

EVOS
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1552
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S42
1989
v.21

[Shoreline evaluations, 1989].

Volume 21

Knight Island (108-506)

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LIST OF KEY CODES USED ON SHORELINE CLEANUP EVALUATION FORMS

ISLANDS (Locations)

Naked Is.	NA
Peak Is.	PE
Stoney Is.	ST
Eleanor Is.	EL
Ingot Is.	IN
Block Is.	BL
Entrance Is.	EN
Sphinx Is.	SP
Disk Is.	DI
Knight Is.	KN
Smith Is.	SM
Seal Is.	SE
Applegate Is.	AP
Green Is.	GR
L. Green Is.	LG
Agnes (Bass) Is.	AB
L. Smith Is.	LS
Gore Point	GP
Montague Is.	MN
Aguliak Is.	AG
Squirrel Is.	SL
New Year Is.	NY
Murray Is.	MU
Squire Is.	SQ
Crafton Is.	CR
Pt. Nowell	PN
Junction Is.	JU
Chenega Is.	CH
Pleiades Is.	PL
Bainbridge Is.	BA
Flemming Is.	FL
Evans Is.	EV
Elrington Is.	ER
Latouche Is.	LA
Danger Is.	DA

* GEOLOGIC SEDIMENT TYPE

Boulder (>256mm)	B
Cobble (64-256)	C
Pebble (4-64)	P
Granule (2-4)	G
Sand (0.06-2)	S
Mud (less 0.06)	M
Rock	R

** DEGREE OF OILING

Heavy	HV
Moderate	MD
Light	LT
No Oil	NO
Unobserved	UN

AREA OF BEACH IMPACT

Supratidal (+SHWL)	SU
HWL to SHWL	SP
Upper 1/3 ITZ	H
Middle 1/3 ITZ	M
Lower 1/3 ITZ	L

ADEC IMPACT SURVEY

Heavy	HVY
Moderate	MOD
Light	LT
No Oil	NO
Unobserved	UNOBS

SHORELINE TYPE

Beach	BEA
Cove	COV
High Angle	HANG
Low Angle	LANG
Vertical	VER
Headland	HLD
Spit	SPI

Comments:

* Multiple entry is acceptable, use decreasing order of type found. (ie. C/G/S where C is most predominant type and S is the least one.)

** Heavy (>6m wide and/or >1.0 cm thick)
Moderate (3-6m wide and/or 0.2-1.0 cm thick)
Light (0.1 -3m wide and/or <0.2 cm thick)
No Oil (free of vissible oil)

RECEIVED
Merged with
A.R.L.I.S.
ANCHORAGE, ALASKA
JUL 23 1991
Est. 1997
Oil Spill Public Information Center
645 G Street
Anchorage, AK 99501

BEACH LEVEL

SUPRATIDAL (+SHWL)	SU
HWL to SHWL	SP
UPPER 1/3 ITZ	H
MIDDLE 1/3 ITZ	M
LOWER 1/3 ITZ	L

SEDIMENT TYPE

BOULDER (> 256 mm)	B
COBBLE (64 - 256)	C
PEBBLE (4 - 64)	P
GRANULE (2 - 4)	G
SAND (0.06- 2)	S
MUD (< 0.06)	M
ROCK	R

Can use multiple entries e.g. C/G/S; in which case the first letter is the predominant sediment type and the following are in decreasing order

KEY

LOCATION PREFIX

NAKED IS	NA
PEAK IS	PE
STOREY IS	ST
ELEANOR IS	EL
INGOT IS	IN
BLOCK IS	BL
ENTRANCE IS	EN
SPHINX IS	SP
DISK IS	DI
KNIGHT IS	KN
SMITH IS	SM
SEAL IS	SE
APPELGATE IS	AP
GREEN IS	GR

LOCATION SUFFIX

A unique number which identifies the distinct segment described in this report.

C:\WP\DATA\SHOREVAL.1

Sent To TR + OR

Date 5/19

(version 5/04/89)

Sent To TR + OR

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Knight Island/Herring Bay

Includes Shoreline Segments: KN-108, KN-109, KN-110, KN-111, KN-112 KN-113, KN-114, KN-115, KN-116, KN-117, KN-118, KN-119, KN-120, KN-121, KN-122, KN-123, KN-124, KN-125, KN-126, KN-127, KN-128, KN-129, KN-130, KN-131, ~~KN-132~~, KN-133, KN-300, KN-301

Submitted : _____ (for Exxon) Date: 5/19/89

FOSC Approval: _____ Date: 5/21/89

Endorsed by ISCC 5-19-89 _____ COR, NOAA

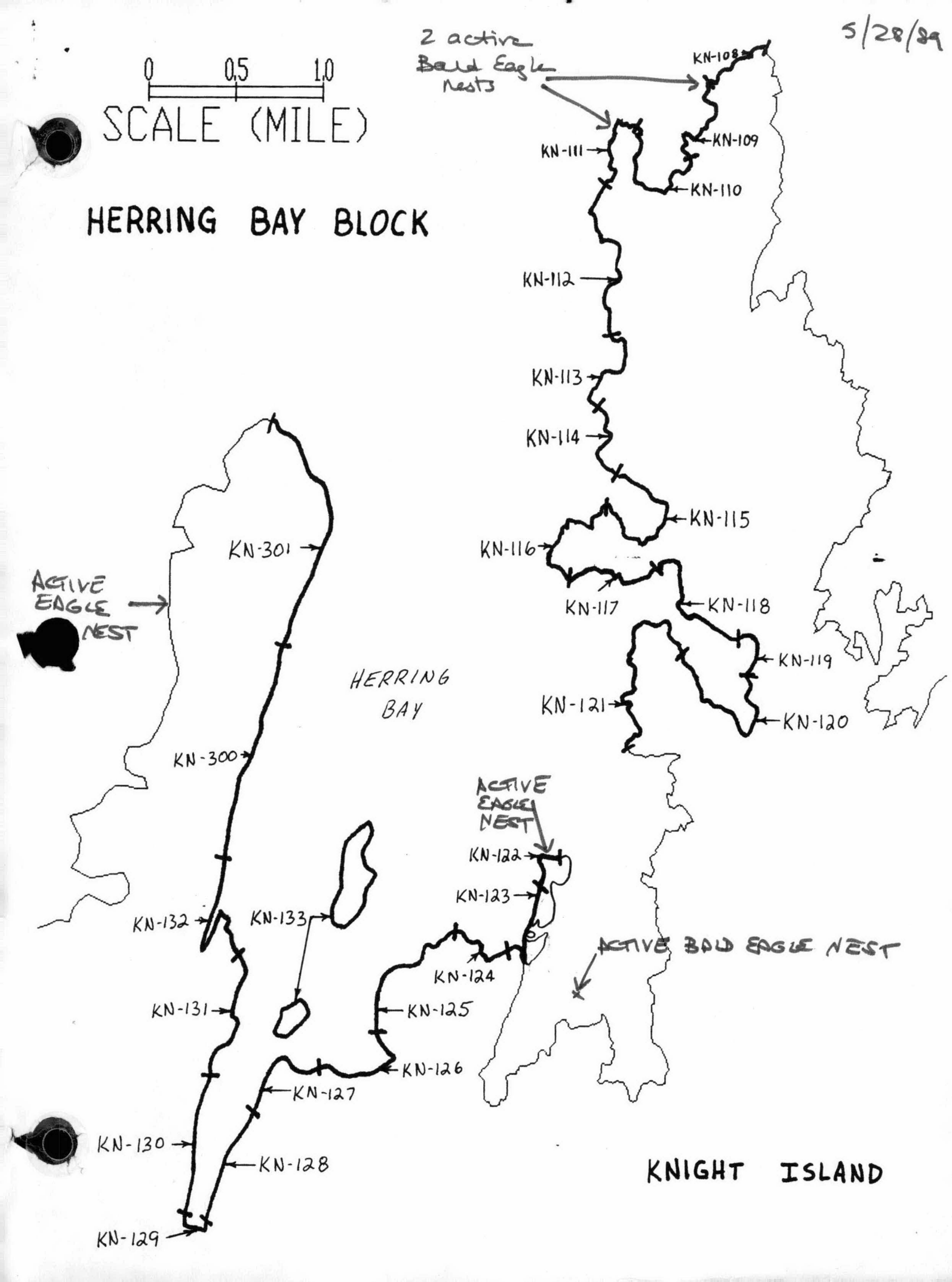
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

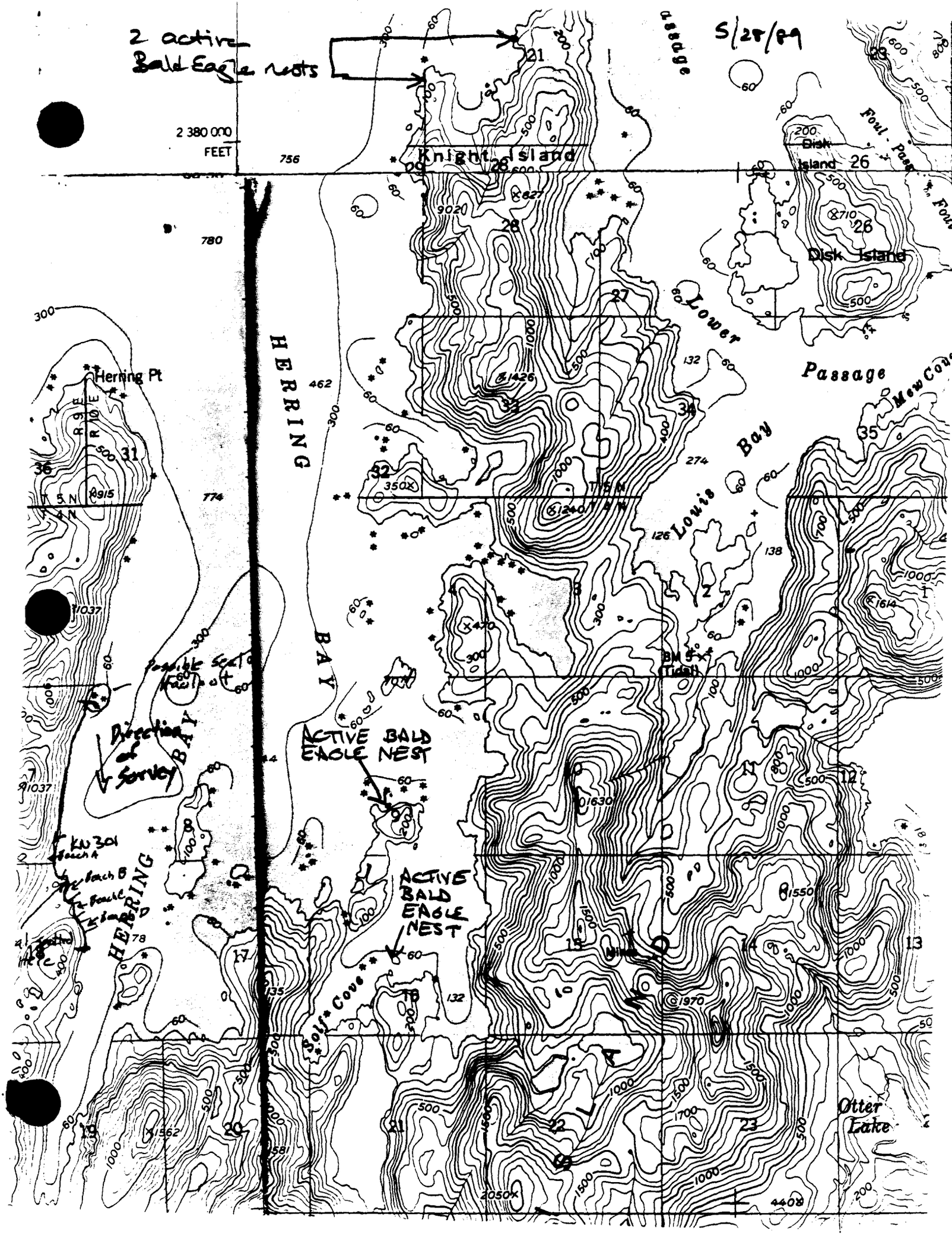
Distribution:

- Exxon Shoreline Coordinator
- Exxon Shoreline Supervisor
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- A.DNR
- CAC
- PWSCA
- USFS
- SHPO

5/28/89


0 0.5 1.0
SCALE (MILE)
HERRING BAY BLOCK
2 active Bald Eagle nests
KN-108
KN-109
KN-110
KN-111
KN-112
KN-113
KN-114
KN-115
KN-116
KN-117
KN-118
KN-119
KN-120
KN-121
KN-122
KN-123
KN-124
KN-125
KN-126
KN-127
KN-128
KN-129
KN-130
KN-131
KN-132
KN-133
KN-300
KN-301
ACTIVE EAGLE NEST
HERRING BAY
ACTIVE EAGLE NEST
ACTIVE BALD EAGLE NEST
KNIGHT ISLAND


2 active Bald Eagle nests
5/28/89
2 380 000 FEET
Knight Island
Disk Island
Herring Pt
HERRING BAY
Louis Bay
Lower Passage
Mew Cove
Direction of Survey
ACTIVE BALD EAGLE NEST
ACTIVE BALD EAGLE NEST
KW 301
Beach A
Beach B
Beach C
Beach D
Golf Cove
Otter Lake
BM 5 (Tidal)
Possible Seal Haul-out
T 5 N
R 9 E
R 10 E
T 6 N
T 5 N

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 6, 1989 SHORELINE SEGMENT KN-108

LOCATION: (see enclosed map) Knight Island/Passage Pt. East

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/30/89

Recommended Cleanup Activity(ies):
Hot water, high pressure rinse.

Priorities Considerations:
These beaches are oiled, but they are small. Not a high probability for re-oiling.

Ecological Constraints (from site survey):
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Marla E Holmes
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 4 / 30 /89 Observer: C. Dillon

Time: 09 h 10 ~~20~~ 40 m Weather: Sun/Cloud/Rain/Snow/Fog
to 09

LOCATION

LOCATION Knight Island SITE Passage Pt. East

LOCATION PREFIX KN SEGMENT NUMBER KN-108

LATITUDE: 6 d ____ m ____ s LONGITUDE: 147 d ____ m ____ s

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: FOot/VEhicle/BOat/BArge/HElio/Float Plane

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/COve/____/____/

Wave Exposure: High/Med/Low

ROck (Y)/N % 95 VErtical/High Angle/Low Angle

SEdiment (Y)/N % 5 Types: B / C / P / G / S / M / R

Strand Line (Y)/N Algae/Debris/Logs

OIL

LOCATION OF OIL: SU / SP / H / M / L

CONTINUOUS: (Y)/N ~~ced~~ WIDTH OF BAND: 5-10 m % of Segment 5

PATCHY: ~~ed~~ 10/20/30/40/50/60/70/80/90% coverage % of Segment ____

EST. OIL THICKNESS: 2 cm EST. OIL PENETRATION: >12 cm

POOLED OIL: Y/(N) "FREE" OIL: (Y)/N WEATHERED: (Y)/N

STRAND LINE CLEAN/OILED

SUMMARY OILING: Amount High/Med/Low } refers to south-most beach only.
Coverage Extensive/Moderate/Light

COMMENTS: Segment consists of two beaches with long stretches of rock face in between. One beach is substantially oiled. The remainder of the segment

C:\WP\DATA\SHOREVAL.1

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight I #9. SITE: Passage PT East OBSERVER: SMRam

LOCATION PREFIX: KN SEG. NO.: 108 LENGTH: 650 (M)

DATE: 4/30/89 TIME (HHMM): 0910 TIDE HT.: +3 (M)

OILED ZONE: Splash ~~High~~ (Medium) Low

SUBSTRATUM: ~~Rocks~~ (Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on rock face, sparse on cobbles - probably dense under water Oiled on rock face

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Probably dense under water - NOT SEEN due to TIDAL Height

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Those seen were dead

Same comment as Mytilus.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

OTHER OBSERVATIONS: No pools but oil found in rock crevices

CLEANUP PRECAUTIONS: Try to clean on ebbing tide if possible - otherwise no precautions.

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: These are small, moderately oiled beaches with long stretches of rock face between

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/30/89 Location Knaggit Island Site Passage Point East

Location Prefix KN Segment # KN108 Length 650 m

Survey Method:

Air _____ (A - indicate on map) Boat 1 BEACH (A - indicate on map)

Ground 2 BEACHES (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 6 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Boulder & cobble steep with large cobble in the back of beach. Segment mostly steep wall for access, large cobble area

Fresh Water Sources none

Sea Exposure open to north

Access/Safety difficult access at high tide

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # CW5 Frames 29

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

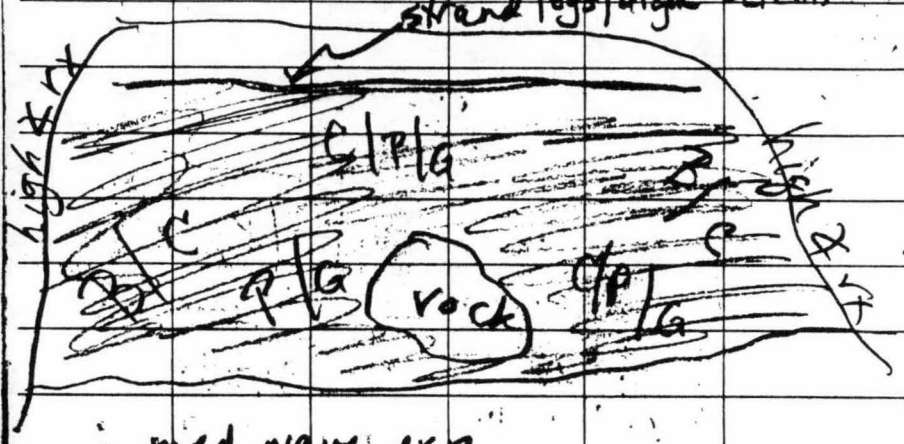
Time survey started 0930 Time survey ended 0940

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup notify Eyak archeologist, C. Mobley immediately.

0930 Seg KN-108. Passage Pt East

[Beach 1 - bathtub ring only]



med wave exp

no pool, is free/wx between crevices

>12 cm pen

~2 cm thick

650m total

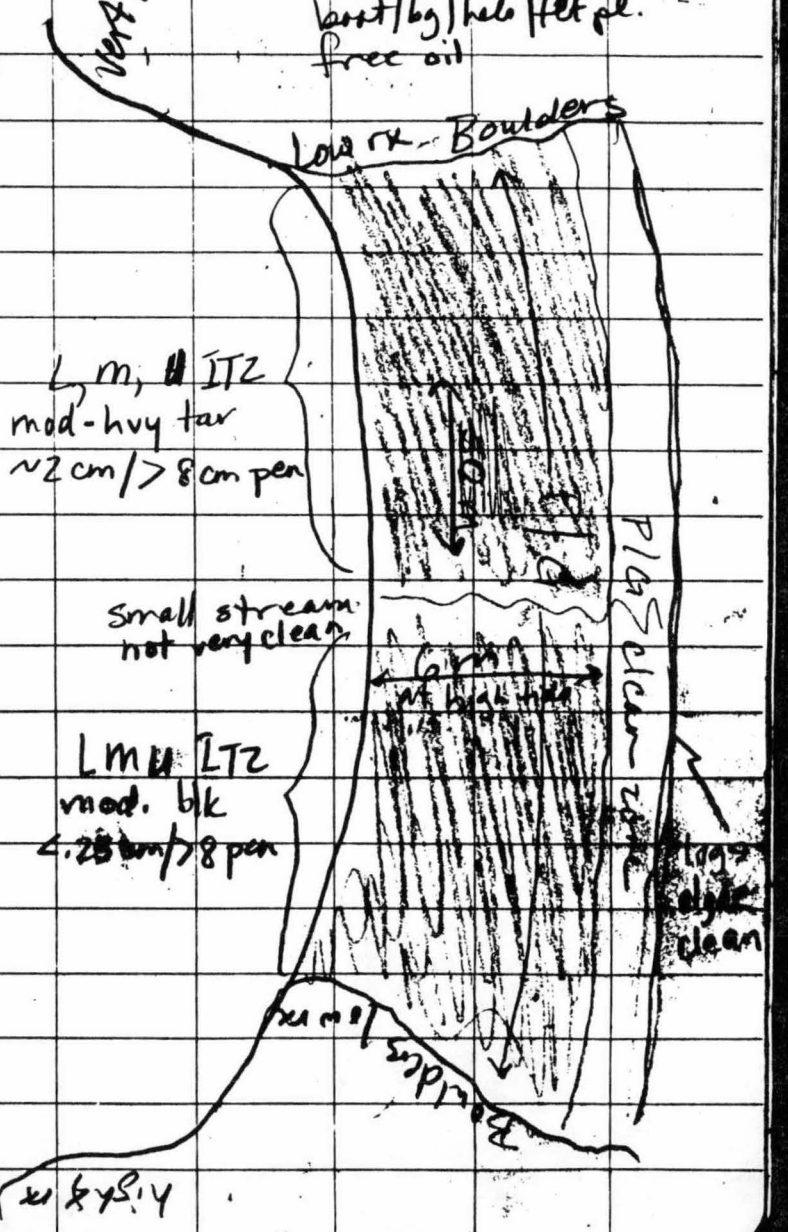
0950 Seg KN-109. Passage Pt Bay 1

Beach 1

wave exp: med

boat/bg/helo/flt pl.

free oil



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 6,1989 SHORELINE SEGMENT KN-109

LOCATION: (see enclosed map) Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/30/89

Recommended Cleanup Activity(ies):
Hot, high pressure wash on rocky areas.
Hot, low pressure high volume wash on finest grained gravel beaches.

Priorities Considerations:
Areas are probably causes of re-oiling episodes.

Ecological Constraints (from site survey):
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 4 / 30 /89 Observer: C. Dillon

Time: ~~to~~ 09 10 h 50 55 m Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SITE Passage Pt. Bay One (1)

LOCATION PREFIX KN SEGMENT NUMBER KN-109

LATITUDE: 6 d ____ m ____ s LONGITUDE: 147 d ____ m ____ s

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: FOot/VEhicle/(BOat/BArge/HElio/Float Plane)

SHORELINE:

SHORELINE CHARACTER:

(BEach)/SPit/COve/____/____/

Wave Exposure: High/(Med)/Low

ROck (Y)/N % 80 (VErtical/High Angle)/Low Angle

SEdiment (Y)/N % 20 Types: (B / C / P / G)/ S / M / R

Strand Line (Y)/N (Algae)/Debris/(Logs)

OIL

LOCATION OF OIL: SU / SP / (H / M / L)

CONTINUOUS: (Y)/N WIDTH OF BAND: 4-6 m % of Segment 20

PATCHY: 10/20/30/40/50/60/70/80/90% coverage % of Segment ____

EST. OIL THICKNESS: 1-4 cm EST. OIL PENETRATION: ≥15 cm on S most ≥8 on N most beach

POOLED OIL: Y/N "FREE" OIL: Y/N WEATHERED: Y/N

STRAND LINE (CLEAN)/OILED

SUMMARY OILING: Amount (High/Med/Low) ? refers to beach areas only
Coverage (Extensive)/Moderate/Light

COMMENTS: 2 beaches of ~50 m each are mod-heavily oiled with thick and some free oil. Remaining 550 m of segment is Rock face and steep boulder slopes with light oil ring only.

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version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: ~~[illegible]~~ Passage Pt Bay one OBSERVER: SM Barn

LOCATION PREFIX: KN SEG. NO.: 109 LENGTH: 650 (M)

DATE: 4/30/89 TIME (HHMM): 0945 TIDE HT.: +3 (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: Rocks (Boulder) (Cobble) (Gravel) ~~Sand~~ Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Can be seen subtidally - dense on rocks

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

Probably ~~more dense~~ located subtidally since survey occurred close to high tide

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

Probably located subtidally

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Large gammarid amphipod found heavily coated dead. Small stream not doing very good job of cleaning

CLEANUP PRECAUTIONS: Can use hot water here. Try to clean on ebbing tide

MAMMALS: Otters + Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: Moderate oiling to heavy oiling high probability of reoiling

version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/30/89 Location Knight Island Site Passage Point Bay One

Location Prefix KN Segment # KN 109 Length 650m

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility Moderate to heavy.

Width of beach zone surveyed Beach Zone Beach 2-3-5 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Beaches were relatively broad and flat. The uplands of beach 1 were steep but beach 2 had moderately sloped, unvegetated

Fresh Water Sources None

Sea Exposure open to north

Access/Safety good access

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW-5 Frames 31,32

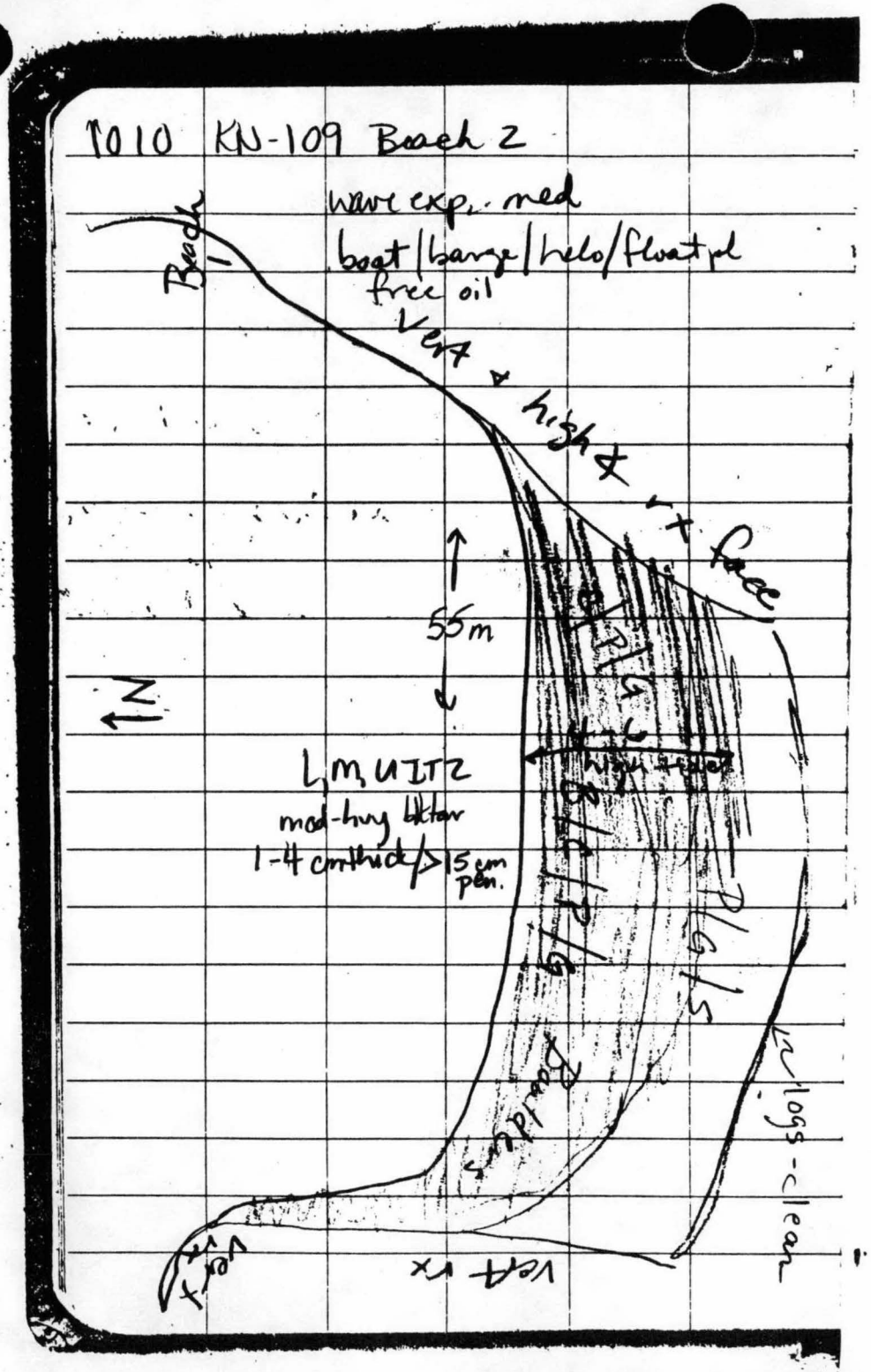
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 0945 Time survey ended 1025

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are identified during cleanup, notify Byron Sackett, C. Mobley, immediately


1010 KN-109 Beach 2
wave exp. med
boat | barge | helo | float pl
free oil
Beach
55m
N
L, M, UIT2
mod-hvy blktar
1-4 cm thick / >15 cm pen.
Pools
Logs - clean

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 6, 1989 SHORELINE SEGMENT KN-110

LOCATION: (see enclosed map) Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/30/89

Recommended Cleanup Activity(ies):
Hot water, high pressure on coarse grained, cobbley areas.

Priorities Considerations:
Clean rocky, cobbley areas with hot water, high pressure. These areas have a potential to release oil.

Ecological Constraints (from site survey):
Avoid streams and any areas of healthy (golden) FUCUS.
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: May 14-89

FOSC: _____ Date: May 21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

[revised 19 Apr 89]

SHORELINE OIL EVALUATION

Date: 4 / 30 /89 Observer: C. Dillon

Time: 10 h 30 m Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SITE Passage Pt. Bay 2 (Two)

LOCATION PREFIX KN SEGMENT NUMBER KN-110

LATITUDE: 6 d ____ m ____ s LONGITUDE: 147 d ____ m ____ s

LENGTH OF SHORELINE SEGMENT: 1275 m

ACCESS: FOot/VEhicle/(BOat/BArge/HElio/Float Plane)

SHORELINE:

SHORELINE CHARACTER:

(BEach)/SPit/COve/____/____/

Wave Exposure: High/(Med)/Low

ROck (Y)/N % 25 VErtical/(High Angle/Low Angle)

SEdiment (Y)/N % 75 Types: (B / C / P / G) S / M / R

Strand Line (Y)/N (Algae)/Debris/(Logs)

OIL

LOCATION OF OIL: SU / SP / (H / M / L)

CONTINUOUS: (Y)/N WIDTH OF BAND: 4-8 m % of Segment 50

PATCHY: ~~10~~/20/30/40/50/60/70/80/90% coverage % of Segment 50 cod

EST. OIL THICKNESS: up to 1 cm EST. OIL PENETRATION: none cm

POOLED OIL: Y/(N) "FREE" OIL: (Y)/N WEATHERED: Y/(N)

STRAND LINE (CLEAN)/OILED

SUMMARY OILING: Amount (High/Med/Low)
Coverage Extensive/(Moderate)/Light

COMMENTS: Segment is primarily cobble and pebble beaches. Most beach areas are mod-hvy oiled, some are mod-light and one is entirely clean.

C:\WP\DATA\SHOREVAL.1

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Passage Pt Bay Two OBSERVER: SMB

LOCATION PREFIX: KN SEG. NO.: 110 LENGTH: 1275 (M)

DATE: 4/30/89 TIME (HHMM): 1025 TIDE HT.: 3/3 2 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Fucus on rocks is oiled. Fucus stands under water are apparently healthy also healthy in areas of streams.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

May exist in subtidal areas, not observed as survey was completed near high tide

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Exists subtidally may not be oiled

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

OTHER OBSERVATIONS: None

CLEANUP PRECAUTIONS: Begin cleaning at cobbles past streams Avoid streams They are doing a fine cleaning job

MAMMALS: Otters ~~None~~ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: Rocky, cobbley areas are in need of cleaning. Less coarse areas are light to clean and should be avoided.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/28/89 Location Knight Island Site Passage Point Two

Location Prefix KN Segment # ~~KN109~~ KN110 Length 1275

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility variable throughout spectrum

Width of beach zone surveyed 1-5 m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Beaches on east end are moderately steep, others are flatter. Uplands on 1, 5 and 6 are fairly flat

Fresh Water Sources Large streams

Sea Exposure open to north

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW5 Frames 32,33

B/W Roll # _____ Frames _____

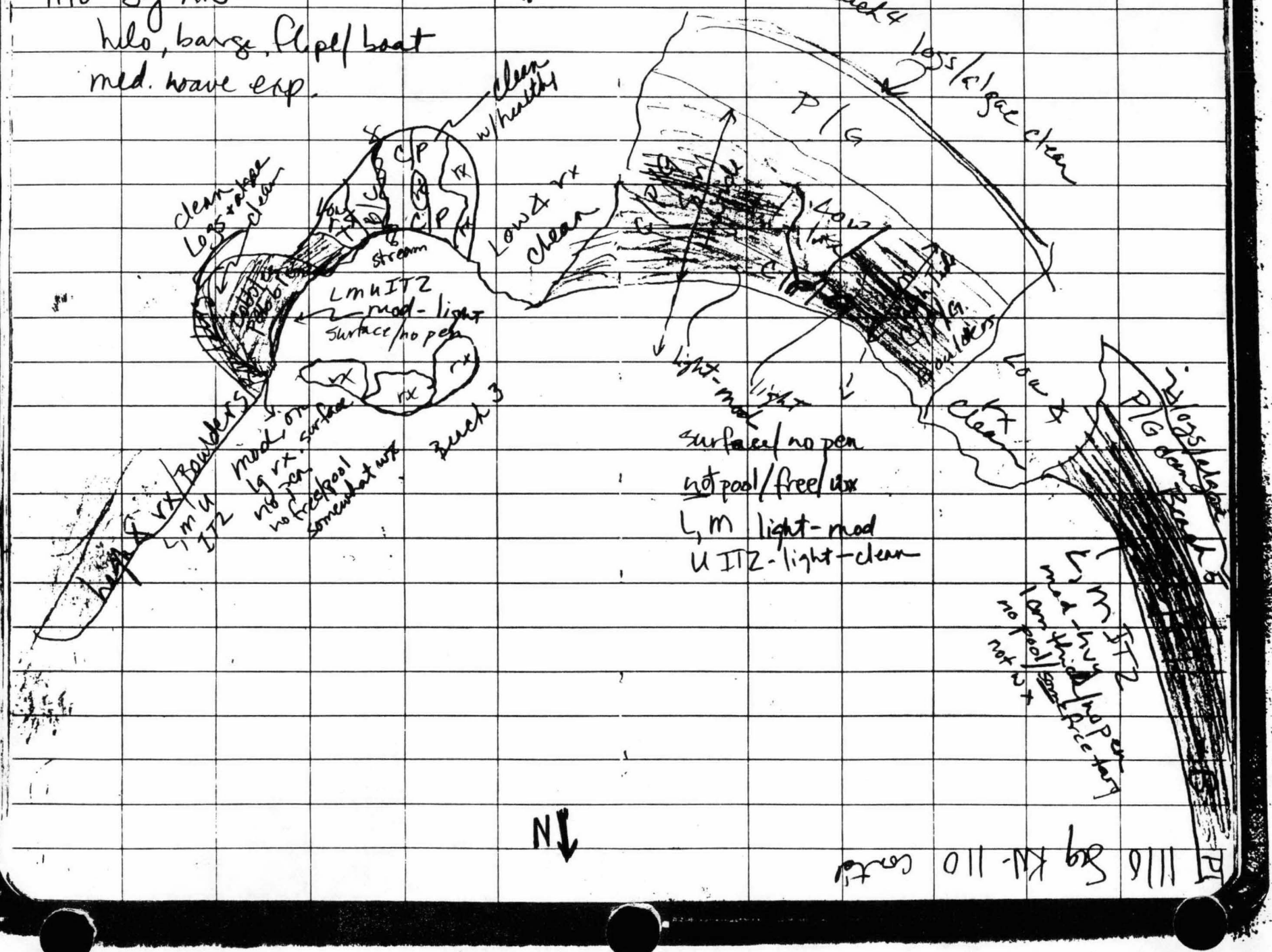
Observer(s) C. WILSON (by Rib Boat)

Time survey started _____ Time survey ended _____

Cultural resource considerations/restraints:

IF HERETOFORE UNDISCOVERED CULTURAL RESOURCES ARE UNCOVERED DURING CLEAN-UP NOTIFY EXXON ARCHAEOLOGIST C. MOBLEY IMMEDIATELY.

1110 Sq KN-
hilo, barge, flipel/boat
med. wave exp.



1110 Sq KN- 110 cont'd

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 6, 1989 SHORELINE SEGMENT KN-111

LOCATION: (see enclosed map) Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/30/89

Recommended Cleanup Activity(ies):
Hot water, high pressure wash in coarse grained cobbled areas.
Hot water, low pressure wash in gravel beach areas.

Priorities Considerations:
Heavy oil areas - clean to remove possibility of re-oiling.

Ecological Constraints (from site survey):
Avoid stream in clean areas and areas of healthy FUCUS.
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Sheila F. Thomas
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 4 / 30 /89 Observer: C Dillon

Time: ~~12~~ 14 h 35 m Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SITE Herring Bay East One

LOCATION PREFIX KN SEGMENT NUMBER KN-111

LATITUDE: 6 d m s LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: FOot/VEhicle/(BOat/BArge/HElio/Float Plane)

SHORELINE:

SHORELINE CHARACTER:

(BEach)/SPit/COve/ / /

Wave Exposure: (High/Med)/Low

ROck (Y)/N % 20 (VErtical/High Angle)/Low Angle

SEdiment (Y)/N % 80 Types: (B / C / P / G) S / M / R

Strand Line (Y)/N (Algae/Debris/Logs)

OIL

LOCATION OF OIL: SU / (SP / H / M / L)

CONTINUOUS: (Y)/N WIDTH OF BAND: 5-25 m % of Segment 80

PATCHY: 10/20/30/40/50/60/70/80/90% coverage % of Segment

EST. OIL THICKNESS: 1-6 cm EST. OIL PENETRATION: >12 cm

POOLED OIL: (Y)/N "FREE" OIL: (Y)/N WEATHERED: (Y/N) → black oil on large cobble beaches

N most 2 beaches only

STRAND LINE CLEAN/(OILED)

SUMMARY OILING: Amount (High/Med/Low)
Coverage (Extensive)/Moderate/Light

COMMENTS:

C:\WP\DATA\SHOREVAL.1

version: 4/24/89

ECOLOGICAL EVALUATION Herring Bay East one

LOCATION: Knight Is. SITE: ~~Passage H. Bay~~ Herring Bay ← OBSERVER: SMB

LOCATION PREFIX: KN SEG. NO.: 111 LENGTH: 650 (M)

DATE: 4/30/89 TIME (HHMM): ~~1400~~ 1215 TIDE HT.: 1 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)N Sparse Y/N None Y/N

Oiled on rocky intertidal - ok in vicinity of small stream (Beach 6)

Mytilus (Mussels): Patchy (Y)N Contin. Y/N Dense (Y)N Sparse Y/N None Y/N

Most indiv. are heavily coated but not yet dead

Balanus (Barnacles): Patchy (Y)N Contin. Y/N Dense (Y)N Sparse Y/N None Y/N

Those in oiled zone ~~MAY~~ are coated and may be dead.

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

Dead

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

Alive but oiled

OTHER OBSERVATIONS: Katharina - a indiv. found one dead. Lepasterias - not vigorous Nucella very dense feeding on oiled mussels. One of the beaches (#3) is boomed

CLEANUP PRECAUTIONS: Avoid stream in last beach segment

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___

Other None

BIRDS: None

GENERAL OBSERVATIONS: This area is heavily oiled and is a probable re-oiling source

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/30/89 Location Knight Island Site Herring Bay East One

Location Prefix KN Segment # KN111 Length 650

Survey Method:

Air _____ (A - indicate on map) Boat 3 BEACHES (A - indicate on map)

Ground 4 BEACHES (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility mostly moderate to heavy

Width of beach zone surveyed 1-4 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Beaches done by boat were steeply sloped and heavily cobbled. Beaches walked were less steep and contained more gravel.

Fresh Water Sources None

Sea Exposure open to north

Access/Safety fair

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW-5 CW-6 Frames 1 33, 34, 35, 36

B/W Roll # _____ Frames _____

Observer(s) C Welch

Time survey started 1215 Time survey ended 1430

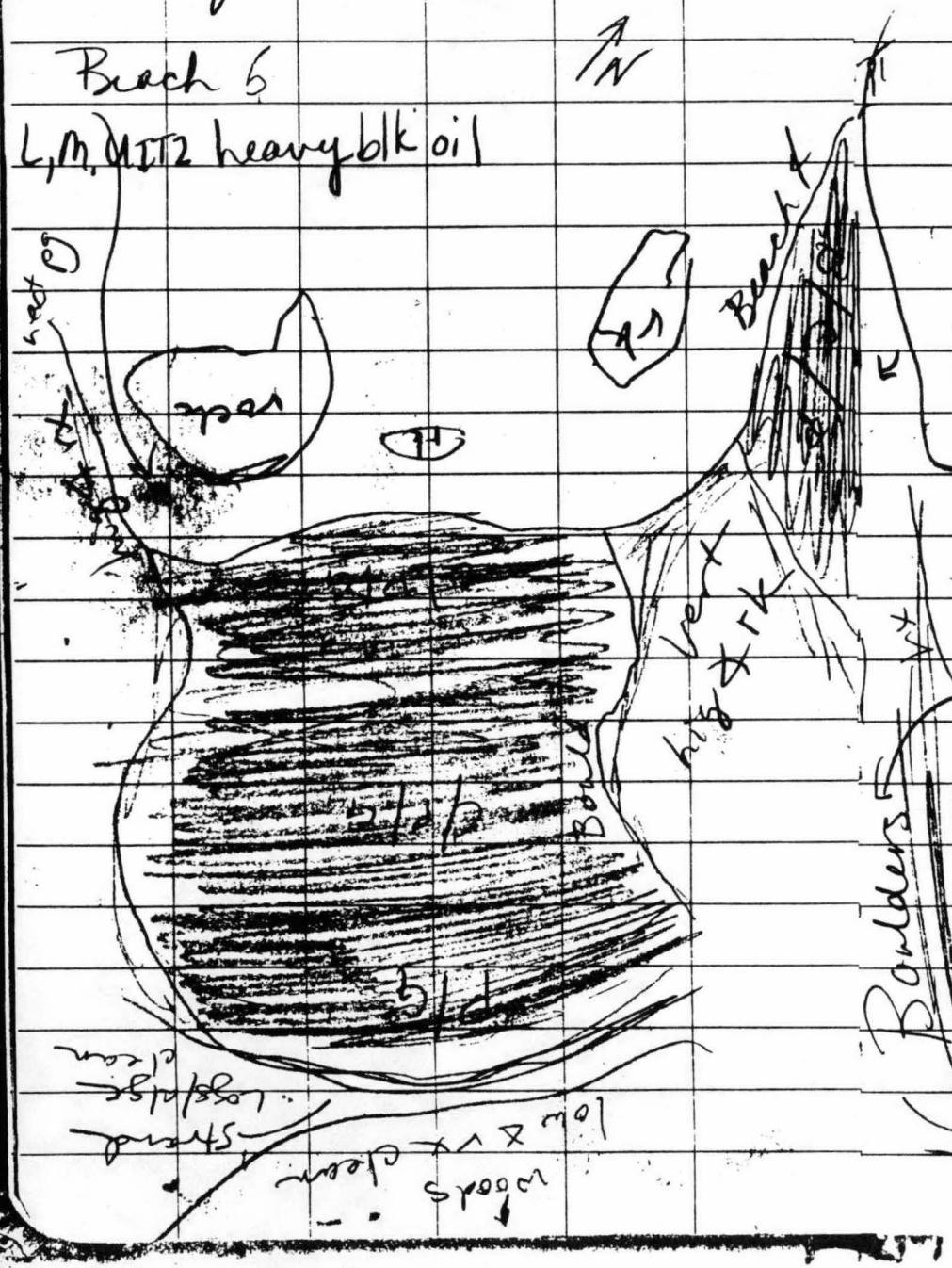
Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during ~~any~~ cleanup notify Exxon archaeologist, C. Mobley immediately.

1310 Seg KN-111 Beach (3-boomed)

Beach 5

L, M, UIT2 heavy blk oil



70% Coated Beach 4 & 5

5% pooled

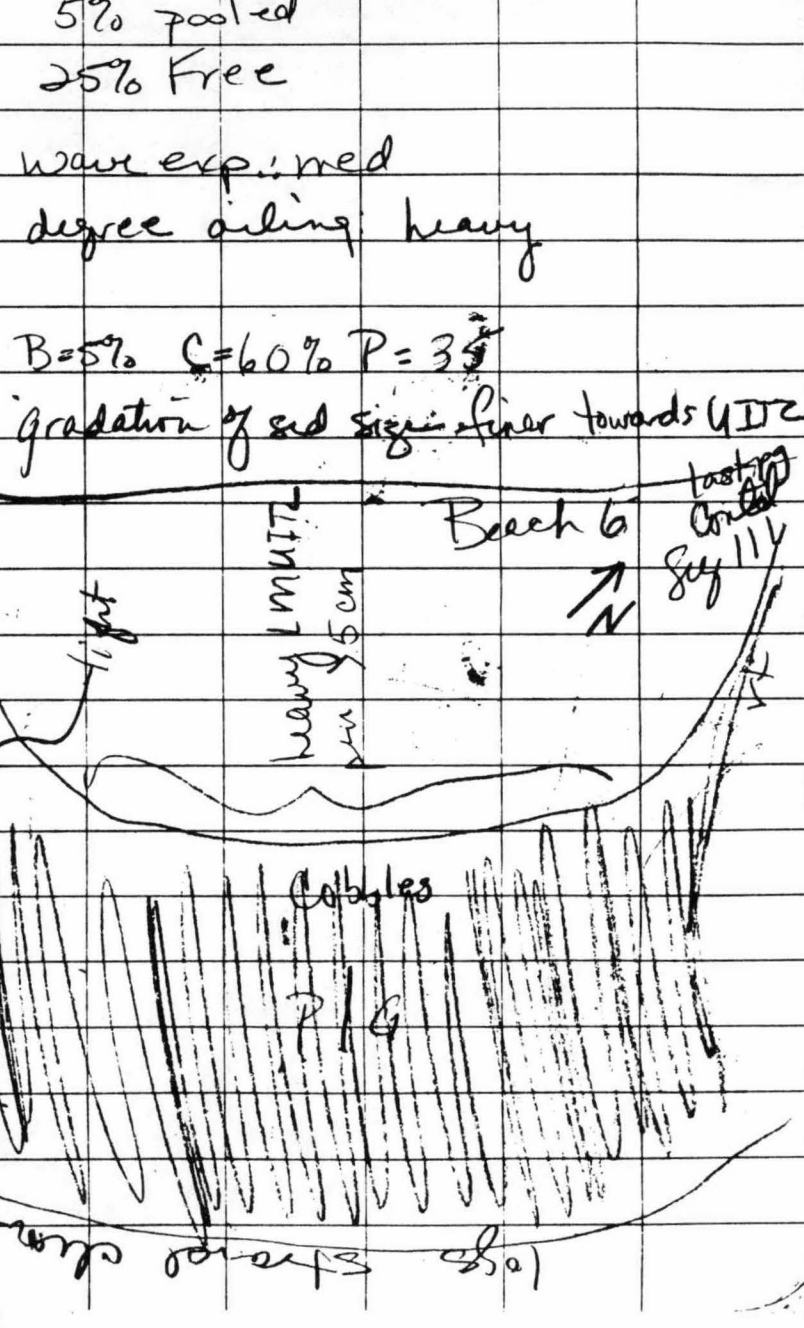
25% Free

wave exp.: med

degree oiling: heavy

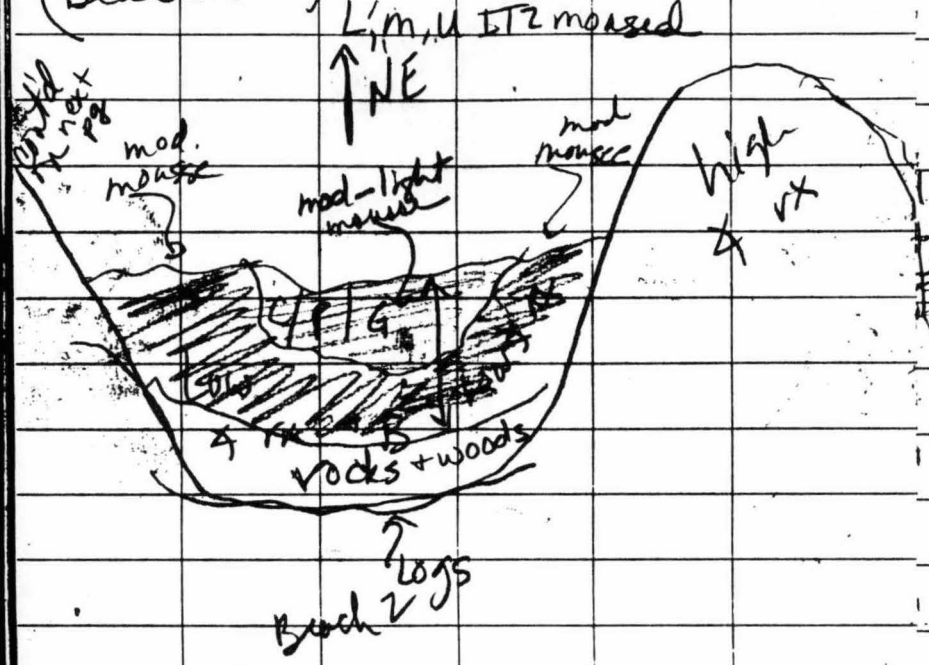
B=5% C=60% P=35

gradation of sed size finer towards UIT2

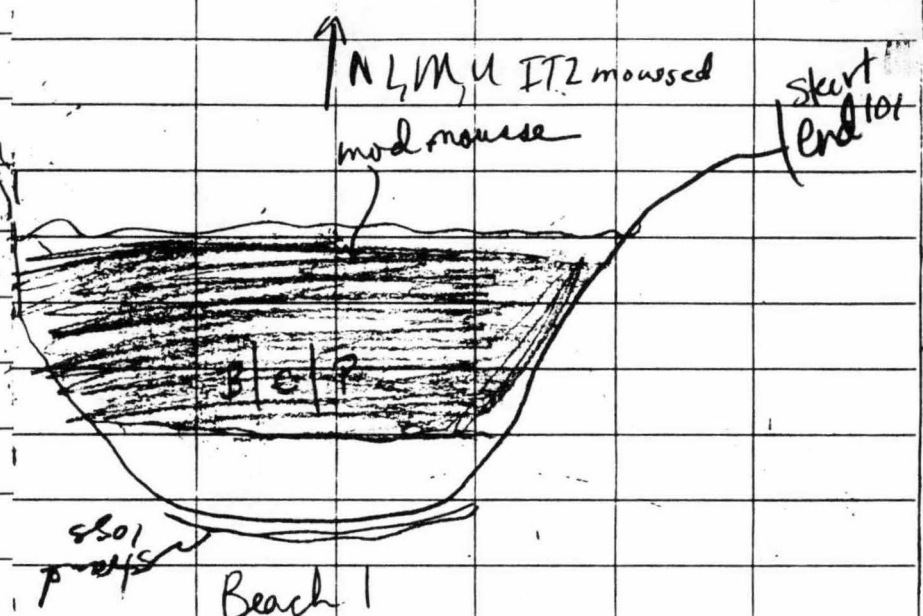


1215 Seg KN-111

(Beach 1+2)



< 1cm/no pen



< 1 cm/no pen

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 10, 1989 SHORELINE SEGMENT KN-112

LOCATION: (see enclosed map) Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/30/89

Recommended Cleanup Activity(ies):
High/low pressure hot wash, if feasible, but low priority.

Priorities Considerations:
Concentrate on pocket beaches prior to rock slopes.

Ecological Constraints (from site survey):
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
Archeological re-evaluation with subsurface testing is needed prior to cleanup if cleanup is to be conducted.

Charles E. Holmes
State Historic Preservation Officer *

Date: May 10, 1989

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 / 30 /89 Observer: Reimer

Time: 14 h 00 m Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SPECIFIC AREA _____

LOCATION PREFIX Kn SEGMENT NUMBER Kn 112

LATITUDE: 6 _____ d _____ m _____ s LONGITUDE: ____ d _____ m _____ s

LENGTH OF SHORELINE SEGMENT: _____ m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/(Float Plane)

SHORELINE:

SHORELINE CHARACTER:

Shoreline Type: (BEA)/COV/(HANG)/LANG/VER/HLD/SPI

Wave Exposure: Pocket High/Med/Low

Sediment: B 10 % / C 10 % / P ___ % / G ___ % / S ___ % / M ___ % /R 80 %

Drift Debris in Intertidal Zone: (Yes)/No Upper/Mid/Lower Type Log, algae
on beach Segments only

OIL

Area of Beach Impact: SU / SP / [H / M] / L

Continuous: (Y)/N Width of Band: 30 m (on beaches) % of Segment 100

Patchy: 10/20/30/40/50/60/70/80/90% coverage % of Segment _____

Est. Oil Thickness: — cm Est. Oil Penetration: >10 cm (on beaches)

Pooled Oil: _____ % "Free" Oil: _____ % Weathered: _____ % ~~Stained~~ Coating: 100 %

Tar Formation: _____ %

Drift Debris in Intertidal Zone Oiled ? Yes/No Upper/Mid/Lower

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Comments:

generally steep rocky shoreline with pocket boulder/cobble beaches

LOGI ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: Northwest OBSERVER: M. Fawcett

LOCATION PREFIX: KN SEG. NO.: 112 LENGTH: _____ (M)

DATE: 4/30/89 TIME (HHMM): 1400 TIDE HT.: about +1m (M)

OILED ZONE: (Splash) (High) (Medium) Low

SUBSTRATUM: (Rocks) Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/N

Littorina
Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: steep cliff face, observed from boat

CLEANUP PRECAUTIONS: cleanup may not be feasible, low priority many case

MAMMALS: Otters 1 Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 04/30/89 Location KNIGHT ISLAND Site PASSAGE POINT

Location Prefix KN Segment # 113 (134) Length 135 M

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) N/A Data Source N/A

Oil conditions/beach visibility MODERATE TO HEAVY OIL

Width of beach zone surveyed 35 m Tree fringe surveyed 10 M

Cultural resources observed in beach zone (AHRS code) N/A NOTE DISTRIBUTION OF FAUNAL MATERIAL IN UPPER ZONE.

Cultural resources observed in tree fringe (AHRS code) POSSIBLE CUT BCS

General observations justifying survey method and segment's site probability:

Shore Profile STEEP COBBLE BEACH BOUNDED BY ROCK HEADLANDS, RECENT STORM BERM AT COBBLE EDGE, RAISED STORM BERM CA. 10M INSIDE TREE LINE.

Fresh Water Sources SMALL CLEAR STREAM AT CENTER OF BEACH

Sea Exposure WAVE FETCH TO W. PROTECTED TO N.

Access/Safety ACCESS BY SMALL BOAT ONLY, MULTIPLE APPROACH OPTIONS.

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # NO CAMERA AVAILABLE Frames _____

B/W Roll # _____ Frames _____

Observer(s) B. ROAM

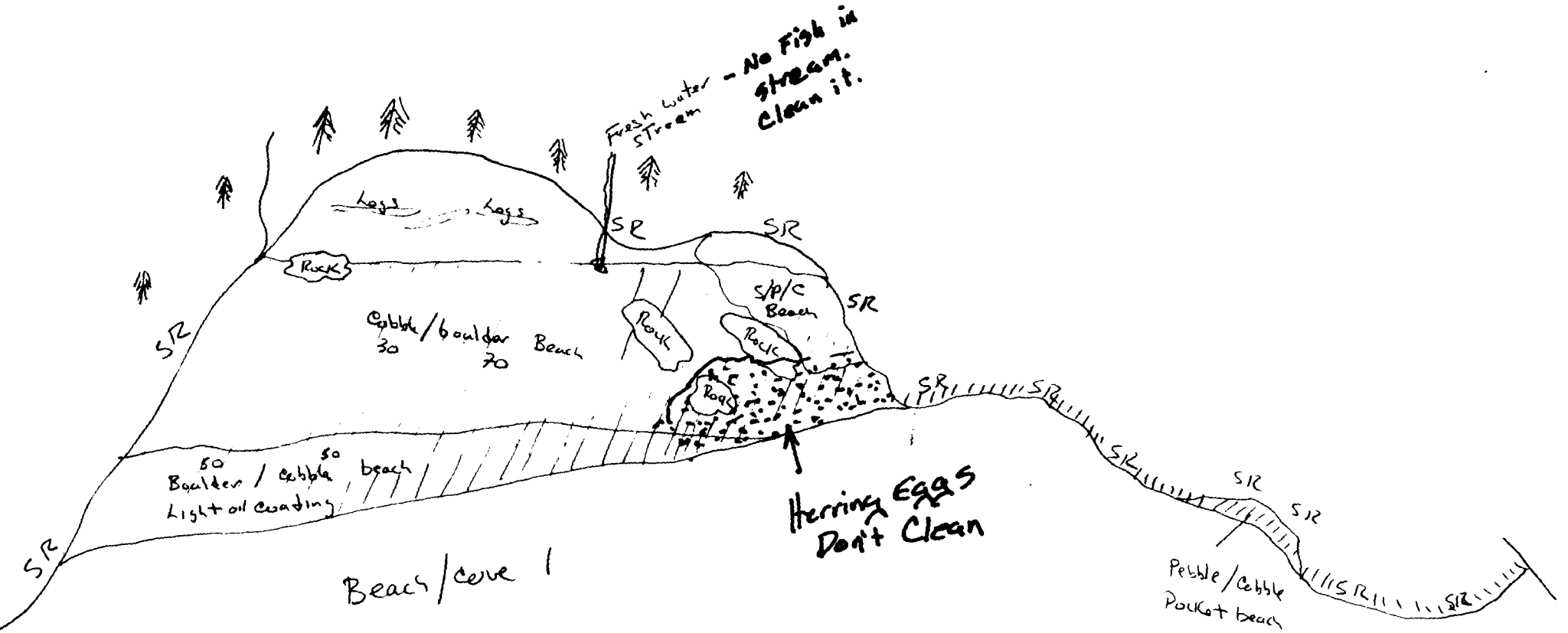
Time survey started 1430 HRS Time survey ended 1500 HRS

Cultural resource considerations/restraints:

OBSERVED VARIETY OF FAUNAL SKELETAL ELEMENTS IN UPPER BEACH ZONE, NOT BEACH ROLLED, UNCERTAINTY OF ORIGIN. BEACH WASHING OPERATIONS WILL TAKE PLACE IN MID TO LOW INTERTIDAL AREA, BUT PEDESTRIAN TRAFFIC COULD DISCLOSE AN ORIGIN IN THE UPPER TIDAL ZONE.

C. MOBLEY CAVEAT.

Knight ICN 112



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 10, 1989 SHORELINE SEGMENT KN-113

LOCATION: (see enclosed map) Herring Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):
Use hot water high pressure wash on cobbles and rocks
Use hot water low pressure with agitation on gravel/sand.
Vacuum pools of oil in rocks prior to washing.

Priorities Considerations:

Ecological Constraints (from site survey):
Avoid streams and any areas of healthy looking FUCUS.
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
Archeological re-evaluation with subsurface testing is needed prior to cleanup if cleanup is to be conducted.

Marion E. Holmes
State Historic Preservation Officer *

Date: May 10, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1300-1415 Observer: C. Dillon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-113

LENGTH OF SHORELINE SEGMENT: 500 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/HANG/VER

Wave Exposure: (High/Med)/Low

Sediment: B 5 % / C 15 % / P 50 % / G ~~5~~ % / S ~~25~~ % / M ___ % / R 5 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy)/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 5-20 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 4 cm Est. Oil Penetration: > 12 cm

Pooled Oil: 0 % "Free" Oil: 15 % Coated: H 70 % /M 15 % /L ___ %

Fresh 100 % Mousse ___ % Tar Formation: ___ %

Drift Debris Oiled ? (Yes) (No Supra)/Upper/Mid/Lower Amount: H/M/(L)

Comments: 3 on 1st beach

Refer to diagram for details.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay One OBSERVER: SMB

LOCATION PREFIX: KN SEG. NO.: 113 LENGTH: ~~425~~ 500 (M)

DATE: 5/1/89 TIME (HHMM): 1300 TIDE HT.: +1 to +2 (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: ~~Rocks~~ (Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on rocks - dead in oiled zone

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Covers - 10% gaping on oiled rocks

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dead - scrape off easily

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None Seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

OTHER OBSERVATIONS: Areas surrounding streams are clean
Pools of oil in rocks to side of beach

CLEANUP PRECAUTIONS: Avoid streams, suck up pooled oil prior to washing

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: Heavy oiling in Higher + Mid ITZ.
Areas near streams are light

version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/1/89 Location Knight Island Site Herring Bay One

Location Prefix KN Segment # 113 Length 500

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility heavy over much of the area, moderate over the rest

Width of beach zone surveyed 2-4 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile broad, gravel beach with moderate cobbles

Fresh Water Sources Stream on each beach.

Sea Exposure open to the west

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # CW6 Frames 2, 3, 4, 5

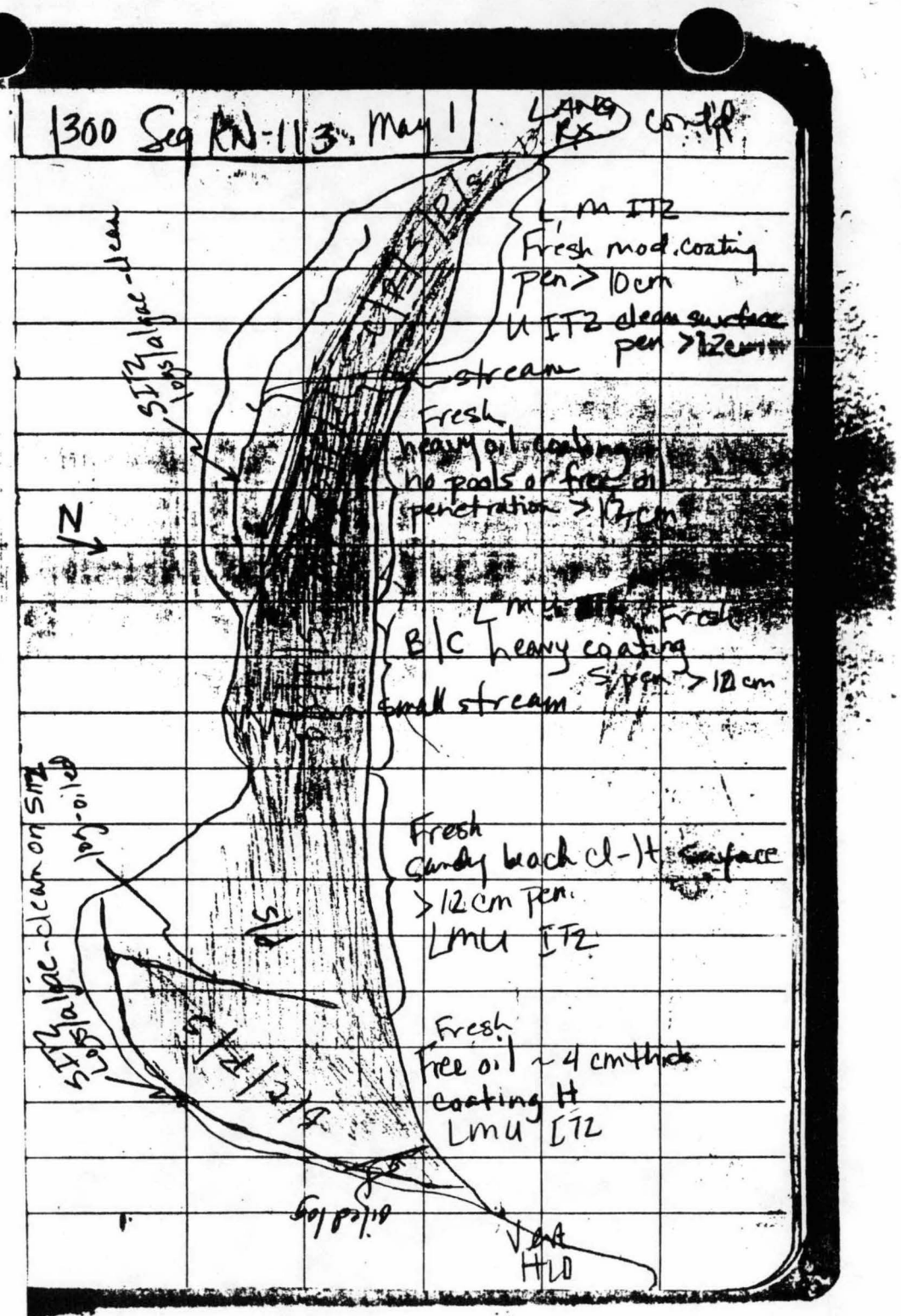
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

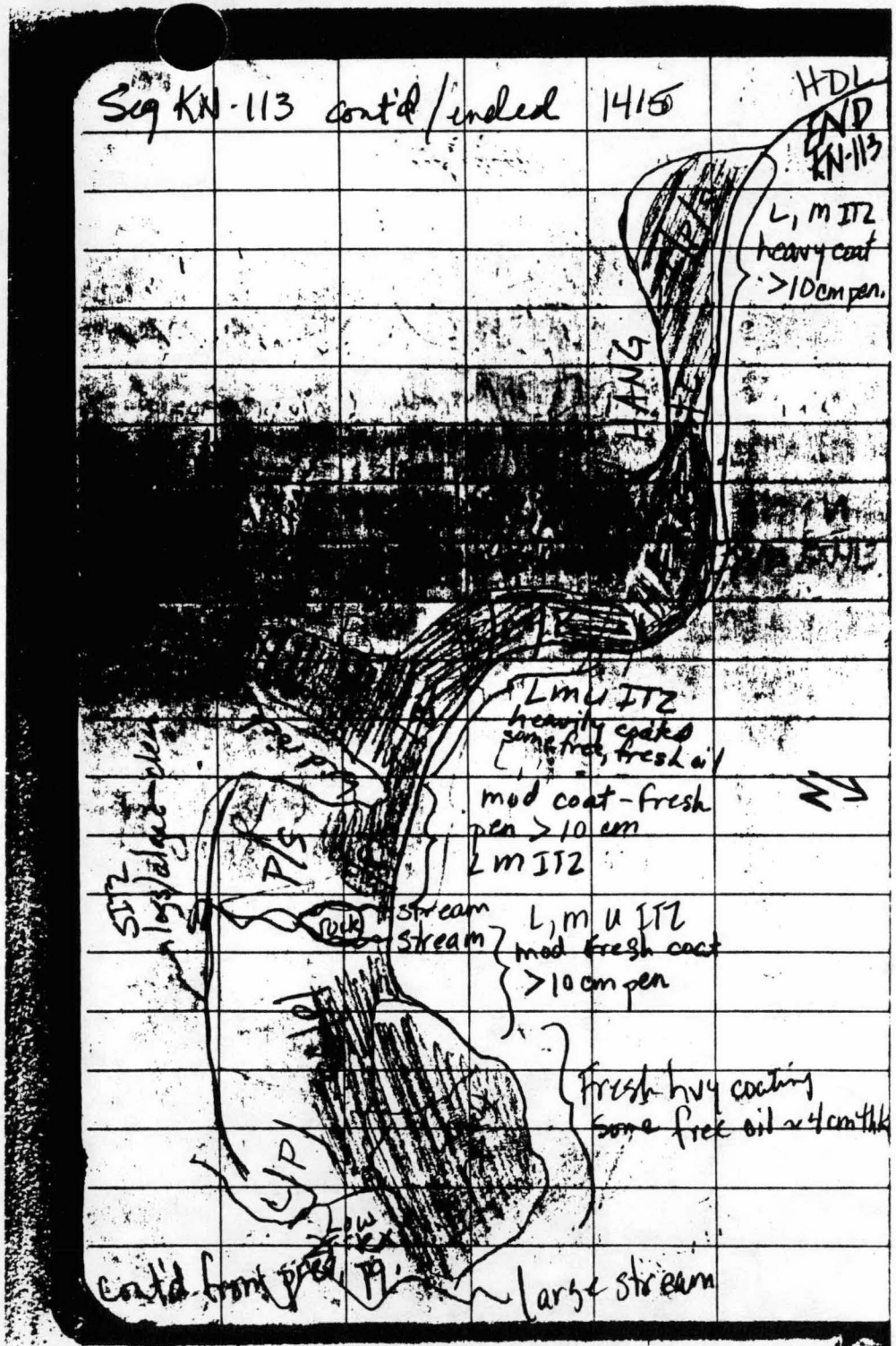
Time survey started 1300 Time survey ended 1415

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Exxon archaeologist. C. McKay immediately.


1300 Seg RN-113 May 1
Land Rx
Control
In ITZ
Fresh mod. coating
Pen > 10cm
U ITZ clean surface
pen > 12cm
stream
Fresh
heavy oil coating
no pools of free oil
penetration > 12cm
N
B/C heavy coating
pen > 12 cm
small stream
Fresh
Sandy beach cl-H surface
> 12cm pen.
Lm U ITZ
Fresh
Free oil ~ 4 cm thick
coating H
Lm U ITZ
Vent
HLD

Seg KN-113 cont'd / ended 1415



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-114

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure on boulders/cobbles, low pressure on pebbles/sand.

2) Dilute with cold water flushing at lower intertidal zone where biota is alive.

Priorities Considerations:

NONE

Ecological Constraints (from site survey):

Avoid streams and areas of health-looking FUCUS.

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

_____ Date: 5/3/89
State Historic Preservation Officer *

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1420-1530 Observer: C. Dillon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-114

LENGTH OF SHORELINE SEGMENT: 600 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD)/STRT Slope: LANG/(HANG)/VER

Wave Exposure: High/(Med)/Low

Sediment: B 20% / C 40% / P 30% / G ~~X~~% / S 10% / M ___% /R ___%

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: (Y)/N % of Segment 60 Width of Band: 4-12 m

Sporadic: (Y)/N % of Segment 40

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 10 % /M 30 % /L 60 %

Fresh 100 % Mousse _____ % Tar Formation: _____ %

Drift Debris Oiled ? Yes/(No) (Supra)/Upper/Mid/Lower Amount: (H)/M/L/

Comments: Refer to diagram for details.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay Two OBSERVER: SMB

LOCATION PREFIX: KN SEG. NO.: 114 LENGTH: 1600 (M)

DATE: 5/1/89 TIME (HHMM): 1420 TIDE HT.: +2 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Healthy in Lower ITZ Dead in upper ITZ

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

On rocks 30% gaping - dead

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Coated - may be alive

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Dead

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

OTHER OBSERVATIONS: Thais oiled but alive

CLEANUP PRECAUTIONS: Avoid streams

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None seen

BIRDS: None

GENERAL OBSERVATIONS: ~~Heavy~~ Heavy to mod oiling except in areas of streams

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/21/89 Location Knight Island Site Herring Bay Two

Location Prefix KN Segment # KN 114 Length 600 m

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility heavy to moderate

Width of beach zone surveyed 1-3 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile headlands are moderately sloped; uplands flat to moderate

Fresh Water Sources two streams

Sea Exposure open to east

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # CW6- Frames 7, 10 (8+9) no good

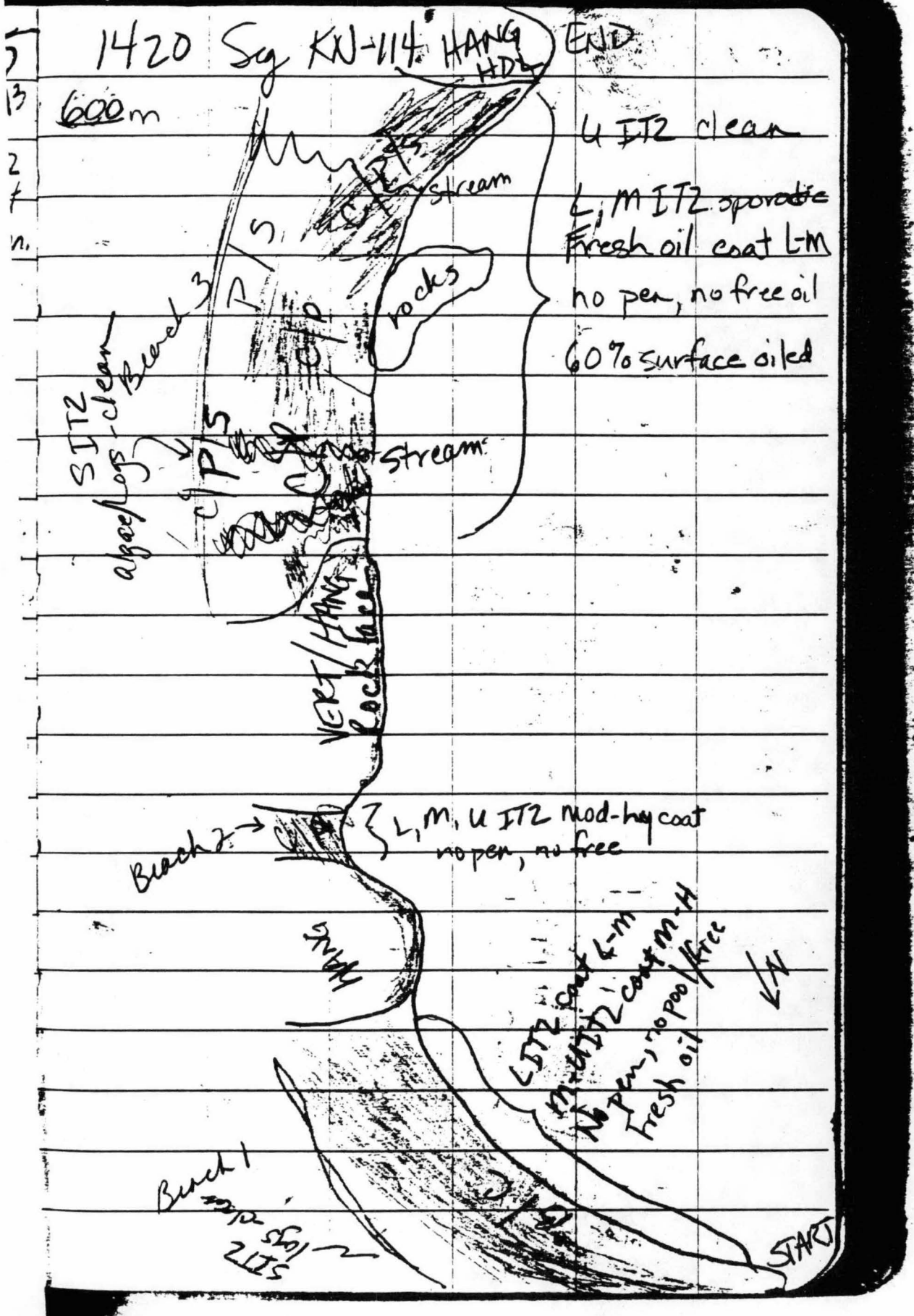
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1320 Time survey ended 1525

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Exxon archaeologist, C. Mobley, immediately


1420 Sg KN-114 HANG
HDT
END
600m
4 IT2 clean
L, M IT2 sporadic
Fresh oil coat L-M
no pen, no free oil
60% surface oiled
stream
rocks
S IT2 clean
algae/logs
Bench 3
P
S
stream
VERT
HANG
Rock face
Bench 2
L, M, U IT2 mod-hvy coat
no pen, no free
Rocks
L IT2 coat L-M
M-H IT2 coat M-H
No pen, no pool free
Fresh oil
Bench 1
logs
STAKE

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-115

LOCATION: (see enclosed map) HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):

1) Use hot water, high pressure on rocks-very hot, ok
2) Vacuum pools of free oil before cleaning.
3) Use hot water, lower pressure on gravel beaches. Agitate to bring up oil.

Priorities Considerations:

This oil must be removed due to the high potential for weeping to other areas.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Avoid stream at Beach (3) if possible.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Sheila G. Hoffman Date: 5/3/89
State Historic Preservation Officer *

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1530-1645 Observer: C. Dillon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-115

LENGTH OF SHORELINE SEGMENT: 1275 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD)(STRT) Slope: LANG/(HANG)/(VER)

Wave Exposure: High/(Med/Low)

Sediment: B 15 % / C 35 % / P 40 % / ~~G ~~ % / S 10 % / M ___ % / R ___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type Logs

OIL

Degree of Oiling: (Heavy)/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 4-10 m

Sporadic: Y/(N) % of Segment ___ 6 cm to

Est. Oil Thickness where > 1cm: 2-4 cm Est. Oil Penetration: >12 cm

Pooled Oil: 0 % "Free" Oil: 5 % Coated: H 75 % /M 20 % /L ___ %

Fresh 100 % Mousse 0 % Tar Formation: 0 %

Drift Debris Oiled ? (Yes)/(No Supra)/Upper/Mid/Lower Amount: H/(M)/L/

Comments:

Refer to diagram for specifics.

ECOLOGICAL EVALUATION

LOCATION: KnightIs SITE: Herring Bay ~~two~~ three OBSERVER: SM Bc

LOCATION PREFIX: KN SEG. NO.: 115 LENGTH: 1275 (M)

DATE: 5/11/89 TIME (HHMM): 1530 TIDE HT.: +1 (M)

OILED ZONE: (Splash High Medium Low)

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Most is heavily coated

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

These have been oiled for awhile and most (70%) are dead

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Most are heavily coated

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Dead

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Dead

OTHER OBSERVATIONS: Trais found coated dying. sheen on water odor of death + decay

CLEANUP PRECAUTIONS: None - most organisms are dead
Try to avoid Stream at Beach 3 as it is self-cleaning

MAMMALS: Otters None Harbor Seals ____ Sea Lions ____ Whales ____
Other ____

BIRDS: Bald Eagles - Eagle nest at Beach 5

GENERAL OBSERVATIONS: Very bad area, much potential for re-oiling of other areas.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay Three

Location Prefix KN Segment # KN115 Length 1275 m

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility extremely heavy

Width of beach zone surveyed 0-2 m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile _____

Fresh Water Sources Beaches at northern end are mostly moderately sloped, done at the southend are steep. Central beaches have open uplands.

Sea Exposure protected to east

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW6 Frames 11,12

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started ~~1640~~ 1530 Time survey ended 1640

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup notify Exxon archeologist immediately.

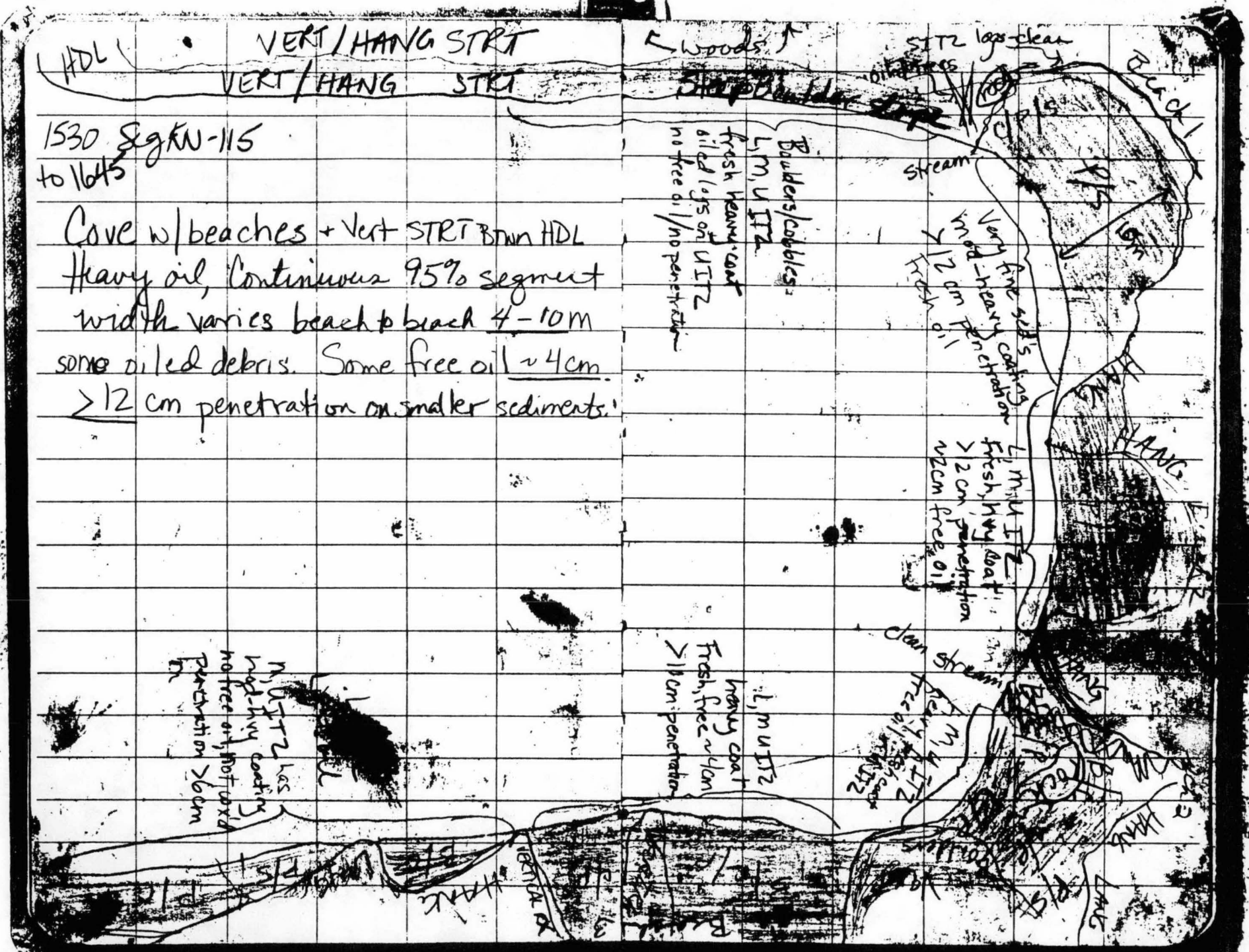
HDL

VERT/HANG STRT

VERT/HANG STRT

1530 SgKN-115
to 1645

Cove w/ beaches + Vert STRT Brown HDL
Heavy oil, Continuous 95% segment
width varies beach to beach 4-10m
some oiled debris. Some free oil ~4cm.
>12 cm penetration on smaller sediments.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-116

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity (ies)

Hot water, high pressure flushing.

Priorities Considerations:

Area could be a source for re-oiling.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE EVALUATION

Date: 5/1/89 Time: 1645-1715 Observer: C. Dillon

Surveyed From: Foot/(Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-116

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/(STRT) Slope: LANG/(HANG)/VER

Wave Exposure: High/(Med)/Low

Sediment: B 20 % / C ___ % / P ___ % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: (Heavy)/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H)/ M / L

Continuous: (Y)/N % of Segment 100 Width of Band: 1-2 m

Sporadic: Y/(N) % of Segment _____

Est. Oil Thickness where > 1cm: up to 1 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H/100 % /M ___ % /L ___ %

Fresh 50 % Mousse 50 % Tar Formation: _____ %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

Entire segment is a straight rockface with one continuous band of heavy oil/mousse. Mostly vertical and high angle with some steep boulder slopes. Clean beaches. A continuous band of heavy oil/mousse covers the segment and is so heavy that it often drips down the rock wall. Presents a scrubbing problem.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay Four OBSERVER: SMBa

LOCATION PREFIX: KN SEG. NO.: 116 LENGTH: 650 (M)

DATE: 5/1/89 TIME (HHMM): 1645 TIDE HT.: 0 1-2 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: Rocks (Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

OTHER OBSERVATIONS: Clean beach at beginning of segment
Most of segment is vertical & steep slope

CLEANUP PRECAUTIONS: None - skip first clean beach
Second beach is oiled

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other Voles

BIRDS: None

GENERAL OBSERVATIONS: Very steep areas but heavily oiled
and may be a re-oiling source

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date ~~5~~ 5/2/89 Location Knight Island Site Herring Bay Four

Location Prefix KN Segment # KN116 Length 650

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility Moderate

Width of beach zone surveyed None m Tree fringe surveyed None

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile steep heavily cobbled beaches, when cliff face behind them.

Fresh Water Sources None

Sea Exposure open to east

Access/Safety sufficient

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW6 Frames 13

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1645 Time survey ended 1715

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Glyphon archeologist, C. Hobby, immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-117

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity (ies)

Hot water, high pressure flushing.

Priorities Considerations:

Area could be a source for re-oiling.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger
State Historic Preservation Officer * Date: 5/13/89

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1715-1730 Observer: C. Dillon

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island / Herring Bay SEGMENT NUMBER KN-H6 ~~000~~ 117

LENGTH OF SHORELINE SEGMENT: ~~1650~~ 1700 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/HLD/(STRT) Slope: LANG/(HANG/VER) / steep boulder slopes

Wave Exposure: High/(Med)/(Low)

Sediment: B 50 % / C 5 % / P 5 % / G ~~X~~ % / S ___ % / M ___ % / R ___ %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: (Heavy)/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: (Y)/N % of Segment 100 Width of Band: 1 - 3 m

Sporadic: Y/(N) % of Segment _____

Est. Oil Thickness where > 1cm: up to 1 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H/100 % / M ___ % / L ___ %

Fresh 50 % Mousse 50 % Tar Formation: 0 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay Five OBSERVER: SmBc

LOCATION PREFIX: KN SEG. NO.: 117 LENGTH: 700 (M)

DATE: 5/1/8 TIME (HHMM): 1715 TIDE HT.: 0-1 (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: Rocks (Boulder) (Cobble) Gravel Sand Mud 4 Faces

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)N Dense (Y)N Sparse Y/N None Y/N

On Rock faces - heavily oiled dead

Mytilus (Mussels): Patchy (Y)N Contin. Y/N Dense (Y)N Sparse (Y)N None Y/N

Coated -

Balanus (Barnacles): Patchy (Y)N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

coated -

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)N

None seen

OTHER OBSERVATIONS: Most of this segment is rock face with oiled band. Two small rocky beaches with heavy oil

CLEANUP PRECAUTIONS: None

MAMMALS: Otters ____ Harbor Seals 4 Sluggish Sea Lions ____ Whales ____
Other ____

BIRDS: None

GENERAL OBSERVATIONS: heavy oil band on rock faces may cause re-oiling problems

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Knight Island Fire

Location Prefix _____ Segment # KN 117 Length 700m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility Moderate oil

Width of beach zone surveyed None m Tree fringe surveyed None

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile 5 tiers, largely cobbled beaches that are under water at high tide; steep cliff backing

Fresh Water Sources none

Sea Exposure open to east

Access/Safety difficult

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Hudson

Time survey started 1720 Time survey ended ~~1720~~ 1740

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup operations, contact Exxon archeologist, C. Mobley, immediately.

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-118

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):

Hot water, high pressure on cobble beach. Lower pressure on pebbly areas.

Priorities Considerations:

Probably not a re-oiling problem, lower priority cleaning.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer *

Date: 5/3/89

EXXON: _____ Date: 5-14/89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1730-1825 Observer: C. Dillon

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-118

LENGTH OF SHORELINE SEGMENT: 1400 m

ACCESS: Foot/Vehicle/(Boat)/Barge/(Helio/Float Plane) → at low tide

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 10 % / C ~~20~~ % / P 10 % / G ~~X~~ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/(N) % of Segment 60 Width of Band: 1-3 m

Sporadic: (Y)/N % of Segment 40

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 10 % /M 40 % /L 50 %

Fresh 70 % Mousse 30 % Tar Formation: 0 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Herring Bay Sx OBSERVER: SM Barn

LOCATION PREFIX: KN SEG. NO.: 118 LENGTH: 1400 (M)

DATE: 5/1/89 TIME (HHMM): 1730 TIDE HT.: -1 to 0 (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on rocks oiled - dead

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

On rocks - closed some gaping

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Very dense barnacle spat - even have settled on Mytilus shells

spat appear to be dead.

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

None seen

OTHER OBSERVATIONS: ~~Algae~~ Seagrass subtidally looks healthy

CLEANUP PRECAUTIONS: Avoid Stream

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___

Other None

BIRDS: None

GENERAL OBSERVATIONS: Black sticky oil, probably not a re-oiling problem lower priority

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay Sys

Location Prefix KN Segment # KN118 Length 1400

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 0-15m Tree fringe surveyed 0-10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Bank 1-pocket beach steep gravel beach two moderate slope, some gravel near shore, moderately sloped uplands

Fresh Water Sources _____

Sea Exposure southeast + protected

Access/Safety fair

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Lobdell

Time survey started 1730 ~~1805~~ Time survey ended 1825

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup contact Gypsi Auchard Bjork, E. Mobley immediately.

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/1/89 SHORELINE SEGMENT KN-119

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure on boulders and cobbles.
2) Hot water, low pressure on pebbles.

Priorities Considerations:

NONE

Ecological Constraints (from site survey):

Avoid stream and area of health FUCUS.

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: 5/3/89

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 / Time: 1825-1845 Observer: C. Dilla

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-119

LENGTH OF SHORELINE SEGMENT: 450 m

ACCESS: Foot/Vehicle/(Boat)/Barge/(Helio/Float Plane)

→ low tide

SHORELINE:

Shoreline Type: SPI/(BEA/COV)/HLD/(STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 10 % / C 40 % / P 50 % / ~~G ___ %~~ / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type ____

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 5 m

Sporadic: Y/(N) % of Segment ____

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: Ø cm

Pooled Oil: Ø % "Free" Oil: 5 % Coated: H 15 % /M 85 % /L ___ %

Fresh 100 % Mousse ____ % Tar Formation: ____ %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Herring Bay Seven OBSERVER: SnBar

LOCATION PREFIX: KN SEG. NO.: 119 LENGTH: 450 (M)

DATE: 5/1/89 TIME (HHMM): 1825 TIDE HT.: 0-+1 (M)

OILED ZONE: Splash (High) (Medium) (Low)

SUBSTRATUM: Rocks (Boulder) (Cobble) (Gravel) (Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Oiled on rocks

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Some gaping

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Spat dense to very dense, dead

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

OTHER OBSERVATIONS: Thais dead

CLEANUP PRECAUTIONS: Avoid stream and areas of healthy Fucus.

MAMMALS: Otters ___ Harbor Seals X (sluggish) Sea Lions ___ Whales ___
Other

BIRDS: None

GENERAL OBSERVATIONS: Moderate oiling on rocks and cobbles

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay Seven

Location Prefix KN Segment # KN119 Length 450

Survey Method:

Air _____ (A - indicate on map) Boat Wall Face (A - indicate on map)

Ground Beach (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate to low

Width of beach zone surveyed 1-3 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Moderate slope, not heavily ~~gravel~~ cobbled.

Fresh Water Sources Stream

Sea Exposure semi-exposed / protected

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Mobley

Time survey started 1825 Time survey ended 1849

Cultural resource considerations/restraints:

If heretofore undiscovered cultural material is discovered during cleanup notify Upon archaeologist, C. Mobley, immediately.

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-120

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/1/89

Recommended Cleanup Activity(ies):

No clean-up recommended; area is either steeply cloped or clean to lightly oiled.

Priorities Considerations:

NONE

Ecological Constraints (from site survey):

No ecological constraints since clean-up is not recommended. Should this recommendation be changed, ecological constraints should be re-evaluated. An ecological evaluation is not included. Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Segment was not recommended for clean-up, so no constraints are necessary. If recommendations change, constraints should be reconsidered.

Charles E Holmes Date: 5/3/89
State Historic Preservation Officer *

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 Time: 1845-1900 Observer: C. Dillon

Surveyed From: Foot/(Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-120

LENGTH OF SHORELINE SEGMENT: 1600 m

ACCESS: Foot/Vehicle/(Boat)/Barge/(Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV)/HLD/(STRT) Slope: LANG/(HANG/VER) steep boulder slop

Wave Exposure: High/Med/Low

Sediment: B50% / C35% / P10% / G5% / S___% / M___% /R___%

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L None

NA Continuous: Y/N % of Segment_____ Width of Band: _____m

Sporadic: Y/N % of Segment_____

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H___% /M___% /L20 %

Fresh _____% Mousse _____% Tar Formation: _____%

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

Basically clean to light segment. Light band of oil stained face rock 1m wide and back at head of cove with light stain band - no penetration.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay 8

Location Prefix KN Segment # KN120 Length 1600

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility No beaches present

Width of beach zone surveyed 0 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Steep wall face

Fresh Water Sources None

Sea Exposure None

Access/Safety None

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C Wilson

Time survey started 1845 Time survey ended 1900

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resource materials are discovered during cleanup contact Region archeologist, C Wooley, immediately.

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/3/89 SHORELINE SEGMENT KN-121

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):

1) Vacuum free oil prior to washing.

2) Hot water, high pressure on cobbles.

Priorities Considerations:

Moderately oiled - most of segment is vertical or high angle - lower priority for clean-up.

Ecological Constraints (from site survey):

Avoid stream. Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes Date: 5/3/89
State Historic Preservation Officer *

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-20-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/1/89 / Time: 900-2015 Observer: C. Dillon

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island / Herring Bay SEGMENT NUMBER KN-121

LENGTH OF SHORELINE SEGMENT: 1725 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/(Med/Low)

Sediment: B 30 % / C 20 % / P 10 % / ~~G ~~ % / S ___ % / M ___ % / R ___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 85 Width of Band: 3-6 m

Sporadic: (Y)/N % of Segment 15

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: 2-6 cm

Pooled Oil: 0 % "Free" Oil: 5 % Coated: H 30 % / M 70 % / L ___ %

Fresh 50 % Mousse 50 % Tar Formation: 0 %

Drift Debris Oiled ? Yes/(No) (Supra)/Upper/Mid/Lower Amount: H/M/L/

Comments:

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Herring Bay 4 OBSERVER: SMBan

LOCATION PREFIX: KN SEG. NO.: 121 LENGTH: 1725 (M)

DATE: 5/1/89 TIME (HHMM): 1900 TIDE HT.: +1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Fucus more healthy towards water line

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Some (15%) gaping

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Some patches coated

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Some oiled

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Oiled but alive

OTHER OBSERVATIONS: Thais - coated, alive

CLEANUP PRECAUTIONS: Avoid streams

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: Moderately oiled area

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay ~~Eight~~ Nine

Location Prefix KN Segment # KN 121 Length 1725

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 1-2 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Steep, heavily cobbled beaches

Fresh Water Sources None

Sea Exposure Open to west

Access/Safety Fair

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # CW6 Frames 14, 15

B/W Roll # _____ Frames _____

Observer(s) C Wilson

Time survey started 1900 Time survey ended 2015

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup contact Exxon archaeologist immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/7/89 SHORELINE SEGMENT KN-122

LOCATION: (see enclosed map) KNIGHT ISLAND/Herring Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure on large rocks (boulders/cobbles)

2) Hot water, low pressure, high volume flushing on pebbles which have deep penetration.

Priorities Considerations:

Don't clean Beach 3 - already clean to lightly oiled.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

None - Other than avoid areas of Healthy Fucus.

Archeological Constraints (from site survey):

If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Marla E. Holmes
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/2/89 Time: 0840-0910 Observer: C. Dillon

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-122

LENGTH OF SHORELINE SEGMENT: 425 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)
→ maybe at low tide

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD/STRT) Slope: (LANG/HANG/VER)

Wave Exposure: High/(Med)/Low

Sediment: B25 % / C10 % / P25 % / G~~X~~ % / S___ % / M___ % /R___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M / L)

Continuous: (Y)/N % of Segment 90 Width of Band: 4 - 10 m

Sporadic: Y/(N) % of Segment_____

Est. Oil Thickness where > 1cm: 4-6 cm Est. Oil Penetration: >12 cm

Pooled Oil: 2 % "Free" Oil: 5 % Coated: H30 % /M60 % /L10 %

Fresh 80 % Mousse 20 % Tar Formation: _____ %

Drift Debris Oiled ? Yes/(No) (Supra)/Upper/Mid/Lower Amount: H/M/L/

Comments:

Segment includes 4 beach areas which are moderately to heavily oiled except the third one which is light to clean. Refer to diagram for details

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Herring Bay Ten OBSERVER: SM Ben

LOCATION PREFIX: KN SEG. NO.: 122 LENGTH: 425 (M)

DATE: 5/2/89 TIME (HHMM): 0840 TIDE HT.: +3½ (M)

OILED ZONE: Splash (High Medium Low)

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

No fucus in water, that on rocks is oiled & dead

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Under water due to high tide

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Spat very dense - dead

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

OTHER OBSERVATIONS: The third Beach is clean and should not be touched. Free oil on second beach

CLEANUP PRECAUTIONS: None

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: There are 4 beaches (small) in this segment suggest third beach not be touched

version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay Jen

Location Prefix KN Segment #KN122 Length 400

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate to light

Width of beach zone surveyed 2-5 m Tree fringe surveyed 15

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile moderate sloped beach s and flat uplands

Fresh Water Sources no streams

Sea Exposure Beach 1+2 southeast = protected; beaches 3+4 southeast = open

Access/Safety ok

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CN16 Frames 17

B/W Roll # _____ Frames _____

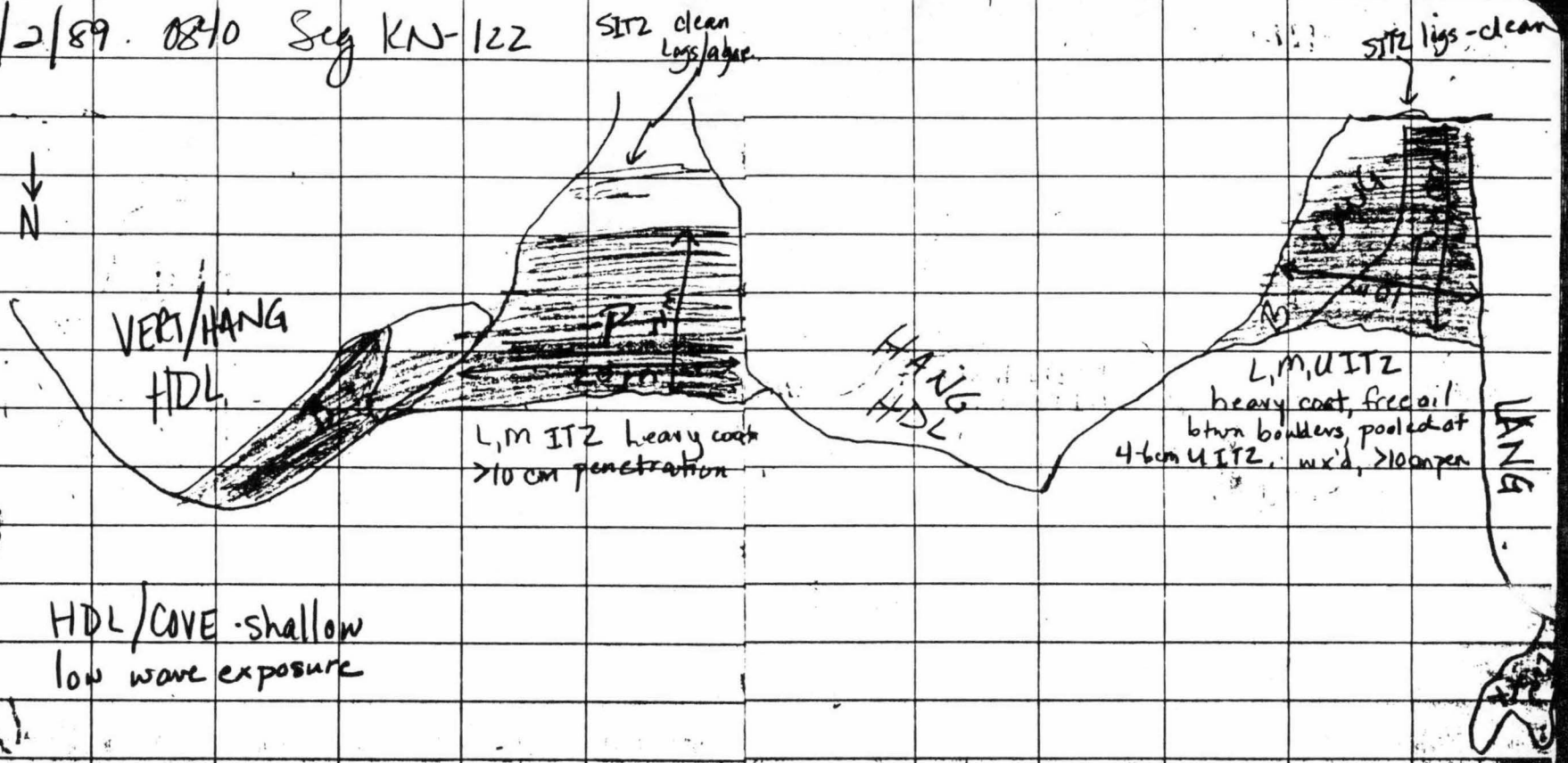
Observer(s) C Wilson

Time survey started 0840 Time survey ended 0905

Cultural resource considerations/restraints:

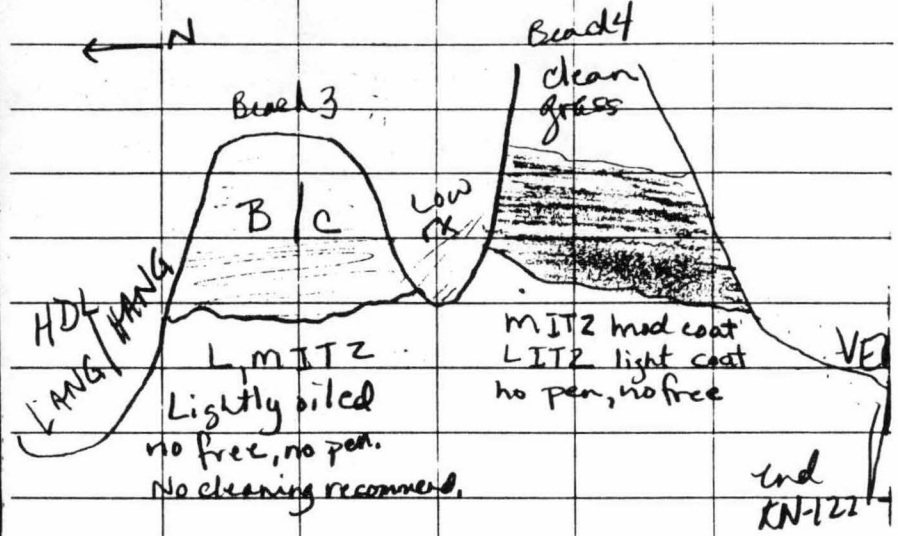
If heretofore undiscovered cultural resources are uncovered during cleanup notify Lyon archeologist, Mobley, immediately.

5/2/89. 0810 Seg KN-122



HDL/COVE - shallow
low wave exposure

End KN-122


N
Beach 3
Beach 4
clean grass
B
C
Low TS
HDL
HANG
HANG
L, MITZ
Lightly oiled
no free, no pen.
No cleaning recommend.
MITZ mod coat
LITZ light coat
no pen, no free
VE
end KN-122

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/7/89 SHORELINE SEGMENT KN-123

LOCATION: (see enclosed map) KNIGHT ISLAND/Herring Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):

1) Low priority cleaning.
2) Use hot water, high pressure flushing on oiled boulders and cobbles of segment beach only.
3) Unnecessary to clean first 600 meters of segment.

Priorities Considerations:

The segment is mostly rock face with one beach. Cobble areas all moderately oiled. Re-oiling is not expected to be probable. Clean-up priority is low.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/2/89 Time: 0910-0935 Observer: C. Dillon

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-123

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE: & maybe at low tide

Shoreline Type: SPI/(BEA)/COV/HLD/(STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 5 % / C 5 % / P 5 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/NO Supra/(Upper)/Mid/Lower Type large log

OIL

Degree of Oiling: Heavy/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M / L)

Continuous: (Y)/N % of Segment 85 Width of Band: 1-2 m

Sporadic: (Y)/N % of Segment 15

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H ___ % /M 10 % /L 90 %

Fresh 95 % Mousse 5 % Tar Formation: ___ %

Drift Debris Oiled ? (Yes)/NO Supra/(Upper)/Mid/Lower Amount: (H)/M/L/ large fallen tree

Comments:

Segment consists of about 600 m of vertical/high angle face rock with a light to moderate 1-2 m wide band of oil at the high tide level. There is one beach at the end of the segment which is half clean to light and half moderately oiled. See diagram for details

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Herring Bay Elem OBSERVER: SM Barn

LOCATION PREFIX: KN SEG. NO.: 123 LENGTH: 650 (M)

DATE: 5/2/89 TIME (HHMM): 0910 TIDE HT.: + 3 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

May be Subtidal

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Coated dead

OTHER OBSERVATIONS: Amphipods under rocks, alive, Finer grained part of beach is clean, cobbles are moderately oiled

CLEANUP PRECAUTIONS: Avoid clean areas

MAMMALS: Otters ~~No~~ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: This segment consists only of steep rock face with one small beach. Cobble areas of the beach are moderately oiled. The chance of fouling is low and cleanup priority is low.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Island Site Herring Bay Eleven

Location Prefix KN Segment # KN 129 Length ~~435~~ 650

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 1 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Heavily cobbled beach, uplands are steep except to southeast where they are moderate.

Fresh Water Sources none

Sea Exposure Northeast

Access/Safety fair

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

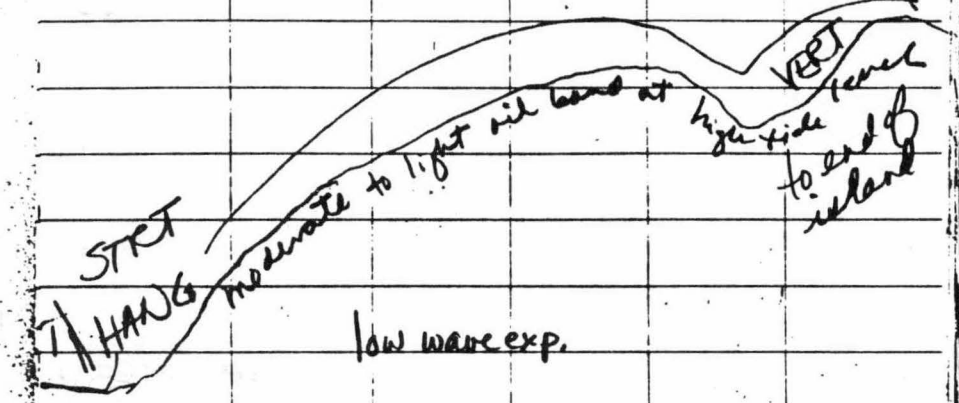
Observer(s) C. Wilson

Time survey started 0910 Time survey ended _____

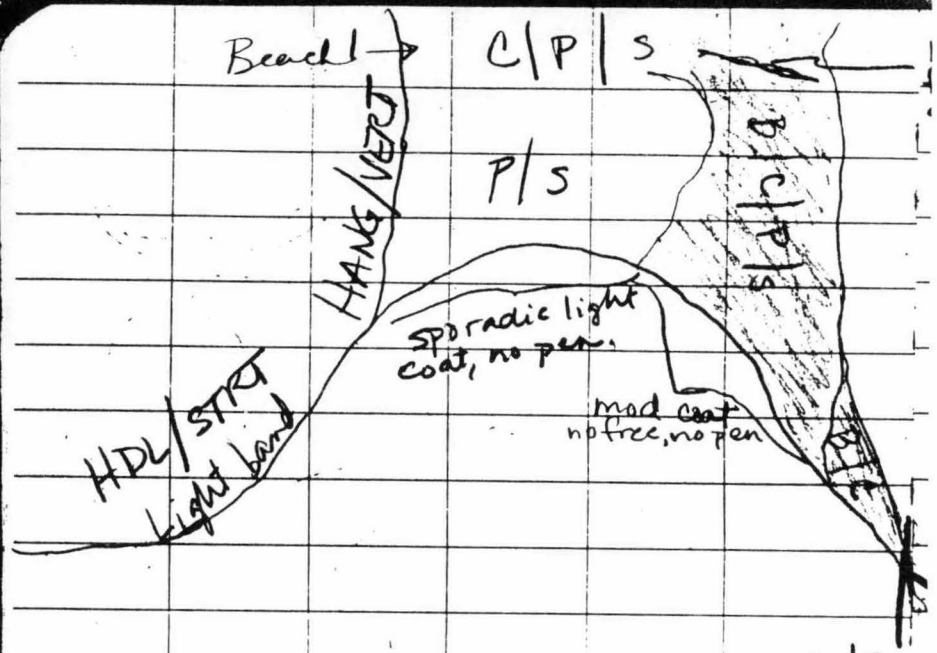
Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Lyon archeologist, C. Mobley, immediately

0910 KN-123



Start KN-123



Low wave exp.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/7/89 SHORELINE SEGMENT KN-124

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):

1) Vacuum oil at strand line prior to washing.

2) Hot water, high pressure on cobbles.

3) Hot water, low pressure on gravel/sand areas.

Priorities Considerations:

Low priority due to small re-oiling potential.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/2/89 Time: 0935-1035 Observer: C. Dillon

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KN-124

LENGTH OF SHORELINE SEGMENT: 550 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD)/(STRT) Slope: (LANG/HANG)/VER

Wave Exposure: High/(Med/Low)

Sediment: B 10 % / C 20 % / P 10 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type ~~Logs~~/(Algae)

OIL

Degree of Oiling: Heavy/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / (M / L)

Continuous: Y/(N) % of Segment ~~10~~ 4 ces Width of Band: ~~2~~ 4 ces m

Sporadic: (Y)/N % of Segment 10

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H ___ % /M 10 % /L 90 %

Fresh 90 % Mousse 10 % Tar Formation: ___ %

Drift Debris Oiled ? (Yes)/(No) Supra/(Upper)/Mid/Lower Amount: H/M/(L)

Comments: ~~logs~~ logs in SIIZ are clean
only oiled algae on beach 3 4 IIZ

Majority of segment is low and high angle rock face which is generally clean to lightly oiled in a 1-2m band. There are 3 beaches, 2 of which have areas which are moderately coated with no free oil and no penetration

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay Tussle OBSERVER: SM Bam

LOCATION PREFIX: KN SEG. NO.: 124 LENGTH: 550 (M)

DATE: 5 / 2 / 89 TIME (HHMM): 0935 TIDE HT.: +2½ (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: Rocks (Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

More dense below water level - oiled on rocks

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

More dense below water level

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

More dense below water level - coated on rocks

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

None seen

OTHER OBSERVATIONS: Free oil at strand line

CLEANUP PRECAUTIONS: Avoid streams - these areas are cleaner

MAMMALS: Otters ___ Harbor Seals 1 Sea Lions ___ Whales ___
Other → Very sick baby seal observed - dying

BIRDS: ___

GENERAL OBSERVATIONS: This section consists of 3 beaches and a steep cliff segment. Parts of the beaches are ~~heavily~~ moderately oiled, but represent a low priority for clean up.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/2/89 Location Knight Site Herring Bay Twelve

Location Prefix KN Segment # [redacted] KN124 Length 550

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 1-3 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile slope of beaches moderate as are those of the uplands

Fresh Water Sources none

Sea Exposure north

Access/Safety good at other than high tide

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

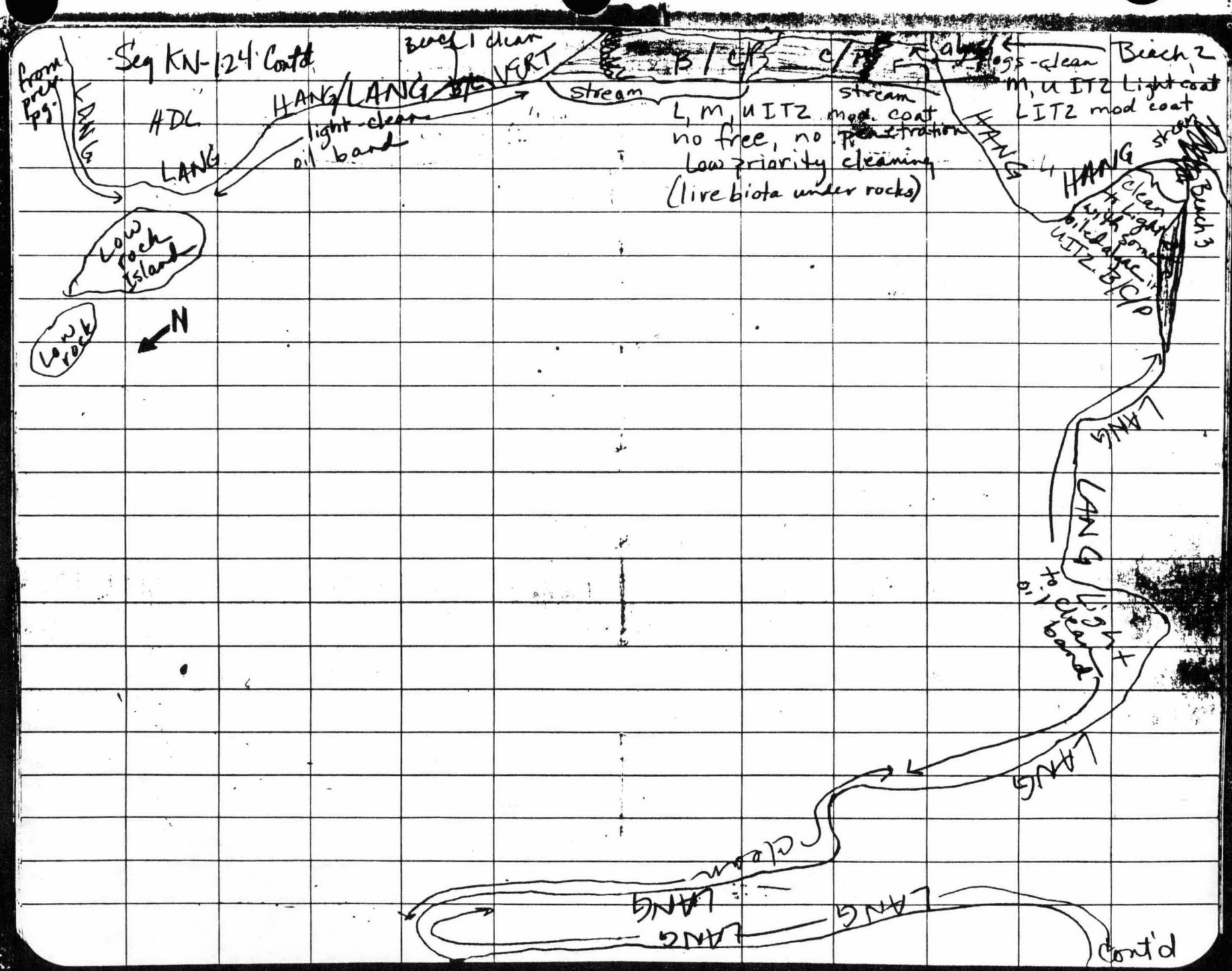
B/W Roll # _____ Frames _____

Observer(s) C. Mobley

Time survey started 0925 Time survey ended 1025

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Exxon archeologist, C. Mobley, immediately.


Seg KN-124 Cont'd
from prev pg
LANG
HDL
LANG
HANG/LANG
light-clean oil band
Beach 1 clean
VERT
B/C/P
stream
L, M, U IT2 mod. coat
no free, no
Low priority cleaning
(live biota under rocks)
stream
Beach 2
m, u IT2 Light coat
LIT2 mod coat
HANG
Beach 3
clean
UIT2 B/C/P
Low rock Island
Low rock
N
LANG
LANG
to clean
oil band
LANG
LANG
LANG
LANG
Cont'd

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/7/89 SHORELINE SEGMENT KN-125

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure on steep rocky beaches if access if possible.

2) Hot water low pressure with agitation on gravel beach.

Priorities Considerations:

Get the deep oil (black) out of the gravel beach.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Marilee E. Holmes
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/2/89 Time: 1235-1130 Observer: C. Dillon

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island/Herring Bay SEGMENT NUMBER KI-125

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD)/(STRT) Slope: (LANG/HANG/VER)

Wave Exposure: High/(Med/Low)

Sediment: B 5 % / C ___ % / P 10 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs

OIL

Degree of Oiling: (Heavy)/(Moderate)/Light/No Oil/Unobserved ← on part of beach

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 5 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 4 cm Est. Oil Penetration: >12 cm

Pooled Oil: 0 % "Free" Oil: 5 % Coated: H 5 % /M ~~80~~ % /L 5 %

Fresh 85 % Mousse 15 % Tar Formation: ___ %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Herring Bay 13 OBSERVER: SMBan

LOCATION PREFIX: KN SEG. NO.: 125 LENGTH: 650 (M)

DATE: 5/2/89 TIME (HHMM): 1035 TIDE HT.: +2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks (Boulder) Cobble Gravel (Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/N

Oiled on rocks - dense clumps under water

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

May be dense subtidally

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

May be dense subtidally

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

OTHER OBSERVATIONS: Black oil beneath mousse in gravelly areas

CLEANUP PRECAUTIONS: ~~Access~~ None

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: ___

GENERAL OBSERVATIONS: This section is mostly rock face

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 6/2/89 Location Knight Island Site Herring Bay Thirteen

Location Prefix KN Segment # KN125 Length 650 m

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 1-2 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile beach moderate slope; uplands moderate slope

Fresh Water Sources none

Sea Exposure north

Access/Safety fair at low to mid tide and poor at high tide

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1035 Time survey ended 1130

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup notify Clifton Clark - archeologist, C Mobley, immediately

1035 Seg KN-125 med/low wave exp

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-126

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/3/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure on oiled cobbles and rock.

Priorities Considerations:

Light to moderate tarry oil; not much potential for re-oiling. Low priority for clean-up.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
Archaeological monitoring needed during cleanup if cleanup is conducted.

Charles E Holmes Date: May 10, 1989
State Historic Preservation Officer *

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 3 MAY 89 / Time: 1700 Observer: BOB DUGAN

Surveyed From: (Foot/Boat) Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND HERRING BAY (SOUTH END) SEGMENT NUMBER KN-126

LENGTH OF SHORELINE SEGMENT: 700 m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: (LANG/HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 15 % / C 10 % / P 5 % / G ___ % / S ___ % / M ___ % /R 75 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type timber
minor fuccus

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H)/ M / L

Continuous: Y/(N) % of Segment 70 Width of Band: 2-10 m

Sporadic: (Y)/N % of Segment 70

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 1-2 cm

Pooled Oil: 0 % "Free" Oil: 2 % Coated: H 25 % /M 50 % /L 20 %

Fresh _____ % Mousse _____ % Tar Formation: 95 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/M/(L)

Comments:

① 6 beaches in This segment - all lightly oiled

② BEACH # 5 has L+ to Med oil

③ Lower priority for cleanup

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: - OBSERVER: SM BAN

LOCATION PREFIX: KW SEG. NO.: 126 LENGTH: 700m (M)

DATE: 5/3/89 TIME (HHMM): 1710 TIDE HT.: +1 (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on rocks to waterline - healthy in lower ITz. Dead in oiled band on rocks

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Littorina
Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Alive

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Leptasterias - dead, Isopods dense upper rocks - alive Thais healthy

CLEANUP PRECAUTIONS: Avoid Streams & clean areas with healthy Fucus

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other ___

BIRDS: ___

GENERAL OBSERVATIONS: This segment consists of 6 beaches ~~with~~ Separated by rock bases. Overall oiling is light to moderate without much potential for re-oiling. Low priority for clean-up.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site _____

Location Prefix KN Segment # KN126 Length 700

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 1-5 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None FCR

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Beaches 1+2 were flat + mostly gravel. Beaches 3-6 were steep and cobbly

Fresh Water Sources Beach two had several streams

Sea Exposure north / northeast sheltered

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 2 3 (4) 5

Monitoring during cleanup needed* yes/no Collection yes (no)

Photos: Color Roll # CW6 Frames 18, 19, 20, 21, 22

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1710 Time survey ended 1825

Cultural resource considerations/restraints:

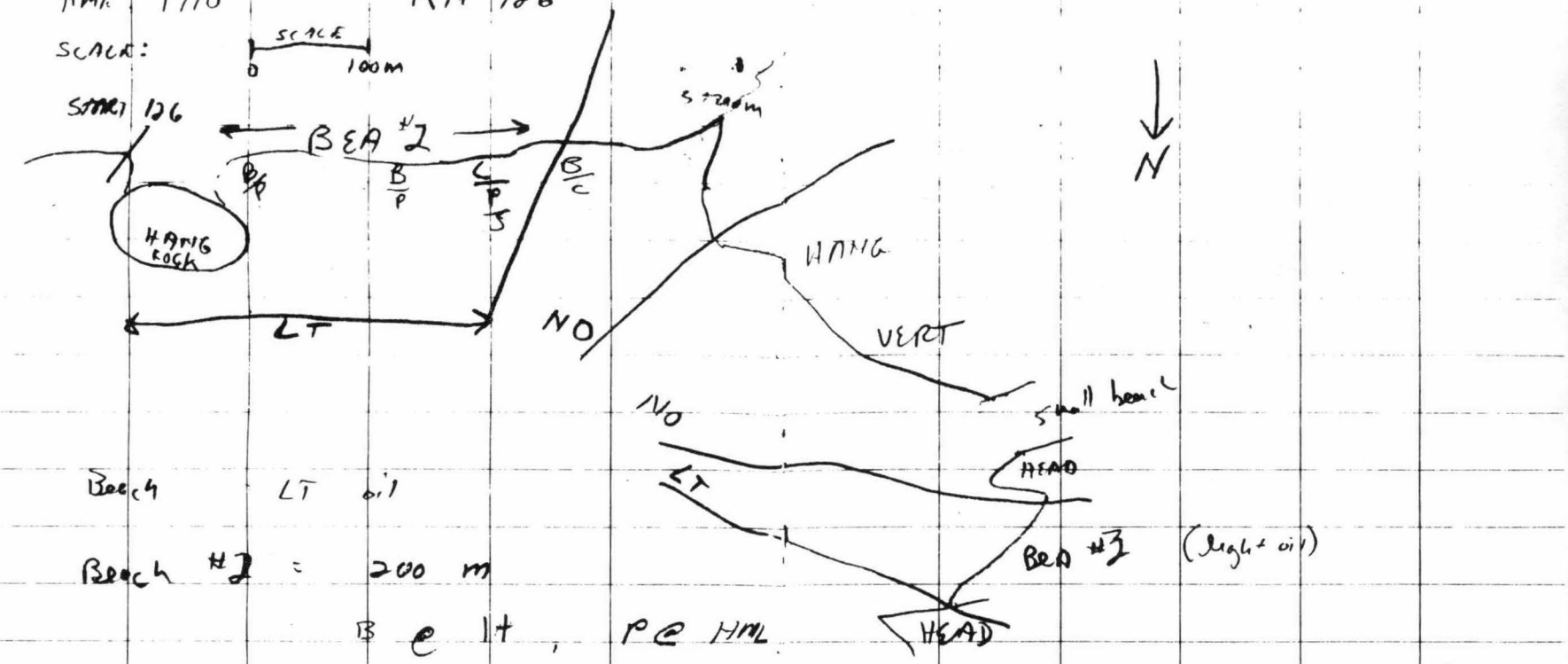
If heretofore undiscovered cultural resources are uncovered during cleanup notify Exxon archeologist, C. Mobley, immediately. Keep people out of north end of beach 2.

SEE COMMENTS ON SUPPORTING DOCUMENTATION COVER SHEET.

3 MAI 89

TIME: 1710 KN 126

SCALE: SCALE 0 100m



Beach LT oil

Beach #2 : 200 m

Belt, PC HML

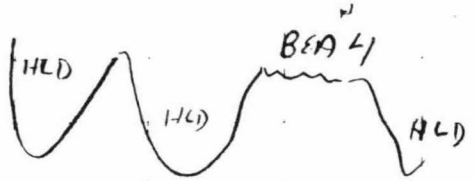
- lightly oiled, 2 meter band at H ; < 1/2 INCH penetration (tarry)
- vegetation healthy w/ some light oil in M, L zones ; < 1/2 INCH penetration

BEACH #3 - 40 m, C/P

- lightly oiled

KN 126 (cont)

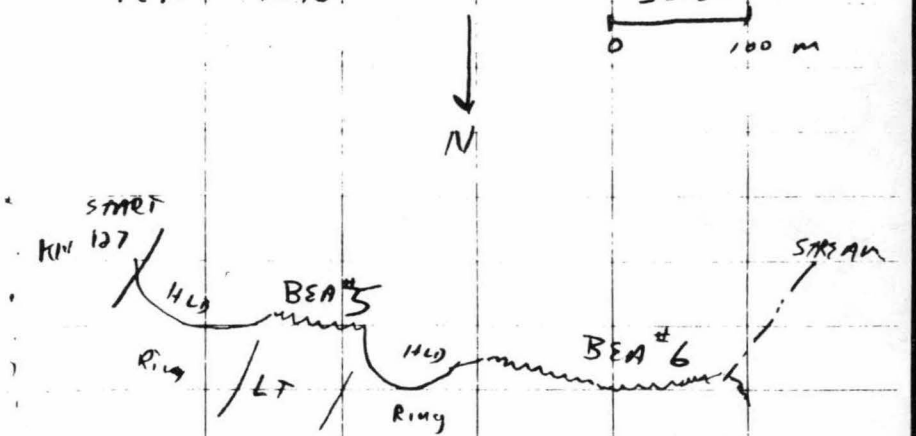
KN # 126 (cont)



BEA #4

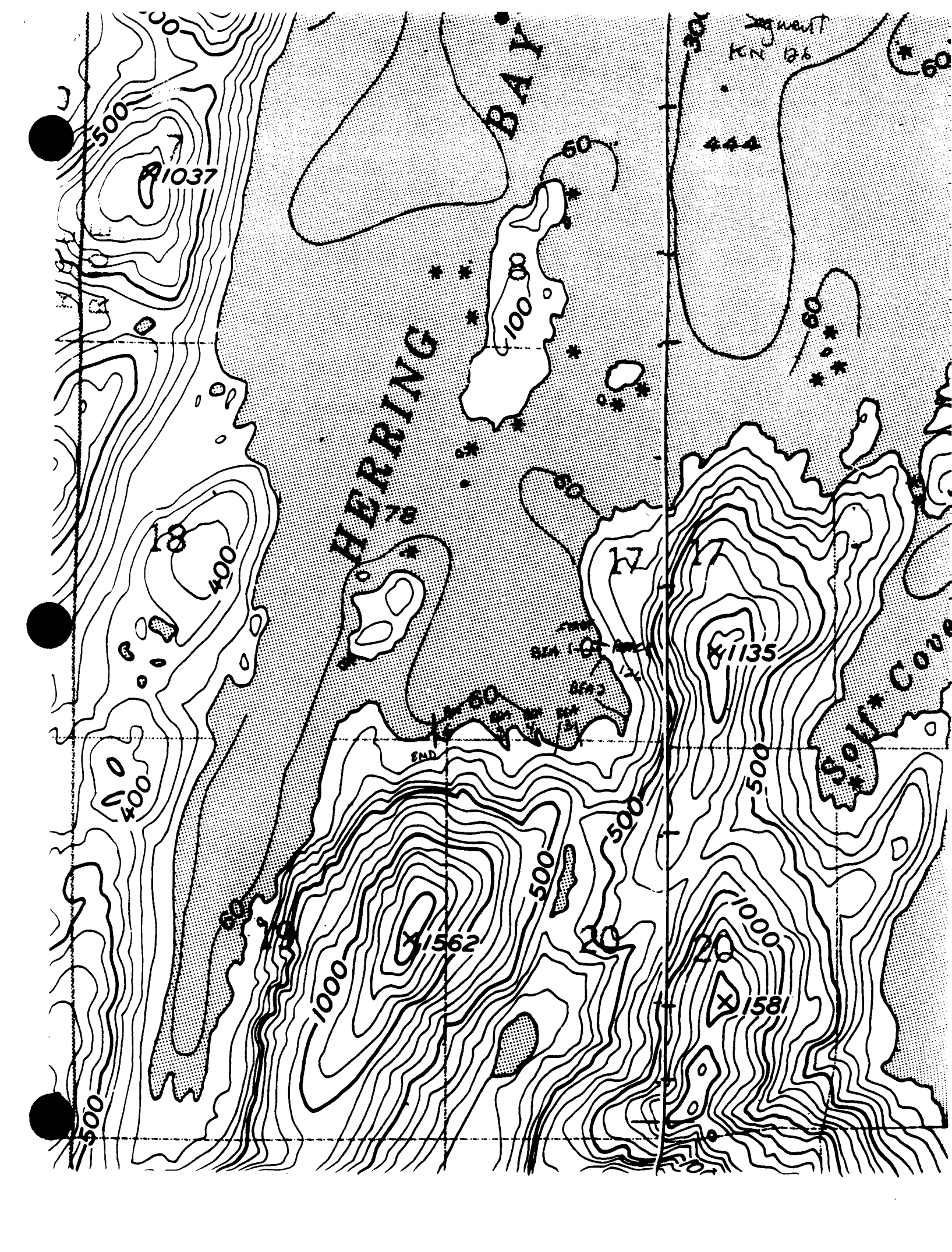
- very LT oil,
- recommend do not clean

KN 126



BEA #5 - LT/MOD # HITZ
- P, C

BEA 6 - very LT black ring
- C


HERRING
BAY
1037
1135
1562
1581
444
500
400
1000
60
20
17
18

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-127

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/3/89

Recommended Cleanup Activity(ies):

1) Hot water high pressure on cobbles, boulders, and rocks.

2) Hot water low pressure with agitation on gravel beaches.

Priorities Considerations:

Vacuum of, shovel mousse and oiled debris at strand line-high priority. Overall cleaning, moderate priority.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Date: May 9, 1989
State Historic Preservation Officer *

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 3 MAY 89 / Time: 1825 Observer: BOB DUGAN

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION Knight Is. Herring Bay SEGMENT NUMBER KN 127

LENGTH OF SHORELINE SEGMENT: 1000 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 10 % / C 5 % / P 5 % / G ___ % / S ___ % / M ___ % /R 80 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type Logs

OIL

Degree of Oiling: Heavy/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M)/ L

Continuous: (Y)/N % of Segment 100 Width of Band: 2-10 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 5 cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H ____ % /M ____ % /L ____ %

Fresh ____ % Mousse 10 ft x 10 ft patch % Tar Formation: 90 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/M/(L)

Comments:

2 beaches:

- BEA #1 : Lt to Mod, tarry in H.M.T.Z
- mousse patch, 2 in penetration
- needs hot H2O w/ pressure to clean

- Beach #2 : trace tar, needs no action

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: — OBSERVER: SmBa

LOCATION PREFIX: KN SEG. NO.: 127 LENGTH: ~~1705~~ 1000 (M)

DATE: 5/3/89 TIME (HHMM): 1825 TIDE HT.: +1 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Healthy in lower I+2

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/N

Dense in Lower I+2, alive Sparse in upper I+2 - oiled

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

On rocks lower I+2, clean

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

OTHER OBSERVATIONS: Thick mousse at strand line,

CLEANUP PRECAUTIONS: Avoid Streams and areas of healthy Fucus in lower I+2

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: Moderate oiling on the two beaches included in this section - MOD. priority.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site

Location Prefix KN-127 Segment # Length 7745 1000

Survey Method:

Air (A - indicate on map) Boat (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed None m Tree fringe surveyed None

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile 5 Tep, heavily cobbled beach; steep, above uplands.

Fresh Water Sources none

Sea Exposure west + protected

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # None Frames

B/W Roll # Frames

Observer(s) C. Mobley

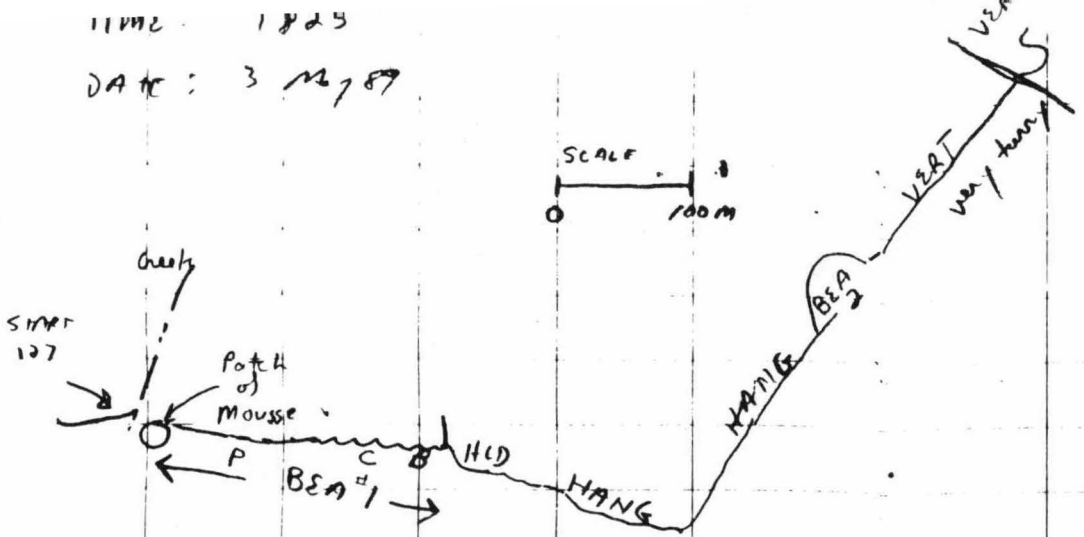
Time survey started 1825 Time survey ended 1845

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup notify Alyson archaeologist, C. Mobley, immediately.

TIME: 1825

DATE: 3 May 89



BEA #1 :- B/C . ΔT to MOD

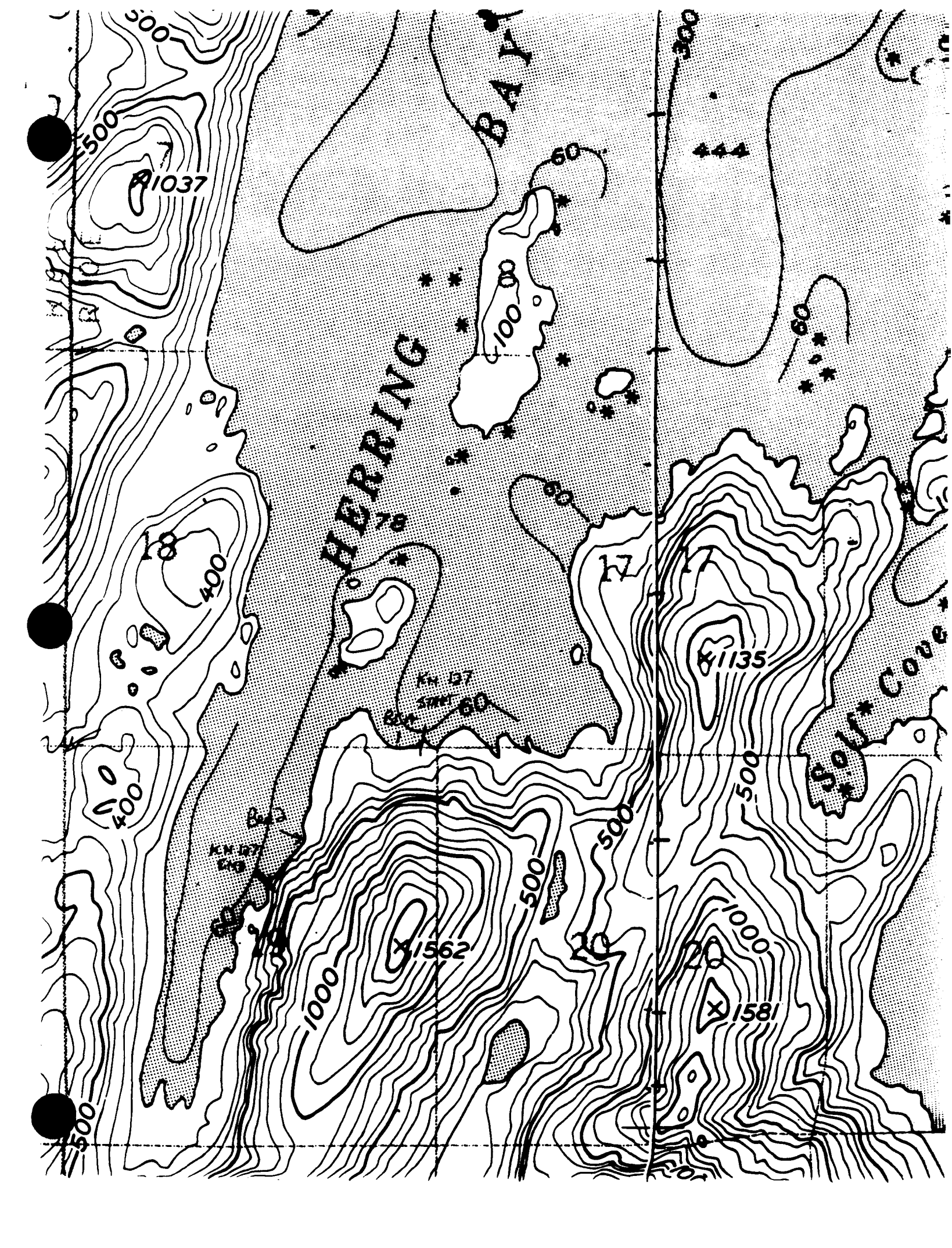
P

- turny
- area of impact : HITZ / MITZ
- penetration : 2 IN

BEA #2 - TRACE TAR
- Basically clean

BEA #1 Recommend : pick up mousse
- high pressure, hot water

Low Priority


BAY
HERRING
1037
1135
1562
1581
KN 137
START
KN 137
END
500
400
1000
60
444

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-128

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/3/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure wash on cobbles/boulders

Priorities Considerations:

Low priority for clean up

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5 21 -89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 3 May 89 / Time: 1855 Observer: Bob Duggan

Surveyed From: Foot/(Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION Herring Bay, Knight Is SEGMENT NUMBER KN 128

LENGTH OF SHORELINE SEGMENT: >100 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA #1)/COV/HLD/(STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 5 % / C 5 % / P ___ % / G ___ % / S ___ % / M ___ % / R 90 %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: (Y)/N % of Segment 100 Width of Band: 2-10 m

Sporadic: ~~(Y)~~/(N) % of Segment _____

Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: 2 cm

Pooled Oil: _____ % "Free" Oil: _____ % Coated: H 70 % / M 50 % / L ? %

Fresh _____ % Mousse _____ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

BEA # 1 - very small (50 m) mod/Lt tar.
- Rock wall
- beach is all Boulders & cobbles - steep backing
- low priority cleanup

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: — OBSERVER: SM Ban

LOCATION PREFIX: KN SEG. NO.: 128 LENGTH: 700 (M)

DATE: 5/3/89 TIME (HHMM): 1846 TIDE HT.: ~~0~~ +1½ (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Healthy in Lower ITZ

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Not oiled in lower ITZ

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

OTHER OBSERVATIONS: Sheen on water, & Black Tar on rocks

CLEANUP PRECAUTIONS: Avoid streams and lower ITZ

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: This steeply walled segment contains one steep boulder/cobble beach and is a low priority for cleanup

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site ~~350~~

Location Prefix KN Segment # 128 Length 700

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed None m Tree fringe surveyed None

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile high steep + boulder/cobble backed by steep rock face

Fresh Water Sources none

Sea Exposure west + sheltered

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Mobley

Time survey started 1945 Time survey ended 1900

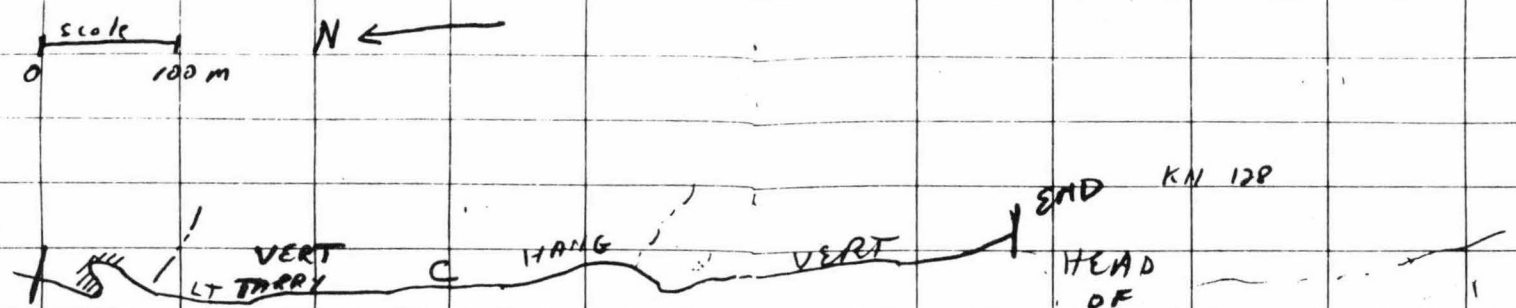
Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are identified during cleanup contact Gypsum archaeologist, C. Mobley immediately

KN 128

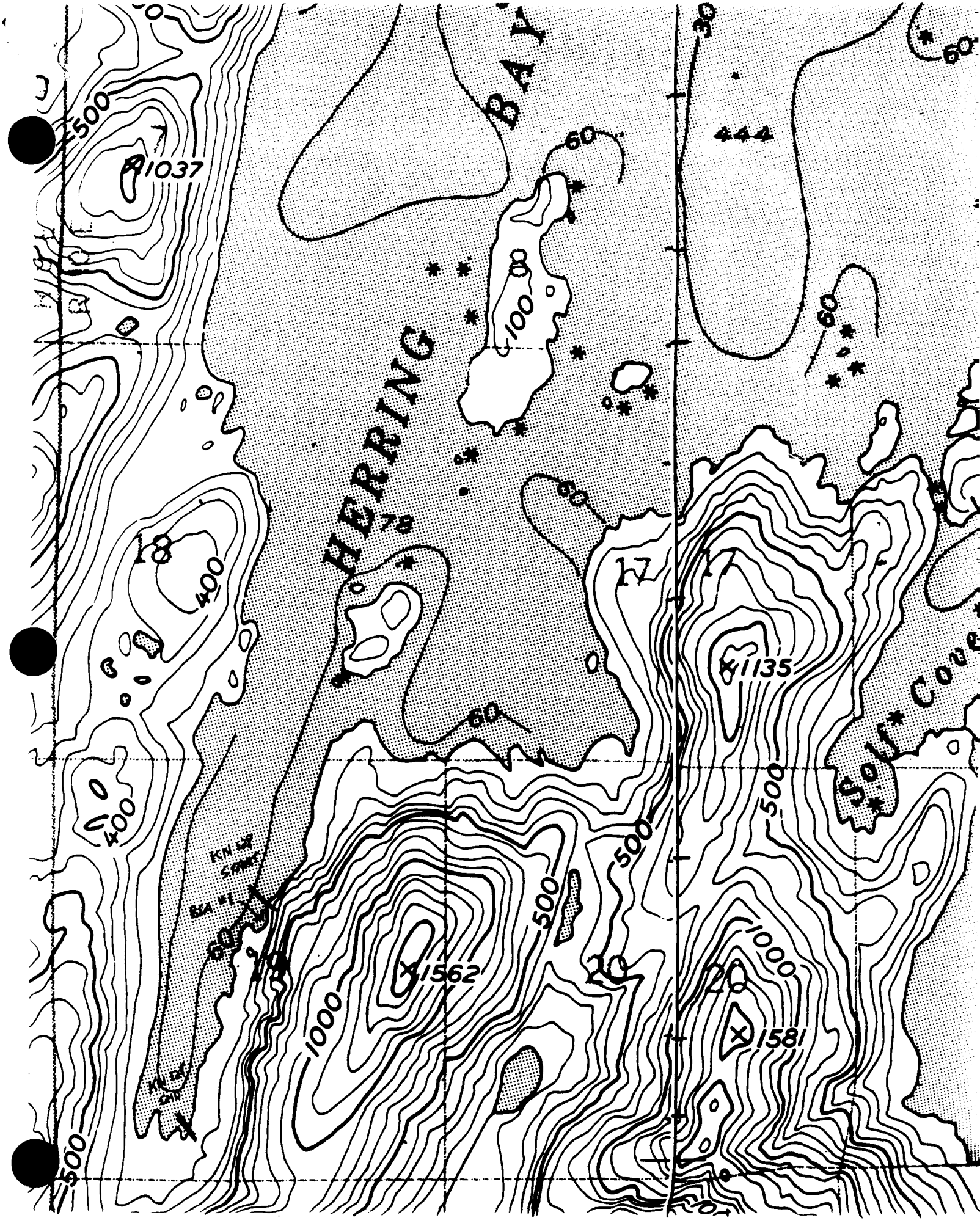
TIME: 1855

DATE: 3 MAY 89



BEAM #1 - TARRY ~~LT~~ MOD, C.B @ HITZ

LOW PRIORITY


HERRING
BAY
1037
1135
1562
1581
444
500
400
1000
60
30
18
17
20

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-129

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/4/89

Recommended Cleanup Activity(ies):

1) Vacuum or shovel oil and oiled debris at strandline.

2) Hot water, high pressure on cobbles, boulders, rocks.

3) Hot water low pressure with agitation on gravel beaches.

Priorities Considerations:

Remove thick mousse as high priority due to strong potential for re-oiling.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 May 89 / Time: 0900 Observer: R. Dugan

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/Cloud/(Rain)/Snow/Fog

LOCATION

LOCATION Knight Island Herring Bay (south end) SEGMENT NUMBER KN # 129

LENGTH OF SHORELINE SEGMENT: 500 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: (LANG)/(HANG)/(VER)

Wave Exposure: High/Med/(Low)

Sediment: B 20 % / C 20 % / P 10 % / G ___ % / S ___ % / M ___ % / R 50 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 10-50 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 4 cm Est. Oil Penetration: 8 cm

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H 100 % /M 80 % /L 40 %

Fresh ___ % Mousse 10 % Tar Formation: 80 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: (H)/M/L/

Comments:

- 2 beaches, both high priority for cleanup,
- 2 streams
- need hot water, shovel & rakes for globs
- ~~80%~~
- hot water & pressure necessary

Version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: E Knight Is. SITE: ——— OBSERVER: SM Barn

LOCATION PREFIX: KU SEG. NO.: 129 LENGTH: 500 (M)

DATE: 5/4/89 TIME (HHMM): 0900 TIDE HT.: + 2½ (M)

OILED ZONE: Splash (High Medium Low)

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dead on rocks, oiled - healthy subtidally

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

May be denser subtidally

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense as spat at water line or subtidally probably dead on oiled rocks, OK under water

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

oiled but alive

OTHER OBSERVATIONS: Thick mousse high in ITZ, Thais alive in stream

CLEANUP PRECAUTIONS: Avoid streams and lower ITZ.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____

Other None

BIRDS: ____

GENERAL OBSERVATIONS: This segment is two moderate to heavily oiled beaches with potential for recoiling high.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-129 Length 580m

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate to heavy

Width of beach zone surveyed 2-6 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile beaches moderately sloped

Fresh Water Sources each of two beaches has a stream

Sea Exposure northwest + protected

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # CW6 Frames 22, 23

B/W Roll # _____ Frames _____

Observer(s) C. Mehrer

Time survey started 0900 Time survey ended 0925

Cultural resource considerations/restraints:

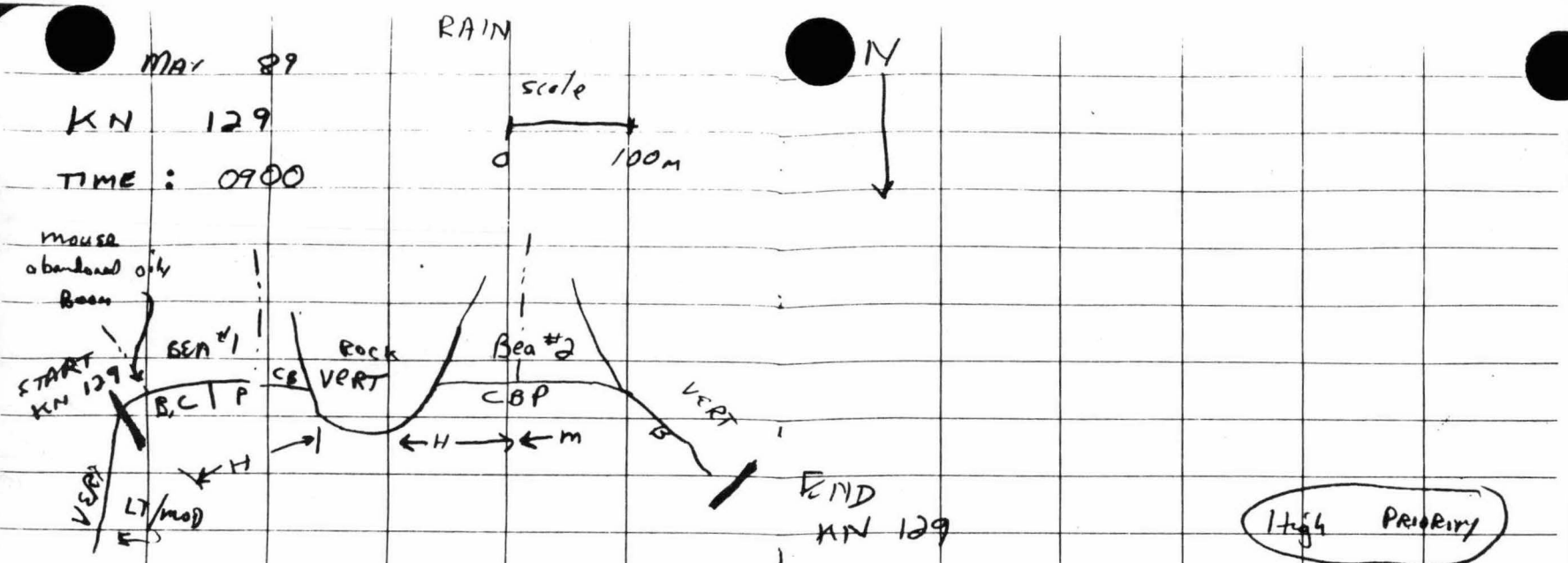
If heretofore undiscovered cultural resources are identified during cleanup notify Shoreline Archaeologist, C. Mehrer, immediately.

RAIN

MAY 89

KN 129

TIME : 0900



High PRIORITY

Beach #1 , C B, P

, Heavy oil , H, M, L ITZ , penetration 3 in

, width 10-50 meters

, continuous oil, mousse free oil

, debris H ITZ

need: vacuum or shovel

Hot H_2O, high pressure

Bea #2 - C, B, P, (5-50 m wide)

- Heavy oil east side with tarry pools 3" deep H, M, L
- Moderate oil west side H, M
- 3 in penetration

NEED - hot water / pressure

BAY
KERRING
1037
444
1135
1562
1581
Cove
500
1000
400
60
100
18
Stop
Km 107
Start
Km
129

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-130

LOCATION: (see enclosed map) KNIGHT ISLAND/HERRING BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/4/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure wash

Priorities Considerations:

Low

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 May 89 / Time: 0940 Observer: R. Dugan

Surveyed From: Foot/(Boat)/Helio/Plane Weather: Sun/Cloud/(Rain)/Snow/Fog

LOCATION

LOCATION Knight Island Herring Bay SEGMENT NUMBER 130

LENGTH OF SHORELINE SEGMENT: 1000 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B___% / C___% / P___% / G___% / S___% / M___% /R 100 %

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type logs

OIL

Degree of Oiling: Heavy/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H)/ M / L

Continuous: (Y)/N % of Segment 100 Width of Band: 2-10 m

Sporadic: Y/(N) % of Segment_____

Est. Oil Thickness where > 1cm:_____cm Est. Oil Penetration: _____cm

Pooled Oil: _____% "Free" Oil: _____% Coated: H 100 % /M____% /L____%

Fresh _____% Mousse _____% Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M/L)

Comments:

Continuous high angle rock slope w/ some boulders.
- entire length steep & tarry
- needs cleaning w/ hot H2O + pressure
- low porosity

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: — OBSERVER: SmBar

LOCATION PREFIX: KN SEG. NO.: 130 LENGTH: 1000 (M)

DATE: 5/4/89 TIME (HHMM): 0940 TIDE HT.: +2 (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder) Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Fucus is dead in oiled band. Healthy in lower ITZ.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Mytilus is ~~FR~~ more abundant in subtidal on these rocks

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

coated in oiled zone - dying

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None observed

OTHER OBSERVATIONS: Dead crab in water)

CLEANUP PRECAUTIONS: Clean at high tide

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: None

GENERAL OBSERVATIONS: This area is steep rock face and a low priority for clean up.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site ~~1000~~

Location Prefix KN 170 Segment # KN-130 Length 1000m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 20 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile steep wall face. No beaches present

Fresh Water Sources none

Sea Exposure east / sheltered

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed, yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Mobley

Time survey started 0940 Time survey ended 0955

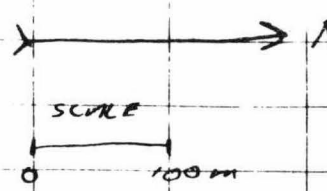
Cultural resource considerations/restraints:

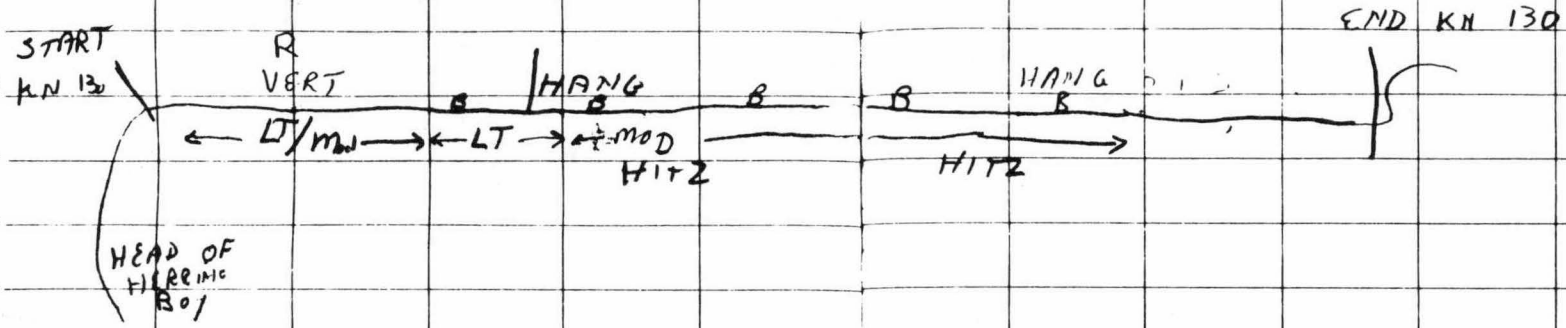
If subsurface unidentified cultural resources are uncovered during cleanup contact Bigos archaeologist, C. Mobley immediately

11 May 89

Time 0940

Segment: KN 130





Steep boulder & cobble beach below

High angle Rock slope, moderate oil in HITZ, very continuous 2 - 10 m oiled zone

(Low Priority)

NEED: Hwy Up

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-131

LOCATION: (see enclosed map) HERRING BAY/KNIGHT ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/4/89

Recommended Cleanup Activity(ies):

-Shovel up or vacuum blobbs of oil on Beach #1
-Hot water wash with pressure on beaches and rocky portions of aligiment.

Priorities Considerations:

Beach #1 - needs medium priority.
Rest of segment - needs low priority.

Ecological Constraints (from site survey):
Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.
Avoid streams and areas of Healthy Vegetation
Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger
State Historic Preservation Officer * Date: 5/13/89

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 May 89 / Time: 1000 Observer: R. Dugan

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/Cloud/(Rain)/Snow/Fog

LOCATION

LOCATION Herring Bay, Knight Island SEGMENT NUMBER KN 13/

LENGTH OF SHORELINE SEGMENT: 1300 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD/STRT) Slope: LANG/(HANG)/VER

Wave Exposure: High/Med/(Low)

Sediment: B 10 % / C 10 % / P 5 % / G ___ % / S ___ % / M ___ % /R 70 %

Drift Debris on Beach: (Yes)/No (Supra)/(Upper)/Mid/Lower Type logs, Fucus

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H)/ M / L

Continuous: (Y)/N % of Segment 95 Width of Band: 2-20 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 5 cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H 90 % /M 10 % /L — %

Fresh ____ % Mousse 10 % beach only / Tar Formation: 95 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L/

Comments:

Beach #1, moderate to heavy oil w/ 10% mousse, medium priority for cleaning with shovels, rakes & hot water w/ pressure

Beach #2, lt oil, low priority

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: - OBSERVER: SM BAN

LOCATION PREFIX: KN SEG. NO.: 131 LENGTH: 1300 (M)

DATE: 5/4/89 TIME (HHMM): 1000 TIDE HT.: +2' (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Healthy in lower ITZ

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

More dense in lower ITZ

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

coated in oiled zone - dead

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Oiled

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Oiled

OTHER OBSERVATIONS: Mousse pools high in ITZ - Thais oiled but alive

CLEANUP PRECAUTIONS: Avoid areas of healthy vegetation and/or streams

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___

Other None

BIRDS: ___

GENERAL OBSERVATIONS: Two beaches in this segment. First Beach moderate to heavy oil and a medium priority for clean up. Second beach is lightly oiled and is a low priority.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site

Location Prefix KN Segment # KN-131 Length 1300

Survey Method:

Air (A - indicate on map) Boat (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility Beach 1 moderate to heavy; beach 2 light.

Width of beach zone surveyed 10m m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) SHP

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Moderate

Fresh Water Sources stream on beach 2

Sea Exposure east / protected

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW6 Frames 24,25,26,27,28,29,30,31

B/W Roll # Frames

Observer(s) C. Wilson

Time survey started 1015 Time survey ended 1040

Cultural resource considerations/restraints:

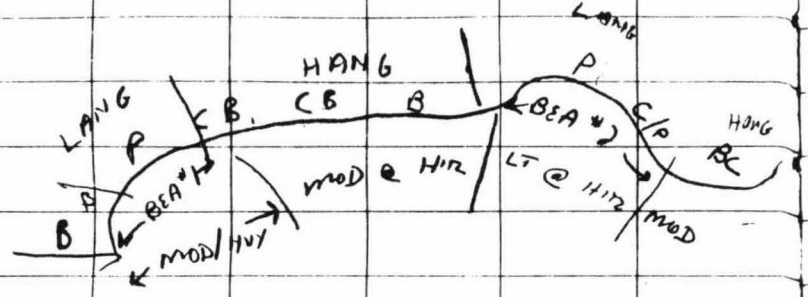
Keep people and equipment off of large wooden flyer at northeastern end of beach 2. If heretofore undiscovered cultural resources are identified during cleanup notify Exxon archaeologist, C. Mobley, immediately.

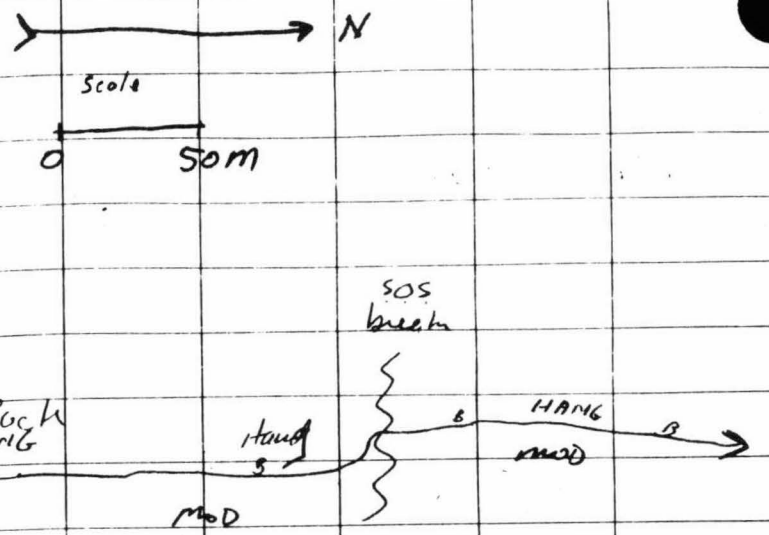
4 MAY 89

TIME: 1000

WX: Rain

Segment: 131





BEA #1 - Mod/Heavy oil, heavy pods in HIT2
- 10% mouse HIT2
- 20m width

NEED: HOT H2O + passage

medium priority

BEA #2 - LT @ HIT2
-

Low Priority

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 8, 1989 SHORELINE SEGMENT KN-132

LOCATION: (see enclosed map) Knight Island/Herring Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/4/89

Recommended Cleanup Activity(ies):
Rake and shovel up mouse patches.
Hot water wash for beaches and rock faces.

Priorities Considerations:
Beaches (3) - medium priority
Rock faces - low priority

Ecological Constraints (from site survey):
Avoid large stream as it is probably anadromous.

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological Constraints (from site survey):
Archaeological monitoring is needed during cleanup of central 1/3 of segment if cleanup is conducted.

Charles E. Holmes
State Historic Preservation Officer *

Date: May 10, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 May / Time: 1045 Observer: R. Dugan

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/Cloud/(Rain)/Snow/Fog

LOCATION

LOCATION _____ SEGMENT NUMBER KN-132

LENGTH OF SHORELINE SEGMENT: 800 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(3 BEA)/COV/(HLD)/STRT Slope: LANG/(HANG)/VER

Wave Exposure: High/Med/(Low)

Sediment: B (20) % / C 15 % / P 10 % / G ___ % / S 5 % / M ___ % /R 50 %

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type seaweed / logs

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M)/ L

Continuous: (Y)/N % of Segment 100 Width of Band: 2 - 30 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: _____cm Est. Oil Penetration: 5 cm

Pooled Oil: _____% "Free" Oil: _____% Coated: H 100 % /M 70 % /L 20 %

Fresh _____% Mousse _____% Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L/

Comments:

- 3 beaches in Segment - all are moderately oiled

- need rakes & shovels for heavy globs, hot-pressure/H2O for the rest

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: — OBSERVER: SM Burn

LOCATION PREFIX: KN SEG. NO.: 132 LENGTH: 800 (M)

DATE: 5/4/18 TIME (HHMM): 1045 TIDE HT.: +3-3½ (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)N Sparse Y/N None Y/N

Healthy in subtidal

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

More dense in subtidal area

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

More dense in subtidal

Littorina
Patchy Y/N Contin. Y/N Dense (Y)N Sparse (Y)N None Y/N

Several oiled

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)N None Y/N

OTHER OBSERVATIONS: Oiled debris face upstream at beach 3

CLEANUP PRECAUTIONS: Avoid Stream in Beach 3

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: Merganser

GENERAL OBSERVATIONS: Three beaches, mod-heavy on Beach 1, Moderate on beaches 2+3

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-132 Length 600

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 2-3 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) ~~None~~ FCR

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile moderate beaches

Fresh Water Sources two streams

Sea Exposure northeast/protected

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 2 3 (4) 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # CW-6 Frames 31, 32, 33

B/W Roll # _____ Frames _____

Observer(s) C Wilson

Time survey started 1045 Time survey ended 1130

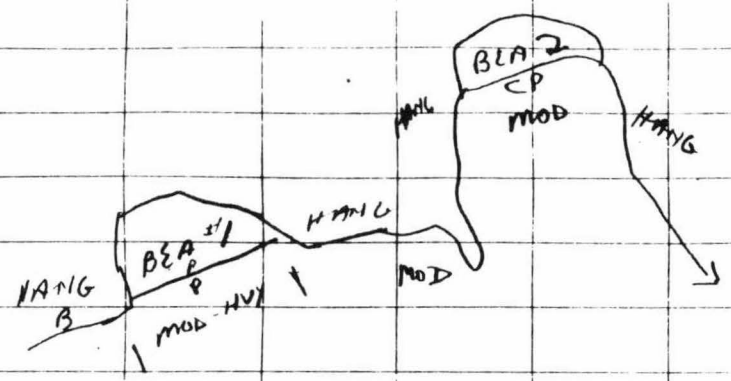
Cultural resource considerations/restraints:

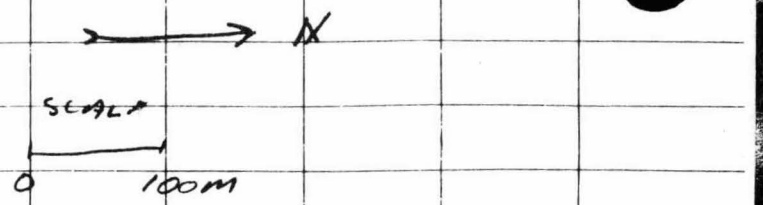
People should be kept out of the northern part of beach 3 on the north side of the creek near the small gravel bank. If heretofore undiscovered cultural resources are uncovered during cleanup notify Exxon archaeologist, C. Mobley, immediately.

4 MAY 89

KM 132

TIME: 1045





BEA #1 : mod/heavy oil w/ 10% mouse in H, M, LITZ

: tarry - mousse/ globby pools

:

NEED : SHOVEL, Rake
HOT H_2O Pressure

BEA #2 : Mouse patches & tarry to 3 in in pools

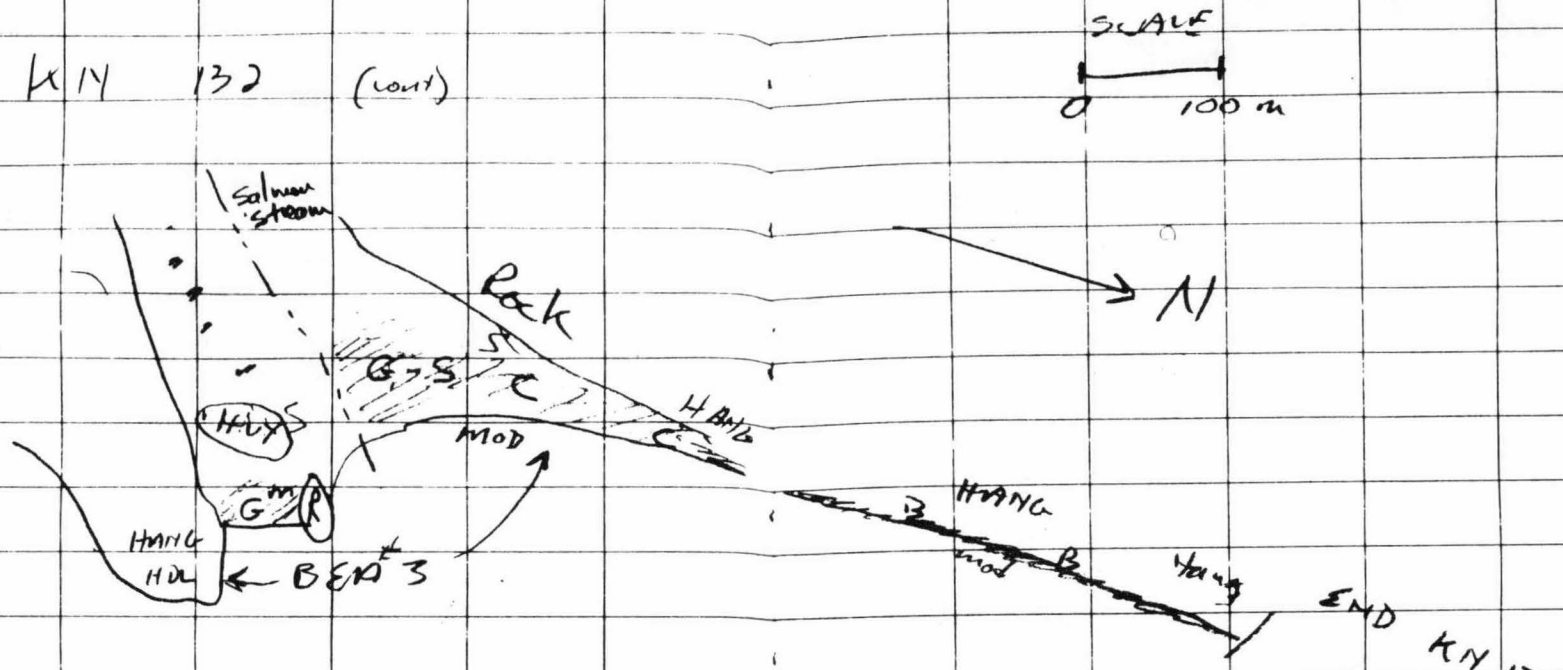
: similar to Bea 1

: H, M, LITZ, CP

: 3 in penetration

Medium priority

KIN 132 (cont)



BEN #3

- Mod o.l w/ some pools 200m upstream
- Mod @ H,M
- organic debris

MODERATE PRIORITY

Need Poles, shovel
Hot H_2O

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89 SHORELINE SEGMENT KN-133

LOCATION: (see enclosed map) Small and Large Islands in Herring Bay, Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/4/89

Recommended Cleanup Activity(ies):

1) Hot water, high pressure wash on boulders and cobbles

2) Vacuum mousse (or shovel moussed debris) prior to washing.

Priorities Considerations:

Low priority except for Beach no.1 on Big Island which is medium priority for clean-up.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Avoid streams and areas of healthy vegetation

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: May 10, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 4 May 89 / Time: 1710 Observer: R. Dugan

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/Cloud/(Rain)/Snow/Fog

LOCATION

LOCATION Herring Bay Knight Island SEGMENT NUMBER KN - 133

LENGTH OF SHORELINE SEGMENT: 2500 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(3 BEA)/COV/(HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 25 % / C 10 % / P 5 % / G ___ % / S ___ % / M ___ % /R 60 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M / L)

Continuous: (Y)/N % of Segment 100 Width of Band: 2 - 30 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 5 cm

Pooled Oil: 1 % "Free" Oil: 2 % Coated: H 100 % /M ___ % /L ___ %

Fresh ____ % Mousse 2 % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: (H/M/L/)

Comments:

- Segment includes 2 islands with 1 200m Beach (BEA #1) and 2 v. small beaches. Entire segment moderately oiled, very tarry, (medium priority)
- Low priority for cleanup except Bay Beach #1 (see map)
- Cleanup - high pressure/hot H2O wash: shovel up goo and tar - natural focus

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: — OBSERVER: SM BAN

LOCATION PREFIX: KN SEG. NO.: 133 LENGTH: ~~3000~~ 2500 (M)

DATE: 5/4/89 TIME (HHMM): 1715 TIDE HT.: +1½ (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder ~~Cobble~~ Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Oiled in upper ITZ

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Covered with mousse, Not Yet Dead

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Both Spat and adults dense - most oiled

Littorina

Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

oiled

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

oiled

OTHER OBSERVATIONS: Heavy mousse in upper ITZ, Chais found oiled but alive. Katharina also oiled but alive

CLEANUP PRECAUTIONS: Avoid streams and areas of Healthy Fucus in lower ITZ

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___

Other None

BIRDS: ___

GENERAL OBSERVATIONS: This segment consists of mostly vertical rock face with several small beaches

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/4/89 Location Knight Island Site _____

Location Prefix KN Segment # 133 Length 15-00

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 0-2 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) CBN

General observations justifying survey method and segment's site probability:

Shore Profile Beach gravel was heavily oiled and very steep and heavily cobbled. Beach above was fine cobble and sand and was heavily

Fresh Water Sources stream near head

Sea Exposure sound/protected

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # CW6 Frames [redacted],34,35,36

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1715 Time survey ended 1900

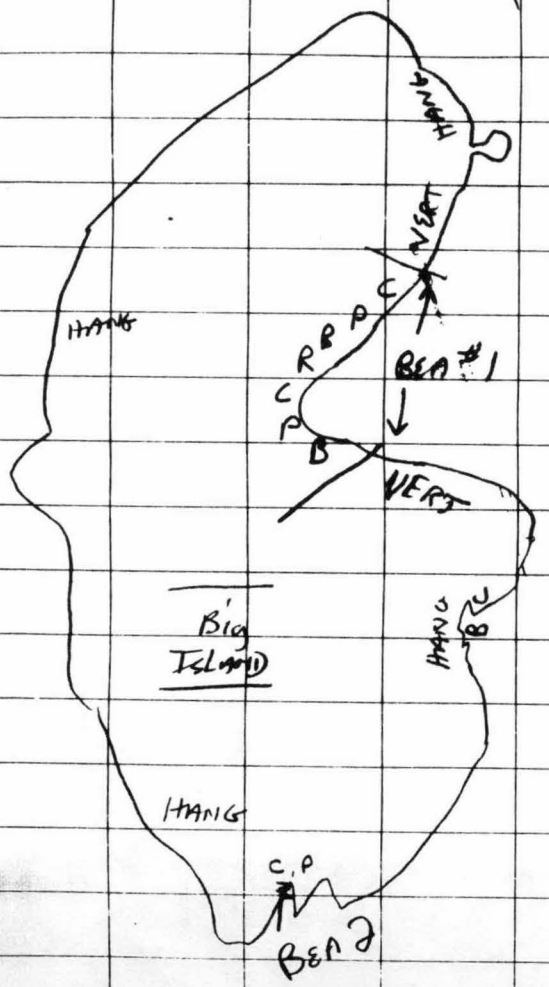
Cultural resource considerations/restraints:

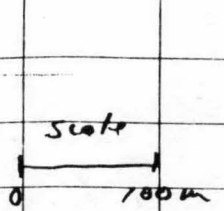
If heretofore undiscovered cultural resources are located during cleanup notify Exxon archaeologist immediately.

1 May 86

TIME: 1710

Segment: KW133, Island in Herring B.

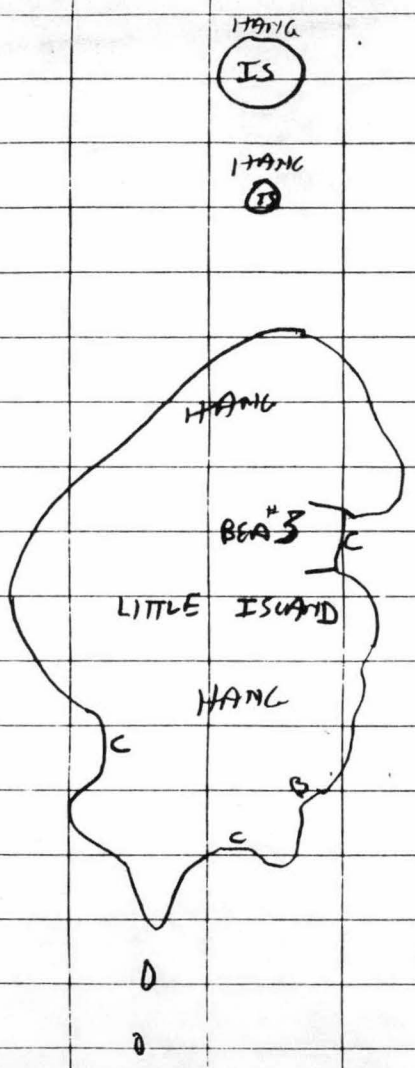




Bea #1 - Heavy oil = to 5cm
- L, M, Mitz / 10-30 m
- tarry pools, 16% mousse

Bea #2 - double beach, very narrow
Lt to Mod tarry, L, M itz
- 15 meters wide
- no debris
- 5 cm penetration

KN-133 cont



N

Bea #3 - 50 m wide
- MOD, H. Mitz
- tarry

- Both islands are moderately oiled all around in H. Mitz
- low priority
- little potential for much recoling except BEA #1

SHORELINE CLEANUP PROGRAM

DATE May 8, 1989 SHORELINE SEGMENT KN-300

LOCATION: (see enclosed map) Knight Island/Herring Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity(ies):
Low pressure flushing or flooding on beaches, hot water acceptable.
Moderate to high pressure on rocks or boulders if necessary.
Clean suspected seal haulout with whatever means necessary.

Priorities Considerations:
Oiling is primarily along the upper intertidal area. With the possible exception of a few beaches, clean-up may not be warranted at this time.

* Seal haulout are cleaned regardless.

Ecological Constraints (from site survey):
Avoid cleaning headlands.Looks very healthy as do most of the vertical walls. For the beach just south of the headlands use low pressure and/or flooding. Occasional pocket beaches. Use any method necessary. Don't clean vertical surfaces.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. H'Doubler
State Historic Preservation Officer *

Date: May 9, 1989

EXXON: _____ Date: 5-14-89

FOSC: _____ Date: 5-21-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/2/89 / Time: 0700 Observer: Marty Cramer

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SEGMENT NUMBER KN-300

LENGTH OF SHORELINE SEGMENT: 3200 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/HLD/(STRT) Slope: LANG/(HANG)/(VER) (Beaches; coves & straights)

Wave Exposure: (High/Med)/Low

Sediment: B 15 % / C 10 % / P 5 % / G ___ % / S ___ % / M ___ % / R 70 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type ~~logs/boom/kelp~~

OIL

Degree of Oiling: Heavy/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M) / L

Continuous: (Y)/N % of Segment 20 Width of Band: 15 m

Sporadic: (Y)/N % of Segment 60

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: < 1 cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H ___ % / M 5 % / L 95 %

Fresh 100 % Mousse ____ % Tar Formation: ____ %

Drift Debris Oiled ? (Yes)/No (Supra/Upper)/Mid/Lower Amount: H/M/(L)

Comments:

Light coating of black oil on northern end of beaches near Herring Pt. Mostly mid to upper intertidal w/ very light coating in lower along beaches. Flaked boom in upper intertidal on Beach A w/ oil trapped between flakes. Majority of segment is vert rocky or high angle B/C. Oiling is light to mod. & sporadic, mostly on southeastern facing sides of points and coves. Rocks just offshore of southern end of segment are moderately oiled and apparently a seal haulout area as several seals were noted around rocks. (Photos T36-19 thru 21)

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISL SITE: HERRING PT OBSERVER: LMW

LOCATION PREFIX: KN SEG. NO.: KN 300 LENGTH: ~3200 (M)

DATE: 05/02/89 TIME (HHMM): 0656 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks! Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N (Contin) Y/N (Dense) Y/N Sparse Y/N None Y/N

Very Heavy fucus growth, esp along Northern portion

Mytilus (Mussels): (Patchy) Y/N Contin. Y/N (Dense) Y/N Sparse Y/N None Y/N

Very dense beds on none vertical surfaces

Balanus (Barnacles): Patchy Y/N (Contin) Y/N (Dense) Y/N Sparse Y/N None Y/N

Dense, mixed w/ fucus on Vertical surfaces

Littorina

(Patchy) Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Patchy distribution in this area. Fairly sparse where they do occur.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N (None) Y/N

None seen

OTHER OBSERVATIONS: Light to Moderate oiling, most of segment is vertical rock w/ a very occassional pocket beach (all small <30 m). Exceptions are the headlands and Beach areas to S of headl

CLEANUP PRECAUTIONS: Avoid healthy headlands esp. Also watch out for LITZ. Seal haulout area should be cleaned. Most of the stuff w/ a southern exposure is dead. Numerous Nucella

MAMMALS: Otters — Harbor Seals 7 Sea Lions — Whales —
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Herring Pt South to Seal Haulout ~~of~~ of NW of Large Isl.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 2 MAY 89 Location KNIGHT ISLAND Site HERRING BAY

Location Prefix KN Segment # 300 Length 3200M

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) N/A Data Source N/A

Oil conditions/beach visibility MODERATE TO HEAVY, VARIES IN NATURAL TRAPS.

Width of beach zone surveyed 10-25 m Tree fringe surveyed AT COBBLE BEACH 10-15M

Cultural resources observed in beach zone (AHRS code) HTD (FLOTSAM)

Cultural resources observed in tree fringe (AHRS code) POSSIBLE RKS CMT

General observations justifying survey method and segment's site probability:

Shore Profile PREDOMINATELY ROCK WALLS AND REEFS IN FRONT OF CLIFFS. SMALL COBBLE BEACHES IN BETWEEN ROCKY HEADLANDS. LG COBBLE - BOULDER AGGREGATE INDICATES HIGH ENERGY BEACH.

Fresh Water Sources SMALL STREAMS AND SEEPS

Sea Exposure WAVE FETCH TO N BY NW, VISIBILITY TO W. AND N.

Access/Safety GOOD IN CALM WEATHER, ROCKS ARE STEEP W/ POOR FOOTINGS BEACHES HAVE REEFS OFFSHORE, STEEP SLOPE = DANGER IN ROUGH SEAS

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # _____ Frames _____

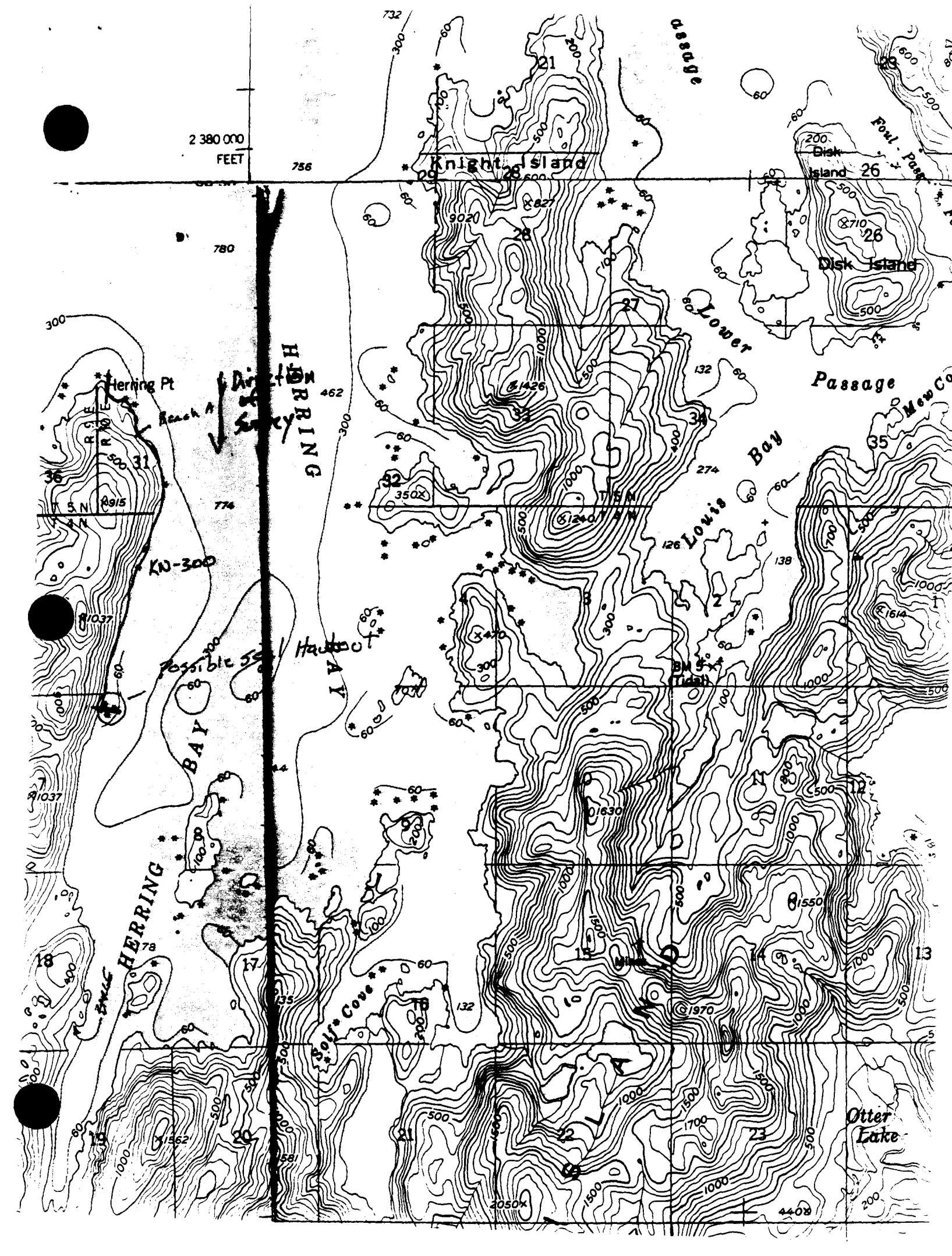
B/W Roll # T3A-1 Frames BEACH 1 AND 2: 2-5 / BEACH 3: 6-8

Observer(s) B. REAM

Time survey started 0700 Time survey ended 0730

Cultural resource considerations/restraints:

BEACH ZONE EXPERIENCES HIGH ENERGY WAVE ACTION FLOOD + WASH CLEANING STRATEGY IS ACCEPTABLE. THERE IS A STRONG ATTRACTION VALUE FOR THE UPLAND AREAS AND EXTRA CAUTION SHOULD BE EXERCISED TO KEEP WORKERS BACK. THIS AREA HAS MANY SMALL OVERHANGS AND CREVICES WHICH COULD CONTAIN CULTURAL MATERIALS. ALSO, BLUFF TOP IS FLAT + PROTECTED MAKING IT A LIKELY CAMPSITE


2 380 000
FEET
Knight Island
Disk Island
Foul Pass
Lower Passage
Herring Pt
Herring Bay
Louis Bay
Mew Co
KW-300
Possible Ss
Haulout
Sulfur Cove
Otter Lake
T 5 N
R 9 W
R 10 W
R 11 W
R 12 W
R 13 W
R 14 W
R 15 W
R 16 W
T 5 N
T 4 N
T 3 N
BM ⊙ (Tidal)
Mile 10
Mile 15

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/2/89 SHORELINE SEGMENT KN-301

LOCATION: (see enclosed map) From seal halout rocks south to Point, to across from Southern tip of Island and to the South East end of stream mouth.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/2/89

Recommended Cleanup Activity (ies)
1) Medium to high pressure washing on rock faces and high angle boulder beaches - hot water acceptable.

2) Low pressure flushing/flooding on low angle beaches to avoid additional penetration - hot water acceptable.

Priorities Considerations:

Pooled and fredd oil in upper intertidal area should be recovered with sorbents, vacuum or manual removal prior to flushing.

Ecological Constraints (from site survey):

Avoid streams or banks of streams unless the Resource Advisory Team Biologist authorizes cleanup on a site-specific basis.

Archeological ~~Constraints~~ (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger Date: 5/13/89
State Historic Preservation Officer *

EXXON: _____ Date: 5/14/89

FOSC: _____ Date: 5/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

BEACH A

Date: 5/2/89 / Time: 1420 Observer: M. Gomez

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knights Island SEGMENT NUMBER KN 301

LENGTH OF SHORELINE SEGMENT: 260 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 70 % / C 20 % / P 5 % / [redacted] / S 5 % / M ___ % / R ___ %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 100 Width of Band: 20 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: < 1 cm

Pooled Oil: 2 % "Free" Oil: 8 % Coated: H ___ % / M 30 % / L 50 %

Fresh 95 % Mousse 5 % Tar Formation: ___ %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Angular boulder cobble beach including stream at southern end - light to moderate coating on rocks - primarily black oil - pooled oil up to 3 cm deep in small pockets at small point on beach especially behind log - small amt of free oil between cobbles & boulders - very little penetration Recommend low pressure flushing / flooding - hot water o.k.

SHORELINE OIL EVALUATION

Date: 5/2/89 / Time: 1400 - 1530 Observer: MARTY CRAMER

Surveyed From: (Foot/Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-301

LENGTH OF SHORELINE SEGMENT: 164 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: (SPI/BEA/COV/HLD/STRT) Slope: (LANG/HANG/VER)

Wave Exposure: High/(Med/Low)

Sediment: B 25 % / C 25 % / P 15 % / [redacted] S 5 % / M ___ % / R 30 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/fucus

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M) / L

Continuous: (Y)/N % of Segment 90 Width of Band: 20 m

Sporadic: (Y)/N % of Segment 10

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: ≤ 1 cm

Pooled Oil: 1 % "Free" Oil: 4 % Coated: H ___ % / M 35 % / L 60 %

Fresh 95 % Mousse 5 % Tar Formation: ___ %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/M/(L)

Comments:

Primarily vert. rock or high angle boulder beaches at north end of segment becoming low angle boulder/cobble beaches at south end - Degree of oiling increases to south - Heaviest oil on beaches is along top of upper intertidal where some "fresh" and small pockets of thick mousse exist. Very little penetration. Partially oiled seal hauled out on rocky pt between beaches B & C. (Photo T3G-1-27). Flowing stream enters Bay between beaches A & B.

version: 4/24/89

ECOLOGICAL EVALUATION

Seal Haul out

LOCATION: KNIGHT ISL SITE: ~~to~~ Pt. W of Stream OBSERVER: LMW

LOCATION PREFIX: KN SEG. NO.: 301 LENGTH: 1500 (M)

DATE: 5/2/89 TIME (HHMM): ~~09:00~~ 1400 TIDE HT.: ~~2~~ + 7 ft ~~MLLW~~

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): (Patchy) Y/N Contin. Y/N Dense Y/N (Sparse) Y/N None Y/N

With Continuous Dense on headlands

Mytilus (Mussels): (Patchy) Y/N Contin. Y/N Dense Y/N (Sparse) Y/N None Y/N

Only Seen on headlands

Balanus (Barnacles): (Patchy) Y/N Contin. Y/N Dense Y/N (Sparse) Y/N Nohe Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N (Sparse) Y/N None Y/N

few seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N (None) Y/N

None Seen

OTHER OBSERVATIONS: This area heavily oiled w/ dark brown & black oil & mousse. Clean as necessa

CLEANUP PRECAUTIONS: Avoid cleaning streams or getting oil into stream bed. ~~Other than that, use~~

MAMMALS: Otters 1 Harbor Seals 1 Sea Lions ___ Whales ___
~~Other~~ Offshore approx 300 m Near a portion of Seg.

~~BIRDS:~~ Harbor Seal (♀) Sunning herself on Rock

GENERAL OBSERVATIONS: ___

SHORELINE OIL EVALUATION

BEACH C

Date: 5/12/89 / Time: 1500 Observer: Marty Cramer

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Knight Island SEGMENT NUMBER KN 301

LENGTH OF SHORELINE SEGMENT: 75 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA/COV)/HLD/STRT Slope: (LANG)/HANG/VER

Wave Exposure: High/Med/(Low)

Sediment: B 30 % / C 40 % / P 20 % / G ___ % / S 10 % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/ fucus

OIL

Degree of Oiling: (Heavy/Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP/(H / M)/ L

Continuous: (Y)/N % of Segment 100 Width of Band: 25 m

Sporadic: Y/N % of Segment ___

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: 1 cm

Pooled Oil: 5 % "Free" Oil: 10 % Coated: H ___ % /M 25 % /L 60 %

Fresh 80 % Mousse 20 % Tar Formation: ___ %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L

Comments:

Beach consists of angular boulders & cobbles underlain by pebbles & sand - pretty much, 100% coated with black oil except along top of upper intertidal where thick mousse was observed as free oil between cobbles and in small pools. Small amts of oiled fucus in upper intertidal

Recommend low pressure flushing/flooding to prevent penetration - both water & Seal observed hauling out (slightly oiled) on rocky pt north of Beach 15" PHOTO T3G-1-27

(version 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 02/MAY/89 Location KNIGHT ISLAND Site HERRING BAY

Location Prefix KN Segment # 301 Length 1500 M

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) N/A Data Source N/A

Oil conditions/beach visibility VARIABLE DEPENDING UPON EXPOSURE

Width of beach zone surveyed 30-35 m Tree fringe surveyed 20 M

Cultural resources observed in beach zone (AHRS code) N/A

Cultural resources observed in tree fringe (AHRS code) CMT (TIMBER HARVEST AHRS CA 1940)

General observations justifying survey method and segment's site probability:

Shore Profile PREDOMINATELY STRAIGHT ROCKY REEF INTERSPERSED WITH BOULDER BEACH FRONTING SHEER ROCK WALLS TO 25 M ASL. ONE LONG COBBLE BEACH + POSSIBLE SALMON STREAM AT EAST END OF SECTION.

Fresh Water Sources ABSENT ALONG ROCK WALLS, 1 LG + 1 SM CLEAR STREAMS AT COBBLE BEACH

Sea Exposure OPEN TO HERRING BAY ON EAST, PROTECTED FROM NORTH ROLLERS ENTERING BAY

Access/Safety SAND/GRAVEL FLAT BOTTOM, EASY APPROACH AND SHELTER

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # _____ Frames _____

B/W Roll # T3A-1 Frames BEACH 1 9+10

Observer(s): B. REAM

Time survey started 0900 Time survey ended 0940

Cultural resource considerations/restraints: NO RESTRAINTS ALONG REEF/ROCK WALL SECTIONS: LIMITED ACCESS NO FOOTING. NO RESOURCES OBSERVED ON BEACH, BUT PROXIMITY TO LG. CLEAR STREAM SUGGESTS THE LIKELYHOOD OF FISHING SITE. IF PRESENT, SUCH REMAINS WILL BE LOCATED ON LOW BLUFFS OR UPSTREAM CA. 100M AT HIGH WATER MARK. BOTH AREAS ARE LIKELY TO ATTRACT RECREATIONAL USE.

TREATMENT MANUAL. 6/15/89

SEG KN-110 INSPECTION # 1

DATE 1 JUL 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical OIL SKIMMER
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Gross Contamination Removed. SEGMENT IS ENVIRONMENTALLY STABLE.

Signature Elmer W Saugll Date: 7/1/89 Time: 0900

Printed Name ELMER W SAUGLL

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
25	Medium
45	Light
10	Very Light
20	None
100 %	

Subsurface Oil

- [ ] Yes
- [x] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Gross contamination removed. Little mobile oil. Recommend putting seals/pans in specified areas to monitor mixing. Have to harvest

Signature Danny R Timmons Date: 7/1/89 Time: 1020

Printed Name Debray R. TIMMONS, ENVIRONMENTAL ADEC

FOSC rep

Demobilization approved/disapproved

Comments NO MOBILE OIL SIGHTED

Signature [signature] Date: 7/1/89 Time: 1020

Printed Name [illegible]

KNIK

DATE 8-30-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments

Signature Date: Time:

Printed Name

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
0%	Heavy
10%	Medium
10%	Light
10%	Very Light
70%	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [ ] Yes - necessary
- [x] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
2 1/2%	Heavy
15%	Medium
70%	Light
15%	Very Light
6	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Bulk of moderate oil is at one beach at S. end of segment with a narrow 2nd band on another. All beaches scheduled for

Signature Date: 8/30 Time: 1912

Printed Name

FOSC rep Demobilization approved/disapproved

Comments

Signature Date: 8/30 Time: 1930

Printed Name ISCC

COPY: EXXON ADEC POSC ISCC

4.75

SEG KN 112 INSPECTION # 1

DATE 8/2/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-112 is complete. Ready for demobilization and deployment to new segment.

Signature R S Healey Date: 8/2/89 Time: 1408

Printed Name Robert T. Healey

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
	Heavy
5%	Medium
20%	Light
15%	Very Light
60%	None
100 %	

Subsurface Oil: [x] Yes [ ] No

Comments Above scoured sheet and @ cobble / cobble beaches area will continue to produce sheen

Reassessment

[x] Yes - necessary [x] No - not necessary unless re-oiled

ADEC rep Comments demobilization approved. Gross contamination removed. Reassessment not necessary unless re-oiled

Signature Curtis Conner Date: 8/2/89 Time: 1417

Printed Name Curtis Conner

FOSC rep Demobilization approved/disapproved

Comments No heavy or gross contamination - area will continue to sheen

Signature Thomas D. Harrison Date: 8/2/89 Time: 1420

Printed Name Thomas D. Harrison LT USCG

COPY: EXXON ADEC FOSC ISCC

SEG KN-113 INSPECTION # 1 **SEGMENT**

DATE 8/2/89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-113 is complete, ready for demobilization and deployment to new segment

Signature R T Mealey Date: 2-18 89 Time: 1409

Printed Name ROBERT T. MEALEY

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
1%	Heavy
25%	Medium
30%	Light
20%	Very Light
24%	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

Comments MEDIUM OIL TRAPPED IN PEA GRAVEL / COBBLE BEACHES

Reassessment:

- [x] Yes - necessary
- [x] No - not necessary unless re-oiled

ADEC rep Comments Demobilization approved. Gross contamination removed. Recommend placement of sorbent booms around gravel beaches

Signature Curtis Conner Date: 8/2/89 Time: 1419

Printed Name Curtis Conner

FOSC rep Demobilization approved/disapproved

Comments GRAVEL/COBBLE BEACHES WILL CONTINUE TO SHEEN OFF

Signature Thomas D. Date: 8/2/89 Time: 1424

Printed Name THOMAS D JACKSON LT USCG

COPY: EXXON ADEC FOSC ISCC

KN 114

TREATMENT MANUAL. 6/15/89

SEG KN-114 INSPECTION # 1 SEGMENT

DATE 8/2/89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [ ] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-114 is complete, ready for demobilization and deployment to a new segment.

Printed Name ROBERT I. MEALEY

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
5	Medium
20	Light
15	Very Light
60	None
100 %	

Subsurface Oil

[X] Yes [ ] No

Comments Area will continue to produce sheen. Slight sand gravel beaches

Reassessment

[X] Yes - necessary [ ] No - not necessary unless re-oiled

ANFA ran Comments Oiling is light to moderate in isolated areas between cracks in rocks.

Signature Curtis Conner Date: 8/2/89 Time: 7 1/2 G

Printed Name Curtis Conner

FOSC rep **Demobilization approved/disapproved**

Comments DEMOBILIZATION APPROVED.

NO Heavy or gross contamination area will continue to show

Signature Chester B. Socha Jr. Date: 8/2/89 Time: 2300

Printed Name CHESTER B. SOCHA JR.

QMC USCGR

1275m

TREATMENT MANUAL, 6/15/89

USCG KN115 INSPECTION # 1 SEGMENT

DATE 7/17/89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☑ Hot water wash
- ☑ Warm water wash
- ☑ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical SWIPE & HAND WIPE
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN 115 IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT.

Signature [signature] Date: 7/17/89 Time: 1355

Printed Name ROBERT A. SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
32.5	Medium
67.5	Light
0	Very Light
0	None
100 %	

Subsurface Oil: ☐ Yes ☑ No

Comments

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments Gross surface contamination removed. Some scaly coverage

Signature [signature] Date: 7/17/89 Time: 1355

Printed Name DOUGLAS H. DASHER, EE III, ADEC

FOSC rep Demobilization approved/disapproved

Comments DO GROSS CONTAMINATION

Signature [signature] Coast Date: 7/17/89 Time: 1355

Printed Name [illegible] Coast

TREATMENT MANUAL, 6/15/89

SEG KN-116 INSPECTION # 1 **SEGMENT** 650 m

DATE 17 JUL 89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- ☑ Hot water wash
- ☑ Warm water wash
- ☑ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical Manual wipe
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN 116 IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW [redacted] SEGMENT.

Signature Robert A Simmons Date: 7/17/89 Time: 1752

Printed Name ROBERT A. SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
10	Medium
25	Light
65	Very Light
0	None
100 %	

Subsurface Oil

☐ Yes ☑ No

Comments

Reassessment

☐ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments Gross contamination removed.

Signature Douglas H. Dasher Date: 7/17/89 Time: 1752

Printed Name DOUGLAS H. DASHER, ENVT III, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments NO GROSS CONTAMINATION

Signature [signature] Date: 7/17/89 Time: 1754

Printed Name PAUL DOUGLAS COAST

TREATMENT MANUAL, 6/15/89

SEG KN 117 INSPECTION # 1

DATE 7/30/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☒ Hot water wash
- ☐ Warm water wash
- ☒ Water deluge
- ☐ Mechanical
- ☐ Non-mechanical
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN117 is complete. Ready for demobilization and deployment to a new segment.

Signature [signature] Date: 7/31/89 Time: 2012

Printed Name Robert T. MARLEY

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
____	Heavy
5%	Medium
20%	Light
25%	Very Light
50%	None
100 %	

Subsurface Oil

☒ Yes ☐ No

Comments COBBLE / ROCKY AREAS HAS LIGHT TO MOD OILING OVER UPPER INTERTIDAL PORTION OF ALL BUT CLIFF PORTION OF SEG

Reassessment

☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments JAN KRIEGER FROM ADEC WAS PRESENT DURING INSPECTION. [signature]

Signature Date: / / Time:

Printed Name

FOSC rep **Demobilization approved/disapproved**

Comments MSA WILL CONTINUE TO ASSESS HOWEVER GROSS CONTAMINATION REMOVED.

Signature [signature] Date: 7/30/89 Time: 2215

Printed Name THOMAS S. HARRISON

COPY: EXXON ADEC FOSC ISCC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER KK-118

SHORELINE SEGMENT NAME KNIGHT Island

SUBMITTED FOR APPROVAL 6/3/89

COMMENTS: Area is environmentally clean. area is very clean and not a high priority for phase II

J D Keaveny
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

No objections to crews moving on to other areas

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later data to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Richard M Sandison LT SCPT
Signature of Coast Guard rep
6/3/89

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER KH119

SHORELINE SEGMENT NAME KNIGHT ISLAND

SUBMITTED FOR APPROVAL 6/13/89

COMMENTS: area is environmentally cleaned, looks very good; not high priority to be cleaned for phase II

Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

No objection to crews moving on to other areas

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Roland R. Lundin LT Scott
Signature of Coast Guard rep
6/3/89

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER KN 120

SHORELINE SEGMENT NAME KNIGHT ISLAND

SUBMITTED FOR APPROVAL 5/27/ 89

COMMENTS:

SECTION LOOKS EXCELLENT. THERE ARE SOME BLACK ROCKS, HOWEVER THERE IS ABSOLUTELY NO FILM OR RESIDUE THAT COMES OFF, NOR ANY SHEENS. AREA IS ENVIRONMENTALLY CLEAN. DOES NOT APPEAR TO NEED ANY FURTHER CLEANING.

Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

ADEC Rep Bob CANNONE ACCOMPANIED THE SURVEY PARTY AND IS IN AGREEMENT WITH THE FINDINGS.

Signature of ADEC rep

Coast Guard Comments and Action.

X **Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.**

____ **The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.**

____ **All contamination has been removed. No further treatment required unless re-oiled.**

* MINOR OILING NOTICED ON BEACH IS CONSIDERED CONSISTENT WITH PHASE ONE CRITERIA.

Richard P. Lawson LT USCG(SCOTT)

Signature of Coast Guard rep

XC: **ADEC**
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER KH-121

SHORELINE SEGMENT NAME KNIGHT ISLAND

SUBMITTED FOR APPROVAL 6/3 89

COMMENTS: Area is environmentally clean - but a high priority for phase II since it looks very good.

Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

No objection to crews moving to other areas

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Richard M. Claudio LTJG COTP
Signature of Coast Guard rep

6/3/89

XC: ADEC
EXXON
FSOC

SEG KN-122 INSPECTION # 1 **SEGMENT**

DATE 8/2/89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-122 is complete, ready for demobilization and deployment to new segment.

Signature K.T. Mealey Date: 8/2/89 Time: 1410

Printed Name ROBERT T. MEALEY

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
____	Heavy
5%	Medium
15%	Light
20%	Very Light

Subsurface Oil

- [x] Yes
- [ ] No

Comments GRAVEL BERMS HAD OIL TRAPPED. THESE AREAS ARE CONTINUE TO SHEEN.

Reassessment

- [ ] Yes - necessary
- [x] No - not necessary unless re-oiled

ADEC rep Comments Gross contamination has been removed. Light oiling remains in small isolated areas. Demobilization approved

Signature Curtis Conner Date: 8/2/89 Time: 1419

Printed Name Curtis Conner

FOSC rep Demobilization (approved)/disapproved

Comments AREAS W/ SUBSURFACE OIL WILL CONTINUE TO SHEEN. GROSS CONTAMINATION NOT PRESENT IN SEGMENT

Signature [illegible] Date: 8/2/89 Time: 1432

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

TREATMENT MANUAL, 6/15/89

SEG KN-122 INSPECTION # 1 **SEGMENT**

DATE 8/2/89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [ ] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-122 is complete, ready for demobilization and deployment to new segment!

Signature K.T. Mealey Date: 8/2/89 Time: 1410

Printed Name ROBERT T. MEALEY

Existing Shoreline Condition As Visually Determined by USCG

ADMIN
LREP
HIST
COS

CAMEO
OPS
WAK
PWS

Percent	Degree of Oiling
	Heavy
5%	Medium
15%	Light
20%	Very Light
60%	None
100 %	

Surface Oil

Subsurface Oil

[X] Yes [ ] No

Comments Gravel Bulkers had oil traces. These areas were cleaned to sheen.

Reassessment

- [ ] Yes - necessary
- [X] No - not necessary unless re-oiled

ADEC rep Comments Gross contamination has been removed. Light oiling remains in small

Printed Name [illegible]

FOSC rep **Demobilization approved/disapproved**

Comments Areas of subsurface oil with sheen. Gross contamination not present in segment.

Signature [illegible] Date: 8/2/89 Time: 1432

Printed Name [illegible]

TREATMENT MANUAL, 6/15/89

SEG KN-123 INSPECTION # 1

DATE 17 JUL 89

SEGMENT INSPECTION RECORD

650m

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical HAND WORK
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN 123 IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT.

Signature Robert A Simmons Date: 7/17/89 Time:

Printed Name ROBERT A SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
15	Medium
0	Light
0	Very Light
85	None
100 %	

Subsurface Oil

☑ Yes ☑ No

Comments

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments Crude contamination removed (debris) by hand picking. +50 yds of medium oiled area not treated as per apparent instruction.

Signature Douglas H Dasher Date: 7/17/89 Time: 1805

Printed Name DOUGLAS H. DASHER, EETII, ADEC

FOSC rep Demobilization approved/disapproved

Comments No crude contamination.

Signature [signature] Date: 7/17/89 Time: 1805

Printed Name [illegible] CWO2

KN-124

TREATMENT MANUAL, 6/15/89

SEG KN-124 INSPECTION # 1

DATE 17 JUL 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [x] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN 124 IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT.

Signature Robert A. Simmons Date: 7/17/89 Time: 1752

Printed Name ROBERT A. SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
5	Medium
10	Light
0	Very Light
0	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments Gross contamination removed.

Signature Douglas H. Dasher Date: 7/17/89 Time: 1800

Printed Name DOUGLAS H. DASHER, RE III, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments no gross contamination noted

Signature [illegible] Date: 7/17/89 Time: 1800

Printed Name [illegible] USCG

TREATMENT MANUAL, 6/15/89

SEG KW-124-1B INSPECTION # 1

DATE 9 July 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [L] Warm water wash
- [✓] Water deluge
- [ ] Mechanical
- [✓] Non-mechanical SWAMP
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KW124 is complete. Ready for demobilization and deployment to new segment

Signature Wm C Baird Date: 7/9/89 Time: 12:40

Printed Name Wm C Baird

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
0 5 10	Medium
0 5 40 50	Light
0 10 20	Very Light
0 10 30	None
100 %	

Subsurface Oil

[✓] Yes [ ] No

Comments Subsurface oil found in pits manually excavated areas

Reassessment

[✓] Yes - necessary [ ] No - not necessary unless re-oiled

ADEC rep

Comments Pockets of light to medium oil in subsurface within low tide zone today. Some oiled debris. Segment fit for treatment as determined by reassessment.

Signature Douglas H Darker Date: 7/9/89 Time: 1258

Printed Name Douglas H. Darker

NOTE: did not observe the salmon stream section of 124 upstream.

FOSC rep

Demobilization approved/disapproved

Comments Gross contamination removed. Moderate sensitivity caused by organic material mix into sediment at low tide mark.

Signature [illegible] Date: 7/9/89 Time: 1300

Printed Name Paul Putnoy USCG

Boom access to deploy absorbent material to control sheening. Intertidal area will continue to be protected by hand boom and absorbents.

COPY: EXXON ADEC FOSC ISCC

KN-127

DATE 29 JUN 89 — INSPECTION RECORD — Doc 9/2

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [x] Non-mechanical OIL BOOMS
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments KN-127

Signature Elmo W Sauell Date: 6/29/89 Time: 1645

Printed Name ELMO W SAUELL

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
5	Medium
20	Light
15	Very Light
60	None
100 %	

Subsurface Oil

- [ ] Yes
- [x] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Gross contamination removed. Recommend moving to a more heavily contaminated area

Signature Danny R Tamas Date: 6/29/89 Time: 1650

Printed Name Danny R. Tamas Env Engr ADEC

FOSC rep

Demobilization approved/disapproved

Comments

Signature [illegible] Date: 6/29/89 Time: 1640

Printed Name [illegible]

SEG KN 128 INSPECTION # 1 SEGMENT

DATE 7/10/89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical SNares
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KN 128 is Complete and Ready for demobilization and ready for deployment to a new segment.

Signature Wm C Baird Date: 7/10/89 Time: 1345

Printed Name Wm C Baird

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
20	Medium
50	Light
20	Very Light
10	None
100 %	

Subsurface Oil

- [ ] Yes
- [x] No

Comments Lots of Tar

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments Gross contamination removed.

Signature Douglas H. Dasher Date: 7/10/89 Time: 1350

Printed Name Douglas H. Dasher, Env. Eng III, ADEC

FOSC rep Demobilization approved/disapproved

Comments Gross contamination removed.

Signature [illegible] Date: 7/10/89 Time: 1350

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

SEG KN 130 INSPECTION # 1

DATE 4 July 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical OIL SNARES
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT 130 IS Complete AND READY FOR DEMOBILIZATION AND READY FOR DEPLOYMENT TO NEW SEGME

Signature Elmer Savell Date: 7/4/89 Time: 1300

Printed Name ELMER W. SAVELL

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
2%	Heavy
10-20%	Medium
48	Light
20	Very Light
30	None
100 %	

Subsurface Oil

- [ ] Yes
- [x] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments Gross contamination removed. No mobile oil found in this segment. Recommend moving to an area of heavier contamination.

Signature Denny R. Terminus Date: 7/4/89 Time: 1340

Printed Name Denny R. Terminus ENVR Eng, ADEC

FOSC rep Demobilization approved/disapproved

Comments no mobile oil

Signature [signature] Date: 7/4/89 Time: 1300

Printed Name [signature]

COPY EXXON ADEC FOSC ISCC

TREATMENT MANUAL, 6/15/89

SEG K-131 INSPECTION # 1

DATE 22 JUL 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT B1 IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT.

Signature [signature] Date: 7/22/89 Time: 1410

Printed Name ROBERT A. SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
26	Medium
46	Light
0	Very Light
46	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments [illegible] REQUIRED

Signature Date: / / Time:

Printed Name

FOSC rep Demobilization approved/disapproved

Comments NO CROSS CONTAMINATION

Signature [signature] Date: 7/22/89 Time: 1410

TREATMENT MANUAL, 6/15/89

SEG KN-132 INSPECTION # 1

DATE 17 July 89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical GRAVEL & SOIL REMOVAL, PEAT MOSS, HAND WIPED ROCKS
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

KN 132

Comments TREATMENT OF SEGMENT IS COMPLETE. READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT.

Signature [signature] Date: 7/17/89 Time:

Printed Name ROBERT A. SIMMONS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
1	Heavy
32	Medium
56	Light
0	Very Light
11	None
100 %	

Subsurface Oil

- [x] Yes
- [ ] No

Comments LIGHT SS CONTAMINATION IN SOUTH SECTION OF 132 IN SAND AREA

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments Gross surface contamination removed, except for some in the untreated section

Signature [signature] Date: 7/17/89 Time: 1405

Printed Name DOUGLAS H. DASHER, KETTLE, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments GROSS CONTAMINATION REMOVED FROM ALL BUT THE AREA DESIG AS A SALINA SEGMENT. SYSTEM AREA TREATMENT COMPLETE AS PER CG, EPA, AND ADF&G AGREEMENT.

Signature [signature] Date: 7/17/89 Time: 1403

Printed Name TAL PETRY LCDR

SEG KN-133 INSPECTION # 1

DATE 8/2/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-133 is complete. Awaiting confirmation and deployment to new segment

Signature K.T. Mealey Date: 8/2/89 Time: 1411

Printed Name ROBERT T. MEALEY

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil		Subsurface Oil
Percent	Degree of Oiling	[x] Yes [ ] No
1%	Heavy	Comments Coarse boulder areas between rock faces have trapped oil pockets that will continue to sheen
20%	Medium	
30%	Light	
25%	Very Light	
24%	None	
100 %		

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep (TOR)

Comments Demobilization approved. Grass containment has been removed. Isolated areas remain lightly oiled.

Signature Curtis Cramer Date: 8/2/89 Time: 1421

Printed Name Curtis Cramer

[illegible] MED OIL GROSS CONTAMINATION removed

Signature [illegible] Date: 8/2/89 Time: 1428

Printed Name [illegible]

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER KN-300

SHORELINE SEGMENT NAME KNIGHT ISLAND

SUBMITTED FOR APPROVAL 6/3/89

COMMENTS:

Area is Environmentally clean. Not a high priority for phase II since it is very clean.

A D Kuesgen
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Will check area this pm. No comment at this time

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

___ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

___ All contamination has been removed. No further treatment required unless re-oiled.

Richard G. Lawson LT Scott
Signature of Coast Guard rep
6/3/89

XC: ADEC
EXXON
FSOC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Herring Bay Islands Block

Includes Shoreline Segments: KN-141, KN-144, KN-145

Submitted : _____ (for Exxon) Date: 7/18/89

ISCC ~~Approval~~ Recommendation: Sharon K. Christopherson Date: 7/28/89

FOSC Approval: A.C. Alejandro, by dir. Date: 7/28/89

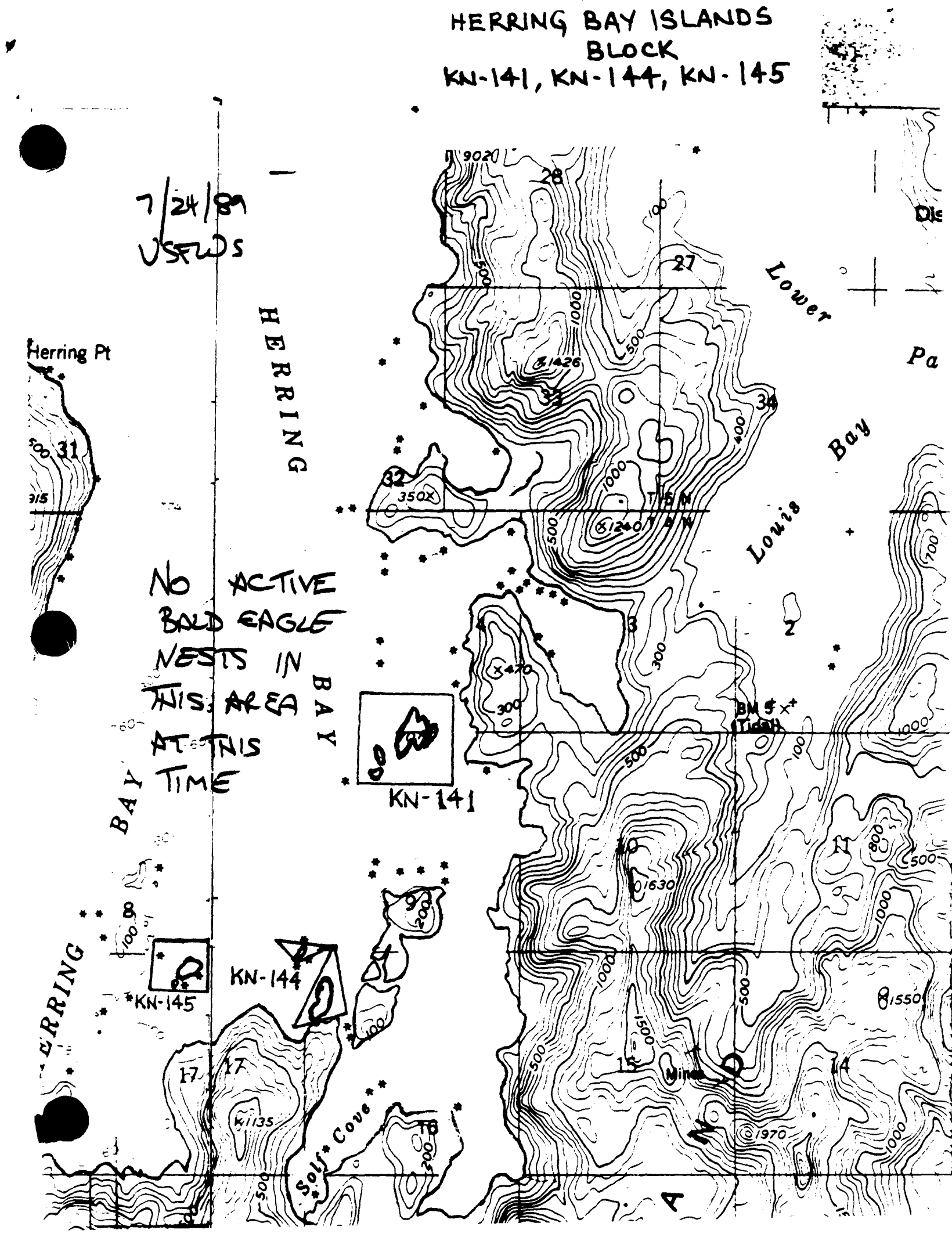
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
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USFS
SHPO

HERRING BAY ISLANDS BLOCK
KN-141, KN-144, KN-145



(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89 SHORELINE SEGMENT KN-141

LOCATION: (see enclosed map) Northeast Herring Bay - North Knight Island 5 small islands

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/12 & 7/13/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus), and garbage. Use of sorbents in depression on North Island on map 2 may improve recovery of oil.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2-4: heavy to light oil
Class A: resources present

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Limit access to intergravel mussel bed (on map) and marsh grass.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

_____ Date: _____
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson Date: 7/28/89

EXXON: _____ Date: 89-07-28

FOSC: D.C. Alexander, by dlc Date: 7/28/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

~14:30 July 12

Date: July 12&13 1989 Time: ~05:30 July 13 Observer: Greg Chaney

Surveyed From: (Foot) (Boat) Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION Islands - East Side Herring Bay SEGMENT NUMBER KN-141

LENGTH OF SHORELINE SEGMENT: 1860 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/(BLD)/STRT Slope: LANG/(HANG)/(VER)

Wave Exposure: High/(Med)/Low

Sediment: B 0 % / C 2 % / P 2 % / G 1 % / S — % / M — % / R 85 % small amount logs

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type Seaweed

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / (L)

Continuous: Y/N % of Segment 30% Width of Band: 1 to ~16 m

Sporadic: Y/N % of Segment 40%

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 20 cm Max. Observed

Pooled Oil: — % "Free" Oil: — % Coated: H 10 % / M 40 % / L 50 %

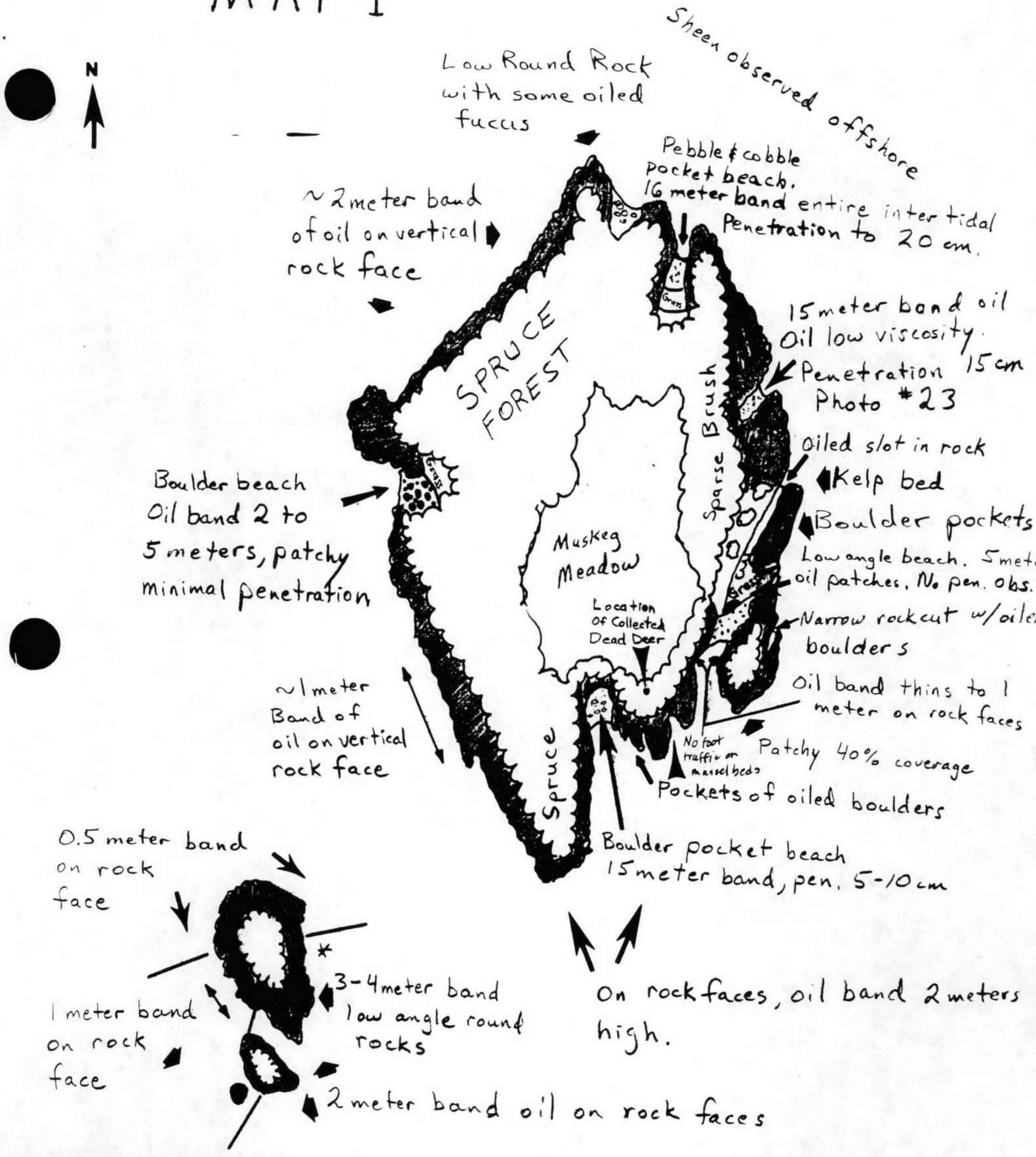
Fresh 30 % Mousse trace % Tar Formation: 70 %

Drift Debris Oiled ? (Yes)/No Supra/Upper/Mid/Lower Amount: H/M/(L)

Comments:

These 5 islands are composed mostly of pillow lava and have steep rock faces. Oil is patchy and thinly coated on smooth pillow lava rock faces but can be heavy in cracks in the rock. The northern most island on MAP 2 has a donut like shape and most oil is located in the central depression. Sheen was observed at the shoreline and in standing tide pools. Oiled cleanup garbage was found on some pocket beaches.

MAP 1



Oil is patchy and thinly coated on smooth pillow lava rock faces but in cracks oil can be heavy.

MAP 2

Both islands consist of low rounded rocks with no significant vegetation and no significant beach development.

ECOLOGICAL EVALUATION

LOCATION: Knight Island **SITE:** Herring Bay **OBSERVER:** Crank

LOCATION PREFIX: KN **SEG. NO.:** 141 **LENGTH:** 1860 (M)

DATE: 07/12/89 **TIME (HHMM):** 1400 **TIDE HT.:** +4' ~~(M)~~

OILED ZONE: (Splash) (High) (Medium) Low

SUBSTRATUM: Rocks Boulder Cobble (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N (Contin. Y/N) (Dense Y/N Moderate) Sparse Y/N None Y/N
Low-moderate population with dense to moderate concentrations.
Patchy along some portions of shore

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N Moderate) None Y/N
Extensive dense intertidal/gravel beds - Patchy moderate to sparse on headlands
Contaminated intercobble bed ≈ 90% mortality, 40% mort on headlands.

Balanus (Barnacles): Patchy Y/N (Contin. Y/N) (Dense) Y/N Sparse Y/N None Y/N
In heavy oiled areas ≈ 60% mortality in HTZ

Littorina
(Patchy) Y/N Contin. Y/N (Dense Y/N) Sparse Y/N None Y/N

Limpets: (Patchy Y/N) Contin. Y/N (Dense Y/N) Sparse Y/N None Y/N

OTHER OBSERVATIONS: Kelp (Laminaria) Beds
Dead deer in woods - Pictures MM7, 1-3 on Archie's camera - (collected skull & pelvis for Fish & Game)

CLEANUP PRECAUTIONS: Limit access to intertidal mussels beds (on map) (normal constraints)

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other dead deer

BIRDS: Oystercatcher (possible nest), Gulls

GENERAL OBSERVATIONS:

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Seward B-3

Date 7/13/89 Location Herring Bay NW Knight Is Site _____

Location Prefix ~~KAV~~ _____ Segment # 141 Length 1260 m

Survey Method:

Air _____ (A - indicate on map) Boat 80% (A - indicate on map)

Ground 20% (G - indicate on map)

Known cultural resources (AHRS #) None Data Source —

Oil conditions/beach visibility poor visibility in intertidal due to moderate to heavy oil

Width of beach zone surveyed 10 m Tree fringe surveyed 20 m

Cultural resources observed in beach zone (AHRS code) HT1

Cultural resources observed in tree fringe (AHRS code) CMT

General observations justifying survey method and segment's site probability:

Shore Profile steep rocky islands punctuated with narrow slits of landable cobble beaches

Fresh Water Sources None apparent

Sea Exposure more exposed to north/entrance to bay

Access/Safety difficult

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # — Frames —

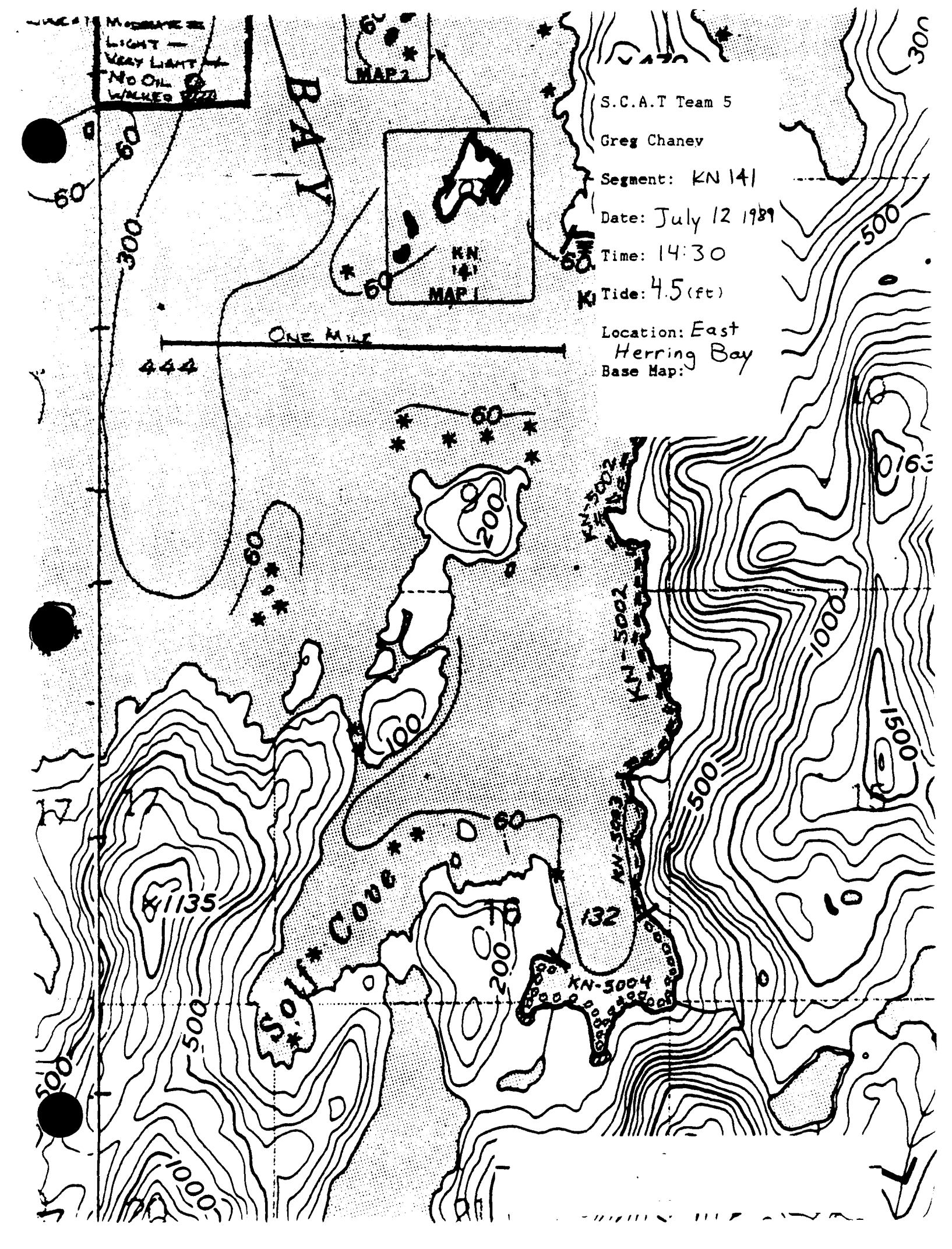
B/W Roll # MM 6: 23-24; MM 7: 1-11 Frames _____

Observer(s) MMoss

Time survey started 7/12: 1400-1600; 7/13: 500-515 Time survey ended total hrs. 2¼

Cultural resource considerations/restraints:

Standard Constraints


MODERATE
LIGHT
VERY LIGHT
NO OIL
MAP 2
MAP 1
KN 141
BAY
ONE MILE
444
60
300
500
1000
1500
200
100
0
163
KN-5002
KN-5003
KN-5004
Cove
S.C.A.T Team 5
Greg Chaney
Segment: KN 141
Date: July 12 1989
Time: 14:30
Tide: 4.5 (ft)
Location: East Herring Bay
Base Map:

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89 SHORELINE SEGMENT KN-144

LOCATION: (see enclosed map) South Herring Bay, Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/13/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time on the west side of these islands (subject to FOSC reassessment at a later date) due to ecological constraints.

On east side of this island:
- Use moderate to high pressure washing on rock and boulders.
- Manually remove contaminated drift material and any garbage.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2-4: light to heavy oil
Class B: on west side
Class A: generally on east side

Ecological Constraints (from site survey):
Recommend no cleanup on west side of islands at this time, as activities would be more detrimental to ecosystem than present oil.
On east side work at + 5' tide or higher taking appropriate measures to protect lower intertidal zone. Boom area for at least 2 full tide cycles after cleanup.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

_____ Date: _____
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson Date: 7/28/89

EXXON: _____ Date: 8907-28

FOSC: R.C. Alejandro, by dis. Date: 7/28/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: July 13 '89 Time: 06:30 AM Observer: Greg Chaney

Surveyed From: (Foot) (Boat) Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION South Herring Bay Knight Is SEGMENT NUMBER KN144

LENGTH OF SHORELINE SEGMENT: 800 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/(Helio)/(Float Plane)

SHORELINE: Low ↑ tide

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: (LANG)/(HANG)/(VER)

Wave Exposure: High/Med/(Low)

Sediment: B 20 % / C 5 % / P — % / G — % / S — % / M — % / R 75 %

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type small amount logs & seaweed

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H)/(M)/(L)

Continuous: Y/N % of Segment 70% Width of Band: 0.5-8 m

Sporadic: Y/N % of Segment 20%

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: not measured m

Pooled Oil: — % "Free" Oil: — % Coated: H 20 % /M 60 % /L 20 %

Fresh 5 % Mousse — % Tar Formation: 95 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/M/(L)

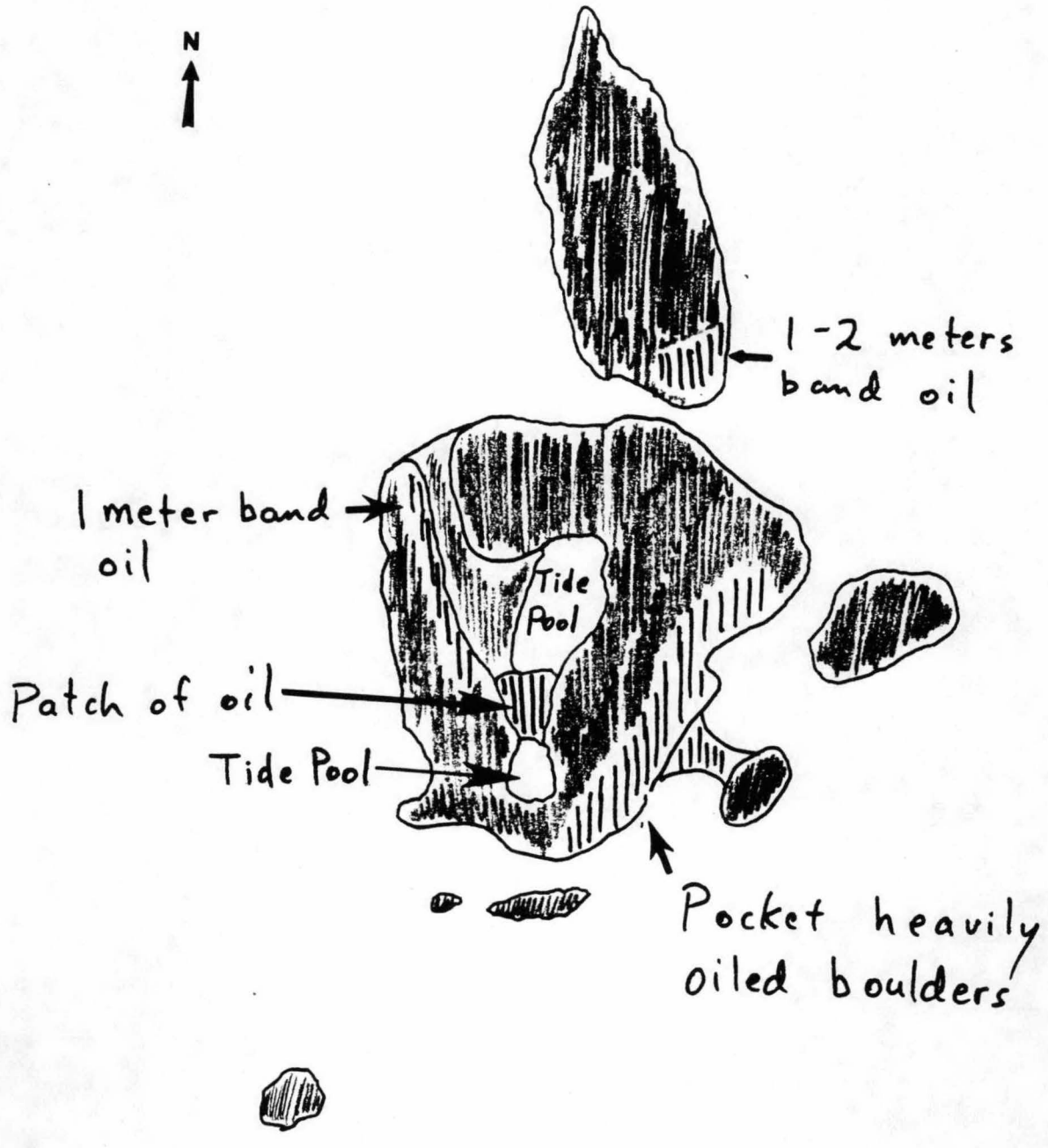
Comments:

Pockets of boulders and cuts in rocks hold heavy oil. Little oil deposited on rock faces. Band of oil is fairly distinct along most of coast. Omni Boom Barge will probably prove effective on rock faces and rock cuts. Small pocket beaches may be more difficult to access. Exterior of small rock island on MAP 1 has patch of oil which may be missed unless the island is scouted on foot.

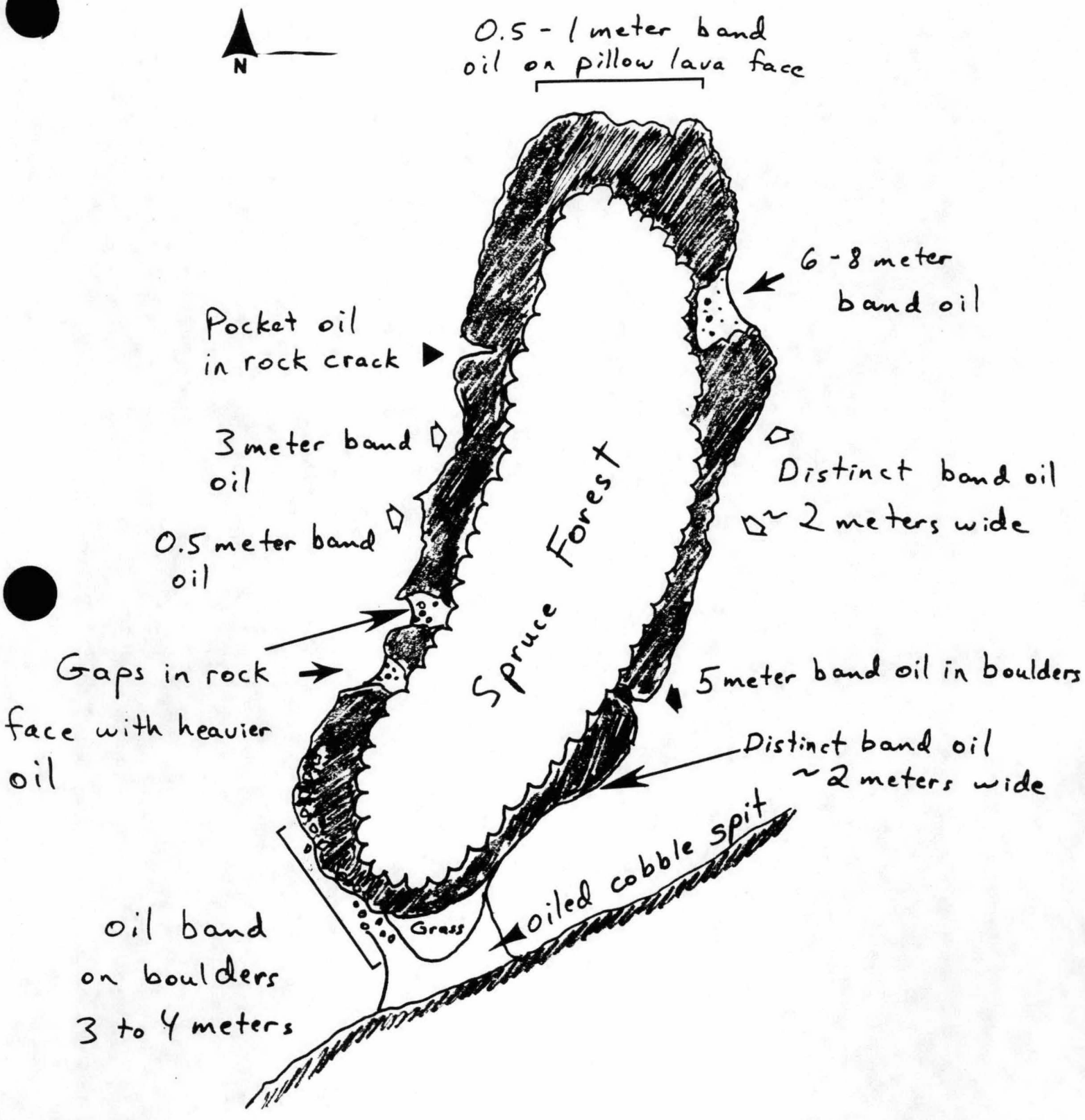
MAP 1

Addendum

KN- 144



MAP 2 Addendum KN-144



ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: Herring Bay OBSERVER: Crank

LOCATION PREFIX: KN SEG. NO.: 144 LENGTH: 800 (M)

DATE: 07/13/89 TIME (HHMM): 0910 TIDE HT.: 5+ feet (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:

CLEANUP PRECAUTIONS: Recommend no cleanup on West side of sands as it may be more detrimental to ecosystem than present. East side - Normal cons[illegible] Boom area for at least

MAMMALS: Otters ____ Harbor Seals 5 Sea Lions ____ Whales ____
Other

BIRDS: Oystercatcher

GENERAL OBSERVATIONS:

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 7/13/89 Location Seward B-3 Herring Bay, NW Knight Is. Site _____

Location Prefix ~~KN~~ Segment # 144 Length 800 m

Survey Method:

Air — (A - indicate on map) Boat 100% (A - indicate on map)

Ground — (G - indicate on map)

Known cultural resources (AHRS #) None Data Source —

Oil conditions/beach visibility light to moderate oiling from boat

Width of beach zone surveyed 5 m Tree fringe surveyed —

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile steep rocky shore, larger "island" is connected by cobble beach to Knight Island

Fresh Water Sources None identified

Sea Exposure well within Herring Bay, protected

Access/Safety tricky

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # — Frames —

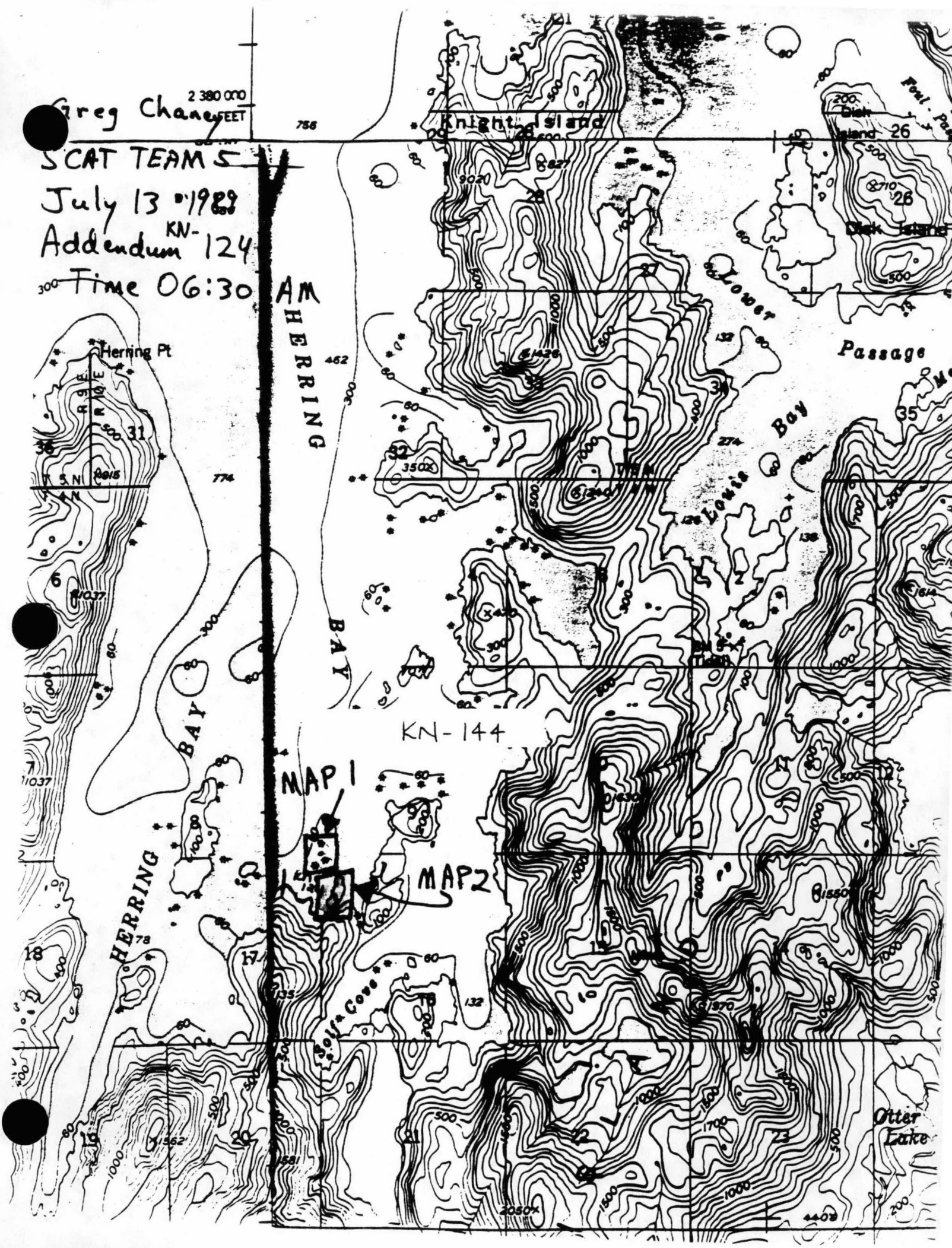
B/W Roll # — Frames —

Observer(s) MMass

Time survey started 700 Time survey ended 745

Cultural resource considerations/restraints:

Standard Constraints.


Greg Chaney
SCAT TEAM 5
July 13 1989
Addendum KN-124
Time 06:30 AM
KN-144
MAP 1
MAP 2
Knight Island
Herring Pt
HERRING BAY
Lower Passage
Louis Bay
Otter Lake
Dick Island

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89 SHORELINE SEGMENT KN-145

LOCATION: (see enclosed map) South Herring Bay - Knight Island

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ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/13/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus) and garbage.
- Use moderate to high pressure washing on rock and boulders.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2-4: heavy to light
Class A: resources present

Ecological Constraints (from site survey):
Work at mid tide + or take appropriate measures to protect lower intertidal zone. ~~Avoid~~ VOID Seal haulout site ~~(on map) until approved by RAT biologist~~. on map MINIMIZE DISTURBANCE PER ADVISORY IN MANUAL BUT NO RESTRICTION IS PLACED ON ~~=~~ TREATING AREA.

SC 11 /89
6 8907-28

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer * Date: 7/28/89

ISCC: Sharon K. Christopherson Date: 7/28/89

EXXON: _____ Date: 89-07-28

FOSC: R. C. Alejandro, by dir. Date: 7/28/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: July 13 89 Time: 06:00 AM Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION South Herring Bay SEGMENT NUMBER KN-145

LENGTH OF SHORELINE SEGMENT: 700 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 10 % / C 5 % / P trace % / G trace % / S — % / M — % / R 85 %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type seaweed logs garbage

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 75 % Width of Band: 1-25 m

Sporadic: Y/N % of Segment 25 %

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: Max. +15 cm

Pooled Oil: — % "Free" Oil: 10 % Coated: H 20 % / M 30 % / L 40 %

Fresh 10 % Mousse — % Tar Formation: 90 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

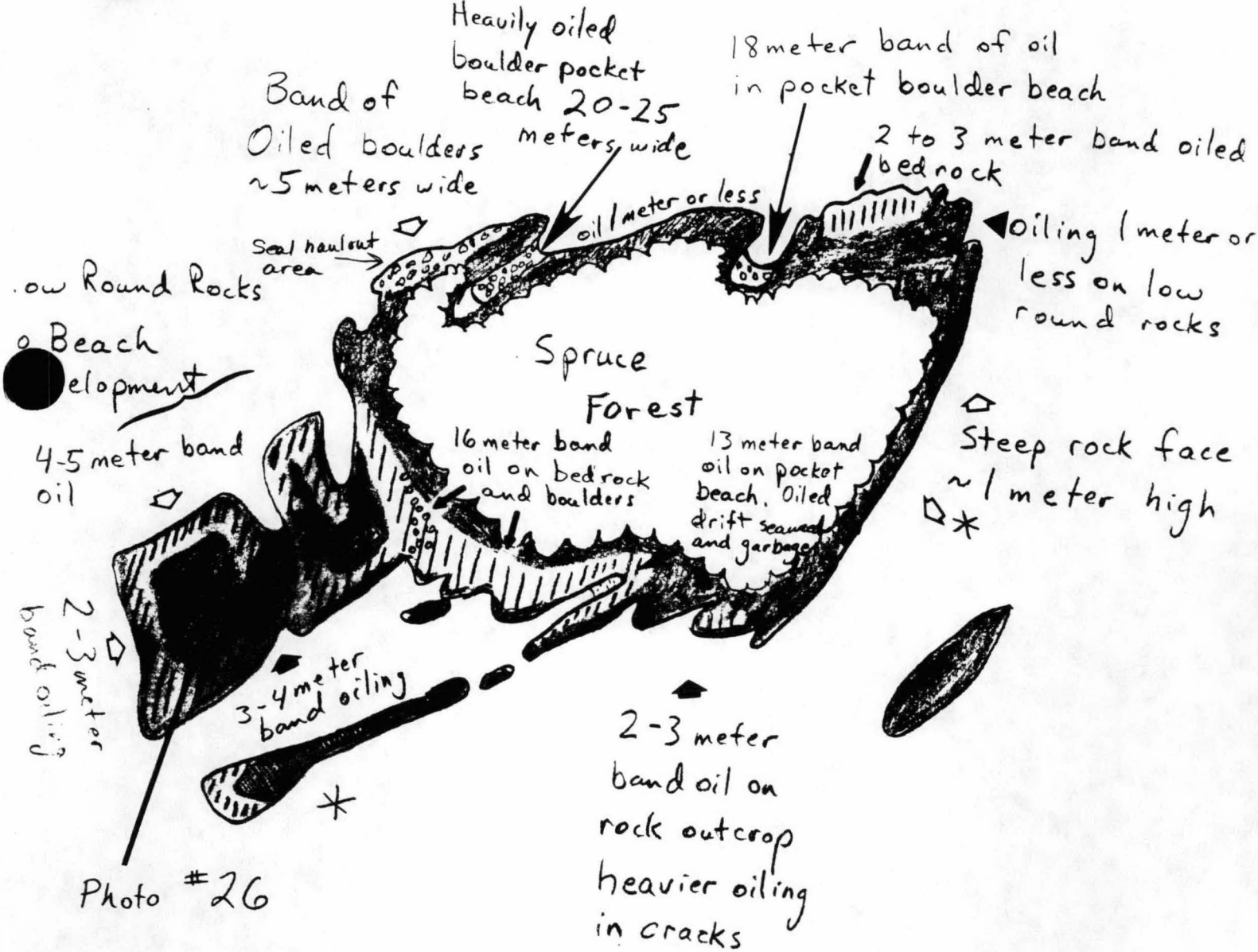
Majority of island is made up of low round rock faces. In the south west this is very pronounced and some significant bands of oil are present. Omn: boom barge should prove effective in this area. Pocket beaches have heavy concentrations of oil. Oiled garbage should be removed.

6:30 AM July 13 1989

Sheen observed on water adjacent to island

= Bedrock

= Low Round Oiled Rocks



KN-145

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: Herring Bay OBSERVER: Crank

LOCATION PREFIX: ~~KN~~ SEG. NO.: 145 LENGTH: 700 m (M)

DATE: 07/13/89 TIME (HHMM): 0545 TIDE HT.: 5' (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Moderate on rock face - dense intercobble/gravel beds. 30-60% mort on rock, ~80% mort interstitial

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: Work at 5' with normal constraints

Seal haulout, should be avoided until approved by RAT biolog

MAMMALS: Otters ___ Harbor Seals ~30 w/3 pups Sea Lions ___ Whales ___
Other _____

BIRDS: Oystercatcher, Terns, Gulls

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Seward B-3

Date 7/13/89 Location Herring Bay, NW Knight Is. Site _____

Location Prefix KN Segment # 145 Length 700 m

Survey Method:

Air — (A - indicate on map) Boat 20% (A - indicate on map)

Ground 80% (G - indicate on map)

Known cultural resources (AHRS #) None Data Source —

Oil conditions/beach visibility heavily oiled beach - low visibility

Width of beach zone surveyed very little m Tree fringe surveyed 30 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) CMT

General observations justifying survey method and segment's site probability:

Shore Profile Steep rocky shoreline of island with a few slits of cobble beaches
smaller island is actually rocks connected to larger island at low tide

Fresh Water Sources None

Sea Exposure North side of island more exposed than south - relatively protected within Herring Bay

Access/Safety not good

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # — Frames —

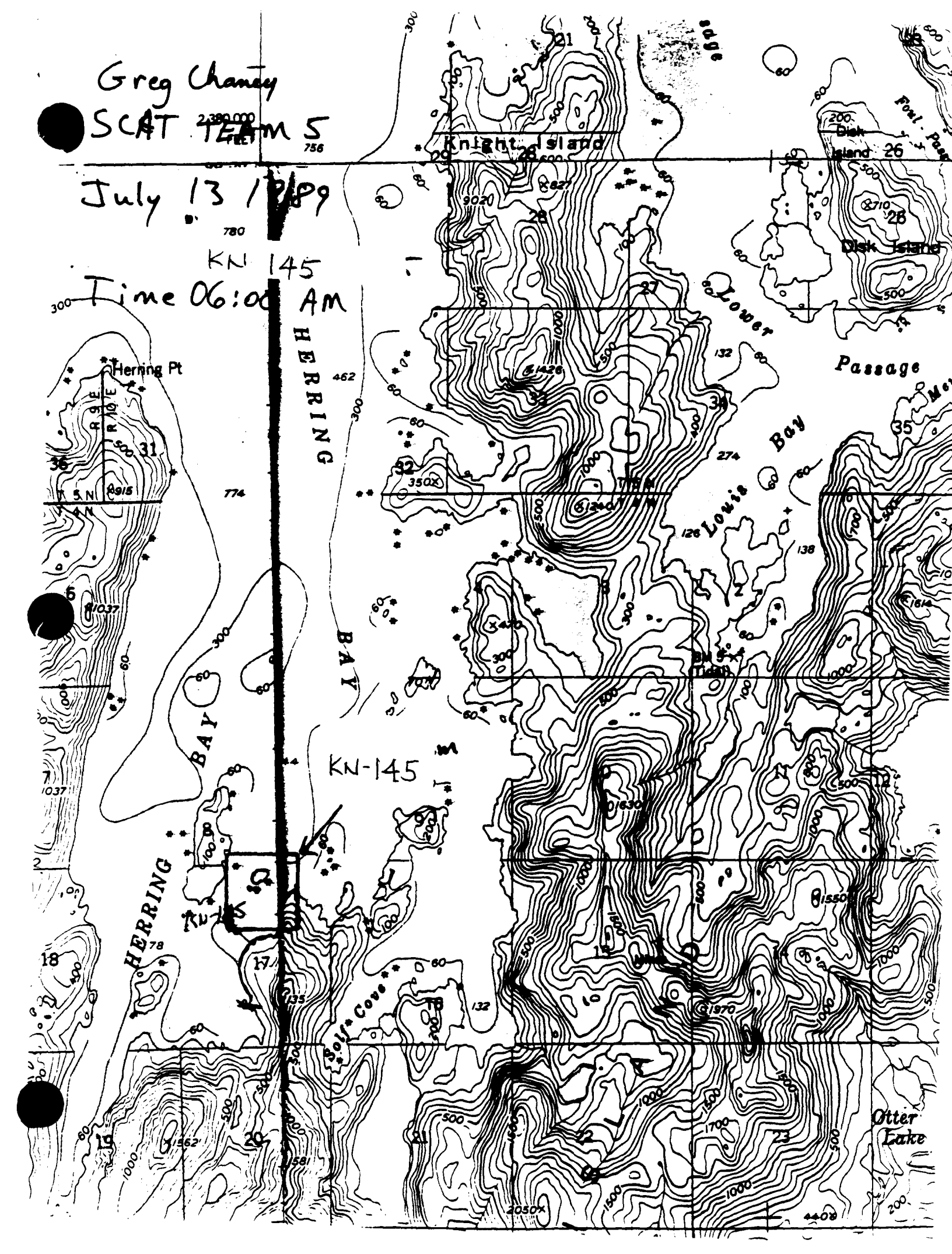
B/W Roll # MM 7 Frames 12

Observer(s) MMoss

Time survey started 530 Time survey ended 645

Cultural resource considerations/restraints:

Standard Constraints


Greg Chaney
SCAT TEAM 5
July 13 1989
KN 145
Time 06:00 AM
Herring Pt
HERRING BAY
KN-145
Knight Island
Disk Island
Lower Passage
Louis Bay
Otter Lake
Golf Cove

TREATMENT MANUAL, 6/15/89

SEG Lw-20b INSPECTION # 1 **SEGMENT**

DATE 1 JULY 89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☑ Warm water wash
- ☑ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical O.L SNARES.
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments ENVIRONMENTALLY CLEAN

Signature James L. Fletcher Date: 7/1/89 Time: 6 PM.

Printed Name JAMES L. Fletcher

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
2	Medium
5	Light
5	Very Light
88	None
100 %	

Subsurface Oil

☐ Yes ☑ No

Comments

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments Gross contamination removed. Treatment stabilized, little mobile oil. Recommended snare booms placed at one medium section. Recommend moving to heavier oiled beach segment.

Signature Denny R Tumons Date: 7/1/89 Time: 8:05 PM

Printed Name Denny R. Timmons, Envir Eng, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments

No visible oil

Signature [signature] Date: 7/1/89 Time: 2200

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): BENCHMARK SLIP BLOCK

Includes Shoreline Segments: KN-209, KN-211, KN-210

Submitted : D A Mahoney (for Exxon) Date: 6/3/89

ISCC ~~Approval~~ Recommendation: Sharon K. Christopherson Date: 6-10-89

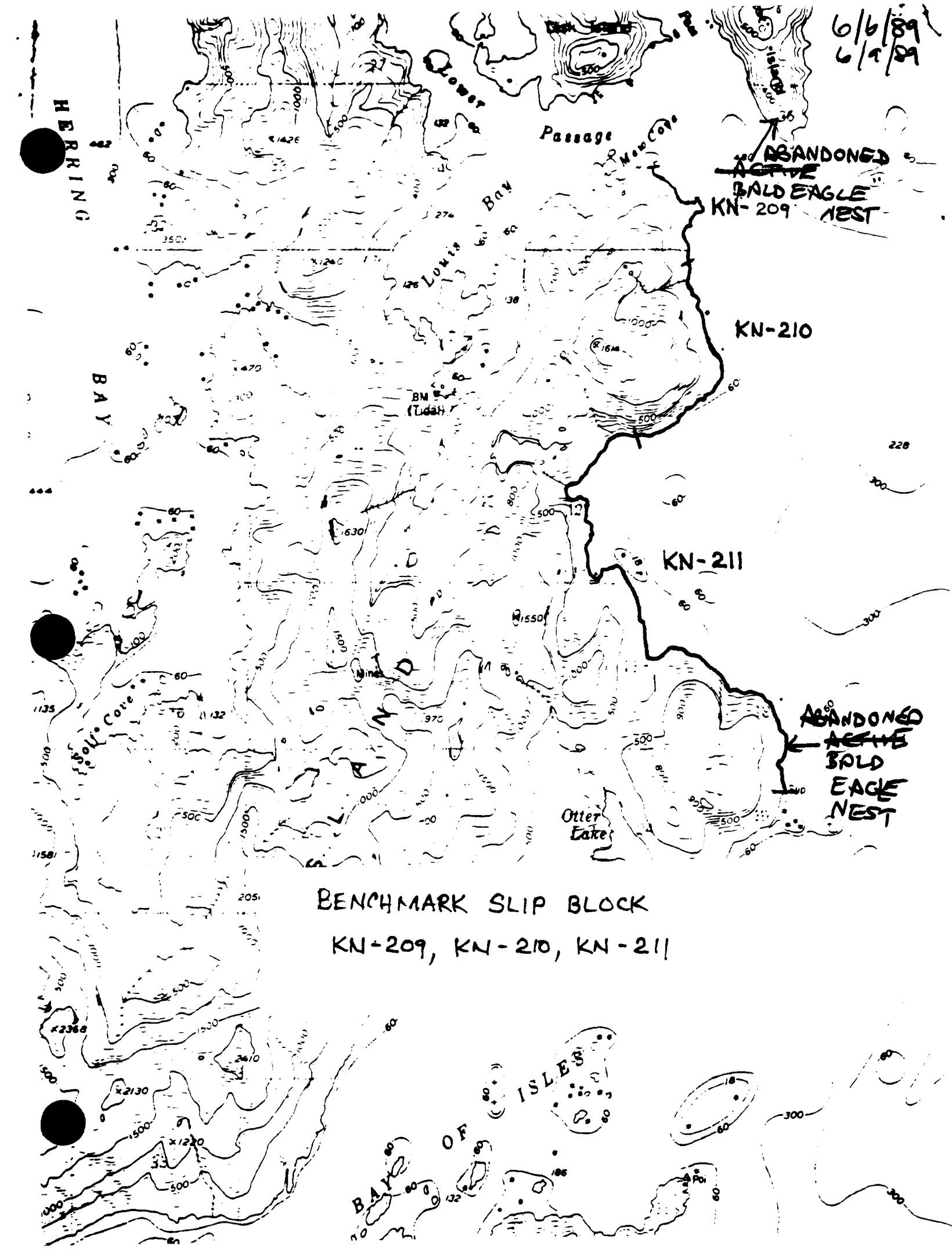
FOSC Approval: A. C. Alejandro, by dir. Date: 6-11-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
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ABANDONED
~~ACTIVE~~
BALD EAGLE
NEST
KN-209
KN-210
KN-211
BAY
ABANDONED
~~ACTIVE~~
BALD
EAGLE
NEST
Otter
Lake
ISLES
BENCHMARK SLIP BLOCK
KN-209, KN-210, KN-211

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/29/89 SHORELINE SEGMENT KN-209

LOCATION: (see enclosed map) Knight Island-Northeast Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/24/89

Recommended Cleanup Activity(ies):
- Manually remove oiled debris.
- Remove pooled and free oil by appropriate means.
- Flood/flush with hot water/high pressure on cobble and boulders.
- Flood/flush with warm-hot water/low pressure on pebbles.
- Light dry stain on large headlands and straights may not be recoverable.

Priorities Considerations:
CLASS 2 A

Ecological Constraints (from site survey):
- Recommend low pressure cold wash of biota (littorina) into water from oiled zone prior to high pressure/hot water procedures. Protect healthy fucus and associated biota below middle intertidal zone on headland rock on either side of flat beach.

Archeological Constraints (from site survey):
No access to historic burial under rock pile in overhang at south end of beach #2. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes — Date: June 3, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson — 6-10-89

EXXON: _____ Date: June 10-89

FOSC: A. C. Alexander, by dir. — Date: 6-11-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 0745-0930 Observer: C. Dillon

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-209

LENGTH OF SHORELINE SEGMENT: 1350 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane) - only on very calm day

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: (High)/Med/Low

Sediment: B~~30~~% / C~~20~~% / P10% / G__% / S__% / M__% /R40%

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy/Moderate/Light/No Oil)/Unobserved

Area of Beach Impact: SU / SP /(H / M) L

70m on Beach 2

Continuous: (Y)/N % of Segment 60 Width of Band: <1 - 2 m on headlands

Sporadic: (Y)/N % of Segment 40

Est. Oil Thickness where > 1cm: See Comments cm Est. Oil Penetration: See Comments cm

Pooled Oil: 1 % "Free" Oil: 1 % Coated: H15% /M__% /L85%

Fresh 15 % Mousse 5 % ~~Tar Formation~~ dry light stain: 80 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L/

Comments:

Segment is mostly rocky headlands and vertical/high angle straights with several small pockets of boulders and smaller sediments. The headlands have a sporadic, light and dry band of stain <1 to 2m wide. Beach 1 (see map) had a moderate weathered coating 20m x 20 on 5/24/89. Seen again on 5/27/89 the oil had been wave cleaned to 20m x 3m. Beach 2 is very heavily oiled and is evaluated separately on the next page

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 0830-0930 Observer: C. Dillon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Foc

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-209 (Beach 2

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 150 m

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: (High)/Med/Low

Sediment: B 15 % / C 70 % / P 15 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy)/Moderate/(Light/No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: (Y)/N % of ~~Segment~~ beach 100 Width of Band: 70 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 4-6 cm Est. Oil Penetration: >15 cm

Pooled Oil: 5 % "Free" Oil: 5 % Coated: H ___ % /M ___ % /L ___ %

Fresh 85 % Mousse 15 % Tar Formation: ___ %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L/

Comments:

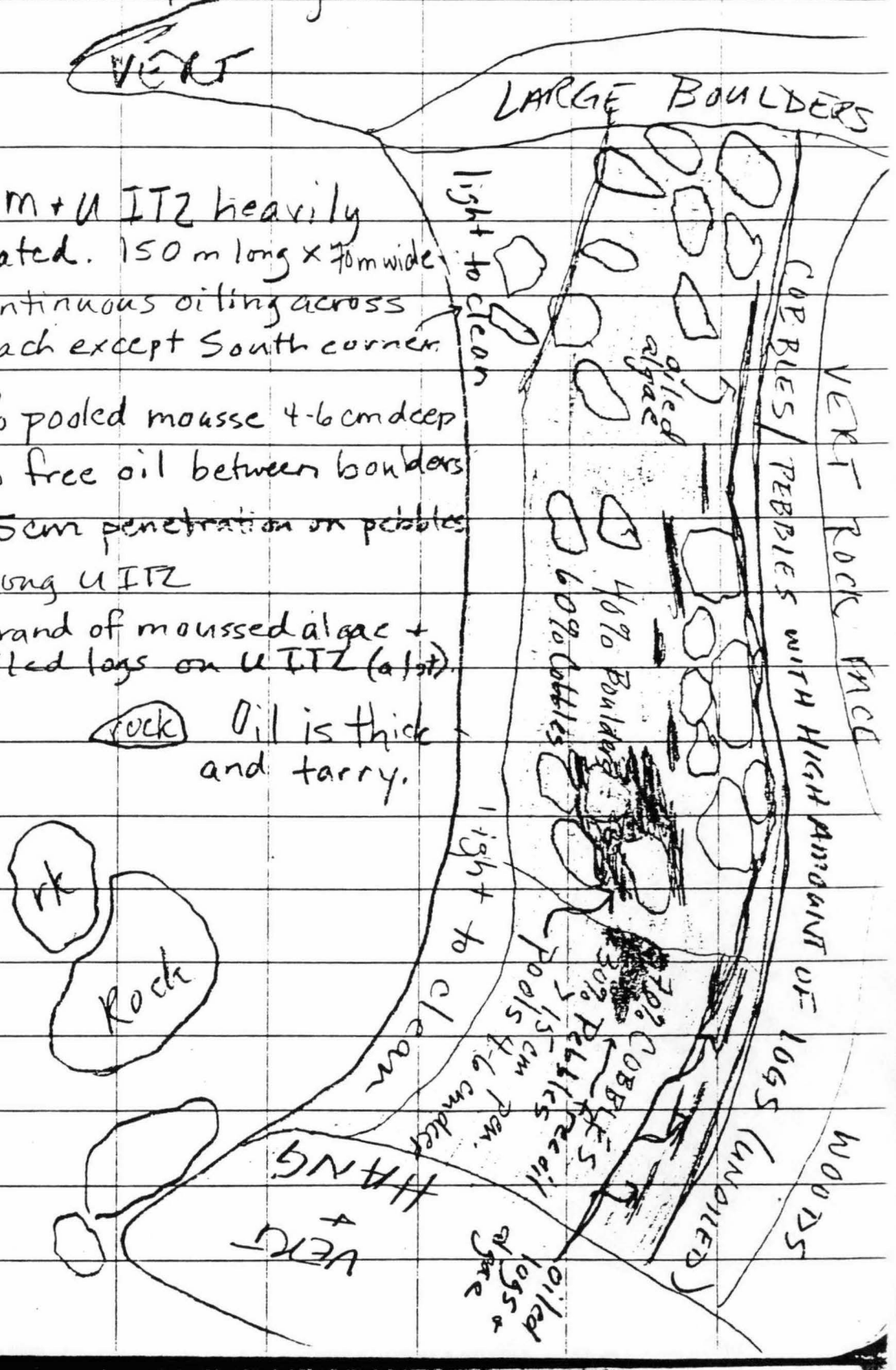
Refer to diagram for details.

0830-0930 End of KN-209

Beach 2: foot survey, cloudy wx

access: boat/barge/float plane only on a very calm day.

wave exp: high



m+u ITZ heavily coated. 150 m long x 70m wide

Continuous oiling across beach except South corner

5% pooled mousse 4-6 cm deep

5% free oil between boulders

>15cm penetration on pebbles along u ITZ

Strand of moussed algae + oiled logs on u ITZ (a lot).

rock Oil is thick and tarry.

light coat.

0% B/20% C/0% P

gon m-u

to free/pool

ris. May

Seems to

ccess now,

1/3 of beach

most clean).

is 20 m x 3 m now.

ded by

nd some

ually clean.

long.

~ 5m wide.

to contin-

t oil.

ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISLAND SITE: NORTHEAST POINT OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 209 LENGTH: 1350 (M)

DATE: 05/24/89 TIME (HHMM): 0745 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): (Patchy) Y/N (Contin.) Y/N (Dense) Y/N Sparse Y/N None Y/N

Fucus in continuous LIZ band on vertical rock generally not oiled; Beach #2 (and Beach #1) dense unoiled healthy Fucus band on headland rock LTZ.

Mytilus (Mussels): (Patchy) Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Beach #2 - few patches of mussels in oiled band; Beach #1 - mussels on headland rocks coated w/ heavy oil

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Barnacles throughout segment, some oiled on Beach #2

Littorina
Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/N

Beach #2 - Littorina abundant in oiled zone and unoiled LIZ; some shells oiled but clinging fast to rock.

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

OTHER OBSERVATIONS: little biota in intertidal below boulder/cobble beach — biota concentrated on rock headlands on either end of flat area.

CLEANUP PRECAUTIONS: Recommend low pressure wash of biota (littorina) into water from oiled zone prior to high pressure cleanup. Protect healthy fucus and associated biota below MTZ on headland rock.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Beach #1 - if cleanup occurs restrict high pressure/hot water from mussel beds on NW vertical headland rock.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/24/89 Location Knuguk Island Site _____

Location Prefix KN Segment # KN-209 Length 1350 m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 0-10 m Tree fringe surveyed 0-10 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Most beaches are flat to moderate in slope with cobble/boulder surface

Fresh Water Sources none

Sea Exposure south/southeast

Access/Safety beaches good the rest was poor

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed (yes)/no Collection yes/no

Photos: Color Roll # _____ Frames _____

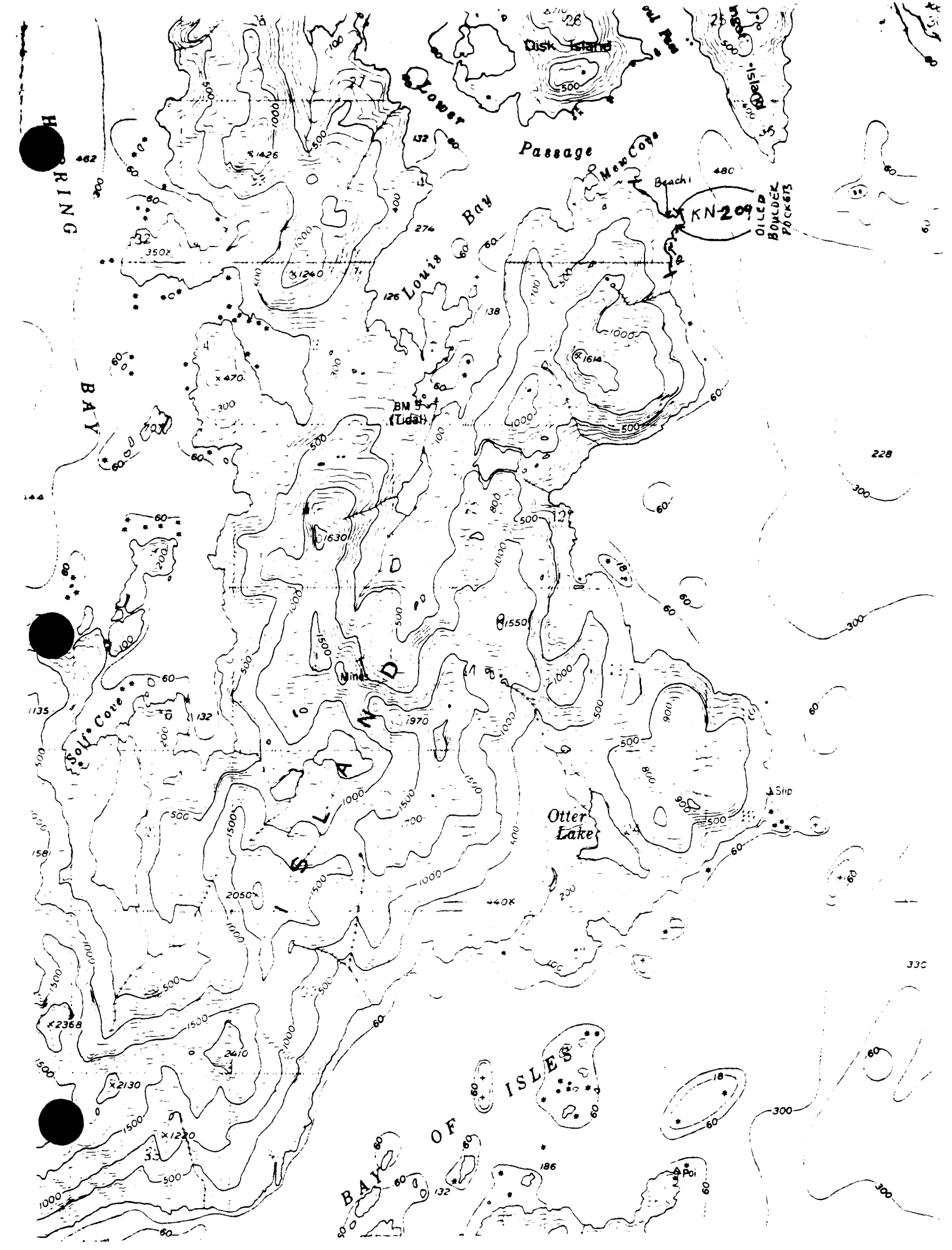
B/W Roll # CW9 Frames 9-13

Observer(s) C. Wilson

Time survey started 0945 Time survey ended 0930

Cultural resource considerations/restraints:

If previously undiscovered cultural resources are identified during cleanup contact Glynn archaeologist, C. Mobley, immediately. Monitoring during cleanup is recommended. Restrict access to upland


Disk Island
Lower Passage
Louis Bay
Beach
KN-209
OILED BOULDER POCKETS
BM 5 (Tidal)
Nine Fathom
Otter Lake
BAY OF ISLES
Ship
Poi

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/03/89 SHORELINE SEGMENT KN-210

LOCATION: (see enclosed map) Knight Island-Bay of Isles

Northeastern Tip

ADEC NO. _____ SHORELINE ASSESSMENT DATE: _____

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time subject to FOSC approval. Light oil occurs as a dry stain in a discontinuous narrow band and the shoreline has high wave exposure.

Priorities Considerations:
CLASS 4B

Ecological Constraints (from site survey): No ecological constraints because no cleanup is recommended.

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes Date: June 3, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson 6-10-89

EXXON: _____ Date: June 10-89

FOSC: A. C. Allejandro, by dir. Date: 6-11-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 0930-0950 Observer: C. Dillon

Surveyed From: Foot/(Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fo

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-21C

LENGTH OF SHORELINE SEGMENT: 2625 m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: (High)/Med/Low

Sediment: B 30% / C 30% / P 10% / G ___% / S ___% / M ___% / R 30%

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs

OIL

Degree of Oiling: Heavy/Moderate/(Light/No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: Y/(N) % of Segment _____ Width of Band: _____ m

Sporadic: (Y)/N % of Segment <5

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: <1 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 0 % /M <1 % /L 100 %

Fresh 0 % Mousse 0 % Tar Formation: 100 % drie sta.

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

Segment consists of 7 small beaches surrounded by rocky headlands and high angle/vertical straights. Oiling is confined to the following: 1m wide band on the headland rocks of beach 1; 1-2 m wide light stain on upper ITZ of beach 3; <1-2 m wide stained band on the straights at the southern extent of the segment. Oiled Absorbent boom was floating (drifting) around in the water in this vicinity.

ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISLAND SITE: KN-210 OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 210 LENGTH: 2625 (M)

DATE: 05/24/89 TIME (HHMM): 0930 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: (Rocks) (Boulder) (cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

No oiling

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

No oiling

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

No oiling

Littorina
Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

No oiling

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

No oiling

OTHER OBSERVATIONS: All 5 harbor seals on barrier rock island were very oiled. Two slid into water, other three were skittish but remained on rocks. No pups seen.

CLEANUP PRECAUTIONS: _____

MAMMALS: Otters ___ Harbor Seals 5 Sea Lions ___ Whales ___
Other River otter-1

BIRDS: Eagle-1

GENERAL OBSERVATIONS: Segment surveyed by boat.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/20/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-2D Length 1625 m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light and scattered

Width of beach zone surveyed 0 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile steep wall face and boulder fields

Fresh Water Sources none

Sea Exposure open to east

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # _____ Frames _____

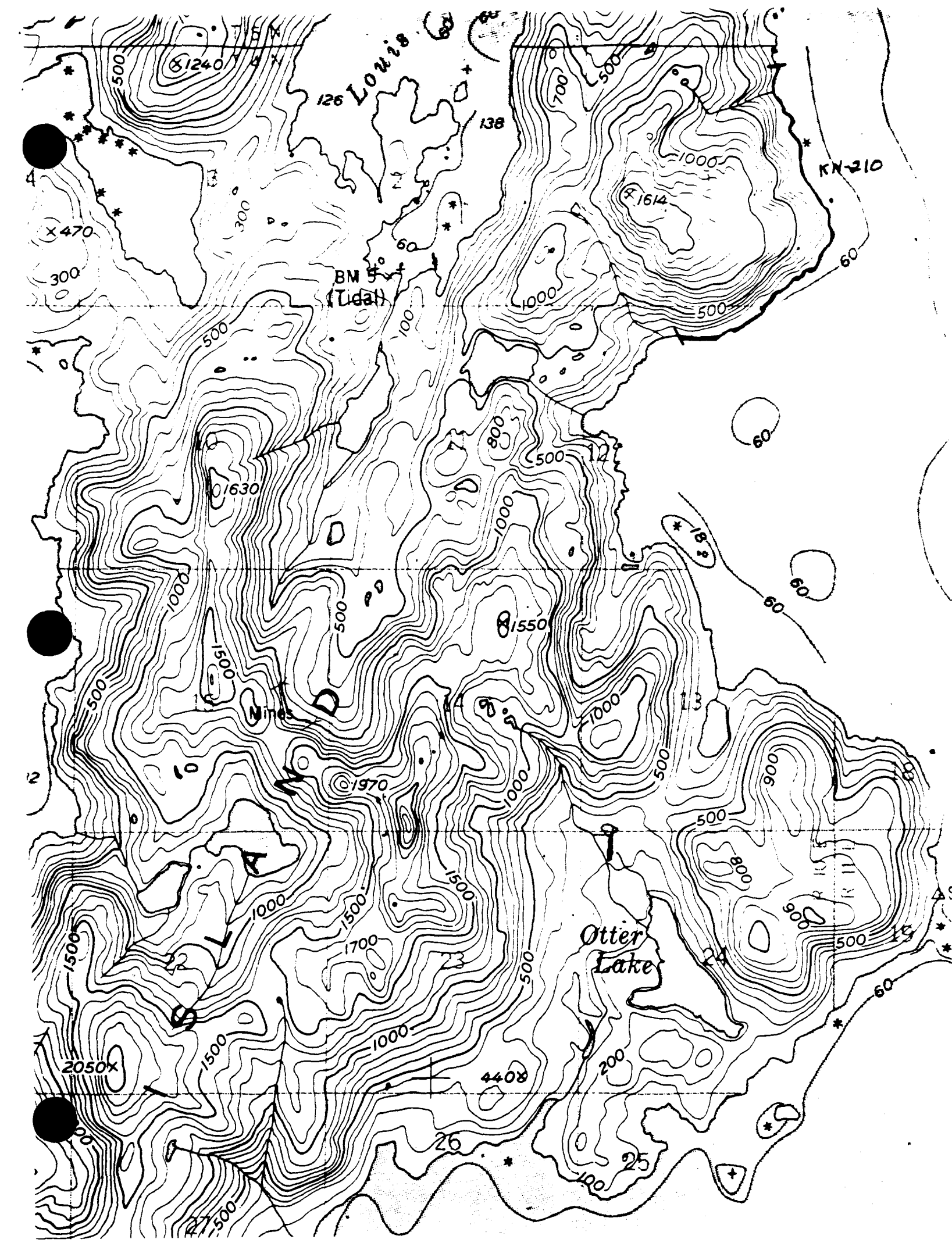
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 0930 Time survey ended 0950

Cultural resource considerations/restraints:

If heretofore undiscovered cultural ~~resources~~ material is uncovered during cleanup notify Exxon archaeologist C. Mobley.


Louis
BM 5
(Tidal)
KN-210
Nines
Otter
Lake
1240
1614
1630
1550
1970
1700
2050
4408
470
126
138
12
13
14
15
22
23
24
25
26
27

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/03/89 SHORELINE SEGMENT KN-211

LOCATION: (see enclosed map) Knight Island-Northeast Tip

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/24/89

Recommended Cleanup Activity(ies):
- Manually collect all oiled logs/algae and boom.
- Manually collect/scrape up asphalt like sediments.
- Hot water/high pressure flushing on boulder/cobble sediments.
- Hot water/low pressure flushing on pebble/sand sediments.
- Cleaning not recommended for oil stain on headlands/straights because it has high wave exposure. .

Priorities Considerations:
Class 2A
- Heavily oiled boom on beaches #4 & #5 should be removed as soon as possible, if possible, prior to cleanup crew mobilization.
- HIGH RECREATIONAL USE OF SMALL BEACHES.

Ecological Constraints (from site survey): Avoid stream areas and mytilus beds outside oiled zone. Harbor seal cow and pup on beach #2.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes Date: June 3, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson 6-10-89

EXXON: _____ Date: June 10 - 89

FOSC: D.C. Alexander, by dir. Date: 6-11-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 0945-1230 Observer: C. Dillon

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun/Cloud)/Rain/Snow/Fo

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-211

LENGTH OF SHORELINE SEGMENT: 15,000 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD/STRT) Slope: LANG/(HANG/VER)

Wave Exposure: (High)/Med/Low

Sediment: (B__% / C__% / P__%) / G__% / S__% / M__% / R ~20% 80 %

Drift Debris on Beach: (Yes)/No (Supra/Upper/Mid/Lower) Type logs/algae boom

OIL

Degree of Oiling: (Heavy/Moderate/Light/No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H / M / L) (mostly H/M)

Continuous: (Y)/N % of Segment 100 Width of Band: <1 - 75 m

Sporadic: Y/(N) % of Segment _____

Est. Oil Thickness where > 1cm: 1 cm Est. Oil Penetration: 0 - >15 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 75 % / M 20 % / L 5 %

Fresh 30 % Mousse 30 % Tar Formation: 40 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper/Mid/Lower) Amount: (H/M/L)

Comments:

This is a generalized Segment evaluation form. Most of this segment consists of rocky headlands and straight rock face with a 1 m wide dried/stained oil band. There are 5 large beaches with varying conditions. They are evaluated on the following sheets.

Diagrams of each are attached. Their locations are identified on the attached map.

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 0930-1020 Observer: C. Dalla

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fo

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KI-2 Beach

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 250 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/(HANG/VER)

Wave Exposure: (High)/Med/Low

Sediment: B 25 % / C 40 % / P 30 % / G ___ % / S 5 % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/algae

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M)/ L

Continuous: Y/(N) % of Segment ___ Width of Band: ___ m

Sporadic: (Y)/N % of ~~Segment~~ beach 10

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: <6 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H ___ % /M 70 % /L 30 %

Fresh 20 % Mousse ___ % ~~Tar Formation~~: 80 % dried Stainka

Drift Debris Oiled ? Yes/No Supra/(Upper)/Mid/Lower Amount: H/(M)/L/

Comments:

See attached diagram for details.

Majority of beach is unoiled.

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 1030-1100 Observer: [illegible]

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun/Cloud)/Rain/Snow/Fo

LOCATION

LOCATION Knight Island SEGMENT NUMBER KI-2 Beach 2

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 200 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: (High)/Med/Low

Sediment: B25 % / C25 % / P45 % / G___ % / S___ % / M___ % /R 5 %

Drift Debris on Beach: (Yes)/No (Supra/Upper/Mid/Lower) Type logs/algae + (large / small)

OIL

Degree of Oiling: (Heavy)/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP /(H / M / L)

Continuous: (Y)/N % of ~~Segment~~ Beach 90 Width of Band: 75 m

Sporadic: Y/(N) % of Segment_____

Est. Oil Thickness where > 1cm: 1 cm Est. Oil Penetration: >15 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 100 % /M___ % /L___ %

Fresh 0 % Mousse 30 % Tar Formation: 70 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper/Mid/Lower) Amount: (H)/M/L/

Comments:

Majority of beach is covered with a thick tarry/mousse asphalt-like pavement of pebbles and algae mixed oil. It varies from 2cm thick to >12 cm in places.

Boulders on North end of beach have heavy tar coating but no pools or free oil.

The stream area has almost cleaned itself completely.

Refer to diagram for details.

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 1105-1115 Observer: C. Sillan

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Foc

LOCATION

LOCATION Knight Island SEGMENT NUMBER KI-2 Beach 2

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 200 m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/(HANG)/VER

Wave Exposure: (High/Med)/Low

Sediment: B__% / C 10 % / P 90 % / G__% / S 40 % / M__% /R__% → underlies top sediments

Drift Debris on Beach: (Yes)/No (Supra/Upper/Mid)/Lower Type logs/algae

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/(No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H / M) / L

Continuous: (Y)/N % of ~~Segment~~ Beach_____ Width of Band: 13-15 m

Sporadic: Y/(N) % of Segment_____

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: >12 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 5 % /M 15 % /L 70 %

Fresh 70 % Mousse 15 % Tar Formation: 15 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper/Mid)/Lower Amount: H/M/(L)

Comments:

Small patches of thin "asphalt-like" sediments on Upper ITZ. Also some oiled logs and algae on U ITZ. Penetration is >12cm.

Middle ITZ is lightly coated with <4cm penetration. Some oiled algae & twigs in this zone.

Lower ITZ is unoiled.

High wave action is cleaning the small sediments of the middle ITZ

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 1125-1150 Observer: C. Dixon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun/Cloud)/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KI-2 Beach 4

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 200-300 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/(HANG)/VER

Wave Exposure: (High)/Med/Low

Sediment: B 5 % / C 80 % / P 10 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type logs/algae
oiled containment boom
oil saturated absorbent boom

OIL

Degree of Oiling: (Heavy)/Moderate/Light/(No Oil)/Unobserved

Area of Beach Impact: SU / SP /(H / M)/ L

Continuous: (Y)/N % of ~~Segment~~ Beach 100 Width of Band: 10 - 50 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 1 cm Est. Oil Penetration: >10 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H/00 % /M ___ % /L ___ %

Fresh 95 % Mousse 5 % Tar Formation: 0 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: (H)/M/L/

Comments:

Access to beach is very good. Bottom is a low angle slope and is very sandy.

approximately 200 feet of oil saturated absorbent boom and 20 ft. of containment boom have washed onto the upper ITZ.

See diagram for details.

SHORELINE OIL EVALUATION

Date: 5/24/89 Time: 1155-1210 Observer: C Dillon

Surveyed From: (Foot)/Boat/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fo

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KI-3a (Back 5)

LENGTH OF SHORELINE ~~SEGMENT~~ Beach: 150 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio/Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: LANG/(HANG)/VER

Wave Exposure: (High)/Med/Low

Sediment: B 70 % / C 25 % / P 5 % / G ___ % / S ___ % / M ___ % /R ___ %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type logs/oiled Containment boom

OIL

Degree of Oiling: (Heavy/Moderate)/Light/(No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H / M) / L

Continuous: (Y)/N % of Segment 100 Width of Band: 15-50 m

Sporadic: Y/(N) % of Segment ___

Est. Oil Thickness where > 1cm: 1 cm Est. Oil Penetration: 0 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 50 % /M 50 % /L ___ %

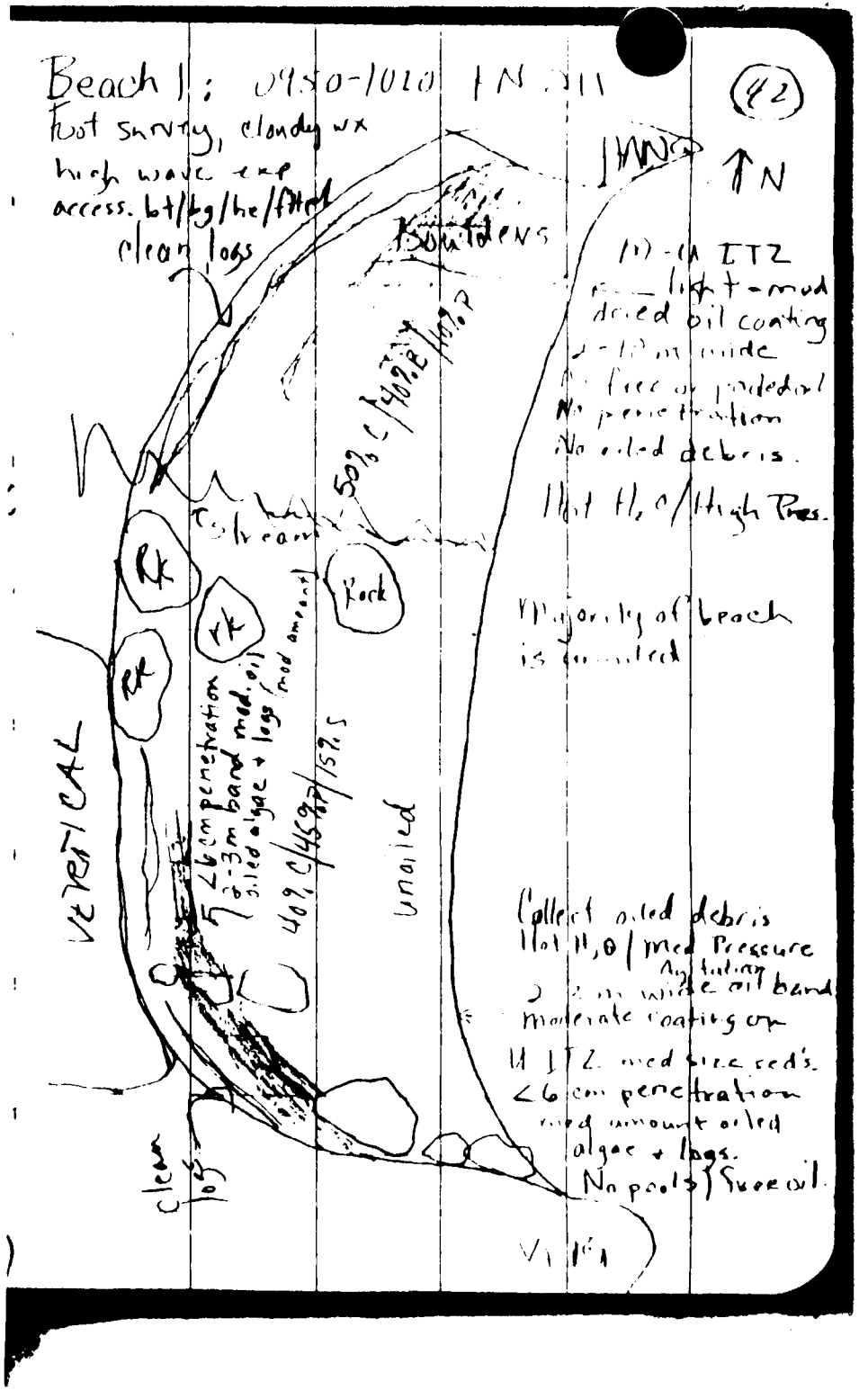
Fresh 0 % Mousse 0 % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: (H)/M/L/

Comments:

Lower ITZ is unoiled. Approx. 300' or more of oiled containment boom is washed up on the south end of the beach.

See diagram for details.

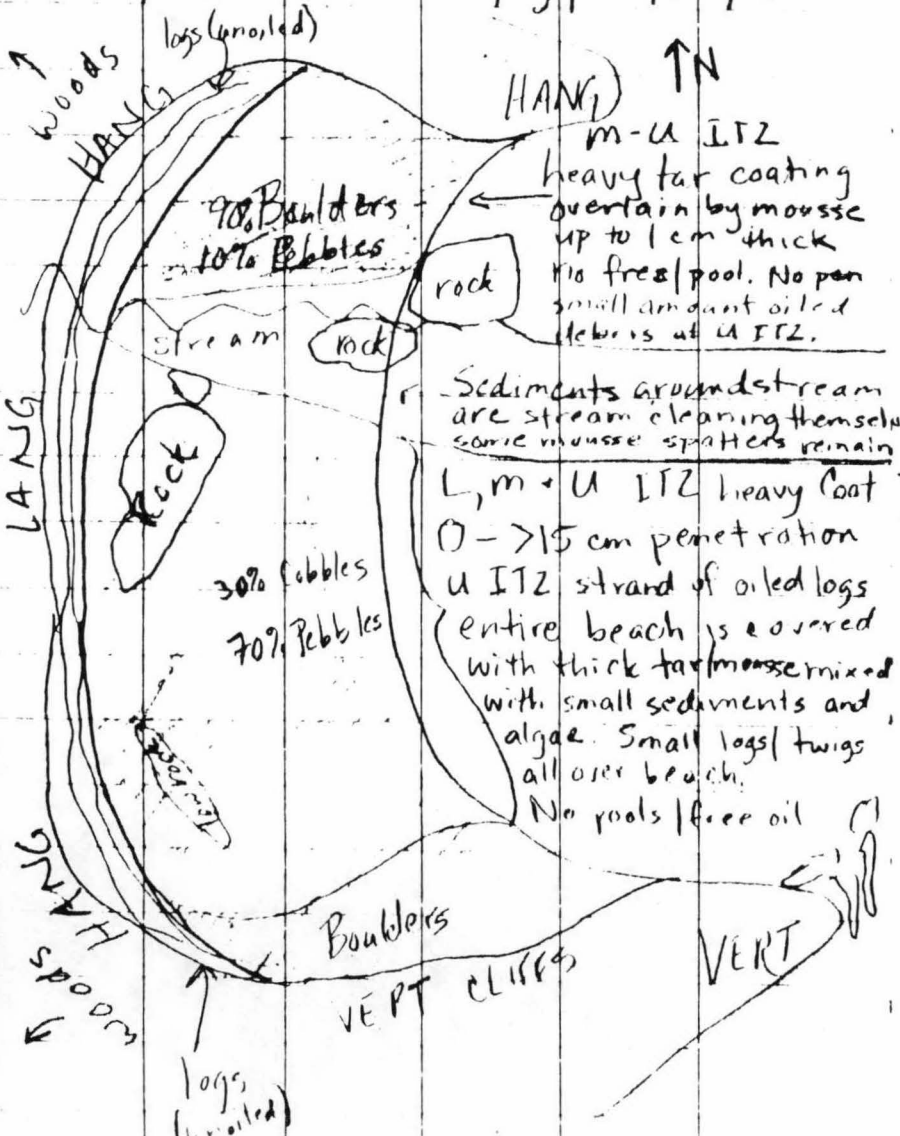

Beach 1: 0950-1010 1N 311
(42)
foot survey, cloudy wx
high wave exp
access. bt/bg/he/ftbrd
clean logs
N
Boulders
Stream
Rock
Rock
Rock
VERTICAL
clean logs
unoiled
clean logs

(113)

KN-211 Beach 2: 1030 - 1100

wx: Cloudy | sunny wave exposure: high

Survey: foot access: bt | bg | helo | fixed plane



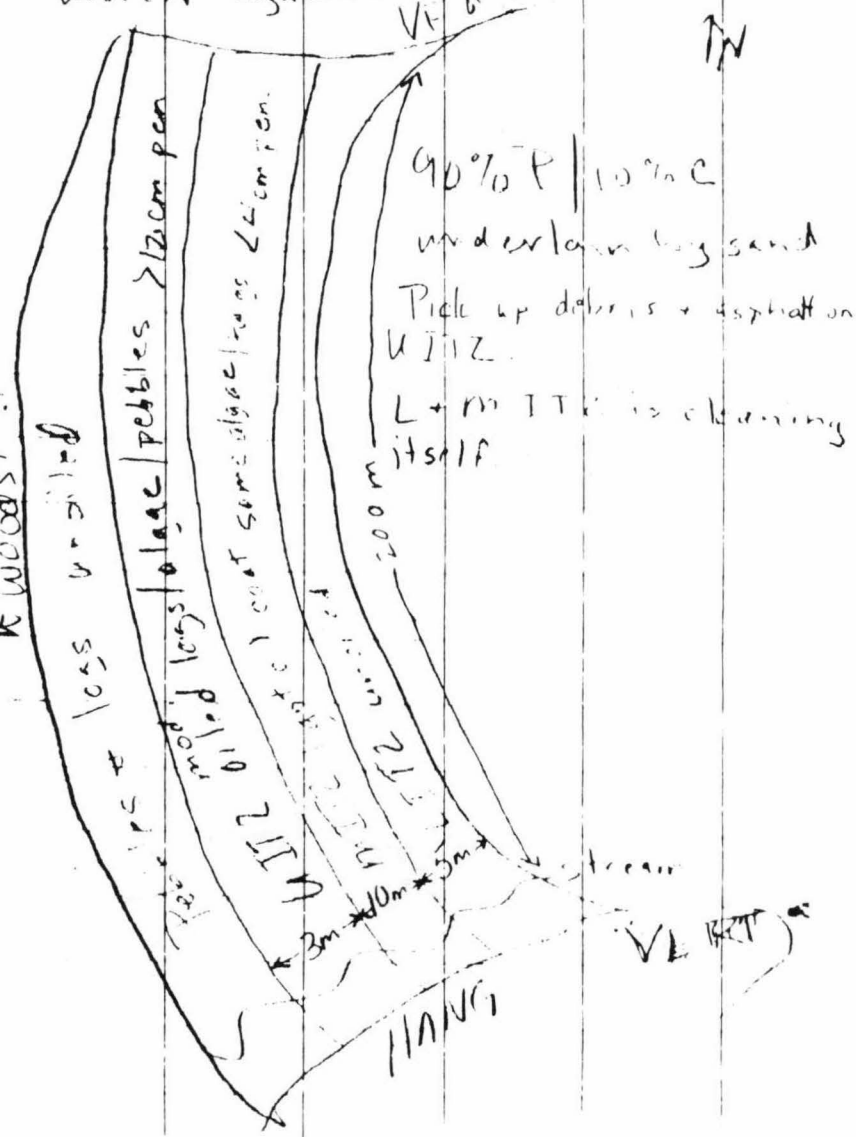
Beach 3: 1105 - 1115

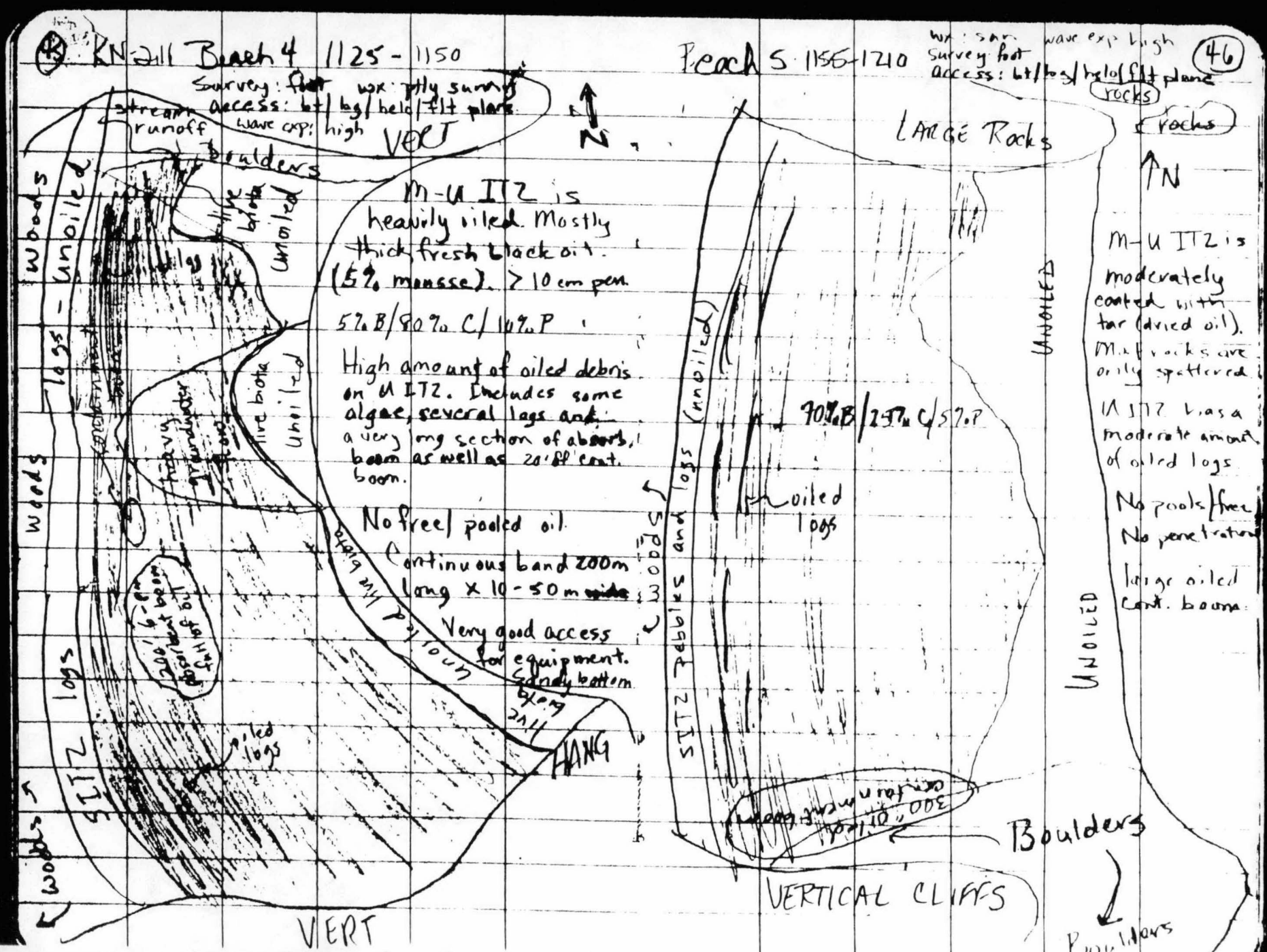
(114)

Survey: foot wx: cloudy

Access: boat/bg/helo/fixed pl

wave exp: high-med




KN-all Beach 4 1125 - 1150
Survey: foot wx: ptly sunny
access: bt/ bg/ helo/ flt plane
wave exp: high
VEJ
stream runoff
Boulders
Woods
less - unoiled
unoiled
live biota
M-U ITZ is heavily oiled. Mostly thick, fresh black oil. (5% mousse). > 10 cm pen.
5% B/ 80% C/ 10% P
High amount of oiled debris on U ITZ. Includes some algae, several logs and a very long section of aboard, boom as well as 20' ff cont. boom.
No free/ pooled oil
Continuous band 200m long x 10 - 50m wide
Very good access for equipment. Sandy bottom
HANG
oiled logs
STTZ
logs
VERT
Beach 5 1155-1240
wx: sun wave exp: high
survey: foot
access: bt/ bg/ helo/ flt plane
rocks
LARGE Rocks
N
M-U ITZ is moderately coated with tar (dried oil). Many rocks are oily spattered
U ITZ has a moderate amount of oiled logs
No pools/ free
No penetration
large oiled cont. boom
UNOILED
70% B/ 25% C/ 5% P
oiled logs
STTZ Pebbles and logs (unoiled)
UNOILED
VERTICAL CLIFFS
Boulders
Pebbles

ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISLAND SITE: KN-211 OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 211 LENGTH: 15,000 (M)

DATE: 05/24/89 TIME (HHMM): 0945 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) (Medium) (Low)

SUBSTRATUM: (Rocks) Boulder (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Generally unoiled and healthy throughout area and on beaches.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None (Y)

Particularly dense in stream area Beach #2; None on Beach #5

Balanus (Barnacles): Patchy (Y)/N Contin (Y)/N Dense (Y)/N Sparse Y/N None Y/

Present in oiled and un-oiled zones.

Littorina
Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None (Y)/N

Beach #2, patchy in LT2, not in oiled area; None on Beach #5. Dense moon snails extend into oiled zone Beaches #1, #4.

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None (Y)/N

Sparse throughout beaches, none on Beach #5

OTHER OBSERVATIONS: Non-anadromous streams on beaches #1, 2 & 4. White particulate in H₂O off Beach #5 - seems to be same as private individuals' dispersant seen last week. Mousse in water off heavily oiled Beach #2. Heavily oiled boom on Beaches #4 & #5.

CLEANUP PRECAUTIONS: LT2 below oiled zones generally with sparse biota - ecological constraints limited to stream areas and boulders on ends of beaches. Avoid mytilus beds outside oiled areas as much as possible.

MAMMALS: Otters ____ Harbor Seals 2+pup Sea Lions ____ Whales ____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Beach #3: Harbor seal + pup 20 yards off shore, unoiled; pup trying to beach, cow nudging it back into water watching us unceasingly.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/24/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-2 11 Length 15820m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 0 - 10 m Tree fringe surveyed 0 - 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Most beaches have moderate slopes and are mostly cobbled; the rest is steep wall face and cobble fields

Fresh Water Sources several streams

Sea Exposure open to east

Access/Safety good on beaches; poor elsewhere

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # _____ Frames _____

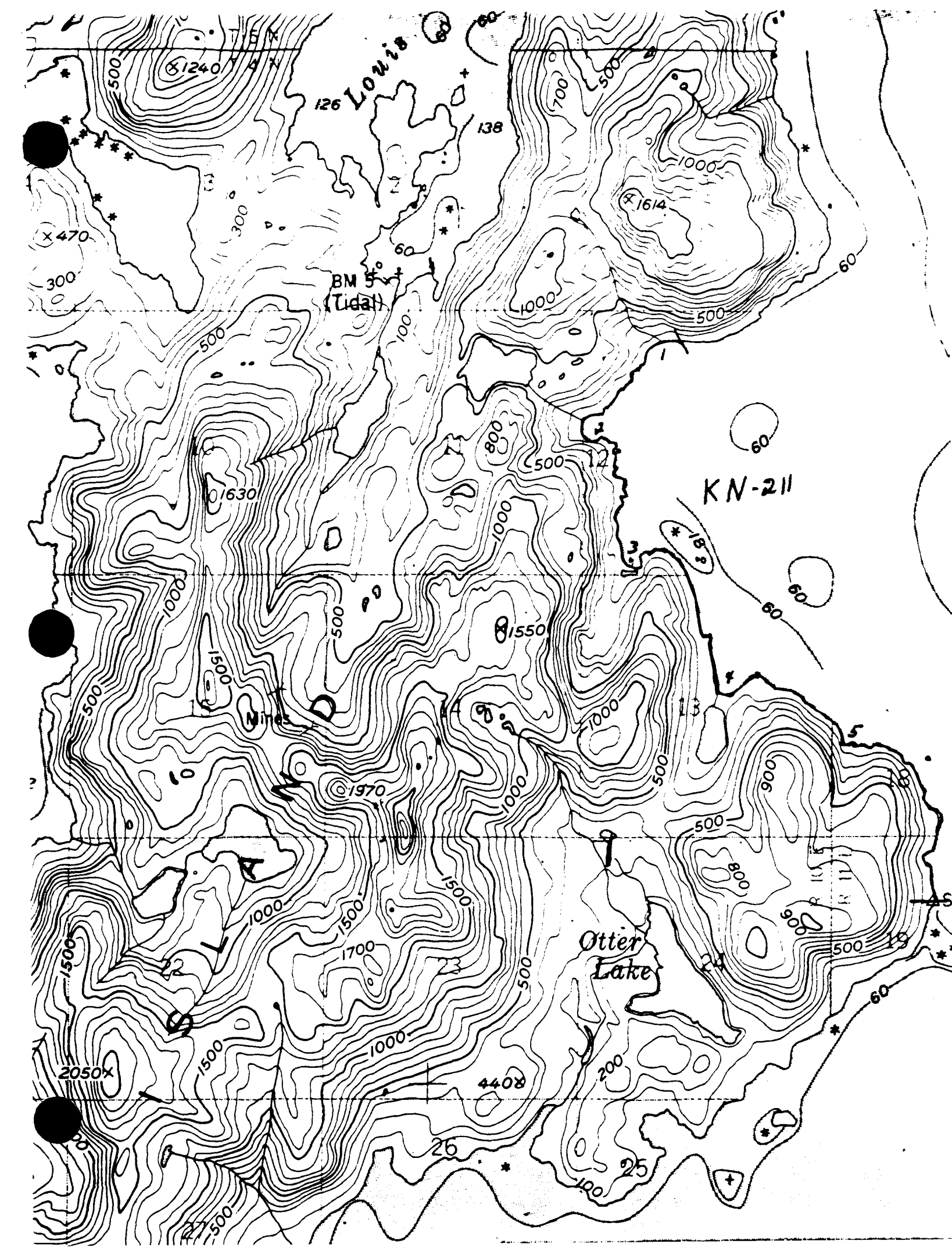
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 0950 Time survey ended 1230

Cultural resource considerations/restraints:

If heretofore undiscovered cultural material is uncovered during cleanup contact Gyda archaeologist, C. Mobley immediately.


Louis
BM 5
(Tidal)
KN-211
Mines
Otter
Lake
1240
1614
1630
1550
1970
1700
4408
2050
470
126
138
1
2
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KN-210

TREATMENT MANUAL, 6/15/89

SEG KN-210 INSPECTION # 1 SEGMENT

DATE 7/19/89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical _____
- ☐ Non-mechanical _____
- ☒ Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-210 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsower Date: 7/21/89 Time: 16:30

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
1	Medium
17	Light
0	Very Light
82	None
100 %	

Subsurface Oil

☐ Yes ☒ No

Comments _____

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments NOT AVAILABLE

Signature _____ Date: / / Time:

Printed Name _____

FOSC rep Demobilization approved/disapproved

Comments NO VISUAL CONTAMINATION. SEGMENT WAS NOT TREATED, SEE SEGMENT PLAN RECOMMENDS NO CLEAN UP

Signature _____ Date: 7/21/89 Time: 1650

25JUL89

SEG KN211 INSPECTION # 1 **SEGMENT**

DATE 9-13-89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [X] Other Hand pick up

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN 211 is complete

Signature Michael A. DeRudder Date: 9/13/89 Time: 1500

Printed Name Michael A. DeRudder

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
2	Heavy
8	Medium
10	Light
0	Very Light
80	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil Percent	Degree of Oiling
2	Heavy
8	Medium
10	Light
0	Very Light
80	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Gross contamination still present.

Signature Michele Peap Date: 9/14/89 Time: 13:45

Printed Name Michele Peap

FOSC rep **Demobilization approved/disapproved**

Comments Treatment not completed Excessive Heavy oil Co

Signature Coast Guard Date: 9/14/89 Time: 1345

Printed Name PAUL PUNCEC Coast Guard

COPY: EXXON ADEC FOSC ISCC

Remediation Recommended

6/7/89

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): IRON MOUNTAIN BLOCK

Includes Shoreline Segments: KN-212, KN-213

Submitted: [signature] (for Exxon) Date: 6/5/89

ISCC Reccomendation: Sharon K. Christopherson Date: 6/12/89

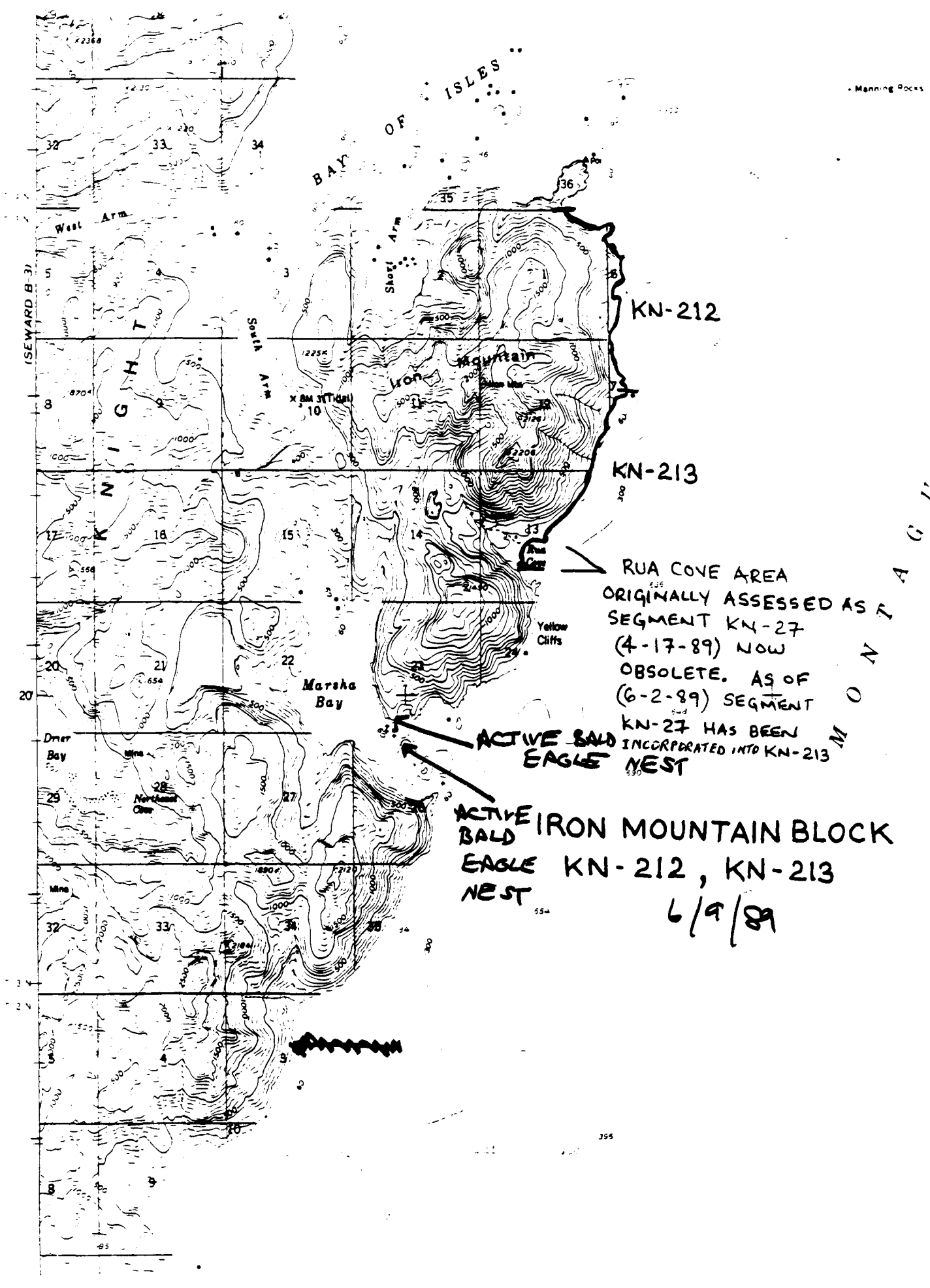
FOSC Approval: A. C. Alejandro, by dlw Date: 6/13/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

FOSC
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NOAA
EPA
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USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO


BAY OF ISLES
West Arm
Short Arm
South Arm
Iron Mountain
Marsha Bay
Dyer Bay
Northeast Cape
Yellow Cliffs
(SEWARD B-3)
KN-212
KN-213
RUA COVE AREA ORIGINALLY ASSESSED AS SEGMENT KN-27 (4-17-89) NOW OBSOLETE. AS OF (6-2-89) SEGMENT KN-27 HAS BEEN INCORPORATED INTO KN-213
ACTIVE BALD EAGLE NEST
ACTIVE BALD EAGLE NEST
IRON MOUNTAIN BLOCK
KN-212, KN-213
6/9/89

(version 6/04/89)

SHORELINE CLEANUP PROGRAM

DATE 6/05/89 SHORELINE SEGMENT KN-212

LOCATION: (see enclosed map) Knight Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/01/89

Recommended Cleanup Activity(ies):
- Manually remove oiled debris.
- Hot water wash on oiled cobbles/boulders.
- Flood/flush oiled cobbles/boulders with medium to high pressured hot water or use other appropriate cleaning methods.

Priorities Considerations:
- Class 2B (Beach 0)

Ecological Constraints (from site survey):
- None.

Archeological Constraints (from site survey):
Archaeological monitor required during cleanup of some portions of the southern portion of the segment. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes — Date: June 5, 1989
State Historic Preservation Officer *

ISCC: Shera K. Christopherson — Date: 6/12/89

EXXON: [signature] — Date: June 12 -89

FOSC: A. C. Alejandro, by dir. — Date: 6/13/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/15/91 Time: 0555-1545 Observer: A E. JAHN

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/(Cloud)/(Rain)/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-212

LENGTH OF SHORELINE SEGMENT: 3200 m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/(STRT) Slope: (LANG)/(HANG)/VER

Wave Exposure: (High)/Med/Low

Sediment: B 15 % / C 10 % / P 5 % / G ___ % / S ___ % / M ___ % / R 70 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type Logs, Plastic

OIL

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: (SU) / (SP) / (H) / M / L

Continuous: Y/(N) % of Segment < 5 Width of Band: 1-30 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 10-30 cm

Pooled Oil: ____ % "Free" Oil: 20 % Coated: H ___ % /M 50 % /L 50 %

Fresh ____ % Mousse 50 % Tar Formation: 50 %

Drift Debris Oiled ? (Yes)/No (Supra)/Upper/Mid/Lower Amount: H/M/(L)

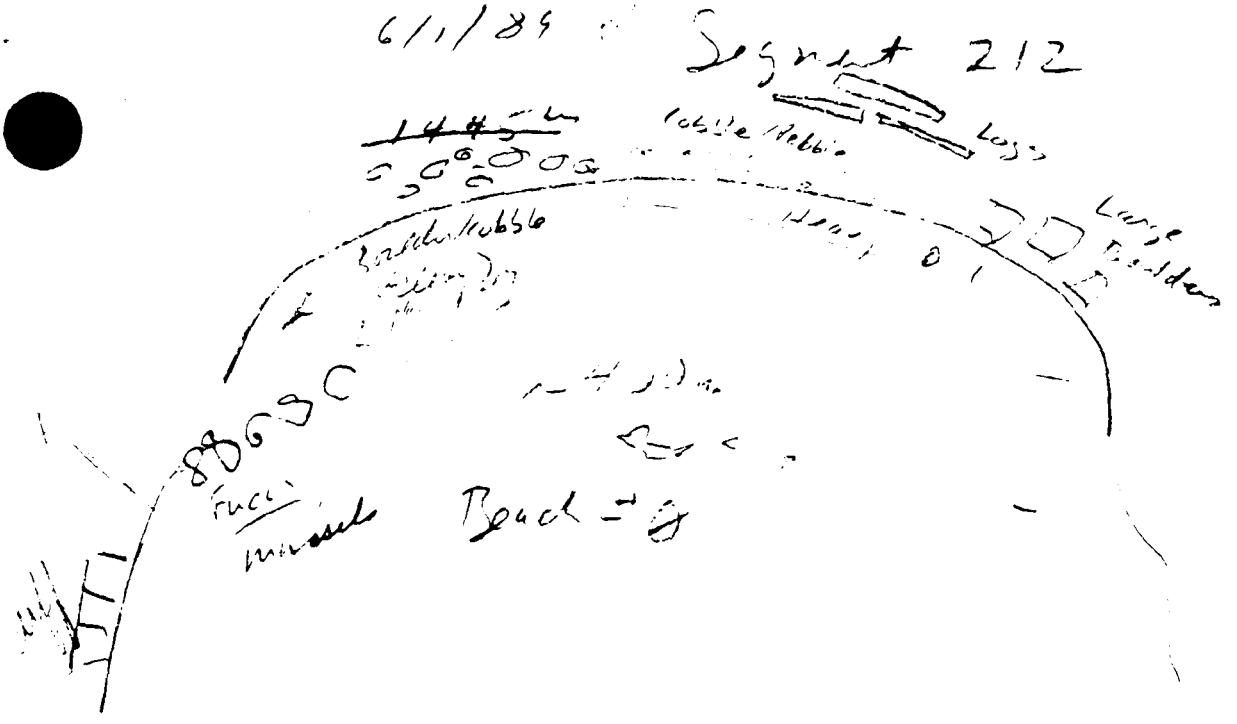
Comments:

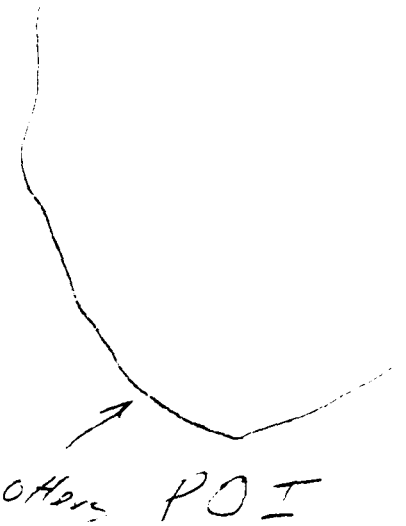
North ends of beaches are oiled - south ends generally clean. Where oiled, coating is light except @ Beach #0 where mouse is ~1 cm thick in places.

Beach 0 is the only part of segment where cleanup is recommended; but all of this may be synonymous with segment KN-26.

NO CAMERA

6/1/89 Segment 212





Segment 212
1530 hrs
Beach #6



Sylvia KN-212

6/1/59

0755 - 0640



SHORELINE EVALUATION

LOCATION: KNIGHT IS. SITE: _____ OBSERVER: A.E. JAHN

LOCATION PREFIX: KN SEG. NO.: KN-212 LENGTH: 3200 (M)

DATE: 6/1/89 TIME (HHMM): 0555-1545 TIDE HT.: -1.4-2 ft (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

mussel bed @ Bch 6 is oiled lightly, but mussels are alive

Balanus (Barnacles): Patchy Y/N Contin. (Y)/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

abundant @ Bead 5

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Very few organisms (alive or dead) in oiled part of Bead #0, where cleanup is recommended. Possible salmon stream (minor) @ Bch #4.

CLEANUP PRECAUTIONS: Otters with pup seen near Bead #0

MAMMALS: Otters 4 Harbor Seals 3 Sea Lions ___ Whales 2
Other _____

BIRDS: pidgeon guillemots, puffins (?), gulls

GENERAL OBSERVATIONS: Except @ bead #0, segment is not oiled enough to justify cleanup operations - no free oil anywhere else, and damage to intertidal zone would contraindicate cleanup of upper tidal zone.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/2/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-212 Length 3200

Survey Method:

Air _____ (A - indicate on map) Boat ~~THE REST~~ (A - indicate on map)

Ground ~~BEACHES~~ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 5-15 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) ~~None~~ CBN

General observations justifying survey method and segment's site probability:

Shore Profile most beaches are moderately sloped but all except 6 are mostly cobble and boulders.

Fresh Water Sources streams on several beaches during heavy rains.

Sea Exposure open to east

Access/Safety good on beaches poor elsewhere

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed (yes)/no Collection yes/(no)

Photos: Color Roll # CW-C1- Frames 6-11

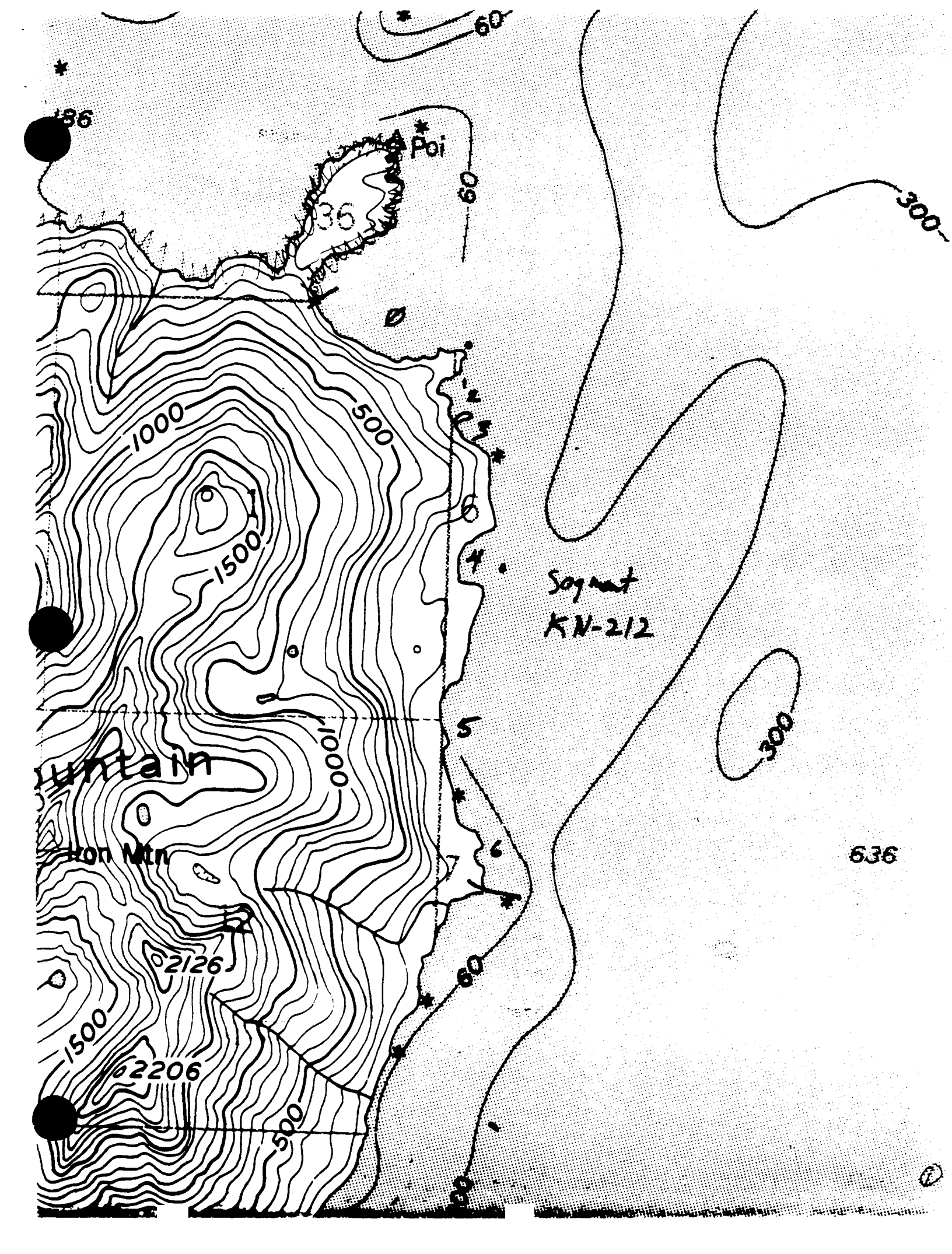
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 0555 Time survey ended 1545

Cultural resource considerations/restraints:

An archaeologist should monitor beaches if cleanup occurs there (it is not recommended) if heretofore undiscovered cultural materials are discovered during cleanup contact Upon archaeologist, C. Mobley, immediately.


60
Poi
36
60
300
1000
500
1500
Segment
KN-212
1000
Mountain
Iron Mtn
2126
1500
2206
500
300
636

(version 6/04/89)

SHORELINE CLEANUP PROGRAM

DATE 6/05/89 SHORELINE SEGMENT KN-213

LOCATION: (see enclosed map) Knight Island-Northern East Coastline

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/02/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time subject to FOSC approval. Only very light sporadic oil distribution, very thin oil coat, insufficient oil to justify cleanup on shore with high wave exposure.

Priorities Considerations:
- Class 4A

Ecological Constraints (from site survey):

Archeological Constraints (from site survey):
No access to uplands. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes — Date: June 9, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson — Date: 6/12/89

EXXON: Beal — Date: June 12 - 89

FOSC: R. C. Alexander, by dir — Date: 6/13/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/1, 6/2 Time: 16:20 - 19:30, 07:00 - 10:00 Observer: G. MACDONALD.

Surveyed From: (Foot)/Boat/Helio/Plane Weather: Sun/(Cloud/Rain)/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-213

LENGTH OF SHORELINE SEGMENT: 2700 m

ACCESS: Foot/Vehicle/(Boat)/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/HLD/(STRT) (RUA COVE) Slope: (LANG)/HANG/(VER) (BEACH) (CLIFF)

Wave Exposure: (High)/Med/Low

Sediment: B 30 % / C 15 % / P 15 % / G ___ % / S ___ % / M ___ % / R 40 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy/Moderate/(Light)/(No Oil)/Unobserved

Area of Beach Impact: SU / (SP / H) / M / L

BAND - Continuous: Y/(N) % of Segment ≤ 20 % Width of Band: ≤ 3 m

MOUSSE - Sporadic: (Y)/N % of Segment ≤ 10 %

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: ≤ 20 cm

Pooled Oil: ∅ % "Free" Oil: ∅ % Coated: H ___ % / M ___ % / L 100 %

Fresh ____ % Mousse 30 % Tar Formation: 70 %

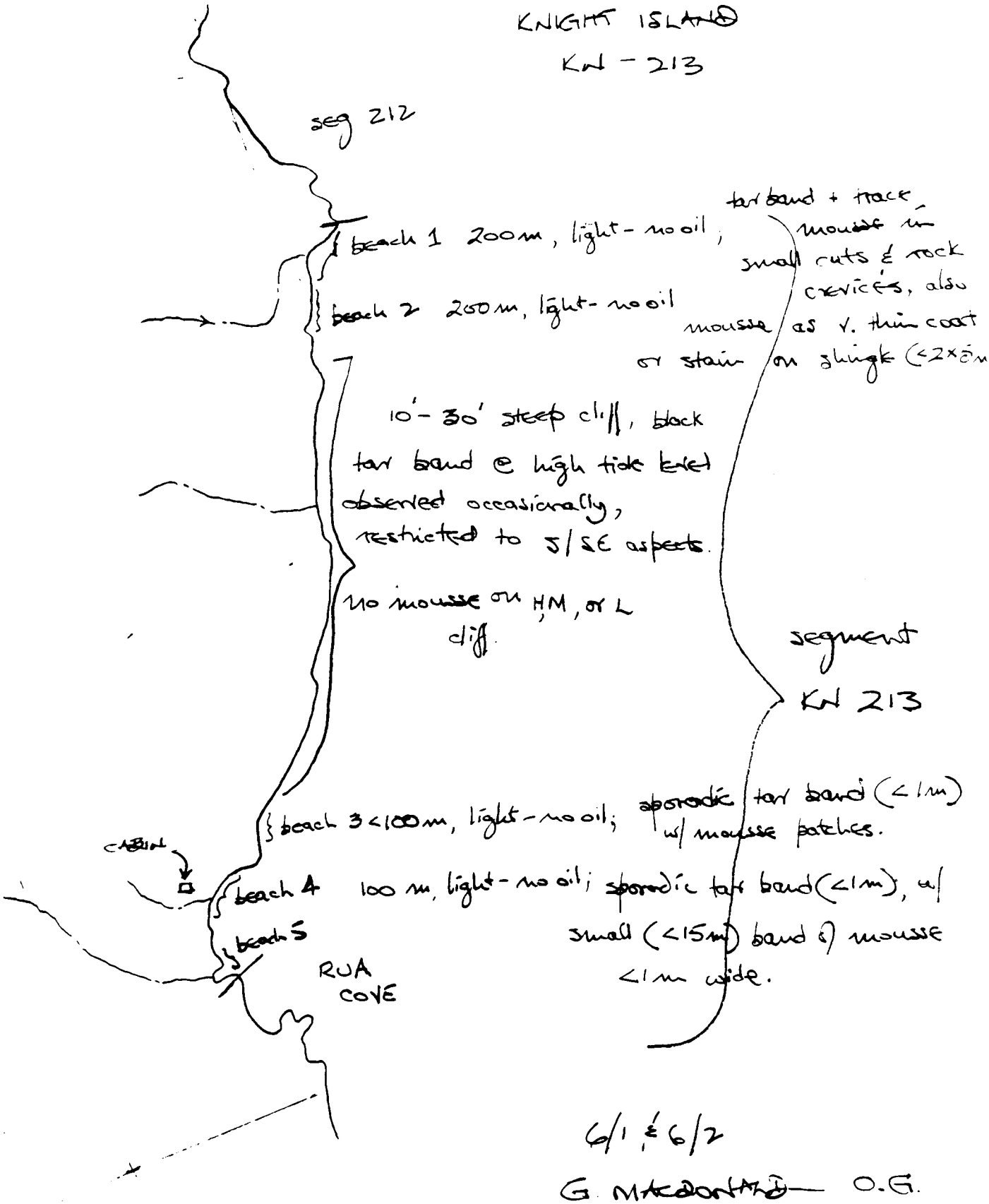
Drift Debris Oiled ? (Yes)/No (Supra)/Upper/Mid/Lower Amount: H/M/(L/*) VERY LIGHT.

Comments:

TWO DISTINCT ZONES & TYPES OF OIL : 1) THIN COAT OF TAR, MAINLY ON CLIFFS FACING S & SE, AS OBVIOUS BAND. 2) SPORADIC PATCHES / BELTS OF FRESH - SLIGHTLY CRUSTY MOUSSE, COATS BOULDERS AND PEBBLE BEACHES, OCCASIONALLY TRAPPED IN CREVICES AND GULLIES; INSUFFICIENT OILING TO JUSTIFY CLEANUP.

KNIGHT ISLAND

Knl - 213



6/1 & 6/2

G. MACDONALD — O.G.

scale ~ 2½" : 1 mile.

beach sketches attached.

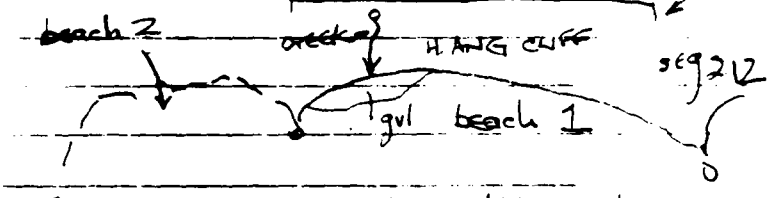
GEO. SCAT

1st JUNE 89 E. Knight, Bay of Islands

ARR MARY JANE II @ 12.30

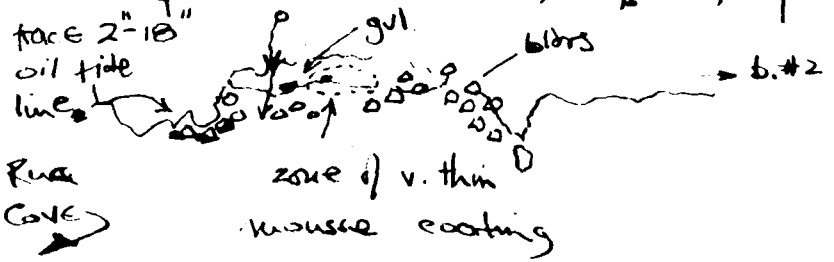
segment Z12, beaches 0-6, mousse covered ot's NW aspects only, becom thin - non exist to S. Most surficial cover @ hi-vhi tide line, decreasing to seaward. 15 45 pm

4.23 pm seg 213 bldr beach w/ H. ANG cliff, "cured" blk oil tide mark conspic; rare crusted choc. mousse splotches; dk brn-blk oil stain on <10% of small bldr faces; trace of free oil in crevices* & cuts parallel to shore @ HTL; MIN cleanup · ϕ activity advised. L. shorelines clean and no sign of oil or sheen -2 HRS before LTide. Hi vol. stream flushing beach. Local o.c. of meta. pillow basalts & agglomerate. 200 m



Peat moss could be applied here *

5·15pm, beach 3, seg 213; v. light of thin crusted mousse; v. stky; U – Mid level; stream flushing gvl, no obs. tide mark of oil; v. thin coating / stn; no clean-up advised. >80 bldr, 15% cob, 5 pebs



gale warning frn. Kaco timekeeper / F, SW MJ II @ 8·00pm

6/2 (lo tide 07·00, -2·7')

beach 2, seg 213 ~200m wide – bldrs 30% pebs 70%; mod. sloping peb beach w/ hi. avg greenstone pillows basalt headwall cliffs. oil only as single lt. coating on super hi storm scarp, to 6", stky choc. mousse, 100' × 18" only, unless later contam. is obs, only gvl/peb shovelling + sluice box cleaning or removal is worthwhile here.



V. light coat of dk. choc brn mousse, only a few pebs. are totally stained.

BEACH 2 seg 213.

07.30; oily coated cliff * could be hand wiped w/ sorbent, < 10'×4'. SO/t mousse.

Beach 4 seg 213; 08.40. 100m wide @ LT med-LARGE gvl/peb beach in cove; dried mousse @ hi tide level again as prevasive stain, 50' sect" of gvl. & U. beach has mousse to ~8" deep in local smearing; loc". adj. N of Rua Cove beach no oil obs on mid or L. beach;



BEACH 5 seg 213 ; 09.20 ; 50m wide
80' bldrs, lo cobs, lo peebs,



additional oil tideline @
hi tide again, dk brn mousse
cover, < 30% of total beach sfc.

All segment 213 is v.low priority ; poss. for
omniweep @ hi tide only w/ boom/skim ;
any cleanup would have to have
excel. skim fact. to justify any action
here. Oil staining < 2mm thick, mousse
on the shingle < 18" deep, avg < 1".
END of SEGMENT.
CAMERA MALFUNCTION — NO PHOTO.

BIOLOGICAL EVALUATION

LOCATION: KNIGHT IS. SITE: _____ OBSERVER: A. E. JAHN

LOCATION PREFIX: KN SEG. NO.: KN 213 LENGTH: 2700 (M)

DATE: 6/14/89 TIME (HHMM): 6/14 1600-1800 6/15 0720-0930 TIDE HT.: -2 to +2 ft (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y

Littorina
Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N
dense on some beaches, absent on others

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N
coming in upper tide zone on clean boulders

OTHER OBSERVATIONS: possible salmon stream @ Beach #5 - near mine shack

CLEANUP PRECAUTIONS: no good reason to clean this segment

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other _____

BIRDS: pidgeon guillemots, gulls, eagles

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/2/89 Location Kinguet Island Site _____

Location Prefix KN Segment # KN-213 Length 2700m

Survey Method:

Air _____ (A - indicate on map) Boat ✓ THE REST (A - indicate on map)

Ground ✓ BEACHES (G - indicate on map)

Known cultural resources (AHRS #) 49 Data Source 14(4)1?

Oil conditions/beach visibility none to medium

Width of beach zone surveyed 5-15 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) MNE

General observations justifying survey method and segment's site probability:

Shore Profile beaches mostly cobble and boulder covered

Fresh Water Sources several streams

Sea Exposure east

Access/Safety beaches good, else vert poor

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # _____ Frames _____

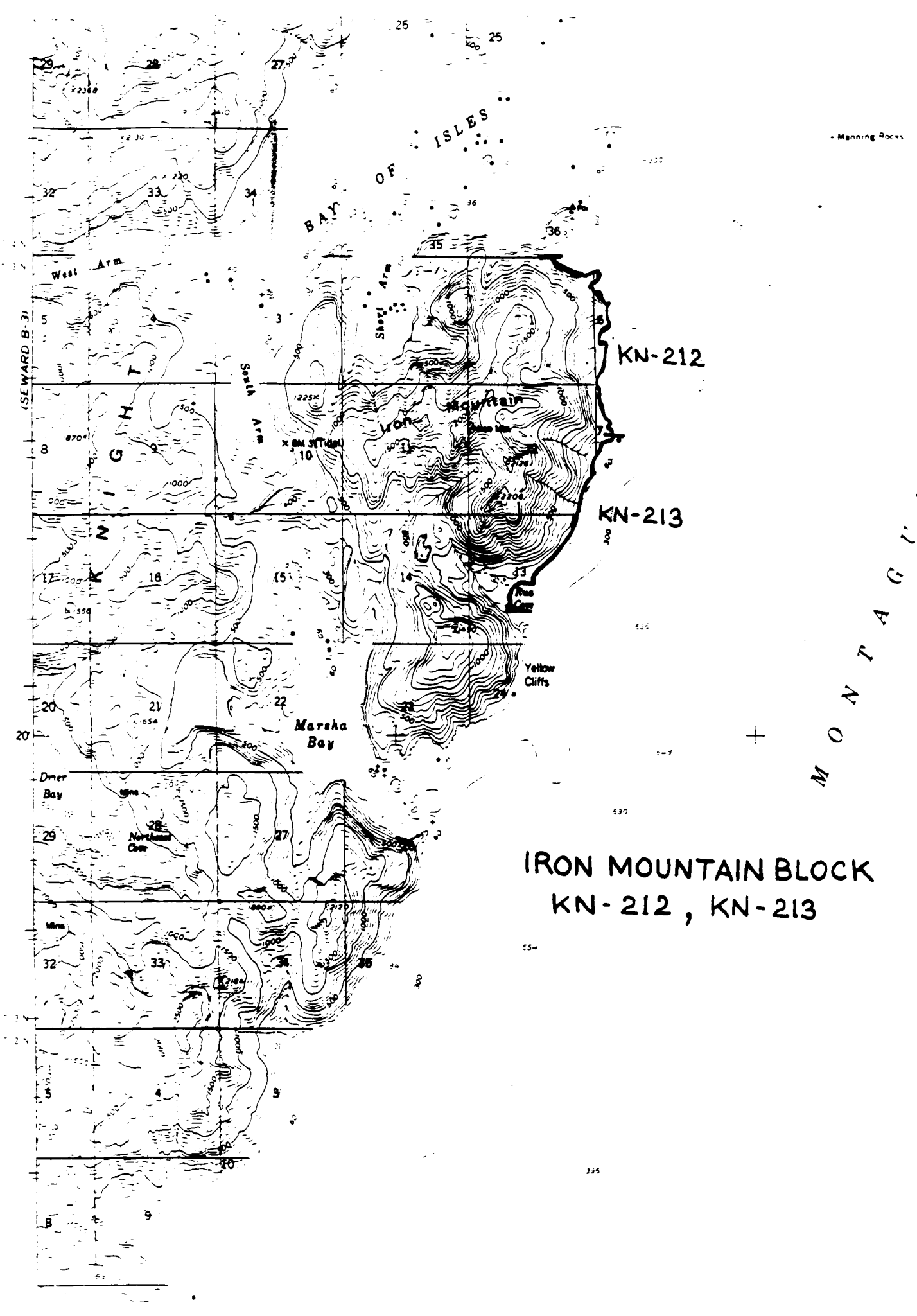
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 6/1/89 1620 Time survey ended 6/2/89 1000

Cultural resource considerations/restraints:

If cleanup occurs the restriction against upland access should be strictly enforced on beach 5. If buried/obscured undiscovered cultural resources are uncovered during cleanup contact Eyak archaeologist C. Mobley, immediately.



IRON MOUNTAIN BLOCK
KN-212 , KN-213

SEG KN 212 INSPECTION # ___ SEGMENT

DATE 8-19-89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☑ Hot water wash
- ☑ Warm water wash
- ☑ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical WIPING, RAKING
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-212 IS COMPLETE AND READY FOR DEMOBILIZATION TO NEW SEGMENT

Signature Melvin D. Moore Date: 8/19/89 Time: 2045

Printed Name MELVIN D. MOORE

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

USCG	Percent ADEC	Degree of Oiling
3	3	Heavy
12	12	Medium
35	35	Light
40	40	Very Light
10	10	None
	100 %	

Subsurface Oil

☑ Yes ☐ No

Comments Very Light. Primarily Bed rock base and Rock lined land shoreline.

Reassessment

☑ Yes - necessary on Spring ☐ No - not necessary unless re-oiled

ADEC rep Comments Additional work after initial inspection on 8/15/89. Beach boundaries on north end of segment to where it meets end of segment. Light contamination remains

Signature Frank S. Sautner Date: 8/19/89 Time: 2100

Printed Name FRANK S. SAUTNER

FOSC rep **Demobilization approved/disapproved**

Comments Joint ADEC/CG inspection on 8/15. Required rework of small area which was approved Today.

Signature Cal Kenton Date: 8.19.89 Time: 2050

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Yellow Cliffs Block

Includes Shoreline Segments: KN-214

Submitted : _____ (for Exxon) Date: 7/17/89

ISCC ~~Approval:~~ Recommendation Sharon K. Christopherson Date: 7/25/89

FOSC Approval: C S Robbins Date: 7/25/89

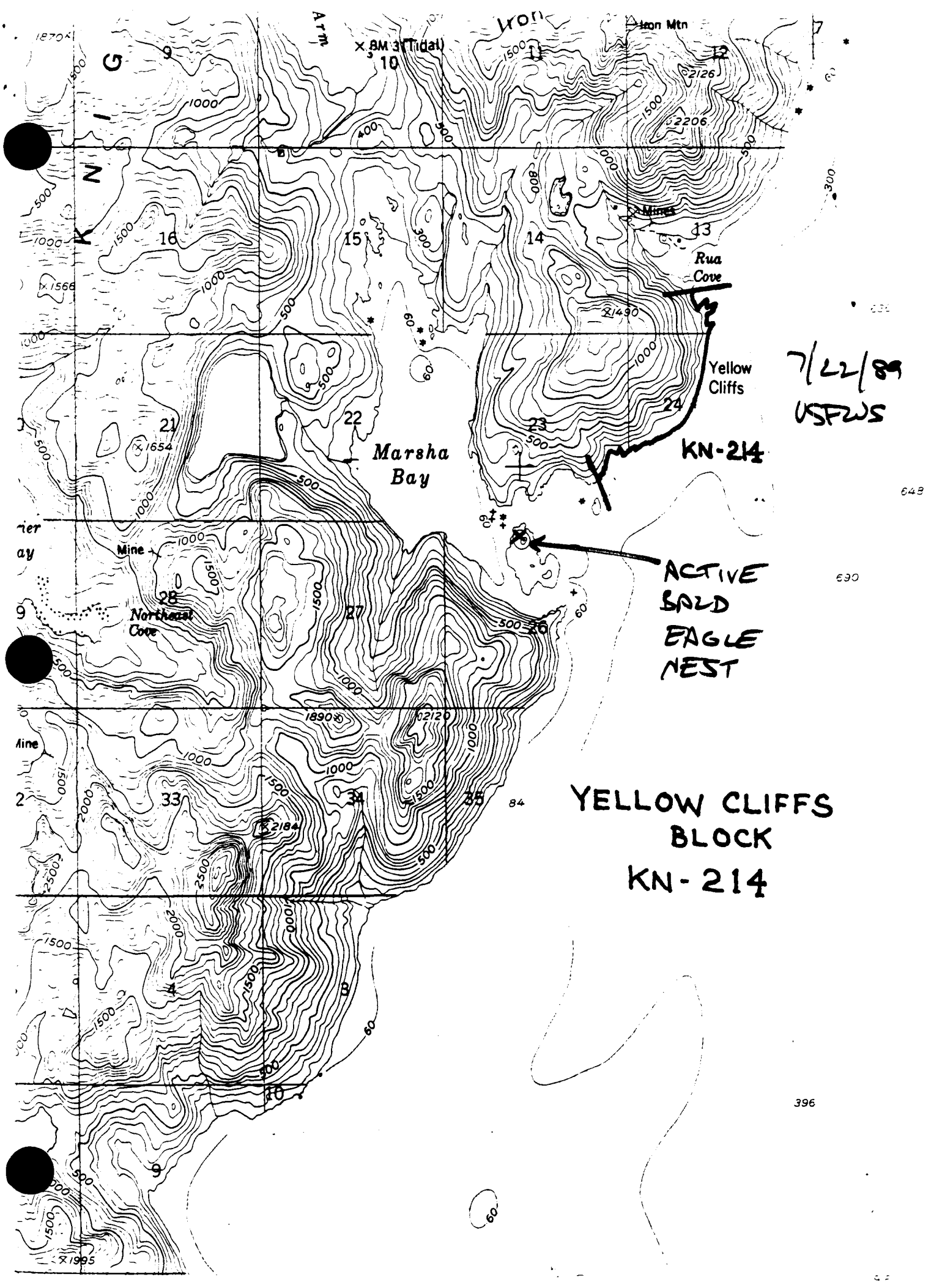
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

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SHPO

ACA 7/25


Iron Mtn
Rua Cove
Yellow Cliffs
Marsha Bay
Northeast Cove
Mine
Mines
KN-214
ACTIVE BALD EAGLE NEST
7/22/89 USFWS
YELLOW CLIFFS BLOCK KN-214

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89 SHORELINE SEGMENT KN-214

LOCATION: (see enclosed map) Yellow cliffs - shoreline between Marsha Bay and Rua Cove, east side of Knight Island PWS

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/8/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- Shoreline has very light, sporadic oil and is subject to high wave exposure.

Priorities Considerations:
Class 4-5: very light to no oil
Class B: resources absent

Ecological Constraints (from site survey):
No ecological constraints. ~~IF NOT TREATED~~. LAND OWNED BY CHUGACH ALASKA CORPORATION. PERMIT NO ACCESS TO UPLANDS AT ANY TIME.

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer * Date: July 18, 89

ISCC: Sharon K. Christopherson Date: 7/25/89

EXXON: Mark N. Silbert Date: 7/25/89

FOSC: [signature] Date: 7/25/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 8 July 89 / Time: 1132 hr Observer: Mann

Surveyed From: (Foot/Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION yellow cliffs (Rua Cove to Mummy Bay), PWS SEGMENT NUMBER KN 214

LENGTH OF SHORELINE SEGMENT: 2.5 Km

ACCESS: Foot/Vehicle/(Boat/Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/(HLD)/STRT Slope: (LANG)/(HANG)/VER

Wave Exposure: (High/Med)/Low relatively high for inner PWS.

Sediment: B 8 % / C 2 % / P <1 % / G 0 % / S 0 % / M 0 % / R 90 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type wood

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / (SP / H / M) / L

Continuous: (Y)/N % of Segment 30 Width of Band: 20-50 cm

Sporadic: (Y)/N % of Segment 70

Est. Oil Thickness where > 1cm: NA cm Est. Oil Penetration: NA cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 0 % / M 20 % / L 80 %

Fresh 0 % Mousse 0 % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/Upper/Mid/Lower Amount: H/M/(L)

Comments:

Segment KN 214 consists of an exposed, rocky coast that apparently received only light oiling and since then has 'self-cleaned' to a large extent. The few pocket beaches (boulder/cobble) that interrupt the otherwise, near-continuous Yellow Cliffs.

ECOLOGICAL EVALUATION

LOCATION: PWS KNIGHT ISLAND SITE: Rua Cove to Marsha Bay OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 214 LENGTH: 2.5 KM (M)

DATE: 07 / 08 / 89 TIME (HHMM): 1130 TIDE HT.: +0.2 FT (M)

OILED ZONE: Splash ~~High~~ Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Fucus patchy and Sparse along rock cliff, occassional dense beds on rock outcrops.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Occassional dense patch mytelis along rock cliff

Balanus (Barnacles): Patchy Y/N Contin Y/N Dense Y/N Sparse Y/N None Y/N

Continuous thin zone Balanus along rock cliff, often in Lt. oil zone; patches of thatched barnacles

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina patchy in fucus, tiny young littorina on barnacles of boulders.
Nucella common throughout segment in patches, often clustered in oiled barnacles of vertical rockface

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Sea Stars patchy abundance: Pisaster, Dermasterias, Pycnopodea, few Evasterias. Patches of eelgrass, particularly off pocket beaches. Patches of diverse low tidal/subtidal - abundant clothing/Kathaina tunicata, diverse anemonies, calcareous worms

CLEANUP PRECAUTIONS: No cleanup recommended in this light oiled, high energy area - natural cleansing is well underway.

MAMMALS: Otters 6 Harbor Seals 3 (See map for haul out site) Sea Lions ____ Whales ____

Other ____

BIRDS: Common Merganser - 38; Oystercatcher - 1; Black-legged Kittiwake - 9; Crow - 7; Glaucous-winged Gull - 5; Pigeon Guillemot - 3; misc. small auklets (murrelets, dovekies?); 1 Eagle; one old eagle nest (see map).

GENERAL OBSERVATIONS: Onchidella borealis common, Pulmonate Siphonaria thersites common in Halosaccion

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 8 JULY 1989 Location Knight Island Site _____

Location Prefix KN Segment # KN-214 Length 2.5 Km

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source —

Oil conditions/beach visibility Light Oiling

Width of beach zone surveyed 0-100 m Tree fringe surveyed Up to 50 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Rock faces with pocket beaches

Fresh Water Sources One small, unmarked stream

Sea Exposure Exposed

Access/Safety Access would be dangerous on stormy days.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames —

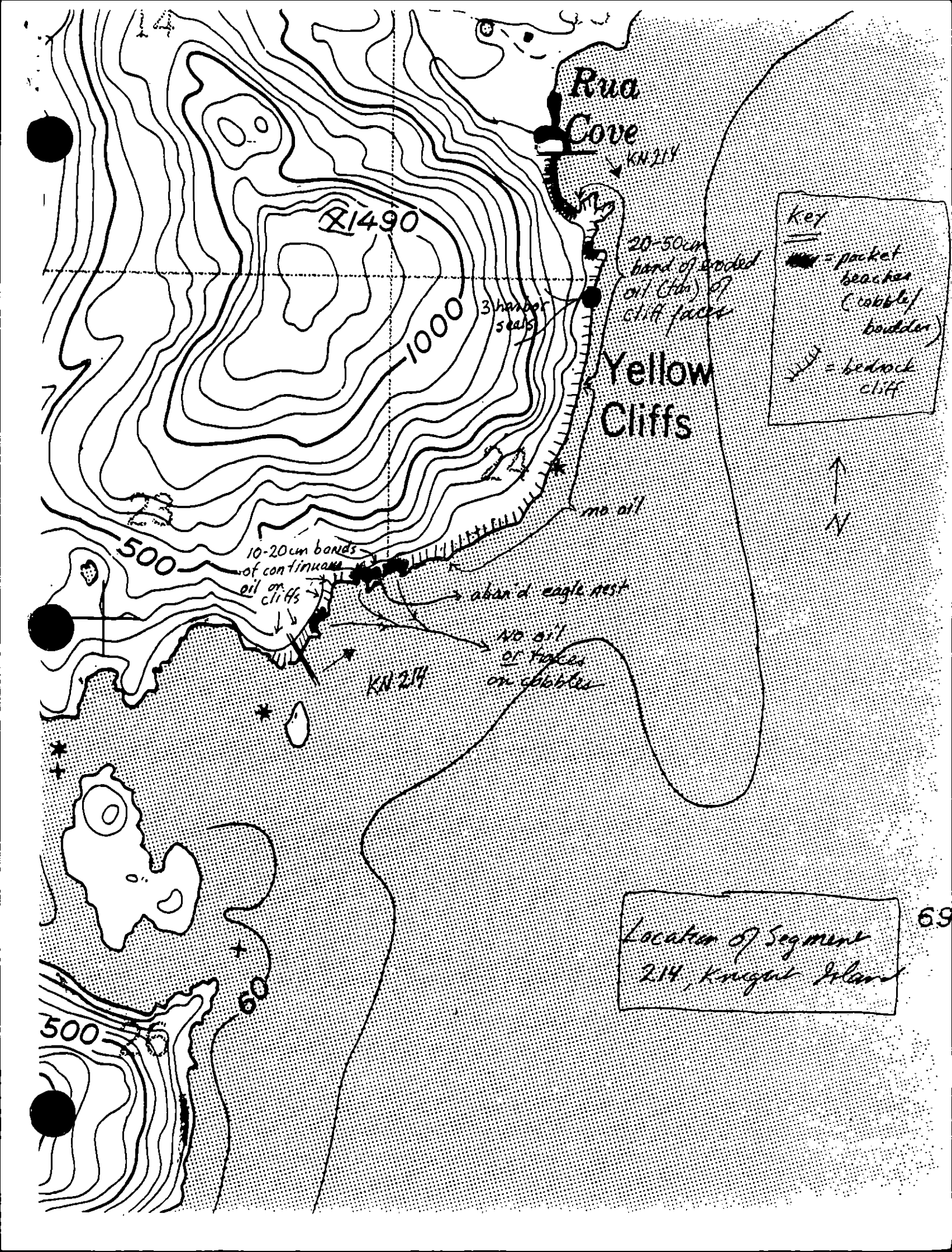
B/W Roll # None Frames —

Observer(s) TY L. DILLIPLANE

Time survey started 1132 hours Time survey ended 1332 hours

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are found during the course of any clean-up activities, please notify the Exxon Archaeological Director, Dr. C. Mobley, immediately.


Rua Cove
KN 214
1490
1000
500
500
60
3 harbor seals
20-50cm band of oiled oil (tar) on cliff face
Yellow Cliffs
no oil
10-20cm bands of continuous oil on cliffs
abandoned eagle nest
KN 214
No oil or tracks on cobbles
Key
= packed beaches (cobble/boulder)
= bedrock cliff
N
Location of Segment 214, Knight Island
69

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Slip Block

Includes Shoreline Segments: KN-260

Submitted : _____ (for Exxon) Date: 7/17/89

ISCC Approval: Sharon K. Christopherson Date: 7/25/89

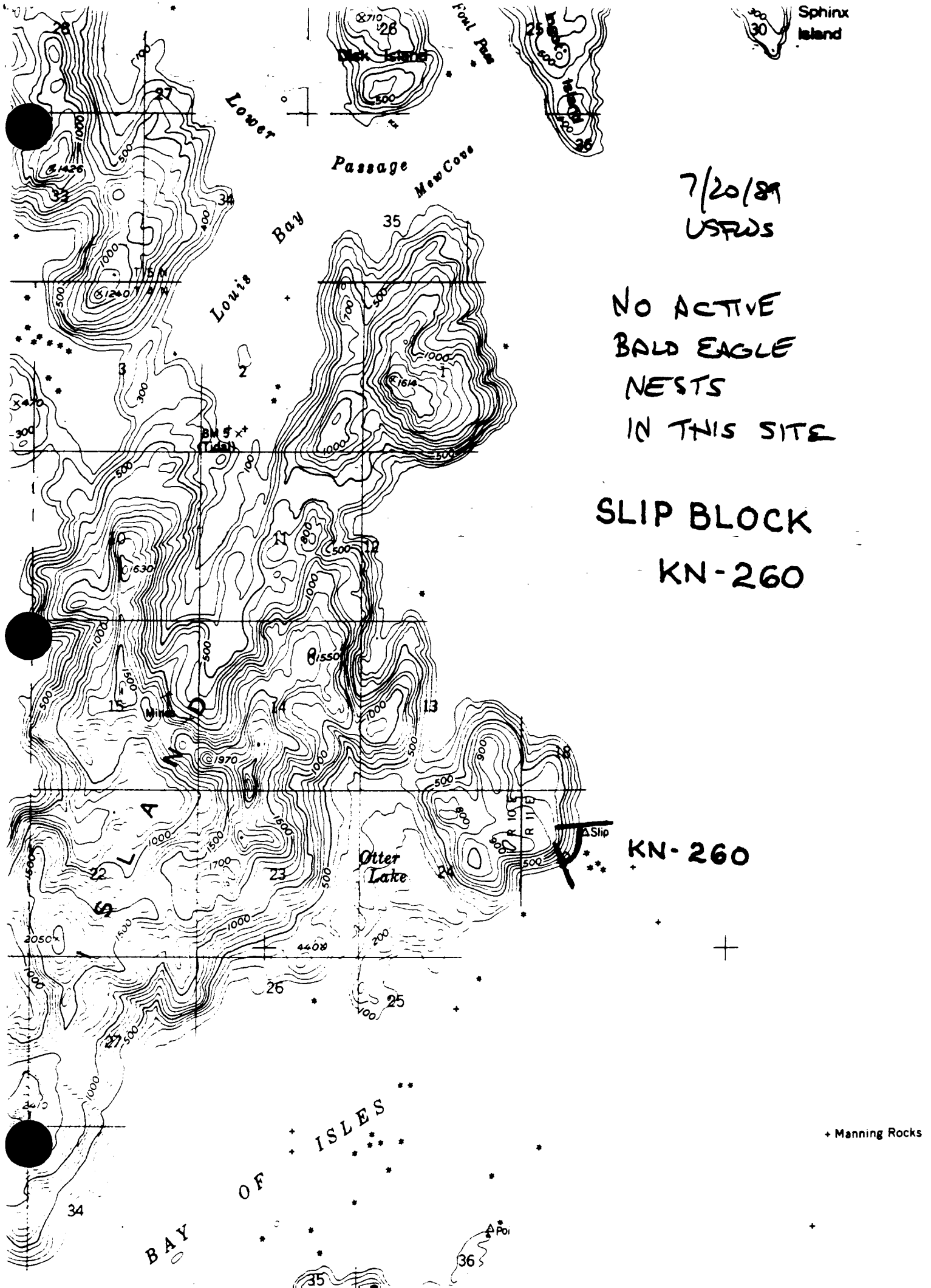
FOSC Approval: _____ Date: 7/26/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

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Sphinx Island
Dick Island
Fowl Pass
Lower Passage
Mew Cove
Louis Bay
BAY OF ISLES
Otter Lake
Slip
+ Manning Rocks
7/20/89
USFWS
NO ACTIVE BALD EAGLE NESTS IN THIS SITE
SLIP BLOCK
KN-260
KN-260

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89 SHORELINE SEGMENT KN-260

LOCATION: (see enclosed map) Between Bay of Isles and Mew Cove on NW Knight Island - a short strip of coastline near triangulation stations "slip"

ADEC NO. SHORELINE ASSESSMENT DATE: 7/8/89

Recommended Cleanup Activity(ies):
- None: oil disposition apparently low; cleanup by wave action effective on this relatively high energy coastline.
- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- Shoreline has very light oil and is subject to high to moderate wave energy.

Priorities Considerations:
Class 4-5: very light to no oil
Class B: resources absent

Ecological Constraints (from site survey):
No ecological constraints

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer * Date: July 17, 89

ISCC: Sharon K. Christopherson Date: 7/25/89

EXXON: Mark N. Silbert Date: 7/25/89

FOSC: C E Robbins Date: 7/26/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 8 July 89 Time: 1040 to 1048 Observer: Mann

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fo

LOCATION rocky point south of triangulation

LOCATION Station "Slip", NW coast of Knight Island SEGMENT NUMBER KN260

LENGTH OF SHORELINE SEGMENT: 0.6 K m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 5 % / C 4 % / P 0 % / G 0 % / S 0 % / M 0 % /R 95 %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Seaweed

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment NA Width of Band: NA m

Sporadic: Y/N % of Segment 100

Est. Oil Thickness where > 1cm: NA cm Est. Oil Penetration: NA cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H ___ % /M 50 % /L 50 %

Fresh 0 % Mousse 0 % Tar Formation: 100 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Low cliffs have a discontinuous oil band up to 20 cm wide.

ECOLOGICAL EVALUATION

LOCATION: PWS KNIGHT ISLAND SITE: NW Coast OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 260 LENGTH: 0.6 KM (M)

DATE: 07/08/89 TIME (HHMM): 1040 TIDE HT.: 1.0 FT (M)

OILED ZONE: ~~Splash~~ ~~High~~ Medium Low

SUBSTRATUM: ~~Rocks~~ ~~Boulder~~ Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Occasional patches of mytilus beds - unoiled.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus reach into oiled zone; thatched barnacles also present.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Nucella present in patches along rockface

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Pycnaster, Dermasterias, Orthasterias present. Onchidella borialis common

CLEANUP PRECAUTIONS: NONE

MAMMALS: Otters 1 Harbor Seals ____ Sea Lions ____ Whales ____
Other ____

BIRDS: Pigeon Guillemots - 3; Black-legged Kittiwakes - 10; Murre sp.; Bald Eagle - 1

GENERAL OBSERVATIONS: Relatively high energy coastline and light oil band.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 8 JULY 1989 Location Knight Island Site ____

Location Prefix KN Segment # KN-260 Length .6 Km

Survey Method:

Air ____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source —

Oil conditions/beach visibility Light Oil

Width of beach zone surveyed 0-10 m Tree fringe surveyed 0 m.

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) N/A

General observations justifying survey method and segment's site probability:

Shore Profile Steep, rocky cliff faces.

Fresh Water Sources None observed.

Sea Exposure Open, exposed cliff faces

Access/Safety Access would be dangerous on stormy days.

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames —

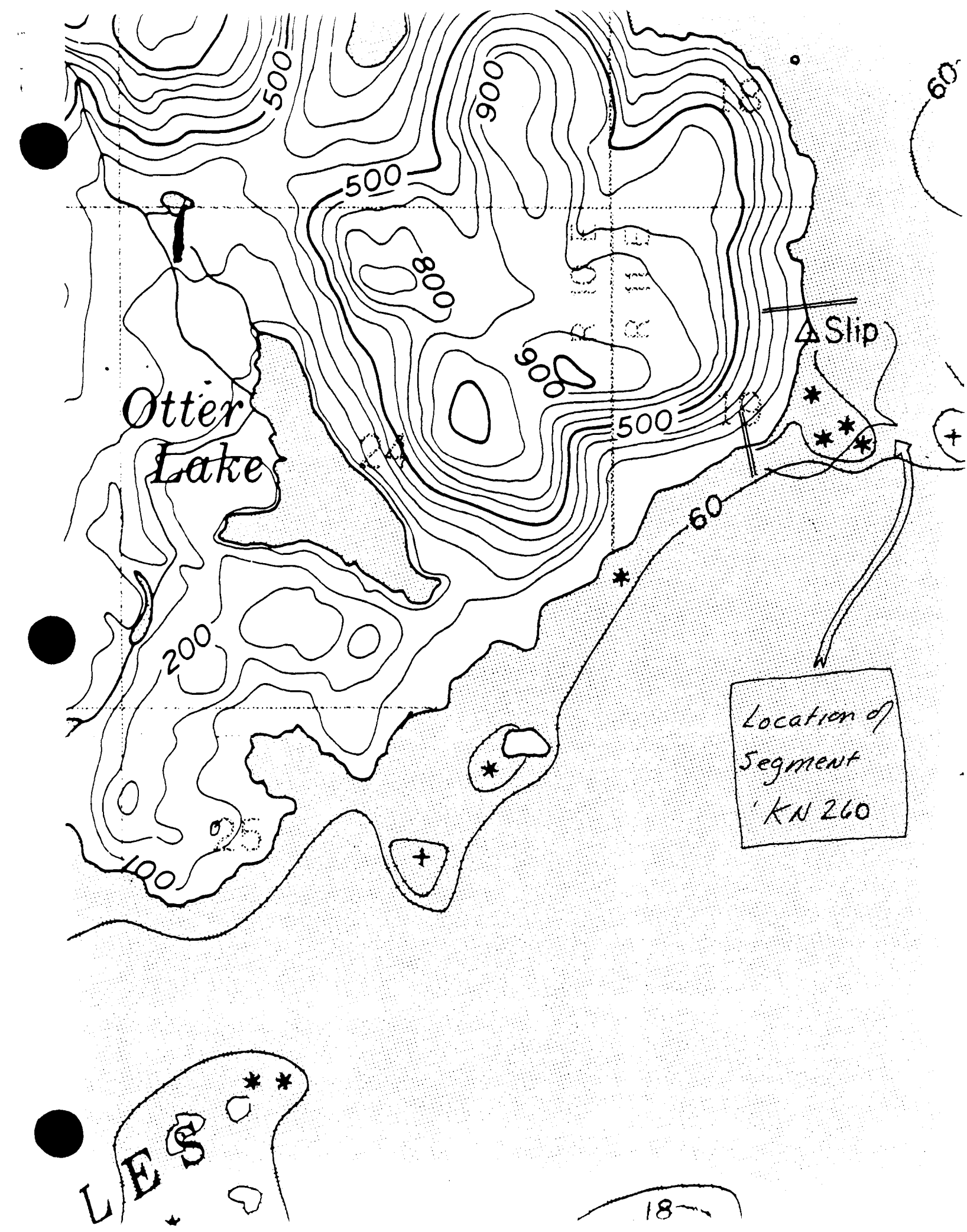
B/W Roll # None Frames —

Observer(s) TJ L. DILLIPLANE

Time survey started 1040 hours Time survey ended 1048 hrs

Cultural resource considerations/restraints:

Should heretofore undiscovered cultural resources be found during the course of any clean-up activities, please notify the Exxon Archaeological Director, Dr. C. Mobley, immediately.


500
900
500
800
900
500
60
Slip
Otter
Lake
60
200
100
Location of
Segment
KN 260
LES

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): SNUG HARBOR WEST BLOCK

Includes Shoreline Segments: KN-400, KN-401, KN-402, KN-403

Submitted: Collins Boatang. (for Exxon) Date: 6/14/89

ISCC Reccomendation: Sharon K. Christopher Date: 6-20-89

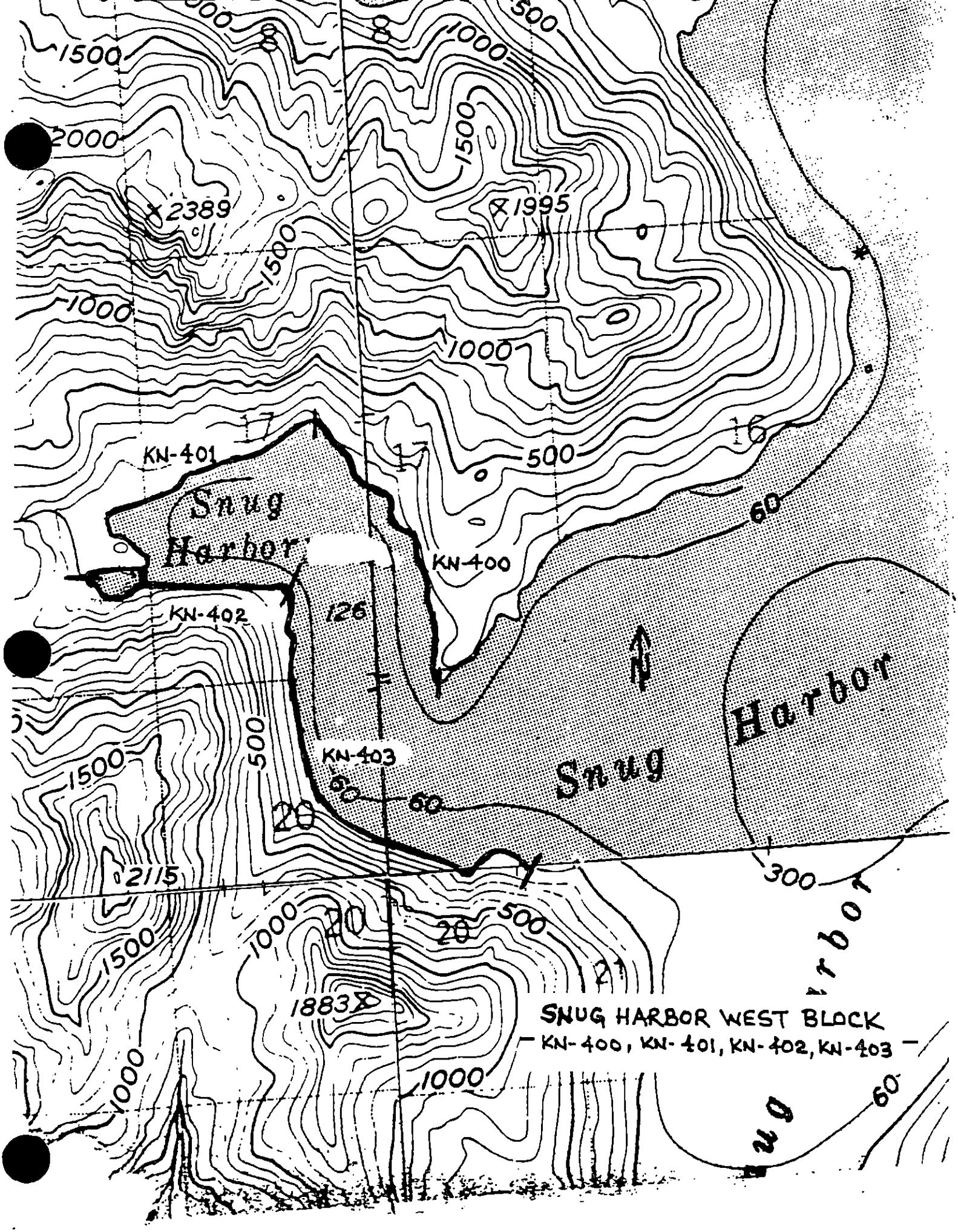
FOSC Approval: J.W. Lure Date: 6-22-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

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USFS


KN-401
Snug Harbor
KN-400
KN-402
KN-403
126
Snug Harbor
SNUG HARBOR WEST BLOCK
KN-400, KN-401, KN-402, KN-403
2389
1995
2115
1883
1500
2000
1000
500
60
20
300

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE June 13, 1989 SHORELINE SEGMENT KN-400

LOCATION: (see enclosed map) Knight Island-Snug Harbor

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/10/89

Recommended Cleanup Activity(ies):
Manually remove contaminated drift material and pooled oil.
Flood/flush with arm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure washing on rock.
Use other approved methods as appropriate.

Priorities Considerations: Contact ADF&G and RAT prior to beginning cleanup activities on beach #5.
Medium recreation use.
Class 2: heavy oil.
Class A: resources present.

Ecological Constraints (from site survey):
~~Beach 1: 800' NOAA research project. Do not disturb inter tidal zone. Contact NOAA for information.~~
Beach 2, 3, 4: No ecological constraints due to heavy contamination at this time.
Beach 5: Possible salmon stream. ~~Cleanup crews should avoid the mouth of the stream.~~ CONSULT WITH ADF&G AND RAT, IF AFTER
Beach 6: Work at mid tide or take appropriate measures t
protect intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Homer Date: June 13, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson 6-20-89

EXXON: _____ Date: June 21, 1989

FOSC: J.W. Lowe Date: 6-22-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

Date: 6/12/89 Time: 13:30 Observer: Doc Betts (Acrv,

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/F

LOCATION

LOCATION Knight Island / Snug Harbor SEGMENT NUMBER KN-400

LENGTH OF SHORELINE SEGMENT: 1400 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 40 % / C 25 % / P 10 % / G 5 % / S 2 % / M 0 % / R 20 %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type driftwood

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 98 Width of Band: 20 m
(2m on upper

Sporadic: Y/N % of Segment N/A

Est. Oil Thickness where > 1cm: 5 cm Est. Oil Penetration: 5 cm

Pooled Oil: 5 % "Free" Oil: 5 % Coated: H 5 % / M 15 % / L 20 %

Fresh 5 % Mousse 35 % Tar Formation: 10 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

see attached comments

Photos 1, 2, 3 roll TY-A15 #5

RIO - 105 comments

The shore zone consists of rocky headlands with cobble / boulder beaches, Most of the beaches and the boulders along the rocky headlands are exposed [illegible] tide.

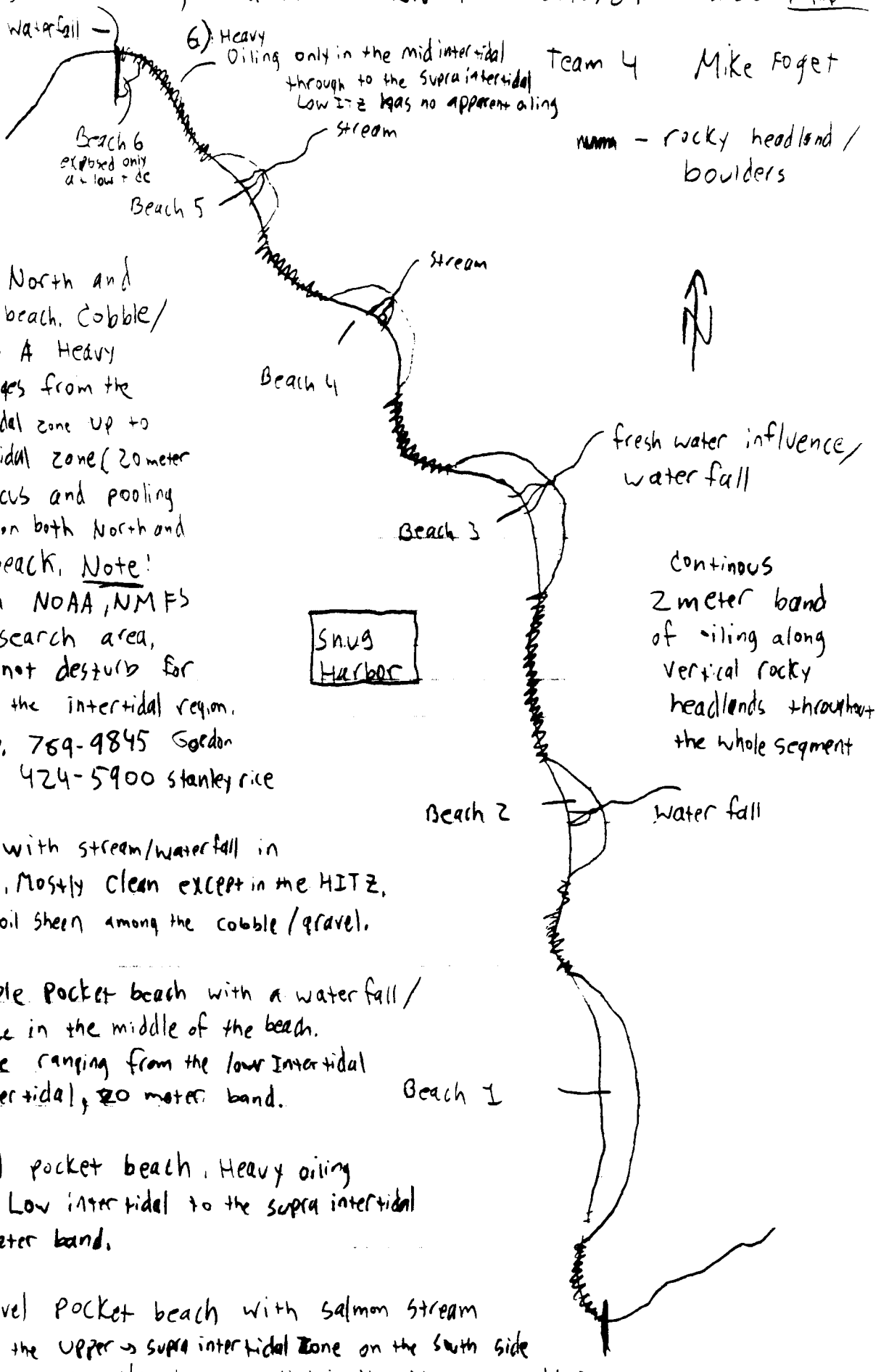
There is fairly continuous oiling throughout the shore zone with the exception of stream beds. The oiling is heavy and ranges from the upper low inter-tidal zone through to the supra inter-tidal zone. The width of the band ranges from 20 meters on the pocket beaches to 2 meters wide on vertical rocky headlands. (see map 1). Along the rocky headlands there is oiled fucus, throughout the inter-tidal zone, Beach on North end of segment has oiling only in mid to supra ITZ

The shore zone has a low wave exposure and has heavily oiling therefore the whole shore zone should be cleaned. The only exception to this is beach 5 which has a salmon stream and beach 1 which is a NOAA/NMFS impact research beach (map 1).

Moderate to high pressure hot water should be used for Rock / Boulder / cobble areas (map 1). Pooled oil should be removed manually or any other approved methods which are appropriate. For cobble / gravel areas use approved methods which are deemed appropriate. Manually remove contaminated drifted material.

Kinght Island / Snug Harbor KN-400 6/10/89 13:30 Map 1

Team 4 Mike Foget



1) Boulders on North and South end of beach. Cobble/gravel beach. A Heavy mousse/oiling ranges from the upper Lower intertidal zone up to the supra Intertidal zone (20 meter band). Oiled fucus and pooling among boulders on both North and South end of beach. Note! This beach is a NOAA, NMFS oil impact research area, with posted do not disturb for 800 ft zone in the intertidal region. JUKE Bay Lab, 759-9845 Gordon cordova 424-5900 stanley rice

2) Pocket beach with stream/waterfall in middle of beach. Mostly clean except in the HITZ. There is a free oil sheen among the cobble/gravel.

3) Boulder/Cobble pocket beach with a waterfall/ fresh water influence in the middle of the beach. Heavy oil/mousse ranging from the lower Intertidal to the supra intertidal, 20 meter band.

4) Cobble/gravel pocket beach. Heavy oiling ranging from Low intertidal to the supra intertidal approximate 20meter band.

5) Cobble/Gravel pocket beach with salmon stream heavy oiling in the upper → supra intertidal zone on the South side of the beach. on the North side heavy pooling in the High intertidal zone

ECOLOGICAL EVALUATION

LOCATION: SE Knight Island SITE: Snug Harbor/Beach 6 OBSERVER: Patty Crank (ABR) Mike Foget (C.O.) Bob Betts (ARCO)

LOCATION PREFIX: KN SEG. NO.: KN 400 LENGTH: 1400 m (total seg) (M)

DATE: 6/10/89 TIME (HHMM): 1430 TIDE HT.: mid (M)

OILED ZONE: (Splash High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): (Patchy Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N (Contin.) Y/N Dense Y/N Sparse Y/N None Y/N

Numerous shells on beach

Balanus (Barnacles): Patchy Y/N (Contin. Y/N Dense Y/N) Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N (Dense Y/N) Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

OTHER OBSERVATIONS: Segment ends at large waterfall with approximately 20 m pool.

CLEANUP PRECAUTIONS: Work at mid tide using booms, sorbent material or other appropriate means to protect LITZ from contamination

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other ___

BIRDS: ___

GENERAL OBSERVATIONS: ___

ECOLOGICAL EVALUATION

Patty Crank (Bio.)
Mike Foget (O.G.)

LOCATION: SE Kruzof Island SITE: Long Lagoon Beach 1 & 2 OBSERVER: Bob Betts (Archae.

LOCATION PREFIX: KN SEG. NO.: KN 400 LENGTH: 400 (total seg) (M)

DATE: 6/10/89 TIME (HHMM): 1330 TIDE HT.: Mid (M)

OILED ZONE: (Splash) (High) (Medium) (Low)

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Moderate) Y/N Dense Y/N (Sparse) Y/N None Y/N

Patchy: sparse on beach 1 / Continuous: moderate on beach 2.

Mytilus (Mussels): (Patchy Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Patchy on boulders, continuous dense intergravel beds

Balanus (Barnacles): Patchy Y/N (Contin. Y/N Dense Y/N) Sparse Y/N None Y/N

Dense: continuous on boulders

Littorina
Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

Nucella present in dense small patches. Littorina present at North

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N (None Y/N)

No limpets observed, however thick mousse covering on beach could hide a sparse popu

OTHER OBSERVATIONS: 2 hairy tridents; 2 small moon snails shells found in MIT2. Mousse patties in LIT2

CLEANUP PRECAUTIONS: NOAA research project on 800' of beach 1 - restriction on disturbing intertidal. Contact NOAA

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other ___

BIRDS: Several gulls and artic terns over entire segment

GENERAL OBSERVATIONS: Unable to survey on lower 1/2 of LIT2 due to stormy weather and poor low tide. Small waterfall on beach 2. There is freshwater influence on these beach

ECOLOGICAL EVALUATION

LOCATION: SE Knight Island SITE: Snug Harbor/Beach 3 OBSERVER: Patty Crank (Biol.), Mike Foget (O.G.), Bob Betts (Arco)

LOCATION PREFIX: KN SEG. NO.: KN400 LENGTH: N/C (total segment) (M)

DATE: 6/10/89 TIME (HHMM): 1405 TIDE HT.: mid (M)

OILED ZONE: (Splash) High Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N (Contin. Y/N) (Dense Y/N) Sparse Y/N None Y/N

Mytilus (Mussels): (Patchy Y/N) Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

Patchy: Sparse on beach 3 - Intergravel cont bed.

Balanus (Barnacles): Patchy Y/N (Contin. Y/N) Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: Due to heavy contamination, no ecological constraints on this beach.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Small waterfall on beach 3 - freshwater influence on both beaches

ECOLOGICAL EVALUATION

Patty Creek (E. Fork) (C.G.) Bob Betts (Fish)

LOCATION: SE Knight Island SITE: Snug Harbor Beaches OBSERVER:

LOCATION PREFIX: KN SEG. NO.: KN 400 LENGTH: 400 (total seg) (M)

DATE: 6/10/89 TIME (HHMM): 1425 TIDE HT.: mid (M)

OILED ZONE: (Splash) (High) (Medium) (Low)

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): (Patchy Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N (Contin. Y/N Dense Y/N) Sparse Y/N None Y/N

Balanus (Barnacles): (Patchy Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

OTHER OBSERVATIONS: Possible Salmon Stream - Contact AK Fish & Game.
South bank light to moderate contaminated. Northbank heavy pooling & contamination

CLEANUP PRECAUTIONS: Crews should avoid mouth of stream

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other ___

BIRDS: ___

GENERAL OBSERVATIONS: ___

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date June 16 1989 Location Knight Is SE Site Snug Harbor

Location Prefix KN Segment # 400 Length ~300 m

Survey Method:

Air _____ (A - indicate on map) Boat X (50%) (B - indicate on map

Ground X (50%) (G - indicate on map)

Known cultural resources (AHRS #) None Data Source _____

Oil conditions/beach visibility heavy/medium oil; good visibility

Width of beach zone surveyed 10-25 m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT

General observations justifying survey method and segment's site probability:

Shore Profile Rock & gravel pocket beaches; vertical rocky headlands

Fresh Water Sources Numerous small streams; 2 significant streams

Sea Exposure Sheltered from all directions

Access/Safety Safe & easy by boat under any weather conditions

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames _____

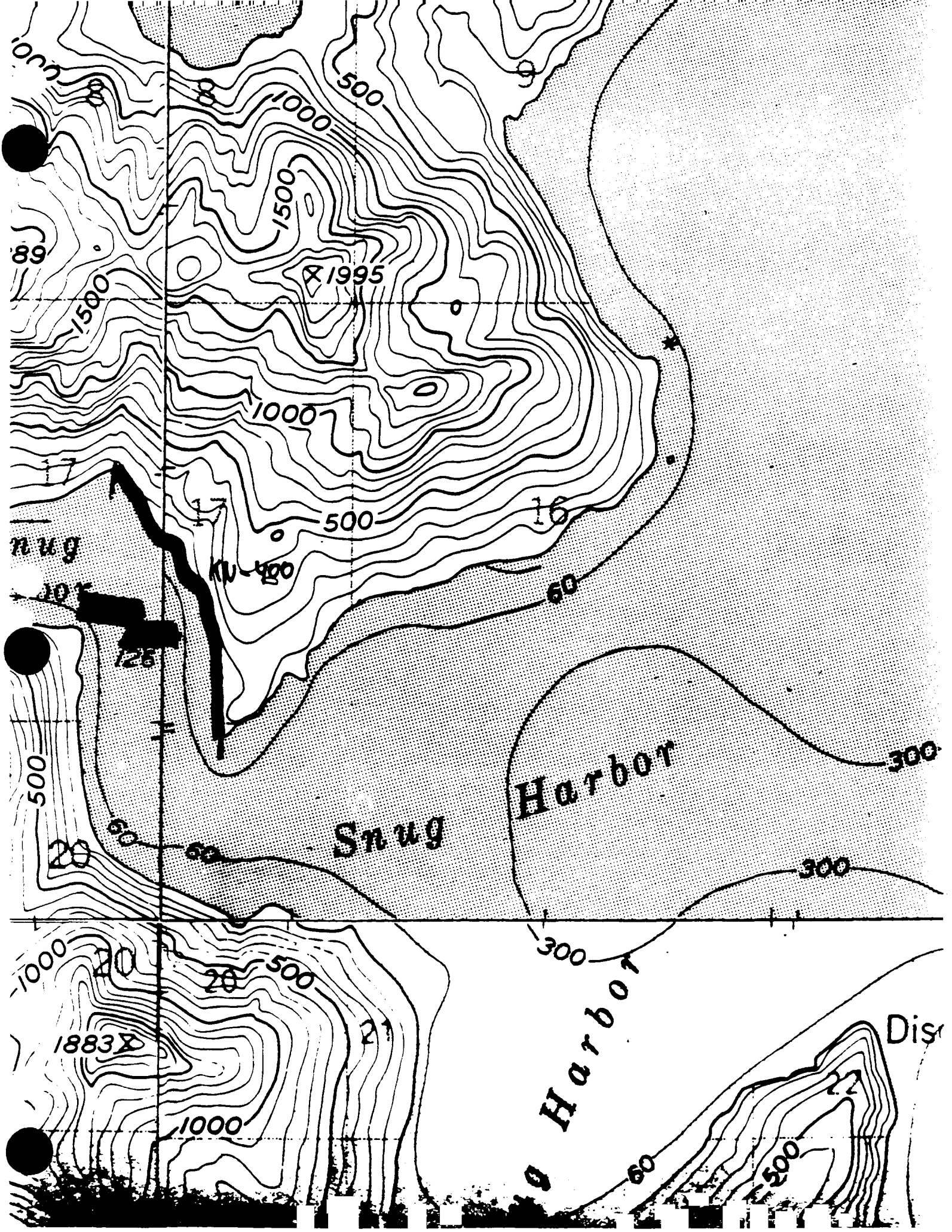
B/W Roll # None Frames _____

Observer(s) Robert Betts; Morley Eldridge

Time survey started 13:28 Time survey ended 14:25

Cultural resource considerations/restraints:

If hitherto undiscovered etc. etc. No other archaeological considerations.


500
1000
1500
1995
1000
500
16
60
300
Snug
Harbor
300
20
60
500
1000
1883
21
500
60
500
22
Dis

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE June 13, 1989 SHORELINE SEGMENT KN-401

LOCATION: (see enclosed map) Southeast Knight Island-Snug Harbor

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/11/89

Recommended Cleanup Activity(ies):
Manually remove contaminated drift material.
Flood/flush with warm to hot water (up to 140° F) on low angle beaches.
Use moderate to high pressure washing on rock.
Use other approved methods as appropriates.

Priorities Considerations:
Contact ADF&G and RAT 48 HOURS prior to beginning cleanup activities on beach 8.
Class 2: heavy oil.
Class A: resources present.
Medium recreational use.

Ecological Constraints (from site survey):
Bald eagle nest with eaglets on beach 1. SEE ADVISORY ~~Avoid disturbance in area of nest. Beach 6 is a NOAA research project. Do not disturb intertidal. Contact NOAA for information.~~ JMK
Salmon stream located at beach 8, ~~CONTACT ADF&G AND~~ RETAIN BOOM BETWEEN STREAM AND WORK AREA.
Take appropriate measures to protect uncontaminated eel grass beds.

Archeological Constraints (from site survey):
Archaeological monitor required during cleanup of pilings area and ~~after~~ historic debris in intertidal zone in western portion of the cove. Cleanup crews should be restricted from forest zone. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

AMONG

Charles E. Holmes
State Historic Preservation Officer * Date: June 13, 1989

ISCC: Sharon K. Christopherson 6-20-89

EXXON: _____ Date: June 21, 1989

FOSC: _____ Date: 6-22-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

Mike Eppler (B.31)
Patti Crank (B.31)

Date: 6/11/89 / Time: 12:30 Observer: Bob Betts (Arch)

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/I

LOCATION

LOCATION Knight Island / Snug Harbor SEGMENT NUMBER KN-401

LENGTH OF SHORELINE SEGMENT: 1400 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio)/Float Plane
Low tide only

SHORELINE:

Shoreline Type: SPI/(BEA/COV/HLD)/STRT Slope: (LANG/HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 35 % / C 35 % / P 10 % / G 5 % / S 0 % / M 5 % / R 10 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type Driftwood
Seaweed (fucus

OIL

Degree of Oiling: (Heavy/Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / (SP / H / M / L)

Continuous: (Y)/N % of Segment 95 Width of Band: 20m Low angle 2 m. vert. rock

Sporadic: Y/N % of Segment N/A

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: 5 cm

Pooled Oil: 5 % "Free" Oil: <1 % Coated: H 0 % / M 20 % / L 20 %

Fresh 0 % Mousse 30 % Tar Formation: 25 %

Drift Debris Oiled ? (Yes)/No (Supra/Upper)/Mid/Lower Amount: H/M/(L)

Comments:

see attached comments and maps

constraints: NOAA/NMFS Oil research area

Photos 5, 6, 7 roll T4 A10 #5

Comments KN 101

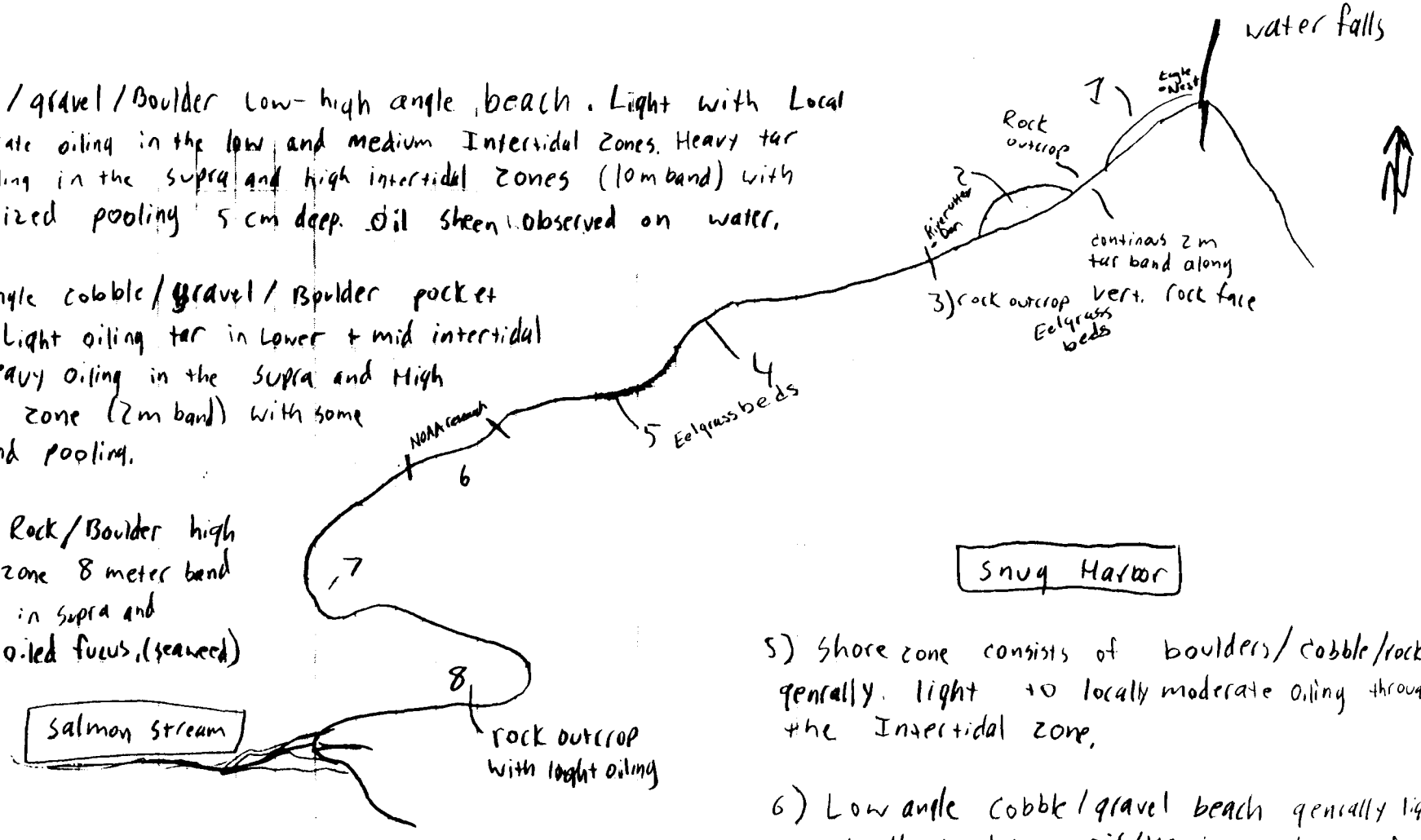
The shore zone consists of rocky headlands with cobble/boulder beaches. Most of the beaches and the boulders along the rocky headlands are exposed only at low tide. Shore Zone 7 is a cove with a low angle gravel/cobble/mud beach (map 1)

There is fairly extensive oiling throughout the shore zone with the exception of shore zone 6, and shore zone 5. The oiling is heavy and ranges from the upper intertidal to the supra intertidal zone. A discontinuous band of light oiling ranges from the low intertidal to the mid intertidal zones. The width of the band is 2 meters on vertical rocky headlands/boulders to 20 meters on pocket beaches.

The shore zone has a low wave exposure and is heavily oiled, therefore the whole shore zone should be cleaned with exception to shore zone 6 (a NOAA/NMFS oil research beach) and shore zone 1, which has an eagles nest.

— Moderate to high pressure hot water should be used for Rock/Boulder/cobble areas (map 1). Pooled oil should be removed manually or by any other approved methods which are appropriate. Pebble/Gravel areas should use approved methods which are deemed appropriate. Manually remove contaminated drifted material.

Knight Is. 6/11/89 KN-401 Mike Foget Map 1
Team 4



1) Cobble / gravel / Boulder Low- high angle, beach. Light with Local moderate oiling in the low and medium Intertidal zones. Heavy tar and Oiling in the supra and high intertidal zones (10m band) with Localized pooling 5 cm deep. Oil sheen observed on water.

2) High angle cobble / gravel / Boulder pocket beach. Light oiling tar in Lower + mid intertidal zone, Heavy oiling in the supra and High intertidal zone (2m band) with some mousse and pooling.

3) at Point Rock / Boulder high angle shore zone 8 meter band heavy Oiling in supra and High ITZ, oiled fucus, (seaweed)

4) Rock / Boulder / cobble shore zone with small pocket cobble / gravel beach. heavy oiling in the supra and High ITZ with oiled fucus (seaweed). and pooling among Boulders. Light to Localized moderate Oiling in the mid to Low Intertidal zone,

5) Shore zone consists of boulders / cobble / rock genrally. light to locally moderate oiling throughout the Intertidal zone,

6) Low angle cobble / gravel beach genrally light to locally moderate oil / tar in the Low and mid ITZ. Heavy oiling with pooling in the high and supra ITZ. Note: NOAA / NMFS research beach 800 ft zone. AUKA BAY Lab

7) Low angle gravel / cobble / mud cove. Heavy oiling 8m in the supra and High ITZ with pooling oiled fucus

ECOLOGICAL EVALUATION

LOCATION: SE Knight Island SITE: Snug Harbor OBSERVER: Patty Crank (Biol.) M. Le Feget (O.G.) Bob Betts (Archae)

LOCATION PREFIX: KN SEG. NO.: KN 401 LENGTH: 4 (M)

DATE: 6/11/89 TIME (HHMM): 1230 TIDE HT.: mid-low (M)

OILED ZONE: (Splash) High Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): (Patchy Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): (Patchy Y/N) (Contin. Y/N Dense) Y/N Sparse Y/N None Y/N

Patchy on boulders - extensive intercobble/gravel moderate mussel beds.

Balanus (Barnacles): Patchy Y/N (Contin.) Y/N (Dense) Y/N Sparse Y/N None Y/N

Littorina

Patchy Y/N ~~Contin. Y/N~~ (Dense Y/N) Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

OTHER OBSERVATIONS: Eelgrass beds

CLEANUP PRECAUTIONS: Eagle Nest with eaglets, NOAA research project, Salmon Stream

see map for location - contact AK fish & Game and NOAA before cleaning beach.

Use precautions to avoid oiling uncontaminated eelgrass beds. Crews should avoid stream mouth and mud

MAMMALS: Otters Den (River) Harbor Seals 2 Sea Lions — Whales —

Other

BIRDS: Bald Eagle nest with eaglets, terns, gulls, Pigeon Guillemonts

GENERAL OBSERVATIONS:

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-11-89 Location KNIGHT ISLAND Site SNUG HARBOR

Location Prefix KN Segment # 401 Length 1400M

Survey Method:

Air _____ (A - indicate on map) Boat 5% (A - indicate on map

Ground 95% (G - indicate on map)

Known cultural resources (AHRS #) REP. TO 5 FAMILIES LIVING IN SNUG HARBOR Data Source [illegible]

Oil conditions/beach visibility Heavily oiled (mousse) - Moderate beach visibility

Width of beach zone surveyed 5-10 m Tree fringe surveyed up to 40 M

Cultural resources observed in beach zone (AHRS code) RCS, HTI,

Cultural resources observed in tree fringe (AHRS code) RCS, CBN, HTI, CHT's

General observations justifying survey method and segment's site probability:

Shore Profile Low to moderate angle angular rock beach - difficult access to steep forest zone

Fresh Water Sources Stream and large waterfall at east end of Segment; Salmon Stream at west end

Sea Exposure Protected head of Snug harbor - very sheltered bay

Access/Safety Safe easy access by boat - very deep protected bay

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 (5)

Monitoring during cleanup needed (yes)/no Collection yes/(no)

Photos: Color Roll # _____ Frames _____

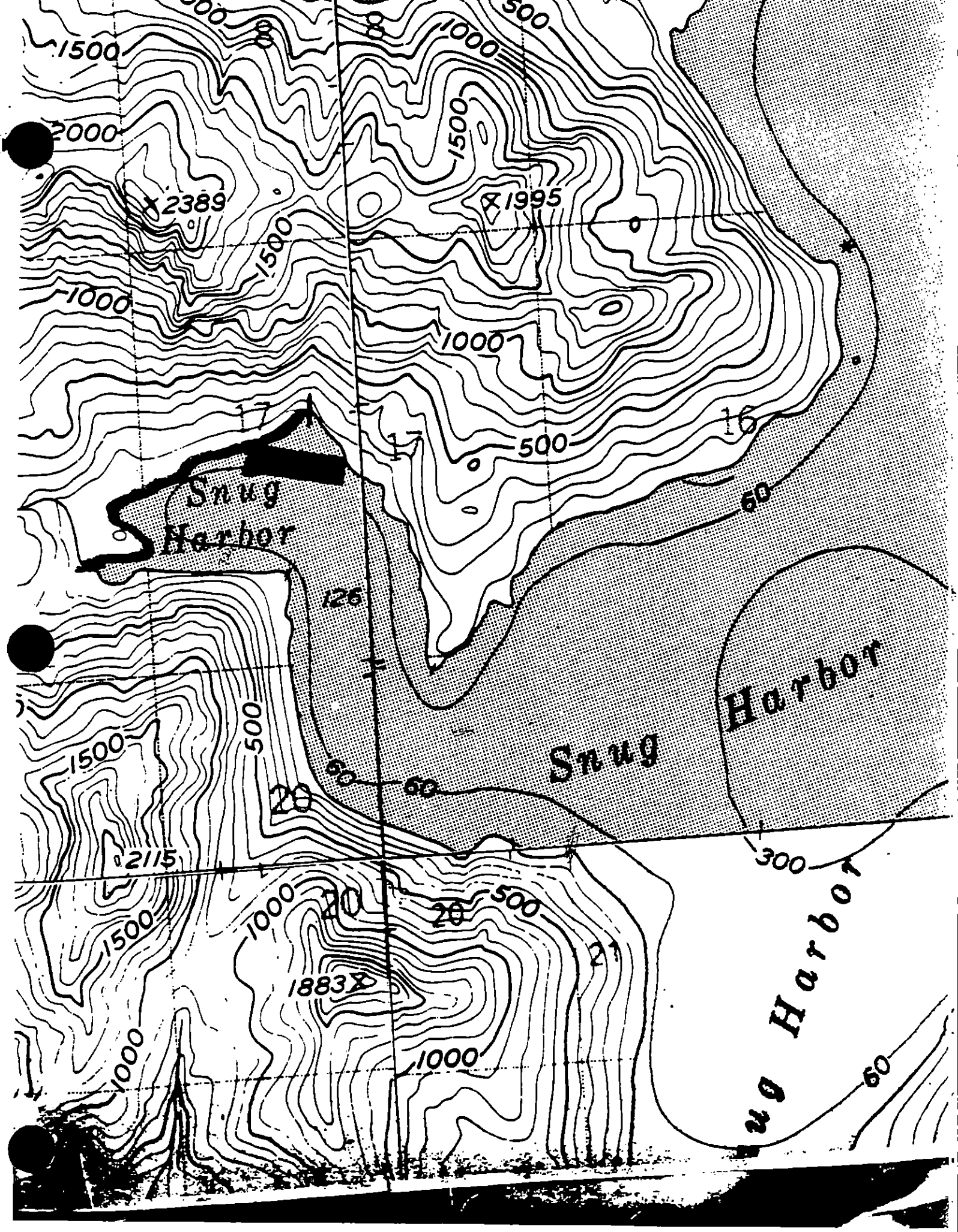
B/W Roll # T-4 RB-5 Frames #1 To #20

Observer(s) BOB BETTS, MORLEY ELDRIDGE

Time survey started 0940 Time survey ended 1123

Cultural resource considerations/restraints:

ARCHAEOLOGICAL MONITOR REQUIRED. CLEAN-UP CREWS SHOULD BE RESTRICTED FROM ENTERING FOREST ZONE. STANDARD STATEMENT.


Snug Harbor
Snug Harbor
Snug Harbor
2389
1995
1883
2115
1500
1000
500
2000
20
60
300
126

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE June 13, 1989 SHORELINE SEGMENT KN-402

LOCATION: (see enclosed map) Knight Island-Snug Harbor

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/11/89

Recommended Cleanup Activity(ies):

Manually remove contaminated drift material, patches of mousse and pooled oil.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure washing on rock.
Use other approved methods as appropriate.

Priorities Considerations:

Class 4 to 2: light oil (locally heavy)
Class B: resources absent.

Ecological Constraints (from site survey): Clean at high tide or take appropriate measures to protect middle and lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes — Date: June 13, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson — 6-20-89

EXXON: _____ Date: June 21, 1989

FOSC: J. W. Kime — Date: 6-22-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

PRELIMINARY OIL EVALUATION

M.C. Path, crank (B.)

Date: 6/11/84 / Time: _____ Observer: Bob Behs (Arch)

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/F

LOCATION

LOCATION Knight Island / Snug Harbour SEGMENT NUMBER KN-402

LENGTH OF SHORELINE SEGMENT: 700 m

ACCESS: Foot/Vehicle/(Boat/Barge)/(Helio)/(Float Plane)

Low tide

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: (LANG/HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 40 % / C 20 % / P 10 % / G 5 % / S 5 % / M 0 % / R 20 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type Lt. wood

OIL

Local

Degree of Oiling: (Heavy)/(Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / (SP / H) / M / L

Continuous: (Y)/N % of Segment 25 Width of Band: 1 m

Sporadic: (Y)/N % of Segment 10

Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: 3 cm

Pooled Oil: 20 % "Free" Oil: 0 % Coated: H 0 % / M 20 % / L 20 %

Fresh 0 % Mousse 25 % Tar Formation: 25 %

Drift Debris Oiled ? (Yes)/No (Supra)/Upper/Mid/Lower Amount: H/M/(L)

Comments:

Rocky headlands with high angle boulder/cobble shore zone. on the west end there is a river delta area which is boomed off. At the mouth of the river there is a 100 meter long 1 meter wide heavy oiling band with some pooling in the supra intertidal zone. The rest of the zone has sporadic mousse balls located in the high + supra intertidal zone. Manually remove pooled oil or use other approved methods deemed appropriate. Use Moderate to high pressure hot water for a Rock/Boulder/cobble area with deluge flushing if appropriate.

Photos # 8 roll T4 A/G #5

ECOLOGICAL EVALUATION

LOCATION: SE Knight Island SITE: Snug Harbor OBSERVER: Patty Crane (Biol) Mike Foget (O.G.) Bob Betts (Anch)

LOCATION PREFIX: KN SEG. NO.: KN 402 LENGTH: 700 m (M)

DATE: 10/11/89 TIME (HHMM): 1400 TIDE HT.: low (M)

OILED ZONE: (Splash High) Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N (Contin.) Y/N Dense Y/N Sparse Y/N None Y/N

Moderate population

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Intergravel mussel beds

Balanus (Barnacles): Patchy Y/N (Contin. Y/N Dense) Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N (Sparse Y/N) None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N (Sparse) Y/N None Y/N

OTHER OBSERVATIONS:

CLEANUP PRECAUTIONS: Work at High tide. Use approved methods to protect MITZ and LITZ from contamination

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other

BIRDS: Pigeon Guillemonts, Gulls, Terns

GENERAL OBSERVATIONS:

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-11-89 Location Knight Island Site Snug Harbour

Location Prefix KN Segment # 402 Length 700 m

Survey Method:

Air — (A - indicate on map) Boat — (A - indicate on map)

Ground 100% (G - indicate on map)

Known cultural resources (AHRS #) None Data Source

Oil conditions/beach visibility Light with local heavy

Width of beach zone surveyed 15 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Steep boulder and cobble beach. Pebble delta at river mouth

Fresh Water Sources Salmon stream at east end; numerous small streams.

Sea Exposure Sheltered from all directions

Access/Safety Good access under all weather conditions from Snug Harbour.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # None Frames

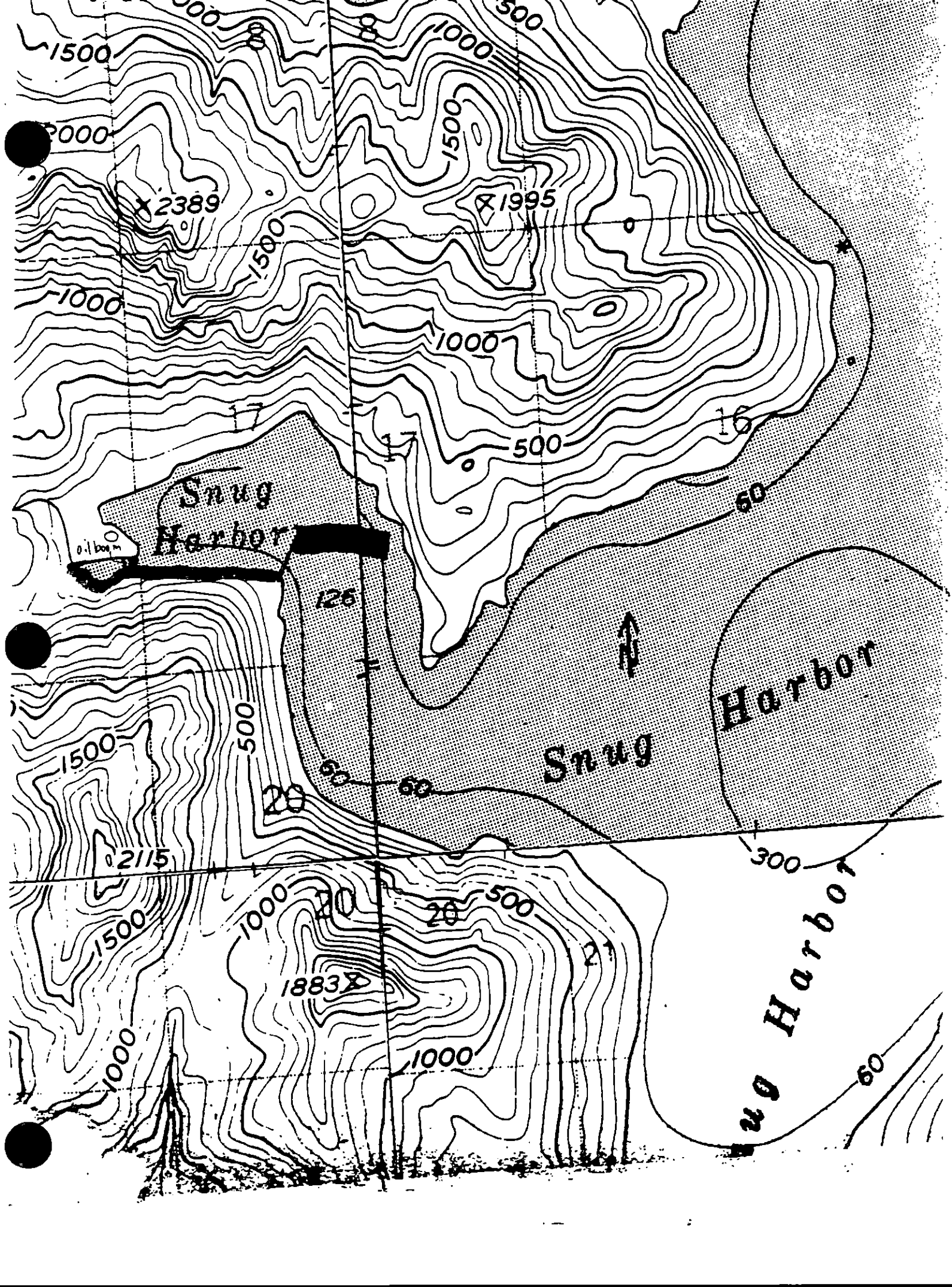
B/W Roll # None Frames

Observer(s) Bob Betts; Morley Eldridge

Time survey started 14:20 ; 19:42 Time survey ended 14:45 ; 20:00

Cultural resource considerations/restraints:

No monitor needed. If hitherto undiscovered cultural site etc


Snug Harbor
Snug Harbor
Harbor
1500
1000
500
2389
1995
1883
2115
126
60
20
300
N

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE June 13, 1989 SHORELINE SEGMENT KN-403

LOCATION: (see enclosed map) Knight Island-Snug Harbor

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/11/89

Recommended Cleanup Activity(ies):

Manually remove contaminated drift material, patches of mousse and pooled oil on beaches 2 and 3.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches (2 and 3).
Use other approved methods as appropriate on beaches 2 and 3.
~~No cleanup recommended at this time on beach 1, due to EPA bioremediation study.~~ EPA BIOREMEDIATION SITES ON BEACHES 1 AND 2. NO CLEANUP RESTRICTIONS RECOMMENDED AT THIS TIME.

Priorities Considerations:

Class 3 to 2: moderate oil (locally heavy)
Class A: resources present (EPA bioremediation study site)
Medium recreational use.

Ecological Constraints (from site survey):

~~Beach 1 is an EPA bioremediation study site. Contact EPA before proceeding with cleanup activities in this segment for determination as to whether recommended cleanup activities on beaches 2 and 3 may impact study site. Live boxes are located offshore.~~ ACTIVE BALD EAGLE NEST PRESENT. SEE ADVISORY.

Archeological Constraints (from site survey):

If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer * Date: June 13, 1989

ISCC: Sharon K. Christopherson 6-20-89

EXXON: _____ Date: June 21 1989

FOSC: _____ Date: 6-22-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

Mike Foget (?)
Patty Crank (?)

Date: 6/11/89 Time: 14:45 Observer: Bob Betts (Arch

Surveyed From: (Foot/Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/F

LOCATION

LOCATION Snug Harbor / SEGMENT NUMBER KN-403

LENGTH OF SHORELINE SEGMENT: 2000 m

ACCESS: Foot/Vehicle/(Boat/Barge/Helio)/Float Plane

Low tide

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: (LANG/HANG/VER)

Wave Exposure: High/Med/(Low)

Sediment: B 20 % / C 30 % / P 15 % / G 20 % / S 5 % / M 0 % / R 10 %

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type Driftwood

OIL

Degree of Oiling: (Heavy/Moderate/Light)/No Oil/Unobserved

Area of Beach Impact: SU / (SP / H / M) / L

25 m on beac

Continuous: (Y)/N % of Segment 70 Width of Band: 2 m

on vert rock

Sporadic: (Y)/N % of Segment 20

Est. Oil Thickness where > 1cm: 3 cm Est. Oil Penetration: 5 cm

Pooled Oil: 5 % "Free" Oil: 0 % Coated: H ___ % / M 15 % / L 30 %

Fresh 0 % Mousse 30 % Tar Formation: 20 %

Drift Debris Oiled ? (Yes)/No (Supra/Upper)/Mid/Lower Amount: H/M/(L)

Comments:

See attached comments and maps

Note: beach 1 EPA test beach

Photos 9, 10 roll T4 A/B #5

KN-403

The shore zone consists of mainly cobble, mixed ocean with some rocky reefs, ridges and boulders (map 1). The cobble/gravel beaches contain pebble storm berms located in the supra intertidal zone.

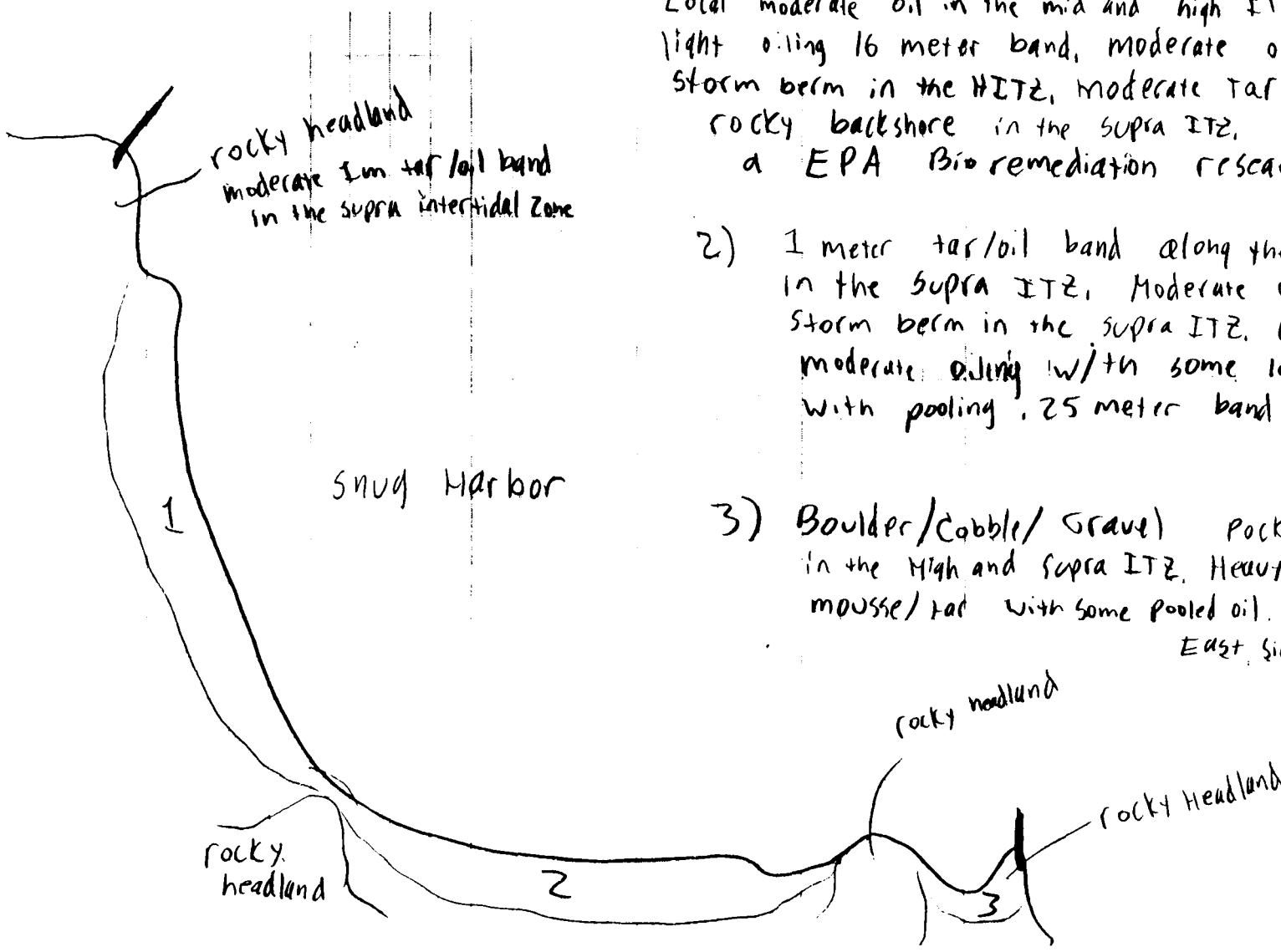
The shore zone is generally light to moderate oiling with localized heavy oiling which is a 25 meter band. The oiling occurs in the mid intertidal zone through to the supra intertidal zone (map 1). Moderate oiling occurs in the pebble storm berm located in the supra intertidal zone.

The shore zone has a low wave exposure and should be cleaned. The exception to this is Beach 1 is a EPA bio remediation test beach and is not clearly marked as are the NOAA/NMFS oil research beaches, therefore beach 2 should not be cleaned either until EPA o.k.'s clean up for shore zone KN-403.

Moderate to high pressure hot water with deluge flush appropriate should be used on heavy to moderately oiled Rock/Boulder/cobble substrates. All pooled oil should be removed manually or by other approved methods deemed appropriate. All contaminated drift material should be removed manually. For pebble gravel substrate use approved methods which are deemed appropriate. For lightly oiled areas use Low pressure washing with deluge flushing if appropriate or use approved methods which are appropriate.

KN-403 KNight Island /snug halbor 6/11/89 Map 1

Team 4 Mike Foget



1) Gravel beach at the north end, cobble gravel at the south. Local moderate oil in the mid and high ITZ, otherwise generally light oiling 16 meter band, moderate oiling in the Pebble storm berm in the HITZ, moderate tar/oil band along rocky backshore in the supra ITZ. Note: Beach is a EPA Bio remediation research beach.

2) 1 meter tar/oil band along the rocky headlands in the supra ITZ. Moderate oiling in the pebble storm berm in the supra ITZ. Cobble / Gravel beach moderate oiling w/th some localized heavy oiling with pooling. 25 meter band

3) Boulder/Cobble/ Gravel Pocket beach. Oiling and mouss in the High and supra ITZ. Heavy oiling on west side of r mousse/ tar with some pooled oil in the supra to mid IT East side 1 meter pooled mousse

ECOLOGICAL EVALUATION

Kathy Crank (Biol
Mike Foget (OS

LOCATION: SE Knight Island SITE: Snug Harbor OBSERVER: Bob Betts

LOCATION PREFIX: KN SEG. NO.: KN403 LENGTH: 2000m (M)

DATE: 6/11/89 TIME (HHMM): 1445 TIDE HT.: low → mid (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Patchy on boulders, Extensive intergravel beds. Continuous: Dense on Vertical Wall at East End

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Dense localized patches.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Bull Kelp bed at East point and Waterfalls and snow

---

CLEANUP PRECAUTIONS: Clean up not recommended at this time due to EPA study, no other biological constraints.

MAMMALS: River Otters paw prints in sand Harbor Seals ____ Sea Lions ____ Whales Dolphin 300 yds off shore.
Other ____

BIRDS: ____

GENERAL OBSERVATIONS: EPA bioremediation study on beach

Live box study

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date June 11, 1989 Location Knight Island Site Snug Harbour

Location Prefix KN Segment # 403 Length 2,000 m

Survey Method:

Air - (A - indicate on map) Boat - (A - indicate on map

Ground 100% (G - indicate on map)

Known cultural resources (~~AHRS~~ #) Site #26 Data Source Unknown/CHUGA

Oil conditions/beach visibility good above o.l - heavy oil in bands

Width of beach zone surveyed 20 m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) RCS

General observations justifying survey method and segment's site probability:

Shore Profile mod. angled cobble/pebble shale beach. Very long, uniform beach

Fresh Water Sources numerous small streams.

Sea Exposure Northern half well protected; southern half open to NE

Access/Safety Good northern half in all but severe NE'ers.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # None Frames

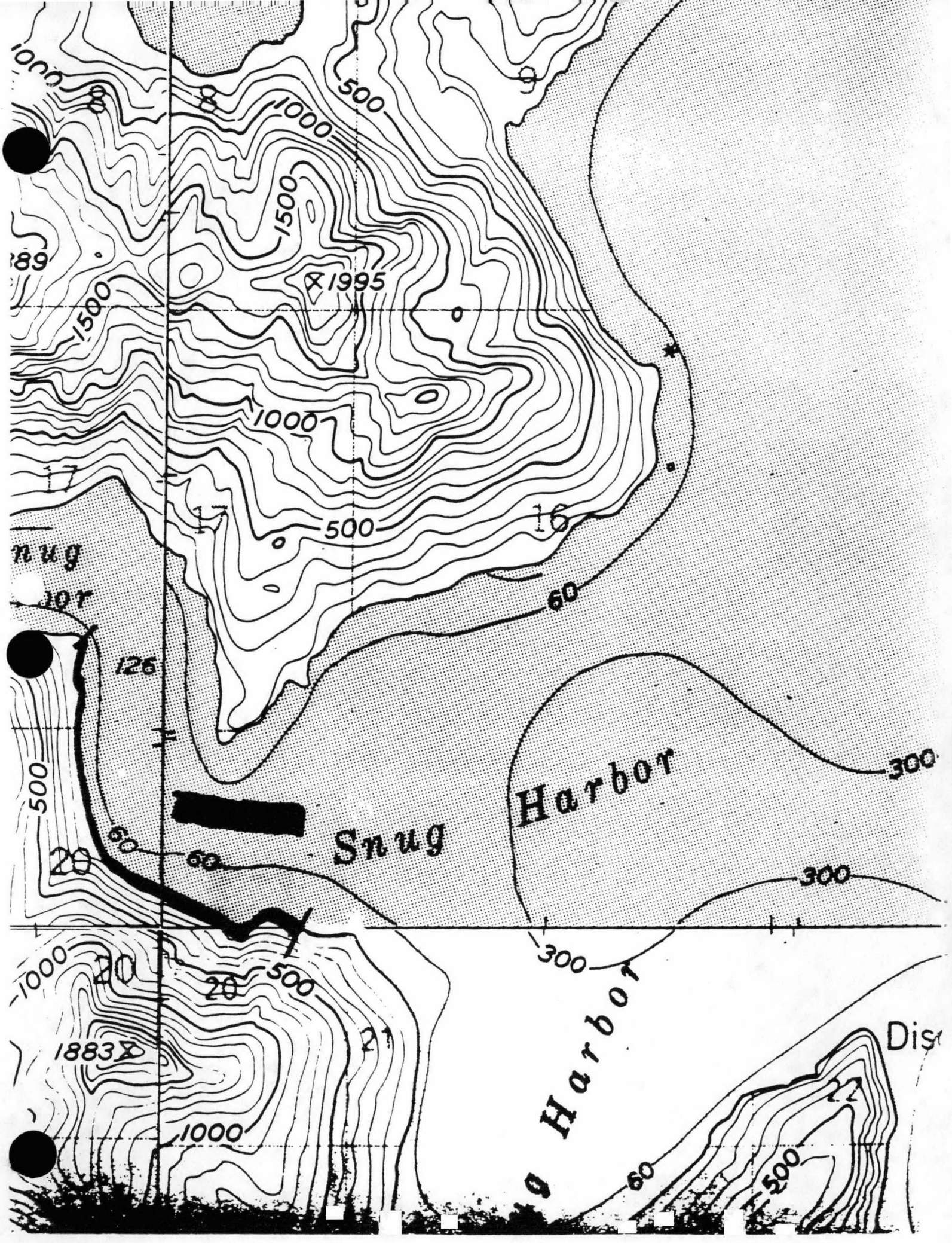
B/W Roll # None Frames

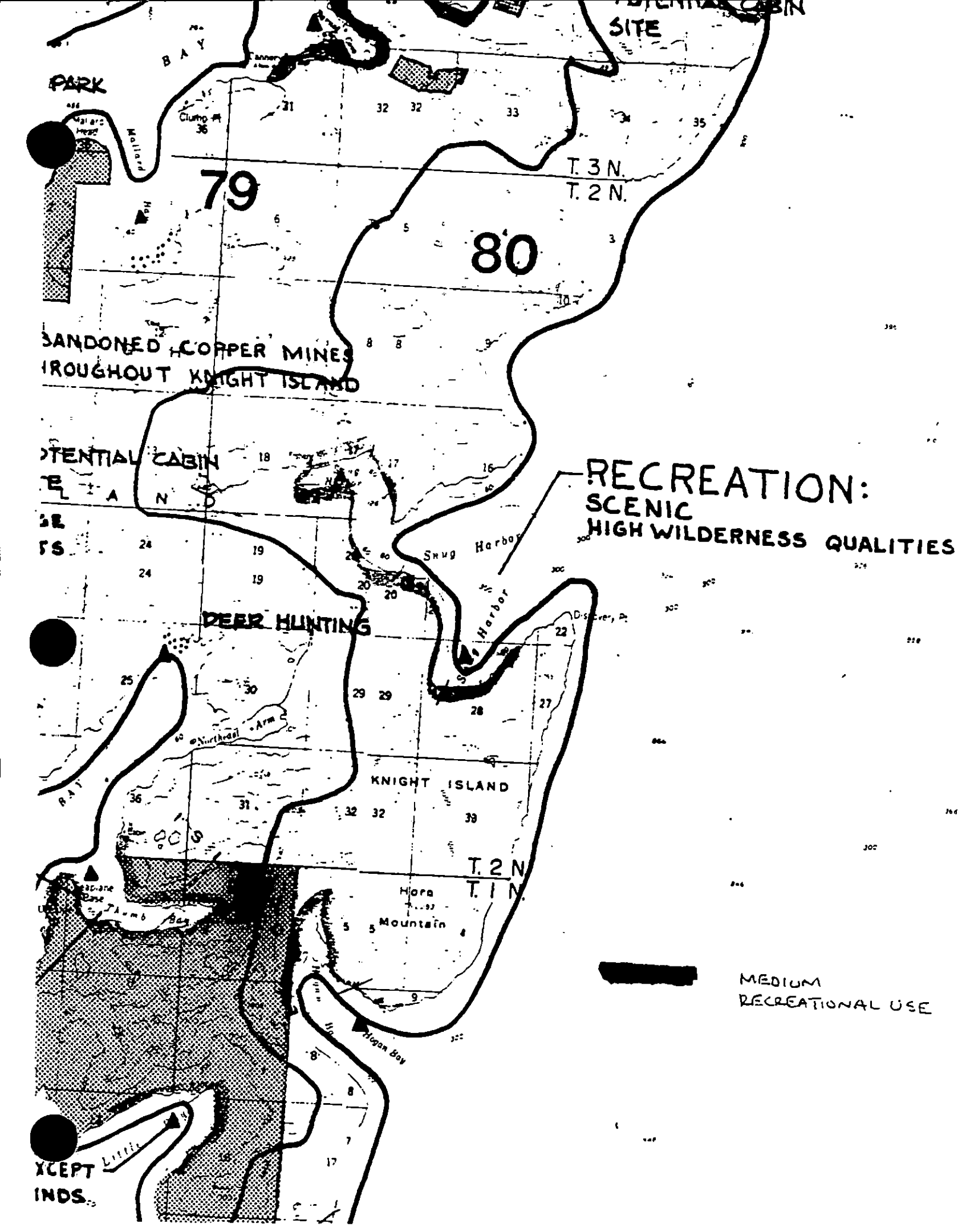
Observer(s) Robert Betts; Morley Eldridge

Time survey started 14:45 Time survey ended 16:00

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources etc. etc.


1000
500
1500
1995
1000
500
60
Snug
Harbor
300
300
300
20
20
20
1883
1000
500
60
500


SITE
PARK
BAY
79
80
T. 3 N.
T. 2 N.
SANDONED COPPER MINES
ROUGHOUT KNIGHT ISLAND
TENTIAL CABIN
RECREATION:
SCENIC
HIGH WILDERNESS QUALITIES
DEER HUNTING
KNIGHT ISLAND
T. 2 N
T. 1 N.
MEDIUM
RECREATIONAL USE

KN-400 SEGMENT

DATE 8/27/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment KN-400 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsaur Date: 8/27/89 Time: 1100

Printed Name Steve E. Ramsaur TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
>1	Heavy
15	Medium
15	Light
10	Very Light
59	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil Percent	Degree of Oiling
2	Heavy
20	Medium
15	Light
10	Very Light
53	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Majority of oil on beach is of heavy consistency in tarballs thin layers. Two pockets located with lower, heavier contamination (under tree branches & rocks)

Signature Matt C. Biery Date: 8/27/89 Time: 1111

Printed Name Matt C. Biery

FOSC rep **Demobilization approved/disapproved**

Comments [illegible] CONCURRENCE

Signature [illegible] Date: 8/27/89 Time: 1105

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

ICN 401

20.89 INSPECTION RECORD KN-401

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical
- ☑ Non-mechanical WASH, POM POMS & PICKING UP OILED DEBRIS AS APPLIED
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-401 IS COMPLETE AND READY FOR DEMOBILIZATION TO NEXT SEGMENT

Signature Melvin D Jones Date: 8 12 89 Time: 1700

Printed Name MELVIN D JONES

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
1%	Heavy
2%	Medium
30%	Light
10%	Very Light
57%	None
100 %	

Subsurface Oil

☒ Yes ☐ No

COMMENT BELOW

Reassessment

- ☐ Yes - necessary
- ☒ No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
1%	Heavy
3%	Medium
20%	Light
30%	Very Light
46%	None
100 %	

Subsurface Oil

☒ Yes ☐ No

COMMENT BELOW

Reassessment

- ☒ Yes - necessary -
- ☐ No - not necessary unless re-oiled

ADEC rep

Comments Gross contamination removed, Primarily very light to light oiling along tide line. Light subsurface oil in areas.

Signature Joseph S. Sautner Date: 8 12 89 Time: 1235

Printed Name Joseph S. SAUTNER

C rep **Demobilization approved/disapproved**

Comments To remove tarballs & debris at areas determined during inspection

Signature Paul B. Gandy Date: 8 12 89 Time: 1230

Printed Name Paul B. Gandy LT

COPY: EXXON ADEC FOSC ISCC

KN-402 PKN-402
8-20-89 INSPECTION RECORD KN-402

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical
- ☒ Non-mechanical WIPING AND RAKING
- ☐ Other: AND PICKED UP OILED DEBRIS AND PUT IN BAGS

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF KN-402 SEGMENT IS COMPLETE AND IS READY FOR DEMOBILIZATION TO LOG CREEK

Signature Melvin D Ghost Date: 8 20 89 Time: 1700

Printed Name MELVIN D GHOST

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
less than 1%	Heavy
3%	Medium
3%	Light
43%	Very Light
100 %	None

Subsurface Oil: ☒ Yes (very small amount) ☐ No

COMMENT BELOW

Reassessment: ☐ Yes - necessary ☒ No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil Percent	Degree of Oiling
0	Heavy
< 1%	Medium
4%	Light
3%	Very Light
96%	None
100 %	

Subsurface Oil: ☒ Yes ☐ No

COMMENT BELOW

Reassessment: ☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep

Comments No gross contamination observed. Very little subsurface oil. Mostly heavy band near MHA with small amt banding of oil

Signature Joseph S. Sautner Date: 8 12 89 Time: 1240

Printed Name JOSEPH S. SAUTNER

FOSC rep **Demobilization (approved)/disapproved**

Comments no gross contamination observed

Signature Paul B. Gandy Date: 8 12 89 Time: 1235

Printed Name Paul B. Gandy LT

COPY: EXXON ADEC FOSC ISCC

KN-403

DATE 9/3/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [X] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KN-403 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsower Date: 9/3/89 Time: 1400

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
1	Heavy
10	Medium
25	Light
0	Very Light
64	None
100 %	

Subsurface Oil

[X] Yes [ ] No

COMMENT BELOW

Reassessment

[X] Yes - necessary

[ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
>2	Heavy
20	Medium
28	Light
0	Very Light
50	None
100 %	

Subsurface Oil

[X] Yes [ ] No

COMMENT BELOW

Reassessment

[X] Yes - necessary

[ ] No - not necessary unless re-oiled

ADEC rep

Comments Some goocy blobs exists beneath the cobbles on a few sections of beach.

Signature Dale W. Gardner Date: 9/3/89 Time: 14:10

Printed Name DALE W GARDNER

FOSC rep **Demobilization approved/disapproved**

Comments [illegible] CONTINUATION

Signature [illegible] Date: 9/3/89 Time: 1405

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): POINT HELEN EAST BLOCK

Includes Shoreline Segments: KN-404, KN-405

Submitted: _____ Date: 6/26/89
(for Exxon)

ISCC Reccomendation: _____ Date: 7/3/89

FOSC Approval: _____ Date: 7-6-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

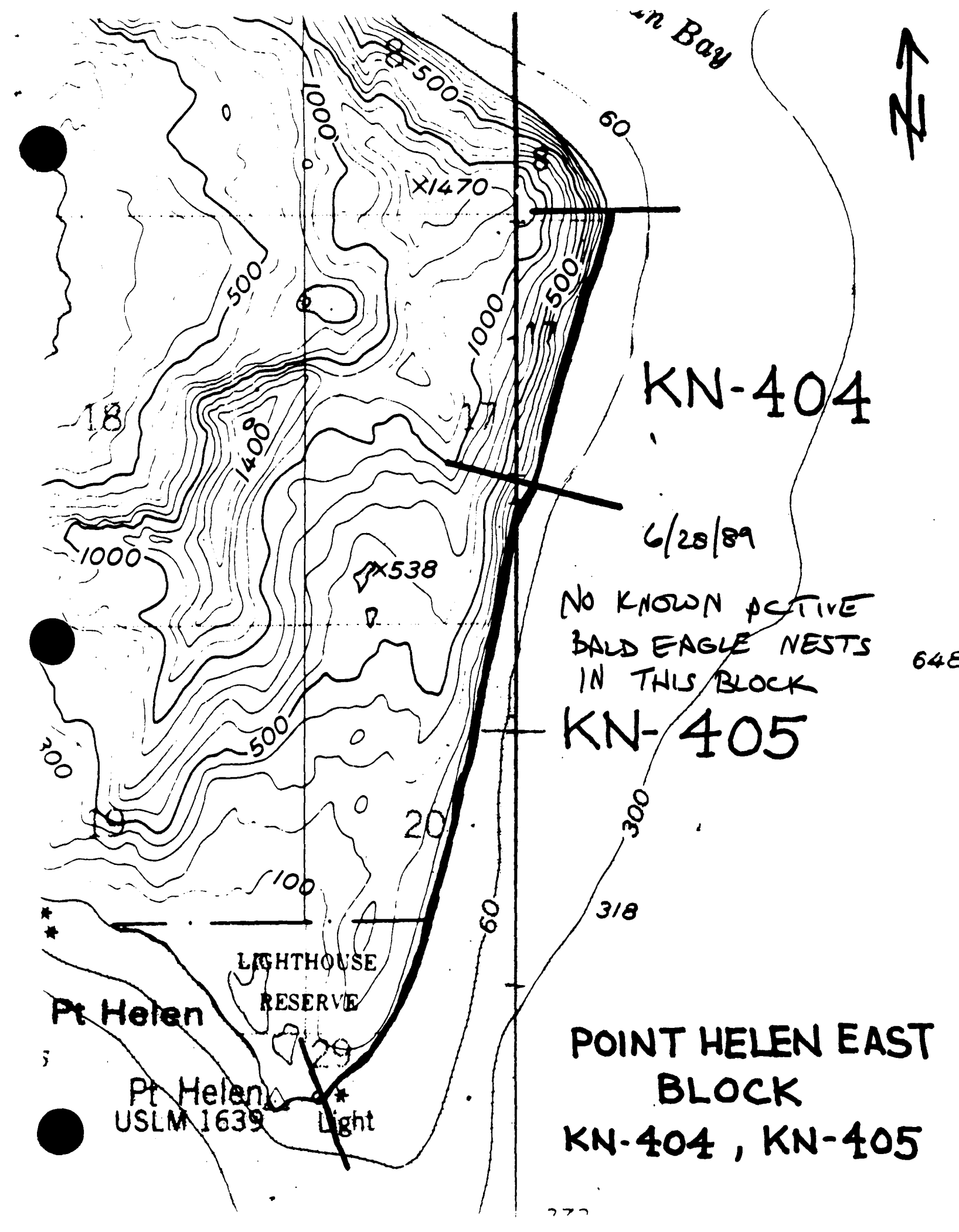
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

********** SCOT NOTE **********

THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

SHORELINE SEGMENTS WITHIN POINT HELEN EAST BLOCK ARE ON LAND OWNED BY CHENEGA VILLAGE CORPORATION. NO ACCESS TO UPLAND AREAS.


N
KN-404
6/28/89
NO KNOWN ACTIVE BALD EAGLE NESTS IN THIS BLOCK
KN-405
POINT HELEN EAST BLOCK
KN-404 , KN-405
LIGHTHOUSE RESERVE
Pt Helen
Pt Helen USLM 1639 Light
X1470
X538
500
1000
1400
100
200
300
60
318
18
20
29

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 6/21/89 SHORELINE SEGMENT KN-404

LOCATION: (see enclosed map) KNIGHT ISLAND-SOUTHEAST CORNER

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus). No mechanical cleanup recommended at this time subject to FOSC ~~approval~~. Segment is lightly oiled and has high wave exposure. REASSESSMENT

Priorities Considerations:
Class 1: light oiling / TIME SENSITIVE
Class A: adjacent to subsistence resources area / AND HATCHERY. THIS AREA IS OF HIGH RECREATION USE / VALUE JAC 7/3/89

Ecological Constraints (from site survey): Work at mid tide and/or take appropriate measures to protect lower intertidal zone. No additional ecological constraints.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger Date: 6-26-89
State Historic Preservation Officer *

ISCC: Jacqueline Michel Date: 7-3-89

EXXON: [signature] Date: 7-4-89

FOSC: [signature] Date: 7-6-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/19/89 Time: 07:00 Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-404

LENGTH OF SHORELINE SEGMENT: 1,100 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPT/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 20 % / C 60 % / P 10 % / G ___ % / S ___ % / M ___ % / R 10 % FUCUS

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 100 Width of Band: 2-10 m

Sporadic: Y/N % of Segment ___

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ___ cm (THICKNESS OF FUCUS 10-15)

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H ___ % / M ___ % / L 100 %

Fresh ___ % Mousse ___ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

① TWO UNITS

UNIT #1 (NORTH UNIT): LIGHT OIL BAND, 2-4 M WIDE

UNIT #2 (SOUTH UNIT): LIGHT OIL BAND, 5-10 M WIDE

② OIL IS VERY WEATHERED AND FORMS A THIN COATING

③ NATURAL ABRASION AND WASHING ON-GOING

6/19/1997 Rick Gillie

SEGMENT KN-404

-07:00 UNIT #1 (700m)

- Moderate slope
- Large boulder (0.5-1.0m) and cobbles at HTZ becoming boulder/cobble at m-LTZ
- Angular boulders and cobbles, especially at back of beach (supplied from rock falls)
- Sub-strate wave-cut platform

Access

① Good - moderate slope nearshore with no large rocks or reef

- No oiled Fucus !

Oil

① North section - light band at MTZ on large boulder surfaces
- Band 0.5-1.0m wide/high 2-4m
- ITZ - 60-70m wide

- Photo 15 View south at LTZ

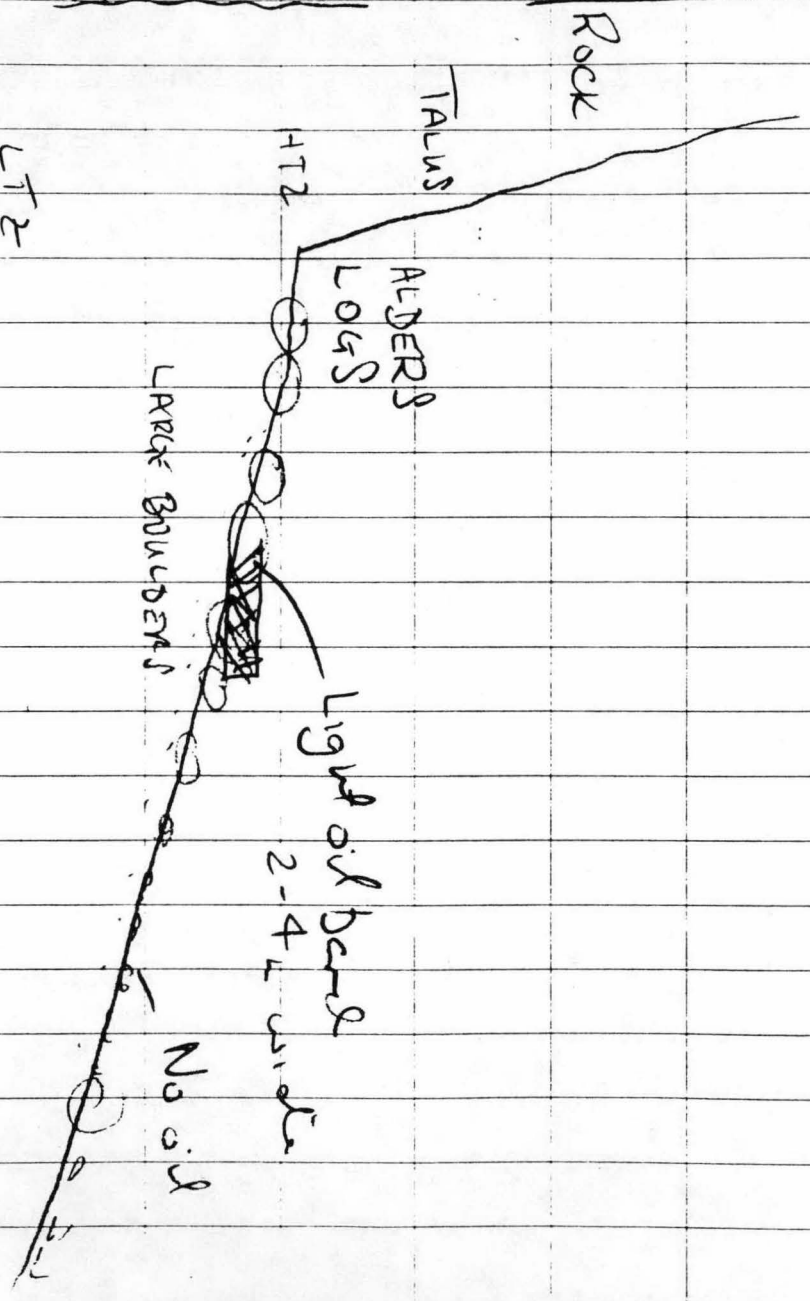
- Natural abrasion is high

- Potential very natural treatment by waves is high

- High energy surf zone

KN-404

UNIT #1



UNIT #2 Rick Gilfillan

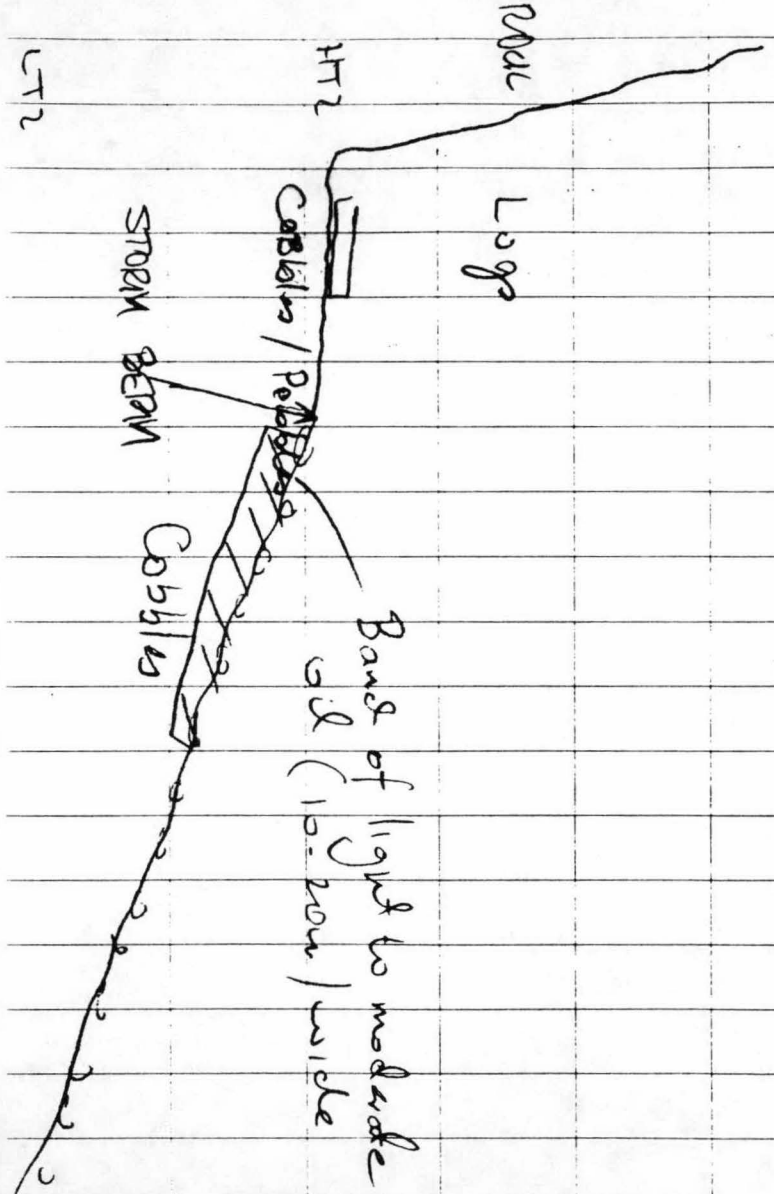
② Stop ≈ 500-800 m south
- 200 m south of talus
- less boulders.
- oil band now 10-20 cm wide in HTZ
- most cobble in HTZ
- oil is weathered, thin coating on rock
- very weathered
- no residue on touching

- Penetration to 10 cm (thickness of cobble, to 15 cm in pebbles

- UNIT #2 photo

KN-404 UNIT #2

Rick Grillo



- No clean-up required
- Paint-like coating, thin by very weathered
- Would have to steam clean every rock

- Natural clean-up suggested.

ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISLAND SITE: _____ OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 404 LENGTH: 1,100 (M)

DATE: 06 / 19 / 89 TIME (HHMM): 0700 TIDE HT.: +1.0 FT (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None (Y)/N

-NO OIL-

Most of segment with no fucus; sparse patches at Northern end of segment where coast is a bit protected

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None (Y)/N

Few in LTZ boulders

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense Y/N Sparse (Y)/N None Y/N

Fairly continuous band in MTZ/LTZ of this years acorn spat; thatched barnacles patchy & sparse at Northern end of segment.

Littorina
Patchy (Y)/N Contin. (Y)/N Dense Y/N Sparse (Y)/N None Y/N

Tiny baby Littorina fairly continuous on boulders in MTZ; Adults sparse, primarily associated with patchy fucus @ northern end of segment.

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Patchy but fairly common @ Northern end of segment - wider distribution than adult littorina LTZ

OTHER OBSERVATIONS: Pycnopodia fairly common @ LTZ; few leather stars (Dermasterias)

CLEANUP PRECAUTIONS: No ecological constraints

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: Glaucous-winged Gull - 1

GENERAL OBSERVATIONS: Generally no biota in oiled zone.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/19/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-404 Length 1100

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light

Width of beach zone surveyed 15 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile moderately sloped boulder beach

Fresh Water Sources none

Sea Exposure open to east

Access/Safety fair

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # _____ Frames _____

B/W Roll # _____ Frames _____

Observer(s) C Mobley

Time survey started 0700 Time survey ended 0745

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup contact Exxon archaeologist, C Mobley, immediately.

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 6/21/89 SHORELINE SEGMENT KN-405

LOCATION: (see enclosed map) KNIGHT ISLAND-SOUTHEAST CORNER

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus), especially at south end of segment.
  Flood/flush with warm to hot water (up to 140 F) in the middle to high intertidal zone.
  Use moderate to high pressure washing on boulders.
  After the fall bird migration, a reassessment of the remaining oil and additional techniques (~~such as relocation of the oiled beach material into the active surf zone~~) may be appropriate. 7/31/89 jm
  ~~Do not relocate any material finer than pebbles~~.
  Use other approved methods as appropriate.
  ALL AREAS, INCLUDING STUDY SITES, SHOULD BE TREATED, UNLESS OTHERWISE DIRECTED BY SCAT

Priorities Considerations:

Class ~~I~~ 2: heavy to moderate oiling/ TIME SENSITIVE
Class A: segment is within a subsistence resources area.
THIS AREA HAS HIGH RECREATIONAL USE/VALUE.

Ecological Constraints (from site survey): Work at mid tide and/or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger Date: 6-26-89
State Historic Preservation Officer *

ISCC: [signature] Date: 7-3-89

EXXON: [signature] Date: 7-4-89

FOSC: [signature] Date: 7-6-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/19/89 Time: 08:00 Observer: Rick Gillie

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-405

LENGTH OF SHORELINE SEGMENT: 2 200 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/HLD/STRT Slope: (LANG)/(HANG)/(VER)

Wave Exposure: (High)/Med/Low

Sediment: B 10 % / C 60 % / P 20 % / G 5 % / S ___ % / M ___ % / R 5 % LOGS Fucus

Drift Debris on Beach: (Yes)/No (Supra)/(Upper)/Mid/Lower Type Fucus

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / (L) HEAVY 10-20 MOD. 20-30

Continuous: (Y)/N % of Segment 100 Width of Band: _____ m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: +30 cm

Pooled Oil: — % "Free" Oil: — % Coated: H 80 % / M 20 % / L ___ %

Fresh _____ % Mousse 2 % Tar Formation: 98 %

Drift Debris Oiled ? (Yes)/No (Supra)/(Upper)/Mid/Lower Amount: (H)/M/L/

Comments:

① THREE UNITS (SEE MAP AND PROFILES)

6/19/89

Rick Gillie

SEGMENT KN-405

08:00

- Shoreline became moderate to heavily oiled
- Oil band 50m wide comprising 30m at MTZ and 20 m at HTZ

R - 5%
B - 10%
C - 60%
P - 20%
G - 5%

- Oil penetration to 30cm + in upper HTZ on pebble berm

- Recommend

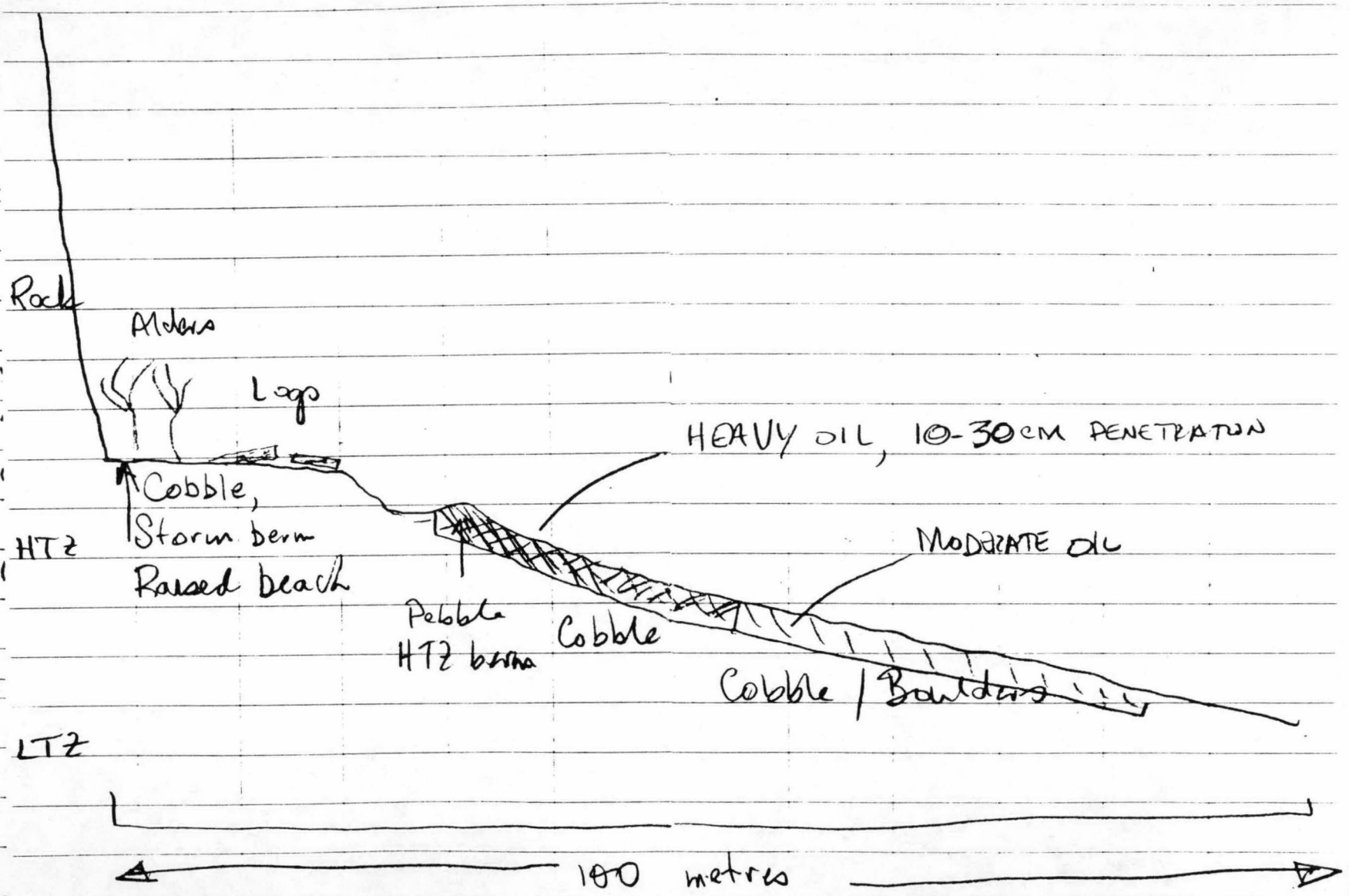
(1) Manual - light fines, logs

(2) Flood / hot wash at HTZ

(3) Agitation of HTZ to recover sub-surface oil to 30 cm depth

KN-405 (NORTH UNIT #1)

Ride Gillie



KN-405 (UNIT #2)

@ 08:30

HT2 - 5m wide, MODERATE OILED, HT barm (COBBLE)

- 10m wide, HEAVILY OILED Cobble / Boulders, +30cm

MT2 - 30m wide, Light mod. oiled boulders

LT2 - Nood to V. Light

- Located 300-400m north of house size (30') rock on the beach

- Good access - clear of nearshore obstructions

Recommend

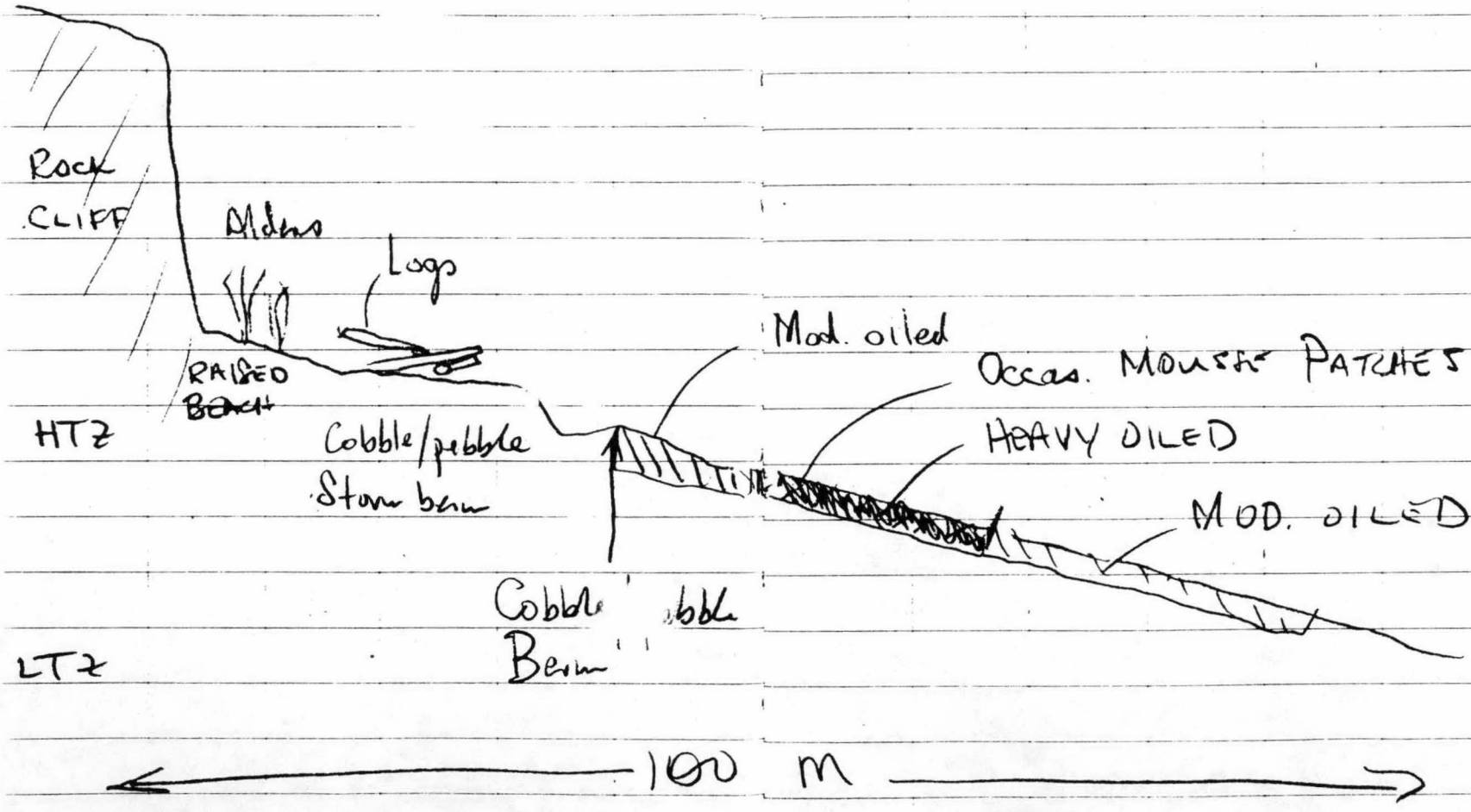
① Manual - oil flows (mod) = Logs (low)

② High press / steam on rocks / boulders

③ Flood / Hot water at mid-tide to clean heavy oil on HT2

④ Push HT2 cobble / boulders to LT2 (?)

KN-405 (UNIT # 2)


Rock
CLIFF
Mdms
Logs
RAISED BEACH
HTZ
Cobble/pebble
Storm berm
Mod. oiled
Occas. MOUSSE PATCHES
HEAVY OILED
MOD. OILED
Cobble
Berm
LTZ
100 m

KN-405 (SOUTH UNIT #3) R Gillie

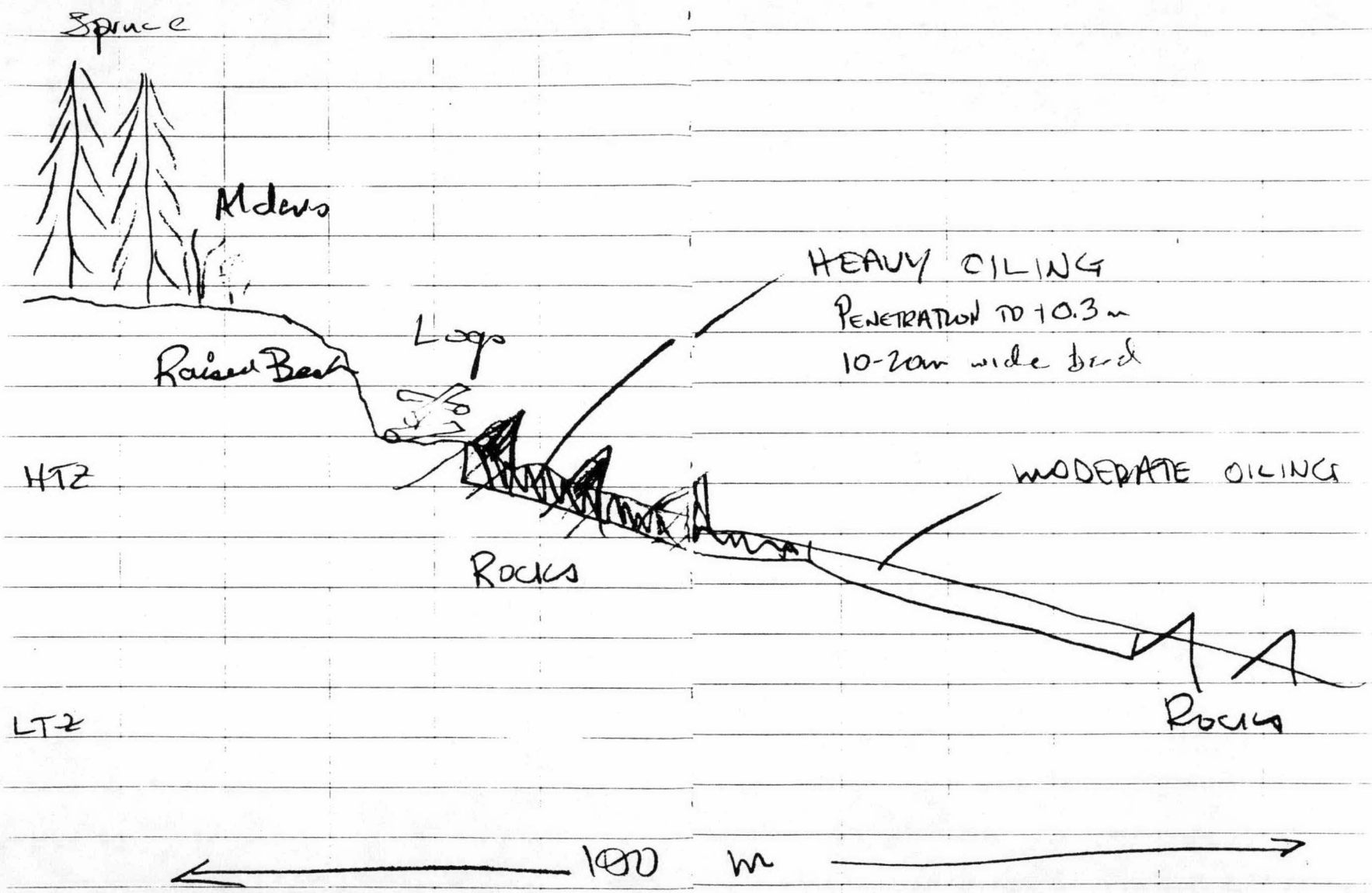
@ 09:10

- HTZ - rock/boul./cobble
  - heavily oiled band (10-15m)
  - HT barn
  - oiled kelp/fucus
- MTZ - moderate oiled zone
  - cobbles/boulders
- LTZ - light or no oil
- Access - low tide over nearshore rocks kinda shore approach

Note - EXXON OIL SPILL ETKIN SITE SIGN #9 approx 300 m north of Pt Helen Lt

- Large boulders and bedrock with heavy oil coating and mousse at 300 m north of Helen Lt.
- Debris - oiled Fucus
  - oiled kelp
- RECOMMEND
  (1) Manual
  (2) Hi & L Pres - Rocks
  (3) HT
  (4) M-LTZ - No clean-up

KN-405 (SOUTH UNIT)



ECOLOGICAL EVALUATION

LOCATION: KNIGHT ISLAND SITE: _____ OBSERVER: MEYER

LOCATION PREFIX: KN SEG. NO.: 405 LENGTH: 2,200 (M)

DATE: 06 / 19 / 89 TIME (HHMM): 0755 TIDE HT.: -1.5 FT (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: Rocks (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Fucus absent from most of segment; fairly dense @ LTZ at southern end.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Few mussels throughout most of segment; several boulders of mussel beds at southern end.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense Y/N Sparse (Y)/N None Y/N

Spat and adult acorn throughout LTZ, MTZ; patches of thatched barnacles

Littorina
Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Varies throughout segment - adults associated w/ Fucus, baby littorina in continuous band thru MTZ. Unoiled EXCEPT in Unit 3 (Southern end) where they are in oiled zone w/ oiled shells. Few Nucella with Fucus.

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

OTHER OBSERVATIONS: Pycnopodia abundant @ LTZ, also dermasterias (leather star), one Orthasterias. Except in Unit #3 (southern end) little biota present in oiled zone or below it.

CLEANUP PRECAUTIONS: No ecological constraints.

MAMMALS: Otters 1 Harbor Seals 1 Sea Lions ____ Whales ____
Other _____

BIRDS: 4 Glaucous-winged Gulls

GENERAL OBSERVATIONS: There is Dames+Moore Study Site #9 at the Southern end of this segment (Exxon Oil Spill Study Site - "Do Not Disturb within 50 yards of the Marker")
What little oiled biota (mussels, fucus, barnacles) which occurs in this segment is concentrated on this study site's boulders.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/19/89 Location ~~KN-405~~ Knight Island Site _____

Location Prefix KN Segment # KN-405 Length 2200

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate

Width of beach zone surveyed 10-15 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile boulder, moderately sloped beach

Fresh Water Sources None

Sea Exposure open to east

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

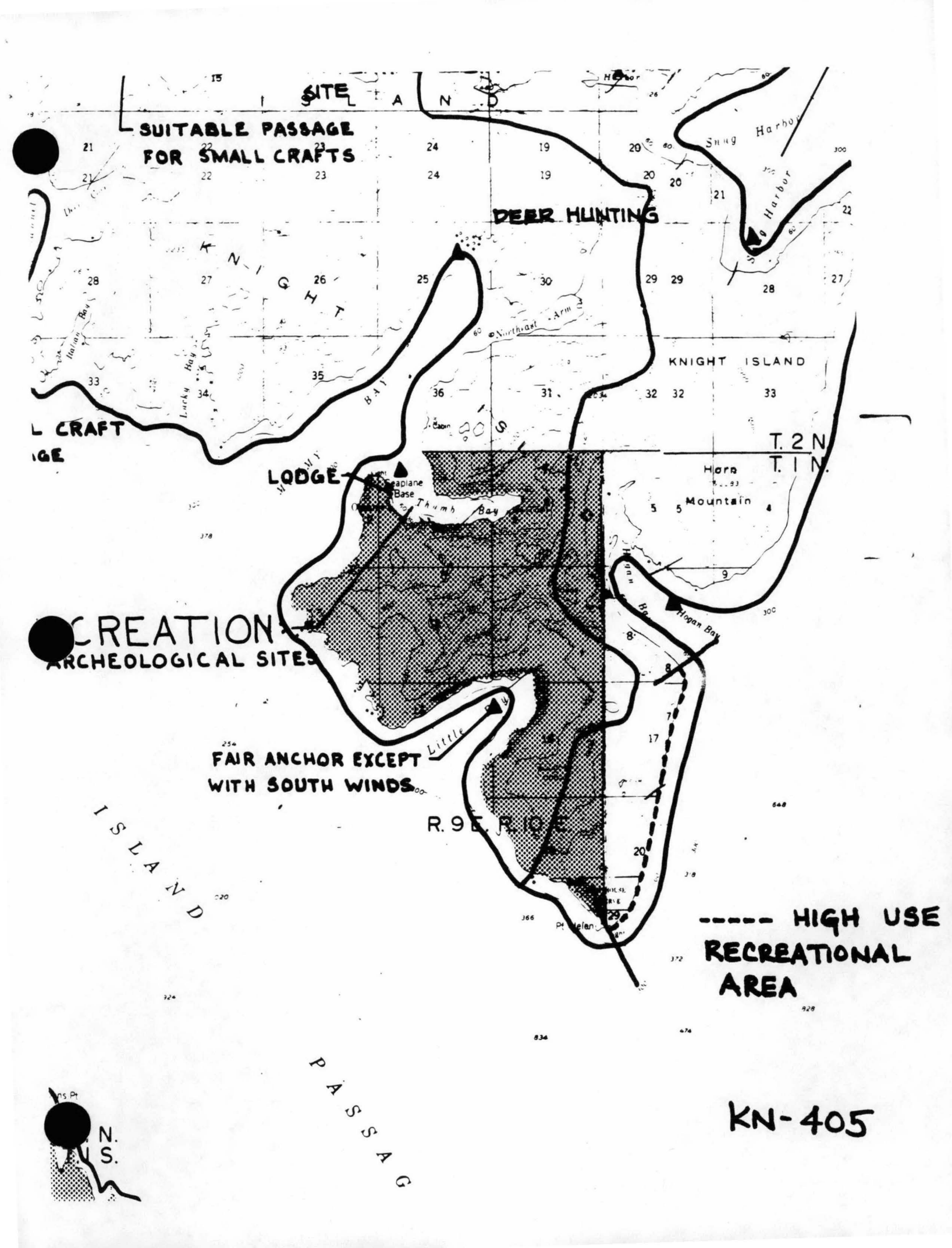
B/W Roll # _____ Frames _____

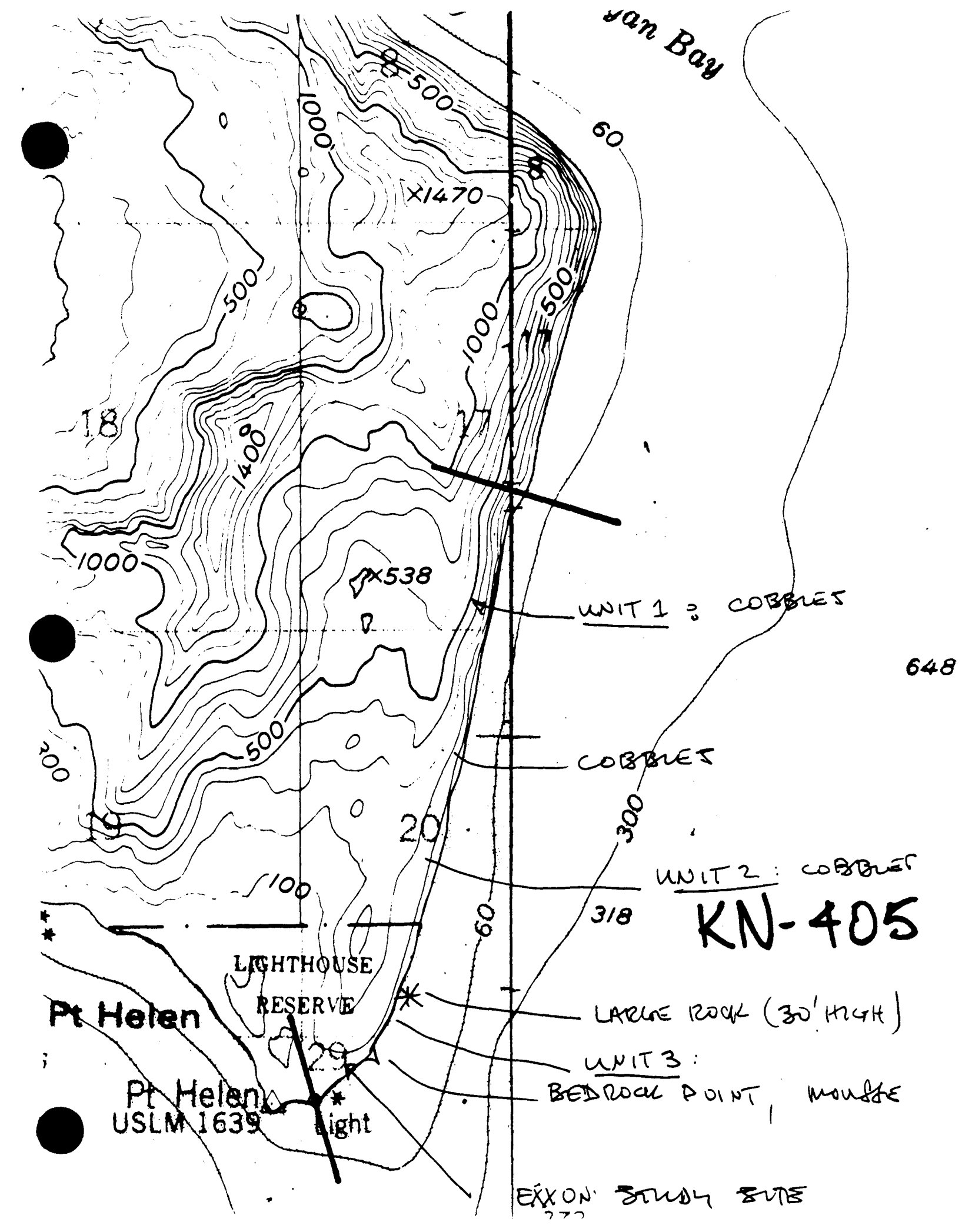
Observer(s) C. Wilson

Time survey started ~~0900~~ 0745 Time survey ended ~~0945~~ 1030

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup contact Upon archaeologist, C. Mobley, immediately.


SITE
SUITABLE PASSAGE FOR SMALL CRAFTS
DEER HUNTING
KNIGHT ISLAND
L CRAFT
GE
LODGE
Seaplane Base
Thumb Bay
T. 2 N
T. 1 N.
Horn Mountain
CREATION
ARCHEOLOGICAL SITES
FAIR ANCHOR EXCEPT WITH SOUTH WINDS
R. 9 E.
R. 10 E.
ISLAND
PASSAG
----- HIGH USE RECREATIONAL AREA
N.
S.
KN-405


Bay
500
1000
0
60
X1470
500
1000
500
18
1400
1000
X538
UNIT 1 : COBBLES
648
500
COBBLES
200
20
300
UNIT 2 : COBBLES
100
318
60
KN-405
LIGHTHOUSE
RESERVE
Pt Helen
LARGE ROCK (30' HIGH)
29
UNIT 3 :
BEDROCK POINT, MOUSSE
Pt Helen
USLM 1639
light
EXXON STUDY SITE

KN-405A

DATE 9/4/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment 405-A is complete and ready for demobilization to next segment.

Signature [signature] Date: 9/4/89 Time: 2010

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
3	Heavy
20 30	Medium
25 35	Light
30 25	Very Light
22	None
100 %	

Subsurface Oil

- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
3	Heavy
37	Medium
20	Light
10	Very Light
10	None
100 %	

Subsurface Oil

- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments There is little heavy oiling on surface. However, I feel the amount of medium oiling warrants further attention and the shore could benefit from more treatment.

Signature [signature] Date: 9/4/89 Time: 2025

Printed Name DALE GARDNER, ADEC INSPECTOR

FOSC rep

Demobilization approved/disapproved

Comments THIS SEGMENT IS THE NORTH SUBDIVISION OF 405. 405 WAS SPLIT INTO TWO TASK FORCES. TASK FORCE TWO IS ASSIGNED TO

Signature [signature] Date: 9/4/89 Time: 2020

Printed Name PAUL FOKEY CWO2 USCG

COPY: EXXON ADEC FOSC ISCC

KN405B - [illegible]

Date: 9/13/89 KN405B [illegible]
REV 1

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-405B IS COMPLETE AND READY FOR DEMOB & FOLLOWED BY BIOREMEDIATION TREATMENT

Signature [signature] Date: 9/13/89 Time: 15:00

Printed Name P.G. CALVERT JR TF #4

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
10	Heavy
30	Medium
40	Light
0	Very Light
20	None
100 %	

Subsurface Oil

- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
15	Heavy
35	Medium
30	Light
0	Very Light
20	None
100 %	

Subsurface Oil

- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Gross contamination still present - mobile oil still present at upper tidal zone

Signature [signature] Date: 9/14/89 Time: 1120

Printed Name Michele Perr

FOSC rep Demobilization approved/disapproved

Comments THIS SEGMENT COMPLETES EXXON TREATMENT NOT COMPLETE

Signature [signature] Date: 9/14/89 Time: 1128

Printed Name Peter Rosky Cruz

COPY: EXXON ADEC FOSC ISCC

EXCESSIVE HEAVY OIL REMAINS BIOREMEDIATION TREATMENT RECOMMENDED

KN-405-B
9/13/89

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-405B IS COMPLETE & READY FOR DEMOB. & FOLLOWED BY BIOREMEDIATION TREATM

Signature [signature] Date: 9/13/89 Time: 15:00

Printed Name TG CAVANAUGH Ref. #4

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
10	Heavy
30	Medium
40	Light
0	Very Light
20	None
100 %	

Subsurface Oil
- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment
- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
15	Heavy
25	Medium
35	Light
0	Very Light
20	None
100 %	

Subsurface Oil
- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment
- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments Alot of heavy contamination removed but mobile oil still present at upper tidal zone.

Signature [signature] Date: 9/13/89 Time: 1901

Printed Name Michele Peep

FOSC rep Demobilization approved/disapproved

Comments Has inspected completed segment KN-405 demobilization

Signature [signature] Date: 9/13/89 Time: 1855

Printed Name Paul Putney USCG

COPY: EXXON ADEC FOSC ISCC

DISAPPROVED DUE TO LARGE QUANTITY 1-2 FOOT HEAVY OIL. RECOMMEND BIOREMEDIATION.

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Knight Island - Horn Mountain Block

Includes Shoreline Segments: KN-406, KN-407, KN-408, KN-409, KN-410, KN-411, KN-412, KN-413

Submitted : _____ (for Exxon) Date: 7/15/89

ISCC Approval: Sharon K. Christopherson Date: 7/21/89

FOSC Approval: A.C. Allejandro, by dir. Date: 7/24/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

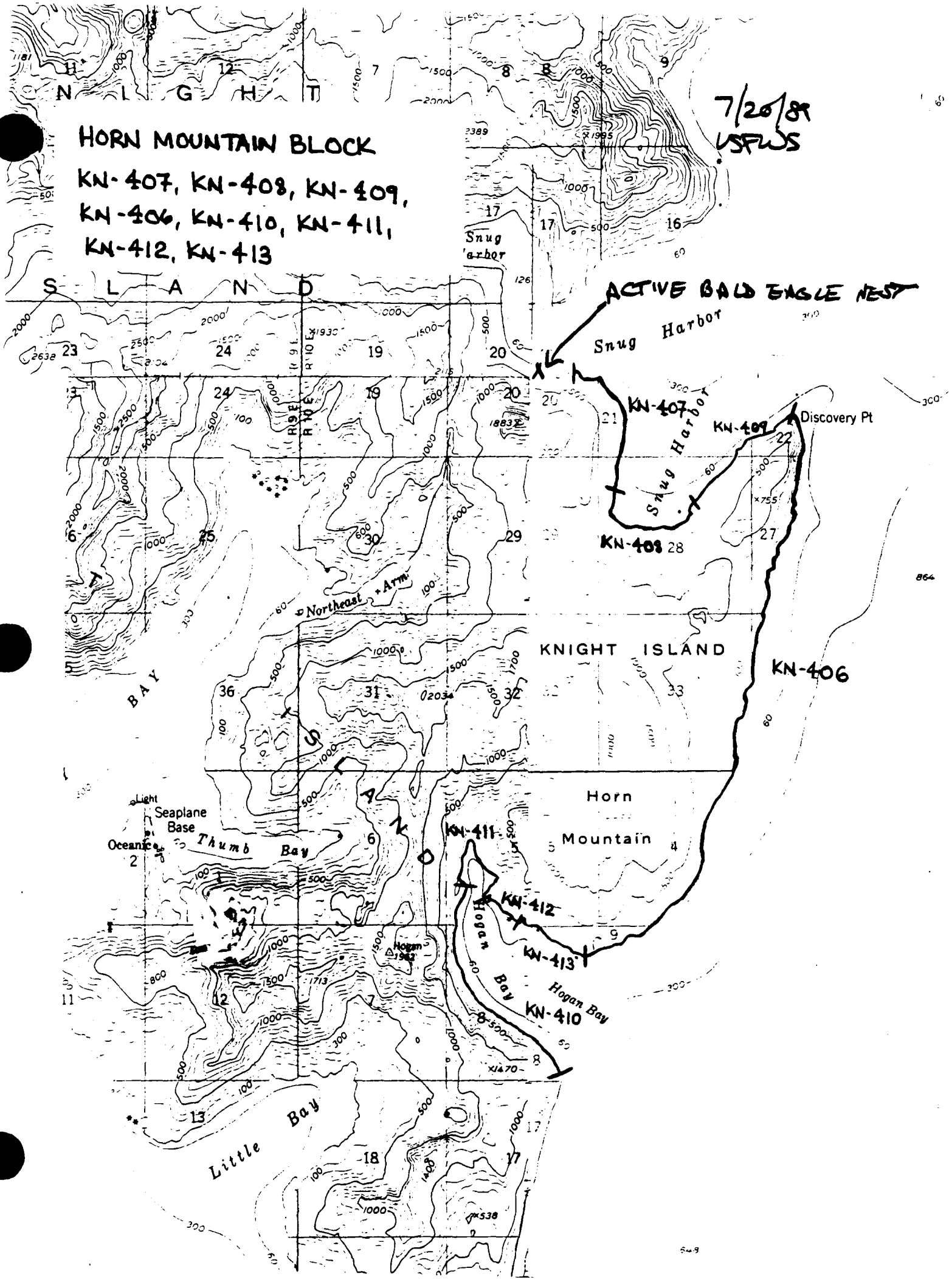
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

********** SCOT NOTE **********

THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

NOTE THAT THE UPLANDS IN SHORELINE SEGMENTS KN-406, KN-410, KN-411, KN-412, AND KN-413 IN THE KNIGHT ISLAND - HORN MOUNTAIN BLOCK ARE OWNED BY THE CHENEGA VILLAGE CORPORATION. PERMIT NO ACCESS TO UPLANDS AT ANY TIME.


HORN MOUNTAIN BLOCK
KN-407, KN-408, KN-409,
KN-406, KN-410, KN-411,
KN-412, KN-413
7/20/89
USFWS
ACTIVE BALD EAGLE NEST
Snug Harbor
KN-407
KN-409
Discovery Pt
KN-408
KN-406
KNIGHT ISLAND
Horn Mountain
KN-411
KN-412
KN-413
KN-410
Hogan Bay
Thumb Bay
Seaplane Base
Oceanic
Little Bay
Northeast Arm
BAY
ISLAND

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/05/89 SHORELINE SEGMENT KN-406

LOCATION: (see enclosed map) KNIGHT ISLAND-(BETWEEN SNUG HARBOR AND HOGAN BAY)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/20/89

Recommended Cleanup Activity(ies):

Manually remove oiled debris (fucus).
Flood/flush with hot water (up to 140 F) on low angle beaches.
Use moderate to high presure warm to hot water washing on rocks and oiled logs.
Use other approved methods as appropriate.

Priorities Considerations:

Class 3-4: Moderate to light oiling.
Class A: Resources present.

Ecological Constraints (from site survey):

Work at mid tide + or take appropriate measures to protect lower intertidal zone. protect ~~Retain~~ mussel beds and fucus ~~holdfasts~~. Minimal disturbance of rock outcroppings.

sc 7
cc 890721

Archeological Constraints (from site survey):
Avoid disturbance to barge wreck in central portion of segment. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Mark E. Hoffman
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopherson Date: 7/21/89

EXXON: [signature] Date: 8907-21

FOSC: A.C. Allegiado, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/19/1989 Time: 18:30 - 21:30 Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-406

LENGTH OF SHORELINE SEGMENT: 5,900 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 40 % / C 15 % / P 5 % / G ___ % / S ___ % / M ___ % / R 40 % BOOMS LOGS FUCUS

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved PATCHY

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment ____ Width of Band: ____ m

Sporadic: Y/N % of Segment 10 (BAND 10 M WIDE)

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 10 cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H 5 % / M 5 % / L 90 %

Fresh ____ % Mousse ____ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

(1) FIVE SITES/UNITS LANDED UPON AND DESCRIBED IN DETAIL

(2) GENERALLY LIGHT BAND OF OIL ON ROCK FACES OR BAND OF WEATHERED OIL COATING ROCKS IN THE HTZ TO MTZ.

(3) A FEW PATCHES OF HEAVY OIL WHICH ARE LOCALIZED AND LIMITED IN SIZE (< 200 M^2).

6/19/1989

NORTHEND

Rick Gillie

SEGMENT KN-406

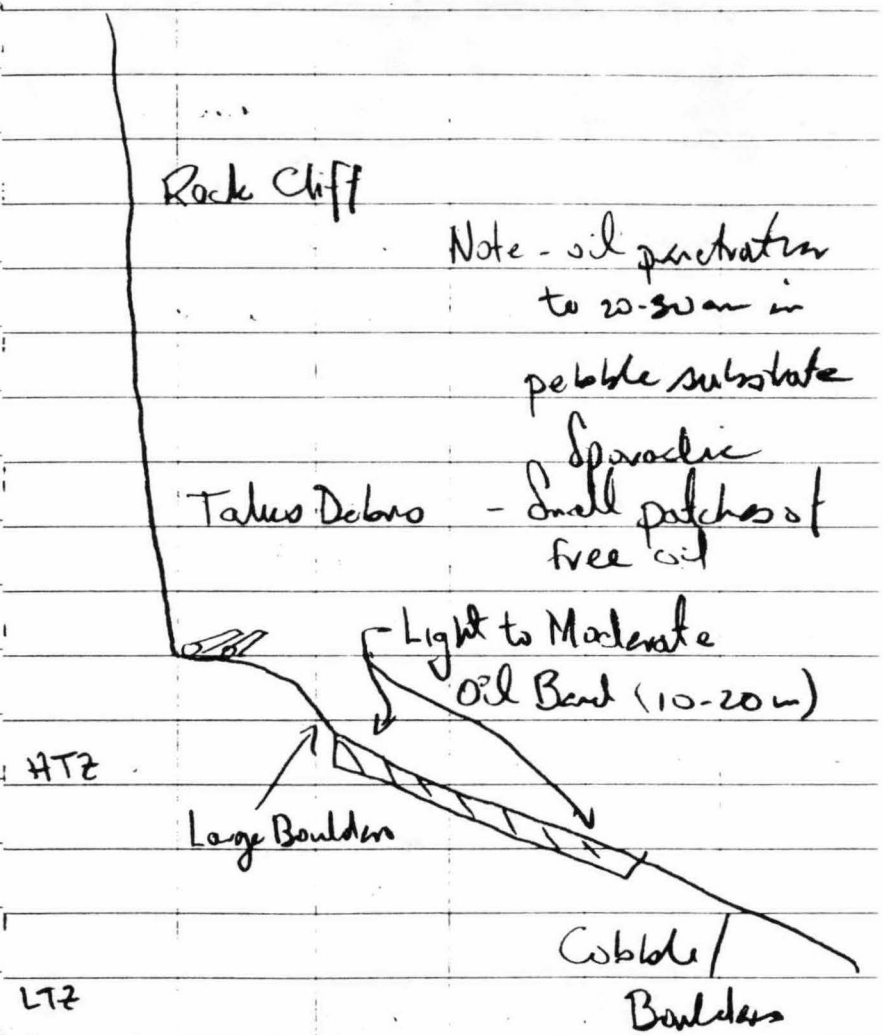
- 18:30, NORTHEND
- Substrate: Bedrock and rock / boulders / cobbles

HTZ - bedrock / boulders (>1/m²)
MTZ - boulders / cobbles with pebbles
LTZ - boulders / cobbles / " "

- Oil: band 15-20m wide
  - mostly light residual weathered oil / tar with the exception of rock crevices and protected areas behind boulders

- Debris - 2 black boom sections of 5m each
  - ethafoam roll

Access - O.K. mod. steep nearshore with no large rocks visible



Recorded
① Ground - boom bag
② Hose / absorbent — vacuum
③ Leave to surface

KN-406 (SECOND UNIT)

Rick Gillie

① Rocky steep coast with occasional pocket beach

② Light band on rocks at HTZ sporadic patches of heavy oil (in protected rock crevices + behind rock walls. - penetrates to 20cm cobbles

③ Access difficult with nearshore rocks.

④ Beach has oil band 10m wide moderate but sporadic oiling

⑤ Many tarballs to floating Not much oil - Many oiled logs



Rick Gillie

① Stay off small reef

② Low tide only!

UNIT 3

③ Patches of ~~sand~~ oil on small pocket beaches to the south. A patch of oiled pebbles (≈ 10×3m) just south of wreck on map.

UNIT 4

- Boulder beach (400m long)
- Band 40m wide
- Oil residue
- Heavy coating in crevices

UNIT 4

- Oil to waterline
- Could not clean with hot water
- Not easy to oil to be recovered
- Would need steam cleaning with assistants of the whole beach
  400 × 60m = 24,000 m².

KN-405 SITE 5 Rick Gillie

20:50

- Beach - approx 300 m long and up to 100 m wide

- Rock / boulders at ends, transition to Rock

- South of Δ SHELF on map.

- Substrate

HTZ - cobble / pebble stream bank
- no oil
- HT bank - cobble, oil (wet)

MTZ - heavily oiled band 10-15 cm
- 10 cm penetration

~~LTZ - oil~~
- weathered oil in Low MTZ

LTZ - no oil

- Access - good

- Debris - some oiled trees and logs

Recommend

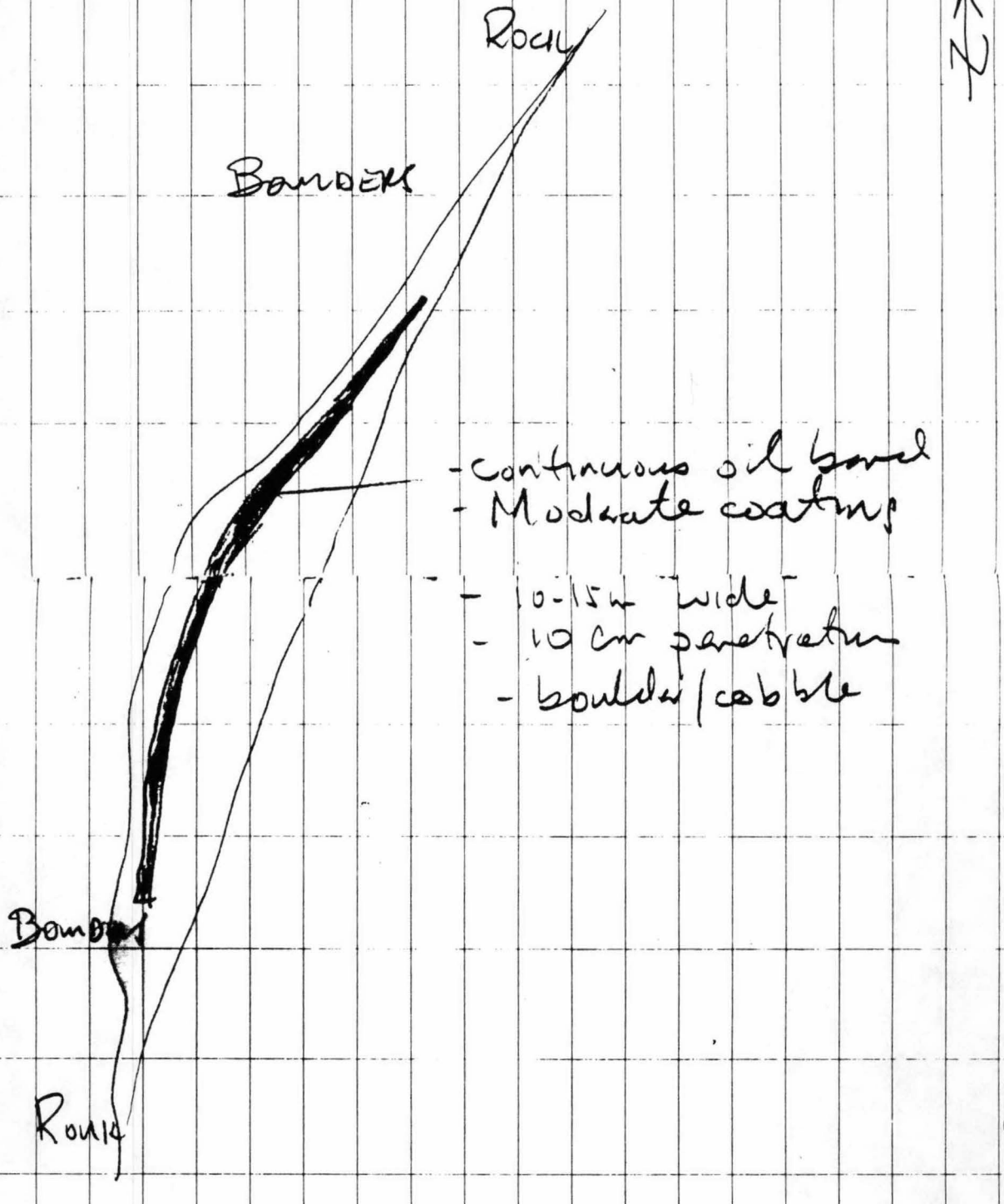
① ~~Flood~~ /

① Manual - debris

② Steam / absorb

③ Flood / wash

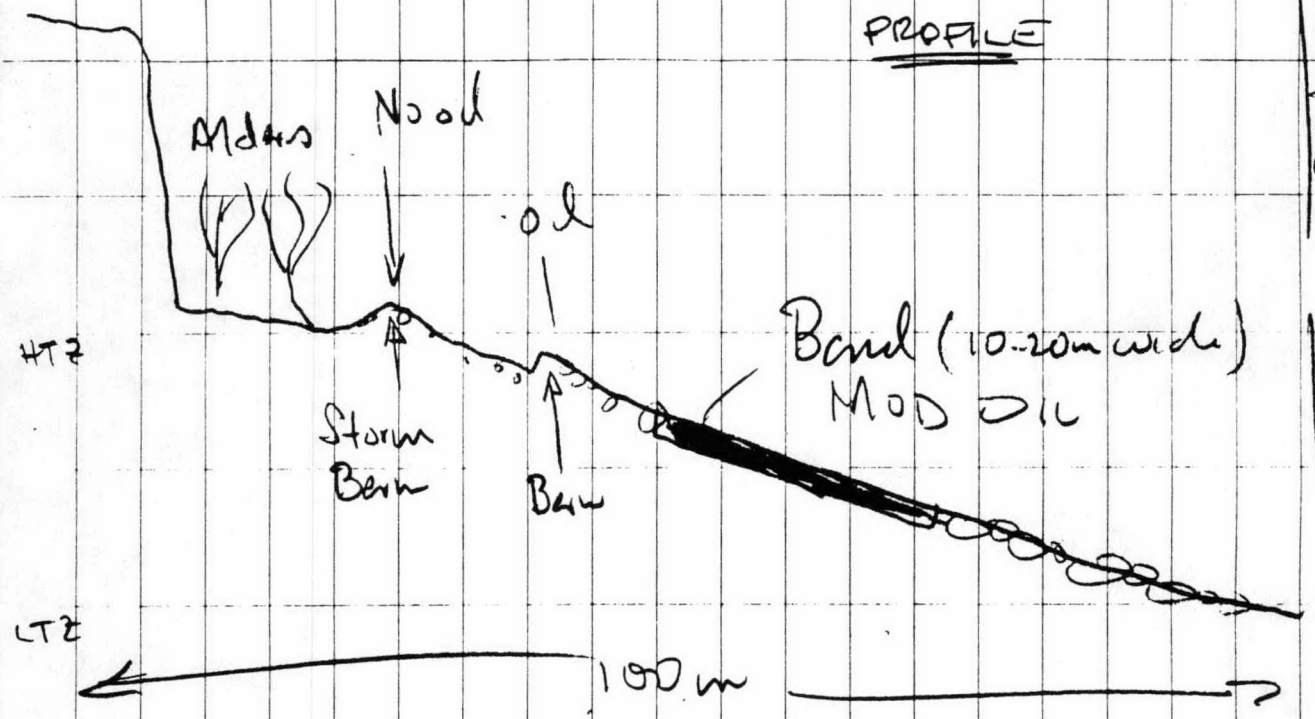
KN-406-Site 5



Rick Gillis

KN-406 SITE 5

PROFILE



Rick Gillie

FILM ROLL # T4G-4

Rick Gribble

FRAME	DATE	SEGMENT			DESCRIPTION		
1	6/19/89	KN-406		- Title	page		
2	✓	✓	(North END)	-	View	North	HTZ
3	✓	✓	✓	-	View	South	HTZ
4	✓	✓	✓	-	View	North	LT 2
5	✓	✓	✓	-	View	North	LT. Z
6	✓	✓	(SECOND SITE)	-	View	North	(Rocks)
7	✓	✓	✓		View	South	(Cobble/Boulder Beach)
8	✓	✓	✓		- View North - Beach		
9	✓	✓	✓		- View North - Beach to Rock shoreline		
10	✓	✓	SITE 5		View	North	
11	✓	✓	SITE 5		View	South	
12							
13							
14							
15							
16							
17							
18							
19							

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: Snug Harbor-Hogan core OBSERVER: STOKer

LOCATION PREFIX: KN SEG. NO.: 406 LENGTH: 5900 (M)

DATE: 6/19/89 TIME (HHMM): 1630-2130 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: (Rocks Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable distribution/density. Generally dense on rock headlands and subtidal, sparse on boulder/cobble beaches.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable distribution/density. Generally patchy but abundant on rock headlands, sparse on boulder/cobble beaches.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable. very dense on rock headlands, patch or sparse on boulder/cobble

Littorina
Patchy Y/(N) Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable density/distribution. Seems to avoid or to be sparse in oiled zone

Limpets: Patchy Y/N Contin. (Y)/N Dense Y/(N) Sparse (Y)/N None Y/(N)

Variable. Generally higher density on rock headlands and below MTL.

OTHER OBSERVATIONS: Pagurus, Nucella, Starfish, Sculpins common on rock headlands; chitons, anemones sparse. Isopods, Amphipods sparse. Seagrass (Phyllospadix) on headlands and dense, extensive, subtidal.

CLEANUP PRECAUTIONS: Avoid any disturbance of rock headlands and intertidal/subtidal seagrass communities.

MAMMALS: Otters 2 Harbor Seals 1 Sea Lions 0 Whales 0
Other Dall Porpoise - 2

BIRDS: 4 Eagles

GENERAL OBSERVATIONS: Balanus & mytilus alive, seem OK even when oiled.

Segment consists of Rock/boulder/cobble beaches interrupted by rock headlands. Biota generally rich & diverse on headlands, low density & diversity on boulder/cobble.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/19/89 Location Kaiget Island Site _____

Location Prefix KN Segment # KN-406 Length 5900

Survey Method:

Air _____ (A - indicate on map) Boat ← (A - indicate on map)

Ground ← (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate but patchy

Width of beach zone surveyed 10-15m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile mostly cobble, fields, but with some gravel/cobble pocket beaches

Fresh Water Sources none on beaches

Sea Exposure open to east

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames ~~23,24~~ 23,24

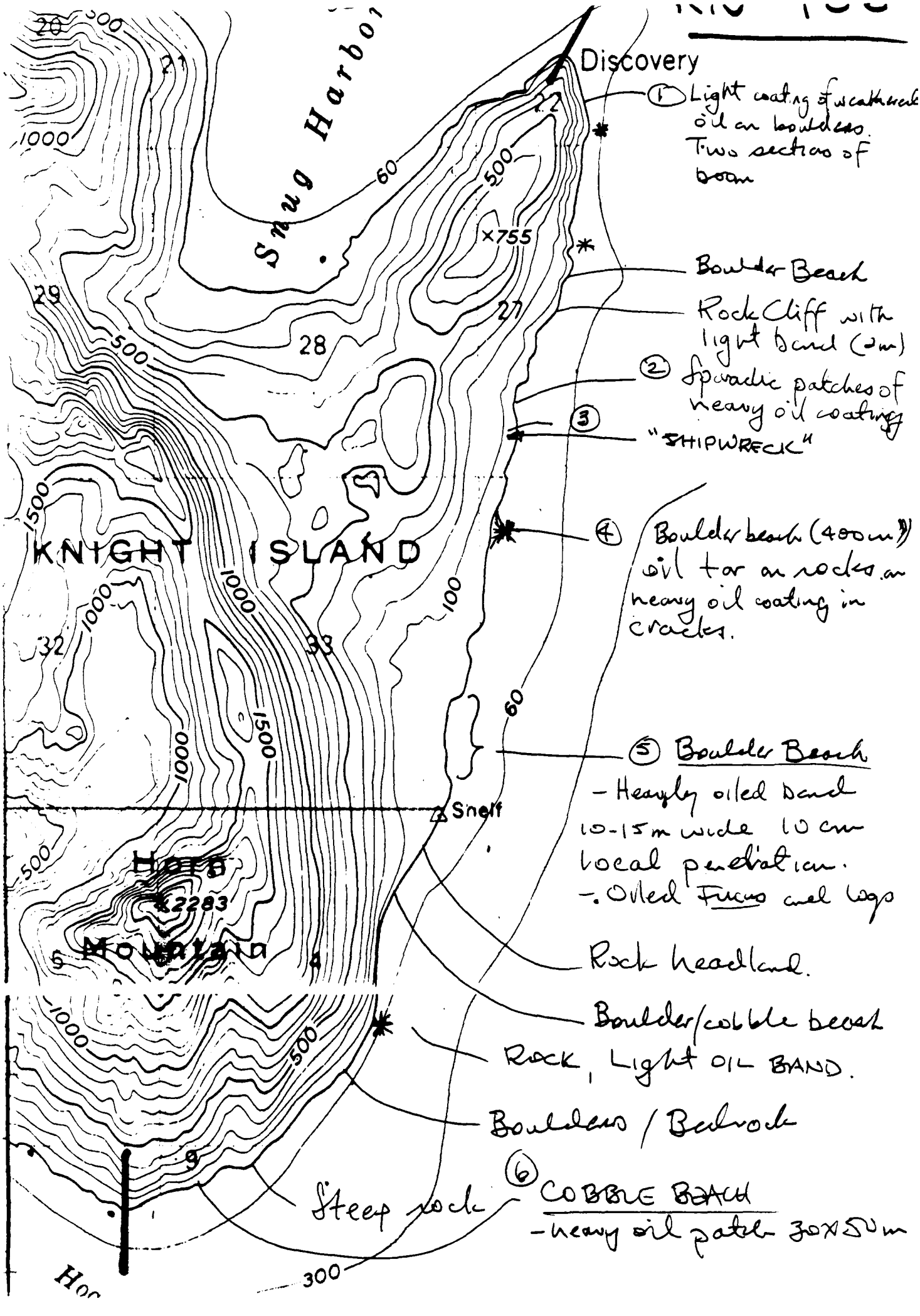
B/W Roll # T4-A1-~~23,24~~ T4-A2-t13 Frames 1, 3

Observer(s) C. Mobley

Time survey started 1830 Time survey ended 2130

Cultural resource considerations/restraints:

If cleanup occurs near unit 3, all personnel and equipment should be kept away from the barge. If heretofore undiscovered cultural resources are uncovered during cleanup contact Exxon archaeologist, C. Mobley, immediately


Snug Harbor
Discovery
KNIGHT ISLAND
Shelf
HOE B
MOUNTAIN
×2283
×755
1000
500
1500
100
60
Hor
300
① Light coating of scattered oil on boulders. Two sections of boom
Boulder Beach
Rock Cliff with light band (3m)
② Sporadic patches of heavy oil coating
③ "SHIPWRECK"
④ Boulder beach (400m) oil tar on rocks. Heavy oil coating in cracks.
⑤ Boulder Beach
- Heavily oiled band 10-15m wide 10 cm local penetration.
- Oiled Fucus and logs
Rock headland.
Boulder/cobble beach
Rock, Light OIL BAND.
Boulders / Bedrock
⑥ COBBLE BEACH
- heavy oil patch 30×50m
Steep rock

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/05/89 SHORELINE SEGMENT KN-407

LOCATION: (see enclosed map) KNIGHT ISLAND-SNUG HARBOR

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/20/89

Recommended Cleanup Activity(ies):

Manually remove oiled debris (fucus).
Flood/flush with hot water (up to 140 F) on low angle beaches.
Use moderate to high presure warm to hot water washing on rocks and oiled logs.
Use other approved methods as appropriate.

Priorities Considerations:

Class 2-4: Heavy to light oiling.
Class A: Resources present.

Ecological Constraints (from site survey):

Work at mid tide + or take appropriate measures to protect lower intertidal zone. Protect ~~Retain~~ mussel beds and fucus ~~holdfasts~~. Minimal disturbance of rock outcroppings.
RESTRICT TRAFFIC IN VICINITY OF EPA STUDY SITE (SEE MAP) AND PROTECT AREA FROM SHEENS.

