIGNATURE

Randall E. Boyer☒ NTR

TREATMENT HERE WOULD NOT SERVE ANY ENVIRONMENTAL
BENEFIT. SURFACE RESIDUE WAS LIGHT ON THE SURFACE AND
MEDIUM UNDERNEATH Boulders IN THE UITE IN 2 SMALL POCKETS.
SOME SUBSURFACE RESIDUE EXISTED BUT HARDLY DETECTABLE IN
SOME PITS. HEALTHY INTERTIDAL ZONE WITH LIVING CREATURES ABOVE
AND BELOW Boulder SURFACES.

LANDMANAGER

NAME

MARSHA HALL

OF

DNR

SIGNATURE

Marsha Hall☐ NTR☒ treatment

Tilling with ^{incoming} tide in AREAS A, C. MANUAL WORK
with shovels/Rakes. Great area for kayaking, anchorage

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

J. A. Schultz / J. C. Childs☒ NTR

FURTHER REMOVAL OPERATIONS WOULD PROVE ^{MORE} ENVIRONMENTAL
HARMFUL THAN THE OIL TO BE REMOVED.

BEACH SHORLINE w/ DEEP CUTS CONTAINING ROCK DEBRIS & ORGANICS.

THE DEEP CUTS STILL CONTAIN SIGNIFICANT OIL AS SOR/I IN THE SMALLER
ROCK DEBRIS & ORGANICS IN THESE POIDS UNDER & BETWEEN B & C's. THIS OIL IS FAIRLY
GRADED BUT STILL SHEEDS UPON AGITATION. COULD BE RECOVERED BY A SMALL CONTIGAL
DESIGNED w/ THAT INTENT. REMAINING OIL WAS CT, CV, & ST ON B, C, & VERT BR FACES IN MI-UI in,
OIL CONTAINING BRIDS.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1OG G. MACDONALDBIO M. FAWCETTSEGMENT KN-123ADEC J. GINAWASLANDMANAGER M. HALL for DNRSUBDIVISION BEXXON R. BOYERUSCG/NOAA SCHULTZ/CHILDSDATE 5 / 18 / 91TIME 10:55 to 12:00TIDE LEVEL -1.9 ft. to -1.8 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1050 mNEAR SHORE SHEEN: ☐ BR ☒ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W - m M 20 m N 220 m VL 670 m NO 140 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1				P							BC	M	6	5	x	x			in R channel trap.
A2					S	S					R	H	<1	15		x			well weathered.
B					S	S					R	V	1	20	x				under overhang.
C				P	P	P	P				BCR	M	3	5		x			hi sor; R sheen
D1				S	S						RB	H	<1	225	x	x			R trap.
D2				P							RB	M	3	5		x			
E1				P							RB	M	2	3		x			
E2					P	P					PCM	M	1	50					
F1				P							PCR	M	.6	5			x		
F2				P							PC	L	1	5	x				

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 25 FRAMES 17-23

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	10							x	3-7	Y	0	RB	x				CP-PGR	hi sor 3-7
2	23							x	10-20	Y	15	R		x			PB-GR	
3	40							x	7-10	Y	30	S		x			P-PGB	
4	10							x	3-6	Y	1	B			x		PB-PGM	hi sor
5	10							x	2-5	Y	5	RB			x		PC-GM	
6	15							x	0-5	Y	10	B		x			BC-PVR	
7	25							x	2-15	Y	5	B		x			BC-PVR	R. traps.
8	15							x	0-5	Y	5	B		x			BC-PVR	

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

OG COMMENTS:

Sheltered rocky shore w/ deep rock channels.

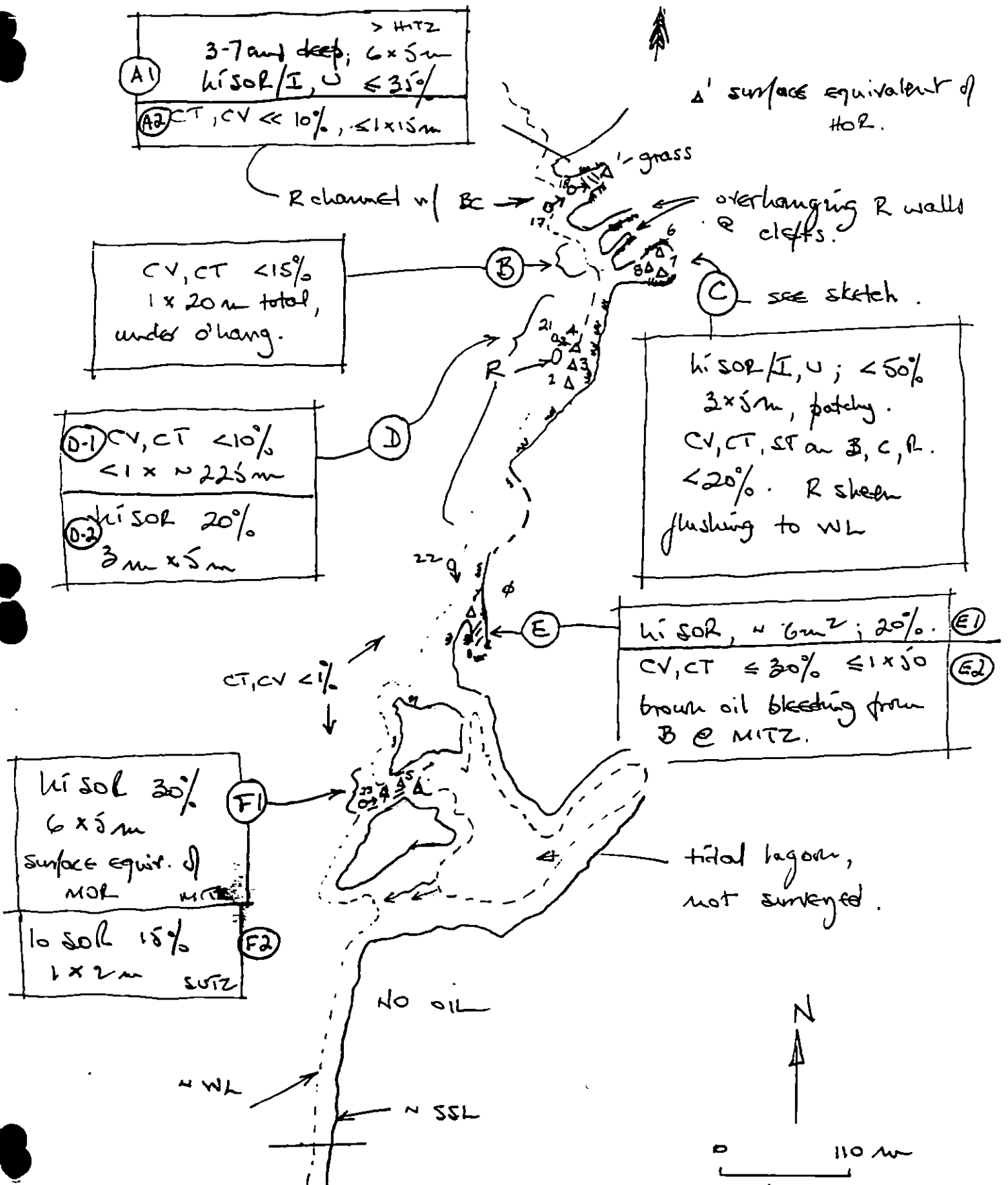
Surface oil only, as (i) CR, CT, ST @ H12-S12, well weathered; greatest % cover found under R overhangs.

(ii) patches of SOL, water saturated, in R channels on coarse, poorly sorted sediments, and on low angle traps associated w/ channels.

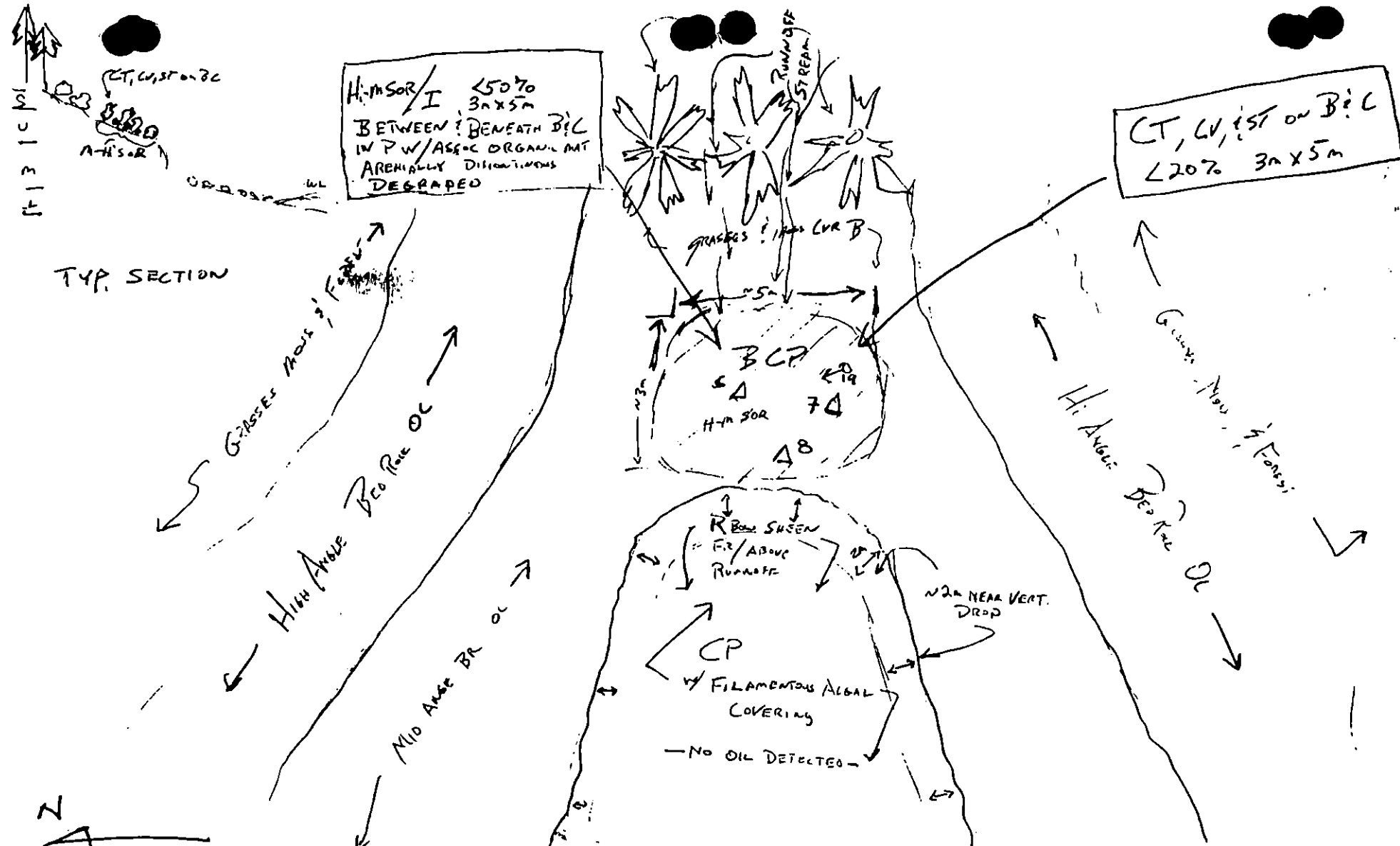
REVIEWED: F.W. 5/21/91

KN-123B

G. MACDONALD
5.18.91



REVISED: F.W. 5/21/91 ~



#6	~15cm	M SOR	BC-PVR MOD SLOPE	1m x 2m	UI	B SHEEN	20
#7	~25cm	H. SOR	BC-PVR MOD SLOPE	2m x 3m	UI	B "	
#8	~15cm	H. SOR	BC-PVR MOD SLOPE	2m x 3m	US	B "	

- △ - SCRAPING OR FIT
- - SOR ZONE
- ♂ - PHOTO LOC

LA-123 B B. CHINS
5.18.01

Site (C)

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE 18 May 91

SEGMENT #

KN 123

TIDAL HEIGHT (Range) -1.9 to -0.7 ft MLLW

SUBDIVISION

B

BIOLOGIST Michael Fawcett

SEA STATE

2 1/2 ft seas

WIND SPEED/DIRECTION NE 15-20, gusts 30

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision has steep bedrock shoreline with several narrow sheltered pocket beaches and a lagoon with two entrances on the west side. The first pocket (A) at the north end of the subdivision has boulder/cobble sediments with some SOR in the UTZ-SUTZ at +10 ft, about 5 m upshore of the highest biota (sparse rockweed). Further downshore are dense littorinids (many new recruits), dense rockweed, and sparse barnacles, mussels, and limpets. LTZ in boulders/cobble has dense cover of red, green, and brown algae, breeding whelks (*Nucella lamellosa*), dive whelks (*Searlesia diva*), nudibranchs, pricklebacks, and breeding pairs of crescent gunnels. CT and CV on walls at +9-10 ft is among or just above sparse to dense barnacles. Sites (B) & (C) are similar to (A). Site (D) is also similar, except that SOR extends down into MTZ into the middle of a dense bed of mussels. The mussels appear to be from 0 to about 3 yrs old, and are growing among & on top of SOR --- destroying them to remove SOR would seem unwise. Sparse rockweed, littorinids, and barnacles also occur among the SOR. Larger boulders on sides of beach have breeding whelks & gunnels, starfish, bryozoans, sponges, sabellid (tube-dwelling) worms, anemones, etc, and there are clams in LTZ & shallow subtidal zones. Site (E) similar to (D), but SOR in UTZ above most biota. Site (F) in lagoon mouth similar to (D), including SOR in dense mussel bed, clams downshore.

see sketch for descriptions of biota near each oiled site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

D. J. ... M R 5/1/91

KN 1236 18 May 91 Fawcett
slat + 1053

1st long narrow pool

SOR SUTZ 300 -

Yang from sparse slats 5 m
down in C/O

CT mussels + 9-10 VTZ-SUTZ

among sparse bivalves

- MTZ in B/C w/ dense fern,

dense / (many pen)

LTZ and mixed area -

breeding N. Lam. - Seals,

possibly

1120 see Sket 1

3rd site - same as above

but, buried in MTZ

under dense mussels in ground

pebble/cobble - sparse fern,

1st Ficus - dense on rocks

- lapas boulders w/ breeding

whelks, breeding crescent

gumms, Periwinkles,

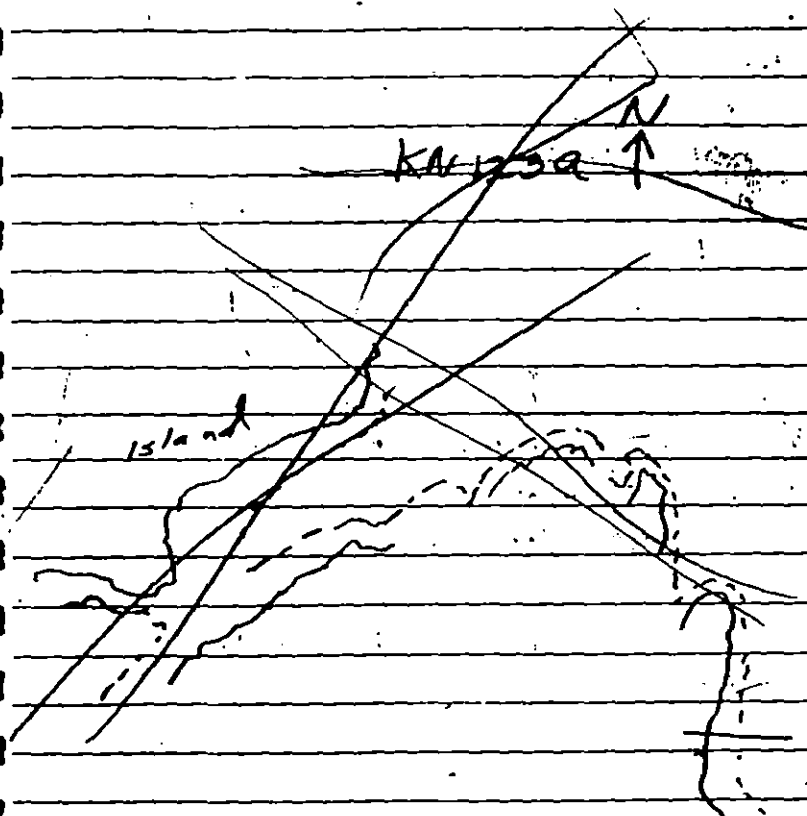
Pycnopoda, Anysia etc -

probably SOR - have a lot

1155 - near lagoon - same as 1120

- buried in dense mussels

cores of small offer



1236 (cont) - LTZ - MTZ

whelks, clams, variety of algae -

Pycnopoda - bryozoans

old N. scutum

Bio Sketch Map
KN 123 B, 5/18/91
M. H. Fawcett

(A) no biota near SOR; sparse young *Fucus* 5m downshore; dense *Fucus*, limnoriids, sparse barnacles, mussels, limpets further downshore; ct on walls among sparse barnacles
Dense algae & under-rock fauna in LTZ --- breeding whelks, fish
R channel w/ BC →

biota same as (A)

overhanging R walls & clefts.

(C) see sketch

Biota same as (A)

Biota same as (A), but SOR extends into dense mussel bed

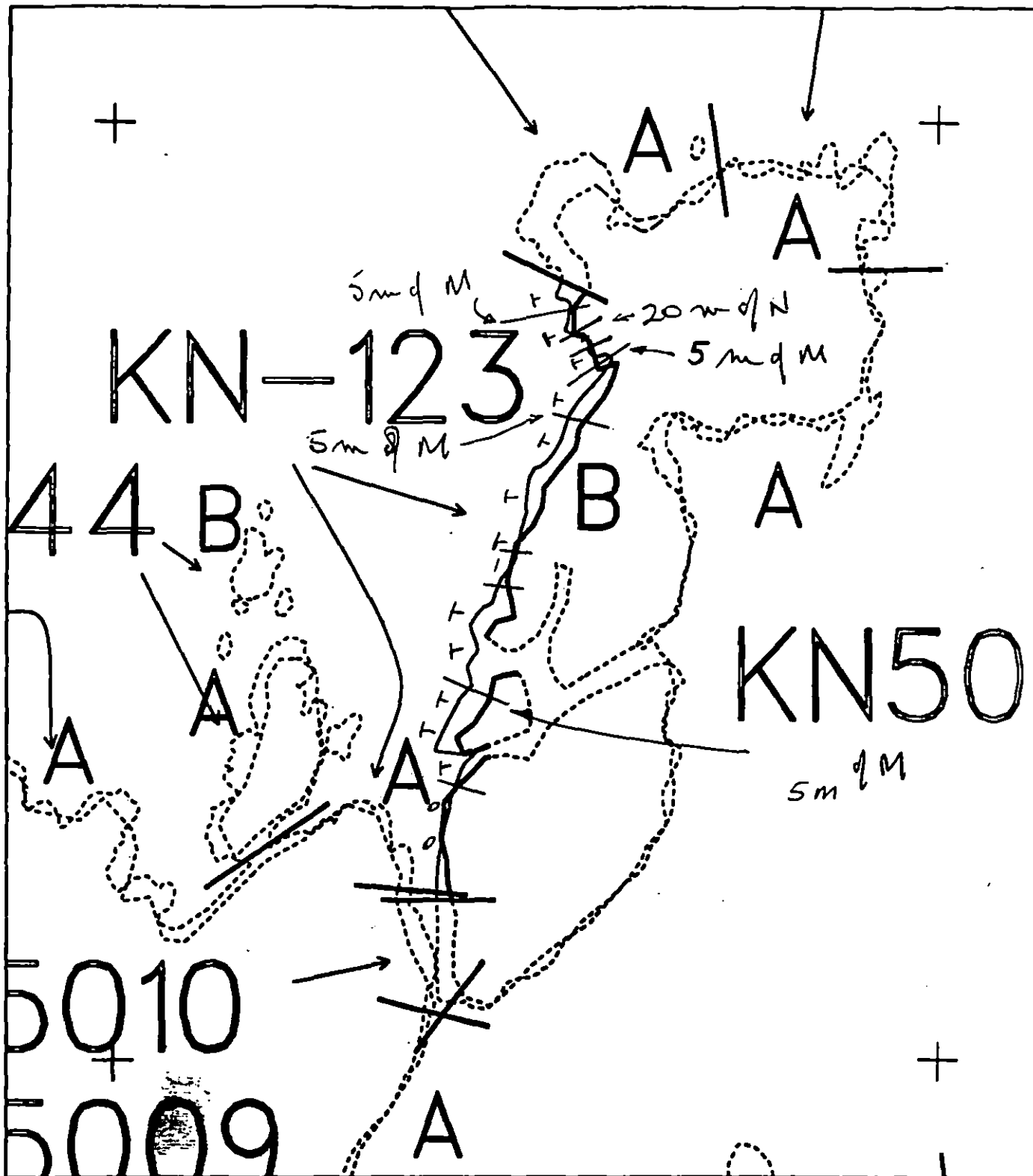
Biota same as (D) (mussel bed, clams, etc. on beach) but SOR only in VTZ-SVTZ above most biota

biota similar to (D), including dense mussels among & on top of SOR; clams downshore

NO OIL

NWL

NSSL



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

KN0123 B
 ADEC Subsegment Length: 1050m
 METERS
 0 200 400
 AZ State Plane Zone 4
 11001235



Subdivision Field Map
 Map Key: KNKN0123B
 Name: G. MARSDONALD
 Date: 5.10.91
 Date Entered:

REVISED: F.W. 5/21/91

A

1991 MAYSAP EVALUATION

SEGMENT: KN 123 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

TEAM NO. 1

SEGMENT

KNO 123

SUBDIVISION

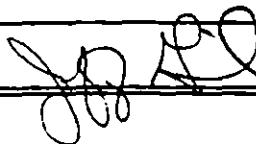
^{REB}
ADATE 5/18/91

ADEC

NAME

JEFF GUALTAS

SIGNATURE

☒ NTR

NO REMAINING RECOVERABLE OIL IN SEGMENT. COVES & SEDIMENTS RETAIN LOW SUR, BUT NOT RECOVERABLE AND DOES NOT APPEAR TO BE THREATENING ENVIRONMENT. PATCH OF MOUSSE AT SITE B1 SITS HIGH ON SUITE BEDROCK PLATFORM, WEATHERING AND IS CAUGHT UP IN CREVICES IN ROCK. RECOVERABLE OIL IN THIS SPOT MINIMAL WHEN COMPARED TO POTENTIAL THREAT IMPOSED AS WELL AS RESOURCES NECESSARY TO REMOVE TREAT.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

NO TREATABLE OILING CONDITIONS FOUND ON THIS SUBDIVISION. Light oily residue on the surface and subsurface in one flat bridge at the base of a broad point were identified. The beach face appeared healthy with Fucus and mussel beds. No further reassessment warranted.

LANDMANAGER

NAME

MARSHAHALLOF DNR

SIGNATURE

Marsha Hall☒ NTR

Area B1 has small amount of oil. Not worth the effort.

USCG/NOAA

NAME

SCHULTZCHILDS

SIGNATURE

J. Schultz / 1/2 c☒ NTR NO RECOVERABLE OIL REMAINS.

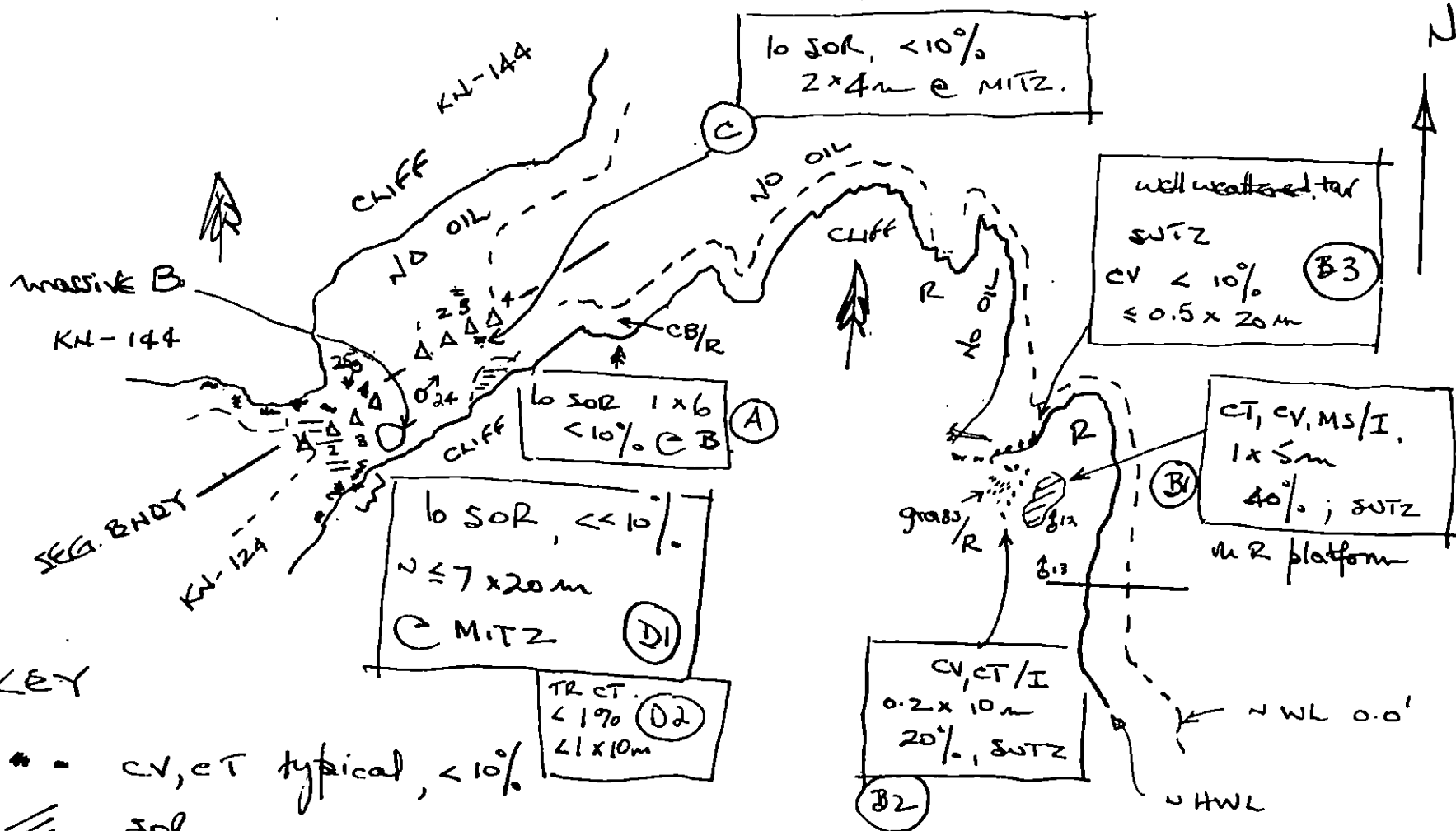
STEEP BEDROCK OUTCROP SHORELINE, A TIDAL CHANNEL TO THE NW & A STEEP POCKET TO THE EAST. TYPICAL HI & SI CT, CV/E WERE FOUND ON THE EAST IN B1 & A2. MS/E DETECTED ON BEDROCK BEACH ON B1. NO SUBSURFACE OILING FOUND.

KN-123A

G. MARDONIA

5.18.91

0 approx. 100m



KEY

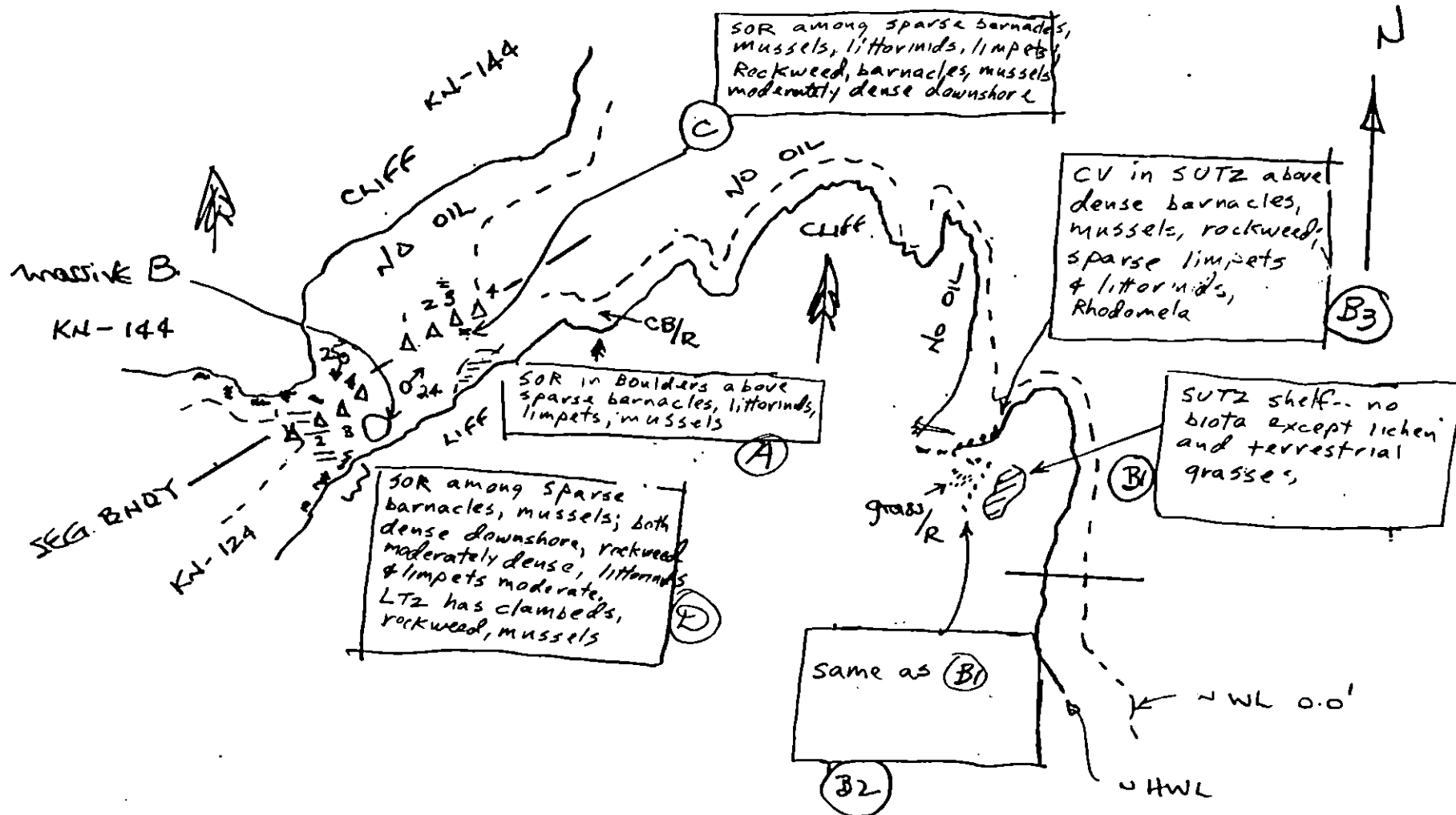
* - cv, CT typical, <10%

/// sor

⊙ cv, CT, patch.

BIO Sketch Map
KN-123A
M. Fawcett
5/18/91

0 approx. 100m



KN 123a - app 6 Fawcett

5/18/91 start 1205

B/C P/G -

clamside LTZ - mussel / Fucus
MTZ at a wall + 8 ft a lot
fairly bare

- SOR in C/P/G VTZ - 5/18/91
long mussel, dense downshore
mod Fucus downshore

Quint 123a

~~start 1205~~ 12:26

25 Kittiwakes on island nearby

12 Pigeon guillemots - in bay

26 Gull gulls

11:10 hrs 19 May - returned

to 123a to finish

checking cracks on South side

~ 100 Kittiwakes on island in
middle of bay

- 6-8 mottled mussels

- ~~common~~ Pocket beach - B/C/P/G

- dense barn, Fucus, mussels on

walls below Tr CT & CV

- grassy knoll a bow wall on

Seaward side - CT in pockets

123a (cont) 19 May

on top of BR shelf - SVTZ -
no biota except lichen nearby on
downshore

returned to 124a 11:40 hrs 5/19/91

11:45 - app. big beach - B/C/P/G/ 30 m wide

biota as at opp. head - dense barn

on larger cobbles & boulders MTZ

also mussel chips, Fucus, mod. downshore

more Rhodome than Fucus LTZ

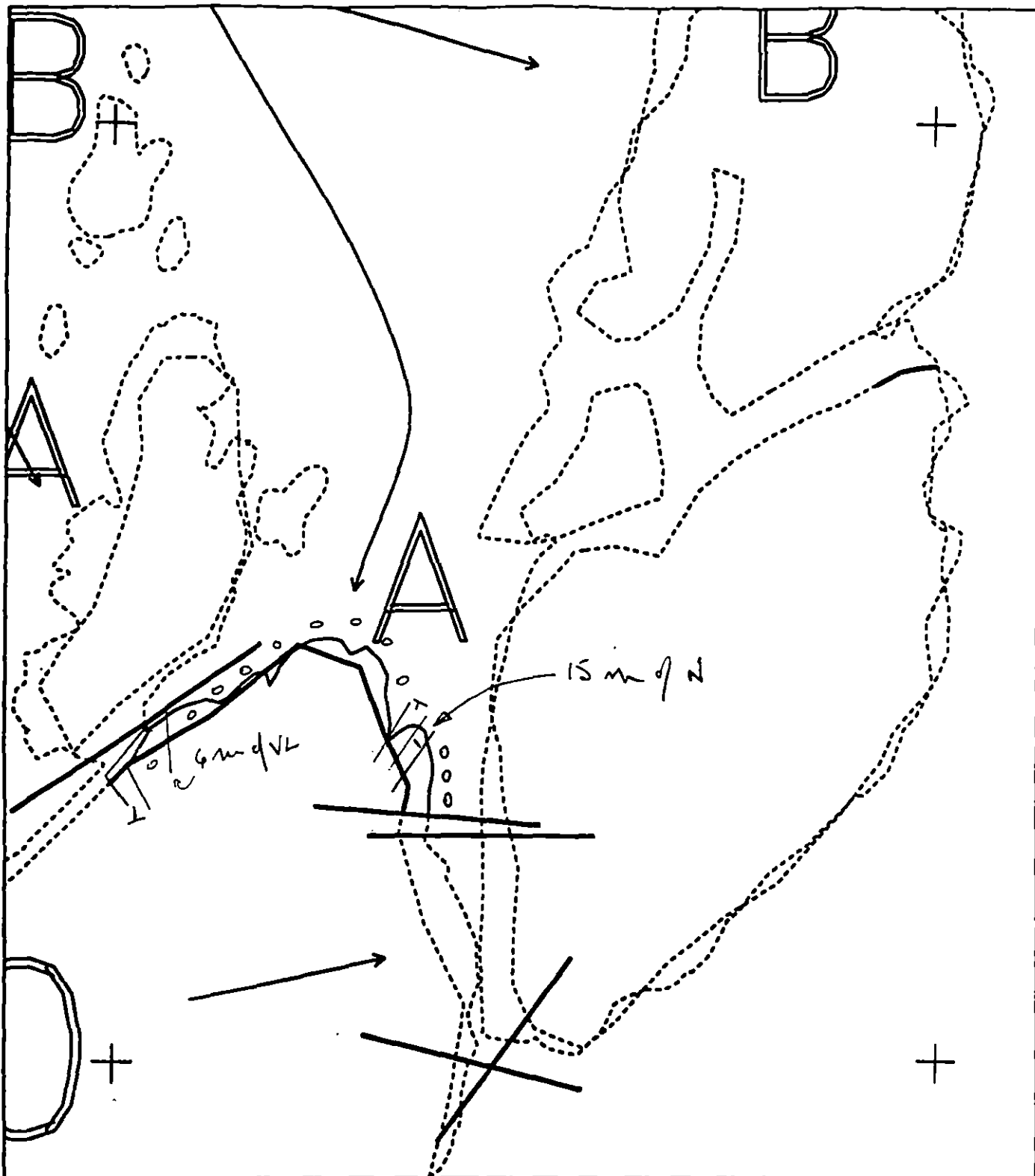
- CT on North wall + 7-9 ft among
a few dense barnacles - sparse mussels,
then B/C/P/G below

- SOR in B/C near stream on South
side + 11-12 ft SVTZ - no biota

- CT on South wall 8-10 ft - mostly
no biota, but downshore end of
it above dense barnacles - boulders
below upper w/ n. prona,
sparse barn

- Rhodome, rockweed, barn extend
up shore in stream to + 8 ft on
so, higher than elsewhere

- some SOR in B/C in 10 ft among sparse
barn, lump, Politt. - some sparse
downshore for 3 m on so



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

KN0123 A
 ADEC Subsegment Length: 370m
 METERS

0 100 200
 AR State Plane Zone 4
 kn0123a



Subdivision Field Map
 Map Key: KNKN0123A
 Name: G.M.
 Date: 5-19-91
 Date Entered:

REVISED: F.W. 5/21/91

1991 MAYSAP EVALUATION

SEGMENT: KN 124 SUB: A REGION: PWS SURVEY DATE: 5/19/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy Admitt

Date: 6/03/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 21 1991

FOSC APPROVAL DATE: 6/15/91

ADEC

FOSC

EXXON

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

USCG

NOAA

TEAM NO. 1SEGMENT KN 124SUBDIVISION ADATE 5/19/91

ADEC

NAME

JEFF GONALVES

SIGNATURE



- ☒ NTR A CLOSE CALL. AT OG MAP SITE "A" THIS IS A TYPICAL HEAVILY OILED HERREW BAY COVE. A SUBSURFACE LENS RUNS DIAGONAL ACROSS THE BEACH, FROM MITZ TO LITZ. A MEDIUM INCLINE, LOW ENERGY BEACH. OIL AT MITZ IS MOR (I BELIEVE RUNNING TO HOR) TAPERING TO LOR AT LITZ. OIL LENS BEGINS RELATIVELY CLOSE TO SURFACE (3-5 CM, STARTING DEEPER TOWARD LITZ) AND AT MITZ EXTENDS 10 CM THICK. BEACH CONTAINS RELATIVELY SPARSE BIODA WHEN COMPARED WITH OTHERS. EXTENT OF WORK SEEMS TOO MASSIVE FOR MANUAL CREW TO BE ABLE TO ADEQUATELY EXPOSE AND TILL/OR REMOVE. MECHANICAL EQUIPMENT COULD BE PLACED ON BEACH, BUT AREA OF HEAVY OIL CONCENTRATION (1/2 OF BEACH SOUTH END) MAY NOT CONTAIN ENOUGH OIL TO JUSTIFY INTRUSIVENESS. ALSO, A FEW LARGE BOULDERS STICK OUT OF BEACH. SITE C, OILING AREA TOO SMALL, UNDER LARGE BOULDERS, NOT ACCESSIBLE. AREA F (MOUSSE) TREATED BY MARSHALL TEAM.

EXXON

NAME LARRY D. OLSON

SIGNATURE



- ☒ NTR Segment is healthy with abundant biological growth. Any further intrusion would damage the established growth with very little recovery of oil. Veco crew removed 5 G.O. bags from area indicated on O.G. sketch map.

LANDMANAGER

NAME MARSHA HALL OF DNRSIGNATURE Marsha Hall☐ NTR ☒ TREATMENT

Area A has 10 SOR at base of boulders - patchy. The oil in the MITZ extends from 3 cm to 12 cm on the east portion of beach and is buried deeper on the west side and lower in the tidal zone. The boulders phase out to cobble in MITZ, LITZ. Release the oil by tilling mechanically or by using a large manual crew. Area F has some serious oil in supra. Veco crew addressed this area and removed 5 bags of oil sediment.

USCG/NOAA

NAME SCHULTZ / CHILOS

SIGNATURE



- ☒ NTR ANY FURTHER REMOVAL OPERATIONS WOULD BE MORE HARMFUL THAN REMAINING OIL

STEEP PILLOW BASALT SHORELINE w/ INCISED CHANNELS OF BCP VENEER OVER BR BASEMENT - CHANNELS CONTAIN RUNOFF STREAMS - TYPICAL SEDIMENTS WERE POORLY SORTED ANGULAR TO SUB ANGULAR EXCEPT FINE (PERLES & GRAVEL) IN ICEWALL OR SLATED UP BY TEAM. SURFACE OIL OF CT, LV & SP ON VERTICAL FACES. MITSZ IN "F" PICKED UP BY TEAM. SITE "A" CONTAINED 10 SOR IN A RAMP @ UI THAT CONTINUED AS LOR & MOR IN AN ANGLE DOWN BEACH FACE (PHOTO 16) OVER MUD - ORGANIC ZONE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT KN-124

ADEC J. GINALAB

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON L. OLSON

USCG/NOAA SCHULTZ/CHILDS

DATE 5/19/91

TIME 11:40 to 12:30

TIDE LEVEL -0.5 ft. to +0.2 ft.

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

TOTAL LENGTH SHORELINE SURVEYED: 750 m

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

EST. OIL CATEGORY LENGTH: W - m M - m N 16 m VL 279 m NO 455 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							CB	M	4	15		X			5-10 cm deep, 10
B					S	S					R	H	<1	100	X				
C1				S							RB	H	3	2	X				10 sol
C2					S	S					R	H	1	60	X				
D1				P							BC	H	2	6		X			10 sol
D2	P										R	H	1	3		X			on R.
E1	P										R	H	1	2		X			
E2						T					R	H	1	50	X				
F1	S										R	H	<2	3	X				
F2	S										RB	M	2	4	X				5 BAGS PICKED UP
F3						S					R	H	<1	50	X				

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

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

PHOTO ROLL # MAYSAP-

1 - 25 25
1 - 26 FRAMES 1422

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	25							x	-		8	N				x	CP-PMC	
2	10							x	-		5	N			x		PC-GCM	
3	10							x	2-3	Y	4	R		x			CL-GCM	
4	25							x	-		7	N		x			PG-GP	
									-									
5	20							x	-		-			x			PC-PGMC	
6	20							x	-		-				x		CP-CPG	
7	20							x	-		-					x	CP-CP	
8	15			EX					3-12	Y	2	RB				x	BC-CPG	

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

OG COMMENTS: Rocky shore w/ broad CB channels between steep rock outcrops.

Surface oil as CT, CV on steep R, and as 10 sol @ HTZ - SWTZ at head of channel.

Subsurface oil as MOL - LOL, greatest area @ (A).

REVISED: F.W. 5/21/91

PAGE 2 OF 2

DATE 5 / 19 / 81

Oil depths range between 5' - 30 cms, with average thickness ≥ 10 cms, — typically perched above a mud or muddy peat layer.

[illegible]

REVIEWED: F.W. 5/21/96

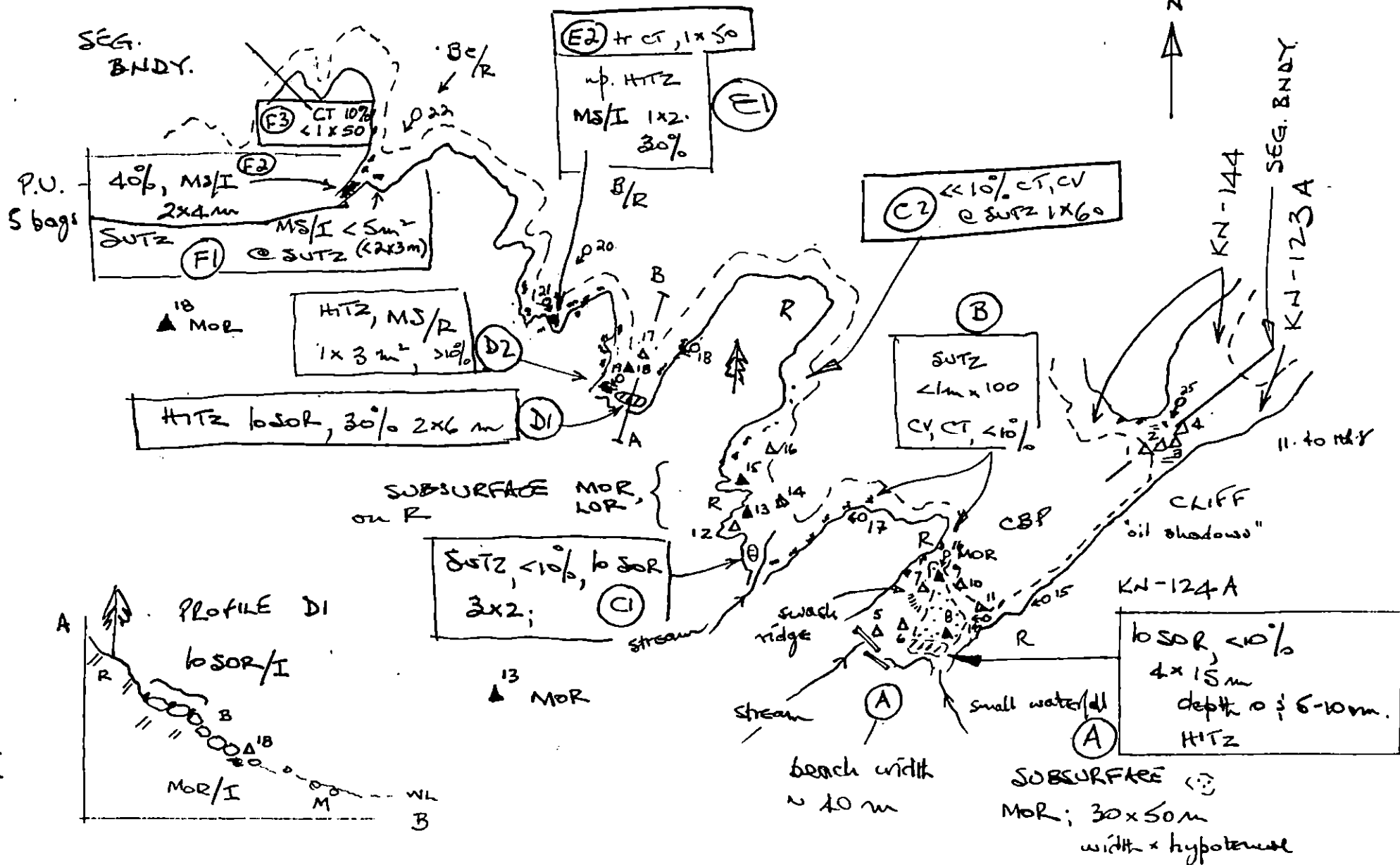
KN-124A

G. MACDONALD

5.19.91

0 70 140 m

EOS 13.30 HRS



REVISED: F.W.S/24/91 3

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 19 May 91
 SEGMENT # KN 124 TIDAL HEIGHT (Range) -0.8 to +0.2 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft WIND SPEED/DIRECTION N 0-5 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

This subdivision contains one 30m long B/C/P beach (Site A on sketch) and a series of small pocket beaches. The boulder/cobble beaches generally have sparse barnacles and limpets (*Notacmea personata*) in UTZ; sparse to dense rockweed, mussels, limpets, littorinids, and dense barnacles in MTZ; and dense mixed algae (*Fucus*, *Rhodomela*, *Ulva*, *Halosaccion*, *Lithothamnion*, *Urospora*, filamentous and leafy reds and filamentous browns in LTZ along with clams (and many sea otter craters), mussels, pricklebacks, starfish (*Leptasterias* and *Pycnopodia*), whelks (*Nucella emarginata*, *N. lamellosa*, *Searlesia dira*), limpets (*N. scutum* and *Collisella pelta*), littorinids, hermit crabs, nudibranchs and other animals. Vertical rock walls have dense barnacles throughout MTZ-UTZ; dense rockweed in MTZ; sparse to dense mussels, limpets, littorinids, and whelks in MTZ-LTZ (whelks, *N. lamellosa*, breeding throughout the region in LTZ).

see sketch map for descriptions of biota near oiled sites.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults	black prickleback
Seabirds	1 pigeon guillemot	1	
Waterfowl			
Gulls/Kittiwakes	2 (95% 2nd yr Black-leg Kittiwake)	N 50	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP
KN-124A
M. Fawcett
5/19/91

0 70 140 m



SEG.
BNDY.

