



EVOS
GC
1552
.P75
S42
1989
v.14

[Shoreline evaluations, 1989].

Volume 14

Green Island

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ARLIS

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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)

File: \VALDEZ\KEYCODES.LST

ARLIS

Alaska Resources
Library & Information Services
Anchorage, Alaska



Oil Spill Public Information Center
645 G Street
Anchorage, AK 99501

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Green Island - Putnam Point Block

Includes Shoreline Segments: GR-1A, GR-1B, GR-2, GR-9, GR-10,
GR-11, GR-12

Submitted :

(for Exxon)

Date:

5/14/89

FOSC Approval:

Date:

5/15/89

Endorsed by ISCC 5-17-89 Jan E. [Signature] CDR, NOAA

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

Distribution:

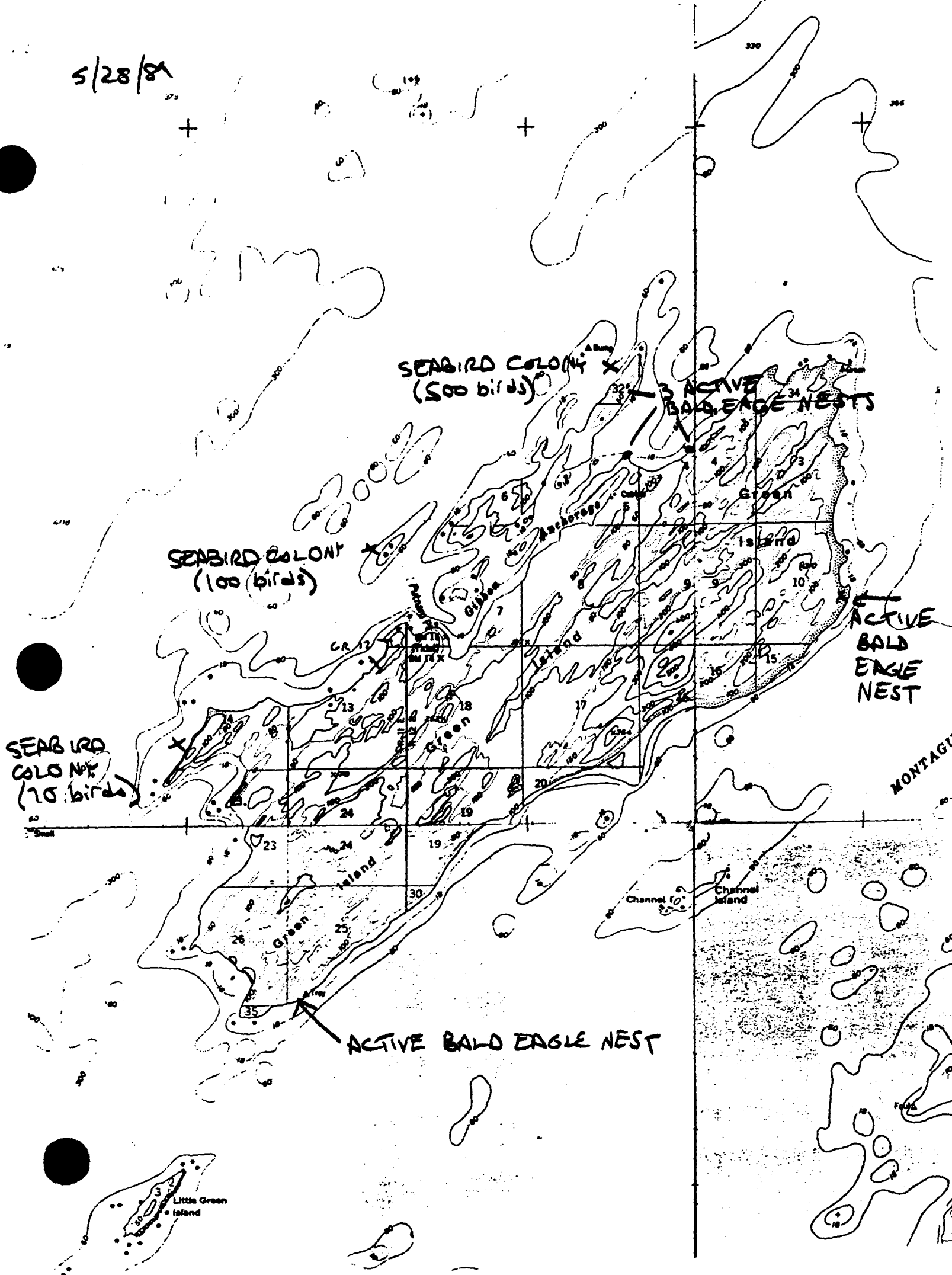
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

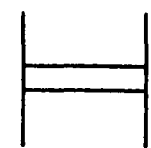
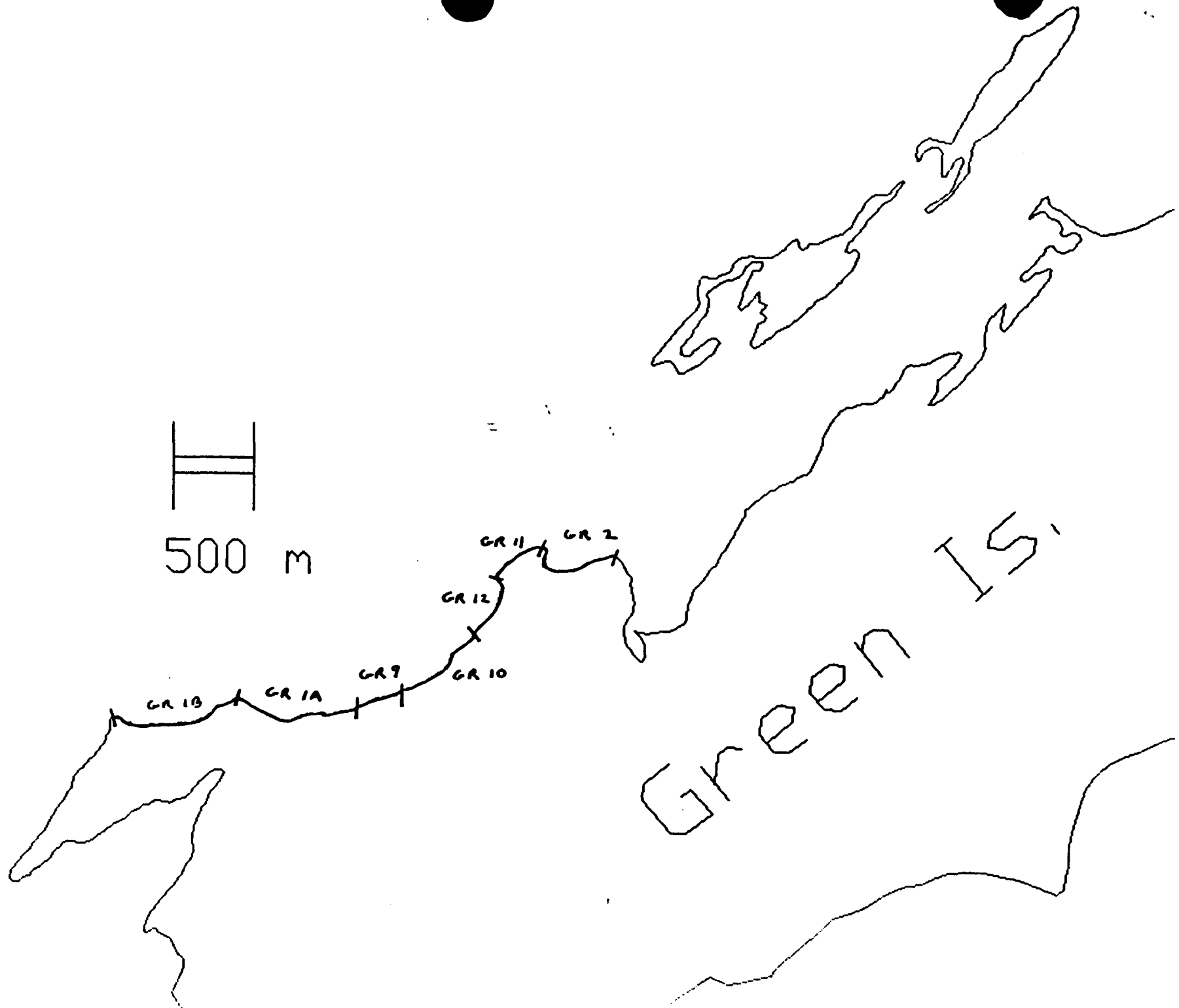
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

*Need to add Anonymous
Advisory to GR 2 ; GR 9.*

*GR 9 , GR 11 should reflect
later advice on removal of
~~help and focus~~ focus.*

5/28/81





500 m

Green IS.

(version 4/28/89)

Approved

M. J. Ter

SHORELINE CLEANUP PROGRAM

DATE: April 28, 1989

SHORELINE SEGMENT GR-1

LOCATION: (see enclosed map) Green Island - Putnam Point to the most
westerly point of Green Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 89-04-28

Recommended Cleanup Activity(ies):

Shoreline washing with ambient low pressure flushing/flooding of beaches. Warm water and pressure washing on rocky areas. Warm water flooding/flushing of cobble/boulder areas.

Priorities Considerations: *

Areas of heavy oiling.

As stipulated under the attached "general guidelines"

Ecological Constraints (from site survey):

Herring spawning spotting will be conducted by a biologist and crews directed accordingly.

Hazing is being conducted - do not disturb silhouettes and ADF&G equipment.

Archeological Constraints (from site survey):

No access will be allowed above the upper surf line. Evaluation team will assess the shoreline cleaning site prior to operation of the equipment, and will notify the crew leader of any restrictions/sensitivities. If heretofore undiscovered cultural material is uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Mark S. Adams
State Historic Preservation Officer *

Date: 4/28/89

EXXON: William J. Stufup

Date: 4/28/89

FOSC: C. E. Robbins

Date: 4/28/89

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

Ad
Interagency Shoreline Committee Representative 4/28/89

(version 4/26/89)

SHORELINE CLEANUP PROGRAM

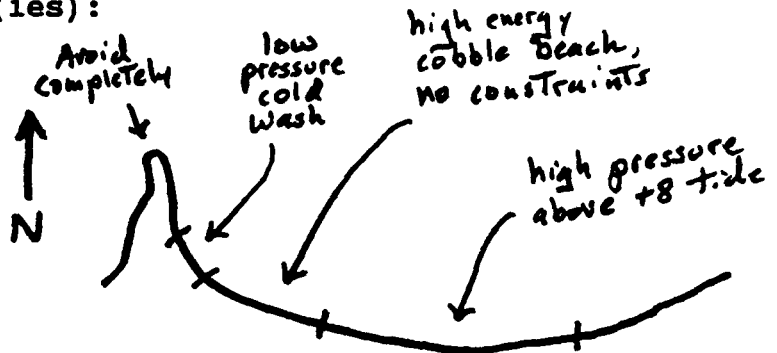
DATE: April 28, 1989

SHORELINE SEGMENT ~~GR-1A~~ GR-1A

LOCATION: (see enclosed map) Northwest side of Green Island

ADEC NO. 44 SHORELINE ASSESSMENT DATE: 4-28-89

Recommended Cleanup Activity(ies):



Priorities Considerations:

Ecological Constraints (from site survey):

Avoid marine terrace from point to 200m east (No disturbance or floats!)
Next 75 meters, low pressure cold wash only. From there to mid-segment
no constraints (high energy heavily oiled beach). Last half of segment
(east end) high pressure cold wash at + '8 tides or better.

Archeological Constraints (from site survey):

If heretofore undiscovered cultural material are uncovered
during cleanup, contact Exxon archaeologist C. Mobley and take
actions prescribed in the Operational Guidelines for Shoreline
Cleanup dated 4/21/89 as amended.

No access to the uplands. No fires on the upper beach. Restrict activity
to the oiled zone of the beach.

Douglas Reager
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

[revised 17 Apr 89]

Date: 4 / 28 / 89

Observer: HN Y...

Time: 16 h 20 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Green Is

SITE Point Cove

LOCATION PREFIX

SEGMENT NUMBER GI-1 GR-1A

LATITUDE: 60 d 16 m s

LONGITUDE: 147 d 29 m s

LENGTH OF SHORELINE SEGMENT: 800 m

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/

Wave Exposure: High/Med/Low

Rock Y/N & 10 Vertical/High Angle/Low Angle

Sediment Y/N & 90 Types: B/C/P/G/S/M/R

Strand Line Y/N Algae/Debris/Logs

overwash sp.
Beach
See 0.5 m sheet for
note

OIL

LOCATION OF OIL: SU SP H M L

CONTINUOUS: Y/N WIDTH OF BAND: 100 m % of Segment 100

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

EST. OIL THICKNESS: 1-25 cm EST. OIL PENETRATION: 25-30 cm+++

POOLED OIL: Y/N "FREE" OIL: Y/N WEATHERED: Y/N
Don't in
Cobbles
Bedrock

STRAND LINE CLEAN/OILED

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

COMMENTS: This is a Heavy oil beach - old Fuel oil 1 foot
Deep in pit at the High T.L. Line - oil has
overwash sp. - old Fuel thrown into grass line

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See how Beach is w/ in corner of dune
Beach - looks like Rocks which are in dune

GR-1A

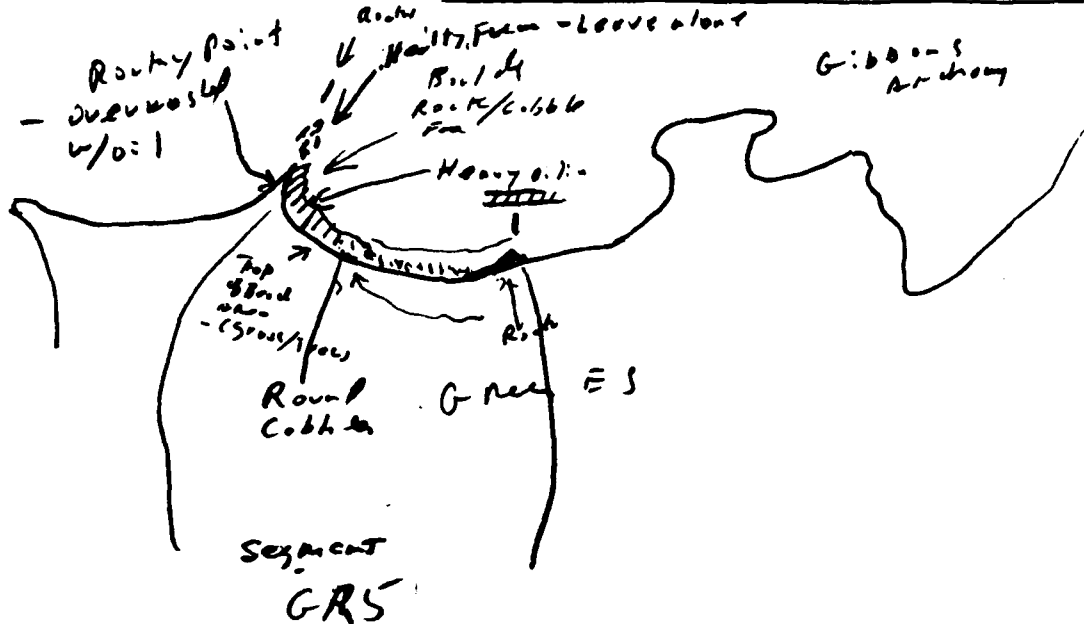
DOCUMENTATION:

MAP/Aerial photo marking segment boundaries Aerial Video - TAPE 8

VTR: Y/N Tape Number(s) Rain

PHOTOGRAPHY: Y/N Roll Number(s) from 3-77 To End of Roll = 36

SAMPLE NUMBERS COLLECTED: None



C:\WP\DATA\SHOREVAL.1

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: N.W. Coast of Green OBSERVER: AmdurLOCATION PREFIX SEG. NO.: 1A LENGTH: ~ 1250 (M)DATE: 89/04/28 TIME (HHMM): 15:30 TIDE HT.: .6 (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/NFucus dense at point, some (sparse) in lower tidal zone.Mytilus (Mussels): Patchy ☒ Y/N Contin. Y/N Dense ☒ Y/N Sparse ☒ Y/N None Y/NMussels dense at point, band ~ 200m, less dense along cave.Balanus (Barnacles): Patchy ☒ Y/N Contin. Y/N Dense Y/N Sparse ☒ Y/N None Y/NScattered Balanus glandula, B. cariosusLittorinaPatchy ☒ Y/N Contin. Y/N Dense Y/N Sparse ☒ Y/N None Y/Nfew littorina at point or lower intertidal zone at West end of CoveLimpets: Patchy ☒ Y/N Contin. Y/N Dense Y/N Sparse ☒ Y/N None Y/Nfew seenOTHER OBSERVATIONS: 200m Section from point to east is in very good shape, 75 meters more to east extensive damage/some live biota
Last 250m has good biota below +8'CLEANUP PRECAUTIONS: Avoid Marine Terrace from point east 200m, Next 75m low pressure cold rinse, Next 400m; No restrictions Hot water OK
above +7' tide, Rest of cove; High pressure cold above +8' tideMAMMALS: Otters 1 Harbor Seals 2 Sea Lions Whales
Other BIRDS: 1 dead oiled seabird.GENERAL OBSERVATIONS: Marine Terrace at West end is in good shapeand should be avoided completely. High energy Cobble beach
from cove to mid transect is heavily oiled and can be cleaned
by any method (few animals). east half of segment is
Heavily oiled above +8' tide, clean only at +8' tide or higher

(version of 4/17/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-28-89 Location GREEN Island Site NW COAST OF GREEN Island
Location Prefix GR Segment # 1A Length 1250 m

Survey Method: Air _____ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____

Oil conditions/beach visibility Heavy oil, in places up to the top of the beach

Width of beach zone surveyed 1 - 5 m Tree fringe surveyed up to 40m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) RCS
SMT, EXP CAN, HTI

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

Shore Profile Moderate to steeply sloping cobble to boulder beach. 20m wide
vegetated raised beach. Vertical cliffs to flat or moderately sloping
uplands behind a beach ridge.

Fresh Water Sources NUMEROUS small STAGNANT. LARGER lake to the south
smaller lake to the southwest.

Sea Exposure OPEN to the NORTH AND NORTHEAST

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 # MY 2 Frames 14 - 23

B/W Roll # _____ Frames _____

Observer(s) MIKE YARBOROUGH

Time survey started 3:30 pm Time survey ended 6:30 pm

Cultural resource considerations/restraints:

NO ACCESS to the uplands. NO FIRES ON the upper BEACH.

RESTRICT ACTIVITY to the oiled zone of the BEACH.

IF heretofore undiscovered cultural material is uncovered during
cleanup, contact EXXON Archeologist C. Mosley immediately

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(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-1B

LOCATION: (see enclosed map) Green Island

ADEC NO. 44 SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies):

Clean only at +4' tide or better, high pressure cold ok, hot water only on large unvegetated cobble beach.

Priorities Considerations:

Ecological Constraints (from site survey):

Keep off reefs at ends of cove and points at mid-beach.

Archeological Constraints (from site survey):

No access to the area above the active beach. No fires. 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.

Wendell Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATIONDate: 04 / 29 / 89Observer: AmdurTime: 14 h 00 mWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION Green IslSITE NW end of Green Isl.LOCATION PREFIX GRSEGMENT NUMBER 1B

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: 850 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:

SHORELINE CHARACTER:

BEach/SPit/COVE ___/___Wave Exposure: High/Med/LowRock Y/N % 15 Vertical/High Angle/Low AngleSEDIMENT Y/N % 85 Types: B / C / P / G / S / M / RStrand Line Y/N Algae/Debris/LogsOILLOCATION OF OIL: SU / SP / H / M / LCONTINUOUS: Y/N WIDTH OF BAND: 20 m % of Segment 80

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

EST. OIL THICKNESS: 1 cm EST. OIL PENETRATION: ___ cmPOOLED OIL: Y/N ^{To Contingency} "FREE" OIL: Y/N WEATHERED: Y/NSTRAND LINE CLEAN/OILEDSUMMARY OILING: Amount High/Med/Low
Coverage Extensive/Moderate/Light

COMMENTS:

GRIB

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: NW end of Green OBSERVER: Amdur
 LOCATION PREFIX: GR SEG. NO.: 13 LENGTH: 850 (M)
 DATE: 89/04/29 TIME (HHMM): 14:00 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

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: Moderate Oiling in High & Splash zones

clean w/ high pressure cold water around algae at +1/2'
tide zone. Hot water ok on boulders on beach. Keep off

CLEANUP PRECAUTIONS: reefs at each end of Cove and

clean only at +1/2' tide

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

BIRDS: few oyster catchers.

GENERAL OBSERVATIONS: _____

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINEDate 4-29-89 Location GREEN ISLAND Site NW end of GREEN ISLANDLocation Prefix GR Segment # 1B Length 850 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 Heavy oilWidth of beach zone surveyed 4 m Tree fringe surveyed 10 mCultural resources observed in beach zone (AHRS code) NONECultural resources observed in tree fringe (AHRS code) CMT

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

Shore Profile Beach varies from sand to large boulders to bedrock. Terrace at the western end. Uplands rise 3-5 m above the beach. Low FMTFresh Water Sources Several small streams

Sea Exposure _____

Access/Safety Rocky Beach on an exposed coastProbability of undiscovered sites in beach zone (circle one) 1 2 3 4 5Monitoring during cleanup needed yes/no Collection yes/noPhotos: Color Roll # may 2 Frames 26 and 27

B/W Roll # _____ Frames _____

Observer(s) Mike YARBOROUGHTime survey started 2:00 pm Time survey ended 3:30 pm

Cultural resource considerations/restraints:

No access to the area above the active beach. No fires.If nonetheless undiscovered cultural material is uncoveredduring cleanup, contact Exxon Archaeologist C. Mosley immediately

Bounced off

~~Not cleaned as of 5/8~~ Cleared.

(version 4/28/89)

SHORELINE CLEANUP PROGRAM

DATE: April 28, 1989

SHORELINE SEGMENT GR-1

LOCATION: (see enclosed map) Green Island - Putnam Point to the most
westerly point of Green Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 89-04-28

Recommended Cleanup Activity(ies):

Shoreline washing with ambient low pressure flushing/flooding of beaches. Warm water and pressure washing on rocky areas. Warm water flooding/flushing of cobble/boulder areas.

Priorities Considerations:

Areas of heavy oiling.

As stipulated under the attached "general guidelines"

Ecological Constraints (from site survey):

Herring spawning spotting will be conducted by a biologist and crews directed accordingly.

Hazing is being conducted - do not disturb silhouettes and ~~ADPSS~~ FWS equipment.

Archeological Constraints (from site survey):

No access will be allowed above the upper surf line. Evaluation team will assess the shoreline cleaning site prior to operation of the equipment, and will notify the crew leader of any restrictions/sensitivities. If heretofore undiscovered cultural material is uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Adams
State Historic Preservation Officer *

Date: 4/28/89

EXXON: William J. Stirling

Date: 4/28/89

FOSC: C. E. Robbins

Date: 4/28/89

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

Ad
Intergovernmental Shoreline Cleanup Committee Representative 4/28/89

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-2

LOCATION: (see enclosed map) South end Gibbons Anchorage

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):

No cleanup advised unless oil at stream outfall poses hazard to fishery.

Priorities Considerations:

Ecological Constraints (from site survey):

Wash impacted point with low pressure cold water. Use caution to avoid stream mouth, cove is stream mouth. Point should be done but not high priority.

