

OIL SPILL PUBLIC INFO. CENTER



3 6653 00006442 2

EVOS
GC
1552
.P75
S42
1991
v.46

[Shoreline evaluations, 1991].

Prince William Sound IN-31 to IN-34

Title supplied by cataloger. This title page is supplied by Alaska Resources Library and Information Services (ARLIS).

ARLIS

Alaska Resources Library & Information Services
Library Building, Suite 111
3211 Providence Drive
Anchorage, AK 99508-4614

1991 MAYSAP EVALUATION

SEGMENT: IN 031 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,
Anadromous stream

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN-031 SUBDIVISION A DATE 5/18/91

ADEC

NAME Peter Montezano

SIGNATURE [Signature]

☒ NTR

☐ TREATMENT RECOMMENDED

The AP and SOR found during ASAP was either removed or raked. Work completed. This oiling was w/in 10m of the Anad stream

EXXON

NAME C.M. FATSIMPALIS

SIGNATURE [Signature]

☒ NTR

VERY LITTLE OIL FOUND HERE. TEAM BROKE UP A FEW SMALL SOR PATCHES. SURVEY INCLUDES ANAD STREAM (#?)

LANDMANAGER

NAME DENNIS S. Kennedy OF USFS

SIGNATURE [Signature]

☒ NTR

moderate to low energy beach. Subdivision receives recreation use. Little amounts of oil found.

USCG/NOAA

NAME BRI ZENQUE

USCG USNCEC-BERTY D. daniel - Betty NOAA

SIGNATURE [Signature]

☐ NTR

A low energy beach that has a few patches of residual oil.

CG- NO TREATMENT RECOMMENDED. 3

OG SKETCH
IN 31 A
MAY 18, 1991
10:30 - 11:00
Doug Reimer

CT/ST
< 1%
3 X 30m
P/C U/TZ

CT < 1%
ST 5%
4 X 12m
P/C U/TZ

Fresh water stream

AP 6" X 6" (Removed)

Fresh water stream

SOR 1% Isolated
Patches 1/2 X 1/2 m
or smaller
CT < 1% (10 X 50m)
ST 5%
TB < 1% P/GK

Average Beach Width = 80 meters

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

IN 031 A
ADEC Subsegment Length: 327m
METERS
0 100 200
AK State Plane Zone 6
610310

Subdivision Field Map
Map Key: KNIIN031A
Name: Reimer
Date: 5/18/91
Date Entered:



revised 5:21 9/4
REVIEWED 5:21 5/22/91

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 18 May 91
 SEGMENT # IN-31 TIDAL HEIGHT(Range) -1 to -2
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE 1 - 2 ft WIND SPEED/DIRECTION 15kt gusting to 25kt
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A: A lagoon in area of lichen cover. However, the bank of CT reaches to the upper Eucalyptus/bamboo zone. Seaward of the oiled pits is an area of dense mussel beds, Littorinae & Littorinae egg masses. A boulder area supports numerous tide pools with dense Littorinae pagurids, & anemones.

C&D: Lichen & green algae in area of CT/ST. Lower ITZ here supports dense Eucalyptus clumps, mussel beds etc.

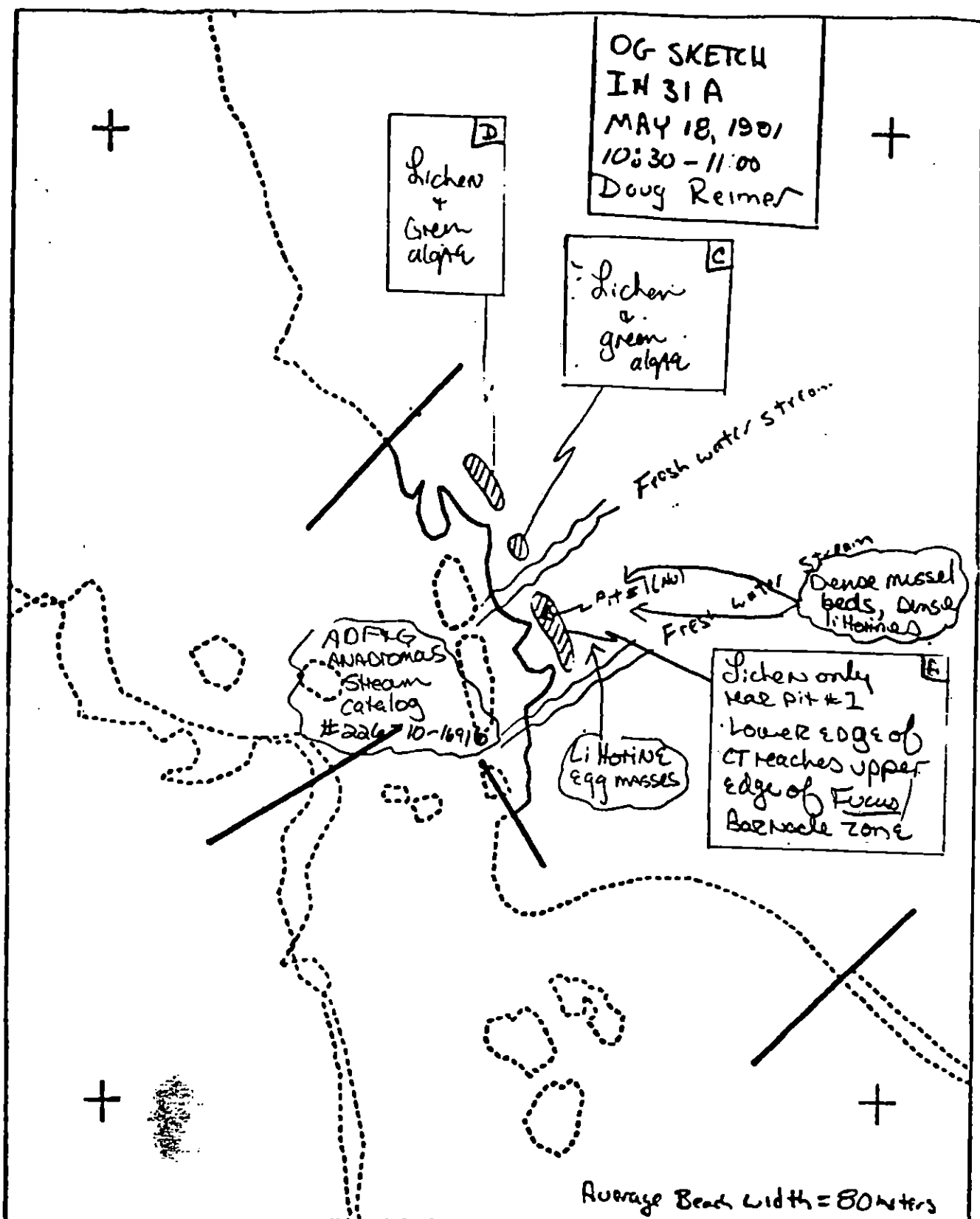
→ The stream at this site has been catalogued as anadromous by ADF&G Stream # 226-16-16916

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	/	/	/
Amphipeds(specify)			
Canines(specify)			

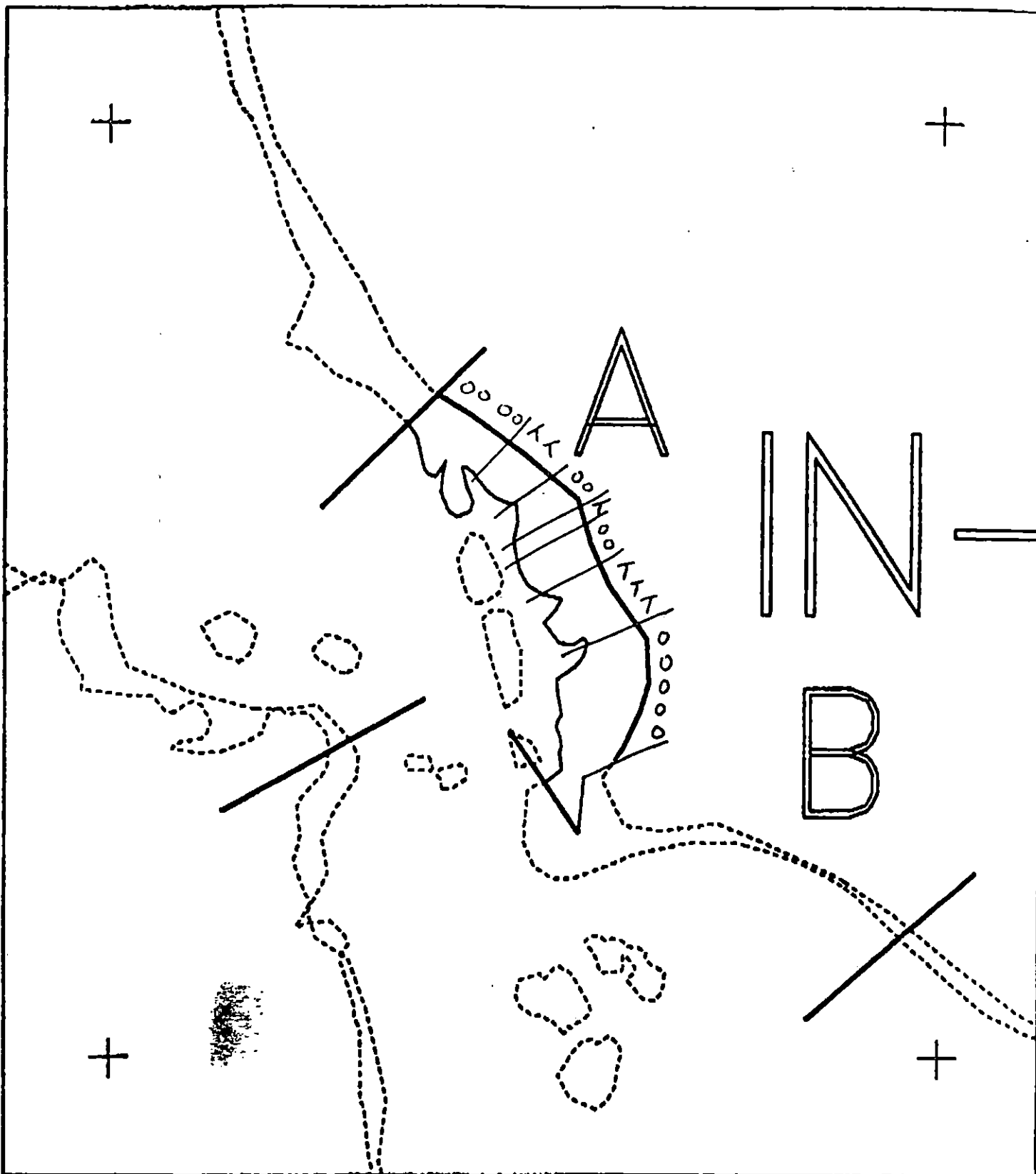
Shoreline subdivision map showing important biological features attached.



XXXX	Wide	IN031 A ADEC Subsegment Length: 327m METERS AS State Plane Zone 6 48031a	Subdivision Field Map
////	Medium		Map Key: KHIIN031A
----	Narrow		Name: <u>Reimer, S. Ban</u>
TTTT	Very Light		Date: <u>5/18/91</u>
0000	No Oil		Date Entered:

REVIEWED: F.W. 5/22/91

TOTAL P.E:



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

IN031 A

ADEC Subsegment Length: 327m
 METERS

0 100 200
 AK State Plane Zone 4
 110031a



Subdivision Field Map

Map Key: KN11N031A

Name: ReimerDate: 5/18/91

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: IN 031 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,
Anadromous stream

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy Adsmith Date: 5/31/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

N

UU

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

FOSC

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

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN-031 SUBDIVISION A DATE 5/18/91

ADEC

NAME Peter MontemayorSIGNATURE *Peter Montemayor*☒ NTR ☐ TREATMENT RECOMMENDED

The AP and SOR found during ASAP was either removed or raked. Work completed. This oiling was w/in 10m of the road stream

EXXON

NAME C.M. KATSIMPALISSIGNATURE *C.M. Katsimpalis*

☒ NTR VERY LITTLE OIL FOUND HERE. TEAM BROKE UP A FEW SMALL SOR PATCHES. SURVEY INCLUDES ANAD STREAM (#?)

LANDMANAGER

NAME DENNIS S. Kennedy OF USFSSIGNATURE *D.S. Kennedy*

☒ NTR moderate to low energy beach. Subdivision receives recreation use. Little amounts of oil found.

USCG/NOAA NOAA D. SINECEL-BERRY D. Sinecel-Berry NOAANAME BMI ZENONE USCGSIGNATURE *BMI Zenone*☐ NTR

A low energy beach that has a few patches of residual oil. 057.

CG. NO TREATMENT RECOMMENDED. 3

revised 5.21 qy
REVIEWED: F.W. 5/21/91

OG SKETCH
IN 31 A
MAY 18, 1991
10:30 - 11:00
Doug Reimer

CT/ST
< 1%
3 X 30m
P/C U1T2

CT < 1%
ST 5%
4 X 12m
P/C U1T2

P.U.
AP 6"X6" (Removed)

SOR 1% Isolated
Patches 1/2 X 1/2 m
or smaller
CT < 1% (10 X 50m)
ST 5%
TB < 1% P/C

Average Beach Width = 80 meters

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

IN031 A
ADEC Subsegment Length: 327m
METERS
AK State Plane Zone 4
110031a

Subdivision Field Map
Map Key: KN11N031A
Name: Reimer
Date: 5/18/91
Date Entered:



revised 5.21 gy
REVIEWED 5.21 gy
TOTAL P. 01 5/24/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 18 May 91
 SEGMENT # IN-31 TIDAL HEIGHT(Range) -1 to -2
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE 1 - 2 ft WIND SPEED/DIRECTION 15 kt gusting to 25 kt
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A: Pit dug in area of lichen cover. However, the bank of CT reaches to the upper Fucus barnacle zone. Seaward of the oiled pits is an area of dense mussel beds, Littorines & Littorine egg masses. A boulder area supports numerous tide pools with dense Littorines pagurios, & Anenomes.

C+D: Lichen & green algae in area of CT/ST. Lower intertidal here supports dense Fucus clumps, mussel beds etc.

→ The stream at this site has been catalogued as anadromous by ADFG Stream # 226-16-16916

WILDLIFE OBSERVATIONS

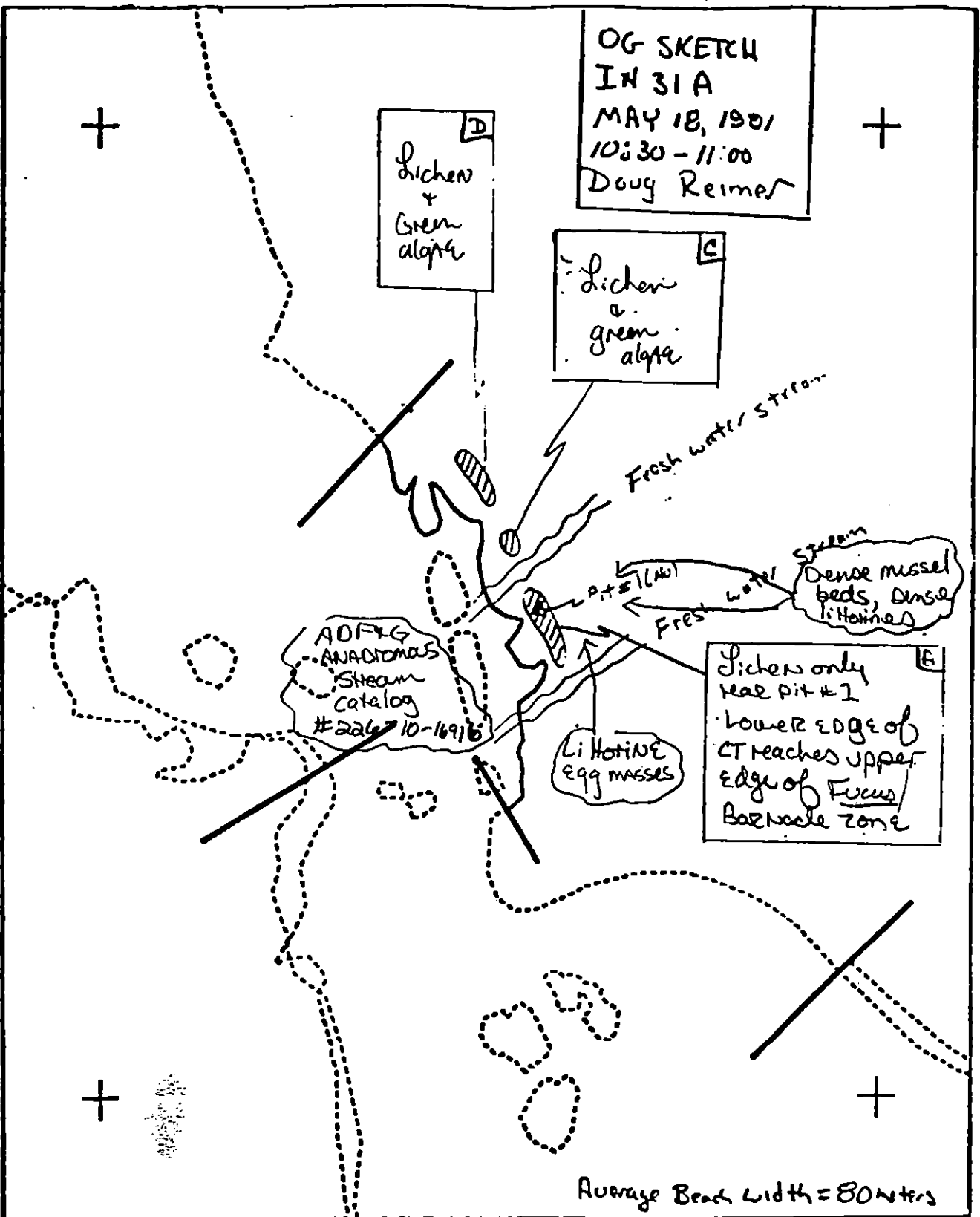
TO BE COMPLETED IN ALL SUBDIVISIONS

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	1	/	/
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed: F.W. 5/22/91
 Pond 5/21/91 DM



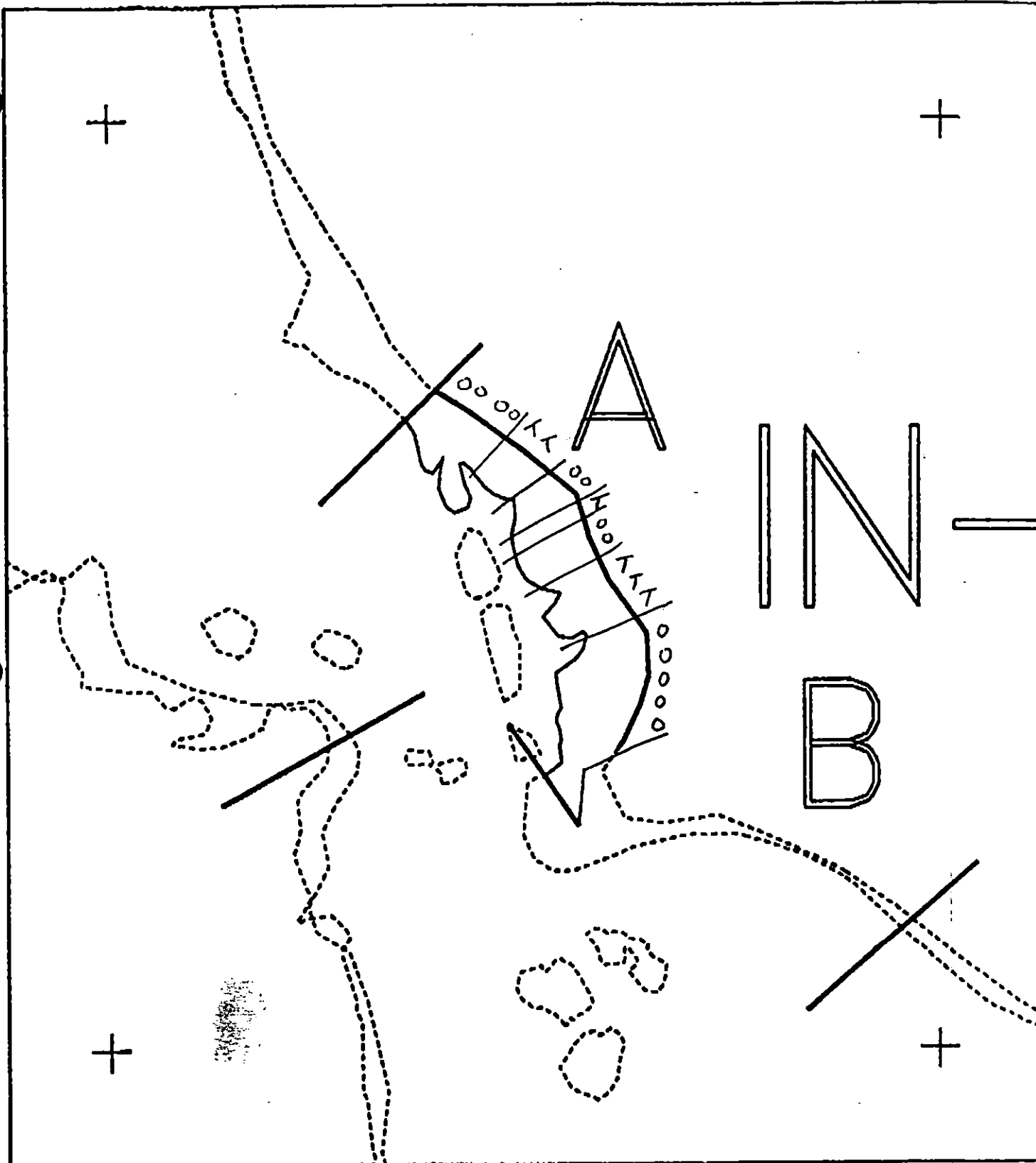
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

IN031 A
 ADEC Subsegment Length: 327m
 METERS
 0 100 200
 AK State Plane Zone 4
 610314

Subdivision Field Map
 Map Key: KNIIN031A
 Name: Reimer, S. Bar
 Date: 5/18/91
 Date Entered:

REVIEWED: F.W. 6/22/91

TOTAL P.E:



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

IN031 A
ADEC Subsegment Length: 327m
METERS
0 100 200
AK State Plane Zone 4
810310

Subdivision Field Map
Map Key: KHIIN031A
Name: Reimer
Date: 5/18/91
Data Entered:

reviewed 5.21 gy
RENEWED: F.W. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: IN 031 SUB: B REGION: PWS SURVEY DATE: 5/17/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IA - 0.31 SUBDIVISION B DATE 5/17/91

DEC

NAME

Peter Montesano

SIGNATURE

[Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

as noted by OG, Pit 1 is more a reflection of the thickness of the AP than of the presence of sub-surface oil. The % provided represent an overall fair account of the presence of SOR/AP, however in areas D, C, + E the AP/SOR is in distinct patches between boulders, which is lost in the % classification. These areas (D, C, + E) warrant attention w/ hoes and shovels and are easily accessible. Considering accessibility and distribution, areas A, H, I, K, + N do not have oil which warrants attention. Areas F + G are in finer sediments such as gravel and should be raised w/ clam rakes after the heavier patches are removed.

EXXON

NAME

C. M. Katsimbalis

SIGNATURE

[Signature]

☐ NTR

SOME OF THE SOR & AP AREAS WITHIN THIS SEGMENT COULD USE MANUAL REMOVAL/BREAKUP. WORK HERE SHOULD BE CONCENTRATED ON EASILY ACCESSED AREAS SO DISTURBANCE IS KEPT TO A MINIMUM. CARE SHOULD BE TAKEN TO AVOID MUSSEL/CLAM BEDS DURING CLEAN UP OPS.

* AP/SOR INTERSTITIAL BETWEEN BOULDERS IS NOT OF GREAT CONCERN.

LANDMANAGER

NAME

Dennis S. Kennedy OF USFS

SIGNATURE

D. S. Kennedy

☐ NTR

Area "E" could be handworked because of the small rock sizes. If work is by a small crew would need to take care around mussels and clams. [see Bio. notes] Reported eagle nest was not found. There is an often used camp site that is trashed by recreation users. If in subdivision "F" & "G" could be raised, low priority.

USCG/NOAA D. Linneer - Beatty NOAA

NAME

Bruce M. P. Zende USCG

SIGNATURE

[Signature]

☐ NTR

There is SOR in areas E, F, + G that could be manually broken. However, the biologist has indicated that some mortality to the mussel beds could be attributed to trampling by cleanup crews, use of chains etc. - PS-B

- SIGNIFICANT IMPROVEMENT OVER LAST YEAR. HOWEVER, 1/2 DAY'S WORK BY A MANUAL CREW COULD AID THIS SEGMENT IN AREAS D, C, + E. MOSTLY BREAK-UP OF AP AND OF COURSE REMOVAL OF AS MUCH AS PRACTICAL. SMALLER TOOLS MAY BE NEEDED IN AREAS C + D TO FACILITATE BREAK-UP. CAREFUL CONSIDERATION BY TAG AND PERHAPS VISIT IF PRACTICAL DUE TO CLAM BEDS BETWEEN AREAS E + N WHERE APPARENT OTTER FORAGING IS TAKING PLACE. AREAS F + G COULD USE RAKING. GOOD RESULTS FROM BIOREMEDIATION LAST YEAR.

TEAM NO. 2OG ReimerBIO S. BAWSEGMENT IN 31ADEC P. MontesanoLANDMANAGER O. Kennedy for USFSSUBDIVISION BEXXON C. KatsimpalisUSCG/NOAA O. Simacek - PeattyDATE 5/17/91TIME 9:00 to 10:45TIDE LEVEL -0.67 ft. to 2.65 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 283 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M 15 m N 50 m VL 15 m NO 123 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			TYPE	VHML	WIDTH	LENGTH	S	UI	
											m	m							
A					S	S					RB	H	2	20		X			
B	S			S							B	M	2	40		X			Interstital
C	S			S		S	S				RB	M	4	20		X			
D	P			P		P					B	M	6	15		X			Interstital SOR/AP
E	P			P	P	P	P				BC	M	15	60		X	X		
F				P							PC	M	1	10		X			light SOR
G				S		T					PC	M	4	15		X			light SOR
H				S		P	P				BR	M-V	4	10		X			SOR (light - heavy)
I			T	S	P	P					RBC	H	4	15		X			
J						S					R	V	1	15		X			
K				S	S	S					RB	H	1	10		X			
L						P					RB	M	1/2	3		X			
					S						R	H	1	3		X			
					S	S					RBC	M-V	1	8		X			Time dwo

DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2-19 FRAMES 1-5

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	13		X						5-10	Y	-	-		X			C-G-P	See Below
2	30							X	-					X			P-G-P	Berm
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

* Pit #1 - was dug through patch of Surface SOR/AP which is around boulder/cobble. The SOR/AP is patchy throughout the lug, the > 5 cm depth of material does not appear to be a subsurface layer with measurable extent, however the patches are greater than 5 cm in thickness, this is a common occurrence on coarse boulder/cobble beaches where the SOR/AP is often intertidal between coarser sediments.

See attached sheet

 revised 5.21 9y
 REVISUWED: F.W. 5/22/91

OG Comments (Page 2)

The Subdivision Consists of a complex Boulder/Cobble beach which grades into a pebble "spit like" headland sheltered behind three near shore Islands. The Islands and beach areas are connected @ low tide by a wide tidal flat area.

The predominant oiling is along the east side of the Segment on the Coarser Boulder material and consists of OT/ST on sides of Boulders/Rock with patches of AP/SOIL largely intertidal between Coarser Sediments. The oiling is heavier along the NITZ and decreases down slope. The AP is often friable and breaks up easily, however some patches of cohesive material were found. Some sporadic SOR was found at the west end of the Segment in areas where AP was removed during the 1990 Clean-up Season.

NOTE: The Islands are not indicated on the GIS Map as being included as part of the Segment. They were surveyed for completeness as they were included in the SSAT survey and had BIO Treatment during 1990. The oiling category Lengths on the OG form Do NOT include the Islands, as the shoreline Length as indicated on GIS map does not include the Islands.

Doug Reimer

OG SKETCH
IN 31 B
5/17/91
9:00 - 10:45
Doug Reimer

E 15 x 60 m
CT/CV/ST 20% pine needles
on sides of Boulders
SOR/AP 10% patchy,
largely interstitial between
Boulders

G 4 x 15 m
SOR (Light) 5%
Some bordering on Ap, but
breaks up easily
CT on cobbles < 1%

C 4 x 20 m
AP/SOR - generally < 6%
occasional small patches to 10%
CT/ST Rock/BIDS 6%

A CV/CT
2 x 20 m 10%
Rock/BID

D CT 10% BIDS
AP/SOR (Light-heavy)
interstitial between
boulders
6 x 15 m 15%

B SOR/AP 5%
2 x 40 m
interstitial between
Boulders

N 1 x 8 m each
CT/CV 5% Rock
SOR < 1% at
base of Rock cliff

M CV (drip lines) 2%
1 x 3 m

L CT 10%
1/2 x 3 m
Rock/BID

K CT/CV 5%
SOR 1%
1 x 10 m
Rock/BID

J CT 2%
1 x 15 m
VERT Rock

I CT/CV 15%
SOR 5%
TB < 1%
4 x 15 m

H CT/ST 20% Rock/BID
SOR 5% (Light-heavy)
4 x 10 m
1 x 10 m CT on
Rock cliff

F SOR (Light)
1 x 10 m
discontinuous
Patches 10%

Pebble Beach

Tidal flats

Hor
est. 90m²
from OG
notes (10%)

Boulder/cobble

Boulder

Beach

Run off
STREAM



AVERAGE BEACH WIDTH - 40m
This does NOT include Tidal flats
revised 5.21.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 17 May 91
 SEGMENT # IN 31 TIDAL HEIGHT (Range) -1 to +2.5
 SUBDIVISION B BIOLOGIST S M RAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

ABC + D: The CV, CT 302 + AP in this area is found in the upper + upper-mid I as indicated on maps. Sparse barnacles and Fucus are observed in lower reaches of the bank, but generally the oiled areas are in the lichen zone

E: Oil in this zone reaches lower into the intertidal. Barnacles, Lithothamnion + Fucus observed in lower edges of oiled zone. A native clam bed is seaward of the oil as indicated. Numerous Pterotheca + Saxidomus shells were observed along with siphon holes indicating living hives. Scatter pits and mussel snail egg cases were also seen. SEA STARS (Pycnopodia) and the seagrass Phyllospadix were observed subtidally in this area.

FG H: AS indicated on map. Dense + Diverse lower ITZ in these zones

I J K L M: AS indicated - Tide Pool at "I" contained "thousands" of Lithothamnion (adult + juvenile) on Podemela. All locations have dense + diverse lower ITZ

N: Oil at base of rock - lower edge of oil reaches upper edge of barnacles + Fucus

If cleanup is recommended for this site do not allow access to mussel or clam beds. This site has shown high mussel mortality some of which may be attributed to trampling by cleanup crews.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

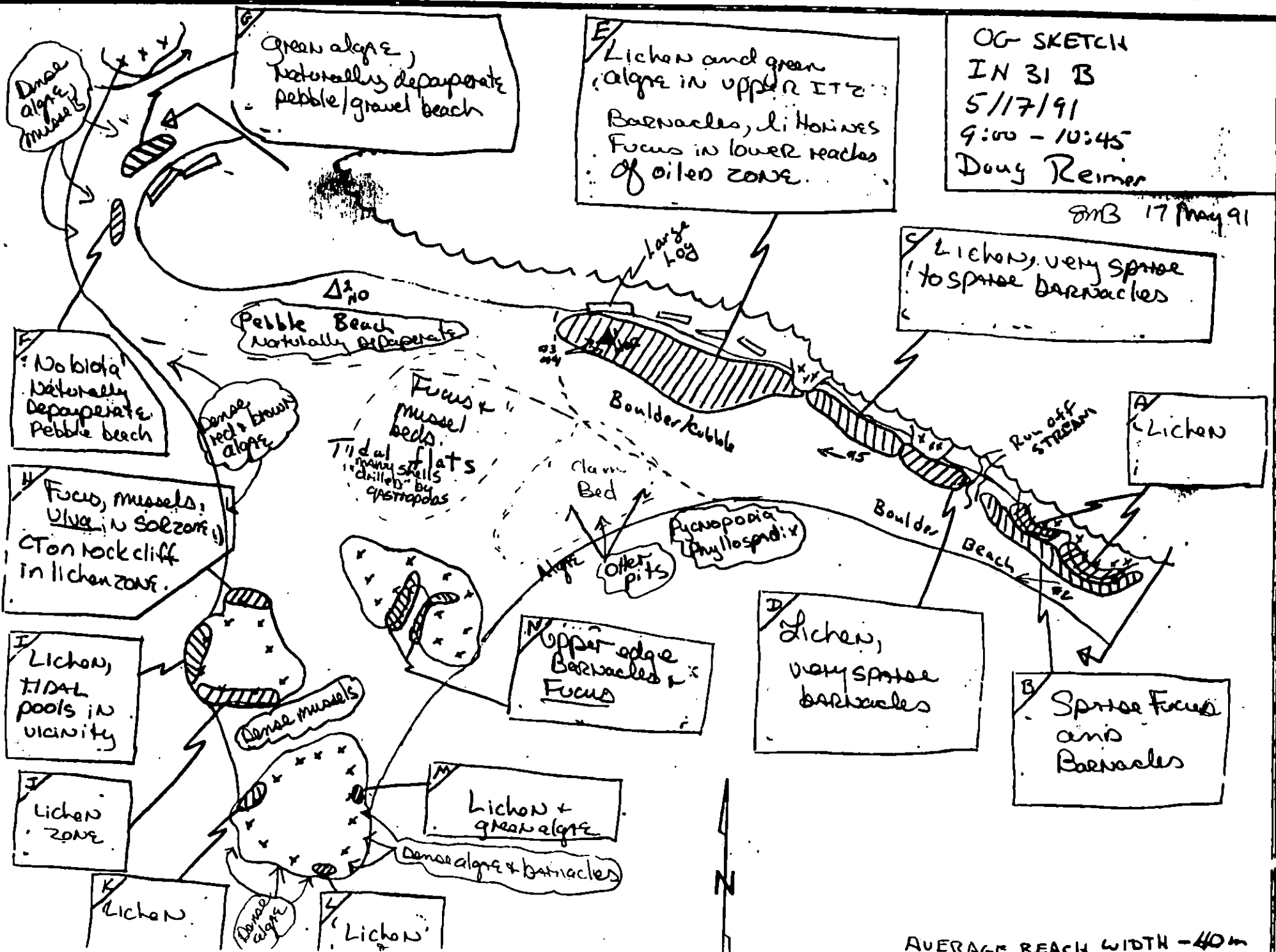
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (in flight)	1 total	
Seabirds			
Waterfowl	Harlequin + goldeneyes	2 @ total = 4	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 adults 1 pup		
Pinnipeds (specify)			
Seal (specify)	1		

Shoreline subdivision map showing important biological features attached.

OG SKETCH
IN 31 B
5/17/91
9:00 - 10:45
Doug Reimer

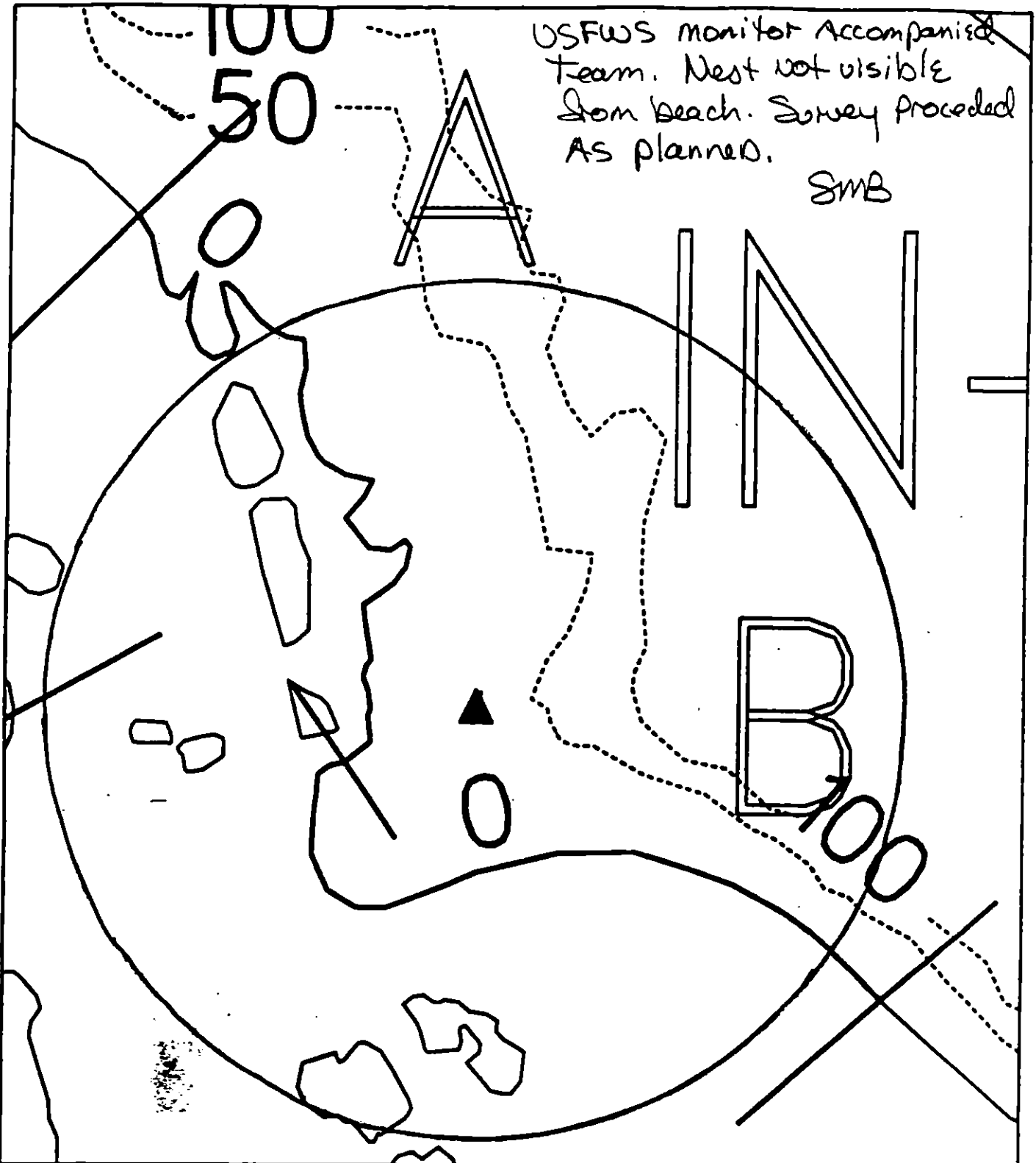
8MB 17 May 91



AVERAGE REACH WIDTH - 40m

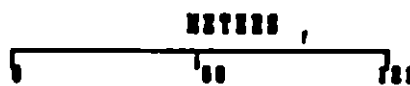
USFWS monitor Accompanied
Team. Nest not visible
from beach. Survey proceeded
AS planned.

SMB



IN031

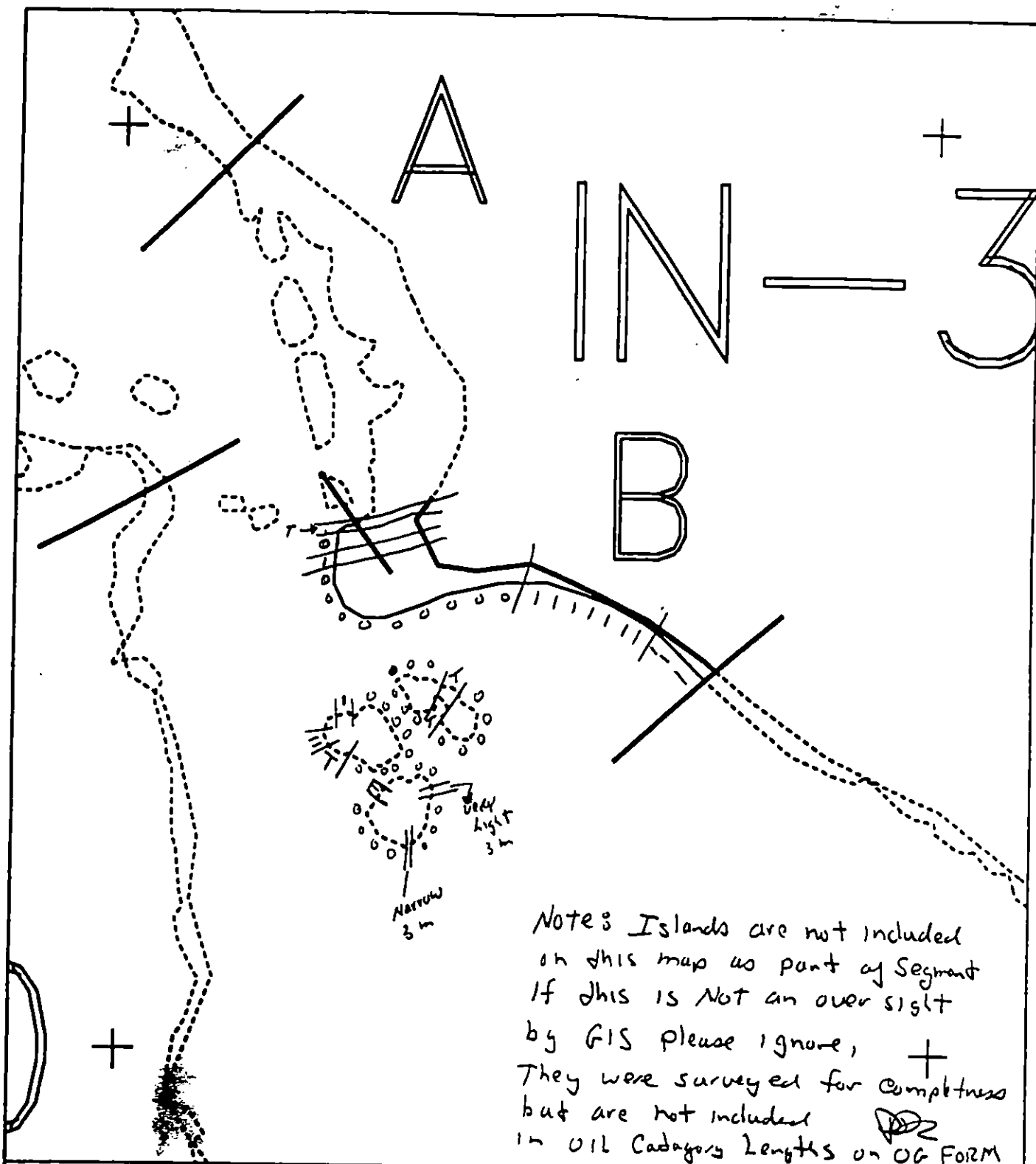
Segment Reference Map
Map Key: PVSIN031



AS State Planning Zone 4
pl031



EAGLE NEST



XXXX	Wide	IN031 B ADEC Subsegment Length: 283m METERS 0 100 200 AK State Plane Zone 4 14N031B	Subdivision Field Map
////	Medium		Map Key: KNIN031B
----	Narrow		Name: <u>Reimer</u>
TTTT	Very Light		Date: <u>5/17/91</u>
0000	No Oil		Date Entered:

Reviewed 5.21 94
 REVIEWED: F.W. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: IN 031 SUB: B REGION: PWS SURVEY DATE: 5/17/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/1Ecological/Constraints (see page two for details) Eagle nestARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.SHPO Signature: Timothy O. Smith Date: 5/31/91RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>Y</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: MANUALLY REMOVED AD + HSOILID ATLAS C, D RE AND BIORESTRICTIONAL AREA! AN SURVEYTEAM MEMBERS INDICATED CLEANUP IS WARRANTED - 5/25/91TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/5/91ADEC John BauerFOSC E. E. PAGEEXXON Real

E. E. PAGE, CDR, USCG

USCG Ed Maso

CHIEF OF STAFF / FOSC
 The State will reevaluate the
 need for treatment on this
 Subdivision John Bauer

NOAA John Bauer

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN - 031 SUBDIVISION B DATE 5/17/91

ADEC

NAME

Peter Montesano

SIGNATURE

☐ NTR

TREATMENT RECOMMENDED

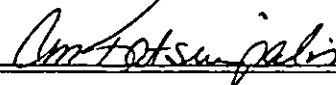
as noted by OG, pit 1 is more a reflection of the thickness of the AP than of the presence of sub-surface oil. The % provided represent an overall fair account of the presence of SOR/AP, however in areas D, C, + E the AP/SOR is in distinct patches between boulders, which is lost in the % classification. These areas (D, C, + E) warrant attention w/ hoes and shovels and are easily accessible. Considering accessibility and distribution, areas A, H, I, K, + N do not have oil which warrants attention. Areas F + G are in finer sediments such as gravel and should be raised w/ clam rakes after the heavier patches are removed.

EXXON

NAME

C. M. Katsimpalis

SIGNATURE

☐ NTR

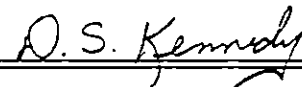
SOME OF THE SOR & AP AREAS WITHIN THIS SEGMENT COULD USE MANUAL REMOVAL/BREAKUP. WORK HERE SHOULD BE CONCENTRATED ON EASILY ACCESSED AREAS SO DISTURBANCE IS KEPT TO A MINIMUM. CARE SHOULD BE TAKEN TO AVOID MUSSEL/CLAM BEDS DURING CLEAN UP OPS.

* AP/SOR INTERSTITIAL BETWEEN BOULDERS IS NOT OF GREAT CONCERN.

LANDMANAGER

NAME Dennis S. Kennedy OF WSFS

SIGNATURE

☐ NTR

Area "E" could be handworked because of the smaller rock sizes. If work is R_x a small crew would maintain care around mussels and clams. [see Bio. notes] Reported eagle nest was not found. There is an often used camp site that is trashed by recreation users. If in subdivision "F" & "G" could be raised, low priority.

USCG/NOAA D. J. MEECE-BEATTY NOAAD. J. Meece-BeattyNAME Bruce M. P. ZENOVE USCG

SIGNATURE

☐ NTR

There is SOR in areas E, F, + G that could be manually broken. However, the biologist has indicated that some mortality to the mussel beds could be attributed to trampling by cleanup crews, researchers etc. - PS-B

CG - SIGNIFICANT IMPROVEMENT OVER LAST YEAR. HOWEVER, 1/2 DAY'S WORK BY A MANUAL CREW COULD AID THIS SEGMENT IN AREAS D, C, + E. MOSTLY BREAK-UP OF AP AND OF COURSE REMOVAL OF AS MUCH AS PRACTICAL. SMALLER TOOLS MAY BE NEEDED IN AREAS C + D TO FACILITATE BREAK-UP. CAREFUL CONSIDERATION BY TAG AND PERHAPS VISIT IF PRACTICAL DUE TO CLAM BEDS BETWEEN AREAS E + N WHERE APPARENT OTTER FORAGING IS TAKING PLACE. AREAS F + G ~~ARE~~ COULD USE RAKING. GOOD RESULTS FROM BIOREMEDIATION LAST YEAR.

TEAM NO. 2OG ReimerBIO S. BAWSEGMENT IN 31ADEC P. MontesanoLANDMANAGER O. Kennedy for USFSSUBDIVISION BEXXON C. KatsimpalisUSCG/NOAA O. Simmel - BeattyDATE 5/17/91TIME 9:00 to 10:45TIDE LEVEL -0.67 ft. to 2.65 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 283 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M 95 m N 50 m VL 15 m NO 123 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					S	S					RB	H	2	20		X			
B	S			S							B	M	2	40		X			interstitial
C	S			S		S	S				RB	M	4	20		X			
D	P			P		P					B	M	6	15		X			interstitial SOR/AP
E	P			P	P	P	P				BC	M	15	60		X	X		
F				P							PC	M	1	10		X			light SOR
G				S		T					PC	M	4	15		X			light SOR
H				S		P	P				BR	M-V	4	10		X			SOR (light-heavy)
I			T	S	P	P					RBC	H	4	15		X			
J						S					R	V	1	15		X			
K				S	S	S					RB	H	1	10		X			
L						P					RB	M	1/2	3		X			
M					S						R	H	1	3		X			
N					S	S					RBC	M-V	1	8		X			Time dwo

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

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

PHOTO ROLL # MAYSAP-

2-19FRAMES 1-5

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE	CLEAN BELOW	H2O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	13		X						5-10	Y	-	-		X			C-G-P	see below
2	30							X	-					X			P-G-P	Beach
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

* Pit #1 - was dug through patch of Surface SOR/AP which is around boulder/cobble. The SOR/AP is patchy throughout the loc, the > 5 cm depth of material does not appear to be a subsurface layer with measurable extent, however the patches are greater than 5 cm in thickness, this is a common occurrence on coarse boulder/cobble beaches where the SOR/AP is often intertidal between coarser sediments.

See attached sheet

revised 5.21 94
REVIEWED: F.W. 5/22/94

O.G. Comments (Page 2)

The Subdivision consists of a complex Boulder/Cobble beach which grades into a pebble "spit like" headland sheltered behind three near shore Islands. The Islands and beach areas are connected @ low tide by a wide tidal flat area.

The predominant oiling is along the east side of the segment on the coarser Boulder material and consists of OT/ST on sides of Boulders/Rocks with patches of AP/SOR largely interstitial between coarser sediments. The oiling is heavier along the NITZ and decreases down slope. The AP is often friable and breaks up easily, however some patches of cohesive material were found. Some sporadic SOR was found at the west end of the segment in areas where AP was removed during the 1990 Cleanup Season.

NOTE: The Islands are not indicated on the GIS map as being included as part of the segment. They were surveyed for completeness as they were included in the SSAT survey and had BIO Treatment during 1990. The oiling category Lengths on the OG form Do NOT include the Islands, as the shoreline Length as indicated on GIS map does not include the Islands.

Doug Reimer

OG SKETCH
IN 31 B
5/17/91
9:00 - 10:45
Doug Reimer

G/ 4 x 15 m
SOR (light) 5%
Some bordering on Ap, but
breaks up easily
CT on cobbles < 1%

E/ 15 x 60 m
CT/CV/ST 20% pine needles
on sides of Boulders
SOR/AP 10% patchy,
largely interstitial between
Boulders

C/ 4 x 20 m
AP/SOR - generally < 5%
occasional small patches to 10%
CT/ST Rock/BLDS 5%

A/ CV/CT
2 x 20 m 10%
Rock/BLD

B/ SOR/AP 5%
2 x 40 m
interstitial between
Boulders

D/ CT 10% BLDS
AP/SOR (light-heavy)
interstitial between
boulders
6 x 15 m 15%

HOR
est. 90m²
from OG
notes (10%)

N/ 1 x 8 m each
CT/CV 5% Rock
SOR < 1% at
base of Rock cliff

M/ CV (driplines) 2%
1 x 3 m

L/ CT 10%
1/2 x 3 m
Rock/BLD

K/ CT/CV 5%
SOR 1%
1 x 10 m
Rock/BLD

J/ CT 2%
1 x 15 m
VERT Rock

I/ CT/CV 15%
SOR 5%
TB < 1%
4 x 15 m

H/ CT/ST 20% Rock/BLD
SOR 5% (light-heavy)
4 x 10 m
1 x 10 m CT on
Rock cliff

F/ SOR (light)
1 x 10 m
discontinuous
Patches 10%

Pebble Beach

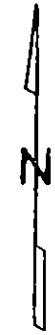
Tidal flats

Boulder/cobble

Boulder

Beach

Run off
STREAM



AVERAGE BEACH WIDTH - 40m
This does NOT include Tidal flats
reviewed 5.21.91

Reviewed: F.W. Slack

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 17 May 91
 SEGMENT # IN 31 TIDAL HEIGHT (Range) -1 to +2.5
 SUBDIVISION B BIOLOGIST S M RAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A B C + D: The CV, CT 90R + AP in this area is found in the upper + upper-mid ITZ as indicated on maps. Sparse barnacles and Fucus are observed in lower reaches of the barn, but generally the oiled areas are in the lichen zone.

E: Oil in this zone reaches lower into the intertidal. Barnacles, Littorines + Fucus observed in lower edges of oiled zone. A native clam bed is seaward of the oil as indicated. Numerous Prototheca + Saxidomus shells were observed along with siphon holes indicating living bivalves. Sea urchin pits and mussel snail egg cases were also seen. Sea stars (Pycnopodia) and the seagrass Phyllospadix were observed subtidally in this area.

F G H: As indicated on map. Dense + Diverse lower ITZ in these zones

I J K L M: As indicated - Tide Pool at "I" contained "thousands" of Littorines (adult + Juvenile) on the rocks. All locations have dense + diverse lower ITZ.

N: Oil at base of rock - lower edge of oil reaches upper edge of barnacles + Fucus

If cleanup is recommended for this site do not allow access to mussel or clam beds. This site has shown high mussel mortality some of which may be attributed to trampling by cleanup crews.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (in flight)	1 total	
Seabirds			
Waterfowl	Harlequin + goldeneyes	2 @ total = 4	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 Adults 1 pup		
Pinnipeds (specify)			
Seal	1		
es (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: F.W. 5/22/91
 D. J. 5/24/91 NM

OMB 17 May 91

✓ Lichen, very sparse
to sparse barnacles

A/
Lichen

B Spruce Focus
and
Baobabs

D
Lichen,
very sparse
barbules

Upper edge
Barbules
Fucus

Lichen + green algae

green algae;
naturally depauperate
pebble/gravel beach

Pebble Beach
Naturally Dispersed

F
 • No blotch
 • Naturally
 Depauperate
 Pebble beach

4. Fucus, mussels;
Ulva in solz zone;
OTon rock cliff
in lichen zone.

I Lichen,
TIDAL
pools in
vicinity

I
Lichen
zone

K
Zichen.

4
(Lichon)
Lichon

Dense red & brown algae

Fossil
mussel
beds.
Tidal flats
many shells
"drilled" by
gastropods

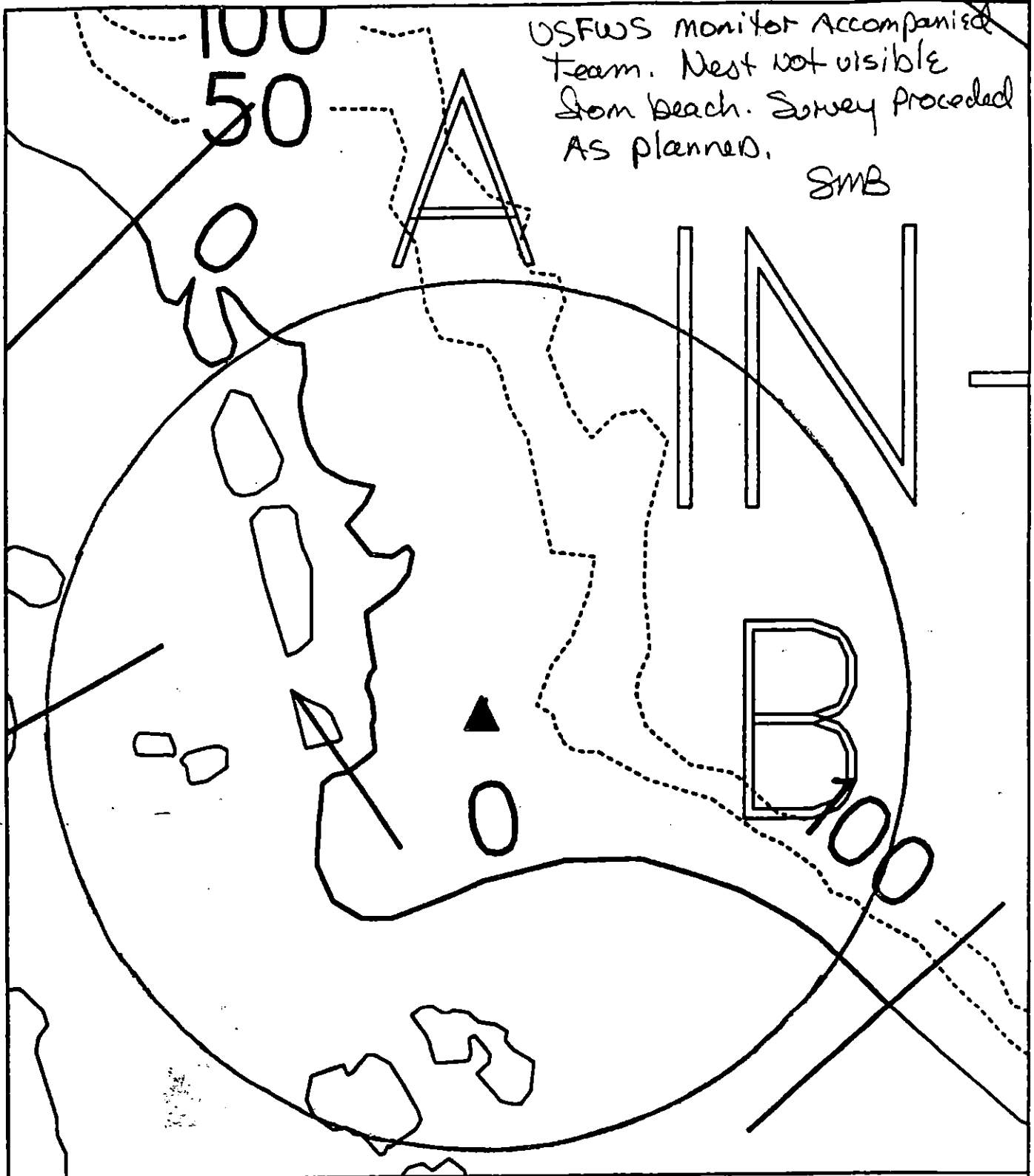
Pycnospodia
Phyllospodix

A hand-drawn map of the study area. It features a diagonal line representing a boundary or path. Above the line, the word "Boulder" is written. Below the line, the word "Beach" is written. To the right of the line, there is a small sketch of a person sitting on a bench, with the word "Slacks" written above it.

