

OIL SPILL PUBLIC INFO. CENTER



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EVOS
GC
1552
.P75
S42
1991
v.47

[Shoreline evaluations, 1991].

Prince William Sound KN-04 to KN-25

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1991 MAYSAP EVALUATION

SEGMENT: KN 004 SUB: A REGION: PWS SURVEY DATE: 5/4/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:

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

Richard J. O...

5/21/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Apply Customblen and Inipol at locations D and E after removing easily accessible asphalt ^{+HSEAR} Avoid dense mussel beds at and near location E.

TAG:

FOSC:

TAG APPROVAL DATE: MAY 21 1991

FOSC APPROVAL DATE: 5/29/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. THREE SEGMENT KN0004 SUBDIVISION A DATE 5/4/91

DEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley

☐ NTR ☒ TREATMENT RECOMMENDED: Biota w/ oiled areas is sparse. Manually remove abundant AP thru-out subdivision (see og map for location) Manual removal of OP/HOR sediments. Roll boulders to expose oil, manually (mechanically till, Area can be worked mechanically, machine can be unloaded) Manually remove heavily oiled sediments till w/incoming tide, agitate sediment to float oil, retrieve oil w/ snare boom. - The Heaviest oiling is located at sections D & E. Both are heavily oiled and will NEVER clean itself naturally w/o a large amount of work. I also suspect that the tar mats will melt in the Summers Sun & become mobile.

EXXON

NAME Jon GARNICK SIGNATURE Jon GARNICK

☒ NTR This segments has some AP that was broken up and partially removed. The biota is in good shap, it is healthy and thriving in the lower and mid tide range. Most of this segment has subsurface oil.

LANDMANAGER

NAME John Schmar OF Chugach SIGNATURE John Schmar

☐ NTR

☒ Recommend ^{to remove} All oil from segmt

USCG/NOAA

NAME MOONEY / Barato SIGNATURE Tony Mooney / Ang Barato

☐ NTR Segment is comprised of Boulder, Cobble in MITZ AND Pebble, Gravel in UITZ. Beach is in a moderate wave energy zone and clast are subangular to subrounded. Outcrops in LITZ shelter MITZ sediment which are abundant with mussels. Patches of weathered A/P AND SOR in UITZ extend over an area 5 by 40m. Subsurface HORZ conditions are present in Gpits in MITZ AND extends over an area 5 by 20metre. Subsurface oil is degraded.

If treatment is applied to segment, crew should be careful of mussel beds in MITZ. Manual removal of A/P would be ~~sufficient~~ sufficient.

PAGE 5 OF 6

Birth areas of AP has associated OP/HOR subsurface

PAGE 2 OF 2

DATE 4 MAY 191

[illegible]

oiling conditions associated with them. These include an estimated $5 \times 20m$ at Location D and $5 \times 30m$ at Location E; subsurface oiling may be discontinuous within these areas and this estimate is thought to represent the largest extent.

OG 2015

A+

KN-05

B

C

AKN



(P)

OIL

136

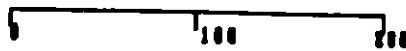
A

B



KN0004 A

METERS



AK State Plane Zone 4
18N000000

Subdivision Field Map

Map Key: ENIKN0004A

Name: HARDER

Date: 4 May 91

REVIEWED: MGS/9/91 ES reviewed, May 8

LOCATION MAP

OG 3 of 5

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/4/91

SEGMENT # KNO4

TIDAL HEIGHT(Range) 2-4'

SUBDIVISION A

BIOLOGIST Stoker

SEA STATE 0-1'

WIND SPEED/DIRECTION E 5-10

PHOTOGRAPHS: ROLL #

FRAME #

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

Moderate to low energy beach of pebble/cobble/boulder and rock headlands.
 Biota in upper intertidal generally sparse (barnacles/spat, limpets, Littorina).
 Biota in mid-lower intertidal on cobble/boulder beaches south of main point consists of patchy new-growth Fucus, patchily dense barnacles/spat, patches of interbedded and attached Mytilus, and sparse to moderate densities of limpets and Littorina. Biota on same substrate NW of the point is similar except that Mytilus are much sparser and Littorina (with egg masses here) more common. Both barnacles and Fucus increase in abundance to NW and downslope on this beach.
 Biota on point bedrock dominated by dense new-growth Fucus, filamentous green algae, and dense barnacles and spat MTZ and below. Cobble substrate at & near point characterized by extensive and dense patches of interbedded Mytilus, dense Littorina with egg masses, patches of new-growth Fucus and barnacles/spat, filamentous green algae, surfgrass, clusters of small Pagurus, small Leptasterias, Nucella, scarlella and limpets, occasional Nemeritoans and eel blennies, and shells of Saxidomus and Protothaca.
 Biota within/proximal to surface oil locations A-C relatively abundant & diverse, described above r.e. cobble/boulder substrate at or near the point.
 Biota within/proximal to surface/subsurface oiled areas D & E consists of sparse Fucus, filamentous green algae, sparse barnacles, scattered clusters of limpets, sparse interbedded Mytilus, and sparse to moderate densities of Littorina with egg masses. Biota downslope from these areas similar in major composition, increased abundance and, to some extent, diversity.

WILDLIFE OBSERVATIONS

(cont. on attached sheet)

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 overhead	
Seabirds			
Waterfowl	Geese	Several large flocks overhead	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

If additional treatment is undertaken on this segment, care should be taken to minimize disturbance/destruction of the mid and lower intertidal community downslope from areas D and E, especially the dense mussel beds at and near the headland. This community appears healthy, abundant and relatively diverse, and is recovering rapidly.

Bio Map

← Generally abundant
& diverse biota

← Dense Fucus & Barnacles

← Dense Mytilus
Beds

← Generally abundant
& diverse biota

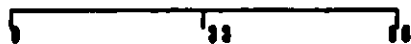
S. Stoker
5/4/91

KN0004

Segment Reference Map
Map Key: KN1KN0004



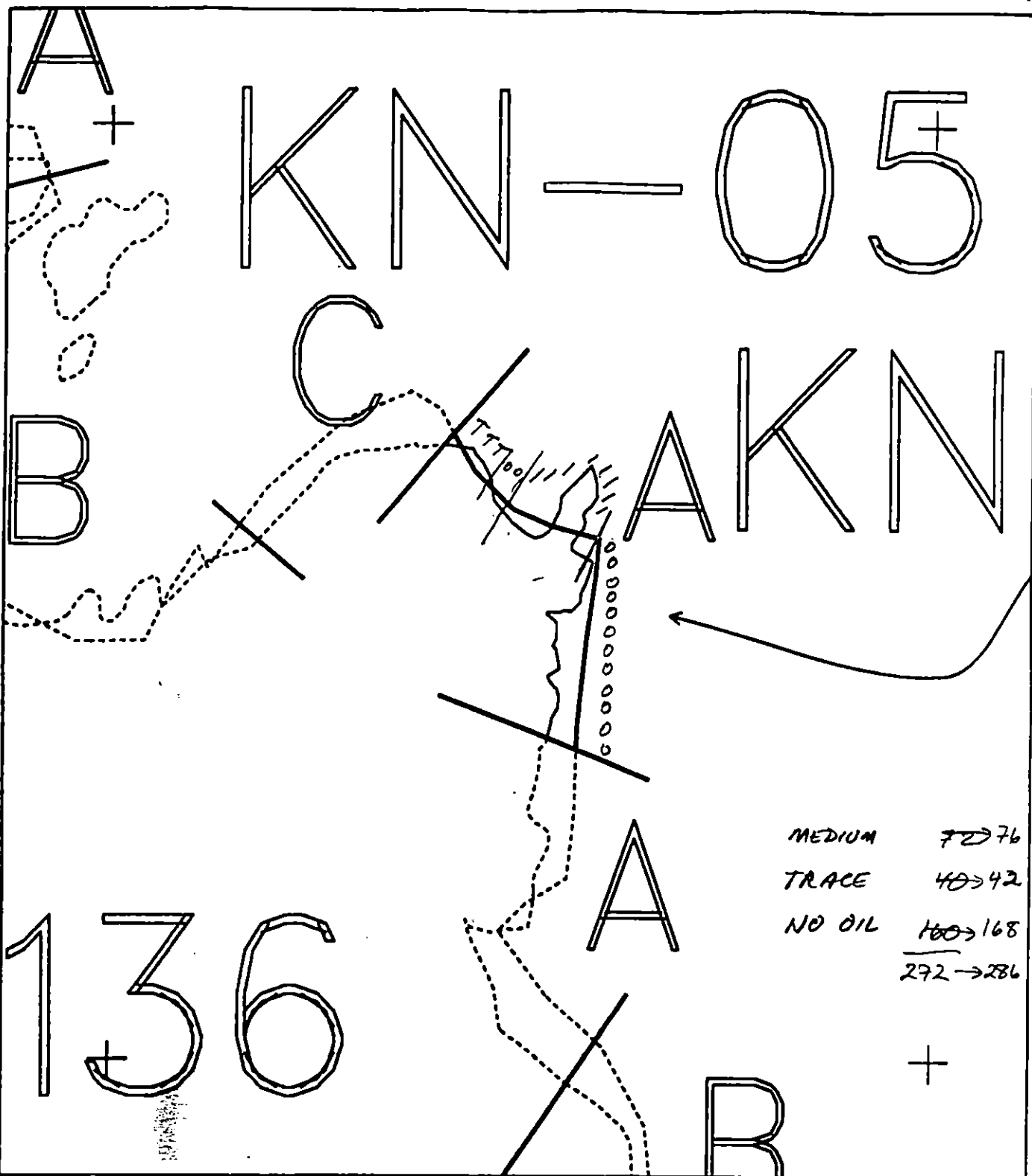
METERS



AK State Plane Zone 4
1220004



EAGLE NEST



MEDIUM 7276
 TRACE 4042
 NO OIL 100168
 272-286

XXXX	Wide	KN0004 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 286m	Map Key: KNKN0004A
----	Narrow	METERS	Name: <u>HARPER</u>
TTTT	Very Light	0 100 200	Date: <u>4 MAY 91</u>
0000	No Oil	AK State Plane Zone 4 550004a	Date Entered:

REVIEWED: MC 5/9/91
 SURFACE OILINO DISTRIBUTION
 MAP

OG 5 of 5

ASAP TAG REVIEW SHEET

Segment: KNO4 Subd: A Site: 1

Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

☐ HIGH ☐ MEDIUM ☒ LOW ☐ NTR X None

Treatment
Recommended:

m/p of SOR only because low energy beach

BROKEN SOR don't know

If High OR Not.

P15 2 OF OIL 0-10cm.

Surface sor??

NOT to be reassessed

Priority Site For Reassessment In 1991

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

TAB 21 AUG 90
Manual Rate + BIO
Medium PRIORITY

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ KN-04 Subd.: A Site: _____ Date: 8-10-90 1990

Conditions Observed: Both work sites had moderate amount of coat and cover as well as a moderate amount of substrate material. Several areas of AP (and AP residual after manual removal) were located with the largest being approx 50m x 10m below which is OP and OR subsurface oil.

Followup Recommendations: Manual removal of AP, substrate material, and residual surface and subsurface OP and OR oil. See below comments.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☐ Mod ☐

ADEC Bob McReady (name) Robert E. McReady (signature)

Comments: Agree with above recommendations. In addition, I would recommend HP HU washing with a floodline to treat areas of heavy cover, coat and substrate MS in boulders

Exxon John Dorn (name) John Dorn (signature)

Comments: ADDITIONAL MANUAL REMOVAL CAN BE ACCOMPLISHED BEFORE "BIO" TREATMENT.

USCG Dan Davis, 6m (name) Dan Davis (signature)

Comments: POSSIBLE HOT WATER WASHING. SURFACE WATER IS LOWER THAN KN-136. SOME OIL COULD BE LOST IN MED ROCK (CAVE) BEACH. ADDITIONAL "BIO" TREATMENT AND DISBURSEMENT OF PATCHY AREAS TO ALLOW WEATHERING. TREATMENT IN 1990 SHOULD BE CONSIDERED.

Land Rep. LORA JOHNSON (name) Lora L. Johnson (signature)

Comments: AGREE WITH ADEC COMMENTS. SEE SSAT SITE MAPS ALSO.

JF/83

SEGMENT AS KN-004 SUBDIVISION: A SITE: 1 DATE 10 AUG 90NAME Don Orvis GM USCG SIGNATURE Don Orvis
Don Orvis, NOAA☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SOME OAT/STAIN OBSERVED ON LARGE ROCK OUTCROPS AND INTERSTITIAL OILING OBSERVED IN LARGE POULCES AT EDGE OF ROCK OUTCROPS. SEVERAL PITS WERE DUG SHOWING OILING TO BLOCK AND AN OIL LENS @ 2CM. ("OR") IN ADDITION, A PATCH OF ASPHALT, "SOL" AND MOUSSE WAS DISCOVERED APPROX. 50M X 10M. SUGGEST WORK BE PERFORMED ON THIS SEGMENT IN 1990 W/ BIO TREATMENT AND REASSESSMENT IN 1991.

ADEC

NAME Frank Proctor SIGNATURE Frank Proctor☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oiling on this segment includes MS, AP, OP, OR, CT and CV. Coat and cover are on majority of haulbars in HITZ with interstitial mousse between these same haulbars. Potely AP, OP, and OR oiling is broken only by one large area of AP, beneath which is OP and OR subsurface oil to 5cm. Segment has been recommended for further work in '90 by SAP/Sunny crew. Segment would benefit from HW-HP washing utilizing a Header F-lash.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

AGREE WITH ADEC. SEE SSAT SKETCH MAP ALSO.

EXXON

NAME JOHN DEAN SIGNATURE John Dean☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SHELTERED AREA, OIL PRESENCE

100-444444-KP0044

SUBDIVISION A

TOTAL NO. SITES 1

TIDE LEVEL o.c. 10 - 0.5

SITE 3

[illegible]

names _____

REVISION NO. 7/27/99

SECT ST/ KN-04

SUBDIVISION

DATE 3, 30 80

CHECKLIST

- ☒ Name
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Obs.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HULLAGE
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PA Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CVC
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

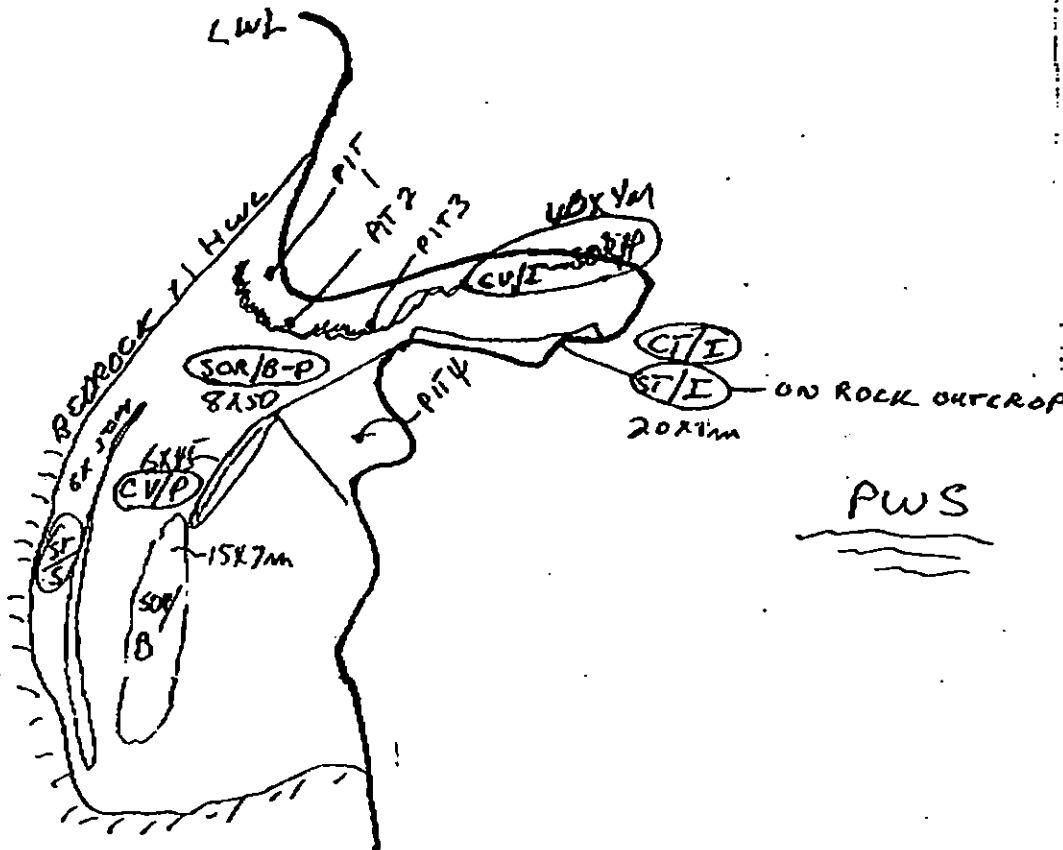
CT/S
Splashed Distribution

Need Vegetation

Photo location, direction,
and number

SKETCH MAP

N
KNIGHT ISLAND

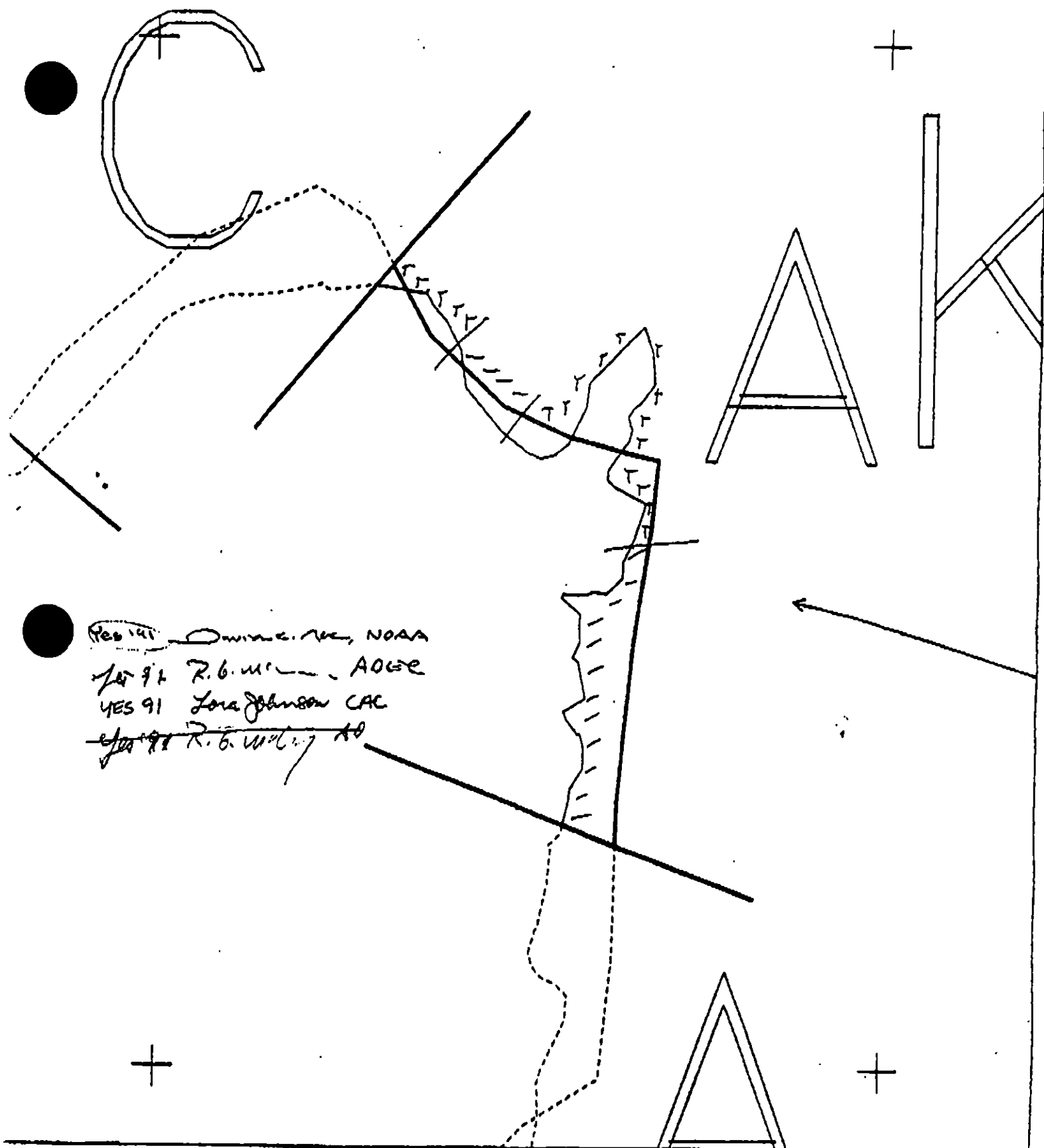


8/10/90

SOR	105
ST	70
CV	85
ST	70
CT	20
NO	0
US	0

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

REVISED 20/7/80



Res. 141 - Diving. Rec., NOAA
 for 91 R.B. M. - AOCB
 YES 91 Lora Johnson CAC
~~for 91 R.B. M. - AOCB~~

X ● //// --- TTTT 0000	Wide Medium Narrow Very Light No Oil	KN-4 A ADEC Subsegment Length: 286m METERS AK State Plane Zone 4 1:2015	 	Subdivision Field Map Map Key: KNKN-4A Name: NAKASHIMA Date: 8/9/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

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

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

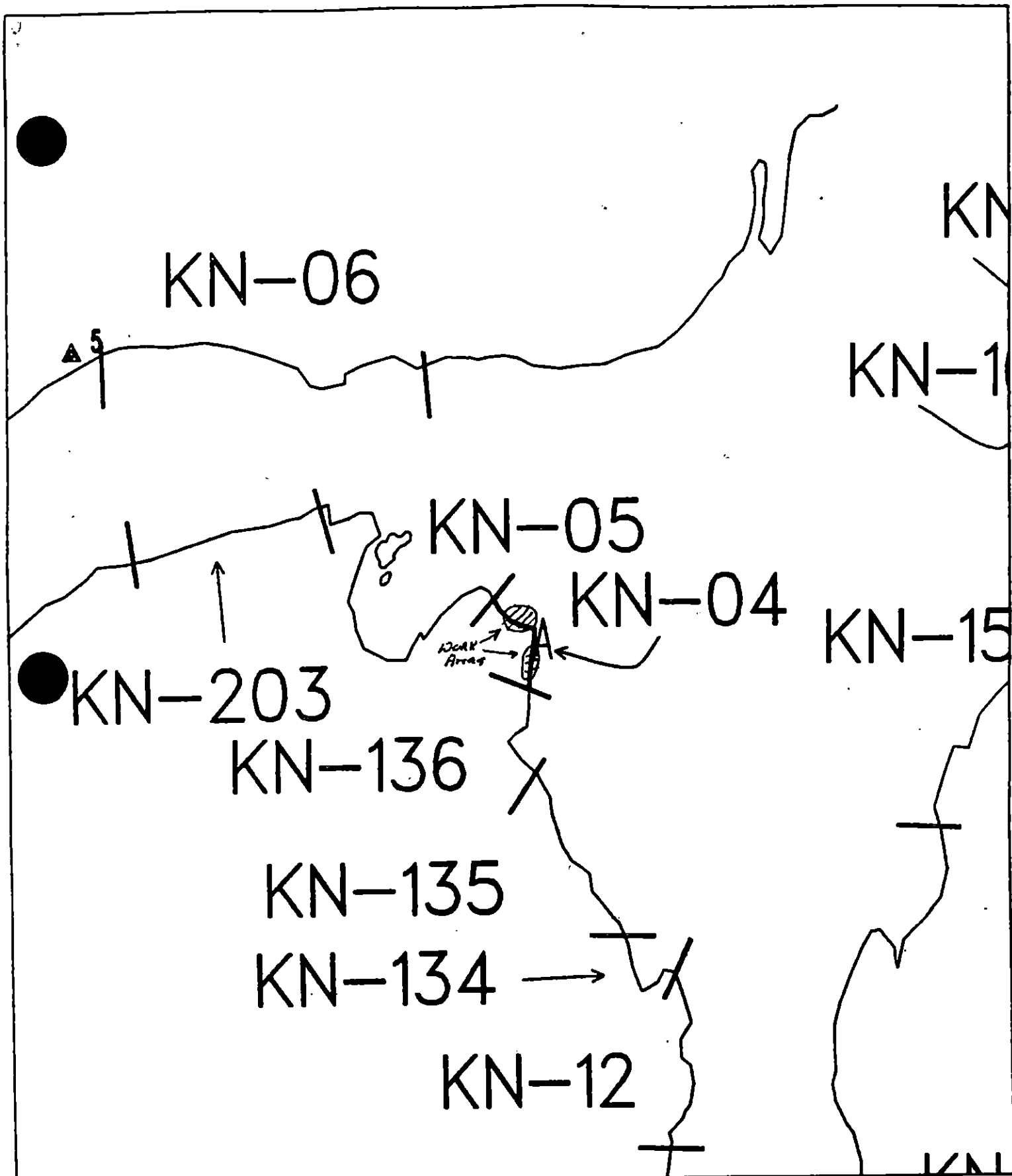
TAG APPROVAL DATE 5/24/90.
ADEC Art Weimer
EXXON Andy Lee
NOAA B. Wescott
USCG M. J. Hall

FOSC

DATE 5-24-90

Prepared By: Andru Meyer WTK

Date 5/22/90



Exxon Company, USA
Map Key: KNI-KN-4
M. 11 1000



ECOLOGY MAP
SEGMENT KN-4
SUBDIVISION *A* (1 of 1)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1077 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-04 SUBDIVISION A (1 OF 1) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion molting site (30, 0) - 8/15 to 9/15;
Herring spawning area (2M) - 4/1 to 6/15; contact ADF&G habitat
division prior to cleanup.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict boat traffic and gen-
eral disturbance to minimum.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Keith J. Owen DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V.Light 36 m: No Oil 50 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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: Recommend breakup and removal of tarmats as shown on map,
as well as bioremediation of area where cover and coat are indi-
ated. Work between (6/15) and (8/15) based on molting, herring spawn-
ing constraints.

→ [See Addendum Dated 5/22/90] wks

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC JOHN BAUER
EXXON ANDY WAT
NOAA Bert Wiercott
USCG Ken KEANE

FOSC: WHL DATE: 5-6-90

SHORELINE EVALUATION

SEGMENT ST/ KN-04 SUBDIVISION A (1 OF 1) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion molting site (30, 0) - 8/15 to 9/15;
Herring spawning area (2M) - 4/1 to 6/15; contact ADF&G habitat
division prior to cleanup.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict boat traffic and gen-
eral disturbance to minimum.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V.Light 36 m: No Oil 50 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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: Recommend breakup and removal of tarmats as shown on map,
as well as bioremediation of area where cover and coat are indi-
ated. Work between 6/15 and 8/15 based on molting, herring spawn-
ing constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC JOHN BAUER
EXXON ANDY WAT
NOAA Burt W. Wright
USCG KEN KEANE

FOSC: W. L. DATE: 5-6-90

03

SEY

SEGMENT ST/

KN-04

SUBDIVISION

DATE 3, 30 90

CHECKLIST

- ☒ M Arrow
☒ Approx. Scale
☒ Gap/Sub Endry
☒ Oil Dist.
 Width
 Length
 % Cover
☒ Substrate Character
☒ Est. HWA/LVA
 SSL
☒ Profile Location(s)
☒ Profile(s)
☒ Pit Location(s)
☒ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

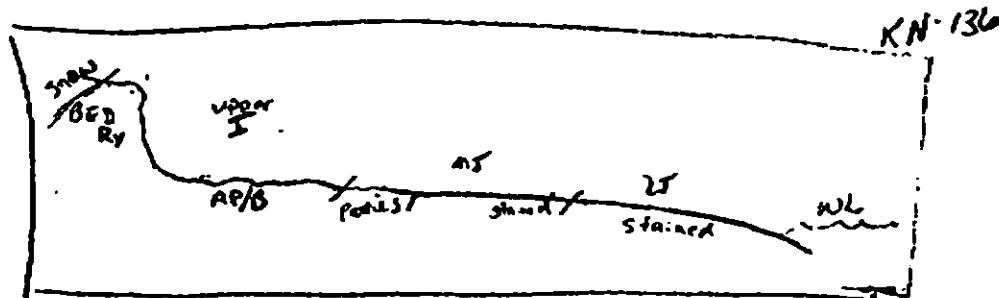
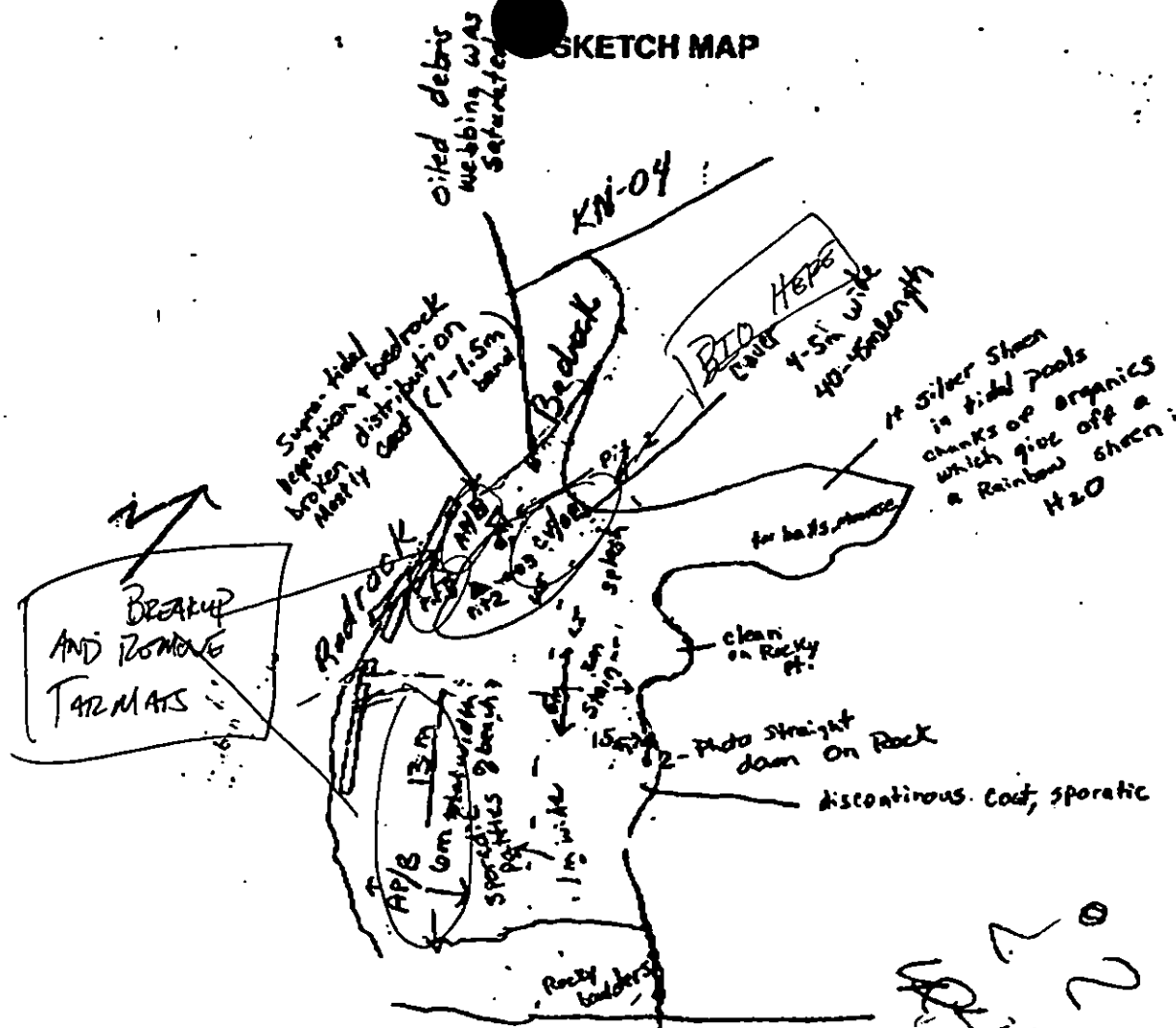
Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

SKETCH MAP



AP/B - 13m length x 6 width
 Stain 6m length x 2m wide
 Cover - 45m wide x 40-45m length

Is this what you
 wanted in sketch?

Oil Character Length (m): AP 13 PO CV 45 CT ST 6 MS PT TB FL NO

OG RAVEY
SEGMENT ST/KN-04

SUBDIVISION —

DATE 3 / 30 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. H/W/L/WL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PI Location(s)
- ☒ Photo Location(s)

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

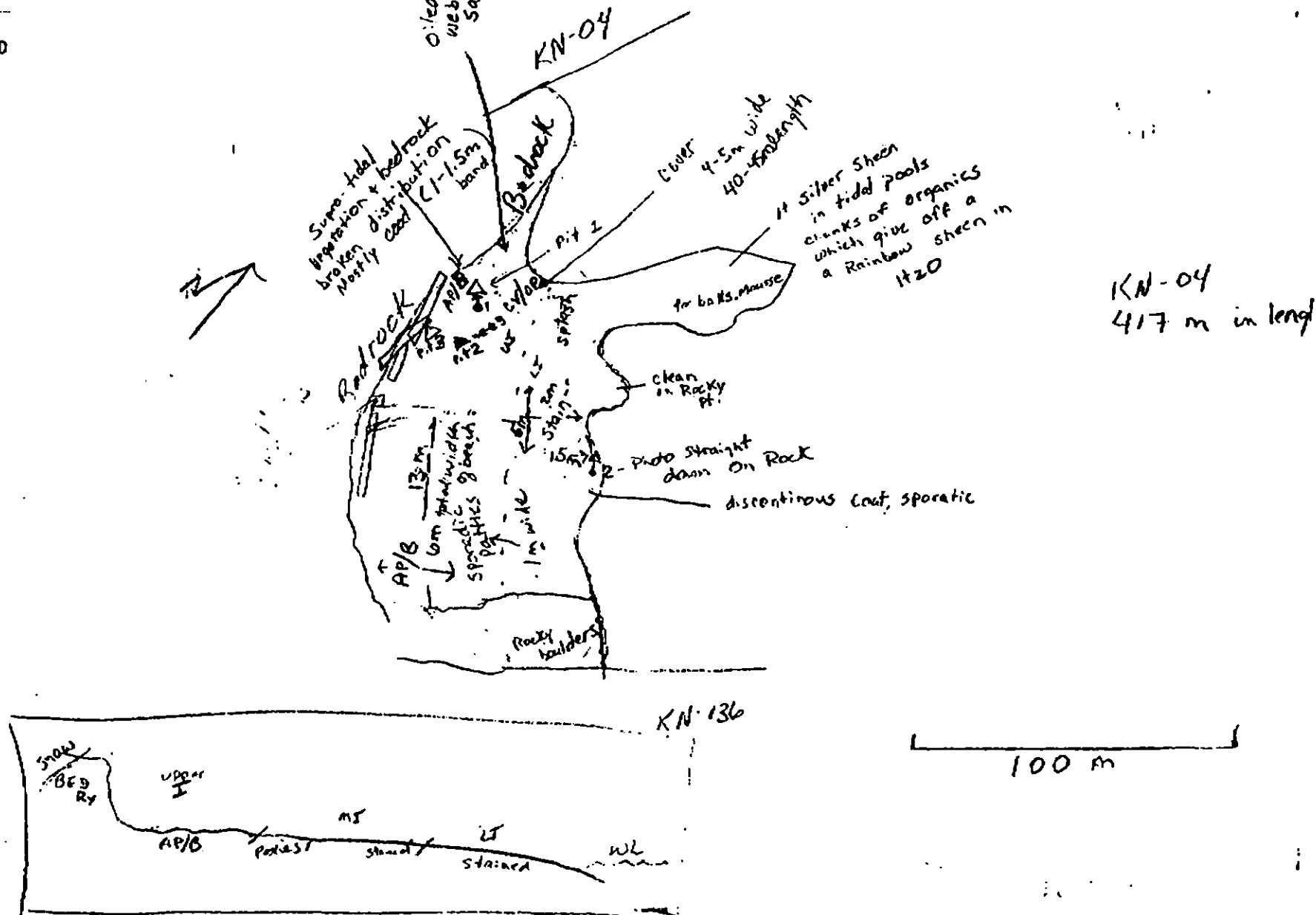
Splashed Distribution

Oiled Vegetation

1 →

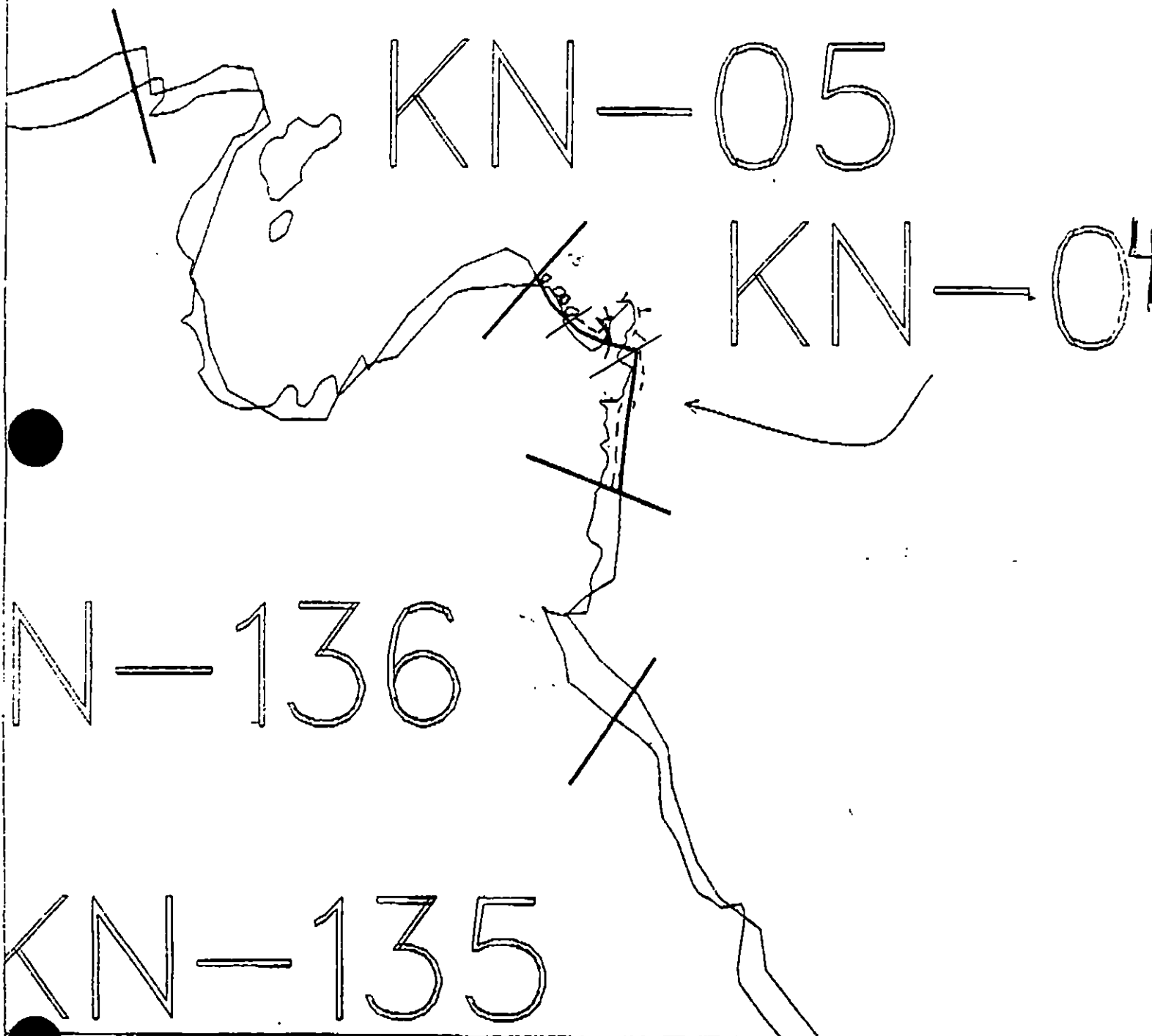
Photo location, direction, and number

ETCH MAP



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

REVISION: 007600



KN-4

XXX Wide

//// Medium

--- Narrow

TTTT Very light

ADEC Segment Length: 286m

Map Key: PWS-351

Name: RAMSEY

Date: 3/30/

1991 MAYSAP EVALUATION

SEGMENT: KN 004 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/4/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

X

Other

Other

COMMENTS:

INITIAL: Apply Customblen and Inipol at locations D and E after removing easily accessible asphalt. Avoid dense mussel beds at and near location E.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

MAYDAY FIELD SHORELINE COMMENT SHEET

TEAM NO. THREE SEGMENT KN0004 SUBDIVISION A DATE 5/4/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED: Biota w/ oiled areas is sparse.
 Manually remove Abundant AP thru-out Subdivision (see oq map for location) Manual removal of OP/HOR sediments. Roll boulders to expose oil, manually (mechanically till, Area can be worked mechanically, machine can be unloaded) Manually remove heavily oiled sediments till w/ incoming tide, agitate sediment to float oil, retrieve oil w/ snare boom.
 - The Heaviest oiling is located at sections D & E. Both are heavily oiled and will NEVER clean itself naturally w/o a large amount of work. I also suspect that the tar mats will melt in the Summers Sun & become mobile.

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

☒ NTR This segments has some AP that was broken up and partially removed. The biota is in good shape, it is healthy and thriving in the lower and mid tulle range. Most of this segment has subsurface oil.

ANDMANAGER

NAME John Johnson OF Chugach SIGNATURE John Johnson

☐ NTR

☒ Recommend ^{to remove} All oil from segment

USCG/NOAA

NAME Mooney / Barato SIGNATURE Tim Mooney / Aug Barato

☐ NTR Segment is comprised of Boulder, Cobble in MITZ AND Pebble, Gravel in UITZ. Beach is in a moderate wave energy zone and clast are subangular to subrounded. Outcrops in LITZ shelter MITZ sediment which are abundant with mussels. Patches of weathered A/P AND SOR in UITZ extend over an area 5 by 40m. Subsurface HOR conditions are present in Lpits in MITZ AND extends over an area 5 by 20 meters. Subsurface oil is degraded.

IF treatment is applied to segment, crew should be careful of mussel beds in MITZ. Manual removal of A/P would be ~~sufficient~~ sufficient.

REVIEWED: MC 5/4/91 ^{OG 145} _{revised, May 7}

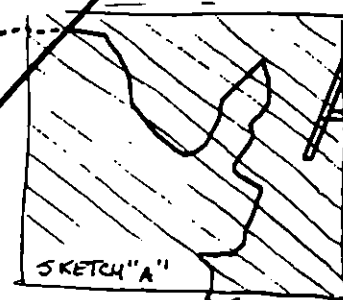
A +

KN-05

B

C

AKN



(P) → NO OIL

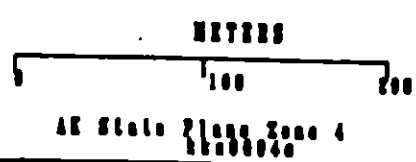
136

A

B



KN0004 A



Subdivision Field Map
Map Key: ENIKN0004A
Name: HARDER
Date: 4 May 91

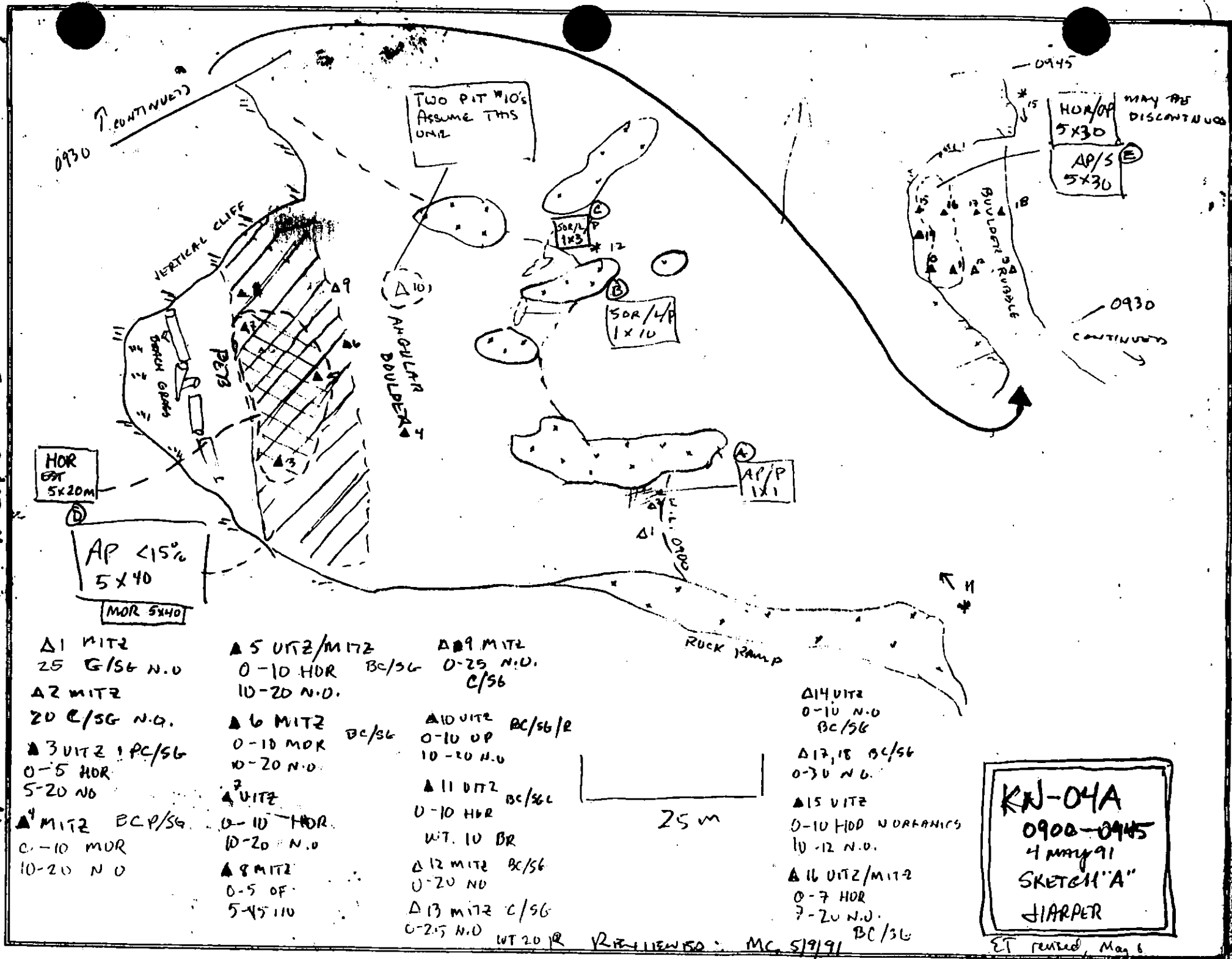
LOCATION MAP

REVIEWED: MG 5/9/91 ET reviewed, May 8

OG 3 of 5

Field sketch

08/4/95



HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/4/91

SEGMENT # KN04

TIDAL HEIGHT (Range) 2-4'

SUBDIVISION A

BIOLOGIST Stoker

SEA STATE 0-1

WIND SPEED/DIRECTION E 5-10

PHOTOGRAPHS: ROLL #

FRAME #

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

Moderate to low energy beach of pebble/cobble/boulder and rock headlands.

Biota in upper intertidal generally sparse (barnacles/spat, limpets, Littorina).

Biota in mid-lower intertidal on cobble/boulder beaches south of main point consists of patchy new-growth Fucus, patchily dense barnacles/spat, patches of interbedded and attached Mytilus, and sparse to moderate densities of limpets and Littorina. Biota on same substrate NW of the point is similar except that Mytilus are much sparser and Littorina (with egg masses here) more common. Both barnacles and Fucus increase in abundance to NW and downslope on this beach.

Biota on point bedrock dominated by dense new-growth Fucus, filamentous green algae, and dense barnacles and spat NTZ and below. Cobble substrate at & near point characterized by extensive and dense patches of interbedded Mytilus, dense Littorina with egg masses, patches of new-growth Fucus and barnacles/spat, filamentous green algae, surfgrass, clusters of small Pagurus, small Leptasterias, Nucella, scudgrass and limpets, occasional Nemeritoans and eel blennies, and shells of Saxidomus and Protothaca.

Biota within/proximal to surface oil locations A-C relatively abundant & diverse, as described above r.e. cobble/boulder substrate at or near the point.

Biota within/proximal to surface/subsurface oiled areas D & E consists of sparse Fucus, filamentous green algae, sparse barnacles, scattered clusters of limpets, sparse interbedded Mytilus, and sparse to moderate densities of Littorina with egg masses. Biota downslope from these areas similar in major composition, increased abundance and, to some extent, diversity.

WILDLIFE OBSERVATIONS

(CONT. on attached sheet)

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 overhead	
Seabirds			
Waterfowl	Geese	several large flocks overhead	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Page 5/13/91

If additional treatment is undertaken on this segment, care should be taken to minimize disturbance/destruction of the mid and lower intertidal community downslope from areas D and E, especially the dense mussel beds at and near the headland. This community appears healthy, abundant and relatively diverse, and is recovering rapidly.

Bio Map

Generally abundant
& diverse biofa

Dense Fucus & Barnacles

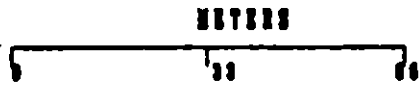
Dense Mytilus
Beds

Generally abundant
& diverse biofa

S. Stoker
slu. 2

KN0004

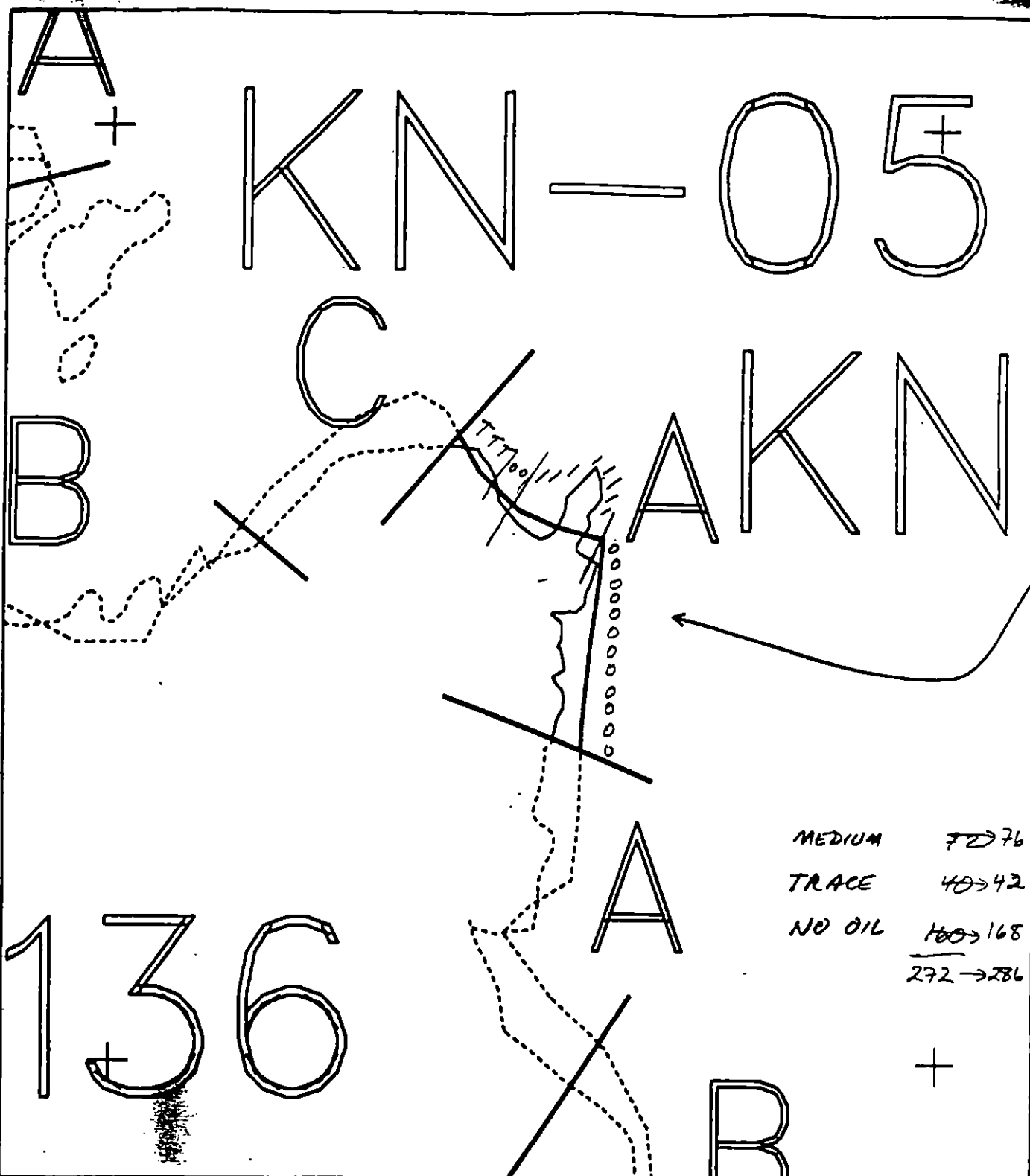
Segment Reference Map
Map Key: KN1KN0004



AK State Plane Zone 4
6220004



EAGLE NEST



MEDIUM 7276
 TRACE 4042
 NO OIL 100168
 272-286

XXXX	Wide	KN0004 A ADEC Subsegment Length: 200m METERS 0 100 200 AK State Plane Zone 4 bbn0004a	Subdivision Field Map Map Key: KNKN0004A Name: <u>HARPER</u> Date: <u>4 MAY 91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

REVIEWED: MC 5/9/91
 SURFACE OIL/WATER DISTRIBUTION
 MAP
 SE reviewed, May 8

OG 545

1991 MAYSAP EVALUATION

SEGMENT: KN 005 SUB: B REGION: PWS SURVEY DATE: 5/4/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:

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

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</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>X</u>	<u>X</u>	<u>X</u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other Manual Rake/Tilling	<u>X</u>	<u>X</u>	<u>Y</u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL: Manually rake/till in area of pits 15, 16, 17, 19, 22, 25, 28, and 29 with rising tide, using snare boom to catch released oil. Manually rake/till Customblen in same areas on falling tide.

TAG:

- Add AREA B MANUAL PICKUP OF EASILY ACCESSIBLE AP *AP*
- Add AREA A MANUAL PICKUP OF EASILY ACCESSIBLE HSOR AT LOCATION A.

FOSC:

TAG APPROVAL DATE: MAY 21 1991 FOSC APPROVAL DATE: 5/29/91

ADEC

FOSC

EXXON

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT KN 5 SUBDIVISION B DATE 5/4/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED - RESURVEY SUTZ due to SNOW covered, 2 heavily oiled pom-poms were retrieved from North side.
- Very soft mussel patties were present thru-out segment, I believe they will melt in the summer sun & become mobile. They are very retrievable in there present condition use square point shovel to pick up REMOVE 20x40 area of Asphalt. REMOVE Hor sediment Manually till area, agitate w/ incoming tide use snare worm to collect oil. WORK w/ tides.

- Remove all sor/H next to road stream-

EXXON

NAME Jon P Czarnecki SIGNATURE Jon Czarnecki

☒ NTR Some A/P picked up small patches of subsurface oil which are not exposed to surrounding life. The biota is healthy on the lower and mid tide zones.

LANDMANAGER

NAME Sam Johnson OF Chugach SIGNATURE Sam Johnson

☐ NTR

☒ Remove All oil From Segment.

USCG/NOAA

NAME MOONEY / BORATZ SIGNATURE Tungz Mooney

☐ NTR THE PRIMARY, AREA OF CONCERN IS IN SKETCH MAP B (SEE FIELD SKETCH). THE SOUTHERN COVE IN AREA "B" CONSISTS OF BOULDER COBBLE AMONG COARSE SEDIMENT AND BEDROCK NORTH OF STREAM, BEDROCK OUTCROPS IN THE LITE, AND SHELTERED PORTIONS OF THIS SEGMENT. SUBSURFACE CONDITIONS CONSISTS OF SOR TO A/P AND OCCUR IN PATCHES OVER AN AREA 20 BY 40 METER. SUBSURFACE OIL CONDITION IN AREA IS HOR UNDER B/C ARMOR.

PAGE 4 OF 2

- One area of significant subsurface oiling was observed (at Location B). A number of pits, #14 & #20, delineated

MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 2 OF 2

TEAM NO. 3

SEGMENT KN-5

SUBDIVISION B

DATE 4 MAY 1991

THARTOR

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		
10	30			X					0-20	Y	25	B		X			BC/SG	
11	40							X	-	Y				X			G	LHTS
12	25					X			0-10	Y	-	-			X		PC/SG	
13	15					X			0-5	Y	-	-			X		PC/SG	
14	20		X						0-10	Y	-	-			X		C/SG	Peat
15A	20		X						0-10	N	-	-		X	X		PC/SG	
15B	20			X					10-20	N	-	-		"	"		"	
16A	15		X						0-5	N	-	-		X			PCB/SG	
16B	15			X					5-15	N	-	-		"			"	
17	10		X						0-10	Y	-	-		X			P/SG/R	
18	25							X	-	Y	-	-			X	X	CP/SG	
19	10		X						0-10	Y	-	-			X		P	
20	20							X	-	-	-	-		X			PC/SG	
21	20							X	-	-	-	-		X			P/S	
22	15		X						5-7	Y	-	-		X			P/SG	
23	35					X			0-2	Y	-	-		X	X		SG	
24	15' NOT	SUBSURFACE							X	-	-	-	-			X	SG	NOT SURFACE
25	15		X						0-3	Y	-	-		X			P/SG	
26	10					X			0-5	Y	-	-			X		P/SG	
27	15							X	-	Y	-	-			X		P/SG	
28	20			X					0-10	Y	-	-			X		P/SG	
29	30		X						0-5	Y	-	-		X			CP/SG	END 2x2 m
									-	-	-	-						
									-	-	-	-						
									-	-	-	-						
									-	-	-	-						

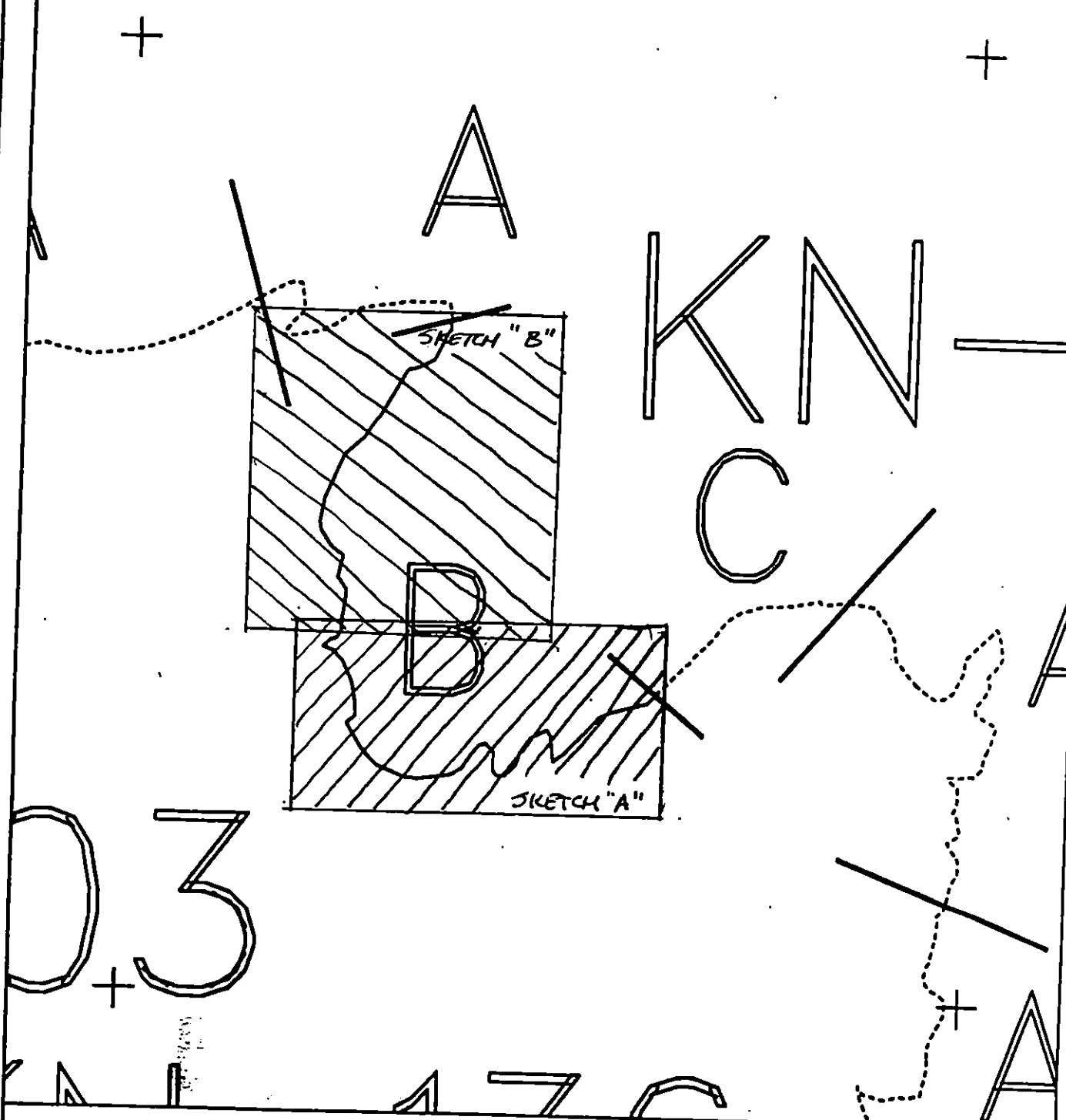
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

this HOR condition is approximately 20x20m. Other locations of subsurface oiling appear to be very limited in extent (e.g. Pit #10: MOR is 3x10m; Pit #25: HOR is 2x2m).

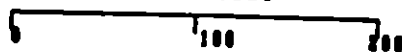
Reviewed: MC 518/a/ 25 revised May 8

OR 2/1/1



KN0005 B

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: ENIKN0005B

Name: HARPER

Date: 4 MAY 91

SKETCH LOCATION MAP

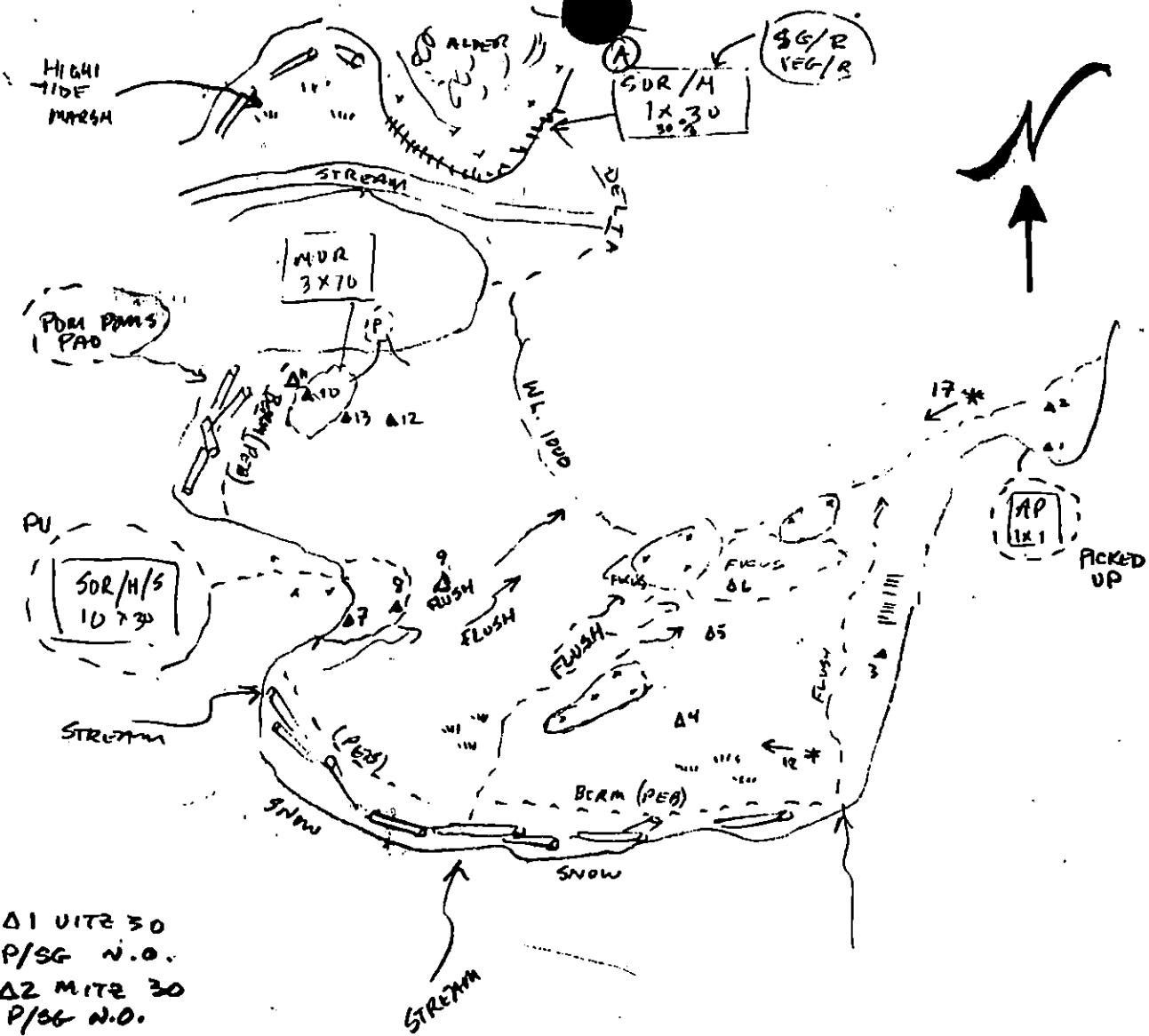
Reviewed: MC 5/8/91

OG 3 of 6

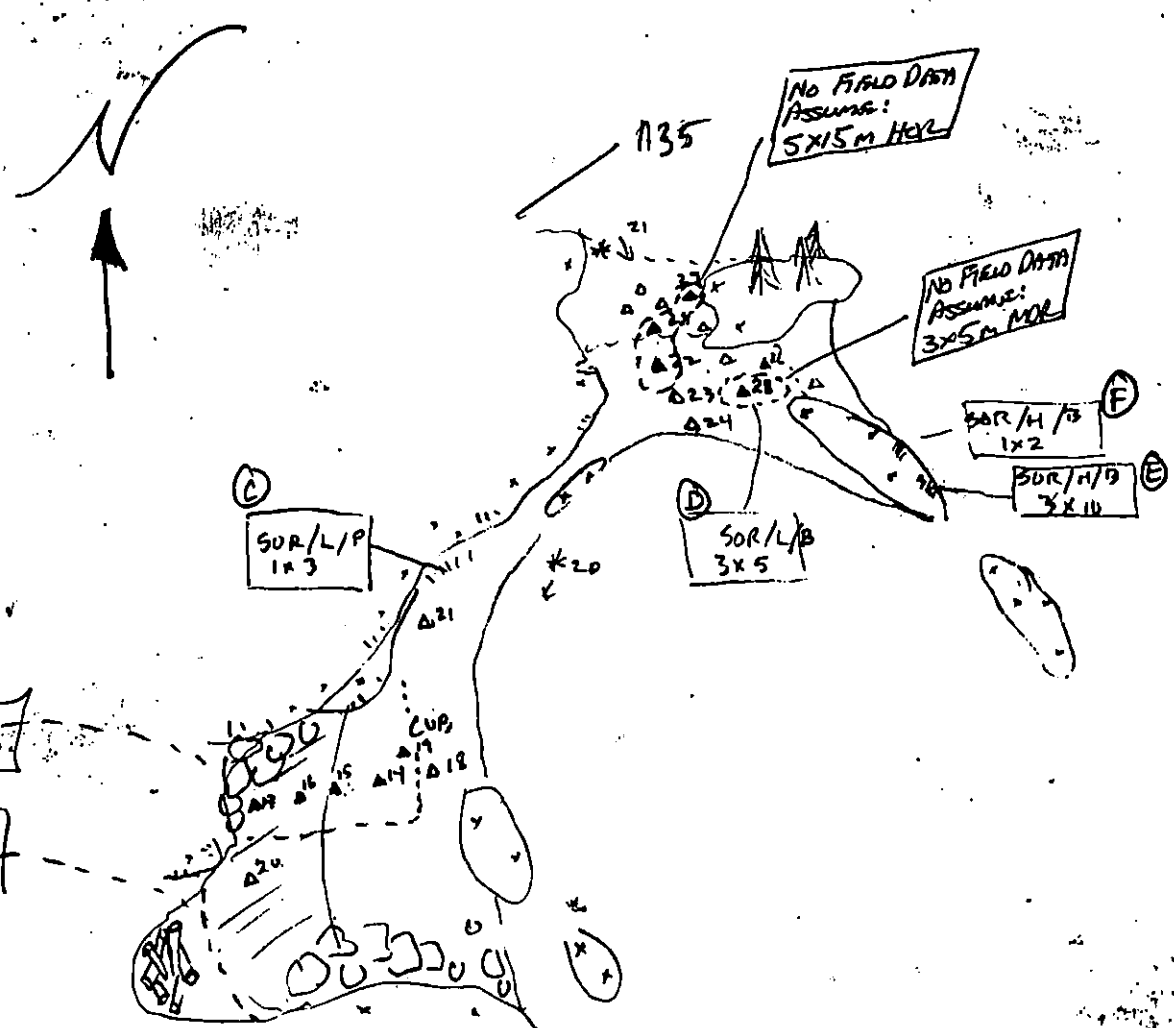
Unit 7101

- Δ4 UITE
PC/SG NO
- Δ5 MITZ 30
P/SG N.O.
- Δ6 UITE 30
P/SG N.O.
- Δ7 UITE 20
0-10 LDR CP/SG
10-20 N.O.
- Δ8 UITE 30
0-10 LDR P/SG
10-20 N.O.
WT 10 N.O.
- Δ9 MITZ 30
0-30 N.O.
WT 25 S
- Δ10 UITE
0-20 MOR
20-30 N.O.
WT 25 B
- Δ11 UITE (LHTS)
0-40 G N.O.
- Δ12 MITZ 25
0-10 OF.
10-20 N.O.
PC/SG
- Δ13 MITZ
0-5 OF.
5-15 N.O.

- Δ1 UITE 30
P/SG N.O.
- Δ2 MITZ 30
P/SG N.O.
- Δ3 UITE C/P/SG
0-5 P
5-7 O.F. ORG, S.G.
7-15 N.O.



KN-005B
4 MAY 91
1000-1040
HARPER
SKETCH A



Δ24
 0-3 U.F. SURFACE
 3-15 N.O. OIL
 Δ23 MITZ/UITZ
 O.F. Δ-2
 2-35 N.O.
 Δ22 UITZ
 0-5 NO P/SG
 5-7 HOR
 7-15 SG N.O.
 Δ25 UITZ
 0-3 HOR
 3-15 N.O.
 Δ26 MITZ
 0-5 O.F.
 5-14 N.O.
 Δ27 MITZ
 0-15 NO
 Δ28 MITZ
 0-10 MOR
 10-20 N.O.
 Δ29 UITZ
 0-5 HOR
 5-30 N.O.
 EST 2x2

Δ14 MITZ 20
 0-10 HOR
 10-20 PERT N.O.
 C/SC
 ΔUITZ/20
 0-11 HOR
 10-20 MOR
 PC/SG
 Δ16 UITZ PCB/SG
 0-5 HOR
 5-15 MOR
 ΔUITZ (LHTS)
 0-10 HOR P/SG/R
 10 R
 Δ12 MITZ/LITZ 25m
 CP/SG N.O.
 Δ19 MITZ
 P HOR 0-10
 Δ20
 ΔUITZ
 0-20
 PC/SG N.O.
 Δ21 UITZ
 P/SG N.O.

PERT
 0 50m
 SCALE APPROXIMATE

KN-00513
 4 MAY 91
 1040-1135
 HARPER
 SKETCH "B"

NOT DRAWN TO SCALE

06 546

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/4/91
 SEGMENT # KN 05 TIDAL HEIGHT (Range) 1-2'
 SUBDIVISION B BIOLOGIST STAKOR
 SEA STATE waves 0-1' WIND SPEED/DIRECTION E 10-15
 PHOTOGRAPHS: ROLL # FRAME #

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

Moderate energy beaches of pebble/cobble/boulder with bedrock headlands.
 Biotra generally sparse in upper intertidal, increasing downslope in diversity and abundance. a significant anadromous stream traverses the W. shore.
 Biotra on pebble/cobble/boulder beaches M7 and below characterized by variable density new-growth Fucus, filamentous green algae, patchy barnacles and spat (variable sparse-dense), moderately dense Littorina with egg masses, generally sparse limpets (some dense clusters), attached and interbedded Mytilus (scattered dense patches, increasing to W & N), and sometimes Nucella, Searlesia, dense packets of small amphipods, clusters of small Pagurus, sea blennies, and shells of Saxidomus, Protothaca.
 Biotra in the vicinity of the anadromous stream mouth is especially abundant, dominated by dense new-growth Fucus, barnacles and spat, and extensive beds of densely interbedded Mytilus.
 Biotra on the Tombolo and headland at the N end of the subdivision is also particularly abundant and diverse M7 and below, consisting, on pebble/cobble/boulder substrate, of patchy and moderately dense barnacles/spat, patchily dense new Fucus, filamentous green algae, clusters of attached and interbedded Mytilus (many small individuals), clusters of small Leptasterias, moderately dense Littorina with egg masses, Nucella, Searlesia, Asterias?, Pagurus, Hapalogaster?, sea blennies, Chironus (Megalops?), Natasia egg collars, and numerous shells of Saxidomus, Prototheca, Mya, Mercenaria, Clinocardium, Hiatella.
 (cont. on attached sheet)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	sea blennies
Seabirds			
Waterfowl	unident Ducks	10	
Gulls/kittiwakes	Glaucous-wing	10	
Shorebirds			
Corvids	Raven	1	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Bio Summary (Cont)

KN 05B

Biota on bedrock headlands dominated by dense new-growth *Fucus*, dense barnacles and spat, patches of *Mytilus* (many small individuals), limpets and *Littorina*.

Biota proximal to subsurface oil at pits 7-8 and 10-13 is generally sparse, consisting of sparse barnacles, sparse *Mytilus*, and scattered limpets. Biota increases downslope in diversity and abundance as described earlier.

Biota proximal to surface oil location A is relatively abundant (barnacles, *Fucus*, *Littorina*, *Mytilus*), with dense interbedded *Mytilus* nearby.

Biota proximal to surface oil location B is generally sparse (barnacles) increasing downslope in abundance and diversity.

Biota proximal to subsurface oil pits 14-19 consists of sparse to moderately dense barnacles and spat, clusters of limpets, packets of small amphipods, sparse *Mytilus*, sparse to moderately dense *Littorina* with egg masses, filamentous green algae, coral blennies, and oligochaetes. Abundance and diversity increases downslope. Shells of *Saxidomus*, *Prothoea*, *Clinocardium* also present.

Biota at surface location C generally sparse, increasing downslope as described earlier for cobble/boulder.

Biota at surface location D and pit 28 relatively abundant, consisting of dense barnacles and spat, dense *Littorina* with egg masses, patchy *Fucus*, limpets, filamentous green algae, interbedded *Mytilus* (variable density) and various clams.

Biota proximal to pit 25 is sparse, but increases rapidly downslope as described earlier.

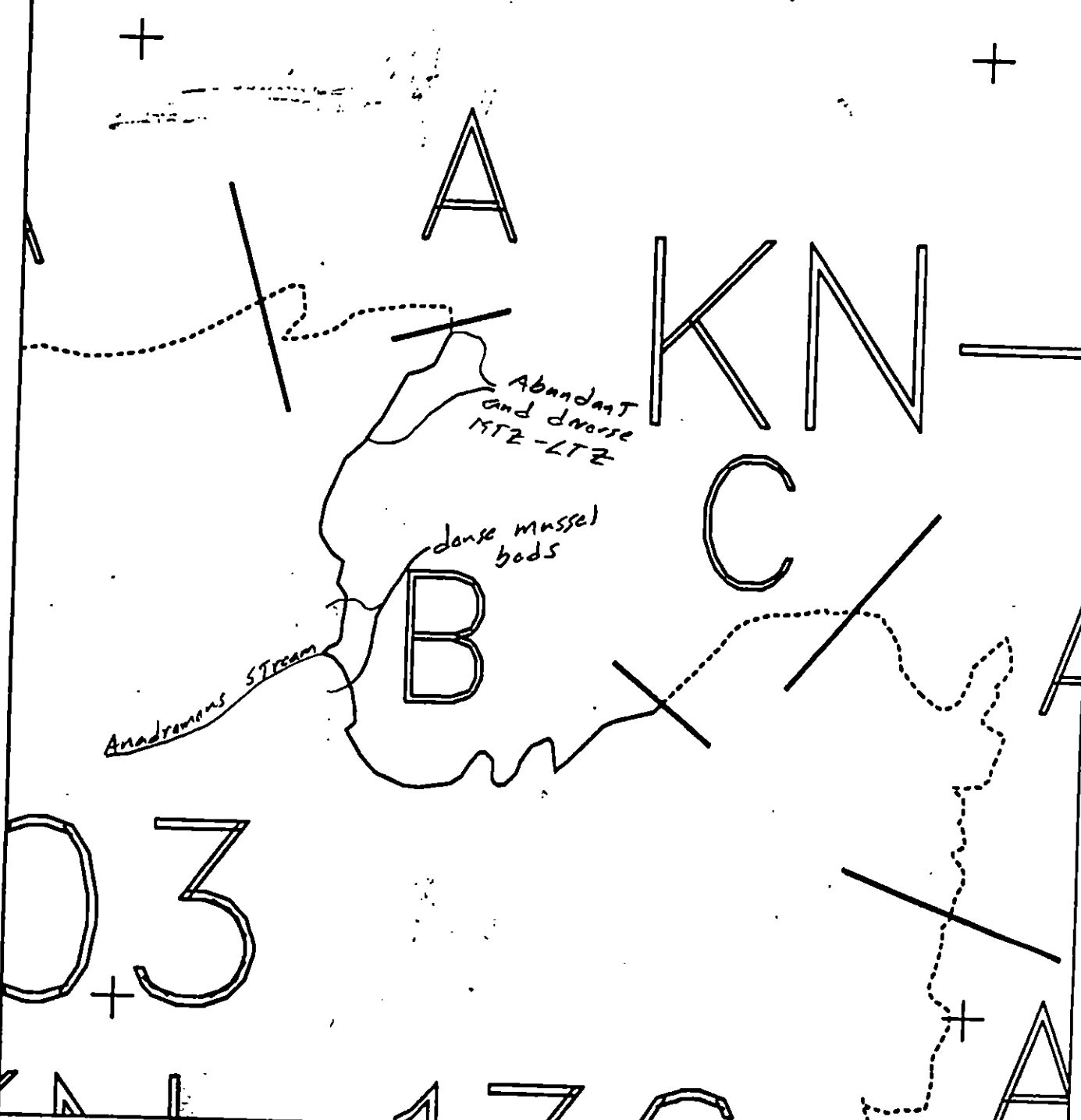
Biota proximal to surface locations E & F relatively abundant, consisting of dense barnacles and spat, dense new-growth *Fucus*, patches of attached *Mytilus*.

If treatment is undertaken on this subdivision, avoid disturbance and destruction of established community in the mid to lower intertidal, which is relatively abundant and diverse and seems to be recovering rapidly. This applies particularly to the Tombolo and headland to the north, and to the anadromous stream and nearby mussel beds.

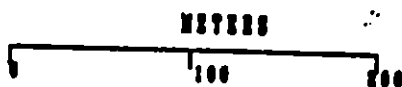
Anad stream in this subdivision not catalogued by ADFG; not present during '90 SSAT.

No constraints apply to the subdivision. DMC.

Bio Map



KN0005 B



AS State Plane Zone 4

Subdivision Field Map

Map Key: KN1KN0005B

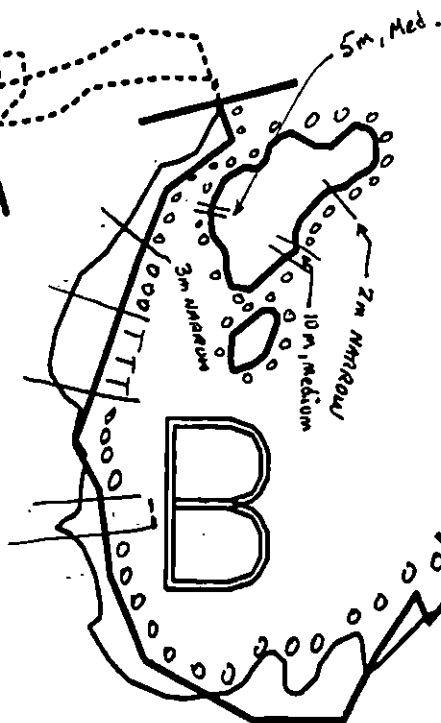
Name: _____

Date: _____

A

A

KN



03

MEDIUM

NARROW

VERY LIGHT

NO OIL

10 → 15

72 → 77 35

824 → 878 875

906 → 965

A

17C

XXXX
////

TTTT
0000Wide
Medium
Narrow
Very Light
No Oil

KN0005 B

ADEC Subsegment Length: 965m

METERS

0 100 200

AK State Plane Zone 4
6600056

Subdivision Field Map

Map Key: KNKN0005B

Name: HARPER

Date: 4 May 91

Date Entered:

REVISED: MC 5/8/91

Extended May 8

OB 6 of 6

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: KN 005 SUB: B REGION: PWS SURVEY DATE: 5/4/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) OPENEcological/Constraints (see page two for details) NONEARCHAEOLOGICAL 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.).

RECOMMENDATIONS:

Timothy A. Smith for SHPO 6/20/91

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</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>X</u>	<u>X</u>	<u>X</u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:INITIAL: Apply Inipol at locations A and B.TAG: FOSC: TAG APPROVAL DATE: June 19 1991ADEC John BaneEXXON PaulUSCG Ed MallNOAA JohnFOSC APPROVAL DATE: 6/27/91FOSC E. E. Page

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

ASAP TAG REVIEW SHEET

Segment: kn05 Subd: B Site: 1 Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

 HIGH X MEDIUM LOW X NTR

Treatment
Recommended:

NTR

Re-Grille mnt 9/

Can't tell if SOR is High or
Not

Asphalt, mouse only "I" and spore

Priority Site For Reassessment In 1991

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

TAG 21 AUG 90

Manual Pickup AP/mouse
patches & BIO (MED)

ASAP FOLLOWUP RECOMMENDATIONS

Site: AS/KV-05 Subd.: B Site: _____ Date: 8-10-90 1990

Conditions Observed: Several areas of residual AP, SOR, OP, and OR were observed. Also on shoulders was moderate amounts of lower and coat. Diking occurs in cove and at LIT 2 levels in sheering.

Followup Recommendations: Manual removal followed by bioremediation. See below for specific treatment comments.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Bob McCreedy
(name)

Robert B. McCreedy
(signature)

Comments: Removal of all areas of AP, residual surface OP and OR oil. Also, the removal of all surface OP and OR oil is recommended from L-HITZ. Work should be conducted in 1990.

Exxon

John Dean
(name)

J Dean
(signature)

Comments: Agree with follow-up recommendations above.

USCG

Don Davis
(name)

Don Davis
(signature)

Comments: Whole area has been diked, most of which can be treated by a manual crew. All beach areas are high tide but low energy. Work should be attempted this year.

Land Rep.

LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: Agree with ADEC comments. Requires intensive treatment in 1990. Reassess in 1991. See SSAT sketch map.

8/8/90

FIELD SHORELINE COMMENT SHEET

SEGMENT AS KN-005 SUBDIVISION: B SITE: 1 DATE 10 AUG 90

LOG
NAME DAN DEWIS 603 USCG SIGNATURE [Signature]
Edward Roe, NOAA

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: LARGE SEGMENT W/ A VARIOUS ASSORTMENT OF OILING FROM "OR" / ASPHALT / MOUSSE PATCHES / "SOL" / COOT / STAIN, AND FILMING OBSERVED ON SURFACE WATER. SOME OILING IS INTERSTITIAL, BUT A MAJORITY IS CONTAINED IN SURFACE POCKETS AND SUBSURFACE OILING. THE WHOLE SEGMENT CAN BE WORKED MANUALLY. SUGGEST REMOVAL OF HEAVY DEPOSITS AND "BIO" TREATMENT THIS YEAR AND REASSESSMENT IN 1991.

ADEC
NAME Bob McReady SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Segment is two pocket heather and a large cone with moderate to heavy oiling throughout. ASAP / Survey crew has recommended further manual work in '90. Oiling is AP, MS, OP, OR, CT, CV, and ranges from LITZ - HITZ. Area will require extensive manual treatment. Manual removal performed during summer '90 was inadequate throughout.

LAND MANAGER
NAME LORA JOHNSON SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. REQUIRES EXTENSIVE TREATMENT. TREAT IN 1990. REASSESS IN 1991. SEE SSAT SKETCH MAP.

EXXON
NAME John Dean SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Presence of Oil.

3
 ADEC BOB McCRENNY
 DATE 8/10/90
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 805 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 CATEGORY LENGTH: W 83 m M 20 m N 105 m VLS 54 m NO 38 m US 160 m
 EPOCH JOHN DEAN
 888 USCG - CONCORD/INCA
 LAND REP. LAURA JOHNSON
 TIME 8:45 to 9:28
 WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 SUBDIVISION B
 TOTAL NO. SITES 1
 TIDE LEVEL +1.0 to 0.0

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				I	X			
S.O.R.		X	X	X	X			
POOLED								
COVER								
COAT		X			X			
STAIN		X	X		X			
MOUSSE			I		X			
PATTIES/T.B.								
FILM			X		X	X		
NO OIL					X			X
EST. SITE LENGTH	805m							

SITE 2

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

SITE 3

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

SURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	10			X		0-6	Y		X			P/G/C
1	2	20		X			5-10	Y		X			P/G/C
1	3	10			X		0-2	Y		X			P/C/B
1	4	8		X			0-6	Y		X			P/C/B
1	5	8			X		0-7	Y		X			P/C/B
1	6	3		X			0-2	Y		X			P/G/SB
1	7	3		X			0-3	Y		X			P/G/S
1	8	16				X	.	-					P/G/C/S
							.						
							.						
							.						
							.						

Photographs

Page No.

Frames

MENTS

- OIL OCCURS THROUGHOUT MUCH OF THE SEGMENT/SITE AS SHOWN/ST/AN
- SUBSURFACE OIL WAS FOUND IN 7 OF 8 PITS DRG, AND A FILM IN THE UI/MI ON THE LESIDE (SOUTH) OF THE INTERNAL TOMBARD WAS NOTED - A PIT DRG IN THIS AREA SHOWED AN OIL-LENS AT A 5-10 cm depth (b/s)

REVISION NO. 1/2/90

SEGMENT STATION-5

SUBDIVISION 5, C.

DATE 3/29/90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Study
- ☐ CT Box
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAZARD
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Old Vegetation

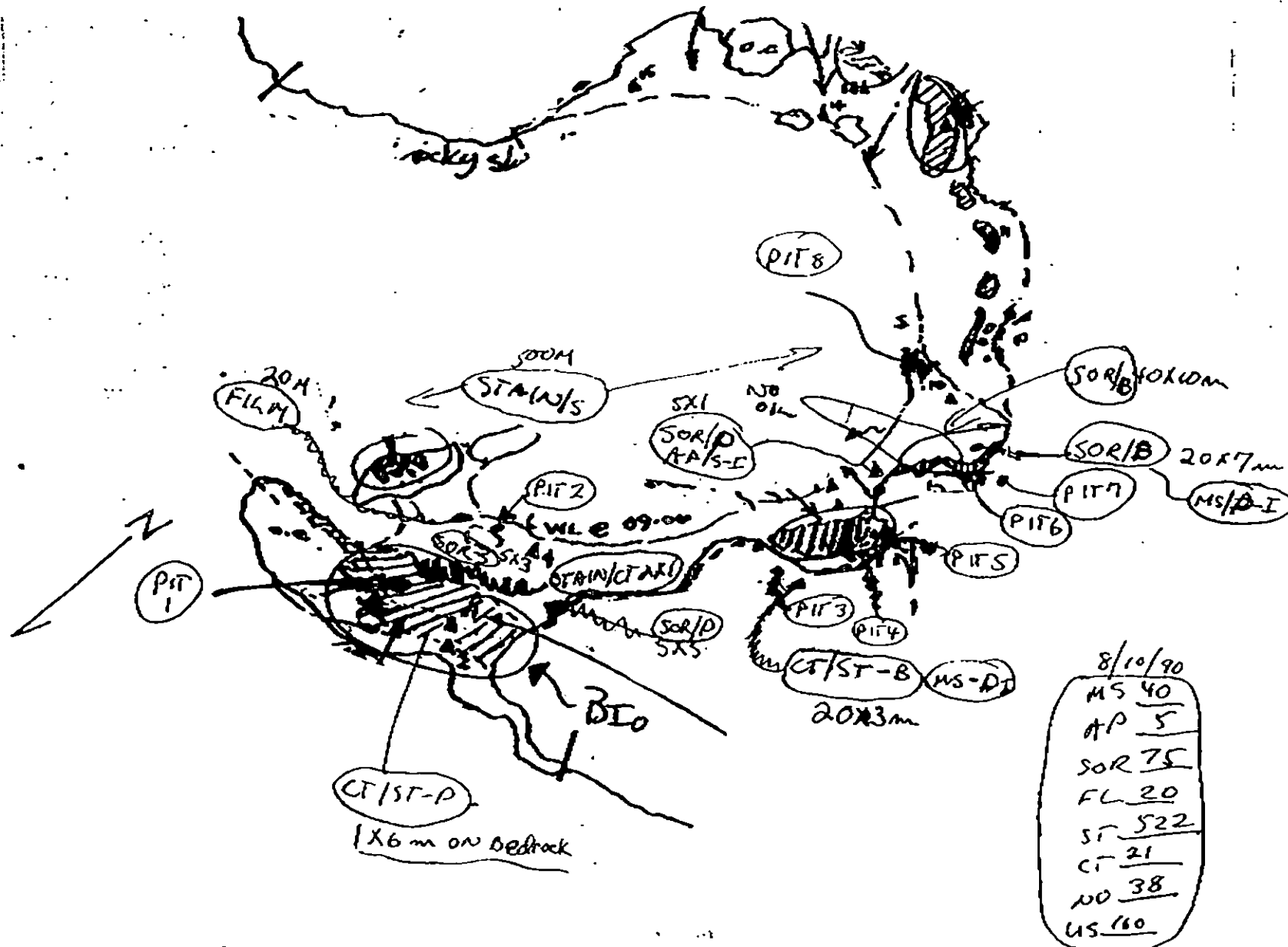
1 →

Photo location, direction, and number

→ shore

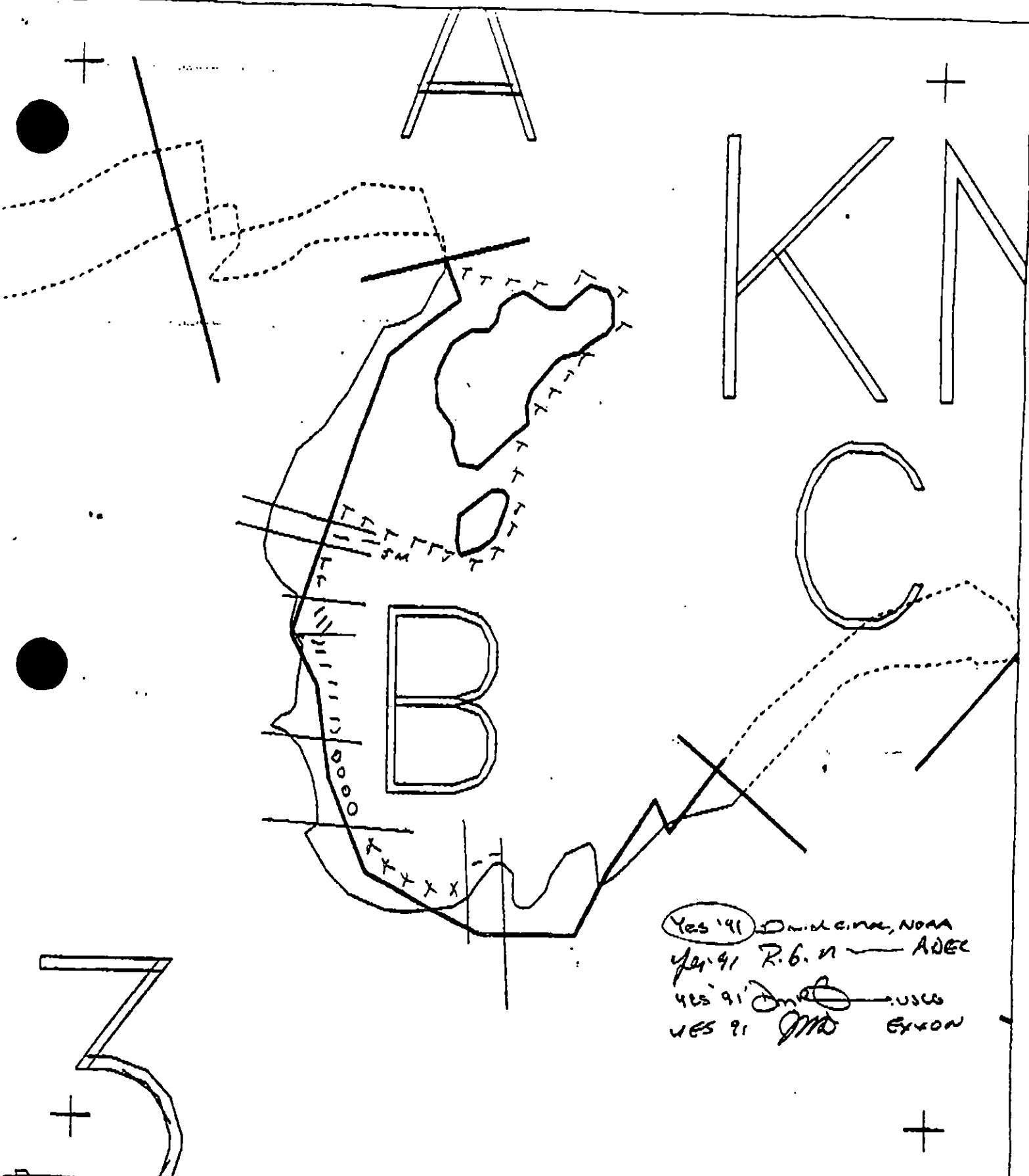
ORIENT MAP

KN05B



8/10/90	
MS	40
AP	5
SOR	75
FL	20
SI	522
CT	21
NO	38
US	160

Character Length (m): AP 120 PO 0 CV 80 CT 300 ST 300 MS 0 PT 200 TB 0 FL 200 NO 50



Yes '91 D.W. C. M. NOAA
 Yes '91 R.B. M. ADEC
 Yes '91 J.M. B. USGS
 Yes '91 J.M. Exxon

Wide
Medium
Narrow
Very Light
No Oil

KN-5 B

ADEC Subsegment Length: 965m

METERS

0 64 128

AK State Plane 7000 x 10000

Subdivision Field Map

Map Key: KNKN-5B

Name: NAKASHIMA

Date: 8/9/90

EXXON

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION C (3 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 197 m
Subsurface Oil Observed: Yes No X Maximum Depth

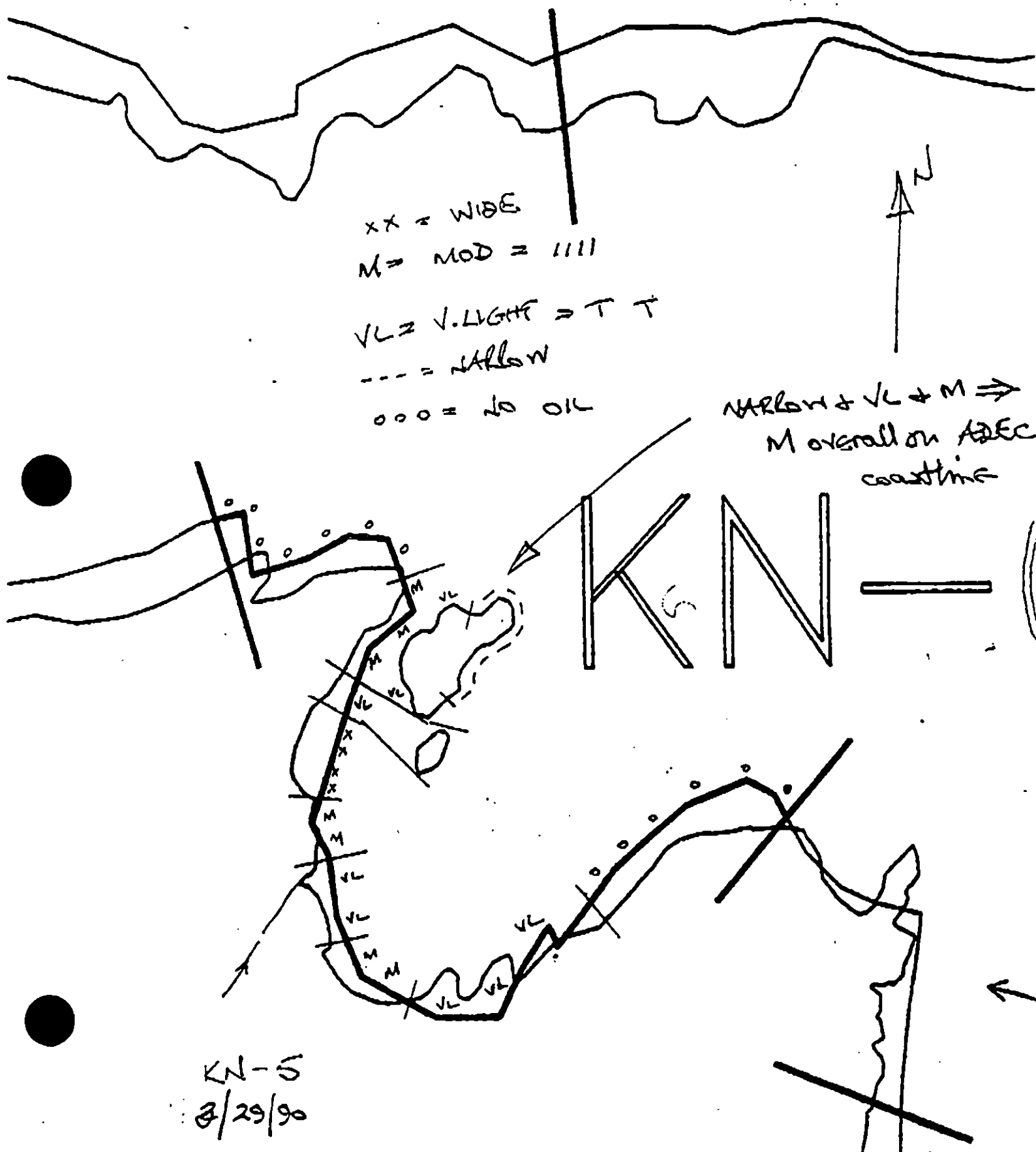
RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90.
ADEC Art Weiner Dpt. Green
EXXON ANDY CAR FOSC: WJL DATE: 5-6-90
NOAA Bayl Wescott
USCG C.A. KEMER G.H. Bester



1991 MAYSAP EVALUATION

SEGMENT: KN 005 SUB: B REGION: PWS SURVEY DATE: 5/4/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other Manual Rake/Tilling

Other _____

X

X

COMMENTS:

INITIAL: Manually rake/till in area of pits 15, 16, 17, 19, 22, 25, 28, and 29 with rising tide, using snare boom to catch released oil. Manually rake/till Customblen in same areas on falling tide.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

MLYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/4/91

SEGMENT # KN 05

TIDAL HEIGHT (Range) 1-2'

SUBDIVISION B

BIOLOGIST STAKOR

SEA STATE waves 0-1'

WIND SPEED/DIRECTION E 10-15

PHOTOGRAPHS: ROLL #

FRAME #

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

Moderate energy beaches of pebble/cobble/boulder with bedrock headlands. Biota generally sparse in upper intertidal, increasing downslope in diversity and abundance. A significant anadromous stream traverses the W. shore. Biota on pebble/cobble/boulder beaches MIZ and below characterized by variable density new-growth *Fucus*, filamentous green algae, patchy barnacles and spat (variable sparse-dense), moderately dense *Littorina* with egg masses, generally sparse limpets (some dense clusters), attached and interbedded *Mytilus* (scattered dense patches, increasing to W & N), and sometimes *Nucella*, *Scorlella*, dense pockets of small amphipods, clusters of small *Pagurus*, eel blennies, and shells of *Saxidomus*, *Protethaca*. Biota in the vicinity of the anadromous stream mouth is especially abundant, dominated by dense new-growth *Fucus*, barnacles and spat, and extensive beds of densely interbedded *Mytilus*. Biota on the Temble and headland at the N end of the subdivision is also particularly abundant and diverse MIZ and below, consisting, on pebble/cobble/boulder substrate, of patchy and moderately dense barnacles/spat, patchily dense new *Fucus*, filamentous green algae, patches of attached and interbedded *Mytilus* (many small individuals), clusters of small *Lepidasterias*, moderately dense *Littorina* with egg masses, *Nucella*, *Scorlella*, *Asterias*?, *Pagurus*, *Hapalegaster*?, eel blennies, *Chiron* (*Myopala*?), *Natasa* egg masses, and numerous shells of *Saxidomus*, *Protethaca*, *Mya*, *Macoma*, *Clione*, *Cardium*, *Hiatella*. (cont. on attached sheet)

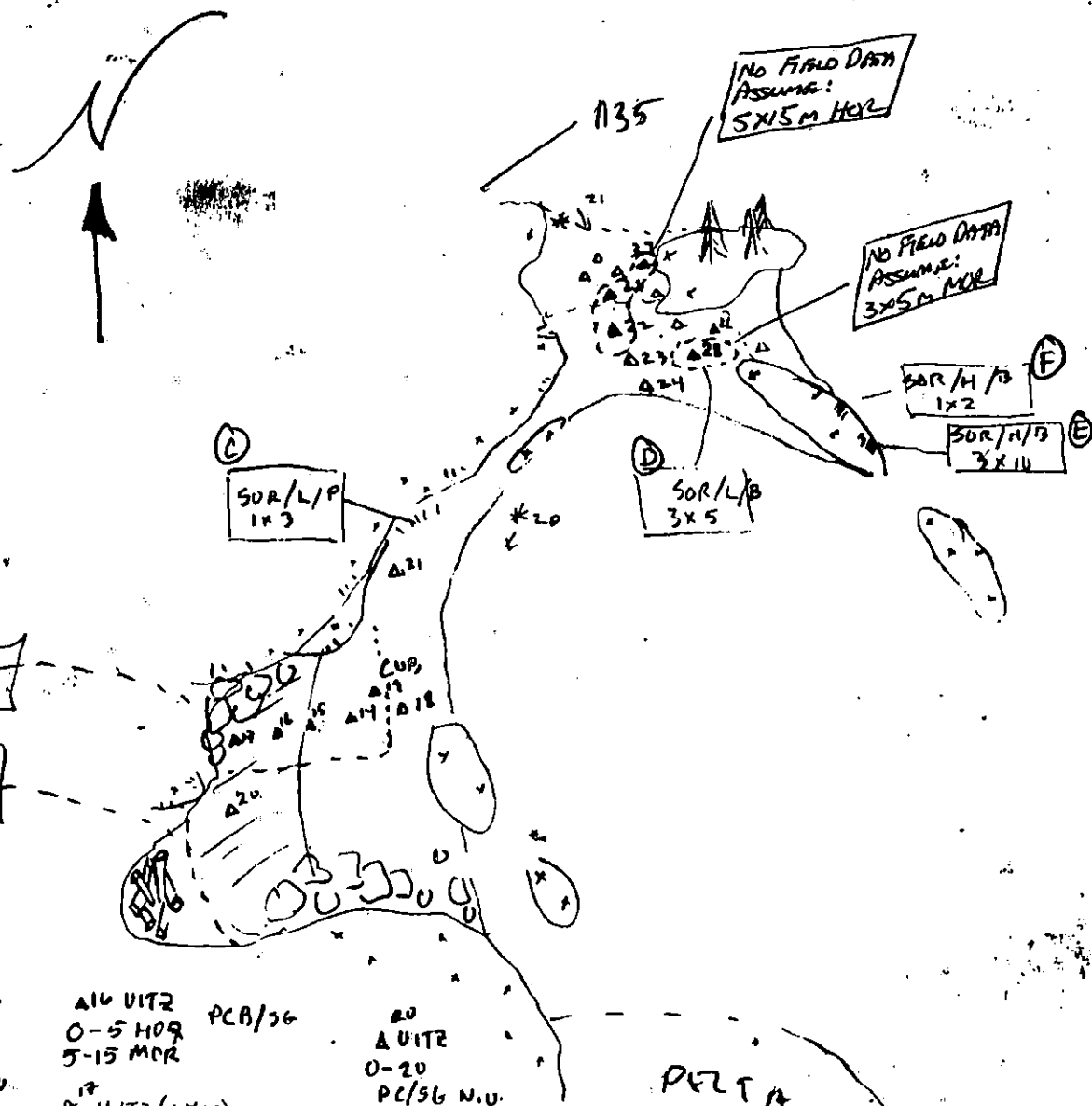
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			eel blennies
Waterfowl	unident Ducks	10	
Gulls/Kittiwakes	Glaucon-wing	10	
Shorebirds			
Corvids	Raven	1	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.



Δ24
 0-3 U.I. SURFACE
 7-15 N.O. OIL
 Δ23 MITZ/UITZ
 O.F. N-2
 2-35 N.O.
 Δ22 UITZ
 0-5 NO P/SG
 5-7 HOR
 7-15 SG N.O.
 Δ25 UITZ
 0-3 HOR
 7-15 N.O.
 Δ26 MITZ
 0-5 O.F.
 5-10 N.O.
 Δ27 MITZ
 0-15 NO
 Δ28 MITZ
 0-10 MOR
 10-20 N.O.
 Δ29 UITZ
 0-5 HOR
 5-30 N.O.
 EST 2X2

Δ14 MITZ 20
 0-10 HOR
 10-20 PEAT N.O.
 C/SG
 ΔUITZ M20
 0-11 HOR
 10-20 MOR
 PC/SG
 Δ16 UITZ PCB/SG
 0-5 HOR
 5-15 MOR
 ΔUITZ (LHTS)
 0-10 HOR P/SG/R
 10 R
 Δ12 MITZ/LITZ 25m
 CP/SG N.O.
 Δ19 MITZ
 P HOR 0-10 1
 Δ20
 ΔUITZ
 0-20
 PC/SG N.O.
 Δ21 UITZ
 P/S N.O.

PEAT A
 0 50m
 SCALE APPROXIMATE

KN-005B
 4 MAY 91
 1040-1135
 HARPER
 SKETCH "B"

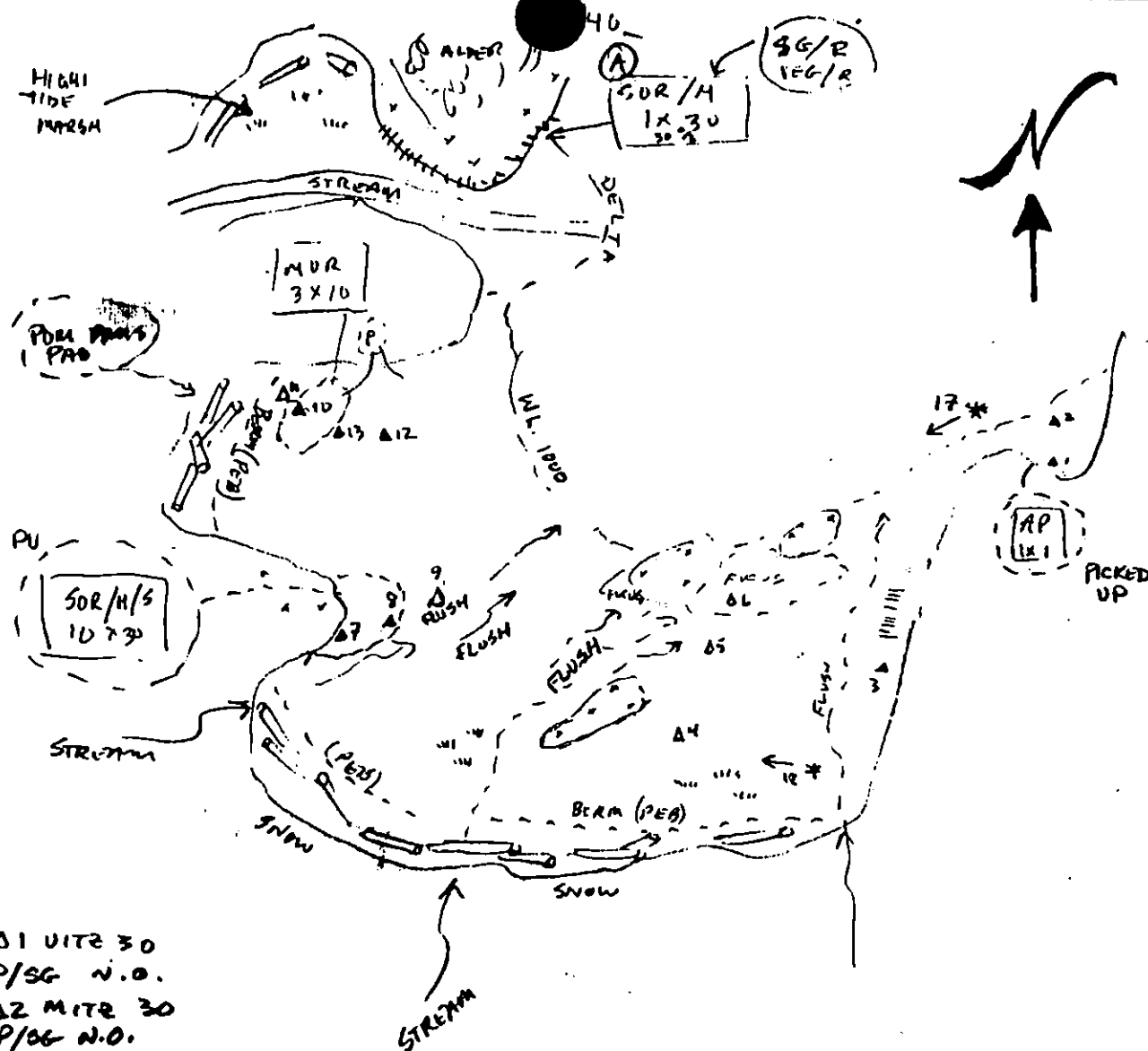
NOT DRAWN TO SCALE

065046

OR 4066

Δ4 UITE
 PC/SG NO
 Δ5 MITZ 30
 P/SG N.O.
 Δ6 UITE 30
 P/SG N.O.
 Δ7 UITE 20
 0-10 LOR CP/SG
 10-20 N.O.
 Δ8 UITE 30
 0-10 LOR P/SG
 10-20 N.O.
 WT 10 NO.
 Δ9 MITZ 30
 0-30 N.O.
 WT 25 S
 Δ10 UITE
 0-20 MOR
 20-30 N.O.
 WT 25 B
 Δ11 UITE (LITS)
 0-40 G N.O.
 Δ12 MITZ 25
 0-10 OF.
 10-20 N.O.
 PC/SG
 Δ13 MITZ
 0-5 OF.
 5-15 N.O.

Δ1 UITE 30
 P/SG N.O.
 Δ2 MITZ 30
 P/SG N.O.
 Δ3 UITE C/P/SG
 0-5 P
 5-7 O.F. ORG, S.G.
 7-15 N.O.



KN-005B
 4 MAY 91
 1000-1040
 HARPER
 SKETCH A

FARSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT KN 5 SUBDIVISION B DATE 5/4/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED - RESURVEY SUTZ DUE TO SNOW COVERED, 2 heavily oiled pom-poms were retrieved from North side.
 - Very soft mussel patties were present thru-out segment, I believe they will melt in the summer sun & become mobile. They are very retrievable in there present condition use square point shovel to pick up REMOVE 20x40 area of Asphalt. Remove Hor sediment Manually till area, agitate w/ incoming tide use snare boom to collect oil. WORK w/ tides.

- Remove all sor/H next to Anad stream-

EXXON

NAME Jon P Czarnicki SIGNATURE Jon Czarnicki

☒ NTR Some A/P picked up small patches of Subsurface oil which are not exposed to surrounding life. The flora is healthy on the lower and mid tide zones.

LANDMANAGER

NAME John Johnson OF Chugach SIGNATURE John Johnson

☐ NTR

☒ Remove All oil From Segment.

USCG/NOAA

NAME MOONEY / BORAT SIGNATURE Tung Mooney

☐ NTR THE PRIMARY, AREA OF CONCERN IS IN SKETCH MAP B (SEE FIELD SKETCH). THE Southern Cove in AREA "B" CONSISTS OF Boulder Cobbles among covering sediment and bedrock north of stream, bedrock outcrops in the LITE, AND SHALTED PORTIONS OF THIS SEGMENT. SURFACE CONDITIONS CONSISTS OF SOR TO A/P AND OCCUR IN PATCHES OVER AN AREA 20 by 40 meter. SUBSURFACE oil CONDITION IN AREA IS HOR WORSE B/C ARMOR.

SEGMENT KN-5

SUBDIVISION B

DATE 4 / 11 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

EST. OIL CATEGORY LENGTH: W 0 m M 15 m N 35 m VL 15 m NO 815 m US 0 m

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

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

PHOTO ROLL # MAYSAP- 3 - 10 FRAMES 17-21

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

One area of significant subsurface siltng was observed (at location B). A number of pits, #14 & #20, delineated

REMARKS: MC 8/8/41 En revised, May 8 OG 1 of 6

TEAM NO. 3SEGMENT KN-5SUBDIVISION BDATE 4 1 MM / 91

CHARTER

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		
10	30			X					0-20	Y	25	B		X			BC/SG	
11	40							X	-	Y				X			G	LHTS
12	25					X			0-10	Y	-	-			X		PC/SG	
13	15					X			0-5	Y	-	-			X		PC/SG	
14	20		X						0-10	Y	-	-			X		C/SG	Peat
15A	20		X						0-10	N	-	-		X			PC/SG	
15B	20			X					10-20	N	-	-		"	"		"	
16A	15		X						0-5	N	-	-		X			PCB/SG	
16B	15			X					5-15	N	-	-		"			"	
17	10		X						0-10	Y	-	-		X			P/SG/R	
18	25							X	-	Y	-	-			X	X	CP/SG	
19	10		X						0-10	Y	-	-			X		P	
20	20							X	-	-	-	-		X			PC/SG	
21	20							X	-	-	-	-		X			P/S	
22	15		X						5-7	Y	-	-		X			P/SG	
23	35					X			0-2	Y	-	-		X	X		SG	
24	15	NOT	SUBSURFACE						X	-					X		SG	NOT SURFACE
25	15		X						0-3	X	-	-		X			P/SG	
26	10					X			0-5	Y	-	-			X		P/SG	
27	15							X	-	-	-	-			X		P/SG	
28	20			X					0-10	Y	-	-			X		P/SG	
29	30		X						0-5	Y	-	-		X			CP/SG	Ext. 2x2m
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

This HOR condition is approximately 20x20m. Other locations of subsurface oiling appear to be very limited in extent (e.g. Pit #10: MOR is 3x10m; Pit #25: HOR is 2x2m).

REVIEWED: MC 5/8/91 25 revised, May 8

OG 2 of 6

Biota on bedrock headlands dominated by dense new-growth Fucus, dense barnacles and spat, patches of Mytilus (many small individuals), limpets and Littorina.

Biota proximal to subsurface oil at pits 7-8 and 10-13 is generally sparse, consisting of sparse barnacles, sparse Mytilus, and scattered limpets. Biota increases downslope in diversity and abundance as described earlier.

Biota proximal to surface oil location A is relatively abundant (barnacles, Fucus, Littorina, Mytilus), with dense interbedded Mytilus nearby.

Biota proximal to surface oil location B is generally sparse (barnacles) increasing downslope in abundance and diversity.

Biota proximal to subsurface oil pits 14-19 consists of sparse to moderately dense barnacles and spat, clusters of limpets, patches of small amphipods, sparse Mytilus, sparse to moderately dense Littorina with egg masses, filamentous green algae, coral blennies, and oligochaetes. Abundance and diversity increases downslope. Shells of Saxidomus, Prototheca, Clinocardium also present.

Biota at surface location C generally sparse, increasing downslope as described earlier for cobble/boulder.

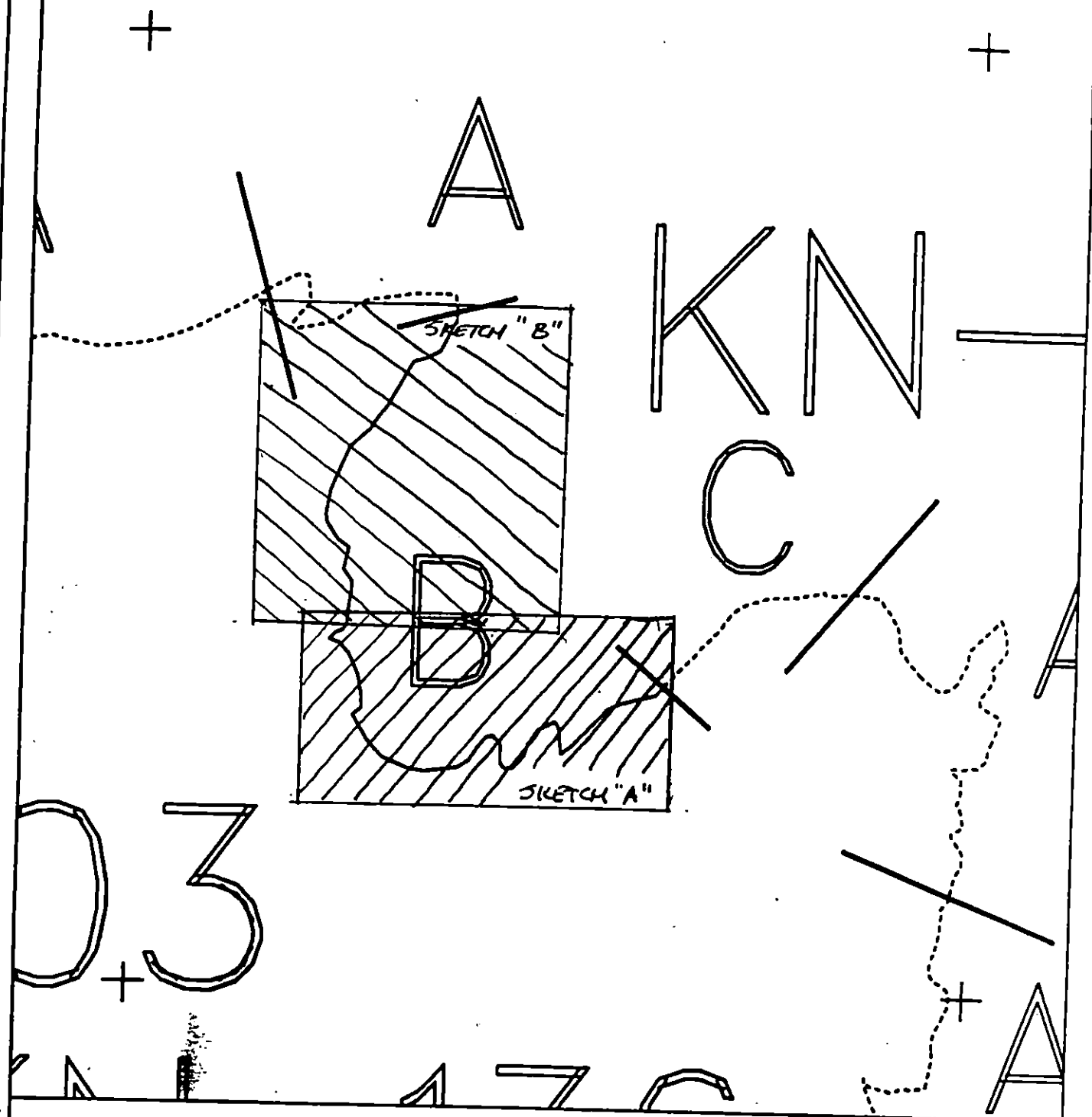
Biota at surface location D and pit 28 relatively abundant, consisting of dense barnacles and spat, dense Littorina with egg masses, patchy Fucus, limpets, filamentous green algae, interbedded Mytilus (variable density) and various clams.

Biota proximal to pit 25 is sparse, but increases rapidly downslope as described earlier.

Biota proximal to surface locations E & F relatively abundant, consisting of dense barnacles and spat, dense new-growth Fucus, patches of attached Mytilus.

