[Shoreline evaluations, 1989].

Volume 9

Montague Island

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SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): GRAVEYARD POINT BLOCK

Includes Shoreline Segments: MN-01, MN-02

Submitted: [Signature] Date: 8/25/89
(for Exxon)

ISCC Recommendation: [Signature] Date: 8/28/89

FOSC Approval: [Signature] Date: 8/28/89

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

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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Anchorage, Alaska
SHORELINE CLEANUP PROGRAM

DATE 8/23/89 SHORELINE SEGMENT MN-01

LOCATION: (see enclosed map) MONTAGUE ISLAND-NORTHWEST SIDE

(GRAVEYARD POINT BLOCK)

ADEC NO. ________ SHORELINE ASSESSMENT DATE: 8/17/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Use bioremediation if possible.
- No other cleanup recommended due to discontinuous, light oil and high wave exposure.

Priorities Considerations:
Class 4: Light oil
A: Resources present

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. A cataloged anadromous stream (#17570) is located within this segment. Notify ADF&G and RAT forty eight hours prior to beginning cleanup activities. An active bald eagle nest is located within this segment, see advisory. AVOID SETTING BIOREMEDIATION SPRAY IN INTERTIDAL POOLS. Recommend 100 meter buffer around anadromous fish stream and lagoon from bioremediation activity unless otherwise adjusted by ADF&G field rep.

Archeological Constraints (from site survey): Do not bioremediate historic features at the southern end of this segment. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer * Date: 8/24/89

ISCC: Shuck K. Cluett ________ Date: 8/28/89

EXXON: ________ Date: 8/28/89

FOSC: ________ Date: 8/28/89

* Signature required to satisfy stipulations in Alaska DNR land
GRAVEYARD POINT BLOCK
MN-1, MN-2
SHORELINE OIL EVALUATION

Date: Aug 17 89   Time: 07:00 AM   Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane   Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
Location: NW Montague Island   Segment Number: MN-1
Length of Shoreline Segment: 5300 m
Access: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:
Shoreline Type: SPI BE COV HLD STRT   Slope: LANG HANG VER
Wave Exposure: High/Med/Low
Sediment: B70% / C-1% / P-1% / G-1% / S/10% / M-1% / R 20%
Drift Debris on Beach: Yes/No   Supra/Upper/Mid/Lower Type: Seaweed Legs

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU / SP / H/M/L Max.
Continuous: Y/N % of Segment 5% Width of Band: 3 m
Sporadic: Y/N % of Segment 80%
Est. Oil Thickness where > 1 cm: — cm Est. Oil Penetration: 15 cm
Pooled Oil: — % "Free" Oil: — % Coated: H 5% / M/10% / L 85%
Fresh 5% Mousse — % Tar Formation: 95%
Drift Debris Oiled?: Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:
This segment is dominated by a low bedrock wave cut terrace. The terrace is covered with a wide boulder layer but the bedrock is near the surface. Random drops of tar were observed along most of the beach. Portions of the segment which face due north received a greater amount of oil than any others. Bands of oil were rare but clusters of oil patches were more common. Little penetration was observed due to shallow bedrock.
25% Surface Coverage. Rough Discontinuous Band Oil and Tar. 2 to 3 meters wide. Several large patches in general area. Sheen on tide pools.

Rough 1 Meter Band Tar. Significant Drips and Patches in Vicinity

Drops over entire intertidal zone. Rough Discontinuous Band Tar ~ 1 meter wide. Mid intertidal.

Low Rock Offshore

South MNI Graveyard Point

LEGEND

- Random Tar Drops
- Patches Tar
- Rough Tar Band
- Clear Tar/Oil Band

Although tar bands may be roughly 1 meter wide, significant drips & splattering were observed in general vicinity.
S.C.A.T Team 4

Segment: MN-1
Date: 8/17/89
Time: 0700
Tide: -1.0 (ft)
Location: NW Monterey Island
Base Map:
ECOLOGICAL EVALUATION

LOCATION: Monterey Is.  SITE: Monterey Pt. and North  OBSERVER: J. Tarpley

LOCATION PREFIX: MN  SEG. NO.: 1  LENGTH: 5300 m (M)

DATE: 8/17/89  TIME (HHMM): 0145-1200  TIDE HT.: -1.0' - 2.3' + 7.0' (O)

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
Wide band throughout segment: Low ITZ rich & diverse with algae.

Mytilus (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Patchy throughout segment and sparse where found - few areas are dense.

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

Primarily Contin/sparse but at North end segment forms dense band above Fucus, Both B. glandula & Semibalanus common.

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

Primarily  Notoclerum personatum, also Talkiua crenatum

OTHER OBSERVATIONS: Pyropodium abundant, Pisaster common; Derrin view's rare;
Kelp forests & surf grass beds offshore (see map). Very little water flowing through anadromous stream #17510. Probably not active at this time.

CLEANUP PRECAUTIONS: Avoid streams, Eagle coast and further oil

Contaminated by healthy low ITZ.

MAMMALS: Otters 30-30  Harbor Seals  Steller's  Sea Lions  Whales

Other 2 Deer skeletons  Land Otter tracks

Gulls, Kittiwakes, Terrestrial birds

BIRDS: Active Eagle Nest at Graveyard Pt.; 4 eagles, 3 Lesser Yellowlegs, 1 Oystercatcher, 8 Mergansers

GENERAL OBSERVATIONS: Segment consists of low wave-cut terrace covered by boulders and cobble, in some areas (bay) sand. Oil coated rocks and splatter throughout segment, heaviest concentrations on north-facing beaches.

The biota in segment is healthy even on most oiled beaches. Due to wide cobble/terrace and healthy biota surrounding the oil, bioremediation may be the best type of clean up for this area.
CULTURAL RESOURCE EVALUATION

Date 8/17/89  Location NW PART MONTAGUE I. Site

Location Prefix MN-  Segment # 1  Length 5300 M

Survey Method:
Air (A - indicate on map) Boat (20%) (A - indicate on map
Ground (80%) (G - indicate on map)

Known cultural resources (AHRS #) SEW-204  Data Source AHRS FILES
Oil conditions/beach visibility: ZERO TO LIGHT OIL: GOOD BEACH VISIBILITY.

Width of beach zone surveyed: 36-100 M  Tree fringe surveyed: 0-20 M

Cultural resources observed in beach zone (AHRS code):

Cultural resources observed in tree fringe (AHRS code):

General observations justifying survey method and segment's site probability

Shore Profile: Low-Moderate Gradient Boulder/Sand Beach with Marine Stands

Fresh Water Sources: Several Small Streams

Sea Exposure: Open to Prince William Sound

Access/Safety: Access for Large/LCM in Calm Weather

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 # PEST MY-21  Frames 7-15

Observer(s): D. BUCK

Time survey started: 0650  Time survey ended: 1150

Cultural resource considerations/restraints:

Site SEW-204 (CAT-CUT TREES) is not located in RN-1 and will
not be impacted by any cleanup operations. (STATE)

Constraints here:
S.C.A.T Team 4
Greg Chaney
Segment: MN-1
Date: Aug. 17 1989
Time: 07:00 AM
Tide: 0 (ft)
Location: N.W. Montague Island
Base Map: Seward B1
SHORELINE CLEANUP PROGRAM

DATE 8/23/89

SHORELINE SEGMENT MN-02

LOCATION: (see enclosed map) MONTAGUE ISLAND-NORTHWEST SIDE

(GRAVEYARD POINT BLOCK)

ADEC NO. SHORELINE ASSESSMENT DATE: 8/17/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material and oiled containment boom.
- Physically remove mobile oil if possible.
- Use bioremediation if possible. Prior to bioremediation.
- No other cleanup recommended at this time due to discontinuous oil and high wave exposure.

Priorities Considerations:
Class 2-4: Heavy to light oil
A: Resources present

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. There are two active bald eagle nests located within this segment, see advisory. Do not bioremediate in vicinity of marsh at mouth of stream or in tide pool areas.

Archeological Constraints (from site survey):
No access to uplands. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

ISCC: 8/28/89
EXXON: 8/28/89
FOSC: 8/17/89

Date: 8/24/89
Date: 8/28/89
Date: 8/17/89

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

Date: Aug 17/89  Time: 18:30  Observer: Greg Chaly
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION NW Montague Pt.  SEGMENT NUMBER MW-2

LENGTH OF SHORELINE SEGMENT: 2600 m

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

SHORELINE: limited  Fair weather only
Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 70% / C - - / P - - / G - - / S10% / M - - / R 20%

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  Max. Obs.

Continuous: Y/N  % of Segment 5%  Width of Band: 6 m
Sporadic: Y/N  % of Segment 90%

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

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H 10% / M 20% / L 70%

Fresh 10%  Mousse ___%  Tar Formation: 90%

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

Comments:

This region is dominated by a long, low wave cut terrace offshore. Several rocks dot the near intertidal. Calm weather is required to land on this coast safely. Bands of oil were rough and coverage was usually less than 75% within the band. Some mobile oil was observed and sheen commonly occurred in the vicinity of oiled bedrock and boulders.
500 METERS

HEAVY PATCHES TAR ON BOULDERS

ROUGH BAND UP TO 6 METERS WIDE. SOME MOBILE OIL STILL PRESENT. 75% SURFACE COVERAGE.

5 - 6 METER WIDE ROUGH BAND ON BED ROCK AND BOULDERS. SHEEN ON LOCAL TIDE POOLS. LITTLE PENETRATION DUE TO BED ROCK SUBSTRATE.

2 AND 3 METER BAND OIL ON BOULDERS 50% COVERAGE Drips FROM LOW TO HIGH INTERTIDAL ZONE.

HEAVY SHEEN IN MARSH

OILED RUBBER BOOM MARKED WITH ORANGE FLAGGING

LEGEND

- RANDOM TAR DROPS
- PATCHES TAR
- ROUGH TAR BAND
- CLEAR TAR/OIL BAND

PHOTO #8

NORTH MN-2

Tagus Cabin

SOUTH MN2

100

18

RIBE 18

RIBE 6

1
ECOLOGICAL EVALUATION

LOCATION: Montague Island SITE: NW Peninsula OBSERVER: J. Teagley
LOCATION PREFIX: MN SEG. NO.: 2 LENGTH: 2600 (M)
DATE: 8/17/85 TIME (HHMM): 1835-2030 TIDE HT.: +5.0' to 7.0' (F)
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
Wide band of Fucus on terrace throughout the segment. Algal community rich in Littorina
Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Patchy through out segment. Sand or bedrock outcrops.
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
Margareta, Nucella also present and most affected by oil in mid to high ITZ area
Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Affected by oil in mid to high ITZ and

OTHER OBSERVATIONS: Disaster is common. 2 Active Eagle nests in segment and 1 other raptor (unidentified) nest on cliff - appears to be non-act.