AVERAGE BEACH WIDTH - 40m

Reviewed: F.W. 5/22/94

SMB



INO31



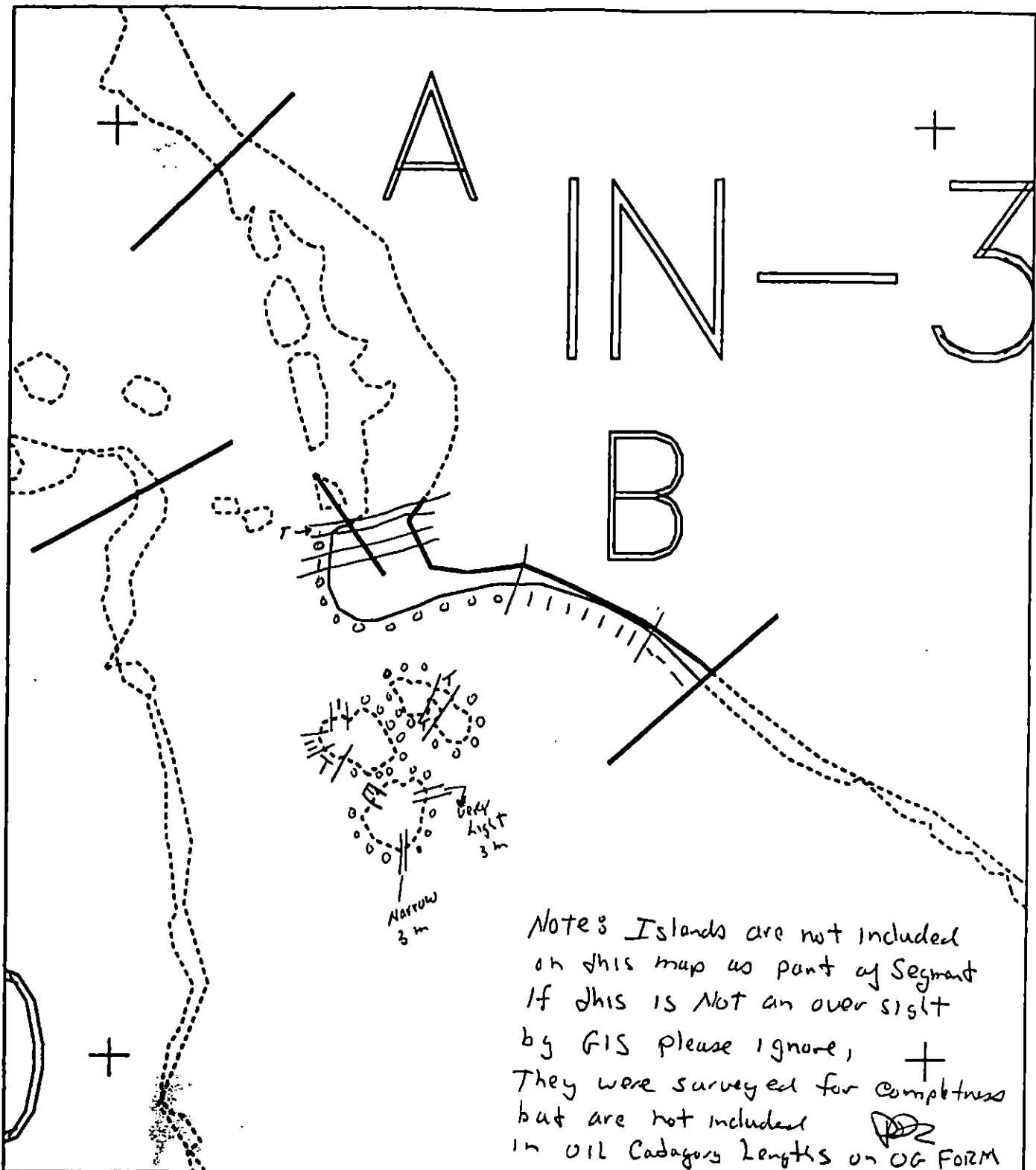
AE State Plane Zone 4
pln031

Segment Reference Map

Map Key: PWSIN031



EAGLE NEST



XXXX	Wide	IN031 B		Subdivision Field Map
////	Medium	ADEC Subsegment Length: 283m		Map Key: KNIN031B
----	Narrow	METERS		Name: <u>Reimer</u>
TTTT	Very Light	5 100 200		Date: <u>5/17/91</u>
0000	No Oil	AK State Plane Zone 4 614031B		Date Entered:

Reviewed 5.21 94
 REVIEWED: F.W. 5/22/91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-31 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints recommended.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/16/90.

ADEC Art Weimer D. L. Weimer

EXXON Andy John

NOAA John Talbot John

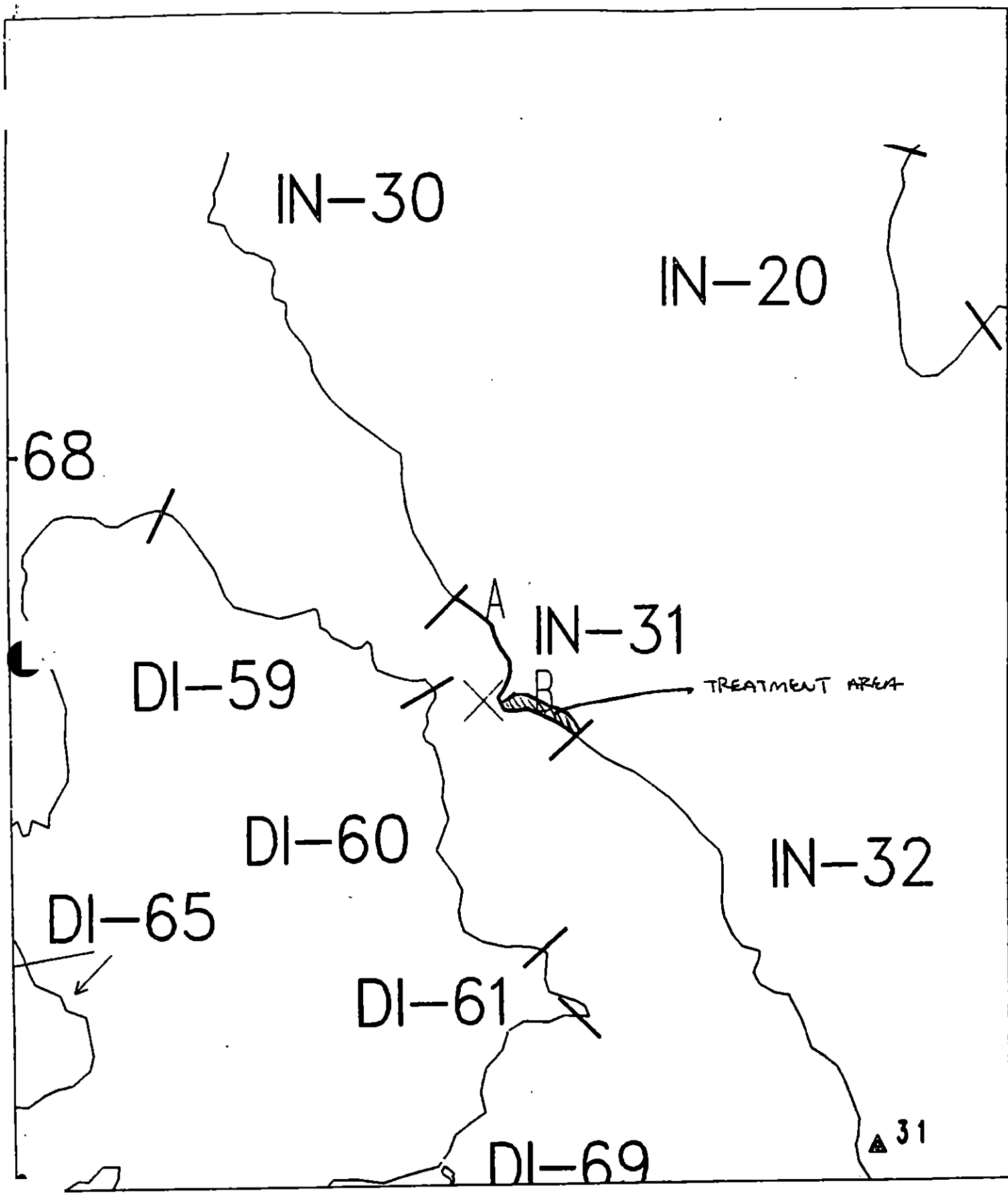
USCG G. A. Peter John

FOSC

DATE 5-17-90

Prepared by: WIK

Date: 5/14/90



Exxon Company, USA
Map Key: KNI-IN-31
May 11, 1990



ECOLOGY MAP
SEGMENT IN-31
SUBDIVISION B (2 of 2)
METERS
0 363 726

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1191 feet

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 283 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
2) manual pick up of tarballs, 3) bioremediation of areas shown on
attached sketch map. No specific constraints for performing work.

TAG COMMENTS: MONITORS TO ASSESS FEASIBILITY / NEED TO BIOREMEDIATE
TAG CAUSE/COST ON THE TWO SMALL ISLANDS

TAG APPROVAL DATE: 4/23/90
ADEC ART WEINER
EXXON ANDY TATE
NOAA Jessie Talbot
USCG KENNETH KEANE

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

IN-30

IN-20

68

DI-59

IN-31

TREATMENT AREA

DI-60

IN-32

DI-65

DI-61

DI-69



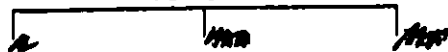
Exxon Company, USA

Map Key: PWS-IN-31

June 04, 1990



ECOLOGY MAP
SEGMENT IN-31
SUBDIVISION B (2 of 2)
METERS



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

Wavy line = *Wavy line*

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 283 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
2) manual pick up of tarballs, 3) bioremediation of areas shown on
attached sketch map. No specific constraints for performing work.

SEE CONSTRAINTS ADDENDUM dated 6/10/90/P.

TAG COMMENTS: MONITORS TO ASSESS FEASIBILITY / NEED TO BIOREMEDIATE
TAG CAUSE/COMP ON THE TWO SMALL ISLANDS

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER
EXXON ANDY TON
NOAA Jessie Talbot
USCG Kenneth Keane

FOSC: [Signature] DATE: 7-27-90

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 283 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
2) manual pick up of tarballs, 3) bioremediation of areas shown on
attached sketch map. No specific constraints for performing work.

TAG COMMENTS: MONITORS TO ASSESS FEASIBILITY / NEED TO BIOREMEDIATE
TAR COVER/COAT ON THE TWO SMALL ISLANDS.

TAG APPROVAL DATE: 4/23/90

ADEC ART WERNER
EXXON ANDY TON
NOAA Joseph Talbot
USCG KENNETH KEANE

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

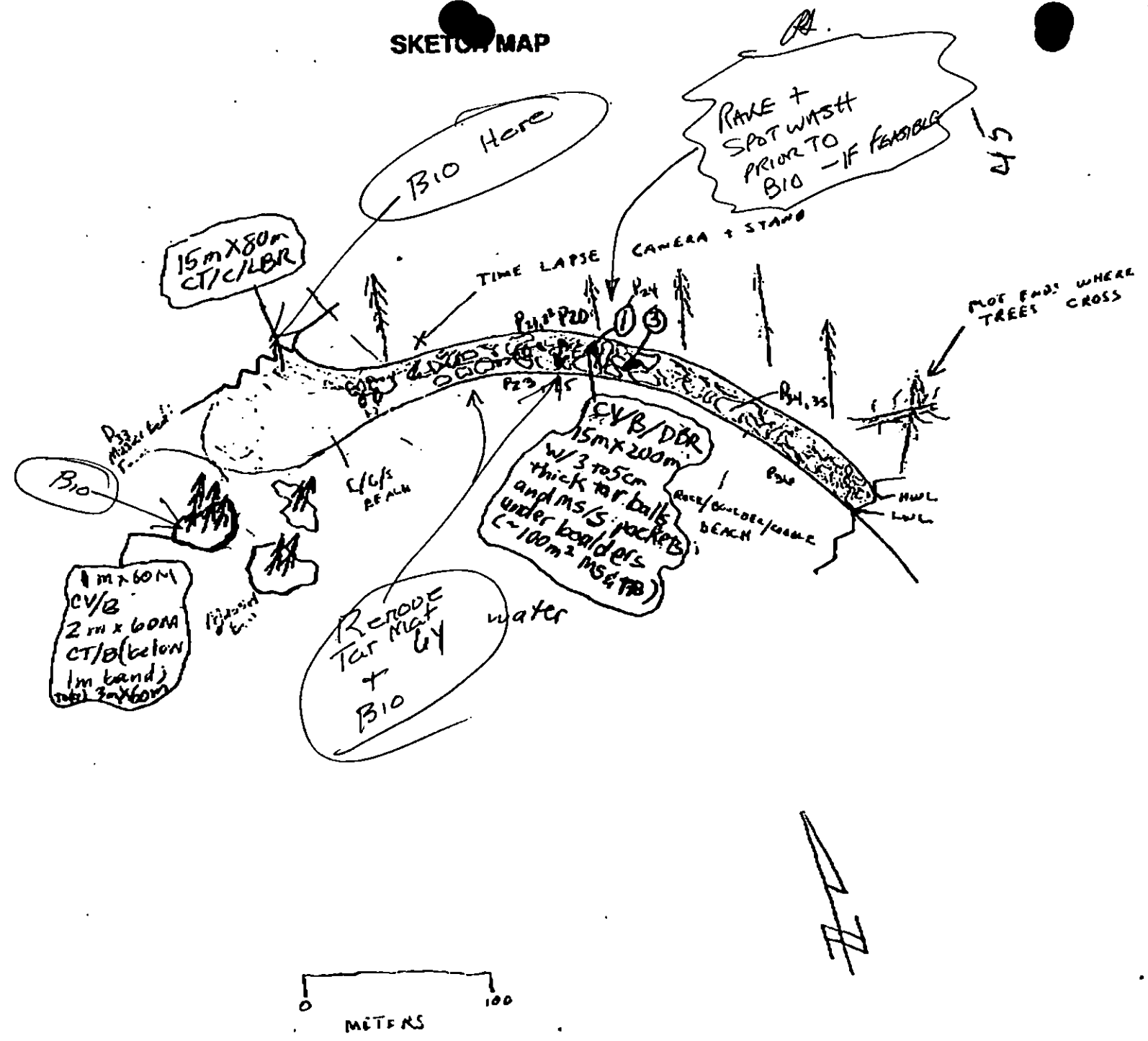
OGT SPRING
 SEGMENT ST/IN-31
 SUBDIVISION B
 DATE 04 107/190

SKETCH MAP

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

LEGEND

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



Oil Character Length (m): AP _____ PO _____ CV 260 CT 80 ST _____ MS _____ PT _____ TB _____ FL _____ NO 34

Sey:ST IN31B

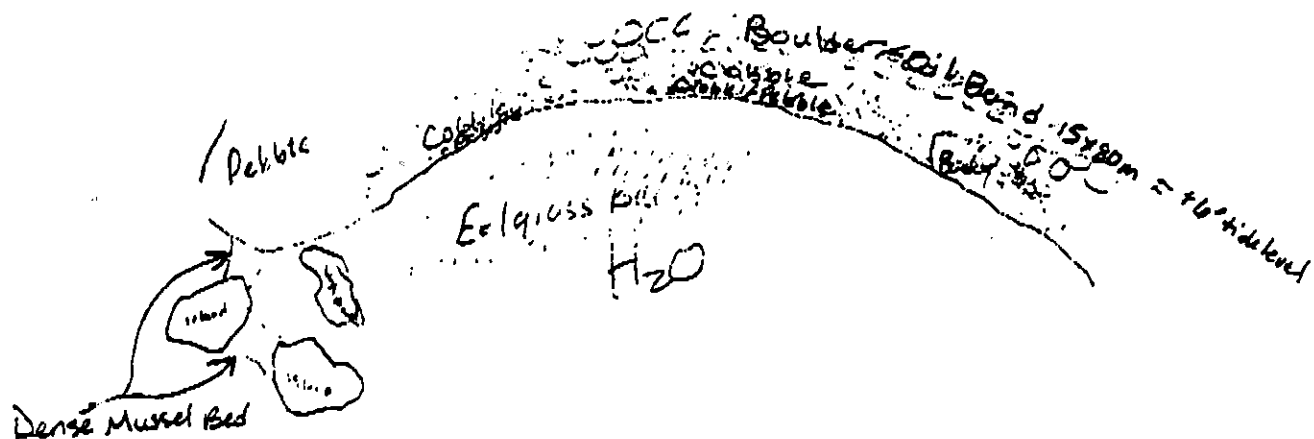
Date: 4/7/90
4/8/90

Time: 0910-1045
0720-0830

Tide Height: +5 to +8 ft
0 to +1 ft

Length 374m

pg 2 of 2



Comments

- Subdivision has rich flora/fauna community below 3 ft tide level.
- Directly below oil band in boulder field, Filamentous Green dominate the +3 to +5 ft range.
- LITZ is a clam bed, stippled by others.
- There is a 80 x 20m eelgrass bed (opposite to moderate ...)
- Area has high ... potential.
- That area - possible archaeological site?
- To protect LITZ any work done in this area should be performed at +4 or higher; taking precautions not to contaminate clam beds.

IN-31

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

IN-31

ADEC Segment Length: ~~610m~~ 824

0 100 200 300
METERS



Map Key: PWS-276

Name: James Spring

Date: 4/7/90

Date Entered:

52

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream catalogue no. 226-10-16916
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbance of salmon stream bed and bank. Stream will be surveyed during ANAD scat.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David M. Mahan DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 112 m: Narrow 0 m: V.Light 0 m: No Oil 215 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
Work should be conducted after 5/1, contact ADF&G regarding stream
constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90
ADEC ART WEINER Spt Weiner
EXXON ANDY TATE Deal
NOAA JOSEPH TILBOTT
USCG KENNETH KANE

FOSC: W L DATE: 4-27-90

OG

SEGMENT ST/11-31

SUBDIVISION A

DATE 4 107/90

CHECKLIST

- ☒ 1/1 Arrow
- ☒ Approx. Scale
- ☒ Seg/Side Grid
- ☒ Oil Dist
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pt Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continued Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

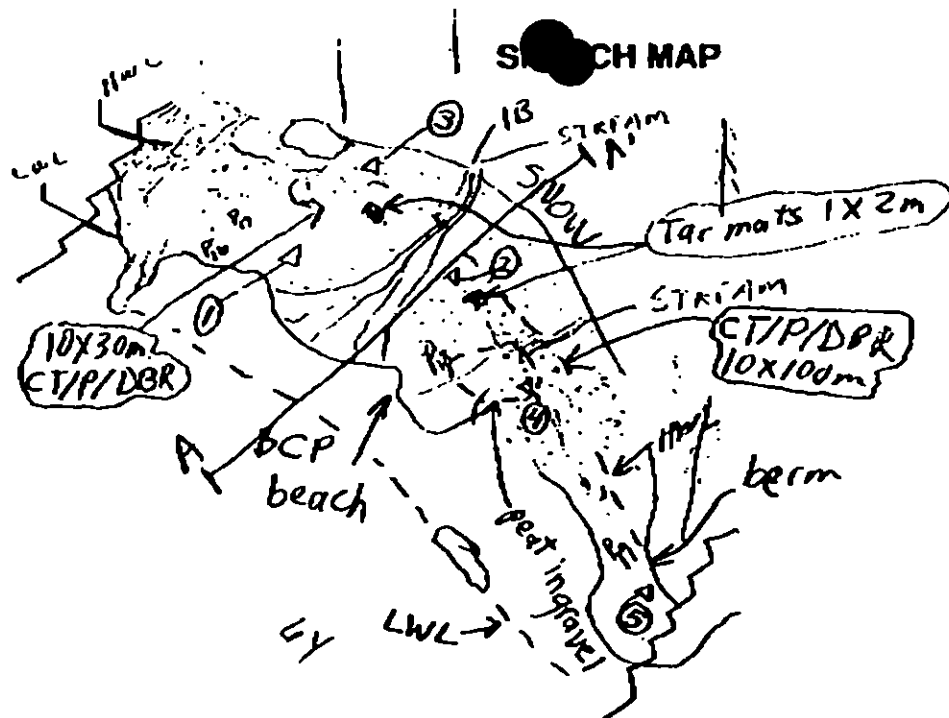
Scattered Distribution

Oil Vegetation

1 →

Photo location, direction,
and number

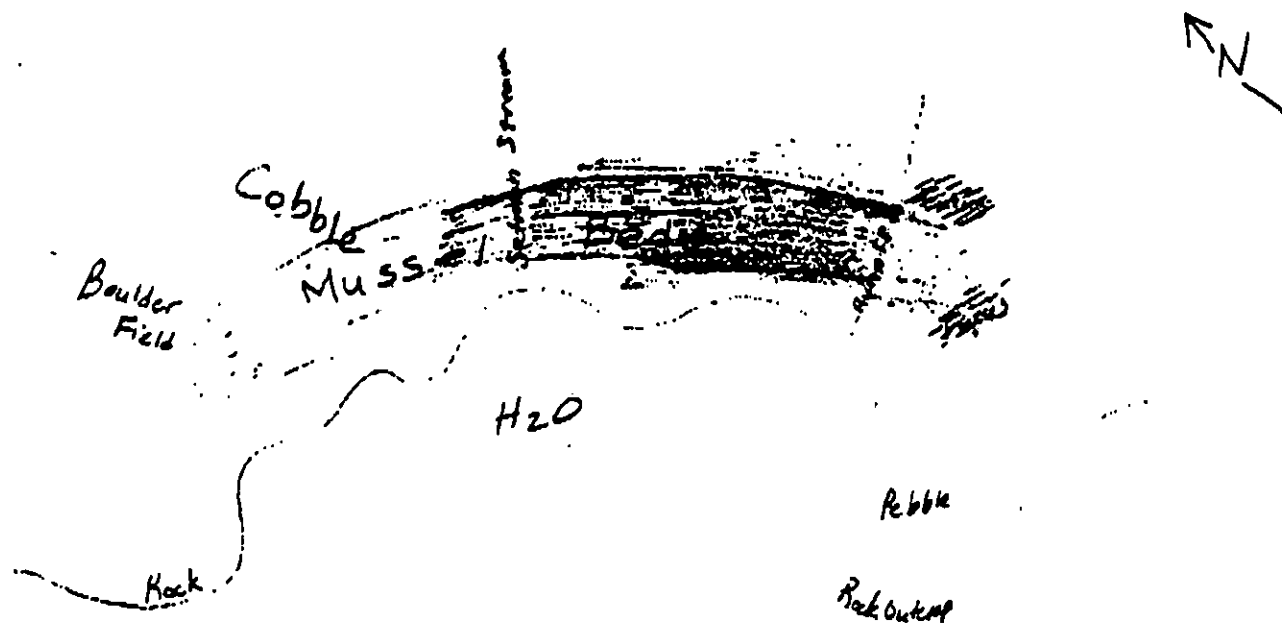
Sketch Map



0 100
METERS

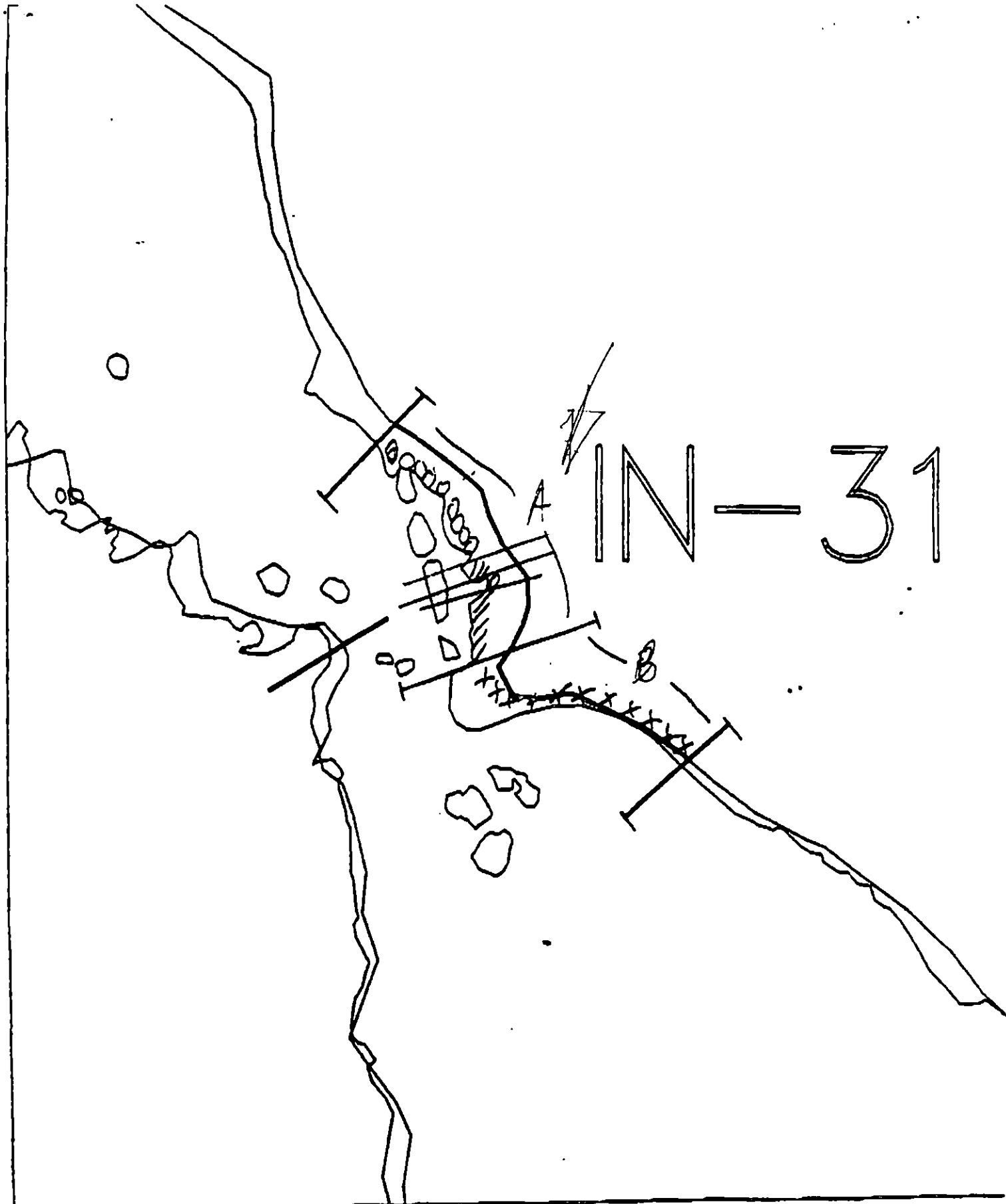
Oil Character Length (m): AP PO CV CT 130 ST MS PT TB 4 FL NO 316

REVISIONS



Comments

- The LIT2 and MIT2 are a rich Saxidomus: Prototheca clam bed. Within the clam bed dense concentrations of Predatory gastropods, Littorina, Pagurus, and various worms. Littorina, Nucella and Lunatia egg cases are dense.
- Fucus is in a discontinuous band along the MIT2 cobble. There are 2 dense patches ($\approx 3m^2$) in MIT2 345 with high recruitment.
- There is a $150m \times 30m$ Intertidal/cobble mussel bed. Concentration is sparse on the north end but increases to dense on the southern end. Northern end has been heavily preyed upon by Predatory gastropods.
- Barnacles are a minor portion of the biota in this subdivision. Recruitment is only evident on the bedrock and then in moderate to sparse concentrations. Scarring is present on Rock outcrops.
- This area appears healthy and precautionary measures should be taken to avoid damage to the well-established ecosystem.



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

IN-31

ADEC Segment Length: 824
~~510m~~

0 100 200 300
 METERS



Map Key: PWS-276
 Name: James Sprin
 Date: 4/7/90
 Date Entered:

52

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-31

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 283 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
2) manual pick up of tarballs, 3) bioremediation of areas shown on
attached sketch map. No specific constraints for performing work.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EN-31 SUBDIVISION: 8 DATE 04/07/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest picking up tar mats, hot water wash, till & bio. of the 15x100 band in this sub sec.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This area should have a second opinion due to the characteristics of the sub-segment. We discussed the pros & cons of several treatments which have been outlined by the land manager. In addition, the two of the outer islands require treatment. I walked around both of them and found a band varying from CV → CT of 1M in width and a band of CT → ST 2M in width (below the 1st band). Hot water wash and manual removal of patches and tarballs are both possibilities, but the LITZ is very rich and should be kept in consideration. The B and C surrounding the island is approx. a 4:5 slope.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Segment IN-31(B) is a 300M low energy, high recreational value beach. This area should be listed as a camp site on the resource sensitivity list. Except for the western most 50M which is a cobble/gravel/sand beach the subdivision is comprised of Rock/boulder over a cobble/gravel/sand substrate. The mid/lower intertidal zone has dense mussel, fucus, gastropod production and moderate to light barnacle density.

Starting at the approximate location of the 100M x 15M mat of AP/F.

REVISION NO. 08/21/90

I recommend this area to be treated by breaking up the asphalt mat by hand, removing the oiled material, then apply fertilizer. This procedure should be done only after the area has been cleared by an archaeologist.

Immediately south east of the asphalt section is 15M x 20M of broken cover which can be easily recognized from the water. The cover appears to be stable and is above mean high tide. I suggest a review of the segment and one of the following three alternatives selected:

ALTERNATIVE 1 - NO TREATMENT

The advantage of this alternative is the oil appears to be stable at this time and no further disturbance would eliminate the risk of oil moving into the mid-intertidal zone. The disadvantage is that on this low energy beach the oil will remain visible for several years.

ALTERNATIVE 2 - REMOVE OILED MATERIAL

Removing oiled rocks and boulders will require the use of heavy equipment which will remove 50% of oil but will leave a deep scar on the upper/supra intertidal zone. Removing the rocks and boulders will create a risk of mass slumping from the immediate neighborhood.

ALTERNATIVE 3 - HOT WATER WASH

A hot water, high pressure wash of 150°F or greater will be necessary to break down the stable coat. The hot water wash will convert the stable surface oil to a liquid which approximately 10% will be recovered. This alternative will remove the oil from the visible surface but should be evaluated against the effects of hot water (150°F) on intertidal ecology. The transport of stable surface oil to unstable sub-surface oil should also be considered. The 150°F water temperature is above the current maximum acceptable 120°F standard.

I recommend alternative 3 as this will have the least effect on upper and supralittoral geomorphology while significantly reducing visible oil. If the wash is conducted during a plus 4 tide or greater the movement of oil to lower intertidal zone should be reduced. The movement of sub-surface oil could be further reduced by constructing a 20cm ditch at the 4 foot tide mark. The 150°F hot water wash could possibly be mitigated by reducing the total water volume sprayed at one time to allow subtidal water to dissipate high temperature faster. This area should have 51 an archaeological clearance prior to any disturbance.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ IN-31
 BIO P. Crank LAND REP D. Lagan SUBDIVISION B(2092)
 XXON T. Tomblin ADEC M. Baer TIME 08:55 to 10:00
 EAM NO.: 5 TIDE LEVEL: +4 to +6 DATE 07/07/90
 EST. SUBDIVISION LENGTH: 374 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 10 % B 60 % C 15 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 280 m M 0 m N 0 m VL 0 m NO 0 m
0 70 0 70

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 300 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-5-4Frames 26-25, 33-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8			
1	50		X				0-15	X										X		CPGS
2	10	X					0-7	X										X		GS
							.													
							.													
							.													
							.													

COMMENTS LITZ covered by tide.

all depths ≤ 5cm do not constitute
subsurface oiling 44

OGT SPIN

SKE MAP

SEGMENT ST/IN-31

SUBDIVISION B

DATE 04/07/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LML
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pt Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

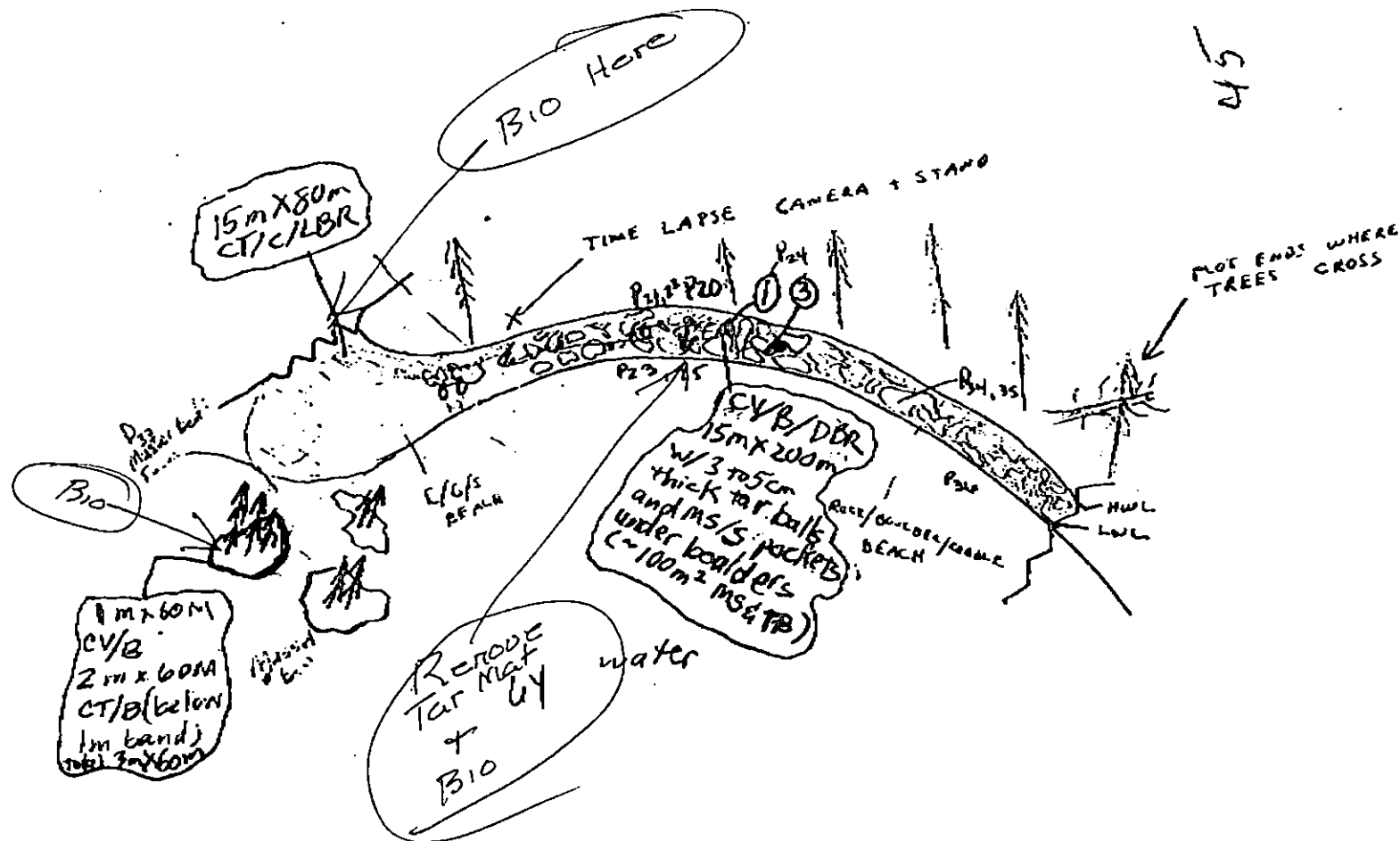
CT/S

Splashed Distribution

Oil Vegetation

1 →

Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 260 CT 80 ST _____ MS _____ PT _____ TB _____ FL _____ NO 34

REVISION 02/04/90

SHORELINE ECOLOGICAL SUMMARY

pg 1 of 3 REVISION: 2

Segment ST/IN 31 Subdivision B Date (mo/day/yr) 4/1/90, 4/8Time (24 hr) 0910-1045 Biologist Crank Tide Heights +5 → +9
0 → +1 ft.(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt(B) Overall % cover of biota (% of segment): Dense 5 Moderate 20 Low 75

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

Photographs:
Roll No. ST-5-4Frames 33-36

BARNACLES

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

NOT PRESE

MYTILUS

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

NOT PRESE

GASTROPODS

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

NOT PRESE

FUCUS

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

NOT PRESE

Wildlife Observations/ General Comments:

1 - Harbor Seal - Adult

2 - Others

5 - Glaucous-wing Gulls

Ecological Considerations:

1 - dark unidentified Marine Bird

2 - Cormorants

2 - Tufted Puffins

3 - Mergansers

1 - Spruce Goose

6Y - Special Use Destination

There is high tenting potential for this area

46

SEGMENT: ST/ 11/31 SUBDIVISION 6 LENGTH 374m BIOLOGIST Crank

DATE 4/2/90 TIME 0910-1045 TIDE HEIGHT +5 → +8 ft

pg 2 of 3

4/8/90 0720-0830

0 → +1 ft

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

FLORA:

SPECIES	UTZ	MITZ	UTZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				Drift
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS		432	234	Dense on MITZ cobble
FILAMENTOUS REDS		34	34	
GLOIOPELTIS FURCATA	12	123		
HALOSACCION GLANDIFORME		123	123	
LAMINARIA SPP				in drift
LITHOTHAMNION		12	12	
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA		32		
RHODOMELA LARIX		123	123	
RHODOMENIA PALMATA		1234	1234	
SCYTOSIPHON SPP				
ULVA SPP				
ZOSTERA MARINA				
<i>Cryptosiphonia</i>		123	123	

FAUNA:

ANTHOPELURA SPP				
(SEM) BALUNUS CARIOSUS		21	12	
B. GLANDULA	1234	1234	1234	
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATU)				
CLAMS		345	345	High Clam Production
CRABS		34	34	Hemigrapsus
DERMASTERIAS IMBRICATA		2	3	
KATHARINA TUNICATA		2		
LEPTASTERIAS HEXACTIS		34	34	Brooding - Dense
LIMPETS	234	12345	2345	
LITTORINA SPP	2341	2345	2345	
NUCELLA SPP	3412	2341	234	
PAGURUS SPP		345	345	Dense
PISASTER OCHRACEUS				
POLYCHAETES				
PYRNOPODIA HELIANTHOIDES			345	Dense
SEARLESIA DIRA		234	234	
SERPULIDS				
SIPHONARIA THERSITES		1		
TEALIA				
Juvenile Eels		34	34	
Micridium sp.			4	
Sea grass			345	Moderate Sparse Cinc. 50x30m
Echini			45	
Lunatic			45	Dense Sand Gullies

47

Seg: ST IN 31 B

Date: 4/7/90

4/8/90

Time: 0910-1045

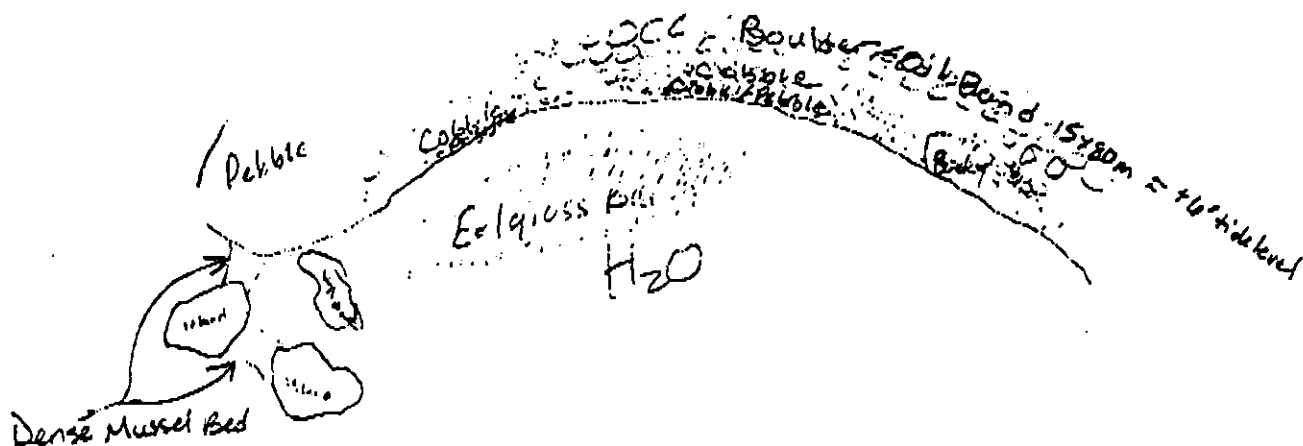
0720-0830

Tide Height: +5 to +8 ft

0 to +1 ft

Length 374 m

PG 2072



Comments

- Subdivision has rich floral/fauna community below 3 ft tide level.
- Directly below oil band in boulder field, Filamentous Green dominate the +3 to +5 ft range.
- LIT2 is a clam bed, stylized by others.
- There is a 80 x 30m eelgrass bed (superior to moderate).
- Area has high recreational potential.
- Find areas - possible archaeological site?
- To protect LIT2 any work done in this area should be performed at +4 or higher; taking precautions not to contaminate clam beds.

IN-31

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

IN-31

ADEC Segment Length: ~~610m~~ 824

0 100 200 300
METERS

Map Key: PWS-276

Name: James Sprin

Date: 4/7/90

Data Entered:

52

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-31 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup* Tarmat Removal	CLOSED

*EXXON 'A' STUDY SITE #AP-4 DO NOT REMOVE STAKES FROM BACK OF INTERTIDAL ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

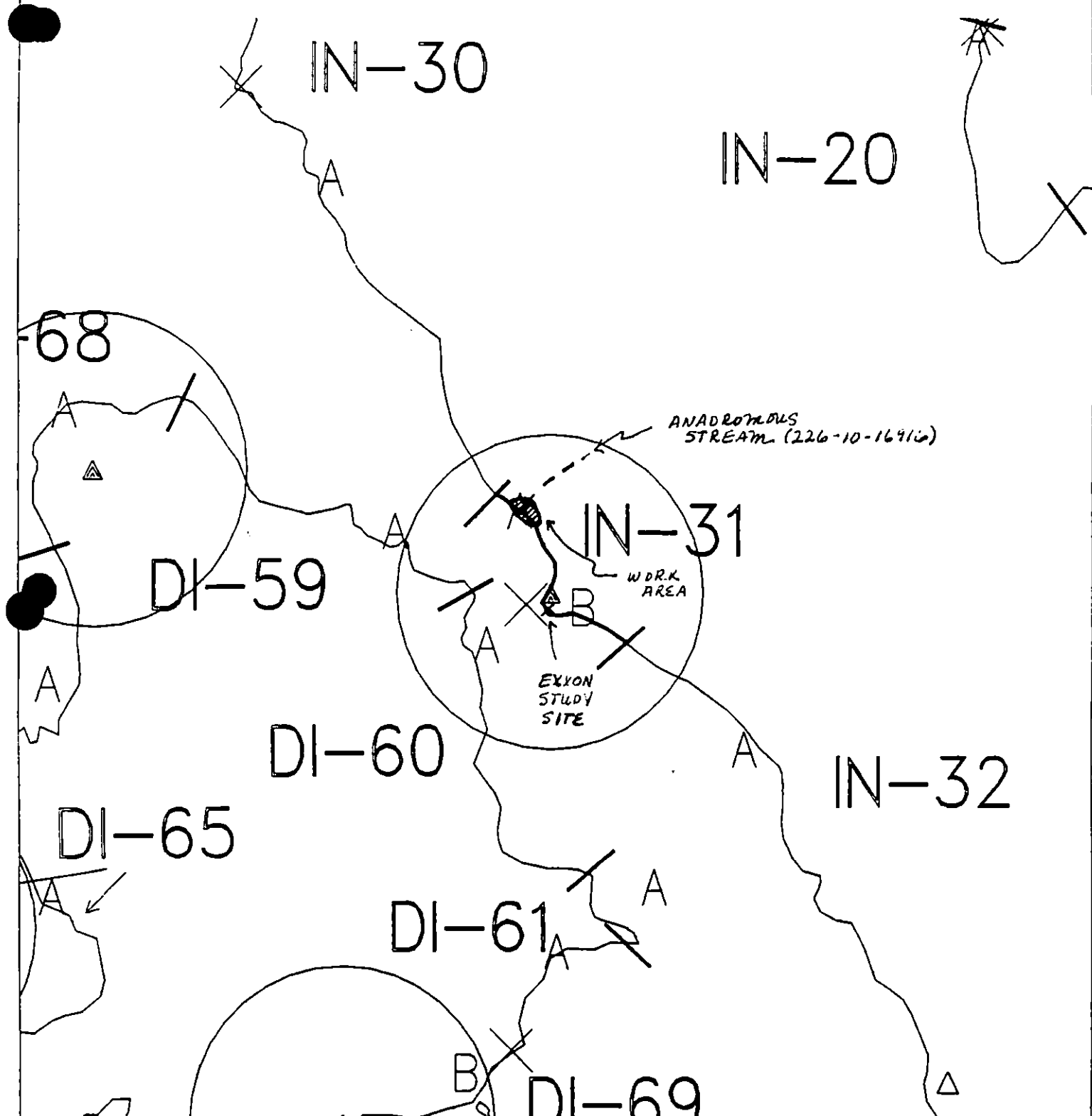
1A,1B	Salmon Stream	An ADF&G catalogued anadromous stream is present within Subdivision A (226-10-16916). No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup and tarmat removal within 400m of active nest. No constraint to manual pickup and tarmat removal more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-12-90

Prepared by J. Phillips Date 6/10/90



Exxon Company, USA
 Map Key: PWS-IN-31
 June 04, 1990



ECOLOGY MAP
 SEGMENT IN-31
 SUBDIVISION A (1 of 2)



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

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream catalogue no. 226-10-16916
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Avoid disturbance of salmon stream bed and bank. Stream will be surveyed during ANAD scat.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 112 m: Narrow 0 m: V.Light 0 m: No Oil 215 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
Work should be conducted after 5/1, contact ADF&G regarding stream
constraint.

SBS CONSTRAINTS ADDENDUM dated 6/10/90 gpp

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC Art Weiner
EXXON ROY TATE
NOAA K. T. ...
USCG Kenneth ...

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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-31 SUBDIVISION A (1 of 2)

WORK WINDOW

Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B

Salmon Stream

An ADF&G catalogued anadromous stream is present within Subdivision A (226-10-16916). No constraint to tarmat removal.

***Exxon Study Site**

NO CONSTRAINT. Closed to work within 50m of Study Site.

OTHER ECOLOGICAL CONSIDERATIONS

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

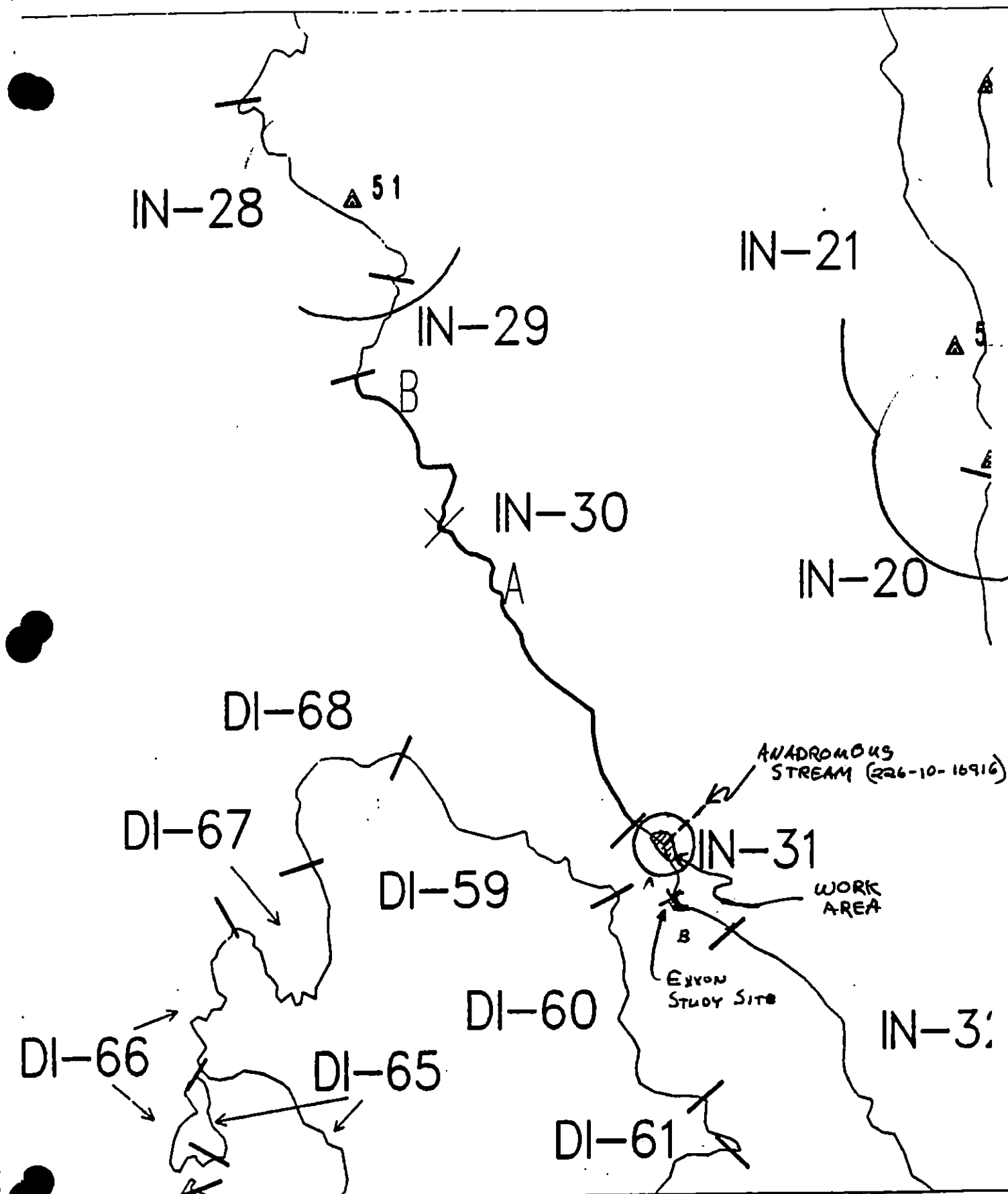
TAG ADDENDUM DATE 5/18/90
 ADEC Art Weimer Art Weimer
 EXXON Andy Gm Andy Gm
 NOAA Janeen Tolbert Janeen Tolbert
 USCG Janeen Tolbert Janeen Tolbert

FOSC

DATE 5-14-90

Prepared by:

Date:



Exxon Company, USA
Map Keys KNI-IN-30



ECOLOGY MAP
SEGMENT IN-30
SUBDIVISION A (1 of 2)
METERS

- ★ Seabird Colony
- △ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream catalogue no. 226-10-16916

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

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

6Y Recreation: Special use destination

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbance of salmon stream bed and bank. Stream will be surveyed during ANAD scat.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/7/90

OILING CATEGORIZATION:

Wide 0 m: Medium 112 m: Narrow 0 m: V.Light 0 m: No Oil 215 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
Work should be conducted after 5/1, contact ADF&G regarding stream
constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER

EXXON ANDY TATE

NOAA JOHN T. KELLEY

USCG KENNETH H. HARRIS

FOSC: DATE:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-31

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ IN-31 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream catalogue no. 226-10-16916
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Avoid disturbance of salmon stream bed and bank. Stream will be surveyed during ANAD scat.

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 112 m: Narrow 0 m: V.Light 0 m: No Oil 215 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats.
Work should be conducted after 5/1, contact ADF&G regarding stream
constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / IN-31 SUBDIVISION: A DATE 04/07/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest picking up tar mats, hot water wash, till + bio. of the area of IN-31 sub A from the stream south 100 M distant by 10 wide.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This area is a very nice anchorage, ^{and} ~~camp~~ tent site, with a salmon stream, ~~muscle~~ ^{mussel} and clam beds. ~~When till~~ I concur with the Land Manager's recommendations. When the hand tilling of the 10 x 100m and 10 x 30m areas occurs, special consideration should be made to stay away from the salmon stream.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND MANUALLY REMOVING TARMATS. ~~THE~~ ^{DUE TO THE DENSE FLORA AND FAUNA POPULATIONS IN THE LIT ANA MITZV AND THE ANATOMOUS STREAM} THE 10MX100M AND 10MX30M CT/D BANDS SHOULD BE HAND TILLED WITH NO FERTILIZER APPLICATION.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SHORELINE OILING SUMMARY

REVISION NO. 02/02/00

OG J. Springer USCG R. Vandepels SEGMENT ST/ IN-31
 BIO P. Crank LAND REP D. Logan SUBDIVISION AC10P2
 EXXON T. Tomblin ADEC M. Baer TIME 08:15 to 08:55
 TEAM NO.: 5 TIDE LEVEL: +2 to +4 DATE 04/07/00
 EST. SUBDIVISION LENGTH: 450 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 10 % C 50 % P 25 % G 7 % S 3 % M % V %
 SLOPE: Long 95 % Hang 5 % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M 130 m N m VL m NO 3/6 m
70

SURFACE OIL

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

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

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC						SU	U	M	U		
1	25					X	.		X									X		PGS
2	20					X	.		X							X				PGS
3	30					X	.		X							X				CPGS
4	30					X	.		X							X				PMV
5	60					X	.		X							X				PGV
							.		X											

COMMENTS

26

1-800-4-A-RENT

SHORELINE ECOLOGICAL SUMMARY pg 1 of 3

REVISION: 001

Segment ST / IN 31 Subdivision A Date (mo / day / yr) 4/7/90

Time (24 hr) 0810-0910 Biologist Crank Length 450m
Tide Height +2.5+3 ft

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 10 (3) Cobble 50 (4) Pebble 25 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 10 Low 10

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

Photographs:
Roll No. ST-S-4

Frames 14-19

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- 1 Sex Otter
- 2 Pelagic Cormorants - in breeding plumage
- 1 Glaucous-wing Gull
- Deer on Ingot
- 5 Barrow's Goldeneye
- 6 - unidentified Marine birds
- 4 Tufted Puffin

Ecological Considerations:

64 - Special Use Destination

18 - Salmon Stream

SEGMENT: ST/ N 31 SUBDIVISION A LENGTH _____ BIOLOGIST Crank pg 2 of 3

DATE 4/7/90 TIME 0810-0910 TIDE HEIGHT +2 to +3 ft

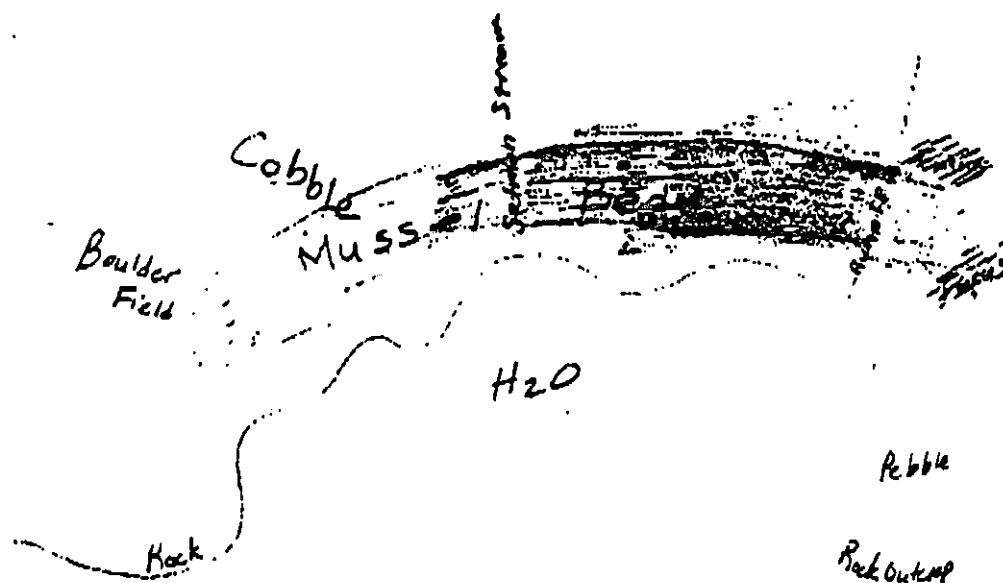
1 = BEDROCK 2 = BOULDER 3 = COBBLE 4 = PEBBLE 5 = SAND 6 = SILT

FLORA:

SPECIES	UTZ	MITZ	LTZ	COMMENTS
BOSSIELLA CORALLINA				
CALLIANTHUS CORALLINA				
CLADOPHORA SPP				
COETARIA SPP				
ENDOCOLADIA MURICATA				
FILAMENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA		321	32	
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEMECYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
RHODOMELA LARIX		12		
RHODOMENA PALMATA				
SCYTOSIPHON SPP				
ULVA SPP		1		
ZOSTERA MARINA				

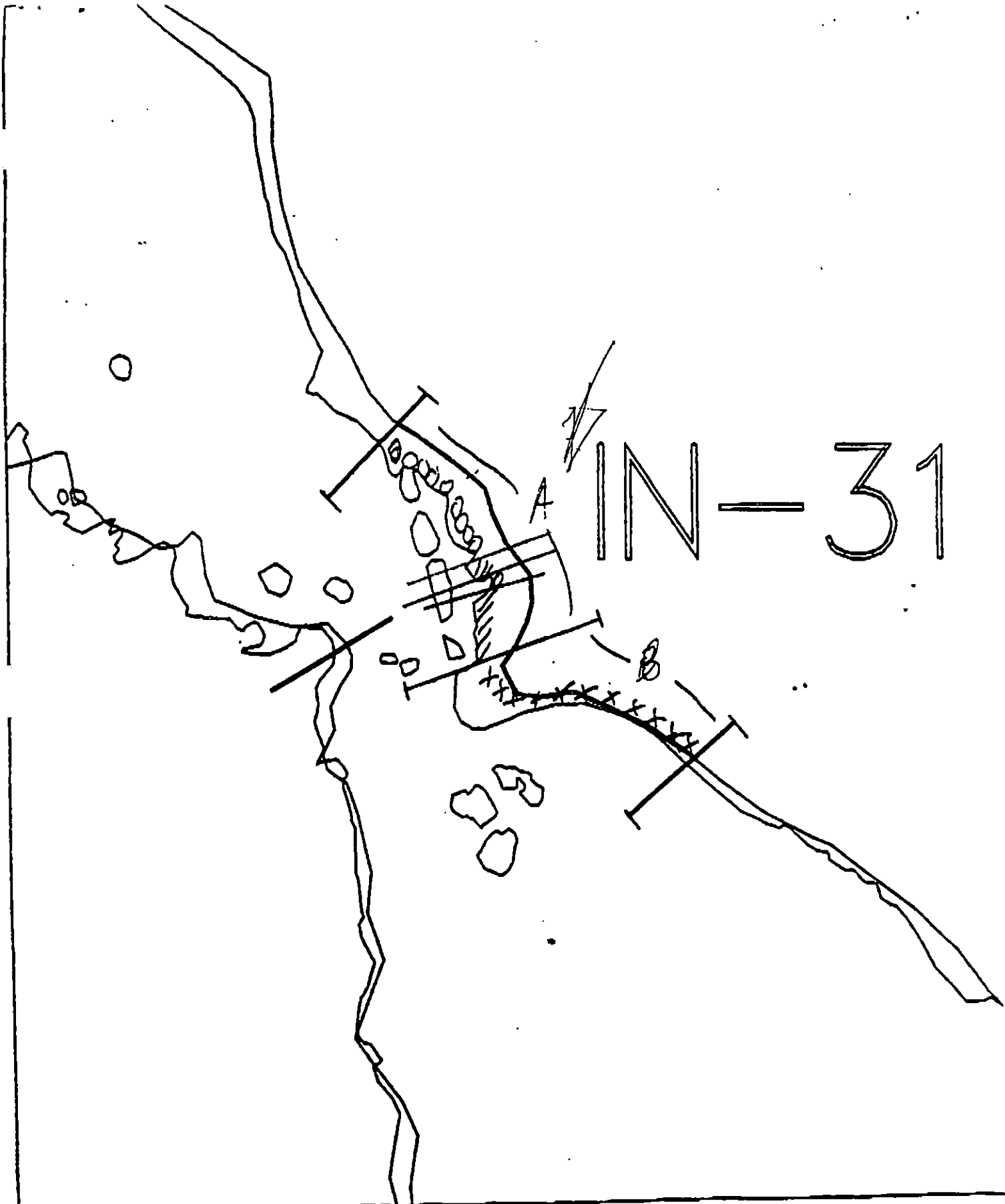
FAUNA:

ANTHOPLURA SPP				
(BIRD) BALANUS CARINATUS			2	
B. GLANCOLA	1230	1234	1235	
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATU)				
CLAMS		345	345	Sanidonta, Heterostoma, Dense Concentrations
CRABS				
CYPRIDASTERAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTENAS HEXACTIS				
LIMPETS	1234	1234	1234	
LITTORINA SPP	1234	1234	1234	
NUCULA SPP				
PAGURUS SPP				
PARASTER OCHRACEUS				
POLYCHAETES				
PYRROPODIA MELANTHOIDES				
SEPIOLIDA DURA		345	345	
SERPULIDS				
SIPHONARIA THEPESIES				
TEALIA				
Echin. worm			5	1 in der sample
Ribbon worm			3	"
Strongylocentrotus droghensis			4	"
Nematode			1	in Peat
Lunatia lewisii			45	Dense Sand Culture



Comments

- The LIT2 and MIT2 are a rich Saxidomus: Prototheca clam bed. Within the clam bed dense concentrations of Prototypus gastropods, Littorina, Pagurus, and various worms. Littorina, Nucella and Lumina egg cases are dense.
- Fucus is in a discontinuous band along the MIT2 cobble. There are 2 dense patches ($\approx 3m^2$) in MIT2 345 with high recruitment.
- There is a $150m \times 30m$ Intertidal/cobble mussel bed. Concentration is sparse on the northern end but increases to dense on the southern end. Northern end has been heavily preyed upon by Predatory gastropods.
- Barnacles are a minor portion of the biota in this subdivision. Recruitment is only evident on the bedrock and then in moderate to sparse concentrations. Scarring is present on Rock outcrops.
- This area appears healthy and precautionary measures should be taken to avoid damage to the well-established ecosystem.