MS above sparse
barnacles, limpets;
rockweed, mussels,
littorinids, etc., downshore
(F) F1, F2, F3

same as
D1

(E1+E2)
ET/MS above biota;
dense barnacles,
rockweed 3m downshore
with sparse littorinids,
limpets, mussels, etc

B/R

SOR in UT2-SUTZ---lowest SOR under
rocks with limpets, littorinids,
sparse barnacles; Rockweed, other
algae, mussels, etc., downshore

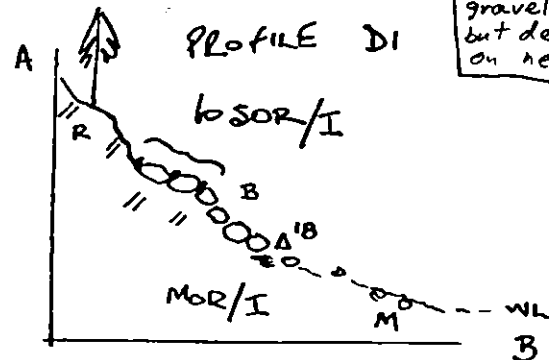
(B)
ET/CV among
& above dense
barnacles - sparse
mussels on wall
below, then Bk/p
fauna

(C1)
SOR at +12ft picked up;
some SOR & MOR in MT2
gravel - no biota in gravel,
but dense barnacles & Fucus
on nearby B/Br, claus downshore
stream

CLIFF
'oil shadows'

KN-124A

(A)
SOR, MOR mostly above intertidal
biota, but some at +8-10ft
among sparse barnacles,
limpets, littorinids; dense
barnacles, patchy dense
mussels, Fucus, Rhodospira,
plus fish, starfish etc, downshore



beach width
~ 40 m

123a (cont) 19 May

on top of BR shelf - SVTZ -
no biota except lichen nearby on
downshore

returned to 124a 11:40 hrs 5/19/91

1145 - opp. big beach - B/C/A/G/ 30 m up
beach as at opp. beach - dense barn
on larger cobbles & boulders MTZ

also mussel clumps, Fucus, mod. downshore -
more Rhodonele than Fucus LTZ

- CT on North wall + 7-9 ft among &
above dense barnacles - sparse mussels,
then Bk/A/G below

- SOR in B/C near stream on south
side + 11-12 ft SVTZ - no biota

- CT on South wall 8-10 ft - mostly
no biota, but downshore end of
it above dense barnacles - boulders
below imprinted w/ N. prona,
sparse barn

- Rhodonele, rockweed, barn extend
up shore in stream to + 8 ft on
so, higher than elsewhere

- Some SOR in Bk at 10 ft among sparse
barn, lump, Politt. - some sparse
downshore for 5 m or so

12 adult eagles /
124A (cont) 5/19/91

1200 hrs - LTZ B/C/P. has dense
algal cover, not real thick -
thelassion, corallines, Scyto, Ulva,
Urospora, Enteromorpha, Fucus, leafy
reds, Rhodo, fil reds -

Lept. brooding, prickles
brooding N. Lion on LTZ walls

- dense large N. scutum on walls & boulders
at North side +1-3 ft (3 cm)

20 or 50/m² - SOR clear down to
+3 ft in this area among scutum

1225 hrs next bright - 2 minute rivulets
w/ barn. Fucoid, litt. up to +10 ft or so,
dense Ulva Enteromorpha covering gravel
in LTZ stream mouth - SOR (P.O.)

near creek +12 ft, some SOR & burred algal
in MTZ gravel - no burred, but dense barn
& fucus on nearby B & BR - (SKIP part)

KN141 to continue

KN 124A (cont) 5/19/91 Fancett
1230 hrs still at 2nd bight

- clams LTZ - many other holes -

algae similar to previous bight,
but torn up by oysters, more sparse

1250 - last bight - small pocket

B/c, some gravel in LTZ - LTZ

algae as at previous + no -

mod. dense barn MTZ, sparse Fucus
(dense on sides) - mod. dense Litt, limpets

MTZ - small clusters very mussels
scattered throughout MTZ -

CT on rocks + 10 ft

SOR UTZ-SUTZ in bank ^{MTZ} ^{SUTZ}

sparse barn, Fucus, limps, Litt 2 m
downshore

Rhodospira sparse MTZ, mod-dense LTZ

SOR under rocks in UTZ with

limpets, Litt, sparse barn

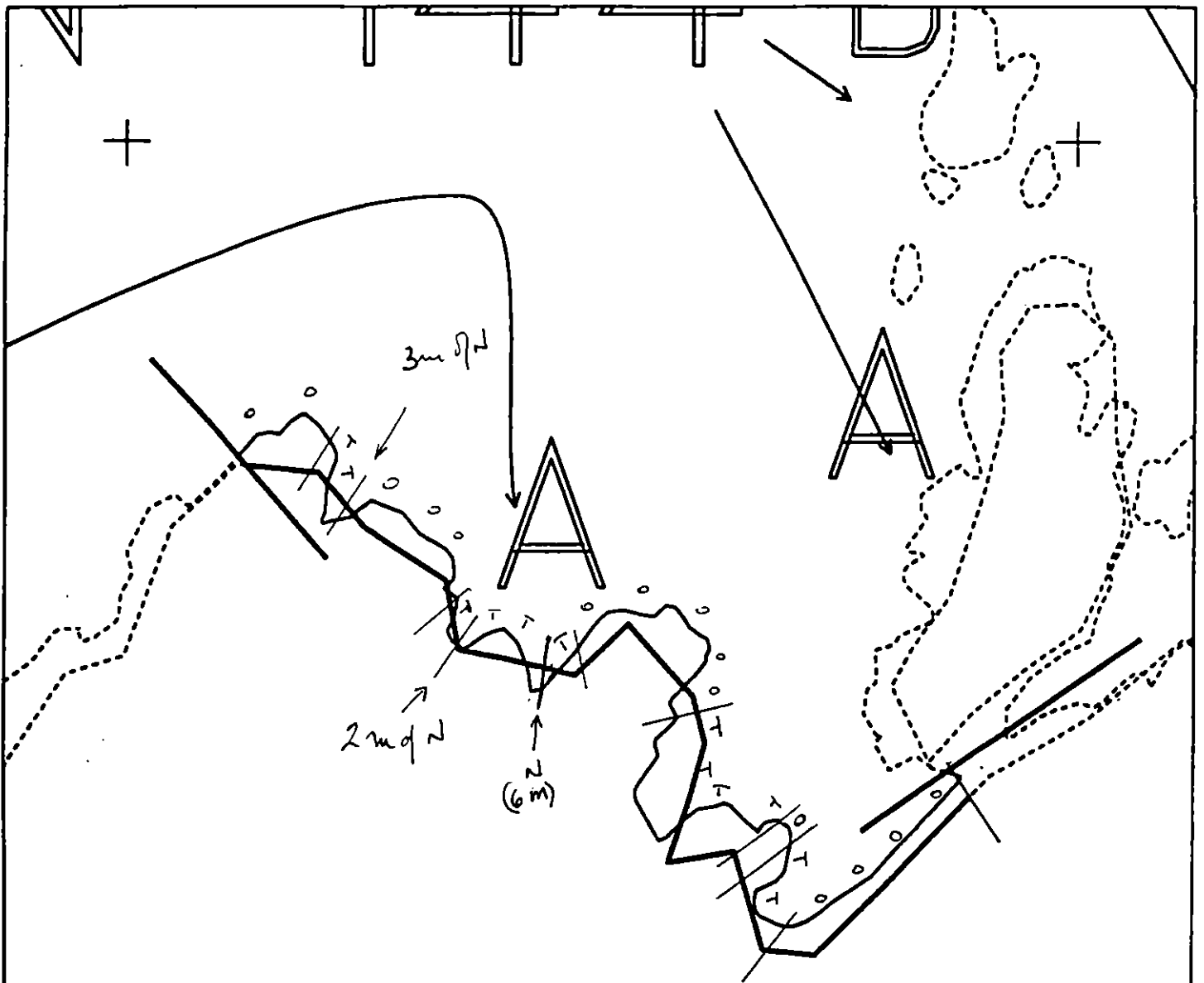
- leave 1310 hrs, west to next

pocket 1312 - BCP - same as
last one, but more dense algae

throughout LTZ-MTZ - CT + SOR

UTZ-SUTZ + 10-12 ft. dense Fucus,
barn, 3m downshore

LTZ 100% covered w/ mix of algae
Lanellusa, hydroids, + 1000s, sponges with algae



KN5010

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

KN0124 A
 ADEC Subsegment Length: 751m
 METERS

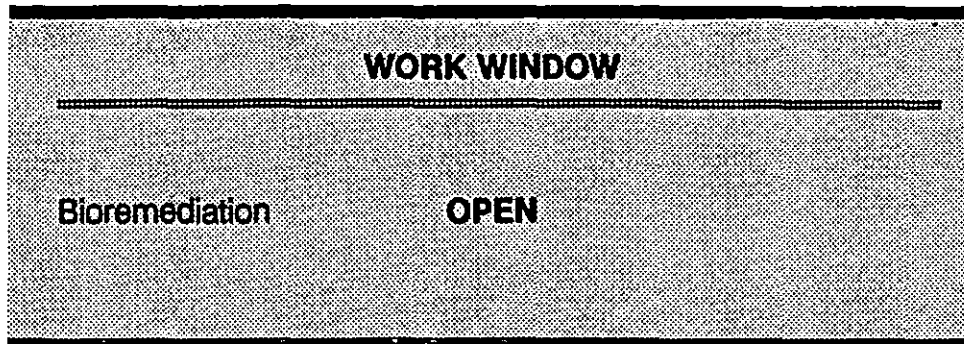
0 100 200
 AK State Plane Zone 4
 660124a



Subdivision Field Map
 Map Key: KNKN0124A
 Name: GM
 Date: 5-19-21
 Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-124 SUBDIVISION A (1 of 1)



ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

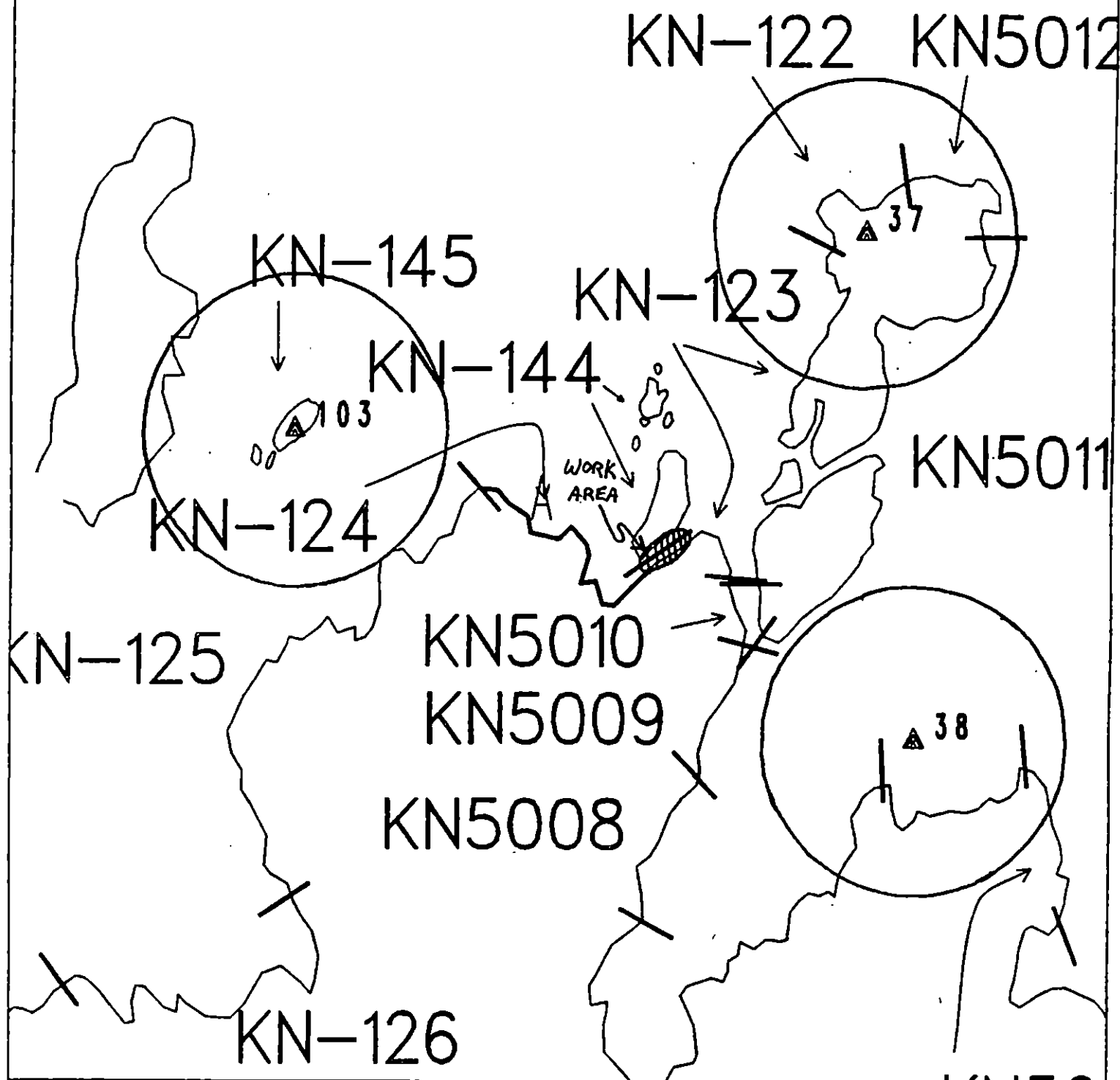
TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Andy Bz
NOAA Joseph Talant
USCG W. J. Hall

FOSC W L

DATE 5-21-90

Prepared by: Anders Meyer

Date: 5/20/90



Exxon Company, USA

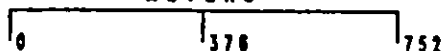
Map Key: KNI-KN-124

May 11, 1990



ECOLOGY MAP
SEGMENT KN-124
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1233 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-124 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Recreation anchorages (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to uncoiled substrate and biota.

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

SHPO SIGNATURE: Mark Adams DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 638 m: V.Light 113 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Bioremediate area of surface oil shown on attached sketch map.
No constraints.

**SEE ADDENDUM DATED 5/20/90
Box C.**

TAG COMMENTS: MONITORS TO ASSESS THE NEED FOR TAR PATCH REMOVAL
PRIOR TO BIOREMEDIATION.

TAG APPROVAL DATE: 4/14/90.

ADEC JOHN BAUER
EXXON ANDY BEN
NOAA BUSI WAGGOTT
USCG G.A. REITER

FOSC: DATE: 4-16-90

SHORELINE EVALUATION

SEGMENT ST/ KN-124 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Recreation anchorages (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled substrate and biota.

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

SHPO SIGNATURE: *Charles J. Adams*

DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 638 m: V.Light 113 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Bioremediate area of surface oil shown on attached sketch map.
No constraints.

TAG COMMENTS: MONITORS TO ASSESS THE NEED FOR TAR PATCH REMOVAL
PRIOR TO BIOREMEDIATION.

TAG APPROVAL DATE: 4/14/90.

ADEC *John Bauer*

EXXON *Andy B...*

NOAA *Burt W...*

USCG *G.A. REITER*

FOSC: *[Signature]*

DATE: 4-20-90

OG Sawye
 SEGMENT ST/ KN124
 SUBDIVISION _____
 DATE Apr 1 1990

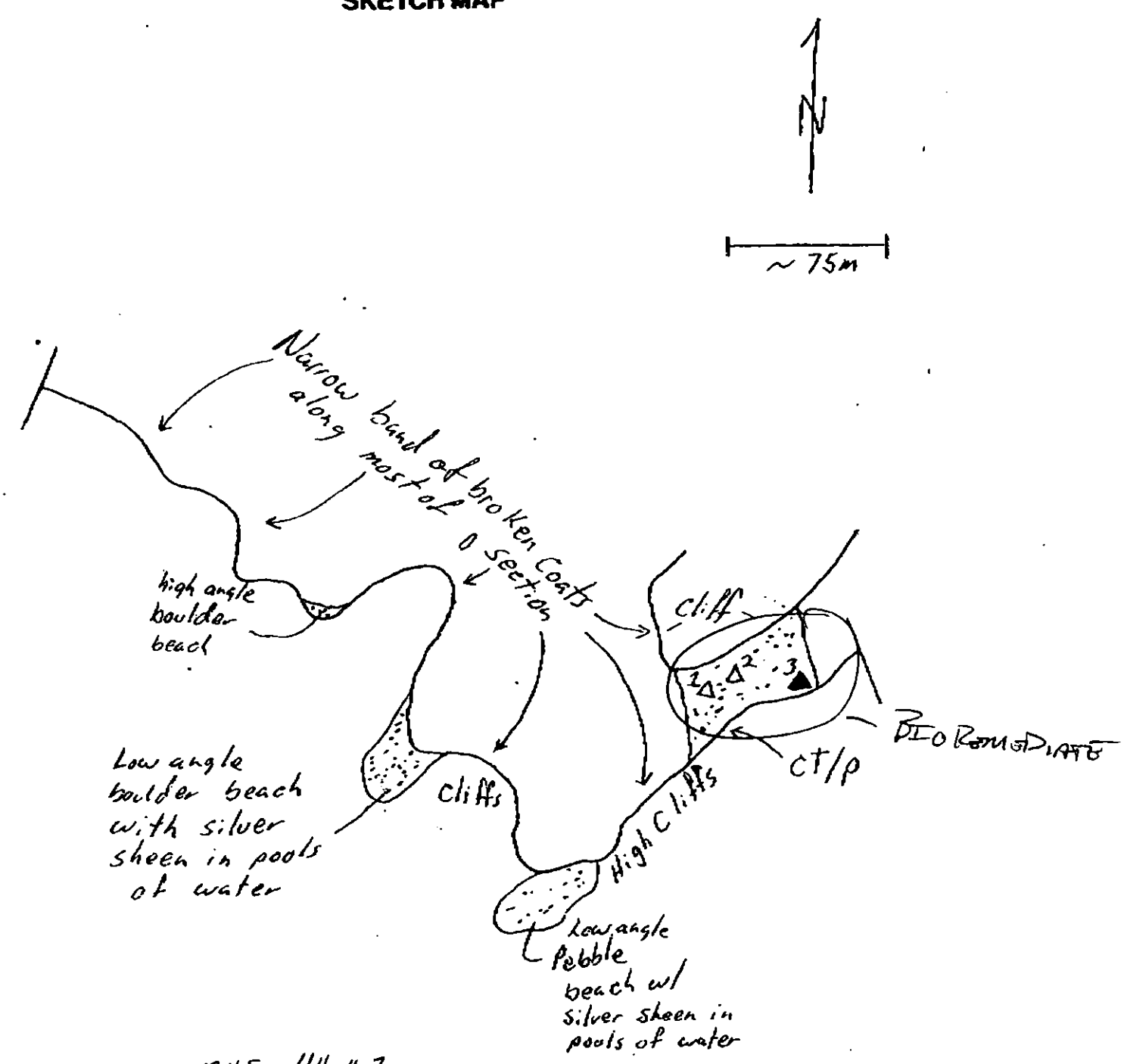
SKETCH MAP

CHECKLIST

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

LEGEND

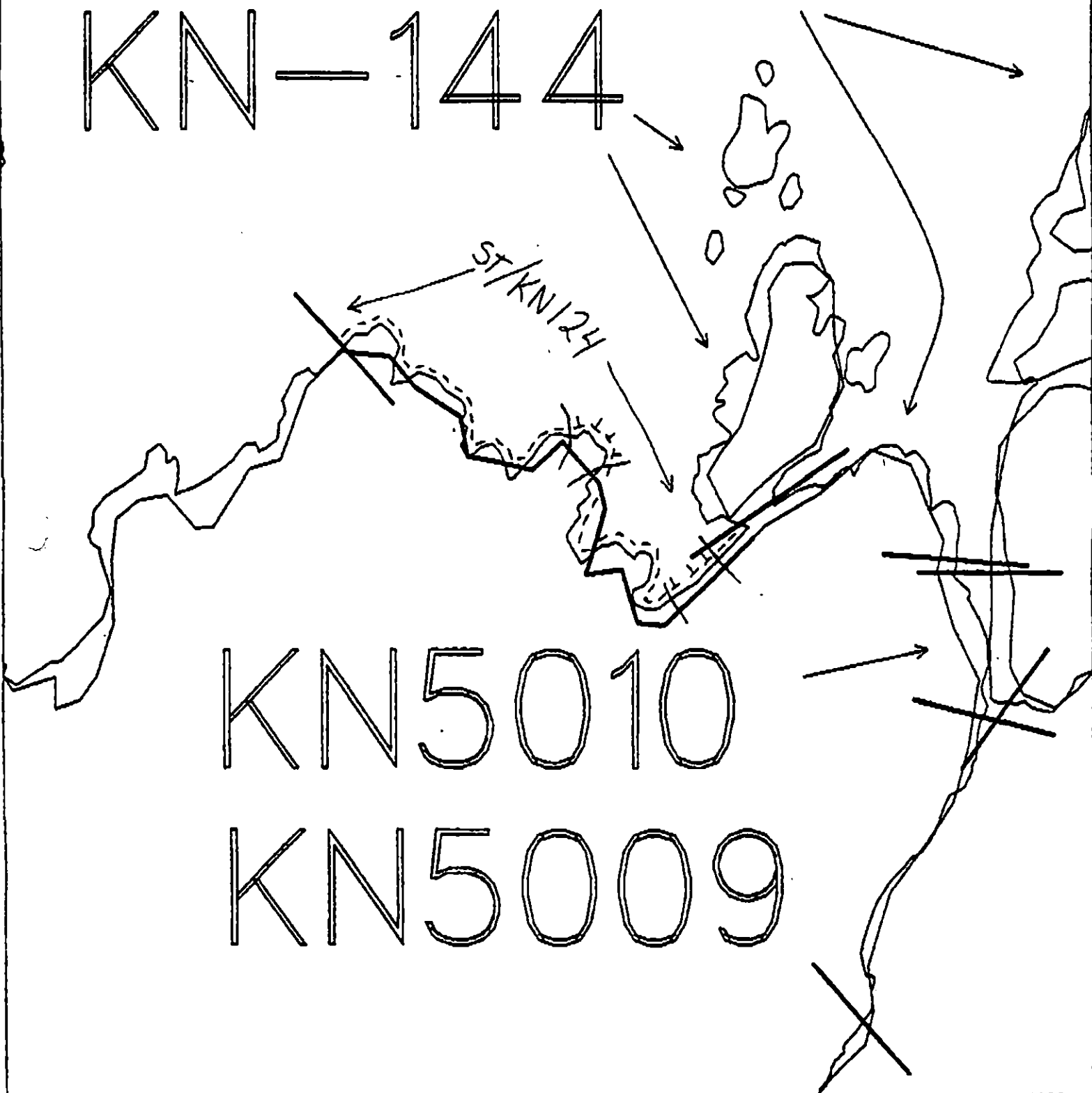
- 1 Δ
 Pit - No Subsurface Oil
- 2 Δ
 Pit - Subsurface Oil
- CT/C
 Continuous Distribution
- CT/B
 Broken Distribution
- CT/P
 Patchy Distribution
- CT/S
 Splashed Distribution
- Oiled Vegetation
- $\rightarrow$
 Photo location, direction, and number



Oil Character Length (m): AP 245 PO 4-7 CV 750 CT 200 MS PT TB FL NO NO

KN-125

KN-144



(XXX) Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-124

ADEC Segment Length: 751m



Map Key: PWS-306

Name: Sawyer

Date: Apr 1, 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 124 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/19/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

TEAM NO. 1SEGMENT KN 124SUBDIVISION ADATE 5/19/91

ADEC

NAME

JEFF GOWALDS

SIGNATURE



- ☒ NTR A CLOSE CALL. AT OG MAP SITE "A" THIS IS A TYPICAL HEAVILY OILED HERRING BAY COVE. A SUBSURFACE LENS RUNS DIAGONAL ACROSS THE BEACH, FROM MITZ TO LITZ. A MEDIUM INCLINE, LOW ENERGY BEACH. OIL AT MITZ IS MOR (I BELIEVE RUNNING TO HOR) TAPERING TO LOR AT LITZ. OIL LENS BEGINS RELATIVELY CLOSE TO SURFACE (3-5 CM, STARTING DEEPER TOWARD LITZ) AND AT MITZ EXTENDS 10 CM THICK. BEACH CONTAINS RELATIVELY SPARSE BIODA WHEN COMPARED WITH OTHERS. EXTENT OF WORK SEEMS TOO MASSIVE FOR MANUAL CREW TO BE ABLE TO ADEQUATELY EXPOSE AND TILL/OR REMOVE. MECHANICAL EQUIPMENT COULD BE PLACED ON BEACH, BUT AREA OF HEAVY OIL CONCENTRATION (1/2 OF BEACH, SOUTH END) MAY NOT CONTAIN ENOUGH OIL TO JUSTIFY INTRUSIVENESS. ALSO, A FEW LARGE BOULDERS STICK OUT OF BEACH. SITE C, OILING AREA TOO SMALL, UNDER LARGE BOULDERS, NOT ACCESSIBLE. AREA F (MOUSSE) FILLED BY MARSHALL TEAM.

EXXON

NAME LARRY D. OLSON

SIGNATURE



- ☒ NTR Segment is healthy with abundant biological growth. Any further intrusion would damage the established growth with very little recovery of oil. Veco crew removed 5 G.O. bags from area indicated on O.G. sketch map.

LANDMANAGER

NAME MARSHA HALL OF DNR

SIGNATURE



- ☐ NTR ☒ TREATMENT

Area A has 10 SOR at base of boulders - patchy. The oil in the MITZ extends from 3 cm to 12 cm on the east portion of beach and is buried deeper on the west side and lower in the tidal zone. The boulders phase out to cobble in MITZ, LITZ. Release the oil by tilling mechanically or by using a large manual crew. Area F has some serious oil in supra. Veco crew addressed this area and removed 5 bags of oil sediments.

USCG/NOAA

NAME SCHULTZ / CHILOS

SIGNATURE



- ☒ NTR ANY FURTHER REMOVAL OPERATIONS WOULD BE MORE HARMFUL THAN REMAINING OIL

STEEP PILLOW BASALT SHORELINE w/ INCISED CHANNELS OF BCP VENEER OVER BR BASEMENT - CHANNELS CONTAIN RUNOFF STREAMS - TYPICAL SEDIMENTS WERE POORLY SORTED ANGULAR TO SUB ANGULAR EXCEPT MINOR (PEARLS & GRAVEL) IN ICEWASH OR SLATED. ALL SUB POCKETS SURFACE OIL OF CT, LV & SP ON VERTICAL FACES. MITSZ in "F" PICKED BY TEAM. SITE "A" CONTAINED 10 SOR IN A RAMP @ UI THAT CONTINUED AS LOR & MOR IN AN ANGLE DOWN BEACH FACE (PHOTO 16) OVER MUD-ORGANIC ZONE.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALDBIO M. FAWCETTSEGMENT KN-12.4ADEC J. GINALIASLANDMANAGER M. HALL for DNRSUBDIVISION AEXXON L. OLSONUSCG/NOAA SCHULTZ/CHILDSDATE 5/19/83TIME 11:40 to 13:30TIDE LEVEL -0.5 ft. to +0.2 ft.ENERGY LEVEL ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 750 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W - m M - m N 16 m VL 279 m NO 455 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							CB	M	4	15		X			5-10 cm deep, 10
B					S	S					R	H	21	100	X				
C1				S							RB	H	3	2	X				10 sol
C2					S	S					R	H	1	60	X				
D1				P							BC	H	2	6		X			10 sol
D2		P									R	H	1	3		X			on R.
E1		P									R	H	1	2		X			
E2						T					R	H	1	50	X				
F1		S									R	H	22	3	X				
F2		S									RB	M	2	4	X				5 BAGS PICKED UP
F3						S					R	H	21	50	X				

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

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

PHOTO ROLL # MAYSAP-

1 - 25

25

1 - 26

FRAMES 4-22

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	25							x	-		8	N				x	CP-PMC	
2	10							x	-		5	N			x		PC-GCM	
3	10							x	2-3	Y	4	R		x			CL-GCM	
4	25							x	-		7	N		x			PG-GP	
									-									
5	20							x	-		-			x			PC-PGMC	
6	20							x	-		-			x			CP-CPG	
7	20							x	-		-				x		CP-CP	
8	15			xx					3-12	Y	2	RB			x		BC-CPG	

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

OG COMMENTS: Rocky shore w/ broad CB channels between steep rock outcrops.

Surface oil as CT, CV on steep R, and as 10 sol C HITZ - SWTZ at head of channel.

Subsurface oil as MOL - LOL, greatest area @ (A).

REVISED: F.W. 5/21/91

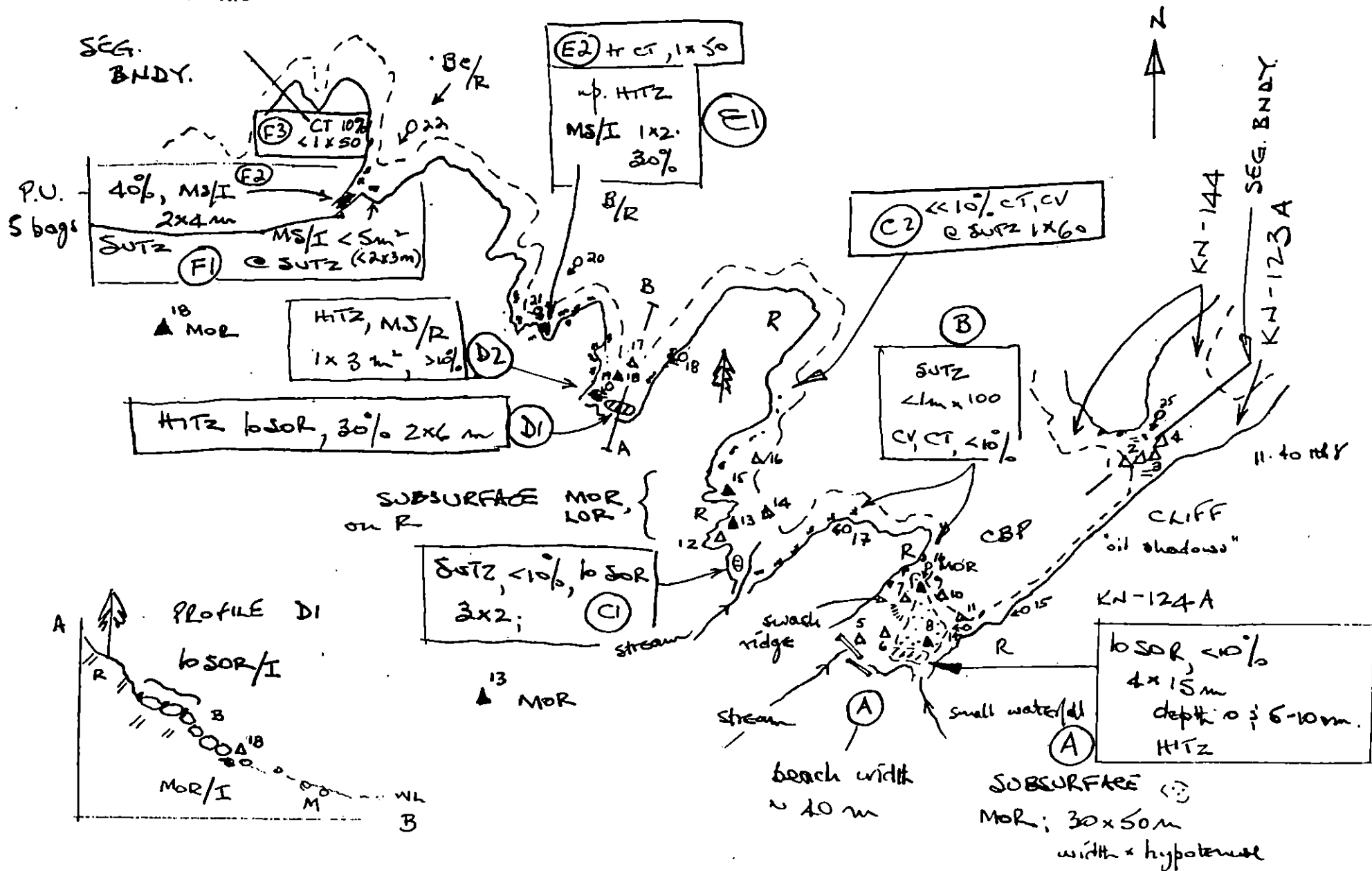
KN-124A

G. MACDONALD

5.19.91

0 70 140 m

EOS 13.30 HRS



Revised: F.W. S/24/91 3

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 19 May 91
 SEGMENT # KN 124 TIDAL HEIGHT(Range) -0.8 to +0.2 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft WIND SPEED/DIRECTION N 0-5 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

This subdivision contains one 30m long B/C/P beach (Site A o-stret) and a series of small pocket beaches. The boulder/cobble beaches generally have sparse barnacles and limpets (*Notacmea personata*) in UTZ; sparse to dense rockweed, mussels, limpets, littorinids, & dense barnacles in MTZ; and dense mixed algae (*Fucus*, *Rhodomela*, *Ulva*, *Halosaccion*, *Lithothamnion*, *Urospora*, filamentous and leafy reds and filamentous browns in LTZ along with clams (and many sea urchin craters, mussels, pricklebacks, starfish (*Leptasterias* and *Pycnopodia*), whelks (*Nucella emarginata*, *N. lamellosa*, *Searlesia dira*), limpets (*N. scutum* and *Collisella pelta*), littorinids, hermit crabs, nudibranchs and other animals. Vertical rock walls have dense barnacles throughout MTZ-UTZ; dense rockweed in MTZ; sparse to dense mussels, limpets, littorinids, and whelks in MTZ-LTZ. Whelks, *N. lamellosa*, breeding throughout the region in LTZ).

see sketch map for descriptions of biota near oiled sites.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

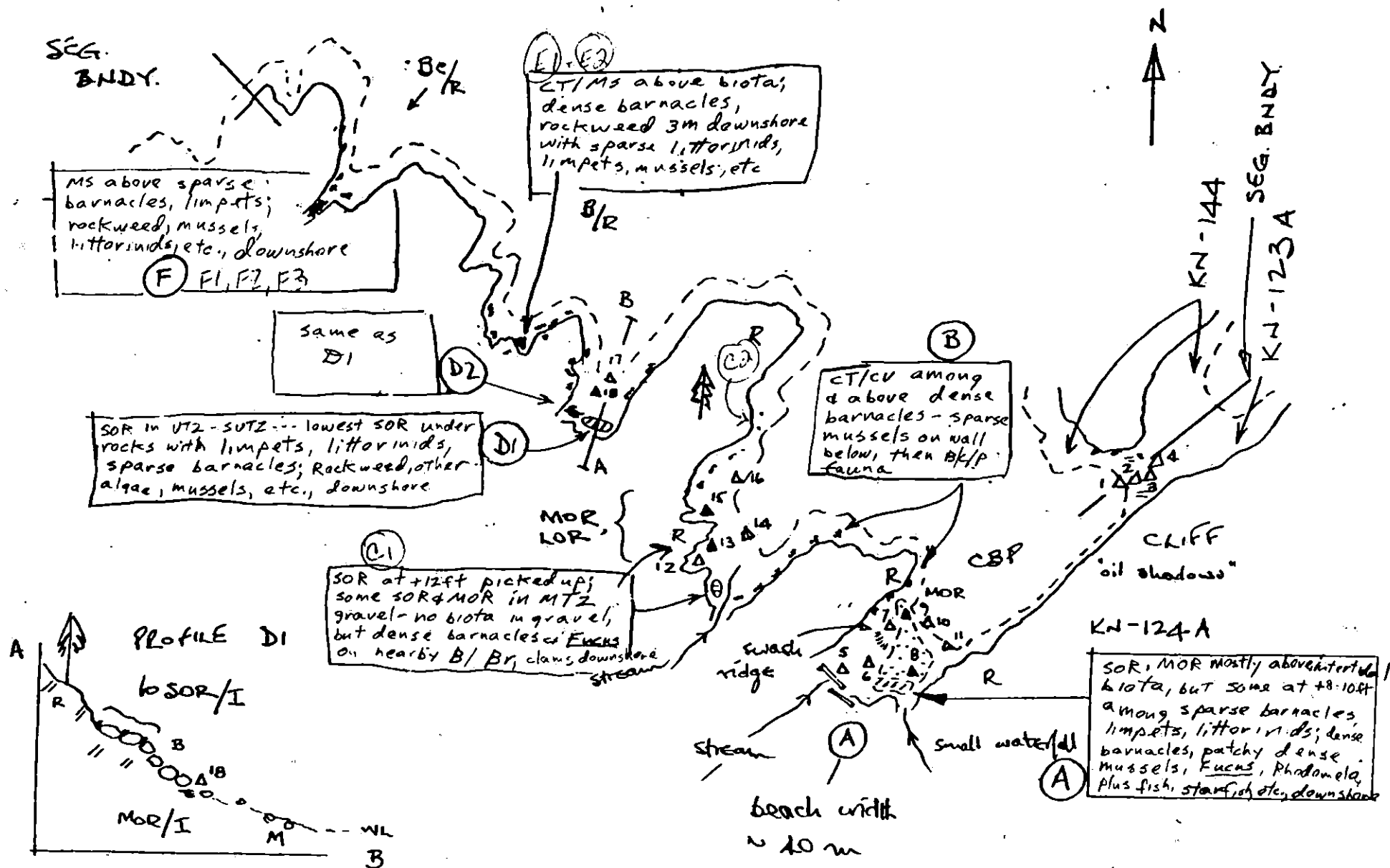
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults	black prickleback
Seabirds	1 pigeon gull/ndt	1	
Waterfowl			
Gulls/kittiwakes	2 (6 w. 3 n. / Black-leg Kittiwake)	N 50	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
W es (specify)			

Shoreline subdivision map showing important biological features attached.

A horizontal number line with tick marks at 0, 70, and 140 m.



123a (cont) 19 May

on top of BR shelf - SVTZ -
no biota except lichen nearby on
downshore

re/moved to 124a 11:40 hrs 5/19/91

1145 - opp. big beach - B/C/H/G/ 30 m wide
biota as at opp. beach - dense barn
on larger cobble & boulders MTZ

also mussel chips, Fucus, mod. Rhodomeles -
more Rhodomeles than Fucus LTZ

- CT on North wall + 7-9 ft among
abundant barnacles - sparse mussels,
then Bk/Hg below

- SOR in B/C near stream on south
side + 11-12 ft SVTZ - no SOR

- CT on South wall 8-10 ft - mostly
no biota, but down to end of
it above dense barnacles - boulders
below covered w/ R. prona,
sparse barn

- Rhodomeles, rockweed, barn extend
up shore in stream to + 8 ft on
so, higher than elsewhere

- some SOR in Bk to 10 ft among sparse
barn, lump, Politt., - some sparse
downshore for 5 m or so

- 2 adult gophers

124A (cont) 5/19/91

1200 hrs - LTZ B/C/F has dense
algal cover, not real thick -
thalassium, corallines, Scyto, Ulva,
Urospora, Enteromorpha, Fucus, leafy
reds, Rhodo, fil reds -

Lept. brooding, prickles
brooding N. Lom on LTZ walls

- dense large N. scutum on walls & boulders
at North side $\pm$ 1-3 ft (3 cm)

20 on 50/m² - SOR clear down to
 $\pm$ 3 ft in the area among scutums

1225 hrs next bright - 2 minute rivulets
w/ bare Fucus, litt. up to $\pm$ 10 ft or so,
dense Ulva Enteromorpha covering gravel
in LTZ stream mouth - SOR (P.O.)

near creek $\pm$ 12 ft, some SOR & buried at
in MTZ gravel - no brya, but dense bany.
& fucus on nearby B & BR - (skip path)

KN141 to continue

KN 124A (cont) 5/19/91 Fancett
1230 hrs still at 2nd bight

- clams LTZ - many other holes -

algae similar to previous bight,
but torn up by oysters, more sparse

1250 - last bight - small pocket

B/f, some gravel in LTZ - LTZ

algae as at previous + no -

mod. dense barn MTZ, sparse Fucus
(dense on sides) - mod. dense Litt, limpets

MTZ - small clusters new mussels
scattered throughout MTZ -

CT on shells + 10 ft

SOR UTZ-SUTZ in barn M. worm; SUTZ
sparse barn, Fucus, limps, Litt 2m
downshore

Rhodospira sparse MTZ, mod. dense LTZ

SOR under rocks in UTZ with

limpets, Litt, sparse barn

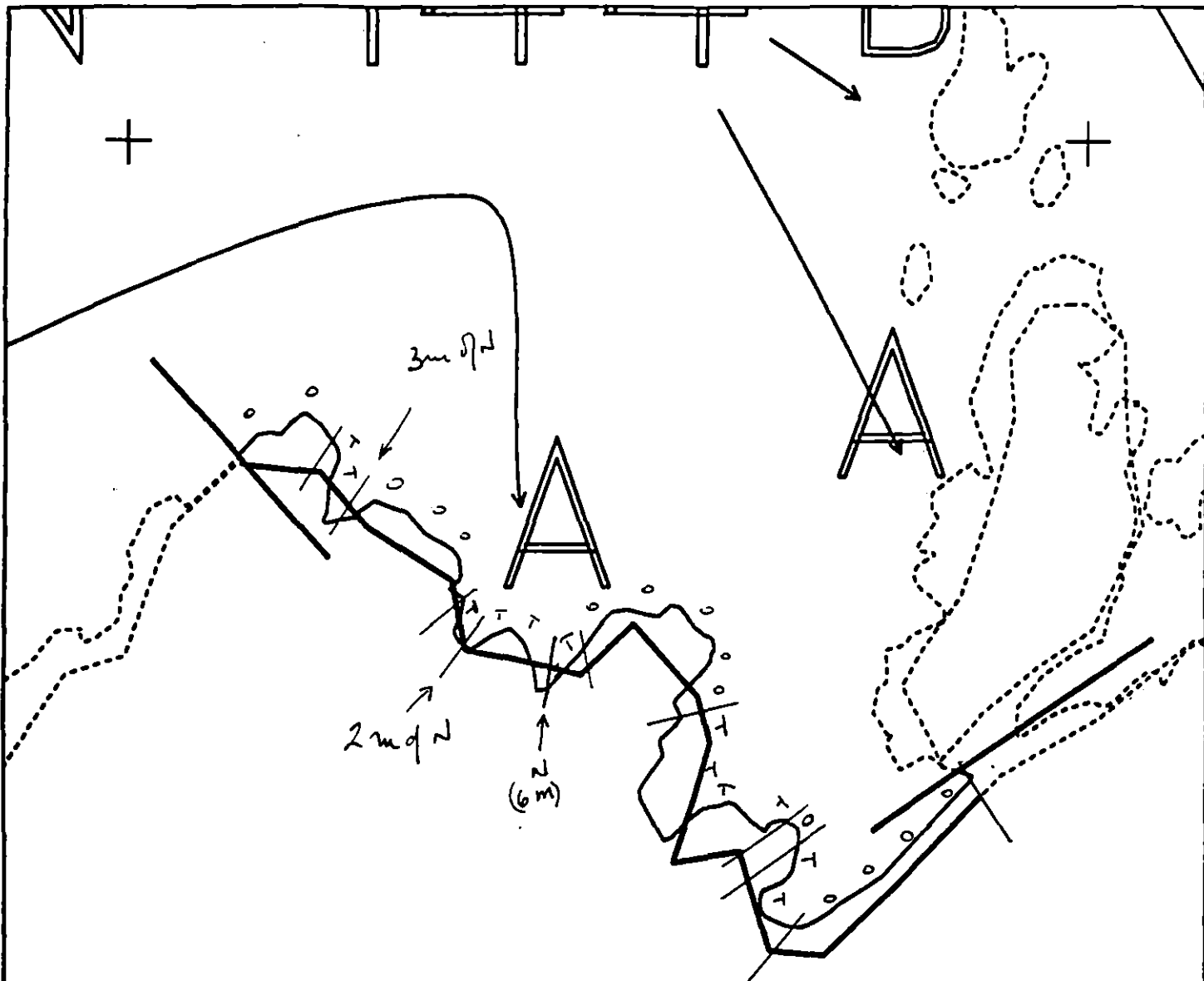
- leave 1310 hrs, went to next

pocket 1312 - BCP - same as
last one, but more dense algae

throughout LTZ-MTZ - CT + SOR

UTZ-SUTZ + 10-12 ft. dense Fucus,
barn, 3m downshore

LTZ 100% cover N/mix of algae
lanellaria, hydroids, & 200m, sponges with tubes



KN5010

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

KN0124 A
 ADEC Subsegment Length: 75m
 METERS

0 100 200
 AK State Plane Zone 4
 kn0124a



Subdivision Field Map
 Map Key: KNKN0124A
 Name: ENH
 Date: 5-19-21
 Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-124

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-124 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Recreation anchorages (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled substrate and biota.