CLEANUP PRECAUTIONS: Avoid Eagle nests - stay at least 300 ft from these nests. Avoid oil contamination of healthy low ITZ. Keep floats and surf gear beds throughout segment. Stellar's

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other Lead other slides & tracks

BIRDS: Bald Eagle Nests, 3 Adult Eagles, 2 In nest, Gulls, Kittiwakes, 1 Oystercatcher, 4 Lesser Yellow

GENERAL OBSERVATIONS: Segment consists of wave-cut terrace covered with shingles and boulders. Oiled zones primarily mid to high ITZ, except southern most oiled area within segment is mid to Low ITZ, ~50% Fucus oiled/dead, 15% alive, 25% un-oiled & healthy in this area. Barnacles & Mytilus ~ 50/5 Limpets, Littorina, and Nucella appear healthy even though shells are oil coated. Lower ITZ below oiled zone appears un-oiled, unaffected and healthy. Oiled area in mid to high ITZ show only Limpets and Littorina being affected and low ITZ organisms abundant and healthy.
CULTURAL RESOURCE EVALUATION
SEWARD (8-1) QUAD

Date 8/17/89 Location/MN MONTAGUE ISLAND Site

Location Profile MN - Segment # 2 Length 260 M

Survey Method:
Air (A - indicate on map) Boat (40 %) (A - indicate on map)
Ground (60 %) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source AHRS FILE

Oil conditions/beach visibility LIGHT - HEAVY OIL, FAIR BEACH VISIBILITY

Width of beach zone surveyed 15 - 200 m Tree fringe surveyed 0 - 20 M

Cultural resources observed in beach zone (AHRS code) HTD

Cultural resources observed in tree fringe (AHRS code) CBN, CHT (1)

General observations justifying survey method and segment's site probability

Shore Profile MODERATE CURRENT BREAK BEHIND SABLE COVE AND GRAVEL ISLAND POCKET ISLANDS.

Fresh Water Sources SEVERAL SMALL STREAMS

Sea Exposure OPEN TO PRINCE WILLIAM SOUND

Access/Safety ACCESS POSSIBLE FOR SMALL IN DRY WEATHER

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 # POSTLY-21 Frames 12 - 22

Observer(s) A. BUCK

Time survey 1133 - 1215 1830 - 2030 Time survey ended

Cultural resource considerations/restraints:

"STANDARD CONVENTIONS" + CLEANUP PERSONNEL SHOULD NOT BE ALLOWED IN TREE FRINGE IF CLEANUP IS PLANNED NE TAU POINT.
S.C.A.T Team 4

Greg Chaney

Segment: MN-2
Date: Aug 17, '89
Time: 13:30
Tide: 4 (ft)

Location: NW Montague Island
Base Map: Seward Bl

Montague Point
Graveyard Point
### Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Mechanical
- [ ] Warm water wash
- [ ] Non-mechanical
- [x] Other: **Garbage Pick-up**

---

**Exxon**

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

**Comments:**

**SEGMENT MN-01 IS COMPLETE AND READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW**

**Signature:** Timothy W. Turner  
**Date:** 89/09/09  
**Time:** 14:30

**Printed Name:** Timothy W. Turner

---

### Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 %</td>
<td></td>
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<tr>
<td>&lt; 1</td>
<td>Heavy</td>
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<td>&lt; 1</td>
<td>Medium</td>
</tr>
<tr>
<td>&lt; 1</td>
<td>Light</td>
</tr>
<tr>
<td>&lt; 1</td>
<td>Very Light</td>
</tr>
<tr>
<td>&lt; 1</td>
<td>None</td>
</tr>
</tbody>
</table>

**Subsurface Oil**  
- [x] Yes (minimum)  
- [ ] No

**COMMENT BELOW**

**Reassessment**  
- [ ] Yes - necessary
- [x] No - not necessary unless re-oiled

---

**ADEC rep**

**Comments:** No treatment done in this section. Only a small buildup of oil, which I recommend to be cleaned up.  
**Signature:** Michael Peep  
**Date:** 89/09/09  
**Time:** 15:04

**Printed Name:** Michael Peep

---

**FOSC rep**

**Demobilization approved/disapproved**

**Comments:** Subsurface oil limited to scattered area 40 YDS LONG

**Signature:** James R. Porter  
**Date:** 89/09/09  
**Time:** 14:58

**Printed Name:** James R. Porter, Chief Marine Science Technician

**COPY:** EXXON  ADEC  FOSC  ISCC
SEGMENT INSPECTION RECORD

Date: 09/09/89

Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

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

Comments: TREATMENT OF ON-02 SEGMENT IS COMPLETE AND READY FOR DEMOBILIZATION AND DEPLOYMENT TO NEW SEGMENT

Signature: Timothy W. Turner

Printed Name: Timothy W. Turner

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsurface Oil</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Existing Shoreline Condition As Visually Determined by ADEC

<table>
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<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsurface Oil</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Reassessment

- [ ] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments: Gross contamination and mobile oil removed.

Signature: [Signature]

Printed Name: [Printed Name]

FOSC rep

Demobilization approved/disapproved

Comments: SECTION CE = LENGTH OF SEGMENT WAS CLOSED.

Signature: [Signature]

Printed Name: [Printed Name]

COPY: EXXON ADEC FOSC ISCC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): POINT BAZIL NORTH POINT BLOCK

Includes Shoreline Segments: MN-03.

Submitted: W. [Signature] Date: 8-23-89
(for Exxon)

ISCC Recommendation: [Signature] Date: 8-28-89

FOSC Approval: [Signature] Date: 8/4/89

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

Distribution:
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Exxon Shoreline Supervisor
Exxon SCAT file

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A. FG
A. DNR
CAC
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USFS
SHORELINE CLEANUP PROGRAM

DATE 8/23/89 SHORELINE SEGMENT MN-03

LOCATION: (see enclosed map) MONTAGUE ISLAND-NORTH OF HANNING BAY (POINT BAZIL NORTH BLOCK)

ADEC NO. ________ SHORELINE ASSESSMENT DATE: 8/20/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material and oiled sorbant boom.
- Use bioremediation if possible after mobile oil has been physically removed.
- No other cleanup recommended at this time due to discontinuous, light oil and high wave exposure.

Priorities Considerations:
Class 4: Light oil
A: Resources present

Ecological Constraints (from site survey):
Work at mid tide or take appropriate measures to protect lower intertidal zone. Two cataloged anadromous streams are located in this segment. Notify ADF&G and RAT forty eight hours prior to beginning cleanup activities. An active bald eagle nest is located in this segment, see advisory. Recommend 20 yard buffer on either side of streams if bioremediation occurs in vicinity.

Archeological Constraints (from site survey):
Do not bioremediate historic wooden feature(s) in the intertidal zone. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

Date: 8/24/89

ISCC: ___________________________ Date: 8/28/89

EXXON: ___________________________ Date: 8/28/89

FOSC: ___________________________ Date: 8/28/89

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

Date: Aug 20, 1989 Time: 07:30 AM
Surveyed From: Foot/Boat/Helio/Plane
Observer: Greg Chaney
Weather: C/Cloud/Rain/Snow/Fog

LOCATION
LOCATION: Basil Pt. Montague IS
SEGMENT NUMBER: MN-3
LENGTH OF SHORELINE SEGMENT: 7250 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane
FAIR WEATHER

SHORELINE:
Shoreline Type: SPI/BEA/COV/HLD/STRT
Slope: LANG/HANG/VER
Wave Exposure: H/L/M/Low
Sediment: B5 / C5 / P- / G- / S5 / M- / RS
Seaweed

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

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/H/M/L
Continuous: Y/N % of Segment 5%
Sporadic: Y/N % of Segment 90%
Est. Oil Thickness where > 1cm: ___ cm
Est. Oil Penetration: 45 cm

Pooled Oil: ___ % Free Oil: ___ % Coated: H10 % / M10 % / L80 %

Fresh 5 % Mousse __ % Tar Formation: 95 %

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

Comments:
This segment is dominated by a low angle uplifted rock terrace. Heavy kelp grows offshore. At all locations (other than B) barges would have a difficult time working due to numerous rocks and kelp. Behind the beach is dominated by a wide alder band. Mobile oil was primarily observed near locations B & but traces of tar were found throughout the segment.
ECOLOGICAL EVALUATION

LOCATION: Montague Island  SITE: Pt. Basil to Pt. Lub  OBSERVER: J. Tarpley

LOCATION PREFIX: MN  SEG. NO.: 3  LENGTH: 7250 M (M)

DATE: 8/20/79  TIME (HHMM): 0730-1230  TIDE HT.: + 5.0' - 1.0' - 3.1' (M)

OILED ZONE: Splash  High  Medium  Low

SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

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

(Medium band of algae across ITZ. Other algae include Ulva, Fucus, Nematostella, & laminariae --- some Phyllophora)

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

Mytilus & Saxidomus  Shell debris throughout segment

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

Mergovites + Balanus also present in ITZ.

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

OTHER OBSERVATIONS:

Extensive & thick kelp forests offshore throughout the length of the segment. Numerous jellyfish (Pelagia?) on beach. Abundant algae drift. Amphipods abundant & healthy in algae drift.

CLEANUP PRECAUTIONS:

Kelp Forests: Seal Headlands: Eagle Nest: Avoid oil containers

Do not disturb marine life...

MAMMALS: Otters  Harbor Seals  Sea Lions  Whales

Other: 1 dead murre or murrelet!

BIRDS: 2 Bald Eagles + Nest!: 3 gullcresters, Gulls, Kittiwakes,  22 Common Mergansers, Territorial bird

GENERAL OBSERVATIONS:

** 1 Dead Sea Otter at Pt. Basil. Location has been marked w/orange flagging tape. Otter is in high ITZ drift line next to grass edge

* Possible anadromous stream located within segment.
S.C.A.T Team 4
Greg Chaney
Segment: MN-3
Date: Aug 20, 89
Time: 07:30
Tide: 3 (ft)
Location: S.W. Montague Is.
Base Map: NOAA Chart 16701
CULTURAL RESOURCE EVALUATION

Date 8/20/89 Location NE MONTAQUE ISLAND Site

Location Prefix MN- Segment # 3 Length 7250 M

Survey Method:
Air (A - indicate on map) Boat (50%) (A - indicate on map)
Ground (50%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Sources AHRS FILE

Oil conditions/beach visibility ZERO - LIGHT OIL, GOOD BEACH VISIBILITY

Width of beach zone surveyed 500 Tree fringe surveyed 0 - 10 M

Cultural resources observed in beach zone (AHRS code) PEG(?)

Cultural resources observed in tree fringe (AHRS code) NONE

General observations justifying survey method and segment's site probability
LOW GRADIENT

Shore Profile BOULDER BEACH W/ SUNK ROCKY HEADLANDS AND CABRIL GRVEL

Fresh Water Sources MARRY SMALL STREAMS & SEEPS

Sea Exposure OPEN TO LATOKITE PASSAGE

Access/Safety ACCESS DIFFICULT FOR RANGE/LCM DUE TO ROCKS

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # Frames
B/W Roll # REGMY-21 Frames 23-27

Observer(s) P. BUCK

Time survey started 0730 Time survey ended 1230

Cultural resource considerations/restraints:

"STANDARD CONSTRAINTS"
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 MN 3 is complete. Ready for demobilization and equipment to new segment.

Signature: [Signature]
Date: 9/1/89
Time: [Time]
Printed Name: [Printed Name]

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsurface Oil</td>
<td>[ ] Yes</td>
<td>[ ] No</td>
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</tbody>
</table>

Subsurface Oil

Existing Shoreline Condition As Visually Determined by ADEC

<table>
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<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsurface Oil</td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>

Reassessment

[ ] Yes - necessary
[ ] No - not necessary unless re-oiled

ADEC rep

Comments: No medical treatment done. Hand pick-up visible from aircraft.

Signature: [Signature]
Date: 9/1/89
Time: [Time]
Printed Name: [Printed Name]

FOSC rep

Demobilization approved/disapproved

Signature: [Signature]
Date: 9/1/89
Time: [Time]
Printed Name: [Printed Name]

COPY: EXXON ADEC FOSC ISCC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): MONTAGUE POINT BLOCK

Includes Shoreline Segments: MN-04, MN-05

Submitted: [Signature] Date: 8/23/89  (for Exxon)

ISCC Recommendation: [Signature] Date: 8/28/89

FOSC Approval: [Signature] Date: 8/28/89

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

Distribution:
Exxon Shoreline Coordinator
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PWSCA
USFS
SHORELINE CLEANUP PROGRAM

DATE 8/23/89  SHORELINE SEGMENT MN-04

LOCATION: (see enclosed map) MONTAGUE ISLAND-NORTH END

(MONTAGUE POINT BLOCK)

ADEC NO. ________________ SHORELINE ASSESSMENT DATE: 8/21/89

Recommended Cleanup Activity(ies):
- Use bioremediation if possible. If at all possible, recommend physical removal of oil, not bioremediation.
- No other cleanup recommended at this time due to discontinuous, light oil and high wave exposure.

Priorities Considerations:
Class 4: Light oil
A: Resources present

Ecological Constraints (from site survey):
Work at mid tide or take appropriate measures to protect lower intertidal zone. An active bald eagle nest is located in this segment, see advisory.

Archeological Constraints (from site survey):
No not bioremediate historic wooden feature(s) in the intertidal zone. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer  
Date: 8/24/89

ISCC:  
Date: 8/28/89

EXXON:  
Date: 8/28/89

FOSC:  
Date: 7/28/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: Aug 21 1989  Time: 09:00 AM  Observer: GREG CHANEY

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

**LOCATION**

**LOCATION**  North Montague Is.  **SEGMENT NUMBER**  MN-Y

**LENGTH OF SHORELINE SEGMENT:**  4400 m

**ACCESS:**  Foot/Boat/Helio/Float Plane

**SHORELINE:**  Off shore rocks may cause problems - fair weather only

Shoreline Type: SPI/BEN/COV/HILL/STRT  Slope: LANG/HANG/VER

Wave Exposure:  High/Med/Low

Sediment:  B/C/P/G/S/M/R20

**Drift Debris on Beach:**  Yes/No  **Supra/Upper/Mid/Lower Type**  Seaweed

**OIL**

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

**Area of Beach Impact:**  SU/SP/H/M/I  **Max Observed**

Continuous: Y/N  % of Segment 10%  **Width of Band:**  up to 6 m

Sporadic: Y/N  % of Segment 95%  **Estimate**

**Est. Oil Thickness where >1 cm:**  _____ cm  **Est. Oil Penetration:**  20 cm

Pooled Oil:  _____  **"Free" Oil:**  _____  **Coated:**  H/10%  M/20%  L/70%

**Fresh**  5  **Mousse**  5  **Tar Formation:**  95%

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

**Comments:**

This segment is dominated by a long low angle wave cut terrace. This terrace is covered with a thin layer of coarse boulders. Oil at #1 is heavy but the majority of the segment has only random drops of tar. The majority of the tar appeared stable and is unlikely to re-float. Oil at location #4 covered a high percentage of the rock surface and still appeared mobile.

**EXXON** says they cannot remove since it is between boulders. Cannot wash because exposed.
~6 meter band oil
Mobile oil present
See sketch map

Concentrated Tar patches
rough band 6 meters wide
10% coverage

Drips throughout intertidal zone
Heavy drips and splatters
Sheen on tide pools

West edge MN-4

Low bedrock terrace
Random drops. Few patches. No significant oil observed.

East edge MN-4

Montague Island

abin
THICKLY COATED OIL BETWEEN BOULDERS

OIL IN ROCK CRACKS, SHEEN ON TIDE POOLS.

Low Jagged Rocks

Small Offshore Rocks

Oil Concentration Decreases

OIL BAND ON BOULDERS

CLIFF

Spruce Forest on Top of Cliff

Low Jagged Rocks

Rock Slab Which Sticks Up Like A Finger

Spruce On Top Of Cliff

MONTAGUE ISLAND
Ecological Resource Map

S.C.A.T Team 4

Segment: MN-4

Date: 8/21/89

Time: 0845→1300

Tide: (ft)

Location: Montague Island

Base Map: —

Bald Eagle Nest (Active)

Kelp Forest

Montague Point

Bay

Rocky

100

200

300

400

500

600

700

800

900

9544

1162

18
ECOLOGICAL EVALUATION

LOCATION: North Montague Pt. SITE: North Montague Pt. OBSERVER: J. Tarpley
LOCATION PREFIX: MN SEG. NO.: Y LENGTH: 4400 m (M)
DATE: 7/21/79 TIME (HHMM): 0845 → 1500 TIDE HT.: +5.0' → 0.0 → +3.0' (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Wide band throughout lower ITZ. Other algae includes Halosaccion, Cladophora, Odonthalia, Leathesia, Ralfsia, Corallium, Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Located on bedrock outcrops and inbetween cobbles.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Almost completely dead in heavily oiled areas.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Almost completely dead in heavily oiled areas.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Affected in High ITZ in heavy oil areas.

OTHER OBSERVATIONS: Large kelp forest off Montague Pt. Dead Limpet, Littorina and Balanus found in heavily oiled areas in High ITZ. Below oiled zone is rich and healthy although a few Fucus at high edge of range were also dead.

CLEANUP PRECAUTIONS: Keep forest Extensive rocky beach Accidents nesting area and oil contamination of healthy low ITZ.

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other 2 deer skeletons: Deer See.

BIRDS: 1 dead Murrelet (little bit of oil): 4 Bald Eagles (1 in, 3 fledging) + Nest: Gull, Shark

GENERAL OBSERVATIONS: Segment is wave cut terrace covered with boulders & cobble. ITZ extensive with difficult access for large vessels.
CULTURAL RESOURCE EVALUATION

Date 4/21/89 Location: MONSHAGUT ISLAND Site

Location Pref: MN- Segment # 4 Length 4400 M

Survey Method:
Air (A - indicate on map) Boat (25%) (A - indicate on map)
Ground (25%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source: MARP FILE

Oil conditions/beach visibility LIGHT OIL W/ SPOADIC MODERATE WAVES GOOD BEACH VISIBILITY

Width of beach zone surveyed 50 M Tree fringe surveyed 0-10 M

Cultural resources observed in beach zone (AHRS code) SMP, HTI

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

General observations justifying survey method and segment's site probability
Shore Profile: MORGUE GRADIENT BOULDER DEPOTS W/ CORAL REEF BEACH
Fresh Water Sources: NUMEROUS SMALL STREAMS

Sea Exposure: OPEN TO PRINCE WILLIAM SOUND

Access/Safety: ACCESS INADVISABLE EXCEPT FOR SKIFF IN CALM WEATHER

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 #PESTRY - 21 Frames 28 - 31

Observer(s): P. BUCK

Time survey began: 0850 Time survey ended: 1315

Cultural resource considerations/restraints:
"STANDART CONSIDERATIONS"
S.C.A.T Team 4

Greg Chaney

Segment: MN-4

Date: Aug 21 1989

Time: 1:00 AM

Tide: 2 (ft)

Location: North Montague I.S.
Base Map: Seward B-1

Montague Point

Graveyard Point
SHORELINE CLEANUP PROGRAM

DATE  8/23/89                  SHORELINE SEGMENT  MN-05

LOCATION: (see enclosed map) MONTAGUE ISLAND-REEF OFF NORTHEAST END (MONTAGUE POINT BLOCK)

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 8/21/89

Recommended Cleanup Activity(ies):
No cleanup recommended at this time (subject to FOSC reassessment at a later date), due to discontinuous, light oil, difficult access and high wave exposure.

Priorities Considerations:
Class 4: Light oil
A: Resources present

Ecological Constraints (from site survey):
None, since no cleanup recommended. If cleanup occurs, see Har bor Seal Advisory.

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

State Historic Preservation Officer *
Date: 8/24/89

ISCC: ____________________________ Date: 8/28/89
EXXON: __________________________ Date: 8/28/89
FOSC: ____________________________ Date: 8/28/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: Aug 21/89  Time: 14:00  Observer: Greg Chavaney
Surveyed From: Foot/Boat/ Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
LOCATION Reef near Montague Pt. SEGMENT NUMBER MN-5
LENGTH OF SHORELINE SEGMENT: 1000 m
ACCESS: Foot/ Vehicle/ Boat/ Barge/ Heli/ Float Plane

SHORELINE:
Shoreline Type: SPI/ SRI/ COV/ HLD/ STRT Slope: LANG/ HANG/ VER
Wave Exposure: HIGH/ Med/ Low
Sediment: B-40% / C-% / P-% / G-% / S-% / M-% / R-60%
Drift Debris on Beach: Yes / No Supra/ Upper/ Mid/ Lower Type __________

OIL
Degree of Oiling: Heavy/ Moderate/ Light/ No Oil/ Unobserved
Area of Beach Impact: SU / SP / H / M / L
Continuous: Y / N % of Segment 10% Width of Band: ______ m
Sporadic: Y / N % of Segment 90%
Est. Oil Thickness where > 1 cm: ______ cm Est. Oil Penetration: ______ cm
Pooled Oil: ______ t "Free" Oil: ______ t Coated: H/10% / M/ 30% / L/ 60%
Fresh ______ t Mousse ______ t Tar Formation: ______ t
Drift Debris Oiled? Yes / No Supra/ Upper/ Mid/ Lower Amount: H/ M/ L /