IN-31

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

IN-31

ADEC Segment Length: ~~610m~~ 824



Map Key: PWS-276
 Name: James Spruill
 Date: 4/7/90
 Date Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ IN-31 STREAM NO: 226-10-16916 DATE 4/24/90

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)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: intertidal biota. Subject stream is located within Subdivision A (1 of 2).

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. Daniel McManis DATE: 5/10/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is 1) manual removal of tarmat as indicated on sketch map.

TAG COMMENTS: MONITOR TO ASSESS AREA INDICATED AS "SHEENING"
ON SKETCH. ASSESS SOURCE + NEED TO RAKE.

TAG APPROVAL DATE: 5/10/90.

ADEC ART WENGER
EXXON AMY KAT
NOAA BILL WENGER
USCG D.D. ROME

FOSC: ML DATE: 5-15-90

03 CAL LARSON

SKETCH MAP

SEGMENT ST 1N 031

STREAM 226-10-10916

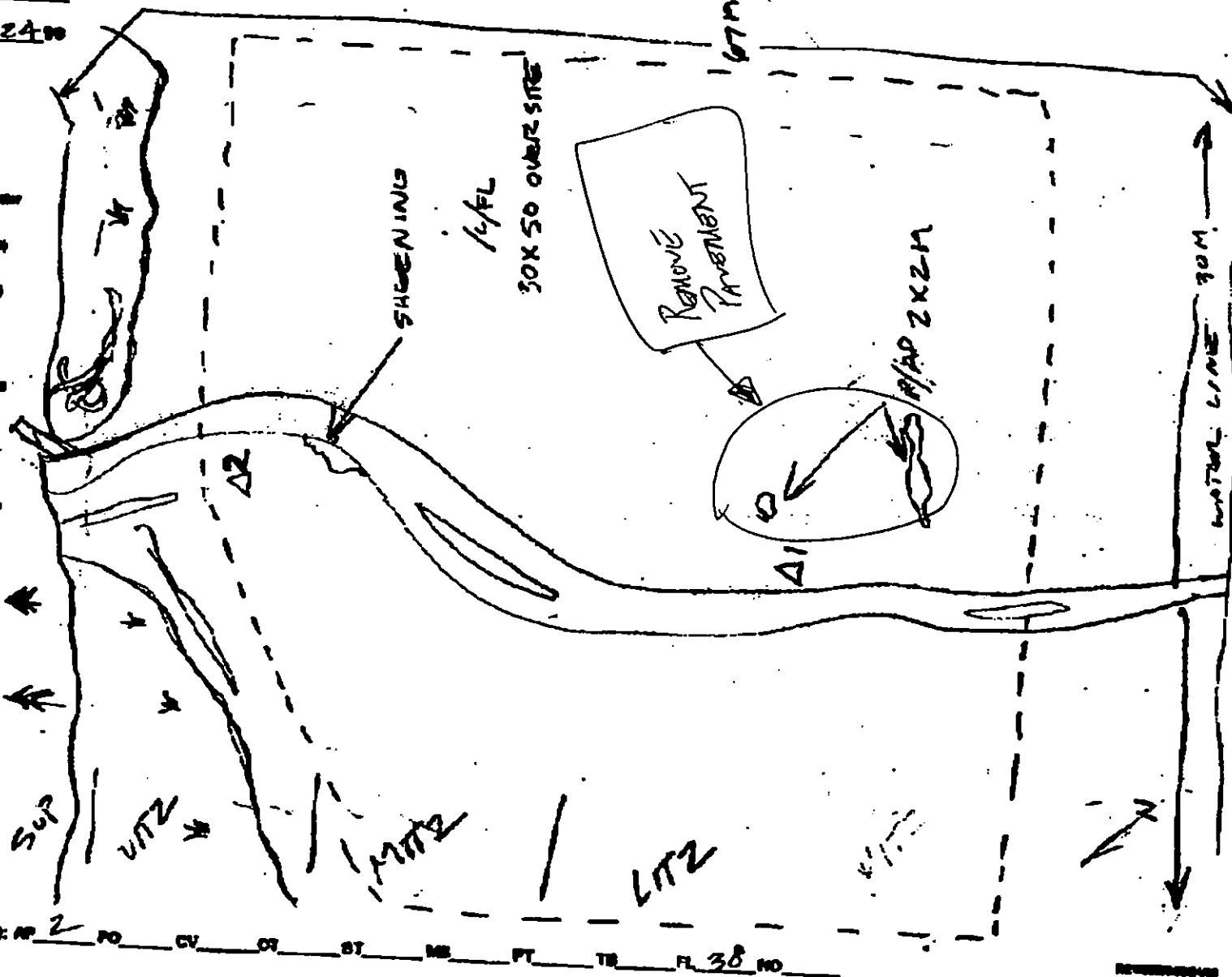
DATE 4 12400

CHECKLIST

- Name
- Approx. Scale
- Seg/Div Entry
- On Dist
- Width
- Length
- S-Curve
- Substrate Character
- Est. 1984/85
- SSE
- Field Location
- Field No
- Photo Location(s)
- Photo Section(s)

LEGEND

- 1 A
- PS - No Substrate Ch
- 2 A
- PS - Substrate Ch
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/D
- Patchy Distribution
- CT/E
- Spotted Distribution
- ree
- Other Vegetation
- 1 go
- Photo location, direction, and number



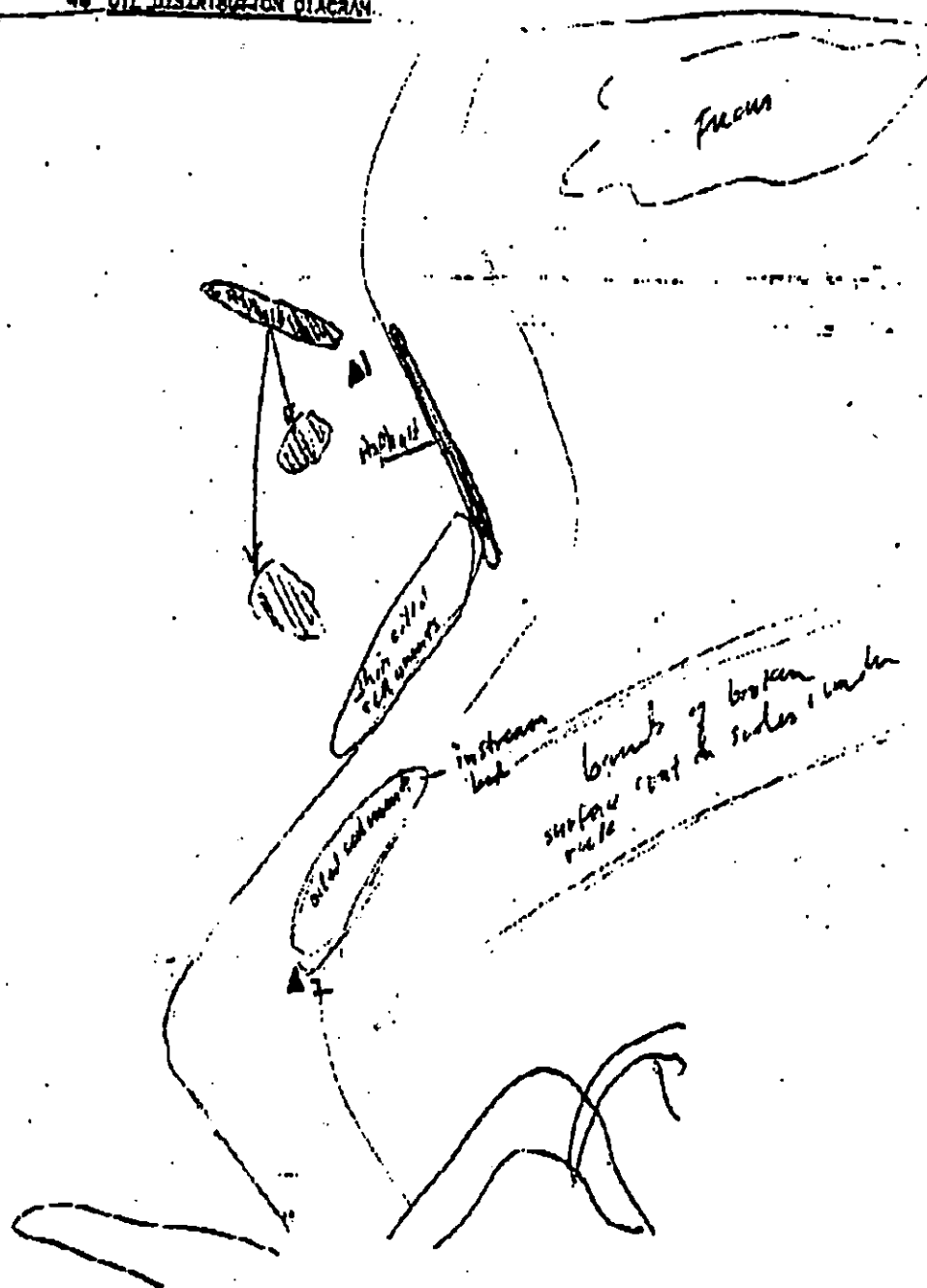
03 Character Length Int: AP 2 PO CV OT ST ME FT TB FL 30 NO

FRAME(S)

DESCRIPTION

Pit #1 2.5 cm deep Shearway from sediment
 Pit #2 2.5 cm deep - finely coated

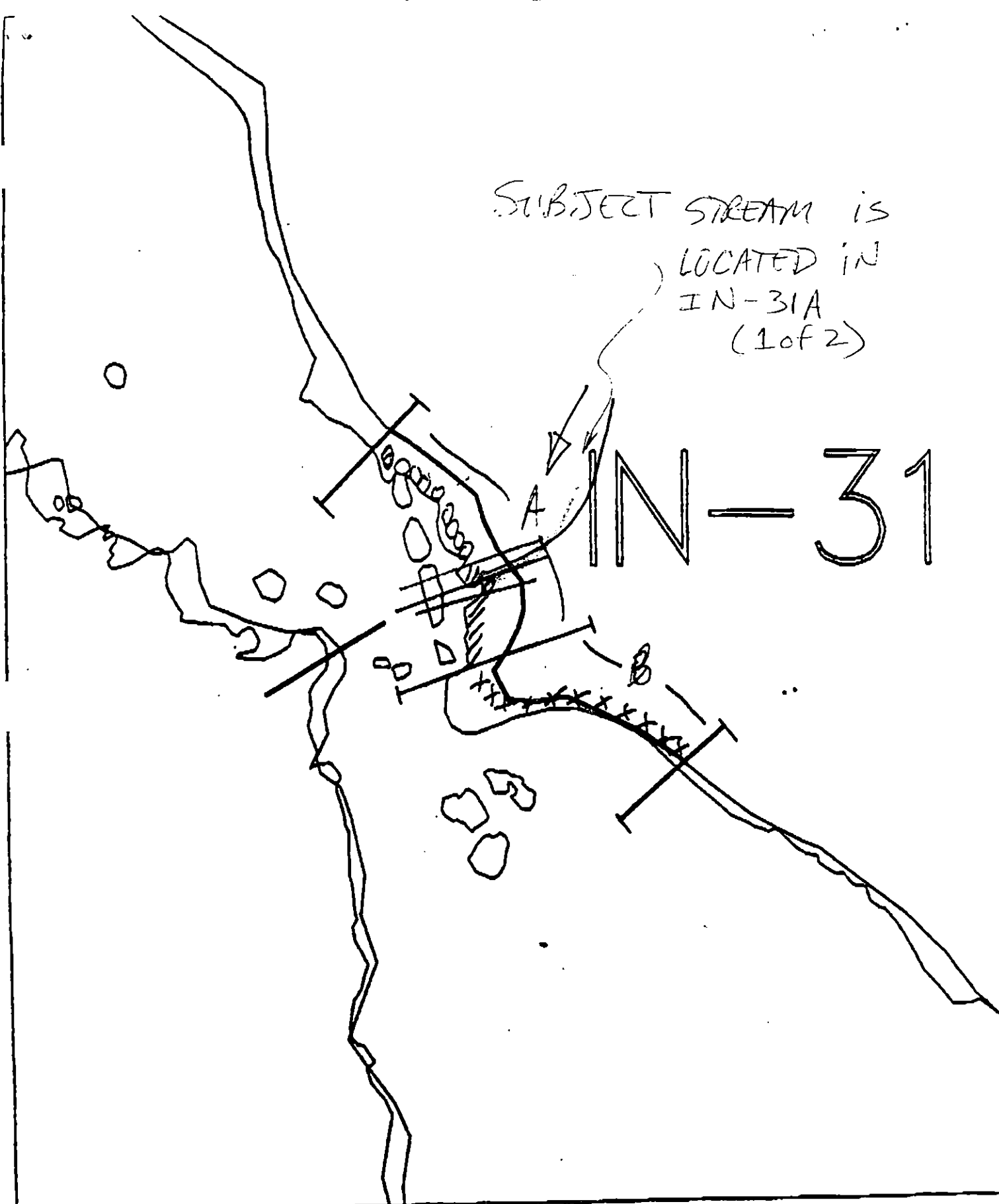
48 OIL DISTRIBUTION DIAGRAM



sample taken
 here frame 8 and
 10 direction.

SUBJECT STREAM IS
LOCATED IN
IN-31A
(1 of 2)

IN-31



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

IN-31

ADEC Segment Length: ~~510m~~ 824



Map Key: PWS-276
Name: James Sprin
Date: 4/2/90
Date Entered:

52

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16916

SEGMENT IN-31 SUBDIVISION A

WORK WINDOW	
Tarmat Removal * Manual Raking	CLOSED

* EXXON STUDY SITE AP-4 - DO NOT REMOVE STAKES FROM BACK OF INTERTIDAL ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream - (226-10-16916) is in Subdivision A. No constraint to tarmat removal and manual raking.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to within 400m of active nest. No constraint to more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM IN-31A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

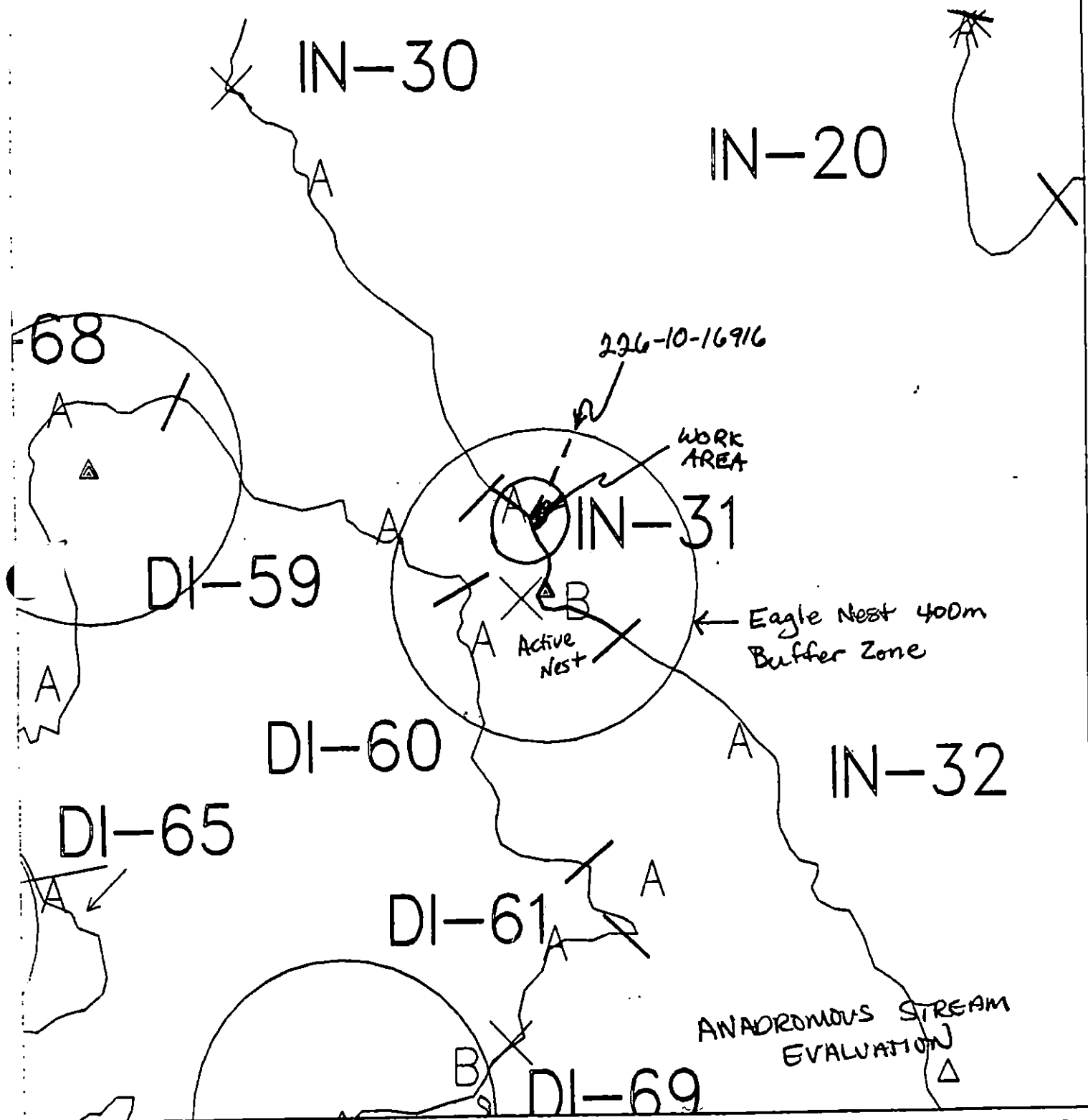
Date

6-10-90

Prepared by

Date

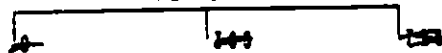
6/10/90



Exxon Company, USA
Map Key: PWS-IN-31
June 04, 1990

ECOLOGY MAP
SEGMENT IN-31
SUBDIVISION A (1 of 2)

METERS



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

~~1 inch = 100 feet~~

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ IN-31 STREAM NO: 226-10-16916 DATE 4/24/90

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)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: intertidal biota. Subject stream is located within Subdivision A (1 of 2).

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: 5/10/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is 1) manual removal of tarmat as indicated on sketch map.

SEE ANAD. FISH ADDENDUM dated 6/14/90 JPP

TAG COMMENTS: MONITORS TO ADDRESS AREA INDICATED AS "SHEENING"
and SKETCH. ADDRESS SOURCE + NEED TO RAKE.

TAG APPROVAL DATE: 5/10/90.

ADEC ART WENGER
EXXON AMY EAR
NOAA BILL WOODRUFF
USCG D.D. ROME

FOSC: [Signature] DATE: 5-15-90

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: IN-31

STREAM NO: 226-10-16916

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ IN-31 STREAM NO: 226-10-16916 DATE 4/24/90

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)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: intertidal biota. Subject stream is located within Subdivision A (1 of 2).

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: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

_____ Manual Pickup

_____ Bioremediation

X Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment is 1) manual removal of tarmat as indicated on sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

39/A

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / IN-031 SUBDIVISION: ASC# 226-10-169¹⁶ DATE 24 APR 90

USCG

NAME

Kerwin L. Draher SIGNATURE CWO K. L. Draher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

~~ADEC~~
NAME

~~ADF & G~~

Rick Gustin

SIGNATURE

Richard J. Gustin

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS Recommend working at proper tide window 0 →

Remove thin crust of oiled matt and vegetation along east side of stream in middle & upper I.T.Z
Remove oiled gravels and sands on west side of stream edge and in areas where sheens occur in the stream bed. Remove thin patches of oiled matts in upper:

~~LAND MANAGER~~ → NONE

NAME

Rick Gustin

SIGNATURE

Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

on west side of stream.

Remove patches of tar matt on East side of the stream in middle I.T.Z area.

After removal fill mechanically or with shovels

Remove thin crust of oiled matt & vegetation
along east side of stream in middle & upper I.T.Z.

37/40

Remove oiled gravels and sands on west side of
stream edge and in areas where
sheens occur on the stream bed.

Remove thin patches of oiled matts in upper I.T.Z.
on West side of stream.

Remove patches of tar-matt on East side of
the stream in middle I.T.Z. area.

After removal, till mechanically or with shovels
areas sludged. Till areas which show
sheening.

SHORELINE OILING SUMMARY (ANAD)

VERSION NO. 01-300

COG EAL LARSON USCG 20742, CWE SEGMENT ST/ IN 031
 BIO REN CRITCHLOW LAND REP 14/90
 EXON DARRELL YVES ADF RAKANTON ALPHE WISEMAN STREAM 220-12-16916 OF 1
 TEAM NO. 14 TIDE LEVEL -2 FT DATE 4/22/90 TIME 10:20
 EST. SUBDIVISION LENGTH: 20 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: Offshore ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 40 % P 35 % G 20 % S 0 % M 0 % V 0 %
 SLOPE: Long low % Hang 0 % Vert 0 %
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VI 20 m NO 0 m
 WAVE EXPOSURE: ☐ Low ☐ Med ☐ High

SURFACE OIL

CHARACTER	DISTRIBUTION	OIL / FILM COLOR	IMPACTED ZONES
ASPHALT			
PAVEMENT			
POOLED			
COVER			
COAT			
STAIN			
MOUSSE			
PATTIES			
TARBALLS			
FILM			
NO OIL			

PAVEMENT H P S 2 sq. m by .4 cm

PATTIES/TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT
Logs	
Vegetation	
Trash	
Debris	

Did You Collect DEBRIS ☐ YES ☒ NO

TYPE 0
#BAGS 0

Photographs:

Roll No. 0

Frame 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER	OILED INTERVAL	BELOW	OIL / FILM COLOR	PIT ZONE	ANA	SHEEN	YING	SURFACE - SUBSURFACE SEDIMENTS
1	20									
2	20									

COMMENTS LICED SARIDONIS SHELL / LIGHT FILM OBSERVED OVER SITE.

REVIEWED JW DATE 4-25-90

36/48

ADP20 MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: MS CS DS TO AYS 30M HTS PTA 2 REGION: SPR KP,C1 K,JS

METHOD: Aerial Ground Boat

3 DATE: 4/24/90 16 HIGH TIDE TIMES: 1 21 TEAM RECDON: P. Gustaf

4 START TIME: 1023 18 HIGH TIDE HTS: 1 22 OBSERVERS: A. W. W. W.

5 STOP TIME: 1055 17 LOW TIDE TIMES: 1 23 AGENCY: ADF46

6 SECTOR #: INO31 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y 0

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

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: 0 0 TAPE: _____

9 STAT AREA: _____ 20 UNCL QUAD: _____ Start: 236 End: 400

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN: Y 0 Number _____

12 SOURCE: Deep Loran 01 _____

13 LOCATION: SW side Ingot Island Sediment _____

14 DESCRIPTION: Full Pass Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	N	L	V	H	N
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	1cm	1cm						
29 PENETRATION	3-4cm	1-2cm						
30 OVERALL OIL IMPACT: <u>N</u> <u>VL</u> <u>L</u> <u>H</u> <u>N</u>								
31 OIL TYPE: Pooled <u>Heavy</u> <u>Top</u> Asphalt Sticky Stain								
32 OILED DEBRIS: <u>Y</u> <u>N</u>								
33 SHORELINE TYPE: Headland Low-lying Rocks Beach <u>Cove</u>								
34 WAVE EXPOSURE: <u>High</u> Moderate Low								
35 SUBSTRATE TYPE: Bedrock Boulder <u>20</u> Cobble <u>60</u>								
Gravel <u>20</u> Sand _____ Rd/silt _____								
36 CATALOGED ANAD. FISH BREAST <u>Y</u> <u>N</u>								
37 CATALOG # <u>226-10-16916</u>								
38 STREAM NAME: _____								
39 OIL IN STREAM BED <u>Y</u> <u>N</u>								
40 OIL ON STREAM BANKS <u>Y</u> <u>N</u>								
41 OIL ON BEACH ADJACENT TO MOUTH <u>Y</u> <u>N</u> (within 50 meters)								
42 OIL WITHIN 1 MILE OF STREAM <u>Y</u> <u>N</u>								
Where: _____								
43 ANADROMOUS FISH PRESENT? <u>Y</u> <u>N</u>								
44 ANADROMOUS FISH OBSERVATION								
Species Aerial Ground								

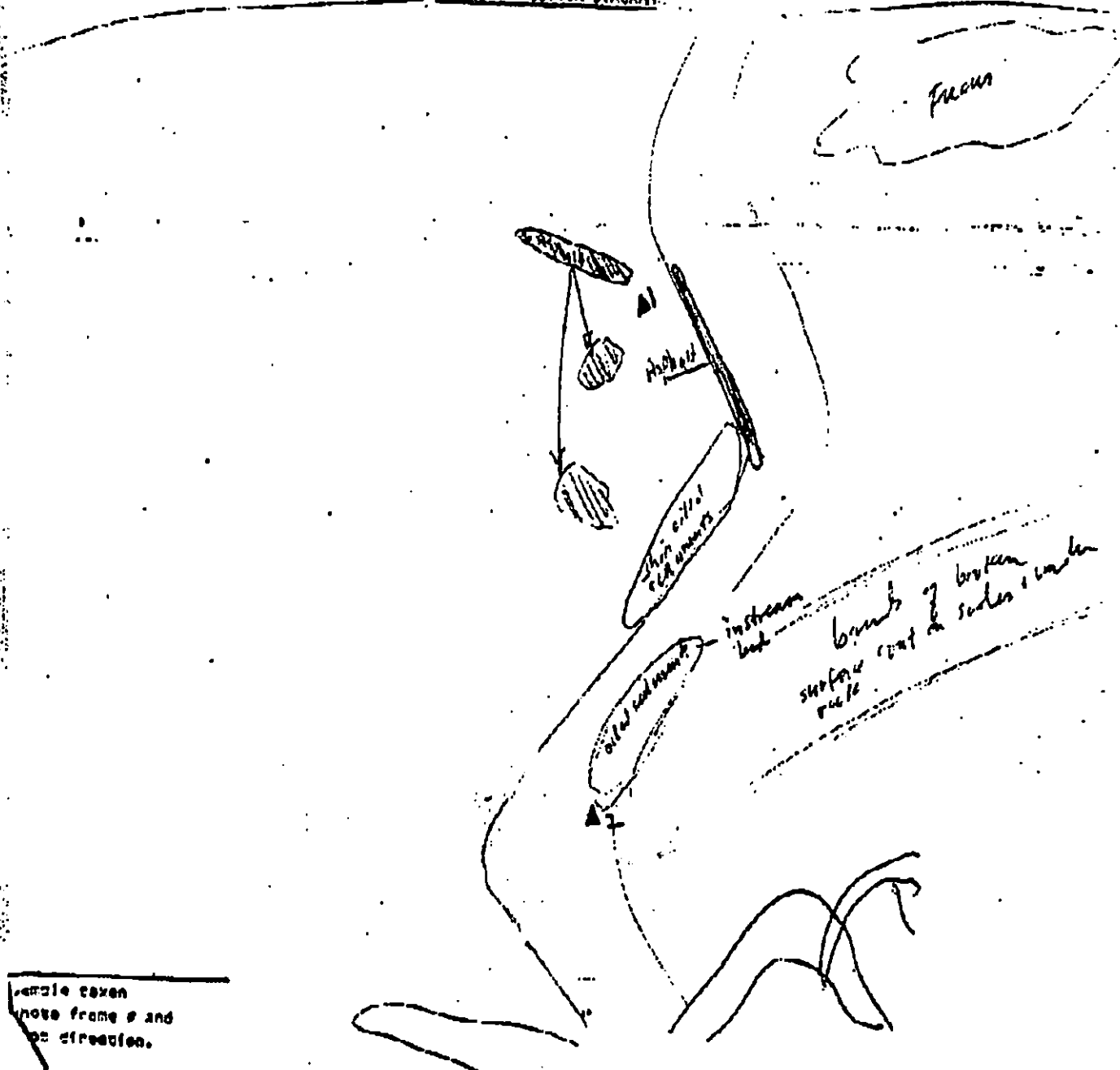
COMMENTS: Some very thin tar mats along and under of
stream - seen from ground in stream itself
WATER - oiled gravel + rock primarily under side west
side stream
m372 - tar mat and oil on stream banks

38/42

48 PHOTOLOG

FRAME(S)	DESCRIPTION
Pit #1 2.8 cm deep	showing brown sediments
Pit #2 2.2 cm deep	- finely sorted

48 OIL DISTRIBUTION DIAGRAM



sample taken
note frame # and
on direction.

11/48

Seg ID: IN-031 Subdiv: 226-10-16916

Survey Date: 4/24/90

Comments by: Ken Critchlow

This stream site was lightly oiled with a small amount of asphalt pavement in the LITZ, and sediments producing sheen from a film on a gravel bar adjacent to the stream in the MITZ. No subsurface oil was observed in pits located in the LITZ and MITZ.

This site can be cleaned by a small crew using shovels to remove the upper 4 cm of contaminated sediments in oiled areas.

KR Critchlow

SUBJECT STREAM is
 LOCATED IN
 IN-31A
 (1 of 2)

IN-31

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

IN-31

ADEC Segment Length: ~~610m~~ 824

0 100 200 300

Map Key: PWS-276

Name: James Sprin

Date: 4/7/90

Date Entered:

52

1991 MAYSAP EVALUATION

SEGMENT: IN 032 SUB: A REGION: PWS SURVEY DATE: 5/22/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). YAB

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: MANUAL P/U OF AP/HBOR AT LOCATION C
FOLLOWED BY CUSTOMBLEN

FOSC: _____

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/11/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN 32 SUBDIVISION A DATE 5/22/91

ADEC

NAME PETER MONTESANO

SIGNATURE [Signature]

☐ NTR

WHATEVER TREATMENT THAT FOLLOWED ASAP

TREATMENT RECOMMENDED WAS INADEQUATE. AREA "C" LOOKS NO DIFFERENT THAN MY AUGUST VISIT, WHEN MANUAL REMOVAL WAS RECOMMENDED. 1991 RECOMMENDATION: MANUAL REMOVAL WHICH IS EASILY ACCOMPLISHED IN THE THIN BOULDER FIELD. THIS IS A PROTECTED SADDLE AND NATURAL ENERGY IS BOUND TO BE SLOW. SOME OF THE AP/SOR IN THIS SADDLE TRAPS MOUSSED SEDIMENTS. ADDITIONALLY, AREA "AB" AROUND PITS COULD BENEFIT FROM SOME REMOVAL: ROLL SOME SMALL BOULDER, SINCE AP CONTINUES AS NEAR SURFACE NOT BELOW THEM. ALL THIS IS ACCESSIBLE TROWEL/SHOVEL WORK. -CONTINUED-

EXXON

NAME FRANK A. Bax

SIGNATURE [Signature]

☐ NTR

I would recommend the break-up of the SOR on the southern tip of IN-32-A. around section C of of section 12. Also the same for the sor area in section A-X. After breaking up the SOR. Bioremediation.

LANDMANAGER

NAME DENNIS S. Kennedy OF USFS

SIGNATURE [Signature]

☐ NTR

It would be possible to remove some of the oil in location [C] but any crew must be careful around the dense mussels and tide pools. I do not feel that treatment is warranted throughout the remaining subdivision.

USCG/NOAA NOAA D. Simat-Beatty D. Simat-Beatty

NAME BMI M. P. ZENORE USCG

SIGNATURE [Signature]

☐ NTR

"SOR" and "AP" observed between boulders and breccias would be difficult to remove within area C. Tide pools and mussel beds were also found in this area. Photo #5 (USCG water near tide pools) gives a good small view of area C. The other sections that contain "SOR" are relatively small. DS-B.

- AREA @ PIT #1, SOUTHERN TIP, COULD USE SOME WORK IN THE FORM OF BIOREMEDIATION. VERY LITTLE MANUAL WORK. AREA @ PIT #7 COULD USE SOME ROCK ROLLING (NO REMOVAL) THEN BIOREMEDIATION. IT SEEMS WE ALL AGREE ON THE AREAS THAT NEED WORK ON THIS SEGMENT. HOWEVER THE LESS INTRUSIVE THE BETTER.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN 32 SUBDIVISION A DATE 5/22/91

ADEC

NAME

CONTINUED Pjm

SIGNATURE _____

☐ NTR



TREATMENT RECOMMENDED

NOTE THAT THE WORK ON AREA "AB" IS NOT EXTENSIVE AND CAN EASILY BE INCORPORATED THE WORK ON AREA "C" AND IN 3/B (EXTENSIVE SOR/AP) ON THE NEAR OTHER SIDE.

EXXON

NAME

SIGNATURE _____

☐ NTR

LANDMANAGER

NAME

OF

SIGNATURE _____

☐ NTR

USCG/NOAA

NAME

SIGNATURE _____

☐ NTR

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 2OG ReimerBIO BanSEGMENT IN32ADEC MontesanoLANDMANAGER Kennedy for USFS
BMI ZenoneSUBDIVISION AOXON BoxUSCG/NOAA D. Simecek-BettyDATE 5/22/91TIME 12:10 to 15:30TIDE LEVEL +6 ft. to 11.8 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 2667 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 50 m M 100 m N 600 m VL 1200 m NO 717 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						S					R	V	1.0	30		X			
B					B						R	V	0.5	20		X			
C				P	P	P					B	H	15.0	25		X			SOR-H
D					B	B					RB	H	1.5	30		X			
E						S					R	V	1.0	30		X			
F						S					B	H	2.0	10		X			
G						S					RB	H	0.5	25		X			
H					P	P					RB	H	1.0	15		X			
I						P					R	H	2	35		X			N-D T SE
J					P	P					R	V	1.0	25		X			
K				S	P	P					B	H	3.0	20		X			SOR-L
L				S		P					B	H	4.0	15		X			SOR-L
M						S					BR	H	1.5	100		X			
N	S				P	P					B	H	6.0	13		X			
O	T					S					B	H	2.0	100		X			
P				S	P	P					B	H	2.5	8		X			SOR-L

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 24 FRAMES 1-5

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	17			X					11-14	Y				X			C-PG	
2	20							X	-					X			CP-PGC	
3								X	2-12	N				X			B-GPB	
4	7		X						0-7		N			X			BC-CPRock	
5			X						0-3	Y				X			B-GP	
6	20							X	-						X		P-PG	
7	5			X					0-4					X			B-	
8	13							X	-					X			PG-PG	
9	7		X						0-3					X			B-PG	

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

OG COMMENTS:

Δ 1 Dug in area of Ap between blds and does not extend as subsurface layer, may be patchy within surface oiling (surface Ap between Blds > 5cm thick)

Δ 5 Dug between large Blds

7 Dug between large Blds on Steep Bank

Δ 8 Dug through Heavy SOR between Blds (Surface layer 2 cm thick)

Δ 9 Dug in SOR between Blds

Continued

Revised 5/29/91 KG

REVISOR: MC 5/31/91

MAYSAP SHORELINE OILING SUMMARY

PAGE 4 OF 5TEAM NO. 2OG Reimer

BIO _____

SEGMENT TU 32

ADEC _____

LANDMANAGER _____ for _____

SUBDIVISION A

EXXON _____

USCG/NOAA _____

DATE 5/22/91TIME 12:10 to 15:30

TIDE LEVEL _____ ft. to _____ ft.

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL _____ m NO _____ m US _____ m

LOC	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	
Q	T			T		S	S				R	V	1	250		X			Isolated Patches AP (mud-r)
R					S	S					R	V	1	10		X			
S					P	P					B	H	1	10		X			
T						S					R	V	1	10		X			
U				S		P					B	H	2	10		X			SOR-H
V		T		S		P					B	H	2	10		X			SOR-H
W			S			S					B	H	1	10		X			
X						S					R	V	2	10		X			
Y				S	P	P					B	H	1	6		X			
Z				S		S	S				RB	H	1	100		X			SOR-H
AA						S					R	V	1	5		X			
AB	S			S	P	P					B	H	5	20		X	X		SOR-H
C			T	S		S					BCR	H	5	20		X			SOR-H
DS				S	P	P					B	H	2.5	20		X			SOR-H
AE					B						R	V	1	10		X			
AF					B						R	V	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- _____ FRAMES _____

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S UI MI LI				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										
								-										

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

OG COMMENTS: This segment consists of alternating Rocky headlands and steep Boulder beaches. Oiling is found throughout the segment in the form of Bath tub Rings (BTR) on Rock $\approx$ 1m wide increasing up to 5m on beaches as determined by beach slope. Pockets of Interstitial SOR/AP are associated with most beach areas. Concentrations vary throughout the segment. Note: The three SIKets maps join together to form a mural.

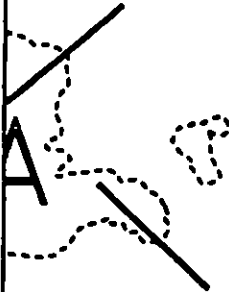
reviewed 5/29/91 EG

Revised: MC 5/31/91

Revised: MC 5/31/91
revised 5/29/91 KG

IN-32

SKETCH
MAP #3



A

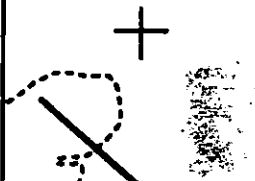
OG SKETCH
LOCATION MAP #1

I-69

SKETCH
MAP #2

A

SKETCH
MAP #1



IN032 A

Subdivision Field Map

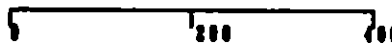
Map Key: INIIN032Aa

Name: Reimer

Date: 5/22/91



METERS



AK State Plane Zone 4
61203200

+

IN-20

A

+

OG SKETCH
LOCATION MAP #2

IN-31

B

Small Pocket Beach
CT/CU 40% Rck/BLDS
SOR 5% (matrix BLDS)
4 x 20m

AL

Beach Site

SKIFF

CT < 5% BTR
1 x 300m

AM

SKETCH MAP
#3 Cont.

IN032 A

Subdivision Field Map

Map Key: ENIIN032Ac

Name: ReimerDate: 5/22/91

METERS

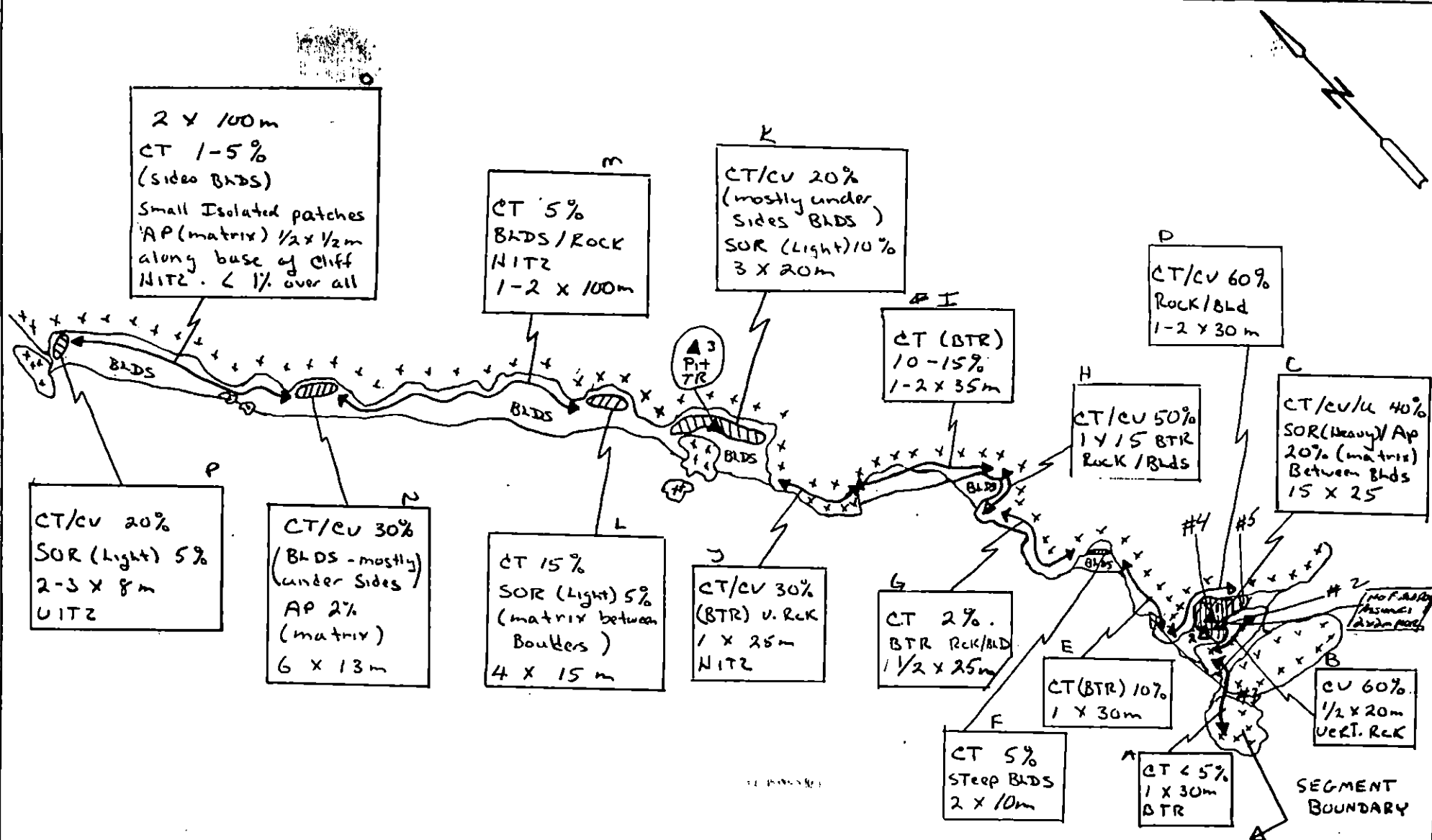
0 200 400

AK State Planning Zone 4
61203200

REVIEWED: MC 3/31/91

revised 5/29/91 KG

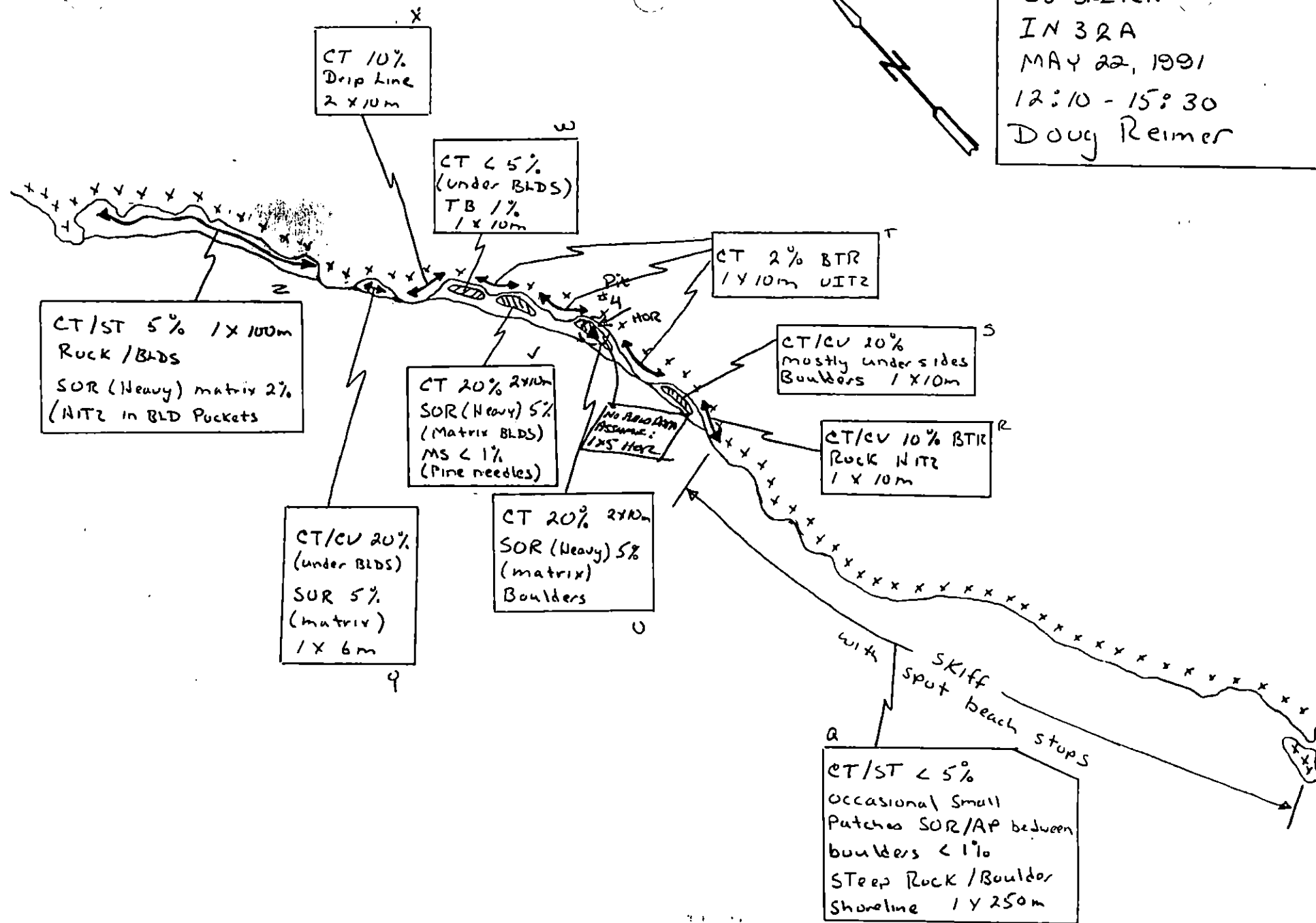
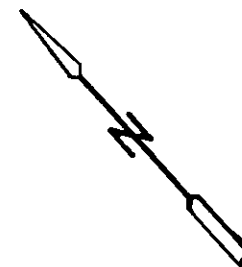
OG SKET. #1
IN 32 A
MAY 22, 1991
12:10 - 15:20
Doug Reimer



revised 5/29/91 RS

REVISOR: MC 5/31/91

OG SKETCH
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer



revised 5/29/91 kg

REVISED: MC 5/31/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 2 DATE 22 May 91
 SEGMENT # ±N 3a TIDAL HEIGHT(Range) 3 to 1 ft
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A+B: CT/cv high in ITZ in lichen zone. Lower ITZ with dense Fucus and tide pools containing Agurids, Littorines, algae & limpets.
 C: SOR in barnacle zone - oiled barnacles observed. Oil extends up to lichen zone. Several tide pools high in ITZ support only Algae (scum).
 Mid ITZ zone near pit #2 is depopulated. Mussels dense seaward of pit.
 D+E: CT/cv/BTR high in ITZ - Above below and within lichen zone. Lower ITZ dense with algae, barnacles.
 F: CT reaches to upper barnacle zone. Recently settled spat observed on lower intertidal boulders. Fucus Ulva dense along near water & subtidally.
 G+H: All BTR high in ITZ - Lichen zone. Dense Fucus at lower elevation.
 K: CT/cv/SOR ranges from lichen to green algae zone. Boulder beach seaward of oiled zone supports small & large mussels, limpets, dense juvenile and adult Littorines, and recently settled spat. Oligochaeta found under rocks.
 L: CT in lichen zone. SOR extends to upper edge of barnacle zone.
 M+O: CT/AP in upper ITZ - lichen zone. Small mussels in crevices of rock outcrop area & boulders. Fucus dense at water line along boulder slope.
 AP to barnacle & spat zone. Oiled, alive barnacles & shells observed.
 CT/cv near and within lichen zone. SOR v. high in ITZ - NO biota.
 Q: as mapped - biota & oil observed mostly from skiff with several stops.
 R+X: CT/cv/BTR high in ITZ Above, and within lichen zone on rock face.
 S+Y+U: CT/cv/SOR where is on steep boulder beaches. The oil extends from the lichen zone to the upper barnacle zone. Lower ITZ dense and diverse with mussels in boulder crevices, recent spat & dense algae.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Salmon fry
Seabirds			
Waterfowl			
Gulls/Kittiwakes	gulls	±10	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/31/91
 Reviewed: JNB 5/30/91

pg 2 of 2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 22 May 91
 SEGMENT # IN-32 TIDAL HEIGHT (Range) 3 to 1 ft
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Y: CT/cv/sor ranging from lichen to barnacle zone, however no oiled barnacles observed in the immediate area
 Z: C/CV/SOR AS AT "Y". Lower ITZ here dense & diverse with small mussels, spat, small Littorines & limpets. Several tide pools as mapped - dense with littorines, limpets, chitons & pagurids. No alien species observed.
 AA & AB: CT/SOR in barnacle zone, oiled barnacles at both sites. Patches of Ulva were growing on CT AT "AB". Lower ITZ with dense Fucus & barnacles as shown.
 AC & AD: Green algae to barnacle zone. Tide pools on rock outcrop support mussels, Littorines, limpets, Nucella & chitons.
 AE & AF: CV high in ITZ on rock face within & above lichen zone.
 AG: CT/cv in lichen to barnacle zone. Amphipods on SOR within barnacle zone.
 AH: SOR very high in ITZ. Several patches of beach grass growing through the CT/ST in lichen zone.
 AI & AJ: CT/cv/sor extends from lichen to barnacle zone. Oiled barnacles observed at "AI". Tide pools between sites support dense Nucella, Algae, & pagurids.
 K: CT/BTR is high in ITZ, within lichen zone. SOR reaches much lower, throughout barnacle zone and to the upper edge of the mussel zone. No oiled mussels were observed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

See pg 1

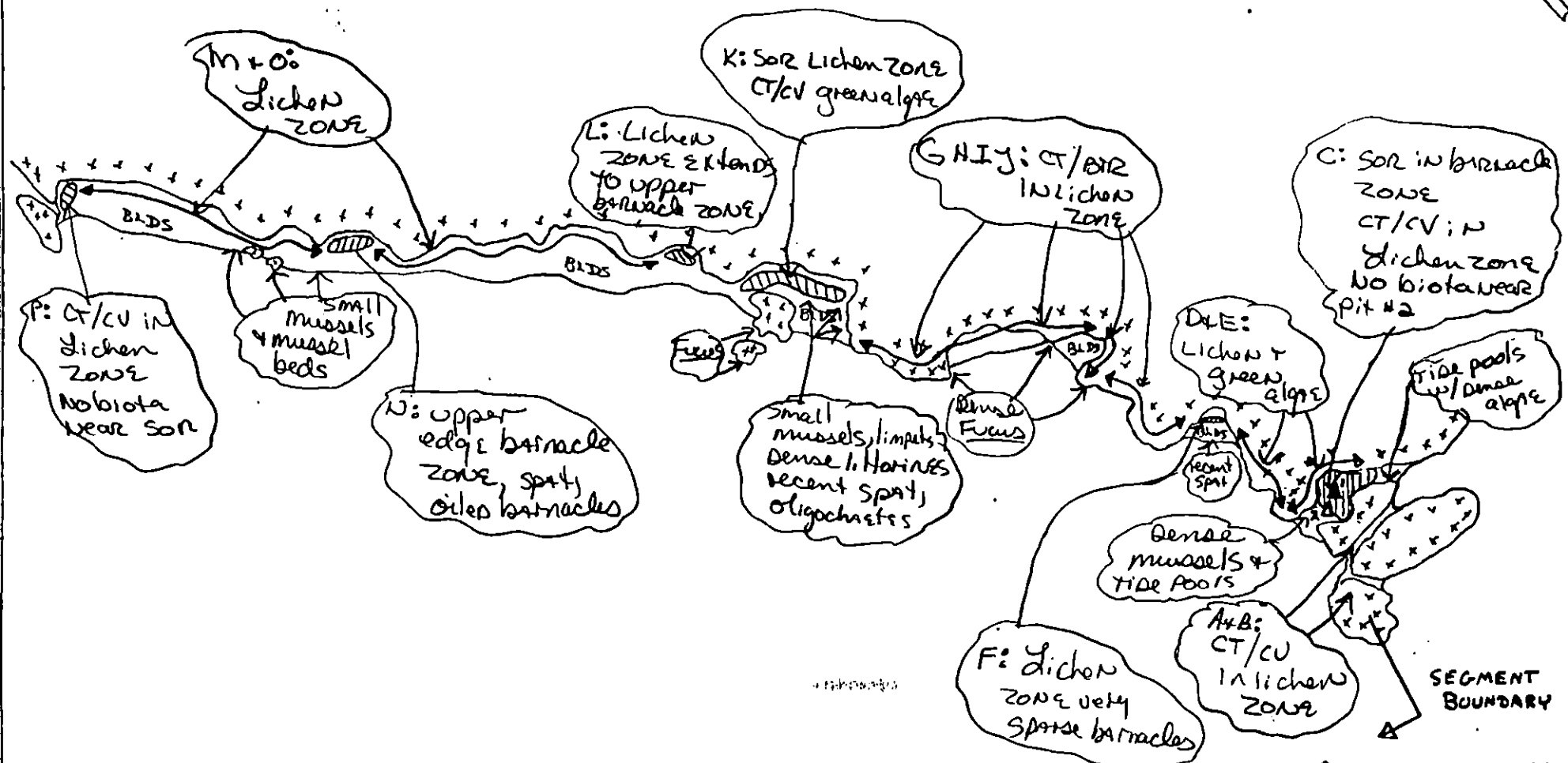
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Phocids (specify)			
les (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/31/91
 Reviewed: MBS 5/30/91

OG SKET #1
IN 32 A
MAY 22, 1991
12:10 - 15:20
Doug Reimer

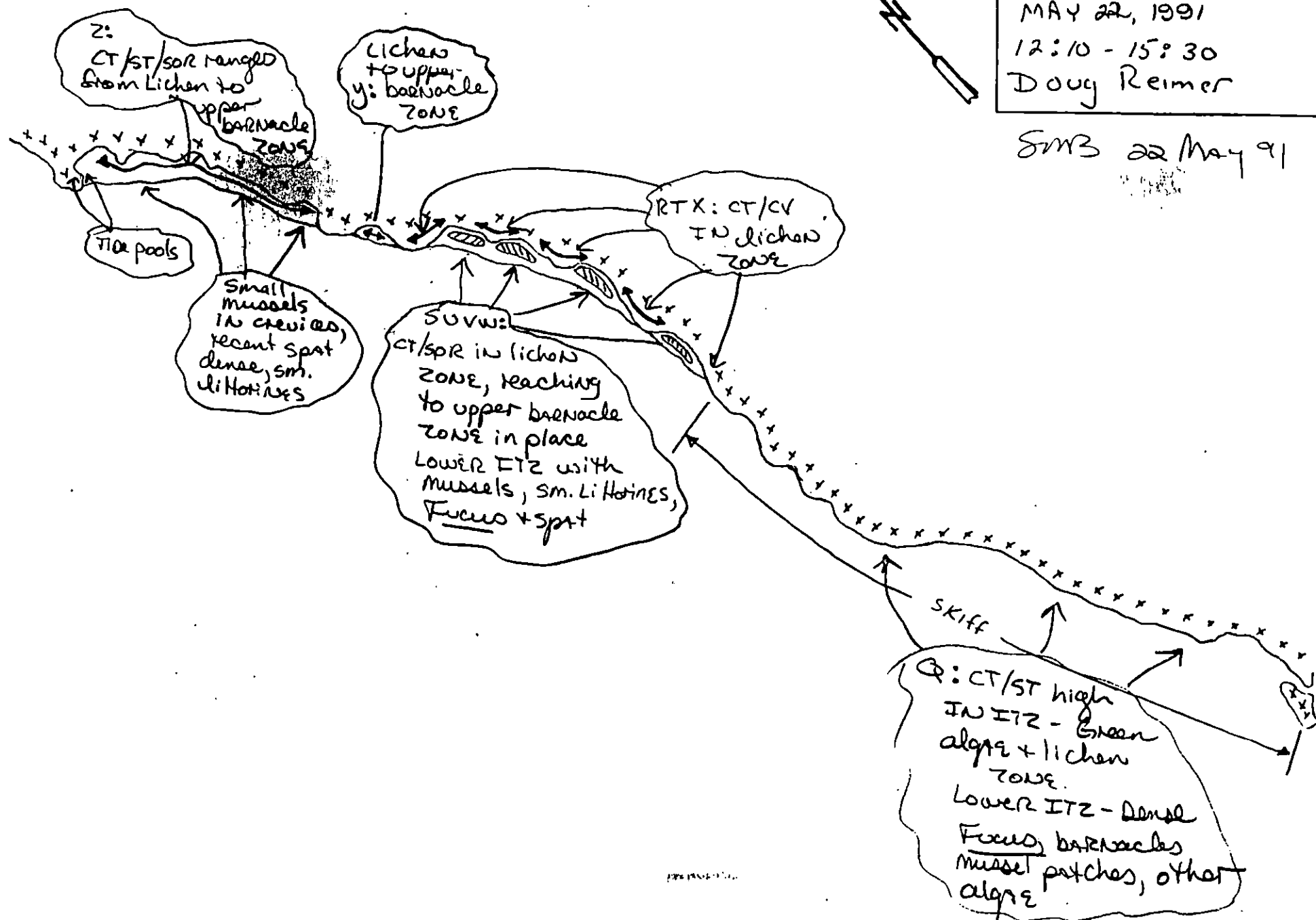


REVIEWED: MC 5/31/91

Reviews MOS 5/30/91

OG SKETCH 2
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer

SMB 22 May 91



REVIEWED: 5/31/91 M.C.

