



EVOS
GC
1552
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S42
1989
v.16

[Shoreline evaluations, 1989].

Volume 16

Crafton Island, Main Bay, Falls Bay, Eshamy Bay, Point Nowell

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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 visible oil)

RECEIVED
A.R.L.I.S.
ANCHORAGE, ALASKA
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

(version 5/13/89)

Ngall Kanga
Sent to TR + OR

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CRAFTON ISLAND

Includes Shoreline Segments: CR-1, CR-2, CR-3, CR-4, CR-5

Submitted : *ARM: Adam* Date: 5-15-89

(for Exxon)

FOSC Approval: *David Zampieri* Date: 5/26/89

ISCC Representative: *Pat* 5/25/89

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.

ARCHEOLOGICAL MONITOR REQUIRED DURING

Distribution: *CLEANUP ON THE ISLAND*

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

(version 5/17/89)

SHORELINE CLEANUP PROGRAM

DATE 5/17/89

SHORELINE SEGMENT CR-1

LOCATION: (see enclosed map) CRAFTON ISLAND Northwest
tip of Crafton Island

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

Recommended Cleanup Activity(ies):

Hot water pressure wash.

Priorities Considerations:

Low priority.

Ecological Constraints (from site survey):

~~None.~~ *AD* ARCHEOLOGICAL MONITOR REQUIRED DURING } delete
CLEANUP ON THE ISLAND. } ok
per Lore J.
et. d. 5/31/89
phone
of Alaska

Archeological Constraints (from site survey):

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

Wangley Reger
State Historic Preservation Officer *

Date: 5/18/89

EXXON: affal

Date: 5/25/89

FOSC: David Jamoff

Date: 5/26/89

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

REVISED

SHORELINE OIL EVALUATIONDate: 5 Mar 89 Time: 1145Observer: R. DuganSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION Crafton IslandSEGMENT NUMBER C R-1LENGTH OF SHORELINE SEGMENT: 600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B5 % / C5 % / P40 % / G % / S % / M % / R50 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs
weeds**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

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

Continuous: N % of Segment 80 Width of Band: 2 - 30 mSporadic: Y/N % of Segment 80Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: 15 cmPooled Oil: 5 % "Free" Oil: _____ % Coated: H80 % / M70 % / L? %Fresh _____ % Mousse 5 % Tar Formation: 80 %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

- low priority for cleanups
- wave action may help
- hot water/pressure wash necessary

ECOLOGICAL EVALUATION

LOCATION: Crafton Is SITE: OBSERVER: SMB

LOCATION PREFIX: CR SEG. NO.: 1 LENGTH: 600 (M)

DATE: 5/5/89 TIME (HHMM): 1145 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

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: High wave action

CLEANUP PRECAUTIONS: None

MAMMALS: Otters None Harbor Seals Sea Lions Whales
Other None

BIRDS: None

GENERAL OBSERVATIONS: Moderately oiled but high wave action
will argument cleanup - overall low priority

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 5/5/89 Location Beach of Crocker Island Site

Location Prefix CR Segment # CR1 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 light to medium

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 moderate profile

Fresh Water Sources none

Sea Exposure open to southwest

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 1145 Time survey ended 1300

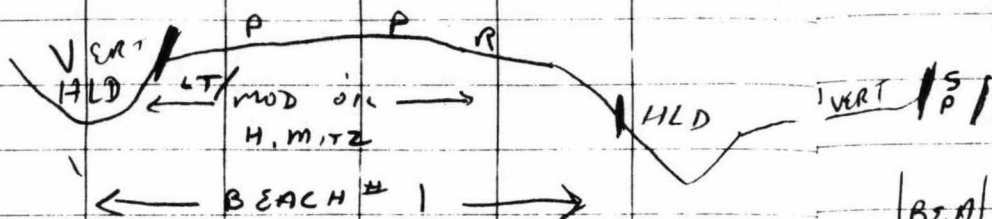
Cultural resource considerations/restraints:

If heretofore undiscovered cultural material is discovered during clean up notify Exxon archaeologist, C. Mobley, immediately

5 May 89

TIME: 1145

Segment: CR-1 Crafton Island
NW tip



10% more

6 in penetration

moderate wave exposure

patchy - sediment has
been stirred up
by waves since
oiling

medium wave exposure

BEACH

2
LT/Mod

CRAFTON ISLAND BLOCK

366

462

60

Light

CR-1

100

19

CR-2

Crafton
Island

60

60

300

60

CR-5

30

CR-3

Crafton I

30

Cabins

60

60

60

CR-4

102

60

60

60

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/17/89

SHORELINE SEGMENT CR-2

LOCATION: (see enclosed map) CRAFTON ISLAND - North East Coast

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/6/89

Recommended Cleanup Activity(ies):

Boulders and bedrock; hot water with pressure, pick up fucus.

Gravel beaches; back flush may work.

Priorities Considerations:

Low priority for cleanup; natural wave action cleaning now.

Ecological Constraints (from site survey):

~~NONE.~~

ARCHEOLOGICAL MONITOR REQUIRED DURING
CLEANUP ON THE ISLAND.

delete,
ok, but add
focus to keep
crews off
upland

Archeological Constraints (from site survey):

No cleanup or access allowed in that portion of the segment from the light to the offshore rocks 2/5 of a mile to the south. 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.

upland

see
phone no.

EXXON, SHORELINE
FS, Laura Johnson
5/31/89

Restrict access to uplands during cleanup operations.

Charles E. Holmes
State Historic Preservation Officer *

Date: May 18, 1989

EXXON: David Zavaroff

Date: 5/25/89

FOSC: David Zavaroff

Date: 5/22/89

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

SHORELINE OIL EVALUATIONDate: 6 May 89 Time: 1720Observer: R. Dugan

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATIONLOCATION NE. Coast of
CRAFTON ISLANDSEGMENT NUMBER CR-2LENGTH OF SHORELINE SEGMENT: 1200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/SEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 25 % / C 20 % / P 10 % / G % / S 5 % / M % / R 40 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP H / M / LContinuous: Y/N % of Segment 70 Width of Band: 10-50 mSporadic: Y/N % of Segment 30Est. Oil Thickness where > 1cm: 3 cm Est. Oil Penetration: 0-20 cm100 Pooled Oil: 1 % "Free" Oil: 1 % Coated: H 15 % / M 60 % / L 30 %100 Fresh % Mousse 10 % Tar Formation: 90 %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

High energy coast ; most sections with gravel
and small cobbles appear partly clean as rocks roll
around. Fucus & mussel areas trap oil & keep it.
Middle tide zone is worst section. Wave action appears
to be naturally scrubbing it.

ECOLOGICAL EVALUATION

LOCATION: ~~NE Coast~~ CR Crocker Is. SITE: NE COAST OBSERVER: DMc

LOCATION PREFIX: CR2 SEG. NO.: CR2 LENGTH: 1200 MT (M)

DATE: 5/6/89 TIME (HHMM): 1720 TIDE HT.: ~~1.5~~ 0.5 (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

Sub-tidal Fucus live, mid-high tidal very heavily oiled on rocks.

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

Heavily oiled - some live mussels in isolated clean pools.

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

Mostly dead, few live Bal. in isolated pools

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: 1 oiled bird; many areas mid-high tidal cleaned by wave action, sub-tidal heavily oiled

CLEANUP PRECAUTIONS: Very few live animals to be concerned with - clean at high tide.

MAMMALS: Otters ✓ Harbor Seals ✓ Sea Lions Whales
Other

BIRDS: Colony of about 20 cormorants on islet offshore - to the east; bald eagle in area.

GENERAL OBSERVATIONS: This segment consists of 2 beaches - moderate oiling.

This is high wave action area - natural cleanup obvious on beach areas. Also steep cliffs w/ dense oiled fucus. Priority for cleanup is low.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/6/89 Location CRAFTON ISLAND Site NORTH EAST COAST
Location Prefix CR Segment # 2 Length 2600 M Approx.

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)
Ground X (G - indicate on map)

Known cultural resources (AHRS #) SEW-004 Data Source AHRS FILES

Oil conditions/beach visibility DISCONTINUOUS LIGHT TO MODERATE OILING, GOOD BEACH VISIBILITY

Width of beach zone surveyed 5-50 m Tree fringe surveyed 5 M

Cultural resources observed in beach zone (AHRS code) RKS, FCR, BRL, MDN, PAG

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile Exposed bedrock cliffs with rocky coasts and gentle gradient from beach to

Fresh Water Sources Two small creeks present in segment

Sea Exposure Open exposed, high energy beaches with east exposure to Knight Island pass

Access/Safety Boat access is overland across Crafton Island - boat access to east side of island difficult and dangerous due to rocks and Shoals.

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 # T1-RCB-1 Frames 1-4, 12-24

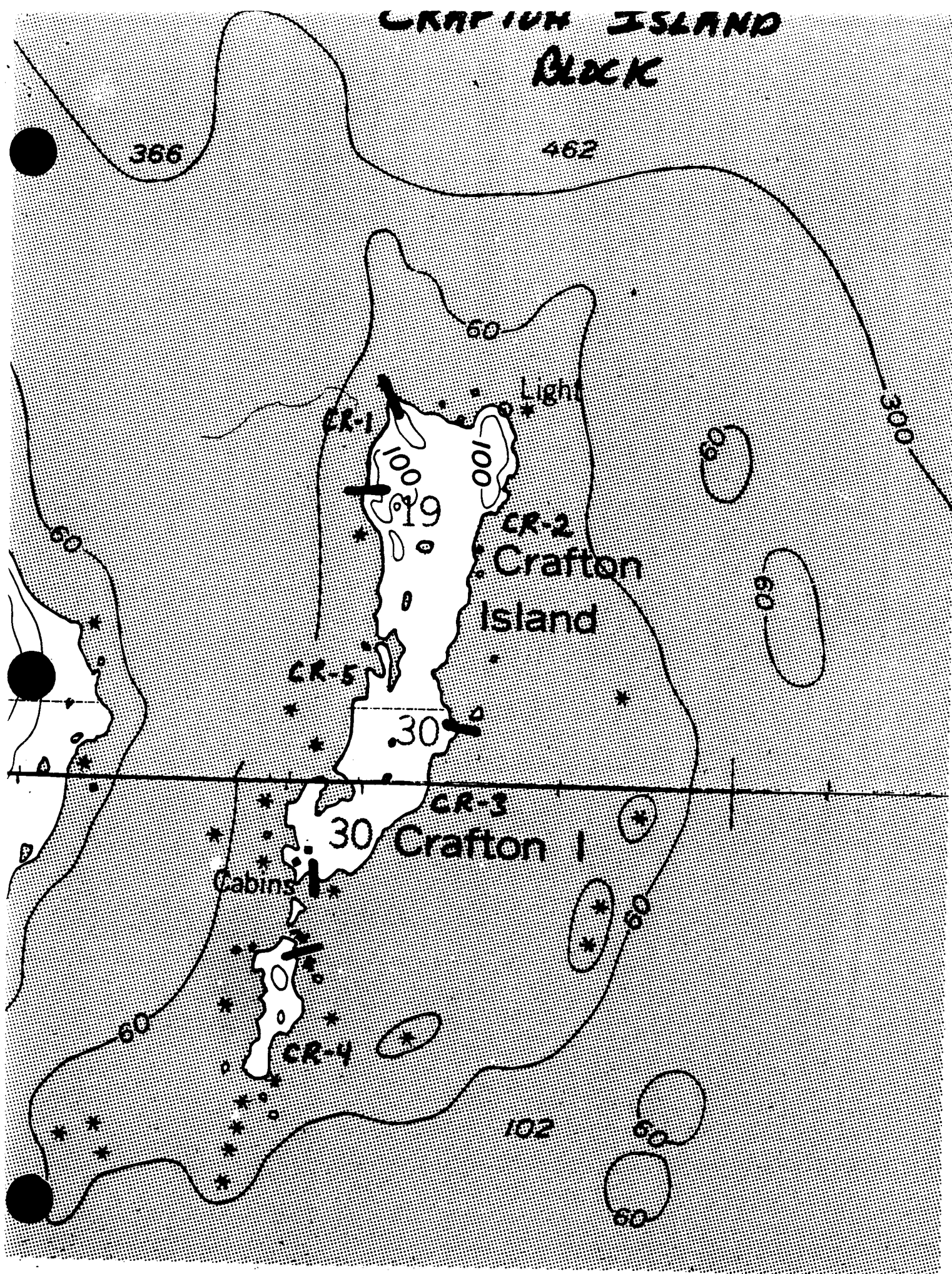
Observer(s) Bob Berts

Time survey started 5/6/89 1730 Time survey ended 5/6/89 1838
5/7/89 1200 5/7/89 1230

Cultural resource considerations/restraints:

Stay out of Sea Caves and rock overhangs. IF HERETOFORE UNDISCOVERED
CULTURAL MATERIALS ARE UNCOVERED DURING CLEANUP NOTIFY EXXON
ARCHAEOLOGIST C. MABLEY IMMEDIATELY (835-7749).

CRAFTON ISLAND BLOCK



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 5/17/89

SHORELINE SEGMENT CR-3

LOCATION: (see enclosed map) CRAFTON ISLAND Eastshore

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/7/89

Recommended Cleanup Activity(ies):

Hot water and pressure; back flush in gravelly areas.

Priorities Considerations:

Low; high energy beach will aid natural cleanup - reoiling not likely.

Ecological Constraints (from site survey):

~~None.~~ Clean at high tide ~~to~~ to avoid oiling intertidal areas or use techniques, like sorbents, to prevent oiling of intertidal areas.

Archeological Constraints (from site survey):

Archeological monitor required during cleanup of southern half of segment.

ARCHEOLOGICAL MONITOR REQUIRED DURING
CLEANUP ON THE ISLAND. *RS*

*delete
OK w/ EXXON
PHPC, P
Core Johnson
CAL, etc.*

Douglas Reger

State Historic Preservation Officer *

Date: 5/18/89

EXXON: *Paul*

Date: 5/24/89

FOSC: *David Zausoff*

Date: 5/26/89

*5/31/89
phone
grk*

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

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 17, 1989

SHORELINE SEGMENT CR-4

LOCATION: (see enclosed map) CRAFTON ISLAND South end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/7/89

Recommended Cleanup Activity(ies):
Hot water, pressure wash with back flushing.

Priorities Considerations:

Medium priority 1) Opposite set net sites
2) Low energy beach will not promote natural
cleanup on West side of segment.

Ecological Constraints (from site survey):

*"Restrict access to uplands
during cleanup operations."*

Archeological Constraints (from site survey):

No crew access to south end of main Crafton Island during cleanup of segment CR-4. 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.

ARCHEOLOGICAL MONITOR REQUIRED DURING CLEANUP OF
THE ISLAND.

at
Douglas Reger

State Historic Preservation Officer *

Date: 5/18/89

*add nonupland access
w/ Lore Johnson
5/31/89
JPK*

EXXON: *[Signature]*

Date: 5/25/89

FOSC: *David Jansofski*

Date: 5/26/89

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

SHORELINE OIL EVALUATIONDate: 7 May / Time: 0940Observer: R. DyanSurveyed From: Foot Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION South end of Cagayan Island SEGMENT NUMBER CR-4LENGTH OF SHORELINE SEGMENT: 1200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 10% / C 10% / P 10% / G ___% / S ___% / M ___% / R 70%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs
seaweed**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP H / M / LContinuous: Y/N % of Segment 50 Width of Band: 10-20 mSporadic: Y/N % of Segment 50Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: 2-25 cmPooled Oil: ___% "Free" Oil: ___% Coated: H 50% / M 40% / L ___%Fresh ___% Mousse 10% Tar Formation: 90%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- East side of island has light discontinuous oil in high & mid tide zones (high wave exposure)
- West side of Island has moderate oil, continuous in High & mid tide zones, 5-25 cm penetration in gravel zones.
- mid-priority to clean-up west side of Is.
- low-priority to clean-up east side of Is.

ECOLOGICAL EVALUATION

LOCATION: Crafton Island SITE: South End OBSERVER: A. McCormick

LOCATION PREFIX: _____ SEG. NO.: CR-4 LENGTH: 1200 m (M)

DATE: 5/7/89 TIME (HHMM): 0940 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 at mid-tide zone covered w/ oil, clean at low ITZ

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

Extensive myt. beds oiled in some low tidal areas + at mid 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)

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

OTHER OBSERVATIONS: Leptasterius, solaster, sea urchin, leeches(?) in
low ITZ under dense patches of algae - oil underneath here.

CLEANUP PRECAUTIONS: avoid cleanup during low tides.

MAMMALS: Otters _____ Harbor Seals ✓ Sea Lions _____ Whales _____
Other _____

BIRDS: Mergansers

GENERAL OBSERVATIONS: E. side of island low priority for cleanup due to
wave activity, west side mid priority at mid-high zones

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/7/89 Location CRAFTON ISLAND Site SMALL ISLAND AT
EXTREME SOUTH END
OF MAIN ISLAND.
Location Prefix CR Segment # 4 Length 6200 M

Survey Method:

Air _____ (A - indicate on map) Boat X (A - indicate on map)
Ground X (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____

Oil conditions/beach visibility LIGHT OIL ON EAST SIDE, MEDIUM OIL ON WEST SIDE

Width of beach zone surveyed 10-15M AT
NORTH END. 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 Mostly vertical rock - a few small coves w/ small sea caves

Fresh Water Sources Several small creeks

Sea Exposure East side: unprotected high energy coast, west side sheltered bays

Access/Safety Rocks and Shoals on east side, access from west side beach.

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 _____

NONE B/W Roll # _____ Frames _____

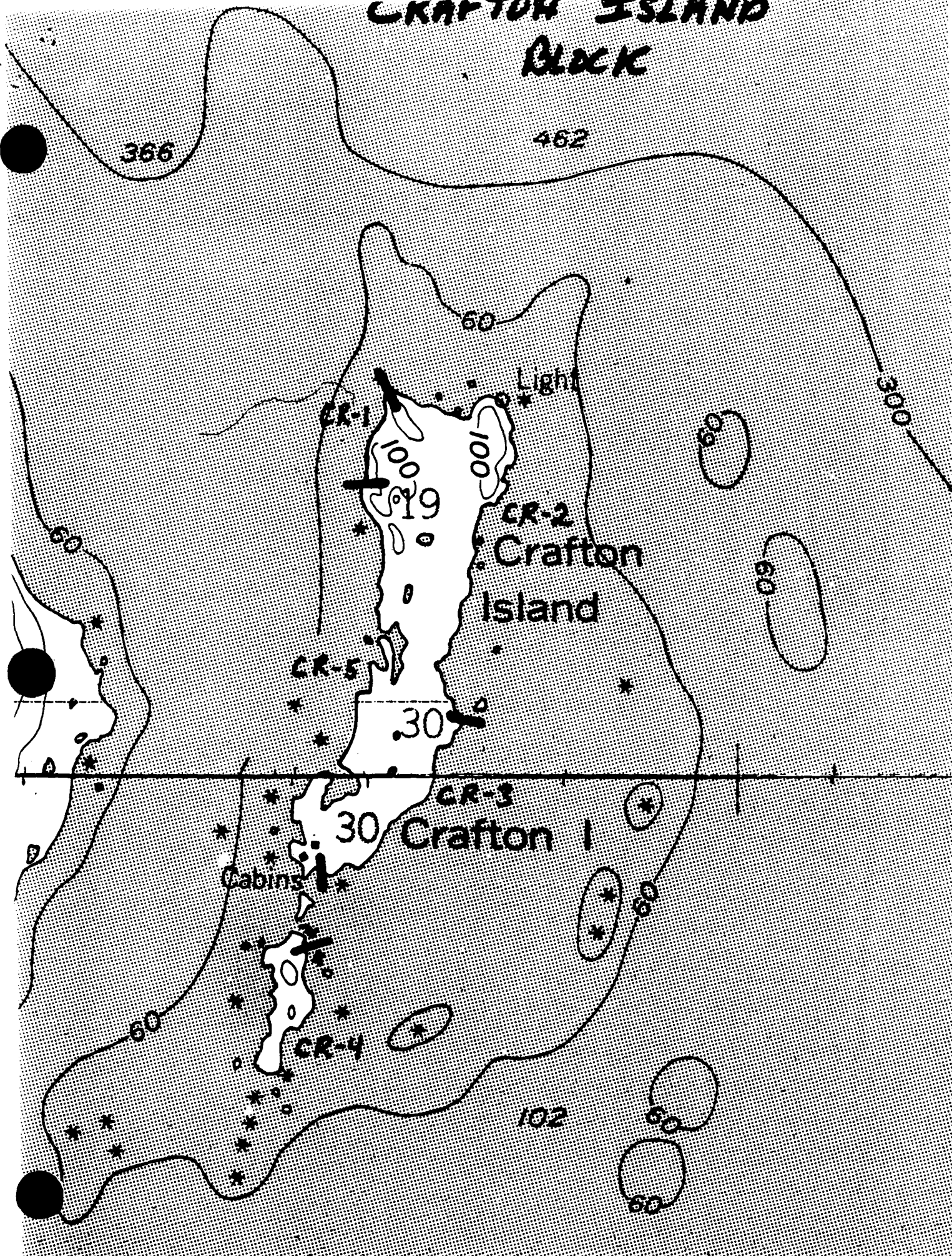
Observer(s) Bette

Time survey started Boat - 0815
Ground - 1015 Time survey ended Boat - 0830
Ground - 1030

Cultural resource considerations/restraints:

Do not allow clean up crews on main part of Crafton Island to
work without monitor. IF HERE TO FIND UNDISCOVERED CULTURAL MATERIALS
ARE UNCOVERED DURING CLEANUP NOTIFY EXXON PROJECT ARCHAEOLOGIST
IMMEDIATELY (835-7749).

462



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/17/89

SHORELINE SEGMENT CR-5

LOCATION: (see enclosed map) CRAFTON ISLAND West Side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/7/89

Recommended Cleanup Activity(ies):

Hot water pressure wash, back flush granular zones.

Priorities Considerations:

- High - medium priority: 1) South beach popular camping area.
2) Set net sites nearby.
3) Low energy coast will limit cleanup by natural wave action

*5/30 RAT gives high priority to long core on W. Shore of Crafton I.
Lots of free oil & mouse.*

Ecological Constraints (from site survey):

None.

Archeological Constraints (from site survey):

Archaeology monitor required during cleanup of southern 1/5 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.

ARCHEOLOGICAL MONITOR REQUIRED DURING CLEANUP?
ON THE ISLAND. *detete*

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/18/89

EXXON: *Paul*

Date: 5/25/89

FOSC: *David Janowski*

Date: 5/26/89

*detete
per phone
w/ Lou Johnson
et. al. SHP
5/31/89
DRK now*

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

SHORELINE OIL EVALUATIONDate: 7 May 89 Time: 1100Observer: R. DuganSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION West side, N 2/3 of
CRAFTON ISLANDSEGMENT NUMBER CR-5LENGTH OF SHORELINE SEGMENT: 1200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 10% / P 20% / G % / S % / M % / R 50%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs
trash
sea weed**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 95 Width of Band: 5-30 mSporadic: Y/N % of Segment 5Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: 5-10 cmPooled Oil: % "Free" Oil: 5% Coated: H 50% / M 40% / L 5%Fresh % Mousse 5% Tar Formation: 95%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H M/L**Comments:**

This segment is continuously moderately oiled
with a variable morphology. Cleanup
priority is medium to high due to
nearby set net sites and lack of
self-cleaning wave action.

ECOLOGICAL EVALUATION

LOCATION: Crofton Is. SITE: West Side N²/₃ OBSERVER: D. McCormick

LOCATION PREFIX: _____ SEG. NO.: CR-5 LENGTH: 1200 (M)

DATE: 5/7/89 TIME (HHMM): 11:10 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 Dense Y/N Sparse Y/N None Y/N

Live Fucus occurs in patchy areas - moderate oiling otherwise

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: None

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

BIRDS: oiled dead duck

GENERAL OBSERVATIONS: medium priority for cleanup - most muscle beds + fucus at low-mid tide zone completely oil coated

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/7/89 Location CRAFTON ISLAND Site WEST COAST

Location Prefix CR Segment # 5 Length 2,000 M

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) SEW-248 Data Source AHRS FILES

Oil conditions/beach visibility MODERATE OILING - POOR BEACH VISIBILITY

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

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CBN, HTD, FxF,

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

Shore Profile 5-15 M high vertical rock with protected coves and estuaries - pocket coves

Fresh Water Sources Humorous creeks

Sea Exposure Protected and sheltered west side of island

Access/Safety Easy access and good anchorages - a few rocks and shoals

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 _____

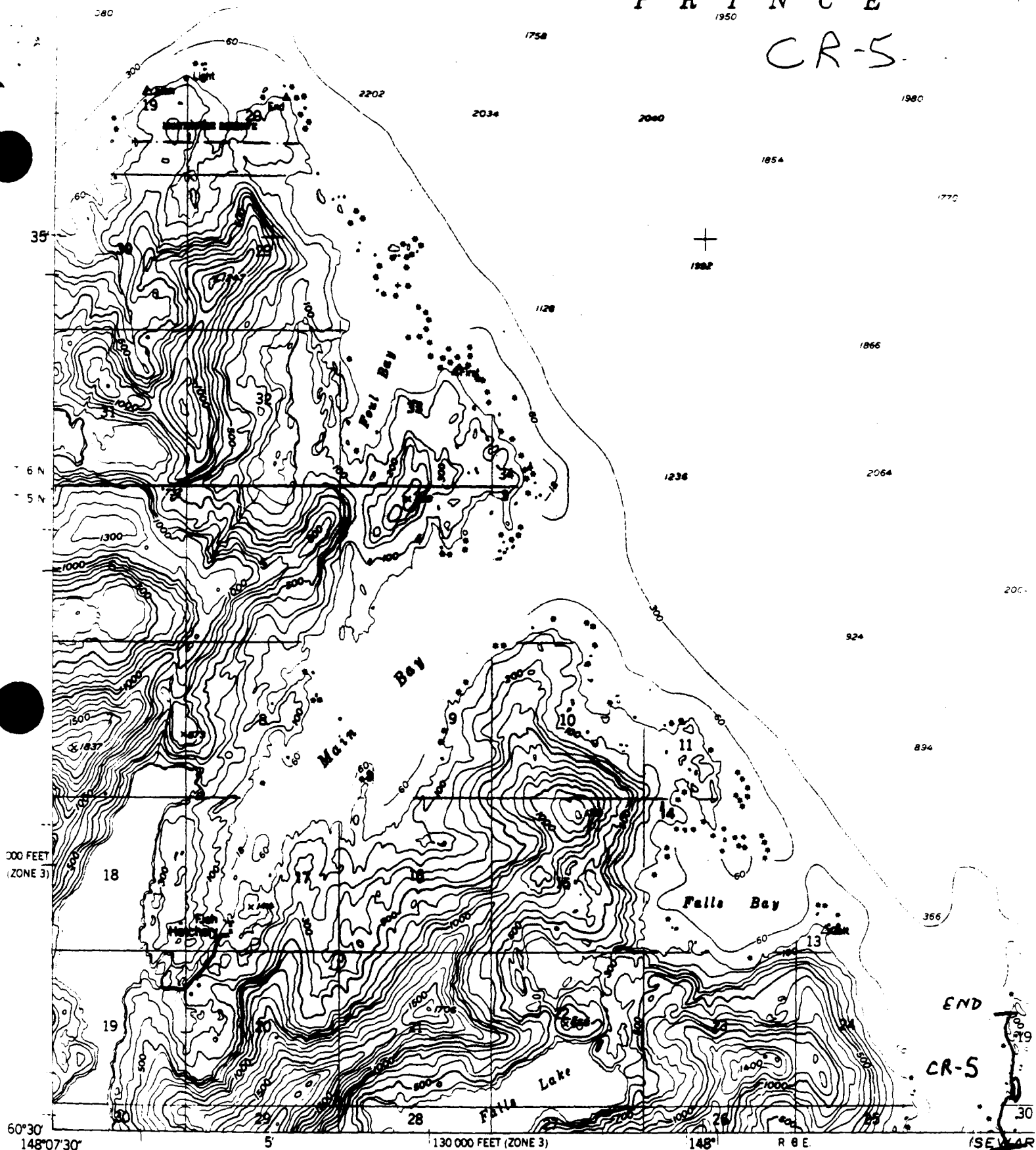
B/W Roll # T1 RCB-1 Frames 7-11

Observer(s) BOB BETTS

^{GROUND}
Time survey started 1030 Time survey ended 1100

Cultural resource considerations/restraints:

PEOPLE MUST BE RESTRICTED TO BEACH - NO ACCESS TO TREES ESPECIALLY EXTREME SOUTH
END OF SEGMENT. CLEANUP NEEDS ARCH. MONITOR. IF HERETOFORE UNDISCOVERED
CULTURAL MATERIALS ARE UNCOVERED DURING CLEANUP NOTIFY EXXON
PROJECT ARCHAEOLOGIST IMMEDIATELY (835-7749)



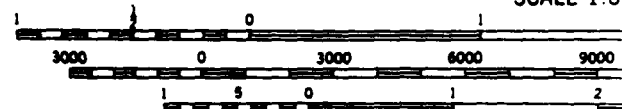
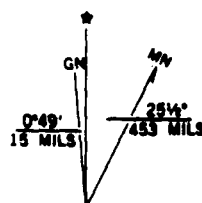
Mapped, edited, and published by the Geological Survey
Control by USGS, NOS/NOAA, and USCE

Topography by photogrammetric methods from aerial photographs
taken 1950, field annotated 1951. Map not field checked
Revised from aerial photographs taken 1983
Map edited 1987

Selected hydrographic data compiled from NOS/NOAA
Charts 16700 (1983), and 16705 (1982)

This information is not intended for navigational purposes

Projection and 1000-meter grid ticks shown in blue:
Universal Transverse Mercator, zone 6
10,000-foot grid ticks based on Alaska coordinate



CONTOUR INTERVAL
NATIONAL GEODETIC VERTICAL DATUM
DEPTH CURVES AND SOUNDINGS IN FEET-DATA
SHORLINE SHOWN REPRESENTS THE APPROXIMATE

CRAFTON ISLAND BLOCK

366

462

60

Light

CR-1

100

CR-2

Crafton
Island

CR-5

30

ACTIVE BALD EAGLE NEST

CR-3

Crafton I

30

Cabins

CR-4

102

60

60

81

TREATMENT MANUAL, 6/15/89

SEG CR-1 INSPECTION #

SEGMENT

DATE 8/12/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash

Mechanical Omni

Warm water wash

Non-mechanical Beach Crew

Water deluge

Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment CR-1 is complete
Ready for demobilization and deployment to new segmentSignature Michael J. Tydings Date: 8/11/89 Time: 5:30 PMPrinted Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling



Yes



No

_____	Heavy
_____	Medium
<u>5%</u>	Light
<u>10%</u>	Very Light
<u>45%</u>	None

100 %

Comments SOME SUBSURFACE OIL
IN FEW SPOTS LIMITED TO
CORALS AREAS

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments Consent w/ 70 and demobilization approval
Treatment is stabilized. No gross contamination
observed. Reassess for oiling at later date. Deploy to recover 1044Signature Denny R. Timmons Date: 8/11/89 Time: 1745Printed Name DENNY R. TIMMONS, ENV ENGR, ADEC

FOSC rep

Demobilization approved / disapprovedComments Minor staining on back of rock face w/ VL OIL
IN CORALS AREAS - NO HEAVY OR GROSS CONTAMINATIONSignature Thomas D. Harrison Date: 8/10/89 Time: 1745Printed Name THOMAS D. HARRISON LT USCG

7/25/89
444 :# 5

TREATMENT MANUAL, 6/15/89

SEG CR-2 INSPECTION # 1

SEGMENT

DATE 7-24-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐

Hot water wash

Warm water wash

Water deluge

☐
☐
☒

Mechanical

Non-mechanical

Other None

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment CR 2 is complete.
Ready for demobilization + deployment to new seg.
 Signature Tobias Dulia Date: 7/24/89 Time: 9:00 PM
 Printed Name Tobias Dulia

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent

Degree of Oiling

☐

Yes

☒

No

0
0
5
5
90

Heavy

Medium

Light

Very Light

None

Comments

100 %

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

None provided

Signature

Date: / / Time:

Printed Name

FOSC rep

Comments

Demobilization approved/disapproved
No GROSS CONTAMINATION

Signature

Date: 7/24/89 Time: 22 30

Printed Name

Ante J. S. - 11

7/25/89
H/O

SEG CR-3 INSPECTION # 2
DATE 7-24-89

TREATMENT MANUAL 6/15/89

SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash	☐ Mechanical
☐ Warm water wash	☐ Non-mechanical
☐ Water deluge	☒ Other <u>None</u>

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment CR-3 is complete,
Ready for Demobilization & deployment to new segment

Signature Tammy Dulin

Date: 7/24/89 Time: 22:00

Printed Name Tammy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	
Percent	Degree of Oiling
<u>0</u>	Heavy
<u>0</u>	Medium
<u>5</u>	Light
<u>6</u>	Very Light
<u>89</u>	None
100 %	

Subsurface Oil

☐ Yes ☐ No

Comments _____

Reassessment

☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments None Provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Comments Demobilization approved disapproved
No Gross Contamination

Signature Arthur J. Smith

Date: 7/24/89 Time: 2230

Printed Name Arthur J. Smith LTJG

SEG CR-4 INSPECTION # 1
DATE 8/17/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☒ Mechanical
☐ Warm water wash	☒ Non-mechanical <u>Beach Crew</u>
☒ Water deluge	☐ Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment CR-4 is complete. Ready for demobilization and deployment to new segment.

Signature Michael J. Tydings Date: 8/19/89 Time: 4:05 PM

Printed Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	Degree of Oiling
Percent	
<u>0</u>	Heavy
<u>0</u>	Medium
<u>10</u>	Light
<u>20</u>	Very Light
<u>30</u>	None
100 %	

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil	Degree of Oiling
Percent	
<u>0</u>	Heavy
<u>0</u>	Medium
<u>10</u>	Light
<u>20</u>	Very Light
<u>30</u>	None
100 %	

Subsurface Oil
☒ Yes ☐ No
COMMENT BELOW

Reassessment
☐ Yes - necessary
☒ No - not necessary unless re-oiled

ADEC rep

Comments Very little oiling observed. Very small percent of this beach requires actual treatment.

Signature Joseph S. Stautner

Date: 8/19/89 Time: 1605

Printed Name Joseph S. Stautner

FOSC rep
Comments

Demobilization approved/disapproved

Signature Steven B. Baker

Date: 8/19/89 Time: 1546

Printed Name STEVEN B. BAKER

CR-5

SEG CR-5 INSPECTION # 1DATE 8/24/97

SEGMENT

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash



Non-mechanical



Water deluge



Other

Exxon

Treatment as indicated above has been completed Request demobilization from this segment

Comments

Beach treated, ready for demobilization

Signature

Carey W. Philley Jr.Date 8/24/97 Time

Printed Name

Carey W. Philley Jr.

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling71
25
20
10
69
100 %Heavy
Medium
Light
Very Light
None

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 Oiling71
25
20
10
69
100 %Heavy
Medium
Light
Very Light
None

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments

medium areas spotty but need to be cleaned

Signature

Ed Mays

Date / / Time

Printed Name

FOSC rep

Comments

Demobilization approved/disapproved

Signature

Ed MaysDate 8/24/97 Time 2:14 PM

Printed Name

Ed Mays

COPY

EXXON

ADEC

FOSC

ISCC

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): MAIN BAY NORTH BLOCK

Includes Shoreline Segments: NJ-1, MA-1, MA-2, MA-3, MA-4 ✓

Submitted : A.C. Ross Date: 5/30/89
(for Exxon)

^{Recommendation}
ISCC Approval: Jacques Michel Date: 6/5/89

FOSC Approval: David Zankoff Date: 6/5/89

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:

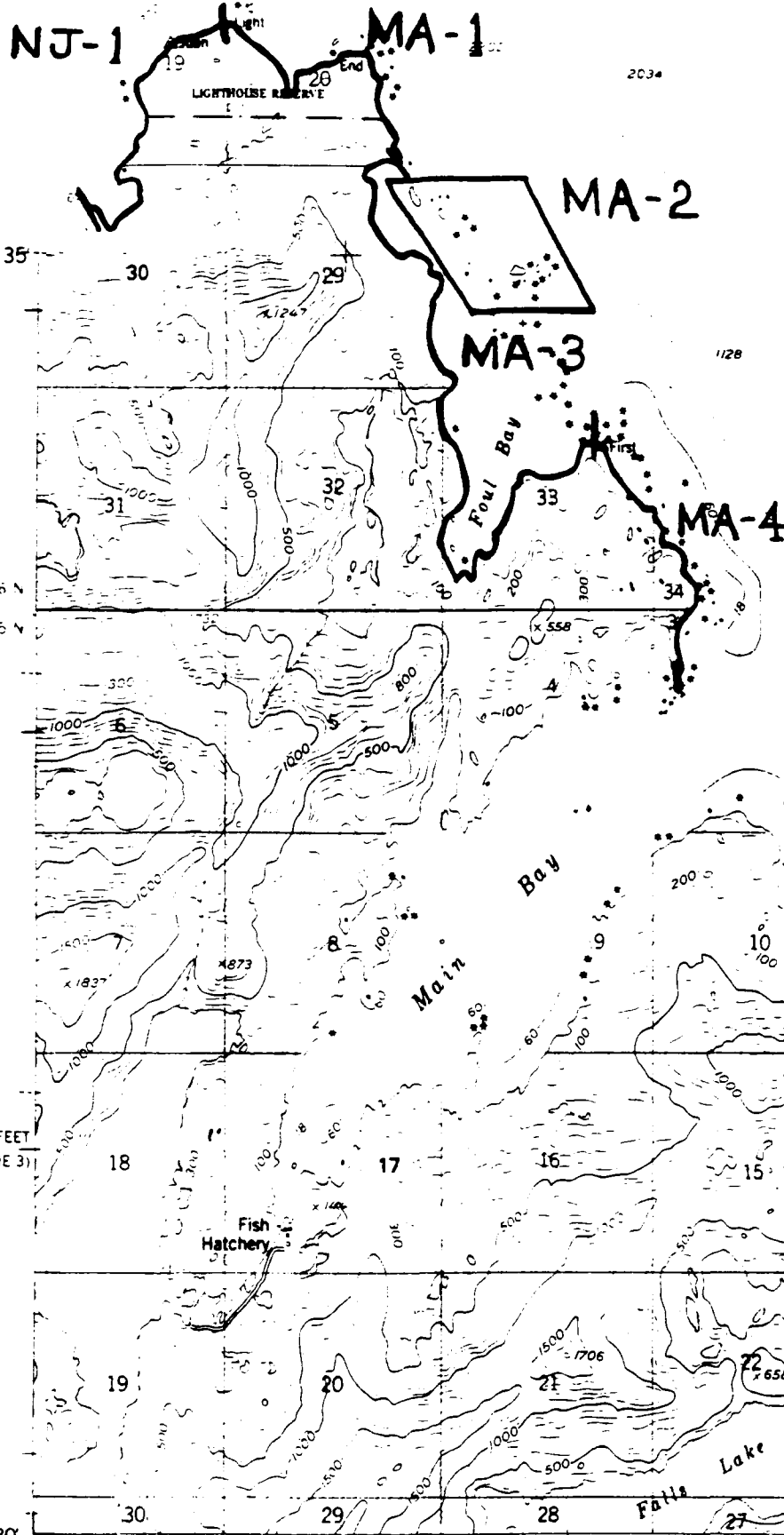
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

NJ-1

MAIN BAY NORTH BLOCK

P R I N C E



- GENERALLY NO OIL
- MINOR AMOUNTS OF TAR STAIN OCCUR LOCALLY

2 390 000 FEET
(ZONE 3)

60°30'
148°07'30"

130 000 FEET (ZONE 3)

148° P B E

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT NJ-1

LOCATION: (see enclosed map) Mainland South of Nelli Juan Strait
West of light by benchmark "JUAN"

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/21/89

Recommended Cleanup Activity(ies):

- No cleanup recommended ^{at this time} as the beach contains sporadic amounts of tar and is exposed to low and medium wave exposure. This does not appear to present any ecological hazard.

Priorities Considerations:

- None.

Ecological Constraints (from site survey):

- None.

Archeological Constraints (from site survey):

No constraints are necessary because no cleanup is recommended.
If cleanup activities occur, constraints must be reconsidered.

Douglas R. Reger
State Historic Preservation Officer *

ISCC

EXXON:

FOSC:

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATION

Page 1
MIKE MILES Log
MARTY BOZER

Date: MAY 21/89 Time: 09:00

Observer: RICK FEARNER

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Mainland South of Natick, MA SEGMENT NUMBER NJ - 1

LENGTH OF SHORELINE SEGMENT: 2600 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 0% / C 5% / P 80% / G % / S % / M % / R 15%

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 < 1

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

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

Fresh 0% Mousse 0% Tar Formation: 0%

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

Comments:

Small blobs of oil on beach. No significant oiling observed. No debris oiled.

ECOLOGICAL EVALUATION

LOCATION: Mainland - south of Juan Strait SITE: _____ OBSERVER: M. Bozenman

LOCATION PREFIX: NJ SEG. NO.: 01 LENGTH: 2600 (M)

DATE: 5/21/89 TIME (HHMM): 0900 TIDE HT.: _____ (M)

OILED ZONE: Splash ☒ High ☐ Medium ☐ Low

SUBSTRATUM: ☒ Rocks ☐ Boulder ☒ Cobble ☐ Gravel ☐ Sand ☐ Mud

LIVE BIOTA outcrops Beaches

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

Dense only on Rock

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

Dense only on Rock

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

Dense only on Rock

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: Few organisms on beaches -
most present in M/L ITZ on Rock outcrops

CLEANUP PRECAUTIONS: (N/A) No cleanup recommended

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

BIRDS: _____

GENERAL OBSERVATIONS: Light to No Oil & Patchy THIR in
high intertidal zone

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-21-89 Location NELLIE JUAN STRAIT ENTRANCE LIGHTHOUSE Site

Location Prefix NJ Segment # NJ-1 Length 2600 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

Oil conditions/beach visibility 11:30⁺ to no oil / clear visibility

Width of beach zone surveyed 0-30 m Tree fringe surveyed 0-10 m

Cultural resources observed in beach zone (AHRS code) PLG

Cultural resources observed in tree fringe (AHRS code) CBN

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

Shore Profile High angle gravel to center beach

Fresh Water Sources NONE

Sea Exposure Sheltered cove open to NW.

Access/Safety Easy access / no safety considerations

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) R Reanier

Time survey started 0900 Time survey ended 1000

Cultural resource considerations/restraints:

If undiscovered cultural materials are uncovered
during subsequent cleanup, contact Exxon
archeologist C. Mobley immediately

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT MA-1

LOCATION: (see enclosed map) Mainland - From point east of
benchmark "JUAN" to north end of bay north of Foul Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/21-22/89

Recommended Cleanup Activity(ies):

- Recommend manually remove concentration of tar, mousse and oil which occur locally in conjunction with drifted seaweed accumulations or in storm berms.
- No general "beach washing" is required due to the limited amount and distribution of oil.

Priorities Considerations:

- Low Priority. 4A

Ecological Constraints (from site survey):

- Avoid working on rock outcrops to protect associated biota. Avoid cleanup activities that would affect lower intertidal zone.
- THERE IS AN ANTERIOR STREAM AT THE BIGHT.

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 R. Peger
State Historic Preservation Officer *

cc Jaqueline Michel

EXXON: SA Ryan

FOSC: David Zampieri

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

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

MAY 21/89 10:00-12:00 hrs
MAY 22/89 08:00

SHORELINE OIL EVALUATION

MIKE MILES [O.G.]
MARTY BOZEMAN

Date: _____ / Time: _____

Observer: RICK REANIER

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION MAINLAND: From the light

SEGMENT NUMBER MA-1

east of "JUAN" to the north end of the Bay north of Foul Bay

LENGTH OF SHORELINE SEGMENT: 2300 m

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

Numerous rocks occur along this section of coast. There is ~~no~~ substantial fetch to the east and large waves must be expected

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 10 % / C 10 % / P 30 % / G % / S % / M % / R 50 %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type LOGS AND

Drifted 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 _____ Width of Band: 0 to > 4 m

Sporadic: Y/N % of Segment 80

Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 to > 30 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 0 % / M 5 % / L 35 % } of area
Fresh 0 % Mousse 35 % Tar Formation: 25 % } oiled

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

Comments:

generally only seaweed drift is oil

SEE ATTACHED SHEET [2 PAGES]

NOTE: ROCKS ALONG THIS SECTION OF COAST
PRESENT A HAZARD TO BOATS ENGAGED
IN CLEAN UP ACTIVITIES

DATE 21/22, 1989
MAINLAND MA-1

M. MILES
PAGE 1 OF 2

COMMENTS

This section of rocky coast contains numerous small embayments or coves with pebble beaches (although areas of cobbles and boulders occur locally). Headland areas generally have a light, discontinuous and narrow band of oil. The beaches ~~are~~ generally contain a ^{in the mid to upper ITZ} discontinuous band of light oil coatings or tar patches, which, in ~~some~~ ^{one} locations, was observed to be up to 4 m wide. Many of the beaches in this area have a moderate to high wave exposure and, where this condition occurs, oil, tar and mousse deposits are limited to and concentrated in a storm berm at the high tide or ST level. These deposits are generally covered with clean pebbles and are therefore only visible after excavating into the storm berm. There is a potential for buried oil deposits to occur in lower portions of the ITZ but no deposits of this kind were observed in the areas sampled.

Given the light coating of oil or tar which occurs on this segment of the coast, the relatively clean conditions in the mid and low ITZ and the generally moderate or high wave exposures, beach washing
can't /2

DEC 21/22, 1989

MAINLAND

MA-1

M MILES

PAGE 2 OF 2

Comment's con't

activities ~~are~~ are not recommended as:

- i) Wave action is expected to successfully clean most of these beaches; and
- ii) Clean-up activities may be detrimental to biota in the mid to lower ITZ.

However, if it is feasible, it would be beneficial to remove the concentrations of mousse, tar, oil and ^{contaminated drifted seaweed} which occur in the storm berm on pebble beaches. →

→ Many of these oil deposits are sufficiently heavy that they are forming an asphalt pavement and, given their high elevation, and the fact that they are frequently buried by pebbles, it may take a long time for wave action to remove them. [Note: The writer does not know if techniques are available to pick-up oiled debris and pebbles, remove the oil and debris, and replace the pebbles on the beach.]

ECOLOGICAL EVALUATION

LOCATION: Foul Bay/Main Bay Mainland SITE: _____ OBSERVER: M. Bozeman

LOCATION PREFIX: MA SEG. NO.: 01 LENGTH: 2300 (M)

DATE: 5/22/89 TIME (HHMM): 10:00 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA Outcrops Beaches

Fucus (algae): Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse (Y/N) None Y/N
Continuous & Dense along Rocks Patchy & sparse on Beaches

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

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

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: Most organisms on Rock outcrops and boulders - Few to None on Gravel/Cobble Beaches

CLEANUP PRECAUTIONS: Avoid working on rock outcrops to protect associated biota. Avoid cleanup activities that would affect LITZ.

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

BIRDS: Eagle

GENERAL OBSERVATIONS: Light to Moderate Oil in M to HITZ
Some oiled seaweed & debris (including tnr & mousse) in splash zone high on beaches.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-21-89 Location SE of Lighthouse ^{North of Foul Bay} Site

Location Prefix MB MA Segment # MA-1 Length 2300

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 NO OIL to Moderate Oil / Good visibility

Width of beach zone surveyed 5-30 m Tree fringe surveyed 0-5 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 High on beach, pebbles to cobbles, some rock boulders

Fresh Water Sources One stream in inlet east of lighthouse

Sea Exposure Exposed to NW

Access/Safety Acceptable access / offshore rocks are dangerous

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

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

Photos: Color Roll # Frames

B/W Roll # Frames

Observer(s) R Reanier

Time survey started 1000 Time survey ended 1100

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials
are uncovered during subsequent cleanup contact
Exxon Archeologist C. Mobley immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT MA-2

LOCATION: (see enclosed map) Mainland: Islands in the bight
north of Foul Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/21-22/89

Recommended Cleanup Activity(ies):

- Use moderate to high pressure hot water to clean oiled/tarred sections of cobble beach or bedrock beaches.

- Oil and mousse deposits within pebble beaches should also be cleaned using appropriate methodologies.

- MANUAL REMOVAL OF DEBRIS IS OF HIGH PRIORITY.
Priorities Considerations: .

- 2A to 3A

Ecological Constraints (from site survey):

- Avoid disturbance to nesting eagles on southwest corner island #2.

- Avoid disturbance to lower intertidal zone.

- Confine cleanup on rock outcrops to higher intertidal zone to protect biota (except on island #3 where all oiled intertidal area needs cleaning).

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 R. Peger
State Historic Preservation Officer *

ISCC Jaqueline Michel

EXXON: BA Pyman

FOSC: David J. Jankowski

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

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

MAY 21/89

MAY 22/89

11:15; 20:00

10:00

SHORELINE OIL EVALUATION

MIKE MILES [0.6]

MARTY BOZEMAN

Observer: RICK REANIER

Date: _____ / Time: _____

Surveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION MAINLAND: LARGER ISLANDS SEGMENT NUMBER MA-2NORTH OF FOUL BAYLENGTH OF SHORELINE SEGMENT: 1200 m

Numerous rocks occur

along this section of coast

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneThere is ~~no~~ substantial

to the end of the beach must be

exp. 100

SHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B5 % / C10 % / P30 % / G20 % / S % / M % / R35 %

Lags on upper

and surf

Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type

Fluke on surf

and upper

OILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L extreme low intertidal is fairly cleanContinuous: Y/N % of Segment 100 Width of Band: up to 30 m

generally < 4

Sporadic: Y/N % of Segment _____Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 0 to > 30 cm

in Rebbles

Pooled Oil: 0 % "Free" Oil: < 1 % Coated: H20 % / M25 % / L15 %Fresh 0 % Mousse 30 % Tar Formation: 10 %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

focus on

after seaward. logs

generally clear

Comments:

SEE ATTACHED SHEET

NOTE: ROCKS ALONG THIS SECTION OF COAST
PRESENT A HAZARD TO BOATS ENGAGED IN
CLEAN UP ACTIVITIES.

MAY 21/22, 1989

MAINLAND MA-2

3 miles

PAGE 1 OF 2

Three small vegetation islands occur in the bright north of Foul Bay. One of these islands forms a peninsula with the mainland at low tide. Numerous rocks also extend above the high tide level.

Moderate to heavy oil ~~and~~ carbonation has occurred along the section of coast. However ~~some of the~~ wave action has cleared many exposed sand bars and removed the surface material with a result of the gravelly sand being exposed in some places. In some areas and on portions of the lee (or western) side of the larger islands, blow-flown sand accumulations of oil and tar occur on bedrock benches and oil and grease have occurred on the shoreward ~~side~~ portions of the gravelly beaches. In some of the latter locations, ~~the~~ bedrock like action has exposed the surface sediments in some areas and, in these environments, the amount of oiling can only be determined by excavations into the beach.

Given the extent of the problem on these islands and the abundance of sea otters - seals, ~~and~~ killer whales and eagles in the region - sea, clean up on these islands is certainly a high priority.

Con't PAGE 2

MAY 21/22, 1989
MAINLAND MA-2

M. MILES
PAGE 2 OF 2

Comments on Specific Islands:

① Island / low water Peninsula

West side: oiled portion of pebble cobble (shingle) beach
L > 14 m wide, light to moderate concentration
of oil and mouse. Surface exposure of light tar > 2 m wide

② Small Island with an eagle nest

East side moderate to heavy oil on ~~beach~~ shoreline
consisting of 50% rock, 40% pebble, 10% boulder.
oil (mouse penetration > 30 cm in pebble beach
Remove stored net with oil soaked line on the
rock end of the beach

③ Larger Island

The north side of the island is extremely oiled,
somewhat less oil occurs on the south side.

④ ~~the~~ Small unvegetated Island 300 m to the southern of ③

Portions of this island have been moderately to heavily oiled.
Recommend cleaning central beach consisting of dunes, pebbles,
cobbles and boulders.

ECOLOGICAL EVALUATION

LOCATION: ISLANDS off Foul Bay SITE: _____ OBSERVER: M. Bozeman
 LOCATION PREFIX: MA SEG. NO.: 02 LENGTH: 1200 (M)
 DATE: 5/22/89 TIME (HHMM): 1115 2000 5/21 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA outcrops beaches

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

VARIES w/location

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

VARIES w/location

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: Most Biota associated w/rock outcrops
little use of gravel beaches

CLEANUP PRECAUTIONS: Avoid Disturbance to Nesting Eagle - SW corner
Island #2, Avoid cleanup activities that would affect LITZ
Avoid work on rock outcrops in MITZ & LITZ (except Island #3)

MAMMALS: Otters 1 Harbor Seals _____ Sea Lions _____ Whales 1-Killer
 other _____

BIRDS: 3 eagles, 2 terns, 15 gulls, 2 oystercatchers

GENERAL OBSERVATIONS: Islands 1 & 2 - light to mod oiling; III - MITZ,

Island #3 - mod to heavy oiling throughout ITZ, Island #4 - mod to heavy
oiling in HITZ

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-21-89 Location Islands N of Foul Bay Site

Location Prefix MA Segment # MA-2 Length 1200

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 moderate to heavy oil / clear vis b / t /

Width of beach zone surveyed 20-60 m Tree fringe surveyed 20 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 High angle gravel to cobble beaches, rocky shores

Fresh Water Sources NONE

Sea Exposure exposed to sand on NE

Access/Safety Adequate access / dangerous cliffs here rocks

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) R Reamer

Time survey started 5-21 1115-1200 Time survey ended -1300-2200

Cultural resource considerations/restraints:

If here to fore undiscovered cultural materials
are discovered during cleanup contact
Exxon archaeologist C. Mehley immediately

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT MA-3

LOCATION: (see enclosed map) Mainland - Foul Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/23/89

Recommended Cleanup Activity(ies): If the technology is available, light to moderate concentrations of oil in the storm berm should be cleaned. Locally moderate concentrations of oil/mousse in pebble beaches should also be cleaned by small scale operations if this is possible. There is insufficient oil on most rocky headlands to warrant large scale cleanup activities. If cleanup is to be undertaken, detailed mapping of the areas with concentrations of oil will be required. Hand harvest heavily contaminated/dying fucus.

Priorities Considerations:

- 4A to locally 3A

Ecological Constraints (from site survey):

- Clean only high intertidal zone and above on rock outcrops.
- Protect lower intertidal zone and subtidal zone along beaches.
- Protect stream channel (above SP zone) at southeast corner of Foul Bay, which is an anadromous stream.

Archeological Constraints (from site survey):

NO Access to historic structure to be restricted. 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 R. Regier
State Historic Preservation Officer *

ISCE Jaqueline Michael
EXXON: JA Rymay

FOSC: Charles Jankoff

Date: 5/27/89

6/5/89
Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATION

MAY 21/89

11:30 -

MAY 22/89

11:00 → 12:00

MIKE MILES [O.G.]

MARTY BOZEMAN

Date: _____ / Time: _____

Observer: RICK REANIERSurveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATIONLOCATION MAINLAND: FOUL BAYSEGMENT NUMBER MA-3LENGTH OF SHORELINE SEGMENT: 5600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

Narrower rocks occur
along the section of coast
Trawl boats to beach in
the area and they may
pull up debris.

SHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B10% / C15% / P20% / G10% / S% / M% / R50%Drift Debris on Beach: Yes/No
Supra/Upper/Mid/Lower Type logs and
drifted sea
weed
OILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment Y80% Width of Band: 0.02 → 7.20 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: 6 cm Est. Oil Penetration: 0 to > 30 cmPooled Oil: 0% "Free" Oil: 0% Coated: H3% / M10% / L50%Fresh 0% Mousse 25% Tar Formation: 10%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

SEE ATTACHED SHEET

These are the
oil slicks seen
along the coast.

NOTE: ROCKS ALONG THIS SECTION OF COAST
PRESENT A HAZARD TO BOATS ENGAGED
IN CLEAN-UP ACTIVITIES

MA-2 MA-3

3. 3. 25

Dr. 500

2000-2001

[illegible]

Continued on Page 2

MAY 21/22, 1995

MAINLAND MA-3

R. MILES

PAGE 2 OF 7

COMMENTS ON SPECIFIC BEACH SITE:

Site P

May 21 11:30

During rain

- North end of Bay - sheltered cove
- Cobble ^{30%} / pebbles ^{30%} / rock 30% / boulders 10%
- light continuous oil coating, penetration < 5cm
- on mid to high TZ
- High tide (storm beach) consists of pebbles -
Sea water at 24 - moderately to heavily oiled
with tar (surfaces and mousse (at depth)).
- lower elevation or 7' would (in storm beach) be
moderately oiled
- heaviest mousse and tar deposits occur in lumps
up to 5 m long. These lumps could possibly
be picked up or float in water and the
pebbles kept dry.
- width of oiled beach ~ 16 m

MAY 21/22, 1989
MAINLAND MA-3

M. MOLES
PAGE 3 OF 7

COMMENTS ON SPECIFIC BEACH SITES CONT

SITE Q North Pebbles 50% cobbles 20% boulders 30% rock 10%
MAY 22/89 high wave exposure
11:00
cloud

• very light sporadic coating of oil over mid to

HIGH ITZ

→ Contaminated area > 22 m wide, due to ~~high~~ small amount of oil, cleaning likely not warranted

- light oil coating +/- mousse in storm berm
no surface expression, penetration at least 30 cm - cleaning would likely be beneficial
- light continuous "bath-tub" like rings on exposed rock boulders exposed. NE not visible, does not warrant cleaning

← back view

SITE Q South • Pebble / Cobble / Boulder high angle beach with
MAY 21/89 • oil - ~~high~~ stain high, but not over
12:15 • light oil coating from mid to high ITZ
partly obs • no tar or mousse in seaward oil or in pebble beach.
• moderate to high exposure
• insufficient oil to justify cleanup activities

MAY 21/22, 1989
MAINLAND MA-3

M. MILES
PAGE 4 OF 7

Comments on SPECIAL BEACH SITE

SITE S

MAY 22/89

11:15

cloud

- Boulder beach on north inside edge of
Foul Bay (points to south coast in
wave attack)
- light to moderate for cooling sweep to 20
m wide band
- intermittent light "water tub" ring on
rocky headland

SITE T

MAY 22/89

- Oct 75% (mostly 25%)
• 10% (mostly 25%) exposure
• 10% (mostly 25%) on surface through mid to high
ITB
- 50 m to west
• 50% pebbles, 25% sand, 25% cobble
• 10% light oil on surface to shore line
• 10% in shallow water pool line
shaded

MAY 21/22, 1989

M. MILES

MAINLAND MA-3

PAGE 5 OF 7

Comments on Specific Beach Sites cont.

SITE Z • small stream and waterfall

MAY 22/89 • oil line on rocks ~ 2 cm high
rock and boulder beach

SITE U

MAY 22/89

- small bay at west end of Fuel Bay
- pebble / cobble / boulder beach with headland of rock and boulder
- light to moderate far deposit on lee (west) side of boulder on south side of bay. vertical extent 2 m, width $\approx$ 4 to 6 m. no permeation.
- on north side of bay - were light coating of oil on face of rock $\approx$ 5% for 5% more
- far coal on beach
- small stream came in from west side of bay

SITE V

MAY 22/89

- Adjacent bay end of U
- boulder rock beach on west only
- light to moderate oil coating
- South side - rock + boulder beach - small patches of far only

MAY 21/22 1989
MA-1 AND MA-3

M. MILES
PAGE 7 OF 7

Comments on Spool 2

2 x 14
May 22 37
1700
1000

- Insufficient oil on bearing surfaces
- Show bearing surfaces
to be lubricated. Check appropriate
tools to be available
- Bearings are not oiled. Small
oiled but not full oil. At east
end of beam should be removed.

ECOLOGICAL EVALUATION

LOCATION: Mainland Foul Bay SITE: _____ OBSERVER: M. Bozeman
 LOCATION PREFIX: MA SEG. NO.: 03 LENGTH: 5600 (M)
 DATE: 5/22/89 TIME (HHMM): 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

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

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

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: SPARSE to NO biota on gravel/cobble
beaches. Intertidal organisms generally ABUNDANT only on rock
outcrops and boulder surfaces

CLEANUP PRECAUTIONS: Clean ONLY HITZ of rock outcrops
Protect LITZ and subtidal zone along beaches
Protect stream channel at SE corner Foul Bay - ABOVE = BAY

MAMMALS: Otters 10 Harbor Seals 6 Sea Lions _____ Whales _____
 Other _____

BIRDS: 2 Eagles

GENERAL OBSERVATIONS: Most oiling in HITZ & ABOVE - Lt to 110d
Mostly Above biota

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-21-89 5-22-89 Location Foul Bay north to Lighthouse reserve boundary Site

Location Prefix ~~MA~~ MA Segment # ~~MA-1~~ MA-3 Length 5600 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

Oil conditions/beach visibility no to moderate oil / excellent visibility

Width of beach zone surveyed 0-20 m Tree fringe surveyed 0-10 m

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 High angle gravel dunes to rock walls.

Fresh Water Sources A stream enters Foul Bay

Sea Exposure Exposed to the east

Access/Safety Easy access / no safety considerations

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) K. Reznier

Time survey started 1000 5-21-89 0900 5-22-89 Time survey ended 1200 5-21-89 1230 5-22-89

Cultural resource considerations/restraints:

If heretofore undiscovered cultural materials are
discovered during cleanup, contact Exxon
archeologist C. Mobley immediately. Security
personnel will insure that workers do not
disturb recently abandoned fisherman's cabin.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT MA-4

LOCATION: (see enclosed map) Mainland - Coast between Main Bay
and Foul Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Oil accumulations on rocky headlands should be cleaned with hot water and moderate to high pressure.
- Oil accumulations in pebble beaches and in contaminated storm berms should be cleaned using the techniques currently deemed to be most appropriate. Harvest heavily contaminated/dying fucus, manually.

Priorities Considerations: .

- 3A to 4A

Ecological Constraints (from site survey):

- Protect rock outcrops at middle intertidal zone and below.
- Protect lower intertidal zone subtidal at beaches.

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 R. Regan
State Historic Preservation Officer *

ISCE Jaqueline Muelich
EXXON: DA Murray

FOSC: Ronald J. Janssen

Date: 5/29/89

6/5/89
Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATION

MIKE MILAS [0.6]

MARTY BUZEMAN

19:50 - 22:30

Date: 11/27/89 Time: 7:30 PMObserver: RICK REANIERSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**

Coast between Foul Bay

LOCATION MAINLAND: old Main Bay SEGMENT NUMBER MA - 4LENGTH OF SHORELINE SEGMENT: 2300 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

Numerous rocks along the shoreline. There is a slight dip to the east and some waves may be expected.

SHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 10 % / C 10 % / P 25 % / G 5 % / S % / M % / R 50 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Logs and

DRIFTED
SEA WEED

OILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

→ most coast is lightly to moderately oiled.

Continuous: Y/N % of Segment 90 Width of Band: 15 to 20 mSporadic: Y/N % of Segment 10Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: 730 cm ^{oil on rock}Pooled Oil: 0 % "Free" Oil: <1 % Coated: H 5 % / M 10 % / L 50 %Fresh 0 % Mousse 25 % Tar Formation: 10 %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/Comments: Very minor amounts of oiled debris occur locally at High tideSee attached sheet

NOTE: ROCKS ALONG THIS SECTION OF COAST PRESENT A HAZARD TO BOATS ENGAGED IN CLEAN UP ACTIVITIES.

MAY 22, 1989
MAINELAND MA-4

m mules
fig 53 1 of

COMMENTS

This shoreline was originally at least moderately oiled. However the large overlook beach has resulted in substantial clearing of the wave action. In rocky areas, particularly those which have a large bench at the mid to upper ITZ, moderate to locally heavy concentrations of oil still occur. The beaches along this section of coast consist principally of pebbles with some ~~sand~~^{gravel} and cobble. In protected environments (if what there are seaward) this material can be "glued" together ~~to depths~~ to depths of at least 10 cm. Wave action has ~~been~~ known to cause the surface of these piles to break apart. It appears that despite the fact that the oil is present on the surface of the piles it does not penetrate deeply into them. This may be due to the nature of the oil or to the nature of the substrate.

The oil is found in small amounts scattered over the beach surface. It is not concentrated in any one place. It is found in small amounts scattered over the beach surface. It is not concentrated in any one place. It is found in small amounts scattered over the beach surface. It is not concentrated in any one place.

leading to oil being a common contaminant in places in water.

Clean-up activities appropriate to this type of beach need to be discussed with the Salk ^{if} maps of the distribution of oiled rock and ^{beach} sediments ~~will be~~ ^{are} needed

MAY 22, 1989

MAINLAND MA-4

M. MILES

PAGE 2 OF

COMMENTS cont

prior to clean-up, this will require walking the ~~se~~ entire section of coast, digging test pits as required, and the use of large scale maps suitable for ~~presenting~~ portraying the required level of detail.

net

Additional notes: ① The storm berm on this segment does not generally as heavily contaminated as ~~is~~ in the area north of Foul Bay.

~~② Clean up~~ appropriate

② Clean-up techniques for use on areas of contaminated pebble beaches need to be discussed with the folks in Valdez.

③ Given the high wave exposure in this area, there is the potential for ~~and~~ waves ^{action} to clean the beach. If ~~clean up is carried out within 2 to 3~~ ^{circumstances} Thus it there may be beneficial for this coast to be resurveyed prior to clean-up activities if either:

- a large storm occurs between the time of survey and the commencement of clean up activities
- if a substantial delay occurs between the time of survey and the commencement of clean-up activities

ECOLOGICAL EVALUATION

LOCATION: Mainland - Coast Between Main Bay & Foul Bay SITE: _____ OBSERVER: M Bozeman
 LOCATION PREFIX: MA SEG. NO.: 04 LENGTH: 2300 (M)
 DATE: 5/22/89 TIME (HHMM): 1950 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

outcrops Beaches (mainly gravel)
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
VARIES WITH LOCATION

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

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: Few organisms ON Beaches - Most on Rocky Intertidal;

CLEANUP PRECAUTIONS: Protect Rock outcrops & MITZ and below
Protect LITZ & SUBTIDAL at beaches

MAMMALS: Otters 2 Harbor Seals _____ Sea Lions _____ Whales 1 - killer
 Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Moderate to Heavy oiling in HITZ
appears to be much buried oil on gravel beaches

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-22-89 Location Coast between Foul and Main Bays Site _____

Location Prefix MB Segment # MA-4 Length 2100

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 very light to heavy / Good visibility

Width of beach zone surveyed 10-40 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 High angle gravel to cobble beach rock headers

Fresh Water Sources occasional small streams

Sea Exposure Exposed to NE

Access/Safety adequate access / dangerous offshore rocks

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

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

Photos: Color Roll # _____ Frames _____

B/W Roll # _____ Frames _____

Observer(s) R Reonier

Time survey started 1930 Time survey ended 2200

Cultural resource considerations/restraints:

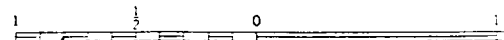
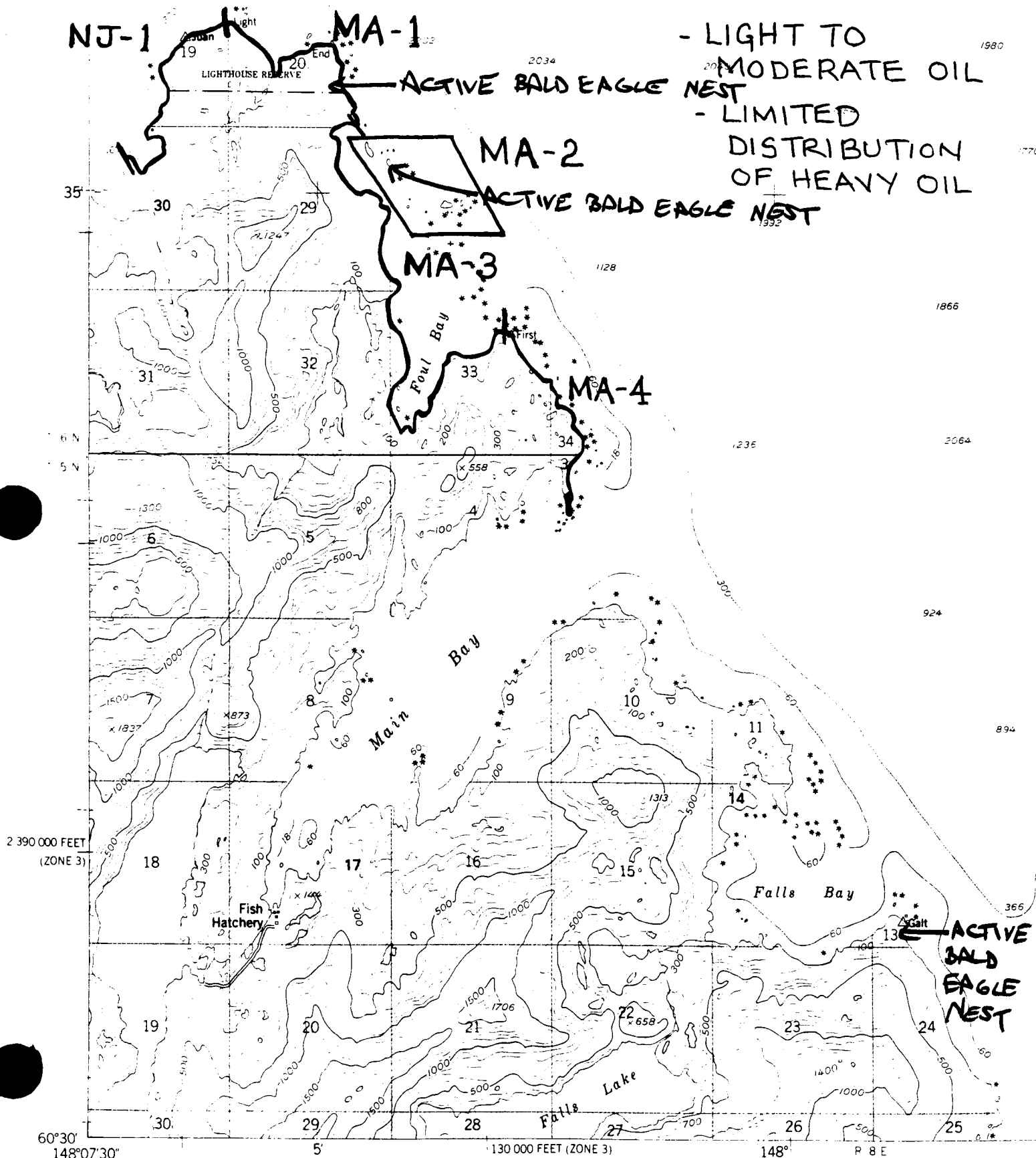
If heretofore undiscovered cultural materials
are uncovered during cleanup contact

Exxon Archeologist + C. Mobley immediately

MA-4

MAIN BAY NORTH BLOCK

P R I N C E



SEG MA 1 INSPECTION # 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 MA 1 is complete.
Ready for Demobilization & Deployment to new segment.Signature [Signature]Date: 7/30/89 Time: 16:05Printed Name T. J. Smith

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

9
2
5
0
93

Heavy

Medium

Light

Very Light

None

100 %

Subsurface Oil

☐

Yes

☒

No

Comments

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

No inspector provided

Signature

Date: / / Time:

Printed Name

FOSC rep

Comments

Demobilization approved/disapprovedNo Gross Contamination

Signature

Date: 7/30/89 Time: 22:37

Printed Name

Arthur J Smith C.T.G.

Main Bay

8 1000 RESOLUTE (METH-400) 1-15-88 (MTRM)

ED00007013- 150783559051# 7
TREATMENT MANUAL CHANGE 1

MA2

SEG MA-2 INSPECTION # 1

SEGMENT

DATE 24 AUG 89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash



Non-mechanical BEACH CREW



Water deluge



Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment MA-2 is complete. Ready for Demobilization and Deployment to next segment.

Signature Michael J. Tydings Date: 8/24/89 Time: 6:30 PM

Printed Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
1
25
25
49
100 %

Heavy
Medium
Light
Very Light
None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling

100 %

Heavy
Medium
Light
Very Light
None

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments Review REP arrived AFTER completion of inspection. No objections raised.

Signature

Date: 1 / 1 Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments contamination

Signature

Date: 8/24/89 Time: 1825

Printed Name Tan R. R. Curo

SEG MA 3 INSPECTION # _____

SEGMENT

DATE 7-30-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical _____

☐

Warm water wash

☒

Non-mechanical _____

☐

Water deluge

☐

Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments

Treatment of segment MA 3 is complete.
Ready for demobilization & deployment to new segment

Signature

Teddy DulinDate: 7/30/89 Time: _____

Printed Name

Teddy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent

Degree of Oiling

☐

Yes

☒

No

0

Heavy

0

Medium

2

Light

0

Very Light

98

None

100 %

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

NO Inspector provided

Signature

Date: 1/1 Time: _____

Printed Name

FOSC rep

Comments

Demobilization approved / disapprovedNO GROSS Contamination

Signature

Arthur J. Smith Date: 7/30/89 Time: 2238

Printed Name

Arthur J. Smith LTJG

SEG MA 4 INSPECTION # _____

SEGMENT

DATE 7-30-89

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 MA 4 is complete. Ready for demobilization & deployment to new Segment
 Signature Tommy Dulin Date: 7/30/89 Time: _____
 Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒ Yes ☐ No
0
0
5
5
90
Heavy
Medium
Light
Very Light
None

100 %

Comments Small Area
5 to 15 light
subsurface

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments

No Inspector provided

Signature

Date: / / Time:

Printed Name

FOSC rep.

Demobilization approved / disapproved

Comments

No Gross Contamination

Signature

Date: 7/30/89 Time: 2245

Printed Name

Arthur J Smith LTSG

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): MAIN BAY CENTRAL BLOCK

Includes Shoreline Segments: MA-5, MA-6, MA-7, MA-8 ✓

Submitted : *HA Myman* Date: 5/29/89
(for Exxon)

RECOMMENDATION
ISCC Approval: *Jacques Michel* Date: 6/5/89

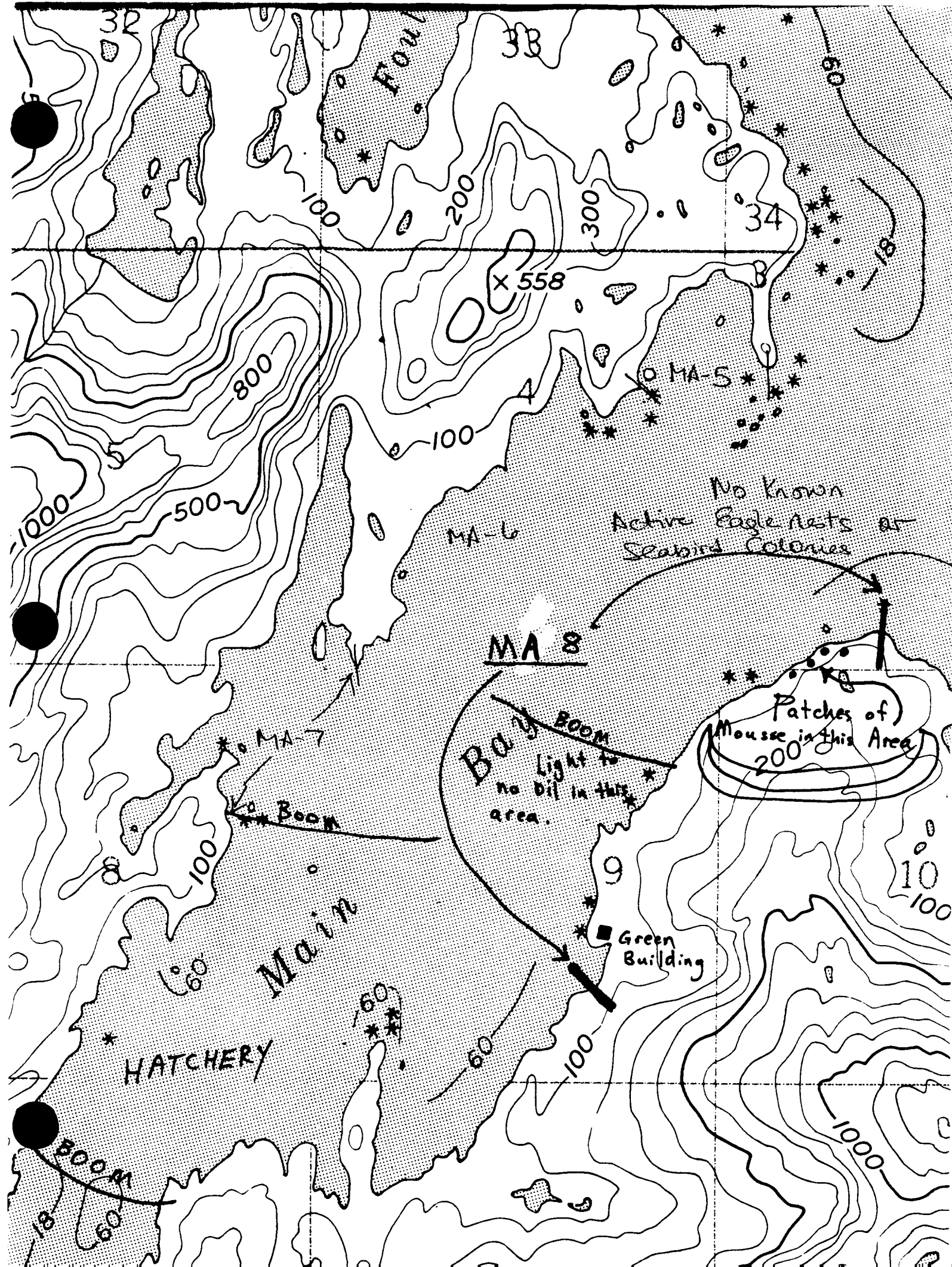
FOSC Approval: *David Zauscher* Date: 6/5/89

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
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USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/28/89

SHORELINE SEGMENT MA-5

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/25/89

Recommended Cleanup Activity(ies):

- 1) Removal/repair of absorbent boom.
- 2) Manually remove tar balls and oiled fucus debris.
- 3) Mechanically wash beach location #4 at high tide.

Priorities Considerations:

Ecological Constraints (from site survey): Contact John at Main Bay Hatchery before cleanup begins. Recommend manual removal of visibly oiled fucus and localized steam on oiled rocks at a 6 ft. tide or more. Should use sorbent under steam to avoid contaminating lower intertidal organisms.

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 R. Regier
State Historic Preservation Officer *

ISCC Jaqueline Michel
EXXON: BA Ryman

FOSC: David "Jawz" Juarez

Date: 5/29/89

6/5/89
Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATIONDate: 5/25/89 Time: 09:15Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION MAIN BAYSEGMENT NUMBER MA-5LENGTH OF SHORELINE SEGMENT: 1,200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/NLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20% / C10% / P10% / G10% / S___% / M___% / R50%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Logs
FucusOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP H / M / L

Continuous: Y/N % of Segment _____ Width of Band: _____ m

Sporadic: Y/N % of Segment 5Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: _____ cm

Pooled Oil: _____% "Free" Oil: _____% Coated: H___% / M___% / L___%

Fresh 50% Mousse 30% Tar Formation: 20%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

- ① Headland has high tide oil coated rocks and sporadic tar balls. Some oiled fucus debris on small beaches.
- ② Two sections of absorbent boom at high tide (lose on the beach).
- ③ Tar balls and oiled fucus debris.
- ④ Small beach has high tide oiling 50m long, 1-2 m wide, 10 cm deep.

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: North East Corner OBSERVER: Greg Chaney
 LOCATION PREFIX: MA SEG. NO.: 5 LENGTH: 5100/1150 (M)
 DATE: May 125/1989 TIME (HHMM): 8:00 AM TIDE HT.: ~+0.5 (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

Large regions are brown and defoliated but no surface oil is left
Locals stated that oil has been washed off from these locations.

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

Sections are completely opened and dead but no surface oil is left
Locals stated that oil has been washed off from these locations.

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

On rocky headlands continuous. Oiled band 10cm thick near high tide line.
Steaming not recommended where barnacles are still alive.

Littorina

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

Littorina are common on rocks, little impact from present oiling.

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

Limpets are common on rocks, little impact from present oiling.

OTHER OBSERVATIONS: Liz Senear and Pat Jones stated that the first slick
hit April 10th-15th. This is what caused the mussel & fucus mortality

CLEANUP PRECAUTIONS: John at Main Bay Hatchery requested to be contacted
before cleanup begins. He may request cleanup to be delayed until late July.

MAMMALS: Otters — Harbor Seals — Sea Lions — Whales 2 Male Orcas
 Other —

BIRDS: One Eagle, 6 sea ducks

GENERAL OBSERVATIONS: Recommend removal of visibly oiled fucus and localized
steam on oiled rocks at 6 ft. tide. Need to use sorbents underneath
steam to catch oil to avoid contaminating the lower intertidal organisms.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-25-89 Location Main Bay Site _____

Location Prefix MA Segment # 5 Length _____

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 oil cover is light

Width of beach zone surveyed 5-35 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 Steep rock cliffs 50%, gentle sloping cobble beaches 50%

Fresh Water Sources small streams, seeps

Sea Exposure Open To the South.

Access/Safety easy access to 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 # _____ Frames _____

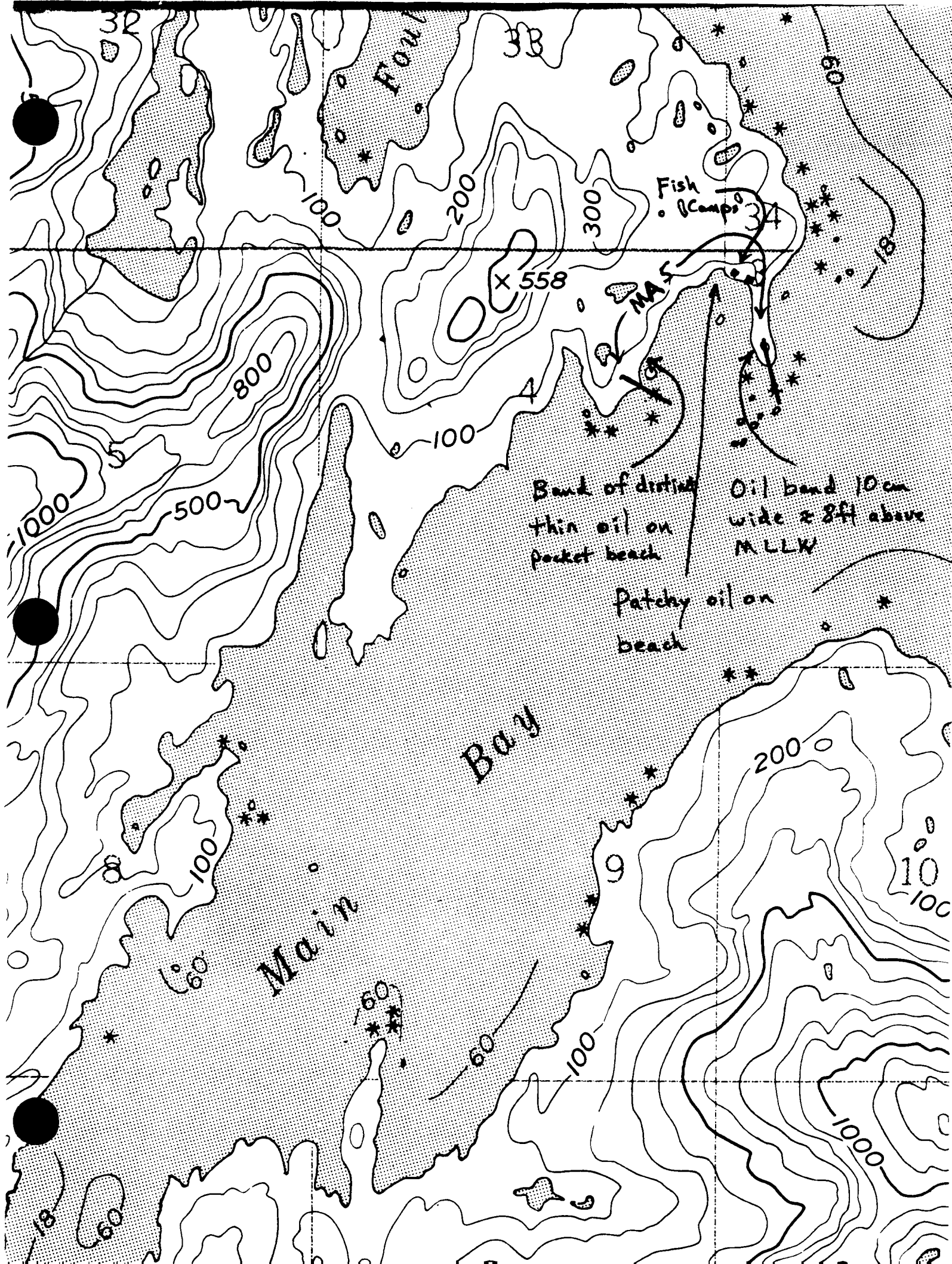
Observer(s) ANDREFSKY

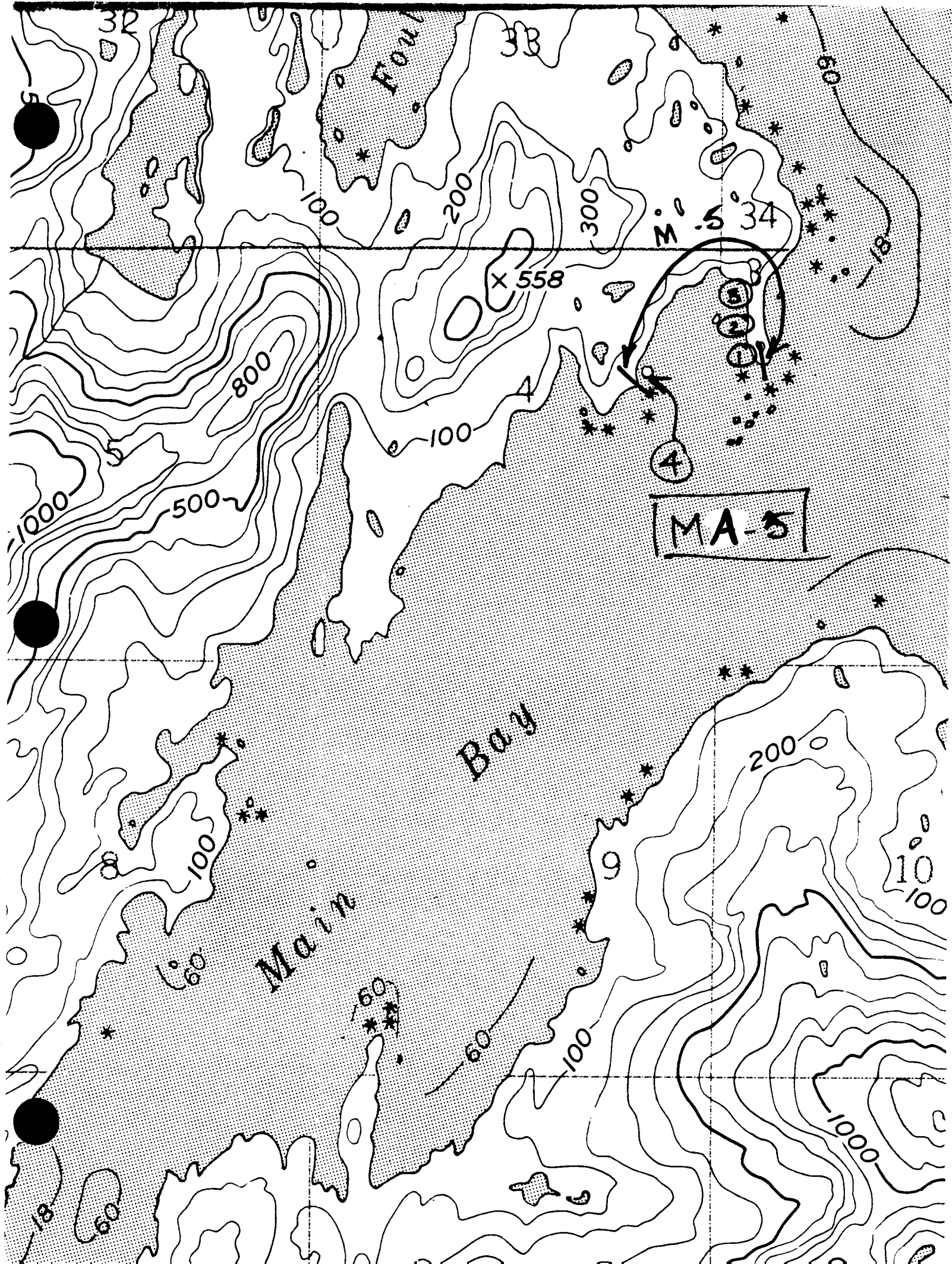
Time survey started 9:15 AM Time survey ended 11:00 AM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are observed during cleanup

contact Exxon archaeologist immediately.





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/28/89

SHORELINE SEGMENT MA-6

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/25/89

Recommended Cleanup Activity(ies):

- Manually remove tar balls and fucus debris at beach location #2.

Priorities Considerations:

Ecological Constraints (from site survey):

- Cleanup on pocket beach #2 should take place when tide is above the intertidal organisms at the lower intertidal level.

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 R. Regier
State Historic Preservation Officer *

ISCC Jaqueline Kuchel
EXXON: DAHymay

FOSC: David Zaverzi

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATIONDate: 5/25/89 Time: 10:54Observer: RICK GILLIESurveyed From: Foot Boat Helio PlaneWeather: Sun Cloud Rain Snow FogLOCATIONLOCATION MAIN BAYSEGMENT NUMBER MA-6LENGTH OF SHORELINE SEGMENT: 2,400 mACCESS: Foot/Vehicle Boat Barge Helio Float PlaneSHORELINE:Shoreline Type: SPI BEA COV HLD STRTSlope: LANG HANG VER

Wave Exposure: High/Med/Low

Sediment: 20% / 10% / 10% / 10% / 0% / 0% / 0% / 0% / 50%Drift Debris on Beach: Yes NoSupra/Upper/Mid/Lower Type LOU'SOIL

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 10%

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

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

Fresh _____% Mousse 50% Tar Formation: 50%Drift Debris Oiled? Yes No Supra/Upper/Mid/Lower Amount: H/M/L/ L

Comments:

- ① Very light oiling. One tarball every 100 m².
- ② Beach with oiled Fucus, high tide band, 30 m long, 1 m wide, 20 cm deep.
- ③ Mousse patches. (size = 2-3 cm).

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: North Shore OBSERVER: Greg Chaney
 LOCATION PREFIX: MA SEG. NO.: 6 LENGTH: 2400 (M)
 DATE: May 25/89 TIME (HHMM): 9:30 AM TIDE HT.: ~0.0 (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

Small patches of oiled fucus on rock - fucus out crops. Large areas where early slick touched shore - are brown & defoliating.

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

Patches of ~~ba~~ mussels with high rates of mortality in ~~some~~ area of brown fucus.

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

Thin band of oiling on high tide on rock outcrops. Only attempt removal of oil if no intertidal life is present

Littorina

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

Common. Most areas do not have oil present and littorina are abundant.

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

Common. Most ~~are~~ areas do not have oil present and limpets are abundant.

OTHER OBSERVATIONS: Intertidal organisms are common on headlands and rocky outcrops but restricted to lowest tide levels during on pocket beaches

CLEANUP PRECAUTIONS: Hand crew could take care of most tar balls. On the pocket beach with oiling there are no intertidal organisms above ~~low~~ tide. Cleanup can ~~proceed~~ take place when water is above this level

MAMMALS: Otters Harbor Seals 3 Sea Lions Whales
 other I think just inside forest line

BIRDS: 2 female bufflehead ducks, 5 sea gulls

GENERAL OBSERVATIONS: See attached map for location of ^{light to} moderately oiled pocket beach.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-25-89 Location Main Bay Site _____

Location Prefix MA Segment # 6 Length _____

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 Oil cover is low

Width of beach zone surveyed 5-40 m Tree fringe surveyed 5-15 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 and gentle sloping beach pockets.

Fresh Water Sources Small streams, seeps

Sea Exposure Open to the South

Access/Safety good access to beach pockets

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 _____

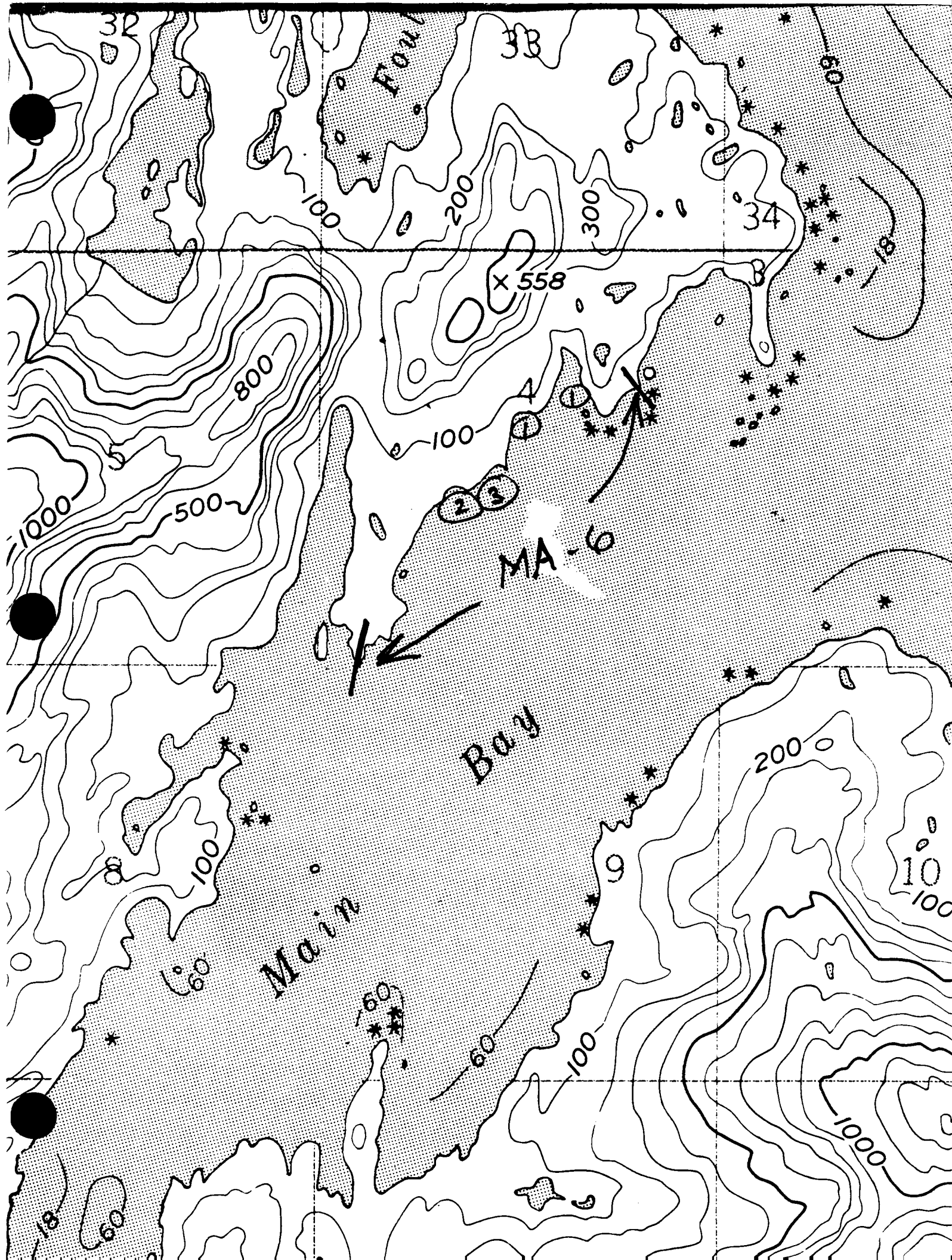
B/W Roll # _____ Frames _____

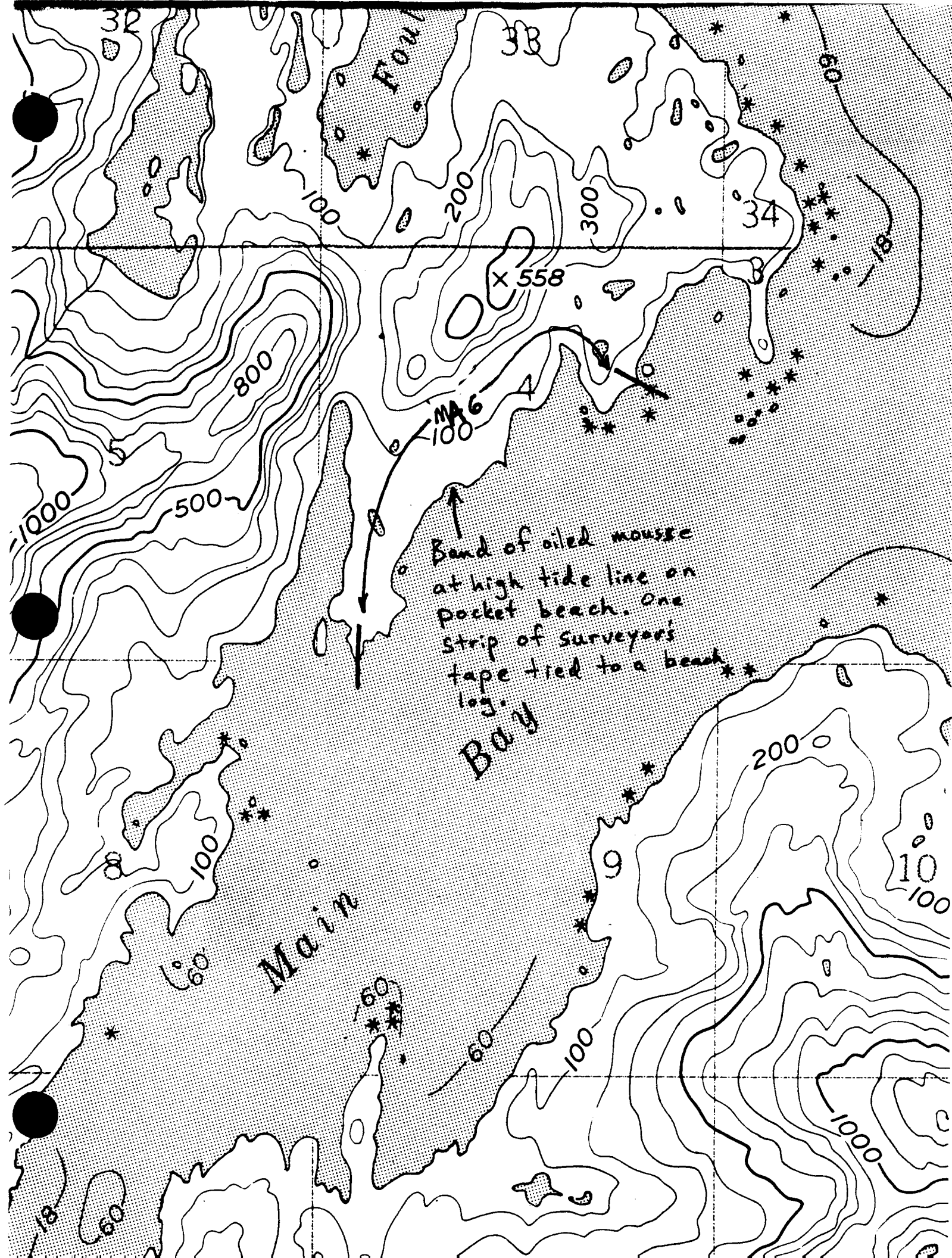
Observer(s) ANDREFSKY

Time survey started 11:00 AM Time survey ended 12:15 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered
during cleanup contact Exxon archaeologist immediately.





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/28/89

SHORELINE SEGMENT MA-7

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/25/89

Recommended Cleanup Activity(ies):

- Manually remove tar balls and oiled seaweed debris.
- Local mechanical wash of gravel on beach at location #2 (see map).

Priorities Considerations:

Ecological Constraints (from site survey): Trace amount of oiled debris on pocket beaches. Recommend hand pickup or local use of steam on rocks with sorbents underneath. Washing should only take place when tide covers local intertidal organisms.