Comments:
This reef is exposed to intense wave action and is submerged at high tide. Although waves have been working on the oil, a band of tar approximately 2 meters wide was observed near the center of the reef. No sheen was observed on any of the tide pools present. Although the tar is not likely to cause reoiling, it may persist in its present form for some time.
LOCATION: Montague Is.  SITE: Reef near Montague  OBSERVER: J. Tarpley
LOCATION PREFIX: MN  SEG. NO.: 5  LENGTH: 1000 m (M)
DATE: 8/21/89  TIME (HHMM): 1350-1415  TIDE HT.: +7.5 ft (O)
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
Other algae include: Chondrus, Desmarestia, Obnerthalia

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

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: Tide was high and difficult to evaluate complete.
Rocks, Rocky Reef is a Harbor Seal Haulout site and Sea otters are located in kelp forests surrounding the reef.

CLEANUP PRECAUTIONS: Kelp Rocks: Sea Otters & Harbor Seals

MAMMALS: Otters 6  Harbor Seals 24+  Sea Lions  Other  Whales

BIRDS: Gulls, Kittiwakes, Cormorant

GENERAL OBSERVATIONS: Light oil splatter across reef. Recommend that no cleanup be done due to Seal & otter use of the reef and surrounding area. Oil on high rocks and appears to have little impact on the surrounding biota.
S.C.A.T Team 4
Greg Chaney
Segment: MN-5
Date: Aug 21 1989
Time: 14:00
Depth: 7 (ft)
Location: North Montague Is.
Base Map: Seward Bl
CULTURAL RESOURCE EVALUATION
SEWARD CO-1 SQUAD

Date 3/21/89 Location NE CORNER HUNTSHAWI SITE

Location Prefix MN- Segment # 5 Length 1000 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 AHRS FILES

Oil conditions/beach visibility: PEN TO LIGHT OIL, GOOD BEACH VISIBILITY

Width of beach zone surveyed 20 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 BOULDER/CABILL REEF

Fresh Water Sources NONE

Sea Exposure OPEN TO DRINK WILKIN SOUND

Access/Safety ACCESS DIFFICULT DUE TO EXPOSURE AND ROCKS

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # Frames
B/W Roll # Frames

Observer(s) RUCK

Time survey started 1350 Time survey ended 1430

Cultural resource considerations/restraints:
"STANDARD CONSTRAINTS"
Along ridge top discontinuous tar band up to 2 meters wide 50% surface coverage in band.

Montague Point
Montague Island

Offshore reef

No sheen on tide pools
Trace random tar drops

Harbor Seal haunt
## Inspection Record

### Shoreline Treatment Process(es)
- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [x] Mechanical
- [ ] Non-mechanical
- [ ] Other: **No Treatment Required**

### Exxon

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

**Comments**: SEGMENT MN-05 is complete and ready for demobilization and deployment to new segment.

**Signature**: Timothy W. Turner  
**Date**: 8/1/95  
**Time**: 15:21

**Printed Name**: Timothy W. Turner

### Existing Shoreline Condition

#### USCG

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<th>Percent</th>
<th>Degree of Oiling</th>
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</thead>
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#### ADEC

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<th>Percent</th>
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<td>None</td>
</tr>
<tr>
<td>100%</td>
<td></td>
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</tr>
</tbody>
</table>

### Subsurface Oil

- [ ] Yes
- [x] No

**Comment Below**

**Reassessment**

- [ ] Yes - necessary
- [x] No - not necessary unless re-oiled

### ADEC rep

**Comments**: I reviewed this segment thoroughly and found no oil. Continue with cones.

**Signature**: Michael F  
**Date**: 9/19/98  
**Time**: 15:21

**Printed Name**: Michael F

### FOSC rep

**Demobilization approved/disapproved**

**Comments**: CONCUR WITH ADEC REPRESENTATIVE

**Signature**: James R. Porter  
**Date**: 9/19/98  
**Time**: 15:21

**Printed Name**: James R. Porter

**Copy**: EXXON  ADEC  FOSC  ISCC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): HANNING BAY SOUTHWEST BLOCK
(Montague Island-PWS)

Includes Shoreline Segments: MN-06

Submitted: [Signature] Date: 8-29-89
(for Exxon)

ISCC Recommendation: [Signature] Date: 8-1-89

FOSC Approval: [Signature] Date: 8-1-89

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

Distribution:
Exxon Shoreline Coordinator
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A. DEC
A. FG
A. DNR
CAC
PWSCA
USFS
HANNING BAY
SOUTHWEST BLOCK
MN-6
SHORELINE CLEANUP PROGRAM

DATE  8/29/89                  SHORELINE SEGMENT  MN-06

LOCATION: (see enclosed map) MONTAGUE ISLAND-Southwest Hanning Bay

ADEC NO.________________SHORELINE ASSESSMENT DATE:  8/22/89

Recommended Cleanup Activity(ies):
Manually remove pooled oil.
Bioremediate if possible. Available SCAT reports indicate the presence of little substrate suitable for bioremediation and/or no oil for most of the shoreline segment. Recommend BAT reassess prior to bioremediation.