Reviewed 11/03 5/30/91

SMB 22/May 91

OG SKE N #3

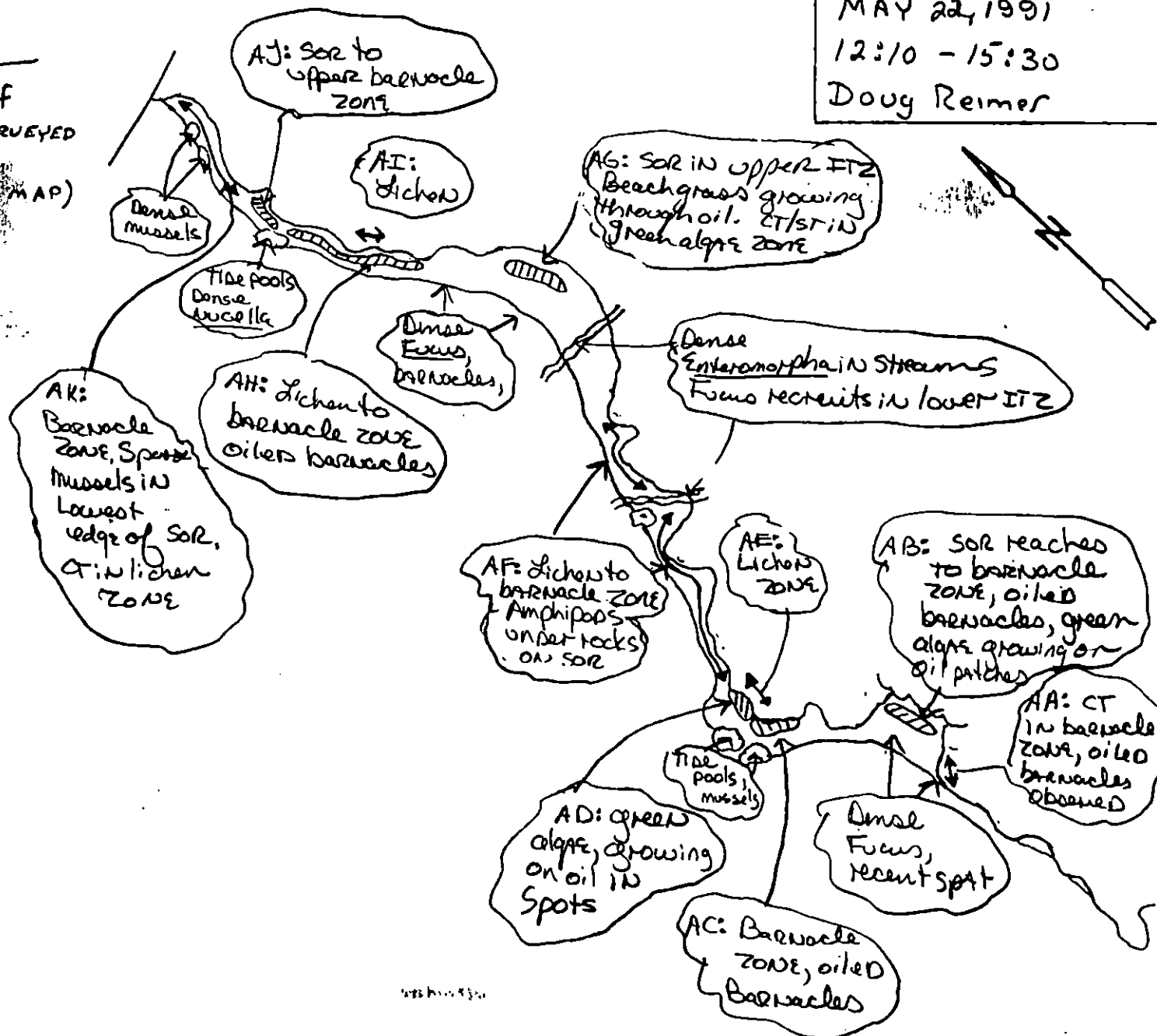
IN 32A

MAY 22, 1991

12:10 - 15:30

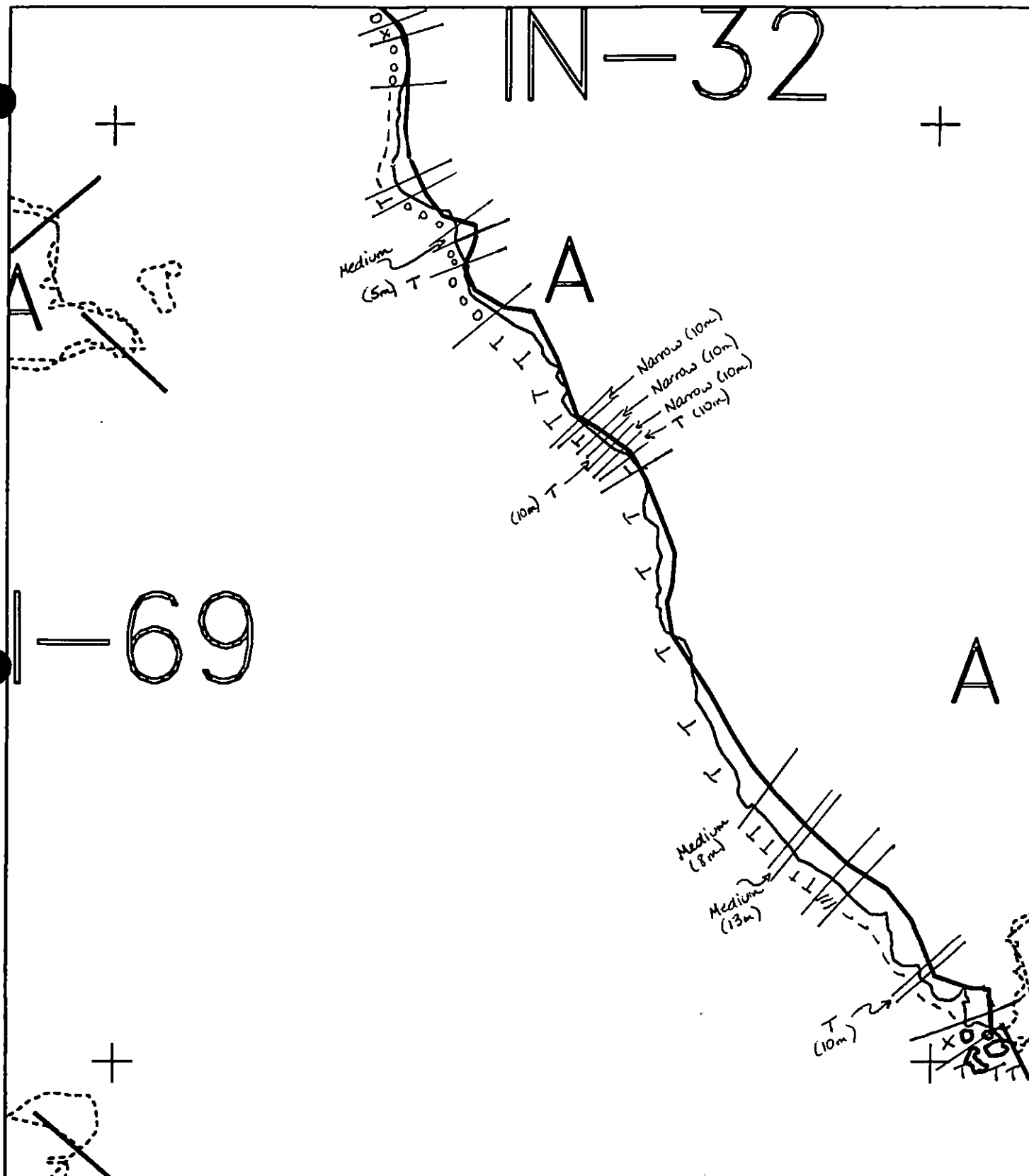
Doug Reimer

Remainder of
SEGMENT SURVEYED
BY SKIFF
(see MAP)



Reviewed: MC 5/31/91
Reviewed: MGS 5/30/91

IN-32



-69

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

IN032 A
 ADEC Subsegment Length: 2667m
 METERS
 0 200 400
 AK State Plane Zone 4
 k1n032aa

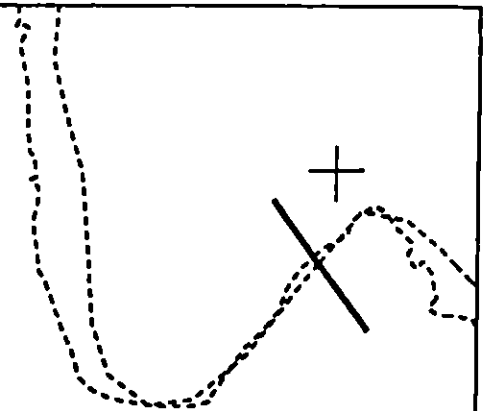


Subdivision Field Map
 Map Key: KN11N032Aa
 Name: Reimer
 Date: 5/22/91
 Data Entered:

RAU:SS: MC 5/31/91 revised 5/29/91 RG

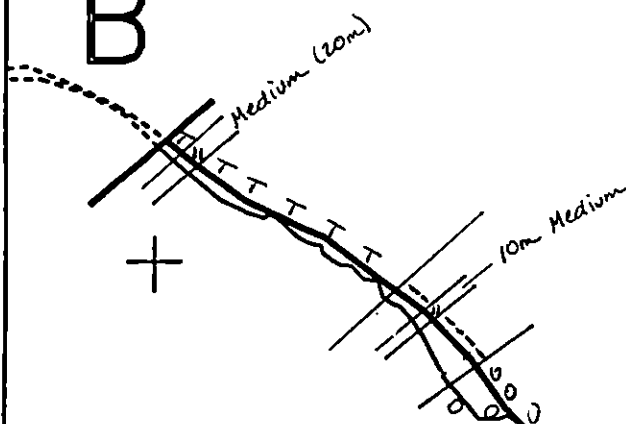
+ IN-20

A



IN-31

B



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

IN032 A
ADEC Subsegment Length: 2867m
METERS
0 200 400
AK State Plane Zone 4
41N032uc



Subdivision Field Map
Map Key: KN11N032Ac
Name: Reimer
Date: 5/22/91
Data Entered:



Revised: MC 5/31/91 revised 5/29/91 KCG

SHORELINE EVALUATION

SEGMENT ST/ IN-32 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and
contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. Hume DATE: 4/20/98

OILING CATEGORIZATION:

Wide 34 m: Medium 50 m: Narrow 760 m: V.Light 1526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
2) manual pick up of oiled debris, 3) bioremediation of areas shown on
attached sketch maps. Work should be conducted after 6/1 based on
eagle nest constraints after the approval of ADF&G and USFWS regarding
eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/20/90

ADEC ART WEINER Art Weiner

EXXON ANDY TEAL Black

NOAA Bur. Wescott Bunkley

USCG KENNETH KEANE *Kenneth Keane*

FOSC: _____ DATE: 4-26-90

DATE: 4-26-90

OG C. 2 ON
 SEGMENT ST/IN-32
 SUBDIVISION A
 DATE 07 APR 80

SEARCH MAP

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Subarea Character
- ☐ Est. MW/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
- $\odot$
Old Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

Photo 4:

AP/B

 and

CT/C

 6-8 m wide X 50 m long
 U-SITZ large crevice across
 bedrock containing B/C/P/MS
 Dull black weathered coat (furry) on
 surface and hard, broken
 asphalt pavement to
 10 cm thickness.

4.5 m wide

CT/B

 15 m long
 on B/C UITSZ

Pit 1
Photo 3

Pit 2
Photo 5

ARM TARMAT REMOVAL

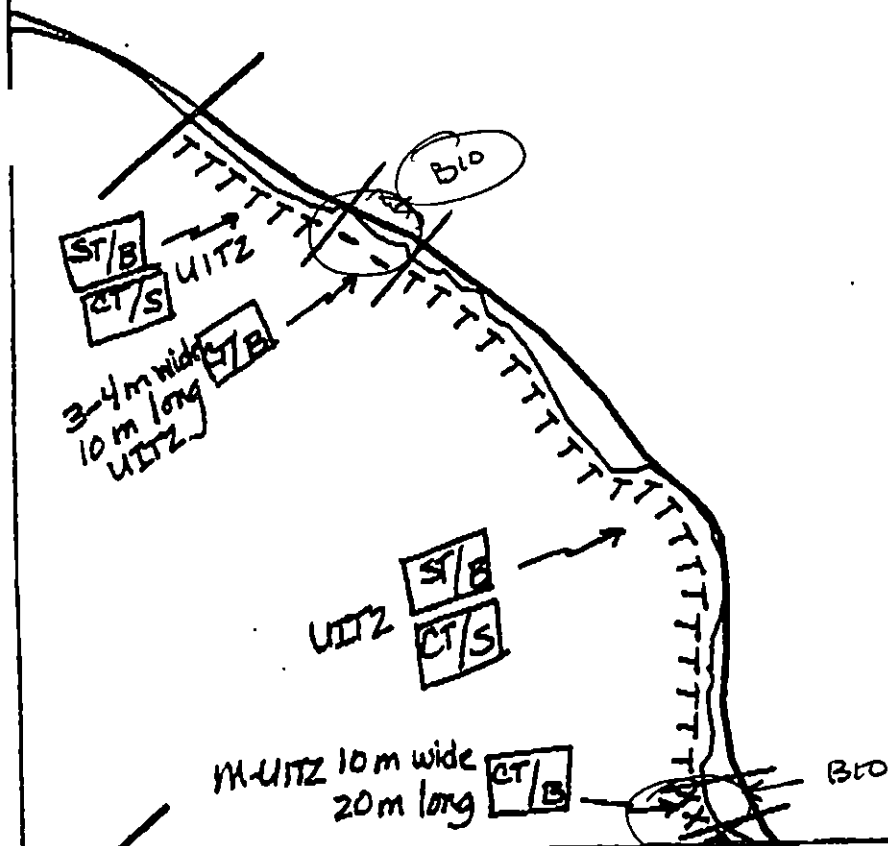
BIODEGRADABLE COAT
 + SUBSURFACE OIL

Oil lengths are for entire subdivision

Oil Character Length (m): AP 0 PO 0 CV 50 CT 105 ST 159 MS 0 PT 0 TB 0 FL 0 NO 65

SEGMENT IN-32
 SUBDIVISION A
 LENGTH = 2777 meters

IN-31



IN-32

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

IN-32

EXON SEGMENT LENGTH: 2777m

ADEC Segment Length: 2369m

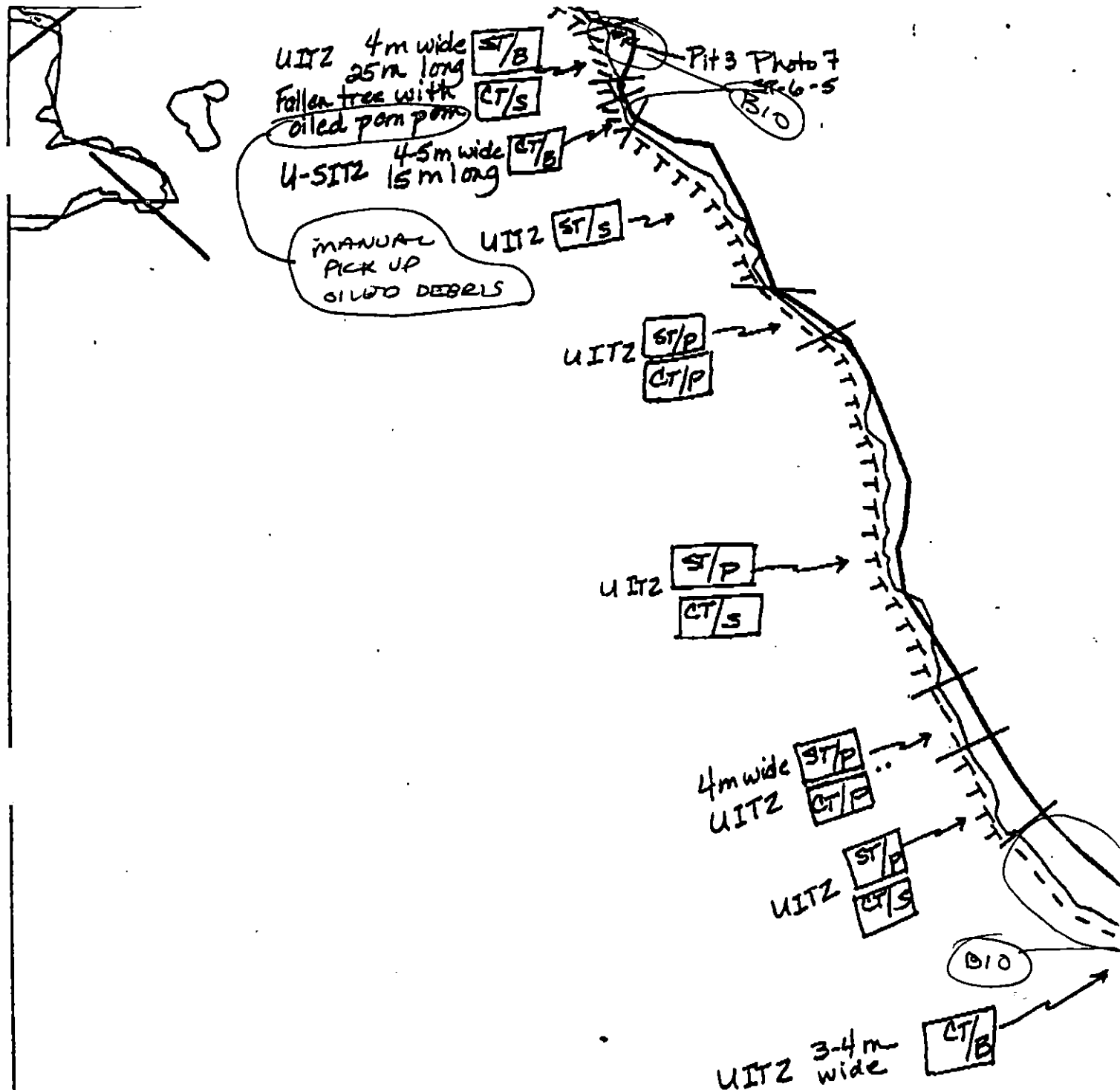


Map Key: PWS-277c

Name: C. DILLON

Date: 4/7/90

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

IN-32

EXXON SEGMENT LENGTH: 2777m

ADEC Segment Length: 2369m

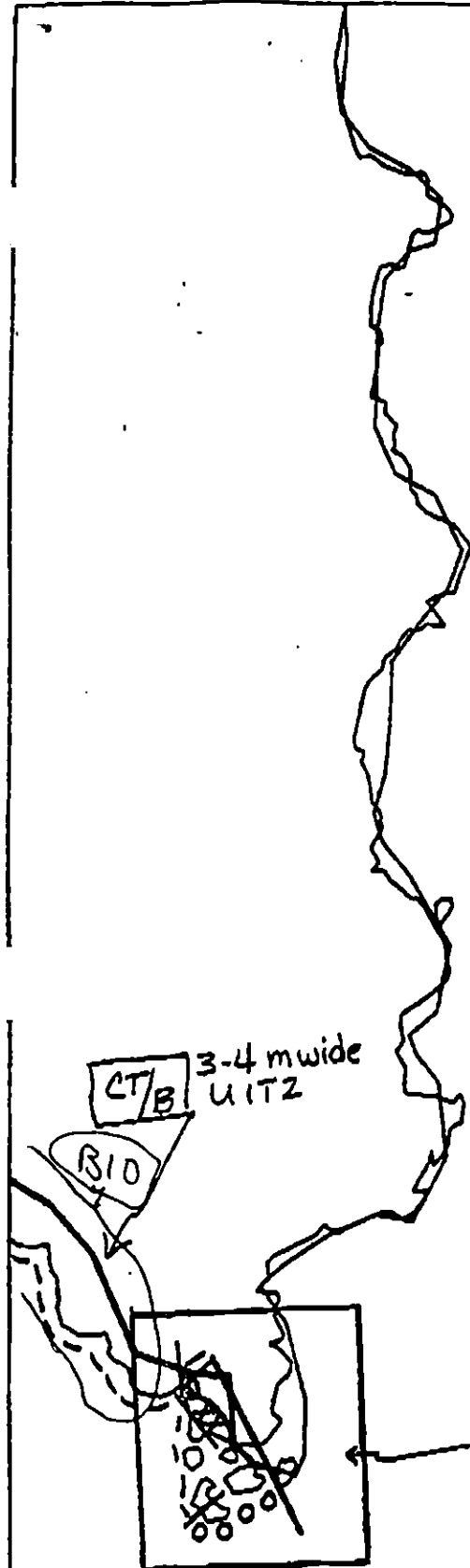


Map Key: PWS-277a

Name: CDillon

Date: 4/7/90

Date Entered:



OILING DESCRIBED ON
SKETCH MAP

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

IN-32

EXXON SEGMENT LENGTH: 2777m
 ADEC Segment Length: 2389m



Map Key: PWS-277b

Name: C. DILLON

Date: 4/7/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: IN 032 SUB: A REGION: PWS SURVEY DATE: 5/22/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Subsistence - Deer harvesting

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.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

TEAM NO. 2SEGMENT IN 32SUBDIVISION ADATE 5/22/91

ADEC

NAME

PETER MONTESANO

SIGNATURE

[Signature]☐ NTR☒ TREATMENT RECOMMENDED

WHATEVER TREATMENT THAT FOLLOWED ASAP
 THAN MY AUGUST VISIT, WHEN MANUAL REMOVAL WAS RECOMMENDED. 1991
 RECOMMENDATION: MANUAL REMOVAL WHICH IS EASILY ACCOMPLISHED
 IN THE THIN BOULDER FIELD. THIS IS A PROTECTED SADDLE AND NATURAL
 ENERGY IS BOUND TO BE SLOW. SOME OF THE AP/SOR IN THIS SADDLE TRAP
 MOUNDED SEDIMENTS. ADDITIONALLY, AREA "AB" AROUND PIT 5 COULD BENEFIT
 FROM SOME REMOVAL: ROLL SOME SMALL BOULDER, SINCE AP CONTINUES AS NEAR SURFACE
 NOT BELOW THEM. ALL THIS IS ACCESSIBLE TROWEL/SHOVEL WORK. -CONTINUED-

EXXON

NAME

FRANK A. Bax

SIGNATURE

[Signature]☐ NTR

I would recommend the break-up of the SOR on the southern
 tip of IN-32-A around section C of of section 12.
 Also the same for the sor area in section A-X. After
 breaking up the SOR. Bioremediation.

LANDMANAGER

NAME

DENNIS S Kennedy OF USFS

SIGNATURE

D.S. Kennedy☐ NTR

It would be possible to remove some of the
 oil in location [C] but, any crew must be
 careful around the dense mussels and tide pools.
 I do not feel that treatment is warranted through out
 the remaining subdivision.

USCG/NOAA NOAA

NAME

BRI M. P. ZENONE USCG

SIGNATURE

[Signature]☐ NTR

"SOR" and "AP" observed between boulders and crevices would be
 difficult to remove within area C. Tide pools and mussel beds
 were also found in this area. Photo #5 (view water next tide pools) gives
 a good small view of area C. The other sections that contain "SOR"
 are relatively small. BS-6.

CH- AREA @ PIT #1, SOUTHERN TIP, COULD USE SOME WORK IN THE FORM OF BIOREMEDIATION. VERY LITTLE
 MANUAL WORK. AREA @ PIT #7 COULD USE SOME ROCK ROLLING (NO REMOVAL) THEN BIOREMEDIATION.
 IT SEEMS WE ALL ARE ON THE AREAS THAT NEED WORK ON THIS SEGMENT. HOWEVER THE LESS
 INTRUSIVE THE BETTER.

TEAM NO. 2 SEGMENT IN 32 SUBDIVISION A DATE 5/22/91

ADEC

NAME CONTINUED-PJM SIGNATURE _____

☐ NTR

☒ TREATMENT RECOMMENDED

NOTE THAT THE WORK ON AREA "AB" IS NOT EXTENSIVE AND CAN EASILY BE INCORPORATED THE WORK ON AREA "C" AND IN 3/B (EXTENSIVE SOR/AP) ON THE NEAR OTHER SIDE.

EXXON

NAME _____ SIGNATURE _____

☐ NTR

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME _____ SIGNATURE _____

☐ NTR

TEAM NO. 2OG ReimerBIO BanSEGMENT IN 32ADEC MontesanoLANDMANAGER Kennedy for USFSSUBDIVISION AEXXON BoxBMT Zenone
USCG/NOAA D. Simecc-BattyDATE 5/22/91ME 12:10 to 15:30TIDE LEVEL +6 ft. to +1.8 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 2667 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 50 m M 100 m N 600 m VL 1200 m NO 717 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						S					R	V	1.0	30		X			
B					B						R	V	0.5	20		X			
C				P	P	P					B	H	15.0	25		X			SOR-H
D					B	B					RB	H	1.5	30		X			
E						S					R	V	1.0	30		X			
F						S					B	H	2.0	10		X			
G						S					RB	H	0.5	25		X			
H				P	P						RB	H	1.0	15		X			
I					P	P					R	H	2	35		X			No T SE
J					P	P					R	V	1.0	25		X			
K				S	P	P					B	H	3.0	20		X			SOR-L
L				S		P					B	H	4.0	15		X			SOR-L
M						S					BR	H	1.5	100		X			
N	S				P	P					B	H	6.0	13		X			
O	T					S					B	H	2.0	100		X			
P				S	P	P					B	H	2.5	8		X			SOR-L

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

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

PHOTO ROLL # MAYSAP- 2 - 24 FRAMES 1-5

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	17			X					11-14	Y				X			C-PG	
2	20							X	-					X			CP-PGC	
3								X	2-12	N				X			B-GPB	
4	7		X						0-7		N			X			BC-CPRock	
5			X						0-3	Y				X			B-GP	
6	28							X	-						X		P-PG	
7	5								0-4					X			B-	
8	13							X	-					X			PG-PG	
9	7		X						0-3					X			B-PG	

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

OG COMMENTS:

Δ 1 Dig in area of Ap between blds and does not extend as subsurface layer, may be patchy within surface oiling (surface Ap between Blds > 5cm thick)

Δ 5 Dig between large Blds

Δ 7 Dig between large Blds on Steep Bank

Δ 8 Dig through Heavy SOR between Blds (Surface layer 2 cm thick)

Δ 9 Dig in SOR between Blds

Continued

revised 5/29/91 KC

Reuses: MC 5/31/91

LANDMANAGER _____ for

SUBDIVISION A

USCG/NOAA _____

DATE 5 / 22 / 91

TIME 12 : 10 to 15 : 30

TIDE LEVEL _____ ft. to _____ ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W____m M____m N____m VL____m NO____m US____m

LOC	SURFACE OIL CHARACTER											SURFACE SEDIMENT	SHORE SLOPE	AREA		ZONE				NOTES	
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	TYPE			VHML	WIDTH	LENGTH	S	UI	MI		LI
															m	m					
S	T			T		S	S					R	V	1	250		X			Isolated Patches AP (medium)	
R					S	S						R	V	1	10		X				
S					P	P						B	H	1	10		X				
T						S						R	V	1	10		X				
U				S		P						B	H	2	10		X			SOL-H	
V		T		S		P						B	H	2	10		X			SOL-H	
W			S			S						B	H	1	10		X				
X						S						R	V	2	10		X				
Y				S	P	P						B	H	1	6		X				
Z				S		S	S					RB	H	1	100		X			SOL-H	
AA						S						R	V	1	5		X				
AB	S			S	P	P						B	H	5	20		X	X		SOL-H	
AC			T	S		S						BCR	H	5	20		X			SOL-H	
AD	S			S	P	P						B	H	2.5	20		X			SOL-H	
AE					B							R	V	1	10		X				
AF					B							R	V	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-

FRAMES

[illegible]

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

OG COMMENTS: This segment consists of alternating Rocky headlands and Steep Boulder beaches. Oiling is found through out the segment in the form of Bath tub Rings (BTR) on Rock ≈ 1 m wide increasing up to 5 m on beaches as determined by beach slope. Pockets of Interstitial SOR/AP are associated with most beach areas. Concentrations vary throughout the segment. Note: The three sketch maps join together to form a mural.

reviewed 5/29/91 KG

Revised: MC 5/31/91

Revised: MC 5/31/91
revised 5/29/91 KG

IN-32

SKETCH
MAP #3

OG SKETCH
LOCATION MAP #1

SKETCH
MAP #2

SKETCH
MAP #1

-69

IN032 A

Subdivision Field Map

Map Key: ENIIN032Aa

Name: Reimer

Date: 5/22/91

METERS

0 100 200

AK State Plane Zone 4
81003200



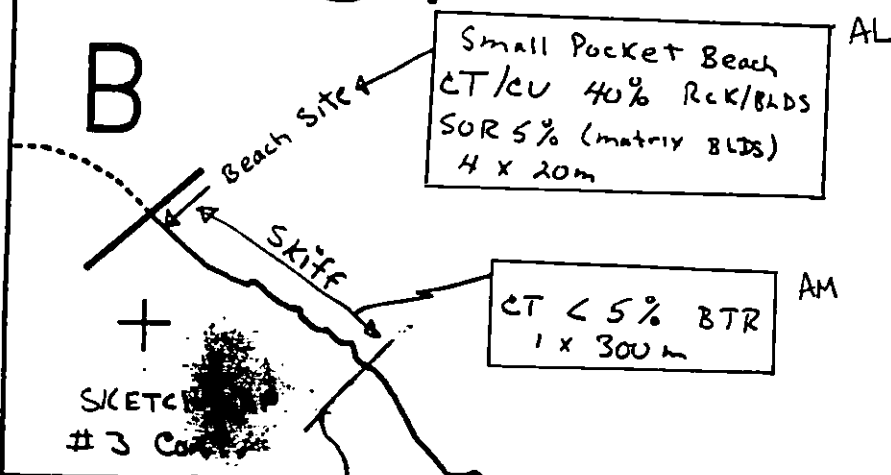
+ IN-20

A

OG SKETCH
LOCATION MAP #2

IN-31

B



IN032 A



METERS
0 200 400

AK State Plane Zone 4
11403200

Subdivision Field Map

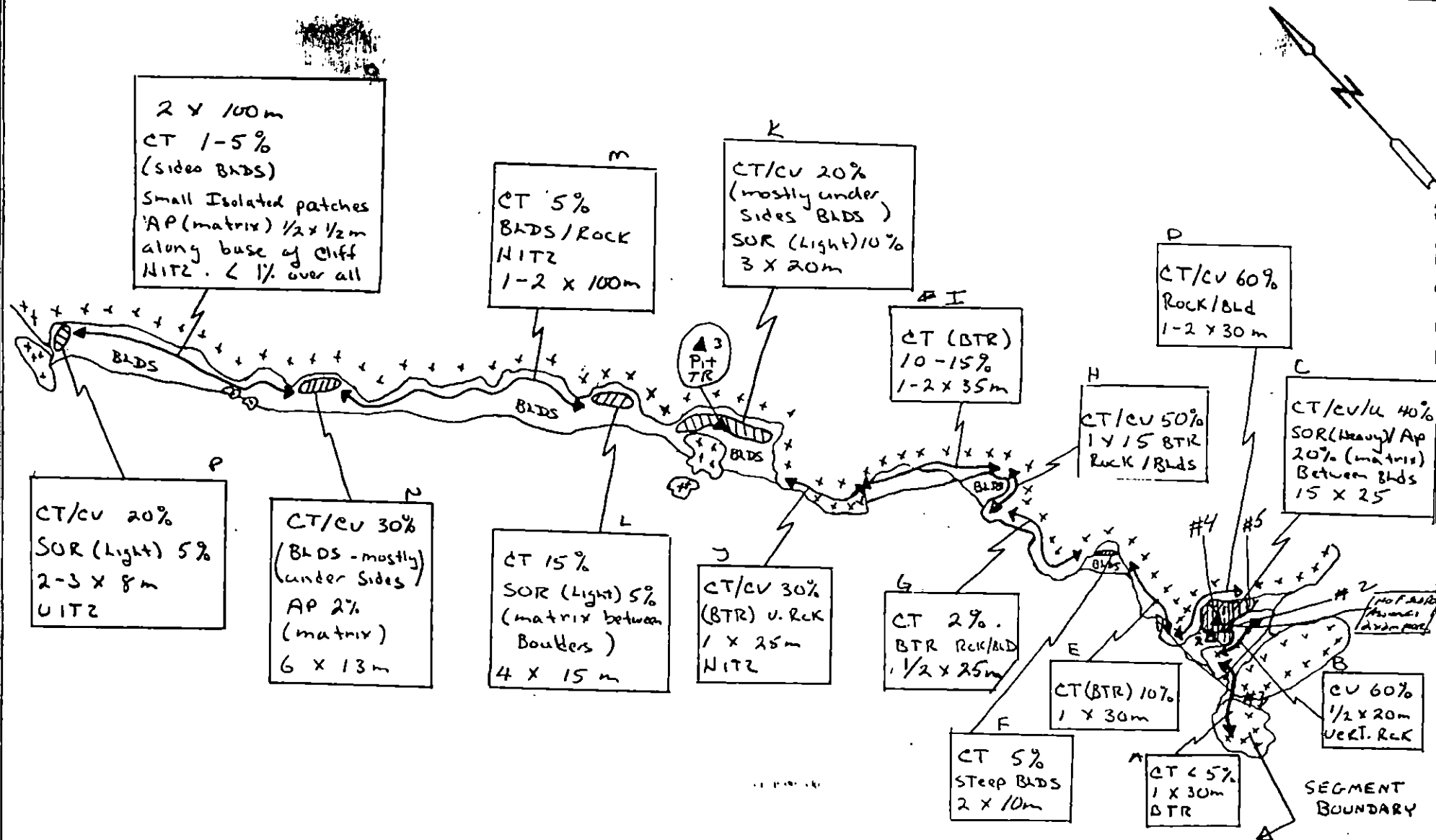
Map Key: KHIIN032Ac

Name: Reimer

Date: 5/22/91

REVIEWED: MC 5/31/91
revised 5/29/91 KG

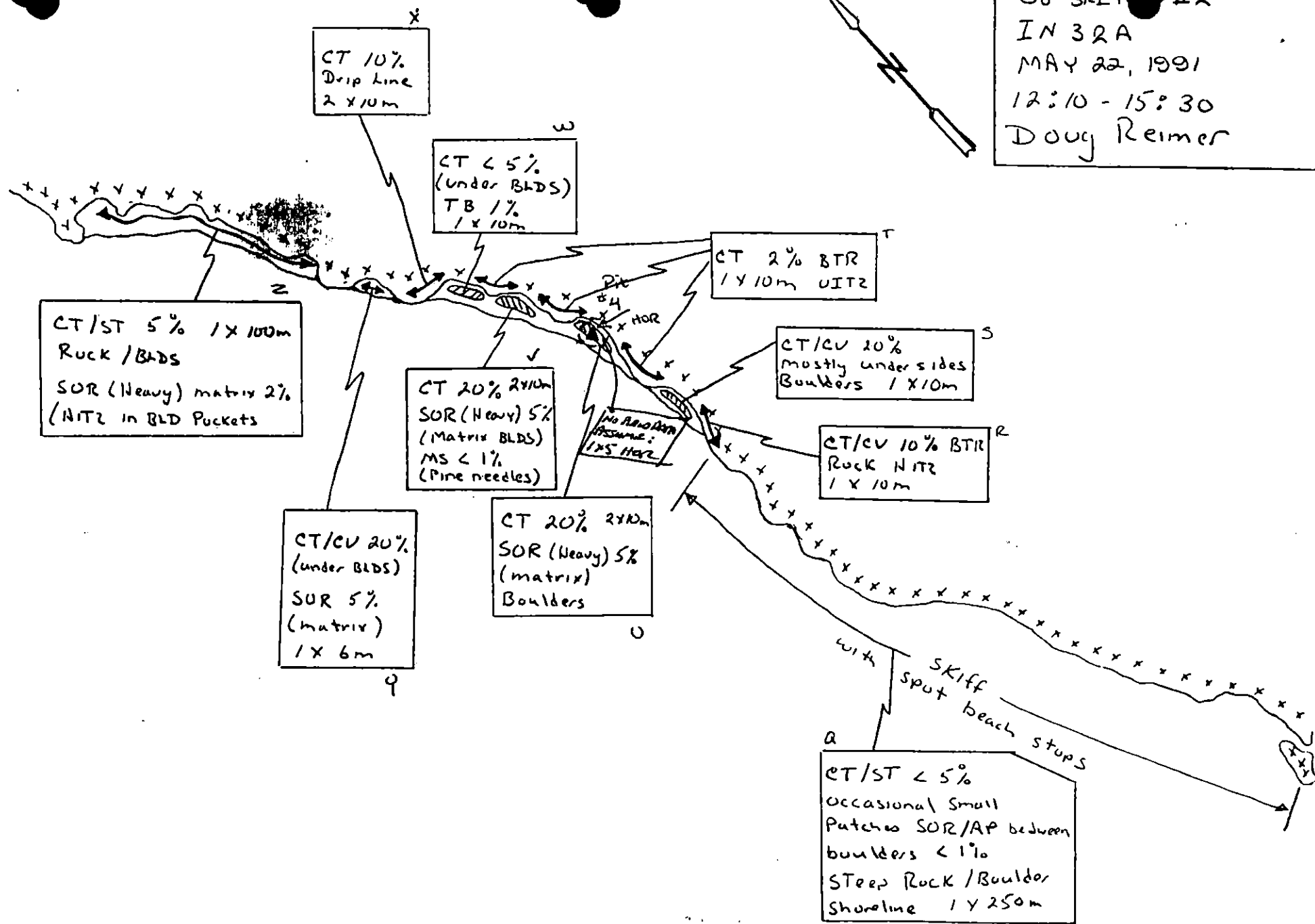
OG SITE CH #1
IN 32 A
MAY 22, 1991
12:10 - 15:20
Doug Reimer



revised 5/24/91 LG

REVISED: MC 5/31/91

OG SKETCH #2
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer

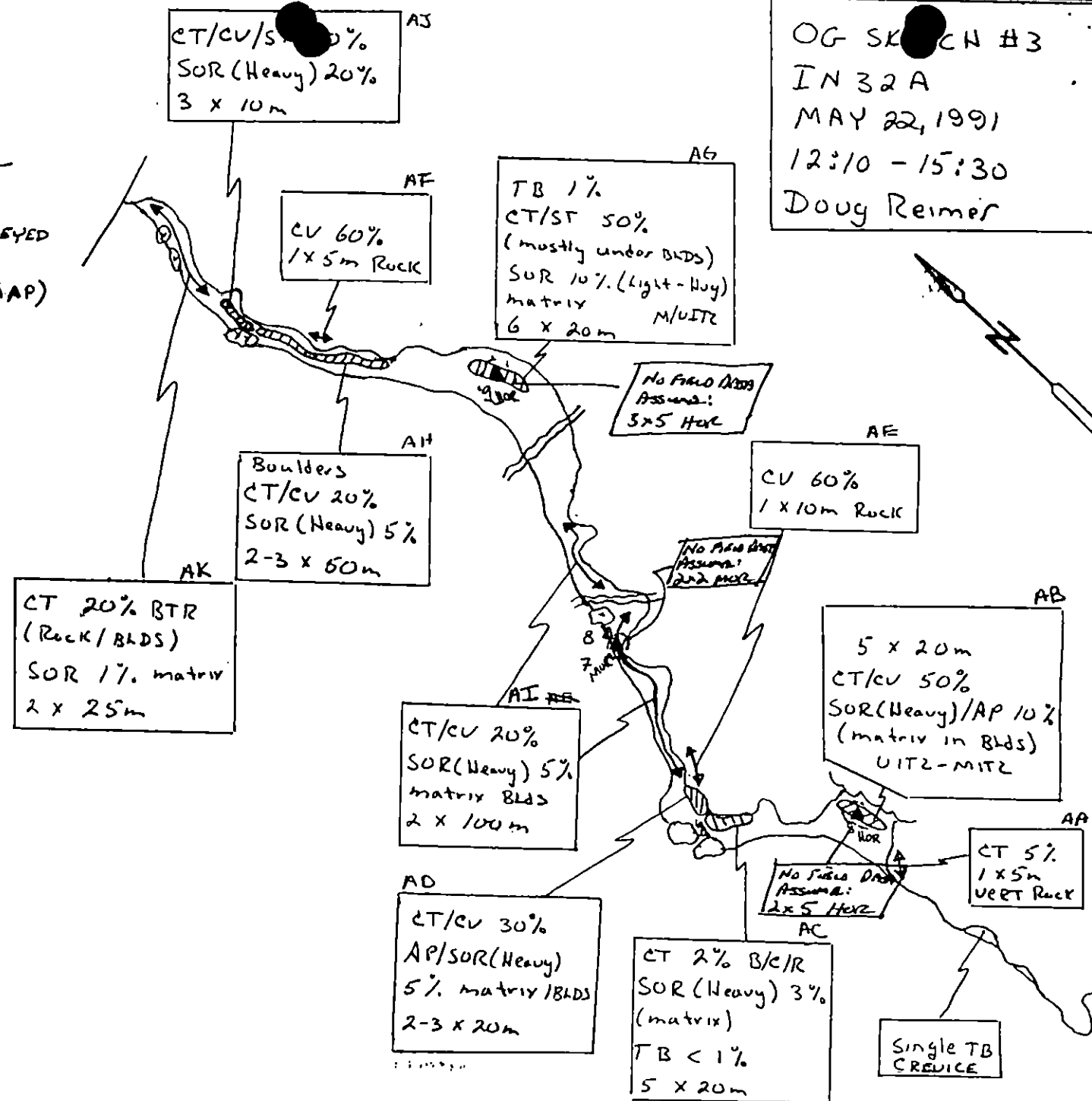


REVISED 5/29/91 KG

REVISED: MC 5/31/91

OG SKETCH #3
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer

Remainder of
SEGMENT SURVEYED
BY SKIFF
(see LATER MAP)



REVISED 5/29/91 KG

REVISED: MC 5/31/91

TEAM # 2 DATE 22/May 91
 SEGMENT # IN 3a TIDAL HEIGHT(Range) 3 to 1 ft
 SUBDIVISION Aa BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

A+B: CT/cv high in ITZ in lichen zone. Lower ITZ with dense Fucus and tide pools containing Anurans, Littorines, algae & limpets.
 C: SOR in barnacle zone - oiled barnacles observed. Oil extends up to lichen zone. Several tide pools high in ITZ support only Algae (scum).
 Mid ITZ zone near pit #2 is depulperate. Mussels dense seaward of pit.
 D+E: CT/cv/BTR high in ITZ - Above below and within lichen zone. Lower ITZ dense with Algae, barnacles.
 F: CT reaches to upper barnacle zone. Recently settled spat observed on lower intertidal boulders. Fucus Ulva dense along near water & subtidally.
 G+H+I: All BTR high in ITZ - Lichen zone. Dense Fucus at lower elevations.
 K: CT/cv/SOR ranges from lichen to green algae zone. Boulder beach seaward of oiled zone supports small & large mussels, limpets, dense juvenile and adult Littorines, and recently settled spat. Oligochaetes found under rocks.
 L: CT in lichen zone. SOR extends to upper edge of barnacle zone.
 M+O: CT/AP in upper ITZ - lichen zone. Small mussels in crevices of rock outcrop over & boulders. Fucus dense at water line along boulder slope.
 N: AP to barnacle & spat zone. Oiled, alive barnacles & shells observed.
 P: CT/cv near and within lichen zone. SOR v. high in ITZ - No biota as mapped - biota & oil observed mostly from skiff with several stops.
 Q: CT/cv/BTR high in ITZ Above, and within lichen zone on rock face.
 S+U+V: CT/cv/SOR there is on steep boulder beaches. The oil extends from the lichen zone to the upper barnacle zone. Lower ITZ dense and diverse with mussels in boulder crevices, recent spat & dense algae.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			Salmon fly
Waterfowl			
Gulls/Kittiwake	gulls	±10	
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: MC 5/31/91
 Reviewed: MB 5/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 22 May 91
 SEGMENT # IN-32 TIDAL HEIGHT (Range) 3 to 1 ft
 SUBDIVISION BIOLOGIST SMB/N
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Y: CT/CV/SOR Ranging from lichen to barnacle zone, however no oiled barnacles observed in the immediate area
 Z: C/CV/SOR AS AT "Y". Lower ITZ here dense & diverse with small mussels, spat, small Littorines & limpets. Several tide pools as mupper-dense with littorines, limpets, chitons & pagurios. No albatrosses observed.
 AA+AB: CT/SOR in barnacle zone, oiled barnacles at both sites. Patches of Ulva were growing on CT AT "AB". Lower ITZ with dense Fucus & barnacles also.
 AC+AD: Green algae to barnacle zone. Tide pools on rock outcrop support mussels, Littorines, limpets, Nucella & chitons.
 AE+AI: CV high in ITZ on rock face within & above lichen zone.
 AF: CT/CV in lichen to barnacle zone. Amphipods on SOR within barnacle zone.
 AG: SOR very high in ITZ. Several patches of beach grass growing through CT/ST in lichen zone.
 AH+AJ: CT/CV/SOR extends from lichen to barnacle zone. Oiled barnacles observed at "AH". Tide pools between sites support dense Nucella, Algae & pagurios.
 AK: CT/BTR is high in ITZ, within lichen zone. SOR reaches much lower, throughout barnacle zone and to the upper edge of the mussel zone. No oiled mussels were observed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

See pg 1

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.

Reviewed: MRS 5/31/91
 Reviewed MRS 5/30/91

SMB 22/May 91

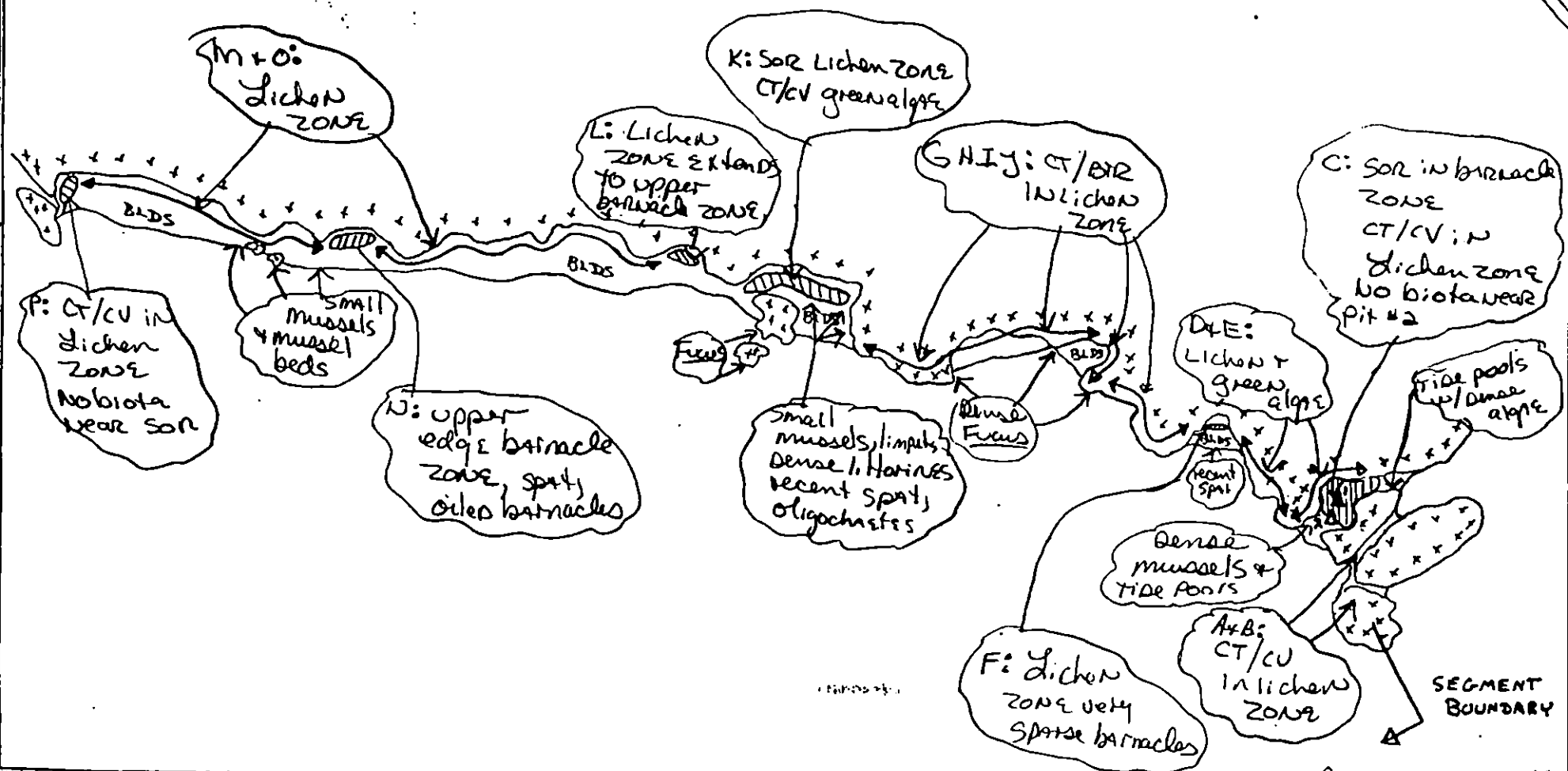
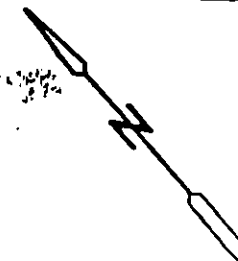
OG SITE #1