THERE IS AN ANADROMOUS FISH STREAM IN THIS SEGMENT THAT WILL NEED PROTECTION DURING MECHANICAL 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.

Douglas R. Reger
State Historic Preservation Officer *

ISCC Jaime Michel
EXXON: DA Rymay

FOSC: David Janoff

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

* Signature required to satisfy stipulations in Alaska DNR land

SHORELINE OIL EVALUATIONDate: 5/25/89 Time: 12:30Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION MAN BAY SEGMENT NUMBER MA-7LENGTH OF SHORELINE SEGMENT: 4,600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 20% / P ___% / G ___% / S ___% / M ___% / R 60%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeLOGS
FACETSOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP H / M / L

Continuous: Y/N ___ % of Segment ___ Width of Band: ___ m

Sporadic: Y/N ___ % of Segment < 1%

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

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

Fresh ___ % Mousse 50 % Tar Formation: 50 %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

① Very light oiling. Small tar balls, about 1
every 100 m².② Gravel beach 30 m long with mousse patches and
large tar ball at high tide.

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: Mid NW Shore OBSERVER: Greg Chaney
LOCATION PREFIX: MA SEG. NO.: 7 LENGTH: 4620 (M)
DATE: May 125 / 1989 TIME (HHMM): 1:30 pm TIDE HT.: ~ 1.0 (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

Large percentage of fucus at lower tide stand is brown and defoliated.

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

High mussel mortality. Some local areas appears to be 100%.

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

Barnacles grow on all rocky outcrops. They do not seem to have been impacted as greatly as mussel populations.

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

Littorina are fairly abundant and do not seem to have been severely impacted.

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

Limpets are fairly abundant and do not seem to have been severely impacted.

OTHER OBSERVATIONS: Local areas of high mussel mortality. Large bands of brown and defoliating fucus at lower tide levels.

CLEANUP PRECAUTIONS: Trace amount of oiled debris on pocket beaches. Recommend hand pickup or local use of steam on rocks with sorbents underneath. No oiling visible on rocky head lands.

MAMMALS: Otters — Harbor Seals 1 Sea Lions — Whales —
Other —

BIRDS: 2 seagulls, 1 Tern

GENERAL OBSERVATIONS: White high tide line very evident on some rock outcrops. Possibly dispersant deposit.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-25-89 Location Main Bay Site _____

Location Prefix MA Segment # 7 Length _____

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 low oil cover w/ some isolated patches (5") of tar

Width of beach zone surveyed 5-30 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 rock outcrops and isolated pockets of rubble beach

Fresh Water Sources small creeks & seeps

Sea Exposure open to the East, North & South

Access/Safety good access to beach pockets

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 _____

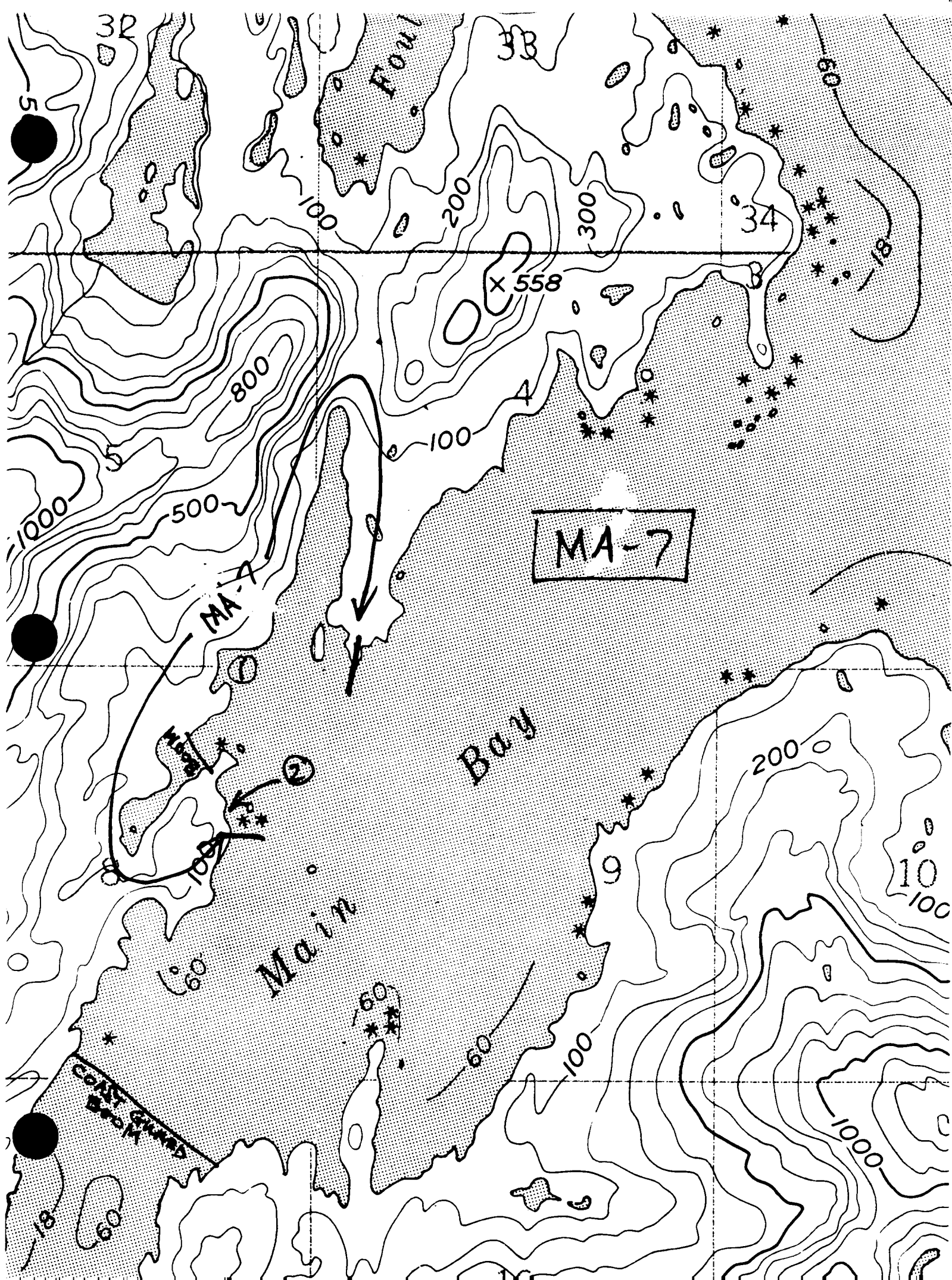
Observer(s) ANDREFSKY

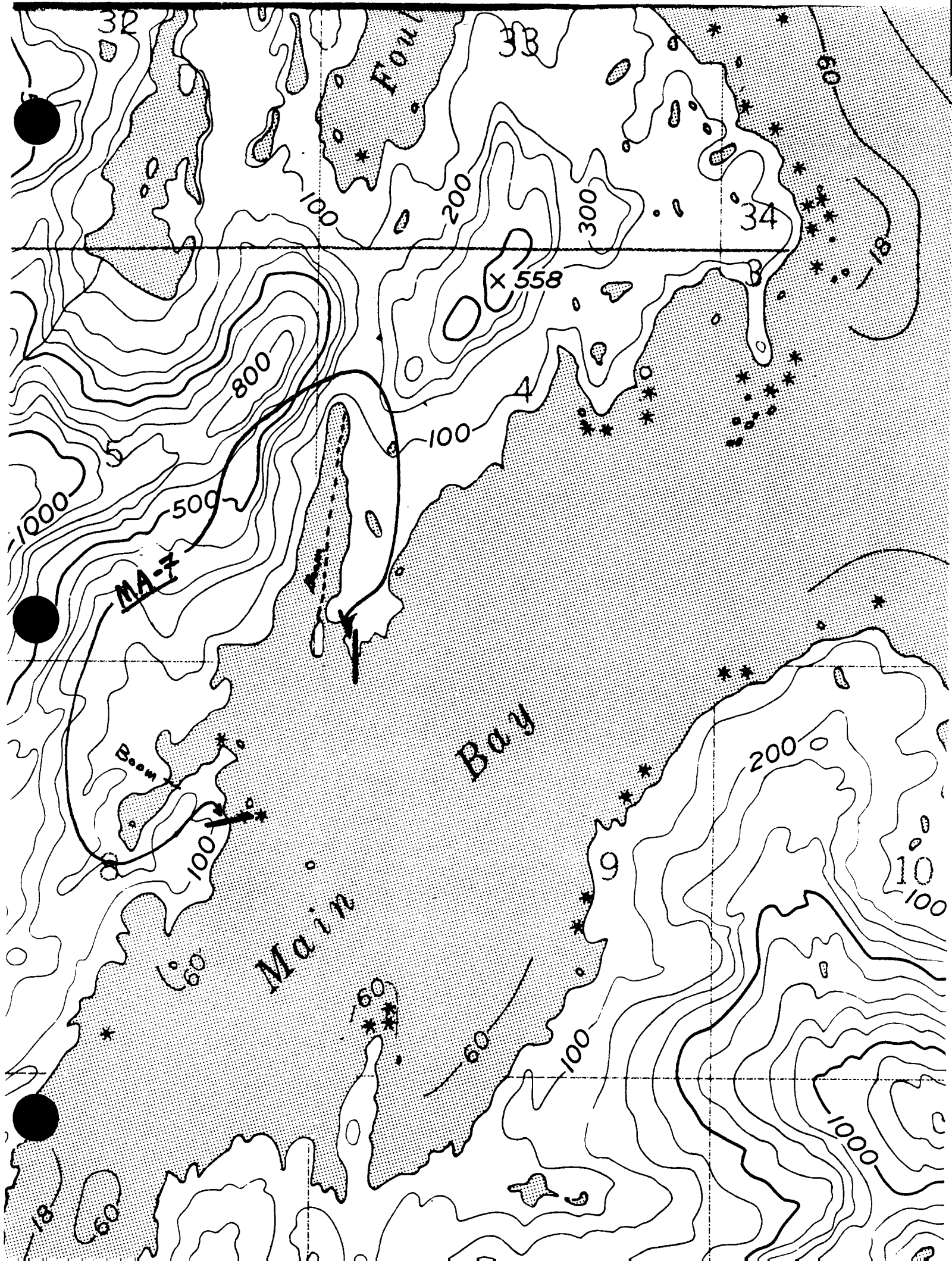
Time survey started 12:05 PM Time survey ended 1:30 PM

Cultural resource considerations/restraints:

If cultural resources are discovered during cleanup contact

Exxon archaeologist immediately.





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/28/89

SHORELINE SEGMENT MA-8

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/25/89

Recommended Cleanup Activity(ies):

- Manually remove tar balls.
- Mechanically wash beach at location #3.

Priorities Considerations:

Ecological Constraints (from site survey): Oiling is very light in this region. Manual crew could remove most of the tar balls. Steam and sorbents could be used to remove oil from few coated rocks. Washing should only occur when tide covers local intertidal organisms.

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 R. Rege
State Historic Preservation Officer *

ISCE Jacques Michel
EXXON: J.A. Murphy

FOSC: David Garofalo

Date: 5/29/89

6/5/89

Date: 6/5/89

Date: 6/5/89

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

SHORELINE OIL EVALUATIONDate: 5/25/89 Time: 13:40Observer: Rick GillieSurveyed From: Foot Boat Helio / PlaneWeather: Sun / Cloud / Rain / Snow / FogLOCATION

LOCATION

MAIN BAY

SEGMENT NUMBER

MA-8LENGTH OF SHORELINE SEGMENT: 2,100 mACCESS: Foot / Vehicle / Boat / Barge / Helio / Float PlaneSHORELINE:Shoreline Type: SPI / BEA / SOV / HLD / STRTSlope: LANG / HANG / VERWave Exposure: High / Med / Low

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

Drift Debris on Beach: Yes / NoSupra / Upper / Mid / Lower TypeFucus
LogsOILDegree of Oiling: Heavy / Moderate / Light / No Oil / UnobservedArea 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: _____ cm

Pooled Oil: _____ % "Free" Oil: _____ % Coated: H ___ % / M ___ % / L 100 %Fresh _____ % Mousse 50 % Tar Formation: 50 %Drift Debris Oiled ? Yes / No Supra / Upper / Mid / Lower Amount: H / M / L

Comments:

① MUST CONTACT HATCHERY MANAGER BEFORE
ANY CLEAN-UP.② Very light oiling - small tar balls③ Low tide coated beach. (see map).

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: ~~South Shore~~ South Shore OBSERVER: Greg Chaney
LOCATION PREFIX: MA SEG. NO.: 8 LENGTH: 2040 (M)
DATE: May 125/89 TIME (HHMM): 4:00 pm TIDE HT.: ~ 2.5 (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

Abundant on rocky outcrops, Not Present on beaches. Unusually large amount is brown and defoliated.

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

Abundant on rocky outcrops, Not present on beaches. Unusually large numbers are open and dead.

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

Abundant on rocky outcrops. Not present on beaches.

Littorina

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

Abundant on rocky outcrops. Not present on beaches.

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

Abundant on rocky outcrops. Not present on beaches.

OTHER OBSERVATIONS: Liz Seneer and Pat Jones have been picking up tar balls periodically as they wash on shore. They stated that the inner portion of Main Bay was mostly free from oil.

CLEANUP PRECAUTIONS: Oil is very light in this region. Hand crews could be used to remove tar balls. Steam and sorbents could be used to remove oil from "ore" coated rocks.

MAMMALS: Otters 1 Harbor Seals — Sea Lions — Whales —
Other

BIRDS: 3 Pigeon Guillemot, 2 seagulls

GENERAL OBSERVATIONS: John the hatchery manager wishes to be contacted before cleanup is conducted in the area. Oiling increases toward south east end of Main Bay,

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-25-89 Location Main Bay Site _____

Location Prefix MA Segment # 8 Length _____

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 low to the north & gradually goes to a light/medium cover to the south.

Width of beach zone surveyed 5-30 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 Very steep cliffs to the ^{NORTH} ~~South~~ with pocket beaches occurring in the ~~North~~ South.

Fresh Water Sources seeps and one creek.

Sea Exposure Open to the Northwest

Access/Safety Access is good on cobble beaches to the south.

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 _____

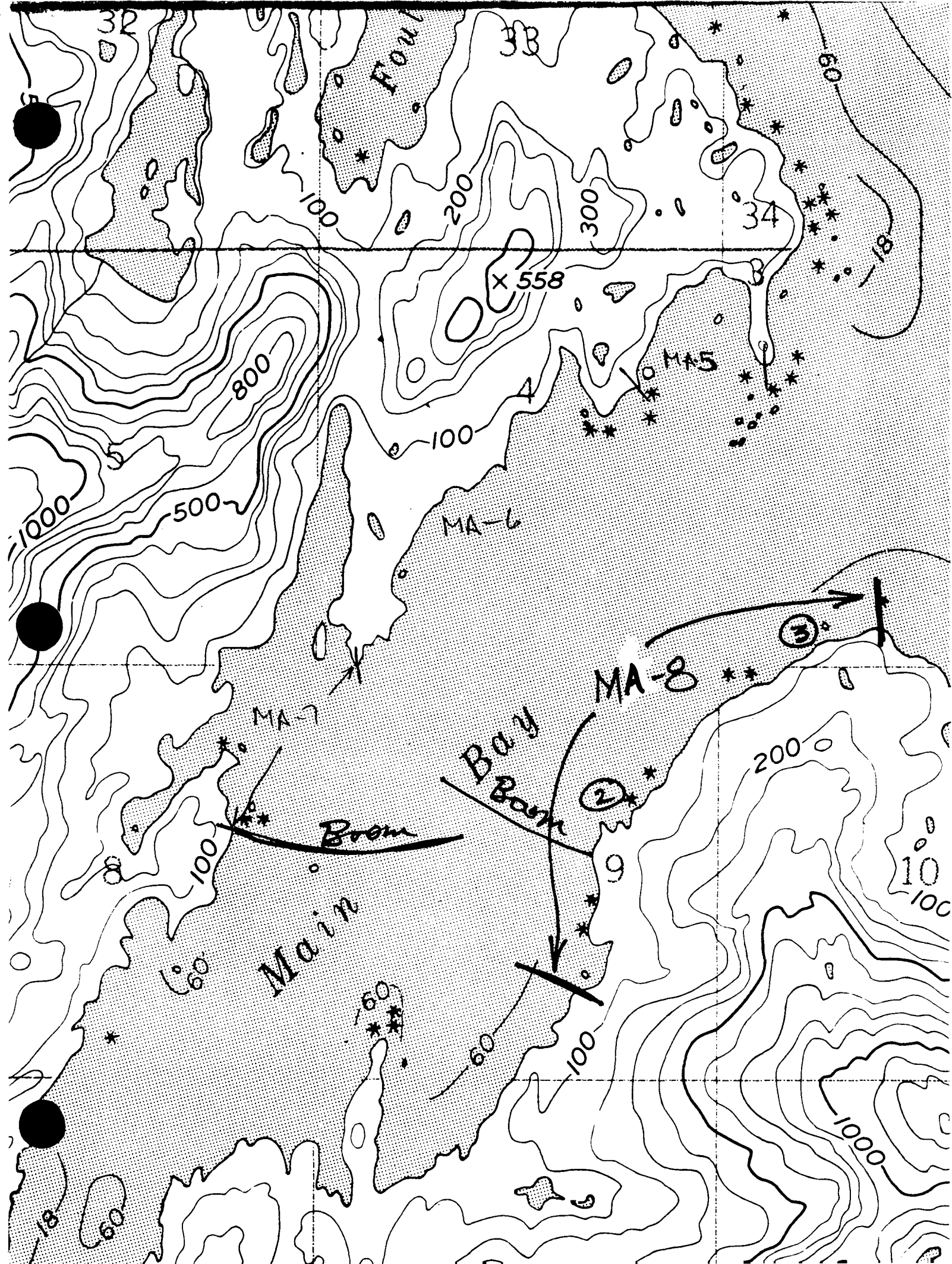
Observer(s) ANDREFSKY

Time survey started 1:30 PM Time survey ended 3:45 PM

Cultural resource considerations/restraints:

IF cultural resources are discovered during cleanup contact

Exxon archaeologist immediately.



7/31/89
all

SEG MA 5 INSPECTION # _____

SEGMENT

DATE 7-30-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical _____

☐

Warm water wash

☒

Non-mechanical _____

☐

Water deluge

☐

Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments

Treatment of Segment MA 5 is complete. Ready for demobilization & deployment to new segment

Signature

Tennay Dulin

Date: 7/30/89 Time: _____

Printed Name

Tennay Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent

Degree of Oiling

0
0
0
5
95

Heavy

Medium

Light

Very Light

None

100 %

Subsurface Oil

☒ Yes

☒ No

Comments NO Subsurface oil

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

NO Inspector provided

Signature

Date: / / Time: _____

Printed Name

FOSC rep

Demobilization approved / disapproved

Comments

NO GROSS Contamination

Signature

Arthur J Smith

Date: 7/30/89 Time: 2247

Printed Name

Arthur J Smith LTJG

7/31/89
RDS

TREATMENT MANUAL, 6/15/89

SEG MA 6 INSPECTION # _____

SEGMENT

DATE 7-30-89

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 MA 6 is complete. Ready for Demobilization & Deployment to next SegmentSignature [Signature]Date: 7/30/89 Time: _____Printed Name TERRY DULIN

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes ☒ No0
0
0
0
100Heavy
Medium
Light
Very Light
None

100 %

Comments _____

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments No inspector provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Demobilization approved / disapprovedComments No Gross ContaminationNo oil foundSignature [Signature]Date: 7/30/89 Time: 2249Printed Name Archie T. C.

7/31/89
RB

SEG MA 7 INSPECTION #
DATE 7-30-89

TREATMENT MANUAL, 6/15/87

SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash	☐ Mechanical
☐ Warm water wash	☒ Non-mechanical
☐ Water deluge	☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment MA 7 is complete.
Ready for demobilization & deployment to next segment
Signature Tommy Dulin Date: 7/30/89 Time:
Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	
Percent	Degree of Oiling
<u>0</u>	Heavy
<u>0</u>	Medium
<u>0</u>	Light
<u>0</u>	Very Light
<u>100</u>	None

100 %

Subsurface Oil

☐ Yes ☒ No

Comments

Reassessment

☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments No inspector provided

Signature Date: / / Time:
Printed Name

FOSC rep

Demobilization approved/disapproved
Comments NO GROSS Contamination
NO oil found on site
Signature Arthur J Smith Date: 7/30/89 Time: 2251
Printed Name Arthur J Smith LTJG

7/31/89
RJB

TREATMENT MANUAL, 6/15/89

SEG 11A 8 INSPECTION # _____

SEGMENT

DATE 7-30-89

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 11A 8 is complete.

Ready for demobilization & deployment to next segment

Signature [Signature]

Date: 7/30/89 Time: _____

Printed Name T. J. Dula

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent

Degree of Oiling

☐

Yes

☒

No

0
0
0
0
100

Heavy

Medium

Light

Very Light

None

Comments _____

100 %

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments _____

Signature _____

Date: 7 / 1 / Time: _____

Printed Name _____

FOSC rep

Demobilization approved/disapproved

Comments

NO Gross Contamination
NO OIL ON SITE

Signature [Signature]

Date: 7/30/89 Time: 2242

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): MAIN BAY SOUTH BLOCK

Includes Shoreline Segments: MA-9, MA-10

Submitted : H.C. Ross Date: 6/3/89
(for Exxon)

RECOMMENDATION
ISCC Approval: Jaqueline M. Miller Date: 6/7/89

FOSC Approval: C.S. Robbins Date: 6/8/89

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.

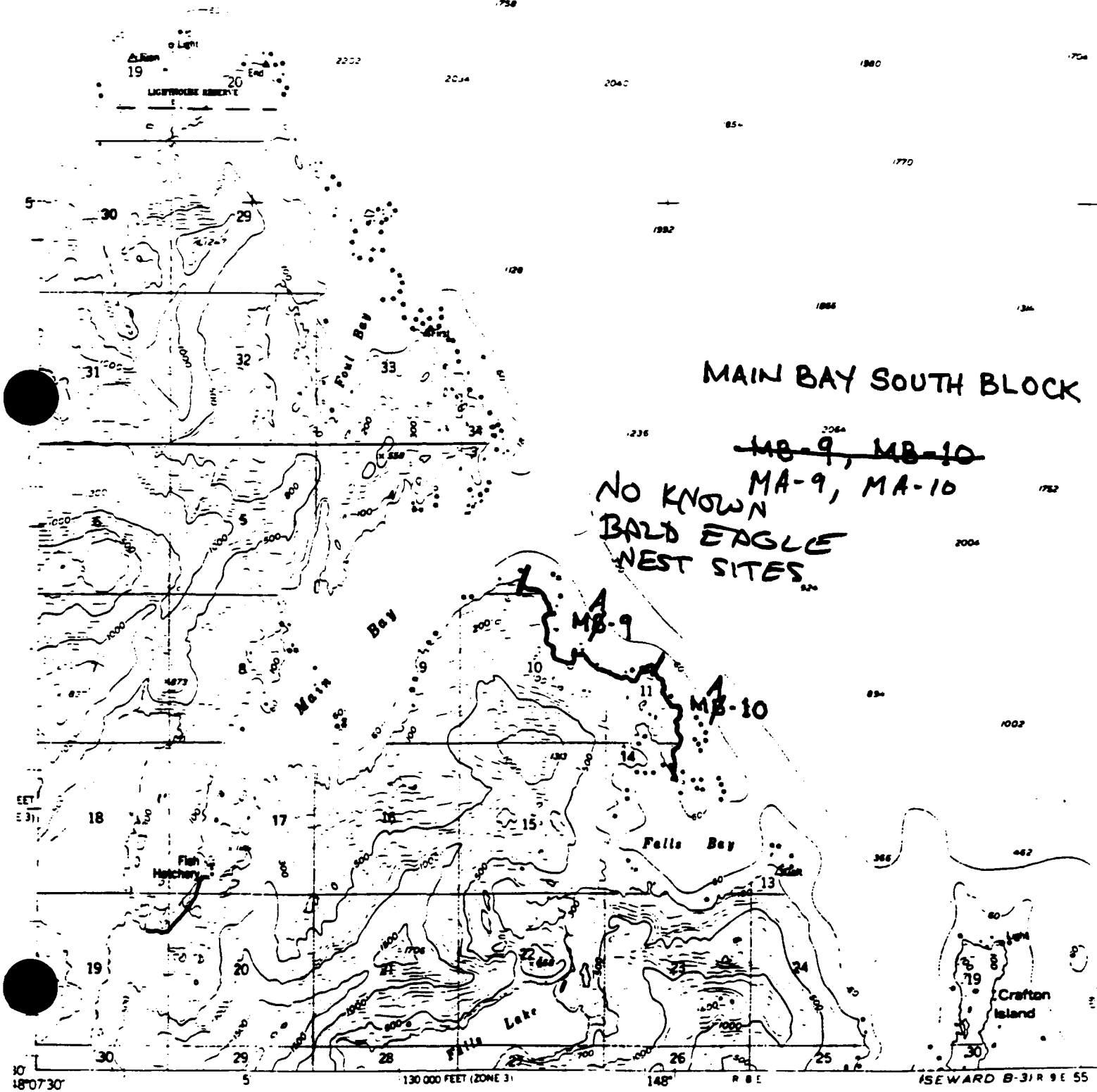
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PRINCE WILLIAM



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/2/89

SHORELINE SEGMENT MA-9

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/26/89

Recommended Cleanup Activity(ies):

- Manual cleanup of oiled fucus and rocks.
- Use appropriate method to clean heavily oiled beach patches and headlands

Priorities Considerations:

Class 4B, EXCEPT FOR THE RISK OF OILED FUCUS + DEBRIS
WASHING OFF THE BEACH INTO THE OPEN RIVERSIDE ZONE, SO
IT IS A high priority for MANUAL cleanup.

Ecological Constraints (from MANUAL site survey): Recommend manual removal of oiled fucus patches and tarballs. Wash local areas of heavy oiling at mid to high tide.

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 *
ISCC Jacqueline Kuehl
EXXON: P. C. Ross
FOSC: C. E. Robbin

Date: June 2, 1989
6/7/89
Date: 6/3/89
Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/26/89 Time: 8:11Observer: Rick GillieSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION MAIN BAY

SEGMENT NUMBER

MA
MA-9LENGTH OF SHORELINE SEGMENT: 2,400 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LAND/HANG/VERWave Exposure: High/Med/LowSediment: B 10% / C 20% / P 30% / G ___% / S ___% / M ___% / R 40%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeLogs
FucusOILDegree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved -see belowArea of Beach Impact: SU / SP (H) (M) / L

Continuous: Y/N ___% of Segment ___ Width of Band: ___ 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 50% / L 30%Fresh 40% Mousse 50% Tar Formation: 10%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments: (Refer to map in back)

- Access is hindered by nearshore reefs.

- ① Pocket beach with tar balls.

② Sporadic oiled Fucus patches.

③ Sporadic oiled Fucus patches.

④ Rocky headland with heavily oiled rock at high tide

⑤ Heavy oiling in patches.

1236

MAY 26 1989

Greg Chaney

SCAT 5

VERY LIGHT OILING

ROCKY HEADLANDS WITH PATCHES OF OILED FUCUS
HIGH TIDE FINE GRAVEL WITH SUB SURFACE OILING
THIN LAYER OF OIL ON BEACH NO LOCAL BIOTA
ANY PROCEEDURE OK.

PATCHES OF OIL ON FUCUS & ROCKS
LOCAL AREAS OF OILED BEACH
HEAVILY OILED SECTIONS OF
ROCKS AND FUCUS

~~MB 9~~

MA-9

1313

14

60

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: South of Main Bay OBSERVER: Greg Chaney

LOCATION PREFIX: MBA SEG. NO.: 9 LENGTH: 2400 (M)

DATE: May 126/89 TIME (HHMM): 8:15 AM TIDE HT.: ~ 1.5 (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

The bedrock outcrops have lush beds of fucus. Heavy oiling in some regions. Some are turning brown & defoliating.

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

Mussels get more concentrated toward southern portion of section. Little mussel mortality observed in oiled areas.

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

Sparse and discontinuous but those in oiled zone reacted to touch in oiled zone.

Littorina

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

Common on unoiled fucus.

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

Very few limpets observed.

OTHER OBSERVATIONS: Thick school of small fish offshore 3 to 6 cm.

Cleanup access may be difficult due to rocks off shore

CLEANUP PRECAUTIONS: Recommend hand removal of oiled fucus patches and tar balls. Wash local areas of heavy oiling at mid to high tide.

MAMMALS: Otters 5 Harbor Seals — Sea Lions — Whales —
Other Mink

BIRDS: 1 seagull, BVA/AT

GENERAL OBSERVATIONS: Some areas are moderate to heavily oiled but these patches are localized and too small to map. Strongly recommend scouting of local area to be conducted by cleanup crew.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-26-89 Location Main Bay Site _____

Location Prefix ~~MA~~ MA Segment # 9 Length 2,400 M.

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility light to medium oil cover, noncontinuous.

Width of beach zone surveyed 5-35 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 1/2 shoreline is rock outcrop & 1/2 is cobble beach w/ slight slope.

Fresh Water Sources Some streams & seeps

Sea Exposure Open to the North

Access/Safety poor access due to rocky 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 # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 8:15 AM Time survey ended 12:40 PM

Cultural resource considerations/restraints:

If unidentified cultural resources are discovered during cleanup
contact Exxon archaeologists immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/2/89

SHORELINE SEGMENT MA-10

LOCATION: (see enclosed map) Main Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/26/89

Recommended Cleanup Activity(ies):

- Flood/flush with medium to high pressure hot water or use other appropriate cleaning methods.

Priorities Considerations:

Class 4B

Ecological Constraints (from site survey): Oiled fucus should be removed manually. Sea cave should be washed with hot water flush at mid to high tide.

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. Hodner
State Historic Preservation Officer *
ISCC Jacqueline Michel

EXXON: F.J.C. Ross

FOSC: R.G. Dobbin

Date: June 2, 1989
6/7/89

Date: 6/3/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/26/89 Time: _____Observer: Rick GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION MAIN BAYSEGMENT NUMBER MA-10LENGTH OF SHORELINE SEGMENT: 1,300 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 60% / C 20% / P 10% / G 10% / S ___% / M ___% / R ___%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type LOGS
STICKSOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

Continuous: Y/N ___% of Segment _____ Width of Band: _____ m

Sporadic: Y/N ___% of Segment 10

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H 50% / M 30% / L 20%Fresh 50% Mousse 50% Tar Formation: _____%

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

Comments:

- Poor access to shore because of nearshore reefs.
- Patches of heavy coated free oil and mousse.
- High tide or storm berm buried oil to > 30 cm deep.
- See attached.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries

See Attached

VTR:

Y/N

Tape Number(s)

Photography:

Y/N

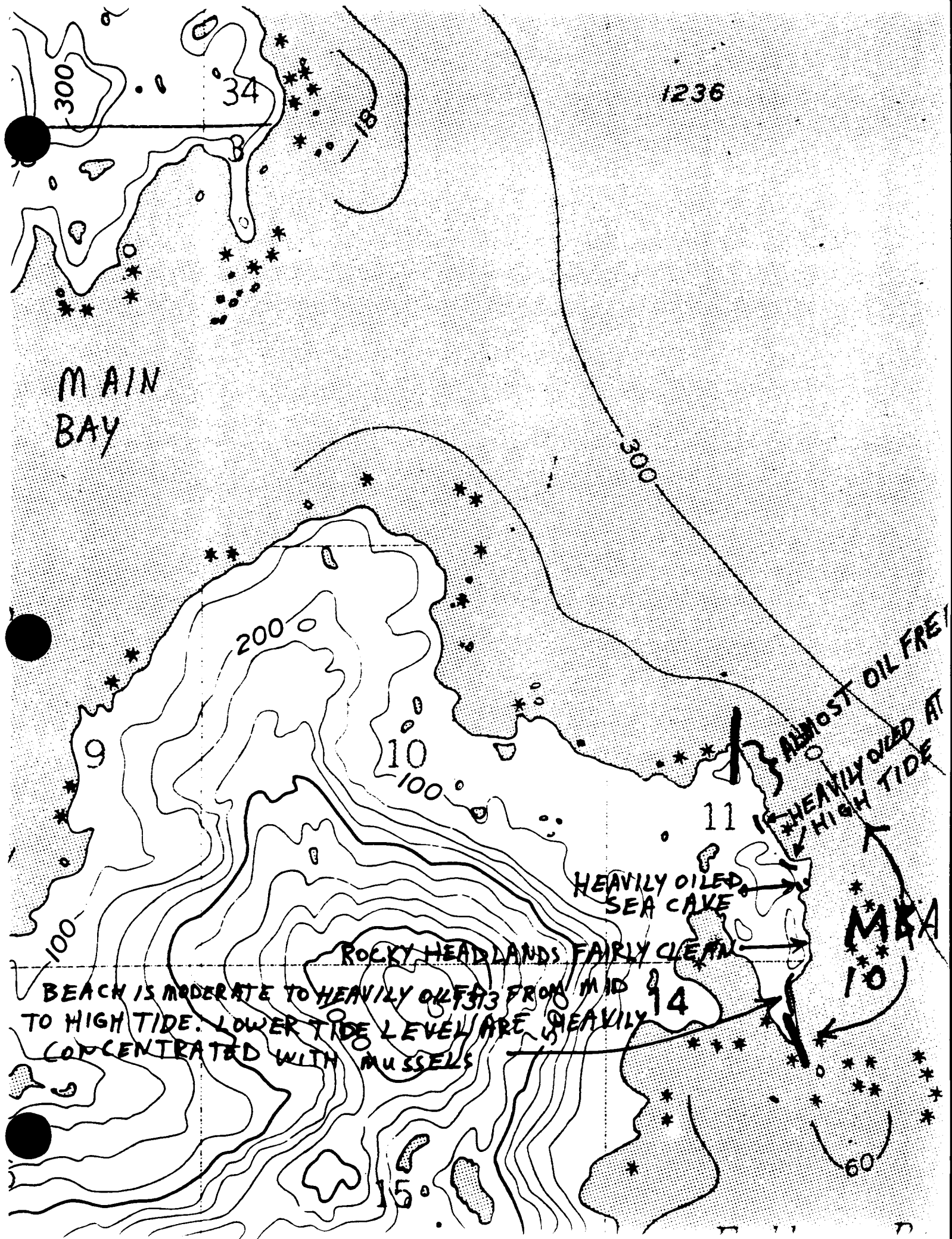
Roll Number(s)

TSG-1

Sample Numbers Collected:

N/ASite numbers refer to map

- ① Heavily oiled notch/cave in shore cliff
- ② Moderate oil on high tide rock platform.
- ③ High tide beach gravel, light to moderate oil
- ④ Heavily oiled cave/notch in shore cliff
- ⑤ Cobble beach



MAIN
BAY

1236

200

100

300

9

11

HEAVILY OILED
SEA CAVE

ROCKY HEADLANDS FAIRLY CLEAN

BEACH IS MODERATE TO HEAVILY OILED FROM MID TO HIGH TIDE. LOWER TIDE LEVEL ARE HEAVILY CONCENTRATED WITH MUSSELS

ALMOST OIL FREE
HEAVILY OILED AT
HIGH TIDE

10

14

15

60

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: South of Main Bay OBSERVER: Greg Chang

LOCATION PREFIX: MB SEG. NO.: 10 LENGTH: 1300 (M)

DATE: May 26, 89 TIME (HMM): 12:30pm TIDE HT.: 0.0 (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

Lush Fucus beds. Heavily oiled in local areas as indicated on map

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

Mussels are more concentrated in southern locations. Little

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

Barnacles respond to touch even when oiled

Littorina

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

Very few Littorina in this area

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

More limpets in this area than other regions observed.

OTHER OBSERVATIONS: Head lands are fairly clean but Sea Cave is moderate to heavy oil.

CLEANUP PRECAUTIONS: Oiled fucus should be removed by hand crew. Sea Cave should be washed with hot water flush at mid to high tide.

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

BIRDS: ~~None~~ 3 Buffle head ducks

GENERAL OBSERVATIONS: —

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-26-89 Location Main Bay Site _____

Location Prefix MB Segment # 10 Length 1,300 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, noncontinuous

Width of beach zone surveyed 5-20 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 Predominately steep rocky cliffs with a few beach pockets.

Fresh Water Sources Small streams & seeps

Sea Exposure Open To the North.

Access/Safety Poor / dangerous access

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

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

Photos: Color Roll # _____ Frames _____

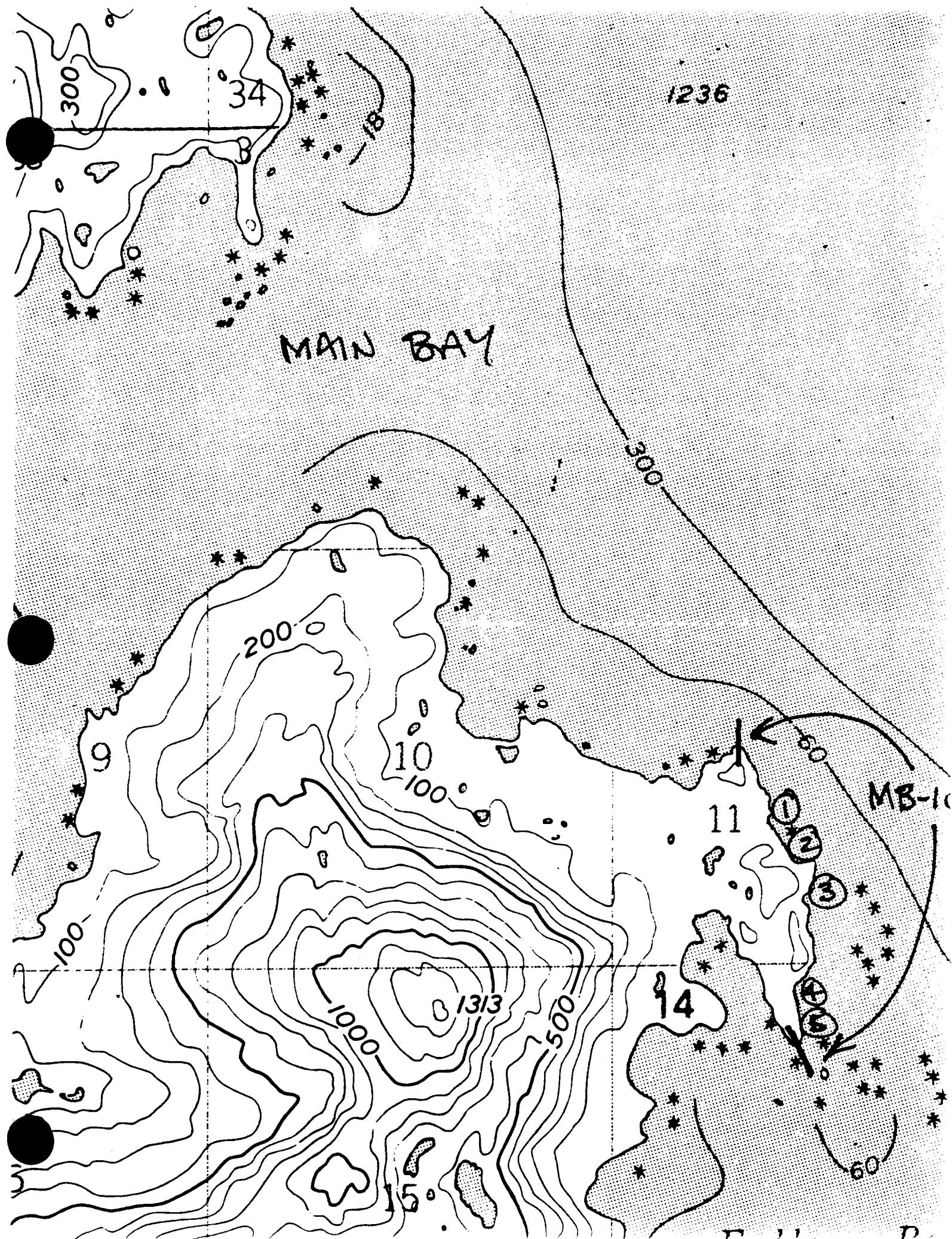
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 12:40 PM Time survey ended 3:30 PM

Cultural resource considerations/restraints:

If unidentified cultural resources are discovered during
cleanup contact Exxon archaeologists immediately.



SEG MA 9 INSPECTION # _____DATE 7-30-89

TREATMENT MANUAL, 6/15/89

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 MA 9 is complete. Ready for demobilization & deployment to new segment.Signature Tommy Dulin Date: 7/30/89 Time: _____Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒ Yes ☐ No

<u>0</u>	Heavy
<u>0</u>	Medium
<u>10</u>	Light
<u>5</u>	Very Light
<u>85</u>	None

100 %

 Comments Small area of light subsurface oil

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments No inspector provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Demobilization approved/disapprovedComments No gross contaminationSignature Arthur J. SmithDate: 7/30/89 Time: 2255Printed Name Arthur J Smith

LTJG

(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): MAIN BAY WEST BLOCK

Includes Shoreline Segments: MA-11

Submitted : W F Wolschke Date: 8-31-89
(for Exxon)

ISCC Recommendation: Shawn K. Christopherson Date: 9-4-89

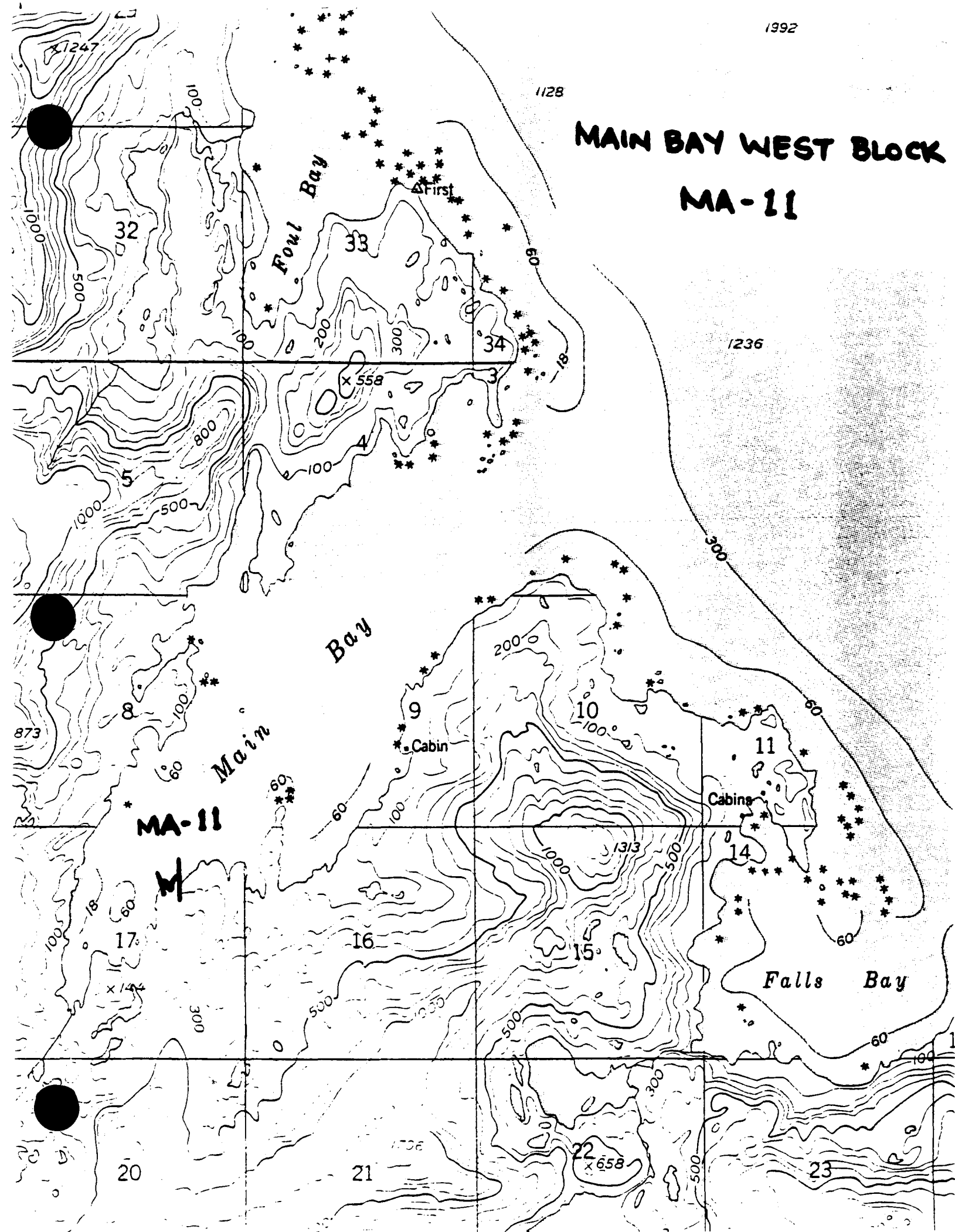
98 FOSC Approval: CS Nelson Date: 9-4-89

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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(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/31/89 SHORELINE SEGMENT MA-11

LOCATION: (see enclosed map) MAIN BAY
(MAIN BAY WEST BLOCK)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/31/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time (subject to FOSC reassessment at a later date), due to no oil.

Priorities Considerations:

No oil.

High recreational use.

Ecological Constraints (from site survey):

There are sensitive resources within and adjacent to this segment, which include tide pools and ADF&G Fish Hatchery. Personnel and equipment should be restricted from this area.

Archeological Constraints (from site survey):

If cleanup is planned an archaeological assessment must be conducted prior to cleanup.



State Historic Preservation Officer *

Date: Aug 31, 89

ISCC: Sharon K. Christopher

Date: 9/4/89

EXXON: Donna D. Taft

Date: 9-4-89

88 FOSC: CE Nelson

Date: 9-4-89

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

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/31/89 SHORELINE SEGMENT MA-11
LOCATION: (see enclosed map) Main Bay (south shore
near head of bay)
ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/31/89

Recommended Cleanup Activity(ies):

No clean-up recommended - no oil observed.

Priorities Considerations:

Class: 5A

Ecological Constraints (from site survey):

- Sensitive resources including anadromous fish and rich tidal pools are present
- Restrict all personnel from inside the boomed areas.

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: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 5/31/89 Time: 1145-1200Observer: C. DillonSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION Main Bay SEGMENT NUMBER MA-11LENGTH OF SHORELINE SEGMENT: 25 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 10% / C 75% / P 5% / G ___% / S ___% / M ___% / R 10%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type algae/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 1 Width of Band: _____ mSporadic: Y/N % of Segment 1

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

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

Fresh _____% Mousse _____% Tar Formation: _____%

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

No oil observed. Lower and middle intertidal zone. Boulders and cobbles were covered with brown algae that gave the appearance of oil from a distance.

No oil was found on surface or under top sediments. Area is boomed off.

ECOLOGICAL EVALUATION

LOCATION: Main Bay SITE: Trunk Beam OBSERVER: S. M. BAN
 LOCATION PREFIX: MA SEG. NO.: 11 LENGTH: 25 (M)
 DATE: 8/31/89 TIME (HMM): 1050 TIDE HT.: 1 (M)

OILED ZONE: Splash High Medium Low No oil!

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 and healthy on boulders. Discrete clumps on gravel beach. No oil.

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

Several clumps consisting of small individuals found in boulder crevices. All apparently healthy.

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

Dense adults and spat on boulders - some spat on gravel. No Corallina observed.

Littorina

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

Occasionally found in Fucus or in Y and pools at water's edge

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

Several individuals in Fucus foliage.

OTHER OBSERVATIONS: Filamentous brown algae on cobbles at water and lower ITZ. May have been mistaken as mouse by video camera.

CLEANUP PRECAUTIONS: No cleanup - no oil

MAMMALS: Otters Harbor Seals Sea Lions Whales
 Other None seen

BIRDS: Glaucous gulls, oldsquaws

GENERAL OBSERVATIONS: No oil or oil impacted organisms.

Numerous (±10) dead silver salmon on beach. Most likely post-spawning individuals; Fish not killed due to oil.

..... HIGH RECREATIONAL USE

PROPOSED MARINE PARK

T. 6 N.
T. 5 N.

MAIN BAY FISH
HATCHERY - STATE
OF ALASKA

63

FISHING CT

ESHMAY BAY
RECREATION 62

SCENIC, WILDLIFE
SEA LION, SEA OTTER,
HARBOR SEAL, WHALE

IMPORTANT SPORT FISHING
SS, RS, PS, CS, DV CT
? FLOAT PLANE LANDING

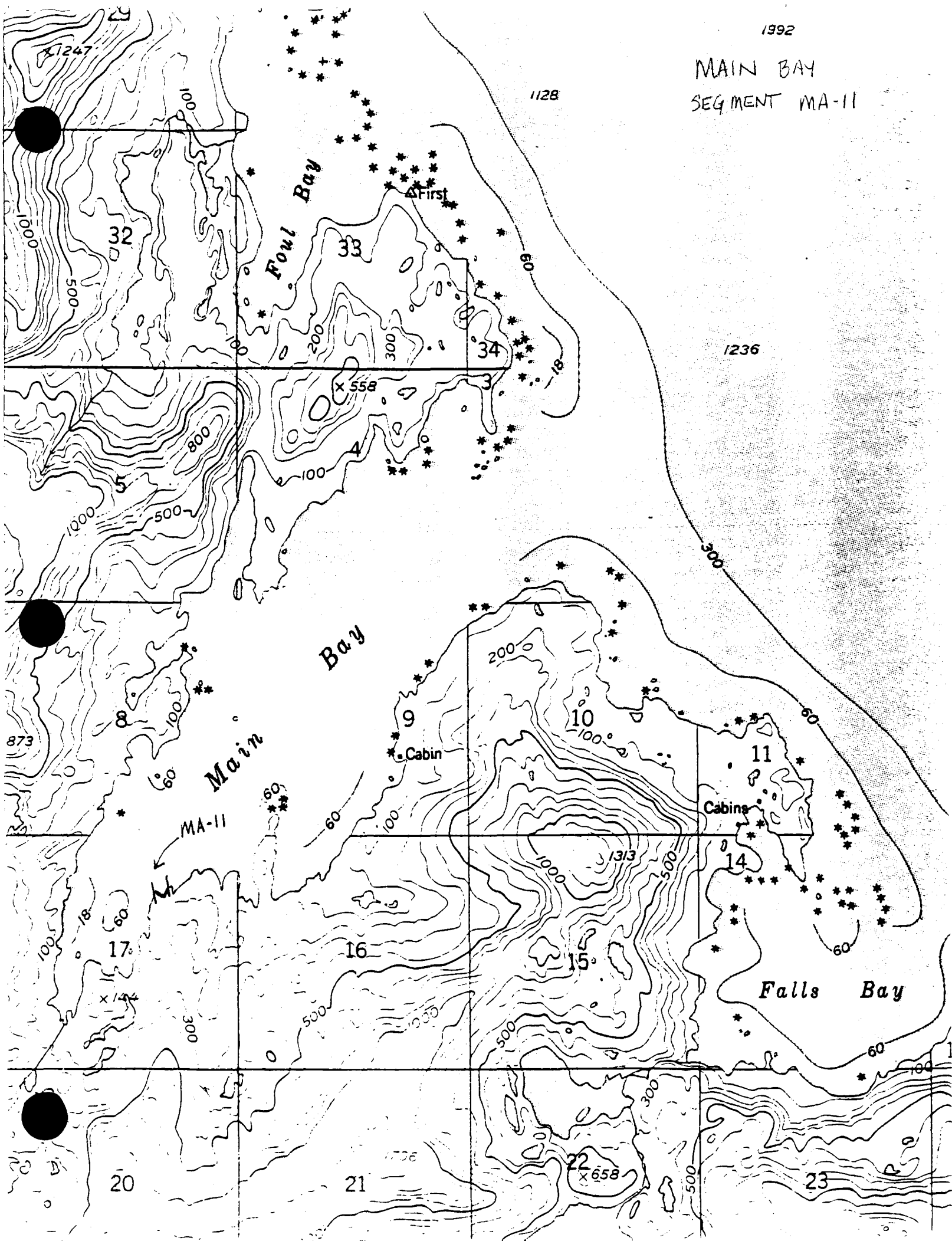
ESHAMY LAGOON

ESHAMY BAY
R. 8 E

MAIN BAY

1992

MAIN BAY
SEGMENT MA-11



(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): FALLS BAY BLOCK

Includes Shoreline Segments: FA-1, FA-2

Submitted : W A [signature] Date: 6/1/89
(for Exxon)

RECOMMENDATION
ISCC Approval: Jacqueline Michel Date: 6/7/89 6/7

FOSC Approval: C E [signature] Date: 6/8/89

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

ALL SEGMENTS IN THIS BLOCK HAVE HIGH PRIORITY FOR MANUAL REMOVAL OF OILED FUCUS AND DEBRIS. NO MECHANICAL TREATMENT ACTIVITIES ARE RECOMMENDED UNTIL AFTER 24 JULY 1989, DUE TO RISK OF CLEANUP GENERATED SHEENS IMPACTING THE HATCHERY AND FISHING ACTIVITIES

THIS BLOCK IS LOW PRIORITY EXCEPT FOR MANUAL CLEANUP OF OILY DEBRIS. IT IS IMPORTANT THAT THE BLOCK BE COMPLETELY REEVALUATED PRIOR TO MECHANICAL CLEANUP BECAUSE OF THE LIKELIHOOD OF NATURAL REMOVAL OF THE PRESENT DISTRIBUTION OF ITS CONTAMINATION

CS/Robbin 6/8/89
FOSC

P R I N C E

W I L L

1950

6/6/89

1302

1758

1980

1704

2034

2040

1854

1770

14

1992

1128

1866

1314

1236

2064

1752

2004

924

894

1002

anadromous fish stream

ACTIVE BALD EAGLE NEST

Falls Bay

FA-1

FA-2

Crafton Island

Light

130 000 FEET (ZONE 3)

148°

R. 8 E.

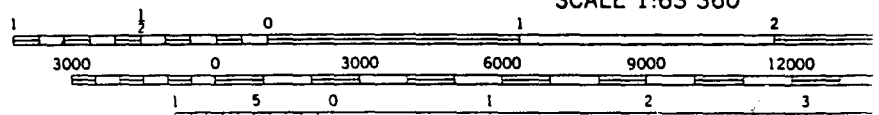
(SEWARD B-3) R. 9 E. 55'

lished by the Geological Survey

, and USCE

ric methods from aerial photographs
1951. Map not field checked

SCALE 1:63 360



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT FA-1

LOCATION: (see enclosed map) Falls Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Sporadically oiled stones. Should be removed or cleaned on site with oil collected on absorbent material.

- Manually remove oiled fucus.

Priorities Considerations:

Class 4: Low oil contamination.

Class B: Resources absent.

Ecological Constraints (from site survey):

- Oiled fucus should be removed. Rest of oiled shore is so light that the impact of known cleanup techniques might cause more damage than good. *ACTIVE BIRD BATTLE 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.

Douglas R. Regier
State Historic Preservation Officer *

ISCC Jaqueline Muehl
EXXON: Adam Adams

FOSC: CS Moller

Date: 5/31/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/22/89 Time: 19:45Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION FALLS BAY

SEGMENT NUMBER

FB-1LENGTH OF SHORELINE SEGMENT: 2,000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 30 / C 30 / P / G / S / M / R 40Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type **OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment Width of Band: mSporadic: Y/N % of Segment < 5%Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H % / M % / L %Fresh % Mousse % Tar Formation: %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- SPORADIC TAR SPOTS (DIME-SIZE) ON DEBBLES
- CLEAN-UP OILED STONES
- SOUTH SIDE OF FALLS BAY, ~~NO OIL~~ ~~APART~~ SPORADIC OIL (< 5% OF LENGTH)

ECOLOGICAL EVALUATION

LOCATION: Southern Falls Bay SITE: South Shore OBSERVER: Greg Chaney
LOCATION PREFIX: FBA SEG. NO.: 1 LENGTH: 2000 (M)

DATE: May 22, 89 TIME (HHMM): 7:30 TIDE HT.: + 1.5 (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

Some fucus is brown & shriveled but not possible to tell what caused this

Oiled near "Galt" point and small spit marked on map.

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

Continuous band on stable rock faces

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

Continuous band on stable rock faces

Littorina

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

Common along rocky points and cliffs

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

Common along rocky points and cliffs

OTHER OBSERVATIONS: Only significant oiling near "Galt" point and near small spit indicated on map. Rest of unit has a maximum of one square cm oil every 2 meters along high tide line

CLEANUP PRECAUTIONS: Oiled fucus should be removed. Rest of oiled shore is so very light that impact of ^{known} clean up ^{techniques} might cause ^{more} damage than good.

MAMMALS: Otters 4 Harbor Seals — Sea Lions — Whales —
Other

BIRDS: 7 Wandering Tattlers, 2 crows, one weak seagull

GENERAL OBSERVATIONS: one weak seagull found at western end of Falls Bay. It could still fly but didn't fly more than 50 m. at a time

Eagle observed on Dutch rocks

Wandering Tattlers
~~3 sandpipers~~ observed

oil fucus should be removed by
hand from rocks and boulders
local areas with heavier oiling should
be steamed with sorbents to catch
run off oil

2 harlequin ducks

1 sea otter off shore

medium to light band of oil at high
tide line w/ heavier concentrations

episodic & localized.

~~Hidden~~ Falls Bay 7:30 HF 1

Limpets, Mussels, Snails, Fucus, barnacles
all cont., abundant, banded on rocky
shoreline

oiling appears about 1 cm^2 drop
every 2 m

7 gray sandpipers Wandering Tattlers

2 crows

4 sea otter at head of bay

some fucus is brown & shriveled
but it was not possible to tell what
caused this

No biological impact observed connected
with the very light oiling

8:30 pm end

8:00 AM start

HF 2

light oiling at high tide line only
 $\approx 1 \text{ cm}^2$ at high tide line 1 m wide
band every 2 meters (one drop of oil
every 2 meters along high tide line)

Mid bay light oiling over entire
beach profile. Water beading up on
stones - Beaches cobbles to gravel.

Beaches nearly devoid of intertidal life
head lands covered with thick intertidal
community. Most stable rocks have all
representative species.

1758

1950

May 22 2040 1989

Greg Chaney

1128 F B

1866

2064

924

~~Weak
Seagull~~

Oiled
Fucus

otters
Moder
oiled
Point

FB

0 FEET
ONE 3)

148°07'30"

130 000 FEET (ZONE 3)

REF

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-22-89 Location FALL BAY Site _____

Location Prefix FBA Segment # 1 Length 2000 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 oil is very light

Width of beach zone surveyed 20-40 m Tree fringe surveyed 0-40 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 wall cliffs and very gentle sloped beaches

Fresh Water Sources many water falls

Sea Exposure Open To the North

Access/Safety good access to several 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 —

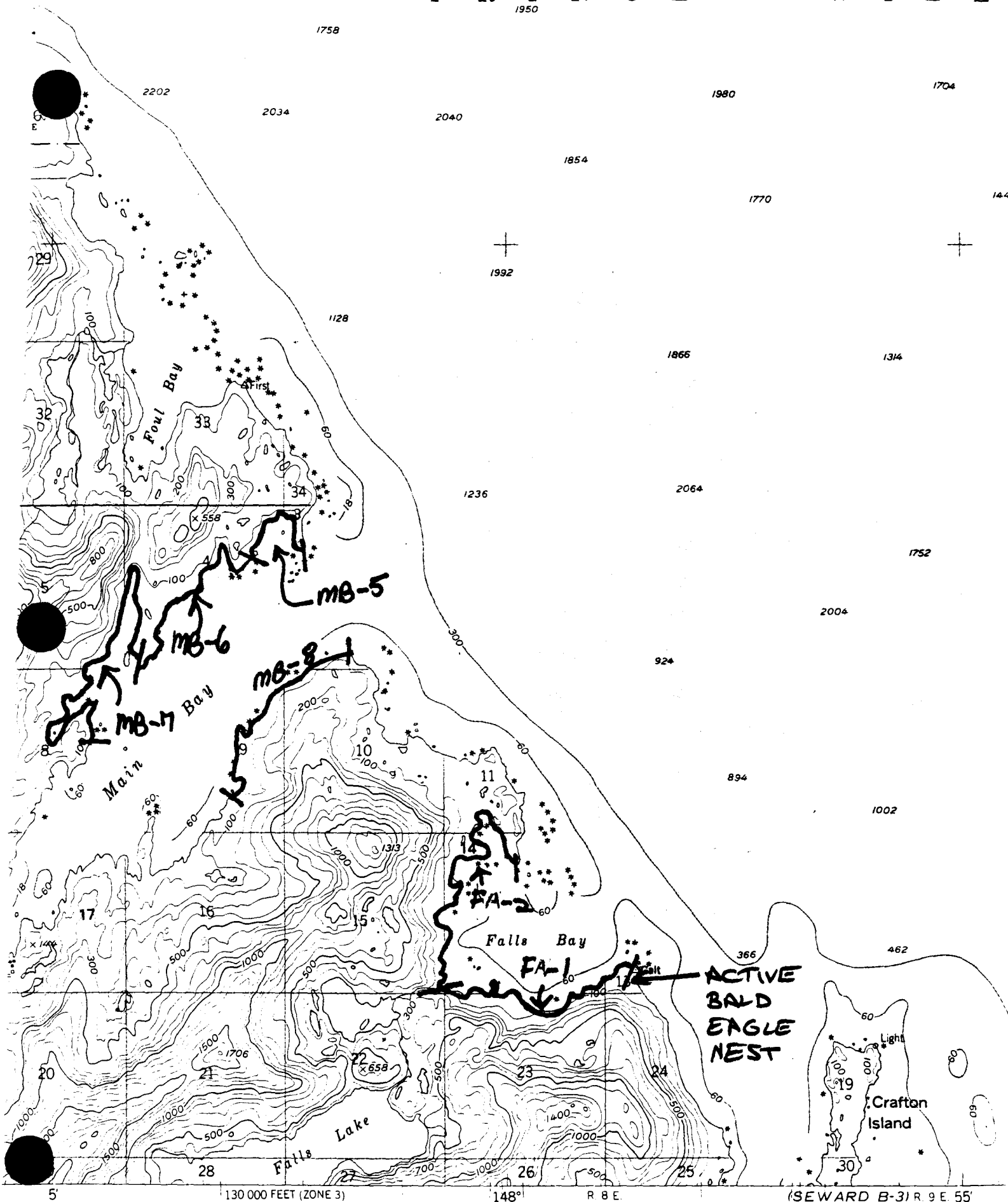
B/W Roll # — Frames —

Observer(s) ANDREFSKY

Time survey started 7:30 PM Time survey ended 8:30 PM

Cultural resource considerations/restraints:

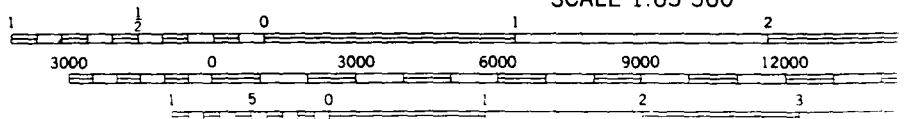
If heretofore unidentified cultural resources are discovered during
cleanup contact Exxon Archaeologist Chuck Mobley immediately.



lished by the Geological Survey
and USCE

ric methods from aerial photographs
1951. Map not field checked

SCALE 1:63 360



TEAM 5

EB1 to EB1^A

Surveyed May 22 & 23, 1989

9:00 AM - 1:30 PM; 6:30 PM - 8:30 PM
8:00 AM - 11:30 AM

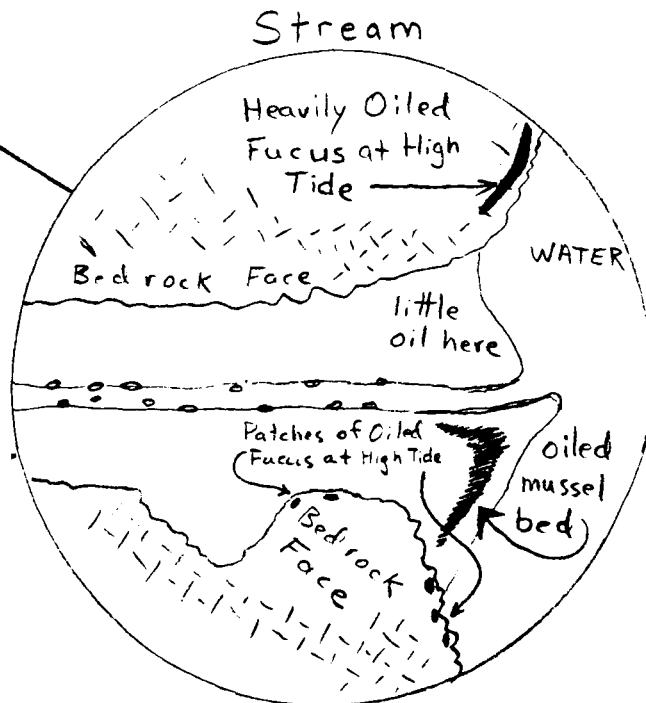
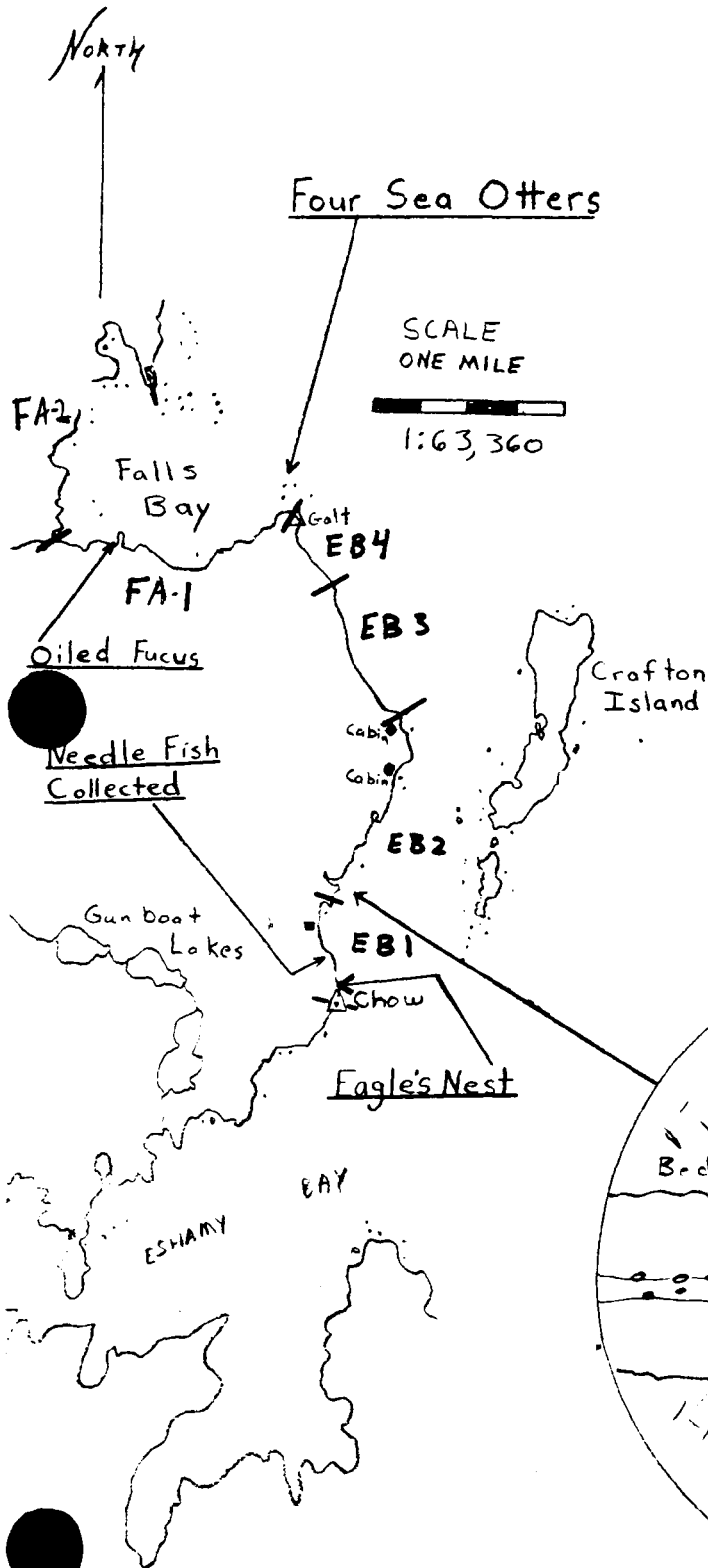
Scale 1:63,360

Sketch Map Compiled by
Greg Chaney May 22 1989

Base Maps USGS Quads

Seward (B-3) & Seward (C-3)

Based on Aerial Photography
Flown 1950, with updates
from 1982 photography



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT FA-2

LOCATION: (see enclosed map) Falls Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/23/89

Recommended Cleanup Activity(ies):

- Manually remove oiled fucus debris.
- Wash and recover dead, oiled fucus attached to rocks at selected rocky headland sites.
- Beaches: Flooding with hot water/pressure at appropriate tide level below oiled portion of beach.

Priorities Considerations:

- Class 3: Moderate oil contamination.
- Class A: Resources present (Salmon Fry-privately developed facilities)

Ecological Constraints (from site survey):

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 R. Regier
State Historic Preservation Officer *

ISCC Jaqueline Michel

EXXON: Adm: Adam

FOSC: CE Dobbin

Date: 5/31/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/23/89 Time: 08:30Observer: Rick GilheSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION FALLS BAY SEGMENT NUMBER F8-2LENGTH OF SHORELINE SEGMENT: 3,200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B30% / C25% / P10% / G5% / S % / M % / R30%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS FUCUS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment Width of Band: VARIABLE mSporadic: Y/N % of Segment 20Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: 10-30 cmPooled Oil: % "Free" Oil: % Coated: H % / M70% / L30%Fresh 100% Mousse % Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- ① - OIL OCCURRENCE SPORADIC, BUT MODERATE WHEN PRESENT
- ② - MODERATE OILING OF FUCUS ON ROCKS AT HIGH TIDE IN SELECTED LOCATIONS (SEE ATTACHED MAP)
- ③ - MOD. OILING OF BEACHES ("A" AND "B") AT MID-HIGH TIDE WITH 10-30 CM PENETRATION
- ④ - OIL ON HEADLANDS ~~NOW~~ EITHER SIDE OF VILLAGE BAY

DOCUMENTATION:

Map/Aerial photo marking segment boundaries see below

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: N/A



ECOLOGICAL EVALUATION

LOCATION: Falls Bay SITE: North Shore OBSERVER: Greg Chaney

LOCATION PREFIX: FBA SEG. NO.: 2 LENGTH: 3,200 (M)

DATE: May 22, 89 TIME (HHMM): 8:00 AM TIDE HT.: -0.5 (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)

Some patches of fucus at high tide are very heavily oiled

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

Most Mussels are dead in oiled zone. They are open

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

Easily detached in oiled zone.

Littorina

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

Large number of shells found at base of oiled rocks

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

Large number of shells found at base of oiled rocks

OTHER OBSERVATIONS: Found skeleton and hide of recently killed sea otter.

Teeth showed no wear, probably young adult. Location marked on map.

CLEANUP PRECAUTIONS: See attached map for location of different types.

Beaches are fairly devoid of intertidal vegetation - cleanup ok at any tide

Rocky outcrops should be cleaned at mid to high tide due to intertidal life below.

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

BIRDS: Russ Williams, local resident, stated Falls Bay had 6 eagles before
slick, now one remains.

GENERAL OBSERVATIONS: Local residents report massive bird

mortality following spill. They also found 4 dead oiled otters. Oil slick

slick only arrived 3 weeks ago.

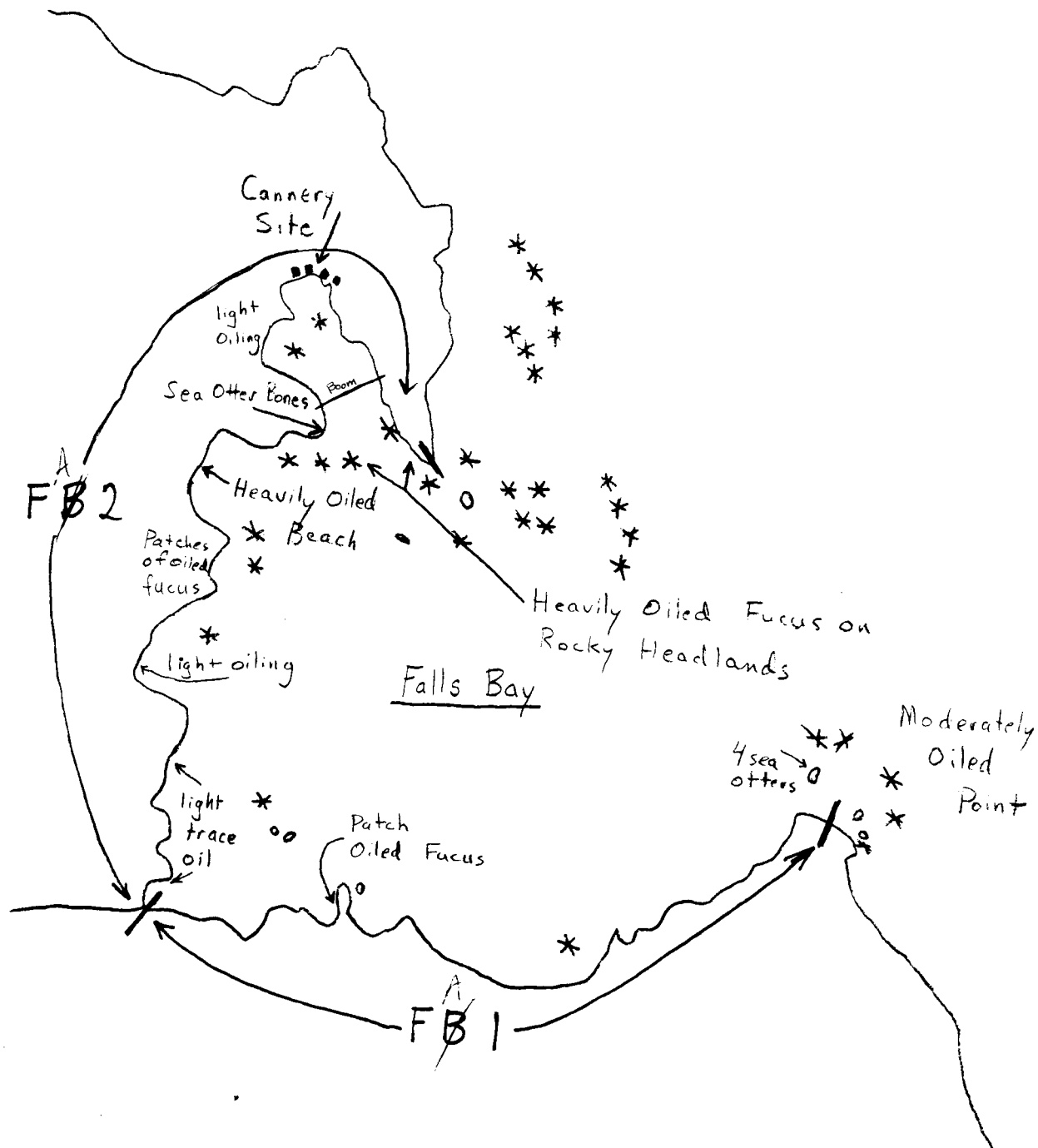


Ecological Survey

May 23 1989

Northern Shore Falls Bay (FB2)

Greg Chaney



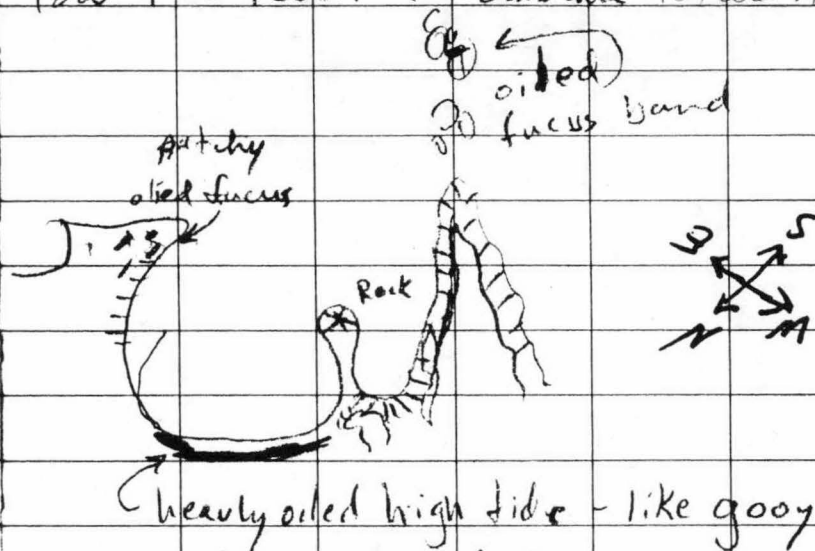
oiling on outcrops is restricted to
10 cm band barnacles encrusted with
oil at this level

2nd major rock ridge on north shore
Falls Bay - Heavy oiling of fucus at
high tide line, oil distribution is
discontinuous but heavy in spots
band about 1 m thick - vertically
spread over larger regions where
slope is gentle.

Stump found in growth position
2-3 m below forest floor.

Beach - north of rocky ridge.
Major oiling of mid to high tide
beach sediments. Cold rainy day when
surveyed. Oil was thick between
the pebbles + fine gravel which

composes the mid to high intertidal.
little intertidal life ~~below~~ on
the beach. Limited fucus at very
low tide level. Recommend hot water flush



heavily oiled high tide - like goopy
pavement on overcast day
recommend steam or hot water
flush for beach at mid tide to
~~but~~ increase efficiency but low
tide operations acceptable.

mussels observed in oiled zone are all
open and dead. Unusually large #s of
mussels ^{were} open below oiled zones
this correlation varies in different areas

oiled barnacles detach easily
few snails, or limpets observed in
oiled zone. In some rocky locations
piles of limpet shells exhibit imply
higher than normal rates of mortality

Sea Otter carcass found at
west shore of Boat House Bay
bones only, no flesh left at all
some tendons holding bones together
Skin was peeled back from
bones around rear flippers.

This may have been due to oiled
skin being pulled back by a
predator. Teeth look very healthy
Canines are sharp & do not exhibit
wear.

Photo's 15 - 17 sea otter
carcasses.

Locals

Requested that we contact
Linda at Veco - skiffs are ready
Russ Williams ^{asked Linda} do you want the
skiffs? - ^{call} pizza hut building on
~~what~~ channel 16

local 12 years

had 6 eagles now only 1
used to have a bunch of birds
but now all have gone
When did the oil come? - 3 weeks ago
54 weeks after the spill
one week after ~~the~~ oil showed
up boom was brought in

No spills in last 12 years
several birds burned
4 sea otters destroyed

Off beach 11:30 AM

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-23-89 Location Fall Bay Site _____

Location Prefix FBA Segment # 2 Length 2,000 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 light

Width of beach zone surveyed 20-40 m Tree fringe surveyed 10 m.

Cultural resources observed in beach zone (AHRS code) -

Cultural resources observed in tree fringe (AHRS code) -

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

Shore Profile steep rock cliffs in some areas and fairly flat beaches

Fresh Water Sources many water falls

Sea Exposure Open to the North

Access/Safety good access to 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 -

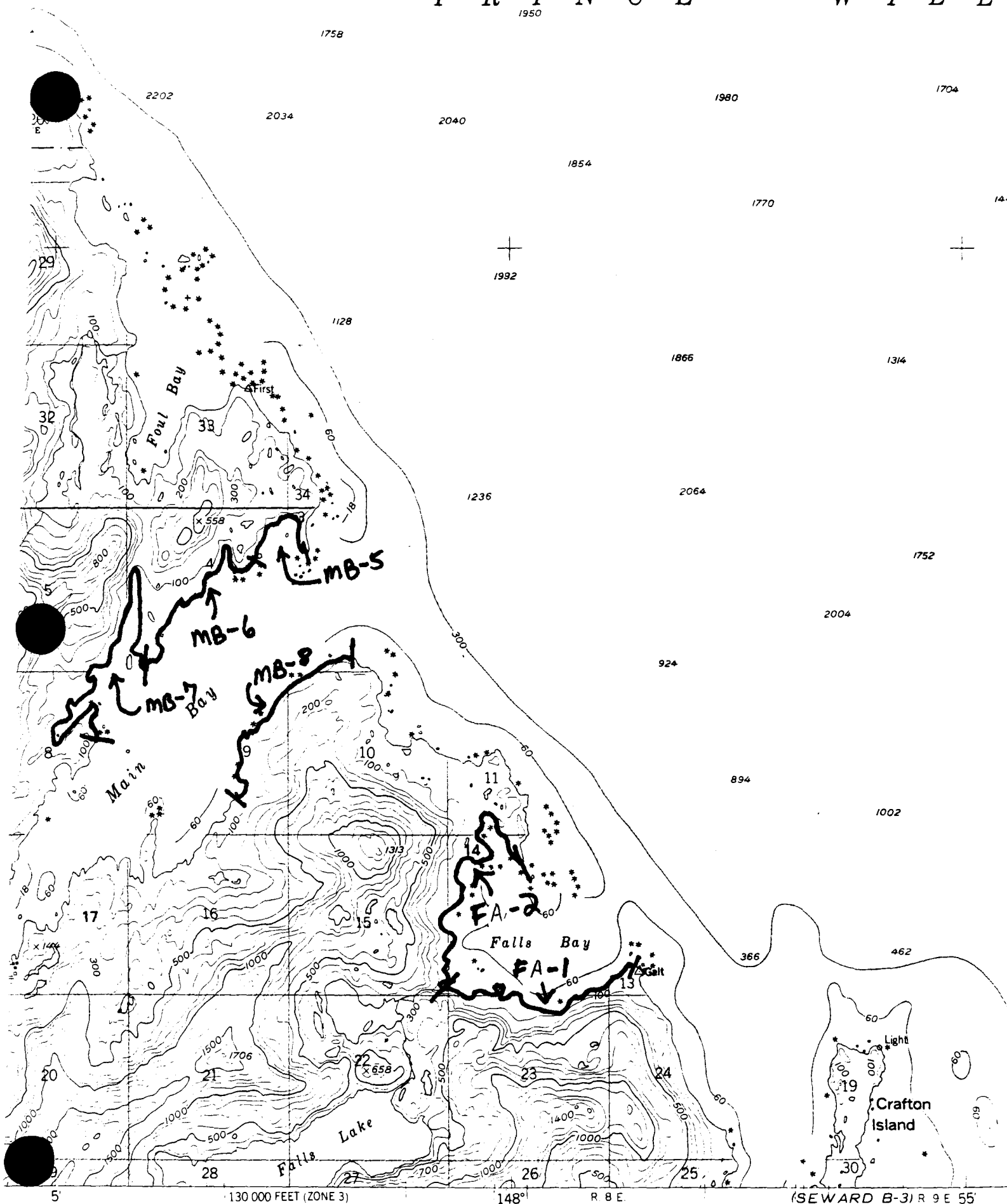
B/W Roll # - Frames -

Observer(s) ANDREPSKY

Time survey started 7:30 PM Time survey ended 8:30 PM

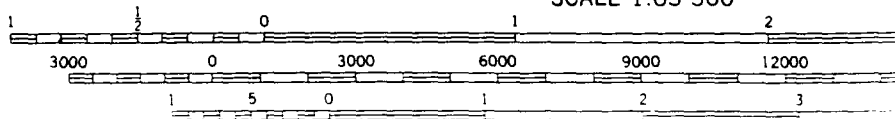
Cultural resource considerations/restraints:

If heretofore unidentified cultural materials are discovered during
cleanup contact EXXON archaeologist Chuck Mobley immediately.



lished by the Geological Survey
and USCE

ric methods from aerial photographs
1951. Map not field checked



TEAM 5

EB1 to FB1

Surveyed May 22 & 23, 1989

9:00 AM - 1:30 PM; 6:30 PM - 8:30 PM
8:00 AM - 11:30 AM

Scale 1:63,360

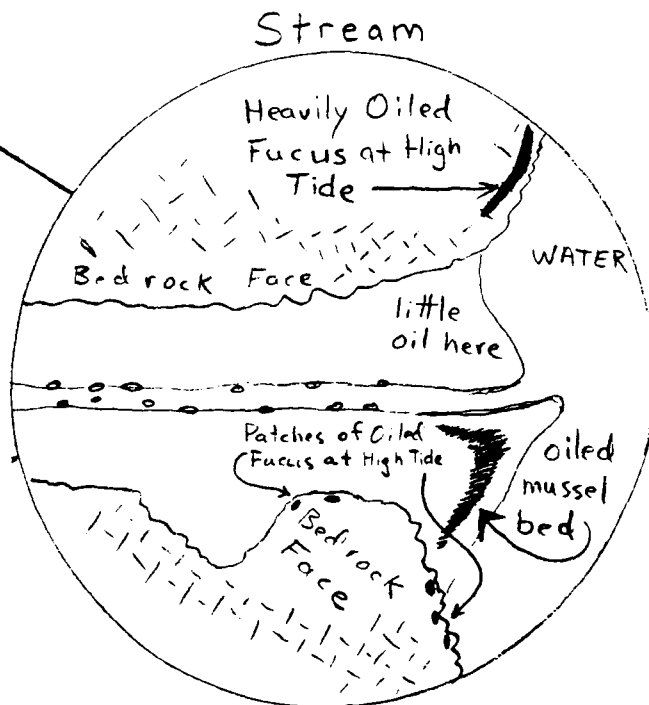
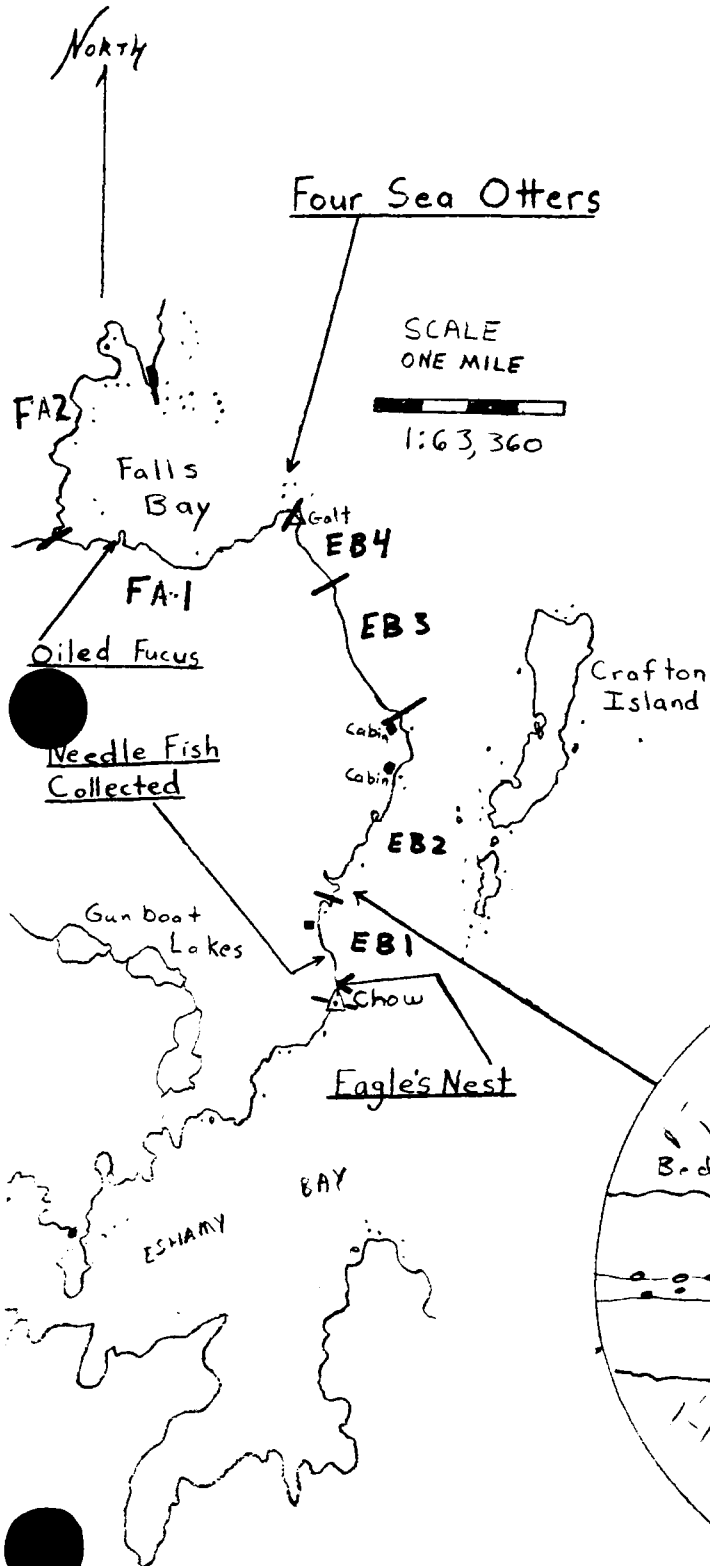
Sketch Map Compiled by
Greg Chaney May 22 1989

Base Maps USGS Quads

Seward (B-3) & Seward (C-3)

Based on Aerial Photography

Flown 1950, with updates
from 1982 photography



SEG FB 1 INSPECTION # _____

SEGMENT

DATE 2-30-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐	Hot water wash	☐	Mechanical _____
☐	Warm water wash	☒	Non-mechanical _____
☐	Water deluge	☐	Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment FB 1 is complete. Ready for demobilization & deployment to new segmentSignature Tommy J. Dulin Date: 7/30/89 Time: _____Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes ☒ No

<u>0</u>	Heavy
<u>0</u>	Medium
<u>0</u>	Light
<u>0</u>	Very Light
<u>100</u>	None

100 %

Comments _____

Reassessment

☒ Yes - necessary☐ No - not necessary unless re-oiledADEC rep Comments No inspector provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Comments Demobilization approved/disapproved
No Gross ContaminationSignature Arthur J. Smith Date: 7/30/89 Time: 2306Printed Name Arthur J. Smith USCG

TREATMENT MANUAL, 6/15/89

SEG FB 2 INSPECTION # _____
DATE 7-30-89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash	☐ Mechanical _____
☐ Warm water wash	☒ Non-mechanical _____
☐ Water deluge	☐ Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment FB2 is complete. Ready for demobilization & redeployment to new segment.
Signature Terry Dulin Date: 7/30/89 Time: _____
Printed Name Terry Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil		Subsurface Oil
Percent	Degree of Oiling	☐ Yes ☒ No
<u>0</u>	Heavy	Comments _____ _____ _____ _____ _____
<u>0</u>	Medium	
<u>0</u>	Light	
<u>0</u>	Very Light	
<u>100</u>	None	

100 %

Reassessment

☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments NO Inspector provided

Signature _____ Date: / / Time: _____
Printed Name _____

FOSC rep

Demobilization approved/disapproved
Comments NO gross contamination
NO oil found on site
Signature Arthur J Smith Date: 7/30/89 Time: 0301
Printed Name Arthur J Smith LTJG

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): ESHAMY BAY NORTH BLOCK

Includes Shoreline Segments: EB-1, EB-2, EB-3, EB-4

Submitted : Adm: Adams Date: 5/30/89
(for Exxon)

RECOMMENDATION
ISCC Approval: Jacqueline Hinkel Date: 6/7/89

FOSC Approval: CE Pollin Date: 6/8/89

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
PWSA
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

MAINTAIN BOOMS AT THE ENTRANCE TO THE INNER LOGOON DURING ANY CLEANUP ACTIVES IN ESHAMY BAY

AVOID ACCESS TO UPLAND SHOULD BE PROHIBITED. THESE ARE CHENEGA VILLAGE PROPERTIES AND THE UPLAND IS OPEN MEADOWS WHICH ARE VERY ACCESSIBLE ESPECIALLY IN THE SOUTH SIDE.

SOUTH BLOCK IS LOW PRIORITY EXCEPT FOR MANUAL REMOVABLE OF OIL DEBRIS. PARTICULAR IT IS IMPORTANT THAT THIS BLOCK COMPLETELY EVALUATED PRIOR TO MECHANICAL CLEANUP, BECAUSE OF THE LIKELIHOOD OF NATURAL REMOVALS OF THE PRESENT DISTRIBUTION OF OIL CONTAMINATION

CS Robbin 4/8/89
FOSC

NORTH OF ESHAMY BAY

TEAM 5

EB1 to F~~B~~^A1

Surveyed May 22 & 23, 1989

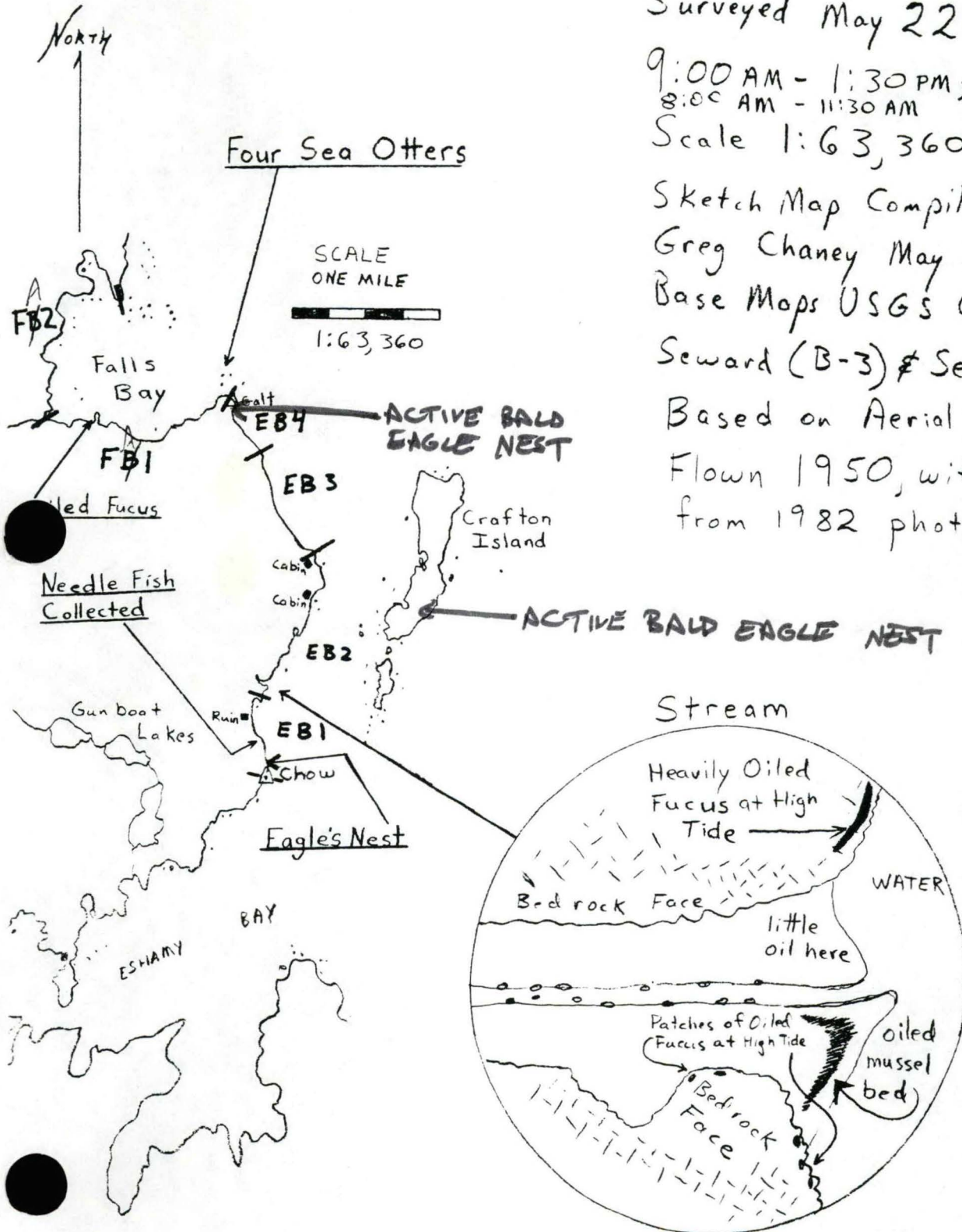
9:00 AM - 1:30 PM; 6:30 PM - 8:30 PM
8:00 AM - 11:30 AM

Scale 1:63,360

Sketch Map Compiled by
Greg Chaney May 22, 1989
Base Maps USGS Quads

Seward (B-3) & Seward (C-3)

Based on Aerial Photography
Flown 1950, with updates
from 1982 photography



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-1

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Manual cleanup of fucus debris.
- Flooding/moderate pressure hot water washing of beach at north end of segment. Oil is at mid-tide level.
- MAINTAIN SORBENT BOOM BETWEEN WORK AREA AND FISH STREAM IN EB-2.

Priorities Considerations:

Class 3: Moderate oil contamination

Class A: Resources present (Salmon stream near by)

Ecological Constraints (from site survey): Restrict helicopter use near eagle's nest. Near survey marker "Chow" cleanup at mid tide or higher. At northern section cleaning at any tide is ok. ANADROMOUS FISH STREAM IS PRESENT, in EB-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.

Douglas R. Peger
State Historic Preservation Officer *
ISCC Jacqueline Michel
EXXON: APM: Adam
FOSC: CS Peltier

Date: 5/30/89

6/7/89

Date: 5/30/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/22/89 Time: 09:20Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAYSEGMENT NUMBER EB-1LENGTH OF SHORELINE SEGMENT: 1,000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 25% / C 10% / P 10% / G 10% / S 5% / M % / R 50%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type LOGS
FUCUS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment Width of Band: mSporadic: Y/N % of Segment 30Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: 10-20 cmPooled Oil: % "Free" Oil: % Coated: H 10% / M 90% / L 10%Fresh 95% Mousse 5% Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- BEACH AT NORTH END : MODERATE OILING AT HIGH TIDE
 : 10 M WIDE, 10 CM DEEP, 100 M LONG
 : COBBLE / GRAVEL PEBBLE

- ROCKS : OIL AT HIGH TIDE
 OIL ON FUCUS ALGAE AND ROCKS

ECOLOGICAL EVALUATION

LOCATION: North of Eshemy SITE: North of "Chow" OBSERVER: Greg Chong

LOCATION PREFIX: EB SEG. NO.: 1 LENGTH: 1000 (M)

DATE: May 22/89 TIME (HHMM): 9:00 AM TIDE HT.: - 0.5 (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

Mid to high tide range growing in large patches on bedrock

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

Patchy discontinuous mostly closed

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

Patchy discontinuous mostly closed

Littorina

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

Snails common in non-oiled fucus patches but absent from areas of oiling

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

Few limpets. Those found in clean areas attached strongly. In oiled sections they fell off easily.

OTHER OBSERVATIONS: large number of clam shells and open mussels at low tide line indicate region may be used by sea otters

CLEANUP PRECAUTIONS: Restrict helicopter use near eagle's nest. Near "Chow" clean up at mid tide or higher. In north clean up at any tide O.K.

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

BIRDS: 2 eagles observed, Eagle's Nest near survey monument "Chow"

GENERAL OBSERVATIONS: Dead needle fish found at mid tide level. No external markings to indicate cause of death. Recovered fish.

Ecology Evaluation Questions

TIME

OILED ZONE

SUBSTRATUM

LIVE BIOTA

FUCUS

MUSSELS

BARNACLES

LITTORINA

LIMPETS

OTHER OBSERVATIONS

CLEAN UP PRECAUTIONS

Mammals: Otters, Seals, Sea Lions, Whales

Others

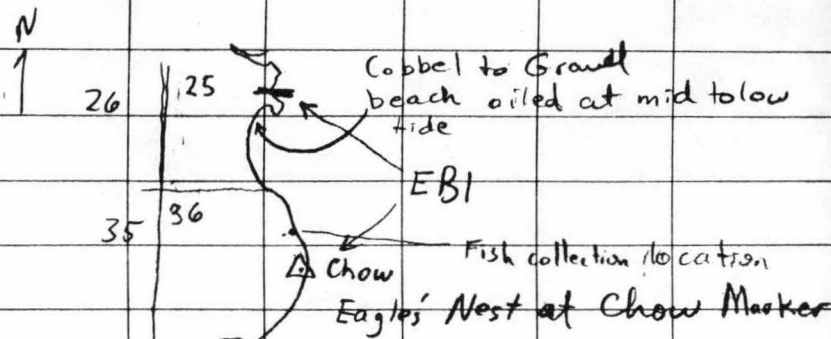
Birds

General Observations

Start 9:00 AM May 22 1989

EB1 starting at survey marker

Chow



Eagle seen flying away
after landing
another flew by about 20 min
later

Photograph #14 picture of
oiled fucus on rocks with small
bunch of ^{healthy} fucus in center
to show contrast

At this end of EB1 all oiled fucus
should be removed from rocks and
bagged

oil from mid to high tide.
patches and large patches - mod to heavy
Cobble Boulder Bedrock

Fucus mid to high tide range
growth in large patches on bedrock
outcrops 50 to 75% heavily oiled
snails on non oiled fucus, but missing
from oiled sections

Mussels and barnacles patchy
discontinuous, mostly closed.

Starfish and clam shells common in
lower tidal areas

Small needle fish found just above
tide water on beach. Lifeless but
no external markings ~ 10:00 AM

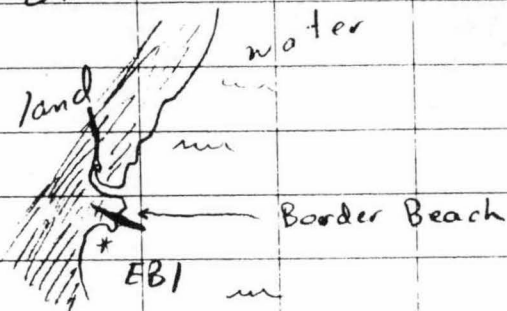
Due to large # of clam & mussel
shells just above low tide line, may
be sea otter feeding location

Rec. South portion of EB 1 should
be cleaned at mid tide or higher

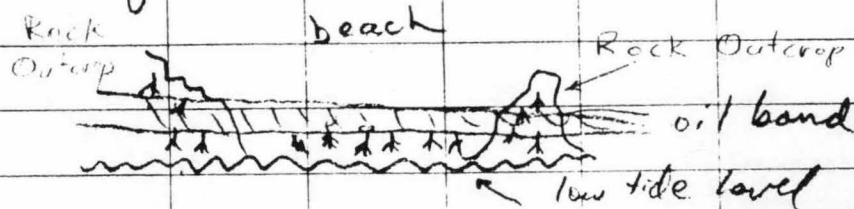
North portion has little biota
& oiling at lower tide reaches
OK to conduct cleanup at low tides

EB 2

11:00 AM



Border Beach between headlands
oiling from mid to lower tide level
sea snails observed on lightly oiled
rocks - fucus on rocky outcrops
but on beach most fucus is
oil free



(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-22-89 Location ^{North of} Eshamy Bay Site _____

Location Prefix EB Segment # 1 Length 1,000 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 medium to heavy cover

Width of beach zone surveyed 30-60 m Tree fringe surveyed 10 m.

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) ~~none~~ CMT, RCS

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

Shore Profile Several fairly flat beaches & rock outcrops jutting to the water

Fresh Water Sources one small stream and many seeps

Sea Exposure Open to the east

Access/Safety good & safe beach access in many areas

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 # WAI- Frames 22-25

B/W Roll # — Frames —

Observer(s) ANDREFSKY

Time survey started 9:00 AM Time survey ended 11:00 AM

Cultural resource considerations/restraints:

IF heretofore unidentified cultural material is discovered during cleanup

Contact Exxon Archaeologist Chuck Mobley immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-2

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Manually remove heavy oil which has penetrated to a depth of up to 30cm along the north end of the segment with flooding/hot water or other appropriate means. Flooding/flushing should occur at low to mid tide. *MAINTAIN BOOM BETWEEN WALK AREA AND FISH STREAM.*

Priorities Considerations:

Class 2: Heavy oil contamination

Class A: Resources present (salmon spawning stream)
Recreational cabins

Ecological Constraints (from site survey): Oiled fucus should be removed. Fish biologist should look at oiled delta. Manually remove oiled mussels. On beaches use large volume, low pressure hot water at mid to high tide. Very low tide operations not recommended. *ANADROMOUS FISH STREAM IS PRESENT. IF CLEANUP IN STREAM CHANNEL IS REQUIRED, AN ADEPTO PERMIT MUST BE OBTAINED.*

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 R. Peger
State Historic Preservation Officer *

Date: 5/30/89

ISCC Jaqueline Michel

6/7/89

EXXON: Ed McAdam

Date: 6/7/89

FOSC: CE Robbins

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/22/89 Time: 10:24Observer: Rick GILUESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAYSEGMENT NUMBER EB-2LENGTH OF SHORELINE SEGMENT: 1,800 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 20% / P 20% / G 10% / S % / M % / R 30%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeLOGS
FUELS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 95Width of Band: 20 mSporadic: Y/N % of Segment Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: 20-30 cmPooled Oil: % "Free" Oil: % Coated: H 60% / M 30% / L 10%Fresh 100% Mousse % Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- HEAVY OILING OF BEACHES AT NORTH END OF SEGMENT
ON LOW TIDE TO MID-TIDE

ECOLOGICAL EVALUATION

LOCATION: North of Eshamy SITE: near S. Crafton I ^{on mainland} OBSERVER: Greg Chaney

LOCATION PREFIX: EB SEG. NO.: 2 LENGTH: 1800 (M)

DATE: May / 22 / 89 TIME (HHMM): 11:00 AM TIDE HT.: ~ 0.0 (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

Fucus grows high on rocky outcrops but limited to low tide region on beaches

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

Mussels found in localized bands where outcrops are stable and at small stream outwash zone

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

Barnacles are found in regions of stable outcrops

Littorina

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

Sea Snails pretty common in areas of unoiled fucus

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

Limpets found in oiled zone are easily detached, on clean rocks they hold on tight

OTHER OBSERVATIONS: Deer tracks observed on beach, small stream has oiled mussel bed on delta & oiled fucus on rocks at high tide line, bear scat at high water line

CLEANUP PRECAUTIONS: Oiled fucus should be removed. Fish biologist should

look at oiled delta. Remove mussels with shovel crew. On beaches use large volume, low pressure hot water at mid to high tide. Very low tide operations not recommended.

MAMMALS: Otters - Harbor Seals - Sea Lions - Whales -
Other Deer tracks and Bear scat

BIRDS: Eagle observed striking water trying water to catch fish

GENERAL OBSERVATIONS: Stranded Buoy ID # 10064/9D40F near south end of EB, oil sheen at water line, when sun shines & wind is calm strong oil smell present

oil from mid to high tide:
splashes and large patches - ^{mod to heavy}
Cobble Boulder Bedrock

Fucus mid to high tide range
growth in large patches on bedrock
outcrops 50 to 75% heavily oiled
snails on non oiled Fucus, but missing
from oiled sections

Mussels and barnacles patchy
discontinuous, mostly closed.

Starfish and clam shells common in
lower tidal areas

small needle fish found just above
tide water on beach. Life less but
no external markings ~ 10:00 AM

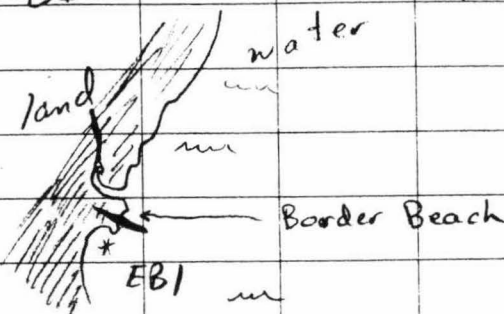
Due to large # of clam & mussel
shells just above low tide line, may
be sea otter feeding location

Rec. South portion ~~near~~ of EB 1 should
be cleaned at mid tide or higher

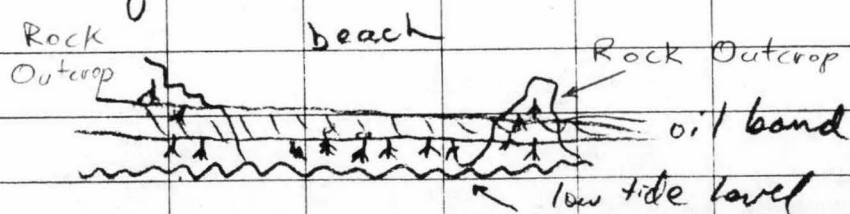
North portion has little biota
& oiling at lower tide reaches
OK to conduct cleanup at low tides

EB 2

11:00 AM



Border Beach between headland
oiling from mid to lower tide level
sea snails observed on lightly oiled
rocks - fucus on rocky outcrops
but on beach most fucus is
oil free



since focus is limited to lowest tide level on rubble beach, impact appears marginal but focus grows higher on rocky outcrops and was heavily impacted in adjacent headlands

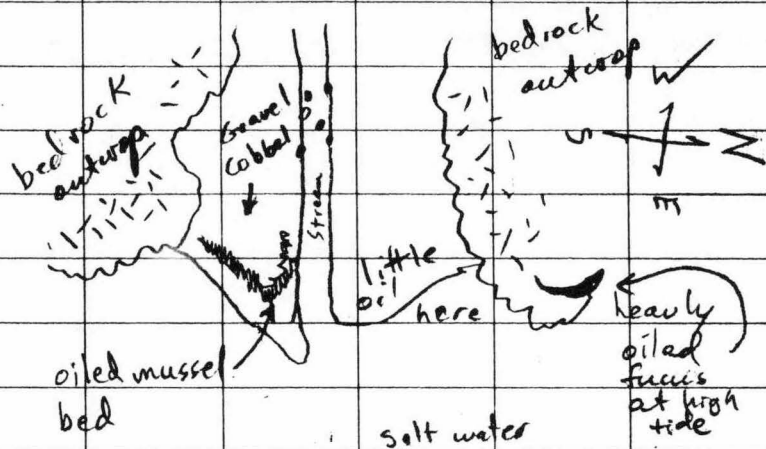
Deer tracks found on upper portion of beach

Stranded Buoy I.D. 10064/9D40F
lightly oiled at high tide

Clean up not recommended at very low tides due to danger of oiling lowest portion of intertidal

Limpets found in oiled zone easily detached

Stream at south end of EB 2
Sorbent boom across mouth of stream.
Mussel bed at stream mouth has high concentration of oil coating



oil does not appear to have traveled up stream channel but mussel beds at delta, high concentrations of snails and limpets

recommended fish biologist examine stream bed - hand shovel removal of oiled mussels recommended

more deer tracks observed

oiled fucus should be removed
from head lands

fishing should only take place
at mid to high tide

fucus at mid to high tide oiled
on all rocky head lands and boulders
Eagle seen striking water trying
to catch fish

Fine gravel beach at upper middle
section of EB-2 oiled from
high to low tide no intertidal
life present in significant quantity,
no restrictions. This beach has small
fishing shack easily seen from beach
Sun shining, oil smell present, strong
when wind is calm.

Recommend ^{low pressure} hot water or steam with
low pressure flooding
oil sheen observed at water line

bear scat observed on high wash
line

Cobble beach at north end of EB-2
deer scat and bear scat at high tide
more pressure possible on this beach,
little intertidal life on beach

EB-3 12:15

mussels, barnacles, fucus on head lands
oiled fucus on rocks

fairly continuous intertidal life
oil is concentrated on fucus

thin light oil band at high tide stand
on rocks, coated barnacles
patches of coated fucus

schools of small fish located at northern
end of EB-3 along rocks

sea otter 150m offshore mid section
of EB-3

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-22-89 Location ^{North of} Eshamy Bay Site _____

Location Prefix EB Segment # 2 Length 1,800 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 to moderate oil cover

Width of beach zone surveyed 10-30 m Tree fringe surveyed 10 m.

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) RCS, CMT

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

Shore Profile gently sloping cobble beaches and rock faces

Fresh Water Sources Stream, seeps

Sea Exposure Open to the east

Access/Safety good access on several locations

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 # WA1 Frames 26, 27

B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 11:00 AM Time survey ended 12:15 PM

Cultural resource considerations/restraints:

IF heretofore undiscovered cultural materials are discovered during
cleanup contact Exxon Archaeologist Chuck Mobley immediately

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-3

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Flood/flush oil band with warm to hot water or other appropriate means. Collect flushed oil with absorbent material.
- Beach at sound end should be cleaned using hot water pressure on beach cobbles/pebbles at low tide.
- Manually remove oiled fucus.

Priorities Considerations:

- Class 4: Low oil contamination
- Class B: Resources absent

Ecological Constraints (from site survey): Oiled fucus should be removed manually. Oiled rocks should be cleaned with steam and sorbent underneath. Cliff faces should only be cleaned at high tide on calm day. Try hot water or steam on rocks.

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 R. Regier
State Historic Preservation Officer *

ISCC Jacqueline Michel
EXXON: Adm. Adams

FOSC: CE McLean

Date: 5/30/89

6/7/89
Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/22/89 Time: 11:20Observer: Rick GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION EXHAMMY BAY SEGMENT NUMBER EB-3LENGTH OF SHORELINE SEGMENT: 1,000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 20% / P % / 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/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment Width of Band: mSporadic: Y/N % of Segment 5Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H % / M % / L 100%Fresh 100% Mousse % Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- DISCONTINUOUS OIL BAND ON ROCKS AT HIGH TIDE
- SOME OILED LOGS (SPORADIC)
- BEACH AT JOUTHERN'S HAS SCATTERED OILED PEBBLES
- NATURAL CLEANING OF PEBBLES OCCURRING

ECOLOGICAL EVALUATION

LOCATION: North of Eshamy SITE: mid ^{main land} N. Grafton Is. OBSERVER: Greg Chaney
 LOCATION PREFIX: EB SEG. NO.: 3 LENGTH: 1000 (M)
 DATE: May 12/89 TIME (HHMM): 12:15 TIDE HT.: ~ 0.5 (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

Continuous on headlands only. Fucus is oiled on headlands at high tide line

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

Continuous on headlands only. Mussels oiled in thin band at mid tide line in spot

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

Continuous on headlands only. Barnacles oiled in thin band at high tide line.

Littorina

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

Few observed possibly due to choppy conditions and inability to get skiff close to rock faces

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

Few observed possibly due to rough water which made rock faces inaccessible

OTHER OBSERVATIONS: On rocky outcrops and cliffs, oil is distributed in a distinct thin band at high tide line. On beaches, 2 to 4 cm patch of oil observed every 1 m at high tide line and at low tide level

CLEANUP PRECAUTIONS: Oiled fucus should be removed. Oiled rocks should be cleaned with ~~oil~~ steam and sorbents underneath. Cliff faces should only be cleaned at high tide on calm day. Try hot water or steam on rock faces.

MAMMALS: Otters 1 Harbor Seals — Sea Lions — Whales —
 Other Deer f Bear scat observed at high wash line

BIRDS: 2 eagles soaring inland

GENERAL OBSERVATIONS: Sea Otter observed 2/50 m off shore, thick schools of ^{small} fish observed just off shore.

~~Fucus~~ should ~~be removed~~

~~from~~ head lands

fishing should only take place
at mid to high tide

fucus at mid to high tide oiled

on all rocky headlands and boulders

Eagle seen striking water trying
to catch fish

Fine gravel beach at upper middle
section of EB-2 oiled from

high to low tide no intertidal
life present in significant quantity,

no restrictions. This beach has small
fishing shack easily seen from beach

Sun shining, oil smell present, strong
when wind is calm.

Recommend ^{low pressure} hot water or steam with
low pressure flooding

oil sheen observed at water line

bear scat observed on high wash
line

Cobble beach at north end of EB-2

deer scat and bear scat at high tide

more pressure possible on this beach,
little intertidal life on beach

EB-3 12:15

mussels, barnacles, fucus on headlands

oiled fucus on rocks

fairly continuous intertidal life

oil is concentrated on fucus

thin light oil band at high tide stand
on rocks, coated barnacles

patches of coated fucus

schools of small fish located at northern

end of EB-3 along rocks

seen after 150m offshore mid section
of EB-3

a few spots of oil observed on
high tide strand line. Spots 2 to 4 cm
in diameter. Some debris is lightly
oiled. Spots occur every meter.

More Bear scat and deer sign
observed.

Recommend on beach use hand crew to
pick up

Isolated cobbles every meter at lower
tide level - sorbents & steam

EB-4 start 6:30 pm

Oiled fucus on high tide line where
large boulder and rocky head land
provide stable platform, light oil stain
on some rock faces

fucus - patchy

limpets - common on rocks, none observed
in oiled zone, Sea snails common in
low inter tidal rocks, barnacles patchy
on rocks & out crop

little inter tidal life on rocky pocket
beaches

Spotted a small grey bird with long
thin straight bill - possibly ~~female sand~~
piper wandering tattler

Photo graph #15 oil line on
rocky outcrop at EB 4 mid section

Beach seems to be more oiled at
northern section. Oil band at high
tide is well defined. Oiled fucus in
high inter tidal. Mussels, barnacles & limpets
below oiling seem healthy, sea snails also
common on bed rock faces, Very light
seen along beach

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date S-22-89 Location ^{North of} Eshamy Bay Site _____

Location Prefix EB Segment # 3 Length 1,000 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 cover

Width of beach zone surveyed 0-20 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 of beach is a steep rock wall.

Fresh Water Sources small water falls and seeps

Sea Exposure Open to east

Access/Safety ONE (1) good beach for boat 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 12:15 PM Time survey ended 1:30 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural materials are discovered during
cleanup contact Exxon archaeologist Chuck Mobley immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-4

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- Beach south of Set Net Sign 56459 should be cleaned at mid-tide with flooding/hot water or other appropriate means.
- Rocks south of headland should be steam cleaned or washed with hot water/pressure. Remove oil with absorbent.
- Manually remove oiled fucus.

Priorities Considerations:

Class 4: Low oil contamination

Class B: Resources absent

Ecological Constraints (from site survey):

Oiled fucus should be removed from rock faces and boulders. Local areas with heavier oiling should be steamed with sorbent to catch run off oil. ~~AND OILED NET 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.

Douglas R. Reger
State Historic Preservation Officer *

ISCC Jacqueline Michel

EXXON: McAdams

FOSC: Ed Delli

Date: 5/30/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/22/89 Time: _____Observer: Rick GILLIE

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAY SEGMENT NUMBER EB-4LENGTH OF SHORELINE SEGMENT: 700 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20% / C10% / P10% / G___% / S___% / M___% / R60%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment _____ Width of Band: _____ m

Sporadic: Y/N % of Segment 10Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: 5 cmPooled Oil: _____% "Free" Oil: _____% Coated: H___% / M___% / L100%Fresh 100% Mousse _____% Tar Formation: _____%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

- OIL COATED PEBBLES (SPORADIC)
- OILED FUCUS
- BEACH IMMEDIATELY SOUTH OF SET NET SIGN (56459)
NEEDS CLEAN-UP, HIGH TIDE TO MID-TIDE, NORTH END
- ROCK OILED SOUTH OF HEADLAND ENTRANCE TO
FAUD BAY

ECOLOGICAL EVALUATION

LOCATION: South of Falls Bay SITE: South of "Galt" OBSERVER: Greg Chaney
 LOCATION PREFIX: EB SEG. NO.: 4 LENGTH: 700 (M)

DATE: May/22/89 TIME (HHMM): 6:30 pm TIDE HT.: +2.5 (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

Fucus near "Galt" Pt. oiled, and inside little spit. Location indicated on map.

Some Fucus heavily oiled in local spots

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

Mussels found where bedrock provides stable platform

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

Barnacles found where bedrock and boulders provide stable platform

Littorina

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

Snails common on bedrock faces in low inter tidal

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

Limpets common on bedrock and boulders but none in oiled

OTHER OBSERVATIONS: Beach is more oiled at northern section. Oil band at high tide is well defined. Oiled fucus in high intertidal. Light sheen along beach

CLEANUP PRECAUTIONS: oiled fucus should be removed by hand from rocks and boulders. Local areas with heavier oiling should be steamed with sorbents to catch runoff oil.

MAMMALS: Otters 1 Harbor Seals — Sea Lions — Whales —
 Other —

BIRDS: Eagle, 3 Wandering Tattlers, 2 harlequin ducks

GENERAL OBSERVATIONS: light oil stain at high tide on some rock faces

few spots of oil observed on
high tide strand line. Spots 2 to 4 cm
in diameter. Some debris is lightly
oiled. Spots occur every meter.

More Bear scat and deer sign
observed.

Recommend on beach use hand crew to
pick up

Isolated cobbles every meter at lower
tide level - sorbents & steam

EB-4 start 6:30 pm

Oiled fucus on high tide line where
large boulder and rocky head land
provide stable platform, light oil stain
on some rock faces

fucus - patchy

limpets - common on rocks, none observed
in oiled zone, Sea snails common in
low inter tidal rocks, barnacles patchy
on rocks & out crop

little inter tidal life on rocky pocket
beaches

Spotted a small grey bird with long
thin straight bill - possibly ~~female sand~~
piper wandering tattler

Photo graph #15 oil line on
rocky outcrop at EB 4 mid section

Beach seems to be more oiled at
northern section. Oil band at high
tide is well defined. Oiled fucus in
high inter tidal. Mussels, barnacles & limpets
below oiling seem healthy, sea snails also
common on bed rock faces, Very light
seem along beach

seals observed on Dyer rocks

Wandering Tattlers

~~3 sandpipers~~ observed

fucus should be removed by

hand from rocks and boulders

low areas with heavier oiling should

be steamed with sorbents to catch

run off oil

harlequin ducks

1 sea otter offshore

medium to light band of oil at high

tide line w/ heavier concentrations

episodic & localized.

Falls Bay 7:30 HF 1

Limpets, Mussels, Snails, Fucus, barnacles

all cont., abundant, banded on rocky

shoreline

oiling appears about 1 cm^2 drop

every 2 m

7 gray sandpipers Wandering Tattlers

2 crows

4 sea otter at head of bay

some fucus is brown & shriveled
but it was not possible to tell what
caused this

No biological impact observed connected
with the very light oiling

8:30 pm end

8:00 AM start

HF 2

light oiling at high tide line only

$\approx 1 \text{ cm}^2$ at high tide line 1 m wide

band every 2 meters (one drop of oil
every 2 meters along high tide line)

Mid bay light oiling over entire
beach profile. Water beading up on
stones - Beaches cobbles to gravel.

Beaches nearly devoid of intertidal life
head lands covered with thick intertidal
community. Most stable rocks have all
representative species.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-22-89 Location ^{North of} Eshamy Bay Site _____

Location Prefix EB Segment # 4 Length 700 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 _____

Width of beach zone surveyed 5-30 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 one slightly sloping beach with many steep rocky slopes

Fresh Water Sources A FEW SMALL CREEKS

Sea Exposure Open to the east

Access/Safety EASY ACCESS ON ONE BEACH ONLY

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 4:30 PM Time survey ended 7:30 PM

Cultural resource considerations/restraints:

IF Hereafter unidentified cultural Resources are discovered contact

Exxon geochaeologist Chuck Mobley immediately.

SEG EB 3 INSPECTION # _____DATE 7-30-87SEGMENT
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 EB 3 is complete. Ready for demobilization & deployment to new segment.Signature Thomas J. SmithDate: 7/30/87 Time: _____Printed Name Thomas J. Smith

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
0
0
0
100Heavy
Medium
Light
Very Light
None

100 %

Subsurface Oil

☐ Yes ☒ No

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments No inspector provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Demobilization approved/disapprovedComments No gross contaminationNo oil found on siteSignature Arthur J. SmithDate: 7/30/87 Time: 2310Printed Name Arthur J. Smith LTJG

COPY: EXXON ADEC FOSC ISCC

TREATMENT MANUAL, 6/15/89

SEG EB 4 INSPECTION # _____

SEGMENT

DATE 7-30-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical _____

☐

Warm water wash

☒

Non-mechanical _____

☐

Water deluge

☐

Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment EB 4 is complete. Ready for demobilization & deployment to new segment.

Signature Tommy DulinDate: 7/30/89 Time: _____Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐

Yes

☒

No

0

Heavy

0

Medium

0

Light

0

Very Light

100

None

100 %

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments no inspector provided

Signature _____

Date: / / Time: _____

Printed Name _____

FOSC rep

Demobilization approved/disapproved

Comments No gross contamination
no oil found on site

Signature Arthur J. SmithDate: 7/30/89 Time: 2301Printed Name Arthur J. SmithLTJG

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): ESHAMY BAY SOUTH BLOCK

Includes Shoreline Segments: EB-5, EB-6, EB-7, EB-8, EB-9,

EB-10, EB-11

Submitted : BA Nymery Date: 6/1/89

(for Exxon) PH

RECOMMENDATION
ISCC Approval: Jaqueline Michel Date: 6/7/89 617

FOSC Approval: CS Robbins Date: 6/8/89

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:

Cherega Village Lands -
upland access prohibited

ESHAM BAY 2-1-89

***** SCOT NOTE *****

THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

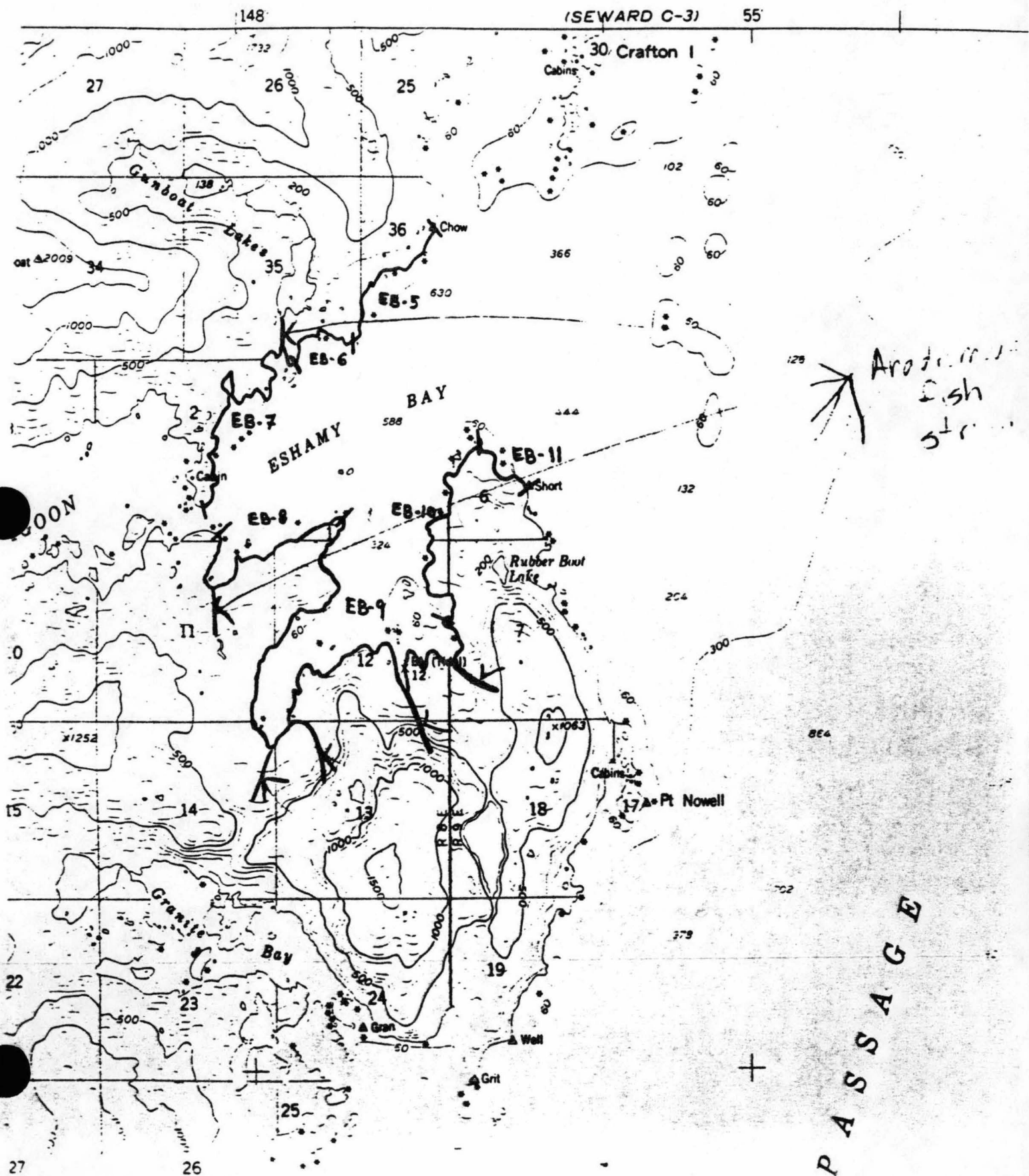
MAINTAIN BOOMS AT THE ENTRANCE TO THE INNER LOGOON DURING ANY CLEANUP ACTIVITIES IN ESHAMY BAY

AVOID ACCESS TO UPLAND SHOULD BE PROHIBITED. THESE ARE CHENEGA VILLAGE PROPERTIES AND THE UPLAND IS OPEN MEADOWS WHICH ARE VERY ACCESSIBLE ESPECIALLY IN THE SOUTH SIDE.

SOUTH BLOCK IS LOW PRIORITY EXCEPT FOR MANUAL REMOVABLE OF OIL DEBRIS. PARTICULAR IT IS IMPORTANT THAT THIS BLOCK COMPLETELY EVALUATED PRIOR TO MECHANICAL CLEANUP, BECAUSE OF THE LIKELIHOOD OF NATURAL REMOVALS OF THE PRESENT DISTRIBUTION OF OIL CONTAMINATION

CS/Robbin 4/8/89
FOSC

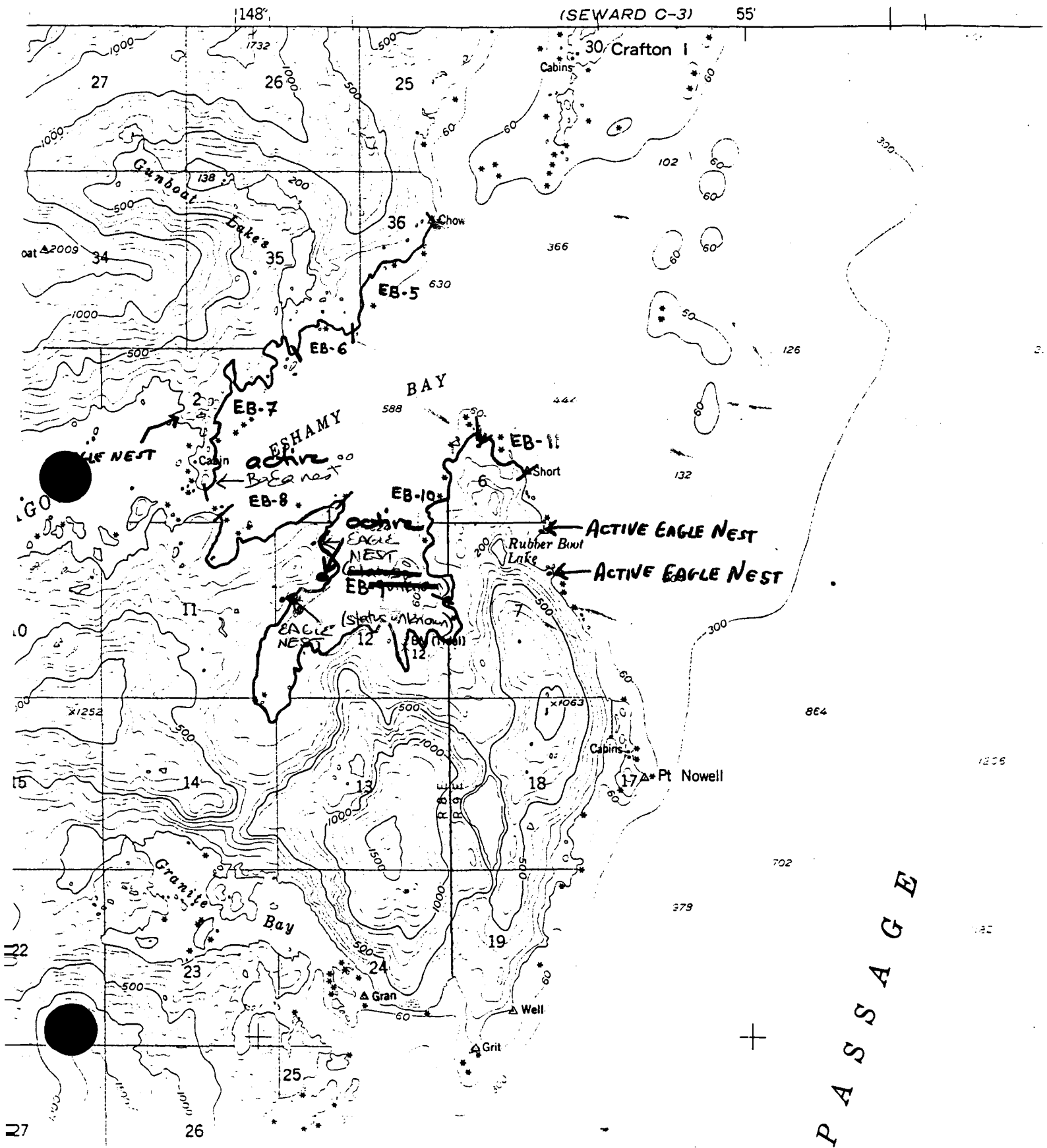
EB-5, EB-6, EB-7, EB-8,
EB-9, EB-10, EB-11

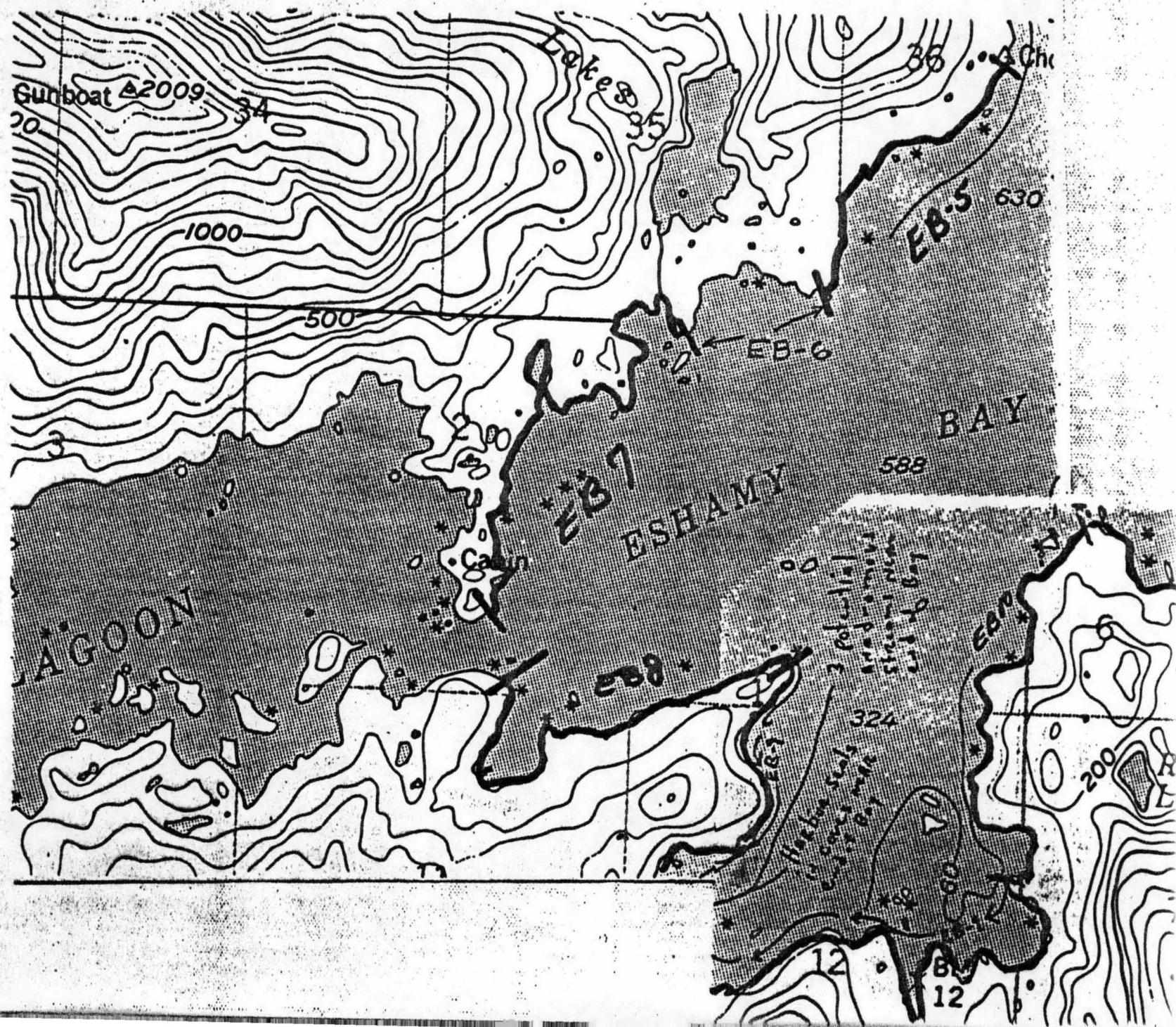


6/6/89

ESHAMY BAY SOUTH BLOCK

EB-5, EB-6, EB-7, EB-8,
EB-9, EB-10, EB-11





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-5

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/26/89

Recommended Cleanup Activity(ies):

- Mechanical cleanup by flooding with hot water, moderate pressure.

Priorities Considerations:

Class 4B

Ecological Constraints (from site survey):

- Recommend removal of oiled fucus. Washing of rocks and beaches when level is close to oil level. No restrictions on non-inhabited beaches. (SEE FUCUS 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.

Donald R. Rege
State Historic Preservation Officer *

ISCC Jaqueline M. Muel
EXXON: ALM: Adams

FOSC: _____

Date: 5/31/89

6/7/89

Date: 6/7/89

Date: _____

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

SHORELINE OIL EVALUATIONDate: 5/26/89 Time: 16:05Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATIONLOCATION ESHAMY BAYSEGMENT NUMBER EB-5LENGTH OF SHORELINE SEGMENT: 1,400 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 30% / C 20% / P 20% / G ___% / S ___% / M ___% / R 30%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeLocal
FucusOILDegree of Oiling: Heavy/Moderate/Light/* No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment _____ Width of Band: _____ m

Sporadic: Y/N % of Segment 20

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H 80% / M 20% / L _____%Fresh 50% Mousse 50% Tar Formation: _____%

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

Comments:

* Generally light oiling but moderate to heavy in patches.
See next page / attached map.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries

See attached

VTR:

Y/N

Tape Number(s)

Photography:

Y/N

Roll Number(s)

T56-1

Sample Numbers Collected:

N/ASITE NUMBERS REFER TO MAP

- ① Heavy oiled rocks and beach at mid to high tide.
Cobble beach, 50m long, 10m wide.
- ② Heavy oiling on Fucus on rocks.
- ③ Rocky coast, sporadic oiling in crevices
- ④ Lightly oiled pebble beach.

Gunboat A2009

Lakes

EB5

Fucus Highly Oiled

Chow

1000

500

100

SCAT TEAM 5
MAY 26 1989
GREG CHANEY

* Lightly Oiled Beach
630
LOCATION OF BALD
EAGLE DEAD AND
OILED FLAGGED WITH
SURVEYOR'S TAPE
LIGHTLY OILED
BAY

588

ESHAMY

Cabin

324

LAGOON

20

ECOLOGICAL EVALUATION

LOCATION: ESHAMY BAY SITE: S. of "Chow" OBSERVER: Greg Chaney
 LOCATION PREFIX: EB SEG. NO.: 5 LENGTH: 1400 (M)
 DATE: May 26, 89 TIME (HHMM): 4:00 PM TIDE HT.: ~1.5 (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

Patches of heavy oiling.

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

Patchy distribution with cobble beaches in between.

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

Discontinuous but not apparently, not impacted by oil.

Littorina

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

Heavy mortality in areas of oiling, Plentiful ~~in~~ in rocky areas.

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

Limpet shells at base of oiling but no live limpets found in oiled areas

OTHER OBSERVATIONS: Oil is below surface on some beaches which appear clean on the surface.

CLEANUP PRECAUTIONS: Recommend removal of oiled fucus & washing of rocks and beaches when water level is close to oil level.

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

BIRDS: Dead Eagle found behind storm berm marked with orange flagging

GENERAL OBSERVATIONS: Cobble beaches have less oil and less inter tidal life. Oiling varies in elevation and in some locations reaches to lower mid tide levels.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-26-89 Location Eshamy Bay Site _____

Location Prefix EB Segment # 5 Length 1,400 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 to moderate oil cover

Width of beach zone surveyed 5-25 m Tree fringe surveyed 5-15 m.

Cultural resources observed in beach zone (AHRS code) ~~20~~ NAME

Cultural resources observed in tree fringe (AHRS code) CMT

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

Shore Profile gentle sloping beaches in small pockets, many rock outcrops

Fresh Water Sources small streams

Sea Exposure Open to South East.

Access/Safety good access to cobble beach pockets

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

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

Photos: Color Roll # _____ Frames _____

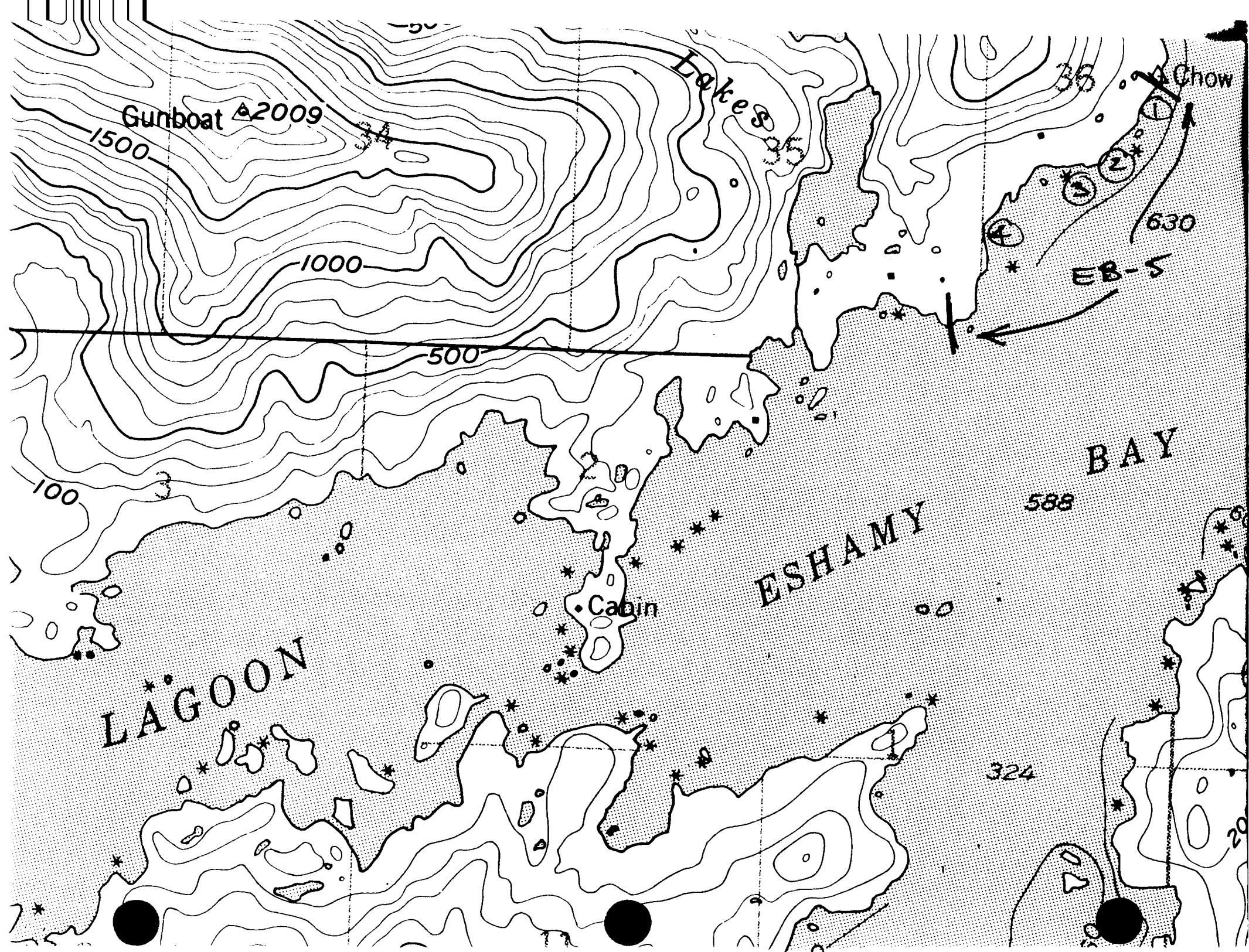
B/W Roll # WA 2 Frames 2-10

Observer(s) Andrefsky

Time survey started 4:00 PM Time survey ended 6:00 PM

Cultural resource considerations/restraints:

Standard constraint for anticipated discoveries.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-6

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/27/89

Recommended Cleanup Activity(ies):

- Flood wash with warm water at high tide to mid tide on beaches.
- Hand clean (pickup) tar balls and oiled crevices.

Priorities Considerations:

Class 4B

Ecological Constraints (from site survey): Flood/flush with warm to hot water (up to 140 F) only after clean areas of intertidal zone are covered by tide or after sufficient protection measures are in plan to prevent oiling of 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.

Douglas R. Peger
State Historic Preservation Officer *

ISCC Jaqueline Michel
EXXON: Alm: Adams

FOSC: C. E. Dobbin

Date: 5/31/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/27/89 Time: 09:30Observer: RICK GRUESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAYSEGMENT NUMBER EB-6LENGTH OF SHORELINE SEGMENT: 800 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B60% / C20% / P__% / G__% / S__% / M__% / R20%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Fucus LOGS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment < 5%Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: — cmPooled Oil: — % "Free" Oil: — % Coated: H__% / M__% / L100%Fresh 100 % Mousse — % Tar Formation: — %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

- VERY LIGHT OILING IN ROCK CREVICES WITH (1m)
Small PATCHES ON BEACH AT HIGH TIDE LEVEL.
- TARBALLS RARE

ECOLOGICAL EVALUATION

LOCATION: Eshamy Bay SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: EB SEG. NO.: 6 LENGTH: 800 (M)
 DATE: 5/27/89 TIME (HHMM): 0930 TIDE HT.: 2.5 (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

Fucus healthy in appearance - little necrosis.

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

10-20% mussel mortality on some Rock colonies + Cobble colonies
Line specimens show tight shell tactile response - no gaping observed

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

Positive tactile response.

Littorina

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

Positive tactile response

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

Positive tactile response.

OTHER OBSERVATIONS:

CLEANUP PRECAUTIONS: Flood/flush to warm to hot water (upto 140°F), only
after clean areas of intertidal zone are covered by tide or after
sufficient protection measures are in place to prevent oiling of middle and
Lower intertidal zone.

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

BIRDS:

GENERAL OBSERVATIONS: Oil light + Patchy on cobble beaches - Light to
Medium in pockets + crevices on boulders + Rocks

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-27-89 Location Eshamy Bay Site 800m.

Location Prefix EB Segment # 6 Length 800 m.

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility light oil patches, very discontinuous

Width of beach zone surveyed 5-20 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 steep rocky cliffs with few cobble beaches

Fresh Water Sources small streams & seeps

Sea Exposure Open to the South

Access/Safety poor access in large boat - dangerous

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

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

Photos: Color Roll # _____ Frames _____

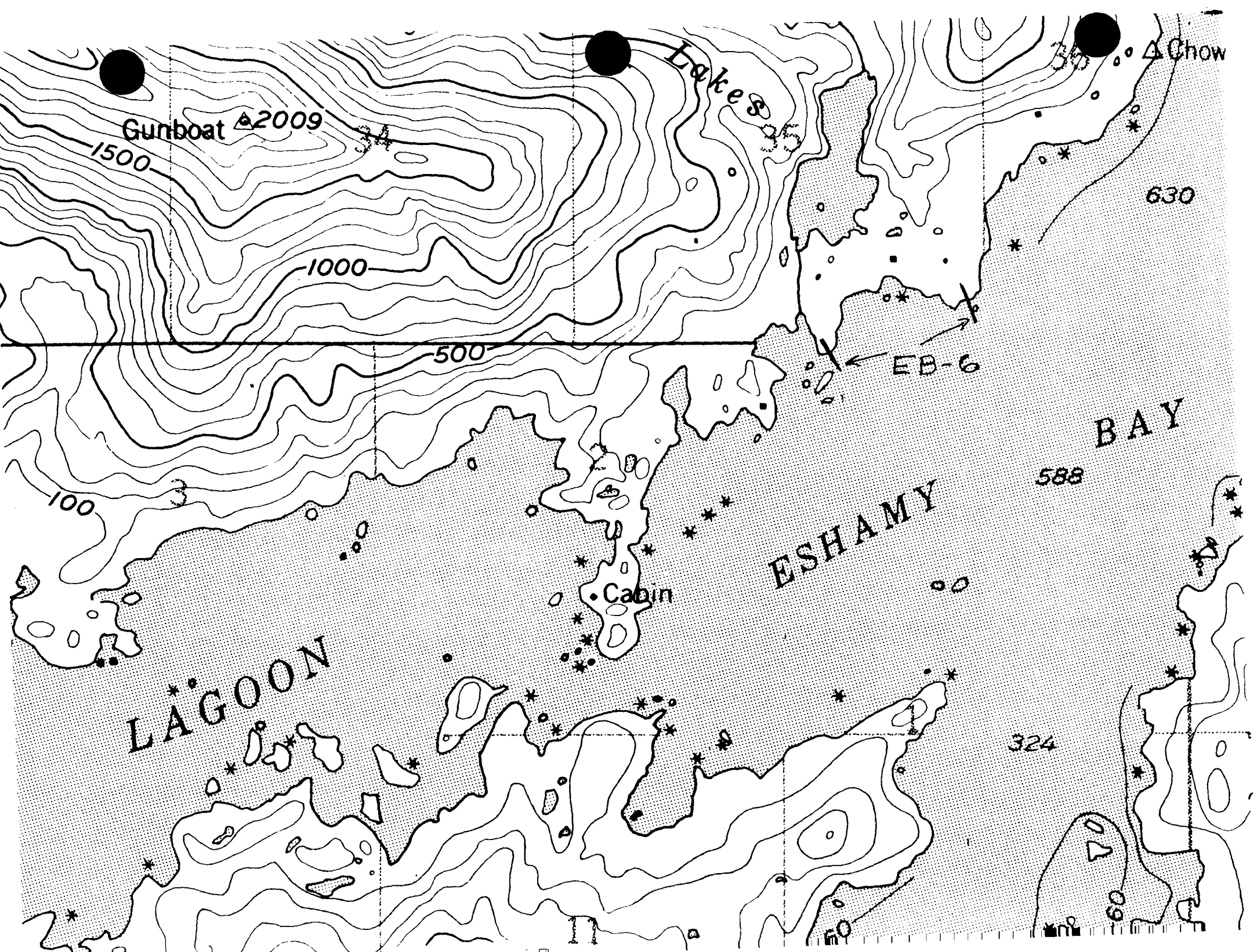
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 9:00 AM Time survey ended 10:30 AM

Cultural resource considerations/restraints:

If unidentified cultural resources are discovered during cleanup
contact Exxon archaeologist immediately.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-7

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/27/89

Recommended Cleanup Activity(ies):

- No oil. No cleanup required.

Priorities Considerations:

Ecological Constraints (from site survey):

- No cleanup recommended. No oil visible.

- ANADROMOUS FISH STREAM PRESENT.

Archeological Constraints (from site survey):

Segment not recommended for cleanup; 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.

Douglas R. Reger

State Historic Preservation Officer *

ISCC Jaqueline Michels

EXXON: Adam Adams

FOSC: CS Robbins

Date: 5/31/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/27/89 Time: 11:00Observer: Rick GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAYSEGMENT NUMBER EB-7LENGTH OF SHORELINE SEGMENT: 2,600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B²⁰% / C¹⁰% / P¹⁰% / G___% / S___% / M___% / R⁶⁰%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Logs
Fuels**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment _____ Width of Band: _____ m

Sporadic: Y/N % of Segment < 1%

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H___% / M___% / L___%

Fresh _____% Mousse _____% Tar Formation: _____%

Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**- VERY SMALL OILING, ALMOST NONE- RARE, SMALL TAR BALLS

ECOLOGICAL EVALUATION

LOCATION: Echamy Bay SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: EB SEG. NO.: 7 LENGTH: 2,600 (M)
 DATE: 5/27/89 TIME (HHMM): 11:00 TIDE HT.: 0.3 (M)

OILED ZONE: Splash High Medium Low - None visible

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 Robust in intertidal zones - Little necrosis observed

Mytilus (Mussels): Patchy (Y/N) Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 5 - 40% mortality on attached colonies.

Mussels in discontinuous small colonies on boulder - most of the denser colonies on larger boulder in crevices. Tactile Response Positive - no gaping

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

Positive tactile Response - mortality not in excess of expected observation.

Littorina

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

Positive tactile response

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

Positive tactile response

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: No cleanup Recommended - no oil visible

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

BIRDS: 1 Common & merganser, 3 Black capped terns, 2 ♂, 3 ♀ Harlequin ducks

GENERAL OBSERVATIONS: No oil visible - Location was primarily verticle
Bedrock faces w occasional narrow cobble beaches.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-27-89 Location Eshamy Bay Site _____

Location Prefix EB Segment # 7 Length 2600 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 No oil

Width of beach zone surveyed 0-10 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 Steep rock cliffs & one or two small beaches.

Fresh Water Sources Streams

Sea Exposure Open to the southeast.

Access/Safety poor access, very dangerous in 1' plus 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 _____

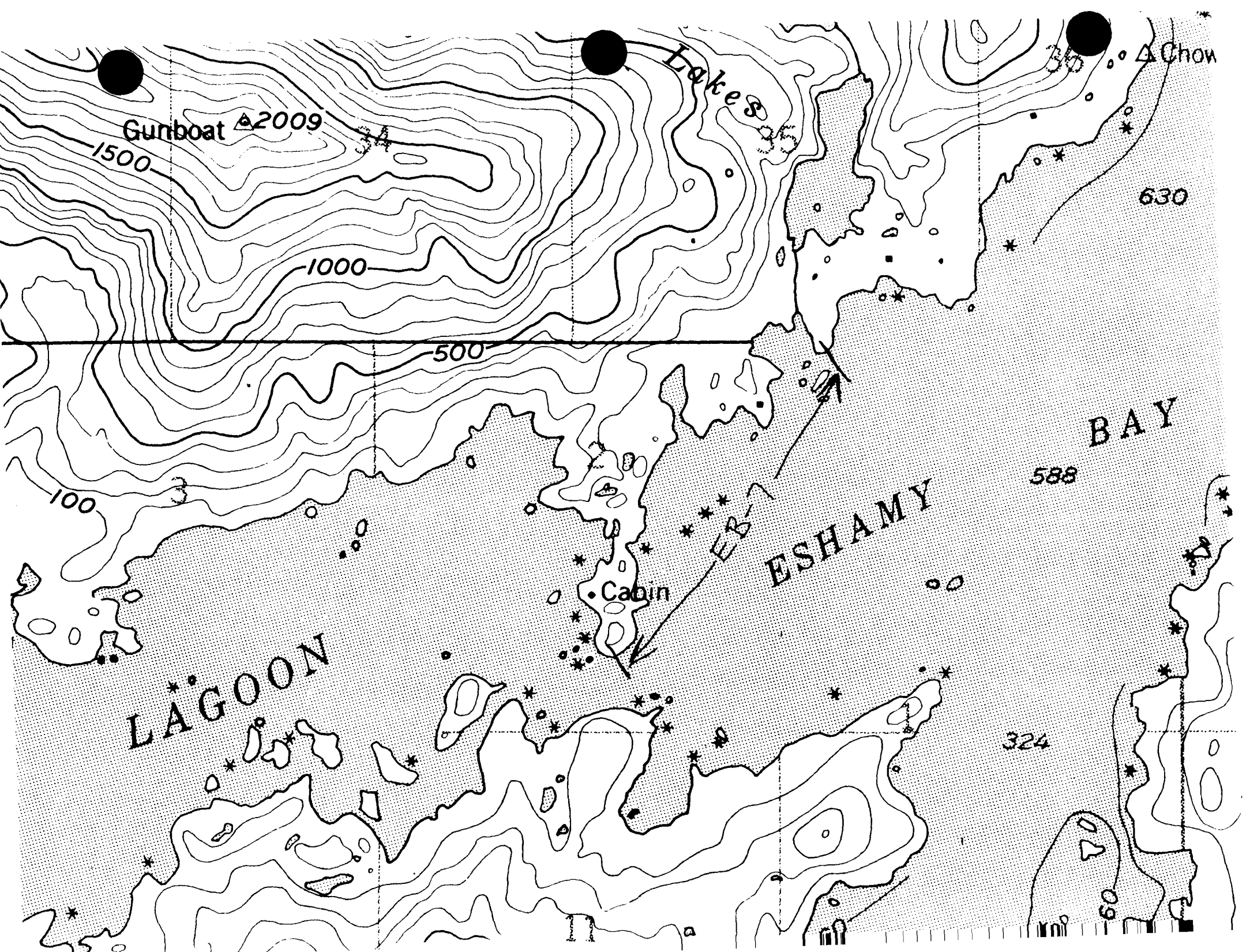
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 10:30 AM Time survey ended 1:30 PM

Cultural resource considerations/restraints:

If cultural resources are discovered during cleanup contact
Exxon archaeologists immediately.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-8

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/28/89

Recommended Cleanup Activity(ies):

- Hand cleanup of oiled debris and tar balls.

Priorities Considerations:

Class 4: Low oil contamination

Class B: Resources absent

Ecological Constraints (from site survey): Flood/flush with warm to hot water (up to 140 F) only after clean areas of intertidal are covered by tide or after sufficient protection measures are in place to prevent oiling of middle and lower intertidal. Clip and remove any oiled fucus. ^{6/17/89} Three (3) potential anadromous streams. ^{RECOMMEND} Fish & Wildlife Official inspect and evaluate prior to cleanup activity in area. ¹ THERE IS ONE DOCUMENTED ANADROMOUS FISH STREAM. ¹ FLOW THE STREAM CHANNEL.

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 R. Reger
State Historic Preservation Officer *

ISCC

EXXON:

FOSC:

Jaqueline Michel

ARM = Adam

CE Robin

Date: 5/31/89

6/7/89

Date: 6/12/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/29/89 Time: 15:00Observer: Rick GullieSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESKAMY BAYSEGMENT NUMBER E-B-8

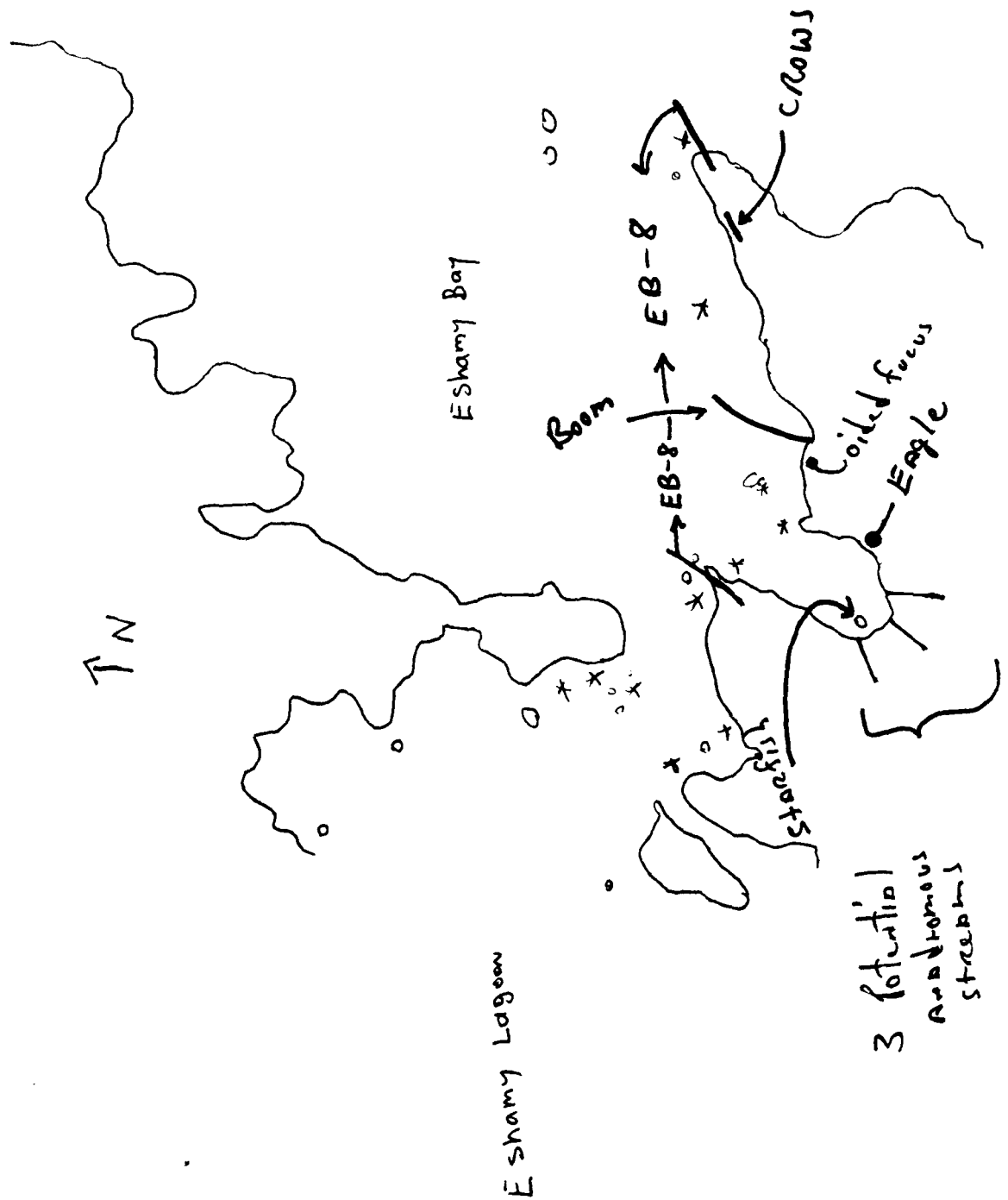
LENGTH OF SHORELINE SEGMENT: _____ m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 10% / C 10% / P 20% / G % / S % / M % / R 60%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeFucus
LOGSDRIFT BOUYS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment < 5Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: 20 cmPooled Oil: _____ % "Free" Oil: _____ % Coated: H % / M 50% / L 50%Fresh 30 % Mousse 20 % Tar Formation: _____ %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

- Generally very lightly oiled with rare tarballs and small oil patches on rocks (< 10 cm diameter)
- Some oiled Fucus on rock faces near high tide
- Light oiling of pebble beach berm at high tide (see map). ①

Ecological Evaluation

EB-8



ECOLOGICAL EVALUATION

LOCATION: Escham Bay SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: EB SEG. NO.: 8 LENGTH: 2100 (M)

DATE: 5/24/89 TIME (HHMM): 14:40 TIDE HT.: 0.4 (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 Sparse Y/N None Y/N

Robust + continuous on vertical Rock walls - Patchy on rubble beaches
Some oiled Fucus just inside Escham Bay oil Boom, also some oil splatters.

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

Positive tactile Response

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

Positive tactile Response

Littorina

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

Positive tactile Response

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

Positive tactile Response

OTHER OBSERVATIONS: No oil observed on Biota except inside Boom.

* **CLEANUP PRECAUTIONS:** Flood/flush w warm^{hot} water (upto 140°F), only after
clean areas of intertidal zone are covered by tide or after sufficient
protection measures are in place to prevent oiling of middle + lower intertidal.
clip + remove oiled fucus.

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

BIRDS: 1-eagle 5-crows No eagle nest observed

GENERAL OBSERVATIONS: Four splatters of oil on high intertidal

* 3 potential nonpoint source streams - recommend fish + wildlife official
inspect + evaluate prior to any cleanup activity in area.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-28-89 Location Eshamy Bay Site _____

Location Prefix EB Segment # 8 Length 2100 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 generally very light oiling

Width of beach zone surveyed 5-25 m Tree fringe surveyed 5-15 m.

Cultural resources observed in beach zone (AHRS code) RCS

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile gentle slope in beach areas, steep on rock outcrops

Fresh Water Sources many fresh water streams

Sea Exposure open to the South, East

Access/Safety good safe access at various places in the segment

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 # WAA2 Frames 16, 17

Observer(s) ANDREFSKY

Time survey started 2:45 PM Time survey ended 4:30 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered
during cleanup contact Exxon archaeologists immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-9

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/27/89

Recommended Cleanup Activity(ies):

- Hand cleanup of rare tarballs.
- Wash high tide oil mark lines on rocks with steam.

Priorities Considerations:

Class 4A

Ecological Constraints (from site survey): Flood/flush in warm to hot water (up to 140 F) only after clean areas of intertidal zone are covered by tide or after sufficient protection measures are in place to prevent oiling of middle and lower intertidal. Hand cleanup of oiled debris (tarballs) Potential anadromous streams (3) in one arm of Bay. Recommend Fish & Game Official observe these prior to any cleanup. **THERE ARE 4 ANADROMOUS FISH STREAMS IN THIS SEGMENT.**

IN THE STREAM CHANNEL.

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 R. Rege
State Historic Preservation Officer *

ISCC Jacqueline Michel
EXXON: ADM: Adams

FOSC: CE Adams

Date: 5/31/89

6/7/89
Date: 6/7/89

Date: 6/8/89

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

SHORELINE OIL EVALUATIONDate: 5/27/89 Time: 15:00Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION ESHAMY BAYSEGMENT NUMBER ETB-9LENGTH OF SHORELINE SEGMENT: 5,800 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20% / C10% / P__% / G__% / S__% / M__% / R70% FUCHSDrift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGSOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment <190Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: _____ cmPooled Oil: _____ % "Free" Oil: _____ % Coated: H__% / M__% / L100%Fresh 100 % Mousse _____ % Tar Formation: _____ %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

- RARE TARBAWS- LIGHT "LINE" OF OIL ON ROCK FACE AT
HIGH TIDE- NO CONCENTRATED OILING IN BAY

1 M 1

EB-9
Ecological

132

Short

3 potential
and more
stream near
end of Bay

324

Harbor seals
in coves near
end of Bay

200 Rubber Boot
Lake

204

BM
12

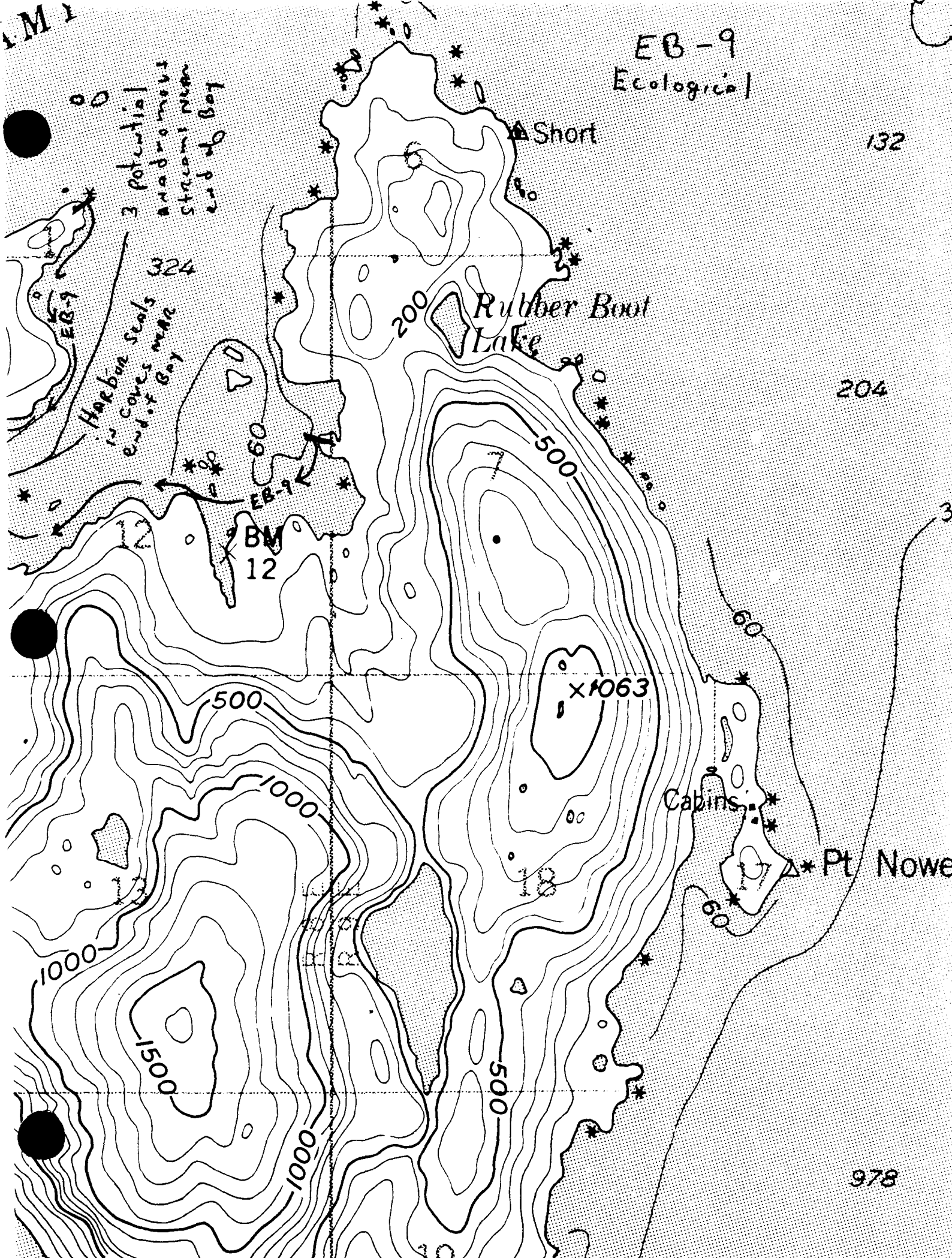
500

X1063

Cabins

Pt. Nowe

978



ECOLOGICAL EVALUATION

LOCATION: Eschamy Bay SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: EB SEG. NO.: 9 LENGTH: 5,800 (M)

DATE: 5/27/89 TIME (HHMM): 15:30 TIDE HT.: 3.0 (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

Fucus Robust - little to no necrosis observed

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

Some Mussel colonies on rock surface + in cobble beds have 70-80% mortality

Positive tactile response - no gaping

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

Positive tactile response

Littorina

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

Positive tactile response

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

Positive tactile response

OTHER OBSERVATIONS: Noted a concentration of Gastropods (similar to oyster drill) in and adjacent to some mussel colonies with high mortality percentages.

CLEANUP PRECAUTIONS: * Flood/fush with warm to hot water (up to 140°F), only after clean up of intertidal zone are covered by tide or after sufficient protection measures are in place to prevent oiling of middle + lower intertidal. Hand cleanup of oiled debris (tar balls).

MAMMALS: Otters _____ Harbor Seals 4 Sea Lions _____ Whales _____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: None small oil splatters / ~~oil~~ Rare tarballs - oil stripe @ high tide mark is sporadic in this area

* potential anadromous streams(?) in one arm of bay (see map)
fish + game officials should observe this area prior to any cleanup.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-27-89 Location Eshamey Site _____

Location Prefix EB Segment # 9 Length 5800 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 oil is discontinuous and very light

Width of beach zone surveyed 0-25 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 variable grades with some rock outcrops and some cobble beaches

Fresh Water Sources several good streams & many seeps.

Sea Exposure Open to North, East, West

Access/Safety good access & safe

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 3:30 PM Time survey ended 5:30 PM

Cultural resource considerations/restraints:

potential for cultural resources given fresh water, open flat beaches
above the shore, and sea mammal availability. If cultural resources are
discovered during cleanup contact Exxon archaeologists immediately.

1 M 1

ESHAMY BAY

Short

132

324

Rubber Boot Lake

204

EB-9

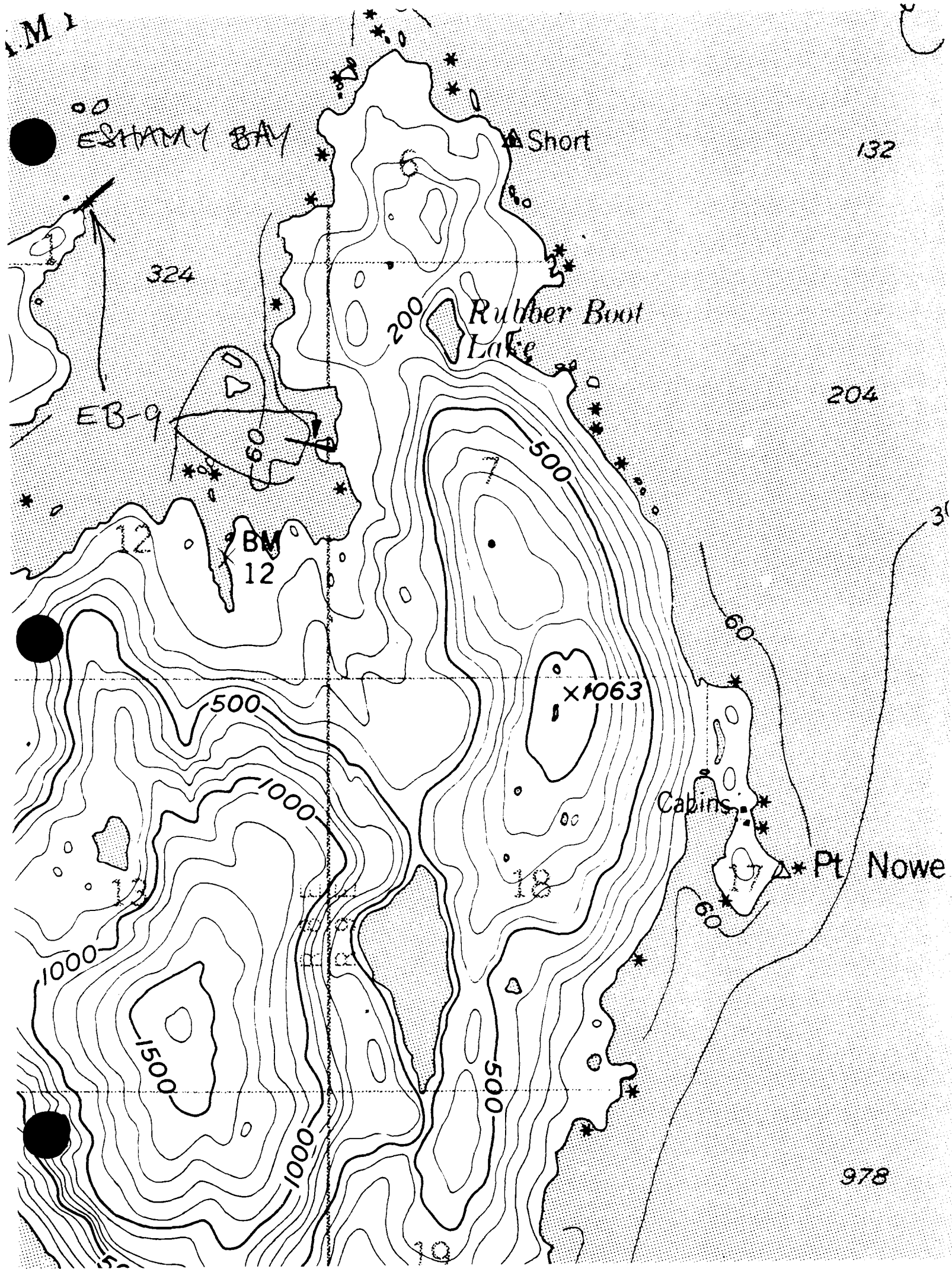
BM
12

x1063

Cabins

Pt. Nowe

978



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-10

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/28/89

Recommended Cleanup Activity(ies):

- Hand cleanup of tarballs.
- Flood/flush oiled high tide band on rockfaces with high pressure, hot water and recover oil, or use other appropriate cleaning methods.

Priorities Considerations:

Class 4: Low oil contamination

Class B: Resources absent

Ecological Constraints (from site survey): Flood/flush with arm to hot water (up to 140 F) only after clean areas of intertidal zone are covered by tide or after sufficient protection measures are in place to prevent oiling of middle and lower intertidal.

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 R. Reger
State Historic Preservation Officer *

ISCC Jaqueline Michel
EXXON: Alm. Chen

FOSC: CS Dobbin

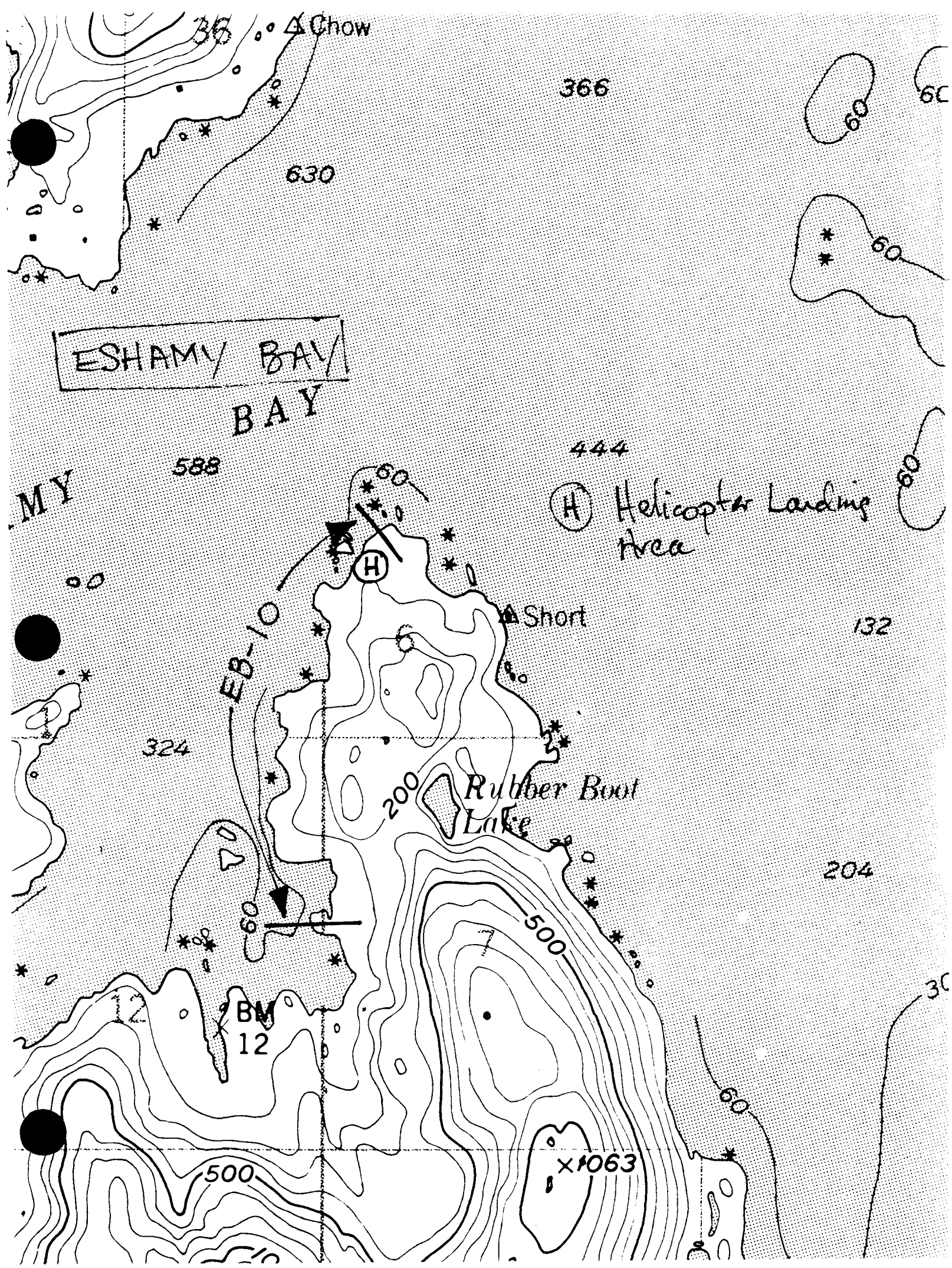
Date: 5/31/89

6/7/89

Date: 6/7/89

Date: 6/8/89

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



SHORELINE OIL EVALUATIONDate: 5/28/89 Time: 11:00Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION ESKAMY BAYSEGMENT NUMBER EB-10

LENGTH OF SHORELINE SEGMENT: _____ m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/MANG/VERWave Exposure: High/Med/LowSediment: B 30% / C 10% / P ____% / G ____% / S ____% / M ____% / R 60%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Logs FucusOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

Continuous: Y/N ____ % of Segment _____ Width of Band: _____ m

Sporadic: Y/N ____ % of Segment < 1%

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H ____% / M ____% / L 100%Fresh 100% Mousse _____% Tar Formation: _____%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/Comments:

- Most of segment not oiled. Only north half has very light oiling comprising rare tarballs, small splotches (< 10 cm diameter) and a light sporadic band of oil on rock face at high tide

ECOLOGICAL EVALUATION

LOCATION: Eschamy Bay SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: EB SEG. NO.: 10 LENGTH: 2,400 (M)
 DATE: 5/28/89 TIME (HHMM): 11:00 TIDE HT.: 2.9 (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

Robust - little necrosis observed

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

High (>70%) mortality in attached mussel colonies on ^{both} Rock & cobble. ~~colonies~~

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

Positive tactile Response

Littorina

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

Occasional to common - positive tactile response

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

Freshly emptied shells common

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: Head/flesh is warm to hot water (up to 140°F), only after
clean areas of intertidal zone are covered by tide or after sufficient
protection measures are in place to prevent oiling of middle & lower intertidal.

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

BIRDS: 1 - eagle - no nest observed

GENERAL OBSERVATIONS: Occasional light areas of oil @ High tide line - scattered
patches in cobble @ high intertidal. No oiled Biota observed

1 M 1

EB-10

EB-10

EB-11

Eagle (2)

Short

Anemones
starfish
(Lower littoral 1)

132

Eagle

324

Rubber Boot
Lake

Ecological 204
Evaluation

EB-10

EB-11

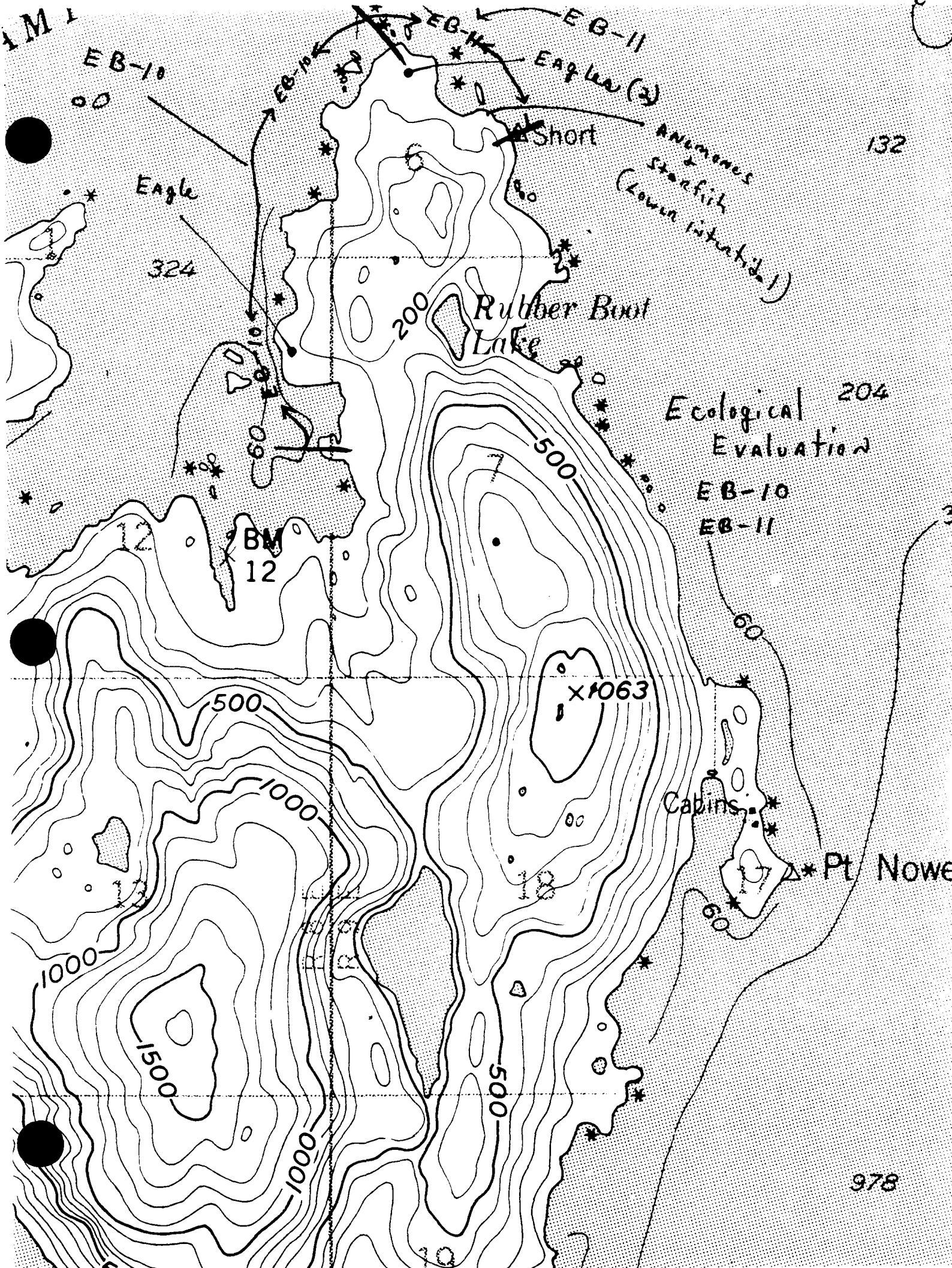
BM
12

X1063

Cabins

Pt. Nowe

978



(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-28-89 Location Eschamy Bay Site _____

Location Prefix EB Segment # 10 Length 2400 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 light oil

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

Cultural resources observed in beach zone (AHRS code) RCS

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile Steep rocky outcrops with few pocket beaches

Fresh Water Sources small & large streams

Sea Exposure Open to the west

Access/Safety poor access / dangerous for larger boats

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

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

Photos: Color Roll # _____ Frames _____

B/W Roll # WA2 Frames 13, 14, 15

Observer(s) ANDREFSKY

Time survey started 9:30 AM Time survey ended 11:45 AM

Cultural resource considerations/restraints:

Standard constraint

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/30/89

SHORELINE SEGMENT EB-11

LOCATION: (see enclosed map) Eshamy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/28/89

Recommended Cleanup Activity(ies):

- Hand cleanup of oil debris at high tide.
- Mechanical cleanup of cobble beach with flooding and warm water, moderate pressure. Boom and recover at 1/3 tide.

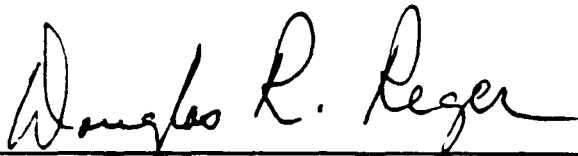
Priorities Considerations:

- Class 3: Moderate oil contamination
- Class B: Resources absent

Ecological Constraints (from site survey): Flood/flush with warm to hot water (up to 140 F) only after clean areas of lower intertidal are covered by tide or after sufficient protection measures are in place to prevent oiling lower intertidal zone. Clip and remove oiled fucus. Due to extend of mousse is mid to upper intertidal. Recommend cleanup proceed only when lower intertidal submerged.

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: 5/31/89

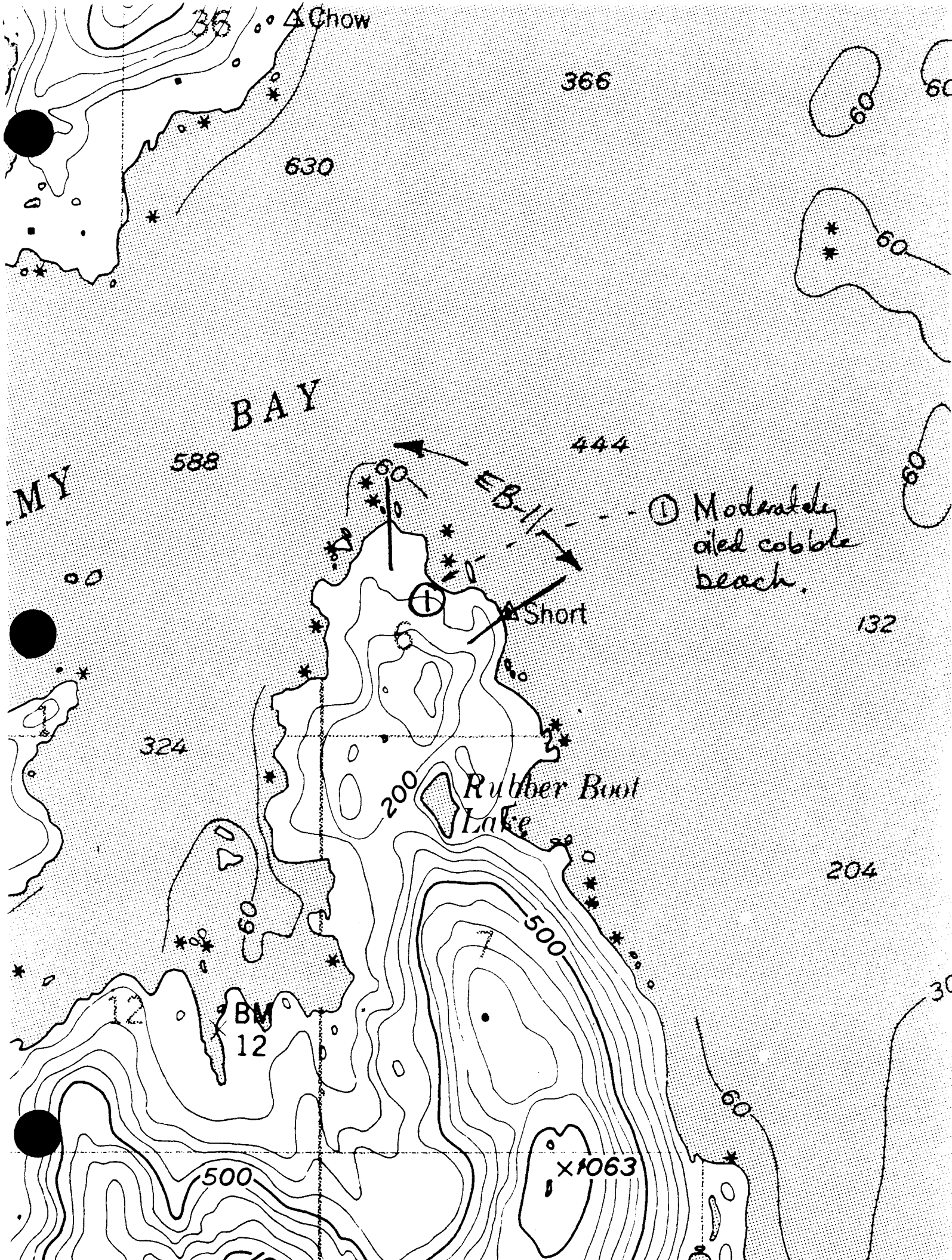
EXXON: Mr. Adam

Date: 6/2/89

FOSC: CE Dobbin

Date: 6/5/89

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



36
Chow
630

366

60
60
60

MY
BAY
588

444

① Moderately
oiled cobble
beach.

132

324

200
Rubber Boat
Lake

204

BM
12

500

X1063

500

30

SHORELINE OIL EVALUATIONDate: 5/28/89 Time: 13:30Observer: RICK GILLIE

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION ESHAMY BAYSEGMENT NUMBER EB-11

LENGTH OF SHORELINE SEGMENT: _____m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 20% / P 20% / G ___% / S ___% / M ___% / R 30%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeLOGS
FUCUSOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 80 Width of Band: 30 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: _____cm Est. Oil Penetration: 20 cmPooled Oil: _____% "Free" Oil: _____% Coated: H 10% / M 80% / L 10%Fresh 30% Mousse 20% Tar Formation: _____%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

- ① - Cobble beach (see map) has moderately oiled band from high tide to 1/3 tide (mid to low tide).
- Other portions of segment have 5-10 m wide band of moderately oiled boulders and rocks.

ECOLOGICAL EVALUATION

LOCATION: Eschamy Bay SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: EB SEG. NO.: 11 LENGTH: 700 (M)

DATE: 5/28/89 TIME (HHMM): 1300 TIDE HT.: 0.4 (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 Sparse Y/N None Y/N

Discontinuous Band to Patchy - covered w mousse is mid to high intertidal

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

Positive Tactile Response - colonies is mid to high intertidal covered

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

Positive tactile Response - colonies is mid to high intertidal covered w mousse.

Littorina

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

Positive tactile Response - ^{individuals} is mid to high intertidal covered w

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

+ Tactile Response

OTHER OBSERVATIONS: Starfish (several) + Anemonies (several) is Lower intertidal - all w positive tactile Response.

* CLEANUP PRECAUTIONS: Flushing w warm to hot water (up to 140°), only

After clear areas of Lower intertidal are covered by tide or after sufficient protection measures are in place to prevent oiling of middle lower intertidal zone. Clip & remove oiled fucus.

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

BIRDS: 2 eagles - no nest observed

GENERAL OBSERVATIONS: 2 eagles - no nest observed

Most intertidal biota @ mid to high levels covered w mousse.

* Due to extent of mousse is mid to high intertidal - Recommend cleanup placed when only Lower intertidal submerged.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-28-89 Location Eshamy Bay Site _____

Location Prefix EB Segment # 11 Length 700 m.

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility moderate oil cover with continuous concentrations

Width of beach zone surveyed 10-50 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 Rocky outcrops - steep in most places

Fresh Water Sources small stream & seeps

Sea Exposure Open to the north

Access/Safety poor access by boat - dangerous for larger boats

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 11, 12

Observer(s) ANDREFSKY

Time survey started 11:45 AM Time survey ended 2:15 PM

Cultural resource considerations/restraints:

If hitherto unidentified cultural resources are discovered during
cleanup contact Exxon archaeologists immediately.

8/5/89
allp

TREATMENT MANUAL, 6/15/89

SEG EB 5 INSPECTION # _____

SEGMENT

DATE 8-4-89

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 EB 5 is complete. Ready for demobilization & deployment to new segmentSignature Jimmy DuhonDate: 8/4/89 Time: _____Printed Name Jimmy Duhon

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
0
0
5%
95Heavy
Medium
Light
Very Light
None

100 %

Subsurface Oil

☐

Yes

☒

No

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments Concur w/ the end demob approval. No gross contamination found. Very little oiling on this segment. Recommend moving to heavier oiled area of segment at this timeSignature Denny R. TammoneDate: 8/4/89 Time: 1745Printed Name Denny R. Tammone, ENR Engr, ADEC

FOSC rep

Demobilization approved/disapprovedComments NO GROSS CONTAMINATIONSignature Arthur J. SmithDate: 8/4/89 Time: 1744Printed Name Arthur J. Smith LTJG

TREATMENT MANUAL, 6/15/89

SEG EB 6 INSPECTION # _____

SEGMENT

DATE 8-4-89

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 EB 6 is complete. Ready for demobilization & deployment to new segments.Signature [Signature] Date: 8/4/89 Time: _____Printed Name Terrence J. Dulai

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes ☒ No

<u>100</u>	Heavy
<u>8</u>	Medium
<u>2</u>	Light
<u>2</u>	Very Light
<u>96</u>	None

100 %

Comments _____

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments Concur w/ 70 and demob authorization. No gross contamination. Recommend moving to a heavier oiled segment at this time.Signature Deany R. Timmons Date: 8/4/89 Time: 1740Printed Name Deany R. Timmons, Envir Engr, ADEC

FOSC rep

Demobilization approved / disapprovedComments No Gross ContaminationSignature Arthur J. Smith Date: 8/4/89 Time: 1739Printed Name Arthur J. Smith LTJG

TO
8/5/89
CRP

TREATMENT MANUAL, 6/15/89

SEG EB 7 INSPECTION # _____

SEGMENT

DATE 8-4-89

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 EB 7 is complete.
Ready for demobilization, & deployment to new segment.
 Signature Tommy Dublin Date: 8/4/89 Time: _____
 Printed Name Tommy Dublin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes ☒ No

0 Heavy
2 Medium
2 Light
0 Very Light
96 None

100 %

Comments _____

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments Concur w/ 96 and demobilization approval. No
gross contamination. Recommend moving to a
more heavily oiled area segment.

Signature Denny R. Tidmons Date: 8/4/89 Time: 1735Printed Name Denny R. Tidmons, Envr Engr, ADEC

FOSC rep

Demobilization approved disapprovedComments No Gross ContaminationSignature Andrew S. ... Date: 8/4/89 Time: 1732Printed Name Andrew S. ... LTJG

TO 8/5/89
ALB

98355905

P.01

TREATMENT MANUAL, 6/15/89

SEG EB 9 INSPECTION # _____

SEGMENT

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☒

Non-mechanical

☐

Water deluge

☐

Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment EB 9 is complete. Ready for demobilization & deployment to new segment.Signature Tommy D. [illegible]Date: 8/4/89 Time: _____Printed Name Tommy D. [illegible]

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐

Yes

☒

No

0

Heavy

0

Medium

5

Light

10

Very Light

85

None

100 %

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments Concur w/ 70 and demob authorization. No gross contamination found. Light to V light thin bands at high tide line. Recommend moving to nearer impacted area at H₁₀.Signature Denny R. TimminsDate: 8/4/89 Time: 1755Printed Name Denny R. Timmins, Env Eng, ADEC

FOSC rep

Demobilization approved/disapprovedComments NO GROSS ContaminationSignature Arthur J. SmithDate: 8/4/89 Time: 1753Printed Name Arthur J. Smith LTJG

8/5/89
alb

TREATMENT MANUAL, 6/15/89

SEG EB 10 INSPECTION # _____

SEGMENT _____

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash	☐ Mechanical _____
☐ Warm water wash	☒ Non-mechanical _____
☐ Water deluge	☐ Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment EB 10 is complete.
Ready for demobilization & deployment to new segment
 Signature Tommy Dulin Date: 8/4/89 Time: _____
 Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil		Subsurface Oil
Percent	Degree of Oiling	☐ Yes ☒ No
<u>0</u>	Heavy	Comments _____ _____ _____ _____ _____
<u>0</u>	Medium	
<u>0</u>	Light	
<u>10</u>	Very Light	
<u>90</u>	None	
100 %		

Reassessment

☒ Yes - necessary ☐ No - not necessary unless re-oiled

ADEC rep Comments Concur w/ 90 and demob authorization. Light band
of oil 1/2 segment 2-3' width. No gross contamination found.
Recommend moving to heavier impacted segment.
 Signature Denny R. Timmons Date: 8/4/89 Time: 1753
 Printed Name Denny R. Timmons, Envt Engr, ADEC

FOSC rep

Demobilization approved/disapproved
 Comments No Gross Contamination

Signature Arthur J. Smith Date 8/4/89 Time: 1752
 Printed Name Arthur J. Smith USCG

SEG EB-11 INSPECTION # 1

SEGMENT

DATE 8/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash

Non-mechanical Bead Crew

Water deluge



Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment EB-11 is complete.
Ready for demobilization and deployment to new segment.

Signature Michael J. TydingsDate: 8/19/89 Time: 4:00 PMPrinted Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
22
23
28
70
 100 %

Heavy
 Medium
 Light
 Very Light
 None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent Degree of Oiling

< 1%
22
23
28
50
 100 %

Heavy
 Medium
 Light
 Very Light
 None

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments Mostly light + very light oiling present. One small section (5x15 yds) of moderate oil. Recommended placing SWARE buoys in this area. No gross contamination.

Signature Joseph J. SautnerDate: 8/19/89 Time: 1600Printed Name Joseph J. Sautner

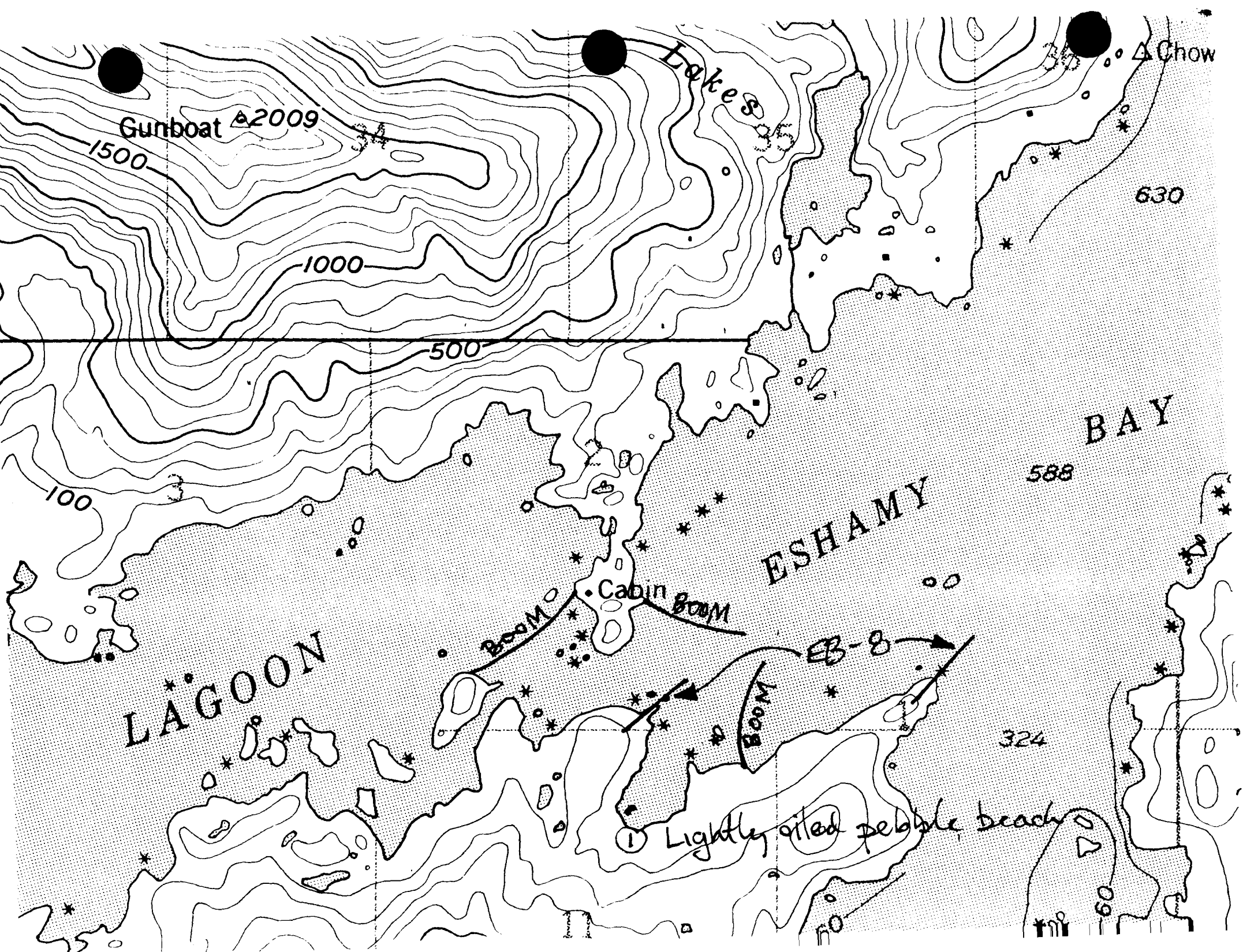
FOSC rep

Demobilization approved/disapproved

Comments

Signature Steven B. ...Date: 8/19/89 Time: 1544Printed Name STEVEN B. ...

COPY: EXXON ADEC FOSC ISCC



(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): ESHAMY LAGOON EAST BLOCK

Includes Shoreline Segments: EB-12, EB-13, EB-14, EB-15

Submitted: BA [signature] Date: 6/7/89
(for Exxon)

ISCC Recommendation: Sharon K Christopher Date: 6-19-89 ?

✓ FOSC Approval: J. W. [signature] Date: 6/17/89

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*****

LANDS IN THE ESHAMY LAGOON EAST BLOCK ARE PRIVATELY OWNED BY CHENEGA VILLAGE CORPORATION. PERMIT NO ACCESS TO UPLAND AREAS.

NOTE LOCATIONS OF ANODROMOUS FISH STREAMS ON ATTACHED MAP.

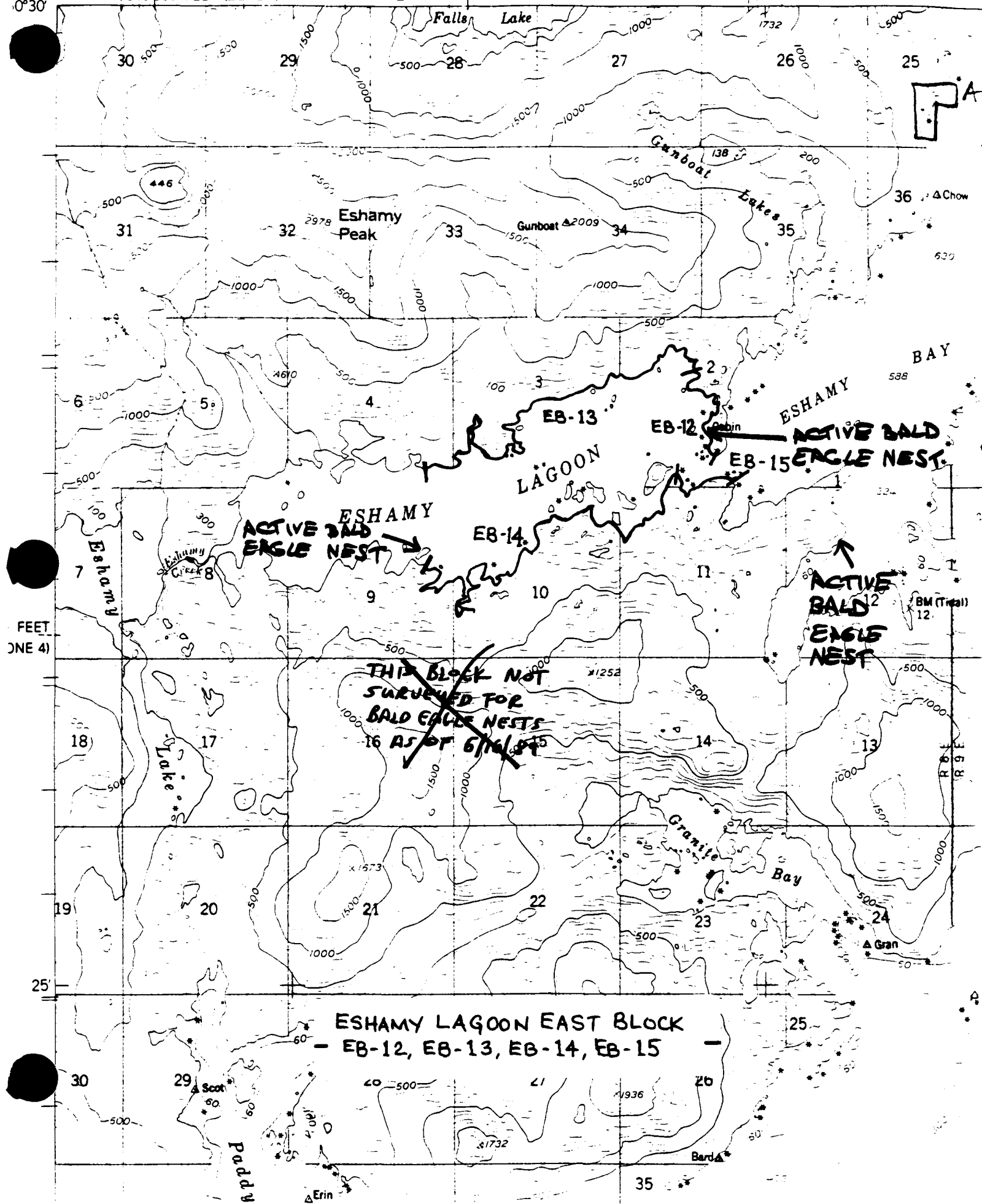
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

148°07'30"
0°30'

840 000 FEET (ZONE 4) 5'

41°00'00"E

148°



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT EB-12

LOCATION: (see enclosed map) Eshamy Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/31/89

Recommended Cleanup Activity(ies):

- Hand cleanup of tar balls, oiled fucus debris, ~~and~~ oiled debris mat rafts. AND PENETRATED OIL ~~AT~~ (LOCATION #1) *pm*

Priorities Considerations: HIGH RECREATIONAL USE. *pm*

- Class 4: Oil contamination low
- Class A: Resources present (salmon fry/~~spawn area~~) *REARING AREA. pm*

Ecological Constraints (from site survey): Clean area when tides cover oil free zones, or take appropriate steps to prevent oiling these zones during 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.

Charles E. Holmes

State Historic Preservation Officer *

ISCC: *Sharon K. Christopher*

EXXON: *[Signature]*

FOSC: *[Signature]*

Date: *June 6, 1989*

6-16-89

Date: *June 16 - 89*

Date: *June 17, 1989*

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

SHORELINE OIL EVALUATIONDate: 5/31/1989 Time: 14:30Observer: RICK GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAY (LAGOON)SEGMENT NUMBER EB-12LENGTH OF SHORELINE SEGMENT: 1,100 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B²⁰% / C¹⁰% / P²⁰% / G___% / S___% / M___% / R⁵⁰% FucusDrift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved to VERY LIGHTArea of Beach Impact: SU/SP/H/M/LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment 10Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: ___ cmPooled Oil: ___% "Free" Oil: ___% Coated: H___% / M___% / L¹⁰⁰%Fresh ___% Mousse 50% Tar Formation: 50%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments: (REFER TO SITE NUMBERS ON ATTACHED MAP)

① Mousse oiled Fucus and tar balls at high tide lines.

5 cm penetration

② Common tar balls. Oiled Fucus debris

③ Oiled Fucus debris and tar balls at high tide

④ Oiled Fucus debris and tar balls

⑤ Rare tar balls and oiled Fucus debris.

Ecological Map

EB-12
EB-13
EB-14
EB-15

ESHAMY

LAGOON

200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
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9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10000

1000 ft
Pituitary
Oiled Ferry
dams (S. 1000 ft)

500-
Pituitary
Oiled Ferry
dams (S. 1000 ft)

EB-14
EB-13
EB-12
EB-15

20-24
Barnard's
collared eye

3 Eagles
(No nest obs.)

Feeding
Terns

EB-12

EB-13

EB-14

EB-15

EB-16

EB-17

EB-18

EB-19

EB-20

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EB-292

EB-293

EB-294

EB-295

ECOLOGICAL EVALUATION

LOCATION: Eshamy Lagoon SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: EB SEG. NO.: 12 LENGTH: 1100 (M)
 DATE: 5/31/89 TIME (HHMM): 14:30 TIDE HT.: 1.4 (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 Sparse Y/N None Y/N

Fucus healthy in appearance, but not as robust as in other areas.

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

Predominant colonies are associated to cobbles, vents surface not heavily colonized.

(+) Tactile Response

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

Predominant colonies on larger cobbles in mid to lower intertidal.

(+) Tactile Response

Littorina

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

Common on shore cobbles in lower intertidal - none in higher zones.

(+) Tactile Response

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

Common on shore cobbles in lower intertidal - none in higher areas of beach.

(+) Tactile Response

OTHER OBSERVATIONS: Fucus not as robust as in other areas observed. Fucus concentrated in lower tidal zones - Possibly a saline effect - Lots of fecal with input, limited marine water exchange.

CLEANUP PRECAUTIONS: Use appropriate mechanical or dispersion techniques including hot water (up to 140°) + hand clean-up. Clean area when tides cover oil free zones or take appropriate steps to prevent oiling these zones during clean-up.

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

Other _____

BIRDS: 2-Blk Skimmer - Numerous + some feeding (See map)

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-31-89 Location E Shamy Lagoon Site _____

Location Prefix EB Segment # 12 Length 1,100 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 cover to moderate.

Width of beach zone surveyed 5-25 m Tree fringe surveyed 5-15 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 gentle grade on cobble beaches - steep rocky cliffs.

Fresh Water Sources small streams & seeps.

Sea Exposure Open to the west

Access/Safety good access on pocket beaches

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

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

Photos: Color Roll # _____ Frames _____

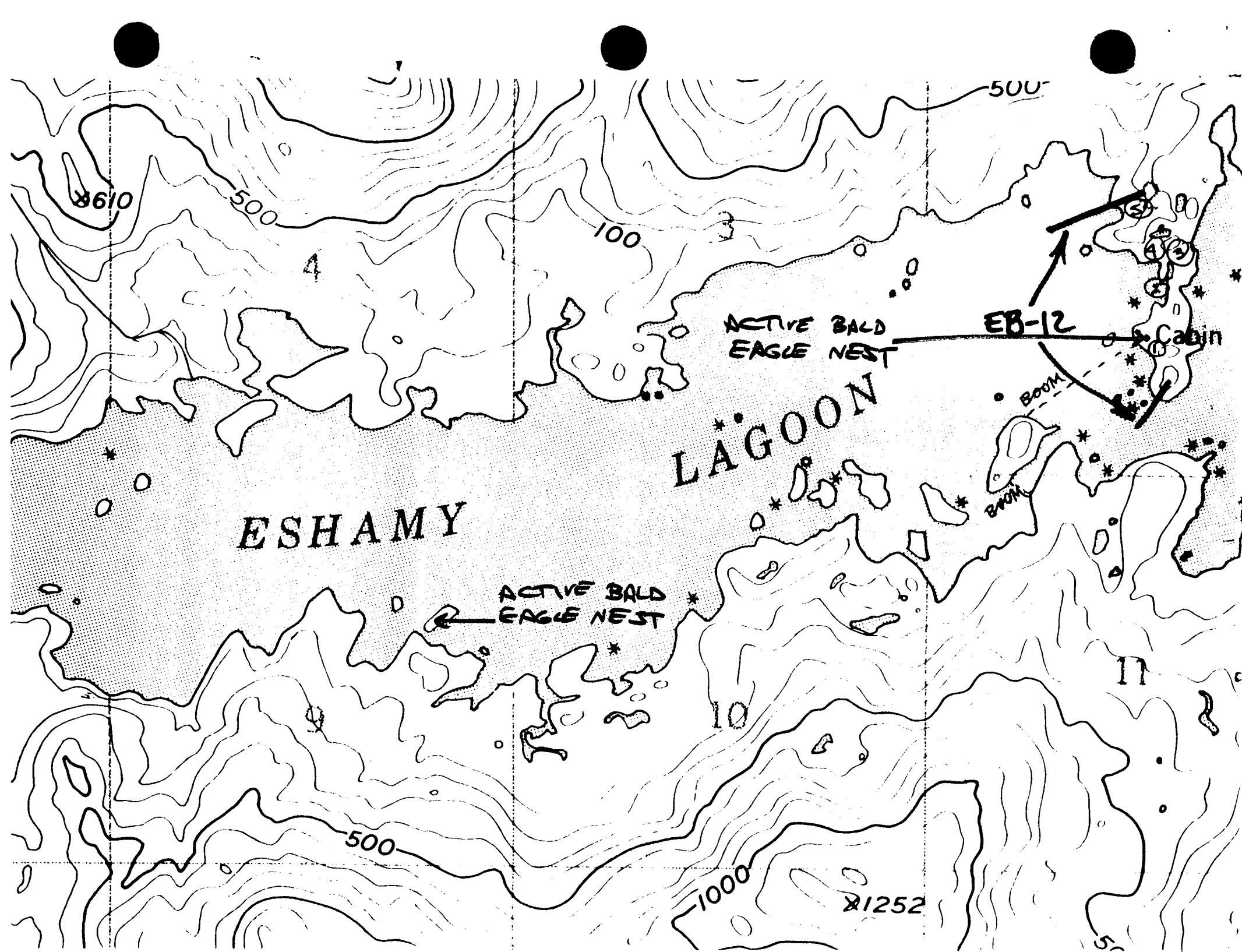
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 1:30 PM Time survey ended 3:50 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered
contact ~~enron~~ archaeologists immediately.



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT EB-13

LOCATION: (see enclosed map) Eshamy Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/31/89

Recommended Cleanup Activity(ies):

- Hand cleanup of tar balls, oiled fucus debris and oiled debris mats at high tide.

Priorities Considerations: HIGH RECREATION USE. *jm*

- Class 4: Oil contamination low

Class A: Resources present (salmon fry ^{REARING} ~~spawning~~) AND ONE *jm*
ANADROMOUS FISH STREAM.

Ecological Constraints (from site survey): Hand clean oiled fucus debris and possibly the rare small splotches of oil. If any cleanup is attempted, suggest hand 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.

Charles E. Himes

State Historic Preservation Officer *

ISCC: *Shawn K. Christopherson*

EXXON: *Real*

J FOSC: *J.W. Rine*

Date: *June 6, 1989*

6-16-89

Date: *June 16 - 89*

Date: *June 17, 1989*

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

SHORELINE OIL EVALUATIONDate: 5/31/1989 Time: 16:30Observer: Rick GillieSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAY (LAGOON)SEGMENT NUMBER EB-13LENGTH OF SHORELINE SEGMENT: 4,000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B³⁰% / C¹⁰% / P²⁰% / G___% / S___% / M___% / R⁴⁰%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower TypeFucus**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment 5

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H___% / M___% / L¹⁰⁰%Fresh _____% Mousse 50% Tar Formation: 50%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments: (REFER TO #'S ON ATTACHED MAP).

- ① No oil on small beaches either side of island.
- ② Small beach (100m long) with tar balls and rafted mats of debris
- ③ Oiled Fucus debris line at high tide
- ④ No oil
- ⑤ Rare rafted debris mats. Scattered oiled Fucus debris
- ⑥ Rare rafted oiled debris.

ECOLOGICAL EVALUATION

LOCATION: Eshamy Lagoon SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: E B SEG. NO.: 13 LENGTH: 4,000 (M)

DATE: 5 / 31 / 89 TIME (HHMM): 15:50 TIDE HT.: 1.1 (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 healthy in appearance, but not as robust as in other areas

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

Subdominant colonies on ~~rocks~~ cobbles, vent. surfaces not heavily colonized

(+) Tactile Response

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

Subdominant colonies on larger cobbles in mid to lower intertidal.

(+) Tactile Response

Littorina

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

Common only on shale cobble in lower intertidal.

(+) Tactile Response

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

Common only on shale cobble in lower intertidal.

(+) Tactile Response

OTHER OBSERVATIONS: Fauna not as robust as in other areas observed. Fauna

concentrated in lower tidal zones - Possible a saline effect due to limited
marine exchange & high freshwater input.

CLEANUP PRECAUTIONS: Hard clean oiled focus^{debris} - Remainder of
oil is small splotches & very rare if any cleanup is attempted - suggest
Hard cleanup.

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

BIRDS: 2 ♂, 2 ♀ common mergansers (see map)

GENERAL OBSERVATIONS: Potential anadromous stream (see map).

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-31-89 Location Eshamy Lagoon Site _____

Location Prefix EB Segment # 13 Length 4,000 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 light oil to no oil.

Width of beach zone surveyed 10-30 m Tree fringe surveyed 10-15m.

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 50% rubble beaches w/ gentle grade, 50% steep rocky outcrops.

Fresh Water Sources many streams

Sea Exposure Open to the South

Access/Safety Good access in several places.

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

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

Photos: Color Roll # _____ Frames _____

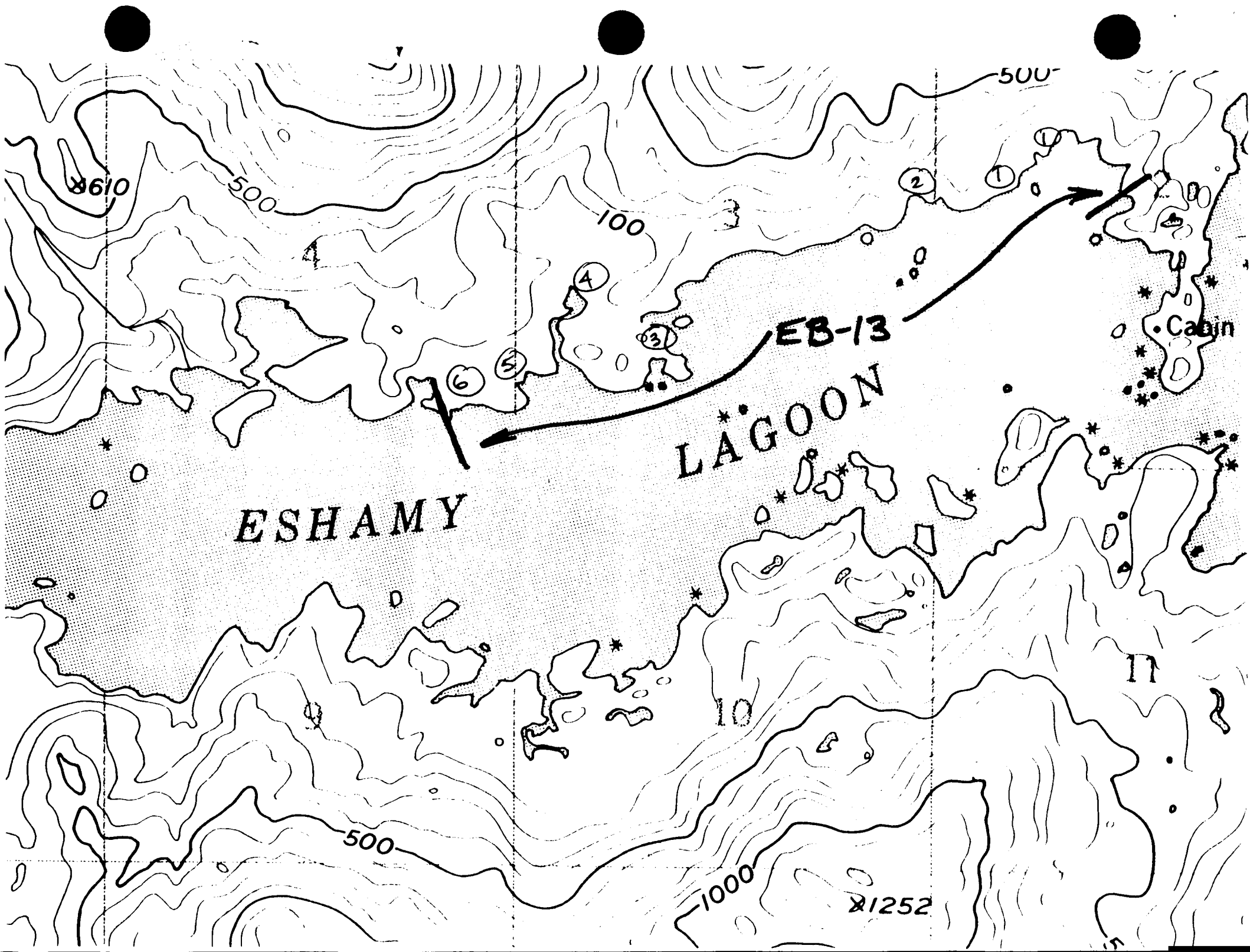
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 3:50 PM Time survey ended 5:45 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are
discovered during cleanup contact Exxon archaeologists
immediately.



ESHAMY

LAGOON

EB-13

Cabin

x1252

x610

11

10

100

500

500

1000

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT EB-14

LOCATION: (see enclosed map) Eshamy Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/31/89

Recommended Cleanup Activity(ies):

- Hand cleanup of oiled fucus debris and debris mats at high tide.

Priorities Considerations: HIGH RECREATION USE.

- Class 4: Low oil contamination
- Class A: Resources present (salmon fry/spawning) ^{REARING AREA} AND ONE ANADROMOUS FISH STREAM.

Ecological Constraints (from site survey): Hand clean intertidal berm area. Remainder of oil is very rare splotches. If any cleanup is attempted, suggest hand 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.

Charles E. Himes
State Historic Preservation Officer *

ISCC: Shawn K. Christopher

EXXON: Paul

FOSC: J. W. Parrie

Date: June 6, 1989

6-16-89

Date: June 16-89

Date: June 17, 1989

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

SHORELINE OIL EVALUATIONDate: 5/31/89 Time: 17:50Observer: Rick GillieSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAY (LAGOON) SEGMENT NUMBER EB-14LENGTH OF SHORELINE SEGMENT: 3,800 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B²⁰% / C¹⁵% / P⁵% / G___% / S___% / M___% / R⁶⁰%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Fresh LOC'S**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment _____ Width of Band: _____ mSporadic: Y/N % of Segment <10%

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

Pooled Oil: _____ % "Free" Oil: _____ % Coated: H___% / M___% / L¹⁰⁰%Fresh _____ % Mousse 50 % Tar Formation: 50 %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/Comments: (See Map)

- ① Rare rafted debris balls and mats (< 10 cm diameter).
Near high tide
- ② Narrow band of oiled debris and coated rocks at high tide.
- ③ Rare rafted oil debris balls and mats.

ECOLOGICAL EVALUATION

LOCATION: Eshamy Lagoon SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: EB SEG. NO.: 14 LENGTH: 3,800 (M)

DATE: 5/31/89 TIME (HHMM): 17:45 TIDE HT.: 1.5 (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

Fucus not robust, but healthy in appearance

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

Mussels comparatively sparse (but common) mostly in cobble colonies.

(+) Tactile response

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

(+) Tactile response, relatively sparse, main colonies on cobbles.

Littorina

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

(+) Tactile response - not common in segment

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

+ Tactile response - sparse to none in segment

OTHER OBSERVATIONS: LT oil on high tide Beach noted in one area, remainder of segment has very rare splashes of oil.

CLEANUP PRECAUTIONS: Hand clean intertidal beach area. Remainder of oil is very rare - if any cleanup attempted - suggest Hand cleanup

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

BIRDS: 2 Canada geese, 3 eagles, 20-24 Barn Swallows, Golden eye, crows, Terns

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-31-89 Location Eshamy lagoon Site _____

Location Prefix EB- Segment # 14 Length 4000 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 light.

Width of beach zone surveyed 10-30 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 gentle beaches (50%) Rocky outcrops (50%)

Fresh Water Sources Several streams.

Sea Exposure open to the North

Access/Safety Good access to beach areas

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

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

Photos: Color Roll # _____ Frames _____

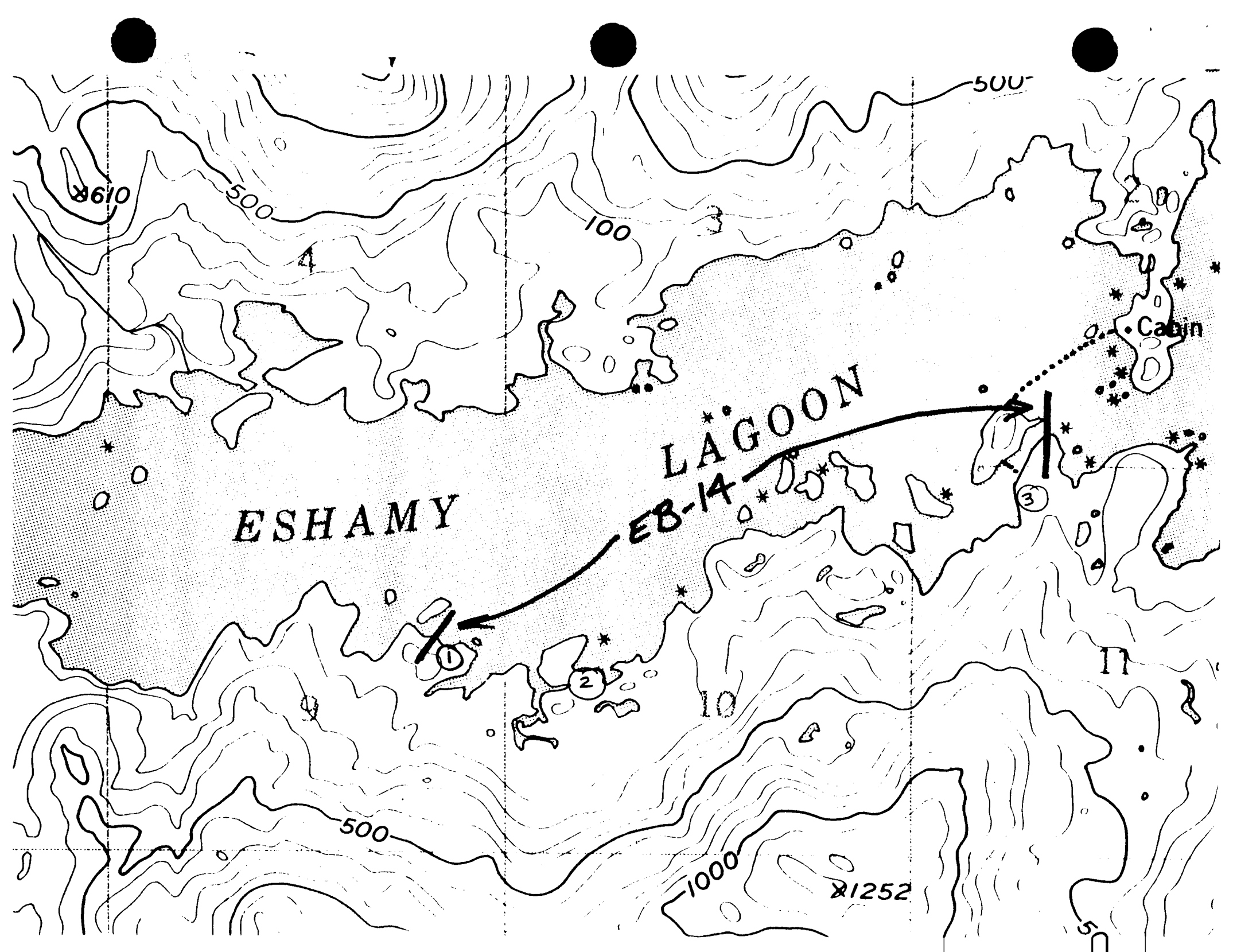
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 5:45 PM Time survey ended 7:00 PM.

Cultural resource considerations/restraints:

If hereafter unidentified cultural resources are discovered
during cleanup contact Exxon archaeologists immediately.



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT EB-15

LOCATION: (see enclosed map) Esham Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/31/89

Recommended Cleanup Activity(ies):

- Hand cleanup of oiled fucus debris and oiled debris at high tide line.
- Flood/flush oiled cobble/pebble beaches with medium to high pressure hot water or use other appropriate cleaning methods. MAINTAIN CONTAINMENT BOOM BETWEEN LAGOON AND WORK WORK/CLEAN UP AREA. *Jim*

Priorities Considerations: HIGH RECREATIONAL USE *Jim*
- Class 3: Moderate oil contamination *REARING AREA*
Class A: Resources present (salmon fry/~~spawn area~~)

Ecological Constraints (from site survey): Use appropriate mechanical/~~dispersion techniques~~ *methods* or other means as appropriate. Protect uncontaminated areas from incidental oiling.

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 *
ISCC: *Sharon K. Christopher*
EXXON: *[Signature]*
FOSC: *J. W. [Signature]*

Date: June 6, 1989

6-16-89

Date: June 16 - 89

Date: June 17, 1989

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

SHORELINE OIL EVALUATIONDate: 5/31/89 Time: 19:09Observer: Rick GILLIESurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION ESHAMY BAY (LAGOON)SEGMENT NUMBER EB-15LENGTH OF SHORELINE SEGMENT: 700 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 20% / C 20% / P 20% / G % / S % / M % / R 40%Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

Fucus Boom**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU/SP/H/M/LContinuous: Y/N % of Segment Width of Band: mSporadic: Y/N % of Segment 50Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H 10% / M 70% / L 20%Fresh 30% Mousse 40% Tar Formation: 30%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

- Beaches have 1 m wide mousse oiled Fucus debris at High Tide. Oil coated cobble beaches HT to MT.
- Rocks have oiled Fucus
- Oiled surfat boom debris located on beach at "X" on map. Also oiled absorbent pads.
- Note: Access hindered by strong tidal currents in entrance to Eshamy Lagoon.

ECOLOGICAL EVALUATION

LOCATION: Eshamy Lagoon SITE: _____ OBSERVER: G. Penn

LOCATION PREFIX: EB SEG. NO.: 15 LENGTH: 700 (M)

DATE: 5/31/89 TIME (HHMM): 19:00 TIDE HT.: 2.0 (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

Oiled fucus & fucus debris is mid to high intertidal.

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

Mussels dense only on elevated vert. Rock headlands & in cobble colonies

(+) Tactile Response

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

Balanus colonies densest on larger cobbles in low to mid intertidal

(+) Tactile Response

Littorina

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

Not common in this segment - Those observed were on shore cobbles in lower intertidal - (+) Tactile Response.

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

None throughout segment - in lower intertidal - (+) Tactile response

OTHER OBSERVATIONS: ^{LTD to mid.} Oil on beach & oiled fucus debris on beach at high tide line. Oiled fucus is mid & high tide zones.

CLEANUP PRECAUTIONS: Use appropriate mechanical/dispersion techniques or other means as appropriate - protect un-contaminated areas from incidental oiling.

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

BIRDS: Feeding Terns.

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5-31-89 Location S Shamy Bay area Site _____

Location Prefix EB Segment # 15 Length 700 m.

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility oil cover is light to moderate

Width of beach zone surveyed 0-20 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 steep rocky outcrops

Fresh Water Sources small streams & seeps

Sea Exposure open to the North

Access/Safety poor access & dangerous

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 _____

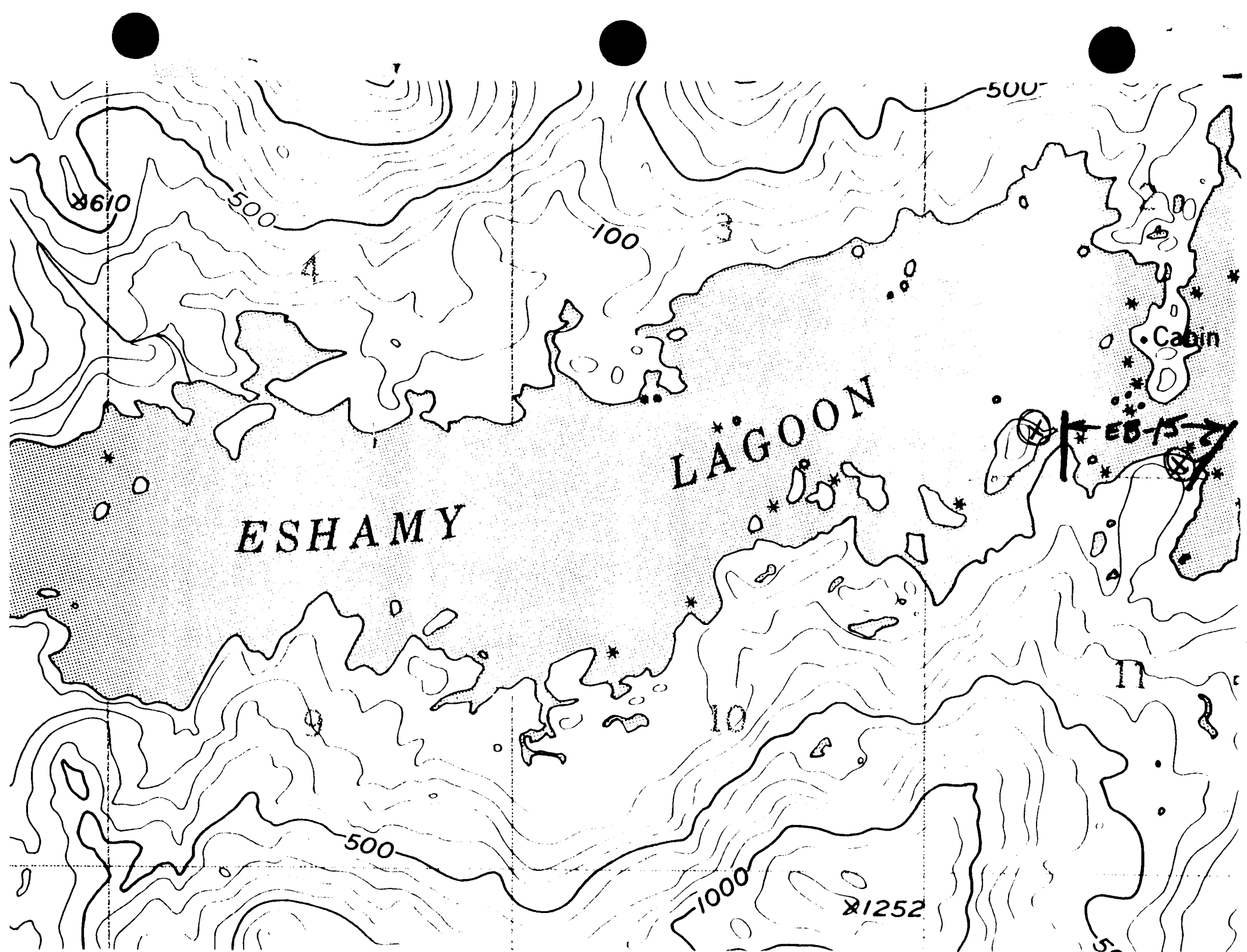
B/W Roll # _____ Frames _____

Observer(s) ANDREFSKY

Time survey started 7:00 PM Time survey ended 8:30 PM

Cultural resource considerations/restraints:

IF heretofore unidentified cultural resources are discovered
during cleanup contact Exxon archaeologists immediately.



8/5/89
elt

TREATMENT MANUAL 6/15/89

SEG EB-12 INSPECTION # _____

SEGMENT

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐

Hot water wash

Warm water wash

Water deluge

☐
☐
☒

Mechanical _____

Non-mechanical _____

Other NONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment EB-12 is completeReady for demobilization & deployment to New SegmentSignature Tommy DublinDate: 8/4/89 Time: _____Printed Name Tommy Dublin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
0
0
0
100

Heavy

Medium

Light

Very Light

None

100 %

Subsurface Oil

☐ Yes☒ No

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments NO SHORELINE TREATED IN THIS SECTION (SEGMENT). ESHAMY BAY LAGOON BOOME OFF AND THIS SEGMENT IS INSignature BOOMED OFF Date: 8/4/89 Time: _____Printed Name AREA.

FOSC rep

Demobilization approved/disapproved

Comments NO GROSS CONTAMINATION, NO OIL OBSERVED, AREA BOOMED OFFSignature Arthur J. SmithDate: 8/4/89 Time: 2229hrPrinted Name Arthur J. Smith LTJG

8/5/89

TREATMENT MANUAL, 6/15/89

SEG EB 13 INSPECTION # _____

SEGMENT

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☐

Non-mechanical

☐

Water deluge

☒Other None

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of EB 13 is complete. Ready for demobilization & deployment to next segment.Signature Tommy DublinDate: 8/4/89 Time: _____Printed Name Tommy Dublin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐

Yes

☒

No

0

Heavy

0

Medium

0

Light

0

Very Light

100

None

100 %

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

NO SHORELINE TREATED IN THIS AREA SEGMENT. ESHAMY BAY LAGOON BOOMED OFF AND THISSignature SEGMENT IS INDate: 8/4/89 Time: _____Printed Name BOOMED OFF AREA

FOSC rep

Demobilization approved/disapprovedComments NO GROSS CONTAMINATIONSignature Arthur J. SmithDate: 8/4/89 Time: 2231Printed Name Arthur J. Smith LTJG

8/5/89
ALB

TREATMENT MANUAL, 6/15/89

SEG EB 14 INSPECTION # _____

SEGMENT

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐Hot water wash
Warm water wash
Water deluge☐
☐
☒Mechanical
Non-mechanical
Other none

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment EB 14 is complete.Ready for demobilization & deployment to next segmentSignature Tommy DulinDate: 8/4/89 Time: _____Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
0
0
0
100Heavy
Medium
Light
Very Light
None

100 %

Subsurface Oil

☐ Yes☒ No

Comments _____

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments NO SHORELINE TREATED IN THIS SEGMENT. ESHAMY BAY LAGOON BOOMED OFF AND THIS SEGMENT ISSignature IN BOOMEDDate: 8/4/89 Time: _____Printed Name OFF AREA

FOSC rep

Demobilization approved/disapprovedComments NO GROSS CONTAMINATION, NOoil observed, area boomed offSignature Arthur J. SmithDate: 8/4/89 Time: 222Printed Name Arthur J. SmithLTJG

TREATMENT MANUAL, 6/15/89

SEG EB 15 INSPECTION # _____

SEGMENT

DATE 8-4-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical _____

☐

Warm water wash

☐

Non-mechanical _____

☐

Water deluge

☒Other None

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments

Treatment of segment EB 15 is complete.
Ready for demobilization & deployment to new segment.

Signature

Tommy DuhonDate: 8/4/89 Time: _____

Printed Name

Tommy Duhon

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒

Yes

☐

No

0

Heavy

0

Medium

0

Light

0

Very Light

100

None

100 %

Comments _____

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

NO SHORELINE TREATED IN THIS
SEGMENT ESHAMY BAY LAGOON
BOOMED OFF AND THIS SEGMENT

Signature

IS IN BOOMED

Printed Name

OF AREA.

FOSC rep

Demobilization approved/disapproved

Comments

NO Gross Contamination, NO
oil observed, Area boomed off.

Signature

Arthur J SmithDate: 8/4/89 Time: 2532

Printed Name

Arthur J Smith LTJG

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): POINT NOWELL NORTH BLOCK

Includes Shoreline Segments: PN-1, PN-2, PN-3, PN-4

Submitted: J. A. [signature] Date: 6/7/89
(for Exxon)

ISCC Recommendation: Sharon K. Christopherson Date: 6-16-89

8 FOSC Approval: J. W. [signature] Date: 6/17/89

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.

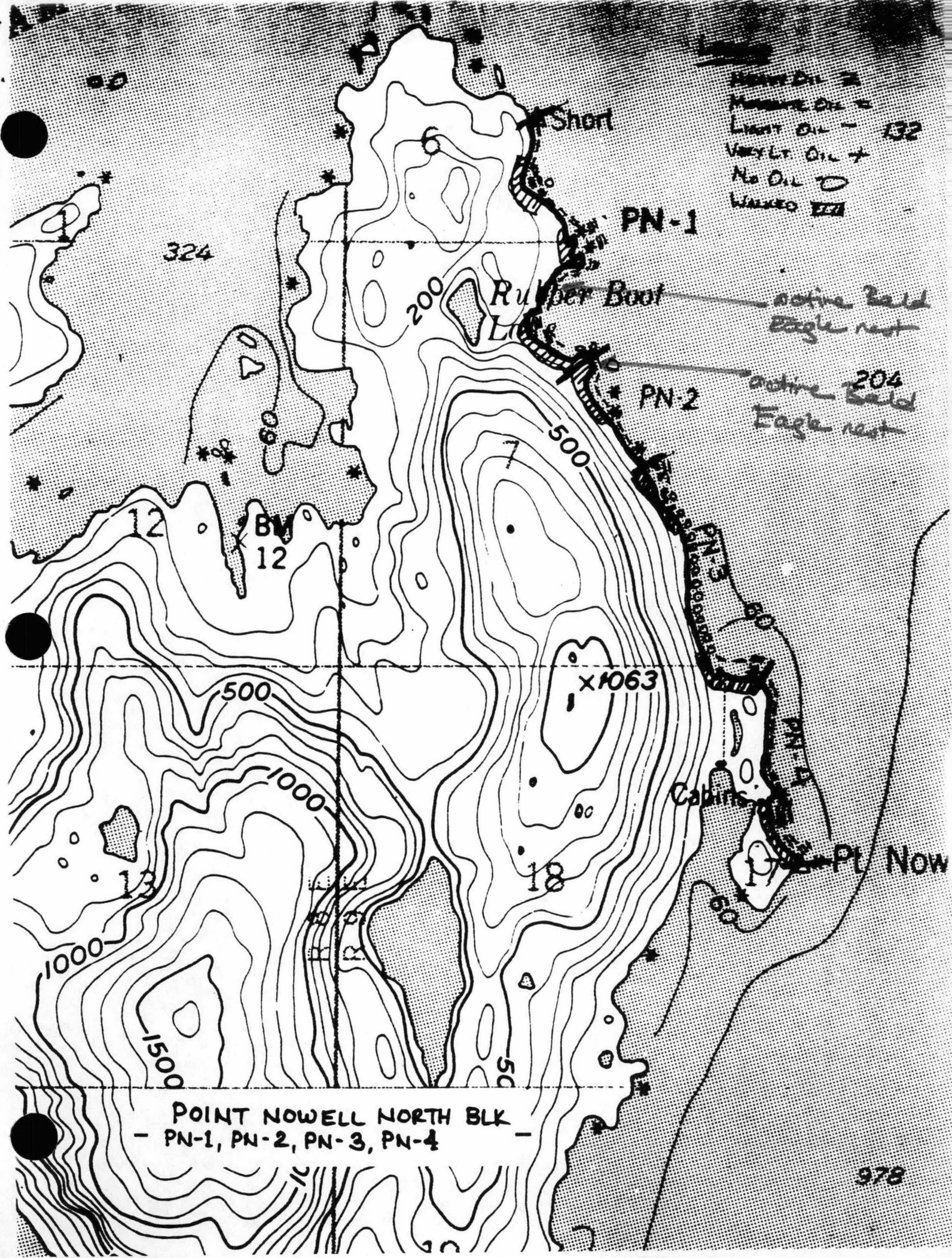
Distribution:

Exxon Shoreline Coordinator
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USFS
SHPO

*****SCOT NOTE*****

LANDS IN THE POINT NOWELL NORTH BLOCK ARE PRIVATELY
OWNED BY CHENEGA VILLAGE CORPORATION. PERMIT NO ACCESS TO
UPLAND AREAS



Heavy Oil X
Medium Oil +
Light Oil - 132
Very Lt. Oil *
No Oil O
Waxed |||

324

PN-1

Rubber Boot

active Bald Eagle nest

PN-2

active 204 Bald Eagle nest

BM 12

x1063

Cabin

Pt. Now

POINT NOWELL NORTH BLK
- PN-1, PN-2, PN-3, PN-4 -

978

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT PN-1

LOCATION: (see enclosed map) North of Point Nowell

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/01/89

Recommended Cleanup Activity(ies):

- Flood/flush with hot water (up to 140 F) on low angle beach.
- Use high pressure on rocks where appropriate.
- Manually remove the oiled fucus drift at the top of the high tide line.

Priorities Considerations: CLASS 3A - SET NET SITE PRESENT. - LEAVE ANCHOR HARDWARE IN PLACE.

Ecological Constraints (from site survey): ~~Suggest approval for cleanup from Fish & Wildlife prior to any operations near occupied eagle's nest.~~ Protect lower intertidal zone from additional contamination. ACTIVE BALD EAGLE NEST /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.

Charles Z. Holmer
State Historic Preservation Officer *

Date: June 2, 1989

ISCC: Shawn K Christopher
EXXON: Beast

6-16-89
Date: June 16 - 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 1 JUNE 89 Time: 1520Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION 2.25 Kilometers North of Pt. NowellSEGMENT NUMBER PN-1LENGTH OF SHORELINE SEGMENT: 1500 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B40% / C15% / P5% / G % / S % / M % / R40%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type LOGS/SEAWEEED
TRASH**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 80 Width of Band: 2 mSporadic: Y/N % of Segment Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: 0% "Free" Oil: 20% Coated: H10% / M40% / L50%Fresh 65% Mousse 30% Tar Formation: 5%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

The pocket beaches have a 4m wide band of predominately light/moderate coating of oil/dune mousse while the low angle rocky headlands have a 2 m band with sporadic heavy coating. In place focus on rocks coated with oil. Sheen seen in Low Intertidal Zone & water line. Watch for oil accumulations on the backside of the rocks/boulders in the crevices.

The vertical rock face in the large cove on the South end of segment has a 1/4 m thick "bathtub" (band) of oil at the top of High Tide Line.

ECOLOGICAL EVALUATION

North of
 LOCATION: Pt. Newell SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: PN SEG. NO.: 1 LENGTH: 1500 (M)
 DATE: 6/1/89 TIME (HHMM): 1520 TIDE HT.: 0.3 (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
Oiled Fucus mid to hi intertidal - Oiled Fucus dubius in 2nd zone

Mytilus (Mussels): Patchy ☒ Y/N Contin. ☒ Y/N Dense ☒ Y/N Sparse ☒ Y/N None ☒ Y/N
(+) Tactile Response

Balanus (Barnacles): Patchy ☒ Y/N Contin. ☒ Y/N Dense ☒ Y/N Sparse ☒ Y/N None ☒ Y/N
(+) Tactile Response

Littorina

Patchy ☒ Y/N Contin. ☒ Y/N Dense ☒ Y/N Sparse ☒ Y/N None ☒ Y/N
Scarcely none - (+) Tactile Response

Limpets: Patchy ☒ Y/N Contin. ☒ Y/N Dense ☒ Y/N Sparse ☒ Y/N None ☒ Y/N
(+) Tactile Response - aggregated @ hi tide mark

OTHER OBSERVATIONS: Ammonia in intertidal pools - (+) Tactile Response.

CLEANUP PRECAUTIONS: Use Appropriate mechanical or dispersion techniques (including hot water - up to 140°) or other suitable means.

Protect Lower intertidal zone from additional contamination. *

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

BIRDS: Occupied eagle nest in this segment (see map)

GENERAL OBSERVATIONS: Only Lower intertidal is in pristine form - remainder needs some cleanup work.

* Suggest clearance w fish + wildlife prior to operation near eagle nest.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-1-89 Location Near Nowell Point Site _____
Location Prefix PN Segment # 1 Length 1500 m.

Survey Method:

Air _____ (A - indicate on map) Boat _____ (A - indicate on map)
Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility moderate & continuous oil cover.

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 steep rock walls & one gentle grade beach.

Fresh Water Sources Seeps

Sea Exposure Open to East

Access/Safety Access is good on the cobble beach

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 3:25 PM Time survey ended 4:50 PM

Cultural resource considerations/restraints:

If here to find unidentified cultural resources are discovered
during cleanup contact Exxon archaeologists immediately

Ecological Map
366

PN-1

630

BAY

588

MY

occupied
Eagle nest
444

PN-1

Short

mailed fucus intertidal
mid to H.
2. oiled fucus debris
© Hi tile mark 132

mid to Hvy. oil
Hvy mortality on all
marine flora &
fauna
(-) Tactile response
on fauna in mid to
high intertidal

Rubber Boot
Junk

ACTIVE BALD EAGLE
NEST
Pee-rolling occurs
than oil slicks
204

ACTIVE BALD
EAGLE NEST

BM
12

500

x1063

3

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT: PN-2

LOCATION: (see enclosed map) North of Point Nowell

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/01/89

Recommended Cleanup Activity(ies):

- Manually remove oiled debris.
- It may be necessary to use high pressure washing on lightly oiled vertical rocks.

Priorities Considerations: CLASS 4A.

Ecological Constraints (from site survey): Suggest hand cleanup as is considered necessary to clean the small splotches of oil scattered along mid to upper tide levels. ACTIVE BALD EAGLE NEST - SEE ADVISORY. SET NET SITE PRESENT - LEAVE ANCHOR HARDWARE IN PLACE -

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. Harris
State Historic Preservation Officer *

ISCC: Sherry K. Christopher

EXXON: Real

FOSC: J.W. Rame

Date: June 7, 1989

6-16-89

Date: June 16 - 89

Date: June 17, 1989

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

SHORELINE OIL EVALUATIONDate: 1 JUNE 89 Time: 1700Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION 2 KM NORTH OF PT NOWELLSEGMENT NUMBER PN 2LENGTH OF SHORELINE SEGMENT: 600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 30% / C 10% / P % / 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/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 60 Width of Band: 1 mSporadic: Y/N % of Segment Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H % / M 25% / L 75%Fresh 25% Mousse 75% Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

PREDOMINATELY VERTICAL ROCK CONTINUOUS & LIGHT COATING OF OIL 1 TO 2 M
WIDE BAND IN MIDDLE TO HIGH INTERTIDAL ZONE. IN PLACE FUCUS & MUSCLES NOT
OILED. RECOMMEND HAND CLEAN UP IF NECESSARY. NOTE: LIGHT OILED SEAWEED DRIFT
IN UPPER INTERTIDAL ZONE

LOCATION: North of Pt. Nowell SITE: _____ OBSERVER: G. Penn
 LOCATION PREFIX: PN SEG. NO.: 2 LENGTH: 600 (M)
 DATE: 6/1/89 TIME (HHMM): 17:00 TIDE HT.: 0.9 (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Healthy in appearance - not robust - no oiling noted

MYTILUS (Mussels): Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse (Y/N) None (Y/N)
 (+) Tactile Response - Boring Gastropod causing mortality

BALANUS (Barnacles): Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse (Y/N) None (Y/N)
 (+) Tactile Response

LITTORINA

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

(+) Tactile Response

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

(+) Tactile Response

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: Small splashes of oil scattered along mid to upper tidal levels - suggest Hard cleanup if any cleanup is considered necessary.

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

BIRDS: _____

GENERAL OBSERVATIONS: Marine fauna + flora not as robust as found in this area, but all appear Healthy.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-1-89 Location North of Point Newell Site _____
Location Prefix PN Segment # 2 Length 600 m.
Survey Method:
Air _____ (A - indicate on map) Boat _____ (A - indicate on map)
Ground X (G - indicate on map)
Known cultural resources (AHRS #) _____ Data Source _____
Oil conditions/beach visibility light oil cover.
Width of beach zone surveyed 5-20 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 Steep rock walls & rock outcrops
Fresh Water Sources Seeps
Sea Exposure Open to the East
Access/Safety poor access and dangerous
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 5:00 PM Time survey ended 5:30 PM
Cultural resource considerations/restraints:
IF heretofore unidentified cultural resources are discovered
during cleanup contact Exxon archaeologists immediately.

Ecological Map
PN-2

AMY BAY

588

444

Short

132

324

Rubber Boot
Lake

Achieve Bald
Eagle 204
Nest

BM
12

x1063

500

200

500

on Nelson's
Upper Intertidal

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT PN-3

LOCATION: (see enclosed map) North of Point Nowell

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/01/89

Recommended Cleanup Activity(ies):

- Flood/flush with hot water (up to 140 F) to remove oil from low angle beach.
- It may be necessary to use high pressure on vertical rocks. Manually remove oiled fucus.

Priorities Considerations: CLASS 4A. *jm*

- Far north portion of segment and east corner of southern beach. *jm*

Ecological Constraints (from site survey): Protect lower intertidal zone from additional contamination. SET NET SITE PRESENT - LEAVE ANCHOR HARDWARE IN PLACE *jm*

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. Adams
State Historic Preservation Officer *

ISCC: Sharon K. Christopher

EXXON: *[Signature]*

✓ FOSC: J.W. Rine

Date: June 9, 1989

6-16-89
Date: June 16 - 89

Date: June 17, 1989

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

SHORELINE OIL EVALUATION

Date: 1 JUNE 89 Time: 1730

Observer: Beyal Trimm

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION 1.5 km N of Pt Nowell

SEGMENT NUMBER PN-3

LENGTH OF SHORELINE SEGMENT: 1100 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 0 / C 0 / P 4 / G 0 / S 0 / M 0 / R 80

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LUGS/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: 3 m

Sporadic: Y/N % of Segment 90

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

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H 0 / M 60 / L 40

Fresh 50 % Mousse 40 % Tar Formation: 10 %

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

Comments:

THE NORTHERN POINT HAS MEDIUM COATING OF FRESH OIL/MOUSSE IN THE HIGH INTER-TIDAL ZONE WITH A WIDTH UP TO 3 M. ACCUMULATION UP TO HEAVY COATING IN CREVICES BEHIND ROCKS/BOULDERS. A BEACH ON THE SOUTH END OF THE SEGMENT (40% B/40% C/20% P) HAS A 6 M WIDE BAND OF MEDIUM COATING OF OIL IN THE HIGH TO MIDDLE INTER-TIDAL ZONE. FUCUS OILED ON THE EAST SIDE OF BEACH. THE CENTRAL PORTION OF THE SEGMENT IS VERT ROCK WITH AN OCCASIONAL BAND (5 CM WIDTH) OF OIL AT THE HIGH TIDE LINE. THE TAR FM IS LIGHT SPLATTERING FROM AN EARLIER OILING. (MARKED NO OIL IN MA)

MUNICIPAL EVALUATION

North of Pt. Newell
 LOCATION: Pt. Newell SITE: _____ OBSERVER: G Penn
 LOCATION PREFIX: PN SEG. NO.: 3 LENGTH: 1100 (M)
 DATE: 6/1/89 TIME (HHMM): 17:30 TIDE HT.: 0.5 (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
No oiled fucus except at northern end of segment

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

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

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

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

OTHER OBSERVATIONS: No oil observed along segment - except at northern end (near PN-2) - see map

CLEANUP PRECAUTIONS: On Northern end only - use appropriate mechanical or dispersion techniques or other suitable means - posted ~~Lower~~ intertidal from contamination *

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 other _____

BIRDS: _____

GENERAL OBSERVATIONS: _____

* Recommend NO-cleanup for remainder of segment due to no visible oil.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-1-89 Location North Point Nowell site

Location Prefix PN Segment # 3 Length 1100 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 light oil except on the very northern end of the segment.

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 one cobble beach w/ gentle grade; the remainder contains steep rock walls.

Fresh Water Sources Streams and seeps

Sea Exposure Open to the East

Access/Safety good access on the beach.

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

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

Photos: Color Roll # Frames

B/W Roll # Frames

Observer(s) ANDREFSKY

Time survey started 5:30 PM Time survey ended 6:23 PM

Cultural resource considerations/restraints:

If heretofore ^{unidentified} cultural resources are discovered during cleanup
Contact Exxon archaeologists immediately.

366
Ecological map
PN-3

AMY BAY

588

444

Short

132

324

200 Rubber Bowl
Lake

204

mult Hwy oil
nit H. intertid

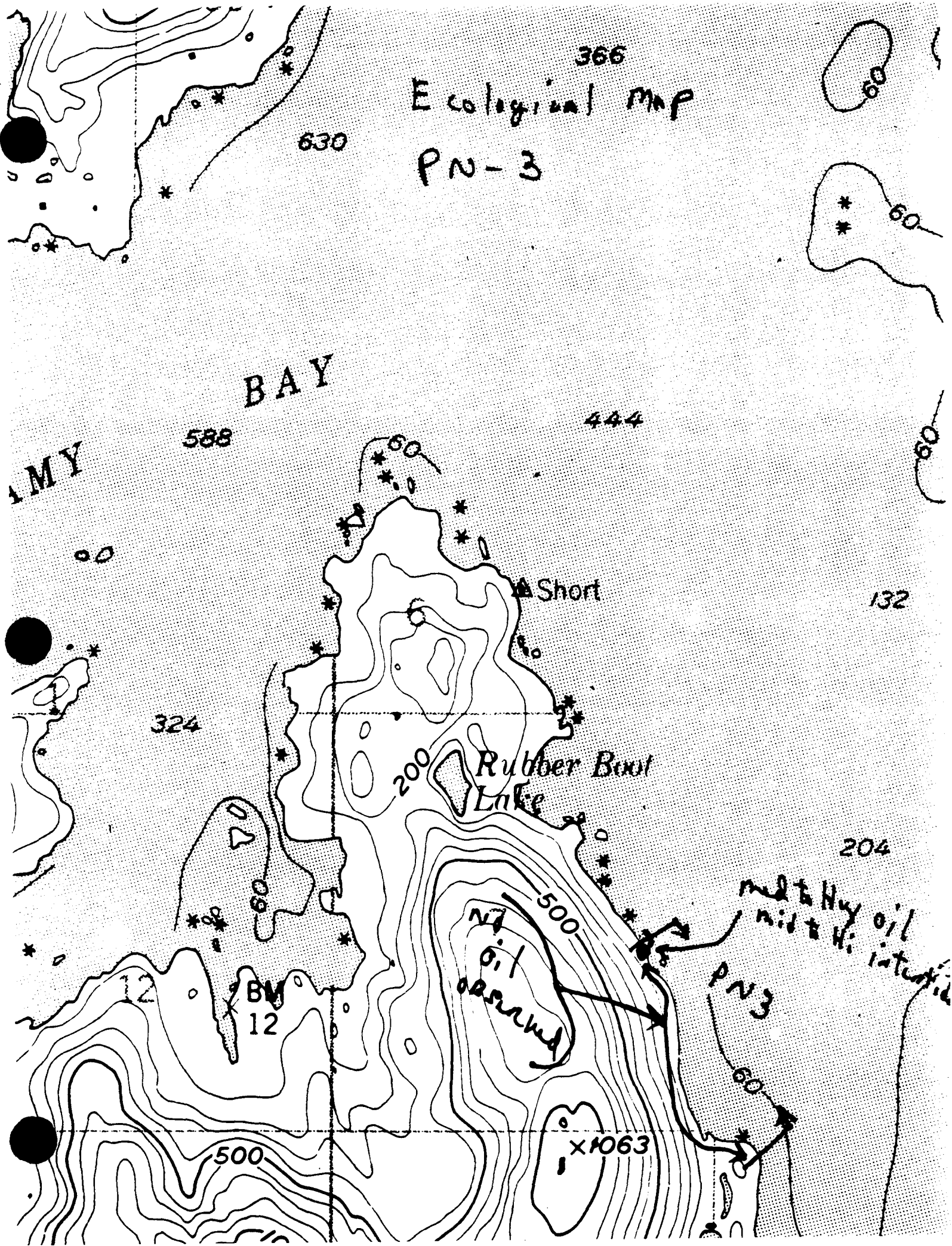
PN3

N7
oil
barrow

BM
12

X1063

500



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/06/89

SHORELINE SEGMENT PN-4

LOCATION: (see enclosed map) North of Point Nowell

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/01/89

Recommended Cleanup Activity(ies):

- Flood/flush with warm to hot water (up to 140 F) on cobble beach.
- Manually remove or use other appropriate means to remove the oiled fucus drift at the top of the high intertidal zone.

NOTE: Some oiled seaweed drift is buried below clean seaweed drift. Check it closely.

Priorities Considerations: CLASS 2A. gm

Ecological Constraints (from site survey): Protect lower intertidal from additional contamination. SET NET POINT PRESENT- LEAVE ANCHOR HARDWARE IN PLACE. gm

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. Hammer

State Historic Preservation Officer *

ISCC: Sharon K. Christopher

EXXON: Real

FOSC: J.W. Rine

Date: June 8, 1989

6-16-89

Date: June 16-89

Date: June 17, 1989

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

SHORELINE OIL EVALUATIONDate: 1 June 89 Time: 1830Observer: Bryan TrimmSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION From Pt Nowell North 0.75 kmSEGMENT NUMBER PN 4LENGTH OF SHORELINE SEGMENT: 900 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 5 % / C 65 % / P 5 % / G 5 % / S — % / M — % / R 20 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Logs/Seaweed**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 100 Width of Band: 20 mSporadic: Y/N % of Segment —Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 8 cmPooled Oil: — % "Free" Oil: — % Coated: H 20 % / M 50 % / L 30 %Fresh 50 % Mousse 50 % Tar Formation: — %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

A CONTINUOUS BAND OF HEAVY TO LIGHT COATING OF OIL VARIES FROM 2 M WIDE IN ROCKY HEADLAND POINTS TO 20 M ON COBBLE BEACH. IMPACT VARIES FROM HIGH INTERTIDAL ON ROCKY POINTS TO HIGH/MIDDLE INTERTIDAL ON BEACH. LOWER END OF SPLASH ZONE (2 TOP HIGH INTERTIDAL?) OILED ON BEACHES. OIL PEBBLES/GRANULE REWORKED DOWN TO 8 CM IN HIGH INTERTIDAL ZONE. OIL SOAKED IN PLACE FOCUS ON ROCKY POINTS

North of
LOCATION: Pt Nouell SITE: _____ OBSERVER: G. Penn
LOCATION PREFIX: PN SEG. NO.: 4 LENGTH: 900 (M)
DATE: 6 / 1 / 89 TIME (HMM): 1845 TIDE HT.: 1.0 (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
Oiled Fucus mid to Hi intertidal

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None
(+) Tactile Response - some oiled

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None
(+) Tactile Response - some oiled

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
(+) Tactile Response - some oiled

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
(+) Tactile Response - some oiled

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: Use appropriate mechanical/dispersion techniques or other suitable means - protect lower intertidal from additional contamination

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

BIRDS: _____

GENERAL OBSERVATIONS: 2m. wide Band of oil light to medium occasionally Hwy. - sheen on water in tide pools.
High tide Barn is oiled.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-1-89 Location South of Point Howell Site _____

Location Prefix PN Segment # 7 Length 900 m.

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility moderate to heavy

Width of beach zone surveyed 10-40 m Tree fringe surveyed 5-20 m.

Cultural resources observed in beach zone (AHRS code) RCS, HTD

Cultural resources observed in tree fringe (AHRS code) RCS, HTD

General observations justifying survey method and segment's site probability

Shore Profile gentle & steep beaches with rock outcrops on Howell Point.

Fresh Water Sources small streams and seeps

Sea Exposure Open to the East

Access/Safety good access

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

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

Photos: Color Roll # — Frames —

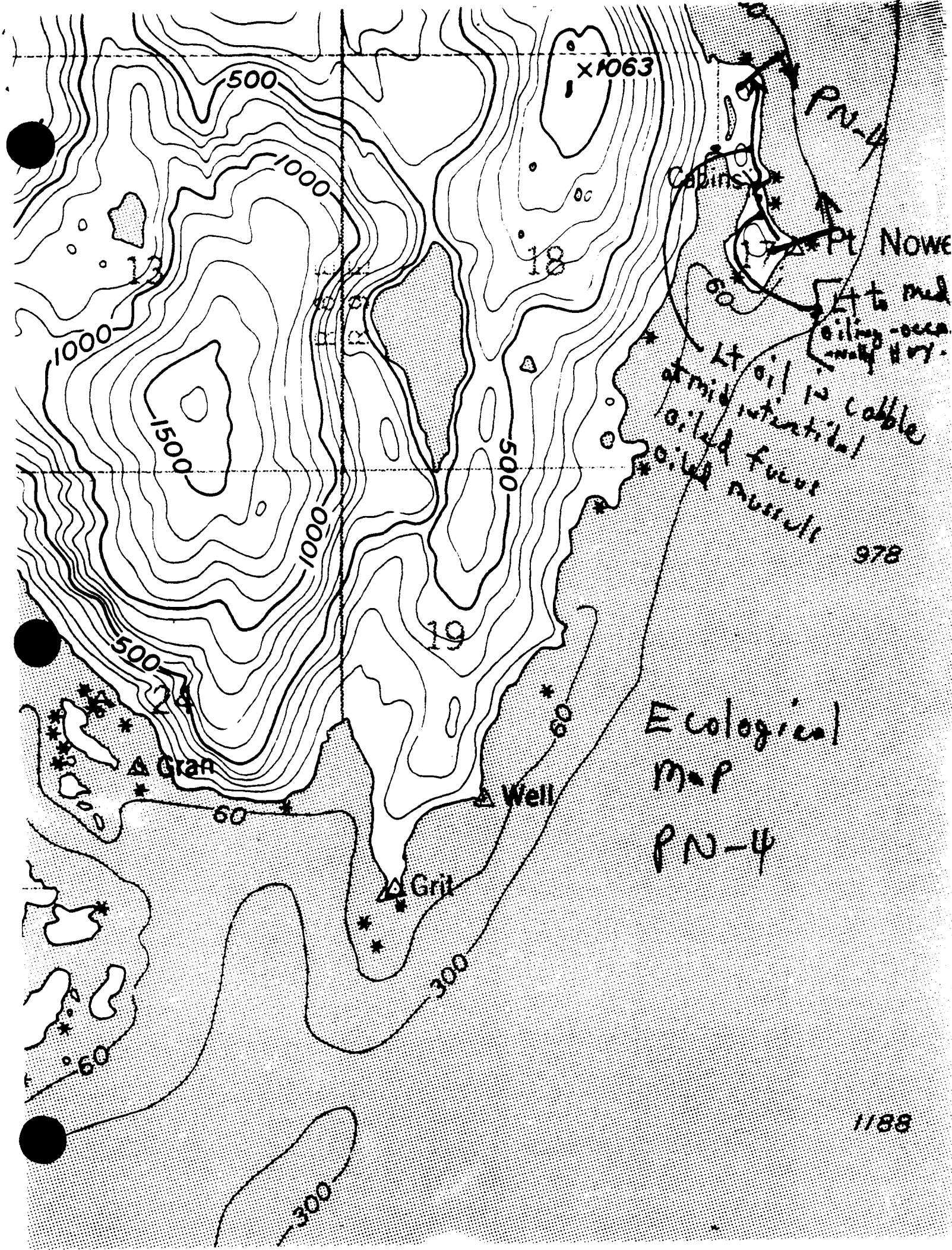
B/W Roll # — Frames —

Observer(s) ANDREPSKY

Time survey started 6:30 PM Time survey ended 7:40 PM

Cultural resource considerations/restraints:

If heretofore unidentified cultural resources are discovered during
cleanup contact Exxon archaeologists immediately.



Point Nowell

TREATMENT MANUAL, CHANGE 1

SEG PN-1 INSPECTION# 1

SEGMENT

DATE 8/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☒ Mechanical
☐ Warm water wash	☐ Non-mechanical
☒ Water deluge	☐ Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment PN-1 is complete.
Ready for demobilization and deployment to new segment.

Signature Michael J. Tydings Date: 8/19/89 Time: 4:06 PMPrinted Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	
Percent	Degree of Oiling

<u>01</u>	Heavy
<u>05</u>	Medium
<u>20</u>	Light
<u>24</u>	Very Light
<u>50</u>	None
100 %	

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil	
Percent	Degree of Oiling

<u>1%</u>	Heavy
<u>5%</u>	Medium
<u>20%</u>	Light
<u>24%</u>	Very Light
<u>50%</u>	None
100 %	

Subsurface Oil
☒ Yes ☐ No

COMMENT BELOW

Reassessment

☐ Yes - necessary
☒ No - not necessary unless re-oiled

Subsurface Oil
☒ Yes ☐ No

COMMENT BELOW

Reassessment

☒ Yes - necessary
☐ No - not necessary unless re-oiled

ADEC rep

Comments Very light, sporadic oiling observed. No gross contamination or flowing oil observed. Some light subsurface, very small percent of beach requires treatment.

Signature Joseph S. SautnerDate: 8/19/89 Time: 1540Printed Name Joseph S. Sautner

FOSC rep

Demobilization approved/disapproved

Comments

Signature Steven BuchananDate: 08/19/89 Time: 1528Printed Name STEVEN BUCHANAN

COPY: EXXON ADEC FOSC ISCC

SEG PN-1 INSPECTION # 1DATE 8/17/89SEGMENT
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 PN-1 is complete.
Ready for demobilization and deployment to new seg

Signature

Michael J. TydingsDate: 8/19/89Time: 4:00 PM

Printed Name

Michael J. TydingsExisting Shoreline Condition As
Visually Determined by USCGSurface Oil
Percent Degree of Oiling01

Heavy

05

Medium

20

Light

24

Very Light

50

None

100 %

Existing Shoreline Condition As
Visually Determined by ADECSurface Oil
Percent Degree of Oiling< 1%

Heavy

5%

Medium

20%

Light

24%

Very Light

50%

None

100 %

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments Very light, sporadic oiling observed. No gross contamination or flow
oiled observed. Some light subsurface. Very small percent of beach requires treat

Signature

Joseph J. SautnerDate: 8/19/89Time: 1540

Printed Name

Joseph J. Sautner

FOSC rep

Demobilization approved/disapproved

Comments

Signature

Steven BuchananDate: 08/19/89Time: 1528

Printed Name

Steven Buchanan

COPY:

EXXON

ADEC

FOSC

ISCC

24 Nowell

TREATMENT MANUAL, 6/15/89

SEG PN-2 INSPECTION # _____

SEGMENT _____

DATE 8/11/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical _____

☐

Warm water wash

☒Non-mechanical Beach Crew☐

Water deluge

☐

Other _____

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment PN-2 is complete. Ready for demobilization and deployment to new segment.Signature Michael J. Tydings Date: 8/11/89 Time: 5:30 PMPrinted Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒

Yes

☐

No

_____ Heavy
 _____ Medium
1% Light
2% Very Light
97% None

100 %

Comments Very minor.

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments Concur w/ 70 and demob approval.
Many splashes scattered but no gross contamination
observed. Recommend deploying to previous impacted area.

Signature Debra R. Timmons Date: 8/11/89 Time: 1752Printed Name Debra R. Timmons, Env Engr, ADEC.

FOSC rep

Demobilization approved/disapproved

Comments Few locations w/ minor accumulations of light to very
oil. Mostly clean w/ couple areas w/ scattered spotting.

Signature Thomas D. Harrison Date: 8/11/89 Time: 1752Printed Name THOMAS D. HARRISON LT USCG.

P-H. Nowell

TREATMENT MANUAL, 6/15/89

SEG PN-3 INSPECTION #

SEGMENT

DATE 8/11/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☒

Non-mechanical

Beach Crew☐

Water deluge

☐

Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of Segment PN-3 is complete.
Ready for demobilization and deployment to new segment.

Signature Michael J. Tydings Date: 8/11/89 Time: 5:30 PMPrinted Name Michael J. TYDINGS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒

Yes

☐

No

Heavy

Medium

Light

2%

Very Light

98%

None

100 %

Comments Very minor sub.
surface oil limited to small
spots

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep Comments Consent up to and demobilization approval.
No gross contamination observed. Recommended
deploying to a heavier impacted segment at this time.

Signature Denny R. Timmons Date: 8/11/89 Time: 1748Printed Name Denny R. Timmons, ENR Engr, ADEC

FOSC rep

Demobilization approved disapprovedComments MOBILE OIL NOT PRESENT W/IN THIS SEGMENT.Signature Thomas A. Harrison Date: 8/11/89 Time: 1748Printed Name Thomas A. Harrison LT USCG

SEG PN-1 INSPECTION # 1

SEGMENT

DATE 9/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash



Non-mechanical



Water deluge



Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment PN-1 is complete. Ready for demobilization and deployment to new segmentSignature Michael J. Tydings Date: 9/19/89 Time: 4:00 PMPrinted Name Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

60
70 65
20 10
15 10 5
20
100 %

Heavy
Medium
Light
Very Light
None A

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil

Percent Degree of Oiling

0
3
15
20
60
100 %

Heavy
Medium
Light
Very Light
None

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

Subsurface Oil



Yes



No

COMMENT BELOW

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments Mostly light - very light oiling observed on small percent of
subsurface oil present - light - very light. No gross contamination. Little treatmentSignature Joseph J. SantoreDate: 9/19/89 Time: 1555Printed Name Joseph J. Santore

FOSC rep

Demobilization approved/disapproved

Comments

Signature Steven BuchananDate: 09/19/89 Time: 1530Printed Name Steven Buchanan

COPY: EXXON ADEC FOSC ISCC

PPN-005

SEG PN-5 INSPECTION # 1

SEGMENT

DATE 24 AUG 89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☐

Non-mechanical

☐

Water deluge

☒

Other NONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment PN-5 is complete. Ready for demobilization and deployment to next segment.

Signature Michael J. Trovies

Date: 8/24/89 Time: 6:40 PM

Printed Name Michael J. Trovies

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
0
1
0
0
99
100 %

Heavy
Medium
Light
Very Light
None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling

100 %

Heavy
Medium
Light
Very Light
None

Subsurface Oil

☐

Yes

☒

No

COMMENT BELOW

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

Subsurface Oil

☐

Yes

☐

No

COMMENT BELOW

Reassessment

☐

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments Rep DELETED TO ESCUT

Signature

Date: / / Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments no treatment required no clean contamination

Signature

Date: 8/24/89 Time: 1835

Printed Name

COPY: EXXON ADEC FOSC ISCC

(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): POINT NOWELL SOUTH POINT BLOCK

(REASSESSMENT)

Includes Shoreline Segments: PN-5R

Submitted : W B Walramp Date: 8-23-89
(for Exxon)

ISCC Recommendation: Sharon K Christopher Date: 8/30/89

FOSC Approval: C E Polkin Date: 8/30/89

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

SHPO
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS

(version 08/02/89)

SHORELINE CLEANUP REASSESSMENT

DATE 8/23/89 SHORELINE SEGMENT: PN-5R

REASSESSMENT DATE 8/15/89

PURPOSE FOR REASSESSMENT THREE WEEKS SINCE INITIAL

ASSESSMENT

Revised Recommended Cleanup Activity(ies):

No cleanup recommended at this time (subject to FOSC reassessment at a later date), due to discontinuous, light oil and medium wave exposure.

Priorities Considerations:

Class 4: Light oil

B: Resources absent

Revised Ecological Constraints:

Weathered condition of oil is not considered to represent an ecological concern.

Revised Archeological Constraints:

No access to private building in cove behind Point Nowell. 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.

Rolfe Byzell
State Historic Preservation Officer *

Date: 8/24/89

ISCC: Sharon K. Christopher

Date: 8/30/89

EXXON: Daniel D. Taft

Date: 8-30-89

FOSC: C E Polkman

Date: 8-30-89

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

(version 6/05/89)

POINT NOWELL SOUTH BEACH

SHORELINE CLEANUP REASSESSMENT

DATE 15 AUG '89

SHORELINE SEGMENT PN-SR

ADEC NO. _____

REASSESSMENT DATE: 15 AUG 89

Revised Recommended Cleanup Activity(ies):

- (1) V. LIGHT OILING CONSISTS PRIMARILY OF DISCONTINUOUS, BATH TUB RING (<5cm) ON ROCK FRAGS AND A DISCONTINUOUS NARROW SPLATTER ZONE ON COBBLE BOULDER BEACHES.
- (2) NO CLEANUP RECOMMENDED BECAUSE OF (a) V. LIGHT OILING, (b) HIGH POTENTIAL FOR NATURAL CLEANING AND (c) WEATHERED STATE OF OIL DOES NOT POSE ANY THREAT TO BIOLOGICAL RESOURCES WITHIN SEGMENT.

Revised Ecological Constraints:

SEA OTTER SEEN IN SEGMENT

Revised Archeological Constraints:

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: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

LOCATION: Point Newell SITE: S. shore OBSERVER: Stoker
LOCATION PREFIX: PN SEG. NO.: 5R LENGTH: _____ (M)
DATE: 8/15/89 TIME (HHMM): 0855-1010 TIDE HT.: _____ (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Generally dense & continuous on rocks; patchy and sparse-moderate on cobble.

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

Generally sparse, small patches on rock and in cobble.

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

Variable. Generally moderate-dense on outer rocks; sparse to moderate on sheltered rocks; moderate to dense on cobble.

Littorina

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

Extremely variable; sparse to dense on rocks/boulder/cobble.

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

Extremely variable; sparse to dense on all substrates.

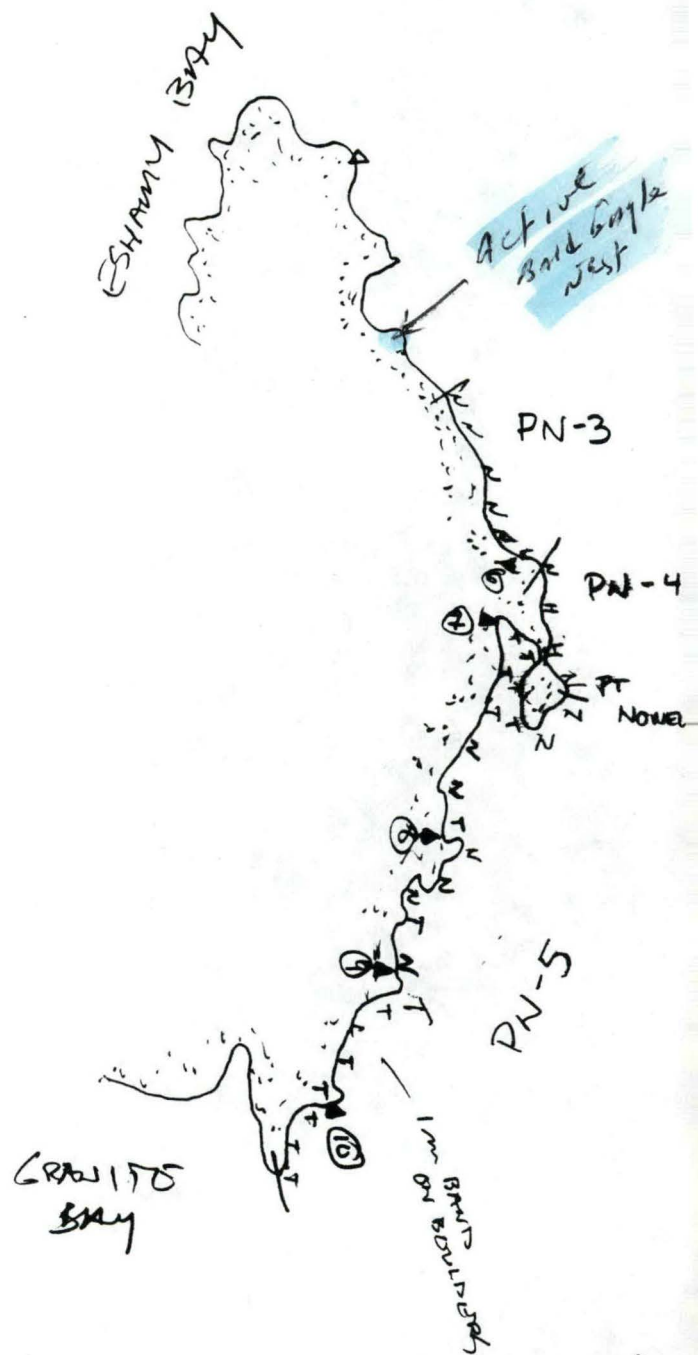
OTHER OBSERVATIONS: Nucella dense on outer rocks. Dense clusters of small Pagurus. Starfish (several sp.), blennies, amphipods, urchins, small crabs, nemertean common. Subtidal Eostora.

CLEANUP PRECAUTIONS: No cleaning required.

MAMMALS: Otters 2 Harbor Seals 1 Sea Lions _____ Whales _____
Other _____

BIRDS: Gulls, Kittiwakes, murrelets, magpies, Kestrel.

GENERAL OBSERVATIONS: Biota healthy. Many small Littorina, limpets, Pagurus, Balanus.



A number of empty
bald eagle nests
along this reach
of shoreline. Only
1 active nest.

8/26/89
RSW

PN-R

SHAWY Bay

PN-3

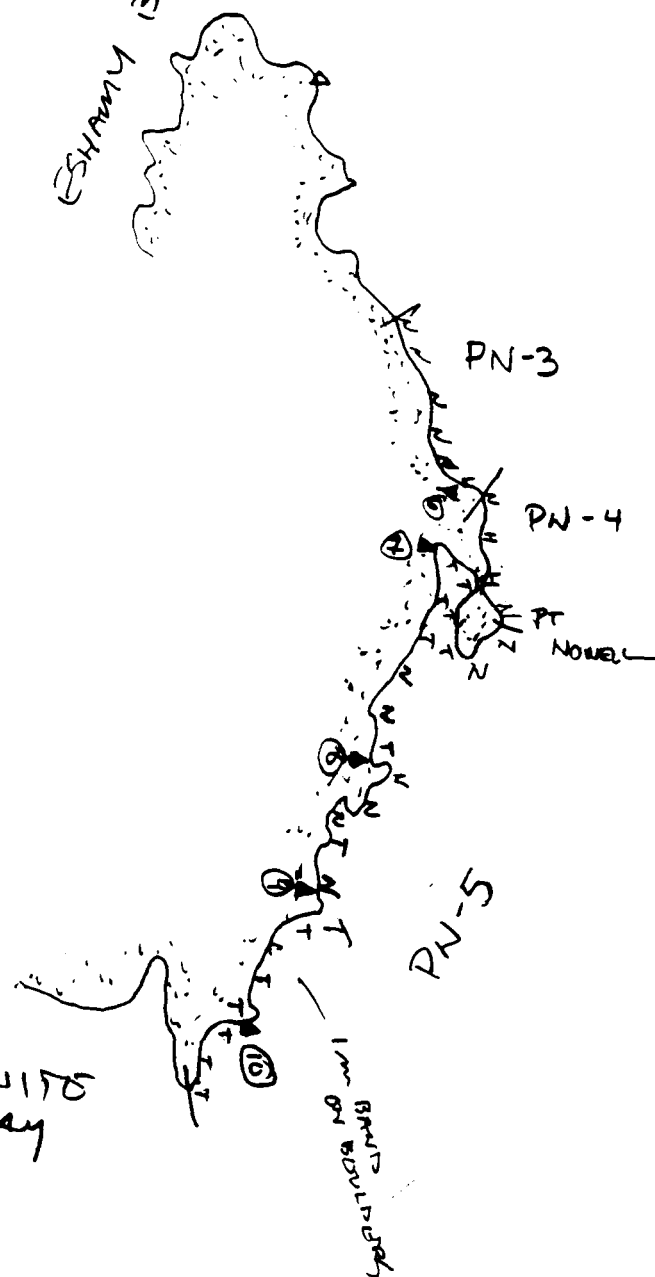
PN-4

PT
NOWEL

PN-5

GRWITS
Bay

1 mi on
GRWITS
Boulder



(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): POINT NOWELL SOUTH BLOCK

Includes Shoreline Segments: PN-5

Submitted : Jerry H. Bailey Date: 8-8-89
(for Exxon)

ISCC Recommendation: Sharon K. Christopherson Date: 8-14-89

FOSC Approval: D. E. Caneary Date: 8-14-89

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

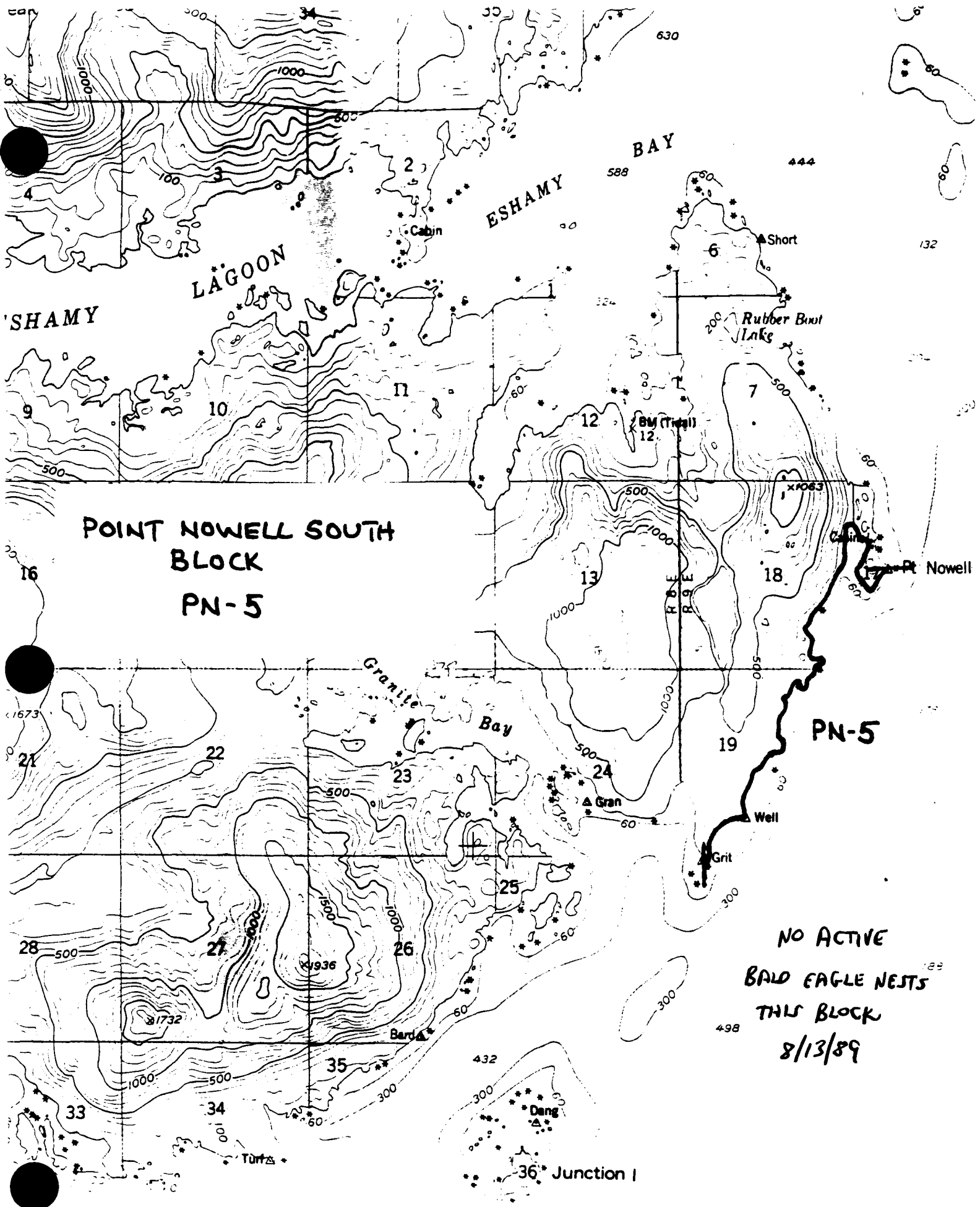
SHPO
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A. DEC
A. FG
A. DNR
CAC
PWSCA
USFS

******* 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 NOWELL SOUTH BLOCK ARE
ON LANDS OWNED BY CHENEGA VILLAGE CORPORATION. PERMIT
NO ACCESS TO UPLAND AREAS AT ANY TIME.**



POINT NOWELL SOUTH
BLOCK
PN-5

PN-5

NO ACTIVE
BALD EAGLE NESTS
THIS BLOCK
8/13/89

4
addy - Luck
SAGE

Enter

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 8/5/89

SHORELINE SEGMENT PN-05

LOCATION: (see enclosed map) POINT NOWELL-SOUTH COAST

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/26/89

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.
- DO NOT REMOVE OR DISTURB SET NET ANCHOR BOLTS. ✓

8/14/89
8/14/89

Priorities Considerations:

Class 4: Light oil
B: Resources absent

Ecological Constraints (from site survey): Work at mid tide +
or take appropriate measures to protect lower intertidal zone.
Avoid contaminating eelgrass beds.

Archeological Constraints (from site survey):

Cleanup crews should be restricted from access to private building in cove behind Point Nowell. 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.

Phadon Holmes
State Historic Preservation Officer *

Date: August 8, 1989

ISCC: Sharon K. Christopher

Date: 8-14-89

EXXON: Daniel R. Tipton

Date: 8-14-89

FOSC: D. F. Canney

Date: 8-14-89

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

SHORELINE OIL EVALUATIONDate: 7/25-26/89 Time: ^{between} 12 noon - 4:15, both daysObserver: Norma BiggerSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION Pt. Nowell south to USGS marker 'Grit' SEGMENT NUMBER PN-5LENGTH OF SHORELINE SEGMENT: 4,900 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane^{some places}SHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VER^{rock areas}Wave Exposure: High/Med/LowSediment: B___% / C5% / P___% / G___% / S___% / M___% / R___%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Fucus, some wood - primarily on pocket beachesOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: YN % of Segment 15% Width of Band: max 2 maverage ≤ 0.5 mSporadic: Y/N % of Segment 75%Est. Oil Thickness where > 1cm: N/A cm Est. Oil Penetration: ^{none} observed cmPooled Oil: 0% "Free" Oil: 0% Coated: H___% / M___% / L100%Fresh 0% Mousse 0% Tar Formation: 100%Drift Debris Oiled? Yes/No/Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

Oil observed on this segment consists of solidified splatters and drip lines - Varying from very thin (5cm wide) bands on rock faces, to heavy splattered beach zones up to 1m wide in some protected areas in cove W of Pt. Nowell and W of "Well" (point). In other areas, spatter is generally light. Drip line becomes continuous near S end of segment. No oiled debris or tar balls seen.

Photos: TSG4 - frames 5 through

ECOLOGICAL EVALUATION

LOCATION: Prince William Sl. SITE: Point Noisel OBSERVER: ER White

LOCATION PREFIX: PN SEG. NO.: 5 LENGTH: 4950 (M)

DATE: 07 25 89 TIME (HHMM): 1315-1400 TIDE HT.: 0.6-1.5 (M)
126/ 1230-1400 1.6-1.0

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 continuous on rock - patchy on beaches / G. part in lower intertidal

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

- occasional dense colonies on rock faces / some colonies in beach face

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

mostly acorn (B. glandula) @ high-mid intertidal

Littorina

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

sparse throughout / also occur as infra in lower beach

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

occasional colonies among rocks in mid intertidal

OTHER OBSERVATIONS: middle beach infra - shore crabs / blennies /

Sculptus amphipods / may be clam beds off some beaches

CLEANUP PRECAUTIONS: do not re-introduce hydrocarbons to water

near seagrass beds / do not contaminate oiled lower intertidal

MAMMALS: Otters 3 seen others Harbor Seals _____ Sea Lions _____ Whales 1 humpback
 Other _____

BIRDS: 2 common goldeneyes / 1 bald eagles

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 7-26-89 Location POINT NOWELL Site SOUTH T. POINT GRIT
Location Prefix PN Segment # 5 Length 4900 M

Survey Method:

Air _____ (A - indicate on map) Boat X _____ (A - indicate on map)
Ground X _____ (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source N/A

Oil conditions/beach visibility EXCELLENT VISIBILITY
LIGHT OIL - DRIPLINE ON VERT. ROCK / SPLATTERED ROCK

Width of beach zone surveyed 5-10 m Tree fringe surveyed 10-20 M

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CBN, CMT'S

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

Shore Profile Vertical Rock, Boulder, Rock ITS, Pocket Beaches - SMALL CAVES AND OVERHANG
ROCK

Fresh Water Sources NUMEROUS SMALL CREEKS - NO MAJOR STREAMS

Sea Exposure OPEN COAST - EXPOSED TO KNIGHT ISLAND PASSAGE

Access/Safety UNPROTECTED COASTLINE - ONLY PROTECTED ANCHORAGE IS INSIDE POINT NOWELL

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

Time survey started 7/25/89 1321 Time survey ended 7/26/89 1347

Cultural resource considerations/restraints:

STANDARD ARCHAEOLOGICAL CONSIDERATIONS - CLEAN-UP PERSONNEL SHOULD AVOID
PRIVATE PROPERTY IN SMALL BAY AT POINT NOWELL. NO ADDITIONAL
ARCHAEOLOGICAL RESTRAINTS.

Norma Biggar

Segment: PN-5

Date: July 25, 26, 1989

Tide: +2 to +6 feet

Location: Pt. Nowell
to Granite Bay

Base Map: Seward 84

---- Ground checked

-- (Seward + Coast) -
Tight oil

heavy oil spatter on cobble
beach. Zone of light oil
spatter extends 20 m
down beach. Appears
to be private property

light oil spatter on
rocks

Discontinuous drip
line up to 0.5 m
wide; oil spatter
over zone up to
6 m wide on
cobble beach.
Photos 6, 7,
Roll TSG4
Likely private
property

Few oil spatters, cobble-boulder
beach

Discontinuous drip line up to 0.5 m wide;
oil spatter zone 6 to 10 m wide on
cobble/boulder beach

Oil spatter over
6-m-wide zone, on
cobble beach, dis-
continuous band
up to 2 m wide on
vertical face

Discontinuous band up to
0.5 m wide; commonly
± 10 cm wide.

Very light oil spatter, no drip line.

Discontinuous drip line

Boulder beach - continuous drip line up to 1 m
wide, oil spatter zone up to 7 m wide

Continuous drip line, few cm to 1 m w.
One or multiple thin (<5 cm) lines most
common.

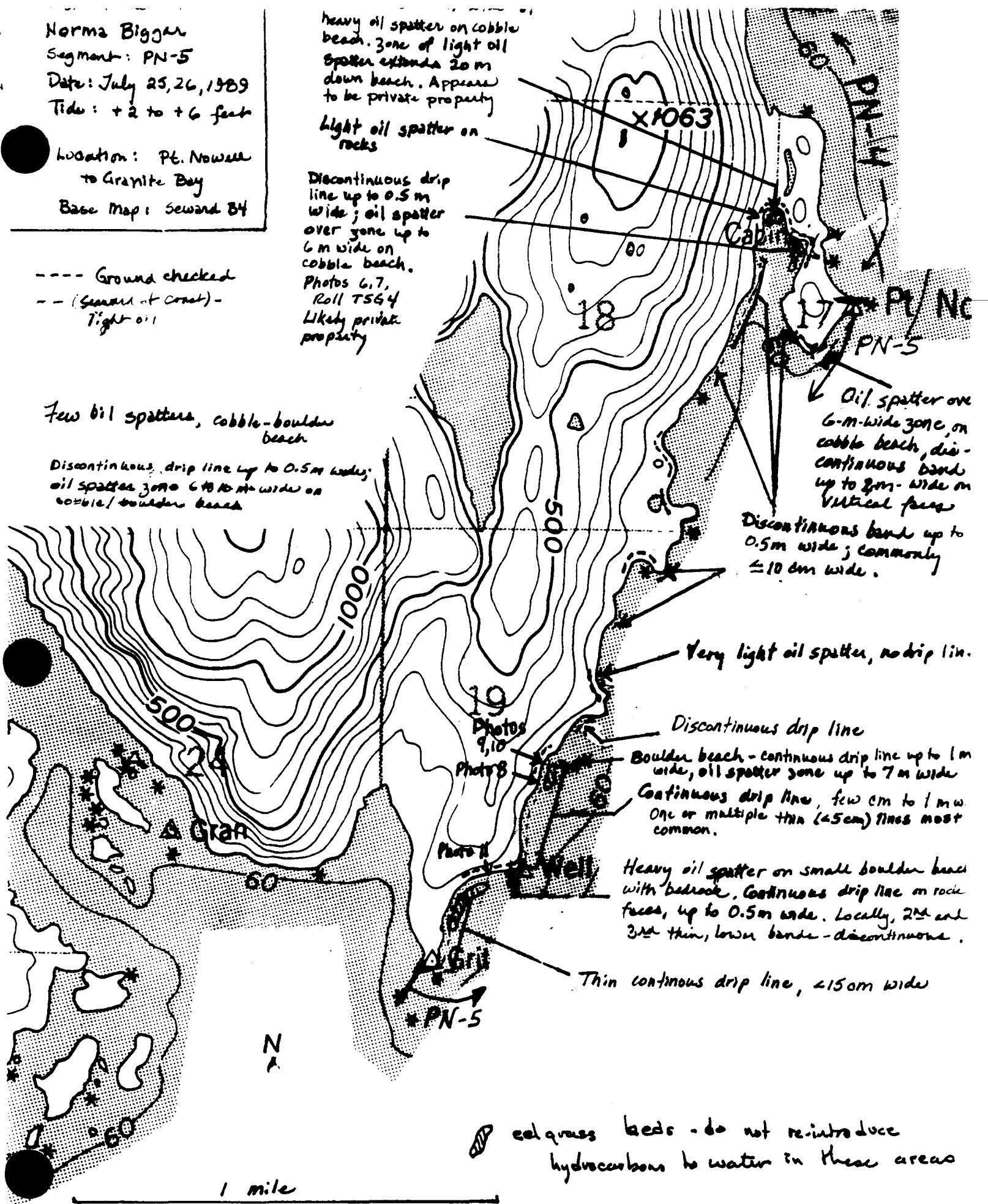
Heavy oil spatter on small boulder beach
with bedrock. Continuous drip line on rock
faces, up to 0.5 m wide. Locally, 2nd and
3rd thin, lower bands - discontinuous.

Thin continuous drip line, <15 cm wide

calques beds - do not re-introduce
hydrocarbons to water in these areas

1 mile

N



Pour Newell

PN-5

5010257213- 190783559051- 5
TREATMENT MANUAL, CHANGE 1

SEG PN-5 INSPECTION # 1

SEGMENT

DATE 24 AUG 89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐

Hot water wash
Warm water wash
Water deluge

☐
☐
☒

Mechanical
Non-mechanical
Other NONE

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments Treatment of segment PN-5 is complete. Ready for demobilization and deployment to next segment.

Signature Michael J. Trivette

Date: 8/24/89 Time: 6:40 PM

Printed Name Michael J. Trivette

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
0
1
0
0
100 %

Heavy
Medium
Light
Very Light
None

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

100 %

Heavy
Medium
Light
Very Light
None

Subsurface Oil
☐ Yes ☐ No

COMMENT BELOW

Reassessment

☐ Yes - necessary
☐ No - not necessary unless re-oiled

ADEC rep

Comments Rep DECIDED TO EXCISE

Signature

Date: / / Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments NO TREATMENT REQUIRED NO CLEAN CONTAMINATION

Signature

Date: 8/24/89 Time: 1835

Printed Name

AR Turkey Creek