Co 890 sc 7/2 sc 7/2 0 810

Archeological Constraints (from site survey):

If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Marlene Hamner
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sheron K. Christopherson Date: 7/21/89

EXXON: [signature] Date: 89-07-21

FOSC: R C. Alexander Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/20/09 Time: 09:00 Observer: RICK GILLIE

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-407

LENGTH OF SHORELINE SEGMENT: ~~1500~~ m 1,600

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/(HLD)/STRT Slope: (LANG)/(HANG)/(VER)

Wave Exposure: High/(Med)/Low

Sediment: B 30 % / C 30 % / P ___ % / G ___ % / S ___ % / M ___ % / R 40 %

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type LOGS BOOMS

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / L

Continuous: Y/N % of Segment 30 Width of Band: 2 m

Sporadic: (Y)/N % of Segment 10

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ___ cm

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H 20 % / M 40 % / L 40 %

Fresh ___ % Mousse 5 % Tar Formation: 95 %

Drift Debris Oiled ? (Yes)/No Supra/Upper/Mid/Lower Amount: H/(M)/L

Comments:

- GOOD ACCESS
- 2 UNITS (SEE MAP)

6/20/89

Rick Gillie

SEGMENT KN-407

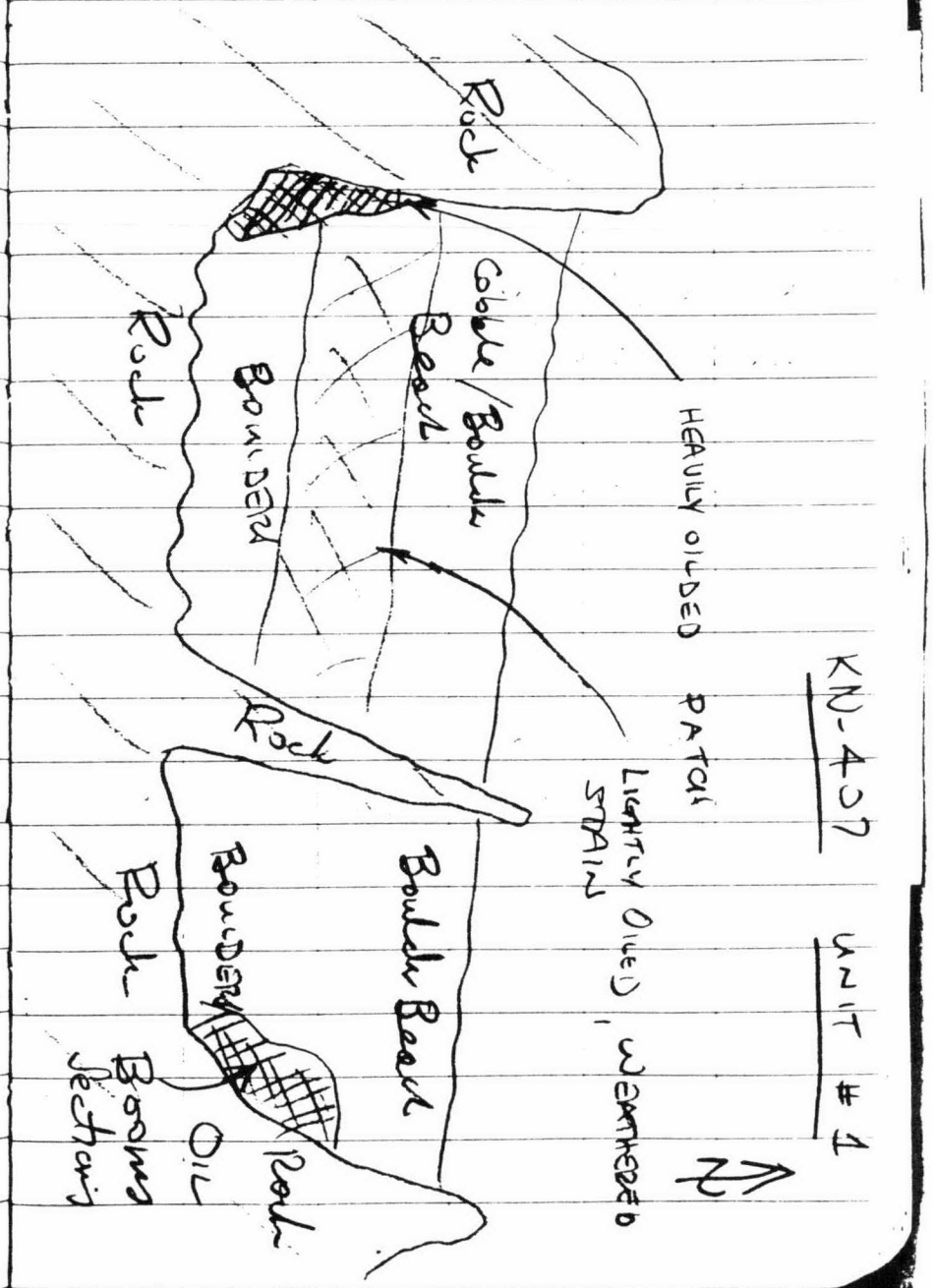
UNIT #1

- @ 09:00, Low tide -2.0' @ 07:03
- 400m long, 80m wide
- boulder/cobble/rock beach

- Access - no problems at west end

- Clean with hot wand/vacuum

- Small area 30x10m of heavily oiled rock and boulde



KN -407 UNIT #2

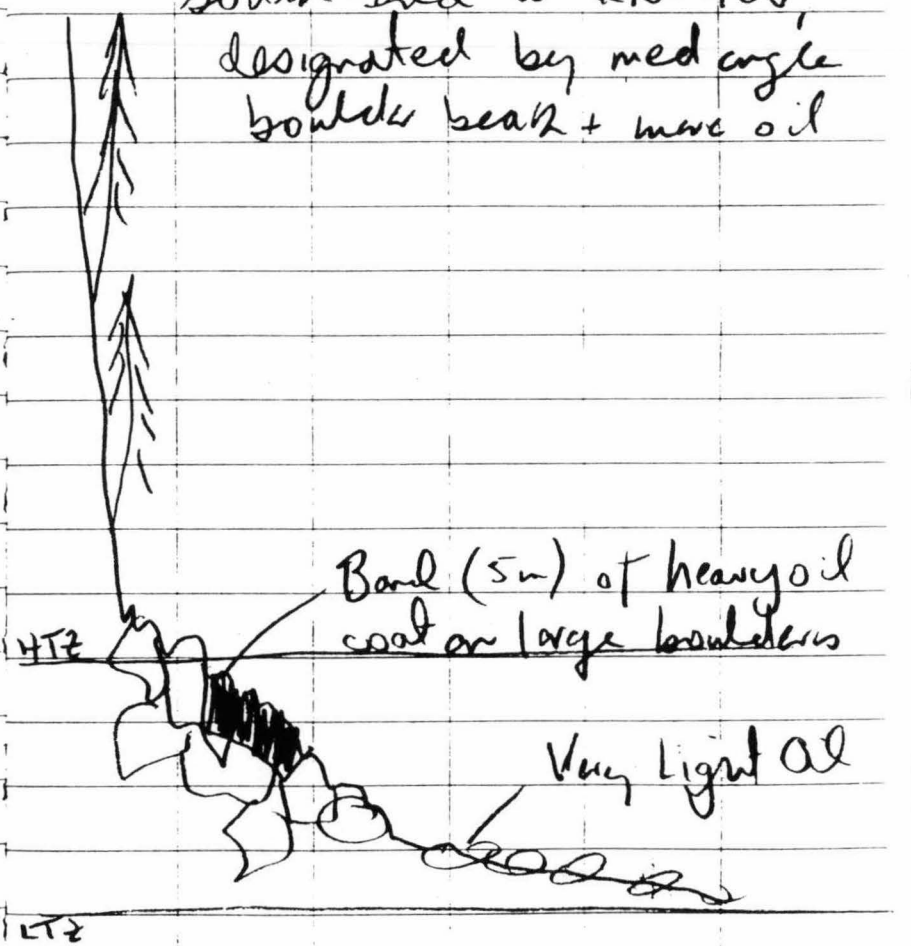
Rick Gillie

- Large Boulders
- Light oil band in HTZ

- Changes to band of heavily coated large boulders to the south with alot of boom sections stranded on the rocks / boulders

- Recommend
  (1) Hot wash c/w vacuum and absorbent pads
  (2) Good access

  Maint - top boom
  - Lots of boom sections



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Snug Harbor OBSERVER: STOKer

LOCATION PREFIX: KN SEG. NO.: 407 LENGTH: ~~1200~~ 1600 (M)

DATE: 6/20/89 TIME (HHMM): 0830-1000 TIDE HT.: _____ (M)

OILED ZONE: (Splash High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse Y/N None Y/N

Patchy & variable. Generally dense on large rocks & headlands, sparser on cobble.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse (Y)/N None Y/N

Patchy & variable. Denser on large rocks & headlands, sparser on boulder/cobble.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Variable distribution/density. Dense, large individuals on outcroppings; small individuals on boulder/cobble.

Littorina
Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Extremely variable. Generally sparse distribution, but with dense patches.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Variable Dense patches of small individuals in low Tide Zone, sparse in upper Zone.

OTHER OBSERVATIONS: Segment consists of boulder/cobble beaches interrupted by rock outcroppings and large boulders. Sea stars (Pycnopodia, Solaster) dense at low wat Nucella dense in patches.

CLEANUP PRECAUTIONS: Minimal disturbance of rock outcroppings. Retain mytilus beds and fauna holdfasts.

MAMMALS: Otters ___ Harbor Seals 1 Sea Lions 4 Whales _____
Other _____

BIRDS: Guillemots, Gulls, Crows, Ravens

GENERAL OBSERVATIONS: Balanus, Mytilus, limpets still alive in heavily oiled zone. Some (10-20%) recent mortality of Balanus.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/20/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-407 Length 1600

Survey Method:

Air _____ (A - indicate on map) Boat ~~THERE~~ (A - indicate on map)

Ground ~~BOAT~~ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 8 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile moderately sloped, cobble/boulder beach - the rest is vertical wall

Fresh Water Sources None

Sea Exposure partly protected to northeast

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # _____ Frames _____

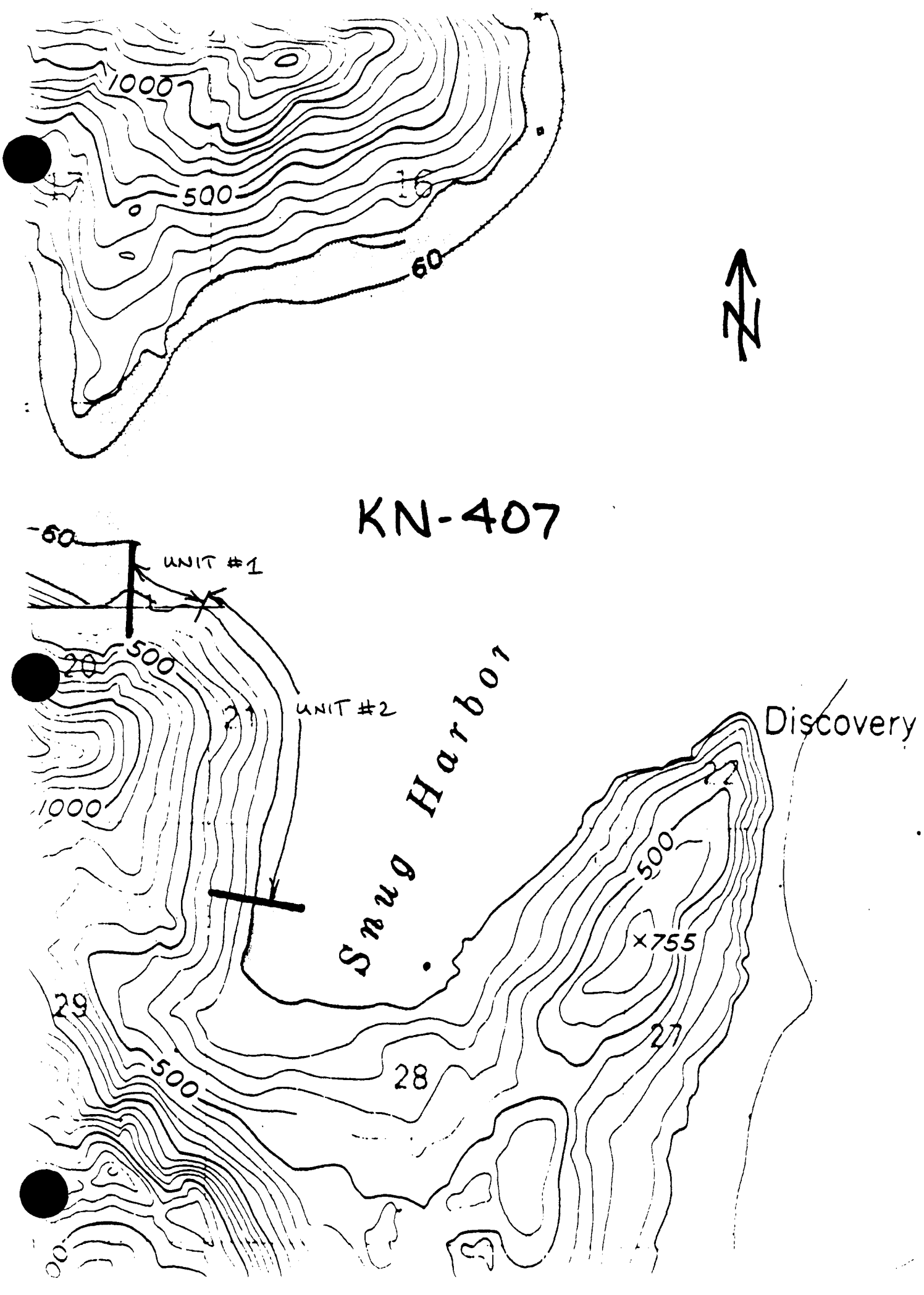
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 0900 Time survey ended 1015

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are discovered during cleanup contact Exxon archaeologist, C. Mobley, immediately.


1000
500
60
N
KN-407
60
UNIT #1
20
500
21
UNIT #2
Snug Harbor
Discovery
1000
500
755
29
500
28
27

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-408

LOCATION: (see enclosed map) KNIGHT ISLAND-SNUG HARBOR

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/20/89

Recommended Cleanup Activity(ies):

Manually remove oiled debris (fucus) and pooled oil.
Use moderate to high pressure warm to hot water washing on rock and oiled logs.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use other approved methods as appropriate.

Priorities Considerations: medium recreational use.

Class 2: Heavy oil.
Class A: Resources present.

Ecological Constraints (from site survey):

Work at mid tide + or take appropriate measures to protect lower intertidal zone. Minimal disturbance of rock reefs and outcroppings. Protect ~~Retain~~ mussel beds and fucus ~~holdfasts~~. ~~Do not destroy~~ Protect seagrass beds (intertidal and shallow subtidal) — ESPECIALLY WITH RESPECT TO POSITIONING BOATS AND EQUIPMENT. CO 8907 SC 7/12 cf 7/1 CO 8907

Archeological Constraints (from site survey):

If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopherson Date: 7/21/89

EXXON: [signature] Date: 89-07-21

FOSC: A. C. Alexandre, Jr. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/20/89 Time: 10:00 Observer: Rick Gilkie

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-408

LENGTH OF SHORELINE SEGMENT: 1,400 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/(HLD)/STRT Slope: (LANG)/(HANG)/VER

Wave Exposure: High/Med/(Low)

Sediment: B 20 % / C 20 % / P 20 % / G 10 % / S ___ % / M ___ % / R 30 % Fuel Logs Booms

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / (L)

Continuous: (Y)/N % of Segment 100 Width of Band: 30-40+ m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: +30 cm

Pooled Oil: 1 % "Free" Oil: 5 % Coated: H 40 % / M 55 % / L ___ %

Fresh — % Mousse 5 % Tar Formation: 95 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: (H)/M/L/

Comments:

- FOUR UNITS (SEE MAP)

6/20/1989 Rick Gilliè

SEGMENT KN-408

@ 10:00

UNIT #1

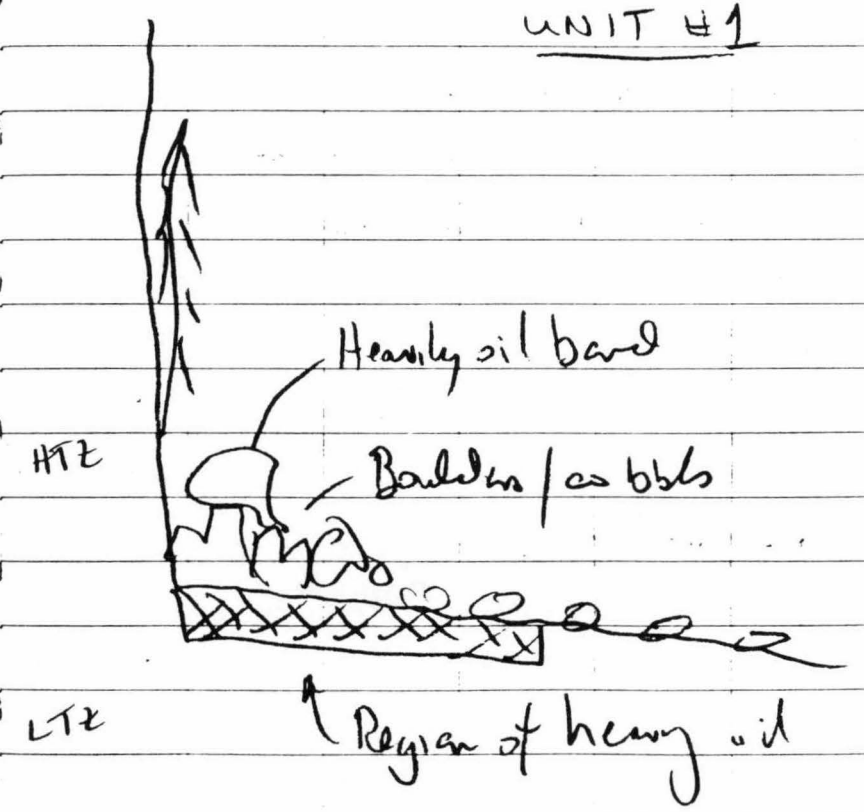
- Boulder beach along southeast side of of Snug Harbor

- Band of heavily coated boulders
  - H-MTZ - 20m wide
  - some Mousse patches and small pools

- Heavy coating of oil tar and mousse
- Cobbles amongst boulders
- Good access mod. nearshore slope.

Recommend
① Hot water wash / Vacuum
② ~~Boom~~ Boom - ? at Mid to HTZ
③ Clean above at 5' tide only

UNIT #1



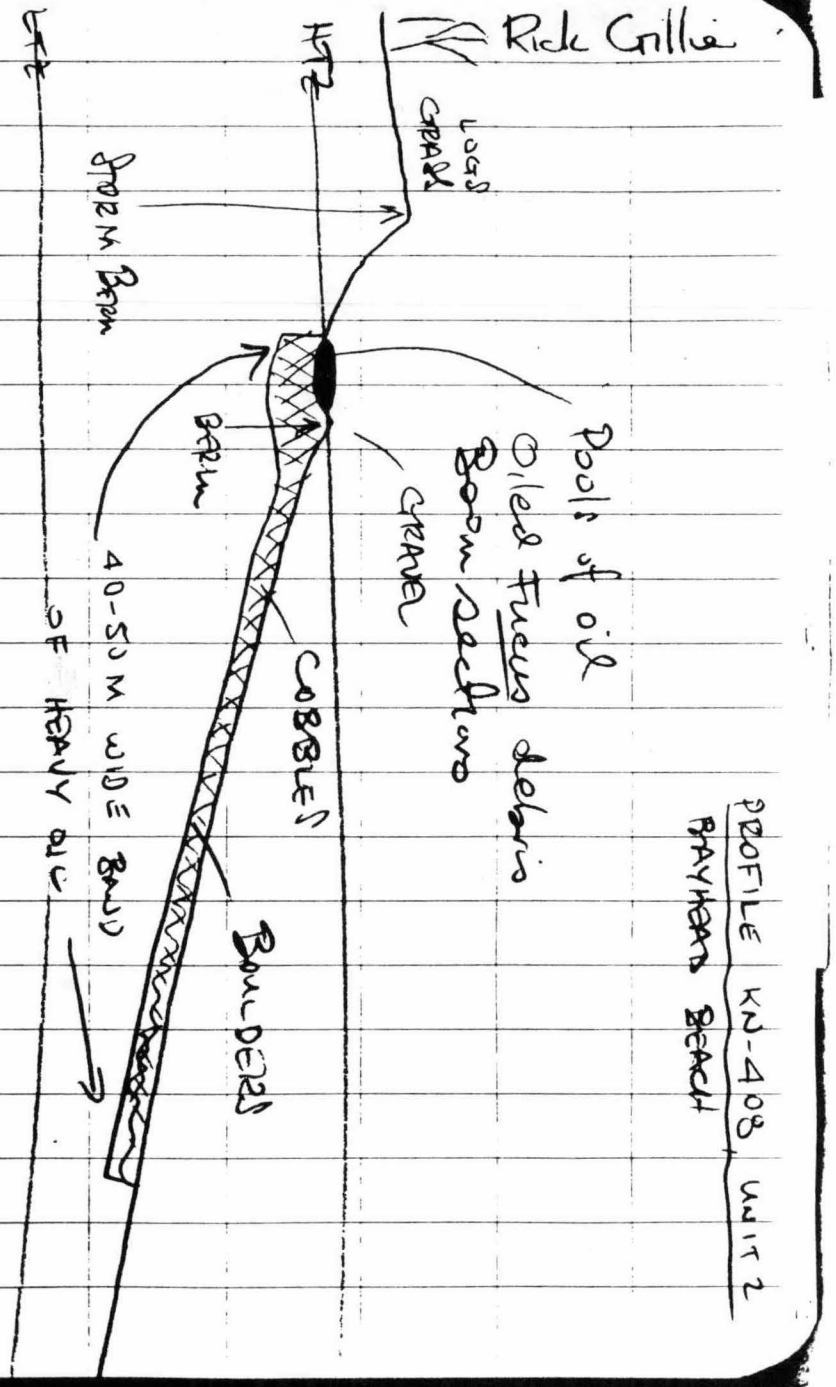
KN-408 UNIT #2

- 6/20/89, @ 10:30

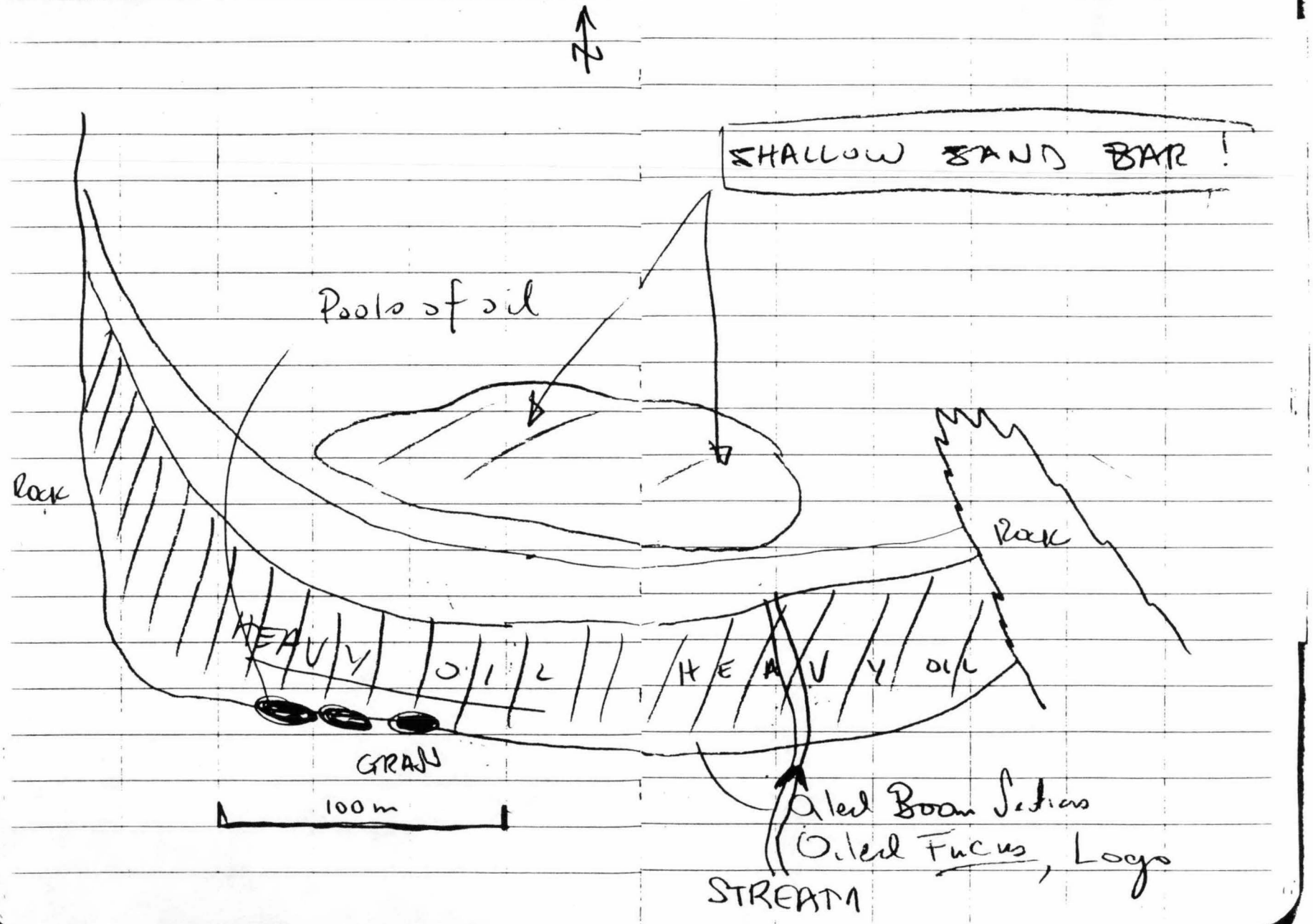
- Bayhead Beach
  - 400 m long 100 m wide
  - Boulders / Cobbles / Pebbles

- VERY HEAVILY OILED BEACH!
  - BAND 30-40 M wide
  - Penetration to +30 cm
  - Pools of heavy oil at HT
  - Large pools (≈ 1 m diameter and 20 cm deep)

- Recommend
  - ① Mud
  - ② Vacuum/scoop
  - ③ Flood/Wash

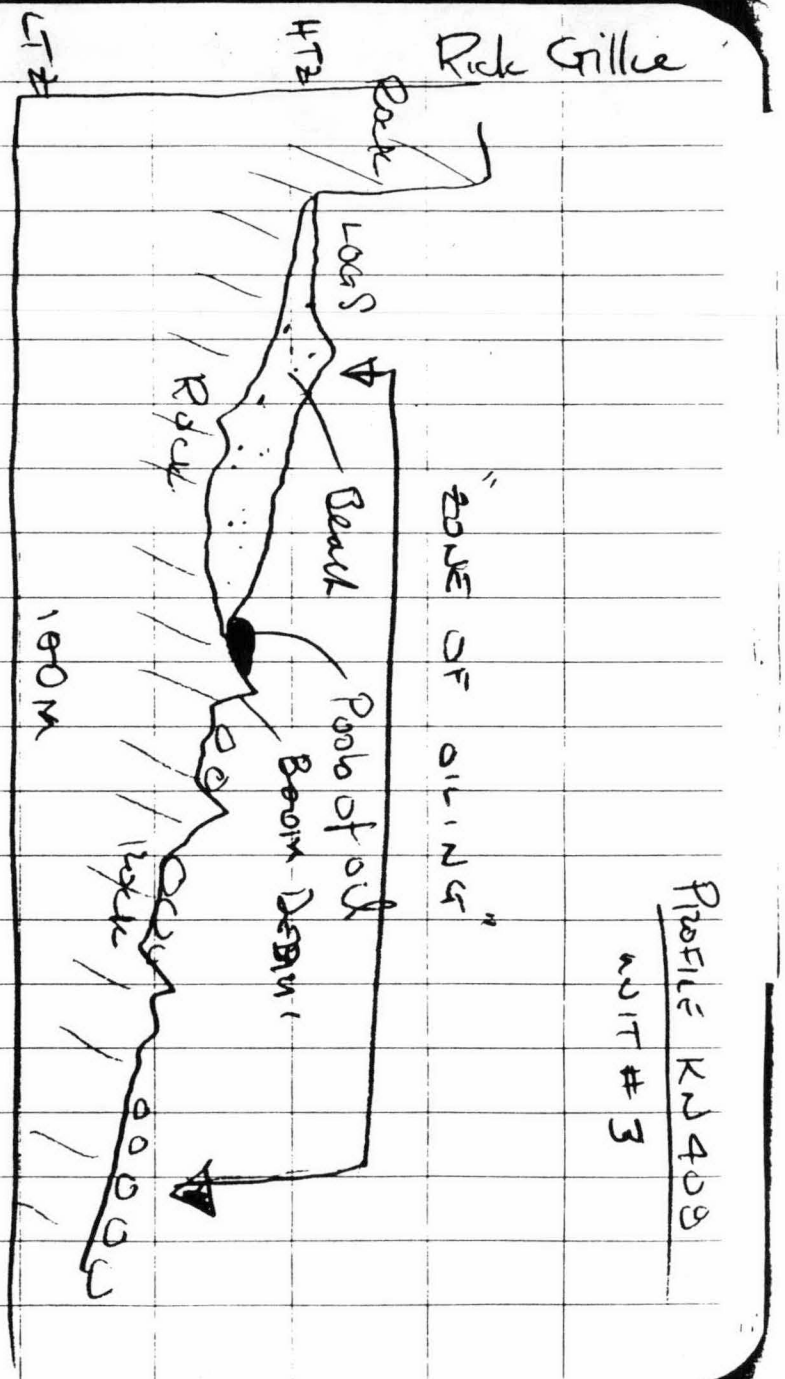


6/20/1989 KN-408 UNIT #2 Rick Gillie



06/20/89 KN-408 UNIT 3

- Wave-Cut Platform with veneer of boulders/cobble/pebbles
- Flood/Wash
- Good access



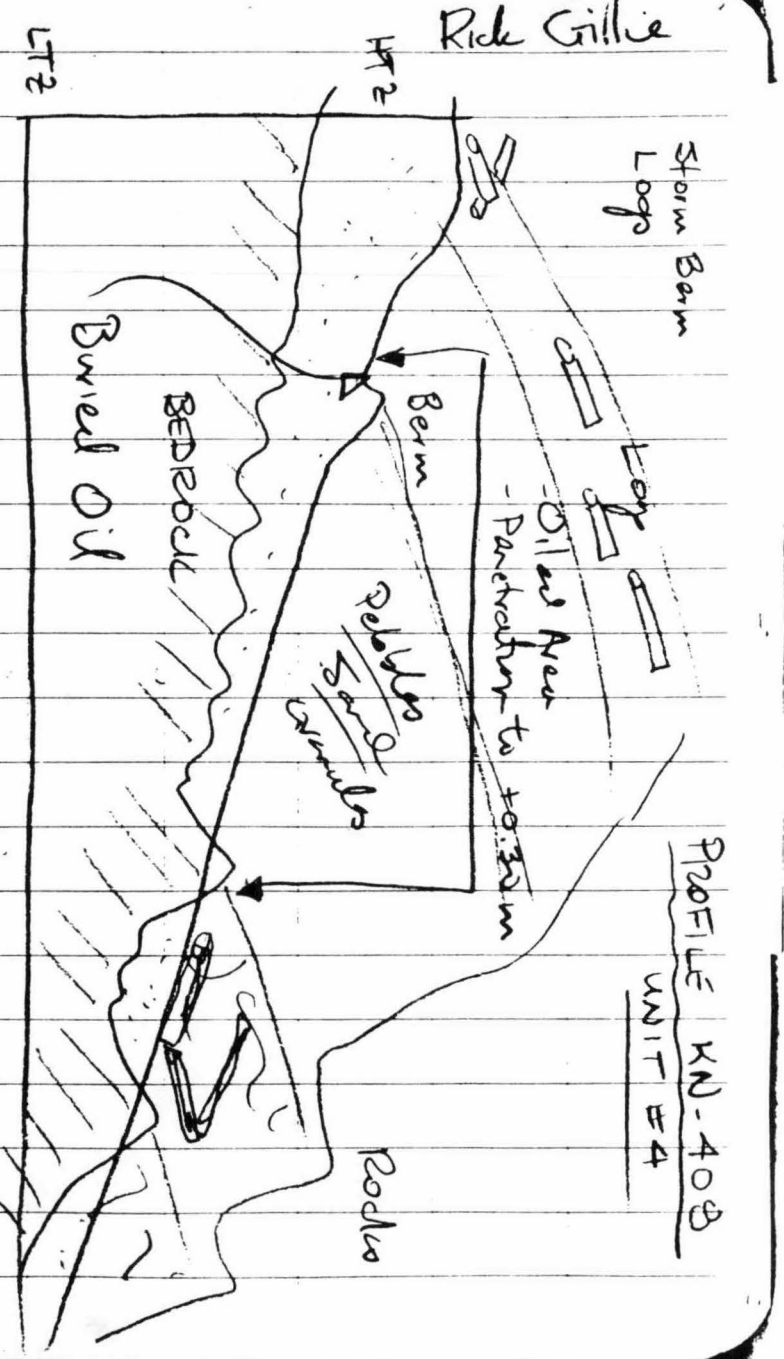
6/20/1989 KN-408 UNIT 4

- 600m of pocket beach with headlands
- HEAVILY OILED

- ROCKS - Moussse

- Beaches - Cobble - 10%
  Pebble - 40%
  Granule - 40%
  Sand - 10%

- Some oil pools on rock areas



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Skagit Harbor OBSERVER: Stoker

LOCATION PREFIX: KN SEG. NO.: 408 LENGTH: 1400 (M)

DATE: 6/20/89 TIME (HHMM): 1000-1200 TIDE HT.: _____ (M)

OILED ZONE: (Splash) (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Variable. Generally sparse on boulder/cobble/gravel; denser on outcrops.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse (Y)/N None Y/N

Extremely variable. Generally sparse, with scattered dense patches on rock outcrops.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Variable; generally denser on rock outcrops, with larger individuals.

Littorina
Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Generally sparse, but with scattered dense patches, even in oiled zone.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense Y/N Sparse (Y)/N None Y/N

Generally sparse. Some fairly dense patches of small individuals at low water.

OTHER OBSERVATIONS: Some mortality (10-20%) of Balanus in oiled zone. Mytilus and limpets seem OK so far. Nucella dense patches, even in oiled zone. Pagurus under rocks, sometimes dense clusters. Dense sea stars at low water: Phyllogadix on roofs and subtidal.

CLEANUP PRECAUTIONS: Minimal disturbance of rock reefs and outcrops. Do not disturb seagrass beds. Retain mytilus beds.

MAMMALS: Otters ___ Harbor Seals 1 Sea Lions ___ Whales ___
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Wide boulder/cobble beaches interrupted by outcrops and rock reefs. Several small cobble/gravel beaches. Biota generally dense on outcrops and roofs, sparse on cobble/gravel, intermediate on boulder/cobble. Several very small streams, all unsuitable for spawning except maybe in intertidal.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/20/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-408 Length 1400

Survey Method:

Air _____ (A - indicate on map) Boat ✓ THE REST (A - indicate on map)

Ground ✓ BEACHES (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility heavy

Width of beach zone surveyed 2 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile flat to moderately sloped beaches and vertical walls

Fresh Water Sources small stream on beach two

Sea Exposure slightly protected to north

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # _____ Frames _____

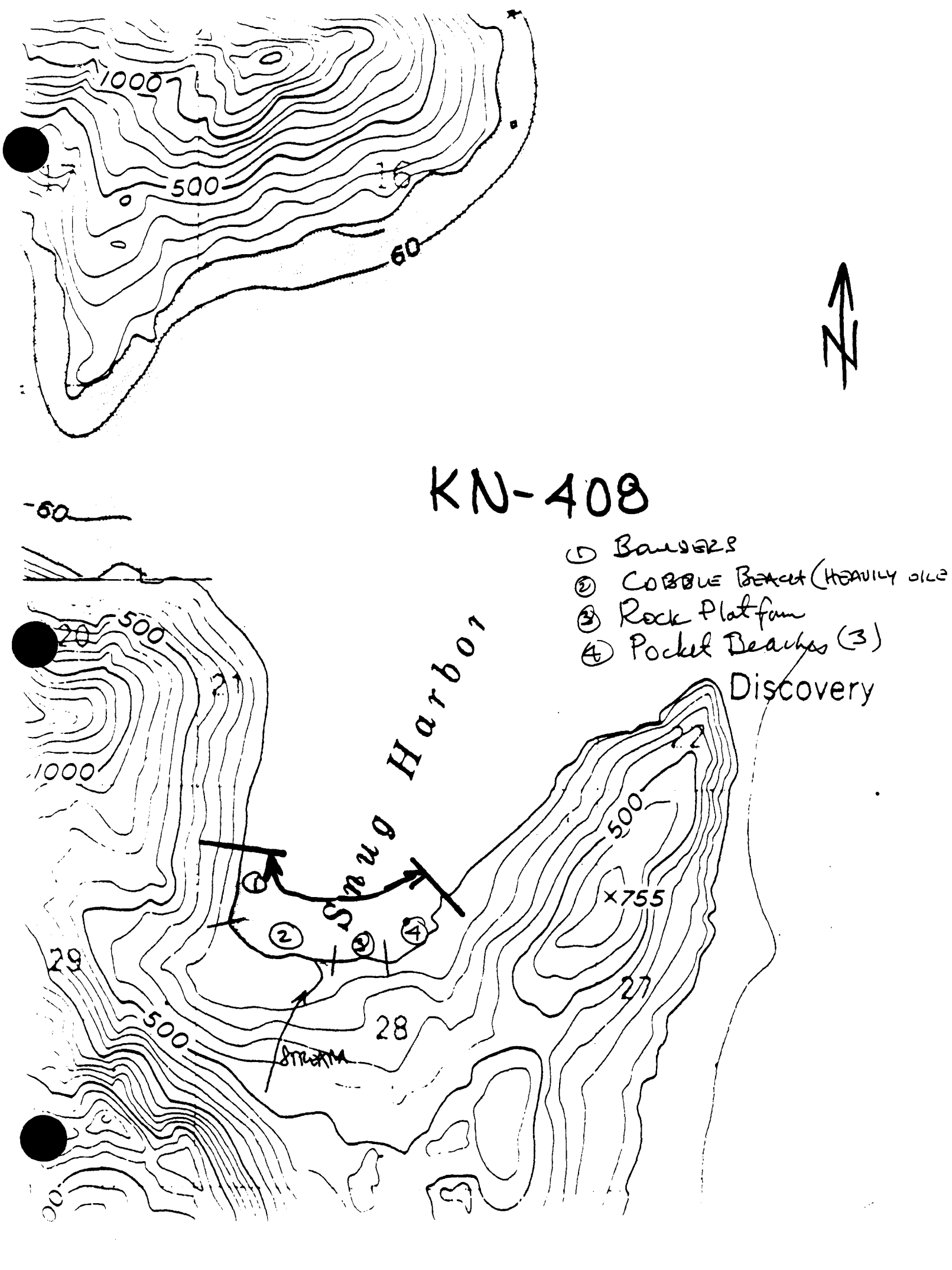
B/W Roll # _____ Frames _____

Observer(s) C. Weber

Time survey started 1015 Time survey ended 1215

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are uncovered during cleanup contact Elyon archaeologist C. Mobley immediately


KN-408
1000
500
60
-60
20
500
21
1000
Snug Harbor
1
2
3
4
Boulders
Cobble Beach (Heavily oile
Rock Platform
Pocket Beaches (3)
Discovery
500
×755
27
29
500
28
Stream

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-409

LOCATION: (see enclosed map) KNIGHT ISLAND-SNUG HARBOR

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/20/89

Recommended Cleanup Activity(ies):
Manually remove boom debris.
Omni-boom treatment of moderate oil band on south portion of segment.
Use other approved methods as appropriate.

Priorities Considerations: medium recreational use.
Class 1: time sensitive resources.
Class A: resources present.

Ecological Constraints (from site survey):
Protect ~~Retain~~ mussel beds and fucus ~~holdfasts~~.

7/21/89
8907-21

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopher Date: 7/21/89

EXXON: [signature] Date: 8907-21

FOSC: A.C. Alexander, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

(Version 4/25/89)

SHORELINE OIL EVALUATION

Date: 6/20/1989 Time: 12:10 Observer: RICK GILLIE

Surveyed From: Foot/(Boat)/Helio/Plane Weather: Sun/(Cloud)/Rain/Snow/Fog

LOCATION

LOCATION S.E. KNIGHT ISLAND SEGMENT NUMBER KN-409

LENGTH OF SHORELINE SEGMENT: 1300 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/(HLD)/(STRT) Slope: LANG/(HANG)/(VER)

Wave Exposure: High/Med/(Low)

Sediment: B 40 % / C ___ % / P ___ % / G ___ % / S ___ % / M ___ % / R 60 % BOOM SECTIONS

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type ____

OIL

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: (Y)/N % of Segment 80 Width of Band: 2-3 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: ____ cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H ___ % / M 30 % / L 70 %

Fresh ____ % Mousse ____ % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/Upper/Mid/Lower Amount: H/M/(L)

Comments: ABSORBENT BOOM SECTIONS

① NEAR VERTICAL BAND (2-3 M HIGH) OF MODERATE OIL AT SW END OF SEGMENT, BECOMING LIGHT TOWARDS DISCOVERY POINT.

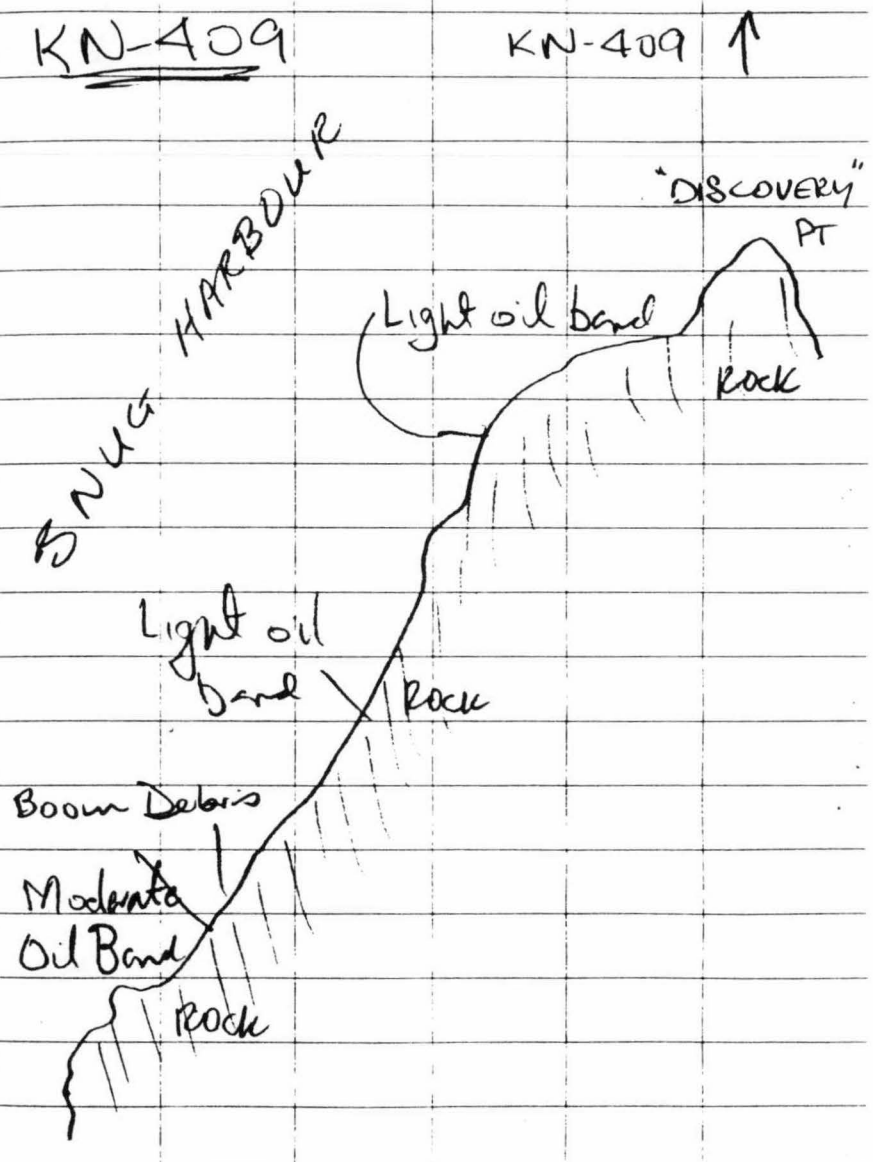
SEGMENT KN-409

Rick Gillie

12:10
6/20/1989

- Bedrock cliff
- Oil Band 2-3 m high
- Heavily Oiled
- Boulder
- Sorbent boom sections
- OMNI-Boom ?

KN-409



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Snag Harbor OBSERVER: Stoker

LOCATION PREFIX: KN SEG. NO.: 409 LENGTH: 1300 (M)

DATE: 6/20/89 TIME (HHMM): 1200-1230 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/(N) Dense (Y)/N Sparse (Y)/N None Y/N

Variable. Sparse on cobble/gravel; denser on rock/boulder and toward mouth of bay

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense Y/(N) Sparse (Y)/N None Y/N

Generally sparse. Some discreet dense patches, especially near bay mouth.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Variable. Generally denser, larger individuals on rock/boulder and near mouth.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Unobserved from skiff, probably continuous & variable.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

unobserved from skiff, probably continuous, variable

OTHER OBSERVATIONS: Nucella dense in patches. Some balanus mortality. Subtidal seagrass.

CLEANUP PRECAUTIONS: Retain mytilus beds.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: Eagles (2)

GENERAL OBSERVATIONS: Small cobble/gravel beaches. Primarily steep rock faces or boulders. Biota sparse on cobble/gravel, fairly dense on rocks.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/20/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-409 Length 1300

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 0 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile vertical wall face

Fresh Water Sources none

Sea Exposure protected to west

Access/Safety poor

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

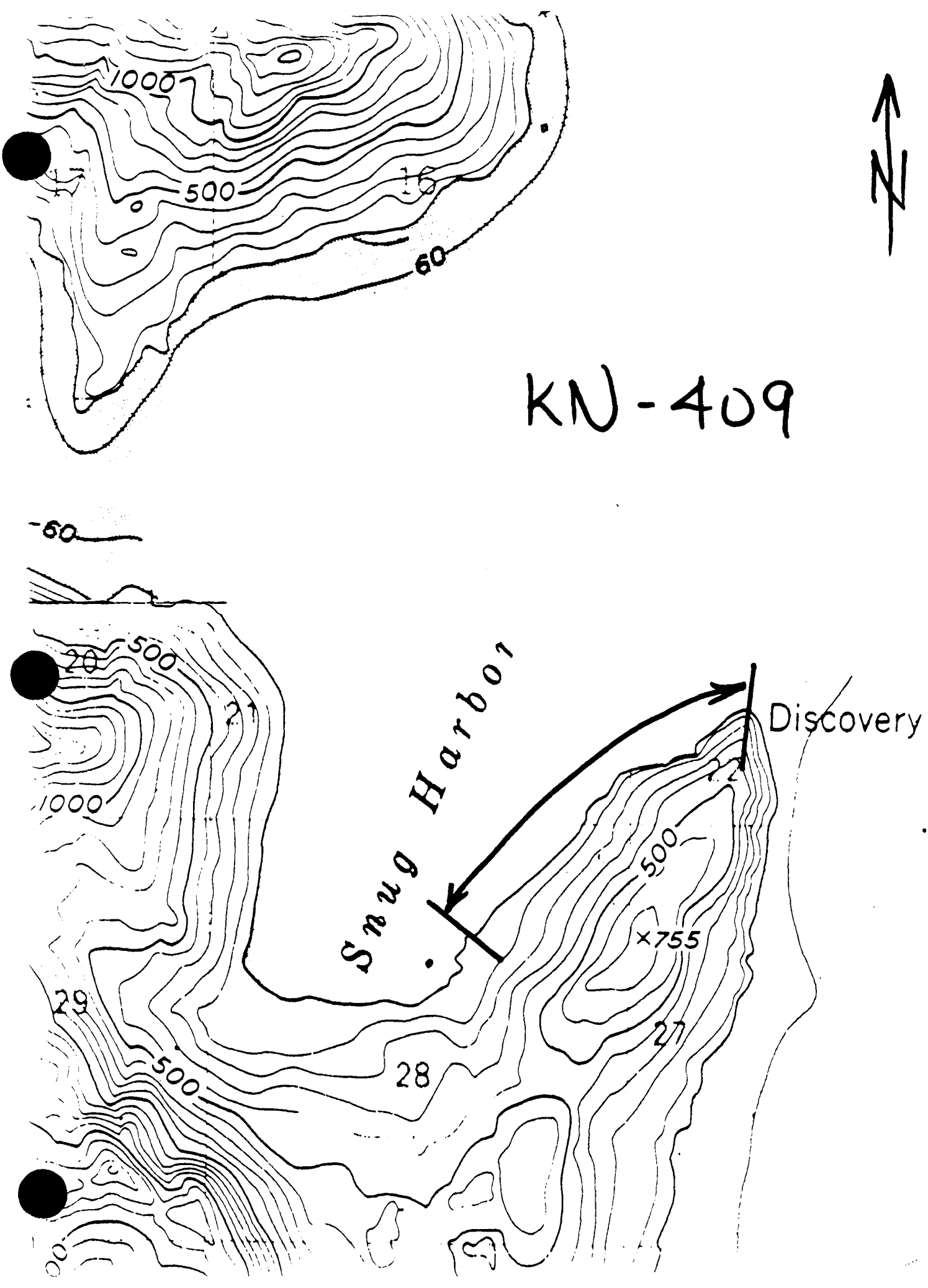
B/W Roll # _____ Frames _____

Observer(s) C. Mobley

Time survey started 1215 Time survey ended 1230

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup contact Exxon archeologist, C. Mobley, immediately.


1000
500
60
N
KN-409
60
20
500
1000
Snug Harbor
Discovery
500
755
29
500
28
27

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-410

LOCATION: (see enclosed map) KNIGHT ISLAND-HOGAN BAY, SOUTHEAST SIDE

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/21/89

Recommended Cleanup Activity(ies):
Manually remove oiled debris.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure warm to hot water washing on rock and oiled logs.
Use other approved methods as appropriate.

Priorities Considerations: medium recreational use.
Class 2-3: Heavy to moderate oil.
Class A: Resources present.

Ecological Constraints (from site survey):
Work at mid tide + or take appropriate measures to protect lower intertidal zone. If possible, cleanup efforts should be kept to a minimum, in forms of both equipment and numbers of people.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopherson Date: 7/21/89

EXXON: _____ Date: 890721

FOSC: A. C. Alejandro, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/21/89 Time: 08:00 Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-410

LENGTH OF SHORELINE SEGMENT: 2,500 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPT/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 40 % / C 40 % / P 10 % / G ___ % / S ___ % / M ___ % / R 10 % LOGS

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type FUCUS

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 80 Width of Band: 10-20 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: 20-30 cm

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H 10 % / M 80 % / L 10 %

Fresh ___ % Mousse 1 % Tar Formation: 99 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

(1) OILING GREATEST NEAR PROFILE 1 and 2.

(2) UNIT (3) ONLY LIGHT WEATHERED OIL FILM

6/21/1989

Rick Gilkie

SEGMENT KN-410

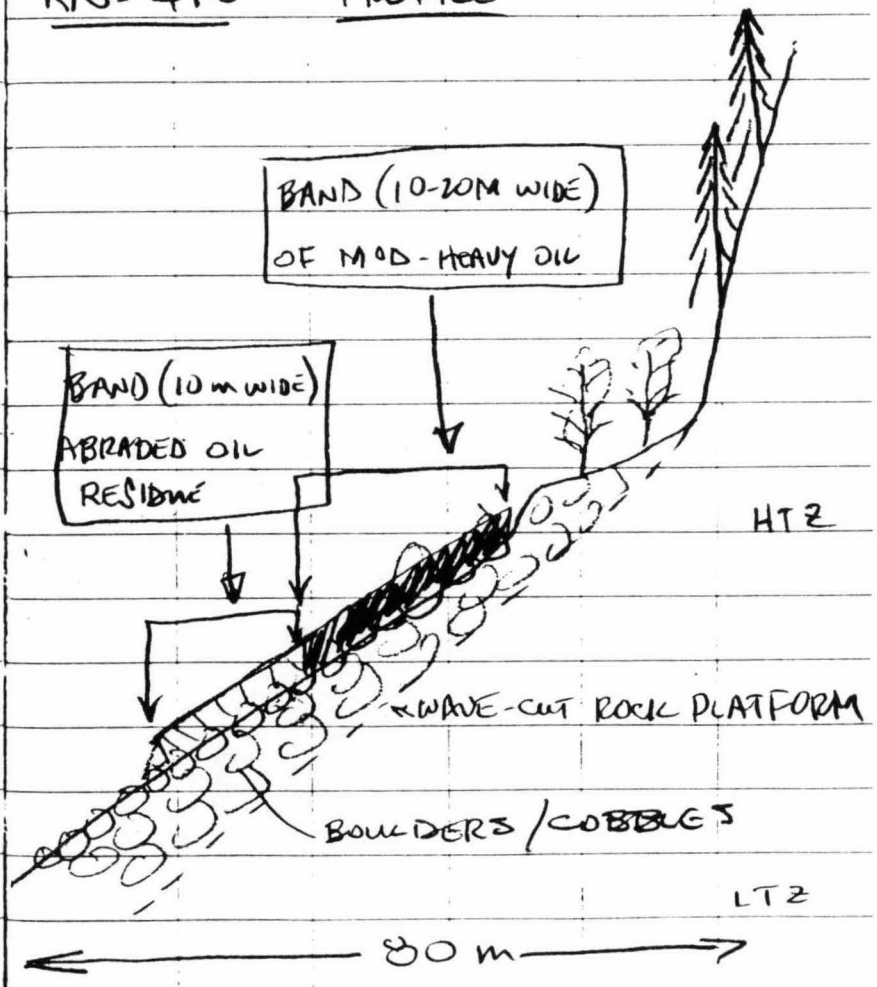
- Hogan B. @ 08:00

- Boulder beach, 3°-5° slope over a wave-cut platform, backed by a raised beach and cliff, 80 m wide (see map)

- Oil - Moderate to heavily oiled band at MTZ to HT
  - 10-20 m width
  - 10-20 cm penetration
  - some mousse coating
  - oil coating is light to moderate (not alot of free oil!) OR "RECOVERABLE OIL"
- stained rocks in Lower MTZ - abraded residue

Access - good access, steep nearshore zone with no boulder racks at low tide

KN-410 PROFILE



RECOMMENDATION

① Manual - remove debris

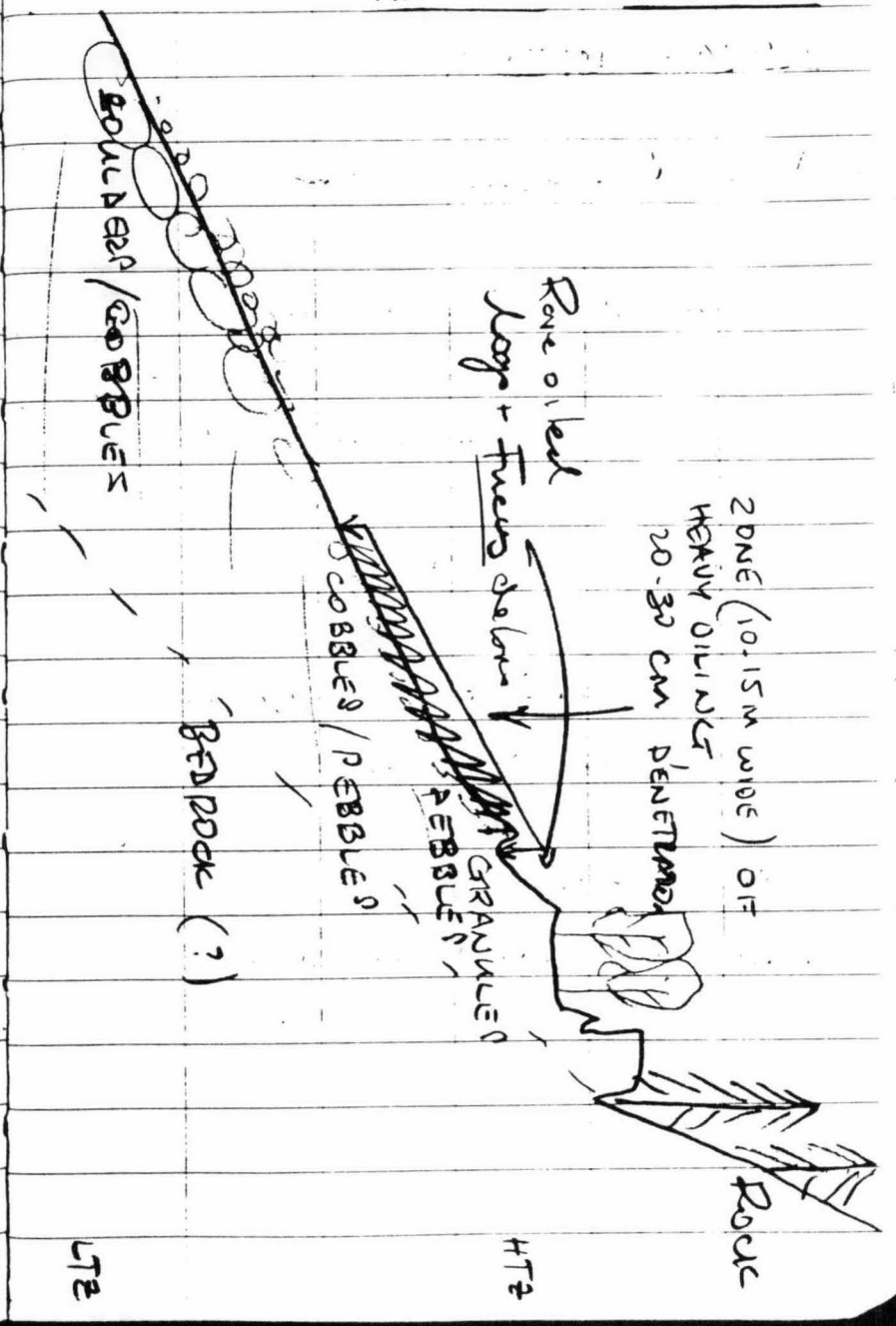
② Manual - oil snare wiping team (20 persons) to wipe-up free-oil and mousse between and under the rocks

- Heavy patches of oil band need to be cleaned up.

KN-410 PROFILE 2

- Cobbles/Pebbles/Granules — HTZ
- Cobbles/Boulders — M - LTZ
- Oil band (Heavy) in HTZ (10-15m wide)
- + 30cm Penetration — Pebbles/Granules
- Good access

KN-410 PROFILE #2.



RECOMMENDATION=(?) Problems?

UNIT #3

① Available treatments for this type of beach would result in little recoverable oil - based upon observations of Sleepy B.

- Very light oil
- Only residue - stain on cobble beach
- NO clean-up recommended!

② Also significant further disturbance of the local environment by the clean-up operation

③ Could not recommend clean-up, but how long will oil remain?
Could push HTZ oiled pebbles/cobbles into MTB, but surf zone was only moderate energy?

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: Hogan Bay SW OBSERVER: Stoker

LOCATION PREFIX: KN SEG. NO.: 410 LENGTH: 2500 (M)

DATE: 6/21/89 TIME (HHMM): 0820-1030 TIDE HT.: _____ (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: Rocks (Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/(N) Dense Y/(N) Sparse (Y)/N None Y/N

variable. Denser toward mouth of bay, very sparse on cobble toward bay head.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense Y/(N) Sparse (Y)/N None Y/N

Increasingly sparse toward bay head and on ~~cobble~~ smaller cobble.

Balanus (Barnacles): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

variable. Generally very dense recent settlement. Large barnacles uncommon, 10-20% mortality observed outside oiled zone

Littorina

Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Generally small individuals, decreasing density toward bay head.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Generally small individuals, clumped distribution, sparser toward bay head.

OTHER OBSERVATIONS: Nucella dense, Amphipods & Asteroidea common, Pagurus sparse. Biota generally sparser toward bay head on boulder/cobble, and sparser above mid Tide level.

CLEANUP PRECAUTIONS: Cleanup would probably be ineffective and would not warrant the disturbance and damage it would create

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____

Other _____

BIRDS: Eagle, Gulls, Ravens

GENERAL OBSERVATIONS: Steep cobble beach at N. end of segment virtually devoid of biota. ~~Oiled~~ Little biota in oiled zone, or above MTL in general.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/21/89 Location Knuckle Island Site _____

Location Prefix KN Segment # KN-~~418~~ 418 Length 2500

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility ~~no~~ light to moderate

Width of beach zone surveyed 5-15m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) ~~None~~ RCS

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Southeast end is boulder/cobble while northwest is large gravel.

Fresh Water Sources none

Sea Exposure protected to northeast

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # _____ Frames _____

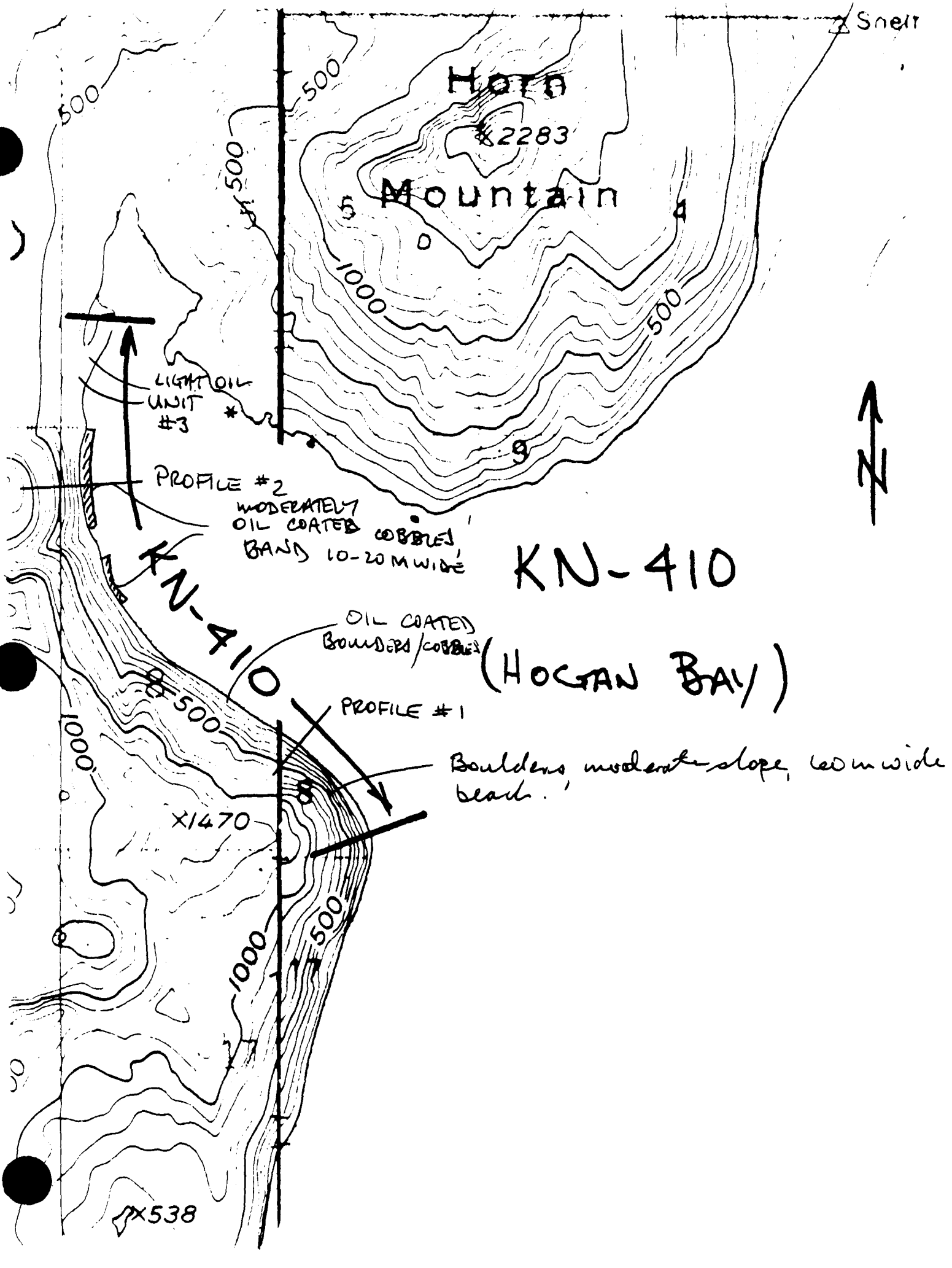
B/W Roll # T4-A2 Frames 8, 17

Observer(s) C. Wilson

Time survey started 0820 Time survey ended 1115

Cultural resource considerations/restraints:

Recent camp site should be preserved if cleanup occurs. However, plastic and tin cans should be removed. If heretofore undiscovered cultural material is uncovered during cleanup contact Exxon archaeologist, C. Mobley, immediately.


Shell
Horn
Mountain
2283
500
1000
LIGHT OIL
UNIT
#3
PROFILE #2
MODERATELY
OIL COATED COBBLES
BAND 10-20 M WIDE
KN-410
KN-410
OIL COATED
BOULDERS/COBBLES
(HOGAN BAY)
PROFILE #1
Boulders, moderate slope, 60 m wide
beach.
X1470
X538
N

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-411

LOCATION: (see enclosed map) KNIGHT ISLAND-HOGAN BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/21/89

Recommended Cleanup Activity(ies):
No cleanup recommended at this time, (subject to FOSC reassessment at a later date) to protect spawning stream mouth and stream delta.

Priorities Considerations:
Class 1: Moderate to heavy oil/time sensitive.
Class A: Resources present.

Ecological Constraints (from site survey):
Cleanup would probably be minimally effective and would not warant the disturbance it would cause. CATALOGED ANADROMOUS FISH STREAM (226-30-16810). NOTIFY ADF&G AND RAT 48 HRS PRIOR TO CLEANING.

FOSC 7/21/89 89-07-21

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended. IF CLEANUP IS CONDUCTED, ANOTHER ARCHEALOGICAL SURVEY IS REQUIRE

: 7/21/89 , 89-07-21

C. Mark Hoffman
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopherson Date: 7/21/89

EXXON: [signature] Date: 89-07-21

FOSC: A. C. Alejandro, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/21/89 Time: 10:10 Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-411

LENGTH OF SHORELINE SEGMENT: 1,400 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 10 % / C 10 % / P 20 % / G ___ % / S ___ % / M ___ % / R 60 %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Fucus

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 30 Width of Band: 2-3 m

Sporadic: Y/N % of Segment 70

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ___ cm

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H ___ % / M 20 % / L 80 %

Fresh ___ % Mousse ___ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

① ANADROMOUS (POTENTIALLY?) STREAM BOOMED OFF AT HEAD OF BAY WITH A.D.F.G. SIGNS POSTED.

6/21/99

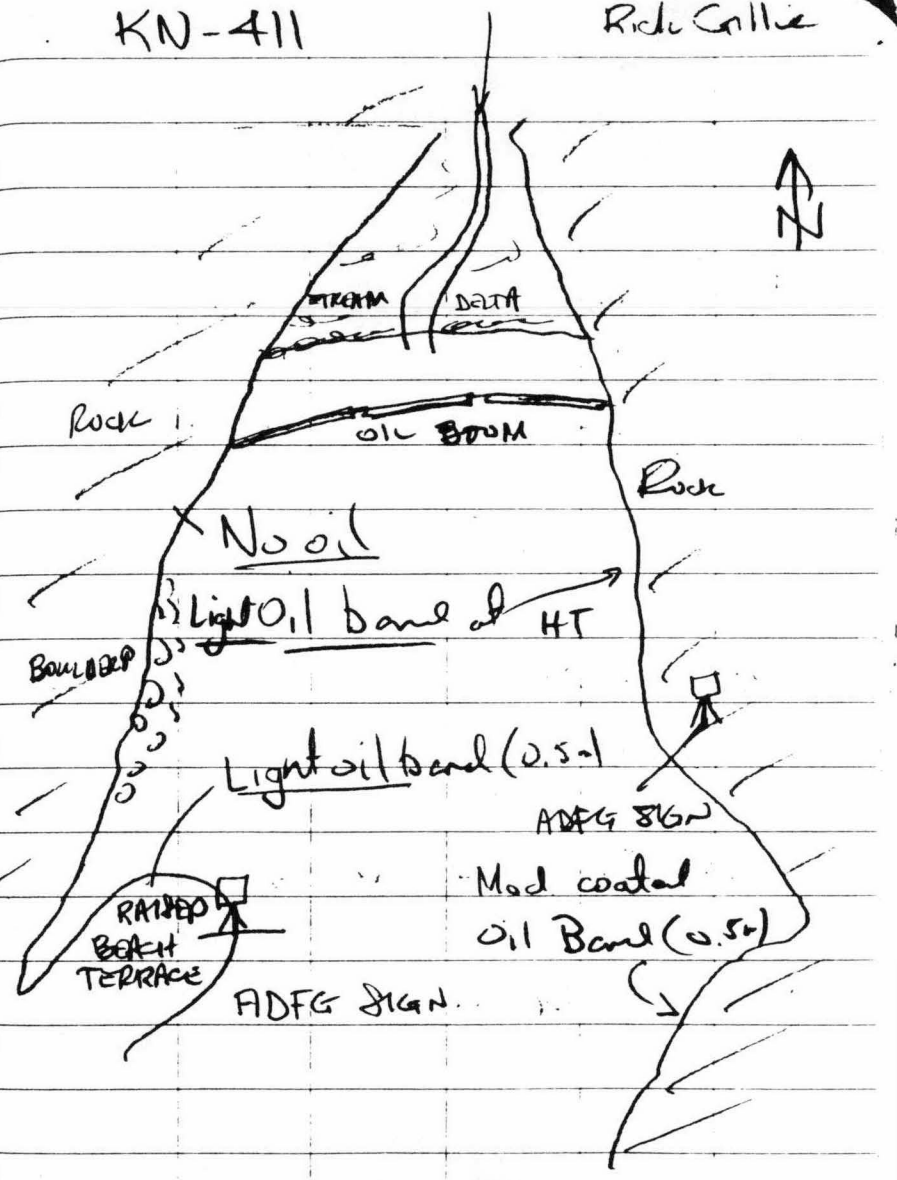
KN-411

Rick Gillie

SEGMENT KN-411

@ 10:10

- ADFG No Fishing Sign 400m either side of stream delta at bay head
- Very little oil
- Just some light stain on the rocks.
- Steep rock shoreline
- Light stain at High Tide
- No clean-up recommended.



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Hogan Bay OBSERVER: Stoker

LOCATION PREFIX: KN SEG. NO.: 411 LENGTH: 1400 (M)

DATE: 6/21/89 TIME (HHMM): 1030-1130 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse (Y)N None Y/N

very dense in core and Tide pool at S.W. end segment and on large boulders & rocks. sparse on cobble/Gravel low in Tide Zone

Mytilus (Mussels): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Dense in upper Tide level of cove at S.W. end of segment in fucus & gravel. Sparse in Tide pool, on rocks, and in low Tide zone.

Balanus (Barnacles): Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

dense on large rocks and in Tide pool. sparser on cobble/gravel and toward head of bay.

Littorina

Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

very dense in cove and Tide pool at S.W. end of segment; sparse on large rocks.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

dense(small individuals) on & under rocks near LTL; sparse in Tide pool; dense in SW cove.

OTHER OBSERVATIONS: Nucella dense in patches. Pagurus in dense clusters under rocks; blennies under rocks; dense unidentified small nudibranchs in cove near LTL; dense Subtidal Seagrass (Probably Zostera). At least 6 common species Subtidal Macroalgae. Sea stars (Pycnopodia) common in cove at LTL.

CLEANUP PRECAUTIONS: Cleanup would do little good, would not warrant the attendant disturbance. Not recommended.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions 2 Whales ____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Very rich biota in cove and Tide pool at SW end of segment. Segment includes considerable local variability in habitat and biota.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/21/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-411 Length 1400m

Survey Method:

Air _____ (A - indicate on map) Boat — (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to none

Width of beach zone surveyed 0 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile broad, flat beach

Fresh Water Sources stream

Sea Exposure protected to southeast

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

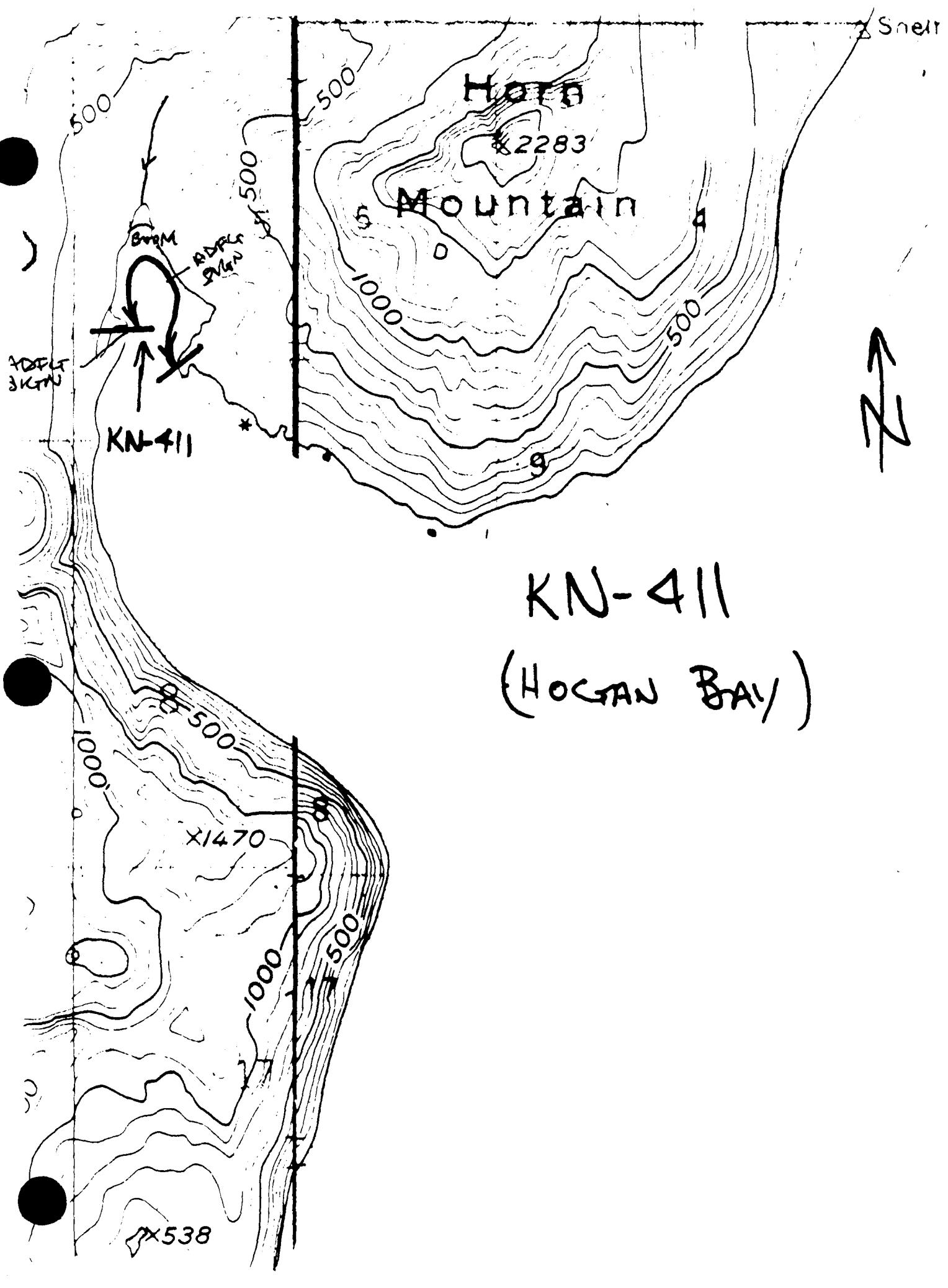
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1115 Time survey ended 1125

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are uncovered during cleanup notify Exxon archaeologist, C. Mobley, immediately.



KN-411
(HOGAN BAY)

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-412

LOCATION: (see enclosed map) KNIGHT ISLAND-HOGAN BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/21/89

Recommended Cleanup Activity(ies):
Use moderate to high pressure, warm to hot water washing on rock.
Use other approved methods as appropriate.

Priorities Considerations: medium recreational use.
Class 3: Moderate oil.
Class A: Resources present.

Ecological Constraints (from site survey):
Work at mid tide + or take appropriate measures to protect sensitive lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Marla E. Holmes
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopher Date: 7/21/89

EXXON: [signature] Date: 8907-21

FOSC: R. C. Alexander, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/24/89 Time: 11:30 Observer: Rick Gillie

Surveyed From: Foot/Boat/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-412

LENGTH OF SHORELINE SEGMENT: 500 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 10 % / C 10 % / P ___ % / G ___ % / S ___ % / M ___ % / R 80 %

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment 100 Width of Band: 2-3 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: ____ cm

Pooled Oil: ____ % "Free" Oil: ____ % Coated: H 10 % / M 80 % / L 10 %

Fresh ____ % Mousse ____ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

① Moderately oiled band (2-3M) on steep Rock shoreline.

Also fresh in HTZ.

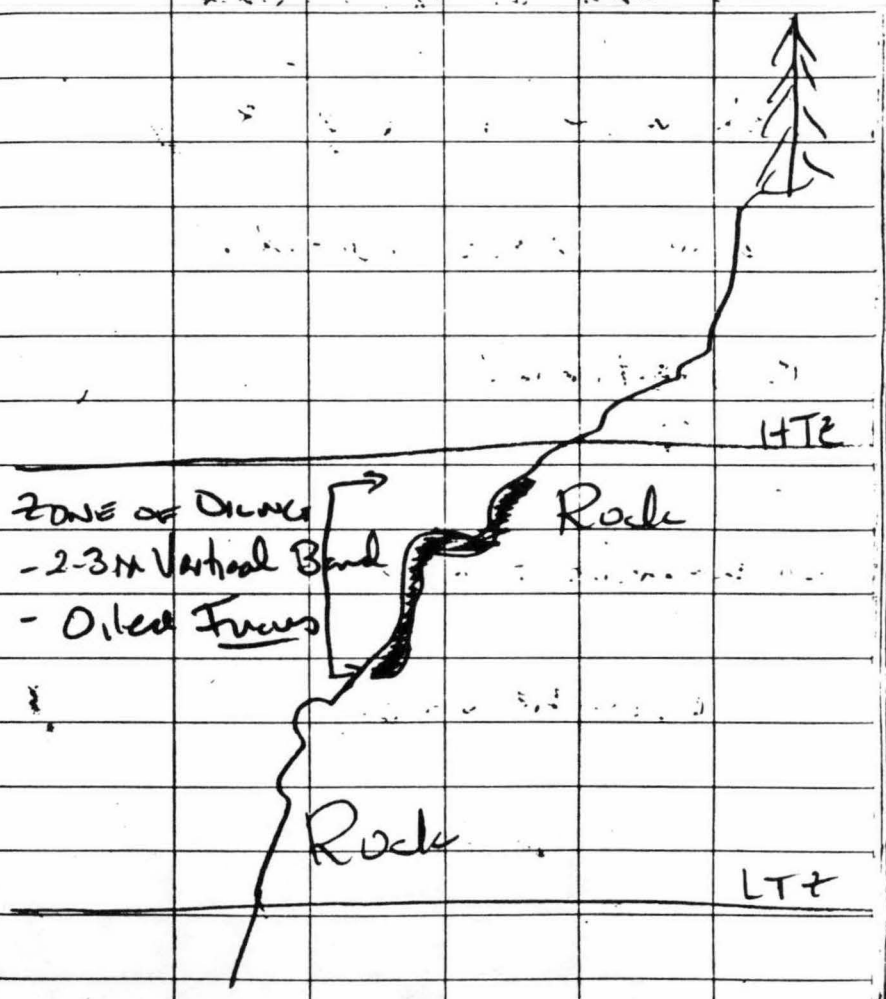
6/21/1989 — Rick Cattle

SEGMENT KN-412

11:30

- Steep rock slope, boulds
- Oil band 2m high at HTt
- Heavily oiled? Oiled Fucus
- Omni-Boom?
- Recoverable oil?
- Oiled Fucus on rocks
- Rare oiled barn.
- Clear at MT & high ONLY

KN-412 PROFILE



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Hogan Bay NE OBSERVER: STOKer

LOCATION PREFIX: KN SEG. NO.: 412 LENGTH: 500 (M)

DATE: 6/21/89 TIME (HHMM): 1145-1210 TIDE HT.: _____ (M)

OILED ZONE: Splash (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable. Dense & continuous on rock faces & boulders; sparse on boulder/cobble.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense Y/(N) Sparse (Y)/N None Y/(N)

Patchy distribution. Generally sparse.

Balanus (Barnacles): Patchy Y/(N) Contin. (Y)/N Dense (Y)/N Sparse Y/(N) None Y/(N)

Generally dense, continuous distribution. Very dense recent settlement on boulder/cobble. Larger individuals on rock faces.

Littorina
Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable. Moderate to dense on boulder/cobble (small individuals). Sparser on rocks, larger indiv.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/N

Small individuals on boulder/cobble, with dense distribution. Larger & sparser on rocks.

OTHER OBSERVATIONS: Verd dense Nucella. Dense isopod & amphipod concentrations under rocks; Nereid worms under rocks in core.

CLEANUP PRECAUTIONS: If cleanup is to proceed it should be done only when Tide level is at bottom of oiled zone in order to minimize further damage and spreading of oil.

MAMMALS: Otters ___ Harbor Seals 1 Sea Lions ___ Whales ___
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: General steep rock face, steep boulder slopes, one moderate angle boulder/cobble pocket core.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/21/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-412 Length 500

Survey Method:

Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility moderate to heavy

Width of beach zone surveyed 10 m Tree fringe surveyed 10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Mostly wall face with several pocket beaches

Fresh Water Sources 1 stream

Sea Exposure protected to southeast

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

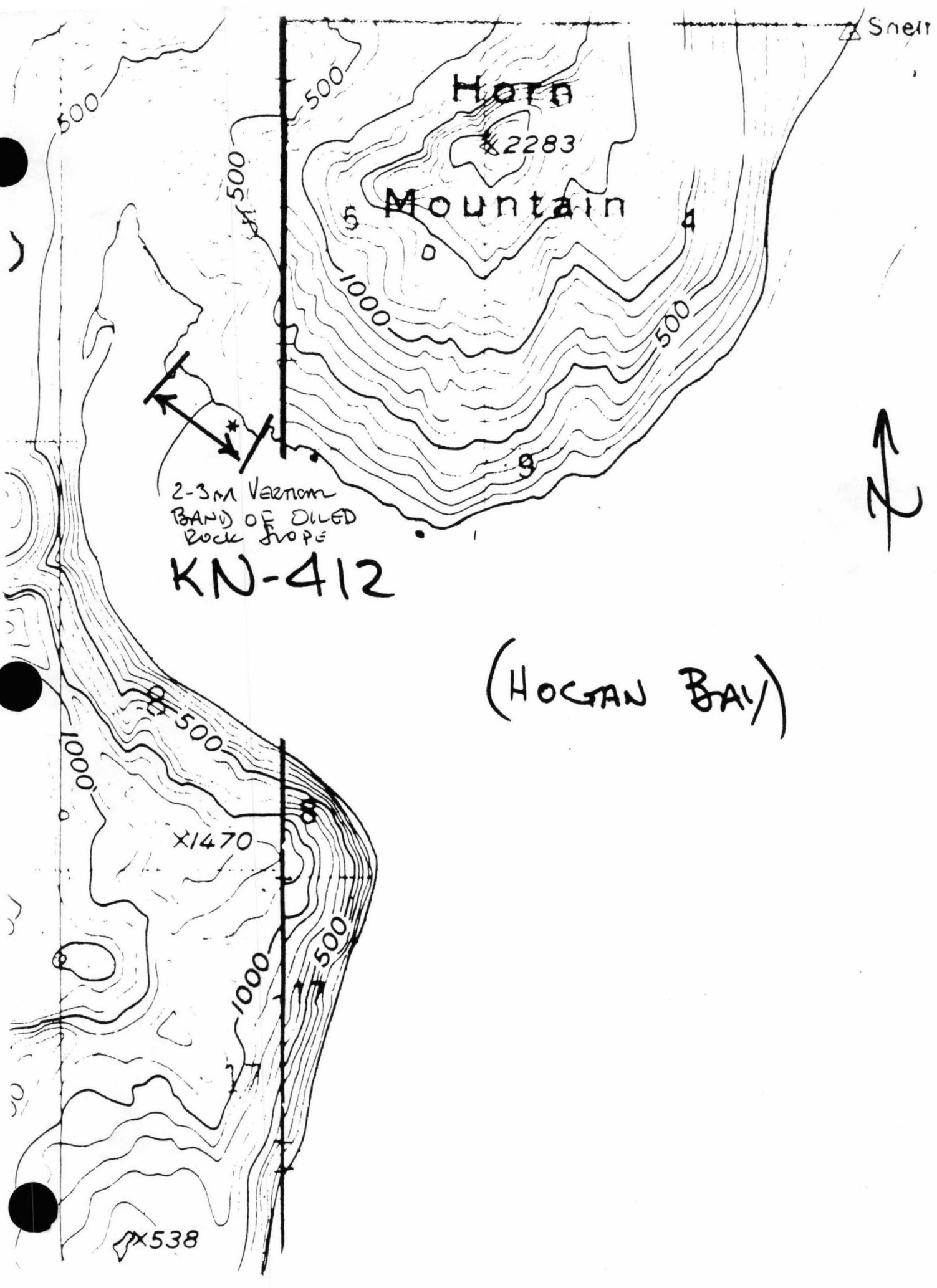
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started _____ Time survey ended _____

Cultural resource considerations/restraints:

If heretofore undiscovered cultural material are uncovered during cleanup notify Exxon archaeologist, C. Mobley, immediately


Horn
Mountain
2283
500
1000
2-3M Vertical
BAND OF OILED
ROCK SLOPE
KN-412
(HOGAN BAY)
1470
538

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/06/89 SHORELINE SEGMENT KN-413

LOCATION: (see enclosed map) KNIGHT ISLAND-HOGAN BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/21/89

Recommended Cleanup Activity(ies):
Manually remove contaminated drift material.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure warm to hot water washing on rock and oiled logs.
Use other approved methods as appropriate.

Priorities Considerations: medium recreational use.
Class 3-4: Moderate to light oil.
Class A: Resources present.

Ecological Constraints (from site survey):
Work at mid tide + or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles Holmes
State Historic Preservation Officer * Date: July 12, 1989

ISCC: Sharon K. Christopherson Date: 7/21/89

EXXON: [signature] Date: 89-07-21

FOSC: R.C. Alejandro, by dir. Date: 7/24/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/21/89 Time: 12:15 Observer: RICK GILLIE

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: Sun/(Cloud)/(Rain)/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND SEGMENT NUMBER KN-413

LENGTH OF SHORELINE SEGMENT: 900 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/HLD/STRT Slope: (LANG)/(HANG)/(VER)

Wave Exposure: High/(Med)/Low

Sediment: B 30 % / C 20 % / P 20 % / G ___ % / S ___ % / M ___ % / R 30 % LOGS

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type _____

OIL

Degree of Oiling: (Heavy)/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / L

Continuous: (Y)/N % of Segment 80 Width of Band: 10-15 m

Sporadic: (Y)/N % of Segment 20

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 10 cm

Pooled Oil: — % "Free" Oil: — % Coated: H 10 % /M 60 % /L 30 %

Fresh — % Mousse — % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No Supra/(Upper)/Mid/Lower Amount: H/M/(L)

Comments:

① ONLY Beaches ① and ② at west end appear to have recoverable oil.

6/21/89

SEGMENT KN-413

12:15

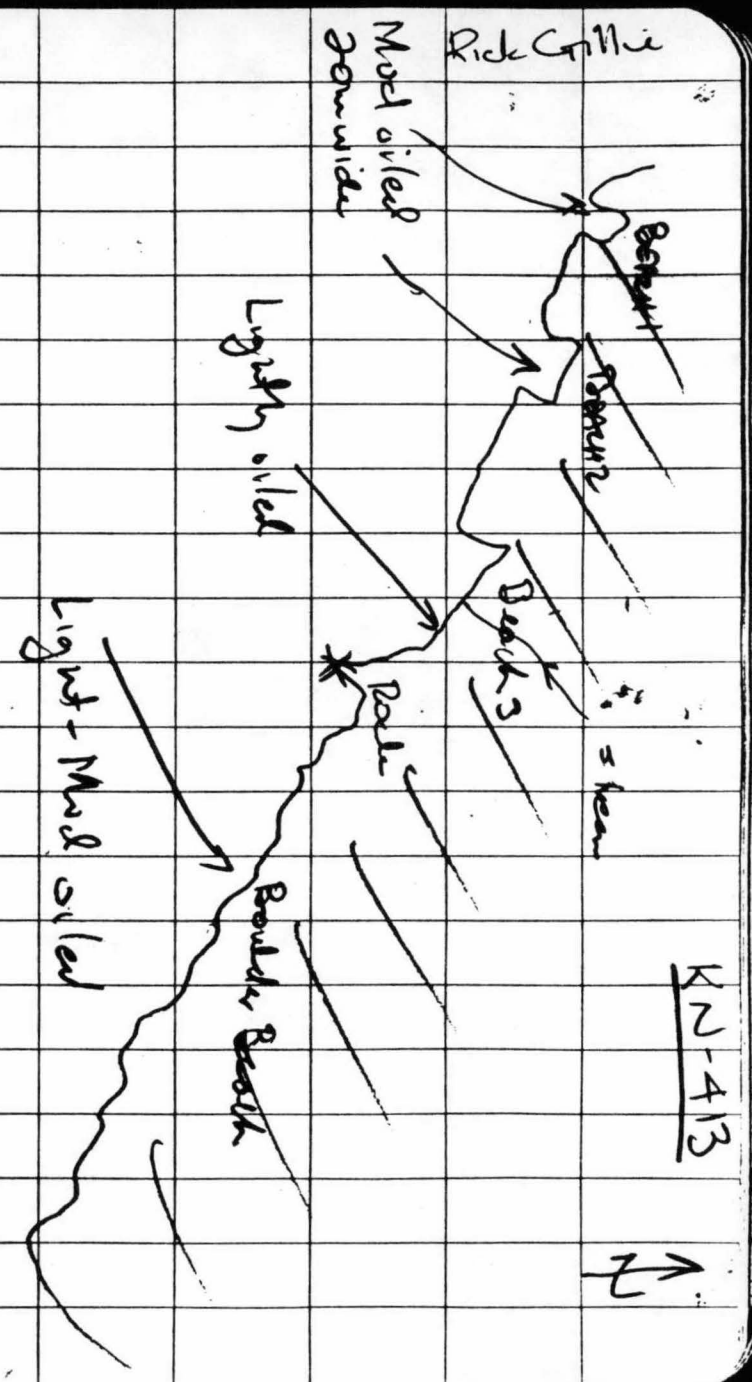
- Predominantly rock shore with sections of beach (100 m long) and 3 pocket beaches at west end (< 100 m each)

- Boulder/cobble beach substrate

- Two (2) most western beaches are heavily oiled
  - 20 m wide oil band
  - mod-heavy coating

- Flood/Wash - Onto?

Access - same nearshore rate.



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is SITE: Hazan Bay NE. OBSERVER: STOMer

LOCATION PREFIX: KN SEG. NO.: 413 LENGTH: 900 (M)

DATE: 6/21/89 TIME (HHMM): 1210-1245 TIDE HT.: _____ (M)

OILED ZONE: Splash (High Medium) Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Dense on rock faces and large boulders, sparse in cores.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/(N) Dense Y/(N) Sparse (Y)/N None Y/(N)

Generally sparse throughout. Denser patches toward mouth of bay.

Balanus (Barnacles): Patchy Y/(N) Contin. (Y)/N Dense (Y)/N Sparse Y/(N) None Y/(N)

Generally dense & continuous. Larger individuals on rock faces; recent settlement on boulder/cobble.

Littorina
Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Variable. Sparse in oiled zone. small individuals dense in places outside oiled zone. Larger & sparser on rocks.

Limpets: Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse (Y)/N None Y/(N)

Sparse in oiled zone. small individuals patchily dense on boulder/cobble. Larger & sparser on rocks.

OTHER OBSERVATIONS: Nucella in dense clusters, common Brachiant. Seagrass in subtidal. Dense concentrations of small resident fish in bay.

CLEANUP PRECAUTIONS: If cleanup is to proceed it should be done only when Tide level is at bottom of oiled zone in order to minimize further damage and spreading of oil.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other _____

BIRDS: Eagle, Gulls

GENERAL OBSERVATIONS: Segment consists of several small pocket coves with boulder/cobble/gravel/sand beaches [redacted] seperated by rock headlands.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6/21/89 Location Knight Island Site _____

Location Prefix KN Segment # KN-413 Length 900m

Survey Method:

Air _____ (A - indicate on map) Boat ~ (A - indicate on map)

Ground ~ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 0-10 m Tree fringe surveyed 0-10

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

General observations justifying survey method and segment's site probability:

Shore Profile Mostly vertical wall face and pocket beaches

Fresh Water Sources 1 stream

Sea Exposure protected to southeast

Access/Safety good

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

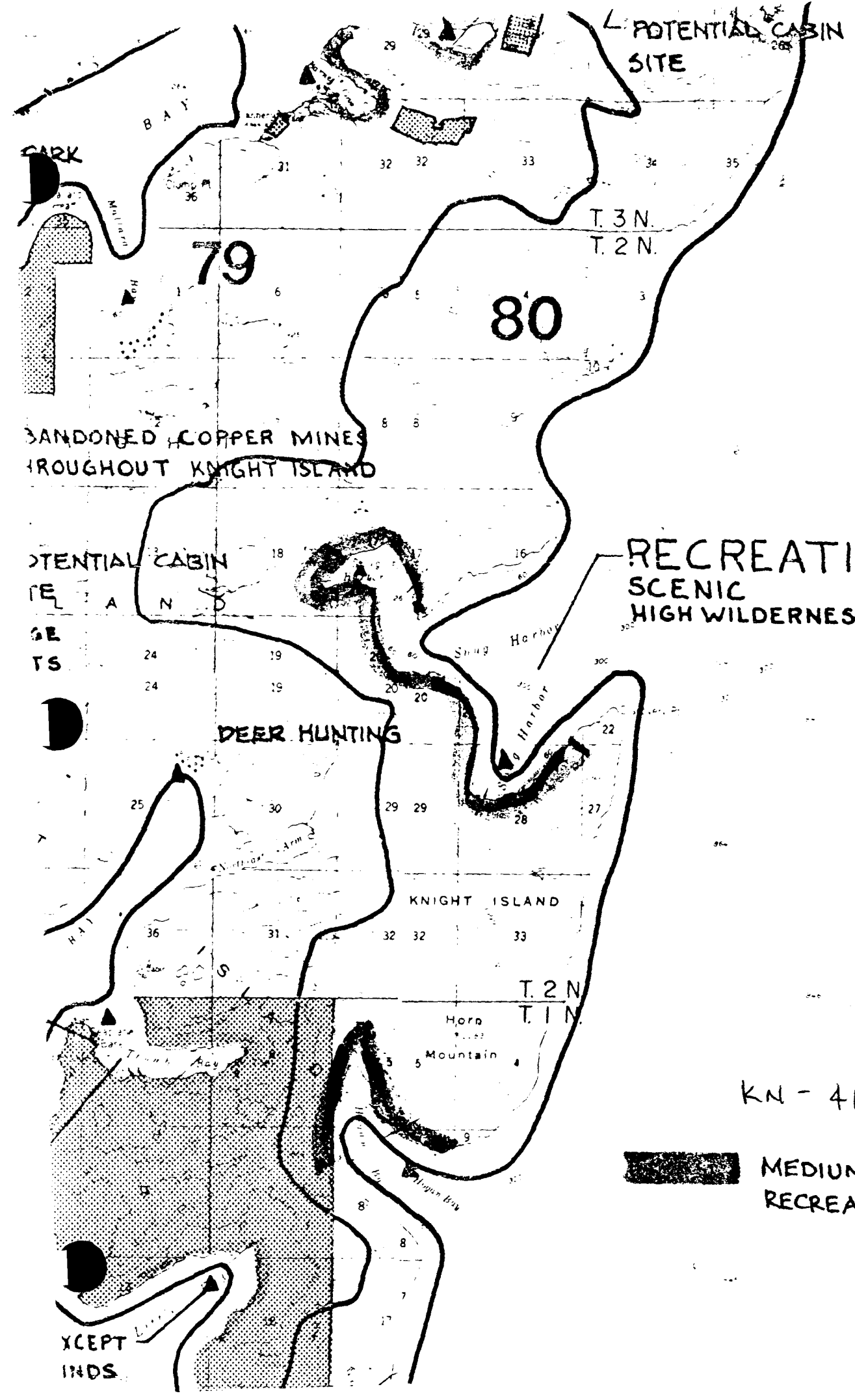
B/W Roll # _____ Frames _____

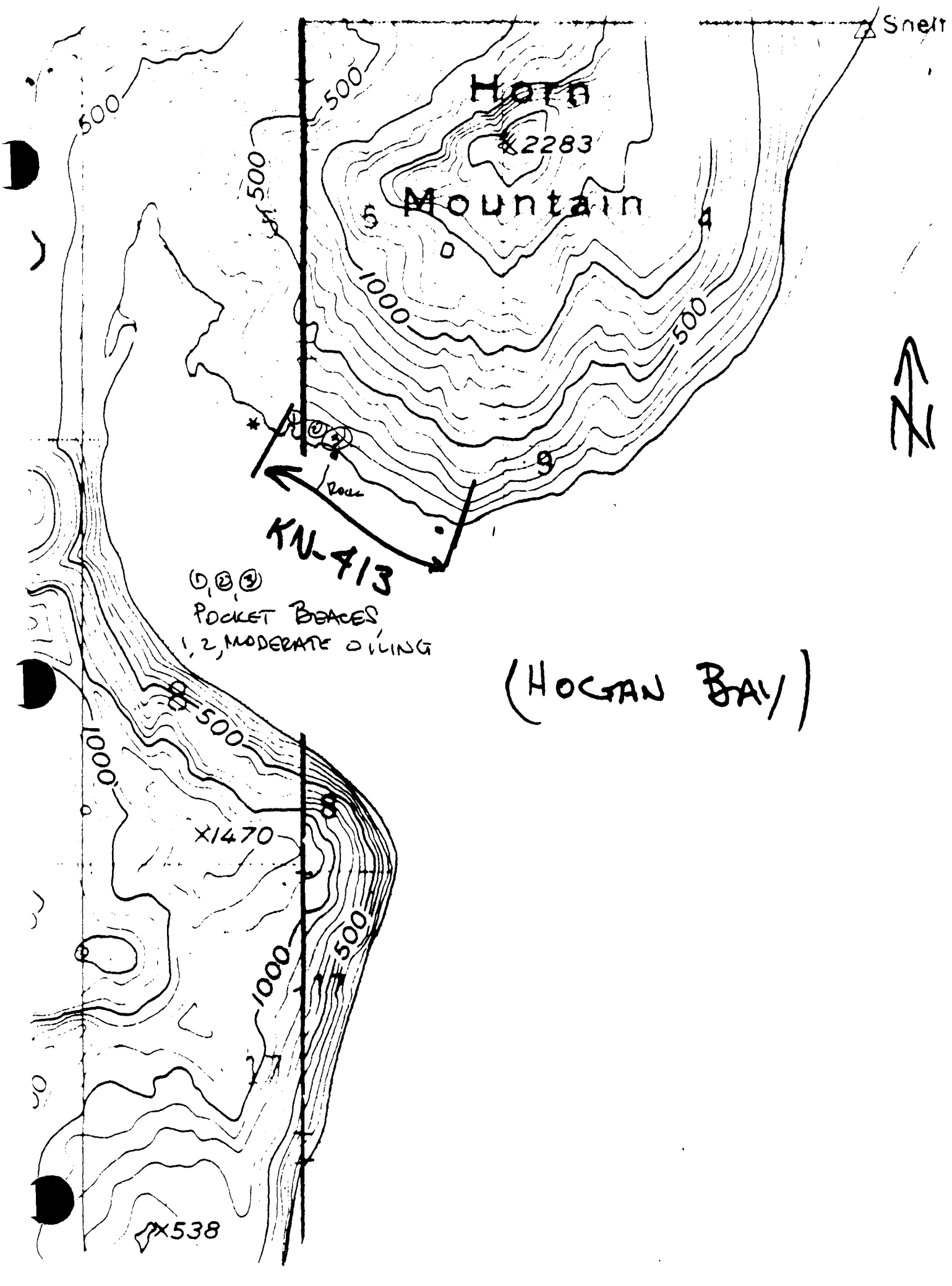
Observer(s) C. [redacted]

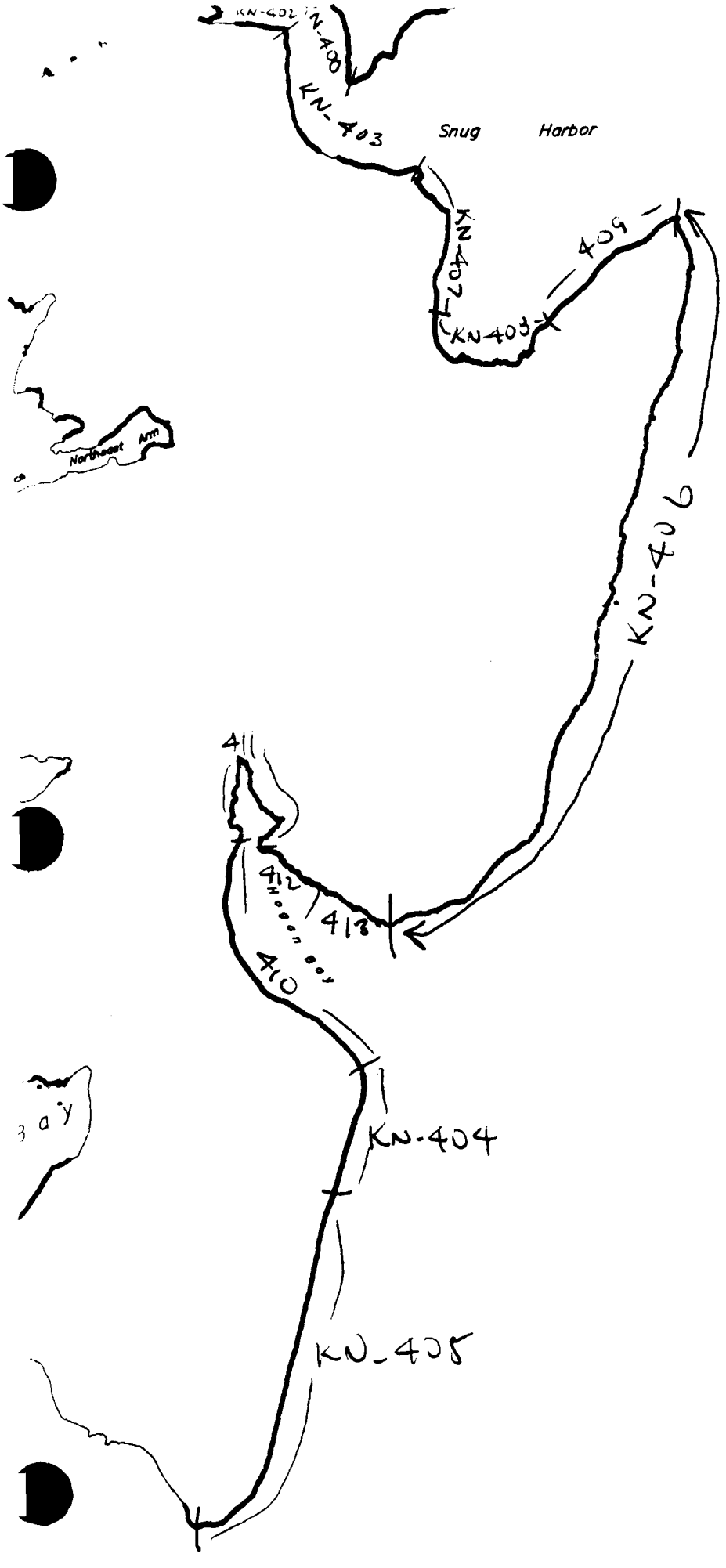
Time survey started 1215 Time survey ended 1230

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are discovered during cleanup notify Exxon duchas by ext. C. Holley, immediately


POTENTIAL CABIN SITE
T. 3 N.
T. 2 N.
79
80
ABANDONED COPPER MINES
THROUGHOUT KNIGHT ISLAND
POTENTIAL CABIN
DEER HUNTING
KNIGHT ISLAND
T. 2 N
T. 1 N.
Horn Mountain
RECREATION:
SCENIC
HIGH WILDERNESS QUALITIES
KN - 413
MEDIUM
RECREATIONAL USE


Snell
Horn
Mountain
2283
500
1000
500
500
1000
500
1000
500
1000
500
1470
538
KN-413
Rock
①,②,③
POCKET BRACES,
1, 2, MODERATE OILING
(HOGAN BAY)
N



KN-404 to
KN-413

SCAT #4
June 19, 20, 21 /1999

Sent to Katz - 8/15

SEG KN-406 INSPECTION # ___ SEGMENT

DATE 8-13-89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical ___
- ☑ Non-mechanical RAKING & BAG BUS
- ☑ Other COLD WATER WASH

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-406 IS COMPLETE AND READY FOR DEMOBILIZATION TO A NEW SEGMENT.

Signature Melvin D Yoes Date: 8/13/89 Time: 5:30 AM

Printed Name MELVIN D YOES

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
___	Heavy
1%	Medium
4%	Light
4%	Very Light
90%	None
100 %	

Subsurface Oil: ☒ Yes ☐ No

Comments Light coating on gravel & small rock areas

Reassessment

- ☐ Yes - necessary
- ☒ No - not necessary unless re-oiled

ADEC rep Comments ADEC rep. unavailable Verbally approved when problem area is completed

Signature Date: / / Time:

Printed Name

FOSC rep Demobilization (approved) disapproved

Comments Must complete wash of one area noted

KN 407

25JUL89

KN-407

DATE 8/27/89

INSPECTION RECORD

Shoreline Treatment Primary(ies) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [X] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KN407 is complete with only Sr demobilization to next segment

Signature [signature] Date: 8/27/89 Time: 1105

Printed Name Steve E. Ramseyer TFL Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
0	Heavy
20	Medium
15	Light
0	Very Light
65	None
100 %	

Subsurface Oil

- [ ] Yes
- [X] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
0	Heavy
20	Medium
20	Light
0	Very Light
60 n.s.	None
100 %	

Subsurface Oil

- [ ] Yes
- [X] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments No heavy contamination visible. Pockets of medium oil - tarry consistency. Northern half of segment free of oil.

Signature [signature] Date: 8/27/89 Time: 1120

Printed Name Matt C. Bing

FOCO rep **Demobilization approved/disapproved**

Comments LO CONTAMINATED

Signature [signature] Date: 8-27-89 Time: 1115

Printed Name Tom Ray CWO2

COMM EXXON ADEC FOSC USCG

KN 408

TREATMENT MANUAL. 6/15/89

INSPECTION # ___ SEGMENT

24/89 INSPECTION RECORD

horeline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [X] Non-mechanical
- [ ] Other

xon

atment as indicated above has been completed. Request demobilization
m this segment.

Comments Treatment of segment KN-408 is complete and ready for demobilization to next segment.

Signature Steve E. Ramseur Date: 8/24/89 Time: 1600

Printed Name Steve E. Ramseur TF-2 commander

sting Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent ADEC	Percent USCG	Degree of Oiling
10	15	Heavy
40	40	Medium
30	25	Light
20	20	Very Light
		None
	100 %	

Subsurface Oil

- [X] Yes
- [ ] No

Comments Shale GRAVEL HAS SL oil but beyond efficient RECOVERY

assessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

EC rep Comments Demobilization approved. Subsurface oil still present. Request hand cleaning as specified and policing of the area.

Signature Curtis Conner Date: 8/24/89 Time: 1857

Printed Name Curtis C. Conner

C rep Demobilization approved/disapproved

Comments Policing is need and additional hand work in ~~Sam~~ ~~Sound~~ ~~Cove~~ at Especially removal of Boom and Snare

KN-409

KN-409

8/22/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [ ] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KN-409 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsower Date: 8/22/89 Time: 1230

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
	Heavy
less than 1%	Medium
15%	Light
5%	Very Light
79%	None
100 %	

Subsurface Oil

[X] Yes gravel area [ ] No

COMMENT BELOW

Reassessment

- [ ] Yes - necessary
- [X] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
0	Heavy
less than 1	Medium
10	Light
10	Very Light
79	None
100 %	

Subsurface Oil

[X] Yes [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments No gross contamination observed. High energy rocky beach. Very little oil observed. Little subsurface oil evident.

Signature Joseph S. Stuckner Date: 8/22/89 Time: 1245

Printed Name Joseph S. Stuckner

FOSC rep **Demobilization (approved) disapproved**

Comments no gross contamination observed

Signature Paul B. Gansle Date: 8/22/89 Time: 1240

Printed Name Paul B. Gansle LT

COPY: EXXON ADEC FOSC ISCC

KN-410

DATE 9/3/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KN-410 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsower Date: 9/3/89 Time: 1405

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent	Degree of Oiling
0	Heavy
2	Medium
10	Light
0	Very Light
88	None
100 %	

Subsurface Oil

- [ ] Yes
- [X] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent	Degree of Oiling
0	Heavy
5	Medium
15	Light
15	Very Light
65	None
100 %	

Subsurface Oil

- [X] Yes
- [ ] No

COMMENT BELOW

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments No gross contamination. Various sections of boom debris remains that needs to be removed.

Signature Dale W Gardner Date: 9/3/89 Time: 14:10

Printed Name DALE GARDNER.

FOSC rep **Demobilization approved/disapproved**

Comments No Gross CONTAMINATION

Signature [signature] Date: 9/3/89 Time: 1410

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

SEG KN 411 SEGMENT
DATE 8-12-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical
- ☐ Non-mechanical
- ☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments NO TREATMENT. TREATMENT NOT RECOMMENDED BY SOT & FOSC DUE TO SMALL AMOUNT & AREA INVOLVED

Signature [signature] Date: 8/12/89 Time: 1145 AM

Printed Name MERVIN D GLOET

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
	Heavy
1%	Medium
2%	Light
2%	Very Light
95%	None
100 %	

Subsurface Oil: ☒ Yes ☐ No

Comments Small cobble area & gravel bed

Reassessment

- ☐ Yes - necessary
- ☒ No - not necessary unless re-oiled

ADEC rep Comments No gross contamination observed. Some staining and heavily weathered mousse very sparse. No mobile oil observed

Signature [signature] Date: 8/14/89 Time: 1307

Printed Name Michael Rep

FOSC rep Demobilization (approved) disapproved

Comments to leave boom until Spawn Season Over - no gross contamination observed

Signature [signature] Date: 8/13/89 Time: 1755

Printed Name Paul B. Gansle LT

KU-412

DATE 9/3/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [X] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment KU-412 is complete and ready for demobilization to next segment.

Signature Steve E. Ramsower Date: 9/3/89 Time: 1405

Printed Name Steve E. Ramsower TF-2 Commander

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
8	Heavy
8	Medium
25	Light
15	Very Light
52	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment:
- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil Percent	Degree of Oiling
1	Heavy
15	Medium
19	Light
15	Very Light
50	None
100 %	

Subsurface Oil: [X] Yes [ ] No

COMMENT BELOW

Reassessment:
- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments A few pockets of medium oiling.

Signature Dale W. Gardner Date: 9/3/89 Time: 14:10

Printed Name DALE GARDNER

FOSC rep Demobilization approved/disapproved

Comments [illegible] CONTAMINATED

Signature [illegible] Date: 8/3 89 Time: 1407

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): HERRING POINT WEST BLOCK

Includes Shoreline Segments: KN-500, KN-501, KN-502, KN-503, KN-504, KN-505, KN-506 * [~~KN-500 Deferred until 6/15~~ (CONSIDERATION)] resolved 6/14 SKC

Submitted: Collin Abadie Jr. Date: 6/10/89
(for Exxon)

ISCC Reccomendation: Sharon K. Christopherson Date: 6/14/89

FOSC Approval: R E Mollin Date: 6/14/89

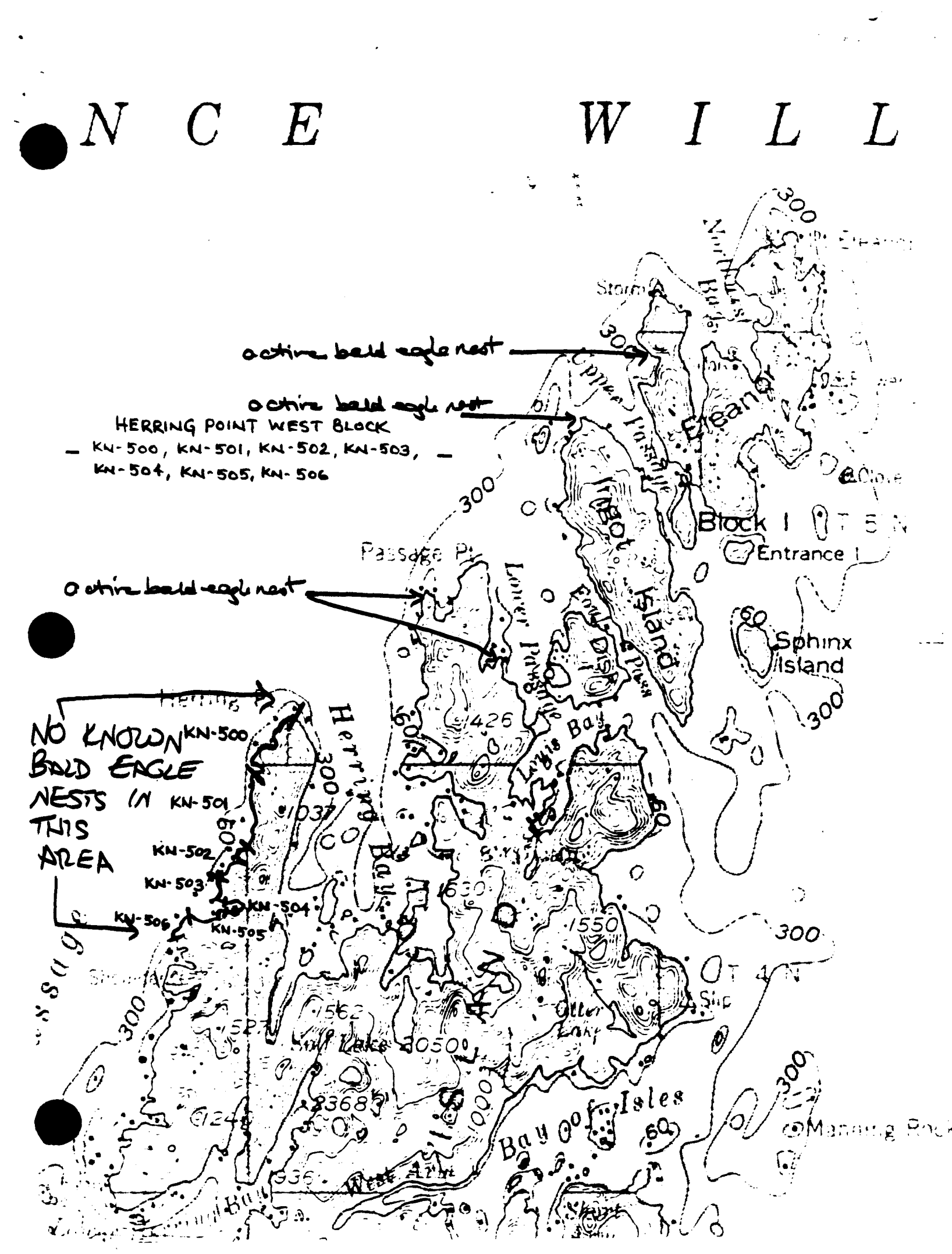
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

FOSC
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NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

N C E W I L L


active bald eagle nest
active bald eagle nest
HERRING POINT WEST BLOCK
KN-500, KN-501, KN-502, KN-503,
KN-504, KN-505, KN-506
active bald eagle nest
NO KNOWN BALD EAGLE NESTS IN THIS AREA
KN-500
KN-501
KN-502
KN-503
KN-504
KN-505
KN-506
Block I
Entrance I
Sphinx Island
Herring Bay
Passage P.
Lower Pond
Long Pond
Eagle Pt.
Lyle Bay
Otter Lake
Isles Bay
West Arm
Storm
Eleanor
Island
300
60
1426
1037
1630
1550
1562
1524
1368
1248
936
1000
0500

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-500

LOCATION: (see enclosed map) Knight Island-Southwest of Herring Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):
- Flood/flush with warm to hot water (up to 140°F) on low angle beaches.
- Use moderate to high pressure washing on rock.
- Use other approved methods as appropriate.
- Access could pose a problem. Natural cleaning should be considered since wave exposure is high.
- ~~No cleanup on beach #7-NOAA test site.~~

Priorities Considerations: HIGH RECREATIONAL USE.
- Class 4: Low oil.
  Class A: Resources present.

Ecological Constraints (from site survey): Avoid lower intertidal zone containing healthy fucus community. Avoid stream run-out areas in beaches 3, 6, 7. Clean at high tide on ebbing tide or take appropriate measures to protect middle and lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles Z Holmes — Date: June 10, 1989
State Historic Preservation Officer *
ISCC: Sharon K. Christopherson — 6-14-89
EXXON: _____ — Date: June 14-89
FOSC: _____ — Date: 6-14-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/5/89 Time: 19.40 HRS Observer: G. MACDONALD

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun) (Cloud) Rain/Snow/Fog

LOCATION

LOCATION KNIGHT ISLAND. W. COAST. SEGMENT NUMBER KN-500

LENGTH OF SHORELINE SEGMENT: 2680 m

ACCESS: Foot/Vehicle (Boat) (Barge) (Helio) Float Plane

SHORELINE:

Shoreline Type: SPI (BEA) (COV) (HLD) STRT Slope: (LANG) (HANG) (VER)

(beach) (cliffs and headlands.)

Wave Exposure: (High) (Med) Low

Sediment: B 10 % / C 10 % / P ___ % / G 10 % / S 5 % / M ___ % / R 65 %

Drift Debris on Beach: (Yes) No (Supra) Upper/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy (Moderate) (Light) No Oil/Unobserved

Area of Beach Impact: SU / SP / (H / M) / L

Continuous: (Y) N % of Segment 50+ Width of Band: ≤ 5 m

Sporadic: Y/N % of Segment ____

Est. Oil Thickness where > 1cm: ____ cm Est. Oil Penetration: 0-10 cm

Pooled Oil: ϕ % "Free" Oil: ϕ % (Coated): H ___ % / M 70 % / L 30 %

Fresh ϕ % Mousse ϕ % Tar Formation: 100 %

(V. FRESH TAR →)

Drift Debris Oiled ? (Yes) No (Supra) Upper/Mid/Lower Amount: H/M/(L)

Comments:

STORMS WILL ERASE > 75% OF THIS OIL; BEACH # 7 IS NOAA TEST SITE - NO DISTURBANCE; EXPOSED ROCKS AND BENCHES MAY HINDER BARGE ACCESS; BEACHES ARE V. PERMEABLE; OIL IS V. FRESH TAR / MATURE MOUSSE; < 0.5 mm THICK & WELL ADHERED TO ROCK.

OILING BECOMES LIGHT IN SOUTHERN SEGMENT

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Is. SITE: SW of Herring Point OBSERVER: SM Barn

LOCATION PREFIX: KN SEG. NO.: 500 LENGTH: 2680 (M)

DATE: 6/5/89 TIME (HHMM): 1940 TIDE HT.: +1 (M)

OILED ZONE: (Splash) High Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense Y/N Sparse (Y)/N None Y/N

Fucus is dense and continuous on rock faces and boulder areas - sparse on gravel areas

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on boulders, many patches oiled, not gaping, but byssal threads are weak

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/N

Dense on rocks, coated in oiled zone, most survived coating

Littorina
Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on several rocky areas - oiled but alive and feeding on Mytilus

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Not oiled but some living in tidal pools that have oil sheen

OTHER OBSERVATIONS: Tidal pools among the boulders exhibit sheen. Pools also contain sea anemones (Anthopleura) that were responsive. Seagrasses (Zostera) seen in subtidal. Small darting fish (Salmon smolts) in subtidal

CLEANUP PRECAUTIONS: Lower ITZ is healthy throughout segment. Avoid this area and the streams at beaches 3, 6, and 7

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other None

BIRDS: Gulls, Eagles, not apparently oiled

GENERAL OBSERVATIONS: This segment contains 7 cobble-gravel beaches separated by rocks & rock face. Oil is black & tarry - possibly a transitional phase from mousse to tar. Overall oiling conditions are moderate

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-5-89 Location Knight Island - ~~east~~ westside Site _____

Location Prefix KN Segment # 500 Length 2680 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility moderate oil cover

Width of beach zone surveyed 10-40 m Tree fringe surveyed 10m.

Cultural resources observed in beach zone (AHRS code) CMT (just off beach)

Cultural resources observed in tree fringe (AHRS code) CMT

General observations justifying survey method and segment's site probability:

Shore Profile Steep rock walls w/ occasional pocket beach w/ gentle grade.

Fresh Water Sources Small streams

Sea Exposure Open to the West

Access/Safety poor access

Probability of undiscovered sites in beach zone (circle one) 1 2 3 (4) 5

Monitoring during cleanup needed yes/(no) Collection yes/(no)

Photos: Color Roll # — Frames —

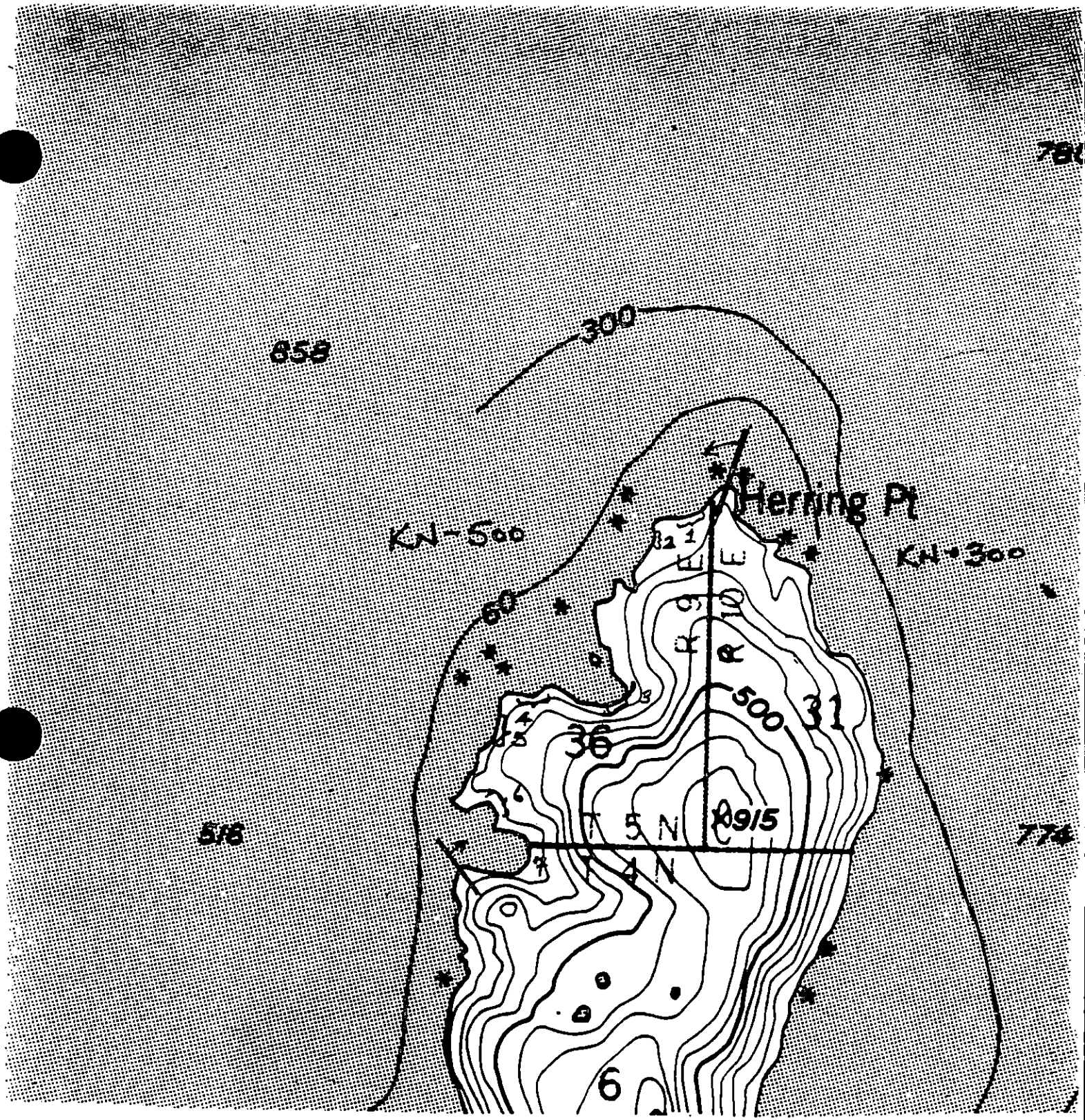
B/W Roll # WA2- Frames 18 - 22

Observer(s) ANDREFSKY

Time survey started 7:50 PM Time survey ended 9:35 PM

Cultural resource considerations/restraints:

IF heretofore unidentified cultural resources are discovered during cleanup contact Exxon archeologists immediately.



SEGMENT KN-500

7 beaches;

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-501

LOCATION: (see enclosed map) Knight Island-Herring Point southwest

ADEC NO. SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- Use small team focused on beach #1 only, for light oil shallow penetration on gravel.
- Flood/flush with warm to hot water (up to 140°F).
- Use other approved methods as appropriate.

Priorities Considerations: HIGH RECREATION USE SOUTHERN ONE THIRD.
- Class 4: Light oil.
  Class A: Resources present.

Ecological Constraints (from site survey): Oil is very light. Avoid lower intertidal zone. Clean at high tide or on an ebbing tidal cycle or take appropriate measures to protect lower intertidal zone. ~~Avoid stream at beach #1, which may be anadromous.~~ NOT CATALOGED STREAM

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: June 10, 1989

ISCC: Sharon K. Christopherson 6-14-89

EXXON: [signature] Date: June 14-89

FOSC: [signature] Date: 6-14-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 08:00 Observer: G. MACDONALD

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/(Fog)

LOCATION

LOCATION KNIGHT ISLAND. W. COAST SEGMENT NUMBER KN-501

LENGTH OF SHORELINE SEGMENT: 2025 m

ACCESS: Foot/Vehicle/(Boat)(Barge)/(Helio)/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA)/COV/HLD/(STRT) Slope: LANG/(HANG)/(VER)

Wave Exposure: High/(Med)/(Low)

Sediment: B 10 % / C 5 % / P ___ % / G TRACE % / S ___ % / M ___ % / R 85 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy/Moderate/(Light)/(No Oil)/Unobserved

Area of Beach Impact: SU / SP /(H / M)/ L

Continuous: (Y)/N % of Segment 20 Width of Band: 0.3 m

Sporadic: (Y)/N % of Segment <10

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ≤ 2 cm

Pooled Oil: ϕ % "Free" Oil: ϕ % (Coated) H ___ % /M ___ % /L ___ %

Fresh ___ % Mousse ___ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

THIN CONTINUOUS TAR BAND @ HIGH WATER LEVEL W/ SPORADIC SMALL PATCHES OF LIGHT OILING ON BEACH # 1.

EXPOSURE IS MODERATE TO LOW.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Islands SITE: SW of Herring Point OBSERVER: SM Ban

LOCATION PREFIX: KN SEG. NO.: 501 LENGTH: 2025 (M)

DATE: 6/6/89 TIME (HHMM): 0800 TIDE HT.: +2 (M)

OILED ZONE: (Splash) (High) (Medium) Low

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Dense on boulders - healthy in lower ITZ - coated in oiled zone

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Several patches oiled but not gaping - Thais feeding on mussels

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Oiled but not dead

Littorina
Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Oiled but alive

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Alive not oiled

OTHER OBSERVATIONS: Amphipods among Fucus fronds, Ulva in lower ITZ

2 IPs, Seagrass (Zostera) and salmon smolts in subtidal, Several (5) dead starfish (Leptasterias and Solaster) in these waters.

CLEANUP PRECAUTIONS: Avoid lower ITZ and stream run out area

The lower ITZ is very healthy. Stream is effectively cleaning part of the beach.

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: Sandpipers, crows, not apparently oiled

GENERAL OBSERVATIONS: This segment contains one beach, and... rocks - rock face areas. Overall oil conditions are light

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island-west side Site _____

Location Prefix KN Segment # 501 Length 2025 m

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility light oil

Width of beach zone surveyed 0-40 m Tree fringe surveyed 5 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

General observations justifying survey method and segment's site probability:

Shore Profile 98% of the segment is composed of a steep vertical rock wall.

Fresh Water Sources seeps, small stream.

Sea Exposure Open to the west.

Access/Safety good access for barges in areas of vertical cliffs. NO landing

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

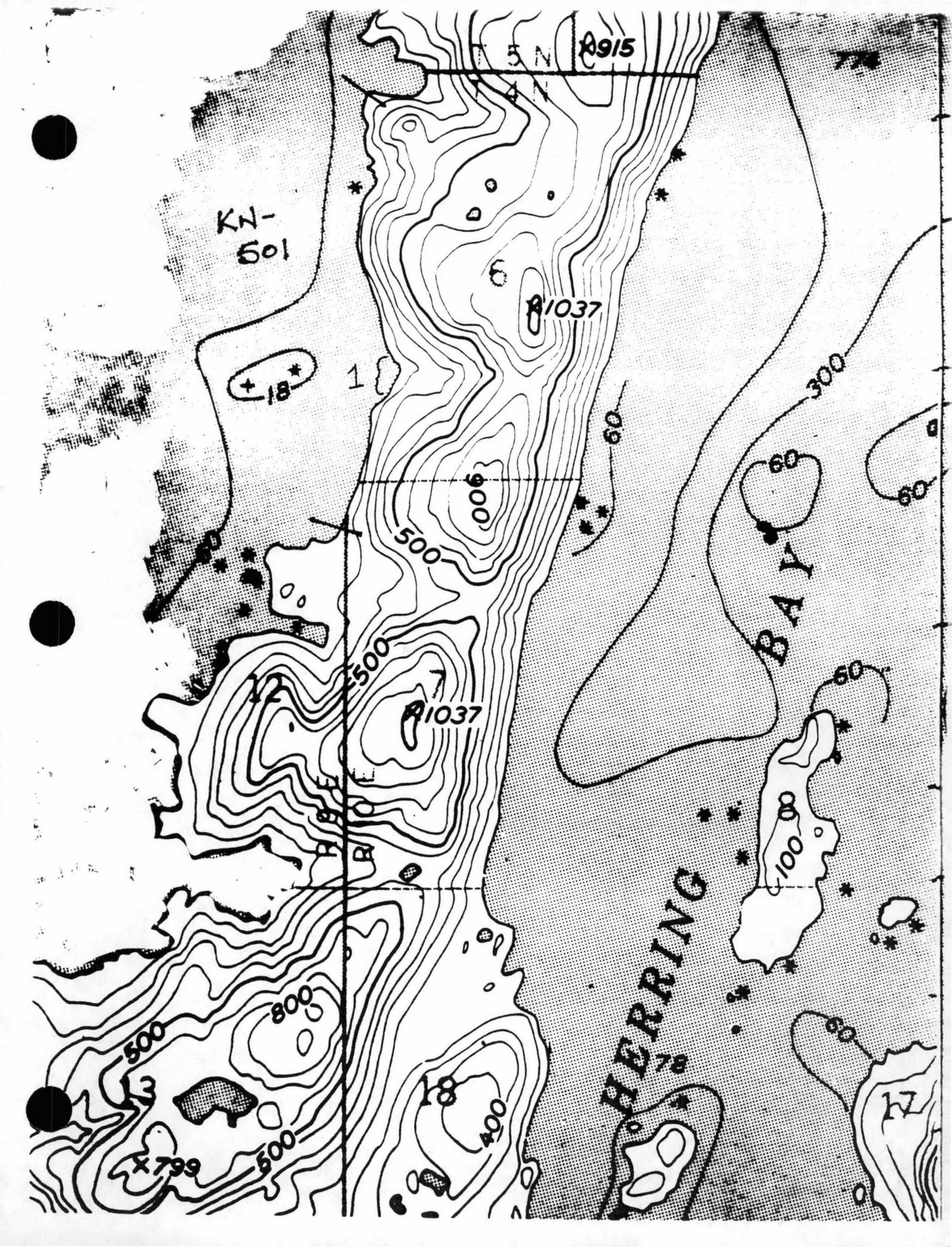
B/W Roll # — Frames —

Observer(s) ANDREFSKY

Time survey started 8:00 AM Time survey ended 9:30 AM

Cultural resource considerations/restraints:

Very low probability of cultural resources due to very steep vertical cliffs.


KN-
501
1037
1037
915
18
300
60
60
60
60
60
500
500
500
800
400
100
BAY
HERRING

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-502

LOCATION: (see enclosed map) Knight Island-Southwest Herring Point

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ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- Flood/flush with warm to hot water (up to 140°F) on low angle beach.
- Use moderate to high pressure washing on vertical rock.
- Use other approved methods as appropriate.

Priorities Considerations: HIGH RECREATION USE. ~~Avoid beach #3 NOAA/NMF Test Site.~~
- Class 3: Moderate oil.
  Class A: Resources present.

Ecological Constraints (from site survey): Avoid healthy lower intertidal zone. Clean at high/ebbing tide, or take appropriate measures to protect lower intertidal zone. ~~Avoid stream at beach #3, as it may be anadramous.~~ Take particular care not to wash oil into the fine, anaerobic sediments at beach #3.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: June 10, 1989

ISCC: Sharon K. Christopherson
EXXON: _____ Date: 6-14-89 June 14-89

FOSC: A S Robbins Date: 6-14-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 08·50 HRS Observer: G. MACDONALD

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/(Fog)

LOCATION

LOCATION W. COAST & KNIGHT ISL. SEGMENT NUMBER KN-502

LENGTH OF SHORELINE SEGMENT: 1950 m

ACCESS: Foot/Vehicle/(Boat)/Barge/(Helio)/Float Plane

↖ SMALL BARGE

SHORELINE:

beaches rock outcrops.

Shoreline Type: SPI/(BEA)/(COV)/(HLD)/STRT Slope: (LANG)/HANG/(VER)

Wave Exposure: High/(Med)/(Low)

15 TRACE

Sediment: B 10 % / C 10 % / P ___ % / G ___ % / S ___ % / M ___ % / R 65 %

Drift Debris on Beach: (Yes)/No (Supra)/Upper/Mid/Lower Type LOGS AND VEGETATION

OIL

Degree of Oiling: Heavy/(Moderate)/Light/No Oil/Unobserved

Area of Beach Impact: SU /(SP)/(H)/(M)/ L

Continuous: (Y)/N % of Segment 20 Width of Band: ≤ 2 m

Sporadic: (Y)/N % of Segment 20

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ≤ 15 cm

Pooled Oil: ϕ % "Free" Oil: ϕ % (Coated): H ___ % / M 60 % / L 40 %

Fresh ___ % Mousse ___ % Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No (Supra)/Upper/Mid/Lower Amount: H/M/(L)

Comments:

BEACH #2 HAS NMF/NOAA TEST SITE - NO CLEANUP;
POOR ACCESSIBILITY FOR LARGE BARGES — ABUNDANT PART.
SUBMERGED ROCKS AND BENCHES.
OIL IS FRESH TAR, < 0·5mm THICK,
MAY BE TRAPPED "POOLS" IN SHINGLE ABOVE OUTCROPS ON
BEACH #2 WEST END.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: SW of Herring Point OBSERVER: SM Barr

LOCATION PREFIX: KN SEG. NO.: 502 LENGTH: 1950 (M)

DATE: 6/6/89 TIME (HHMM): 0850 TIDE HT.: +1½ (M)

OILED ZONE: (Splash) (High) (Medium) (Low)

SUBSTRATUM: (Rocks) (Boulder) (Cobble) (Gravel) (Sand) (Mud)

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Healthy in lower ITZ, coating (dead) in oiled zone

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Dense on rocks - coated but alive - several coating patches also contain mats

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

that are dense MOST not oiled

Littorina Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Alive

Limpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Alive

OTHER OBSERVATIONS: oiled debris in upper ITZ. Dense Solaster (healthy) in this seg. Anthopleura in tidal pools - responsive. Ulva in lower

CLEANUP PRECAUTIONS: Do not wash oil into soft sediments at Beach 3 stream at this beach should also be avoided. Beach 2 is a NOAA restricted zone Remove oiled debris in upper ITZ

MAMMALS: Otters ___ Harbor Seals X Sea Lions ___ Whales ___

Other Seal not oiled

BIRDS: ~~None~~ gulls not oiled

GENERAL OBSERVATIONS: This segment contains 4 beaches separated by rocks - rock faces. Oil is discontinuous but moderate

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island/ west side Site _____

Location Prefix KN Segment # 502 Length 1950 m

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility Variable oil from ~~heavy~~ to moderate to moderate +

Width of beach zone surveyed 30 - 50 m Tree fringe surveyed 5-15 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT

General observations justifying survey method and segment's site probability:

Shore Profile Steep rock outcrops in most areas, some pocket beaches w/ gentle slopes

Fresh Water Sources Small streams

Sea Exposure Open to the West.

Access/Safety fair access to beaches w/ landing craft.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

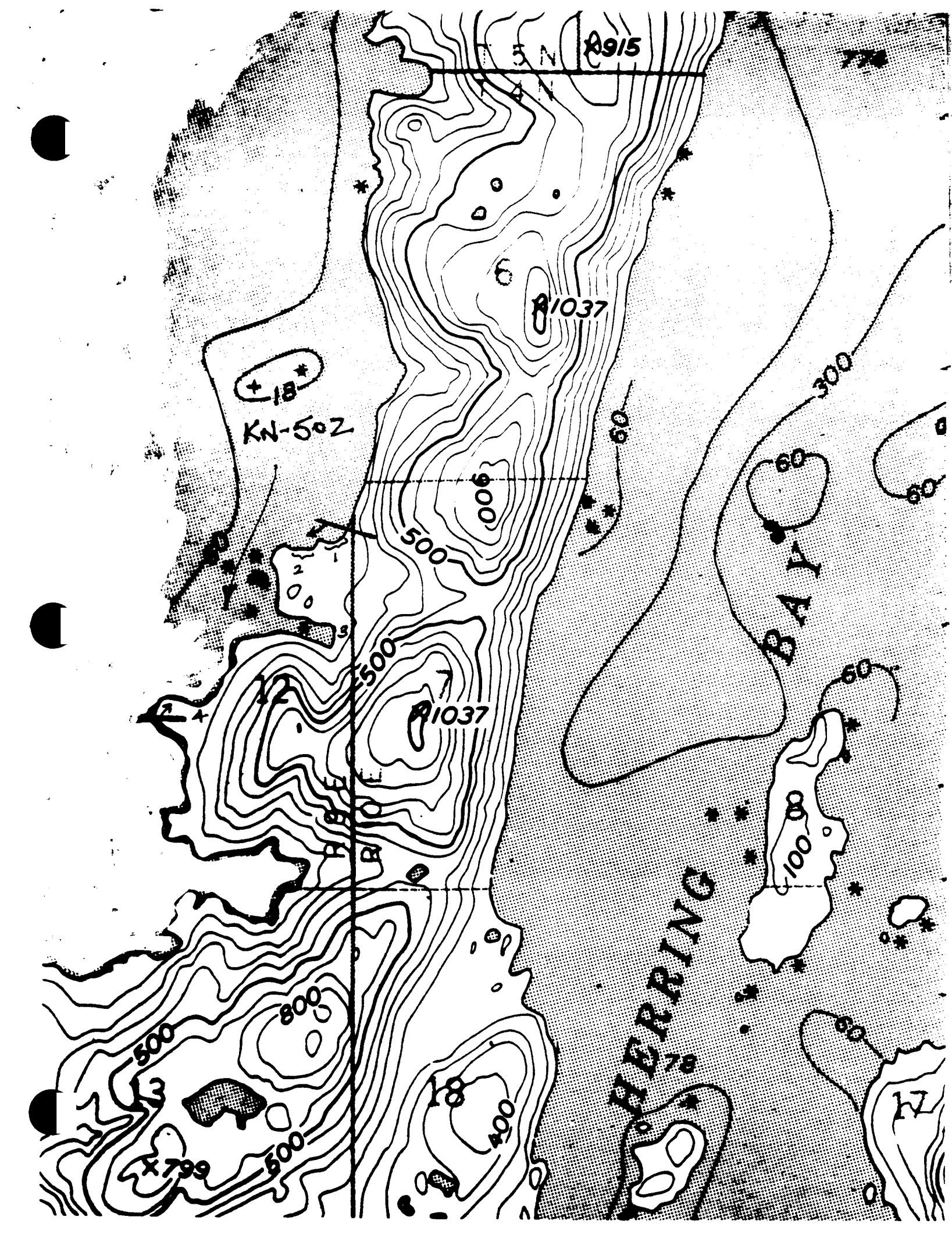
B/W Roll # WA2 Frames 23-27
B/W Roll # WA3 3-5

Observer(s) ANDREFSKY

Time survey started 9:30 AM Time survey ended 11:23 AM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered during cleanup contact EXXON archaeologists immediately.


5 N
1015
1037
18
KN-502
300
60
500
600
1037
BAY
100
800
500
600
400
18

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-503

LOCATION: (see enclosed map) Knight Island-Herring Point Southwest

ADEC NO. SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- Flood/flush with warm to hot water (up to 140°F) on low angle beach.
- Use moderate to high pressure washing on vertical rock.
- Use other approved methods as appropriate.

Priorities Considerations: Difficult access to small coves and beaches.
Class 3-4: Moderate to light oil.
Class B: Resources absent.

Ecological Constraints (from site survey): Avoid healthy lower intertidal zone. Clean at high/ebbing tide or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E Holmes
State Historic Preservation Officer * Date: June 10, 1989

ISCC: Sharon K. Christopherson 6-14-89

EXXON: [signature] Date: June 14-89

FOSC: [signature] Date: 6-14-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 11:00 Observer: G. MACDONALD

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION W. COAST of KNIGHT ISL. SEGMENT NUMBER KN-503

LENGTH OF SHORELINE SEGMENT: 900 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA/COV)/HLD/STRT Slope: (LANG)/HANG/(VER) (GRAVEL BEACHES / CLIFFLINE)

Wave Exposure: High/Med/(Low) (10%)

Sediment: B 15 % / C 15 % / P ___ % / G ___ % / S (TRACE) % / M ___ % / R 60 %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / (M) / L

Continuous: Y/N % of Segment _____ Width of Band: _____ m

Sporadic: (Y)/N % of Segment 30

Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: <5 cm

Pooled Oil: ϕ % "Free" Oil: ϕ % (Coated:) H ___ % / M ___ % / L 100 %

Fresh _____ % Mousse _____ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

OIL < 0.5 mm THICK; PATCHY OILED AREAS ON SMALL MIXED PEBBLE/GRAVEL BEACHES; DIFFICULT ACCESS TO SMALL COVE BEACHES; OIL DECREASES SOUTHWARD.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: South of Herring Pt OBSERVER: SM Barr

LOCATION PREFIX: KN SEG. NO.: 503 LENGTH: 900 (M)

DATE: 6/6/89 TIME (HHMM): 1100 TIDE HT.: 0-1 (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)/N Dense Y/N Sparse Y/N None Y/N

Oiled in upper ITz Healthy in lower ITz

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Several patches oiled but not gaping

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Several patches oiled but not dead

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Alive

Limpets: Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense in tidal pools - alive

OTHER OBSERVATIONS: Some oiled debris high in ITz. Healthy Ulva in lower ITz. Beach grass in supratidal (some oiled). Some tidal pools with sheen.

CLEANUP PRECAUTIONS: Avoid healthy lower intertidal areas

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other None-

BIRDS: Gulls, oystercatchers not apparently oiled

GENERAL OBSERVATIONS: This segment consists of 2 cobble-gravel-sand beaches separated by rocky rock face. Overall oiling is light to moderate.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island/westside Site _____

Location Prefix KN Segment # 503 Length 900 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility moderate to light on the southern end.

Width of beach zone surveyed 0-20 m Tree fringe surveyed 5 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

General observations justifying survey method and segment's site probability:

Shore Profile Rocky outcrops (steep) with small pocket beaches.

Fresh Water Sources small stream, seeps

Sea Exposure Open to the west

Access/Safety poor access due to outcrops.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

B/W Roll # — Frames —

Observer(s) ANDREASEN

Time survey started 11:25 AM Time survey ended 12:00 NOON

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered during cleanup contact Exxon archaeologists immediately.


1015
1037
1037
18
60
300
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KN 503
60
60
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60
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78
BAY
KARLING

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-504

LOCATION: (see enclosed map) Knight Island-Herring Point southwest

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time->95% of segment is oil free and the remainder is very light, and very sporadic in its distribution.

Priorities Considerations: Very low priority.

Ecological Constraints (from site survey): Overall impact of oil is minor. Sensitive lower intertidal organisms, could be negatively affected by cleanup activities.

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: June 10, 1989

ISCC: Sharon K. Christopherson 6-14-89

EXXON: _____ Date: June 14-89

FOSC: _____ Date: 6-18-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 11:50 Observer: G. MACDONALD

Surveyed From: (Foot) (Boat) Helio/Plane Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION W. COAST of KNIGHT ISL. SEGMENT NUMBER KN-504

LENGTH OF SHORELINE SEGMENT: 1,000 m

ACCESS: Foot/Vehicle (Boat) Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/(BEA/COV)/HLD/STRT Slope: (LANG)/HANG/VER

Wave Exposure: High/Med/(Low)

Sediment: B___% / C[redacted]% / P ϕ % / G[redacted]% / S___% / M___% / R 80 % (20)

Drift Debris on Beach: (Yes)/No (Supra/Upper)/Mid/Lower Type LOGS & FUCUS

OIL

Degree of Oiling: Heavy/Moderate/(Light/No Oil)/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: Y/(N) % of Segment < 10 Width of Band: < 0.5 m

Sporadic: (Y)/N % of Segment < 10

Est. Oil Thickness where > 1cm: ____cm Est. Oil Penetration: ϕ cm

Pooled Oil: ϕ % "Free" Oil: ϕ % Coated: H___% /M___% /L 100 % ← VERY LIGHT

Fresh ____% Mousse ____% Tar Formation: 100 %

Drift Debris Oiled ? (Yes)/No (Supra/Upper)/Mid/Lower Amount: H/M/(L)

Comments:

TAR SPLATS @ SPLASH ZONE W/ OCCASIONAL V. NARROW BAND (< 0.5m) ON SOME OUTCROP KNOLLS;

V. LIGHT DISCONTINUOUS OILING OVERALL — INSUFFICIENT TO JUSTIFY CLEANUP BY BARGE.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries _____

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: _____



version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: SW of Herring Point OBSERVER: S.M.EA.

LOCATION PREFIX: KN SEG. NO.: SC4 LENGTH: 1000 (M)

DATE: 6/6/89 TIME (HHMM): 1150 TIDE HT.: +1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Healthy throughout segment

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Also healthy and unoiled

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Spat are dense in several areas - None oiled

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Not oiled

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Not oiled

OTHER OBSERVATIONS: Dense thais feeding on sparse Mytilus

V. light to no oil Dense Macoma spat on beaches

CLEANUP PRECAUTIONS: No clean-up. Any activity would be detrimental to life on the beaches. Overall impact of oil is very minor.

MAMMALS: Otters ___ Harbor Seals ___ Sea Lions ___ Whales ___
Other None

BIRDS: gulls - not oiled

GENERAL OBSERVATIONS: Segment consists of rock faces with several gravel beaches. oiling is very light to Non-Existant Discontinuous.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island/westside Site _____

Location Prefix KN Segment # 504 Length 1000 M

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility very, very light oil

Width of beach zone surveyed 0-30 m Tree fringe surveyed 10 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

General observations justifying survey method and segment's site probability:

Shore Profile Rock outcrops jutting into water w/ occasional pocket beaches

Fresh Water Sources Small streams & seeps.

Sea Exposure Open to the South, west and North.

Access/Safety poor access for landing.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

B/W Roll # — Frames —

Observer(s) ANDREFSKY

Time survey started 12:00 NOON Time survey ended 12:27 PM

Cultural resource considerations/restraints:

IF heretofore unidentified cultural resources are discovered during cleanup contact Exxon archaeologists immediately.


T 5 N
R 15 E
1037
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600
300
60
60
60
60
60
6-6-89 ANDREFSKY
Location of Segment
KN-504
No Cultural Resources
Observed.
Ground Survey Zone
½ MILE
KN-504
BAY
KIPNUK
800
500
500
400
18
78
100

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-505

LOCATION: (see enclosed map) Knight Island-Herring Point southwest

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- Small barge and/or cleanup team as beaches are small and shoreline is dotted with boulders.
- Flood/flush with warm to hot water (up to 140 F) on low angle beach.
- Use moderate to high pressure washing on vertical rock.
- Use other approved methods as appropriate.

Priorities Considerations:
- Class 3: Moderate oil.
  Class B: Resources absent.

Ecological Constraints (from site survey): Avoid lower intertidal zone and any areas of healthy vegetation. Clean at mid to high tide or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
Absolutely no access above high tide line in west-central portion of segment. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes — Date: June 10, 1989
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson — 6-14-89

EXXON: [signature] — Date: June 14-89

FOSC: [signature] — Date: 6-14-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 12:20 Observer: G. MACDONALD

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: Sun/Cloud/Rain/Snow/Fo

LOCATION

LOCATION W. COAST of KNIGHT ISL. SEGMENT NUMBER KN-505

LENGTH OF SHORELINE SEGMENT: 1,250 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/(BEA)/(COV)/(HLD)/STRT Slope: (LANG)/(HANG)/(VER)

GRAVEL BEACHES ROCK OUTCROPS.

Wave Exposure: High/(Med)/(Low) NORTHERLY STORMS ONLY.

Sediment: B 10 % / C 10 % / P 20 % / G ___ % / S 10 % / M ___ % / R 50 %

Drift Debris on Beach: (Yes)/No Supra/(Upper)/Mid/Lower Type LOGS

OIL

Degree of Oiling: Heavy/(Moderate)/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / SP / (H) / M / L

Continuous: (Y)/N % of Segment < 10 Width of Band: < 0.3 m

Sporadic: (Y)/N % of Segment < 10 %

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: > 20 cm

Pooled Oil: 0 % "Free" Oil: 0 % (Coated): H ___ % / M 40 % / L 60 %

Fresh ___ % Mousse 90 % Tar Formation: 10 %

Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

OIL IS V. DARK BROWN "MATURE" MOUSSE; PREDOMINANTLY COATING SHINGLE BEACHES AND OCCASIONAL ROCKY BENCHES;

MAP APPENDED OVERLEAF W/ NOTES.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: SW of Herring Point OBSERVER: S.M. Bue

LOCATION PREFIX: KN SEG. NO.: 505 LENGTH: 1250 (M)

DATE: 6/6/89 TIME (HHMM): 1230 TIDE HT.: 7 ½ (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense on boulders - coated (oiled) in oil band zone. More oiled on small rocky beaches.

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense patches on boulders - some coated. Capping near tension zone

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Sparse on boulders and gravel beaches.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None (Y)/N

None seen

OTHER OBSERVATIONS: Sheen on water in cove

CLEANUP PRECAUTIONS: Avoid healthy lower ITZ

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other None

BIRDS: Gulls, Eagles

GENERAL OBSERVATIONS: Segment consists of several rocky beaches separated by rock bluffs. The entire segment is a cove. Typical oil cond. from site moderate

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island/west side Site _____

Location Prefix KW Segment # 505 Length 1250 m

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility Variable from light to heavy in places

Width of beach zone surveyed 0-30 m Tree fringe surveyed 5-40 m.

Cultural resources observed in beach zone (AHRS code) NONE
FOR, RKS, MON, PAD.

Cultural resources observed in tree fringe (AHRS code) PAD

General observations justifying survey method and segment's site probability:

Shore Profile Boulder/cobble pocket beaches and steep rocky outcrops

Fresh Water Sources seeps, small streams.

Sea Exposure Open to the North.

Access/Safety fair access to cobble beaches.

Probability of undiscovered sites in beach zone (circle one) 1 2 (3) 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

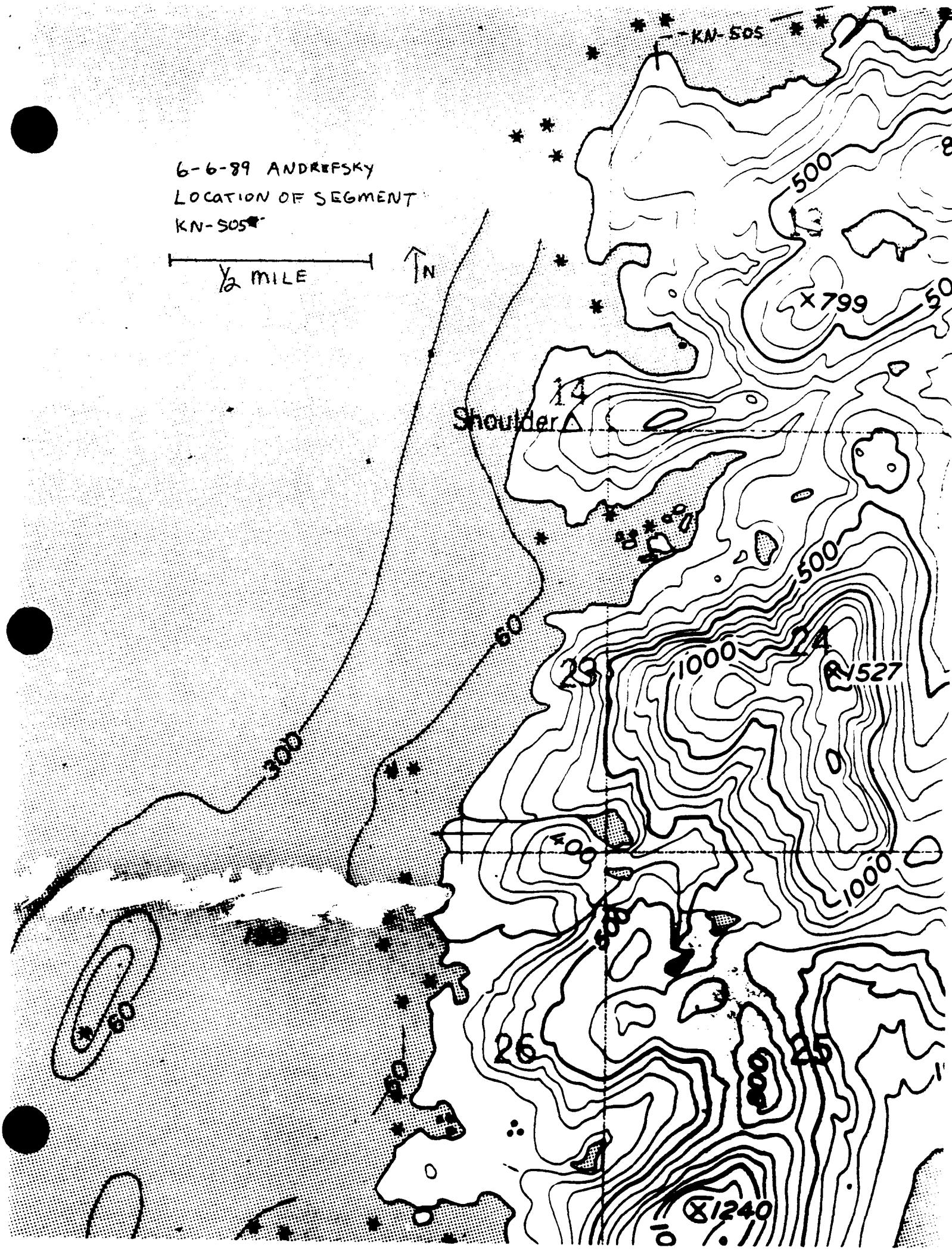
B/W Roll # WA3 Frames 6-23

Observer(s) ANDREFSKY

Time survey started 12:27 PM Time survey ended 1:12 PM

Cultural resource considerations/restraints:

Access should be restricted during cleanup. If heretofore unidentified cultural resources are discovered during cleanup contact Exxon archaeologists immediately


6-6-89 ANDREFSKY
LOCATION OF SEGMENT
KN-505
½ MILE
N
KN-505
500
X799
Shoulder
14
500
1000
527
1000
300
60
60
60
60
26
1240

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/10/89 SHORELINE SEGMENT KN-506

LOCATION: (see enclosed map) Knight Island-Herring Point southwest

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/06/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time- >90% of beach is not oiled and remainder is sporadic and very shallow in penetration.

Priorities Considerations: Very low priority.

Ecological Constraints (from site survey): Impact of cleanup activities on sensitive intertidal organisms outweighs any beneficial effects that may be incurred by the cleanup./

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer * Date: June 10, 1989

ISCC: Sharon K. Christopherson 6-14-89

EXXON: [signature] Date: June 14-89

FOSC: _____ Date: _____

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

SHORELINE OIL EVALUATION

Date: 6/6/89 Time: 13:00 HRS Observer: G. MACDONALD

Surveyed From: (Foot)/(Boat)/Helio/Plane Weather: (Sun)/Cloud/Rain/Snow/Fog

LOCATION

LOCATION W. COAST of KNIGHT ISL. SEGMENT NUMBER KN-506

LENGTH OF SHORELINE SEGMENT: 650 m

ACCESS: Foot/Vehicle/(Boat)/(Barge)/Helio/(Float Plane)

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/(STRT) Slope: LANG/(HANG)/VER

Wave Exposure: High/(Med)/Low

Sediment: B___% / C___% / (P 20%) / (G___%) / S___% / M___% / R 80 %

Drift Debris on Beach: Yes/(No) Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/Moderate/(Light)/No Oil/Unobserved

Area of Beach Impact: SU / (SP / H) / M / L

Continuous: Y/N % of Segment_____ Width of Band: _____m

Sporadic: (Y)/N % of Segment < 5

Est. Oil Thickness where > 1cm:_____cm Est. Oil Penetration: < 5 cm

Pooled Oil: ϕ % "Free" Oil: ϕ % (Coated) H___% / M 30 % / L 70 %

Fresh ϕ % Mousse ϕ % Tar Formation: 100 %

Drift Debris Oiled ? Yes/(No) Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

V. LIGHT DISCONTINUOUS OILING; PATCHES ON MOD. EXPOSED LOW (3m) CLIFFLINE; INSUFFICIENT OIL TO JUSTIFY CLEANUP.

MAP APPENDED W/ SITE NOTES.

version: 4/24/89

ECOLOGICAL EVALUATION

LOCATION: Knight Island SITE: SW of Herring Point OBSERVER: SM. Bahn

LOCATION PREFIX: KN SEG. NO.: 506 LENGTH: 650 (M)

DATE: 6/6/89 TIME (HHMM): 1300 TIDE HT.: ~~+3~~ +2 (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: (Rocks) Boulder Cobble Gravel (Sand) Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. (Y)/N Dense (Y)/N Sparse Y/N None Y/N

Continuous on rock faces - dense on boulders - healthy

Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Dense patches on boulders - healthy - predation by Thais

Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/N

Healthy

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

Among Mytilus patches

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/N

In tidal pools

OTHER OBSERVATIONS: Oil is very light and discontinuous

Oil impact is very minor

CLEANUP PRECAUTIONS: No cleanup. Impact of clean up activities on sensitive intertidal organisms outweighs any beneficial effects of clean up.

MAMMALS: Otters ____ Harbor Seals ____ Sea Lions ____ Whales ____
Other Seals

BIRDS: Gulls oystercatchers

GENERAL OBSERVATIONS: Very light and discontinuous,

overall healthy rocky intertidal community

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-6-89 Location Knight Island/Westside Site _____

Location Prefix KN Segment # 506 Length 650 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility light, discontinuous oil

Width of beach zone surveyed 0-10 m Tree fringe surveyed 0 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

General observations justifying survey method and segment's site probability:

Shore Profile steep rocky beaches w/ one very small cobble pocket beach.

Fresh Water Sources seeps

Sea Exposure Open to the West

Access/Safety impossible to land, but good for barge cleanup anchored offshore

Probability of undiscovered sites in beach zone (circle one) 1 (2) 3 4 5

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # — Frames —

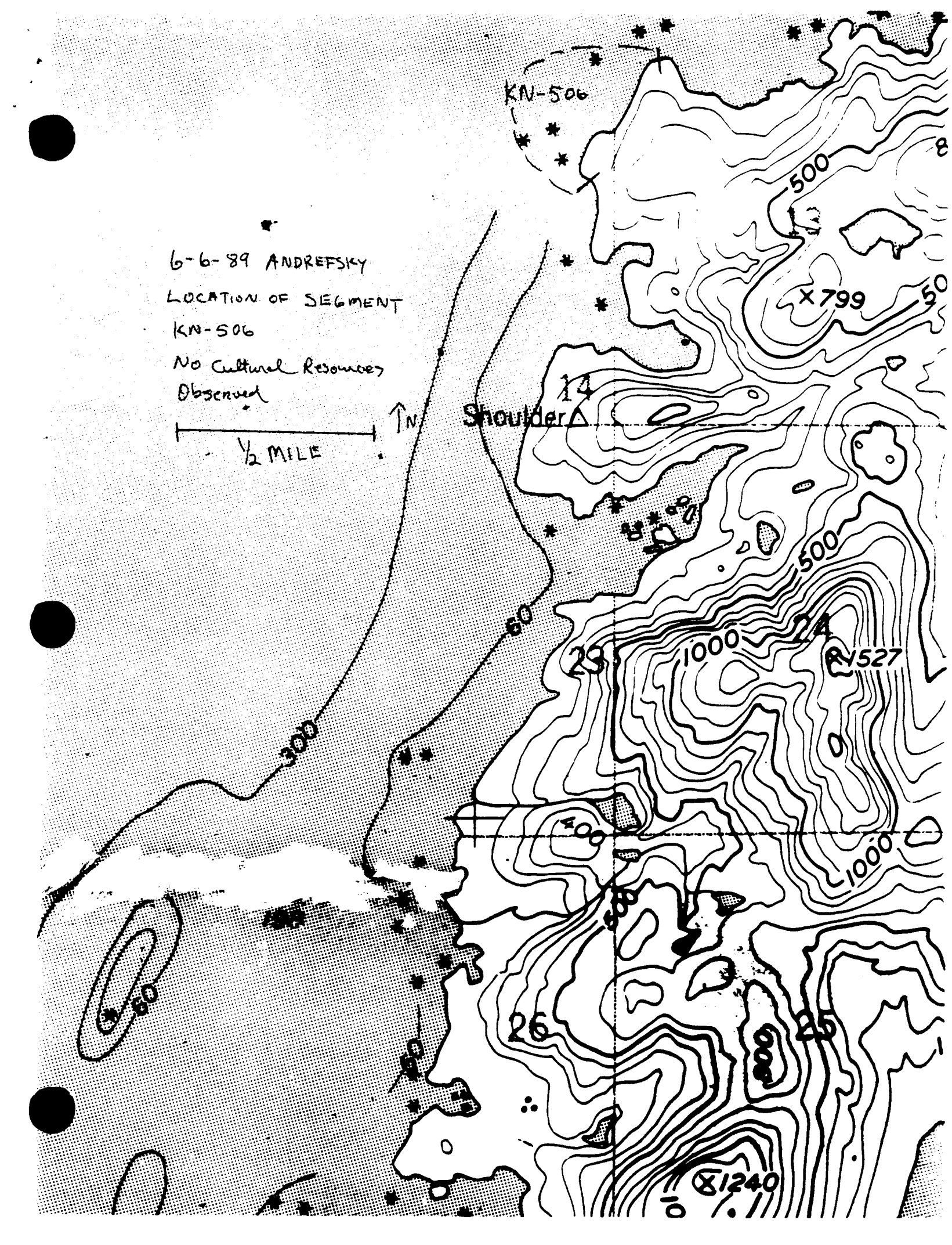
B/W Roll # — Frames —

Observer(s) ANDREFSKY

Time survey started 1:12 PM Time survey ended 1:25 PM.

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered during cleanup contact Exxon archaeologists immediately.


KN-506
6-6-89 ANDREFSKY
LOCATION OF SEGMENT
KN-506
No Cultural Resources
Observed
½ MILE
N
Shoulder
500
1000
300
60
14
23
24
26
X799
X1527
X1240

completed
7/19/89

SEGMENT KN-500 INSPECTION # 1 SEGMENT

DATE 7/23/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical BOOM IN ISOLATED AREA
- [x] Other SNARE BOOM W-TIDAL ZONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-505 IS COMPLETE, READY FOR DEMOBILIZATION + DEPLOYMENT TO A NEW SEGMENT.

Signature [signature] Date: 7/23/89 Time: 1035 AM

Printed Name JOHN C. PONTICELLO

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
0	Medium
15	Light
9	Very Light
76	None
100 %	

Subsurface Oil

- [ ] Yes
- [x] No

Comments

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments NONE AVAILABLE

Signature Date: / / Time:

Printed Name

FOSC rep Demobilization approved/disapproved

Comments AS PER CDR CONVERSATION

Signature [signature] Date: 7/23/89 Time: 1045

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

f KN-
SEG 501 INSPECTIO # 1

DATE 7/20/89

SEGMENT INSPECTION RECORD

EBS 7/21/89

Shoreline Treatment Process(es) Completed for this Segment

- ☒ Hot water wash
- ☒ Warm water wash
- ☒ Water deluge
- ☐ Mechanical
- ☒ Non-mechanical BIOREM IN ISOLATED AREAS
- ☒ Other SNARE BOOM

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN501 IS COMPLETE. READY FOR DEMOBILIZATION + DEPLOYMENT TO A NEW SEGMENT

Signature [signature] Date: 7/20/89 Time:

Printed Name JOHN C. PONTICELLO

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
1	Medium
10	Light
10	Very Light
79	None
100 %	

Subsurface Oil

☐ Yes ☑ No

Comments

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep

Comments Gross heavy surface oil contamination removed

Signature [signature] Date: 7/20/89 Time: 1410

Printed Name Douglas H. Dasher EE III, ADEC

FOSC rep Demobilization approved/disapproved

Comments NO FURTHER CONTAMINATION

Signature [signature] Date: 7/20/89 Time: 1410

Printed Name [illegible]

COPY: EXXON ADEC FOSC ISCC

SEG KN502 INSPECTION # 1 **SEGMENT**

DATE 7/18/89 **INSPECTION RECORD**

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical BOOM BOOM IN ISOLATED AREAS
- [x] Other SWAMP BOOM IN TIDAL ZONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN502 IS COMPLETE. REQUEST FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature [signature] Date: 7/18/89 Time: 1502 PM

Printed Name JOHN C. PONTICELLO

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
20	Medium
~~25~~ 30	Light
0	Very Light
50	None
100 %	

Subsurface Oil: [x] Yes [ ] No

Comments LIGHT TO MODERATE IN SOME AREAS.

Reassessment

[x] Yes - necessary [ ] No - not necessary unless re-oiled

ADEC rep Comments No green heavy pocket oil. Some subsurface oil.

Signature [signature] Date: 7/18/89 Time: 1515

Printed Name Douglas H. Dasher, EETT, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments NO GREEN CONTAMINATION

Signature [signature] CWO2 Date: 7/18/89 Time: 1505

Printed Name [illegible] CWO2

COPY: EXXON ADEC FOSC ISCC

SEG KN-503 INSPECTION # 1

DATE 7/20/89

SEGMENT INSPECTION RECORD

CBS 7/21/89

Shoreline Treatment Process(es) Completed for this Segment

- [x] Hot water wash
- [x] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [x] Non-mechanical ADS PUT IN ISOLATED AREAS
- [x] Other SWEPT DOWN & HAND WIPED

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN-503 IS COMPLETE. AGENCY FOR DEMOBILIZATION + DEPLOYMENT TO A NEW SEGMENT

Signature J C Pontic Date: 7/20/89 Time:

Printed Name JOHN C PONTICELLO

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
2	Medium
8	Light
0	Very Light
90	None
100 %	

Subsurface Oil: [x] Yes [ ] No

Comments IN MEDIUM OIL AREAS LIGHT

Reassessment

- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments Gross heavy surface oil contamination removed.

Signature Douglas H Dasher Date: 7/20/89 Time: 1410

Printed Name Douglas H. Dasher, F.E.III, ADEC

FOSC rep **Demobilization approved/disapproved**

Comments NO GROSS CONTAMINATION

Signature Paul Conn Date: 7/20/89 Time: 1405

Printed Name PAUL PATRICK CONN

COPY: EXXON ADEC FOSC ISCC

SEG KN-505 INSPECTION # 1

DATE 7/23/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☒ Hot water wash
- ☒ Warm water wash
- ☒ Water deluge
- ☐ Mechanical
- ☒ Non-mechanical BOOM IN ISOLATED AREAS
- ☒ Other SWING BOOM IN TIDAL ZONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN500 IS COMPLETE. READY FOR DEMOBILIZATION + DEPLOYMENT TO A NEW SEGMENT

Signature J C Bell Date: 7/23/89 Time: 1032 AST

Printed Name JOHN C. BONTICELLO

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
0	Heavy
30	Medium
25	Light
10	Very Light
35	None
100 %	

Subsurface Oil

☑ Yes ☐ No

Comments MODERATE IN FINE GRAVEL AREAS

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments BOOMS PROVIDED

Signature Date: / / Time:

Printed Name

FOSC rep Demobilization approved / disapproved

Comments AS PLANS CONTINUED

Signature Date: 7/23/89 Time: 1035

Printed Name PAUL FUTTER COAST

COPY: EXXON ADEC FOSC ISCC

8/21/89

KN506 INSPECTION # ___ SEGMENT

DATE 1 AUG. 89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- ☐ Hot water wash
- ☐ Warm water wash
- ☐ Water deluge
- ☐ Mechanical ____
- ☒ Non-mechanical SET SNARE BOOM
- ☐ Other ____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments TREATMENT OF SEGMENT KN506 IS COMPLETE. READY FOR DEPLOYMENT TO A NEW SEGMENT

Signature Date: 8/1/89 Time: 20.20

Printed Name GUS GARCIA

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil Percent	Degree of Oiling
____	Heavy
____	Medium
____	Light
____	Very Light
____	None
100 %	

Subsurface Oil

☐ Yes ☑ No

Comments No work recommended by segment report

Reassessment

☑ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments none available.

Signature Date: / / Time:

Printed Name

FOSC rep Demobilization (approved)/disapproved

Comments none.

Signature V. Pshevlotzky Date: 08/01/89 Time: 2100

Printed Name V. PSHEVLOTZKY, PSC

COPY: EXXON ADEC FOSC ISCC