IN 32 A

MAY 22, 1991

12:10 - 15:20

Doug Reimer

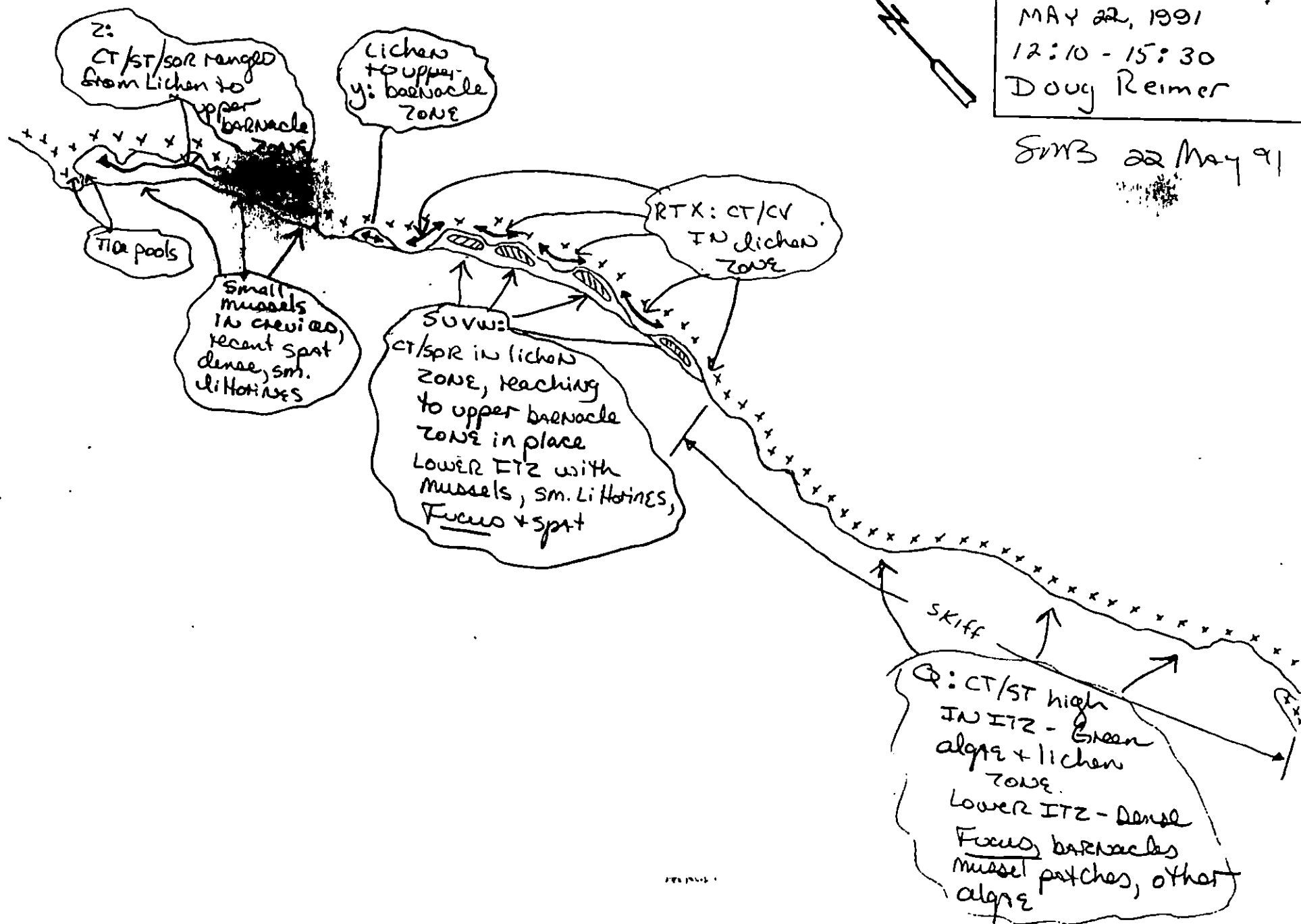


Reviewed MB 5/30/91

Reviewed: MC 5/31/91

OG SKETCH #2
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer

SMB 22 May 91



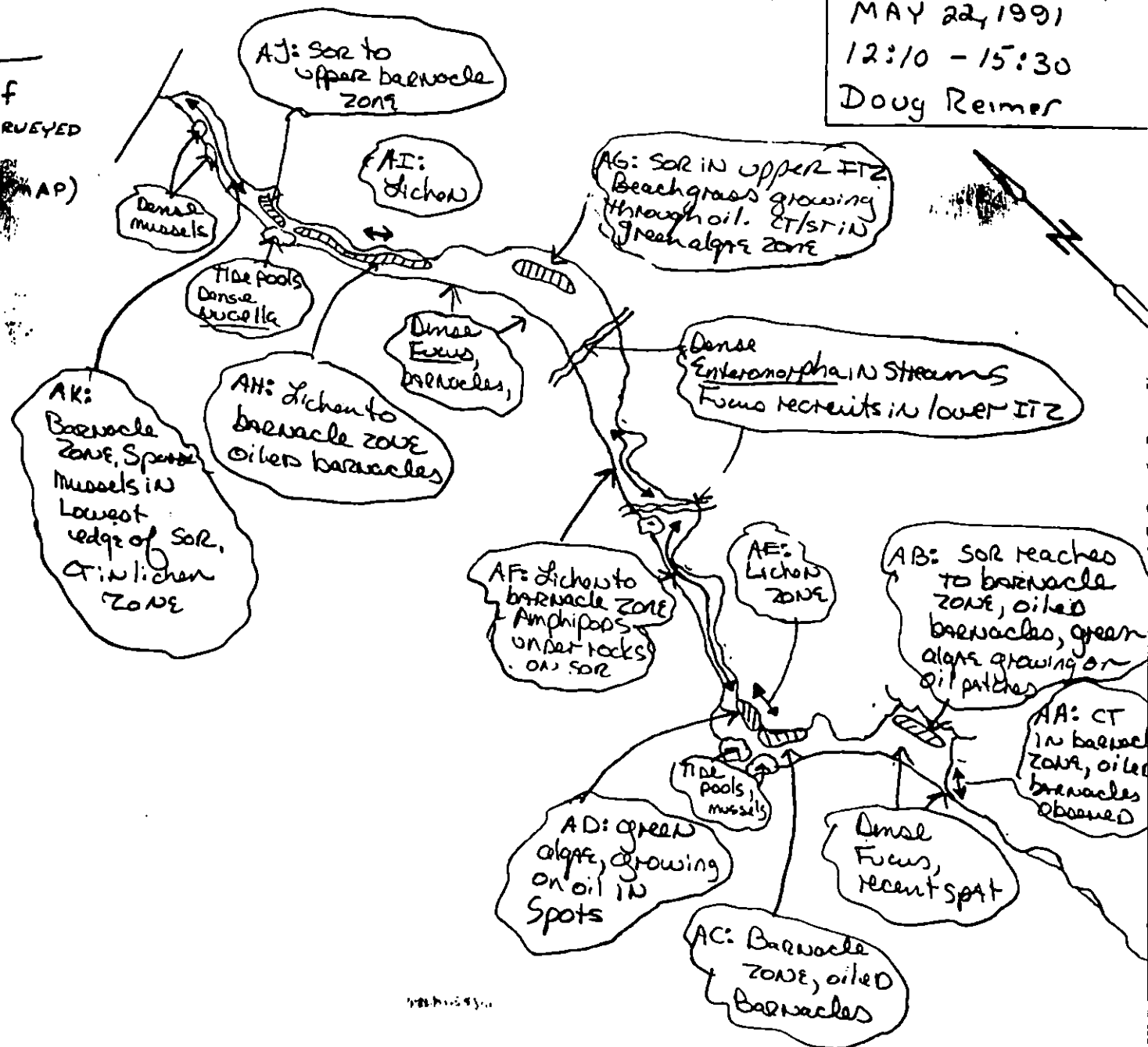
Reviewed 1703 5/30/91

REVIEWED: 5/31/91 MC

SMB 22/May 91

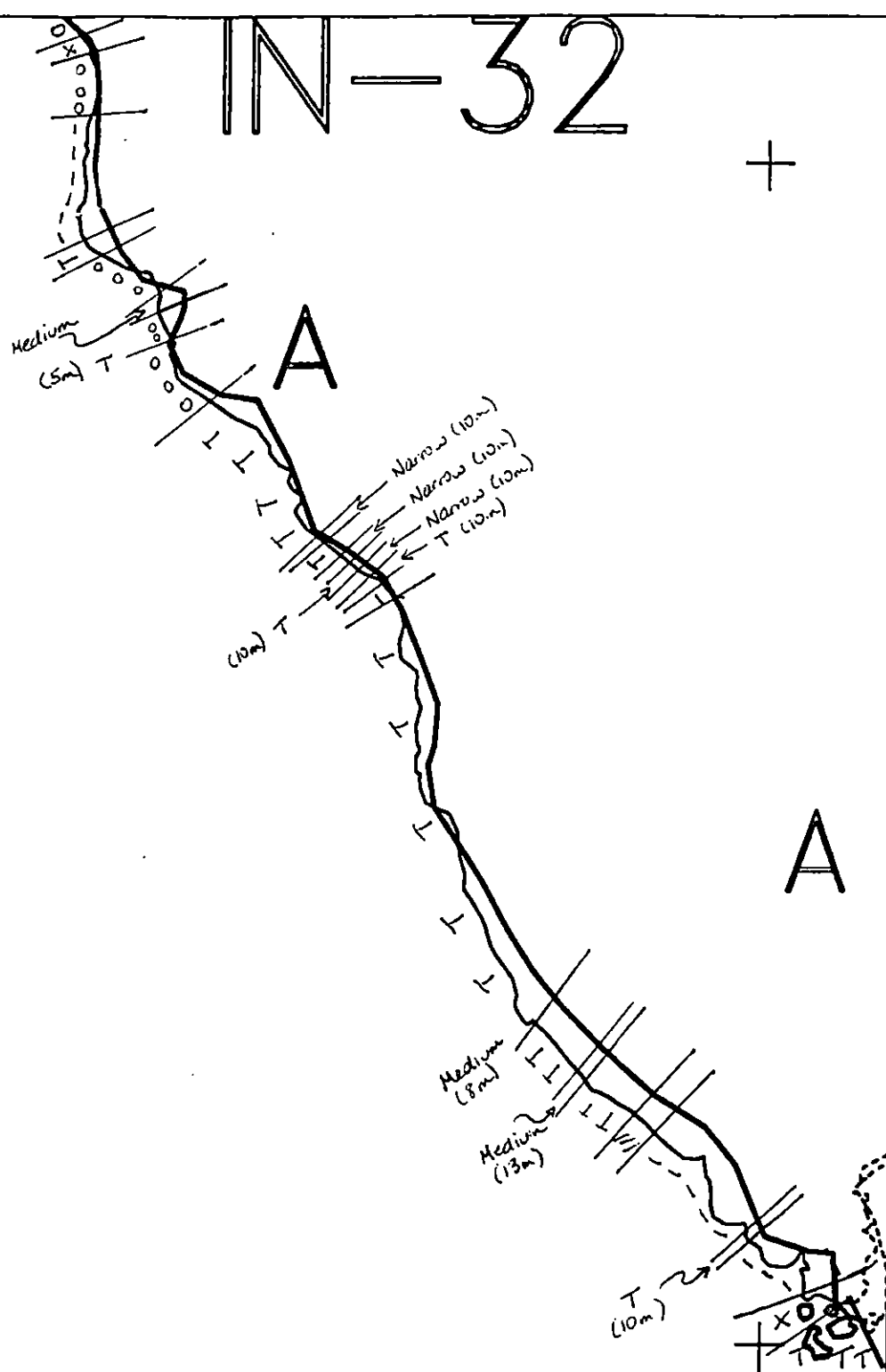
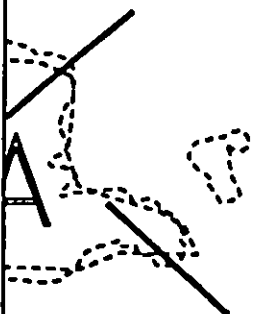
OG SKETCH #3
IN 32A
MAY 22, 1991
12:10 - 15:30
Doug Reimer

Remainder of
SEGMENT SURVEYED
BY SKIFF
(see MAP)



Revised: MC 5/31/91
Reviewed: MOS 5/30/91

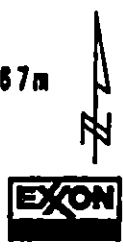
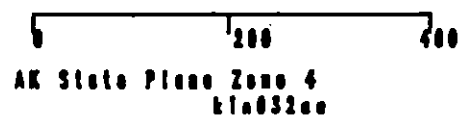
IN-32



1-69

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

IN032 A
ADEC Subsegment Length: 2867m
METERS



Subdivision Field Map
Map Key: KNIN032Aa
Name: Reimer
Date: 5/22/91
Data Entered:

Revised: MC 5/31/91 revised 5/29/91 RG

+

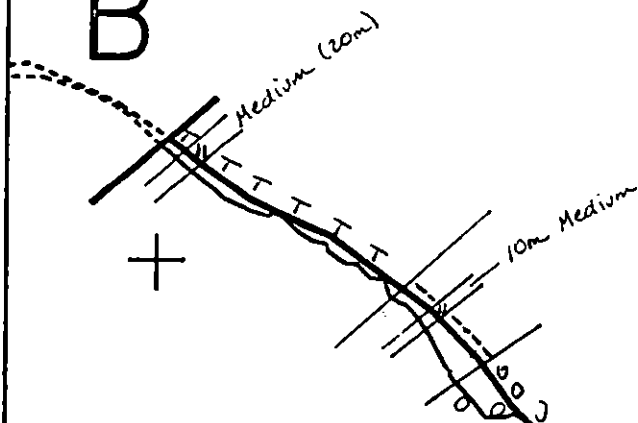
IN-20

A

+

IN-31

B



XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

IN032 A

ADEC Subsegment Length: 2667m

METERS

0 200 400

AK State Plane Zone 4

61003200



Subdivision Field Map

Map Key: KNIIN032Ac

Name: ReimerDate: 5/22/91

Data Entered:

Revised: MC 5/31/91 revised 5/29/91 KCG

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-32

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ IN-32 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 34 m: Medium 50 m: Narrow 760 m: V.Light 1526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of oiled debris, 3) bioremediation of areas shown on attached sketch maps. Work should be conducted after 6/1 based on eagle nest constraints after the approval of ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / IN-32-A SUBDIVISION: A DATE 4/8/90

JSCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

753/USOPR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The bedrock platform in the SE corner of subdivision A will require extensive manual cleanup measures. ^{In addition,} Removal of thin layer of small cobble, pebble & sand surface sediments ^{down} to bedrock platform should be carried out. Remaining tar & coating should be manually scrapped from all rock and boulder surfaces.

(75)

ADEC

NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The areas to the North end of map of Coating are similar to the area of pit #3. These require some hand wiping and removal of sediments under and around the larger surface materials. Additionally, there are one Bio Candidates after considering drainage and underlying bedrocks. At the South end of IN-32A is a Saddle between Ingot and a large shoreline Bedrock formation. This Saddle slopes down E+W to the shore. One isolated local of mossy penetration was located (pit #1) which is not ~~indicative~~ indicative of the areas ailing. This should be wiped and/or removed. The Area is best characterized by Pit #2 in the tarred/paved ~~surface~~ surface. This pavement requires extensive removal of these hardened/hardening sediments ~~along~~ along with wiping/scraping of the side walls. I do not recommend treatment on the beach just to the N of the Saddle. The SBH Cant is in Boulder shadows.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with the ADEC comments and also recommend the manual removal of pebbles on South end of subdivision A from asphalt. scrape and remove load. Remove prom-parks or other debris.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ IN-32
 BIO ST. BARRY LAND REP J. PRITCHARD SUBDIVISION A (1 of 1)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 16:45 to 19:20
 TEAM NO.: 6 TIDE LEVEL: +3 to +0.75 DATE 24/07/90
 EST. SUBDIVISION LENGTH: 2777 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 70 % C 9 % P 1 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 70 m M 40 m N 785 m VL 2317 m NO 65

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	S	P	N	SW	W	W	W	SW	U	M	U
ASPHALT PAVEMENT		X			X				X	X		
POOLED												
COVER												
COAT	X	0	✓	✓	✓				0	0	0	0
STAIN		X	X	X			X		X			
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												X

PAVEMENT: (H) F S 250 sq. m by 10
 PATTIES / TARBALLS 0 BAC
 NEAR SHORE SHEEN? (NO) BR RW SL T.

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECT: ☐ YES ☒ NO
 TYPE 0
 #BAGS 0

Photographs:

Roll No. S-6-5
 Frames 3-54

SUBSURFACE OIL * oiled interval < 5 cm in pit #3 does not constitute subsurface oil.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SW	U	SW	W	W	W	SW	U	M	U		
1	12	X					0-10	X	X					X					CP (to bedrock)
2	12	X					0-10	X	X					X					CP/G thru asphalt pavement
3	18	X					0-8	X	X		X			X					P/G/M
							.												
							.												
							.												

COMMENTS MAJORITY OF SUBDIVISION IS VERT ROCK AND HANG ROCK AND BOULDER SLOPES. WITH A VL OR NARROW STAIN WITH SPORADIC OR PATCHY COAT (HIGHLY WEATHERED). AS THE ANGLE OF THE SLOPE LESSENS, THE WIDTH OF THE BAND INCREASES BETWEEN 1-2 m WIDE AND 3-4 m WIDE. THE OIL BAND DESCRIPTIONS ARE INDICATED ON THE COMPUTER MAP. THE SKETCH MAP SHOWS ONE PARTICULARLY OILED SECTION.

OG C.7 ON
 SEGMENT ST/ IN-32
 SUBDIVISION A
 DATE 07 APR 80

SEARCH MAP

CHECKLIST

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

LEGEND

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

Photo 4: $\square$ AP/B and $\square$ CT/C
 6-8 m wide X 50 m long
 U-SITZ large crevice across
 bedrock containing B/C/P/M
 Dull black weathered coat (furry) on
 surface and hard, broken
 asphalt pavement to
 10 cm thickness.

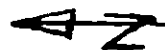
4.5 m wide $\square$ CT/B
 15 m long
 on B/C UITS

Pit 1
 Photo 3

Pit 2
 Photo 5

Asphalt Removal

BIOLUMINESCENT COAT
 + SUBSURFACE OIL



Oil lengths are for entire subdivision

Oil Character Length (m): AP 0 PO 0 CV 50 CT 195 ST 1597 MS 0 PT 0 TB 0 FL 0 NO 65

SEGMENT IN-32
 SUBDIVISION A
 LENGTH = 2777 m

SHORELINE ECOLOGICAL SUMMARY

REVISION 05-22-90

Segment ST 1N32 Subdivision A Date (mo/day/yr) APRIL 7 1990

Time (24 hr) 1430-1930 Biologist JIM BARRY Length 2777

1/6

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 70 (3) Cobble 9 (4) Pebble 1 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 70 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)
- Photographs: Roll No. ST-6-5
 Frames #7

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

PIGEON GUILLEMOT - 10
 SEA OTTERS - 3
 GLAUCOUS-WINGED GULL - 10
 BARNACLES - 4
 CRABS - 6
 COMMON MERRIMACK - 3
 BARROW'S GOLDEN EYE - 10
 PELAGIC COMMUNITY - 5
 GOLDEN EYE CARCASS - 1 HIGHLY DECOMPOSED

Ecological Considerations:

- 7 11 - Deer Harvesting
- 1) EEL GRASS BEDS & CLAM BEDS ARE UNLIKELY TO BE DISTURBED BY CLEANING OPERATIONS
- 2) Deer harvesting will likely not be disturbed by cleaning operations.

I General Comments.

- A. This segment contains only 1 subdivision, in which there is a gradient from a highly exposed high angle bedrock (headland at south end) to a protected cobble/pebble beach. The change in wave exposure and substratum type also is accompanied by a shift in species composition.
- B. Effects of oil are less evident than in other segments. Oil deposits are mostly restricted to the upper and supra tidal zones.

II HABITAT CHARACTERISTICS

A Headlands and exposed cliff faces.

These habitats generally are occupied by mussels (most abundant along headland areas), barnacles (large and small acorn barnacles), moderate to occasionally high gastropod densities, and sea stars. Macroalgae include moderate to dense *Fucus* densities as well as high cover of filamentous and blade-like red algae. Kelps and other blade-like brown algae are abundant in the shallow subtidal.

- B. Cobble and boulder covered beaches. These habitats have a relatively sparse cover of mussels (or no mussels in some cases), but have high cover of small acorn barnacles. Sea stars are very abundant in the extreme low intertidal and shallow subtidal. *Fucus* and other algae are similar in distribution to cliff habitats, and green and red filamentous algae occasionally have very high cover. Many sites along the transect have high numbers of empty *Clarin* shells from several species. Some of these species are present in the sediments as juveniles - Adults are likely to be present in the shallow subtidal zone. Finally, eel grass beds are abundant along the transect and may be used by herring for spawning purposes.

III MAJOR SPECIES

A. BARNACLES -

Large acorn barnacles (*Semibalanus cariosus*) are dense in the middle intertidal along headlands towards the southern end of the segment. Compared to several other sites that experienced high oiling and intensive clean up activity, these barnacles appear to have been much less disturbed.

B. Mussels - Mussels are abundant in the upper to middle zone of exposed headlands at the southern end of the segment. *Mytilus californianus*, the California mussel, is present, as well as the bay mussel. ~~At~~ The cover of mussels is sparse over the remainder of the segment and mussels are restricted to large boulders and bedrock.

C. Gastropods - Littorine snails (*Periwinkles*) are also abundant than on many other segments, but still are present in sparse to moderate densities. Whelks are very abundant, with densities of 30 or more per m^2 over some bedrock faces. Limpets are moderately abundant. The pulmonate snail *Siphonaria* is occasionally dense along the segment.

D. Fucus - Fucus was abundant all along the segment, but less dense than on other segments. It was present on all substratum types, but sparse or rare on small cobble and pebbles.

IV Other Species

Sea Stars - Sea stars were particularly abundant along the extreme low zone and shallow subtidal. Leather stars (*Dermasterias*), Sunflower stars (*Pycnopodia*), ~~and~~ were the 2 most dominant species. Pisaster ochraceus, which feed on barnacles and mussels, also was common.

Clams. Several species of clam shells were present along the shore and could be seen littering the bottom in shallow and water.

Algae - Large stipitate brown algae densely populate the subtidal zone.

Ell Grass - Ell Grass is present in the shallow subtidal zone along the protected end (north) of the segment.

V Wildlife Observations

Several species of birds were observed in the area of IN32A

Common Merganser

Barrow's Goldeneye

Crow

Raven

Bald Eagle -

Glaucous-winged gulls

Pelagic Cormorants

Pigeon Guillemot

Sea otters also were present - 3 to 5

One bald eagle skeleton was found in a beach in the segment.

VI Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M1234

2) GREEN ALGAE - CHLOROPHYTA

Acosiphonia / Spongomorpha M23

Cladophora S12

Enteromorpha S123

Ulva S123

Green Chert () R1

Urospora M23

3) RED ALGAE - RHODOPHYTA

Boswellia sp. S12

Callianthron sp. S12

Coralina sp. S12

Endocladia muricata S12

Halosaccus glandiforme M123

Irudaea sp. ? S12

Cryptosiphonia sp. M12

Mastocarpus sp. S12

Membranoptera sp. M12

Microcladia ? M12

Lithothamnion calicum S12

Petrocellis middendorffii S12

Periphyra sp. ~~M12~~ S123

Rhodomenia laticl M12

Rhodomenia palmata M12

* SPAC OR JUVENILES

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 CORALS

4 PEBBLE

5 SAND

VI SPECIES LIST (CONT)

4) BROWN ALGAE - PHAEOPHYTA (Eli-subtidal)

- ALARIA MARGINATA M12 U
- COSTARIA SP S12 U
- AGARUM spp. DU
- Hedophyllum sessile S12 U
- HILDEBRANDIA M1
- LAMINARIA SP DU
- NEAODYSTIS SP SU
- FUCUS DISTICHUS M12
- SYSTOSIPHONIA lomentaria - M12
- Ralfsia S12

5) HIGHER PLANTS

- ZOSTERA MARINA - eel grass M1 U

B MARINE INVERTEBRATES

1) SPONGES - PORIFERA

- TETHYS spp. - Red/Orange Ball sponge R1
- Halysarca sacra? - yellow brown sponge S23

2) Jellyfish / Anemones / Corals - Cnidaria

- 1) Hydroids - Order Hydroida
- Sertulariidae - Sertularia? R1.

- 2) Hydrocorals - Order Sclerasteria
- Allopora porphyra R12

3) Anemones - Class Anthozoa

- Epinephelus vittatus M12
- Urticina crassicornis S12
- Anthopleura elegantissima S12
- A. artemesia S12
- A. xanthogrammica S12

4) Ctenophores - Beroe spp.? R ocean water

4) FLATWORMS - PLATHYHELMINTHES -

- Lumbricaria spp. R23

5) Annelid Worms

Polychaetes.

- Nereidae M12
- Nephtyidae M12
- Serpulidae Serpula M123
- Cirratulus spp. M123
- Spirorbidae - Spirorbis M123

B. MARINE INVERTEBRATES (cont)

6) Echinuran Worms - Waneel Worms
Echinurus eckurus R23

7) Sipunculid Worms - Peanut Worms
Phascolosoma agassizii R23.

8) Molluscs.

a) CAITONS - POLYPLACOPHORA

Katharina tunicata S12
Tonicella lineata R12
Nucula spp. R12
 Unknown spp or juvenile R123

b) Snails - Gastropods

Littorina saxatilis M12
L. sitkana M12
Nucella lamellosa M-D12
N. emarginata M12
Scartesia diria M23
 ? *Amphissa columbiana* S23

c) Limpets -

Acmaea mitra R12
Lottia digitalis S12
L. parsona S12
Tectura scutum M23
Tectura fenestrata R12
T. parsona R12
Siphenaria thersites M12
Diadema aspera R1

d) Mussels -

Mytilus edulis M12
M. californianus R1

e) Clams

Single - *Pododesmus cepio* S12
Hiattella spp. R123
Prototheca staminea R23
Macoma spp. R23

f) Annelids

Lumbricoides fusca M12

F) Crustaceans

1) Decapods - Cirripedia

Semibalanus curiosus D12
Chthamalus dalli D12
Balanus glandula M12

2) Crabs

Hermit Crabs - Paguridae M23
Hemigrapsus oregonensis S23
Haplogaster spp. M23
Pugetta spp. S23

3) Beach Hoppers

Isopoda - ? spp M23
Amphipoda
Orchestoidea? M23.

4) SHRIMPS

Lebbeus spp. R23

6) Bryozoans

Microporina borealis R23
Schmoporella? spp. M23

h) Echinoderm (Sea Stars/Urchins)

1) Sea Stars

Pycnopodia helianthoides M12
Dermasterias imbricata M23
Leptasterias hexactis M23
Puastarias truscheli R23
Orthostarias kochleri R23
Pisaster ochraceus M12

2) Brittle Stars - Ophiuroidea

Ophiolus spp? R27

3) Sea Cucumbers -

Cucumaria miniata R23

C. MARINE VERTEBRATES

FISH -

PHOLIDAE 2 spp M23
 LOTIDAE - 3 spp S12
 Grand Sulpin? R23

B. MARINE INVERTEBRATES (cont)

6) Echiuran Worms - Ureid Worms

Echiurus echiurus R23

7) Sipunculid Worms - Peanut Worms

Phascolosoma agassizii R23-

8) Molluscs.

a) CAITONS - POLYPLACOPHORA

Katharina tunicata S12*Tonicella lineata* R12*Mopalia* spp. R12

Unknown spp or juvenile R123

b) Snails - Gastropods

Littorina scutellata M12*L. setkanen* M12*Nucella lamellosa* M012*N. emarginata* M12*Scartesia dira* M23*? Amphissa columbiana* S23

c) Limpets -

Acmaca mitra R12*Lottia digitalis* S12*L. persana* S12*Tectura scutum* M23~~*Tectura fenestrata* R12~~*T. persana* R12*Siphonaria thersites* M12~~*Diadema sp.* R1~~

d) Mussels.

Mytilus edulis M12~~*Mytilus edulis* R1~~

e) Clams

Ungula - Pododemus cepio S12*Hyatella* spp. R123~~*Prothaca staminea* R23~~~~*Alacoma* spp. R23~~

f) Nudibranchs

~~*Lamellidors* fucus M12~~

F) Crustaceans

1) BRANWELLS - Copepoda

Semibalanus curiosus D12*Chthamalus dalli* D12*Balanus glandula* M12

2) Crabs

Hermit Crabs - Paguridae M23

Hemigrapsus oregonensis S23*Haplogaster* spp. M23*Puzosia* spp. S23

3) Beach Hoppers

Isopoda - ? spp M23

Amphipods

Orchestoidea? M23

4) SHRIMPS

~~*Leptodora* spp. R23~~

6) Bryozoans

~~*Alcyonaria borealis* R23~~*Schizoporella*? spp. M23

H) Echinoderms (Sea Stars/Urchins)

1) Sea Stars

Pycnopodia helianthoides M123*Dermasterias imbricata* M23*Leptasterias hexactis* M23~~*Pisaster truesdali* R23~~*Orthasterias koehleri* R23*Pisaster ochraceus* M12

2) Brittle Stars - Ophiuroidea

~~*Ophiurus* spp? R23~~

3) Sea Cucumbers -

~~*Cucumaria miniata* R23~~

C. MARINE VERTEBRATES

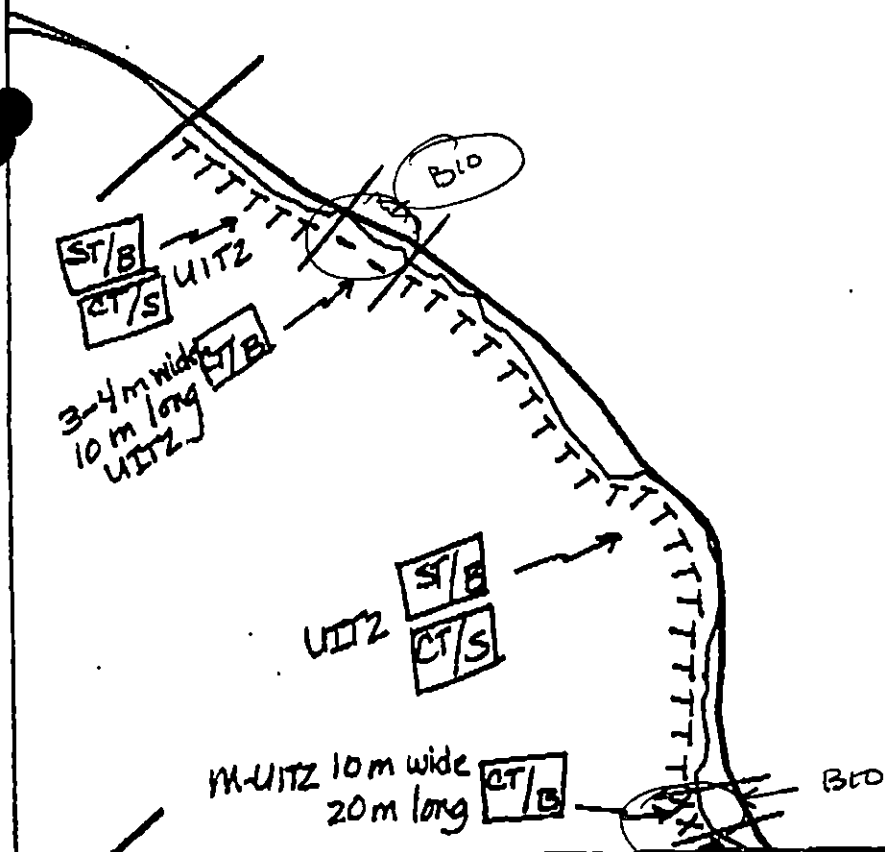
FISH -

POLLIOIDAE 2 spp M123

COTTIDAE - 3 spp S12

~~*Sculpin* R23~~[Sea urchins
Strongylocentrotus droebachiensis R23]

IN-31



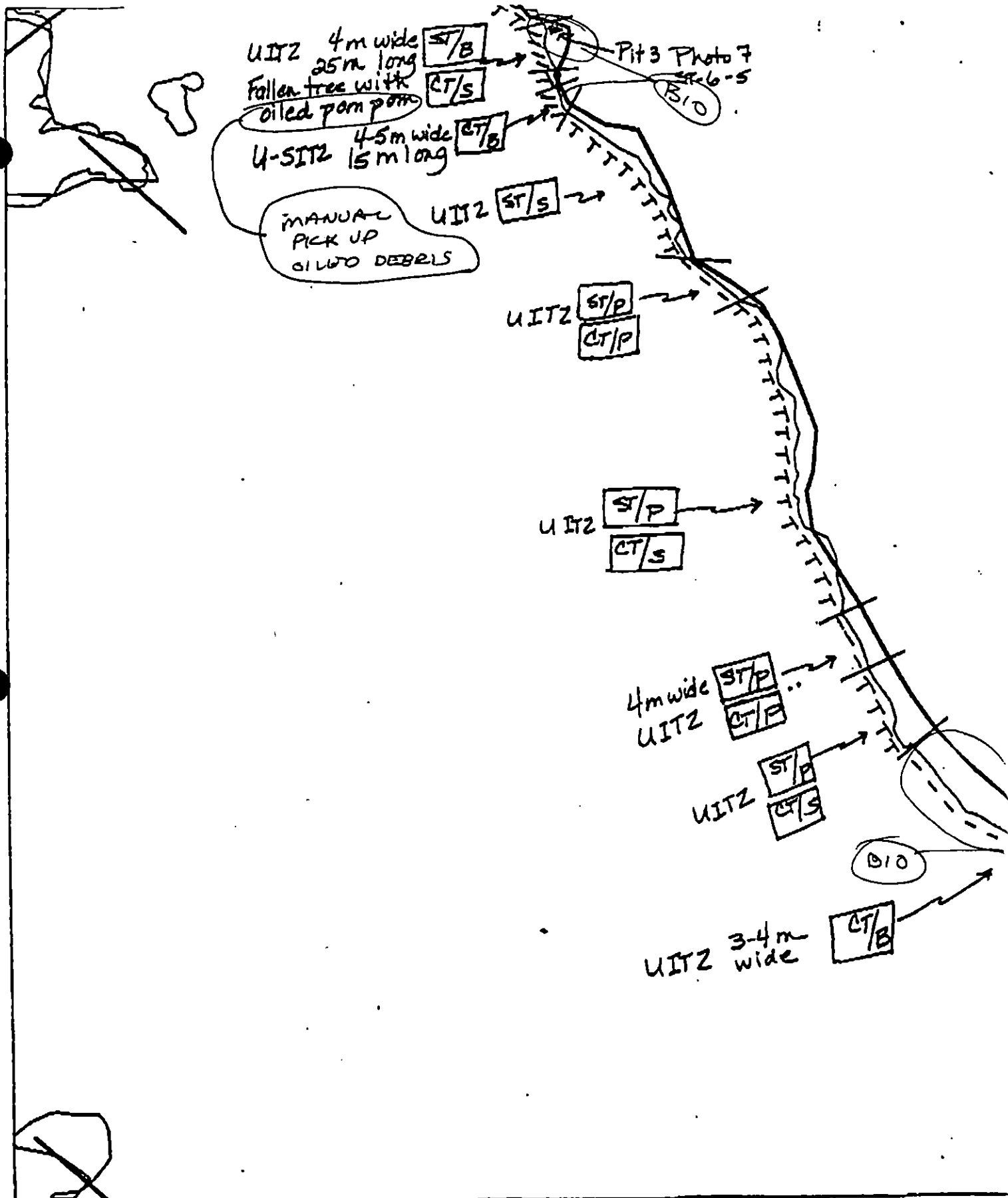
IN-32

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

IN-32
 Exxon Segment Length: 2777m
 ADEC Segment Length: 2369m



Map Key: PWS-277c
 Name: C. DILLON
 Date: 4/7/90
 Data Entered:



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

IN-32

EXXON Segment Length: 2777m
 ADEC Segment Length: 2369m



Map Key: PWS-277a
 Name: C. DILLON
 Date: 4/7/90
 Date Entered:



OILING DESCRIBED ON
SKETCH MAP

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

IN-32

EXXON SEGMENT LENGTH: 2777m
 ADEC Segment Length: 2369m



Map Key: PWS-2776

Name: C. DILLON

Date: 4/7/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-32 SUBDIVISION A (1 of 1)

WORK WINDOW

Tarmat Removal
Manual Pickup

OPEN

Bioremediation WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

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

7II Subsistence: Deer harvesting

No constraint to Manual Pickup or Tarmat Removal; closed to all other treatment activities after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid disturbance/damage to unrolled biota and substrate.
Restrict boat and air traffic, and beach disturbance to essential minimum.

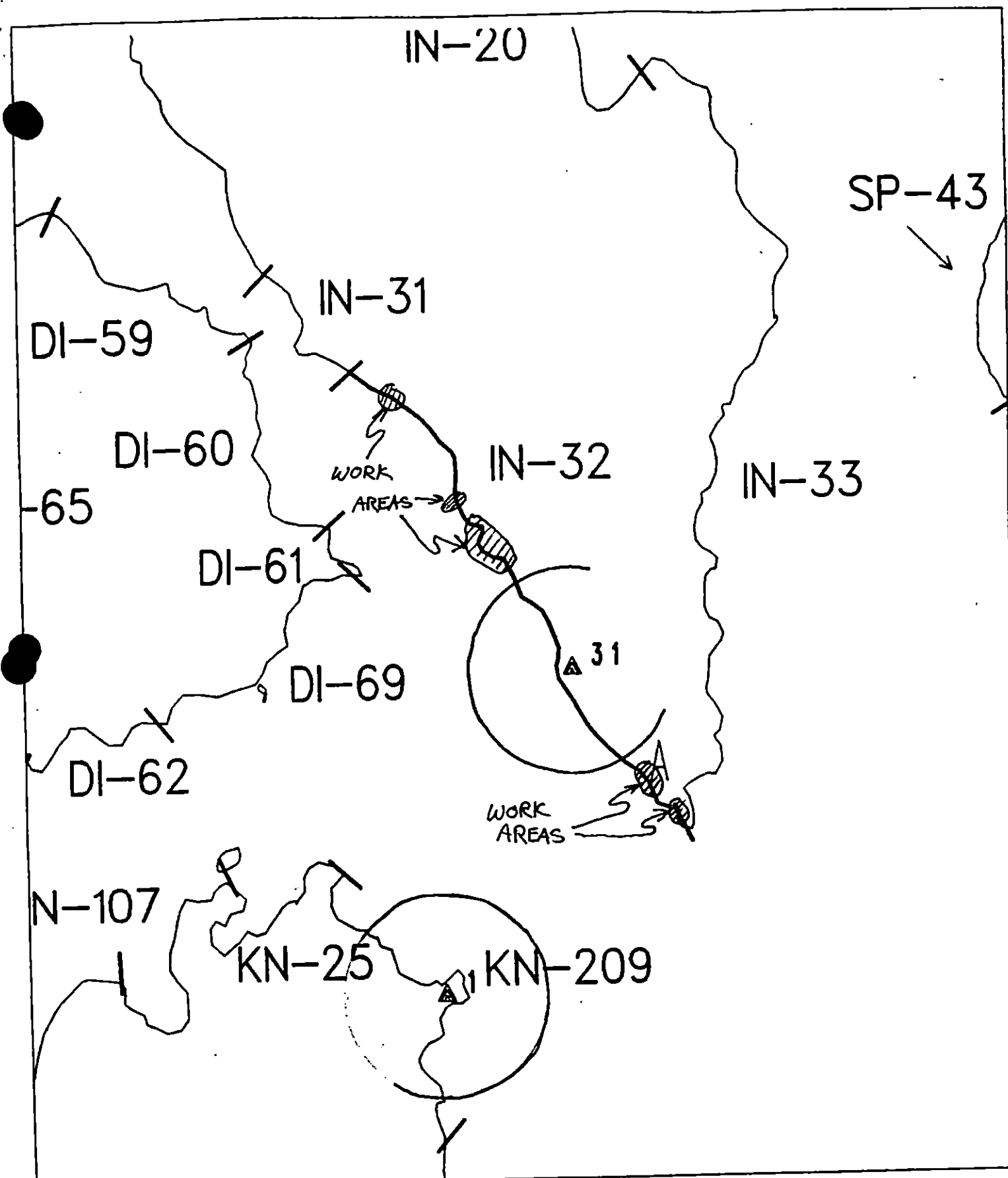
TAG ADDENDUM DATE 5/16/90
ADEC ART WEINER
EXXON ANDY TER
NOAA Joseph Talbot
USCG G.A. HEITER

FOSC

DATE 5-17-90

Prepared by: WIK

Date: 5/14/90



Exxon Company, USA
Map Key: KNI-IN-32
May 11, 1990



ECOLOGY MAP
SEGMENT IN-32
SUBDIVISION A (1 of 1)
METERS

0 501 1003

★ Seabird Colony
▲ Eagle Nest

1 inch = 1645 feet

SHORELINE EVALUATION

SEGMENT ST/ IN-32 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. H. H. H.

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 34 m: Medium 50 m: Narrow 760 m: V.Light 1526 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of oiled debris, 3) bioremediation of areas shown on attached sketch maps. Work should be conducted after 6/1 based on eagle nest constraints after the approval of ADF&G and USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC
EXXON
NOAA
USCG

ART WEINER
Arvy Ede
Bruce Wescott
KENNETH KEANE

FOSC:

DATE: 4-26-90

See Addendum Dated 5/14/90 with

1991 MAYSAP EVALUATION

SEGMENT: IN 033 SUB: B REGION: PWS SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: *Timothy Smith*

Date: 9/13/91

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: 9/13/91

FOSC APPROVAL DATE: 6/10/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

TEAM NO. 2SEGMENT IN33SUBDIVISION BDATE 5/13/91

ADEC

NAME Peter MontesanoSIGNATURE Peter Montesano☐ NTR

TREATMENT RECOMMENDED

INVALID SURVEY

USCG REP. REFUSED TO HAVE SURVEY INCLUDE MORE THAN A SMALL PORTION OF SUBDIVISION. SEVERAL BEACHES WERE MISSED BY TEAM. ONE OF THESE BEACHES WAS WALKED BRIEFLY BY ONLY THE EXXON REP AND SELF. THIS BEACH AT THE SOUTHERN END OF SUBDIVISION HAD THE ONLY TREATABLE OIL FOUND ON IN33B — GROSS CONTAMINATION OF OP IN THREE DISTINCT AREAS. THE REST OF THE TEAM WAS MADE AWARE OF OUR DISCOVERY BEFORE THE END OF THE SURVEY, BUT NO EFFORT WAS MADE TO INCLUDE THIS AREA. THE SEVERAL MISSED BEACHES REQUIRE A THOROUGH SURVEY AND MAPPING PRIOR TO TAG CONSIDERATION. EXTENSIVE WORK WILL BE NEEDED IN THE FORM OF MANUAL REMOVAL.

EXXON

NAME C.M. LatsunichSIGNATURE C.M. Latsunich☐ NTR

NTR IN AREAS DEFINED IN OG SKETCH & SUMMARY. BEACH MENTIONED BY ADEC (ABOVE) REQUIRES FURTHER EVALUATION. THE BULK OF OUR SURVEY IS CERTAINLY VALID. THE AREA IN QUESTION CONSISTS OF A PEBBLE-CORBLE BEACH WITH SUB-SURFACE OP ~ 10-15CM. FROM SURFACE.

LANDMANAGER

NAME Dennis S. Kennedy OF USFSSIGNATURE D.S. Kennedy☐ NTR

Surveyed only ASAP sites. No treatment is needed on these mostly high energy sites. Area found by E. form and ADEC is on a high energy beach with well rounded cobbles & pebbles.

USCG/NOAA NOAA DEBRA SIMCEK-BENTLEY

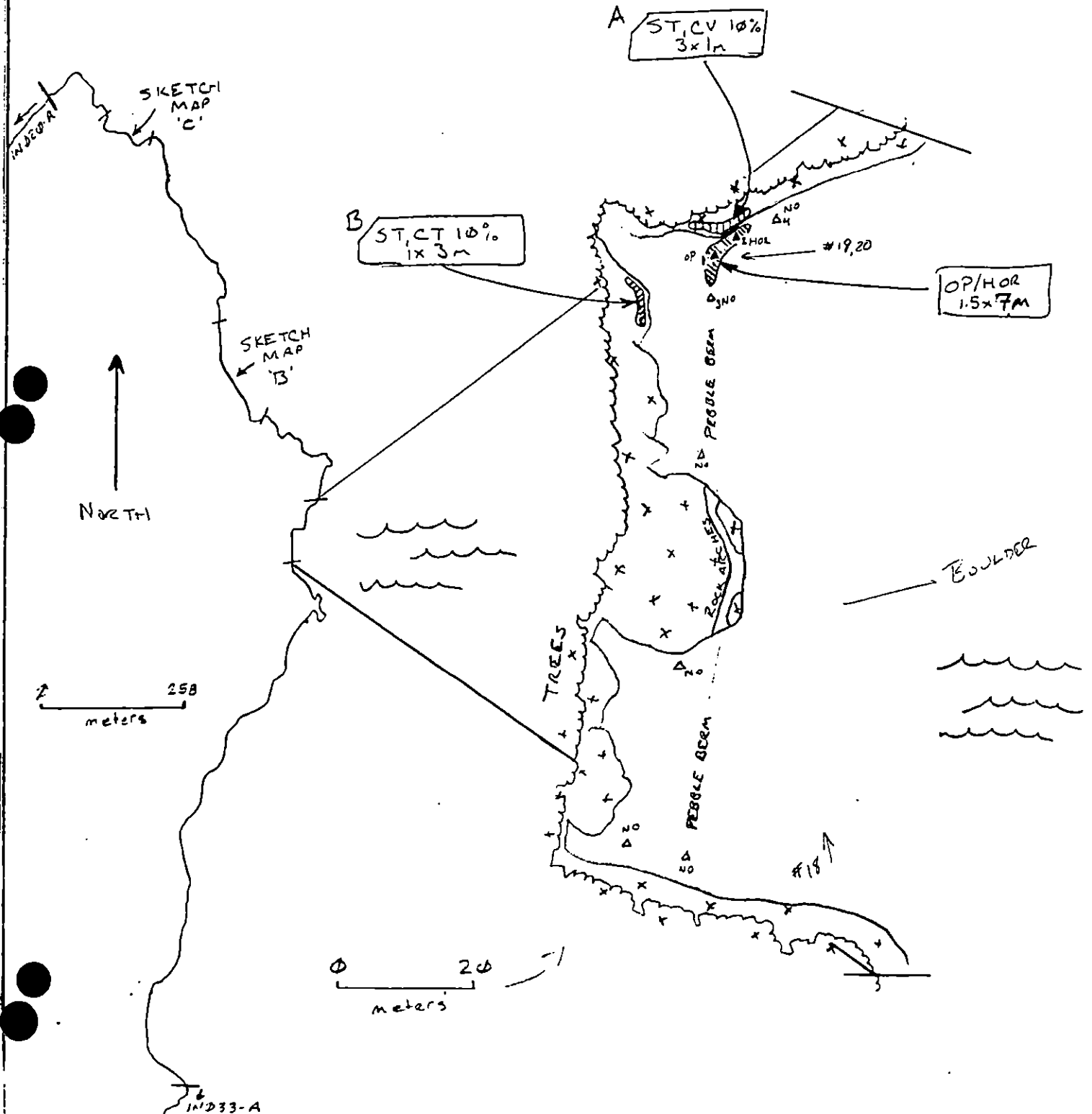
A Simceck-Bentley NOAA

NAME BMI ZENONE USCGSIGNATURE BMI ZENONE☐ NTR

Only small amounts of oil were observed within areas B, C, D, and F. However, there is "OP" in the sub-surface sediments of area A. Since this is a high energy beach, a major storm event could remove the remaining oil. NOTE: Spill very compatible with the data collected from this survey — PS-B

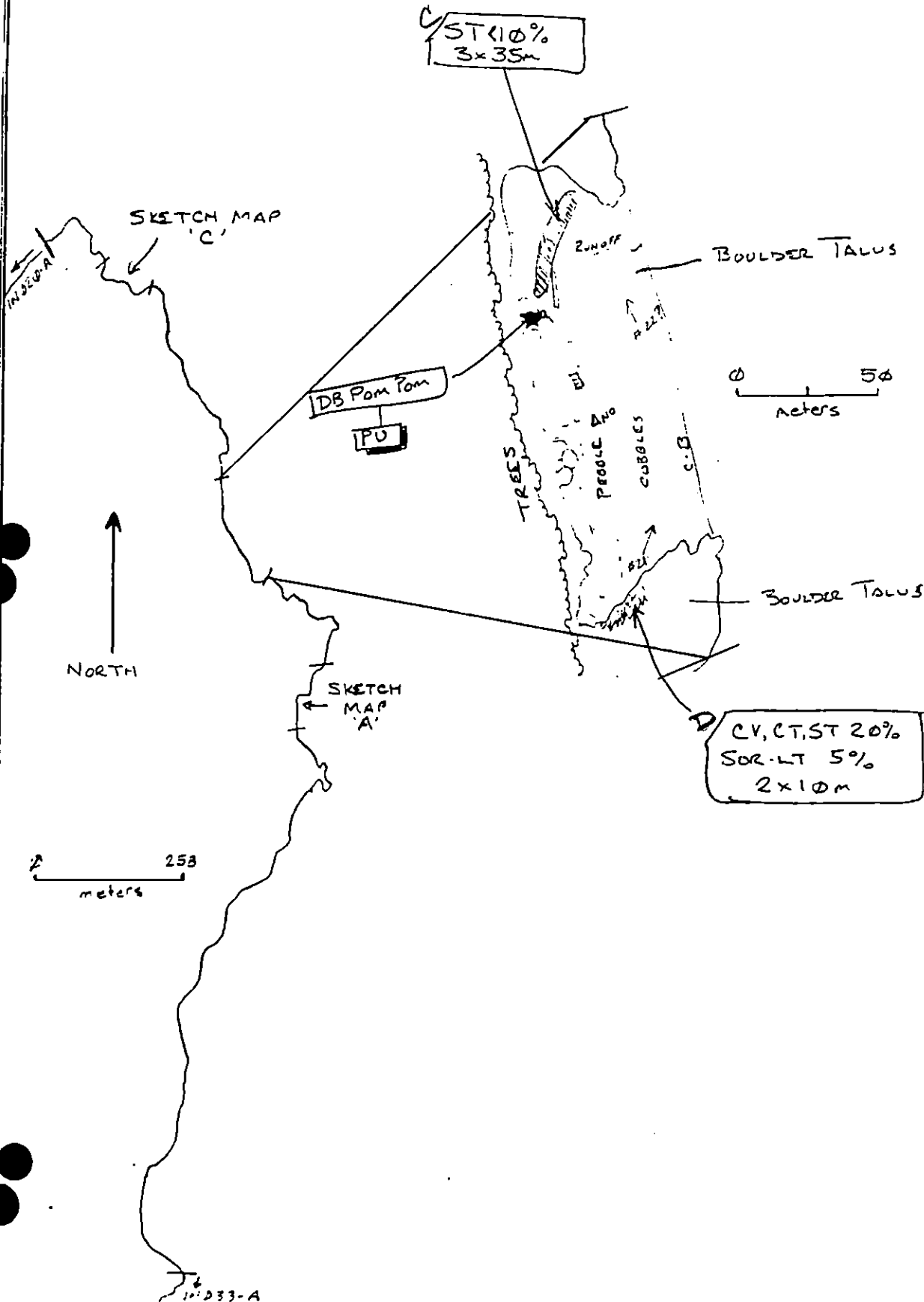
THIS SURVEY MORE THAN ADEQUATELY DEPICTS THE OILING ON THIS SEGMENT. OILING ON THE AREA SURVEYED BY ADEC & EXXON IS SUSPENDED IN LARGE PEBBLES (WHICH ARE INDICATIVE OF MOST BEACHES ON THIS SEGMENT). REMOVAL OF OIL WOULD BE LABOR INTENSIVE AND EXCESSIVELY COSTLY IN VIEW OF THEIR INEFFECTUAL CONTRIBUTION TO MINIMIZING A THREAT TO THE PUBLIC HEALTH & WELFARE, OR THE ENVIRONMENT. I WAS INFORMED OF THIS OILING BY EXXON REP. AS ADEC REP REFUSED ANY DISCUSSION.

OG SKETCH MAP A
 IN033-B
 13-MAY-91
 1834-2012
 BRYAN TRIMM
 MAP 1 OF 3



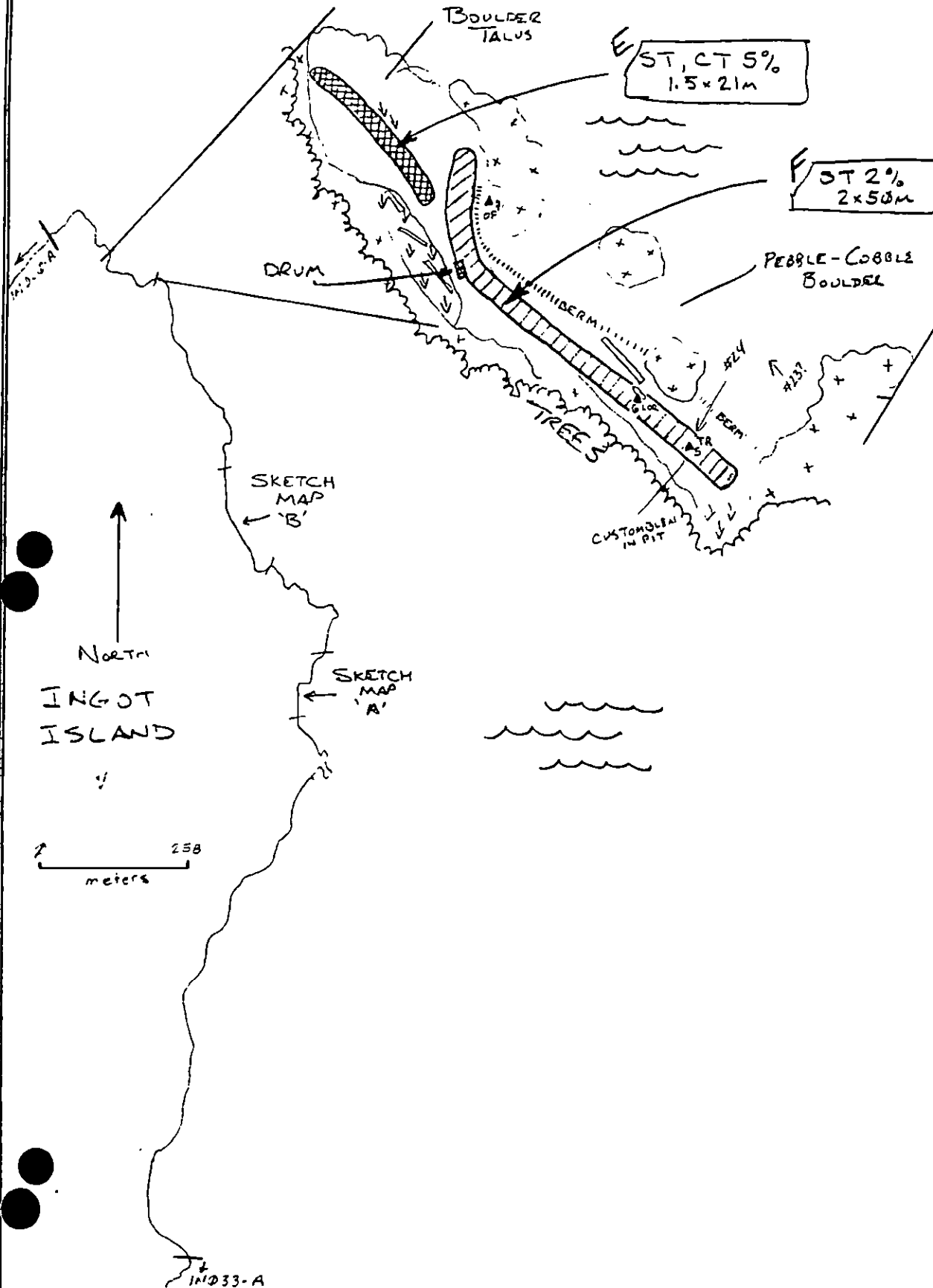
reviewed 5/18/91 KG
 2/ renewed 5/18

OG SKETCH MAP 'B'
IN 033-B
13-MAY-91
1834-2012
BRYAN TRIMM
MAP 2 OF 3



reviewed 5/18/91 KG
ES reviewed 5/18

OG SKETCH MAP C'
IN033-B
13-MAY-91
1834-2412
BRYAN TRIMM
MAP 3 OF 3



reviewed 5/18/91 KG
ET reviewed 5/18

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 13 May 91
 SEGMENT # IN-133 TIDAL HEIGHT (Range) 2 - 3.5 ft
 SUBDIVISION B BIOLOGIST SM BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A: Boulder rock are oiled with patches of mussels barnacle and Fucus bands. Older sppt (fall 1990) present closer to water. Lower intertidal along entire segment supports dense Algae including Fucus Indean Halosaccion etc.

B: Oligochaete worms were found under the rocks in the oiled zone.

C: Mussels and barnacles seaward of oil, but no sppt and no grazers (littorines and limpets)

D: Mussels dense in patches, barnacles sparse - most biota is immed. seaward of oiled zone.