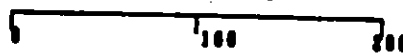
If treatment is undertaken on this subdivision, avoid disturbance and destruction of established community in the mid to lower intertidal, which is relatively abundant and diverse and seems to be recovering rapidly. This applies particularly to the Tombolo and headland to the north, and to the anadromous stream and nearby mussel beds.

stream in this subdivision not catalogued by ADFG; not present during '90 SSF. No constraints apply to the subdivision. DMC.



KN0005 B

METERS



AK State Plane Zone 4
18200000

Subdivision Field Map

Map Key: KNKN0005B

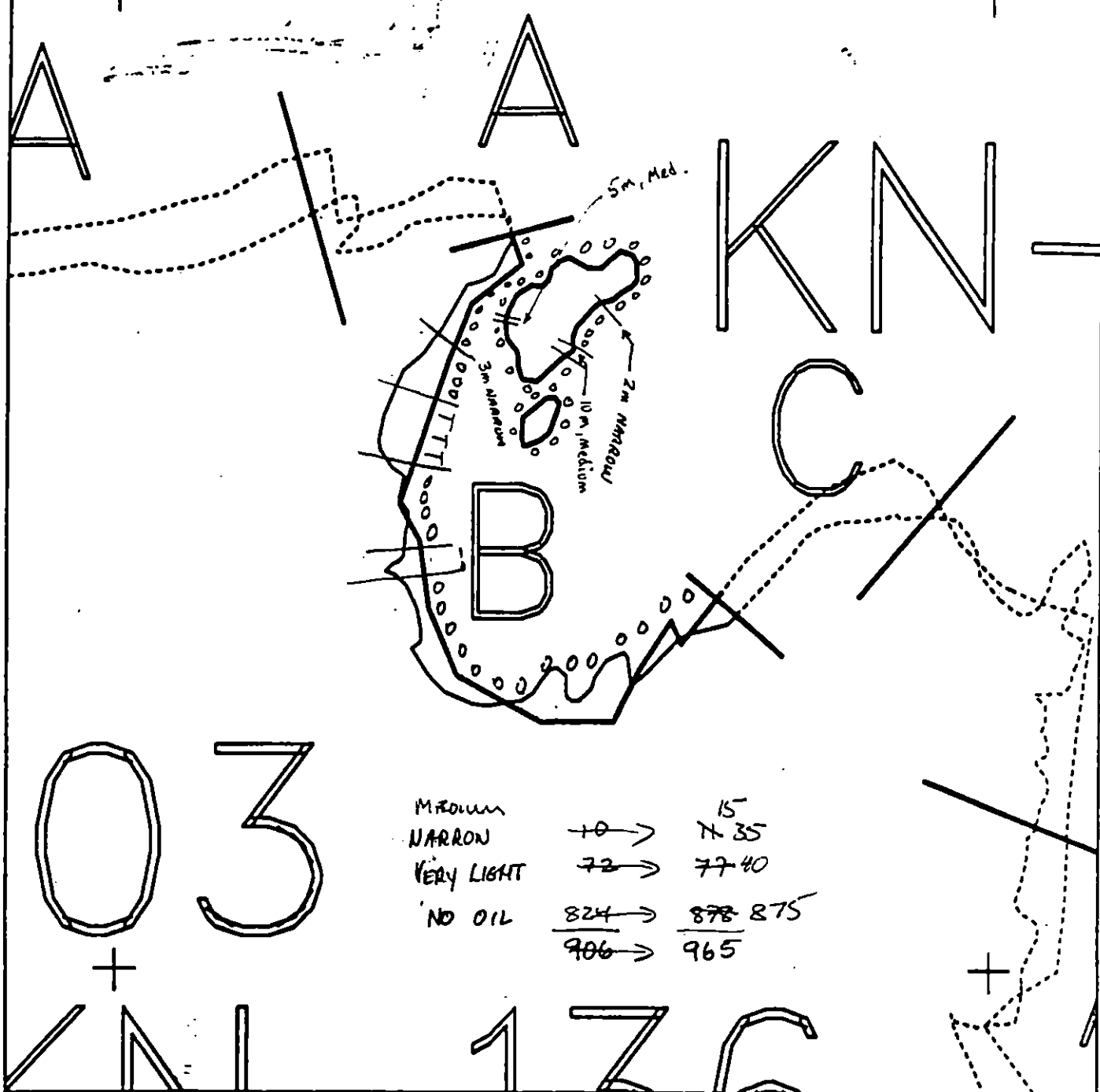
Name: HARPER

Date: 4 MAY 91

SKETCH LOCATION MAP

Reviewed: MC 5/5/91

OG 3 of 6
LS reviewed, May 5



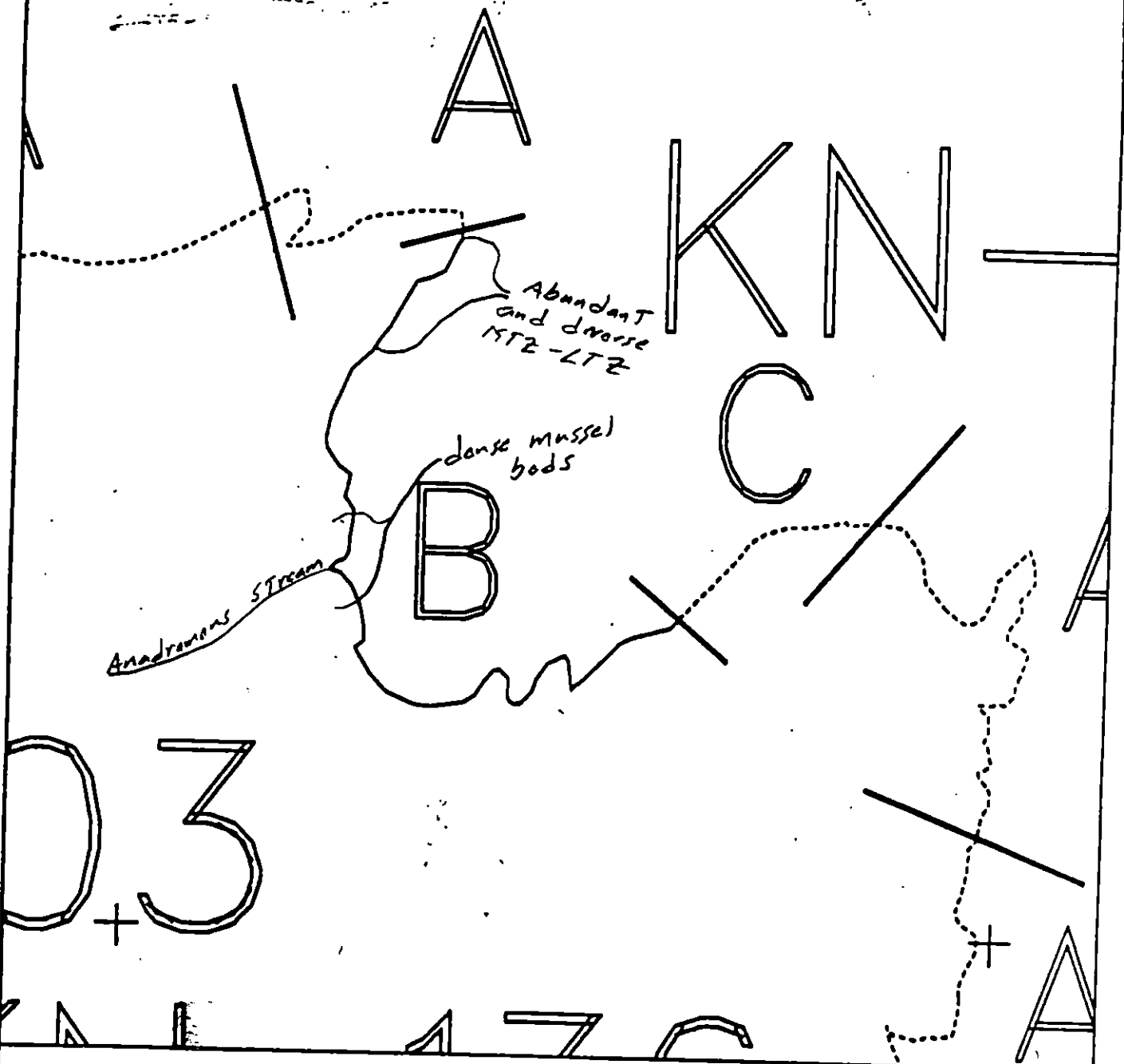
XXXX	Wide	KN0005 B	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 985m	Map Key: KNKN0005B
----	Narrow	METERS	Name: <u>HARPER</u>
TTTT	Very Light	0 100 200	Date: <u>4 May 91</u>
0000	No Oil	AK State Plane Zone 4	Date Entered:
		KN0005B	

Revised: MC 5K/91

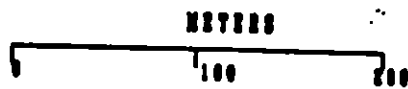
Entered May 8

OG 6 of 6

Bio Map



KN0005 B



AK State Planning 4

Subdivision Field Map

Map Key: KNKN0005B

Name: _____

Date: _____

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-05

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION C (3 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 197 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN-05 SUBDIVISION: A-C DATE 29 MAR 90

USCG SCOTT L. RAINSFORD

NAME MAURICE J. SHARPE

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION A & C NEEDS NO TREATMENT

SUBDIVISION B HAS OILED DEBRI (SNARE BOOM) IN SOME FALLEN TREES AND DRIFT WOOD.

ADEC

NAME

Wesley Ghormley

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Subdivision B of segment KN-05 Needs further mechanical and manual labor. Oiled debri in Subdivision B needs to be physically removed. Some pits dug in Subdivision B Filled with traces of free floating brown oil.

subdivision A and C of Segment KN-05 Needs No Further treatment.

LAND MANAGER

NAME

MICHAEL SMITH

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG McDonald / Ramsey USCG Transford / Sharp SEGMENT ST/ KN-05
 BIO Scott / Penn LAND REP Lori / Smith SUBDIVISION C
 EXXON Butler / Ried ADEC Ghermley / Ferguson TIME 12:45 to 1:00
 TEAM NO.: 3 / 4 TIDE LEVEL: +5 ft to 6 ft DATE 3 / 29 / 90
 ST. SUBDIVISION LENGTH: 165 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 80 % B 20 % C % P - % G - % S - % M - % V - %
 SLOPE: Long - % Hang - % Vert 100 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 4 m M 4 m N 0 m VL 0 m NO 120 m 165 m YH

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SEL BR	DEL HW	GY SL	DEBR TL	LAB	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT: H F S 2 sq. ft by 1 cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SEL BR	DEL HW	GY SL	DEBR TL	LAB	SU	U	M	U		

COMMENTS

SEGMENT KN-5

SUBDIVISION A, B, C.

DATE 3 / 29 / 80

CHECKLIST

- ☐ N Appr
- ☐ Approx. Scale
- ☐ Seg/Sub Grid
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/V/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

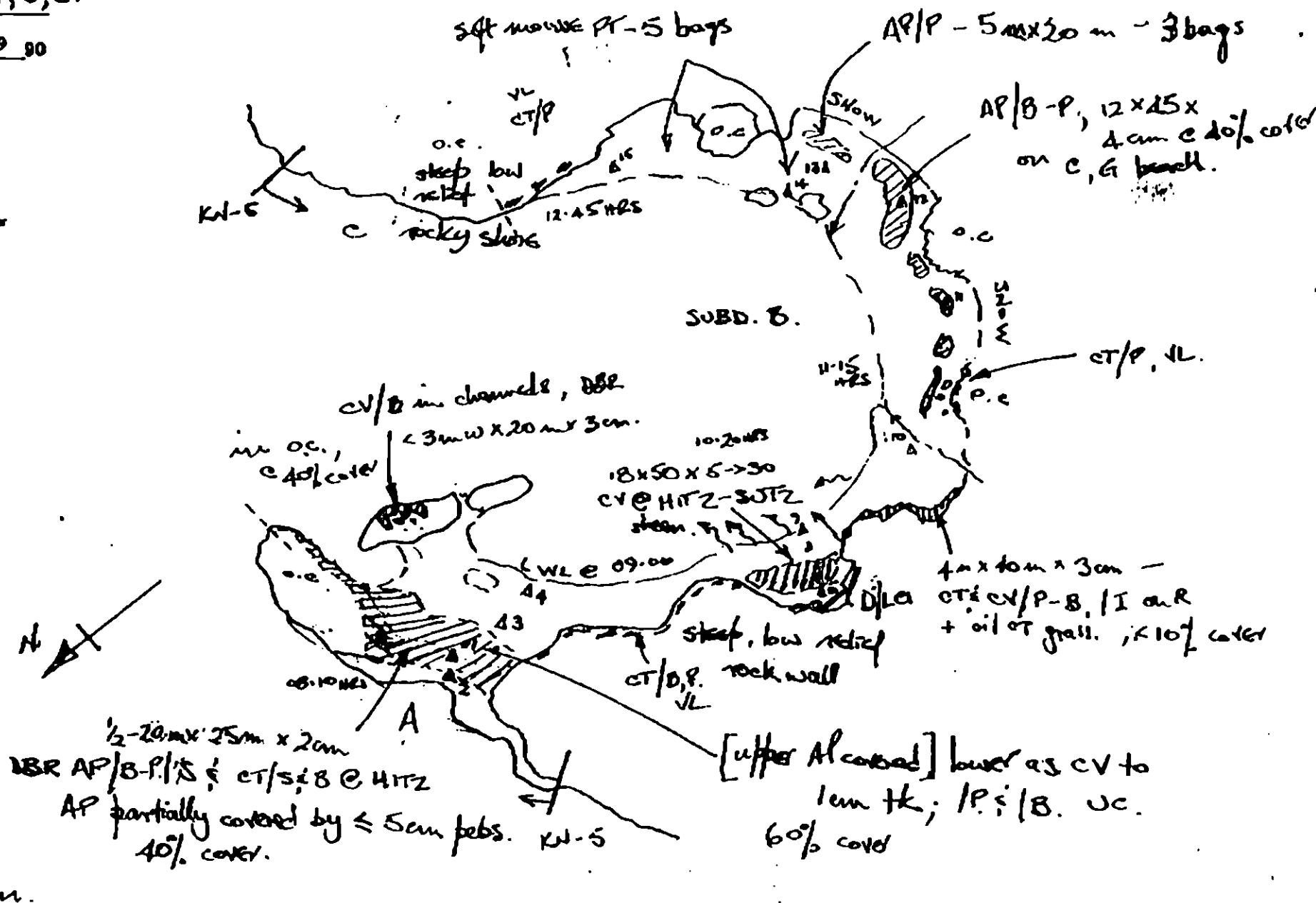
$\square$ CT/S
Spatched Distribution

Old Vegetation

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

$\sim$ stream.

SKETCH MAP



Oil Character Length (m): AP 120 PO 0 CV 80 CT 300 ST 300 MS 0 PT 200 TB 0 FL 200 NO 50

For B Subdiv N

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN-25 Subdivision C Date (mo / day / yr) 3/29/90Time (24 hr) 12:45 Biologist MAScott

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 _____ Moderate 5 Low _____

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

Photographs:

Roll No. _____

Frames 0

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

12

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-05 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal and Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90

ADEC ART WEINER

EXXON ANDY TIGER

NOAA Jessie J. Talbot

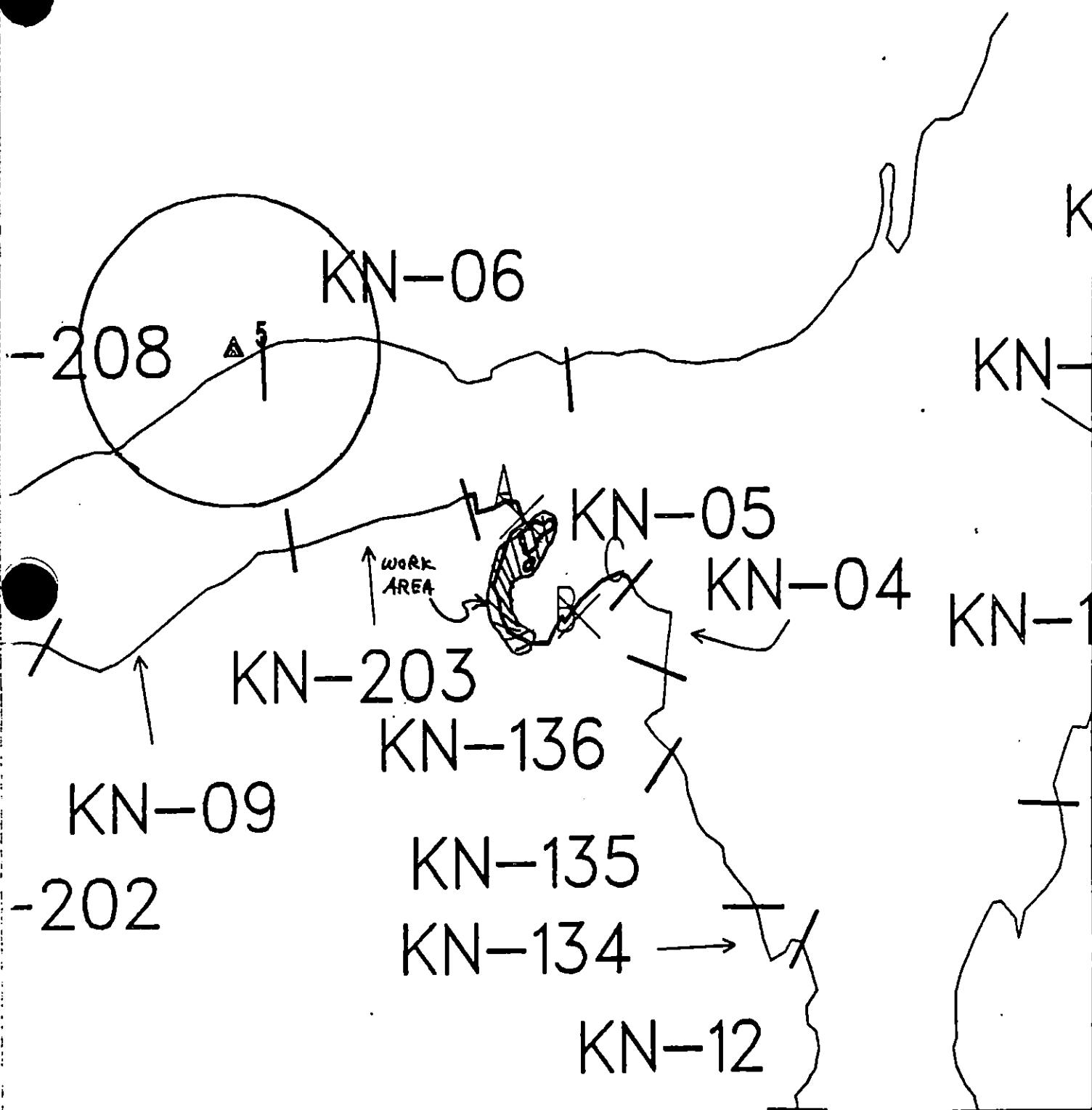
USCG W. J. Hall

FOSC W L

DATE 5-21-90

Prepared by: Anders Meyer

Date: 5/20/90



EXXON
 Exxon Company, USA
 Map Key: KN1-KN-5
 May 11, 1990



ECOLOGY MAP
 SEGMENT KN-5
 SUBDIVISION B (2 of 3)
 METERS
 0 373 746

- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1224 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION B (2 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
 3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
 6Y Recreation: Special use destination
 See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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 Zeffman DATE: 4/18/90

OILING CATEGORIZATION:

Wide 140m: Medium 431 m: Narrow 271 m: V.Light 545 m: No Oil 0 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>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: Recommend removal of tarmats and bioremediation of areas shown on attached sketch map. Treatment to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

REMOVE OILED OGBRIS + TRASH

SEE ADDENDUM DATED 5/24/90
 RSC.

TAG COMMENTS:

LOGS NOT TO BE REMOVED UNLESS FIELD ICP SUPERVISOR INDICATE REMOVAL NECESSARY AT TIME OF TREATMENT.

TAG APPROVAL DATE: 4/18/90

DEC ART WEINER
 EXXON ANDY TEAL
 NOAA 3rd Lt. [Signature]
 USCG G.A. BEITER

FOSC: [Signature] DATE: 5-6-90
 Provide 24 notice to CAC prior to beginning of work.
 CAC monitor to be on scene during work. CAC ICP supervisor transport + berth CAC upon request.
 Monitor survey SITE and UITS.

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION A (1 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass, and contact ADF&G and USFWS prior to treatment.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 219 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90.
ADEC ART WEINER Art Weiner
EXXON ANDY [Signature]
NOAA Bull Wescott Bull Wescott
USCG G.A. FEUER G.A. Feuer

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

OG G. MACDONALD

SEGMENT S 1-5

SUBDIVISION A, B, C.

DATE 3 / 29 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spashed Distribution

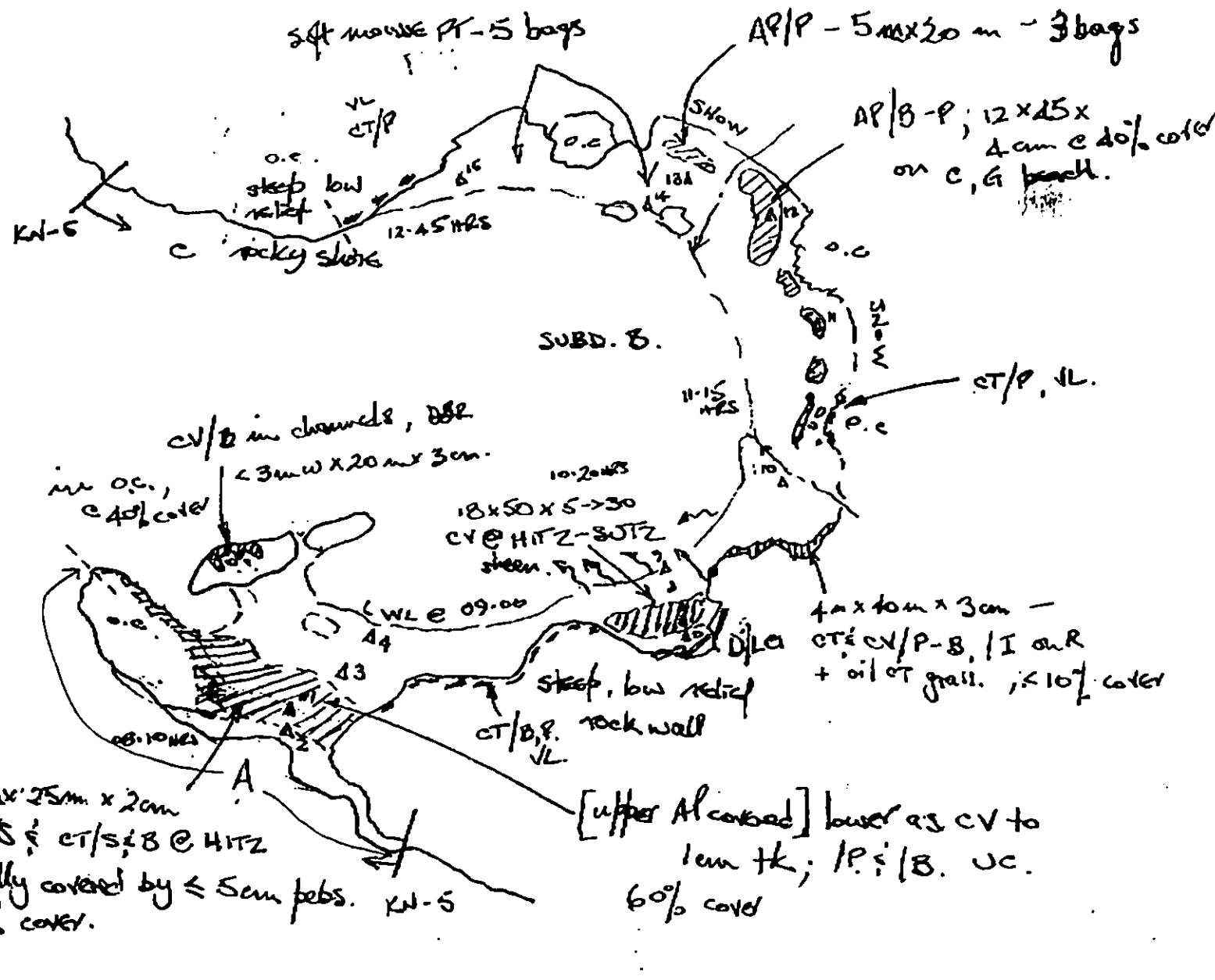
Oiled Vegetation

1 ●

Photo location, direction, and number

~> sheer.

SKETCH MAP



MC-29-1990 21:43 FROM MU BELLPH CANDIES

TO

EXON SCAT

P.02

Oil Character Length (m): AP 120 PO 0 CV 80 CT 300 ST 300 MS 0 PT 200 TB 0 FL 200 NO 50

FOR B SUBD N

REVISION: 03/04/00

VL = V.LIGHT = T T
 --- = narrow
 o o o = no oil



KN-5
8/29/90

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION B (2 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hoffman DATE: 4/18/90

OILING CATEGORIZATION:

Wide 140m: Medium 431 m: Narrow 271 m: V.Light 545 m: No Oil 0 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>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)

+ POOLED OIL

COMMENTS: Recommend removal of tarmats and bioremediation of areas shown on attached sketch map. Treatment to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

REMOVE OILED DEBRIS + TRASH

TAG COMMENTS:

LOGS NOT TO BE REMOVED UNLESS FIELD ICP SUPERVISOR INDICATE REMOVAL NECESSARY AT TIME OF TREATMENT.

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER
EXXON JOEY TEAL
NOAA Byrd Wescott
USCG G.A. REITER

FOSC: M L

DATE: 5-6-90

Provide 24 notice to CAC prior to beginning of work.
CAC monitor to be on scene during work. CAC ICP
supervisor to transport + berth CAC upon request.
monitor survey SITE of UITS.

Abstract

OG G. MACDONALD

SEGMENT 1-5

SUBDIVISION B partial

DATE 2 / 29 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)
☐ PH Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 ▲
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

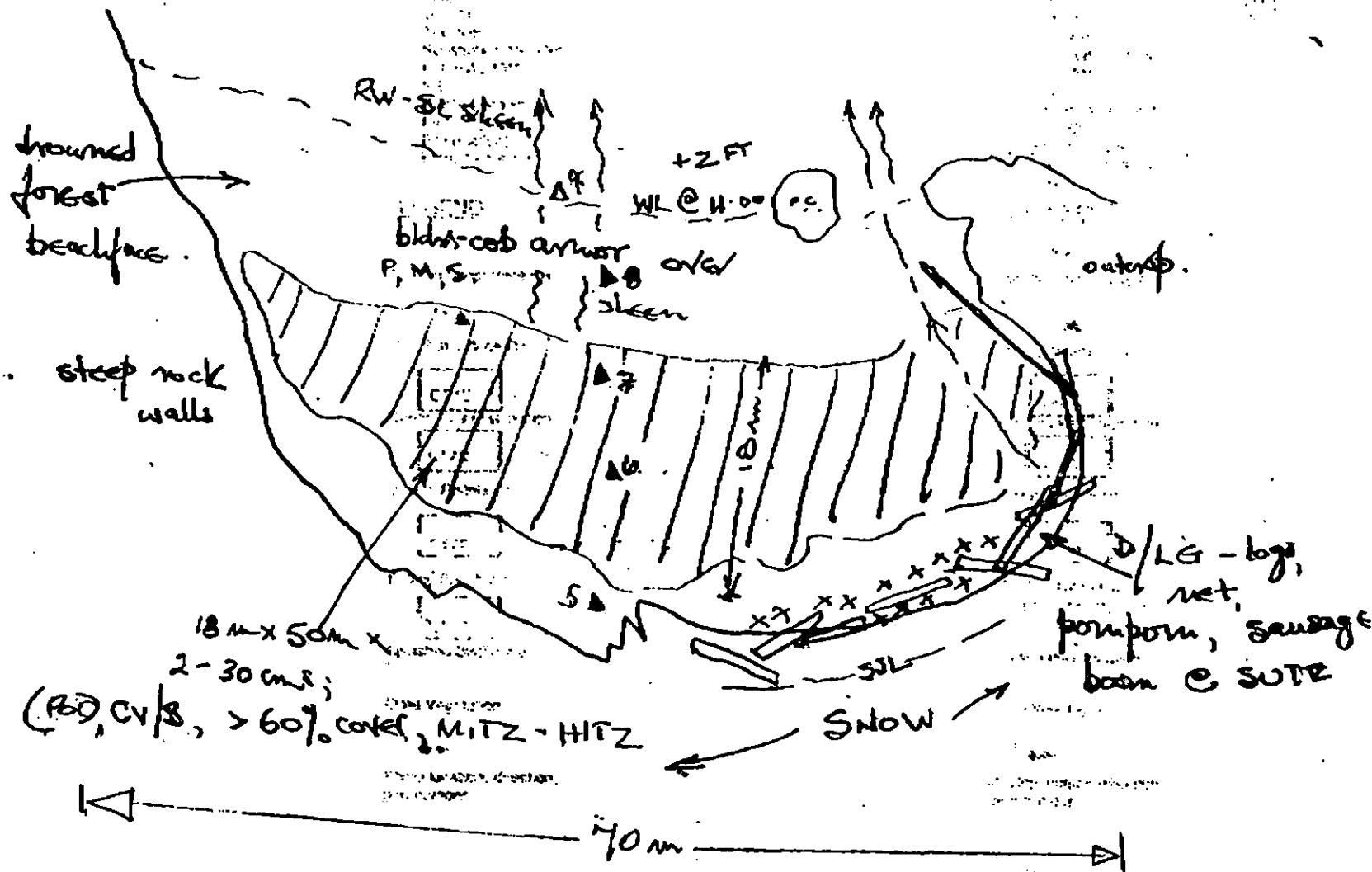
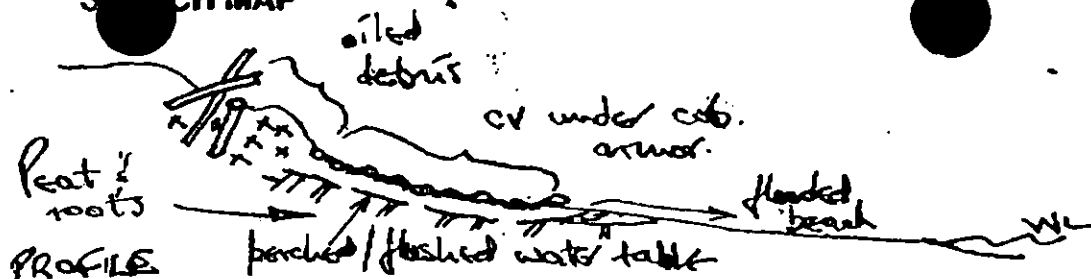
CT/P
Patchy Distribution

CT/S
Splashed Distribution

XXX
Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 20 CV 50 CT 50 STIC 10 MS 10 PP 10 TBV 0 FLY 60 MGT 0

for this sketch only

xx = WIDE
M = MOD = ||||

VL = V. LIGHT = T T

--- = NARROW

ooo = NO OIL

NARROW + VL + M ⇒
M overall on ADEC
coastline

KN

KN-5
3/29/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-05

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION A (1 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass, and contact ADF&G and USFWS prior to treatment.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 219 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN-05 SUBDIVISION: A-C DATE 29 MAR 90

USCG SCOTT L. RAINSFORD

NAME MURICE J. SHARPESIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION A & C NEEDS NO TREATMENT

SUBDIVISION B HAS OILED DEBRIS (SNARE BOOM) IN SOME FALLEN TREES AND DRIFT WOOD.

ADEC

NAME Wesley GhormleySIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Subdivision B of segment KN-05 Needs further mechanical and manual labor. Oiled debris in subdivision B needs to be physically removed. Some pits dug in subdivision B filled with traces of free floating brown oil.

subdivision A and C of segment KN-05 Needs No Further treatment.

LAND MANAGER

NAME MICHAEL SMITHSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/25/90

OG McDonald / Ramsey USCG Ransford / Sharp SEGMENT ST/ KN-5
 BIO Scott / Penn LAND REP Johnson / Smith SUBDIVISION A
 EXXON John B. / S. Reid ADEC G. Hornby / Ferguson TIME 8:00 to 8:30
 TEAM NO.: 3 / 4 TIDE LEVEL: 0 to 0 DATE 3 / 29 / 90
 EST. SUBDIVISION LENGTH: 205 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 60 % B 10 % C 10 % P 20 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 80 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 205 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	BR	BL	GR	OR	TR	LR	SU	UI	ME	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	X

PAVEMENT: H F S 10 sq. m by 1 cm

PATTIES / TARBALLS 10 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No.

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	GR	OR	TR	LR	SU	UI	ME	U		

COMMENTS steep rocky shore with no oil..

OG G. MACDONALD

SEGMENT KN-5

SUBDIVISION A, B, C.

DATE 3, 29 90

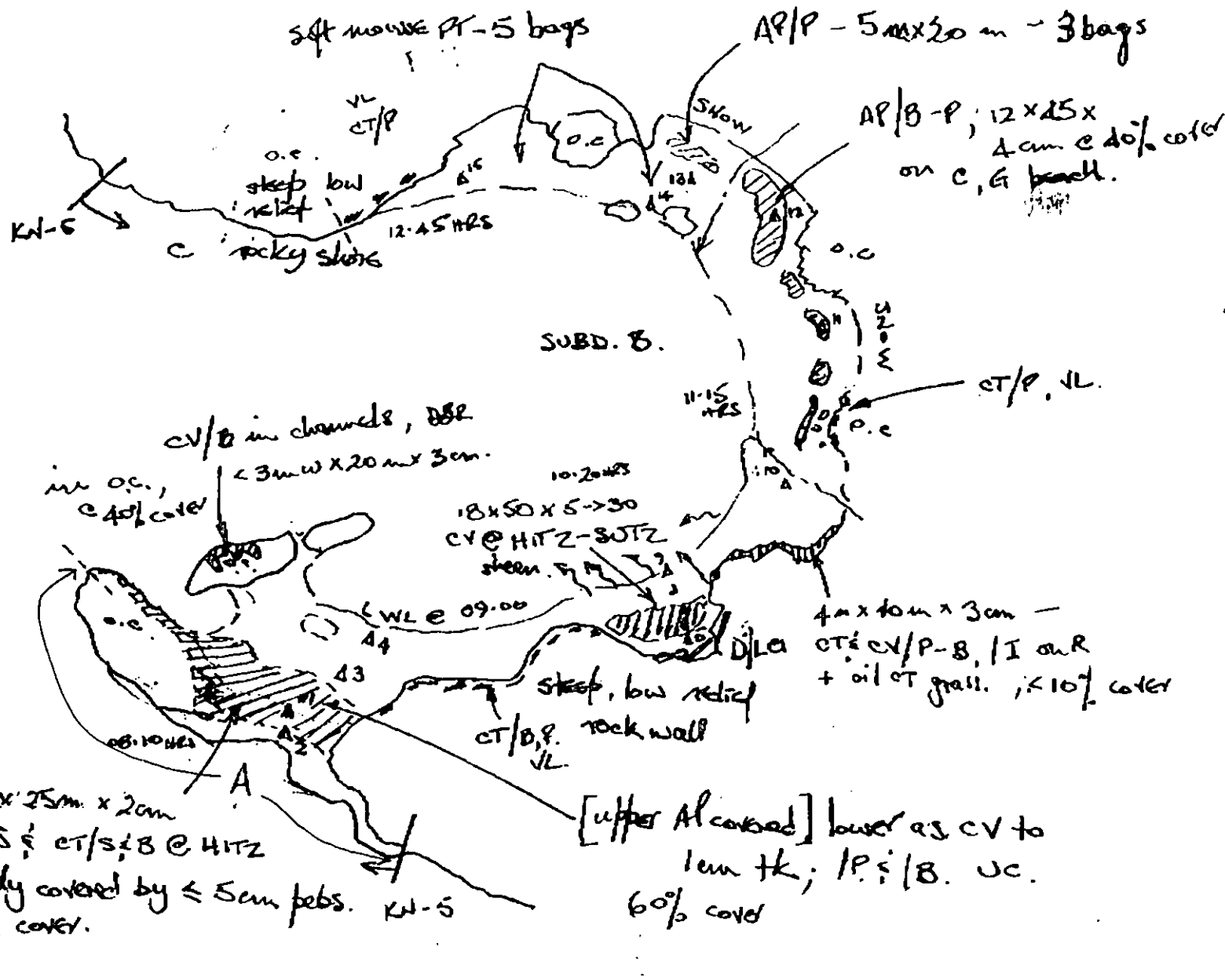
CHECKLIST

- NArow
- Approx. Scale
- Seg/Sub Body
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LVL
- SSI
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

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

TCH MAP



Oil Character Length (m): AP 120 PO 0 CV 80 CT 300 ST 300 MS 0 PT 200 TB 0 FL 200 NO 50

FOR B SUBD N

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / KN-05 Subdivision A Date (mo / day / yr) 3/29/90Time (24 hr) 8:15 MA SCOTT

- (A) Substrate type and % of segments:
 (1) Bedrock 0 (2) Boulder 0 (3) Cobble 0 (4) Pebble 0 (5) Sand 0 (6) SM 0
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 1% Low 3-5%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-3-1Frames 0

(general overview-frames 2-5)

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

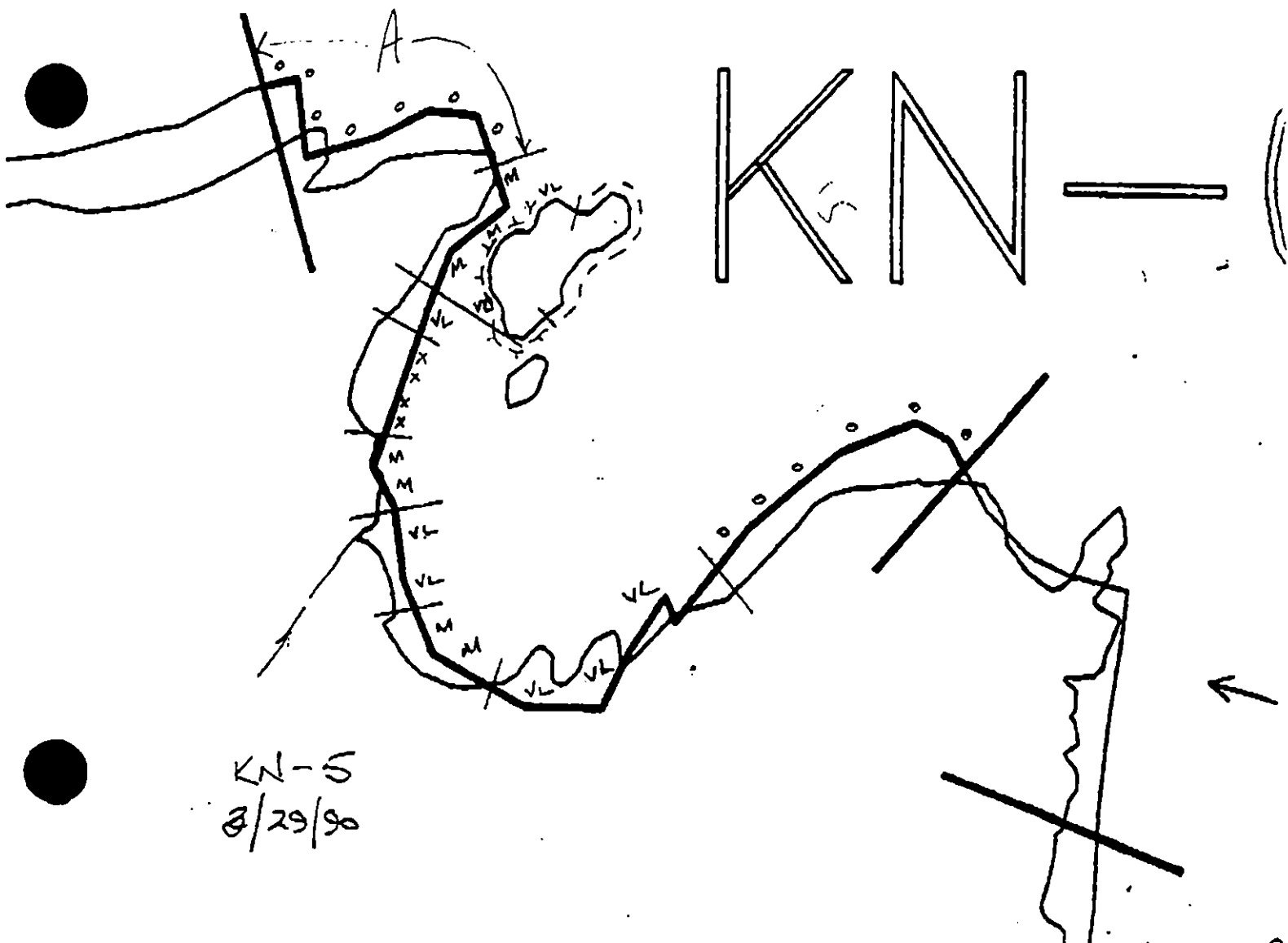
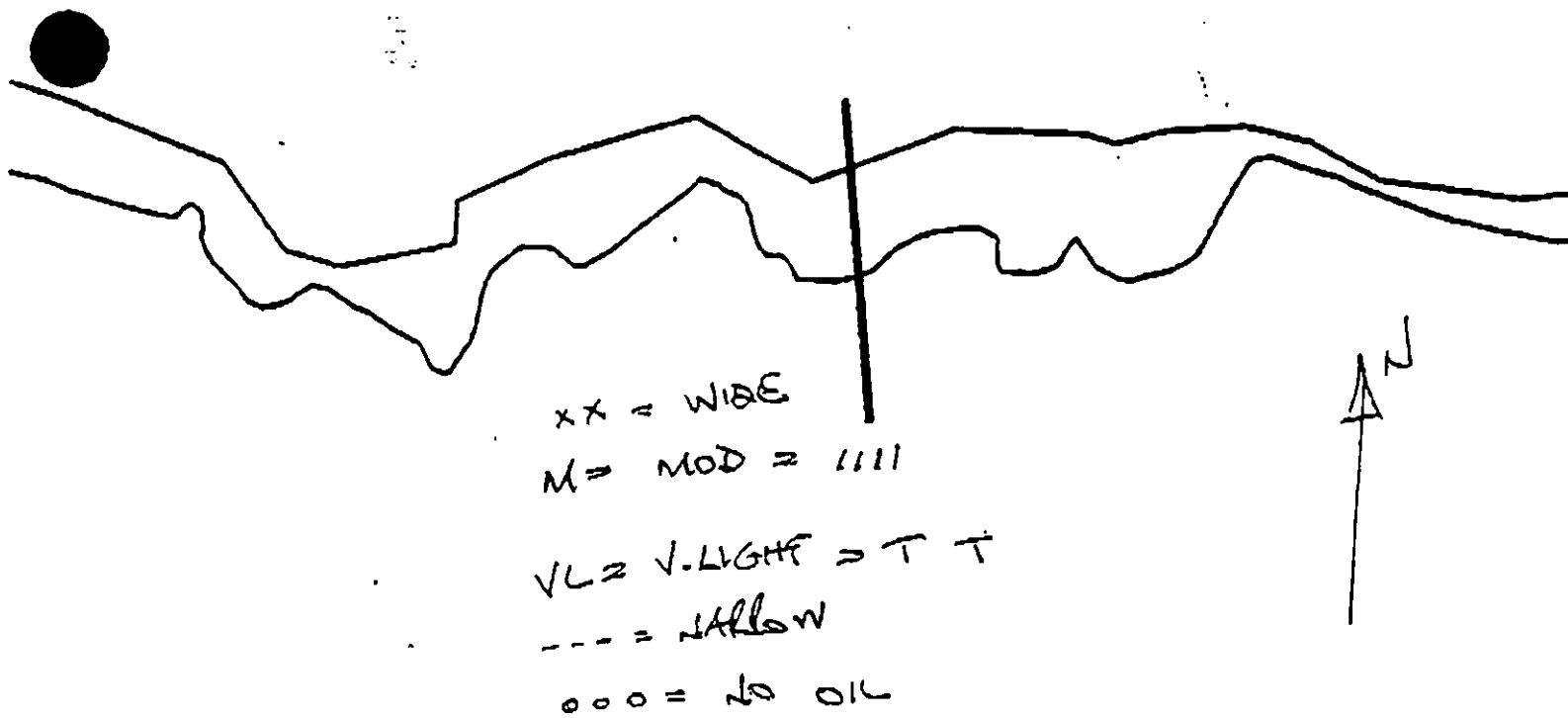
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

4 harlequins 2 eagles
 2 golden eye heard seals(s)
 5-10 gulls

Ecological Considerations:



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-05

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-05 SUBDIVISION B (2 OF 3) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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 140m: Medium 431 m: Narrow 271 m: V.Light 545 m: No Oil 0 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: ☐ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Recommend removal of tarmats and bioremediation of areas shown on attached sketch map. Treatment to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-05 SUBDIVISION: A-C DATE 29 MAR 90

SCG SCOTT L. RAINSFORD

NAME MURIEL J. SHARPE

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION A & C NEEDS NO TREATMENT

SUBDIVISION B HAS OILED DEBRIS (SNARE BOOM) IN SOME FALLEN TREES AND DRIFT WOOD.

ADEC

NAME

Wesley Ghormley

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Subdivision B of segment KN-05 Needs further mechanical and manual Labor. Oiled debris in subdivision B needs to be physically removed. Some pits dug in subdivision B Filled with traces of free floating brown oil.

subdivision A and C of segment KN-05 Needs No Further treatment.

LAND MANAGER

NAME

MICHAEL SMITH

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 06/28/90

OG Graham / Ramsey USCG Ransford / Sharp SEGMENT ST/ KN-05
 BIO Scott / Rees LAND REP Johnson / Smith SUBDIVISION B
 EXXON Butler / Rios ADEC Ghormley / Ferguson TIME 8:30 to 12:45
 TEAM NO.: 3 / 2 TIDE LEVEL: 0 to 1.5 ft DATE 3 / 29 / 90
 ST. SUBDIVISION LENGTH: 660 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 10 % C 20 % P 30 % G 20 % S 5 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 30 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 120 m M 270 m N 0 m VL 330 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	K	B	P	S	OR	OF	OL	OP	OT	OS	OTL	OTR	SU	U	M	U
ASPHALT PAVEMENT		X										X		X		
POOLED		X										X		X	X	
COVER			X									X	X	X	X	
COAT			X					X					X			
STAIN																
MOUSSE																
PATTIES			X								X		X	X		
TARBALLS																
FILM			X	X		X	X						X	X	X	X
NO OIL																

PAVEMENT: H F S 2500 sq. m by 5 cmPATTIES / TARBALLS ~ 10 BAGSNEAR SHORE SHEEN? NO BR (RW) SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-3-1Frames 2-9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	OR OR	OF OF	OL OL	OF OF	NO NO	SU	U	M	U			
1	25			X			5-7		X					X		X				N	P, G, S
2	30					X	.									X				N	P, G, S
3	30					X	.											X		N	G, S, M
4	30					X	.									X				N	G, S, M
5	15		X				5-15		X				X		X					N	G, R
6	20		X				0-20	X					X			X				N	C, G, M 61E@

COMMENTS In general, areas in sec. B indicated a film or coating on Rock facies boulder outcrops. Areas which had a cobble armour trapped the oil into pooled + covered zones. Fine-grained sediments coated Asphalt pavement on surface. Streams were much cleaner.

00 G. MACDONALD

SEGMENT KN-5

SUBDIVISION A, B, C.

DATE 3 / 29 80

CHECKLIST

- ___ N Area
- ___ Approx. Scale
- ___ Seg/Sub Grid
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HW/LWL
- ___ SSI
- ___ Profile Location(s)
- ___ Profile(s)
- ___ PH Location(s)
- ___ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

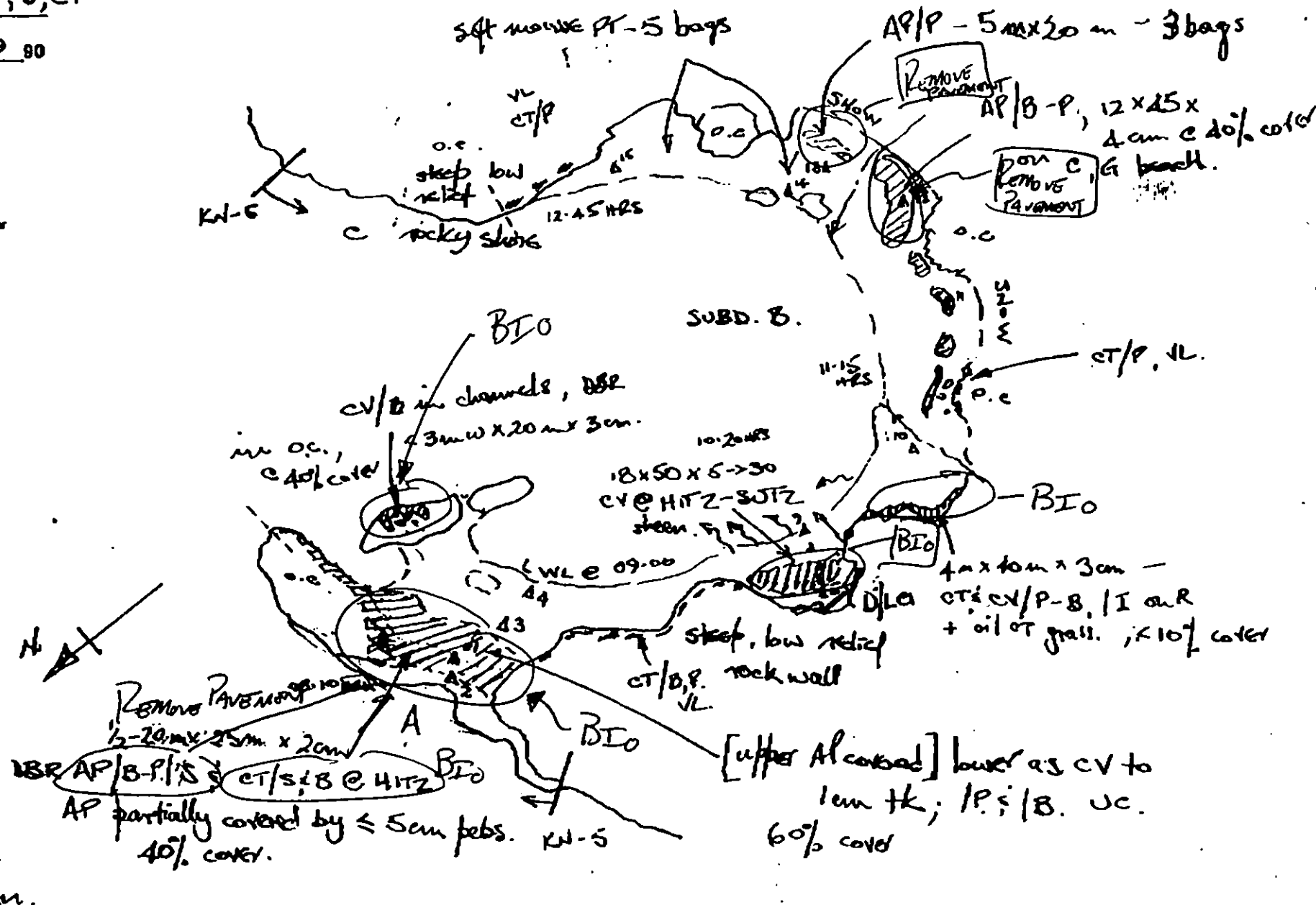
CT/S
Splashed Distribution

Oil Vegetation

1 ●
Photo location, direction, and number

~> stream.

ETCH MAP



Oil Character Length (m): AP 120 PO 0 CV 80 CT 300 ST 300 MS 0 PT 200 TB 0 FL 200 NO 50

APR 8 3 00 PM '80

REVISION: 000000

OG G. MACDONALD

SEGMENT K1-5

SUBDIVISION B partial

DATE 2 / 29 90

CHECKLIST

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

LEGEND

1 Δ
P1 - No Subsurface Oil

2 Δ
P2 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

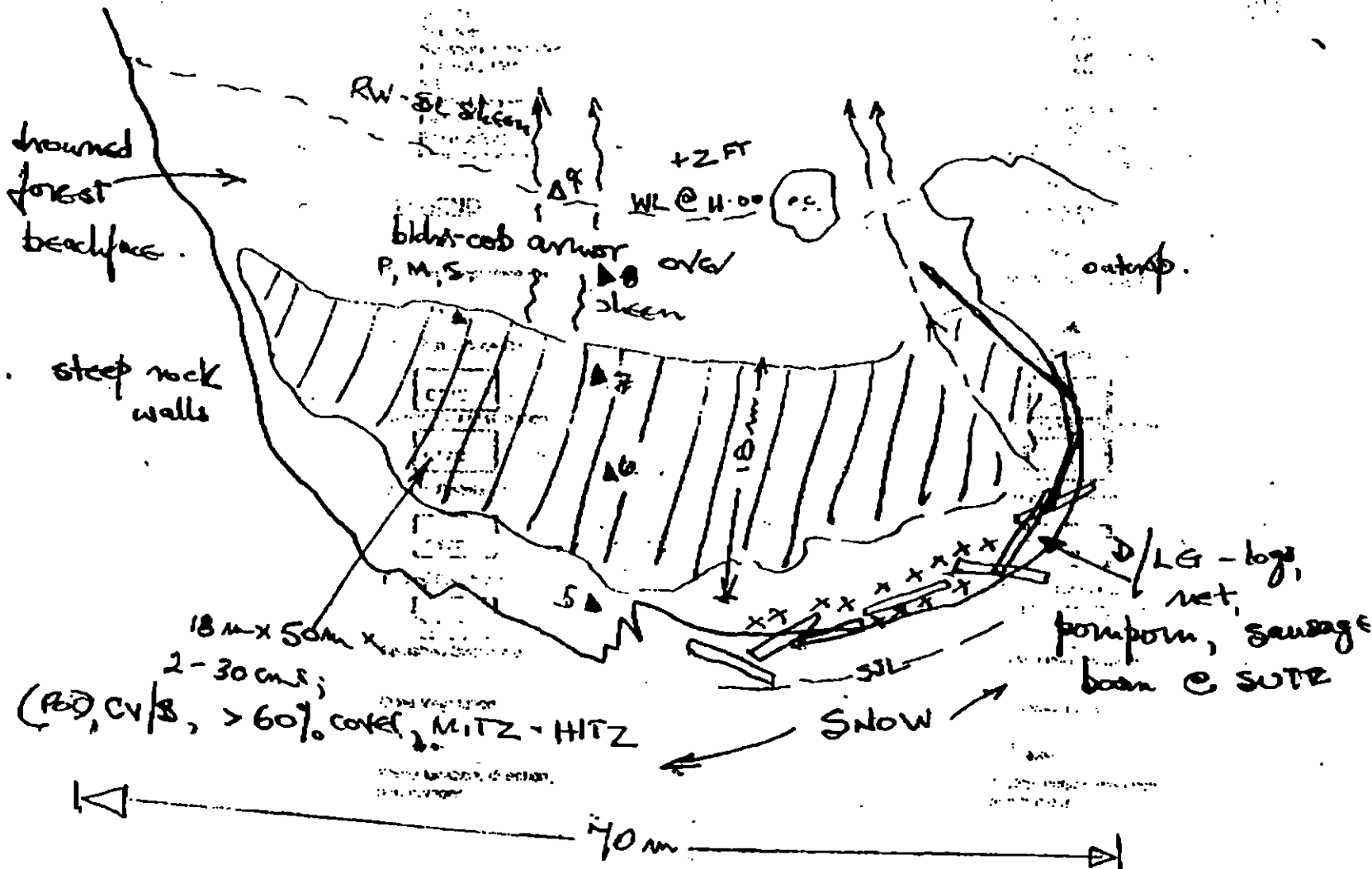
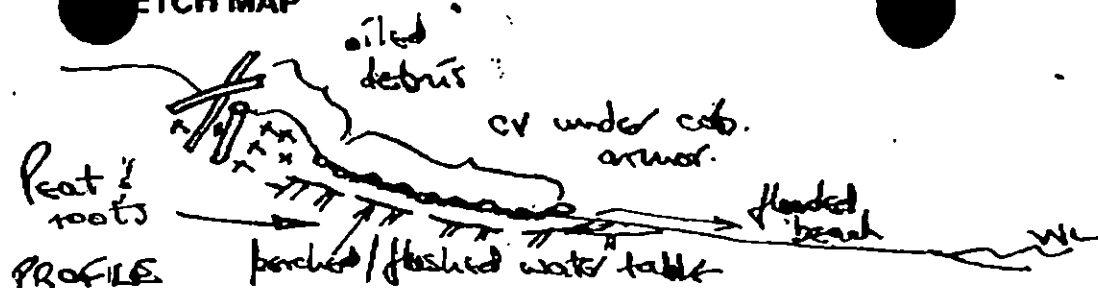
CT/P
Patchy Distribution

CT/S
Splashed Distribution

XXX
Oiled Vegetation

1 →
Photo location, direction, and number

ETCH MAP



Oil Character Length (m): AP 0 PO 20 CV 50 CT 50 STCH 10 MS 10 PP 10 TBV 0 FLY 50 NO 0

for this sketch only

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/88

SEGMENT ST/ KN-05 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR										PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	CL	OF	NO		UO	UO	1	2	3	4	5	6	7	8	9	10	SU	U	M	U		
7	30		X				0-20	X						X								X		N	C, G, M <i>water table @ 0 cm</i>
8	20				X		0-5	X				X										X		N	C, P, M
9	20					X	.																X	N	P, M
10	20					X	.															X		N	P, S, M
11	15					X	.													X				N	C, P, S
12	10					X	.													X				N	C, P, S
13	15					X	.													X				N	G, P, M
14	15					X	.														X			N	S, M
15	20					X	.														X			N	P, S, M
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

REVIEWED

[Signature]

DATE

4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / KN-05 Subdivision B Date (mo / day / yr) 3/29/90

Time (24 hr) 10:20 MASCOTT

(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 Moderate 2 Low 3

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

Photographs: Roll No. 1

Frames 0

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

2 dead otter - no visible oil
1 dead deer - no visible oil
2 buffleheads
1 - sea otter
2 - common mergansers

Ecological Considerations:

lower intertidal - appears to have extensive mussel bed

xx = WIDE
M = MOD = ||||

VL = V. LIGHT = T T

--- = NARROW

ooo = NO OIL

NARROW + VL + M ⇒
M overall on ADEC
coastline

KN

KN-5
3/29/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest located in adjacent segment.
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 cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 61 m: V.Light 828 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat/patties and 2) bioremediate in areas indicated on sketch map. Work should be conducted between 7/1 and 8/15 with approval of USFWS due to eagle nest constraint.

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

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

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

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

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

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

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5F All Bald Eagle nests (3/1 to 6/1)

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

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

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

6Y Special use destination

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

7HH Finfish harvesting

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 / KN006 SUBDIVISION: A of 1 DATE 4-25-90

USCG

NAME

Patrick Malay

SIGNATURE

Patrick Malay

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Recommend that the small area of asphalt pavement in the Eastern half of the segment be broken up and the beaches in the vicinity of pits 1-3 be bioremediated. All subsurface oil discovered was close to the surface ($\leq 10\text{cm}$). There was a small area of grass that was growing through about 5cm of oiled sediments but it appeared healthy.

ADEC

NAME

M. Cunningham

SIGNATURE

M. Cunningham

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Walk the segment, pick up tar splatters, bioremediate areas where patches asphalt occur + check for debris. This area was relatively free of oil with the exception of a few small patches oil & asphalt.

LAND MANAGER

NAME

Steven Phillips

SIGNATURE

Steven Phillips

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Scout segment to retrieve tarballs.
Remove asphalts near Pit 2 and by "oiled grass" (see map)
Sketch map indicates mousse which has weathered and mixed with sediments. This should all be removed including sediments. (it is more like asphalt now)
Near Pit 3 is a 7m x 4m patch of discolored area which had silver sheens in the interstitial water. This area should be bioremediated and disturbed to hasten recovery.
Tarbands on vertical bedrock and boulders is broken up enough to not require treatment.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Shag Chaney USCG Pat Malay SEGMENT ST/ KN 006
 BIO Jim Roth LAND REP DNR Stark Phillips SUBDIVISION A (1 OF 1)
 EXXON Ray Solito ADEC Mike Cunningham TIME 07:30 to 09:00
 TEAM NO. 07 TIDE LEVEL -3.5 ft -2.5 ft DATE April 25 / 90
 EST. SUBDIVISION LENGTH: 989 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
 SURFACE SEDIMENTS: R 20 % B 60 % C 10 % P 5 % G - % S - % M 5 % V - %
 SLOPE: Lang 10 % Hang 85 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 90 m VL 899 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	/C	/B	/P	/S	SL	BR	OR	GR	BL	TR	LT	LB	SU	U	M	L
ASPHALT PAVEMENT				X	X									X		
POOLED																
COVER																
COAT		X	X	X		X	X	X					X	X	X	
STAIN		X	X	X		X	X	X					X	X	X	
MOUSSE																
PATTIES				X									X	X		
TARBALLS				X									X	X		
FILM			X										X	X		
NO OIL																X

PAVEMENT H F 01 sq. m by 5 cmPATTIES / TARBALLS collected 1 BAGSNEAR SHORE SHEEN? ☒ BR ☐ RW ☐ SL ☐ TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE NONE FOUND#BAGS 0

Photographs:

Roll No. NONEFrames NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	D F	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL	BR	OR	GR	BL	TR	LT	LB	SU	U	M	L				
1	20				X		0-5		X	X	X							X				-	Y	15	B-CM
2	20		X				0-5		X	X	X							X				-	N	0	B-CM
3	20				X		0-10		X	X	X							X				-	Y	15	B-CPM
4	30					X	.											X				-	N	0	B-BCM
5	25					X	.											X				-	N	10	B-GC
6	30					X	.											X				-	N	0	P-GBC

COMMENTS

REVIEWED YHDATE 4-29-90

COMMENTS
SEGMENT ST-KN-006-A

Greg Chaney
April 25 1990

This segment ran along the north shore of Bay of Isles on Knight Island. The survey was conducted in the morning under clear skies. The shoreline consisted of boulder beaches separated by rocky headlands. Traces of oil were observed along the entire length of the segment but it did not amount to more than "Narrow" at its greatest concentration. Patches of stain and tar, drops of tar coat and occasional splatters were typical. Near pit #2 asphalt patches between the boulder matrix were observed. The total area of these patches was roughly estimated at half a square meter. Near pit #3 a brown film of oil was observed on the surface sediments. Half way between pits #3 and #4, six patches were observed which appeared to have been mousse patties that had melted into finer sediments between the boulders. Subsurface oiling was relatively minor and appeared localized.

CHECKLIST

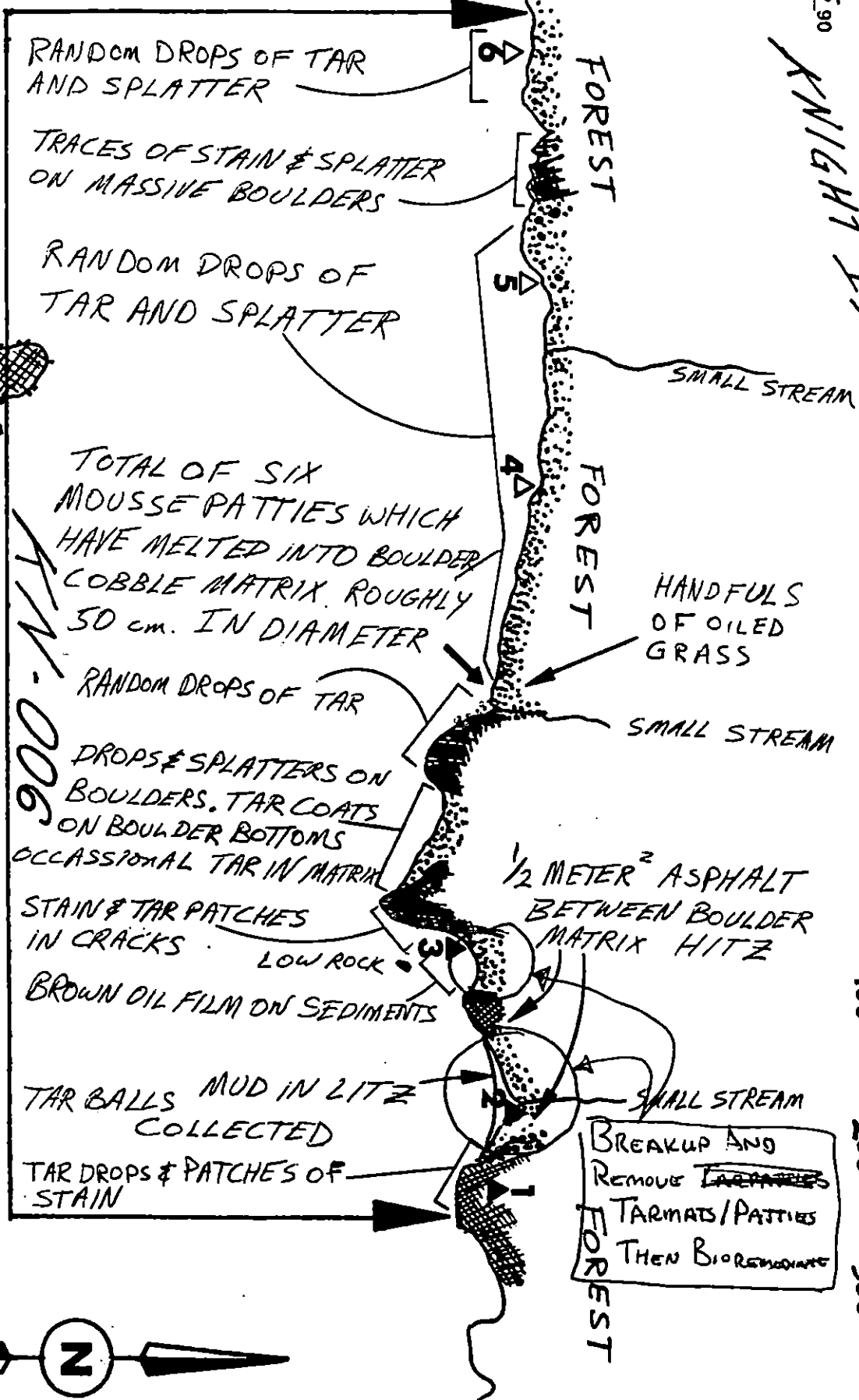
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sags/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pili Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ Pili - No Subsurface Oil
- 2 Δ Pili - Subsurface Oil
- ☐ CT/C Continuous Distribution
- ☐ CT/B Broken Distribution
- ☐ CT/P Patchy Distribution
- ☐ CT/S Splashed Distribution
- ☐ Oiled Vegetation

Photo location, direction, and number

SKETCH MAP



Oil Character Legend (m): AP 5 PO — CV — CT 500 ST 900 MS — DE 10 TB 2 FL 25 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN-6 Subdivision A Date (mo / day / yr) Apr 25, '90Time (24 hr) 0730 - 0900 Biologist ROTH

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 60 (3) Cobble 10 (4) Pebble 5 (5) Sand — (6) Silt 5
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 40 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

 Photographs: —
 Roll No. —
 Frames —

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

SEA OTTER SEEN EN ROUTE TO SECTOR; 1 BALD EAGLE ADULT ON WING + PERCHING IN SECTOR. A SHELTERED SITE WITH MODERATE TO LOW OVERALL PERCENT COVER OF BIOTA. THE RELATIVELY LONG LIST OF PLANT AND ANIMAL SPECIES COLLECTED

Ecological Considerations:

POSSIBLE "PINNIPED HAULOUT
 BALD EAGLE NEST
 BY-SPECIAL USE DESIGNATION
 (SEE ECOLOGY MAP)

REFLECTS THE EXCELLENT MINUS TIDE WHICH PERMITTED OBSERVATIONS IN BOTH LITZ AND SHALLOW SUBTIDAL HABITATS. EVIDENCE OF RECRUITMENT AND/OR NEW GROWTH WAS APPARENT FOR ALL 4 MAJOR BIOTAL GROUPS RATED ABOVE.

ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

~~3N, O, P, Q~~
 6Y (SPECIAL USE DESIGNATION)
 2M HERRING SPAWNING)

BALD EAGLE NEST $\leq$ 400M OF SEGMENT

KN-06

BALD EAGLE
 NEST

"POSSIBLE"
 PUNIPED
 HALL OUT

KN

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-6

ADEC Segment Length: 989m



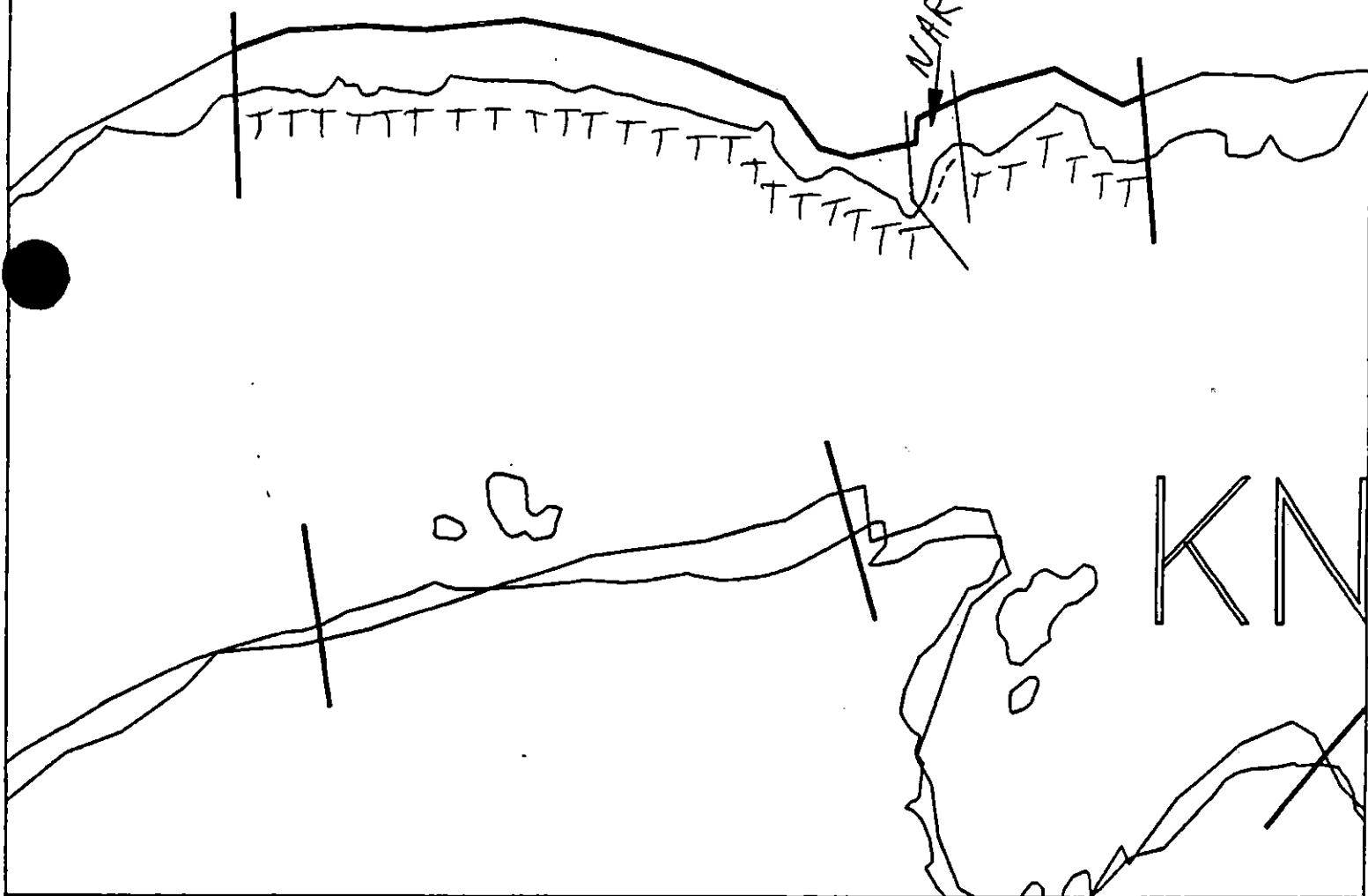
Map Key: PWS-467

Name: _____

Date: _____

Data Entered: _____

KN-06



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-6

ADEC Segment Length: 989m



Map Key: PWS-467

Name: Greg Chaney

Date: April 25 1990

Data Entered:

REVISION 1
6/22/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tar Mat Removal	OPEN
Bioremediation	~~OPEN~~

BIOREMEDIATION REMOVED
BY WORK PLAN ADDENDUM,
DATED 6/8/90, Fox approved 6/14/90
JPP 6/22/90

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	NO CONSTRAINT. Bald eagle nest in Segment 208 is more than 400m from the work areas.

OTHER ECOLOGICAL CONSIDERATIONS

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

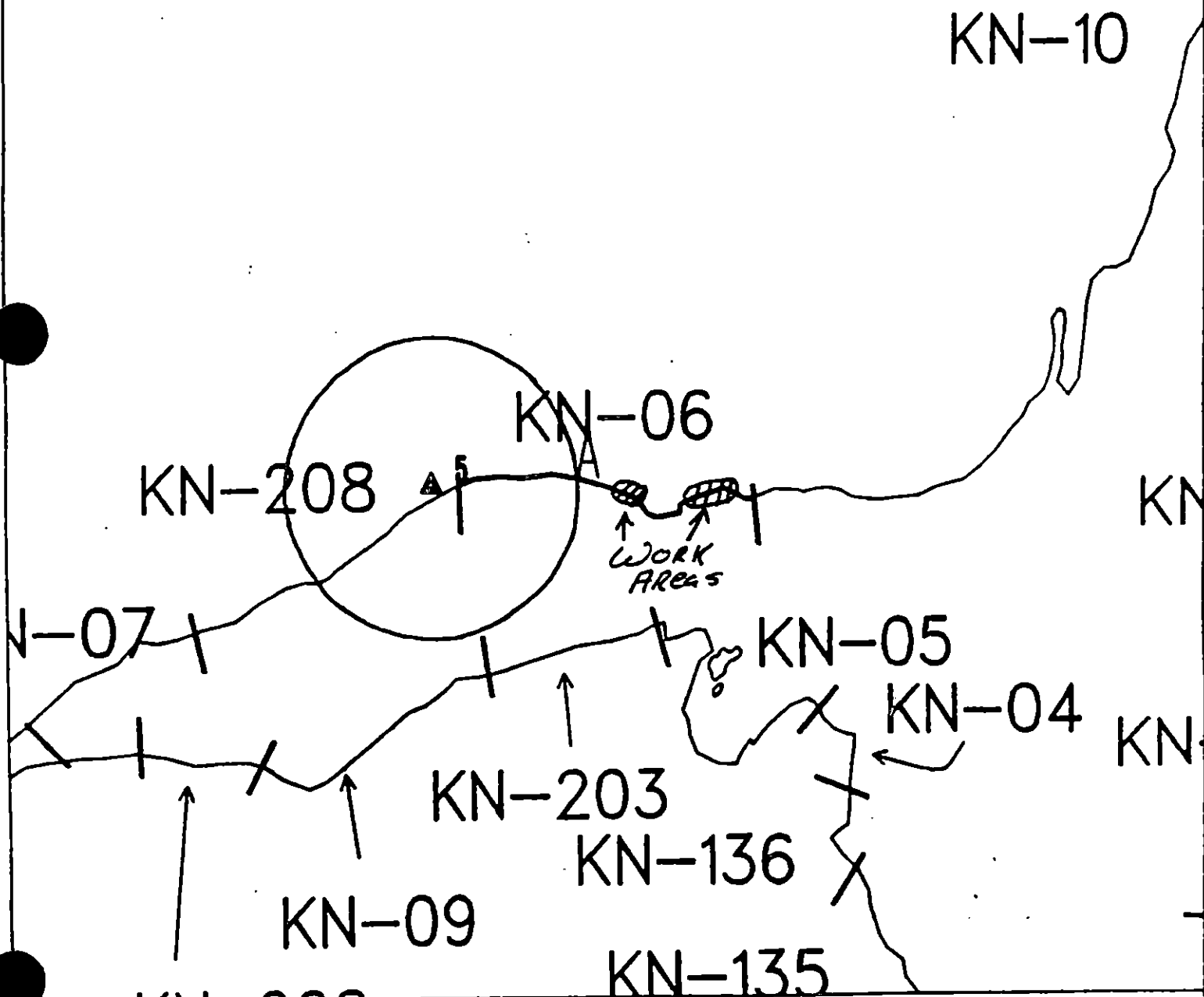
TAG APPROVAL DATE 5/24/90
ADEC Art Weiner
EXXON Mark Taylor
NOAA B. W. ...
USCG M. J. ...

FOSC ML Date 5-24-90

Prepared by ...

Date

5/22/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT KN-6
SUBDIVISION A (1 of 1)

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest located in adjacent segment.
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 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: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 61 m: V.Light 828 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> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat/patties and 2) bioremediate in areas indicated on sketch map. Work should be conducted between 7/1 and 8/15 with approval of USFWS due to eagle nest constraint.

See Addendum Dated 5/22/90 wks

TAG COMMENTS: Monitors TO. Assess significance of moose patties and "horizontal" of oiled grass as indicated on the sketch

TAG APPROVAL DATE: 5/8/90

ADEC [Signature]

EXXON [Signature]

NOAA [Signature]

USCG [Signature]

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

WORK PLAN ADDENDUM

Segment ST/KN-006

Subdivision A

Dated 6/8/90

MODIFICATION

1. REASON FOR MODIFICATION

- Joint request from the field by ADEC, Exxon and USCG

2. ADJUSTMENT TO WORK PLAN

- No bioremediation

SHPO APPROVAL NEEDED YES _____ SHPO SIGNATURE _____
NO X

TAG APPROVAL DATE 6/8/90

ADEC RAY MORGAN

EXXON HANS O. JAMES

NOAA JOSEPH TALBOT

USCG G.A. REITER

FOSC [Signature] DATE 6/16/90

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT KN06 SUBDIVISION A DATED 6/1/90

MODIFICATION

1. REASON FOR MODIFICATION

MOST OF THE REMOVED OIL WAS AT THE HIGH STORM LEVEL. VERY LITTLE IN THE INTERTIDAL ZONE AND IT WAS ALL REMOVED. ABUNDANT PLANKT IN THE INTERTIDAL ZONE AND INSECTS UNDER TIE ROCKS IN THE TREATED AREAS.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

EXXON, USCG AND ADEC REPRESENTATIVE CONCUR THAT BIO REMEDIATION IN THIS SEGMENT IS NOT REQUIRED.

3. TIMING ISSUES

ADEC Richard McKean 6/3/90

EXXON [Signature]

USCG [Signature]

LCDR, USCG 6/3/90

LAND MANAGER _____ (If field rep is on scene)

SHORELINE EVALUATION

SEGMENT ST/ KN-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest located in adjacent segment.
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 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: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 61 m: V.Light 828 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> </u> Manual Pickup	<u> </u> Absorbents (pads,rolls,etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat/patties and 2) bioremediate in areas indicated on sketch map. Work should be conducted between 7/1 and 8/15 with approval of USFWS due to eagle nest constraint.

TAG COMMENTS: MONITORS TO ASSESS SIGNIFICANCE OF MOOSE PATTIES AND "HANDFUL" OF OILED GRASS AS INDICATED ON THE SKETCH.

TAG APPROVAL DATE: 5/8/90

ADEC Art Weiner Art Weiner

EXXON Amy Tetz Amy Tetz

NOAA Gary Peterson Gary Peterson

USCG G.A. Reiter G.A. Reiter

FOSC: W L DATE: 5-12-90

CHECKLIST

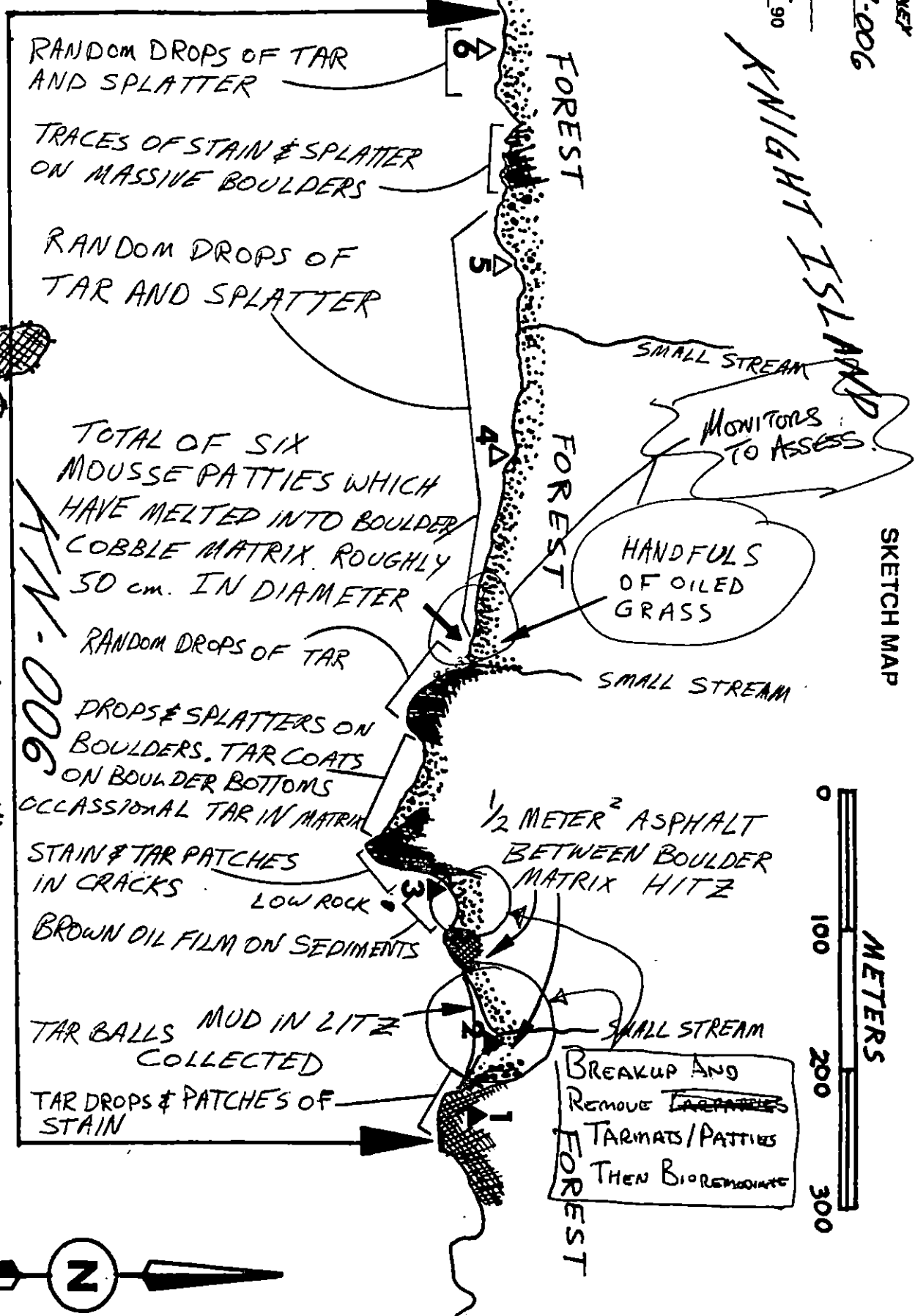
- N Arrow
- Approx. Scale
- SeagSub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LWL
- SSI
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Pit Location(s)

LEGEND

- 1 ▲ Pit - No Subsurface Oil
- 2 ▲ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation

Photo location, direction, and number

SKETCH MAP



KN-006

Oil Character Legend: AP 5 PO - CV - CT 500 ST 900 MS - PT 10 TB 2 FL 25 NO 0



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

3N, O, P, Q
 64 (SPECIAL USE DESIGNATION)
 2MX (HERRING SPAWNING)

BALD EAGLE NEST $\leq$ 400m OF SEGMENT

KN-06

BALD EAGLE
 NEST

"POSSIBLE"
 PINNIPED
 HAUL OUT

KN

XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-6

ADEC Segment Length: 989m

0 100 200 300
 METERS

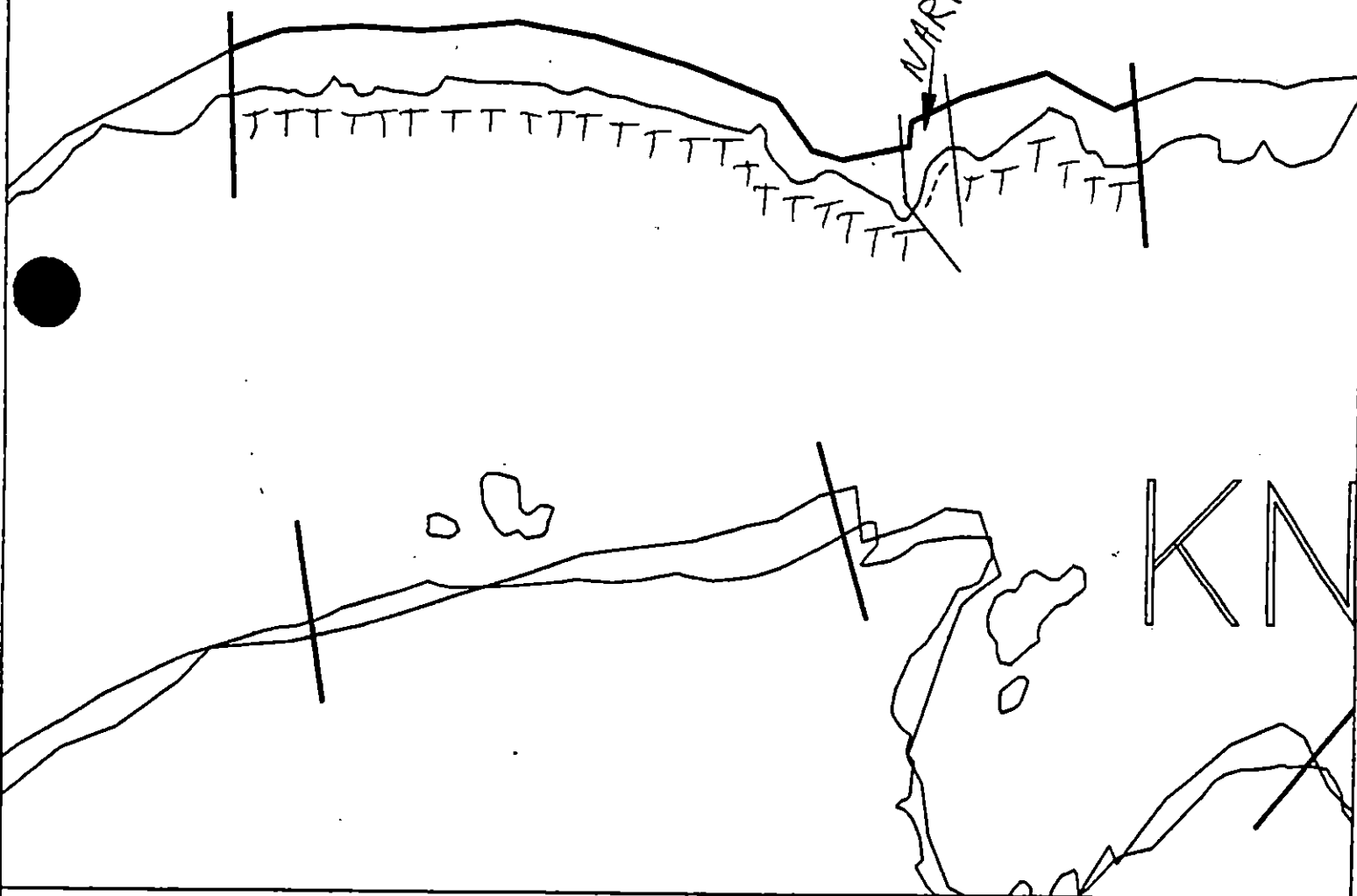
Map Key: PWS-467

Name: _____

Date: _____

Data Entered: _____

KN-06



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-6

ADEC Segment Length: 989m



Map Key: PWS-467

Name: Fred Chaney

Date: April 25 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-6 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	NO CONSTRAINT. Bald eagle nest in Segment 208 is more than 400m from the work areas.

OTHER ECOLOGICAL CONSIDERATIONS

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

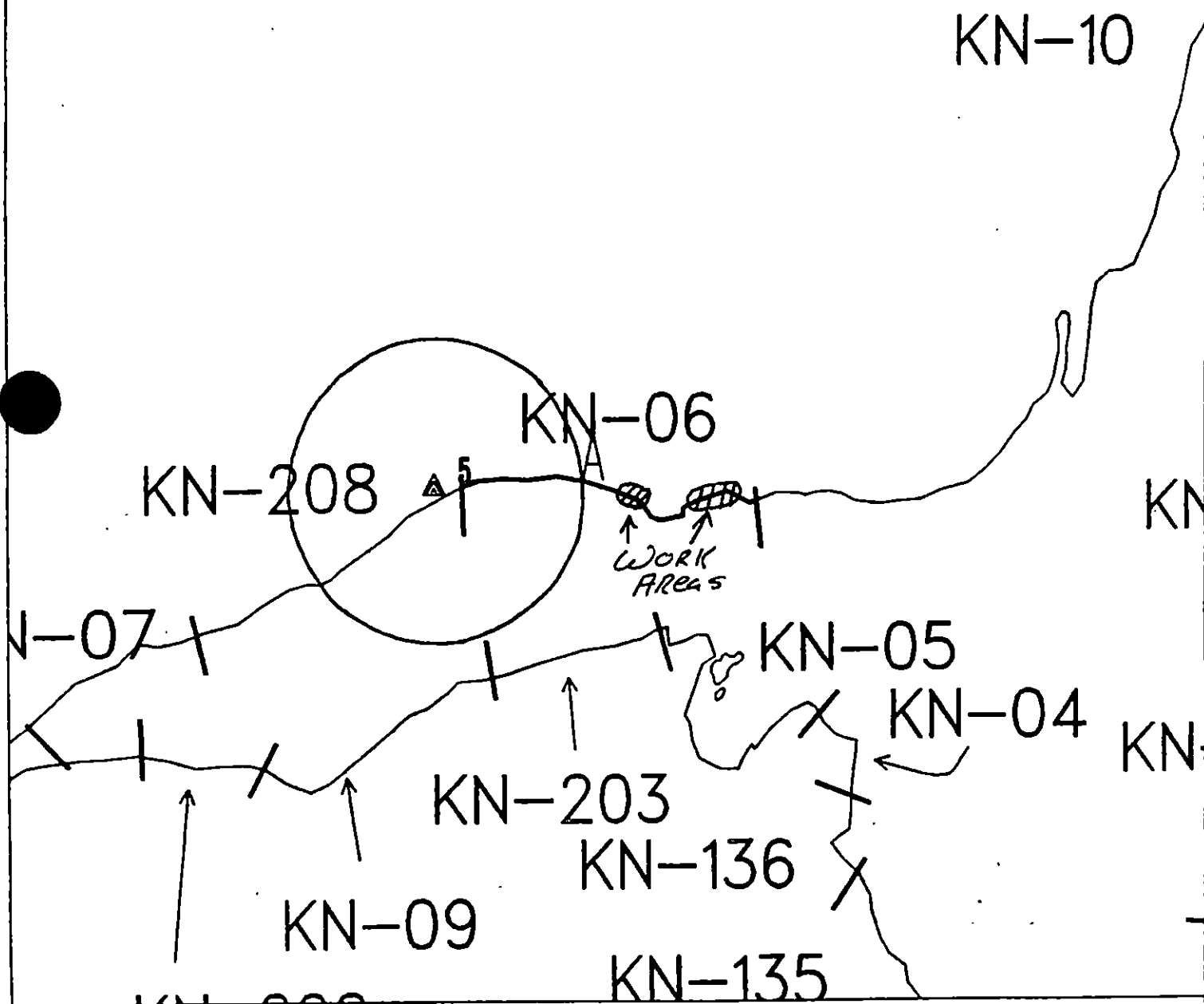
TAG APPROVAL DATE 5/24/90
ADEC ART WEINER
EXXON ANDY TEAR
NOAA B. W. COVITT
USCG M. J. HALL

FOSC KL

Date 5-14-90

Prepared by Anders Meyer

Date 5/22/90



EXXON
 Exxon Company, USA
 Map Keys KN1-KN-6
 M. 11 1000

ECOLOGY MAP
 SEGMENT KN-6
 SUBDIVISION A (1 of 1)
 METERS
 0 100 200

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1400 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest located in adjacent segment.
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 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. Mahon DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 61 m: V.Light 828 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> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat/patties and 2) bioremediate in areas indicated on sketch map. Work should be conducted between 7/1 and 8/15 with approval of USFWS due to eagle nest constraint.

See Addendum Dated 5/22/90 WK

TAG COMMENTS: MONITORS TO ASSESS SIGNIFICANCE OF NOISE PATTERNS AND "HARDWARE" OF OILED GRASS AS INDICATED ON THE SKETCH.

TAG APPROVAL DATE: 5/8/90

ADEC ACT WILSON

EXXON AMY TAYLOR

NOAA GARY L. BROWN

USCG G.A. REITER

FOSC: W L DATE: 5-12-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-07 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

PM Herring spawning (4/1 to 6/15)

BY 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 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 42 m: Medium 21 m: Narrow 475 m: V.Light 0 m: No Oil 0 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: Recommended treatment includes, 1) manual removal of tarmat, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/15 based on herring spawning constraints. Do not treat up to 50 m on either side of stake for both the NOAA and Dames and Moore (Exxon) study sites.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-07 SUBDIVISION: A - 1 of 1 DATE 04/19/90

USCG

NAME David S. Thomas SIGNATURE David S. Thomas

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Patties/Tar Balls should be minimum 20 bags not 2

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① Snow in supratidal - reassessment.
- ② Manual removal of Asphalt, mousse, & tarballs (necessary prep if Bio considered)
- ③ On SW. end. of Segment - possible flush or spot wash SITE - along under B&E on Belrock steep slope -
- ④ ADEC should be consulted for information on streams located within segment as well as cataloged stream within 100m of seg. Boundary (if Bioem. is considered)
- ⑤ IF flush or wash is considered - care should be taken to protect known anadromous stream outside Boundary.

LAND MANAGER

NAME Peter Zellars SIGNATURE Peter Zellars

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① Concur with reassessment of supratidal.
- ② Segment should receive a thorough Assessment before opting for a bio. approach to cleanup. There are, presently, opportunities to do extensive manual removal of thin asphalt, mousse, and oiled debris in the mid upper intertidal.

SHORELINE OILING SUMMARY

REVISION NO 24-13 70

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-07
 BIO DAVE LOHSE LAND REP PETER ZILMER (CAC) SUBDIVISION A (LOF L)
 XON FRANK BOB ADEC CLARA CROSBY TIME 12:10 to 13:50
 TEAM NO. 13 TIDE LEVEL +6 to +5 DATE 04/19/90
 EST. SUBDIVISION LENGTH: 572 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow in supratidal
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 30 % C 40 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 80 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 70 m M 20 m N 482 m VL 0 m NO 0 m

SURFACE OIL

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

Snow

PAVEMENT H F (S) 100 sq. m by 5 cmPATTIES / TARBALLS 2 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE TRASH#BAGS 1

Photographs:

Roll No. ST-13-4Frames 1-7

SUBSURFACE OIL

SUBSURFACE OIL																								
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	SU	U	M	L					
1	20					X	.		X							X						N		P/S/M
2	15					X	.		X							X						N		P/G/M
3	15					X	.		X							X						N		P/G/M
4	30					X	.		X							X					Y	15		P/G/S
5	40			X			5-15		X	X						X						N		P/G/S
6	15					X	.		X							X						N		P/G/S

COMMENTS * Note: Sheen on water in pits #4 & 8

① SURFACE OIL DEPTH (ASPHALT PAVEMENT) < 5 cm.

② "STREAMS" MAY BE SPRING MELT ONLY.

③ CT/CB ON ANGULAR COBBLE OVER BEDROCK.

REVIEWED 7WDATE 4/20/90

REVISION 24-12 90

REVIEWED 7W DATE 4/20/90

OG RICK WILLIE
 SEGMENT ST/ KN-07
 SUBDIVISION A, 1 of 1
 DATE 04, 19/90

GENERAL STUDY MAP

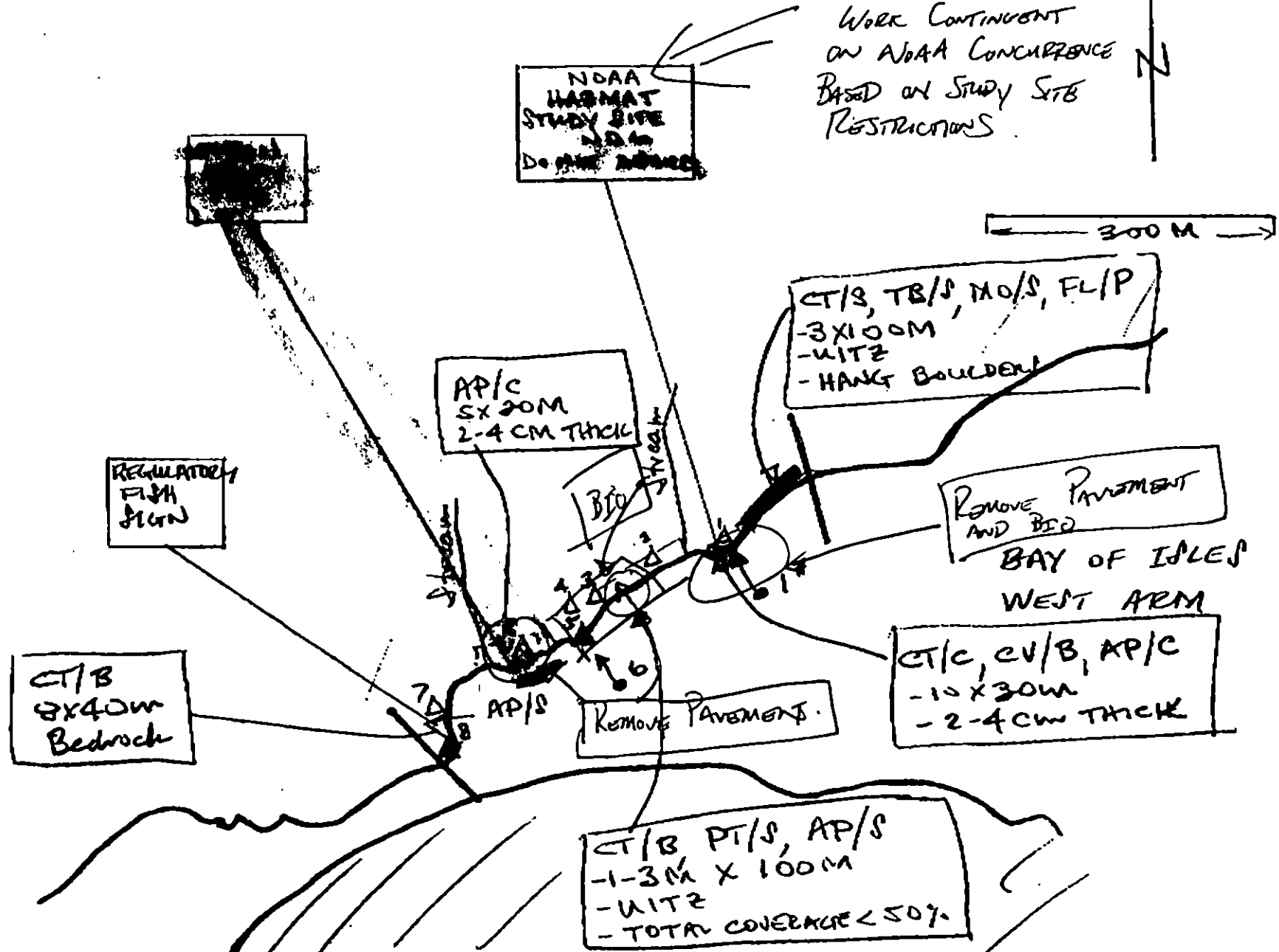
CHECKLIST

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

LEGEND

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

NOTE:
 WORK CONTINGENT
 ON NOAA CONCURRENCE
 BASED ON STUDY SITE
 RESTRICTIONS



Oil Character Length (m): AP 50 PO 0 CV 100 CT 200 ST 0 MS 50 PT 20 TB 20 FL 10 NO 122

Ecology Map

Resource Codes For entire segment

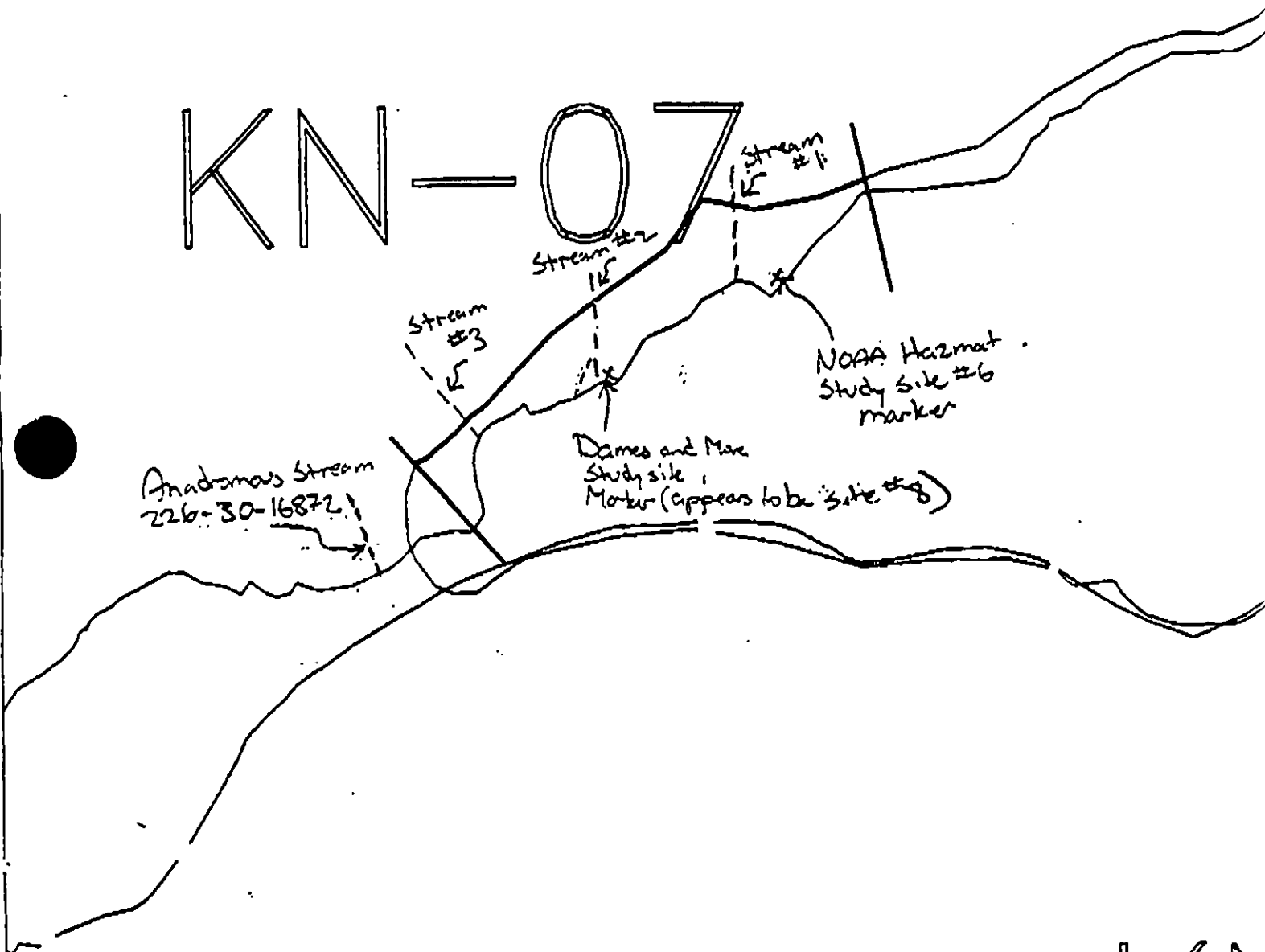
● B - Stream 226-30-16872 within 100m of segment boundary in Segment KN201

2M

6Y

KN-20

KN-07



KN

● XXX Wide

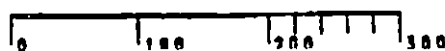
//// Medium

--- Narrow

TTTT Very Light

KN-7

Total Segment Length: 532



Map Key: PWS-411

Name: _____

Date: _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN007 Subdivision A Date (mo / day / yr) 4-19-90

Time (24 hr) 12:00 Biologist David Lohr

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 40 (4) Pebble 10 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 25 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-13-4

Frames 1-7

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

A,B Stream 226-30-16872 located within 100 m of segment boundary.

2M- no comment

6Y- no comment

Shoreline Ecological Summary

Lot 2

Segment KNO07

Subdivision A

4-19-90

Biologist: David Cohen

Wildlife Observations / General Comments

1. Low intertidal not sampled
2. present in mid intertidal: unidentified branching red (Rhodemann?)
3. 3 running streams found in segment (See Ecology map). Oil was present near all 3 streams. No information given as whether or not anabranching streams are present in this segment.
4. One NOAA Hazmat Study Site marker (site #6) and one Dames and Moore Study Site marker (site #8?) found in segment (see Ecology map).
5. Oil covered benches found on mid-intertidal boulders near western segment boundary. Several oil-covered, empty limpet shells were found imbedded in the oil.
6. Several water fowl spotted on way to beach. Tentatively identified as Goldeneyes.
7. Between eastern segment boundary and stream #1 ~~found~~ on mid/high intertidal substrates. Fuus appeared reddish-brown in color. Fuus appeared olive-brown, golden-brown in rest of segment.
8. Mussel mortality reached 25% on mid-intertidal cobble, and 50% on mid-intertidal bedrock.
9. One dead, partially decomposed, oiled bird was collected in segment. Species of bird is unknown.

KN-20

KN-07

SEGMENT: ST/KN-07
 SUBDIVISION: A-1 of 1

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-7

Total Segment Length: 532

0 100 200 300
 METERS

Map Key: PWS-411

Name: R. GILIEDate: 04/19/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.

ADEC Ray Monahan

EXXON ANNY TERA

NOAA Joseph E. Elliott

USCG G.A. FEITEL

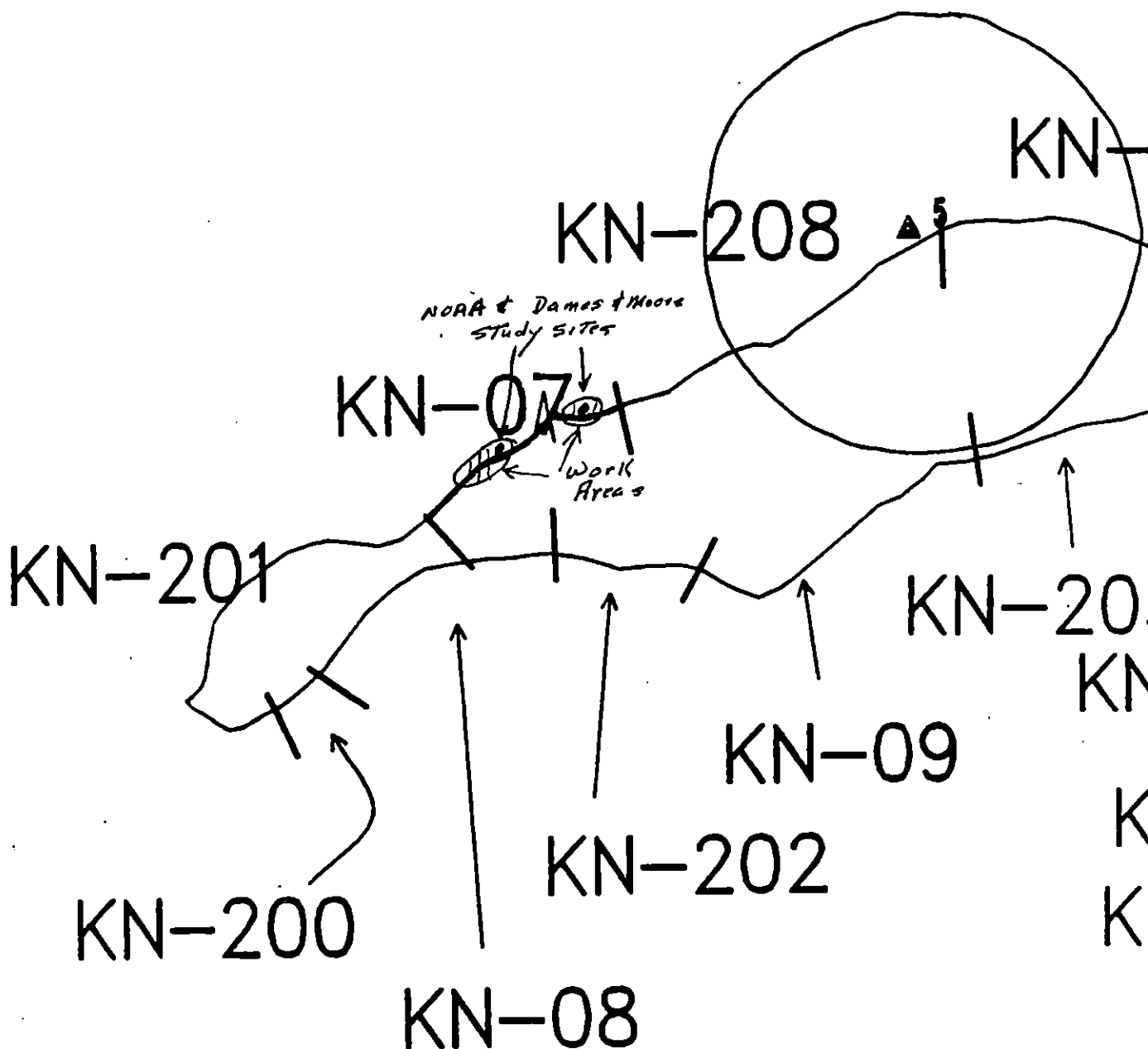
FOSC

DATE

Prepared By:

Date

6/3/90



Exxon Company, USA
Marked KN-07

ECOLOGY MAP
SEGMENT KN-7
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-07 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

BY 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 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. Paul M. Mahan

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 42 m: Medium 21 m: Narrow 475 m: V. Light 0 m: No Oil 0 m

Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

Tarballs, Patties
+ Trash

COMMENTS: Recommended treatment includes, 1) manual removal of tarmat,
2) bioremediation of areas shown on attached sketch map. Work should
be conducted after 6/15 based on herring spawning constraints. Do not
treat up to 50 m on either side of stake for both the NOAA and Bames
and Moore (Exxon) study sites. See Addendum dated 6/3/90 JRP

TAG COMMENTS: Monitors to Assess SUIZ

TAG APPROVAL DATE: 4/28/90

DEC ART WEINER
XXON ANDY TGA
NOAA Gary Petrac
USCG KENNETH KERR

FOSC: W L

DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ KN-07 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David M. Mahan DATE: 5/1/90

OILING CATEGORIZATION:

Wide 42 m: Medium 21 m: Narrow 475 m: V.Light 0 m: No Oil 0 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>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

*Tarballs, Patties
+ Trash*

COMMENTS: Recommended treatment includes, 1) manual removal of tarmat,
2) bioremediation of areas shown on attached sketch map. Work should
be conducted after 6/15 based on herring spawning constraints. Do not
treat up to 50 m on either side of stake for both the NOAA and Dames
and Moore (Exxon) study sites.

TAG COMMENTS: MONITORING TO ASSES SUITZ

TAG APPROVAL DATE: 4/28/90
ADEC ART WEINER
EXXON ANNY TEAL
NOAA GARY PATRICK
USCG KENNETH KEANE

FOSC: h L DATE: 5-12-90

OG RICK COLLIE
 SEGMENT ST/ RN-07
 SUBDIVISION A, 1 of 1
 DATE 04/19/90

GENERAL SITE MAP

CHECKLIST

- ☒ H Auro
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HAV/LAVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pht Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
 Pht - No Subsurface Oil

2 Δ
 Pht - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

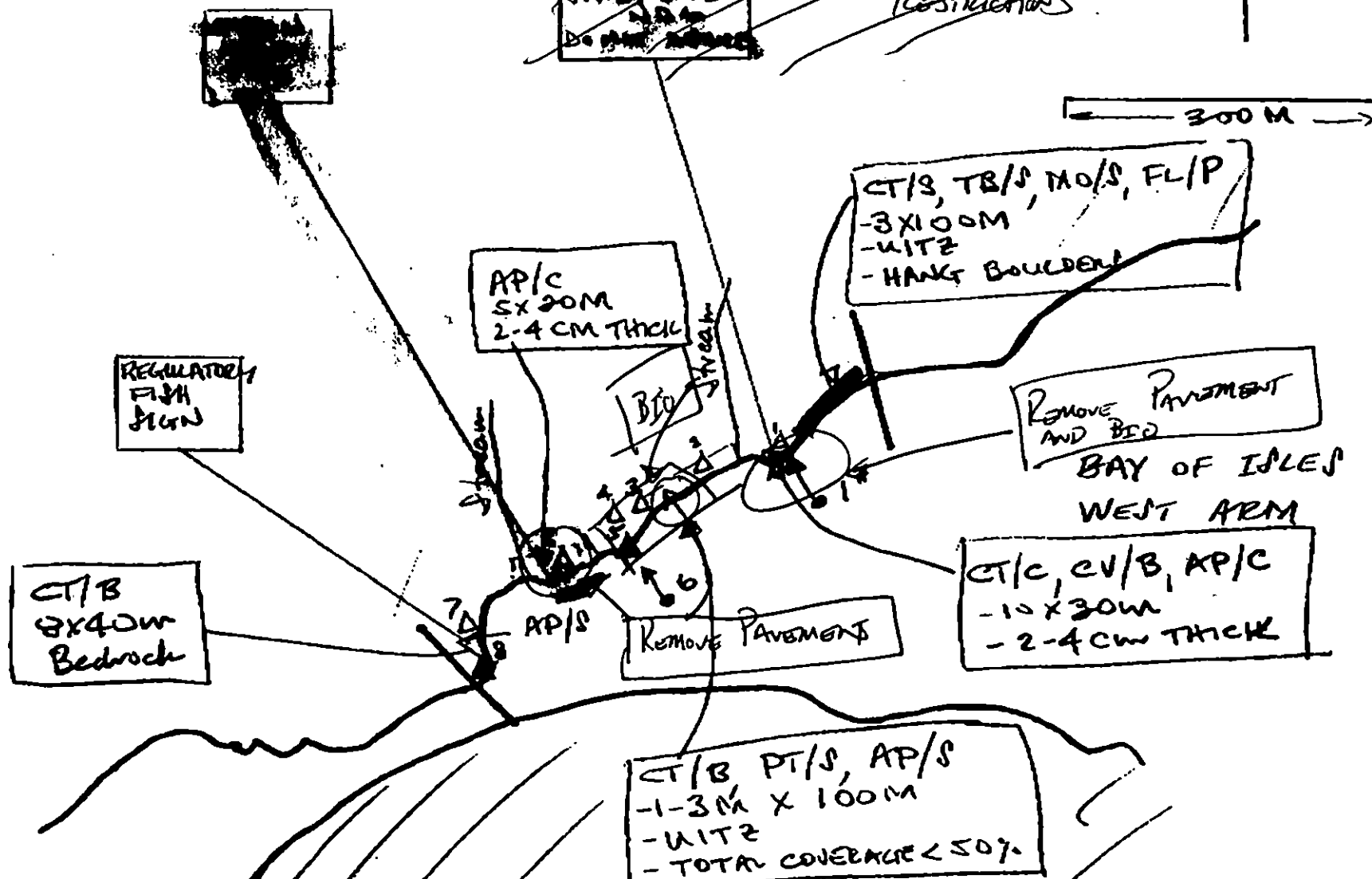
$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

Oiled Vegetation

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

Oil Character Length (m): AP 50 PO 0 CV 100 CT 200 ST 0 MS 50 PT 20 TB 20 FL 10 NO 122



NOTE:
 WORK CONTINGENT
 ON NOAA CONCURRENCE
 BASED ON SPOT SITE
 RESTRICTIONS

Ecology Map

Resource Codes For entire segment

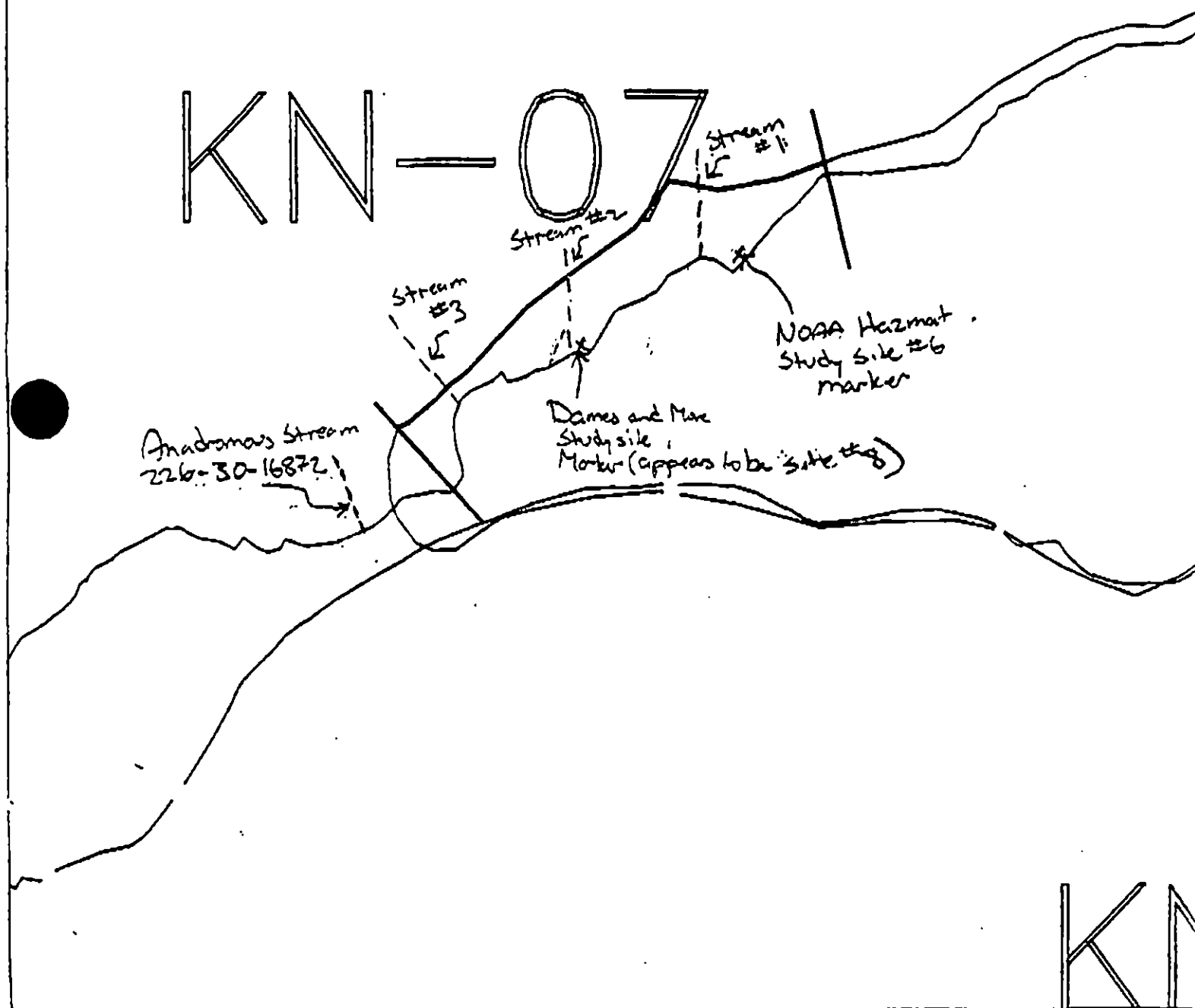
KN-20

● A,B - Stream 226-30-16872 within
100m of segment boundary in
segment KN201

2M

6Y

KN-07



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-7

Total Segment Length: 532

Map Key: PWS-411

Name: _____

Date: _____

KN-20

KN-07

SEGMENT : ST / KN - 07
SUBDIVISION : A - 1 of 1

XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 No Oil

KN - 7

Total Segment Length: 532



Map Key: PWS-411

Name: R. GILLIE

Date: 04/19/90

Data Entered:

ASAP TAG REVIEW SHEET

Segment: KNO7 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NTR

Treatment

Recommended: MANUAL REMOVE AP / ~~HANDS ON~~ / MOUSSE
and BIO

AREA IN CLOSE PROXIMITY OF
NOAA TEST SITE..... DOES TEST SITE
HAVE PERMIT?

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90
Manual Rmv. AP & Mousse
& BIO

Low-Medium
Priority

ASAP FOLLOWUP RECOMMENDATIONS *ASAP*

Segment: AS/KV-07 Subd.: A Site: _____ Date: 8-9-90 1990

Conditions Observed: Segment includes several areas of moderate oiling in the Hitz, AP, MS (between boulders), OP and OR sub-basins oiling. NOAA Test Site / Escape Set Aside Site has a moderate amount of AP, OR, OP. Area to west of test site has a band of AP, OP, OR which culminates in an area of heavy oiling - AP, MS, OP, OR, in boulders at East boundary of segment.

Followup Recommendations: Due to large areas of removable AP, MS, OP, and OR, the manual removal of the oiling is recommended. Bioremediation should follow manual treatment.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Bob McCready
(name)

Robert E. McCready
(signature)

Comments:

Oiling observed oiling should be removed in 1990. Note: Area of heavy oiling at East end of segment was not noted by P.A. on oiling map or oiling photo. Please see attached map for location of heavy oiling.

Exxon

John Dean
(name)

John Dean
(signature)

Comments: The ASAP Identified Work Area would benefit from some additional manual treatment this B.Y. I can not comment on other area reference since I did not participate in assessment.

USCG

Don Davis
(name)

Don Davis
(signature)

Comments: Two sections of heavy oiling noted. NOAA Test Site should be treated and only removal. Second section requires further evaluation removal of ash, mussels and tree patches. In addition to further B.Y.

Land Rep.

Lora Johnson
(name)

Lora L. Johnson
(signature)

Comments: A PERMIT IS NEEDED FOR ALL SET ASIDES / TEST AREAS. IF A PERMIT HAS NOT BEEN OBTAINED THEN AREA SHOULD BE TREATED. SUBSTANTIAL AMOUNTS OF OIL ARE PRESENT AND NEED TREATMENT. THROUGHOUT SEGMENT PAVEMENT AND OILED SEDIMENTS SHOULD BE REMOVED. SHOULD BE TREATED IN 1990. CAL IS NOT TAKING A POSITION ON BIOREMEDIATION.

SEGMENT AS / KN-07 SUBDIVISION: A SITE: 1 DATE 09 AUG 90

ISCG

NAME Don Davis, USCG
Don Davis, NOAA

SIGNATURE [Signature]

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Some small deposits of asphalt noted at beginning of segment. Heaviest deposits discovered in two areas. First being the vicinity of the NOAA test site; removable accumulations of mousse, coat, stain, and tar particles. Penetration in one of two pits dug. Found going "on" to 15cm. Second area of heaviest oiling was found in Pocket Beach located in narrow toward back of Cove. This area was not located on oiling map, but shows heavy deposits of mousse, coat, stain, asphalt all along Pocket area in U/I. Both areas need clean-up efforts in 1990.

DEC

NAME Bob McCreary

SIGNATURE [Signature]

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Two heavy areas of oiling occur on this segment requiring treatment. One is NOAA test site (CAC should be consulted regarding viability of test site) and the second was not surveyed by entire ASAP team. However, this pocket beach and rocky point at west boundary of segment is an area AP, MS (intertidal), OP, and OR. Because this was not characterized in a "visit" on the ASAP maps provided by Exxon, the OG did not survey area and did not mark this area of substantial oiling on the Oiling map. MANAGER This situation of designated work area being surveyed is greatly regarding the integrity of the ASAP project.

NAME LORA JOHNSON

SIGNATURE [Signature]

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. SET ASIDES & TEST AREAS REQUIRE A PERMIT. IF NO PERMIT HAS BEEN ISSUED AREA SHOULD BE CLEANED. MANUAL REMOVAL RECOMMENDED. SEE SSAT SKETCH MAP.

EXXON

NAME JOHN DEAN

SIGNATURE [Signature]

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: THE '90 WORK AREA WOULD BENEFIT FROM ADDITIONAL MANUAL WORK AS WELL AS BIOREMEDIATION.

THE SECOND AREA REFERENCED ABOVE WAS NOT IDENTIFIED FOR ASAP ASSESSMENT. IF THIS OILING IS PRESENT THEN IT SHOULD BE ADDRESSED OUTSIDE THE ASAP PROCESSES

REVISION NO. 1/2/90

SEGMENT STUDY 07

SUBDIVISION A, 1 of 1

DATE 04, 19/90

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Topographic Study
- ☒ On Site
- ☒ Width
- ☒ Length
- ☒ S. Corner
- ☒ Substrate Character
- ☒ Ext. HILLSIDE
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
No Subsurface CH

2 Δ
Subs.

CT/C
continuous CH

CT/B
broken CH

broken CH

CT/P
muddy CH

muddy CH

CT/S
planted CH

planted CH

Red Vegetation

1 ●
note location, direction,
and number

SKETCH MAP

KNIGHT ISLAND

N

300 M

MO/S, FL/P

LODGE

PLES

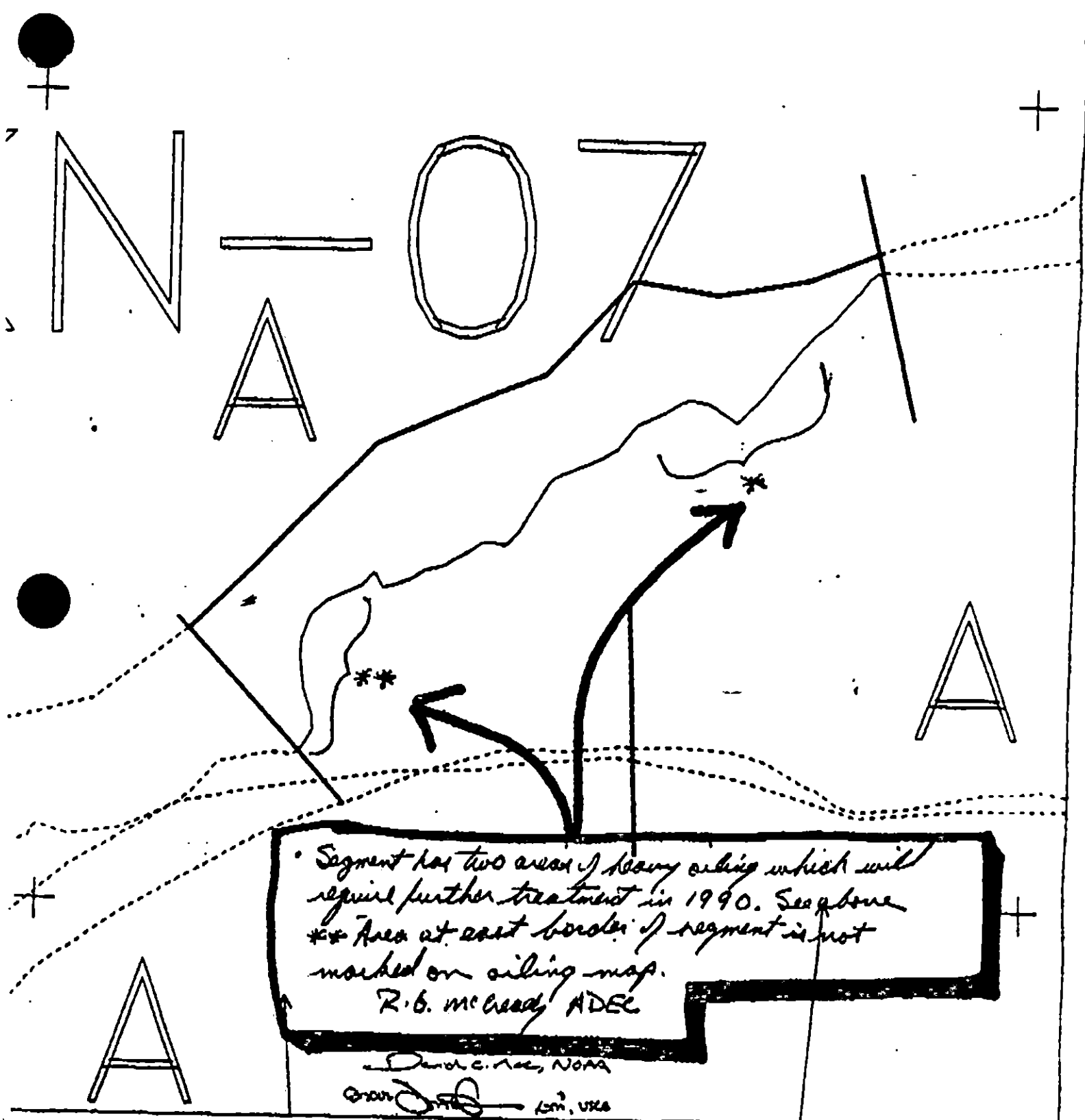
CH

BAY OF ISLES

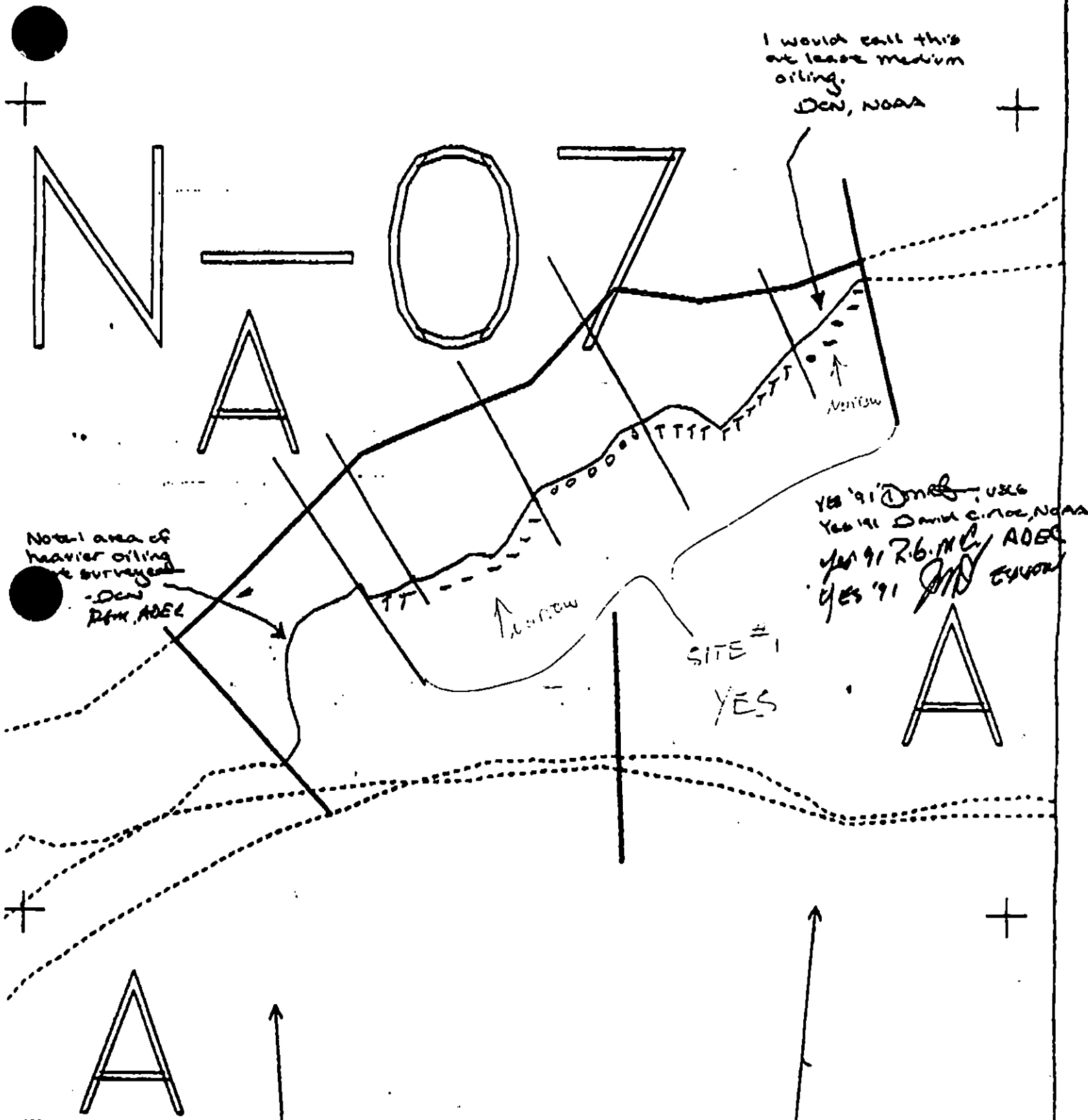
Character Length (m) AP 50 PO 0 CV 100 CT 200 ST 0

PT 20 TB 20

REVISION 04/90



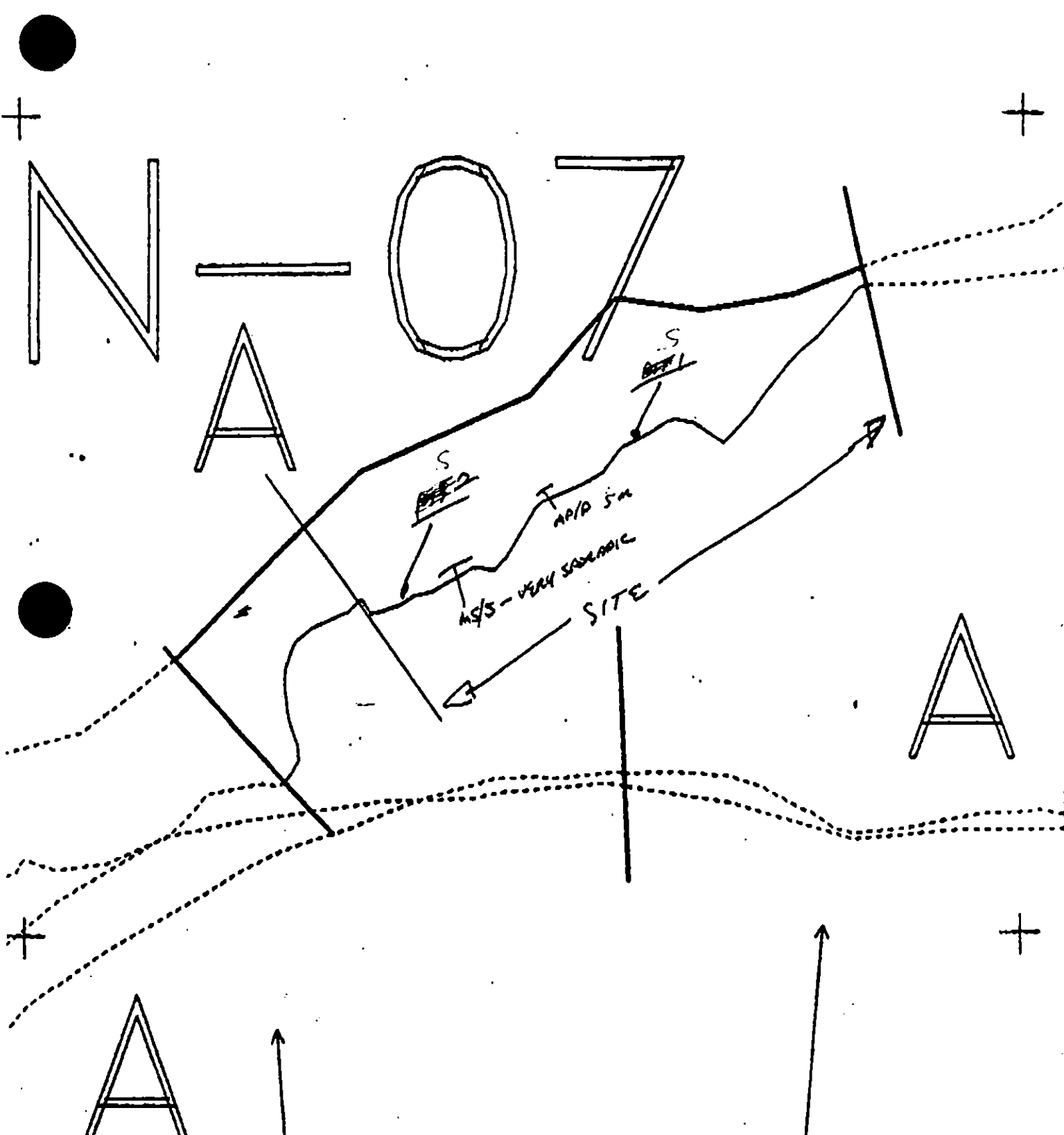
Wide Medium Narrow Very Light No Oil	KN-7 A ADEC Subsegment Length: 538m METERS AK State Plane Zone 4 1:3481	Subdivision Field Map Map Key: KN1KN-7A Name: _____ Date: _____



	Wide	KN-7 A ADEC Subsegment Length: 538m METERS 	 Subdivision Field Map Map Key: KNKN-7A Name: <u>NAKASHIMA</u> Date: <u>8/9/90</u>
	Medium		
	Narrow		
	Very Light		

AAA

EXON



● Wide /// Medium --- Narrow TTT Very Light ooo	KN-7 A ADEC Subsegment Length: 538m METERS 0 50 177 EXON	Subdivision Field Map Map Key: KNKN-7A Name: <u>NAKASHIMA</u> Date: <u>8/9/90</u>

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-08

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-08 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 650 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of patties and oiled debris in areas indicated on sketch map, 2) manual removal of tarmat in area indicated on sketch map and 3) bioremediation of entire subdivision following manual work. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-08 SUBDIVISION: A-10f1 DATE 04/19/90

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC NAME Clara J. Crosby SIGNATURE Clara J. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① Suggest Supratidal be reassessed after snow melts - or crew is aware of oiling possibility in SV. (numerous patties observed in observable debris as well as oiled debris)
- ② if Area is considered for Bioremediation... Asphalt should be removed... granular imp fertilizer - Also should be aware that this area is adjacent to Anadromous fish Stream - (note Regulatory on map) - stream located at head of Bay - As well as KNOZ.
- ③ Surface sediment appears clean in spots - oil directly below sur. Sed...

LAND MANAGER

NAME Peter Zollars SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I concur with ADEC's statements above. There is a high incidence of oil & oiled debris that can be removed manually.

SHORELINE OILING SUMMARY

REVISION NO. 34-1370

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-08
 BIO DAVE LOHSE LAND REP PETER ZYAR (CAC) SUBDIVISION A (LOFL)
 EXXON FRANK BOX ADEC CLARA CROSBY TIME 16:15 to 17:30
 TEAM NO. 13 TIDE LEVEL +2 to +3 DATE 04/19/90
 EST. SUBDIVISION LENGTH: 621 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock snow in supratidal
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 30 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 621 m N 0 m VL 0 m NO 0 m

SURFACE OIL

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

PAVEMENT H F S 100 sq. m by 4 cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

Photographs:

Roll No. ST-13-4Frames 11

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	5	6	7	8	SU	U	M	U				
1	15					X	.		X									X					Y	5	G/S
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

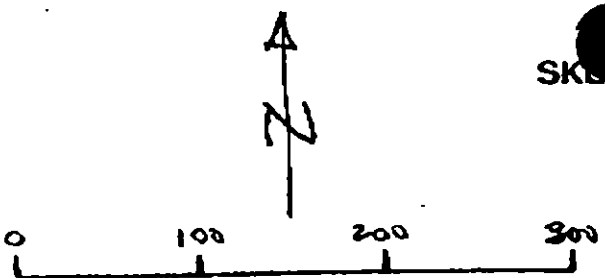
*Note: sheen on water in pit #1

① GEOMORPHOLOGY: Mostly High Angle, Boulder Shoreline

② OILING: Oil coating on underside of Boulder
INDICATIONS OF PATTIES IN SUTZ DEBRISREVIEWED 7W DATE 4/20/90

OG RICK L LIE
 SEGMENT ST/ KN-08
 SUBDIVISION A-10f1
 DATE 04, 19/90

SKETCH MAP

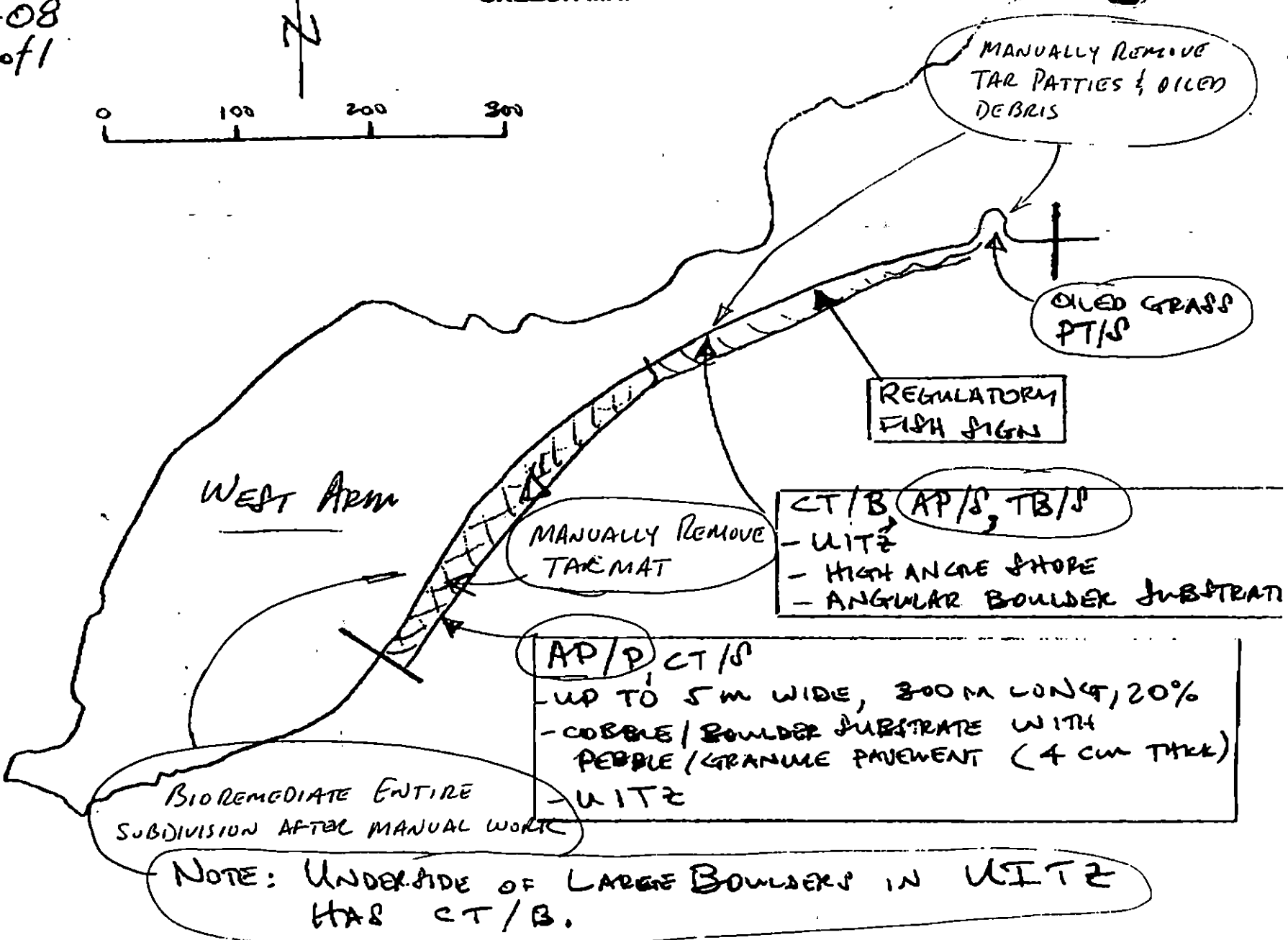


CHECKLIST

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

LEGEND

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



Oil Character Length (m): AP 100 PO 0 CV 0 CT 100 ST 0 MS 0 PT 20 TB 30 FL 0 NO 371

(11) KICK TILLIE
 SEGMENT **KN-08**
 SUBDIVISION **A-1 of 1**
 DATE **04/19/90**

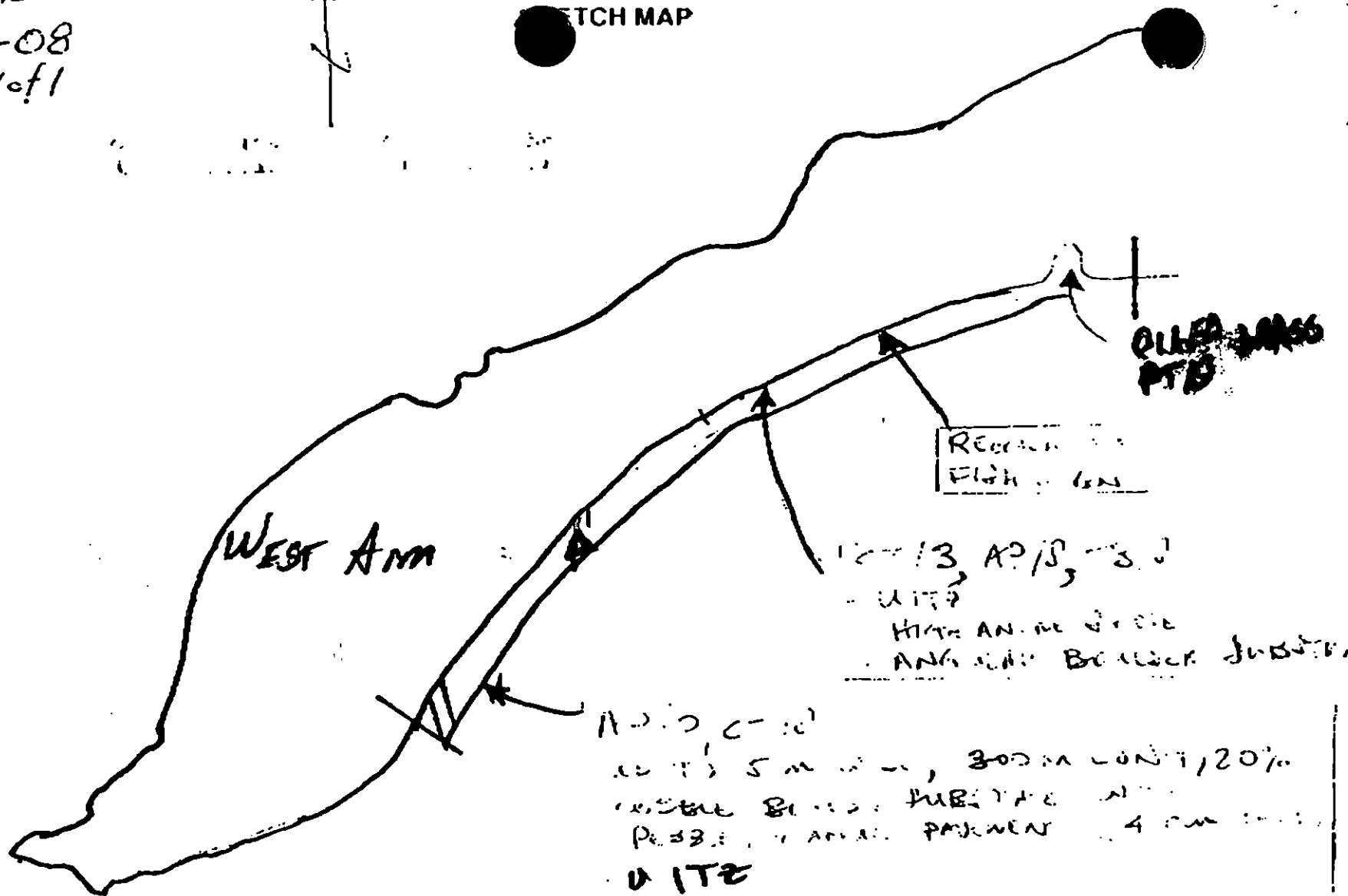
CHECKLIST

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

LEGEND

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

SKETCH MAP



NOTE: UNDERside of LARGE Boulders. in UITE.
 HAS CT/B.

Oil Character Length (m): AP 150 PO 0 CV 0 CT 10 ST 0 MS 0 PT 0 TB 20 FL 0 NO 371

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN008 Subdivision A Date (mo / day / yr) 4-19-90

Time (24 hr) 16:15 Biologist David Lohse

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

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 45 Low 40

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

Photographs: Roll No. ST-13-4

Frames 11

BARNACLES

Dense	Moderate	Sparse	Rare
1U 1M 1L	1U 1M 1L	1U 1M 1L	1U 1M 1L
2 2 2	~~2~~ ~~2~~ ~~2~~	~~2~~ <u>2</u> ~~2~~	~~2~~ ~~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. Low intertidal not sampled
2. present in mid intertidal: *Ralfsia*, *Cladophora*, unidentified branching red (*Rhodomenia*?)
high intertidal: *Ralfsia*

Ecological Considerations:

3. Herring eggs attached to *Nereocystis* stripe found washed up on beach
4. Salmon Fishing regulatory marker found in segment

64 - no comment

ECOLOGY MAP (10F1)

RESOURCE CODES FOR ENTIRE
SEGMENT:

6Y

KN-07

Salmon Fishing
Regulation Marker

KN-08

KN-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-8

ADEC Segment Length: 621m

0 100 200 300

Map Key: PWS-494

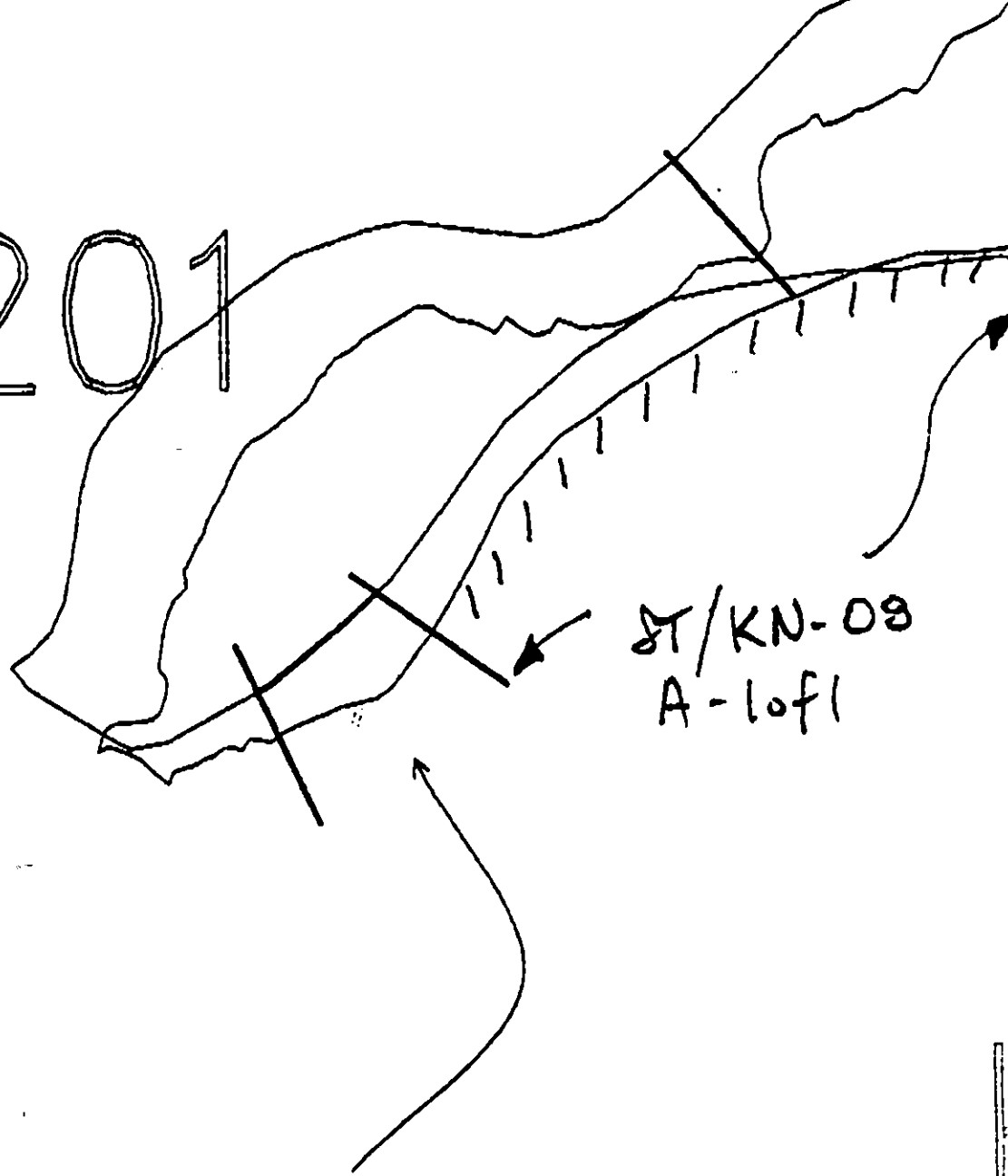
Name: _____

Date: _____

--- PWS-494

KN-U

N-201

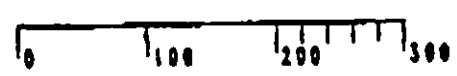


~~KN-2000~~

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

KN-~~2000~~ 08

ADEC Segment Length: ~~1000~~



Map Key: PWS-401
 Name: Rick Gillette
 Date: 04/19/90
 Data Entered:

WORK PLAN ADDENDUM

Segment ST/KN-008

Subdivision A

Dated 6/8/90

MODIFICATION

1. REASON FOR MODIFICATION

- Joint request from the field by ADEC, Exxon and USCG

2. ADJUSTMENT TO WORK PLAN

- No bioremediation

SHPO APPROVAL NEEDED YES _____ SHPO SIGNATURE _____
NO X

TAG APPROVAL DATE 6/8/90

ADEC Ramona's Raymond

EXXON HANSO. JAHNS

NOAA Joseph Elliott

USCG G.A. REITER

FOSC [Signature] DATE 6/14/90

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT KN08

SUBDIVISION A

DATED

6/1/90

MODIFICATION

1. REASON FOR MODIFICATION

LOTS OF FRESH WATER SEEPAGE
ALONG THE ENTIRE AREA. MOUSS WAS
SPORATIC AND SPREAD AT INTERVALS
UNDER BOULDERS. NOT MUCH LEFT.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

EXXON, U.S.C.G. AND ADEC REPS
ALL CONCUR THAT BIOREMEDIATION
IN THIS AREA IS NOT NEEDED

3. TIMING ISSUES

ADEC

Richard McKee

6/3/90

EXXON

[Signature]

USCG

[Signature] LCDR, USCG 6/3/90

LAND MANAGER

(If field rep is on scene)

W. Mark Futhell
Chugach Alaska Corp

SHORELINE EVALUATION

SEGMENT ST/ KN-08 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMahon DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 650 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of patties and oiled debris in areas indicated on sketch map, 2) manual removal of tarmat in area indicated on sketch map and 3) bioremediation of entire subdivision following manual work. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS: Monitors to assess SURT2

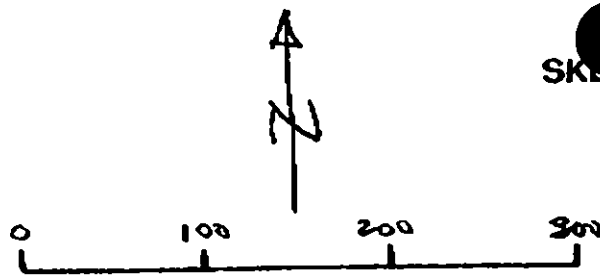
TAG APPROVAL DATE: 4/28/90.

ADEC Art Weimer Art Weimer
EXXON AMY TEAL Amy Teal
NOAA Gary Petrac Gary Petrac
USCG KENNETH KOWE Kenneth Kowe

FOSC: W L DATE: 5-12-90

OG RICK LIE
 SEGMENT ST/ KN-08
 SUBDIVISION A-10f1
 DATE 04, 19/90

SKETCH MAP



CHECKLIST

- ✓ N Arrow
- ✓ 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 Δ
 P1 - No Subsurface Oil

2 Δ
 P1 - Subsurface Oil

CT/C
 Continuous Distribution

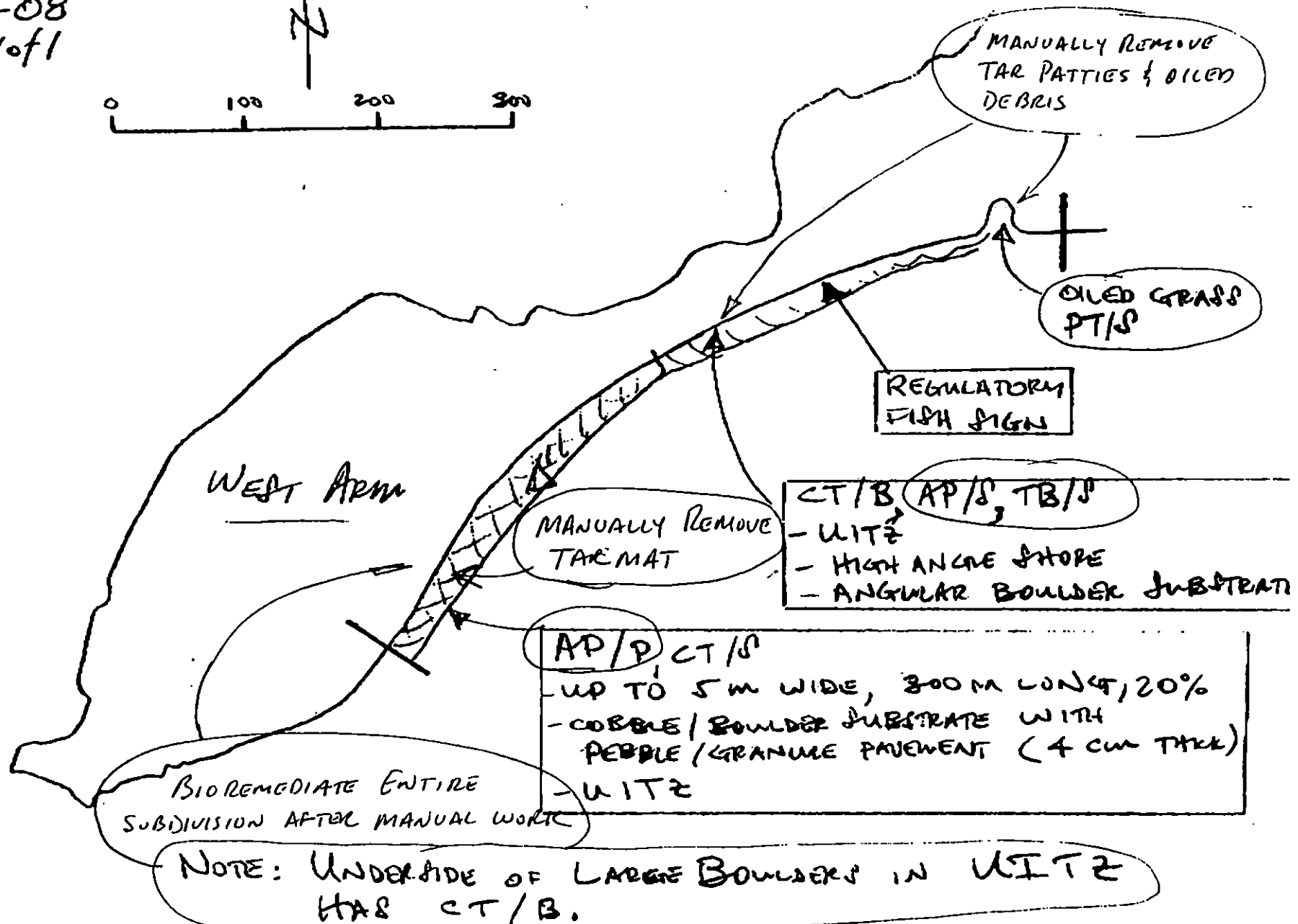
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

1 ●
 Photo location, direction,
 and number



Oil Character Length (m): AP 100 PO 0 CV 0 CT 100 ST 0 MS 0 PT 20 TB 30 FL 0 NO 371

SEGMENT **KN-08**

SUBDIVISION **A-1 of 1**

DATE **04/19/90**

CHECKLIST

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

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

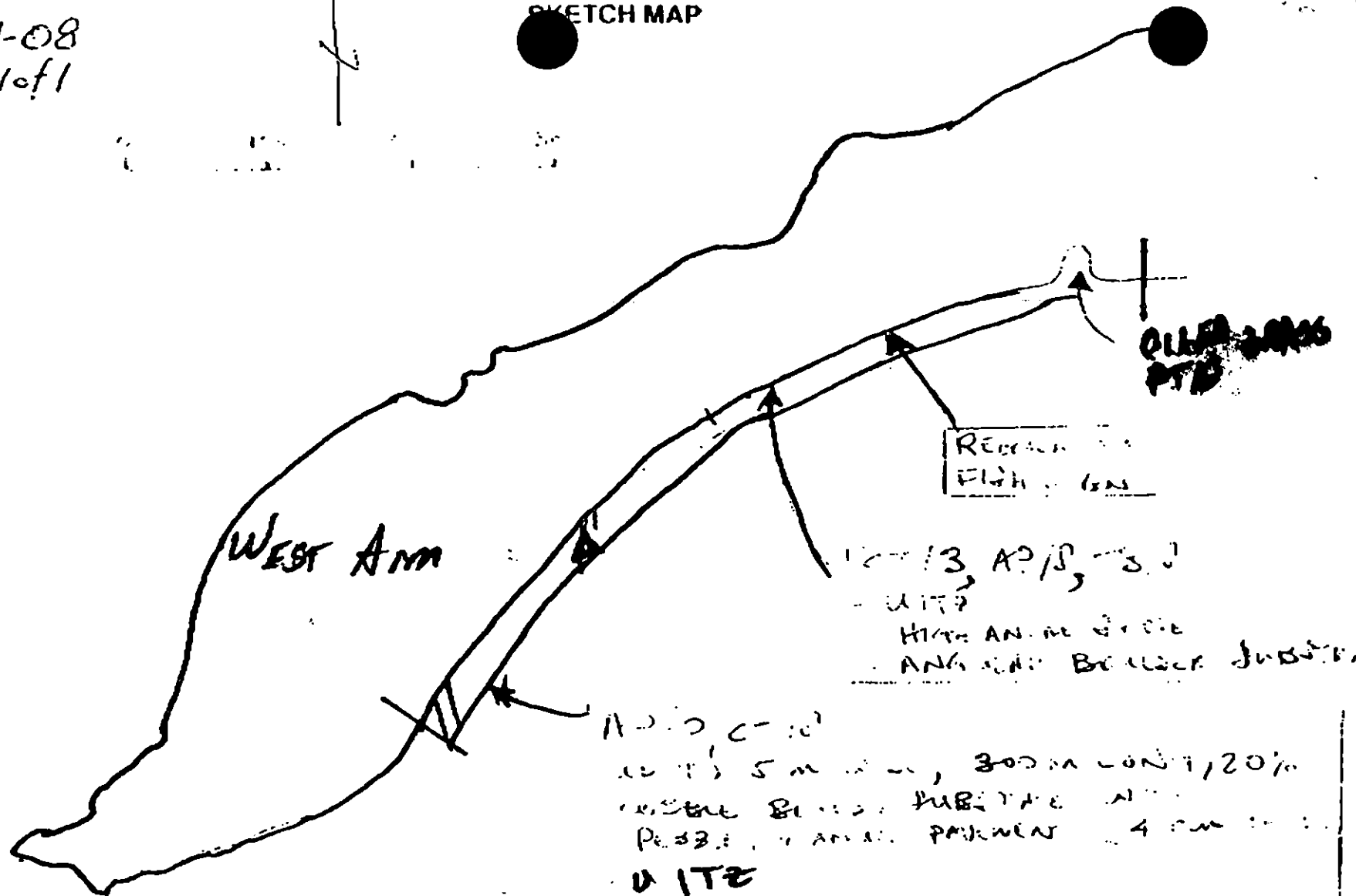
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 100 PO 0 CV 0 CT 10 ST 0 MS 0 PT 0 TB 20 FL 0 NO 371

ECOLOGY MAP (10F1)

RESOURCE CODES FOR ENTIRE
SEGMENT:

6Y

KN-07

Salmon Fishing
Regulation Marker

KN-08

KN-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-8

AOEC Segment Length: 621m

0 100 200 300

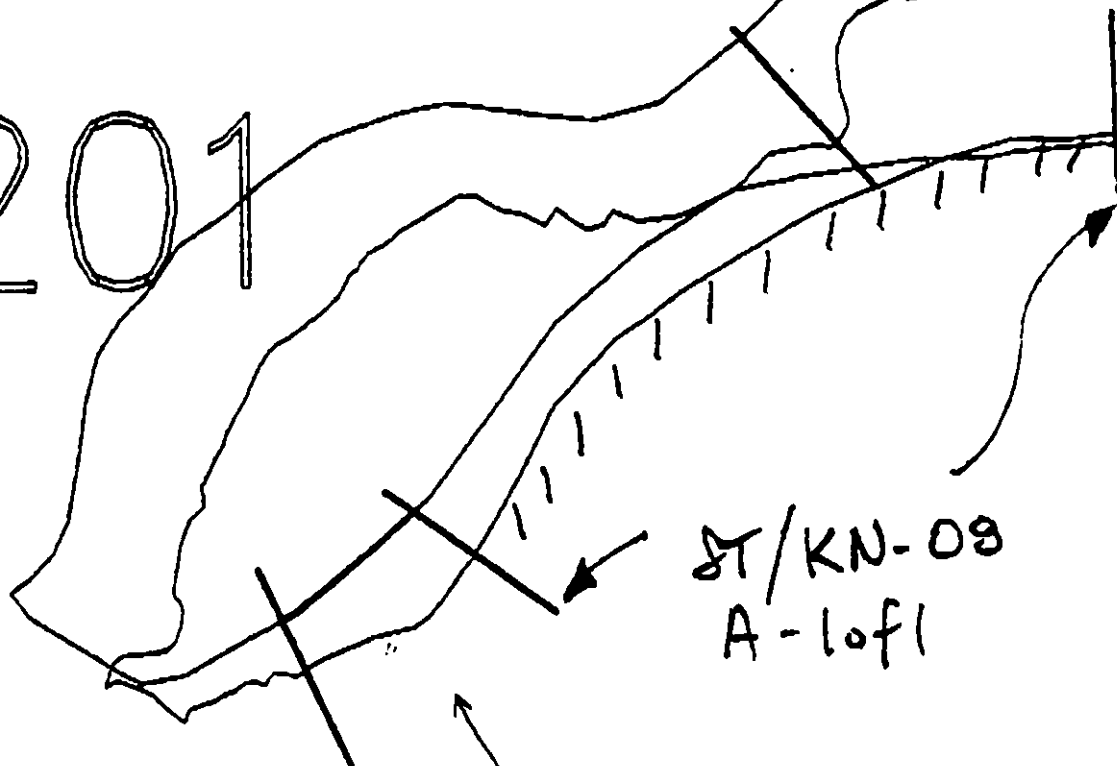
Map Key: PWS-494

Name: _____

Date: _____

KN-08

N-201



~~KN-2000~~

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-~~2000~~ 08

ADEC Segment Length: ~~100~~

0 100 200 300

Map Key: PWS-401

Name: Rick Gillette

Date: 04/19/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/24/90.
ADEC Art Weisner
EXXON Amy Katz
NOAA Buckart
USCG M. J. Hall

FOSC W L

DATE 5-24-90

Prepared By: Claudia Slater WKS

Date 5/22/90

SHORELINE EVALUATION

SEGMENT ST/ KN-08 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (4/1 to 6/15)

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

SHPO SIGNATURE: J. David M. Mahan DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 650 m: Narrow 0 m: V. Light 0 m: No Oil 0 m
Surface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

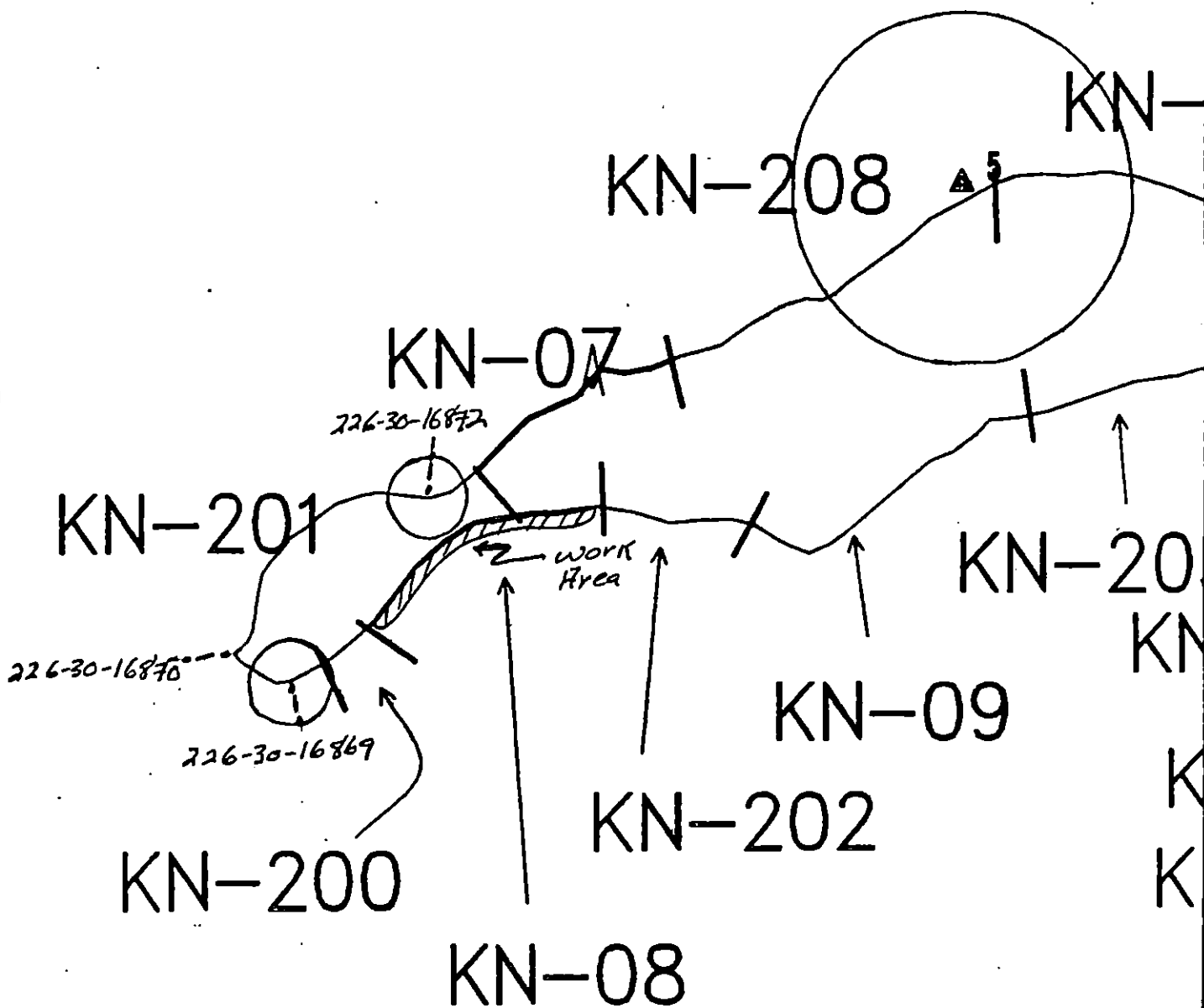
COMMENTS: Recommended treatment includes 1) manual removal of patties and oiled debris in areas indicated on sketch map, 2) manual removal of tarmat in area indicated on sketch map and 3) bioremediation of entire subdivision following manual work. Work should be conducted after 6/15 based on herring spawning constraints.

[See Constraint Addendum
Dated 6/22/90 WTK]

TAG COMMENTS: Monitors to Assess SURT2

APPROVAL DATE: 4/28/90
DEC Art Wehner
EXXON AMTGA
NOAA Gary Petree
USCG Kenneth Kene

FOSC: W L DATE: 5-12-90



Exxon Company, USA
Map Key: KN1-KN7



ECOLOGY MAP
SEGMENT KN-8
SUBDIVISION H (1 of 1)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

ASAP TAG REVIEW SHEET

Segment: KN08

Subd: A

Site: 1

Date

PRE-Review 11AUG90

Priority For Addressing In 1990

 HIGH

MEDIUM

LOW

 NTR

Treatment
Recommended:

MANUAL PICKUP OF MOUSSE / PATIES
& BIO (IF PERMITTED)

As per
ASAP Followup
Recommendation
Sheet

OG SHEET ~~CHS FOR~~ INDICATES
SPORATIC / INTERMITTENT MOUSSE
THIS WOULD NORMALLY BE NTR

LOW ENERGY SITE

Priority Site For Reassessment In 1991

YES NO
 CG

YES NO
 ADEC

YES NO
 EXXON

YES NO
 LAND MGR

13AUG90 TAG

Manual Pickup Mousse & BIO

LOW PRIORITY

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KV-08 Subd.: A Site: _____ Date: 8-9-90 1990

Conditions Observed: Segment includes a virtually continuous band of AP, MS between boulders and OP/OR in boulder oil. Band ranges from 2.5 m wide to 5 m wide. Some manual treatment and bioremediation appears to have been performed.

Followup Recommendations: Due to large amounts of removable AP, MS, OP, and OR remaining, the manual removal of these areas is recommended. Bioremediation should follow manual treatment.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Med ☐ Low

ADEC

Bob McCreary
(name)

Robert G. McCreary
(signature)

Comments: As described oiling should occur in 1990. The treatment that ~~was~~ was performed previously was inadequate.

Exxon

John Dean
(name)

[Signature]
(signature)

Comments: A LIMITED AMOUNT OF ADDITIONAL OIL COULD BE RECOVERED MANUALLY. I AGREE W/ BIOREMEDIATION RECOMMENDATIONS.

USCG

Don Davis
(name)

[Signature]
(signature)

Comments: ALL SPRINGS, VARIOUS SPRING CATCHES OF CRABS, CRAB, AND THE PATRIS. SOME SPRING WATER HAS DECONTAMINATION. SOME WITH OILY TRAIL. BUT MOST CRABS AS MOVED. BIOREMEDIATION SHOULD BE USED IN CONJUNCTION W/ MANUAL TREATMENT.

Land Rep.

LORA JOHNSON
(name)

[Signature]
(signature)

Comments: AGREE WITH ADEC RECOMMENDATIONS. CAG IS NOT TAKING A POSITION ON BIOREMEDIATION. SHOULD BE FURTHER TREATMENT IN 1990.

SEGMENT AS / KN-008 SUBDIVISION: A SITE: 1 DATE 8-9-90

ISCG

NAME David N. NOAA SIGNATURE David N. NOAA
David N. NOAA, CM, USCG

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Several patches of mousse in band across high intertidal zone. Most are surface accumulations which can be manually removed. Less common are deep pockets of oiled pebbles and cobbles which could use removal plus bio in 1990. Recommend reassessment in 1991.

DEC

NAME Bob McCreary SIGNATURE Robert G. McCreary

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: A fairly continuous band of AP, intertidal MS, and OP and OR sub surface oiling remains on segment. ASAP/Survey team has recommended that manual removal and bioremediation occur in 1990. Manual work performed in summer '90 was inadequate.

MANAGER

NAME Lora Johnson SIGNATURE Lora L. Johnson

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC. MANUAL REMOVAL RECOMMENDED. SEE SSAT SKETCH MAP ALSO. CHECK UNDER FOCUS THAT HAS WASHED ASHORE.

EXON

NAME John Dean SIGNATURE John Dean

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: A LIMITED AMOUNT OF ADDITIONAL OIL COULD BE RECOVERED MANUALLY FOLLOWED BY BIO RE-TREATMENT.

REVISED NO. 10700

SEGMENT STATION **N-08**

SUBDIVISION **A-10f1**

DATE **04, 19/90**

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Map Substrate
- ☒ Contour
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MSL/MLL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
No Substrate Cl

2 Δ
Substrate Cl

CT/C
Substrate Distribution

CT/D
Open Distribution

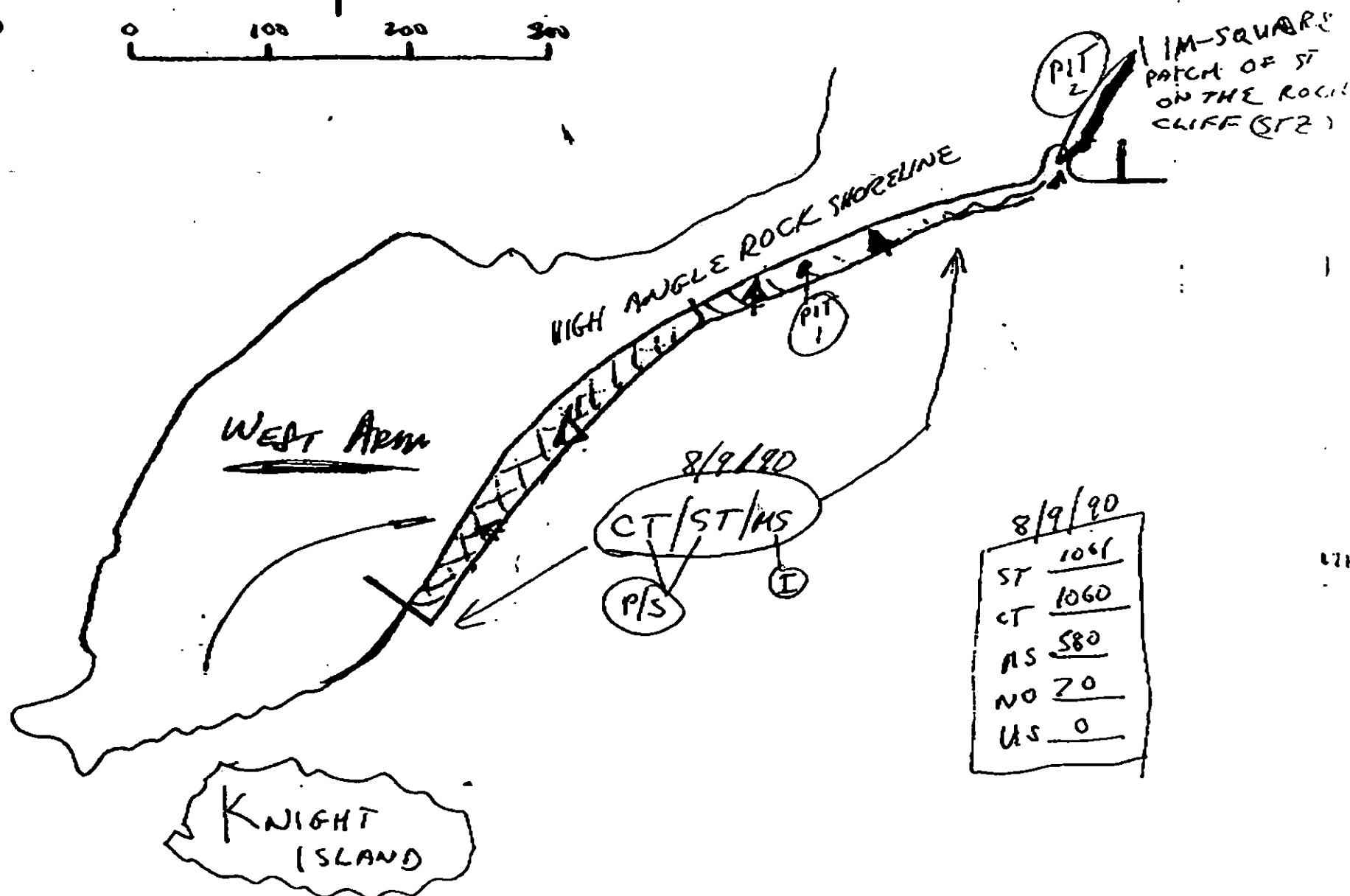
CT/P
Rocky Distribution

CT/S
Shaded Distribution

Red Vegetation

1 $\circ$
note location, direction,
if number

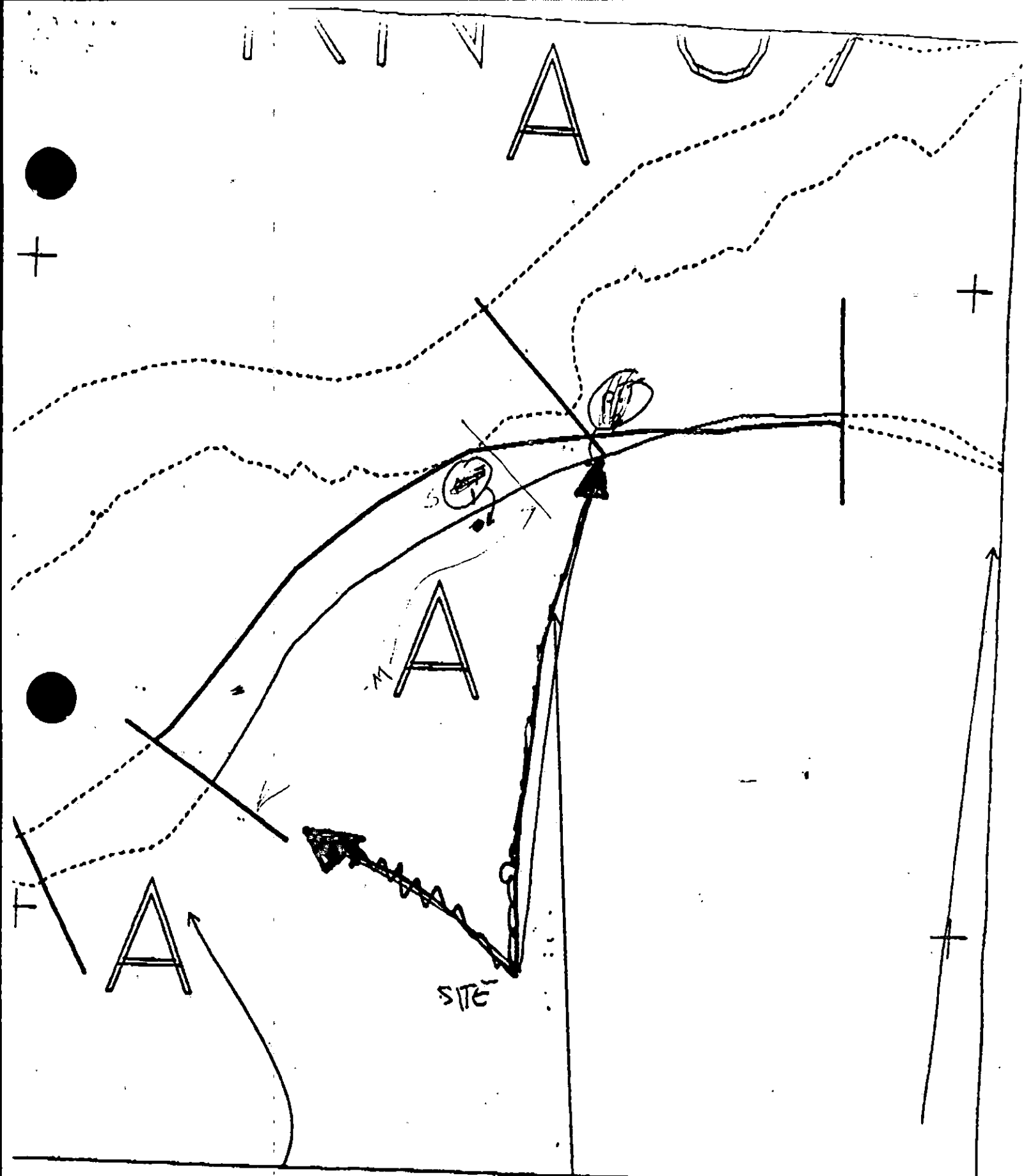
SEARCH MAP



8/9/90

ST	1061
CT	1060
MS	580
NO	70
US	0

Character Length (m): AP 100 PO 0 CV 0 CT 100 ST 0 MS 0 PI 20 TB 30 FL 0 NO 371



XX Wide
 /● Medium
 -- Narrow
 TT Very Light
 OO No Oil

KN-8 A

ADEC Subsegment Length: 650m
METERS

0 102 204
AK State Plane Zone 4 1:4017



Subdivision Field Map

Map Key: KNKN-8A

Name: NAKASHIMA

Date: 8/9/90

Revision 1
6/22/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
~~Biosolidation~~	~~OPEN~~

BIOREMEDIATION REMOVED
BY WORK PLAN ADDENDUM DATED 6/8/90
AND APPROVED BY FOJC 6/16/90.
JPP
6/22/90

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS

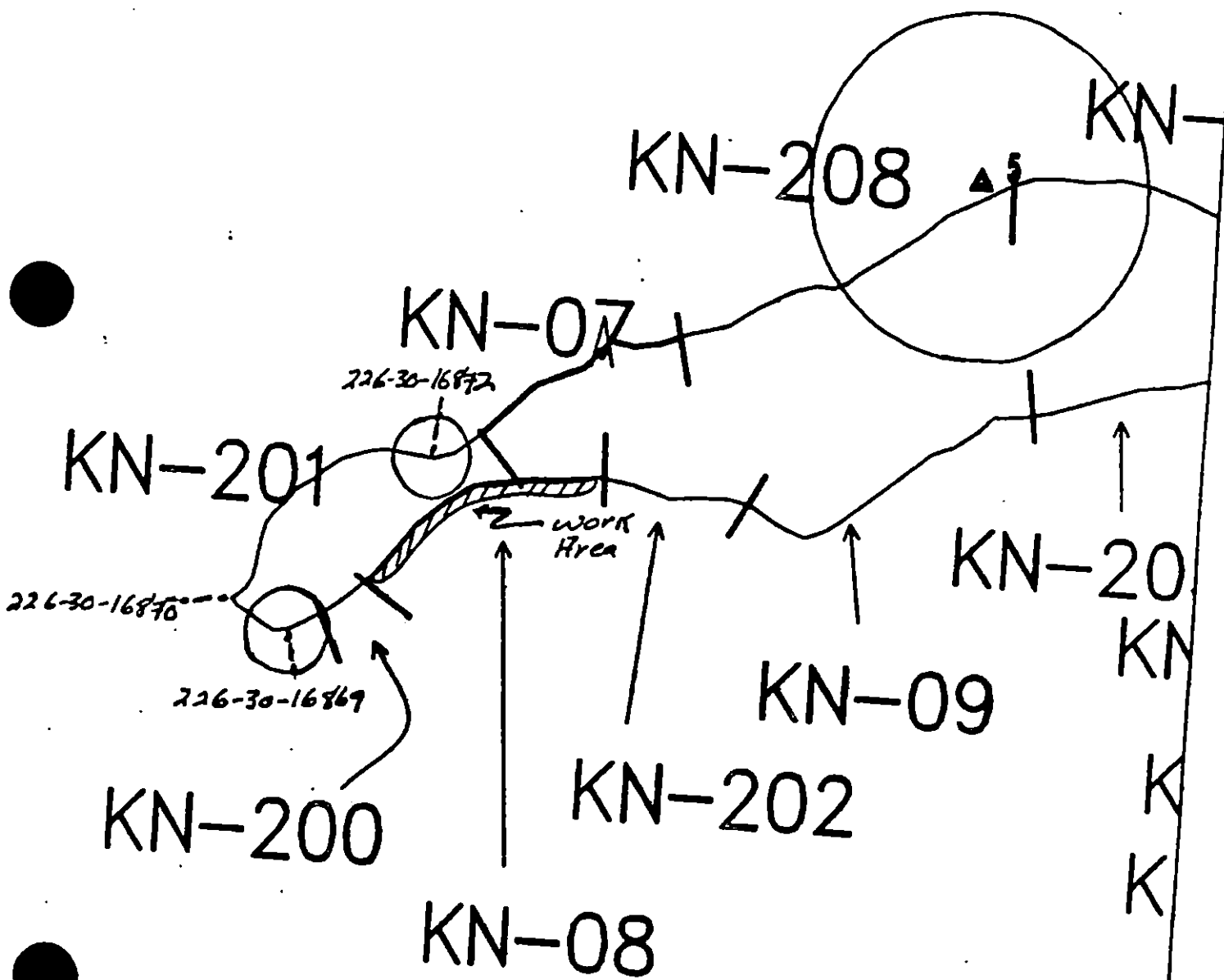
Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 5/24/90.
ADEC ART WEINER
EXXON AMY TAYLOR
NOAA BRUCE
USCG W. J. HALL

FOJC [Signature] DATE 5-24-90

Prepared By: [Signature] WTK

Date 5/22/90



Company, USA



ECOLOGY MAP
SEGMENT KN-8
SUBDIVISION A 1 /

★ Seabird Colony

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-9 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/30/90.

ADEC Art Wern Art Wern

EXXON Andy Gatz Andy Gatz

NOAA Joseph Talbott Joseph Talbott

USCG G.A. Benter G.A. Benter

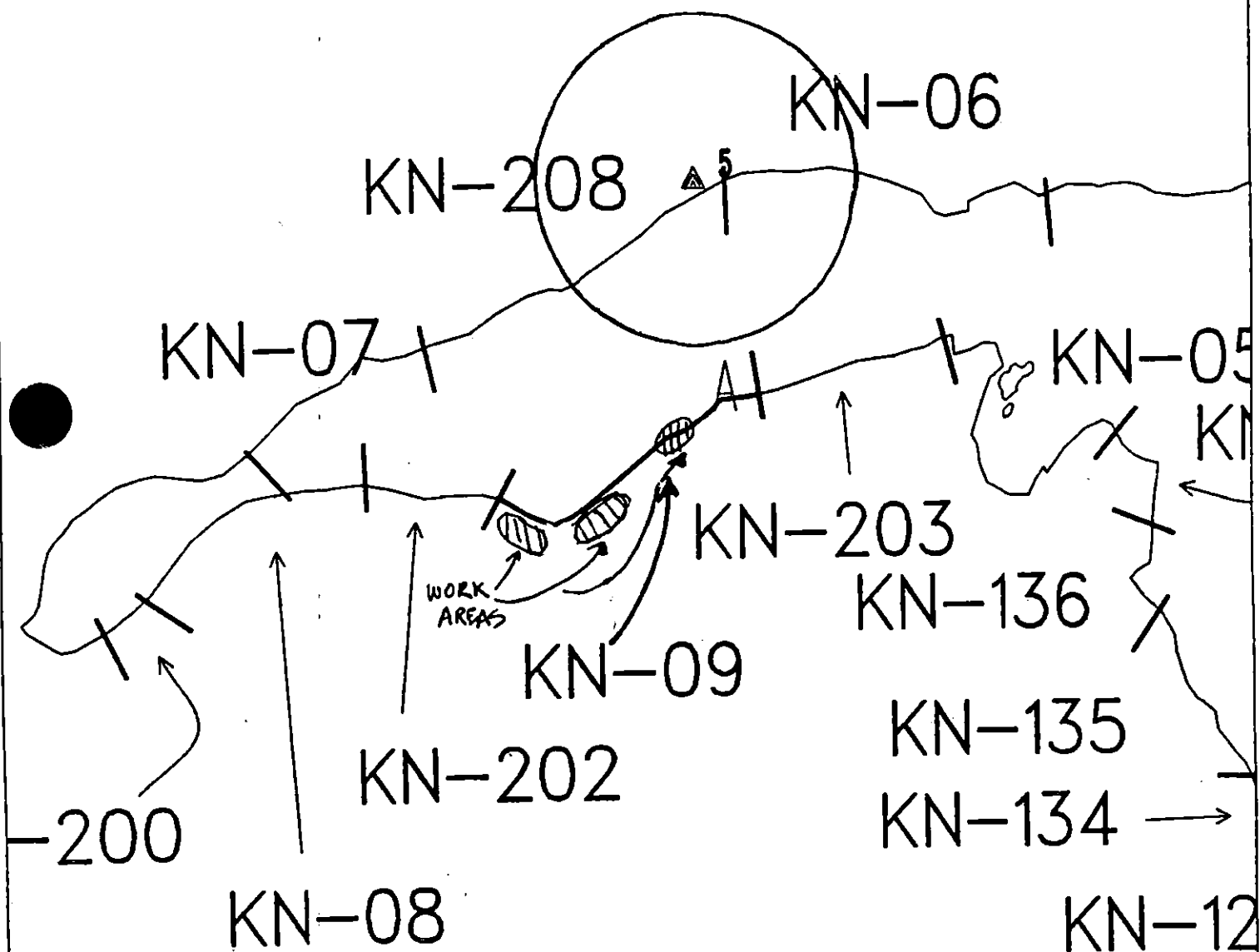
FOSC

DATE

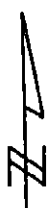
Prepared By: Andrea Meyer LA

Date

5/29/90

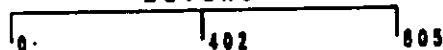


Exxon Company, USA
Map Key: KNI-KN-9
May 11, 1990



ECOLOGY MAP SEGMENT KN-9 SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1320 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 McManus DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 261 m: Narrow 11 m: V.Light 488 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> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats, and 2) bioremediate areas shown on attached sketch map. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90
DEC Art Weiner
EXXON Andy BAC
NOAA Joseph Teller
USCG D. D. Rome

FOSC: WGL DATE: 5-18-90

"NOTIFY CAR 24HRS. IN ADVANCE OF WORK"

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-09

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 261 m: Narrow 11 m: V.Light 488 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

_____ Manual Pickup

X Bioremediation

X Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats,
and 2) bioremediate areas shown on attached sketch map. Work should be
conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
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 8/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30 Harbor seal and sea lion pupping (5/15 to 7/1)
30 Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-09 SUBDIVISION: A-10f1 DATE 04/25/90SCGNAME David S. ThomasSIGNATURE *David S. Thomas*☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTEDADECNAME Clara S. CrosbySIGNATURE *Clara S. Crosby*☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS 1). Manual removal of AP & spot work at pit sites #1 & 2. & to east of delta.

2). Manual removal of AP/p. 1x10m. area. Considered percentage of distribution heavier - however, regardless of any discrepancies consider dist. of AP significant enough to suggest crew be sent in to remove.

3). Please request CSC Rep. Peter Pollara comments - Transferred before p.p. work was done -

LAND MANAGER

NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO 34-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-09
 BIO DAVE LOHSE LAND REP PETER ZOLLAR (PAC) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA COWBY TIME 07:50 to 09:00
 TEAM NO. 13 TIDE LEVEL -3' to -2' DATE 04/25/90
 EST. SUBDIVISION LENGTH: 773 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 20 % B 40 % C 30 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 200 m N 10 m VL 563 m NO 0 m

SURFACE OIL

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

 PAVEMENT H F (S) 147 sq. m by 5 cm

 PATTIES / TARBALLS 0 BAGS

 NEAR SHORE SHEEN? (NO) BR RW SL TL

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

Photographs:

 Roll No. ST-13-5

 Frames 20,21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼ T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	SU	S	M	L				
1	20	X					5-10		X		X						X					Y	10	P-P.M	
2	35					X	.		X								X							P-P.M	
3	30					X	.		X								X							P-P.M	
							.																		
							.																		
							.																		

COMMENTS

① GEOMORPHOLOGY: BOULDER / COBBLE SHORELINE WITH SMALL BEDROCK POINTS AND ONE COBBLE DELTA.

OIL CHARACTER / CATEGORY: COAT AND ASPHALT PAVEMENT ALONG WEST END OF SHORELINE IN 4-5 M BAND IN U.T.Z. TOP OF BOULDER'S CT/S. UNDERSIDE OF BOULDER'S CT/P WITH AP/P BETWEEN.

 REVIEWED IN DATE 5-1-90

OG KICK GILLIE
 SEGMENT KN-09
 SUBDIVISION A-10f1
 DATE 04/25/90

Bay of Isles West Arm

CHECKLIST

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

LEGEND

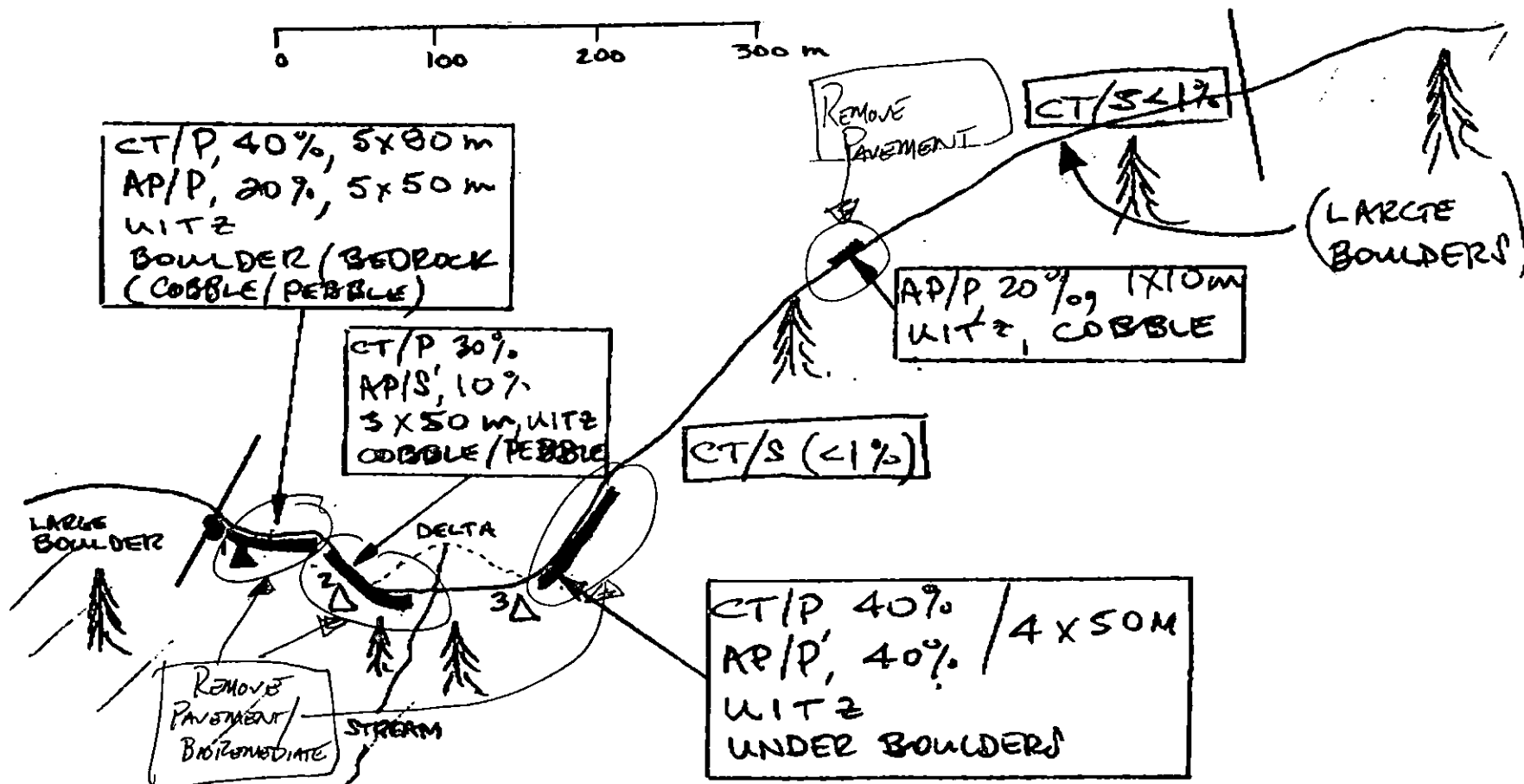
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



Oil Character Length (m): AP 35 PO 0 CV 0 CT 190 ST 0 MS 0 PT 0 TB 0 FL 0 NO 548

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / KN009 Subdivision A Date (mo / day / yr) 4-25-90Time (24 hr) 7:45 Biologist David Hulse(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 40 (3) Cobble 30 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 30 Moderate 50 Low 20(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
juveniles / adults (X), new settlement (3)Photographs:
Roll No. ST-13-5Frames 20, 21

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1 - no comment
64 - no comment

Abundant starfish in low intertidal would be susceptible to foot traffic.

Shoreline Ecological Summary

L of 2

Segment ST-KN009

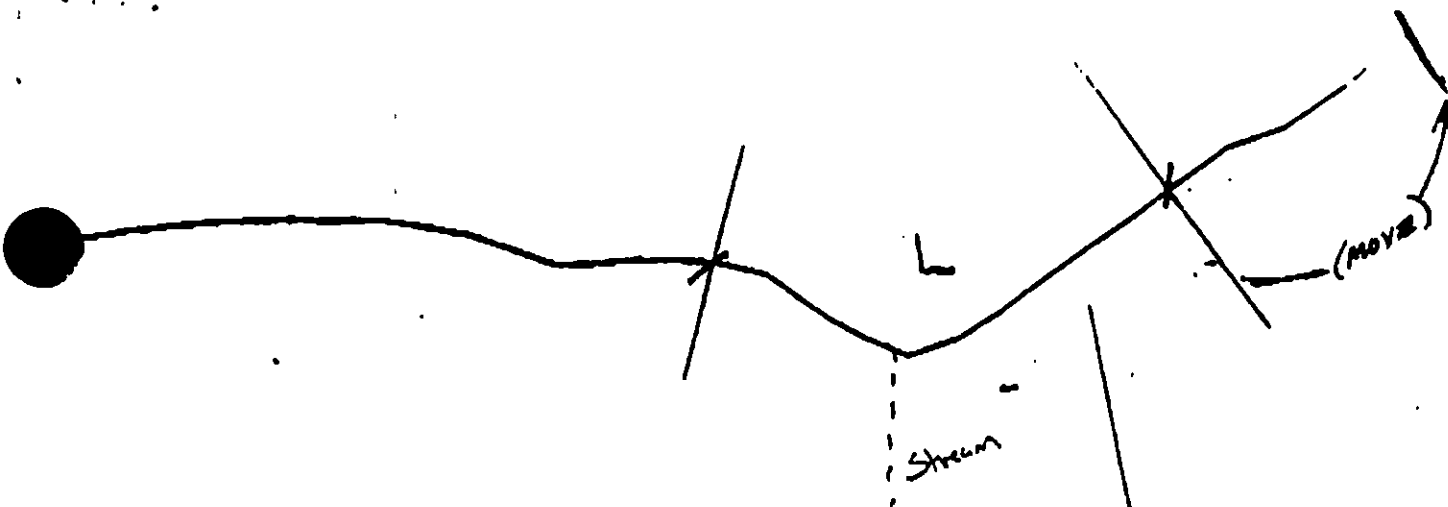
Subdivision A

4-25-90

Biologist: David Lohse

Wildlife Observations/General Comments

1. Present in low intertidal: Spirorbis, Pycnopodia, Enteromorpha, unidentified red "branch" (Rhodomenia?), Coralline algae, Zostera, Mopalia, Dermasterias, Anthopleura, Onchidella, Rhodomenia, unidentified yellow sponge, Ulva
mid intertidal: Littorina, Anulipus, unidentified red "branch" (Rhodomenia?), amphipods
2. Littorina egg masses found underneath mid-intertidal cobble
3. Mussel mortality in mid intertidal cobble was ~10% (estimate based on one site).
4. Barnacle mortality was ~25% on both mid-intertidal bedrock and cobble, and ~80% on both low intertidal cobble and bedrock.
(Estimates made at one site for each type of substrate)
5. Total algal cover in low intertidal was ~90% on bedrock, 80-90% on boulders, and 60-75% on cobble. (Estimates based on one site for bedrock, and 2 sites ^{each} for boulders and cobble).
6. Pycnopodia was quite abundant in low intertidal.
7. One stream was found in the segment. (see Ecology map for its location).



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR
ENTIRE SEGMENT:

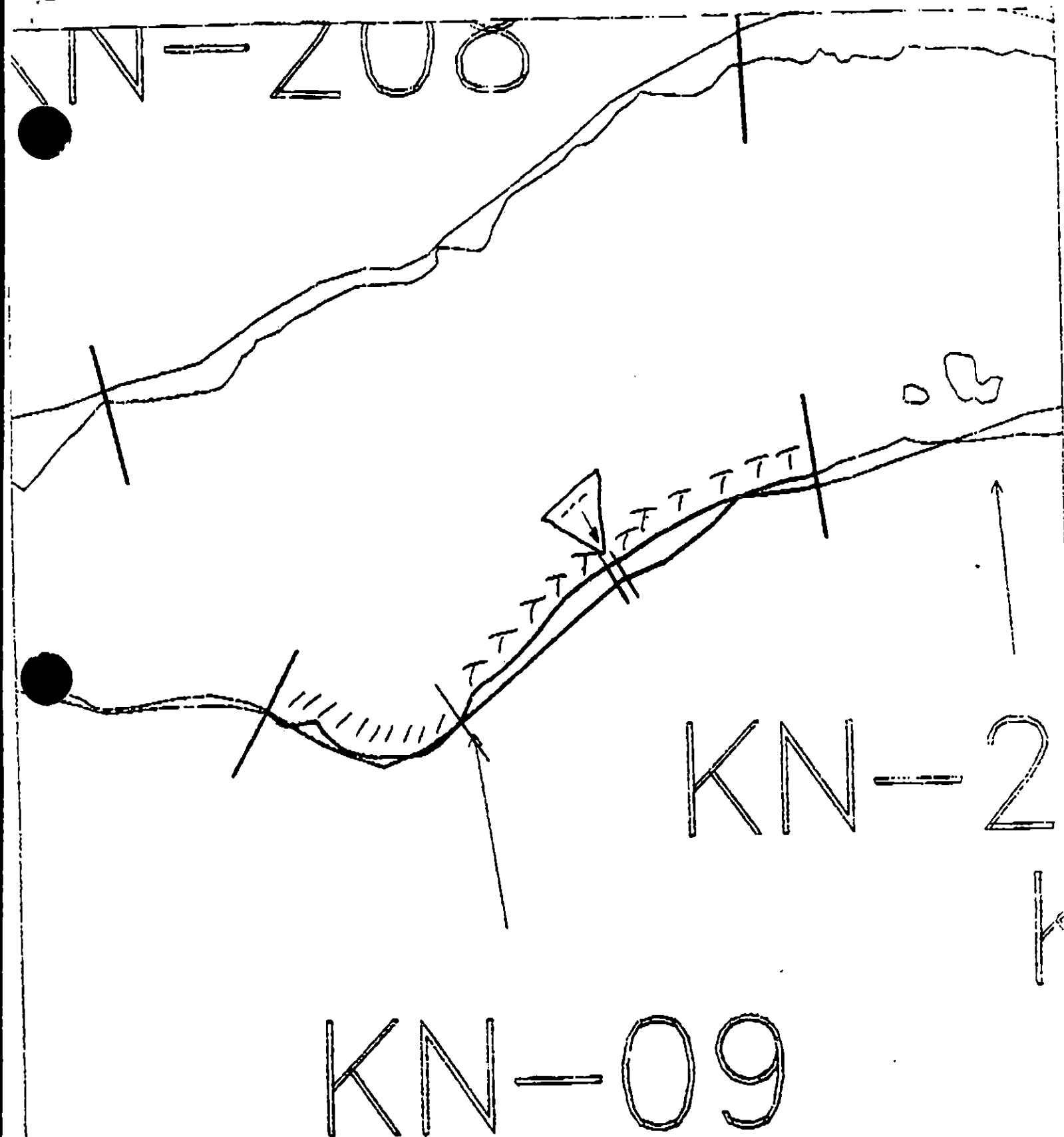
~~O-Y~~

~~2-M~~

KN009

500:0

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



XXXX Wide
//// Medium
--- Narrow

KN-9

Approx. Segment Length: 766m

Map Key: KN1-KN-9

Name: Rick GILLIE

Date: 04/25/90

SHORELINE EVALUATION

SEGMENT ST/ KN-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 McManahan DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 261 m: Narrow 11 m: V.Light 488 m: No Oil 0 m

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats, and 2) bioremediate areas shown on attached sketch map. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90

ADEC Art Wenzel

EXXON Andy EAC

NOAA Joseph Talbot

USCG D. D. Rome

FOSC: WGL DATE: 5-18-90

"NOTIFY CAC 24HRS. IN ADVANCE OF WORK"

SEGMENT N-09

SUBDIVISION A-10/1

DATE 04/25/90

SKETCH MAP

Bay of Isles
West Arm

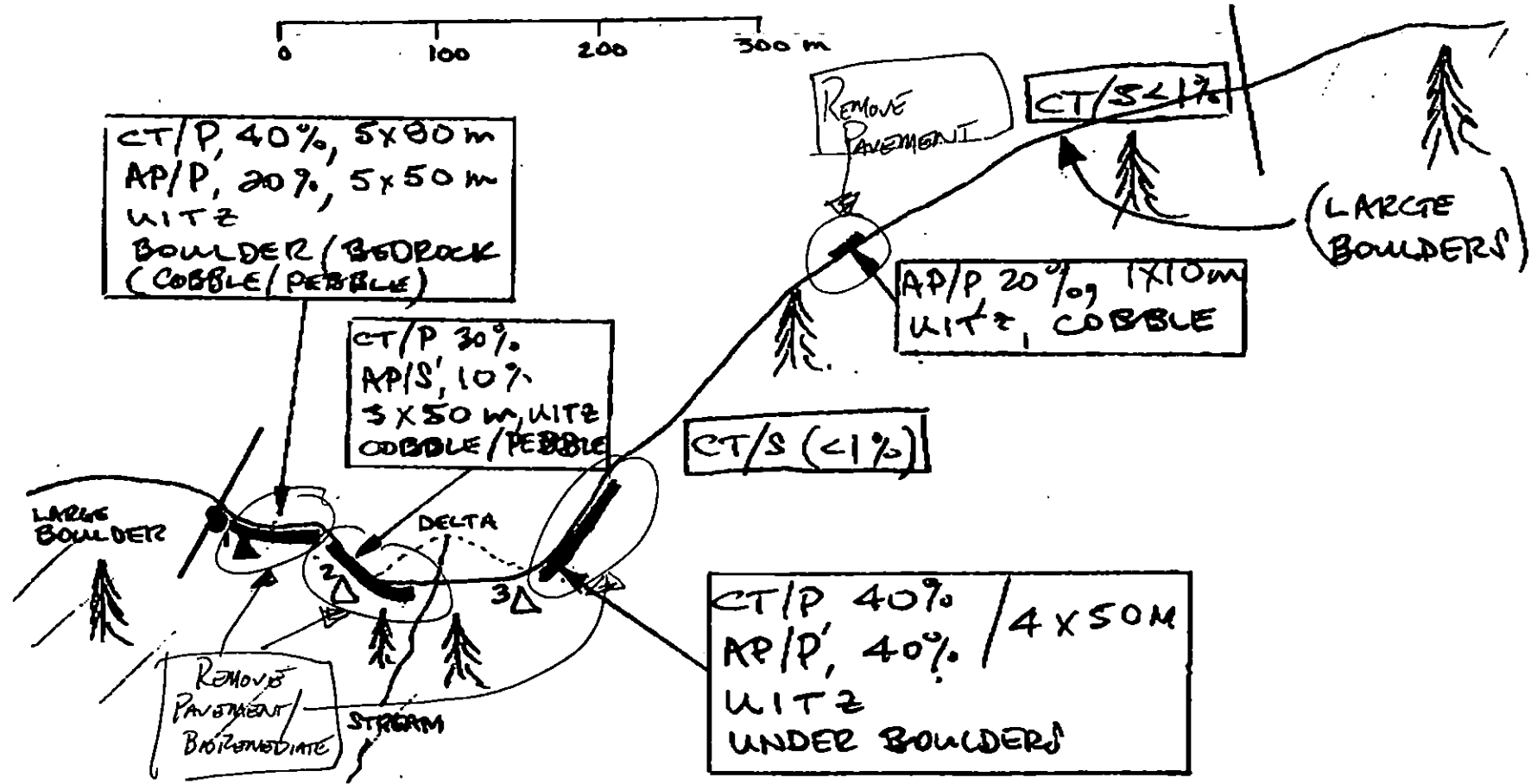


CHECKLIST

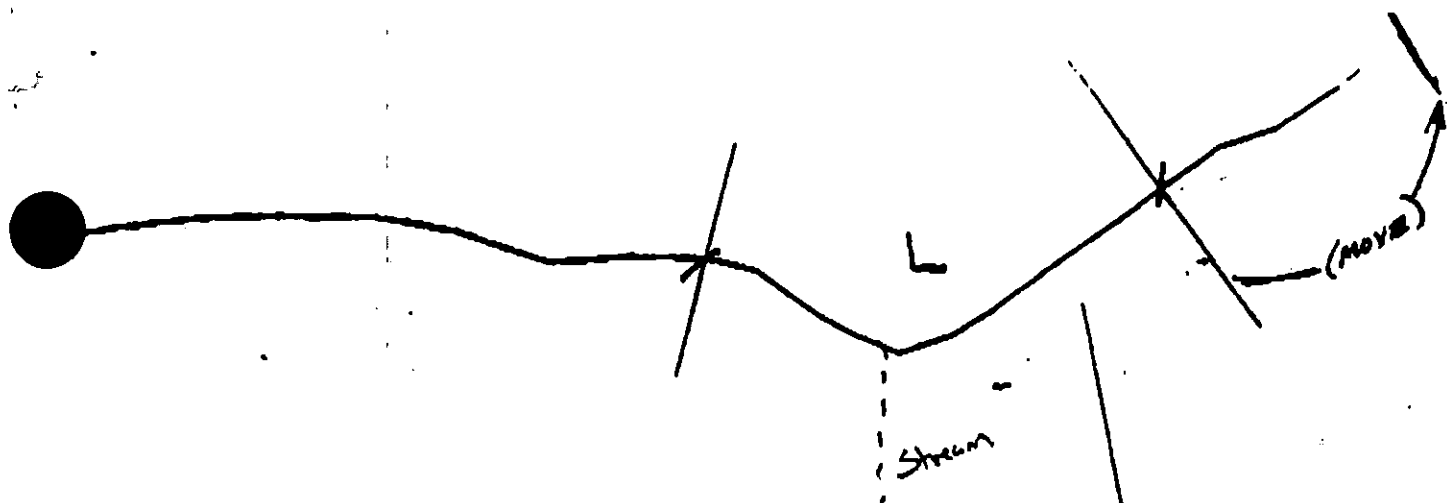
- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PI Location(s)
- ☒ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP 35 PO 0 CV 0 CT 190 ST 0 MS 0 PT 0 TB 0 FL 0 NO 548



ECOLOGICAL MAP (1 OF 1)

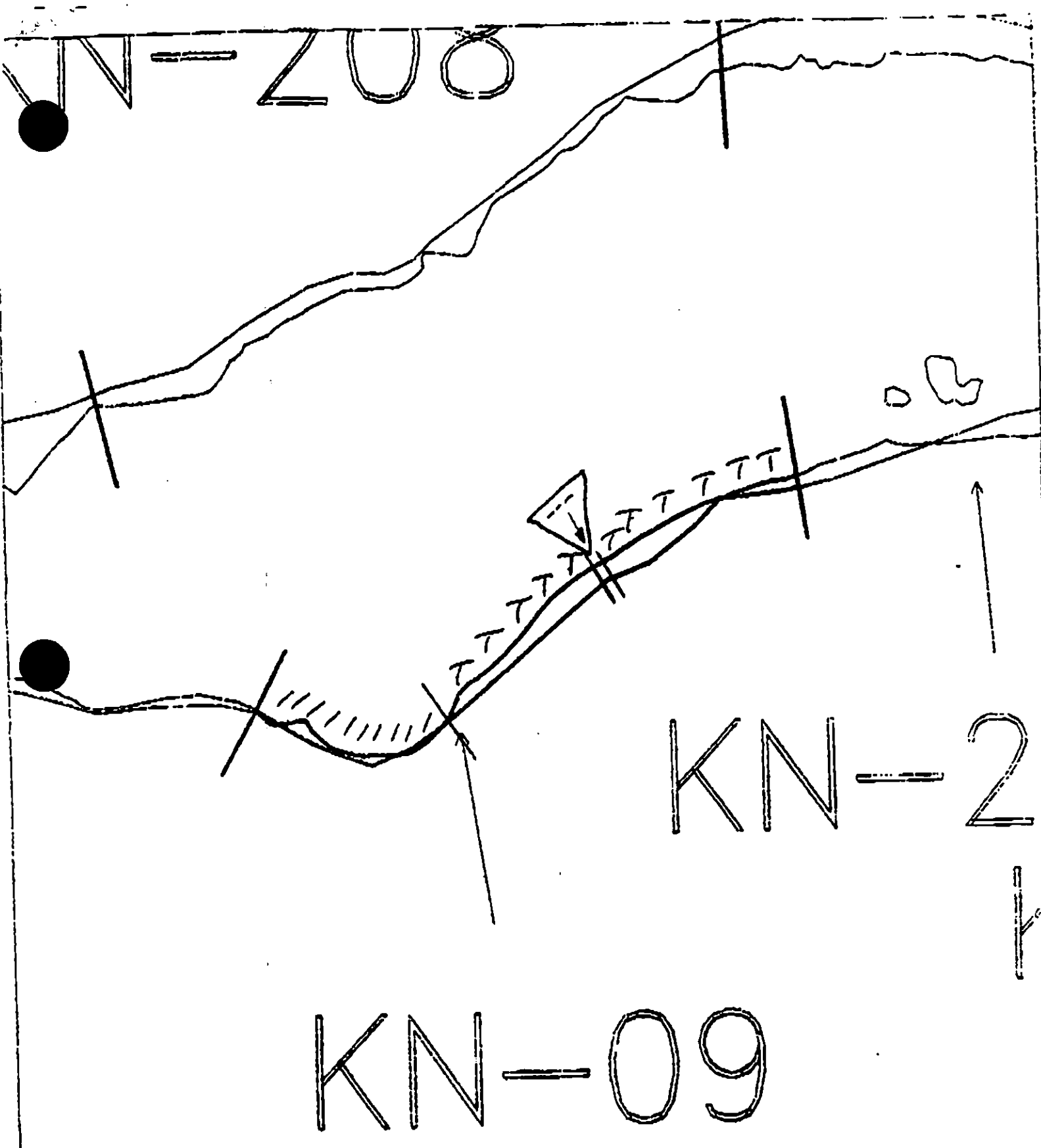
RESOURCE CODES FOR
ENTIRE SEGMENT:

~~0-1~~
~~2-M~~

KN009

500:0

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



XXXX Wide
 /// Medium
 --- Narrow
 T T T T

KN-9

Approx. Segment Length: 766m

Map Key: KNI-KN-9

Name: RICK GILLIE

Date: 04/25/90

1991 MAYSAP EVALUATION

SEGMENT: KN 009 SUB: A REGION: PWS SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN 09 SUBDIVISION A DATE 5/2/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley **

☒ NTR ☐ TREATMENT RECOMMENDED

SMALL patches OF MOUSSE patties removed & broken up by survey team.

EXXON

NAME Jon P. Cernock SIGNATURE Jon Cernock

☒ NTR Broke up and picked up oil. Beach looked good.

LANDMANAGER

NAME John Johnson OF CAC SIGNATURE John Johnson

☐ NTR ?
3 patches of tar noted
Clean up of tar recommended

USCG/NOAA

NAME MOONEY / BARATS SIGNATURE Timothy Mooney / Andy Barats

☒ NTR MANUALLY tilled in 1990. REMAINING TAR PATTIES BROKEN up OR REMOVED BY SURVEY TEAM. Segment was very clean.

DATE 2 MAY / 91

OG HARPER

BIG STOKER

ADEC GORMLEY

LANDMANAGER JOHNSON for CVC

EXXON CZARNIEZKI

USCG/NOAA MOONEY / BARATS

TIME 09:55 to 10:20

TIDE LEVEL ~.30 ft. to 21 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 0 m M 0 m N 0 m VL 20 m NO 652 m US 88 m

[illegible]

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP- 3 - 09 FRAMES 24 -

[illegible]

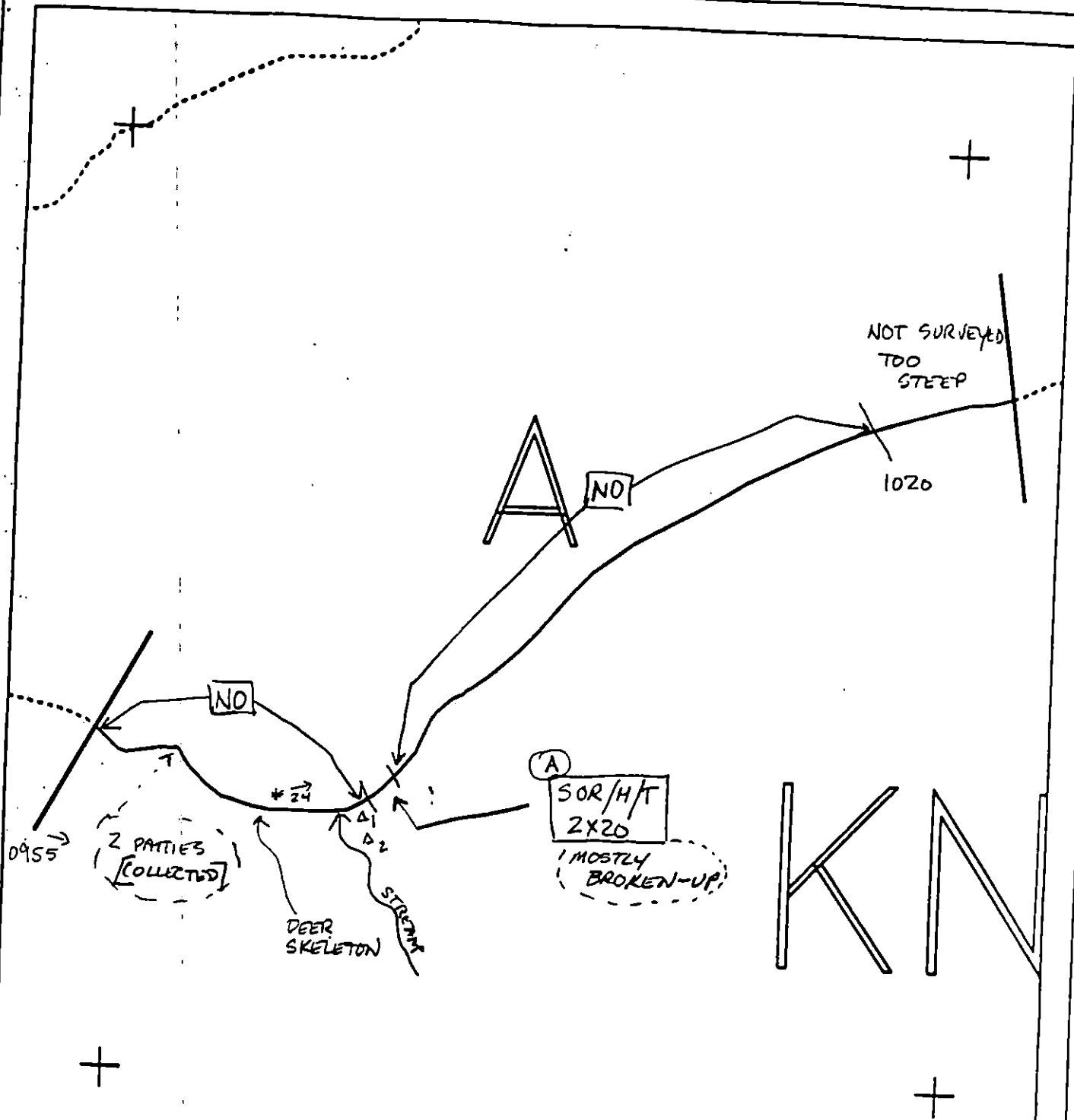
8HEEN COLOR: B - BROWN; R - RAINBOW; S - SILVER; N - NONE

OG COMMENTS:

Several mousse patches were collected and the remainder broken-up leaving only a trace of oil in a 20m section of this segment. Notably there were no stains of coats on rocks.

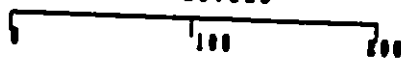
REVIEWED ~~CS~~ 12 MAY
E6 reviewed, May 8

OG 1 of 4



KN0009 A

MEETERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KNKN000000

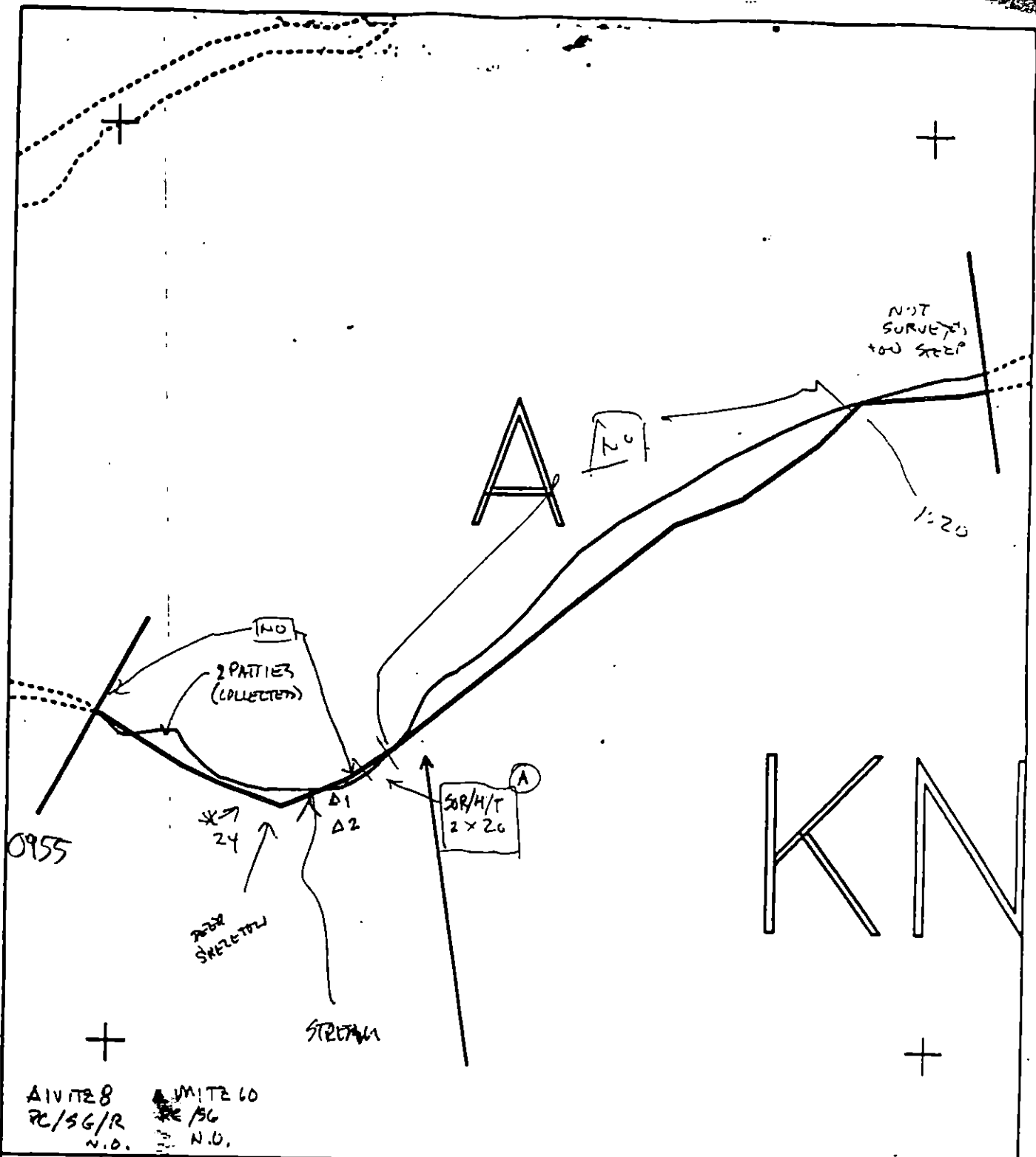
Name: HARPER

Date: 2 MAY 91

REVISED FIELD MAP

EA revised May 11
REVIEWED LE 12 MAY

OG 2 of 4



AIVITE 8 AIVITE 60
 PC/SG/R PC/SG
 N.O. N.O.

XXXX	Wide	KN0009 A ADEC Subsegment Length: 760m METERS AK State Plane Zone 4 KN000900	Subdivision Field Map
////	Medium		Map Key: KNKN0009A0
----	Narrow		Name: <u>HARPER</u>
TTTT	Very Light		Date: <u>2 MAY 91</u>
0000	No Oil		Date Entered:

ORIGINAL FIELD MAP

EC revised Map 11
 REVIEWED 12 MAY
 OG 3 of 4

WAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/2/91

SEGMENT # KN09

TIDAL HEIGHT (Range) -1 to 0

SUBDIVISION A

BIOLOGIST Stakov

SEA STATE 0-1

WIND SPEED/DIRECTION E 10-20

PHOTOGRAPHS: ROLL #

FRAME #

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

Low energy shore ranging from fairly steep cobble/boulder/bedrock to low-angle pebble/cobble, traversed by a small stream.

Biota characterized by barnacles, limpets, Fucus (all generally sparse) and Petroselin algae extends well into the upper intertidal. Biota increases in abundance, and to some extent in diversity, downlope through the mid and lower intertidal, consisting for the most part of moderate to dense barnacle populations, moderate to dense populations of interbedded and/or attached Mytilus, patchily distributed Fucus (sparse-dense), generally dense limpets, sparse Littorina and egg masses, and sometimes eel blennies, amphipods, Pagurus, Scudicaria, Nucella and Leptasterias. Pebble/cobble flats dominated by interbedded Mytilus, barnacles, limpets, and variable densities of patchy Fucus.

Biota within or adjacent to the little remaining surface or concrete of interbedded Mytilus, barnacles, limpets (often dense) and patchy Fucus.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS No birds.

OF SPECIES

TOTAL BIRDS

FISH OBSERVED
SPECIES PRESENT

Eagles			
Seabirds			eel blennies
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

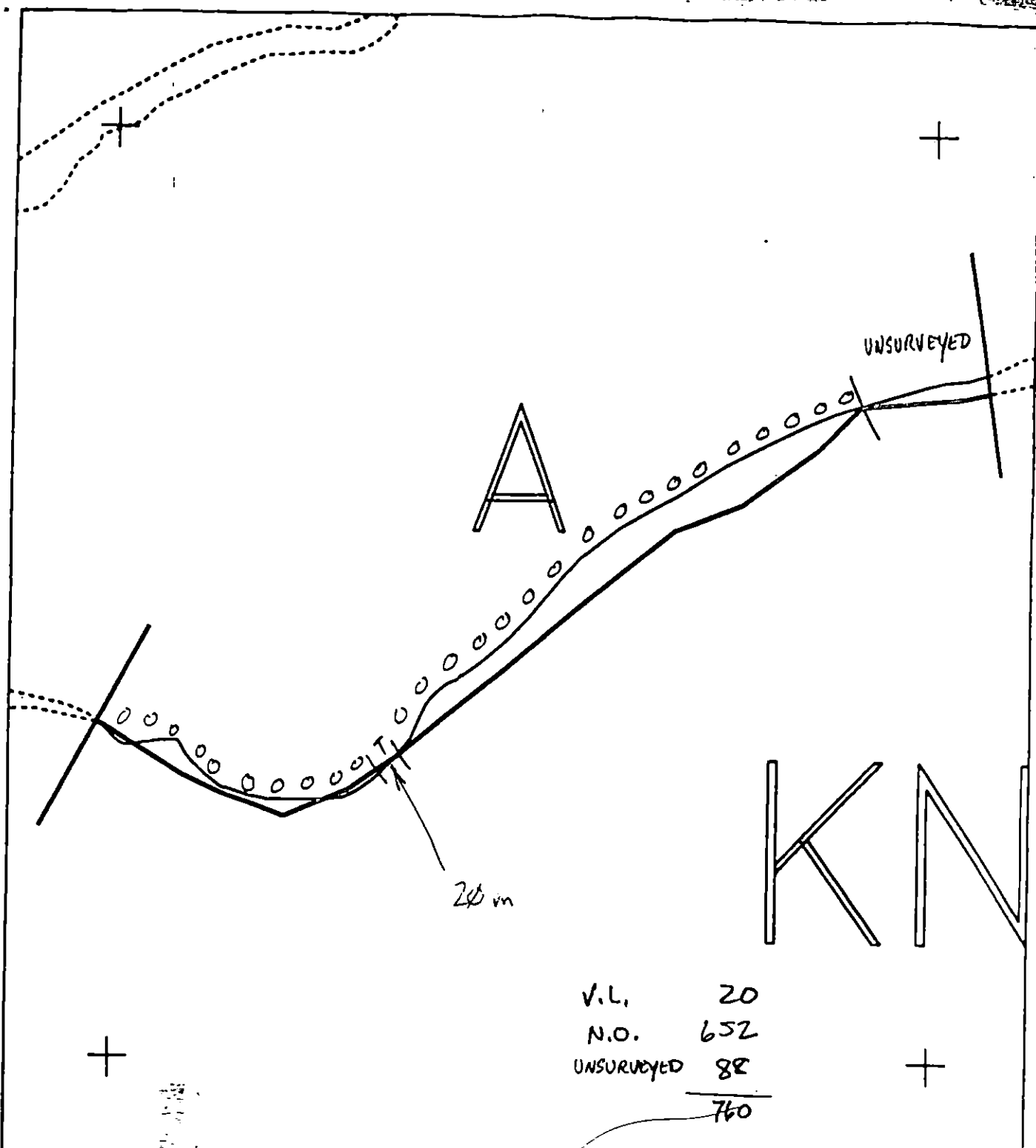
OBSERVED

Sea Otters		Deer Skeleton	
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 12 MAY

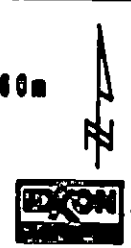
P. J. J. J. J. J.



V.L. 20
 N.O. 652
 UNSURVEYED 88
 760

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

KN0009 A
 ADEC Subsegment Length: 700m
 METERS
 0 100 200
 AK State Plane Zone 4
 4800000m



Subdivision Field Map
 Map Key: KNKN0009Aa
 Name: HARPER
 Date: 2 MAY 91
 Date Entered:

SURFACE OILING SUMMARY
 MAP

ES reviewed, May 8
 REVISED 12:12 PM
 OF 4 of 4

100

Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

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

SHPO Signature: Rachel Van Daele Date: 5/21/91

FOSC



Other

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 2 1991

FOSC APPROVAL DATE: 5/29/91

ADEC

FOSC

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN 09 SUBDIVISION A DATE 5/2/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley **

☒ NTR ☐ TREATMENT RECOMMENDED

SMALL patches OF Mousse patties removed & broken up by survey team.

EXXON

NAME Jon P. Carmichael SIGNATURE Jon Carmichael

☒ NTR Broke up and picked up 40% Beach looked good.

LANDMANAGER

NAME John Johnson OF CAC SIGNATURE John Johnson

☐ NTR

? patches of tar noted
Clear up of tar recommended

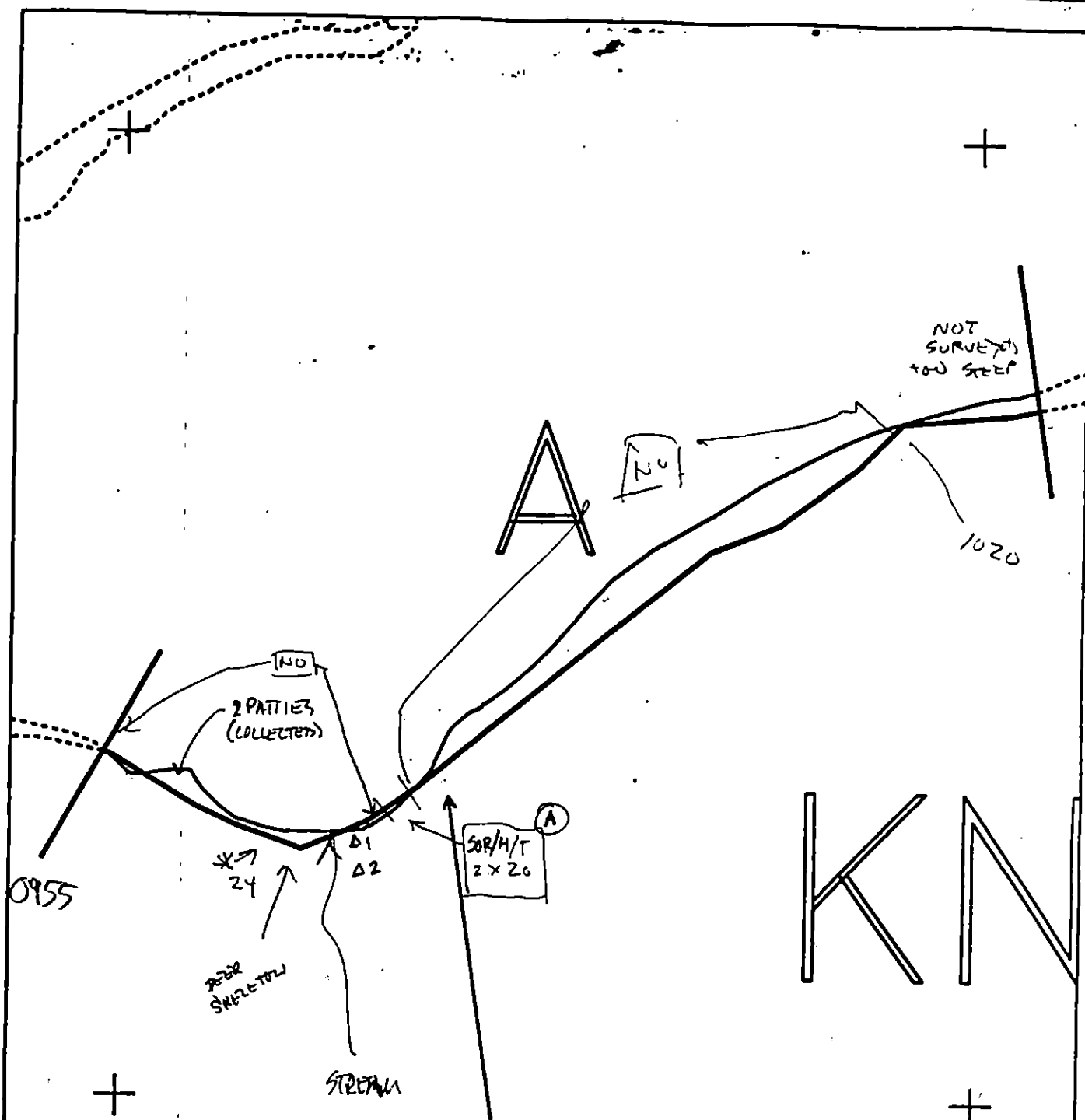
USCG/NOAA

NAME MOONEY / BARATS SIGNATURE Tina Mooney / Ariz Barats

☒ NTR MANUALLY filled in 1990. REMAINING TAR PATTIES BROKEN UP OR REMOVED BY SURVEY TEAM. Segment was very clean.

PAGE 1 OF 1

OG 1 of 4



AVITEB AVITELO
 PC/SG/R PC/SG
 N.D. N.D.

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

KN0009 A
 ADEC Subsegment Length: 780m
 METERS
 0 100 200
 AK State Plane Zone 4
 4800000m



Subdivision Field Map
 Map Key: KNKN0009Aa
 Name: HARPER
 Date: 2 MAY 91
 Date Entered:

ORIGINAL FIELD MAP

EC revised May 11
 REVIEWED CD 12 MAY
 OG 3 of 4

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/2/91

SEGMENT # KNO9

TIDAL HEIGHT(Range) -1 to 0

SUBDIVISION A

BIOLOGIST Stakor

SEA STATE 0-1'

WIND SPEED/DIRECTION E 10-20

PHOTOGRAPHS: ROLL #

FRAME #

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

Low energy shore ranging from fairly steep cobble/boulder/bedrock to low-angle pebble/cobble, traversed by a small stream. Biota characterized by barnacles, limpets, Fucus (all generally sparse) and Petricell algae extends well into the upper intertidal. Biota increases in abundance, and to some extent in diversity, downlope through the mid and lower intertidal, consisting for the most part of moderate to dense barnacle populations, moderate to dense populations of interbedded and/or attached Mytilus, patchily distributed Fucus (sparse-dense), generally dense limpets, sparse Littorina and egg masses, and sometimes eel blennies, amphipods, Pagurus, sculpin, Nucella and Leptasterias. Pebble/cobble flats dominated by interbedded Mytilus, barnacles, limpets, and variable densities of patchy Fucus. Biota within or adjacent to the little remaining surface or concrete of interbedded Mytilus, barnacles, limpets (often dense) and patchy Fucus.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	No birds.	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles				eel blennies
Seabirds				
Waterfowl				
Gulls/Kittiwakes				
Shorebirds				
Corvids				
Other Birds				

MARINE MAMMALS

OBSERVED

LAND MAMMALS

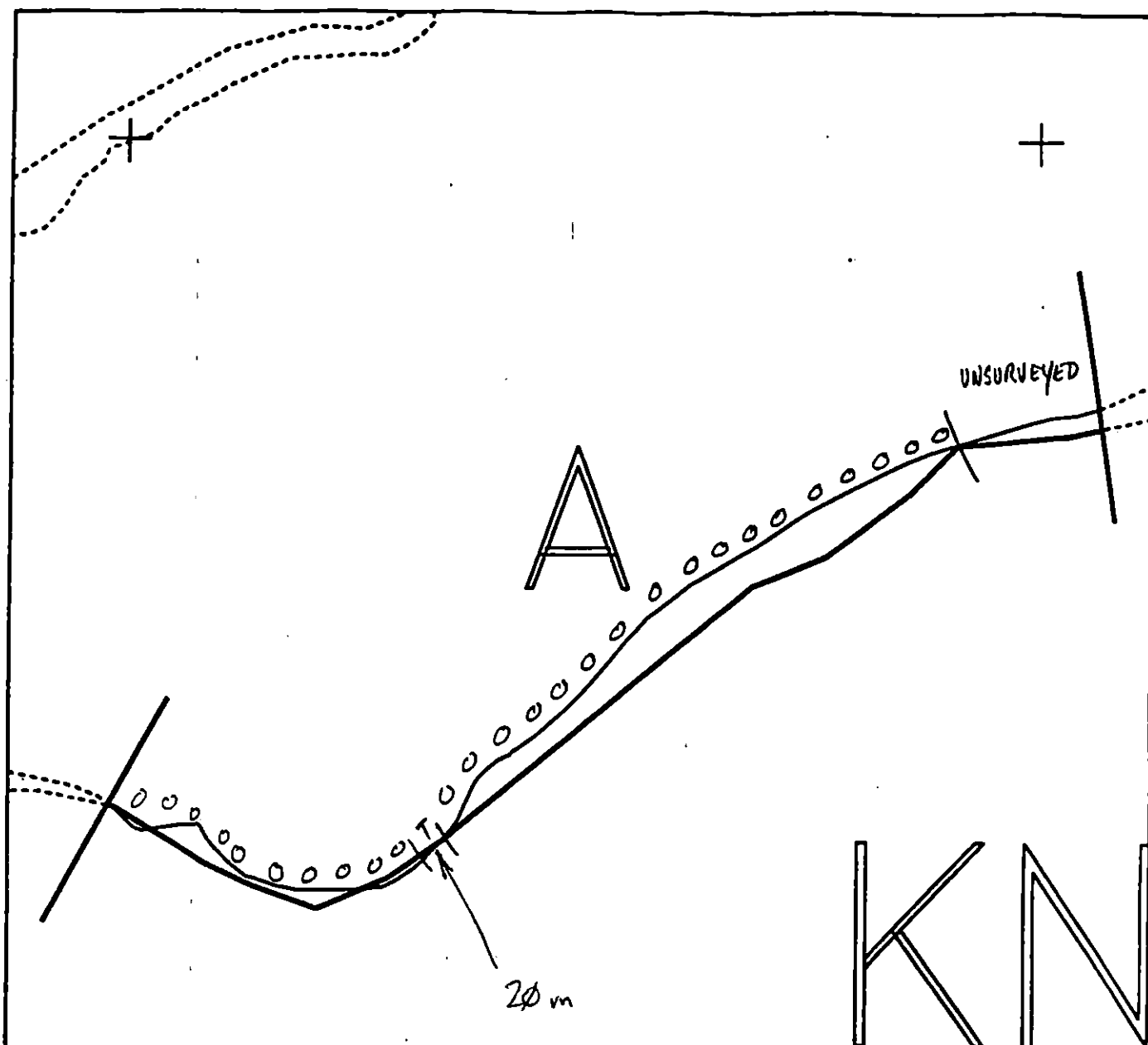
SPECIES

OBSERVED

Sea Otters		Deer Skeleton	
Pinnipeds(specify)			
les(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 12 MAY



V.L. 20
 N.O. 652
 UNSURVEYED 88
 760

XXXX	Wide	KN0009 A ADEC Subsegment Length: 760m METERS AZ State Plane Zone 4 66000000	Subdivision Field Map Map Key: KNKN0009Ae Memo: <u>HARPER</u> Date: <u>2 MAY 91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

SURFACE OILING SUMMARY
map

ES reviewed, May 8
 REVISED CD 12 MAY
 06 Yaf 4

SHORELINE EVALUATION

SEGMENT ST/ KN-10 SUBDIVISION A (1 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
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 ~~ent, stop work~~
~~shoreline treatment. 1. a member of~~
~~4-31-53 or 1964~~

32763.

SHPO SIGNATURE: Charles J. Holmes DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 985 m: No Oil 396 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/29/90
ADEC Art Weiner
EXXON Andy Con
NOAA J. Talbot
USCG M.J. Hall
FOSC: MyL DATE: 5-3-90

OG KOMSEY
SEGMENT ST/ KN10

SUBDIVISION A

DATE 4.8.90

CHECKLIST

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

LEGEND

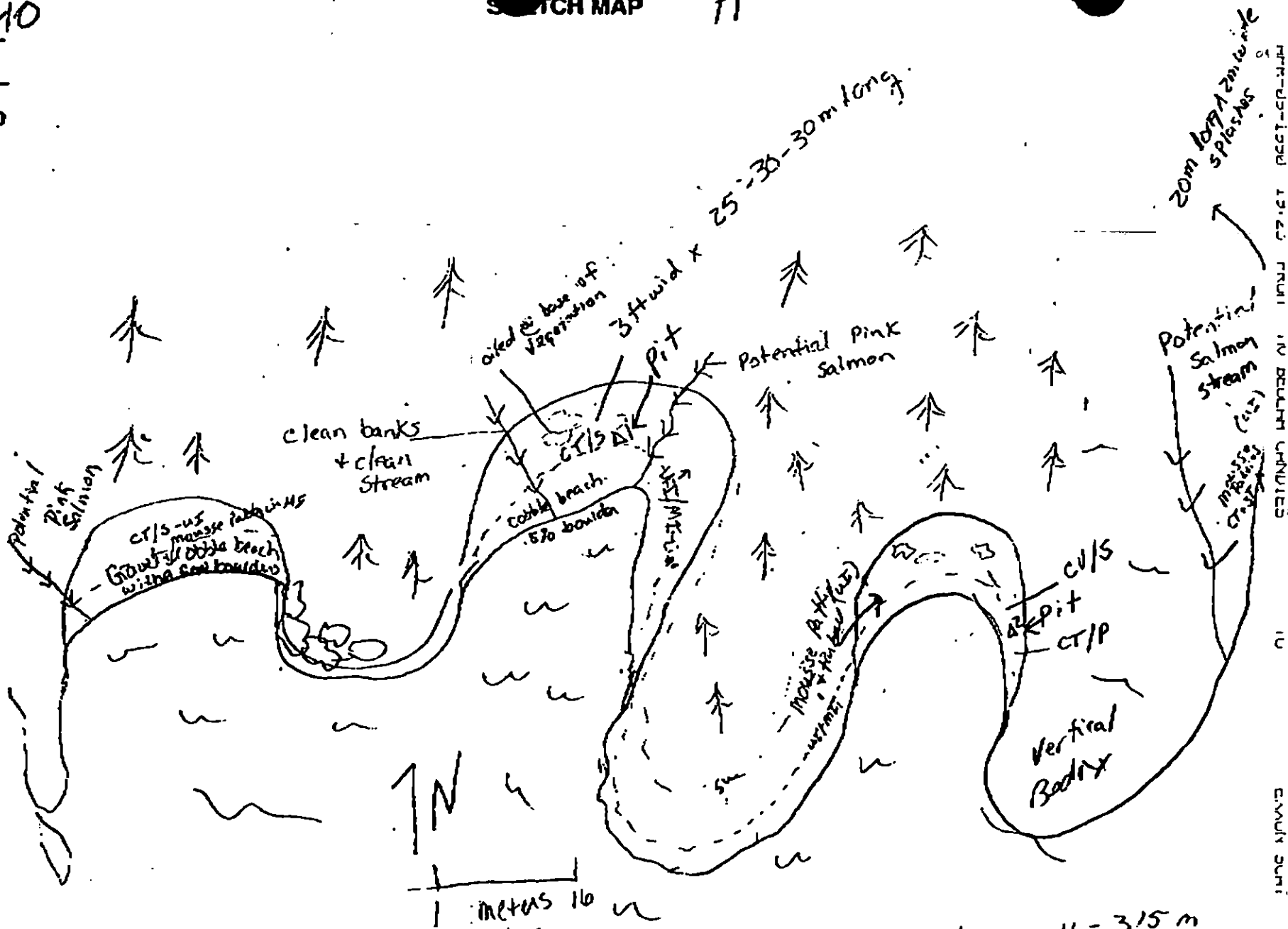
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



for entire subdivision

Oil Character Length (m): AP — PO — CV 3 CT 757 ST 757 MS — PT 3 TB — FL — NO 504

12

classified as
fair ball due
to size (< 10cm)
but more of
a splat than
actual size of
parties

Stream

a few parties on
west bank



2 1/2 ft wide x 50m long
oil line on bedrock - oiled webbing
oiled Pom. Pom (caught in net on landing)

SKETCH
A

9 few
splatters

KN-10-B

Stain line
1-2cm thick

oil band
clean

Clean

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m

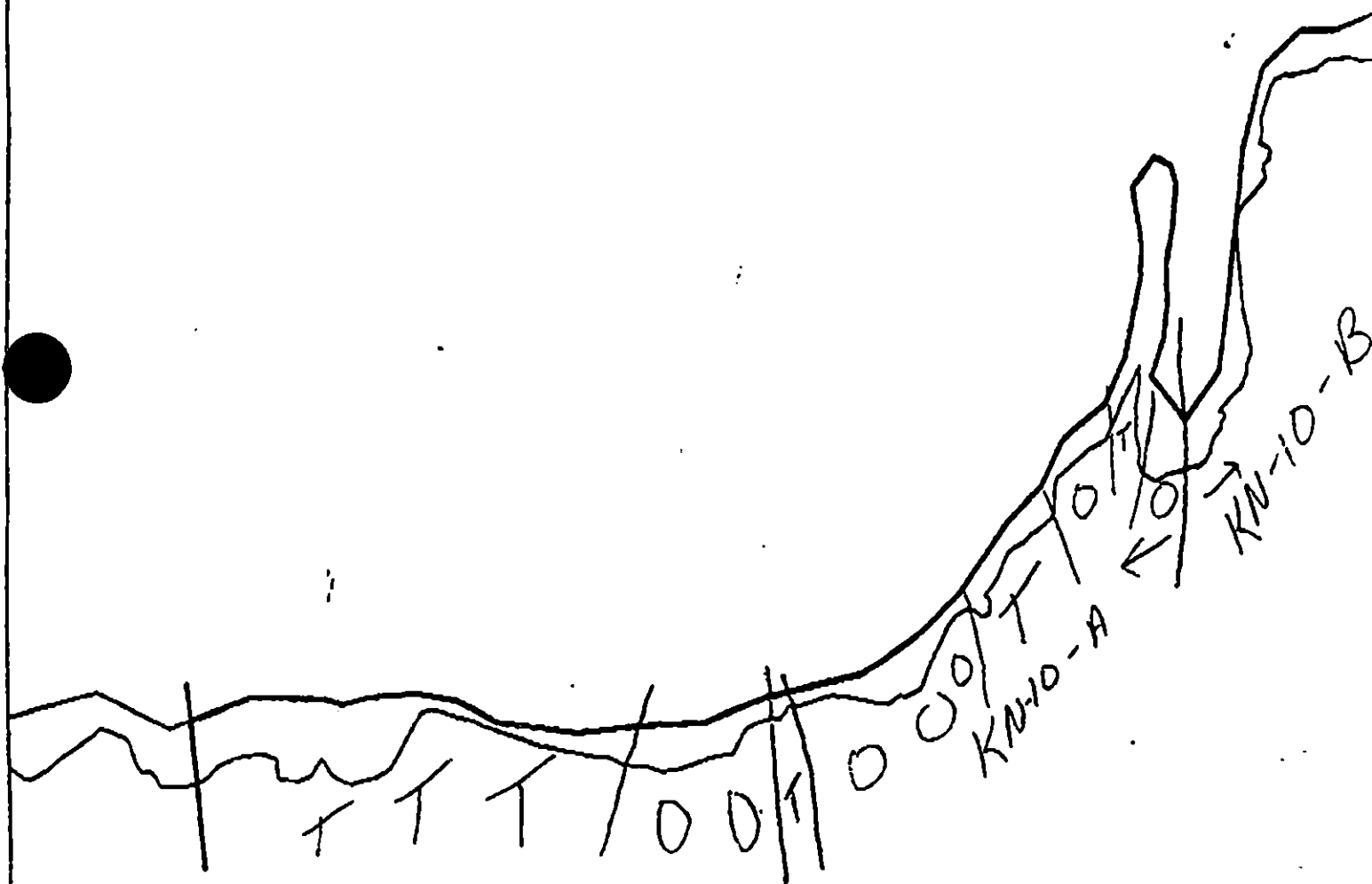


Map Key: PWS-2800

Name: K. RAMSEY

Date: 4/8/90

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTT Very Light

OOO No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-2800

Name: K. RAMSEY

Date: 4/8/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-10 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
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: Charles E. Holman DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 486 m: No Oil 1720 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MONITORS TO ASSESS THE FEASIBILITY AND NEED FOR
MANUAL PICK UP, SPOT WASH, AND BIUREMEDIATION WHILE IN
PROXIMITY TO THIS AREA.

TAG APPROVAL DATE: 4/24/90
ADEC ART WEINER
EXXON ANDY GILL FOSC: DATE: 5-3-90
NOAA Joseph Talbot
USCG M. J. HALL

OG RAMSEY

SEGMENT ST/ KN10

SUBDIVISION B

DATE 4.8 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

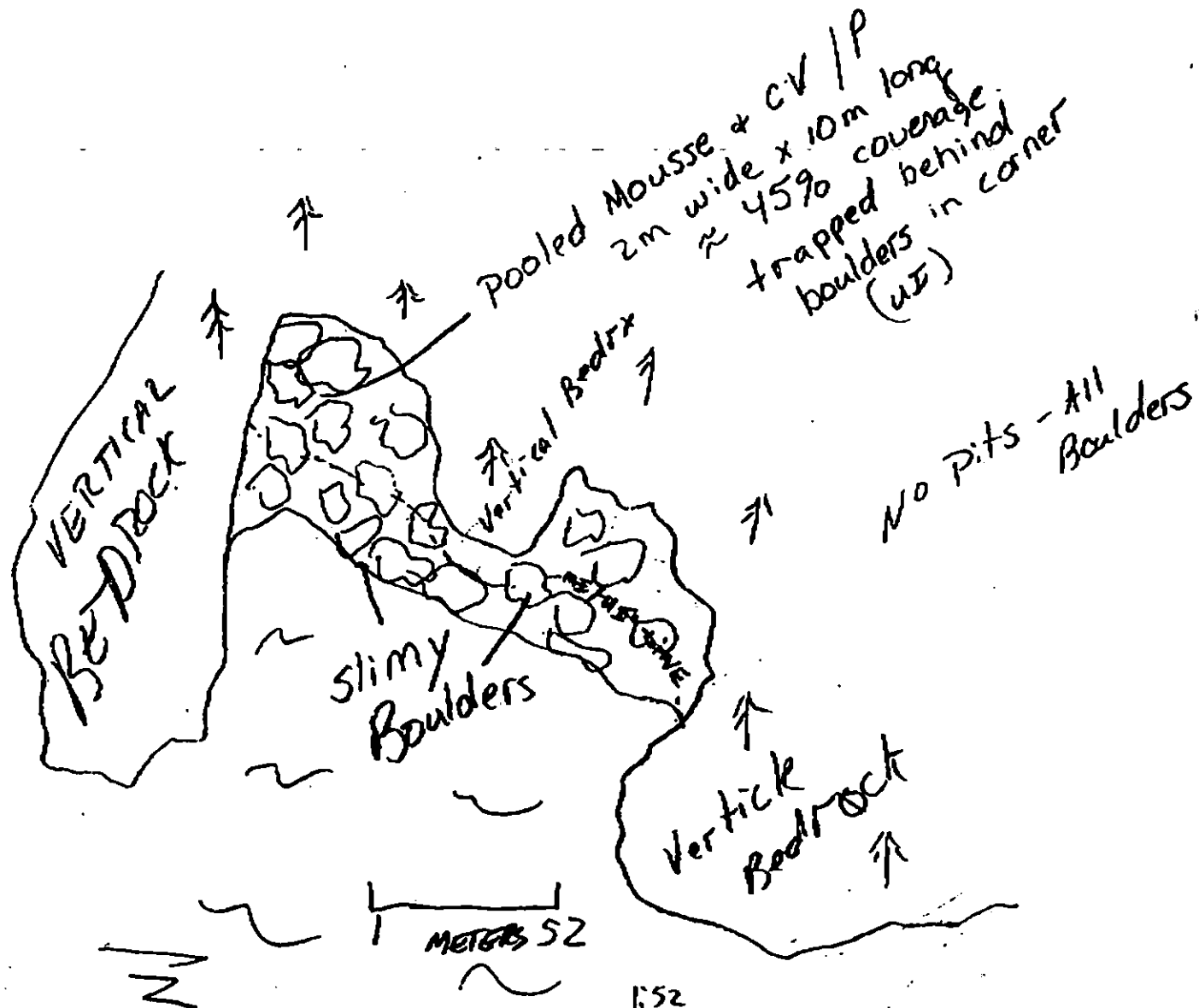
$\boxed{CT/S}$
Splashed Distribution

$\boxed{CT/S}$
Splashed Distribution

Oil Vegetation

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

SKETCH MAP A



entire subdivision

Oil Character Length (m): AP 6 PO 6 OV 6 OT 757 ST 757 MS 3 PT 3 TB 2 FL 1765

OG K. Ramsey

SEGMENT ST/ KN-10

SUBDIVISION B

DATE 4, 9 90

ETCH MAP B

CHECKLIST

- ☒ Arrow
- ☒ 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 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

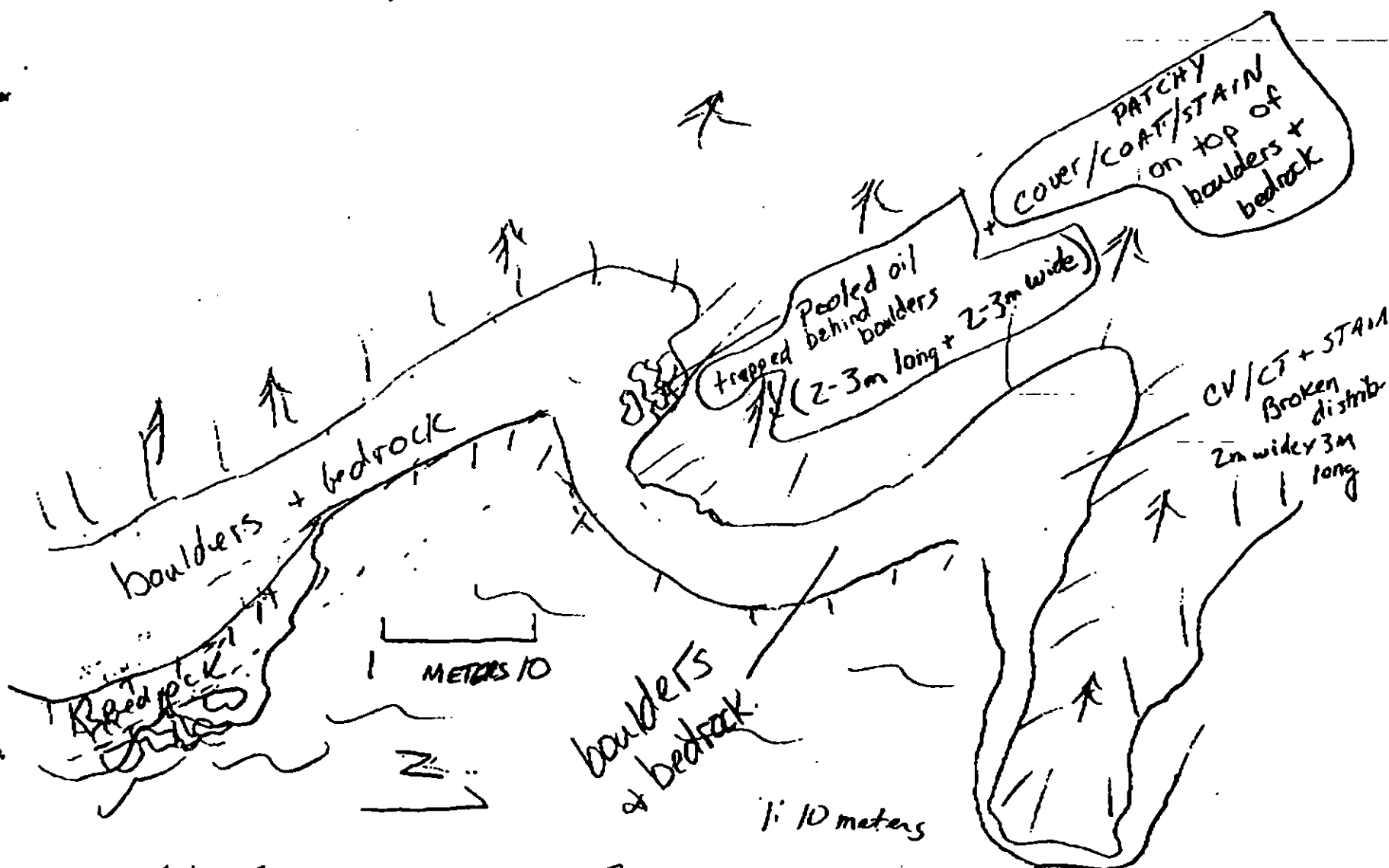
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

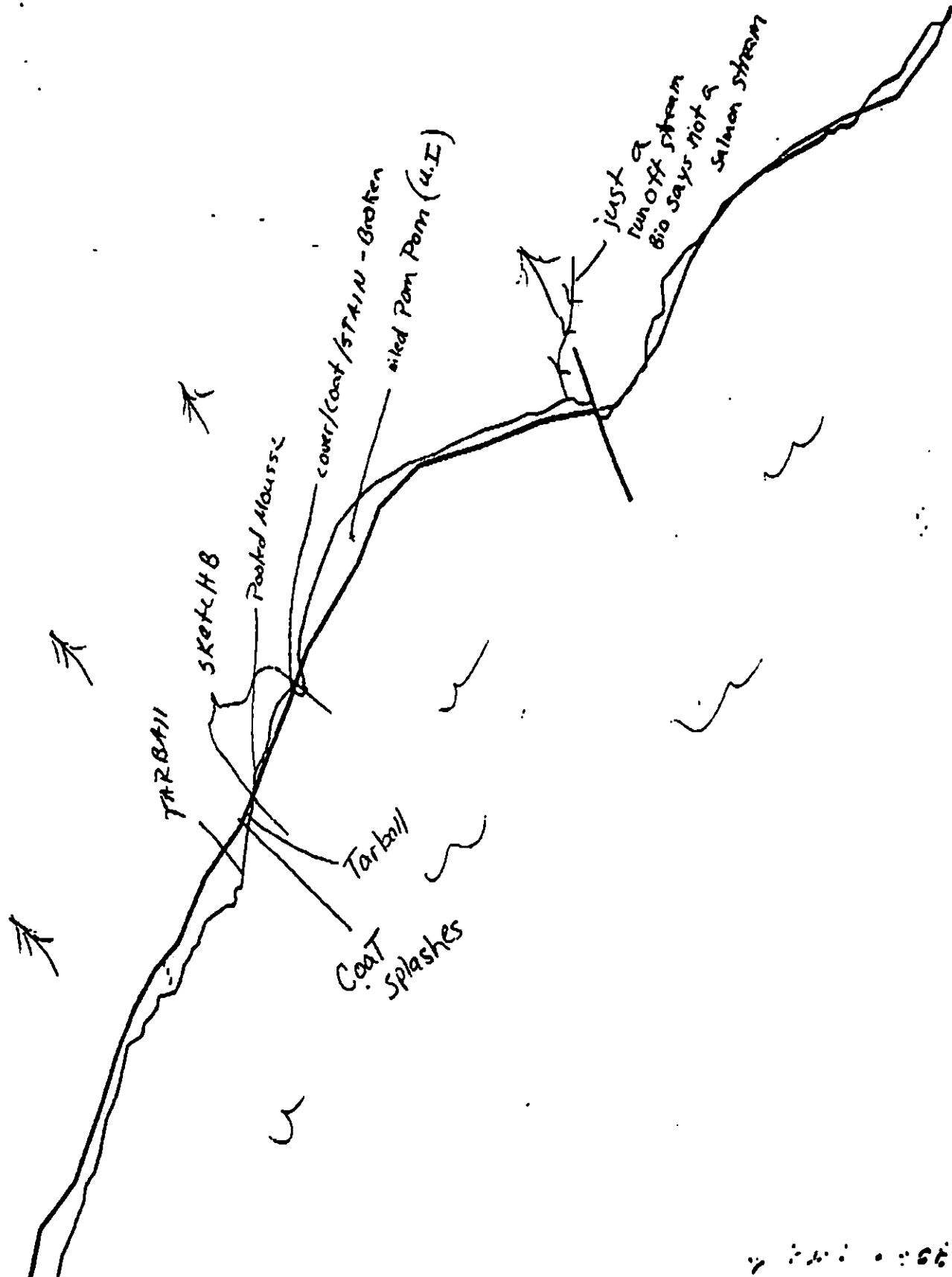
1 $\rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP — PO 6 CV 6 CT 757 ST 757 MS — PT 3 TB 2 FL — NO 1765

REVISION: 000000

MPR-05-1590 13:28 FROM NY BELMONT OFFICES TO EXON SCOT P.13



XXXX Wide

/// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PMS-2800

Name: K. RAMSEY

Date: 4/8/90

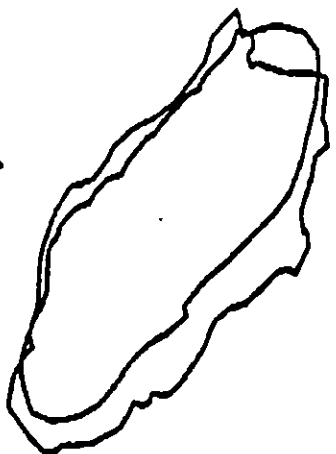
Date Entered:

KN-11

Potential Salmon Stream
STAIN/CONT/SPLASHES
STAIN LINE
2cm wide @ Hurl
only on this Rock face



KN-17



KN-16



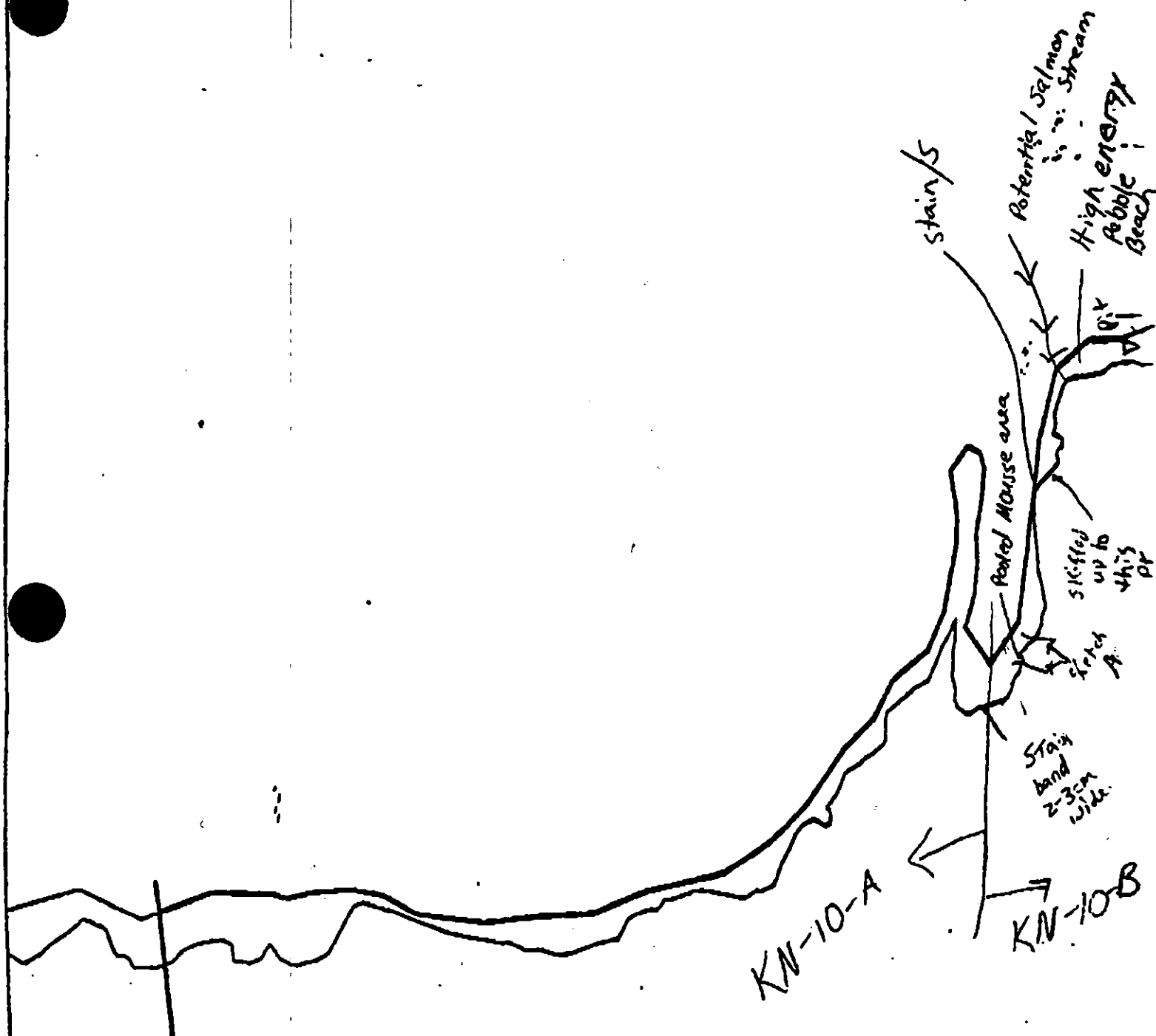
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-280b
Name: K. RAMSEY
Date: 9/8/90
Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



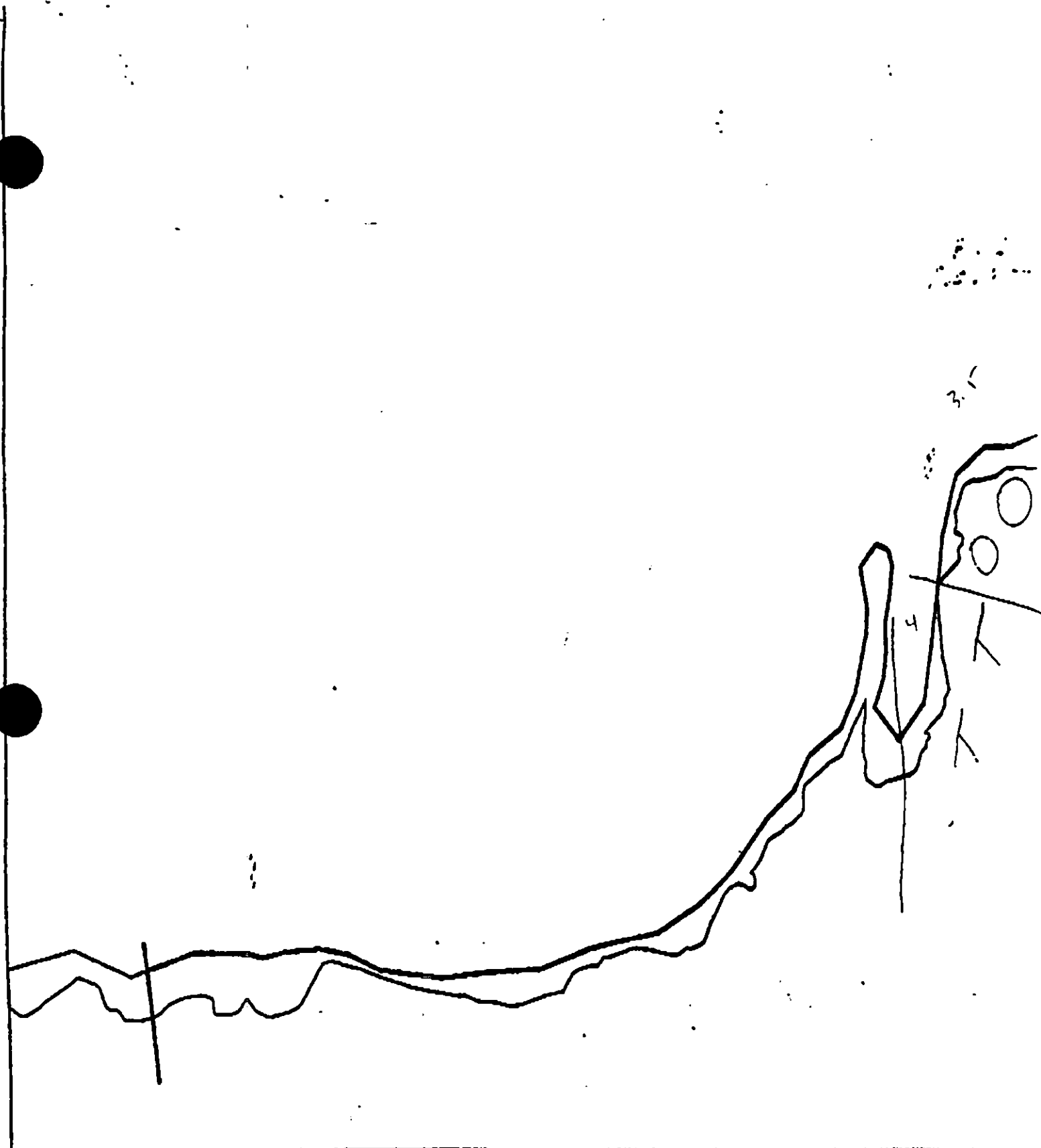
METERS



Map Key: PWS-240a

Name: K. RAMSEYDate: 4/8/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PMS-280a

Name: K. RAMSEY

Date: 4/8/90

Date Entered:

KN-17

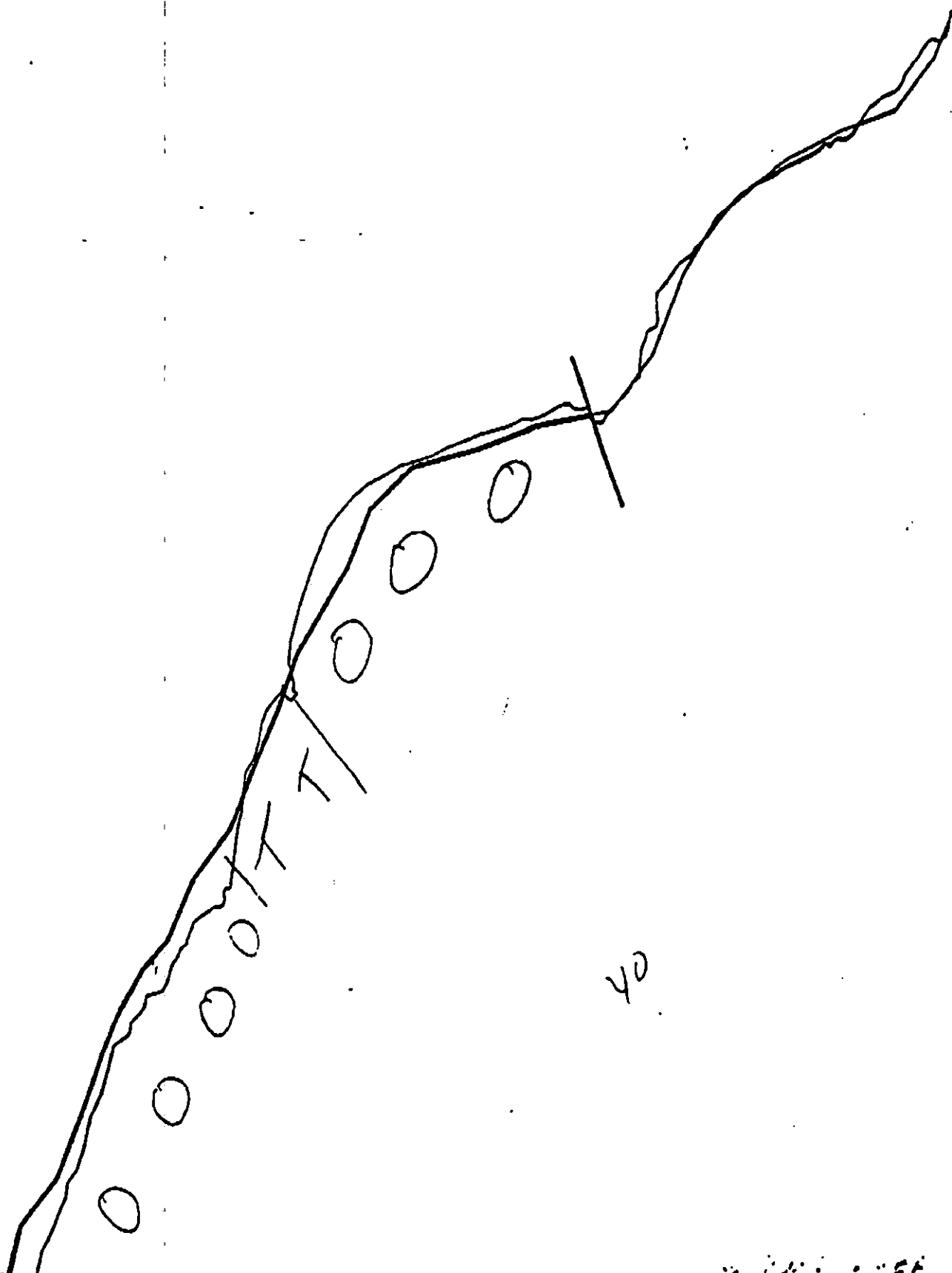
KN-16

KN-10

0000 No Oil

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

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



METERS



Map Key: PWS-280d

Name: K. RAMSEYDate: 4/8/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-10

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-10 SUBDIVISION A (1 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
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 cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 985 m: No Oil 396 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-10 SUBDIVISION: 7 DATE 4/8/90

CG
NAME M.J. SHARPER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

ADEC
NAME S. FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS ☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-10
 BIO G. Penn LAND REP A SUBDIVISION 192
 EXXON S. Reid ADEC S. Ferguson TIME 4:10 to 5:45
 TEAM NO.: 4 TIDE LEVEL: 6' to 1.5' DATE 4/8/90
 EST. SUBDIVISION LENGTH: 1261 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 62 % B 70 % C 20.5 % P 0 % G 5 % S .5 % M 1 % V 1 %
 SLOPE: Long 15 % Hang 25 % Vert 60 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 757 m NO 504 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	10	15	SR	BR	OR	OL	OF	NO	TL	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NO2 oiled pom poms
TYPE 2 oiled pom poms#BAGS 1

Photographs:

Roll No. 0Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UC	UC	SO L	SO L	SO L	SO L	SO L	SO L	SO L	SO L	SU	U	M	U		
1	7					X	~~0-4~~		X									X				N	B, C
2	30					X	~~0-25~~		X									X				N	V, C, M
							.																
							.																
							.																
							.																

COMMENTS

This segment was mainly bedrock. In the pocket beaches at the beginning of the segment had splashes of cover + patchy coat + stain. There were a few patties + tarballs but more oiled pom poms than patties.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST, KN-10 Subdivision A Date (mo / day / yr) 04 / 08 / 90
 Time (24 hr) 1630 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 2 (2) Boulder 10 (3) Cobble 21 (4) Pebble 5 (5) Sand 1/2 (6) Silt 1
- (B) Overall % cover of biota (% of segment): Dense — Moderate 60 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: —
 Roll No. —
 Frames —

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

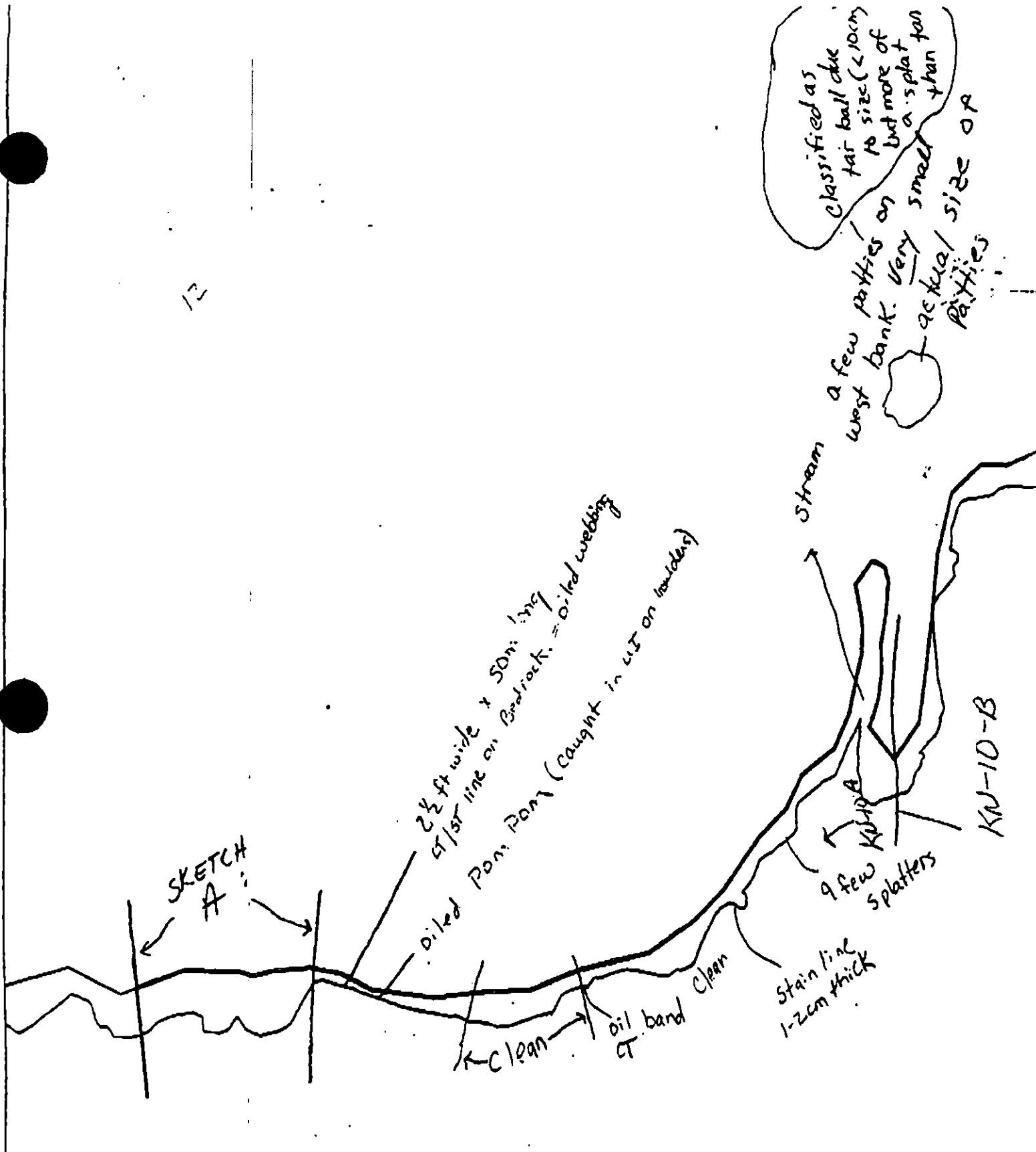
Wildlife Observations/ General Comments:

2 eagles
 2 otters

Ecological Considerations:

A

12



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m

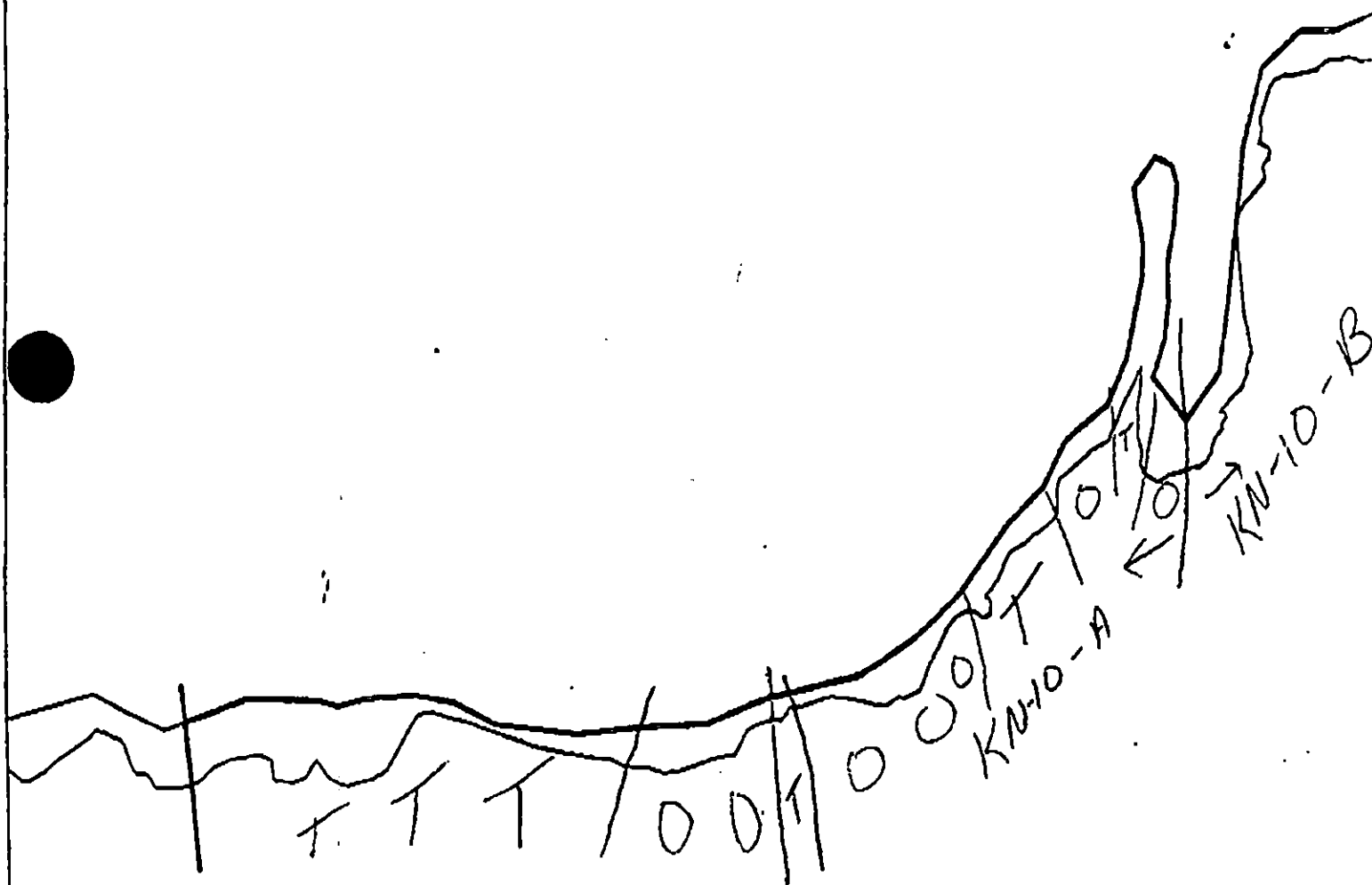


Map Key: PWS-2800

Name: K. RAMSEY

Date: 4/8/90

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTT Very Light

OOO No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-280a

Name: K. RAMSEY

Date: 4/8/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-10

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ KN-10 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 486 m: No Oil 1720 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-10 SUBDIVISION: 3 DATE 4/8/90

SCG

NAME

M. J. SHARP

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

S. FERGUSON

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG K. RAMSEY USCG R. Sharpe SEGMENT ST/ KN-10
 BIO G. PENN LAND REP B SUBDIVISION B
 EXXON S. REID ADEC S. FERGUSON TIME 5:45 to 7:40
 TEAM NO.: 4 TIDE LEVEL: 1.5' to 1' DATE 4/8 / 90
 ST. SUBDIVISION LENGTH: 2522 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 10 % B 69 % C 20 % P 1 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 21 % Hang 69 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 257 m NO 1265 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	10	15	17	18	SP BR	DEL RW	GY	SL ORR	TL LBR	9U	UI	MR	U	
ASPHALT PAVEMENT														
POOLED			X			X					X			
COVER			X			X					X			
COAT				X		X					X			
STAIN				X		X					X			
MOUSSE														
PATTIES				X				X			X			
TARBALLS				X		X					X			
FILM														
NO OIL											X		X X	

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Pom Pom#BAGS 1

Photographs:

Roll No. 1Frames 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP BR	BL RW	GY SL	DR TL	LT LB	SU	UI	MI	U					
1	25					X	0-0		X							X			N	P all the way			
2	10					X	0-0		X				X			X			N	C, P - dug through patty			
							.																
							.																
							.																
							.																

COMMENTS

This segment was mainly high angle bedrock + boulders. There were 2 areas of pooled mousse, the 1st at the beginning of the segment trapped behind the Rx outcrop in the UZE behind + under the large boulders. The second was trapped in front of the 2nd to last outcrop before the end of the segment behind lg. boulders in the UZE.

Page 1 of 1

REVIEWED 7wDATE 4/12/90

OG RAMSEY
SEGMENT ST/ KN-10

SUBDIVISION B
DATE 4, 8 90

ETCH MAP A

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

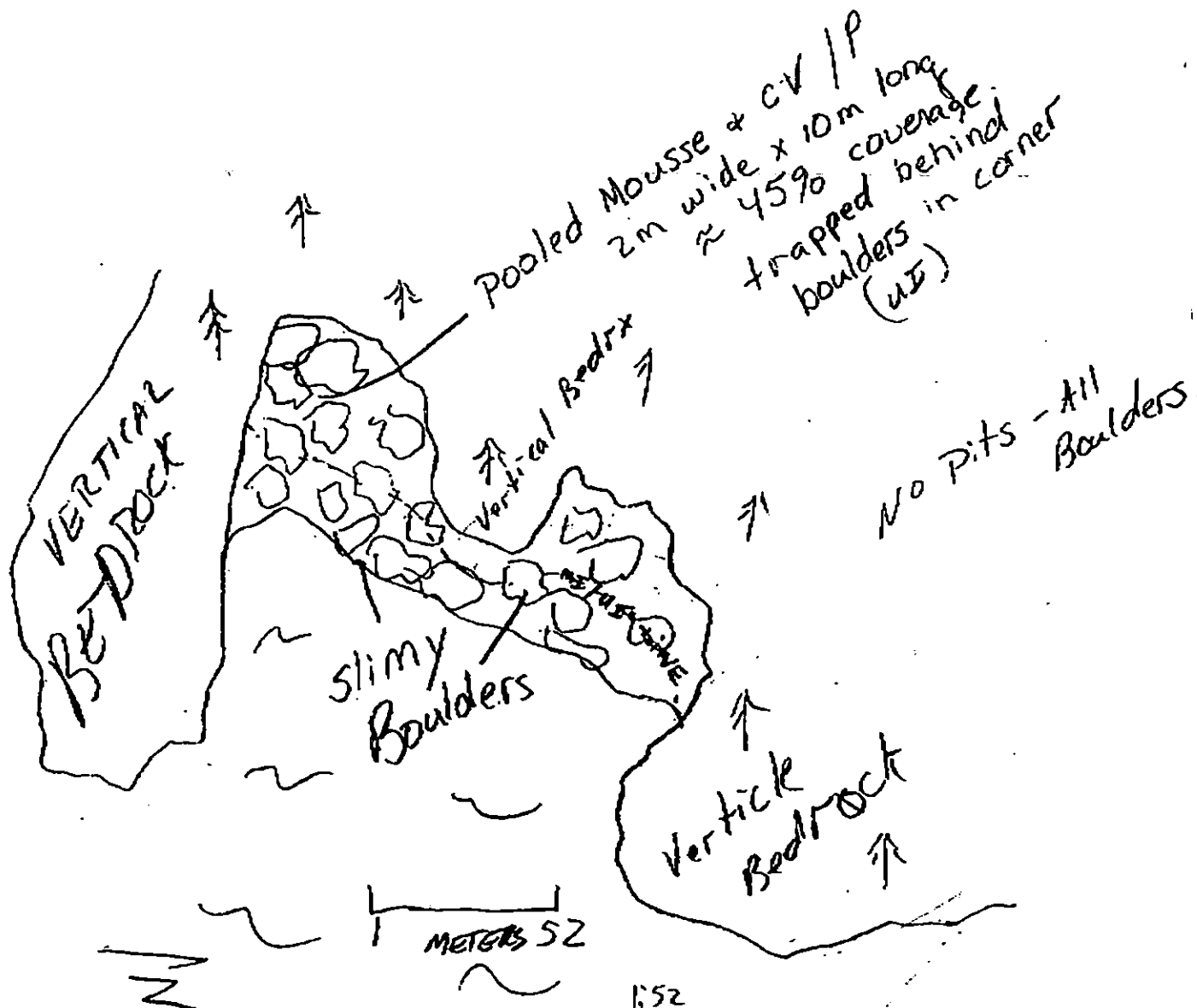
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

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



entire subdivision
Oil Character Length (m): AP 6 PO 6 CV 6 CT 77 ST 757 MS 3 PT 3 TB 2 FL NO 1765

REVISION: 03/24/00

OG KAMSEY

SEGMENT ST/ KN-10

SUBDIVISION B

DATE 4, 9 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\square$ CT/C
Continuous Distribution

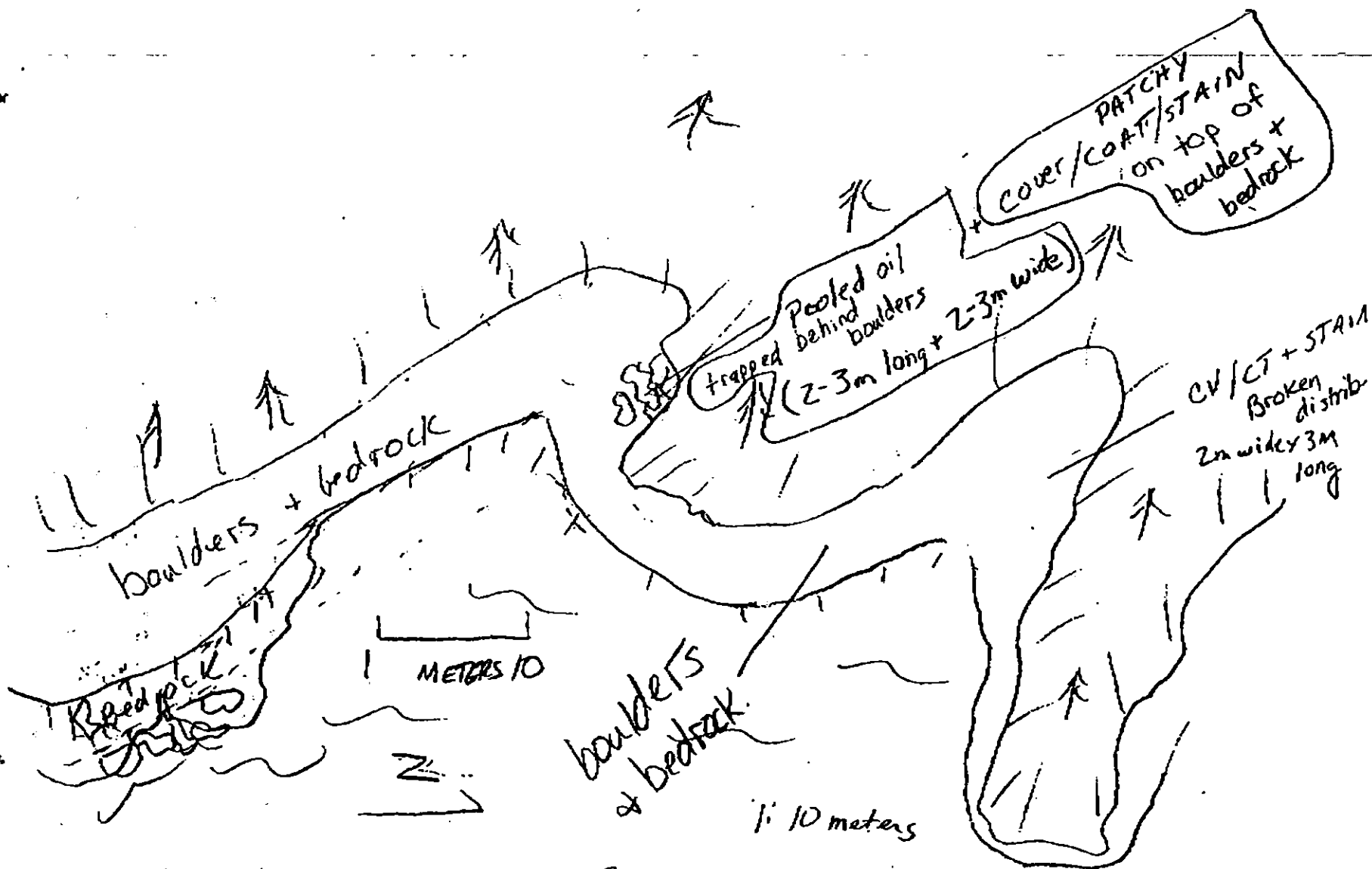
$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patched Distribution

$\square$ CT/S
Splashed Distribution

Oiled Vegetation

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



Oil Character Length (m): AP — PO 6 CV 6 CT 757 ST 757 MS — PT 3 TB 2 FL — NO 1765

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST KN-10 Subdivision B Date (mo / day / yr) 04 / 08 / 90
 Time (24 hr) 1745 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 69 (3) Cobble 20 (4) Pebble 1 (5) Sand 16 (6) Silt 1
- (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 (3)

Photographs:
 Roll No. 1
 Frames 1

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	

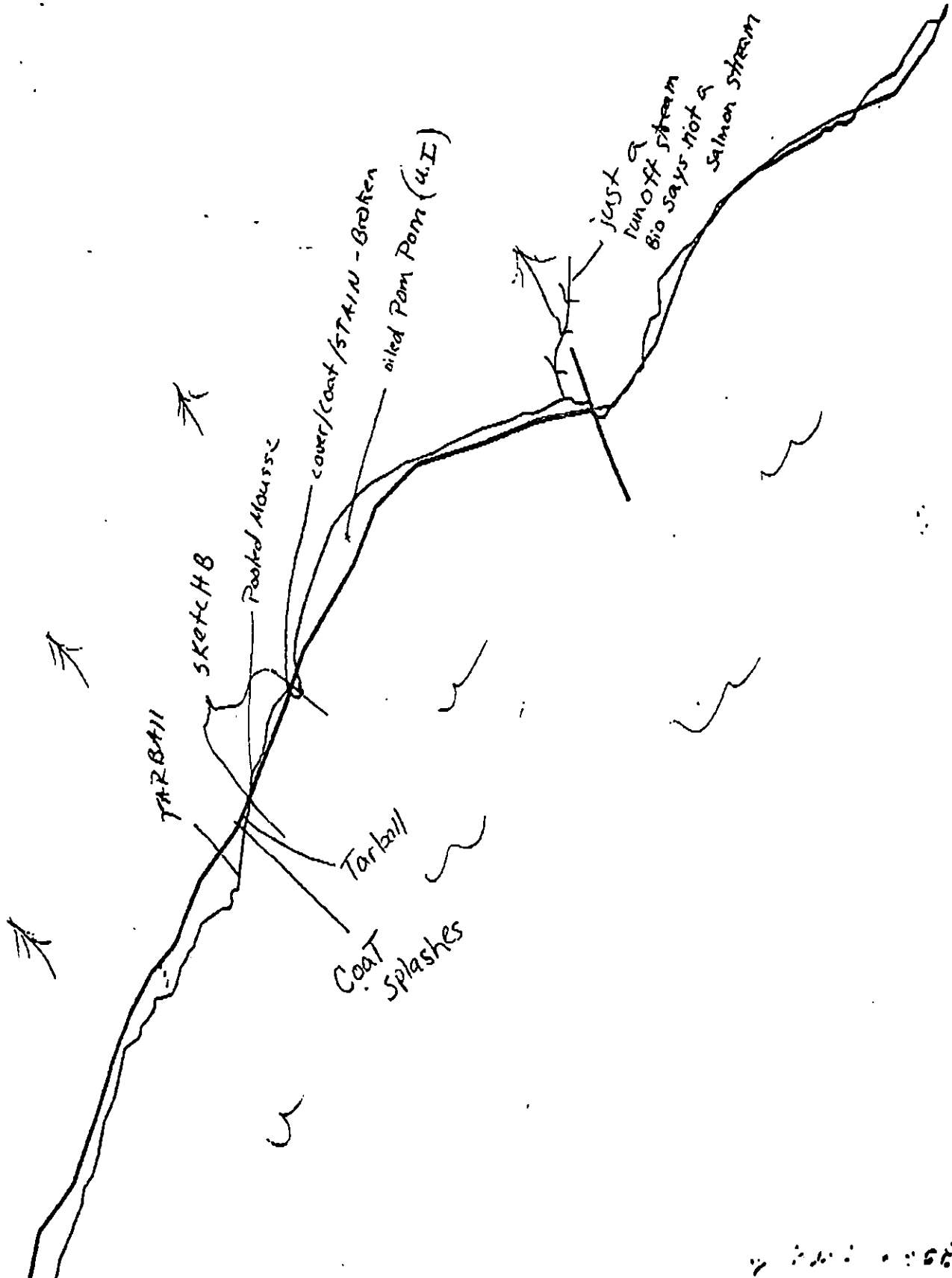
Wildlife Observations/ General Comments:

2 mergansers 1 cormorant
 1 seal 1 eagle
 1 otter

Ecological Considerations:

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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



XXXX Wide

/// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-280d

Name: K. RAMSEY

Date: 4/8/90

Date Entered:

Potential
Station
Stream

STAIN/CONT/SPLASHES

STAIN LINE
2cm wide @ HWL
only on this
Rock face

STAIN

KN-11



KN-17



KN-16



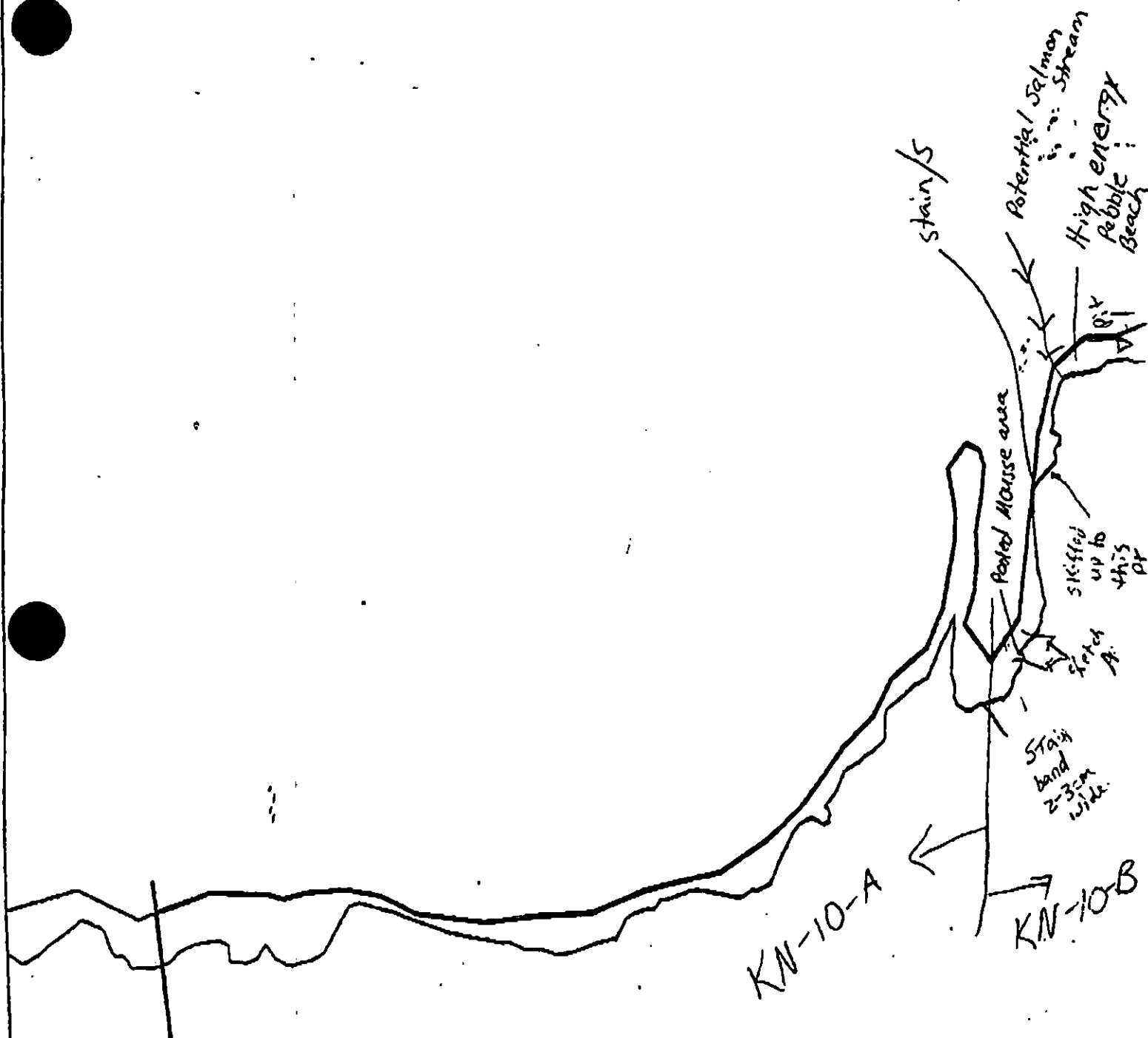
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-280b
Name: K. RAMSEY
Date: 4/8/90
Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



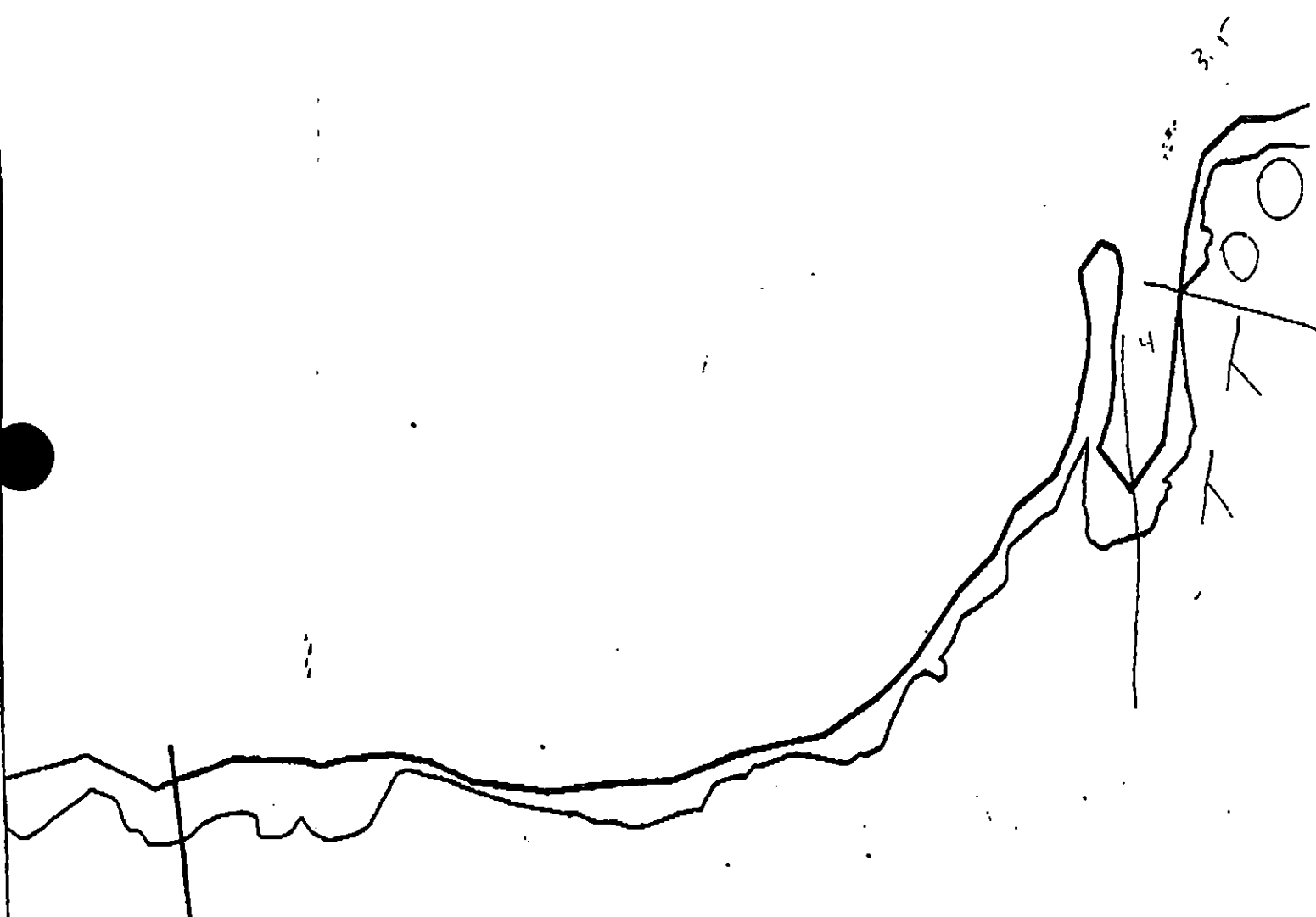
METERS



Map Key: PMS-280a

Name: K. RAMSEYDate: 4/8/90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m



Map Key: PWS-280a

Name: K. RAMSEY

Date: 4/8/90

Date Entered:

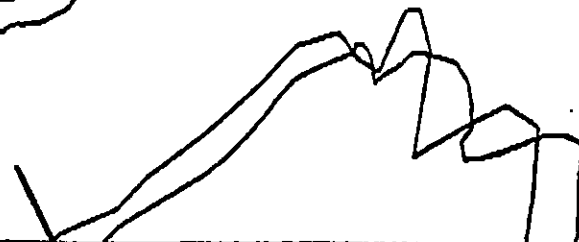
KN-11



KN-17



KN-16



KN-10

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 3587m

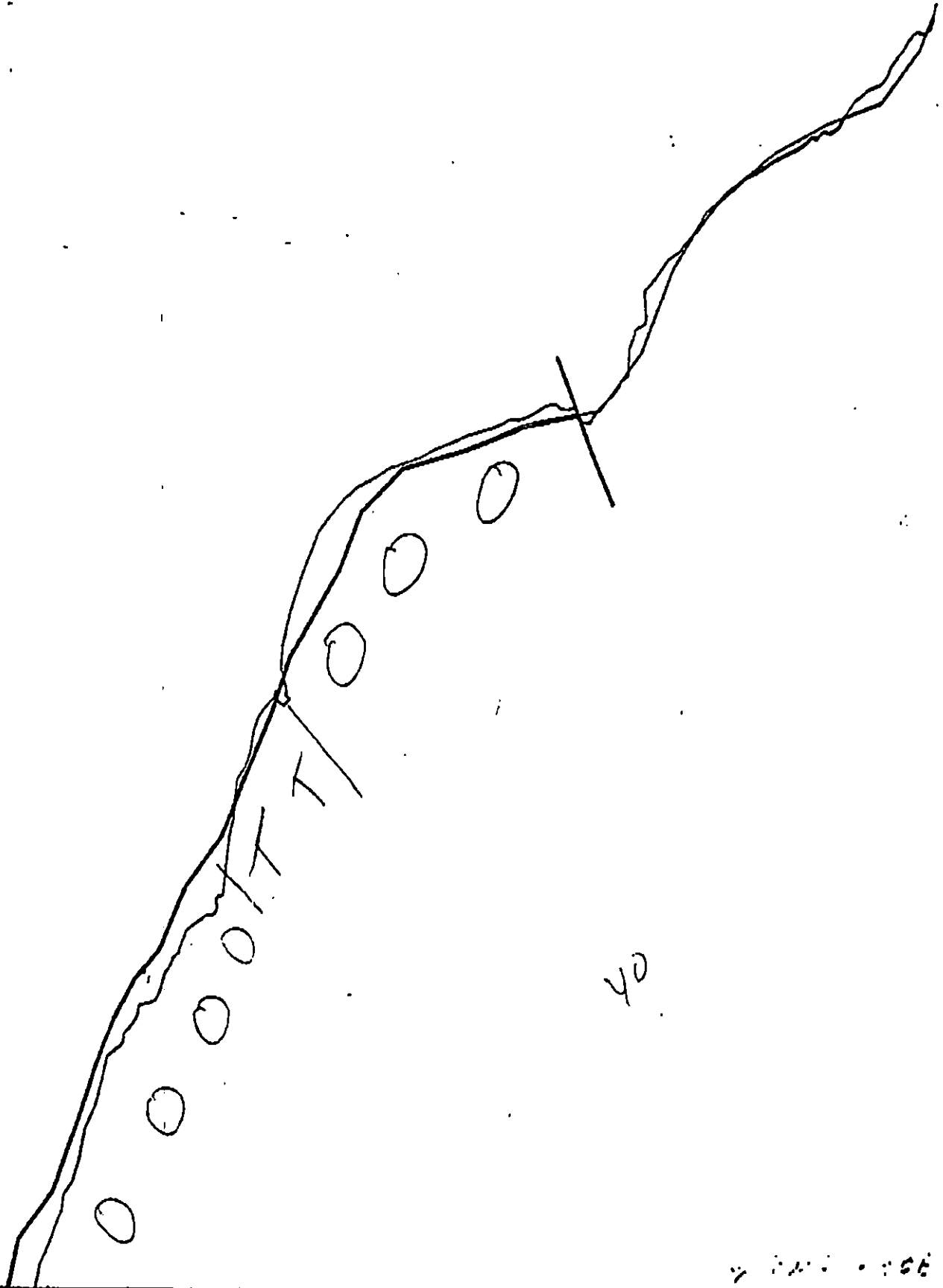


Map Key: PWS-2806

Name: K. Ramsey

Date: 4/8/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-10

ADEC Segment Length: 3587m

0 100 200 300
METERS



Map Key: PWS-2800

Name: K. RAMSEY

Date: 4/8/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-11 SUBDIVISION A (1 of 1)

WORK WINDOW	
Spot Washing Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS Bald Eagle Impact Assessment on 5/22/90 by Mike Lockhart verified no active nest within 400m of work site.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Restrict disturbance of *Fucus*, barnacles and gastropods in upper and mid intertidal zones.

TAG APPROVAL DATE

ADEC

EXXON

NOAA

USCG

FOSC

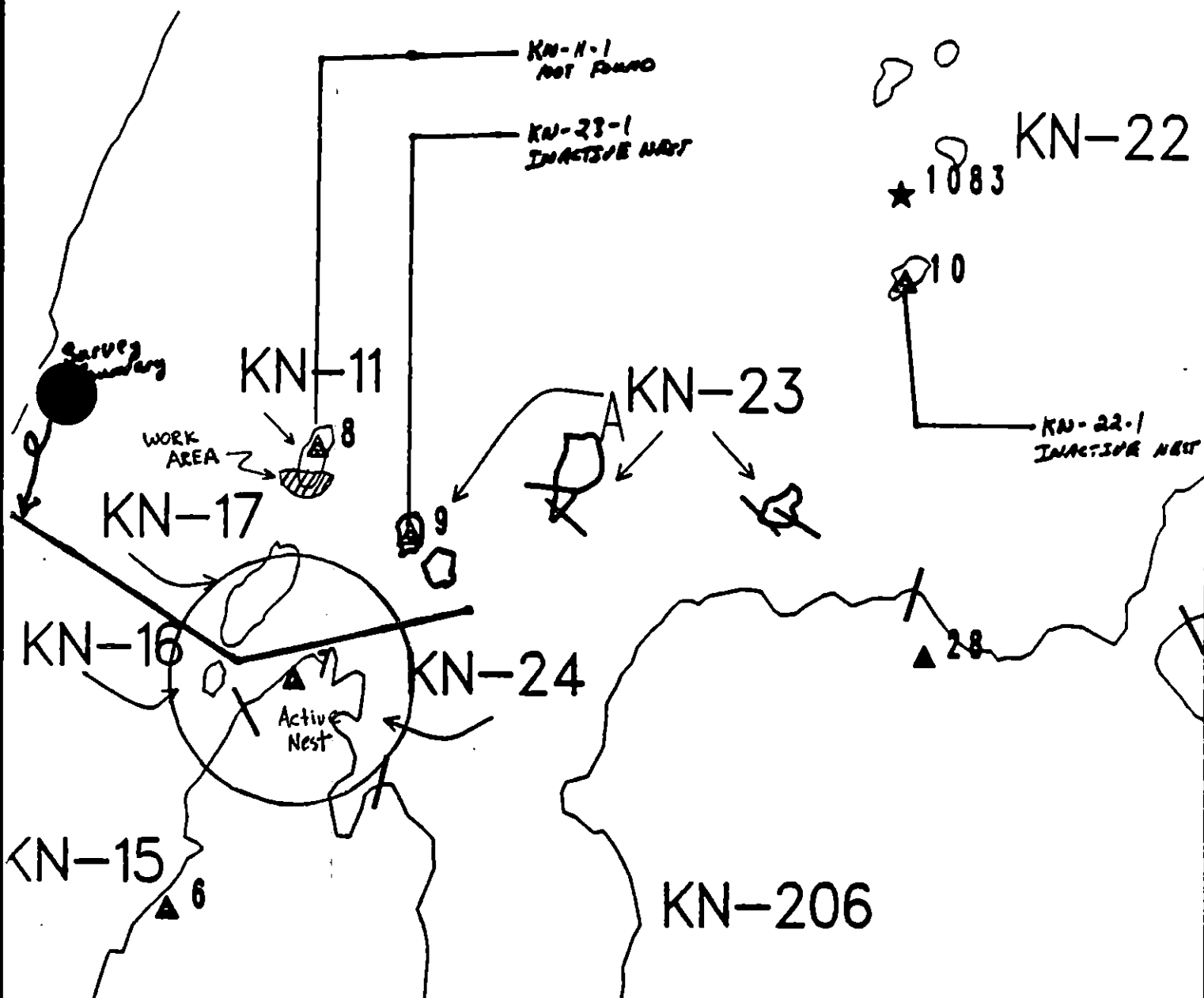
Date

Prepared by

Date

USFWS Bald Eagle Damage Assessment
 Survey by Mike Lockhard on 5/22/90.

W-KN-11
 40/41



Exxon Company, USA
 Map Key: KN1-KN-23
 May 11, 1990

ECOLOGY MAP
 SEGMENT KN-11
 SUBDIVISION A (1 of 1)
 METERS



★	Seabird Colony
▲	Eagle Nest

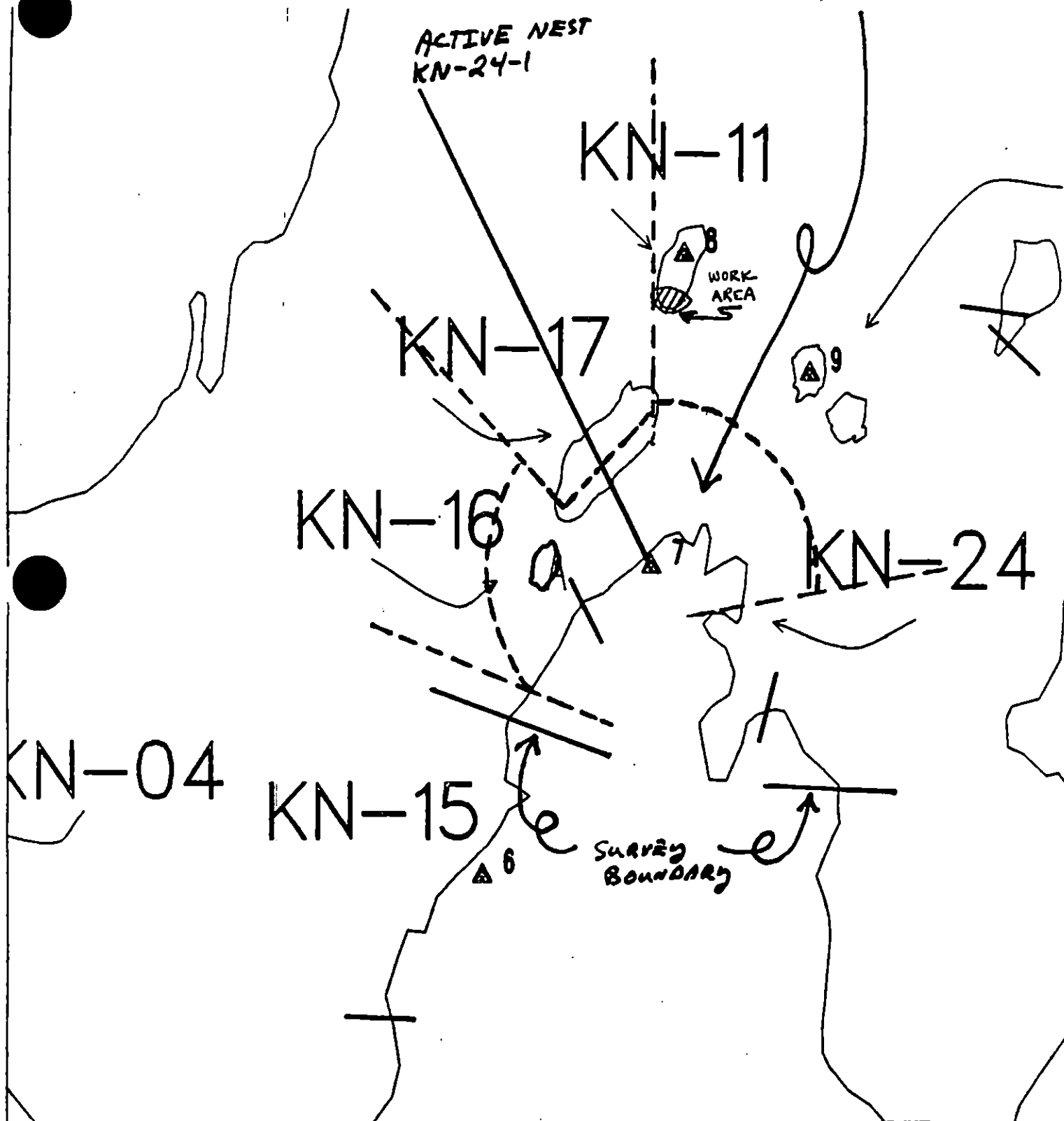
1 inch = 1612 feet

USFWS Bald Eagle Damage Assessment
Survey by Mike Lockhard on 5/27/90.

W-KN-24

3 of 3

NO BEACH, BOAT,
AIRCRAFT ACCESS



EXXON
Exxon Company, USA
Map Key: KN1-KN-16
May 11, 1990

ECOLOGY MAP
SEGMENT KN-11
SUBDIVISION A (1 of 1)
METERS
0 321 642

★ Seabird Colony
▲ Eagle Nest

1 inch = 1054 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-11 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; harbor seal and sea lion
pupping and molting area (3N, O, P, Q) - 5/15 to 7/1 and 8/15 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of dense
to moderate fucus in U and MITZ, and moderate development of bar-
nacles and gastropods in U and MITZ.

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

SHPO SIGNATURE: Charles Z. Horne DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 86 m: V. Light 244m: No Oil 144m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of area indicated on sketch
map. All work to be performed between 7/1 and 8/15 based on
pinniped constraints. SPOT WASH AS REQUIRED PRIOR TO BIOREMEDIATION.

SEA CONSTRAINT ADDENDUM
DATED 5/29/90, NOTE
ECOLOGY MAP WITH ACCESS
ZONES!
WPK

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

ADEC DAN BAKER
EXXON ANDY GIL
NOAA Burt Wescott
USCG G.A. REITER

FOSC: WPK DATE: 5-6-90

1991 MAYSAP EVALUATION

SEGMENT: KN 011 SUB: A 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: Timothy O. Smith Date: 5/30/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 29 1991 FOSC APPROVAL DATE: 6/5/91

ADEC John Bauer

FOSC E. E. Page

EXXON Ed Malo

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

USCG Ed Malo

NOAA Long

**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. 3 SEGMENT KN-11 SUBDIVISION A DATE 5/17/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR

TREATMENT RECOMMENDED

I removed subsurface oil that I classify as OP. More remains in a small amount, manually remove remainder of oil.

This oil has also been present since ASAP, it seems the only way it was to be removed was by an ADEC representative.

EXXON

NAME Jon P. Garavetti SIGNATURE Jon Garavetti

☒ NTR

There is some small patches of oil in and around the space between the surface cover. It is removable however the amount that could be removed would damage the beach and possibly wild life.

LANDMANAGER

NAME DAVE BLANCHET OF USFS SIGNATURE Dave Blanchet

☐ NTR

MODERATE ENERGY ENVIRONMENT. Small island with bedrock shores, with some fractured rock cover patches of SOR. Found in areas of broken rock + fine sediments. SOR was broken up or removed where found. This requires moving boulders + cobble to get at the oil. Probable that there is some remaining oil to be worked. No campsites available on island.

USCG/NOAA

NAME Jensen / Jeffrey Dahlin SIGNATURE Jeffrey Dahlin

☒ NTR

Further removal operations would cause more environmental harm than the oil to be removed.

There are scattered patches of SOR and OP/HOR in the sheltered areas of the island, major oil was collected here. The environment where there is oil is only a small fraction of the island.

PAGE 1 OF 1

SEGMENT KNOLL

SUBDIVISION A

DATE 18, MAY, 1991

ENERGY LEVEL: ☐ H ☒ M ☒ L

WEATHER: ☐ DRIZZLE ☐ LIGHT RAIN ☐ MEDIUM RAIN ☐ HEAVY RAIN ☒ HORIZONTAL RAIN

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

EST. OIL CATEGORY LENGTH: W 0 m M 2 m N 0 m VL 10 m NO 300 m US 168 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 3 - 18 FRAMES 6

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20	X	X						0 - 20	Y			X	X			P/SG/R	EXTENT < 1x2 m
2	10			X	Y				0 - 10	Y			X	X			Pg/SG/R	
3	10				X				0 - 10	Y				X			P/SG/R	
4	15							X	-					X			P/SG	
5	15							X	-						X		CP/SG	
6	15							X	-						X		CP/SG	
									-									
									-									
									-									
									-									

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

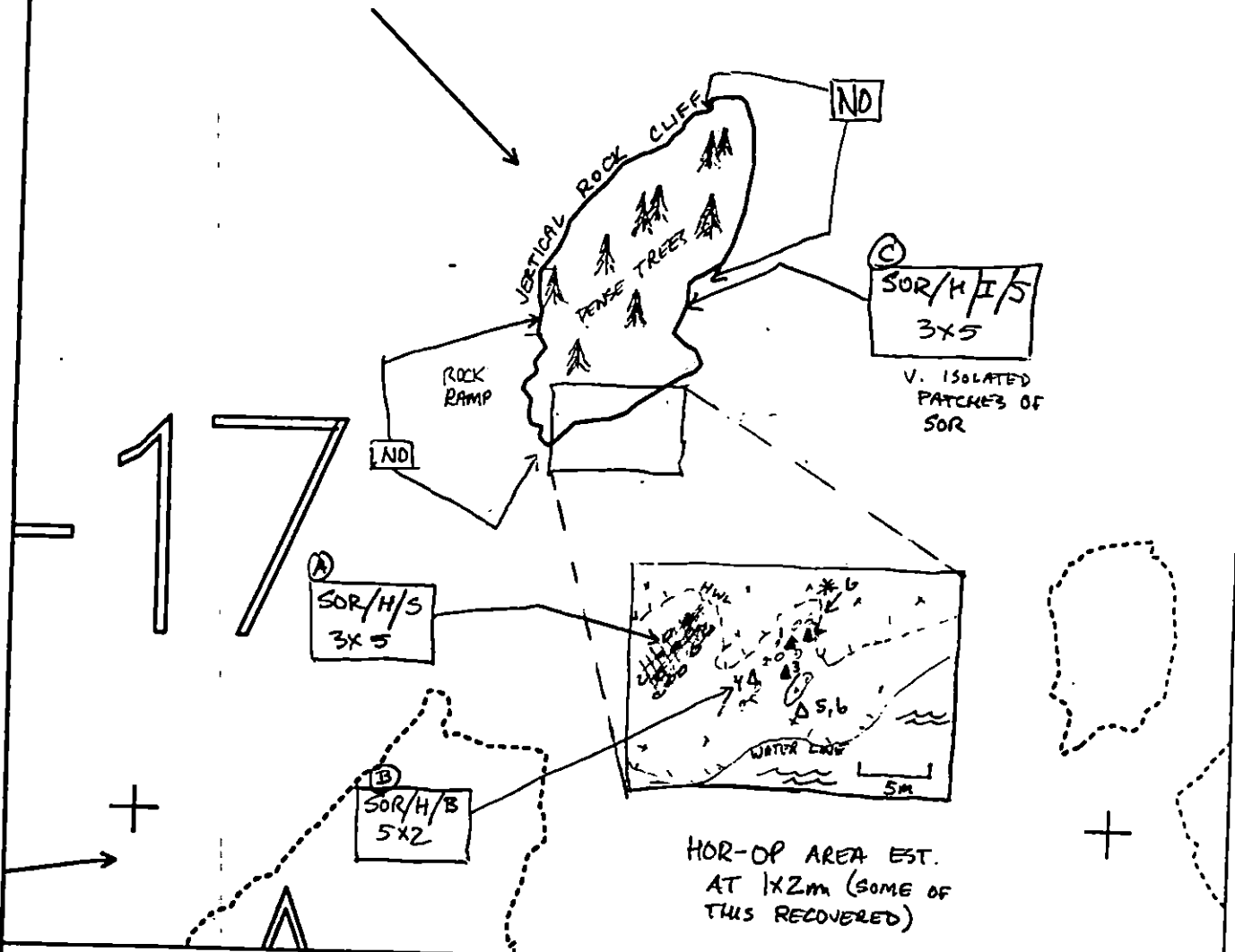
OG COMMENTS: This island receives partial protection from islands near the entrance of Bay of Talies and is considered moderate wave exposure. Most of the island is bedrock with 2 or 3 coarse sediment pockets.

Surface and subsurface siltling is confined to these sediment pockets and confined within bedrock depressions. SOR at (A) and (C) is shallow and sporadic. The SOR at (B) grades into subsurface OP-HOR in one pocket (est. $< 1 \times 2$ m extent), some of which was collected.

ΣG revised 5/19

OG 1 of 5

KN-11



KN0011 A

Subdivision Field Map

Map Key: KN1KN0011A

Name: HARPER

Date: 18 MAY 91

EXON

AR State Plane Zone 4

ES revised 5/19
 REVIEWED CO 19MA
 OG 2af5

1. **THE**
 2. **THE**
 3. **THE**

KN-11 A
AOC Subgroup Length: 4000

INDEX

Subdivision Flood Map

8313

2

Wm. Cherry

ASAP

41 NITZ/STZ
U-20 P/SGRHOIL-UP

AZ UTE

0-10 MOR-LR
PG/ST/R

▲ 3 U172
0-10 P/SG LOR

Δ⁴ VITZ
0-15 N.O.
P/SG

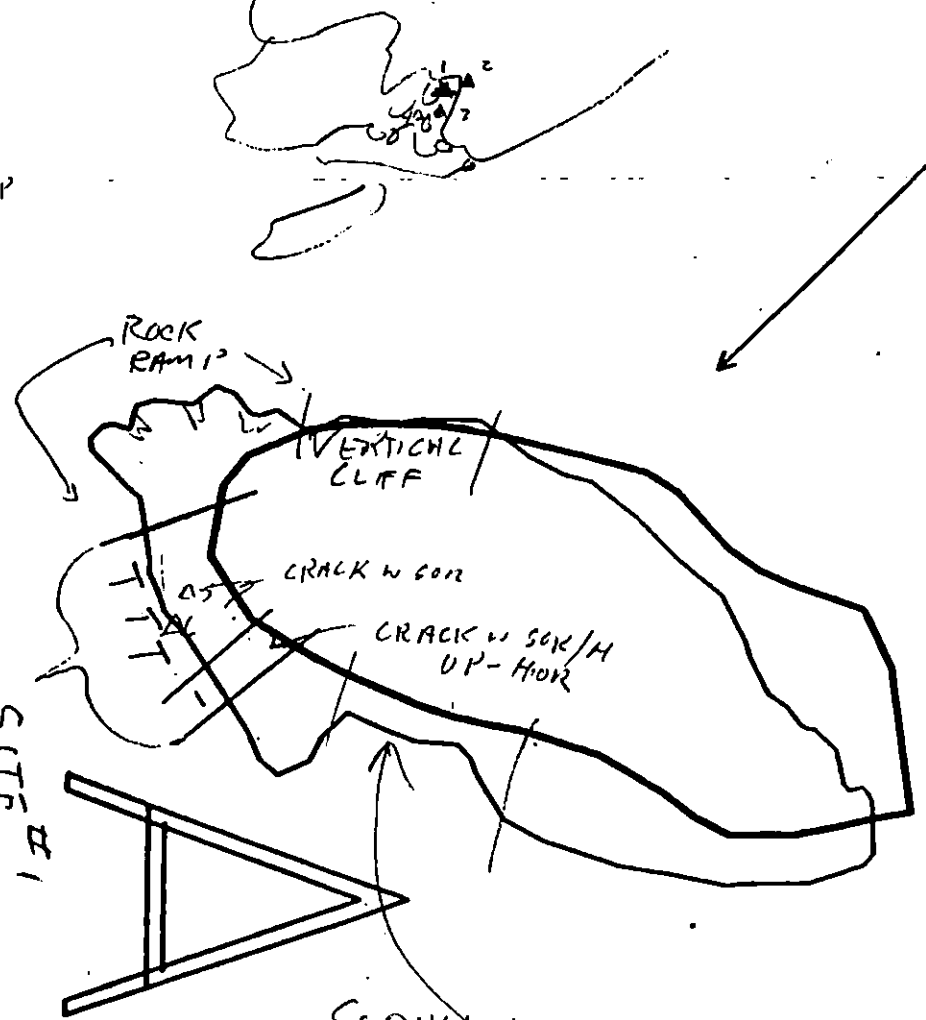
HOR-OP 1x2
SOME RECOVERIES

YES

Δ5 MITZ 15
CP/SG N.U.

AL m. 12 15
CP/36 N 1

end 12915



SCRM/IT
3x5

ISOLATED PATIENT

ORIGINAL FILED NOTES
15 MAY 1991 SHARPER

OG-50K5
Scanned 5/19
Reviewed by 1911

RECEIVED 5/17
17:01 PM EDT (5-19 MAY)

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3
 DATE 5/18/91
 SEGMENT # KN 11
 TIDAL HEIGHT(Range) 1-2'
 SUBDIVISION A
 BIOLOGIST STOKOR
 SEA STATE 1-2'
 WIND SPEED/DIRECTION E 15-20
 PHOTOGRAPHS: ROLL #
 FRAME #

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

Small bedrock island with 2 small 'beaches' of pebble/cobble/boulder sized rubble, generally high to moderate exposure/wave energy.

Biota on bedrock characterized by dense Fucus, dense barnacles and spat, clusters of small limpets and Littorina, sparse patches of Mytilus.

Biota on rubble beaches consists of patchy and variable-density new-growth Fucus, patchily dense barnacles and spat, small limpets and Littorina (with some egg masses), attached and interbedded Mytilus and amphipods. Composition and abundance remains fairly uniform over the observed intertidal range on these beaches.

Biota within or proximal to residual oil locations A thru C is sparse or absent (as is generally so in the upper intertidal here). Downslap biota consists of patchily dense barnacles and spat, dense clusters of small limpets and Littorina (with some egg masses), variable patchily dense Fucus, and some dense patches of attached and interbedded Mytilus.

Additional cleanup, if undertaken, should proceed with care so as to minimize disturbance to established biota. Limit personnel to intertidal zone.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	1	
Shorebirds			
Corvids			
Other Birds			

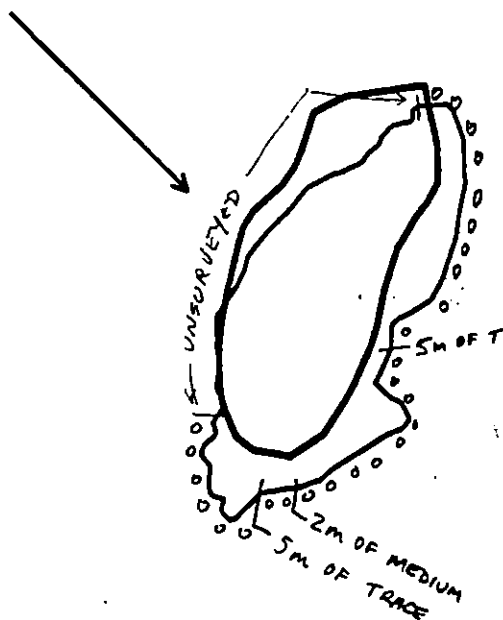
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
_____les (specify)			
_____les (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED CD BMM
 REVIEWED M.B. 5/19/91

+ KN-11 +

-17



EXXON
SUMMARY
OILING

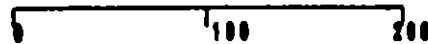


XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0011 A
ADEC Subsegment Length: 480m
METERS
AK State Plane Zone 4
480011a



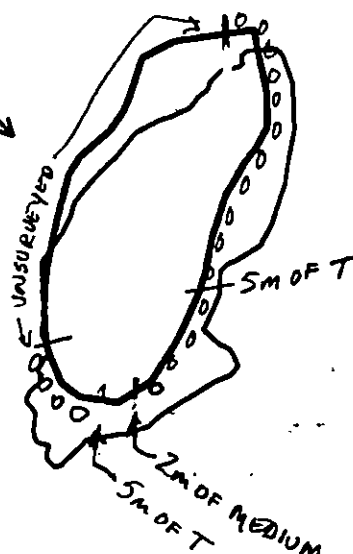
Subdivision Field Map
Map Key: KNKN0011A
Name: HARPER
Date: 18 MAY 91
Date Entered:

SURFACE OILING SUMMARY MAP (EXXON SHORELINE)

ET revised 5/19
OG 4 of 5
REVIEWED CG 19 MAY

KN-11

17



ADEC
SUMMARY
OILING

MED = 2
T = 10m
NO = 300
U.S. = 168

312

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

KN0011 A
ADEC Subsegment Length: 480m
METERS

AK State Plane Zone 4
100 200
KN0011A



Subdivision Field Map
Map Key: KN1KN0011A
Name: HARRER
Date: 18 MAY 91
Date Entered:

SURFACE OILING SUMMARY MAP (ADEC SHORELINE) ES REVIEWED 5/19
OG 3 of 5
REVIEWED CS 11 MAY

SHORELINE EVALUATION

SEGMENT ST/ KN-11 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; harbor seal and sea lion
pupping and molting area (3N, O, P, O) - 5/15 to 7/1 and 8/15 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of dense
to moderate fucus in U and MITZ, and moderate development of bar-
nacles and gastropods in U and MITZ.

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

SHPO SIGNATURE: Charles Z. Horne DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 86 m: V.Light 244m: No Oil 144m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of area indicated on sketch
map. All work to be performed between 7/1 and 8/15 based on
pinniped constraints. SPOT WASH AS REQUIRED PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC JOHN P. MAER
EXXON ANDY (G) FOSC: W L DATE: 5-6-90
NOAA Burl Wescott
USCG G.A. REITER

RAMSEY
SEGMENT 07/ KAI-11

DATE 3/31 90

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

! Δ
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

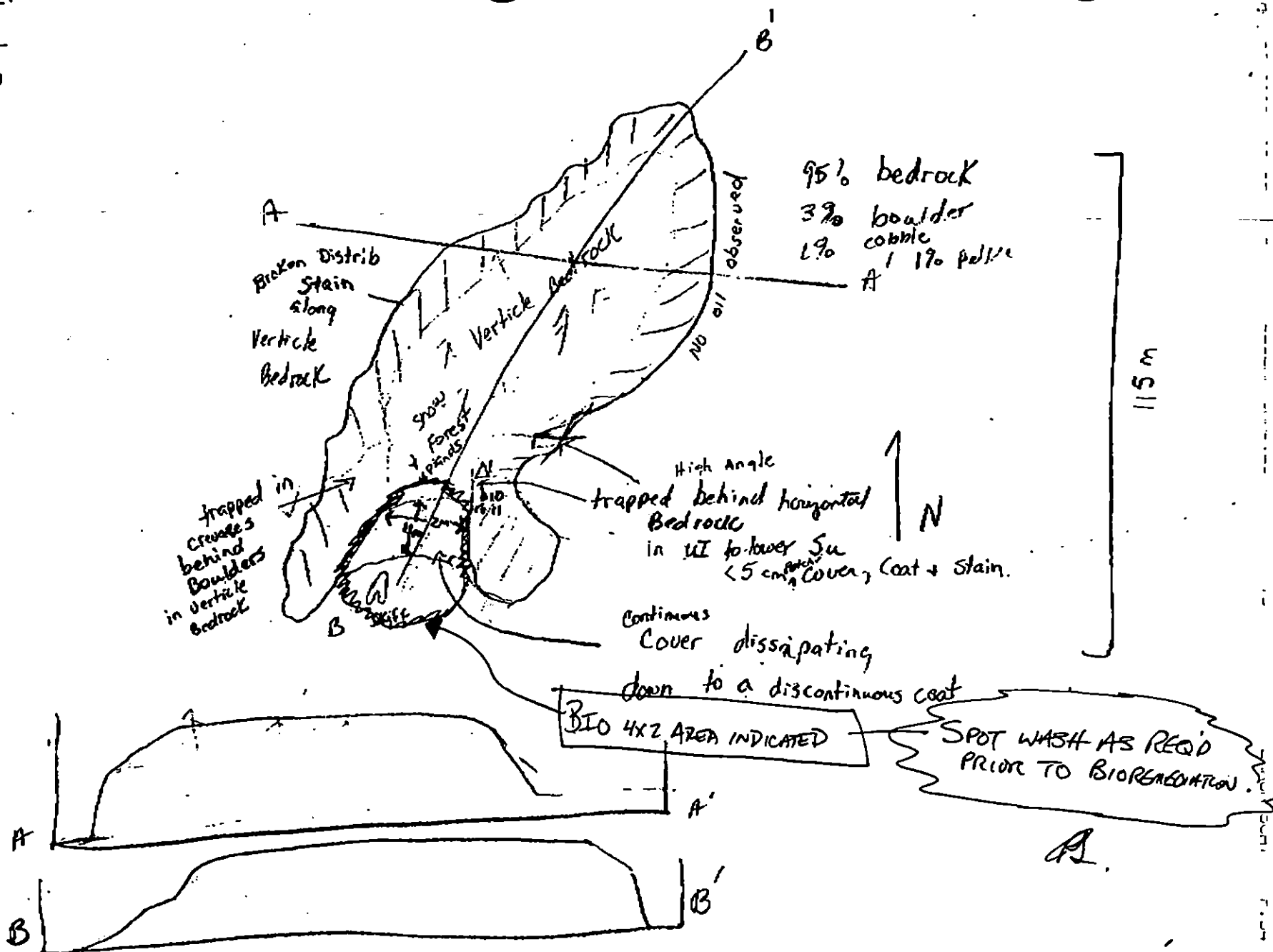
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 

Photo location, direction,
and number



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

REVISION: 832476

OG K RAMSEY

SEGMENT ST/ KN-11

SUBDIVISION

DATE 3/31/90

KETCH MAP

CHECKLIST

- ☒ N Arrow
☒ Approx. Scale
☒ Seg/Sub Endry
☒ Oil Dist.
☒ Width
☒ Length
☒ % Cover
☒ Substrate Character
☒ Est. HWL/LWL
☒ SSL
☒ Profile Location(s)
☒ Profile(s)
☒ P/L Location(s)
☒ Photo Location(s)

LEGEND

1 Δ

P/L - No Subsurface Oil

2 Δ

P/L - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

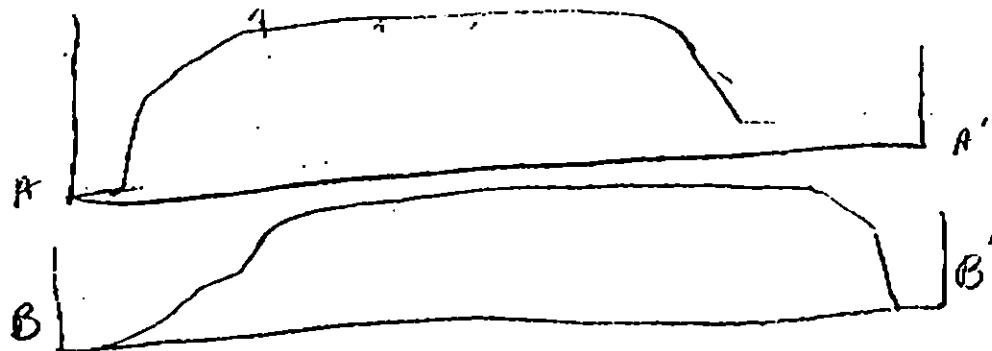
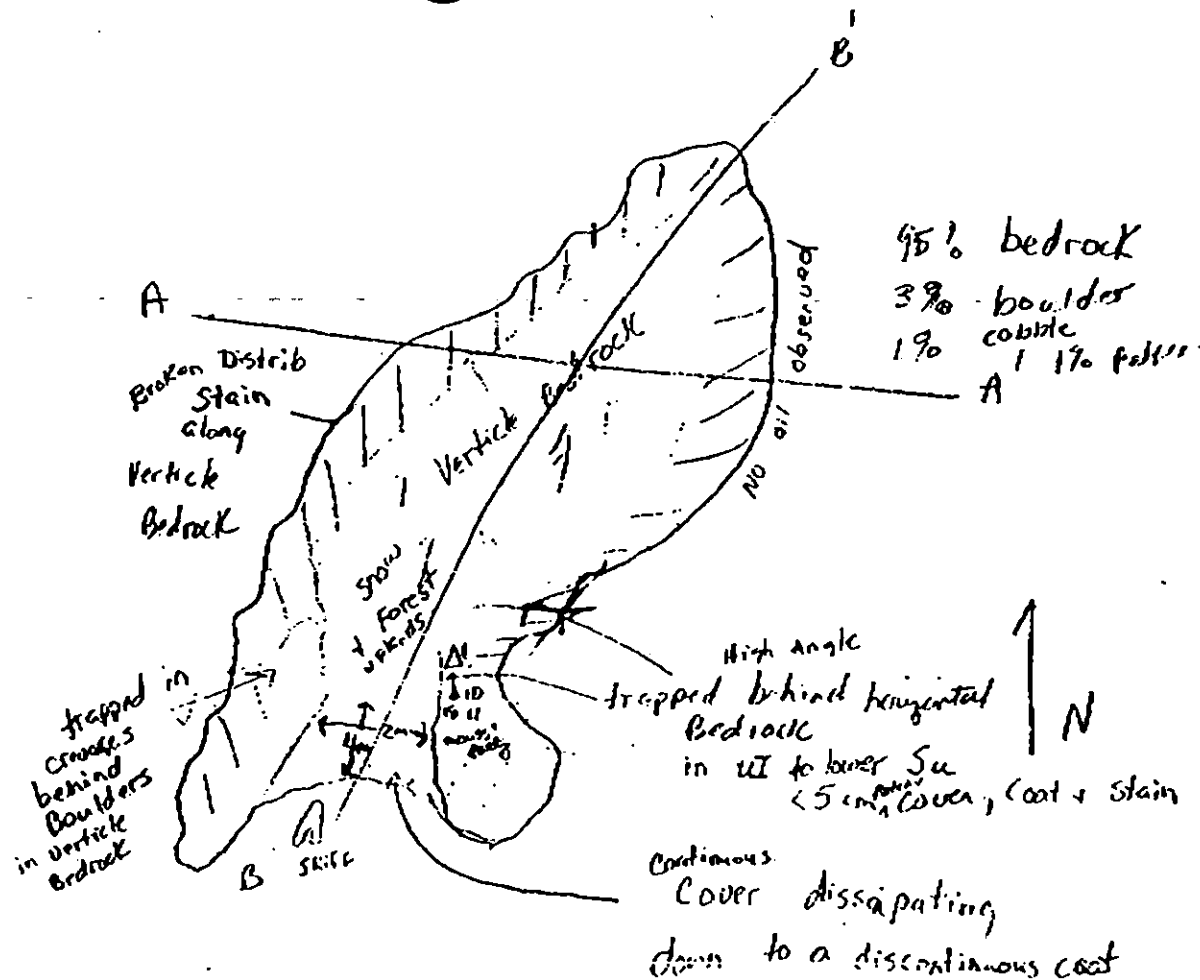
Patched Distribution

CT/S

Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

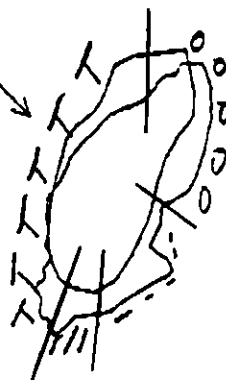


Oil Character Length (m): AP 0 PO 0 CV 2 CT 40 ST 302 MS 0 PT 1 TB 0 FL 0 NO 24

REVISION 002400

REVISED TO INCLUDE

KN-11



KN-17



KN



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-~~11~~ 11

Total Segment Length: 871



Map Key: PWS-325

Name: _____

Date: _____

Data Entered: _____

1991 MAYSAP EVALUATION

SEGMENT: KN 011 SUB: A 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. 3 SEGMENT KN-11 SUBDIVISION A DATE 5/17/91

ADEC

NAME

Wesley Ghermley

SIGNATURE

Wesley Ghermley



NTR



TREATMENT RECOMMENDED

I removed subsurface oil that I classify as OP. More remains in a small amount, manually remove remainder of oil.

This oil has also been present since ASAP, it seems the only way it was to be removed was by an ADEC representative.

EXXON

NAME

Jon P. Gairdick

SIGNATURE

Jon Gairdick



NTR

There is some small patches of oil on and around the space between the surface foam. It is known however that contact that could be made would damage the beach and possibly well off.

LANDMANAGER

NAME

Dave Blomquist

OF

USFS

SIGNATURE

Dave Blomquist



NTR

MODERATE ENERGY ENVIRONMENT. Small island with bedrock shores, with some fractured rock cover patches of SOR. Found in areas of broken rock + fine sediments. SOR was broken up or removed where found. This requires many boulders + coarse to get at the oil. Probable that there is some remaining oil to be worked. No campsites available on island.

USCG/NOAA

NAME

Sensen / Jeffrey Dahlin

SIGNATURE

Glenn Jensen / Jeffrey Dahlin



NTR

Further removal operations would cause more environmental harm than the oil to be removed.

There are scattered patches of SOR and OP/HOR in the sheltered areas of the island, major oil was collected here. The environment where there is oil is only a small fraction of the island.

SEGMENT KNOW

SUBDIVISION A

DATE 18 / MAY / 91

ENERGY LEVEL: ☐ H ☒ M ☒ L

☐ NEWM RAIN ☐ HEAVY RAIN ☒ HORIZONTAL RAIN

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

EST. OIL CATEGORY LENGTH: W 0 m M 2 m N 0 m VL 10 m NO 300 m US 168 m

[illegible]

DISTRIBUTION: C = 81-100%; B = 61-80%; P = 41-60%; S = 1-40%; T = <1%

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

'PHOTO ROLL # MAYBAP-

3 - 18

FRAMES

7

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20	X	X						0-20	Y			X	X			P/Sg/R	EXTENT 1x2 m
2	10			X	X				0-10	Y			X	X			Pg/Sg/R	
3	10				X				0-10	Y				X			P/Sg-R	
4	15							X	-					X			P/Sg	
5	15							X	-						X		CP/Sg	
6	15							X	-						X		CP/Sg	
									-									
									-									
									-									
									-									

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

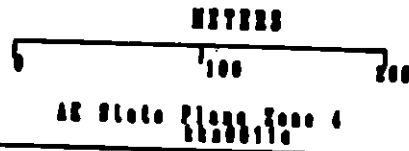
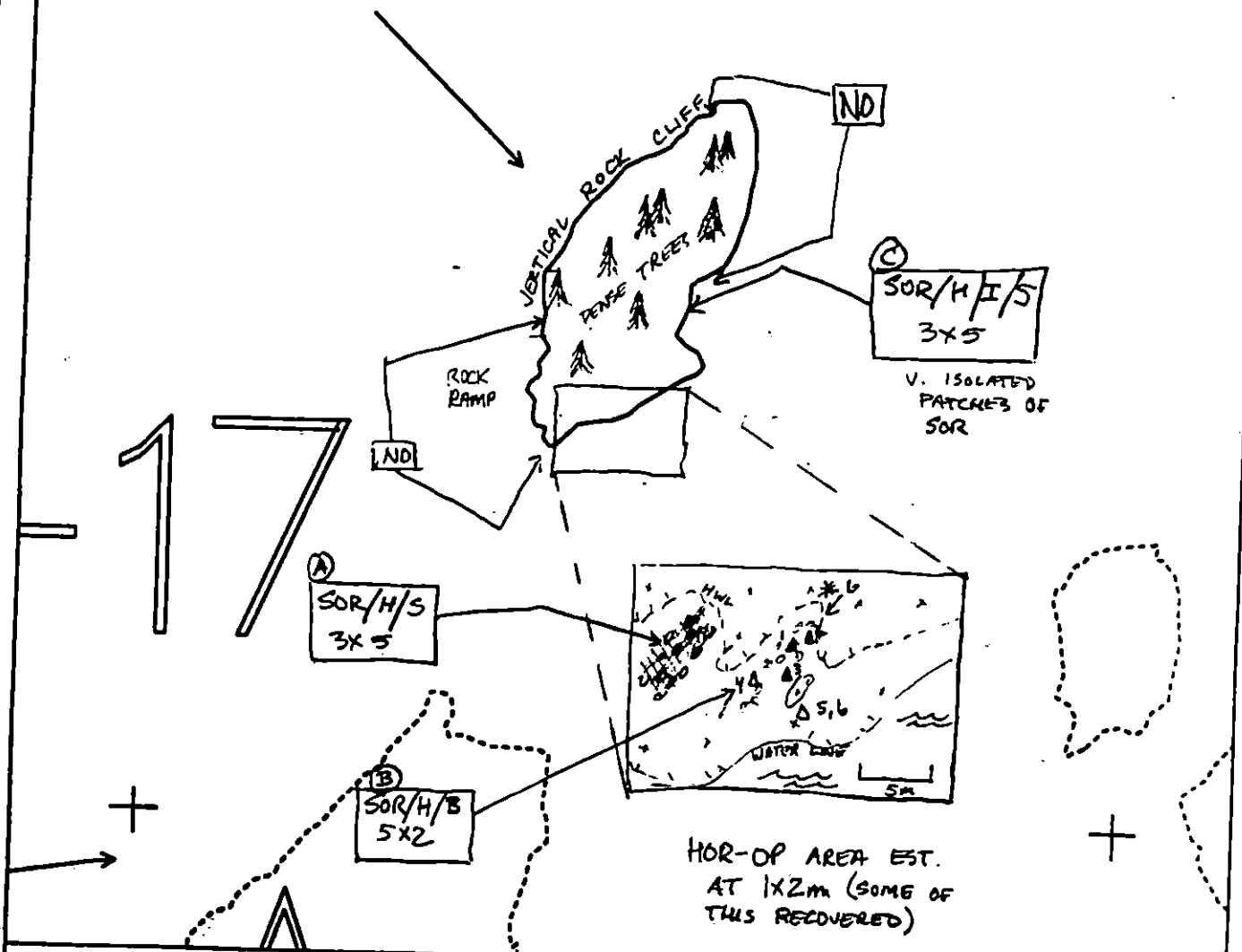
OG COMMENTS: This island receives partial protection from islands near the entrance of Bay of Talcahuano and is considered moderate wave exposure. Most of the island is bedrock with 2 or 3 coarse sediment pockets.

Surface and subsurface silt is confined to these sediment pockets and is confined within bedrock depressions. SOR at A and C is shallow and podolic. The SOR at B grades into subsurface OP-HOR in one pocket (ext. $< 1 \times 2$ m extent), some of which was collected.

Σε: ρομπέρτο 5/19

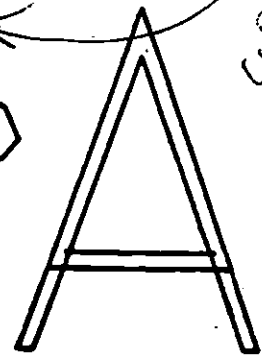
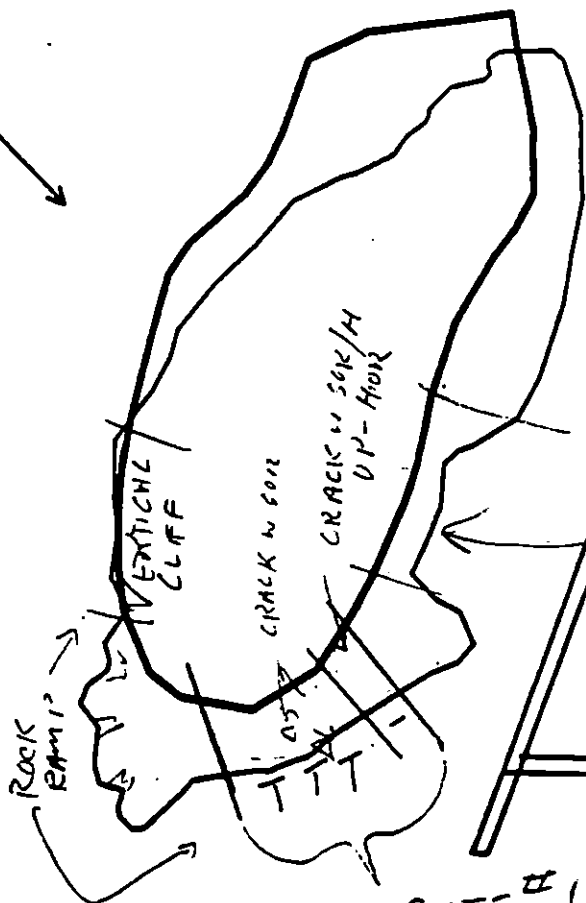
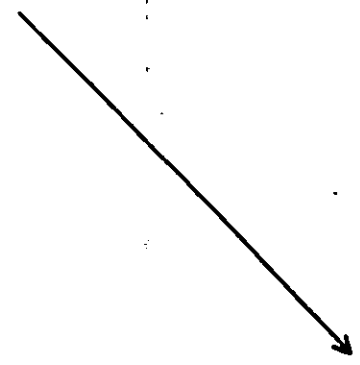
OG 1 of 5

KN-11



Subdivision Field Map
Map Key: KN1KN0011A
Name: HARPER
Date: 18 MAY 91

ES revised 5/19
OG 2af5
REVIEWED 19M



SCREEN/T
3x5'
ISOLATED PARTICLE
and DMS

- + 41 UTR/SITZ
- U-20 P/SG HOIL-UP
- A2 UTRZ
- 0-10 MOK-UX
- PC/SG/R
- A3 UTRZ
- 0-10 P/SG LOR
- A4 UTRZ
- 0-15 NO.
- P/SG

HUR-UP IXZ
SOME RECOVERED
SITE #1
YES

A5 MTRZ 15
CP/SG NO.
A6 MTRZ 15
CP/SG NO.

ASAP

XXXX
IIII

IIII
XXXX

Wide
Medium
Narrow
Very Light
Very Heavy

KN-11 A
ADEC Subsegment Length: 480m
METERS



At State Place Zone 4 1:1007

ORIGINAL FIELD NOTES
18 MAY 1991 SHARPER

Subdivision Field Map
Map Key: KNKN-11A
Name: Cherry
Date: Aug 3 1991

OG 5 of 5
Entered 5/19
REVIEWED CB 19 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3
 DATE 5/18/91
 SEGMENT # KN 11
 TIDAL HEIGHT (Range) 1-2'
 SUBDIVISION A
 BIOLOGIST STOKOR
 SEA STATE 1-2'
 WIND SPEED/DIRECTION E 15-20
 PHOTOGRAPHS: ROLL #
 FRAME #

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

Small bedrock island with 2 small 'beaches' of pebble/cobble/boulder sized rubble, generally high to moderate exposure/wave energy.

Biota on bedrock characterized by dense Fucus, dense barnacles and spat, clusters of small limpets and Littorina, sparse patches of Mytilus.

Biota on rubble beaches consists of patchy and variable-density new-growth Fucus, patchily dense barnacles and spat, small limpets and Littorina (with some egg masses), attached and interbedded Mytilus and amphipods. Composition and abundance remains fairly uniform over the observed intertidal range on these beaches.

Biota within or proximal to residual oil locations A thru G is sparse or absent (as is generally so in the upper intertidal here). Downslope biota consists of patchily dense barnacles and spat, dense clusters of small limpets and Littorina (with some egg masses), variable patchily dense Fucus, and some dense patches of attached and interbedded Mytilus.

Additional cleanup, if undertaken, should proceed with care so as to minimize disturbance to established biota. Limit personnel to intertidal zone.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds	1	1	
Corvids			
Other Birds			

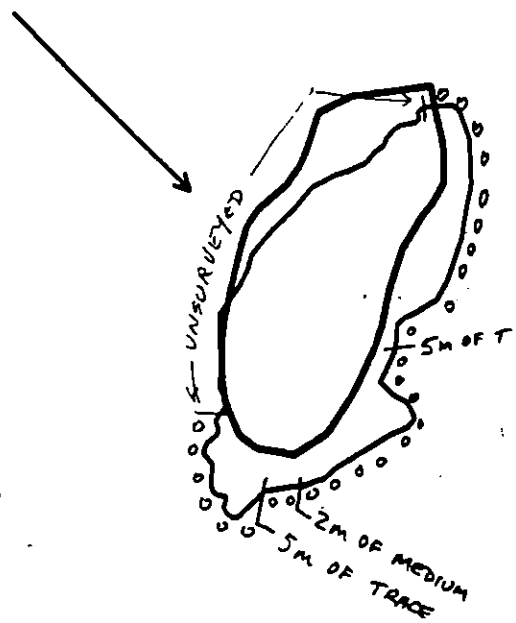
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

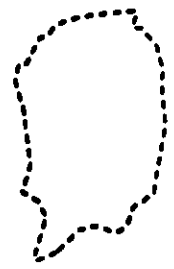
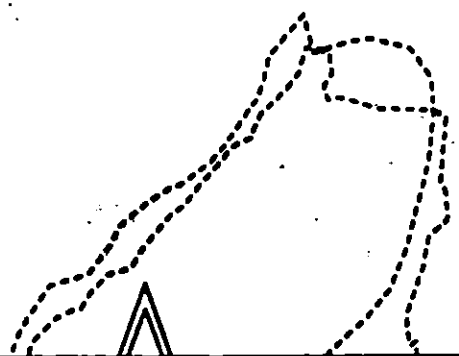
REVIEWED CD BMM
 Reviewed M.B. 5/19/91

KN-11

17



EXXON
SUMMARY
OILING



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

KN0011 A
 ADEC Subsegment Length: 480m
 METERS
 0 100 200
 AK State Plane Zone 4
 6608011a

Subdivision Field Map
 Map Key: KNKN0011A
 Name: HARPER
 Date: 18 MAY 91
 Date Entered:

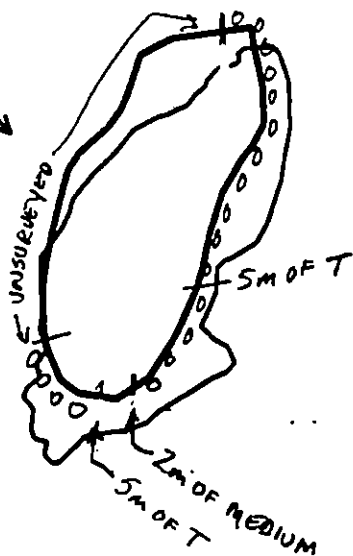


SURFACE OILING SUMMARY MAP (EXXON SHORELINE)

ET revised 5/19
 OG 4 of 5
 REVIEWED 16 MAY 91

KN-11

-17



ADEC
SUMMARY
OILING

MED = 2
T = 10m
NO = 300
U.S. = 168

312

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

KN0011 A
ADEC Subsegment Length: 480m
METERS
AK State Plane Zone 4
480011a



Subdivision Field Map
Map Key: KNKN0011A
Name: HARRIS
Date: 18 MAY 91
Date Entered:

SURFACE OILING SUMMARY MAP (ADEC SHORELINE) 25 REVIEWED 5/19
DG 3 of 5
REVIEWED CO 11 MAY

31
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-12

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-12 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 97 m: Medium 32 m: Narrow 101 m: V.Light 251 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats,
2) bioremediation of areas indicated on attached sketch map. Work
should be conducted after 6/15 based on herring constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-12 SUBDIVISION: A-1 of 1 DATE 04/24/90

USCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS 1) Pit #1 SITE: Due to terrain (Ang. B/C armor w/ gravel) extent of piling suggest Hot water flush or steam flush.
2) Same recommendation for area (Boulder Cove) to south.
3) Site @ pits # 2, 3, 4. 50 m area surface sediments silted low energy area - prep (rake or till) if Bio is considered.
cc.

LAND MANAGER

NAME Peter Zellers SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with the above recommendations.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-12
 BIO DAVE LOHSE LAND REP PETER ZOLLAR (CA) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA COWBY TIME 0800 to 0900
 TEAM NO. 13 TIDE LEVEL -2' to 0' DATE 04/24/90
 EST. SUBDIVISION LENGTH: 529 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 60 % B 20 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 120 m M 30 m N 150 m VL 209 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	S	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT			X	✓		X							X			
POOLED																
COVER				X		X							X			
COAT	✓	*	0	X		X							X			
STAIN				X		X							X			
MOUSSE																
PATTIES																
TARBALLS				X		X							X			
FILM																
NO OIL													X	X	X	

PAVEMENT H F \$20 sq. m by 5 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

Photographs:

Roll No. ST-13-5Frames 12-16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE-SUBSURFACE SEDIMENTS	
		OP	OM	OL	OP	NO		SO	UC	1 10 100	2 10 100	3 10 100	4 10 100	5 10 100	6 10 100	SU	U	M	L							
1	30	X					5-10		X		X							X							25	C-P, S, M
2	25					X	.		X											X						P-G, M
3	25					X	.		X									X								P-G, M, P
4	20					X	.		X									X								C-S, M
							.																			
							.																			

COMMENTS

REVIEWED YHDATE 4-26-90

Oil Character Length (m): AP 30 PO 0 CV 10 CT 200 ST 0 MS 0 PT 0 TB 5 FL 0 NO 284

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KNOR Subdivision A Date (mo / day / yr) 4-24-90Time (24 hr) 8:00 Biologist David Lohr(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 70 (3) Cobble 15 (4) Pebble 5 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 45 Moderate 30 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-13-5Frames 12-16

BARNACLES

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

2M - no comment64 - no comment

Moderate to dense mussels in mid-intertidal cobble at site 1 (see ecology map) would be susceptible to foot traffic / disturbances.

Shoreline Ecological Summary

Lot 2

Segment ST-KNO12

Subdivision A

4-24-90

Biologist: David Lohse

Wildlife Observations/General Comments

1. Present in low intertidal: Pycnopodia, Dermasterias, Evasterias, Pisaster ochraceus, Scytosiphon, Spirorbis, Ulva, Enteromorpha, Rhodomenia, coralline algae, Ectocarpus, Ralfsia
mid intertidal: Scytosiphon, Nueella, Cladophora, coralline algae, Endocladia, Enteromorpha, Pagurus (under cobble), amphipods (under cobble), unidentified red "branch" (Rhodomenia)
2. Barnacle mortality on mid intertidal bedrock was 10%, 10% on mid intertidal cobble and 80% low intertidal cobble (one location estimated for each type of substrate).
3. Algal cover in low intertidal ranged from 50-100% (aver ~ 75%).
4. Many Melibe found in water near shore.
5. The remains of a deer were ~~found~~ found above high tide line.
No oil observed.
6. Oil covered barnacles were found in high intertidal.
7. Littorina egg masses were found underneath mid-intertidal cobble.
8. Starfish, particularly Pycnopodia, were abundant in the low intertidal.

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

6Y

2M

KN-12

KN-13

Side 1

KN-12

ADEC Segment Length: 481m

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

0 100 200 300

Map Key: PWS-301

Name: _____

Date: _____

Data Entered: _____

KN-12

KN-13

TTTT Very Light

KN - 12

ADEC Segment Length: 481m

Date: 04 / 24 / 90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-12 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Manual Raking Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/30/90.

ADEC Art Weiner

EXXON Andy Katz

NOAA Joseph Tallant

USCG G.A. Heiter

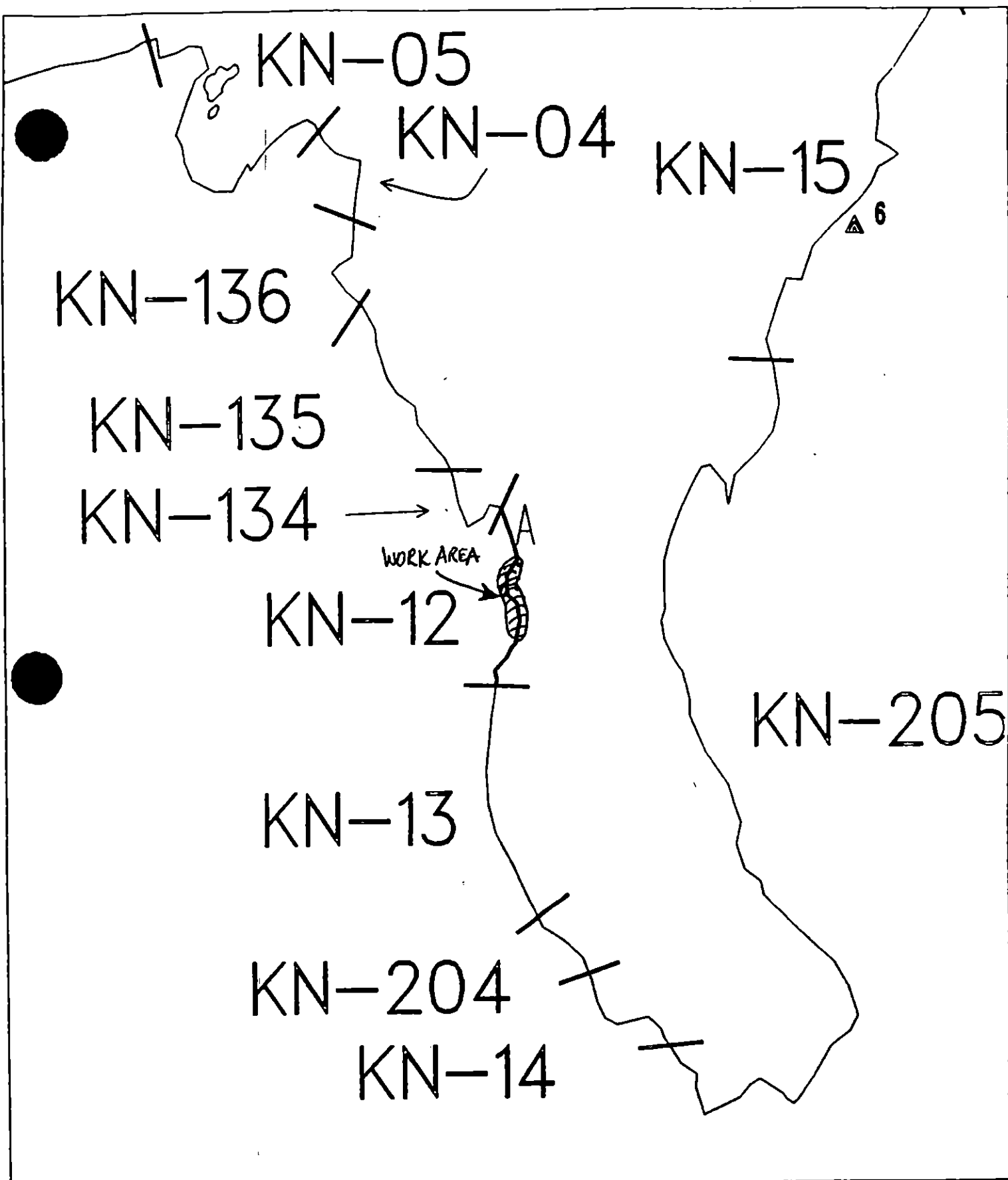
FOSC

DATE

Prepared By: Claudia Slater WTK

Date

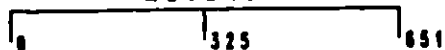
5/29/90



Exxon Company, USA
Map Key: KNI-KN-12
May 11, 1990



ECOLOGY MAP
SEGMENT KN-12
SUBDIVISION A (1 of 1)
METERS



★	Seabird Colony
▲	Eagle Nest

1 inch = 1068 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-12 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

☒ M Herring spawning (4/1 to 6/15)

☒ Y 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 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: 5/5/90

OILING CATEGORIZATION:

Wide 97 m: Medium 32 m: Narrow 101 m: V.Light 251 m: No Oil 0 m
Subsurface Oil Observed: Yes ☒ No ☐ Maximum Depth 10 cm

RECOMMENDATIONS:

☐ No Treatment Recommended

☒ X Treatment Recommended

☒ X Manual Pickup

☒ X Bioremediation

☒ X Tarmat Removal

☐ Snare/Absorbent Booms

☐ Oil Snares (pom poms)

☐ Absorbents (pads, rolls, etc)

☐ Spot Washing: Wands

☐ Beach Cleaner

☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) bioremediation of areas indicated on attached sketch map. Work
should be conducted after (6/15) based on herring constraints. REMOVE

UNATTACHED OIL-60 VEGETATION

SEE APPENDUM DATED 5/29/90 WTK

TAG COMMENTS: MANUALLY RAKE IF FEASIBLE PRIOR TO BIO IN AREA
OF TP-1

TAG APPROVAL DATE: 5/4/90.

DEC ART WENGER

EXXON AMY GEA

NOAA GARY PETERSON

USCG C.A. REITER

FOSC: [Signature]

DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ KN-12 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 5/5/90

OILING CATEGORIZATION:

Wide 97 m: Medium 32 m: Narrow 101 m: V.Light 251 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) bioremediation of areas indicated on attached sketch map. Work
should be conducted after 6/15 based on herring constraints. REMOVE
UNATTACHED OILED VEGETATION

+ TARBALS

TAG COMMENTS: MANUALLY RAKE IF FEASIBLE PRIOR TO BIO IN AREA
OF TP-1

TAG APPROVAL DATE: 5/4/90

ADEC ART WEINER

EXXON ANDY TEAL

NOAA GARY PETROE

USCG G.A. REITER

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

OG **RIC GILLIE**

SEGMENT ST/ **KN-12**

SUBDIVISION **A-1 of 1**

DATE **04/24/90**

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HRR/LWR
- SSI
- Profile Location(s)
- Profile(s)
- ☒ Pht Location(s)
- ☒ Photo Location(s)

LEGEND

1 ▲

Pht - No Subsurface Oil

2 ▲

Pht - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

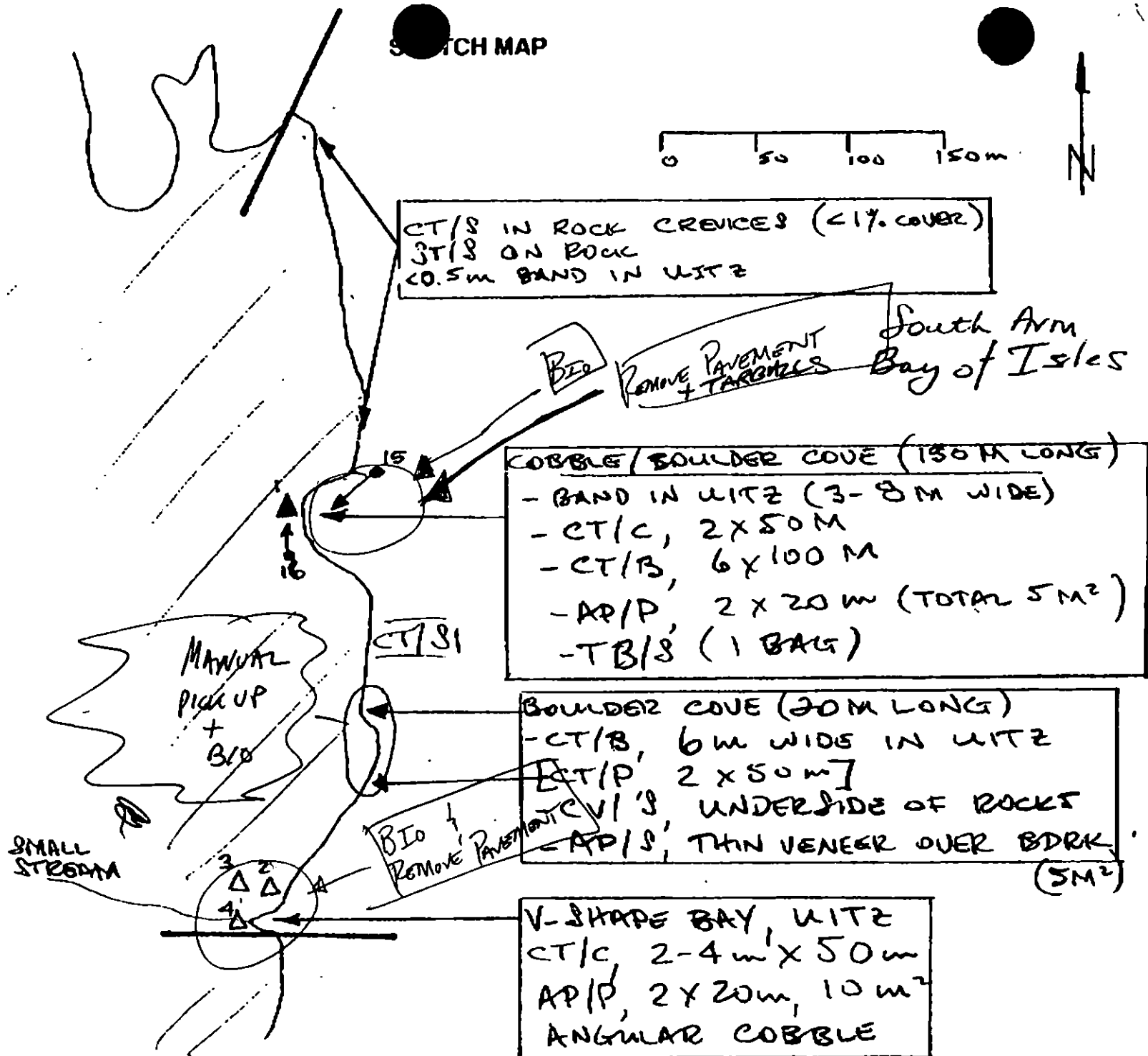
Oiled Vegetation

1 ➡

Photo location, direction, and number

SWITCH MAP

0 50 100 150m



Oil Character Length (m): AP **30** PO **0** CV **10** CT **200** ST **0** MS **0** PT **0** TB **5** FL **0** NO **284**

REVISION: 2/2/90

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

4M
2M

KN-12

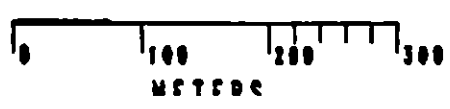
KN-13

Side 1

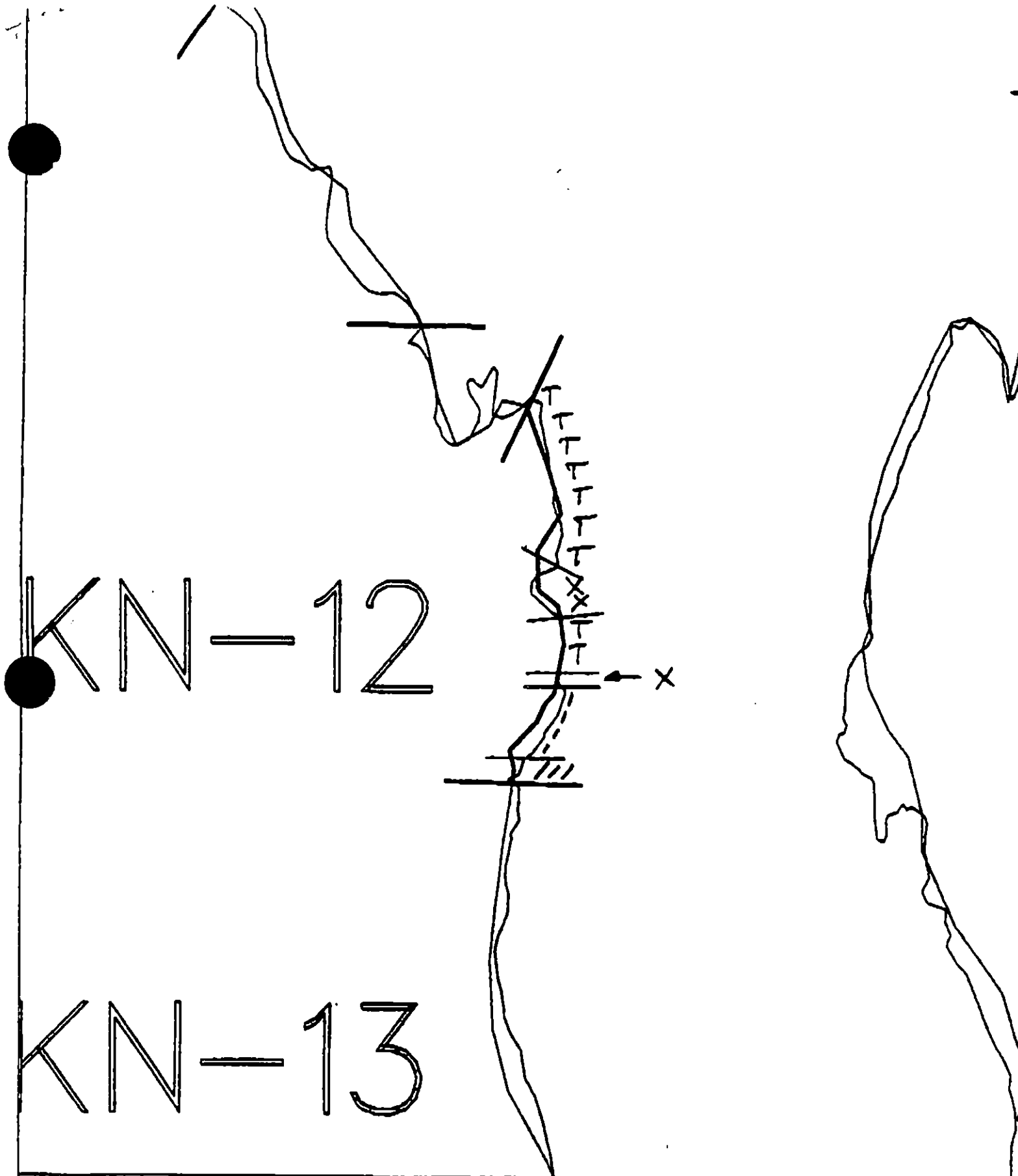
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

KN-12

ADEC Segment Length: 481m



Map Key: PWS-301
Name: _____
Date: _____
Data Entered: _____



KN-12

KN-13

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

KN-12

ADEC Segment Length: 481m



Map Key: PWS-301
Name: RICK GILLIE
Date: 09/24/90
Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-13

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-13 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 121 m: V.Light 480 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats in areas indicated on sketch map and 2) bioremediation of areas indicated on sketch map. Work should be conducted after 6/15 due to herring spawning constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

- 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
- 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 (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or 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
- ✓ 298 Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3H Harbor seal and sea lion pupping (5/15 to 7/1)
 3C 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 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7I Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-13 SUBDIVISION: A-1 of 1 DATE 04/24/90

SCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara J. Crosby SIGNATURE Clara J. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- 1) Manual removal of AP
- 2) Bio of narrow Bands.

LAND MANAGER

NAME Peter Zellers SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 24-12-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-13
 BIO DAVE LOHSE LAND REP PETER ZOLLAR (CA) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA CONBY TIME 0700 to 1000
 TEAM NO. 13 TIDE LEVEL 0' to +3' DATE 04/24/90
 EST. SUBDIVISION LENGTH: 603 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 30 % C 40 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 150 m VL 453 m NO 0 m

SURFACE OIL

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

PAVEMENT H F (S) 8 sq. m by 5 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE T#BAGS 1

Photographs:

Roll No. ST-13-5Frames 17, 18

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		UD	UC	1	2	3	4	5	6	7	8				
1	30					X	.		X												C-P, S, P
2	40					X	.		X												P-P, G
3	30					X	.		X												C-P, G, S
							.														
							.														
							.														

COMMENTS

① GEOMORPHOLOGY: BOWDER/CORBLE/PEBBLE BEACH OVER MOST OF SEGMENT. PEBBLE DELTA AT FOUTHER EN

② OILING: VERY LIGHT EXCEPT FOR SOME CT/B UNDER BOWDERS AND AP/P ON DELTA.

REVIEWED YWDATE 4/27/90

OG Rick GILLIE
 SEGMENT KN-13
 SUBDIVISION A-10/1
 DATE 04/24/90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

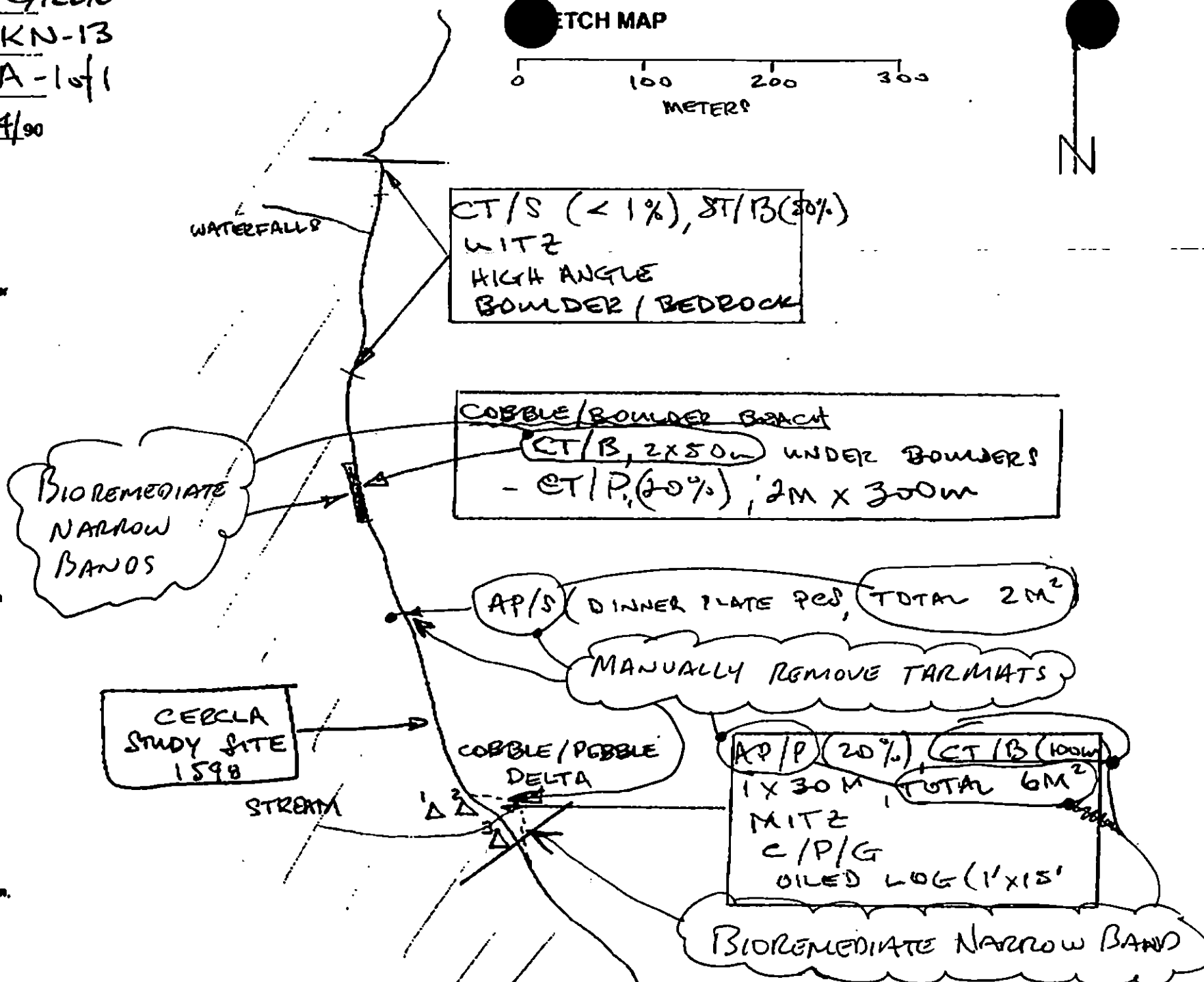
Patchy Distribution
- CT/S

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

ETCH MAP

0 100 200 300
METERS

N



Oil Character Length (m): AP 10 PO 0 CV 0 CT 200 ST 100 MS 0 PT 0 TB 0 FL 0 NO 293

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/79

Segment ST / KN013 Subdivision A Date (mo / day / yr) 4-24-90Time (24 hr) 9:00 Biologist David Lohse(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 40 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 25 Moderate 60 Low 15

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

Photographs:
Roll No. ST-13-5Frames 17, 18

BARNACLES

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See Page 2

Ecological Considerations:

ZM - no comment

64 - no comment

The population of barnacles on mid and high intertidal boulders and cobble (overall moderate density, but with patches of high density) would be

Shoreline Ecological Summary

Lot 2

Segment ST-KN013

Subdivision A

4-24-90

Biologist: David Cohse

Field observations / General comments

1. present in low intertidal: Enteromorpha, Scytosiphon, Cladophora, Pycnopoda, Nuella, Scytosiphon
mid intertidal: Nuella, Endocladia, Ulva, Scytosiphon, unidentified nemertean, amphipods (under cobble), unidentified red algal "branch" (Rhodomencia?)
2. No observations were taken on low intertidal bedrock
3. 1 weasel, 1 cottontail observed in the area
4. One stream located in segment. No information given on whether or not it is anadromous
5. Littorina egg masses found underneath mid-intertidal cobble.
6. Algal cover reached 50% in some areas in low intertidal.

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR
ENTIRE SEGMENT:

6Y

2M

KN-12

KN-13

KN-204

KN-11

Stream

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-13

ADEC Segment Length: 601m



Map Key: PWS-312

Name: _____

Date: _____

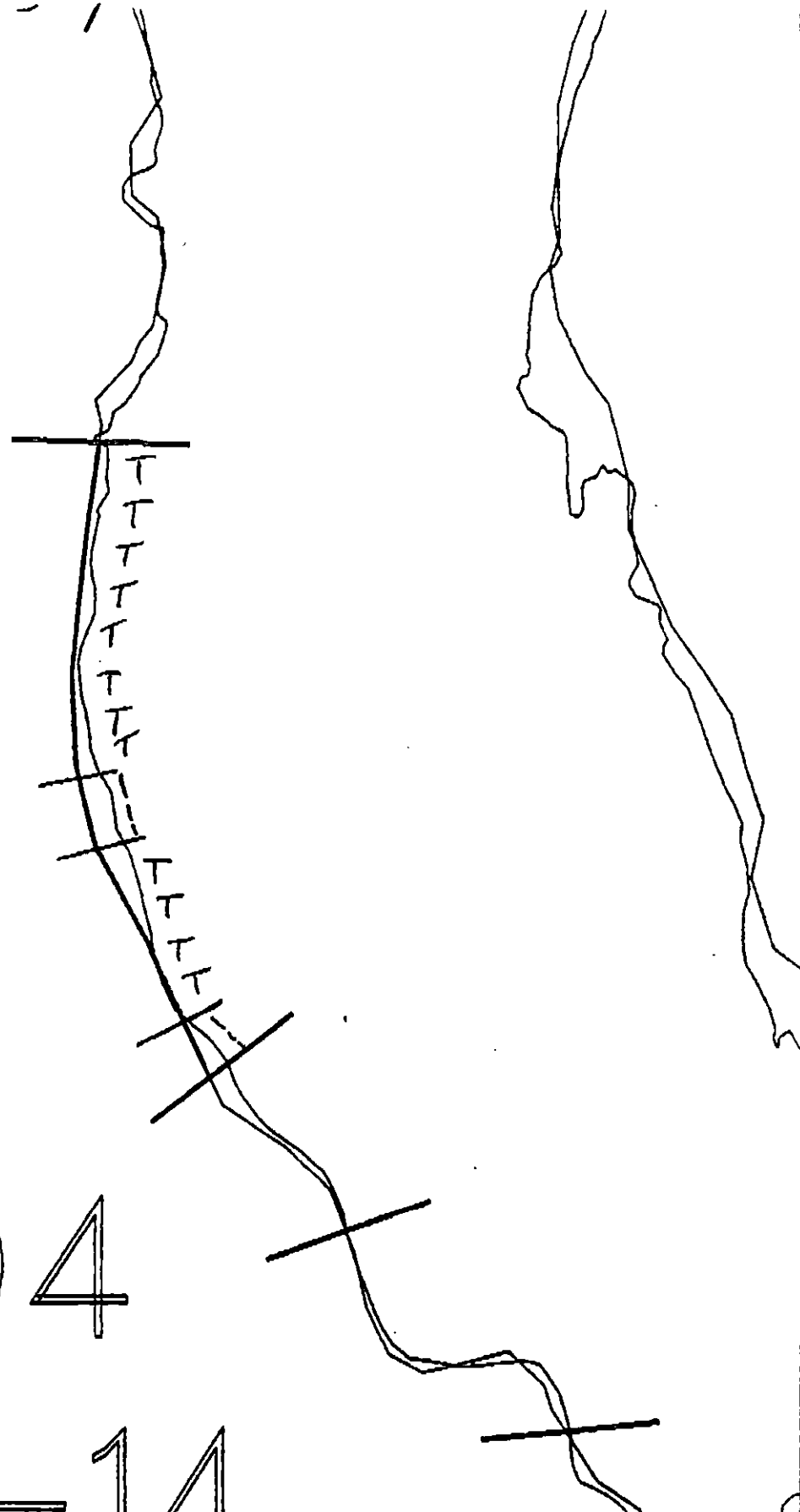
Data Entered: _____

● KN-12

● KN-13

KN-204

KN-11



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

KN-13

ADEC Segment Length: 601m



Map Key: PWS-312

Name: Rick Gillie

Date: 04/24/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-13 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

ADEC Art Weiner

EXXON Art Slater

NOAA Joseph Tolbert

USCG G.A. Dreitel

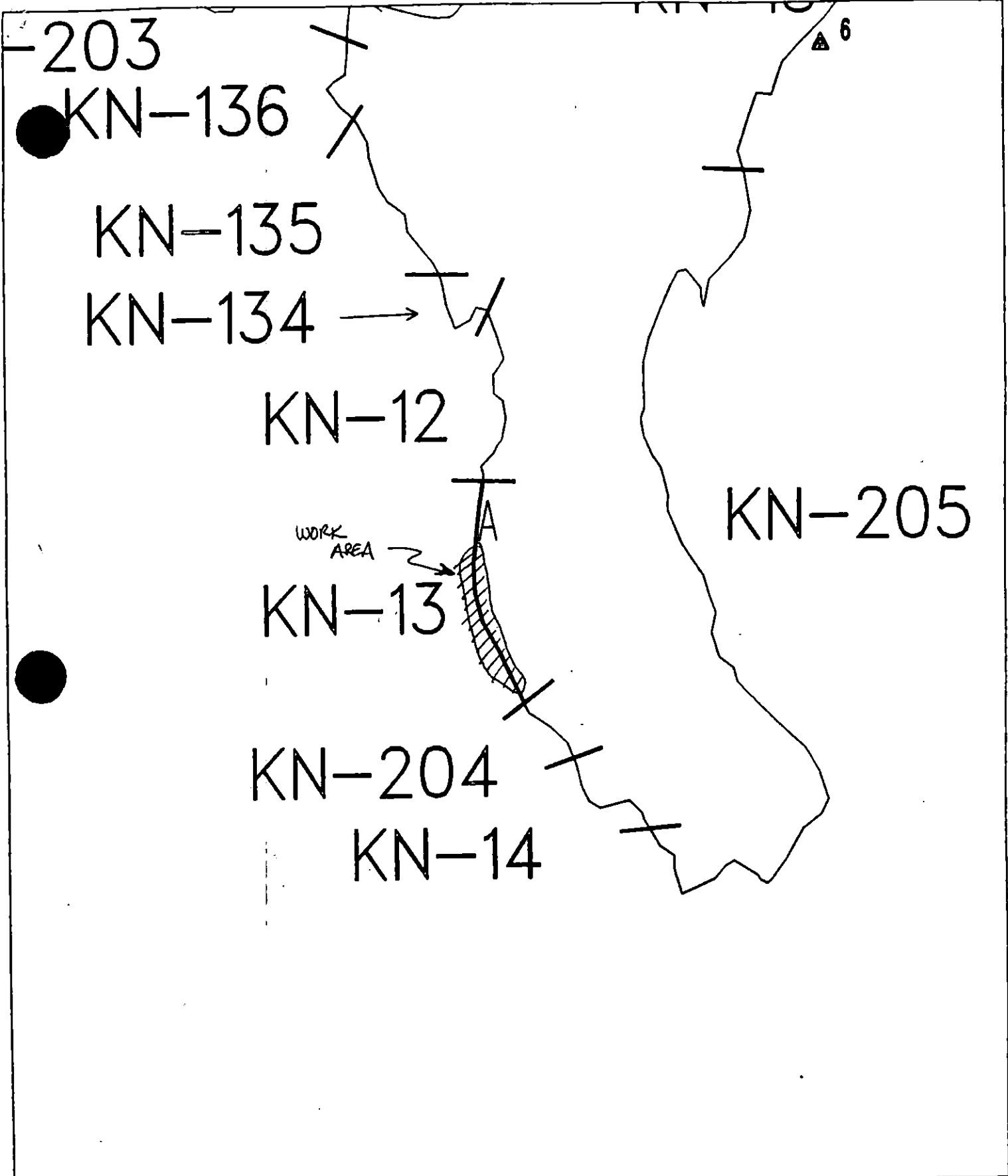
FOSC

DATE

Prepared By:

Date

5/30/90
Art Slater
Art Slater
Joseph Tolbert
G.A. Dreitel
Art Slater
5/30/90
Claudia Slater
5/29/90



Exxon Company, USA
Map Key: KN-13
May 11, 1990



ECOLOGY MAP
SEGMENT KN-13
SUBDIVISION --- (--- of ---)
METERS
0 337 674

★	Seabird Colony
▲	Eagle Nest

1 inch = 1106 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-13 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (4/1 to 6/15)

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 121 m: V. Light 480 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats in areas indicated on sketch map and 2) bioremediation of areas indicated on sketch map. Work should be conducted after 6/15 due to herring spawning constraints.

See Addendum DATED 5/30/90
W.K.

TAG COMMENTS:

TAG APPROVAL DATE: May 5 1990

DEC ART WENGER DATE 5-12-90
EXXON Mark N. Silbert FOSC: W L
NOAA Gary Petrac
USCG G.A. KETTER

SHORELINE EVALUATION

SEGMENT ST/ KN-13 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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. [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 121 m: V.Light 480 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
in areas indicated on sketch map and 2) bioremediation of areas indi-
cated on sketch map. Work should be conducted after 6/15 due to
herring spawning constraints.

TAG COMMENTS:

TAG APPROVAL DATE: May 5 1990
ADEC ART WENGER [Signature]
EXXON Mark N. Silbert Mark N. Silbert FOSC: [Signature] DATE: 5-12-90
NOAA Gary Petracz Gary Petracz
USCG G.A. REITER G.A. Reiter

OG R. GILLIE
 SEGMENT ST/ KN-13
 SUBDIVISION A-10/1
 DATE 04/24/90

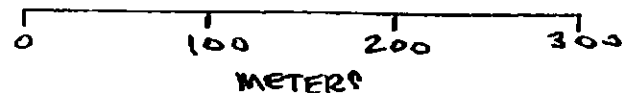
CHECKLIST

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

LEGEND

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

SKETCH MAP



N

BIOREMEDIATE
NARROW
BANDS

CERCLA
STUDY SITE
1598

CT/S (<1%), ST/B (80%)
WITZ
HIGH ANGLE
BOULDER / BEDROCK

COBBLE / BOULDER BEACH
CT/B, 2X50m UNDER BOULDERS
- CT/P, (20%), 2M X 300m

AP/S DINNER PLATE PEB, TOTAL 2M²

MANUALLY REMOVE TARMATS

COBBLE / PEBBLE
DELTA

AP/P (20%), CT/B (100m)
1X30M, TOTAL 6M²
MITZ
C/P/G
OILED LOG (1'X15')

BIOREMEDIATE NARROW BAND

Oil Character Length (m): AP 10 PO 0 CV 0 CT 200 ST 100 MS 0 PT 0 TB 0 FL 0 NO 293

ECOLOGY MAP (1061)

RESOURCE CODES FOR
ENTIRE SEGMENT:

QY

2M

● KN-12

● KN-13

KN-204

KN-14

Stream

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-13

ADEC Segment Length: 601m

0 100 200 300
METERS

Map Key: PWS-312

Name: _____

Date: _____

Date Entered: _____

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-14

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-14 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) 4/1 to 6/15. Restrict boat traffic to essential minimum. Do not damage unoiled algae. Contact ADF&G for dates and locations. Special use area (6Y).

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

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 328 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse patties and bioremediate area as shown on attached sketch map. Treatment activities should be conducted after 6/15 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 14 SUBDIVISION: 7 DATE 4/4/90

USCG

NAME MARKIN J. SHARPE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

HITZ NEEDS TO BE LOOKED AT FURTHER DUE TO SNOW COVERAGE
AREA OF CONTINUOUS COVERAGE (AREA WAS 80% COVERED BY SNOW) SUGGEST
MANUAL REMOVAL → NOTE THAT THERE WERE 5 CM. OF GRAVEL (UNCOVERED) OVER
THE CONTINUOUS BAND WHICH WAS APPROX. 2 CM. LAYER. / SPORADIC MOUSE PADDS
ALONG LOWER HITZ.

LAND MANAGER

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

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/10

OG K. RAMSEY USCG R. SHARPE SEGMENT STI KN-14
 BIO G. PENN LAND REP M. SMITH SUBDIVISION A 191
 EXXON S. REID ADEC S. FERGUSON TIME 3:35 to 3:55
 TEAM NO.: 4 TIDE LEVEL: 2' to 2' DATE 4/14/90
 EST. SUBDIVISION LENGTH: 322 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 2 % B 25 % C 31 % P 12 % G 30 % S — % M — % V — %
 SLOPE: Long 98 % Hang 2 % Ven — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 322 m NO — m

SURFACE OIL

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

PAVEMENT: H F S N/A sq. m/ly — crPATTIES / TARBALLS 1 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-oz)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	L		
1	20					X	0-0		X									X				N	B, C, G
2	25	X					0-30	X		X								X				N	C, P
3	25	X					5-7	X		X								X				N	G, Bedrock
4	25	X					5-7	X		X								X				N	G, Bedrock
5	25	X					5-7	X		X								X				N	G, Bedrock
6	30					X	—		X									X				N	G, Bedrock

COMMENTS

This segment was mainly a boulder shoreline. There was snow covering the SU + upper U. Sporadic mousse patties occurred throughout the section. A section of cont. cover 5m long x 1m wide occurs midway through the segment in the U.I. ^{sporadic} Splashes or stain on some of the boulders in the upper U. can be found.

SEGMENT ST/ KN-14 SUBDIVISION A

REVISION 03/23/12

[illegible]

COMMENTS

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/73

Segment ST KN-14 Subdivision A Date (mo / day / yr) 04/04/90Time (24 hr) 1535 Biologist PENN

- (A) Substrate type and % of segments:
 (1) Bedrock 2 (2) Boulder 25 (3) Cobble 31 (4) Pebble 42 (5) Sand - (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 20 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (S)

Photographs:
Roll No. -Frames -

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

SEGMENT **KN-14**

SUBDIVISION **A**

DATE **4, 4, 80**

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/W/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

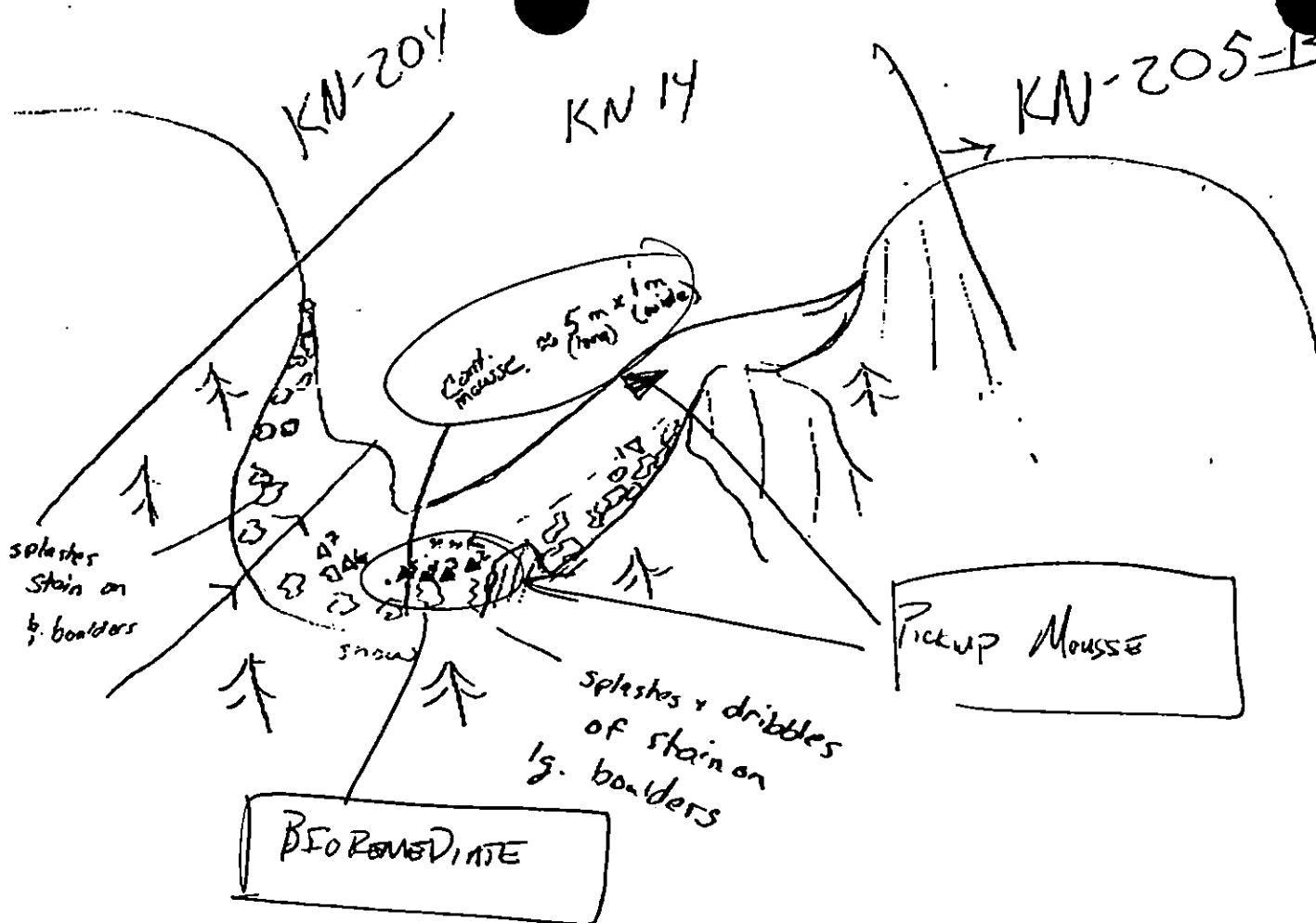
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Cited Vegetation

1 ➡
Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 5 MS 0 PT 322 TB 0 FL 0 NO 0

K

KN-204 →

KN-14

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

KN-~~0222~~ 14

ADEC Segment Length: ~~0222~~



Map Key: PWS-331
Name: K. RAMSEY
Date: 4/4/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-14 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

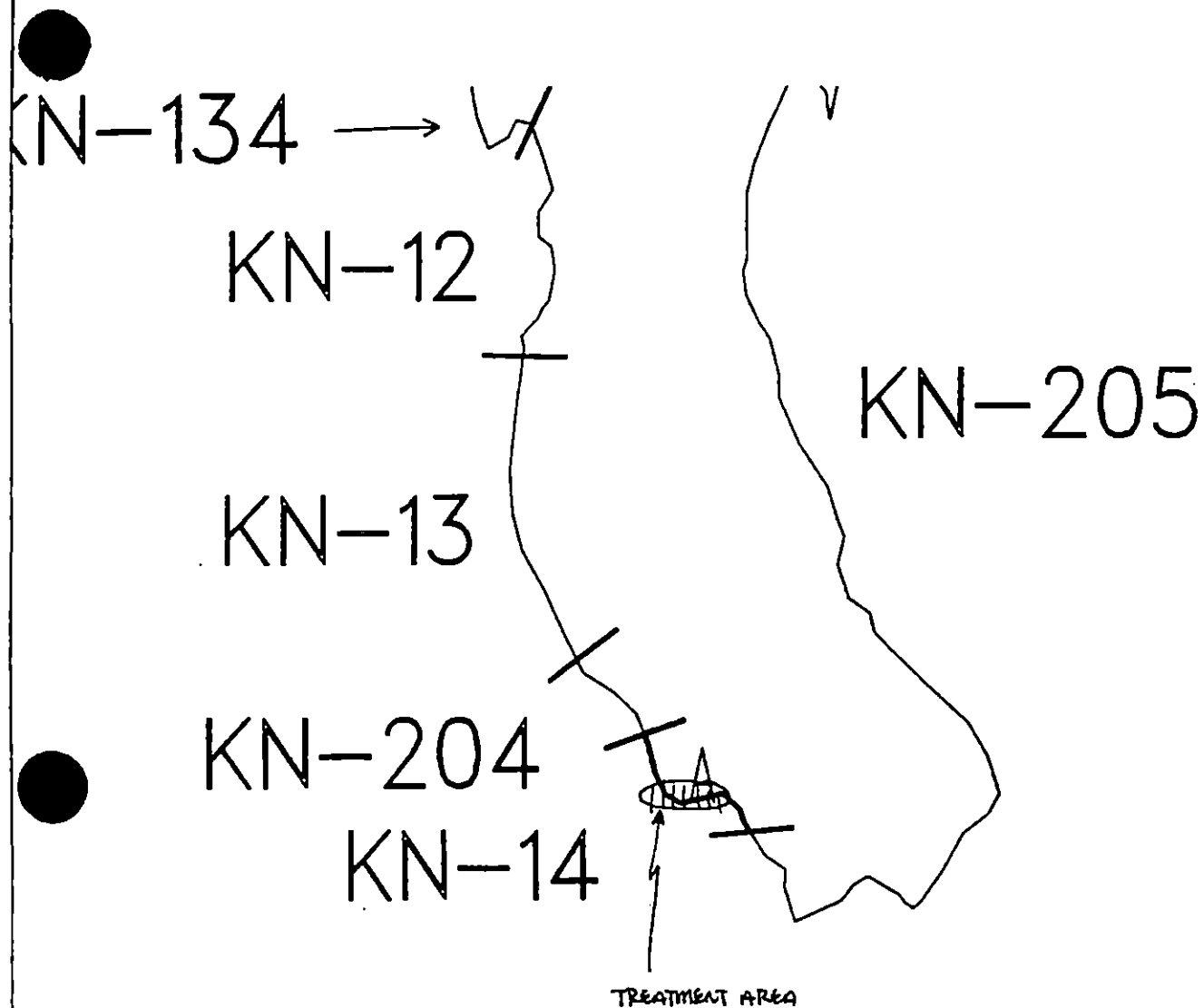
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/16/90.
 ADEC Ant Weiner Dyl Weir
 EXXON Anthony G. Real FOSC h L DATE 5-17-90
 NOAA Joseph Talbot
 USCG C.A. Treiter C.A. Treiter

Prepared by: Andrew Meyer W&L

Date: 5/14/90



Exxon Company, USA

Map Key: KNI-KN-14

May 11, 1990



ECOLOGY MAP
SEGMENT KN-14
SUBDIVISION A (1 of 1)
METERS
0 340 681

★	Seabird Colony
▲	Eagle Nest

1 inch = 1117 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-14 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) 4/1 to 6/15. Restrict boat traffic to essential minimum. Do not damage unoiled algae. Contact ADF&G for dates and locations. Special use area (6Y).

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

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

SHPO SIGNATURE: Charles Z. Hume DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 328 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse patties and bioremediate area as shown on attached sketch map. Treatment activities should be conducted after 6/15 based on above constraints.

TAG COMMENTS:

REASSESS SUITZ FOR OILED DEBRIS AT TIME OF CLEANUP.
ALSO CHECK FOR GENERAL OILING CONDITION IN SUITZ

TAG APPROVAL DATE: 4/16/90

ADEC AL KEGGLEN
EXXON ANN TATE
NOAA Burl Wescott
USCG G.A. REITER

FOSC: My L DATE: 5-5-90

See Addendum Dated 5/14/90 wmk

SHORELINE EVALUATION

SEGMENT ST/ KN-14 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) 4/1 to 6/15. Restrict boat traffic to essential minimum. Do not damage uncoiled algae. Contact ADF&G for dates and locations. Special use area (6Y).

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

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

SHPO SIGNATURE: Charles J. H. [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 328 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse patties and bioremediate area as shown on attached sketch map. Treatment activities should be conducted after 6/15 based on above constraints.

TAG COMMENTS:

REASSESS SUITZ FOR OILED DEBRIS AT TIME OF CLEANUP.
ALSO CHECK FOR GENERAL OILING CONDITION IN SUITZ

TAG APPROVAL DATE: 4/16/90

ADEC AL HEGLER [Signature]
EXXON ANNY T. [Signature] FOSC: [Signature] DATE: 5-5-90
NOAA Burl Wescott [Signature]
USCG G.A. REITER [Signature]

SEGMENT **KN-14**

SUBDIVISION **A**

DATE **4, 4, 90**

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/NE/SW
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1
 PH - No Subsurface Oil

2
 PH - Subsurface Oil

Continuous Distribution

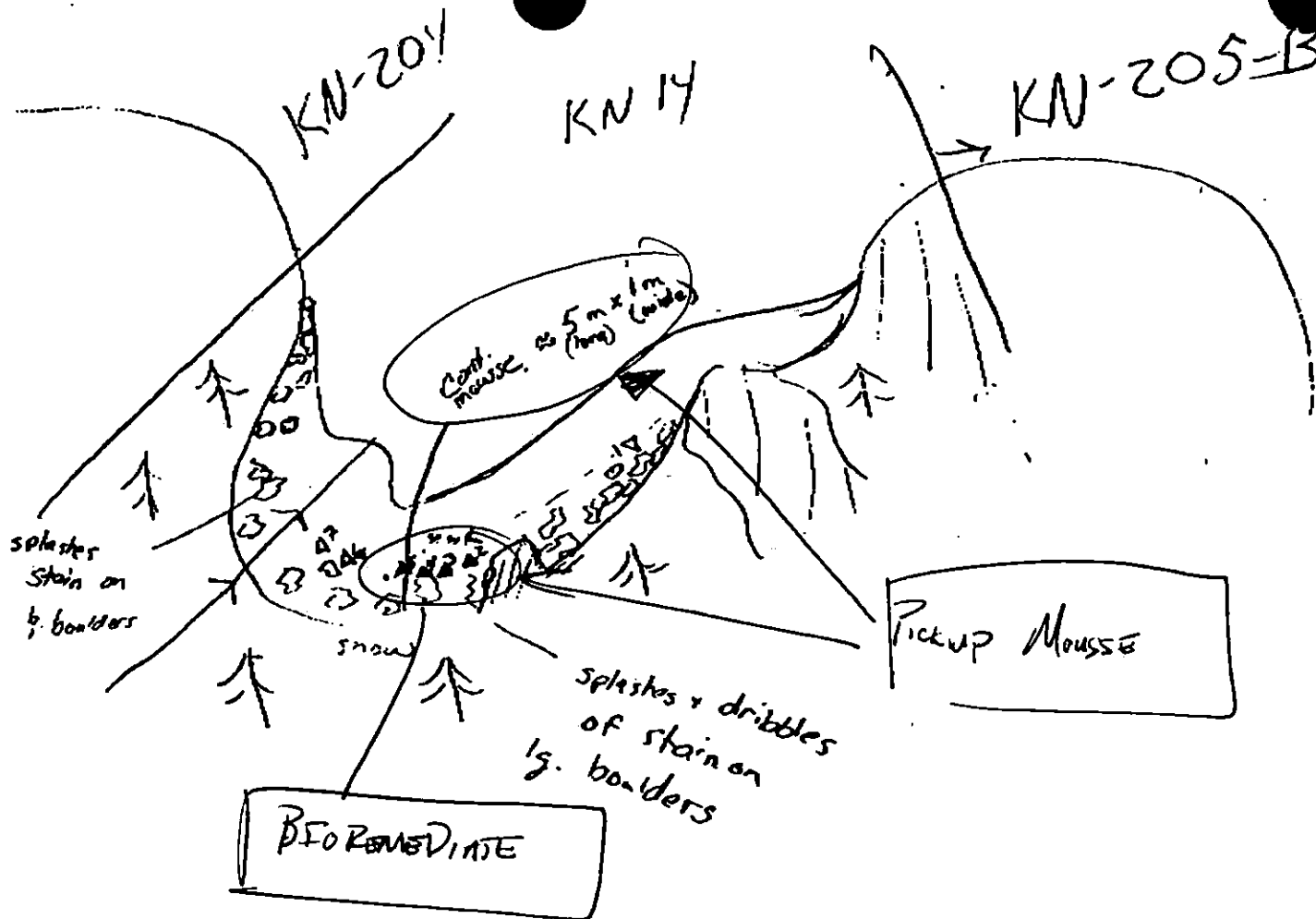
Broken Distribution

Patchy Distribution

Splashed Distribution

Oiled Vegetation

1
 Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 5 MS 0 PT 322 TB 0 FL 0 NO 0

KN-14

KN-204 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-~~14~~ 14

ADEC Segment Length: ~~100~~



Map Key: PWS-331

Name: K. RAMSEY

Date: 4/4/90

Data Entered:

1991 MAYSAP EVALUATION

SURVEY ADDENDUM

SEGMENT: KN 015 SUB: A REGION: PWS SURVEY DATE: 6/13/91ENVIRONMENTAL 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 A. Smith Date: 6/20/91RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

NNYES

Manual Pickup (Check as Req.)

__________✓

Spot Washing

Bio-Customblen Only

__________✓

Bio-Inipol/Customblen

Other

Other

_______________COMMENTS:INITIAL: Original survey (5/12/91), interrupted because of eagle activity. Survey addendum (6/13/91) completed survey.TAG: _____FOSC: As noted by ADEC, Exxon - CG Survey Team indicates some oil remains + is readily recoverable requiring limited work/time. Recover splash mouse at location ITAG APPROVAL DATE: JUNE 19 1991 FOSC APPROVAL DATE: 6/21/91

ADEC

John Bauer

FOSC

E. E. PAGE, GDR, USCG

EXXON

Real

CHIEF OF STAFF FOSC

USCG

Ed Mall

NOAA

JohnThe State will Reevaluate the need to conduct treatment on this subdivision.
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.

EXXON COMPANY, U.S.A.
ALASKA OPERATIONS

M E M O R A N D U M

To: File

From: Julie Arin

Date: June 17, 1991

Subject: MAYSAP Subdivisions EL-106C, GR-103B, GR-103C, & KN-15A

Additional surveying was performed on the subdivisions listed above. These subdivisions were not completed during the initial survey due to eagles in the area. These survey reports are addenda to the survey information previously submitted (EL-106C was not previously surveyed).

CENTRAL FILE
OFFICIAL COPY

MAYSAP FIELD SHORELINE COMMENT SHEET
ADDENDUM

TEAM NO. 00 SEGMENT KN015 SUBDIVISION A DATE 13 JUN 1991

ADEC

NAME Marianne Profita SIGNATURE Marianne Profita

- ☐ NTR Mousse in Pebble, cobble, small boulder in the UITE. Mousse 0-3cm. thick on undersides and around boulder. Very easy access. Roll small boulders-Remove Mousse OP/SOR - use sorbent pads to wipe boulders. Area H: Partial AP/SOR removal. This area should be worked again - After crew headed down shore, boulders/cobble moved to expose additional AP/SOR - 1 to 2 people 30 min

EXXON

NAME Rex Coulter SIGNATURE Rex R. Coulter

- ☒ NTR BREAKUP/REMOVAL OF AP/SOR WAS DONE IN ALL AREAS AS MUCH AS TIME PERMITTED. ALTHOUGH SOR WAS HEAVY IN ISOLATED SMALL AREAS, RECOVERED MATERIAL CONTAINED A LARGE PERCENTAGE OF SEDIMENT. ANY ADDITIONAL TREATMENT WOULD RECOVER VERY LITTLE OIL BUT A CONSIDERABLE MASS OF MATERIAL. AS NOTED BY THE BIOLOGIST, THE OILING WE FOUND APPARENTLY HAS LITTLE OR NO IMPACT ON THE SURROUNDING BIOTA. FOR THIS REASON, AS WELL AS THE FACT THAT WE RECOVERED/BROKE UP A MAJOR PORTION OF WHAT WAS FOUND, I RECOMMEND NO ADDITIONAL WORK.

2 min?

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

- ☐ NTR LANDMANAGER NOT PRESENT.

ADEC COMMENTS continued: This area has been discussed at TAG meeting 6/13/91.

USCG/NOAA

NAME CWO R SPURR SIGNATURE R. Spurr

- ☐ NTR Manual pickup of remaining AP/SOR indicated on OG map as area I is recommended. This area is easily accessible for workers.

PAGE 1 OF 1

DATE June / 13 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

* ABOVE VALUES DO NOT INCLUDE 12 1/2 - MAY-91 SURVEYS

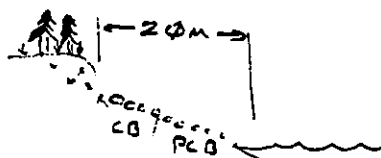
DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-00 - 03 FRAMES # 2-5

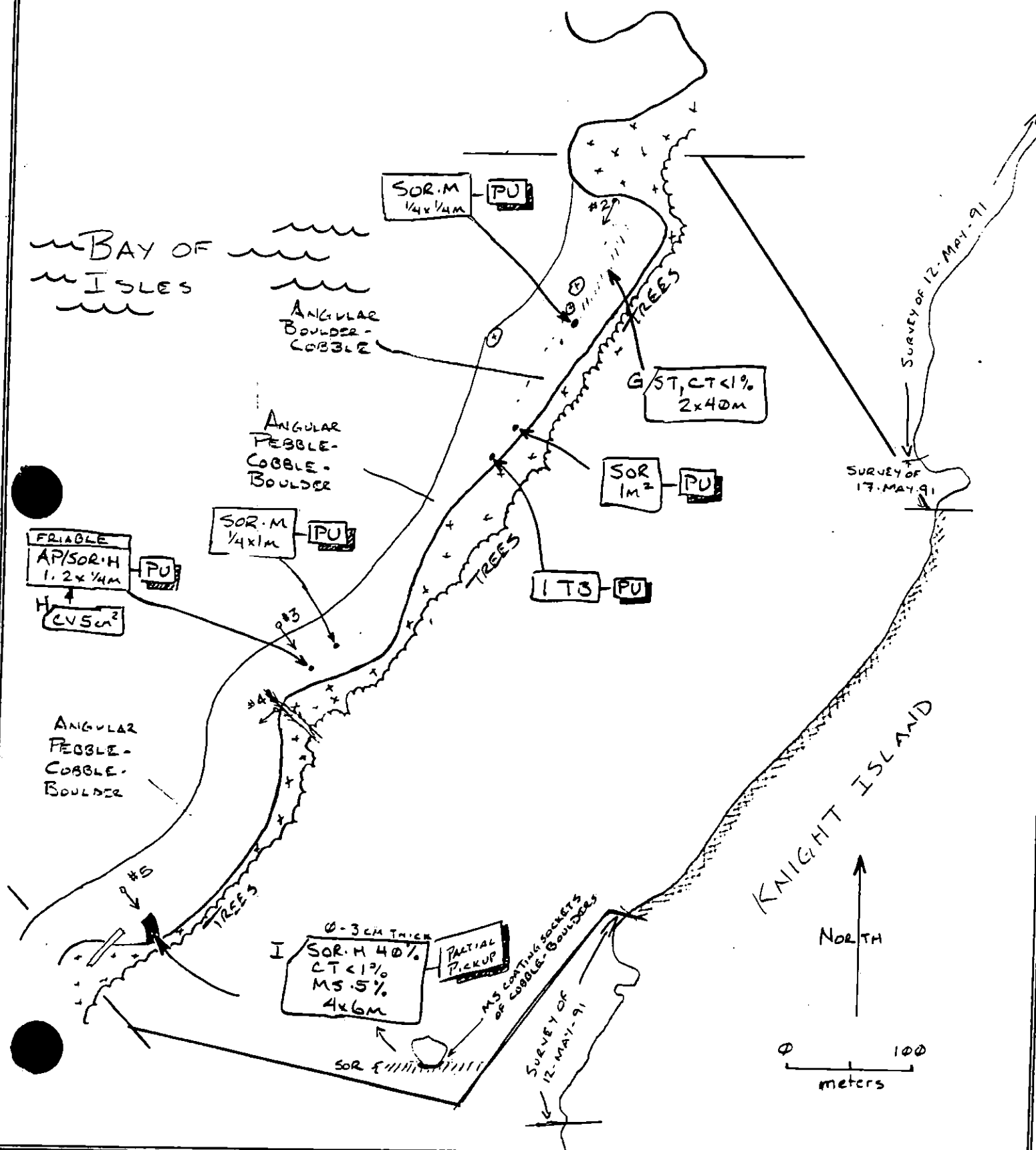
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

- 20m WIDE HIGH ANGLED BEACH WITH ANGULAR SEDIMENTS,
- HEAVY SOR UNDER & BETWEEN COBBLES & BOULDERS. MOUSSE FOUND IN SOCKETS OF COBBLE & BOULDERS. SOR IS TYPICALLY 3cm THICK



REVIEWED 19 18 JUN

KNØ15-A
ADDENDUM
OG SKETCH MAP
13-JUN-91
Ø655-Ø758
BRYAN TRIMM



REVISED 6 JUN

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 06 DATE 6/13/91
 SEGMENT # KN 015 TIDAL HEIGHT (Range) -2.5 ~ -1.5'
 DIVISION A BIOLOGIST D. McCORMICK
 SEA STATE 0.0' WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

Oiling area (G) (Stems coat) This steep-angled beach has an abundance of surface macrofauna high into the UITZ, including barnacles, littorine snails, limpets, mussels, & *Fucus*. The oiling conditions are light; no oil-impacted benthos was observed at G or downslope to the lower ITZ. Heavy recruitment by all of the indicator species is evident at all elevations on this beach.

Area (H) Same abundant recruitment observed here as in "G" above. New settlement observed on undersides of boulders & cobbles also; juvenile star fish (*Leptasterias*) were common in the LITZ; egg cases of the carnivorous snail *Nucella* were seen on undersides as well. Amphipod-like blemies were fairly common here. Lower ITZ had a Diatom mat/blue green algal cover over much of the substrate. Overall surface benthos cover was nearly 100% in the LITZ 30-50% cover in the M-UITZ. Clam shells littered the LITZ throughout the subdivision including butter (*Saxidomus*) and little neck (*Potamocorbula*) clams.

(I) HSOR CT + MS - oil in finer substrate, not impacting the barnacles, snails & limpets that occur primarily on the larger cobbles & boulders, and is definitely not impacting the benthos downslope where a diverse and dense algal & faunal community occurs. Algal spp. include *Laminarians*, *Costateles*, *Ulva*, *Ralfsia*, *Sargassum*, encrusting pinkish. Subtidally, eelgrass beds were seen throughout the subdivision; herring were seen in the nearshore area, as well as 2 species of sea stars, (*Derasterias imbricata* & *Pycnopoda helianthoides*) which were common.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	Herring
Seabirds	—	—	eel blemies
Waterfowl	—	—	
Gulls/Kittiwakes	—	—	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	—	—	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	/	/	
Pinnipeds (specify)	/	/	
Marine Mammals (specify)	/	/	

Shoreline subdivision map showing important biological features attached.

Reviewed MB 6/17/91

BIO MAP
D. Mc Cormick
6/13/91

KN015-A
ADDENDUM
SKETCH MAP
13-JUN-91
0655-0758

Lion's Mane
Jellyfish (*Cyanea capillata*) abundant in the Bay

BAY OF
ISLES

ANGULAR
BOULDER-
COBBLE

ANGULAR
PEBBLE-
COBBLE-
BOULDER

Herring in
the nearshore
eelgrass beds

Dense +
diverse algal cover
throughout subdivision
in LITZ

ANGULAR
PEBBLE-
COBBLE-
BOULDER

Sea stars
(*Dermasterias* +
Prenopoda) common
in the subtidal

barnacles (spat + adults)
Extend to the UITZ; strong
recruitment of mussels, littorines
and limpets - most abundant in the
mid-to-lower ITZ, but common SURVEY of
in the UITZ adjacent to ST + CT 17 MAY 91
Black lichen extensive throughout
entire subdivision in UITZ.
No obviously oil-impacted biota at G

Saxidomus (butter clams) + *Prototheca* (little-
neck clams) shells litter most of the
LITZ

Same conditions as G above for UITZ biota
mid-to-lower zones have moderate to dense
cover of surface macrofauna. Beneath
cobble + boulders: eel blennies, brooding
starfish (also many juveniles), amphipods, *Nucella*
egg cases. Blue-green algae + diatom
mats cover large areas of LITZ.

Area of heaviest oiling. Bio in immediate
vicinity of oil include sparse littorines,
limpets and barnacles, but most of these
were on the tops of larger cobbles and
boulders rather than within the
oil-soaked smaller sediments.
Oligochaete worms within or in
close proximity to oil here.

KNIGHT ISLAND

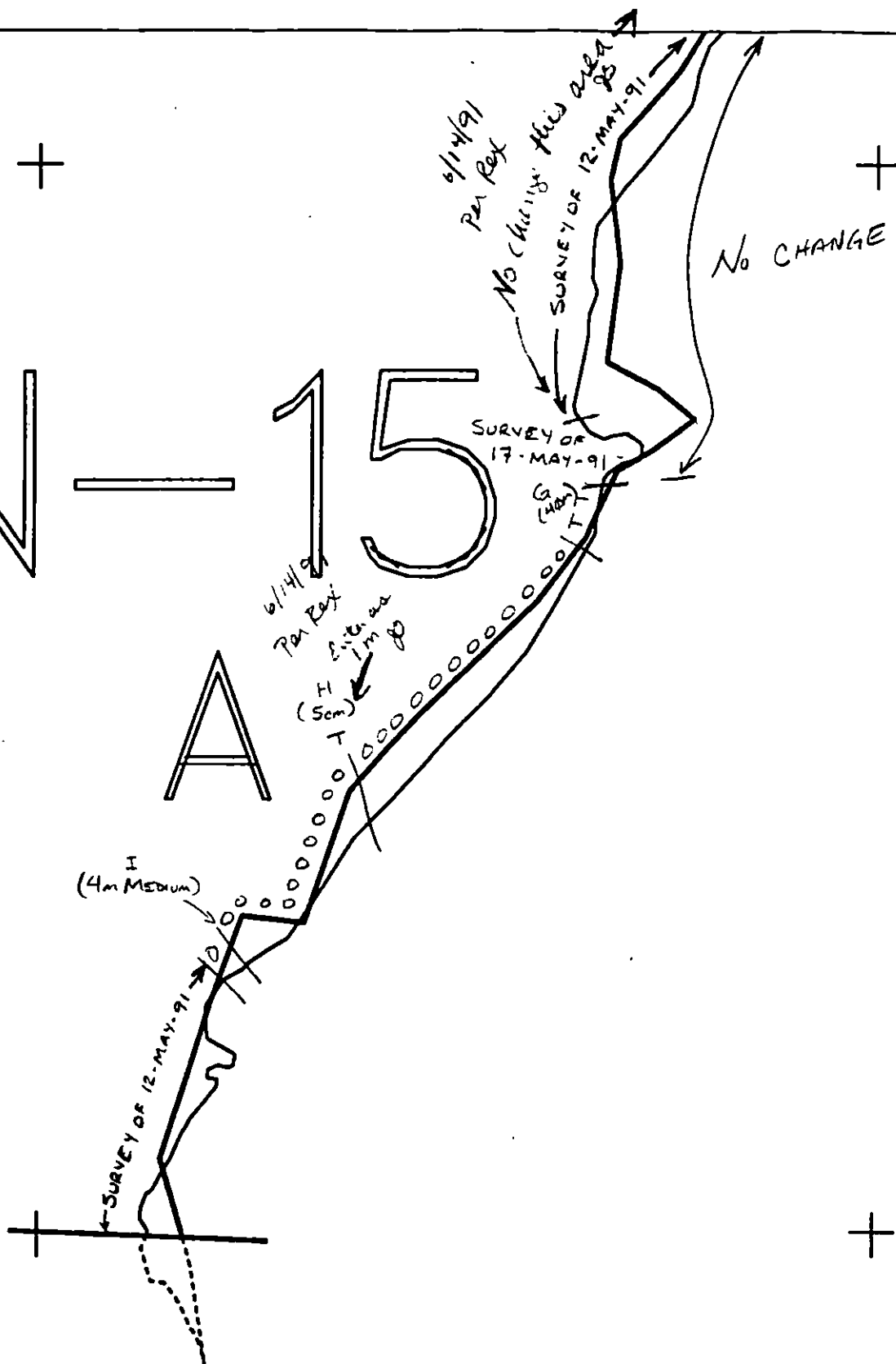
NORTH

0 100
meters

Reviewed MB 6/17/91

N-15

A



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0015 A

ADEC Subsegment Length: 1180m

METERS

0 100 200

AK State Plane Zone 4
ktn0015a



Subdivision Field Map

Map Key: KN1KN0015Aa

Name: TRIMM

ADDENDUM TO 12 & 17-MAY-91

Date: 13-JUN-91

Date Entered:

SURFACE OIL CATEGORY MAP

+

KN-17

A

KN-16

A

+

Survey of 12-MAY-91

+

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

KN0015 A

ADEC Subsegment Length: 1180m
METERS

0 100 200

AK State Plane Zone 4
kn0015ab



Subdivision Field Map

Map Key: KNKN0015Ab

Name: TRIMM

ADDENDUM TO 12 & 17 MAY-91

Date: 13 JUN-91

Date Entered:

SURFACE OIL CATEGORY 1 MAP

1991 MAYSAP EVALUATION

SEGMENT: KN 015 SUB: A REGION: PWS SURVEY DATE: 5/12/91

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. THREE SEGMENT KN-0015 SUBDIVISION A DATE 5/12/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley☐ NTR ☒ TREATMENT RECOMMENDED

- RESURVEY AREA NOT SURVEYED DUE TO EAGLES.

MANUAL REMOVAL OF 3x6M AREA OF SOR/H. OIL WOULD BE VERY EASILY COLLECTED USING HAND TROWELS OR SHOVELS.

EXXON

NAME Jon Carnecki SIGNATURE Jon Carnecki☒ NTR There is an area which was not surveyed due to Eagle constraints. Above only a small amount of oil sign were south of the zone and a small protected area in the north which has angular cobble cover over it. I don't feel that the 2mm or less patch of 50% or less is any problem.

LANDMANAGER

NAME E. Heltness OF CAC SIGNATURE Edward E. Heltness☐ NTR Area that was surveyed showed a particular spot where oil markings were dense, but removable.USCG/NOAA USCG NOAANAME Peter Gleason / Jeffrey Dahlin SIGNATURE Peter Gleason☐ NTR 3x6 m area with less than 50% surface coverage on south end of segment, which was manually removed. 20-25% remain at this time EGD.I concur with above statement per

KN-15A was originally surveyed on 12 May but 400m was unsurveyed due to an eagle's nest constraint. Following discussions with Doug Stein of USF&S, an attempt was made to survey this unsurveyed segment because no eagle's nest could be seen during the previous survey.

The skiff driver was deputized as eagle monitor and the crew went ashore at 0910hr and surveyed until 0920 when the monitor reported that the female had left the nest; the Team left the site immediately.

It is unlikely that any additional survey will be possible until after the nesting period ends.

As marked as having AP during the ASAP survey showed only a few pathies, which were collected.

The only remaining oil was small areas of coat on bedrock and larger cobbles.

A large portion of the segment still remains unsurveyed.

PAGE OF

ADDENDUM to 12 May Survey

SEGMENT KN-15

BIO STOKER

SUBDIVISION A

LANDMANAGER Haltress for CAC

DATE 5 / 17 / 91

XXON Czarnecki

USCG/NOAA Gleason/Dahlin

TIME 9:10 to 9:20

TIDE LEVEL -0.5 ft. to -1.75 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 65 m

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

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 40 m NO 25 m US 625 m ^{remains}

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

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

addendum to survey of 12 May when left due to eagle nest.
Returned to finish, but again had to leave as eagle left
the nest.

written from sketch map 5.26.9, 10

N-15

A

(C)
ST/P
0.2x60
RESIDUAL
DRIPLINE

UNSURVEYED
STEED
CLIFF

SKIFFED

(F) see attached
addendum

UNSURVEYED DUE TO EAGLES

PICKED UP

(B)
SOR/H 45%
6x3

(A)
SOR/H/P
1x2

*19

0945h

WALKED

0935h

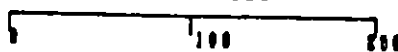
SKIFFED
(STEED CLIFF)

*18



KN0015 A

METERS



AK State Planning Zone 4
KN0015A

Subdivision Field Map

Map Key: KN1KN0015Aa

Name: HARPER

Date: 12 MAY 91

REVISED FIELD NOTES
1 of 2

OG 2 of 7

REVISION 5, 11/1/91

KN-16

KN-17

A

50R/H/S
1x3

CT/S
0.5x20

21*

1010hr

WALKED

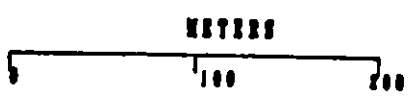
SKIFF

NO

(P)

KN0015 A

Subdivision Field Map
Map Key: KNKN0015A6
Name: HARPER
Date: 12 MAY 91



AK State Plane Zone 4
GCSNAD83

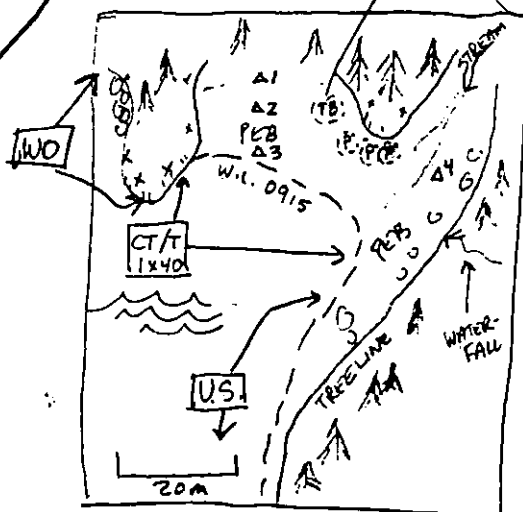
REVISED FIELD NOTES
2 of 2

EG reviewed 5/14
OG 347
reviewed 5/14

N-15

A

STILL UNSURVEYED



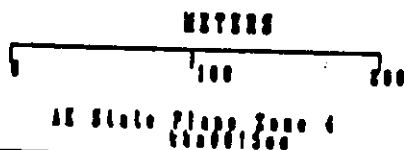
(F)

PITS

Δ1 UTR 20
PC/SG N.O.
WT 0
Δ2 UTR/MTR 20
P/SG N.O.
Δ3 LTR 20
P/SG N.O.

Δ4 UTR 10cm (kick pit)
P/SG w ong N.O.

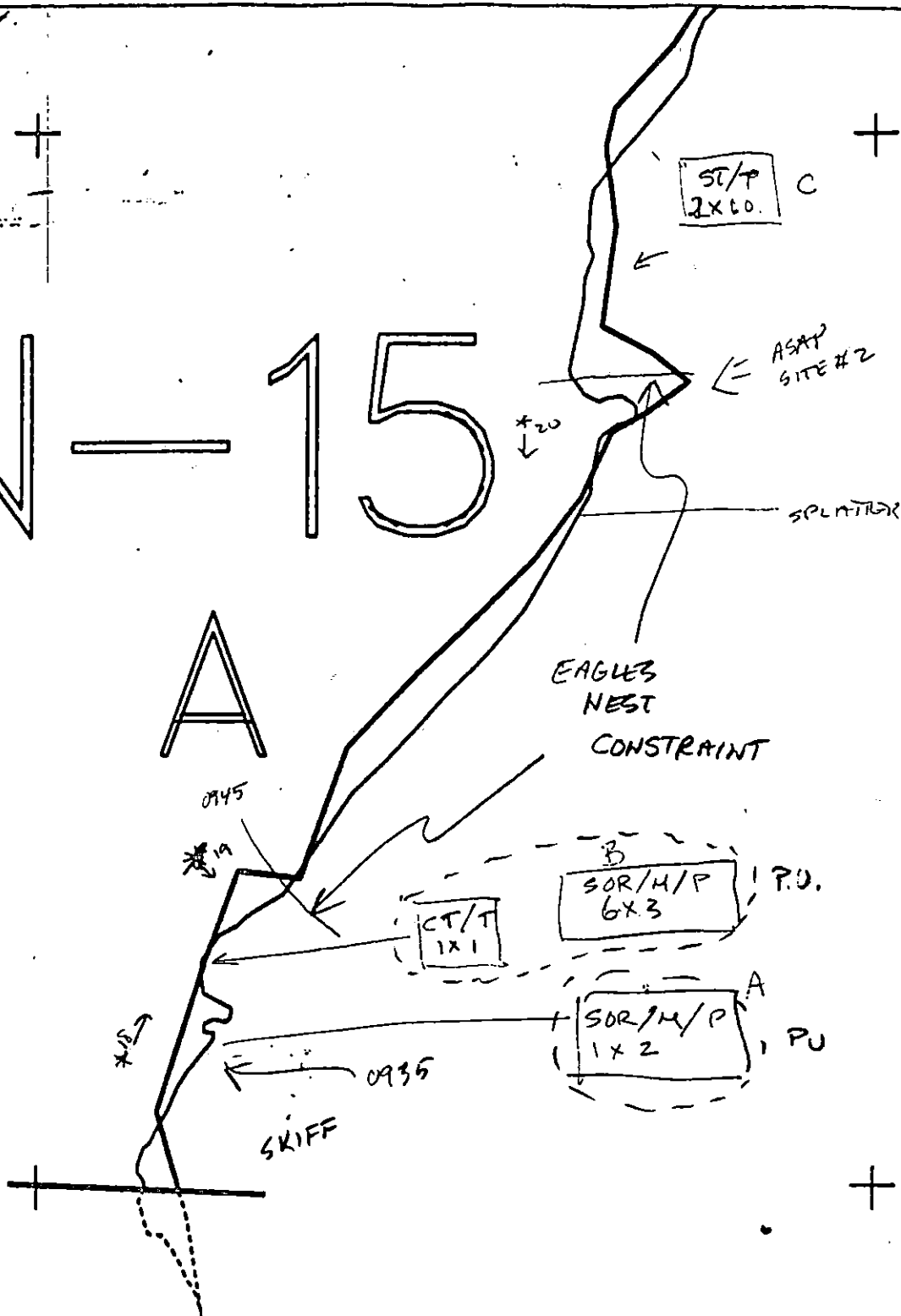
KN0015 A



Subdivision Field Map
Map Key: KN00015A
Name: HARPER
Date: 17 MAY 91
- Addendum -

reviewed 5.20.91

N-15



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

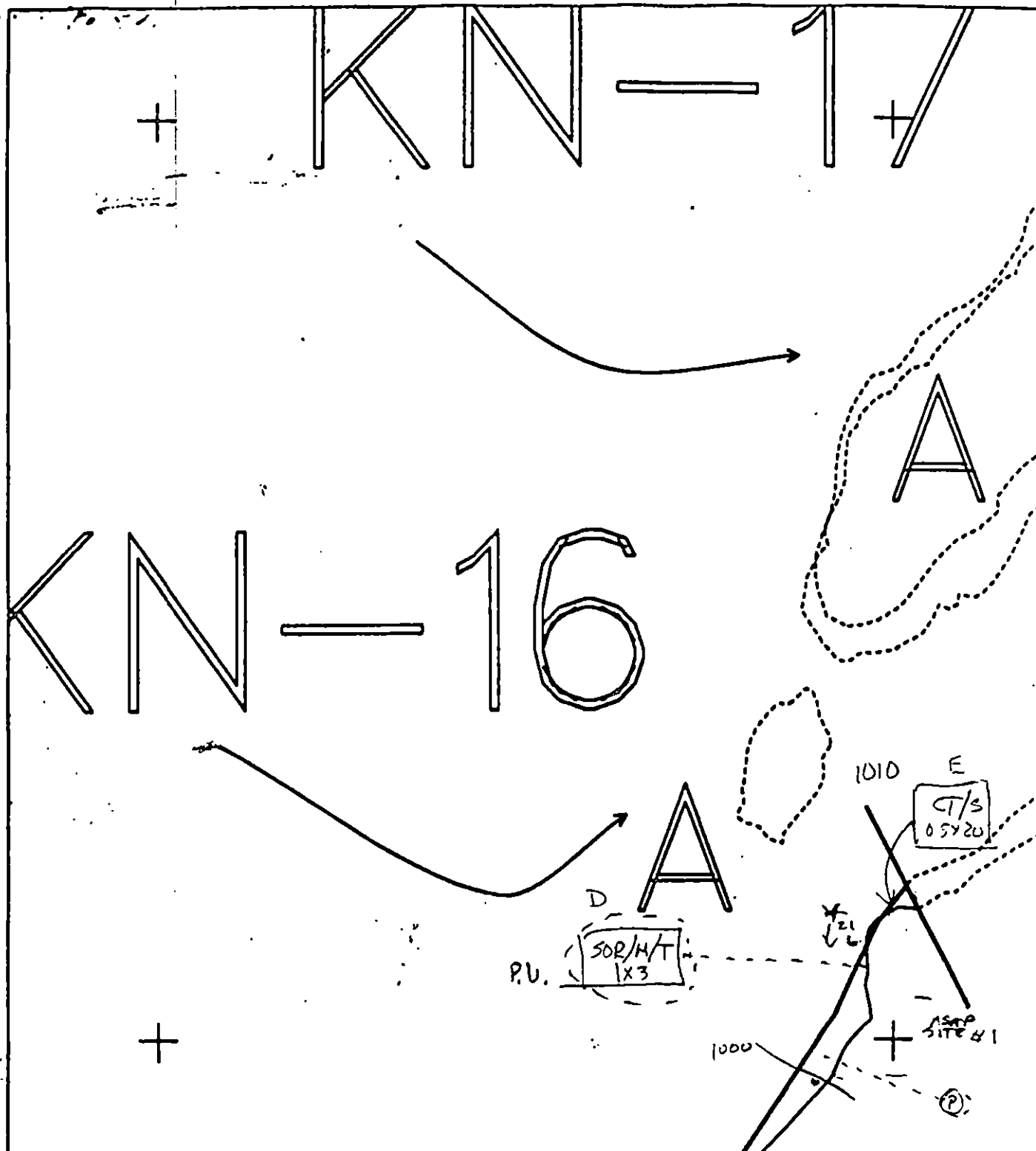
KN0015 A
 ADEC Subsegment Length: 1180m
 METERS
 100 200
 AK State Plane Zone 4
 48001500



Subdivision Field Map
 Map Key: KNKN0015Aa
 Name: HARPER
 Date: 12 MAY 91
 Date Entered:

ORIGINAL FIELD NOTES
 1 of 2

25 reviewed sim
 revised sim
 OG bcf 7



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

KN0015 A
 ADEC Subsegment Length: 1180m
 METERS
 0 100 200
 AK State Plane Zone 4
 82N0015ab



Subdivision Field Map
 Map Key: KNKN0015Ab
 Name: HARPER
 Date: 12 MAY 91
 Date Entered:

ORIGINAL FIELD
 NOTES 2 of 2

8' Contour 5'
 revised 5/91
 06 7 of 7

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 13 DATE 5/12/91
 SEGMENT # KN 015 TIDAL HEIGHT(Range) 4-6'
 SUBDIVISION 1 BIOLOGIST STAKOR
 SEA STATE 0-1' WIND SPEED/DIRECTION E 5-10
 PHOTOGRAPHS: ROLL # FRAME #

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

Low to moderate energy beach of cobble/boulder with bedrock headlands.

Biota extends well into upper intertidal (barnacles, Littorina, limpets); increases downslope in both diversity and abundance. Characterized in general by patchy and moderately dense new-growth Fucox, dense barnacles and spat, patchily dense Mytilus (both attached and interbedded - many small individuals), dense Littorina (Numerous egg masses; dense clusters of tiny individuals), limpets (clusters of small individuals) and, in the mid intertidal, Nucella, Nereid worms, amphipods and Pagurus.

Central portion unobserved due to eagle nest constraint. No nest or eagles seen. Lower intertidal unobserved due to tide height.

Biota proximal to the minimal oil observed (area A-E) consists of sparse new-growth Fucox, sparse barnacles, sparse to moderately dense Littorina with egg masses, clusters of small limpets, Pagurus, and patchily dense interbedded and attached Mytilus. Dense interbedded Mytilus occur downslope from area B within the small cove.

Biota appears healthy, abundant, recovering well. If further cleanup is attempted, care should be taken to safeguard established biota. In particular, mussel beds such as at area B should not be trampled or disturbed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	Kittiwakes	4	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

1000000000

TEAM # 3 DATE 5/18/91
 SEGMENT # KN 15 TIDAL HEIGHT(Range) 0-1'
 SUBDIVISION A BIOLOGIST S. ToKor
 A STATE 1-2 WIND SPEED/DIRECTION E 10-15
 PHOTOGRAPHS: ROLL # FRAME #

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

Shoreline surveyed consists of moderate energy rock faces and angular cobble/boulder pocket beach.
 Biot on bedrock characterized by dense Fucus, dense barnacles and spat clusters of small limpets and Littorina, sparse patches of Mytilus.
 Biot on cobble/boulder consists of patchily dense Fucus, patchily dense barnacles and spat, patchily dense small limpets and Littorina (some egg masses), eel blennies, clusters of Nucella and scarlecia, and patches of interbedded Mytilus.
 Survey terminated because of cranky eagle.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 + nest	eel blennies
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.

N-15

A

▲ Active eagle nest

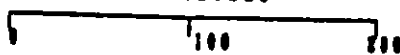
Dense mussel bed

3
SOR/H 45%
6x3



KN0015 A

METERS



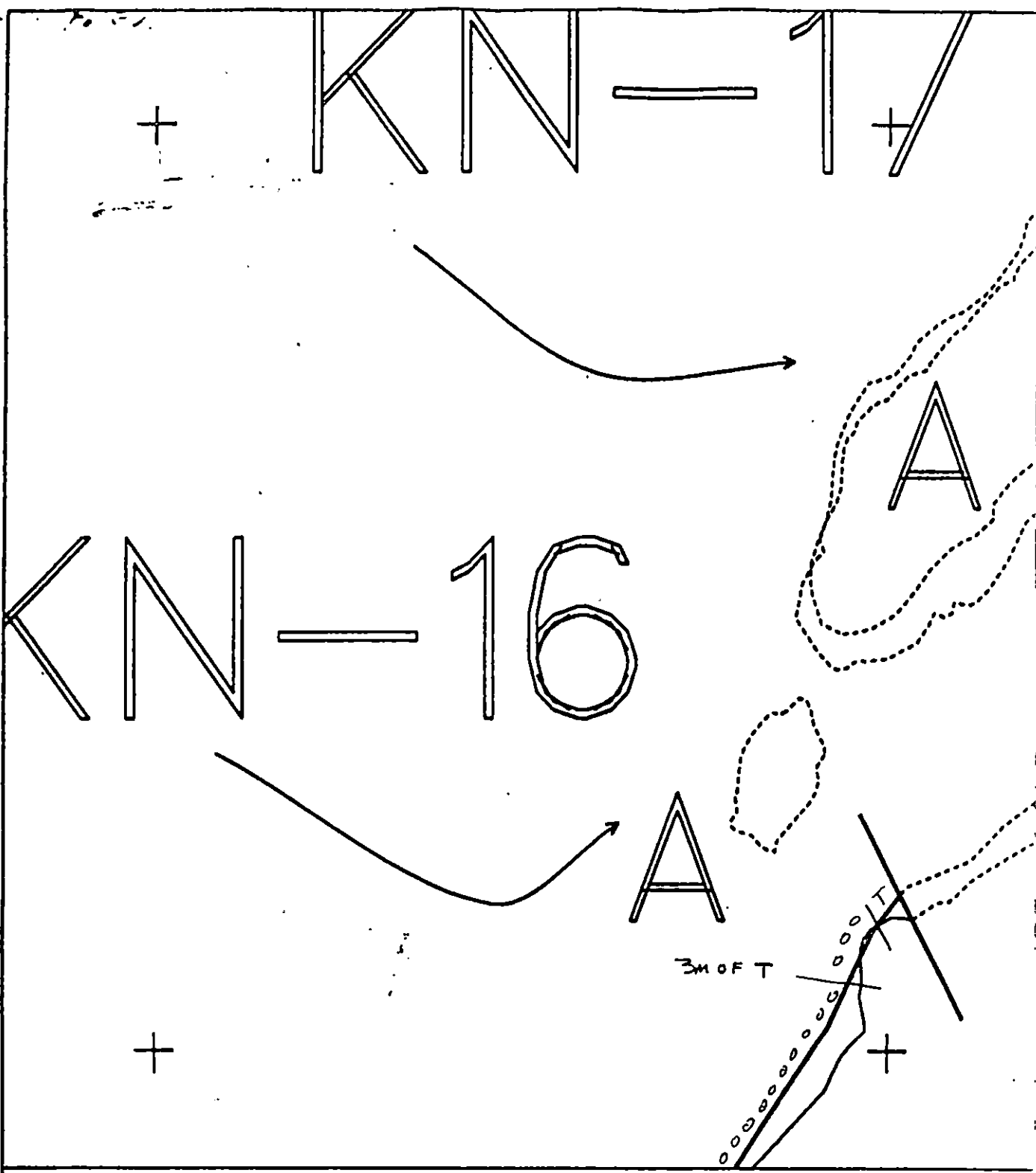
AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KNKN0015Aa

Name: S. Stokier

Date: 5/12/9



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

KN0015 A
 ADEC Subsegment Length: 1180m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0015ab



Subdivision Field Map
 Map Key: KNKN0015Ab
 Name: HARPER
 Date: 12 MAY 91
 Date Entered:

SURFACE OIL SUMMARY MAP
 1 of 2

Reviewed 5/14/91 K.C.
 Reviewed 5/14 OG Yaff

N-15

UNSURVEYED

EAGLE NEST

140 m very light
(addendum)

3m OF MGD. $\rightarrow$
2m of T

VS

UNSURVEYED
DUE TO
STEEP CLIFF

Narrow = 6cm
MEDIUM = 3m

$$V.L. = 2 + \cancel{60} + 3 + 20 = \overset{25}{\cancel{85}}$$

N.O. = 352

$$V.S. = 740m$$

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

KN0015 A

ADEC Subsegment Length: 1180m

METERS

AK State Plane Zone 4
htn9015a



Subdivision Field Map

Map Key: KN1KN0015Aa

Name: HARAR

Date: 12 may

Date Entered:

SURFACE OIL SUMMARY MAP
2 of 2

OG 5 of 7
Reviewed 5/14

SHORELINE EVALUATION

SEGMENT ST/ KN-15 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Treatment to be conducted prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS. Contact ADF&G and USFWS prior to treatment. Eagle nest (5T) - 3/1 to 6/1. Air approach to and from seaward only. Contact USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate. Additional segment constraints: herring spawning (2N) - 4/1 to 6/15. Restrict boat traffic to essential minimum. Contact ADF&G prior to treatment. Special use (6Y).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1180m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

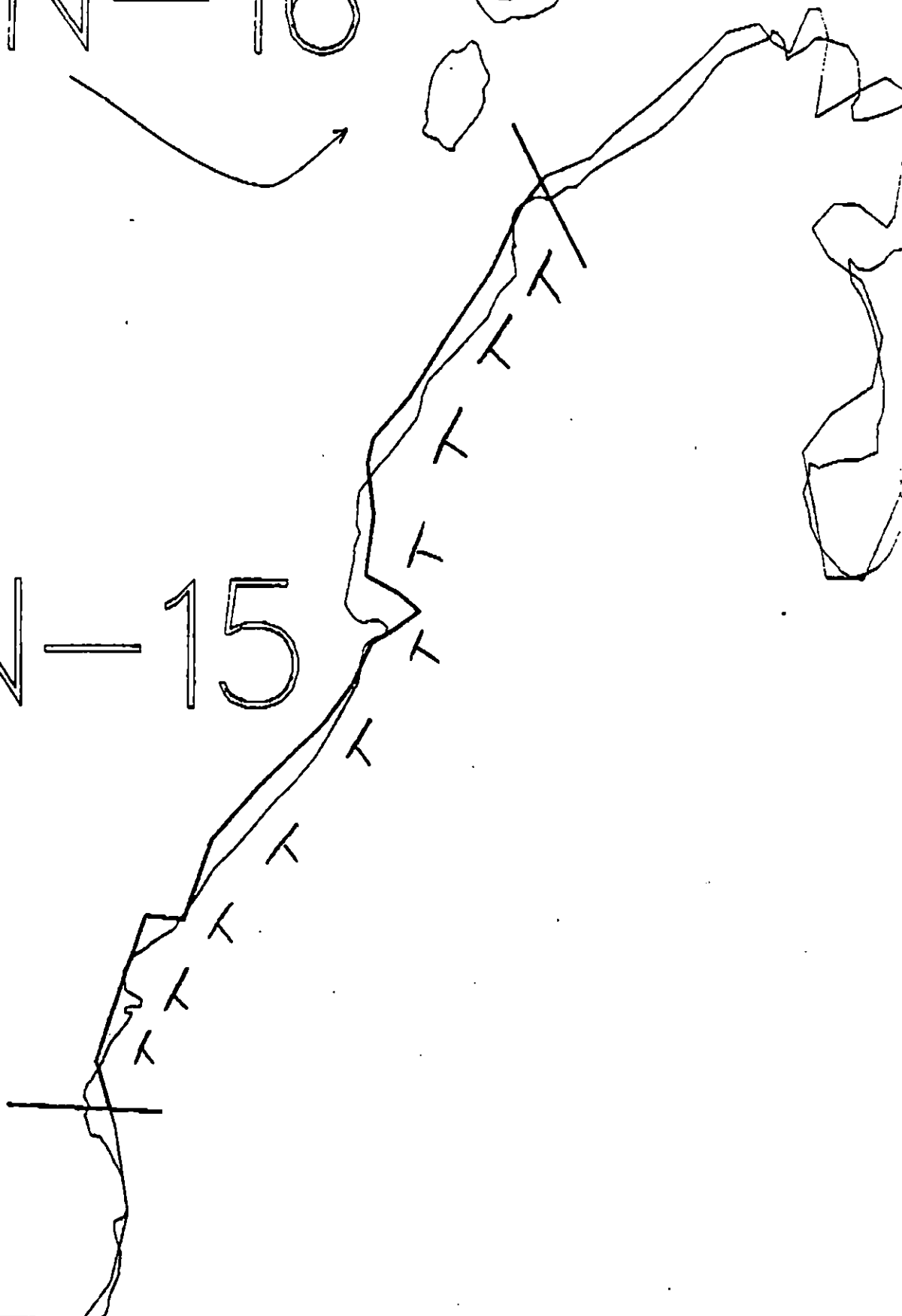
COMMENTS: Recommend removal of tarmat shown on attached sketch map and manual pick up of mousse patties, tar balls, and debris also shown on map. Work before 5/15 or 7/1 to 8/15 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90
ADEC AL KEMEN
EXXON ANDY TGA FOSC: DATE: 5-6-90
NOAA Burl Wescott
USCG G.A. REITER

KN-10

KN-15



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-15

Total Segment Length: 1180



Map Key: PWS-324

Name: K. Ramsey

Date: 4/2/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-15 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup and Tarmat Removal
More Than 400m From Active Nest

OPEN

Manual Pickup and Tarmat Removal
Less Than 400m From Active Nest

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

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

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

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active eagle nest in the adjacent Segment KN-24. Closed to manual pickup and tarmat removal less than 400m from active nest. No constraint to manual pickup and tarmat removal more than 400m from nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 6/04/90

ADEC Roy Morris

EXXON Amy

NOAA Joseph

USCG G.A. Reiter

FOSC

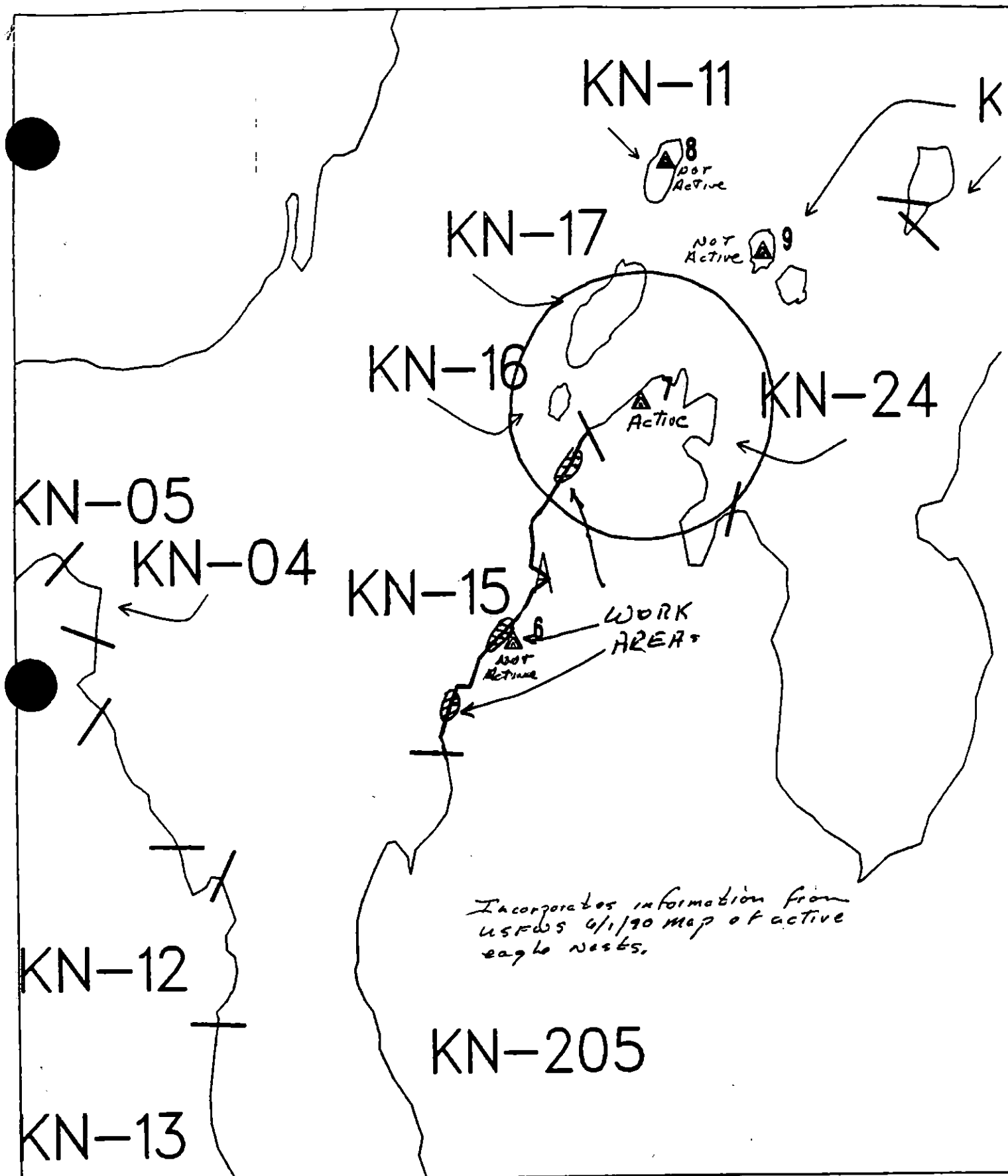
Date

6/4/90

Prepared by

Date

6/2/90





Exxon Company, USA
Map Key: KNI-KN-15
May 11, 1990

ECOLOGY MAP ^{6/2}
SEGMENT KN-15
 SUBDIVISION *A* (L of L)
 METERS
 0 385 770

★	Seabird Colony
▲	Eagle Nest

1 inch = 1264 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-15 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Treatment to be conducted prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS. Contact ADF&G and USFWS prior to treatment. Eagle nest (5T) - 3/1 to 6/1. Air approach to and from seaward only. Contact USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled biota and substrate. Additional segment constraints: herring spawning (2N) - 4/1 to 6/15. Restrict boat traffic to essential minimum. Contact ADF&G prior to treatment. Special use (6Y).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1180 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat shown on attached sketch map and manual pick up of mousse patties, tar balls, and debris also shown on map. Work before 5/15 or 7/1 to 8/15 based on constraints.

See addendum dated 6/2/90

TAG COMMENTS:

TAG APPROVAL DATE:

4/16/90
ADEC AL KEMEN
EXXON ANDY TGAZ FOSC: DATE: 5-6-90
NOAA Burt Wescott
USCG G.A. HEITER

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-15

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-15 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Treatment to be conducted prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS. Contact ADF&G and USFWS prior to treatment. Eagle nest (5T) - 3/1 to 6/1. Air approach to and from seaward only. Contact USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate. Additional segment constraints: herring spawning (2N) - 4/1 to 6/15. Restrict boat traffic to essential minimum. Contact ADF&G prior to treatment. Special use (6Y).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1180m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat shown on attached sketch map and manual pick up of mousse patties, tar balls, and debris also shown on map. Work before 5/15 or 7/1 to 8/15 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-15 SUBDIVISION: A DATE 4/2/90

CG
NAME MAURICE J. SHARP SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED COMMENTS ☒ TREATMENT SUGGESTED

ADEC
NAME S. FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED COMMENTS ☒ TREATMENT SUGGESTED

THIS SEGMENT HAS MOUSSE PADDIES → SCATTERED ALONG THE HITZ → RUNNING THE ENTIRE SEGMENT. SUGGEST MANUAL CLEAN-UP OF THESE MOUSSE PADDIES → IN THAT ONCE THE TEMPERATURE INCREASES THIS SPRING + SUMMER THE MOUSSE WILL SIT ON THE SURFACE OF THESE PADDIES CAUSING A POTENTIAL PROBLEM TO BIRD LIFE FEEDING ON THIS SHORELINE. A 10 MAN CREW COULD ACCOMPLISH THIS IN 2-4 HOURS OF WALKING ALONG THE SHORELINE PICKING UP THE PADDIES THAT ON AVERAGE ARE 2 METERS APART (BETWEEN DOCK ALSO PICK-UP OF THE 3M(L) X 4M(W) IS RECOMMENDED.

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

☐ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-15
 BIO G. Penin LAND REP M. Smith SUBDIVISION A 191
 EXXON S. Reid ADEC S. Ferguson TIME 7:30 to 6:00
 TEAM NO.: 4 TIDE LEVEL: 1 to 6 DATE 04/02/90
 EST. SUBDIVISION LENGTH: 1205 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 101 % B 30 % C 5 % P 2 % G 2 % S - % M - % V - %
 SLOPE: Long 5 % Hang 75 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 1205 m NO - m

SURFACE OIL

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

PAVEMENT: H (P) S 12 sq. m by 2 cm

PATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Pom Pom

#BAGS 1

Photographs: 1 oiled Pom Pom
1 Clean Pom Pom
 Roll No. -
 Frames -

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	1	2	3	4	5	6	7	8	SU	UI	MI	U		
<u>1</u>	<u>10</u>		X				<u>0-2</u>		X						X			X				<u>N</u>	<u>B, C Beddy</u>

COMMENTS This segment is a bedrock shoreline with boulder + some cobble beaches. There is a broken 1m wide coat along the mwl + thk which continues throughout the segment. You find the most prominent southern face of the verticle bedrock with broken lines + splash on the high an bedrx/boulder between. Bedrx outcrops. Mousse patties + a few scattered tar balls found the length of the seg. in pocket beaches + high angle boulder shoreline. the way from the water line to top of U.I.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST, KN-15 Subdivision A Date (mo / day / yr) 04/02/90
Time (24 hr) 1630 Biologist PENN

- (A) Substrate type and % of segments:
(1) Bedrock 61 (2) Boulder 30 (3) Cobble 5 (4) Pebble 4 (5) Sand - (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense 35 Moderate 50 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: -
Roll No. -
Frames -

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

OG K. D. Rosey
 SEGMENT ST KN-15
 SUBDIVISION A by
 DATE 4/2/90

ATCH MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo Location(s) — only 1 photo — Bedrock didn't allow any more
- ☒ Photo Location(s) — None

LEGEND

1-▲
 PIt - No Subsurface Oil

2-▲
 PIt - Subsurface Oil

CT/C
 Continuous Distribution

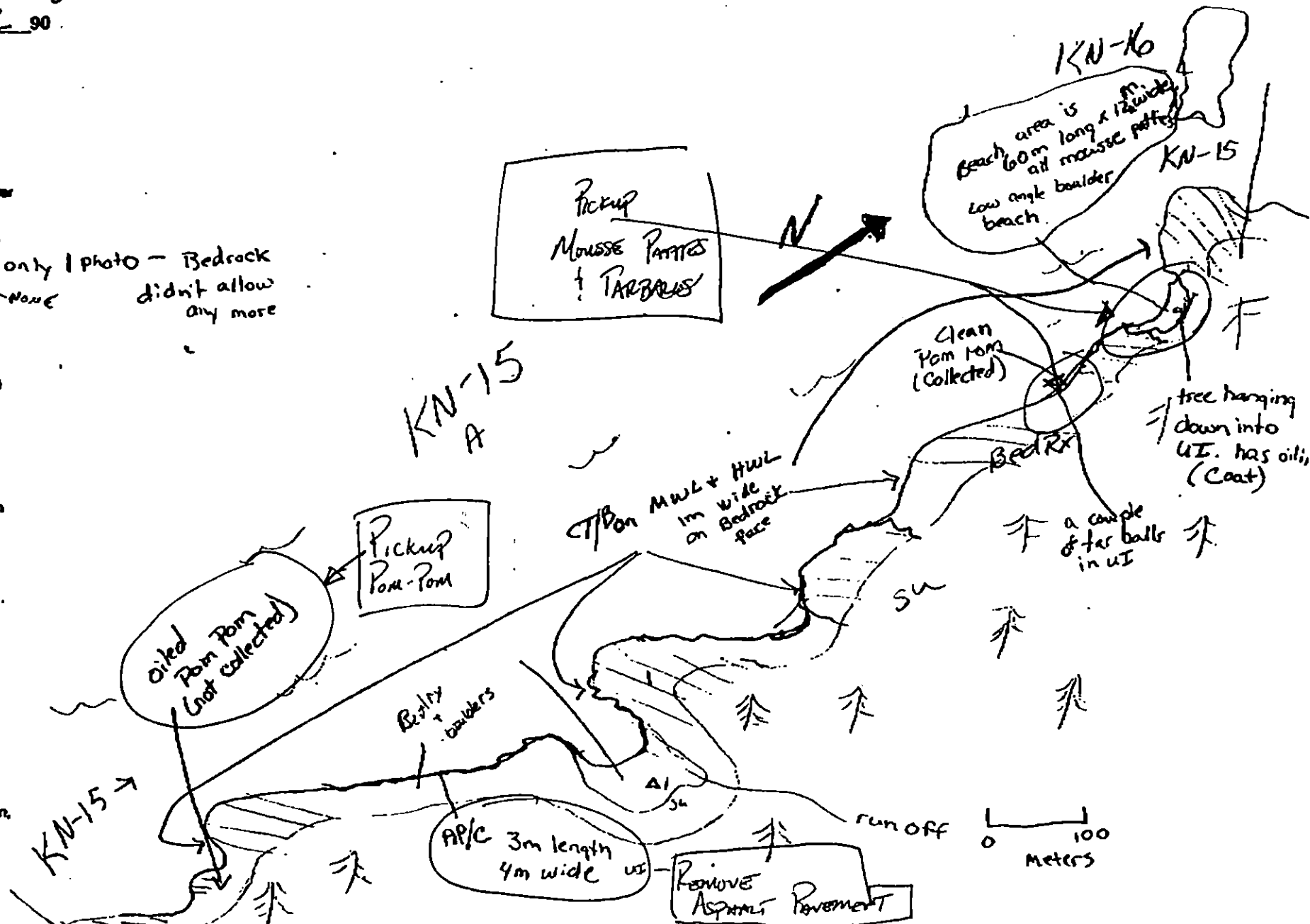
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

1-→
 Photo location, direction, and number

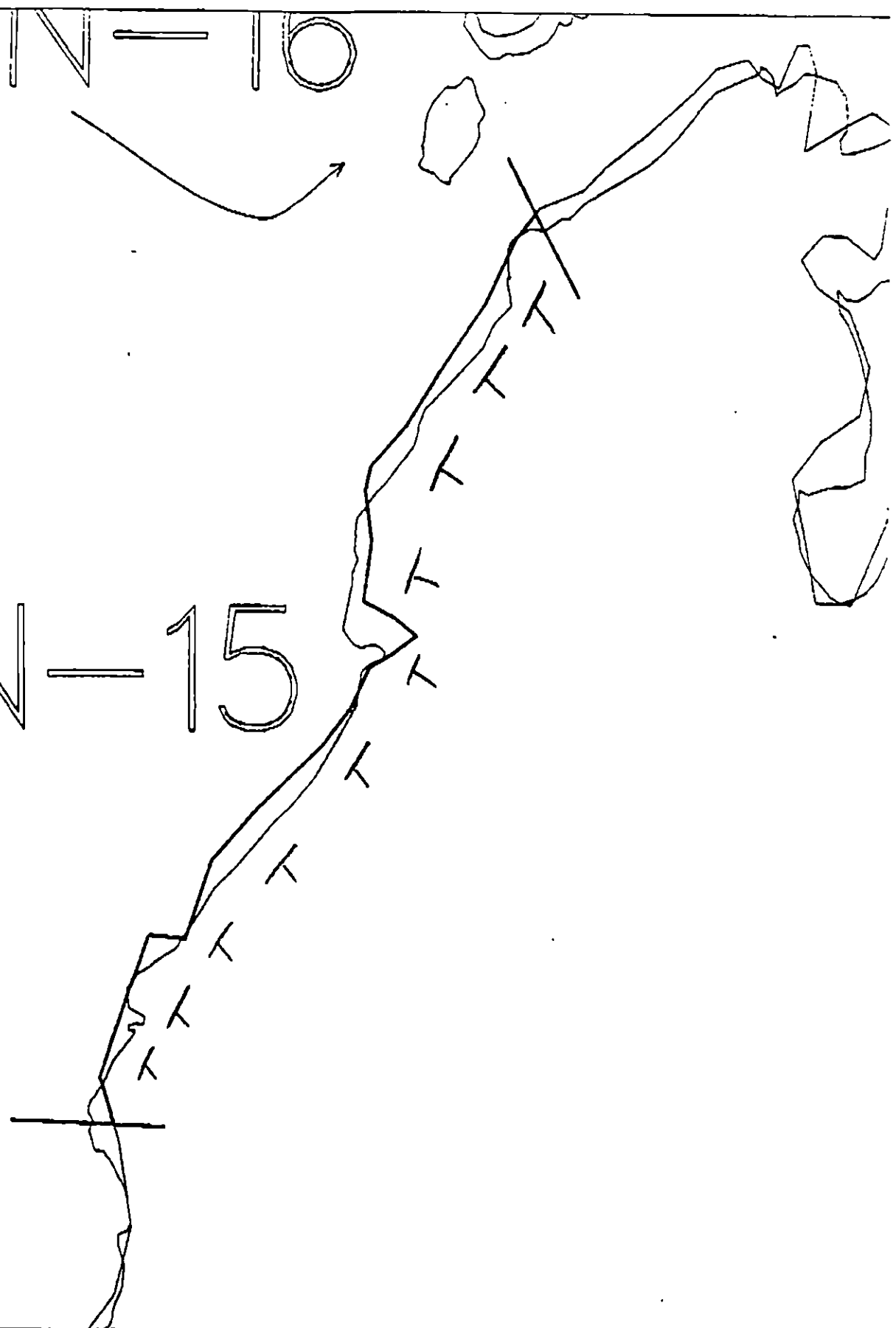


Oil Character Length (m): AP 3 PO 0 CV 0 CT 1205 ST 1205 MS 1000 PT 1000 TB 1 FL 0 NO 0

REVISION 03/24/90

KN-16

KN-15



XXXX Wide

/// Medium

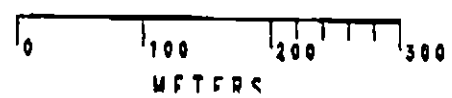
--- Narrow

TTTT Very Light

0000 No Oil

KN-15

Total Segment Length: 1180



METERS



Map Key: PWS-324

Name: K. Ramsey

Date: 4/2/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 015 SUB: A REGION: PWS SURVEY DATE: 5/12/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

INITIAL**TAG**

FOSC

TREATMENT REQUIRED (Y or N)

N

1

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT KN-0015 SUBDIVISION A DATE 5/12/91

ADEC

NAME Wesley Ghorumley SIGNATURE Wesley Ghorumley

☐ NTR ☒ TREATMENT RECOMMENDED

- RESURVEY AREA NOT SURVEYED DUE TO EAGLES.

MANUAL REMOVAL OF 3x6m AREA OF SOR/H. OIL WOULD BE VERY EASILY COLLECTED USING HAND TROWELS OR SHOVELS.

EXXON

NAME Jon Carmichael SIGNATURE Jon Carmichael

☒ NTR There is an area which was not surveyed due to Eagle constraints. There only a small amount of oil sign were south of the zone and a small disturbed area in the north which has angular cobble cover over it. I don't feel that the 2mm or less patch of 50% or less is any problem.

LANDMANAGER

NAME Ed Haltness OF CAC SIGNATURE Edward E. Haltness

☐ NTR Area that was surveyed showed a particular spot where oil markings were dense, but removable.

USCG/NOAA USCG NOAA

NAME Peter Gleason / Jeffrey Dahlin SIGNATURE Peter Gleason

☐ NTR 3x6 m area with less than 50% surface coverage on south end of segment, which was manually removed. 20-25% remain at this time G.D.S.

I concur with above statement JGD

ADDENDUM TO KN-15A

17 May 91

KN-15A was originally surveyed on 12 May but 400m was left unsurveyed due to an eagle's nest constraint. Following discussions with Doug Stein of USF&S, an attempt was made to survey this unsurveyed segment because no eagle's nest could be seen during the previous surveys.

The skiff driver was deputized as eagle monitor and the crew went ashore at 0910hr and surveyed until 0920 when the monitor reported that the female had left the nest; the Team left the site immediately.

It is unlikely that any additional survey will be possible until after the nesting period ends.

Areas marked as having AP during the ASAP survey showed only a few patches, which were collected.

The only remaining oil was small areas of coat on bedrock and larger cobbles.

A large portion of the segment still remains unsurveyed.

PAGE 1 OF 1

SEGMENT KN-15

SUBDIVISION A

DATE 12 MAY 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 3 m N 60 m VL 25 m NO 352 m US 740 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 3 - 11 FRAMES 18-21

NO PITS REQUIRED

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

OG COMMENTS: An estimated 700 m. of this segment was unsurveyed due to eagles nest constraints (400m) and "impenetrable" cliffs (300m).

Two pockets of SSM were observed and largely recovered
(Locations A-B; D). Surface sediments were pebble/cobble material.

Amazingly no pits were dug by the "85-pit/day team" indicating little likelihood of subsurface oil.

25 reviewed 5/14

revised 5/14/91 KLG

OG 1 of 7

PAGE ____ OF ____

written from sketch map 5.20.91 9y

N-15

A

(C)
ST/P
0.2x60
RESIDUAL
DRIPLINE

(NO)

UNSURVEYED
STEED
CLIFF

SKIFFED

(F) see attached
addendum

UNSURVEYED DUE TO EAGLES

PICKED UP

(B)
SOR/H 45%
6x3

(A)
SOR/H/P
1x2

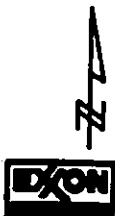
*19

0945h

WALKED

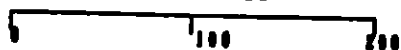
*18

0935h
SKIFFED
(STEED CLIFF)



KN0015 A

METERS



AK State Plane Zone 4
GCS NAD83

Subdivision Field Map

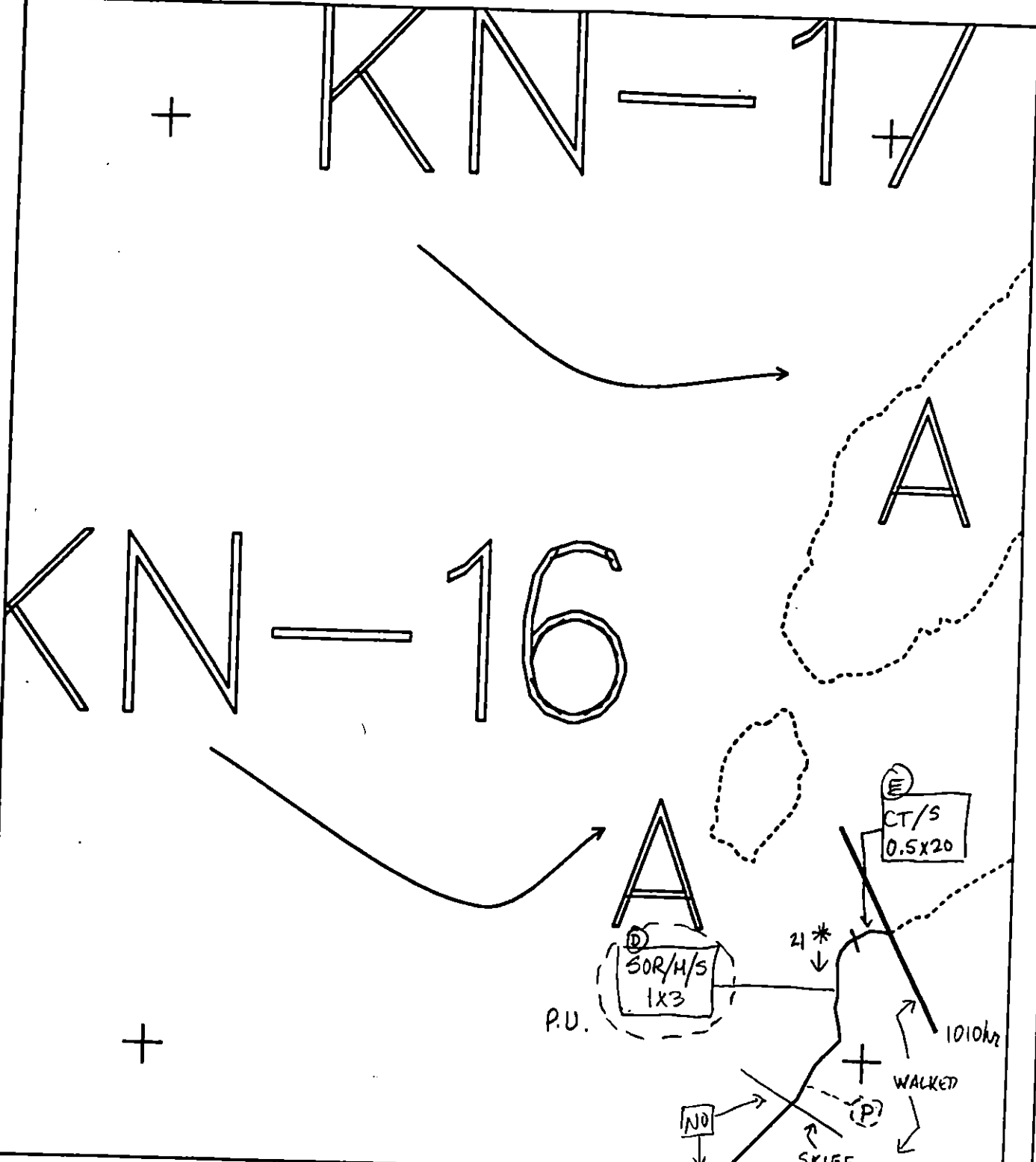
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Name: HARPER

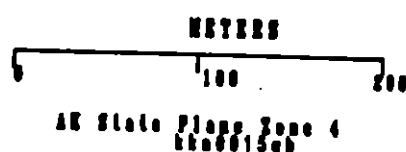
Date: 12 May 91

REVISED FIELD NOTES
1 of 2

OG 2 of 7
reviewed 5/14/91 KG



KN0015 A



Subdivision Field Map
 Map Key: ENR0015AB
 Name: HARPER
 Date: 12 MAY 91

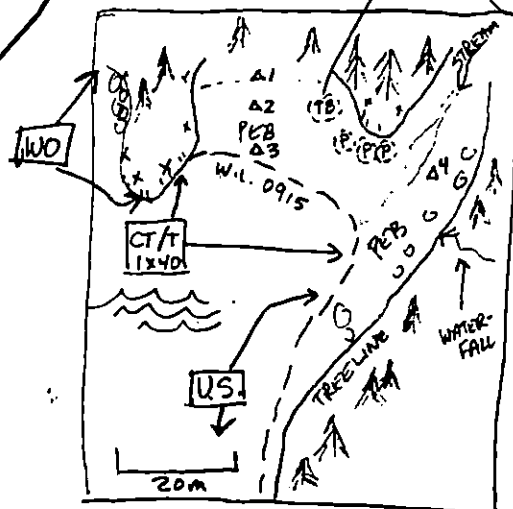
REVISED FIELD NOTE 3
 2 of 2

EG reviewed 5/14
 OG 3 of 7
 reviewed 5/14/91 KCG

N-15

A

STILL UNSURVEYED



(F)

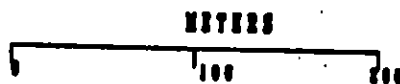
Pts

Δ1 UTR 20
PC/SG N.O.
WT. 0
Δ2 UTR/MTR 20
P/SG N.O.
Δ3 LTR 20
P/SG N.O.

Δ4 UTR 10cm (KICK PT)
P/SG w ong N.O.



KN0015 A



AK State Planning Zone 4
66001500

Subdivision Field Map

Map Key: KN0015A

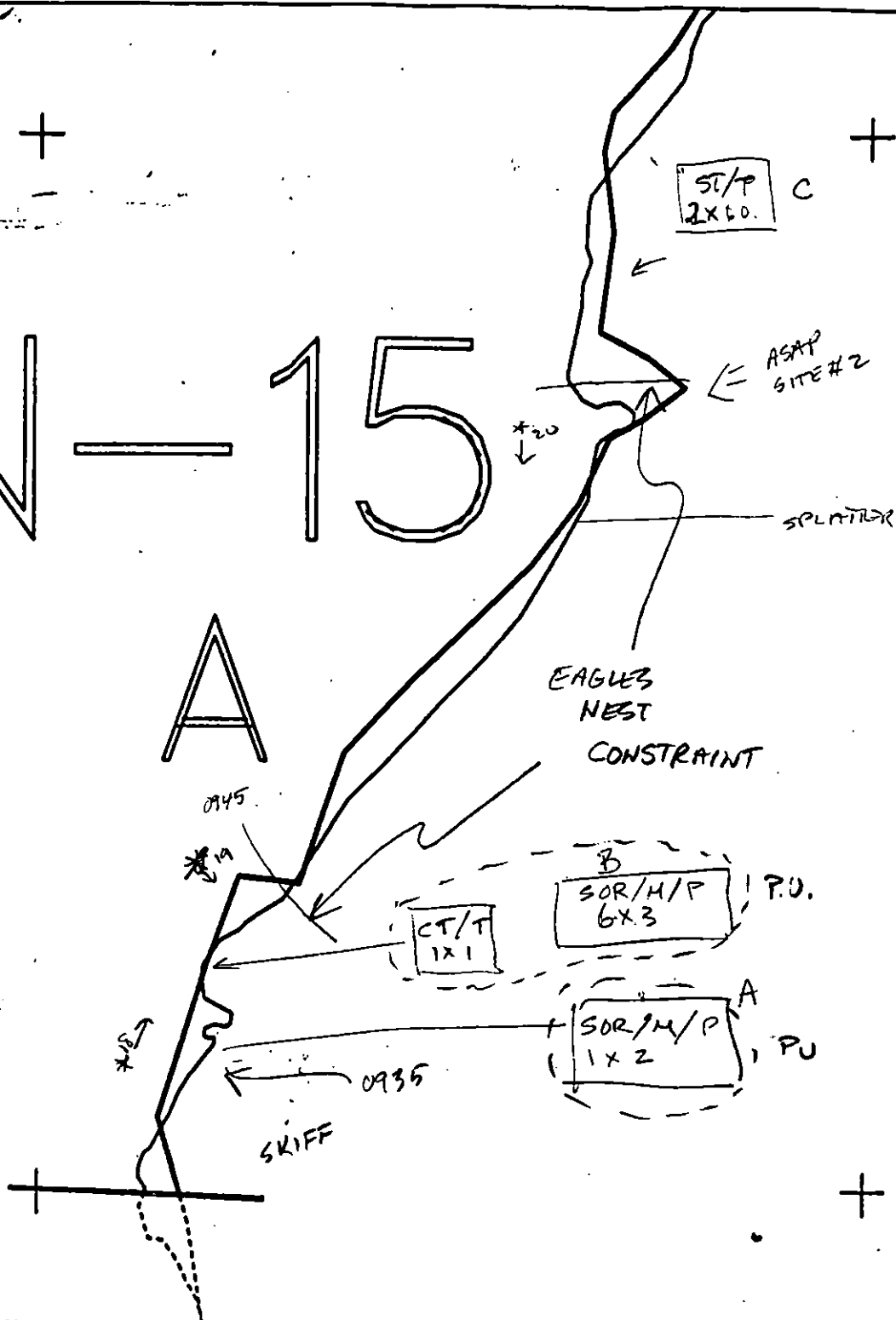
Name: HARPER

Date: 17 MAY 91

- Addendum -

reviewed 5.20.91 g

N-15



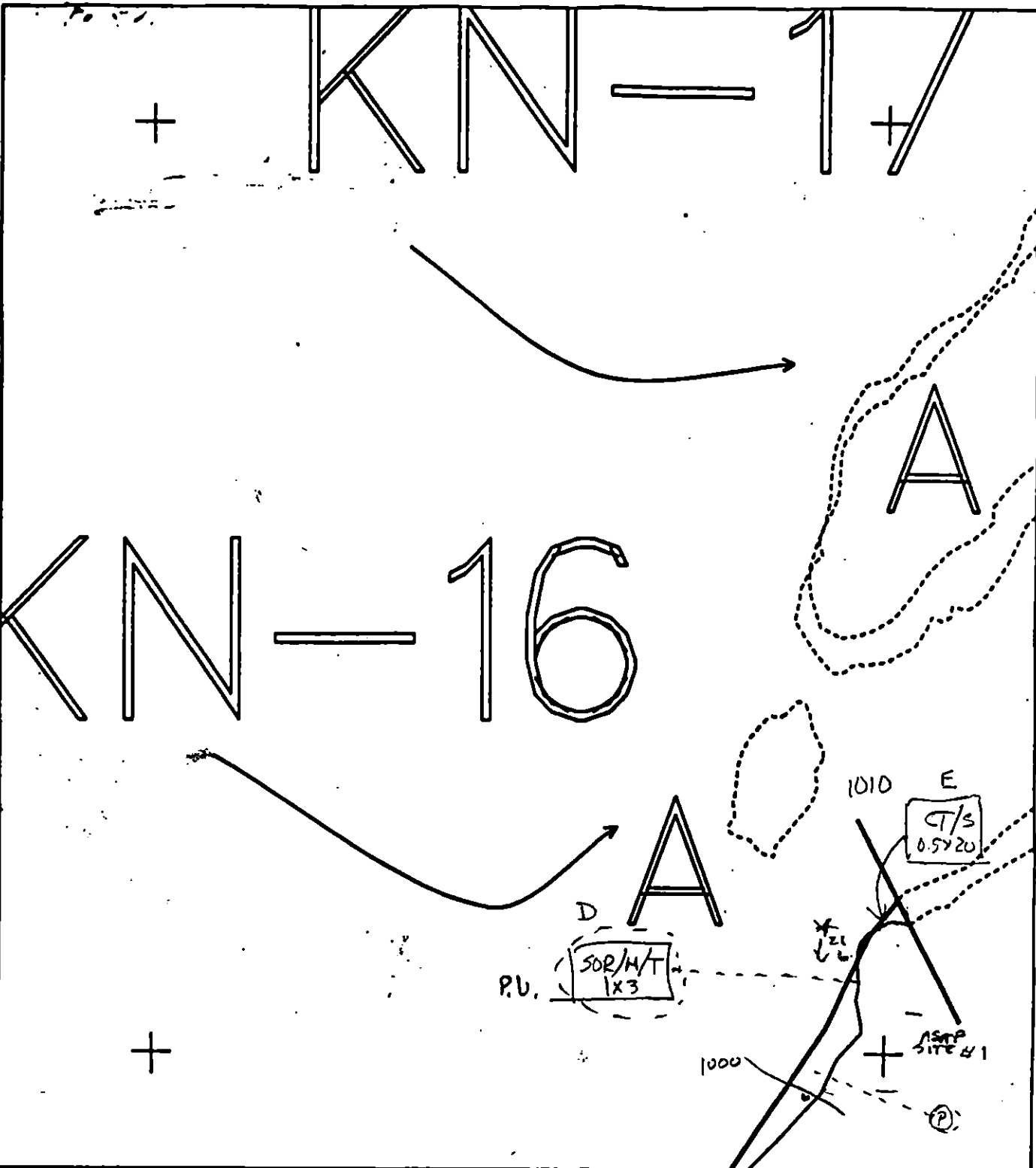
XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

KN0015 A
 ADEC Subsegment Length: 1180m
 METERS
 0 100 200
 AK State Plane Zone 4
 66001500

Subdivision Field Map
 Map Key: KNKN0015Aa
 Name: HARPER
 Date: 12 MAY 91
 Date Entered:

ORIGINAL FIELD NOTES
 1 of 2

26 reviewed shv
 raised initial ke
 OG bcf 7



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

KN0015 A
ADEC Subsegment Length: 1180m
METERS
0 100 200
AK State Plane Zone 4
kn0015Sub



Subdivision Field Map
Map Key: KNIKN0015Ab
Name: HARPER
Date: 12 MAY 91
Date Entered:

ORIGINAL FIELD
NOTES 21/2

8 reviewed 5/11
revised 5/11/21 KG
OG 7 of 7

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 13 DATE 5/12/91
 SEGMENT # KN 015 TIDAL HEIGHT (Range) 4-6'
 SUBDIVISION A BIOLOGIST STAKOR
 SEA STATE 0-1' WIND SPEED/DIRECTION E 5-10
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Low to moderate energy beach of cobbles/boulder with bedrock headlands.

Biota extends well into upper intertidal (barnacles, Littorina, limpets); increases downslope in both diversity and abundance. Characterized in general by patches and moderately dense new-growth Fucus, dense barnacles and SPAT, patchily dense Mytilus (both attached and interbedded - many small individuals), dense Littorina (numerous egg masses; dense clusters of tiny individuals), limpets (clusters of small individuals) and, in the mid intertidal, Nucella, Nereid worms, amphipods and Pagurus.

Central portion unobserved due to eagle nest constraint. No nest or eagles seen. Lower intertidal unobserved due to tide height.

Biota proximal to the minimal oil observed (areas A-E) consists of sparse new-growth Fucus, sparse barnacles, sparse to moderately dense Littorina with egg masses, clusters of small limpets, Pagurus, and patchily dense interbedded and attached Mytilus. Dense interbedded Mytilus occur downslope from area B within the small cove.

Biota appears healthy, abundant, recovering well. If further cleanup is attempted, care should be taken to safeguard established biota. In particular, mussel beds such as at area B should not be trampled or disturbed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	<u>Kittiwakes</u>	<u>4</u>	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3	DATE 5/18/91
SEGMENT # KN 15	TIDAL HEIGHT(Range) 0-1'
SUBDIVISION A	BIOLOGIST Stokor
SEA STATE 1-2'	WIND SPEED/DIRECTION E 10-15
PHOTOGRAPHS: ROLL #	FRAME #

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

Shoreline surveyed consists of moderate energy rock faces and angular cobble/boulder pocket beach.

Biota on bedrock characterized by dense *Fucus* dense barnacles and spat clusters of small limpets and *Littorina*, sparse patches of *Mytilus*.

Biota on cobble/boulder consists of patchily dense *Fucus*, patchily dense barnacles and spat, patchily dense small limpets and *Littorina* (some egg masses), cal blennies, clusters of *Nucella* and scarlecia, and patches of interbedded *Mytilus*.

Survey terminated because of cranky eagle.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 + nest	cal blennies
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Bro Map

N-15

A

▲ Active eagle nest

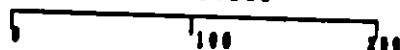
Dense mussel bed

50R/H 459
6x3



KN0015 A

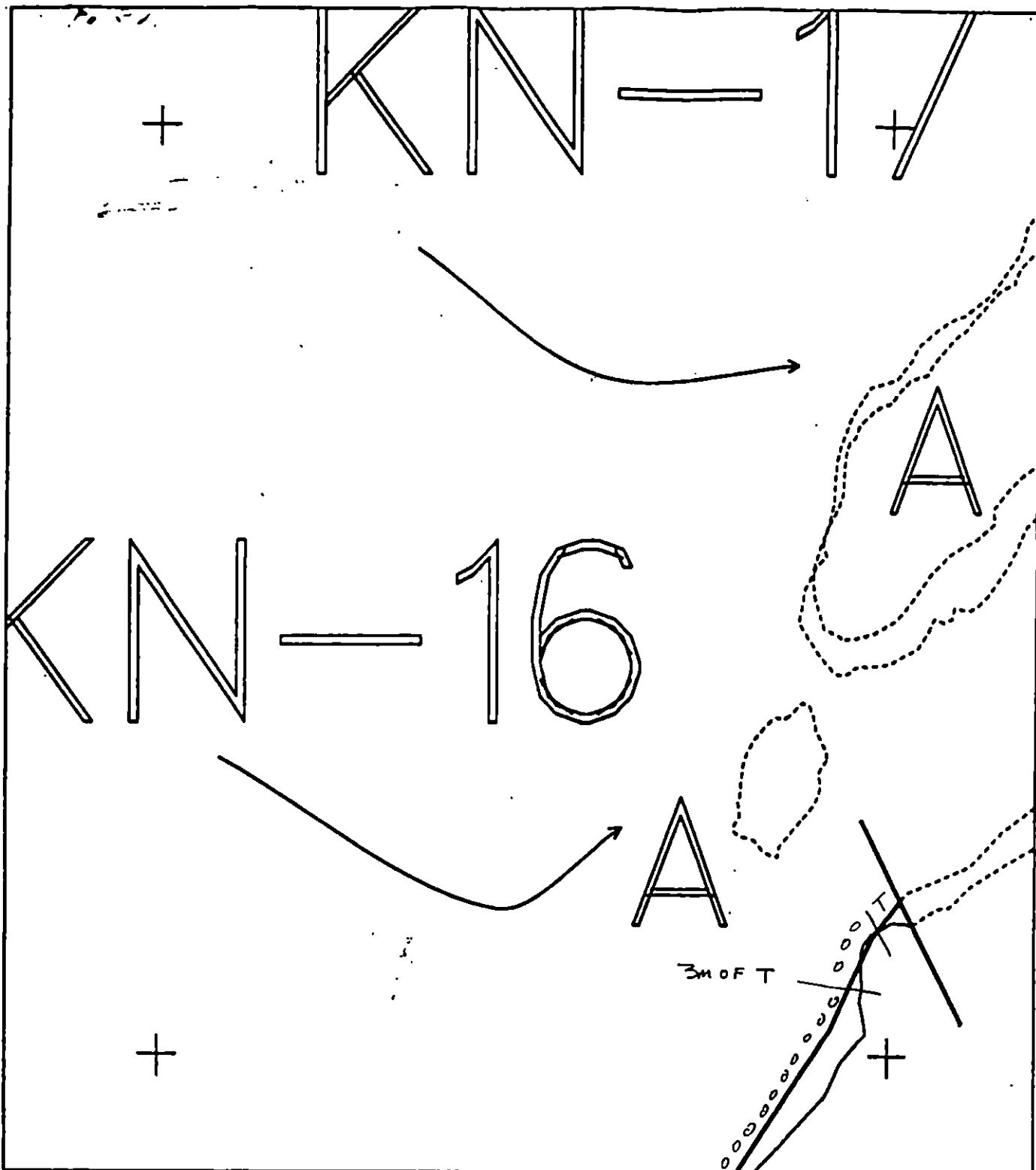
METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map
Map Key: ENIKN0015A
Name: S. Stoker
Date: 5/12/91

Bro 5/14/91 SM



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

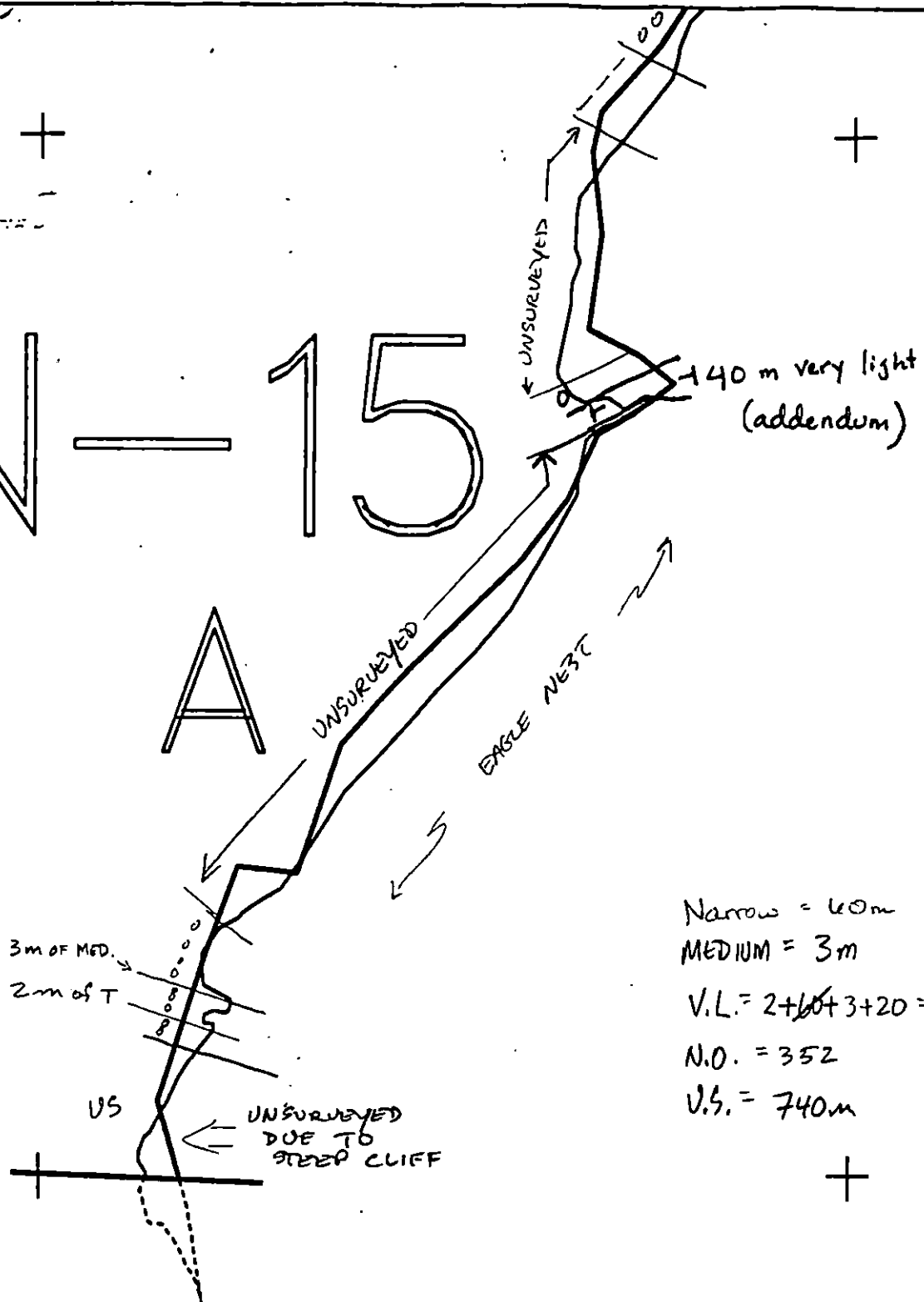
KN0015 A
 ADEC Subsegment Length: 1180m
 METERS
 0 100 200
 AK State Plane Zone 4
 kn0015ab

Subdivision Field Map
 Map Key: KNKN0015Ab
 Name: HARPER
 Date: 12 MAY 91
 Date Entered:



SURFACE OIL SUMMARY MAP
 1 of 2
 (revised 5/14/91) KG
 26 revised 5/4 OG 4 of 7

N-15



Narrow = 40m

MEDIUM = 3m

V.L. = $2 + 60 + 3 + 20 = 85$

N.O. = 352

V.S. = 740m

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

KN0015 A

ADEC Subsegment Length: 1180m

METERS

0 100 200

AK State Plane Zone 4
 kn0015a



Subdivision Field Map

Map Key: KNKN0015Aa

Name: HARPER

Date: 12 May

Date Entered:

SURFACE OIL SUMMARY MAP
 2 of 2

revised 5/14/91 KG

OG 5 of 7
 ES revised 5/14

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-16 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup and bioremediation within USFWS designated buffer zone per 5/22/90 survey conducted by Mike Lockhart.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

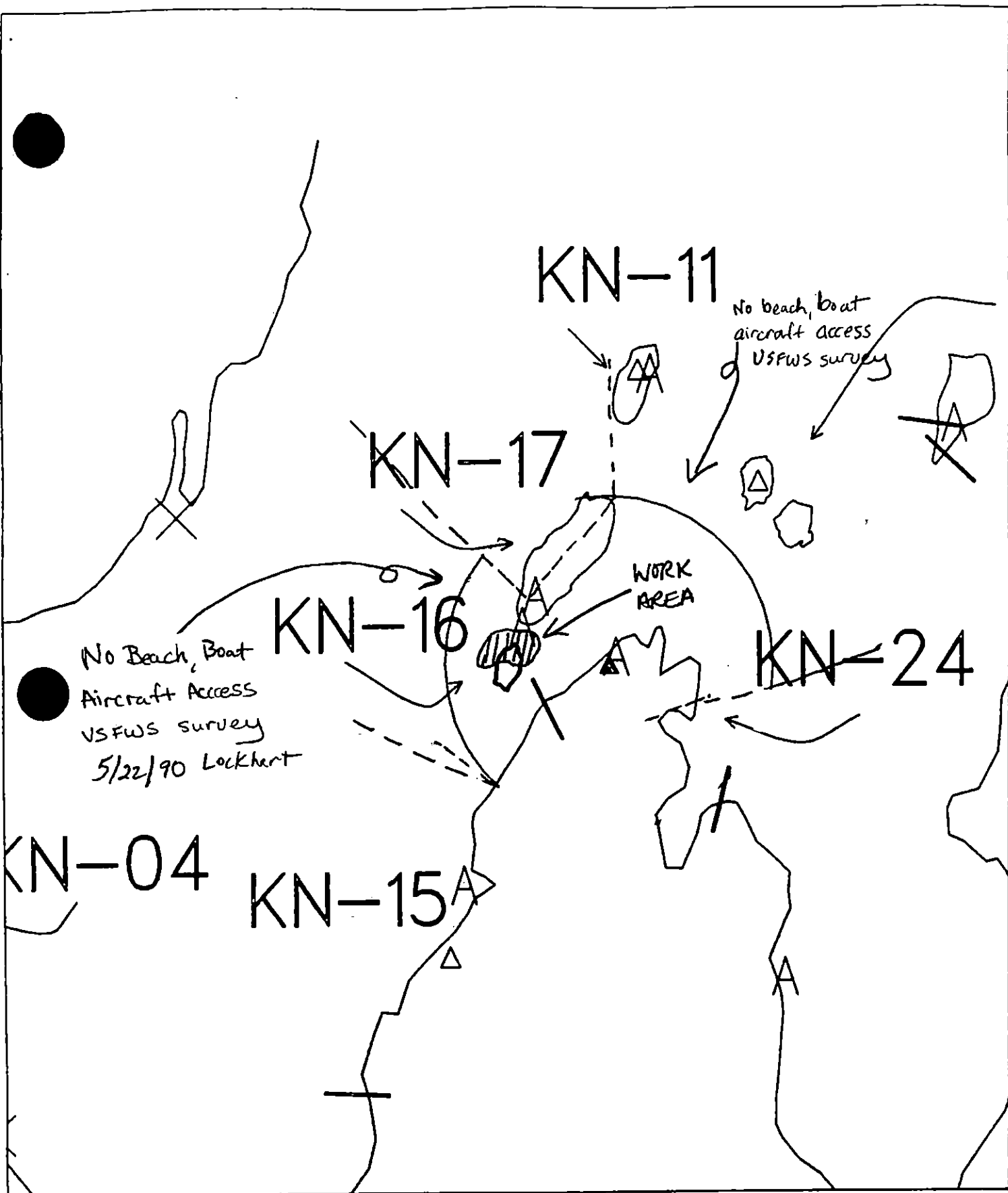
5-10-90

Prepared By:

W. Kelley

Date

6/9/90

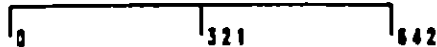


Exxon Company, USA
Map Key: PWS-KN-16
June 05, 1990



ECOLOGY MAP
SEGMENT KN-16
SUBDIVISION A (1 of 1)

METERS



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

1 inch = 1054 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-16 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Harbor seal and sea lion
pupping and molting area (3N, O, P, Q) - 5/15 to 7/1 and 8/15 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of dense
barnacle patches and uncoiled moderate fucus holdfasts in UITZ.

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

SHPO SIGNATURE: Charles E. H. Dimer DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 26 m: Narrow 256 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments) <u>Prior TO MAY 15.</u>

COMMENTS: Recommend manual pickup of mousse patties, and bioremedi-
ation of surface cover as indicated on the sketch map. All work
should be conducted after 7/1 and before 8/15 based on pinned
constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAKER

EXXON ANDY TEAR

NOAA Carl Wesselt

USCG G.A. REITER

FOSC:

DATE: 4-19-90

SHORELINE EVALUATION

SEGMENT ST/ KN-16 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Harbor seal and sea lion
pupping and molting area (3N, O, P, Q) - 5/15 to 7/1 and 8/15 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of dense
barnacle patches and uncoiled moderate fucus holdfasts in UITZ.

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

SHPO SIGNATURE: Charles E. Holmes DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 26 m: Narrow 256 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of mousse patties, and bioremedi-
ation of surface cover as indicated on the sketch map. All work
should be conducted after 7/1 and before 8/15 based on pinned
constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAKER

EXXON ANDY TEAL

NOAA Burl Westcott

USCG G.A. REITER

FOSC:

DATE: 4-19-90

OG Ramsey
SEGMENT KN-16

SUBDIVISION

DATE 3/31/90

CHECKLIST

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

LEGEND

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

ATCH MAP

KN-16

Pickup 2 BATTERIES HERE

Continuous Band (1m) stain along rx face

(solid rx face not broken with crevices as the rest of the shoreline)

sim ledge with same cover oiding

storm berm line

ledges - 8m length x 1-2m wide
5cm surface oil

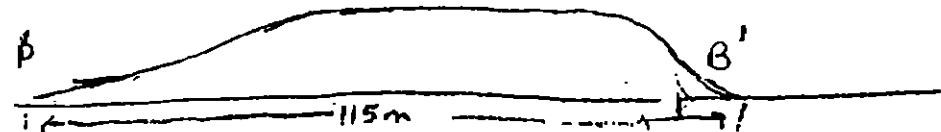
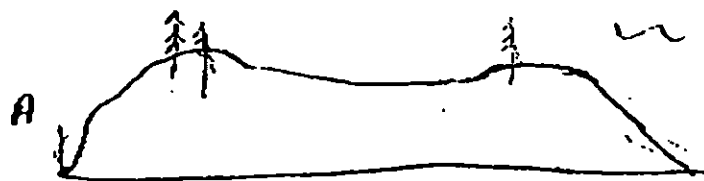
Horizontal bedrock ledges in US
Had surface oil cover 9/5cm deep
Bio cover in 8x2 AREA
1m patchy stain in US and another one in MI line

1m or less discontinuous
Patchy stain is sporadic all the way around the island.

Vegetation line

Sporadic rx Sheen (probably splash)

Rocky Beach



Oil Character Length (m): AP 0 PO 0 CV 0 CT 1 ST 282 MS 0 PT 15 TB 0 FL 1 NO 282

REVISION 03/24/90

KN-17

KN-16

KI

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-~~17~~ 16

Total Segment Length: 871

0 100 200 300

Map Key: PWS-325

Name: RAMSEY

Date: 3/31/90

Note Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 116 SUB: A REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

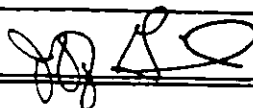
TEAM NO. 1SEGMENT ²⁸ KNO116SUBDIVISION ADATE 5/16/91

ADEC

NAME

JEFF GIVALLAS

SIGNATURE

☒ NTR

Remaining oil consists of coat and stain on boulders and occasional sporadic light sor when agitated, ~~the~~ light sheen apparent w/in cobbles. At site C of sketch map a trace of non-definable lens, which produces immediate rainbow sheen. Oil not sufficient enough quantity to justify treatment. NTR

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

Short subdivision, mostly characterized by vehicle head lands. Surface coatings weathered on rock faces and pits revealed light sheen. Biota is healthy and continuing to establish the colonization process. Further treatment would not serve any environmental benefit.

LANDMANAGER

NAME

MARSHAHALL OF DNR

SIGNATURE

Marsha Hall☒ NTR

Asphalt patch in Hitz recovered by VECO crew.

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

J. Schultz / Z2C

☒ NTR No Recoverable oil remains, + no further treatment or intrusion is warranted

NEAR VERTICAL BEDROCK SHORELINE - POCKETS EXIST W/ STREAM CHANNELS - BOULDER STREWN BEACHES - SURFACE OIL OBSERVED AS CTIST ON VERT RKG, B FACES - SHEEN APPEARED AFTER AGITATION IN SEVERAL SPOTS

PAGE 1 OF 1

SEGMENT KN-116

SUBDIVISION A

DATE 5 / 16 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 280 m VL 60 m NO 1 m US 1000 m

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

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

PHOTO ROLL # MAYSAP- 1 - 24 FRAMES 12

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

OG COMMENTS: Steep rocky shore of steep B stream channels.
Surface oil as CT & ST on steep rock walls of HITZ-SWTZ;
Trace of subsurface oil, indicated by silver sheen wisps and
slightly tacky granules.
Much of the UNS shore appeared oil-free to cursory inspection.

up HIZ CT, ST $1\frac{1}{2} \times 280m$
- SUTZ ; $\leq 15\%$

(A)

30 ▲¹ TR PC-B-P

20 ▲² TR PC-B-P

20 ▲³ TR PC-PC

massive B

stream

steep R
walls

AP 1×2 - PU
15%

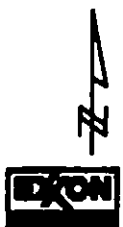
steep
R shore

CT, ST 1×30
 $\leq 10\%$

(B)

CT, ST
 $2 \times 30m$, $\leq 10\%$
TR-LOR $3 \times 7 @$
MITZ pit #4

(C)



KN0116 A

METERS

0 100 200

AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KN0116Aa

Name: G. MACDONALD

Date: 5.16.91

Reviewed: MC 5/21/91
revised 5.21 91
2

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

16 May 91

SEGMENT #

KN 116

TIDAL HEIGHT (Range) -0.1 to +1.3 ft MLLW

SUBDIVISION

A

BIOLOGIST Michael Fawcett

SEA STATE

1 ft swell

WIND SPEED/DIRECTION NE 5-10 knots

PHOTOGRAPHS: ROLL #

FRAME #

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

Site A: moderate to high energy pocket beach--low boulders polished by pebble abrasion, sparse biota except barnacle spat. Bedrock walls and a massive boulder in the center of the beach have very dense barnacle cover and patches of dense young (0-2 year old) mussels. Oil coat on lee side of massive rock in upper edge of barnacles. LTZ boulders have dense cover of ephemeral algae, few grazers, but relatively dense predators beneath them (3 spp. of starfishes *Pycnopodia*, *Evasterias*, and numerous *Leptasterias* (brooding eggs)).

Sites B + C: Small narrow channels or pockets in bedrock, typical biota, ct at upper edge of dense barnacles.

see sketch map for descriptions of biota near each oiled site.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED
SPECIES PRESENT

Eagles			
Seabirds			black prickleback
Waterfowl			crescent gannet
Gulls/kittiwakes	2 black-leg. kittiwake Glaucous-W Gull	~100	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

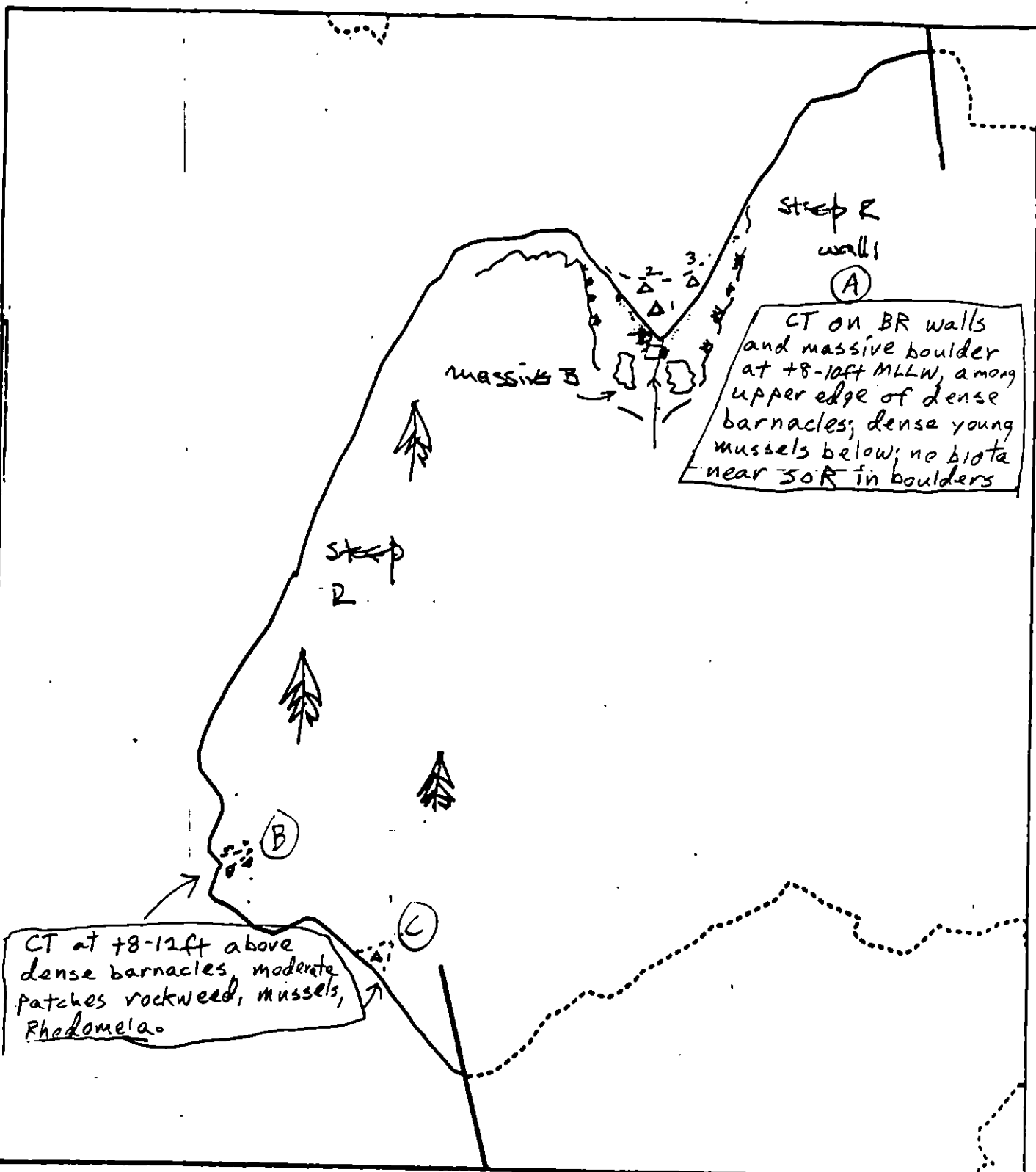
LAND MAMMALS
SPECIES

OBSERVED

Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

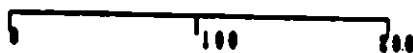
Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91



KN0116 A

METERS



AK State Plapp, Zone 4
1:100,000

Bio Sketch Map
KN 116A, 5/16/91
M. H. Fawcett

KN 116 16 May 91 Barrett
Start 1130

mod. energy pocket - B/P - 1 massive
boulder w/ dense barn/mussels (young
0-2 yrs) - same on BR walls - smaller
boulders polished by abrasion -
sparse barn (occ. spat) denser in
lee of big rock - stream in bank
goes underground

CT & SOR + 10 ft

CT on lee side of big rock
at + 8 ft, upper edge of dense
barnacle, some coated alive & dead
no brot in pebbles

- L12 pricklybacks, cresat gurnel
(all these sides so far in KN 115

& 116 tend to have few
grazers, dense ephemeral algae

- dense Leptasterias, briding -
prickles, 1 Eusasterias -
typomphale

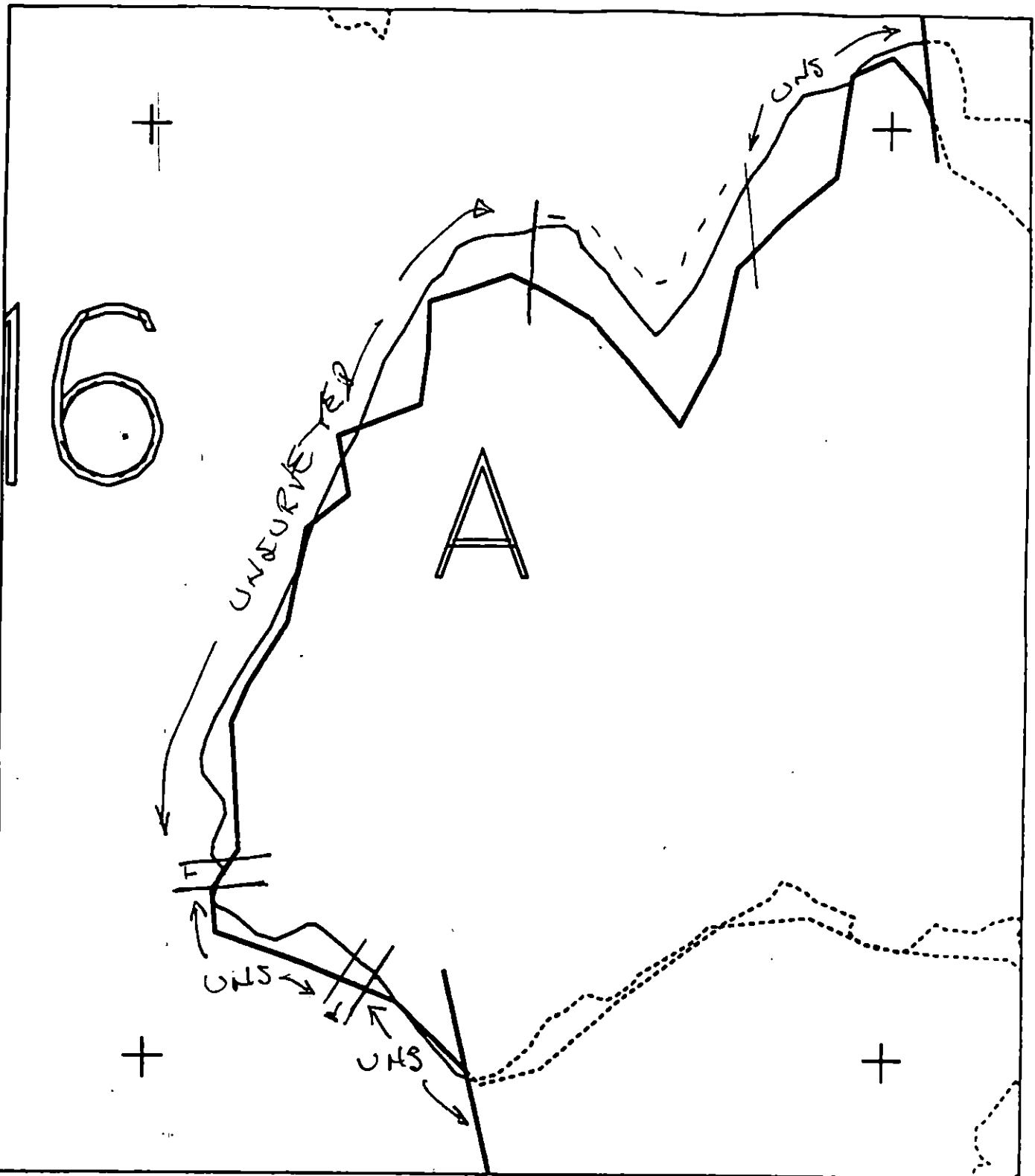
100 Kittiwakes & gulls near 1st

- Site 2 + tiny channel BR &

Boulders - CT + 8-12 ft - dense
mussel & barnacle or

End 1205 - last pocket of similar
to older ones

CT at upper edge of dense
barnacle



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

KN0116 A
 ADEC Subsegment Length: 1337m
 METERS
 0 100 200
 AK State Plane Zone 4
 14N011600

Subdivision Field Map
 Map Key: KN1KN0116Ae
 Name: GM
 Date: 5-6-91
 Data Entered:



Reviewed: MC 5/21/91
 revised 5.21.91
 3

1991 MAYSAP EVALUATION

SEGMENT: KN 016 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy Admitt Date: 5/30/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 29 1991 FOSC APPROVAL DATE: 6/5/91

ADEC John Bauer FOSC E. E. PAGE, CDR, USCG

EXXON Real CHIEF OF STAFF, FOSC

USCG Ed Mace

NOAA John Bauer

The State will evaluate the need for treatment on this subdivision
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. Three SEGMENT KN 016 SUBDIVISION A DATE 5/18/91

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley☐ NTR**TREATMENT RECOMMENDED**

- This oil has been present since ASAP survey. Recommend Manual removal of sor - AP. The oil is protected and seems to be not getting the forces of Nature. I believe it is finally time to remove it once & for all.

EXXON

NAME

Jon P. Carnecki

SIGNATURE

Jon Carnecki☒ NTR

There is some sor and small patches of AP. The beach is thriving and healthy. There are numerous birds on this island. The AP sor are in protected locations and pose little potential problems to marine life in the area. It is recoverable. However the amount to be removed is quite small.

LANDMANAGER

NAME

DAVE BLANCHET

OF

USFS

SIGNATURE

David Blanchet☐ NTR

MODERATE ENERGY ENVIRONMENT. SMALL ISLAND WITH BEDROCK SHORES, WITH SOME FRAGMENTED ROCK COVER. PATCHES OF SOR. FOUND IN AREAS OF BROKEN ROCK AND FINE SEDIMENT. SOR WAS BROKEN UP OR REMOVED WHERE FOUND. THIS REQUIRES MOVING BOULDER & COBBLE TO GET AT THE OIL. PROBABLE REMAINING OIL THAT COULD BE WORKED

MARGINAL CAMPSITE AVAILABLE ON TOP OF THIS ISLAND. ISLAND USED BY OYSTER CATCHERS FOR NESTING

USCG/NOAA

NAME

Jensen / Jeffery Ahlin

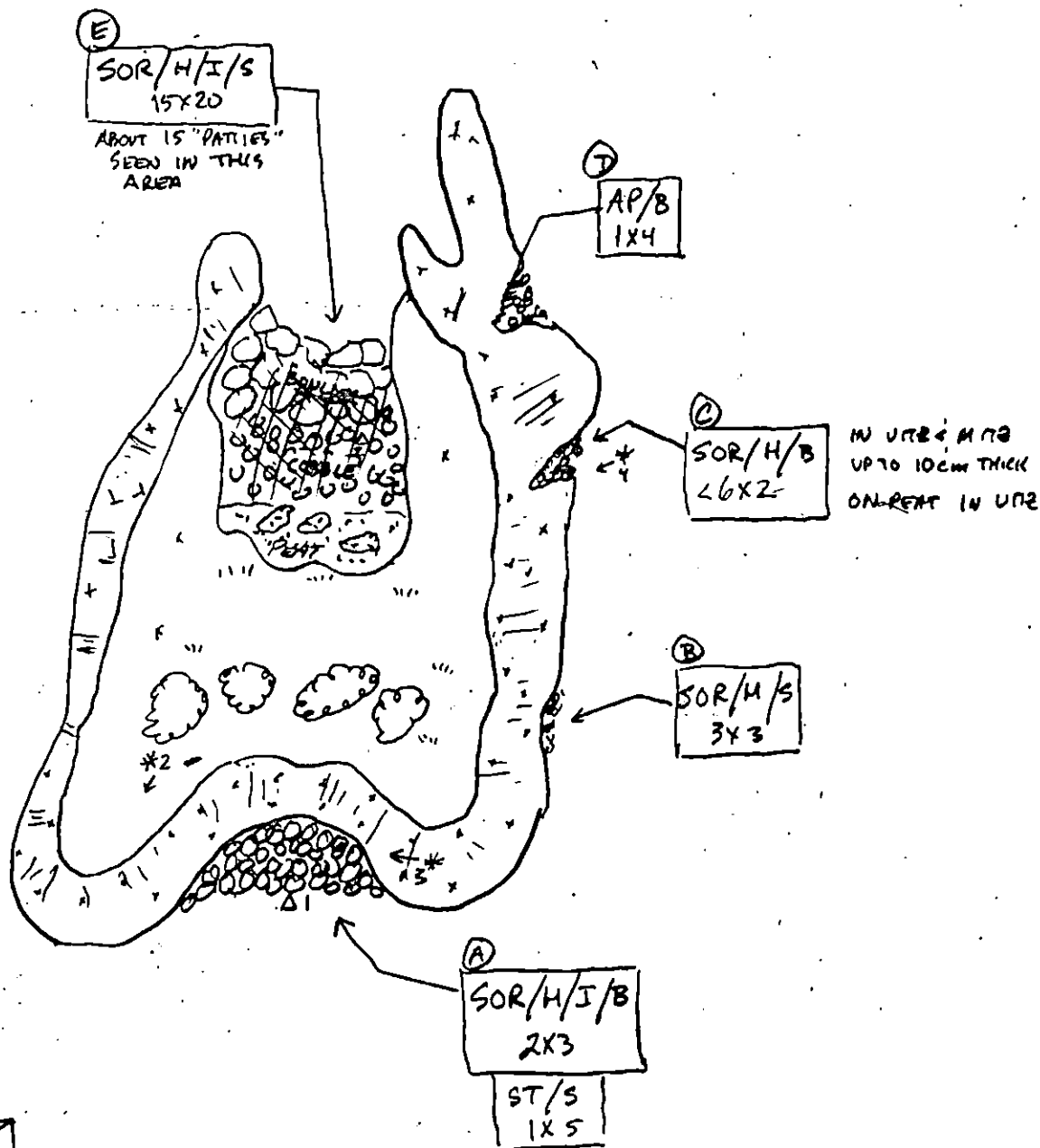
SIGNATURE

Robert Jensen / Jeffery Ahlin☒ NTR

I believe that further removal operations would cause more environmental harm than the small amount of degraded SOR oil remaining. The area is accessible but the SOR is patchy at best. As it was we disturbed an oystercatcher's nest when we landed.

There is very little oil on this beach and an oystercatcher nest. Not enough oil is present to justify disturbing the nest for cleanup.

OG 1 of 3
reviewed 5.19 Jy



KN-16A
17 MAY 91
0815-0845
HARPER
TEAM #3

MAP BASED ON ASAP(90) SKETCH

REVISED FIELD SKETCH

20m
V. APPROX. SCALE

reviewed 5.19 91

OG 2 of 3
REVIEWED (12) 1 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/18/91

SEGMENT # KN 16

TIDAL HEIGHT (Range) 2-4'

SUBDIVISION A

BIOLOGIST STAHOR

SEA STATE 1-2'

WIND SPEED/DIRECTION E 15-20

PHOTOGRAPHS: ROLL #

FRAME #

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

Small bedrock island with a few small beach areas of broken cobbles/boulder rubble, generally high to moderate exposure/wave energy.

Biota on bedrock characterized by generally dense Fucus, dense barnacles and spat, clusters of small limpets and Littorina in sheltered crevices, sparse Mytilus.

Rubble beach biota consists of patchy new-growth Fucus, filamentous green algae, patchily dense barnacles and spat, sparse to moderate density limpets and Littorina (some egg masses), and patchily dense attached and interbedded Mytilus.

Biota within or adjacent to residual surface oil locations.

A thru D consists of sparse barnacles and moderately dense limpets.

Biota increases down slope to include moderately dense new-growth Fucus, filamentous green algae, patchily dense barnacles and spat, sparse to moderately dense small limpets and Littorina with egg masses, and patches of interbedded and attached Mytilus.

Biota within/adjacent to location E consists of sparse to moderately dense barnacles, sparse limpets and Littorina (some egg masses).

Down slope biota includes generally sparse Fucus, moderately dense barnacles and spat, sparse patches of interbedded Mytilus, and generally sparse limpets and Littorina.

Any additional cleanup should proceed with as little disturbance as possible to established biota. No personnel on top of the island above the intertidal, due to nesting shorebirds.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds	Least? Sandpeppers	8	
Seabirds	Tern	1	
Other Birds	Oystercatchers + nest	2	

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 19 MAY
Reviewed M.B 5/19/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-17

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-17 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting
(3O, Q) - 8/15 to 9/15; Herring spawning area (2M) - 4/1 to 6/15;
Anchorage (6V) - 6/1 to 9/15. Restrict boat and air traffic to
essential minimum. Contact ADF&G Habitat Division re: seals/sea
lions and herring prior to treatment.

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

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1 m: No Oil 870 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

SEGMENT ST 1 KN-17 SUBDIVISION: A DATE 31 MAR 70**USCG**NAME MAURICE J. SHARP SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDDID NOT SEE LOG**ADEC**NAME S. FERGUSON SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTEDREMOVE OILED LOG**LAND MANAGER**NAME M. C. T. Smith SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ KN-17
 BIO G. Penn LAND REP M. Smith SUBDIVISION
 EXXON S. Reid ADEC S. Ferguson TIME 1:46 to 2:42
 TEAM NO.: 4 TIDE LEVEL: 5' to 6' DATE 3/31/90
 EST. SUBDIVISION LENGTH: 953 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 LANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: to Clockwise from N. tip
 SURFACE SEDIMENTS: R 90 % B 8 % C 2 % P — % G — % S — % M — % V — %
 SLOPE: Long 5 % Hang 5 % Vert 90 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 3 m NO 953 m
452 950

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	SL	SR	SY	ST	SB	TL	LB	LR	SU	UL	ML	LU
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN			X												X	
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

PAVEMENT: H F S 4/4 sq. m by 4/4 cmPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
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		UO	UC	SL	SR	SY	ST	SB	TL	LB	LR	SU	UL	ML	LU		

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/27/90

Segment ST/ KN-17 Subdivision NONE Date (mo / day / yr) 03/31/90
Time (24 hr) 1346 Biologist PENN

- (A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 8 (3) Cobble 2 (4) Pebble - (5) Sand - (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 60
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (G)

Photographs:

Roll No. _____

Frames _____

BARNACLES

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

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

observed
NOT PRESENT

FUCUS

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

Lower MITZ & LITZ NOT observed.

Ecological Considerations:

OG RESEY
SEGMENT ST/ KN-17
SUBDIVISION _____
DATE 3/31/90

ETCH MAP

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

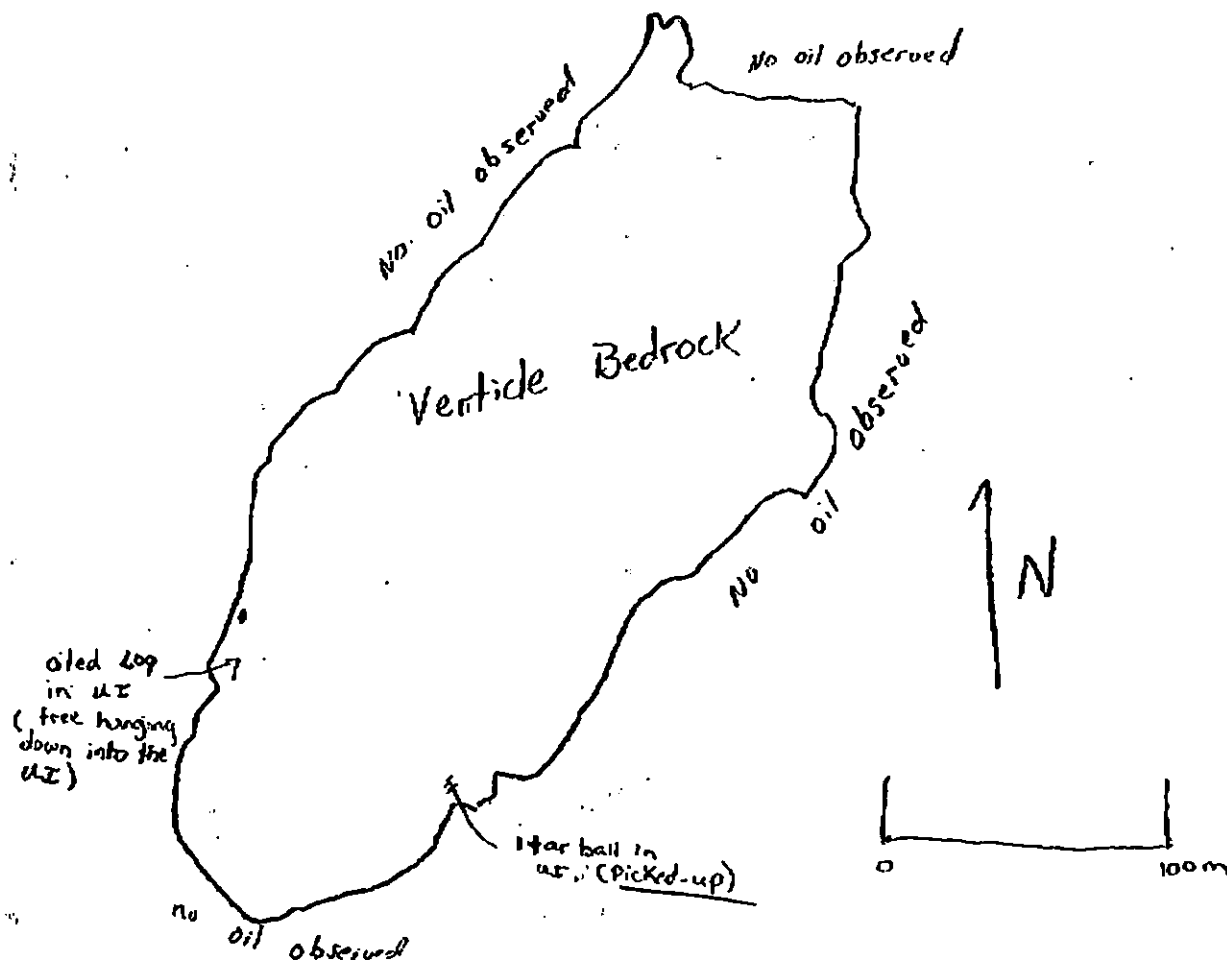
CT/S

Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction,
and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 3 MS 0 PT 0 TB 0 FL 0 NO 950

REVISION: 03/24/00

KN-17

KN-16

N-15

XXX Wide
/// Medium
Narrow
TTT Very Light
000 No Oil

KN-17

ADEC Segment Length: 871



Map Key: PWS-396

Name: RAMSEY

Date: 3/31/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-17 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting
(3O, Q) - 8/15 to 9/15; Herring spawning area (2M) - 4/1 to 6/15;
Anchorage (6V) - 6/1 to 9/15. Restrict boat and air traffic to
essential minimum. Contact ADF&G Habitat Division re: seals/sea
lions and herring prior to treatment.

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

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1 m: No Oil 870 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC DAN BAUER John
EXXON INDY TALL Paul FOSC: My L DATE: 5-6-90
NOAA Burl Wesscott Burl Wesscott
USCG M. J. HALL MR

OG RAVEY
SEGMENT ST/ KN-17
SUBDIVISION _____
DATE 3/3/90

SEARCH MAP

CHECKLIST

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

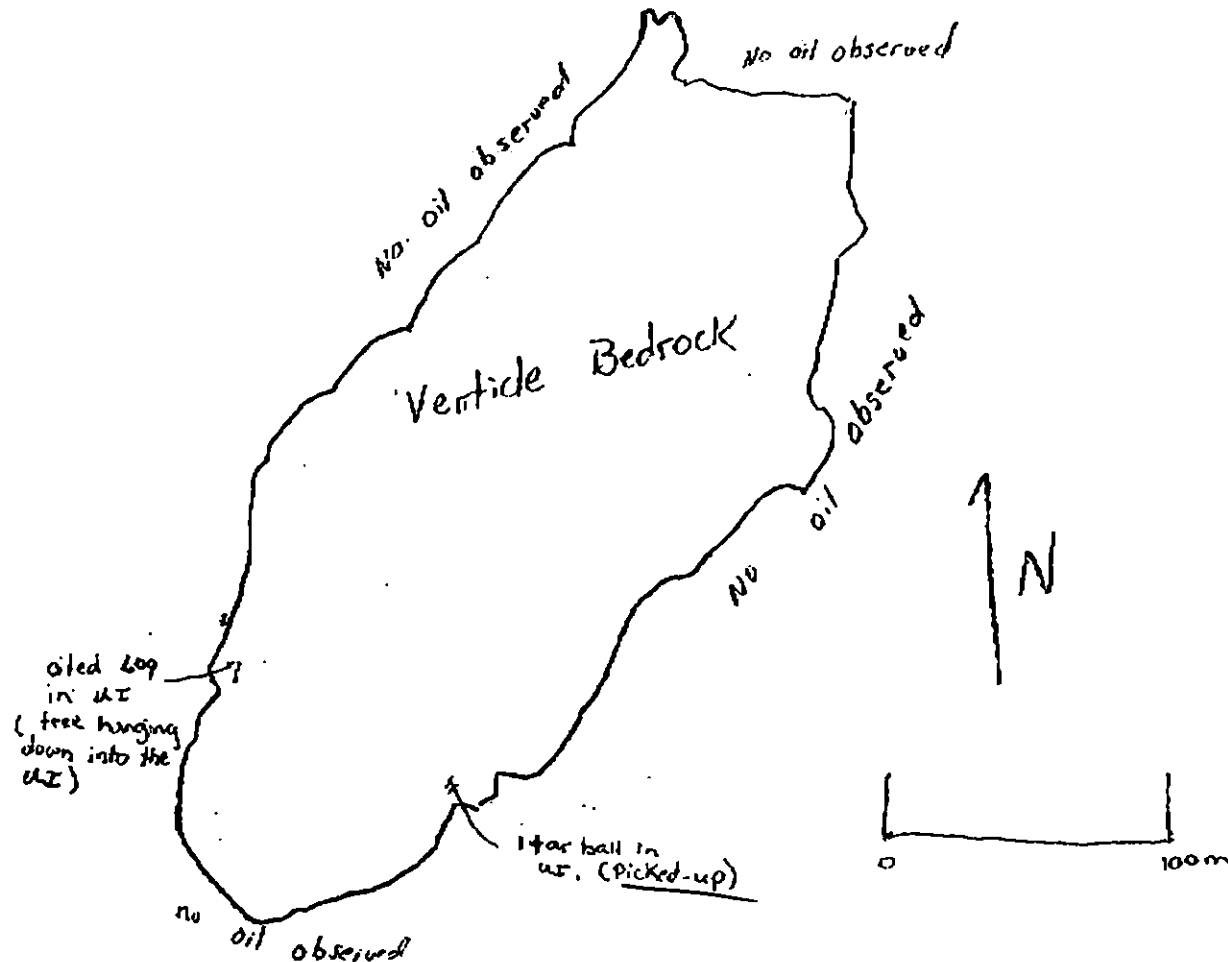
CT/S

Splashed Distribution

Oil Vegetation

1 ➡

Photo location, direction,
and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 3 MS 0 PT 0 TB 0 FL 0 NO 950

REVISION: 03/24/98

KN-17

KN-16

KN-15

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 NA 0:1

KN-17

871

ADEC Segment Length: 200

0 100 200 300

Map Key: PWS-396

Name: RAMSEY

Date: 3/31/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: KN-108 18

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-018 SUBDIVISION A (1 of 1) DATE 04/08/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16880

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

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

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

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)

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1042 m: No Oil 2760 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD OFFICERLINE COMMENT SHEET

SEGMENT ST/ KN-18 SUBDIVISION: A DATE 4-8-90

ESCG

NAME SCOTT RAMSFORD SIGNATURE Scott Ramsford

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
1B

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

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

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

1C

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

1D

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

1E

Main Bay Hatchery release (4/20 to 5/10)

1F

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

1G

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

1H

Remote release site

1I

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

1J

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

1K

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

1L

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

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

2M

Herring spawning (4/1 to 6/15)

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

3N, 3P
3O, 3Q

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

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

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

5R

Seabird colony (5/1 to 9/1)

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

5S

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

Restrict all activity to essential minimum, especially air traffic.

5T

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

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

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

6U

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

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

7HH

Finfish harvesting

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. 63/2/89

OG G. MACDONALD USCG S. RAINFORD SEGMENT ST/ KN-18
 BIO MA. SCOTT LAND REP NFS SUBDIVISION A (10+1)
 EXXON J. BUTLER ADEC W. GHORMLEY TIME 16:40 to 18:40
 TEAM NO.: 3 TIDE LEVEL: +5 1/2 to +1 1/2 FT DATE 4/1/90
 T. SUBDIVISION LENGTH: 4.250 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 80% B 10% C 5% P 0% G 5% S 0% M 0% V 0%
 SLOPE: Long 10% Hang 30% Vert 60% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 920 m NO 3,330 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	17	18	BR	BL	GY	OR	TR	TL	LR	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X	X		X							X			
STAIN			X	X		X							X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-3-2

Frames

SUBSURFACE OIL - NO SEDIMENTS

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			UO	UC	BR	BL	GY	OR	TR	TL			

COMMENTS low-mud. exposure, steep rocky shore.
 Surface oil as a trace ss/s and thin
 (< 5mm wide) drip line ss/s @ H/TZ.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / KW18 Subdivision A Date (mo / day / yr) 4/8/90Time (24 hr) 1640 - 1940 Biologist M A SCOTT

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble 5 (4) Pebble 5 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 52 Moderate 25 Low 25
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. —Frames —

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

1 dead deer
 1 seal
 1 eagle (immature)
 1 bald eagle

crows

- in cobble, high (75%) mytilus mortality

Ecological Considerations:

- patches of dense Mytilus beds throughout segment in MTE
 - 2 anadromous streams (and visible oil)

OG G. MACDONALD

SEGMENT KN-18

SUBDIVISION A

DATE 4 / 8 / 90

ATCH MAP 182

CHECKLIST

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

LEGEND

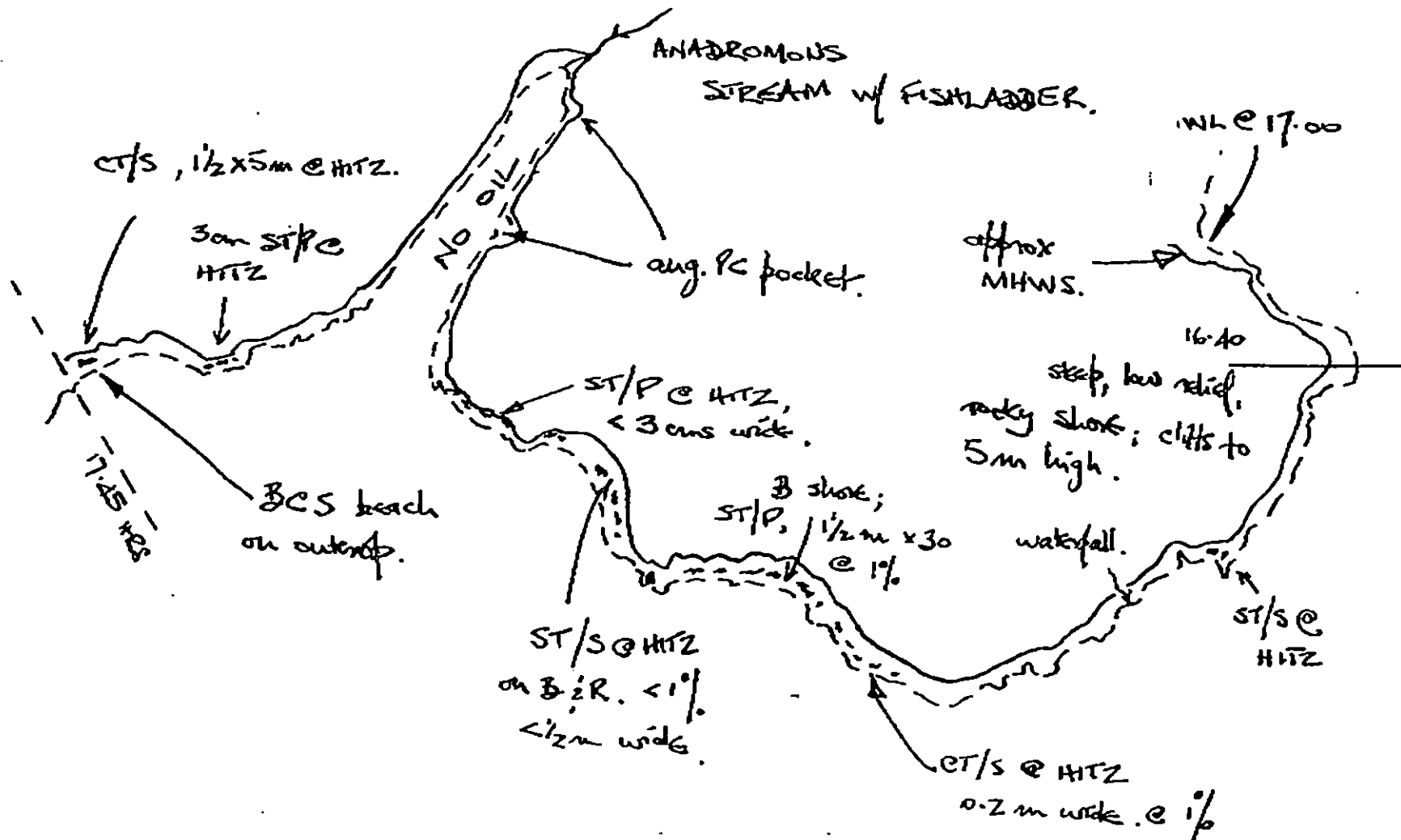
- 1 Δ
Pk - No Subsurface Oil
- 2 Δ
Pst - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Pachy Distribution
- CT/S

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



Oil Character Length (m): AP 0 PO 0 CV 0 CT 350 ST 570 MS 0 PT 0 TB 0 FL 0 NO 3330

REVISION: 6/2/90

HR-05-150 10:12 FROM MV BEULH CHINDIES TO EXON 501 P.03

OG G. MACDONALD

SEGMENT 11 KN-18

SUBDIVISION A

DATE 4 / 8 90

ETCH MAP 2 of 2

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

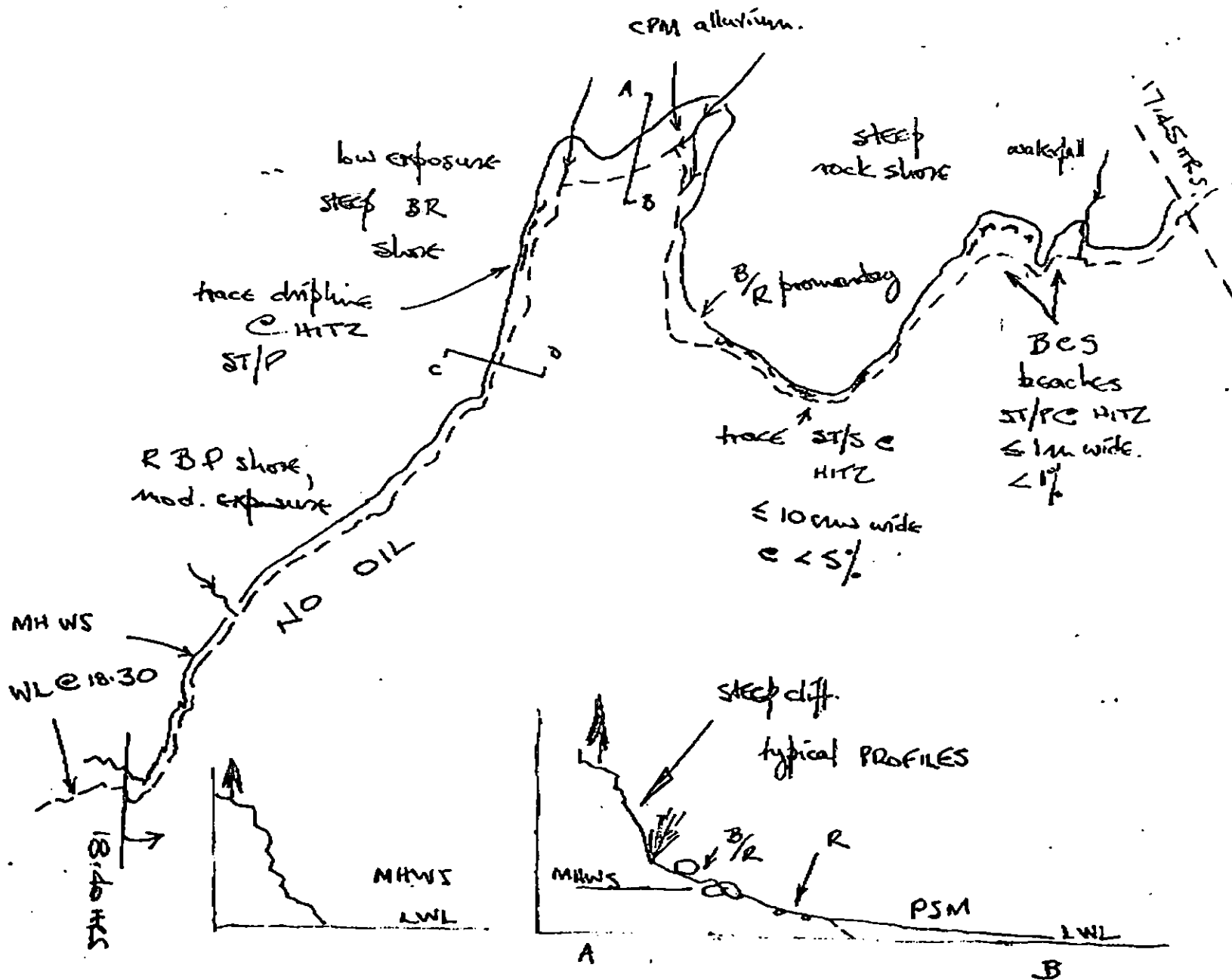
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction, and number



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

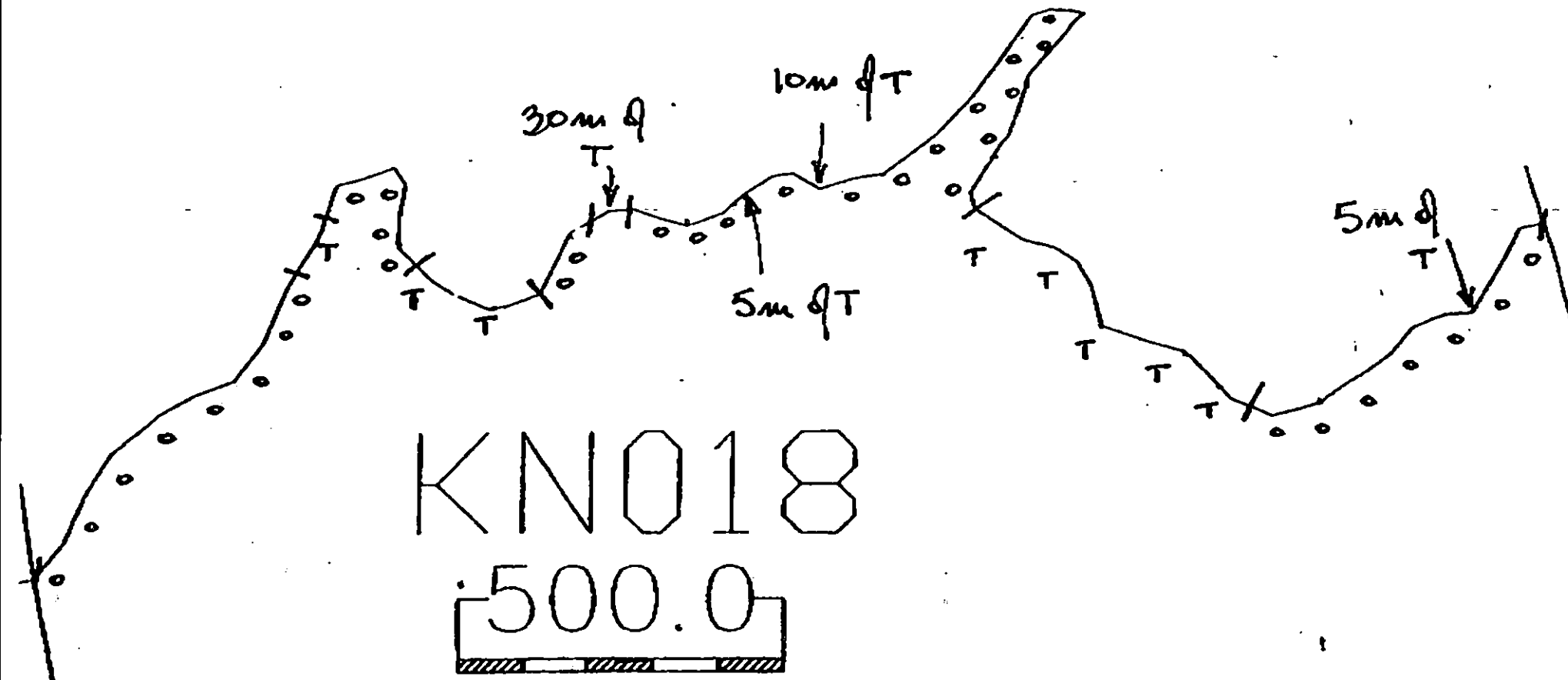
REVISION 03/2000

HER-03-1590 16:42 FROM MU BEULIH CHINDIES

TO

EXCUN SCAT

P.04



CT 350, ST 570, NO 3330.

G. MACDONALD
4/8/90

Data Entered: _____

OILING	
T	Heavy
Q	Moderate
Q	Light
T	Very Light
O	None
NS	Not Surveyed
Distance In Meters	

SHORELINE EVALUATION

SEGMENT ST/ KN-018 SUBDIVISION A (1 of 1) DATE 04/08/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G stream #226-30-16880

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

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

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

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)

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1042 m: No Oil 2760 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

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

FOSC: W L DATE: 4-27-90

OG MACDONALD

SEGMENT ST/ KN-18

SUBDIVISION A

DATE 1 / 8 90

CHECKLIST

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

LEGEND

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

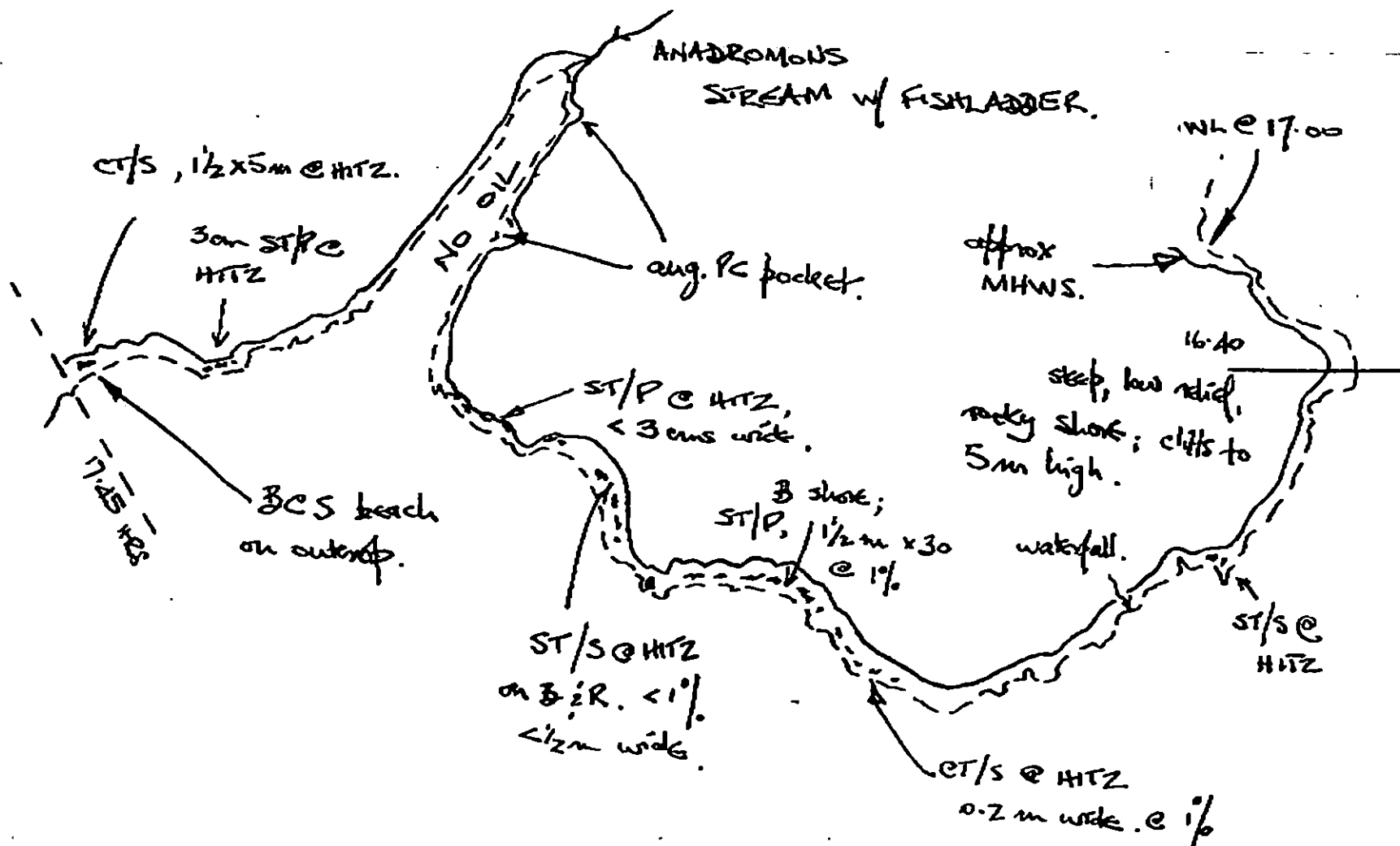
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Pecchy Distribution
- CT/S

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

SKETCH MAP 182



Oil Character Length (m): AP ☐ PO ☐ CV ☐ CT 350 ST 570 MS ☐ PT ☐ TB ☐ FL ☐ NO 3330

REVISION: 02/2000

OG MACDONALD

SEGMENT ST/ KN-18

SUBDIVISION A

DATE 4 / 8 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Of Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pk - No Subsurface Oil
- 2 Δ
Pl - Subsurface Oil
- CT/C

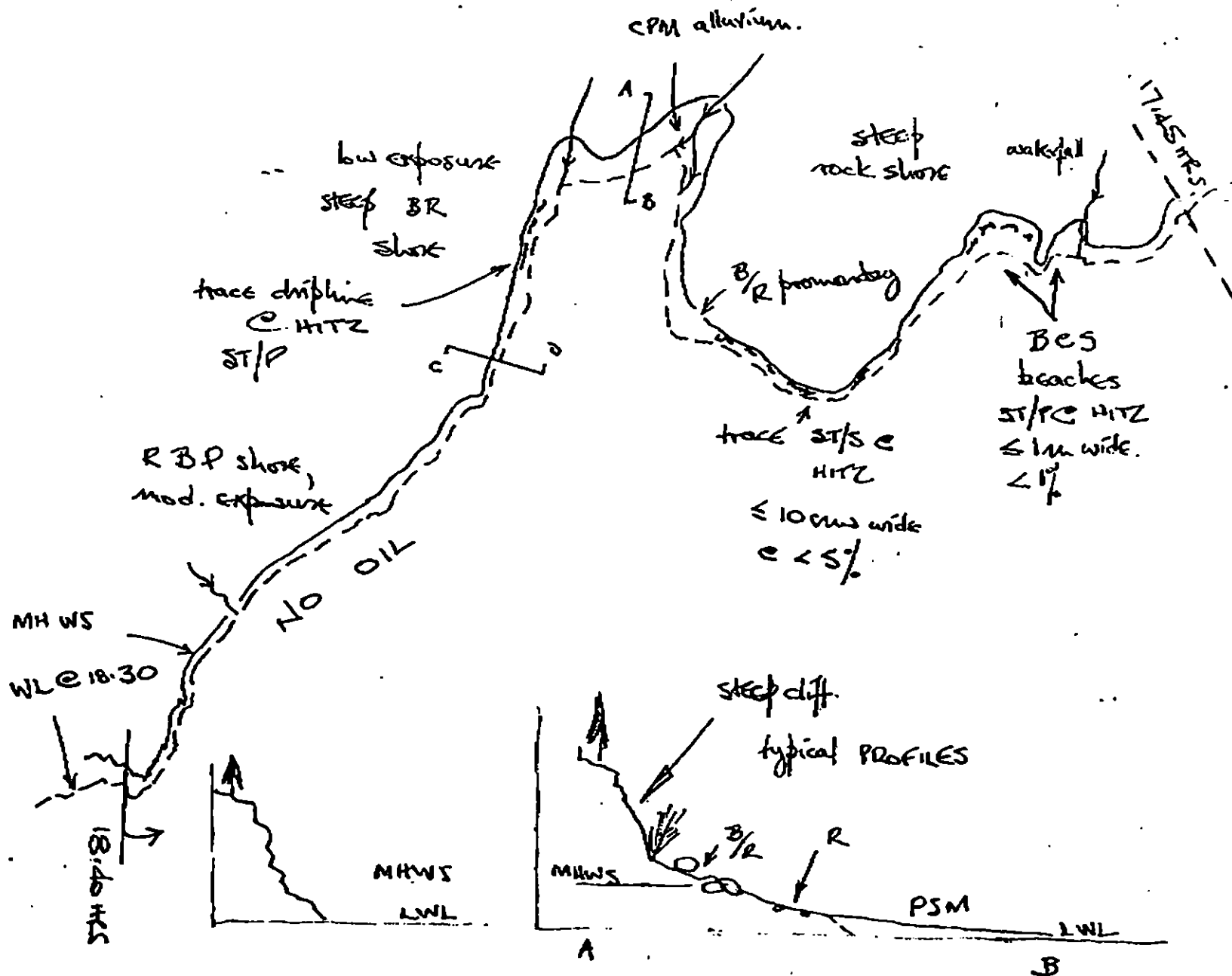
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

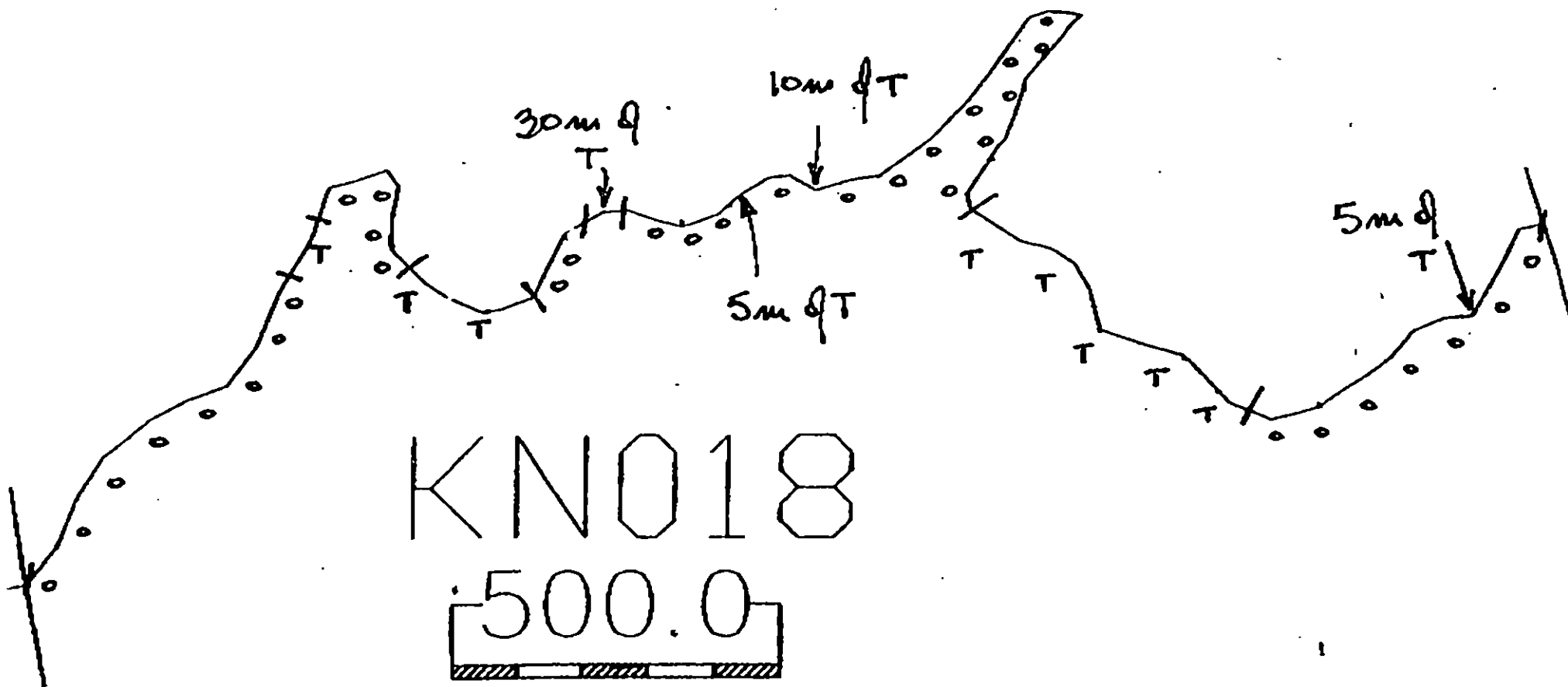
Splashed Distribution
- Oil Vegetation
- 1 $\rightarrow$
Photo location, direction, and number

SKETCH MAP 2 of 2



Oil Character Length (m): AP — PO — EV — CT — ST — MS — PT — TR — FL — NO

REVISION: 03/2000



CT 350, ST 570, NO 3330.

G. MACDONALD
4/8/90

Data Entered: _____



OILING	
+	Heavy
•	Medium
•	Light
•	Very Light
•	None
NS	Not Surveyed
Distance In Meters	

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-19

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-19 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 110 m: Narrow 480 m: V.Light 47 m: No Oil 215 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

_____ Manual Pickup

X Bioremediation

X Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

AGENCY CONTACT PERSON: ADF&G John Morison 257-2324

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 Inpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

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

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

1F 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 Inpol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

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

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

1I Gill net area (5/7 to 8/31)

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

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

1L Set net sites (5/11 to 7/25)

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

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

258: Herring spawning (4/1 to 6/15)

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

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

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

30 Harbor seal and sea lion molting (5/15 to 9/15)

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 257-2403

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 257-2205

5T All Bald Eagle nests (3/1 to 6/1)

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (5/1 to 9/15)

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

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

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

6Y Special use destination

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

7H-H Finfish harvesting

7I Deer harvesting (5/15 to 2/25)

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 Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 257-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KNO19 SUBDIVISION: A 10F1 DATE 4-25-90CG
NAMEPatrick Mahy

SIGNATURE

Patrick Mahy☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Recommend bioremediation in vicinity of pits 2-5 and breakup of pavement patch. There was weathered stain & coat on the backside of large boulders & bedrock but it was weathering well. This cove is a natural collection area for floating debris. We picked up what we could but a lot remained.

ADEC
NAMEM. Cunningham

SIGNATURE

M. Cunningham☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Break up sediments near pits 2-5 and bioremediate check storm berm for debris.
Vertical coats on headlands weathering normally and do not require treatment.

LAND MANAGER

NAME Steven Phillips

SIGNATURE

Steven Phillips☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This segment has beaches which collect debris. Check at summer's end. All current debris removed.

Tar bands on vertical bedrock and boulders are mostly broken up and won't require treatment.

In the vicinity of the 5 pits, remove asphalt and bioremediate low angle boulder patches with tar coats.

Asphalt occurs between some boulders. Move boulders, remove asphalt, and bioremediate the balance.

REVISION NO. 03/21/88

Try to get the oil which has seeped under the boulders

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG Greg Chaney USCG Pat Malley SEGMENT ST/ KN-019
 BIO with Roth LAND REP DNR Steve Phillips SUBDIVISION A (LOFL)
 EXXON Ray Sotelo ADEC Mike Cunningham TIME 09:10 to 10:40
 TEAM NO. 7 TIDE LEVEL -1.5 to 3.5 ft DATE April 25/90
 EST. SUBDIVISION LENGTH: 935 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: West to East
 SURFACE SEDIMENTS: R 65 % B 25 % C 5 % P 5 % G - % S - % M - % V - %
 SLOPE: Long 5 % Hang 30 % Vert 65 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 92 m N 484 m VL 42 m NO 217 m

SURFACE OIL

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

PAVEMENT ☒ F ☒ S 25 sq. m by 15 cm

PATTIES / TARBALLS collected / BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐
 plastic bottles shoes!
 TYPE Pom-poms
 plastic bags
 #BAGS 4

Photographs:

Roll No. ST-7-4

Frames 21, 22, 23, 24, 25

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	1	2	3	4	SU	U	M	U				
1	45					X	.									X			N	0	BCG-C66
2	50		X				0-20			X	X			X					N	0	P-P
3	20	X					0-15			X	X					X			N	0	BP-CP
4	40		X				0-10			X	X					X			N	0	BP-PC
5	35					X	.									X			N	30	CP-PG
							.														

COMMENTS

REVIEWED MH DATE 4-28-90

COMMENTS
SEGMENT 8T-KN-019-A

Greg Chaney
April 25 1990

Segment KN-019-A was surveyed during mid-morning under sunny skies. The segment consisted of a semicircular bay on the northeastern edge of Bay of Isles. The shore of this bay was composed primarily of steep bedrock faces and high angle boulder beaches. Due to the bay's orientation, it traps floating debris. As a result, four full bags of pompoms, plastic bottles and bits of styrofoam were collected from this segment. Oil is present primarily in the form of weathered stains and tar coats on bedrock and boulder faces. The notable exception was located in the western portion of the bay in the vicinity of pits 2 - 5. In this region a patch of asphalt pavement was observed which filled the spaces between the boulders. The asphalt measured roughly 5 x 10 meters with 50% surface coverage. Depth of penetration was measured at 15 cm. A few tar balls were collected. The tar coats in the bay seem to be weathering and, other than the western edge, little mobile oil was noted.

OG Greg Chaney
 SEGMENT STATION NO 19
 SUBDIVISION A

DATE April 125 90

CHECKLIST

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

LEGEND

- 1 Δ
Pit - No Subsurface Oil
ROUGHLY 5x10 M
WITH 50% COVERAGE
DUE TO BOULDERS
15 cm DEEP
- 2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled Vegetation

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

TAR COATS UNDER
BOULDERS ~6 meters
WIDE, 15% SURFACE
COVERAGE

PATCHES OF
SOFT PAVEMENT
BETWEEN BOULDERS
IN FINER MATRIX
ROUGHLY 5x10 M
WITH 50% COVERAGE
DUE TO BOULDERS
15 cm DEEP

DISCONTINUOUS
TAR BAND 1 METER
HIGH ON BEDROCK
& BOULDERS

KNIGHT
ISLAND

SKETCH MAP

THIN
TREES

STREAM

PATCHES TAR ON BOULDER BEACH, TAR AT BASE OF
BOULDERS. BAND ~6 METERS WIDE LESS THAN 10%
COVERAGE

FOREST

FOREST

ROUGH BAND STAIN FCOAT
~1 METER HIGH.

MANUALLY REMOVE
TAR MAT, MANUALLY RAKE
THEN BIODEGRADATE

100 METERS

SPLATTER
TAR COAT
30 cm HIGH

TRACE SPLATTER

FOREST

MONTAGUE
STRAIT

KN-019



Oil Character Length (m): AP 10 PO - CV - CT 500 ST 150 MS - PT - TB - FL - NO 317

REVISION: 03/24/88

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/02/90

Segment ST / KN-019 Subdivision A Date (mo / day / yr) Apr 25, 90
 Time (24 hr) 0907 - 1040 Biologist ROTH

- (A) Substrate type and % of segments:
 (1) Bedrock 65 (2) Boulder 25 (3) Cobble 5 (4) Pebble 5 (5) Sand - (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 60 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-7-4
 Roll No. ST-7-4
 Frames 21-25

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

SEVERAL FORMATIONS OF 100-200 SANDHILL CRANES MIGRATED OVER SEGMENT.

A MEDIUM-EXPOSURE SITE CHARACTERIZED BY MODERATE- TO DENSE OVERALL COVER OF BIOTA. THE NUMBER OF PLANT AND ANIMAL SPECIES OBSERVED WAS HIGH, AT

Ecological Considerations:

TENT SITES

SPECIAL USE DESIGNATION
 HERRING SPAWNING

LEAST IN PART BECAUSE THE EXCELLENT MINUS TIDE EXPOSED THE LOWER INTERTIDAL UNUSUALLY WELL. RECRUITMENT AND/OR NEW GROWTH WAS OBSERVED IN ALL 4 MAJOR BIOTAL CATEGORIES RATED ABOVE.

SEGMENT KN-019 APR 25, '90

ADDITIONAL FLORA:

ALARIA	SHALLOW SUBTIDAL
AGARUM	SHALLOW SUBTIDAL
VERUCARRIA	HIGH INTERTIDAL
CONSTANTINEA	SHALLOW SUBTIDAL

ADDITIONAL FAUNA:

CUCUMARIA sp.	L-3	
SCULPINS	M-1, L-1	POOLS
SPIRORBIS	L-3	
OPHTHOPLIS	L-3	
PODODESMUS CEPID	L-3	
BLENNY EELS	L-3	
CANCER OREGONENSIS	L-3	1cm CARAPACE WIDTH
SOLASTER DAWSONI	L-3	
ORTHASTERIAS	L-2	
EVASTERIAS	L-2,3	

KN-19

ECOLOGICAL MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

6 U, Y

2 M

KN-19

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

ADEC Segment Length: 852m

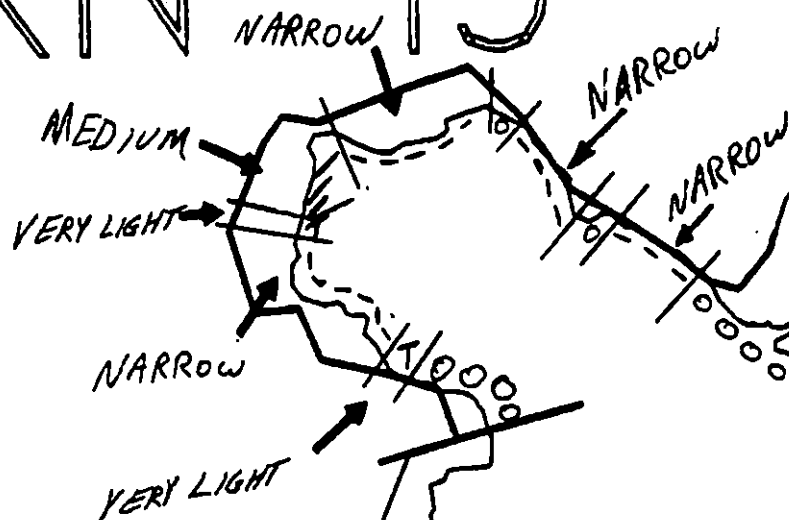
0 100 200 300

Map Key: PWS-327

Name: _____

Date: _____

KN-19



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO

KN-19

ADEC Segment Length: 852m



Map Key: PWS-327

Name: Greg Chaney

Date: April 25, 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-19 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation Manual Raking	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

OTHER ECOLOGICAL CONSIDERATIONS

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

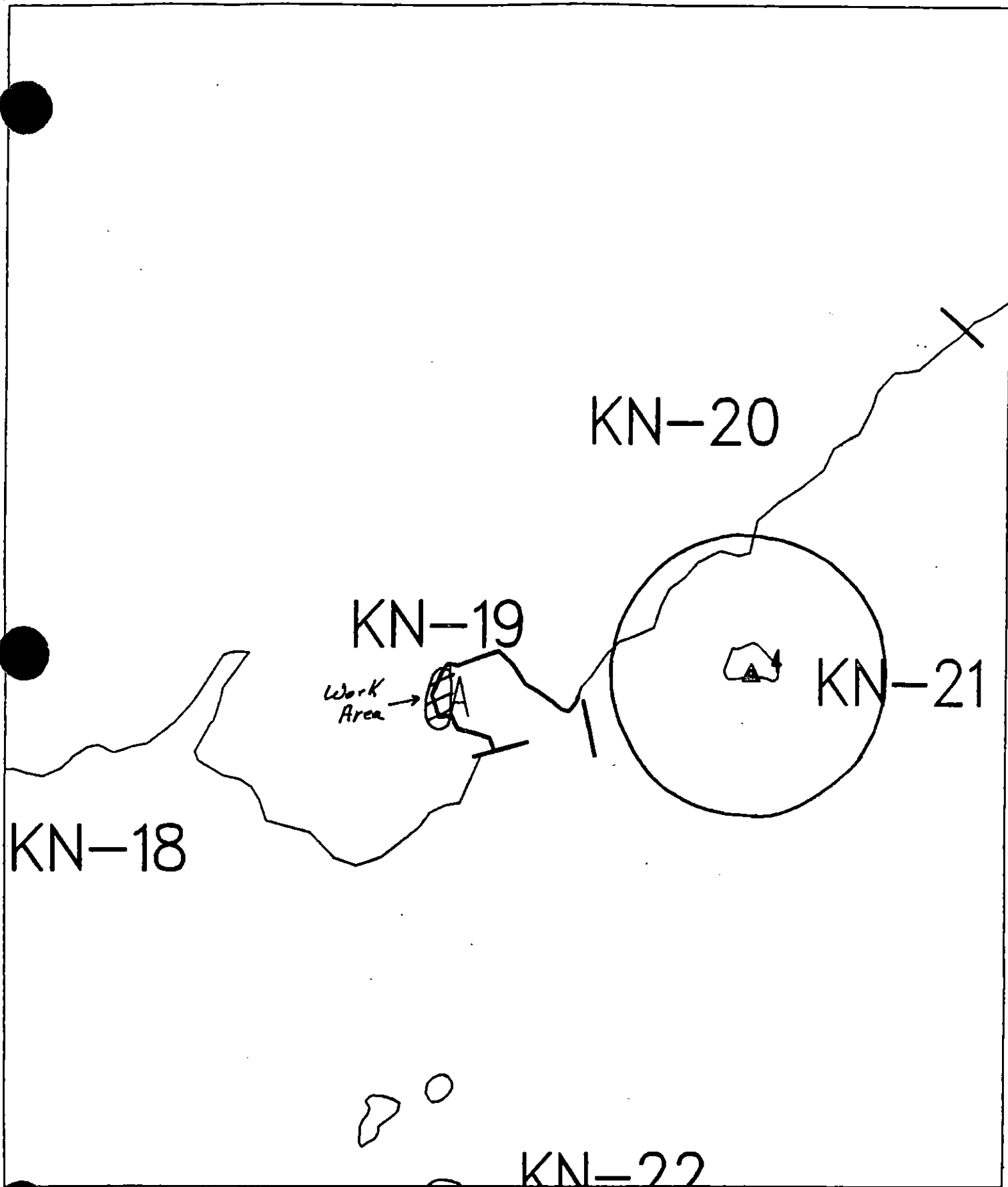
TAG APPROVAL DATE 5/24/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL Andy Teal
NOAA B. Wescott B. Wescott
USCG M. J. MALL M. J. MALL

FOSC

DATE 5-24-90

Prepared By: Anden Meyer WTK

Date 5/22/90



Exxon Company, USA
Map Key: KNI-KN-19



ECOLOGY MAP
SEGMENT KN-19
SUBDIVISION *A* (1-1 of 1-1)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ KN-19 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David M. Mahan

DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 110 m: Narrow 480 m: V. Light 47 m: No Oil 215 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

 No Treatment Recommended

☒ 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 includes 1) manual removal of tarmats in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. Work should be conducted after 6/15 based on herring spawning constraints.

→ [See Addendum Dated 5/22/90] with

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90.

ADEC Art Wagon Art Wagon

EXXON ANDY TATE AKA

NOAA Joseph Talbott

USCG D. D. Rome DA Rome

FOSC: My L

DATE: 5-15-80

SHORELINE EVALUATION

SEGMENT ST/ KN-19 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMahon

DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 110 m: Narrow 480 m: V.Light 47 m: No Oil 215 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. Work should be conducted after 6/15 based on herring spawning constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90

ADEC Art Wagon

EXXON Andy Tetz

NOAA Joseph Talbot

USCG D. D. Rome

FOSC: My L

DATE: 5-15-90

OG Greg Chaney

SEGMENT STN 019

SUBDIVISION A

DATE April 125 90

CHECKLIST

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

LEGEND

- 1 Δ PATCHES OF SOFT PAVEMENT BETWEEN BOULDERS IN FINER MATRIX, ROUGHLY 5x10 M WITH 50% COVERAGE DUE TO BOULDERS 15 cm DEEP
- Pt - No Subsurface Oil
- 2 Δ PATCHES OF SOFT PAVEMENT BETWEEN BOULDERS IN FINER MATRIX, ROUGHLY 5x10 M WITH 50% COVERAGE DUE TO BOULDERS 15 cm DEEP
- Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

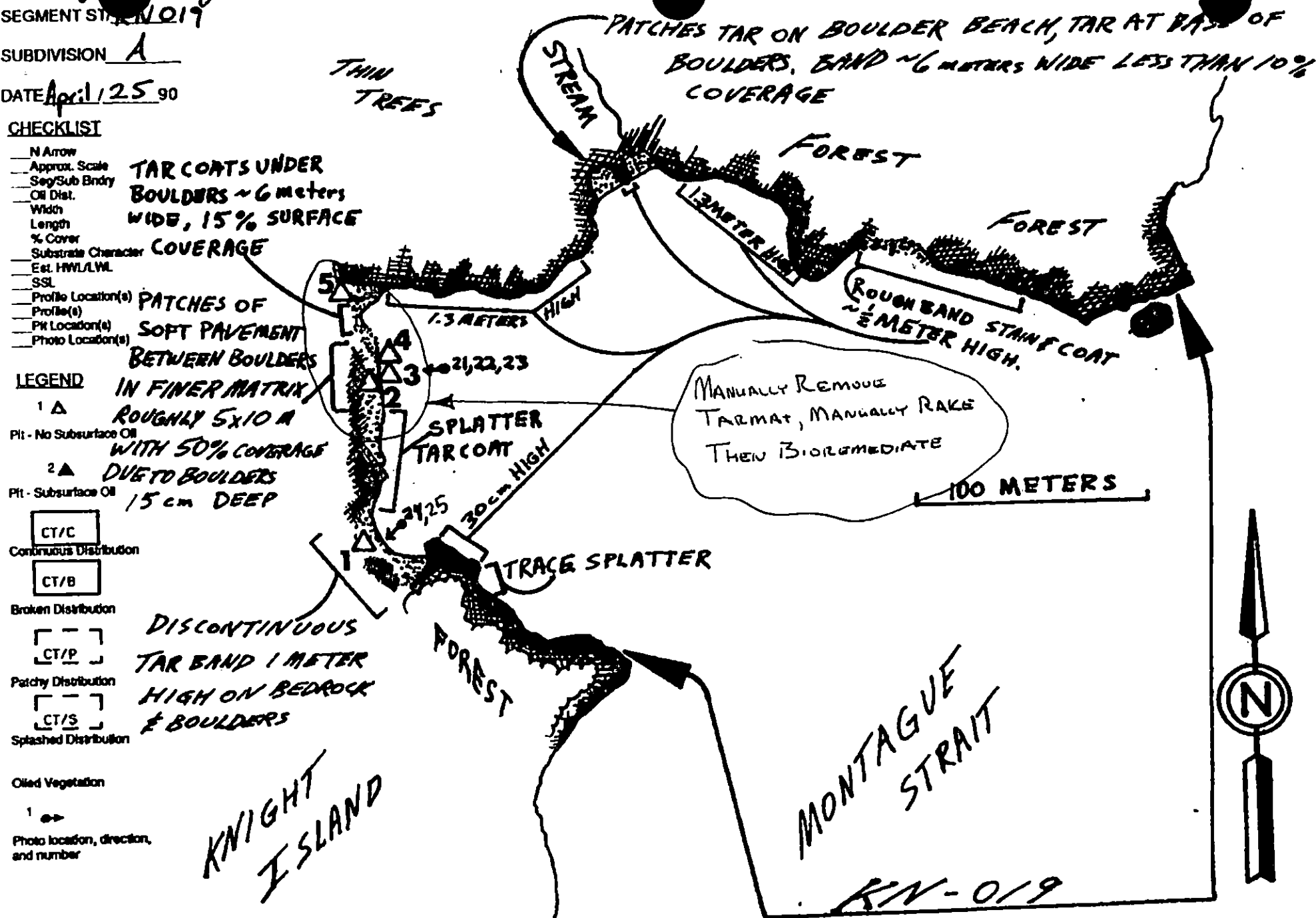
CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled Vegetation

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

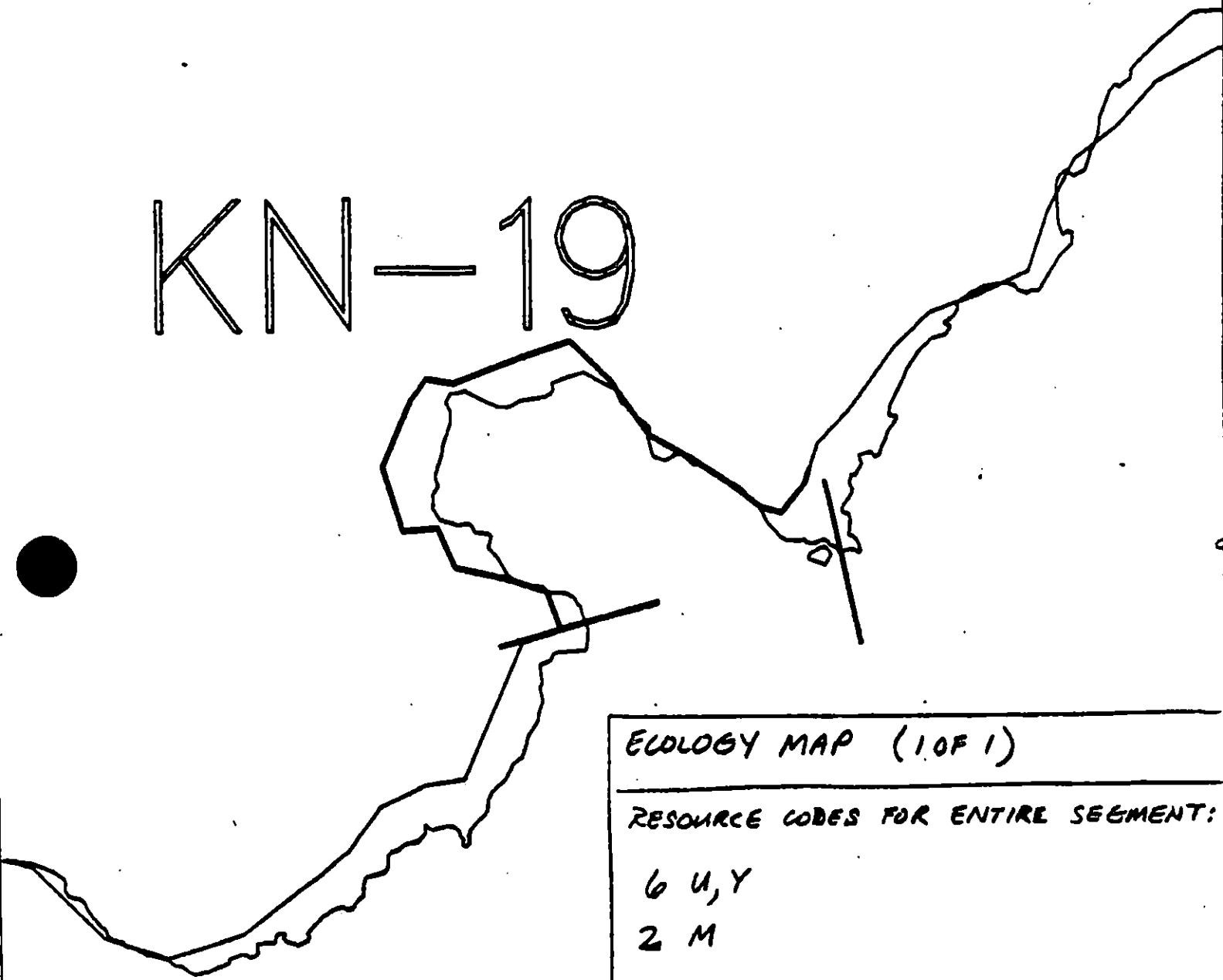
SKETCH MAP



Oil Character Length (m): AP 10 PO - CV - CT 500 ST 150 MS - PT - TB - FL - NO 317

REVISION: 03/24/90

KN-19



EKOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

6 U, Y

2 M

XXX Wide

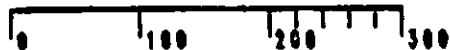
//// Medium

--- Narrow

TTTT Very Light

KN-19

ADEC Segment Length: 852m



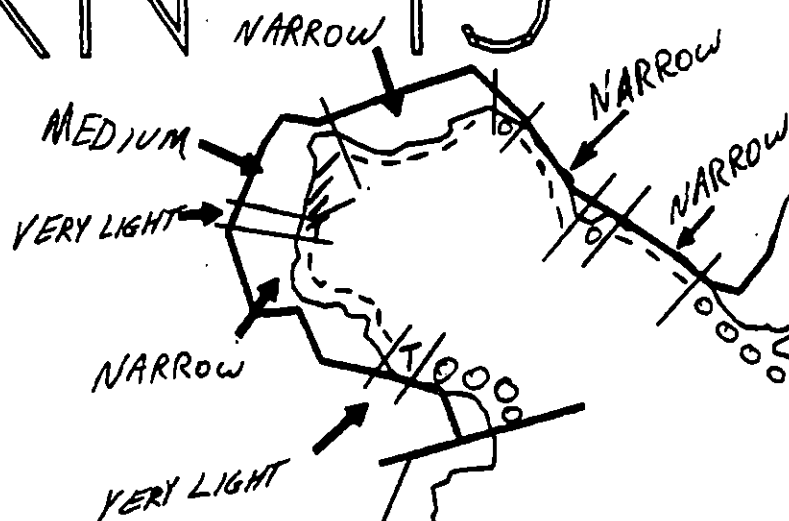
Map Key: PWS-327

Name: _____

Date: _____

Page Released.

KN-19



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

KN-19

ADEC Segment Length: 852m



Map Key: PWS-327

Name: Greg Chaney

Date: April 25, 1990

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 019 SUB: A REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: [Signature] Date: 11/1/2014

Date: 6/04/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN-19 SUBDIVISION A DATE 5/23/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ NTR ☐ TREATMENT RECOMMENDED

THIS subdivision is fairly exposed with mostly CTs and stains on boulder/bedrock. Collectable oil was removed by Survey Team.

EXXON

NAME REY SOTEC SIGNATURE Rey Soteco

☒ NTR Broke up and collected areas B, E + I as shown on oq map, mainly small patches of SOR. No further treatment or surveying will be required on this subdivision.

LANDMANAGER

NAME DAVE BLANCHET OF USFS SIGNATURE Dave Blanchet

☒ NTR SMALL BAY WITH MOSTLY BEDROCK/CLIFF SHORELINE AND A SMALL BROKEN BEACH AT BACK END. MEDIUM TO LOW ENERGY WAVE ENVIRONMENT. PRIMARILY ANGULAR GRAVEL/COBBLE/BOULDERS ON BEACH. SPORADIC OIL COAT FOUND ALL AROUND BAY AND SEVERAL SMALL PATCHES OF S.O.R. S.O.R. CLEANED &/OR BROKEN UP WHERE FOUND. MINIMAL CAMPING OPPORTUNITIES IN BAY, BUT GOOD GENERAL RECREATION POSSIBILITIES.

USCG/NOAA

NAME MOONEY / DAHLIN SIGNATURE Mooney / Dahlin

☒ NTR COMPOSED OF BEDROCK AND BOULDER, COBBLE, PEBBLE SHORELINE. SPORADIC STAIN & COAT ALONG TIDAL LINE. REMOVED AND TILTED THREE AREAS OF SOR/H-L. NO FURTHER TREATMENT REQUIRED

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1TEAM NO. 3SEGMENT KN-19OGI HARPERBIO STOKERSUBDIVISION AADEC GHORMLEYLANDMANAGER BLANCHET for USFSDATE 23 MAY 1991EXXON 30TELOUSCG/NOAA MOOREY / DAHLINTIME 05:20 to 06:00TIDE LEVEL 2.04' ft. to 2.68' ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 852 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 25 m VL 199 m NO 628 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						P					R	V	1	5		X			
B				T							C,B	M	0.5	15		X			REMANANTS AFTER COLLECTION
C						P					R	V	0.5	5		X			
D						S	S				B,R	M	1	3		X			LEG 500' OF BOULDER RD
E						P					RCP	M	0.5	5		X			
F						S	S				R	V	2	15		X			
G				T							OB/R	M	1	2		X			SOR/H-L BROKEN UP
H						S					R	V	0.5	50		X			
I				T							CB	M	1	2		X			BROKEN SUR/H
J						S					R	V	0.5	100		X			DRIPLINE
K						P	P				R	V	1	10		X			DRIPLINE
L						S					B	H	0.5	2		X			BIO DEGRADED

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

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

PHOTO ROLL # MAYSAP- 3 - 20 FRAMES 5-6

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	35							X	-						X		BC/SP	
2	20							X	-					X			BC/SP	
3	20							X	-						X		BC/SP	
4	20							X	-						X		BC/SP	
5	30							X	-					X	X		P/SG	
6	40							X	-					X			P/P/SG	
7	30							X	-					X	X		BC/P	
8	20							X	-					X			P/P	
9	30							X	-		25	N		X			PG/PG	
10	30							X	-		28	N			X		PG/PG	
11	30							X	-								PG/SG	

OG COMMENTS:

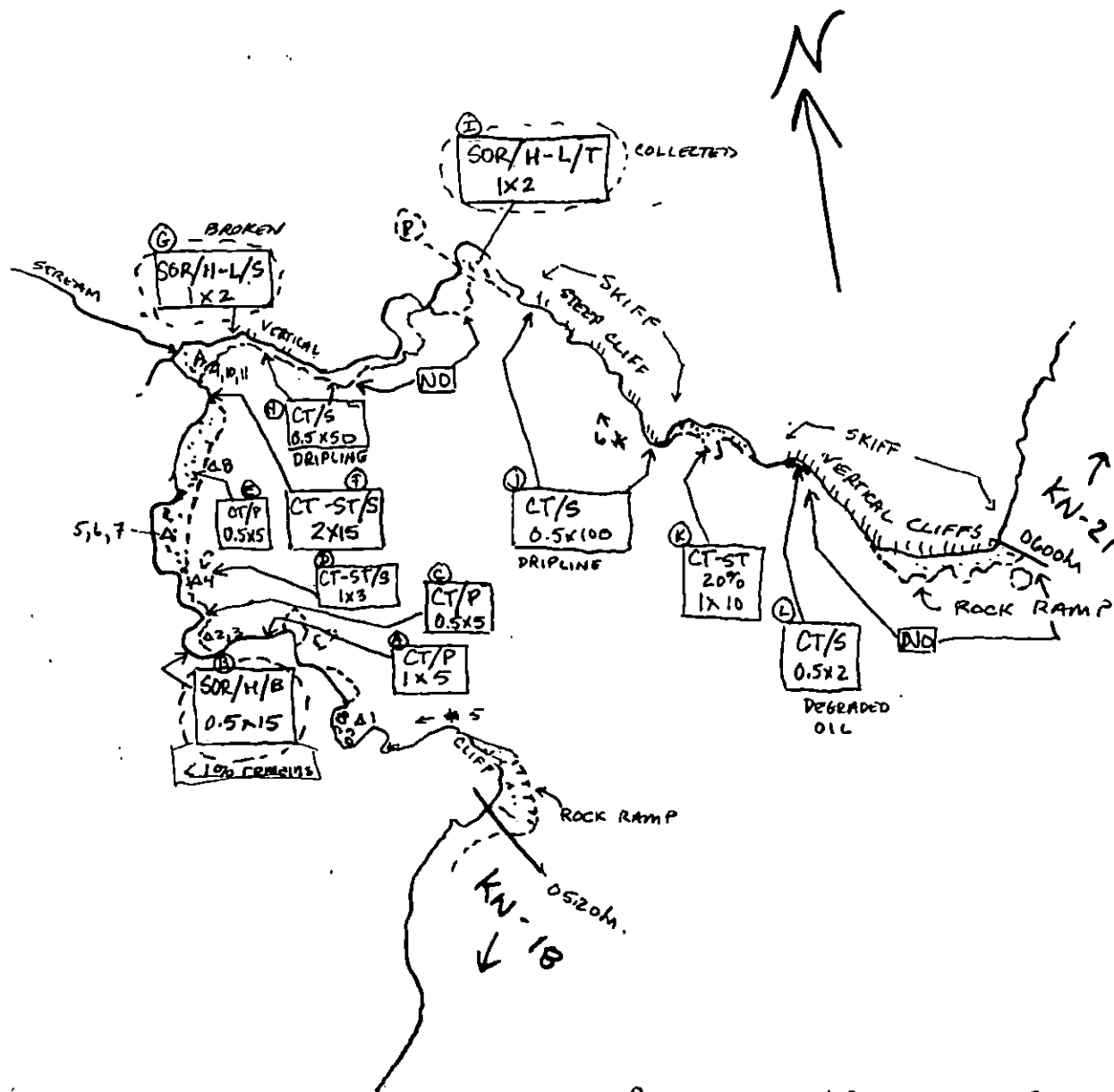
This pocket embayment lies near the mouth of Bay of Isles and receives moderate wave exposure. Most of the shoreline is either bedrock or large boulder rubble.

About 25% of the subdivision shoreline has some type of surface oil although most remaining oil (98%) is weathered surface coat and stain. SOR that was encountered was collected during the survey.

No subsurface oiling was identified.

REVISED: F.W. 5/25/91

1-15

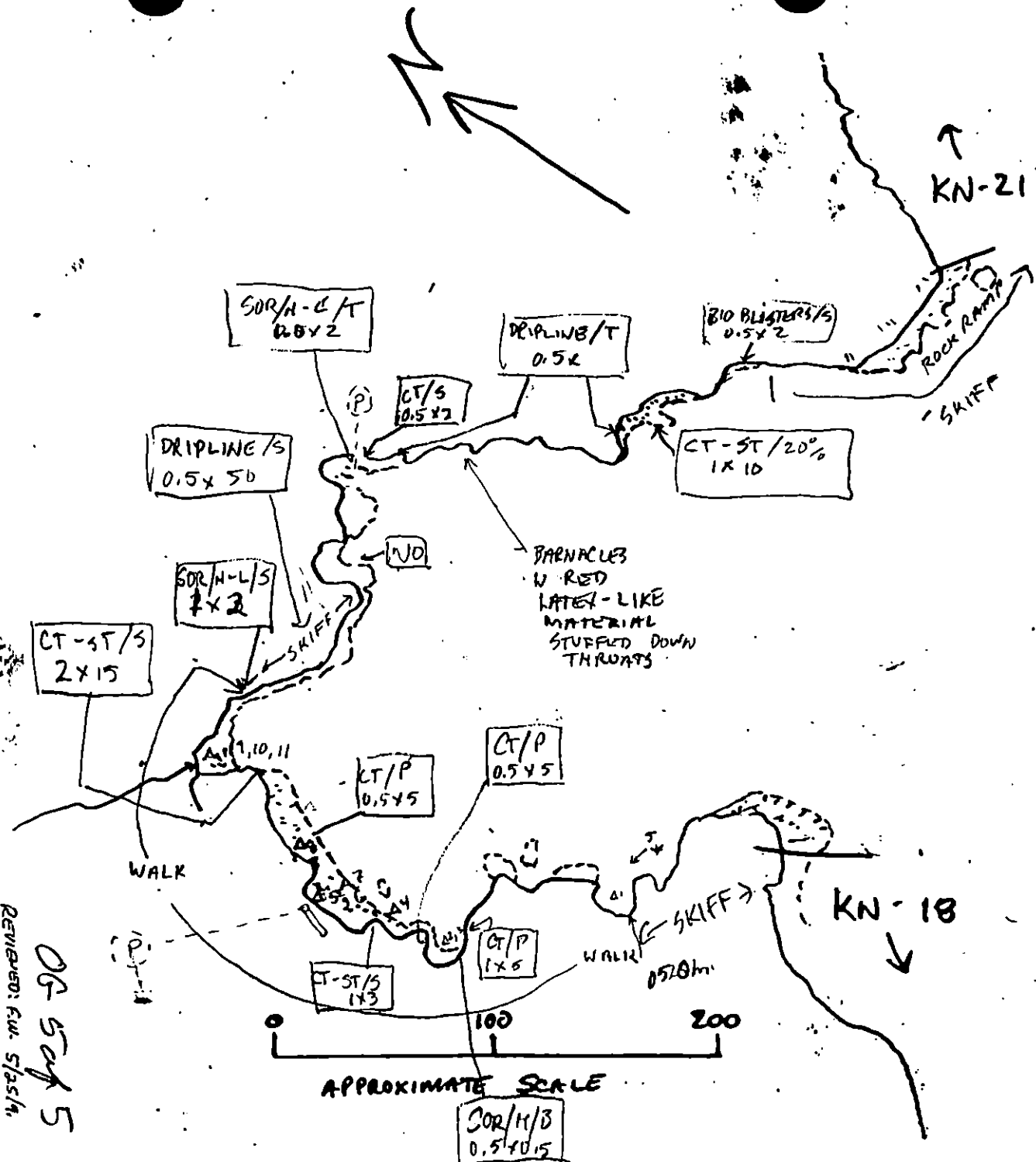


KN-19A
23 MAY
0520-0600
HARPER
TEAM #3

REVIEWED: F.W. 5/15/91

06-2045

OG 5045
 REVEREND: cu. 5/14/14



- Δ2 MITZ 35
BC/SP N.O.
- Δ3 UITE 26
BC/SP
- Δ1 MITZ 20
BC/SPC N.O.
- Δ4 MITZ 20
BC/SGP N.O.
- Δ5 UITE/MITZ
P/SG 30 N.O.
- Δ6 UITE 40
P/P/SG N.O.
- Δ7 UITE/MITZ
BC/P
- Δ8 UITE
P/PG N.O.
- Δ9 UITE 30
PG/PG N.O.
WT 25 N
- Δ10 MITZ 30
PG/PG N.O.
WT 28 N
- Δ11 MITZ 30
PG/SG N.O.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3
 DATE 5/23/91
 SEGMENT # KN19
 TIDAL HEIGHT(Range) 2-3'
 SUBDIVISION A
 BIOLOGIST STOKER
 SEA STATE Calm
 WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL #
 FRAME #

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

Segment comprised by a small bay of rock faces and pocket beaches. Exposure and wave energy moderate to high.
 Biota on bedrock faces and headlands characterized by generally dense *Fucus*, *Ulva*, *Rhodomythra*, filamentous red & green algae, dense barnacles and *Spat*, dense small limpets, patchily dense *Littorina*, sparse patches of *Mytilus*, clusters of *Nucella*, and some *Pisaster*.
 Relatively high-energy beaches of gravel/pebble and interspaced cobble/boulder support patchily dense *Fucus*, barnacles, *Littorina* and limpets on stable cobbles and boulders, with little or no obvious surface biota, other than a few sparse patches of interbedded *Mytilus* at the base of boulders, in the gravel/pebble component.
 Biota on more sheltered pebble/cobble/boulder beaches consists in general of patchily dense *Fucus* and other algae, patches of larger barnacles with dense overall *Spat* cover, patchily dense small limpets, variable densities of *Littorina*, clusters of small *Leptasterias*, small unident. *Holothurians* and nudibranchs, small *Pagurus*, *Scorlosia* and amphipods, and sparse patches of small attached *Mytilus*.
 Biota within proximal to residual surface oil locations A, C, D, E, H, I, and L (all high upper intertidal on rock faces) is normally sparse or absent, increasing downslope as described above for bedrock faces.

(Cont. on attached sheet)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	Murrelet	1	
Waterfowl			
Gulls/Kittiwakes		0	
Shorebirds			
Corvids			
Other Birds	Fox Sparrow	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinipeds (specify)	Harbor Seal - 1		
Carnivores (specify)			

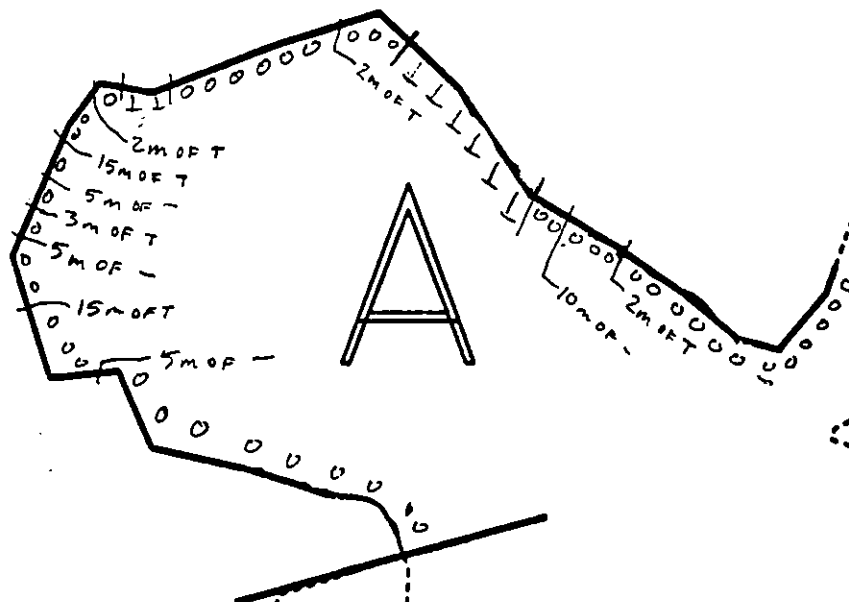
Shoreline subdivision map showing important biological features attached.

Biota within/proximal to residual surface oil locations B & G (high upper intertidal over relatively high-energy beaches of gravel/pebble with interspersed cobble/boulder) is normally sparse (a few barnacles, Littorina, limpets), increasing downslope as described on preceding page for this beach type.

Biota within/proximal to locations E, I and K is sparse, as above. Downslope biota as described on preceding page for more sheltered pebble/cobble/boulder beaches.

Biota on this segment is doing fine, and needs no further cleaning efforts for complete recovery. If further efforts are undertaken for other than biological reasons, care should be taken to do as little damage as possible to downslope biota.

N-19



ADEC
SHORELINE
OILING

~~Sum of narrow~~

$$49 + 160 = 209$$

$$- 110 = 628$$

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

KN0019 A
 ADEC Subsegment Length: 852m
 METERS

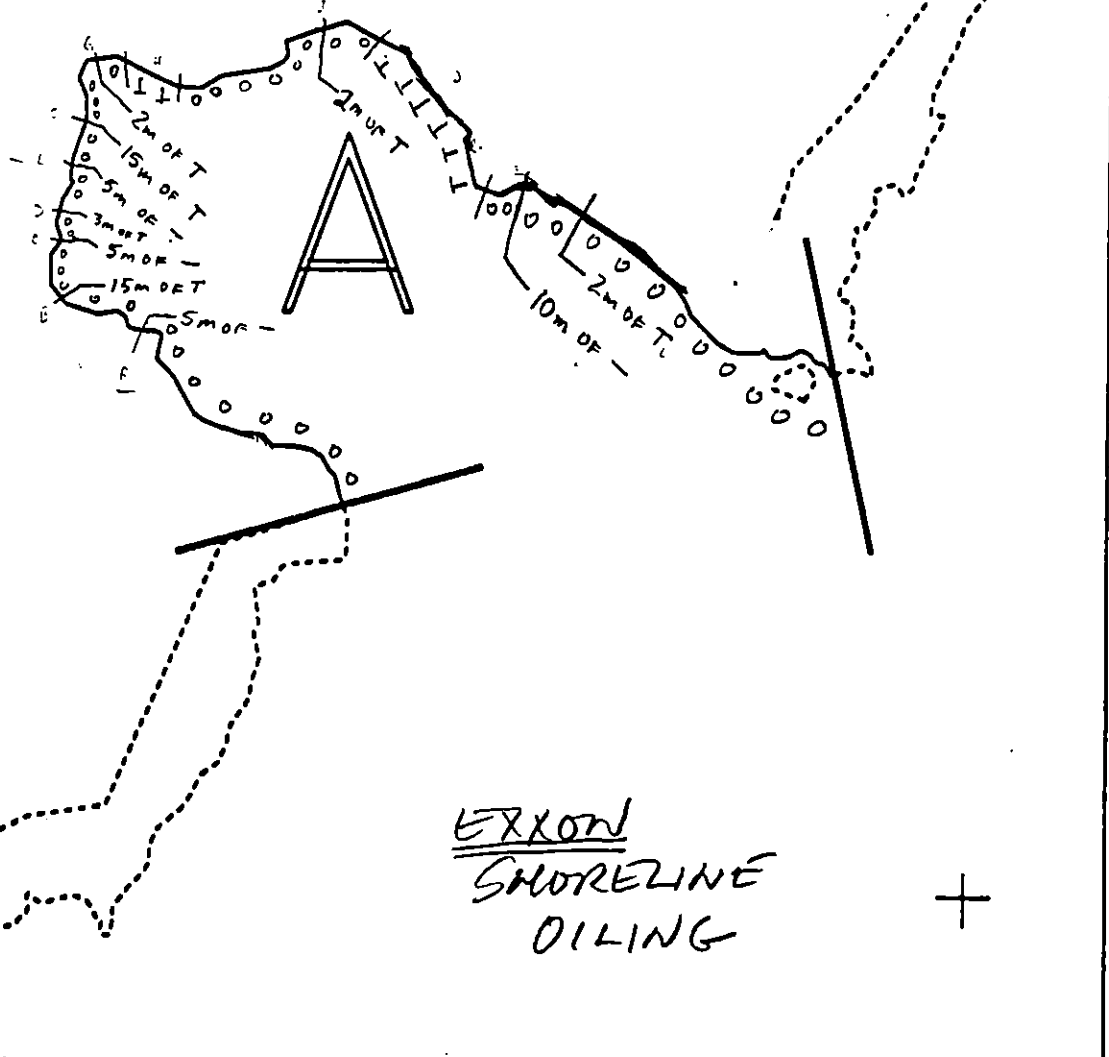
AK State Plane Zone 4
 14N0019a



Subdivision Field Map
 Map Key: KNKN0019A
 Name: HARPER
 Date: 23 May 91
 Date Entered:

REVISED: F.W. 5/25/91
 OG 3 of 5

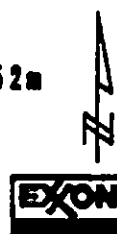
N-19



EXXON
SHORELINE
OILING

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

KN0019 A
 ADEC Subsegment Length: 852m
 METERS
 0 100 200
 AK State Plane Zone 4
 660019a



Subdivision Field Map
 Map Key: KN1KH0019A
 Name: HARPER
 Date: 23 MAY 91
 Date Entered:

REVISED: E.W. 5/25/91
 AC 4215

1991 MAYSAP EVALUATION

SEGMENT: KN 019 SUB: A REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT KN-19 SUBDIVISION A DATE 5/23/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley



NTR



TREATMENT RECOMMENDED

THIS subdivision is fairly exposed with mostly CTs and stains on boulder/bedrock. Collectable oil was removed by Survey Team.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo



NTR

Broke up and collected areas B, E + I as shown on oq map, mainly small patches of SOR. No further treatment or surveying will be required on this subdivision.

LANDMANAGER

NAME DAVE BLANCHET OF MSFS SIGNATURE Dave Blanchet



NTR

SMALL BAY WITH MOSTLY BEDROCK/CLIFF SHORELINE AND A SMALL BROKEN BEACH AT BACK END. MEDIUM TO LOW ENERGY WAVE ENVIRONMENT. PRIMARY MATERIAL GRNCL/COBBLE/BOULDERS ON BEACH. SPORADIC OIL COAT FOUND ALL AROUND BAY AND SEVERAL SMALL PATCHES OF S.O.R. S.O.R. CLEANED +/OR BROKEN UP WHERE FOUND. MINIMAL CAMPING OPPORTUNITIES IN BAY, BUT GOOD GENERAL RECREATION POSSIBILITIES.

USCG/NOAA

NAME MOONEY / DAHLIN SIGNATURE Mooney / Dahlin



NTR

Composed of BEDROCK AND BOULDER, COBBLE, PEBBLE SHORELINE. SPORADIC STAIN & COAT ALONG TIDAL LINE. REMOVED AND TILTED THREE AREAS OF SOR/H-L. NO FURTHER TREATMENT REQUIRED

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 3SEGMENT KN-19OG HARPERBIO STOKERSUBDIVISION AADEC GHORMLEYLANDMANAGER BLANCHET for USFSDATE 23 MAY 1991EXXON SOTELOUSCG/NOAA MOOREY / DAHLINTIME 05:20 to 06:00TIDE LEVEL 2.04' ft. to 2.68' ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 852 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 25 m VL 199 m NO 628 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	LENGTH					
													m	m	S	UI	MI	LI	
A						P					R	V	1	5		X			REMNANTS AFTER COLLECTION
B				T							C,B	M	0.5	15		X			
C						P					R	V	0.5	5		X			LEE SIDE OF BOULDER 122
D						S	S				B,R	M	1	3		X			
E						P					RCP	M	0.5	5		X			
F						S	S				R	V	2	15		X			
G				T							OB/R	M	1	2		X			SOR/H-L BROKEN UP
H						S					R	V	0.5	50		X			
I				T							CB	M	1	2		X			BROKEN SUR/H
J						S					R	V	0.5	100		X			DRIPLINE
K						P	P				R	V	1	10		X			DRIPLINE
L						S					B	H	0.5	2		X			BIO DEGRADED

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

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

PHOTO ROLL # MAYSAP- 3 - 20 FRAMES 5-6

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	35							X	-						X		BC/SP	
2	20							X	-						X		BC/SP	
3	20							X	-						X		BC/SP	
4	20							X	-						X		BC/SP C	
5	30							X	-					X	X		P/SG	
6	40							X	-					X			P/P/SG	
7	30							X	-					X	X		BC/P	
8	20							X	-					X			P/P/G	
9	30							X	-		25	N		X			PG/PG	
10	30							X	-		28	N			X		PG/PG	
11	30							X	-								PG/SG	

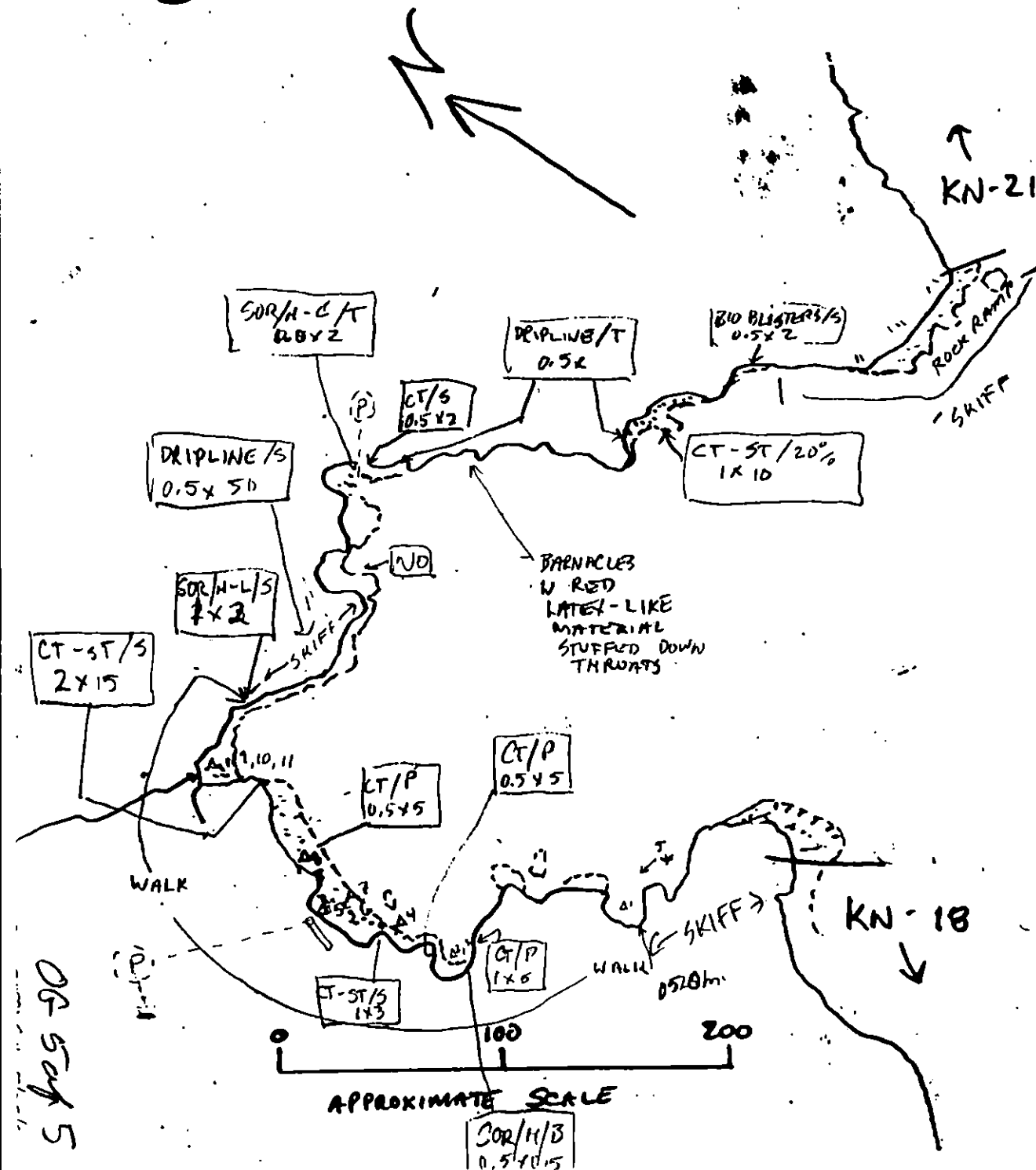
OG COMMENTS: This pocket embayment lies near the mouth of Bay of Isles and receives moderate wave exposure. Most of the shoreline is either bedrock or large boulder rubble.

About 25% of the subdivision shoreline has some type of surface oil although most remaining oil (98%) is weathered surface coat and stain. SOR, that was encountered was collected during the survey.

No subsurface oiling was identified.

REVISED: F.W. 5/25/91

OG 1 of 5



Δ2 MITZ 35

BC/SP N.O.

Δ3 UITE 26

BC/SP

Δ1 MITZ 20

BC/SPC N.O.

Δ4 MITZ 20

BC/SGP N.O.

Δ5 UITE/MITZ

P/SG 30 N.O.

Δ6 UITE 40

P/P/SG N.O.

Δ7 UITE/MITZ

BC/P

Δ8 UITE

P/PG N.O.

Δ9 UITE 30

PG/PG N.O.

WT 25 N

Δ10 UITE 30

PG/PG N.O.

WT 28 N

Δ11 MITZ 30

PG/SG N.O.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/23/91
 SEGMENT # KN19 TIDAL HEIGHT(Range) 2-3'
 SUBDIVISION A BIOLOGIST STOKER
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Segment comprised by a small bay of rock faces and pocket beaches. Exposure and wave energy moderate to high.

Biota on bedrock faces and headlands characterized by generally dense *Fucus*, *Ulva*, *Rhodomenia*, filamentous red & green algae, dense barnacles and spat, dense small limpets, patchily dense *Littorina*, sparse patches of *Mytilus*, clusters of *Nucella*, and some *Pisaster*.

Relatively high-energy beaches of gravel/pebble and interspaced cobble/boulder support patchily dense *Fucus*, barnacles, *Littorina* and limpets on stable cobbles and boulders, with little or no obvious surface biota, other than a few sparse patches of interbedded *Mytilus* at the base of boulders, in the gravel/pebble component.

Biota on more sheltered pebble/cobble/boulder beaches consists in general of patchily dense *Fucus* and other algae, patches of larger barnacles with dense overall spat cover, patchily dense small limpets, variable densities of *Littorina*, clusters of small *Leptasterias*, small inident *Holothurians* and nudibranchs, small *Pagurus*, *Scorlosia* and amphipods, and sparse patches of small attached *Mytilus*.

Biota within proximal to regional surface oil locations A, C, D, E, H, I, and L (all high upper intertidal on rock faces) is normally sparse or absent, increasing down-drift as described above for bedrock faces.

(Cont. on attached sheet)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	Marblet	1	
Waterfowl			
Gulls/Kittiwakes		0	
Shorebirds			
Corvids			
Other Birds	Fox Sparrow	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)	Harbor Seal -1		
Cetaceans(specify)			

Shoreline subdivision map showing important biological features attached.

Page 4 5/26/91 DM

Biota within/proximal to residual surface oil locations B & G (high upper intertidal over relatively high-energy beaches of gravel/pebble with interspersed cobble/boulder) is normally sparse (a few barnacles, Littorina, limpets), increasing downslope as described on preceding page for this beach type.

Biota within/proximal to locations E, I and K is sparse, as above. Downslope biota as described on preceding page for more sheltered pebble/cobble/boulder beaches.

Biota on this segment is doing fine, and needs no further cleaning efforts for complete recovery. If further efforts are undertaken for other than biological reasons, care should be taken to do as little damage as possible to downslope biota.

A hand-drawn map of a field. In the center is a simple drawing of a tent. The field is bounded by a line with several points marked with small circles. Distances are written along these boundaries: on the left side, from top to bottom, they are 2m OF T, 15m OF T, 5m OF -, 3m OF T, 5m OF -, 15m OF T, and 5m OF -. On the top boundary, from left to right, they are 2m OF T and 2m OF T. On the right boundary, from top to bottom, they are 10m OF - and 2m OF T. The bottom boundary has several small circles but no distance labels. A dashed line extends from the bottom boundary towards the bottom right corner. A solid line runs diagonally across the bottom of the map.

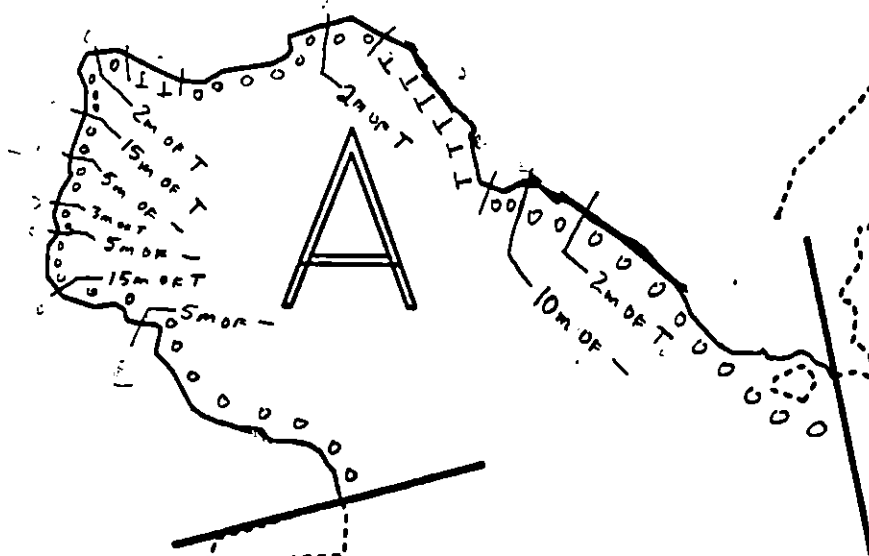
~~From of whom~~

~~$$49 + 160 = 209$$~~
~~$$NA = 628$$~~

Subdivision Field Map
Map Key: KNKN0019A
Name: HARPER
Date: 23 May 91
Date Entered:

REVISED: F.W. 5/25/9,
OG 3 of 5

N-19



EXXON
SHORELINE
OILING

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

KN0019 A
ADEC Subsegment Length: 852m

METERS
0 100 200
AK State Plane Zone 4
6620610a



Subdivision Field Map

Map Key: KNIK0019A

Name: HARPER

Date: 23 MAY 91

Date Entered:

REVISED: F.W. 5/25/91

OG 4ak5

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-20

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-20 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 43 m: V.Light 15 m: No Oil 1578 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream 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
- 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 (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7I 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/ KN-020 SUBDIVISION: A DATE 4/25/90SCG
NAME BM3 David A. Sylvestre SIGNATURE David A. Sylvestre☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Speradic patches of coating very sparse

ADEC
NAME Dianne Monson SIGNATURE Dianne Monson☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

- patchy and sporadic coats.
- No subsurface oiling
- very little oil within this segment

LAND MANAGER

NAME David Mandrella SIGNATURE David Mandrella☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

- Minimal oiling was noted in this segment. Continued natural cleaning.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Alan Pittenger USCG D. Sylvester SEGMENT ST/ KN020
 BIO John Benson LAND REP Steve Mondrella SUBDIVISION A (1 OF 1)
 EXXON Chris Katsimpalis ADEC Diane Munson TIME 7:20 to 10:40
 TEAM NO. 778 TIDE LEVEL -1 to +2 ft. DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2056 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 50 % B 20 % C 15 % P 15 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 3 m NO 2033 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	17	18	20	25	30	35	40	45	50	55	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X	X		X							X	X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X			X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Boat (oiled), Containers, Shells#BAGS 5

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	UC	20	25	30	35	40	45	50	55	SU	U	M	U				
1	20					X	.													X		N	15		C.P.-P.G., S
2	35					X	.													X		N	>35		P.G.-G., S
3	25					X	.													X		N	>25		P.-G., S
4	40					X	.													X		N	>40		P.-P.G., S
5	20					X	.													X		N	>20		P.-C, B
6	25					X	.													X		N	>5		P.-P

COMMENTS

REVIEWED 7WDATE 4/26/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-13-90

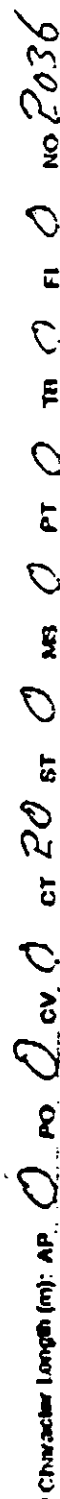
SEGMENT ST/ KNO20 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	OR ST	OR ST	OR ST	OR ST	OR ST	OR ST	OR ST	SU	U	M	L				
7	40					X	.										X					N	>40	P-P
8	35					X	.											X				N	20	P-P, G, S
9	35					X	.													X		N	>35	P-P
10	35					X	.													X		N	>35	C-P, G
11	45					X	.												X			N	>45	P-P, G
12	40					X	.											X				N	>40	P-P
13	35					X	.											X				N	>35	P-P
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

REVIEWED _____ DATE _____



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN020 Subdivision A Date (mo / day / yr) 4/25/90Time (24 hr) 0730-1040 Biologist Benson

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 20 (3) Cobble 15 (4) Pebble 15 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 20 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. Frames

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Sitka black tail deer (eating seaweed) // school of herring? (3" x 1/2"; blueish)
 mature bald eagle
 Steller jays & ravens
 sand hill cranes (Grus canadensis)

Ecological Considerations: No sensitivities (bald eagle nest within 400m of segment)

This segment is notable for the of total % cover.
 found either high % cover (on bedrock and large boulders) or very low % cover (on small boulders and cobbles), but little substrate having moderate biotic % cover. Dense cover was dominated by Rhodamela, Odonthalia, Fucus, and Verrucaria. Gastropods were occasionally abundant on both and in isolated locations (see map)

ECOLOGY MAP (1 OF 2)

RESOURCE CODES FOR ENTIRE SEGMENT:

6 Y

BALD EAGLE NEST $\leq$ 400m OF SEGMENT

KN-20

* relatively protected
cobble/pebble beach which
supports large gastropod populations *

saw 2 mature bald eagles PWS
but could not confirm nests 32.33

BALD EAGLE NEST

KN-20

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-20

ADEC Segment Length: 1636m

0 100 200 300

Map Key: PWS-328a

Name: BensonDate: April 25, 1990

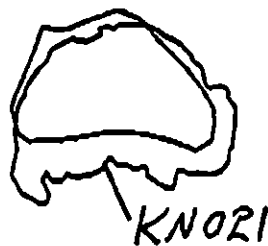
DATE Apr 25, 1990 TIME 0720-1040 TIDE HEIGHT -3' to +3'

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

SEGMENT ST. KN020 SUBDIVISION A LENGTH 2056 m BIOLOGIST Benson

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	~~Agarum cribosum~~			1,2	
	~~Alaria~~			1	
	BOSSIELLA/CORALLINA				2 erect
	CALLIARTHRON/CORALLINA			1	
	CLADOPHORA SPP		2		
	COSTARIA SPP			1	
	ENDOCLADIA MURICATA				
	FILAMENTOUS GREENS	1	2	1,2,3	
	FILAMENTOUS REDS				
	GLOIOPELTIS FURCATA				
	HALOSACCION OLANDIFORME				
	LAMINARIA SPP			1	
	LITHOTHAMNION encrusting			1	
	NEREOCYSTIS SPP				drift
	PORPHYRA SPP				
	RALPHSIA/HILDENBRANDIA		2	1,2,3	
	PHODOMELA LARX				
	RHOHOMENIA PALMATA				
	SCYTOSIPHON SPP		2,3		
	ULVA SPP			1	
	ZOSTERA MARINA			5	inshore of island protection
	ENTOMORPHA				
	~~Constantinea sp.~~			1,2	
	Verrucaria	1,2			
AUNA:	~~Orange encrusting sponge~~			1,2	also urn sponge on 3
	ANTHOPEURA SPP				
	(SEMI) BALUNUS CARIOSUS		1,2	1,2	
	B. GLANDULA	1	1,2		
	BRYOZOANS			1,2	encrusting
	CHITONS (other than K. TUNICATA)			1,2	Tonicella lineata, T. insignis
	CLAMS				rock jingle
	CRABS				Telmoneus sp.
	DERMASTERIAS IMBRICATA			1,2	
	KATHARINA TUNICATA		1	1,2	
	LEPTASTERIAS HEXACTIS			1	
	LIMPETS	1	1	1	Notagomus persona, Onchidella boreal
	LITTORINA SPP	1			L. setacea, L. scutellata
	NUCELLA SPP		1	1,2	common on vertical bedrock walls
	PAGURUS SPP hermit crabs		1	1	in tidepools
	PISASTER OCHRACEUS		2	1	
	POLYCHAETES		1	1	Spirorbis in 1, cream-colored in M
	PYCNOPODIA HELIANTHOIDES		2 (pool)	1,2,3	very common
	SEARLESIA DIRA				
	SERPULIDS			1,2	common under overhangs & in pools
	SIPHONARIA THERSITES				
	TEALIA		1 (pool)		T. crassicornis

KN-20

PWS
328B →

KN-2

KN-20

● XXX Wide

//// Medium

--- Narrow

TTTT Very Light

ADEC Segment Length: 1636m
Exxon Segment Length: 2056m

0 100 200 300

Map Key: PWS-328a

Name: Alan PittengerDate: 4/25/90

SHORELINE EVALUATION

SEGMENT ST/ KN-20 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Hume* DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 43 m: V.Light 15 m: No Oil 1578 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC *Art Weiner*
EXXON *Amy Katz*
NOAA *Gary Pattee*
USCG *Kenneth Kenzie*

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

Symbols

Bedrock
Sediment
B, C, P, G, S- Grain Size
Oiled Interval

Scale

0 100 200 300

KNIGHT ISLAND

H. ang.
B-rubbleRock Slide
Scree Slope

Stream

Lang, C, P beach

Stream

MZ, CT/P, 1x10m, 30%

H. ang. Rock K
B-rubble

P, C beaches

H. ang.
B-rubbleLang. P, C
beach

Stream

Lang. B, C
beachLang.
C, P beach

BAY OF ISLES

UI, CT/P, 1x10m, 30%

HWL

LWL

UI, CT/S, 1m x 3m, $\leq 10\%$ Lang Rock Platform
& RubbleOG Alan Finger
SEGMENT ST/KN020

SUBDIVISION A

DATE 4/25/90

CHECKLIST

N Area
Apparent Scale
Sediment Body
OS Dist.
Width
Length
% Cover
Substrate Character
Est. MRLA ML
SSL
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)

LEGEND

1 Δ

P8 - No Subsurface Oil

2 Δ

P1 - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 Δ Photo location, direction,
and number

Character Length (m): AP 0 PO 0 CV 0 CT 20 ST 0 MS 0 PT 0 TB 0 FL 0 NO 2036

ECOLOGY MAP (1 OF 2)

RESOURCE CODES FOR ENTIRE SEGMENT:

6 Y

BALD EAGLE NEST $\leq$ 400m OF SEGMENT

KN-20

* relatively protected
cobble/pebble beach which
supports large gastropod populations *

saw 2 mature bald eagles PWS
but could not confirm nests 3233

BALD EAGLE NEST

KN-2

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KN-20

ADEC Segment Length: 1636m

0 100 200 300

Map Key: PWS-328a

Name: Benson

Date: April 25, 1990

KN-20

PWS
328B →

KN021

KN-2

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-20

ADEC Segment Length: 1636m
Exxon Segment Length: 2056m

0 100 200 300

Map Key: PWS-328a

Name: Alan Pittenger

Date: 4/25/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-21

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-21 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 413 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

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

SEGMENT ST 1 NU-21 SUBDIVISION: A DATE 4-8-90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MSJ

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/22/88

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KN-21
 BIO MA. SCOTT LAND REP NFS SUBDIVISION A 1 of 1
 EXXON J. BUTLER ADEC W. GHORMLEY TIME 10:00 to 10:20
 TEAM NO.: 3 TIDE LEVEL: to DATE 4/8 /90
 EST. SUBDIVISION LENGTH: 566 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: to
 SURFACE SEDIMENTS: R 95 % B 0 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 20 % Vert 80 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 20 m NO 566 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	60	65	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X		X							X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-3-2

Frames 1

SUBSURFACE OIL — NO PIT SUBSTRATE

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	30 PR	35 PR	40 FW	45 FW	50 T	55 T	60 L	SU	U	M		
							-														
							-														
							-														
							-														
							-														
							-														

COMMENTS

Small rock island w/ 20m of ST @ SURZ.
 Steep rock walls.

OG G. MACDONALD

SEGMENT ST-21

SUBDIVISION A

DATE 4/8 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

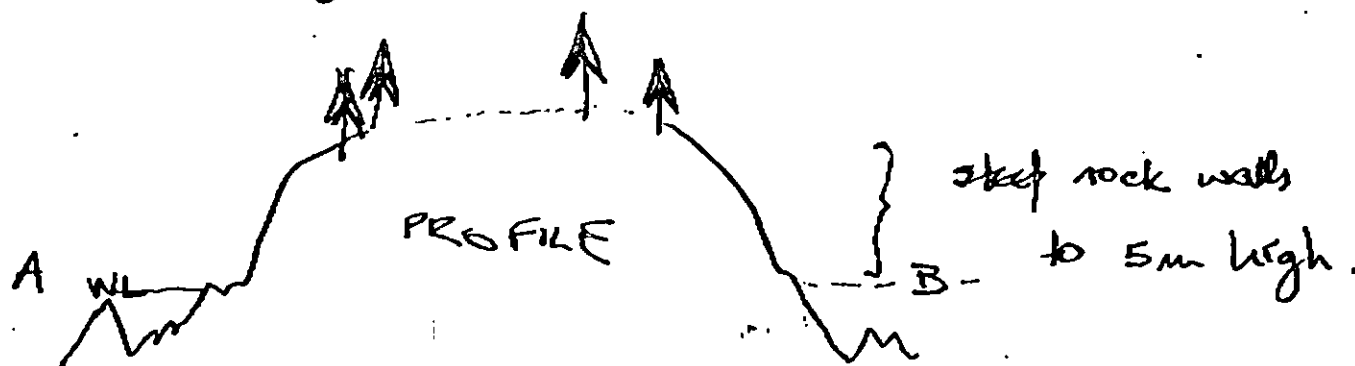
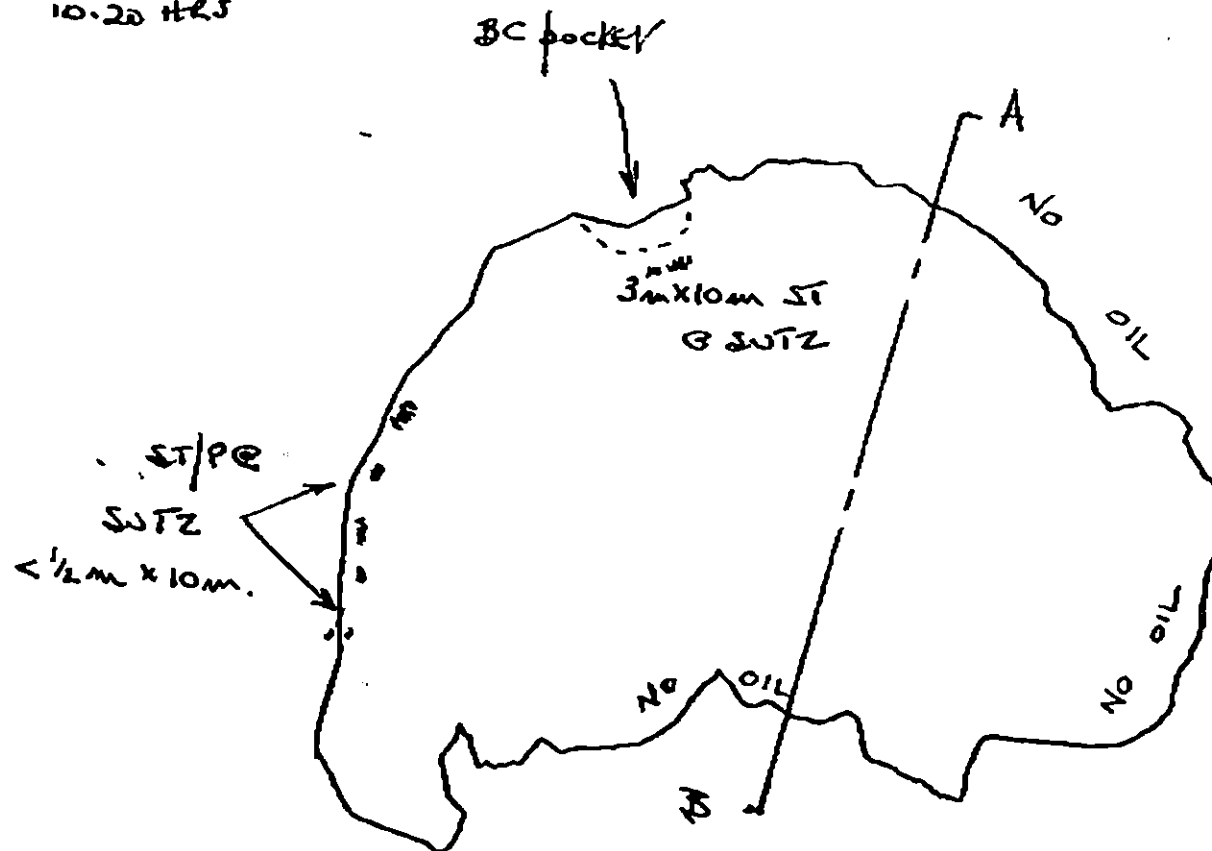
Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

SEARCH MAP

0 40 80m
1" = 80m



10.00 -
10.20 HRS



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 0 NO 566

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / KN 21 Subdivision A Date (mo / day / yr) 4/8/90Time (24 hr) 1000-1030 Biologist M.A. Scott(A) Substrate type and % of segments:
(1) Bedrock 95 (2) Boulder — (3) Cobble 5 (4) Pebble — (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense 70 Moderate 20 Low 10

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

Photographs:

Roll No. —Frames —

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

1 scal
2 sea otters
1 eagle
2 oyster catchers
no rock sandpipers (?)
6 goldeneyes

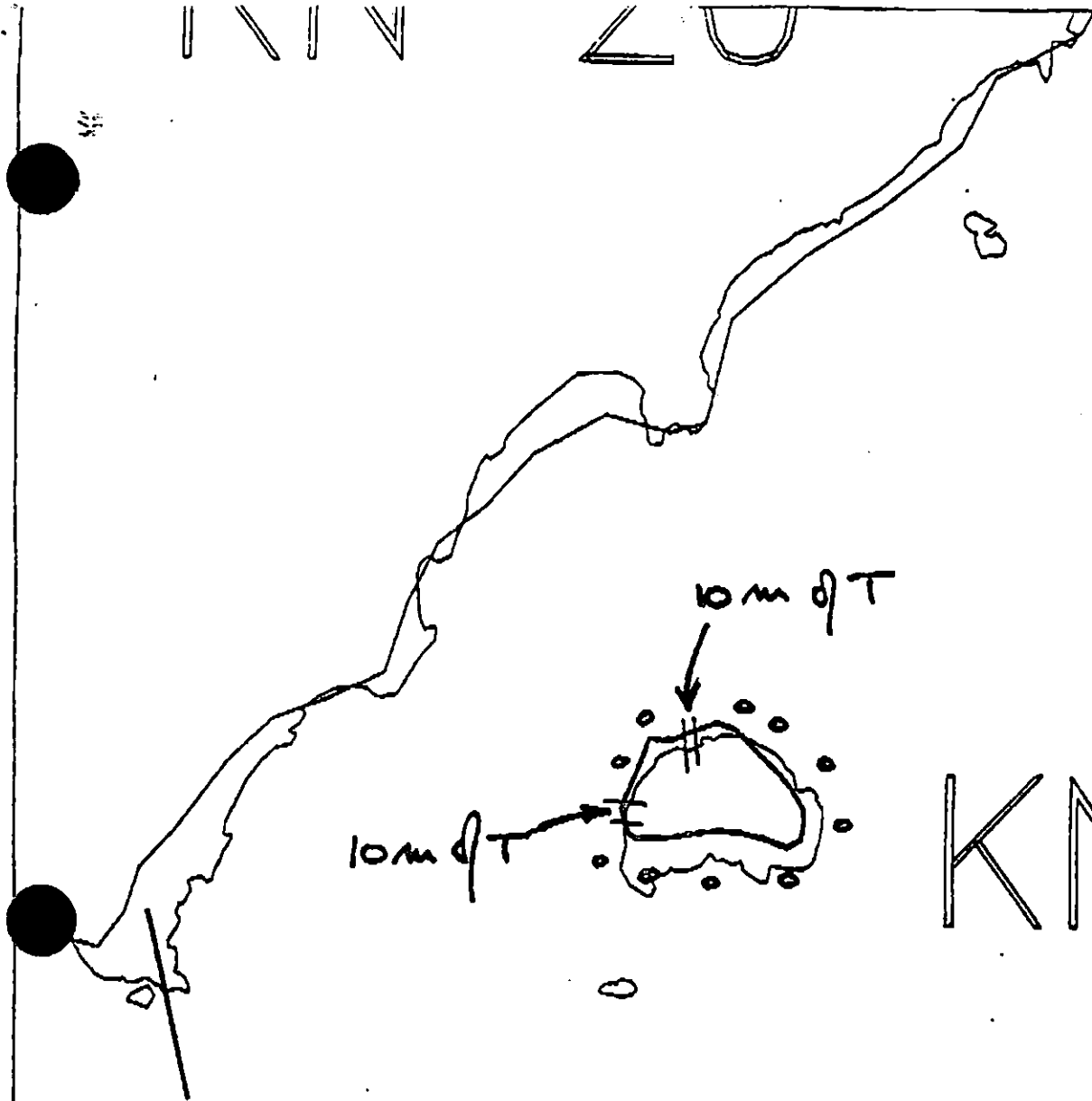
1 pigeon guillemot
(observations from boat; LTB not visible)

Ecological Considerations:

- intertidal - biota dense (4 appears diverse but observations limited from boat)
- dense patches of mytilus found occasionally (sparse) around island

U V V V

Z U



KN-2

ST 20, No 566

XXXX Wide

/// Medium

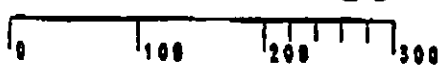
--- Narrow

TTTT Very Light

OOOO No Oil

KN-21

ADEC Segment Length: 440m
Exxon " " : 584m



Map Key: PWS-337

Name: G. MACDONALD

Date: 4/8/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-21 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. [Signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 413 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER
EXXON ANDY TATE
NOAA Burt Wescott
USCG KENNETH KEANE

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

OG G. McDONALD

SEGMENT ST/KN-21

SUBDIVISION A

DATE 1/8 90

CHECKLIST

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

LEGEND

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

ETCH MAP

0 40 80m
1" = 80m



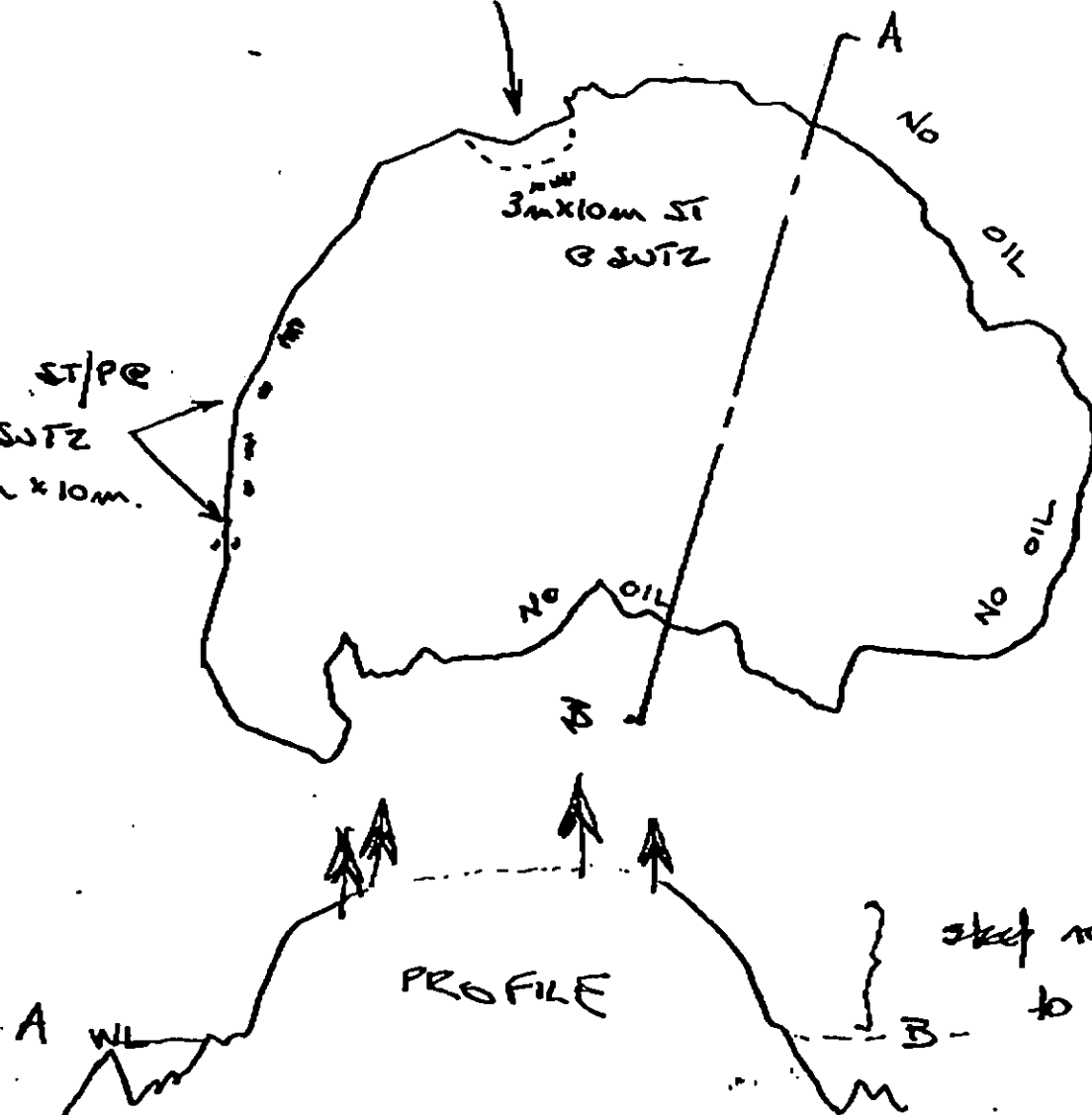
10.00 -

10.20 HRS

BC pocket

3m x 10m ST
G SWTZ

ST/PE
SWTZ
< 1/2 m x 10m.



Oil Character Length (m): AP 0 PO 9 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 0 NO 566

REVISION: 02/04/00

||||

∠ U

10m of T
10m of T

KN-2

ST 20, No 566

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-21

ADEC Segment Length: 440m
EXXON " " : 586m

0 100 200 300
METERS

Map Key: PWS-337

Name: G. MACDONALD

Date: 4/8/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-23

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-23 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest within 400 M of subject segment.
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 25 m: Medium 0 m: Narrow 471 m: V.Light 1347 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats as shown, 2) manual pickup of debris, and 3) bioremediation of areas indicated on attached sketch map. Work restricted 5/1 to 9/1 by sea-bird colony, consult with USFWS for 7/1 to 8/15 working period regarding seabird colony and 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 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
- 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
- ✓ 30,00 Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- ✓ 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206
- ✓ 5T: All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- ✓ 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-23 SUBDIVISION: A-1-f1 DATE 04/25/90

USCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS - Pit site #1 & 2. Boulder armor over peat & mud - Bio site - Same Island.

On SE side CT/C, AP/P, 10x10m area needs manual removal of AP & wash - Near shore sheer noted at this site.

Possible wash site @ 3m wide Band CT/P Southern most island.

Other areas oiling concentrated under B/C - difficult to thin CT (C).

Minimal recovery Bio sites -
CSC rep. Peter Collins was transferred before paperwork was completed -
Please refer to his comments.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 26.12.88

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ KN-23
 BIO DAVE LOHJE LAND REP PETER ZOLLAR SUBDIVISION A (1 OF 1)
 EXXON FRANK BOY ADEC CLARA CROBY TIME 04/25/90 11:00
 TEAM NO. 13 TIDE LEVEL -1' to +4' DATE 04/25/90
 EST. SUBDIVISION LENGTH: 2211 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 80 % B 15 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 75 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 20 m M 0 m N 550 m VL 1,641 m NO 0 m

SURFACE OIL

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

PAVEMENT H F (S) 30 sq. m by 4 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-13-5Frames 23, 24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U			
1	25	X					5.10		X	X					X						B-P, M
2	25	X					5.10		X	X					X						C-P, M
							.														
							.														
							.														
							.														

COMMENTS

- ① GEOMORPHOLOGY: HIGH ANGLE TO VERTICAL BED ROCK WITH SMALL, NARROW BOUNDER / COBBLE BEACHES
- ② OIL CHARACTER/CATEGORY: "WIDE OILING" (CT, AP) CONFINED TO TWO SHORT NARROW BEACHES. OTHERWISE A RESIDUAL COAT (CT/D) TYPICAL.

10+2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/1

Segment ST / KN023 Subdivision A Date (mo / day / yr) 4-25-90Time (24 hr) 9:30 Biologist David Lohr

(A) Substrate type and % of segments:

(1) Bedrock 80 (2) Boulder 15 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 60 Moderate 25 Low 15

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

Photographs:

Roll No. ST-13-5Frames 23,24

BARNACLES

	Dense	
1U	~~X~~	~~X~~
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

	Moderate	
1U	~~X~~	1L
2	~~X~~	2
3	~~X~~	3
4	4	4
5	5	5
6	6	6

	Sparse	
1U	~~X~~	1L
2	2	~~X~~
3	3	~~X~~
4	4	4
5	5	5
6	6	6

	Rare	
1U	~~X~~	1L
2	~~X~~	~~X~~
3	~~X~~	~~X~~
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	~~X~~	1L
2	~~X~~	2
3	~~X~~	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	~~X~~	2
3	3	3
4	4	4
5	5	5
6	6	6

	Sparse	
1U	~~X~~	1L
2	~~X~~	2
3	~~X~~	3
4	4	4
5	5	5
6	6	6

	Rare	
1U	~~X~~	1L
2	~~X~~	~~X~~
3	~~X~~	~~X~~
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	~~X~~	~~X~~
2	~~X~~	~~X~~
3	3	3
4	4	4
5	5	5
6	6	6

	Sparse	
1U	~~X~~	1L
2	~~X~~	2
3	~~X~~	~~X~~
4	4	4
5	5	5
6	6	6

	Rare	
1U	~~X~~	1L
2	~~X~~	~~X~~
3	~~X~~	~~X~~
4	4	4
5	5	5
6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

O, P, Q - Z seals spotted in area

ST- 1 mature bald eagle observed flying in area. No nest was observed

SR. no comment

GU. no comment

Shoreline Ecological Summary

2 of 2

Segment ST-KN023

Subdivision A

4-25-90

Biologist: David Lohse

Wildlife Observations / General Comments

1. Present in low intertidal: Enteromorpha, unidentified nemertean (orange in color), Scytosiphon, Rhodomenia, Pycnopodia, Ulva, Nereis, Dermasterias, Pisaster ochraceus, unidentified filamentous red algae, unidentified red "branch" (Rhodomenia?)
mid intertidal: Scytosiphon, Anthopleura, coralline algae, Endouladia, unidentified red "branch" (Rhodomenia?)
high intertidal: Enteromorpha (dense in tidal pools)
2. 3 oystercatchers, 2 seals, 2 cormorants, and 1 raven spotted in the area
3. Algal cover in the low intertidal was 50% on cobble (2 sites estimated), 0% on bedrock (1 site), and 90% on boulders (1 site estimated).
4. Some oil covered barnacles found ~~at~~ in high intertidal. Montellus was ~60% (estimate of one site).
5. Bare ~~the~~ Fewer stipes were found in high intertidal in some areas.

ECOLOGY MAP

(1 OF 2)

RESOURCE CODES FOR
ENTIRE SEGMENT:

ST-11

3H, O, P, Q

5R-11

6U

PINNIPED HAULOUT

KN-2

BALD EAGLE
NESTPWS
3-1-86

KN-24

KN 206

KN-23

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO

ADEC Segment Length: 1108m

0 100 200 300

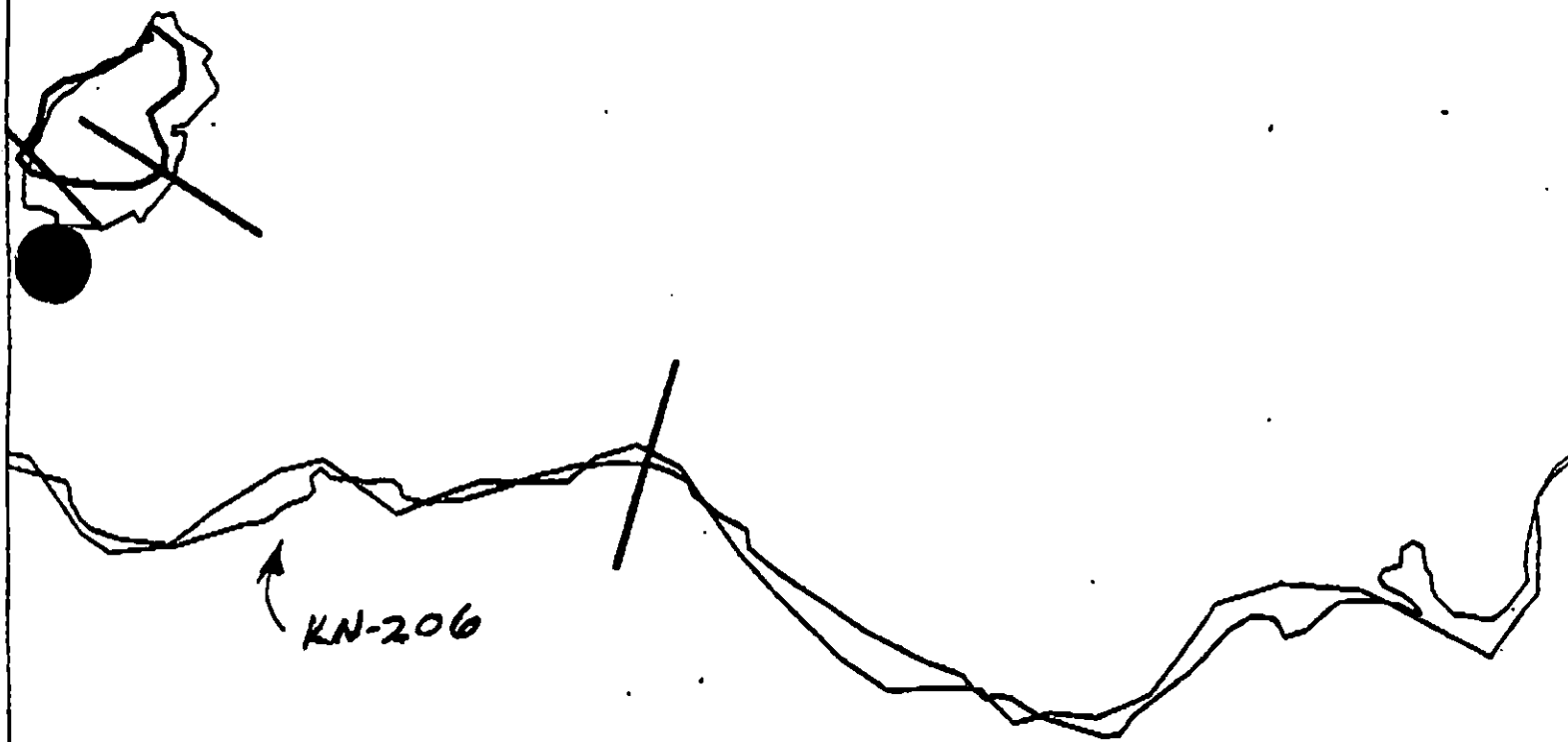
Map Key: PWS-344a

Name: _____

Date: _____

Data Entered:

ECOLOGICAL MAR 2&2



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-23

ADEC Segment Length: 1108m

Map Key: PWS-344b

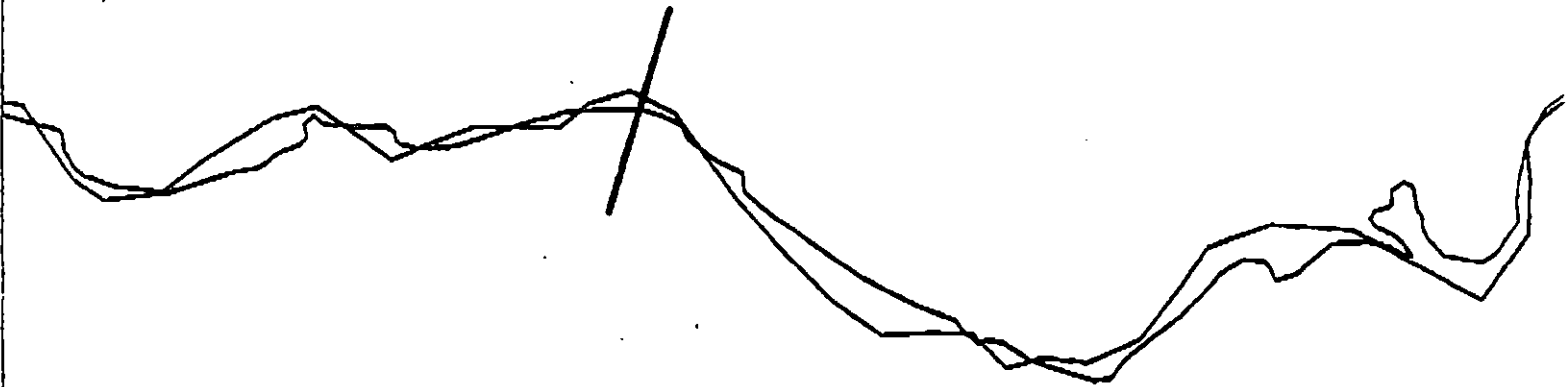
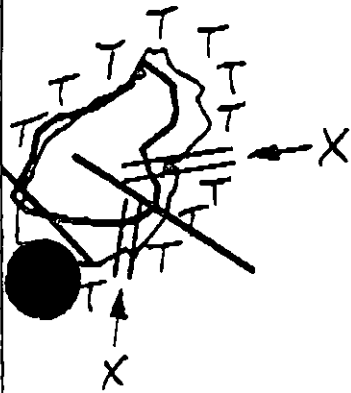
Name: _____

Date: _____

ST/KN-23

SUBDIVISION: A - 10ft

EAST PORTWON

← PWS
34-A

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-23A

ADEC Segment Length: 1108m

Map Key: PWS-3446

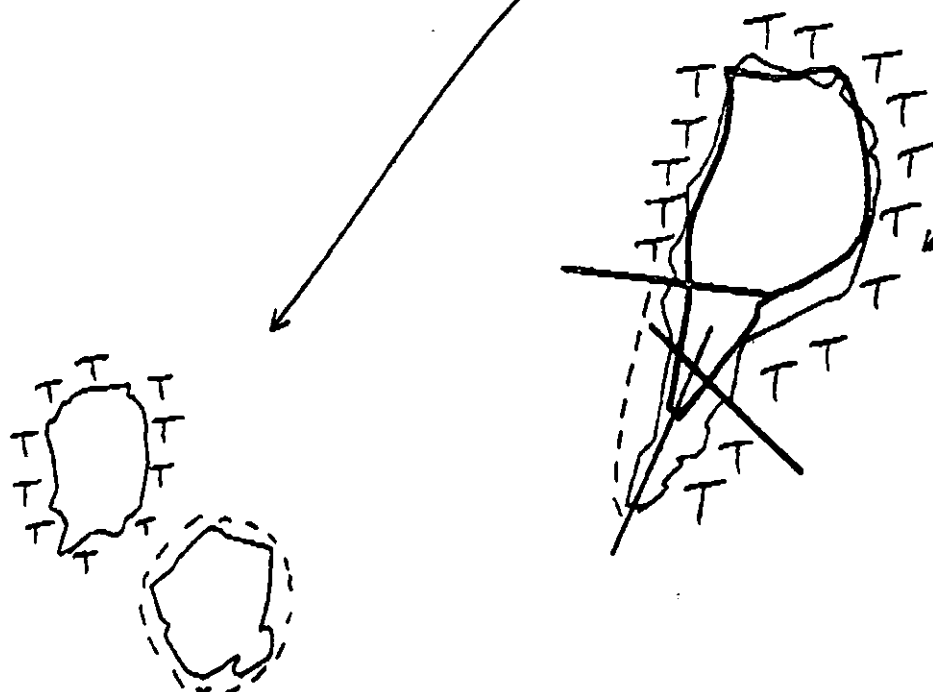
Name: RICK GALLIEDate: 04/25/90

ST/KN-23

SUBDIVISION 3 A - 10ft

WEST PORTION

KN-23

PWS
3448 →

KN-24

● XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-23A

ADEC Segment Length: 1108m

Map Key: PWS-344a

Name: RICK GILLIEDate: 04/25/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-23 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

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

5T Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessments completed on 5/22/90 and 5/27/90 by Mike Lockhart indicate no active nests within 400m of the work area.

5R Seabird Colony

NO CONSTRAINT. The work area is more than 800m from the nearest seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

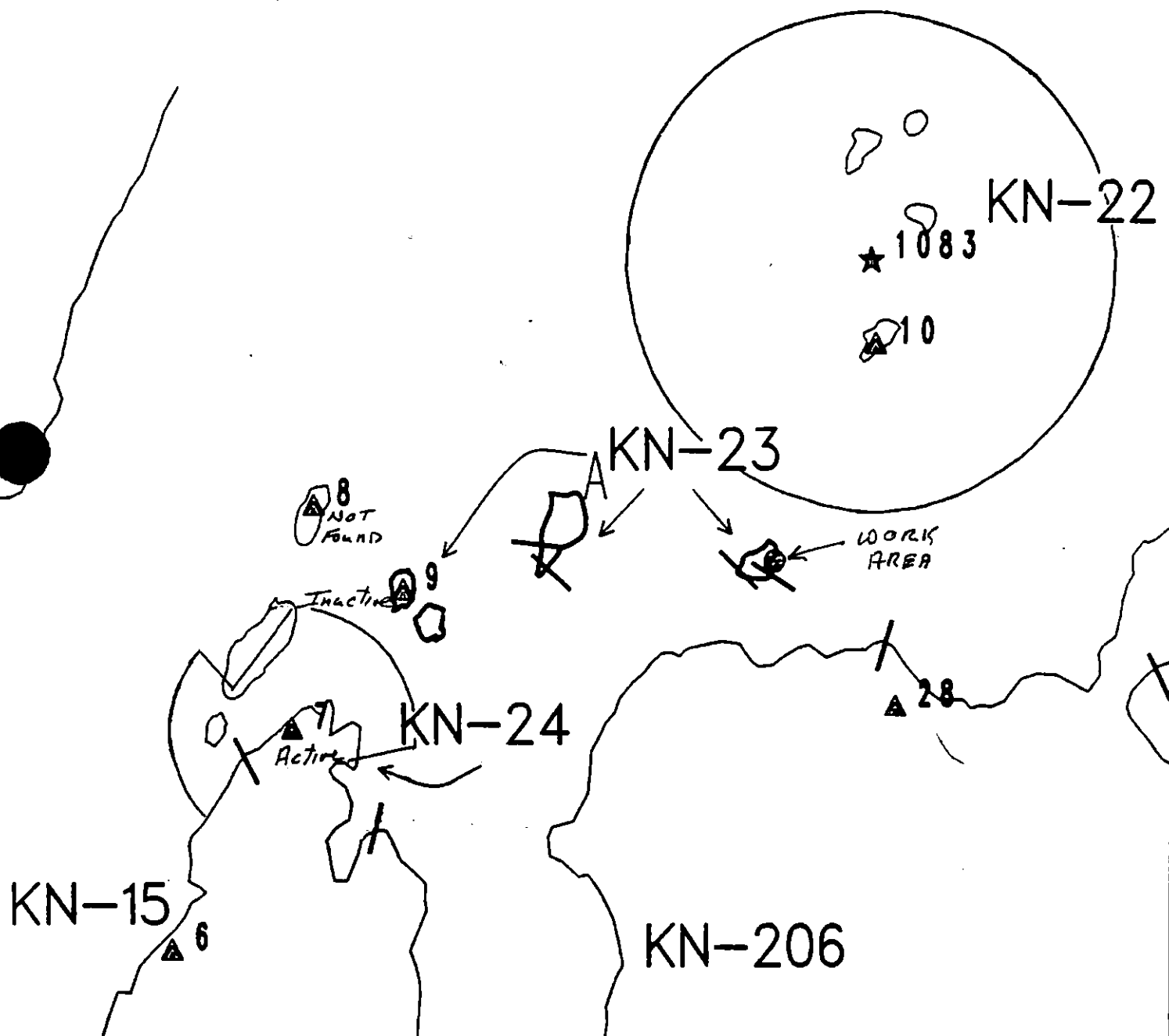
Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance.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

TAG APPROVAL DATE 6/04/90
ADEC Roy Morais
EXXON Andy Lee
NOAA Joseph Talbot
USCG C.A. KETTER

FOSC [Signature] Date 6/4/90

Prepared by Anders Meyer Date 6/2/90

Incorporates information from
USFWS bald eagle survey 5/22 & 5/27/90



Exxon Company, USA

Map Key: KNI-KN-23

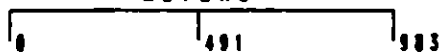
May 11, 1990



ECOLOGY MAP $\frac{1}{2}$ SEGMENT KN-23

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1612 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-23 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest within 400 M of subject segment.
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. Paul McWhorter DATE: 5/11/90

OILING CATEGORIZATION:

Wide 25 m: Medium 0 m: Narrow 471 m: V.Light 1347 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats as shown, 2) manual pickup of debris, and 3) bioremediation of areas indicated on attached sketch map. Work restricted 5/1 to 9/1 by seabird colony, consult with USFWS for 7/1 to 8/15 working period regarding seabird colony and eagle nest.

SEE ADDENDUM DATED 6/2/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90
ADEC Art Weimer Art Weimer
EXXON Arny Tate Arny Tate
NOAA Aspen J. K. It's St. J. K.
USCG D. D. Rome D. D. Rome

FOSC: W L DATE: 5-18-90

"NOTIFY CAC 24 HRS. IN ADVANCE OF WORK"

SHORELINE EVALUATION

SEGMENT ST/ KN-23 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest within 400 M of subject segment.
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMahon DATE: 5/11/90

OILING CATEGORIZATION:

Wide 25 m: Medium 0 m: Narrow 471 m: V.Light 1347 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats as shown, 2) manual pickup of debris, and 3) bioremediation of areas indicated on attached sketch map. Work restricted 5/1 to 9/1 by seabird colony, consult with USFWS for 7/1 to 8/15 working period regarding seabird colony and eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90
ADEC Art Weimer
EXXON Andy TGA
NOAA Joseph J. Kelly II
USCG D.D. Rome

FOSC: W L DATE: 5-18-90

"NOTIFY CAL 24 HRS. IN ADVANCE OF WORK"

OG KICK CTILLIE
 SEGMENT KN-23
 SUBDIVISION A-1 of 1
 DATE 04/25/90

CHECKLIST

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

LEGEND

1 Δ
 PH - No Subsurface Oil

2 Δ
 PH - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

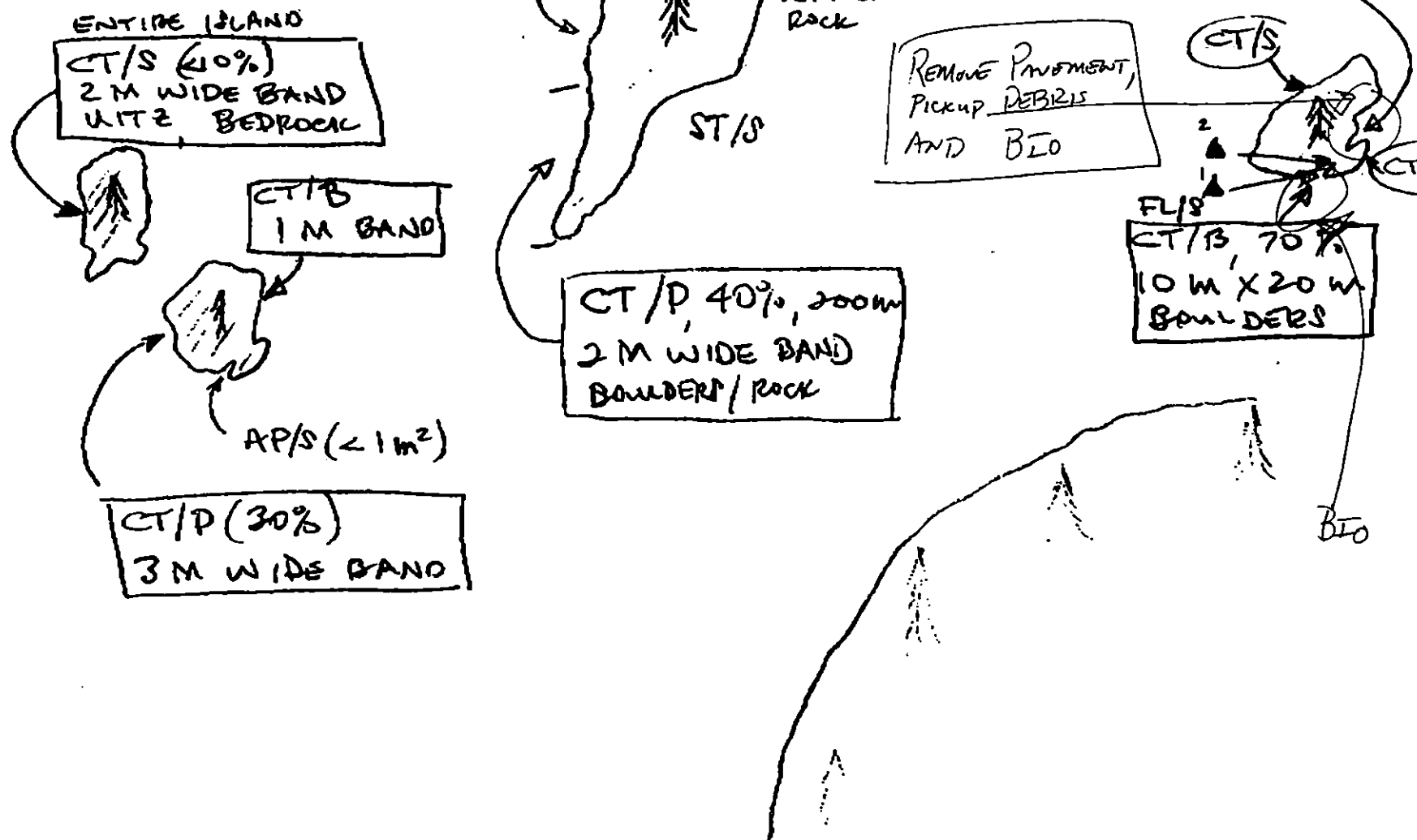
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

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

ATCH MAP



Oil Character Length (m): AP 5 PO 0 CV 0 CT 800 ST 0 MS 0 PT 0 TB 0 FL 2 NO 1,404

REVISION 03/90

ECOLOGY MAP

(1 OF 2)

RESOURCE CODES FOR
ENTIRE SEGMENT:

ST-H
3N, O, P, Q
5R-1
GU

PINNIPED HAULOUT

KN-2

BALD EAGLE
NEST

PWS
3-1-18

KN-24

KN 206

KN-23

ADEC Segment Length: 1108m

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

0 100 200 300

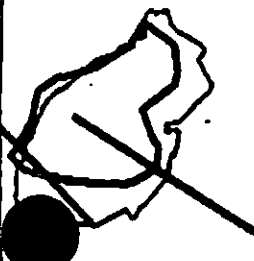
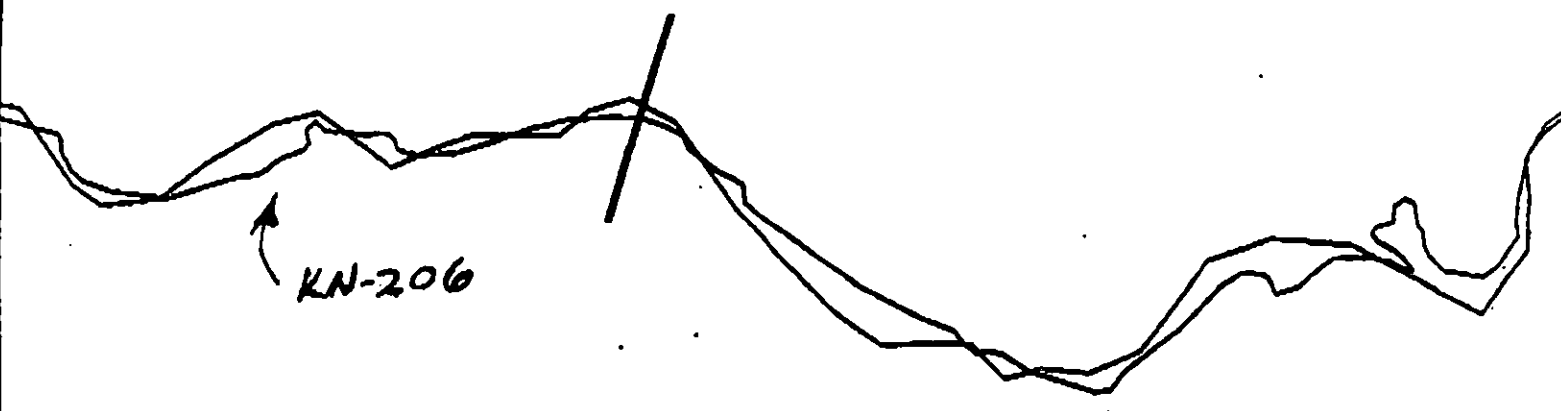
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Name: _____

Date: _____

Date Entered: _____



EDDOGY MAR 2&2

KN-206

← PWS
344A

XXX Wide

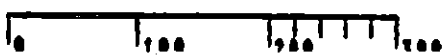
//// Medium

---- Narrow

TTTT Very Light

KN-23

ADEC Segment Length: 1108m



Map Key: PWS-344b

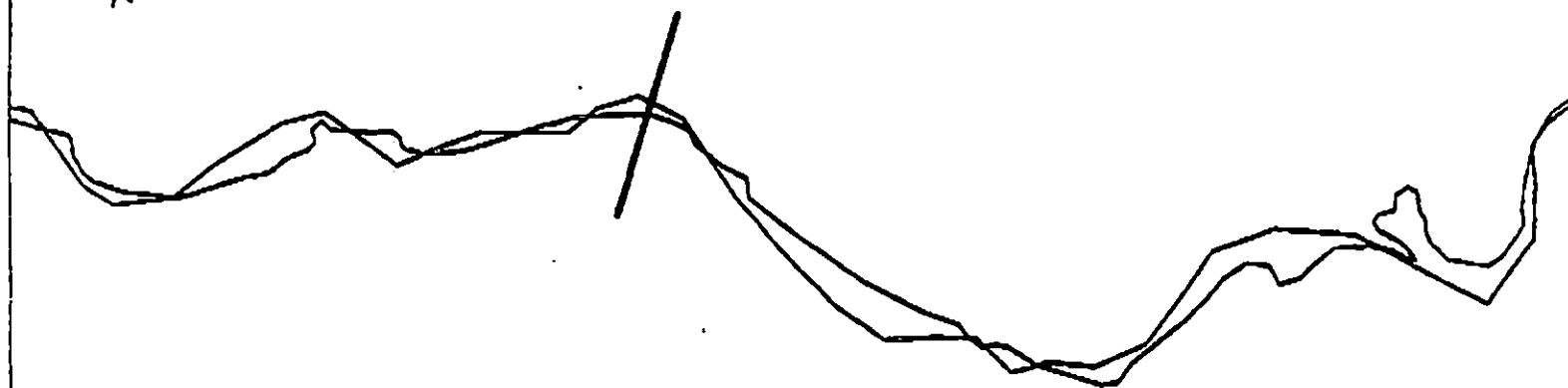
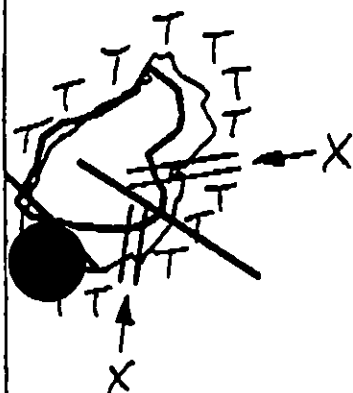
Name: _____

Date: _____




ST/KN-23

SUBDIVISION: A - 10f1

EAST PORTWYN← PWS
34-1A

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KN-23A

ADEC Segment Length: 1108m

Map Key: PWS-344b

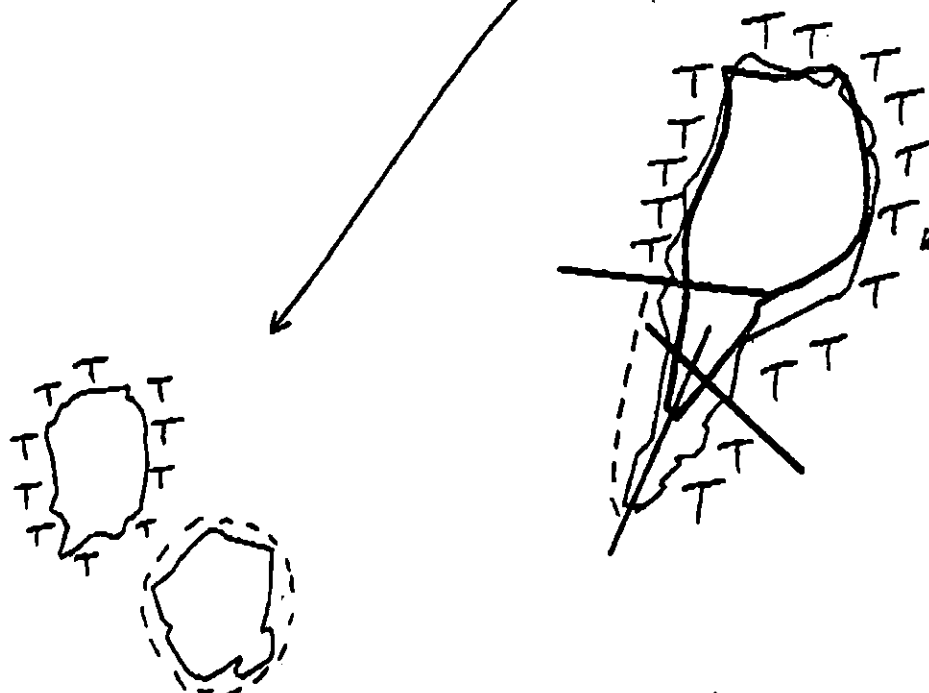
Name: RICK GILLIEDate: 04/25/90

ST/KN-23

SUBDIVISION: A - 1 of 1

WEST PORTION

KN-23



PWS
3443 →

KN-24

XXX Wide

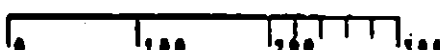
//// Medium

--- Narrow

TTTT Very Light

KN-23A

ADEC Segment Length: 1108m



Map Key: PWS-344a

Name: RICK GILLIE

Date: 04/25/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-24

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ KN-24 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 234 m: Narrow 0 m: V.Light 851 m: No Oil 417 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: Recommend manual pick up of mousse patties and bioremediation of areas shown on attached sketch map. Work should be conducted between 7/1 to 8/15 based on pinned constraints and with approval from ADF&G and USFWS regarding eagle nests.

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.

SEGMENT ST/ KN-24 SUBDIVISION: A DATE 4/4/90

USCG

NAME SCOTT RAINFORD SIGNATURE Scott Rainford 14571☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

THIS segment needs both manual & mechanical applications. I recommend after pavement/asphalt is removed & mechanical methods are used (Hot H₂O wands) that bioremediation be applied.

ONE method I observed in this area last summer while monitoring seemed to work fairly well. It simply consisted of rolling sorbent pads over a contaminated area & walking up & down on the pad to pick up the sticky oil. But if pavement/asphalt is to be retrieved in any of these segments by manual clean-up (shovels, trowels etc.) it should be done early in the clean-up so as the oil won't be sticky & mobile when heated by the sun; get it while still frozen. Oiled debris on beach need removed.

LAND MANAGER

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

SNOW IN HITZ ? SITZ INHIBITED SURVEY.

SEE ALSO 1989-SCAT SURVEY.

SHORELINE OILING SUMMARY

REVISION NO. 06/22/88

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ KN-2A
 BIO MA SCOTT LAND REP L. JOHNSON SUBDIVISION A
 EXXON J. BUTLER ADEC W. GHORMLEY TIME 12:30 to 15:20
 TAM NO.: 3 TIDE LEVEL: +7 to +2 DATE 4/4/90
 EST. SUBDIVISION LENGTH: 1440 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 40 % B 15 % C 25 % P 10 % G 10 % S - % M - % V - %
 SLOPE: Long 15 % Hang 25 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M 170 m N - m VL 920 m NO 350 m

SURFACE OIL

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

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

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT	
	SM	MD LG
Logs		
Vegetation		
Trash	X	
Debris		

DEBRIS COLLECTED

☒ YES ☐ NO

TYPE benzene

#BAGS 1

Photographs:

Roll No. ST-3-2

Frames 11-16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8			
1	15					X	-											X	N	CGMR
2	20					X	-											X	N	GPMR
3	15					X	-											X	N	GSR
4	25		X		X		5-10		X			X		X				X	N	CGMR
5	25					X	-		X						X			X	N	CM Peat.
6	20					X	-					X	X	X				X	N	PCR

7 10
COMMENTS

X

X

CS

Steep rocky shore and CPG covers w/ thin grassland by streams; Oiled at CV/B-1e H1Z-5UTZ. Subsurf. as CV/B which has penetrated to CPG substrate to 10 cm and limited in extent to pit #4 area.

OG G.M.

SEGMENT KJ-24

SUBDIVISION A

DATE 4/4/90

CHECKLIST

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

LEGEND

1 Δ
PK - No Subsurface Oil

2 Δ
PK - Subsurface Oil

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

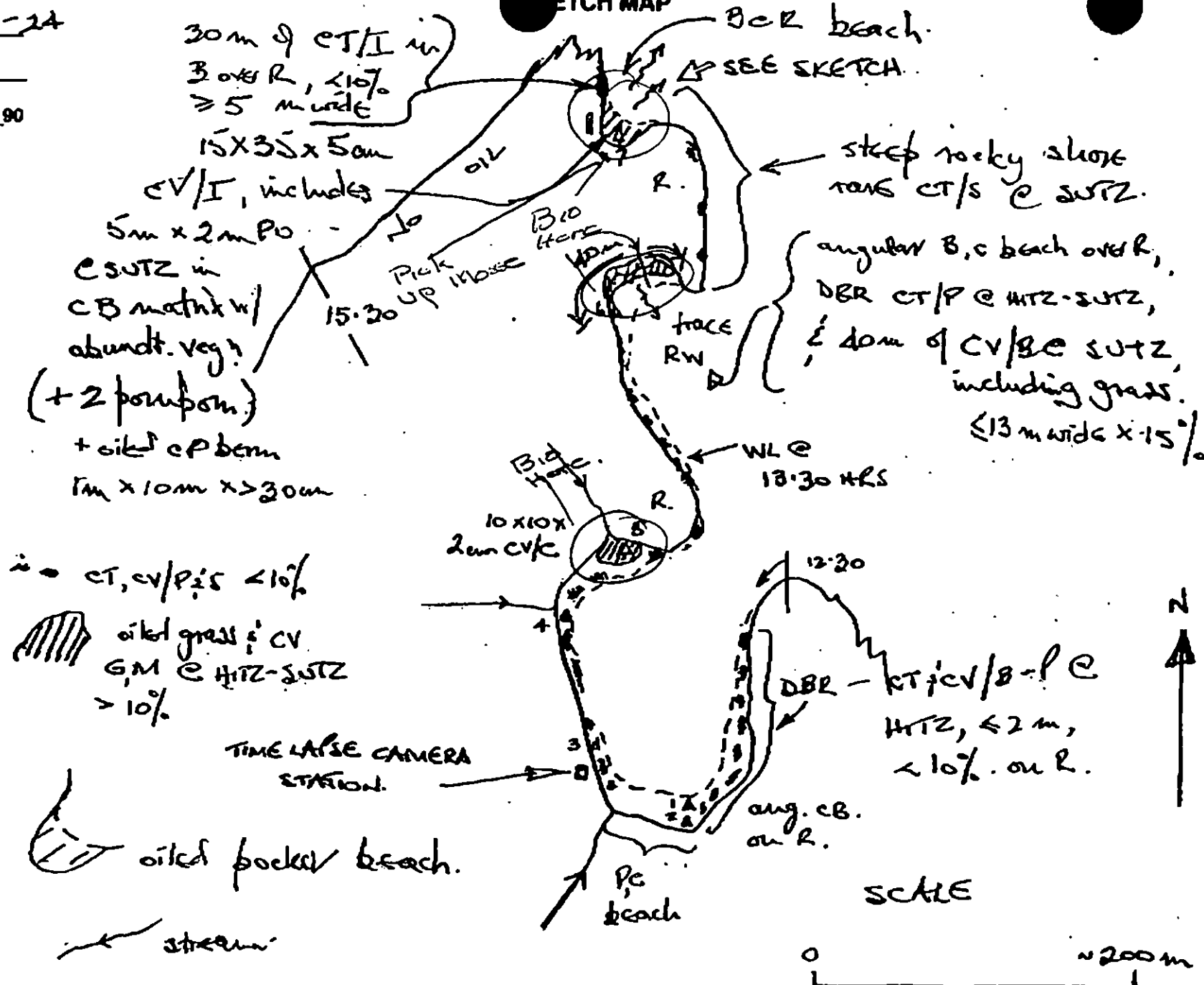
$\square$ CT/S
Splashed Distribution

$\square$ Oiled Vegetation

$\bullet \rightarrow$

Photo location, direction, and number

ETCH MAP



Oil Character Length (m): AP — PO 15 CV 500 CT 1000 ST 50 MS — PT 10 TB — FL 20 NO 400

REVISION 9204/90

2/4

OG G. M.

SEGMENT SW-N-24

SUBDIVISION A partial

DATE 4 / 4 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/NE/SW
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pk - No Subsurface Oil

2 Δ

Pk - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

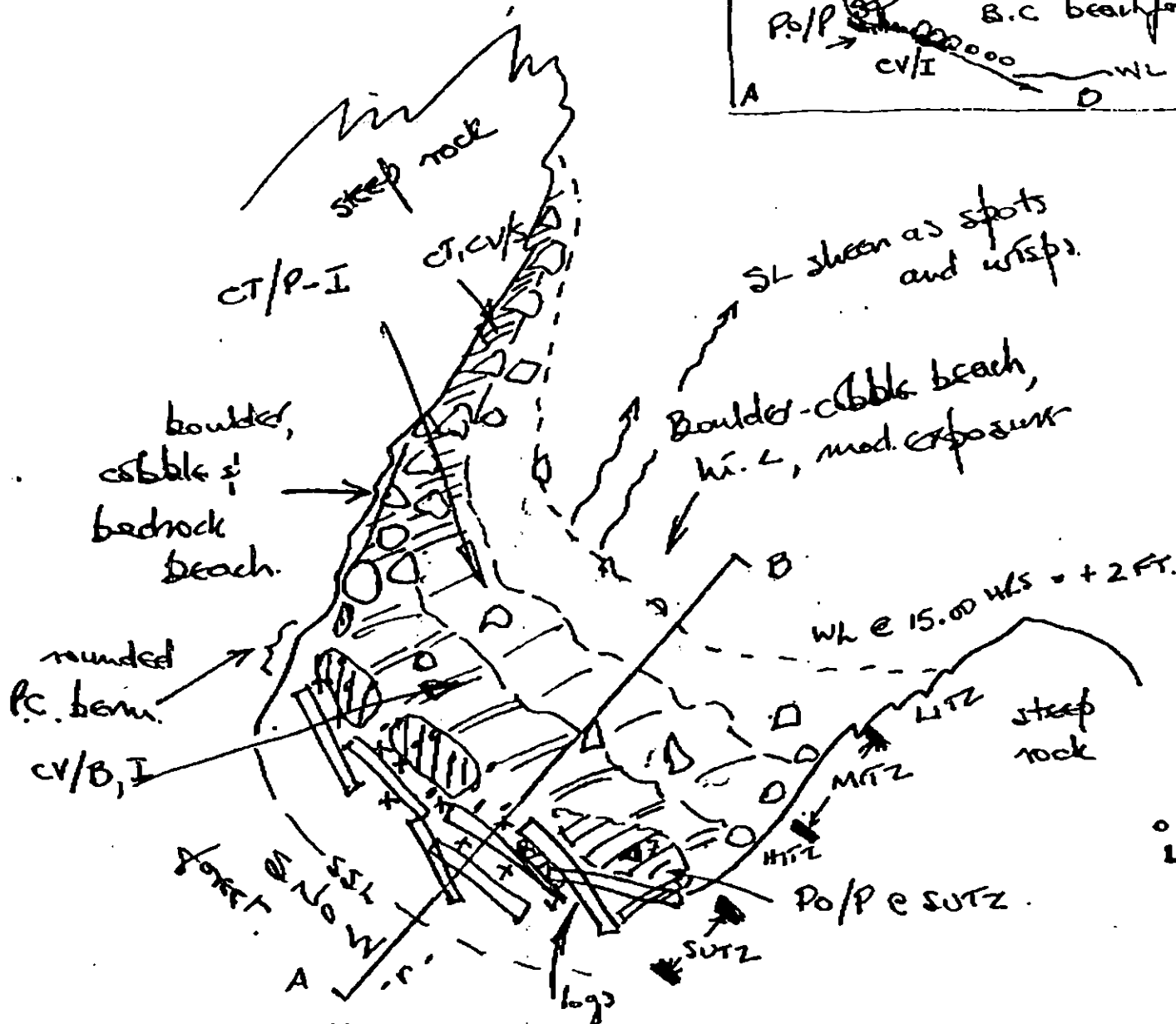
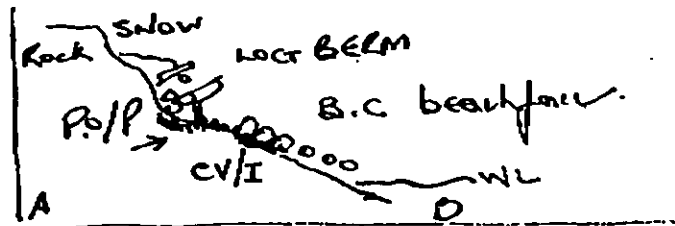
1 →

Photo location, direction, and number

X SEAWEED

CH MAP

PROFILE



SCALE.

Oil Character Length (m): AP — PO 15 CV 60 CT 75 ST 30 MS — PT — TB — FL — NO 10 this sketch.

REVISION 20/2/90

3/4

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/28/95

Segment ST / KN024 Subdivision A Date (mo / day / yr) 4 / 7 / 90

Time (24 hr) 1230 - Biologist MA Scott

(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 15 (3) Cobble 25 (4) Pebble 20 (5) Sand (6) Silt

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

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

Photographs: Roll No. ST-3-2

Frames 11-16

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

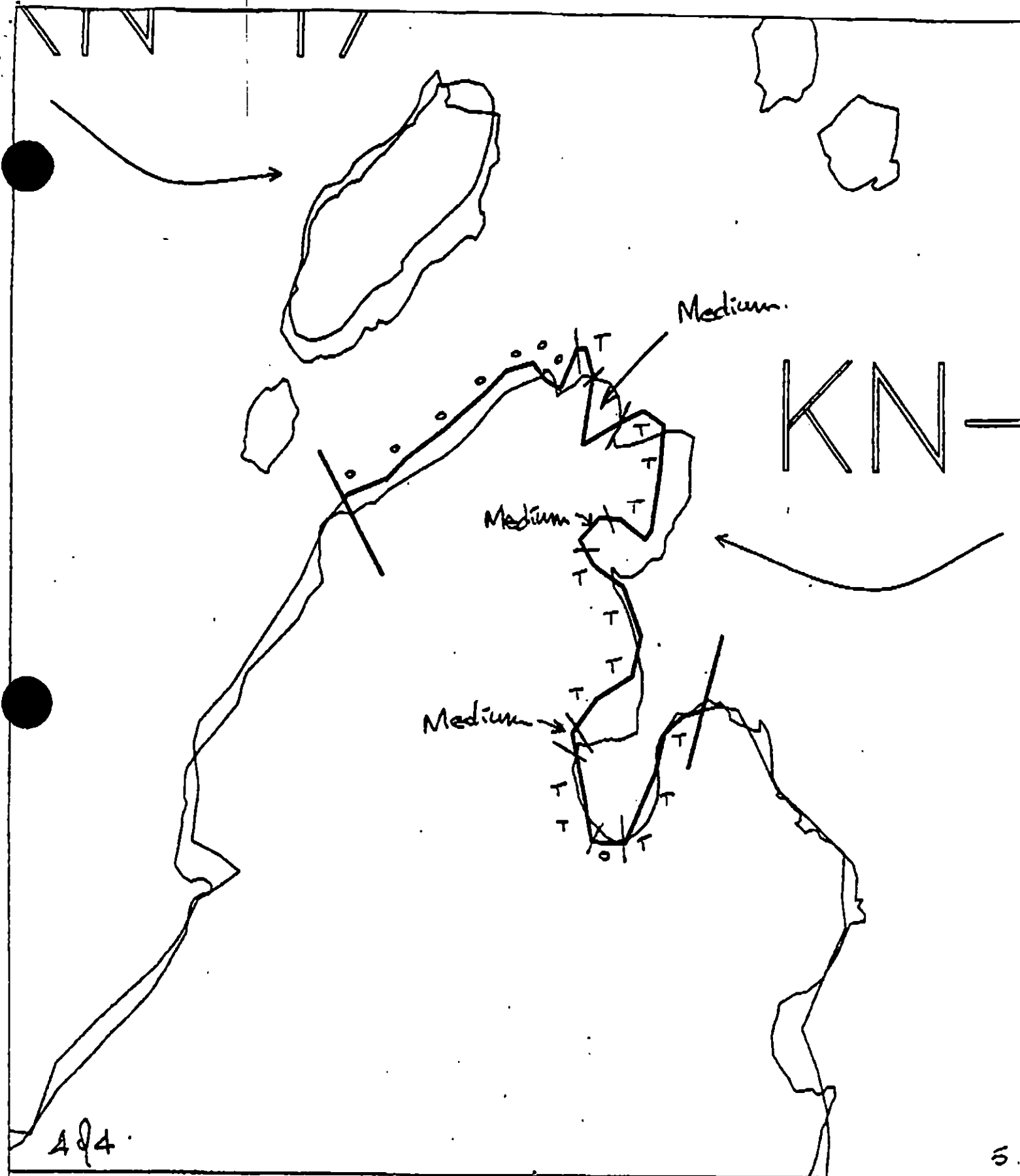
NOT PRESENT

Wildlife Observations/ General Comments:

1- cormorant 2- seal
1- eagle
5- gull
1- raven

NOTE - some areas w/ barnacles covered in oil - mortality, overall -
(see notes map for specific locations)

Ecological Considerations:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KN-24

ADEC Segment Length: 1502m



Map Key: PWS-345

Name: G. MACDONALD

Date: 4/4/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-24 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup Outside Eagle Nest Buffer Zone	OPEN
Manual Pickup Inside Eagle Nest Buffer Zone	CLOSED
Bioremediation and Spot Washing Outside Eagle Nest Buffer Zone	OPEN
Bioremediation and Spot Washing Inside Eagle Nest Buffer Zone	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
3N,O,P,Q	Harbor Seal and Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	USFWS bald eagle impact assessments conducted on 5/22/90 and 5/27/90 by Mike Lockhart indicate an active nest in Subdivision A. Closed to manual pickup, bioremediation, and spot washing inside the eagle nest buffer zone established by USFWS. No constraint to manual pickup, bioremediation and spot washing outside the buffer zone.

OTHER ECOLOGICAL CONSIDERATIONS

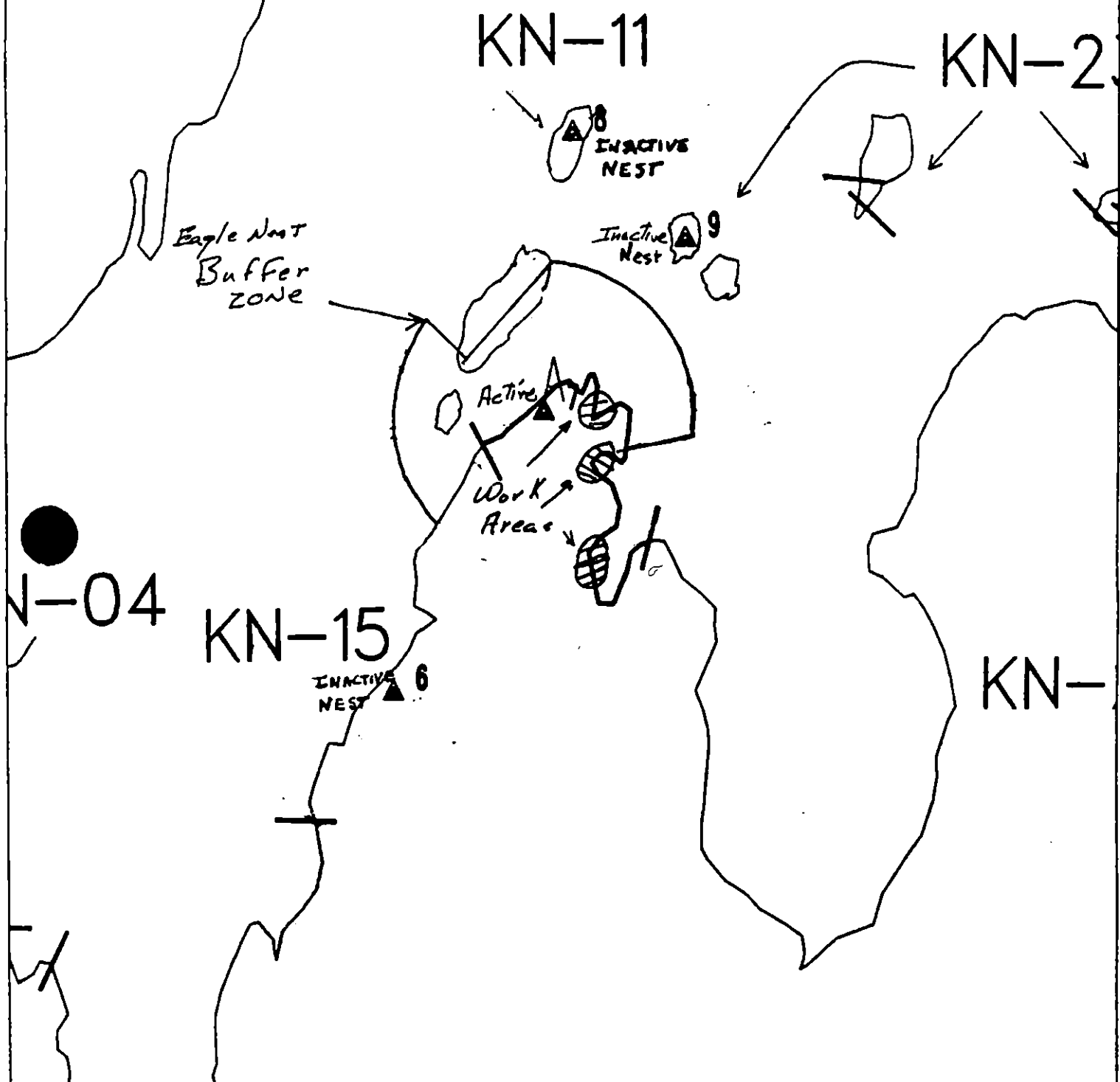
No personnel or boats within eagle nest buffer zone. Restrict air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from nests. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG APPROVAL DATE 6/04/90
ADEC Ray Monks
EXXON Amy
NOAA John
USCG SA

FOSC B. J. J. J. Date 6/5/90

Prepared by Andin Meyer Date 6/4/90

Incorporates information from
USFWS bald eagle survey 5/22
& 5/27/90. (6/1/90)



Exxon Company, USA

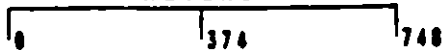
Map Key: KNI-KN-24

May 11, 1990



ECOLOGY MAP 6/1
SEGMENT KN-24
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1228 feet

SHORELINE EVALUATION

SEGMENT ST/ KN-24 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled 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: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 234 m: Narrow 0 m: V. Light 851 m: No Oil 417 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: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommend manual pick up of mousse patties and bioremediation of areas shown on attached sketch map. Work should be conducted between 7/1 to 8/15 based on pinned constraints and with approval from ADF&G and USFWS regarding eagle nests.

SEE Addendum dated 6/4/90

TAG COMMENTS: MONITORS TO ASSESS SVITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC
EXXON
NOAA
USCG

JOHN BAUER

ANDY TEN

Bryl Wierant

G.A. BREWER

FOSC:

DATE: 5-6-90

Provide 24 hour notice to CAC prior to work
CG pass transport and berth CAC up upon
request. Consider spot wash areas of oil
refer to bioremediation.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT IN-24 SUBDIVISION B (2 of 3)

WORK WINDOW

Bioremediation
Manual Raking

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Bald eagle nest in Subdivision C is over 400m from work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90
ADEC Art Weller Art Weller
EXXON Andy Andy
NOAA B. Wescott B. Wescott
USCG G.A. MEYER G.A. Meyer

FOSC

DATE

MAY 29 1990

Prepared By: Arden Meyer WTK

Date 5/27/90

EL-

EL-14

IN-34

IN-23

IN-24

WORK
Area

IN-22

IN-28

IN-29

ECOLOGY MAP
SEGMENT IN-24

SUBDIVISION B (2 of 3)

METERS

0 459 918



Seabird Colony



Eagle Nest

1 inch = 1506 feet

Exxon Company, USA

Map Key: KNI-IN-24

May 11, 1990

SHORELINE EVALUATION

SEGMENT ST/ IN-24 SUBDIVISION B (2 OF 3) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1-1 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 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: [Signature] DATE: 5/11/90

OILING CATEGORIZATION:

Wide 144 m: Medium 0 m: Narrow 34 m: V.Light 38 m: No Oil 575 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of areas indicated on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

[See Constraint Addendum 5/27/90] WK

TAG COMMENTS: MANUAL MAKE AREA OF TP1 PRIOR TO BIO IF FEASIBLE.

TAG APPROVAL DATE: 5/11/90
ADEC ART WERNER
EXXON ANDY TAYLOR
NOAA Joseph Gilbert
USCG D.D. ROME

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

SHORELINE EVALUATION

SEGMENT ST/ KN-24 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled 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 Z. Adams DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 234 m: Narrow 0 m: V.Light 851 m: No Oil 417 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

+ POOLED OIL + TRASH
COMMENTS: Recommend manual pick up of mousse patties and bioremediation of areas shown on attached sketch map. Work should be conducted between 7/1 to 8/15 based on pinned constraints and with approval from ADF&G and USFWS regarding eagle nests.

TAG COMMENTS: MONITORS TO ASSESS SVITZ DURING TREATMENT

TAG APPROVAL DATE:

ADEC JOHN BAUER John Bauer

EXXON Andy Ten Andy Ten

NOAA Billy West Billy West

USCG G.A. Reiter G.A. Reiter

FOSC:

DATE: 5-6-90

Provide 24 hour notice to CAC prior to work
CG ~~perm~~ transport and berth CAC rep upon
request. Consider spot wash areas of oil concentration

OG G-1
 SEGMENT SW-24
 SUBDIVISION A
 DATE 4/4/90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

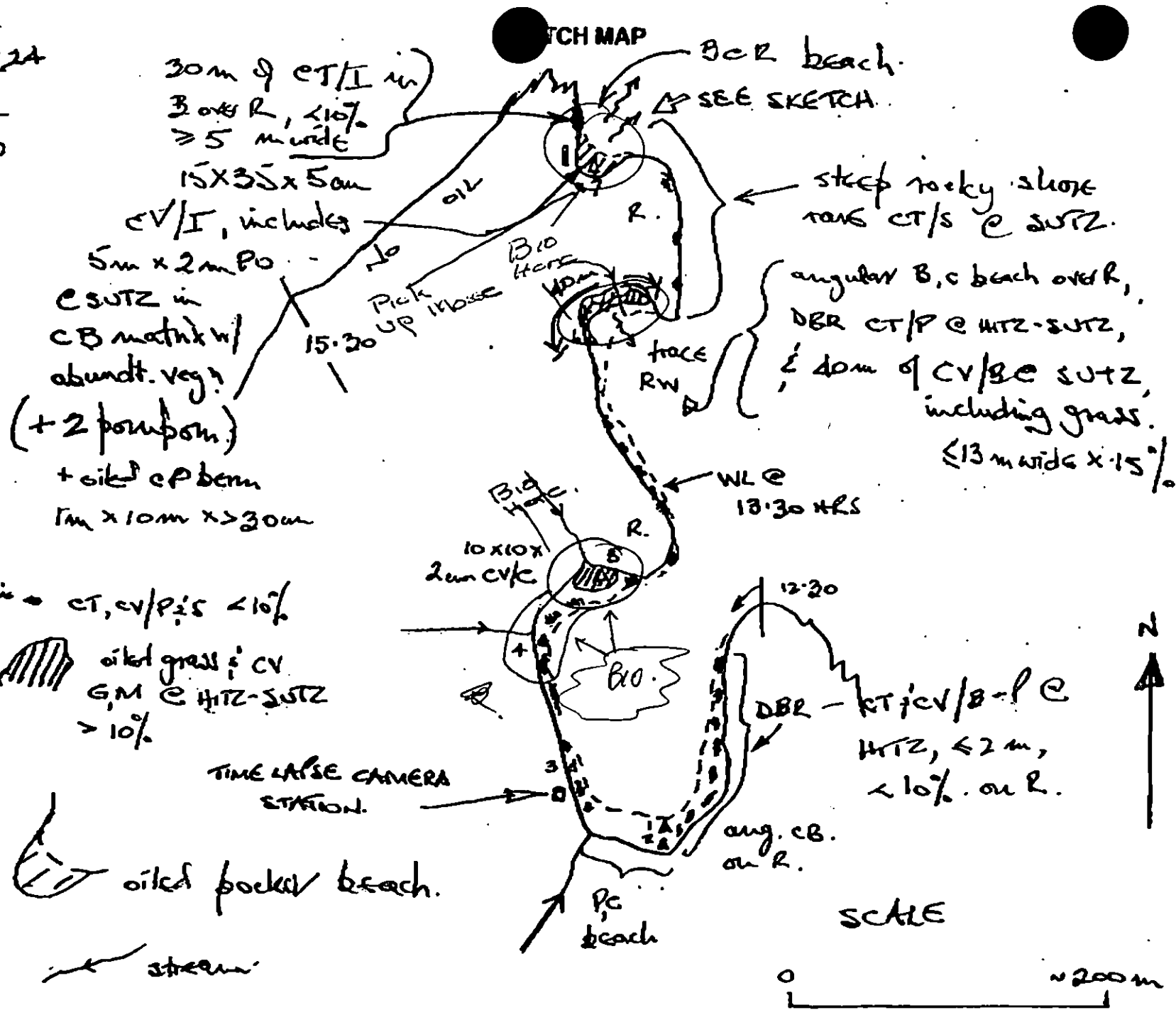
$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

$\square$ Oiled Vegetation

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



Oil Character Length (m): AP — PO 15 CV 500 CT 1000 ST 50 MS — PT 10 TB — FL 20 NO 400

REVISION: 02/04/90

2/4

OG G.M.

SEGMENT SITE N-24

SUBDIVISION A partial

DATE 4 / 4 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Site Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH 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
Pachy Distribution

CT/S
Splashed Distribution

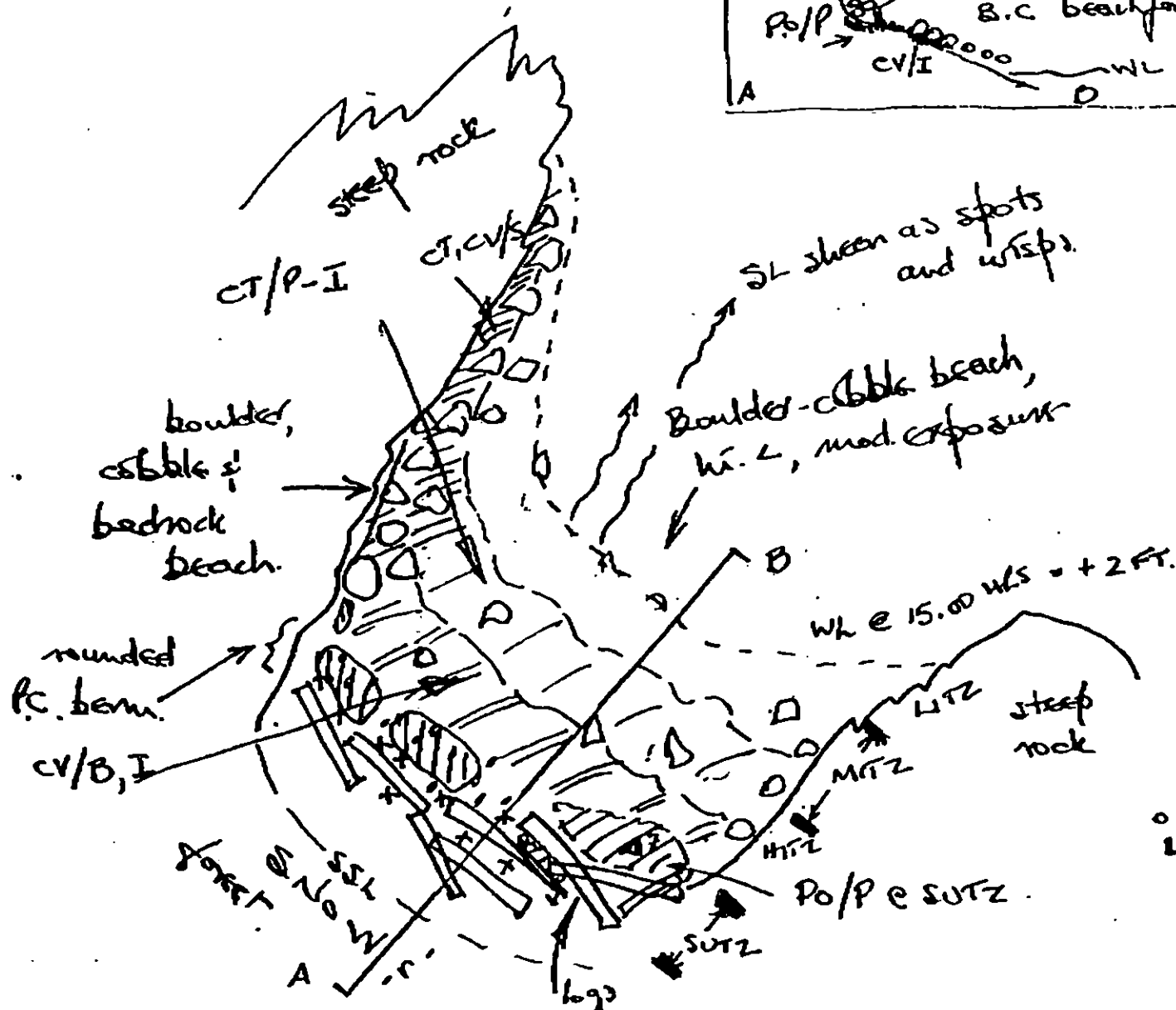
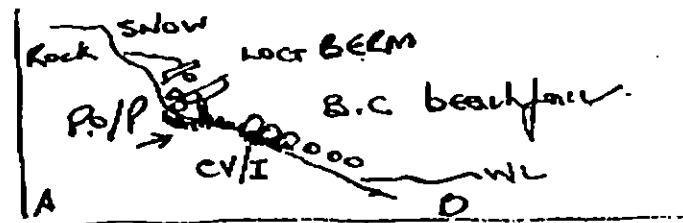
Oiled Vegetation

Photo location, direction, and number

X SEAWEED

SKETCH MAP

PROFILE

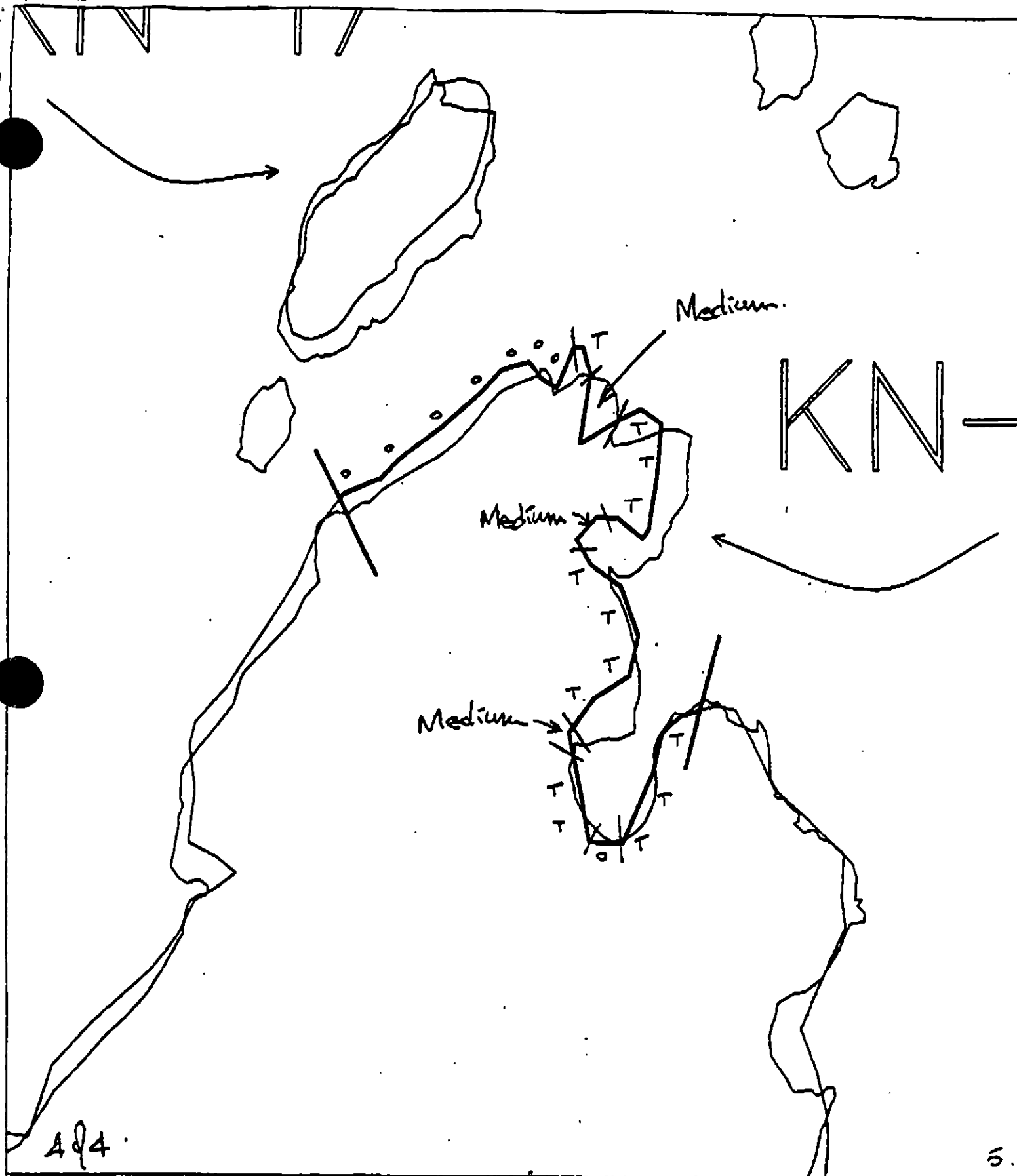


SCALE.

Oil Character Length (m): AP - PO 15 CV 60 CT 75 ST 30 MS - PT - TB - FL - NO 10 this sketch.

REVISION 03/24/90

304



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KN-24

ADEC Segment Length: 1502m

0 100 200 300
METERS

Map Key: PWS-345

Name: G. Macdonald

Date: 4/4/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KN 024 SUB: A REGION: PWS SURVEY DATE: 5/3/91

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)	<u>Y</u>	_____	_____
Manual Pickup (Check as Req.)	<u>X</u>	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	<u>X</u>	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Remove accessible asphalt and oiled vegetation at locations A, F, and G. Apply Customblen and Inipol at locations A and F.

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.

MAYDAY FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT K100024 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED

- Wes G* - AREAS where AP & SOR/H is are very low energy environments. OP is present. At location F some of OP is present. This oil is covered by boulders and protected. By a small stream, probably a salmon spawning area. Due to areas being sheltered & protected by Mother Natures elements I do not believe natural cleaning can & will occur. Oiled vegetation is also present - REMOVE.
- Manual removal of all SOR/H, AP and OP sediments. Manual till area of OP, work with tides, use snare broom to collect/contain oil.
- Most of the AP is really soft, light brown muck that will cause a problem once the sun shines on it, melting it and making it mobile!

EXXON

NAME Jon Czarnicki SIGNATURE Jon Czarnicki

- ☒ NTR Picked up some AP and broke up several other balls of SOR. Beach is good condition medium to high surf area is healthy.

LANDMANAGER

NAME Solo Solo OF Chugach SIGNATURE [Signature]

☐ NTR

☒ Recommend that all remaining oil be removed

USCG/NOAA

NAME MOOREY / BARATS SIGNATURE Tim Moorey / Amy Barats

- ☒ NTR SEGMENT COMPRISES OF SEVERAL MICRO BEACHES, WITH SOR/H AND ASPHALT. BY STREAMS. NO FURTHER TREATMENT REQUIRED. SURVEY TEAM RECOVERED SOR/H AND ASPHALT, ANY REMAINING OIL SHOULD BE LEFT FOR MOTHER NATURE TO CLEAN.

TEAM NO. 3

OG HARPER

BIG STOKER

SEGMENT KN-24A

ADEC GORMLEY

LANDMANAGER JOHNSON for CVC

SUBDIVISION ^A

EXXON CZARNEZKI.

USCG/NOAA MOONEY / BARATS

DATE 3 / MAY / 91

TIME 08:30 to 09:45

TIDE LEVEL 1.45 ft. to 1.3 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1444 m

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

EST. OIL CATEGORY LENGTH: W m M 0 m N 126 m VL m NO 1283 m US 58 m

[illegible]

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYBAP- - 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				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20							X	-	Y	-	-		X			P/SG	LHTS
2	20							X	-	Y	-	-		X	X		G/SG	
3	20							X	-	Y	-	-				X	G/SG	
4	20							X	-	Y	-	-		X			G/SG	
5	30							X	-	Y	-	-	X	X			G/SG	
6	20		X						0-10	Y	-	-		X			CP/SGP	EST. 5 X 30m
7	50							X	-	Y	-	-			X		P/E	
8	20	X							0-20	Y	-	-			X		CB/PSG	" "
9	30							X	-	Y	-	-				X	BC/C/SG	

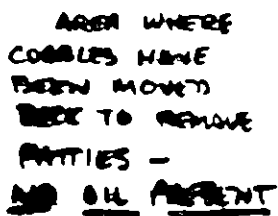
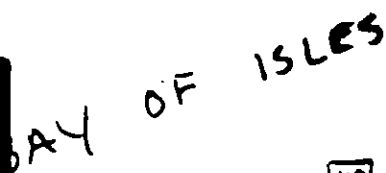
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

A few pockets of surface silt remain on this segment notably near two stream mouths (Locations A & D) and one pocket beach (Location F) where some GOR/H and AP remains.

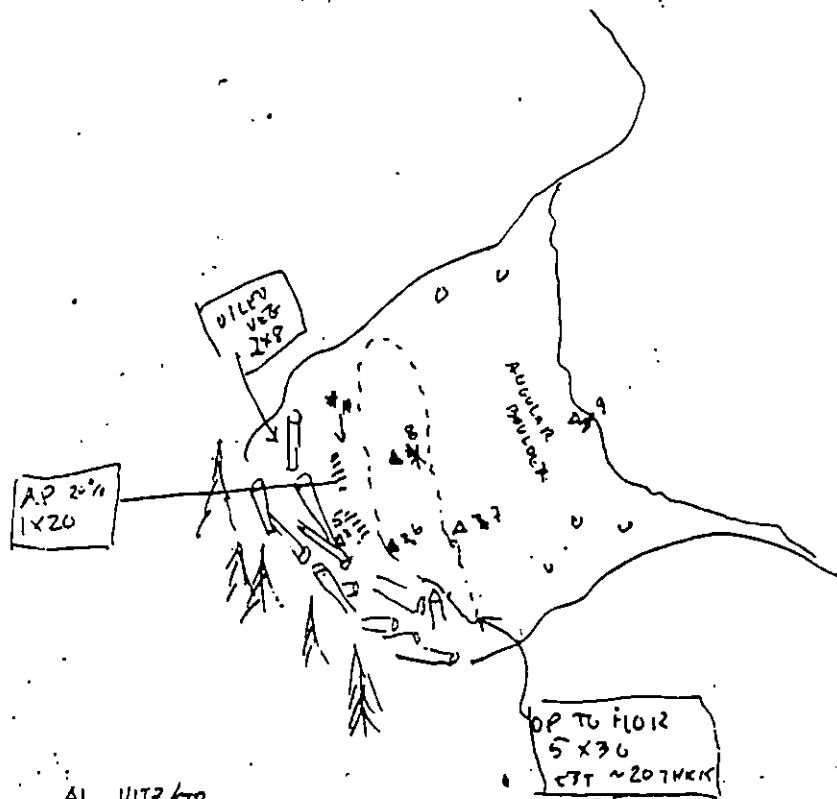
The only "significant" subsurface silt identified

RECEIVED: MC 579/01
OG 1 of 6
May 8



3 of 6

REVISED: MC 5/9/91



Δ1 VITZ/STR
 G/SG NO 30
 Δ2 VITZ
 HCR CP/SGP
 (0-10)
 0-20 NR
 Δ3 MITZ 50
 P/C N.O.
 Δ4 MITZ 20
 CB/PSG
 OP 0-20
 *10
 Δ7 LITZ N.O.
 BC/C/SG 20m

50m

J HARPER
 May 3, 1991
 KN-24A

26 revised May 5
 REVISIONS: MC 5/9/91
 OG 5 of 6

ORIGINAL
 FIELD NOTES

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # KN 24 TIDAL HEIGHT(Range) 1-3'
 SUBDIVISION A BIOLOGIST STOKER
 BEA STATE 0-1' WIND SPEED/DIRECTION NE 0-5
 PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach of pebble/cobble/bedrock. Segment includes 4 pocket coves or pebble/cobble separated by headlands or boulder/bedrock.

Biota on core beaches consists primarily of moderate to dense barnacle and spat settlements, moderate to dense Littorina (with egg masses), limpets, patchy Fucus of variable densities, filamentous red algae, and in some cases Surfgrass, Nucella, amphipods, Chitons (K. Tunicata), nudibranchs (Lamellidorsis?), and eel blennies. Due to generally sheltered aspect, biota extend well into upper intertidal, though both abundance and diversity decline rapidly above about MSL.

The first (SE) core beach is crossed by 2 small streams, the second by one.

Biota within/adjacent to surface/subsurface oiled areas as described below
A - barnacles (variable density), limpets, Oligochaetes. Biota down slope more abundant, barnacles, interbedded Mytilus, limpets, Littorina, sparse Fucus.

B - relatively abundant barnacles, new-growth Fucus.

C-E - beachhopper amphipods, sparse barnacles, limpets and interbedded Mytilus, oligochaetes. Biota down slope consists of dense barnacles, moderate/dense Littorina with egg masses, sparse Fucus, filamentous red algae, Surfgrass, Nucella.

F - sparse barnacles, limpets, filamentous green algae.

If treatment is planned, attempt to minimize damage to established biota. In general, community in this segment appears healthy and recovering.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

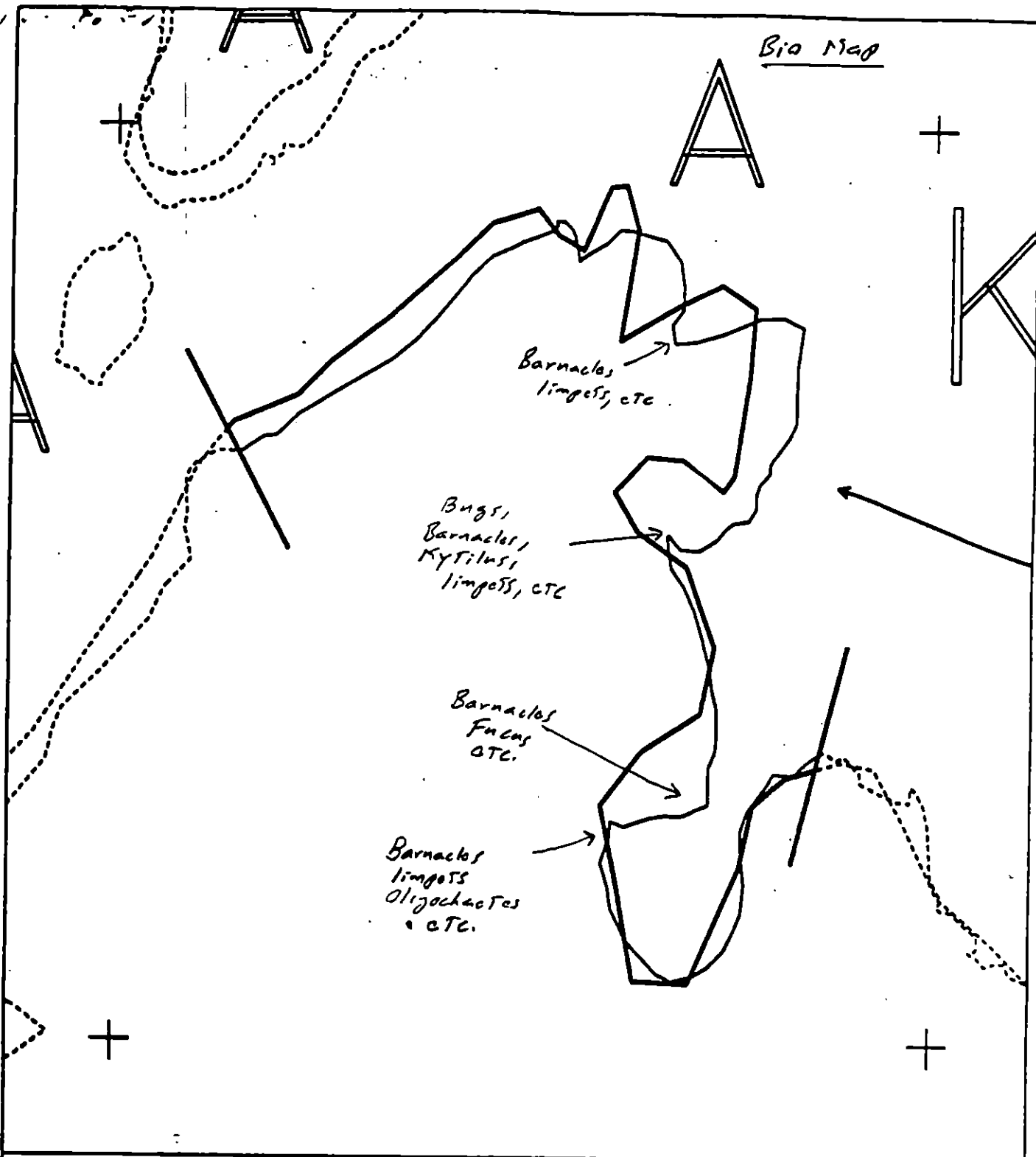
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes	<u>Marginalia</u>	<u>2</u>	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/9/91

Rev'd 5/8/91



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

KN0024 A

ADEC Subsegment Length: 1502m
 METERS

0 100 200

AK State Plane Zone 4
 14N00240



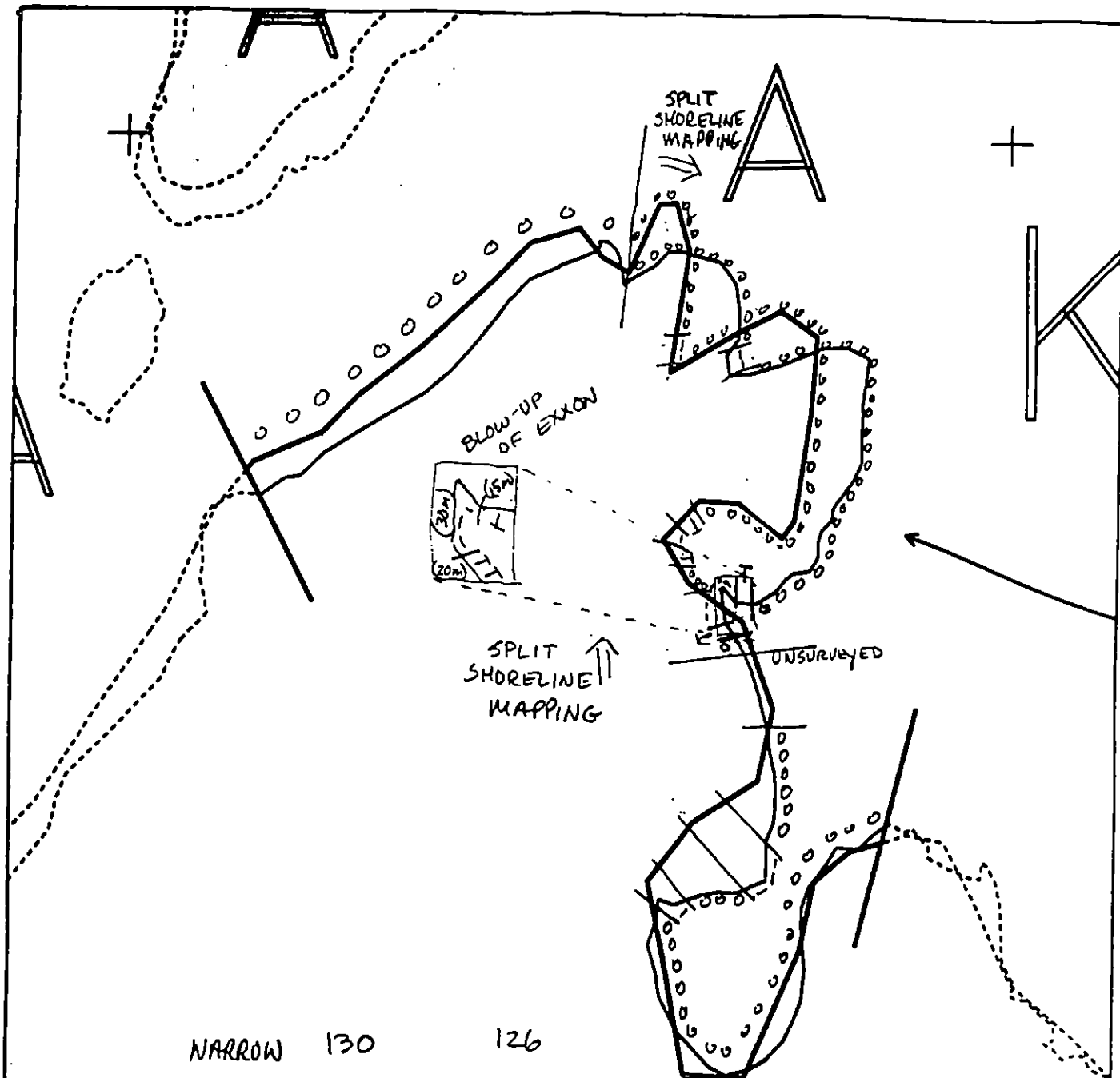
Subdivision Field Map

Map Key: KNKN0024A

Name: S. Stoker

Date: 5/3/91

Date Entered:



NARROW	130	126
V.L.	<u>35</u>	34
NO OIL	1320	1283
	<u>60</u>	58
	1545	1444
		1502

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

KN0024 A
 ADEC Subsegment Length: 1502m
 METERS
 0 100 200
 AK State Plane Zone 4
 1500240

Subdivision Field Map
 Map Key: KNKN0024A
 Name: HARPER
 Date: 5 MAY 91
 Date Entered:

REVIEWED: MC 5/9/99

SUMMARY SURFACE
 OILING MAP

OG 6 of 6
 ES raised, May 8

1991 MAYSAP EVALUATION

SEGMENT: KN 024 SUB: A REGION: PWS SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:

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

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

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.).

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Remove accessible asphalt and oiled vegetation at locations A, F, and G. Apply Customblen and Inipol at locations A and F.

TAG: AT PIT 6 MANUALLY TILL AREA OF HOR IF FEASIBLE

FOSC:

TAG APPROVAL DATE: MAY 21 1991

FOSC APPROVAL DATE: 6/18/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

E. E. PAGE, CDR, 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.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. Three SEGMENT X10024 SUBDIVISION A DATE 5/3/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☒ TREATMENT RECOMMENDED

- AREAS where AP & SOR/H is are very low energy environments. OP is present at location F. ~~Some of OP is present. This oil is covered by boulders and protected by a small stream, probably a salmon spawning area.~~ Due to areas being sheltered & protected by Mother Natures elements I do not believe natural cleaning can & will occur. Oiled vegetation is also present - REMOVE.
- Manual removal of all SOR/H, AP and OP sediments. Manual till area of OP, work with tides, use snare boom to collect/contain oil.
- Most of the AP is really soft, light brown muck that will cause a problem once the sun shines on it, melting it and making it mobile!

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

- ☒ NTR Picked up some AP and broke up several other balls of SOR. Beach is good condition medium to high surf dune is healthy.

LANDMANAGER

NAME Soh Soh OF Chugach SIGNATURE [Signature]

☐ NTR

☒ Recommend that all remaining oil be removed

USCG/NOAA

NAME MOOREY / BARATO SIGNATURE Moorey / Barato

- ☒ NTR SEGMENT COMPRISED OF SEVERAL MICRO BEACHES, WITH SOR/H AND ASPHALT. BY STREAMS. NO FURTHER TREATMENT REQUIRED. SURVEY TEAM RECOVERED SOR/H AND ASPHALT, ANY REMAINING OIL SHOULD BE LEFT FOR MOTHER NATURES TO CLEAN.

ES raised OG 1 of 6
May 8

TEAM NO. 3

SEGMENT KN-24

SUBDIVISION A

DATE 3 MAY 191 .

J HARPER

[illegible]

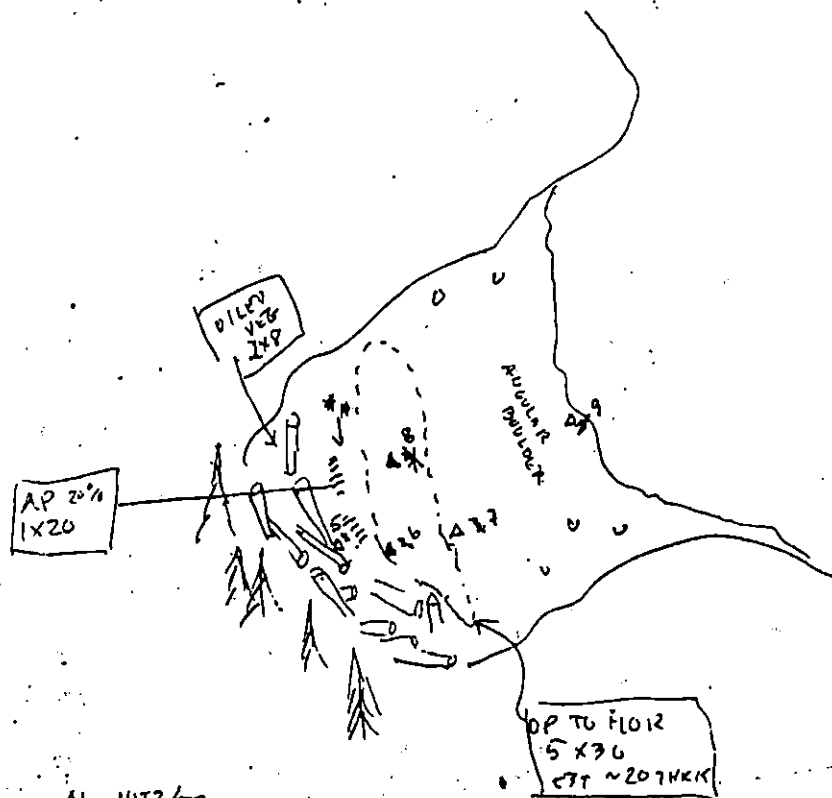
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

OG COMMENTS:
was the small pocket beach at location F where
an estimated 150m² of OP/HOR conditions were identified.

REVIEWERS: MC 5/9/91
E6 reviewed. May 8

OG 2 of 4



Δ1 VITE/STR
 G/SG NO 30
 Δ2 VITE
 HCR CP/SGP
 (D-10)
 10-20HQ
 Δ3 MITZ 50
 P/C N.O.
 Δ4 MITZ 20
 CB/PSG
 OP 0-20
 *10
 Δ7 LITZ N.O.
 BC/C/SG 30m

50m

J HARPER
 May 3, 1991
 KN-24A

26 revised May 8
 REVISIONS: MC 5/9/91
 OG 5 of 6

ORIGINAL
 FIELD NOTES

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/3/91
 SEGMENT # KN 24 TIDAL HEIGHT(Range) 1-3'
 SUBDIVISION A BIOLOGIST STOKER
 SEA STATE 0-1' WIND SPEED/DIRECTION NE 0-5
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Low energy beach of pebble/cobble/bedrock. Segment includes 4 pocket coves or pebble/cobble separated by headlands or boulder/bedrock.

Biota on core beaches consists primarily of moderate to dense barnacle and spat settlements, moderate to dense Littorina (with egg masses), limpets, patchy Fucus of variable densities, filamentous red algae, and in some cases Surfgrass, Nucella, amphipods, Chitons (K. tunnicata), nudibranchs (Lamellidorsis?), and eel blennies. Due to generally sheltered aspect, biota extend well into upper intertidal, though both abundance and diversity decline rapidly above about MSL.

The first (SE) core beach is crossed by 2 small streams, the second by one.

Biota within/adjacent to surface/subsurface oiled areas as described below
A - barnacles (variable density), limpets, Oligochaetes. Biota down slope more abundant, barnacles, interbedded Mytilus, limpets, Littorina, sparse Fucus.

B - relatively abundant barnacles, new-growth Fucus.

C-E - beachhopper amphipods, sparse barnacles, limpets and interbedded Mytilus, oligochaetes. Biota down slope consists of dense barnacles, moderate/dense Littorina with egg masses, sparse Fucus, filamentous red algae, Surfgrass, Nucella.

F - sparse barnacles, limpets, filamentous green algae.

If treatment is planned, attempt to minimize damage to established biota. In general, community in this segment appears healthy and recovering.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

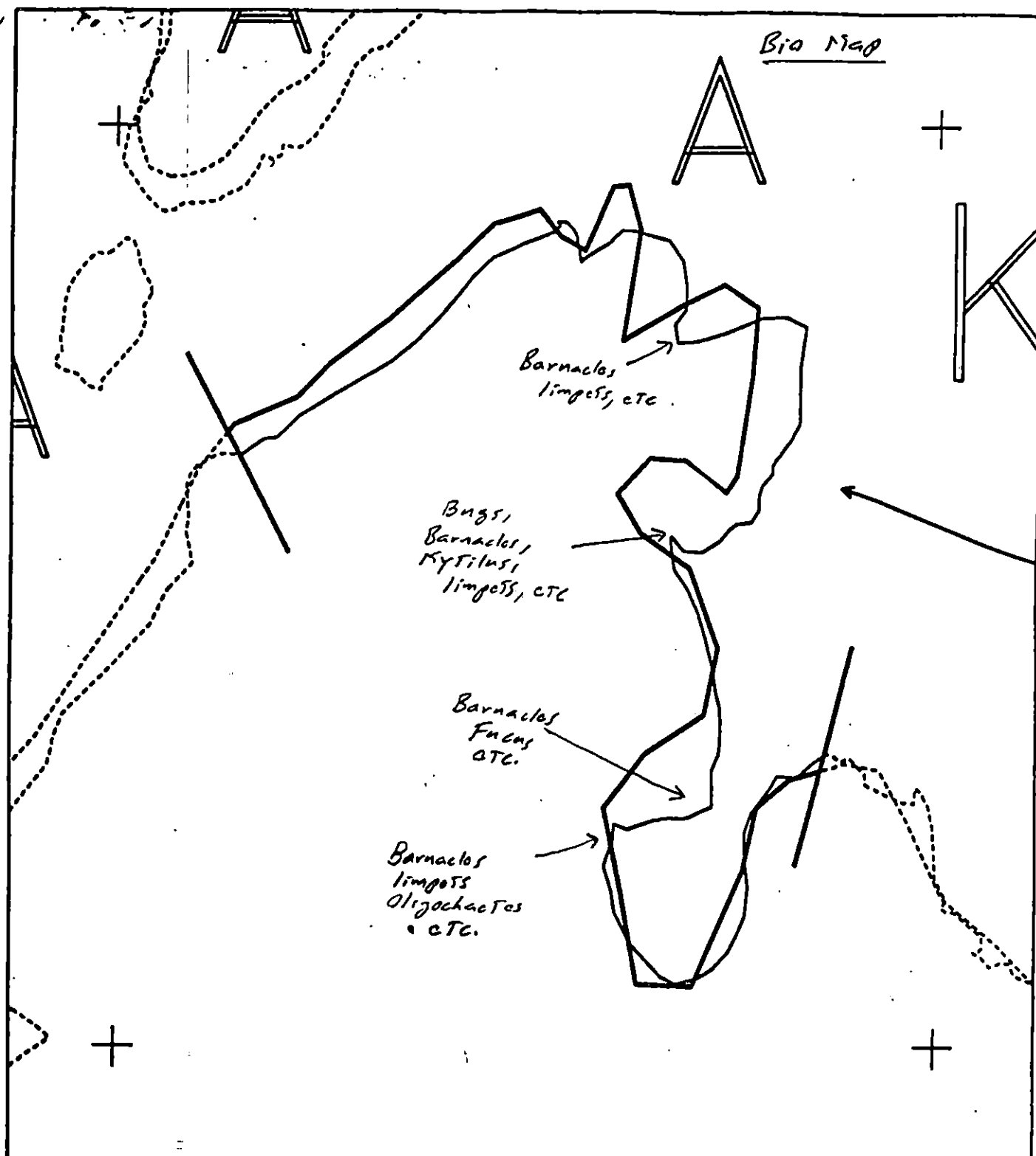
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	<u>Merganser</u>	<u>2</u>	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

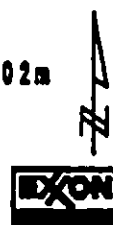
REVIEWED: MC 5/9/91

2. 1. 1991

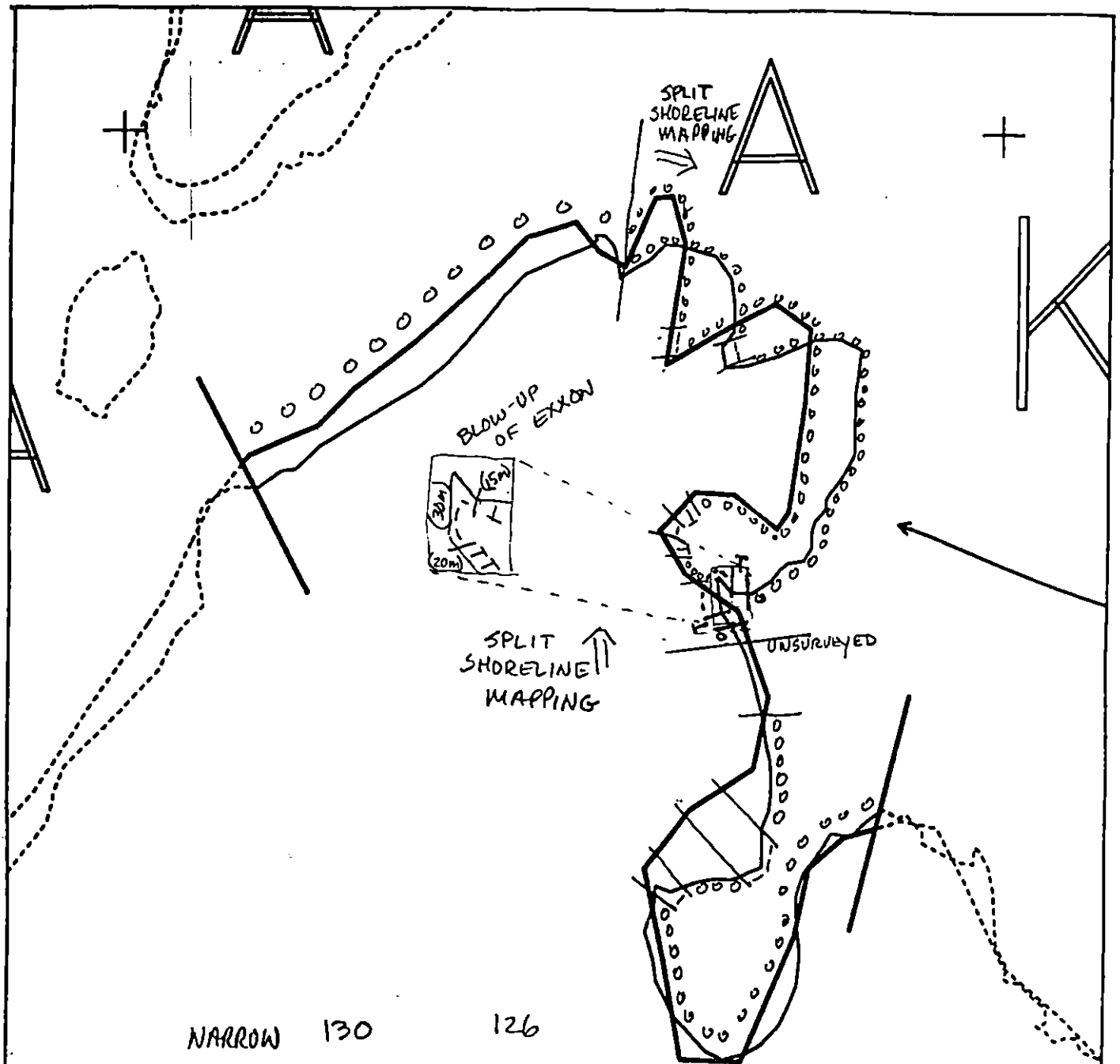


XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

KN0024 A
 ADEC Subsegment Length: 1502m
 METERS
 0 100 200
 AK State Plane Zone 4
 6600240



Subdivision Field Map
 Map Key: KNKN0024A
 Name: S. Stoker
 Date: 5/3/91
 Date Entered:



NARROW	130	126	
V.L.	<u>35</u>	34	
NO OIL	1320	1283	
DIS.	<u>60</u>	58	-1444
	1545	1502	

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

KN0024 A
 ADEC Subsegment Length: 1502m
 METERS
 0 100 200
 AK State Plane Zone 6
 kn0024a

Subdivision Field Map
 Map Key: KNKN0024A
 Name: HARPER
 Date: 5 MAY 91
 Date Entered:

REVIEWED: MC 5/9/99

SUMMARY SURFACE
 OILING MAP

OG 6 of 6
 ES revised, May 8

ASAP TAG REVIEW SHEET

Segment: KR4 Subd: A Site: + Date 18 Aug
PRE-Review

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment

Recommended: myr Asphalt, mouse, BID

A SphATT Broken,
Sporic mouse

Priority Site For Reassessment In 1991

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

TAB 23A06

Pickup heavy patches of Asphalt
Recover Asphalt Mat as feasible
Take & BID (MED)
where applicable

ASAP TAG REVIEW SHEET

Segment: KN24 Subd: A Site: 2 Date
PRE-Review 18 Aug

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment
Recommended:

NTR

SOR - patchy
Mousse - Spacing

Priority Site For Reassessment In 1991

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

TAG 23 AUG

Same as 1

ASAP TAG REVIEW SHEET

Segment: kn24 Subd: A Site: J

Date
PRE-Review 12 Aug

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment
Recommended:

M/P Asphalt BEU

Asphalt - patchy
SOR - P

Priority Site For Reassessment In 1991

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

Same as 1

ASAP TAG REVIEW SHEET

Segment: Kn24 Subd: A Site: 4 Date PRE-Review 18 Aug

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment
Recommended:

NO OG Sheet
NO COMMENT Sheet

Priority Site For Reassessment In 1991

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

Same as 1

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 1 Date: 8-14 1990

Conditions Observed: IN VITZ, THREE AREAS HAD BEEN EXPOSED AND TARMATS AND POOLED OIL HAD BEEN REMOVED EARLIER. AREAS HAD BEEN BIO'D. OR REMAINS IN AREAS THAT WERE WORKED; ORGANIC MATERIAL MIXED WITH MOBILE OIL EXISTS UNDER COBBLE/BOULDERS IN AREAS ADJACENT TO THE THREE AREAS THAT WERE WORKED. ON EASTERN SIDE OF PICKET BEACH CT AND ST ARE PATCHY UNDER LARGE BOULDERS. AP EXISTS IN BROKEN AND PATCHY DIST. IN AREAS WORKED.

Followup Recommendations: SEE COMMENTS BELOW.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC BOB MC CREARY
(name)

Robert B. McCreary
(signature)

Comments: I recommend the manual removal of all AP, MS, OP and OR to be followed by bio remediation. It could be noted that MS and OP material is indeed present on this site and needs to be manually removed prior to bio

3xxon AL SNOOK
(name)

A.L. Snook
(signature)

Comments: FLIP LARGE COBBLE/SMALL BOULDERS IN AREAS ADJACENT TO AREAS THAT HAVE ALREADY BEEN WORKED; RAKE SURFACES OF WORKED AREAS & APPLY CUSTOM BLEN & INIPOL.

SCG DON DENIS AM
(name)

Don Denis
(signature)

Comments: REMOVAL OF HEAVY DEPOSITS OF ANCHORT Mousse AND HEAVY SURFACES. FOLLOWED BY RAKING OF REMAINING OILED AREAS AND BIO REMEDIATION. RECOMMEND REMOVAL OF HEAVY OILING FIRST TO BIO

ind Rep. LORA JOHNSON
(name)

Lora L. Johnson
(signature)

Comments: AGREE WITH ADEC COMMENTS. SAC TOENI TAKE A POSITION ON THE USE OF BIOREMEDIATION

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASI KN-24 Subd.: A Site: 2 Date: 8-14 1990

Conditions Observed: IN POCKET BEACH, SURFACE COATS AND STAINS ~~DO~~ EXIST
IN IITZ ON ANGULAR COBBLE/PEDDLE/GRANULAS. SURFACE COATS &
STAINS ARE PATCHY TO SPORADIC DIST. SOME SOR EXISTS IN
AREAS ~~AND~~ WHERE TARMATS WERE REMOVED. SOME OILED VEGETA-
TION IN SUPRA IITZ. SUBSURFACE OILING CONSISTS OF OR ~~OF~~ OF
IN AREAS WHERE TARMATS WERE REMOVED.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC Bob McCready
 (name)

Robert B. McCready
 (signature)

Comments: Manual removal of AP, MS, residual AP, as well as OR and
OF subsurface oil is recommended. Following manual removal, heavy
excavation is recommended. Oiled vegetation should be removed as per
EXC's request.

Exxon Al Snook
 (name)

Al Snook
 (signature)

Comments: RAKE OILED SURFACES & IN AREAS THAT WERE PREVIOUSLY
WORKED & APPLY CUSTOMBLEN & INIPOL TO THE RAKED SURFACES.

JSCG John Davis
 (name)

John Davis
 (signature)

Comments: Base contains some heavy deposits of mousse and "gum" in bands of gum and
solid. Removal of heavy deposits, looking for remaining surface oiling and
bioremediation recommended.

and Rep. LORA JOHNSON
 (name)

Lora Johnson
 (signature)

Comments: AGREE WITH ADEC COMMENTS. REMOVE AP MS, OR & OILED
SURFACE OIL & OILED VEGETATION. LAC DESIN: TAKE A PRE-
BIOREMEDIATION.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS KN-24 Subd.: A Site: 3 Date: 8-14 1990

Conditions Observed: PATCHY COATS, STAINS & TARMAT RESIDUALS
EXIST ON SURFACES WHERE TARMATS WERE REMOVED. SOME
OILED VEGETATION EXISTS IN SUPRA ITZ ON STEEP ANGLE SHORE-
LINE ON NORTH END OF SITE 3. SUBSURFACE OILING EXISTS OF
OR 4 OF 1-2 CM IN UITE.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Bob McCreary
 (name)

Robert A. McCreary
 (signature)

Comments: Manual removal of all AP, which is AP (in need of primary
treatment), OR, OS, and oiled vegetation as per CAC's request.
Manual removal should be followed by tilling and liming.

Exxon

Al Swook
 (name)

Al Swook
 (signature)

Comments: RAKE OILED SURFACES IN AREAS PREVIOUSLY WORKED
(INCLUDING SITE 4 WHICH IS SOUTHEAST OF SITE 3) & APPLY CUSTOMER'S
& INEPCO TO THE RAKED SURFACES.

USCO

Don Davis GM
 (name)

Don Davis
 (signature)

Comments: AREA CONTAINS ASPHALT AND "SOS" POTENTIAL AND INTERSTITIAL IN JOINTS
OF COAT AND STAIN. REMOVAL OF HEAVY DEPOSITS OF OIL, FOLLOWED BY RAKING
OF REMAINING LIGHT OILING AND DISPERSED OIL.

and Rep.

LORA JOHNSON
 (name)

Lora L. Johnson
 (signature)

Comments: AP, CT, OR & OF SUBSURFACE OIL SHOULD BE REMOVED AS
AS OILED VEGETATION.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 4 Date: 8-14 1990

Conditions Observed: PATCHY TO SPORADIC COATS AND APPEAR ON SURFACES WHERE TARMATS WERE REMOVED IN VITE. SURFACE PILING IS MINIMAL. SOR

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☒ YES ☒ NO

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

ADEC Bar McCrea
(name)

Bar McCrea
(signature)

Comments: Area was worked in '90 but not marked as work site in ASAP maps provided by Exxon. Area should receive a small amount of material removed prior to filling and hire marshalling.

Exxon Al Swook
(name)

Al Swook
(signature)

Comments: RAKED OILED SURFACES IN AREAS PREVIOUSLY WORKED & APPLY CUSTOM BLEN & INIPOL TO THE RAKED SURFACES

USCO Don Davis
(name)

Don Davis
(signature)

Comments: AREA IS MARKED AS BEING OUTSIDE DESIGNATED WORK SITE. LOCATED IN SAME GULF AS KN-24A-SITE 3. REMOVAL OF HEAVY DEPOSITS OF ASPHALT PAVING OF REMAINING AREAS FOLLOWED BY BIODEGRADATION OF EXPOSED SOILS

and Rep. LORA JOHNSON
(name)

Lora Johnson
(signature)

Comments: IT IS RECOMMENDED THAT ALL ARE MARKED AS BEING OUTSIDE OF DESIGNATED "WORK AREA" FOR THE YEAR 1990 IF THERE IS OIL PRESENT.

SEGMENT AS / KN-24 SUBDIVISION: A SITE: 1 DATE 14 AUG 90**USCG**NAME Don Criss, GM, USCG SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

Small SWEEPING COVE WITH DISCONTINUOUS BAND OF VARIOUS OILING. PATCHY, SPLASH, AND INTERSTITIAL AREAS WERE NOTED AS PER SKETCH MAP. SOME MANUAL REMOVAL OF HEAVY DEPOSITS OF ASPHALT AND MOUSE ARE NEEDED. LIGHT RACING OF EFFECTED AREA FOR WEATHERING OVER WINTER. REASSESSMENT IN 1991 RECOMMENDED.

ADECNAME Bob McCready SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: 3 work sites as designated by Exxon. However a 4th work site was located at SE corner of segment. Any oiling located on this ~150m area is not represented on oiling matrix or oiling map. This situation needs to be rectified before the integrity of the ASAP survey is damaged any further. All four sites on KN-24 require the further removal of AP, residual AP, and rubber/pne O-Pond OR oiling. Following manual removal, bioassessment of all treatment areas in all four work sites is recommended. Do not forget the presence of the fourth site and see "Site 4" on additional sketch map.

LAND MANAGERNAME LORA JOHNSON SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS, MANUAL REMOVAL RECOMMENDED. SEE SSAT SKETCH MAP ALSO. OTHER AREAS NOT INCLUDED IN THE ASAP WORK SITES ARE OILED AND NEED TREATMENT. RECOMMEND REASSESSMENT OF ENTIRE SEGMENT IN 1991.

EXXONNAME Al Snook SIGNATURE [Signature]☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THIS POCKET BEACH HAS HAD LARGE AREAS EXPOSED & EXCAVATED & BIO'D IN UITS. SMALL AMOUNTS OF TARMAT RESIDUAL EXIST IN AREAS WHERE OIL WAS REMOVED. HEAVY ORGANIC MATERIAL WITH A FILM EXISTS UNDER LARGE COBBLES IN ~~THE~~ AREAS ADJACENT TO EXPOSED AREAS. POCKET BEACH FACES NORTH & IS MED. TO HIGH ENERGY.

SEGMENT AS / KN-24 SUBDIVISION: A SITE: 2 DATE 14 AUG 90

USCG

NAME Don Davis, USCGSIGNATURE Don Davis☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SCATTERED PATCHES OF GRASS, STAIN, SOR, WITH SOME MOUSE. LIGHT OILS VEGETATION NOTES IN U/I. NO DEEP PENETRATION OF SUBSURFACE OILING NOTED. MANUAL REMOVAL OF HEAVY DEPOSITS, RAKING OF SURFACE RESIDUAL AND POSSIBLE BIO TREATMENT RECOMMENDED REASSESSMENT IN 1991.

ADEC

NAME Bob McCrearySIGNATURE Bob McCreary☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Recommend the manual removal of all AP, MS, SOR, and all OR and OF subsurface oil on this small boulder / rubble / pebble pocket beach. Oil vegetation is present in the SW and CAC up has requested that it and the subsurface oil beneath it be removed. Please note: A 4th work site was located which was not designated on ASAP maps provided by Exxon. Any oiling located on this 150m area is not represented on Oil Matrix or Philip map. Please see attached sketch map with "Site 4" represented. This situation needs to be rectified before the integrity of the ASAP project is damaged any further.

L MANAGER

NAME LORA JOHNSONSIGNATURE Lora Johnson☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

RECOMMEND MANUAL REMOVAL OF AP, MS, SOR, & OR OF SUBSURFACE OIL AND OILED VEGETATION, SEE SSAT SKETCH MAP ALSO OTHER AREAS NOT INCLUDED IN THE ASAP WORK-SITES ARE OILED AND NEED TREATMENT. RECOMMEND REASSESSMENT OF ENTIRE SEGMENT IN 1991. AGREE WITH ADEC COMMENT.

EXXON

NAME Al SnookSIGNATURE Al Snook☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

LOW ENERGY SHELTERED POCKET BEACH FACING SOUTH. DEGREE OF OILING AT PRESENT IS MEDIUM. WITH ADDITIONAL APPLICATION OF BIO & TIDAL ACTION, MINIMUM OILING SHOULD EXIST IN 1991.

SEGMENT AS / KN-24 SUBDIVISION: A SITE: 3 DATE 14 AUG 91

USCG

NAME Don Davis, GM, USCG SIGNATURE Don Davis☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

LARGE SEMI-EXPOSED BAY WITH POCKET BEACH. OILED OILING NOTES ALONG SHORE AREA IN U11. COAT, STAIN, SOL, AND ASPHALT OBSERVED IN PREVIOUS WORK SITE. SMALL POCKET BEACH WAS FOUND TO CONTAIN OILING ON BOTH SIDES (COAT, STAIN, SOL, ASPHALT). SOME HEAVY ASPHALT PATCHES NEED MANUAL REMOVAL. OTHER AREAS REQUIRE RAKING AND APPLICATION OF D.O. URGENTLY NEED BEACH AREA REASSESS IN 1991.

ADEC

NAME Bob McCreary SIGNATURE Bob McCreary☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Pocket beach with AP, residual AP (in areas of previous manual removal), coat as well as OR and OF subsurface oil. Above described oiling should be manually removed (with the exception of CT) followed by tilling and bioremediation.

*Please note a "4th pocket" is present on KN-024 which was not recognized on ASAP maps provided by Exxon. Oiling in this area is not represented by the OG on the oiling matrix or oiling maps. Please see attached sketch map representing "Site 4." This situation needs to be rectified before the ASAP project is damaged any further.

LAND MANAGER

NAME LORA JOHNSON SIGNATURE Lora L. Johnson☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

AP, CT, OR & OF SUBSURFACE OIL SHOULD BE REMOVED. SEE SKAT SKETCH MAP ALSO. OTHER AREAS NOT INCLUDED IN THE ASAP WORK SITES ARE OILED AND NEED TREATMENT. RECOMMEND REASSESSMENT OF ENTIRE SEGMENT IN 1991.

EXXON

NAME Al Snook SIGNATURE Al Snook☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

LOW to MEDIUM ENERGY SHORELINE WITH SHELTERED POCKET BEACH FACING SOUTH. WITH ADDITIONAL BIO TREATMENTS ON EXPOSED AREAS & TIDAL ACTION, MINIMUM OILING SHOULD REMAIN IN 1991.

TEAM NO. 3 EXXON AL SNOOK SEGMENT AS KU24A
 OG LINDSAY NAKASHIMA USCG DON ORVIS SUBDIVISION A
 ADEC BOB McCREARY LAND REP LORA JOHNSON TOTAL NO SITES 3
 DATE 8/14/90 TIME 10:10:11 TIDE LEVEL 6.8 10+6.4
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 290 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 CATEGORY LENGTH: W m M 20 m N 60 m VL 40 m NO 170 m US 12/2 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT		X	X			X		
S.O.R.								
POOLED								
COVER								
COAT			I			X		
STAIN			I			X		
MOUSSE				I		X		
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					60m			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X				X		
POOLED								
COVER								
COAT			X	X		X		
STAIN				X		X		
MOUSSE				I		X		
PATTIES/T.B.								
FILM		X				X		
NO OIL					X		X	X
EST. SITE LENGTH					80m			

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			X	I		X		
S.O.R.			X			X		
POOLED								
COVER								
COAT			X			X		
STAIN			X			X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					150m			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO		SU	UI	MI	LI	
1	1	15		X			Y	X				P/B/C
1	2	7	X				Y	X				P/C/B/V
2	1	12			X		Y	X				P/C/G/S
2	2	10		X			Y	X				P/C/G
2	3	25			X		Y	X				P/G/S/B
3	1	10			X		Y	X				S/G/P
3	2	5		X			Y	X				P/C/O

Photographs:

Roll No. φ

Frames φ

REMARKS

- SITE 1 WAS A NORTH-FACING BOULDER POCKET BEACH LINEO WITH LARGE BOULDER & LOGS. FOUR AREAS OF CT/ST/AP/MS WERE FOUND AS BROKEN, PATCHY, SPORADIC (SPASH) DEPOSITS.
- SITE 2 WAS A SMALL POCKET BEACH WITH CT/ST/MS ON THE NORTH SHORE, AND 2 SMALLER (2x1m) (5x1m) PATCHES ON THE OPPOSITE (SOUTH SHORE).

REVISION NO. 7/27/90

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 1 Date: 8-14 1990

Conditions Observed: IN VITZ, THREE AREAS HAD BEEN EXPOSED AND
TARMAITS AND POOLED OIL HAD BEEN REMOVED EARLIER. ALSO
IN O. OR REMAINS IN AREAS THAT WERE WORKED; ALSO
IN MOBILE OIL EXISTS UNDER COBBLE/BOULDER. IN AREA A
THE THREE AREAS THAT WERE WORKED ON EASTERN
FOURTH AND ST ARE PATCHY UNDER LARGE BOULDERS. ALSO
POOLED AND PATCHY DIST IN AREAS WORKED.

Followup Recommendations: SEE COMMENTS BELOW.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☐ Med ☐

ADEC BOB MC CREARY
 (name)

Robert B. McCreary
 (signature)

Comments: I recommend the manual removal of all AP, MS, OP and OR to be
followed by bioremediation. It should be noted that MS and OP are
is making work on this site and needs to be manually removed, just to line

Exxon AL SNUOK
 (name)

AL SNUOK
 (signature)

Comments: FLIP LARGE COBBLE/SMALL BOULDERS IN AREAS ADJACENT
TO AREAS THAT HAVE ALREADY BEEN WORKED; RAKE SURFACES IN
WORKED AREAS & APPLY CUSTOMBLEN & INIPOL.

USCG JOHN CRIS AM
 (name)

John Cris
 (signature)

Comments: REMOVAL OF HEAVY OBJECTS OF AIRPORT MASSIVE AND HEAVY
WORK. FOLLOWED BY REMOVAL OF REMAINING OIL AND BULKY MATERIALS
AND REMOVAL OF WASTEWATER PRIOR TO BIO

Land Rep. LORA JOHNSON
 (name)

Lora Johnson
 (signature)

Comments: AGREE WITH ADEC COMMENTS AND
RECOMMENDATION IN THE USE OF BIOREMEDIATION

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 2 Date: 8-14 1990

Conditions Observed: IN POCKET BEACH, SURFACE COATS AND STAINS ~~AT~~ EXIST
IN VITZ ON ANGULAR COBBLE/PEBBLE/GRANULS. SURFACE COATS &
STAINS ARE PATCHY TO SPORADIC DIST. SOME SOR EXISTS IN
AREAS ~~WH~~ WHERE TARMATS WERE REMOVED. SOME OILED VEGETA-
TION IN SUPRA ITZ. SUBSURFACE OILING CONSISTS OF OR & OF
IN AREAS WHERE TARMATS WERE REMOVED.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC BAR MCCREARY
 (name)

Robert B. McCrery
 (signature)

Comments: MANUAL REMOVAL OF AP, MS, RESIDUAL AP, as well as OR and
OF surface oil is recommended. Following manual removal, heavy
decontamination is recommended. Oiled vegetation should be removed as per
CAC's request

Exxon AL SNOOK
 (name)

Al Snook
 (signature)

Comments: RAKE OILED SURFACES & IN AREAS THAT WERE PREVIOUSLY
WORKED & APPLY CUSTOMBLEN & INIPOL TO THE RAKED SURFACES

USCG JOHN DEVIS, JR.
 (name)

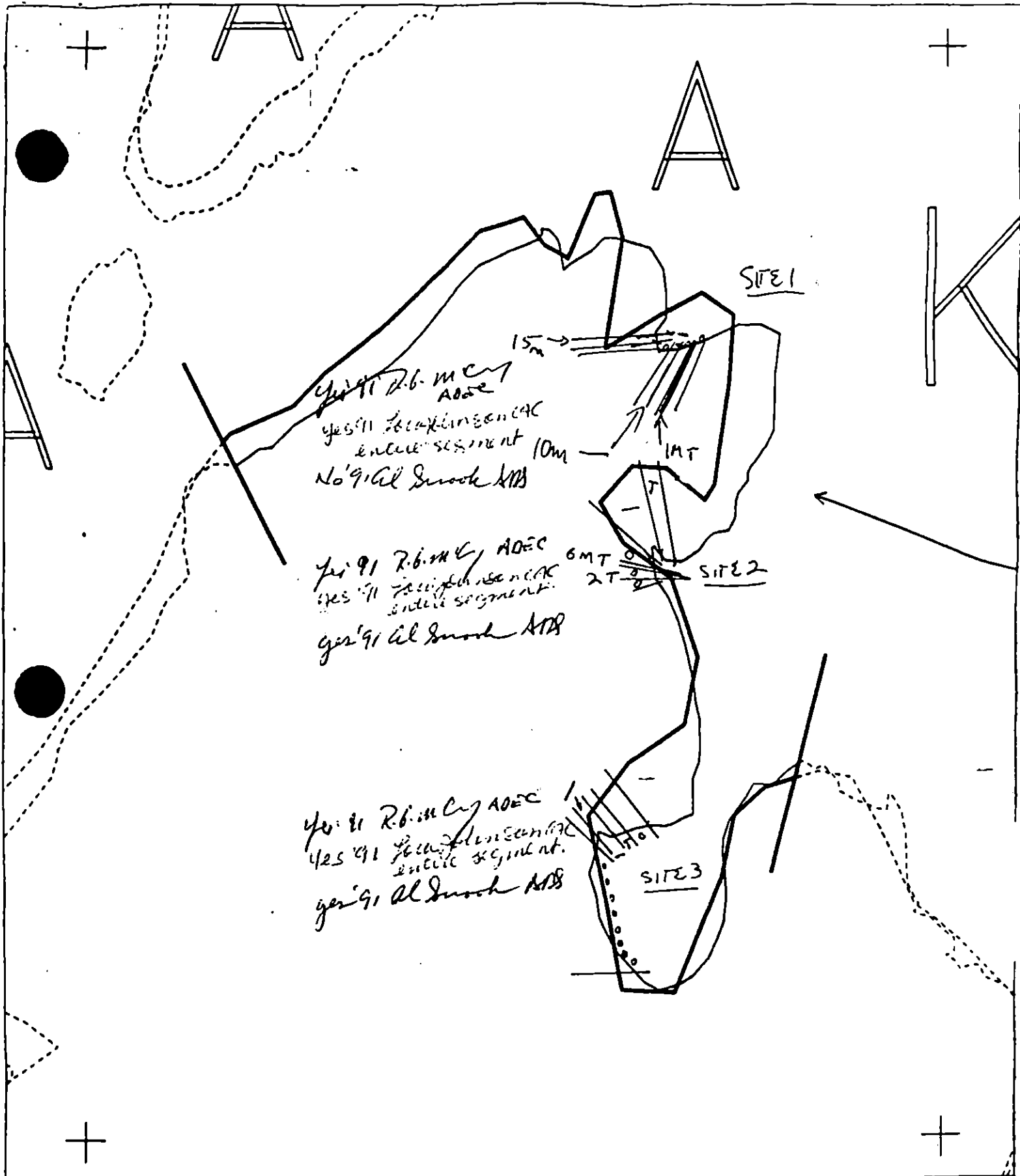
John Devis, Jr.
 (signature)

Comments: AREA CONTAINS SOME HEAVY DEPOSITS OF MUD/SILT AND 30% IN BANDS OF COAT AND
STAIN. REMOVAL OF HEAVY DEPOSITS, RAKING OF REMAINING SURFACE OILING, AND
BIOREMEDIATION RECOMMENDED.

Land Rep. LORA JOHNSON
 (name)

Lora Johnson
 (signature)

Comments: AGREE WITH ADEC COMMENTS. REMOVE AP, MS, RESIDUAL AP, as well as OR and
OF surface oil & OILED VEGETATION CAC REQUESTED THIS FOR
BIOREMEDIATION.



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

KN-24 A
 ADEC Subsegment Length: 1502m
 METERS
 0 95 180
 AK State Plane Zone 4 1:3724



Subdivision Field Map
 Map Key: KNIK-24A
 Name: NAKASHIMA
 Date: 8/14/90
 Data Entered:

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 3 Date: 8-14 1990

Conditions Observed: PATCHY COATS, STAINS & TARMAT RESIDUALS
EXIST ON SURFACES WHERE TARMATS WERE REMOVED, SOME
OILED VEGETATION EXISTS IN SUPRA ITZ ON STEEP ANGLE SHORE-
LINE ON NORTH END OF SITE 3. SUBSURFACE OILING EXISTS OF
OR 1/2 OF 1-2 CM IN UITS.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC Bob McCready
 (name)

Robert L. McCready
 (signature)

Comments: Manual removal of all AP, residual AP (in areas previously
treated), OR, OF and oiled vegetation as per CAC rep's request.
Manual removal should be followed by tillage and bio remediation.

Exxon Al Swook
 (name)

Al Swook
 (signature)

Comments: RAKE OILED SURFACES IN AREAS PREVIOUSLY WORKED
(INCLUDING SITE 4 WHICH IS SOUTHEAST OF SITE 3) & APPLY CUSTOMER'S
& INEPCO TO THE RAKED SURFACES.

USCG Don Davis GM
 (name)

Don Davis
 (signature)

Comments: AREA CONTAINS ASPHALT AND "SOS" POTENTIAL AND INDUSTRIAL WASTE
OF COAT AND STAIN. REMOVAL OF HEAVY DEPOSITS OF OILING, FOLLOWED BY RAKING
OF REMAINING LIGHT OILING AND BIO REMEDIATION.

Land Rep. LORA JOHNSON
 (name)

Lora L. Johnson
 (signature)

Comments: AP, CT, OR 1/2 OF SUBSURFACE OIL SHOULD BE REMOVED AS WELL
AS OILED VEGETATION.

OG: NAKASHIMA

SEGMENT: 11

SUBDIVISION: _____

DATE: / / 90

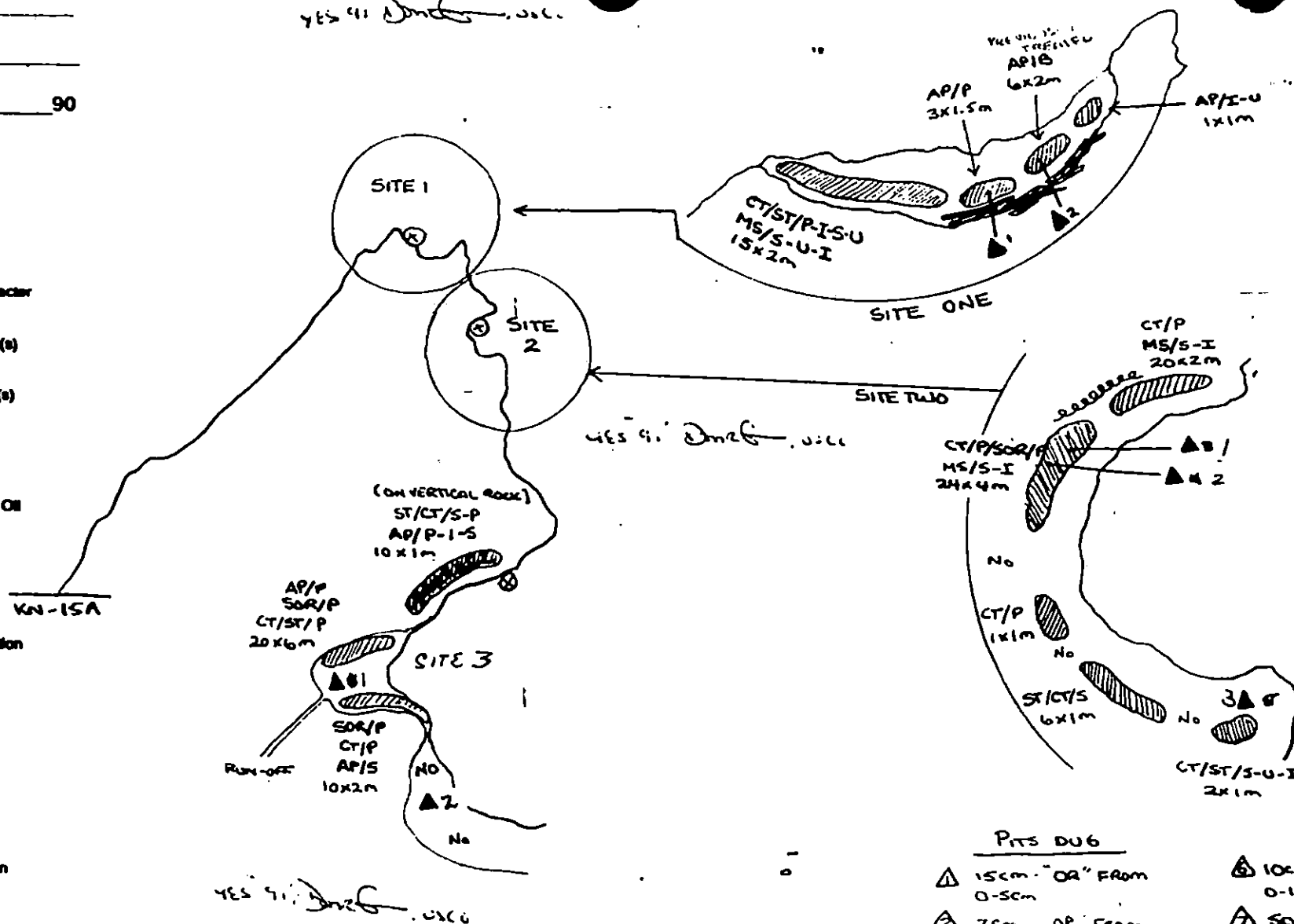
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWR/LWR
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit 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
- Oiled Vegetation
- 1
 Photo location, direction, and number

SKETCH MAP



- PITS DUG
- 15cm "OR" FROM 0-5cm
 - 7cm "OR" FROM 0-5cm
 - 12cm "OR" FROM 0-2cm
 - 10cm "OR" FROM 0-3cm
 - 25cm "OR" FROM 0-4cm

- 10cm "OR" FROM 0-1cm
- 5cm "OR" FROM 0-2cm

Oil Character Length (m): AP 71 PO CV CT 114 ST 108 MS 60 PT TB FL 4 NO 110 SOR 50

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-24 Subd.: A Site: 4 Date: 8-14 1990

Conditions Observed: PATCHY TO SPORADIC COATS AND APPEAR EXIST ON SURFACES WHERE TARMATS WERE REMOVED IN VITZ. SURFACE OILING IS MINIMAL.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☒ YES ☒ NO

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

ADEC Bob McCRENA
(name)

Robert B. McCreary
(signature)

Comments: Area was marked in '90 but not marked as work site on ASAP maps provided by Exxon. Area should receive a small amount of manual removal prior to tilling and bioremediation.

Exxon Al Swook
(name)

Al Swook
(signature)

Comments: RAKED OILED SURFACES IN AREAS PREVIOUSLY WORKED & APPLY CUSTOM BLEN & INIPOL TO THE RAKED SURFACES.

USCG Don Davis
(name)

Don Davis
(signature)

Comments: AREA IS MARKED AS BEING OUTSIDE DESIGNATED WORK SITE. LOCATED IN SAME GULF AS KN 24A - SITE 3. REMOVAL OF HEAVY DEPOSITS OF ASPHALT, RAKING OF REMAINING AREAS, FOLLOWED BY BIOREMEDIATION OF EFFECTED AREAS.

Land Rep. LORA JOHNSON
(name)

Lora Johnson
(signature)

Comments: IT IS RECOMMENDED THAT OIL BE MANUALLY REMOVED FROM AREAS OUTSIDE OF DESIGNATED "WORK AREAS" SHOULD BE MARKED IF THERE IS OIL PRESENT.

SUBDIVISION A

DATE Aug 14/ 90

CHECKLIST

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

LEGEND

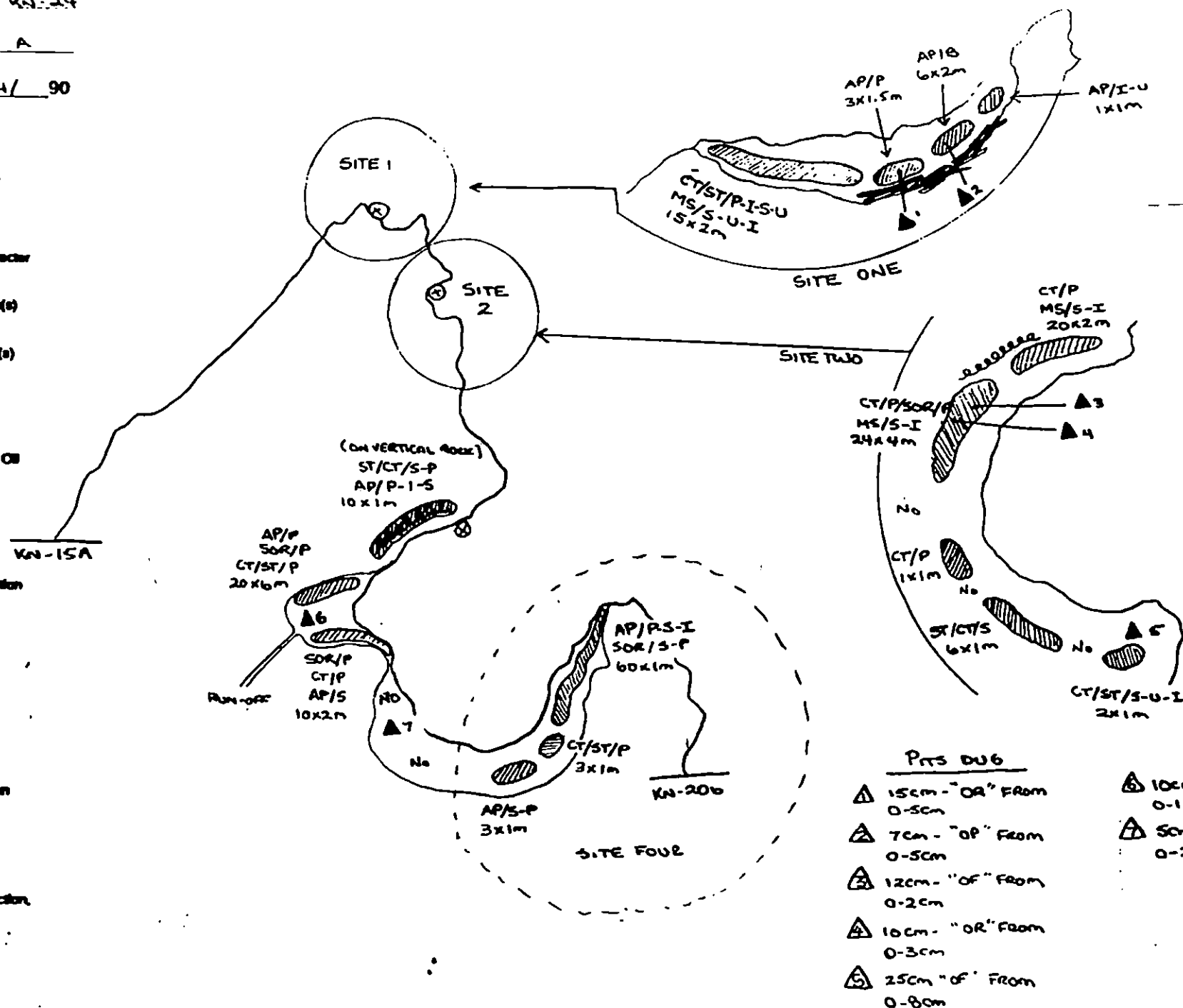
- 1 
 PK - No Subsurface Oil
- 2 
 PK - Subsurface Oil
- 
 Continuous Distribution
- 
 Broken Distribution
- 
 Patchy Distribution
- 
 Splashed Distribution
- 
 Oiled Vegetation

1 

Photo location, direction,
and number

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

REVISED 01-2017



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-25

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION A (1 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 102 m: V.Light 0 m: No Oil 284 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 KN-025 SUBDIVISION: A DATE 04-20-

USCG
NAME

AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME

Michele Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

5/ on headland observed. No other oil found.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber 30

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Recommend continued natural cleansi.
Very little oil found on rocky headland and
that oil in a benign form (ie weathered / not
Oil difficult to distinguish from natural ~~oil~~
present.

SHORELINE OILING SUMMARY

REVISION NO. 1

OG J. Springer USCG R. Vandepels SEGMENT ST/ HN-25
 BIO P. Crank LAND REP C. Huber SUBDIVISION A 1 OF 3
 EXXON T. Temblin ADEC M. Baer TIME 17:32 to 17:50
 TEAM NO. 5 TIDE LEVEL +2 +2 +2 1/2 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 100% S 0% C 0% P 0% G 0% S 0% M 0% V 0%
 SLOPE: Long 0% Hang 5% Vert 95% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 100 m VL 0 m NO 400

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs: No photos

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		UC	UC	1	2	3	4	SU	U	M	U			

COMMENTS

No pits dug - rock face only.

26

REVIEWED

TW

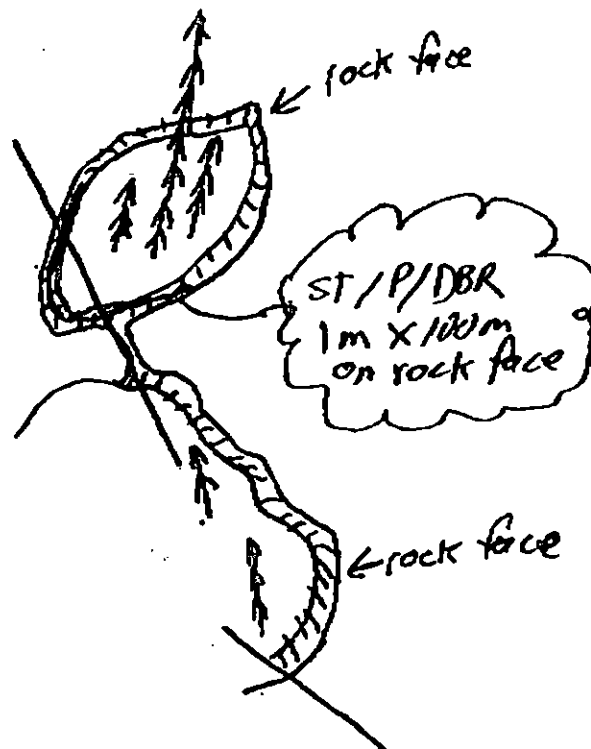
DATE

4/23/90

SKETCH MAP



0 100 m
Approx



J. Spring

MENT ST/ KN-25

DIVISION A

E 04, 20/90

ECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Study
- OS Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LML
- SSL
- Profile Location(s)
- Profile(s)
- Plot Location(s)
- Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
random Distribution

CT/B
even Distribution

CT/P
patchy Distribution

CT/S
patched Distribution

eee
seed Vegetation

1 →
note location, direction,
and number

2

SHORELINE ECOLOGICAL SUMMARY

pg 1 of 2

REVISION: 03/22/90

Segment ST/KN 25 Subdivision A Date (mo / day / yr) 4/20/90

Time (24 hr) 1725-1745 Biologist Crack Tide Height: +2.5 +2.4
Length: 500 m

- (A) Substrate type and % of segments:
(1) Bedrock 100 (2) Boulder — (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 100 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 (3)
- Photographs: No photos
Roll No. —
Frames —

BARNACLES

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

MYTILUS

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

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESE No information av
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESE 26
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
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:
3 otter

Ecological Considerations:
67- Special Use Designation

- Subdivision was entirely vertical face around an isl and a headland. Survey by skiff.
- Fucus (mature plants) formed a dense ^{continuous} 2 m band with sparse sportlings.
- Barnacles also formed a dense continuous band. Dense recruitment in VITZ.
- Mytilus were not observed.
- Gastropod distribution not given. Although there were observed Nucella congregations Littorina and L could not be taken for from skiff.
- Area appeared healthy, there was an h. i. m. rather oil obsen

SEGMENT: ST/ KN 23 SUBDIVISIONDATE 4/20/90 TIME 1725-1745 TIDE HEIGHT +2 → +2.5 ft

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

pg 2 of 2

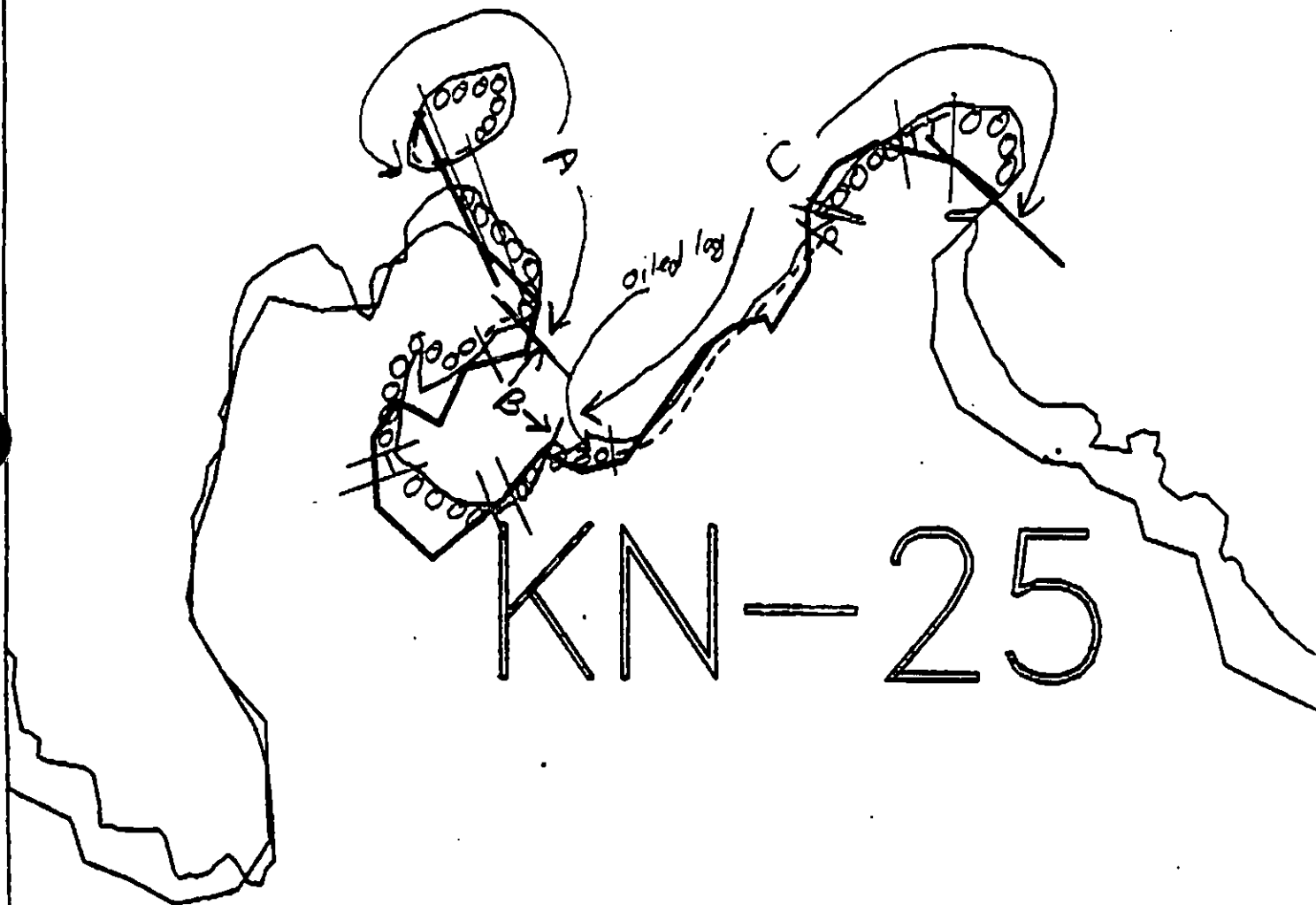
FLORA:

SPECIES	UTTZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP	1			
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILMAENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA			1	
PHODOMELA LARX			1	
RHOHOMENIA PALMATA			1	
SCYTOSIPHON SPP				
ULVA SPP			1	
ZOSTERA MARINA				
ENTOROMORPHA				
<i>Iridia</i>			1	
<i>Maistrocaspus</i>			1	
<i>Alaria</i>			1	

FAUNA:

ANTHOPLEURA SPP				
(SEM) BALUNUS CARIOSUS				
B. GLANDULA	1	1	1	
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS				
LITTORINA SPP				
NUCELLA SPP		1		
PAGURUS SPP				
PISASTER OCHRACEUS				
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES			1	
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALTA				

29



45

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420

Name: James Spring

Date: 4/20/90



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-25

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION B (2 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 93 m: V.Light 0 m: No Oil 373 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-25 SUBDIVISION: B DATE 04-20-90

USCG

NAME

AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

Michelle Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

On the 1st beach, a band varied from ST/B to CV/B for 20' along the headland (by pit #1 + #2). By pit #5, the group picked up and bagged the occasional TB/s and MS. No other oil was found.

LAND MANAGER

NAME

Carol S. Huber SIGNATURE Carol S Huber 35

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Recommend continued natural cleansing. Very little oil found. Rare tar splatters were bagged and removed. Resource sensitivity - Special use destination

SHORELINE OILING SUMMARY

REVISION NO. 04-13/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-25
 BIO P. Crank LAND REP C. Huber SUBDIVISION B (2 OF 3)
 EXXON T. Tomblin ADEC M. Baer TIME 17:15 to 18:35
 TEAM NO. 5 TIDE LEVEL 1 1/2 to 2 1/2 DATE 1 / 1 / 90
 EST. SUBDIVISION LENGTH: 400 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to _____
 SURFACE SEDIMENTS: R 30 % B 20 % C 30 % P 15 % G 0 % S 0 % M 5 % V 0
 SLOPE: Long 60 % Hang 15 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 70 m VLO 20 m NO 310 m
me

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	W	M	N	V	L	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER		X			X						X		
COAT													
STAIN		X			X						X		
MOUSSE				X			X				X		
PATTIES													
TARBALLS				X	X						X		
FILM													
NO OIL										X	X	X	

PAVEMENT H F S 0 sq. m by 0 cPATTIES / TARBALLS 0 BAG

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Tarballs#BAGS 1

Photographs:

Roll No. ST-5-6Frames 21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR					PIT ZONE				A	N	A	SHEEN (Y/N)	↓	SURFAC SUBSURF. SEDIMENT
		OP	OR	OL	OF	NO		W	M	N	V	L	SU	U	M	U						
1	30					X		X						X						N	25	BC/PS
2	20					X		X								X				N	10	CP/PS
3	20					X		X						X								P/PM
4	30					X		X						X								P/GM
5	30					X		X						X						N	15	C/CP
6	30					X		X						X						N	10	P/PGM

COMMENTS

Picked up tarballs from beach.

32

REVIEWED 7W

DATE

4/23/90

SHORELINE OILING SUMMARY (PAGE 2)
SEGMENT ST/ KN-25 SUBDIVISION B (2 OF 3)

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

33

REVIEWED YW DATE 4/23/90

OG J. Sanger
 SEGMENT ST/ KN-25
 SUBDIVISION B
 DATE 04/20/90

ETCH MAP

CHECKLIST

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

LEGEND

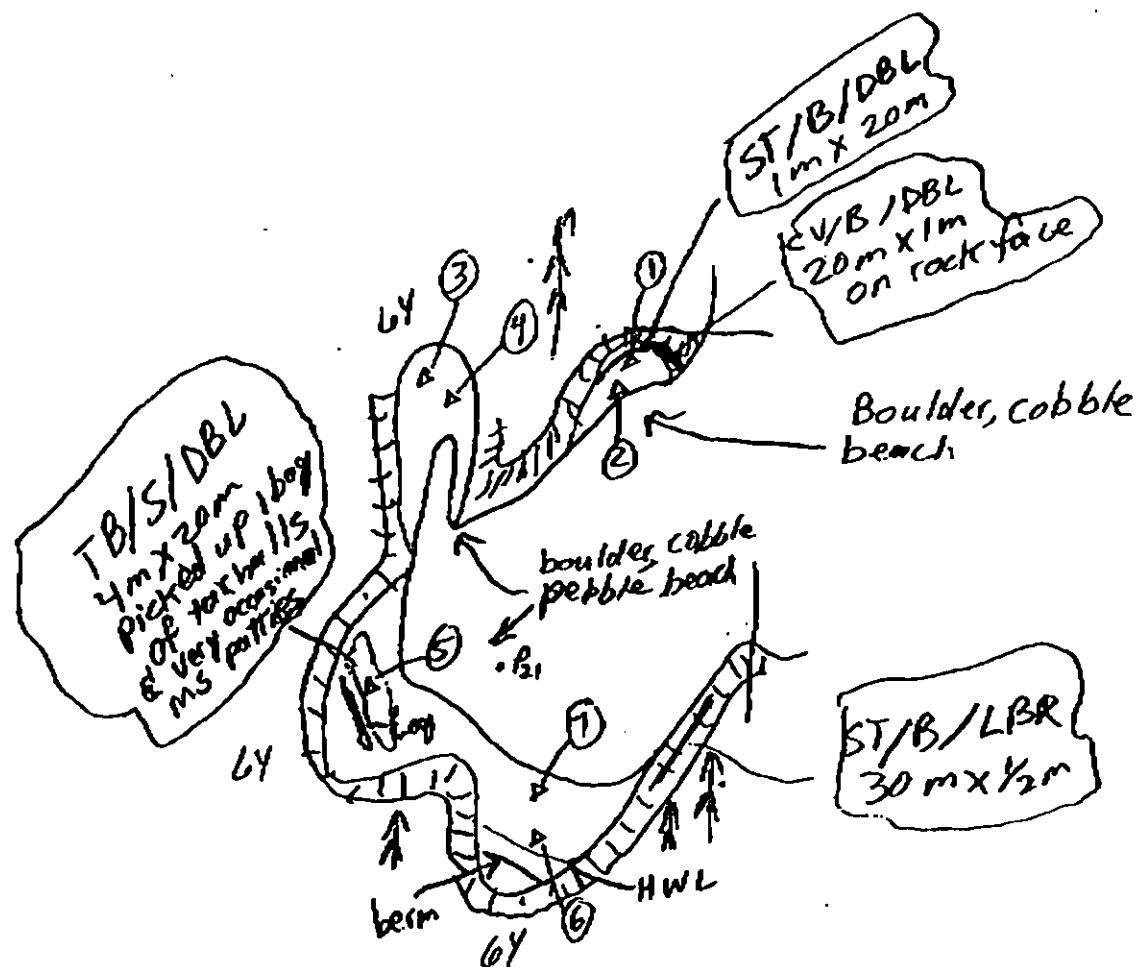
- 1 Δ
P# - No Subsurface Oil
- 2 Δ
P# - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

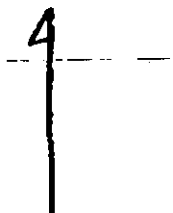
Patchy Distribution
- CT/S

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



54

N



0 100 m
Approx

Oil Character Length (m): AP _____ PO _____ CV 20 CT _____ ST 50 MS _____ PT _____ TB 20 FL _____ NO 310

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KN 25 Subdivision B Date (mo / day / yr) 4/20/90
 Time (24 hr) 1725-1840 Biologist Crank Tide Height 12-13 Length: 400m pg 1 of 1

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 20 (3) Cobble 30 (4) Pebble 15 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 3 Moderate 17 Low 80
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
 juveniles / adults (X), new settlement (3)
- Photographs:
 Roll No. ST-5-4
 Frames 21

BARNACLES

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

Wildlife Observations/ General Comments:

2 Bald Eagle

1 Otter

Heard a raven

1 - Rainbow Smelt? - appear unhealthy

Bear Tracks

Ecological Considerations:

6 Y - Special Use Destination

36

Segment: ST / KN 25 Subdivision: B Length: Bio: Crank

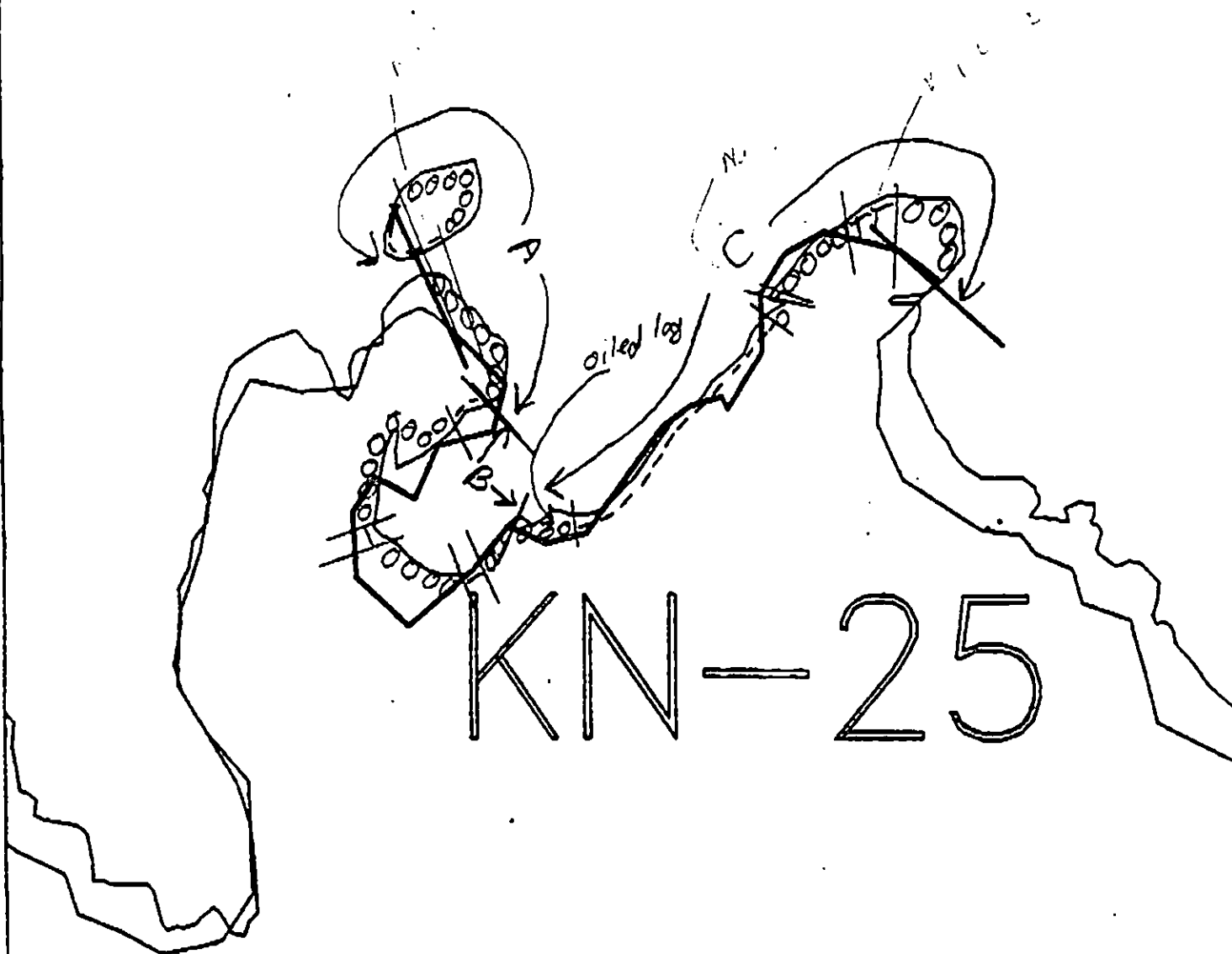
Date: 4/20/90 Time: 1725-1840 Tide Height: +2 → +3 ft

pg 2 of 2

General Comments

- Subdivision consists of steep angular boulders' sides with ^{shaly} ~~angular~~ boulder/cobble beaches. - MEW COVE. Most of LITZ unexposed.
- Area appears to have been hot H₂O washed. Sporadic oiled splashed surfaces. Mortality %'s did not appear to change from oiled to unoled surfaces.
- 50% Barnacle mortality in UITZ; MITZ; 30% in LITZ. Recruitment and New Growth continuous throughout: Sparse in UITZ, Moderate in MITZ, dense in LITZ.
- Fucus stipes are sparse and sporadic in MITZ, 40% of stalks appear burnt.
- Back of Mew Cove on beach there is a moderate concentration of intercobble mussel bed 100m x 10m. 80% Mortality and rare recruitment and new growth.
- Gastropods have low mortality and dense recruitment and new growth.

32



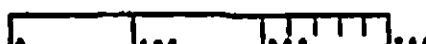
KN-25

45

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

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420
 Name: James Springs
 Date: 4/20/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-25

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION C (3 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 310 m: V.Light 46 m: No Oil 231 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ KN-025 SUBDIVISION: C DATE 04-20-

USCG

NAME

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

ADEC

NAME

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

1) on SW beach, remove oiled log and debris
 2) Group raked ms/p 1m x 5m, ^{more} no treatment recom-
 mended.

LAND MANAGER

NAME

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

Only very light oil observed on about $\frac{1}{3}$ of this subdivision. See 1) comment of ADEC
 Continued natural cleansing recommenc
 Resource sensitivity: Special Use Dist
 -tion.

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.

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ KN-25
 BIO P. Cronk LAND REP C. Huber SUBDIVISION C (3 OF 2)
 EXXON T. Temblin ADEC M. Boel TIME 18:35 to 19:45
 TEAM NO. 5 TIDE LEVEL +3 to +5 DATE 04/20/90
 EST. SUBDIVISION LENGTH: 600 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5% B 40% C 5% P 3% G 2% S 0% M 0% V 0%
 SLOPE: Lang 5% Hang 30% Vert 65% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 245 m VL 50 m NO 305 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR										IMPACTED ZONES			
	C	R	P	B	1	2	3	4	5	6	7	8	9	10	SU	U	M	L
ASPHALT PAVEMENT																		
POOLED																		
COVER																		
COAT		X	V	+											X			
STAIN				X											X			
MOUSSE			X											X				
PATTIES																		
TARBALLS																		
FILM															X		X	X
NO OIL																		

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-5-6Frames 19, 20, 22

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 SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	9	10					
1	30					X	.	X												X				P/PM
2	20					X	.	X														N	10	P/GS
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

40

REVIEWED 7W DATE 4/23/90

J. Springer
 SEGMENT ST/ KN-25
 SUBDIVISION C

DATE 04/20/90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HPA/LA/BL
- ☐ SGL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲
 No Subsurface Oil

2 ▲
 Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

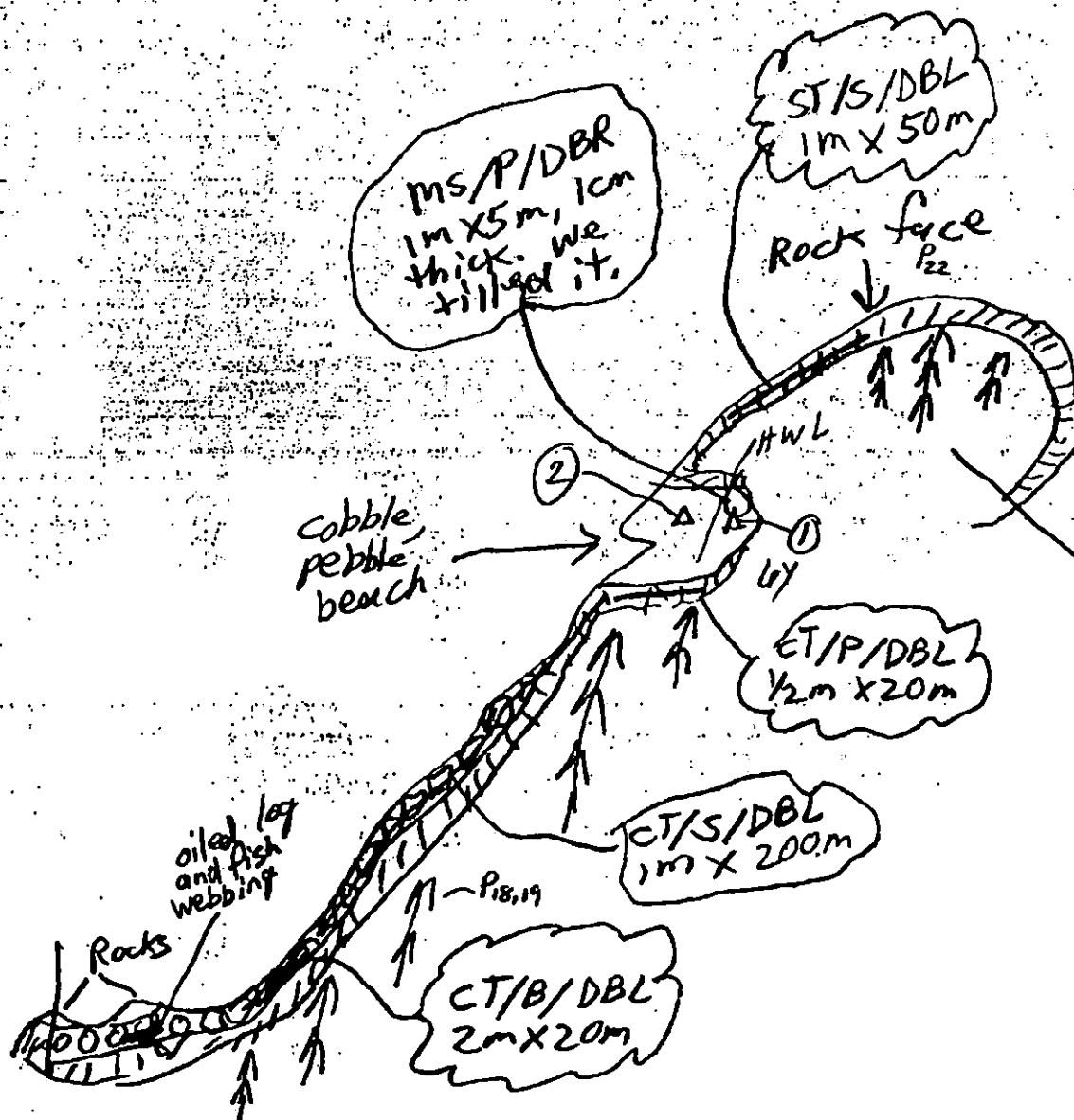
CT/P
 Patchy Distribution

CT/S
 Plashed Distribution

eee
 Seeded Vegetation

1 ●→
 Photo location, direction,
 and number

SKETCH MAP



N

0 100m
 Approx

Character Length (m): AP _____ PO _____ CV _____ CT 240 ST 50 MS 5 PT _____ TB _____ FL _____ NO 305

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/91

Segment ST / KN 25 Subdivision C Date (mo / day / yr) 4/20/90
 Time (24 hr) 1840-1915 Biologist Crank Length 1000m
 Tide Height +3 to +5 ft

(A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 40 (3) Cobble 5 (4) Pebble 3 (5) Sand 2 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 Low 50 pg 1 of 2

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

Photographs:
 Roll No. ST-5-6

Frames 19, 20, 22

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	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 Golden Eagle

1 Bald Eagle (missing both primarys on left wing)

2 Kittiwake

Ecological Considerations:

6 Y - Special Use Disturbance

Other Seabird - mostly mussel shell
 Flock of Duck - ~20 individuals
 1 Cormorant
 1 Otter

Most of LITZ unexposed appeared to be rich floral community water.

Barnacle spat on c surfaces.

5% Barnacle scars MITZ headland bc

50% Barnacle mort on both oiled & un-oiled surfaces.

42

DATE 4/20/90 TIME 1840-1915 TIDE HEIGHT +2 → +3 ft

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

pg 2 of

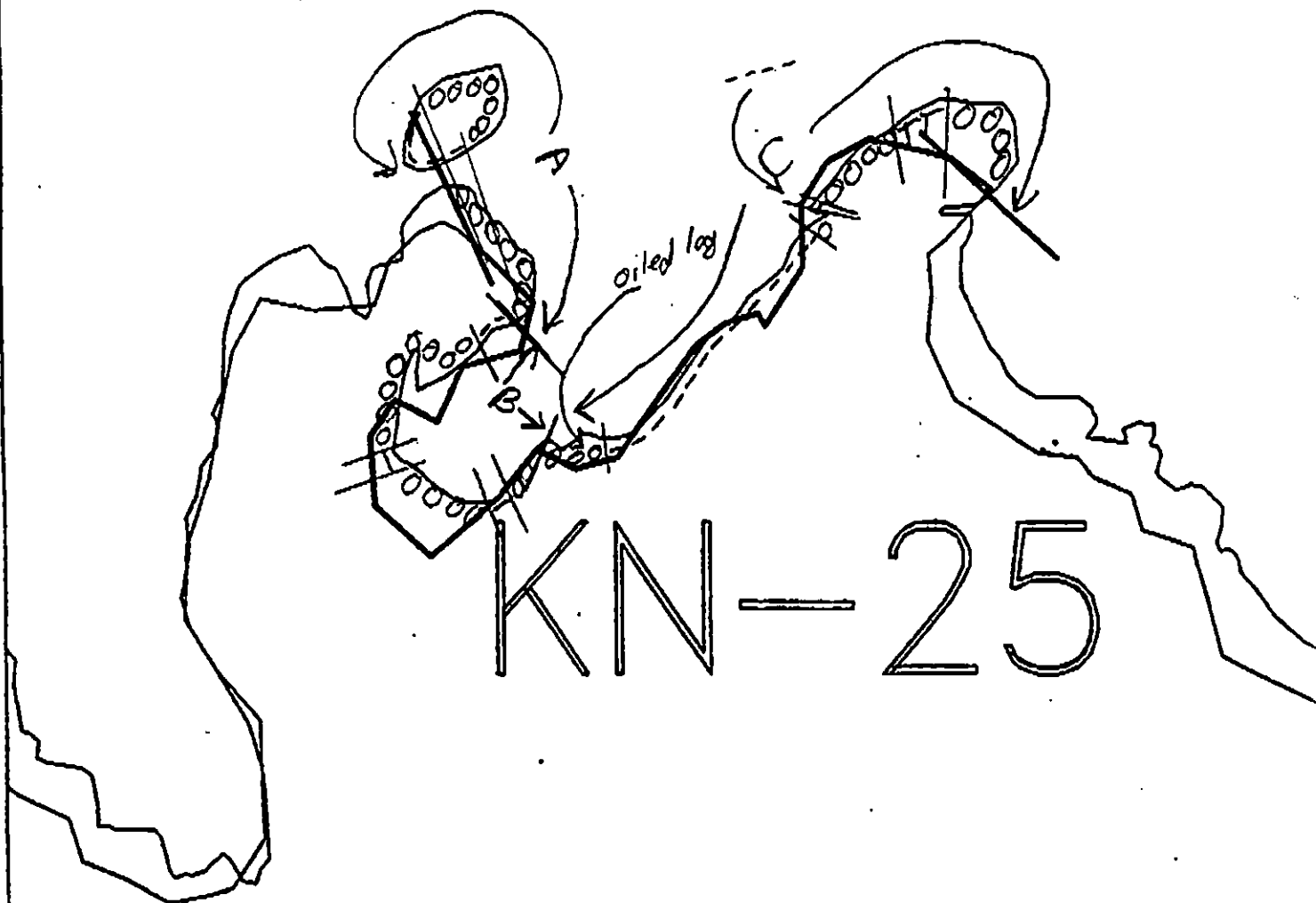
FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILMAENTOUS GREENS			23	sparse
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP		12		
RALPHSIA/HILDENBRANDIA			12	
PHODOMELA LAREX				
RHOHOMENIA PALMATA			12	
SCYTOSIPHON SPP			12	
ULVA SPP			12	
ZOSTERA MARINA				
ENTOROMORPHA				
Mastrocarpus			12	
Odonthalia			12	
Cryptosiphonia			12	

FAUNA:

ANTHOPLEURA SPP				
(SEMI) BALUNUS CARIOSUS		12		
B. GLANDULA	12 3	12 3	12 3	
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA			1	
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS	12	12 3	12 3	
LITTORINA SPP	12	12 3	12 3	
NUCELLA SPP		1	12	small patches of dense concentration
PAGURUS SPP		34	34	
PISASTER OCHRACEUS				
POLYCHAETES			24	43
PYCNOPODIA HELIANTHOIDES			1	
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				
Medusa			On H ₂ O	Clear w/ Brown radial stripes
Fish - swimming thru on side				in the Avicula Smith?

⊗ Tok



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

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420

Name: James Spring

Date: 4/20/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION A (1 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 102 m: V. Light 0 m: No Oil 284 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC *Art Weimer Art Weimer*

EXXON *Andy Tate Andy Tate*

NOAA *Gary Petras Gary Petras*

USCG *G.A. Reiter G.A. Reiter*

FOSC: *[Signature]*

DATE: 5-12-90

J. Springer

MENT ST/ KN-25

DIVISION A

E 04, 20/90

ECKLIST

N Area
Approx. Scale
Seg/Sub Grid
DB Dist.
Width
Length
% Cover
Substrate Character
Est. HML/LML
SSI
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)

LEGEND

1 ▲
No Subsurface Oil

2 ▲
Subsurface Oil

CT/C
Continuous Distribution

CT/D
Discrete Distribution

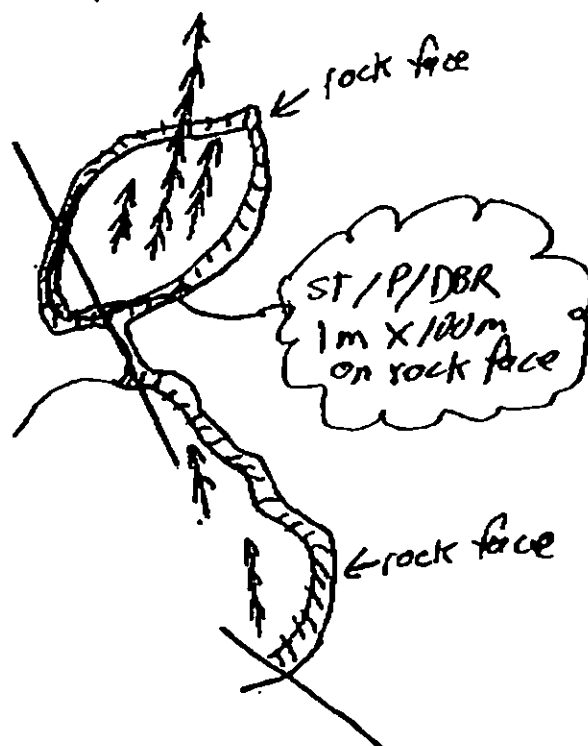
CT/P
Patchy Distribution

CT/S
Scattered Distribution

eee
Exposed Vegetation

1 ●→
Note location, direction,
and number

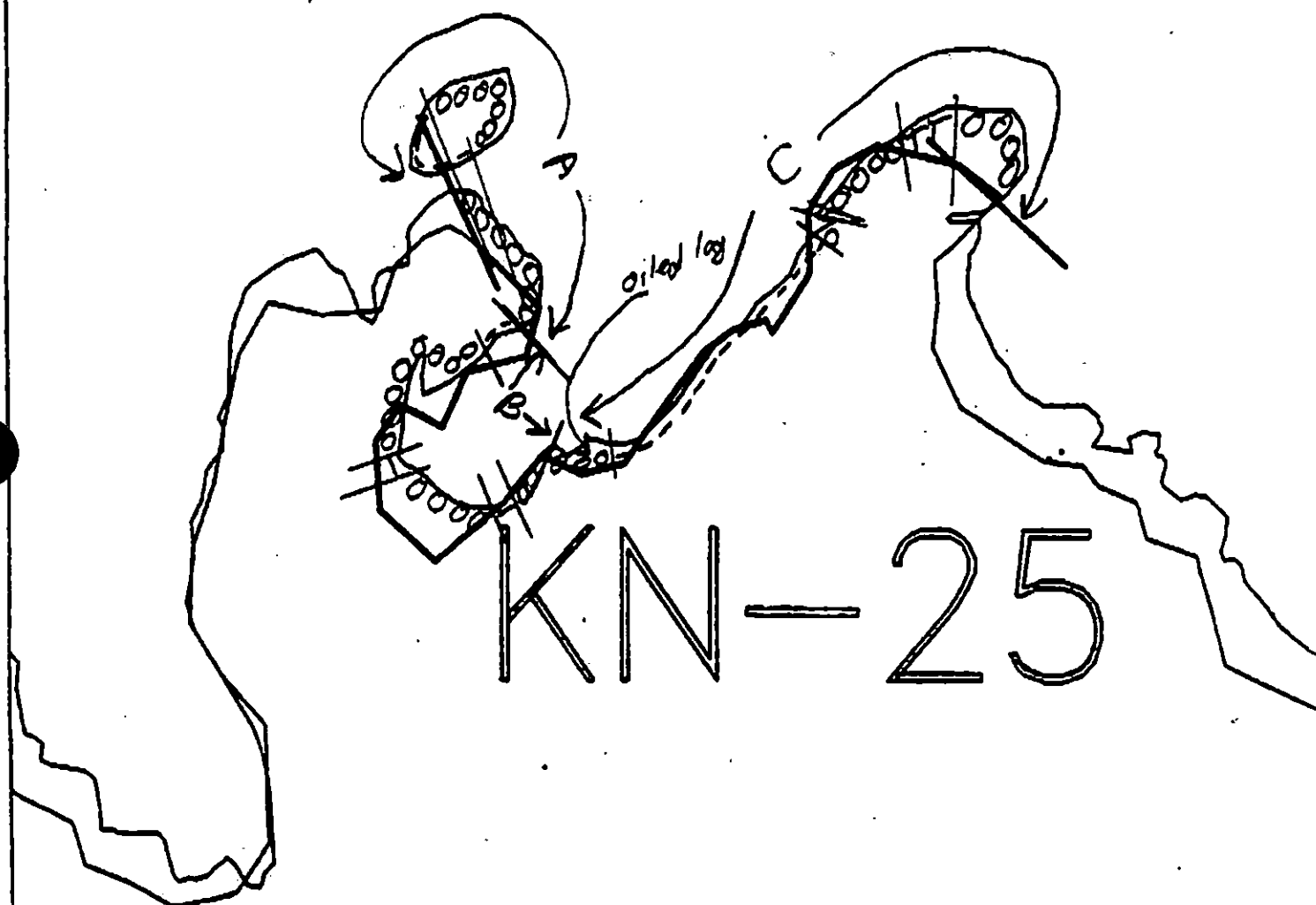
SKETCH MAP



N

4

0 100 m
Approx



KN-25

45

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

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420
Name: James Spring
Date: 4/20/90

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION C (3 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Daniel McMahon DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 310 m: V.Light 46 m: No Oil 231 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MONITORS TO ASSESS SIGNIFICANCE OF OILED LOG

TAG APPROVAL DATE: 5/8/90
ADEC Art Wemmer, Dist Wemmer
EXXON Andy Teller FOSC: W L DATE: 5-12-90
NOAA Gary Palmer, Gary Palmer
USCG G.A. Reiter, G.A. Reiter

De J. Springer
 SEGMENT ST/ N-25

CH MAP

SUBDIVISION C

DATE 04/20/90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Segment Study
- ☐ On Data
- ☐ WASH
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HPLA (M)
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 A

II - No Substrate On

2 A

I - Substrate On

CT/C

ORIGINATOR'S LOCATION

CT/B

When Distribution

CT/P

When Distribution

CT/S

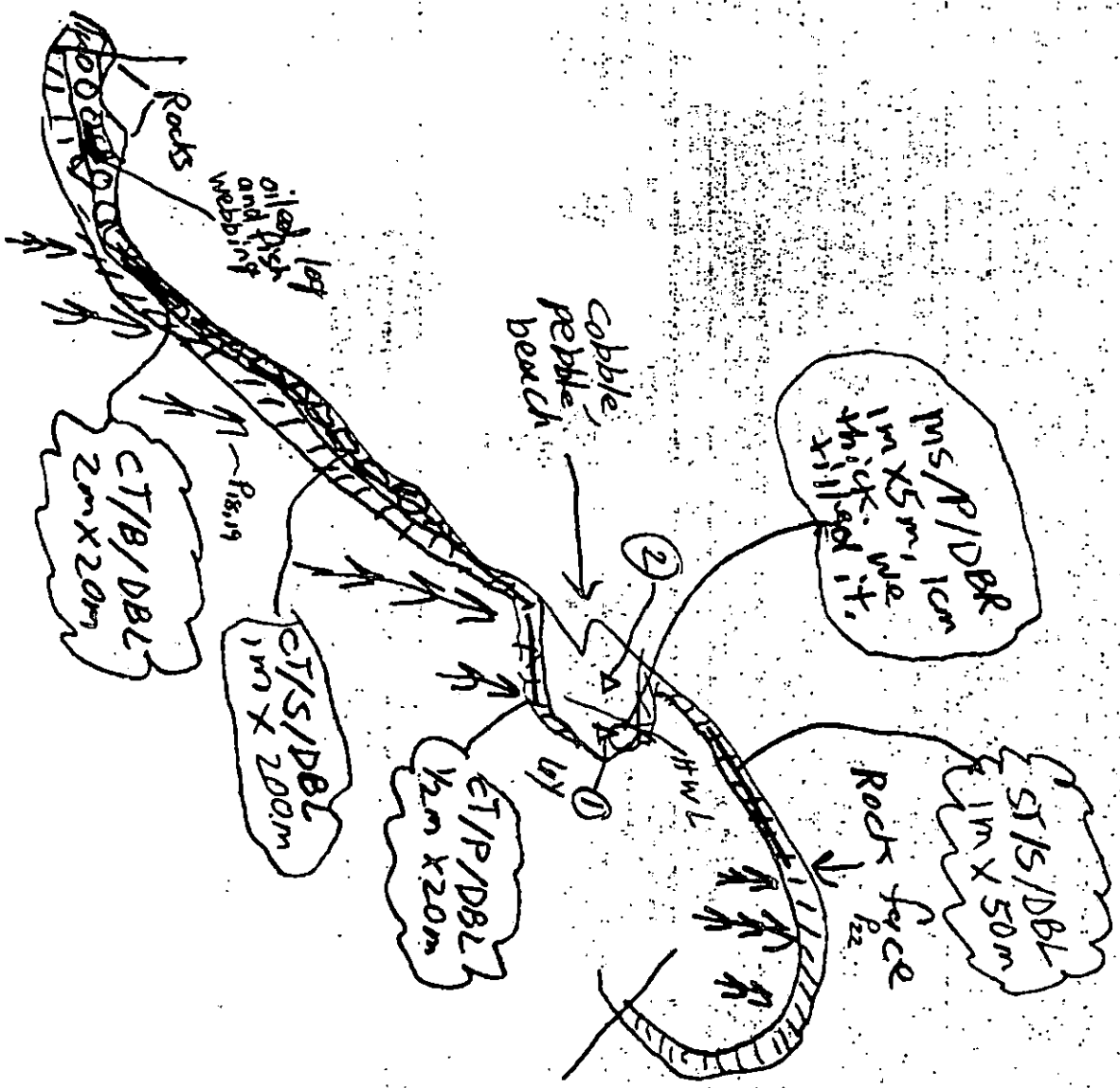
When Distribution

CT/B

When Distribution

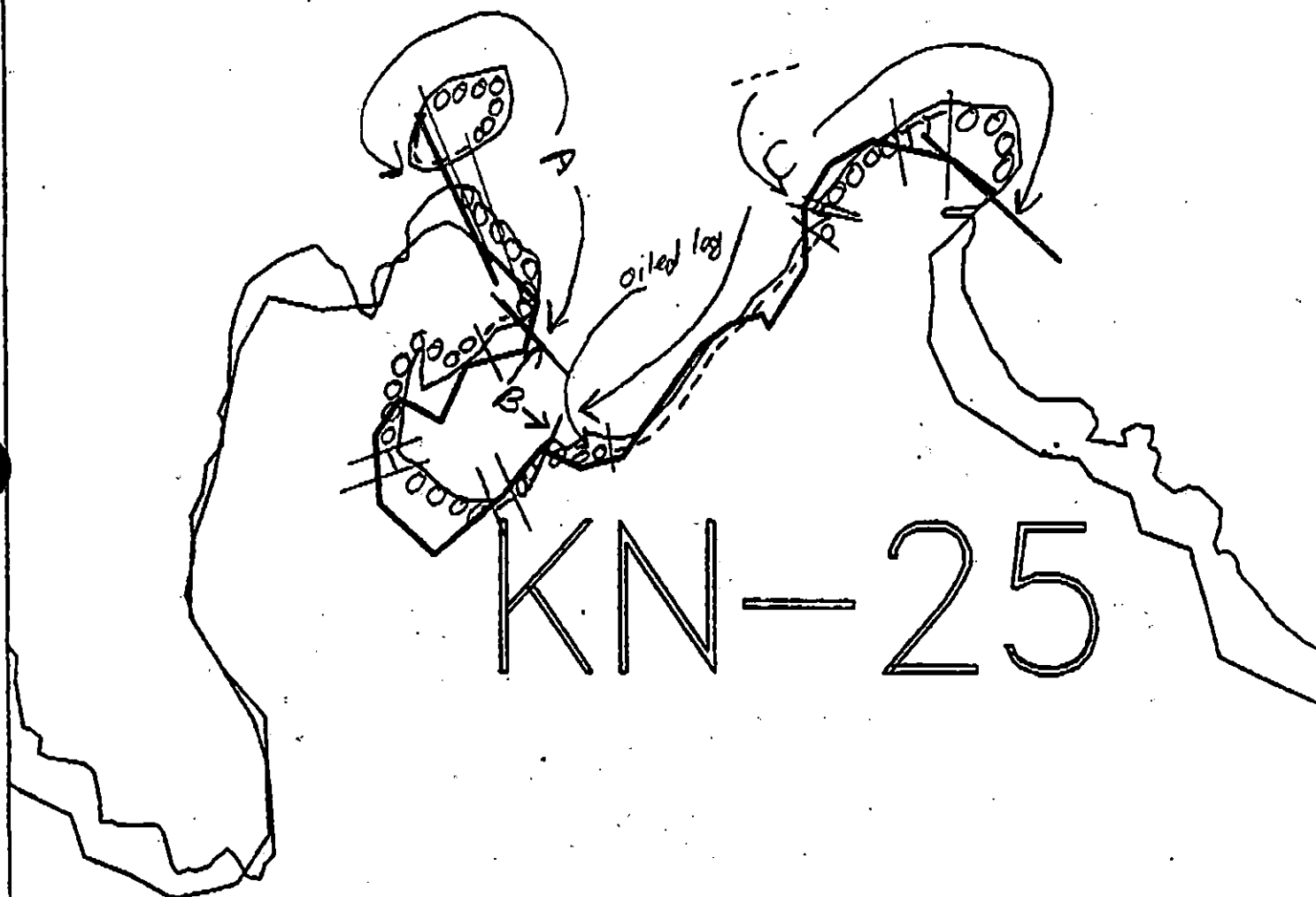
CT/B

When Distribution, direction, d number



Character Length (m): AP PO CV CT 240 ST 50 MS 5 PT TB FL NO 305





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

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420

Name: James Spring

Date: 4/20/90

Data Entered:

Handwritten notes and markings at the top right of the page, including a large 'X' and some illegible scribbles.

Vertical text on the right side of the page, possibly a list or index, with some characters that appear to be '1', '2', '3', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '4', '5', '6', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '7', '8', '9', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '10', '11', '12', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '13', '14', '15', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '16', '17', '18', etc.

Vertical text on the right side of the page, continuing the list or index, with some characters that appear to be '19', '20', '21', etc.

Vertical text on the left side of the page, possibly a list or index, with some characters that appear to be '22', '23', '24', etc.

SHORELINE EVALUATION

SEGMENT ST/ KN-25 SUBDIVISION B (2 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 93 m: V.Light 0 m: No Oil 373 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC Act Wagoner DeWagoner

EXXON ANDY TAN Deal

NOAA Gary DeGrae Gary DeGrae

USCG G.A. REITER G.A. Reiter

FOSC: W L DATE: 5-12-90

Handwritten notes and scribbles, possibly including the word "GIVE" and other illegible markings.

Vertical text on the right margin, possibly a list or index, with some legible words like "GIVE" and "GIVE".

00 J. S. inger
 SEGMENT ST KN-25
 SUBDIVISION B
 DATE 04, 20/90

ETCH MAP

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Body
☐ Oil Dist.
☐ Wharf
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWA/LWL
☐ SCL
☐ Profile Location(s)
☐ Profile(s)
☐ PA Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 PH - No Subsurface Oil

2 Δ
 PH - Subsurface Oil

CT/C
 Continuous Distribution

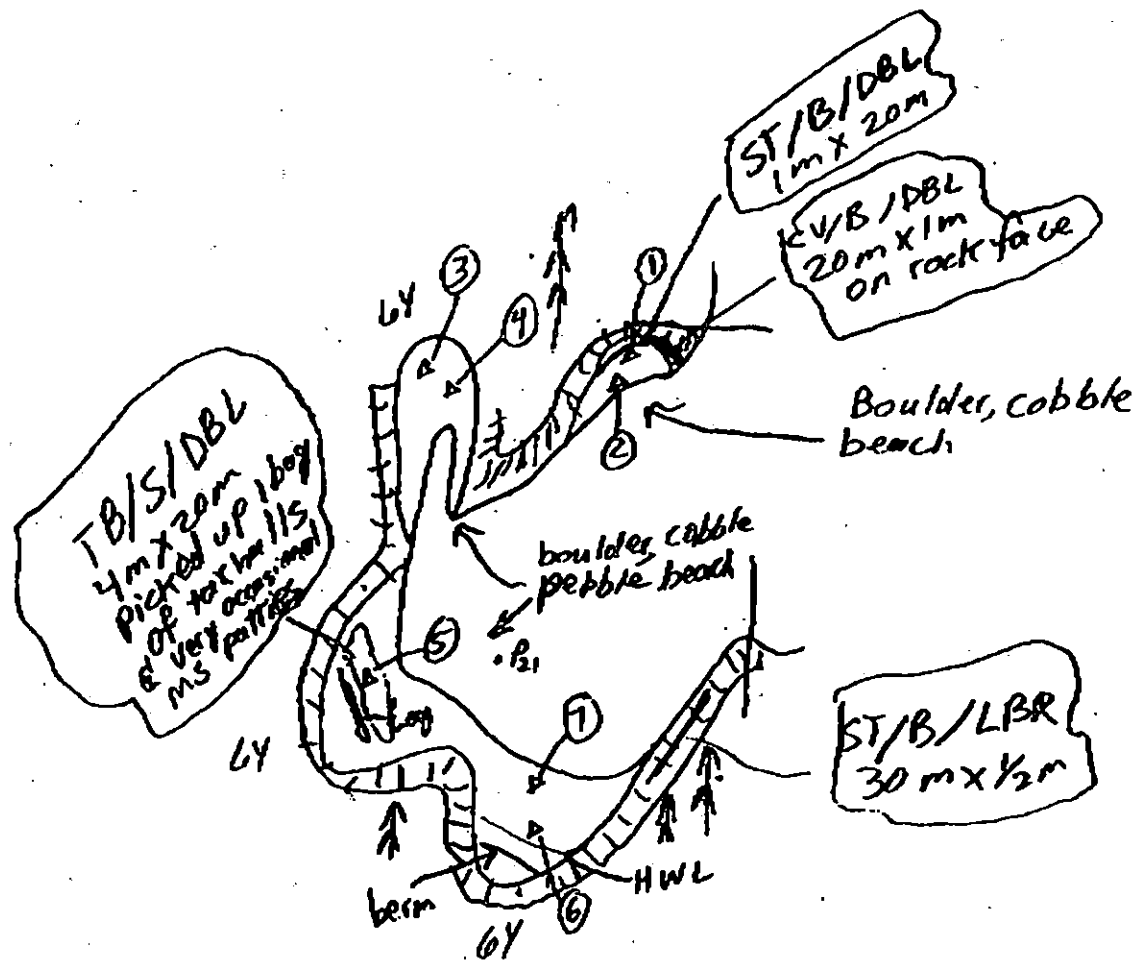
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 →
 Photo location, direction, and number



34

N

1

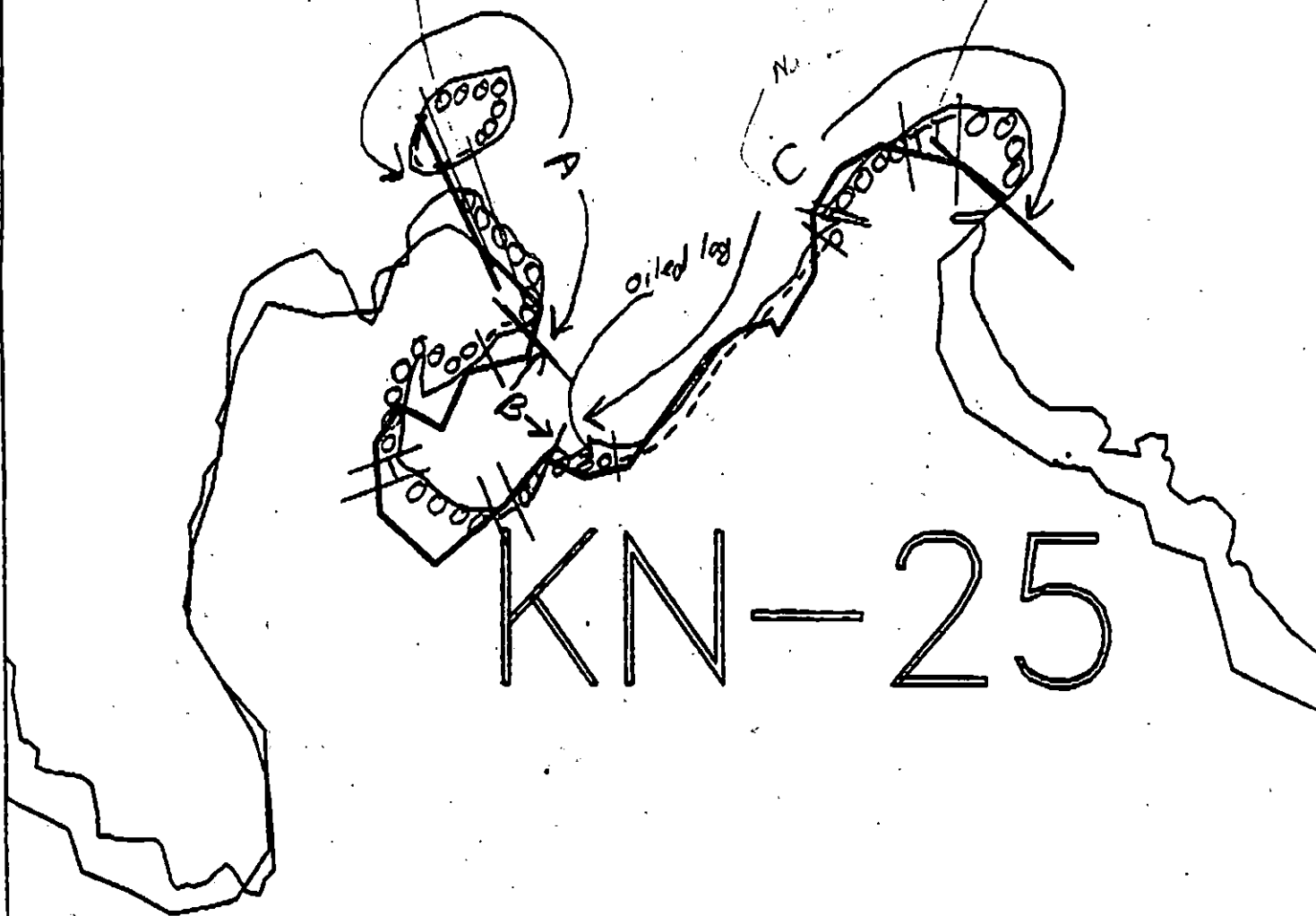
0 100 m
 Approx

Oil Character Length (m): AP _____ PO _____ CV 20 CT _____ ST 50 MS _____ PT _____ TB 20 FL _____ NO 3/0



10

... ..
... ..
... ..
... ..
... ..
... ..
... ..



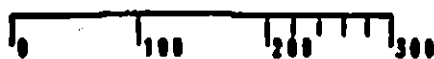
KN-25

45

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

KN-25

ADEC Segment Length: 1242m



Map Key: PWS-420

Name: James Springs

Date: 4/20/90

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