Archeological Constraints (from site survey):

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

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

* Signature required to satisfy stipulations in Alaska DNR

SW END
GIBBONS
Anchorage

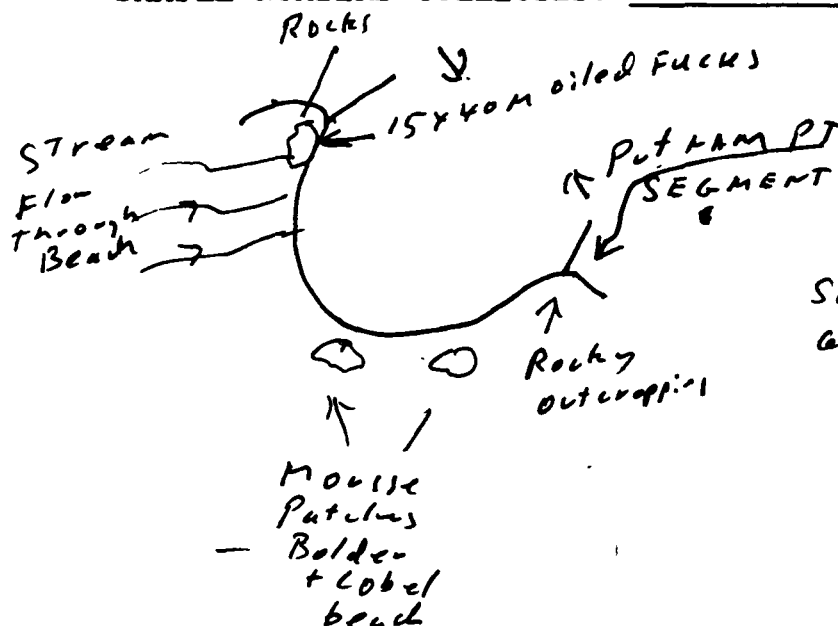
DOCUMENTATION:

MAP/Aerial photo marking segment boundaries _____

VTR: (Y)N Tape Number(s) Harry Young Tape 8

PHOTOGRAPHY: (Y)N Roll Number(s) John Andur

SAMPLE NUMBERS COLLECTED: _____



Terrestrial Video of
Segment - Aerial video
at Beginning of Tape 8.

C:\WP\DATA\SHOREVAL.1

ECOLOGICAL EVALUATION

LOCATION GREEN Island SITE ^{Cove} ~~SE~~ END Gibbs Pt. OBSERVER Amdur

DATE 04 / 27 / 1989 TIME (HHMM) 17:21 TIDE HT. (m) +2m

OILED ZONE: SPLASH HIGH MED LOW

SUBSTRATUM: ROCKS BOULDER COBBLE GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus 80 Mytilus 15 Balanus 25 Littorina 0

Nucella 0 Pagurus 0 Limpets — Halosaccion —

Gelidium — Other —

Oil Damaged Biota Fucus heavily impacted / muscles weak / Balanus ok

Clean-up Precautions wash w/ low pressure at +7' tides
at point (Cove is Mouth of Stream) Do Not wash Stream Mouth
point only

OILED ZONE: SPLASH HIGH MED LOW

SUBSTRATUM: ROCKS BOULDER COBBLE GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus _____ Mytilus _____ Balanus _____ Littorina _____

Nucella _____ Pagurus _____ Limpets _____ Halosaccion _____

Gelidium _____ Other _____

use caution when
working point
to avoid
stream
flow

Oil Damaged Biota _____

Clean-up Precautions _____

MAMMALS (#): OTTERS 2 HARBOR _____ DALL _____ OTHER _____

OTHER _____

BIRDS: _____

GENERAL OBSERVATIONS: Filamentous Green algae in stream mouth
Few marines.

(GR2)

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 4 / 27 / 89

Observer: Young, H.M.J.

Time: 16 h 55 m
17 22

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION SW End, Gibbons Anchorage
SE of Pt. ...

SITE ~~CR 2~~

LOCATION PREFIX ~~CR 2~~

SEGMENT NUMBER 3 2

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 400 m

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/ /

Wave Exposure: High/Med/Low

Rock (Y)N % 20 Vertical/High Angle/Low Angle

SEDiment (Y)N % Types: B / C / P / G / S / M / R
60% to 100%

Strand Line (Y)N Algae/Debris/Logs - Superficial Evidence of
Major Debris Stranding - Many years ago -
Few "new" Logs

OIL

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

CONTINUOUS: (Y)N WIDTH OF BAND: m % of Segment

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

EST. OIL THICKNESS: Thin Coating To 1 cm cm EST. OIL PENETRATION: NO cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS: Several Patches of Fucus on Middle Portion of Segment 2 M²
Patch of Moderately Oiled Fucus at Mid-Tidal Zone
ES 15M X 40M

(version of 4/17/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-27-89 Location GREEN Island Site SW END GIBBONS ANCHORAGE
Location Prefix GR Segment # 2 Length m
Survey Method: Air (A - indicate on map)
Ground ✓ (G - indicate on map)
Known cultural resources (AHRS #) NONE Data Source
Oil conditions/beach visibility Light oil, Good visibility
Width of beach zone surveyed 5 m Tree fringe surveyed up to 15 m
Cultural resources observed in beach zone (AHRS code) NONE
Cultural resources observed in tree fringe (AHRS code) CMR
General observations justifying survey method and segment's site probability:
moderately steep, angular boulder beach. High Rock
Shore Profile FACES BOTH EAST AND WEST OF LOWLANDS AT THE HEAD OF THE COVE
Fresh Water Sources LARGE SALMON STREAM DRAINING LAKE
Sea Exposure OPEN TO THE NORTH AND EAST
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) MIKE YARBOROUGH
Time survey started 5:22 pm Time survey ended 7:30 pm
Cultural resource considerations/restraints:
IF PREVIOUSLY UNDISCOVERED CULTURAL RESOURCES ARE UNCOVERED DURING
CLEANUP, CONTACT EXXON ARCHEOLOGIST C MOBLEY IMMEDIATELY.

Tabbed for now - need to verify "low oil - low priority" . Changed to
Addendum to high level oil - high priority
Pinniped Haul-out site 5/1/89.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/27/89 SHORELINE SEGMENT GR-3

LOCATION: (see enclosed map) North East point of Large Island,
adjacent to Green Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):

Last four hundred (400) meters near headland has patches which could be cleaned if it presents a Pinniped hazard. Little danger of oil refloating.

Priorities Considerations:

Pinniped Haulout.

Ecological Constraints (from site survey): Clean-up is not recommended for most of segment. Last four hundred (400) meters should be cleaned, although it is a low priority. Clean with low pressure cold wash when tide is N + 7'.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: Wm Stuhls

Date: 5/4/89

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATIONDate: 27 / 1 APR / 89Observer: Young Fawcett ANDERTime: 1000 h _____ mWeather: Sun/CLOUD/Rain/Snow/FogLOCATIONLOCATION GREEN ISLESITE NE Point of Long Island NW of (Main) Green ISLOCATION PREFIX GRSEGMENT NUMBER 3

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: 800 m

ACCESS: Foot/VEHICLE/BOAT/BARGE/HELIO/Float Plane

SHORELINE:

SHORELINE CHARACTER:

BEACH/SPIT/COVE/Point/_____Wave Exposure: High/Med/LowRock Y/N % 80 VERTICAL High Angle/Low AngleSEDIMENT Y/N % 20 Types: B / C / P / G / S / M / RStrand Line Y/N Algae/Debris/LogsOILLOCATION OF OIL: SU / SP / H / M / L only in High IntertidalCONTINUOUS: Y/N WIDTH OF BAND: 2 m % of Segment _____PATCHY: 10/20/30/40/50/60/70/80/90% coverage % of Segment 5%EST. OIL THICKNESS: Thin Film cm EST. OIL PENETRATION: 1-5 cmPOOLED OIL: Y/N "FREE" OIL: Y/N WEATHERED: Y/NSTRAND LINE CLEAN/OILEDSUMMARY OILING: Amount High/Med/Low
Coverage Extensive/Moderate/LightCOMMENTS: A Few Patches of Oiled Fucus at Upper Intertidal Zone

DOCUMENTATION:

NE Point of Long Island
NW of Main Green IS

MAP/Aerial photo marking segment boundaries

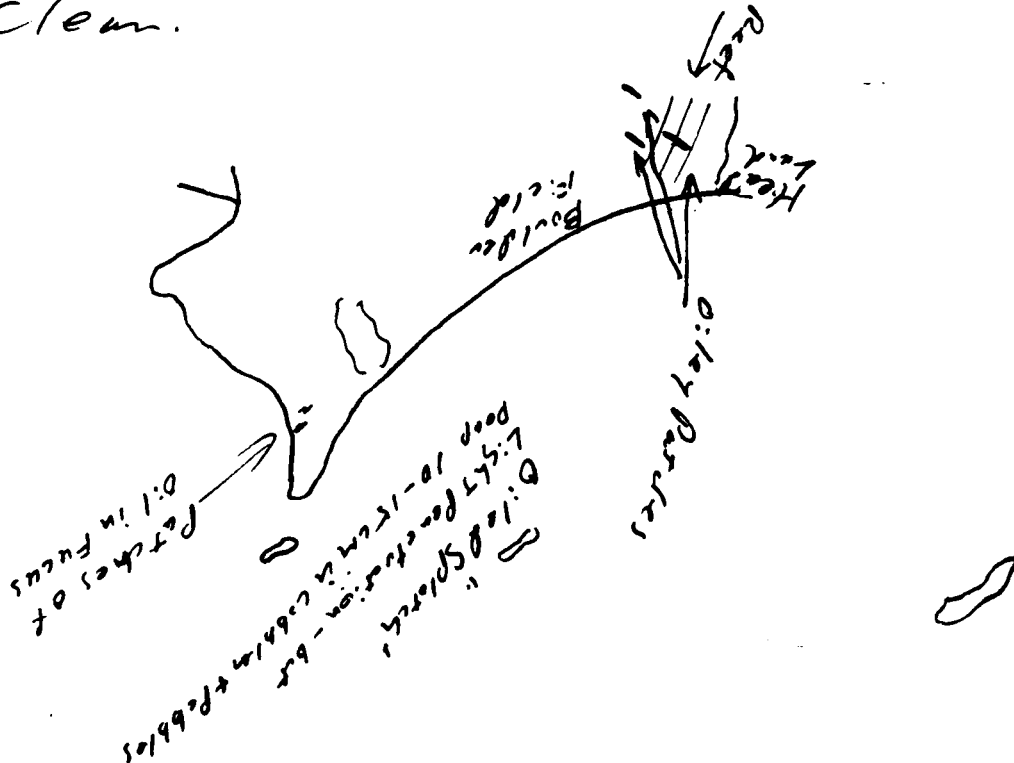
VTR: YN Tape Number(s) 8 Aerial + Terrestrial

PHOTOGRAPHY: YN Roll Number(s) John ANDER

SAMPLE NUMBERS COLLECTED: 4,

Video of entire shoreline at Low Tide -

Few Patches of Mousse at NE + NW End
of Island are on video tape. Coverage of
oil is extremely patchy with most of ITZ
Clean.



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GR. 3

ECOLOGICAL EVALUATION

LOCATION: Green Isl SITE: Long Isl N.W. Point OBSERVER: Fawcett/AmdurLOCATION PREFIX: GR SEG. NO.: 3 LENGTH: _____ (M)DATE: 89/04/27 TIME (HHMM): 10:00 TIDE HT.: ebbing + 0.3 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Nmostly small 1-2 cm mostly same age group mixed w/ occasional older + Balanus Can.Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NContinuous bands of Balanus glandula, patchy B. carboresLittorinaPatchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NLittorines seem ok, even there in oiled areasLimpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NOTHER OBSERVATIONS: 400m stretch of high intertidal on east side of
point tended to be heavily oiled - moss zone 10-20m
wide on low angle rocksCLEANUP PRECAUTIONS: Clean up not recommended for most segment
last 400m should be cleaned w/ low pressure cold wash
and should be done at mid tide ~ +7' (Not High priority)MAMMALS: Otters _____ Harbor Seals 1 Sea Lions _____ Whales _____
Other _____BIRDS: (1) dead murre partly eaten.

GENERAL OBSERVATIONS: _____

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-27-89 Location GRIFFIN Island Site NW point of Long Island

Location Prefix GR Segment # 3 Length _____

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 Patchy, light oil

Width of beach zone surveyed 25 m Tree fringe surveyed 10-30 m

Cultural resources observed in beach zone (AHRS code) none

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

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

Shore Profile FLAT Angular boulder beach with upper zone of vegetation - covered rock. FLAT uplands rising up to 3 m above the beach

Fresh Water Sources small streams

Sea Exposure exposed in all directions

Access/Safety DIFFICULT landing on exposed rocky 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 # MAY 2 Frames 5-9

B/W Roll # _____ Frames _____

Observer(s) MIKE YARBOROUGH, Dave McMahon

Time survey started 10:44 AM Time survey ended 12:32 pm

Cultural resource considerations/restraints:

If ^{previously} undiscovered cultural remains are uncovered during cleanup, contact Exxon Archaeologist C. Mobley immediately.

Signed Off On

Addendum to Pinniped
Haul-out file

forms for GR-6 missing?

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/27/89

SHORELINE SEGMENT GR-4

LOCATION: (see enclosed map) GREEN ISLAND/Channel Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):

Pinniped Haulout Area - oiling on island is isolated and light. Confined to a few patches in fucus.

Priorities Considerations: NO Clean-up recommended. Except for two hundred (200) meter area on west side (Seal Haulout Area). Oil impact is low, clean only if concerned over pups (High Tidezone).

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.

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 27 / April / 89

Observer: Young H.N. Ji

Time: 12 h 57 m

Weather: Sun/Cloud Rain/Snow/Fog

LOCATION

LOCATION Channel Is

SITE _____

LOCATION PREFIX GR

SEGMENT NUMBER 4

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: _____ m (Entire Island)

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

SHORELINE:

SHORELINE CHARACTER:

Beach/Spit/Cove/____/____

Wave Exposure: High/Med/Low ^{10%} ^{5%}

Rock Y/N % _____ Vertical/High Angle/Low Angle

SEdiment Y/N % 85 Types: B/C/P/G/S/M/R
_{20 10 30 25}

Strand Line Y/N Algae/Debris/Logs _{Few at}

OIL

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

*N/W Zone - on Haul Out
of Fucus 200 m Band - 5m wide
Very Light - No Ch unless affect
on pupping season*

CONTINUOUS: Y/N WIDTH OF BAND: _____ m % of Segment _____

PATCHY: ~~5/10~~ 20/30/40/50/60/70/80/90% coverage % of Segment 5%

EST. OIL THICKNESS: Thin Coating cm EST. OIL PENETRATION: _____ cm

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

STRAND LINE CLEAN/OILED

Dil entrained in Fucus

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

COMMENTS: Island is Clean in most areas - Patch of

Oil in Fucus on N/E, NW, and SW.

200x5m - NW Do Not Recommend Cleanup unless

TRAILS - EE Trace oiling on Fucus is a Hazard to Seal

200x2m - SW ^{severe} OTTEN observed swimming

C:\WP\DATA\SHOREVAL.1 Haulout + Popping -
SE End of Island -
Did Not Appear to be Oiled

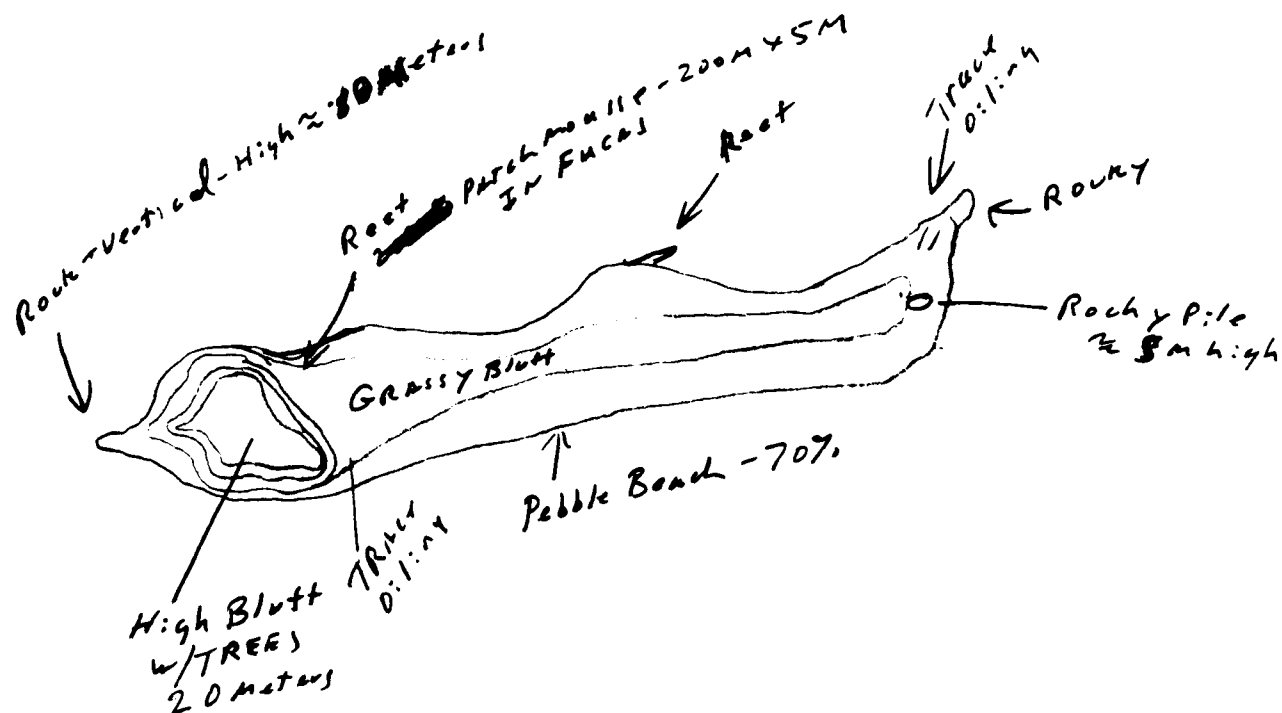
DOCUMENTATION:

MAP/Aerial photo marking segment boundaries _____

VTR: (Y/N) Tape Number(s) 8 - Aerial + Terrestrial - Complete

PHOTOGRAPHY: (Y/N) Roll Number(s) John LADAR Island Both By Air + LAND by Henry Young

SAMPLE NUMBERS COLLECTED: _____



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GR-4

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Channel Isl. OBSERVER: Fawcett/AmdurLOCATION PREFIX: GR SEG. NO.: 24 LENGTH: _____ (M)DATE: 89/04/24 TIME (HHMM): 13:00 TIDE HT.: + .3 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NNone on Cobble beaches on west sideMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Nfew dense patches among gravel & bouldersBalanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Ndense patches on most rocky & stable bouldersLittorinaPatchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NExtremely dense in rocks on west side, feeding on drift algaeLimpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NScattered among rocks & bouldersOTHER OBSERVATIONS: few animals among bare ~~cobble~~ Cobble and gravel. High energy steep beach on west sideCLEANUP PRECAUTIONS: no Cleanup recommended except possibly in one 200m area on west side in Seal Haulout area - low Pressure washing although oil impact minimal.MAMMALS: Otters 2 Harbor Seals 2 Sea Lions _____ Whales _____
Other _____BIRDS: Oyster catchers (many)

GENERAL OBSERVATIONS: _____

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINEDate 4-27-89 Location GREEN Island Site Channel ILocation Prefix GA Segment # 4 Length _____

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 Little oilWidth of beach zone surveyed 5 m Tree fringe surveyed 5mCultural resources observed in beach zone (AHRS code) NONECultural resources observed in tree fringe (AHRS code) NONEGeneral observations justifying survey method and segment's site probability:
moderately sloping pebble beach, low flat uplands exceptShore Profile FOR A ROCK SEA STACK AT THE SW CORNER OF THE ISLANDFresh Water Sources NONESea Exposure very exposedAccess/Safety intermediate stopping point between Green & Montague I.
Good view in all directions.Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5Monitoring during cleanup needed yes (no) Collection yes (no)Photos: Color Roll # my 2 Frames 10-11

B/W Roll # _____ Frames _____

Observer(s) Mike Valborough, Dave McMahonTime survey started 12:41 Time survey ended 2:08

Cultural resource considerations/restraints:

IF PREVIOUSLY UNDISCOVERED CULTURAL REMAINS ARE UNCOVERED
DURING CLEANUP, CONTACT EXXON ARCHEOLOGIST C. MOBLEY
immediately.

Have
been reviewed
(version 5/02/89)

Rocky Area north of Little Green
used as haul out.

Small area - 1/2 day cleanup - adjacent areas for
animals to move to

OK in meeting

Start clearing 5/8

SHORELINE CLEANUP PROGRAM

DATE May 2, 1989

SHORELINE SEGMENT GR-5

LOCATION: (see enclosed map) Green Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies):

~~Secondary~~ priority cleanup area. Use high pressure warm water at
+5' tide (flooding).

Hot water can be used if it allows crews to finish quickly and with
less interference with the marine mammal community in area.

Priorities Considerations:

Avoid using warm water on live animals in spill zone. Use hot water
only on unvegetated rocks in +7' zone.

Ecological Constraints (from site survey):

Community below oiled zone is healthy, no hot water. High pressure
ok in oiled zone and on vertical face. Do entire island quickly
and with as few people as possible, do only at rising 5' tide.
Potential seal pupping area so must be done soon.

Archeological Constraints (from site survey):

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

Mark E. Adams
State Historic Preservation Officer *

Date: 5/2/89

EXXON: [Signature]
FOSC: [Signature]

Date: 5/3/89

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 29 / 89

Observer: Amdur

Time: 11 h 25 m

Weather: Sun/Cloud Rain/Snow/Fog

LOCATION

LOCATION Green Isl.

SITE Small island north of "Long Island"

LOCATION PREFIX GR

SEGMENT NUMBER 5

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 250 m

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/Island

Wave Exposure: High Med/Low

Rock Y/N % 80 Vertical/High Angle Low Angle

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

Strand Line Y/N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y/N WIDTH OF BAND: 15 m % of Segment 80

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

EST. OIL THICKNESS: .5 cm EST. OIL PENETRATION: cm

POOLED OIL: Y/N TO Surface Coat "FREE" OIL: Y/N WEATHERED: Y/N

STRAND LINE CLEAN/OILED

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

COMMENTS:

Sensitive area due to Harbor seal habitat.

(GR-5)

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: ^{Small Island North} 01- "Long Island" OBSERVER: Amdur
 LOCATION PREFIX: GR SEG. NO.: 15 LENGTH: 125 250 (M)
 DATE: 89/04/29 TIME (HHMM): 11:25 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

lots of Fucus in intertidal, long greens & browns also present
eel grass in tidepools

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

Mytilus present in large beds, heavy oil in oiled zones

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: Isopods, Tidepool fish, and Pagurus present
below oiled zone, Many Harbor Seals in area, Nearby rock
haulouts for seals, Island possible pupping area

CLEANUP PRECAUTIONS: Cleanup here is a priority, Probable pupping area
Cleanup should be done quickly with the least disturbance possible
Clean only at 5.5' tide (Flood only). Low pressure cold water OK

MAMMALS: Otters 4 Harbor Seals +7 Sea Lions _____ Whales _____
 Other _____

BIRDS: _____

GENERAL OBSERVATIONS: _____

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-29-89 Location GARIN Island Site Small island north of "Long Island"

Location Prefix GR Segment # 5 Length 250 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 Heavily oiled

Width of beach zone surveyed 5 m Tree fringe surveyed Entire Island

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile Steep Boulder and Bedrock Beach. SW end flat and grass covered. NE end supports two tall covered bedrock stacks.

Fresh Water Sources NONE

Sea Exposure wide open to the North and North West

Access/Safety Difficult Landing on an Exposed Rocky 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) Nike YARBOROUGH

Time survey started 11:25 AM Time survey ended 12:30 PM

Cultural resource considerations/restraints:

If heretofore undiscovered cultural remains are uncovered during

cleanup, contact Exxon Archeologist C. Mosley immediately

Signed off on

Pinniped Haulout

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/29/89 SHORELINE SEGMENT GR-6

LOCATION: (see enclosed map) GREEN ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies): NONE, Do not clean. Oil stain is on a few rocks at extreme tideline, well above the area used by seals. Oil has had little effort on the marine community.

Priorities Considerations:

Pinniped Haulout.

Ecological Constraints (from site survey):

Low to no impact. Stains high on vertical rocks. Do not clean.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Seal Haulouts OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 6 LENGTH: _____ (M)DATE: 89/04/29 TIME (HHMM): 11:25 TIDE HT.: .75 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NDense algal growth in band to High Tidal ZoneMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NBalanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NLittorina

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/NOTHER OBSERVATIONS: Dense lush algal growth w/ healthy population of musselsCLEANUP PRECAUTIONS: Do not clean oil stain may look bad but its in upper zone w/ No effect on Seals or marine CommunityMAMMALS: Otters 10 Harbor Seals 15+ Sea Lions _____ Whales _____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Keep away

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 29 / 89

Observer: Amdur

Time: 11 h 25 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Green Isl.

SITE Seal Haulouts

LOCATION PREFIX GR

SEGMENT NUMBER 6

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: m

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/ / Rock Pinnacle

Wave Exposure: High / Med / Low

Rock Y / N % 100 Vertical High Angle / Low Angle

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

Strand Line Y / N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y / N WIDTH OF BAND: 1-2 m % of Segment 100

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

EST. OIL THICKNESS: Coating cm EST. OIL PENETRATION: cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

Tar stain on few rocks at extreme tideline
well above point used by Harbor Seals.

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(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINEDate 4-29-89 Location GREEN Island Site SEAL HauloutsLocation Prefix G-R Segment # 6 Length _____

Survey Method:

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

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____Oil conditions/beach visibility Light coatingWidth of beach zone surveyed - m Tree fringe surveyed -Cultural resources observed in beach zone (AHRS code) NONECultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile WAVE WASHED OFFSHORE ROCKSFresh Water Sources NONESea Exposure openAccess/Safety NOT ACCESSIBLEProbability of undiscovered sites in beach zone (circle one) ① 2 3 4 5Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # _____ Frames _____

Observer(s) MIKE YARBOROUGHTime survey started 11:25 AM Time survey ended 12:30 PM

Cultural resource considerations/restraints:

IF HERETOFORE UNDISCOVERED CULTURAL REMAINS ARE FOUNDduring cleanup, CONTACT EXXON ARCHEOLOGIST C. MOSELEYimmediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-9

LOCATION: (see enclosed map) Green Island

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

Recommended Cleanup Activity(ies):

Use hot water (180 dgr.) on cobble beach on heavy tar areas. Avoid stream area in mid-cobble beach. Use high pressure on rock reefs and remove all oiled fucus.

Priorities Considerations:

I don't believe the stream is used by anadromous fish - refer to ADF&G atlas of anadromous fish streams. If not in atlas, recommend cleaning stream bed (seep from upland lake).

Class 2B

Ecological Constraints (from site survey):

Reef community seems ok. Try to avoid working on reefs below +7.5' tides. High pressure is ok but no hot water on live mussels or algae.

Archeological Constraints (from site survey):

No access above the active beach. No fires. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 30 / 89

Observer: Amdur

Time: 08 h 45 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Green Isl.

SITE NW Cost of Green Isl.

LOCATION PREFIX GR.

SEGMENT NUMBER 10 9

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: 300 m

ACCESS: Foot/Vehicle/BOat/BARGE/Helio/Float Plane

SHORELINE:

SHORELINE CHARACTER:

BEach SPit/Cove ___/___

Wave Exposure: High/Med/Low

Rock Y/N % 50 VERTICAL/High Angle/Low Angle

SEdiment Y/N % 30 Types: B / C / P / G / S / M / R

Strand Line Y/N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y/N WIDTH OF BAND: 18 m % of Segment 90

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

EST. OIL THICKNESS: 1-2 cm EST. OIL PENETRATION: 0 cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

(GR-9)

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: NW Coast OBSERVER: Amdur
 LOCATION PREFIX: GR SEG. NO.: 10 9 LENGTH: 300 (M)
 DATE: 89/04/30 TIME (HHMM): 8:45 TIDE HT.: +3.3 (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

Fucus dense on Rock reefs, less on Cobble beach
Cutwormorpha and eelgrass in tidepools.

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

not on Cobble beach above +7' tidezone

Littorina

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

Heavy on reef, Abundant in Tidepools

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

Heavily stressed, Slow to react.

OTHER OBSERVATIONS: Oiled otter seen well offshore.

CLEANUP PRECAUTIONS: High pressure ok on Rock Reefs, try

To avoid interference below +7' zone. Hot water recommended
on Cobble beach (180°) ok. avoid stream area in mid Cobble beach.

MAMMALS: Otters 1 Harbor Seals Sea Lions Whales
 Other

BIRDS: 1 oiled seabird (Cormorant?) w/ head eaten.

GENERAL OBSERVATIONS: oil on cobble beach is very heavy and

peeled in areas. Oil is Tanlike and binds smaller rocks,
little or no penetration.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-30-89 Location GREEN ISLAND Site NORTHWEST COAST

Location Prefix GR Segment # 7 Length

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 Heavy oil, 8 m wide band of unoiled upper beach

Width of beach zone surveyed 8 m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) NONE

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

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

Shore Profile Beach varies from SW to NE from red rock and large boulders to large cobbles and boulders. Uplands include both vertical cliffs and raised beach ridge in front of a lake.

Fresh Water Sources Lake, large seep through the raised beach ridge

Sea Exposure open to the north

Access/Safety difficult landing on an exposed 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 # MRY 2 Frames 26-30

B/W Roll # Frames

Observer(s) Mike YARBOROUGH

Time survey started 8:45 AM Time survey ended 10:34

Cultural resource considerations/restraints:

NO ACCESS ABOVE THE ACTIVE BEACH. NO FIDES. SHOULD THEREFORE UNDISCOVERED CULTURAL REMAINS BE UNCOVERED DURING CLEANUP.

CONTACT EXXON ARCHEOLOGIST C. MOSLEY IMMEDIATELY.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-10

LOCATION: (see enclosed map) Green Island

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

Recommended Cleanup Activity(ies):

Use moderate (± 100 LBS) pressure to clean rocks. Place most effort on rocks with eastern exposure. Work on +6' tides or better. Avoid interference with subtidal communities as much as possible.

Priorities Considerations:
Class 3A

Ecological Constraints (from site survey):

Live animals present in oiled area, moderate pressure ok but no high temperature is recommended. Work in +6' tide or better.

Archeological Constraints (from site survey):

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

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 30 / 89

Observer: Amdur

Time: 10 h 34 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Green Isl.

SITE Northwest Coast

LOCATION PREFIX GR

SEGMENT NUMBER 10

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: 485 m

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove ___/___/___

Wave Exposure: High/Med/Low

Rock Y/N % 30 Vertical/High Angle/Low Angle

SEdiment Y/N % 70 Types: B / C / P / G S / M / R

Strand Line Y/N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y/N WIDTH OF BAND: 10 m % of Segment 50

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

EST. OIL THICKNESS: Coating cm EST. OIL PENETRATION: 0 cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

QR-10

ECOLOGICAL EVALUATION

LOCATION: GREEN ISL. SITE: Northwest Coast OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 10 LENGTH: 485 (M)DATE: 89/04/30 TIME (HHMM): 10:34 TIDE HT.: 3 (M)OILED ZONE: Splash (High) Medium LowSUBSTRATUM: (Rocks Boulder Cobble Gravel) Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NDense on Reef Structures, alive below oiled zone & some alive in oil. Ectocarpomorpha present in tidepools and eelgrassMytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NDense patches of mussels (stressed) ~ 50% still alive in oiled zoneBalanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/Nno activity seen, some High zone and Supra zone barnacles unoiled.LittorinaPatchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NLittorina dense even in oiled areas, may be moving into oiled areas - looks like feeding on oiled fucusLimpets: Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse (Y)/N None Y/NFew seen, most in oiled zones dead or slow to respond.OTHER OBSERVATIONS: most points & coves with eastern exposure has oil, less oil on west side of reef structures.CLEANUP PRECAUTIONS: Use moderate pressure ~ 100 lbs to clean reefs with live animals. Clean at +6' tides or betterMAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____

BIRDS: _____

GENERAL OBSERVATIONS: Subtidal communities look healthy.

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-30-89 Location GREEN ISLAND Site NORTHWEST COAST

Location Prefix GR II Segment # 10 Length 485 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 moderate coating of oil.

Width of beach zone surveyed up to 20 m Tree fringe surveyed —

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile NARROW, Boulder and pebbly beach in front of up to 10m high cliffs

Fresh Water Sources small trickles down the cliff faces.

Sea Exposure open to the north

Access/Safety rugged, exposed 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) Mike YARBOROUGH

Time survey started 10:34 Time survey ended 11:30

Cultural resource considerations/restraints:

IF nonetheless undiscovered cultural remains are found

during cleanup, contact Exxon Archeologist C. Mosley

immediately

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-11

LOCATION: (see enclosed map) Green Island

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

Recommended Cleanup Activity(ies):

Hot water (180 dgr.) ok on vertical faces. High pressure cold on vegetated zones above +6' tide. ~~Remove all oiled plants. Plant removal should remove most oil.~~

Priorities Considerations:
Class 3A

Ecological Constraints (from site survey):

Live animals present in oiled areas. Use high pressure only in vegetated zones.

Archeological Constraints (from site survey):

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

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 30 / 89

Observer: Amdur

Time: 11 h 30 m

Weather: (Sun) Cloud/Rain/Snow/Fog

LOCATION

LOCATION Green Isl.

SITE _____

LOCATION PREFIX GR

SEGMENT NUMBER 11

LATITUDE: 6 ___ d ___ m ___ s

LONGITUDE: 147 d ___ m ___ s

LENGTH OF SHORELINE SEGMENT: _____ m

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

SHORELINE:

SHORELINE CHARACTER:

Beach/SPit/Cove/ Point / Marine / Terrace

Wave Exposure: (High) Med/Low

Rock (Y)/N % 75 (Vertical/High Angle/Low Angle)

SEdiment (Y)/N % 25 Types: (B / C / P) / G / S / M / R

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

OIL

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

CONTINUOUS: (Y) WIDTH OF BAND: 10 m % of Segment 25

PATCHY: 10/20/30/40/(50/60)/70/80/90% coverage % of Segment 75

EST. OIL THICKNESS: Coating cm EST. OIL PENETRATION: 0 cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

Oil mouse on marine planes, tar and weathered oils on
Vertical rocks.

(QR-11)

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: _____ OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 11 LENGTH: _____ (M)DATE: 89/04/30 TIME (HHMM): 11:30 TIDE HT.: 2.5 (M)OILED ZONE: Splash (High) Medium LowSUBSTRATUM: (Rocks Boulder Cobble) Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NHeavy bands of fucus in oil zone, retaining oil & mouse
light to no oil in fucus at +7.5' level & below.Mytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NOK below oiled zones, mostly dead in upper.Balanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NLittorinaPatchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NLimpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NOTHER OBSERVATIONS: Reef at NE point should be ok and
left alone, mostly underwater during oilingCLEANUP PRECAUTIONS: low temp hot water ok if needed most
oil is on fucus, use hot (120°) water on verticle rocksMAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: Oyster catching on pointGENERAL OBSERVATIONS: oil clinging to fucus above +8' tide zone

(version of 4/25/89)

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-30-89 Location GARREN Island Site NORTHWEST COAST

Location Prefix GR Segment # 11 Length _____

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 _____

Width of beach zone surveyed 5 m Tree fringe surveyed —

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile Boulder, and COBBLE and Bedrock beach in front of rock CLIFFS

Fresh Water Sources NONE

Sea Exposure Open to the North

Access/Safety Virtually UNACCESSIBLE

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) MIKE YARBOROUGH

Time survey started 11:30 Time survey ended 11:55

Cultural resource considerations/restraints:

If previously undiscovered cultural material is uncovered

during cleanup, contact Exxon Archeologist C. Mobley

immediately

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-12

LOCATION: (see enclosed map) Northwest coast of Green Island

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

Recommended Cleanup Activity(ies):
None, no oil.

Priorities Considerations:

Ecological Constraints (from site survey):
Clean area, no cleanup needed.

Archeological Constraints (from site survey):
Cultural resource evaluation not completed, no oil. If cleanup
is planned, cultural resource evaluation should be conducted.

Douglas Reger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 04 / 30 / 89Observer: AmdurTime: 11 h 15 mWeather: Sun / Cloud / Rain / Snow / FogLOCATIONLOCATION Green IslandSPECIFIC AREA Northwest CoastlineLOCATION PREFIX GRSEGMENT NUMBER 12

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

LENGTH OF SHORELINE SEGMENT: _____ m

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

SHORELINE CHARACTER:

Shoreline Type: BEA/COV / HANG / LANG / VER / HLD / SPIWave Exposure: High / Med / LowSediment: B _____ % / C 20 % / P 20 % / G 40 % / S 20 % / M _____ % / R _____ %Drift Debris in Intertidal Zone: Yes / No Upper / Mid / Lower Type _____OIL

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

Continuous: Y/N Width of Band: _____ m % of Segment 0

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

Est. Oil Thickness: _____ cm Est. Oil Penetration: _____ cm

Pooled Oil: 0 % "Free" Oil: 0 % Weathered: 0 % Stained: 2 %Tar Formation: 2 %

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

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

Comments:

LOGIC ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: N.W. Coast OBSERVER: AmdurLOCATION PREFIX: GK SEG. NO.: 12 LENGTH: _____ (M)DATE: 89/04/30 TIME (HHMM): 11:15 TIDE HT.: 2.75 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand MudLIVE BIOTAFucus (algae): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NMytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NBalanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NLittorinaPatchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NLimpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NOTHER OBSERVATIONS: Sand beachCLEANUP PRECAUTIONS: No oil do not clean or botherMAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: Oysta Catchers,GENERAL OBSERVATIONS: Healey beach & Cobble zones

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 4-30-89 Location Green Island Site N.W. Coast

Location Prefix GR Segment # 12 Length

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) Data Source

Oil conditions/beach visibility No oil

Width of beach zone surveyed — m Tree fringe surveyed —

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 low uplands behind a raised beach ridge

Fresh Water Sources

Sea Exposure open to the west and northwest

Access/Safety

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) Mike YARBOROUGH

Time survey started 11:15 AM Time survey ended 11:30 AM

Cultural resource considerations/restraints:

cultural resource evaluation not completed: no oil

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER

GR-1A

SHORELINE SEGMENT NAME

SUBMITTED FOR APPROVAL 5/29/ 89

COMMENTS:

Boomed with Pom-Poms to be checked every 2-3 days and changed out as needed, until Pom-Pom Boon is removed.

C. F. Higgins

Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

 The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

 All contamination has been removed. No further treatment required unless re-oiled.

Robert P. Lindner LT SCOT
signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-1B

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/29/89

COMMENTS: *Boomed with 104-201's and will check every 2-3 days and change out the pumps as necessary until boom is removed.*

C. F. Higgins
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Robert J. Lindgren LT Scott
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-3

SHORELINE SEGMENT NAME Green Haulout

SUBMITTED FOR APPROVAL 5 / 15 / 89

COMMENTS:

Environmentaly clean

William J. Stelip
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

ADEC not present
GAR

Signature of ADEC rep

Coast Guard Comments and Action.

☒ Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

G.A. Ruter 5/15/89
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-5

SHORELINE SEGMENT NAME Green Haulout

SUBMITTED FOR APPROVAL 5 / 11 / 89

COMMENTS:

Environmentaly clean

William Stulip
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

ADEC was not present
GAR

Signature of ADEC rep

Coast Guard Comments and Action.

☒ Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

☐ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

☐ All contamination has been removed. No further treatment required unless re-oiled.

G.A. Reiter 5/15/89
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

8

GR 11

DATE 9-7-89

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 GR 11 is complete.
Ready for demobilization & deployment to new segment

Signature

Jimmy D. Dyer

Date: 9/17/89 Time:

Printed Name

Jimmy D. Dyer

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
0
5
0
95
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

0
0
15
0
85
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

No significant oiling

Signature

Dale Dendner

Date: 9/17/89 Time: 11:35

Printed Name

DALE DENDNER

FOSC rep

Comments

Demobilization approved/disapproved

disapproved - contamination

Signature

Mike P. P. P.

Date: 9/17/89 Time: 11:30

Printed Name

Mike P. P. P.

COPY: EXXON ADEC FOSC ISCC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR 12

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/29/ 89

COMMENTS:

CF Duggan
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Robert P. Landon LT Stoi
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Pinniped Haulout Block

Addendum

Includes Shoreline Segments: GR-3, GR-4, GR-6

Submitted :

William Stelmars
(for Exxon)

Date:

5/6/89

FOSC Approval:

C.E. Robbins

Date:

5/12/89

Endorsed by IASCC 5-11-89 Sam S. [Signature], COR NW
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

*Approved
Master*

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/27/89 SHORELINE SEGMENT GR-3

LOCATION: (see enclosed map) North East point of Large Island,
adjacent to Green Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):

Last four hundred (400) meters near headland has patches which could be cleaned if it presents a Pinniped hazard. Little danger of oil refloating.

Priorities Considerations:

Pinniped Haulout.

Ecological Constraints (from site survey): Clean-up is not recommended for most of segment. Last four hundred (400) meters should be cleaned, although it is a low priority. Clean with low pressure cold wash when tide is N + 7'.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: Wm Stuhls

Date: 5/4/89

FOSC: _____

Date: _____

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

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/27/89 SHORELINE SEGMENT GR-4

LOCATION: (see enclosed map) GREEN ISLAND/Channel Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):

Pinniped Haulout Area - oiling on island is isolated and light. Confined to a few patches in fucus.

Priorities Considerations: NO Clean-up recommended. Except for two hundred

(200) meter area on west side (Seal Haulout Area). Oil impact is low, clean

only if concerned over pups (High Tidezone).

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.

Charles E. Himes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 27 / April / 89

Observer: Young H.N. Jr

Time: 12 h 57 m

Weather: Sun/Cloud Rain/Snow/Fog

LOCATION

LOCATION Channel Is

SITE

LOCATION PREFIX GR

SEGMENT NUMBER 4

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: m (Entire Island)

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

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/ /

Wave Exposure: High/Med/Low ^{10%} ^{5%}

Rock Y/N Vertical/High Angle/Low Angle

Sediment Y/N 85 Types: B/C/P/G/S/M/R

Strand Line Y/N Algae/Debris/Logs ^{20 10 30 25} Few at

OIL

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

N/W Zone - On Haul Out
On Fucus 200 m Band - 5m wide
Very Light - No Ch unless Affected
on Popping Season

CONTINUOUS: Y/N WIDTH OF BAND: m % of Segment

PATCHY: 20/30/40/50/60/70/80/90 % coverage % of Segment 5%

EST. OIL THICKNESS: Thin Coating cm EST. OIL PENETRATION: cm

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

STRAND LINE CLEAN/OILED

Dil entrained in Fucus

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

COMMENTS: Island is clean in most areas - Patch of
Oil in Fucus on NE, NW, and SW.

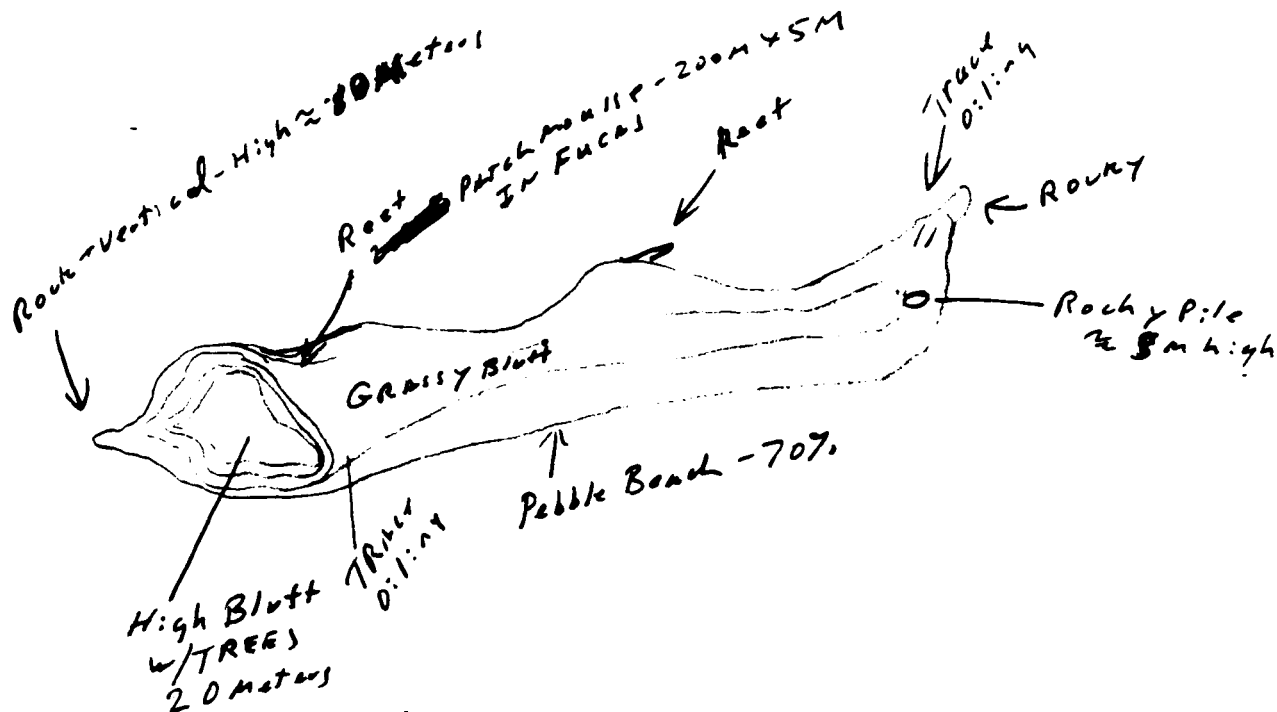
200x5m - NW Do Not Recommend Cleanup unless
Trails - EE Trace oiling on Fucus is a Hazard To Seal
20m x 2m - SW
C:\WP\DATA\SHOREVAL.1 Haulout + Popping - OTTER observed swimming
SE End of Island -
Did Not Appear To be Oiled

DOCUMENTATION:

MAP/Aerial photo marking segment boundaries

VTR: (Y/N) Tape Number(s) 8 - Aerial + Terrestrial - Complete
Island Both By Air + LAND
PHOTOGRAPHY: (Y/N) Roll Number(s) John LINDAR by Henry Young

SAMPLE NUMBERS COLLECTED:



C:\WP\DATA\SHOREVAL.1

(GR.4)

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Channel Isl. OBSERVER: Fawcett/AmdurLOCATION PREFIX: GR SEG. NO.: 24 LENGTH: _____ (M)DATE: 89/04/24 TIME (HHMM): 13:00 TIDE HT.: + .3 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NNone on Cobble beaches on west sideMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Nfew dense patches among gravel & bouldersBalanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Ndense patches on most rocky & stable bouldersLittorinaPatchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NExtremely dense in rocks on west side, feeding on drift algaeLimpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NScattered among rocks & bouldersOTHER OBSERVATIONS: few animals among bare ~~rocks~~ Cobble and gravel. High energy steep beach on west sideCLEANUP PRECAUTIONS: no Cleanup recommended except possibly in one 200m area on west side in Seal Haulout area - low Pressure washing although oil impact minimal.MAMMALS: Otters 2 Harbor Seals 2 Sea Lions _____ Whales _____
Other _____BIRDS: Oyster catchers (many)

GENERAL OBSERVATIONS: _____

{version of 4/25/89}

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4-27-89 Location GREEN Island Site Channel I

Location Prefix GA Segment # 4 Length _____

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 Little oil

Width of beach zone surveyed 5 m Tree fringe surveyed 5m

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:
moderately sloping pebble beach, low flat uplands except

Shore Profile FOR A ROCK SEA STACK AT THE SW CORNER OF THE ISLAND

Fresh Water Sources NONE

Sea Exposure very exposed

Access/Safety Intermediate stopping point between Green & Montague I.
Good view in all directions.

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 # my 2 Frames 10-11

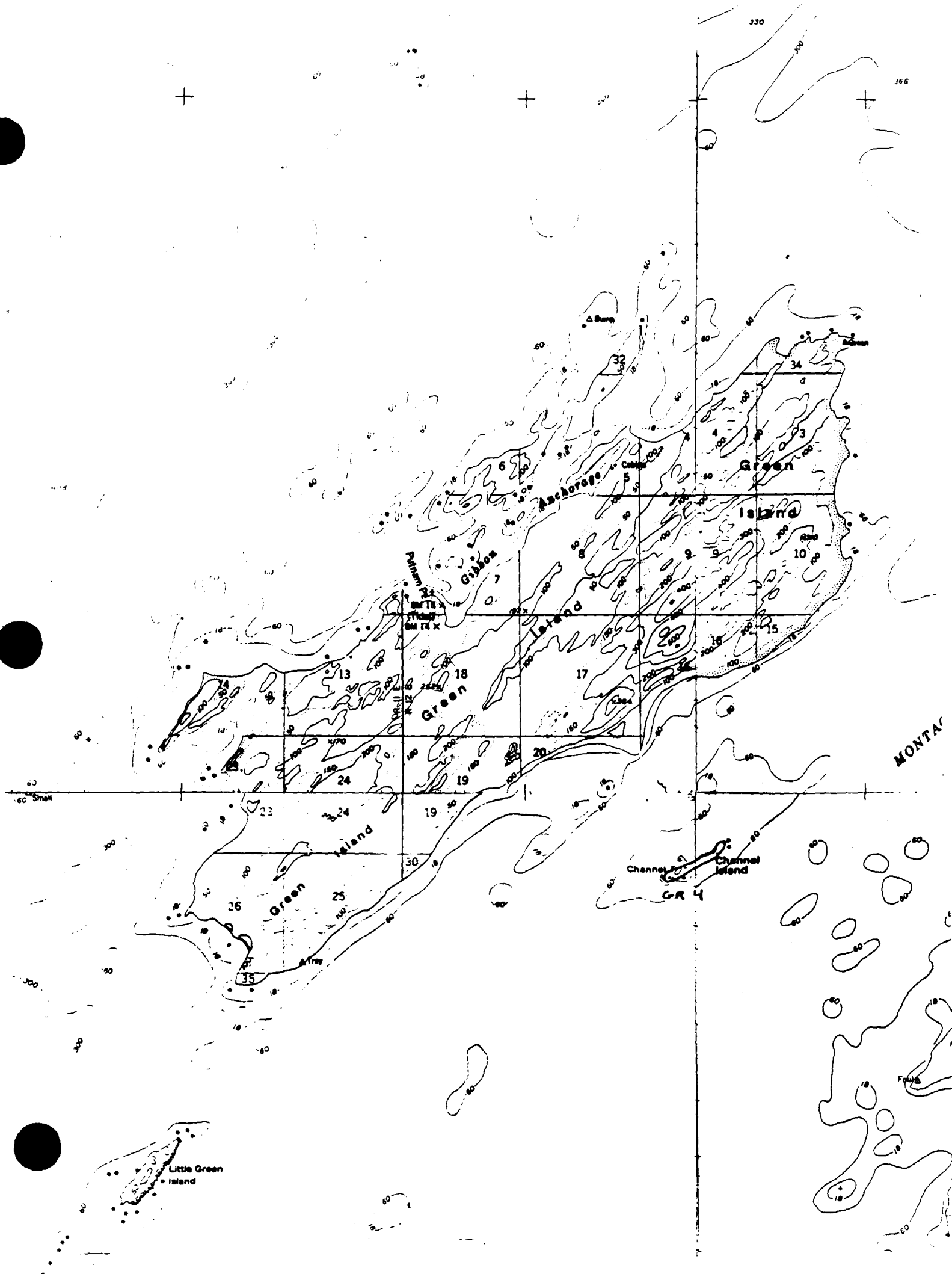
B/W Roll # _____ Frames _____

Observer(s) MIKE YARBOROUGH, Dave McMahan

Time survey started 12:41 Time survey ended 2:08

Cultural resource considerations/restraints:

IF PREVIOUSLY UNDISCOVERED CULTURAL REMAINS ARE UNCOVERED
DURING CLEANUP, CONTACT EXXON ARCHEOLOGIST C. MOBLEY
IMMEDIATELY.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 4/29/89 SHORELINE SEGMENT GR-6

LOCATION: (see enclosed map) GREEN ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies): NONE, Do not clean. Oil stain
is on a few rocks at extreme tideline, well above the area used by seals.
Oil has had little effort on the marine community.

Priorities Considerations:

Pinniped Haulout.

Ecological Constraints (from site survey):

Low to no impact. Stains high on vertical rocks. Do not clean.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: 5/4/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

Sent to TP e OR

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Green Island - Gibbon Anchorage
Block

Includes Shoreline Segments: GR-7, GR-8, GR-13, GR-14

Submitted : RPM: Adam Date: 5-15-89
(for Exxon)

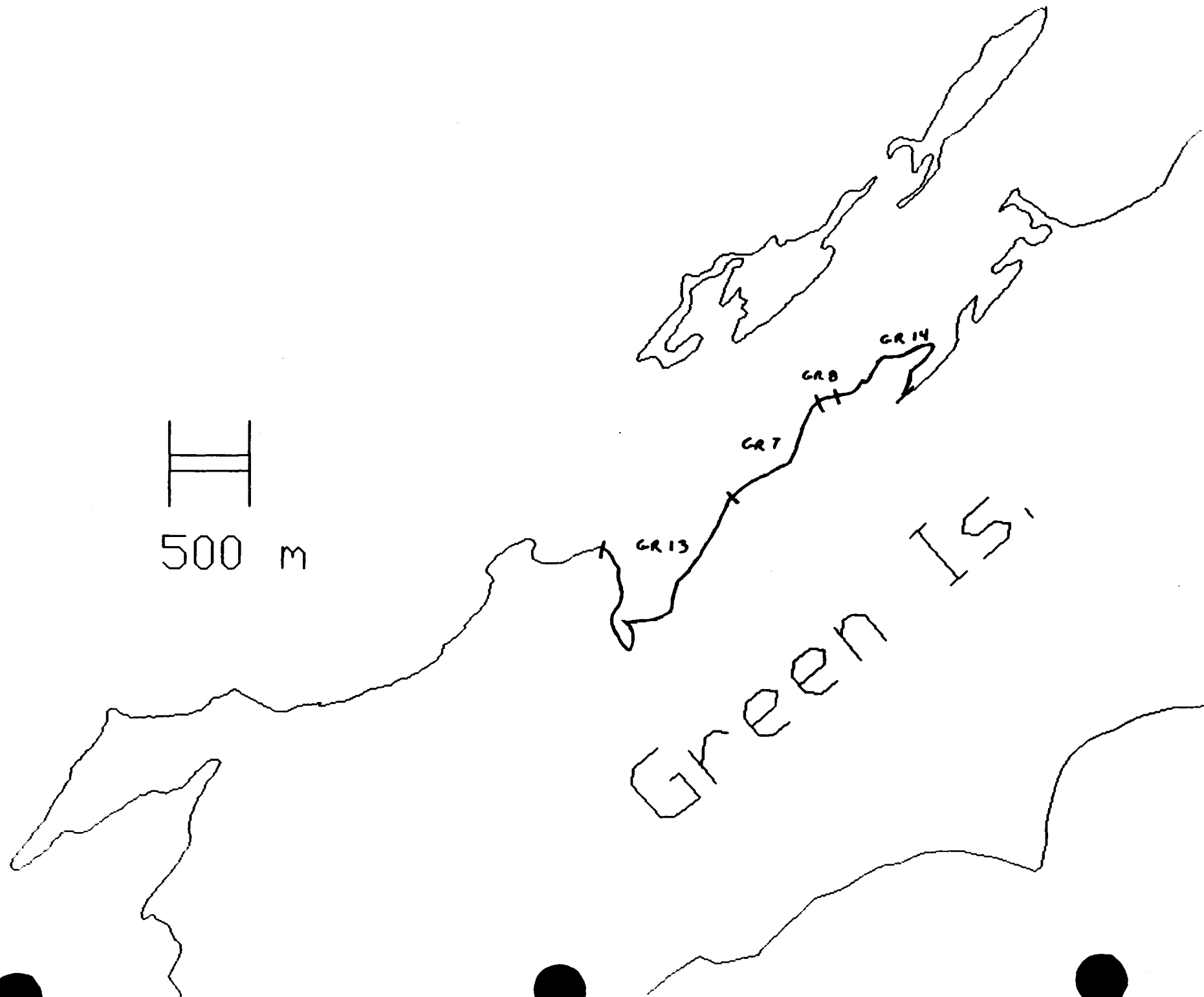
FOSC Approval: _____ Date: _____

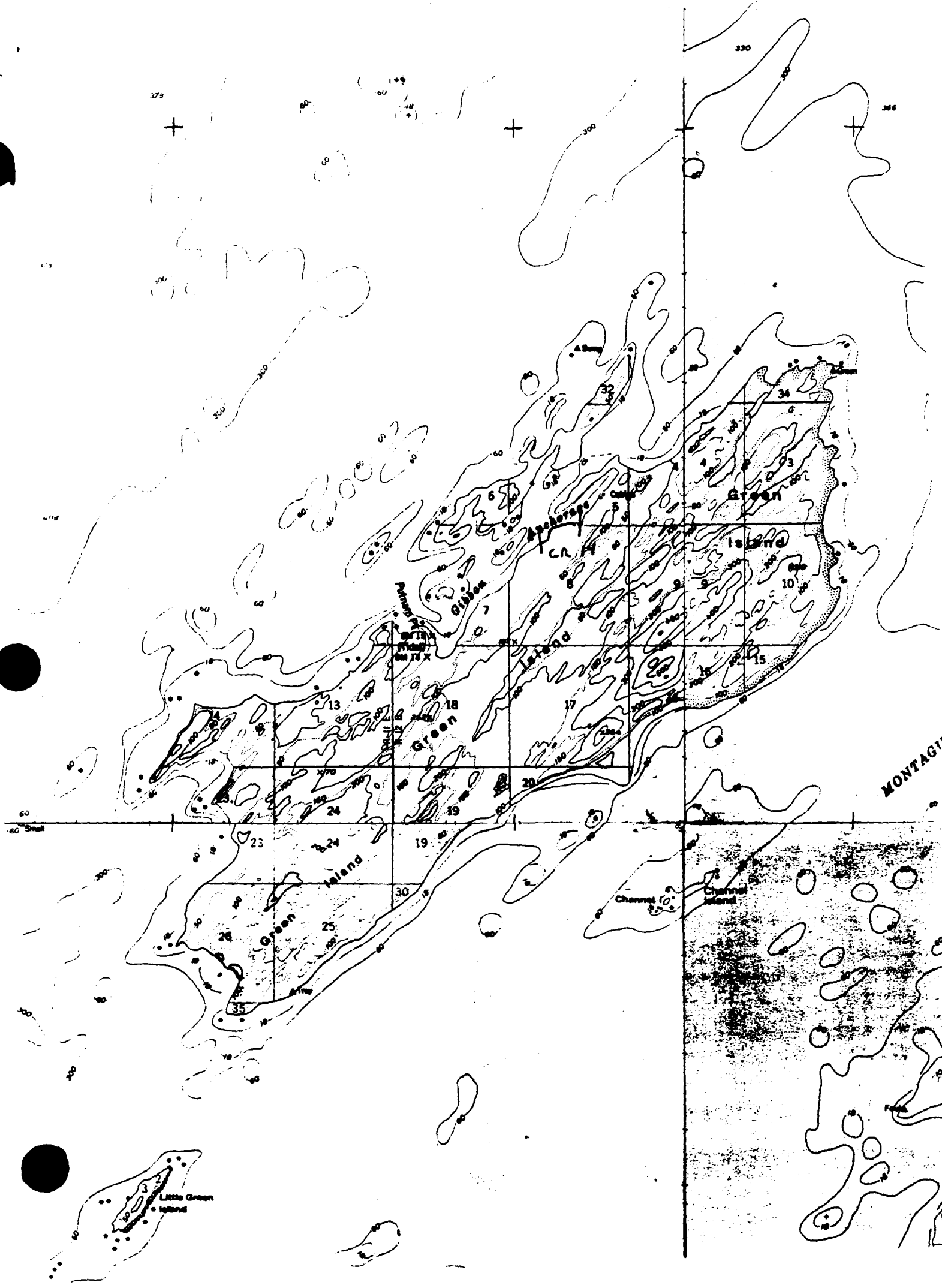
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative 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





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 4, 1989

SHORELINE SEGMENT GR-7

LOCATION: (see enclosed map) Green Island/Gibbon Anchorage

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/28/89

Recommended Cleanup Activity(ies):

Clean-up is recommended only as a ~~very~~ low priority. Small ~~foot~~
crew at +7' tide to ~~remove~~ oiled fucus, ~~only~~
~~No large scale mobilization is appropriate or needed.~~

Priorities Considerations:

Priority is given to possibility of herring spawn in area (although none seen) and bird health.

Ecological Constraints (from site survey):

Most of the communities are healthy. Small amounts of oil are on patches of fucus above +7' tide. Any cleaning work should be done at +7' tides only. Extent of oiling and damage is minimal, with little chance of effecting the shore birds which use the area.

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.

Augusta Peger
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: 5-19-89

FOSC: _____

Date: 5-21-89

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

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 28 / 89

Observer: Amclur

Time: 09 h 30 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION GREEN Isl.

SITE Gibbon Anchorage

LOCATION PREFIX GR

SEGMENT NUMBER 7 7

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 850 m

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

SHORELINE:

SHORELINE CHARACTER:

Beach/SPit/Cove/ /

Wave Exposure: High/Med/Low

Rock Y/N % 10 Vertical/High Angle/Low Angle

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

Strand Line Y/N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y/N WIDTH OF BAND: 2-3 m % of Segment 70

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

EST. OIL THICKNESS: Cent cm EST. OIL PENETRATION: cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

(GR-7)

ECOLOGICAL EVALUATION

LOCATION: Green SITE: Gibbon Anchorage OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 4 7 LENGTH: 850 (M)DATE: 89/04/28 TIME (HHMM): 0930 TIDE HT.: 2.8 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/Nfucus in dense patches along beach. Oil clinging to fucus in spotsMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NSome large bedsBalanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NBalanus present, generally unoiled but very patchy above + 7'LittorinaPatchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NLimpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NOTHER OBSERVATIONS: Geese seen above beach, not in effluent areas. Oil band very narrowCLEANUP PRECAUTIONS: if cleaned, do at + 9' tide recommend
not to clean. oiled fucus could be removed manually only.MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: GeeseGENERAL OBSERVATIONS: Oil is tarlike & not sticky, oiled fucus
could be removed by small foot patrol w/ little impact.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 4-28-89 Location Green Island Site Gibson Anchorage

Location Prefix GR Segment # 7 Length 800 m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) PAO in intertidal zone Data Source John Mattson

Oil conditions/beach visibility Band of oil c. 2m wide AT 8-foot tide line

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

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile moderately sloping angular boulder and large coarse beach intermixed with sediment. 12-25m wide zone on veg. covered, uplifted beach in front of ridge. A low beach ridge of uplands rising c. 2m above the beach.

Fresh Water Sources Three large streams and numerous small seeps

Sea Exposure Protected in Gibson Anchorage

Access/Safety Easily accessible, flat protected 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) Mike Varborough

Time survey started 9:30 am Time survey ended 10:30 am

Cultural resource considerations/restraints:

IF cleanup is limited to manual removal of oiled focus,

NO cultural resource considerations/restraints are necessary. should

heretofore undiscovered cultural remains are found during cleanup,

contact Exxon Archeologist C. Mosley immediately.

(Version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/4/89

SHORELINE SEGMENT GR-8

LOCATION: (see enclosed map) Green Island/Gibbon Anchorage

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies):

Clean-up recommended as "Class 2" priority. Crew in only at +9' tide, very low pressure. Cold wash ok, (soft sediments present, so limit pressure so as not to wash out sand/mud). Foot crew can collect oiled debris from drift line.

Priorities Considerations:

This is a bird habitat area with many shore birds. Soft sediments support large bivalve community. DO NOT WASH OUT SEDIMENTS.

Ecological Constraints (from site survey):

Healthy community below and above oiled zone. Benthic community supports bird populations. Low pressure wash ok, (very low). Try to keep people out of subtidal mudflats and use as few boats as possible. Do work at +9' tide only.

Archeological Constraints (from site survey):

Archeological monitor to be present during cleanup.

Douglas Reger

State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: 5/19/89

FOSC: _____

Date: 5/21/89

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

~~Reserve no cleanup recommendations~~

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 04 / 29 / 89

Observer: Amdur

Time: 08 h 45 m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION GREEN Isl.

SITE Gibbon Anchorage

LOCATION PREFIX GR

SEGMENT NUMBER 8

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 150 m

ACCESS: Foot/VEHICLE/BOAT/BARGE/HELICOPTER/Float Plane

SHORELINE:

SHORELINE CHARACTER:

BEACH/SPIT/COVE/ / /

Wave Exposure: High/Med/Low

Rock Y/N % 5 VERTICAL/High Angle/Low Angle

SEDIMENT Y/N % 95 Types: B / C / P / G / S / M / R

Strand Line Y/N Algae/Debris/Logs

OIL

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

CONTINUOUS: Y/N WIDTH OF BAND: 20 m % of Segment 50

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

EST. OIL THICKNESS: Cent cm EST. OIL PENETRATION: 1 cm

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

STRAND LINE CLEAN/OILED

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

COMMENTS:

(GRB)

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Gibbon Anchorage OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 8 LENGTH: 150 (M)DATE: 29/04/29 TIME (HHMM): 0845 TIDE HT.: 3 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NDense areas of fucus / area at +9' tide Most fucus coatedMytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NMany mussels in shale beach on NE end of sectorBalanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NLittorinaPatchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NLimpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NOTHER OBSERVATIONS: Shale over Sand & mud, lamellibranchia in
Soft Sediments.CLEANUP PRECAUTIONS: Cleanup recommended because bird Habitat,Clean only at +9' tide or higher (Keep people out of Subtidal
mud flats as much as possible) use low pressure wash (cold) & keep
Pressure low enough not to wash away sediments. Small crows.MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: Oyster Catchers, other shorebirds ~ 20+

GENERAL OBSERVATIONS: _____

Pick up oiled debris from wreck line ←

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 4-29-89 Location Green Island Site Gibson Anchorage

Location Prefix GR Segment # 8 Length 150m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) PAO in intertidal zone Data Source John Mattson

Oil conditions/beach visibility 6 m wide band of oil across the upper beach

Width of beach zone surveyed 10-12 m Tree fringe surveyed up to 10m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile FLAT BEACH OF COASTLES TO ANGLER ROCK. up to a 50m wide zone of Alder and small spruce covered raised beach in front of a low up/n water seeping through a beach ridge above the beach.

Fresh Water Sources small Pond Behind the Beach Ridge.

Sea Exposure Protected in Gibson Anchorage

Access/Safety Protected, easily Accessible 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) Mike Yarrowough

Time survey started 9:45 AM Time survey ended 10:15 AM

Cultural resource considerations/restraints:

Site should be monitored during cleanup. Should therefore
undiscovered cultural material be discovered during cleanup,
contact Exxon Archeologist C. Mobley immediately.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 4, 1989

SHORELINE SEGMENT GR-13

LOCATION: (see enclosed map) Green Island / Putnam Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/27/89

Recommended Cleanup Activity(ies):
None, little oil.

Priorities Considerations:
None

Ecological Constraints (from site survey):
Very little tar on a few rocks. No clean-up recommended. Possible
anadromous fish stream in center of cove.

Archeological Constraints (from site survey):
Cultural resource evaluation not completed, no oil. If cleanup
is planned, cultural resources evaluation should be conducted.

Douglas Rege
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: 5-19-89

FOSC: _____

Date: 5-21-89

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

Reserve no cleanup recommendation pending FOSC
inspection.

SHORELINE OIL EVALUATIONDate: 04 / 27 / 89Observer: Amdur

Time: _____ h _____ m

Weather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION Green Isl.SPECIFIC AREA Cove East of Putnam pointLOCATION PREFIX GRSEGMENT NUMBER 13

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

LENGTH OF SHORELINE SEGMENT: _____ m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:****SHORELINE CHARACTER:**Shoreline Type: BEA/COV/HANG/LANG/VER/HLD/SPIWave Exposure: High/Med/LowSediment: B 2% / C 70% / P 10% / G 10% / S 8% / M _____% / R _____%Drift Debris in Intertidal Zone: Yes/No Upper/Mid/Lower Type _____**OIL**

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

Continuous: Y/N Width of Band: _____ m % of Segment 0Patchy: 10/20/30/40/50/60/70/80/90% coverage % of Segment 0Est. Oil Thickness: 0 cm Est. Oil Penetration: 0 cmPooled Oil: 0% "Free" Oil: 0% Weathered: 0% Stained: 8%Tar Formation: 2%

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

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

Comments:

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Cove east of OBSERVER: Amdur
Putnam Point
LOCATION PREFIX: GK SEG. NO.: 13 LENGTH: _____ (M)
DATE: 89/04/27 TIME (HHMM): 4:27 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

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

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

Littorina

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

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

OTHER OBSERVATIONS: Possible anachanous in center of Cove. Sand and gravel
near stream mouth.

CLEANUP PRECAUTIONS: No Cleanup recommended. Very little oil impact

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

BIRDS: 2 Bald Eagles Seen.

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 4-27-89 Location Green Island Site cove east of Putnam Point

Location Prefix GR Segment # 13 Length _____

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) SEW 208 Data Source AHRS files

Oil conditions/beach visibility very little oil

Width of beach zone surveyed _____ m Tree fringe surveyed _____

Cultural resources observed in beach zone (AHRS code) FX1

Cultural resources observed in tree fringe (AHRS code) FX1

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

Shore Profile _____

Fresh Water Sources _____

Sea Exposure _____

Access/Safety _____

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) _____

Time survey started _____ Time survey ended _____

Cultural resource considerations/restraints:

cultural resource evaluation not completed: no cleanup

recommended.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE May 5, 1989

SHORELINE SEGMENT GR-14

LOCATION: (see enclosed map) Green Island/Gibbon Anchorage

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 4/29/89

Recommended Cleanup Activity(ies):

No oil. No clean-up recommended.

Priorities Considerations:

None

Ecological Constraints (from site survey):

Beaches are clean. Do not approach.

Archeological Constraints (from site survey):

Cultural resource evaluation not completed, no oil. If cleanup is planned, cultural resources evaluation should be conducted.

Douglas Rege
State Historic Preservation Officer *

Date: 5/13/89

EXXON: _____

Date: 5/14/89

FOSC: _____

Date: 5/21/89

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

SHORELINE OIL EVALUATIONDate: 04 / 29 / 89Observer: Amdur

Time: _____ h _____ m

Weather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION Green Isl.SPECIFIC AREA Gibbon AnchorageLOCATION PREFIX GRSEGMENT NUMBER 14

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

LENGTH OF SHORELINE SEGMENT: _____ m

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

SHORELINE CHARACTER:

Shoreline Type: BEA/COV/HANG/LANG/VER/HLD/SPIWave Exposure: High/Med/LowSediment: B _____ % / C 50 % / P 10 % / G 10 % / S 10 % / M 20 % / R _____ %Drift Debris in Intertidal Zone: Yes/No Upper/Mid/Lower Type _____**OIL**

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

Continuous: Y/N Width of Band: _____ m % of Segment 0Patchy: 10/20/30/40/50/60/70/80/90% coverage % of Segment 0Est. Oil Thickness: 0 cm Est. Oil Penetration: 0 cmPooled Oil: 0 % "Free" Oil: 0 % Weathered: 0 % Stained: 0 %Tar Formation: 0 %Drift Debris in Intertidal Zone Oiled ? Yes/No Upper/Mid/LowerDegree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Comments:

ECOLOGICAL EVALUATION

LOCATION: Green Isl. SITE: Gibbon Anchorage OBSERVER: AmdurLOCATION PREFIX: GR SEG. NO.: 14 LENGTH: ~~14~~ (M)DATE: 89/04/29 TIME (HHMM): 10:00 TIDE HT.: ~~1.5~~ + 2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand MudLIVE BIOTAFucus (algae): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NMytilus (Mussels): Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NBalanus (Barnacles): Patchy (Y)/N Contin. Y/N Dense (Y)/N Sparse Y/N None Y/NLittorinaPatchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NLimpets: Patchy (Y)/N Contin. Y/N Dense Y/N Sparse (Y)/N None Y/NOTHER OBSERVATIONS: numerous Shorebirds. Clams present & numerous
soft sediments.CLEANUP PRECAUTIONS: No oilMAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: many Shorebirds

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 4-29-89 Location Green Island Site Gibson Anchorage

Location Prefix GR Segment # 14 Length _____

Survey Method:

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

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) _____ Data Source _____

Oil conditions/beach visibility no oil

Width of beach zone surveyed - m Tree fringe surveyed -

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 _____

Fresh Water Sources _____

Sea Exposure _____

Access/Safety _____

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) _____

Time survey started _____ Time survey ended _____

Cultural resource considerations/restraints:

Cultural Resource evaluation not completed: no oil

EXXON VALDEZ
SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-7

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/29/89

COMMENTS:

C. F. Duggan
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Richard P. Hudson LT Sec.
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDES

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GRB

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/29/89

COMMENTS:

Archaeologist Peter Phippen on site prior to
and during cleaning. Area surveyed at both high/low tide
No cultural materials discovered.

C. F. Duggins
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Richard P. Anderson LT 9071
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR 13

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/28/ 89

COMMENTS:

C. A. Quinn
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and ac-
recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that
the oil will not migrate. Site will require reassessment at a
later date to determine future treatment.

____ The majority of surface oil contamination has been removed.
The site will require reassessment at a later date to determine
future treatment.

____ All contamination has been removed. No further treatment
required unless re-oiled.

Richard M. Sanderson II
Signature of Coast Guard r

XC: ADEC
EXXON
FSOC

EXXON VALDES

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-14

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/29/ 89

COMMENTS:

C. F. Duggins
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Richard P. Lander
Signature of Coast Guard

XC: ADEC
EXXON
FSOC

(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): GREEN ISLAND NORTH BLOCK

(REASSESSMENT)

Includes Shoreline Segments: GR-104R

Submitted : *[Signature]* Date: 8/17/89
(for Exxon)

ISCC Recommendation: *Jaqueline Michel* Date: 8/23/89

FOSC Approval: *D. E. Conway* Date: 8-23-89

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 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT GR-104R

LOCATION: (see enclosed map) GREEN ISLAND-NORTHERN

(GREEN ISLAND NORTH BLOCK) (REASSESSMENT)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/13/89

Recommended Cleanup Activity(ies):

No cleanup is recommended at this time due to light oil contamination and a medium wave exposure which has been cleaning this beach since first assessed on 5/16/89.

Priorities Considerations:

4B

Ecological Constraints (from site survey):

No cleanup is recommended because of the presence of an active eagle nest that would be disturbed if this small amount of oil were cleaned.

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: 8/17/89

ISCC: 

Date: 8/23/89

EXXON: 

Date: 8-23-89

 FOSC: 

Date: 8-23-89

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

(version 5/13/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): GREEN ISLAND NORTH

Includes Shoreline Segments: GR-101, GR-102, GR-103, GR-104,
GR-105

Submitted : *ARM: Adams* Date: 5-19-89
(for Exxon)

FOSC Approval: *CS Polgias* Date: 5-21-89

ISCC Representative *[Signature]* 5/21/89
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:

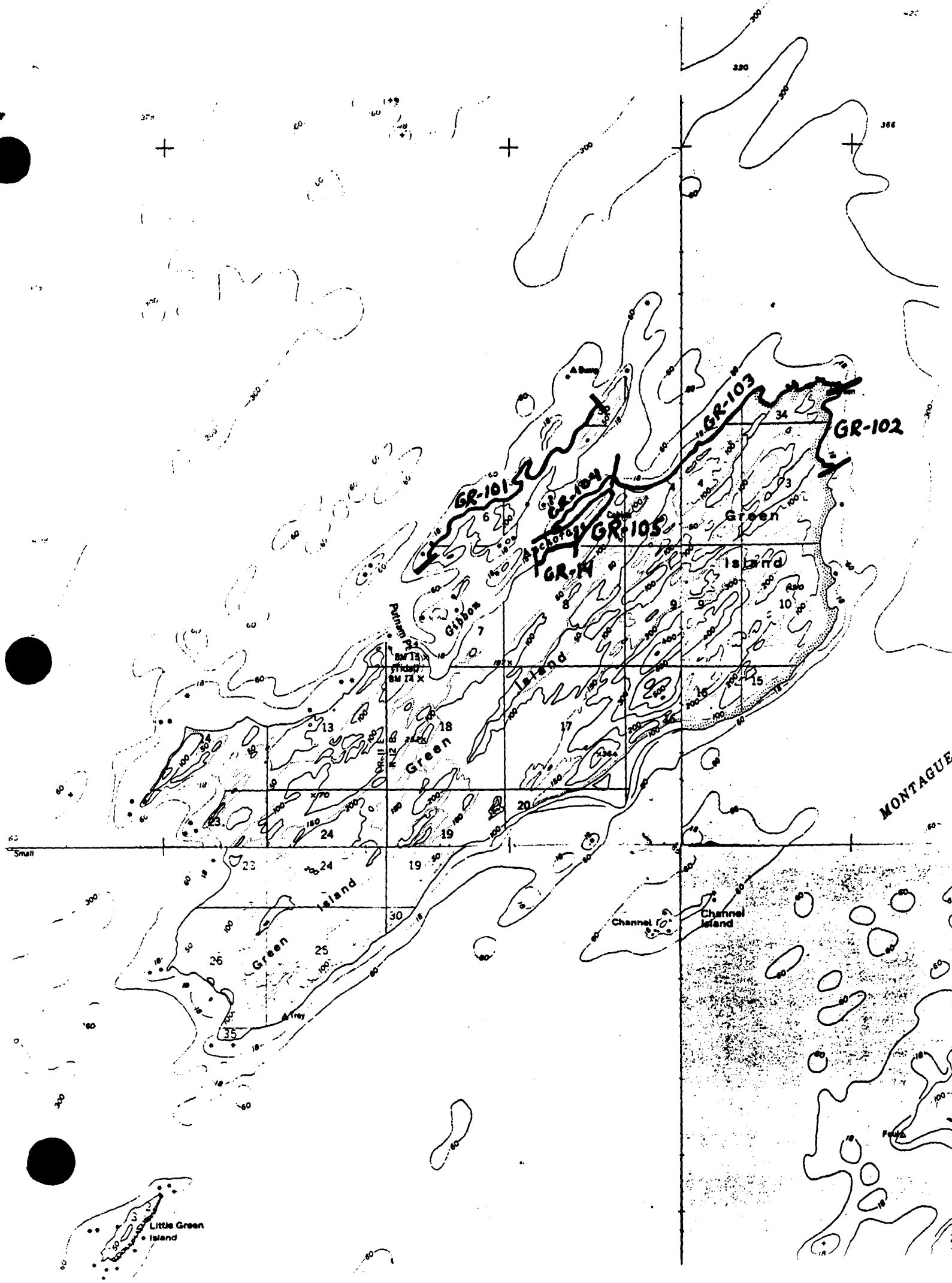
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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

NO ORIGINAL

EXXON

SIGNATURE



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/19/89

SHORELINE SEGMENT GR-101

LOCATION: (see enclosed map) GREEN ISLAND NORTH - Small island
North of Green Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/16/89

Recommended Cleanup Activity(ies):

Use hot water (180 degrees) on cobble beach on heavy tar and mousse area. Use high pressure on rock reefs and remove all oiled fucus. Confine activities to affected areas.

Priorities Considerations: Medium.

Ecological Constraints (from site survey):

Do not clean high-medium tidal areas when tide is low.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: May 19, 1989

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE EVALUATION

Date: 5/16/89 Time: 1400

Observer: MEYER

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun Cloud/Rain/Snow/Fog

LOCATION

LOCATION Small Island N of Green Island SEGMENT NUMBER GR 101

LENGTH OF SHORELINE SEGMENT: 4400 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 20% / C 15% / P 20% / G 5% / S 5% / M % / R 35%

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 30 Width of Band: 10-20 m

Sporadic: Y/N % of Segment 70

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

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

Fresh % Mousse 80% Tar Formation: 20%

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

Comments:

Beach #1 - SW half moderately oiled - recommended for cleanup
 Beach #2 - Continuous band in mid-high tidal zone, moderately oiled (H-med oil)
 Beach #3 - mid-high tidal zone moderately oiled, 6-10m wide band
 Beach #4 - oiled band 6-10m wide thru middle tidal zone - not heavy coat
 Beach #5 - heavier oiled band mid-tidal zone
 Beach #6 - Band on west end 15m wide, rest oil patchy - lower priority cleanup

ECOLOGICAL EVALUATION

LOCATION: Green Island SITE: GR 101 OBSERVER: MEYER
 LOCATION PREFIX: GR SEG. NO.: 101 LENGTH: 1400 (M)
 DATE: 05/16/89 TIME (HHMM): 1400 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
 Bands of Fucus dead in mid tidal zone retaining oil and mousse; surrounding boulders/cobbles no longer oiled.
 Fucus in lower tidal zone alive, occasionally with light oil coating. Green & healthy in most of low tidal zone.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Mussels dense on Beach #2 and coated with oil in oiled zone but still alive (closed).
 Patchy dense mussels on rock reefs and ^{boulder} ~~cobble~~ fields, uncoated.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Patchy Balanus on Beach #1 covered in mousse but alive; large expanses with no Balanus present.
 Uncoated headlands with dense healthy Balanus (outside oiled zone).

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
^{oiled fucus?}
 Alive amid weathered oiled rocks but sparse → moving into area?

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

Few seen, all alive, none in oiled zone.

OTHER OBSERVATIONS: ^{Light to} Moderate oiling in mid and high intertidal zones, ^{on boulders} fucus dead in oiled zone and holding much of the mousse/oil present, little/no live biota. Work oiled band only at mid tide to high tide to avoid damage to living biota.

CLEANUP PRECAUTIONS: in lower intertidal zone.

one may have been oiled - dark fur

MAMMALS: Otters _____ Harbor Seals (±1) 6 Sea Lions _____ Whales _____
 Other _____

BIRDS: 5 NW Crows, 1 Cormorant sp., 4 Pigeon Guillemot, 1 Eagle

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/16/89 Location Small island north of Green Site

Location Prefix GR Segment # 101 Length 3940

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) 207 Data Source 14(h)(1)

Oil conditions/beach visibility light to moderate

Width of beach zone surveyed 2-10 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 beaches moderately sloped, but heavily cobbled

Fresh Water Sources none

Sea Exposure open to north

Access/Safety good at low tide

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

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

Photos: Color Roll # None Frames _____

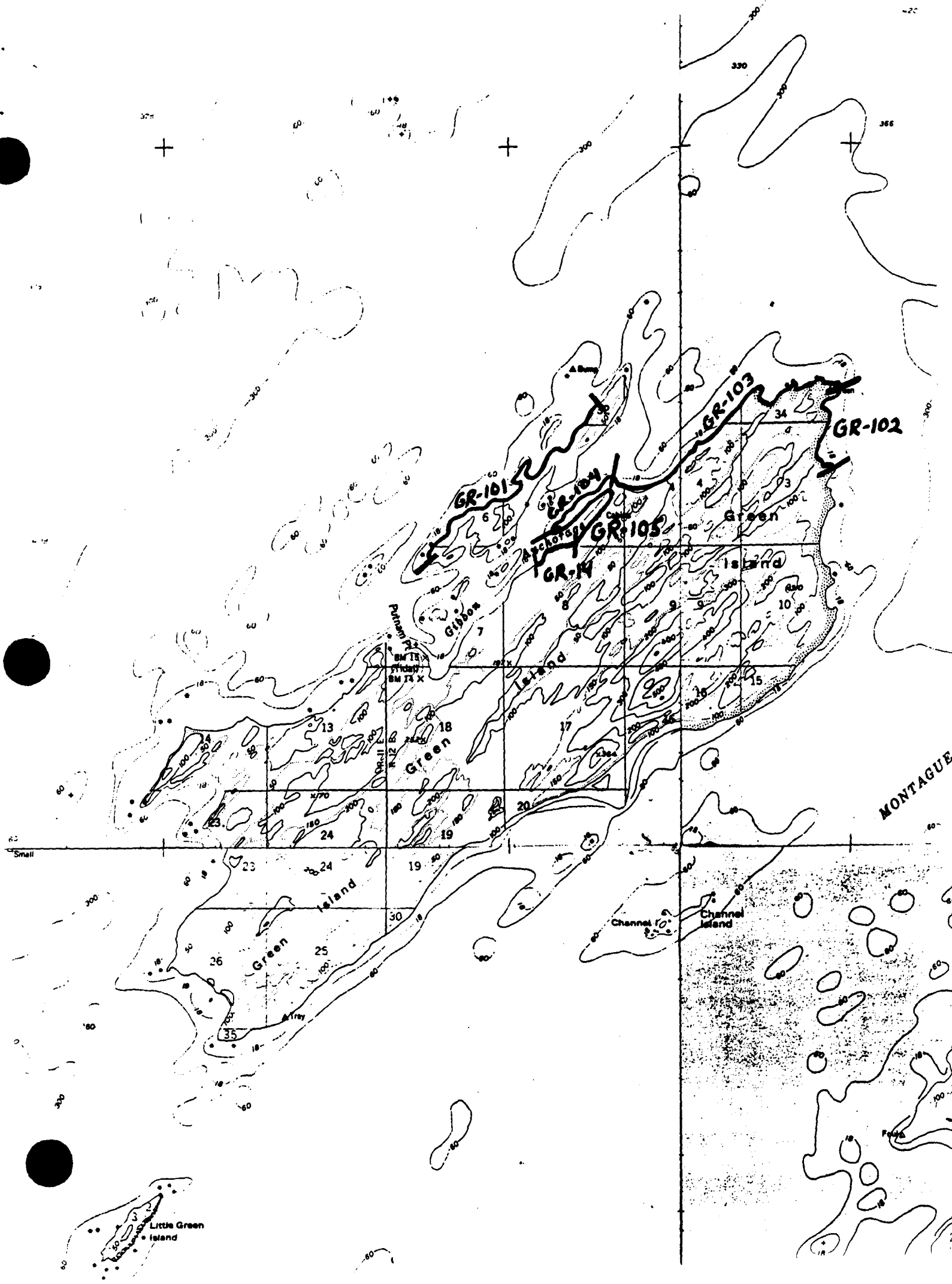
B/W Roll # _____ Frames _____

Observer(s) C. Wilcox

Time survey started 1400 Time survey ended 1600

Cultural resource considerations/restraints:

If heretofore undiscovered cultural resources are
uncovered during cleanup, notify Epson
archaeologist, C. Wilcox, immediately



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/19/89

SHORELINE SEGMENT GR-102

LOCATION: (see enclosed map) Northeast end of Green Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/16/89

Recommended Cleanup Activity(ies):

No cleanup recommended - oiling is light and patchy. Possibly bag dead-oiled fucus at midtide line.

Priorities Considerations: None.

Ecological Constraints (from site survey):

Do not disturb abundant live biota. If cleanup activities occur constraints should be reconsidered.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: May 19, 1989

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

LEANUP PROGRAM

SHORELINE SEGMENT GR-101

GREEN ISLAND NORTH - Small island

ASSESSMENT DATE: 5/16/89

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on cobble beach on heavy tar and
on rock reefs and remove all oiled
affected areas.

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site survey):

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cer * Date: May 19, 1989

Date: 5-19-89

Date: 5-21-89

stipulations in Alaska DNR
submerged lands .

sta (sh) shoreline cleanup manual.

LEANUP PROGRAM

SHORELINE SEGMENT GR-102

northeast end of Green Island

ASSESSMENT DATE: 5/16/89

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ficer * Date: May 19, 1989

Date: 5-19-89

Date: 5-21-89

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id submerged lands .

him probing FOSC inspection

SHORELINE EVALUATIONDate: 05/16/89 Time: _____Observer: MEYERSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FoLOCATIONLOCATION GREEN ISLANDSEGMENT NUMBER GR 102LENGTH OF SHORELINE SEGMENT: 1600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/SEA/COV/FLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 10% / C 30% / P 5% / G 5% / S ___% / M ___% / R 50%Drift 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 / L

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

Sporadic: Y/N ___% of Segment 100

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

Pooled Oil: _____% "Free" Oil: _____% Coated: H ___% / M 100% / L ___%Fresh _____% Mousse 20% Tar Formation: 80%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

ECOLOGICAL EVALUATION

LOCATION: GREEN ISLAND SITE: GR 102 OBSERVER: MEYER

LOCATION PREFIX: GR SEG. NO.: 102 LENGTH: 1600 (M)

DATE: 05/16/89 TIME (HHMM): 1600 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low ~~None~~

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dead fucus is retaining oil and mucus, surrounding boulders & cobbles no longer oiled.

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: Oiled areas light and patchy, primarily oiled fucus with abundant mytilus, balanus, littorina throughout area and rocks self-cleaned.

CLEANUP PRECAUTIONS: No cleanup recommended.

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

BIRDS: Eagle, several small birds - murrelets

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/16/89 Location Green Island Site _____
Location Prefix GR Segment # GR-102 Length 1600m
Survey Method:
Air _____ (A - indicate on map) Boat ✓ (A - indicate on map)
Ground ✓ (G - indicate on map)
Known cultural resources (AHRS #) None Data Source None
Oil conditions/beach visibility No oil
Width of beach zone surveyed 0-3 m Tree fringe surveyed 10m
Cultural resources observed in beach zone (AHRS code) None
Cultural resources observed in tree fringe (AHRS code) None
General observations justifying survey method and segment's site probability:
Shore Profile moderately sloped beaches
Fresh Water Sources water seeping on beach
Sea Exposure open to east
Access/Safety good at low tide
Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5
Monitoring during cleanup needed yes (no) Collection yes (no)
Photos: Color Roll # _____ Frames _____
B/W Roll # _____ Frames _____
Observer(s) C. Mobley
Time survey started 1600 Time survey ended 1625
Cultural resource considerations/restraints:
If heretofore undiscovered cultural materials are
uncovered during cleanup, contact Exxon archaeologist
C. Mobley, immediately.

GR-102

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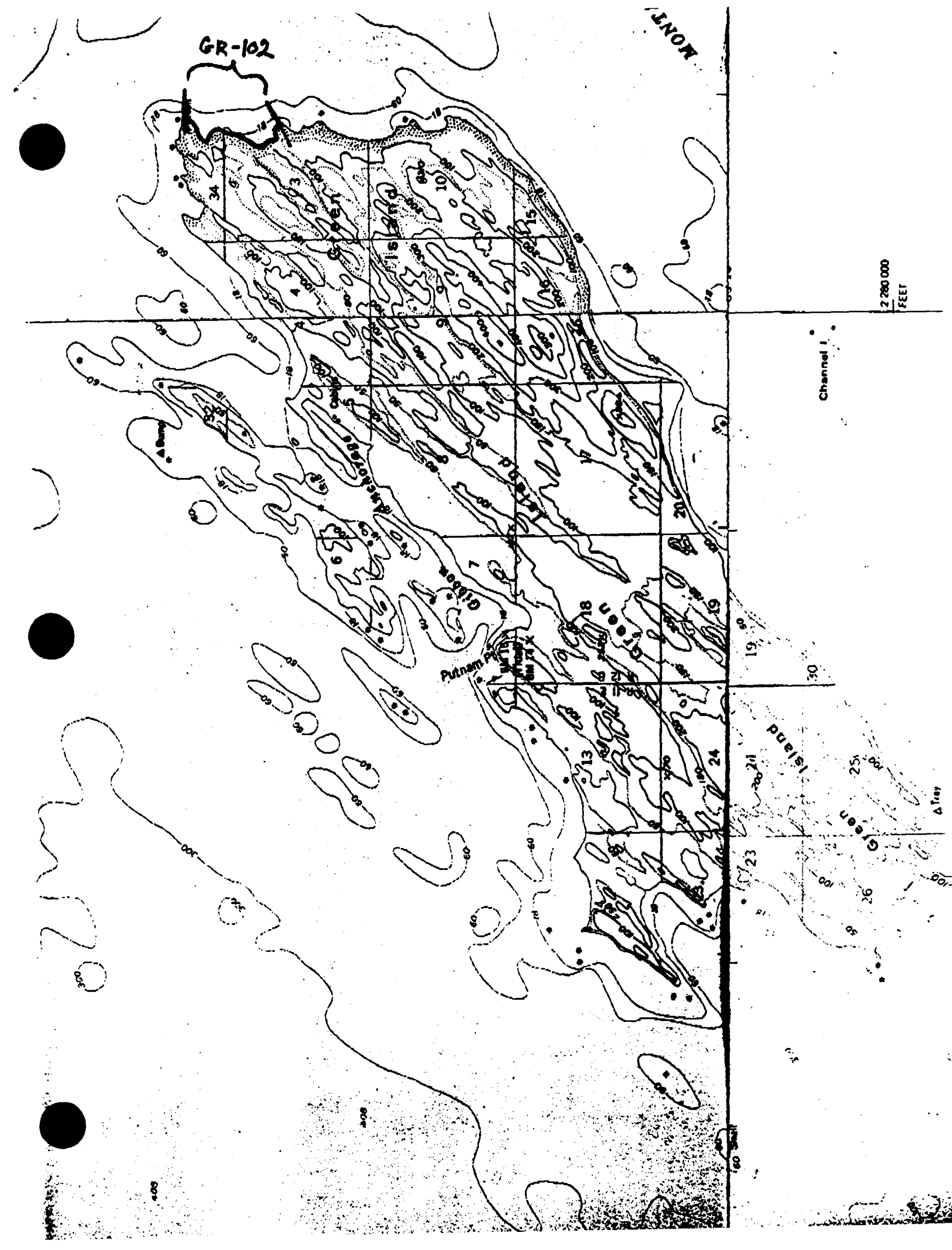
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Tray



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/19/89

SHORELINE SEGMENT GR-103

LOCATION: (see enclosed map) Green Island Northeast end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/16/89

Recommended Cleanup Activity(ies): Scoop up heavy mousse areas prior to mechanical cleanup. Use hot water on cobble beach on heavy tar and mousse area. Pick up manually oiled sea grasses deposited above high tide line and double bag. On beach #3 oiled gravel berm at supra tidal may be pushed into active surf zone.

Priorities Considerations: Medium.

Ecological Constraints (from site survey): Do not clean high - medium tidal areas when tide is low. Do not use high pressure/ hot water in upland area of oiled grasses. Do not clean this area (beach 3).

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

Charles E. Himes
State Historic Preservation Officer *

Date: May 19, 1989

EXXON: _____

Date: 5-19-89

FOSC: _____

Date: 5-21-89

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

SHORELINE OIL EVALUATIONDate: 05/16/89 Time: 1630Observer: MEYERSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION Northwest shore of Green Island SEGMENT NUMBER GR 10.3LENGTH OF SHORELINE SEGMENT: 4300 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 15% / C 10% / P 2% / G 2% / S 1% / M % / R 70%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type uncoiled logs
heavy matted grassOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 80 Width of Band: 10-25 mSporadic: Y/N % of Segment 20Est. Oil Thickness where > 1cm: 12 cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: 25% Coated: H 30% / M 45% / L %Fresh 10% Mousse 60% Tar Formation: 30%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Beach #1 - patches of heavy free oil mousse; most oil on bedrock; continuous band @ mid-high tide line, appears like oiled w/ weathered oil covered with newer mousse.

Beach #2 - continuous sm band of oil @ mid-high tide line

Between Beach #2 and #3 - continuous mod-heavy band of mousse 6-20m wide @ mid tide line

Beach #3 - East end only has band of mousse; oil above high tide line mixed in gravel - possibly oiled gravel redeposited by tide.

ECOLOGICAL EVALUATION

LOCATION: GREEN ISLAND SITE: GR 103 OBSERVER: MEYER
 LOCATION PREFIX: GR SEG. NO.: 103 LENGTH: 4300 (M)
 DATE: 05/16/89 TIME (HHMM): 1630 TIDE HT.: _____ (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse Y/N None Y/N
 Fucus in mid-high ITZ oiled and dead; healthy fucus in lower tidal zone. High tide line
 marked on beaches by continuous roll of dead, uprooted eel grass retaining heavy mousse.

Mytilus (Mussels): Patchy (Y/N) Contin. Y/N Dense (Y/N) Sparse (Y/N) None Y/N
 Some mussels coated with oil but alive (closed)

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: Oiled zone basically free of mytilus, balanus, littorina, limpets,
live fucus. Beach 3 has oiled area extending around roots of land grasses.

CLEANUP PRECAUTIONS: Work oiled band only at mid tide to high tide to
avoid damage to living biota in lower intertidal zone. Pick up and bag the
heavily oiled/moussed retining sea grasses.

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

BIRDS: 4 Pigeon Guillemots; 1 Great Blue Heron

GENERAL OBSERVATIONS: _____

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/16/89 Location Haan Island Site _____

Location Prefix CR Segment # CR-103 Length 4300m

Survey Method:

Air _____ (A - indicate on map) Boat no ~~yes~~ (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) 207 Data Source 14(h)1?

Oil conditions/beach visibility light to heavy

Width of beach zone surveyed 2-8 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

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

Shore Profile Two cobbled beaches but mostly steep far and
cobble fields

Fresh Water Sources One stream

Sea Exposure Open to north

Access/Safety good

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

Monitoring during cleanup needed yes no Collection yes no

Photos: Color Roll # None Frames _____

B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1630 Time survey ended 1800

Cultural resource considerations/restraints:

If herefore undiscovered cultural resources are
identified during cleanup contact Epur authorities
immediately.

A:rey

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/19/89

SHORELINE SEGMENT GR-104

LOCATION: (see enclosed map) GREEN ISLAND NORTH

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/16/89

Recommended Cleanup Activity(ies):

Use hot water (180°) on cobble beach, high pressure on rock reefs.

Priorities Considerations:

Low.

Ecological Constraints (from site survey):

Do not clean high-medium tidal areas when tide is low.

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 *

Date: May 19, 1989

EXXON: _____

Date: 5-19-89

FOSC: _____

Date: 5-21-89

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

SHORELINE OIL EVALUATIONDate: 05/16/89 Time: 1715Observer: MEYERSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION NORTH GREEN ISLANDSEGMENT NUMBER GR 104LENGTH OF SHORELINE SEGMENT: 75 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/SEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 5 % / C 55 % / P 5 % / G 20 % / S 1 % / M 1 % / R 10 %Drift 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 50 Width of Band: < 1 mSporadic: Y/N % of Segment 50Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H % / M 100 % / L %Fresh % Mousse 20 % Tar Formation: 20 %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

Oiled areas patchy and > 1 m wide - low priority cleanup.

ECOLOGICAL EVALUATION

LOCATION: N. Green Island SITE: GR 104 OBSERVER: MEYER

LOCATION PREFIX: GR SEG. NO.: 104 LENGTH: 75 (M)

DATE: 05 / 16 / 89 TIME (HHMM): 1715 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Fucus in lower tidal zone adjacent to oiled area alive & healthy

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: Segment primarily cobble + gravel beaches — little biota present.

CLEANUP PRECAUTIONS: _____

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

BIRDS: 2 oystercatchers, ~20 glaucous winged gulls, 1 short-billed dowitcher.

GENERAL OBSERVATIONS: Oiled areas patchy and >1 m wide, not much biota impacted, some dead oiled fucus in patches.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/16/89 Location New Island Site _____

Location Prefix CR Segment # CR104 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 None

Oil conditions/beach visibility light

Width of beach zone surveyed none m Tree fringe surveyed none

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

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

Shore Profile steep wash and heavy boulder fields

Fresh Water Sources none

Sea Exposure protected to north

Access/Safety good

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # None Frames _____

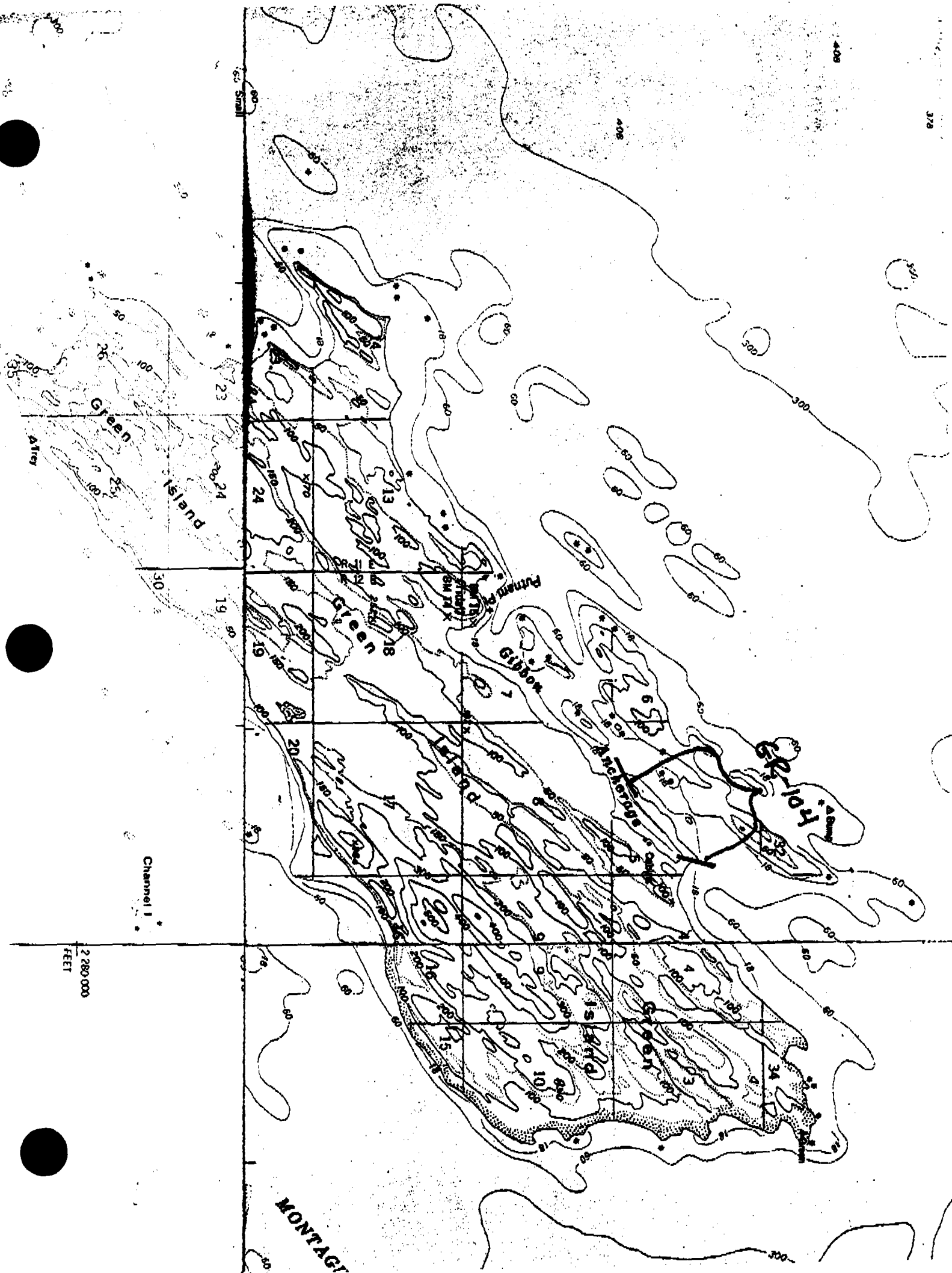
B/W Roll # _____ Frames _____

Observer(s) C. Wilson

Time survey started 1815 Time survey ended 1830

Cultural resource considerations/restraints:

If hereafter undiscovered cultural resources are
uncovered during cleanup, notify Bryan arch-
eologist, C. Mobley, immediately.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/19/89

SHORELINE SEGMENT GR-105

LOCATION: (see enclosed map) Green Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/16/89

Recommended Cleanup Activity(ies):

No cleanup recommended.

Priorities Considerations: None.

Ecological Constraints (from site survey):

No constraints necessary because no cleanup is recommended. If cleanup occurs, constraints should be reconsidered.

Archeological Constraints (from site survey):

No constraints necessary because no cleanup is recommended. If cleanup occurs, constraints should be reconsidered.

Charles E. Adams
State Historic Preservation Officer *

Date: May 19, 1989

EXXON: _____

Date: 5/19/89

FOSC: _____

Date: 5/21/89

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

SHORELINE OIL EVALUATIONDate: 05/16/89 Time: 1815Observer: MEYERSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION GREEN ISLANDSEGMENT NUMBER GR 105LENGTH OF SHORELINE SEGMENT: 2100 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B ___ % / C 30 % / P ___ % / G 60 % / S 10 % / M ___ % / R ___ %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LessOILDegree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

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

Continuous: Y/N % of Segment 0 Width of Band: _____ mSporadic: Y/N % of Segment 0Est. Oil Thickness where > 1cm: 0 cm Est. Oil Penetration: _____ cmPooled 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:

NO OIL IN AREA - PROTECTED CAVE.

ECOLOGICAL EVALUATION

LOCATION: GREEN ISLAND SITE: GR 105 OBSERVER: MEYER

LOCATION PREFIX: GR SEG. NO.: 105 LENGTH: 2100 (M)

DATE: 05/16/89 TIME (HHMM): 1815 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

Algae on gravel/sand at low tidal area; fucus spotty and avoided throughout area.

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

Litterina

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: SURVEYED ONLY BY BOAT - NO OIL EVIDENT

CLEANUP PRECAUTIONS: NO CLEANUP RECOMMENDED

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

BIRDS: 2 Oystercatchers, 5 pigeon guillemot

GENERAL OBSERVATIONS: ENTIRE AREA IS PROTECTED AND FREE OF OIL CONTAMINATION.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 5/16/89 Location Huon Island Site

Location Prefix CR Segment # CR-105 Length 2100m

Survey Method:

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

Ground (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility No oil present

Width of beach zone surveyed 0 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) None

Cultural resources observed in tree fringe (AHRS code) None

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

Shore Profile No oil

Fresh Water Sources Lake in back of beach - may have been

Sea Exposure sheltered

Access/Safety good

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

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

Photos: Color Roll # Frames

B/W Roll # Frames

Observer(s) C. Wilson

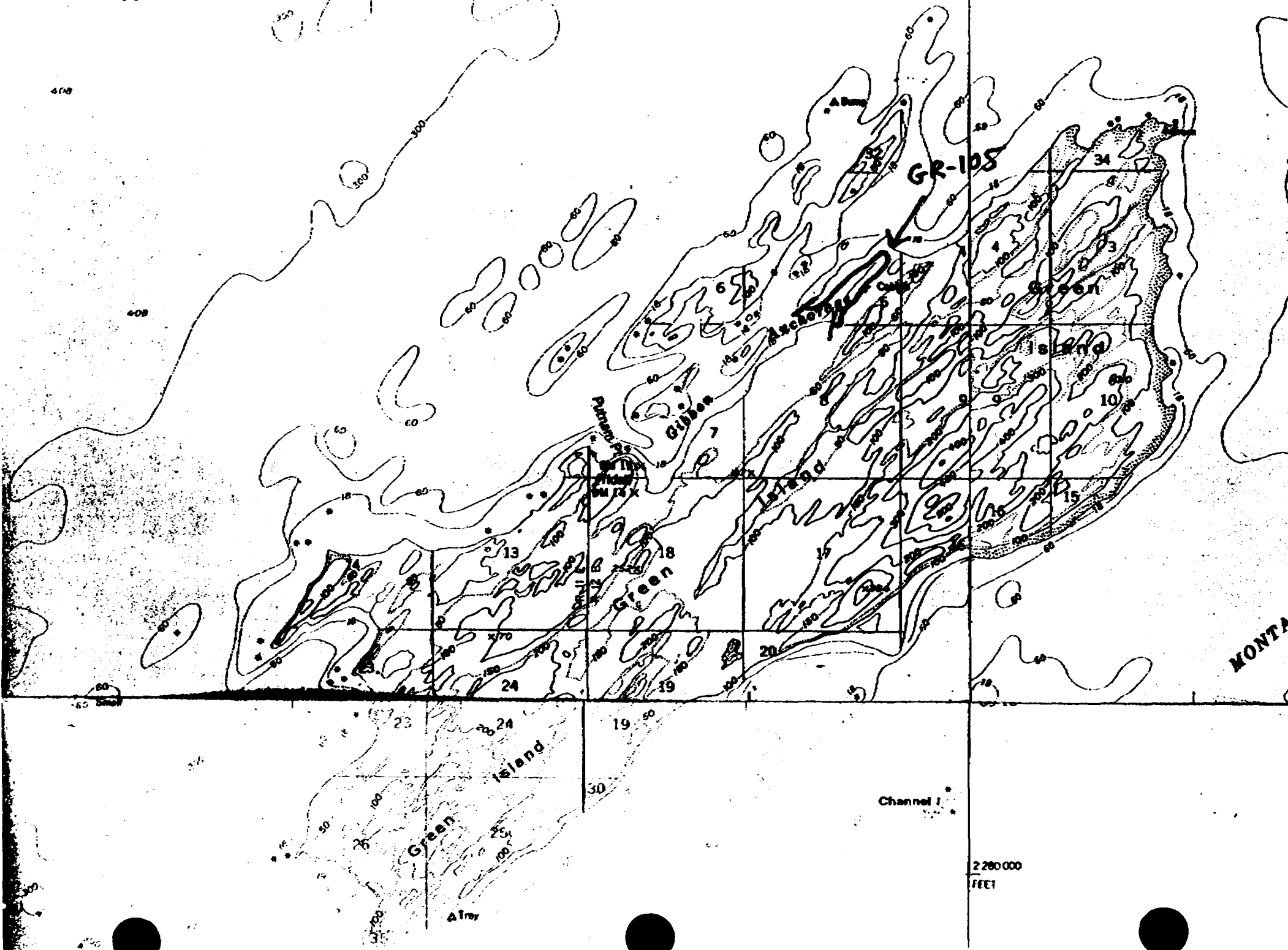
Time survey started 1835 Time survey ended

Cultural resource considerations/restraints:

If huts or undiscovered cultural resources are
located during cleanup contact Byron arch-
aeologist, C. Mobley, immediately

408

408



(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): GREEN ISLAND NORTH BLOCK

(REASSESSMENT)

Includes Shoreline Segments: GR-104R

Submitted :

(for Exxon)

Date: 8/17/89

ISCC Recommendation:

Jaqueline Michel

Date: 8/23/89

FOSC Approval:

J. E. Conway

Date: 8-23-89

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 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT GR-104R

LOCATION: (see enclosed map) GREEN ISLAND-NORTHERN

(GREEN ISLAND NORTH BLOCK) (REASSESSMENT)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/13/89

Recommended Cleanup Activity(ies):

No cleanup is recommended at this time due to light oil contamination and a medium wave exposure which has been cleaning this beach since first assessed on 5/16/89.

Priorities Considerations:

4B

Ecological Constraints (from site survey):

No cleanup is recommended because of the presence of an active eagle nest that would be disturbed if this small amount of oil were cleaned.

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: 8/17/89

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

8/13 RE-ASSESS GR-104R

14:30 HRS

mod-low \angle bedrock w/ rounded
blocky bldns (sandst.) & shattered
slatey pub-grls as sporadic veneer.

light - trace oil as fresh tar drips,
spots & splats @ up. HRTZ \rightarrow supra Z.

up to 4 v. thin tar bands,
each < 0.1 m wide, often < 3 cm
wide - spot & drip @ up. HRTZ \rightarrow
sl. no treatment workable
here except chemical or
bacteriologic.

This area could get occas. v. hi
wave action; the bedrock weathers
easily - frost & wave susceptible.
14:50 HRS.

End of SEGMENT

8/13/89 p.m.

G. MACDONALD

SEGMENT GR-302

RE-ASSESSMENT
GR-104

KEY

· trace - v. light oil

· light oil

* moderate oil

■ heavy oil.

③ photo. loc.

② location (see notes).



scale:

1:12,000

1000 FT.

GR-302

1/2 mile

alder & grass — mod L. gravel-peb shore,
shattered slates.

mod L. slaty
bedrock, cobs, pebs, gravel

ank
drip

NO OIL

32
33

mod L.
blks, v. light-
trace spots & drips.

cob-peb beach, mod L, no oil

OIL

NO

NO

steep bedrock

①

①-5

heavy oil

34-38

30m x
300m

2 Bald Eagles
& nest

low-
mod L.
bedrock w/
bldr-grl
veneer.

mod L. shattered
slate strand w/ sandy
muds @ LWL.

low-mod L. shattered cob-pebs
over bedrock; persistent
trace tar lines @ up. HRTZ →
sl.

GR-104

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-102

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 6/1/89

COMMENTS:

C. F. Sullivan
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

No clean-up recommended in block report
No clean-up was done according to USCG monitors
Area checked 6/4/89 and not much oil present.
No objection to area not being
treated at this time.

[Signature]
Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

 The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

 All contamination has been removed. No further treatment required unless re-oiled.

This segment was recommended for no treatment by SCOT. No treatment was conducted.

Richard M. Anderson LT SCOT
Signature of Coast Guard rep

XC: ADEC
EXXON
FSOC

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-103

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 6/1/89

COMMENTS:

C. F. Higgins
Signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Area free of pooled oil, free oil and oiled debris.

Oil still present.

No objection to crews moving to other areas

[Signature]
Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

All Debris: ^{removed} AND sorbent boom should be repositioned. monitor shore boom to prevent XC: ADEC Reoiling.

XC: ADEC
EXXON
FBOC

[Signature] IT Scoti
Signature of Coast Guard rep

EXXON VALDEZ

SHORELINE TREATMENT APPROVAL

SHORELINE SEGMENT NUMBER GR-105

SHORELINE SEGMENT NAME _____

SUBMITTED FOR APPROVAL 5/27/89

COMMENTS:

C. F. Higgins
signature of EXXON rep

ADEC comments on the condition of this shoreline segment and action recommendation.

Signature of ADEC rep

Coast Guard Comments and Action.

X Completed removal of gross contamination to the extent that the oil will not migrate. Site will require reassessment at a later date to determine future treatment.

____ The majority of surface oil contamination has been removed. The site will require reassessment at a later date to determine future treatment.

____ All contamination has been removed. No further treatment required unless re-oiled.

Robert H. Anderson, Jr. Scott
signature of Coast Guard rep

XC: ADEC
EXXON
PSOC

(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): GREEN ISLAND BLOCK

Includes Shoreline Segments: GR-300, GR-301, GR-302

Submitted : *[Signature]* Date: 8/17/89
(for Exxon)

ISCC Recommendation: *Jaques Michel* Date: 8/23/89

FOSC Approval: *J. E. Conroy* Date: 8-23-89

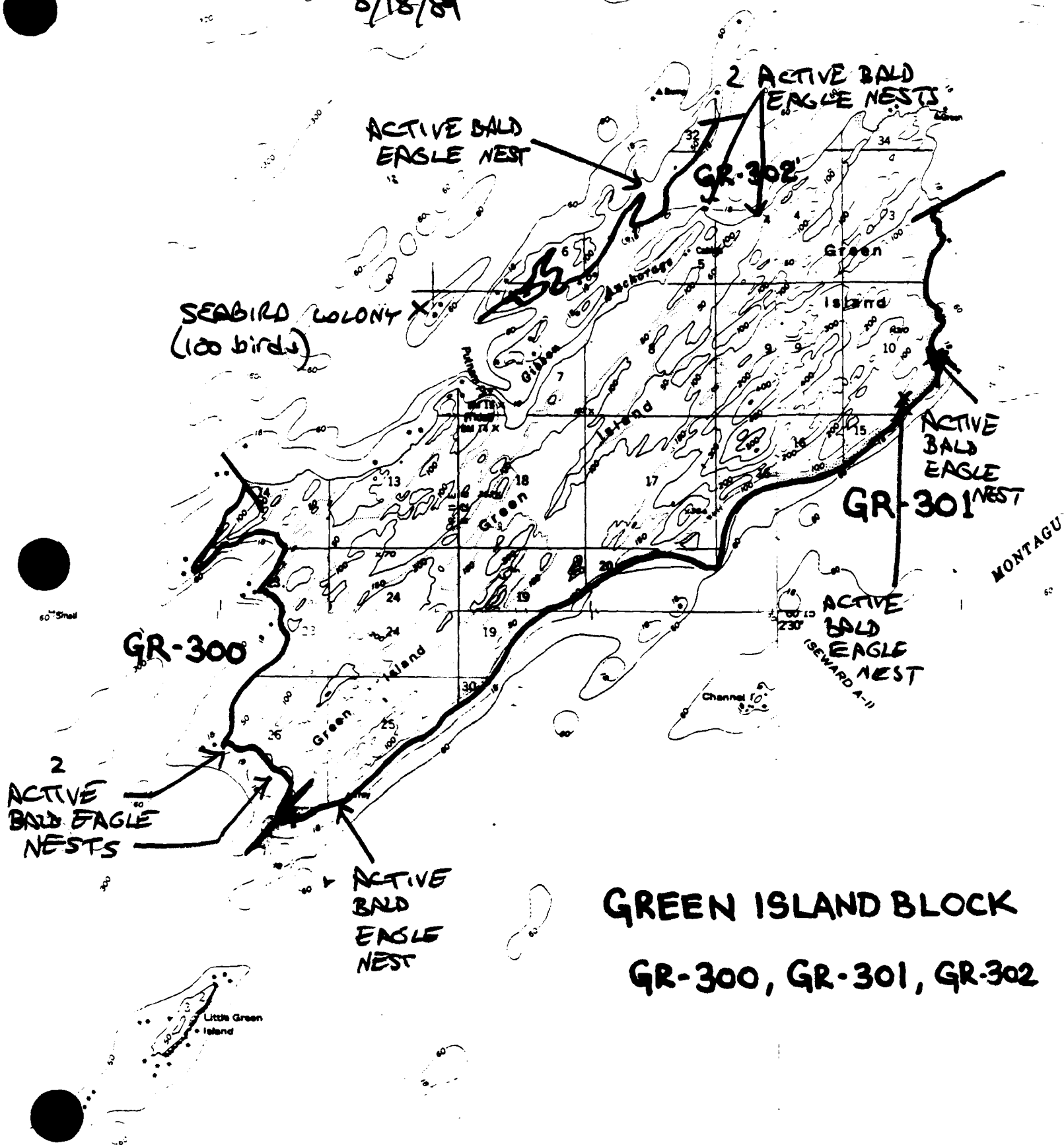
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative 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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SHPO
FOSC
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USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS

USFWS
8/18/89



GREEN ISLAND BLOCK

GR-300, GR-301, GR-302

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT GR-300

LOCATION: (see enclosed map) GREEN ISLAND-SOUTHWEST COAST
(GREEN ISLAND BLOCK)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/11/89

Recommended Cleanup Activity(ies):

No cleanup is recommended at this time (subject to FOSC reassessment) because oil contamination is light and self-cleaning is already in progress under the high wave energy experienced on this shoreline and will undoubtedly continue.

Priorities Considerations:

4B

Ecological Constraints (from site survey):

No cleanup is recommended because cleanup activities would disturb diverse communities of both terrestrial and marine organisms inhabiting this shoreline.

Archeological Constraints (from site survey):

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

Robt. Byrdell
State Historic Preservation Officer *

Date: 8/17/89

ISCC: *Jaques Michel*

Date: 8/23/89

EXXON: *Donald R. Tipton*

Date: 8.23.89

FOSC: *D. E. Conway*

Date: 8.23.89

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

SHORELINE OIL EVALUATION

Date: 8/11/89 Time: 15:00

Observer: GRAHAM MACDONALD

Surveyed From: Foot/Boat/Helio/Plane

Weather: (Sun/Cloud/Rain/Snow/Fo

LOCATION

LOCATION S.W. Green Island. SEGMENT NUMBER GR-300

LENGTH OF SHORELINE SEGMENT: 9,500 m

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

shallow draft only.

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: V. High/Med/Low

Sediment: B IS / C IS / P 5 / G 5 / S 5 / M / R SS scoured.

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved/V. LIGHT

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

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

Sporadic: Y/N % of Segment < 7%

Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: ≤ 10. cm

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

Fresh % Mousse % Tar Formation: 100 % (DRY)

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

Comments:

low relief island guarded by wide shoals and
hazardous foul ground. V. light patchy tar coating
in high energy, hi. sediment load intertidal zone;
self-cleaning off cobbles, shales and bedrock evident,
especially @ pebbles/gvl. beach areas.

Extended working tide window for this hi. priority area.

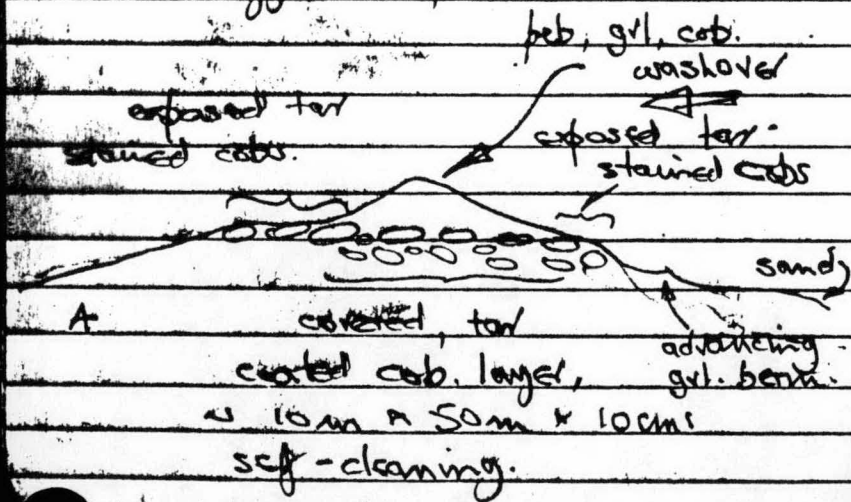
8/11

Green Island

15:00 HRS Segment GR-300

low relief rocky coast w/ steep - mod
 < peb-grl-cob beaches.

120m long > 50m wide tombolo;
 1m wide exposed dry tar coat band;
 covered by advancing shingle; self-
 cleaning; & well developed. Original
 contour was ~ 120m long > 15m wide,
 penetrⁿ prob < 2-3 cbs deep. - now
 faint - & thin tar coat; < 1m wide
 visible but prob ~ 10m covered;
 < 50m long. Rocky, vertically bedded
 siltstones; max. tar thickness < 1/2 mm.
 v. hi. energy locⁿ;



raised beach w/ intricate slates @
 supra-z w/ steep grl-peb-sand HWC+
 berm.

> 200m wide wave-cut platform @
 hi. cliffs;

entire island, certainly SW here is
 ice carved to low relief, then wave-
 worn @ coast; w/ at least 1 raised
 beach; v. hi exposure & energy
 over broad flat benches will cause
 mass movement of sed. of all sizes;
 long distance - 10's 100's yards.

broad silty sand tidal flats; no
 trace of oil at all; lichen on beach;

conspicuous broad black lichen band
 @ splash zone throughout W & SW
 coast. Most of light oil category
 here is prob. combination of lichen
 and disseminated tar splats. - non-
 recoverable; v. high exposure & v. low
 angle rock benches.

END of segment @ 19:00 HRS

8/11/89 p.m.
G. MACDONALD.

SEGMENT :
GR-200

Map 1 of 2

peb-gvl-cob. tombolo

flat rock islet

>3m x 20m tar
stained cobs.
GR-1B

1m wide x 5m
long tar-stained cobs.
penetration \leq 10cm. @ H.T.Z.

washover; pebs & gvls covering, & re-
exposing tar-stained cobbles.

wave-worn bedrock
bench; tar stain;
thin coat @ H.T.Z.
< 3m wide; self-cleaning.

sand, peb-bldr beach; low, no oil.
low relief rocky shore w/ bldr. veneer;
 \leq 3m wide x 40m tar stained bldrs -
espec. underside & landside; self clean on sea-
side.

vert. rock cliff to 40m w/
massive bldr. strand; &
wave cut platform
over 200m wide
no oil

jagged rock
point.
no oil.

DENSE
BULL KERP

toes, discontin.
tar band @ HWL,
< 30cm wide.
on steep rock

mod. L, bldr. cob
veneer over bedrock

exposed, steep
gvl-peb-bldr
beach; no oil.

tidal flats:
exposed, low L, silty
sand beach w/
cobble berm; no oil.
over bedrock
& bldrs.

steep rocky
point; jagged.

estimated LWL

exposed.
mod. L cob-sand
strand, over bedrock,

mod. L bldr-cob.
beach over bedrock.
no oil.

low relief rocky coast,
cont'd.

coastline
sketched

area of v. light-light
tar spot / ~~flat~~ bedrock/bldrs.

A
B
x-sectⁿ, (notes).

1/2 km.

1" = 1,000 Ft.

0 2,000 FT
1:12,000

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: S.W. Green Island OBSERVER: S. Dearn
 LOCATION PREFIX: _____ SEG. NO.: GR-300 LENGTH: 9500 (M)
 DATE: 08/11/89 TIME (HHMM): 1500 - 1900 TIDE HT.: 6-9 ft.*
 * This tidal height was worked as per Andy Teal's request for us to "push the tide".
 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
 Beaches had Fucus present in small clusters on larger boulders.
Fucus was present in continuous bands in places - primarily on rocky outcroppings.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Small patches of sparse + dense ^{mussels} were on the vertical sides of large boulders.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Barnacles were present on larger boulders + rocky outcroppings. Many large individuals located within this segment.

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

Littorines were clustered in dense aggregations beneath Fucus blades. A few individuals were also present under cobbles + boulders on several beaches.

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

Individuals were present under Fucus blades + under larger cobbles/boulders on beach areas.

OTHER OBSERVATIONS: Dense bull kelp beds (Nereocystis lutea) + surfgrass beds (Phyllospadix) were present within segment. A top of storm berm + adjacent to splash zone ~~diverse plant zone exists (terrestrial)~~ ~~lots of~~ Many different algal species present in wrack line suggesting a diverse subtidal community.

CLEANUP PRECAUTIONS: This area contains a high diversity of organisms - both terred + marine. Any cleanup activity would significantly disturb these organisms. The amount of oil that could be retrieved from ^{any} cleanup methods would be minimal and does not justify the disturbance/damage to these microhabitats.

MAMMALS: Otters 6 Harbor Seals _____ Sea Lions _____ Whales _____
 Other 2 Sitka Black-tailed deer (moose family) on beach feeding, plus many sets of tracks on other beaches within segment.

BIRDS: 2 Black Oystercatchers 1 eagle 20+ Kittiwakes (10 observed on an apparent roost - 10 a near rock), 30+ juvenile marbled murrelet type birds (positive identification not made), 4 Pigeon guillemots, numerous sandpipers (2 d.f. spp.), Glaucous-winged gulls

GENERAL OBSERVATIONS:

A species-rich area with many microhabitats. Wave exposure + sediment scour rates are probably considerable during storms.

2 whales (possibly humpbacks) observed outside of Sequim travelling S. on way off coast of N. Har Is.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 6-11-89 Location GREEN IS. Site _____

Location Prefix GR Segment # 6A-500 Length 9500m

Survey Method:

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

Ground ☒ _____ (G - indicate on map)

Known cultural resources (AHRS #) DATA NOT AVAILABLE Data Source _____

Oil conditions/beach visibility Light to None, Good Visibility

Width of beach zone surveyed 10 m Tree fringe surveyed up to 5m

Cultural resources observed in beach zone (AHRS code) SHIP

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile LOW ANGLE WAVE CUT REEFS, TO LOW ANGLE B/C/S beach

Fresh Water Sources small streams

Sea Exposure high energy, S to SE exposure

Access/Safety variable, non-accessible to land, safety-maintained

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 # P6P#13 Frames 15-17

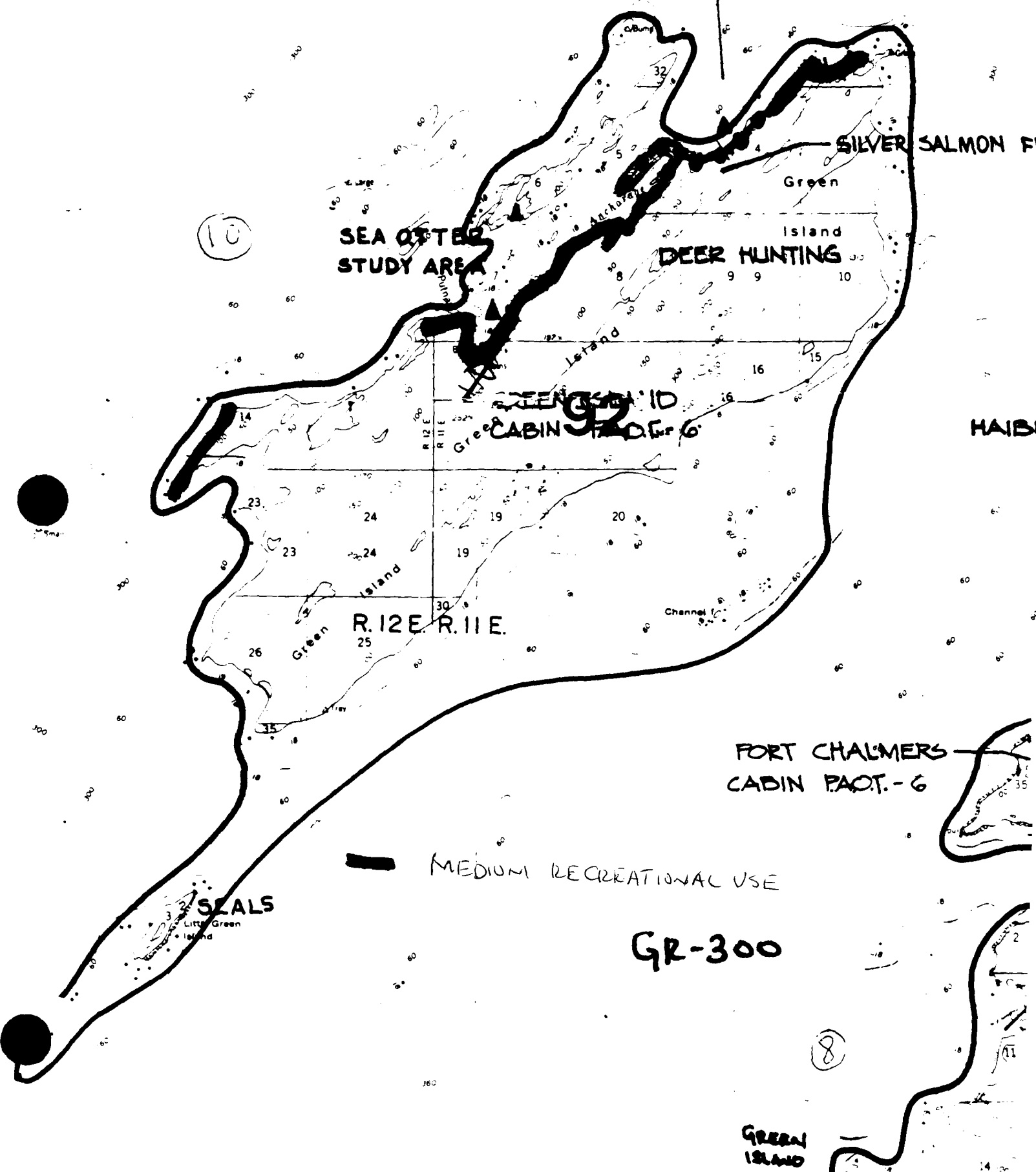
Observer(s) D.G. Phippen

Time survey started 1530 Time survey ended 1900

Cultural resource considerations/restraints:

Standard

RECREATION: WILDLIFE



456 - GREEN ISLAND

Seward B-2
5/28/89

MONTAGUE

SEWARD B-11

COLONY 63-14
500 birds

GA-3

GR-300

COLONY 63-13
100 birds

COLONY 63-12
70 birds

Green

SEWARD A-21

SCALE 1:63360

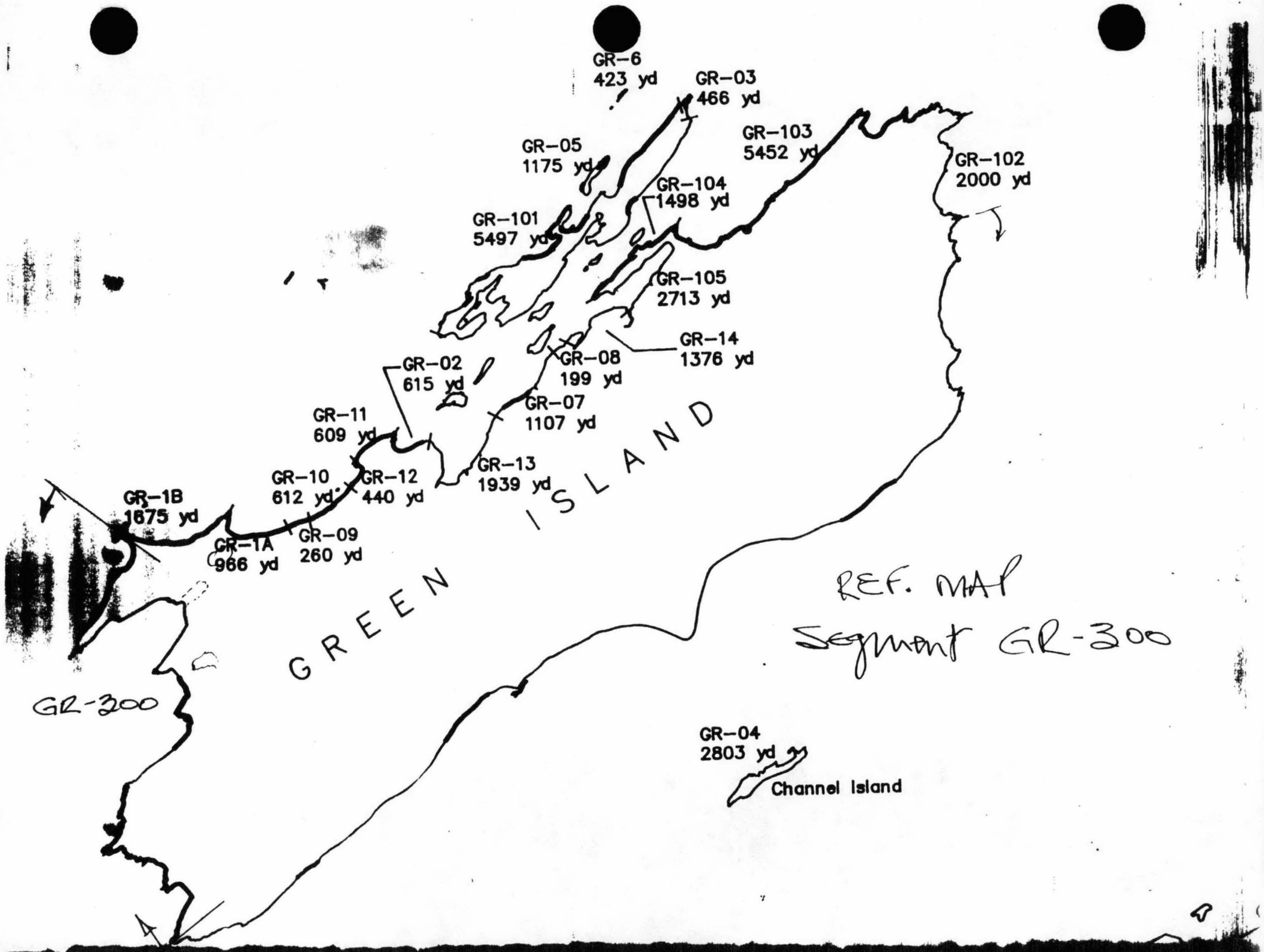
INTERIOR GEOLOGICAL SURVEY, RESTON, VIRGINIA 18600

ROAD CLASSIFICATION

Trails

GREEN ISLAND





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT GR-301

LOCATION: (see enclosed map) GREEN ISLAND-SOUTHERN SHORE

(GREEN ISLAND BLOCK)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/12/89

Recommended Cleanup Activity(ies):

No cleanup is recommended at this time (subject to later FOSC reassessment) because oil contamination on this segment is either light or entirely lacking. Because wave energy is high here, self-cleaning of this small amount of oil will be effective.

Priorities Considerations:

4A

Ecological Constraints (from site survey):

No cleanup is recommended because of the high diversity of birds and of marine mammals which would potentially be disturbed by cleanup activities.

3 active bald eagle nests

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.

IF CLEANUP IS DEEMED NECESSARY, ANOTHER ARCHEOLOGICAL SURVEY WILL BE REQUIRED PRIOR TO ANY CLEANUP ACTIVITIES

*DOT 82
OK
8/23/89*

R. G. Russell

State Historic Preservation Officer *

Date: 8/17/89

ISCC: *Jaqueline Michel*

ISCC: *Jaqueline Michel*

Date: 8/23/89

EXXON: *Daniel R. Tipton*

EXXON: *Daniel R. Tipton*

Date: 8-23-89

FOSC: *D. E. Conway*

FOSC: *D. E. Conway*

Date: 8-23-89

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

SHORELINE OIL EVALUATIONDate: 8/12/89 Time: 06:30Observer: GRAHAM
MACDONALD.Surveyed From: Foot Boat / Helio / Plane

Weather: Sun / Cloud / Rain / Snow / Fo

LOCATIONLOCATION S. shore GREEN IS.SEGMENT NUMBER GR-301LENGTH OF SHORELINE SEGMENT: 14,200 mACCESS: Foot / Vehicle / Boat / Barge / Helio / Float PlaneSHORELINE:Shoreline Type: SPI / BEA / COV / HLD / STRTSlope: LANG MOD / HANG / VERWave Exposure: High / Med / LowSediment: B 30 % / C 15 % / P 2 % / G 2 % / S TRACE % / M % / R 50 %Drift Debris on Beach: Yes / NoSupra / Upper / Mid / Lower Typescattered
occasional
logOIL

Degree of Oiling:

Heavy / Moderate / Light / No Oil / Unobserved

Area of Beach Impact:

TRACE
SU / SP / H / M / LContinuous: Y / N% of Segment < 10Width of Band: ≤ 1 mSporadic: Y / N% of Segment < 1Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: TRACE % Coated: H % / M % / VL 100 %Fresh % Mousse < 1 % Tar Formation: 99+ %Drift Debris Oiled? Yes / No Supra / Upper / Mid / Lower Amount: H / M / L /

Comments:

Exposed, mod-low angle bedrock & boulder shore; v.
shallow - access hazard hi;trace tar-spotted section @ NW end of island -
disseminated spots & splats and occasional 2-3 m
lengths of tar line ≤ 15 cm wide.Soft bedrock, hi. erosion rate.

8/12

GR-301

06.15 HRS

Exposed low relief rocky coast w/
bldr armor bedrock; some
locw. w/ thin pebbles berm @ strand
line; no oil.

ocean swells;

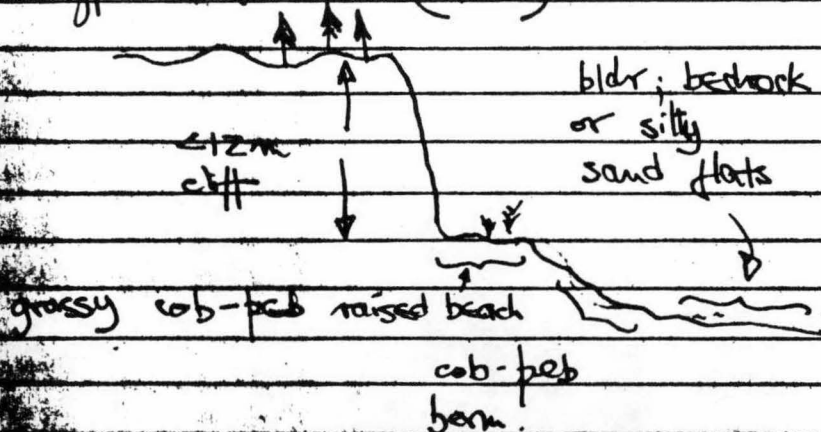
trace natural slicken from backbeach
bogs;

bedrock & beaches flushed by small
streams draining bog & lowland;

Sulfur / H_2S ppt. below rotting seaweed
heaps @ stream exit. no oil.

CERCLA site?

typical X-section (A-B).



A

B.

(35 areas @ Channel I; & NEH!) =

black granule strands on sandy
peb shore looks like oil banding.

Map 3 - trace slicken on water;
no oil on beach; test pits -
no trace.

Map 4 -

small crevice filled w/ murre
saturated/coated gnl, 1m² x 10cms;
below eagle nest!

remainder of bedrock is spotted w/
tar drips/spots & hand-size splats
@ full-splash zone - FLAGGED.

v. inaccessible coast for anything
but v. shallow draft craft < 18"

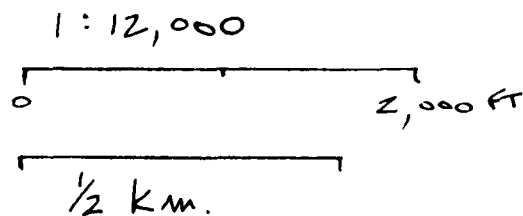
10.30 HRS.

END of SEGMENT.

exposed, low relief, rocky coast; 100m wide wave/ice worn rock;

boulder veneer

8/11/89 p.m.
GR-360 contd.
GR-301 8/12 a.m.



rob. peb. sand beaches covering well rounded bldr. armour over flat bedrock.

REGIONAL GRAW of ROCKS.
VERTICALLY BEDDED.

07.50
contd.

discontin. tar band,
< 10m wide x ≤ 10m long
@ HITZ, on vert. rock strata.

KITTIWAKE ROOST

jagged rock point.

low L. sandy beach w/ bldrs. no oil.
decaying veg. → small marsh/oil sheet.

occas. 20-50m long strands of sandy gills.

trace tar splots and thin (< 5m wide) bands @ upper HITZ on bedrock; max. width of spot/splat zone ≤ 10m,

or confined to channelways; lying perpendicular to beach & faces of bldrs.

~50' clean absorb. boom

State of AK
Cerulea Study Site #4537

blocky sub-rounded-mid. boulders over low L-mid. bedrock

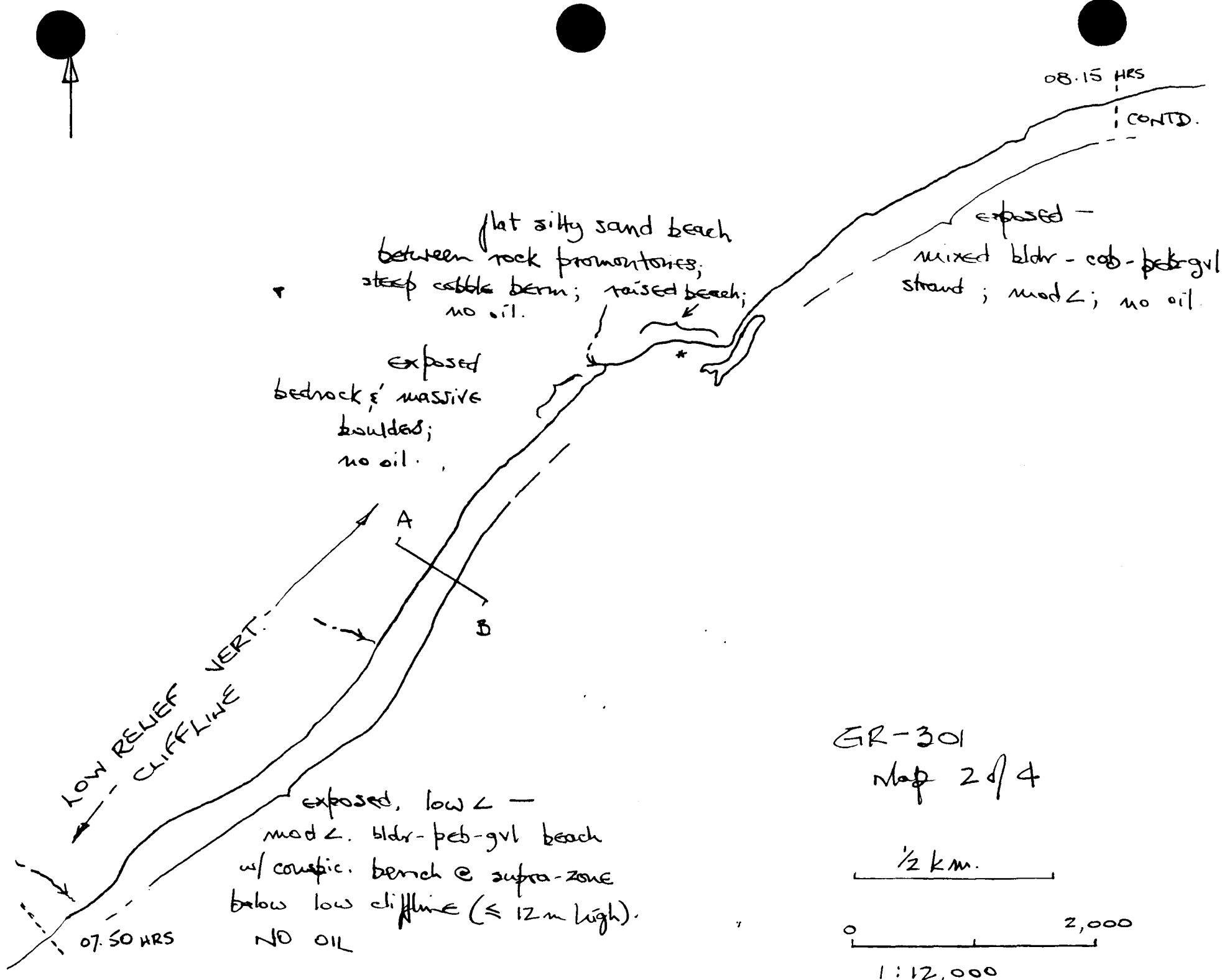
8/11 p.m.
DENSE BULL KELP

8/12/89 a.m.

hi. exposure;
bldr-rob armour over low L. bedrock

WAVE-WORN low relief coast, shoals; rocky coast; vertically bedded sediments;
v. exposed; low cliff line;

GR-301
Map 1 of 4





0 2,000 FT.

1:12,000

1/2 km.

8/12/89 a.m.

G. MACDONALD

Map 3 of 4

GR-301

typical X-section

A
broken steep cliffline
grass & alder
raised beach benches.
gvl-fab-cob
fab-cobble

sandy fab-cob.
shore

09:30
faint
trace for
stained cobbles -
2 per 50 m!

trace light sheen
on water

boulder-cob-snd coast; mod L;
exposed;

trace far-bound
debris balls / pine needles @ HWL.

exposed, mod-L sandy gravel beach / spit
w/ some cobs; no oil; generally fining up beach.
probably lying over bedrock,
connected to Montague I. via Channel I;

LOW CLIFFLINE



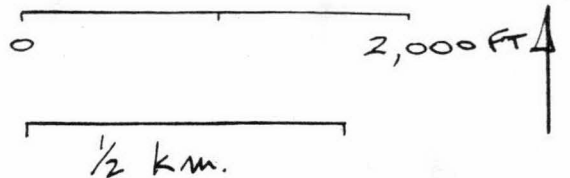
3.15

8/12/89 a.m.

G. MACDONALD

Map 4 of 4

SEGMENT GR-301



GR 102

10:30 HRS

trace tar drips, spots
and some splats on bedrock
& bldgs @ HITZ & splash z.

[bedrock: vertically bedded
siltst, slates, sandst,
mudstones.]

occasional exotic
bldg. - granite;
schistose greenst;
- glacial deposits.

exposed, low L bedrock w/ some
blocky boulders;

trace tar spotted rocks,
bedrock, bldgs; drips and occas.
hand-size splats; @ HITZ

eagle nest

1 - 1/2 m x 100 m area of soft tar
coated & splattered pebs & bldgs;
@ splash zone / supra zone - HITZ
trace free mouse in bedrock
crevices & peb. pockets;
max. penetration 10 cm & 1 m² are
LOCATION FLAGGED.

exposed, mod L, boulder -
cobble beach over bedrock

low angle bedrock w/ some
boulder - cobs; no oil

1 pair nesting
eagles

well sorted, rounded, cob. beach.
no oil.

09:30

well rounded, mod L,
cobble beach; no oil

sandy peb-cobble shore becoming

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: S + S.E. Green Island OBSERVER: S. Dearn

LOCATION PREFIX: _____ SEG. NO.: GR-301 LENGTH: 14,200 (M)

DATE: 08 / 12 / 89 TIME (HHMM): 0700 - 1030 TIDE HT.: 4.0 - 7.5 ft. (M)

OILED ZONE: Splash High Medium Low

> 5.0 ft tide worked as per Andy Teal's request 8/11/89

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 continuous bands of Fucus on flat rock benches + on several boulder areas in pocket beach

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

Small clusters of mussels present on vertical sides of boulders + rock outcroppings. Also located in areas of gravel/cobble mixture on some beaches.

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

Continuous Balanus band on some larger boulders + rocks. Patchy clusters present on some cobbles + smaller boulders

Littorina

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

Primarily found beneath Fucus blades + under cobbles.

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

Under cobbles + Fucus blades. No small individuals (< 1 cm) observed

OTHER OBSERVATIONS: Bull kelp beds offshore, dense surfgrass beds nearshore, 1 active eagle nest, many salmon jumping nearshore, many small rafts of otters, many species of intertidal algae (possibly Salicornia), many species of terrestrial plants near storm beach. (at least 10 spp)

CLEANUP PRECAUTIONS: Access to the areas in this segment is very limited + oil is present in very small amounts. Cleanup activities would create trampling + thermal disturbances + should be avoided.

MAMMALS: Otters 20+ Harbor Seals 1 ^{near shore} Sea Lions 4 ^{Stellar} Whales 30 Orcas *

Other Sitka black-tailed deer - 13 individuals (6 adults, 7 juveniles)
* 3 pods of Orcas observed (#/pod = 15, 6, 7) one group was observed only 300 ft from shore.

BIRDS: 2 Arctic terns, numerous Kittiwakes + glaucous-winged gulls, 6-8 whimbrels, ~35 juvenile Pigeon Guillemots (possibly 18), 6 Eagles - 2 nests (one appears active), several sandpipers.

GENERAL OBSERVATIONS: This segment supports a rich, healthy fauna + flora (in both the intertidal + subtidal). The marine + terrestrial environments)

CULTURAL RESOURCE EVALUATION

Date 8-12-89 Location GREEN IS. Site _____

Location Prefix GR Segment # GR-301 Length 14,200 m

Survey Method:

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

Ground ☒ _____ (G - indicate on map)

Known cultural resources (AHRS #) Data NOT AVAILABLE Data Source —

Oil conditions/beach visibility light to none

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

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 low angle wave cut platforms to mod. L p.c. b. beach

Fresh Water Sources streams

Sea Exposure SE, high energy

Access/Safety mostly good access, fair to good safety

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 —

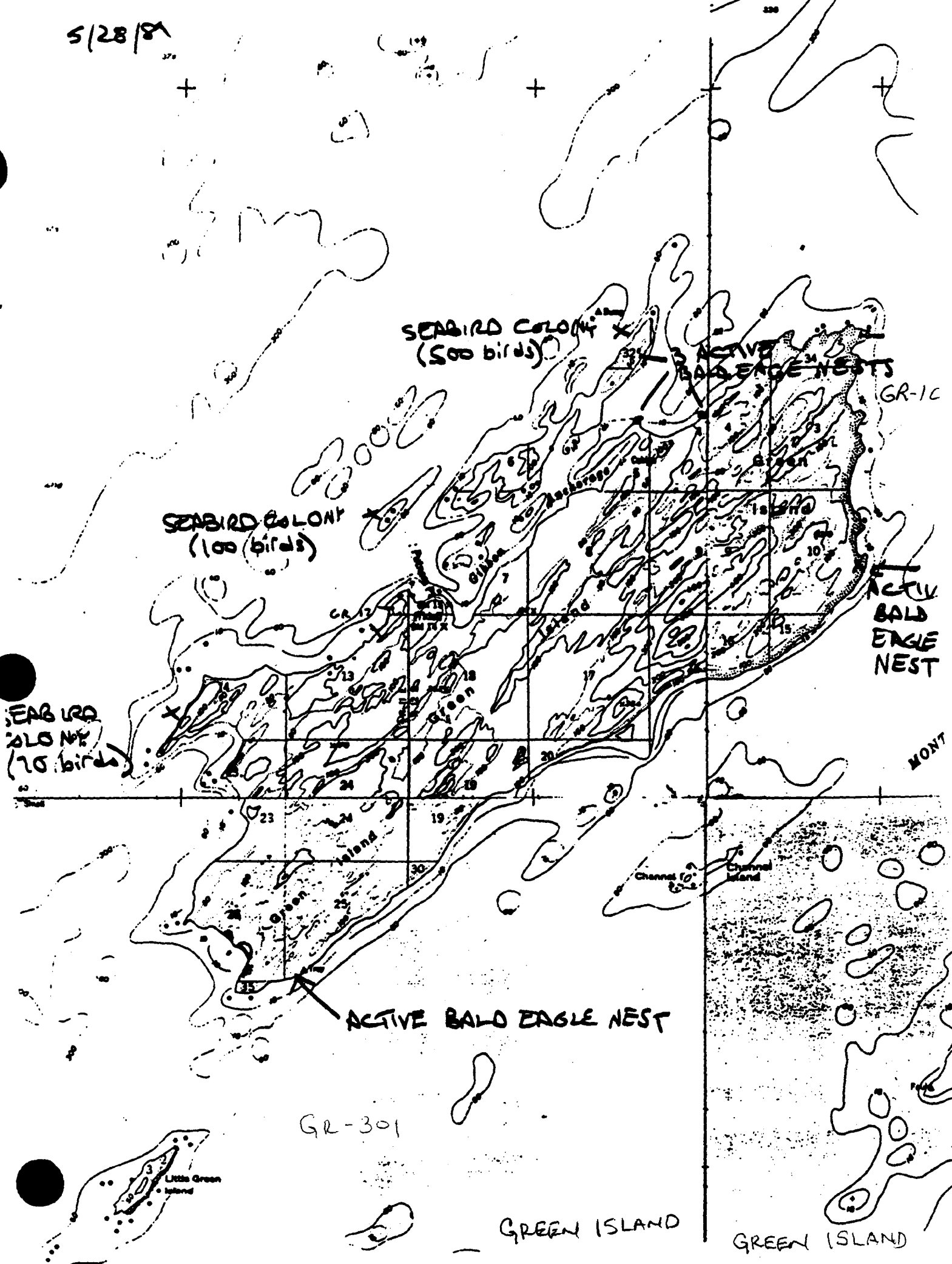
Observer(s) D.L. Phiggen

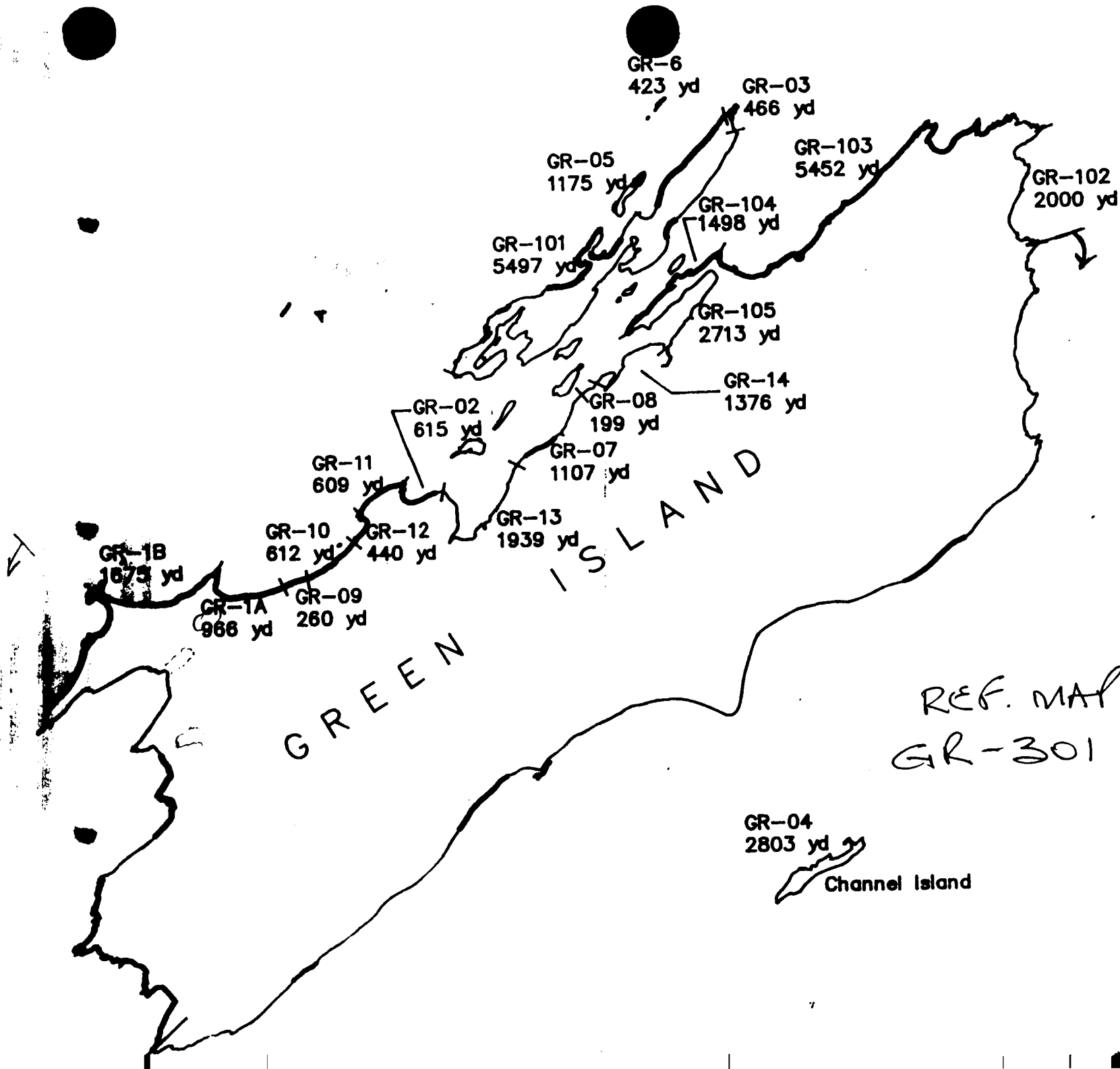
Time survey started 0630 Time survey ended 1030

Cultural resource considerations/restraints:

Standard

5/28/81





REF. MAP
GR-301

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT GR-302

LOCATION: (see enclosed map) GREEN ISLAND-ISLAND OFF OF

NORTHERN COAST OF GREEN ISLAND (GREEN ISLAND BLOCK)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: GR-302

Recommended Cleanup Activity(ies):

1) bioremediation is recommended for location 1; 2) moderate pressure/warm to hot water washing is recommended for location 1 and 2 (preceding bioremediation); 3) no cleanup is recommended for remainder of this segment because of its moderate wave energy and light degree of oil contamination.

Priorities Considerations:

3B

Ecological Constraints (from site survey):

If cleanup is done, work only at tides greater than +6.0 feet to reduce damage to mid/lower intertidal communities. Minimize boat traffic near the island to reduce disturbance to bird life, particularly the active bald eagle nest and seabird colony.

8/23/89
8/23/89

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.

~~IF CLEANUP IS DEEMED NECESSARY, AN ARCHEOLOGICAL SURVEY WILL BE REQUIRED PRIOR TO ANY CLEANUP ACTIVITIES. TREATMENT SHOULD BE LIMITED TO PORTIONS OF NORTHERN ONE-THIRD OF SEGMENT WHERE OIL WAS PRESENT AT TIME OF SCAT SURVEY (8/13/89).~~

[Signature]
State Historic Preservation Officer *

Date: 8/17/89

ISCC: [Signature]

Date: 8/23/89

EXXON: [Signature]

Date: 8-23-89

FOSC: [Signature]

Date: 8-23-89

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

SHORELINE OIL EVALUATION

Date: 8/13/89 Time: 12:20

Observer: G. MARDONALD

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION ~~isls~~ isls, off N. Green Is. SEGMENT NUMBER GR-302

LENGTH OF SHORELINE SEGMENT: 11,350 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

- Mod

Sediment: B30% / C15% / P20% / G5% / STRACE% / MTRACE% / R30%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

OIL

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

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

Continuous: Y/N % of Segment <10% Width of Band: ≤ 30 m

Sporadic: Y/N % of Segment 50% — trace and some light oil.

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

Pooled Oil: % "Free" Oil: TRACE% Coated: H % / M % / L100%

Fresh % Mousse TRACE% FRESH Tar Formation: 100%

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

Comments:

- c. ① ~ 30 m wide x 300 m heavily oiled to bedrock (< 15 m); location ② has about 300 m x 5 m wide moderately oiled bkks & bedrock; — as fresh tar. Remainder of segment had persistent trace tar spots, drips; spots as v. thin lines/bands; ~~some of this~~ some of this heavy-med. oiling area can be hit by high energy waves. — NE & SW fetches.

8/13 SEGMENT GR -

12:20 HRS W → E.

trace (3 lines) tar line & spots @ Supra
SP & HWL; < 0.15 total width;

Photo 32, 33 - rock wall up Gates!
Lander thru mosaic chip line.

intertidal lagoons - some grass flats,
mainly fractured rock, cobs; bedrock
w/ trace tar drips; v. shallow.
muddy bottoms;

Photos 34 → 38! T1W20/13:15 HRS, calm.
① mod-heavy oil area

slaty bedrock w/ rounded cob. veneer
in part; mod-low L; exposed;
v. fresh tar: coats cob & bedrock @ up. HIZ
spots & spots @ HIZ

coat gvl in berm @ supra.

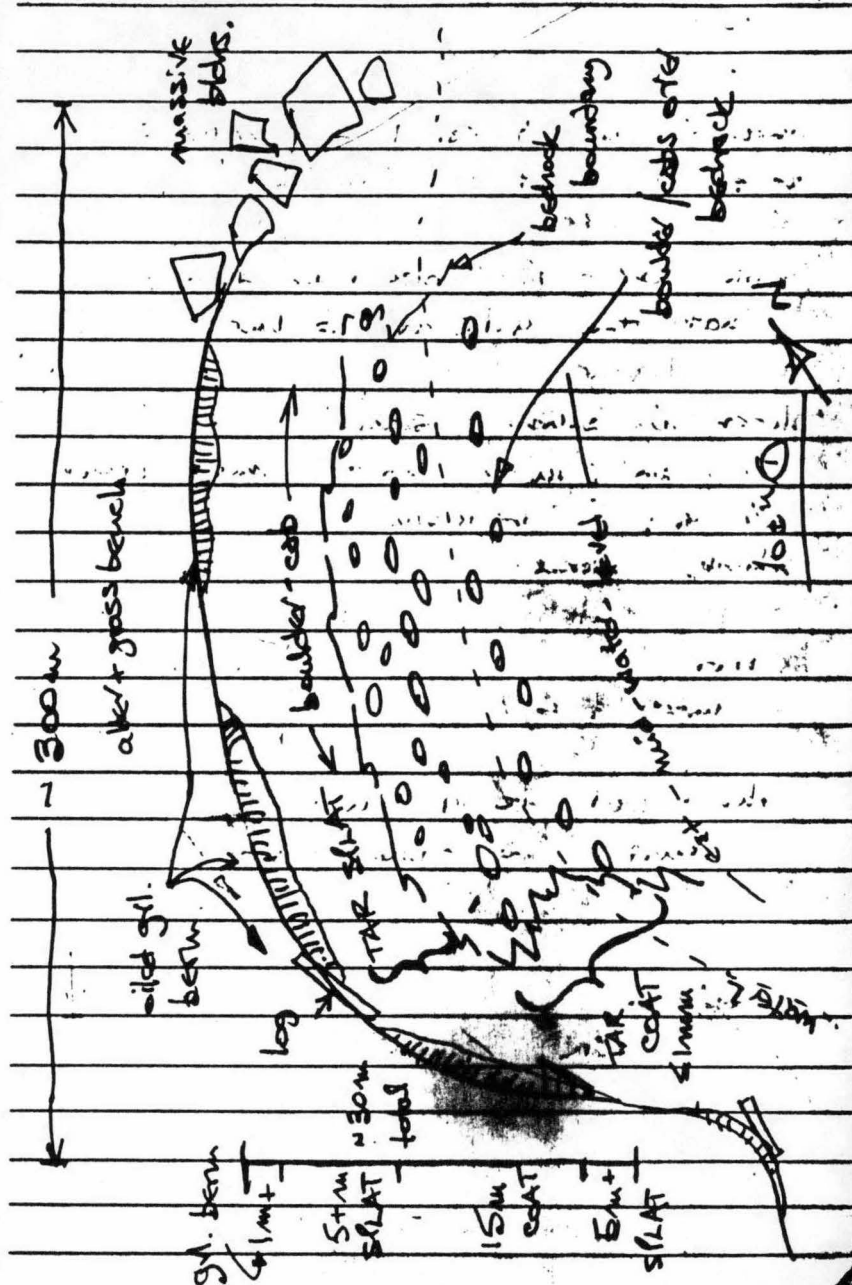
total width ~ 30 m

total length

penetration ≤ 10 cm,

3 phases of oiling.

Photos T1G1, frames 1-5.



massive boulders - bldr-cob. over
bedrock w/ traces of 4 tar lines;
areas of mod. tar coating
 ≤ 6 m wide, drips & coat ≤ 1 mm thk;
fresh tar - mod. odour in sun;
"saturated" grls. in bedrock crevices
and channels; trace free oil;
sheen in small tidepools;
 $< 5\%$ fab. "fines" here; mod. worn
bedrock; hi. exposure;
bedrock - blocky silty sandst w/
slatey siltstone interbeds; vertically
bedded.

frames # 6, 7

Turns out toward end of
segment to take trees.

14.25 hrs

END of SEGMENT

ECOLOGICAL EVALUATION

LOCATION: Prine William Sound SITE: N. Green Island OBSERVER: S. Dearn

LOCATION PREFIX: _____ SEG. NO.: GR-302 LENGTH: 11,350 (M)

DATE: / / TIME (HHMM): 12:20 - 14:30 TIDE HT.: 9.0 - 7.5 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dense continuous band present in most areas. Some boulder/cobble beaches have scattered clumps. Some Fucus lightly oiled in splattered areas. In moderately oiled areas - some dead plants present.

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

Clusters of mussels on boulders + interspersed between large cobbles/boulders. 1

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

Present on cobbles + boulders. Some in higher intertidal ^{individuals} in oiled areas are moderately oiled, + some appear dead.

Littorina

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

Littorines scattered throughout Fucus zone. In oiled areas - many dead individuals present

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

Some limpets present - scattered across segment, under Fucus blades.

OTHER OBSERVATIONS: Seagrass beds present in some shallow subtidal areas. In calm back bay - soft sediments on benthos, scattered w/ clam shell debris. Clam shell debris + empty mussels present in many ^{low} intertidal area (Clam shells often have holes in them - possibly "victims" (!) of sea urchin foraging (?). Oyster catchers may account for the high amount of dead mussels).

CLEANUP PRECAUTIONS: Cleanup activities should occur at tides higher than +6.0ft to avoid/minimize disturbances to the mid-low intertidal. Minimize boat traffic near island in segment section - to reduce disturbance to oyster catchers.

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

BIRDS: Oyster Catchers - ~20 (gathered on island in segment. SEE MAP). Belted Kingfisher - 1 (in back bay S. W. end of segment). 1 eagle observed, at least one other eagle heard in woods. Arctic terns

GENERAL OBSERVATIONS: Species diversity in this segment is relatively low. Some areas are relatively devoid of macroalgae + invertebrates. Organisms below oiled areas appear healthy, however organisms within oiled areas show signs of stress + trauma (many are in fact dead)

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 8-13-89 Location Green Is. Site _____

Location Prefix GR Segment # GR-302 Length 11,350

Survey Method:

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

Ground ☒ _____ (G - indicate on map)

Known cultural resources (AHRS #) Data not available Data Source _____

Oil conditions/beach visibility light to heavy, good visibility

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

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 low angle, cobbles pebbles to blocking border/alt

Fresh Water Sources none observed

Sea Exposure protected, in between two islands, shallows.

Access/Safety good, 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) G. Phappan

Time survey started 1230 Time survey ended 1430

Cultural resource considerations/restraints:

standard

8/13/89 p.m.

G. MACDONALD

SEGMENT **GR-302**

RE-ASSESSMENT
GR-104

KEY

· trace - v. light oil

· light oil

· moderate oil

· heavy oil

③ photo. loc.

② location (see notes)



scale:

1:12,000

1000 FT.

GR-302

1/2 mile

alder & grass — mod L. gravel-peb shore,
shattered slates.

mod L. slaty
bedrock, cobs, pebs, gravel

rare
drip

NO OIL

32
33

mod L.

blk, v. light-
trace slates & drips.

cob-peb. beach, mod L, no oil

OIL

NO

steep bedrock

heavy oil

34-38

30m x
300m

2 Bald Eagle
& nest

low-
mod L.
bedrock w/
blk-grl
veneer.

mod L. shattered
slate strand w/
sandy
muds @ LWL.

low-mod L. shattered cob-pebs
over bedrock; persistent
trace tar lines @ up. HRTZ →
sp.

GR-104

GR 302

DATE 9-7-89

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 GR 302 is complete

Ready for demobilization & deployment of the new segment

Signature Tommy Dulin

Date: 9/7/89 Time:

Printed Name Tommy Dulin

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
15
10
0
75
100 %

Heavy
Medium
Light
Very Light
None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling

1
20
10
0
69
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 Most of the segment oiled. On NE cobble/boulder shore is a 300 yd ba of thick medium oiling. Though the oil does not appear mobile, it will respond well to tr

Signature Dale W. Gardner

Date: 9/7/89 Time: 13:35

Printed Name DALE GARDNER ADEC INSPECTOR

FOSC rep

Demobilization approved/disapproved NO FOSC

Comments NO GROSS CONTAMINATION - Recovery and Bio Remediation only

Signature Anthony C. C...

Date: 9/7/89 Time: 1525

Printed Name Anthony C. C...

COPY: EXXON ADEC FOSC ISCC

Situation was heavily oiled at site & 500 yards of segment.