E: Oil is high in ITZ. Boulders here support only lichen and moss. Boulders closer to water have dense mussel patches, large barnacles and barnacle sppt. Small mussels and limpets found in crevices. Algae dense and diverse in lowest zones.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	100N	2	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

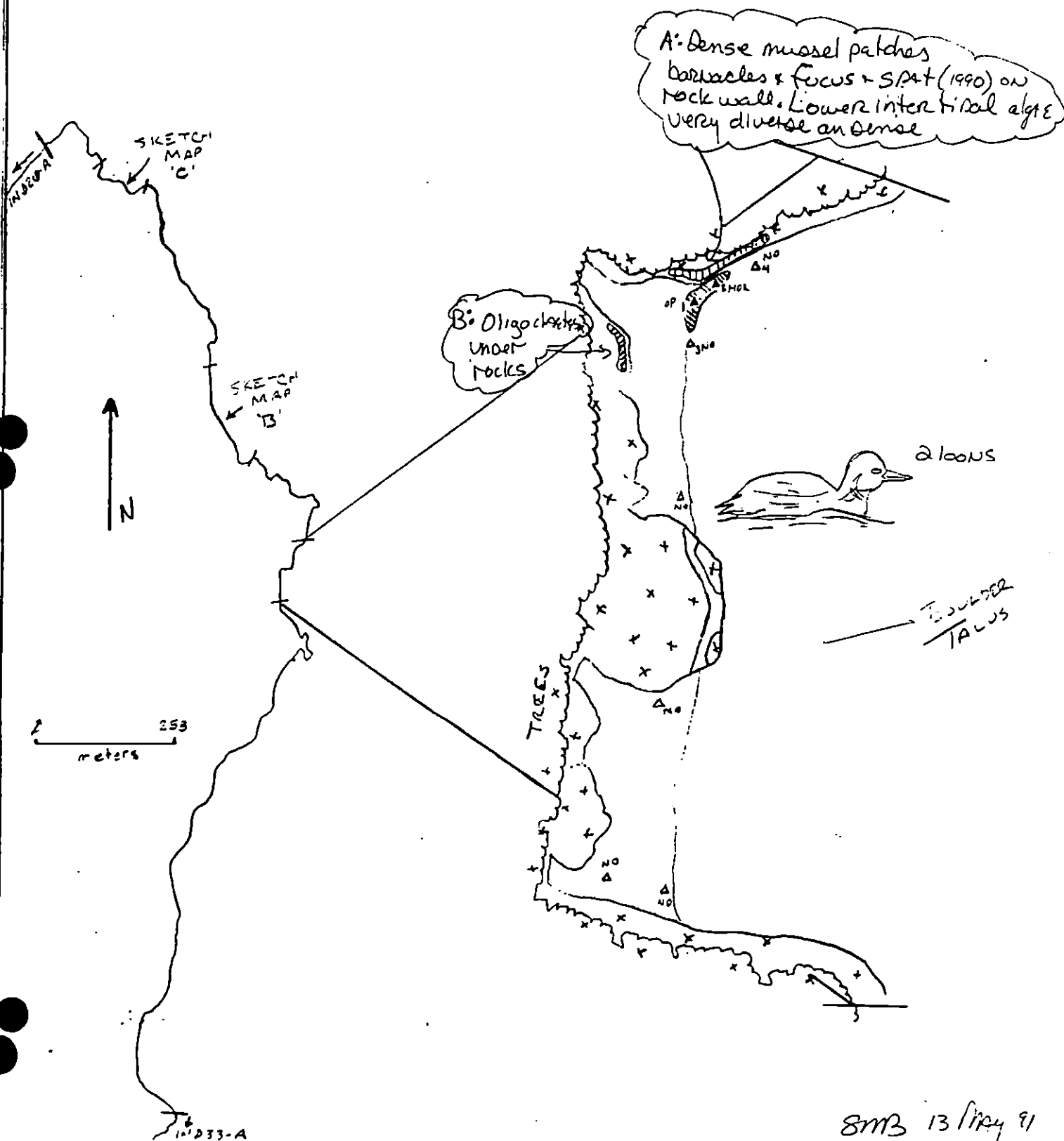
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Seal	1		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B 5/18/91

SKETCH MAP A
IN033-B
13-MAY-91
1834-2012

MAP 1 OF 3

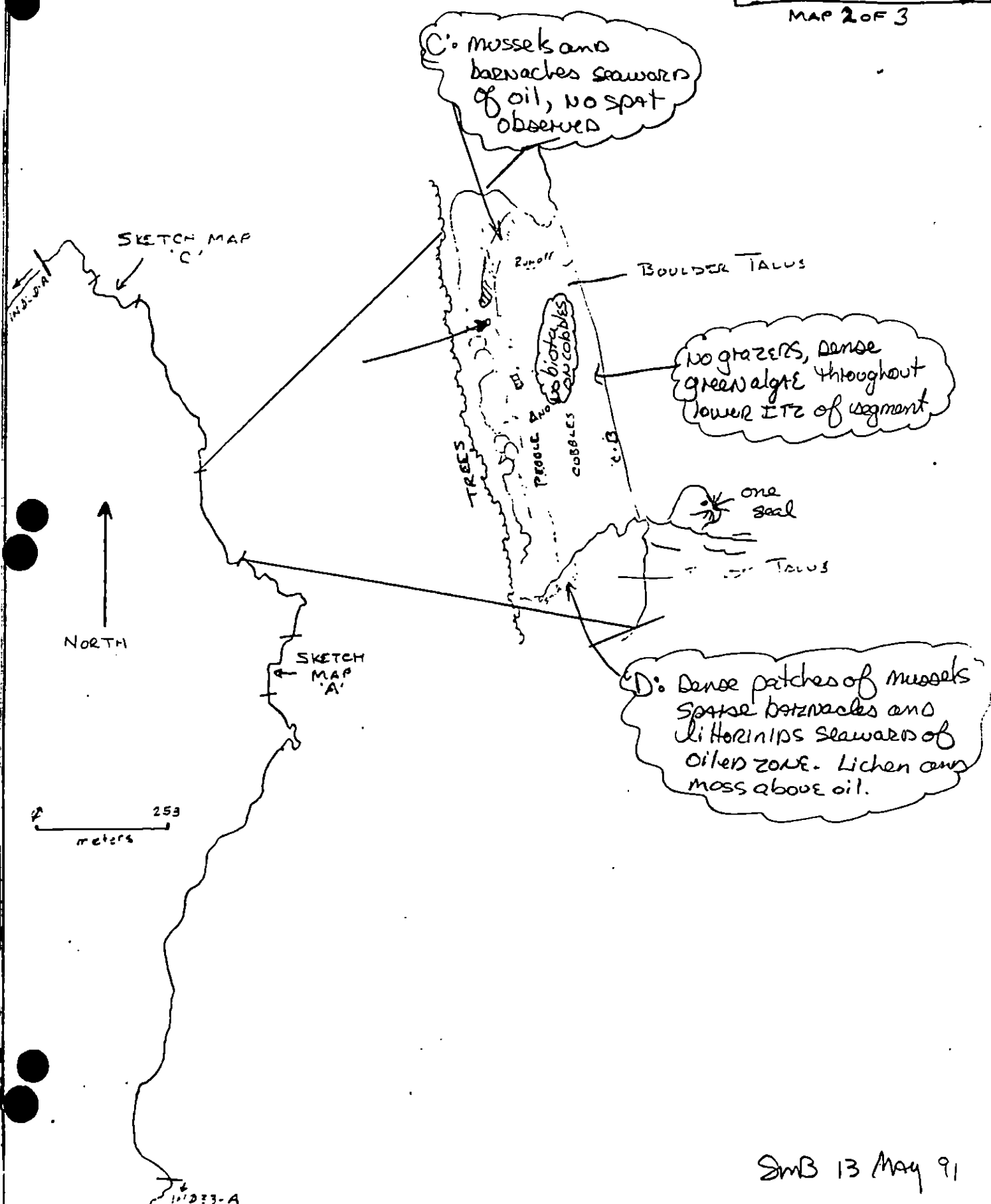


8MB 13 May 91

Reviewed MB. 5/18/91

SKETCH MAP 'B'
IN 033-B
13-MAY-91
1834-2012

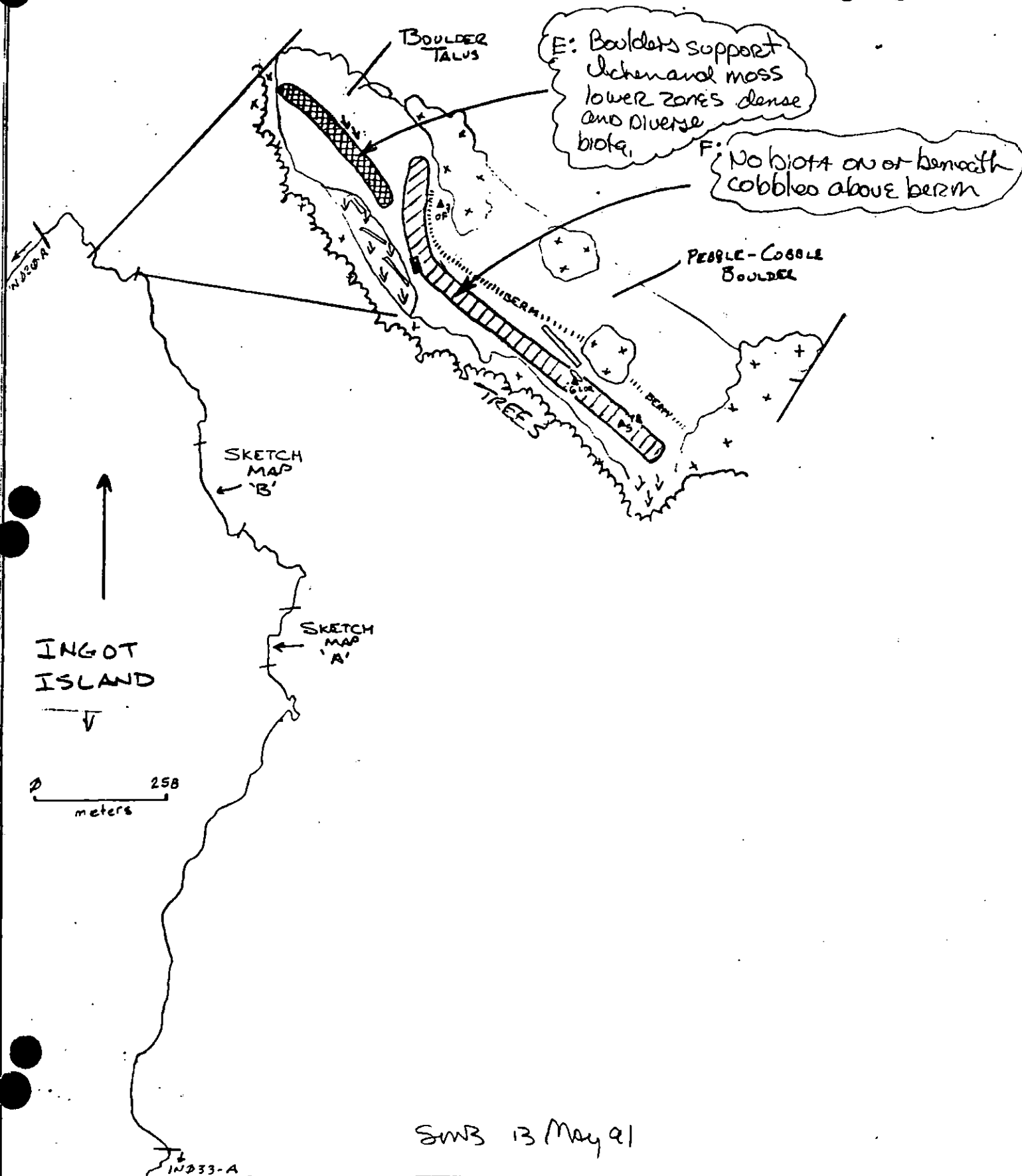
MAP 2 OF 3



Reviewed M.B. 5/18/91

SKETCH MAP C'
IN 033-B
13-MAY-91
1834-2412

MAP 3 OF 3

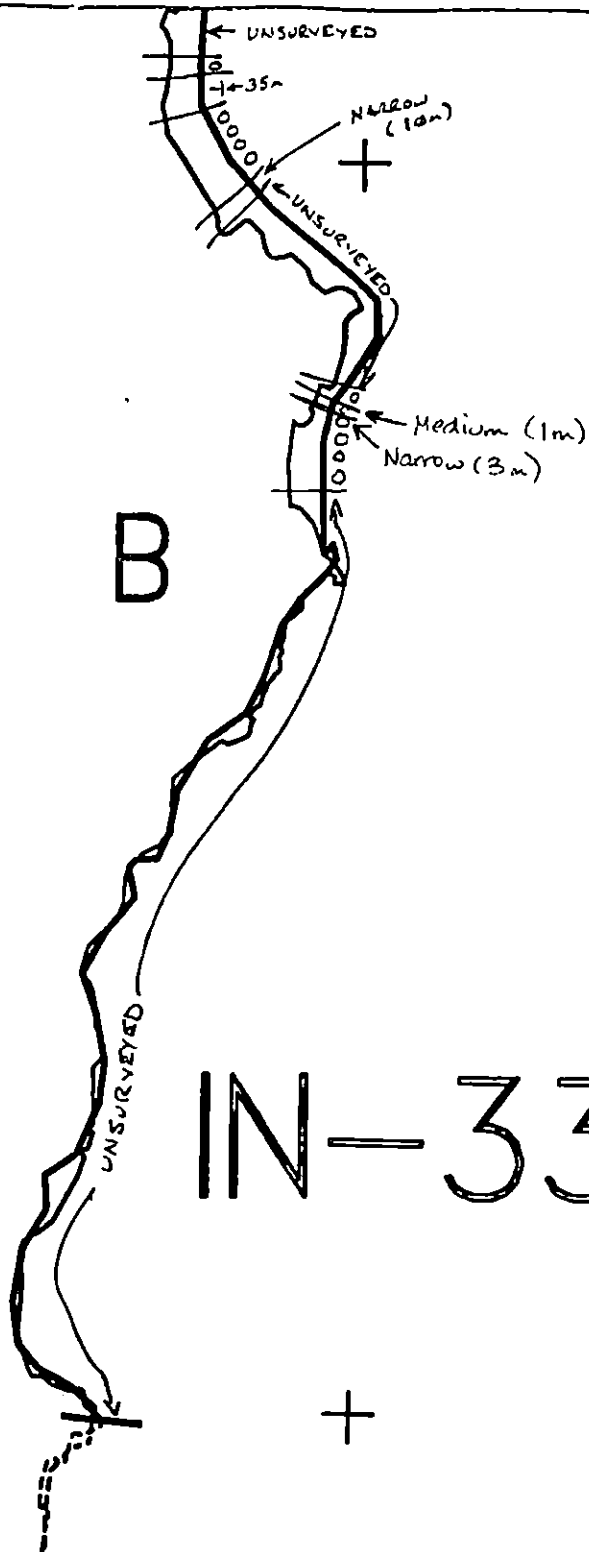


SMB 13 May 91

Reviewed M.B. s/rsk

IN-32

IN-33



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

IN033 B
ADEC Subsegment Length: 2461m
METERS
AK State Plane Zone 4
61N03300

Subdivision Field Map
Map Key: KN11N033Ba
Name: TRIMM
Date: 13-MAY-91
Data Entered:



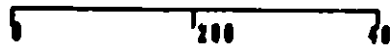
• SURFACE OIL CATEGORY MAP •

revised 5/18/91 KG
EG revised 5/18

EN-45

20

A

XXXX	Wide	IN033 B ADEC Subsegment Length: 246m METERS  AK State Plane Zone 4 41N03366	Subdivision Field Map
////	Medium		Map Key: KN1IN033Bb
----	Narrow		Name: <u>TRIMM</u>
TTTT	Very Light		Date: <u>13-MAY-91</u>
0000	No Oil		Date Entered:




• SURFACE OIL CATEGORY MAP •

Reviewed 5/18/91 KG
 EG revised 5/19

1991 MAYSAP EVALUATION

SEGMENT: IN 033 SUB: A REGION: PWS SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/5 - 9/15

Ecological/Constraints (see page two for details) Subsistence -
Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other Manual Relocation

Other Manual Raking/Tilling

X

X

X

COMMENTS:

INITIAL: Remove easily accessible asphalt, mousse, and high SOR at
locations E3 and E5. Apply Customblen and Inipol at locations E3
and E5. Manually relocate storm berm at location A3 into UITZ
and rake in Customblen.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

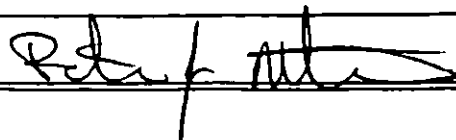
Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

TEAM NO. 2 SEGMENT 1NO 33 SUBDIVISION A DATE 5/13/91

ADEC

NAME Peter Montesano

SIGNATURE

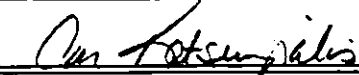
☐ NTR☒ TREATMENT RECOMMENDED

AREA E5: Extensive Removal of AP Required (10% probably low estimate), along with removal of heavily oiled sediments below. Within this area is a protected plateau w/ extensive previously documented oil which should also be removed. This beach is accessible and most of the oiled sediments are easily removed, but the boulders at the south end will define the accessible area as the crew works toward them. This will be a relatively extensive undertaking. On this beach, the OP by Pit 6 is also easily removable. AREA A3: Pit 2 had chocolate brown oil (MOR) and should be relocated as agreed w/ CG Rep during site inspection. The degree of oiling in AREAS E1+2 was difficult to determine because large boulders concealed the true conditions. AREA E3 oil inaccessible. Comprehensive survey, but LITE NOT observed.

EXXON

NAME C.M. Kotsimpalis

SIGNATURE

☐ NTR

A quite intricate beach structure and various degrees of oiling. OG & BIO Reps note accord found info. suggest tag determine where cleanup efforts are to be applied. I tend to agree with NOAA assessment of "A3".

LANDMANAGER

NAME Dennis S Kennedy OF USFS

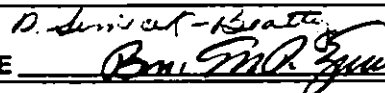
SIGNATURE

☐ NTR

High energy beaches. Seals were seen on this subdivision on the 12th and 13th of May. Good survey and documentation by OG & BIO. Field review by TAG recommended for any treatment is Rx^{ed}.

USCG/NOAA NOAA R. SIMONEK-BERRYNAME BMI MP ZENONE

SIGNATURE

☐ NTR

The oiled pebble/cobble storm berm observed in section A3 is within a high energy area. As this is a small area and no kiosk was observed within the oiled zone, the upper and middle intertidal zone, shoring the oiled clasts into the active intertidal zone is recommended.

A-AREA A-3 WOULD REQUIRE SOME RELOCATION TO FACILITATE WASHING THIS HIGH ENERGY AREA. WOULD RECOMMEND MANUAL RATHER THAN MECHANICAL, IT WOULD BE MORE LABOR INTENSIVE BUT LESS INTRUSIVE. ALSO CONCUR W/ NOAA ON SECTION A-3. 

TEAM NO. 2OG B. TrimmBIO S. BanSEGMENT IN-33ADEC Peter MontesanoLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON C. KatsimpalisUSCG/NOAA D. Simecek - BeattyDATE MAY 13 1991TIME 17 : 00 to 18 : 34TIDE LEVEL 5.59 ft. to 2.40 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1260 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 92 m N 15 m VL 373 m NO 780 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1										T	LOGS	M			X				DB LOGS - SPAT
A2					S	S					CP	M	1.0	5.	X				
A3					B	B					CP	M	1.5	10	X				OILED STORM BERM
A4					P						CP	M	1.0	1.	X				CU WITH NEEDLES IN BOUNDER
A5					P	P					R	V	1.0	5.		X			IN PROTECTED CORNER
B1						S	S				R	V	0.5	19.5		X			ON ROCK FACE
B2						S	S				R	V	0.5	25		X			ON ROCK FACE
C1							S				B	H	1.0	20.		X			
C2							S				B	H	1.0	20.		X			
D						S	S				R	V	0.5	100		X			ON ROCK FACE
E1		S		S	P	P	S				B	H	5.0	30.		X			SOR, HVY
E2						S	S				B	H	3.0	35.		X	X		
E3		S		S	S	S					B	H	3.0	27		X			HOR UNDER SOR HVY
E4							S				B	H	5.0	60.		X			
E5	S	S			P	P					B	H	5.0	25.		X			

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

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

PHOTO ROLL # MAYSAP- 2 - 13 FRAMES 1-16

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	35							X	—	Y	—	—		X			PC - GPC	BASE CLIFF
2	30			?					3-30	N	—	—		X			P - Pore	SEE NOTES
3	28							X	0-12	Y	—	—		X			P - PB ORG	STORM BERM
4	10		X						0-7	Y	—	—		X			B - BPCG	HOR = MS
5A	28	X							15-25	N	—	—		X			BGP - PCG	OP/HOR 3-25m
5B			X						25-20	N								
6	18	X							10-15	Y	—	—		X			BR-GP	
									—									

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

OG COMMENTS:

- HIGH WAVE ENERGY COASTLINE, HOWEVER BOULDER TALUS IN LOCATIONS (E1-E5) DAMPEN ENERGY - PROTECTING ANY STRANDED OIL. MORE OIL WAS FOUND HERE (E1-E5) THAN REST OF BEACH.
- PIT #2 FOUND WHAT LOOKS LIKE MOR (LIGHT BROWN 'GREASY' MATERIAL), HOWEVER, IT DOES NOT SHEEN. PIT #2 IS IN THE STORM BERM WHICH HAS COAT & COVER AT THE SURFACE.
- PIT #5 (LOCATION E-S) DESCRIBES AN OP/HOR AREA UNDER AP
- PIT #6 DESCRIBES A 8x3m OP LENS UNDER BOULDER TALUS
- BLACK LICHEN ON ROCK (B1, B2 & D) IS HARD TO DISTINGUISH FROM STAIN & COAT

revised 5.18.91 9g
ET revised 7/12

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 **DATE** 13 May 91
SEGMENT # IN-33 **TIDAL HEIGHT (Range)** +4 to +2.5
SUBDIVISION A **BIOLOGIST** S. BAN
SEA STATE Calm **WIND SPEED/DIRECTION** 3-4 mph NE
PHOTOGRAPHS: ROLL # - **FRAME #** -

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

A1+A2: Oiled zone is high in ITZ, cobbles and pebbles do not support intertidal organisms. Boulders in lower ITZ support mussels, Ulva, juvenile Littorina, limpets. Spt from 1990 is dense on S. Mary's wall.
 A3+A4: No biota in oiled zone, beach is naturally depauperate except in lower ITZ
 A5: Mussels on rock wall above oil. Barnacles (mortality ~80%) continue to water

B1+B2 - oil is stain on vertical rock face - lichen above oil Fucus, Barnacles, Pycnophoria + Pisaster below

C1+C2 - lichen and green algae in oiled zones - Boulders in lower ITZ support Barnacle Spt, mussels in dense patches, Fucus and sparse patches of Spt (1990)

D: oil stain on rock face - see B1+B2

E1: No visible surface biota in upper ITZ

E2: Oil is in area with no surface biota, areas immediately below and to the side support dense mussel patches and recently settled Spt

E3, E4, E5: Oil is high in ITZ. Green algae adjacent to Pit #5. Sparse barnacles below Fucus, dense barnacles and small patches on boulders in lower ITZ

Tidal Pools in lower ITZ support Agaveles, limpets, Littorina, & Algae, Sea Anemones

E6: Tidal pool with Algae only, seen on water in pool

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	Not in a nest, were not disturbed	2	Salmon Fry (~15)
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids	Sparrow	1	
Other Birds			

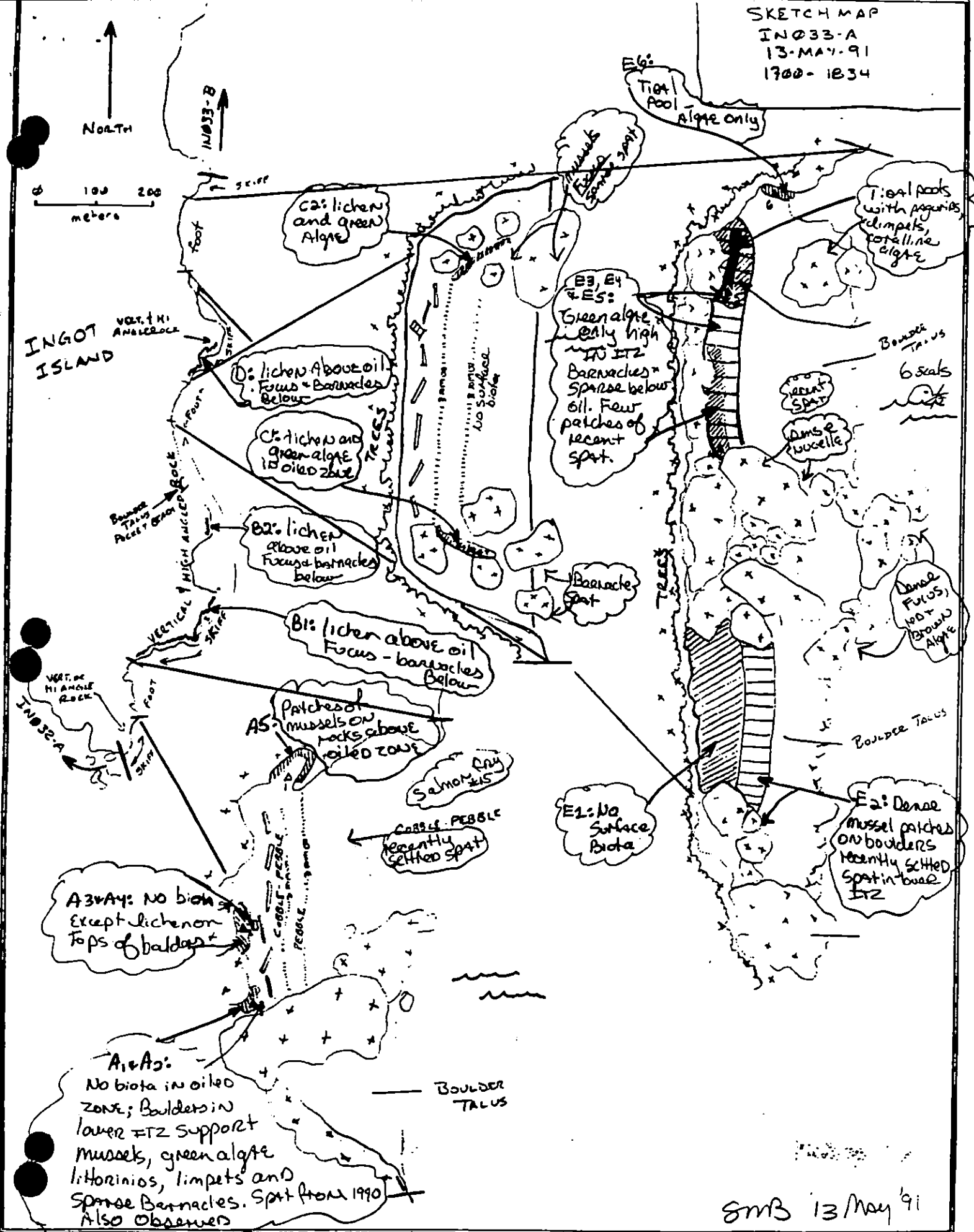
wandering Tattler 2's

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	6	/	/
Pinnipeds (specify)			
Seals			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/18/91

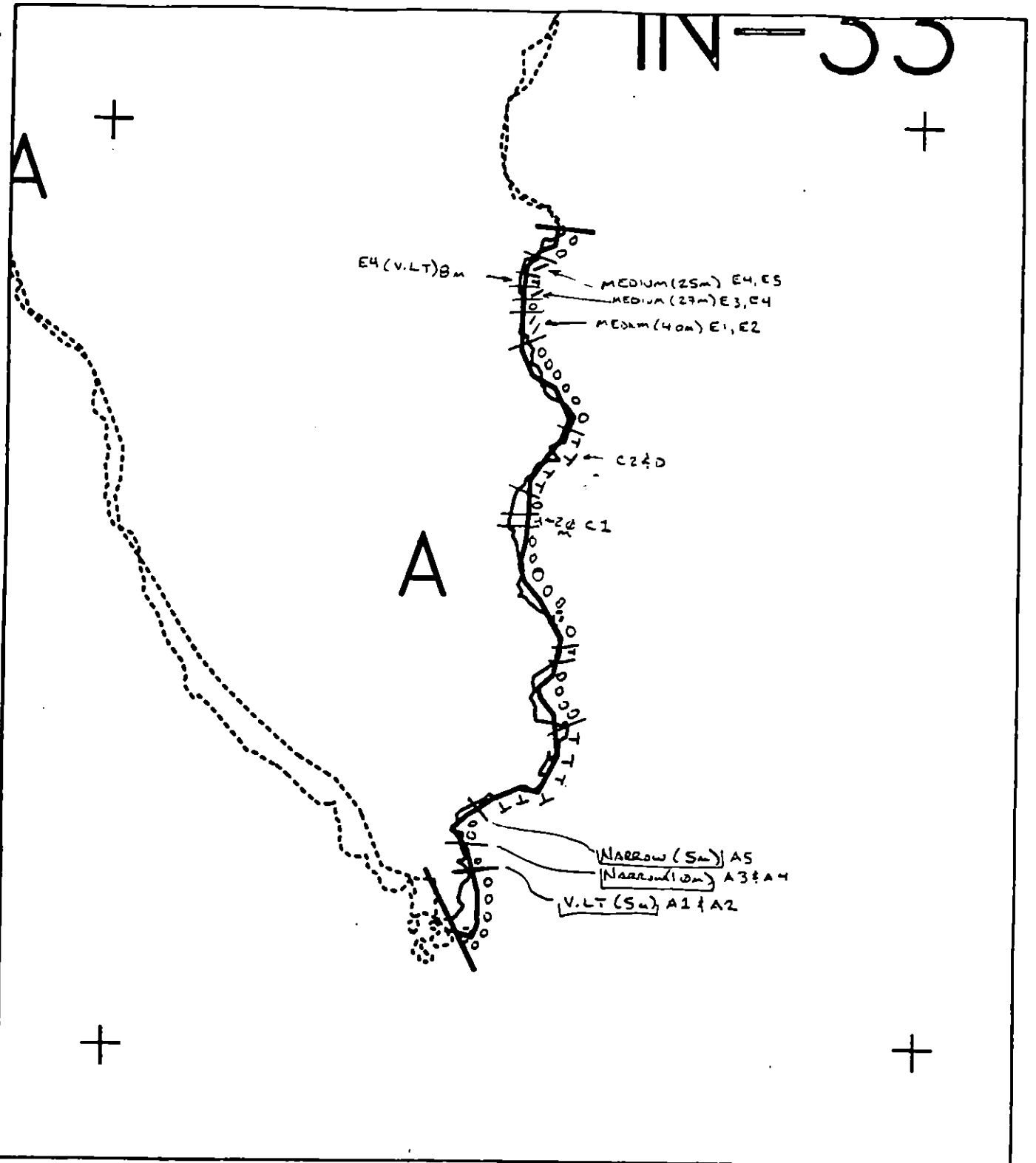
SKETCH MAP
IN 033-A
13-MAY-91
1700-1834



8mB 13/May '91

Reviewed M.B. 5/18/91

IN-33



XXXX	Wide	IN033 A ADEC Subsegment Length: 1200m METERS 5 100 200 AK State Plane Zone 4 616033a	Subdivision Field Map Map Key: KN1IN033A Name: <u>Trim</u> Date: <u>13-MAY-91</u> Date Entered:
///	Medium		
---	Narrow		
TTTT	Very Light		
0000	No Oil		

- SURFACE OIL CATEGORY MAP -

reviewed 5-18-94
 re reviewed 5/18

1991 MAYSAP EVALUATION

SEGMENT: IN 033 SUB: B REGION: PWS SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) **Subsistence - Deer harvesting**

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

TEAM NO. 2 SEGMENT IN33 SUBDIVISION B DATE 5/13/91

ADEC

NAME Peter Montesano

SIGNATURE

Peter Montesano

NTR



TREATMENT RECOMMENDED

INVALID SURVEY

USCG REP. REFUSED TO HAVE SURVEY INCLUDE MORE THAN A SMALL PORTION OF SUBDIVISION. SEVERAL BEACHES WERE MISSED BY TEAM. ONE OF THESE BEACHES WAS WALKED BRIEFLY BY ONLY THE EXXON REP AND SELF. THIS BEACH AT THE SOUTHERN END OF SUBDIVISION HAD THE ONLY TREATABLE OIL FOUND ON IN33B — GROSS CONTAMINATION OF OP IN THREE DISTINCT AREAS. THE REST OF THE TEAM WAS MADE AWARE OF OUR DISCOVERY BEFORE THE END OF THE SURVEY, BUT NO EFFORT WAS MADE TO INCLUDE THIS AREA. THE SEVERAL MISSED BEACHES REQUIRE A THOROUGH SURVEY AND MAPPING PRIOR TO TAG CONSIDERATION. EXTENSIVE WORK WILL BE NEEDED IN THE FORM OF MANUAL REMOVAL.

EXXON

NAME C. M. Ketsung

SIGNATURE

C. M. Ketsung

NTR

NTR IN AREAS DEFINED IN CG SKETCH & SUMMARY. BEACH MENTIONED BY ADEC (ABOVE) REQUIRES FURTHER EVALUATION. THE BULK OF OUR SURVEY IS CERTAINLY VALID. THE AREA IN QUESTION CONSISTS OF A PEBBLE-CORAL BEACH WITH SUB-SURFACE OP ~ 10-15 CM. FROM SURFACE.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE

D S Kennedy

NTR

Surveyed only ASAP sites. No treatment is needed on these mostly high energy sites. Area found by 2nd team on ADEC is on high energy beach with well rounded cobbles & pebbles.

USCG/NOAA NOAA DEBRA SIMONE-BENTLEY D. Simone-Bentley NOAA

NAME BMI ZENONE USCG

SIGNATURE

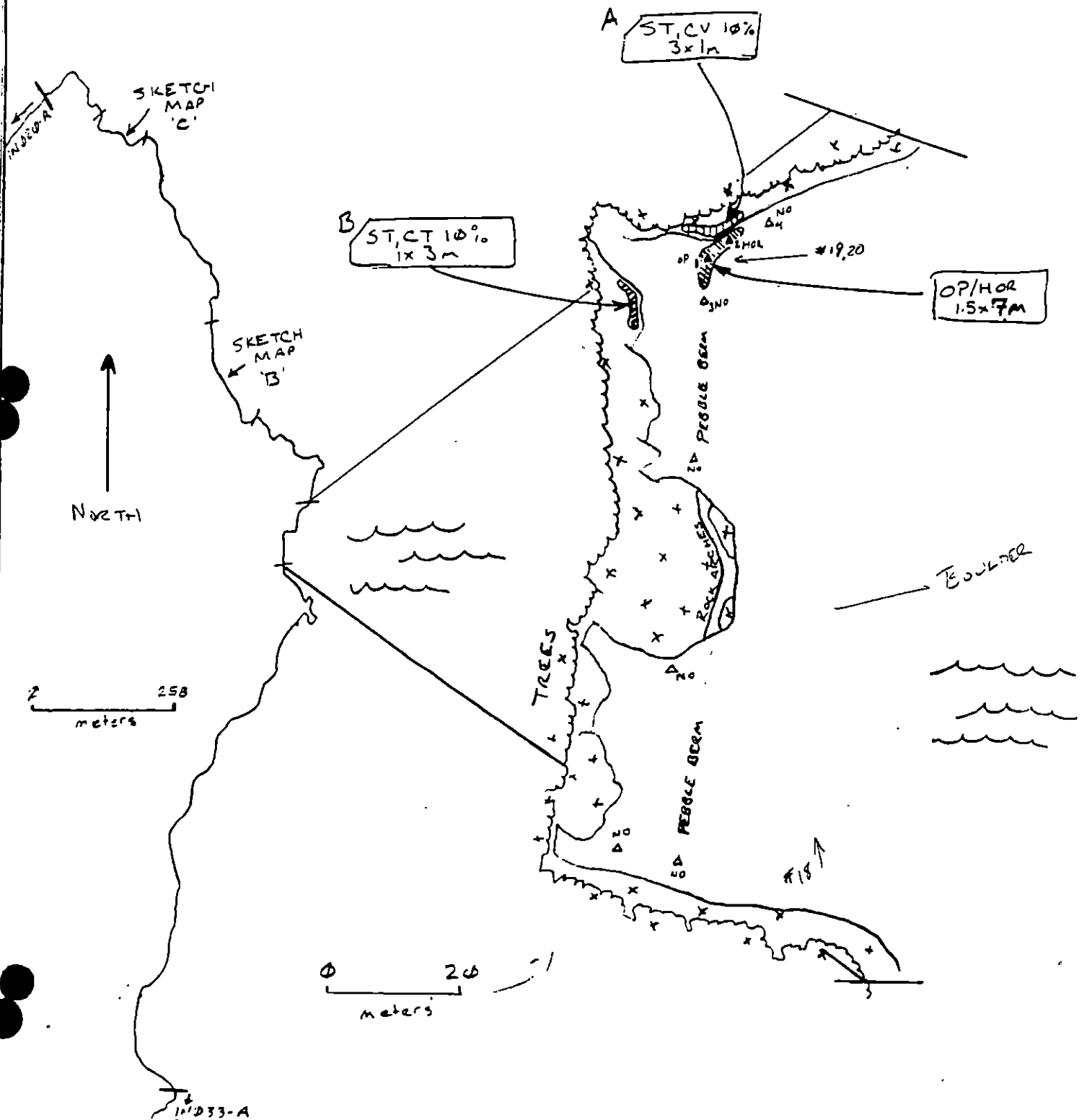
Bmi M. Zenone

NTR

Only small amounts of oil were observed within areas B, C, D, and F. However, there is "OP" in the sub-surface sediments of area A. Since this is a high energy beach, a major storm event could remove the remaining oil. NOTE: I feel very comfortable with the data collected from this survey — DS-B

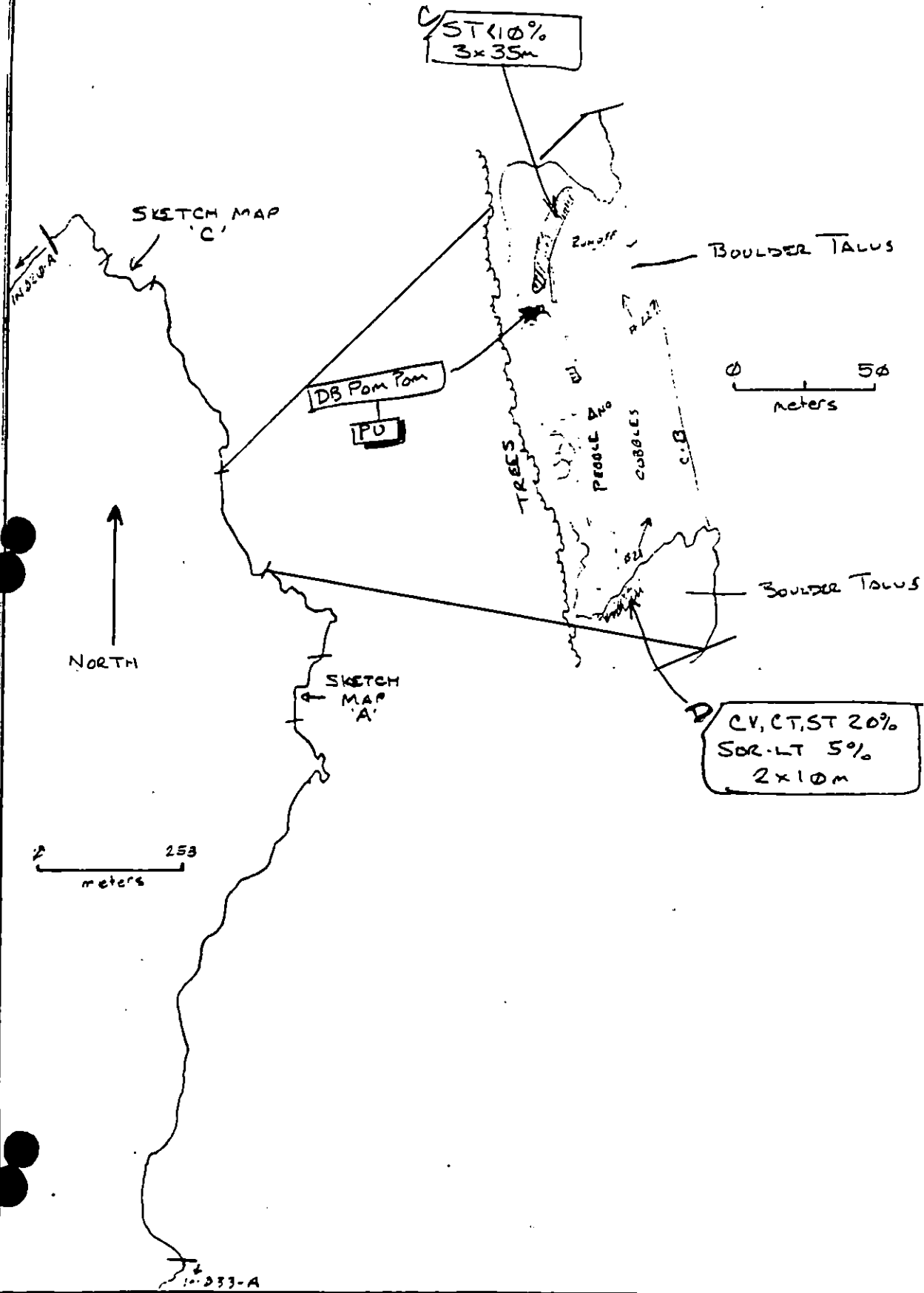
THIS SURVEY MORE THAN ADEQUATELY DEPICTS THE OILS ON THIS SEGMENT. OILING ON THE AREA SURVEYED BY ADEC & EXXON IS SUSPENDED IN LARGE PEBBLES (WHICH ARE INDICATIVE OF MOST BEACHES ON THIS SEGMENT). REMOVAL OF OIL WOULD BE LABOR INTENSIVE AND EXCESSIVELY COSTLY IN VIEW OF THEIR INSIGNIFICANT CONTRIBUTION TO MINIMIZING A THREAT TO THE PUBLIC HEALTH & WELFARE, OR THE ENVIRONMENT. I WAS INFORMED OF THIS OILING BY EXXON REP. AS ADEC REP REFUSED ANY DISCUSSION.

OG SKETCH MAP A
 IN 033-B
 13-MAY-91
 1834-2012
 BRYAN TRIMM
 MAP 1 OF 3



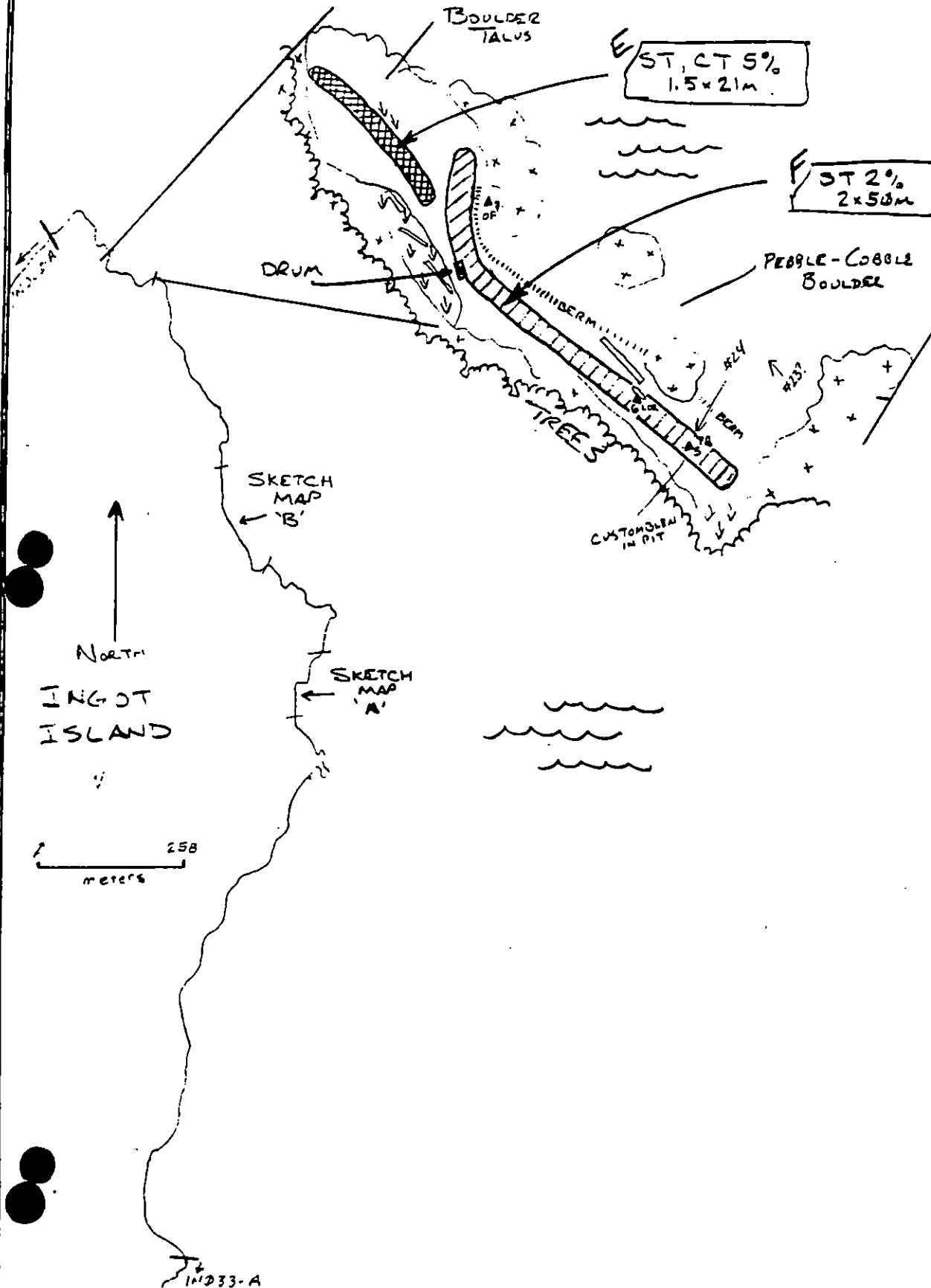
reviewed 5/18/91 K6
 2/renamed 5/18

OG SKETCH MAP 'B'
 IN 033-B
 13-MAY-91
 1834-2012
 BRYAN TRIMM
 MAP 2 OF 3



reviewed 5/18/91 K6
 25 reviewed 5/18

OG SKETCH MAP 'C'
IND 33-B
13-MAY-91
1834-2412
BRYAN TRIMM
MAP 3 OF 3



reviewed 5/18/91 KG
ET reviewed 5/18

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 13 May 91
 SEGMENT # IN-133 TIDAL HEIGHT (Range) 2 - 3.5 ft
 SUBDIVISION B BIOLOGIST SM BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A: Boulder Rock Area area with patches of mussels barnacle and Fucus bands. Older spt (fall 1990) present closer to water. Lower intertidal along entire segment supports dense algae including Fucus Indean Halosaccaria etc.

B: Oligochaete worms were found under the rocks in the oiled zone.

C: Mussels and barnacles seaward of oil, but no spt and no grazers (Littorines and limpets)

D: Mussels dense in patches, barnacles sparse - most biota is immed. seaward of oiled zone.

E: Oil is high in ITZ. Boulders have support only lichen and moss. Boulders closer to water have dense mussel patches, large barnacles and barnacle spt. Small mussels and limpets found in crevices. Algae dense and diverse in lowest zones.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	100N	2	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

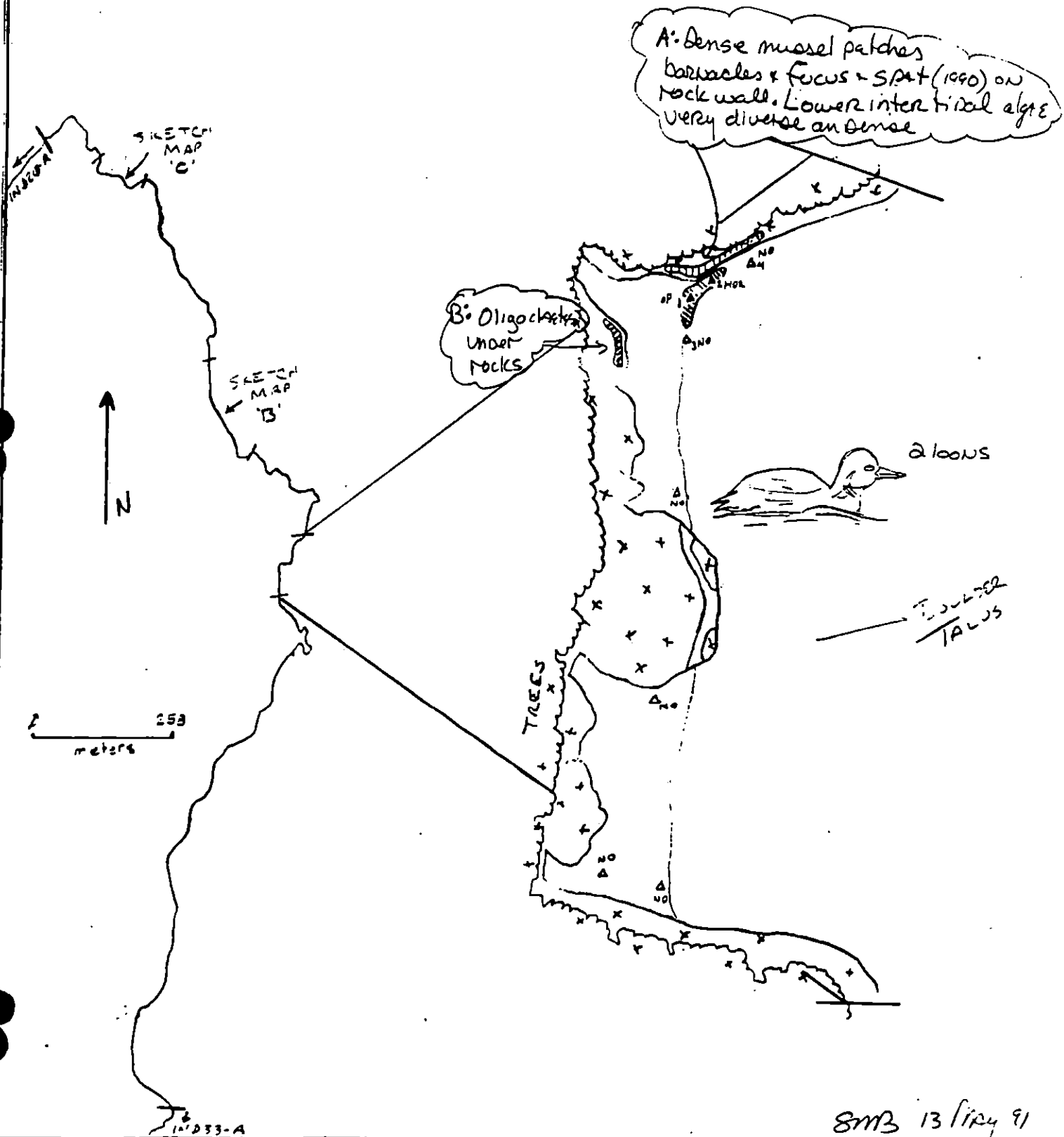
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Seal	1		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B 5/13/91

SKETCH MAP A
IN 033-B
13-MAY-91
1834-2012

MAP 1 OF 3

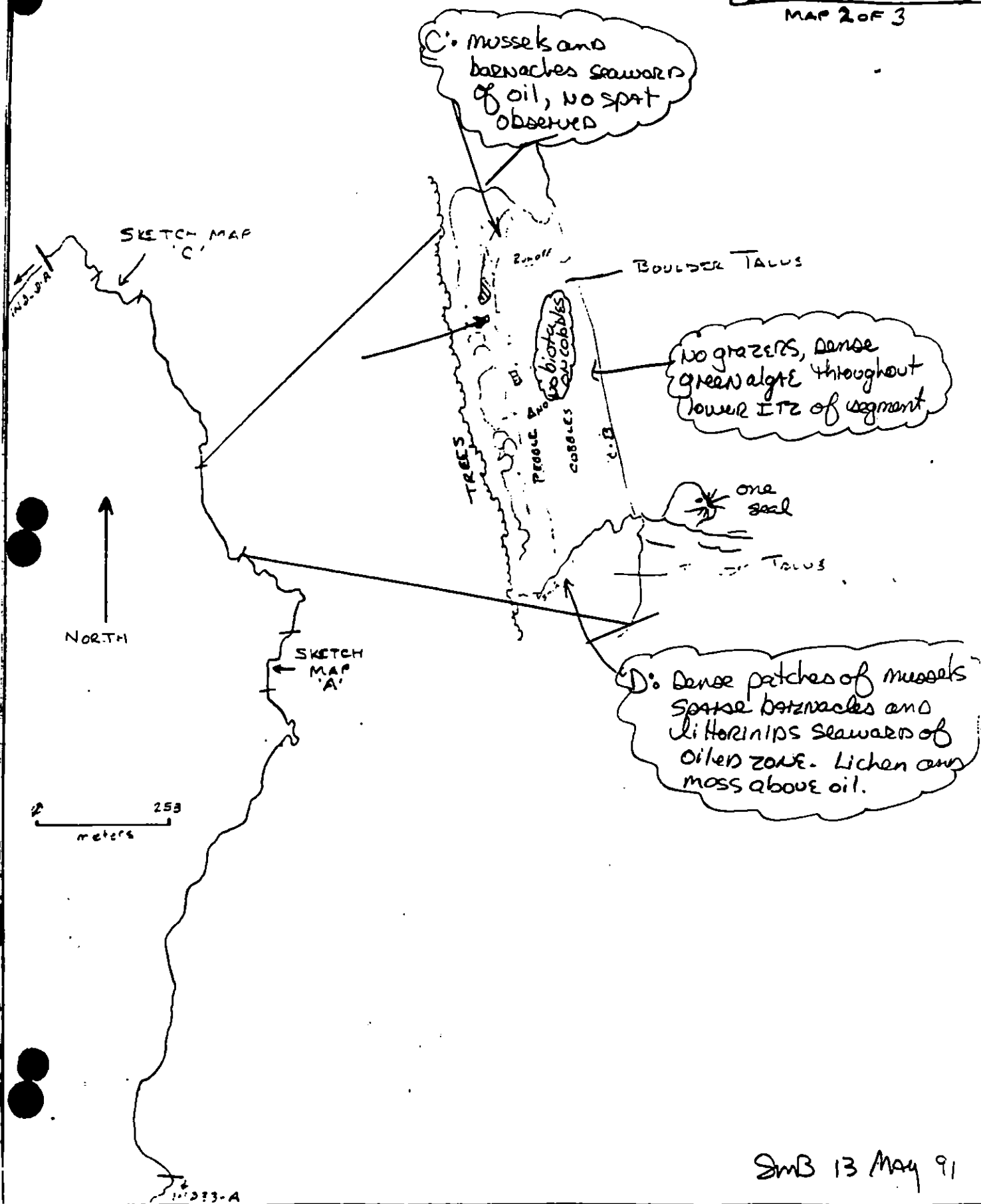


8MB 13 / Apr 91

Reviewed M.B. 5/18/91

SKETCH MAP 'B'
 IN 033-B
 13-MAY-91
 1834-2012

MAP 2 OF 3

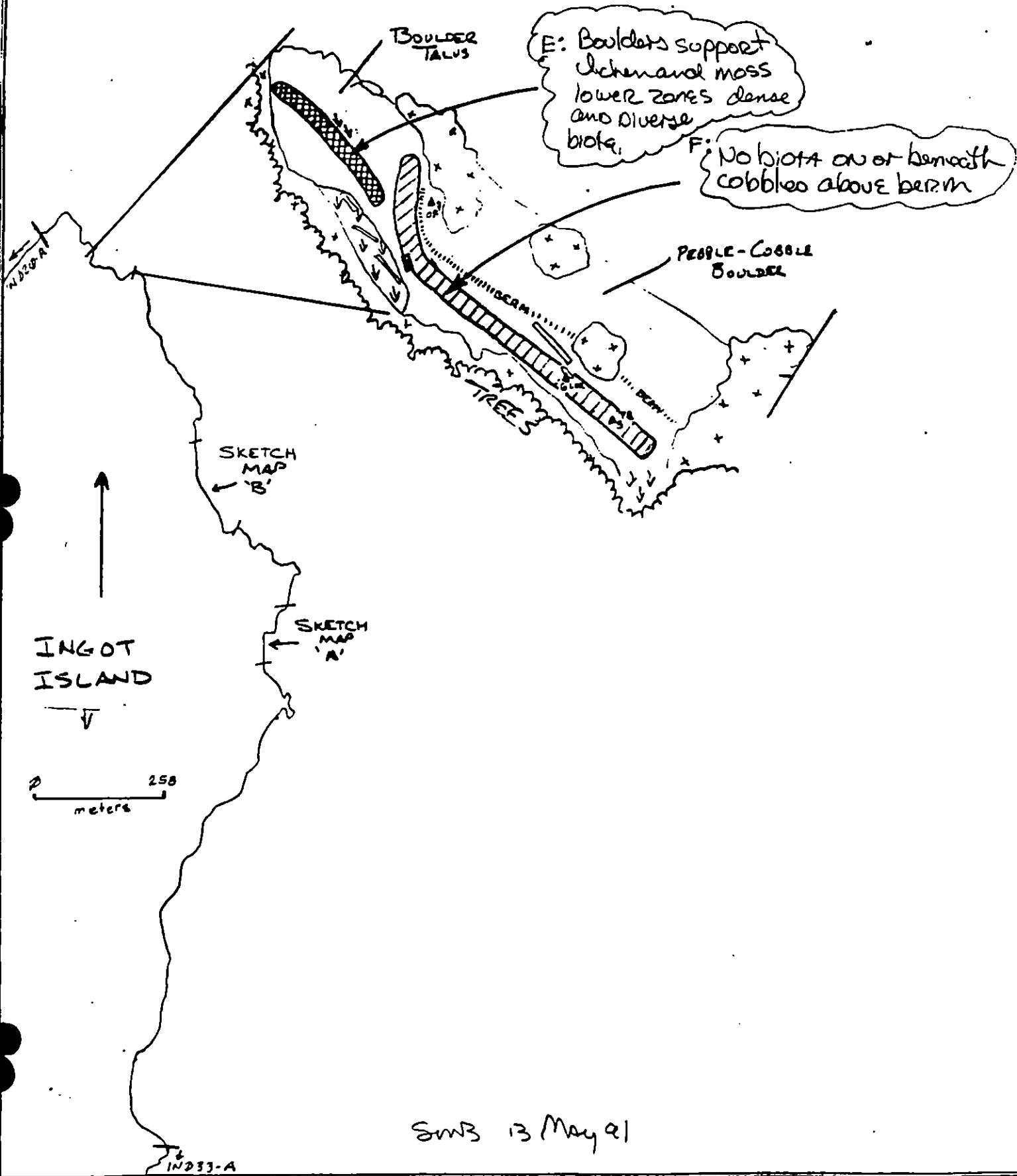


SMB 13 May 91

Reviewed M.B. 5/18/91

SKETCH MAP C'
IN 033-B
13-MAY-91
1834-2412

MAP 3 OF 3



Reviewed M.B. s/rsk

IN-32

IN-33

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

IN033 B

ADEC Subsegment Length: 2481m
 METERS

0 200 400

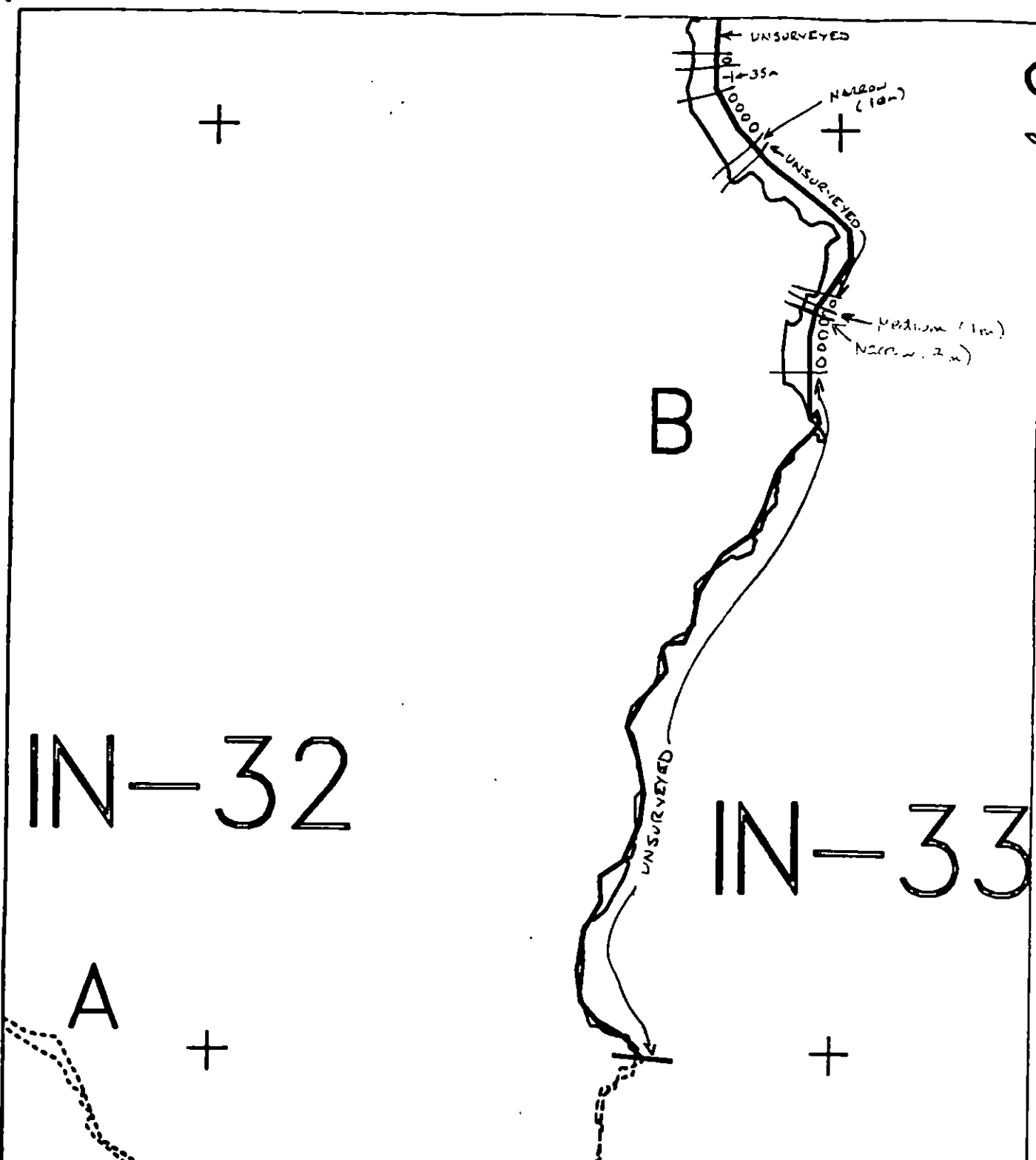
AK State Plane Zone 4
 14N03300



Subdivision Field Map
 Map Key: KNIN03300
 Name: TRIMM
 Date: 13-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP.

revised 5/18/91 KL
 EG revised 5/18



EN-45

20

A

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

IN033 B
 ADEC Subsegment Length: 2461m
 METERS
 0 200 400
 AK State Plane Zone 4
 61203366



Subdivision Field Map
 Map Key: KN11N03386
 Name: TRIMM
 Date: 13-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed 5/18/91 KLS
 EG revised 5/18

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-33 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 8/15
Spot Washing	
Other Approved Treatment	
Manual Tilling	

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

711 Subsistence: Deer Harvesting

Closed to bioremediation, spot washing, other approved treatment, and manual/mechanical raking after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

J. J. Phillips

Date

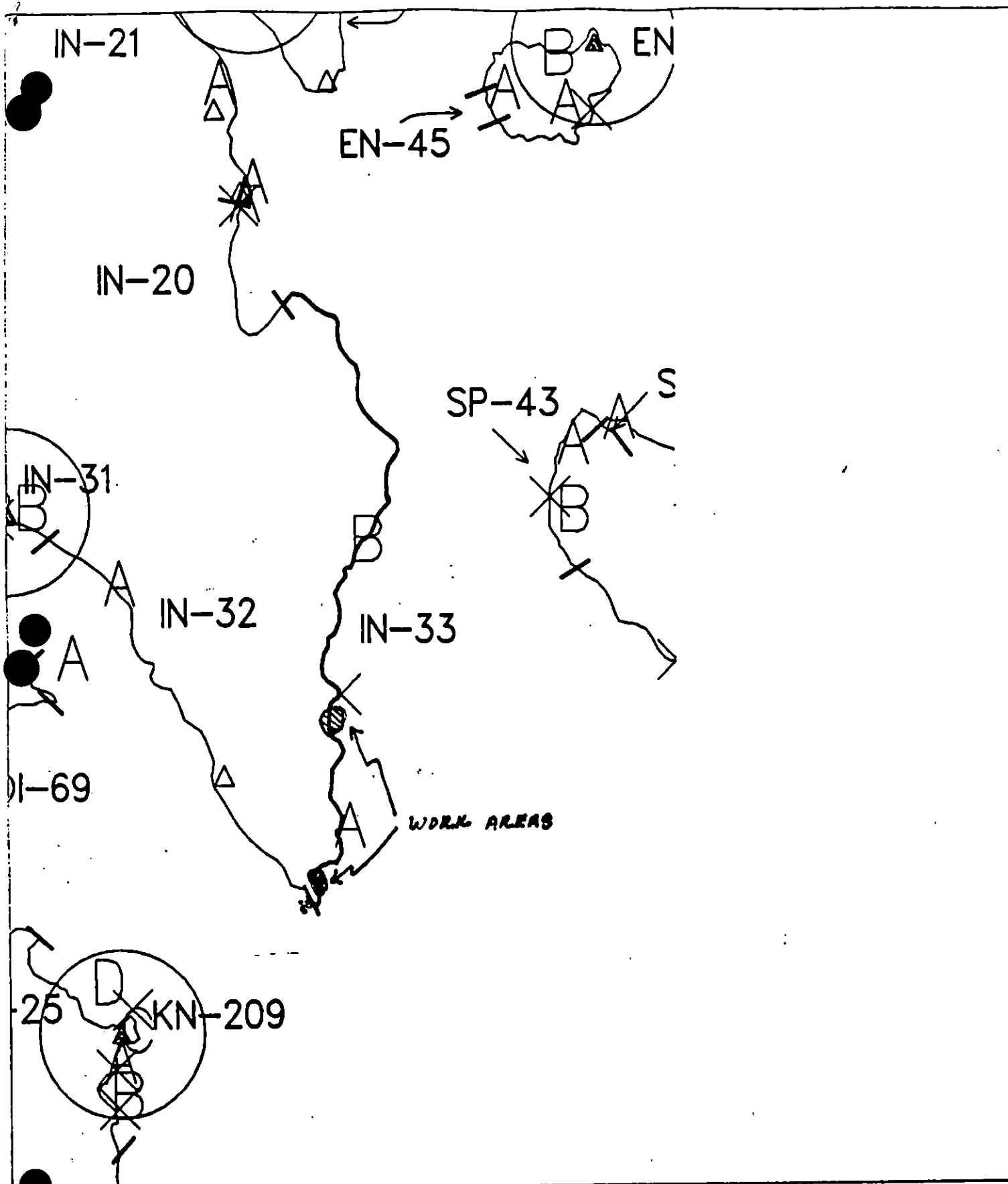
6/14/90

Prepared by

J. J. Phillips

Date

6/14/90



SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION A (1 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

360
al

SHPO SIGNATURE: Rachel Don Dan DATE: 6/1/90

OILING CATEGORIZATION:

Wide 72 m: Medium 17 m: Narrow 213 m: V.Light 472 m: No Oil 486 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>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u>X</u> Spot Washing: <u>X</u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend manual pickup of debris followed by bioremediation where indicated on sketch map.