Priorities Considerations:
Class 4: Light oil
Class A: Resources present

Ecological Constraints (from site survey):
Work at mid tide + or take appropriate measures to protect lower intertidal zone.

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

State Historic Preservation Officer  *  

Date:  Aug 29, 89

ISCC:  Sharon K. Christopher  

Date:  9-1-89

EXXON:  Daniel J. Leg

Date:  9-1-89

FOSC:  

Date:  9-1-89

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

THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

ALL SHORELINE SEGMENTS WITHIN THE EVANS ISLAND NORTHEAST BLOCK ARE ON LANDS OWNED BY CHENEGA VILLAGE CORPORATION. PERMIT NO ACCESS TO UPLAND AREAS AT ANY TIME.
SHORELINE OIL EVALUATION

Date: Aug 22/89 Time: 1015 AM
Surveyed From: Foot/Boat/Helio/Plane
Observer: Greg Chaney
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Sw Hannig Bay - Montague Is
SEGMENT NUMBER MN - 6

LENGTH OF SHORELINE SEGMENT: 2.300 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: B70% / C10% / P-10% / G-I% / S-I% / M-I% / R2O%

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Secured

OIL

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

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

Continuous: Y/N % of Segment 20% Width of Band: up to 2 m
Sporadic: Y/N % of Segment 80%

Est. Oil Thickness where > 1 cm: 1 cm Est. Oil Penetration: 15 cm

Pooled Oil: trace "Free" Oil: Trace Coated: H/L / L30% / L60%

Fresh 5 Mousse 95% Tar Formation: 95%

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

Comments:

This segment is dominated by a wide, low angle wave cut terrace. The north east portion of the segment has some rounded cobbles but the majority of the segment is bed rock overlain by a thin layer of boulders. Some sheen was observed on tide pools. Most of the oil was in the form of stable tar but at location A some small pools of
standing oil were found between boulders. 2 rough bands of tar and oil were found near location A. Both averaged 2 meters wide.
MONTAGUE STRAIT
RANDOM DROPS TAR THROUGHOUT INTERTIDAL ZONE
MASSIVE BOULDER BEACH

HANNING BAY

2 ROUGH PARALLEL BANDS OIL & TAR
SMALL LOCAL POCKETS STANDING OIL
UP TO 1 CM. DEEP BETWEEN BOULDERS

NORTH MN-6

ROUGH DISCONTINUOUS
TAR BAND ~ 1 METER WIDE
SHEEN ON TIDE POOLS

SOUTH MN-6
LARGE WHITE FISH
TOTE ON BEACH

MONTAGUE ISLAND

200 FT. CONTOUR INTERVAL
ECOLOGICAL EVALUATION

LOCATION: Montague IS.  SITE: Hanning Bay  OBSERVER: J. Tarpley
LOCATION PREFIX: MN  SEG. NO.: 6  LENGTH: 2300 m (M)
DATE: 3/27/89  TIME (HHMM): 1018-1330  TIDE HT.: +3.0' → +1.7' → +5.0' (C)
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

Nucella, marmaritae also present

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

OTHER OBSERVATIONS: Very extensive thick kelp forest along outer coast of segment. Rocks, cobble, boulder outside bay. Cobbles & boulders inside bay.

CLEANUP PRECAUTIONS: Kelp forest extensive.

MAMMALS: Otters 2  Harbor Seals  1  Steller's Sea Lions 5  Whales

BIRDS: Kittiwakes, Gulls, Oystercatchers, 50+ Northern Phalarope

GENERAL OBSERVATIONS: 
CULTURAL RESOURCE EVALUATION

Date 8/22/89

Location Prefix MN - Segment # 6 Length 2300 M

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

Ground 100% (G - indicate on map)

Known cultural resources (AHRS #) None

Data Source AHRS # 1446 X 11 075

Oil conditions/beach visibility ZERO TO LIGHT OILING; GOOD BEACH VISIBILITY:

Width of beach zone surveyed 60 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 LOW/NOVEG frauen CORRIGE BEACH LATERED BY PRE-1940 RAPED BEACH

Fresh Water Sources SEVERAL SMALL STREAMS

Sea Exposure OPEN TO SHORELINE SLENT

Access/Safety Access to DIRECT/LOW O.K. IN CALM WEATHER

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) A. BUCK

Time survey started 1015 Time survey ended 1230

Cultural resource considerations/restraints:

"STANDARD CONSTRAINTS"
Shoreline Treatment Process(es) Completed for this Segment
- Hot water wash
- Warm water wash
- Water deluge
- Mechanical
- Non-mechanical

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

Comments

Signature: [Signature]
Date: [Date]
Time: [Time]
Printed Name: [Printed Name]

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>(0)</td>
</tr>
<tr>
<td>Medium</td>
<td>(&lt;2)</td>
</tr>
<tr>
<td>Light</td>
<td>(2)</td>
</tr>
<tr>
<td>Very Light</td>
<td>(4)</td>
</tr>
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<td>None</td>
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Existing Shoreline Condition As Visually Determined by ADEC

<table>
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</table>

Subsurface Oil
- Yes
- No

ADEC rep
Comments: No Mechanical treatment done. Hand picking of debris.
Viewed by aircraft. No visible gross contamination.

Signature: [Signature]
Date: [Date]
Time: [Time]
Printed Name: [Printed Name]

FOSC rep
Demobilization approved/disapproved
Comments: [Comments]

Signature: [Signature]
Date: [Date]
Time: [Time]
Printed Name: [Printed Name]