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 638 m: V.Light 113 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: Bioremediate area of surface oil shown on attached sketch map.
No constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN 124 SUBDIVISION: None DATE 4-1-90

USCG

NAME D. E. WHITE SIGNATURE D. E. White☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Recommend manual removal coats and covers, also beaches that have buried oiled sediments also manual removal

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Patchy coats and sporadic covers on surface. Small amount of silver sheen in subsurface interstitial water. Buried oiled sediments from 2-5 cm. Recommend manual removal coats and covers. Bioremediate pocket beaches that have buried oiled sediments.

LAND MANAGER

NAME David Mandrella SIGNATURE David M. Mandrella☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Narrow band of broken coats along most of segment. Both boulder and pebble beach covers w/ silver sheen in pools of water. Recommend low impact (manual) removal of coating on bedrock and underside of boulders.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Sawyer USCG White SEGMENT ST/ 124
 BIO Benson LAND REP Mandrella SUBDIVISION None A (1 of 1)
 XON Katsimpalis ADEC Munson TIME 15:15 to 16:20
 TEAM NO.: 8 TIDE LEVEL: +3 to +6 DATE Apr 1 / 1 / 1990
 EST. SUBDIVISION LENGTH: 995 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 60 % B 20 % C 10 % P 10 % G - % S - % M - % V - %
 SLOPE: Lang 20 % Hang 10 % Vert 70 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N 855 m VL 140 m NO - m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IB	IP	IS	SB	DB	GB	LB	TB	SU	UT	ME	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

PAVEMENT: H F S - sq. m by - cmPATTIES / TARBALLS 2 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 NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UB	UR	UL	UR	UL	SU	UT	ME	U		
1	25						- - -										N	G, P
2	35						- - -										N	P, G
* 3	30						2 - 5										N	G, M
							.											
							.											
							.											

COMMENTS ST/KN124: Rocky coastline with a few small, low angle beaches.

Strong H₂S smell in lower part of pit 3.

Oiled interval of 2-5 cm in pit 3 does not constitute subsurface oil.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

Segment ST / KN 124 Subdivision None Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1345-1500 Biologist J. Benson(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 20 (3) Cobble 10 (4) Pebble 10 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 10 Moderate 30 Low 60

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

Photographs:
Roll No. no photos

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:

Bald Eagle (Haliaeetus leucocephalus)tracks in snow leading down to cobble/ boulder beach (deer)This segment is dominated by bedrock which in many locations forms

Ecological Considerations:

Sensitivities: none

vertical walls. These walls face north and northwest, receive little direct sunlight and therefore limit algal population size. Also, the density of Mytilus was lower than in other areas seen so far, with similar substrate that I've seen so far.

OG Sawyer

SKETCH MAP

SEGMENT ST/ KN124

SUBDIVISION _____

DATE Apr 1 1990

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

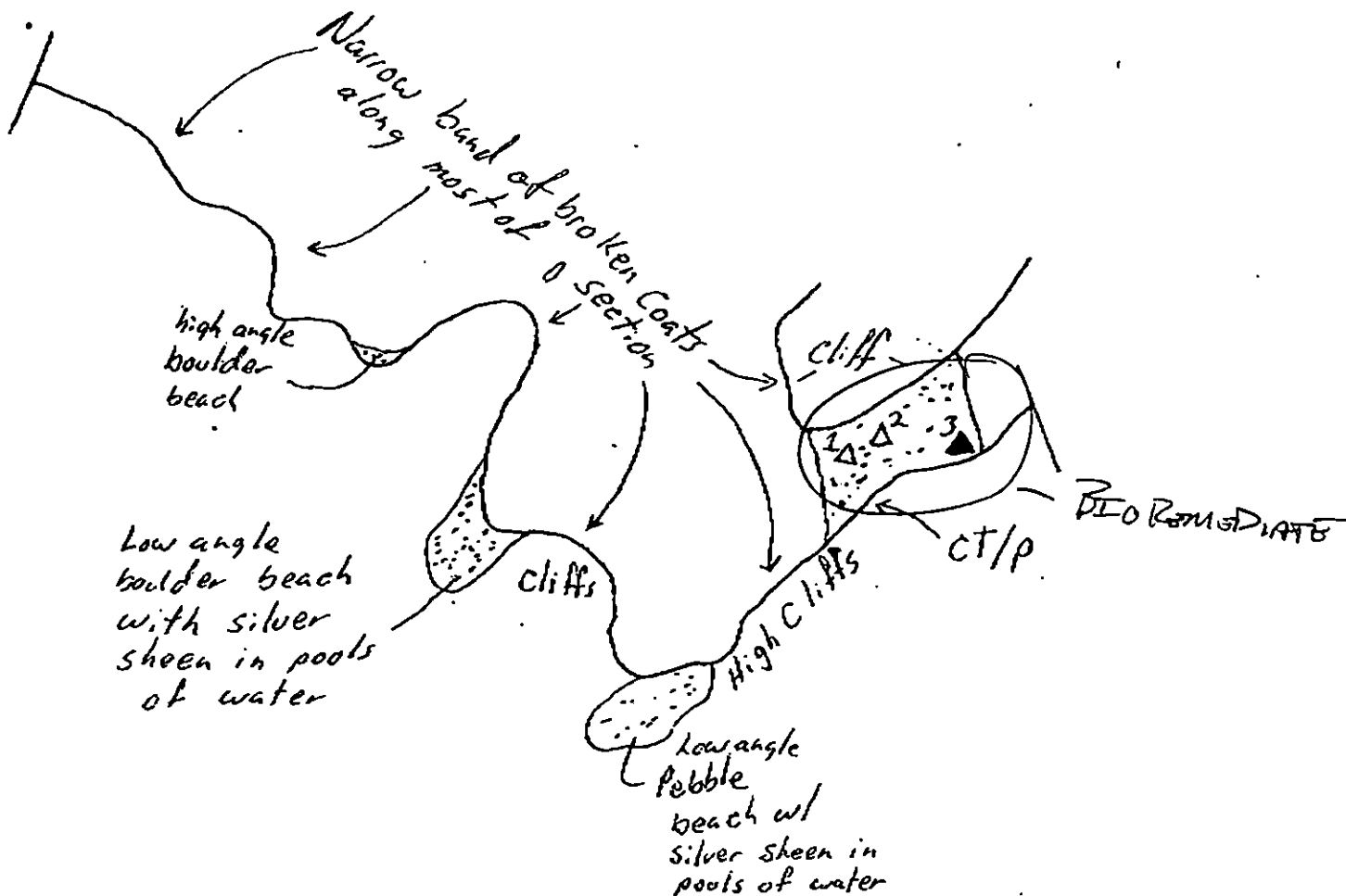
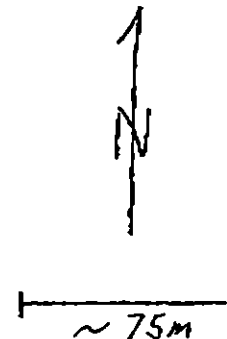
CT/S

Splashed Distribution

Oil Vegetation

1 ➡

Photo location, direction, and number



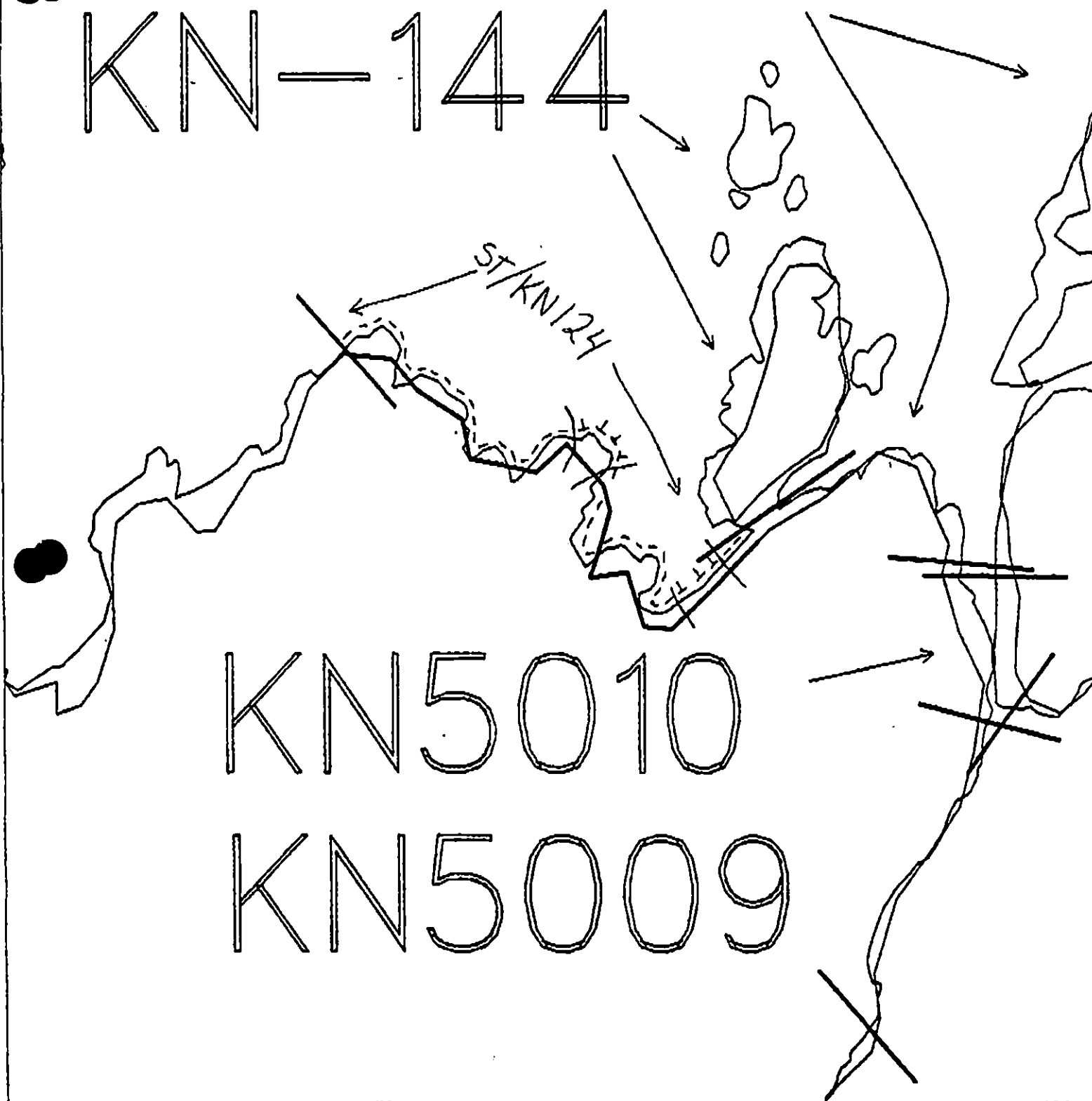
245 YH 4-7

Oil Character Length (m): AP _____ PO _____ CV _____ CT 750 ST 200 MS _____ PT _____ TB _____ FL _____ NO _____

REVISION 3/24/90

KN-125

KN-144



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-124

ADEC Segment Length: 751m



Map Key: PWS-306

Name: SawyerDate: Apr 1, 1990

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-125

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-125 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 182 m: V.Light 1282 m: No Oil 159 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas where subsurface oil found as shown on sketch map. Work should be conducted prior to 5/15 or between 7/2 and 7/31 based on pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST KN-125 SUBDIVISION: A DATE April 21, 1990

USCG

NAME Patrick Malay SIGNATURE Patrick Malay

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This segment has a consistent splashed stain & coat on the boulders and bedrock that produces a band when viewed from a distance. The northern half of the segment includes several pocket beaches where most of the pits dug contained subsurface residual oil at shallow depths. The pocket beaches on the northern half would be good candidates for bioremediation. The beach in the vicinity of pit 6 contains oil covered grass in a 100 m² area. Several scattered tarballs and one patty were collected.

ADEC

NAME M. Cunningham SIGNATURE M. Cunningham

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- ① Hand fill & bio sites #4+5; Bag up and hand till site 6 (remove oiled vegetation), aerate sediments + bio.
- ② Flip over boulders to expose to bio @ sites 7
- ③ Bio along boulder headlands when topography permits
- ④ S 1/2 segment from "low rock" island (on map) southward is OK as is... little stain & coat in evidence.

LAND MANAGER

NAME Steven Phillips SIGNATURE Steven Phillips

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Debris picked up as seen, some snow at supertidal left so scout again.

Tar bands were mostly on vertical bedrock and boulders. ^{very} Visible but not very treatable due to rough surface and steep to "hang" slopes.

Bioremediate pocket beaches on north half of segment. Oil is shallow so some rock turning or moderate disturbance would aid in treatment.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Greg Chaney USCG Pat Malay SEGMENT ST/ KN-125
 BIO Jim Roth LAND REP/DNR Steve Phillips SUBDIVISION A (LOFL)
 EXXON Key Setelo ADEC Mike Cunningham TIME 14:30 18:15
 TEAM NO. 7 TIDE LEVEL 5.0 to 1.0 ft. DATE April 21 1990
 EST. SUBDIVISION LENGTH: 1955 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock SNOW
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 45 % B 30 % C 15 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 155 m VL 1505 m NO 195 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE tire pump
fish hook
#BAGS 3

Photographs:

Roll No. NONEFrames NONE

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		UG	US	1	2	3	4	SU	U	M	U				
1	20	X					0-10	X	X						X			N	0		B-CPM
2	40					X	.								X			N	30		P-PGM
3	50					X	.							X				N	0		P-PG
4	25	X					0-20	X	X			X				X		Y	15		BP-PG
5	25	X					15-20	X	X			X				X		N	0		BP-GB
6	30	X					0-15	X	X			X			X			Y	15		BY-IGMB

COMMENTS

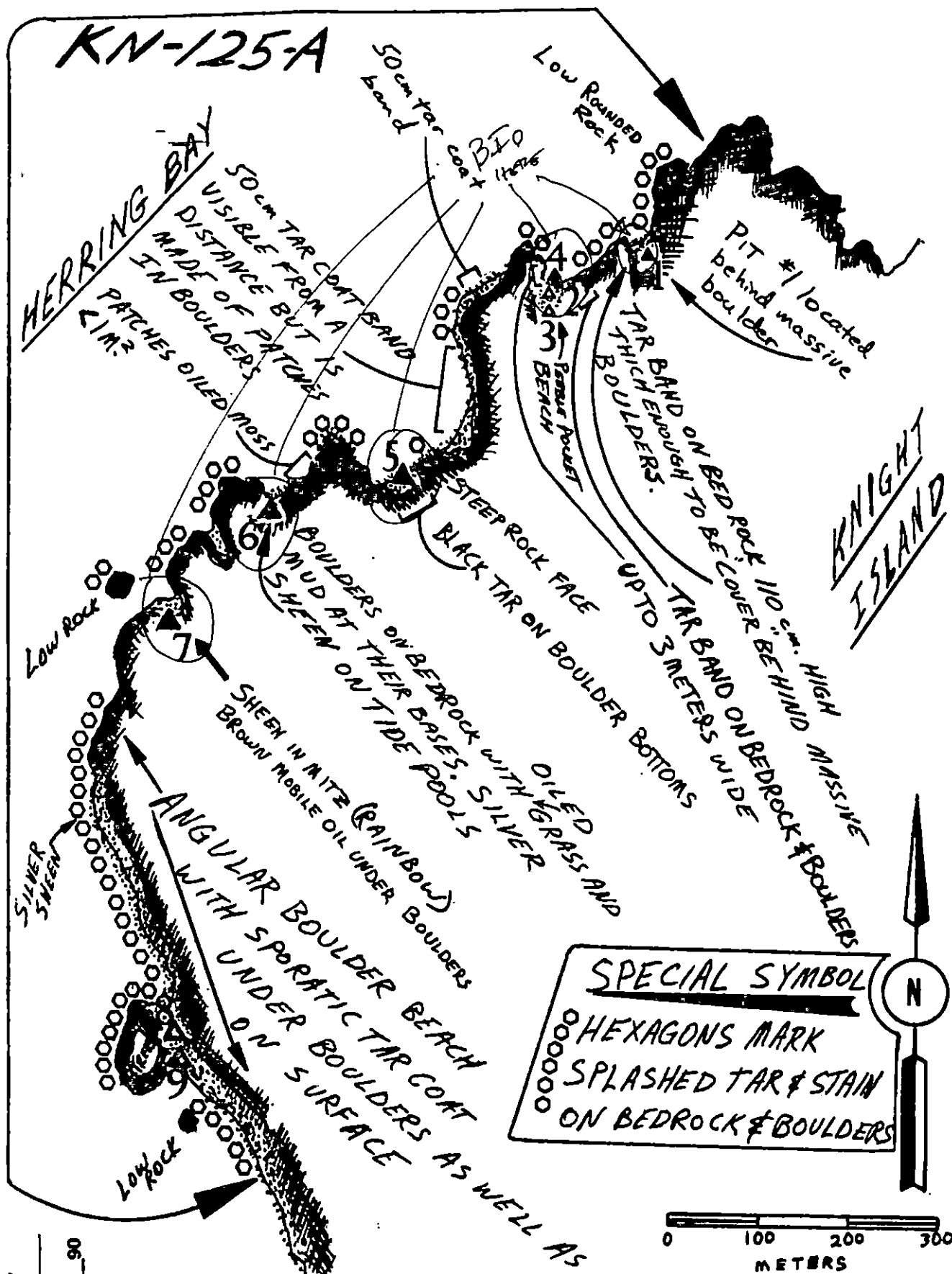
See Attached

REVIEWED YWDATE 4/23/90

REVISION 24-13 90

REVIEWED 7W DATE 4/23/90

SKETCH MAP



LEGEND

1 ▲

PH - No Subsurface Oil

2 ▲

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

OG Greg Chaney

SEGMENT ST/ KN-125

SUBDIVISION A

DATE April 21 90

CHECKLIST

N Arrow

Approx. Scale

Seagulls Birds

Oil Dots

Which

Length

% Cover

Substrate Character

Est. HML/LML

SSS

Profile Location(s)

Profile(s)

PH Location(s)

Photo Location(s)

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/23/90

Segment ST / RN-125 Subdivision A Date (mo / day / yr) APR 21, '90
 Time (24 hr) 1440 - 1815 Biologist RETU

- (A) Substrate type and % of segments:
 (1) Bedrock 45 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 50 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (⊙)

Photographs:
 Roll No. _____

Frames _____

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	X	X	2	2	⊙	⊙	2	
3	3	3	3	3	X	3	X	3	3	⊙	3	
4	4	4	4	4	4	4	X	X	4	⊙	4	
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 SEA OTTER SEEN ON RETURN TRIP TO SHIP.
 A SHELTERED SITE WITH LIMITED DIVERSITY, DENSE TO MODERATE OVERALL COVER OF BIOTA, AND EVIDENCE OF RECENT SETTLEMENT OF BARNACLES, MYTILUS, AND FUCUS.

Ecological Considerations:

NONE LISTED

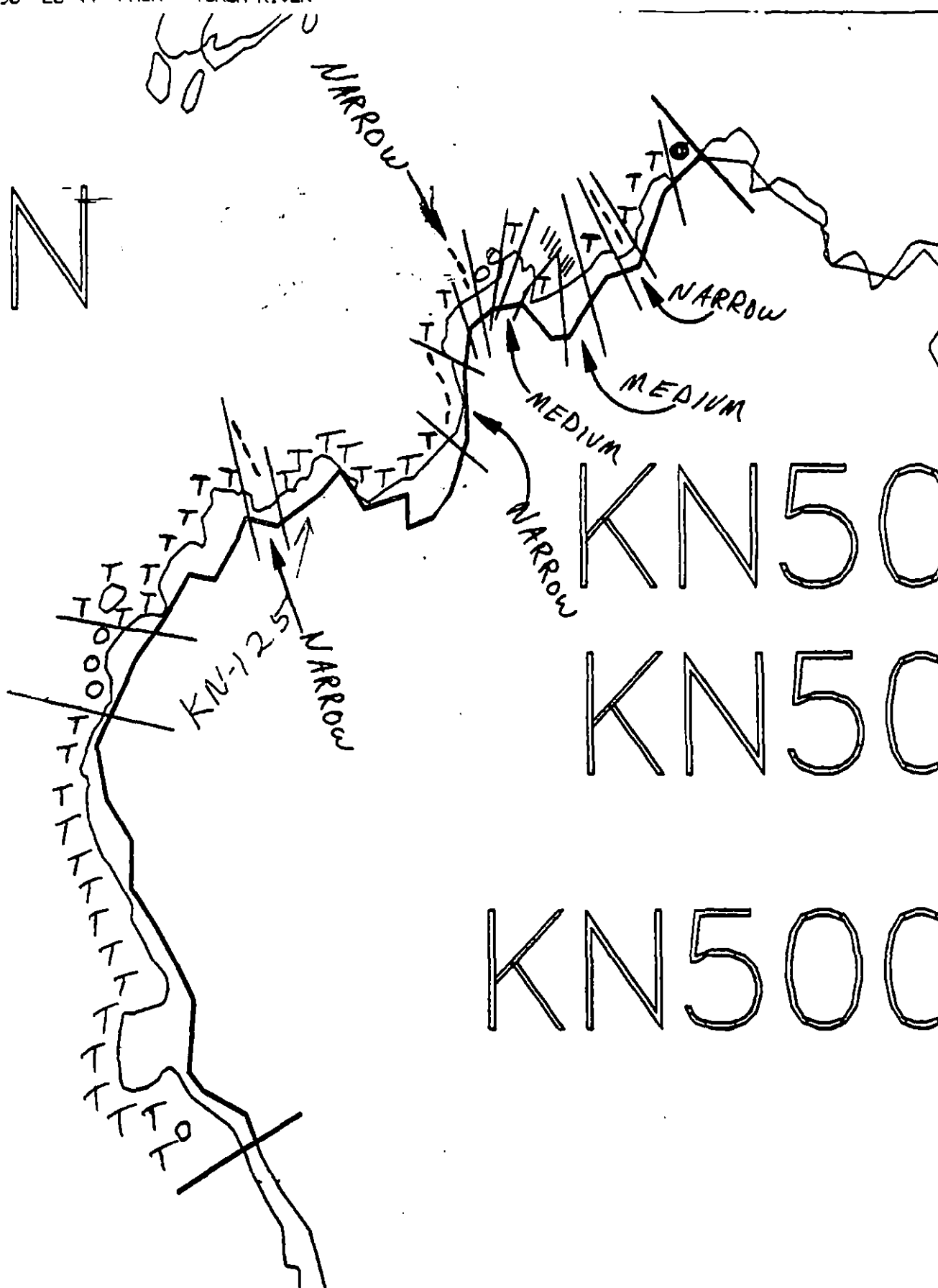
APR 22 1990 20:40 FROM TONGUE RIVER TO SSAT DATA P.04

COMMENTS
SEGMENT 8T-KN-125A

Greg Chaney
April 21 1990

The northern portion of Segment 8T-KN-125A was surveyed during sunny weather. High clouds moved in while surveying the southern half of the segment. The beach sediments were primarily dry and the vast majority of the segment was surveyed on foot. Splashed tar coats were common throughout the segment. The thickest tar was retained behind large boulders and in bedrock cracks. A thin film of black mobile oil was present under several boulders. Silver and rainbow sheens were observed in a few small tidal pools along the segment. A few small friable black tar balls were collected. A mousse patty roughly 40x20 cm. was collected near the northern border of the segment. This mousse patty had the appearance fresh brown frosting and looked as if it had landed recently. Three oiled pompons were collected as well as an old tire. Buried oil was present in the MITZ of some small pocket beaches. At the base of the boulders around pit #6, a mud and peat layer retained oil to a depth of 15 cm.

KN



KN50C

KN50C

KN50C

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-125

ADEC Segment Length: 1694m
EXXON SEGMENT LENGTH: 1955m



Map Key: PWS-307

Name: Greg Chaney

Date: April 21 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-125 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Manual Raking Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/30/90

ADEC ART WEINER Art Weiner

EXXON AMY TEAL Amy Teal

NOAA G.A. BOSTON G.A. Boston

USCG G.H. FOSTER G.H. Foster

FOSC

DATE

Prepared By: Anden Meyer WKK

Date

5/29/90

USFWS Bald Eagle Impact Assessment Survey
by Mike Lockhart, USFWS on 5/27/90

W-KN-123

5/5-

NO BOAT, BEACH, AIRCRAFT
ACCESS

ACTIVE NEST
KN-M5-1
Hatched Young

N-301

KN-12

KN-145

KN-123

KN-144

03

KN-133

KN-124

WORK
AREAS

KN-125

KN5010

KN5009

KN5008

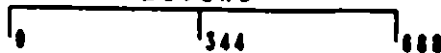


Exxon Company, USA
Map Key: KNI-KN-145
May 11, 1990

ECOLOGY MAP
SEGMENT KN-1

SUBDIVISION A (L of L)

METERS



Seabird Colony



Eagle Nest

1 inch = 1128 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-125 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Johnson DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 182 m: V.Light 1282 m: No Oil 159 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas where subsurface oil found as shown on sketch map. Work should be conducted prior to (5/15) or between (7/2 and 7/31 based on pinniped constraints.

SEE CONSTRAINT ADDENDUM

DATED 5/29/90 WMC

TAG COMMENTS: MANUAL PICK UP OF DEBRIS, MANUAL RAKING IN AREA OF PIT 7 PRIOR TO BIO.

TAG APPROVAL DATE: 5/3/90

ADEC ART WEINER

EXXON ANDY TEAL

NOAA GARY PETERSON

USCG KENNETH KEANE

FOSC: WJL DATE: 5-8-90

SHORELINE EVALUATION

SEGMENT ST/ KN-125 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Johnson DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 182 m: V.Light 1282 m: No Oil 159 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Bioremediate areas where subsurface oil found as shown on sketch map. Work should be conducted prior to 5/15 or between 7/2 and 7/31 based on pinniped constraints.

TAG COMMENTS: MANUAL PICK UP OF DEBRIS, MANUAL RAKING IN AREA OF
PIT 7 PRIOR TO BIO.

TAG APPROVAL DATE: 5/3/90

ADEC ART WEINER

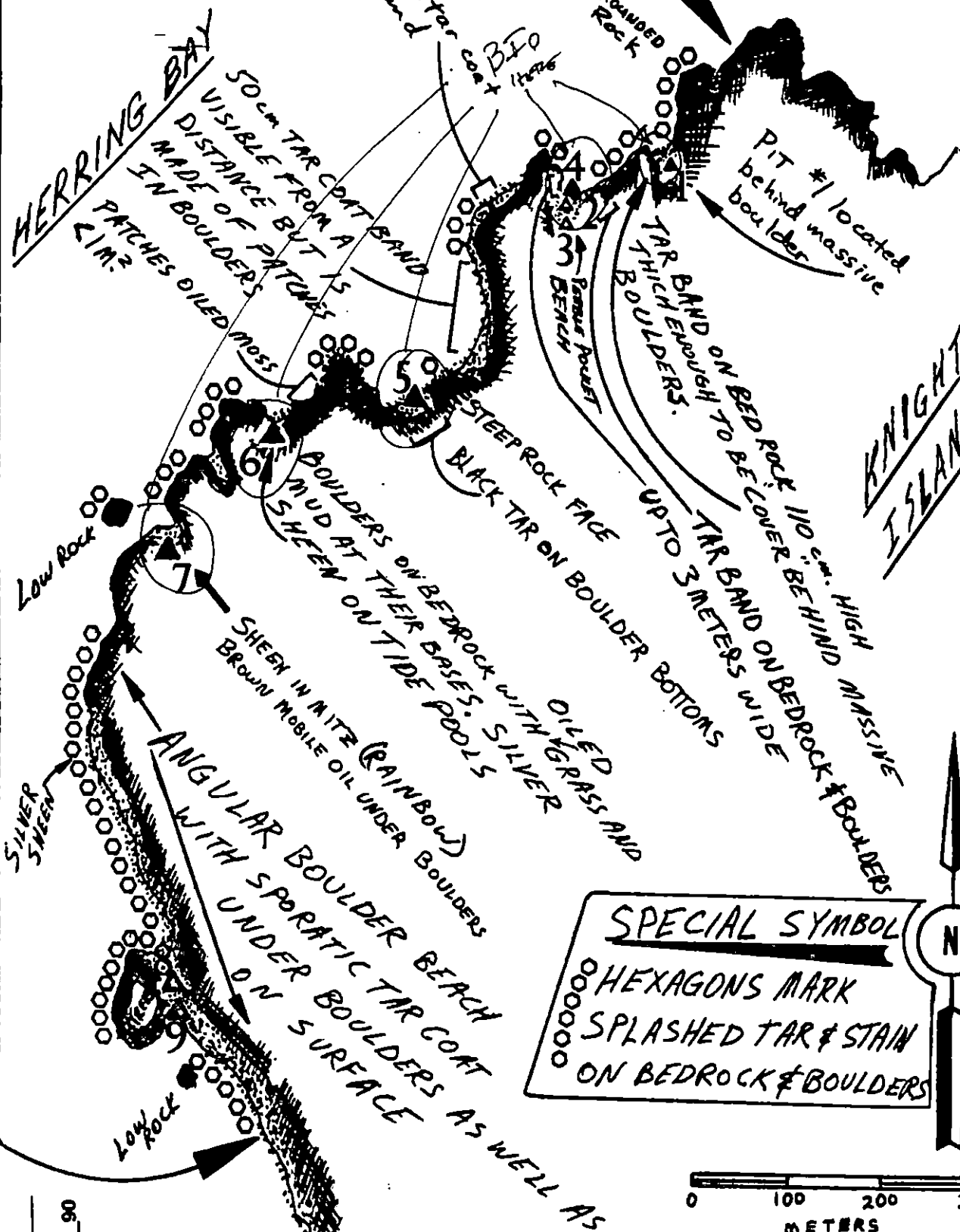
EXXON ANDY TEAL

NOAA GARY PETRO

USCG KENNETH KEANE

FOSC: WJL DATE: 5-8-90

KN-125-A



SPECIAL SYMBOL
 ○ HEXAGONS MARK
 ○ SPLASHED TAR & STAIN
 ON BED ROCK & BOULDERS



SUBDIVISION A

DATE April 21 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bathy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ ECL. HMLA WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ●

Photo location, direction, and number

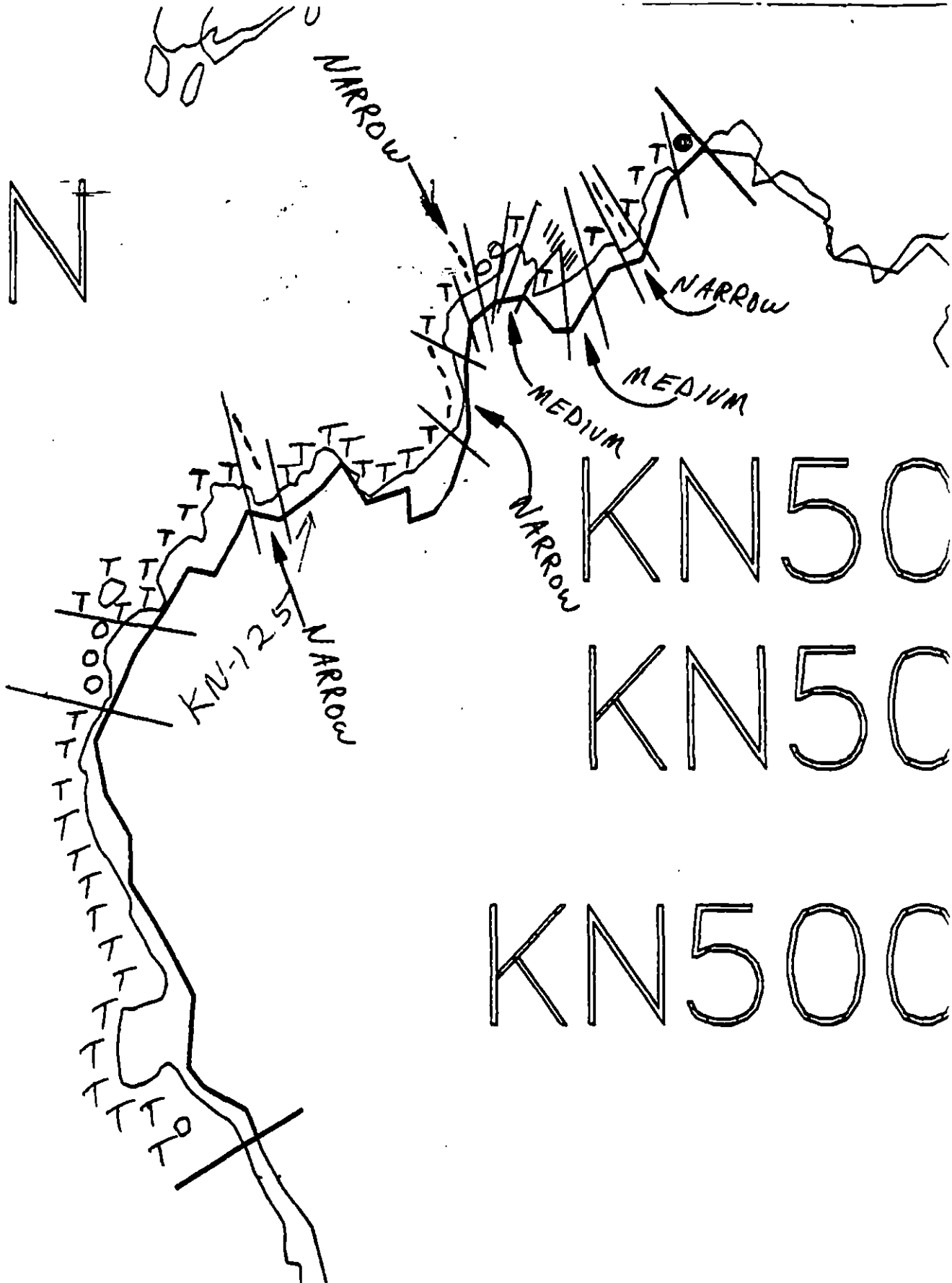
Oil Character Length (m): AP

NO FL TB PT MS ST CT CV PO

REVISIONS

OG Greg Ramsey
 SEGMENT STI KN-125

KN



KN50C

KN50C

KN500C

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-125

ADEC Segment Length: 1694m
EXXON SEGMENT LENGTH: 1955m



Map Key: PWS-307

Name: Greg Chaney

Date: April 21 1990

Data Entered:

SEGMENT: KN 125 SUB: A REGION: PWS SURVEY DATE: 5/25/91

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

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

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

SHPO Signature: T. Smith Date: 6/07/91

FOSC

N

1

Other

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 6 1991

FOSC APPROVAL DATE: 6/10/9

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 125 SUBDIVISION A DATE 5/25/91

ADEC
IME LEFF GINKINS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL OBSERVED. AT OG MAP SITE B, (SPRINT) CAUGHT UP IN ANGULAR Boulders, SCATTERED, DIFFICULT ACCESS FOR REMOVAL. WELL VENTHORIZED CANNOT BE RECOVERED HISOR AT SITE C2 IS IN LOGS. AT MITE, ALONG FROM ~~RECOVERABLE~~ OIL CANNOT BE MANUALLY REMOVED, WOULD REQUIRE ASPIRATION, ~~AND~~ TILTING AND COMMINUTION. ~~Probably~~ PROBABLY NOT ENOUGH RECOVERABLE OIL TO JUSTIFY INTERVENTION.

EXXON
NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR No recoverable oil located.

LANDMANAGER
NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR oil sighted not significant enough to warrant treatment.

USCG/NOAA
NAME SCHULTZ / CHILDS SIGNATURE [Signature] / 122

☒ NTR NOTHING RECOVERABLE REMAINS.

JAGGED, ROCKY STRAND W/ BCP BEACHS - LO - HI SOR / I SPORADIC BEHIND;
BENEATH B & C's. SOME CR & CV PATCHING.

PAGE 1 OF 1

DATE 5 / 25 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 1 m M 5 m N 14 m VL 375 m NO 906 m US 400 m

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

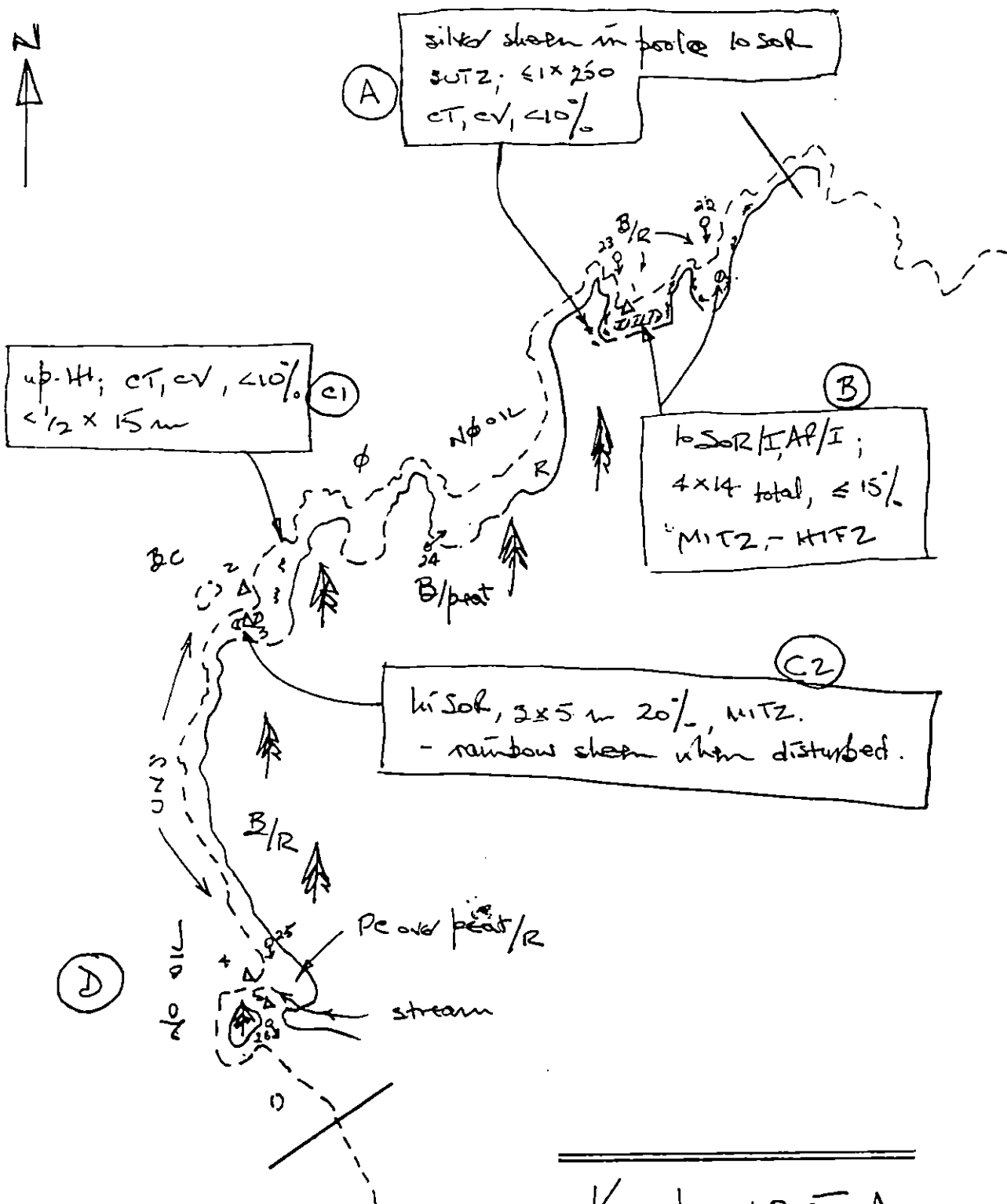
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP- 1 - 31 FRAMES 22~26

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

REVIEWED: MC 5/18/91
REVIEWED: F.W. 5/27/91

0 150 m



KN-125A

G. MACDONALD

5.25.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE 25 May 91

SEGMENT #

KN 125

TIDAL HEIGHT(Range) +3.0 to +4.0 ft MLLW

SUBDIVISION

A

BIOLOGIST Michael Fawcett

SEA STATE

calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

subdivision mostly medium to high angle bedrock and boulders, with small pocket beaches. Typically with dense barnacles in MTZ-VTZ from ~ +5 to +8 ft; patchy sparse to dense mussels, *Fucus* in MTZ; dense filamentous brown algae draped over everything in LTZ. See sketch map for descriptions of biota near remaining oil.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 (immature)	tidpool sculpin
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Pinniped data not

0 150 m



CT/CV above biota; barnacles,
mussels, algae below

CT/CV in upper edge
of barnacles, Littorinids,
limpets

harbor seal

SOR/AP in BR/B among
mod. barnacles, mussels,
1, thorinids (4 eggs), dense
barracle spat, sparse
limpets, dense fili. & brown
& green algae

SOR in MTZ down to +4ft, among dense mussels, Fucus, Littorinids (4 eggs), barnacles, mod. limpets

$$P_{\text{c old}} | P_{\text{c at}} / R$$

stream

KN-125A
Bio Sketch Map
M. Fawcett
5/25/91

KN 125A 5/25/91 Fawcett

Start 1615 north end

- med < BR/B, small pockets
- CT on BR +8-12ft above mod to dense barnacles, scattered mussel on BR, B/C below in MTZ
- Lo SOR in MTZ-UTZ R/B/C with dense fol. barn & eggs, mod barn & mussels, mod litt & eggs, dense spat, & sparse limpets - scallops, hermits in small pools on MTZ-UTZ rock

1646 - light in middle of sab,

islet 30m offshore -

B/R/C - dense Fucus, barn,

litt, ~~mod~~ mussel, limp, MTZ

- 1 imm. eagle flying by

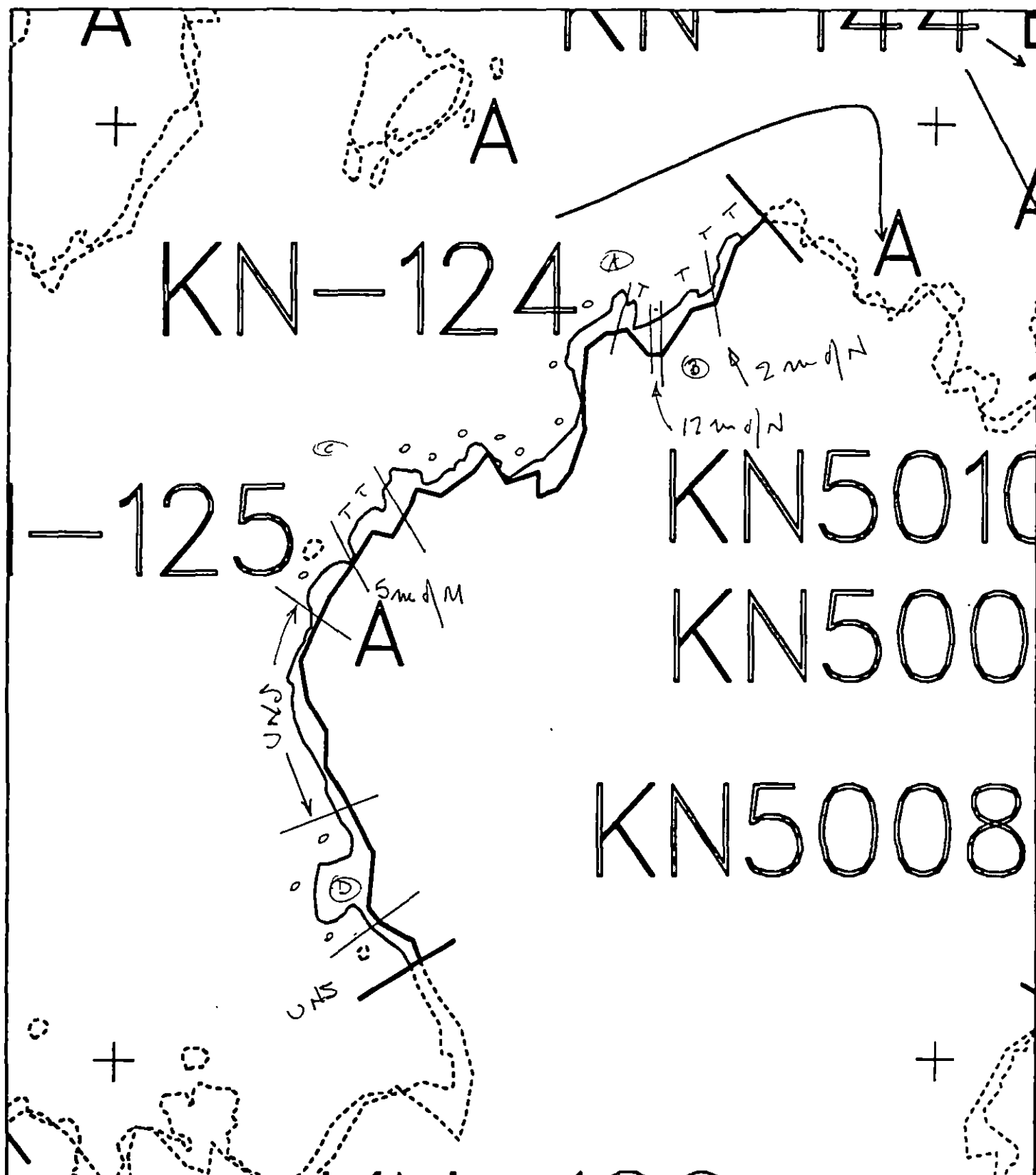
- dense Fucus on BR up to 9ft,

also dense Litt, & eggs

- some SOR at +4ft among dense mussels, Fucus, litt.

TR - CT on walls +10 ft in upper edge of dense barn, mod limp (persona), sparse litt.
- 1 large SEAL

1655 - end of segment - small stream on R/B/C/P/G beach - dense Fucus, mussels, barn, etc - tr. CT UTZ among Fucus, barn,



KN-124

-125

KN5010

KN5000

KN5008

XXXX
////

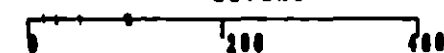
TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0125 A

ADEC Subsegment Length: 1695m

METERS



AK State Plane Zone 4
hko125a



Subdivision Field Map

Map Key: KNIK0125A

Name: GM

Date: 5.25.91

Date Entered:

REVIEWED: F.W. 5/27/91

REVIEWED: MC 5/28/91

1991 MAYSAP EVALUATION

SEGMENT: KN 125 SUB: A REGION: PWS SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME LEFF GINKINS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL OBSERVED. AT OG MAP SITE B, INSPIRAT CAUGHT UP IN Angular Boulders, SCATTERED DIFFICULT ACCESS FOR REMOVAL WERE IDENTIFIED. OIL BE RECOVERED HISOR AT SITE C2 TO 10 FEET AT MITE. ANALYST FROM ~~RESEARCH~~ OIL CAN BE RECOVERED, AND TO AG, MITE, ~~IT~~ TILTING AND CONCENT. ~~RESEARCH~~ PROBABLY NOT ENOUGH RECOVERABLE OIL TO JUSTIFY FURTHER WORK.

EXXON

NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR No recoverable oil located.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR oil sighted not significant enough to warrant treatment.

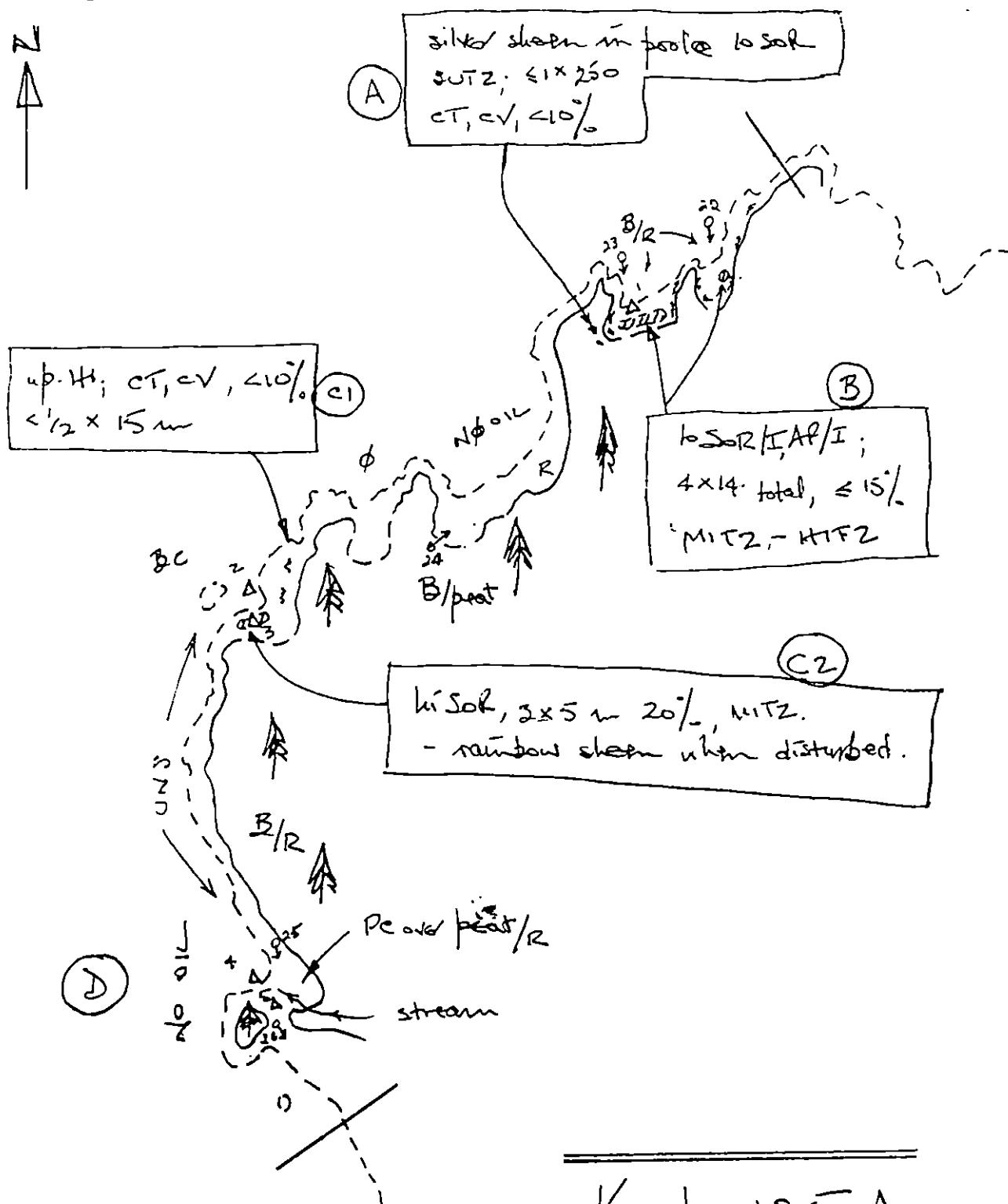
USCG/NOAA

NAME SCHULTZ / CHILDS SIGNATURE [Signature] / 122

☒ NTR NOTHING RECOVERABLE REMAINS.

JAGGED, ROCKY STRAND W/ BCP BEACHS - 20-40' SOIL/E SPORADIC BEHIND; BENEATH B & C'S. SOME CR & CV PATCHY.

REVIEWED: MC 5/18/91
REVIEWED: F.W 5/27/91



KN-125A

G. MACDONALD

5.25.91

REVIEWED: F.W. 5/27/9
REVIEWED: M.G. 5/28/9

TEAM # 1 DATE 25 May 91
 SEGMENT # KN 125 TIDAL HEIGHT (Range) +3.0 to +4.0 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

subdivision mostly medium to high angle bedrock and boulders,
with small pockets+beaches. Typically with dense barnacles in MTZ-LTZ
from +5 to +8 ft; patchy sparse to dense mussels, Fucus in MTZ;
dense filamentous brown algae draped over everything in LTZ
see sketch map for descriptions of biota near remaining
oil.

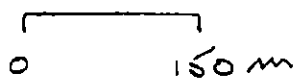
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 (immature)	tidepool sculpin
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.



CT/CV above biota; barnacles,
mussels, algae below

A

CT/CV in upper edge
of barnacles, Littorinids,
limpets

८।

harbor seal

SOR/AP in BR/B among
maj. barnacles, mussels,
littorinids (+ eggs), dense
barnacle spat, sparse
limpets, dense fil. brown
& green algae

③

SOR in MTZ down to +4ft, among dense mussels, Fucus, Littorinids (4 eggs), barnacles, mod. limpets

C2

$$P_{\text{c old}} / P_{\text{c at } R}$$

stream

KN-125A
Bio Sketch Map
m. Fawcett
5/25/91

KN 125A 5/25/91 Fawcett

Start 1615 north end

- mod < BR/B, small pockets
- CT on BR +8-12ft above mod to dense barnacles, scattered mussels on BR, B/C below in MTZ
- 1 SOR in MTZ-UTZ R/B/C with dense fsh. barn + grs, mod barn & mussels, mod litt & eggs, dense spat, & sparse limpets - scalps, hermits in small pools on MTZ-UTZ rock

1646 - bright in middle of sab.,

islet 30m offshore -

B/R/C - dense Fucus, barn,

litt, ^{eggs} mod muss, limp, MTZ

- 1 imm eagle flying by

- dense Fucus on BR up to 9ft,

also dense litt, & eggs

- some SOR at +4ft among

dense mussels, Fucus, litt.

TR - CT on walls +10 ft in upper

edge of dense barn, mod

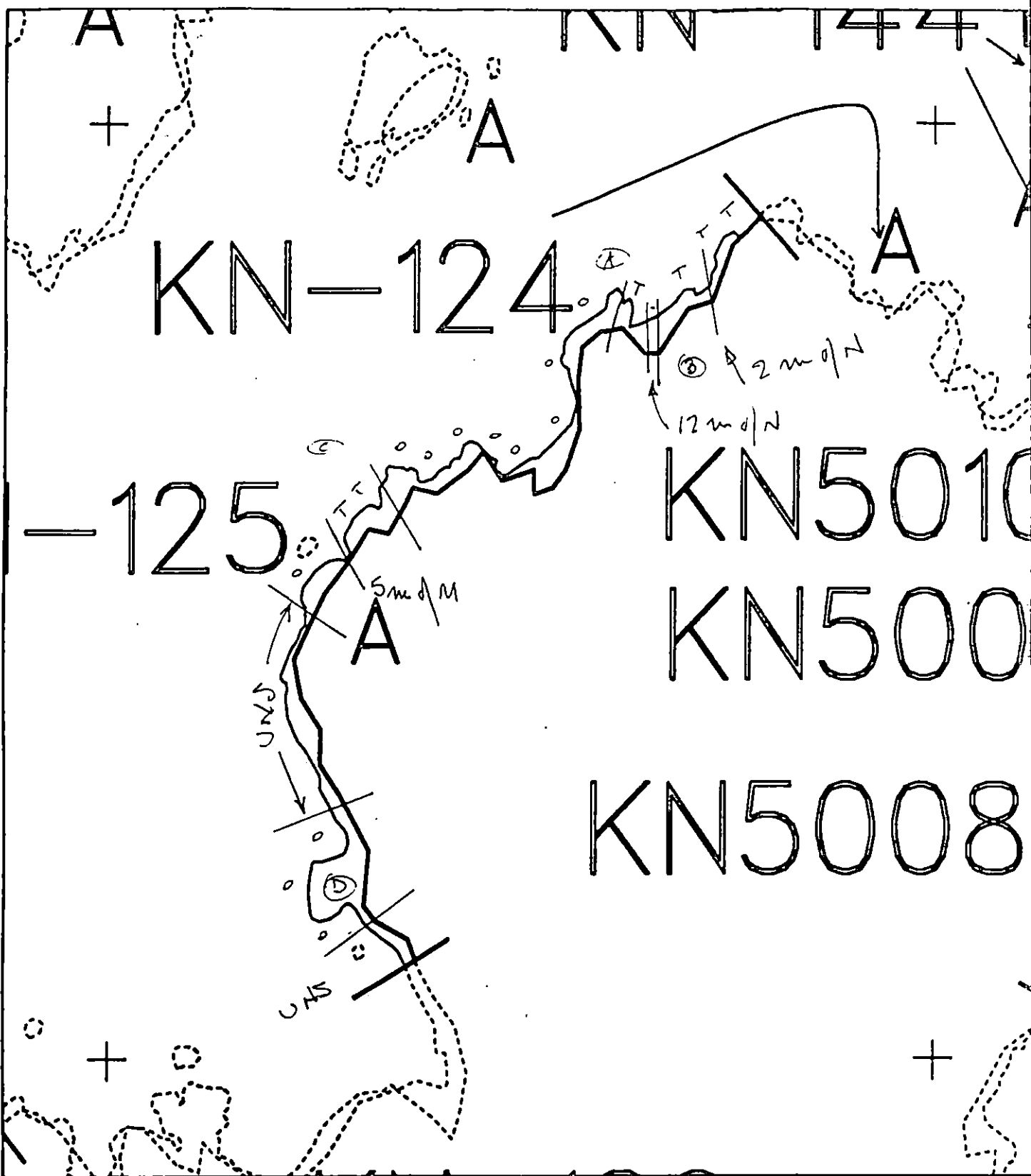
limp (persona), sparse litt.

- 1 large SEA

1655 - end of segment - small stream on

R/B/C/P/G beach - dense Fucus, mussels,

barn, etc - tr CT UTZ among Fucus, barn,



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

KN0125 A
 ADEC Subsegment Length: 1695m
 METERS
 0 200 400
 AK State Plane Zone 4
 4401250



Subdivision Field Map
 Map Key: KNIK0125A
 Name: GM
 Date: 5-25-91
 Date Entered:

REVIEWED: F.W. 5/27/91
 REVIEWED: MC 5/28/91

SHORELINE EVALUATION

SEGMENT ST/ KN-126 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Dineen DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 83 m: Narrow 147 m: V. Light 503 m: No Oil 513 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) spot washing in conjunction with absorbents in area shown on sketch map and 2) rake and bioremediate area of subsurface oil also shown on map. No time constraints identified.

TAG COMMENTS: Monitors to Assess SUIZ

TAG APPROVAL DATE: 5/3/90
ADEC ART WEINER
EXXON ANDY TATL
NOAA GARY PETROSE
USCG KENNETH KEANE

FOSC: [Signature] DATE: 5-8-90

OG Greg Chaney
 SEGMENT STI KN 126
 SUBDIVISION A 1 of 1
 DATE April 12 290

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

SPECIAL SYMBOLS
 RANDOM DROPS
 TAR ON COBBLES,
 BOULDER & BEDROCK
 SYMBOLIZED BY
 HEXAGONS
 OOOOOOOO

KETCH MAP

100 METERS



STEEP CLIFFS

KNIGHT ISLAND

KN-126-A
 HERRING BAY

BROWN FILM & RAINBOW SHEEN
 IN TIDE POOLS AND BETWEEN
 BOULDERS AND BETWEEN
 MOBILE OIL IN FINE MATRIX.
 NEAR SURFACE.

BAND 130 cm HIGH TAR COAT & COVER
 UP TO 0.5 cm IN BEDROCK CRACKS

WIDE REGION OF
 LOW BEDROCK

PATCHES OF TAR COAT & COVER ON BOULDERS
 ALONG HITZ. ROUGHLY 1 METER EVERY 2 METERS

LOW ROCK

NO OIL CHANNEL
 OBSERVED

LOW ROCK

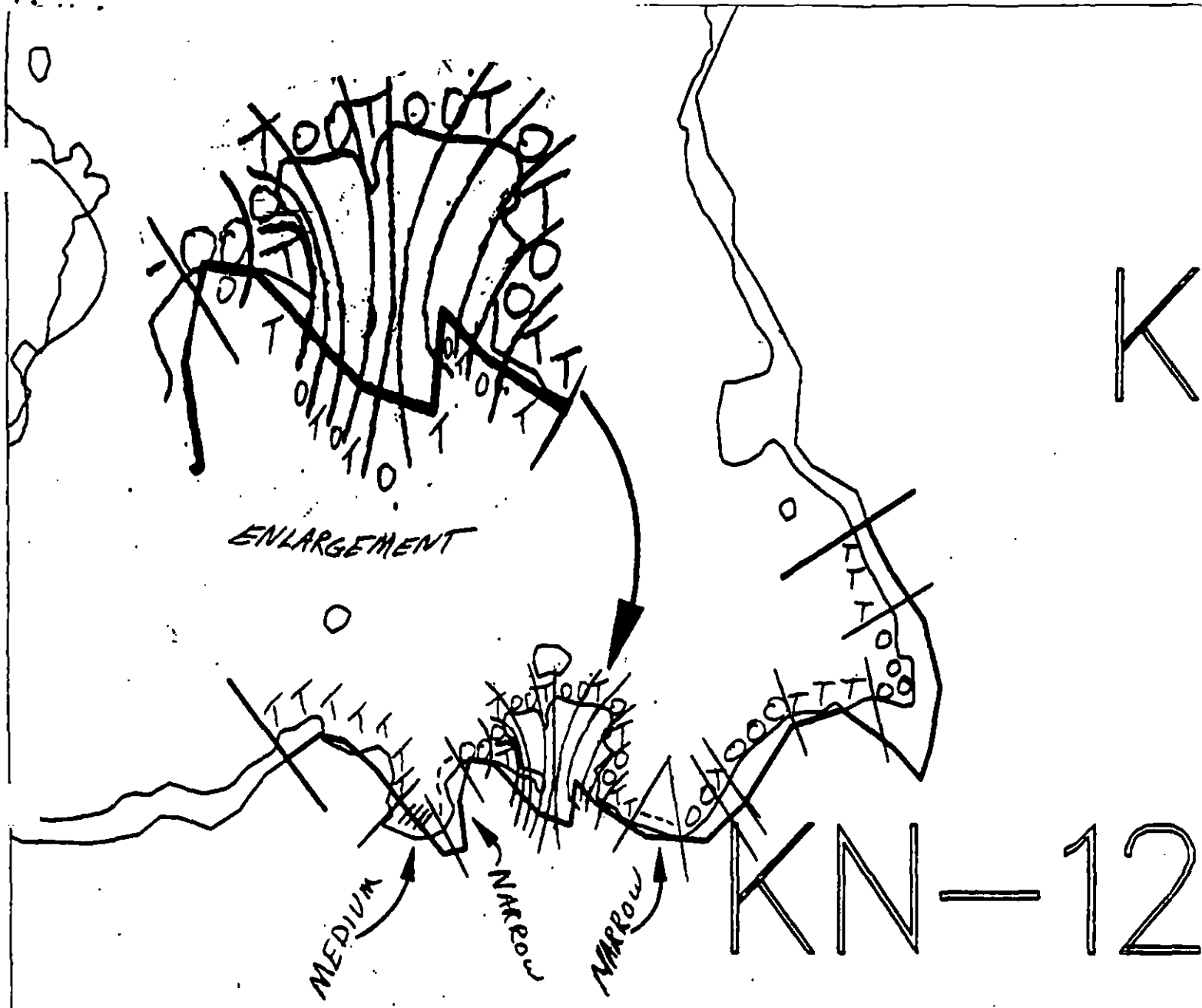
ROCK FACE

BIO
 HERE

SPOT WASH
 AND TIE HERE

Oil Character Length (m): AP — PO — CV 10 CT 880 ST 400 MS — PT — TB — FL 70 NO 470

REVISION 02/2000



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-126

ADEC Segment Length: 1242m



Map Key: PWS-308

Name: Aug. Chaney

Date: April 22 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 126 SUB: A REGION: PWS SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 6/04/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC John Bane

FOSC E. E. PAGE

EXXON Edmond

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

USCG Edmond

NOAA John Bane

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 126 SUBDIVISION A DATE 5/25/91

DEC

NAME

JEFF GINALIAS

SIGNATURE

[Signature]



NTR

NO RECOVERABLE OIL ON SEGMENT. AT SITES C & E (OG map) A COUPLE PATCHES OF HI SOR (BOREHOLE LOW SOR) TRAPPED IN SEDIMENTS, BUT TOO SMALL AND ISOLATED AS AN IMPACT AREA TO WARRANT TREATMENT. MANILA WOOD NOT BENEFIT AREA, WITH ONLY POSSIBLE MEANS METHANOL OR WATER TILLING NOT ENOUGH RECOVERABLE OIL TO JUSTIFY TREATMENT. NO OTHER SIGNIFICANT OIL ON SEGMENT.

EXXON

NAME

LARRY D. OLSON

SIGNATURE

[Signature]



NTR

No treatable conditions were found.

LANDMANAGER

NAME

MARSHA HALL OF DNR

SIGNATURE

[Signature]



NTR

No recoverable oil.

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

[Signature]



NTR

NO RECOVERABLE OIL LOCATED

Typical Steep Rock Shore w/ BC Pacific Boulders. Surface oil only AS to SOR/I HI SOR/I BEHIND BENCH B & C. Very little CT.

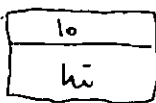
PAGE 1 OF 1

REVISIO: MC 5/29/91

0 100 200 m



ITZ	shear	depth
HITZ	S	0-2
MI-HITZ	R, B	2-5



lo SOR, 10%, 3x10, HITZ.
hi SOR, 40%, 5x10m HITZ, 2-5cm.

③ D, FL 6x40m, <10% MI-HITZ.

MITZ-HITZ

lo SOR, <10%
≤ 2x10m ③
P.U.

hi SOR, 40%
2x6, HITZ,
in PCM ③

SEG
BODY.

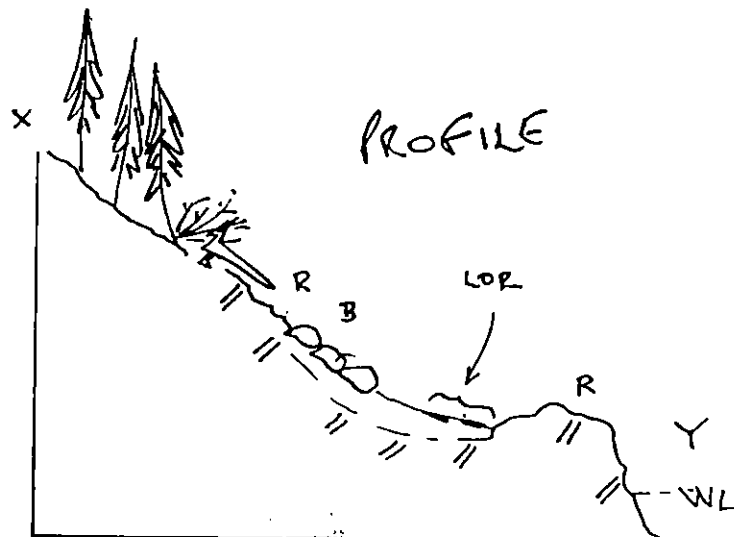
④ FL

hi SOR
4/ lo SOR
above.
2x4,
<10% total.
⑤ HITZ

No oil

CT <1x15m
SUTZ; <10% ①

Stream



KN-126A

G. Macdonald

5.25.91

Revised: MC 5/29/91
Reviewed: FW 5/27/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 5/25/91
 SEGMENT # KN 126 TIDAL HEIGHT(Range) +0.6 to +2.5 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft seas WIND SPEED/DIRECTION N 5-10 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Two small coves within a bight, small stream at east side
of larger beach. some SOR remains in each pocket, near or
within healthy, diverse, typical intertidal community. Recoverable
residue was picked up at one site; other sites with SOR appear
in good shape, would not benefit from further treatment.
see sketch map for descriptions of biota near each oil site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			tide pool sculpin
Seabirds			salmon fry
Waterfowl			Osmerid sp (smelt)
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
W. es(specify)			

Shoreline subdivision map showing important biological features attached.

KN 126A 5/25/91 Fawcett

North facing cone 0735

R/B/C/PG byers seab. w/ shore

Stream at east end w/ dense tam,

From up to VTZ -

- middle of beach has gravel up to +6 ft

(base of BR) - MTZ c/b due

ham, mod From, some Rhodc

- dense green fibe in stream VTZ

- CT on E wall +12 ft above birta

- patch of 40 R on west side,

From & mussels / tam etc on

TOP - +7 ft

- LTZ-MTZ below H150R (further west)

w/ dense From, barn litt, lamp

(tide pool at +8 ft near

50R w/ Rhodc, ^{Sculp, myxodonta} Surf grass, lamp,

dense litt.) - LTZ w sculp, to,

From, Fil m/gg/ Luidia,

Parasol, helmet crabs, hermit,

dense barn in patches

- salmon fin, Hooligan

805 - sm bright near last west point

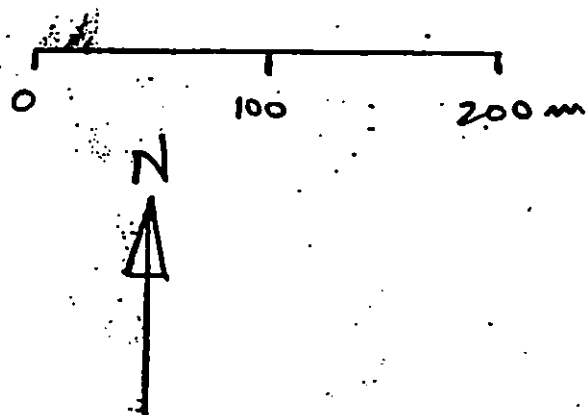
H150R in gravel/p +8 ft - among

dense mussel bed, - B+C in area

w/ dense litt eggs, mod litt, lamp,

dark sparse From & Fil gg/b & Rhodc

KN 12634 (cont) 25 May 91 Fawcett
- clams 172 - dense litt on algal
mat + 3-6 ft - dense barn &
Fucus on 19 boulders at sides
Finish 0820



10

(D) SOR on rock platform overlain w/ scattered boulders - mod. limpets, littorinids, barnacles, mussels, algae near & in SOR

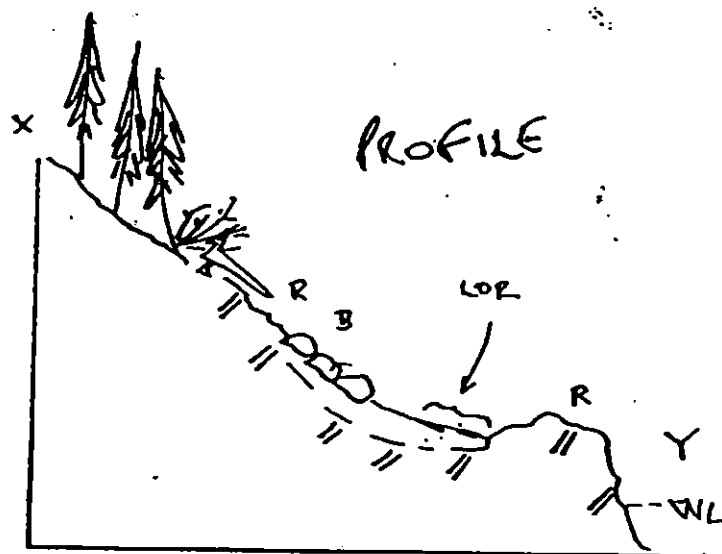
(B) SOR (recovered) among mod. mussels, barnacles, rockweed, littorinids

(C) SOR ~ +8ft near tidepool with Rhodomeela, surfgrass, sculpins, dense mussels, litt., limpets, etc. - also dense biota downshore in MTZ

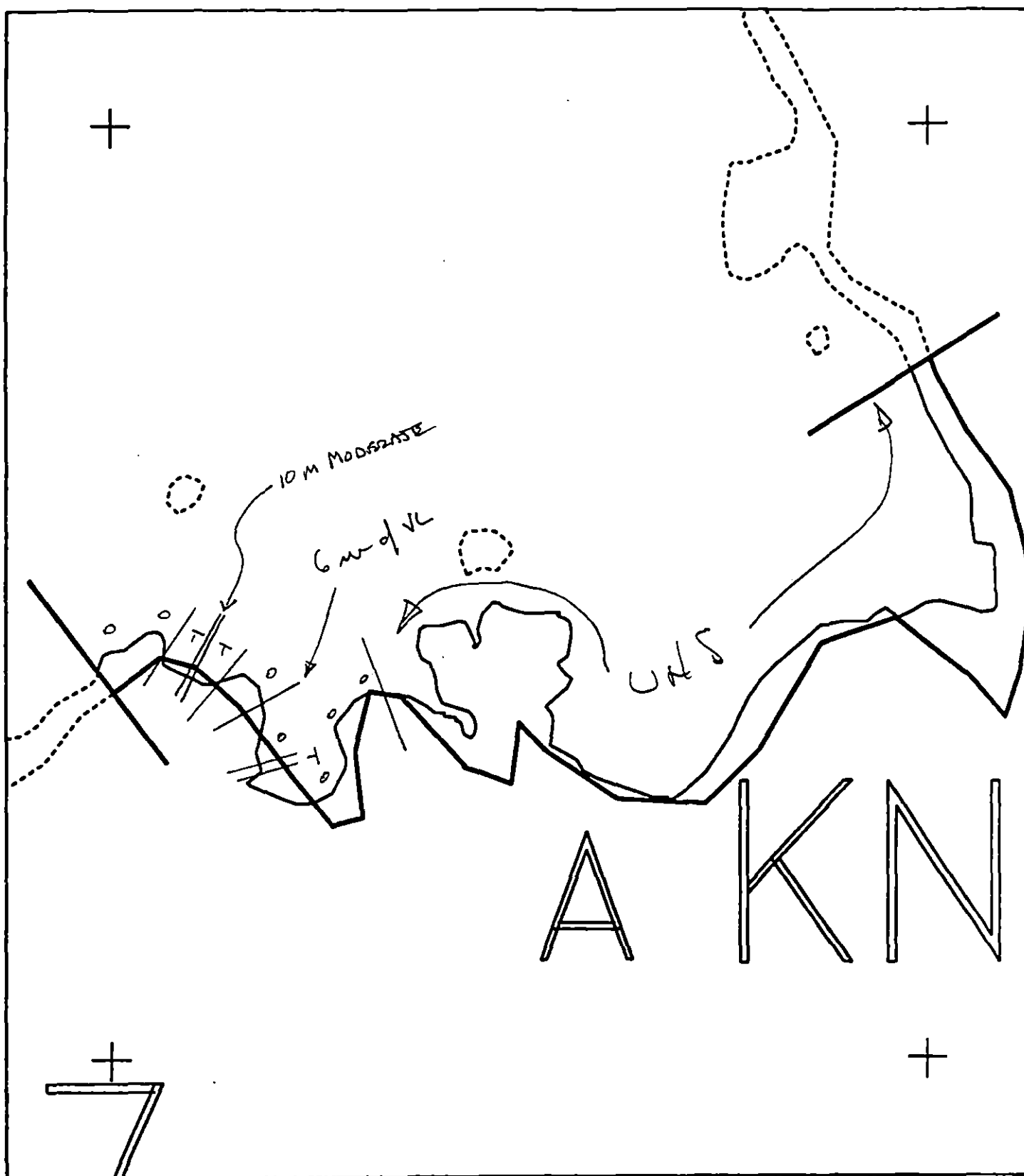
SEG BNDY.

(E) in dense mussel (also mod. litt (995), limpets, barn., use Fucus, Rhodo- fil. brown & green ie; claws downshore LTZ.

(A) CT on wall ~ +12 ft, above biota except lichen



KN-126A
Bio Sketch Map
M. Fawcett
5/25/91



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

KN0126 A
 ADEC Subsegment Length: 1246m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0126a



Subdivision Field Map
 Map Key: KNIK0126Aa
 Name: GM
 Date: 5.25.91
 Date Entered:

REVIEWED: F.W. 5/27/91

1991 MAYSAP EVALUATION

SEGMENT: KN 126 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/25/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

TEAM NO. 1 SEGMENT KN 126 SUBDIVISION A DATE 5/25/91

ADEC
NAME JEFF GINAHAS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL ON SEGMENT. AT SITES C & E (OG MAP) A COUPLE PATCHES OF HI SO₂ (BORNEO LOW SO₂) TRAPPED IN SEDIMENTS, BUT TOO SMALL AND ISOLATED OF A ~~BE~~ IMPACT AREA TO WARRANT TREATMENT. MANIA WOULD NOT BENEFIT FROM WITH ONLY POSSIBLE MEANS MECHANICAL OR MANUAL TILLING NOT ENOUGH RECOVERABLE OIL TO JUSTIFY EFFORTS. NO OTHER SIGNIFICANT OIL ON SEGMENT.

EXXON
NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR NO TREATABLE CONDITIONS WERE FOUND.

LANDMANAGER
NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL.

USCG/NOAA
NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL LOCATED

TYPICAL STEEP ROCK SHORE w/ BC PACIFIC BENCINES, SURFACED OIL ONLY AS LO SO₂/I
i HI SO₂/I BEHIND B & C. VERY LITTLE CT.

PAGE 1 OF 1

SEGMENT KN-126

SUBDIVISION A

DATE 5 / 25 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 1m M 10m N 1m VL 9/9m NO 259m US 921m

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

1 - 31 FRAMES 7-10

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

OG COMMENTS: BC over R, in small today light. Sporadic surface oil as soil/I between B. and a trace of CT on a lee R wall. A noticeably CT, CV-free subdivision, compared w/ adjacent segments, and atypical for Herring Bay.

REVIEWED: F.W. 5/27/91

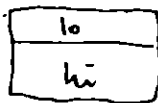
REVIEWED: F.W. 5/27/91

REVISED: MC 5/29/91

0 100 200 m

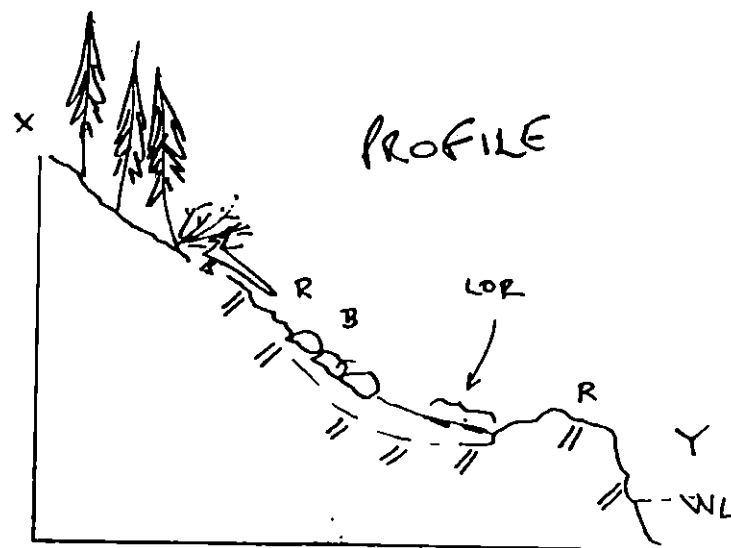
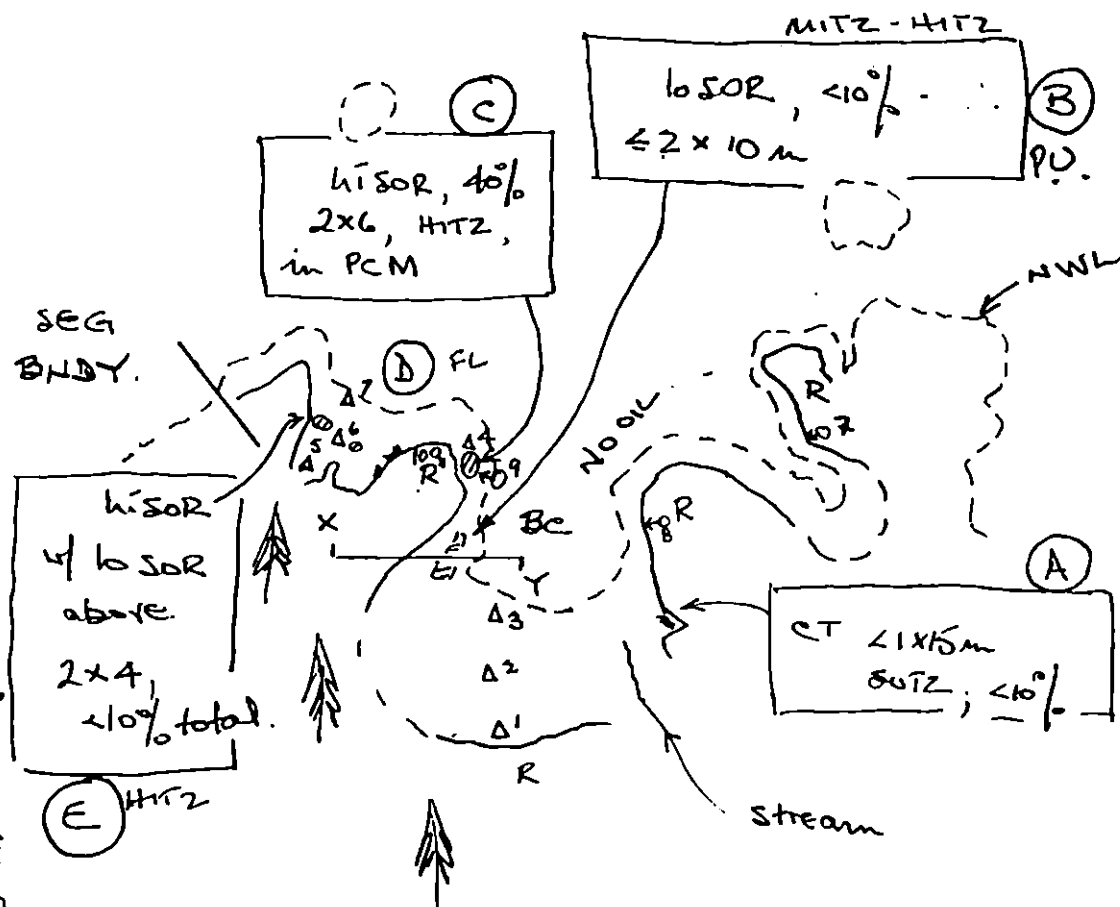


ITZ	shear	depth
HITZ	S	0-2
MI-HITZ	R, B	2-5



lo SOR, 10%, 3x10, HITZ.
hi SOR, 40%, 5x10m HITZ, 2-5ans.

③ D, FL 6x40m, <10% MI-HITZ.



KN-126A

G MACDONALD

5.25.91

Revised: Mc 5/29/91

ANISAS BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 5/25/91
 SEGMENT # KN 126 TIDAL HEIGHT (Range) +0.6 to +2.5 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1/2 ft seas WIND SPEED/DIRECTION N 5-10 knots
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Two small coves within a bay, small stream at east side of larger beach. Some SOR remains in each pocket, near or within healthy, diverse, typical intertidal community. Recoverable residue was picked up at one site; other sites with SOR appear in good shape, would not benefit from further treatment. See sketch map for descriptions of biota near each oil site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			tide pool sculpin
Seabirds			salmon fry
Waterfowl			Osmerid sp (smelt)
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

KN 126A 5/25/91 Fawcett

North facing Cove 0735

R/B/C/PG - bigger scrub up shore

Stream at east end w/ dense trees,

Flow up to VT2 -

- middle of beach has gravel up to +6 ft

(base of BR) - MT2 c/B due

barn, mod flow, some Rhod

- dense green flr in stream VT2

- CT on E wall +12 ft above birta

- patch of BOR on west side,

Fucus & mussels/barn etc on

TOP - +7 ft

- LT2-MT2 below H₁BOR (further west)

w/ dense Fucus, barn litt, limp

(tide pool at +8 ft near

SOR w/ Rhodc, ^{Sculpin, mussels} Surf grass, limp,

dense litt.) - LT2 w scy to,

Fucus, Fil m/gg/ Luidia,

Parasol, helmet chks, hermit,

dense barn in patches

- salmon fry, H₁coligae

805 - am bright near east west point

H₁ SOR in gravel/p +8 ft - among

dense mussel bed, - B+C in area

w/ dense litt eggs, mod litt, limp

Dark sparse Fucus & Fil gg/b & Rhod

KN 126A (cont) 25 May 91 Fawcett
- clams 1/2 - dense litt on algal
- photo + 3-6 ft - dense barn &
Fucus on lg boulders at sides
Finish 0820

0 100 200 m



(C) SOR ~ +8 ft near tidepool with Rhodomela, surfgrass, Sculpin, dense mussels, litt., limpets, etc. - also dense biota downshore in MTZ

(B) SOR (recovered) among mod. mussels, barnacles, rockweed, littorinids

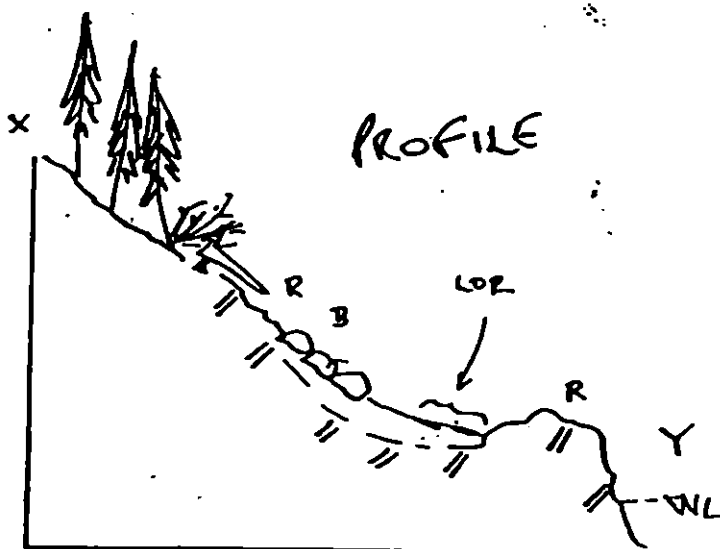
SEG BNDY.

(E) SOR in dense mussel bed - also mod. litt. (eggs), limpets, barn., sparse Fucus, Rhodomela, fil. brown & green algae; clams downshore in LTZ.

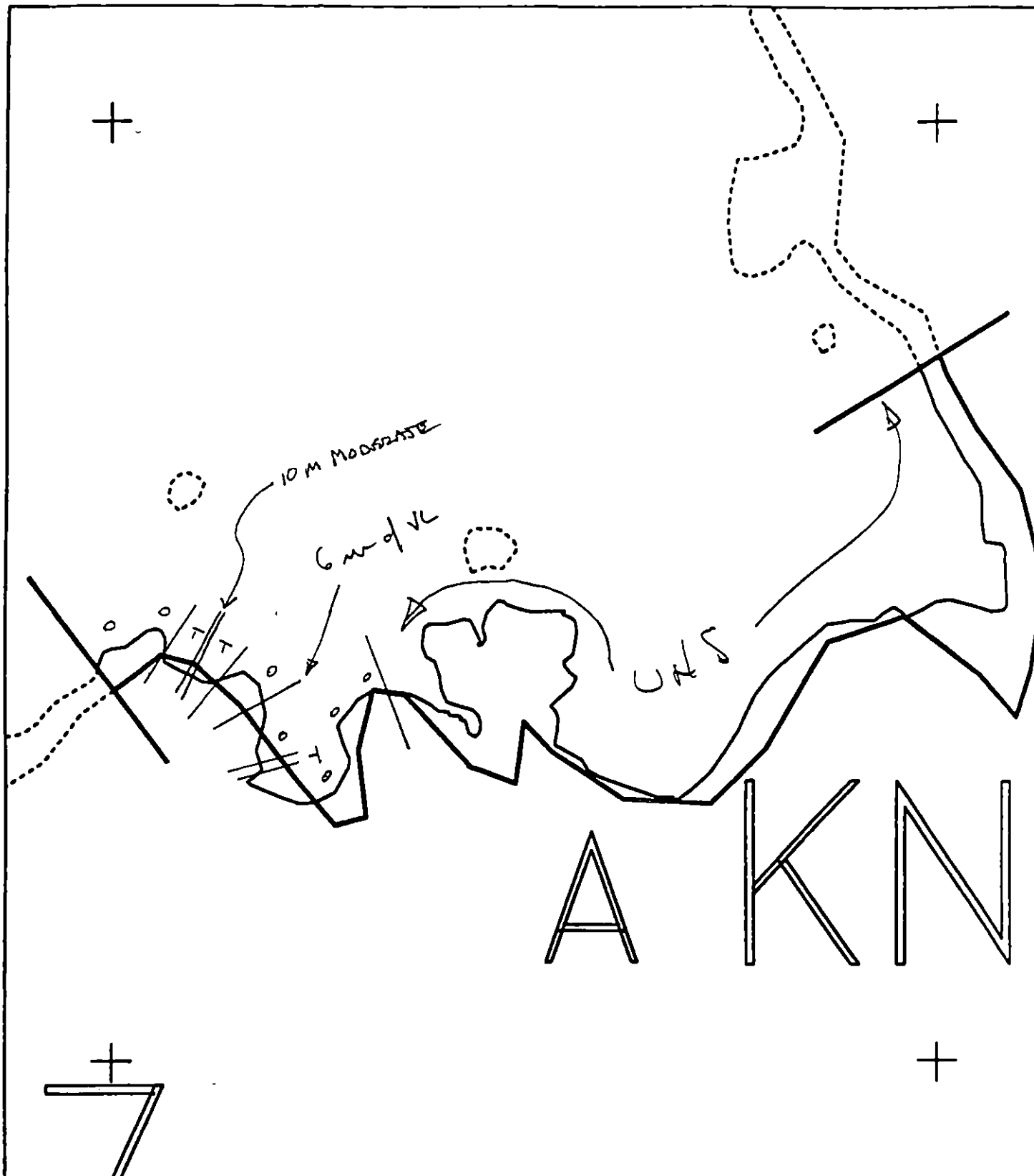
(A) CT on wall ~ +12 ft, above biota except lichen

Stream

(D) SOR on rock platform overlain w/ scattered boulders - mod. limpets, littorinids, barnacles, mussels, algae near & in SOR

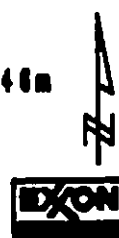


KN-126A
Bio Sketch Map
M. Fawcett
5/25/91



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

KN0126 A
 ADEC Subsegment Length: 1248m
 METERS
 0 100 200
 AK State Plane Zone 4
 Ebn012600



Subdivision Field Map
 Map Key: KNKN0126Ae
 Name: GM
 Date: 5-25-91
 Date Entered:

REVIEWED: F.W. 5/27/91
 REVISOR: MC 5/29/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-126

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-126 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 83 m: Narrow 147 m: V.Light 503 m: No Oil 513 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) spot washing in conjunction with absorbents in area shown on sketch map and 2) rake and bioremediate area of subsurface oil also shown on map. No time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN126 SUBDIVISION: A 1 of 1 DATE 4-22-90

USCG

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

COMMENTS The predominant oil in this segment was concentrated in the cove in the vicinity of pits 4 & 5. The steep sloping bedrock & boulder shore on the eastern side of the cove had a heavy cover that may need spot washing. The eastern side of the cove may be too steep for bioremediation, however it would work well in the lower sloping portions of the cove. This beach may be a bleeder later this summer.

ADEC

NAME M. Cunningham SIGNATURE M. Cunningham☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

- ① Spot wash boulder + bedrock headlands for pit #4. (Lamda)
- ② Hand till gravel portions of beach btwn #4 + 5 then biorem. Flip over larger boulders on remaining portions of beach and biorem.
- ③ Check for debris (most retrieved) under remaining snow packs
- ④ Leave remainder of segment to weather naturally.

LAND MANAGER

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

COMMENTS

Most of the storm berm was melted, a lot of debris was already collected. Tar bands on high angle and vertical rock/boulders was very easy to scrape near pit #4. This should be scraped and the remaining soft (brown) oil hit with high pressure cold water to dislodge oil/tar/needle mix.

Beach around Pit #5 has shallow, brown oil globs. This should be disturbed then bioremediated. Absorbent boom may be needed to contain sheening. This oil readily spread to a rainbow color

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Greg Chaney USCG Pat Malan SEGMENT ST/ KN-126
 BIO Jim Roth LAND REP DNR Steve Phillips SUBDIVISION A (1 OF 1)
 EXXON Ray Sotelo ADEC Mike Cunningham TIME 15:30 to 17:40
 TEAM NO. 7 TIDE LEVEL 5.0 to 10.5 ft DATE April 22, 1990
 EST. SUBDIVISION LENGTH: 1422 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: East to West
 SURFACE SEDIMENTS: R 50 % B 25 % C 15 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 142 m VL 740 m NO 470 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Yellow rope
6 pumps#BAGS 2

Photographs:

Roll No. ST-7-4Frames 9, 10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	DE PTH (cm)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC		SU	U	M	U				
1	25					X	.				X					N	0	CB-G
2	40					X	.					X				N	0	P-GM
3	30					X	.						X			N	20	P-GM
4	25	X					0-10		X			X				N	0	B-CM
5	40				X		30-40	X		X			X			Y	35	CG-GM

COMMENTS

See attached page.

REVIEWED 7W DATE 4/24/90

OG 2 Chaney
 SEGMENT/ST/ KN 126
 SUBDIVISION A 1 of 1
 DATE April 12, 2000

KN-126-A HERRING BAY

KETCH MAP

100 METERS

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

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

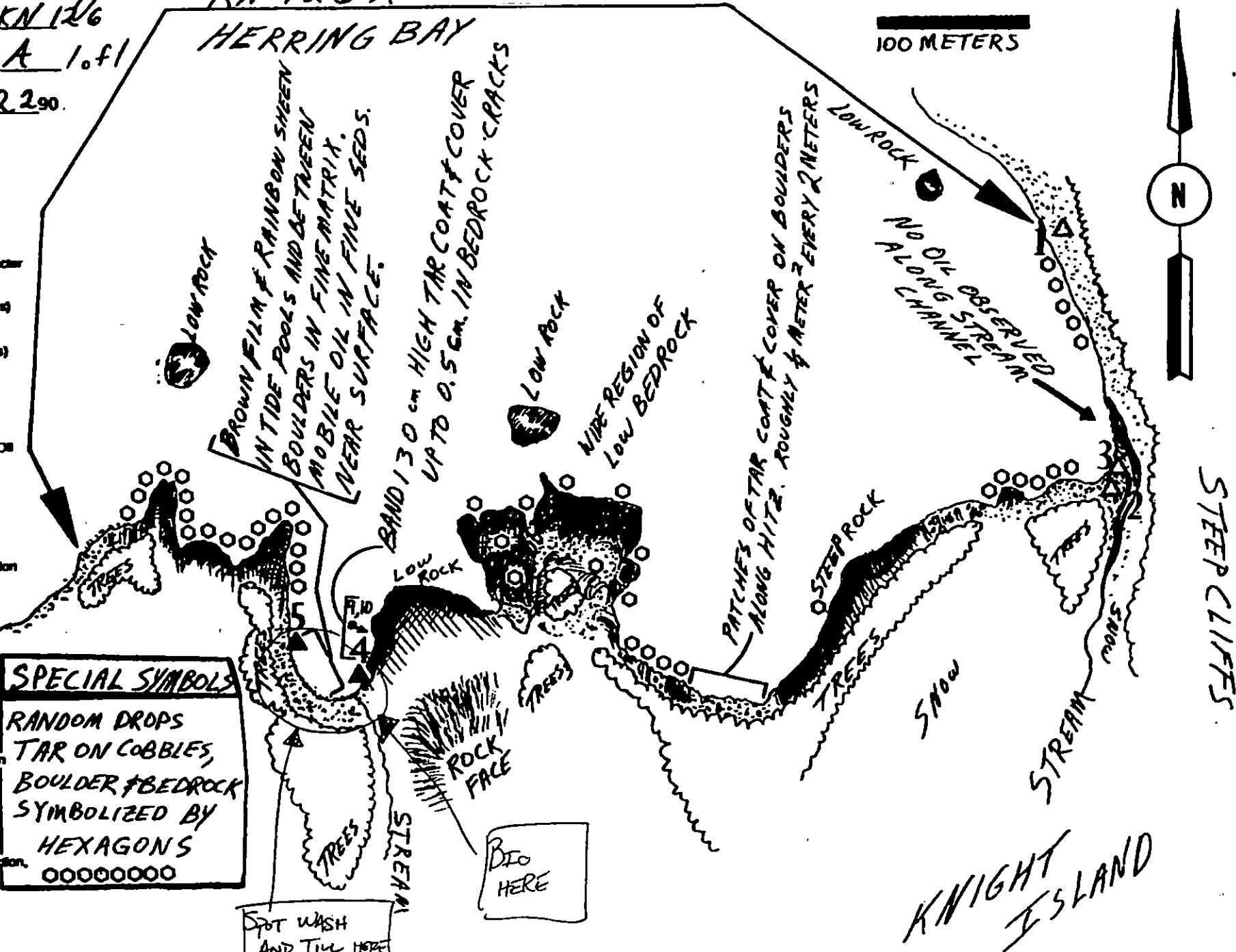
SPECIAL SYMBOLS
 RANDOM DROPS
 TAR ON COBBLES,
 BOULDER & BEDROCK
 SYMBOLIZED BY
 HEXAGONS
 ○○○○○○○○

SPOT WASH
 AND TIL HERE

BIO
 HERE

Oil Character Length (m): AP — PO — CV 10 CT 880 ST 400 MS — PT — TB — FL 70 NO 470

REVISION: 03/20/00



COMMENTS
SEGMENT ST-KN-126-A

Greg Chaney
April 22 1990

The survey of segment KN-126-A was conducted under sunny skies. The beach sediments were dry. Drips of coated tar were common on boulders and bedrock throughout the segment. A few tar balls and tar patties were collected from this segment as well. Along the extreme eastern edge of the segment a stream enters Herring Bay. The banks of this stream were partially covered in snow but no oil was observed along the stream channel. Near pit #4 a tar band roughly 130 cm high was observed. The band consisted of a thin coat on the exposed portions of the bedrock face but increased to a tar cover 5 mm thick in bedrock cracks. This tar was mixed with spruce and hemlock needles. On the boulder beach between pits 4 and 5, rainbow sheen was observed between the clean surface boulders over most of the beach. When the sediments were disturbed, brown oil ran freely out of the surface deposits. In this region mobile oil is still present near the surface. A pit was not dug in this area due to the coarse grain size of the beach but pit #5 revealed an oiled layer 30 to +40 cm deep on the western border of the beach. The bottom of this oil layer could not be reached due to boulders at the bottom of the pit. After this survey I was left with the impression that mobile oil is still held in the sediments along this beach and it may be a source of remobilized oil during spring tides.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/KN-126 Subdivision A Date (mo / day / yr) APR 22, 90Time (24 hr) 1520-1740 Biologist ROTH

(A) Substrate type and % of segments:

(1) Bedrock 50 (2) Boulder 25 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

Photographs: Roll No. ST-7-4Frames 9-10

BARNACLES

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

GASTROPODS

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

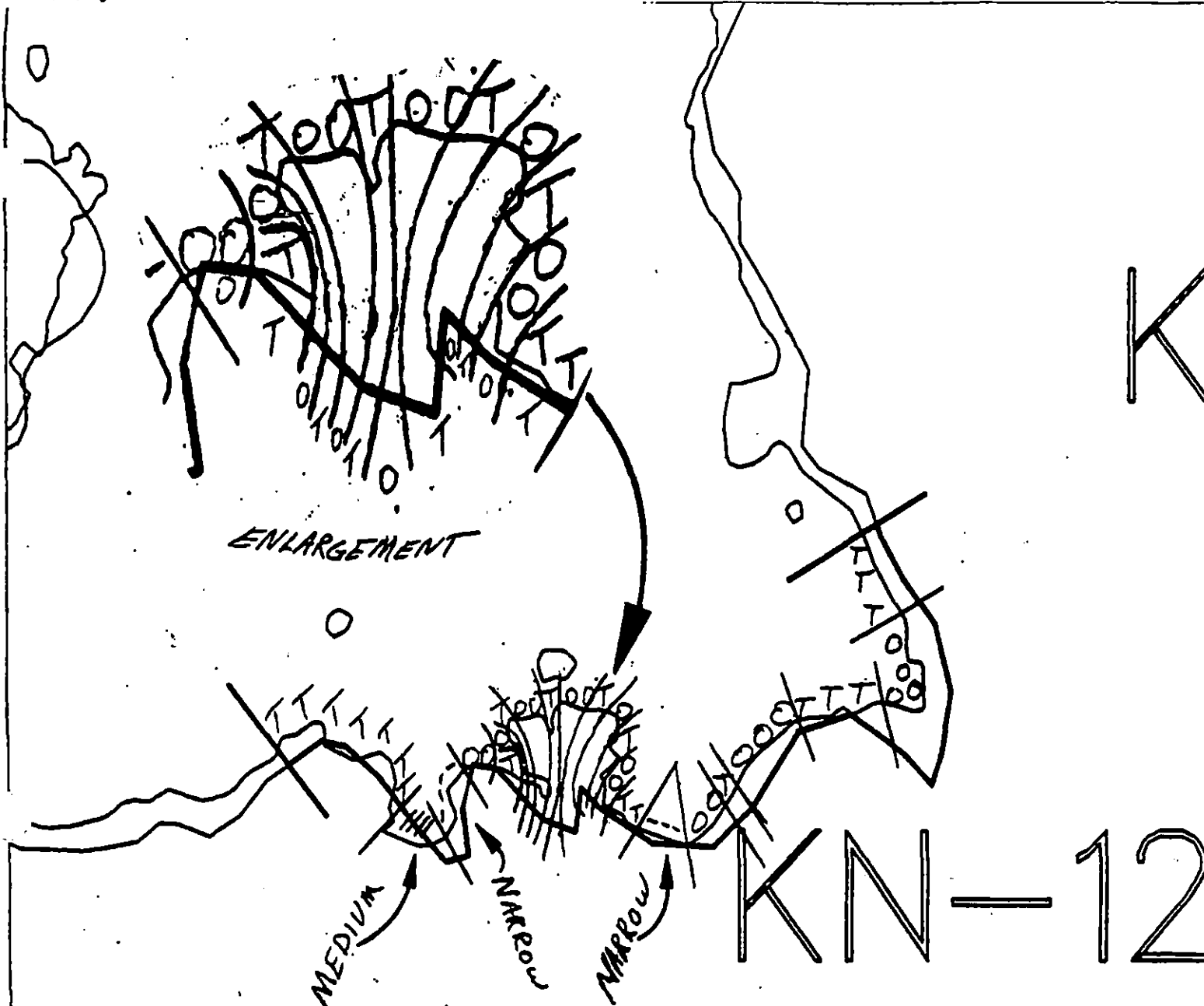
Wildlife Observations/ General Comments:

ONE SEA OTTER SEEN EN ROUTE. A FAIRLY DIVERSE INTERTIDAL COMMUNITY WAS FOUND AT THIS SITE, WHICH CONTAINED NORTH-FACING BEDROCK/BOULDER OUTCROPPINGS WITH POOLS AND MODERATE EXPOSURE. EVIDENCE OF RECRUITMENT /GROWTH SEEN IN

Ecological Considerations:

NONE LISTED.

BARNACLES (SPAT), MYTILUS (YOUNG MEMBRANES), GASTROPODS (LITTORINA AND NUCELLA EGGS), AND FUCUS (SPORULINGS)



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-126

ADEC Segment Length: 1242m



Map Key: PWS-308

Name: Greg Chaney

Date: April 22 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-126 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation	
Manual Raking	
Other Approved Treatment	OPEN
Spot Washing	

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90

ADEC Art Weir Art Weir

EXXON And/ TGA Real

NOAA Joseph T. Galt J. T. Galt

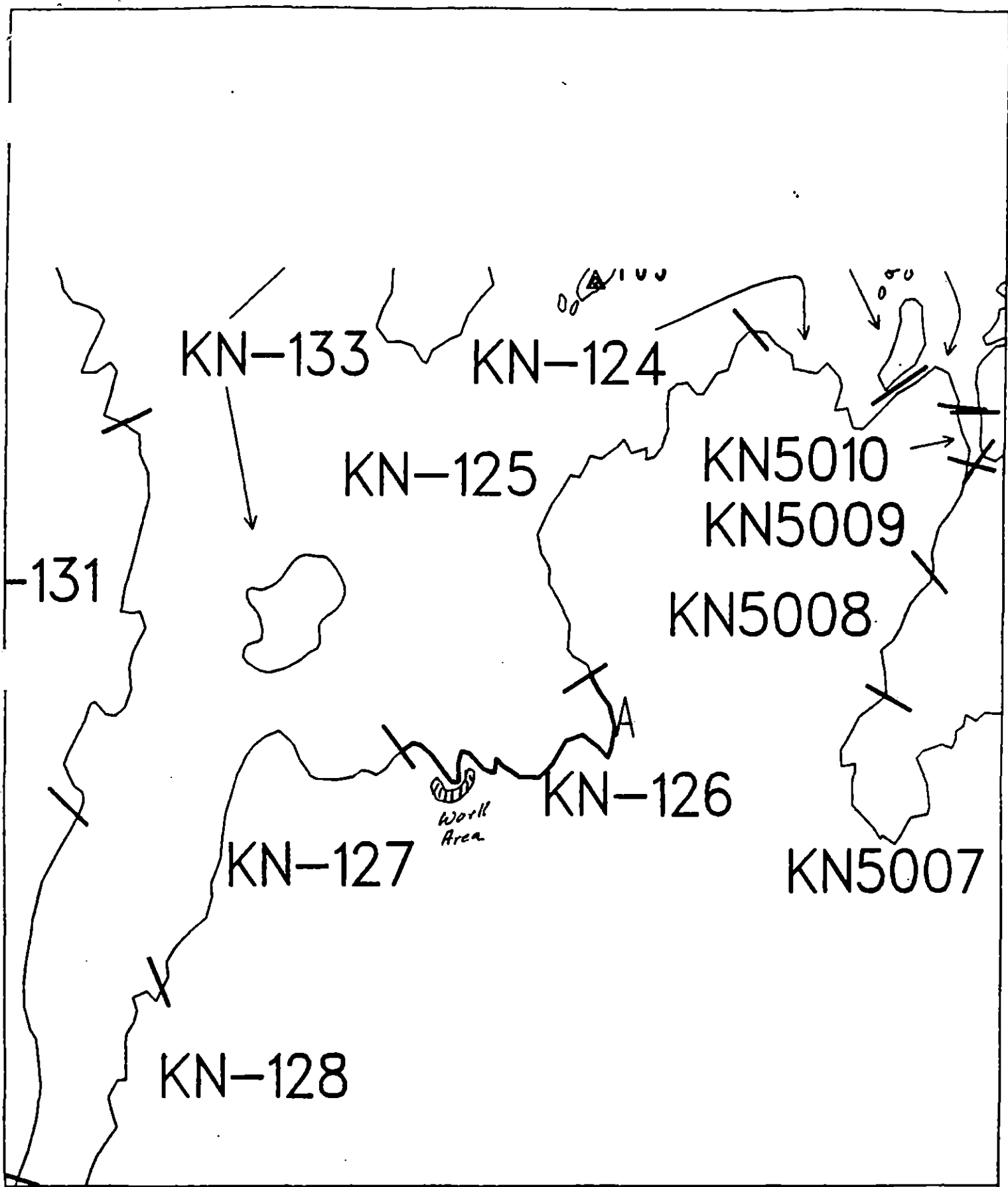
USCG W. J. HALL W. J. HALL

FOSC my L

DATE 5-21-90

Prepared by: Anders Meyer

Date: 5/20/90



Exxon Company, USA

Map Keys KN1-KN126

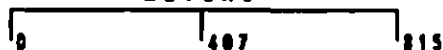
May 11, 1990



ECOLOGY MAP SEGMENT KN-126

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1337 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-126 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Hoffman DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 83 m: Narrow 147 m: V.Light 503 m: No Oil 513 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) spot washing in conjunction with absorbents in area shown on sketch map and 2) rake and bioremediate area of subsurface oil also shown on map. No time constraints identified.

SEE ADDENDUM DATED 5-20-90.
C.DASH

TAG COMMENTS: MONITORS TO ASSES SUITZ

TAG APPROVAL DATE: 5/3/90
ADEC ART WENNER
XXON ANDY TATE
NOAA GARY PETERSON
USCG KENNETH KEANE

FOSC: [Signature] DATE: 5-8-90

1991 MAYSAP EVALUATION

SEGMENT: KN 127 SUB: B REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

MATSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION B DATE 5/23/91

ADEC

NAME JEFF GIVILAS

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL TREATMENT. ALMOST ENTIRE LENGTH OF SEGMENT CONTAINS H1 SOR VARYING TO L2 SOR. ALONG BAND U1Z, CAUGHT UP IN BOULDERS. BEACH PROVIDES EASY SKIFF ACCESS AND OILS BAND EASILY DISCERNIBLE. ROLLING OF BOULDERS COULD REVEAL MORE. MORE SURFACE OIL REMAINS ON THIS SEGMENT THAN MOST TYPICAL BEACHES VIEWED BY SQUAD ONE, MATSAP. BAND MORE WEATHERED, BUT TYPICAL OF HITE BANDS OF 1990 TREATMENT. SUBSURFACE LENS EXISTS MITE, MOSTLY LOW SOR, BUT UPGRADES TO MOR AT SOME SPOTS. WHEN AGITATED, READILY SHEENS. ~~DO~~ DOUBTFUL THAT SUBSURFACE LENS CAN BE TREATED. TOO DIFFICULT TO REACH MANUALLY, AND NOT LARGE ENOUGH TO JUSTIFY MECHANICAL. FOR SURFACE BAND, SHOVELS & TROWELS; ONE CREW ONE DAY.

EXXON

NAME LARRY D OLSON

SIGNATURE [Signature]

☒ NTR

No treatable oiling conditions. Natural degradation process will continue to be effective and least intrusive; small salmon fry and mussel recolonization noticed during survey.

LANDMANAGER

NAME MARSHA HALL OF DNR

SIGNATURE [Signature]

☐ NTR

☒ Treatment

oiling caught at boulder base. Subsurface oil in MITE and SEEMS to come more to surface AS go toward water. Lens is 10 cm thick in MITE covered by pebble - small cobble. I feel it could be RAKED w/ shovels from LITE to MITE on incoming tide, (area of Pits 1,2,3) releasing the oil. This is the type of beach & oil condition where placing on anchor releases a sheen.

USCG/NOAA

NAME SCHULTZ / CHILDS

SIGNATURE [Signature]

☒ NTR

WHAT REMAINS IS MOSTLY SUBSURFACE & UNRECOVERABLE.

BOULDER COBBLE PEBBLE BEACH, MEDIUM ANGLE LOW ENERGY - BEACH IS IN EROSIONAL CYCLE W/ MANY TREES BEING UNDERMINED & TOPPLED OVER - SEDIMENT GRADE FROM B TO CP AT LI - ANGLIAN TO SUB ANGLIAN SEDIMENTS, AP/E IN SMALL AREA @ "A", "B" CONTAINED PATCHY L2 TO H1 SOR IN A BAND ALONG MITE. TYPICAL PATCHY CTE LV X10% ALONG SEGMENT. NW 1/4 END HAD PEBBLE AREA @ LITOMI THAT CONTAINED LOR - MOR WHICH CONTINUED BELOW WL.

PAGE 1 of 1

SEGMENT KN-127

SUBDIVISION B

DATE 5 / 23 / 9:

ENERGY LEVEL $\overline{H}$ $\overline{M}$ $\overline{X}$ $\overline{L}$

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 180 m NO 45 m US m

[illegible]

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

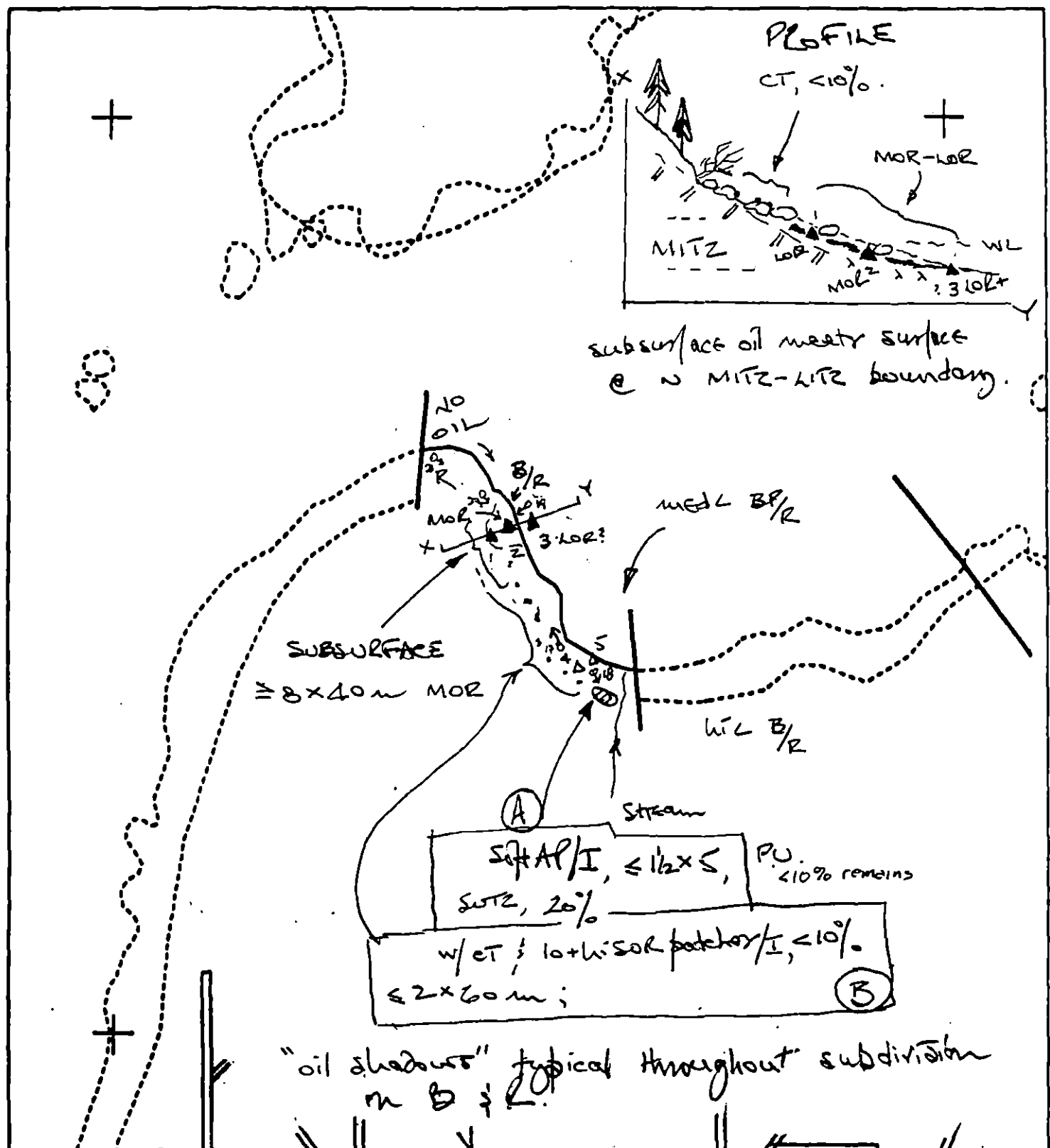
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 721

[illegible]

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

OG COMMENTS: Short length of BL shore, over muddy substrate, becoming more rocky and higher angled to the N. Surface oil as small soil patches (≤ 30 cm dia.) and an associated well weathered CT. Subsurface LOR-MOR, $\geq 8 \times 40$ m, was identified @ MITZ; rainbow sheen w/ brown globules was displaced by walking here, and a silver sheen exists w/ rising tide.

REVIEWED: F.W. 5/25/91



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

KN0127 B
 ADEC Subsegment Length: 225m
 METERS
 AK State Plane Zone 4
 660127b

Subdivision Field Map
 Map Key: KNKN0127B
 Name: G. MACDONALD
 Date: 5.23.91
 Date Entered:



REVIEWED: F.W. 5/25/91

TEAM # 1 DATE 23 May 91
 SEGMENT # KN 127 TIDAL HEIGHT (Range) +3.5 to 5.1 ft, MLLW
 SUBDIVISION B BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION NW 5-10 Knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This low energy shoreline has mostly bedrock and boulder substrate but with gravel or gravel underlying boulders in northwestern half of the subdivision, in the MTZ-LTZ. The surficial oil residue is mostly in the supratidal zone, above high tide except for lichen, oligochaete worms, sparse barnacles & limpets (*Notoacmea* sp.). The buried oil is in the gravel area to the NW, and lies beneath some bare gravel, but also beneath gravel with young mussels beginning to form an extensive bed and beneath boulders with typical MTZ-LTZ biota. See sketch map. Since the buried oil is apparently causing no detrimental effects as it is, and will eventually degrade and disappear, and since removing it would require destruction of the intertidal community now living above it, removal is contraindicated, as far as the intertidal community is concerned.

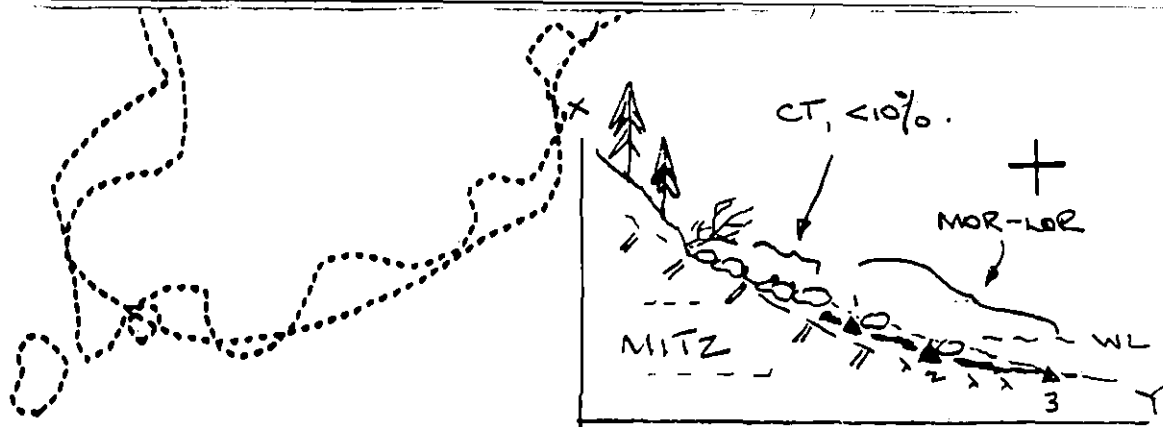
WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	2 (Gw Gull ¹³ Bl. Kittiwake)	6-8	
Shorebirds			
Corvids	1 (Steller's Jay)	1	
Other Birds			

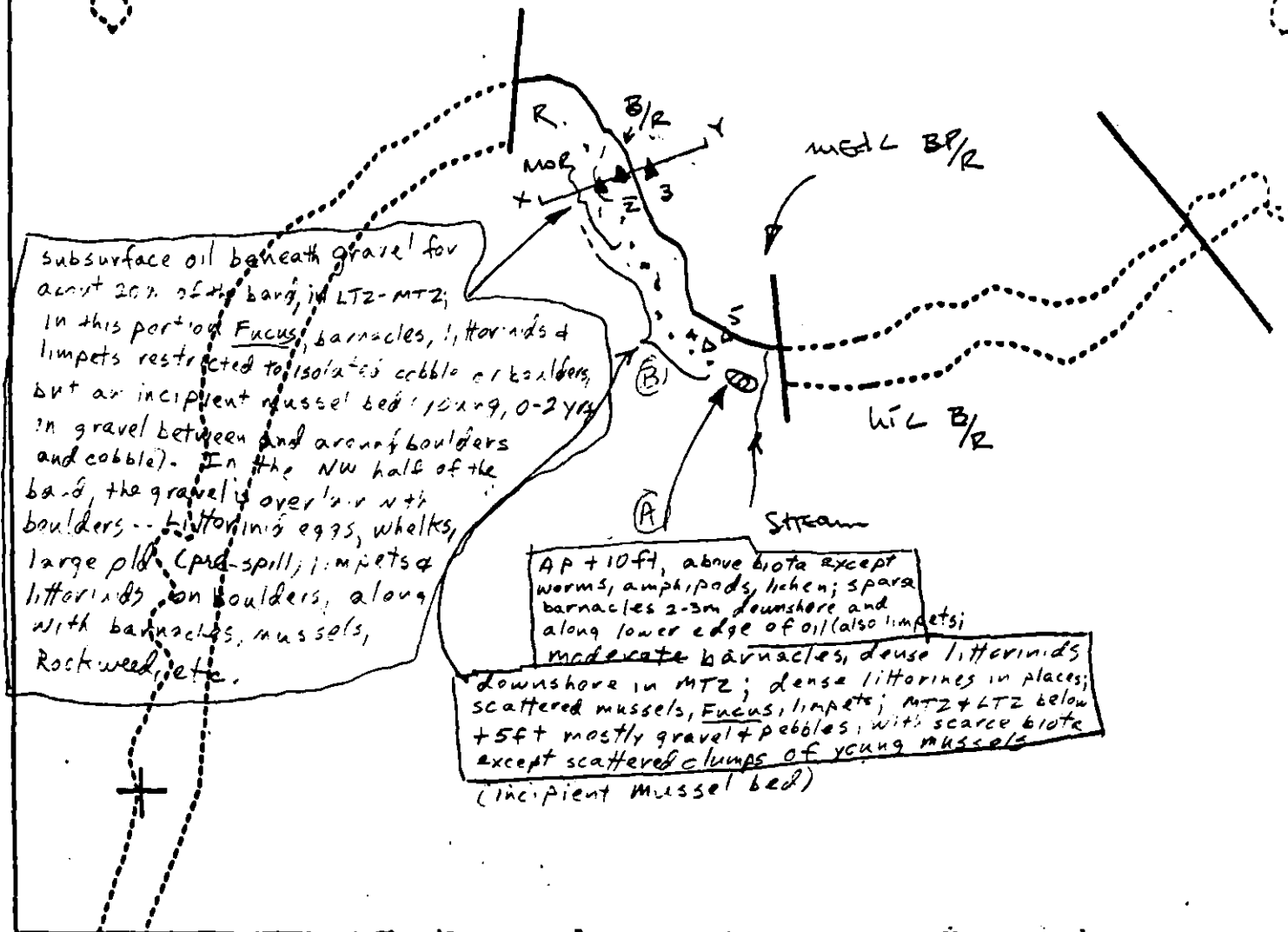
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

+



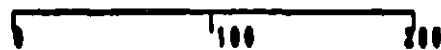
8



KN0127 B

ADEC Subsegment Length: 225m

METERS

AR State Plane Zone 4
6601276

Bio Sketch Map
M. Fawcett
23 May 91

KN 127 B 5/23/96 Fawcett

Start 1805 hrs at stream -

- mod. Fucus, dense barn MTZ-UTZ
in stream runoff - also Filgreen

- soft west side of stream + 10 ft

- worked, amphipods, holon in it,

sparse barn 2-3m downshore &
along lower edge of CT & soft

for most of the length of
the beach - mod barnacles,

dense litt. in MTZ below

about half of the beach (+ 5-7 ft),
pebbles & ^{mod. litt.} gravel below

+ 5, or 5m downshore of SOR

- scattered sparse mussels + 5-7,

sparse Fucus & limp

- MTZ below + 5 & LTZ mostly

all gravel / pebbles, mostly any

biota except on isolated C/B

(Fucus, barn, limp)

- not very sensitive site

- CT / CV / traces SOR or BP continue

along at + 8 - 11 ft to end of

segment - all B/C/P some BR -

- mod barn, lim p, Fucus, litt,

sparse mussels below -

sparse to mod. *N. perssoni* & litt

in lower edge of CT, also sparse

barnacles

1 Steller's jay

6-8 gulls & Kittiwakes

- low energy beach

- subsurface oil in MTZ + 4 - 6 ft

in gravel - no biota except

on isolated C/B (Fucus, barn,

limp, litt) - mod. dense young

mussels in the gravel around

& between boulders, above the

surface oil - oil goes out

to about + 2 ft MLLW -

buried oil extends next to

dense boulders on top of gravel -

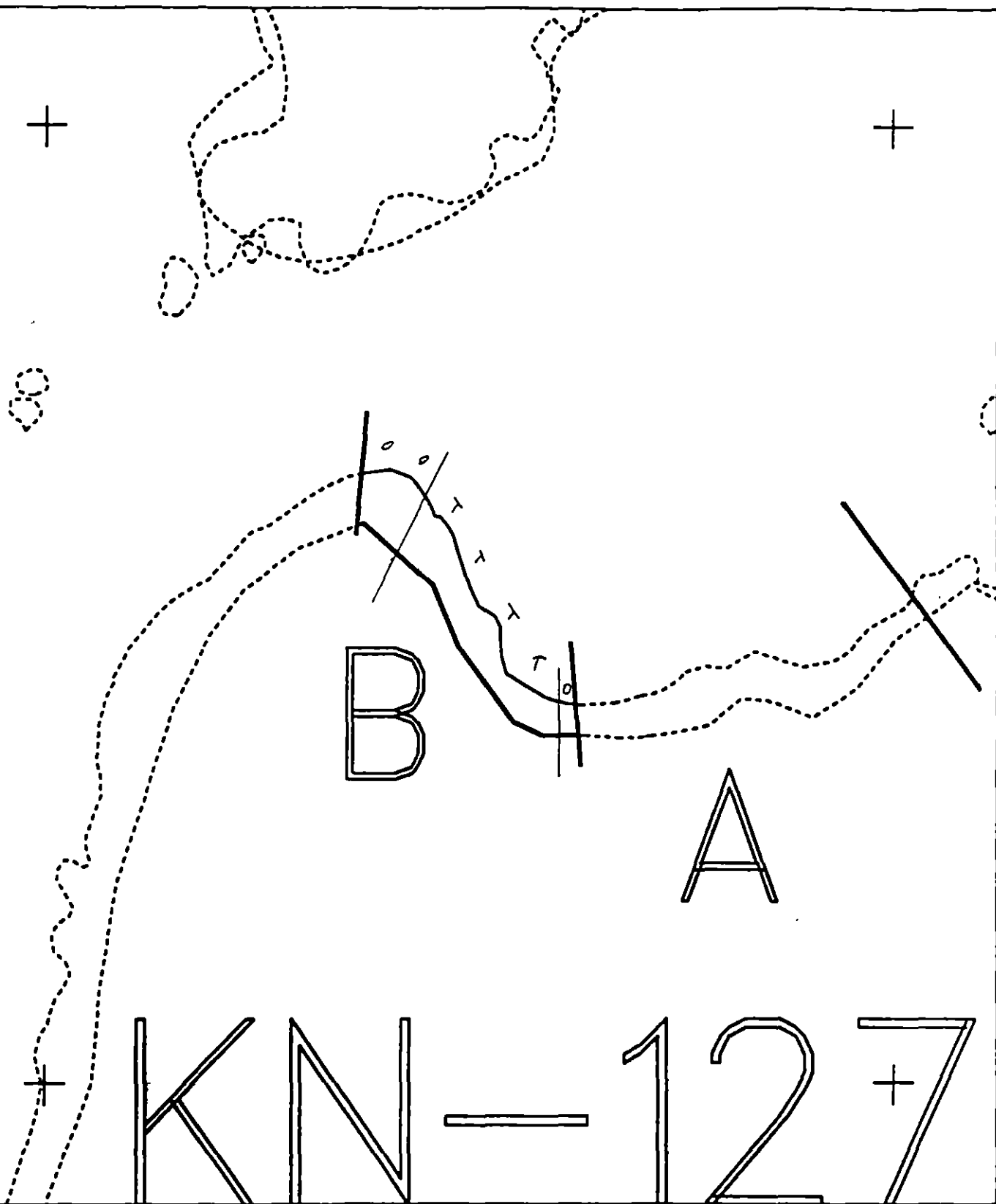
Littorina eggs under MTZ boulders,

some large old *N. scutellatus* (10-15 ft)

- sparse *Nucella emarginata*

- also some very large, old littorines

and 1900



XXXX	Wide	KN0127 B	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 225m	Map Key: KNKN0127B
----	Narrow	METERS	Name: <u>G.M.</u>
TTTT	Very Light	0 100 200	Date: <u>5.23.91</u>
0000	No Oil	AK State Plane Zone 4	Date Entered:
		KN0127b	



REVIEWED: F.W. 5/25/91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-127 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation*	OPEN

*Use Customblen Only - Do Not Use Inlpol

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

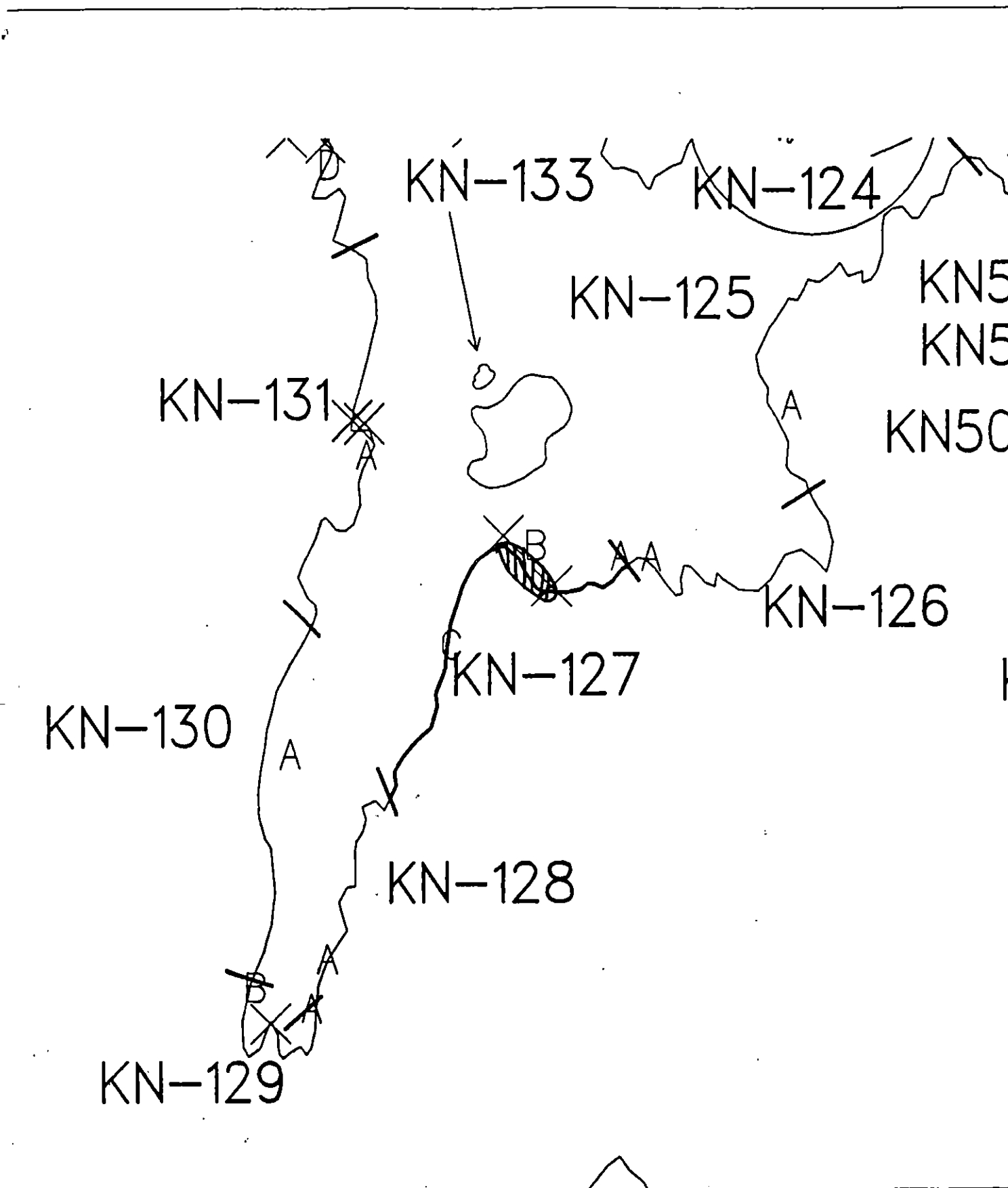
Date

7-12-90

Prepared by

Date

7/12/90



Exxon Company, USA
Map Key: PWS-KN-127
June 09, 1990



0 425 846

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

1 inch = 1387 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION B (2 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
Pinnipeds within 400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Ann Olsen DATE: 5/22/90

OILING CATEGORIZATION:

Wide 0 m: Medium 225 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of oiled
logs and vegetation in areas indicated on sketch map, 2) spot hot water
washing of upper ITZ in area indicated on sketch map, 3) manual tilling
of mid and lower ITZ in area indicated on sketch map, and 4) bioremedi-
ation of upper, mid, and lower ITZ in area indicated on sketch map.
Work should be conducted between 7/1 and 8/15 based on pinniped con-
straints with the exception of inipol which should only be applied from
7/2 to 7/31.

SEE CONSTRAINTS ADDENDUM DATED 7/12/90

TAG COMMENTS: SEE TAG ADDENDUM SKETCH 5/12/90 - MANUAL
REMOVAL OF DEBRIS + OILED TREE LIMBS AS INDICATED. BIOREMEDIATION
USING CUSTOM-BLEN AS INDICATED

TAG APPROVAL DATE: 5/21/90

ADEC ART WINTER

EXXON ANDY TAN

NOAA Joseph Talbot

USCG G.A. REITER

FOSC: [Signature]

DATE: 6-19-90

1991 MAYSAP EVALUATION

SEGMENT: KN 127 SUB: A REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION A DATE 5/23/91

ADEC

NAME JEFF GONALIAS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL. ~~IF~~ A TRACE OF COAT ALONG BORDERS

EXXON

NAME _____ SIGNATURE _____

☒ NTR No treatable oiling conditions exist.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☒ NTR Area B fairly steep boulder/cobble beach. CT well weathered.

USCG/NOAA

NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL REMAINING

TRACE SURFACE OIL - CT: ST @ NE-SE - NO SIGNIFICANT OIL ENCOUNTERED

PAGE 1 OF 1

SEGMENT KN-127

SUBDIVISION A

DATE 5 / 23 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

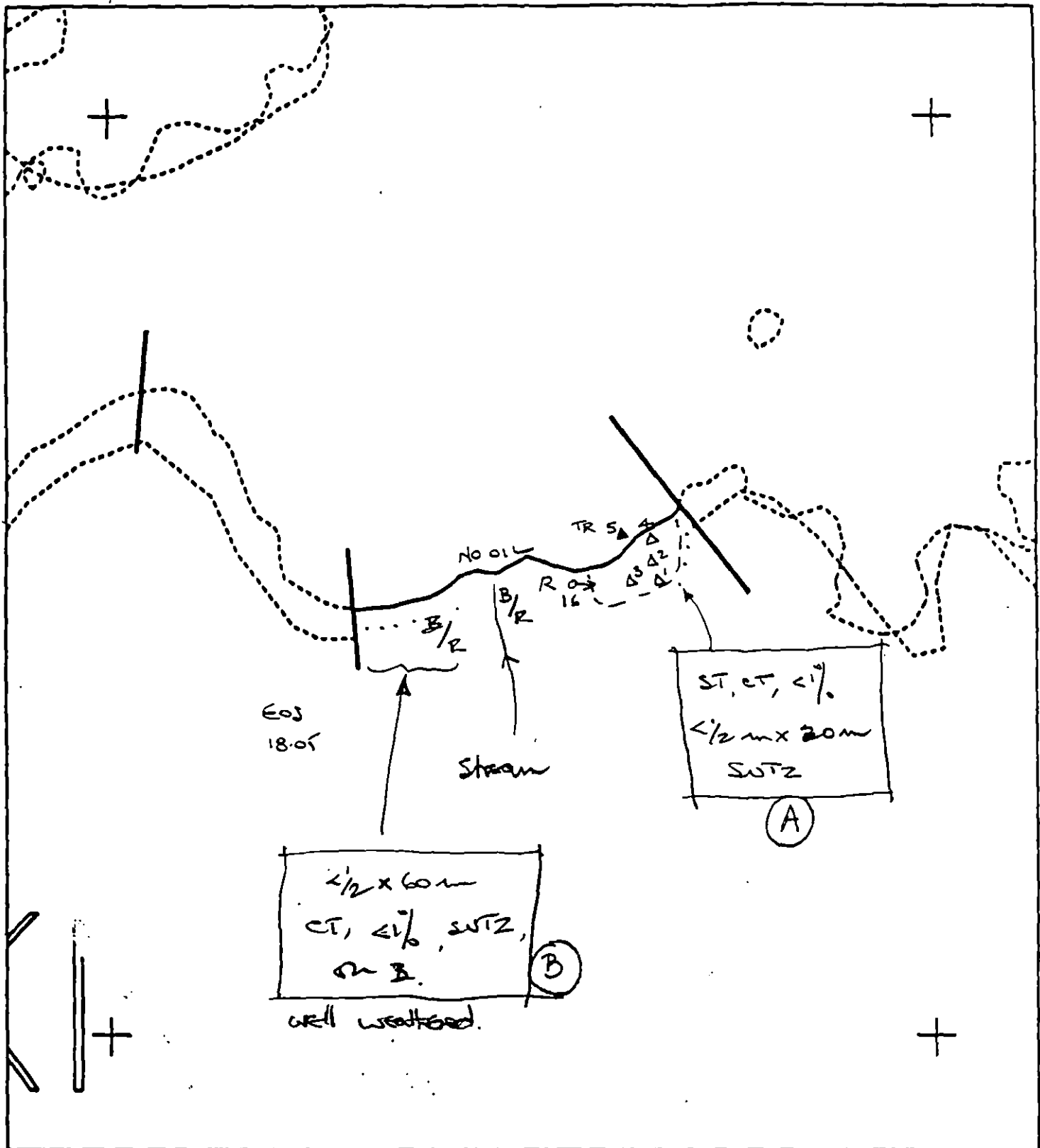
NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 90 m NO 185 m US - m

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 16

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

REVIEWED: F.W. 5/25/91



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0127 A
ADEC Subsegment Length: 201m
METERS

AK State Plane Zone 4
55001270



Subdivision Field Map
Map Key: KNKN0127A
Name: G. MASON
Date: 8-23-91
Data Entered:

REVIEWED: F.W. 5/25/91

TEAM # 1 DATE 23 May 91
 SEGMENT # KN 127 TIDAL HEIGHT(Range) +3.5 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

A short subdivision with bedrock and boulder shoreline (some cobble and pebbles in eastern half), and a small, non-anadromous fish stream. Typical low-energy boulderfield biota: barnacles & Fucus on boulders & cobble, mussels sparse to dense between larger sediments, Littorinids & limpets moderate to dense. Barnacles and Fucus more dense and further upshore in stream runoff. LTZ has Fucus, Scytosiphon, Ulva, Enteromorpha, and filamentous brown algae often covering others.

See sketch map for descriptions of biota near residual oil coat

WILDLIFE OBSERVATIONS

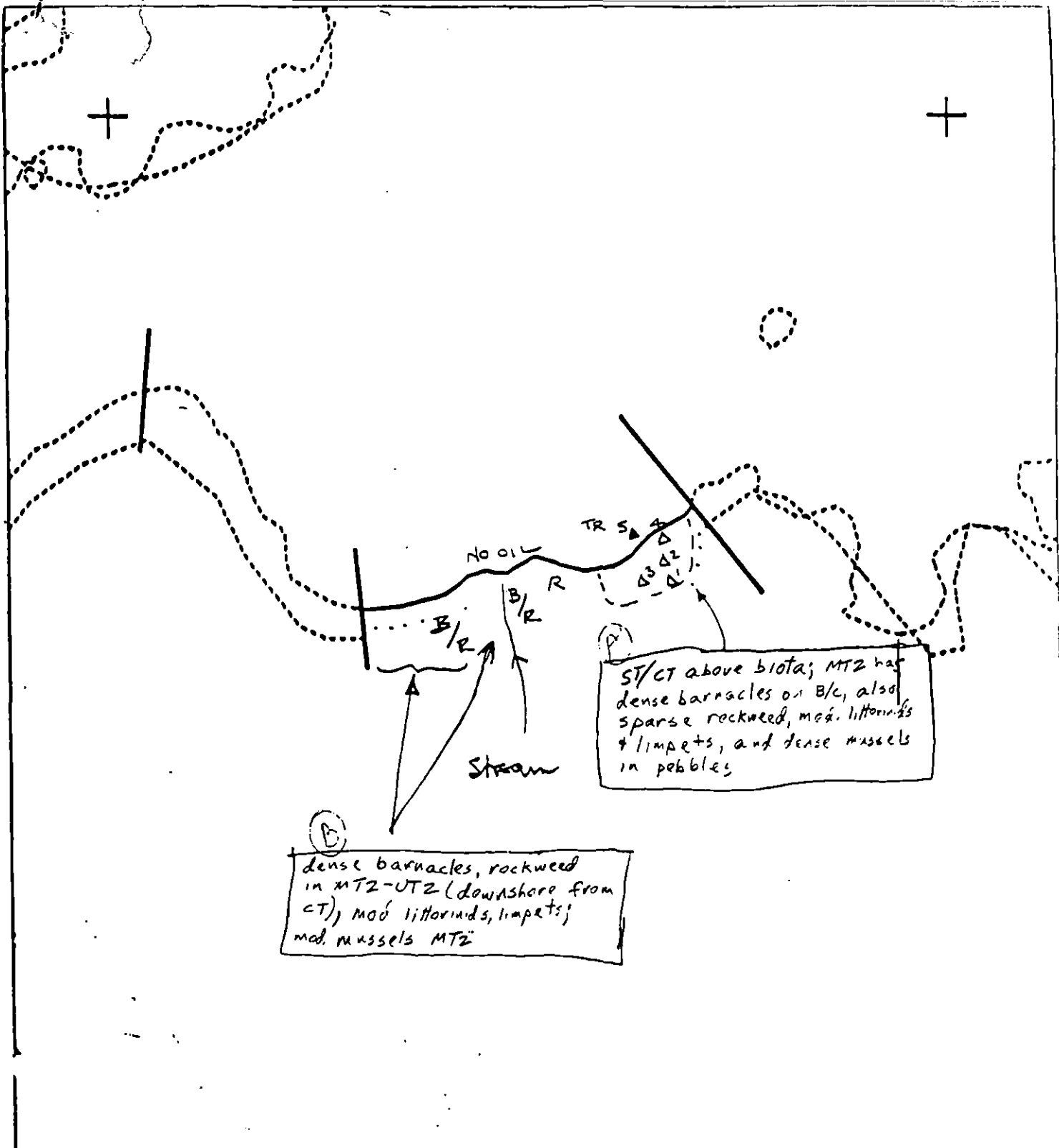
TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Rev'd sketch DM-4



KN0127 A

ADEC Subsegment Length: 281m

METERS



AK State Pseudo Zone 4
kn0127a



BIO Sketch Map

M. Fawcett

23 May 91

KN 127A 5/23/91 Fawcett

start 1745

B/C/P beach

- dense barn on boulders & lg. cobbles,
not on pebbles - ~~sp.~~ MTZ - also,
sparse Fucus, mussels (dense + 4 - + 6) among
pebbles; Fucus on C/E 19 - mod
Litt, Limp

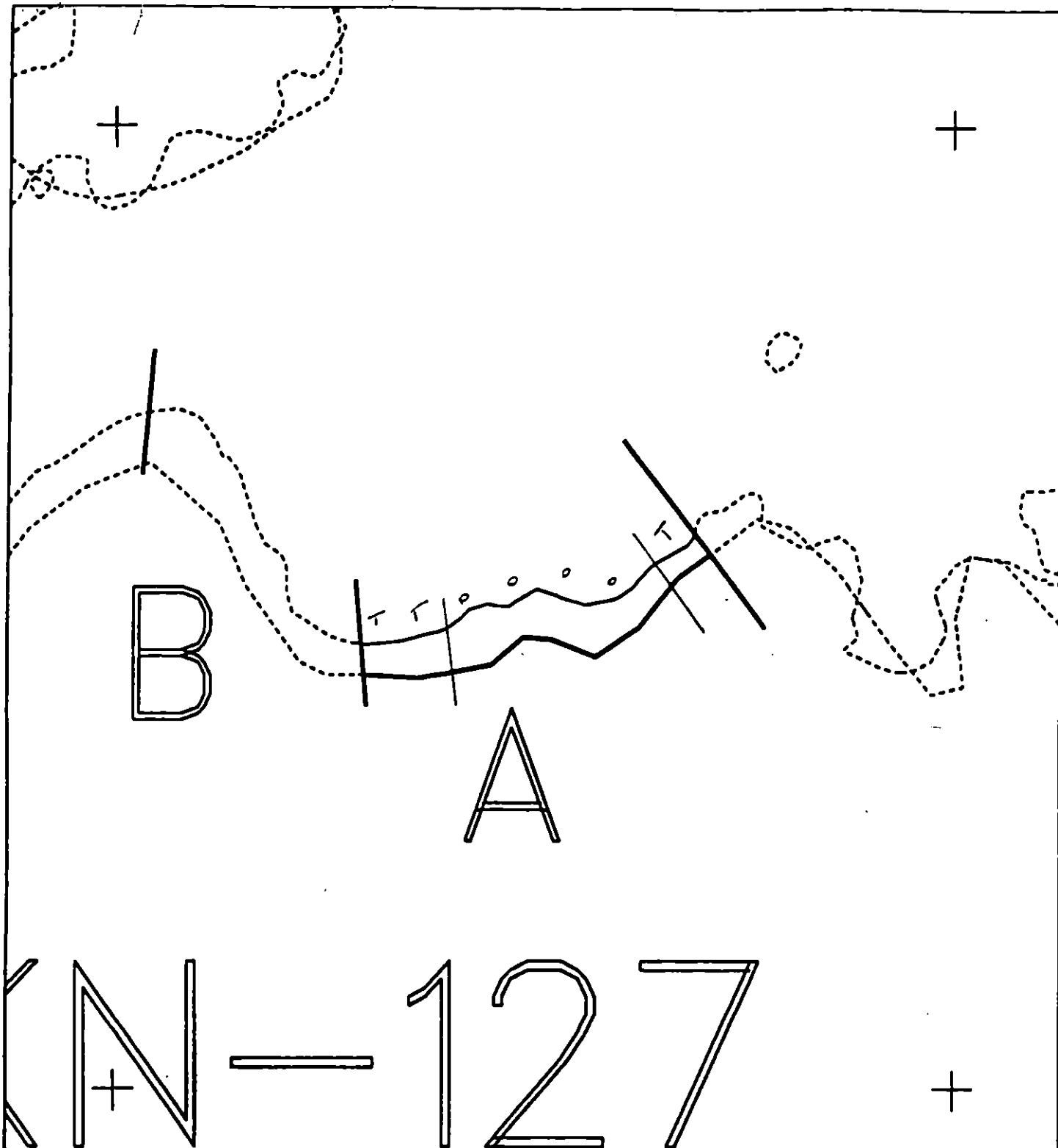
LTZ w/ mod Fucus, fil. bry mats,
Scyph, Entero, VLR -

Fucus & Litt become much more
dense to west in MTZ

1755 - Normal stream -

dense barn, Fucus MTZ-LTZ -
continues to end

1805 - end Subdiv 1



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0127 A

ADEC Subsegment Length: 281m
METERS

5 100 200
AK State Plane Zone 4
22a0127a



Subdivision Field Map

Map Key: KNKN0127A

Name: GM

Date: 5-23-91

Date Entered:

REVIEWED: F.W. 5/25/91

1991 MAYSAP EVALUATION

SEGMENT: KN 127 **SUB:** C **REGION:** PWS **SURVEY DATE:** 5/24/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION C DATE 5/24/91

ADEC

NAME

EFF GINALIAS

SIGNATURE

[Signature]

☒ NTR

NO TREATMENT. OCCASIONAL COAT ON BOULDERS/BEDROCK; NONE RECOVERABLE

EXXON

NAME

LARRY D. OLSON

SIGNATURE

[Signature]

☒ NTR

no recoverable oil found.

ANDMANAGER

NAME

Maisha HALL

OF

DNR

SIGNATURE

[Signature]

☒ NTR

no recoverable oil found

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

[Signature]

☒ NTR NO TREATMENT OIL FOUND.

STEEP PINOW LAVA SHORELINE w/ MED ANGLE LOW ENERGY CPB BEACHES
OIL DETECTED WAS CT, CV, ST @ HI, TYPICAL, & SMALL AREA OF LO SOR.

PAGE 4 OF 1

SEGMENT KN-127

SUBDIVISION C

DATE 5 / 24 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 370 m NO 560 m US m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 30 FRAMES 21~23

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

OG COMMENTS: Steep rock shore w/ occasional B choked gullies.
Surface oil only, as sporadic CT, CV, ST and a patch of
to sol. The CT, CV is flaking off the rocks.

revised 5.27.97

1

A

① CT, <1%
≤1x20

② 10 SOR, 2x5
≤10%, SUT2

"oil shadow"
throughout.

CT, <1%, ≤1x30m

③

steep R slope
w/ B/R

flaking/peeling CT; lichen.

HITZ
ST, CT, CV, <10%
≤1x30m

④

KN-127C

G. MACDONALD

S. 24.91

0 150m

reviewed S. 27.91 2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 24 May 91
 SEGMENT # KN 127 TIDAL HEIGHT(Range) +4.0 to +5.0 ft
 SUBDIVISION C BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision is mostly steep pillow lava shoreline, except for small stream mouths and avalanche rubble. Remaining oil is very light and above nearly all intertidal biota. see sketch map for descriptions of biota near remaining oil.

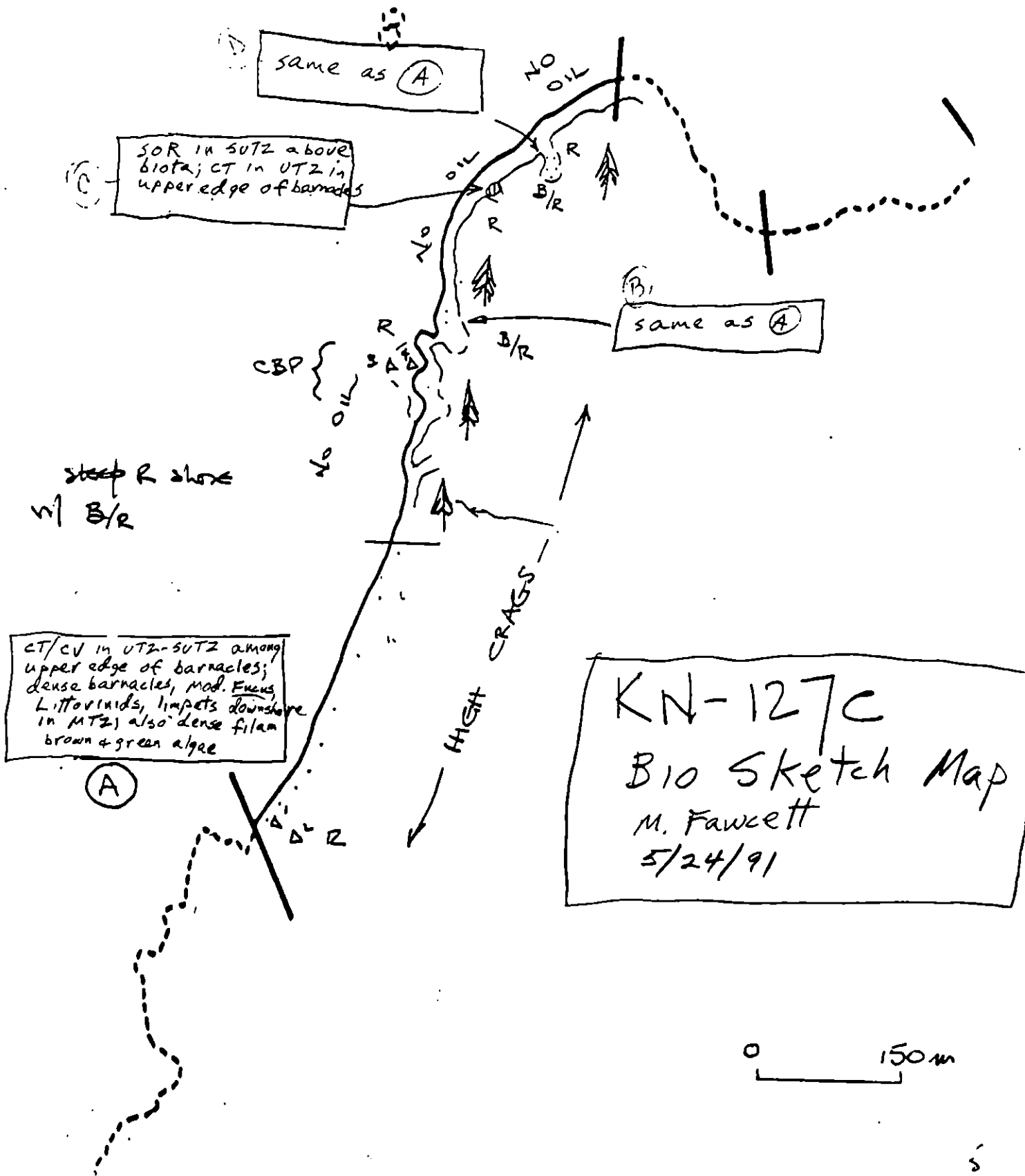
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	tidepool scalpin
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds	1 (sandpiper sp.)	1	
Corvids			
Other Birds	1 (hummingbird sp.)	2	

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

Shoreline subdivision map showing important biological features attached.



KN 127C 5/24/91 Facett
slant 1920 -

- same habitat as 128A -

pillow lava vertical to moderate slope,
boulders rubble in some areas

- dense bare M.T.Z., mod. Fucus,
fil. brown, algae, etc.

- Tr. det. + 8-12 ft

1925 - B/C/P rubble

- 1 eagle flying by

1930 - snow & chute B/C/P/LG low &
slope - dense barn on boulders up

to + 8 ft, sparse on small stuff -
mod litt M.T.Z. (many young)

- dense Fucus below to + 5 ft (vertical)
- sculpins

- patchy intertidal mussels up to + 6
no oil

1935 1 sculpin

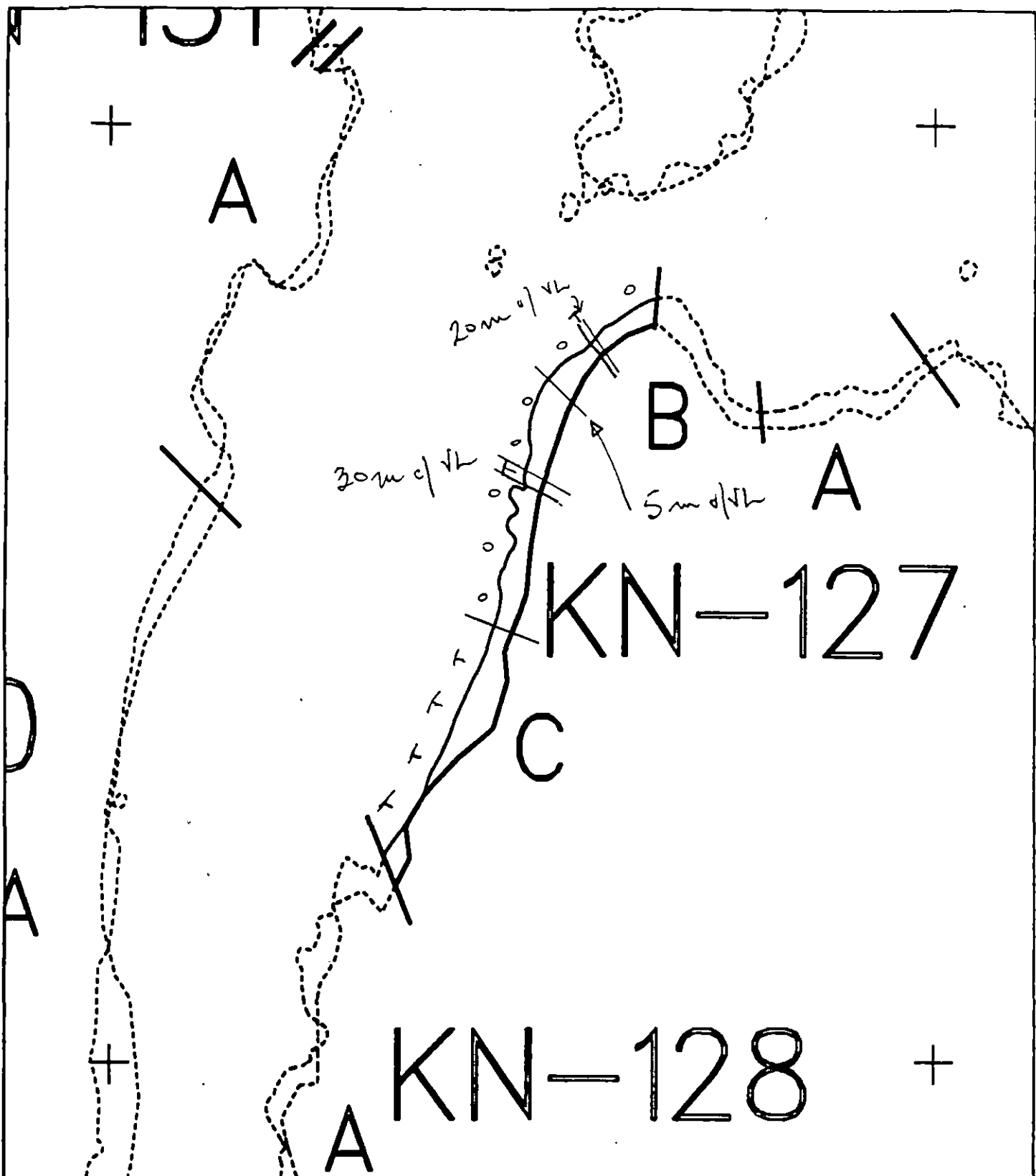
1945 - small NWK feeding pocket
CT/LG SOR in SUTZ CT in UTZ

CT in upper edge of barn - dense
barn, Fucus below

- 2 hummingbirds

1950 - East Pocket - CT UTZ-SUTZ

finish 1955



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0127 C

ADEC Subsegment Length: 829m
METERS

5 100 200
AK State Plane Zone 4
Easting 1270



Subdivision Field Map
Map Key: KNKN0127C
Name: GM
Date: 5.24.91
Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 127 SUB: A REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy P. Smith Date: 6/8/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 6 1991

FOSC APPROVAL DATE: 6/10/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION A DATE 5/23/91

ADEC

NAME JEFF GONALIAS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL. ~~TR~~ A TRACE OF COAT ALONG BOUNDRY

EXXON

NAME _____ SIGNATURE _____

☒ NTR No treatable oiling conditions exist.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE Marsha Hall

☒ NTR Area B fairly steep boulder/cobble beach. CT well weathered.

USCG/NOAA

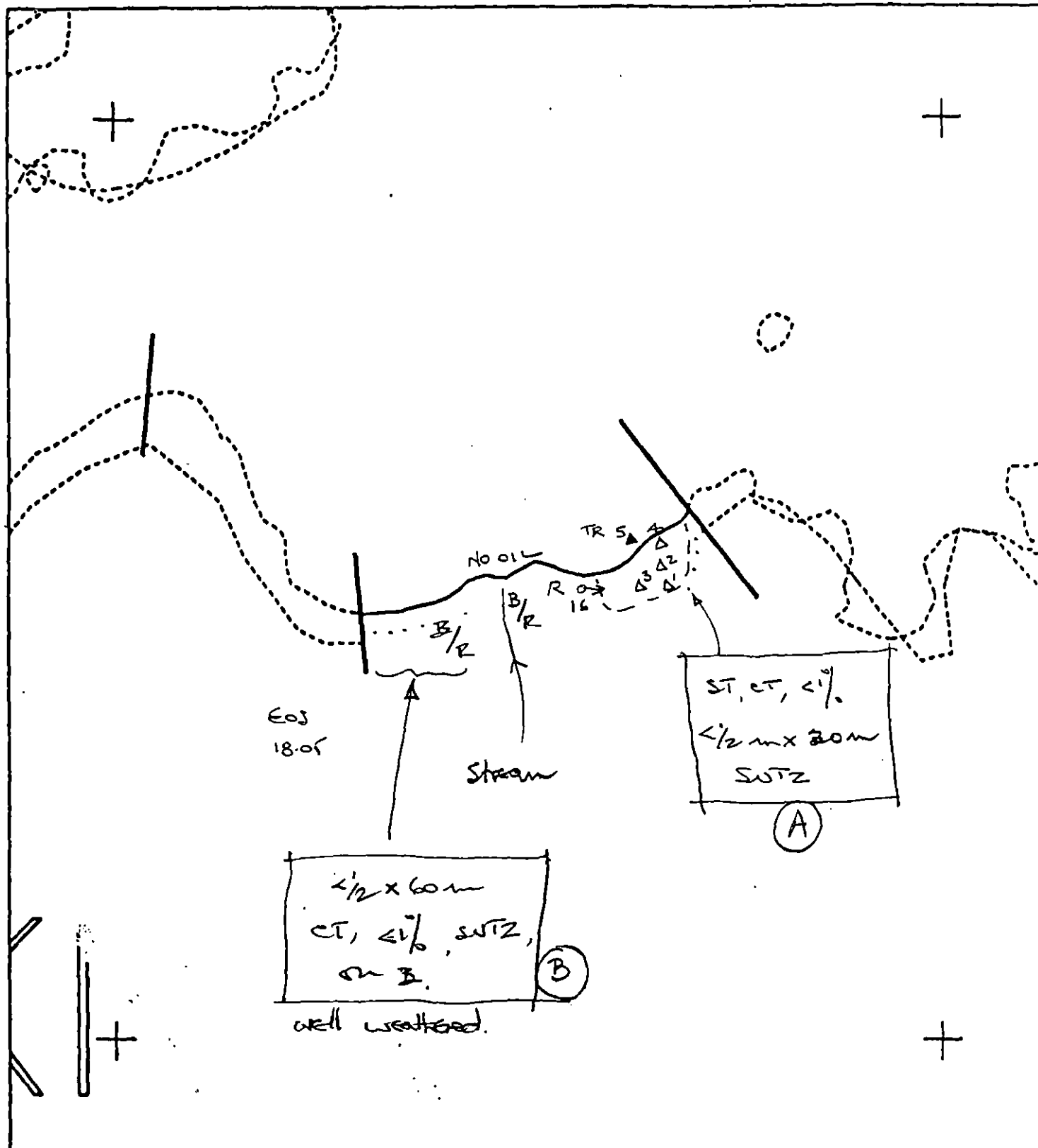
NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR NO RECOVERABLE OIL REMAINING

TRACE SURFACE OIL - CT: ST @ NE-SE - NO SIGNIFICANT OIL ENCOUNTERED

PAGE 1 OF 1

REVIEWED: F.W. 5/25/91



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

KN0127 A
 ADEC Subsegment Length: 281m
 METERS

AK State Plane Zone 4
 6 100 200
 440127a



Subdivision Field Map

Map Key: KNKN0127A

Name: G. MASON

Date: 8-23-91

Date Entered:

REVIEWED: F.W. 5/25/91

TEAM # 1 DATE 23 May 91
 SEGMENT # KN 127 TIDAL HEIGHT(Range) +3.5 ft MLLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A short subdivision with bedrock and boulder shoreline (some cobble and pebbles in eastern half), and a small, non-anadromous fish stream. Typical low-energy, boulderfield biota: barnacles & *Fucus* on boulders & cobble, mussels sparse to dense between larger sediments, Littorinids & limpets moderate to dense. Barnacles and *Fucus* more dense and further upshore in stream runoff. LTZ has *Fucus*, *Scytosiphon*, *Ulva*, *Enteromorpha*, and filamentous brown algae often covering other species.
 See sketch map for descriptions of biota near residual oil coat.

WILDLIFE OBSERVATIONS

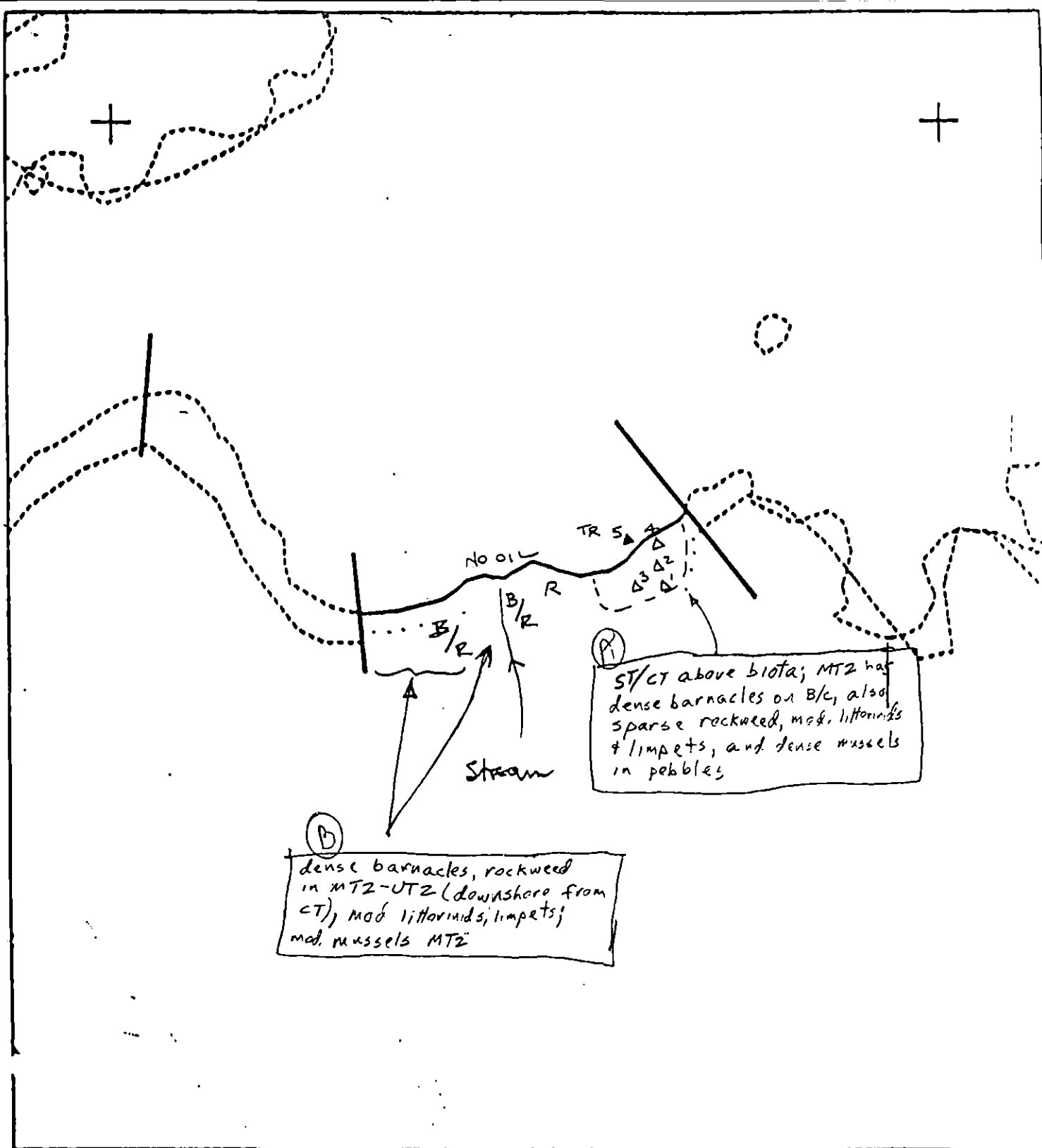
TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Print 3/6/91 DM⁴



KN0127 A
ADEC Subsegment Length: 201m
METERS

100 200

AK State Plane Zone 4
KN0127a



BIO Sketch Map
M. Fawcett
23 May 91

KN 127A 5/23/91 Farwell

start 1745

B/C/P beach

- dense barn on boulders & lg. cobbles,
rot on pebbles - ~~sp~~ MTZ - also
sparse Fucus, mussels (dens + 4 - + 6) among
pebbles; Fucus on C/E 19) - mod
Litt, Limp

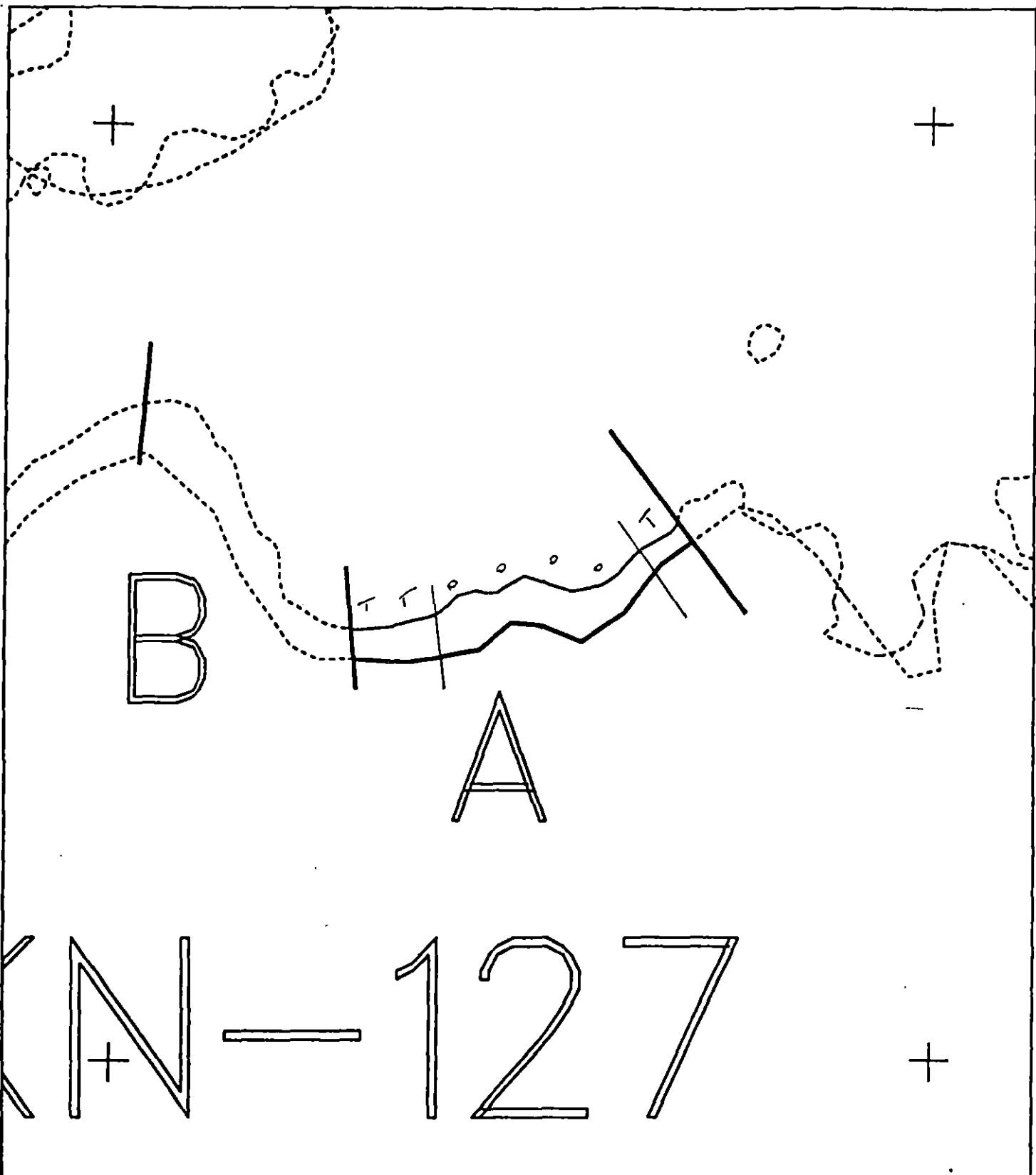
LTZ w/ mod Fucus, fil. bryozoans,
Scyto, Enteromorpha, VLR -

Fucus & Litt become much more
dense to west in MTZ

1755 - Non avar. stream -

dense barn, Fucus MTZ-UTZ -
continues to end

1805 - end Subdivisions



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

KN0127 A
 ADEC Subsegment Length: 281m

METERS
 0 100 200
 AK State Plane Zone 4
 kn0127a



Subdivision Field Map
 Map Key: KNKN0127A
 Name: GM
 Date: 5-23-91
 Data Entered:

REVIEWED: F.W. 5/25/91

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION C DATE 5/24/91

ADEC
NAME EFF GINGLAS SIGNATURE [Signature]

☒ NTR NO TREATMENT. OCCASIONAL COAT ON BOULDERS/BEDROCK; NONE RECOVERABLE

EXXON
NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR No recoverable oil found.

LANDMANAGER
NAME Maisha HALL OF DNR SIGNATURE Maisha Hall

☒ NTR no recoverable oil found

USCG/NOAA
NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR NO TREATABLE OIL FOUND.

STEEP PILLOW LAVA SHORELINE w/ MED ANGLE LOW ENERGY CPB BEACHES
OIL DETECTED WAS CT, CV, ST @ HI, TYPICAL, & SMALL AREA OF LO SUR.

PAGE 1 OF 1

revised 5.27 97

A

(C) 10 SOR, 2x5
 $<10\%$, SUTZ

"oil shadow"
 throughout.

(D) CT, $<1\%$
 $<1 \times 20$

CT, $<1\%$, $\leq 1 \times 30m$
 (B)

HITZ
 ST, CT, CV, $<10\%$
 $\leq 1 \times 315m$

(A)

CBP
 No OIL

HIGH CRAGS

KN-127C

G. MACDONALD
 5.24.91

0 150m

reviewed 5.27.91

2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 24 May 91
 SEGMENT # KN 127 TIDAL HEIGHT (Range) +4.0 to +5.0 ft
 SUBDIVISION C BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

This subdivision is mostly steep pillow lava shoreline, except for small stream mouths and avalanche rubble. Remaining oil is very light, and above nearly all intertidal biota. see sketch map for descriptions of biota near remaining oil.

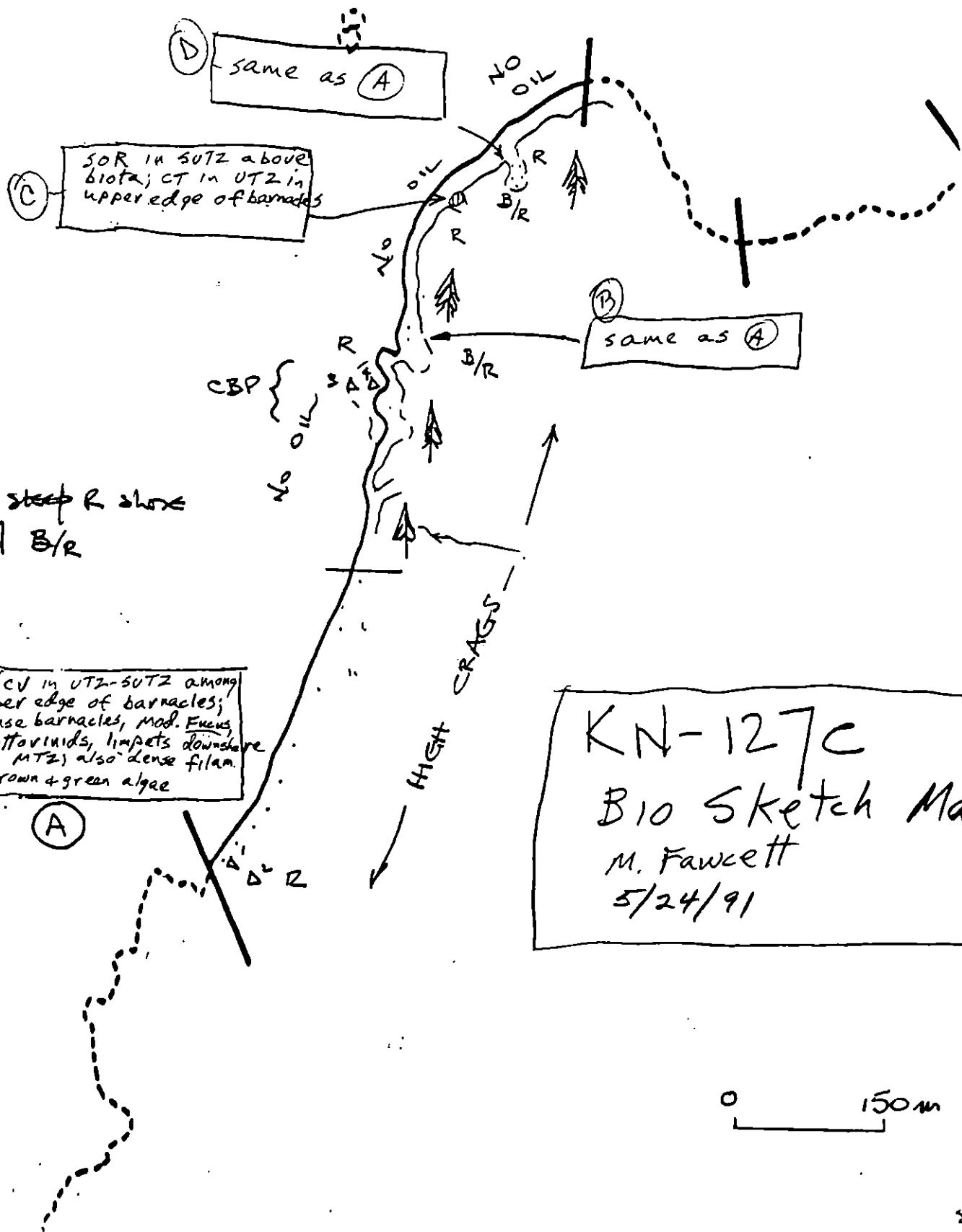
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	tidepool sculpin
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds	1 (sandpiper sp.)	1	
Corvids			
Other Birds	1 (hummingbird sp.)	2	

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

Shoreline subdivision map showing important biological features attached.



KN 127C 5/24/91 Foxett
slant 1920 -

- same habitat as 128A -

- pillow lava vertical to moderate slope,
boulder rubble in some areas

- dense barn MTZ, mod. Fucus,
fil brown, algae, etc

- Tr. det + 8-12 ft

1925 - B/C/P rubble

- 1 eagle flying by

1930 - snow white B/C/P/LG low $\angle$
slope - dense barn on boulders up

to + 9 ft, sparse on small stuff -
mod litt MTZ (many young)

- dense Fucus below ~~to~~ +5 ft (vertical)

- sculpins

- patchy intertidal mussels up to +6
no oil

1935 1 sculpin

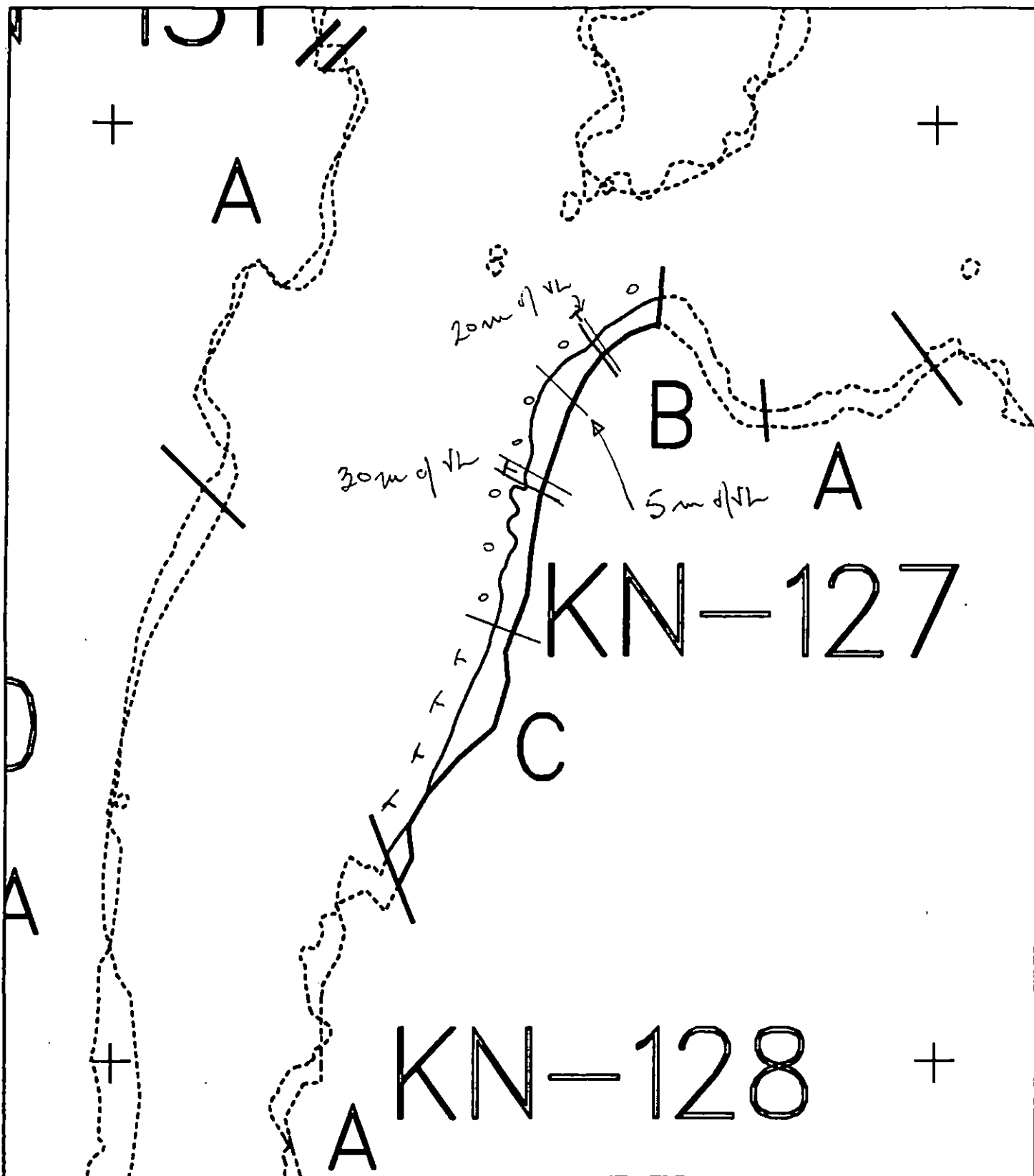
1945 - small NWK foamy pocket
CT/ LcSOR in SVTZ CT in VTZ

CT in upper edge of barn - dense
barn, Fucus below

- 2 hummingbirds

1950 - last pocket - CT VTZ-SVTZ

finish 1955



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

KN0127 C
 ADEC Subsegment Length: 929m
 METERS
 0 200 400
 AK State Plane Zone 4
 kn0127c



Subdivision Field Map
 Map Key: KNKN0127C
 Name: GM
 Date: 5.24.91
 Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 127 SUB: B REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: *[Signature]* Date: 6/04/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC**TREATMENT REQUIRED (Y or N)**

N

A

1

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/8/9

ADEC

FOSC

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

EXXON

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT KN 127 SUBDIVISION B DATE 5/23/91

ADEC

NAME JEFF GUNNAS

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL TREATMENT. ALMOST ENTIRE LENGTH OF SEGMENT CONTAINS H1 SOR VARYING TO L2 SOR. ALONG BAND LITE, CAUGHT UP IN BOULDERS. BEACH PROVIDES EASY SKIFF ACCESS AND OILS BAND EASILY DISCERNIBLE. FILLING OF BOULDERS COULD REVEAL MORE. MORE SURFACE OIL REMAINS ON THIS SEGMENT THAN MOST TYPICAL BEACHES VIEWED BY SQUAD ONE, MAYSAP. BAND MORE WEATHERED, BUT TYPICAL OF HITE BANDS OF 1990 TREATMENT. SUBSURFACE LENS EXISTS MITE, MOSTLY LOW SOR, BUT UPGRADES TO MOR AT SOME SPOTS. WHEN AGITATED, READILY SHEENS. ~~AND~~ DOUBTFUL THAT SUBSURFACE LENS CAN BE TREATED. TOO DIFFICULT TO REACH MANUALLY, AND NOT LARGE ENOUGH TO JUSTIFY MECHANICAL. FOR SURFACE BAND, STROVERS & TROWERS; ONE CREW ONE DAY.

EXXON

NAME LARRY D OLSON

SIGNATURE [Signature]

☒ NTR

No treatable oiling conditions. Natural degradation process will continue to be effective and least intrusive. Small salmon fry and mussel recolonization noticed during survey.

LANDMANAGER

NAME MARSHA HALL OF DNR

SIGNATURE [Signature]

☐ NTR

☒ Treatment

oiling caught at boulder bank Subsurface oil in MITE and SEEMS to come more to surface AS go toward water. Lens is 10 cm thick in MITE covered by pebble - small cobble. I feel it could be RAKED w/ shovels from LITE to MITE on incoming tide, (area of Pits 1,2,3) releasing the oil. This is the type of beach + oil condition where placing an anchor releases a sheen.

USCG/NOAA

NAME SCHULTZ/CHILDS

SIGNATURE [Signature]

☒ NTR

WHAT REMAINS IS MOSTLY SUBSURFACE & UNRECOVERABLE.

BOULDER COBBLE PEBBLE BEACH, MEDIUM ANGLE LOW ENERGY - BEACH IS IN EROSIONAL CYCLE W/ MANY TREES BEING UNDERMINED & TOPPLED OVER - SEDIMENTS GRADE FROM B TO CP AT LI - ANGULAR TO SUB ANGULAR SEDIMENTS, APX in small area @ "A", "B" CONTAINED PATCHY L to H: SOR in A BAND ALONG MI. TYPICAL PATCHY (TELV X 10% ACROSS SEGMENT. NW 1/4 END HAS PEBBLE AREA @ L1 TO M1 THAT CONTAINED LOR - MOR WHICH CONTINUED BELOW WL.

PAGE 1

SEGMENT KN-127

SUBDIVISION B

DATE 5 / 23 / 91

ENERGY LEVEL $\overline{H}$ $\overline{M}$ $\overline{X}$ $\overline{L}$

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 180 m NO 45 m US m

[illegible]

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

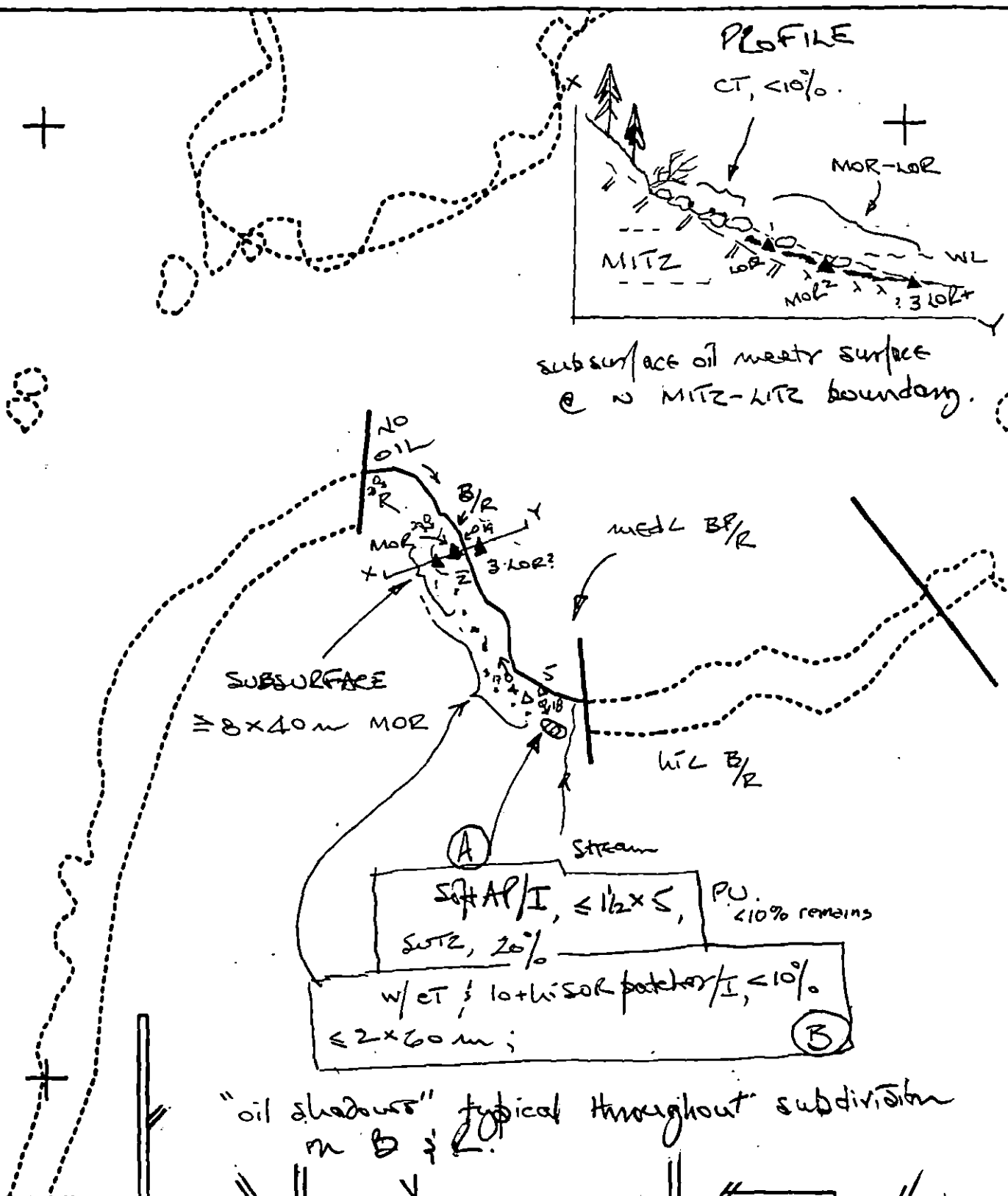
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 29 FRAMES 1721

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20				X				15-25	N	19	B			X	PcB-PMB	B globular	
2	25			X					10-20	Y	4	B			X	PcB-PMCV	3 layers	
3	20				X ²				5-8	?	-50	B			X	PB-PMBV	lo. miltz	
4	25							X	-		-			X		CP-PCBG		
5	25							X	-		-			X		CP-PBG-		
									-									
									-									
									-									
									-									

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

OG COMMENTS: Short length of BL shore, over muddy substrate, becoming more rocky and higher angled to the N. Surface oil as small soil patches ($\leq 30\text{cm}$ dia.) and an associated well weathered CT. Subsurface LOR-MOR, $\geq 8 \times 40\text{m}$, was identified @ MITZ; rainbow sheen w/ brown globules was displaced by walking here, and a silver sheen exists w/ rising tide.

REVIEWED: F.W. 5/25/91



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

KN0127 B
 ADEC Subsegment Length: 225m
 METERS
 0 100 200
 AK State Plane Zone 4
 6601276

Subdivision Field Map
 Map Key: KNKN0127B
 Name: G. MACDONALD
 Date: 5.28.91
 Date Entered:



REVIEWED: F.W. 5/25/91

✓

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 23 May 91
 SEGMENT # KN 127 TIDAL HEIGHT (Range) +3.5 to 5.1 ft. MLLW
 SUBDIVISION B3 BIOLOGIST Michael Fawcett
 EA STATE caln WIND SPEED/DIRECTION NW 5-10 Knots
 PHOTOGRAPHS: ROLL # FRAME #

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

This low energy shoreline has mostly bedrock and boulder substrate, but with gravel, or gravel underlying boulders in northwestern half of the subdivision in the MTZ-LTZ. The surficial oil residue is mostly in the supratidal zone, above high tide except for lichen, oligochaete worms, sparse barnacles & limpets (*Notoacmea peruviana*). The buried oil is in the gravel area to the NW, and lies beneath some bare gravel, but also beneath gravel with young mussels beginning to form an extensive bed, and beneath boulders with typical MTZ-LTZ biota. See sketch map. Since the buried oil is apparently causing no detrimental effects as it is, and will eventually degrade and disappear, and since removing it would require destruction of the intertidal community now living above it, removal is contra-indicated as far as the intertidal community is concerned.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

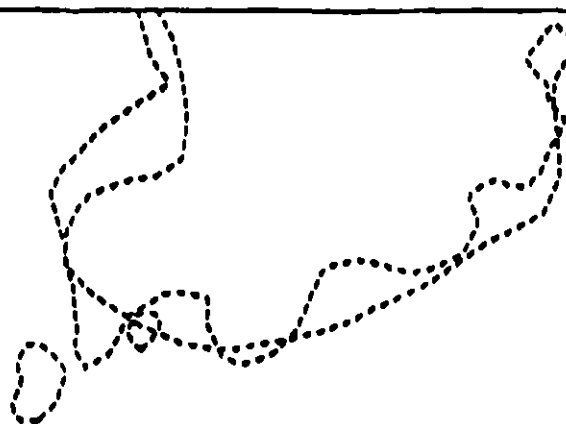
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	2 (SW Gulls Bl. Kittiwake)	6-8	
Shorebirds			
Corvids	1 (Steller's Jay)	1	
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

+



CT, <10%.

MOR-LOR

MITZ

WL

3

8

subsurface oil beneath gravel for about 20% of the band, in LTZ-MTZ; in this portion *Fucus*, barnacles, littorinids & limpets restricted to isolated cobble or boulders, but an incipient mussel bed (young, 0-2 yrs in gravel between and around boulders and cobble). In the NW half of the band, the gravel is overlain with boulders -- littorinid eggs, whelks, large pl. (pud-spill), limpets & littorinids on boulders, along with barnacles, mussels, Rockweed, etc.

R.

MOR

B/R

3

med L B/R

hi L B/R

Stream

AP + 10 ft, above biota except worms, amphipods, lichen; sparse barnacles 2-3m downshore and along lower edge of oil (also limpets);

moderate barnacles, dense littorinids downshore in MTZ; dense littorines in places; scattered mussels, *Fucus*, limpets; MTZ + LTZ below + 5 ft mostly gravel + pebbles, with scarce biota except scattered clumps of young mussels (incipient mussel bed)

KN0127 B

ADEC Subsegment Length: 225m

METERS

0 100 200

AK State Plane Zone 4

10001276



Bio Sketch Map

M. Fawcett

23 May 91

KN 127 B 5/23/96 Fawcett

Start 1805 hrs at stream -

- mod. Fucus, dense barn MTZ-UTZ
in stream runoff - also Filopora

- 50ft west side of stream + 10ft

- worms, amphipods, holan in it,

sparse barn 2-3m downstream &

along lower edge of CT & 50ft

for most of the length of

the bank - mod barnacles,

dense litt. in MTZ below

about half of the bank (+5-7ft),
pebbles & ^{mod. litt.} gravel below

+5, or 5m downstream of SDR

- scattered sparse mussels + 5-7,

sparse Fucus & limp

- MTZ below +5 & LTZ reach

all gravel/pebbles, mostly any

biota except on isolated C/B

(Fucus, barn, limp)

- not very sensitive site

- CT/cv/ trace SDR or AP continue

along at +8-11ft to end of

exponent - all A/c/p some BR -

- mod barn, lim p, Fucus litt,

sparse mussels below -

sparse to mod. *N. persiana* & litt

in lower edge of CT, also sparse

barnacles

1 Steller's jay

6-8 gulls & Kittiwakes

- low energy beach

- subsurface oil in MTZ + 4-6ft

in gravel - no biota except

on isolated C/B (Fucus, barn,

limp, litt) - mod. dense young

mussels in the gravel around

& between boulders, above the

surface oil - oil goes out

to about +2ft MLLW -

buried oil extends next to

dense boulders on top of gravel -

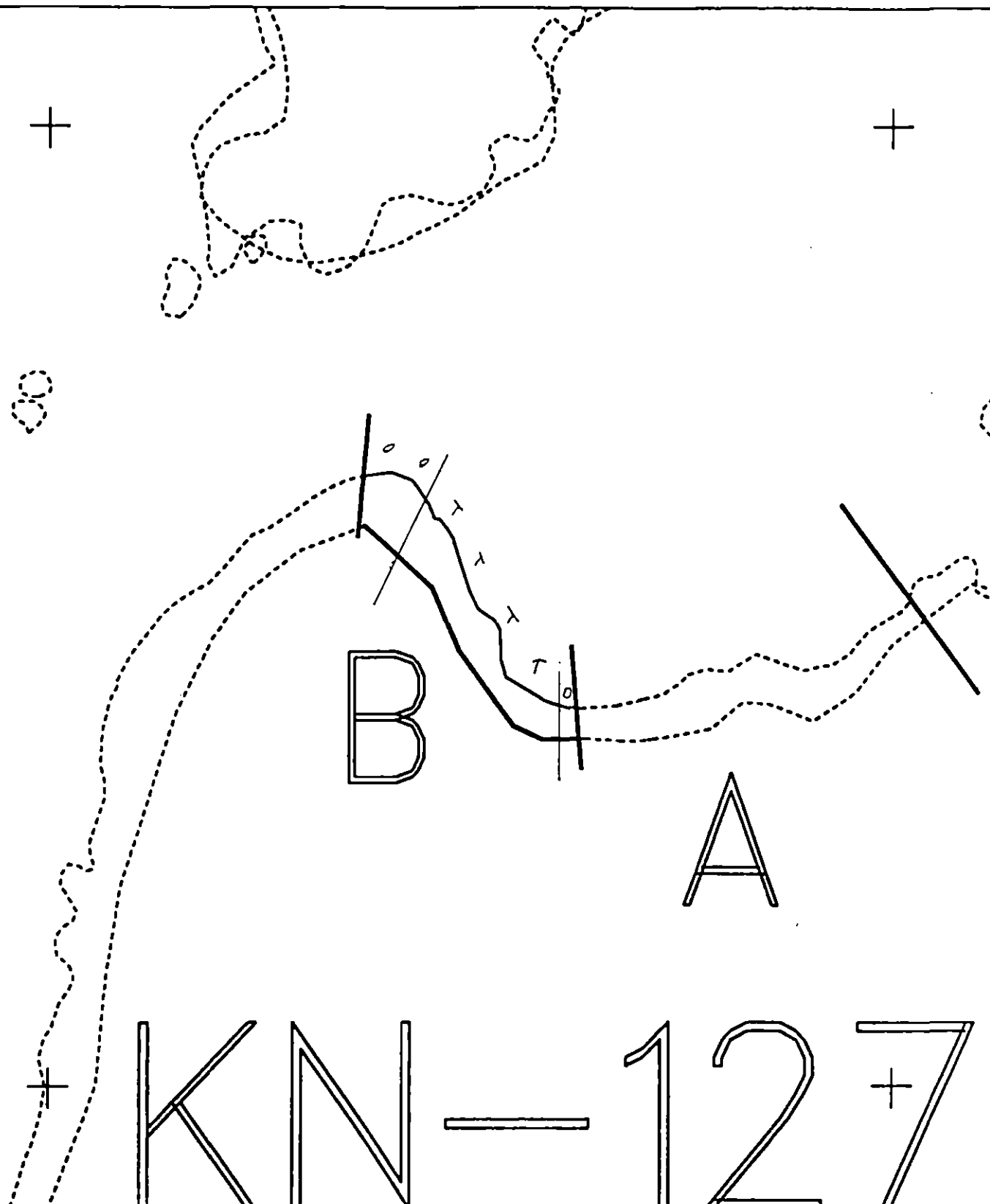
Littorina eggs under MTZ boulders,

some large old *N. scabra* (sp. 1)

- sparse *Nucella emarginata*

- also some very large, old littorines

end 1900



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

KN0127 B
 ADEC Subsegment Length: 225m
 METERS
 0 100 200
 AK State Plane Zone 4
 hko0127b

Subdivision Field Map
 Map Key: KNKN0127B
 Name: Gr. M.
 Date: 5.23.91
 Date Entered:



REVIEWED: F.W. 5/25/91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-127 SUBDIVISION C (3 of 3)

WORK WINDOW	
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3NP,3OQ

Harbor Seal and Sea Lion
Pupping and Molting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

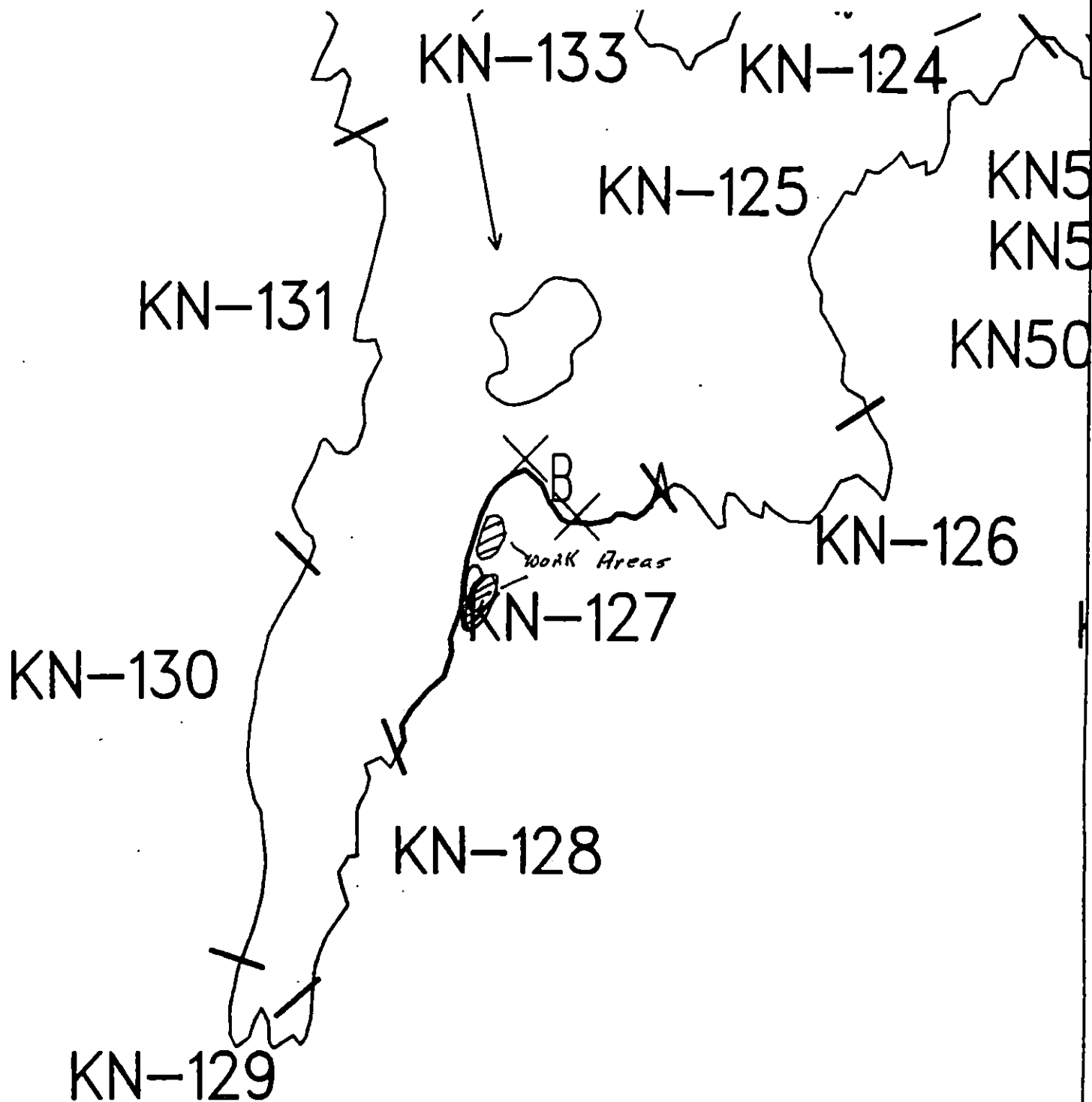
TAG APPROVAL DATE 5/24/90.
ADEC Aret Whitman
EXXON Andy
NOAA B. Wiercraft
USCG Adm. J. Hall

FOSC My L

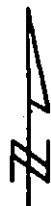
DATE 5-24-90

Prepared By: Andin Meyer

Date 5/22/90



Exxon Company, USA
Map Key: KN1-KN-127
Mar. 11, 1990



ECOLOGY MAP
SEGMENT KN-127
SUBDIVISION C (3 of 3)
METERS
0 100 200

★	Seabird Colony
▲	Eagle Nest

1 inch = 1327 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION C (3 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)- pinnipeds within 400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMan

DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 929 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes bioremediation in areas of subsurface oil shown on attached sketch map. Work should be conducted between (7/2) and (7/31) based on pinniped constraints and Inipol applications.

→ See Addendum dated 5/22/90 WK

TAG COMMENTS:

MANUALLY REMOVE UNATTACHED DICED VEGETATION.

TAG APPROVAL DATE: 5/8/90

ADEC ART WEINER

EXXON AMY TETZ

NOAA GARY PETRO

USCG G.A. REITER

FOSC: ML

DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION A (1 OF 3) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 117 m: No Oil 164 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment is manual pickup of oiled vegetation and limbs. Work should be conducted prior to 5/15 or between 7/1 and 8/15 based on pinniped constraints.

TAG COMMENTS: MONITORS TO ASSESS SUITS + LOG LIMBS INDICATED.

TAG APPROVAL DATE: 5/8/90.

ADEC Art Wagner Art Wagner

EXXON Amy Tate Amy Tate

NOAA Gary Petros Gary Petros

USCG GA. REITER GA. Reiter

FOSC: ML DATE: 5-12-90

OG A. Li nger
SEGMENT ST/ KN127

SUBDIVISION A

DATE 4/21/90

CHECKLIST

☐ N Area
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. H/M/L/VL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pht Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
Pht - No Subsurface Oil

2 Δ
Pht - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

eee
Oiled Vegetation

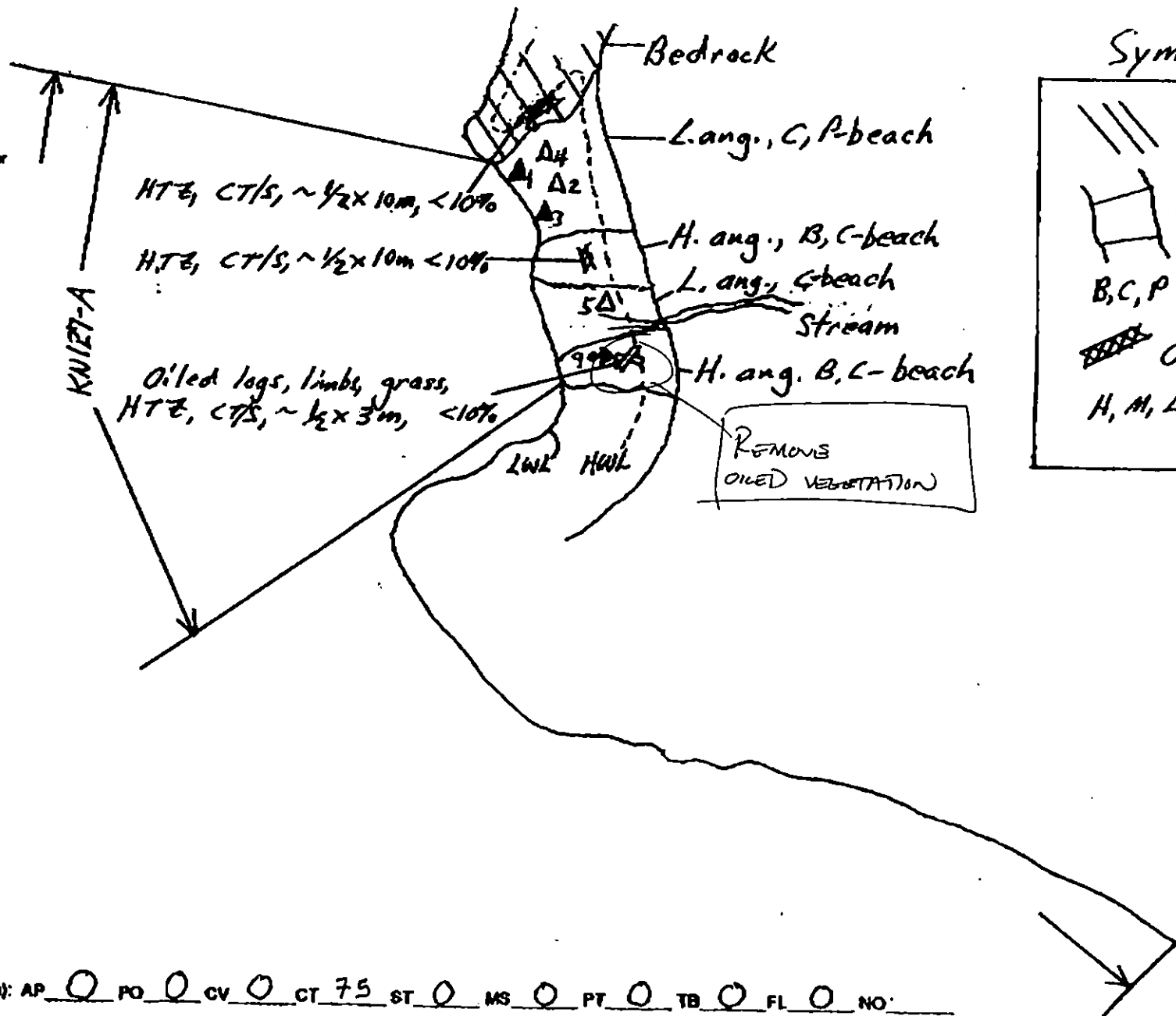
1 $\Rightarrow$
Photo location, direction, and number

SKETCH MAP



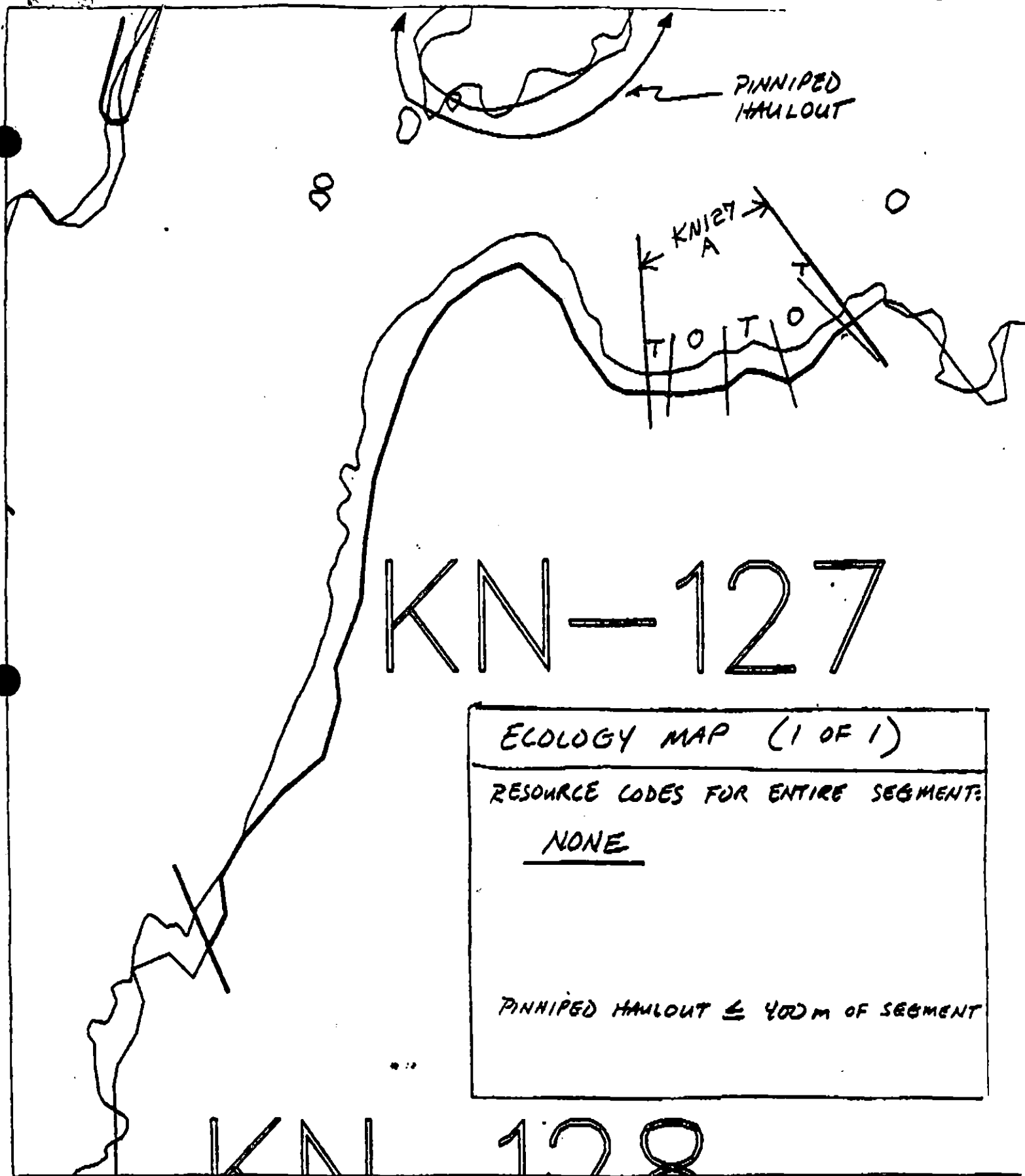
Symbols

$\parallel \parallel$ Bedrock
 $\square$ Sediments
B, C, P - Grain size
~~eee~~ Oiled Interval
H, M, L, Tidal Zone



Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION: 000000



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

NONE

PINNIPED HAULOUT ≤ 400m OF SEGMENT

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

KN-127

ADEC Segment Length: 1435m
 Exxon Segment Length: 1477



Map Key: PWS-309

Name: A. Pittenger

Date: 4/21/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION B (2 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

Pinnipeds within 400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 225 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of oiled
Limbs ~~logs~~ and vegetation in areas indicated on sketch map, 2) spot hot water
~~washing of upper ITZ in area indicated on sketch map, 3) manual tilling~~
~~of mid and lower ITZ in area indicated on sketch map, and 4) bioremedi-~~
~~ation of upper, mid, and lower ITZ in area indicated on sketch map.~~
Work should be conducted between 7/1 and 8/15 based on pinniped con-
straints with the exception of inipol which should only be applied from
7/2 to 7/31.

TAG COMMENTS: SEE TAG ADDENDUM SKETCH 5/12/90. - MANUAL
REMOVAL OF DEBRIS + OILED TREE LIMBS AS INDICATED. BIOREMEDIATION
USING CUSTOMER AS INDICATORY

TAG APPROVAL DATE: 5/21/90.
ADEC ART WENIGER Art Weniger
EXXON ANDY TALL Andy Tall EOSC: W L DATE: 6-19-90
NOAA Joseph T. Talbot Joseph T. Talbot
USCG G.A. REITER G.A. Reiter

SEGMENT ST/ *KN127*

SUBDIVISION B

DATE 4/22/90

CHECKLIST

- ___ N Arrow
 ___ Approx. Scale
 ___ Seg/Sub Endry
 ___ Off Dist
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. Ht/LA/WL
 ___ SGL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ PR Location(s)
 ___ Photo Location(s)

LEGEND

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

Oil Character Length (m): AP 0 PO 0 CV 50 CT 200 ST 0 MS 25 PT 0 TB 0 FL 0 NO 0

REVISED: 08/24/99

SKETCH MAP

Symbols

Bedrock

~~Oil~~ Oiled Interval

Sediment Covered
B, C, P - Grain Size

~~SPOT HOT WATER WASH UPPER IZ~~
~~TILL MID + LOWER IZ, THEN~~
~~BIOREMEDIATE UPPER, MID,~~
~~LOWER IZ~~

See attached addendum.

High angle, B, C beach
Low angle,
B, C, P beach
& bedrock
High angle,
P, C beach

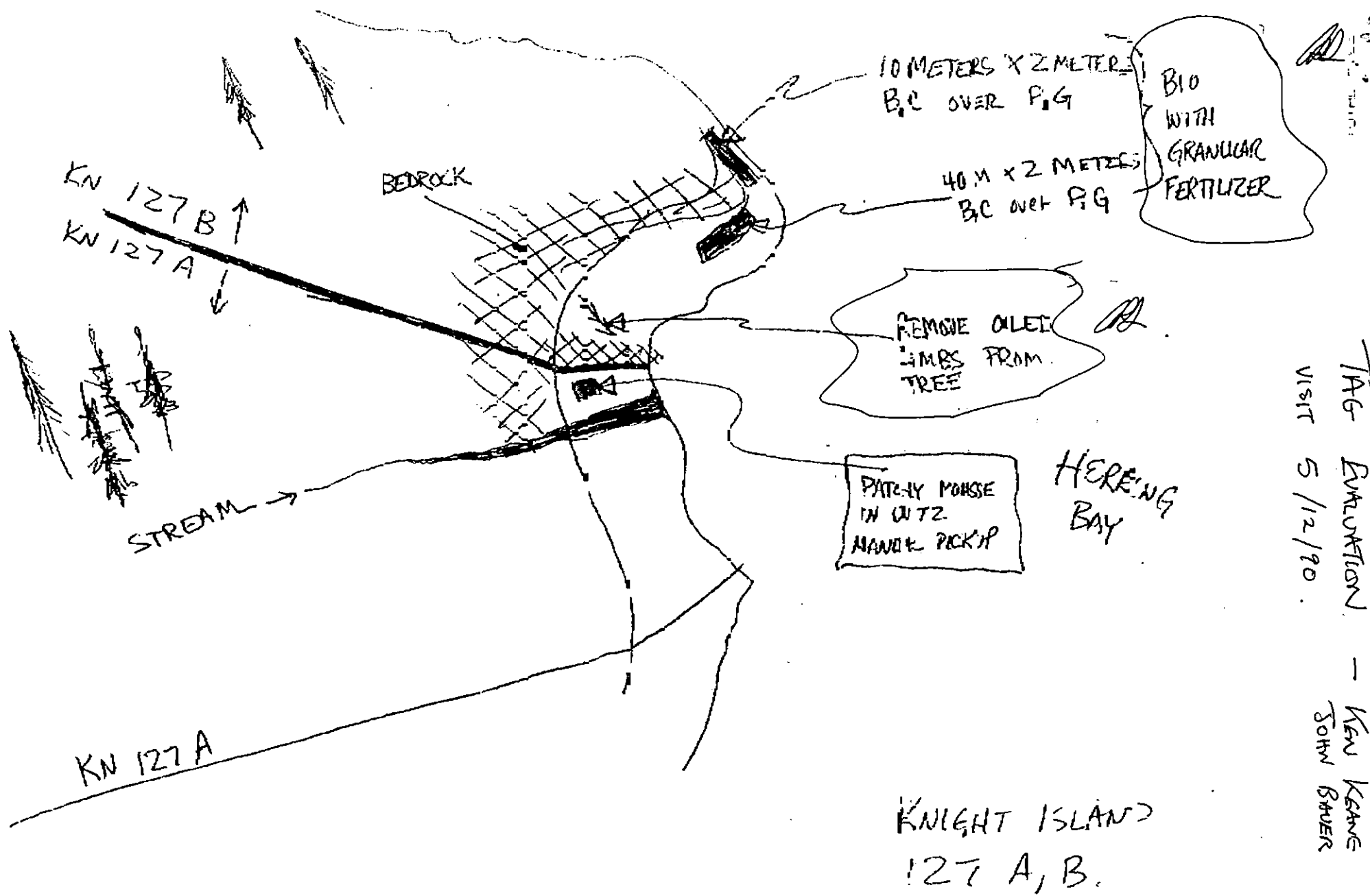
Oiled logs
2 grades

MANUALLY REMOVE
OILED ~~LOGS~~ GRASSES

A

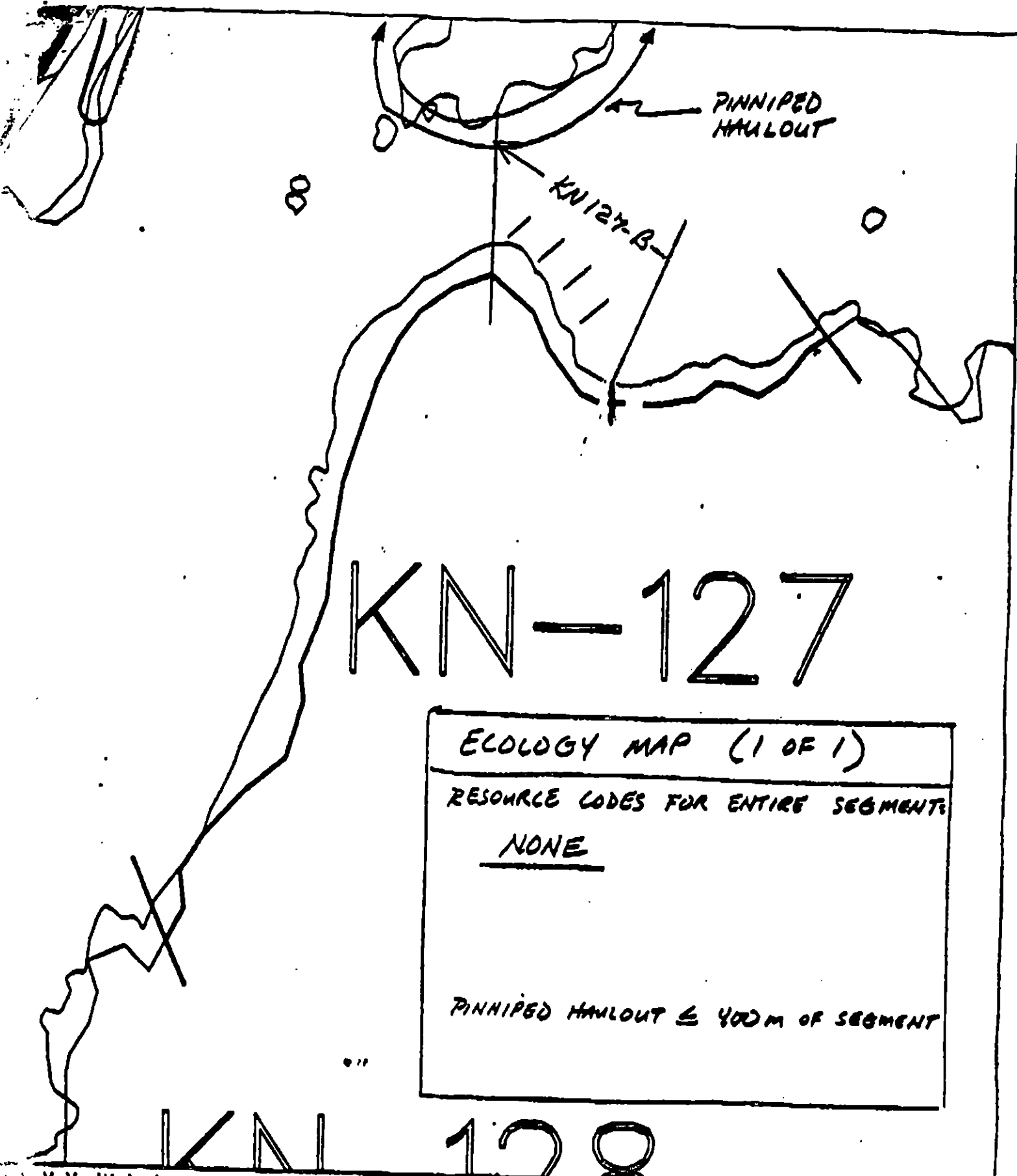
DATE-25-1990 18:12 FROM (KUN RIVER) TO SHIT DITH P.03

MAY-17-1990 20:15 FROM 1501526 0001041 1501526 0001041 1501526 0001041 1501526 0001041



FAX TO WEINER
265-4666 PAGE 2 OF 2

TAG EVALUATION - KEN KEANE
VISIT 5/12/90 JOHN BAUER



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

NONE

PINNIPED HAULOUT $\leq$ 400m OF SEGMENT

KN-127

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

ADEC Segment Length: 1435m
Exxon Segment Length 1477m

0 100 200 300
METERS

Map Key: PWS-300

Name: Pittenger

Date: 4/22/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION C (3 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)- pinnipeds within
400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and
contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMan

DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 929 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation in areas of
subsurface oil shown on attached sketch map. Work should be conducted
between 7/2 and 7/31 based on pinniped constraints and Inipol applica-
tions.

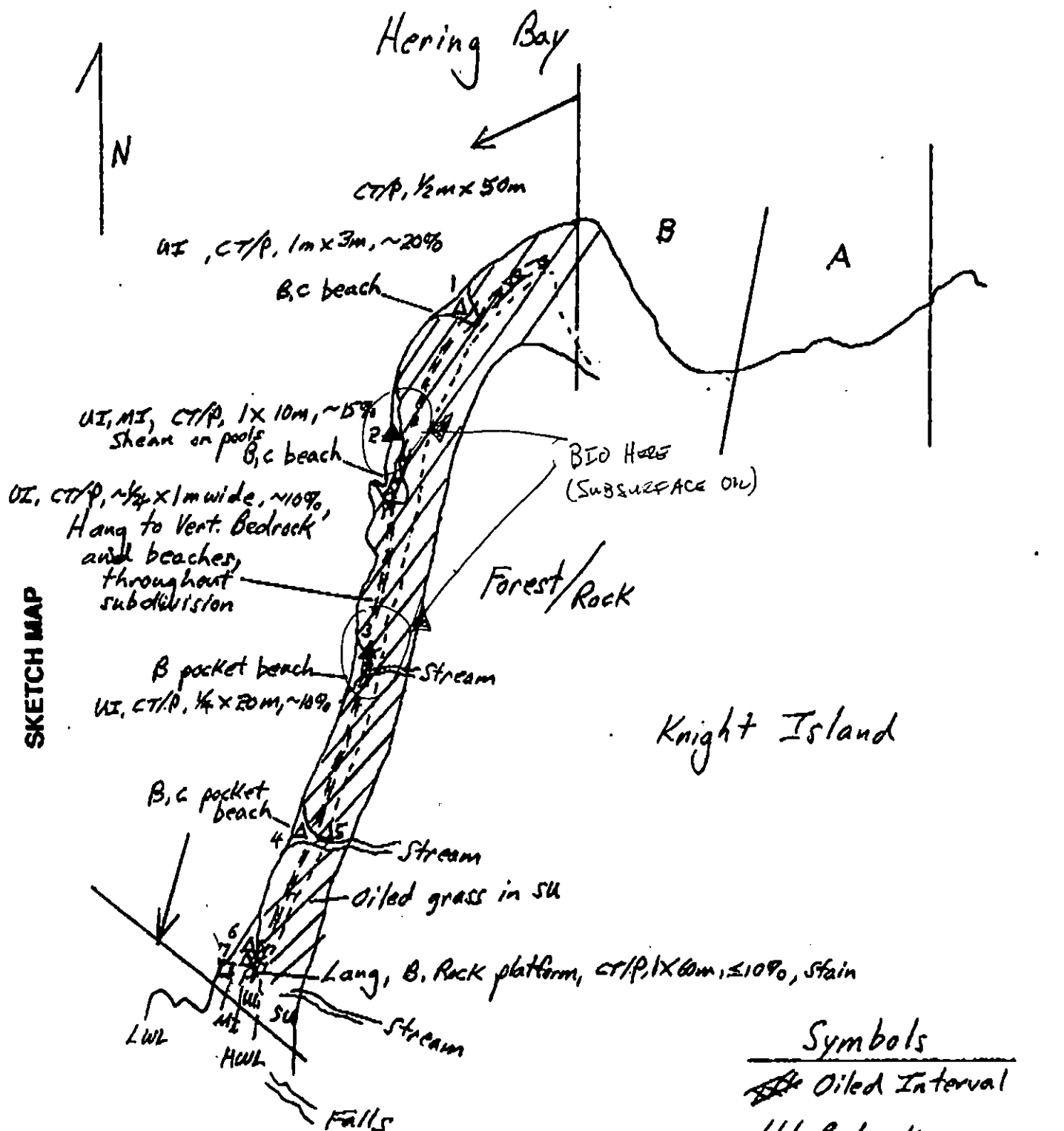
TAG COMMENTS: MANUALLY REMOVE UNATTACHED DICED VEGETATION.

TAG APPROVAL DATE: 5/8/90

ADEC ART WEINER
EXXON ANDY TATE
NOAA GARY PETRO
USCG G.A. REITER

FOSC: ML

DATE: 5-12-90



Symbols

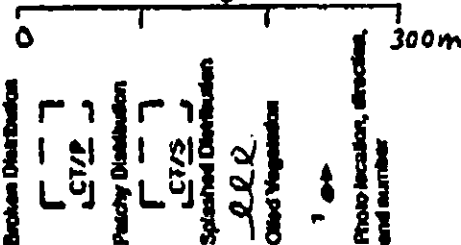
Oiled Interval

Bedrock

Pocket beaches

B, C, P. - Sediments

Scale



OG A. Pittenger

SEGMENT STU/KAL/27

SUBDIVISION C

DATE 4/22/90

CHECKLIST

N Area

Appar. Scale

Sag/Sub Buoy

Oil Dist.

When

Length

% Cover

Substrate Character

Est. HWW/LWL

SSL

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

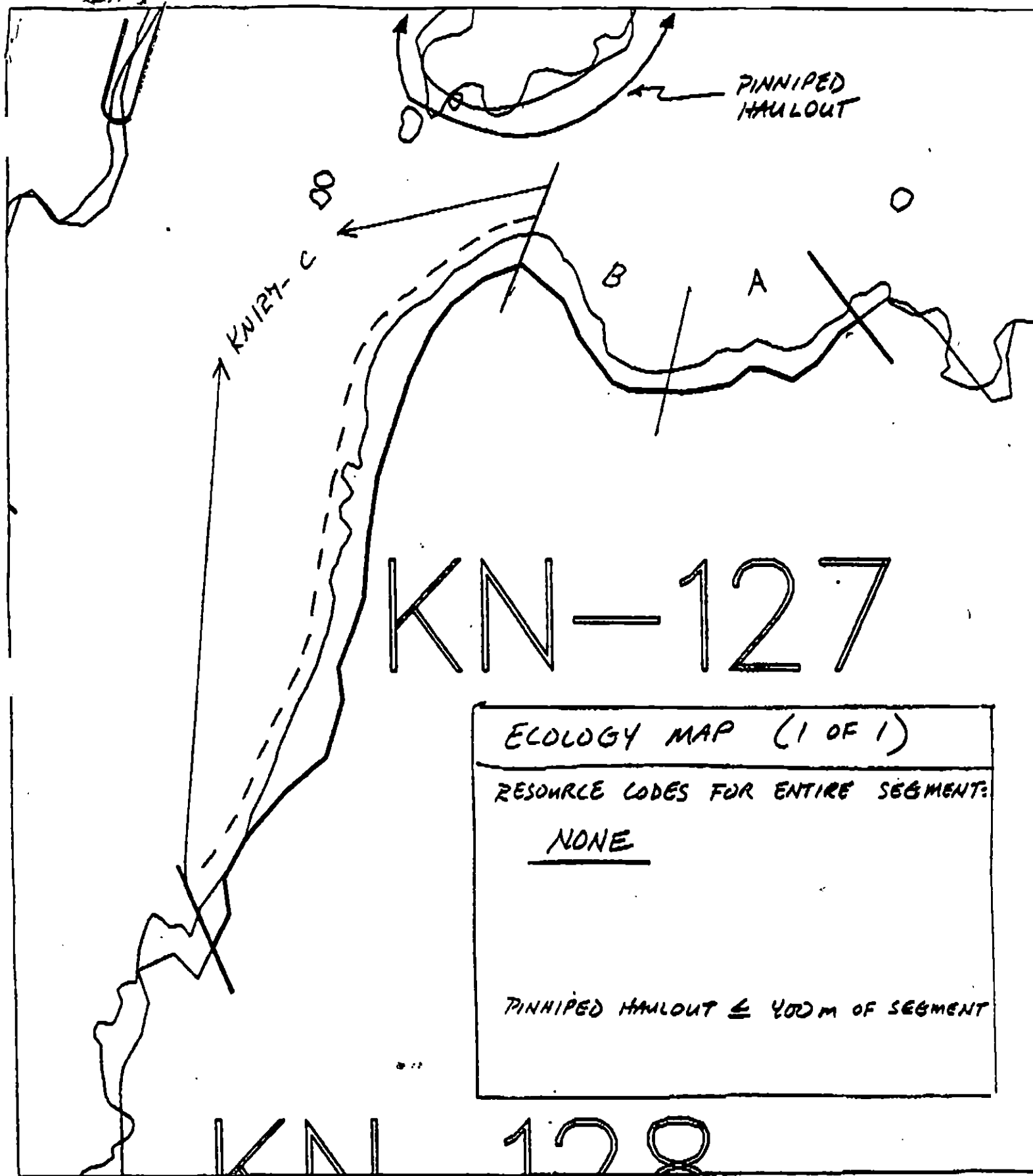
Spotted Distribution

Oil

Oiled Vegetation

1 ●

Photo location, direction, and number



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

NONE

PINNIPED HAULOUT ≤ 400M OF SEGMENT

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

KN-127

ADEC Segment Length: 1435m
 Exxon Segment Length: 1477



Map Key: PWS-309

Name: Pittenger

Date: 4/22/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-127

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION A (1 OF 3) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 117 m: No Oil 164 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is manual pickup of oiled vegetation and limbs. Work should be conducted prior to 5/15 or between 7/1 and 8/15 based on pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN 127 SUBDIVISION: A DATE 4-21-90USCG
NAMEBM3 David A. Sylwiski SIGNATURE BM3 David A. Sylwiski☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

There was 2 logs that were coated with oil.
The logs were approx. 10" in diameter and approx 15-20' long.
This area was very lightly impacted as far as the signs
of oil in this segment. Small scattered traces of tar.

ADEC

NAME

Dianne Munson SIGNATURE Dianne Munson☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

- Low angle boulder, cobble, pebble beach and bedrock cliff,
- Weathered splashy coats on boulders, cobbles, pebbles.
- Subsurface oil film.
- oiled tree limbs and grass.
- Recommend removal of oiled tree limbs and grass as shown on A.G. map.

LAND MANAGER

NAME

David Mandrella SIGNATURE David Mandrella☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

- Very light sub surface oil film was noted in pits 1 and 3.
- Coats on boulder, cobble band in mid intertidal do not warrant any treatment.
- Only recommendation is to remove oiled logs, limbs and grass in western portion of subdivision.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG A. Pittenger USCG D. Sylvester SEGMENT ST/ KN 127
 BIO J. Benson LAND REP D. Mandrella SUBDIVISION A (1 OF 3)
 EXXON C. Katsimpalis ADEC D. Munson TIME 12:24 to 18:25
 TEAM NO. #8 TIDE LEVEL 1-2 ft DATE 4/21/90
 EST. SUBDIVISION LENGTH: 275 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 5 % B 30 % C 50 % P 15 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 75 m NO 200 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
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 Logs/limbs/branches#BAGS 0

Photographs:

Roll No. ST-8-4Frames 9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
1	35						0-10													Y	10	C,P-C,P
2	30						.													N	>30	P,G-P,G
3	30						0-5													Y	15	C,P-C,P
4	30						.													N	15	C,P-C,P
5	35						.													N	>35	G-G
							.															

COMMENTS

REVIEWED 7wDATE 4/24/90

00 A. Pittenger
SEGMENT ST/KN 127

SUBDIVISION A

DATE 4/21/90

CHECKLIST

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

LEGEND

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

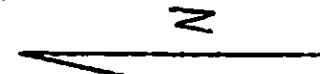
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

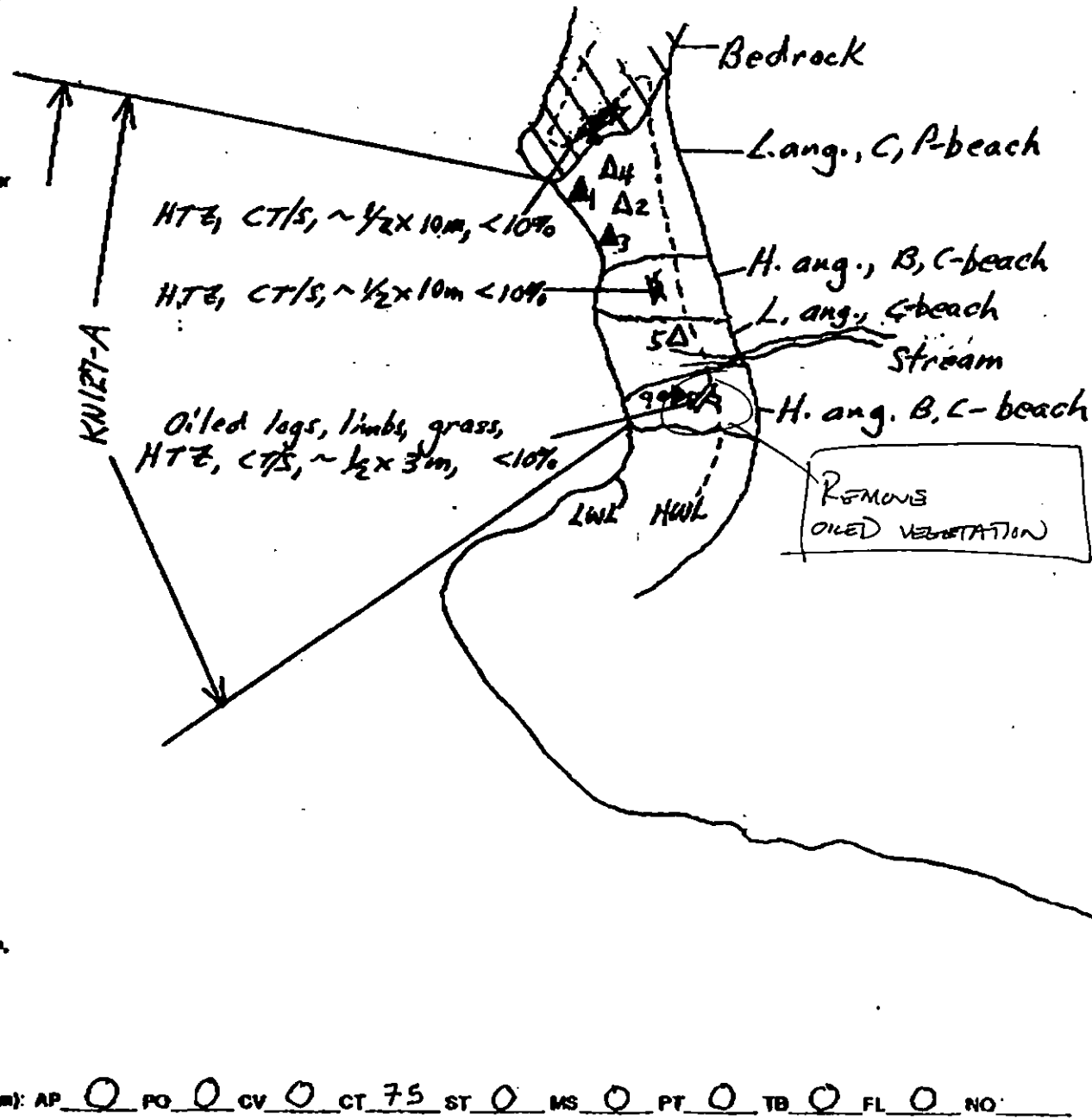
Splashed Distribution
- ell
Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

SKETCH MAP



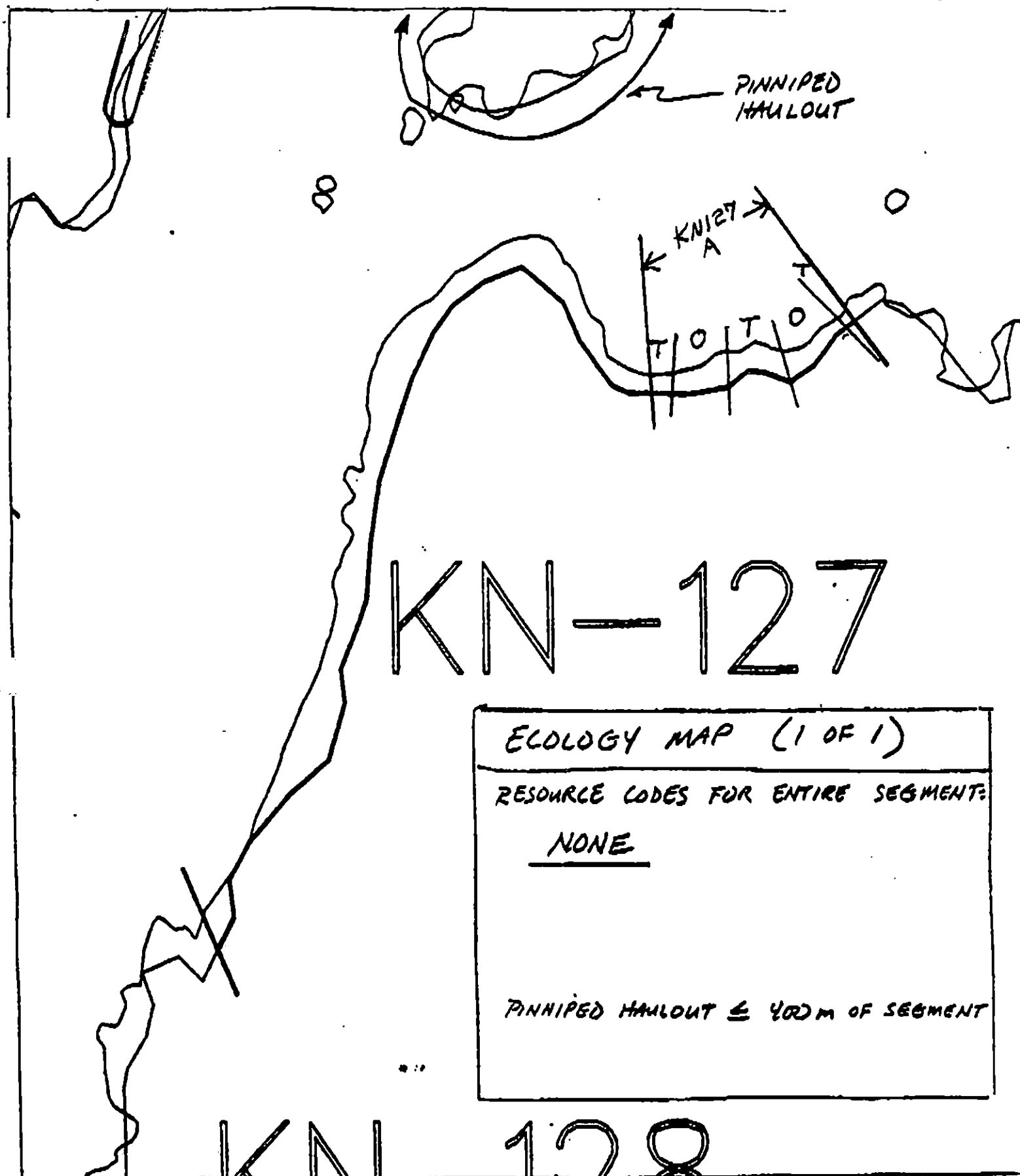
Symbols

- Bedrock
- Sediments
- B, C, P - Grain size
- Oiled Interval
- H, M, L, Tidal zone



Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION: 000000



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

NONE

PINNIPED HAULOUT $\leq$ 400M OF SEGMENT

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KN-127

ADEC Segment Length: 1435m
Exxon Segment Length: 1477



Map Key: PWS-309

Name: A. Pittenger

Date: 4/21/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-127

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION B (2 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

Pinnipeds within 400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 225 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of oiled logs and vegetation in areas indicated on sketch map, 2) spot hot water washing of upper ITZ in area indicated on sketch map, 3) manual tilling of mid and lower ITZ in area indicated on sketch map, and 4) bioremediation of upper, mid, and lower ITZ in area indicated on sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints with the exception of inipol which should only be applied from 7/2 to 7/31.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esthler Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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
- 34, 35 Harbor seal and sea lion pupping (5/15 to 7/1)
 30, 32 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (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
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN 127 SUBDIVISION: B DATE 4-22-90

USCG
NAME BM3 David A. Sylvester SIGNATURE BM3 David A. Sylvester

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

This area contained mousse that could possibly be mobilized once it gets heated up and the water level rises. The area is approximately 150 m. in length. The majority of the oil was found in the lower and middle tidal zones. Tacky to the touch "mousse" was primarily found in the middle tidal zone. Sheening was found in pits dug in middle and lower tidal zones.

ADEC
NAME Dianne Munson SIGNATURE Dianne Munson

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- Actively sheening.
- Within 400 meters of possible sea lion/seal haulout.
- At h.i.t.2., high angle, angular boulder with mousse, covers, coats and saturated vegetation/substrate to 2 cm.
- At mid and low it2, low angle pebble beach. Subsurface O.P. o.i. (Fresh; mobile, black) oil throughout. Wading in water produces sheening.

→ continued

LAND MANAGER
NAME David Mandrella SIGNATURE David Mandrella

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- Active sheens were observed to a distance of about 30 yards offshore. Possible pinniped haulout and heavy oiling characteristics may justify a priority higher than no. 5.
- Mousse, covers and coats and OP substrate throughout subdivision indicates mobilization of oil.
- Treatment recommendations:
- Manual pickup of sporadic mousse in upper intertidal with trowels and shovels.
 - Manual filling of small boulder, cobble in upper. Possible mechanical filling of gravel pits in low to mid tidal.

FIELD SHORELINE COMMENT SHEET Pg 2/2

SEGMENT ST / KN 127 SUBDIVISION: B DATE 4-22-90**USCG**

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME Dianne Munson SIGNATURE Dianne Munson☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- For hit2 area recommend turning boulders where possible and manually removing mousse, warm header flood in conjunction with spot washing and bioremediation.
- For mid and low hit2 area recommend manual/mechanical tilling, warm header flood and steam washing (shore crew) and bioremediation.
- Remove oiled grass and oiled logs.

LAND MANAGERNAME David Mandrella SIGNATURE David Mandrella☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- High pressure hot water spot washing and flooding in heavily impacted areas. Remobilized oil will be manually removed with sorbents (snare-bum, pom poms). Utilize bioremediation techniques.
- Oiled logs and vegetation removed.

OG A. Pittenger USCG D. Sylvester SEGMENT STI KN 127
 BIO J. Benson LAND REP D. Mandrella SUBDIVISION B (2 OF 3)
 EXXON C. Katsimpalis ADEC D. Munson TIME 15:30 to 16:50
 TEAM NO. #3 TIDE LEVEL 1/2-4 ft DATE 4/22/90
 EST. SUBDIVISION LENGTH 280m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 10 % B 35 % C 30 % P 25 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 240 m N 480 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION										OIL / FILM COLOR				IMPACTED ZONES			
	C	E	P	R	OP	OR	OL	OW	NO	GR	BR	BL	TR	LR	SU	U	M	V
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 Rope/Plastic#BAGS 1

Photographs:

Roll No. ST-8-4Frames 9, 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		UO	UC	BR	BL	TR	LR	SU	U	M	V						
1	35	X					5-35	X		X									X		Y	12	P-P, G
2	30	X					5-30	X		X									X		Y	5	P-P
3	35	X					5-35	X		X									X		N	>35	P-P
4	40		X				5-40	X		X									X		N	>40	P-P
5	45	X					5-45	X		X									X		N	>45	C, P-C, P
6	35					X													X		N	20	P-P

COMMENTS

Surface oiling occurs on upper beach face, i.e., SU, U & M tidal zones, where surface sediment are primarily boulders & cobbles. Pebble zones occur on lower beach face and are not oiled on the surface. Pebble zone substrate is oiled and oil film is present (occasional) in shallow water, throughout.

"Fresh" oil, mousse, abundant sheen in water, and OP substrate

REVIEWED [Signature] DATE 4-28-90

OG Pittenger
 SEGMENT STI KN127
 SUBDIVISION B
 DATE 4/22/90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ
 Pk - No Subsurface Oil

2 Δ
 Pk - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

ell
 Oiled Vegetation

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

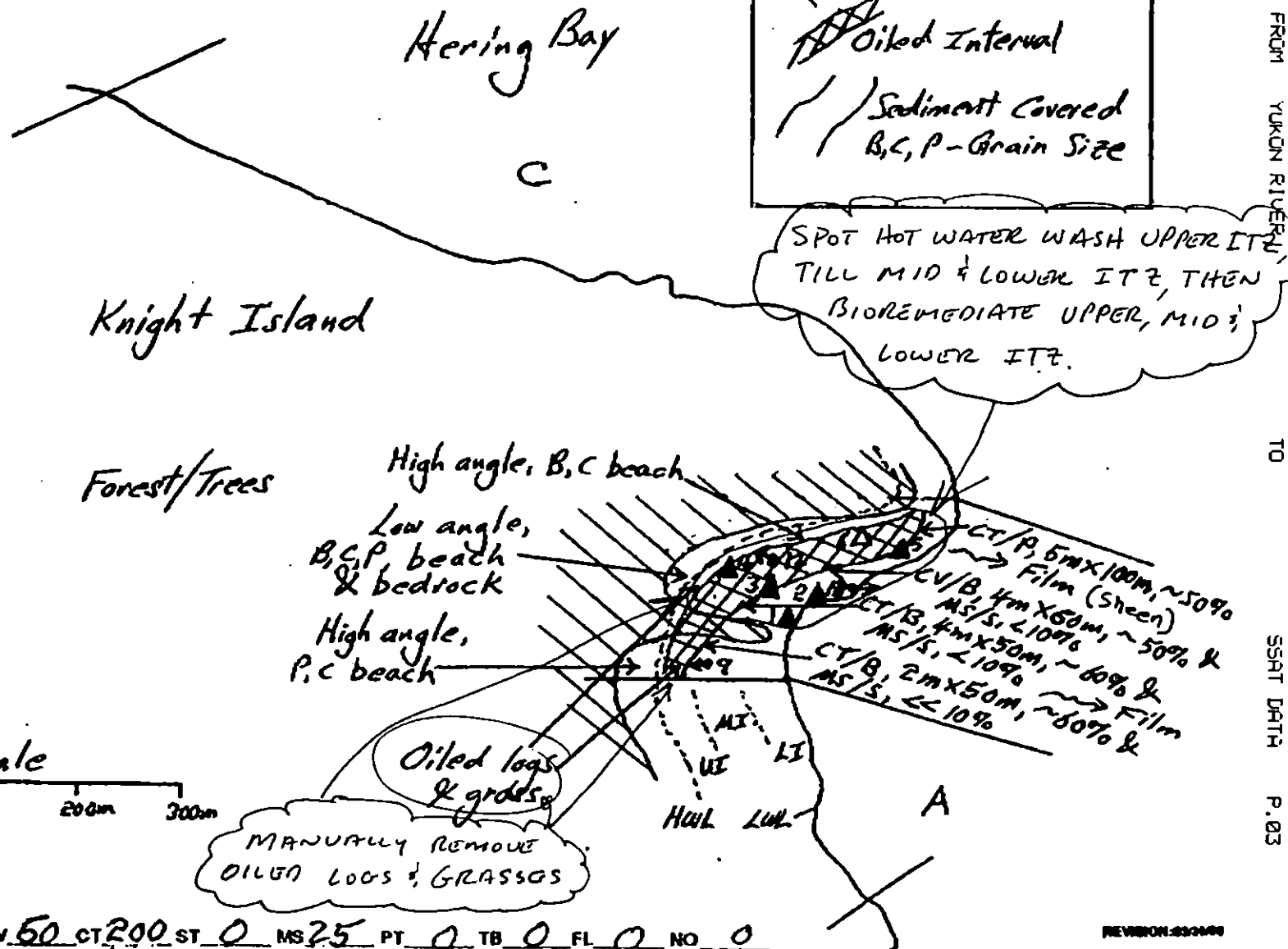
Scale
 0 100m 200m 300m

Symbols

Bedrock

Oiled Interval

Sediment Covered
 B, C, P - Grain Size



Oil Character Length (m): AP 0 PO 0 CV 50 CT 200 ST 0 MS 25 PT 0 TB 0 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ KN127 Subdivision B Date (mo / day / yr) Apr 22, 1990Time (24 hr) 1530-1645
1830-1855 Biologist Benson(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 35 (3) Cobble 30 (4) Pebble 25 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 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-8-4Frames 9, 12-13

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	X	2	X	2	X	
3	3	3	3	3	3	3	X	3	X	3	X	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

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

FUCUS

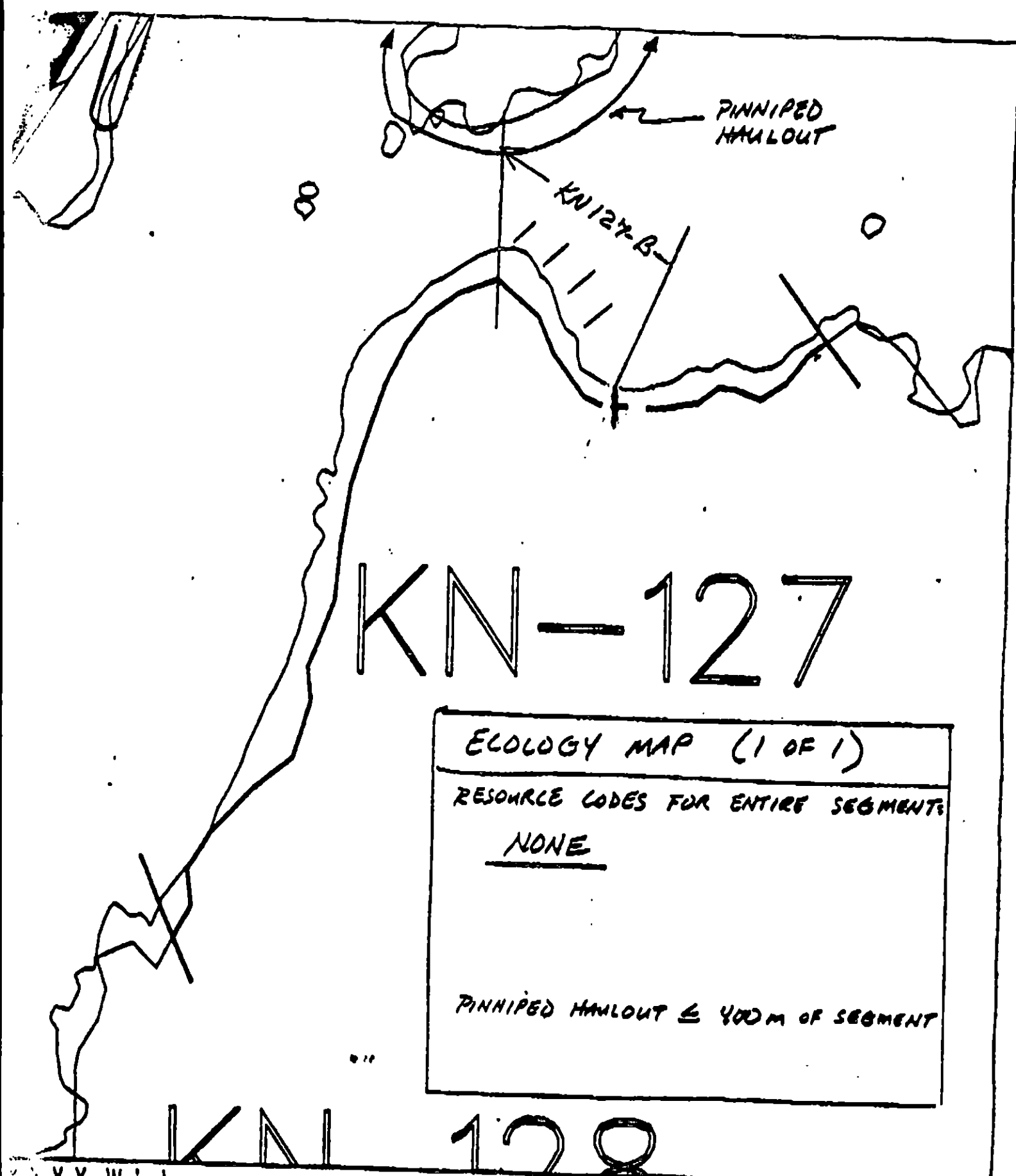
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	X	2	X	X	X	2	2	
3	3	3	3	3	3	3	X	X	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

bold eagle (*Haliaeetus leucacephalus*) - flew off log perch on beach as we approach

Ecological Considerations: NONE (3 N, P, Q within 400m of this segment)

This subsegment has a relatively low number of species. Barnacles with oil appeared to be 40-60% alive while barren 70-80% of barnacles without oil on the outside were alive. The high density portions of this subsegment were composed primarily of *Fucus* and/or barnacles. The low density areas were composed on gravel-sand substrate. There were quite a few dead *Fucus* stipes and holdfasts. The standing stock is low.



ECOLOGICAL MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

NONE

PINNIPED HAULOUT $\leq$ 400m OF SEGMENT

KN-127

XXXX Wide
// Medium
--- Narrow
TTT Very Light
000 No Oil

ADEC Segment Length: 1435m
Exxon Segment Length 1477m

0 100 200 300
METERS

Map Key: PWS-308

Name: Pittenger

Date: 4/22/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-127

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION C (3 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)- pinnipeds within
400 M of this segment in KN-125.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 929 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation in areas of
subsurface oil shown on attached sketch map. Work should be conducted
between 7/2 and 7/31 based on pinniped constraints and Inipol applica-
tions.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HERRING ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)**
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/1)**
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)**
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)**
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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
- 34 3P Harbor seal and sea lion pupping (5/15 to 7/1)**
35 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)**
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)**
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)**
Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation:**
6V Tent sites (6/1 to 9/15)
6W Anchorages (6/1 to 9/15)
6X Forest Service cabins (6/1 to 9/15)
6Y Lodge (6/1 to 9/15)
Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)**
7HH Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 127 SUBDIVISION: C DATE 4-22-90

USCG

NAME RM3 David A. Sylvester SIGNATURE RM3 David A. Sylvester

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

There is a semi-continuous band of coating approx. 4-6" wide and 3-6 mm thick with cracks and crevices being filled. Some of the crevices were filled with as much as 2-3 cm thick oil. The entire area was only 20-35 m. long. This area is between the two pits where sheens were spotted.
P.S. Most of the areas that treatment is suggested is not a complete segment but only a small part of a segment.

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- Primarily bedrock cliff with small pocket beaches.
- Patchy / sporadic coats and stains on bedrock cliff.
- Pocket beaches of boulder / cobble / pebble with sand substrate. surface coats and residual subsurface oil mixed with vegetation to 5 cm. Actively sheening.
- Recommend bioremediation of pocket beaches with pit #'s 2 and 3.

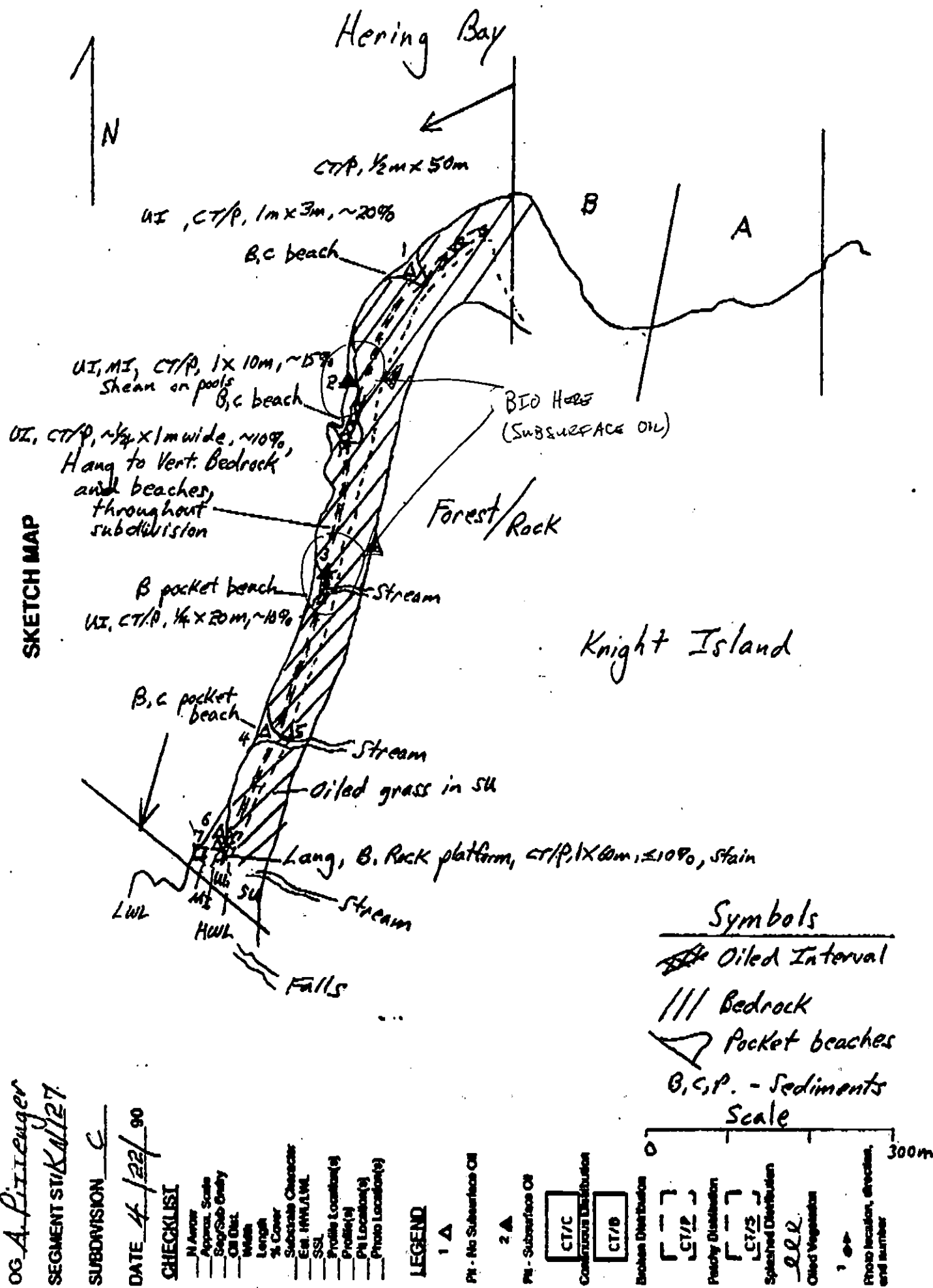
LAND MANAGER

NAME David Mandrella SIGNATURE David Mandrella

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- Primarily bedrock cliff with patchy coat along 3 meter wide band in upper area.
- Treat pocket beach in the vicinity of Pits 2 and 3 with bioremediation.



OG A. Pillerger

SEGMENT SUKAL27

SUBDIVISION C

DATE 4/22/90

CHECKLIST

N Arrow

Approx. Scale

Spot/Sub Only

Oil Out

Width

Length

% Cover

Substrate Character

Est. HWS/LWL

SSL

Profile Location(s)

Profile(s)

PH Location(s)

Photo Location(s)

LEGEND

1 △

PH - No Subsurface Oil

2 △

PH - Subsurface Oil

CT/C

Configuration Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oil Vegetation

Photo location, direction, and number

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ KN127 Subdivision C Date (mo / day / yr) Apr 22 1990Time (24 hr) 1650-1830 Biologist Benson

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 10 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 60 Moderate 20 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-8-4Frames 14

BARNACLES

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

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	X	X	X	
3	3	3	3	3	3	3	3	3	X	X	X	
4	4	4	4	4	4	4	4	4	X	X	X	
5	5	5	5	5	5	5	5	5	X	X	X	
6	6	6	6	6	6	6	6	6	X	X	X	

NOT PRESENT

GASTROPODS

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	X	X	X	
3	3	3	3	X	3	3	X	3	X	X	X	
4	4	4	4	X	4	4	X	4	X	X	X	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

bluish, 2-3" long, 1/2" high fish near shore.
 salmon fry near shore.

Ecological Considerations: NONE (3NP, PQ, within 400 m of this segment)

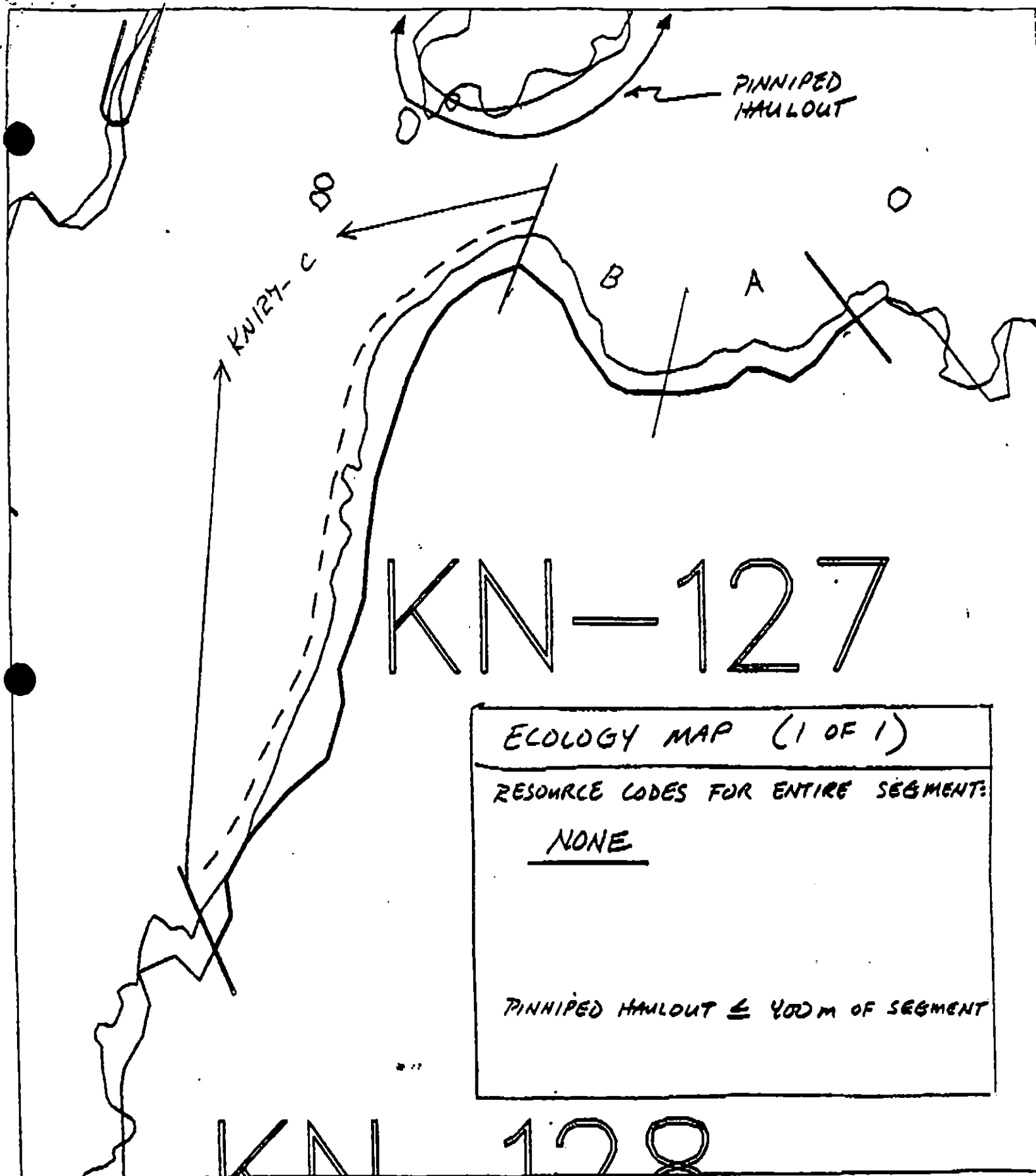
The ^{high} densities of barnacles and Fucus, as well as Verrucaria in some locations, raised the total % cover of biota to high levels. Nucella was also common, perhaps because of the abundance of their food, the barnacles. Although the standing crop was high, the diversity was ^{still} low to moderate. In several places, there were numerous barnacle scars on the substrate.

DATE 4/22/90 TIME 1650-1830 TIDE HEIGHT 0.5' - 1.5'

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

SEGMENT ST. KN 127 SUBDIVISION C LENGTH 922 m BIOLOGIST Benson

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA				
	CALLIARTHRON/CORALLINA				
	CLADOPHORA SPP				
	COSTARIA SPP				subtidal
	ENDOCLADIA MURICATA				
	FILAMENTOUS GREENS	1	1,2	1,2	
	FILAMENTOUS REDS				
	OLOIOPELTIS FURCATA				
	HALOSACCION OLANDIFORME			2	
	LAMINARIA SPP				
	LITHOTHAMNION				
	NEREOCYSTIS SPP				
	PORPHYRA SPP				
	RALPHSIA/HILDENBRANDIA		1		
	PHODOMELA LARIX		1,2	1,2	
	RHOHOMENIA PALMATA				
	SCYTOSIPHON SPP		2	2,3	
	ULVA SPP			2,3	
	ZOSTERA MARINA				subtidal
	ENTOMORPHA				
	Verrucaria				
FAUNA:	pink annelid (100m L X 2mm D)				
	ANTHOPLEURA SPP				
	(SEMI) BALUNUS CARIOSUS	1,2,3	1,2,3	1,2,3	both species on 2
	B. GLANDULA	1,2	1,2,3	1,2,3	
	BRYOZOANS			2,3	
	CHITONS (other than K. TUNICATA)				
	CLAMS				drift shells of Macoma, Protothaca
	CRABS				subtidal Hemigrapsus oregonensis
	DERMASTERIAS IMBRICATA				
	KATHARINA TUNICATA				
	LEPTASTERIAS HEXACTIS			2	
	LIMPETS		1	1	Notmarmara persona
	LITTORINA SPP		1,2,3	1,2,3	egg mass on 2
	NUCELLA SPP		2,3	2,3	empty egg cases
	PAGURUS SPP		2,3	2,3	
	PISASTER OCHRACEUS				
	POLYCHAETES		2,3		
	PYCNOPODIA HELIANTHOIDES			2	
	SEARLESIA DIRA				
	SERPULIDS		2		
	SIPHONARIA THERSITES				
	TEALIA				
	flies, sculpin, herring, etc.			2	
	2-3" long blackish object				



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-127

ADEC Segment Length: 1435m
Exxon Segment Length: 1477

METERS

Map Key: PWS-309

Name: PittengerDate: 4/22/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-127 SUBDIVISION A (1 of 3)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3NP,3OQ

Harbor Seal and Sea Lion
Pupping and Molting

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

No specific ecological time constraint.

OTHER ECOLOGICAL CONSIDERATIONS

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

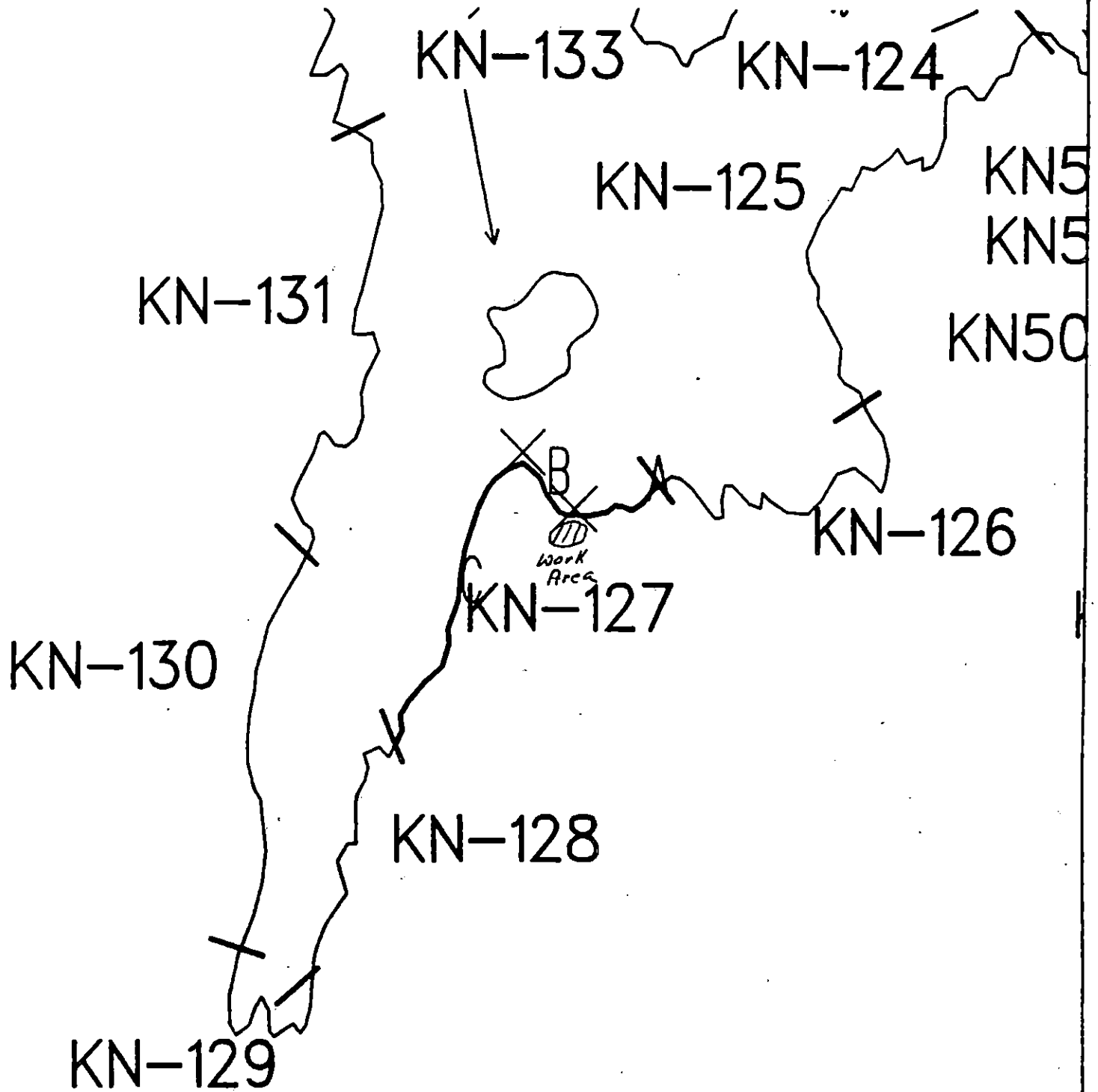
TAG APPROVAL DATE 5/24/90
ADEC Art Weiner
EXXON Andy
NOAA B. Wescott
USCG W. J. Hall

FOSC my L

DATE 5-24-90

Prepared By: Andie Meyer WTK

Date 5/22/90



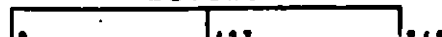
Exxon Company, USA

Map Key: KN1-KN127

Scale 1:1000



ECOLOGY MAP
SEGMENT KN-127
 SUBDIVISION A (1 of 3)
 METERS



★	Seabird Colony
▲	Eagle Nest

1 inch = 1000 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-127 SUBDIVISION A (1 OF 3) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 117 m: No Oil 164 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </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 pickup of oiled vegetation and limbs. Work should be conducted prior to (5/15) or between (7/1) and (8/15) based on pinniped constraints.

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

TAG COMMENTS: MONITORING TO ASSESS SUITS + LOG LIMBS INDICATED

TAG APPROVAL DATE: 5/8/90

ADEC Act Wanda Act Wanda

EXXON Amey Bar

NOAA Gary Jones Gary Jones

USCG C.A. FELTER C.A. FELTER

FOSC: ML DATE: 5-12-90

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