SEE CONSTRAINTS ADDENDUM dated 6/14/90

TAG COMMENTS: MANUAL TILLING + SPOT WASH OF AREA
AROUND TP 5 USE SNARES TO RECOVER AND FREE OIL
MONITORS TO ASSESS LOGS AND SIGNIFICANCE OF REMAINING OIL

TAG APPROVAL DATE: 5/4/

ADEC ART WENGER Net Wenger

EXXON ANDY TEE Andy Tee

NOAA Gary Petrone Gary Petrone

USCG G.A. BAUER G.A. Bauer

FOSC: W L DATE: 6-8-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-33 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Raking AND Bioremediation	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

711 Subsistence: Deer Harvesting

Closed to bioremediation ^{and manual raking} after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

[Signature]

Date

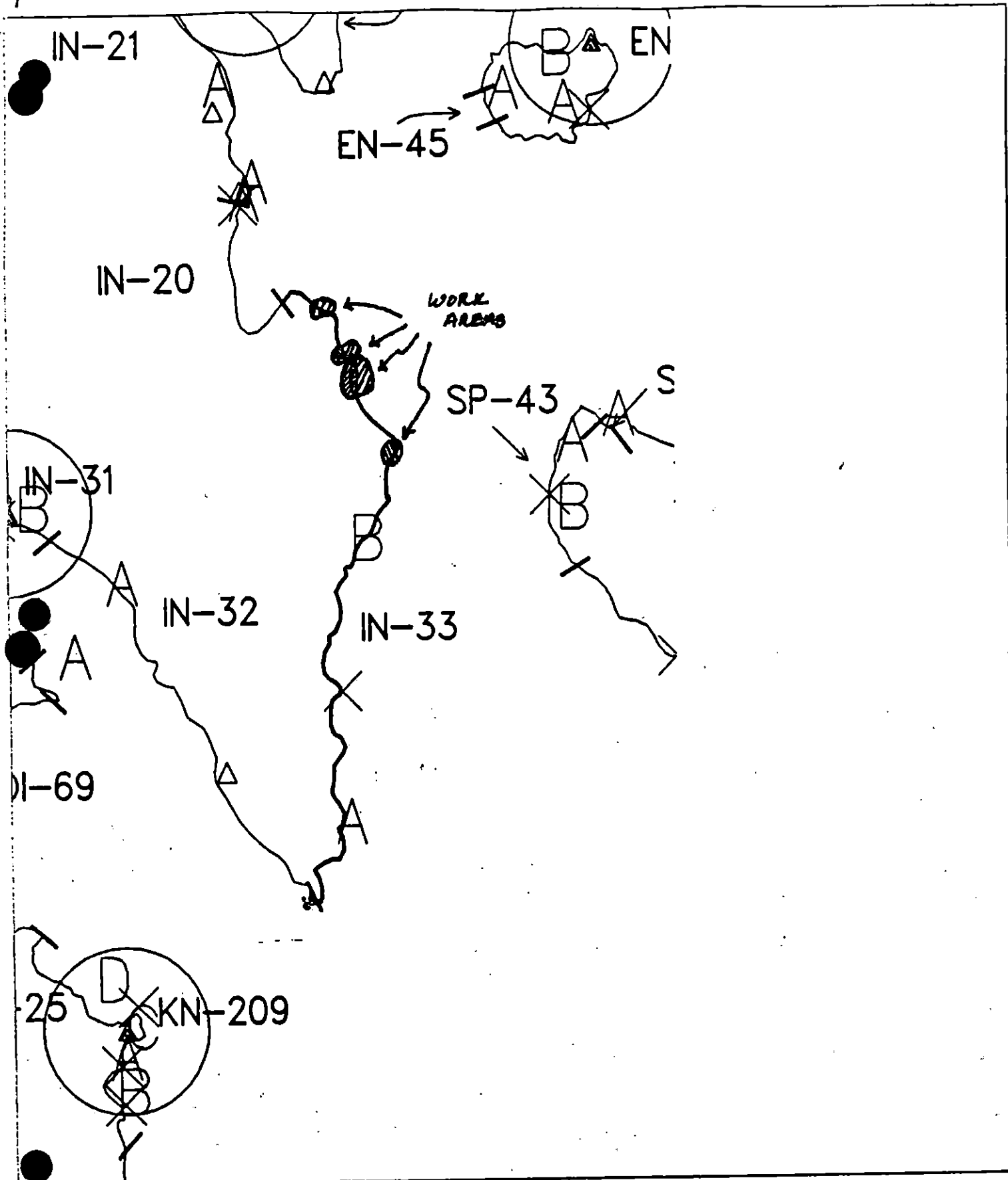
6/8/90

Prepared by

J.P. Phillips

Date

6/14/90



Exxon Company, USA
Map Key: PMS-IN-33



ECOLOGY MAP SEGMENT IN-33 SUBDIVISION B (2 of 2)

METERS



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

1 inch = 2086 feet

SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: Rachel Chan Oake DATE: 6/1/90

OILING CATEGORIZATION:

Wide 11 m: Medium 30 m: Narrow 62 m: V.Light 217 m: No Oil 2142 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: Recommend bioremediation of areas indicated on sketch map.

SPT. ADDENDUM dated 6/14/90
CONSTRAINTS

TAG COMMENTS: MANUALLY RAKE IN AREA OF TPS PRIOR TO BIO

TAG APPROVAL DATE: 5/4/90

ADEC ART WEINER

EXXON ANDY SEAL

NOAA GARY PETRAE

USCG G.A. REITER

FOSC: DATE: 6-8-90

monitors evaluate need to rake area of Pt 10 prior to bioremediation.

SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION A (1 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: Rachel Jan Dore DATE: 6/1/90

OILING CATEGORIZATION:

Wide 72 m: Medium 17 m: Narrow 213 m: V.Light 472 m: No Oil 486 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
 Tarmat Removal

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

COMMENTS: Recommend manual pickup of debris followed by bioremediation where indicated on sketch map.

TAG COMMENTS: MANUAL TILLING + SPOT WASH OF AREA
AROUND T.P.S. USE SNARES TO RECOVER AND FREE OIL.

MONITORS TO ASSESS LOGS AND SIGNIFICANCE OF REMAINING OIL

TAG APPROVAL DATE: 5/4/

ADEC ART WEINER Art Weiner

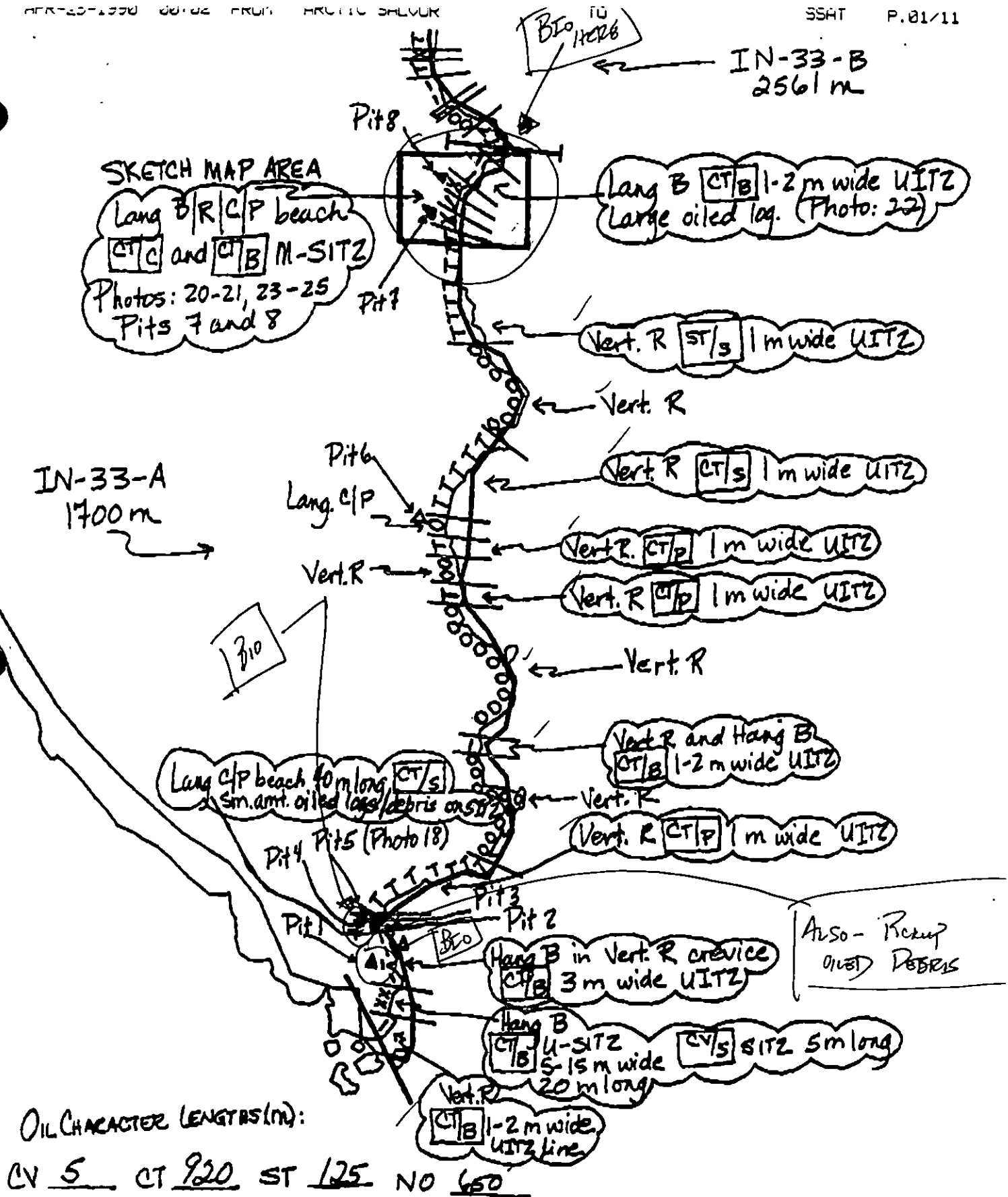
EXXON ANDY TEO Andy TEO

NOAA GARY PETROE Gary Petroe

USCG G.P. BEITER G.P. Beiter

FOSC: W

DATE: 6-8-90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

IN-33

EXXON SEGMENT LENGTH: 4261 m

ADEC Segment Length: 3722m

Map Key: PWS-2780

Name: C. DILLON

Date: 4/22/90

0 100 200 300

3C. DILLON TEAM 6

SKETCH MAP

SEGMENT ST/ 1 B

DIVISION A

ITE 4, 22 90

HECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bdry
- Of Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LWA
- SSL
- Profile Location(s)
- Profile(s)
- PR Location(s)
- Photo Location(s)

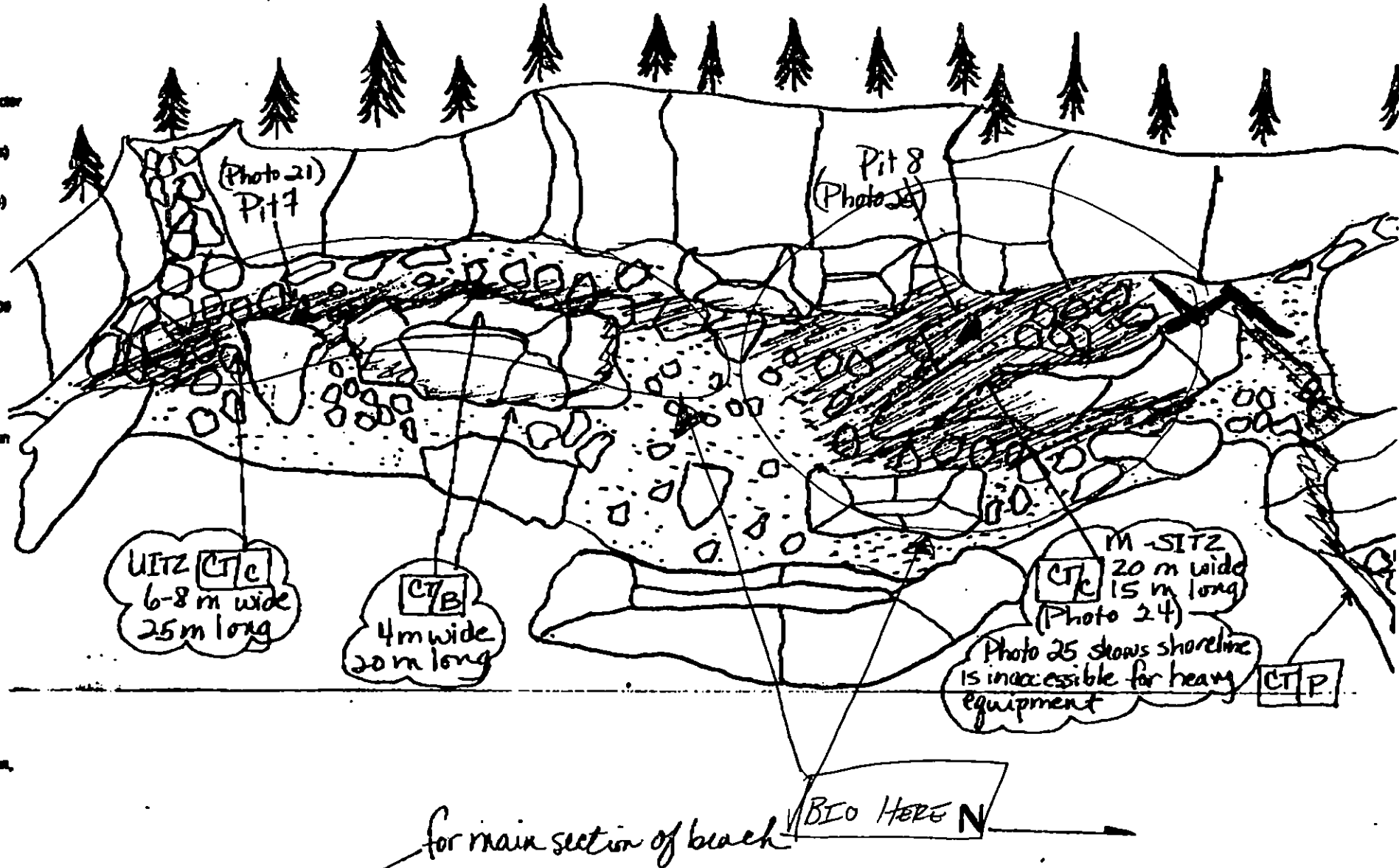
LEGEND

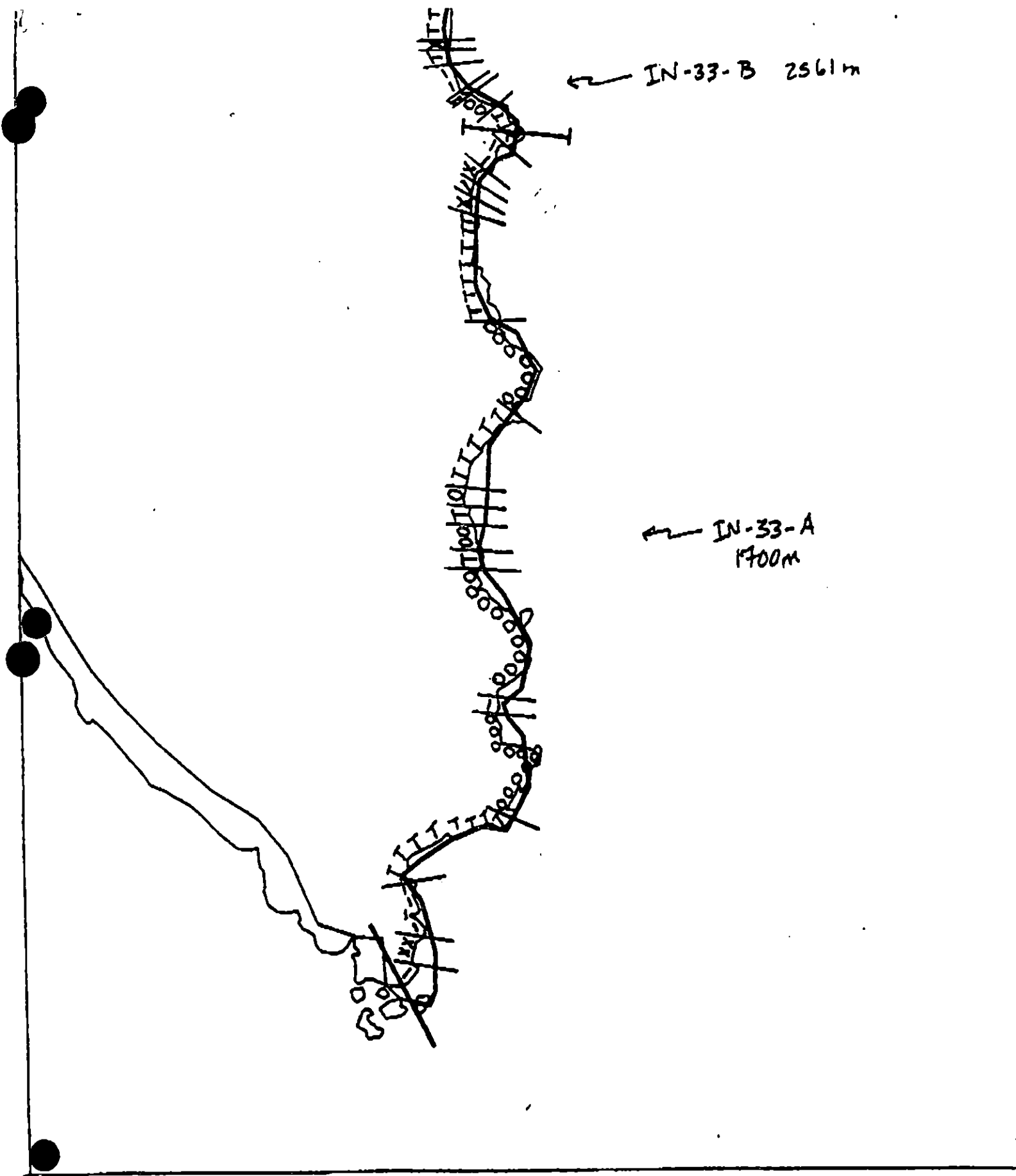
- 1 Δ
- No Subsurface Of
- 2 Δ
- Subsurface Of
- CT/C
- Crucial Distribution
- CT/B
- un Distribution
- CT/P
- ly Distribution
- CT/S
- shed Distribution
- ee
- Vegetation

- location, direction, number

eracter Length (m): AP 0 PO 0 CV 0 CT 60 ST 0 MS 0 PT 0 TD 0 FL 0 NO 0

REVISION 000000





XXXX Wide

//// Medium

--- Narrow

TTTT Very light

IN-33

Exxon Segment Length: 4261m

ADEC Segment Length: 3722m

Map Key: PWS-2780

Name: C. DILLON

Date: 4/22/90



SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: Rachel Ann Oake DATE: 6/1/90

OILING CATEGORIZATION:

Wide 11 m: Medium 30 m: Narrow 62 m: V.Light 217 m: No Oil 2142 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: Recommend bioremediation of areas indicated on sketch map.

TAG COMMENTS: MANUALLY RAKE IN AREA OF TP5 PRIOR TO BIO

TAG APPROVAL DATE: 5/4/90

ADEC ART WEINER Art Weiner

EXXON ANDY GALL Andy Gall

NOAA GARY PETROSE Gary Petrose

USCG G.A. REITER G.A. Reiter

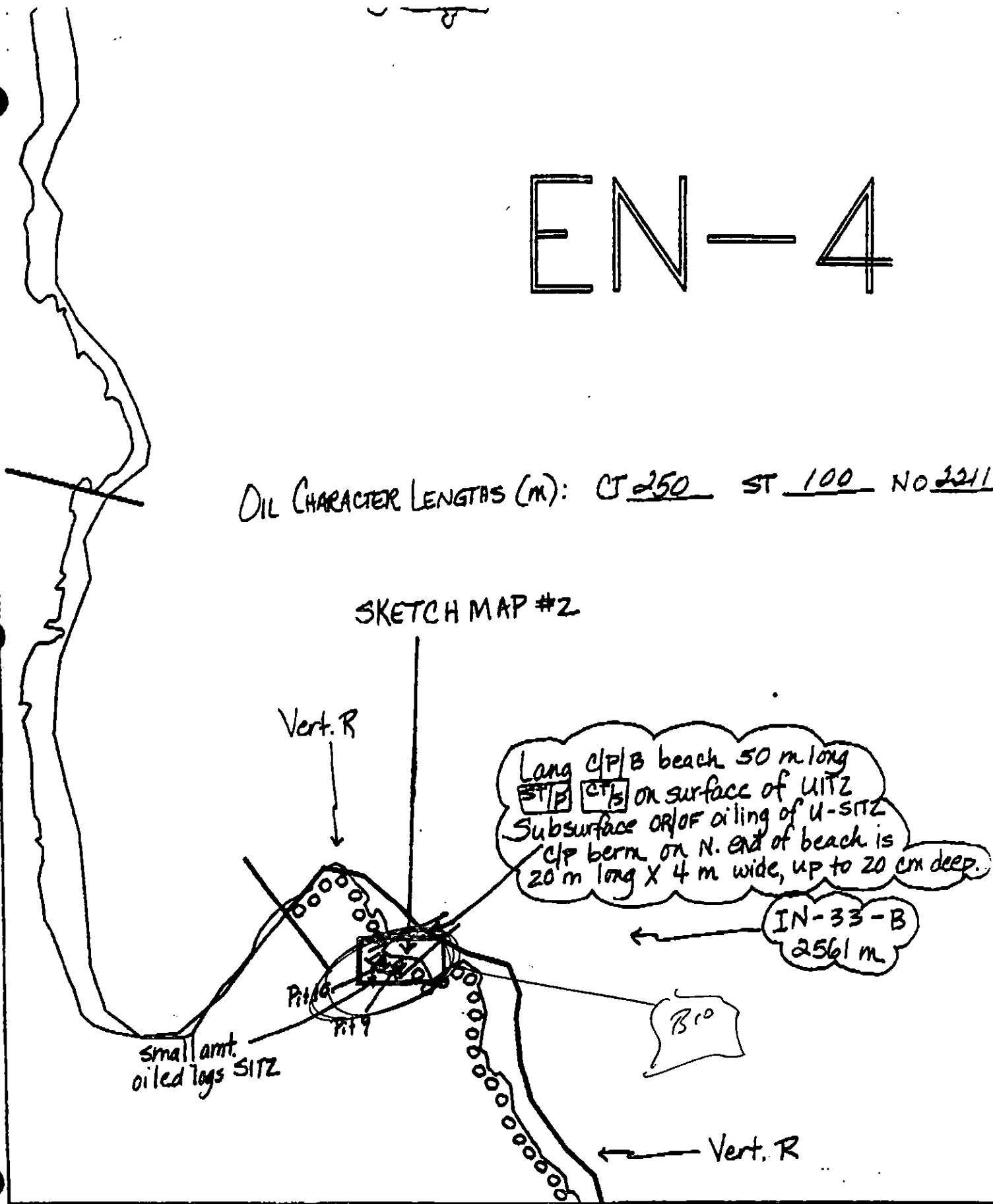
FOSC: DATE: 6-8-90

Monitors evaluate need to rake area of Pt 10 prior to bioremediation.

EN-4

OIL CHARACTER LENGTHS (m): CT 250 ST 100 NO 2211

SKETCH MAP #2



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

IN-33

EXXON SEGMENT LENGTH: 4261 m
ADEC Segment Length: 3722 m

Map Key: PWS-278c

Name: C. DILLON

Date: 4/22/90

C. DILLON TEAM 6

SKECH MAP #1

N

MENT ST/ IN 33

BDIVISION B

TE 4, 22 90

HECKLIST

N Area
Approx. Scale
Seg/Sub Endry
Oil Dia.
Width
Length
% Cover
Substrate Character
Est. HML/LWL
SSL
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Surface Distribution

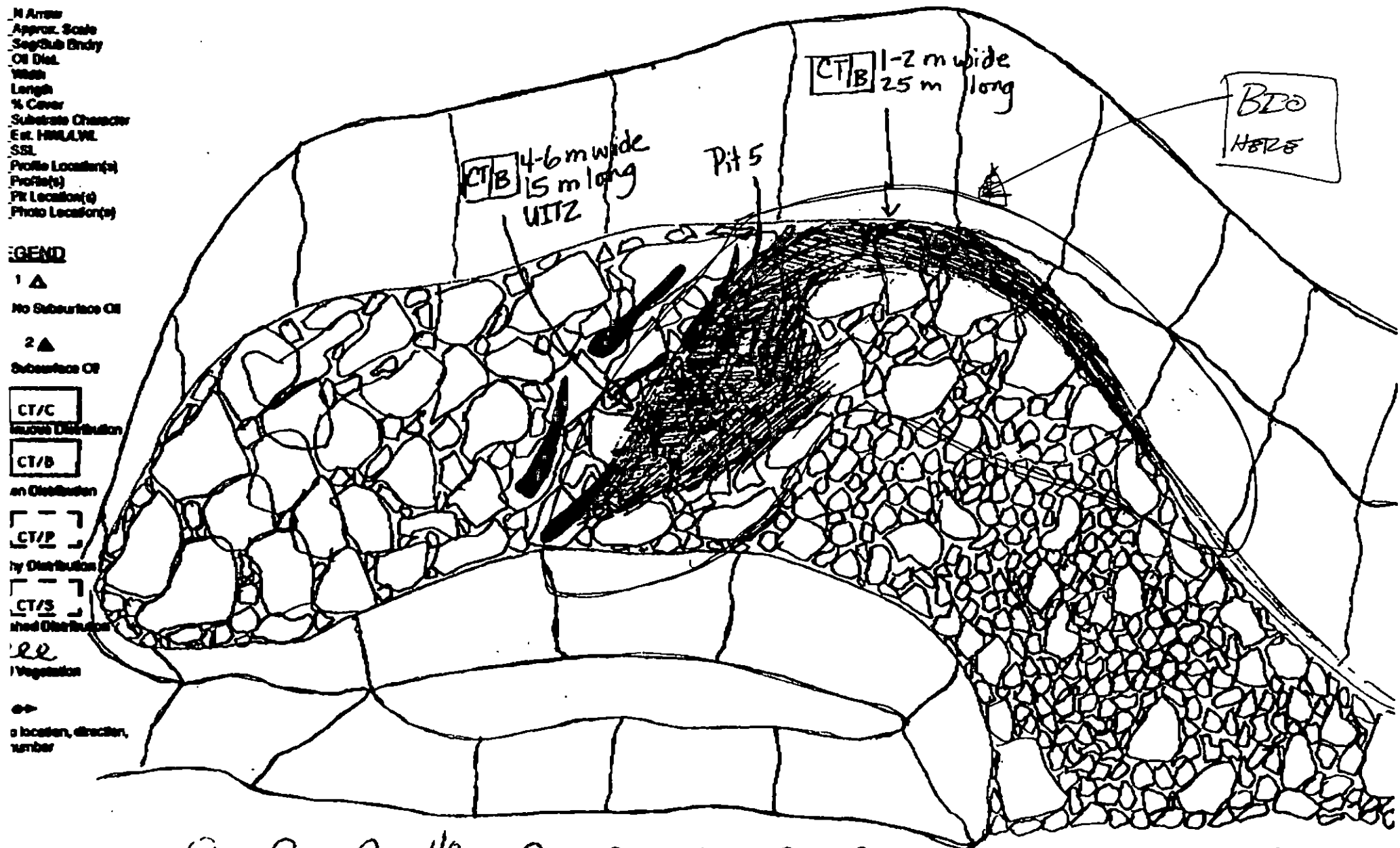
CT/B
on Distribution

CT/P
by Distribution

CT/S
shed Distribution

ee
Vegetation

→
location, direction,
number



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

REVISIONS

C. DILLON TEAM 6

SKETCH MAP #2

MENT ST/IN

B DIVISION B

TE 4, 22 00

HECKLIST

N Area
Approx. Scale
Seg/Sub Entry
OS Dist.
Width
Length
% Cover
Substrate Character
Est. HRA/LVA
SSL
Profile Location(s)
Profile(s)
PI Location(s)
Photo Location(s)

GEN

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Small Distribution

CT/B
on Distribution

CT/P
by Distribution

CT/S
shed Distribution

ee
Vegetation

o location, direction,
number

N

B10

Small amt. oiled logs

clp berm U-SITZ
4m wide X 20m long
Subsurface oil or
to 20 cm depth.

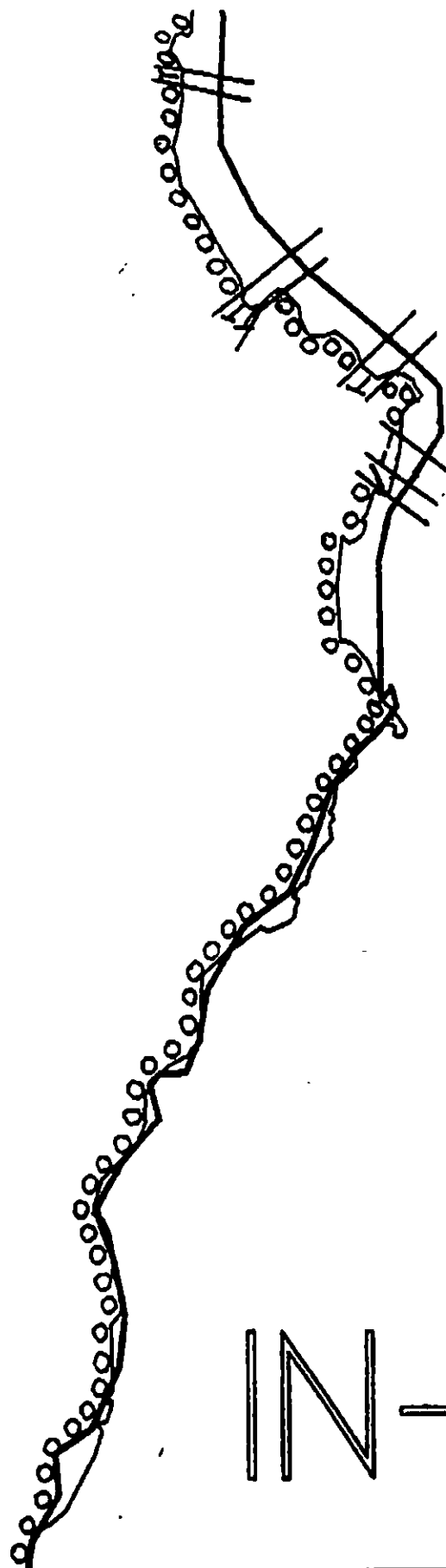
Long B/C
ST/P/UITZ
CT/S 1-3m wide
20m long

Pitlo →

50m

Character Length (m): AP 0 PO 0 CV 0 CT 5 ST 25 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION 000000



IN-33-B
2561m

IN-33

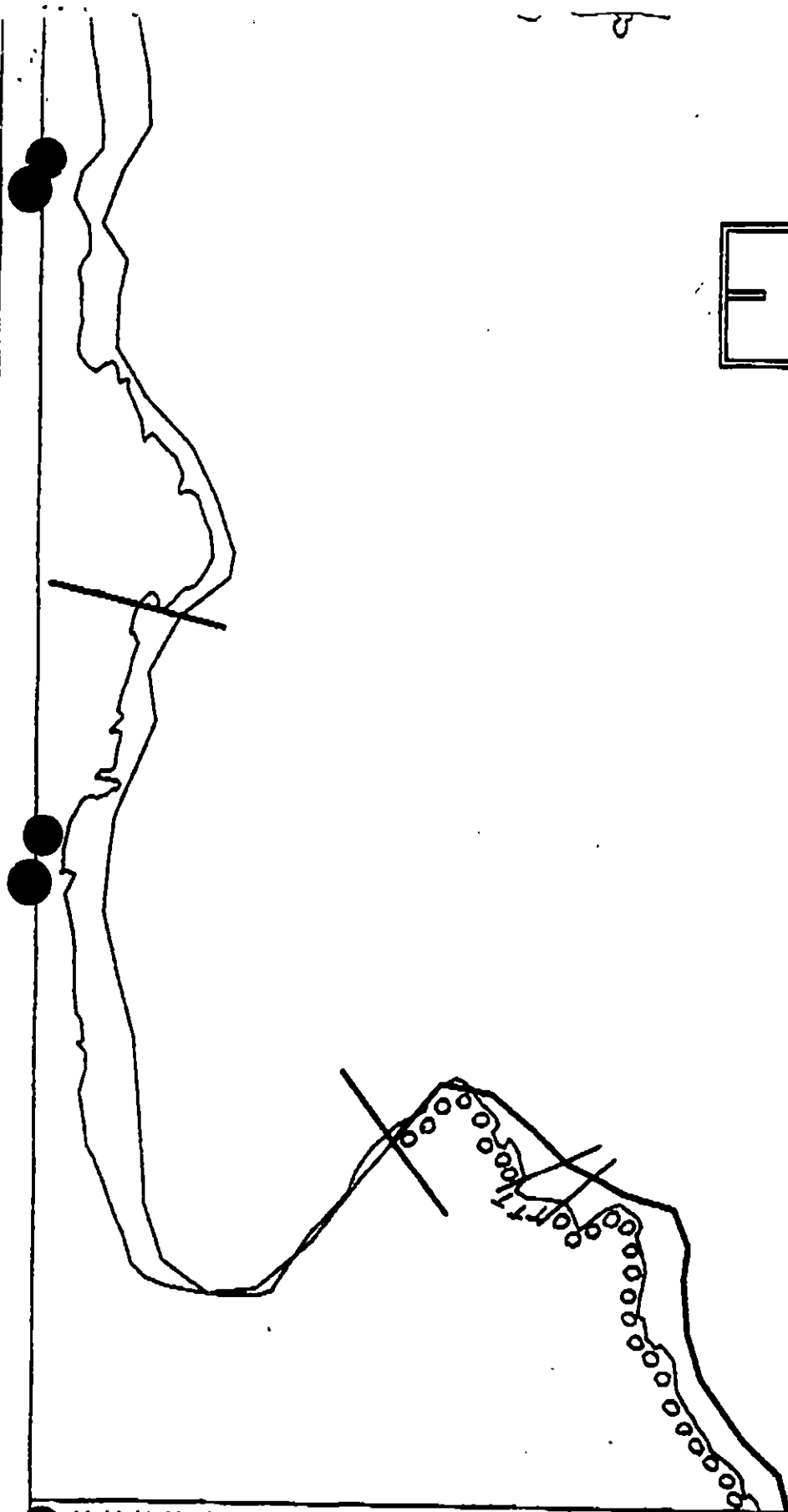
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

IN-33
EXXON SEGMENT LENGTH: 4261m
AOEC Segment Length: 3722m



Map Key: PWS-278b
Name: C. DILLON
Date: 4/22/90

EN-4



IN-33-B
2561 m

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

IN-33

EXXON SEGMENT LENGTH: 4261 m
ADEC Segment Length: 3722 m

0 100 200 300
METERS

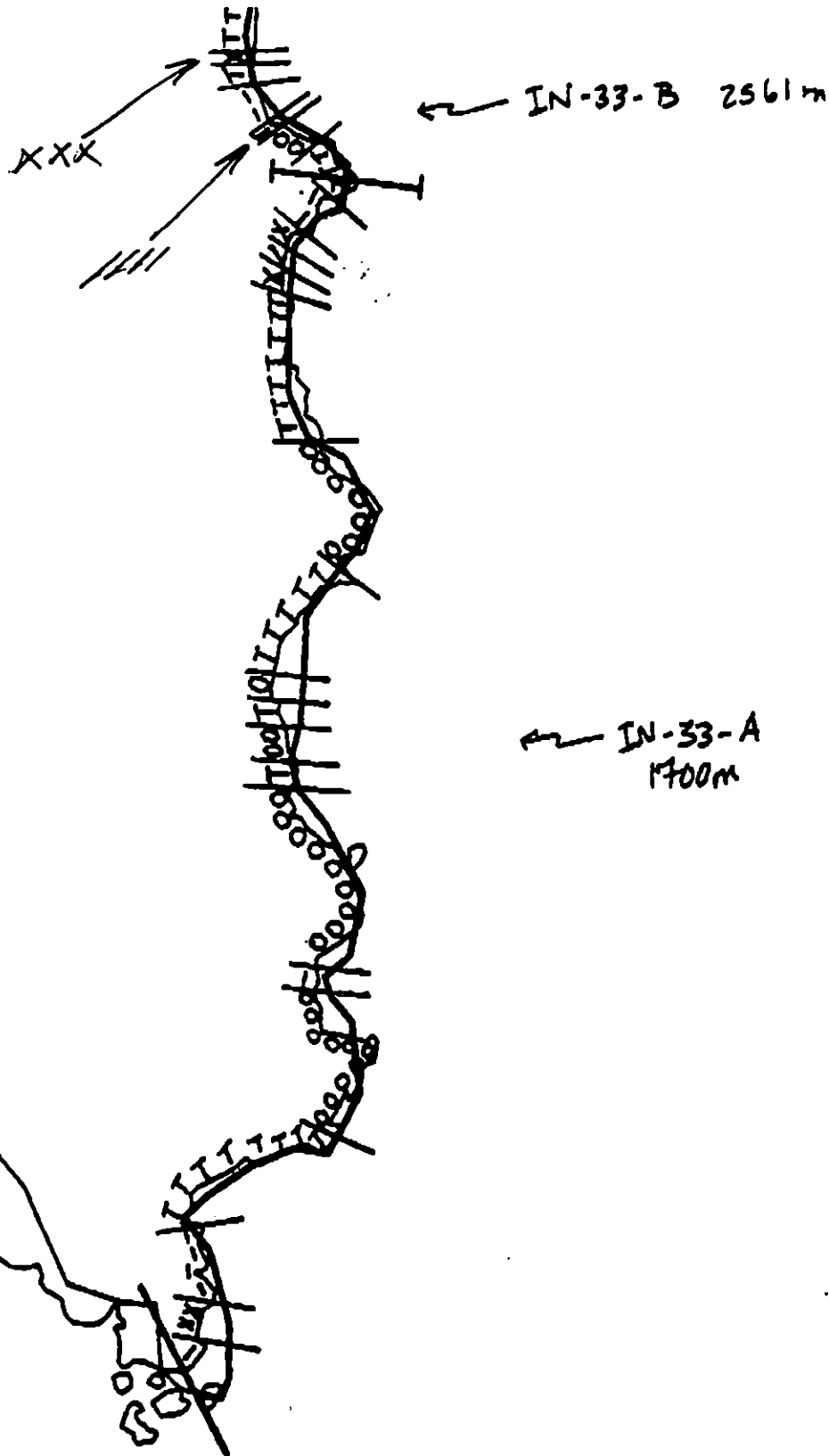


Map Key: PWS-278c

Name: C. DILLON

Date: 4/22/90

Data Entered:



XXXX Wide

/// Medium

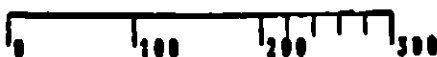
--- Narrow

TTTT Very Light

IN-33

Exxon Segment Length: 4261m

ADEC Segment Length: 3722m



Map Key: PWS-2780

Name: C. DILLON

Date: 4/22/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-33

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION A (1 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 72 m: Medium 17 m: Narrow 213 m: V.Light 472 m: No Oil 486 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: Recommend manual pickup of debris followed by bioremediation
where indicated on sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

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

1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

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

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

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

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

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom 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)

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ IN-33 SUBDIVISION: A DATE 4/22/90

USCG

NAME William E. White SIGNATURE William E. White

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- #1 AREA AROUND PIT #5 - MANUAL REMOVAL OF SEDIMENT AROUND CUBBS AND BOULDERS AND REMOVE OILED DEBRIS.
- #2 SKETCH MAP - SPORADIC MANUAL REMOVAL OF OILED SEDIMENT AROUND LARGE BOULDERS - THEM BIO. AREA.
- #3 NO TREATMENT RECOMMENDED TO ANY OTHER AREA OF THIS SEGMENT.

ADEC
NAME

Peter Montesano

SIGNATURE

Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- Pit 5 Concurr w/ Exxon: ^{25A} oil is pooled among pebbles lined by bedrocks and should be manually removed in N corner. Across in S corner bag oiled vegetation + debris trapped in Supra berm
- Pit 7 Boulders too large for bio. Hw hoses for flush with Steam wands to remove SOB, DBH on, under, around Boulders. likely too bleed.
- Pit 8 Heavy, deep oiling must be removed. Oiling in under median sized Boulders on bedrocks Plateau, w/ tidal level. manual remove will be difficult but needed. NOT suited for wash, till, heavy equipment, Bio, etc.

- Note: Anticipate bleeding from other Boulder shadowed beaches come Sam.

LAND MANAGER

USDA - Forest Service

NAME Don J. Breitzger

SIGNATURE

Don J. Breitzger

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This area is used for subsistence deer hunting Aug 15-F.

Pit 5- agree with Exxon rep, pooled oil should be removed along with oiled debris (vegetation and other).

Areas adjacent to pits 7 and 8 should have patchy removal of oiled sediments - the bio remediation.

The rest of the segment should be left to natural weathering process. Oiled debris should

SHORELINE OILING SUMMARY

REVISION NO. 04/12/88

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ IN-33
 BIO J. BARRY LAND REP D. BRENNER (NES) SUBDIVISION A (1 OF 2)
 EXXON G. STILES ADEC P. MONTESANO TIME 15:30 to 17:55
 TEAM NO. 6 TIDE LEVEL +5 to +1 DATE 04/12/90
 EST. SUBDIVISION LENGTH: 1700 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90 % B 5 % C 4 % P 1 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 5 % Vert 90 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 60 m M 20 m N 200 m VL 770 m NO 150 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐Oiled pom pom
TYPE unsorted trash#BAGS 1

Photographs:

Roll No. ST-6-6Frames 18, 20-25

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	UO	1	2	3	4	5	SU	U	M	L				
1	10	X					0-8	X				X			X					N	-	B-P/G
2	40					X	.	X								X				N	-	C/P-P
3	40					X	.	X						X						N	-	C/P-P
4	70					X	.	X							X					N	-	C-C/P/G
5	15	X					0-15	X				X			X					N	-	P-P/bedrock
6	30					X	.	X								X				N	-	C/P-P

COMMENTS

REVIEWED 7W DATE 4/25/90

SHORELINE OILING SUMMARY (PAGE 2)

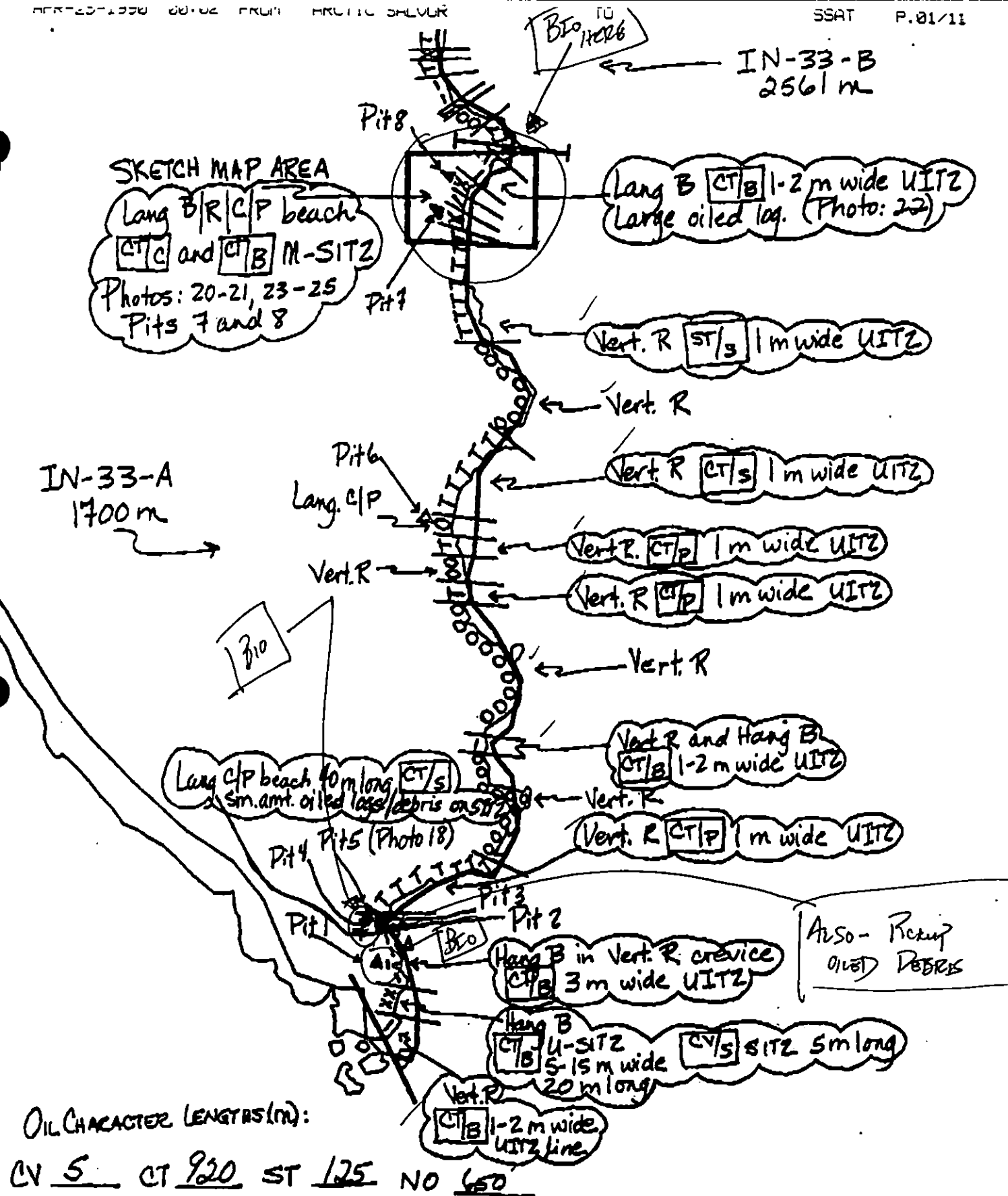
OG C. DILLON
TEAM 6

SEGMENT ST/ IN-33 SUBDIVISION A (2 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	S P E E D (NM)	↓	SURFACE SUBSURFA SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	SL	SR	ST	SS	LT	LB	SU	UR	ME	LI				
7	5	X					0.3		X					X		X					N	-	B-P/m/8
8	30	X					0.3	X		X						X					N	-	Rb/c-P/g/
8	30	X					3.30	X						X		X					N	-	Rb/c-P/g
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

IN-33

EXXON SEGMENT LENGTH: 4261 m

AOEC Segment Length: 3722 m



Map Key: PWS-2780

Name: C. DILLON

Date: 4/22/90

Date Entered:

SEGMENT ST/ 33

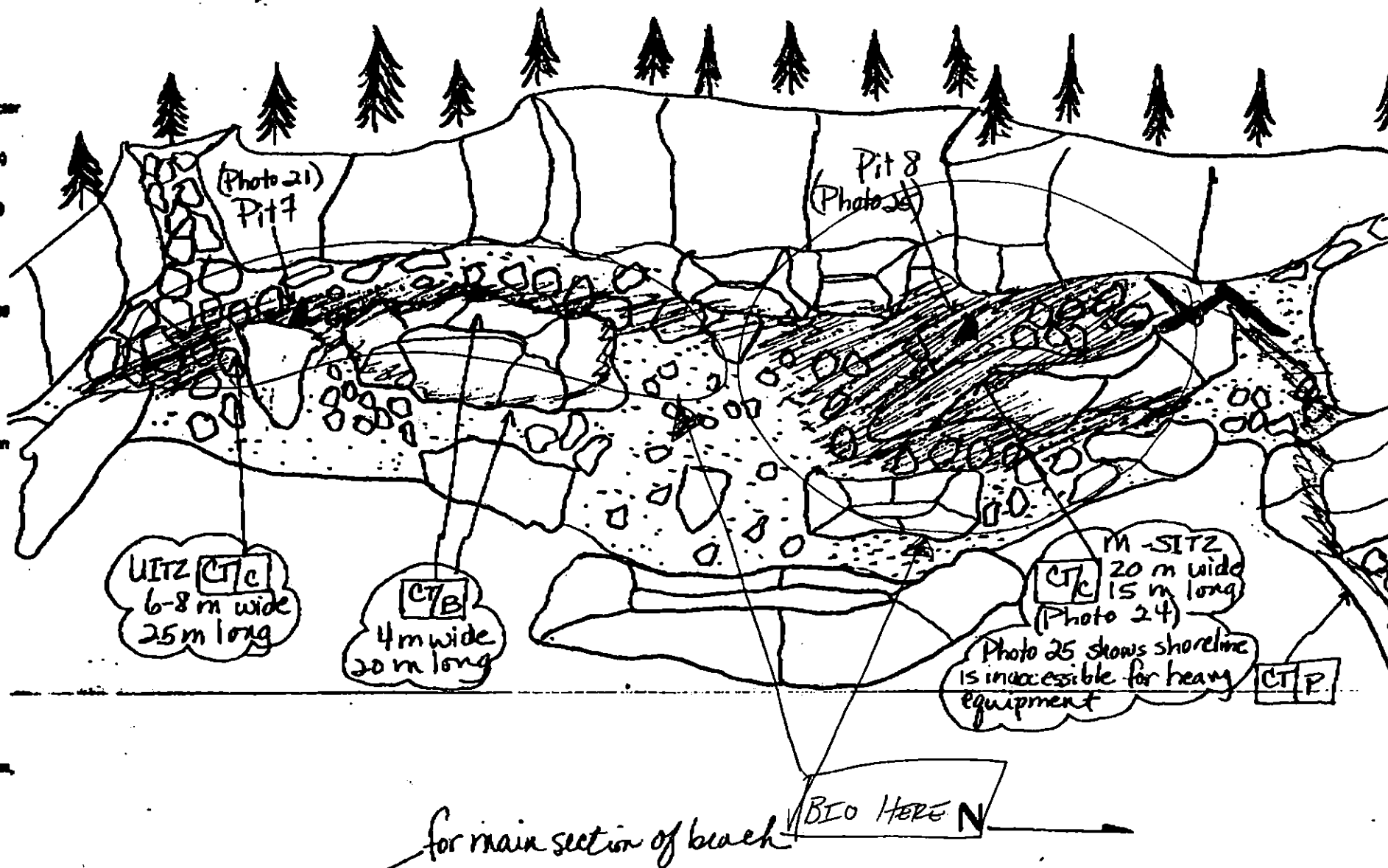
SUBDIVISION A

DATE 4 / 22 90

CHECKLIST

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

LEGEND

1 Δ
PR - No Subsurface Cl2 Δ
PR - Subsurface ClCT/C
Continuous DistributionCT/B
Broken DistributionCT/P
Patchy DistributionCT/S
Sporadic Distributioneee
Old Vegetation1 $\odot$
Photo location, direction,
and number

Character Length (m): AP 0 PO 0 CV 0 CT 60 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

Segment ST / IN 33 Subdivision A Date (mo / day / yr) 4/22/90
 Time (24 hr) 1600-1759 Biologist Jim Barry 1700 = length 1/8

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 5 (3) Cobble 4 (4) Pebble 1 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 75 Moderate 15 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-6-6
 Roll No. 19
 Frames 19

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Sea Otter - 3 Sea Lion - 1 Pigeon Guillemot - 1 Deer tracks
 Bald Eagle - 2 Glaucous winged gull - 5 Schools of Salmon Smolts
 Common Merganser - 5

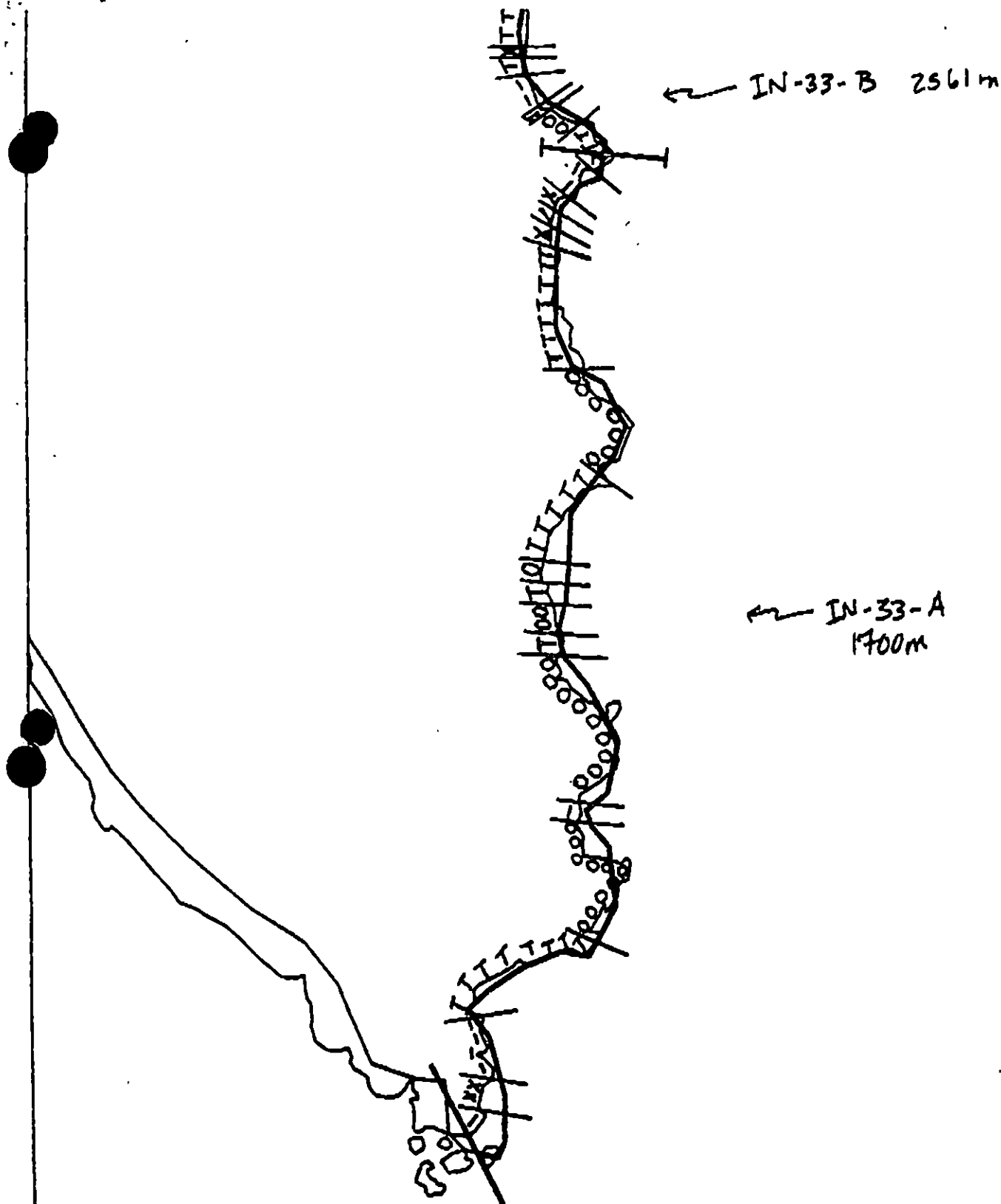
Ecological Considerations: TII - Deer Harvesting Site

Clean up operations may interfere with deer harvesting in some locations during Aug - February.

No other conditions are sensitive.

B. Oil-related Comments

- 1) The high upper zone and supra intertidal zone are the most strongly impacted by oil, where a cover of oil on and amongst corals is occasionally present. This habitat, typically has low cover of biota and often is a "bare zone", occupied by lichens and microalgae. Lower zones along this subdivision are mostly densely covered by oil, and appear at this time to be little affected by oil.
- 2) Deer harvesting in August - February is the only listed ecological sensitivity, and will likely not be affected by cleanup operations or the present oil distribution.



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

ADEC

IN-33

Exxon Segment Length: 4261m

ADEC Segment Length: 3722m

0 100 200 300



Map Key: PWS-2780

Name: C. DILLONDate: 4/22/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-33

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ IN-33 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 11 m: Medium 30 m: Narrow 62 m: V.Light 217 m: No Oil 2142 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: Recommend bioremediation of areas indicated on sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / IN-33 SUBDIVISION: B DATE 4/22/90

USCG

NAME William E. White SIGNATURE William E. White

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

#1 SKETCH MAP #1 SPORADIC PICKING OF
OILED SEDIMENT AROUND LARGE BOWLDERS

#2 SKETCH MAP #2 BRING IN EARTH MOVING EQUIPMENT
TO PULL DOWN SUPERTIDAL INTO LOWER TIDAL ZONE THEN
BIOREMEDIATE.

#3 NO TREATMENT TO THE REST OF THE SEGMENT,

ADEC

NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- Pit 3, soft Ap forming below surface, oil NOT visible from surface, unable to determine appropriate treatment.
- Pit 4, spot steam washable w/ hose flush, SBL ON, under, + around, oil droplets in pit water, Attend of Area Silver Sheen on surface waters at edge of Drain.
- Pit 5, localized pickup of oiled sediments
- Pit 9, Consider granular bio in place
- Pit 10, Few oil signs on surface, area too high to treat w/ Bio, CONCUR w/ Exxon to pull down berm and bio ON U.I.T.Z., protect/avoid Super tidal grass area.

LAND MANAGER

NAME Don J. Bretinger SIGNATURE Don J. Bretinger

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This area serves as a subsistence area for deer harvesting
Aug 15- Feb 28th.

Pit 5 oiled sediments should be picked up and removed.

Pit 9 bio remediation

Pit 10 agree with Exxon rep. to pull down tidal berm
with mechanical equipment and apply bio remediation.

The rest of the segment including the rock faces
(weathered will be left to natural recovery)

SHORELINE OILING SUMMARY

REVISION NO. 06-13-90

OG C. DILLON USCG PS1 E. WHITE ^{Breitunger} SEGMENT STI IN-33
 BIO J. BARRY LAND REP D. [unclear] (NES) SUBDIVISION B (2 OF 2)
 AXON G. STILES ADEC P. MONTESANO TIME 17:55 to 19:30
 TEAM NO. 6 TIDE LEVEL +1 to +2 DATE 04/22/90
 ST. SUBDIVISION LENGTH: 2561 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 75 % B 10 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 20 % Hang 5 % Vert 75 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 10 m M 15 m N 25 m VL 300 m NO 2211 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE united trash#BAGS 1

Photographs:

Roll No. NoneFrames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				AN A	SHEEN (mm)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UD	UC	1	2	3	4	W	M	N	U				
1	45					X	—		X						X			N	45		C/P-P/G/S
2	20					X	—		X						X			N	—		C/P-P/R
3	3		X				0-2		X			X			X			N	—		B/C-P/G/S
4	6	X					0-4		X			X			X			N	6		B/C-P/G/M
5	15	X					0-14		X	X		X			X			N	14		B/C-P/G
6	30					X	—		X						X			N	—		P-G

COMMENTS Majority of subdivision is Vert. R, uniled or with occasional areas of stain and sporadic or patchy coat along the high tide line — the coat is usually in rock fractures and crevices. Some areas of hang and lang B/C slopes or beach have a coat that widens to 3 m and in one 10 m long pocket of hang B/C there is a C/PB on the M-UITZ that is 12 m wide with penetration of the underlying sediments to 4 cm. The long, lang C/P beaches are mostly uniled. Only the 2 areas of significant oiling are sketched.

REVIEWED 70 DATE 4/25/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ IN-33 SUBDIVISION B (2 OF 2)OG C. DILLON
TEAM 6

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	!	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	10/20	20/30	30/40	40/50	50/60	60/70	SU	U	M	U				
7	35					X	.		X							X					N	-	C/P-P/G
8	25					X	.		X							X					N	-	R/C-C
9	20				X		0-20	X					X		X	X					N	-	B/C-P/G
10	25		X				0-15	X				X		X		X					N	-	C-C/P
10	25				X		15-20	X				X		X		X					N	-	C-P
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																

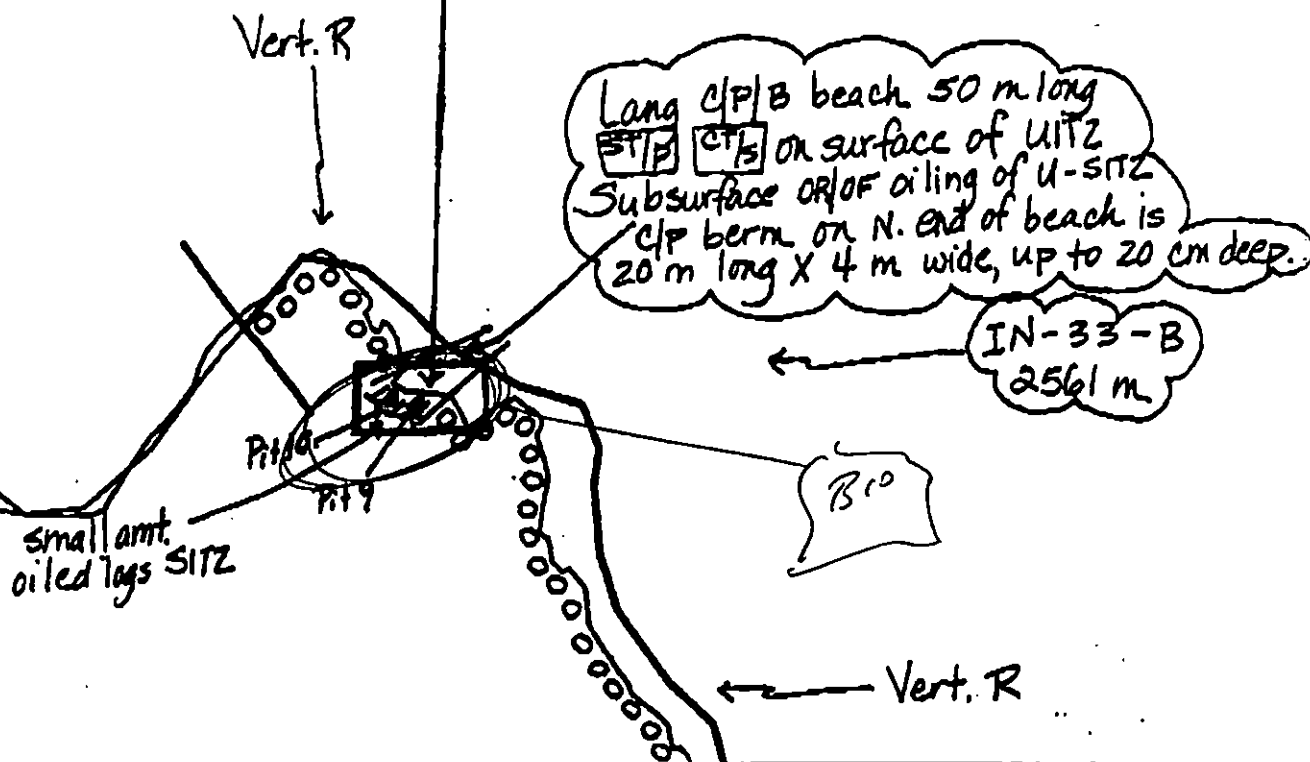
COMMENTS

REVIEWED JWDATE 4/25/90

EN-4

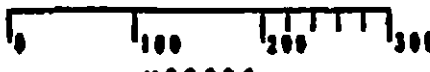
OIL CHARACTER LENGTHS (m): CT 250 ST 100 NO 221

SKETCH MAP #2



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

IN-33
EXXON SEGMENT LENGTH: 4261 m
ADEC Segment Length: 3722 m



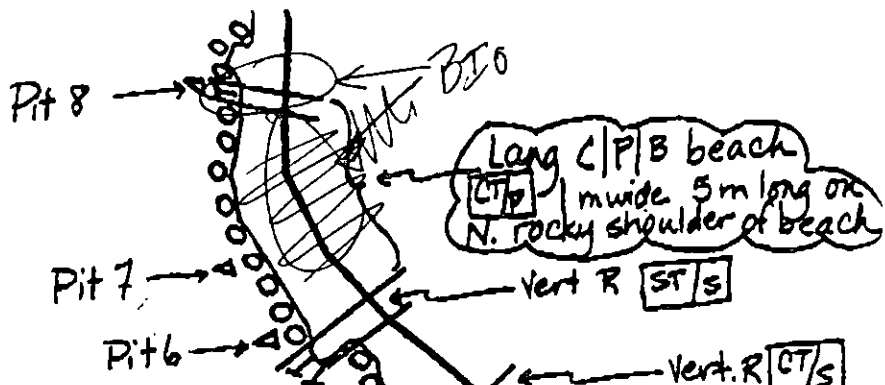
Map Key: PWS-278c

Name: C. DILLON

Date: 4/22/90

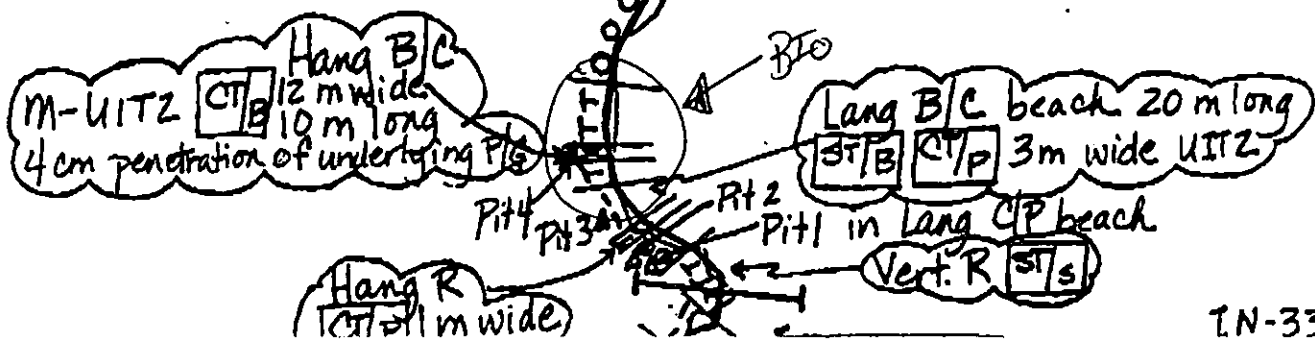
Date Entered:

N



IN-33-B
2561 m

Vert. R



IN-33-A

OG C. DILLON TEAM 6

SKETCH MAP #1

N

SEGMENT ST/IN

SUBDIVISION B

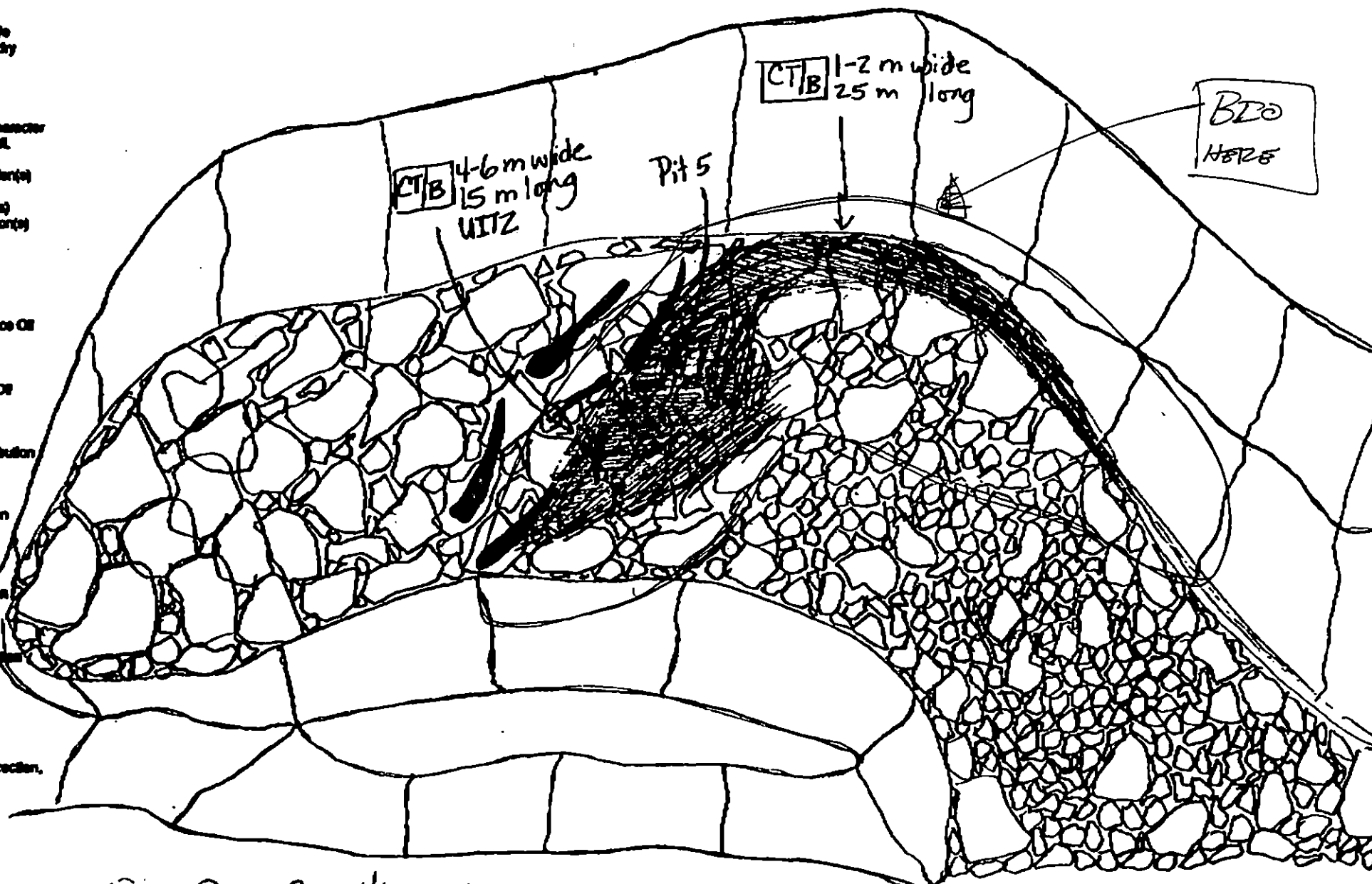
DATE 4/22/90

CHECKLIST

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

LEGEND

- 1 No Subsurface Oil
- 2 Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Dead Vegetation
- 1 Tree location, direction, and number



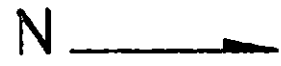
Character Length (m): AP ☐ PO ☐ CV ☐ CT 40 ST ☐ MS ☐ PT ☐ TB ☐ FL ☐ NO ☐

REVISIONS

SEGMENT ST/

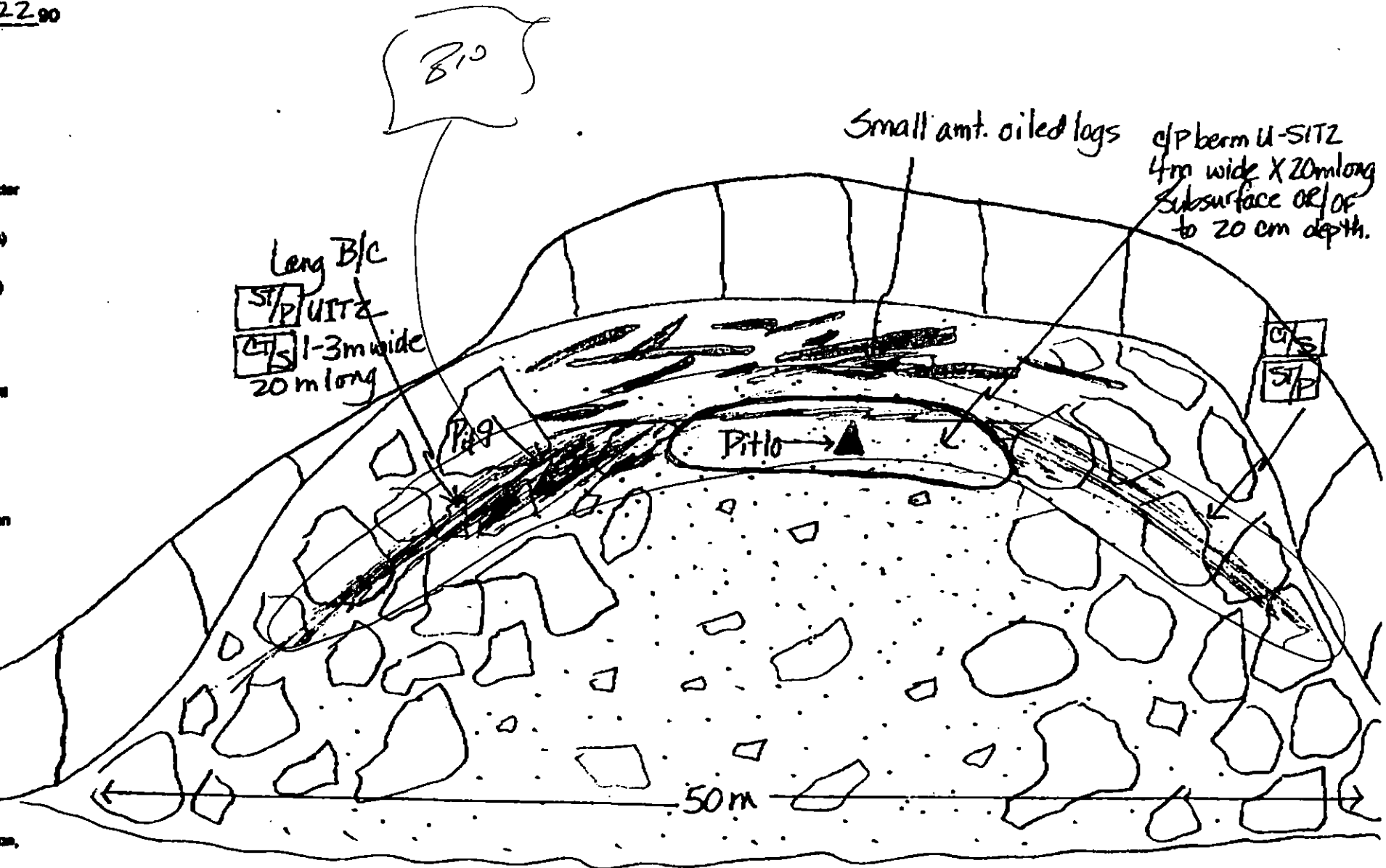
SUBDIVISION B

DATE 4, 22 80



- CHECKLIST
- ☐ N Arrow
 - ☐ Approx. Scale
 - ☐ Seg/Sub Entry
 - ☐ OS Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. NWLA/VL
 - ☐ SSL
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ PI Location(s)
 - ☐ Photo Location(s)

- LEGEND
- 1 ▲
PI - No Subsurface Oil
 - 2 ▲
PI - Subsurface Oil
 - CT/C
Continuous Distribution
 - CT/B
Broken Distribution
 - CT/P
Patchy Distribution
 - CT/S
Splashed Distribution
 - eee
Oiled Vegetation
 - 1 <->
Photo location, direction, and number



SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/20/80

Segment ST / 1N33 Subdivision B Date (mo / day / yr) 4/22/90

Time (24 hr) 1745 - 1930 Biologist JIM BARRY 2561 m. 1/2

(A) Substrate type and % of segments:
(1) Bedrock 75 (2) Boulder 10 (3) Cobble 10 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 60 Moderate 35 Low 25

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

Photographs:
Roll No. ST-6-6

Frames NONE

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Sealion - 1 Glaucous winged gull - 2
Sea Otter - 2 Common Merganser - 2

Ecological Considerations:

7II - Deer harvesting - may be impacted slightly by cleanup operations between August and February

APRIL 22 1990

IN60T IXMD 33 B

2/2

TIME 1755 - 1930

TIDE +1 → +2

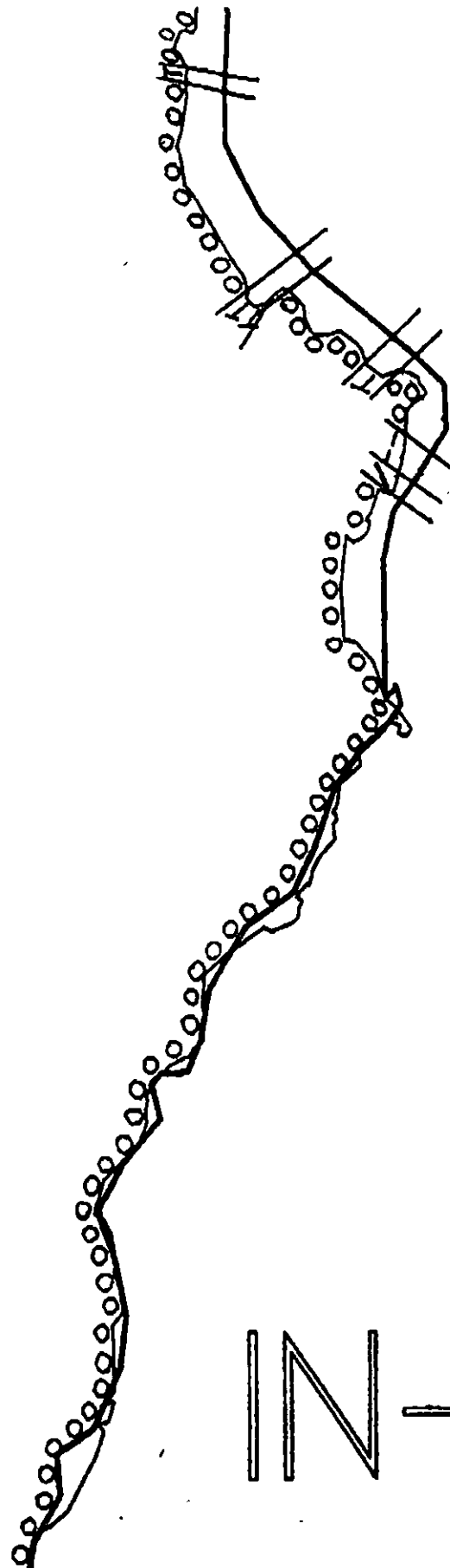
I General Comments

This subdivision is situated along a coastline w/ exposure to high waves. It is, however, not ~~as~~ as exposed as subdivision IN 33 A, located to the immediate South. Because of its similarity in terms of exposure and habitat types, the biotic communities are very similar. Some slight differences are apparent. *Whelks*, (*Nucella*) are moderately to densely abundant, apparently due to the slightly more protected nature of most of the habitat. *Mytilus* is slightly more abundant on exposed headlands, and *Pisaster*, an important *Mytilus* predator seems slightly less abundant. Few other differences are apparent.

See the bio forms for IN 33 A for further discussion.

II Oil Related Comments -

Same as IN 33 A.



IN-33-B
2561m

IN-33

XXXX Wide

//// Medium

--- Narrow

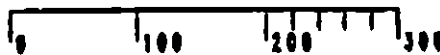
TTTT Very Light

OOOO No. 1

IN-33

EXXON SEGMENT LENGTH: 4261m

ADEC Segment Length: 3722m



Map Key: PWS-278b

Name: C. DILLON

Date: 4/22/90

Data Entered:

EN-4

← IN-33-B
2561 m

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

IN-33

EXXON SEGMENT LENGTH: 4261 m
ADEC Segment Length: 3722 m

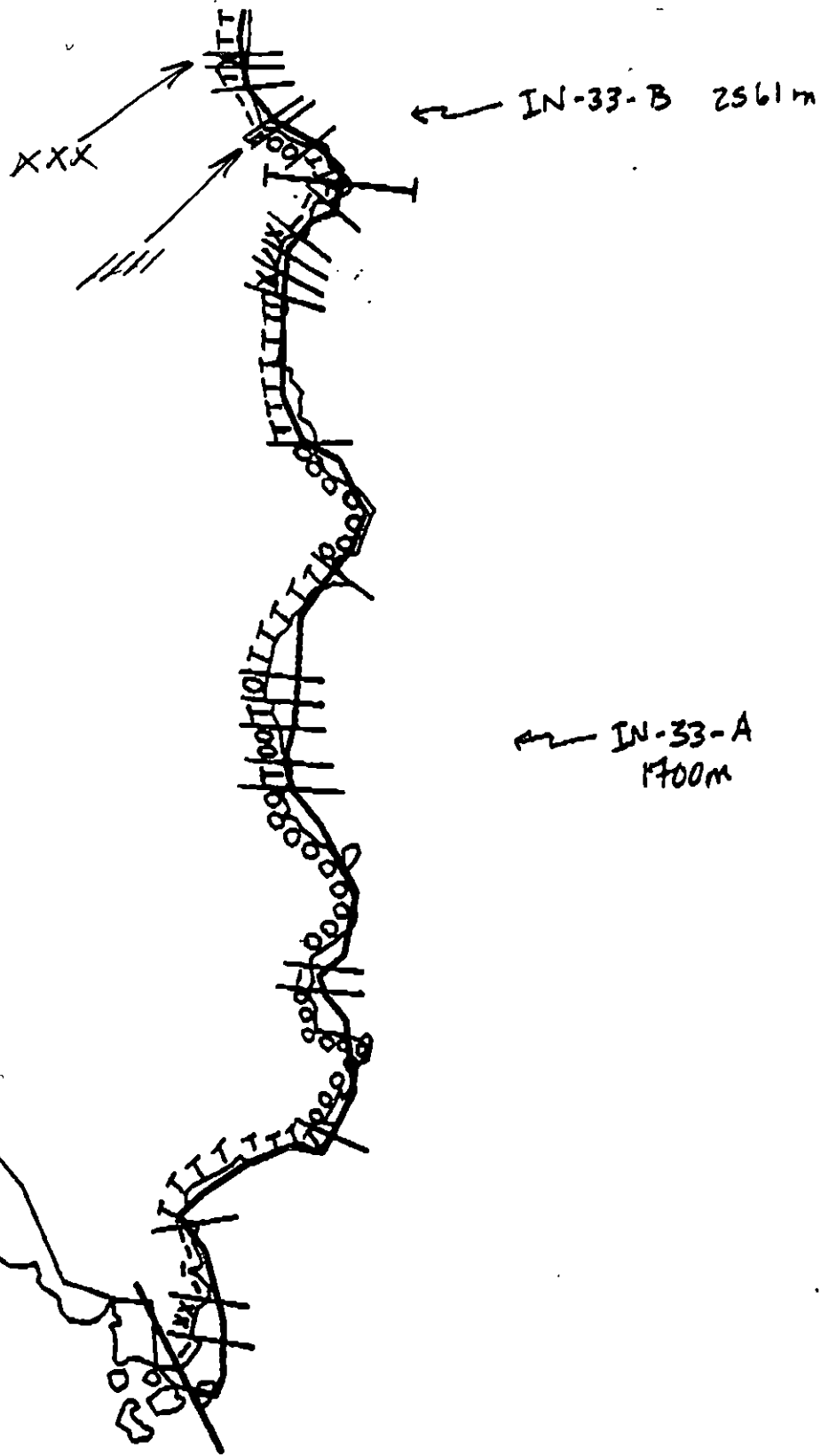
0 100 200 300
METERS

Map Key: PWS-278c

Name: C. DILLON

Date: 4/22/90

Data Entered:



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

IN-33

Exxon Segment Length: 4261m
 ADEC Segment Length: 3722m



Map Key: PWS-278a

Name: C. DILLON

Date: 4/22/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/IN-34

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ IN-34 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 29 m: V. Light 961 m: No Oil 1059 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: _____

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 (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (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 uncolled 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 (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 Subistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7J Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / IN-34 SUBDIVISION: A DATE 4/25/90

USCG

NAME William E. White SIGNATURE William E. White

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS all subsurface oiling "OF." Area of Pits #6+7 is treatable but would involve pulling down a large berm with logs on it. Pit #6 is brown "OF" and pit #7 in the berm is lighter "OF"

LAND MANAGER USDA - Forest Service

NAME Don J. Breitinger SIGNATURE Don J. Breitinger

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

This segment serves as a recreation special use designation area for the period 6/1 - 9/15.

Natural weathering appears to be the best treatment method.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG C. DILLON USCG PS1 E. WHITE SEGMENT STI IN-34
 BIO J. BARRY LAND REP D. BREITENBERG (NE) SUBDIVISION A (1 OF 1)
 EXXON G. STILES ADEC P. MONTESANO TIME 09:15 to 10:00
 TEAM NO. 6 TIDE LEVEL -2.25 +0 DATE 04/25/90
 EST. SUBDIVISION LENGTH: 2410 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION IS AN ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to E to N to W to S
 SURFACE SEDIMENTS: R 80 % B 10 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 55 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 20 m N 40 m VL 1080 m NO 1290 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	B	P	N	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT		X	X	X	X				✓	X		
STAIN		X	X	X	X		X			X		
MOUSSE												
PATTIES												
TARBALLS				X	X					X		
FILM		X			X	X					X	
NO OIL	Snow or Silt (Sketch 2)								S			X

PAVEMENT H F S — sq. m by — cmPATTIES (TARBALLS) 1 BAGSNEAR SHORE SHEEN? NO BR RW ☒ TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE uncoiled trash
oiled pumps#BAGS 2

Photographs:

Roll No. NONEFrames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	SU	U	M	V				
1	20					X	—		X						X				N	—	P-P/G
2	10		X				0-4		X			X			X				N	—	R/B/C-P/G/I
3	35					X	—		X						X				N	—	P-P
4	60					X	—		X					X					N	—	C/P-P/Ve
5	25				X		0-20		X			X		X	X				Y	20	B/C-C/P
6	40				X		0-35		X			X		X	X				N	—	C/P-P/Ve

COMMENTS

REVIEWED MHDATE 4-27-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06/13/90

OG C. DILLON
TEAM 6SEGMENT ST/ IN-34 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (V/N)	▽	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	SP	BP	GP	WP	LP	HP	SU	U	M	U				
7	25				X		0-10		X						X	X					N	-	C/P/Veg-P/Ve
8	60				X		30-60	X						X				X			Y	60	P-C/P/G/Neg/b
9	80					X	.		X							X					N	-	P-P/G
10	40					X	.		X							X					N	-	C/P-P/G/C
11	40					X	.		X							X					N	-	C/P-P
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

REVIEWED YH DATE 4-27-90

SEGMENT TN-34

SUBDIVISION 11

DATE 04/26/90

CHECKLIST

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

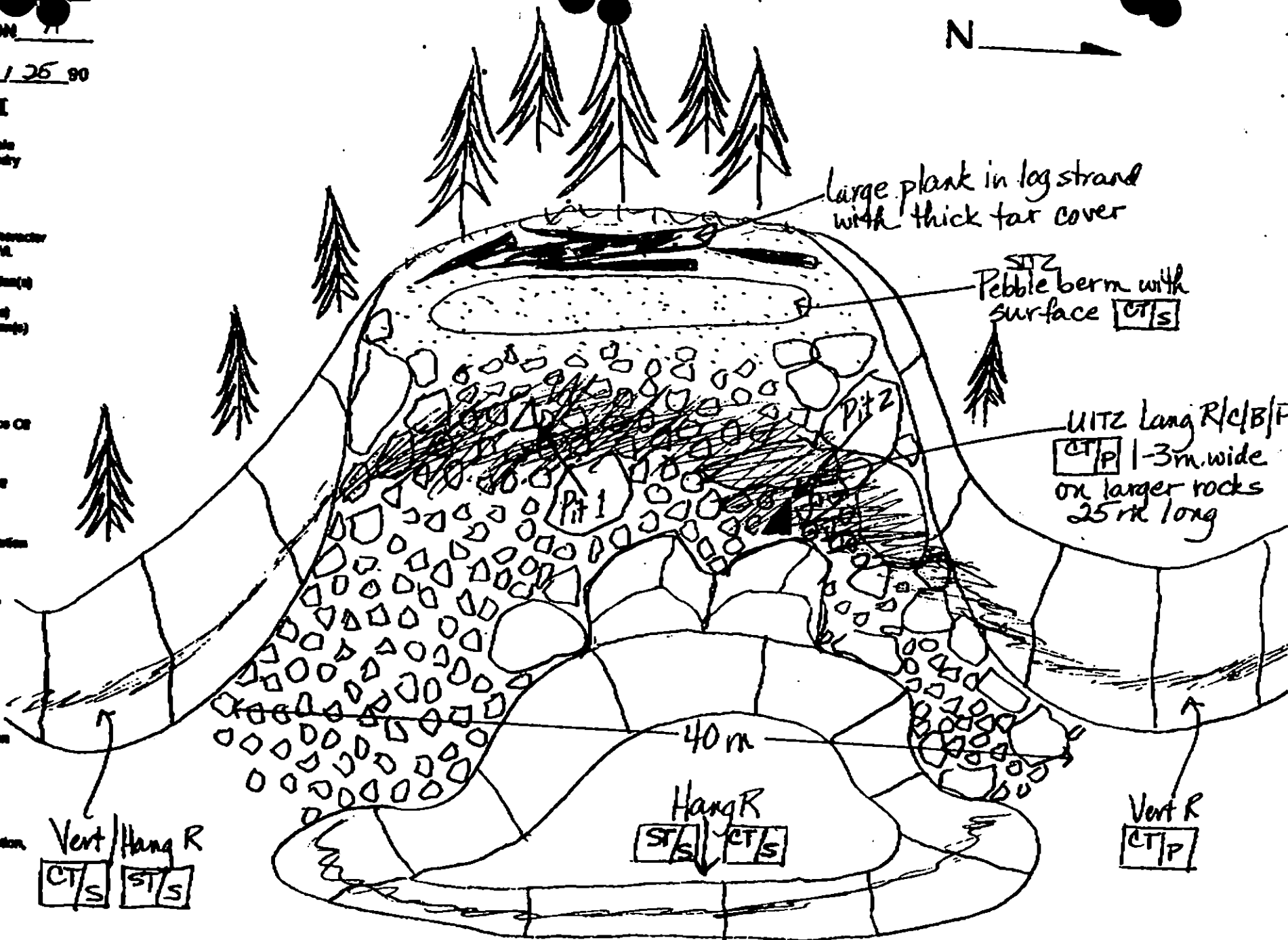
LEGEND

- 1
 - PR - No Subsurface OB
- 2
 - PR - Subsurface OB
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Old Vegetation
- 1
 - Photo location, direction, and number

Vert/Hang R

SKETCH MAP #1

N



Character Length (m): AP 0 PO 0 CV 0 CT 55 ST 5 MS 0 PT 0 TB 0 FL 0 NO 0 TOTAL LENGTH 60m

SEGMENT IN-34

SUBDIVISION 4

DATE 04/25/90

SKETCH MAP #2

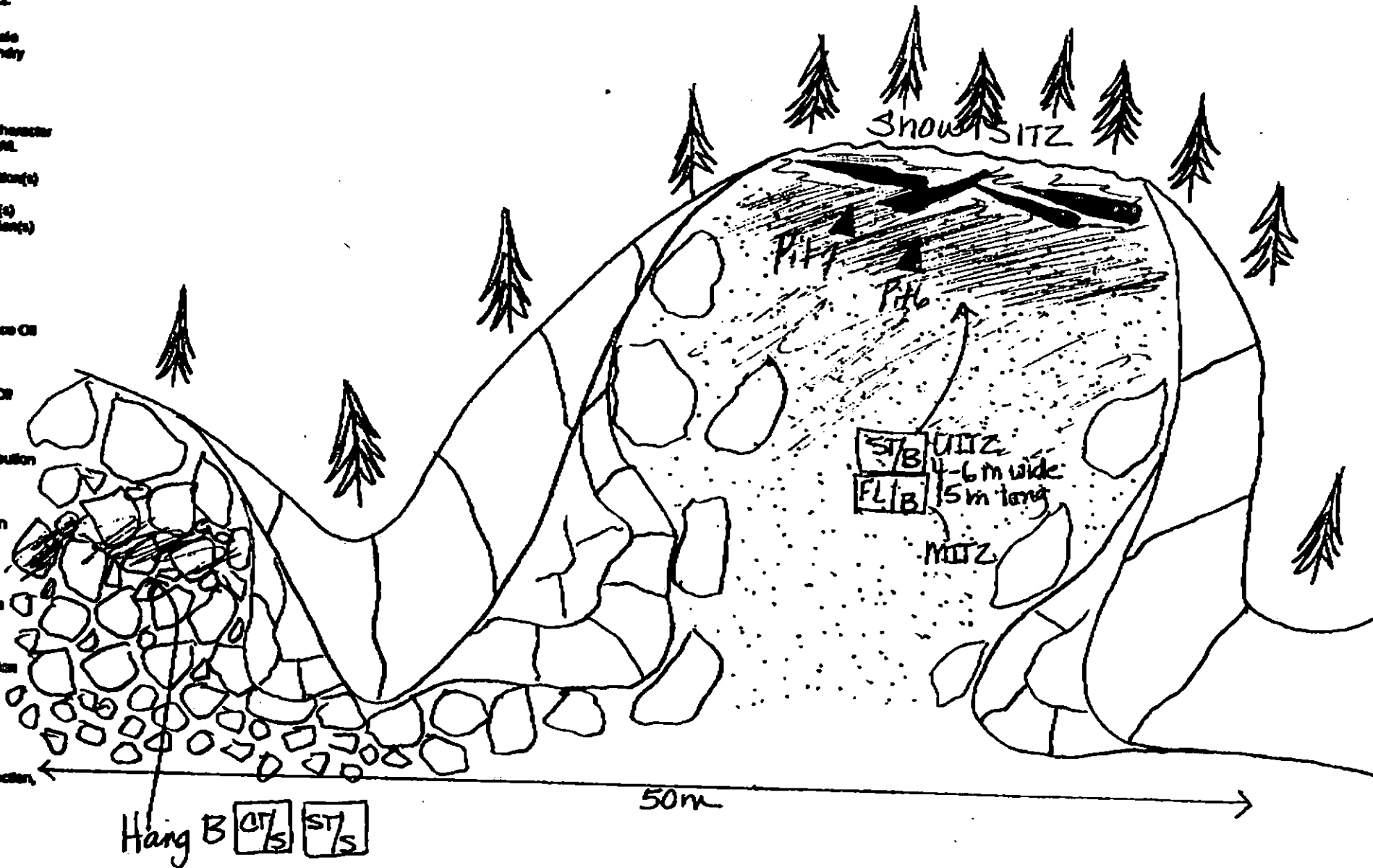


CHECKLIST

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

LEGEND

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



Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 10 NO 30 TOTAL LENGTH = 50m

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST 1/1234 Subdivision A Date (mo/day/yr) 4/29/90Time (24 hr) 0730-1008 Biologist JIM BARRYLength = 2410 1/8(A) Substrate type and % of segments:
(1) Bedrock 80 (2) Boulder 10 (3) Cobble 5 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 60 Moderate 30 Low 10

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

Photographs:
Roll No. ST-6-7Frames 3

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments:

BIRD EAGLE - 5 MARET - 2 WHITE WINGED SLOTER - 1 SEAL - 1
 RAVEN - 2 Herring Gull - 5
 CROW - 10 Pelagic Cormorant - 3

Ecological Considerations:

OTTER HULL OUT SITE - 1

T - EAGLE NEST - LOCATED ON ISLAND - 2 EACH

64 - SPECIAL USE DESTINATION

IN34A

INGOT ISLAND

APRIL 25 1990

2/8

TIME 0715 → 1000

TIDE -3.3 → +6

I General Comments

IN34 is a small island ~ 1/4 mi. N of Ingot Island. The outer coast of the segment is exposed to moderate to large waves and the inner coast has a moderate to low exposure.

A. Habitat types

- 1) Vertical Bedrock & High angle Bedrock & Boulder shores. Most of the segment fits this category. Biota generally are dense, especially in the middle to low tidal zones where algae are abundant. *Fucus* is mostly moderate in the middle & low zone. Ulva and several species of filamentous algae are moderate to dense in the middle shore, particularly on the protected side of the island. In the low zone *Oderthalia*, *Ptilota*, and finely branched red algae (polysiphonous *Ceramiales*?) are dense. The extreme low tidal zone and subtidal are covered by *Costaria*, *Laminaria*, and *Agarum*. Alaria is abundant on the exposed side of the island.

The fauna are typical of a moderately exposed shore. *Mytilus* adults is highly patchy, with moderate coverage in several slightly protected sites, and is sparse overall. Spats are present throughout the intertidal on most substrata in sparse densities. Littorines, limpets, and chelms are moderate to sparse, but have a high diversity. Barnacles often are dense in the upper zones, and on exposed shores, *Semibalanus carnosus*, the large acorn barnacle, is dense. Species diversity is quite high on the island, and related to the variable microhabitat types associated with the changing wave exposure.

2) Cobble and Cobble/Pebble beaches.

Several small beaches are present on the segment. On the exposed side of the island, the cobbles and pebbles are more rounded by wave action and ~~water~~ are more restricted to areas with larger cobble and boulders. ~~Gastropods~~ Littorine snails are dense on large cobble in ~~sea~~ beaches throughout the island. Mytilus adults are absent from most beaches, except for outcrops of boulder or bedrock where they can occasionally be moderate to dense. Spat and small juveniles are sparse ~~on~~ on all but small cobble and pebbles. Barnacles are sparse to dense, depending on the size of the cobble. Algae are abundant only in the middle and low zones on these beaches. Small cobble and pebble are clean, except for a sparse cover of diatoms or filamentous algae. On exposed shores, cobble is nearly clean even in the ~~sub~~ subtidal zone. Protected shores have a thicker cover of filamentous algae and diatoms.

B. Oil Related Comments.

- 1) Oil cover is mostly restricted to upper & supratidal zones and is light to very light. The only apparent effect of oil is the coat found in some sections on the upper zone barnacle population. Coverage occurs over only a small part of the barnacle population and mortality, ~~the~~ estimated from the percentage of empty shells ~~is~~ is variable. Sites with oil have from 30 to 80 % dead (averaging ~50%), while adjacent areas without a coat of oil average ~10%. Lower zones show little evidence of oil. Spat are present on oil stains, and rarely on weathered coats of oil.
- 2) Cleanup operations will probably not affect local ecological sensibilities. However, 2 eagle nests are located on the island, and a sea otter haul site occurs on the island. (see map)

APRIL 25 1990

Reserve Codes For Entire Segment

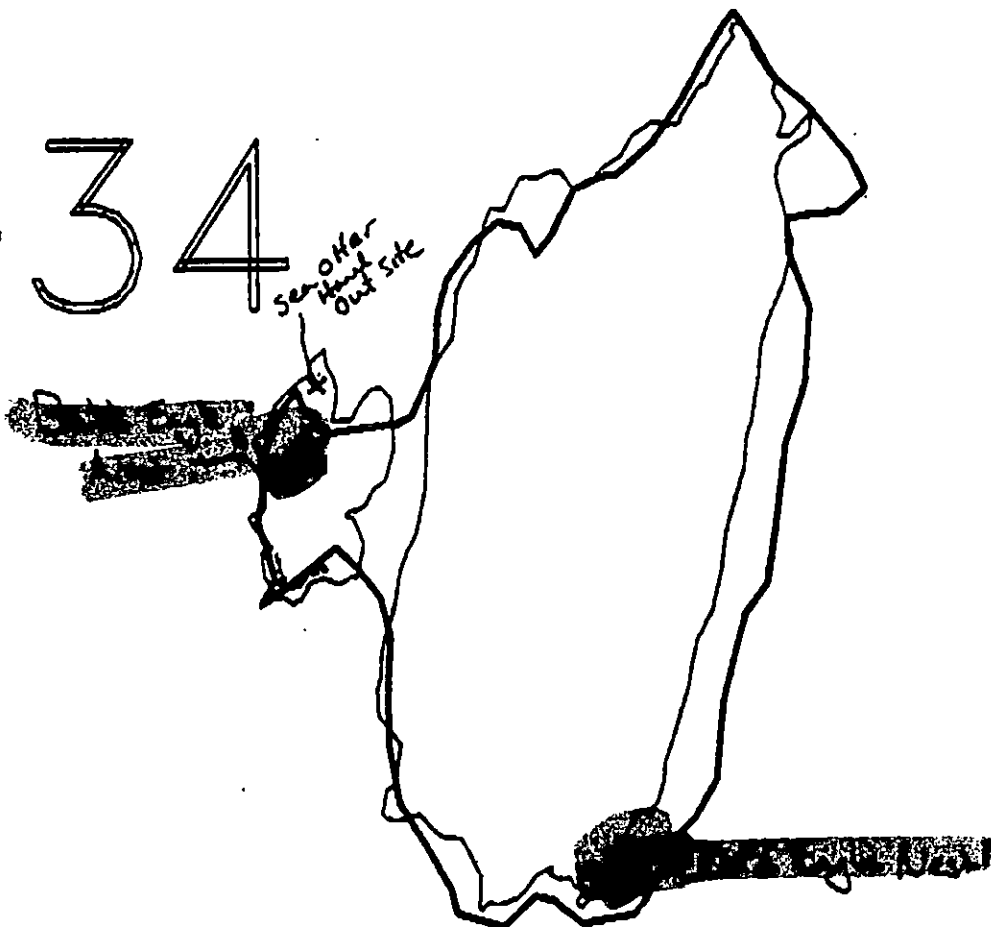
ST-2

6Y

8/8

N-34

See other
hand
out site



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

IN-34

ADEC Segment Length: 2078m



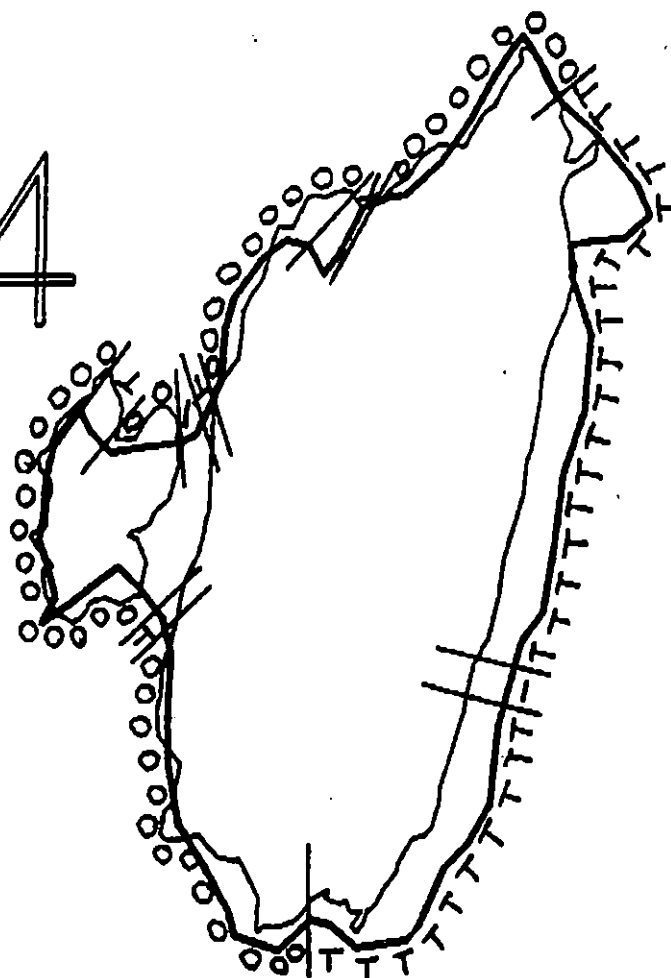
Map Key: PWS-279

Name: _____

Date: _____

Data Entered: _____

N-34



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

IN-34-A

Exxon Segment Length: 2410m
ADEC Segment Length: 2078m



Map Key: PWS-279

Name: C. DILLON

Date: 4/25/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ IN-34 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and
contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 27 m: Narrow 29 m: V.Light 961 m: No Oil 1059 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: _____

TAG COMMENTS: Monitors to reassess SUITZ and logs when in the area

TAG APPROVAL DATE: May 5, 1990
 ADEC Art Werner Art Werner
 EXXON Mark N. Silbert Mark N. Silbert FOSC: u L DATE: 5-9-90
 NOAA Gary Petras Gary Petras
 USCG G.A. Reiter G.A. Reiter

SEGMENT IN-34SUBDIVISION ADATE 04/26/90

CHECKLIST

☐ H Arrow
☐ Approx. Scale
☐ Seg/Sub Boundary
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HRA/LA/PL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pit Location(s)
☐ Photo Location(s)

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Centrimum Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

 Vert / Hang R
 CT/S ST/S

 Hang R
 ST/S CT/S

 Vert R
 CT/P

40 m

Large plank in log strand with thick tar cover

 STZ
 Pebble berm with surface CT/S

 UITZ Lang R/C/B/F
 CT/P 1-3m. wide
 on larger rocks
 25 m long

N

ATCH MAP #1

 Character Length (m): AP 0 PO 0 CV 0 CT 55 ST 5 MS 0 PT 0 TB 0 FL 0 NO 0 TOTAL LENGTH 60m

SEGMENT S

34

CH MAP #2

SUBDIVISION

A

DATE 04/25/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ C# Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSI
- ☐ 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

Hang B CT/S ST/S

50m

SHOW SITZ

ST/B
FL/B
MITZ
4-6m wide
15m long

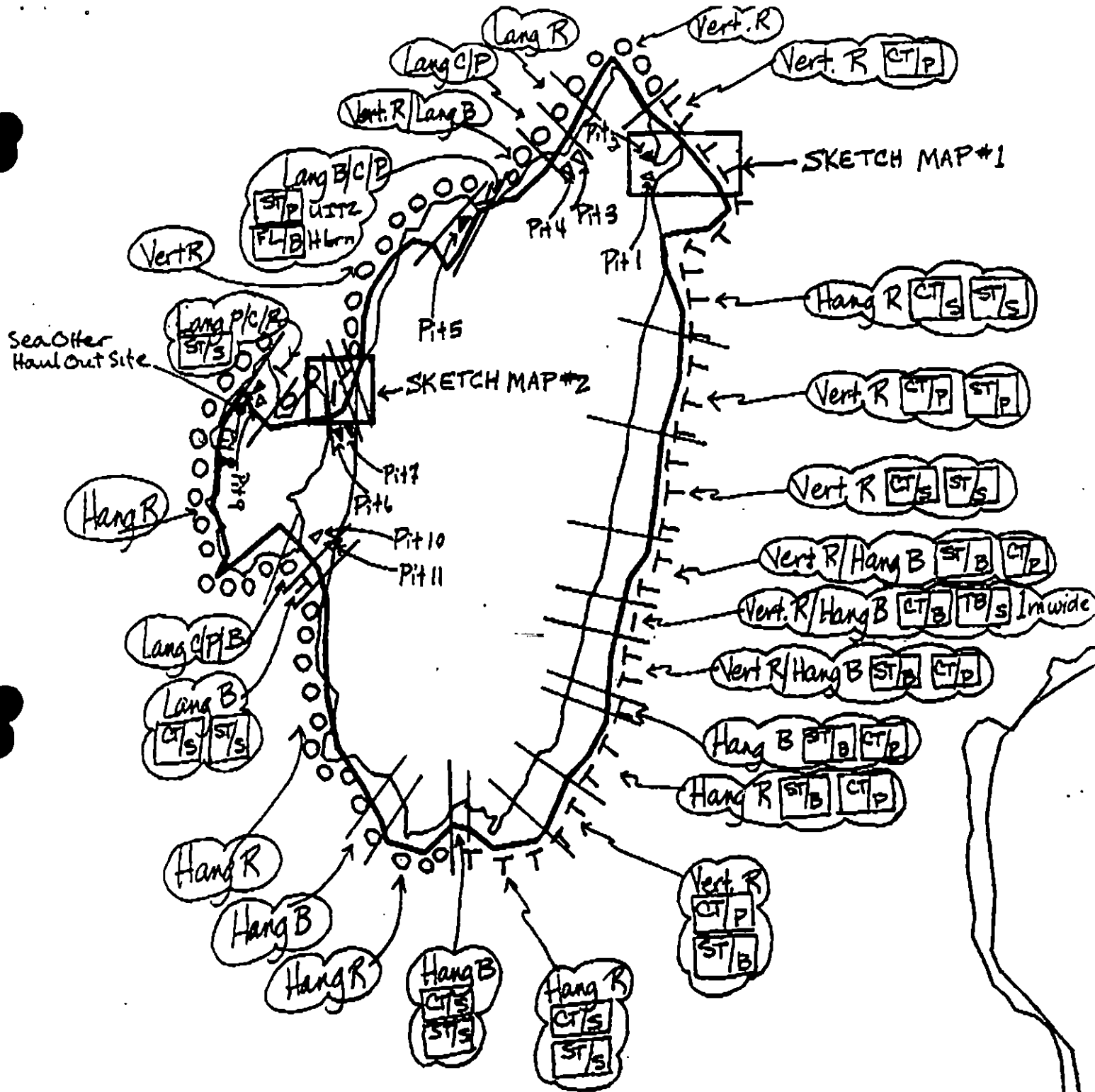
MITZ

Pit 1

Pit 6

N

Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 10 NO 30 TOTAL LENGTH = 50m



OIL CHARACTER LENGTHS (M):

CT 590 ST 525 TB 1 FL 25 NO 1270

Wide
Medium
Narrow
Very Light
No Oil

IN-34

Exxon Segment Length: 2410m
ADEC Segment Length: 2078m



Map Key: PWS-279

Name: C. DILLON

Date: 4/25/90

Date Entered:

APRIL 25 1990

Ecology Map
Resource Codes For Entire Segment
ST-2
6Y

8/8

N-34

See other
think
out site

Bald Eagle
Nest

Bald Eagle Nest

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

IN-34

ADEC Segment Length: 2078m

0 100 200 300
METERS

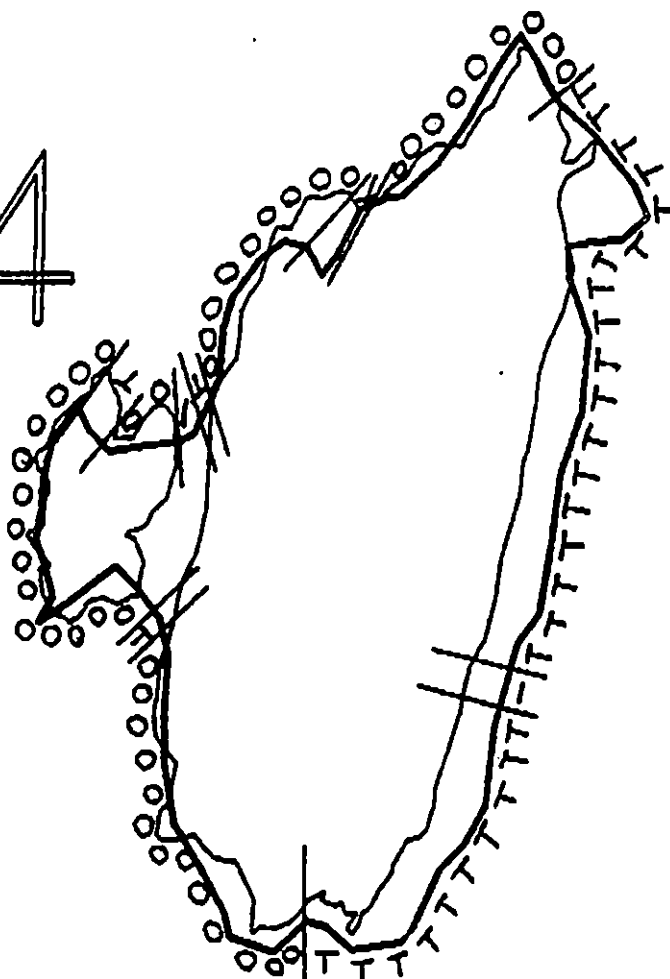
Map Key: PWS-279

Name: _____

Date: _____

Data Entered: _____

N-34



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

IN-34-A

Exxon Segment Length: 2410m
ADEC Segment Length: 2078m



Map Key: PWS-279

Name: C. Dillon

Date: 4/25/90

Date Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK