



EVOS
GC
1552
.P75
S42
1989
v.26

[Shoreline evaluations, 1989].

Volume 26

Kodiak section 4

Title supplied by cataloger. This title page is supplied by Alaska Resources Library and Information Services (ARLIS).

ARLIS
Alaska Resources Library & Information Services
Library Building, Suite 111
3211 Providence Drive
Anchorage, AK 99508-4614

Kodiak
SCAT

SECTION 4

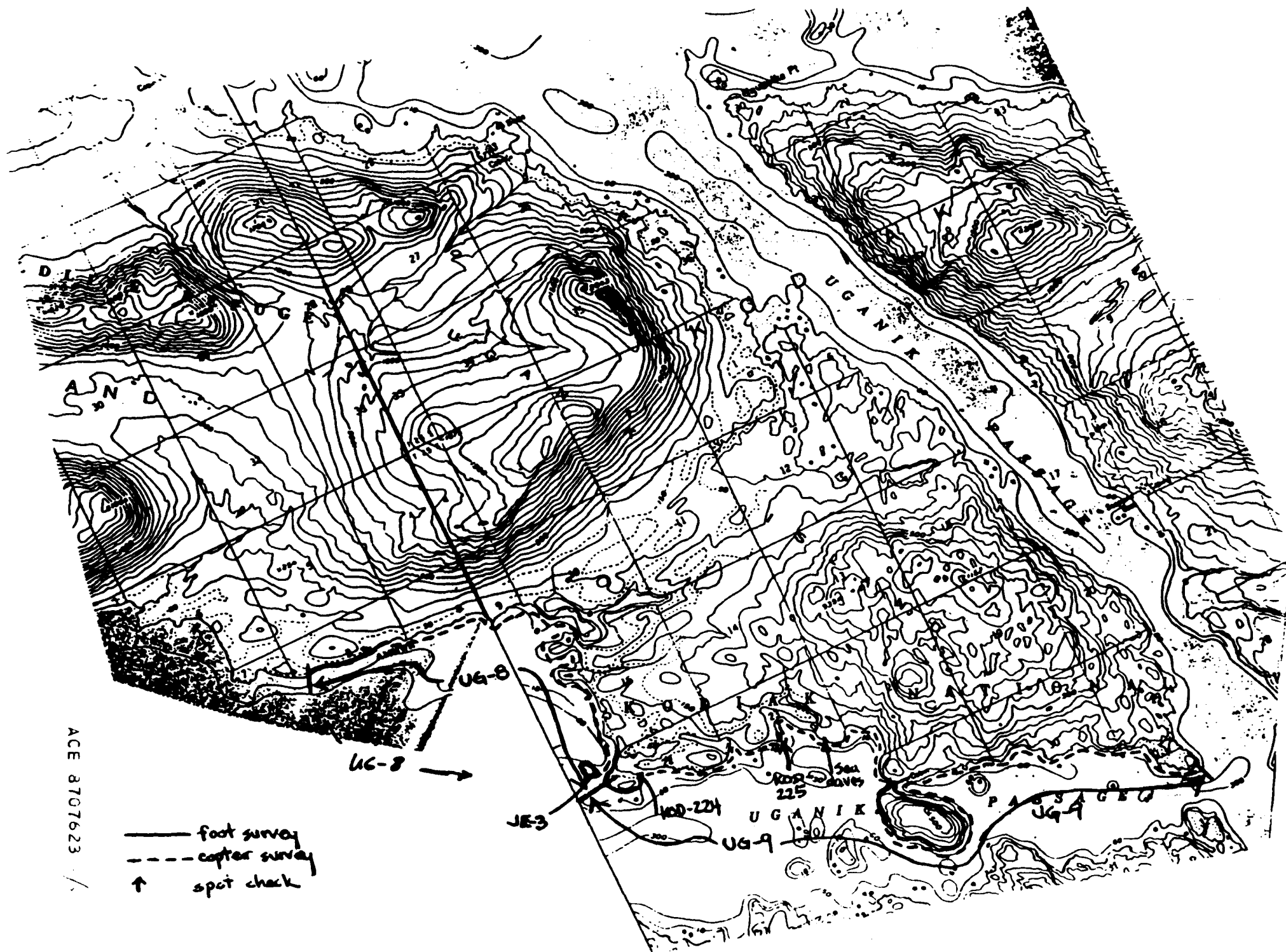
RECEIVED
MAR 1 1985
D
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DENVER, COLORADO 80202



RECEIVED
MAR 11 1965
100178 2 747
100178 2 747
100178 2 747

RECEIVED
MAR 11 1992

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



ACE 8707623

(version 5/02/89)

K6-6

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT NP-1

LOCATION: (see enclosed map) NOISY PASSAGE BEACHES ON UGANIK
ISLAND -KODIAK

ADEC NO. K6-6 SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. No oil observed.

Priorities Considerations:

KISCC considers this a sensitive area due to large seabird colonies on Noisy Island.

Ecological Constraints (from site survey):

No constraints. No cleanup is recommended for this segment.

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.

Douglas Rege
State Historic Preservation Officer *

Date: 6/30/89

EXXON: [Signature]

Date: 7/1/89

FOSC: [Signature]
By: [Signature] Rec'd 7/6/89

Date: 7/8/89

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

ACE 8707624 -/

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 19
1989 / Time: 10:00

Observer: Mike Miles

Surveyed From: Foot Boat Helio Plane

Weather: Sun Cloud Rain Snow Fog

LOCATION UGANIK ISLAND:

LOCATION NOISY PASSAGE

SEGMENT I.D. K-6-6-NP-1

LENGTH OF SHORELINE SEGMENT: 4600 m

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

SHORELINE:

Shoreline Type: SPI/DEA/COV/HID/STRT

with disc - some of
landing site on the
slope: LANG/HANG VER

Wave Exposure: High Med Low

Sediment: B5 % / C2 % / P2 % / G1 % / S % / M % / R90 %

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment # _____ No. Bands _____ Width _____

Sporadic: Y/N Segment # _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: 4/1A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes No No. Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 0 % H/M/L/VL Sheen 0 %

OIL WEATHERING (OV)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 0 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

ACE 8707625

SEE ATTACHED SHEET

DOCUMENTATION:

Map Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

ACE 8707626

Mike Miles
June 19/89

UGANIC ISLAND
NOISY PASSAGE
K-6-6-NP-1

SHORELINE OIL EVALUATION
COMMENTS

This coastline has a steep rock backshore and a high angle rocky foreshore. A number of pebble/cobble/boulder pocket beaches occur in coastal indentations.

This shoreline was flown at 30 feet alt., approximately 300 m was walked and all sizeable pocket beaches were landed on in order to check sub-surface sediment characteristics.

No oil was found on any beach and no oil was observed on any rocky headland section. Clean-up activities are therefore not required.

ECOLOGICAL EVALUATION

LOCATION: Uganik Island SITE: Noisy Passage OBSERVER: J. Tarpley

LOCATION PREFIX: K6/NP SEG. NO.: K-6-6-NP-1 LENGTH: 4600 (M)

DATE: 6/19/89 TIME (HHMM): 0925 TIDE HT.: ~ -0.50 (M)

OILED ZONE: Splash High Medium Low $\emptyset$

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: No oil seen. Rocky ITZ rich & diverse with a healthy biota.

CLEANUP PRECAUTIONS: None, since cleanup is not recommended.

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other none

BIRDS: Gulls, Bald Eagles flying, Tufted puffins, Cormorants, Gulls & scoters in R.

GENERAL OBSERVATIONS: Steep vertical rock faces with small boulder bank
Very difficult access from land or water. No oil seen

UGANIK ISLAND
(KODIAK)
K6-6-NP-1

HELIX OF

ACE 8707630 -/

5-16

5-15

STRAIT

VIEKODA

BAY

5-6/5-7

5-7

5-6

Light
Noisy
Islands

Noisy
Passage

Cape Uganik

KODIAK ISLAND

YAGM 2018

Yellow

WILDER ISLAND
REFUG

Broken Pt

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT NP-2

LOCATION: (see enclosed map) ROCKY POINT AT NOISY PASSAGE ON
UGANIK ISLAND-KODIAK

ADEC NO. K6-6 SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

Manual removal of oiled debris and very small puddles of mousse in bedrock cracks.

Wave action will eventually clean this beach, so no other cleanup recommended at this time. If it is decided that cleanup is to be undertaken, hot water and/or moderate to high pressure washing or other appropriate techniques will be required to remove the tar deposits on this beach.

Priorities Considerations: Class 4-A

KISCC considers this a sensitive area due to the close proximity of major seabird colonies on Noisy Island.

Ecological Constraints (from site survey):

Avoid contamination of lower intertidal zone.

Avoid trafficking through healthy mytilus and balanus areas.

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.

Douglas Reger
State Historic Preservation Officer *

Date: 6/30/89

EXXON: [Signature]

Date: 7/1/89

* FOSC: [Signature] rec'd 7/12

Date: 7/13/89

No type B up review of KISCC

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

Version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: JUNE 19 / 89 / Time: 11:26

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helicopter/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION UGANIK ISLAND
LOCATION NOISY PASSAGE

SEGMENT I.D. X-6-6 - NP-2

LENGTH OF SHORELINE SEGMENT: 450 m

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

SHORELINE:

Shoreline Type: SPI/DEA/COV/HLD/STET

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B30 / C10 / P30 / G / S / M / R30

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type SM

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 30 No. Bands _____ Width 20m

Sporadic: Y/N Segment < 20 Min/Max Dia 10 cm Impact Width 20 cm on vehicle rock

Est. Oil Thickness where > 1cm: 4/4 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0-20 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil 0 ; "Free" Oil _____ ; Spattered _____ ; H/M/L/VL Sheen 0 ;

OIL WEATHERING

Fresh Oil 0 ; SU/SP/VP/MID/LO Choc Mousse 1 ; SU/SP/VP/MID/LO

Pancake Mousse 0 ; SU/SP/VP/MID/LO Asphalt Mousse 99 ; SU/SP/VP/MID/LO

Tar Formation 0 ;

Comments:

SEE COMMENT SHEET AND MAP

These categories do not apply to this beach as the oil is
i) < 0.5 cm in thickness (and therefore not "free oil") and ii) the tar
coatings is nearly continuous in places (hence > 5cm in diameter and not
spattered oil). For the sake of this form assume the oil is 100% oil.

CUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/☒N Tape Number(s) _____

Photography: ☒N Roll Number(s) JT-2

Sample Numbers Collected: N/A

Strike Miles

June 19 / 89

UGANIK ISLAND

NOISY PASSAGE

K-6-6-NP-2

PAGE 1 OF

COMMENTS

SHORELINE OIL EVALUATION

This shorezone consists of a steep rock backshore and a pebble/cobble/boulder beach situated in a relatively protected small cove.

to very light.

A light coating of spotted tar occurs on much of the mid to upper ITZ. This coating is nearly continuous over a 10 m² area in the north corner of the beach and the oil contamination in this localized area could be considered as "moderate".

In a number of small rocky crevices on the adjacent beach.

Clean-up

i) manual removal of oiled debris and manual removal of small volumes of mousse (< 0.3 m³) from cracks.

ACE 8707634

ii) relocation of oiled pebbles to lower portions of the ITZ [However winter storms will accomplish the same objectives].

iii) Hot water +/- high pressure would likely be required to clean the more heavily oiled sections of cobbles, boulders and rock. Un-oiled boulders 1-1.5 m in diameter occur down-drift of this more heavily oiled section of beach.

Mike Miles
June 19 / 89

UGANIK ISLAND
NOISY PASSAGE
K-6-6-NP-2

PAGE 2 OF 2

COMMENTS

SHORELINE OIL EVALUATION

iii) cont It would be difficult or impossible to boom this beach in a manner which would prevent washed oil from contaminating the un-oiled portions of the low to mid ITZ. Due to the porous nature of the beach sediments, a significant percentage of oil would likely be carried down into the underlying material. Given these concerns, the small volume of oil on this beach, access difficulties due to the rocky high wave exposure coast, and biological constraints (discussed separately) - beach washing activities do not appear to be warranted.

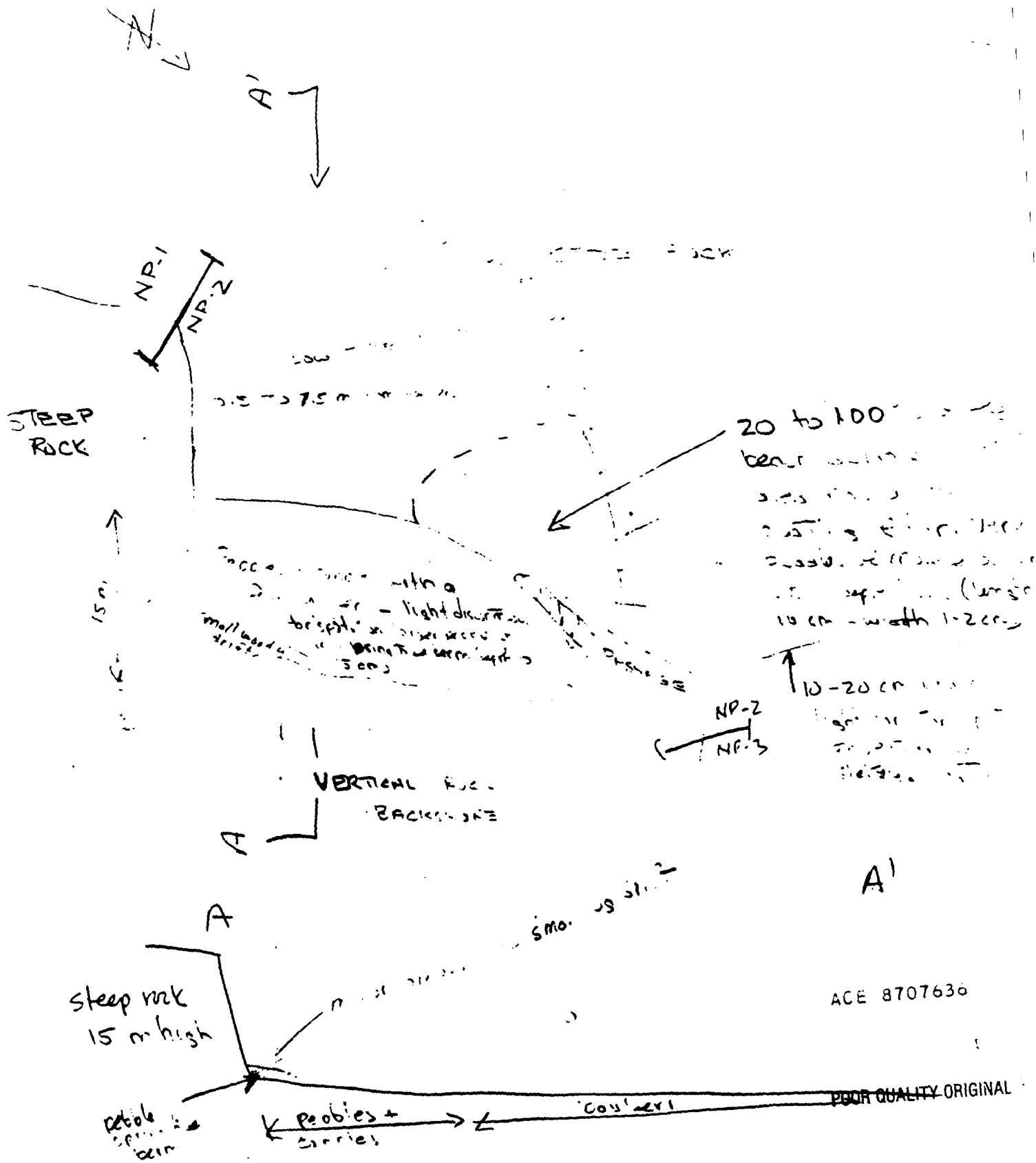
Manual removal of oiled seaweed / drift, plus removal of pooled mousse in small cracks using oilophilic rags, therefore appears to be the preferred option.

JUNE 19/39

11:08

more miles

UGANIK ISLAND
NOISY PASSAGE
NP-2



ACE 8707636

~~POOR QUALITY ORIGINAL~~

ECOLOGICAL EVALUATION

LOCATION: Ugarik Island SITE: Noisy Passage OBSERVER: J. Tarpley

LOCATION PREFIX: K6/NP SEG. NO.: K6-6-NP-2 LENGTH: 450 (M)

DATE: 6/19/89 TIME (HHMM): ~1045 TIDE HT.: ~ -0.25 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Oiled Fucus appears dead but still attached. Fucus in lower ITZ not oiled - healthy

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

Oiled mussels coated & slow to respond to stimulate. Lower ITZ mussels healthy

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

Coated and slow to respond. → In high ITZ oiled areas

Littorina

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

Coated and slow to respond, many dead. → In high ITZ oiled areas

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

Coated and slow to respond. → In high ITZ oiled areas.

OTHER OBSERVATIONS: Lower ITZ boulders not oiled and rich with a healthy biota.

CLEANUP PRECAUTIONS: Avoid contamination of lower ITZ. Avoid traffic through mussels and Balanus areas.

MAMMALS: Otters 2 Harbor Seals Sea Lions Whales
Other ~50m offshore foraging

BIRDS: Magpies on beach, Gulls

GENERAL OBSERVATIONS: Oil concentrated into north side of pocket beach and along high tide line. No drift material on this beach.

Lower ITZ healthy and would be damaged by clean up crews and reeking due to washing than with the present amount of oil that will be washed out with storms.

ACE 8707637

UGANIK ISLAND
(KODIAK)

K6-6-NP-2

5-6/5-7

VIEKODA

BAY

5-7

5-6

HELIX OF

Light
Noisy
Islands

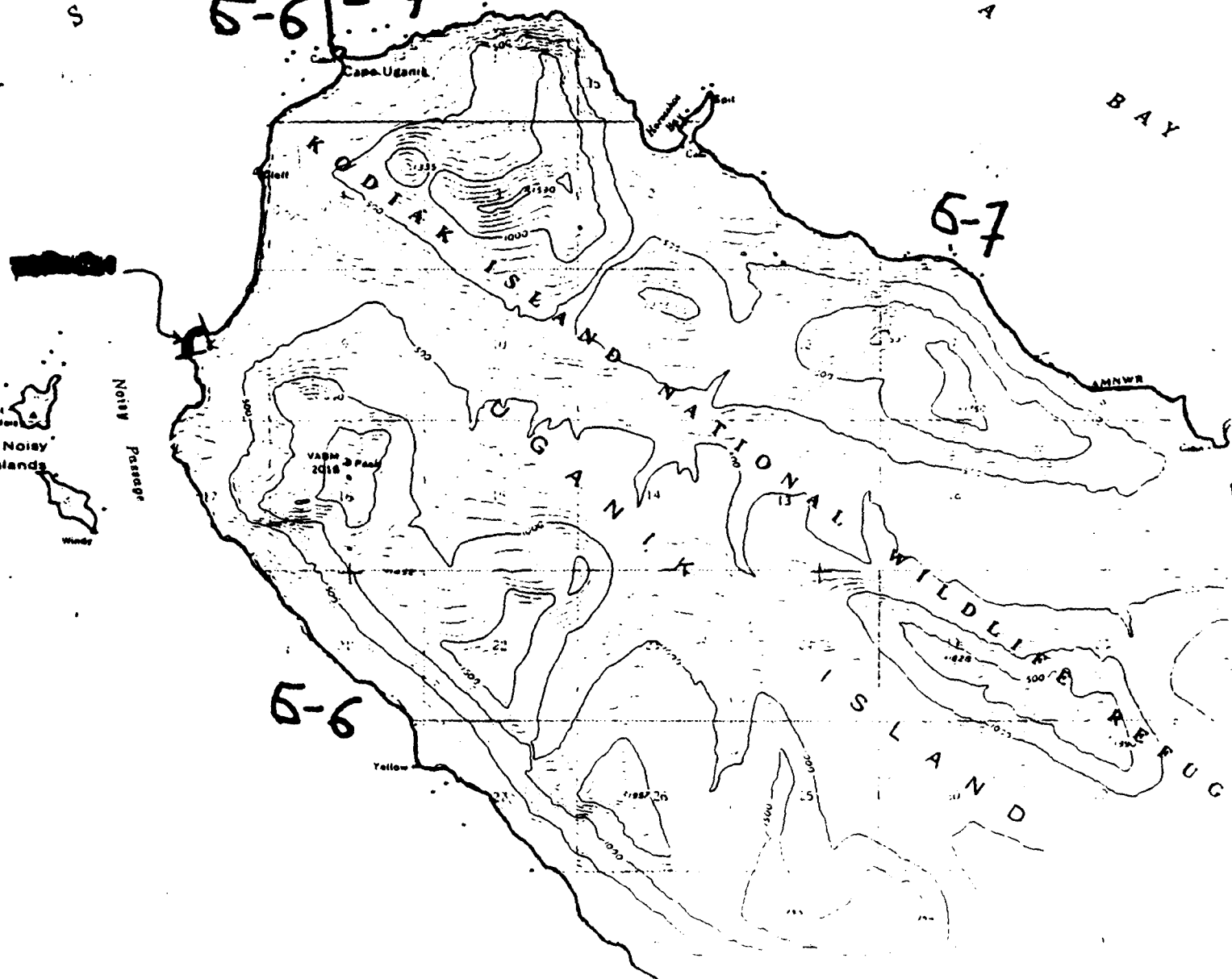
Noisy
Passage

ACE 8707639 -15

-16

5-15

Broken Pt



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89 SHORELINE SEGMENT NP-3

LOCATION: (see enclosed map) SANDY BEACH ON UGANIK ISLAND AT
NOISY PASSAGE-KODIAK

ADEC NO. K6-6 SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

Manual removal of oiled drift (seaweed) is currently taking place and no additional cleanup activities are required.

Priorities Considerations:

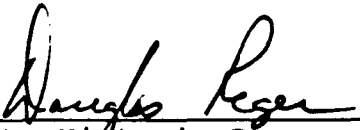
The KISCC considers this a sensitive area due to local seabird colonies on Noisy Island.

Ecological Constraints (from site survey):

Avoid vegetated areas and eroding hillside.

Archeological Constraints (from site survey):

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


State Historic Preservation Officer *

Date: 6/30/89

EXXON: 

Date: 7/1/89

* FOSC:  P. C. Smith

Date: 7/1/89

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

ACE 8707640

(version 5/16/89)

JUNE 19

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 37 / Time: 12:20

Observer: Mike Mills

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION UGANIK ISLAND
LOCATION NOISY PASSAGE

SEGMENT I.D. K-6-6-NF-3

LENGTH OF SHORELINE SEGMENT: 1400 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 1 / C 1 / P 2 / G 3 / S 2 / M 1 / R 1

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands Width

Sporadic: Y/N Segment 1 Min/Max Dia Impact Width

Est. Oil Thickness where > 1cm: 1/16 cm SU / SP / UP / MID / LO

Est. Oil Penetration: cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil 0 Spattered 0 H/M/L/VL Sheen 0

OIL WEATHERING (LOW)

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 0 SU/SP/VP/MID/LO

Pancake Mousse 0 SU/SP/VP/MID/LO Asphalt Mousse 0 SU/SP/VP/MID/LO

Tar Formation 0

ACE 8707641

Comments:

This segment consists of a steep gradient unconsolidated cliff and a wide pebble beach. No oil was found on the beach however a clean-up crew had just finished removing 10 to 20 bags of lightly oiled drifted seaweed.

No additional clean-up activities are required

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

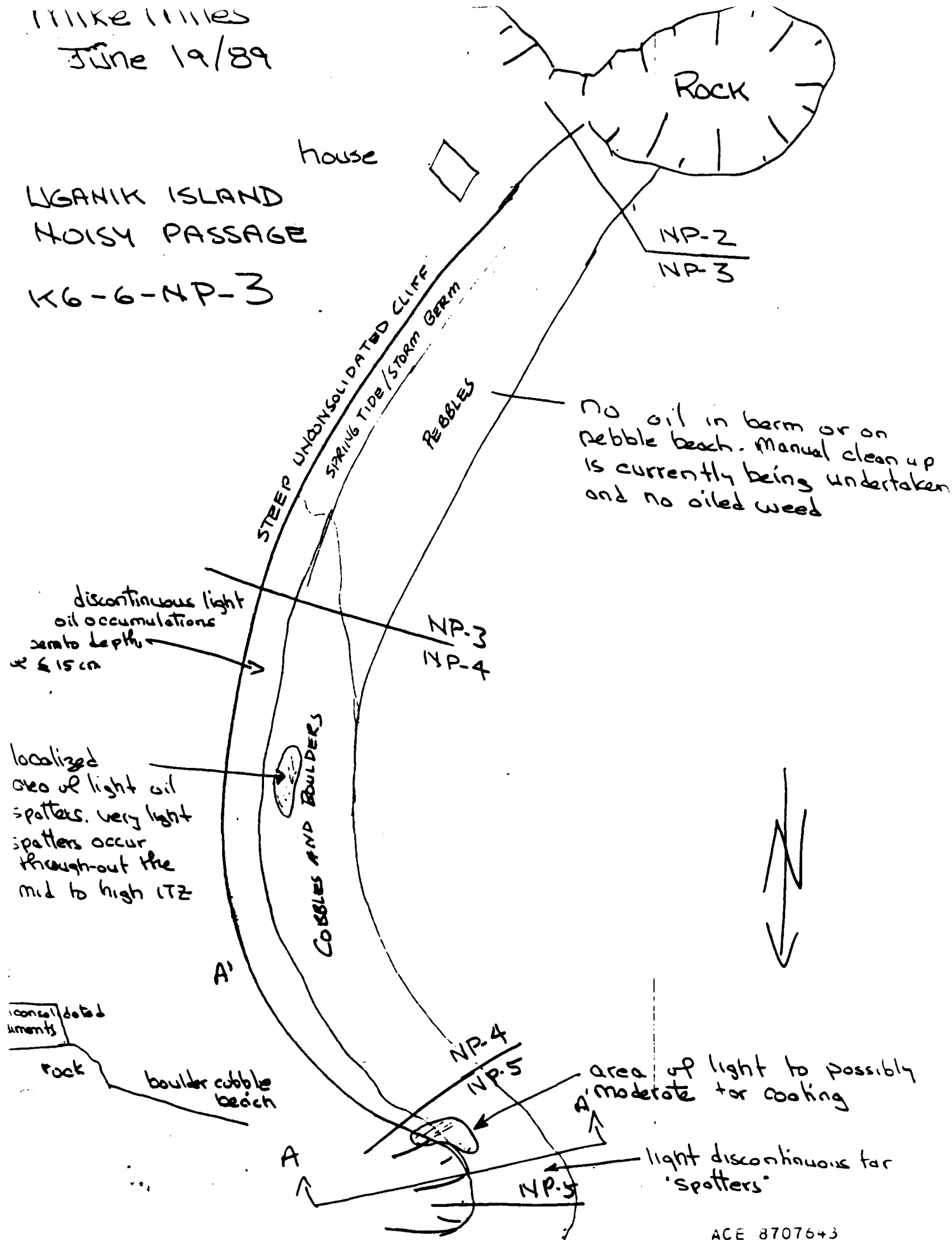
Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

Mike Miles
June 19/89

LGANIK ISLAND
NOISY PASSAGE

K6-6-NP-3



ECOLOGICAL EVALUATION

LOCATION: Ugnaik Island SITE: Noisy Passage OBSERVER: J. Turpley
LOCATION PREFIX: K6/NP SEG. NO.: K6-6-NP-3 LENGTH: 1400 (M)
DATE: 6/19/89 TIME (HHMM): 1130 TIDE HT.: ~ 0.0 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

Shells only

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

Littorina

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

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

OTHER OBSERVATIONS: high energy beach. Seaweed drift and wood
in high ITZ splattered with oil.

CLEANUP PRECAUTIONS: Avoid vegetated areas and hillside.

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other Deer & Fox Tracks.

BIRDS: 1 dead gull, magpies on beach

GENERAL OBSERVATIONS:

UGANIK ISLAND
(KODIAK)
K6-6-NP-3

R A I T

VIEKODA
BAY

5-6/5-7

5-7

5-6

H E L I K O P

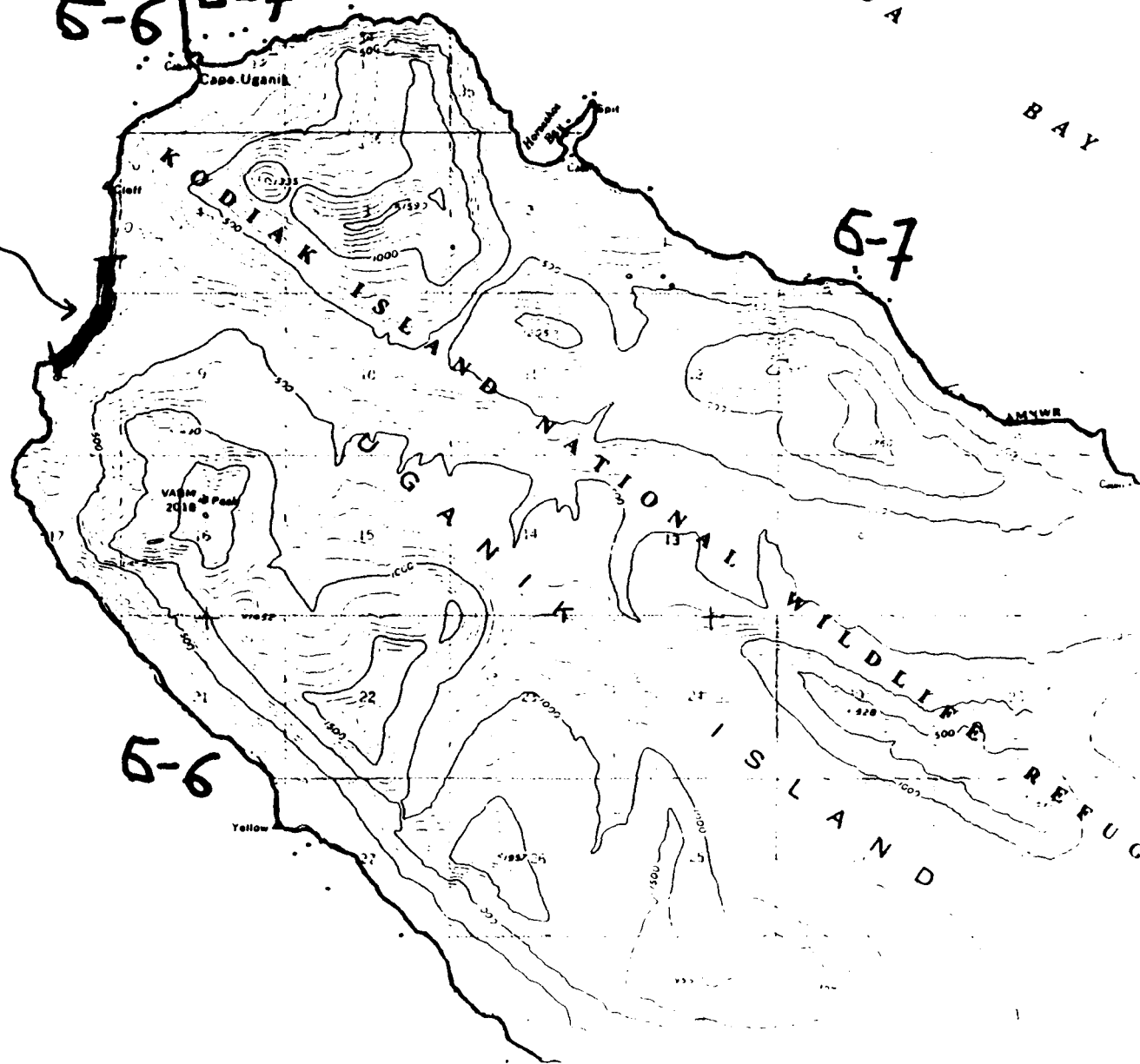


Noisy Passage

ACE 8707646 - /

5-16

5-15



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT NP-4

LOCATION: (see enclosed map) BOULDER BEACH ON UGANIK ISLAND AT
NOISY PASSAGE-KODIAK

ADEC NO. K6-6 SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

Manual removal of oiled debris (in progress)

Natural processes will clean the spattered rocks and the spring tide berm over time. Beach washing is not recommended at this time. If cleanup activities were to be undertaken, the contaminated sections of the berm could be moved into the surf zone. Insufficient oil occurs on the spattered rocks on the lower sections of the intertidal zone to justify any cleanup.

Priorities Considerations: Class 4-A

The KISCC considers this a sensitive area due to local seabird colonies on Noisy Island.

Ecological Constraints (from site survey):

Avoid traffic on eroding hillside.

Avoid oil contamination of healthy lower intertidal zone.

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.

Douglas Regier
State Historic Preservation Officer *

Date: 6/30/89

EXXON: [Signature]

Date: 7/1/89

* FOSC: [Signature]

Date: 7/1/89

NO TYPE B UP REVIEW OF KISCC

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: July 19/89 Time: 12:25

Observer: 111K12

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION WGANIK ISLAND
LOCATION NOISY PASSAGE

SEGMENT I.D. K-6-6 - SP.2

LENGTH OF SHORELINE SEGMENT: 650 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B75% / C20% / P5% / G__% / S__% / M__% / R__%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type logs

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1

Spot: Y/N Segment 1 Min/Max Dia 100 Impact Width 200

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 15 cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil 0 Spattered 100 H/M/L/VL Sheen 0

OIL WEATHERING

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 0 SU/SP/VP/MID/LO

Pancake Mousse 0 SU/SP/VP/MID/LO Asphalt Mousse 100 SU/SP/VP/MID/LO

Tar Formation 0

Comments:

ACE 8707648

This cobble beach has a pebble cobble spring tide/storm line. The backshore consists of steep gradient unconsolidated cliffs 50 to 100 m high.

Very light tar 'spatters' occur throughout the mid to upper 1/3. The beach has a very light to light spattering of oil which may be buried up to 15 cm in some locations.

Clean-up: manual removal of oiled debris (in progress) possibly move oiled berm to surf zone but natural process clean this beach over time.

DOCUMENTATION:

Map Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

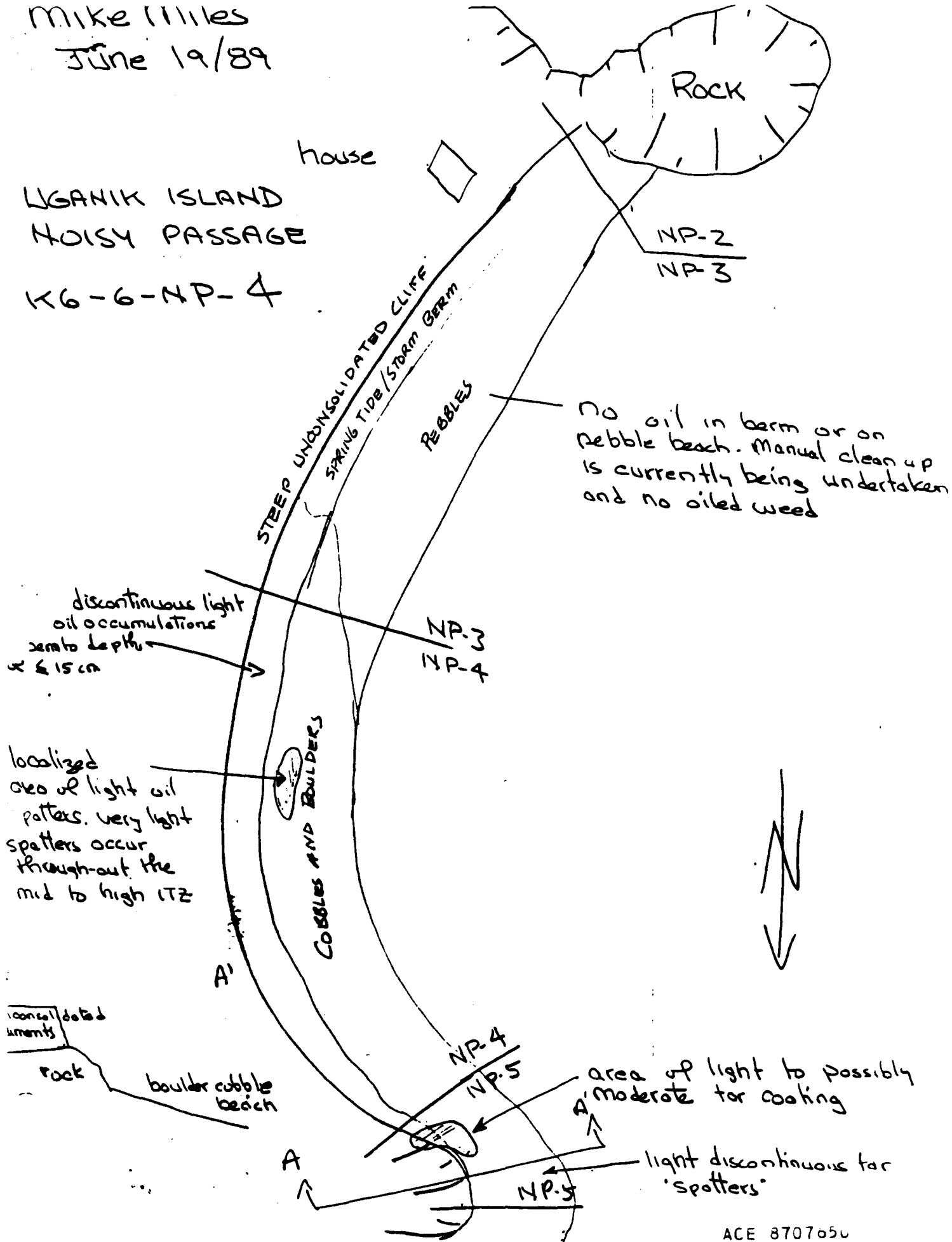
Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

Mike Miles
June 19/89

UGANIK ISLAND
NOISY PASSAGE

K6-6-NP-4



ECOLOGICAL EVALUATION

LOCATION: Ugnik Island SITE: Noisy Passage OBSERVER: J. Tarpley
 LOCATION PREFIX: K6/NP SEG. NO.: K6-6-NP-4 LENGTH: 650 (M)

DATE: 6/19/89 TIME (HHMM): 1215 TIDE HT.: ~ +0.25 (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

Mid → high ITZ

Littorina

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

Mid → high ITZ

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

OTHER OBSERVATIONS: Low ITZ abundant and dense growth of Fucus, Mytilus, and Balanus. This area is not oiled.

CLEANUP PRECAUTIONS: Avoid oil contamination of low ITZ.

MAMMALS: Otters 1 Harbor Seals Sea Lions Whales
 Other Swimming parallel to beach.

BIRDS: 8 oystercatchers in low ITZ; Magpies and Gulls Flying over beach

GENERAL OBSERVATIONS: No oil seen in low ITZ. Lightly oiled drift and drift wood. Splatter on mid → high ITZ rocks. Littorina and Balanus apparently not effected by oil splatter in mid-high ITZ

UGANIK ISLAND
(KODIAK)

K6-6-NP-4

S T R A I T

VIEKODA

BAY

5-6/5-7

5-7

NP-4

H E L I K O P

Noisy Islands
Light House
Windy

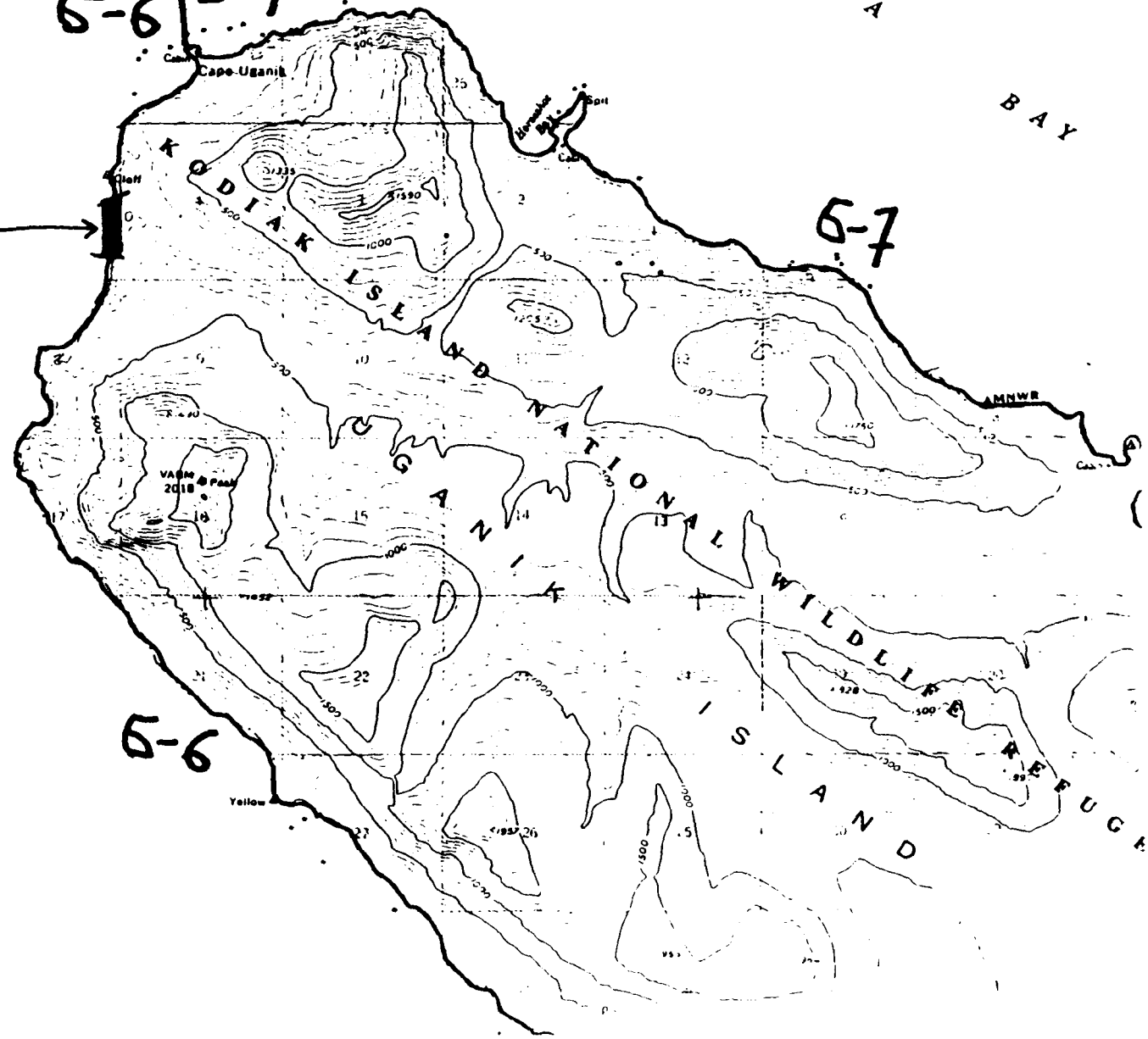
Noisy Passage

5-6

5-16

5-15

ACE 8707653 -1/5



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89 SHORELINE SEGMENT NP-5

LOCATION: (see enclosed map) BOULDER BEACH ON UGANIK ISLAND
NORTH OF NOISY PASSAGE AND SOUTH OF CAPE UGANIK-KODIAK

ADEC NO. K6-6 SHORELINE ASSESSMENT DATE: 6/19/89

Recommended Cleanup Activity(ies):

Manual removal of oiled debris.

Wave action will eventually clean this beach, so no other recommended at this time. If it is decided that cleanup is to be undertaken, hot water and/or moderate to high pressure washing or other appropriate techniques will be required to remove the tar deposits on this beach.

Priorities Considerations: Class 4-A

KISCC considers this a sensitive area due to local seabird colonies on Noisy Island.

Ecological Constraints (from site survey):

Avoid oil contamination of healthy low intertidal zone.

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.

Douglas Rege
State Historic Preservation Officer *

Date: 6/30/89

EXXON: [Signature]

Date: 7/1/89

* FOSC: [Signature]

Date: 7/13/89

NO Class B up to rule of KISCC
* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 19/89 / Time: 12:50

Observer: Mike Mib

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
LOCATION

UGANIK ISLAND
NOISY PASSAGE

SEGMENT I.D. K-6-6 - NP-5

LENGTH OF SHORELINE SEGMENT: 350 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B80% / C10% / P__% / G__% / S__% / M__% / R10%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type logs +

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment # _____ No. Bands _____ Width _____

Sporadic: Y/N Segment # 30 Min/Max Dia _____ Impact Width 10m

Est. Oil Thickness where > 1cm: 14A cm

SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm

SU / SP / UP / MID / LO

Layers? Yes/No

No# Layers _____

Oil Weathering _____

Drift Debris Oiled ? Yes/No

Supra/Upper/Mid/Lower

Amount: H / M / L / VL

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 100 % H/M/L/VL Sheen 0 %

OIL WEATHERING

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 100 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

SEE MAP AND ATTACHED COMMENT SHEET

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

Mike Miles
June 19/89

UGANIK ISLAND
NOISY PASSAGE
K-6-6-NP-5

Comments

Shoreline OIL EVALUATION

This is a boulder beach backed by a vertical rocky cliff overlain by ~~un~~unconsolidated sediments.

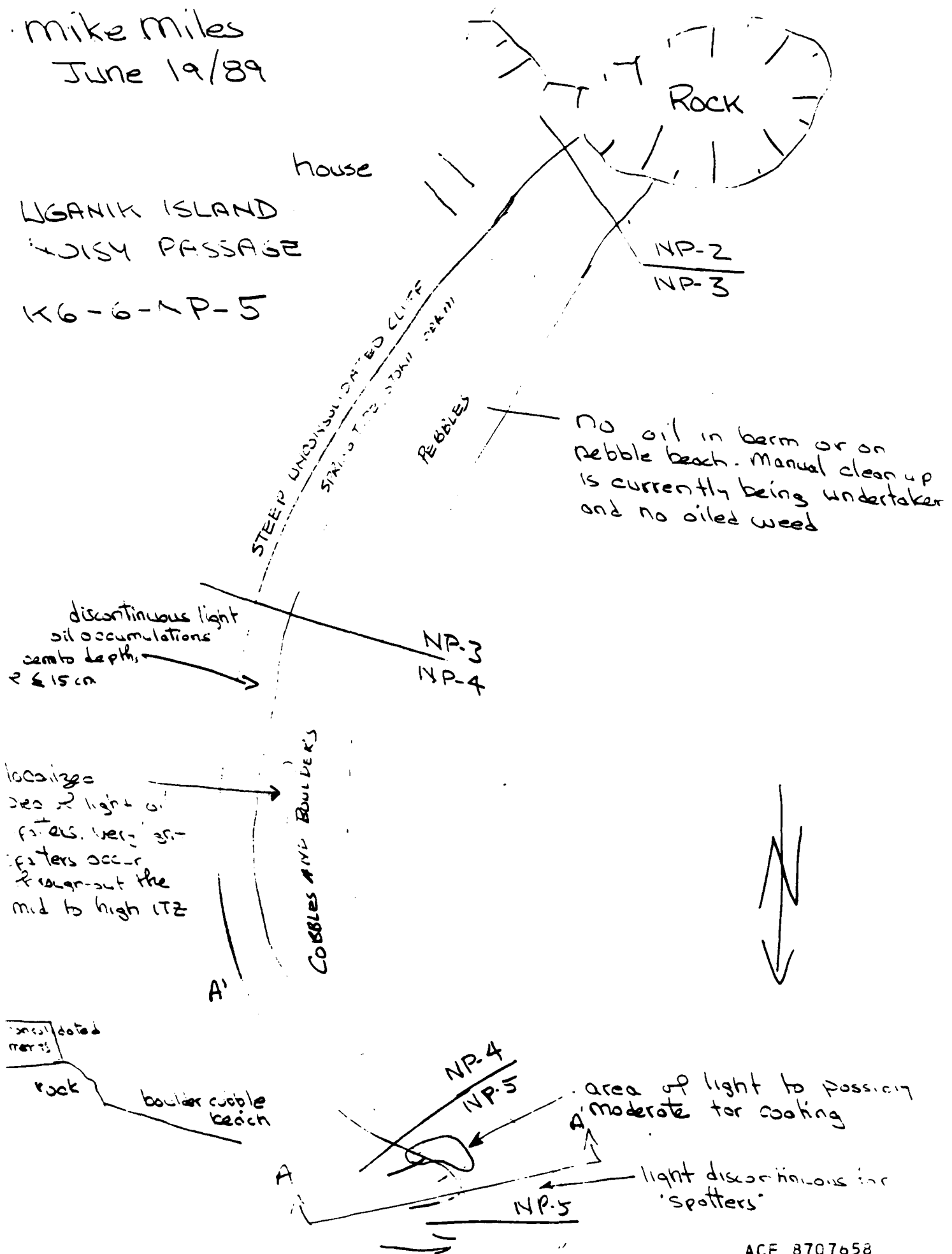
Splattered oil occurs in localized areas of the ~~mid~~ backshore and as 'splatters' or 'coatings' in the mid ^(a few meters to 10's of meters in length) to upper ITZ. In localized areas, the tar coating can be nearly continuous and a moderate oil contamination rating could be appropriate for these portions of the beach.

Manual removal of small quantities of oiled drift ~~oil~~ ~~oil~~ will likely occur as part of the ~~oil~~ clean-up process which is occurring on NP-5. ~~Oil~~ and time will eventually remove the oil in the mid to upper ITZ and given the weathered/oxidized state of this oil, the low beach gradient and the comparatively small volumes of oil which could be recovered, this is likely the preferred clean-up technique. If beach washing were to be undertaken, moderate to high pressure +/or hot water, would likely be required for effective cleaning. ^{ACE 8707657} or other appropriate technology,

mike miles
June 19/89

UGANIK ISLAND
LOISY PASSAGE

K6-6-NP-5



ACE 8707658

ECOLOGICAL EVALUATION

LOCATION: Uganik Island SITE: Navy Passage OBSERVER: J. Tarpley
 LOCATION PREFIX: K6/NP SEG. NO.: K6-6-NP-5 LENGTH: 350 (M)
 DATE: 6/19/89 TIME (HHMM): 1250 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

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: Appears that Balanus & Littorina are not
adversely impacted in this high IT oiled zone.

CLEANUP PRECAUTIONS: 133 Avoid contamination of healthy
lower IT2

MAMMALS: Otters Harbor Seals Sea Lions Whales
 other None

BIRDS: Gulls

GENERAL OBSERVATIONS: Oil coated rocks (boulders) high IT2 to
8 feet up rock face in Splash zone. High energy beach.

UGANIK ISLAND
(KODIAK)

K6-6-NP-5

S T R A I T

VIEKODA

BAY

5-6/5-7

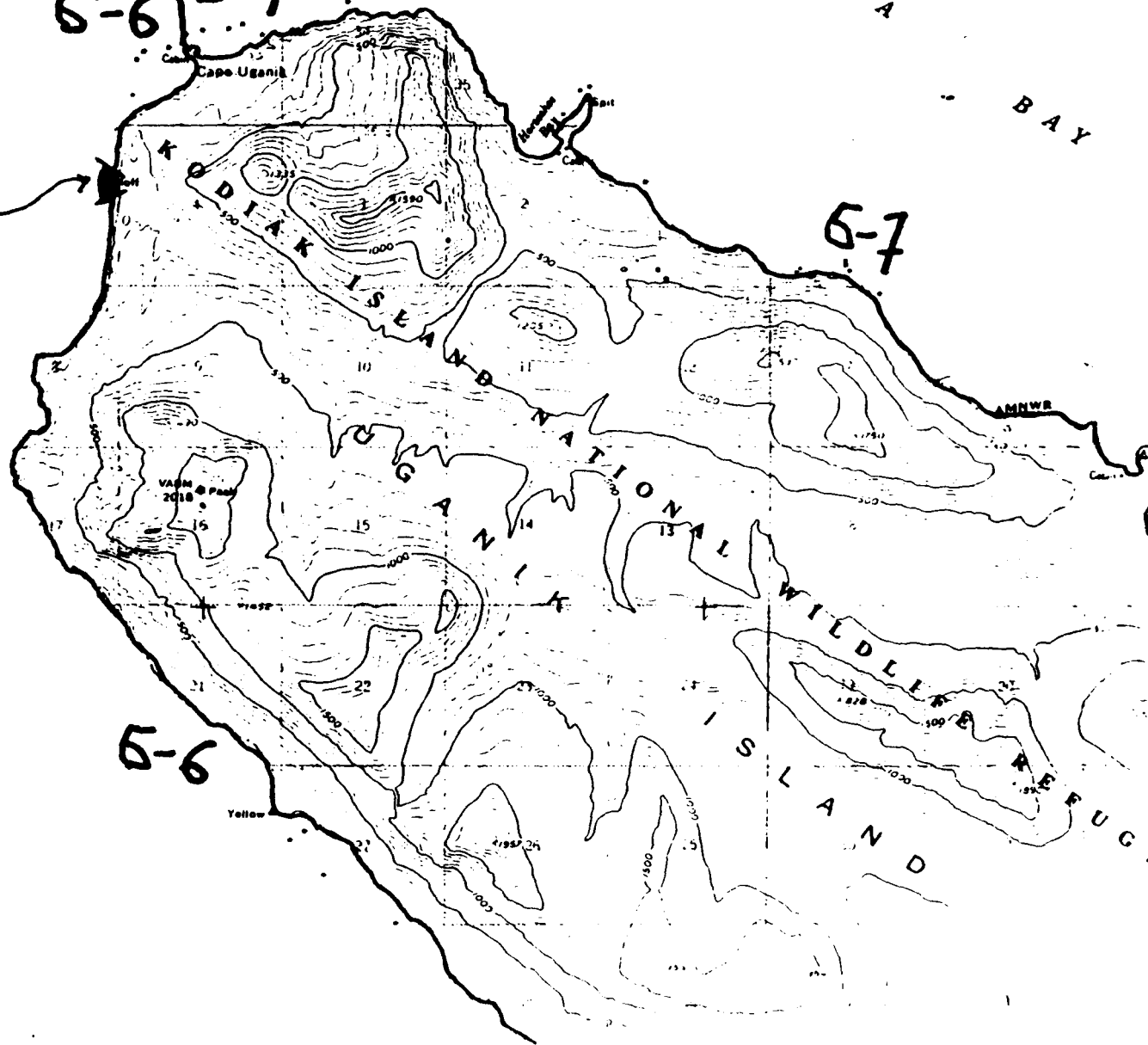
5-7

5-6

H E L I K O P



Noisy Passage



ACE 8707661-1/13/FF

5-16

5-15



517-652-90

- KODIAK SCAT
K6-7

Partial #1 DEC 21 1989

ACE 7963943

COMPLETE DEC 29 1989

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K6-7

Includes Shoreline Segments: UG-50, UG-51, UG-52

Location: Uganik Island

Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT K6-7-UG-50

LOCATION: (see enclosed map) N and NE coast Uganik Island

ADEC NO. K6 SHORELINE ASSESSMENT DATE: 7/07/89

Recommended Cleanup Activity(ies):

- Cleanup already underway by local setnetters at locations 0, 1, 1a, 3, 4, 5, and 6 (see map). May consider supplementing efforts with low pressure/warm water wash to increase effectiveness.

Priorities/Considerations: Class 4-A

- Shallow intertidal area may restrict boats access.
- This segment is within the Alaska Maritime National Wildlife Refuge. Notify USF&WS Representatives prior to treatment.

Ecological Constraints (from site survey):

- Restrict access to lower intertidal, especially extensive tidal pools.
- Work at mid tide plus or take appropriate measures to protect intertidal zone.

Archaeological Constraints (from site survey):

- No access to the forest/upland zone by beach crews during cleanup.
- If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archaeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.


State Historic Preservation Officer *

Date: 7/3/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 7/6; 7/7 / Time: 12:00 / 08:10

Observer: G. MACDONALD

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION UGANIK ISL. N. COAST
LOCATION

SEGMENT I.D. UG-50

LENGTH OF SHORELINE SEGMENT: 14,200 m

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

rock walls

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

SHALLOW DRAFT ONLY

Slope: LANG/HANG/VER-O'HANG

pocket beaches.

Wave Exposure: High/Med/Low

Sediment: B 10 / C 10 / P 20 / G 20 / S 20 / M 20 / R 60

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

LOGS; SAME
SEAWEED

OIL

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

TRACE

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1

Sporadic: Y/N Segment 1 1 / Max Dia 1 Impact Width 3m MAX

Est. Oil Thickness where > 1cm: 1 cm. SU / SP / UP / MID / LO

Depth below top sed

Est. Oil Penetration: 10 cm SU / (SP) / UP / MID / LO

Layers? Yes/No No. Layers 1 Oil Weathering 1

TRACE

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

OIL MORPHOLOGY

Pooled Oil 10 "Free" oil 10 Spattered 90 H/M/L/VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 10 SU / (SP) / VP / MID / LO Choc Mousse 50 SU / (SP) / VP / MID / LO

Pancake Mousse 40 SU / (SP) / VP / MID / LO Asphalt Mousse 10 SU / (SP) / VP / MID / LO

Tar Formation 1

Comments:

HIGH ENERGY EROSIONAL COAST - TREATMENT @

LOCKERS 0, 1, 2, 4, 5 & 6 IS CURRENTLY UNDERWAY

FROM LOCK SETNETTERS ON A DAY TO DAY BASIS.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries

UG-1
Attached

VTR:

Y/N

Tape Number(s)

Unknown

Photography:

Y/N

Roll Number(s)

SMR3-18 (7/7/89)

Sample Numbers Collected:

None

7/6 helicopter UGRANIK IS. K6-7

12:00 SEGMENTS UG - 50

exposed wave cut platform covered w/
moraine boulders, + cobbles; rounded;

A cliff.

120m wide beach, 20m coated mature

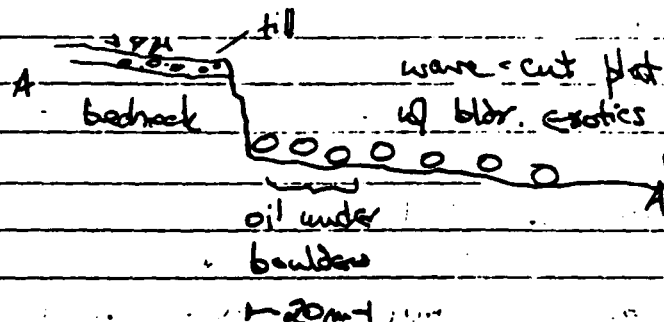
mousse, currently self-cleaning.

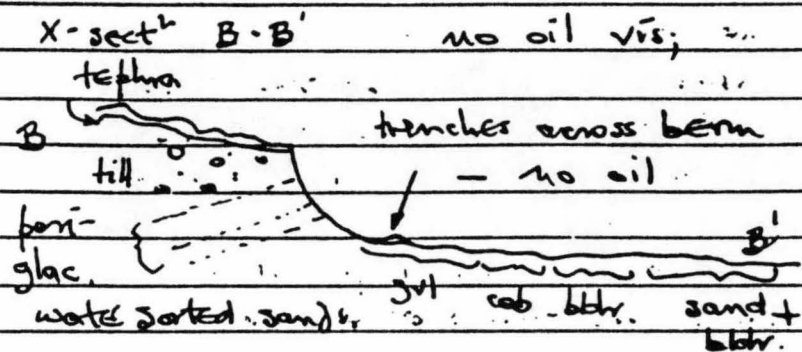
4m-38; underside of cobbles - v. soft
oil coat as soft asphalt, at base of bbls
and cobb; 20m wide x 300m long.

oil fades to trace 3-5cm dia splats
and spots. ⑤. ↑

rem choc mousse blob, egg size; no
oil in gvl or penetration; already corroded;

X section A-A'





1. 100 m x 30 m splattered section; coat
 < 0.2 mm thk; staining; asphalt mounds;
 under cobs; < 5 mm penetration in surface
 guls; @ HWL f' SL zone; eroding ~
 2 ft/year! ... + 30 x 10 m continuous
 coat on cobs + grl @ 1a. 5 m x 1 m
 thin coat on bedrock wall.

2. mod < grl-pab beach pocket; clean

3. Umanik coast - 10 m high steep - o'lang
 rocky walls; occas. 2-dm wide grl
 pockets; pronounced raised beach @
 cliff top; no oil vis;

halt segment @ 16:00

7/7

re-start SEGMENT UG-50.

08:10 Horseshoe Bay
 LOCALS CLEANING AREA

broad, low-mod < grl-pab beach,
 logs & stand line below moraine cliff.
 bordered by steep rocky cliff w/ some
 bldrs. no sign of oil anywhere.

- Schutter report - no oil here.

wave cut bench w/ stacks, rocks; mod.
 < grl-pab pockets; hazardous to shipping
 even @ low tide.

09:00 v. hi angle bedding throughout
 this segment; showed wackest;
 some basalts,

③ 20 m x 3 m matured mouse spotting
 + coating cobs, f' grl to ~ 10 cm,
 esp. undersides of cobs;

11:00

④ 35 m x 5 m x 2 m mod of v. light
 < 3 m dia splots w/ free mouse in
 bedrock crevices & HWL/SL zone; bc.
 about 20 f' 100 m E of schut
 marker ID: R. NELSON # 21687

⑤ 80m x 3m wide oil splats w/ some
mousse under cobs & blips & in bedrock
crevices; @ 3 zone asphalt-m.
cobs are beginning to self clean.

⑥ 10m x 1m splat zone w/ free
mousse in blip. walls & base & in
bedrock crevices @ 3 zone under
small point in cliff line.
local schist v. active in this
segment.

14.00 END of SEGMENT.

At Maritime Nat. Wildlife Refuge.

ECOLOGICAL EVALUATION

LOCATION: Ugnik Bay SITE: Ugnik Is. OBSERVER: SM BAN
 LOCATION PREFIX: K-6-7 SEG. NO.: UG-50 LENGTH: 14,200 (M)
 DATE: 7/6/89 TIME (HHMM): 7/6-1150 TIDE HT.: 0.2 (M)
 OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA This segment is within the Alaska Maritime National Wildlife Refuge.

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

Dense on boulders, some clumps on gravel beaches - Subtidal
No other individuals. Also Alaria closer to water - unoiled

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

Very Dense in some areas esp. boulder crevices.

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

Very dense, spot throughout seg. Spot also noted on kelp fronds.

No oiled. where oiled. Very few Nucella on Balanus.

Littorina

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

Very dense in High areas and lower ITZ. Also found higher in ITZ. Several patches in high ITZ are oiled - but alive.

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

Dense in Hot pools. None oiled

OTHER OBSERVATIONS: Halichondria (both pink & green spp.) Very large Tadpole
(±8" dia) Acanthopagurus & Pagurus dense in Hot pools. Zostera subtidal. Sculpin &
gobies in pools. Amphipoda dense. Littorhamion in all pools. Opisthobranch etc.

CLEANUP PRECAUTIONS: Don't healthy lower interstitial. Removal
of oiled rocks in rock crevices will not impact
healthy areas if teams are kept out of lower ITZ

MAMMALS: Otters Dense Harbor Seals Sea Lions Whales limited
 other Deer tracks - beaver scat

BIRDS: magpies, eagles (5) gulls, crows, oldsquaws, colaptes

GENERAL OBSERVATIONS: Oil is discontinuous throughout segment
and is found in rock crevices. Littorines have been
impacted. No other oiled orgs. were observed.
Many rich Hot pools - many organisms. Hot pools must not be

SEGMENT UG-50

7/6/89

G. MACDONALD

Map 1 of 3



v. exposed steep
headland - no oil visible.

CAPE UGANIK

ROCKS - NAVIGATION

HAZARD

gvl. pockets
no oil

RAISED

gvl pocket
beach; no oil

steep cliff; v. exposed rocky
coast; heavily eroded base of
cliff; no oil visible.
10m high, overhangs
common.

tiny gvl. pocket
beaches; no oil;

7/6 p.m.

7/7 a.m.

CONTINUED

WAVE-CUT
PLATFORM

oiled
debris

~ 300m x 20 m wide
discontin. oil coat / splat.] location
O.

Wave-cut platform w/
overlay of exotic material
boulders & cobbles; v. rounded,
v. exposed; self-cleaning v. evident.

SCALE: 3 1/2" : 1 mile, 1:18,000

1 MILE

KEY

- : v. light discontin. splats.
- x oiled debris
- 1 location ref. (see notes)
- Stream
- segment boundary
- * rock, submerged.
- [A
A' X-section
(see notes)

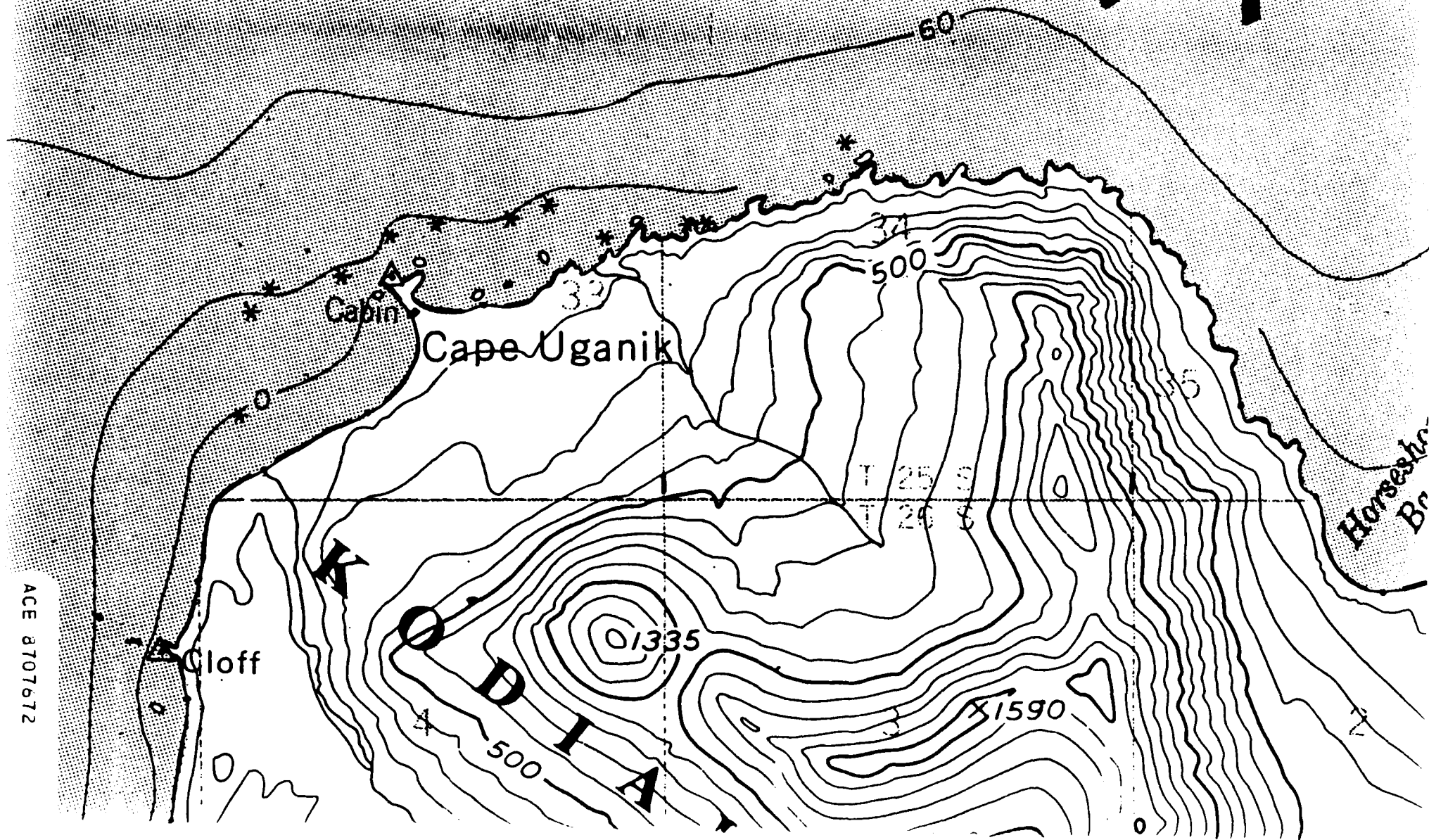
ACE 8707671

A



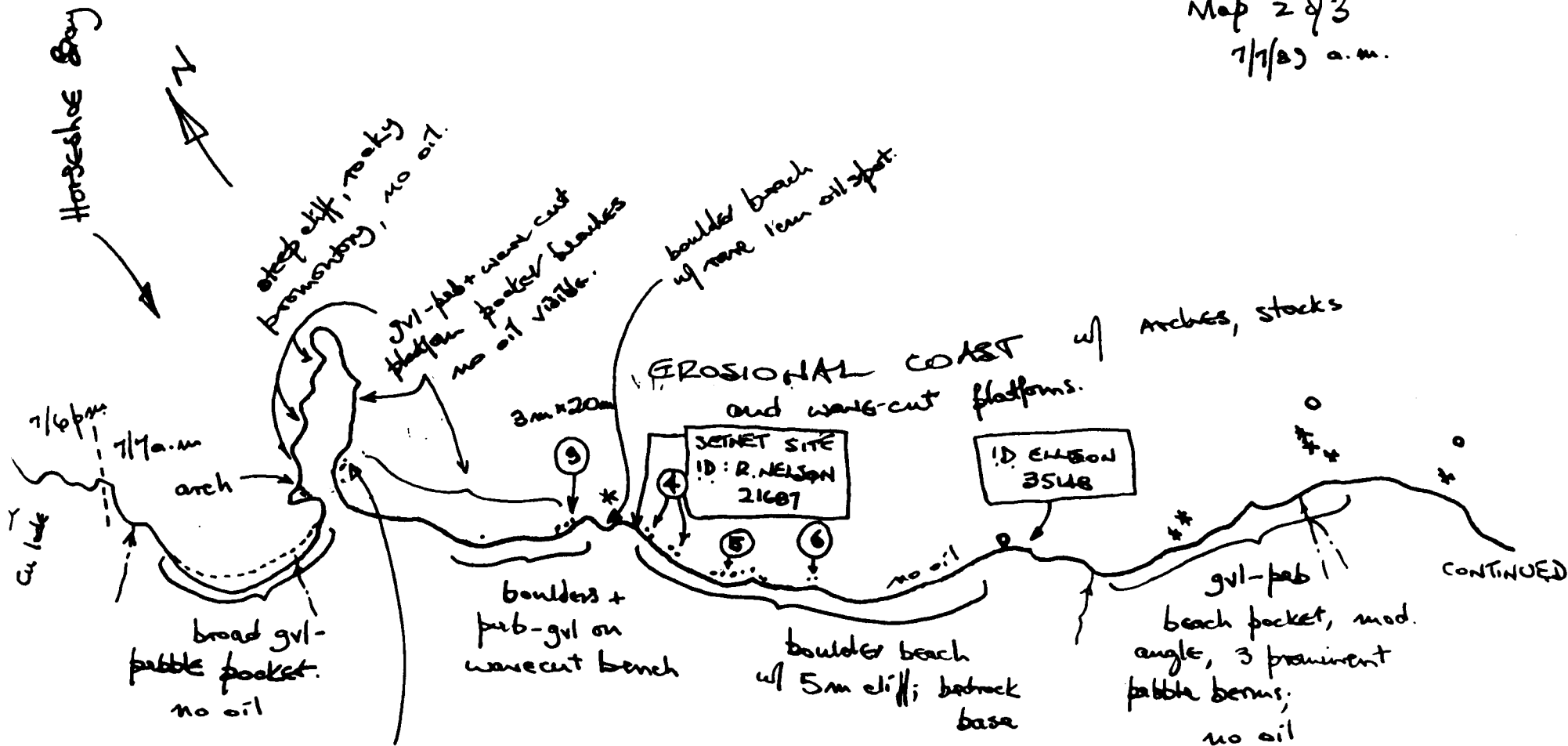
UG-50
Map 193

30



ACE 8707672

Map 283
7/1/83 a.m.



trace choc. mousse
spots, 3 5cm dia blobs.
on bedrock @ sp zone.
w/ trace mature mousse
< 2m dia. once to 5cm deep
in gvls.

KEY
∴ oil - v. light - trace
③ location (see notes)

* rock

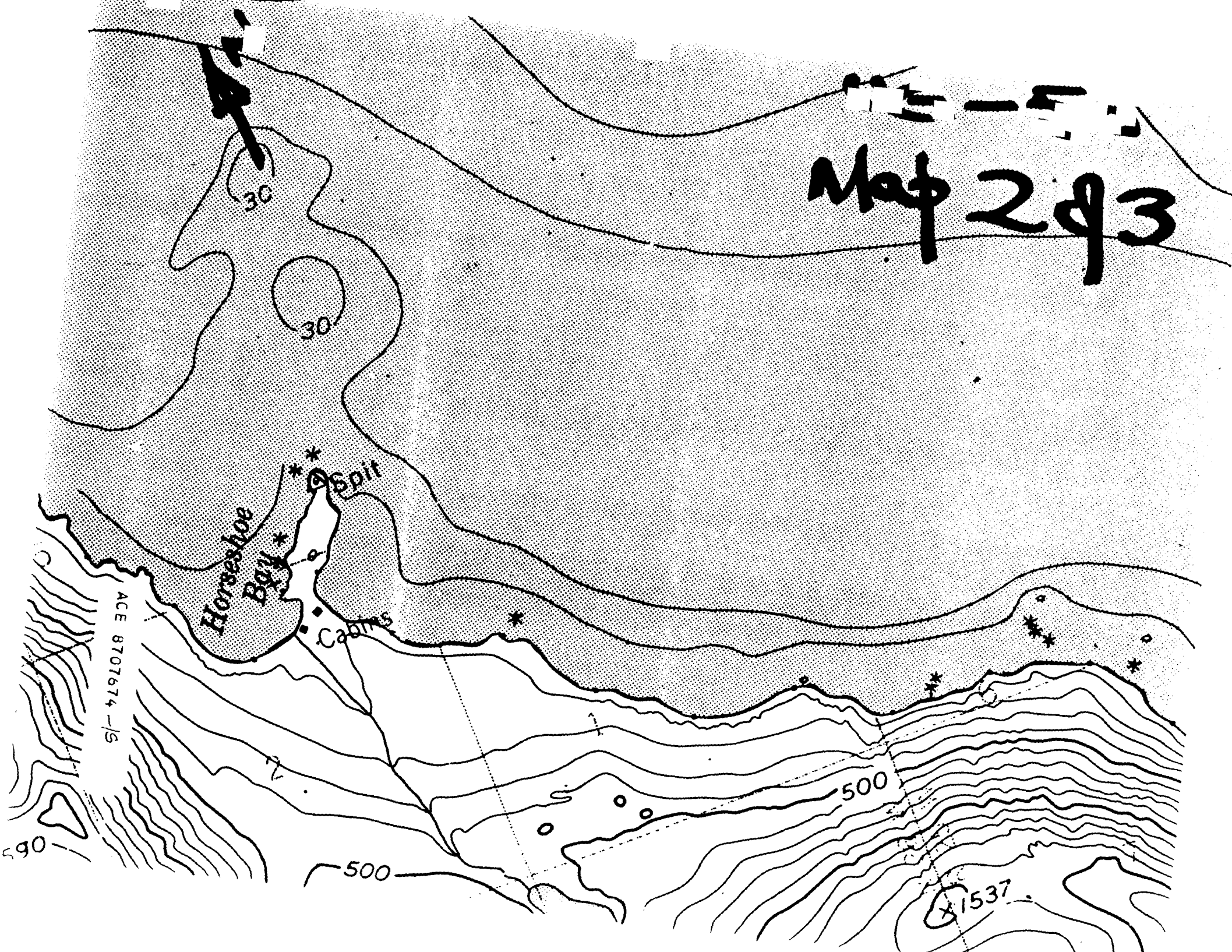
3 1/2" : 1 mile

1 mile

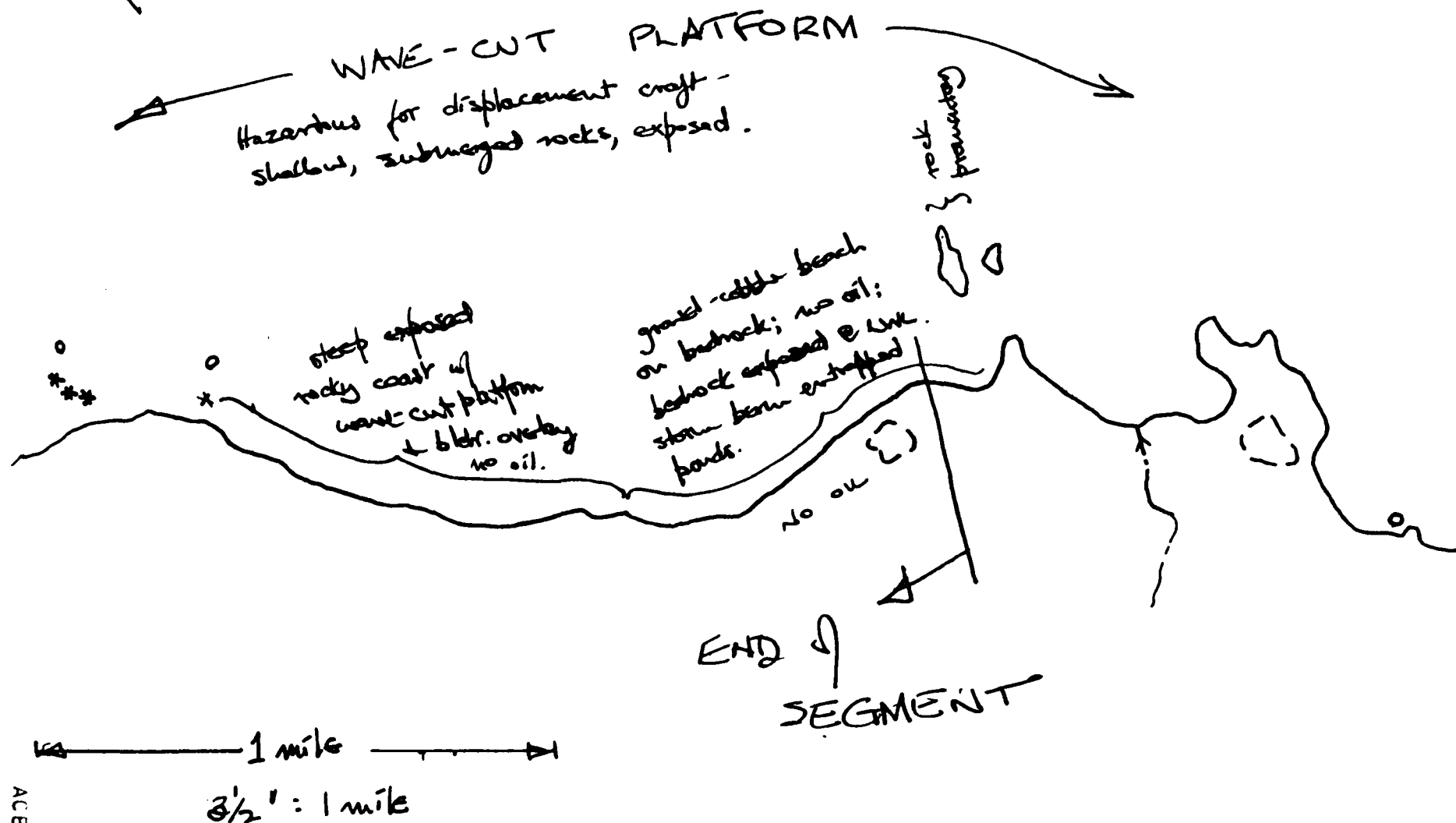
G. MACDONALD.

ACE 8707673

Map 293



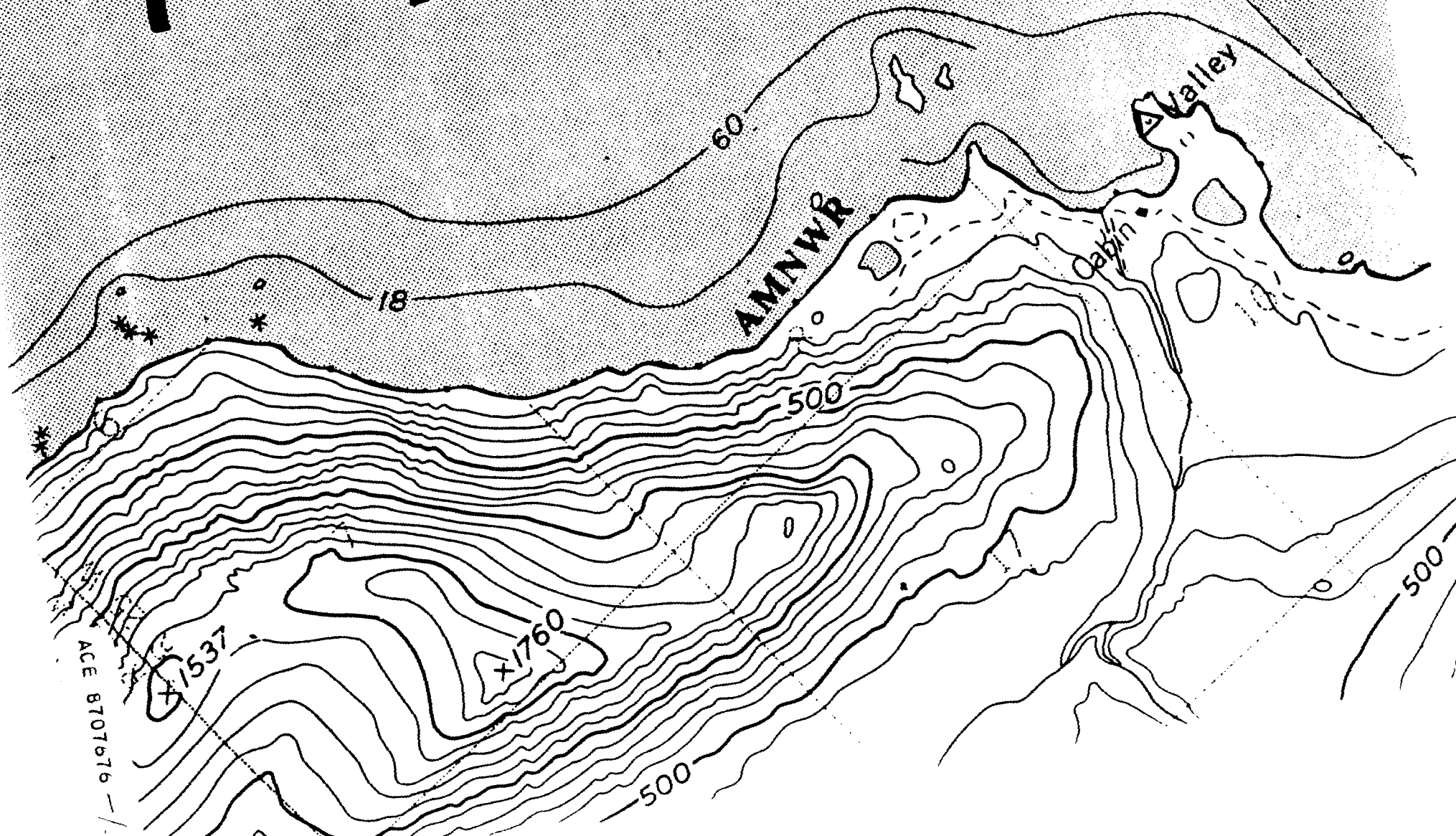
Map 3 of 3
7/7/89 p.m.



ACE 8707675

G. MACDONALD.

15-50
Map 393.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/09/89

SHORELINE SEGMENT K6-7-UG-51

LOCATION: (see enclosed map) Uganik Island, E coast

ADEC NO. K6 SHORELINE ASSESSMENT DATE: 7/09/89

Recommended Cleanup Activity(ies):

- Cleanup currently underway at locations 1-6 (see map) by local setnetters.
- May consider supplementing effort with vacuum units to remove free oil from cracks and crevices.

Priorities/Considerations: Class 4-A

- Notify USFW&S prior to cleaning.

Ecological Constraints (from site survey):

- Take appropriate measures to protect healthy lower intertidal, particularly tidal pools.
- Restrict access to anadromous streams.
- Keep teams small in number.

Archaeological Constraints (from site survey):

- No access to the forest/upland zone by beach crews during cleanup.
- If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archaeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.


State Historic Preservation Officer *

Date: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 7/9/89 Time: 12:20

Observer: G. MacDonald

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun Cloud Rain/Snow/Fog

LOCATION
LOCATION

E. COAST UGAVIK IS.

SEGMENT I.D. UG-51

LENGTH OF SHORELINE SEGMENT: 7,000 m

K6-7

ACCESS: Foot/Vehicle Boat Barge Helio Float Plane beach rock walls.

SHORELINE:

Shoreline Type: SPI BEA COV HLD STRT

Slope: LANG HANG / VER 0.1 H/L

Wave Exposure: High Med/Low

15%

Sediment: B20 / C5 / P4 / G4 / S5 / M / R55

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1

Sporadic: Y N Segment 1 Max Dia 4 cm Impact Width 3m MAX

Est. Oil Thickness where > 1cm: 1 cm SU / SP / UP / MID / LO

Depth below top sed

Est. Oil Penetration: ≤ 10 cm SU / SP / UP / MID / LO

Layers? Yes No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 1 "Free" Oil 30 Spattered 70 H/M/L VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 1 SU/SP/VP/MID/LO Choc Mousse 40 SU SP VP/MID/LO

Pancake Mousse 1 SU/SP/VP/MID/LO Asphalt Mousse 60 SU SP VP/MID/LO

Tar Formation 1

Comments:

LOCATIONS (1) - (6) ARE V. LIGHTLY OILED AND CURRENTLY BEING TREATED MANUALLY BY LOCAL SETNET HOLDERS.

ADDITIONAL SUPPORT TO FACILITATE TREATMENTS WOULD INCLUDE HIGH PRESS. WASH OF ASPHALT SLATS AND DELIVERY OF PORTABLE VACUUM UNITS FOR LOCALS' USE.

THIS COASTLINE SUPPORTS A V. HIGH DENSITY OF SETNET

DOCUMENTATION:Map/Aerial photo marking segment boundaries AttachedVTR: YN Tape Number(s) UnknownPhotography: YN Roll Number(s) SMB-18 (7-8 to 7-9-89)Sample Numbers Collected: None

7/8/89 SEGMENT UG-51

12:30 HRS

K6-7

2 small islets; steep exposed rock walls;

no oil

Locals report most packets empty or rebuilt.

mod- steep & rubble beach; concrete fence

4 beams; abundant driftwood @ U. beam,

clean except for 1 x 4 cm dia tarball.

PRIMAVERIA under packets;

Vert. bedded meta sed, slaty tilted w/

carb. mudst; f-gm congl interbeds,

trace (1) choc. mouse blob / 200 m

hand size; locals cleaning up.

① ditch in rocky cliffs, mouse on
small team w/ hi-l wash. bucket

② beach outcrop w/ platy slabs and
boulders; asphalt & choc mouse @

SE zone; slabs 15m x 1m wide,

esp. under blots and in crevices;

report by scratcher 2' corner of oil

burial here & adjacent pocket.

half segment @ 17:00 HRS.

trace grass-laden mouse balls in
subash zone.

WAX / paraffin ppt?

7/9 restart UG-51

10:20

③ beach & blr point; mod. shattered,
choc mouse & asph. mouse @ SE
zone, 10m x 3m slabs & free in
crevices on beach; locals cleaning
area - vacuum & hot wands

④ free choc. mouse & asph. m. - SE zone
12 x 1 m. zone.

⑤ 30 x 2 " on slabs & point" < 100m

⑥ 3 x 1 " in beach
} direction.

choc mouse & asphalt slabs on
SE side of rock point; grass-laden
mouse balls wash ashore on NW
facing pocket beaches.

Locals @ work all along this shore.

END of SEGMENT UG-51

11:20 "Bullkelp Bay" mod. L grl-pob.

bay; report of mouse-fouled
anchor SE of ASAGE - local scratcher.

Much reduced exposure,
v. light shown @ ASAGE.

ECOLOGICAL EVALUATION

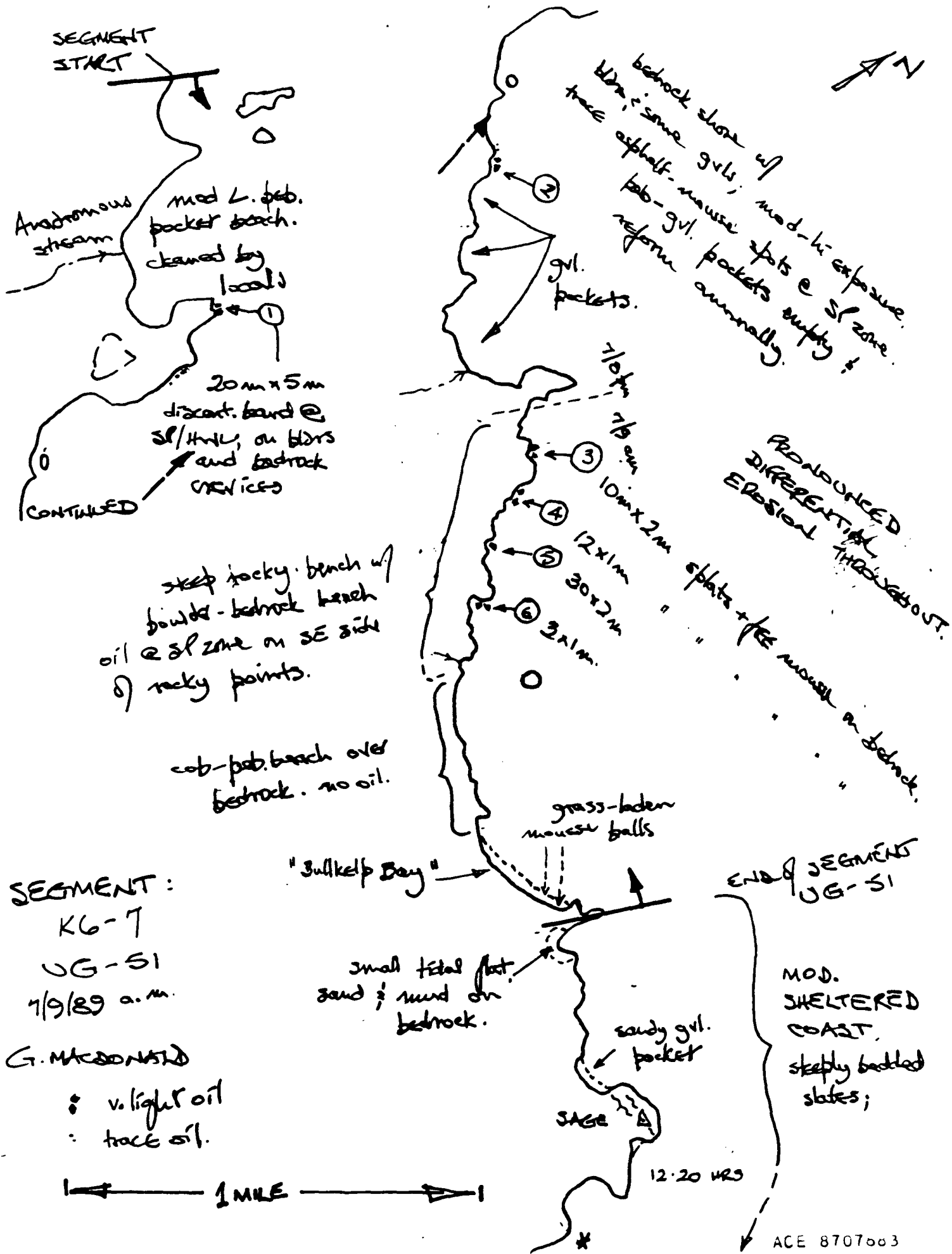
LOCATION: Unmik Island SITE: E shore of Is. OBSERVER: SMRanLOCATION PREFIX: K6-7 SEG. NO.: UG-51 LENGTH: 7,000 (M)DATE: 7 Aug 89 TIME (HHMM): 7/8 - 1230 TIDE HT.: 7/8 - 1/2 to 2 m
7/9 - 1 to 2 m (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA This segment is within the Kodiak Nat. Wildlife Refuge

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NContinuous on rock faces and boulders. Sparse on cobbles and gravels. Oiled area on beach 4 contains Fucus ($\pm 1 m^2$)Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NDense on rocky headlands - and on some gravel beaches. Beach 4 contains a patch ($\pm 1 m$) of oiled individuals.Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NContinuous thru most of segment. Dense spot on several gravel/cobble beaches. Some individuals oiled at Beach 4.

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NVery dense in boulder crevices, patchy throughout intertidal. Some patches on headland boulders are oiled.Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/NNo oiled organisms observedOTHER OBSERVATIONS: Polychaetes under oiled rocks - alive, amphipods - deadMany organisms in richly diverse tide pools including Tealia, Anthopleura, Sculpin, Katharine, etc. Also many sea urchin tests and Macoma & Saxidomus shells on gravel beaches.CLEANUP PRECAUTIONS: Restrict Access to lower ITZ and Anadromous streams (use map). Take appropriate measures to protect tide pools and healthy areas. Use small teams of local settlers.MAMMALS: Otters 3 Harbor Seals 1 Sea Lions Whales
Other Red FoxBIRDS: Ospreys, eagles (yuv + mature), Kittiwakes, gulls & crowsGENERAL OBSERVATIONS: Oil is discontinuous, generally found on rocky headlands or as tar balls in strand line. White flocculent material (paraffins) also observed on water and in strand debris



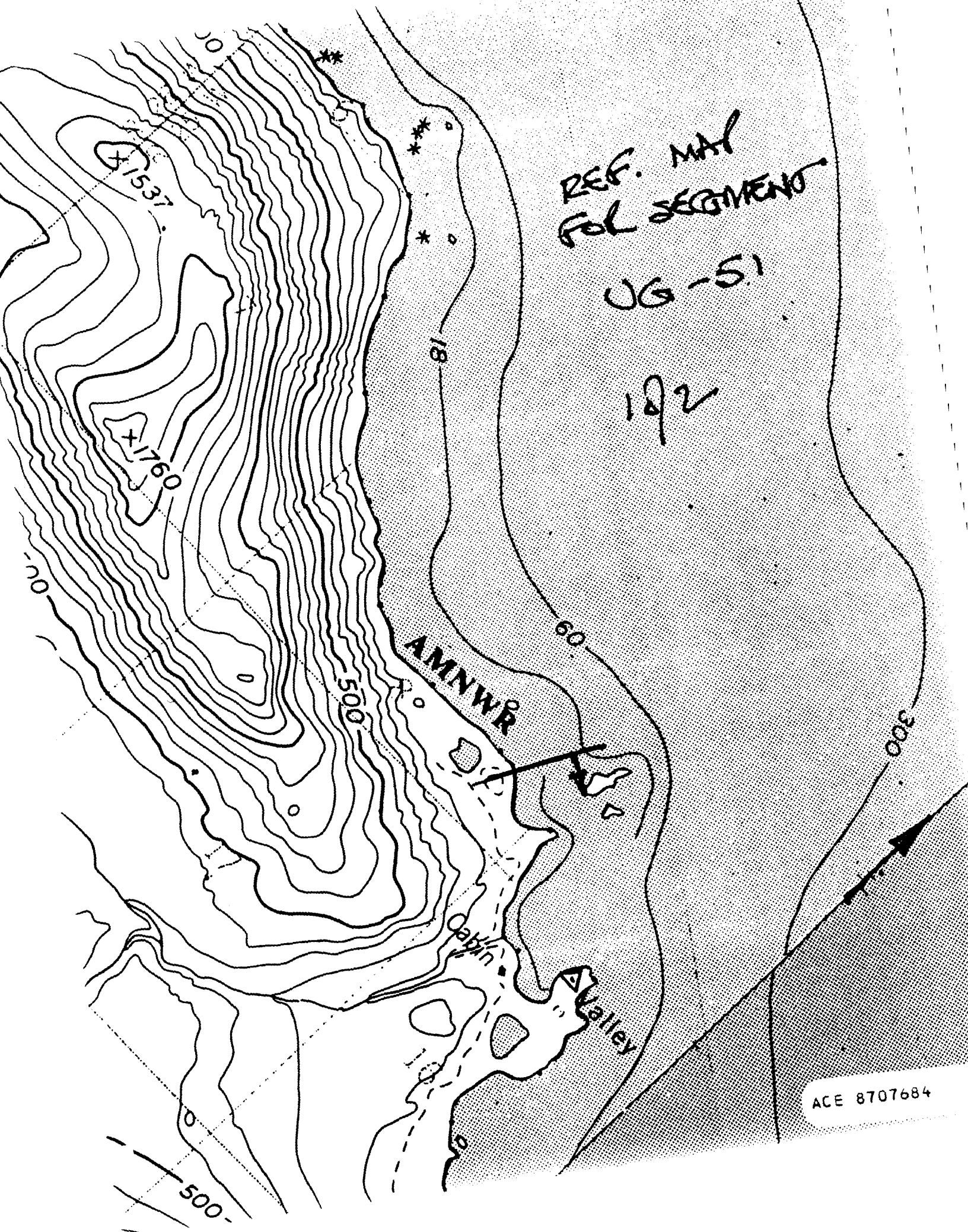
SEGMENT:
K6-7
UG-SI
7/9/89 a.m.

G. MACDONALD
• v. light oil
• trace oil.

REF. MAP
FOR SEGMENT

UG-51

172



ACE 8707684

REFERENCE MAP
FOR SEGMENT:
UG-51

292

Bulkep Bay

Cabin

Sale

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/10/89

SHORELINE SEGMENT K6-7-UG-52

LOCATION: (see enclosed map) Uganik Island, E coast

ADEC NO. K6 SHORELINE ASSESSMENT DATE: 7/10/89

Recommended Cleanup Activity(ies):

-No cleanup recommended due to apparent absence of oil.
Subject to FOSC reassessment at a later date.

Priorities/Considerations:

Ecological Constraints (from site survey):

Archaeological Constraints (from site survey):

-If cleanup is planned, an archaeological monitor must be
assigned in culturally sensitive areas of the segment.


State Historic Preservation Officer *

Date: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707666

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 7/9 & 7/10/89 Time: 11:25 & 12:00Observer: G. MACDONALDSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATION UGANIK IS. E. COAST.SEGMENT I.D. UG-52LENGTH OF SHORELINE SEGMENT: 22,700 mK6-7ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Planerock walls
beach

SHORELINE:

Shoreline Type: SPI/BEA/COV/MLD/STRTSlope: LANG/HANG/VER/OVERHANGWave Exposure: High/Med/Low Higher exposure in N. of segment.Sediment: B20 / C / P / GK / S / M / R 70Drift Debris on Beach: Yes/No 10 Supra/Upper/Mid/Lower Type OCCASIONAL
LOG.

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved/Very LightTotal Area of Beach Impact: SU / SP / H / M / L NOT APPLICABLE

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1Est. Oil Thickness where > 1cm: 1 cm SU / SP / UP / MID / LO
Depth below top sedEst. Oil Penetration: 1 cm SU / SP / UP / MID / LOLayers? Yes/No No# Layers 1 Oil Weathering 1Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H / M / L / VL

OIL MORPHOLOGY

Pooled Oil 1 "Free" Oil 1 Spattered 1 H/M/L/VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 1 SU/SP/VP/MID/LO Choc Mousse 1 SU/SP/VP/MID/LOPancake Mousse 1 SU/SP/VP/MID/LO Asphalt Mousse 1 SU/SP/VP/MID/LOTar Formation 1

Comments:

ONLY OIL REPORTED HERE IS S. of A SAGE- AN OILED ANCHOR - (SETNETTER PERS. COM)

DOCUMENTATION:

Map/Aerial photo marking segment boundaries Attached

VTR: (Y)N Tape Number(s) Unknown

Photography: (Y)N Roll Number(s) SMB-18 (7-9-89 + 7-10-89)

Sample Numbers Collected: None

7/9/89 SEGMENT VG-S2

11.25

steep rocky coast, mod exposed -
sheltered in SE, graphitic slates &
schists; wave cut cliff base & 10-
15m deep wave cut platform in
places; small qtz. pebbles - some gravel pocket
beaches; 2 mouse + bound grass
balls in > 2 miles.

clean lagoons;

end of day 16:30 hrs

rest at VG-S2 12:00 7/10/89

steep graphitic schist walls w/ occas. pocket
beach; bedrock ~ 18" below pocket guls;
no oil vis in pits @ storm beach &
SP zone; li fetch < 1 mile; low < 1 mile fetch;
rock walls eroding easily; wave-cut
scrap @ 4WL/SP zone; o'hangs common;

14.35 END of SEGMENT

ECOLOGICAL EVALUATION

LOCATION: Uganik Is SITE: SE shore to point OBSERVER: SM Bam
 LOCATION PREFIX: K-6-7 SEG. NO.: UG-52 LENGTH: 22,700 (M)
 DATE: 7/10/89 TIME (HHMM): 7:10-10:19 TIDE HT.: + 1 1/2 to + 2 (M)
 OILED ZONE: Splash High Medium Low No oil!
 SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand) Mud

LIVE BIOTA

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

Dense throughout most of site - No oiled patches. Also Halosaccion in with fucus. Algae dense subtidally along with Ulva

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

Became more dense moving southward on island. Individuals increase in size. Very dense in gravel beaches. No oiled individuals.

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

B. glandula dense in lower ITZ below Mytilus band. Many barnacle molt cases in water and mixed with algae at strandline.

Littorina

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

Dense in rock crevices - small individuals (spit) high in ITZ. All unoiled.

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

Dense in tidal pools and crevices. Most at water level or submerged.

OTHER OBSERVATIONS: Canole fish, Pollyboides, and Pink Salmon in bays

Richly diverse tidal pools in lower ITZ. Geotextile ^{mat} at Beach 6, some type of collection system for drift algae

CLEANUP PRECAUTIONS: No Cleanup - do not allow access

to the lower intertidal or any part of this segment.

MAMMALS: Otters X Harbor Seals X Sea Lions _____ Whales _____
 other Beet Hacks - Red Fox and Baby

BIRDS: black tipped kittiwakes, immature & adult eagles, pigeon guillemots, harlequin ducks, oldsquaws, black billed magpies, terns

GENERAL OBSERVATIONS:

No oil was observed - This segment is within the Kodiak National Wildlife Refuge, Access to the area should be restricted.

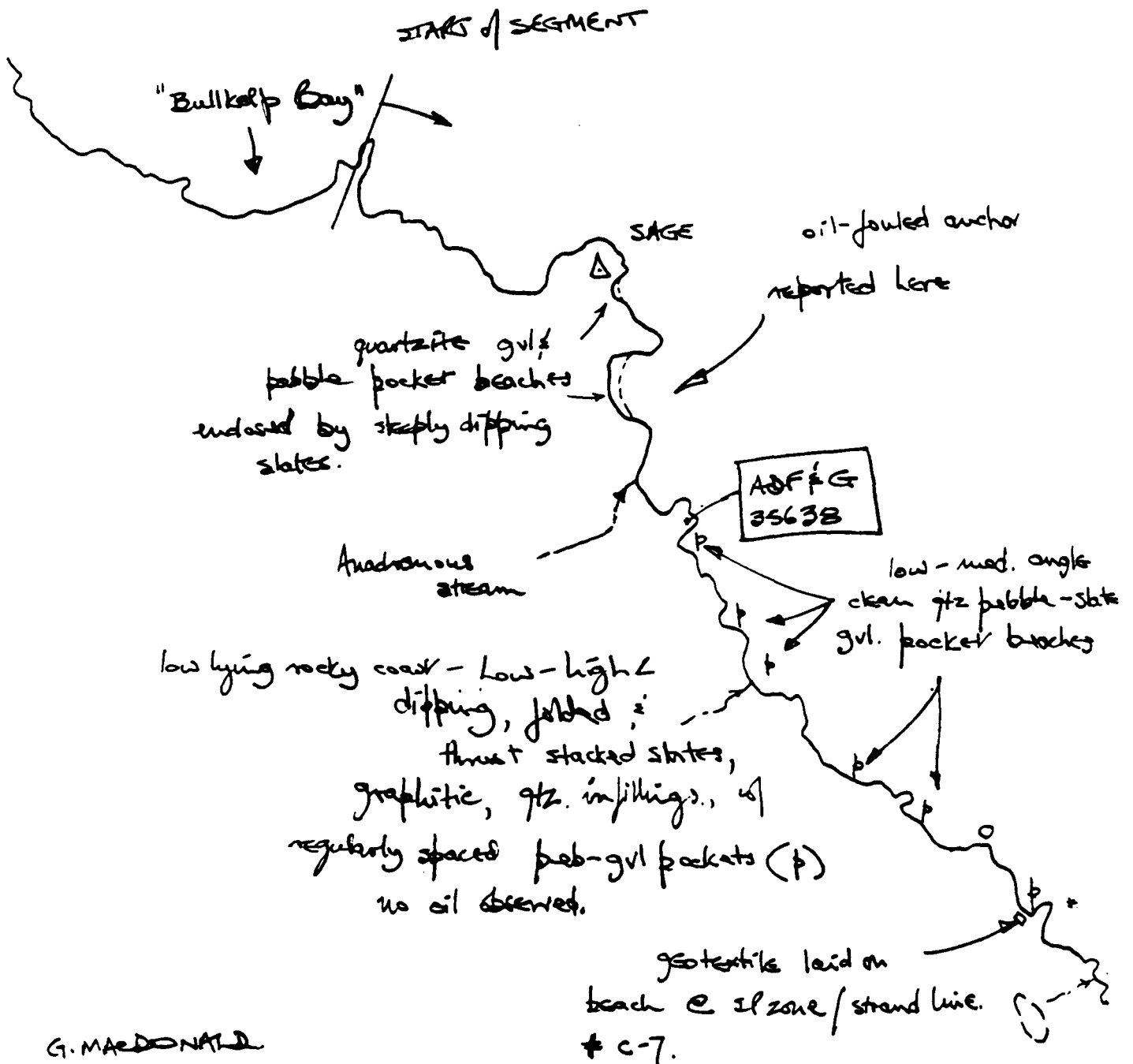


SEGMENTS UG-SZ Map 1 of 4

ADEC. K6-7.

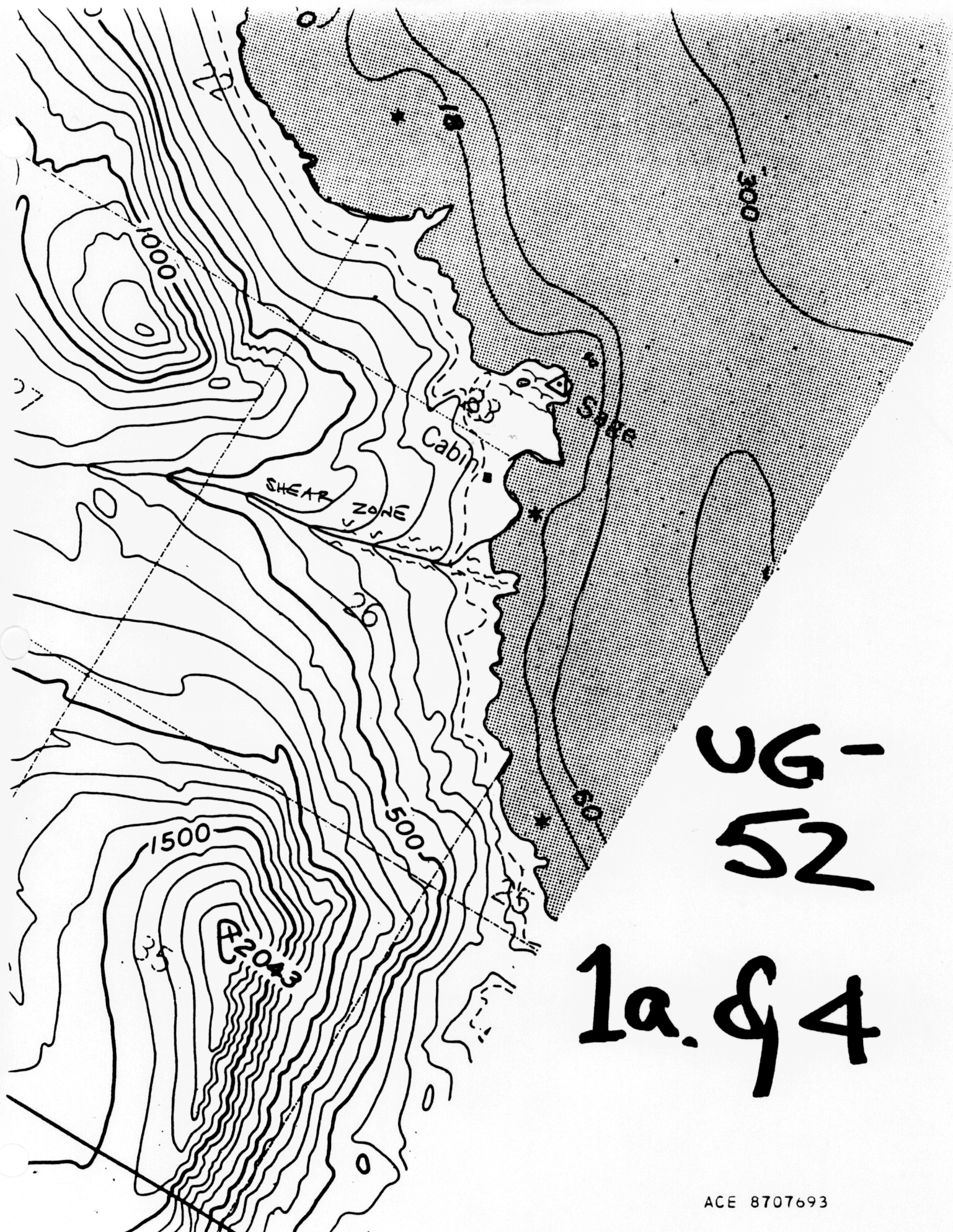
7/9/89 p.m.

Local setnetters very active in cleanup throughout this area.



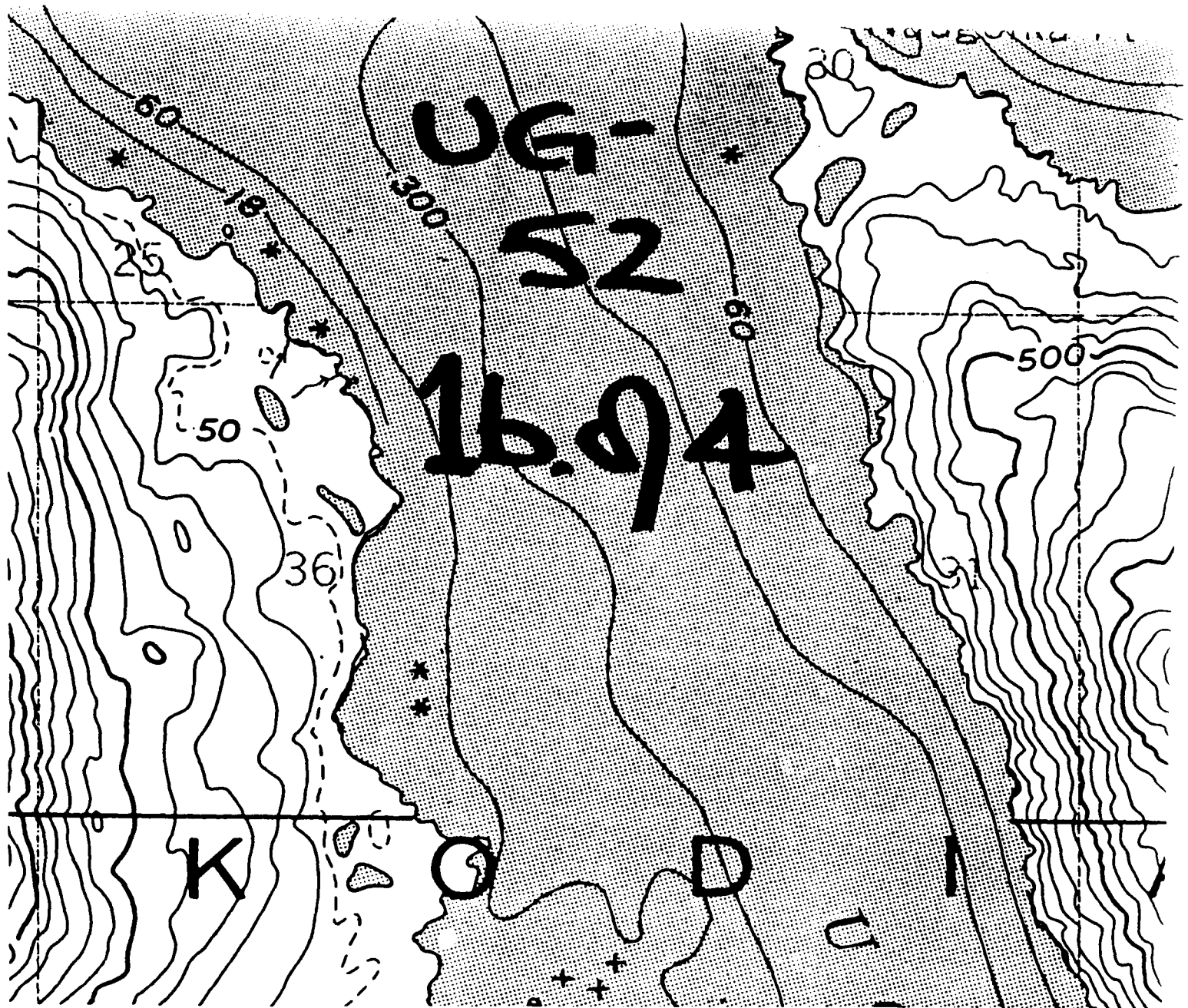
G. MACDONALD

ACE 8707692

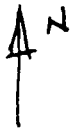


UG-
52

1a. 94



16.94



steep, mod.
sheltered rocky coast
w/ occas. gvl-pab.
pocket beach; cliff to
10m, vert-o' hanging - sheared & foliated,
graphitic slate/schist. no oil.

Map 2 of 4
7/9/89 pm.

gvl-pab beach strands w/ rocky
boulders and bedrock benches
@ N-LWL. no oil, no trace
of oily debris.

14:20 hrs

low angle gvl-
pab: pocket beaches

MOD.-
STRONG FLOW.

thin gvl. over wave-
cut bedrock bench.

lagoon w/ narrow
gorge exit (e), &
rock shallows (s)

clean gvl-pab + slate gvl. pocket
beaches; (no oil) set in steep
crag and promontories
of graphitic slate/
schist.

wave-cut
scorps

clean
pockets

7/9/89
pm.

7/10/89
a.m.

no oil

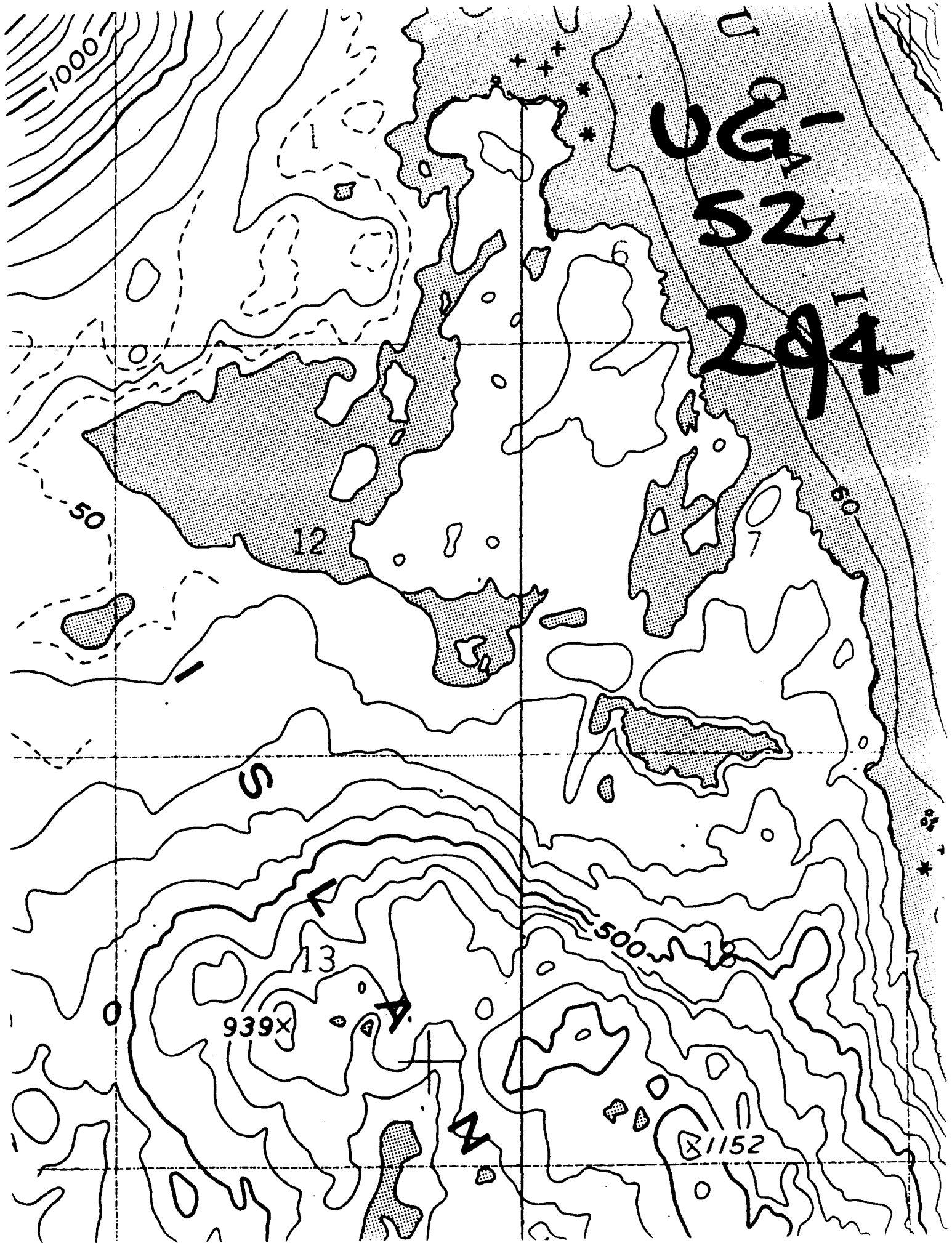
sheltered →
except for N;

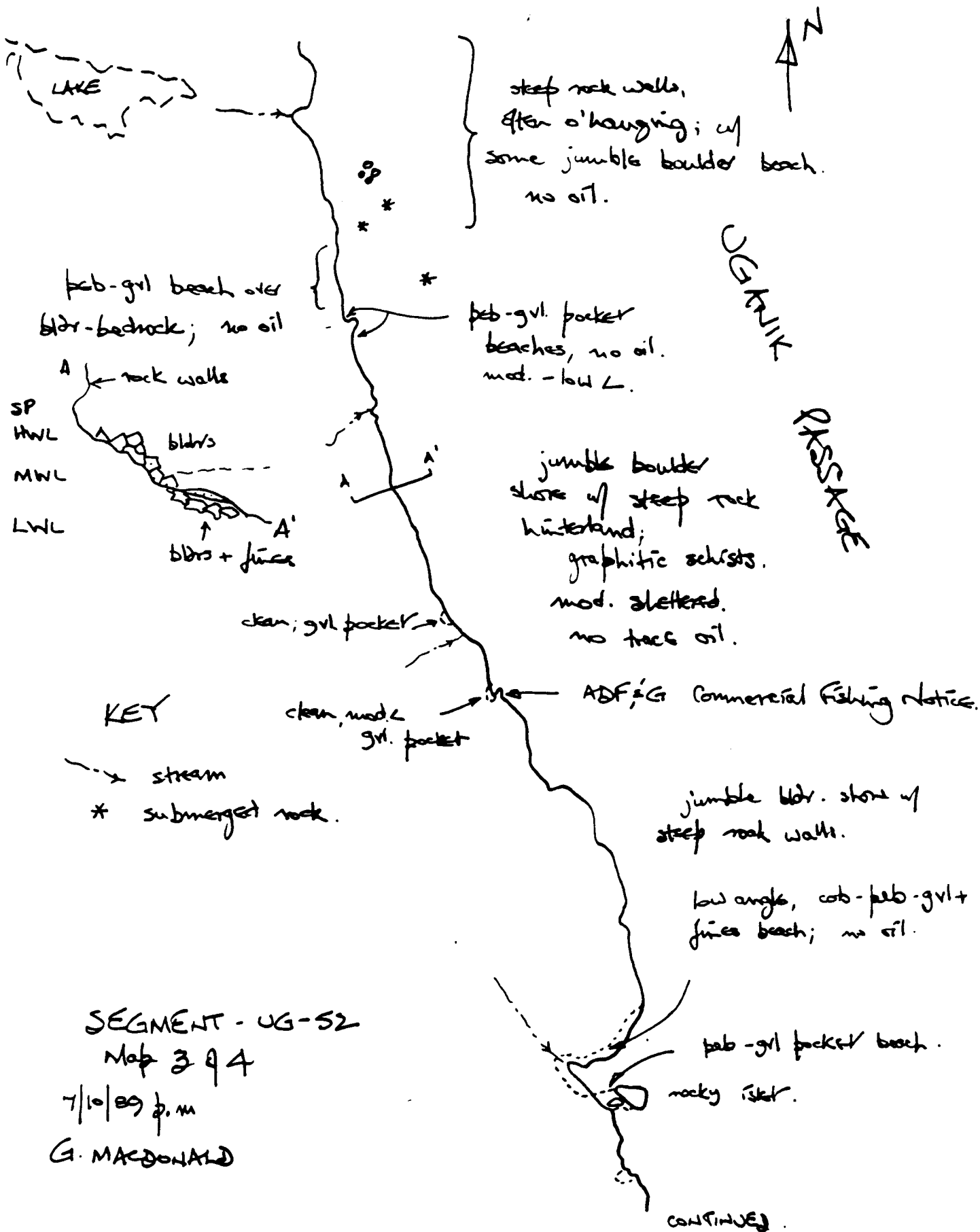
steep rock
walls often
o' hanging;
jumble
intertidal

TIDAL
Lagoon

marshy lagoon
margins, muddy bottom.

1 MILE





UG-52
PA 94

PASSAGE

Mine

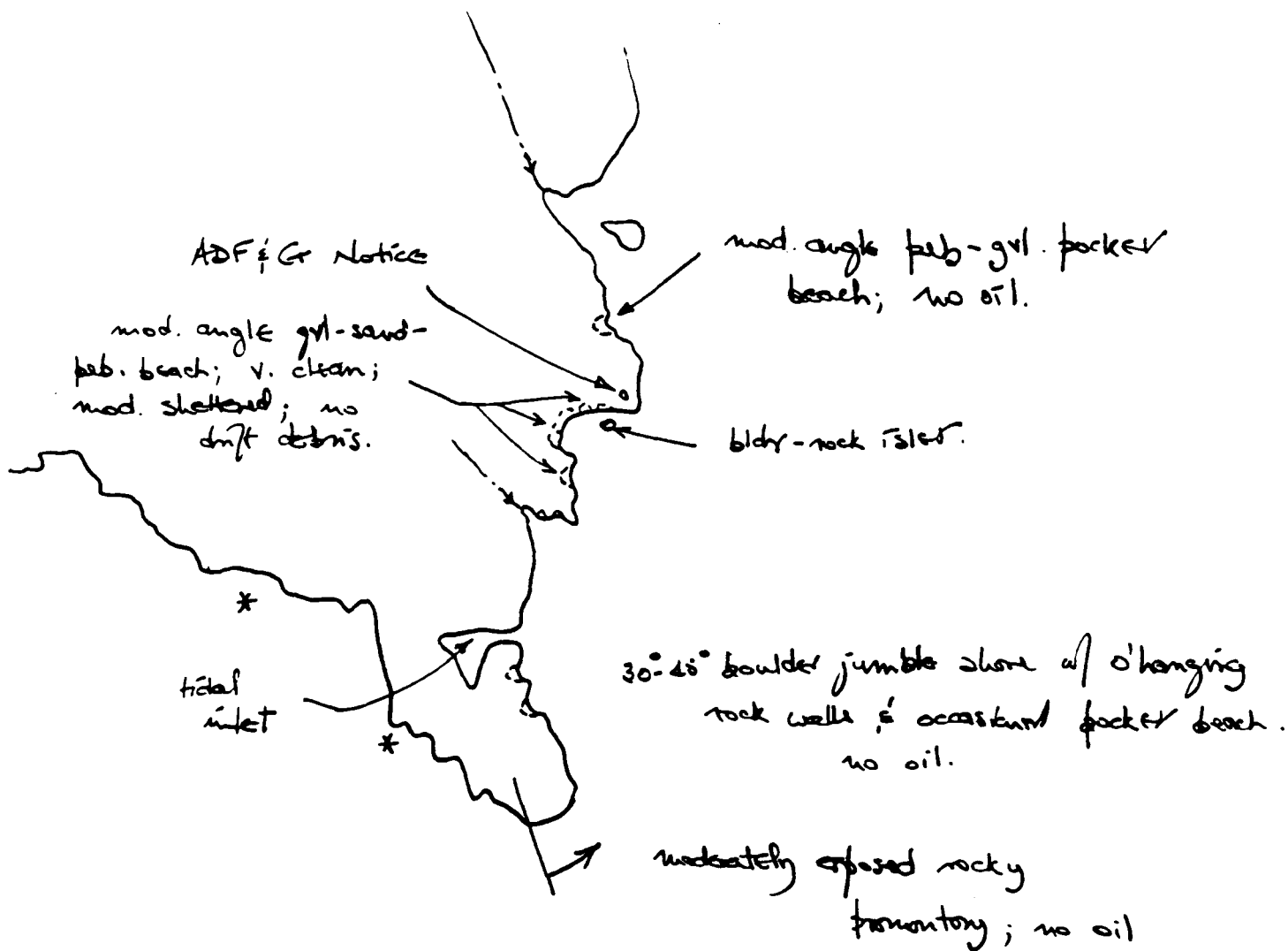
Seaplane
Base

Cabins

47

7/10/89

G. MACDONALD



SEGMENTS JG-52

Map 4 of 4

ACE 8707699

← 1 MILE →



517 - 639-80
KODIAK SCAT
K6-15

COMPLETE

DEC 31 1989

ACE 7963944

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/28/89

SHORELINE SEGMENT K6-15-MP-4B

LOCATION: (see enclosed map) Broken Point south to and including
Campbell Lagoon, Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/08/89

Recommended Cleanup Activity(ies):

- No cleanup recommended due to very light oiling and ecological constraints discussed below. Subject to FOSC reassessment at a later date.

Priorities/Considerations: Class 5-A

- Local setnetters state that they completed cleanup of segment prior to this assessment.

Ecological Constraints (from site survey):

- This segment is too sensitive ecologically to warrant cleanup of very light oil.

Archaeological Constraints (from site survey):

- If cleanup is planned, a full archaeological assessment must be conducted due to the archaeologically sensitive nature of this segment.


State Historic Preservation Officer *

Date: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

ate: 8 July 89 / Time: 1450
 rveyed From: Foot/Boat/Heli/Plane

Observer: Bever T. M.
 Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

ocation: Broken Pt. Segment / Campbell Lagoon / Segment ID: K6-15-MP4B
 Segment Length: 3600 m. Access: Vehicle/Boat/Barge/Heli/Float Plane
 Access Restrictions: NONE

SHORELINE

Shoreline Type: SPI/SEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Ave Exposure: High/Med/Low
 Sediment: B 10 % / C 10 % / P 25 % / G&S 5 % / M 20 % / R 30 %

IL

vg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

IL DISTRIBUTION

Continuous % of Segment — SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment 1 SU/SP/H/M/L H/M/L/VL

otal	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u>1</u>	<u>1</u>	Penetration/Rework:	<u>—</u>	SU/SP/H/M/L
Light:	<u>—</u>	<u>—</u>	Burial Depth:	<u>—</u>	SU/SP/H/M/L
Moderate:	<u>—</u>	<u>—</u>			
Heavy:	<u>—</u>	<u>—</u>			

Utilization Potential: High/Medium/Low

ft Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: —

IL MORPHOLOGY

oiled Oil: — % SU/SP/H/M/L
 Free" Oil: — % SU/SP/H/M/L
 Plattered: 100 % H/M/L/VL SU/SP/H/M/L
 oated: — % H/M/L/VL SU/SP/H/M/L
 pancakes/Balls: — % SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: 1 m
 Total TYPE B: — m
 Total TYPE A/B: — m

IL WEATHERING

resh: — % SU/SP/H/M/L
 ousse: — % SU/SP/H/M/L
 eathered Mousse: 100 % SU/SP/H/M/L
 sphalt Mousse: — % SU/SP/H/M/L
 ar: — % SU/SP/H/M/L

COMMENTS

VERY LIGHT WEATHERED MOUSSE FOUND NORTH OF CAMPBELL LAGOON TO BROKEN PT. BEACH
 IS PREDOMINANTLY/ BOULDER/COBBLE RUBBLE TO PEBBLE BEACH ADJACENT TO CAMPBELL
 LAGOON. CAMPBELL LAGOON IS A TIDAL FLAT - LOW WAVE EXPOSURE.
 LOCAL SETNET FISHERMEN STATE THAT THEY COMPLETED CLEANUP OF BEACH BEFORE
 THIS ASSESSMENT

NOTE: ORIGINALLY K6-15-MP4B & K6-16-MP4A WERE ONE SEGMENT. THIS SEGMENT
 WAS DIVIDED TO FIT INTO ADRL/USCG K SECTION MAP.

DOCUMENTATION:

sp Aerial photo marking segment boundaries See attached

TR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC-19

Sample Numbers Collected: N/A

(59)

2 JUL 89

SATURDAY

(59)

MP 11 GOES TO 2nd INCLUDES CAMPBELL LAGOON -

LARGE MUD FLATS

MUD/S&G/P w/ OCCASS. WCH C. 3 B

NO OIL OBSERVED HELIO, 60% SLO

FROM BROKEN POINT TO LAGOON, 60% & FOUND

VERY LIGHT SPENT W. MOUSSE HITE. ROCKY

HOLD & PEG BEACH (B/C RUBBLE HOLDS)

FROM TENTS (IMP. 3) TO BROKEN Pt

POINT
PER BRACHES w/ ROCKY & VC DRUFFS (HOLD. 2012)

NO OIL OBSERVED ON FLY BY

ONE LANDING - NO OIL SEEN

1315 - LV FOR ADD

1545 - LAND ADD

- LURIE UP MP. 2, 3

1820 - SCAT STAFF MTG

- FINISH MP WRITE UPS

2030 - BUY FOOD FOR SUNDAY SCAT FLT

2100 - BRING BACK CAR (OFFICE)

- UNLOAD UNIFORMS

2200 - MOVIE & GOOD NIGHT

ACE 8707704

POOR QUALITY ORIGINAL

ECOLOGICAL EVALUATION

PECKEN Pt. South to +
Including Campbell Lagoon

LOCATION: KOLAK ISLAND SITE: _____ OBSERVER: D. McCormick

LOCATION PREFIX: K-15-16 SEG. NO.: 4B LENGTH: 3600 (M)

DATE: 7/8/89 TIME (HHMM): 1450 TIDE HT.: +2.0 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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: Campbell Lagoon: 2 dead seals next to, dense mussel beds,
Zostera marina, Pectinella + Saxidomus beds in front of Lagoon.

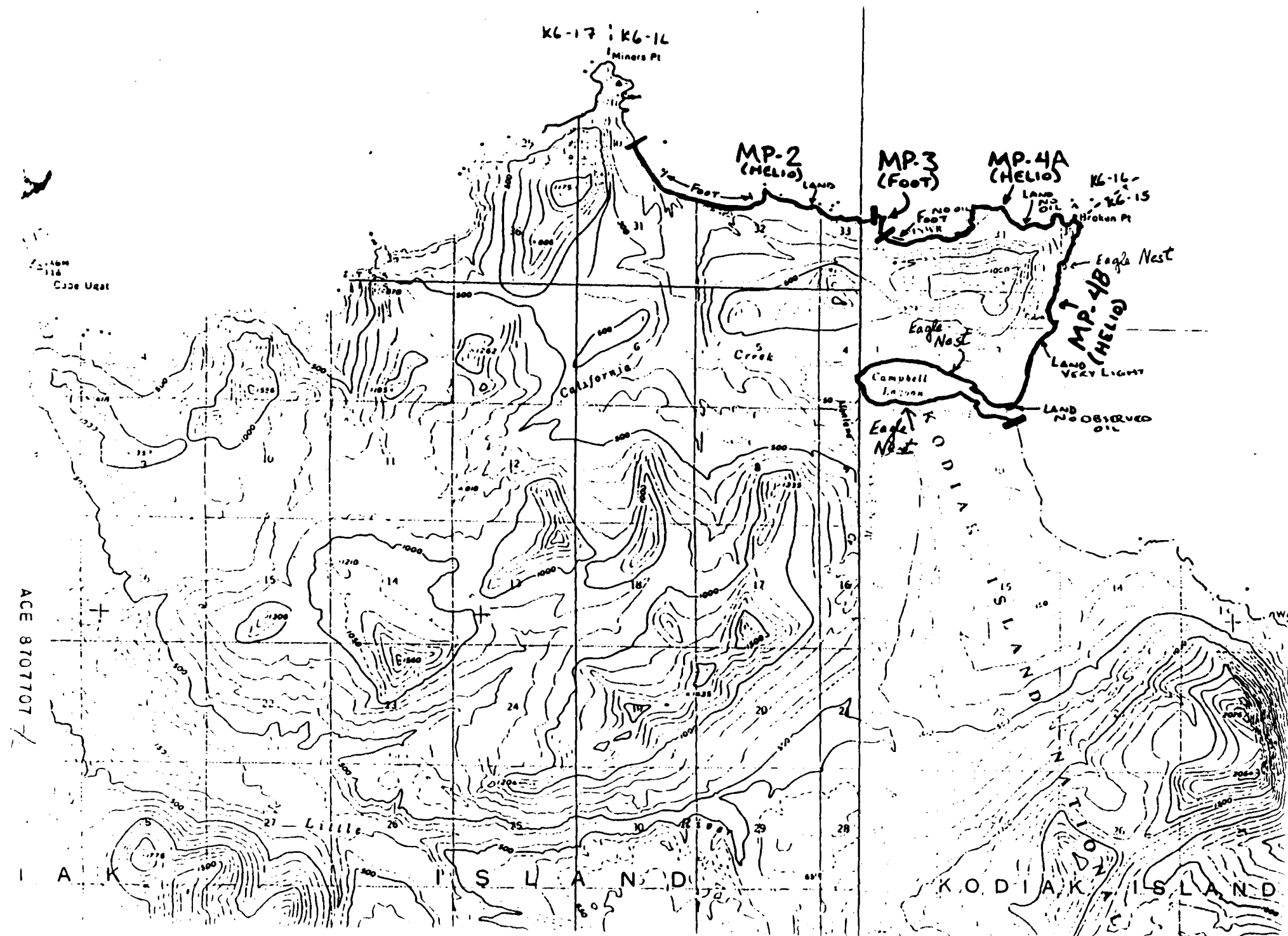
CLEANUP PRECAUTIONS: None, since cleanup is not recommended.

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

BIRDS: Bald eagles (see map for approximate locations)

GENERAL OBSERVATIONS: Very light splatters of oil on boulder beach north of
Campbell Lagoon. No oil-impaired birds observed.

Note: K6-15-MP4B and K6-16-MP4A were originally one segment (K-16-16/K-6-15 MP4)
The original segment was divided to fit into ADEC/USCG K sections (see original



(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K6-15

Includes Shoreline Segments: MP-4B, MP-5, MP-6

Location: Broken Point south to and including Campbell
Lagoon, Kodiak Island

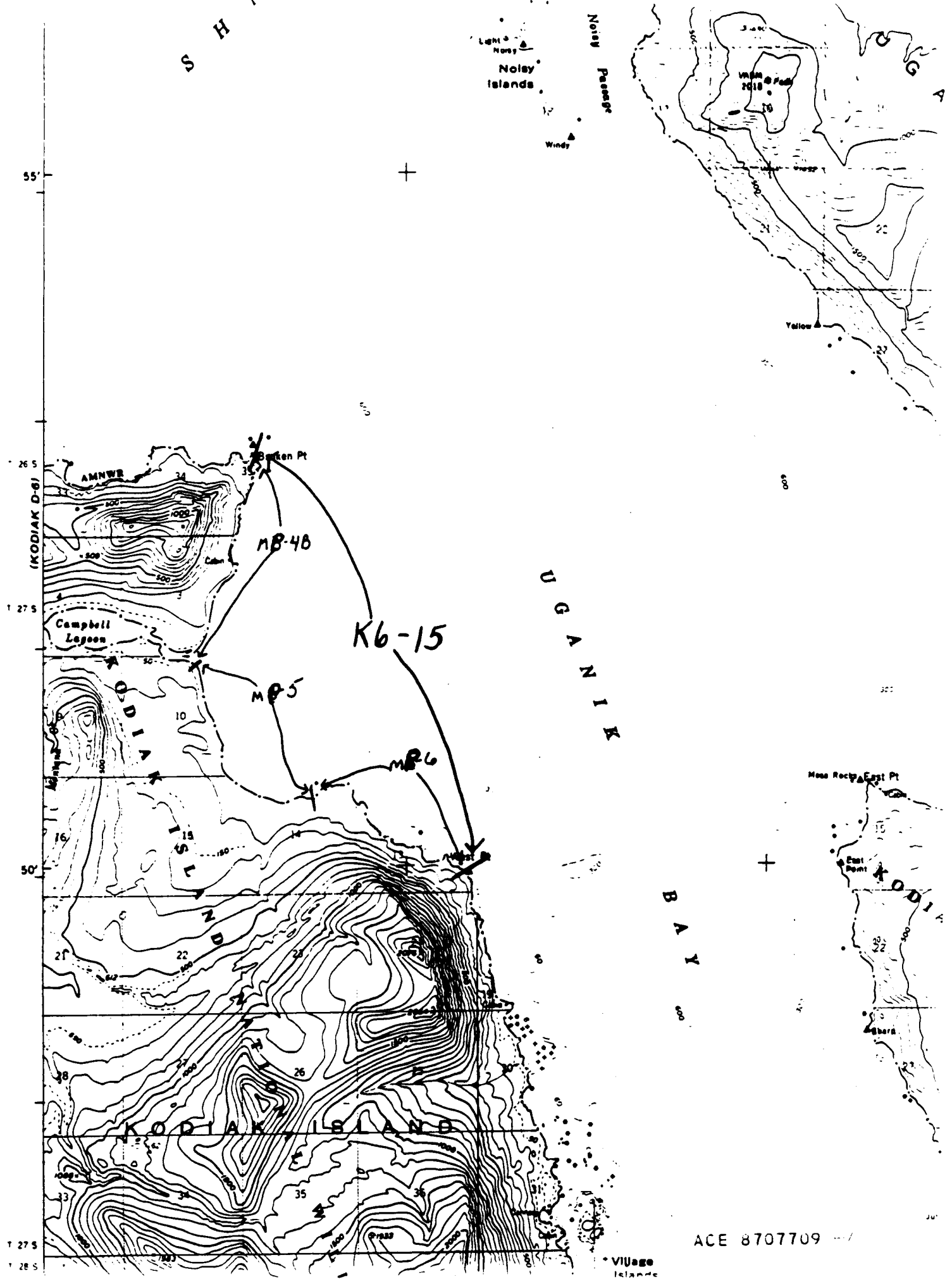
Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC

ACE 8707708 -/



ACE 8707709

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/09/89

SHORELINE SEGMENT K6-15-MP-5

LOCATION: (see enclosed map) South of Campbell Lagoon, Uganik
Bay, Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/09/89

Recommended Cleanup Activity(ies):

-Manual removal of oil splatters from upper intertidal zone.

Priorities/Considerations: Class 5-A

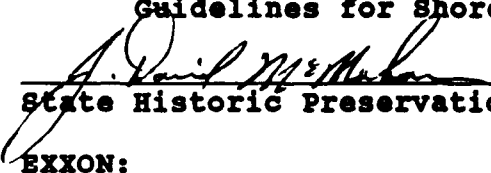
-Local setnetter crews were cleaning the beach under VEECO supervision at time of this assessment.

Ecological Constraints (from site survey):

-None for manual cleanup.

Archaeological Constraints (from site survey):

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


State Historic Preservation Officer *

Date: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 9 JULY 89 / Time: 1502
Surveyed From: Foot/Boat/Helicopter/Plane

Observer: Bryan Trimm
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: SOUTH OF CAMPBELL LAGOON, UGANIK BAY, KODIAK IS. Segment ID: K6-15-MPS
Segment Length: 2870 m. Access: Vehicle/Boat/Barge/Helicopter/Float Plane
Access Restrictions: NONE

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
Wave Exposure: High/Med/Low
Sediment: B 10 % / C 20 % / P 40 % / G&S 10 % / M % / R 20 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment 5 SU/SP/H/M/L H/M/L/VL
Sporadic % of Segment 15 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	
Very light:	<u>1000</u>	<u>1/4</u>		SU/SP/H/M/L
Light:			Penetration/Rework: <u>5</u>	SU/ <u>SP/H</u> /M/L
Moderate:			Burial Depth: <u> </u>	SU/SP/H/M/L
Heavy:				

Mobilization Potential: High/Medium/Low
rift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type:
(SEE COMMENTS)

OIL MORPHOLOGY

Pooled Oil:	%	SU/SP/H/M/L
"Free" Oil:	%	SU/SP/H/M/L
Splattered:	<u>100</u> %	SU/ <u>SP/H</u> /M/L
Coated:	%	SU/SP/H/M/L
Pancakes/Balls:	%	SU/SP/H/M/L

H/M/L/VL
H/M/L/VL

Preliminary Cleanup Est.

Total TYPE A: 200 m

Total TYPE B: m

Total TYPE A/B: m

OIL WEATHERING

Fresh:	%	SU/SP/H/M/L
Mousse:	<u>25</u> %	SU/ <u>SP/H</u> /M/L
Weathered Mousse:	<u>75</u> %	SU/ <u>SP/H</u> /M/L
Asphalt Mousse:	%	SU/SP/H/M/L
Tar:	%	SU/SP/H/M/L

COMMENTS

COBBLE/BOULDER BEACH GRADING INTO PEBBLE/SAND BEACH TO THE SOUTH. THE BEACH IS GENERAL-
50M WIDE WITH ERODING UNDERCONSOLIDATED BLUFFS BUTTING AGAINST THE SPLASH(STORM) ZONE.
VERY LIGHT SPLATTER TO MEDIUM SPLATTER IS FOUND ON THE JUNE HIGH TIDE LINE (BOUNDARY BETWEEN
SPLASH & HIGH INTERTIDAL ZONES). NO OIL WAS OBSERVED ON PEBBLE/SAND BEACH, WHILE THE SPLATTER
ON THE COBBLE/BOULDER BEACH IS DISCONTINUOUS MOST OF THE TIME
LOCAL SETNET FISHERMEN ARE PRESENTLY "CLEANING" BEACH UNDER DIRECTION OF UECO. THEY STATE THAT
THE PEBBLE/SAND BEACH WAS "COVERED" BY OILED SEAWEED DRIFT WHICH THEY REMOVED.

DOCUMENTATION:

1ap Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) D11C-20

Sample Numbers Collected: N/A

9 July 89

SUN

1459

CLIFF AREA SOUTH OF WEST PT
TO CAMPBELL LAGOON

LAND CAMPBELL LAGOON, TALK TO
WORK CREW

SUN COMING OUT

502

LD K6-15-MP5

SOUTH OF CAMPBELL LAGOON TO WEST PT

LA & BEACH 50-75M WIDE

SUNNY,

ERODING UC BLUFFS 5-15M HIGH

SP. AGAINST BLUFFS

TALK TO LOCAL SET NETTOR

MOUSSE CAME IN ON EARLY JUNE H.

TIDE, SAME STORY AS PUAT TO HERE

BY CLIP/SG BEACH

HITE/SP $\frac{1}{2}$ - $\frac{1}{4}$ M WIDE DISC BAND

WEATHER MOUSSE (75%) CHECK MOUSSE (25%)

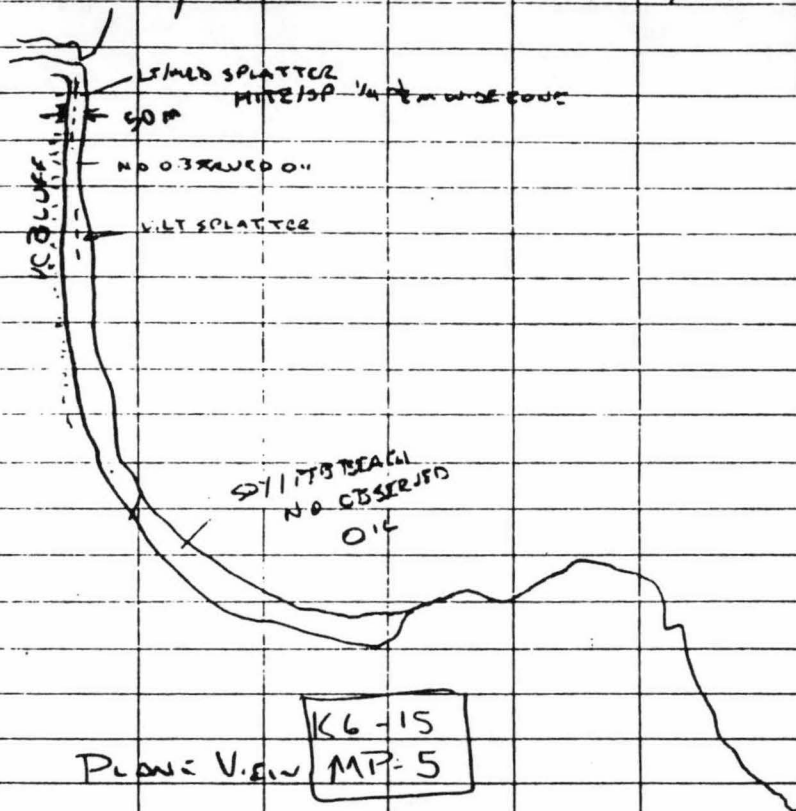
PRESENTLY BEING CLEANED BY LOCAL FISHER-

MEN. LT/MED SPLAT (ULT OCCASIONALLY)

CHECK IN BETWEEN BORDERS/COBBLES

NORTH

9 July 89



LEVEL

9 JUL 89

SUNDAY

LOCAL FISHERMAN SAY OIL HAD "MELTED"
 PENETRATED DOWN BELOW BOULDER/COR?
 PEBB BEACH. VLT SPAT SEEN ALSO
 REPORTS OF SOME LOCALIZED SHEEN
 AT HI TIDE.

OBSERVED OILING TO 5CM INTO PEB
 SUBSTRATE.

LV MP 5 & START FLYOVER OF MP 6

1642 KG-15 - MP-6

FLYOVER 15km @ 15-40 FT

NEET ROCKY HOLD W/ SMALL PEBB POCKET

ISLANDS. NO OIL OBSERVED

1652 • HEAD FOR ADQ

1713 • LD ADQ

WRITE UP MP, KI, & QI SEGMENTS

2200 PICK UP JOHN TARPLEY - ADQ

2230 DINNER & GOOD NIGHT

10 JULY 89

MONDAY

0700 - OFFICE

- WRITE UP MP-5

- CALL GLEN ABOUT ROTATION

0900 - LV FOR ADQ / EXON COMMAND

PAX. JOHN TARPLEY

SCAT (6)

DEBBIE MCCORMICK SCAT

RICK KNECHT SCAT

BRYAN TRIMM SCAT

? SUEY USCG

? PRICETT USF&W

ADQ → ALINCHAK BAY → ADQ

(0930)

(1900)

0939

LV ADQ 523EN TO ALINCHAK BAY
 (AK PENINSULA)

1033

- STOP FLYOVER CAPE KUBUCKAKI

35M ROCKY CLIFFS, LITTLE BOULDER
 RUBBLE D - 10M WIDE BEACH

1035

AB-IN

CIRCLE AROUND - VERIFY LOCATION

LEVEL

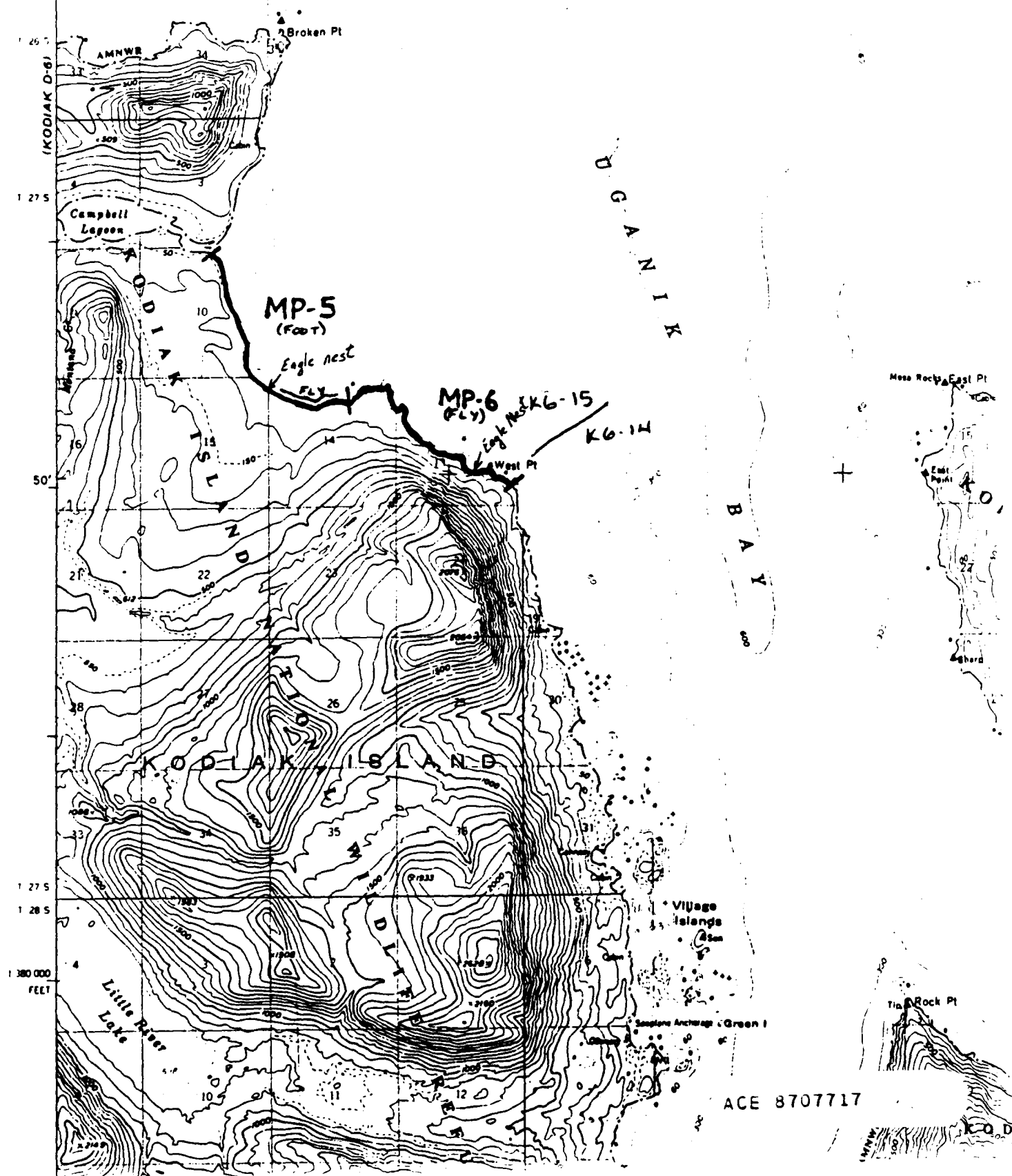
ACE 8707714

POOR QUALITY ORIGINAL

ECOLOGICAL EVALUATION

South of CAMPBELL LAGOON

LOCATION: KODIAK IS SITE: _____ OBSERVER: D. McCORMICKLOCATION PREFIX: KG-15
MP SEG. NO.: 5 LENGTH: 2870 (M)DATE: 7/9/89 TIME (HHMM): 1500 TIDE HT.: +2.0 (M)OILED ZONE: Splash High Medium LowSUBSTRATUM: 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: Endocladia, Heliconia, Ilex, pink encrusting algae,
dense clam bedsCLEANUP PRECAUTIONS: No constraints for manual cleanup.MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____BIRDS: FullsGENERAL OBSERVATIONS: Oil present as sparse mousse in upper intertidal.
Set netters presently cleaning with solvents.



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/09/89

SHORELINE SEGMENT K6-15-MP-6

LOCATION: (see enclosed map) North of West Point Uganik Bay

Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/09/89

Recommended Cleanup Activity(ies):

-No observed oil at this time, thus no action recommended.

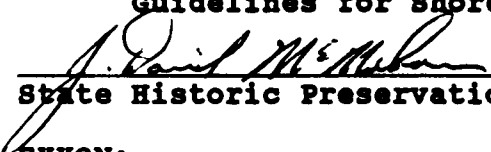
Priorities/Considerations:

Ecological Constraints (from site survey):

- No ecological assessment form is included in this report because segment was surveyed by helicopter only.
- No documentation page - no photos or video taken.

Archaeological Constraints (from site survey):

- If cleanup is planned a full archaeological assessment must be conducted due to the archaeologically sensitive nature 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: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 9 July 89 / Time: 1642
Surveyed From: Foot/Boat/Helio/Plane

Observer: BRYAN TRIMM
Weather: SUN Cloud/Rain/Snow/Fog

LOCATION

Location: NORTH OF WEST POINT UGANDA BAY KODAK ISLAND Segment ID: K6-15-MP6
Segment Length: 3000 m. Access: Vehicle/Boat/Barge/Helio/Float Plane
Access Restrictions: MAIN ROADS - LIMITED HELIO ACCESS

SHORELINE

Shoreline Type: SPI/SEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
Wave Exposure: High/Med/Low
Sediment: B 30% / C 20% / P 20% / G&S / M / R 30%

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous	% of Segment	SU/SP/H/M/L	H/M/L/VL
Sporadic	% of Segment	SU/SP/H/M/L	H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm	cm	SU/SP/H/M/L
Very light:			Penetration/Rework:	cm	SU/SP/H/M/L
Light:			Burial Depth:	cm	SU/SP/H/M/L
Moderate:					
Heavy:					

Mobilization Potential: High/Medium/Low

Drift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: _____

OIL MORPHOLOGY

Pooled Oil:	%	SU/SP/H/M/L
"Free" Oil:	%	SU/SP/H/M/L
Splattered:	%	H/M/L/VL SU/SP/H/M/L
Coated:	%	H/M/L/VL SU/SP/H/M/L
Pancakes/Balls:	%	SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: _____ m
Total TYPE B: _____ m
Total TYPE A/B: _____ m

OIL WEATHERING

Fresh:	%	SU/SP/H/M/L
Mousse:	%	SU/SP/H/M/L
Weathered Mousse:	%	SU/SP/H/M/L
Asphalt Mousse:	%	SU/SP/H/M/L
Tar:	%	SU/SP/H/M/L

COMMENTS

NO OIL OBSERVED AT THIS TIME BY HELICOPTER SURVEY. FLEW 15 KNOTS AT 15 TO 40 FEET. NOTE: THE LIGHTLY SPLATTERED OIL ON BEACHES IS USUALLY IN BETWEEN & UNDER BOULDERS. THUS - NOT VISIBLE BY AIR SURVEY.

9 JUL 89

SUNDAY

10 JULY 89

MONDAY

LOCAL FISHERMAN SAY OIL HAS "MELTED"

PENETRATED DOWN BELOW BOULDER/CORAL

PEL3 BEACH. V.L.T SPAT SEEN. ALSO

REMARKS OF SOME LOCALIZED SHEEN

AT H.TIDE.

OBSERVED OILING TO 5CM INTO PEL3

SUBSTRATE.

LV MP. 5 & START FLYOVER OF MP. 6

1642 K6-15-MP-6

FLY OVER 15km @ 15-40 FT

NEST ROCKY HOLD W/ SMALL PEG POCKET

REMARKS. NO OIL OBSERVED

1652 • HEAD FOR ADD

1713 • LD ADD

WRITE UP MP, KI & QI SEGMENTS

2200 PICK UP JOHN TARPLEY - ADD

2230 DINNER & GOOD NIGHT

0700 - OFFICE

• WRITE UP MP-5

• CALL GLEN ABOUT ROTATION

0900 • LV FOR ADD / EXXON COMMAND

PAT. JOHN TARPLEY

SCAT (6)

DEBBIE MCCORMICK SCAT

RICK KNECHT SCAT

BRYAN TRIMM SCAT

? SUEY USCG

? PERCHETT USF&W

ADD → ALINCHAK BAY → ADD

(10930)

(1900)

0939 LV ADD 523EN TO ALINCHAK BAY
(AK PENINSULA)

1033 • STOP FLYOVER CAPE KUBUGAKI

35M ROCKY CLIFFS, LITTLE BOULDER

RUBBLE D - 10M WIDE BEACH

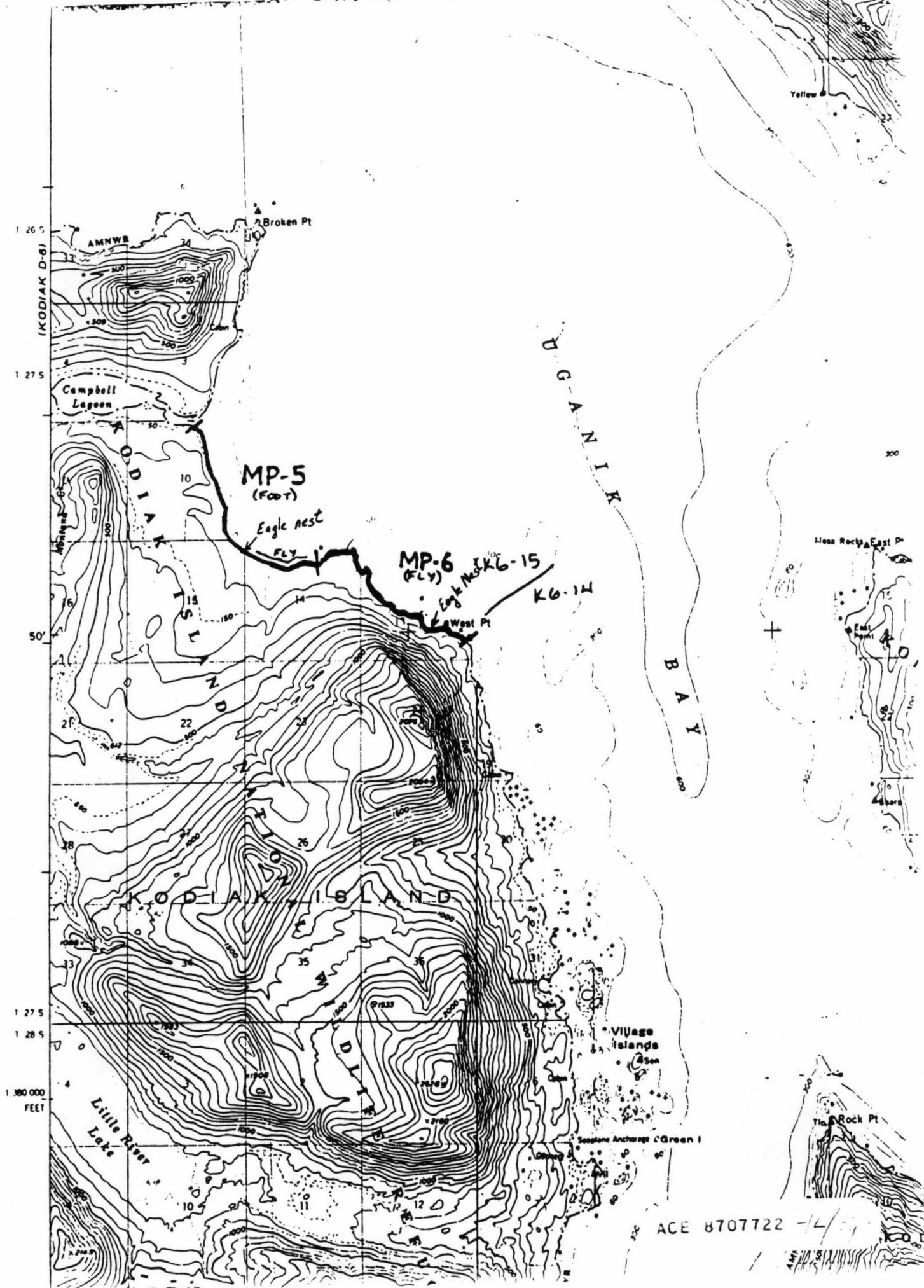
1035

AB-IN

CIRCLE AROUND - VERIFY LOCATION

LEVEL

ACE 8707720



517-632-90

- KODIAK SCAT
K6-16

MAR 22 1990

ACE 7963945

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K6-16-MP-1

LOCATION: (see enclosed map) Miner's Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/29/89

Recommended Cleanup Activity(ies):

- Manual removal of contaminated drift material.
- Manually remove or clean contaminated sediments.

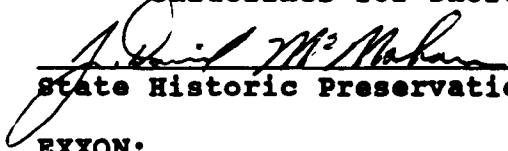
Priorities/Considerations: Class 4-A

Ecological Constraints (from site survey):

- Washing not recommended due to sensitivity of lower intertidal zone biota and low probability of recovering oil.
- Work at mid-tide plus or take appropriate measures to protect lower intertidal zone.

Archaeological Constraints (from site survey):

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


State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 28/89 Time: 14:40

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION MINERS POINT

SEGMENT I.D. K6-16-MP-1

LENGTH OF SHORELINE SEGMENT: _____ m

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

no good helo sites
except on beach to the
east

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: BQA / CD / P / G / S / M / R

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type logs

OIL

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

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

max length of each
packet 10-15 m

OIL DISTRIBUTION

Continuous: Y/N Segment: < 5 No. Bands 1 Width 2-4 m wide

Sporadic: Y/N Segment: < 20 Min/Max Dia 10-20 cm Impact Width 10 m

Est. Oil Thickness where > 1cm: 3-5 cm ^{in p.d.s.} SU / SP / UP / MID / LO

Depth below top sed
Est. Oil Penetration: < 2 cm ^{in p.d.s.} SU / SP / UP / MID / LO

Layers? Yes/No No. Layers _____ Oil Weathering _____

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

all seaward

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil < 5 Spattered 95 H/M/L/VL Sheen _____

OIL WEATHERING (OW)

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 20 SU/SP/VP/MID/LO

Pancake Mousse 0 SU/SP/VP/MID/LO Asphalt Mousse 20 SU/SP/VP/MID/LO

Tar Formation 0

Comments:

SEE COMMENT SHEET

This segment consists of a rocky headland fringed by steep gradient boulder beaches and small pebbly beaches in more sheltered location.
Oil contamination is variable, most of this section consists of oil-free. A 10 m wide band of very high & discontinuous oil occurs on some boulder beach (approx. 20% of section). Localized patches of up to med. oil contamination occurs on some beach.

ACE 8707724

DOCUMENTATION:

Map Aerial photo marking segment boundaries See Attached

VTR: YN Tape Number(s) _____

Photography: YN Roll Number(s) DMC-16

Sample Numbers Collected: N/A

MIKE MILES
JUNE 28/89

MINERS POINT
K6-16-MP-1

COMMENTS
SHORELINE OIL EVALUATION

This segment consists of a rocky headland fringed by ~~a~~ discontinuous steep gradient boulder beaches and small pebbly beaches in more sheltered locations.

Oil contamination is variable. A helicopter survey indicates that most of this segment is un-oiled. A 10 m wide band of very light discontinuous tar spatters occurs on some boulder beaches [estimated distribution is $< 20\%$ of the segment]. Localized pockets of up to "moderate" oil contamination does however occur on some beaches. This area contains ~~area~~ of nearly continuous tar spatters and sea urchins to depths of 3-5 cm in crevices around the base of large boulders. We inspected the largest of these areas and it ranged between 2 to 4 m in width and 10 to 15 m in length.

ACE 8707726

Manual removal of ^{both} gross oil contamination and oil ~~and~~ drifted weed is appropriate at the more heavily oiled portions of this segment. Moderate to high pressure

Mike Miles
June 23/89

MINERS POINT
K6-16-MP-1

COMMENTS

SHORELINE OIL EVALUATION

Hot water washing would be required to remove the dried / oxidized tar, in these heavier oiled segments. However this technique is likely to result in the combustion of presently un-oiled sections of the RTZ. Oil recovery ratios are also expected to be low due to the porous nature of the beach sediment and the difficulty in containing or recovering oil on boulder beaches.

A crew of 3 people are currently cleaning beach in the vicinity of Miners Point. The amount of oil on these beaches is apparently more than they can cope with and some ~~extra~~ assistance would be appreciated. The people on the beach are ^{also} not familiar with the use of "wet pom-poms" and some instruction in their use would therefore be beneficial.

ECOLOGICAL EVALUATION

LOCATION: Mine Point SITE: _____ OBSERVER: D McCORMICK

LOCATION PREFIX: K-6-16-mp SEG. NO.: 1 LENGTH: 875 (M)

DATE: 6/28/89 TIME (HDDM): 1430 TIDE HT.: +0.75 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

FUOUS (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
in lower ITZ

MYTILUS (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
In lower ITZ

BALANUS (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense in low to mid - ITZ; 10% in mid tide zone are oiled/disk

LITTORINA

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

75% Littorine population in high ITZ are oiled.

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

OTHER OBSERVATIONS: Tide pools: hermit crabs, Enderbia, Ulva

CLEANUP PRECAUTIONS: Avoid cross-contamination to clean lower ITZ.

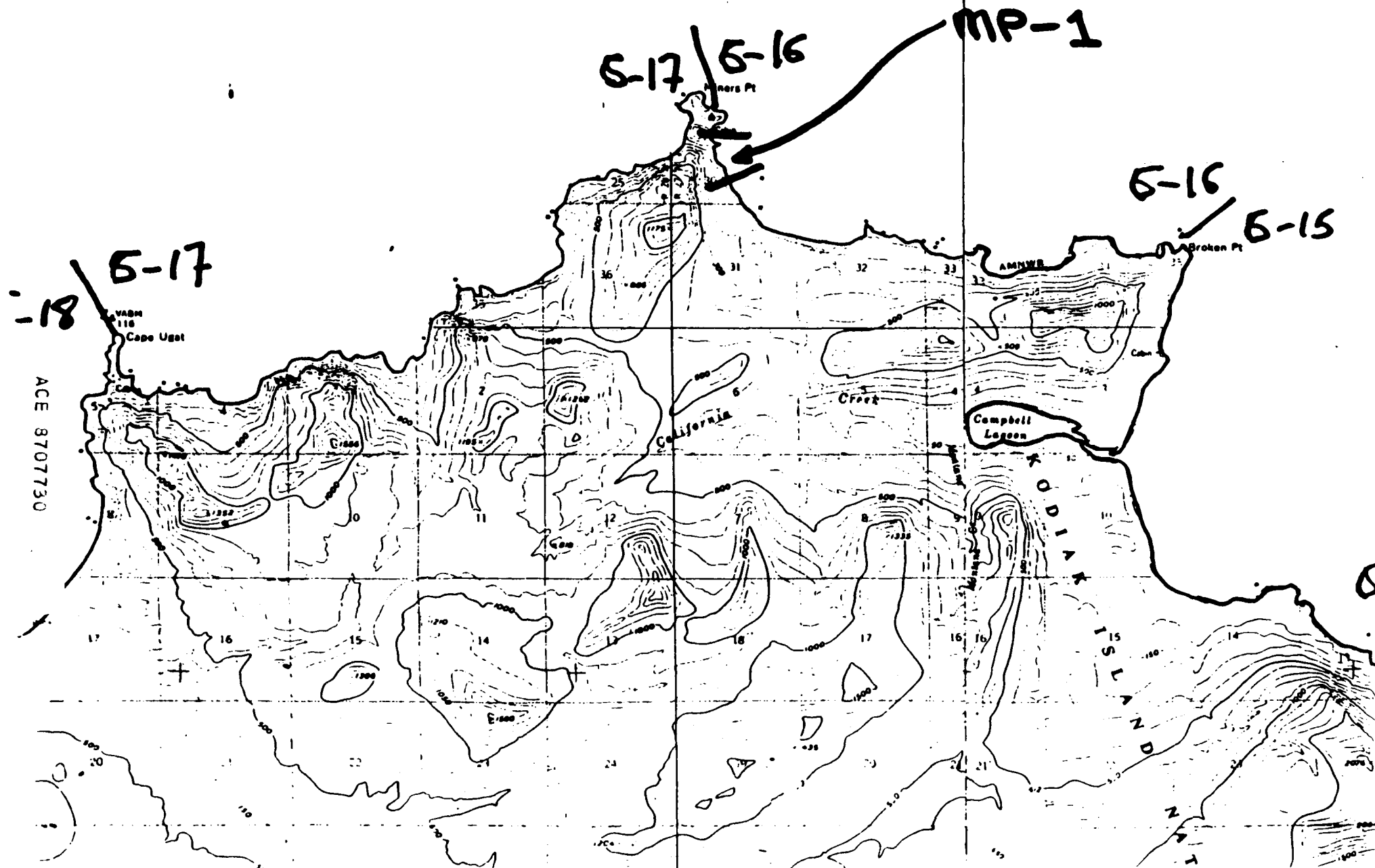
MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other _____

BIRDS: Bird eagle nest on cliff above beach - 2 eggs

GENERAL OBSERVATIONS: This boulder beach has moderate oiling in the upper ITZ with pooled mousse in depressions and mostly a splatter in the mid zone. Lower ITZ is clean. Pom-poms should be used on the most heavily oiled areas. Type B cleanup not recommended due to low probability of oil recovery and contamination risk to lower ITZ.

MINERS POINT

K6-16-MP-1

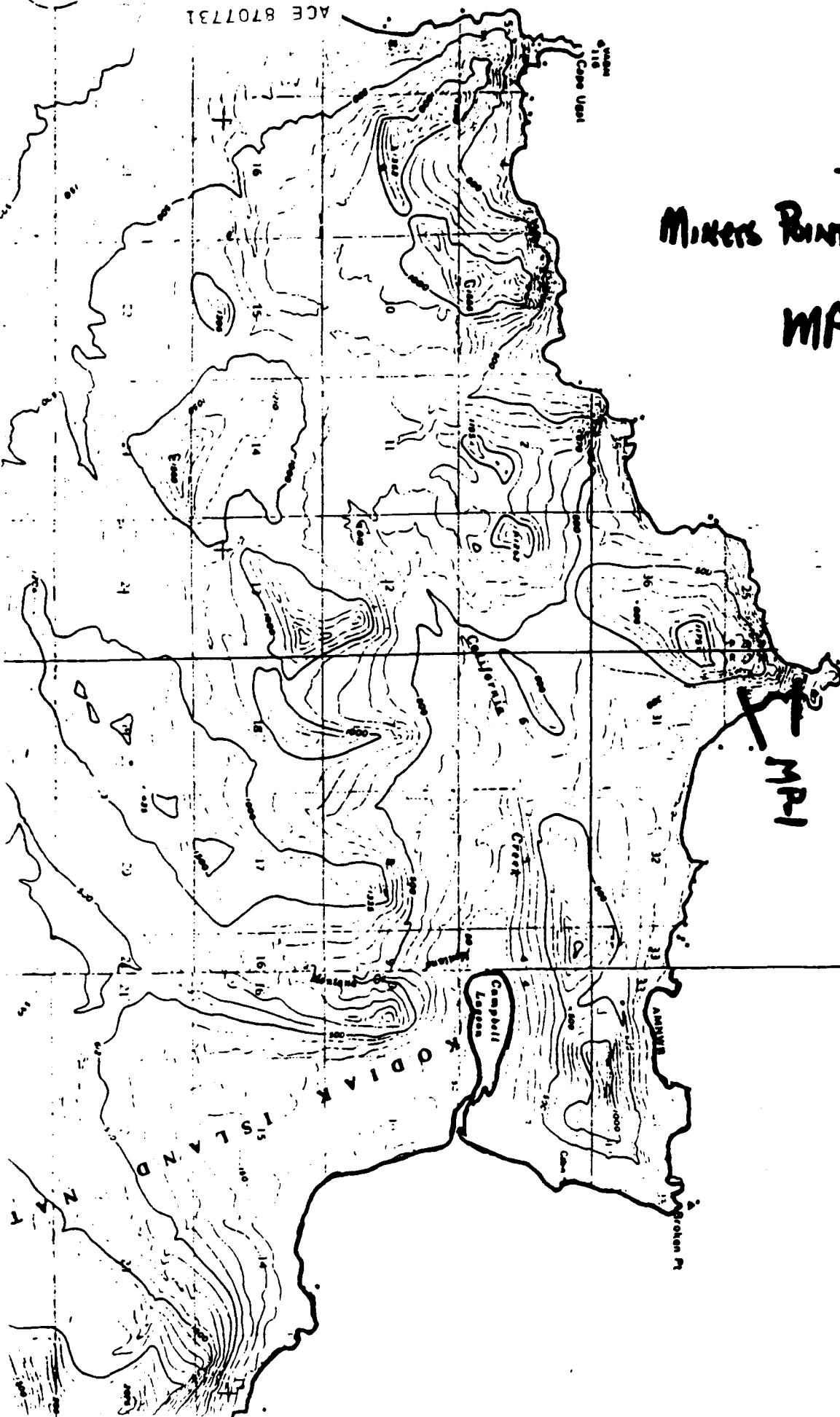


ACE 8707731

Miners Point East-Block

MP-1

MP-1



(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K6-16

Includes Shoreline Segments: MP-1, MP-2, MP-3, MP-4a

Location: Miner's Point

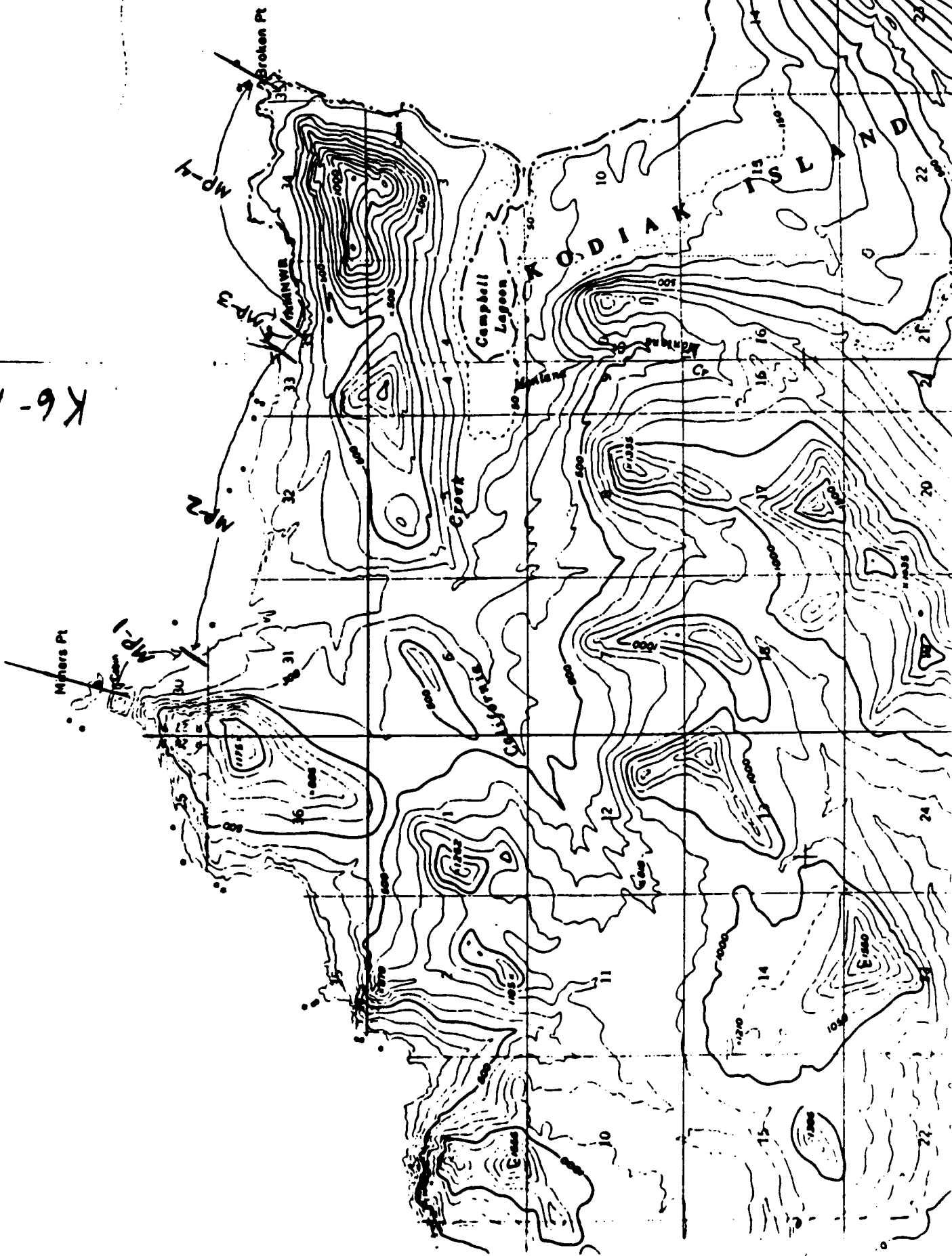
Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC

K 6-16



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT K6-16-MP-2

LOCATION: (see enclosed map) Southeast of Miner's Point, Uganik Bay, Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/08/89

Recommended Cleanup Activity(ies):

- Manual removal of heavier accumulations of oil in the boulder/cobble beaches.

Priorities/Considerations: Class 5-A

- Determine quality of present cleanup by local fisherman.

Ecological Constraints (from site survey):

- Avoid eagle nest sites and lower intertidal zone. (see map of eagle nest locations).

Archaeological Constraints (from site survey):

- No access to the forest/upland zone by beach crews during cleanup.
- 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.

J. David McManis
State Historic Preservation Officer *

Date: 7/24/89

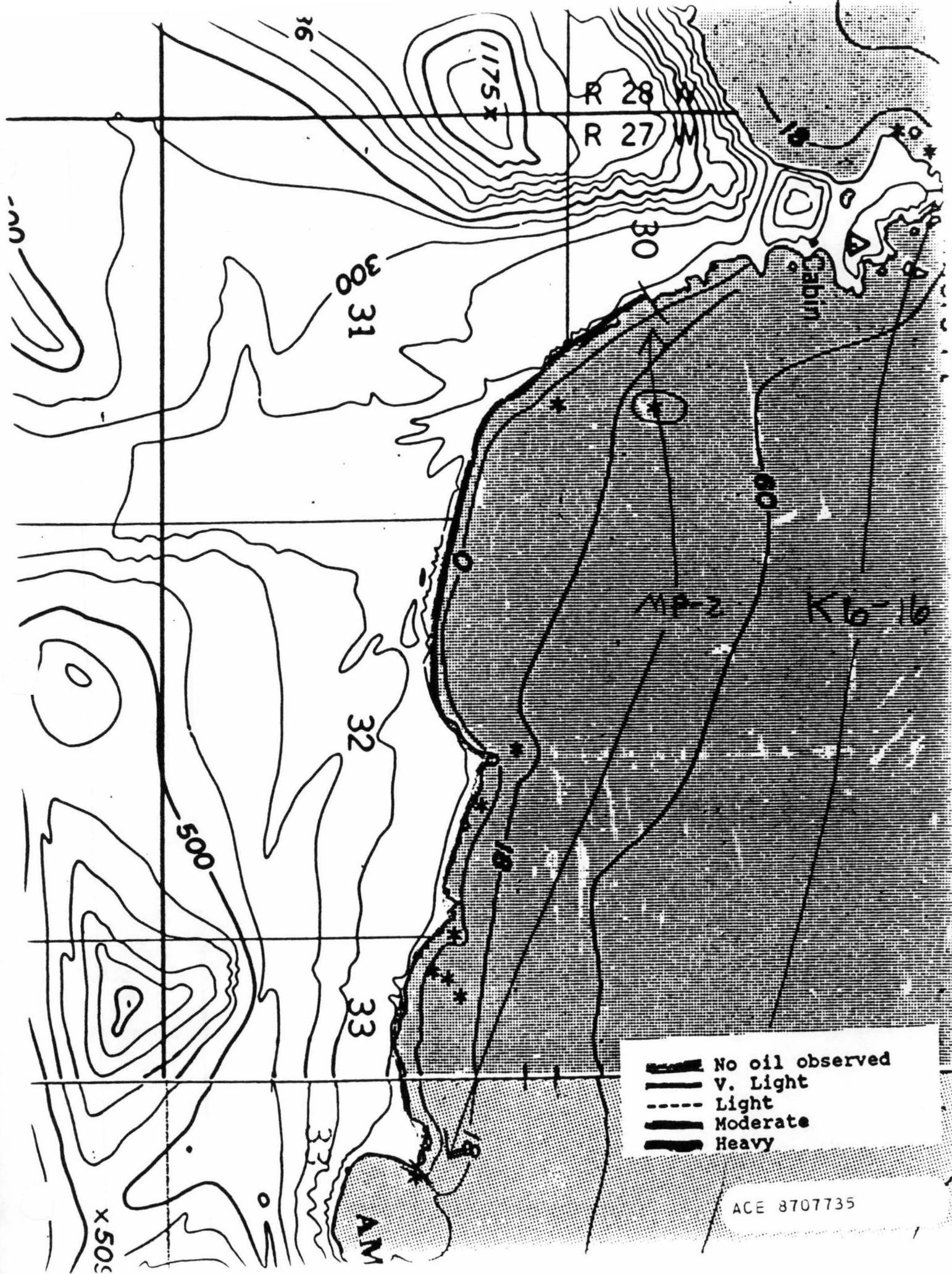
EXXON: _____

Date: _____

FOSC: _____

Date: _____

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



SHORELINE OIL EVALUATION

Date: 5 July '89 / Time: 1131
 Surveyed From: Foot/Boat/Heli/Plane

Observer: BRYAN TRIMM
 Weather: Sun/Cloudy/Rain/Snow/Fog

LOCATION

Location: Entrance of M. G. Point, Uman Bay Segment ID: K6-16-MF.2
 Segment Length: 3800 m. Access: Vehicle/Boat/Barge/Heli/Float Plane
 Access Restrictions: None

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Wave Exposure: High/Med/Low
 Sediment: B 20 % / C 20 % / P 25 % / G&S 5 % / M % / R 30 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment 0 SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment 20 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u>100</u>	<u>1</u>			
Light:			Penetration/Rework:	<u>-</u>	SU/SP/H/M/L
Moderate:			Burial Depth:	<u>10</u>	SU/SP/ <u>H</u> /M/L
Heavy:					

Mobilization Potential: High/Medium/LOW
 Drift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type:

OIL MORPHOLOGY

Pooled Oil:	<u> </u> %		SU/SP/H/M/L
"Free" Oil:	<u> </u> %		SU/SP/H/M/L
Splattered:	<u>100</u> %	H/M/L/ <u>VL</u>	SU/SP/ <u>H</u> /M/L
Coated:	<u> </u> %	H/M/L/VL	SU/SP/H/M/L
Pancakes/Balls:	<u> </u> %		SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: 100 m
 Total TYPE B: m
 Total TYPE A/B: m

OIL WEATHERING

Fresh:	<u> </u> %	SU/SP/H/M/L
Mousse:	<u>25</u> %	SU/SP/ <u>H</u> /M/L
Weathered Mousse:	<u>75</u> %	SU/SP/ <u>B</u> /M/L
Asphalt Mousse:	<u> </u> %	SU/SP/H/M/L
Tar:	<u> </u> %	SU/SP/H/M/L

COMMENTS

WEST SIDE OF BEACH DOMINANTLY BOULDER/COBBLE/LOW ANGLE BEDROCK WITH VERY LIGHT SPLATTER. BOTH FRESH (CHOCOLATE) & WEATHERED MOUSSE IS FOUND. THE CENTER PEBBLE/SAND BEACH HAS VERY LIGHT SPLATTER BURIED DOWN TO 10CM. IN THE HIGH INTERTIDAL ZONE BERM. CLEAN PEBBLES ON THE TOP 10 CM. THE PEBBLE BEACH HAS A VERY SMALL OCCURRENCE. THE NORTH-EAST SIDE OF BEACH IS A BOULDER/COBBLE BEACH WITH VERY LIGHT SPLATTER OF WEATHERED MOUSSE IN THE HIGH INTERTIDAL ZONE. NOTE THAT SETNETTERS ARE PRESENTLY CLEANING THE WEST SIDE BOULDER/COBBLE/LOW ANGLE ROCK BEACH.
 NO OIL FOUND ON OVERFLIGHT OF FAR WESTERN END OF SEGMENT

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See ATTACHED

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DIC-19

Sample Numbers Collected: N/A

7 July 89

FRIDAY

49

2100 - DINNER (KODAK PIZZA - SEASH)

2:11 - $\frac{1}{2}$ GOOD NIGHT

8 July 89

SATURDAY

0730 - MAKE FLOW CHART FOR MARTY, XEROX

6 - GIVE TO HIM IN KISCC MTA

- SHOW RONDA (SECR.) XEROX/DEC

0830 FINISH WRITUPS VP-3

0945 LV FOR AIRPORT

1 - LV ADQ $\rightarrow$ MINER'S PT (UGANIK IS.)

WEATHER FOG NEAR MINIMUMS AT ADQ -

TRY TO GET OVER TO W SIDE ISLAND

1021 - DELAY - 1 ENGINE WON'T START

1039 LV ADQ

1131 - LAND EAST OF MINER'S PT. (MP-2)

CLOUDY & COOL

MP-2 - EAST OF MINER'S PT (UGANIK PASSAGE)

B/C/P/ BEACH GRADING INTO SD/P/SD

V.LT HITE, TO V.LT COAT 60% W. MOUSSE/40% C. MOUSSE

P/SD BEACH HITE BEACH (10CM DEEP V.LT SPAT)

CLEAN PED ON TOP / DECAYING C-WO

PED/SD BEACH 3 HITE TERRACES / 1 SP - WOU DEVELOPED

ACE 870773a

50 8 JUL 89

SATURDAY

PLANE VIEW MP-2

↑ NORTH

MP-2

MRD
WAVE

Lo & Beach

Lo & Rock

BOUNCE/CORBLE
BEACH

20m
W-OS

ROCKY BLUFF

HITZ
60% U. Mousse
40% C. Mousse
V.L.T SPLAT
1m wide zone (DISCONTINUOUS)

ACE 8707739

LOW
WAVES

Lo/Men &
Beach

PEB/SDY BEACH

B/C Beach

ROCKY BLUFF
V.C BLUFF

Boulder
Cobble

ROCKS

HITZ
100% U. Mousse
V.L.T. SPLAT

UNDISCONTINUOUS BLUFF

BURIED OR
SURFACE

PEBBLE/SAND
BURIED

NO OIL OBSERVED

SP DRIFT
LOGS

HITZ
V.L.T SPLAT
70cm BURIED
CLEAN PEB ON TOP

ECOLOGICAL EVALUATION

LOCATION: ^{UGANIK BAY} MINER'S PT SITE: _____ OBSERVER: D. McCoenick
^{KOLINE IS K6 = 16}
 LOCATION PREFIX: M.P. SEG. NO.: 2 LENGTH: 3800 (M)
 DATE: 7/8/89 TIME (HHMM): 1130 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

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

Dense in patches

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

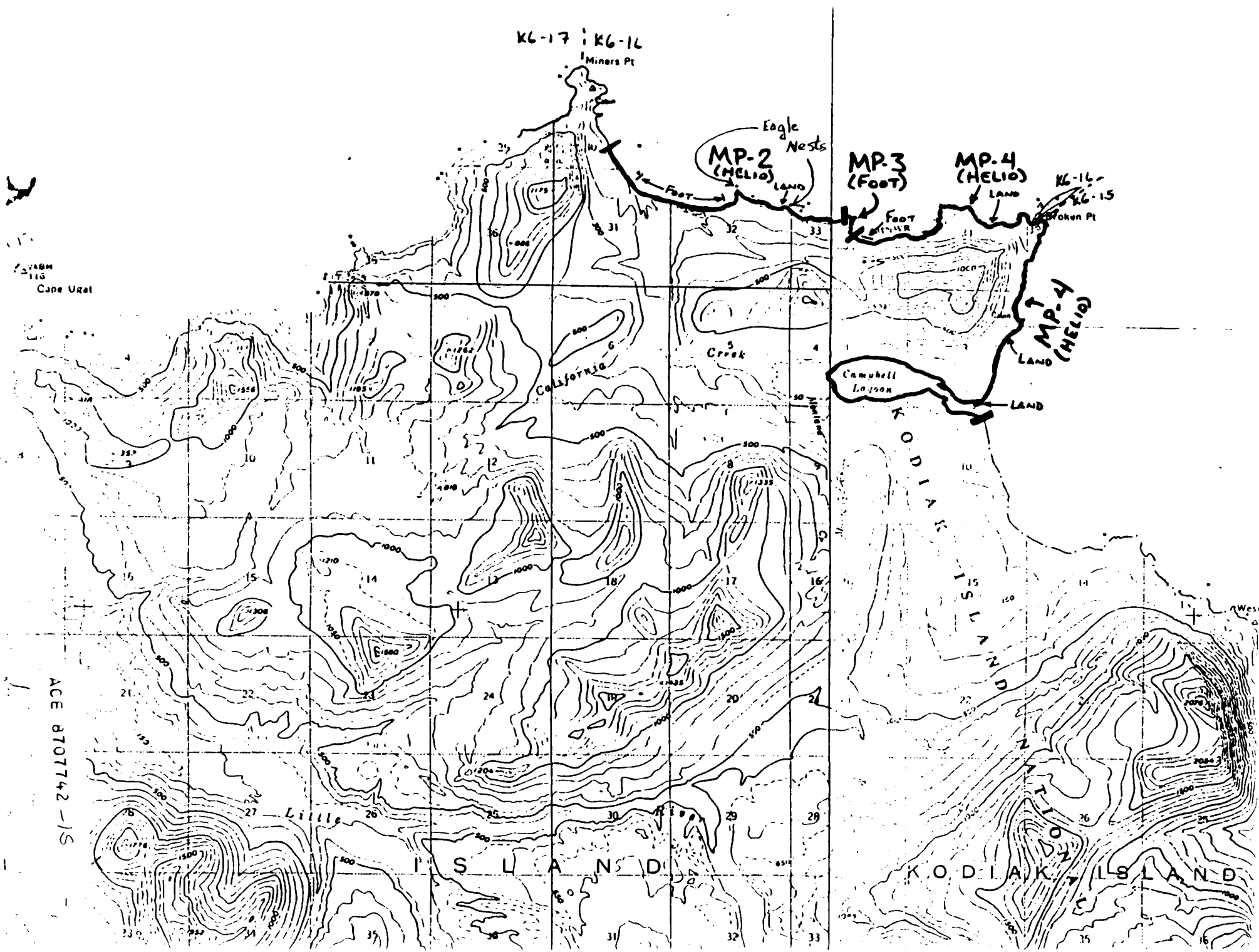
OTHER OBSERVATIONS: Tide pool fauna Eubryopsis, Helocarcion, Alaria, sculpin
sea urchins, Kottarissa, Ulva, Seabass Anthopleura Hermit crabs. Protellina
Black fungi on boulders, Ectocarpus and Gelidium on boulders. Bird trip offshore.

CLEANUP PRECAUTIONS: Stay clear of eagle nests and clean lower ITZ.

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

BIRDS: Gulls. Eagle nests in segment.

GENERAL OBSERVATIONS: Oil conditions in this segment are light to very light grease/asphalt
mousse splatter on boulders in upper tidal zone. Stream at West end of pebble beach.
Minor very light splatter under pebbles at high tide zone on cobble/pebble beach.



ACE 8707742-15

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT K6-16-MP-3

LOCATION: (see enclosed map) Between Miner's Point and Broken
Point, Uganik Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/08/89

Recommended Cleanup Activity(ies):

- Passive sorbent collection in front of heavy and moderate coatings of oil in storm(splash) and high intertidal zones.
- Manual removal of heavy and moderate oil coatings.
- Manual removal of oiled sediments to depths greater than one inch may be required to clean beach.

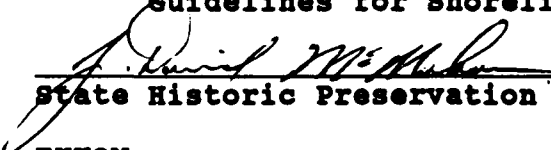
Priorities/Considerations: Class 4-A

Ecological Constraints (from site survey):

- No constraints for manual cleanup other than avoidance of clean lower intertidal zone.

Archaeological Constraints (from site survey):

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


State Historic Preservation Officer *

Date: 7/31/89

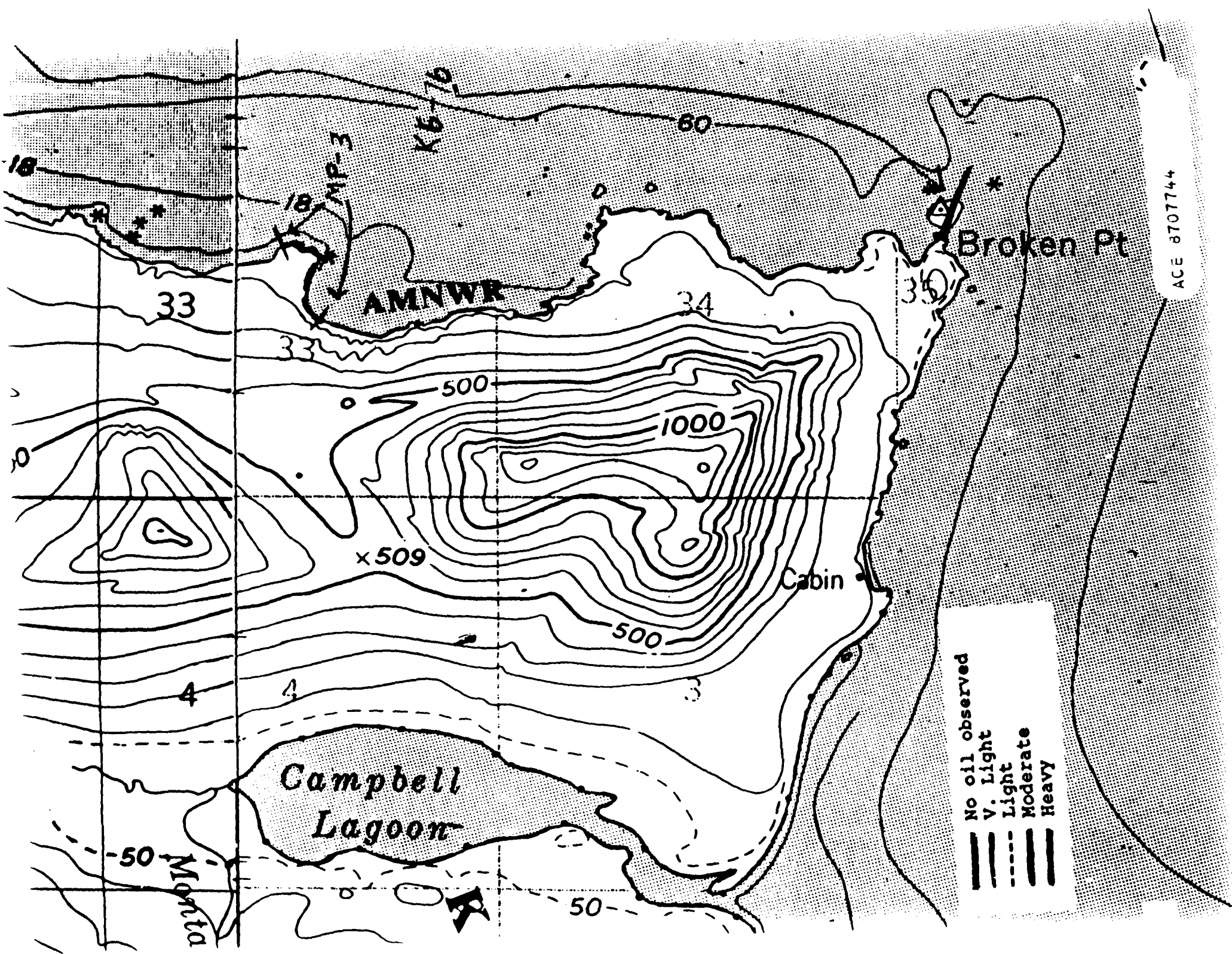
EXXON: _____

Date: _____

FOSC: _____

Date: _____

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



SHORELINE OIL EVALUATION

Date: 5 July 89 / Time: 1358
Surveyed From: Foot/Boat/Helio/Plane

Observer: Eric R...
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: 3rd Ledge Marine Pt & Brown Pt. BAY Segment ID: K6-16-MF3
Segment Length: 200 m. Access: Vehicle/Boat/Barge/Helio/Plane
Access Restrictions: None

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
Wave Exposure: High/Med/Low
Sediment: B 3 % / C 10 % / P 5 % / G&S 5 % / M % / R 50 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment 2 SU/SP/H/M/L H/M/VL
Sporadic % of Segment 65 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	
Very light:	<u>20</u>	<u>1</u>	<u> </u> cm	SU/SP/H/M/L
Light:	<u>15</u>	<u>2</u>	<u> </u> cm	SU/SP/H/M/L
Moderate:	<u> </u>	<u> </u>	<u> </u> cm	SU/SP/H/M/L
Heavy:	<u> </u>	<u> </u>	<u> </u> cm	SU/SP/H/M/L

Mobilization Potential: High/Medium/Low (See below)

ift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type:

OIL MORPHOLOGY

Pooled Oil: <u> </u> %		SU/SP/H/M/L
"Free" Oil: <u> </u> %		SU/SP/H/M/L
Splattered: <u>75</u> %	<u>H/M/L/VL</u>	SU/SP/ <u>H</u> /M/L
Coated: <u>25</u> %	<u>H/M/L/VL</u>	SU/ <u>SP</u> /H/M/L
Pancakes/Balls: <u>0</u> %		SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: 60 m
Total TYPE B: m
Total TYPE A/B: m

OIL WEATHERING

Fresh: <u> </u> %	SU/SP/H/M/L
Mousse: <u>25</u> %	SU/ <u>SP</u> /H/M/L
Weathered Mousse: <u>75</u> %	SU/ <u>SP</u> /H/M/L
Asphalt Mousse: <u> </u> %	SU/SP/H/M/L
Tar: <u> </u> %	SU/SP/H/M/L

COMMENTS

SMALL ACCUMULATIONS OF HEAVY & MODERATE OILING IN THE SPLASH (STORM) ZONE AGAINST IN
VERTICAL ROCKY HEADLANDS, CRACKS & CREVICES (FISSURE) AND IN BETWEEN TPOULERS. CHOCOLATE
MOUSSE DOMINATES THESE DEPOSITS. VERY LIGHT SPLATTER IS FOUND IN THE HIGH INTERTIDAL ZONE
- COMPOSED OF WEATHERED MOUSSE
LOCAL FISHERMAN REPORT SHEEN COMING FROM OIL DEPOSITS AT HIGH TIDE, THUS THE HIGH
MOBILIZATION CLASSIFICATION.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See History

VTR: Y/N (N) Tape Number(s) _____

Photography: Y/N (Y) Roll Number(s) D11-19

Sample Numbers Collected: N/A

⑤ 8 JULY 89

SATURDAY

1300 - LUNCH

1349 - MAP & SKIP

1352 LD, NO OIL OBSERVED (SEE LOCATION MAP)

1356 - LD BY SET NETTIES. ASK ABOUT OILING
& CHECK BEACH.

1358 LD 13Y TENTS (AT OVAL MAP BOUNDARIES)

MAP-3 SM POCKET IN VERT ROCKY MTD B/C

CLOUD 5x6m MED/HY COAT OF W. MOUSSE SP/HITZ

COOL LOCAL FISHERMAN SAYS IT PRODUCES SHEEN
AT HIGH TIDE

V. LT SPLAT W. MOUSSE IN HITZ.

LOW WAVE, NO DRIFT IN ROCKY HOLDS

HEALTHY & CLEAN M/LITZ

- RECOMMEND HOT H₂O WASH & WAND FOR SMALL
DEFA. COULD PLACE SMALL SORBENT BOOM TO
CATCH SHEEN.

LT COAT IN CREVICE (FISSURE) OF UP TO 1m
CHOC MOUSSE. 15m LONG. SLIGHT SHEEN
OF HYDROCARBONS, EVEN ON COOL DAY

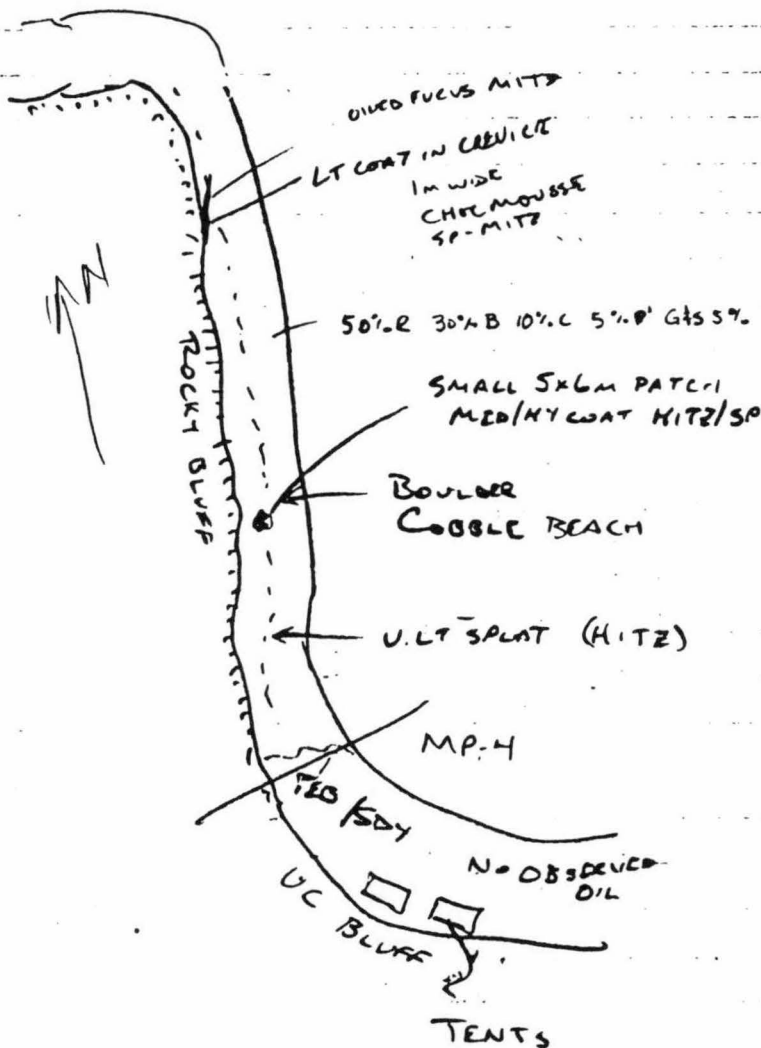
NO

LV MAP-3

1450 FLY MP-4

PLANE VIEW MP-3

8 JULY 89
SATURDAY



ACE 8707747

K6-17 K6-16

Miners Pt

MP-2
(HELIO)

Eagle Nest
MP-3
(FOOT)

MP-4
(HELIO)

K6-14
K6-15
Broken Pt

MP-4
(HELIO)

Campbell
Lagoon

California
Creek

KODIAK
ISLAND

KODIAK ISLAND

ISLAND

Lille

ACE 8707750 -15

ARM
118
Cane Ugal

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/28/89

SHORELINE SEGMENT K6-16-MP-4A

LOCATION: (see enclosed map) West of Broken Point to Broken Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/08/89

Recommended Cleanup Activity(ies):

- No cleanup recommended due to apparent absence of oil.
Subject to FOSC reassessment at a later date.

Priorities/Considerations:

Ecological Constraints (from site survey):

- Should this segment be oiled in the future, it is too sensitive ecologically to warrant cleanup of very light oil.

Archaeological Constraints (from site survey):

- If cleanup is planned, no access to the forest/upland zone by beach crews during cleanup.
- If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.


State Historic Preservation Officer *

Date: 7/31/89

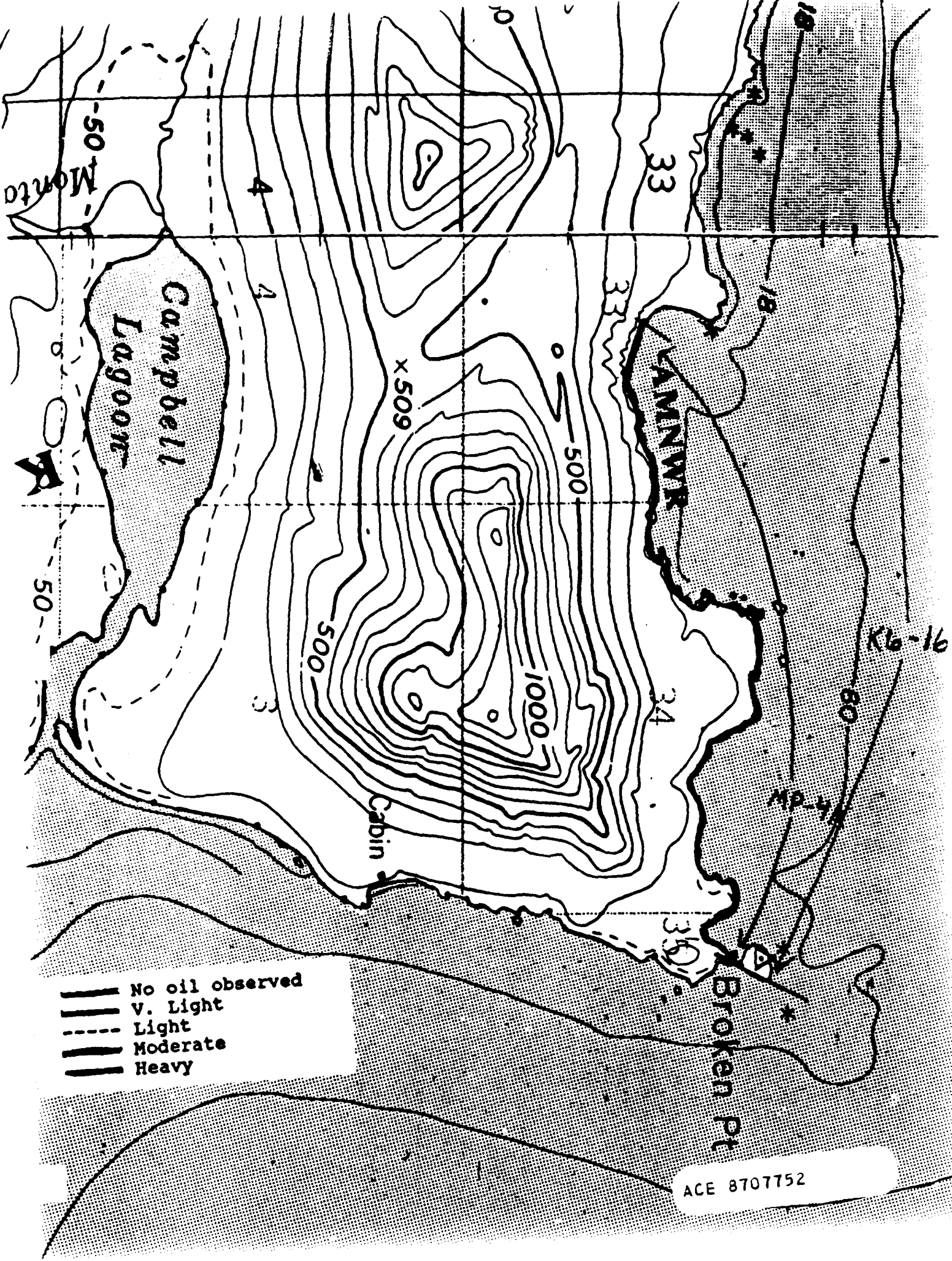
EXXON: _____

Date: _____

FOSC: _____

Date: _____

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



SHORELINE OIL EVALUATION

Date: 6 July 89 / Time: 1450
 Surveyed From: Foot/Boat/Helio/Plane

Observer: Bryan Trimm
 Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: West of Broken Pt to Broken Pt Korean Islands Segment ID: K6-16-MP4A
 Segment Length: 1800 m. Access: Vehicle/Boat/Barge/Helio/Boat Plane
 Access Restrictions: None

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Wave Exposure: High/Med/Low
 Sediment: B 20 % / C 20 % / P 25 % / G&S 5 % / M % / R 30 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u> </u>	<u> </u>	Penetration/Rework:	<u> </u> cm	SU/SP/H/M/L
Light:	<u> </u>	<u> </u>	Burial Depth:	<u> </u> cm	SU/SP/H/M/L
Moderate:	<u> </u>	<u> </u>			
Heavy:	<u> </u>	<u> </u>			

Oil Pollution Potential: High/Medium/Low

Left Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type:

OIL MORPHOLOGY

Spilled Oil:	<u> </u> %	SU/SP/H/M/L
Free Oil:	<u> </u> %	SU/SP/H/M/L
Plattered:	<u> </u> %	H/M/L/VL SU/SP/H/M/L
Coated:	<u> </u> %	H/M/L/VL SU/SP/H/M/L
Pancakes/Balls:	<u> </u> %	SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: 0 m
 Total TYPE B: 0 m
 Total TYPE A/B: 0 m

OIL WEATHERING

Fresh:	<u> </u> %	SU/SP/H/M/L
Mousse:	<u> </u> %	SU/SP/H/M/L
Weathered Mousse:	<u> </u> %	SU/SP/H/M/L
Asphalt Mousse:	<u> </u> %	SU/SP/H/M/L
Bar:	<u> </u> %	SU/SP/H/M/L

COMMENTS

NO OIL WAS OBSERVED BY HELIO. TALKED TO LOCAL FISHERMAN. HE STATED THAT LOCAL CLEANUP CREWS HAVE REMOVED "VERY LIGHT MOUSSE" DEPOSITS. BROKEN POINT IS A MEDIUM WAVE EXPOSED ROCKY HEADLAND WITH POCKET BEACHES.

NOTE ORIGINALLY K6-15-MP4B & K6-16-MP4A WERE ONE SEGMENT. THIS SEGMENT WAS DIVIDED TO FIT INTO ADEC/USCG K SECTION MAP

DOCUMENTATION:

Map Aerial photo marking segment boundaries See Attached

VTR: Y N Tape Number(s) _____

Photography: Y N Roll Number(s) JAC-9

Sample Numbers Collected: N/A

(51)

2 JULY 69

SATURDAY

(53)

MP-4 GOES TO & INCLUDES CAMPBELL LAGOON-

LAGOON - M-D FLATS

MUD/S&G/P w/ OCCASSIONAL C. ? B

NO OIL OBSERVED HELIO, L & SLO

FROM BROKEN POINT TO LAGOON, LD & FOUND

VERY LIGHT SPLAT, W. MOUSSE HITZ. ROCKY

HOLD & PEG BEACH (B/C RUBBLE-HOLDS)

FROM TENTS (MP-3) TO BROKEN Pt

POCKET

PEG BLACUS w/ ROCKY & VC BLUFFS (HOLD - ROCKS)

NO OIL OBSERVED ON FLY BY

ONE LANDING - NO OIL SEEN

1515 - LV FOR ADD

1545 - LAND ADD

- WRITE UP MP-2, 3

1820 - SCAT STAFF MTG

- FINISH MP WRITE UPS

2030 - BUY FOOD FOR SUNDAY SCAT FLT

2100 - BRING BACK CAR (OFFICE)

- UNLOAD UNFURNITURE

2200 - MOVIE & GOOD NIGHT

ECOLOGICAL EVALUATION

LOCATION: West of Broken Pt
to Broken Pt.
KODIAK IS SITE: _____ OBSERVER: D. McCarrick

LOCATION PREFIX: KG-16-
MP- SEG. NO.: 4A LENGTH: 1800 (M)

DATE: 4/8/89 TIME (HHMM): 1450 TIDE HT.: +20 (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)

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: Cobble/pebble scrub fauna Entomocha Tubellaria
Tubellaria Uva cinerea isobola crisp Coelocia pink
invertebrates

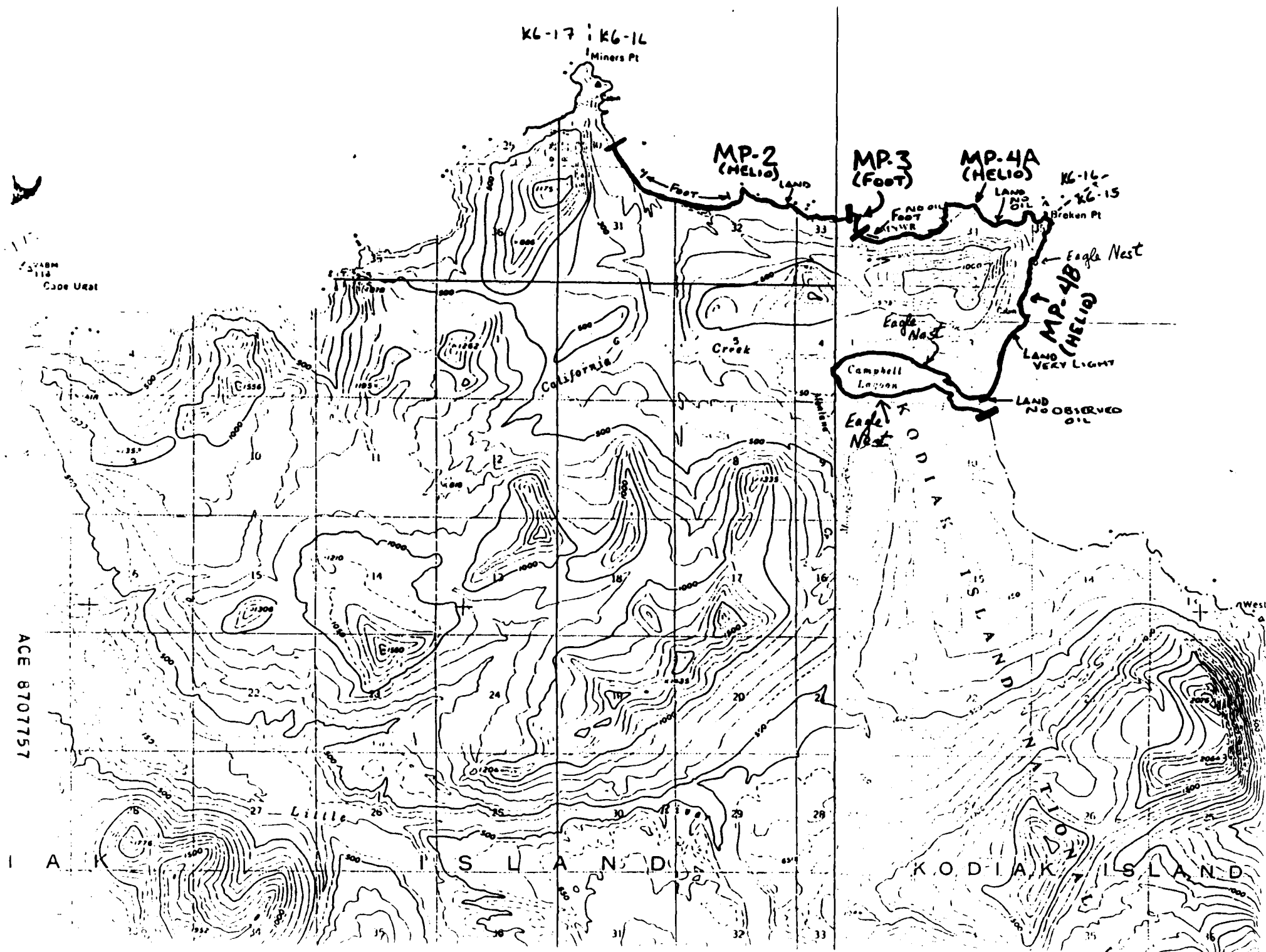
CLEANUP PRECAUTIONS: None, since no cleanup is recommended

MAMMALS: Otters 1 Harbor Seals _____ Sea Lions +30 Whales _____
 Other deer (2)

BIRDS: oxyechus gulls

GENERAL OBSERVATIONS: Walked only small portion of segment at west end; full
survey rest of segment. No oil observed. ACE 8707756

Note: KG-15 MP4B and KG-16-MP4A were originally one segment (K-6-16/K-6-15 etc.
 The original segment was divided to fit into ADEC/USCG K sections (see



K6-17 K6-14

Miners Pt

MP-2
(HELIO)

MP-3
(FOOT)

MP-4A
(HELIO)

K6-15

Broken Pt

292

MP-4B
(HELIO)

277

LAND

Campbell
Lagoon

KODIAK
ISLAND

KODIAK ISLAND

California
Creek

Little

ISLAND

Cane Urat

ACE 8707758 -15

K6-17

ACE 7963946

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K6-17

Includes Shoreline Segments: MP-7

Location: Miner's Point

Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/09/89

SHORELINE SEGMENT K6-17-MP-7

LOCATION: (see enclosed map) Miner's Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/09/89

Recommended Cleanup Activity(ies):

-Manual removal of heavier accumulations of oil.

Priorities/Considerations: Class 4-A

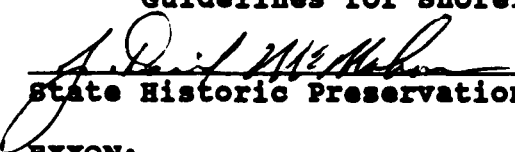
Ecological Constraints (from site survey):

-No constraints for manual cleanup.

Archaeological Constraints (from site survey):

-No access to the forest/upland zone by beach crews during cleanup.

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


State Historic Preservation Officer *

Date: 7/31/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 9 JUL 89 / Time: 1152
 Surveyed From: Foot/Boat/Heli/Plane

Observer: BRYAN TRIMM
 Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: CAPE UGAT TO MINE'S POINT - WEST COAST KODIAK IS. Segment ID: K6-17-MP7
 Segment Length: 12300 m. Access: Vehicle/Boat/Barge/Heli/Float Plane
 Access Restrictions: LIMITED ACCESS BY AIR - NARROW LANDING

SHORELINE

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

Slope: Lo/Med/Hi/Vert

Wave Exposure: High/Med/Low

Sediment: B 25 % / C 25 % / P 10 % / G&S ____ % / M ____ % / R 40 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED

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

OIL DISTRIBUTION

Continuous % of Segment 5

SU/SP/H/M/L

H/M/L/VL

Sporadic % of Segment 10

SU/SP/H/M/L

H/M/L/VL

Total Length(m) Width(m)

Very light: 8000

1/4

Thickness >1cm: 2.5 cm

SU/SP/H/M/L

Light: 50

1

Penetration/Rework: 5 cm

SU/SP/H/M/L

Moderate: _____

Burial Depth: _____ cm

SU/SP/H/M/L

Heavy: _____

Mobilization Potential: High/Medium/Low (SEE COMMENTS BELOW)

Drift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: _____

OIL MORPHOLOGY

Pooled Oil: _____ %

SU/SP/H/M/L

"Free" Oil: _____ %

SU/SP/H/M/L

Splattered: _____ %

H/M/L/VL

SU/SP/H/M/L

Coated: 75 %

H/M/L/VL

SU/SP/H/M/L

Pancakes/Balls: 25 %

SU/SP/H/M/L

 Preliminary Cleanup Est.

Total TYPE A: 2050 m

Total TYPE B: _____ m

Total TYPE A/B: _____ m

OIL WEATHERING

Fresh: _____ %

SU/SP/H/M/L

Mousse: 50 %

SU/SP/H/M/L

Weathered Mousse: 50 %

SU/SP/H/M/L

Asphalt Mousse: _____ %

SU/SP/H/M/L

Tar: _____ %

SU/SP/H/M/L

COMMENTS

CAPE UGAT HAS SET NET FISHERMEN CLEANING VERY LIGHT TO MODERATE (MEDIUM) COATING OF MOUSSE (BOTH CHOCOLATE & WEATHERED) FROM CAPE TO BEACH A (SEE FIELD MAP & SEGMENT LOCATION MAP). TIEPAR (? SPELLING) REMOVED ABOUT 20% OF WEATHERED MOUSSE OFF GRANITE ROCK. GREATEST ACCUMULATIONS IN BETWEEN BOULDERS, ROCKS, & IN CRACKS. PEBBLE POCKET BEACHES ARE NARROW WITH UNDERCONSOLIDATED BLUFFS AGAINST THE STORM (SPLASH) ZONES. SEGMENT IS DOMINANTLY ROCKY HEADLANDS WITH OCCASIONAL PEBBLE POCKET BEACH. VERY LIGHT SPLATTER IS FOUND ON BOULDERS NEXT TO SEVERAL (BUT NOT ALL) PEBBLE BEACHES. VERY LIGHT SPLATTER COULD NOT BE SEEN IN AIR, THUS ONE MAY WANT TO EXTRAPOLATE THE VERY LIGHT SPLATTER TO ALL BOULDER/ROCK BEACHES. I DID THIS; THUS THE 8000M LENGTH FOR VERY LIGHT. LOCALS REPORT SHEEN FROM OILED AREAS AT HIGH TIDE. I WONDER IF THE HAND CLEANUP IS INCREASING THE MOBILITY OF OIL.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y N Tape Number(s) _____

Photography: Y/N Roll Number(s) DME - 20

Sample Numbers Collected: N/A

9 JULY 89

SUNDAY

REST TEAM WILL JOIN ME WHEN THEY
FINISH W/ KALIN IS.

1109 FLY OVER OVER IS K5-7-Q1-1
THICK BEACHES W/ VERT & LAY COC
OUTCROPS. SD/PIC/B BIRD ROCKERY
FLYING AT 30 KNOTS & 20 FT
NO OBSERVED OILING! CAN SEE MANY
LAYMAN CONFUSE GLOSSY BLACK & BROWN
ROCKS WITH OIL.
ANOTHER WGC.

1116 PICK UP REST OF TEAM GO TO
CAMBELL LAGOON & MINE SPT

1152 K6-17-MP7 CAPE UGAT -
TO MINE SPT

CLOUDY, FLY OVER
CAPE UGAT - ROCKY VERT HOLD
FLYING 20 FT @
PTA CLEAN UP HITZ BEACH
ID ABOVE CLEAN UP, TALK TO THEM

9 JULY 89

SUNDAY

LAND BY SET NET SITE. THEY ARE CLEANING
THIS SEGMENT WITH TIFAG (SPELLING)
USCG SUPPLIED THEM. EFFECTIVELY REMOVES
WEATHERED & CHOC MOUSSE (~25% REMOVAL)
FROM ROCK FACES.

BOULDER/CORAL/PEB BEACH HAS A 2 TO
3M WIDE ZONE OF IMPACT IN HITZ
WEATHERED (50%) & CHOC (50%) MOUSSE
FOUND FROM LT SPLAT TO MEDDANT
(GREATEST ACCUMULATIONS IN BETWEEN)
BOULDERS & IN CRACKS & CREVICES.

EVEN ON COOL CLOUDY DAY, A SLIGHT
HYDROCARBON SMELL APPARENT (YES - I'M
FAR FROM THE HELIO).

PENETRATION TO 5 CM, NO REWORK/BURIAL
MOUSSE UP TO 2.5 CM THICK (IN BETWEEN
BOULDERS)

SET NETTERS REPORT A "WAXY/SOAPY" SUBSTANCE
IN H₂O. THEY WILL TRY TO GIVE US SAMPLE
BEFORE WE LEAVE THEIR SITE.

LEVEL

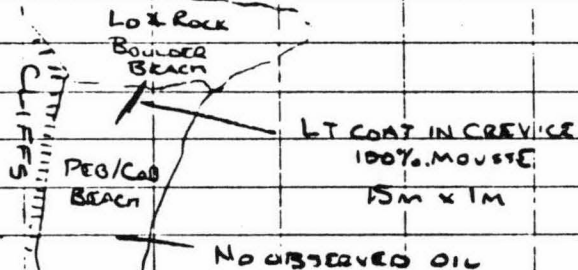
9 July 89

Sunday

SET NETTERS HAVE CLEANED OR ARE IN THE
PROCESS OF CLEANING THIS BOULDER BEACH,
USING TIPAR & SPELLING?

α - LT COAT CHOC MOUSSE FLAT & ROCK
10m x 2m + PEB BEACH

α -



SEGMENT PREDOMINANTLY ROCKY VERT
ROCK

NO OIL OBSERVED IN FLT

LD NG - BEACH P/S/G/B CLEAN
V. LT SPLAT ON BOULDERS

φ - NO OBSERVED OIL TEB/S/G/B

9 July 89

Sunday

σ (FLY OVER) POSSIBLE V. LT SPLAT HIT?
20 FT HOUR (COULD BE LICHEN)

γ - LD - NO OIL OBSERVED PEB/S/G BEACH

WEST SIDE MINER'S PT.

NO OIL OBSERVED IN AIR, BUT MANY BOULDERS
WHERE OIL COULD BE CAUGHT IN BETWEEN

1356

END K6-17-MP 7

FLY TO CAMPBELL LAGOON

CAMPBELL LAGOON SOUTH ALONG BEACH TIL
ROCKY HOLD → WEST PT. - WORK CREW
CLEANING BEACH, FLY OVER & PAST
WEST PT.

1408

LD FOR LUNCH (S. OF WEST PT.)

S OF WEST PT. + CABIN (TOPO MAP)

WHERE T 275 19 ± 30 MEET THE BAY

FOUND 1953 BM SE FACE OF PT. HAS

LT 1m WIDE BAND (AT HITZ/SP) OF CHOC

MOUSSE IN BETWEEN ANGULAR CORBIE/PEB/ROCK

I SHOULD HAVE SCAT CHECK THIS OUT?
THIS IS IN ADEC SEGMENT K6-14

LEVEL

9 July 87

PLANE VIEW, MP-7
BEACH A

NORTH

TO CAPE
UGAT

SUNDAY

9 July 87

SUNDAY

WATER
Low Energy

Boulder/C/P
Beach

Boulder
Beach

PEBBLE
BEACH

No OBSERVED OIL
(HELLO)

No O.I. OBSERVED
NEAR PEBBLE BEACH

20-40m WIDE BEACH

LT TO MED COAT
CHROMOISSE + WEATHERED MORISSE
MITZ 2-3m WIDE ZONE

LEVEL

ECOLOGICAL EVALUATION

LOCATION: CAPE UGAT to MINER'S POINT W. KODIAK IS. SITE: _____ OBSERVER: D. McCORMICK
 LOCATION PREFIX: KG-17 SEG. NO.: 7 LENGTH: 12300 (M)
 DATE: 7/9/89 TIME (HHMM): 1200 TIDE HT.: +1.5' (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble ^{Pebble} 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

Dense in clumps

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

Died in crevices at set net site - not dead

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

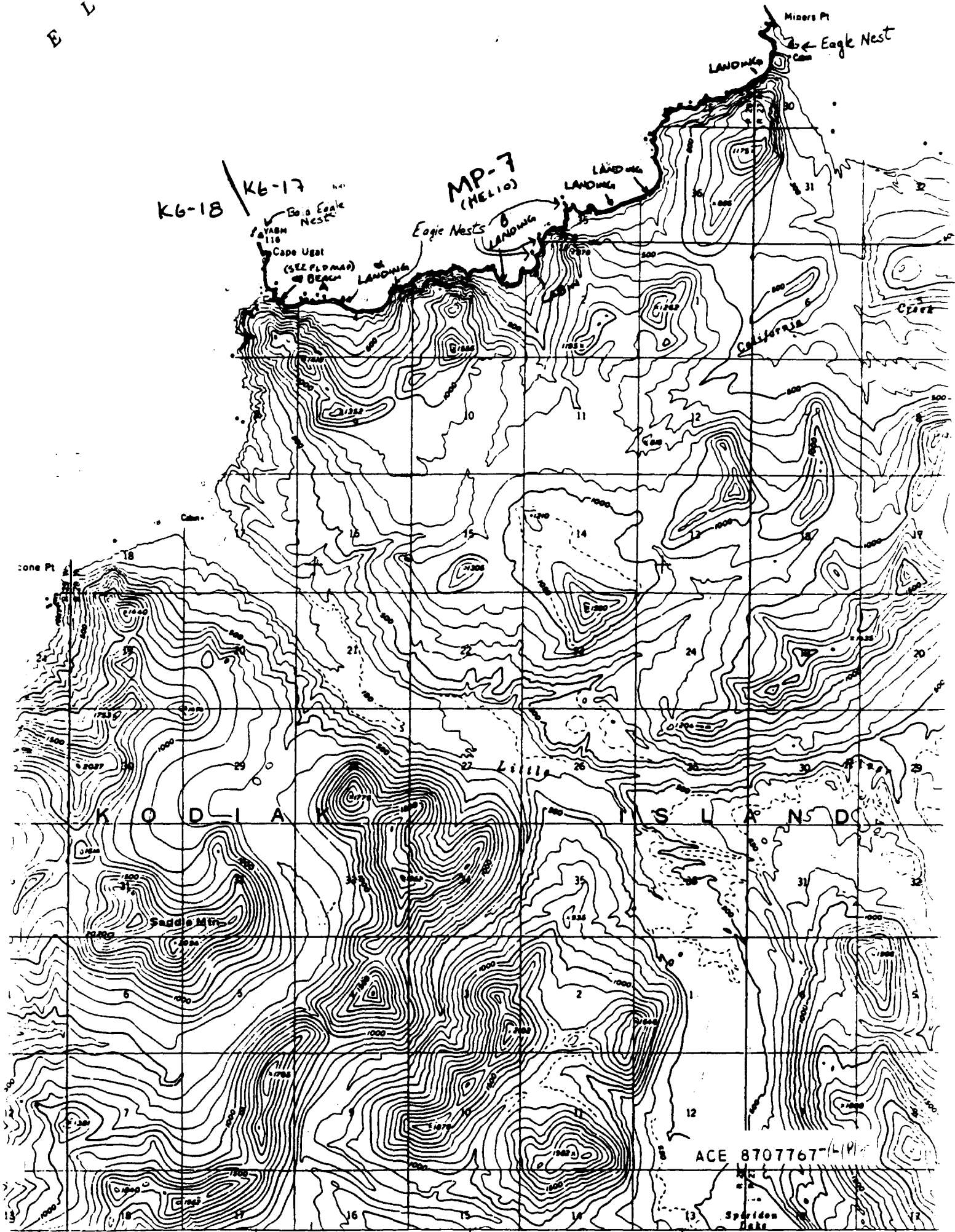
OTHER OBSERVATIONS: Eudorina, Heloscolex, Ectocarpus, Lamouria; Tide pool
fauna: sculpin, Equisetum, Anthopleura, Epiactis anemone, Sarsaparilla, Corallina
algae. Impatiens tenuiflorus patches on pocket beaches.

CLEANUP PRECAUTIONS: Marine cleanup - no constraints

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

BIRDS: 6 bald eagle nests (see Topo map for approx location)

GENERAL OBSERVATIONS: Set netters cleaning lightly oiled boulders at Cape Ugat -
Littorinae and limpets in crevices under these boulders - not dead. Oil in splash zone
is splatter (porcine nearly asphalt).



E L

K6-18 / K6-17

MP-7
(HELIO)

Miners Pt
← Eagle Nest

Bo. & Eagle
NEST

Eagle Nests

LANDING

Cape Ubat
(SEE PLO. MAP)
BEACH

California
Creek

Cone Pt

K O D I A K I S L A N D

Saddle Mt.

ACE 8707767

SPRIDER
LAKE

KODIAK C-6

45' U.S. GEOLOGICAL SURVEY WASHINGTON D.C. 20540

517-023-00

KODIAK SCAT

K6-19

COMPLETE MAR 7 9 1990

ACE 7963947

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CAPE KULIUK SOUTH BLOCK

Includes Shoreline Segments: CK-1, CK-2, CK-3

Submitted : _____ Date: _____
(for Exxon)

ISCC Approval: _____ Date: _____

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.

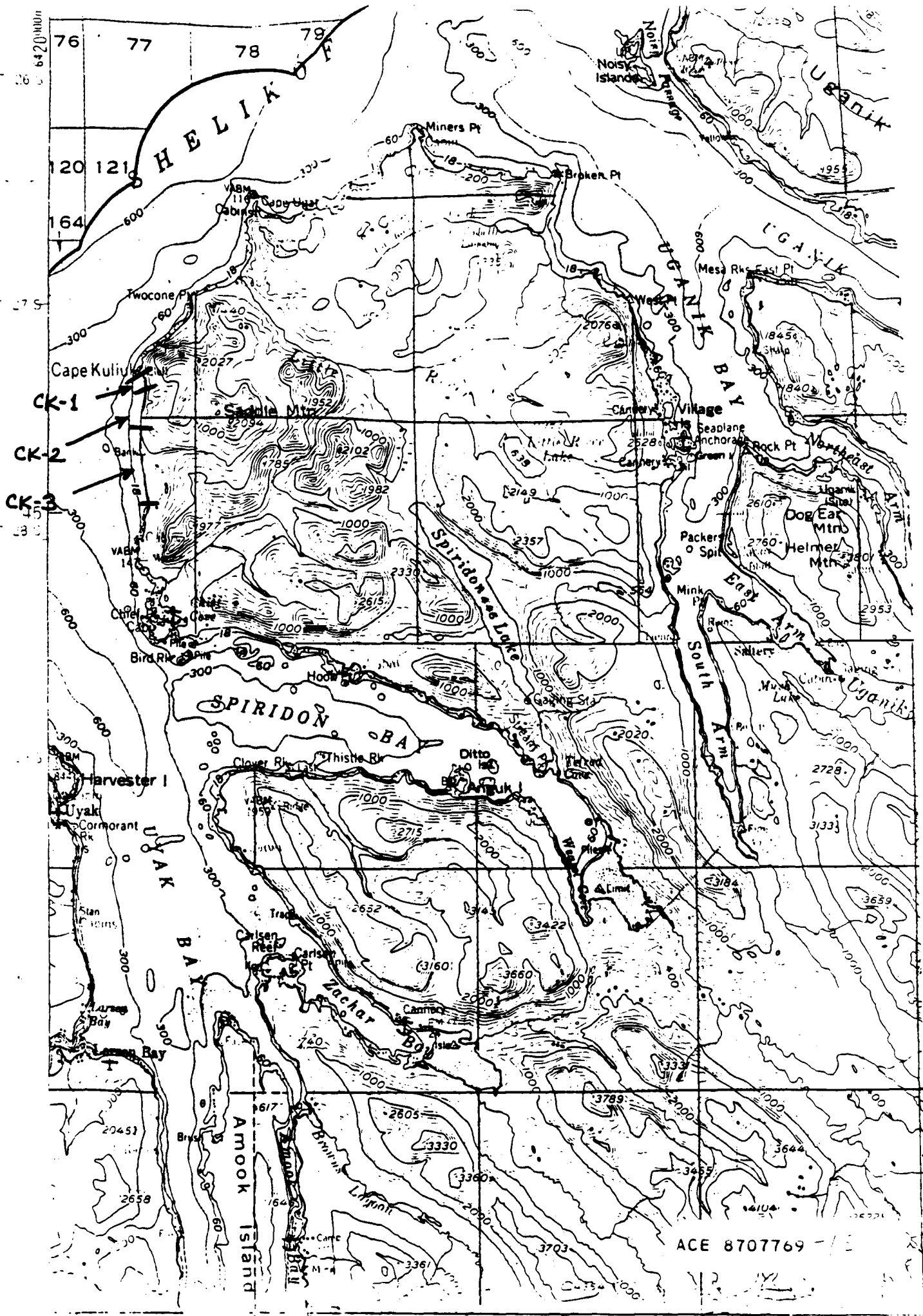
Distribution:

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

ACE 8707768-

64200000



ACE 8707769

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/00/89

SHORELINE SEGMENT K6-19 CK-1

LOCATION: (see enclosed map) Cape ~~Bar~~ Kulik

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

USE HIGH-TEMPERATURE FLOODING TO CLEAN BOULDER/COBBLE BEACH (SEE BELOW)

USE RAKE & SHOVEL TO REMOVE ANY OILED SEAWeed DRIFT AT HIGH TIDE LINE.

Priorities Considerations:

HEAVILY OILED BOULDER/COBBLE BEACH 250 m SOUTH & EAST OF CAPE

Ecological Constraints (from site survey):

Avoid areas of healthy vegetation in
Lower ITZ and on rocks at north end of segment.

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 20 MAY 1989 Time: 1126Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION CAPE KULIK SOUTH ^{FOR A} 1000M (LONG BEACH?) SEGMENT NUMBER CK-1LENGTH OF SHORELINE SEGMENT: 1000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 75% / C 15% / P 5% / G 2% / S 3% / M % / R %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type SEAWeed/LOGSOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 85 Width of Band: 3-10 mSporadic: Y/N % of Segment Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H 75% / M 25% / L %Fresh % Mousse 100% Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

HEAVILY COATED BOULDER BEACH NEEDS TO BE WASHED WITH H₁-TEMPERATURE SPRAY REMOVE OILY
SEAWeed DRIFT WITH PITCH FORK & SHOVEL, CHECK TO MAKE SURE OILY DRIFT IS NOT BURIED COVERED
BY CLEAN SEAWeed DRIFT. LONG SHORE CURRENTS PUSH DRIFT INTO AREA THAT IS HEAVILY OILED "CATCH
Basin". MOUSSE WAS ALMOST "FRESH" OIL. AKE BEACH HAS BEEN OILED MORE THAN ONCE.

DOCUMENTATION:Map/Aerial photo marking segment boundaries AttachedVTR: Y~~N~~ Tape Number(s) NonePhotography: Y~~N~~ Roll Number(s) Kodak - BT-1Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Cape Kuliuk SITE: S. of Cape OBSERVER: SMB
Long Beach

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

DATE: 5/20/89 TIME (HHMM): 1124 TIDE HT.: +1 1/2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Healthy dense patches in lower ITZ and N. part of seg

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

Dense patches in lower ITZ none gaping

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

Healthy dense on rocks in lower ITZ and N. part of seg.

Littorina

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

Several healthy indiv. observed

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

Several healthy indiv. observed

OTHER OBSERVATIONS: many spiders seen on beach, one
dead juvenile penguin chick (not oiled) one eagle with oil
on back

CLEANUP PRECAUTIONS: Avoid healthy areas in lower ITZ
and clean rocks at N. end of segment

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other Fox seen on beach

BIRDS: gulls.

GENERAL OBSERVATIONS: ~~There is~~ heavy oil on cobbles
No organisms inhabiting oiled areas.

CK-2 CK-1

TCA/SD

HEAVY/MOD LIGHT
COATING COATING
5m 4m wide

LIGHT
OIL
3m
WIDE

100m

100m

BOULDER
SANDY
ZONE

BOULDER

BOULDER
BEACH

OCEAN

V. LIGHT
NOISE/IS
1m

LIGHT
3m

1m CONT BAND OIL COATING (H)
SEAWEED DRIFT

HEAVY W/ SOME
MODERATE FRESH OIL

CAPE LULUK

NORTH

ACE 8707776

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/26/89 SHORELINE SEGMENT CK-1

LOCATION: (see enclosed map) CAPE KULIUK

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

- It may be necessary to use high temperature flooding to clean boulder/cobble beach (see below)
- Manually remove any oiled seaweed drift at high tide line.

Priorities Considerations:

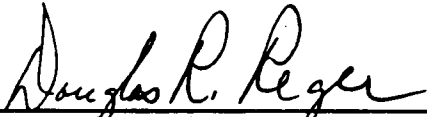
- Heavily oiled boulder/cobble beach 250m south and east of Cape.

Ecological Constraints (from site survey):

- Avoid areas of healthy vegetation in lower intertidal zone and on rocks at north end of segment.

Archeological Constraints (from site survey):

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



State Historic Preservation Officer *

Date: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

(vers 1 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/20/89 SHORELINE SEGMENT 2-1-1

LOCATION: (see enclosed map) Cape ~~St~~ Kulik

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

It may be necessary to ~~Use High-Temperature Flooding to Clean Boulder/Cobble Beach (see below)~~
~~Use ~~Hand~~ to remove any oiled seaweed drift at high tide line.~~
Manually

Priorities Considerations:

HEAVY oiled Boulder/Cobble Beach, 250 m South & East of Cape

Ecological Constraints (from site survey):

Avoid areas of healthy vegetation in
intertidal zone
Lower ~~FT~~ and on rocks at north end of segment.

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707778

SHORELINE OIL EVALUATIONDate: 20 May 1989 Time: 1126Observer: Bryan TrimmSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION Car Kuluik south 1000m (Long Beach?) SEGMENT NUMBER CK-1LENGTH OF SHORELINE SEGMENT: 1000 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 75 / C 15 / P 5 / G 2 / S 3 / M / R Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Seaweed/Logs**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 85 Width of Band: 3-10 mSporadic: Y/N % of Segment Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: B 75 / M 25 / L Fresh % Mousse 100 % Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

HEAVILY COATED BEACH NEEDS TO BE WASHED WITH HI-TEMPERATURE SPRAY REMOVE OILY
SEAWeed DRIFT WITH PITCH FORK & SHOVEL. CHECK TO MAKE SURE ONLY DRIFT IS NOT COVERED
BY CLEAN SEAWeed DRIFT. LONG SHORE CURRENTS PUSH DRIFT INTO AREA THAT IS HEAVILY OILED "CATCH
BEACH". MOUSSE WAS ALMOST "FRESH" ALTHOUGH AREA BEACH HAS BEEN OILED MORE THAN ONCE.

ACE 8707779

DOCUMENTATION:

Map/Aerial photo marking : segment boundaries Attached

VTR: Y/N Tape Number(s) None

Photography: Y/N Roll Number(s) Kodak - BT-1

Sample Numbers Collected: None

ACE 8707780

NUMERICAL EVALUATION

LOCATION: Cape Kuliuk SITE: S. of Cape OBSERVER: SMB
LOCATION PREFIX: CK SEG. NO.: CK 1 LENGTH: 100 (M)
DATE: 5/20/89 TIME (HRS): 1124 TIDE HT.: + 1/2 (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
healthy dense patches in lower ITZ and N. part of seg

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense patches in lower ITZ none gaping

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Healthy dense on rocks in lower ITZ and N. part of seg

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several healthy indiv. observed

Littorata: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several healthy indiv. observed

OTHER OBSERVATIONS: many spiders seen on beach, one
black juvenile penguin chick (first seen) one eagle with oil
on beach

CLEANUP PRECAUTIONS: avoid healthy areas in lower ITZ
and clean rocks at W. end of segment

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other Fox seen on beach

BIRDS: gulls.

GENERAL OBSERVATIONS: heavy oil on cobbles
No organisms inhabiting oiled areas.

ACE 8707781

68.

CK-2 BK-1

TRD/SD

HEAVY/MOD
CRATING
5A

LIGHT
CRATING
4A

LAST
OIL
30
WELL

69

100M → ← 100M

CAPT KULUK

NORTH

Boulder
DRIFT

Boulder
DRIFT

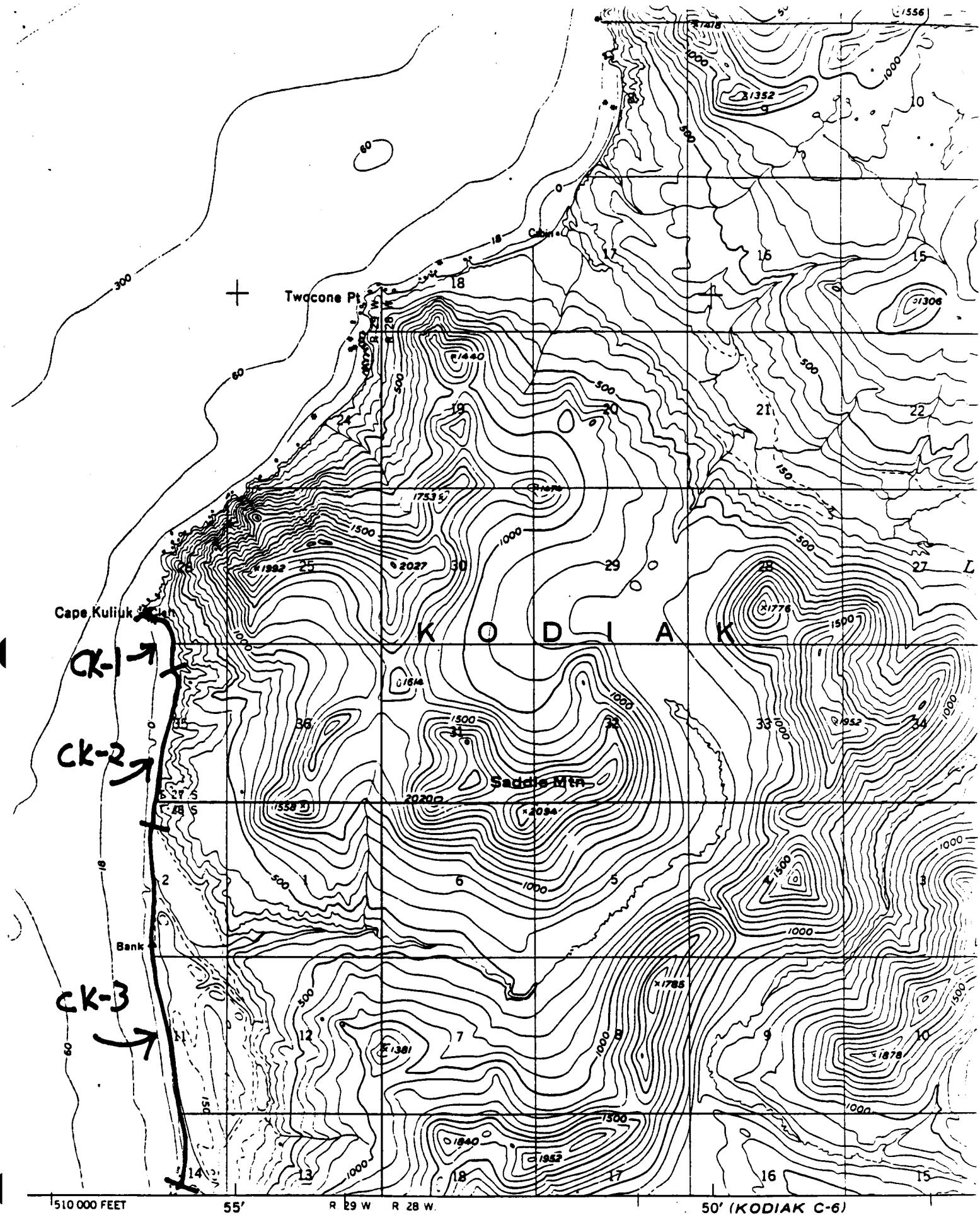
Boulder
DRIFT

100M BAND OIL LANTERN
SRAWPS DRIFT

HEAVY W/ SOME
MODERATE FRESH OIL

LIGHT
NITROGEN
IN

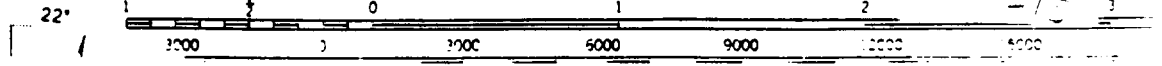
LIGHT
3A



he Geological Survey

from aerial photographs

SCALE 1:63360 ACE 8707784



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/20/89 SHORELINE SEGMENT K6-19 CK-2

LOCATION: (see enclosed map) S. of Cape Kuluk

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

RAKE & SHOVEL DRIFT MATERIAL FROM HIGH TIDE LINE. CHECK TO MAKE SURE OILED DEBRIS IS NOT BURIED IN TERRACE.

Priorities Considerations:

NONE

Ecological Constraints (from site survey):

Avoid stream margin and areas of healthy flora exposed at low tide

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 20 May 1989 Time: 1237Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION S OF CAPE KULIK & S OF SCK-1SEGMENT NUMBER CK-2LENGTH OF SHORELINE SEGMENT: 1750 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/Low

Sediment: B___% / C___% / P___% / G___% / S___% / M___% / R___%

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

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: ? cmPooled Oil: — % "Free" Oil: 1 % Coated: H___% / M___% / L100 %Fresh — % Mousse 100 % Tar Formation: — %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

WELL SORTED BEACH WITH TERRACES CREATED BY HIGH TIDES. THE LIGHTLY OILED SEAWOOD DRIFT & PEBBLES ON THE TERRACES ARE REWORKED, THUS BURIALING SOME OF THE OILED PEBBLES & SEAWOOD DEBRIS. LONG-SHORE CURRENTS PUSH DEBRIS NORTHWARD ALONG BEACH INTO CK-1 SEGMENT

THIS IS A LOW PRIORITY BEACH CLEANUP

DOCUMENTATION:Map/Aerial photo marking segment boundaries AttachedVTR: Y ☒ N Tape Number(s) NonePhotography: ☒ Y ☐ N Roll Number(s) KODIAK - BT-1Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Cape Kuliuk SITE: Long Beach OBSERVER: SM Barn

LOCATION PREFIX: CK SEG. NO.: CK-2 LENGTH: 1750 (M)

DATE: 5/20/89 TIME (HHMM): 1235 TIDE HT.: + 1 1/2 (M)

OILED ZONE: Splash High Medium Low

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

LIVE BIOTA

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

Sparse to dense clumps in lower ITZ Not impacted

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

Same as above

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

Same as above

Littorina

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

Healthy indiv. in lower ITZ

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

Healthy indiv. in lower ITZ

OTHER OBSERVATIONS: Dead Dungeness juvenile on beach not oiled

CLEANUP PRECAUTIONS: Avoid stream and cobble/boulder zone with healthy veg. in lower ITZ

MAMMALS: Otters Harbor Seals None Sea Lions Whales
Other

BIRDS: Eagle with oiled beak seen, ducks in water offshore

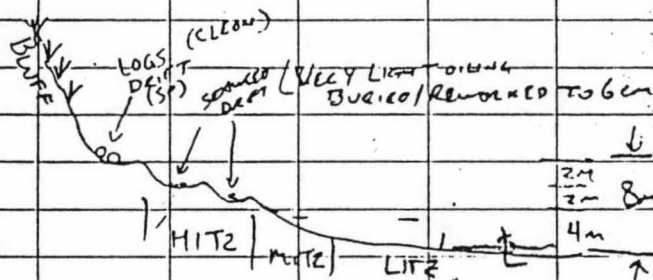
GENERAL OBSERVATIONS: Light oiling of debris

70

CAPE K

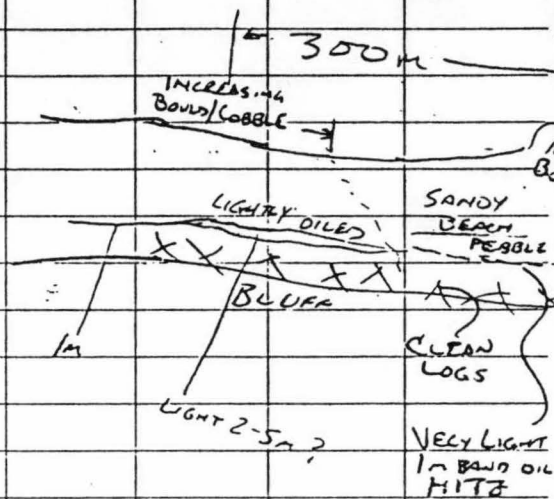
CK-2 1237

X-SEC. AT N. END OF SEGMENT

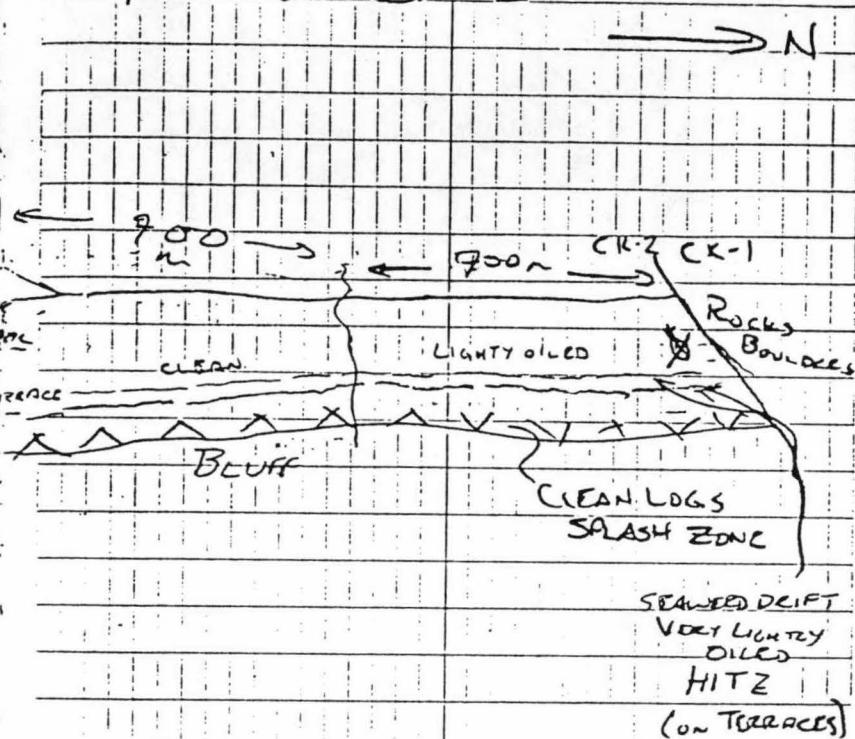


HITZ TERRACES 75% PEB 5% COB

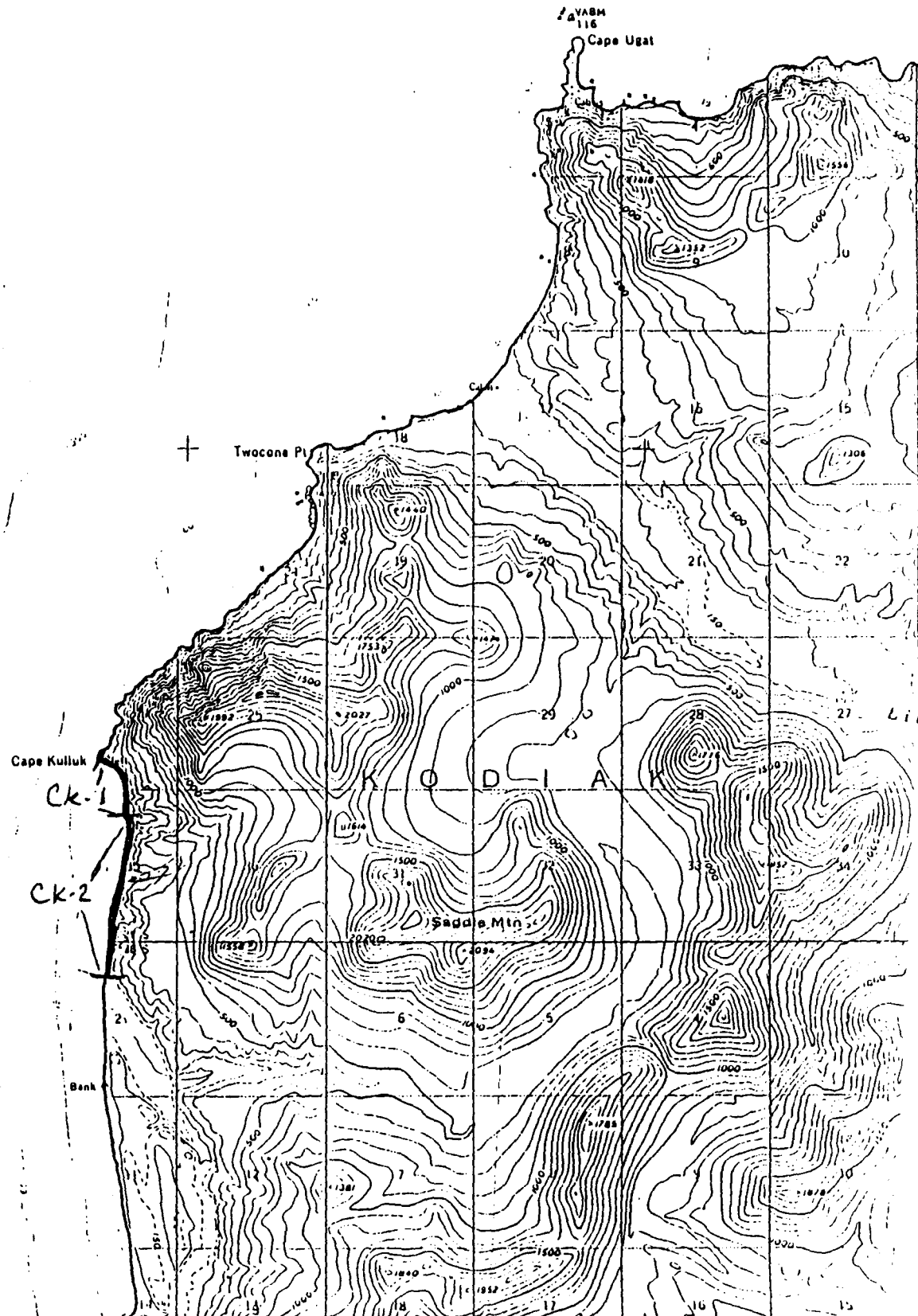
MITZ / LITZ - 10% COB 45% PEB 25% GE



PLANE VIEW CK-2



S H E



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/26/89 SHORELINE SEGMENT CK-2

LOCATION: (see enclosed map) South of CAPE KULIUK

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

- Manually remove oiled drift material from high tide line.
Check to make sure oiled debris is not buried in terrace.

Priorities Considerations:

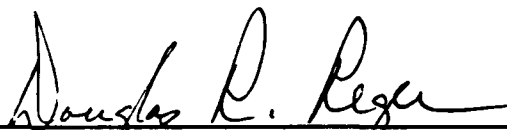
- Low priority.

Ecological Constraints (from site survey):

- Avoid stream margin and areas of healthy fucus exposed at low tide.

Archeological Constraints (from site survey):

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



State Historic Preservation Officer *

Date: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE CLEANUP PROGRAM

DATE 5/20/89

SHORELINE SEGMENT

LOCATION: (see enclosed map) S. of Cape Kulik

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

Manually remove oil/gel ~~from the~~ JANT MATERIAL FROM HIGH TIDE LINE. CHECK TO MAKE SURE OILED DEBRIS IS NOT BURIED IN TERRACE.

Priorities Considerations:

~~Slow~~ Low priority.

Ecological Constraints (from site survey):

Avoid stream margin and areas of healthy riparian exposed at low tide

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707794

SHORELINE OIL EVALUATIONDate: 20 May 1989 Time: 1237Observer: Bryan TrimSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION SW Cape KULINE 4 S of BCK-1 SEGMENT NUMBER CK-2LENGTH OF SHORELINE SEGMENT: 1750 mACCESS: Foot/Vehicle/~~Boat~~/~~Large~~/~~Helio~~/~~Float~~ Plane**SHORELINE:**Shoreline Type: SPI/~~SEA~~/COV/HLD/STRTSlope: ~~ANG~~/HANG/VERWave Exposure: High/~~Med~~/Low

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

Drift Debris on Beach: ~~Yes~~/No Supra/Upper/Mid/Lower Type Loose/Seaweed**OIL**Degree of Oiling: Heavy/Moderate/~~Light~~/No Oil/UnobservedArea of Beach Impact: SU / SP / ~~H~~ / M / LContinuous: ~~Y~~/N % of Segment 50 Width of Band: 1 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: ~ cm Est. Oil Penetration: ? cmPooled Oil: ~ % "Free" Oil: ~ % Coated: H ___ / M ___ / L 100 %Fresh ~ % Mousse 100 % Tar Formation: ~ %Drift Debris Oiled? ~~Yes~~/No Supra/Upper/Mid/Lower Amount: H/M/~~L~~**Comments:**

WELL SORTED BEACH WITH TERRACES CREATED BY HIGH TIDES. THE SLIGHTLY OILED SEAWeed DEBRIS & PEBBLES ON THE TERRACES ARE REWORKED, THUS REMOVING ANYTHING SOME OF THE OILED SEAWeed PEBBLES & SEAWeed DEBRIS. LONG-SHORE CURRENTS ALSO DEBRIS NORTHWARD ALONG BEACH NORTH INTO CK-1 SEGMENT

THIS IS A LOW PRIORITY BEACH CLEANUP

ACE 8707795

DOCUMENTATION:

Map/Aerial photo marking segment boundaries Attached

VTR: Y/N Tape Number(s) None

Photography: Y/N Roll Number(s) KODIAK - BT-1

Sample Numbers Collected: None

ACE 8707796

ECOLOGICAL EVALUATION

LOCATION: Cape Kulik SITE: Long Beach OBSERVER: SM Ben
 LOCATION PREFIX: CK SEG. NO.: CK-2 LENGTH: 1750 (M)
 DATE: 5/22/89 TIME (HHMM): 1235 TIDE HT.: + 1 1/2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

FUgae (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Sparse to dense clumps in lower ITZ Not impacted

MYtilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Same as above

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

Littorina

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

Healthy indiv. in lower ITZ

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

Healthy indiv. in lower ITZ

OTHER OBSERVATIONS: Died Dungeness juvenile on beach not oiled

CLEANUP PRECAUTIONS: Avoid Stream and cobble/boulder zone with healthy veg. in lower ITZ

MAMMALS: Otters Harbor Seals Sea Lions Whales
 Other None

BIRDS: Eagle with oiled beak seen, ducks in water offshore

GENERAL OBSERVATIONS: Light oiling of debris

ACE 8707797

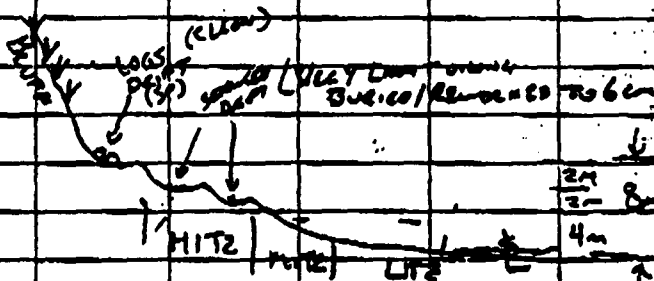
70

CAPR K

CK-2

1237

X-SPR 17 N END OF SEGMENT



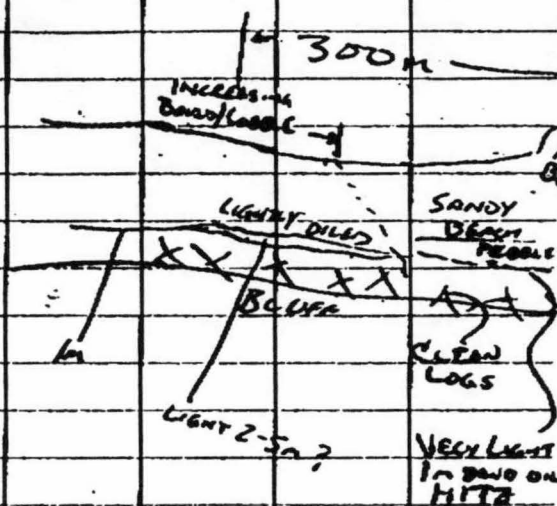
MITZ TERRACE - 75% FOR 5% Cms

MITZ/LITZ - 10% FOR 45% FOR 25% Cms

ACE 8707799

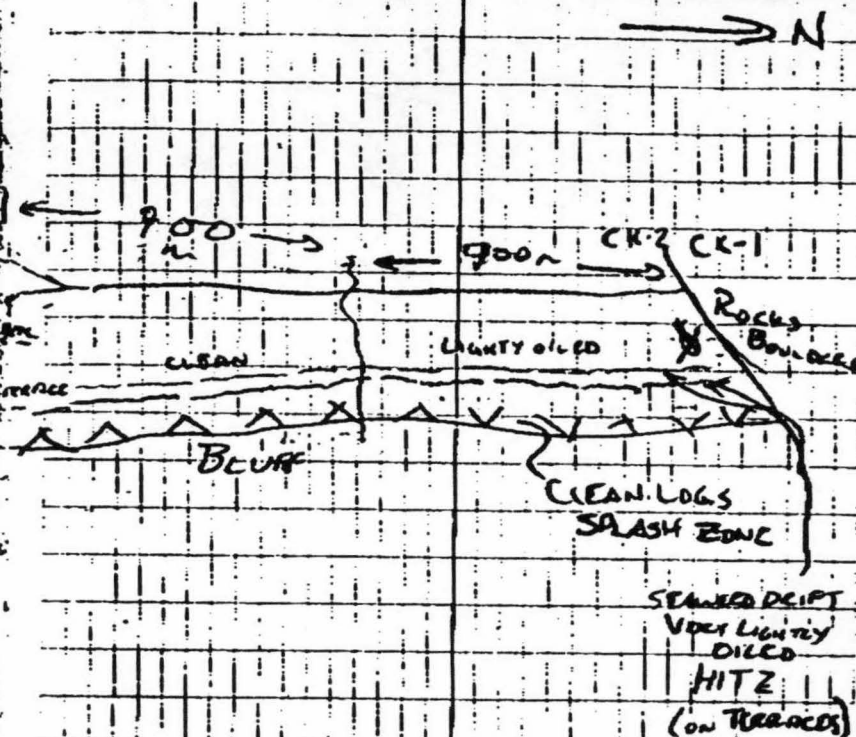
ACE 8707800

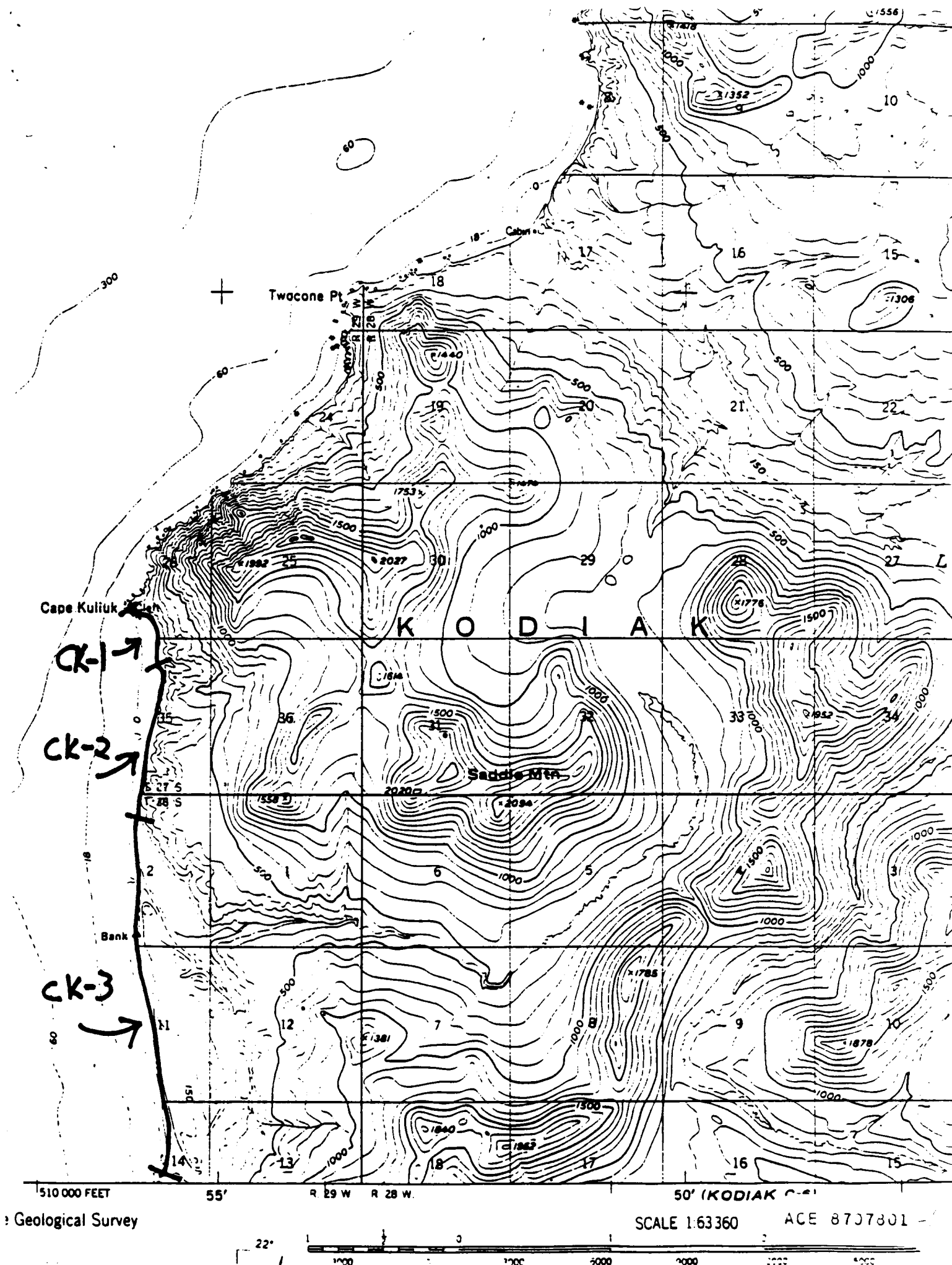
72



73

PLANE VIEW CK-2





Twocone Pt

Cape Kuliuk

K O D I A K

Saddle Mtn

Bank

CK-1 →

CK-2 →

CK-3 →

510 000 FEET

55'

R 29 W R 28 W

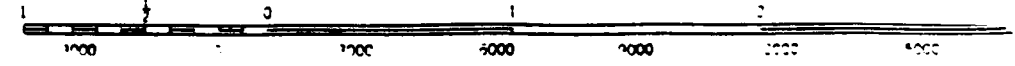
50° (KODIAK C-5)

Geological Survey

SCALE 1:63360

ACE 8707801

22°



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

K6-19

DATE 5/22/89

SHORELINE SEGMENT CK-3

LOCATION: (see enclosed map) South of Cape Kulick

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

Recommended Cleanup Activity(ies):

No cleanup recommended

Priorities Considerations:

None

Ecological Constraints (from site survey):

No ecological constraints since no cleanup is recommended. An ecological evaluation form is not included. Should this recommendation change, ecological constraints must be re-evaluated.

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 22 May 1989 Time: 1210Observer: BRYAN TRIMMSurveyed From: ~~Boat~~/Boat/Helio/PlaneWeather: Sun/cloud/Rain/Snow/FogLOCATIONLOCATION 2 km south of Cape Kulik
ADJACENT TO CL-2SEGMENT NUMBER CK-3LENGTH OF SHORELINE SEGMENT: 3700 mACCESS: Foot/Vehicle/~~Boat~~/~~Barge~~/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B___% / C___% / P 15% / G 15% / S 70% / M___% / R___%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS/SEAWEEDOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 60 Width of Band: 1/4 m

Sporadic: Y/N % of Segment _____

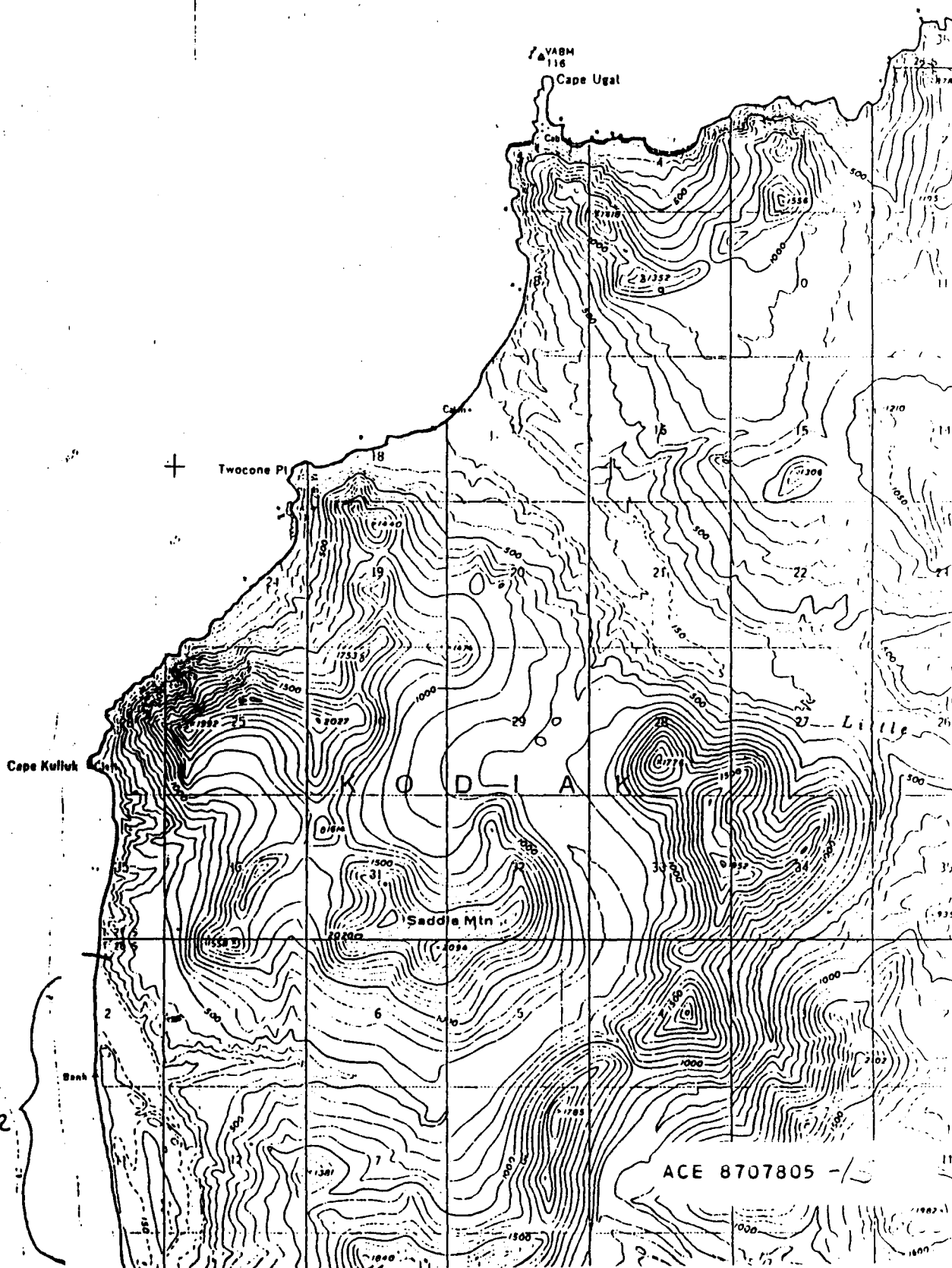
Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: _____ cm

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

Comments:

VERY LIGHT OILING AT HIGH INTERTIDAL ZONE OF SEAWEED DRIFT. SEAWEED DEBRIS
HAS SUCH A LIGHT COATING & IS ONLY A THIN BAND ON THE TOP OF THE HIGH INTERTIDAL
ZONE. RECOMMEND NO ACTION.

S H E E T 1



CK-3
Helicopter
Survey

ACE 8707805 -1

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT SB-6

LOCATION: (see enclosed map) Cove North of Chief Point

ADEC NO. K1-19 SHORELINE ASSESSMENT DATE: 5/22/89

Recommended Cleanup Activity(ies):

- It may be necessary to use high pressure warm to hot water flooding on the lightly coated, 10m wide area on the north side of the segment.
- Manually remove the oiled seaweed drift along the high tide line.

Priorities Considerations:

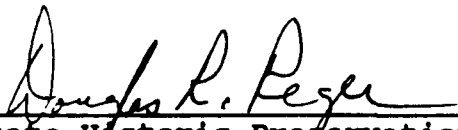
- Manually remove the oiled seaweed drift along the high tide line.

Ecological Constraints (from site survey):

- Do not disturb banks or stream channel. Avoid healthy vegetation in 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: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 22 May 1989 Time: 1110Observer: Bryan TrimmSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION NORTH OF CHIEF COVE & SPIRIT BAY SEGMENT NUMBER SB-6LENGTH OF SHORELINE SEGMENT: 300 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 5 % / C 10 % / P 20 % / G 30 % / S 30 % / M % / R 5 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Logs/Seaweed**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 90 Width of Band: 10 mSporadic: Y/N % of Segment 10Est. Oil Thickness where > 1cm: cm Est. Oil Penetration: ? cmPooled Oil: % "Free" Oil: % Coated: H 10 % / M 20 % / L 70 %Fresh % Mousse 100 % Tar Formation: %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L**Comments:**

LIGHTLY OILED SPRAWLED AT TOP OF HIGH INTERTIDAL ZONE & ALONG THE WHOLE LENGTH OF BEACH. THE INTERTIDAL ZONE BY THE STREAM OUTLET HAS A LITTLE SPLATTERING OF CHOCOLATE MOUSSE BY THE GRASSES. A 75 METER BAND THAT IS 10 METERS WIDE (THUS HEAVY IN ADEC CLASSIFICATION) IS LIGHTLY COATED TO MODERATELY COATED. THIS IS FOUND AGAINST THE NORTHERN HEADLAND. ANOTHER SMALL PATCH OF LIGHTLY COATED MOUSSE IS FOUND ON THE SOUTHERN HEADLAND.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries A Hachon

VTR: Y ☒ N Tape Number(s) None

Photography: ☒ Y / N Roll Number(s) SMB-9

Sample Numbers Collected: None

LOCATION: Spiridon Bay SITE: Cove N. of Chief Point OBSERVER: SMBan
 LOCATION PREFIX: SB SEG. NO.: 6 LENGTH: 300 (M)
 DATE: 5/22/89 TIME (HHMM): 1105 TIDE HT.: 0 - +1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dense and healthy at Northern end of cove. Healthy in lower ETZ. Some oiled Fucus high in ETZ.

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

Dense in boulder areas none oiled

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

Same comment as above

Littorina

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

Healthy

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

Healthy

OTHER OBSERVATIONS: Large Anadromous stream in center of center of cove.

Up oil in stream but several lines of mussels on soil near stream. Grass is oiled on stream edge in high ETZ.

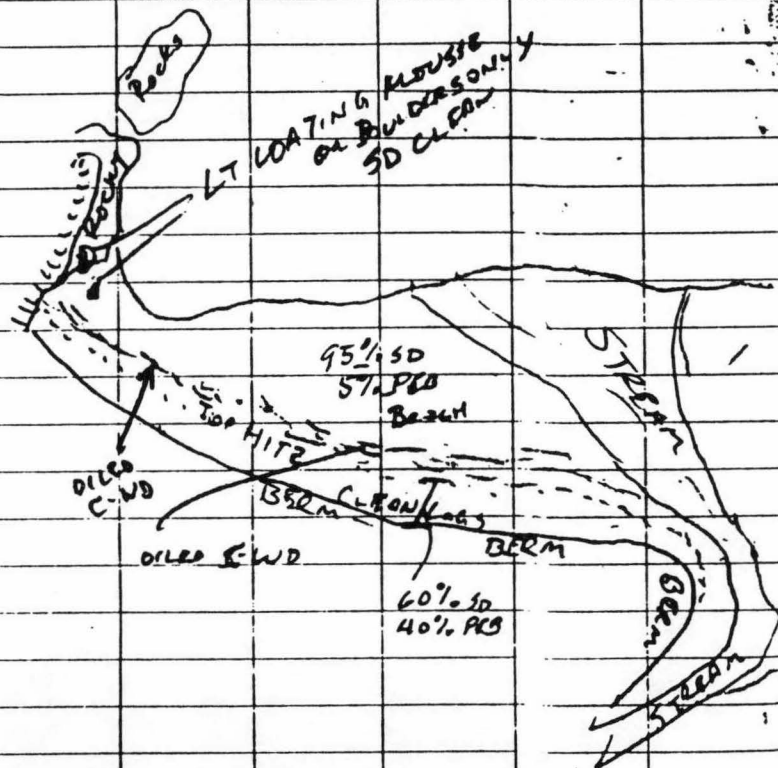
CLEANUP PRECAUTIONS: Avoid stream, avoid healthy

lower ETZ.

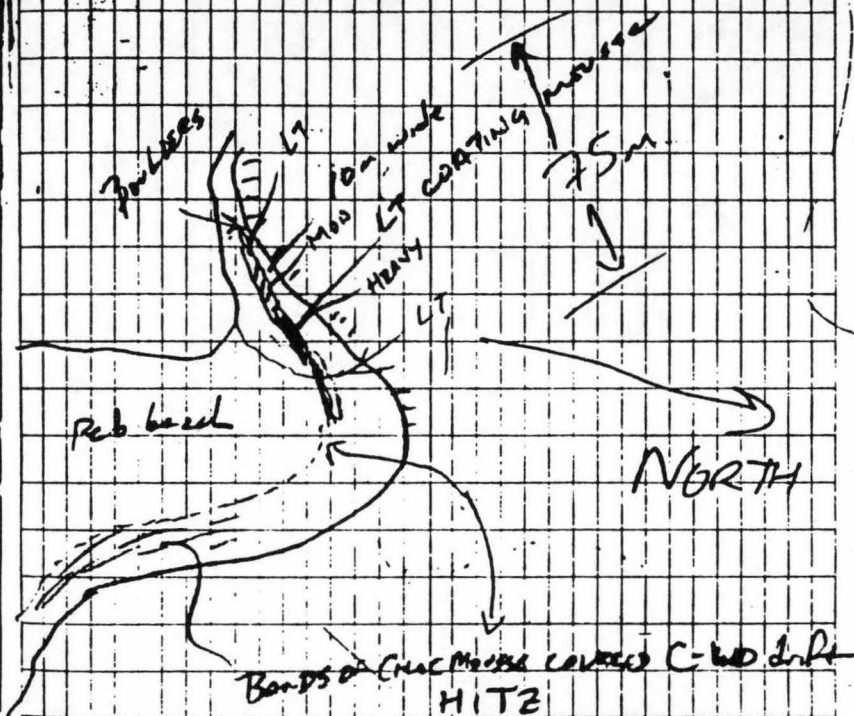
MAMMALS: Otters other Harbor Seals None Sea Lions other Whales other

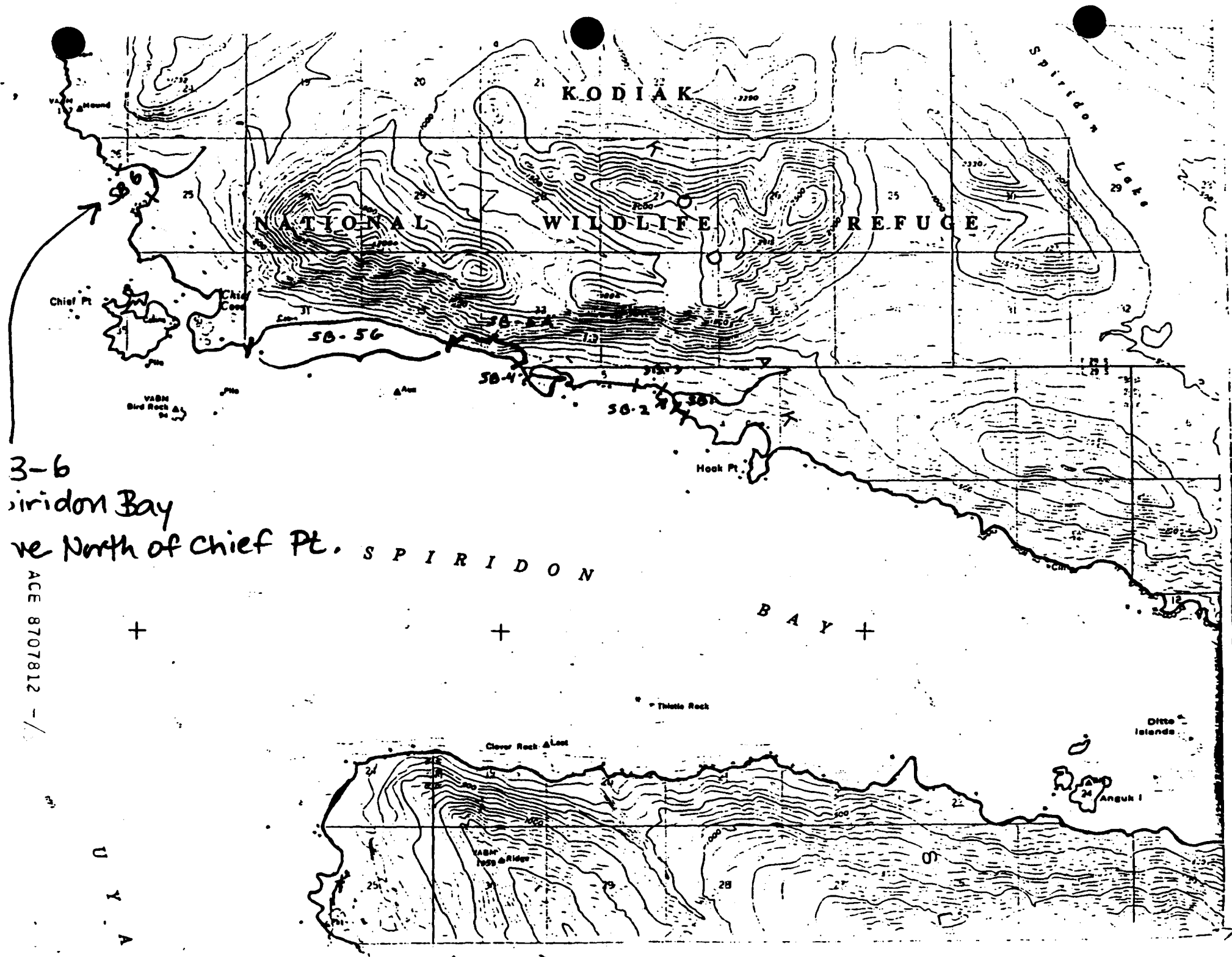
BIRDS: None

GENERAL OBSERVATIONS: Moderate oiling



PLANE VIEW SB-6





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/26/89

SHORELINE SEGMENT CK-3

LOCATION: (see enclosed map) South of CAPE KULIUK

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

Recommended Cleanup Activity(ies):

- No cleanup recommended due to light, restricted oiling and medium wave exposure.

Priorities Considerations:

- None.

Ecological Constraints (from site survey):

- No ecological constraints since no cleanup is recommended. An ecological evaluation form is not included. Should this recommendation change, ecological constraints must be re-evaluated.

Archeological Constraints (from site survey):

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

Douglas R. Rege
State Historic Preservation Officer *

Date: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE CLEANUP PROGRAM

DATE 5/22/89 SHORELINE SEGMENT CK-3
LOCATION: (see enclosed map) South of Cape Kulik

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

Recommended Cleanup Activity(ies):

No cleanup recommended due to light, ~~in~~ restricted oiling and medium wave exposure.

Priorities Considerations:

None

Ecological Constraints (from site survey):

No ecological constraints since no cleanup is recommended. An ecological evaluation form is not included. Should this recommendation change, ecological constraints must be re-evaluated.

Archeological Constraints (from site survey): *be re-evaluated*
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.

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

State Historic Preservation Officer * Date: _____

EXXON: _____ Date: _____

FOSC: _____ Date: _____

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

ACE 8707814

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/22/89 SHORELINE SEGMENT CK-3

LOCATION: (see enclosed map) South of Cape Kulik

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

Recommended Cleanup Activity(ies):

*No cleanup recommended because oil is light
and wave action will probably induce natural cleaning*

Priorities Considerations:

None

Ecological Constraints (from site survey):

*No ecological constraints since no cleanup is recommended.
An ecological evaluation form is not included. Should
this recommendation change, ecological constraints must
be re-evaluated.*

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

State Historic Preservation Officer * Date: _____

EXXON: _____ Date: _____

FOSC: _____ Date: _____

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

SHORELINE OIL EVALUATIONDate: 22 May 1989 Time: 1210Observer: Bryan TrimSurveyed From: ~~Boat~~/Boat/Helio/PlaneWeather: Sun/cloud/Rain/Snow/FogLOCATIONLOCATION 2 km south of Cape KuluukSEGMENT NUMBER CK-3

ADJACENT TO CL-2

LENGTH OF SHORELINE SEGMENT: 3700 mACCESS: Foot/Vehicle/~~Boat~~/~~Barge~~/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B ___ % / C ___ % / P 15 % / G 15 % / S 70 % / M ___ % / R ___ %Drift Debris on Beach: ~~Yes~~/No Supra/~~Upper~~/Mid/Lower Type Logs/SeaweedOILDegree of Oiling: Heavy/Moderate/Light/No oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 60 Width of Band: 1/4 m

Sporadic: Y/N % of Segment _____

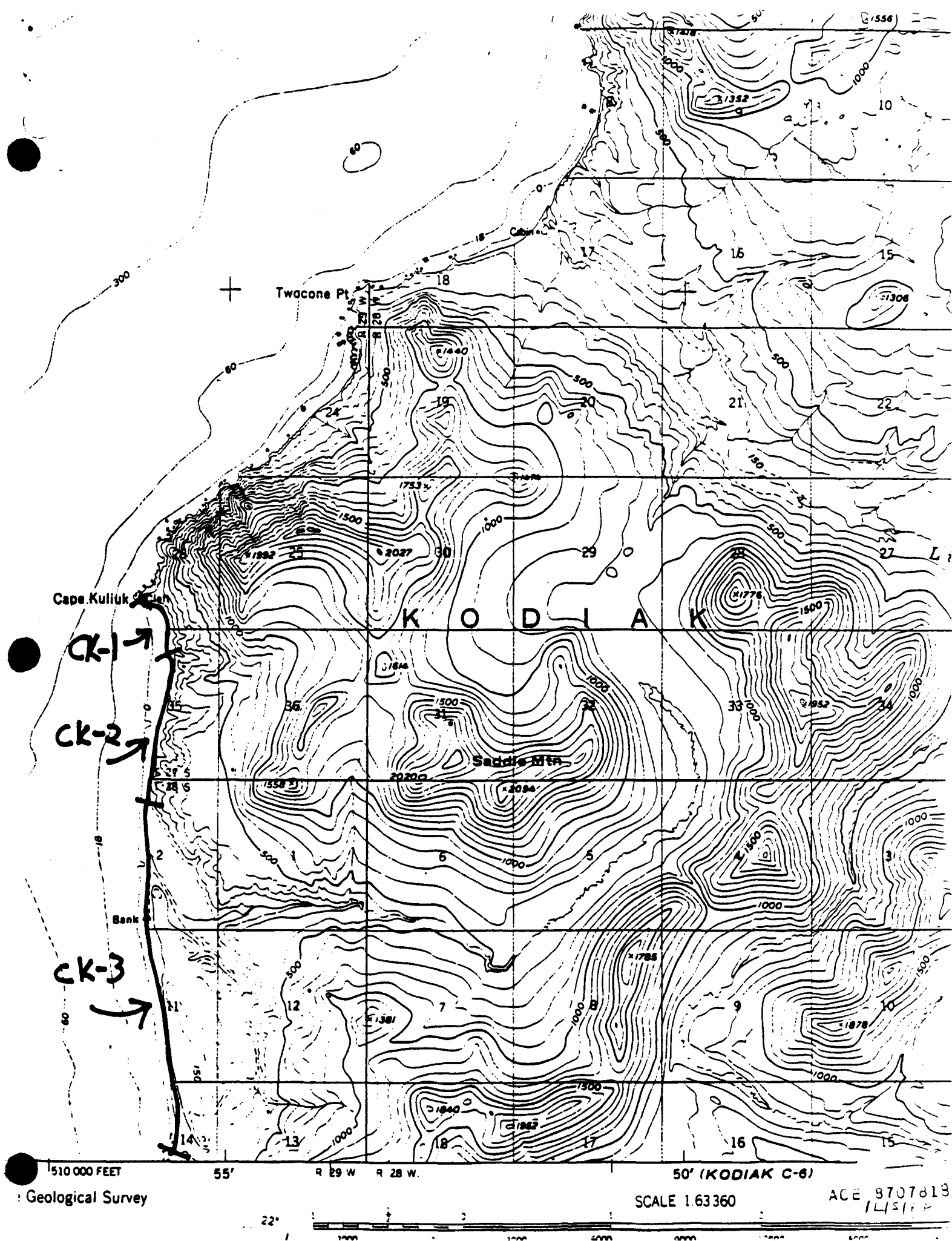
Est. Oil Thickness where > 1cm: _____ cm Est. Oil Penetration: _____ cm

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

Comments:

VERY LIGHT OILING AT HIGH INTERTIDAL ZONE OF SEAWEED DRIFT. SEAWEED DEBRIS
HAS SUCH A LIGHT COATING & IS ONLY A THIN BAND ON THE TOP OF THE HIGH INTERTIDAL
ZONE. RECOMMEND NO ACTION

ACE 8707816



KODIAK SCAT
K6-20

COMPLETE

ACE 7963948

DEC 15 1989

(version 5/24/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): SPIRIDON BAY WEST BLOCK

Includes Shoreline Segments: SB-1, SB-2, SB-3, SB-4, SB-5, SB-6

Submitted : _____ Date: _____
(for Exxon)

ISCC Approval: _____ Date: _____

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

TAB F

Cory

TYPE B SHORELINE CLEANUP WORK ORDER

Date: 6/20/89 Shoreline Segment: SB-5Location: (see map) NORTH SHORE OF SPIRIDON BAY (WESTERN BOUNDARY OF SEGMENT)ADEC No. K6-20 Shoreline Assessment Date: 5/22/89

Recommended Cleanup Activity(ies):

Warm water washing at western boundary of segment
(against headland)

Priority Considerations:

Cleanup west end (against headland)

Ecological Constraints (from site survey):

Avoid areas of healthy vegetation in lower intertidal zone.

Archaeological Constraints (from site survey):

See attached Cultural Resource Evaluation.

Submitted by: Jack A. Rickner
ExxonDate: 20 June 89Recommend
Approval: See Attachment
State Historic Preservation OfficerDate: 5/29/89Recommend
Approval: _____
Interagency Shoreline Committee Representative

Date: _____

Approved: _____
Federal On-Scene Coordinator

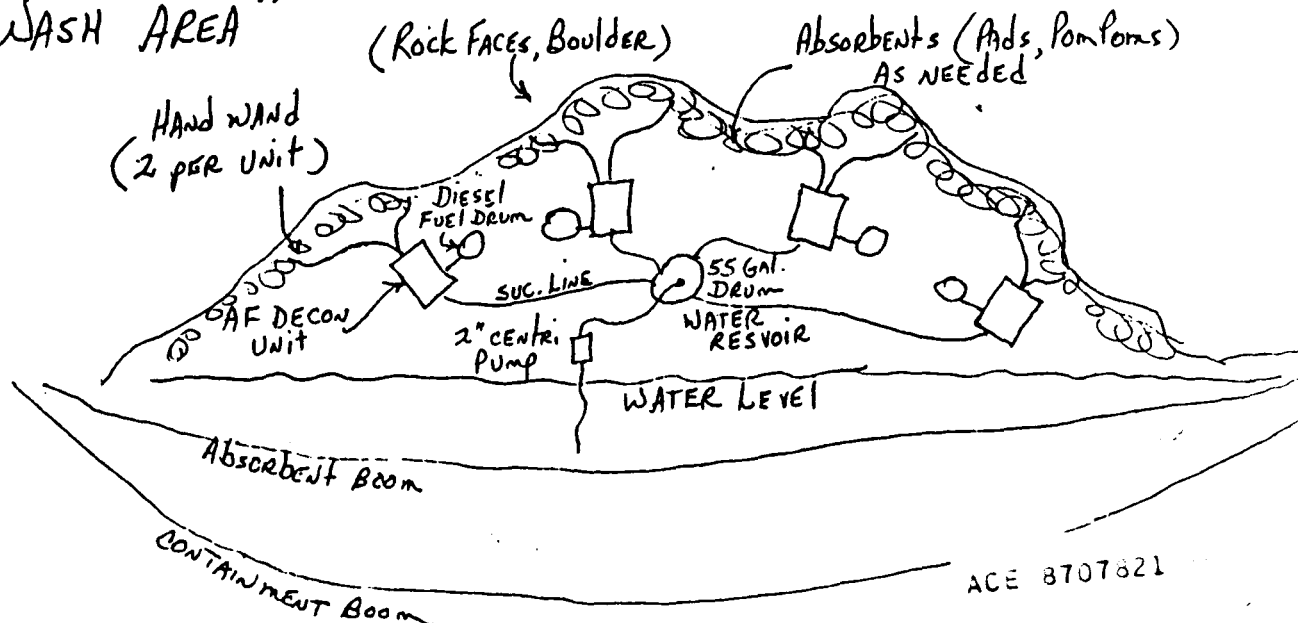
Date: _____

Kodiack Shoreline Cleanup Program

"Hot Water Wash" - Team 9

The "Hot Water Wash" cleanup technique is a type 'B' cleanup activity which employs mechanical equipment to wash the target area. It is moderately effective on rock faces & large to medium boulder areas. The equipment consists of U.S. Air Force decontamination units (hot water wash sys.) with hand wands to wash the rocks with *hot (130° to 150° F) sea water. Washed oil is picked up with absorbents placed @ the area prior to & during wash activity. Absorbent boom & containment boom is employed at the target area to protect against any 'sheen' from the wash. Absorbents are collected in trash bags for disposal. — * (Wash P.S.I. is 150 max.) The team will consist of 8 VECO workers, 1 VECO Foreman, & 1 Exxon Supr. to deploy & maintain equip. local work teams will be added as needed to handle the wands & absorbents (waste). Target area size determines # of units & workers used. (10 units available)

WASH AREA



ACE 8707821

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT SB-1

LOCATION: (see enclosed map) North Shore Spiridon Bay west of Hook Point

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

- See Below.
- Manually remove oiled seaweed at high intertidal zone line.
Note: seaweed is being reworked into the beach. Use rake to get buried seaweed.

Priorities Considerations:

- Remove thick patch of oiled seaweed drift against cliffs on west cove. Check underlying beach for oil contamination. (re-evaluation.)

Ecological Constraints (from site survey):

- Avoid healthy vegetation on rocks near water.

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.

Angelo R. Peger
State Historic Preservation Officer *

Date: 5-27-89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707822

SHORELINE OIL EVALUATIONDate: 20 MAY 1989 Time: 0845Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION N. SHORE SPIRIDON BAY, W OF Hook Pt
KODIAK Is.SEGMENT NUMBER SB-1LENGTH OF SHORELINE SEGMENT: 150 mACCESS: ~~Foot~~/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BAY/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B —% / C 65% / P 35% / G —% / S —% / M —% / R —%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS/SEAWEEDOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 75 Width of Band: 1 to mSporadic: Y/N % of Segment 25Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 20 ^(IN SEAWEED) cmPooled Oil: —% "Free" Oil: —% Coated: H 20% / M 30% / L 50%Fresh —% Mousse 100% Tar Formation: —%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

REMOVE THICK PATCH (15M WIDE) OF 20 CM THICK OILED SEAWEED ON WEST COVE. ALSO REMOVE
THE THIN (UP TO 1M) WIDE) BAND OF OILY SEAWEED AT THE TOP OF THE HIGH INTERTIDAL ZONE.
ACCESS TO THICK COVER OF SEAWEED BY LANDING ON EAST COVE & HIKING OVER.

DOCUMENTATION:Map/Aerial photo marking segment boundaries AttcherVTR: Y/N Tape Number(s) NonePhotography: Y/N Roll Number(s) Kodak - BT-1Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Spirodon Bay SITE: N. Shore Spirodon Bay OBSERVER: S.M. Barn

LOCATION PREFIX: SB SEG. NO.: 1 LENGTH: 250 150 (M)

DATE: 5/20/89 TIME (HHMM): 0845 TIDE HT.: 0 (M)

OILED ZONE: splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dense on rocks near water, some patches coated - dead

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

Several patches coated - most coated indiv. not gaping

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

Coated patches may be dead or dying

Littorina

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

Found in healthy Fucus zone near water

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

Healthy

OTHER OBSERVATIONS: Dense red algae on rocks in lower ITZ

Oiled debris 8-12" deep in boulders on Beach 2

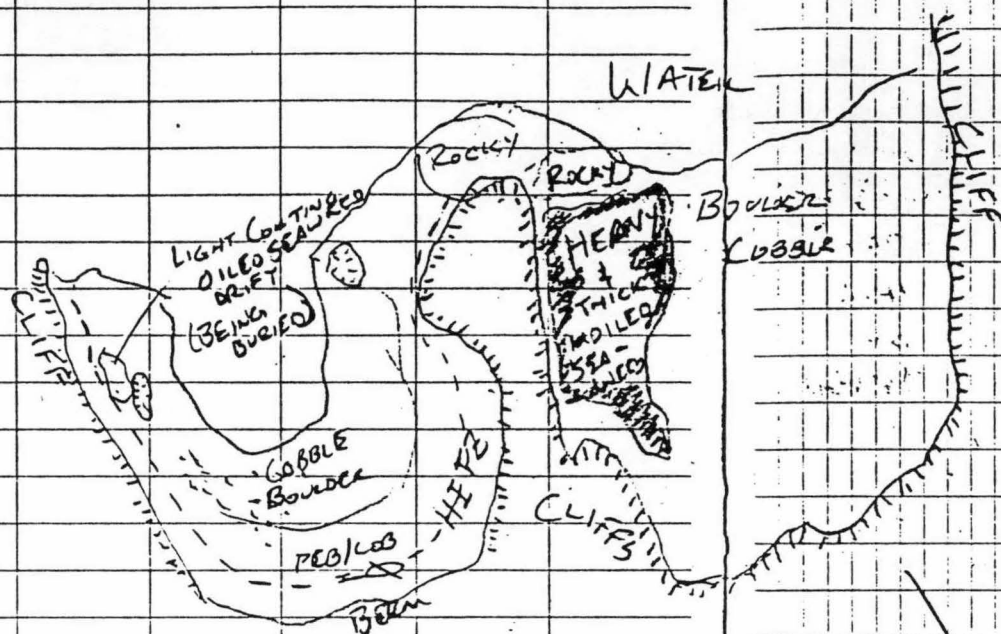
CLEANUP PRECAUTIONS: Avoid healthy lower ITZ

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other

BIRDS: Nine dead birds, Gulls + eagles flying overhead

GENERAL OBSERVATIONS: Heavy oil (mousse) and deep oily debris in boulders on beach 2

PLANE VIEW SB-1



North



ACE 8707828

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT SB-2

LOCATION: (see enclosed map) North Shore Spirodon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

- Manually remove oiled seaweed drift at top of high tide line. Ensure that oiled seaweed is not worked into beach or covered by non-oiled seaweed drift.

Priorities Considerations:

- None.

Ecological Constraints (from site survey):

- Avoid healthy community in lower intertidal zone. Avoid stream boundaries.

Archeological Constraints (from site survey):

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

Douglas R. Reger
State Historic Preservation Officer *

Date: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 20 May 1989 Time: 0945Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION N. SHORE SPIRIDON Is. W of SB-1SEGMENT NUMBER SB-2LENGTH OF SHORELINE SEGMENT: 250 mACCESS: ~~Foot~~/Vehicle/~~Boat~~/Barge/~~Helio~~/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLR/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B - % / C 25 % / P 75 % / G - % / S - % / M - % / R - %Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type SEAWEEDOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 85 Width of Band: 1/2 - 4 m

Sporadic: Y/N % of Segment _____

Est. Oil Thickness where > 1cm: - cm Est. Oil Penetration: 25 ^{REWORKED} cmPooled Oil: - % "Free" Oil: - % Coated: H - % / M + % / L 100 %Fresh - % Mousse 100 % Tar Formation: - %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

AT TOP OF HIGH INTERTIDAL ZONE IS A CONTINUOUS (1/2 TO 4m³ WIDE) BAND OF LIGHTLY COATED SEAWEED
DRIFT. IT IS BEING WORKED INTO THE PEBBLE DOMINANT BEACH BY TIDAL ACTION. THE SMALLER HEADLAND
BEACH POCKET BEACHES WERE INACCESSIBLE TO US, THUS THE WORK CREWS.

DOCUMENTATION:Map/Aerial photo marking segment boundaries AlbionVTR: Y/N Y Tape Number(s) NonePhotography: Y/N Roll Number(s) Kodak - BT-1Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Spiraden Bay SITE: N. Shore Spiraden OBSERVER: S. M. Bann

LOCATION PREFIX: SB SEG. NO.: 2 LENGTH: 250 (M)

DATE: 5/20/89 TIME (HHMM): 0945 TIDE HT.: -1 to 0 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dense on rocks in lower ITZ, not impacted, healthy

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

Patchy dense on rocks not impacted in lower ITZ

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

Patchy dense on rocks healthy in lower ITZ

Littorina

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

Healthy

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

Healthy

OTHER OBSERVATIONS: Slaters on rocks healthy

Oiled debris, splashes on rocks

CLEANUP PRECAUTIONS: avoid healthy lower ITZ, avoid

stream margins

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other None

BIRDS: 6 dead murrelets at ~~the~~

GENERAL OBSERVATIONS: light oil in some areas, moderate
oil in others.

3.2) 0945

EAN

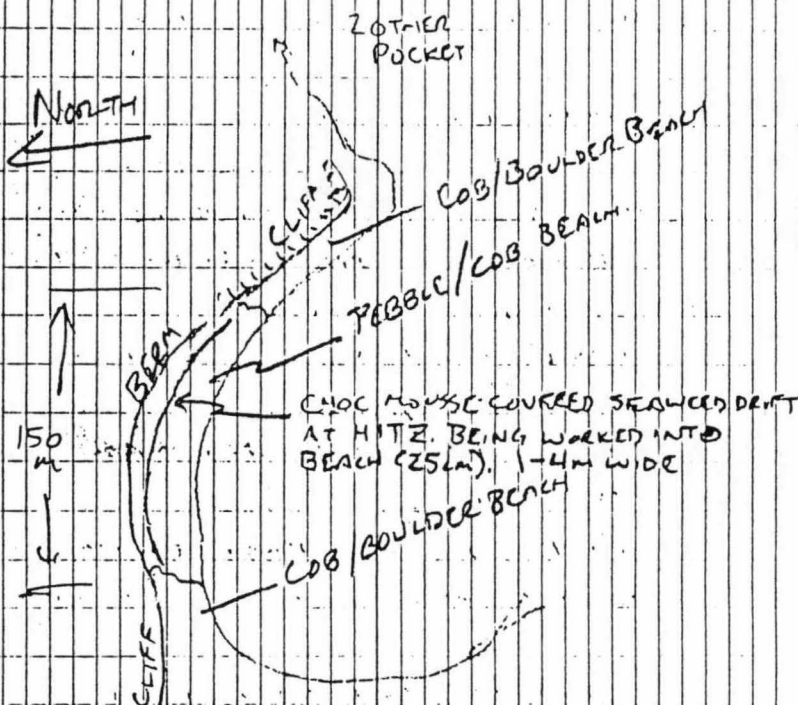
M WIDE CONTINUOUS BAND
(USSE) SEAWARD DRIFT
BEACH (HITZONY) BEING
STO 17 (UP TO 25 cm)
CL COATING CHOC
RIED BY TIDOL
BY RAKE & PITCHFORK
BAND ALONG PRO/COB Bch
& FRESH CLEAN SEAWARD
OILED SEAWARD DRIFT

ITTING ROCKS IN

ACTION

LED SEAWARD CHECK FOR
(KING) & NON-OILED
OILED SEAWARD

PLANE VIEW OF ESIDE SB-2 (BEACH)



THE SMALL POCKETS BEACHES & HEADLANDS E
OF THIS BEACH ARE INACCESSIBLE. FROM 5 TO
10M HIGH CLIFFS, THE DOMINANT BOUL/COB
BEACHES LOOKED LIGHTLY /U, LIGHTLY OILED.

OD



ACE 8707835

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 22 May 1989

SHORELINE SEGMENT SB-4

LOCATION: (see enclosed map) SPIRIDON BAY NORTH SHORE OF THE BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 22 May 1989

Recommended Cleanup Activity(ies):

- USE RAKE & SHOVEL TO REMOVE OILED SEAWEEED DRIFT AT THE TOP OF THE HIGH INTERTIDAL ZONE. CHECK & MAKE SURE THAT THE OILED SEAWEEED IS NOT BURIED AT THE TOP OF THE HIGH INTERTIDAL ZONE (1/2 FOOT DEEP).

Priorities Considerations:

HEAVY (7 x 10 METER) AGAINST EASTERN SEGMENT BOUNDARY.

Ecological Constraints (from site survey):

NONE

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707836

SHORELINE OIL EVALUATIONDate: 22 May 1989 Time: 0842Observer: Bryan TrimmSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION 1700 m East of SB-4 ^{3 North Shore} SPIRIDON BaySEGMENT NUMBER SB-4LENGTH OF SHORELINE SEGMENT: 250 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 5 % / C — % / P 10 % / G 60 % / S 20 % / M — % / R 5 %Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Logs/SeaweedOILDegree of Oiling: Heavy/Moderate/~~Light~~/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 90 Width of Band: 180 mSporadic: Y/N % of Segment 5Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 20 cmPooled Oil: — % "Free" Oil: — % Coated: H — % / M 10 % / L 90 %Fresh — % Mousse 100 % Tar Formation: — %Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

A HEAVY DEPOSIT AT THE EAST END OF SEGMENT SB-4 AGAINST THE HEADLAND COVERS THE BOULDERS & ROCKS IN THE HIGH & MIDDLE INTERTIDAL ZONE. THE CHOCOLATE MOUSSE IS COATING (LIGHT TO MODERATE) AN AREA OF 7 X 10 METERS. ITS LIGHTLY COVERED MOUSSE COATED SEAWEEED BRIEF AT THE TOP OF THE HIGH INTERTIDAL ZONE IS ABOUT ^{1/4 TO 1/2 m} WIDE & IS CONTINUOUSLY DEPOSITED ON THE BEACH. THE DRIFT LOGS IN ABOVE THE INTERTIDAL ZONE IS CLEAN.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries Attached

VTR: Y/N Tape Number(s) None

Photography: Y/N Roll Number(s) SMB-9

Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Spiridon Bay SITE: N. Shore OBSERVER: Sm Ben
 LOCATION PREFIX: S3 SEG. NO.: 4 LENGTH: 250 (M)
 DATE: 5/22/89 TIME (HHMM): 0835 TIDE HT.: +1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Sparse on sand-gravel areas, but healthy. Thick patches on boulders to east are MOD. oiled - dead.

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

Several clumps on boulders to east are coated - ~~many~~ many gppin

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

Dense barnacles on boulders, several areas oiled, barnacle
unresponsive

Littorina

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

Dense among barnacles - oiled but alive

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

None seen

OTHER OBSERVATIONS: oiled debris and oiled band of gravel high
in ITZ. Most biota is located on rocks to west. This
is oiled in high ITZ. Uva in lower ITZ

CLEANUP PRECAUTIONS: None

MAMMALS: Otters other None Harbor Seals None Sea Lions None Whales None

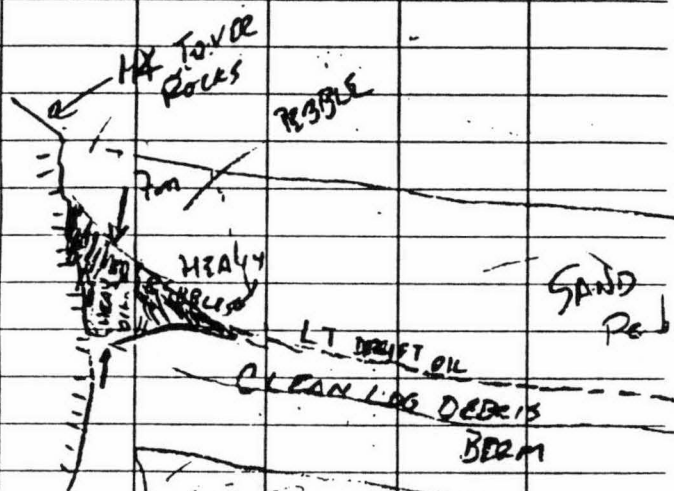
BIRDS: None alive 6 dead murres, 1 thickbill

GENERAL OBSERVATIONS: Most of seg. is lightly oiled, but
the east end of seg. has oiled boulder zone

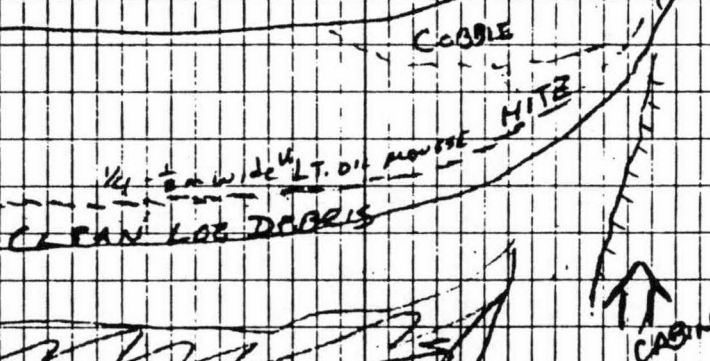
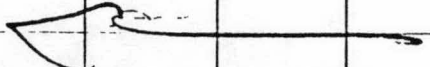
PLEASE VIEW 5B-4

NORTH

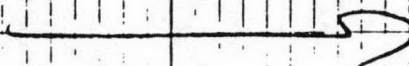
Low SURGE
TIDE/WATER



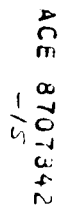
LAGOON



250m



ACE 8707841



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89

SHORELINE SEGMENT SB-3

LOCATION: (see enclosed map) North Shore Spiridon Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 5/20/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated seaweed.
- It may be necessary to use warm water/pressure wash to remove oil from boulders.

Priorities Considerations:

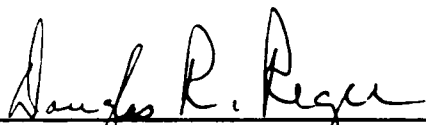
- Remove oil coated seaweed at high tide line.

Ecological Constraints (from site survey):

- Avoid streams and areas of healthy vegetation in 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: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 20 May '89 Time: 1015Observer: BRYAN TRIMMSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION N. SHORE OF SPIRIDON BAY, W OF SB-2 SEGMENT NUMBER SB-3LENGTH OF SHORELINE SEGMENT: 250 mACCESS: ~~Foot~~/Vehicle/~~Boat~~/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/~~COV~~/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B ⁴⁰~~50~~% / C 40% / P 10% / G —% / S —% / M —% / R 10%Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type SEAWEEDOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 10 Width of Band: 1 to 2 mSporadic: Y/N % of Segment —Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: ? cmPooled Oil: —% "Free" Oil: —% Coated: H —% / M 50% / L ⁵⁰100%Fresh —% Mousse 100% Tar Formation: —%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

AT EAST END OF SEGMENT, A PATCH OF LIGHT TO MODERATE COATING OF MOUSSE (3m BY 5m)
ON THE ROCKY POINT. ALSO A 1 TO 2m CONTINUOUS BAND OF LIGHTLY COATED SEAWEED AT THE TOP OF THE
HIGH INTERTIDAL ZONE EXTENDS WEST FROM THE OILY PATCH DESCRIBED ABOVE. RECOMMEND DRAINING
SAND ON OIL COATED ROCKS, THIS MAY ALLOW THE OIL TO ADHERE TO THE SAND & BE WASHED OUT BY THE HIGH
TIDE.

DOCUMENTATION:Map/Aerial photo marking segment boundaries AttachedVTR: YN Tape Number(s) NonePhotography: YN Roll Number(s) Kodiak - BT-1Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Spindon Bay SITE: N. Shore Spindon Bay OBSERVER: SM BAN
LOCATION PREFIX: SB SEG. NO.: 3 LENGTH: 250 (M)
DATE: 5/20/89 TIME (HHMM): 1015 TIDE HT.: 0 - +1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: (Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Healthy in lower ITZ

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

Healthy in lower IZ

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

Healthy in lower 1/2

Littorina

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

Several seen in areas of healthy vegetation

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

Several healthy indiv. seen

OTHER OBSERVATIONS: Cyanea(?) washed ashore, also healthy polychaete (sp.?)

Orchestia and Sclerite in areas of healthy Focus

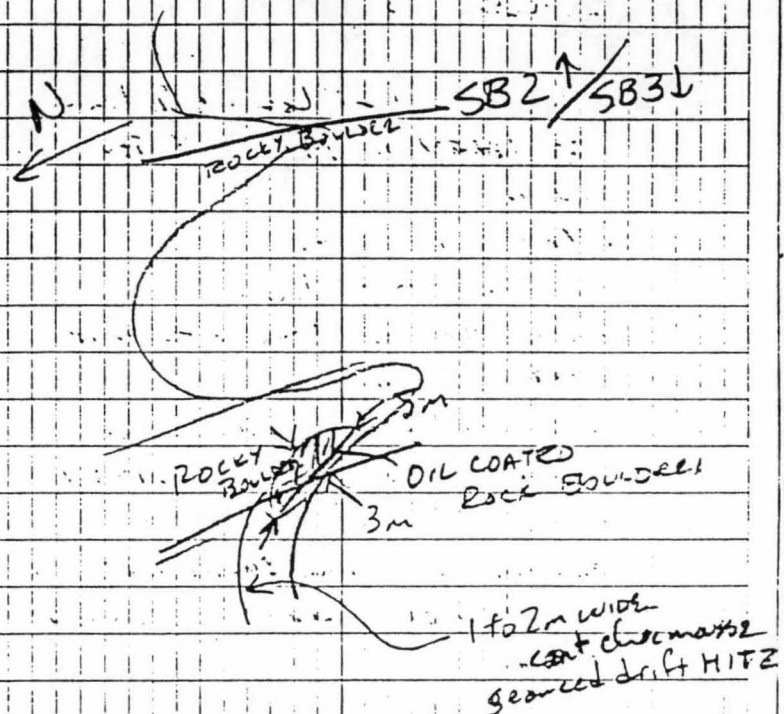
CLEANUP PRECAUTIONS: Avoid & lower ITZ

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

BIRDS: 7 dead murres, one sub-adult eagle with oiler's beak

GENERAL OBSERVATIONS: Moderate oil

PLAN VIEW SB-3





ACE 8707849-7

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 5/27/89 SHORELINE SEGMENT SB-5

LOCATION: (see enclosed map) North Shore of Spiridon Bay

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

Recommended Cleanup Activity(ies):

- It may be necessary to use high pressure warm/hot water washing at the western boundary of segment (against headland).
- Manually remove oiled seaweed drift at high tide. Ensure oiled seaweed is not buried (reworked) at the high tide line.

Priorities Considerations:

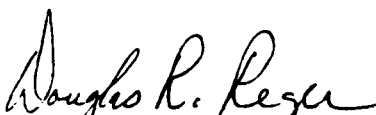
- Cleanup west end (against headland).

Ecological Constraints (from site survey):

- Avoid areas of healthy vegetation in 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: 5/29/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONDate: 22 May 1984 Time: 0930Observer: Bryan TrimmSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/cloud/Rain/Snow/Fog**LOCATION**LOCATION NORTH SHORE SPIRIDON BAYSEGMENT NUMBER SB-5LENGTH OF SHORELINE SEGMENT: 3600 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 30% / C 30% / P 20% / G 10% / S 10% / M / R Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS/SEAWEE**OIL**Degree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / (H) / / LContinuous: V/N % of Segment 67 Width of Band: 8 mSporadic: /N % of Segment Est. Oil Thickness where > 1cm: 2 cm Est. Oil Penetration: cmPooled Oil: % "Free" Oil: % Coated: H % / M % / L 100 %Fresh % Mousse 100 % Tar Formation: %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

A7 WEST END OF SEGMENT, A HEAVY BAND (CONTINUOUS) 8 METER WIDE ~~CHAINS~~ ^{IS} FOUND IN THE MIDDLE & UPPER INTERTIDAL ZONE. THE BAND ~~BEGINS~~ ^{EAST} EXTENDS FROM THE WESTERN BOUNDARY (HEADLAND) & GRADUALLY LIGHTENS TO NIL FOR 400M. ^(1/3) THE EASTERN PORTION IS DOMINATED BY NO TO VERY LIGHT SEAWEEED DRIFT OILING AT THE HIGH TIDE LINE. THE CENTRAL & WESTERN ^(2/3) PORTION OF SEGMENT HAS AN INCREASELY GRADATION (UP TO MODERATE) OF OILING.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries Attached

VTR: Y/N Tape Number(s) None

Photography: Y/N Roll Number(s) SMB-9

Sample Numbers Collected: None

ECOLOGICAL EVALUATION

LOCATION: Spiridon Bay SITE: N. Shore Spiridon Bay OBSERVER: SM Barr
 LOCATION PREFIX: SB SEG. NO.: 5 LENGTH: 3600 (M)
 DATE: 5/22/89 TIME (HHMM): 0920 TIDE HT.: 0-+1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Healthy in lower ITZ, some oiled patches of fucus throughout seg
Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several oiled patches at west end of seg. in heavily oiled area of cobbles.
Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Same comment as above

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
V. dense in west end of seg. most are oiled, not sure if they are alive or dead.
Littorina: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several healthy organisms seen

OTHER OBSERVATIONS: Helio first room light to v. light oil in strand zone. Rest of segment was walked, heaviest oil on cobble at west end of segment.

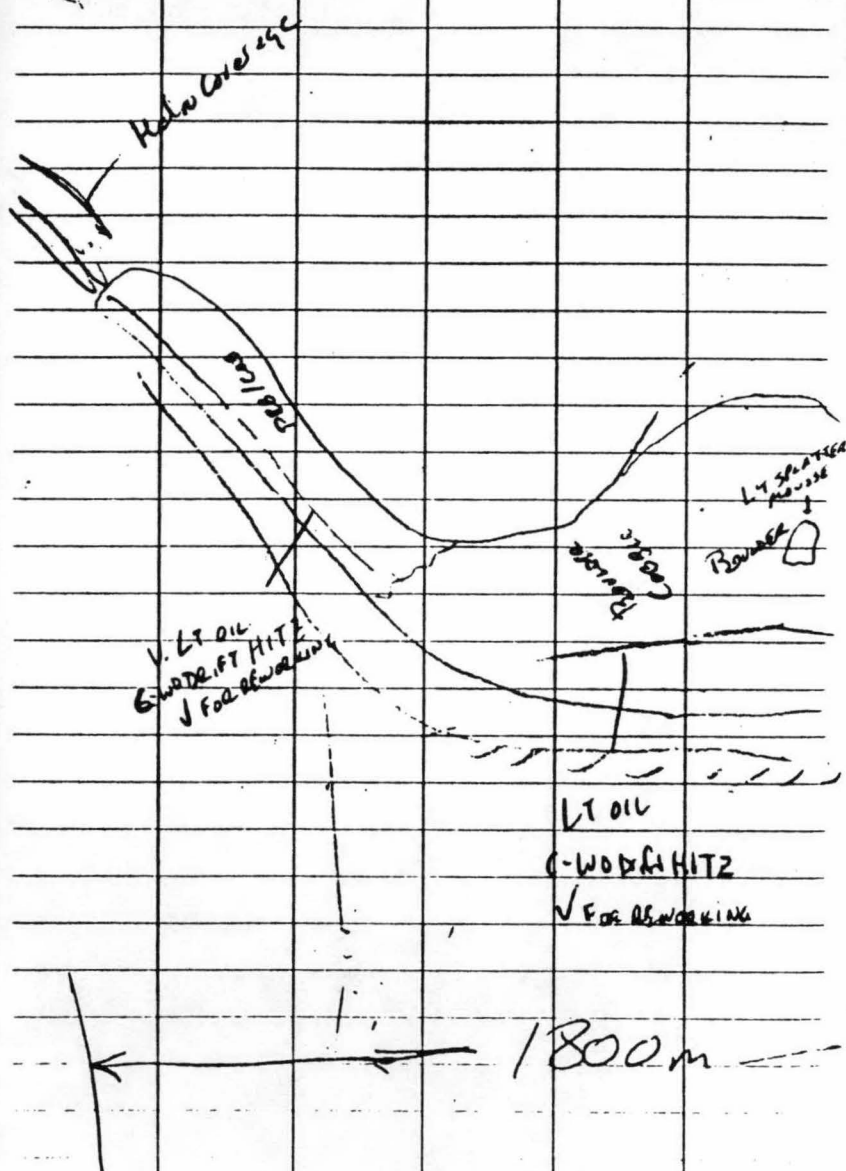
CLEANUP PRECAUTIONS:

Avoid healthy ~~Fucus~~ Fucus community at lower ITZ

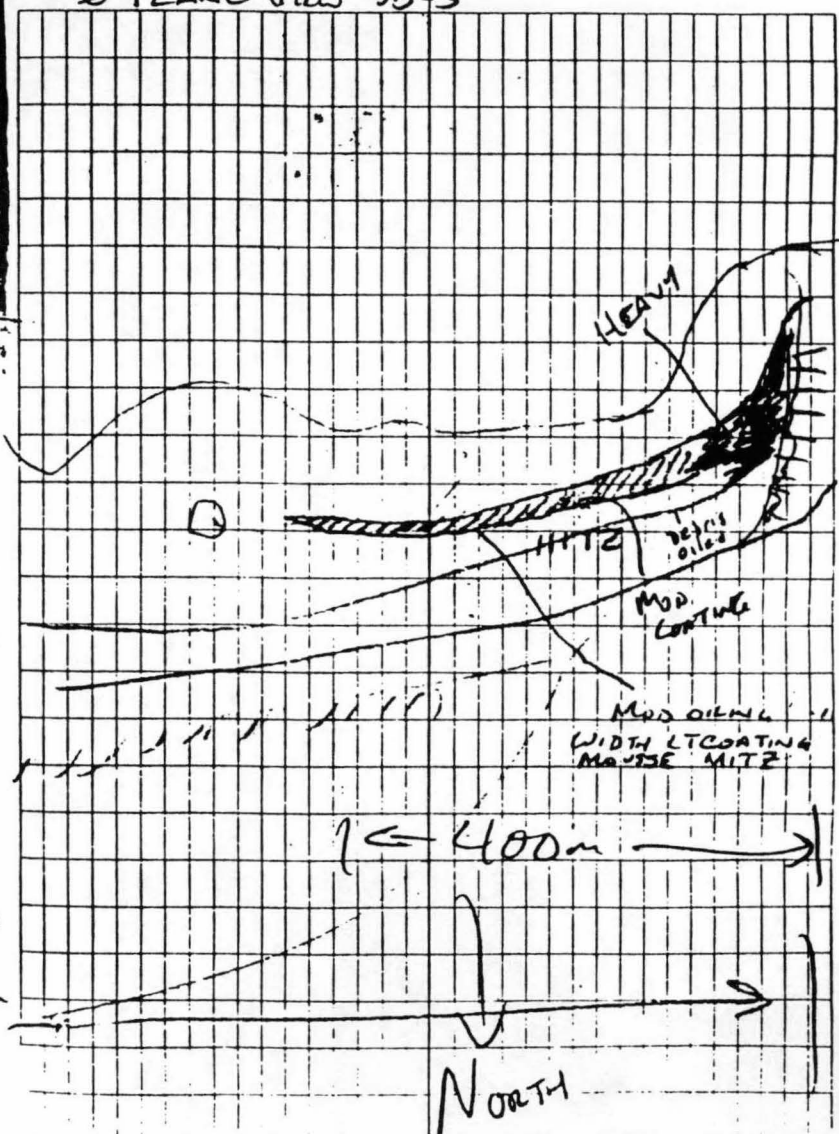
MAMMALS: Otters None Harbor Seals None Sea Lions None Whales None
 other None

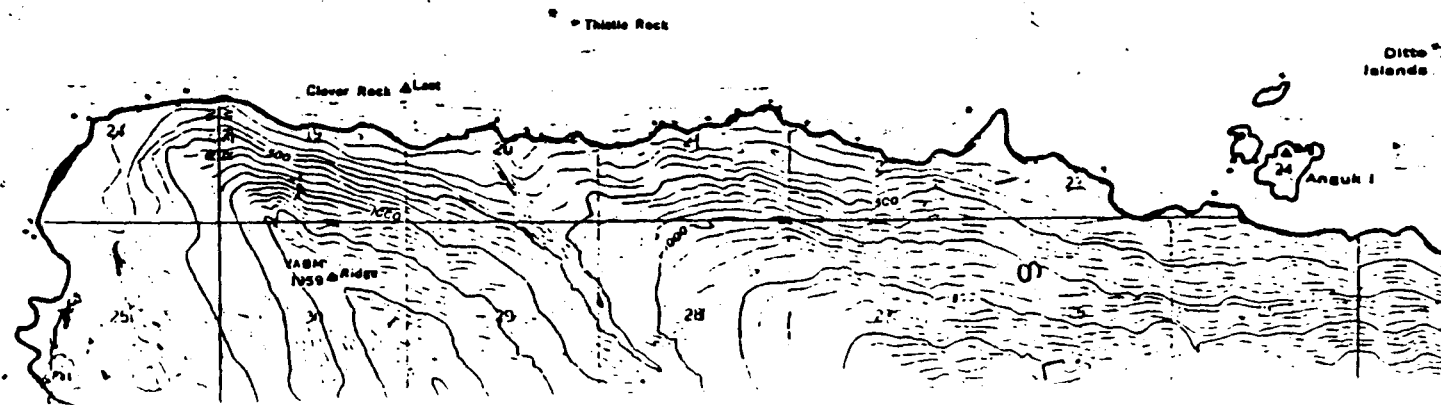
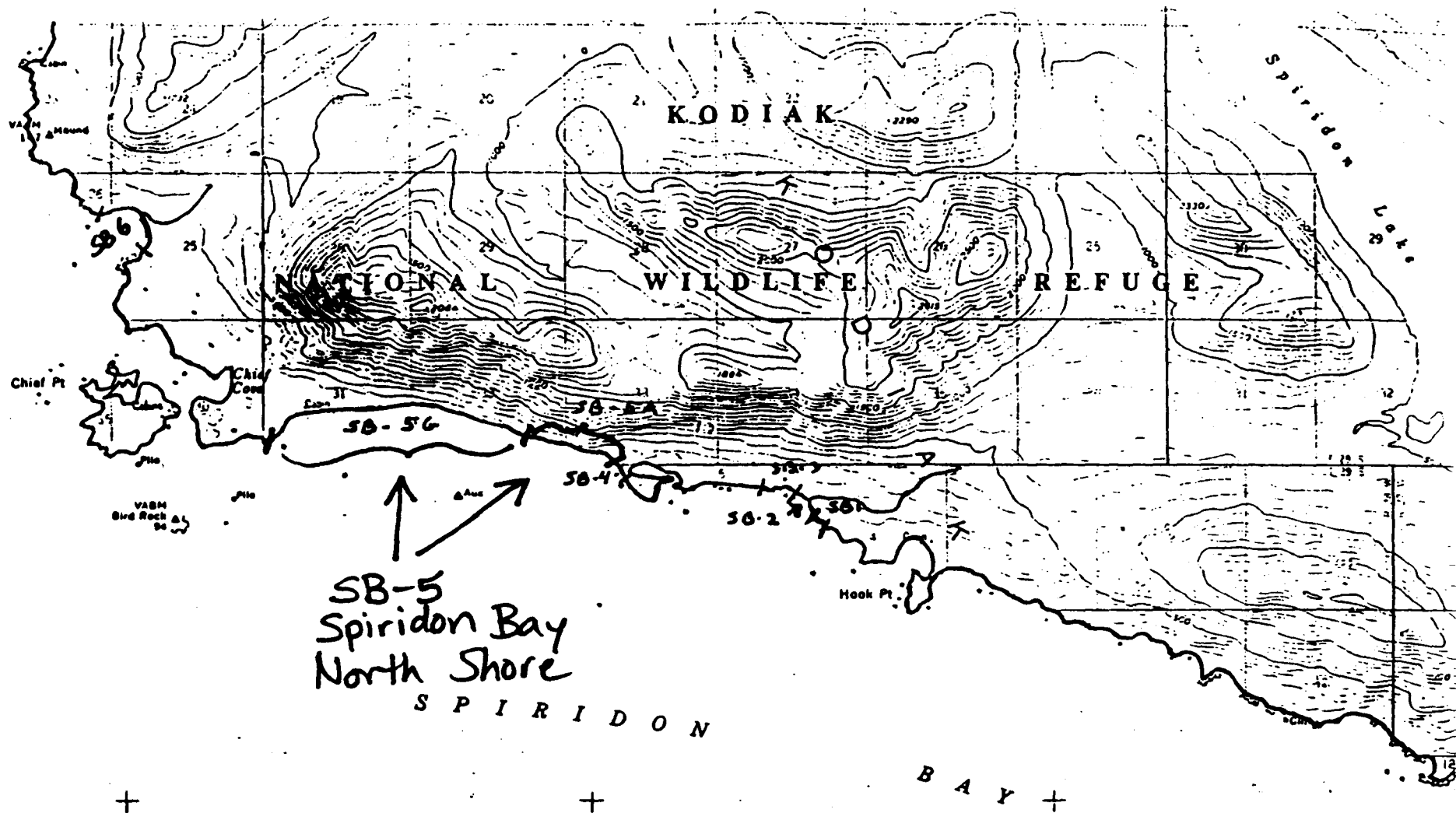
BIRDS: Five Black oystercatchers (2) seen. 7 dead murrelets, 1 dead murrelet

GENERAL OBSERVATIONS: Concentrate cleanup in western boulder area - may need steam cleaning. Remove oiled debris from rest of segment.



PLANE VIEW SB-5





ACE 8707856

copy

TAB F

TYPE B SHORELINE CLEANUP WORK ORDER

Date: 6/20/89 Shoreline Segment: SB-5Location: (see map) NORTH SHORE OF SPIRIDON BAY (WESTERN BOUNDARY OF SEGMENT)ADEC No. K6-20 Shoreline Assessment Date: 5/22/89

Recommended Cleanup Activity(ies):

Warm water washing at western boundary of segment
(against headland)

Priority Considerations:

Cleanup west end (against headland)

Ecological Constraints (from site survey):

Avoid areas of healthy vegetation in lower intertidal zone.

Archaeological Constraints (from site survey):

See attached Cultural Resource Evaluation.

Submitted by: Jack A. Rickner
ExxonDate: 20 June 89Recommend
Approval: See Attachment
State Historic Preservation OfficerDate: 5/29/89Recommend
Approval: signed by J. Callahan 6/21/89 (USCG has original)
Interagency Shoreline Committee Representative

Date: _____

Approved: _____
Federal On-Scene Coordinator

Date: _____

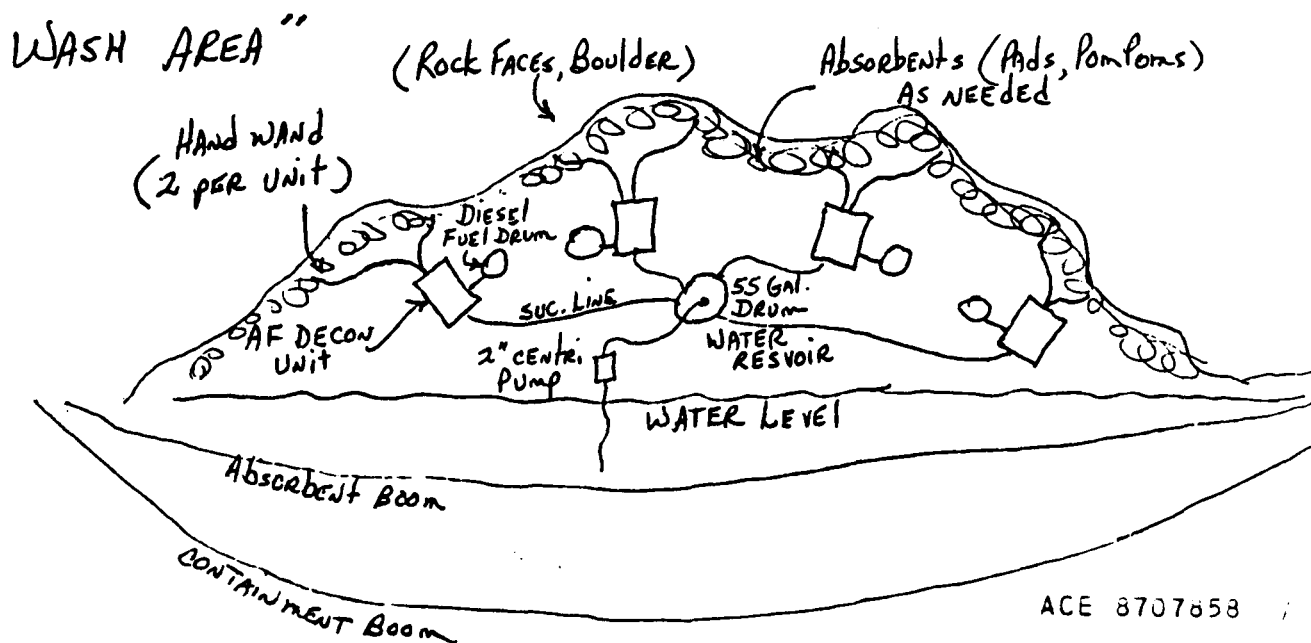
ACE 8707857 -/.

Kodiack Shoreline Cleanup Program

"Hot Water Wash" - Team 9

The "HOT WATER WASH" cleanup technique is a type 'B' cleanup activity which employs mechanical equipment to wash the target area. It is moderately effective on rock faces & large to medium boulder areas. The equipment consists of U.S. Air Force decontamination units (hot water wash sys.) with hand wands to wash the rocks with *hot (130° - 150° F) sea water. Washed oil is picked up with absorbents placed @ the area prior to & during wash activity. Absorbent boom & containment boom is employed at the target area to protect against any 'sheen' from the wash. Absorbents are collected in trash bags for disposal. — * (Wash P.S.I. is 150 max.)

The team will consist of 8 VECO workers, 1 VECO Foreman, & 1 Exxon Supr. to deploy & maintain equip. local work teams will be added as needed to handle the wands & absorbents (waste). Target area size determines # of units & workers used. (10 units available)



KODIAK SCAT
K6-34

COMPLETE DEC 15 1983

ACE 7963949

TYPE A SHORELINE CLEANUP WORK ORDER

Date: 21 June 89 Shoreline Segment: SL-7

Location: (Attach map) Sturgeon Lagoon

ADEC No. K6-34 Shoreline Assessment Date: 6/04/89

Recommended Cleanup Activity(ies):

Type A cleanup, manual removal of surface oil. See Attachment.
Do NOT remove more than 2" of sediment and only that when required. Upon completion of surface cleanup, reevaluation of beach condition will be conducted.

Priority Considerations:

Alternatives

Ecological Constraints (from

Attachments

Type B cleanup is already underway - this is OK - but also need type B work order

Archaeological Constraints:
If any archaeological or historical remain undisturbed and the Exxo "Guideline for Shoreline Cleanup" possible.

ABM 6/25

Submitted by: Jack A. Ruckner
Exxon

Date: 21 June 89

State Historic Preservation Officer Telephone Approval (Required)

Date: 10 June 89 See Attachment

Approved: _____
Assistant OSC Western Alaska (If appropriate)

Date: _____

Approved: ABMeyer
Federal On-Scene Coordinator

Date: 25 JUN 89

By direction

4/30/89

ACE 87078591/F

POOR QUALITY ORIGINAL

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-7

LOCATION: (see enclosed map) Sturgeon Lagoon-Northwest side of
lagoon entrance, lagoon side of Cobble Spit.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means. Emphasis of cleanup should be placed on the upper margin of the band where oil is concentrated. (see ecological constraints below)

Priorities Considerations: This bay is designated sensitive, due to sockeye, pink and chum salmon runs.

Ecological Constraints (from site survey): During manual cleanup of oil-coated rocks, avoid cross-contamination to lower inter-tidal zone and clean lagoon channel.

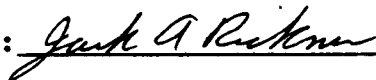
Archeological Constraints (from site survey):

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



State Historic Preservation Officer *

Date: June 10, 1989

EXXON: 

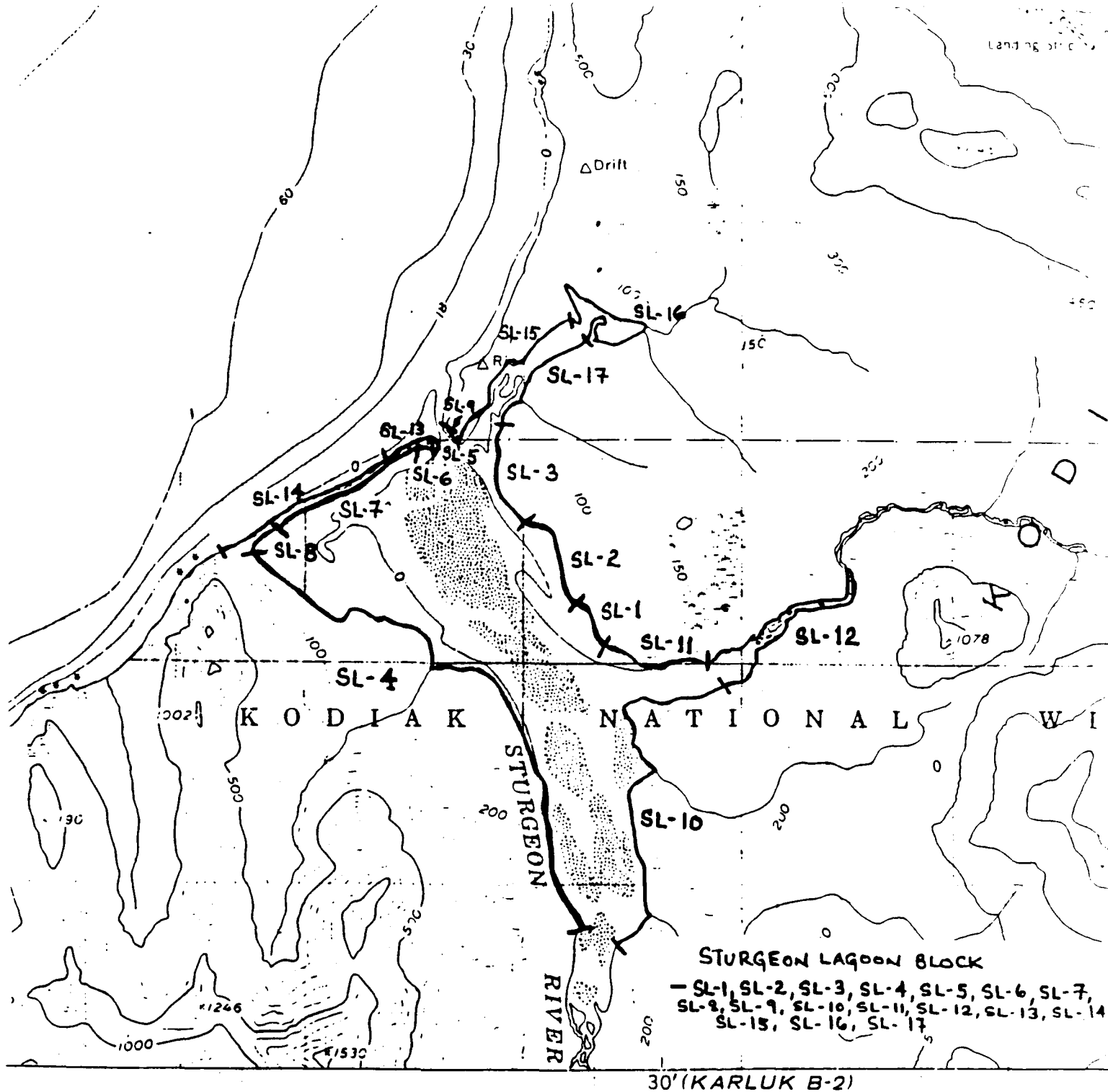
Date: 14 June 89

FOSC: _____

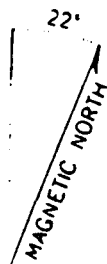
Date: _____

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

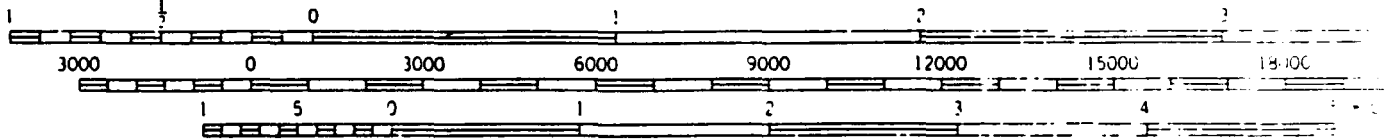
ACE 8707860



30' (KARLUK B-2)



SCALE 1:63,360



CONTOUR INTERVAL 100 FEET

DASHED LINES REPRESENT 50 FOOT CONTOURS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

DEPTH CURVES IN FEET - DATUM IS MEAN LOWER LOW WATER

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 11 FEET

FOR SALE BY U S GEOLOGICAL SURVEY

ACE 87C7861

REPRODUCED FROM THE ORIGINAL MAP OF THE U S GEOLOGICAL SURVEY

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89 SHORELINE SEGMENT SL-9

LOCATION: (see enclosed map) Sturgeon Lagoon - Extreme northeast
end of Cobble Spit at lagoon entrance.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time. Segment is short, there are ecological constraints (anadromous stream) and segment should be subject to wave action. Impossible to clean without removing gravel or by mechanical means, which is inappropriate for the site.

Priorities Considerations: This bay is designated sensitive, due to sockeye, pink and chum salmon runs.

Ecological Constraints (from site survey): Avoid oil contamination to clean mid and lower intertidal, if any cleanup is conducted.

Archeological Constraints (from site survey):

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

Charles E. H. Smith
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - NODAP

Date: JUNE 4/89 Time: 15:25

Observer: D. Howes

Surveyed From: Foot/Boat/Helio/Plane

Weather: Good Cloudy Rain/Snow/Fog

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-9

LENGTH OF SHORELINE SEGMENT: 45 m

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

SHORELINE:

Shoreline Type: SPI/BEA COV/HLD/STRT

Slope: LAAG HANG/VER

Wave Exposure: High Med Low

Sediment: B 5 / C 60 / P 35 / G / S / M / R

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment No. Bands Width 4-5m

Sporadic: Y/N Segment Min/Max Dia Impact Width

Est. Oil Thickness where > 1cm: 5-25 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 45-50 cm ^(may be deeper) SU / SP UP / MID / LO

Layers? Yes/No No# Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil % "Free" Oil 95 % Spattered 5 % H/H/L/VL Sheen

OIL WEATHERING (OW)

Fresh Oil % SU/SP/VP/MID/LO Choc Mousse 100 % SU/SP/VP/MID/LO

Pancake Mousse % SU/SP/VP/MID/LO Asphalt Mousse % SU/SP/VP/MID/LO

Tar Formation %

Comments:

'FRESH' OR RECENT CHOC MOUSSE DEPOSIT; OIL HAS PENETRATED THE SEDIMENTS UP
TO AT LEAST 50 CM + FILLED SOME OF THE VOIDS BETWEEN PARTICLES
SEDIMENT IS POROUS + COARSE TEXTURED

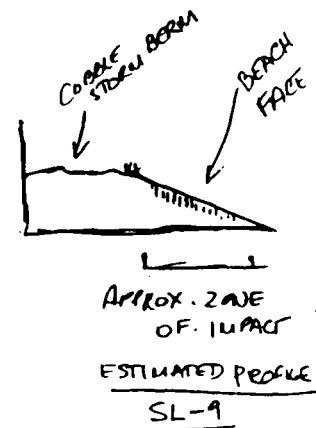
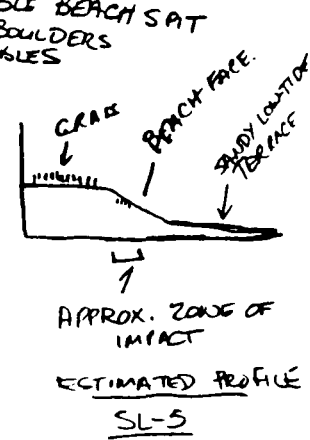
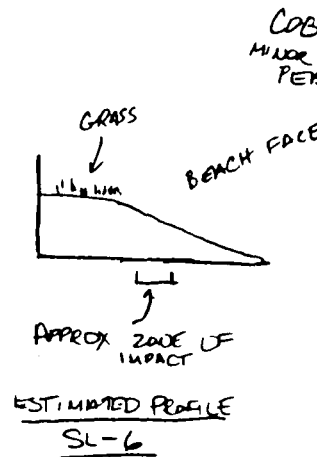
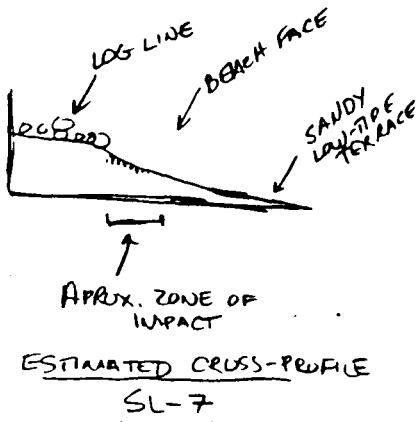
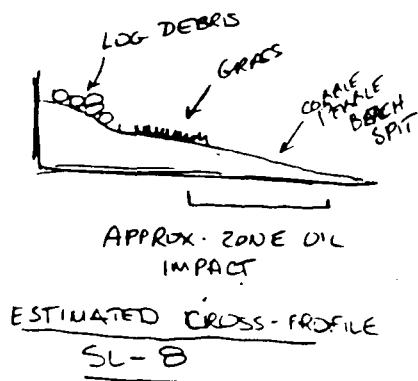
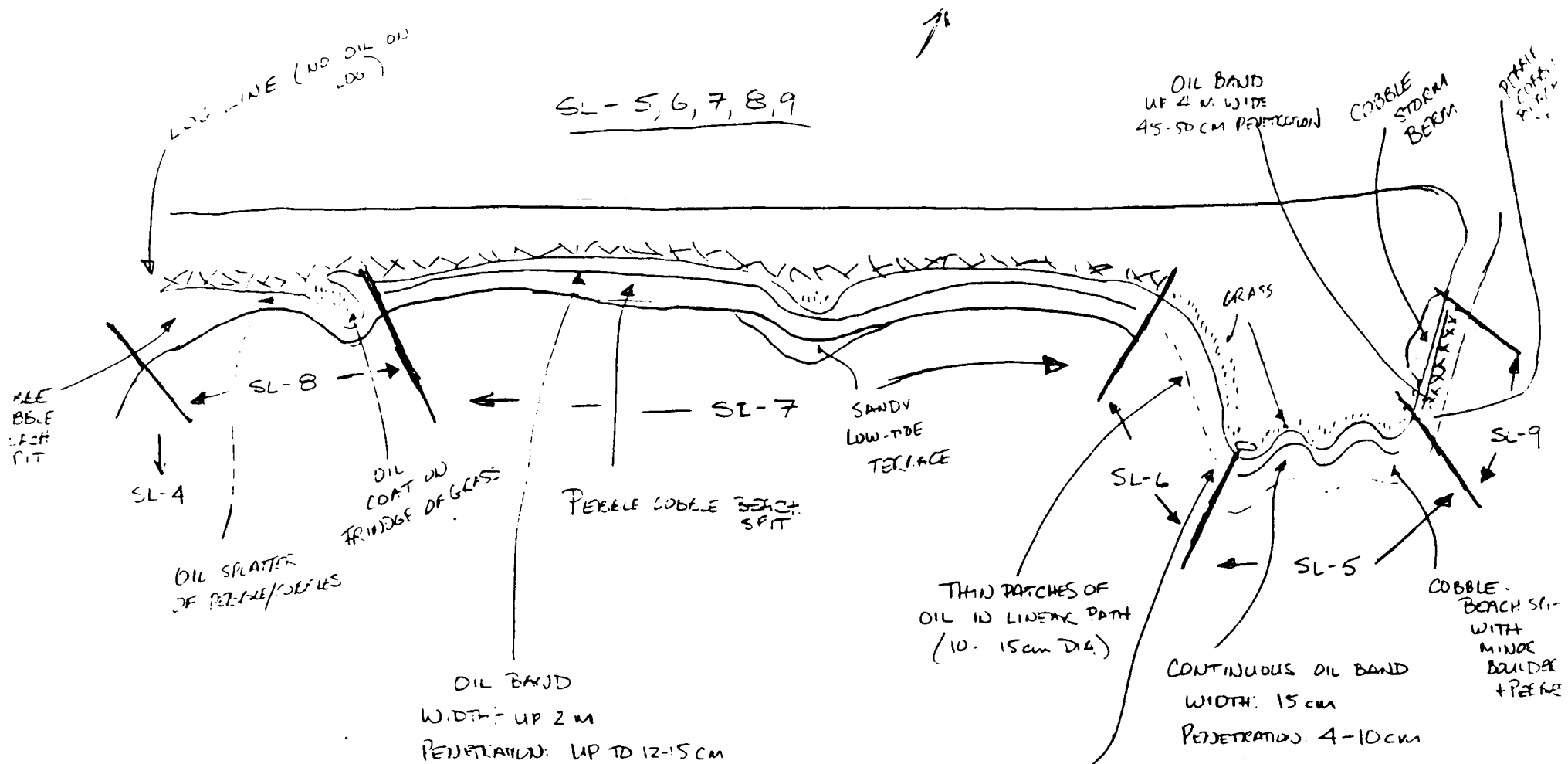
DOCUMENTATION:

Map Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC-12

Sample Numbers Collected: N/A



ACE 8707865

ECOLOGICAL EVALUATION

STURGEON LAGOON
 extreme NE end of cobble
 LOCATION: spt at lagoon entrance SITE: _____ OBSERVER: D McCormick

LOCATION PREFIX: SL SEG. NO.: 9 LENGTH: 45 (M)

DATE: 6/4/89 TIME (HHMM): 1525 TIDE HT.: 2.5 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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: 2 red fox seen foraging on log debris, 3 healthy-looking sea lions 1/4 mi offshore

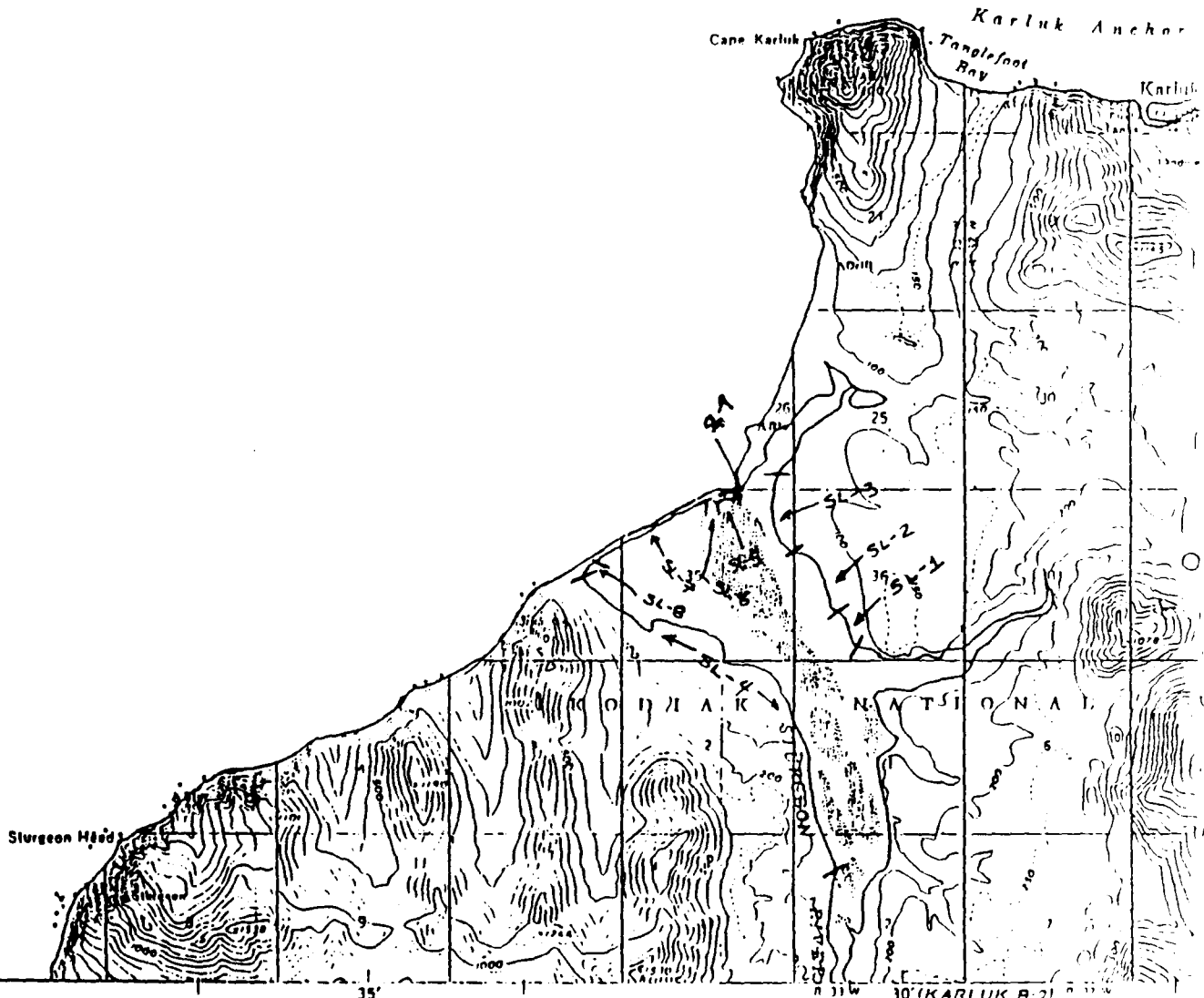
CLEANUP PRECAUTIONS: Avoid contaminating mid and lower ITZ

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions 3 Whales _____
 Other 2 red fox

BIRDS: _____

GENERAL OBSERVATIONS: This segment at the mouth of lagoon was most heavily oiled for this Bay; relatively high energy area which may clean itself

S H E L I K



10 1376 000 FEET

Map, edited, and published by the Geological Survey
 under the direction of the USGS and USCE

Map by photogrammetric methods from aerial photographs
 1961-1962. Map not field checked

22

SCALE 1:61160

ACE 3707858

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-1

LOCATION: (see enclosed map) Sturgeon Lagoon-Northeast shore

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means.

Priorities Considerations: This area is priority for salmon-sockeye, chum and pink.

Ecological Constraints (from site survey): None. Manual cleanup of oiled band at mid-high zone will not adversely impact lower, uncontaminated intertidal zone.

Archeological Constraints (from site survey):

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

Charles E. Adams
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rusk

Date: 14 June 89

FOSC: _____

Date: _____

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

ACE 8707869

SHORELINE OIL EVALUATION FORM - R021A2

Date: JUNE 4/89 Time: _____

Observer: D. HOWES

Surveyed From: Foot/Boat/Helicopter/Plane

Weather: Cloudy

LOCATION

LOCATION STURGEON LAGOON - EAST SIDE SEGMENT I.D. SL-1

LENGTH OF SHORELINE SEGMENT: 440 m

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

SHORELINE:

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

Slope: LAND/SHANG/VER

Wave Exposure: High/Med/Low

Sediment: B5-7 / C___ / P55-7 / G___ / S25-7 / M___ / R___

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % 100 No. Bands 1/2 Width 3

Sporadic: Y/N Segment % _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: 5-2 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil 96 % Splattered 5 % H/U/LO Shores _____

OIL WEATHERING (OW)

Fresh Oil _____ % SU/SP/VP/MID/LO Choc Mousse 00 % UP / MID / LO

Pancake Mousse _____ % SU/SP/VP/MID/LO Asphalt Mousse _____ % SU/SP/VP/MID/LO

Tar Formation _____ %

Comments:

- BAND OF OIL THAT OCCASIONALLY SPLITS INTO TWO SINGLE BANDS GENERALLY 2-3 METERS WIDE. OIL CHOC MOUSSE HAS PENETRATED UP TO 2 CM.
- OIL SPATTER ON THE PEBBLES/CORBLES USUALLY HAVE BAND IN INTERIOR ZONE

DOCUMENTATION:

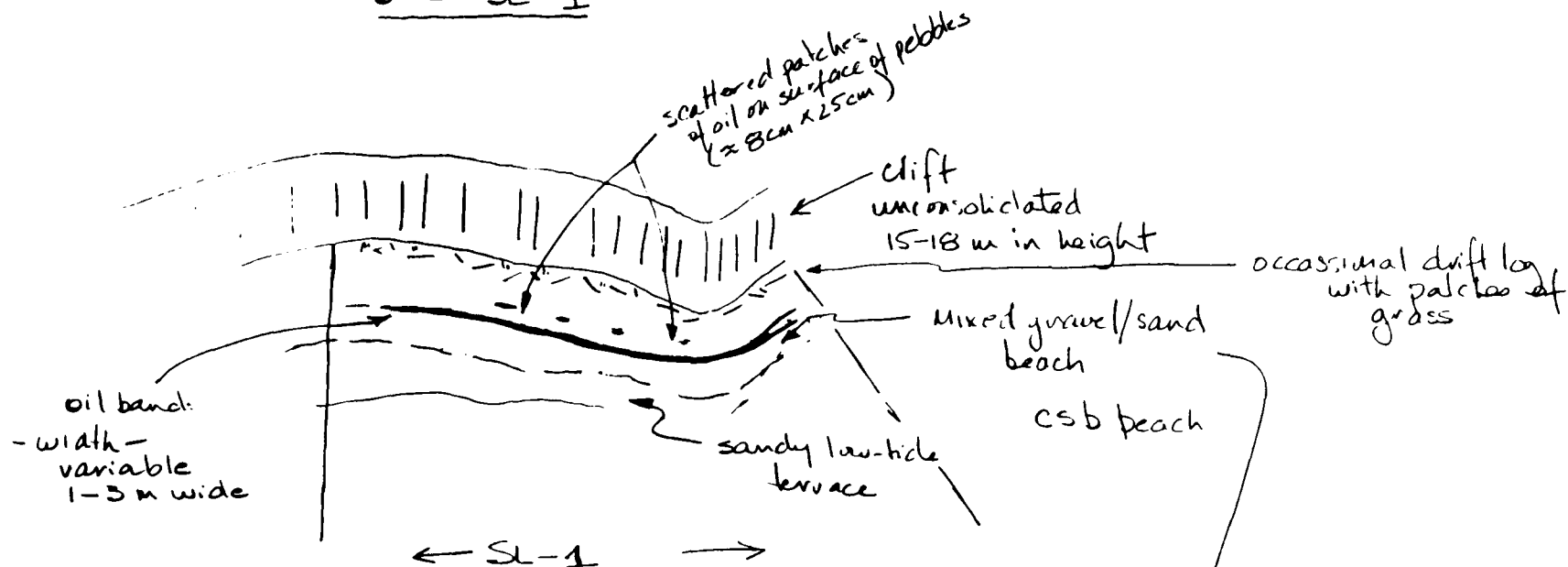
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

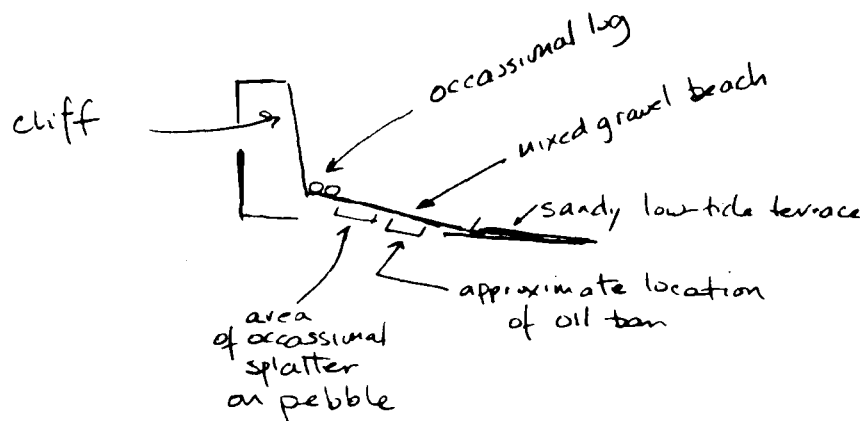
Photography: Y/N Roll Number(s) DMC-11

Sample Numbers Collected: N/A

SITE SL-1



beach texture:
 Cobble: 5-7%
 sand: 25-35%
 pebble 55-65%



ESTIMATED CROSS-SECTION TO FILE

(N) EAST SIDE
 LOCATION: STURGEON LAGOON SITE: _____ OBSERVER: D. McCormick
 LOCATION PREFIX: SL SEG. NO.: 1 LENGTH: 440 (M)
 DATE: 6/4/89 TIME (HHMM): 0930 TIDE HT.: -2.5 (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Fucus at strand line @ 20% oiled

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

Shells only.

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

Mid to low ITZ unoiled, healthy

Littorina

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

low to subtidal ITZ

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

OTHER OBSERVATIONS: 2 downy caracanes; lots of amphipods subtidally feeding on algae and at strand line in seaweed debris; downy green crab shells; bull kelp

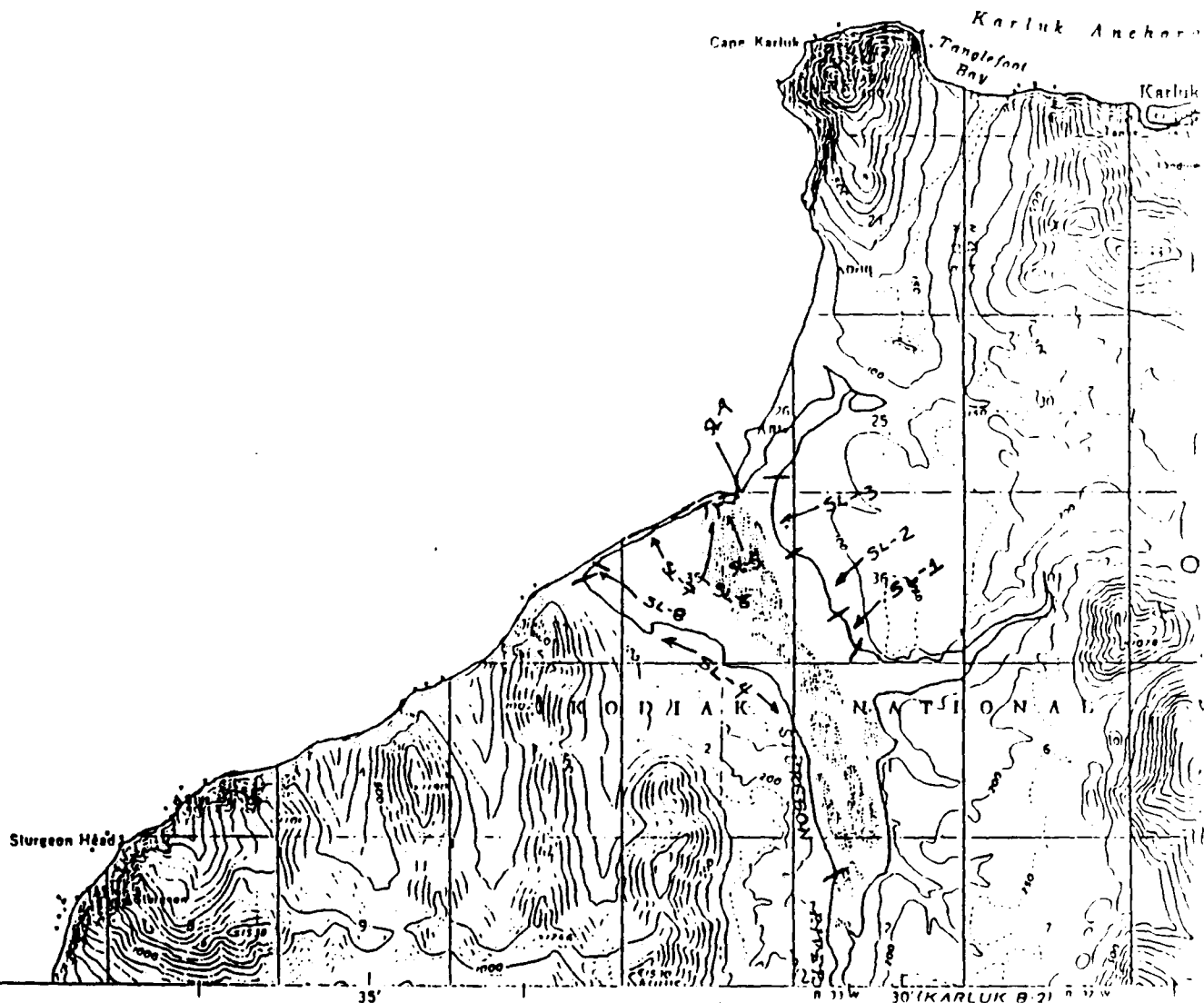
CLEANUP PRECAUTIONS: None. Manual cleanup of oil band will not impact lower, uncontaminated ITZ.

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

BIRDS: _____

GENERAL OBSERVATIONS: Lagoon channels are rich in biota. The narrow band of oil here is not impacting the sensitive, lower ITZ.

S H E L L K



1:375 000 FEET

35

30 KARLUK B-21

Map, edited, and published by the Geological Survey
 by NOS/MOAA and USCE

Map by photogrammetric methods from aerial photographs
 1952. Map not field checked

SCALE 1:63 500

ACE 8707875

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-2

LOCATION: (see enclosed map) Sturgeon Lagoon-Northeast shore

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means. This area has a lower priority than SL-1 segment, but could be cleaned when SL-1 is.

Priorities Considerations:

- Sensitivity has been designated to this bay due to sockeye, chum and pink salmon runs.

Ecological Constraints (from site survey): You may rake dune grass to clear oil debris, however, do not remove the grass.

Archeological Constraints (from site survey):

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

Charles F. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Ruckin

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - NODIAK

Date: JUNE 4/89 / Time: 10:30

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Good Cloudy Drizzle Clear

LOCATION

LOCATION STARGEDON LAGOON - EAST SIDE

SEGMENT I.D. SL-2

LENGTH OF SHORELINE SEGMENT: 860 m

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

SHORELINE:

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

Slope: LAPO HANGOVER

Wave Exposure: High/Med/Low

Sediment: BF-7 / C__ / PS-6 / G__ / SX-5 / M__ / R__

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 66 No. Bands 1 Width 15-20cm

Sporadic: N Segment 66 Min/Max Dia 15-20cm Impact Width

Est. Oil Thickness where > 1cm: 15-20cm SU / SP / UP / MID / LO

Est. Oil Penetration: 15-20cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 10 % "Free" Oil 70 % Spattered 30 % H/M/L/VL Sheen

OIL WEATHERING (OW)

Fresh Oil 10 % SU/SP/VP/MID/LO Choc Mousse 100 % SU/SP/VP/MID/LO

Pancake Mousse 10 % SU/SP/VP/MID/LO Asphalt Mousse 10 % SU/SP/VP/MID/LO

Tar Formation 10 %

Comments:

2/3 OF UNIT IS A CONTINUOUS BAND 15-20 CM WIDE - OIL HAS NOT PENETRATED
& SITS ON THE SURFACE
- NORTHERN 1/3 OF UNIT ABOVE STREAM NO EVIDENCE OF BAND - SPATTER ON
THE PEBBLES/OBBLES (SEE SKETCH)

DOCUMENTATION:

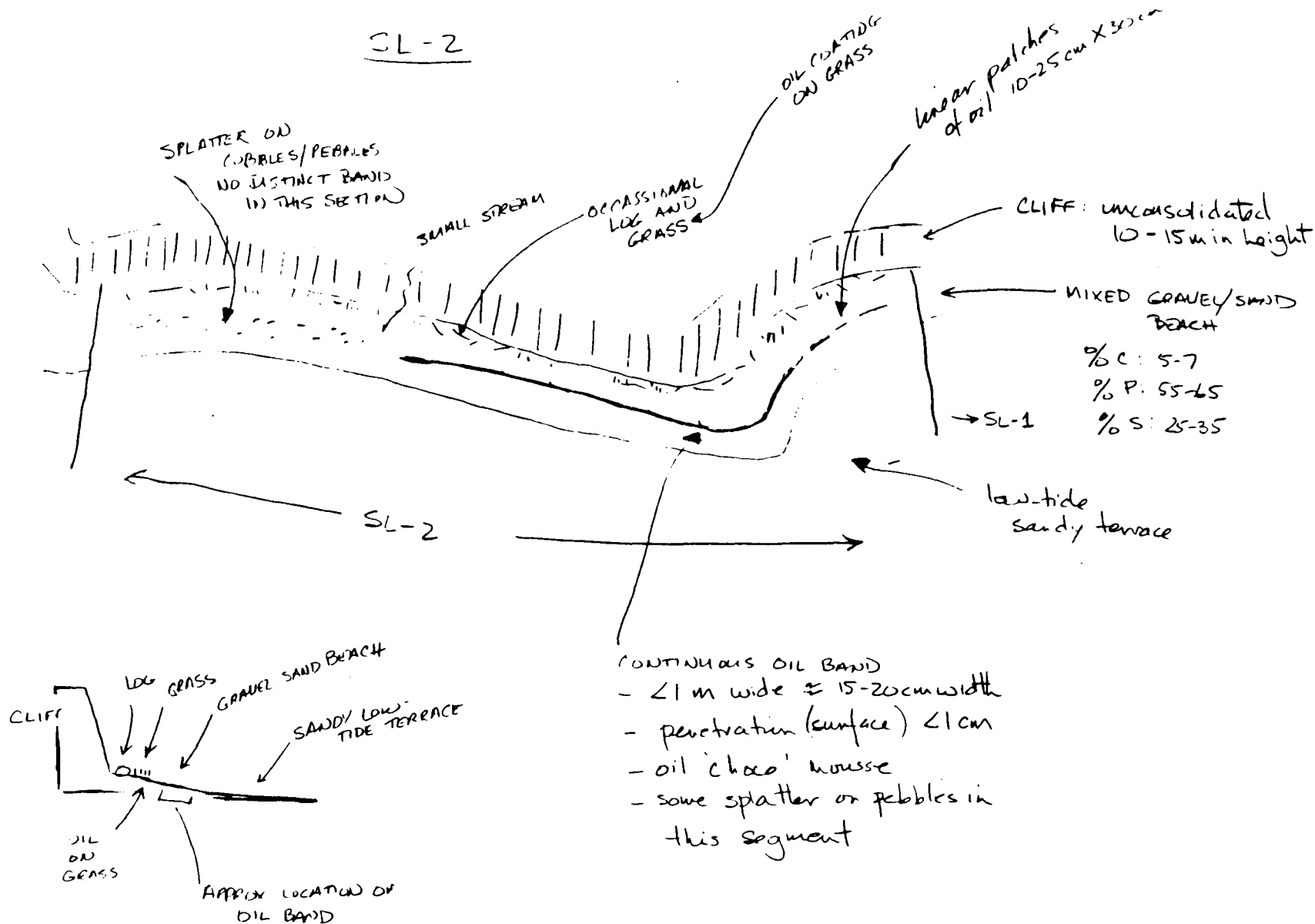
Map/Aerial photo marking segment boundaries see attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) IMC-11

Sample Numbers Collected: none

SL-2



ESTIMATE CROSS-SHORE PROFILE

ACE 8707879

LOCATION: Sturgeon Bay SITE: NE shore OBSERVER: J. T. L.
 LOCATION PREFIX: SL SEG. NO.: 2 LENGTH: 200 (M)
 DATE: 6/7/89 TIME (HHMM): 1030 TIDE HT.: -0.75 (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Healthy low ITZ below oil line

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

Healthy - low ITZ below oil line

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

Healthy - low ITZ below oil line

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: Mytilus shell debris throughout segment

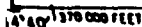
CLEANUP PRECAUTIONS: NONE

MAMMALS: Otters Harbor Seals Sea Lions Whales
 Other NONE

BIRDS: NONE

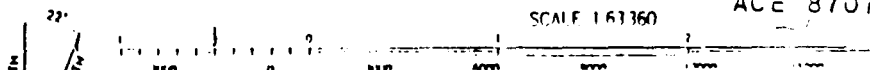
GENERAL OBSERVATIONS: Oil band in mid tidal band where there
not much ecological impact. Oil is down grass at base of
grass slope Oiled Fucus drift present at high tide line.

+



by photogrammetric methods from aerial photographs
1982. Map not field checked

AC E 8707882



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09 /89

SHORELINE SEGMENT SL-3

LOCATION: (see enclosed map) Sturgeon Lagoon-East shore of north
lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means.

Priorities Considerations: This bay has been designated a sensitive area due to sockeye, pink and chum salmon runs.

Ecological Constraints (from site survey): Do not remove live grass from oiled grass areas. Avoid low intertidal zone mussel beds.

Archeological Constraints (from site survey):

Cleanup crews anchored in the northeast arm of the lagoon should be restricted in the active beach. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

ACE 8707883

SHORELINE OIL EVALUATION FORM - NODIAE

Date: JUNE 4/89 / Time: 11:25

Observer: D. Howes

Surveyed From: Foot / Boat / Helio / Plane

Weather: Good / Cloudy / Rain / Snow

LOCATION

LOCATION STURGEON LAGOON - EAST SHORE

SEGMENT I.D. SL-3

LENGTH OF SHORELINE SEGMENT: 875 m

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

SHORELINE:

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

Slope: LAND / HANG / VEP

Wave Exposure: High / Med / Low

Sediment: S-15 % / C-55 % / P-15 % / G % / S-15 % / M % / R %

Drift Debris on Beach: Yes / No

Supra / Upper / Mid / Lower Type logs
(occasional)

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % _____ No. Bands _____ Width _____

Sporadic: Y/N Segment % 100 Min/Max Dia 5-25cm Impact Width 5-6m

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: _____ cm SU / SP / UP / MID / LO

Layers? Yes / No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil 30 % Spattered 10 % H / M / L / VL Sheen 4 %

OIL WEATHERING (OW)

Fresh Oil _____ % SU / SP / VP / MID / LO Choc Mousse 100 % SU / SP / VP / MID / LO

Pancake Mousse _____ % SU / SP / VP / MID / LO Asphalt Mousse _____ % SU / SP / VP / MID / LO

Tar Formation _____ %

Comments:

NO OBSERVED PENETRATION OF OIL
TEXTURE OF BEACH CHANGES TO NORTH (SEE SKETCH)
ONE PATCH OF SHEEN OBSERVED
SMALL SPATTER / FREE OIL ON PEBBLES / CORALS / BOULDERS AND ON BEACH SURFACE
OIL COATING ON TINE GRASS (SOME)

DOCUMENTATION:

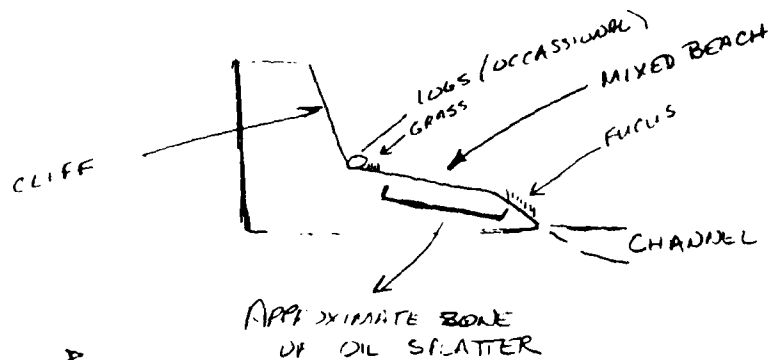
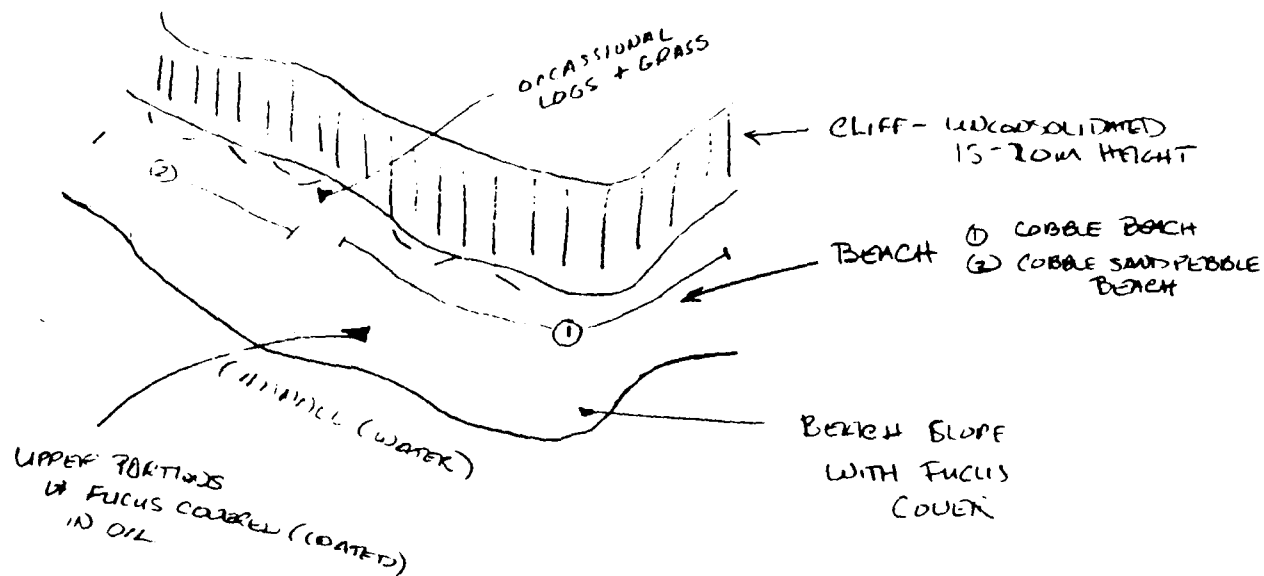
Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) Dmc - 11

Sample Numbers Collected: N/A

SL-3



ESTIMATED CROSS-PROFILE
OF SEGMENT

ACE 8707880

LOCATION: Sturgeon Bay SITE: East shore OBSERVER: J. TARDY
 LOCATION PREFIX: SL SEG. NO.: 3 LENGTH: 275 (M)
 DATE: 6/4/89 TIME (HHMM): 1:25 TIDE HT.: -0.75 (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

low ITZ - along channel -

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

low ITZ - along channel

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

medium to low ITZ below oil band into channel

Littering

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: Fucus mytilus Balanus in low ITZ along channel

banks healthy / Midtidal Fucus oiled / Oil in dune grass at high ITZ

CLEANUP PRECAUTIONS: If there is any clean-up, avoid low ITZ

mussel beds & Balanus on rocks.

MAMMALS: Otters Harbor Seals Sea Lions Whales

Other Deer Tracks at High ITZ

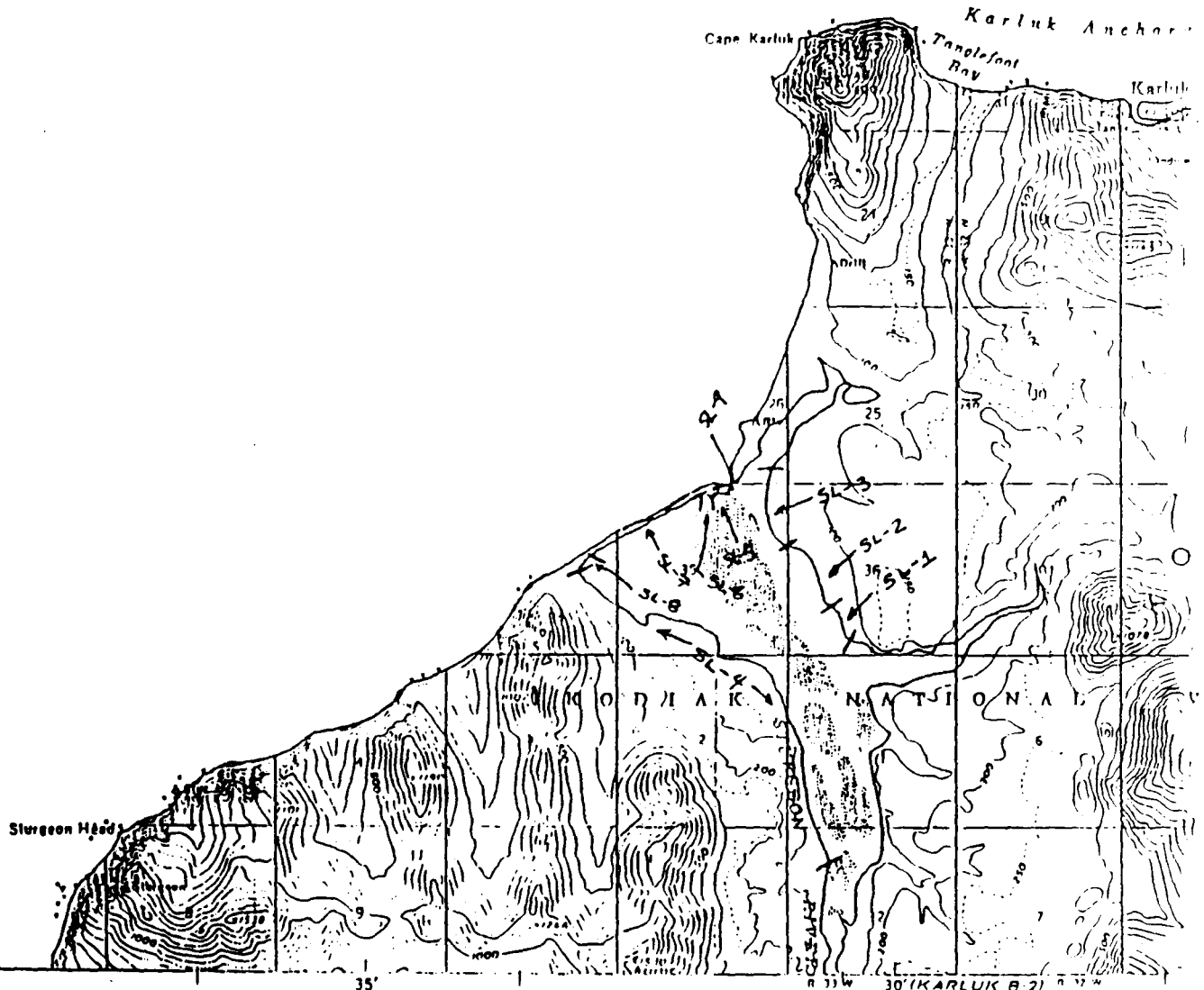
BIRDS: None

GENERAL OBSERVATIONS: Oil in dune grass and a little oiled

drift algae high ITZ at base of grass slope

Remove oiled drift & and oiled debris in grass, but do not remove live grasses.

S H E E T 1 K



1:50,000 FEET
 Prepared, edited, and published by the Geological Survey
 Sponsored by NOSC/MOAA and USCE
 Derived by photogrammetric methods from aerial photographs
 11-1192. Map not field sketched

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-4

LOCATION: (see enclosed map) Southwest side of Sturgeon Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time due to no oil.

Priorities Considerations:

Ecological Constraints (from site survey): None, since no oiling was observed anywhere along this segment and cleanup is not recommended.

Archeological Constraints (from site survey):

If cleanup is conducted, an archaeological monitor should be present during cleanup of the northwest 1/3 of the segment. If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - NODIAK

Date: JUNE 4/89 / Time: _____

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Hazy

LOCATION

LOCATION STURGEON BAY - WEST SIDE

SEGMENT I.D. SL-4

LENGTH OF SHORELINE SEGMENT: 2390 m

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

SHORELINE:

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

Slope: LAWS/HANG/VED

Wave Exposure: High/Med/Low

Sediment: BD-5 % / C3-5 % / P70 % / G ___ % / S20-25 % / M ___ % / R ___ %

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % _____ No. Bands _____ Width _____

Sporadic: Y/N Segment % _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: _____ cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil _____ % Spattered _____ % H/H/L/VL Chocn _____ %

OIL WEATHERING (OW)

Fresh Oil _____ % SU/SP/VP/MID/LO Choc Mousse _____ % SU/SP/VP/MID/LO

Pancake Mousse _____ % SU/SP/VP/MID/LO Asphalt Mousse _____ % SU/SP/VP/MID/LO

Tar Formation _____ %

Comments:

NO OIL OBSERVED - 100% OF SEGMENT SURVEYED BY HELICOPTER
- 30% OF SEGMENT TRAVELLED BY FOOT

DOCUMENTATION:

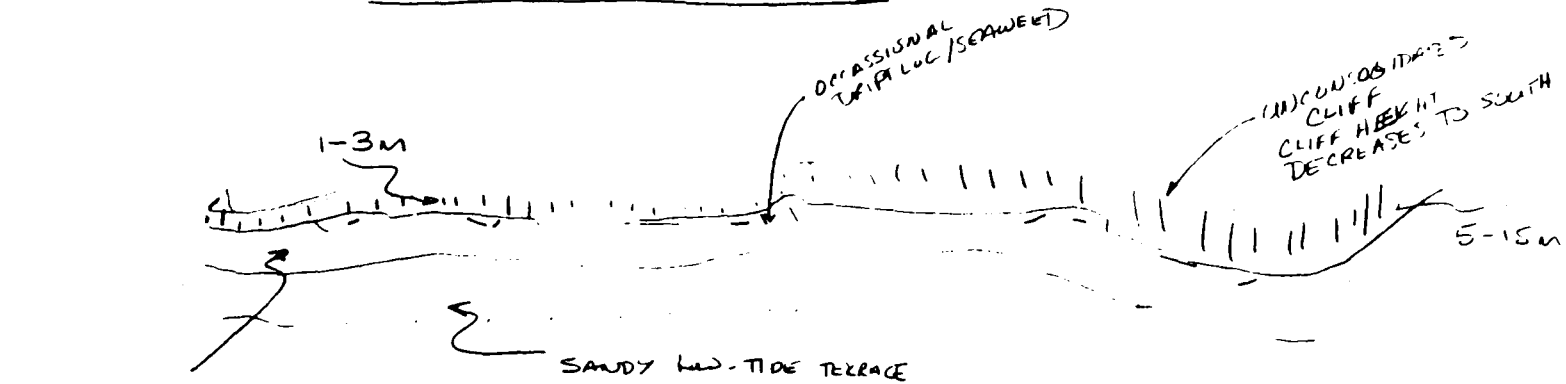
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC-11 + DMC-12

Sample Numbers Collected: N/A

SL-4 (SEGMENT WALKED)



- MIXED BEACH
Texture varies from:
- ① cobble pebble beach over sandy gravels
 - ② cobble sand pebble beach



ESTIMATE CROSS-UNIT PROFILE

LOCATION: SW side of SURGEON LAGOON SITE: _____ OBSERVER: D. McCormick
LOCATION PREFIX: SL SEG. NO.: 4 LENGTH: 2390 (M)
DATE: 6/4/89 TIME (HHMM): 1240 TIDE HT.: -1.5 (M)
OILED ZONE: Splash High Medium Low No Oil
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Live at low ITZ - in debris strand at high ITZ

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

Shells only

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

Dense only on larger boulders

Littorina

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)

OTHER OBSERVATIONS: coagula tide flats; crab shells, dense algal mat
at lower ITZ - clear

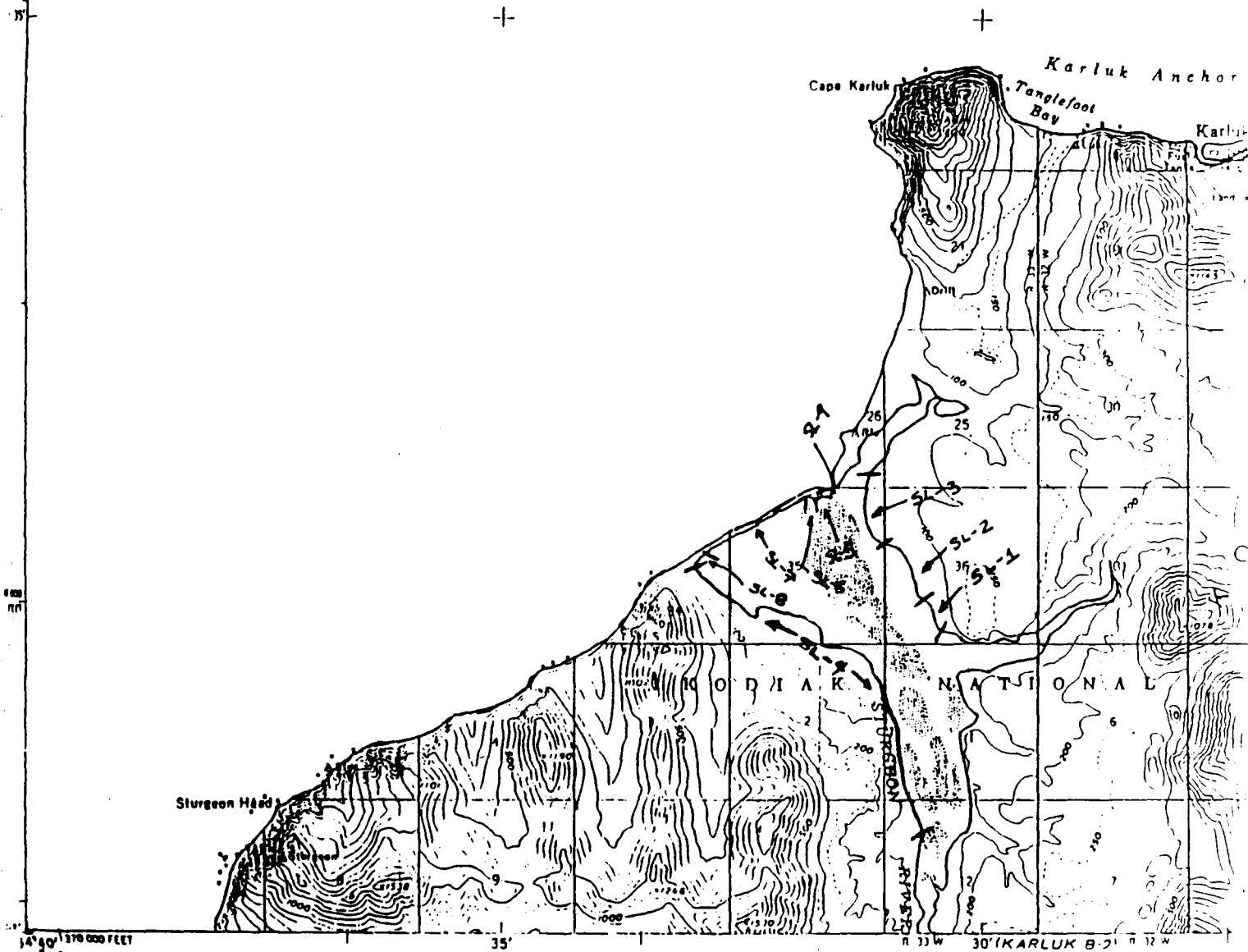
CLEANUP PRECAUTIONS: None

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other 1 starry flounder - half eaten but alive

BIRDS: eagles, gulls, sandpipers, terns

GENERAL OBSERVATIONS: This beach had no oil on it

S H E E T



Map prepared, edited, and published by the Geological Survey
 under contract to the U.S. Navy and USCE
 by photogrammetric methods from aerial photographs
 1952. Map not field checked

22' SCALE 1:63,360 ACE 070752

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89 SHORELINE SEGMENT SL-5

LOCATION: (see enclosed map) Sturgeon Lagoon-West side at east
end of Cobble Spit

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means. This
segment may be a lower priority than SL-7.

Priorities Considerations: This bay is designated sensitive due
to sockeye, pink and chum salmon runs.

Ecological Constraints (from site survey): During manual cleanup
of oil coated rocks, avoid cross-contamination to lower inter-
tidal zone and clean lagoon channel.

Archeological Constraints (from site survey):

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

Charles E. Hines
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - NORTH

Date: JUNE 4/89 / Time: 1400

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun Cloud Rain Clear Wind Light

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-5

LENGTH OF SHORELINE SEGMENT: 75 m

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

SHORELINE:

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

Slope: LAKE/UNGRAVEL

Wave Exposure: High/Med/Low

Sediment: B25% / C60% / P15% / G 0% / S 0% / M 0% / R 0%

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 15-20cm

Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1

Est. Oil Thickness where > 1cm: 1 cm SU / SP UP MID / LO

Est. Oil Penetration: 4-9 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 86 % Spattered 5 % H/H/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 100 % SU/SP 4E MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 0 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

NO EVIDENCE OF OIL ON DRIFT DEBRIS

PENETRATION UP TO ABOUT 10 CM FILLING IN PLACES. HOLES IN STONES

OIL - CONTINUOUS BANDS - MOUSSE CHOCOLATE

SPATTER ON THE COBBLES

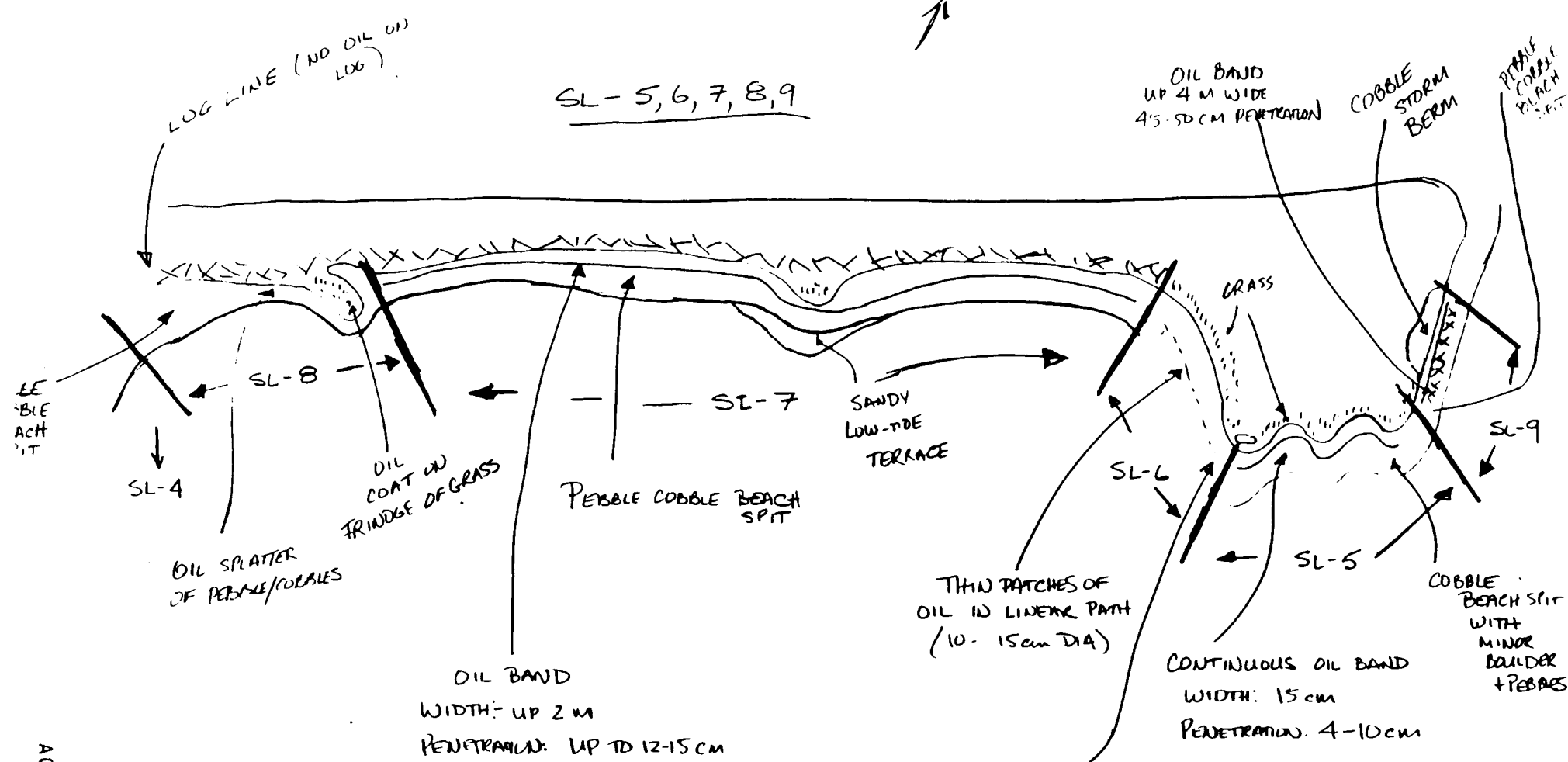
DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

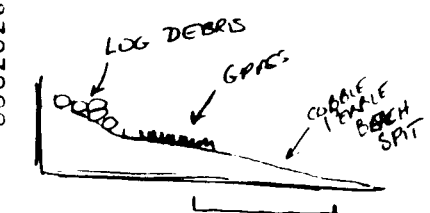
VTR: Y/N Y Tape Number(s) _____

Photography: Y/N _____ Roll Number(s) DMC-12

Sample Numbers Collected: N/A



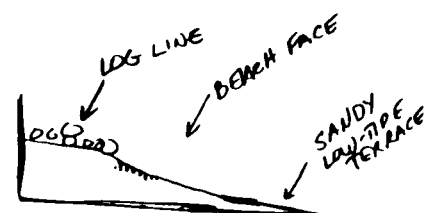
ACE 8707900



APPROX. ZONE OIL IMPACT

ESTIMATED CROSS-PROFILE

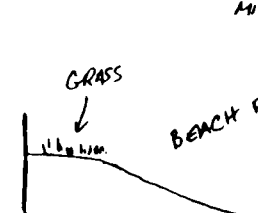
SL-8



APPROX. ZONE OF IMPACT

ESTIMATED CROSS-PROFILE

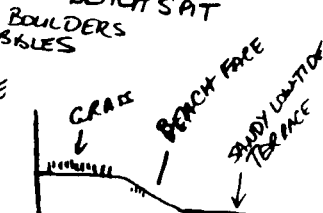
SL-7



APPROX. ZONE OF IMPACT

ESTIMATED PROFILE

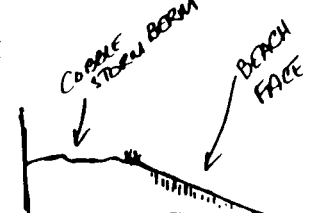
SL-6



APPROX. ZONE OF IMPACT

ESTIMATED PROFILE

SL-5



APPROX. ZONE OF IMPACT

ESTIMATED PROFILE

SL-9

ENVIRONMENTAL EVALUATION

Just inside hook of spit on NW side of Lagoon entrance

LOCATION: SITE: OBSERVER: D McCormick

LOCATION PREFIX: SL SEG. NO.: 5 LENGTH: 75 (M)

DATE: 6/4/89 TIME (HHMM): 1400 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

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

Very dense mussel beds

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

Littorina

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

Sub & low ITZ

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

In stream channel

OTHER OBSERVATIONS: sponges in debris line at high ITZ; very dense population of (presumably) salmon fry associated with seaweed patches in lagoon channel; clam shells

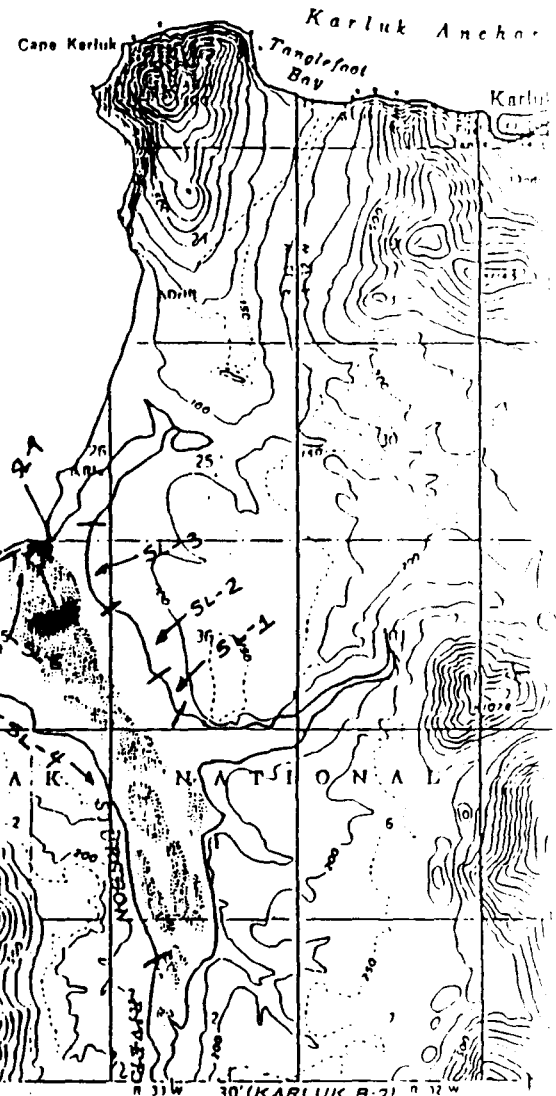
CLEANUP PRECAUTIONS: during manual cleanup of oiled rocks stay away from clean lower ITZ.

MAMMALS: Otters Harbor Seals Sea Lions 3 Whales
Other

BIRDS: semipalmated plover

GENERAL OBSERVATIONS: This area is very rich in biota, very sensitive due to salmon populations. Any cleanup should occur away from lower ITZ so cross-contamination from oiled bank at high ITZ does not take place.

S H E L I A



Sturgeon Head

4° 50' 1370 000 Feet

35°

31°

30°

KARLUK B-21

12°

Maped, edited, and published by the Geological Survey
 by MOSMMAA and USCE
 by photogrammetric methods from aerial photographs
 1952. Map not field checked

22°

SCALE 1:61760

ACE 8707902

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-6

LOCATION: (see enclosed map) Inside hook of southwest Spit of
Sturgeon Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- Manually remove surface oil by appropriate means.

Priorities Considerations: This bay has been designated sensitive, due to sockeye, pink and chum salmon runs.

Ecological Constraints (from site survey): Stay out of lower intertidal zone. Do not allow oil to get into water channels.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - MONTAK

Date: JUNE 4/89 Time: 14:20

Observer: D. HOWES

Surveyed From: Boat/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Day

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-6

LENGTH OF SHORELINE SEGMENT: 50 m

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

SHORELINE:

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

Slope: LAND/WANG/VEP

Wave Exposure: High/Med/Low

Sediment: B 0% / C 75% / P 15% / G ___% / S ___% / M ___% / R ___%

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment # ___ No. Bands ___ Width ___

Sporadic: Y/N Segment # 100 Min/Max Dia 10-15m Impact Width 1-2m

Est. Oil Thickness where > 1cm: ___ cm SU / SP / UP / MID / LO

Est. Oil Penetration: 2-4 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers ___ Oil Weathering ___

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

OIL MORPHOLOGY

Pooled Oil ___% "Free" Oil 30% Spattered 70% H/M/L/VL Sheen ___%

OIL WEATHERING (OW)

Fresh Oil ___% SU/SP/VP/MID/LO Choc Mousse 100% SU/SP/VP/MID/LO

Pancake Mousse ___% SU/SP/VP/MID/LO Asphalt Mousse ___% SU/SP/VP/MID/LO

Tar Formation ___%

Comments:

OIL - SPATTER ON BOULDERS/CORBLES
- FREE OIL SPLATS ON BEACH SEDIMENTS
MOST OIL APPEARS TO BE ON THE WAX SURFACE 2-4 CM PENETRATION

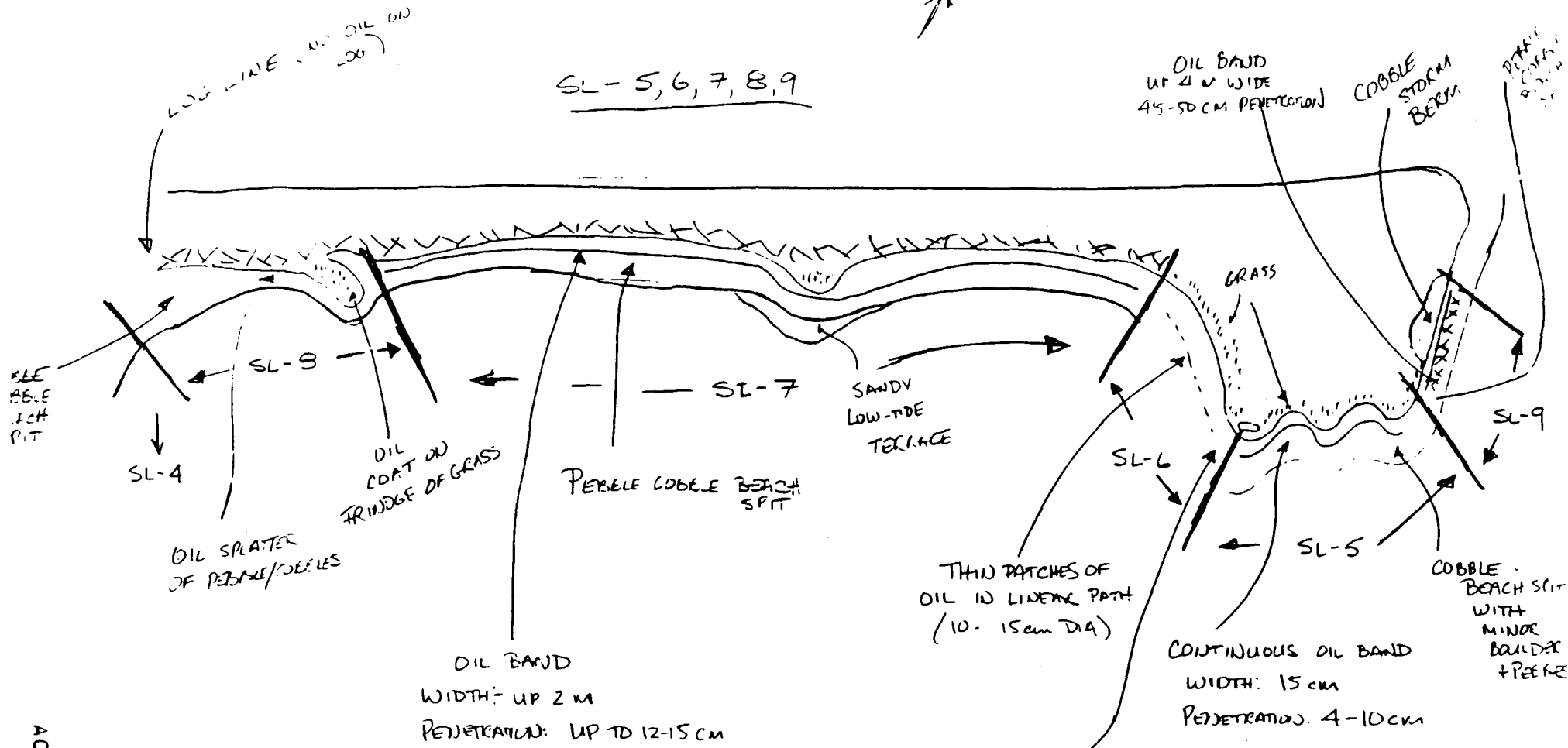
DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

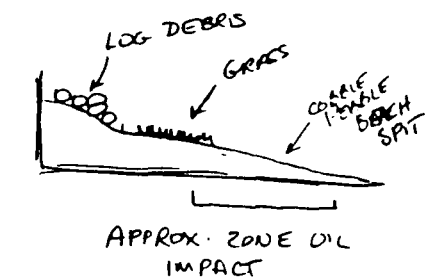
VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) Dmc - 12

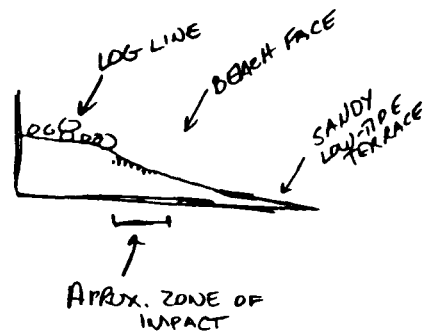
Sample Numbers Collected: N/A



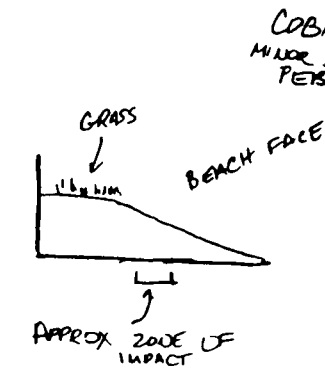
ACE 8707907



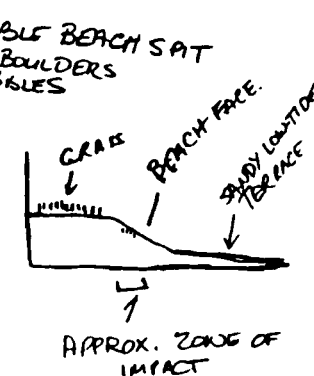
ESTIMATED CROSS-PROFILE
SL-8



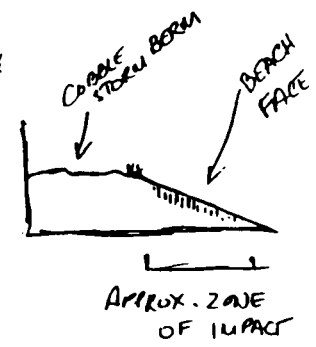
ESTIMATED CROSS-PROFILE
SL-7



ESTIMATED PROFILE
SL-6



ESTIMATED PROFILE
SL-5



ESTIMATED PROFILE
SL-9

LOCATION: Sturgeon Bay SITE: Inside hulk of SW sp. + OBSERVER: J. Turpley
 LOCATION PREFIX: SL SEG. NO.: 6 LENGTH: 50m (M)
 DATE: 6, 4, 89 TIME (HHMM): 1410 TIDE HT.: +0.80 (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
Shell debris

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

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

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

OTHER OBSERVATIONS: _____

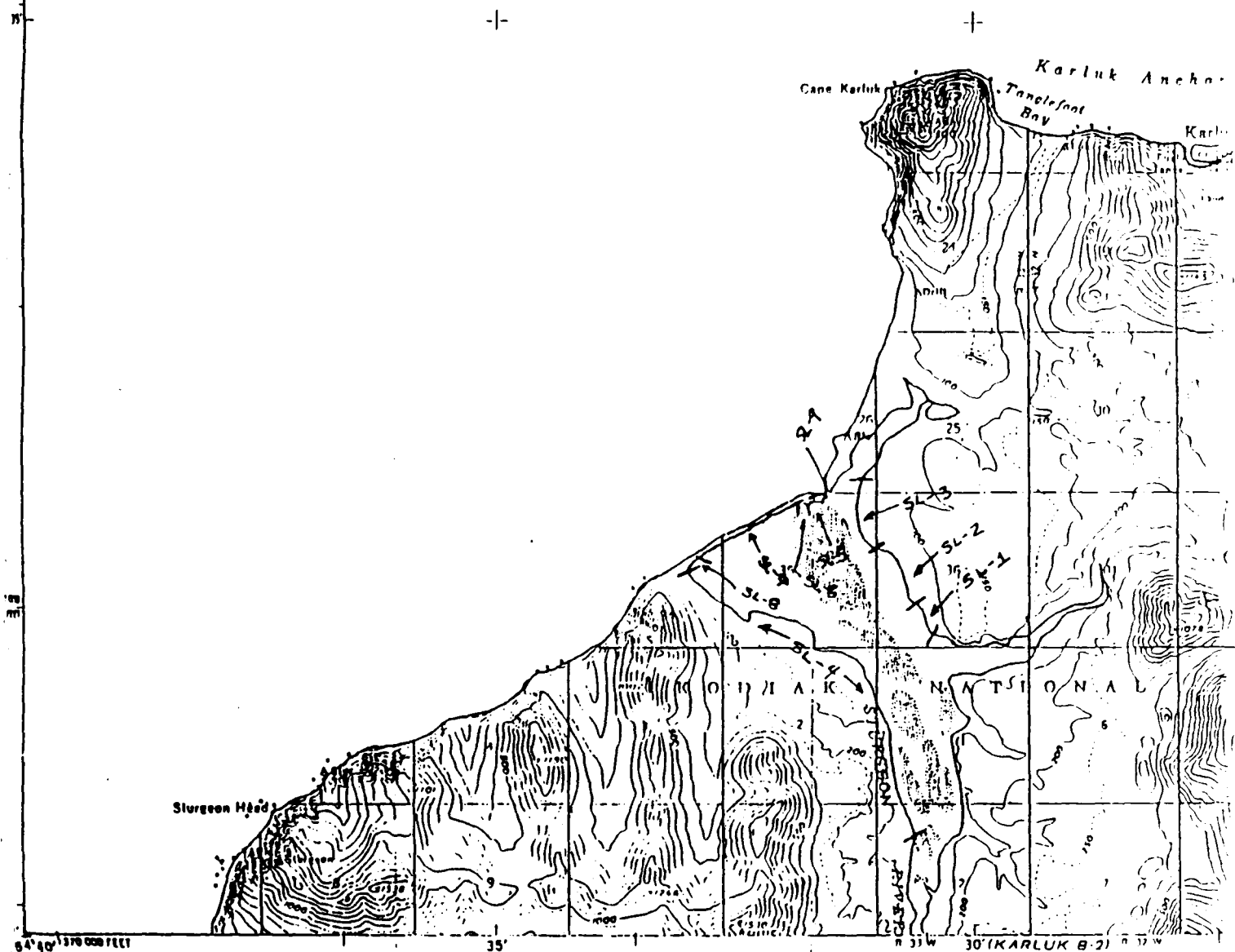
CLEANUP PRECAUTIONS: NONE

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 Other NONE

BIRDS: NONE

GENERAL OBSERVATIONS: Drift is oiled in places. Clean-up procedures
already taking place along this segment. Avoid low ITZ
If oil gets into stream flows may have impact on salmon.

S H E E T 1 X



64° 50' 1370 000 FEET

35°

30°

30°

30°

30°

30°

30°

Maped, edited, and published by the Geological Survey
 Produced by NOS/NOAA and USCE
 Maped by photogrammetric methods from aerial photographs
 1961-1962. Map and field notes.

27

SCALE 1:63,360

ACE 5707910

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-8

LOCATION: (see enclosed map) Sturgeon Lagoon-Southwest end of
Cobble Spit on lagoon side of beach.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/04/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time, due to very light oiling and minimum anticipated environmental impact.

Priorities Considerations:

Ecological Constraints (from site survey): None, since no cleanup is recommended. Oiling is primarily confined to grassy areas in high intertidal zone, which cannot be cleaned. If cleanup is conducted, ecological constraints must be reconsidered.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickman

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - ROUTINE

Date: JUNE 4/89 / Time: 15:00

Observer: D. HOWES

Surveyed From: FOOT/Boat/Helio/Plane

Weather: Sun CLOUD Rain/Snow/Hail

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-8

LENGTH OF SHORELINE SEGMENT: 75 m

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

SHORELINE:

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

Slope: LAKE/HANG/VEP

Wave Exposure: High/Med/Low

Sediment: B 3% / C 33% / P 22% / G 1% / S 1% / M 1% / R 1%

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1

Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1-2

Est. Oil Thickness where > 1cm: 1 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 1/0 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 1% "Free" Oil 20% Splattered 80% H/U/L/VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 1% SU/SP/VP/MID/LO Choc Mousse 1% SU/SP/VP/MID/LO

Pancake Mousse 1% SU/SP/VP/MID/LO Asphalt Mousse 1% SU/SP/VP/MID/LO

Tar Formation 1%

Comments:

LIGHT CHOCO MOUSSE SPLATTER ON GRAVELS
OIL COAT ON GRASS

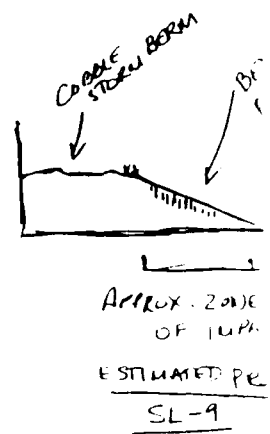
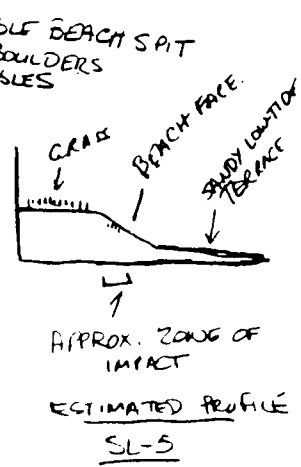
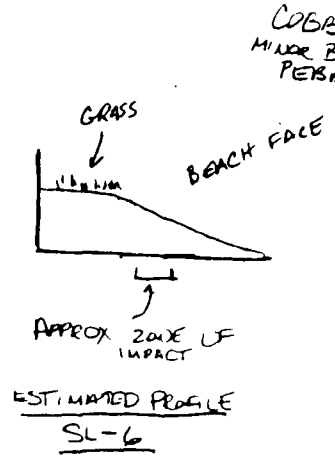
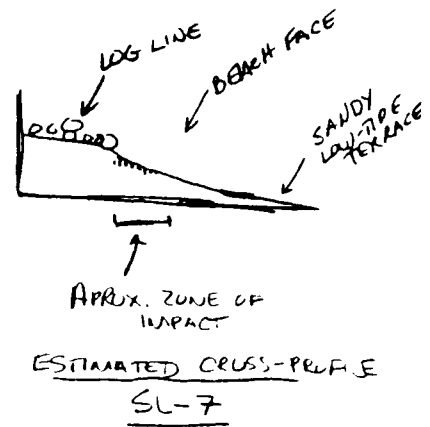
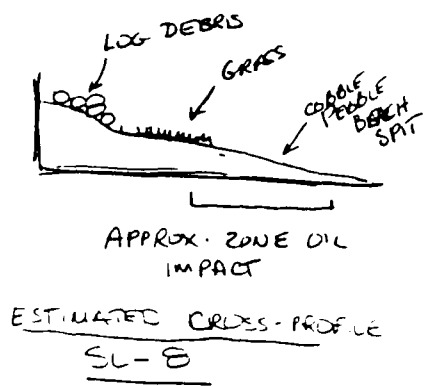
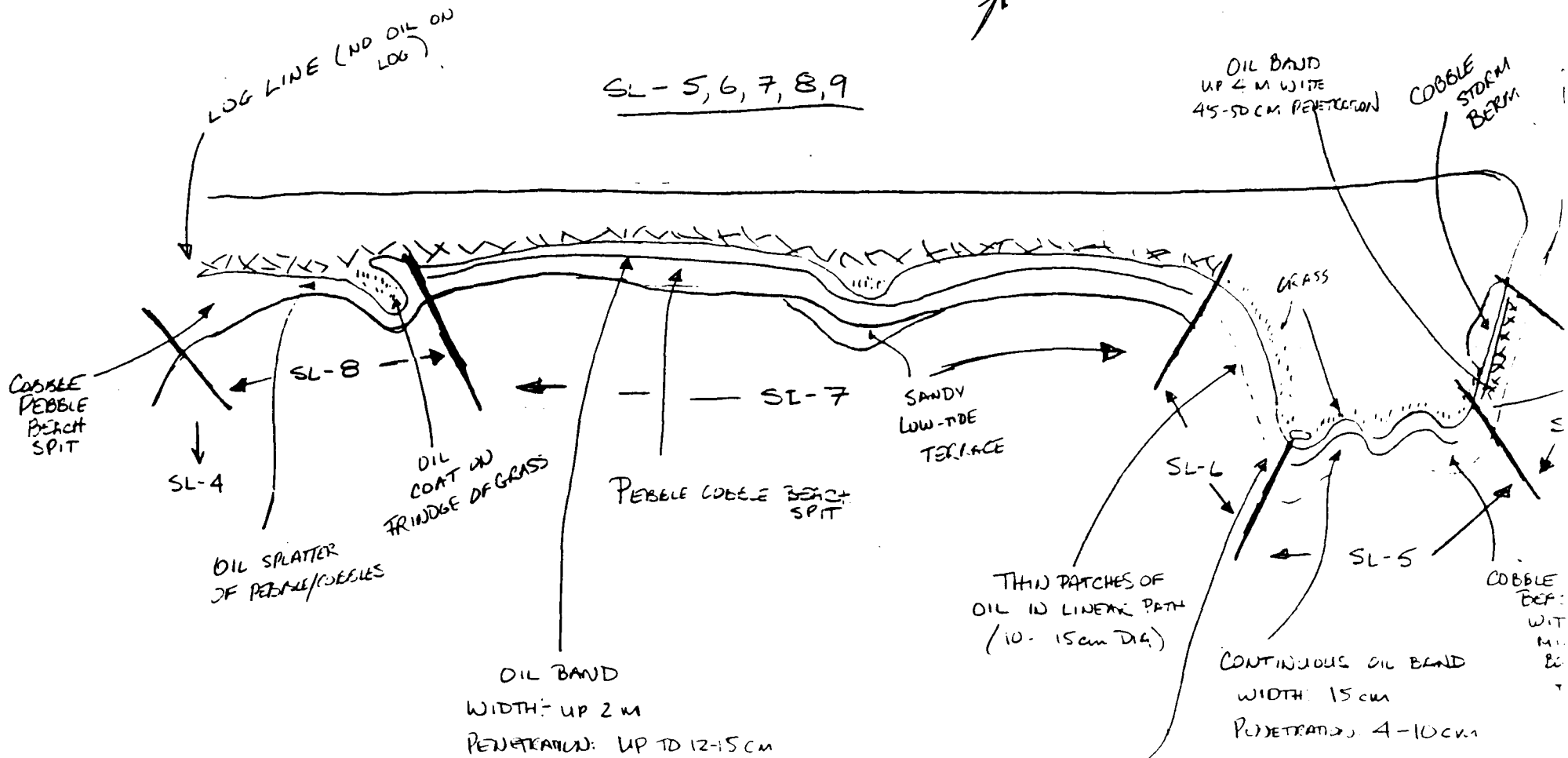
DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: N/A



ACE 8707914

STURGEON LAGOON ECOLOGICAL EVALUATION
Extreme West end of cobble spit

LOCATION: on lagoon side SITE: _____ OBSERVER: D. McCormick

LOCATION PREFIX: SL SEG. NO.: 8 LENGTH: 75 (M)

DATE: 6/4/89 TIME (HHMM): 1500 TIDE HT.: 20 (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: Oiled grass in high ITZ; crab carapaces

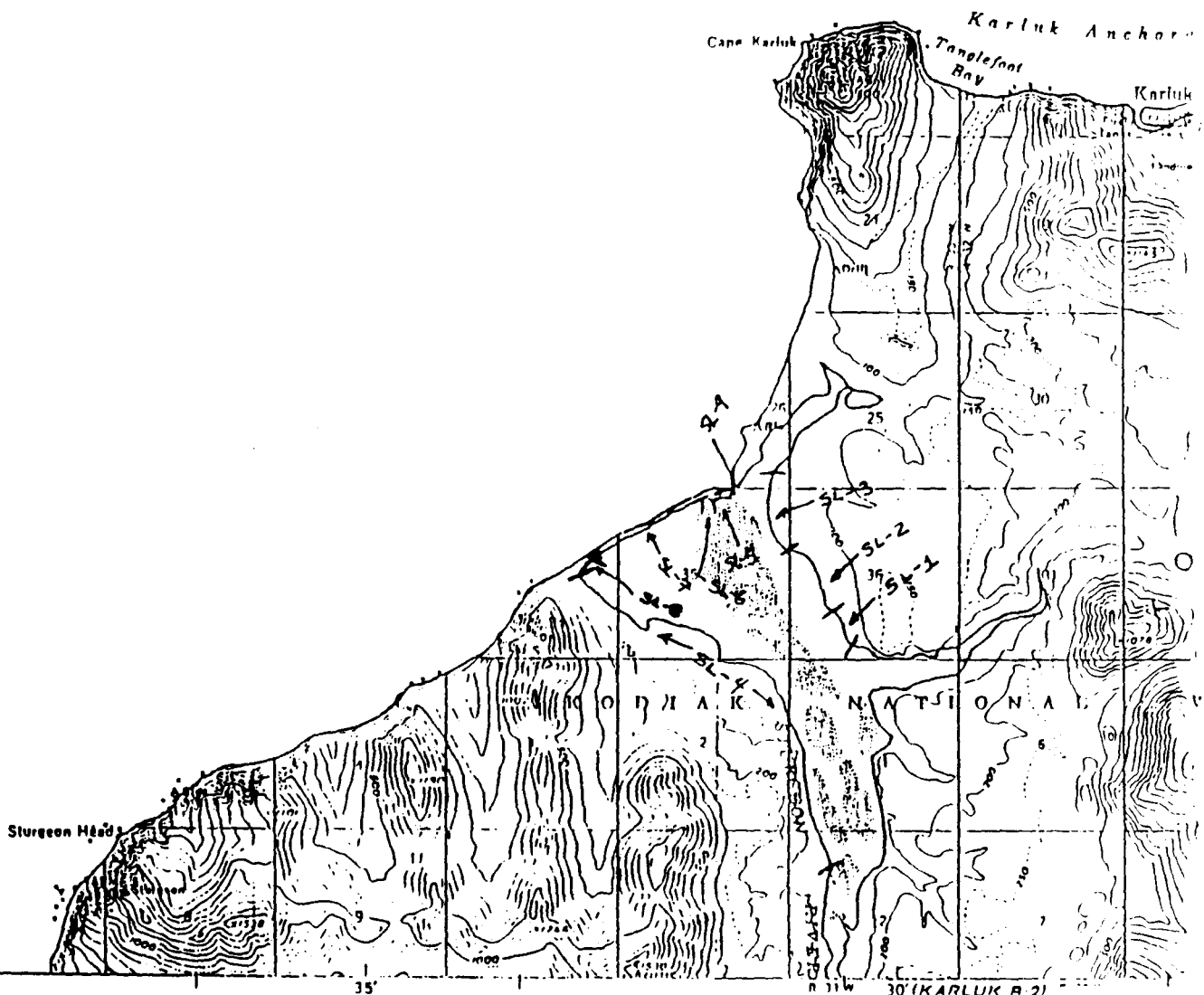
CLEANUP PRECAUTIONS: None, since oiling is confined to grass primarily. Do not remove.

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

BIRDS: _____

GENERAL OBSERVATIONS: patchy oiled seaweed in oiled band at high ITZ - mostly as charcoal masses w/ some splatter on lower end of band

S H E L L K



mapped, edited, and published by the Geological Survey
 prepared by NOS/MOAA and USCE
 compiled by photogrammetric methods from aerial photographs
 1961-1962. Map not field checked

ACE 8707917

SCALE 1:63,160

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-10

LOCATION: (see enclosed map) East side Sturgeon Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time due to very light oiling and minimal anticipated environmental impact.

Priorities Considerations:

Ecological Constraints (from site survey): None, since no cleanup is recommended. If cleanup is conducted, ecological constraints must be reconsidered.

Archeological Constraints (from site survey):

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

Charles F. H. Jones
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Parker

Date: 14 June 89

FOSC: _____

Date: _____

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

ACE 8707918

SHORELINE OIL EVALUATION FORM - KONTAK

Date: JUNE 5/89 Time: 0930

Observer: D. H. WES

Surveyed From: Foot Boat Helio Plane

Weather: Sun Cloud Rain Snow Fog

LOCATION

LOCATION STURGEDA LAGOON - EAST SIDE

SEGMENT I.D. SL-10

LENGTH OF SHORELINE SEGMENT: 2840 m

ACCESS: Foot Vehicle Boat Barge Helio Float Plane

SHORELINE:

Shoreline Type: SPI BEA COV HLD STET

Slope: LANG HANG VER

Wave Exposure: High Med Low

Sediment: B-2 % / C-5 % / P-2 % / G % / S-2 % / M % / R %

Drift Debris on Beach: Yes No

Supra Upper / Mid / Lower Type seaweed

OIL

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

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

OIL DISTRIBUTION

Continuous: Y / N Segment % 10 No. Bands 1 Width 25cm

Sporadic: Y / N Segment % 10 Min/Max Dia 10-25cm Impact Width 25cm

Est. Oil Thickness where > 1cm: 0 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes NO No# Layers 0 Oil Weathering 0

Drift Debris Oiled ? Yes NO Supra Upper / Mid / Lower Amount: 0 / 0 / 0 / 0

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 100 % H / U / L / VL Sheet 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU / SP / VP / MID / LO Choc Mousse 100 % SU / SP UP / MID / LO

Pancake Mousse 0 % SU / SP / VP / MID / LO Asphalt Mousse 0 % SU / SP / VP / MID / LO

Tar Formation 0 %

Comments:

THIS SEGMENT IS ESSENTIALLY FREE OF OIL - ONLY TWO SMALL SPLATTER
PATCHES OF CHOC MOUSSE WERE OBSERVED - NO PENETRATION OF THE OIL
- 60% OF UNIT TRAVERSED ON FOOT, 100% HELIO SURVED INCLUDING TWO
SPOT LANDINGS

DOCUMENTATION:

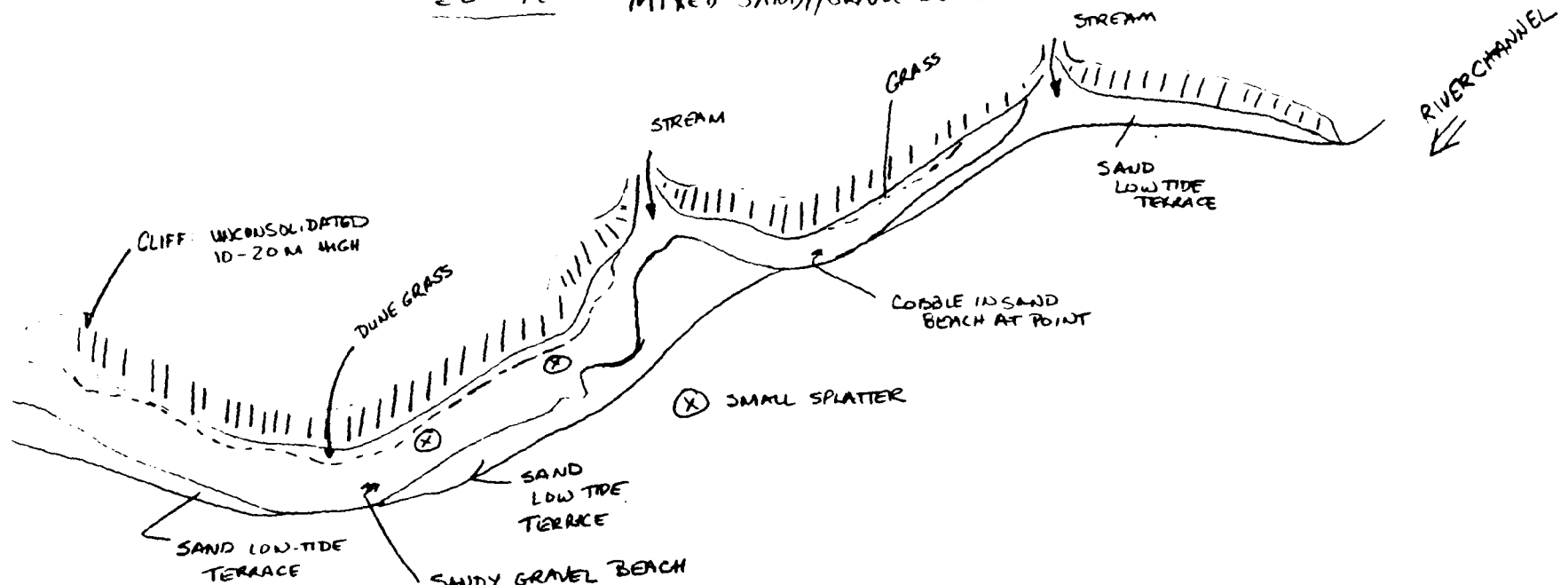
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC 12

Sample Numbers Collected: N/A

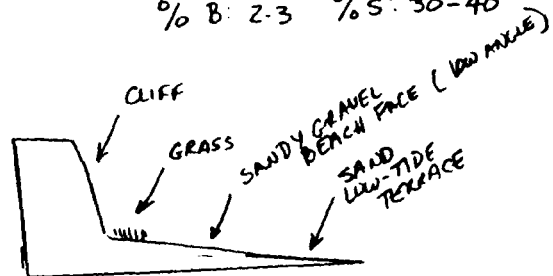
SL-10 MIXED SANDY/GRAVEL BEACH



SANDY GRAVEL BEACH
VARIABLE TEXTURE

% C: 5-10 % P: 50-60

% B: 2-3 % S: 30-40



ESTIMATED CROSS UNIT PROFILE

ECOLOGICAL EVALUATION

E SIDE

LOCATION: STURGEON LAGOON SITE: _____ OBSERVER: D. McCormick

LOCATION PREFIX: SL SEG. NO.: 10 LENGTH: 2840 (M)

DATE: 6/5/89 TIME (HHMM): 0930 TIDE HT.: -1.4 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Present at mid-low TIZ

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

Shells only

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: Crab shells; only 2 mouse patches seen on this entire stretch of beach.

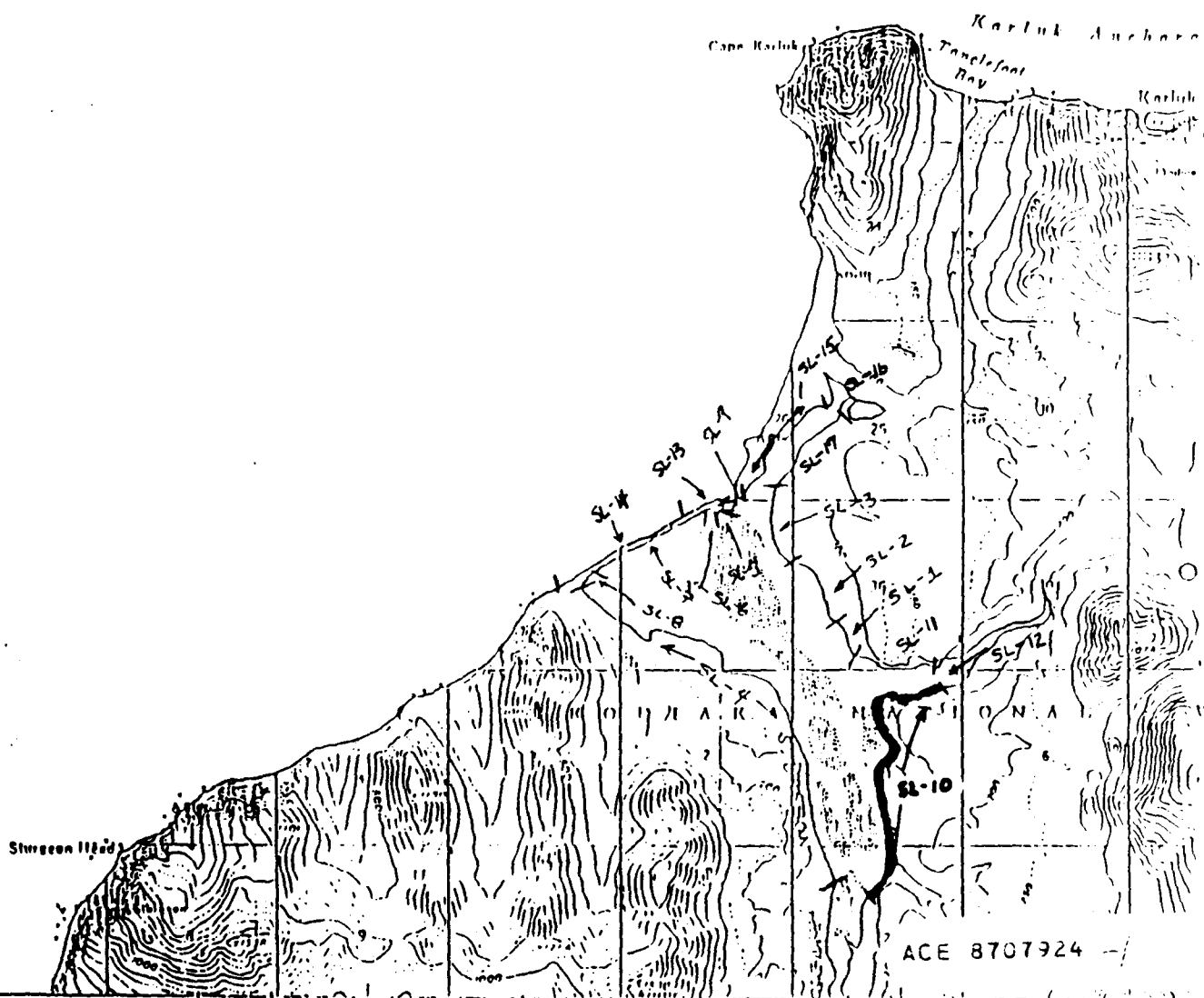
CLEANUP PRECAUTIONS: None.

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

BIRDS: Bald Eagle

GENERAL OBSERVATIONS: No cleanup.

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



ACE 8707924

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-11

LOCATION: (see enclosed map) East side Sturgeon Lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time due to no oil.

Priorities Considerations:

Ecological Constraints (from site survey): None, since no oil was observed.

Archeological Constraints (from site survey):

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

Charles F. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rickert

Date: 14 June 89

FOSC: _____

Date: _____

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

ACE 8707925 +/ -

SHORELINE OIL EVALUATION FORM - ROUTINE

Date: JUNE 5/89 Time: 1015

Observer: D. HOWES

Surveyed From: Foot/Boat/Helicopter/Plane

Weather: Good (Cloudy/Rainy/Sunny)

LOCATION

LOCATION STURGEON LAGOON - EAST SIDE

SEGMENT I.D. SL-11

LENGTH OF SHORELINE SEGMENT: 875 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B5-7 / C___ / PSS / G___ / S25-35 / M___ / R___

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % _____ No. Bands _____ Width _____

Sporadic: Y/N Segment % _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: _____ cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil _____ % Spattered _____ % H/H/L/VL Sheen _____ %

OIL WEATHERING (OW)

Fresh Oil _____ % SU/SP/VP/MID/LO Choc Mousse _____ % SU/SP/VP/MID/LO

Pancake Mousse _____ % SU/SP/VP/MID/LO Asphalt Mousse _____ % SU/SP/VP/MID/LO

Tar Formation _____ %

Comments:

30% TRAVERSED BY FOOT; REST OF SEGMENT SURVEYED BY HELICOPTER
NO OIL OBSERVED

DOCUMENTATION:

Map Aerial photo marking segment boundaries See Attached

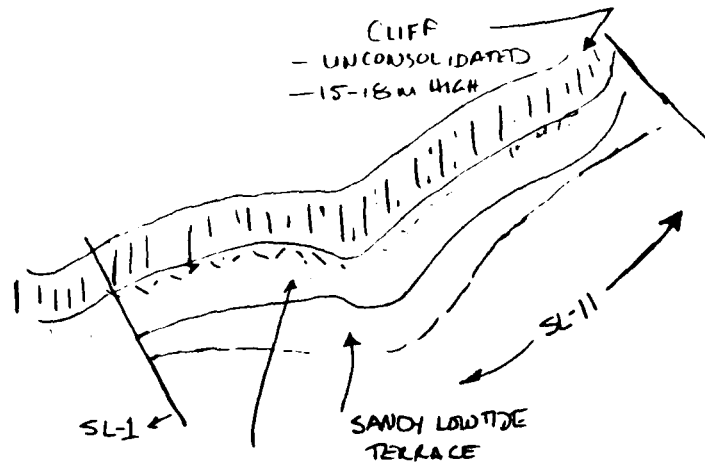
VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

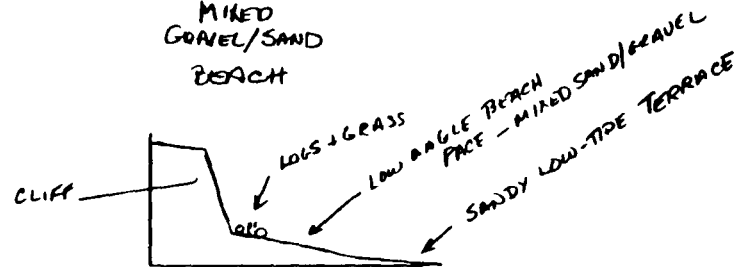
Sample Numbers Collected: N/A

SL-11

MIXED SAND/GRAVEL BEACH



MIXED
GRAVEL/SAND
BEACH



ESTIMATED CROSS UNIT PROFILE

ECOLOGICAL EVALUATION

LOCATION: EAST Side of STURGEON LAGOON SITE: _____ OBSERVER: D. McCormick
 LOCATION PREFIX: SL SEG. NO.: 11 LENGTH: 875 (M)

DATE: 6/5/89 TIME (HHMM): 1015 TIDE HT.: -1.0 (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)
Fucus at strand line

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

Balanus (Barnacles): Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse (Y/N) None (Y/N)
Mud to low ITZ unsoiled, healthy

Littorina
 Patchy (Y/N) Contin. (Y/N) Dense (Y/N) Sparse (Y/N) None (Y/N)
Low to subtidal ITZ

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

OTHER OBSERVATIONS: Amphipods subtidally feeding on algae + at strand line in seaweed debris; divergence crab shells, bull kelp

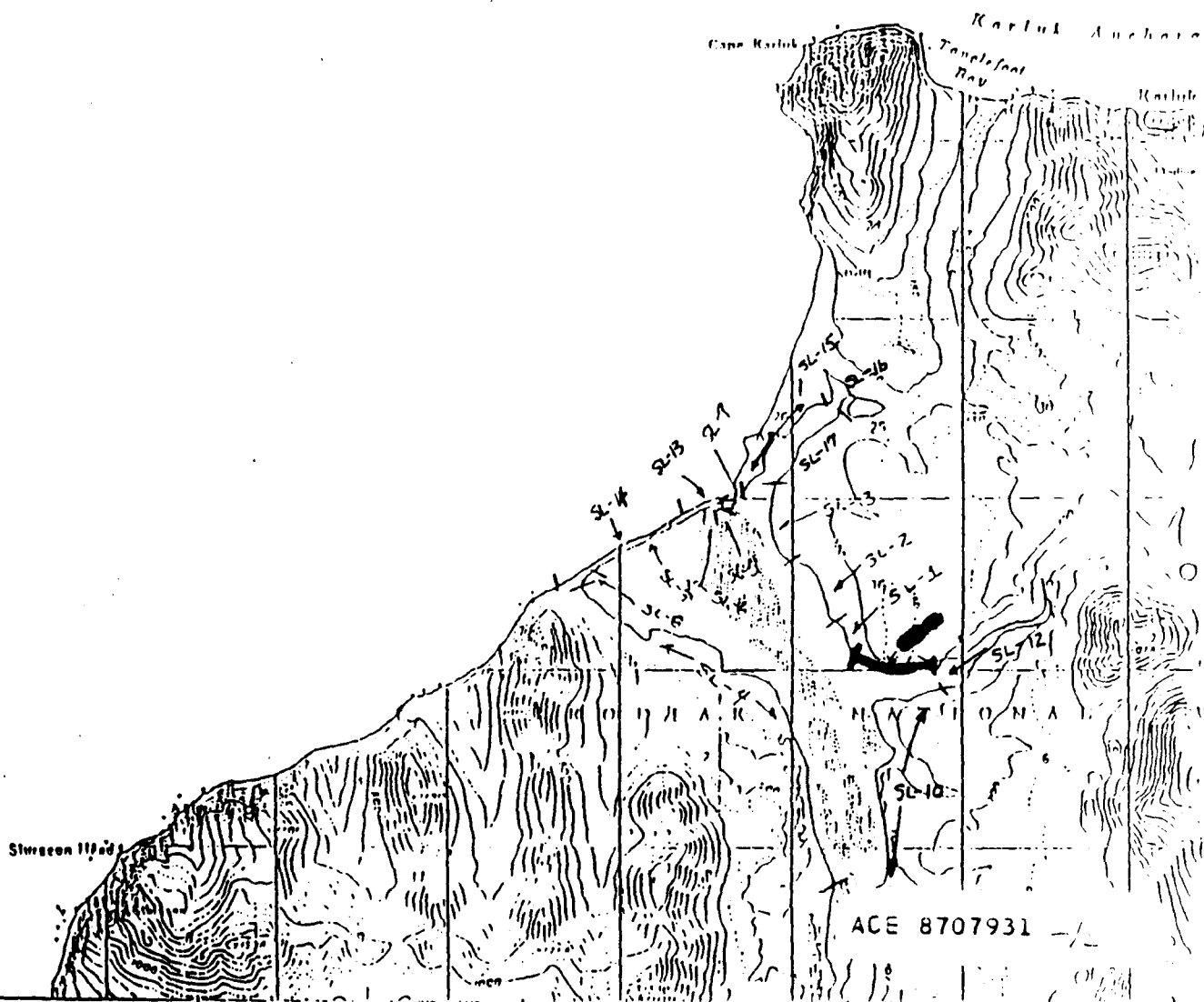
CLEANUP PRECAUTIONS: None

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

BIRDS: _____

GENERAL OBSERVATIONS: No cleanup - no oil

3 4 5 6 7



ACE 8707931

1000 FEET

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89 SHORELINE SEGMENT SL-12

LOCATION: (see enclosed map) Sturgeon Lagoon-East lagoon
(Estuary)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended due to no oil.

Priorities Considerations: This area has been declared sensitive due to sockeye, pink and salmon runs.

Ecological Constraints (from site survey): None, since no oil was observed and cleanup is not recommended.

Archeological Constraints (from site survey):

If cleanup is planned, a cultural resource assessment should be completed.

Charles E. H. Smith
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Ruckman

Date: 14 June 89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KONTAK

Date: JUNE 5/89 / Time: _____

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Icy

LOCATION

LOCATION STURGEON LAGOON - EAST SIDE

SEGMENT I.D. SL-12

LENGTH OF SHORELINE SEGMENT: 3500 m

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

SHORELINE:

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

Slope: LAAG/HANG/VER

ESTUARY

Wave Exposure: High/Med/Low

Sediment: B ___ % / C ___ % / P 60 % / G ___ % / S 40 % M ___ % / R ___ %

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % _____ No. Bands _____ Width _____

Sporadic: Y/N Segment % _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: _____ cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil _____ % Spattered _____ % H/U/L/VL Sheen _____ %

OIL WEATHERING (OW)

Fresh Oil _____ % SU/SP/VP/MID/LO Choc Mousse _____ % SU/SP/VP/MID/LO

Pancake Mousse _____ % SU/SP/VP/MID/LO Asphalt Mousse _____ % SU/SP/VP/MID/LO

Tar Formation _____ %

Comments:

ACE 8707933

THIS UNIT IS A DELTA/ESTUARY WITH CHANNEL & BARS

NO OIL OBSERVED ON BARS OR SEDIMENT ALONG PRIDGE

DOCUMENTATION:

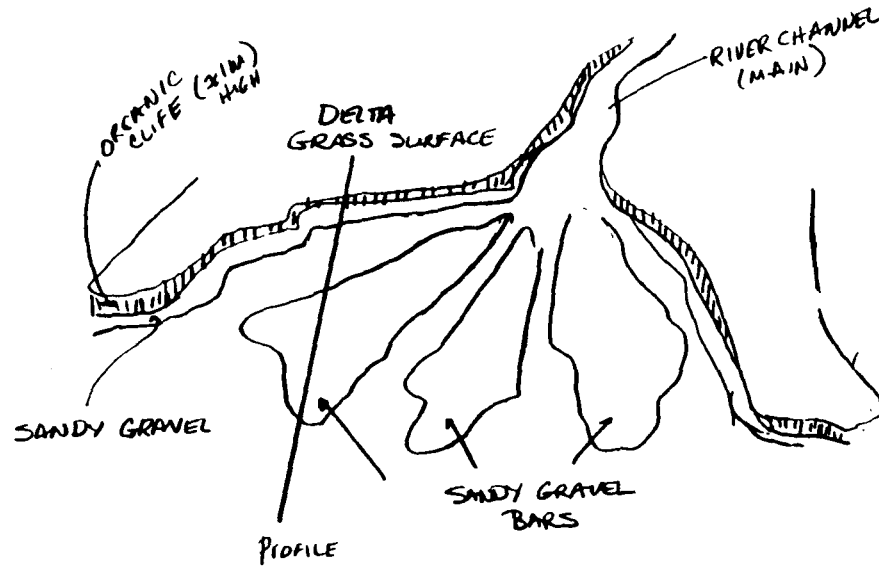
(Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: (Y/N) Roll Number(s) DMC-12

Sample Numbers Collected: N/A

SL-12 - ESTUARY/DELTA



ESTIMATED CROSS-PROFILE
OF UNIT

ECOLOGICAL EVALUATION

LOCATION: Sturgeon Bay SITE: East Lagoon OBSERVER: J. Tangle
 LOCATION PREFIX: SL SEG. NO.: 12 LENGTH: 3500 (M)
 DATE: 6/5/89 TIME (HHMM): 1030 TIDE HT.: -0.90 (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

Shells only

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: Algal debris high in grass of estuary.
Marsh grass extensive throughout this segment.

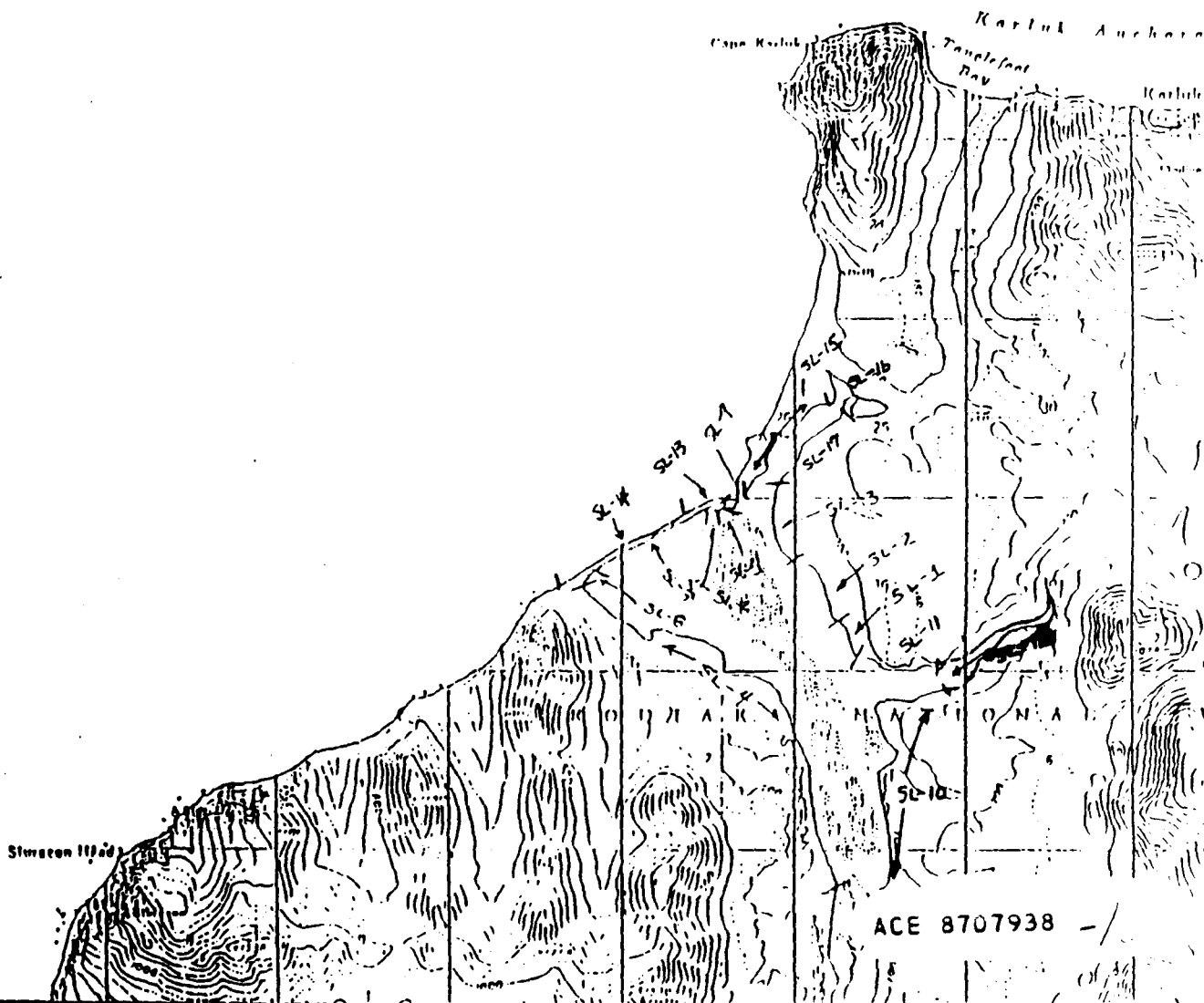
CLEANUP PRECAUTIONS: NONE

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 Other NONE

BIRDS: None

GENERAL OBSERVATIONS: No oil observed. This whole segment is
an estuary and borders part of lagoon. Could smell sulfide
from anoxic muds.

3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-13

LOCATION: (see enclosed map) Sturgeon Lagoon-Ocean side of spit
near mouth.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time, due to light oiling and high energy environment.

Priorities Considerations:

Ecological Constraints (from site survey): None, since no cleanup is recommended. If cleanup is conducted, ecological constraints should be reconsidered.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Rukm

Date: 14 June 89

FOSC: _____

Date: _____

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

ACE 8707939

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - MONTAK

Date: JUNE 5/89 / Time: 10:40

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Icy

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-13

LENGTH OF SHORELINE SEGMENT: 660 m

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

SHORELINE:

Shoreline Type: SPL/BEA/COV/HLD/STET

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: BSS / C40 / P15 / G / SO / M / R

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type LOGS/SEAWEED

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 100 No. Bands 1 Width 1-3 m

Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1

Est. Oil Thickness where > 1cm: 1 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 15 cm SU / SP / UP / MID / LO
LAYER OF STONES

Layers? Yes/No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 1 "Free" Oil 15 Spattered BS H / H / L / VL Choco 1

OIL WEATHERING (OW)

Fresh Oil 1 SU / SP / VP / MID / LO Choc Mousse 70 SU / SP / VP / MID / LO

Pancake Mousse 20 SU / SP / VP / MID / LO Asphalt Mousse 10 SU / SP / VP / MID / LO

Tar Formation 1

Comments:

ACE 8707940

AREA HAS BEEN SUBJECT TO SUCCESSIVE IMPACTS AS THE MOUSSE WEATHERING VARIES FROM CHOCO TO ASPHALT. THE BAND AT BASE BEACH FACE (UPPER 1/2) IS 'RECENT' - IT IS SPLATTER + FREE OIL IN POCKETS - OIL HERE HAS PENETRATED THE SURFACE BOULDER/COBBLE LAYER. ELSEWHERE OIL OCCURS AS A LIGHT SPLATTER ON THE SURFACE COBBLE/BOULDERS NO LAYERS - NO PENETRATION BEYOND SURFACE GRAVEL LAYER. INSUFFICIENT OIL TO MERIT MECHANIZED CLEANING (SMALL SEGMENT), ALSO HIGH NATURAL WAVEY SURF. HELP CLEANING PROCESS AND ~~AND~~ MECHANIZED (WAS MNG) WOULD HARM MUSSELS BELOW. NO CLEANING RECOMMENDED FOR SITE.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

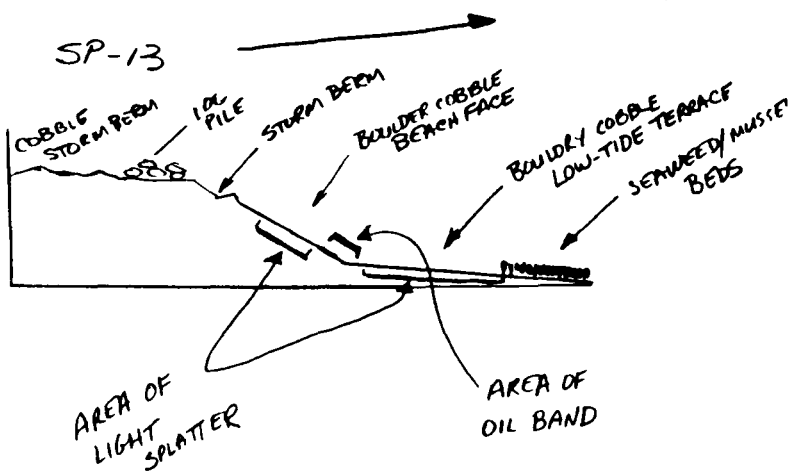
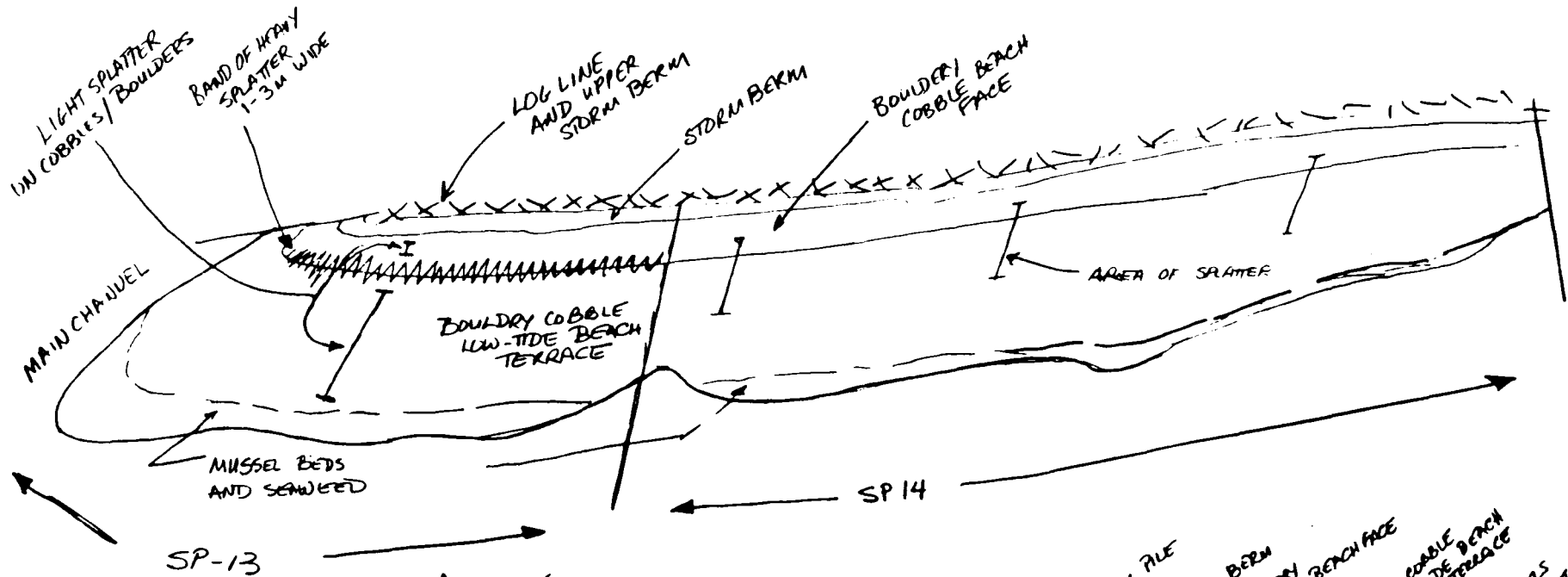
VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DML-12

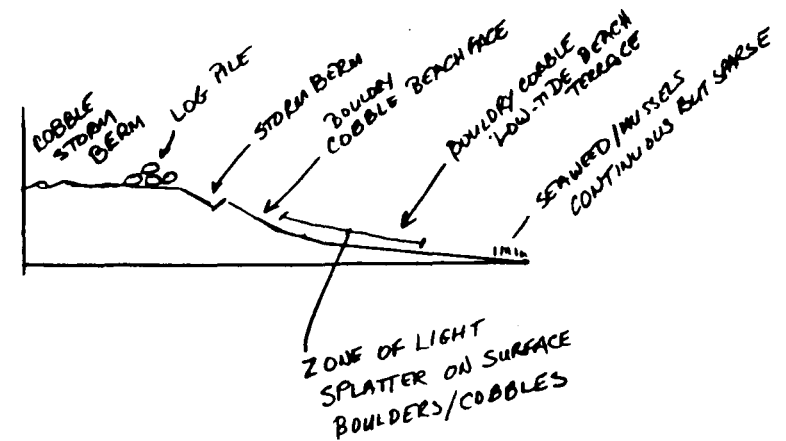
Sample Numbers Collected: N/A

ACE 8707941

SP13 - SP14 - COBBLE SPIT - EXPOSED



CROSS SECTION OF UNIT SP-13



CROSS SECTION OF UNIT SP-14

ACE 8707942

ECOLOGICAL EVALUATION

LOCATION: Struiger Bay SITE: Clamside Spit OBSERVER: J. Temple

LOCATION PREFIX: SL SEG. NO.: 13 LENGTH: 660 (M)

DATE: 6/5/89 TIME (HHMM): 0900 TIDE HT.: -0.80 (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

Located in low ITZ - not oiled

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

Shell debris High ITZ: Located in low ITZ - not oiled

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

Located in low ITZ: not oiled

Littorina

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

High ITZ

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

OTHER OBSERVATIONS: All biota primarily at low ITZ. Biota separated into zones:

Balanus zone; Mytilus/Balanus/Littorina zone; Fucus/Balanus zone; Kelp zone. These zones were 15-25 m wide & the entire length of the segment.

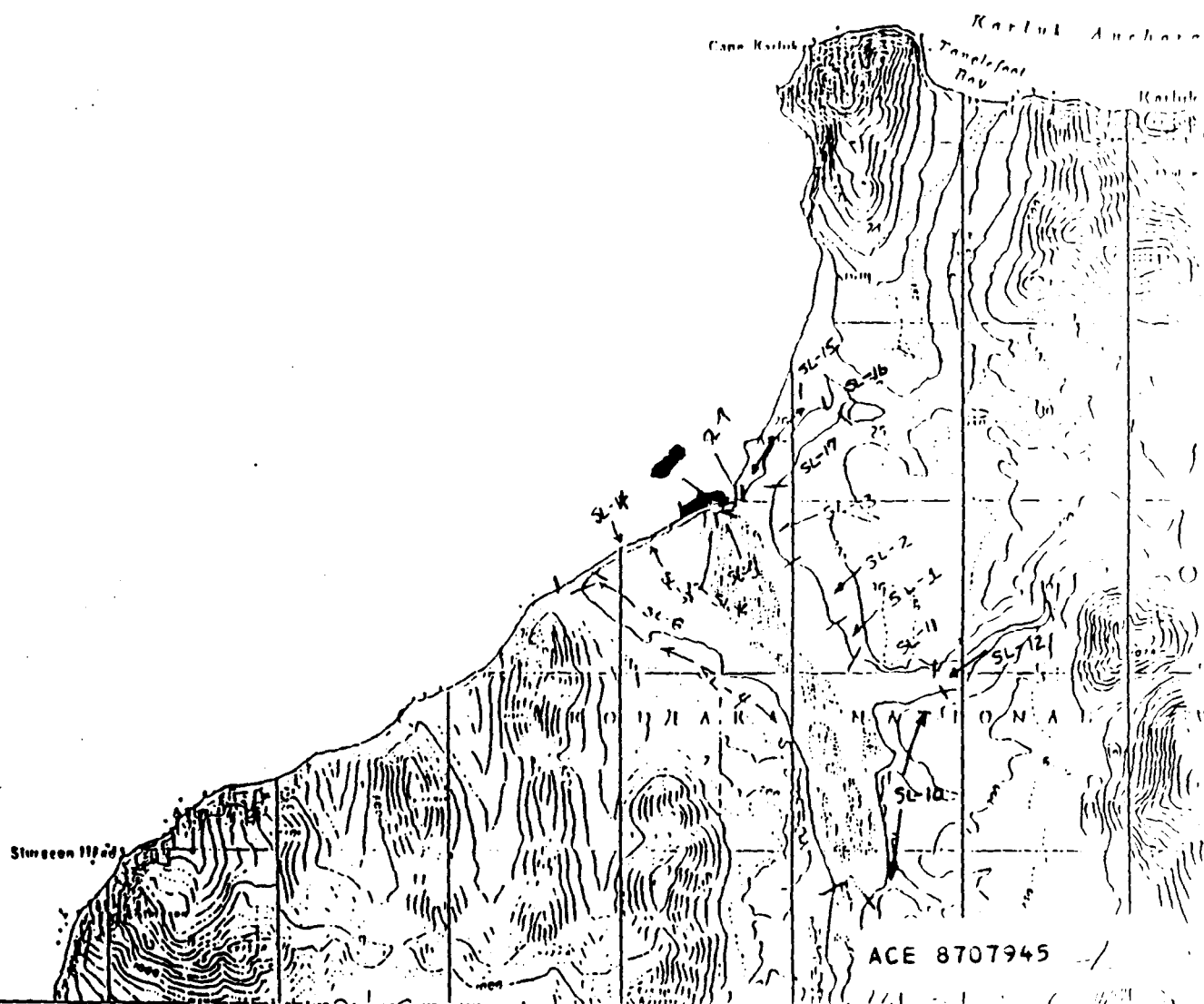
CLEANUP PRECAUTIONS: NONE

MAMMALS: Otters Harbor Seals Sea Lions Whales
Other NONE

BIRDS: NONE

GENERAL OBSERVATIONS: Splattered mousse found from high ITZ down to high edge of Mytilus/Balanus zone.

3 4 5 6 7 8 9



ACE 8707945

1000 FEET

Edited, and published by the Geological Survey

by the Alaska Division

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-14

LOCATION: (see enclosed map) Sturgeon Lagoon-North end ocean side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

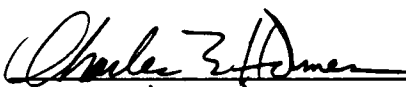
- No cleanup recommended at this time, due to very light oiling, high wave exposure and ecological constraints.

Priorities Considerations:

Ecological Constraints (from site survey): This segment contains very dense mussel beds. Damage to mussel beds from cleanup activity would likely occur.

Archeological Constraints (from site survey):

If cleanup is conducted 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: June 10, 1989

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707946

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - MONTAR

Date: JUNE 5/89 Time: 1100 AM

Observer: DHOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION STURGEDN LAGOON - NORTHEAST

SEGMENT I.D. SL-14

LENGTH OF SHORELINE SEGMENT: 1535 m

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

SHORELINE:

Shoreline Type: SPI/BEA COV/HID/STET

Slope: LAAG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 4% / C 60% / P 15% / G / S 10% / M / R

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

OIL

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

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

OIL DISTRIBUTION

Continuous: (Y)N Segment 100 of unit leaf No. Bands 0 Width 0

Sporadic: (Y)N Segment 100 Min/Max Dia 1/2" - 1" Impact Width 1/2" - 1"

Est. Oil Thickness where > 1cm: _____ cm SU / SP / UP / MID / LO

Est. Oil Penetration: _____ cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil _____ % "Free" Oil _____ % Spattered 100 % H/H/VL Chocn _____ %

OIL WEATHERING (OW)

Fresh Oil _____ % SU/SP/VP/MID/LO Choc Mousse 100 % SU/SP/BE/HT LO

Pancake Mousse 10 % SU/SP/UP/MID LO Asphalt Mousse 20 % SU/SP/UP/MID/LO

Tar Formation _____ %

Comments:

NO FRESH CHOCO MOUSSE IN THIS SEGMENT
SPATTER IS HEAVYLY DISPERSED / OCCASIONAL
SPATTER IS DISTRIBUTED FROM HIGH - MID
100% < 1% OF TOTAL UNIT; OIL OCCUPIES AS SPATTER ON SURFACE COBBLES/BOULDERS

DOCUMENTATION:

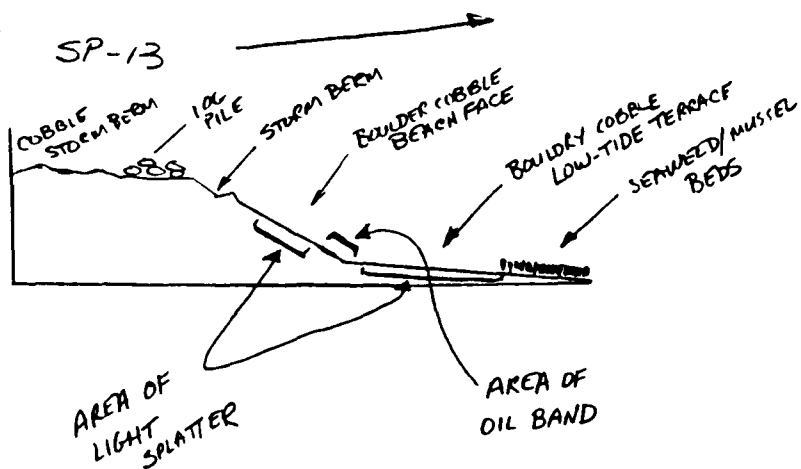
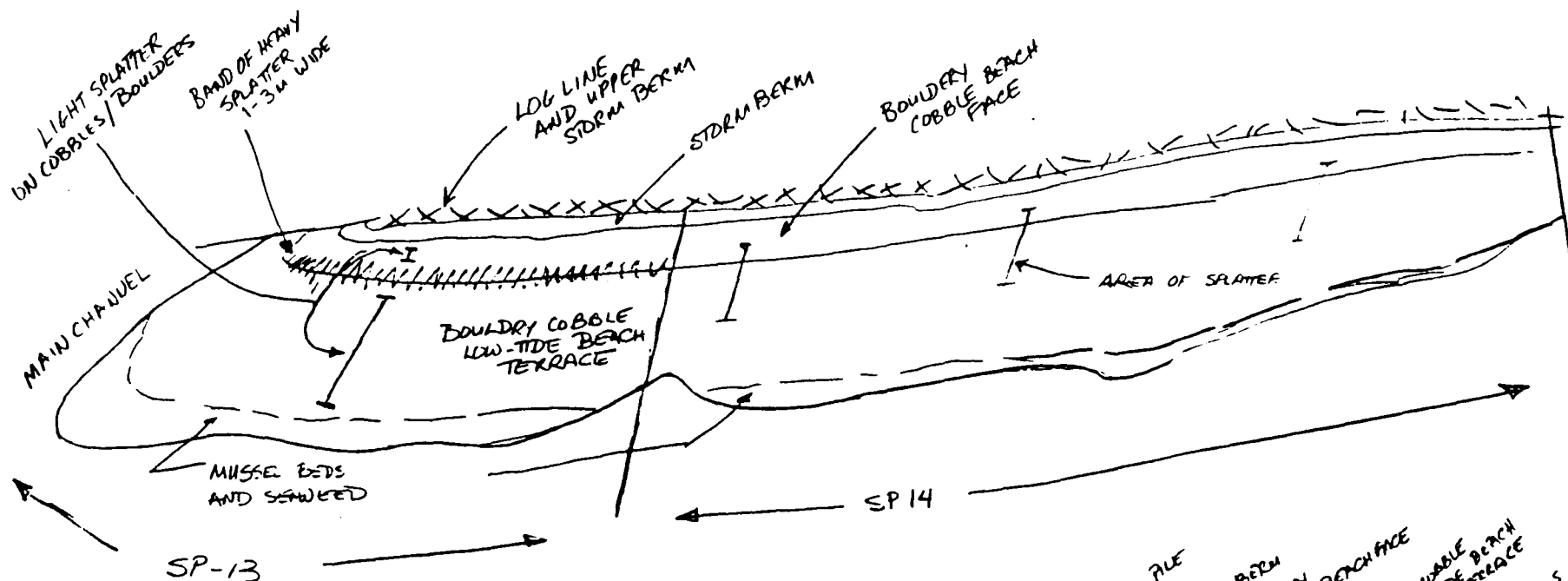
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

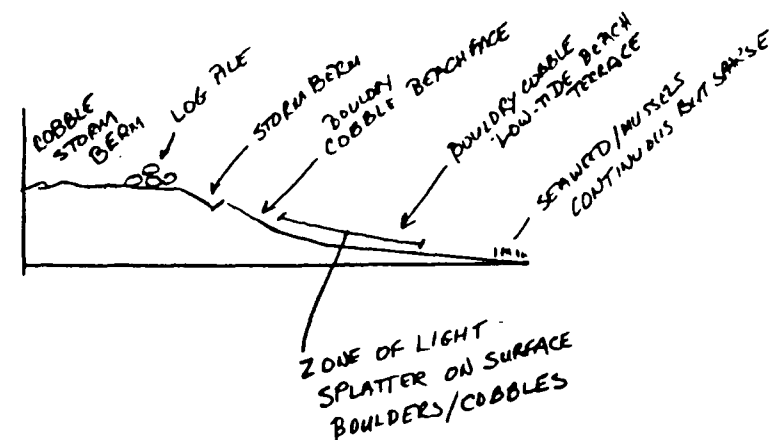
Photography: Y/N Roll Number(s) DMC-12

Sample Numbers Collected: N/A

EXPOSED
SP13 - SP14 - COBBLE SPIT -



CROSS SECTION OF UNIT SP-13



CROSS SECTION OF UNIT SP-14

ACE 8707949

ECOLOGICAL EVALUATION

LOCATION: North End of Sturgeon Lagoon SITE: _____ OBSERVER: D. McCormick
 LOCATION PREFIX: SL SEG. NO.: 14 LENGTH: 1532 (M)
 DATE: 6/5/89 TIME (HHMM): 1100 TIDE HT.: -0.5 (M)

OILED ZONE: Spl ash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Very dense at low tide zone

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

Very dense mussel beds along whole of segment

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

Dense on larger boulders

Littorina

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

Moderately dense -> become more dense going South.

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

Moderately dense in patches.

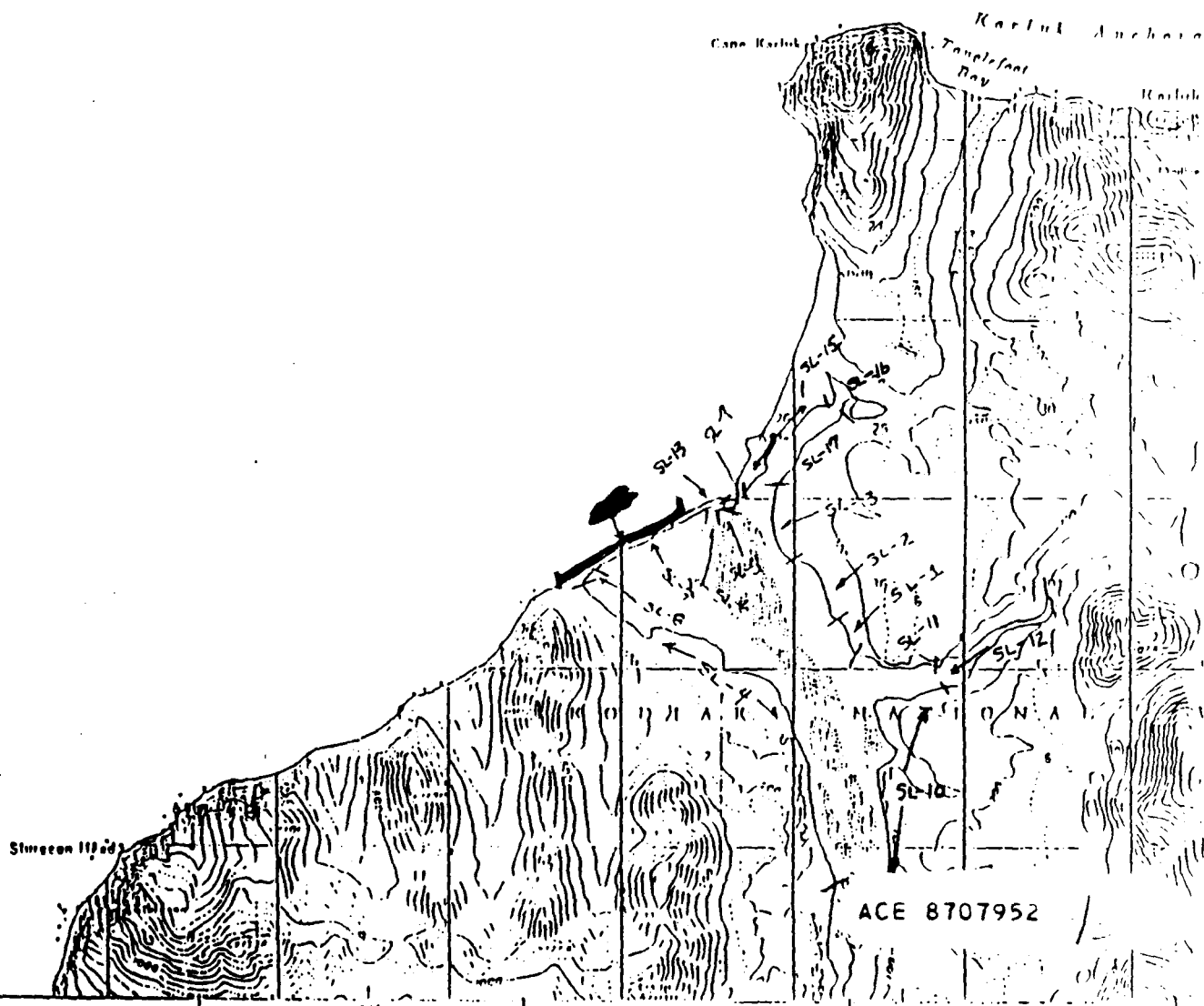
OTHER OBSERVATIONS: This beach rich in biota: primarily kelp at low ITZ, then fucus/balanus zone, mussels/balanus toward mid ITZ. Biota not affected by this light splatter

CLEANUP PRECAUTIONS: None - no cleanup is recommended.

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

BIRDS: _____

GENERAL OBSERVATIONS: Oil occurs as splatter on rocks at high zone to edge of mussel beds at mid zone.



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-15

LOCATION: (see enclosed map) Sturgeon Lagoon-Northwest side of
northern lagoon

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time, due to very light oiling and minimum anticipated environmental impact.

Priorities Considerations: This area has been designated sensitive, due to sockeye, pink, chum and salmon runs.

Ecological Constraints (from site survey): None, since no cleanup occurs, ecological constraints must be reconsidered.

Archeological Constraints (from site survey):

If cleanup is planned, a cultural resource assessment should be completed.

Charles E. H. H. H.
State Historic Preservation Officer *

Date: June 19 1989

EXXON: Jack A. Rukm

Date: 14 June 89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KONTAK

Date: JUNE 5/89 Time: 11:40

Observer: JAMES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Icy

LOCATION

LOCATION STURGEON LAGOON - NORTH END

SEGMENT I.D. SL-15

LENGTH OF SHORELINE SEGMENT: 1300 m

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

SHORELINE:

Shoreline Type: SPI/BEA/COV/HID/STET

Slope: LAUG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 1 / C 5 / P 60 / G 1 / S 30 / M 1 / R 1

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands Width

Sporadic: Y/N Segment 10 Min/Max Dia Impact Width 10-15cm

Est. Oil Thickness where > 1cm: cm SU / SP / UP / MID / LO

Est. Oil Penetration: cm SU / SP / UP / MID / LO

Layers? Yes No No# Layers Oil Weathering

Drift Debris Oiled? Yes No Supra/Upper/Mid/Lower Amount: 11 / 11 / 1 / 11

OIL MORPHOLOGY

Pooled Oil % "Free" Oil % Spattered 100 % H/M/L/VL Sheen %

OIL WEATHERING (OW)

Fresh Oil % SU/SP/VP/MID/LO Choc Mousse % SU/SP/VP/MID/LO

Pancake Mousse 100 % SU/SP/VP/MID/LO Asphalt Mousse % SU/SP/VP/MID/LO

Tar Formation %

Comments:

DISCONTINUOUS BANDS OF SPLATTER (≈ 10 CM WIDTH) ON THE COARSE
FRAGMENTS (PEBBLES, COBBLES)
THIS BAND IS DISCONTINUOUS & PATCHY, < 1% TOTAL UNIT AFFECTED
 PANCAKE MOUSSE (VERY MINOR)

DOCUMENTATION:

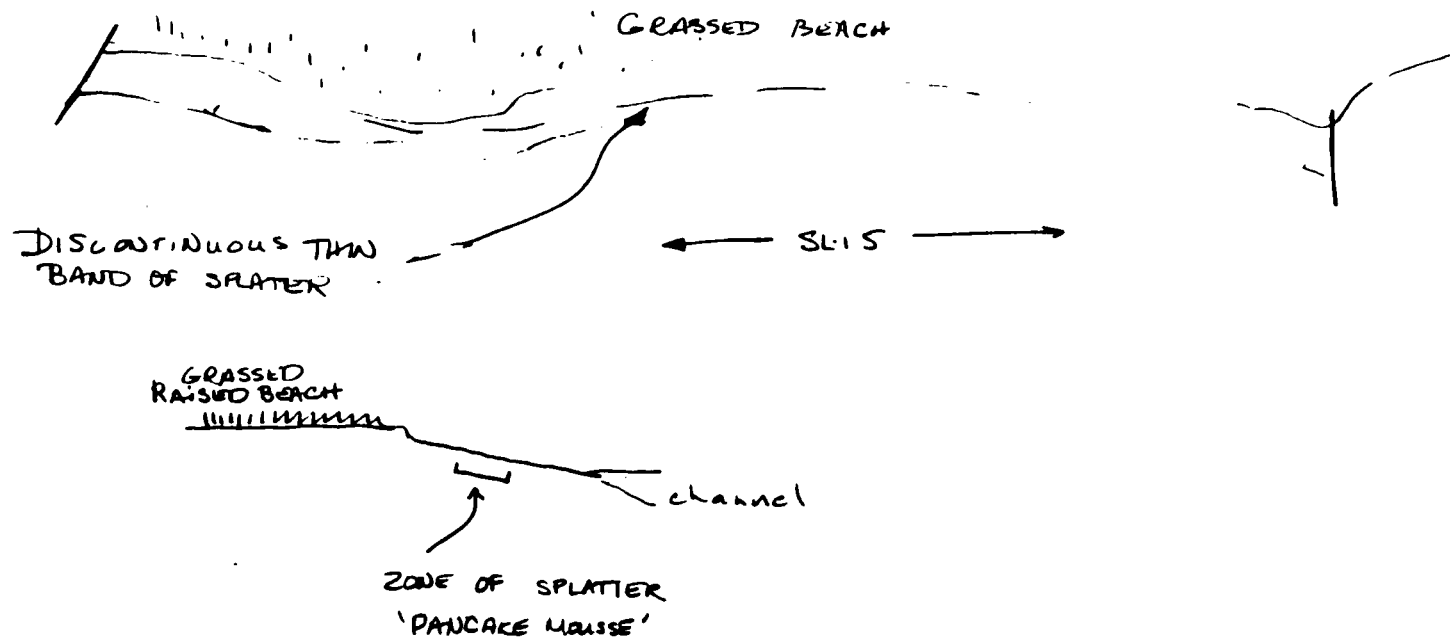
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) Dmc-12

Sample Numbers Collected: N/A

SL-15



ACE 6707956

ECOLOGICAL EVALUATION

LOCATION: Sturgeon Bay SITE: NW side of N. Lagoon OBSERVER: J. TARPLEY
 LOCATION PREFIX: SL SEG. NO.: 15 LENGTH: 1300 (M)

DATE: 6/5/89 TIME (HHMM): 1135 TIDE HT.: -0.40 (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

Became denser closer towards the bay.

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

Became denser closer towards the bay.

OTHER OBSERVATIONS: Benthic infauna present, polychaete worms present
Scud droller shells present; Fish (8-10cm) in stream; "Eggs" found
on surface of mud flat Translucent Black

CLEANUP PRECAUTIONS: NONE

STAY AWAY FROM LAGOON

MAMMALS: Otters Harbor Seals Sea Lions Whales
 Other NONE

BIRDS: Terrestrial birds amongst marsh grass

GENERAL OBSERVATIONS: Beech Flies abundant. Parakee mounds in
mid ITZ very light.

(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89 SHORELINE SEGMENT SL-16

LOCATION: (see enclosed map) Sturgeon Lagoon-North end.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time, due to no oil.

Priorities Considerations:

Ecological Constraints (from site survey): No ecological evaluation form is included because this segment was surveyed from the helicopter only.

Archeological Constraints (from site survey):

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

Charles E. H. Dumas
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Ruckman

Date: 14 June 89

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - KONTAK

Date: JUNES/89 Time: 1140

Observer: D. HOWES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Lot

LOCATION

LOCATION STURGEDA LAGOON - EAST SIDE ^{NORTH}

SEGMENT I.D. SL - 16

LENGTH OF SHORELINE SEGMENT: 1550 m

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

SHORELINE:

Shoreline Type: SPI/BER/COV/HLD/STET

Slope: LAUG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 1 / C 1 / P 1 / G 1 / S 10 / M 1 / R 1

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands Width

Sporadic: Y/N Segment 1 Min/Max Dia Impact Width

Est. Oil Thickness where > 1cm: cm SU / SP / UP / MID / LO

Est. Oil Penetration: cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil % "Free" Oil % Spattered % H/U/L/VL Sheen %

OIL WEATHERING (OW)

Fresh Oil % SU/SP/VP/MID/LO Choc Mousse % SU/SP/VP/MID/LO

Pancake Mousse % SU/SP/VP/MID/LO Asphalt Mousse % SU/SP/VP/MID/LO

Tar Formation %

Comments:

NO OIL OBSERVED IN LOW HELICOPTER ASSESSMENT

DOCUMENTATION:

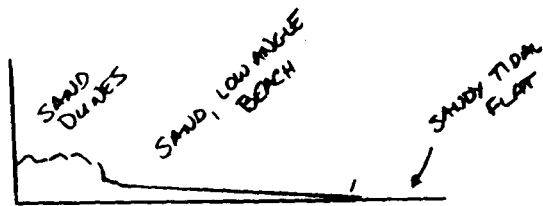
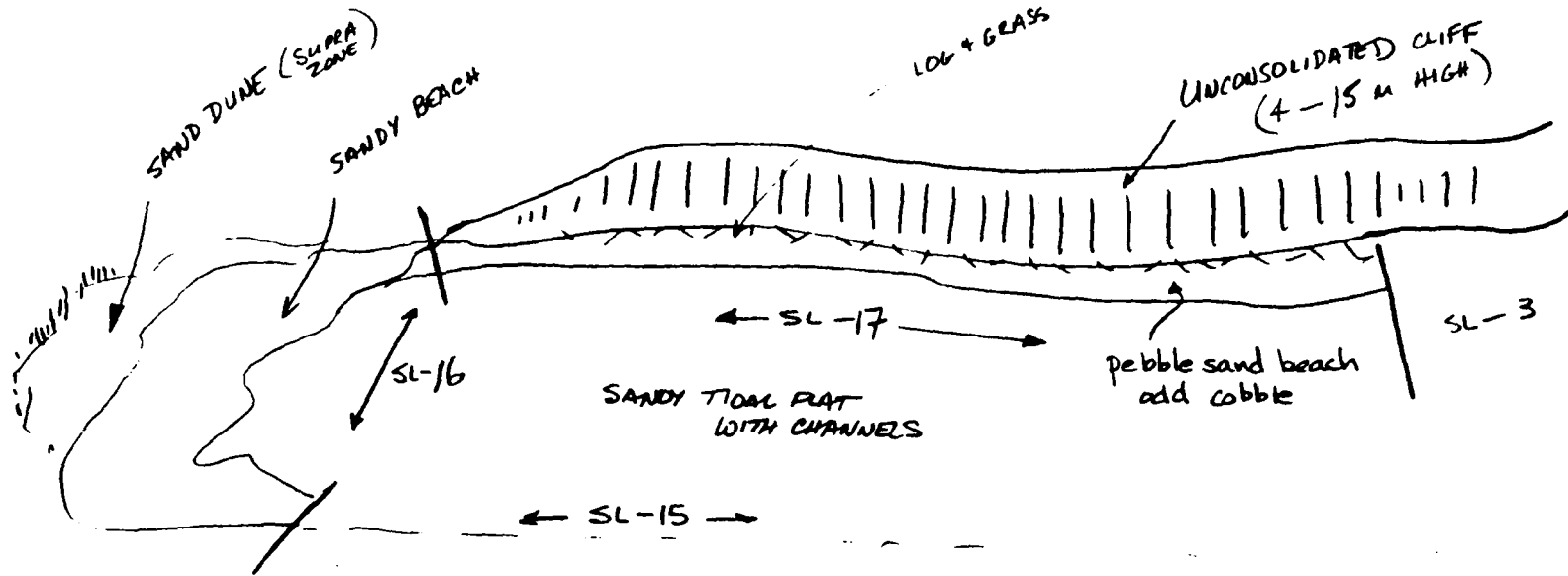
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

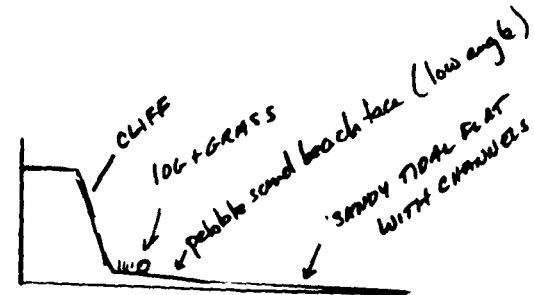
Sample Numbers Collected: N/A

SL-16 / 17



ESTIMATED CROSS SECTION

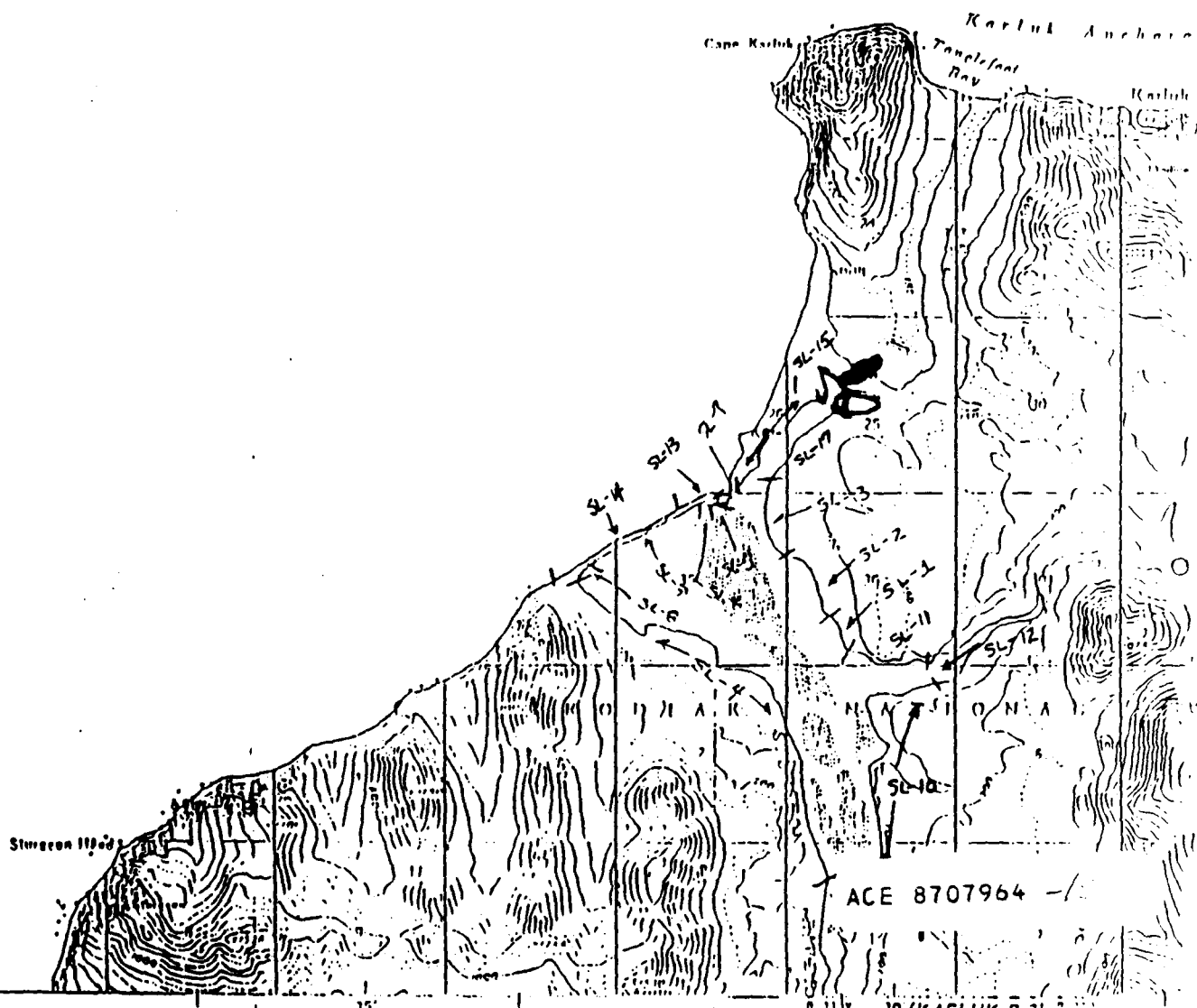
SL-16



ESTIMATED CROSS SECTION

SL-17

3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



(version 4/29/89)

SHORELINE CLEANUP PROGRAM

DATE 6/09/89

SHORELINE SEGMENT SL-17

LOCATION: (see enclosed map) Sturgeon Lagoon-East shore

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/05/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time, due to no oil.

Priorities Considerations:

Ecological Constraints (from site survey): No ecological evaluation form is included here since this segment was surveyed by helicopter only.

Archeological Constraints (from site survey):

If cleanup is planned, a cultural resource assessment should be completed.

Charles E. Holmes
State Historic Preservation Officer *

Date: June 10, 1989

EXXON: Jack A. Peterson

Date: 14 June 89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KONTAK

Date: JUNES/89 / Time: 12:05

Observer: D. HOWES

Surveyed From: Foot/Boat/Helicopter/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION STURGEON BAY - EAST SIDE

SEGMENT I.D. SL-17

LENGTH OF SHORELINE SEGMENT: 875 m

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

SHORELINE:

Shoreline Type: SPI/BEA/COV/HID/STET

Slope: LAHG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 1 / C 1-3 / P SS-LO / G 1 / S 3-4 / M 1 / R 1

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1

Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1

Est. Oil Thickness where > 1cm: 1 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 1 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 1 "Free" Oil 1 Spattered 1 H/U/L/VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 1 SU/SP/VP/MID/LO Choc Mousse 1 SU/SP/VP/MID/LO

Pancake Mousse 1 SU/SP/VP/MID/LO Asphalt Mousse 1 SU/SP/VP/MID/LO

Tar Formation 1

Comments:

ACE 8707966

NO OIL OBSERVED ON LOW HELICOPTER TRAJECT AND 30% OF AREA
ASSESSED BY FOOT

DOCUMENTATION:

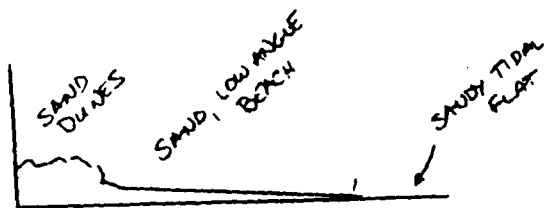
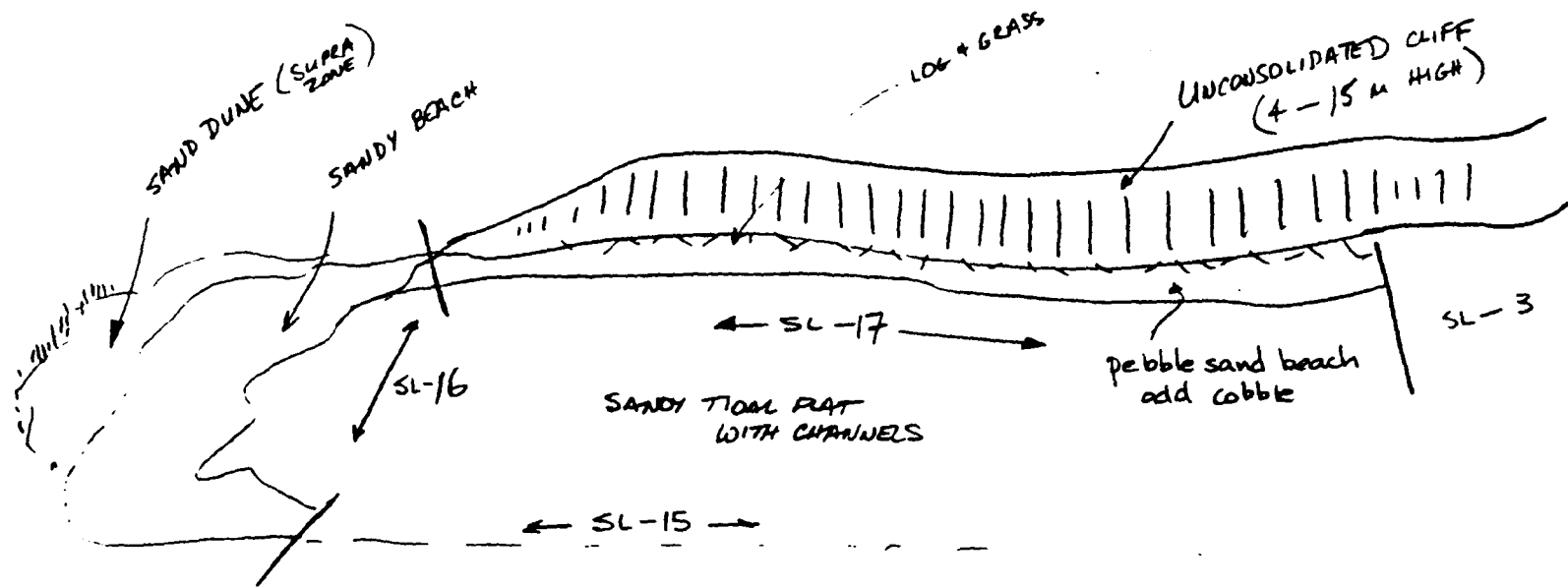
Map Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

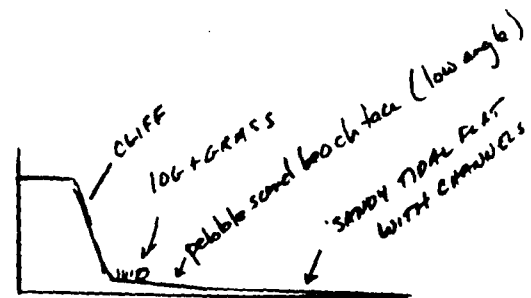
Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: N/A

SL-16 / 17

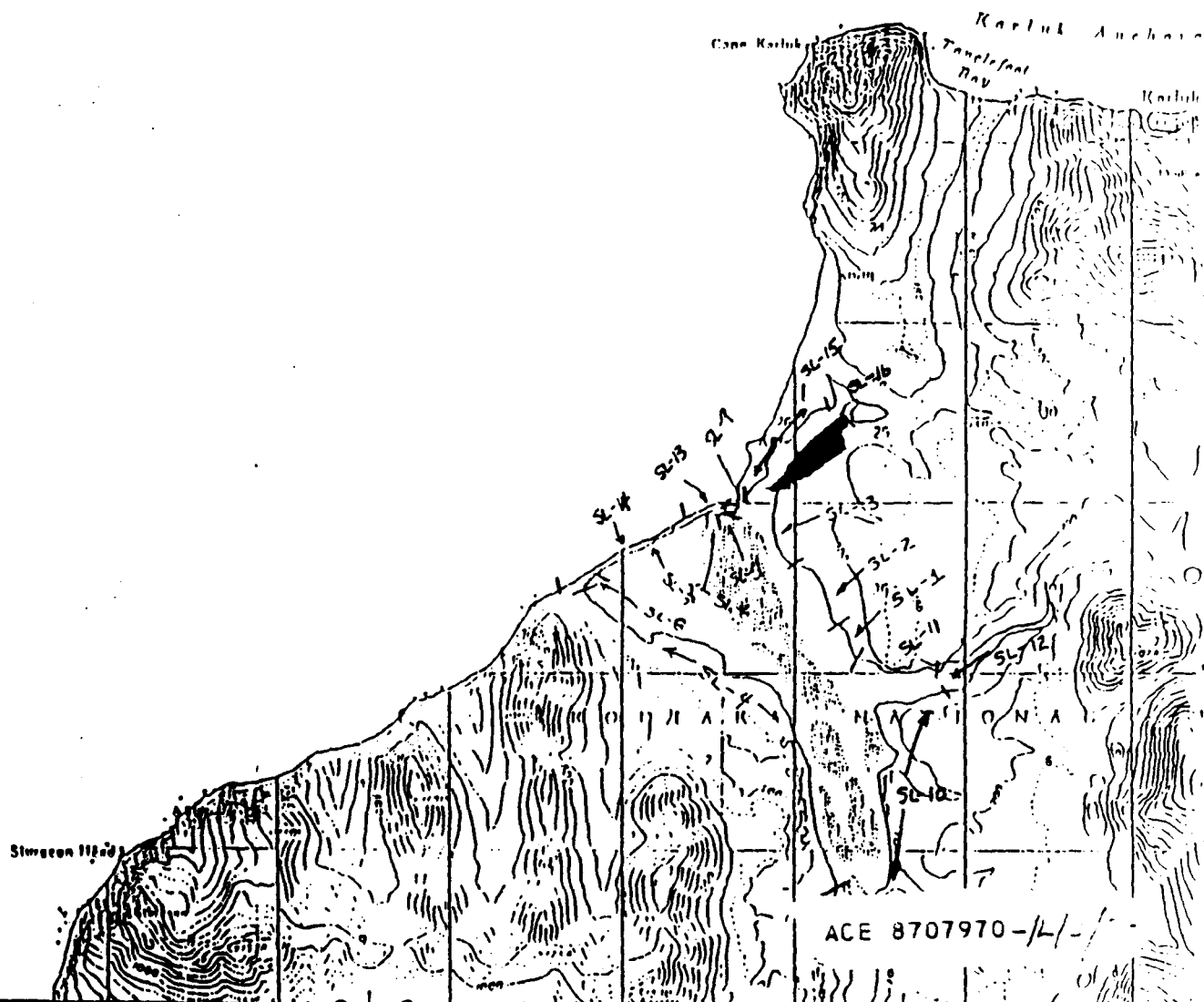


ESTIMATED CROSS SECTION
SL-16



ESTIMATED CROSS SECTION
SL-17

5
4
3
2
1



ACE 8707970-1/-

00000000

ACE 7963950

COMPLETE
DEC 21 1989

512-626-90
KODIAK SCAT
K7-1

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K7-1

Includes Shoreline Segments: LC-12, LC-13

Location: Bumble Bay

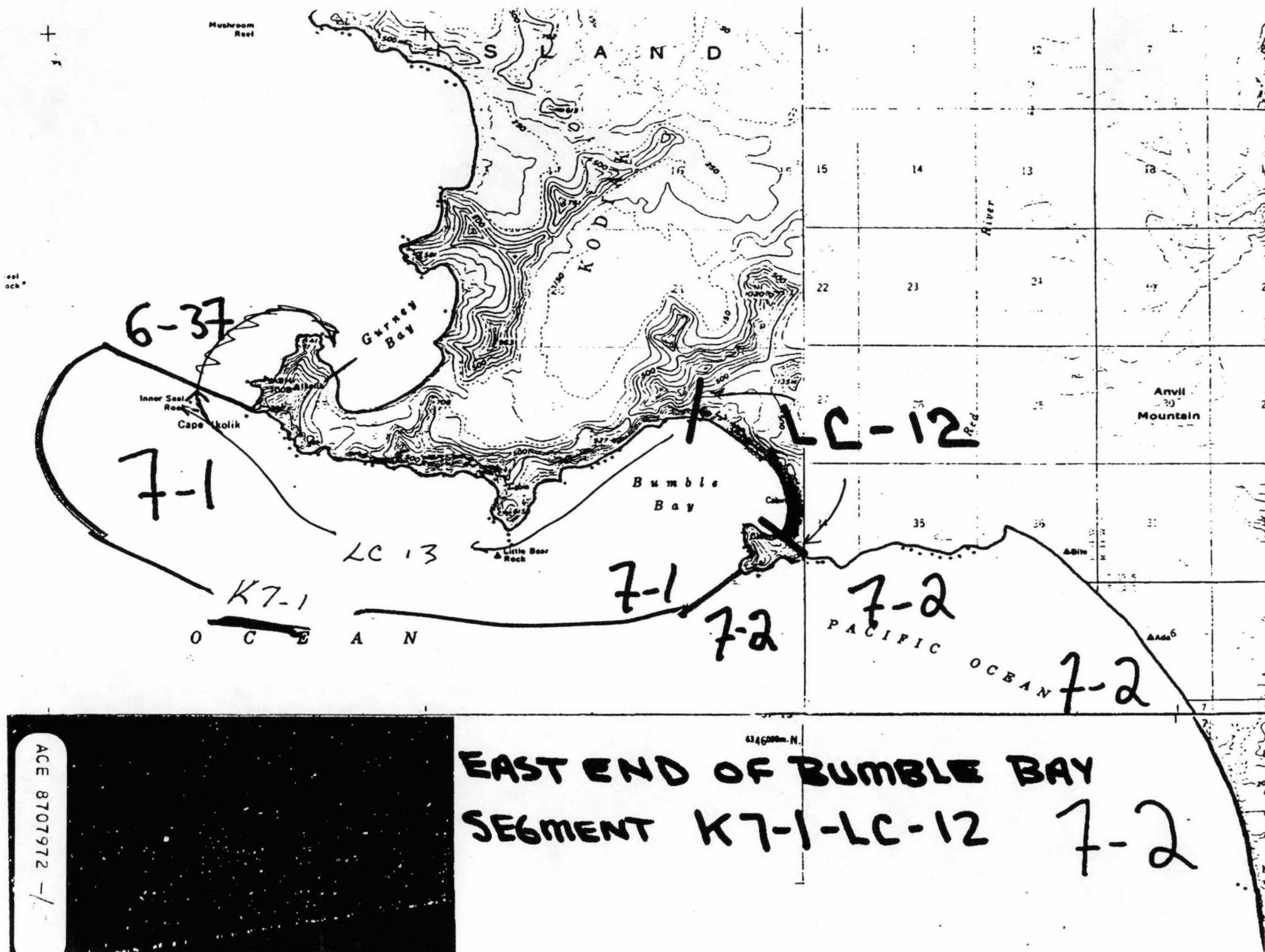
Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC

ACE 8707971+ / F / E / F



ACE 8707972 -1

EAST END OF BUMBLE BAY
SEGMENT K7-1-LC-12

7-2

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-1-LC-13

LOCATION: (see enclosed map) West end of Gurney Bay south to
north end of Bumble Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

Priorities/Considerations: Class 5-A

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8707973 +15

SHORELINE OIL EVALUATION FORM - KODIAK

Date: Jul 24/90 Time: 14:00Observer: Mike MikeSurveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION ROCKY HEADLAND BETWEEN
LOCATION BUMBLE BAY AND GURNEY BAYK-7-1-LC-13
SEGMENT I.D. K-6-37-LC-13LENGTH OF SHORELINE SEGMENT: 9,500 m

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

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20% / C5% / P3% / G % / S3% / M % / R70%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Small logs

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment No. Bands Width Sporadic: Y/N Segment Min/Max Dia Impact Width Est. Oil Thickness where > 1cm: cm: SU / SP / UP / MID / LO
Depth below top sedEst. Oil Penetration: cm SU / SP / UP / MID / LOLayers? Yes/No No# Layers Oil Weathering Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H / M / L / VL

OIL MORPHOLOGY

Pooled Oil % "Free" Oil % Spattered % H/M/L/VL Sheen %

OIL WEATHERING (OW)

Fresh Oil % SU/SP/VP/MID/LO Choc Mousse % SU/SP/VP/MID/LOPancake Mousse % SU/SP/VP/MID/LO Asphalt Mousse % SU/SP/VP/MID/LOTar Formation %

Comments:

ACE 8707974

This exposed rocky coast contains steep cliffs, a number of areas with a discontinuous bouldery veneer and a few small sandy pebbly pocket beaches.

No oil was observed during a low level helicopter overflight and clean-up activities are not required.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC-15

Sample Numbers Collected: N/A

ECOLOGICAL EVALUATION

LOCATION: ^{West End Quay} North End Bungle SITE: _____ OBSERVER: D. McCoemick

LOCATION PREFIX: ^{K7-1, K6-3} LC SEG. NO.: 13 LENGTH: 9500 (M)

DATE: 6/24/89 TIME (HHMM): 1400 TIDE HT.: +1.0 (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

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

Dense clump on some boulders

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

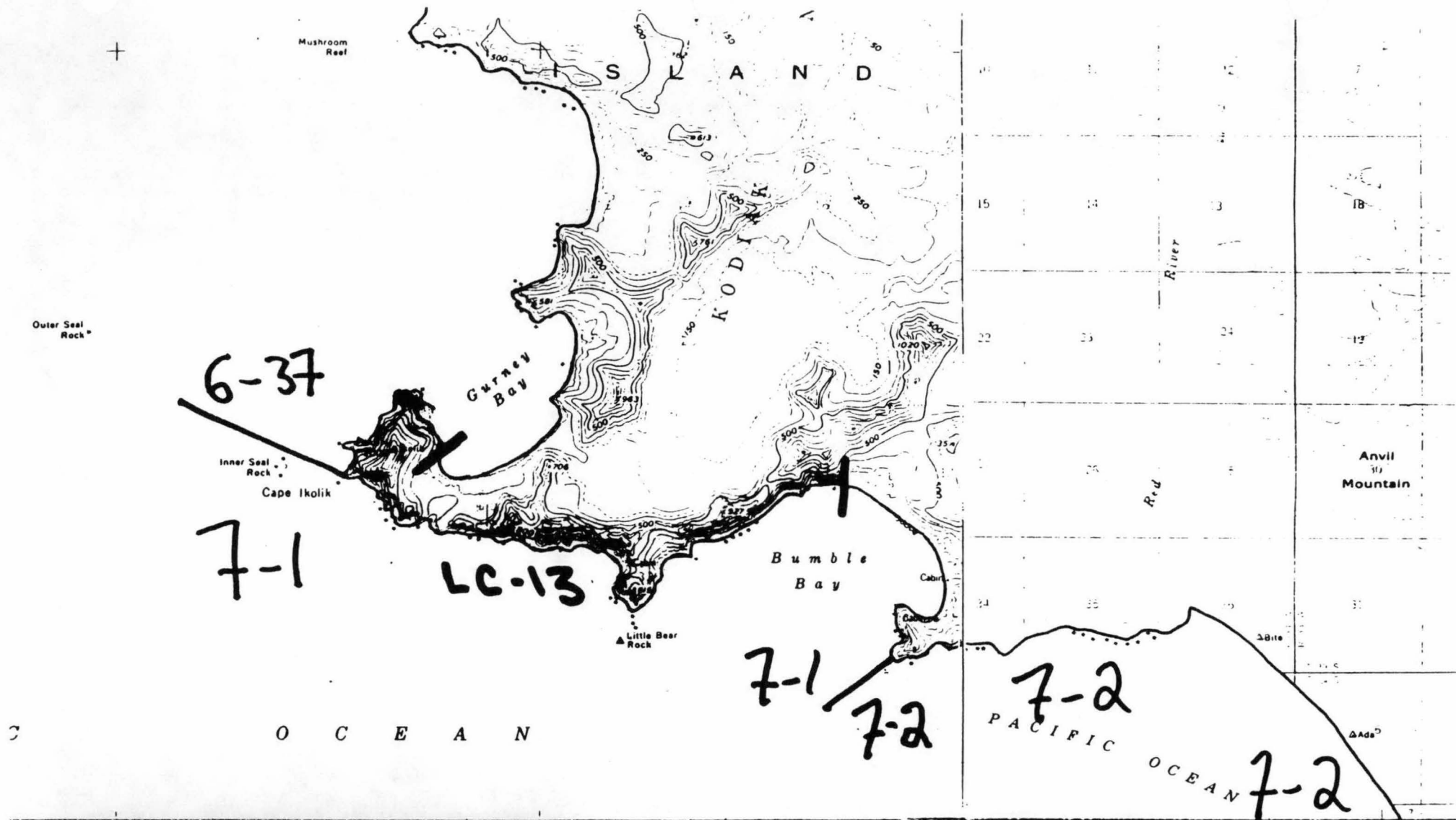
OTHER OBSERVATIONS: Endocladia and Ulva, clam shells, green seaweed in mud, Hermit crabs, Searlesia;

CLEANUP PRECAUTIONS: None

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions ^{Heinrichs} ✓ Whales _____
Other for on beach

BIRDS: pair of cormorants

GENERAL OBSERVATIONS: No al observed in this segment. Harbor seals known to exist in area, colonies for guillemots, cormorants, and kittiwakes



ACE 8707978

HEADLAND BETWEEN
GURNEY BAY AND BUMBLE BAY

SEGMENT K6-37-LC-13
K7-1 - LC-13

7-2

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-1-LC-12

LOCATION: (see enclosed map) East side Bumble Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

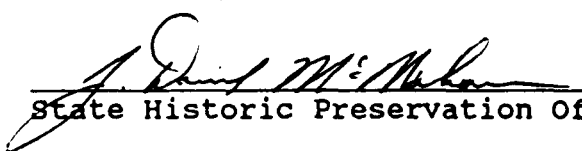
Priorities/Considerations: Class 5-B

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - KODIAK

Date: JUNE 24
1989 Time: 13:42Observer: Mike MilesSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATION EAST SIDE OF
LOCATION BUMBLE BAYSEGMENT I.D. K-7-1-LC-12LENGTH OF SHORELINE SEGMENT: 2200 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B / C / P / SH / S / M / RDrift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type log

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved/Very LightTotal Area of Beach Impact: SU / SP / H / M / L

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 1 Width 1Sporadic: Y/N Segment 1 Min/Max Dia 1 Impact Width 1Est. Oil Thickness where > 1cm: 1 cm: SU / SP / UP / MID / LO
Depth below top sedEst. Oil Penetration: 1 cm SU / SP / UP / MID / LOLayers? Yes/No No. Layers 1 Oil Weathering 1Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H / M / L / VL

OIL MORPHOLOGY

Pooled Oil 1 "Free" Oil 1 Spattered 1 H/M/L/VL Sheen 1

OIL WEATHERING (OW)

Fresh Oil 1 SU/SP/VP/MID/LO Choc Mousse 1 SU/SP/VP/MID/LOPancake Mousse 1 SU/SP/VP/MID/LO Asphalt Mousse 1 SU/SP/VP/MID/LOTar Formation 1

Comments:

ACE 8707980

This segment consists of a wide sandy beach located between
2 rocky headlandsNo oil or oiled debris was found on this beach and
no clean-up activities are required at this time

DOCUMENTATION:

Map (Y) Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: (Y) Roll Number(s) DMC-15

Sample Numbers Collected: N/A

ECOLOGICAL EVALUATION

LOCATION: EAST Side of Bumble Bay SITE: _____ OBSERVER: D. McCORMICK

LOCATION PREFIX: K7-1-LC SEG. NO.: 12 LENGTH: 2200 (M)

DATE: 6/24/89 TIME (HHMM): 1330 TIDE HT.: +0.5 (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

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

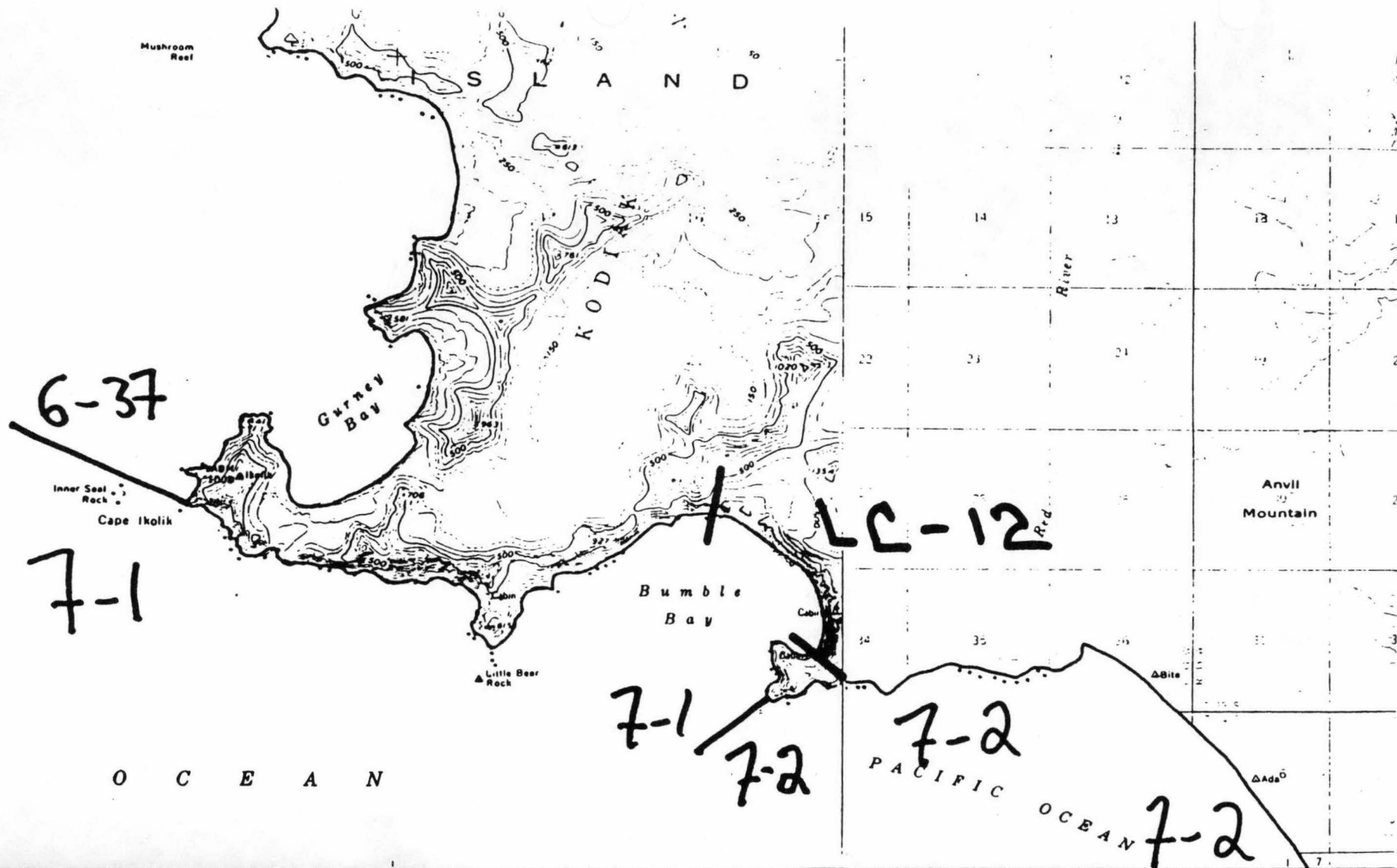
OTHER OBSERVATIONS: No oil observed, fox bear and seal tracks, eel
fish in tide line, crab in spaces

CLEANUP PRECAUTIONS: None

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

BIRDS: wallows; offshore - kittiwakes, puffins and gulls

GENERAL OBSERVATIONS: clam beds reported to exist here, only a few saw
clam shells



ACE 8707984 -/L/S/FF

EAST END OF BUMBLE BAY
SEGMENT K7-1-LC-12

7-2

517 - 624-90

KODIAK SCAT

- K7-2 -

COMPLETE DEC 15 1989

ACE 7963951

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Block (see enclosed map): K7-2

Includes Shoreline Segments: LC-8, LC-9, LC-10, LC-11

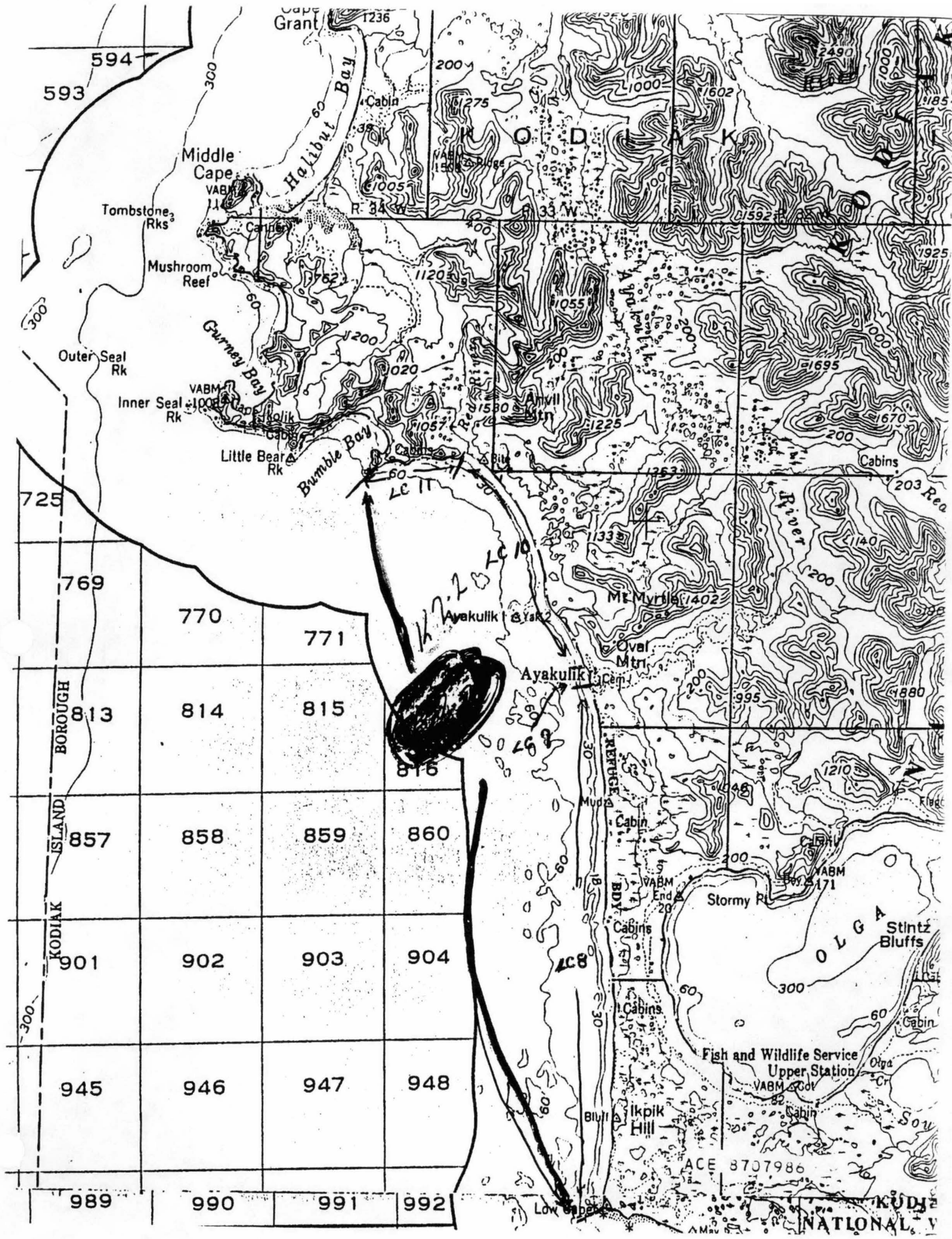
Location: Bumble Bay

Submitted: _____ Date: _____
(for Exxon)

FOSC Approval: _____ Date: _____

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. Requirements for safety and the protection of cultural material must be observed.

CC: KISCC



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-2-LC-11

LOCATION: (see enclosed map) East of Bumble Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

Priorities/Considerations: Class A-B

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION FORM - KODIAK

JUNE 24

Date: 1989 / Time: 12:30

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATION ROCKY HEADLAND SOUTH
LOCATION OF BUMBLE BAYSEGMENT I.D. K7-2 - LC-11LENGTH OF SHORELINE SEGMENT: 5,500 m difficult but possible on a calm day.ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRTlimited landing spots even at low tide
Slope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20 / C / P5 / G / S / M / R75Drift Debris on Beach: Yes No Supra/Upper/Mid/Lower Type _____

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved/Very LightTotal Area of Beach Impact: SU / SP / H / M / L

OIL DISTRIBUTION

Continuous: Y/N Segment # _____ No. Bands _____ Width _____Sporadic: Y/N Segment # _____ Min/Max Dia _____ Impact Width _____Est. Oil Thickness where > 1cm: N/A cm: SU / SP / UP / MID / LO
Depth below top sedEst. Oil Penetration: 0 cm SU / SP / UP / MID / LOLayers? Yes No No# Layers _____ Oil Weathering _____Drift Debris Oiled? Yes No Supra/Upper/Mid/Lower Amount: H / M / L / VL

OIL MORPHOLOGY

Pooled Oil 0 / "Free" Oil 0 / Spattered 0 / H/M/L/VL Sheen 0

OIL WEATHERING (OW)

Fresh Oil 0 / SU/SP/VP/MID/LO Choc Mousse 0 / SU/SP/VP/MID/LOPancake Mousse 0 / SU/SP/VP/MID/LO Asphalt Mousse 0 / SU/SP/VP/MID/LOTar Formation 0

Comments:

This rocky headland contains a number of pebbly
cobble beaches in small embayments. A discontinuous boulder veneer occurs along
approximately 20 % of this segment.

No oil was observed during a low level helicopter
overflight and no clean-up is required at this time

ACE 8707988

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: N/A

ECOLOGICAL EVALUATION

LOCATION: ^{South of} BUMBLE BAY SITE: _____ OBSERVER: D. McCORMICK
 LOCATION PREFIX: ^{K7-2-} LC SEG. NO.: 11 LENGTH: 5500 (M)
 DATE: 6/24/89 TIME (HHMM): 1320 TIDE HT.: +0.2 (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

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

Unknown

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

Unknown

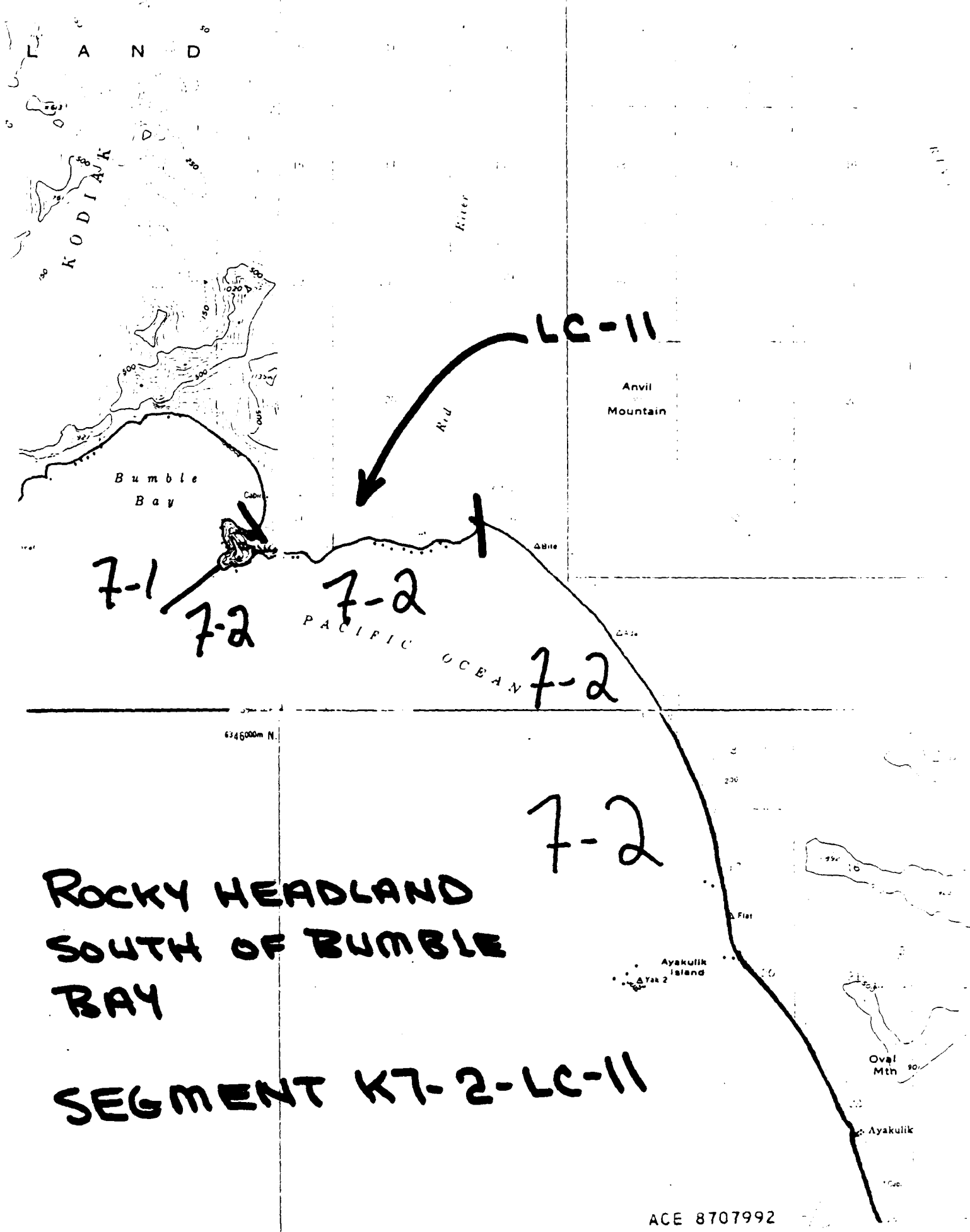
OTHER OBSERVATIONS: Not surveyed from ground - fucus, mytilus, balanus
obvious from air.

CLEANUP PRECAUTIONS: None -

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

BIRDS: murre, gulls, cormorants, kittiwakes

GENERAL OBSERVATIONS: harbor seals not observed but reported to use this area.
this segment surveyed by helio only; no oil observed



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-2-LC-10

LOCATION: (see enclosed map) Kodiak Island, north of Ayakulik
River to south of Bumble Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

Priorities/Considerations: Class 3-B

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

(version 5/16/89)

JUNE 24

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 19 / Time: 13:05

Observer: MIKE MILES

Surveyed From: Foot Boat Helio Plane

Weather: Sun Cloud Rain/Snow/Fog

LOCATION AYAKULIK RIVER TO

LOCATION HEADLAND SOUTH OF BUMBLE BAY SEGMENT I.D. K7-2-LC-10

LENGTH OF SHORELINE SEGMENT: 6900 m at dry tide

ACCESS: Foot/Vehicle Boat/Barge Helio Float Plane on a small boat

SHORELINE:

Shoreline Type: SPI DEA COV/HLD/STET

Slope: LANG/HANG/VER

Wave Exposure: High Med/Low

Sediment: B 2 / C 8 / P 15 / G 20 / S 50 / M 5 / R 0

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y N Segment 1 No. Bands 1 Width 1

Sporadic: Y N Segment 1 Min/Max Dia 1 Impact Width 1

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes No No. Layers 1 Oil Weathering 1

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 0 % H/M/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 0 % SU/SP/VP/MID/LO

Tar Formation 0

Comments:

SEE ATTACHED COMMENT SHEET

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) DMC-15

Sample Numbers Collected: N/A

MIKE MILES
JUNE 24, 1989

AYAKULIK ISLAND TO
HEADLAND SOUTH OF BUMBLE
SEGMENT K7-2-LC-10

COMMENTS
SHORELINE OIL EVALUATION

This long beach is backed by a 10 to 20 m high unconsolidated cliff. Beach sediments on the southern end of this segment consist principally of sand but include cobble, boulders and fine textured sediments which have been eroded from the backshore. On the northern end of the segment, the cliff face is not ~~being~~ actively eroding and the beach sediments consist almost entirely of sand/granules.

No oil was found on this segment and the beach driftwood is un-oiled
/seaweed

No ~~oil~~ ~~is~~ activity is required at this time.

ECOLOGICAL EVALUATION

LOCATION: ^{North of AYAKULIK R} to South of BUNALE JAY SITE: _____ OBSERVER: D McCormick
 LOCATION PREFIX: ^{K-7-2-} LC SEG. NO.: 10 LENGTH: 6900 (M)
 DATE: 6/24/89 TIME (HHMM): 1235 TIDE HT.: -0.2 (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

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

Shells only

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

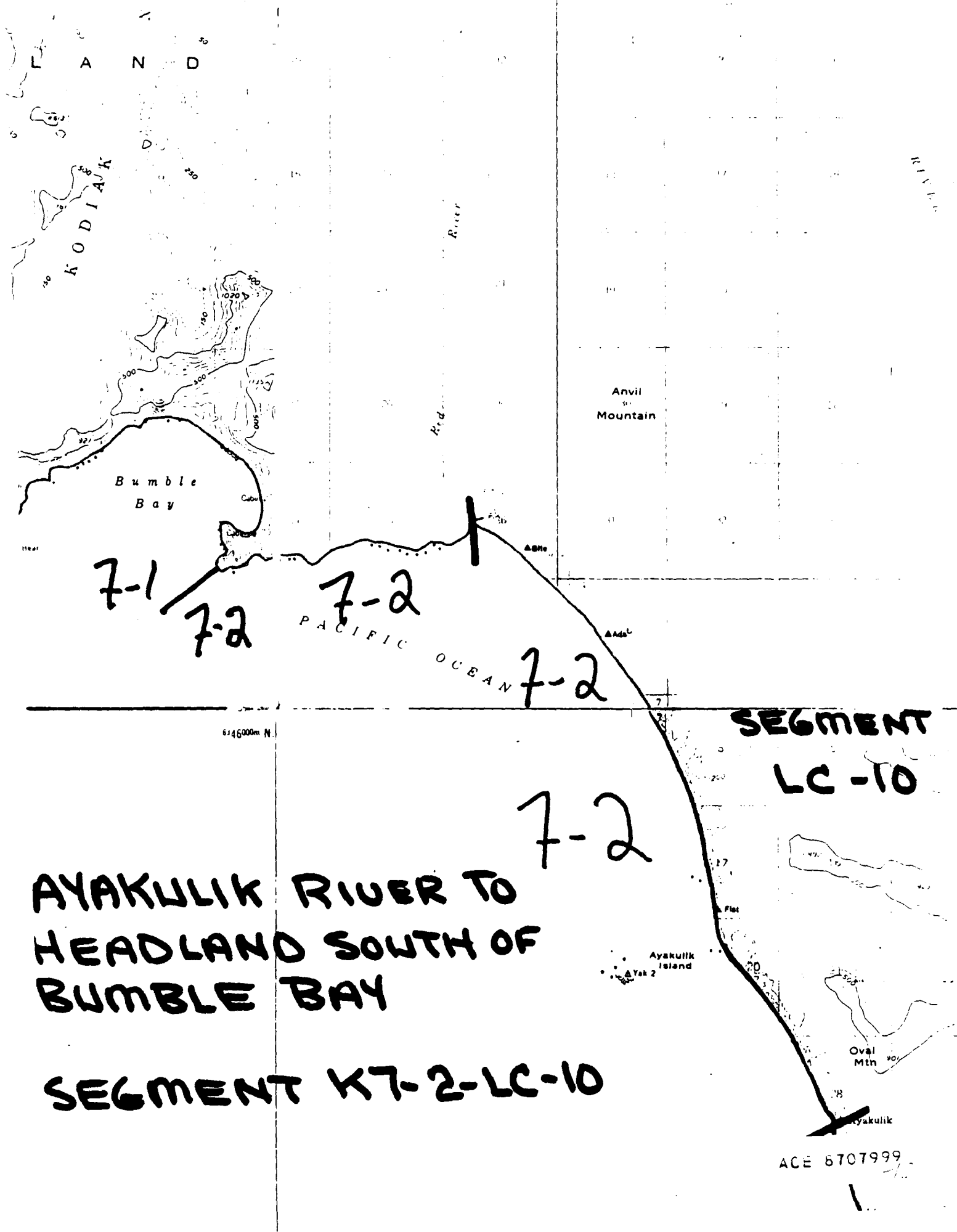
OTHER OBSERVATIONS: blue mussel shells, algae in debris line deer tracks
no oil

CLEANUP PRECAUTIONS: _____

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

BIRDS: offshore: cormorants, puffins (tufted and horned), gulls

GENERAL OBSERVATIONS: no oil was observed in this segment



AYAKULIK RIVER TO
HEADLAND SOUTH OF
BUMBLE BAY

SEGMENT K7-2-LC-10

SEGMENT
LC-10

ACE 6707999

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-2-LC-9

LOCATION: (see enclosed map) Ayakulik River, Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

Priorities/Considerations: Class 3-4

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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.

A. David McMan
State Historic Preservation Officer *

Date: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 24
1989 / Time: 11:30

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION AYAKLIK RIVER

SEGMENT I.D. K7-2 - LC-9

LENGTH OF SHORELINE SEGMENT: 900 m

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

SHORELINE:

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

Slope: LAUG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B/Q / C30 / P30 / W / S30 / M___ / R___

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment #___ No. Bands___ Width___

Sporadic: Y/N Segment #___ Min/Max Dia___ Impact Width___

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: ___ cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers___ Oil Weathering___

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 0 % H/H/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 0 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

SEE ATTACHED COMMENT SHEET

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

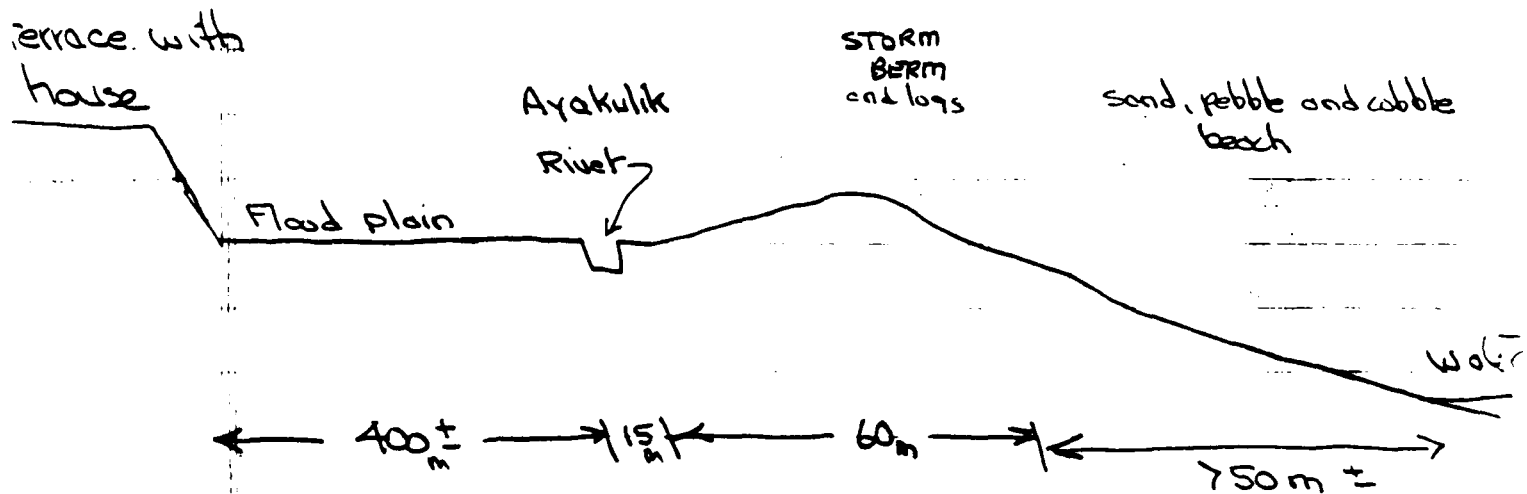
Photography: Y/N Roll Number(s) DMC-15

Sample Numbers Collected: N/A

Mike Miles
June 24/89

AYAKULIK RIVER
K7-2-LC-9

Representative beach Cross-section



Mike Miles
June 24/89

AYAKULIK RIVER
SEGMENT K7-2-LC-9

COMMENTS AYAKULIK RIVER

This segment consists of a wide sandy pebbly cobbly beach and berm at the mouth of Ayakulik River.

No oil was observed on these beach sediments. The Alaska Department of Fish and Game has 2 fish biologists/technicians living at this site. ~~and~~ They reported that a 1 to 3 m wide band of "spattered tar" was on this beach approximately 3 weeks ago. None of this oil is now evident on the beach.

Small quantities of spattered tar occurs on pieces of driftwood located along the high tide line. This oil is now dry and firmly attached to or soaked into the driftwood and this material has no potential for causing ~~any~~ any re-oiling problems.

No clean-up activities are recommended at this time.

*1 tar spots are < 1 cm in diameter ~~and~~ and occur at low densities.

ECOLOGICAL EVALUATION

LOCATION: AYAKULIK River SITE: _____ OBSERVER: D. McCormick
 LOCATION PREFIX: LC SEG. NO.: 9 LENGTH: 800 (M)
 DATE: 6/24/89 TIME (HHMM): 1100 TIDE HT.: +0.5 (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

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: 2 sets bear tracks going N, 1 set going S, 2 deer on cliff above river, mink shells; fox tracks, deer tracks on beach.

CLEANUP PRECAUTIONS: No cleanup recommended due to sensitivity of area

MAMMALS: Otters _____ Harbor Seals 7 Sea Lions 1 Whales _____
 other all 5 species of salmon use Ayakulik R

BIRDS: 16 eagles observed at river mouth, gulls and puffins offshore, cliff swallows

GENERAL OBSERVATIONS: An ADF+G fish camp set up here to monitor orkeye and King salmon escapement; eagles, seals & sea lions feeding on migrating salmon

Debris on high ITZ very lightly oiled ADF+G staff said area has more heavy oils (see report on cobble) approximately 3 weeks ago, but little evidence of this remains (this is a high energy beach)

Bay

1 7-2 7-2 7-2
PACIFIC OCEAN

6146000m N

7-2

Ayakulik Island
Yak 2

892 16 923 500 250 300
Oval Mtn

AYAKULIK RIVER
K7-2-LC-9

LC-9

Ayakulik

Cabin

Mud

Cabin

10'

P
A
C
I
F
I
C

ACE 8708007 -/5

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/15/89

SHORELINE SEGMENT K7-2-LC-8

LOCATION: (see enclosed map) Kodiak Island, low cape to
Ayakulik River

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/24/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date).
- No oil observed.

Priorities/Considerations: Class 3-B

Ecological Constraints (from site survey):

- No ecological constraints.

Archaeological 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: 7/20/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

June 24

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 1999 / Time: 10:00 to 11:00

observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION LOW CAPE TO AYAKULIK RIVER 1 SEGMENT I.D. K7-2-L-3

LENGTH OF SHORELINE SEGMENT: 22200 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B10 / C30 / P30 / S30 / M / R

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 2 No. Bands Width

Sporadic: Y/N Segment 2 Min/Max Dia Impact Width

Est. Oil Thickness where > 1cm: 4/A cm SU / SP / UP / MID / LO
Depth below top sed

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil 0 Spattered 0 H/M/L/VL Sheen 0

OIL WEATHERING (OW)

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 0 SU/SP/VP/MID/LO

Pancake Mousse 0 SU/SP/VP/MID/LO Asphalt Mousse 0 SU/SP/VP/MID/LO

Tar Formation 0

Comments:

SEE ATTACHED COMMENT SHEET

DOCUMENTATION:

Map Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) _____

Sample Numbers Collected: N/A

MIKE MILES
JUNE 24, 1989

LOW CAPE TO AYAKULIK RIVER
SEGMENT K7-2-LC-8

COMMENT

SHORELINE OIL EVALUATION

This long segment consists of a sand / pebble / cobble beach backed by a 15 to 30 m high unconsolidated continuous cliff.

No oil was observed in this segment except for a few small (< 3 cm diameter) tar splatters on the occasional large boulder^{*1}. Occasional pieces of drift wood with small spots of tar^{oat} at the base of the cliff face^{*2}. The total amount of oil on this beach on June 24/89 is so small that this segment has been coded as having no oil.

No cleanup activities are required at this time.

- *1 Total number observed is < 5 over 22 km
*2 Total number observed in is < 10 over 22 km

ECOLOGICAL EVALUATION

KODIAK IS.
Low CAPE To

LOCATION: AYATULIK R. SITE: _____ OBSERVER: D. McCormick
 LOCATION PREFIX: LC SEG. NO.: 8 LENGTH: 22200 (M)
 DATE: 6/24/89 TIME (HHMM): 1000 TIDE HT.: +1.0 (M)

OILED ZONE: Splash High Medium Low NONESUBSTRATUM: 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/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: seaweed on crest line, few red sea urchins,
2 crows on ground (sp. unknown), 2 bird eagles

CLEANUP PRECAUTIONS: _____

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other sealsBIRDS: eagles, swansGENERAL OBSERVATIONS: No ecological assessment information - birds only
only - biota noted above were observed from Pelis only.

Con't ↑

▲ area where subsurface
excavations were made

7-2

7+

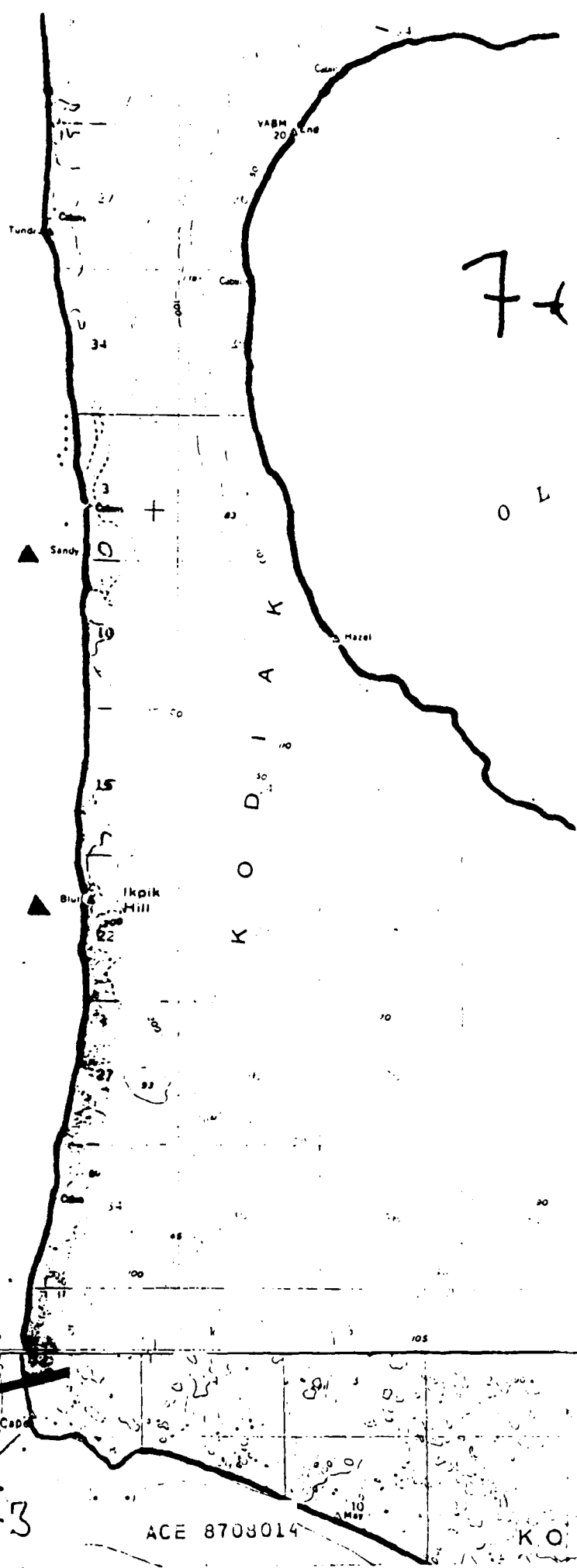
O
C
+
E
A
N

LC-8

LOW CAPE TO
AYATULIK RIVER

SEGMENT
K-7-2-LC-8

Sheet 1 of 2



7-2
7-2
PACIFIC OCEAN 7-2

7-2

LOW CAPE TO
AYATULIK RIVER

SEGMENT K-7-2-LC-8

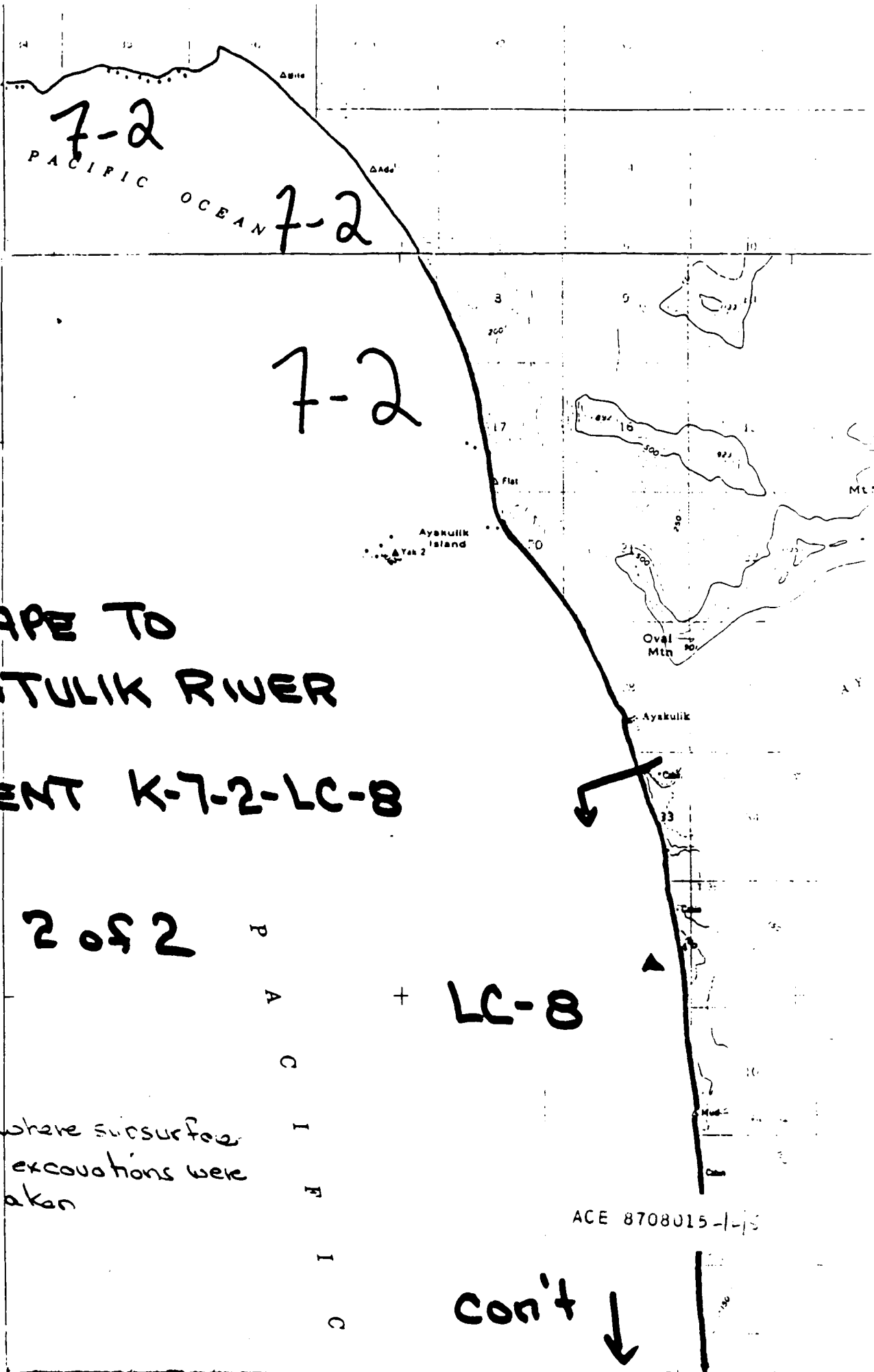
Sheet 2 of 2

LC-8

▲ Areas where subsurface
excavations were
undertaken

ACE 8708015-1-15

con't



517-625-90

KODIAK SCAT

K7-3

CC

ETE

DEC 15 1989

ACE 7963952

(version 5/02/89)

K07-03

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT LC-1

LOCATION: (see enclosed map) LOW CAPE-KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Recommend letting natural processes clean this segment.
However, if cleanup is to be undertaken, appropriate techniques include:
Hot water and/or high pressure washing.
Manual removal of tar with sorbent rags on a warm day.
Other approved techniques as appropriate.

Priorities Considerations: Class 4-B

Critical resources not immediately present, however KISCC considers this a sensitive area due to local salmon use areas and pinniped haulouts.

Ecological Constraints (from site survey):

Avoid contamination of lower intertidal zone during cleanup.

Archeological Constraints (from site survey):

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

Daughlas Reger
State Historic Preservation Officer *

Date: 6/29/89

EXXON: *[Signature]*

Date: 7/1/89

FOSC: *[Signature]* *acknowledged* *REC'D 7/14*
by director

Date: 7/20/89

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

215,6

ACE 87080169

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT K7-3 LC-1

LOCATION: (see enclosed map) LOW CAPE-KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Recommend letting natural processes clean this segment.
However, if cleanup is to be undertaken, appropriate techniques include:

Hot water and/or high pressure washing.

Manual removal of tar with sorbent rags on a warm day.

Other approved techniques as appropriate.

Priorities Considerations: Class 4-B

Critical resources not immediately present, however KISCC considers this a sensitive area due to local salmon use areas and pinniped haulouts.

Ecological Constraints (from site survey):

Avoid contamination of lower intertidal zone during cleanup.

Archeological Constraints (from site survey):

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

Douglas Reger
State Historic Preservation Officer *

Date: 6/29/89

EXXON: Jack A. Pickner

Date: 7/20/89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 18/89 / Time: 09:45

Observer: MIKE MILLER

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KODIAK ISLAND - LOW CAPE

SEGMENT I.D. K-7-2
K-7-3 } LC-1

LENGTH OF SHORELINE SEGMENT: 2000 m

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

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: BIO % / C20 % / P10 % / G % / S % / M % / R %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type Low
OIL

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

Total Area of Beach Impact: SU / SP / H / M / L
OIL DISTRIBUTION

Continuous: Y/N Segment # 1 No. Bands 1 Width 100

Sporadic: Y/N Segment # 1 Min/Max Dia 5cm Impact Width 50-100m

Est. Oil Thickness where > 1cm: 11/10 cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers 1 Oil Weathering 1

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

Pooled Oil 0 % "Free" Oil 0 % Spattered 100 % H/M/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 10 % SU/SP/VP/MID/LO Asphalt Mousse 90 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

ACE 8708018

See attached Comment sheet and map

MIKE MILES
JUNE 18/89

KODIAK ISLAND
LOW CAPE

PAGE 1 OF 2

K-7-3-LC-1
K-7-2-LC-1

COMMENTS

SHORELINE OIL EVALUATION

The backshore along this segment consists of an un-consolidated 8 to 10 m high fine textured cliff. A cobble-boulder ^{sprinkle/stone} berm with a sand veneer occurs at the cliff base. The low to upper ITZ consists of a wide low gradient cobble-boulder beach [See sketch]. The site is situated in a high wave energy environment.

All oil contamination on this segment consists of dried/oxidized "spots" which range in diameter from 1 to 5 cm. The density of 'spots' in contaminated areas range from 1 or 2 per 300 m of coast to 1 or 2 spots / m² of beach. Due to the low beach gradient and the large size of many of the boulders, the oiled section of beach is quite wide, ^{locally} exceeding 50-100 meters.

AGE 8708019

Due to the dried/oxidized nature of the oil, moderate high pressure hot water would likely be required for effective cleaning. However given the small volumes of weathered oil on the beach, and the difficulty in working on a gradient boulder beach, oil recovery rates are likely to be

MIKE MOLES
JUNE 18/89

KODIAK ISLAND
LOW CAPE

PAGE 2 OF 2

K-7-3-LC-1

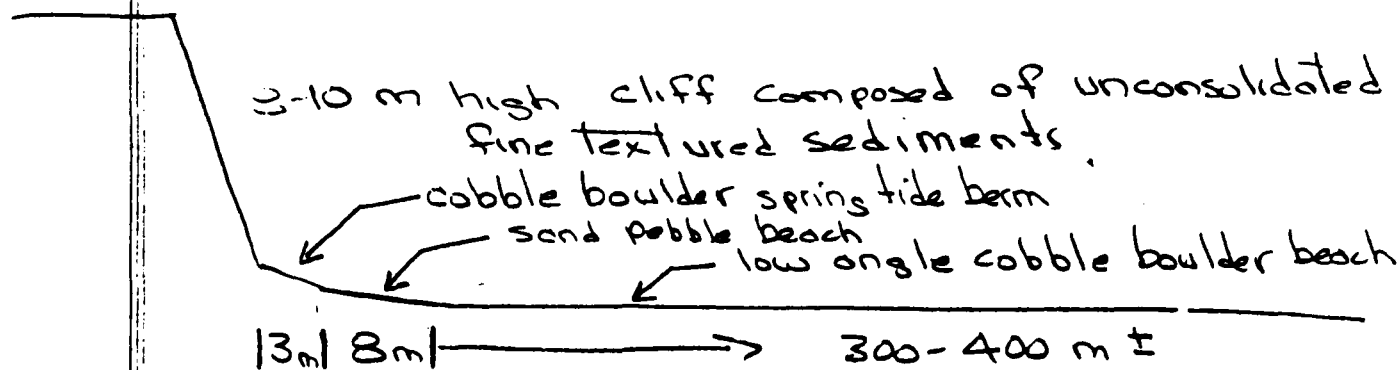
K-7-2-LC-1

COMMENTS

SHORELINE OIL EVALUATION

Given the high wave exposure environment, natural processes are expected to clean this beach over a comparatively short time period (possibly 1 winter). If clean-up were to be undertaken, hand application of sorbents on a hot day would likely be most effective. However this process is expected to take a great deal of effort and the recovery of very little oil.

representative cross-section:



Mike Miles
June 18/89
10:15

K-7-3
K-7-2

}

LC-1

LOW CAPE



Water line at low tide

Unconsolidated fine
textured cliff 5-8
m high

Gravelly sandstone
- maximum
width 300 m ± 100 m

cobble shoulder berm
with a sand veneer

occasional 'tar spots' on
mid to upper ITZ

ACE 8708021

POOR QUALITY ORIGINAL

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

ECOLOGICAL EVALUATION

LOCATION: Low Cape SITE: Low Cape OBSERVER: J. Tapley
 LOCATION PREFIX: K7/LC-1 SEG. NO.: K-7-2-LC-1 LENGTH: 2000 (M)
 DATE: 6/18/89 TIME (HHMM): 0915 TIDE HT.: -0.25 (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

Shells present also

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

Continuous cover but denser in most places and sparser in few others

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: Clam shells are abundant. Clam bed in sandy substrate beyond boulder beach. Higher ITZ were.

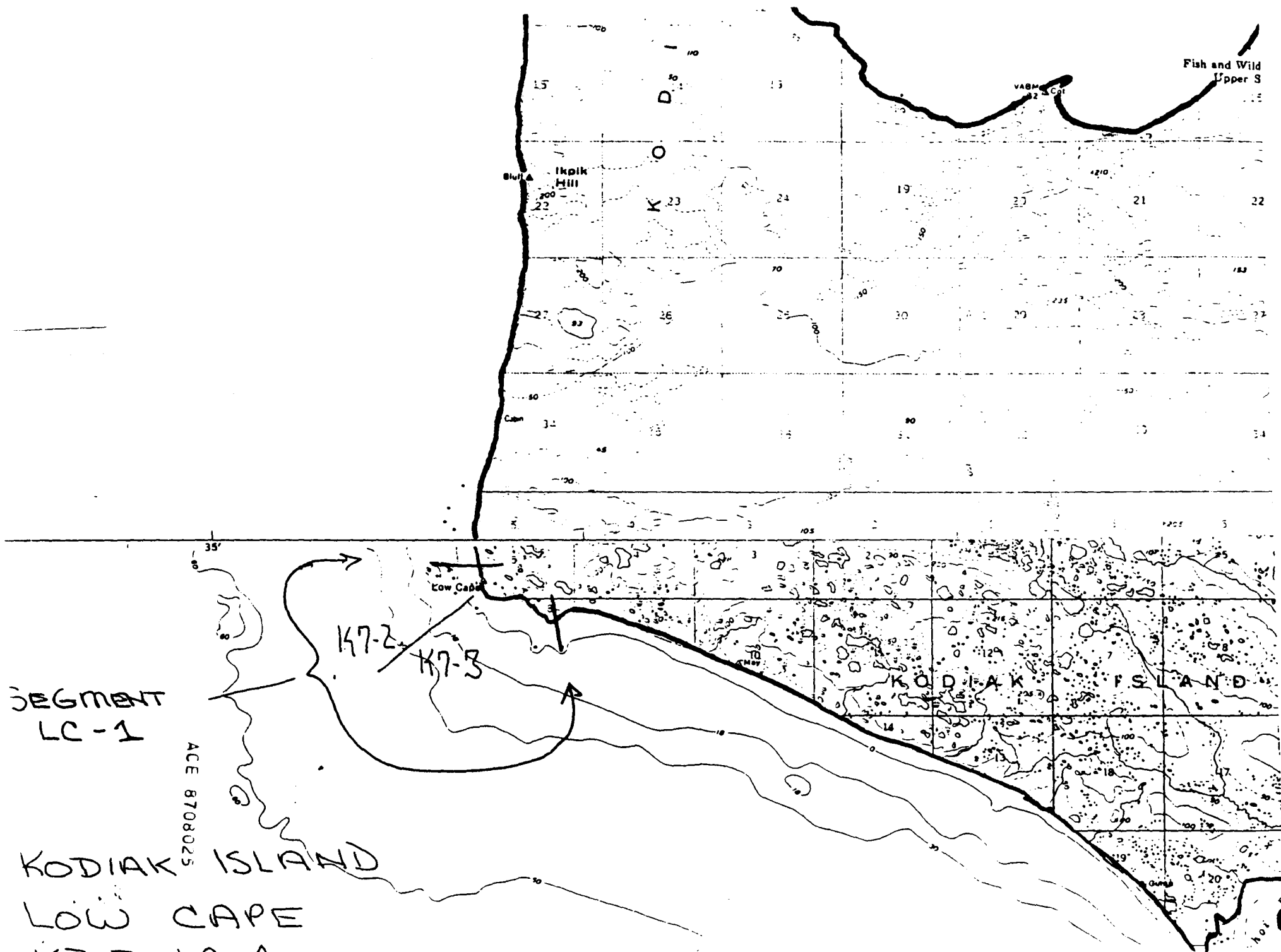
CLEANUP PRECAUTIONS: Avoid oiling lower ITZ

ACE 3708023

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 Other see Fox on beach, Deer Tracks

BIRDS: Swallows near cliffs. Gulls over ITZ

GENERAL OBSERVATIONS: High ITZ where oil is present is primarily on sandy beach and adjacent boulders. Some patches of algae and Littorines in pools only. These pools do not appear to be oiled. Moderate amounts of drift material on sandy beach (not oiled).



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE _____

SHORELINE SEGMENT K-7-3-LC-1

LOCATION: (see enclosed map) Low Cape, Kallak Island K-7-2-LC-1

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Let natural processes clean this segment. However if cleanup is to be undertaken appropriate techniques are:

- hot water +/or high pressure washing
 - manual removal of tar with sorbents ^{ross} on a warm day
 - other techniques as appropriate
- see Cornscent Sheet

Priorities Considerations: A-B

- Critical resources not immediately present, however KISC considers this a sensitive area due to local salmon use areas and pinniped haulouts.

Ecological Constraints (from site survey):

Avoid contamination of lower ITC during cleanup

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

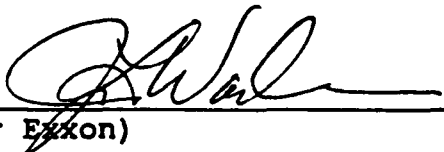
K 7-3

(version 6/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): KODIAK-CAPE ALITAK BLOCK

Includes Shoreline Segments: LC-6, LC-7

Submitted:  Date: 7/7/89
(for Exxon)

→ ISCC Recommendation: _____ Date: _____

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

KISCC:

Type A workorder approved
for LC-6 lightly oiled

~~LC-7 for KISCC review of~~
~~Shoreline Cleanup Program~~
~~(attached)~~
P. S. Smith
SKCP 7/13

ACE 8703027 -1

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 6/21/89

SHORELINE SEGMENT LC-7

LOCATION: (see enclosed map) CAPE ALITAK-KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC approval).
See archaeological constraints below.

Priorities Considerations:

KISCC considers this a sensitive area^a due to pinniped haulouts.

Ecological Constraints (from site survey):

- Avoid traffic through mytilus and bolanus growth areas.
- Avoid grassy hillsides and f/w ponds as much as possible.

Archeological Constraints (from site survey):

Because of the nature and significance of the cultural resources in this area, it is recommended that this segment not be cleaned.



State Historic Preservation Officer *

Date: June 23, 89

→ ISCC: _____

Date: _____

EXXON: 

Date: 7/7/89

FOSC: _____

Date: _____

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

(version 5/16/89)

JUNE 18

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 1989 / Time: 15:00

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fc

LOCATION

LOCATION KODIAK ISLAND: ALITAK

SEGMENT I.D. K7-3-LC-7

LENGTH OF SHORELINE SEGMENT: 440 m

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

SHORELINE

Shoreline Type: SPI/DEA/COV/HID/STRT

calm day only
Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B20 / C10 / P__ / G__ / S__ / M__ / R70

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 15 No. Bands 1 Width 6-8 m

Sporadic: Y/N Segment 5 Min/Max Dia 5 cm Impact Width 8 m

Est. Oil Thickness where > 1cm: 4/4 cm SU / SP / UP / MID / LO

Est. Oil Penetration: ≤ 1 cm SU / SP / UP / MID / LO

Layers? Yes/No Not Layers oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil 50 Spattered 50 H/M/L/VL Sheen 0

OIL WEATHERING (OW)

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 10 SU/SP/VP/MID/LO

Pancake Mousse 0 SU/SP/VP/MID/LO Asphalt Mousse 90 SU/SP/VP/MID/LO

Tar Formation 0

ACE 8703029

Comments:

This rocky section of beach contains 3 coves with bar or cobble/boulder beach

See Map for details of oil contamination

Moderate to high pressure hot water would be require for effective cleaning. Archeology constraints may warrant limit

DOCUMENTATION:

Map Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

ACE 8708030

JUNE 18, 1989
15:07

LC-7



Beach 4:

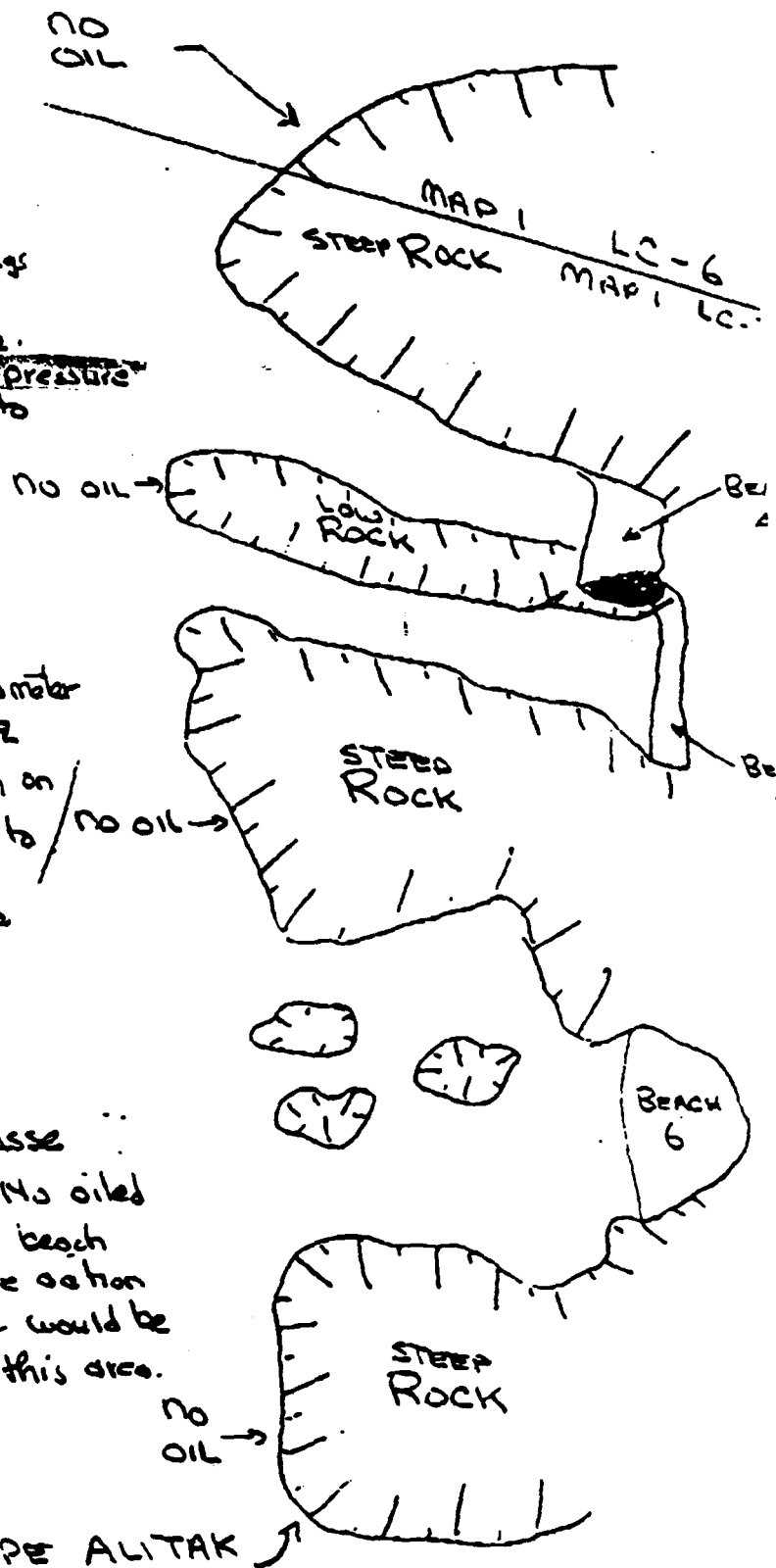
Boulder beach. > 5cm diameter tar
"splatters" on top surfaces of boulders
Nearly continuous tar/mousse coatings
between and under boulders
contaminated band 6-8 m wide.
Beach length 15 to 20 m. High pressure
hot water would be required to
effectively clean this area

Beach 5:

Cobble boulder beach 25 m long
dried tar "splatters" < 5 cm diameter
over 30% of mid to high tide
no Penetration. Oil generally on
larger cobbles and boulders. Med. to
high pressure hot water required
to effectively clean this area

Beach 6:

Boulder Beach. 15 m wide
50% coverage of tar and mousse
Some oiled drifted seaweed. No oiled
logs. More exposed sections of beach
have been partially cleaned by wave action
Med to high pressure hot water would be
required to effectively clean this area.



ECOLOGICAL EVALUATION

LOCATION: Low Cape to Cape Alituk SITE: Cape Alituk OBSERVER: J. Tarpley
 LOCATION PREFIX: K7/LL SEG. NO.: K-7-3-LL-7 LENGTH: 440 (M)
 DATE: 6/19/89 TIME (HMM): 1345 TIDE HT.: +2.2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

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

Littorina

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

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

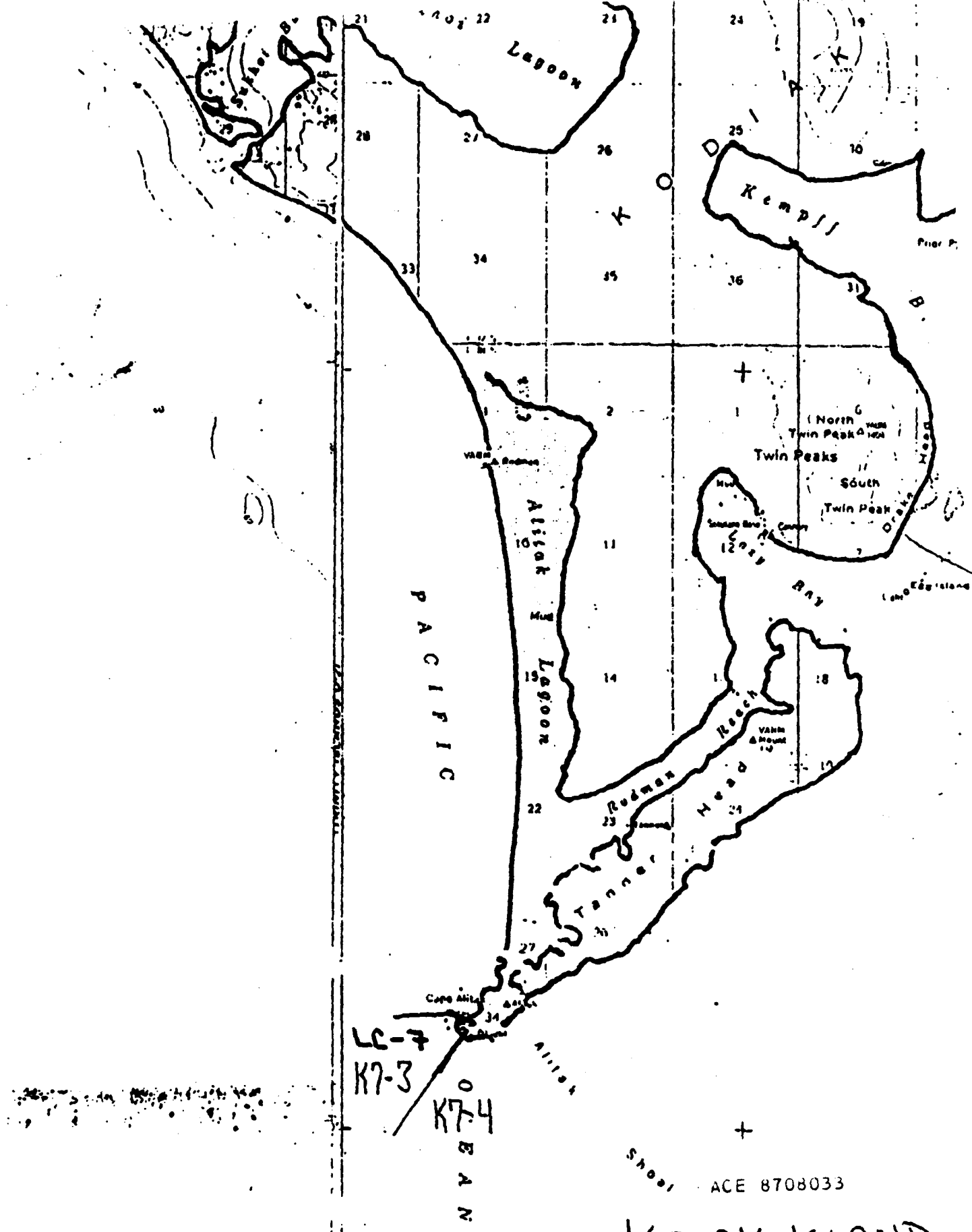
OTHER OBSERVATIONS: Ther above description is for pebbles boulder benches with
Adjacent to these benches are rocky outcrops rich & diverse w/ intertidal algae
which are not oiled

CLEANUP PRECAUTIONS: Avoid traffic through Mytilus and Balanus areas
Avoid grassy hillside and F/w marshes as much as possible.

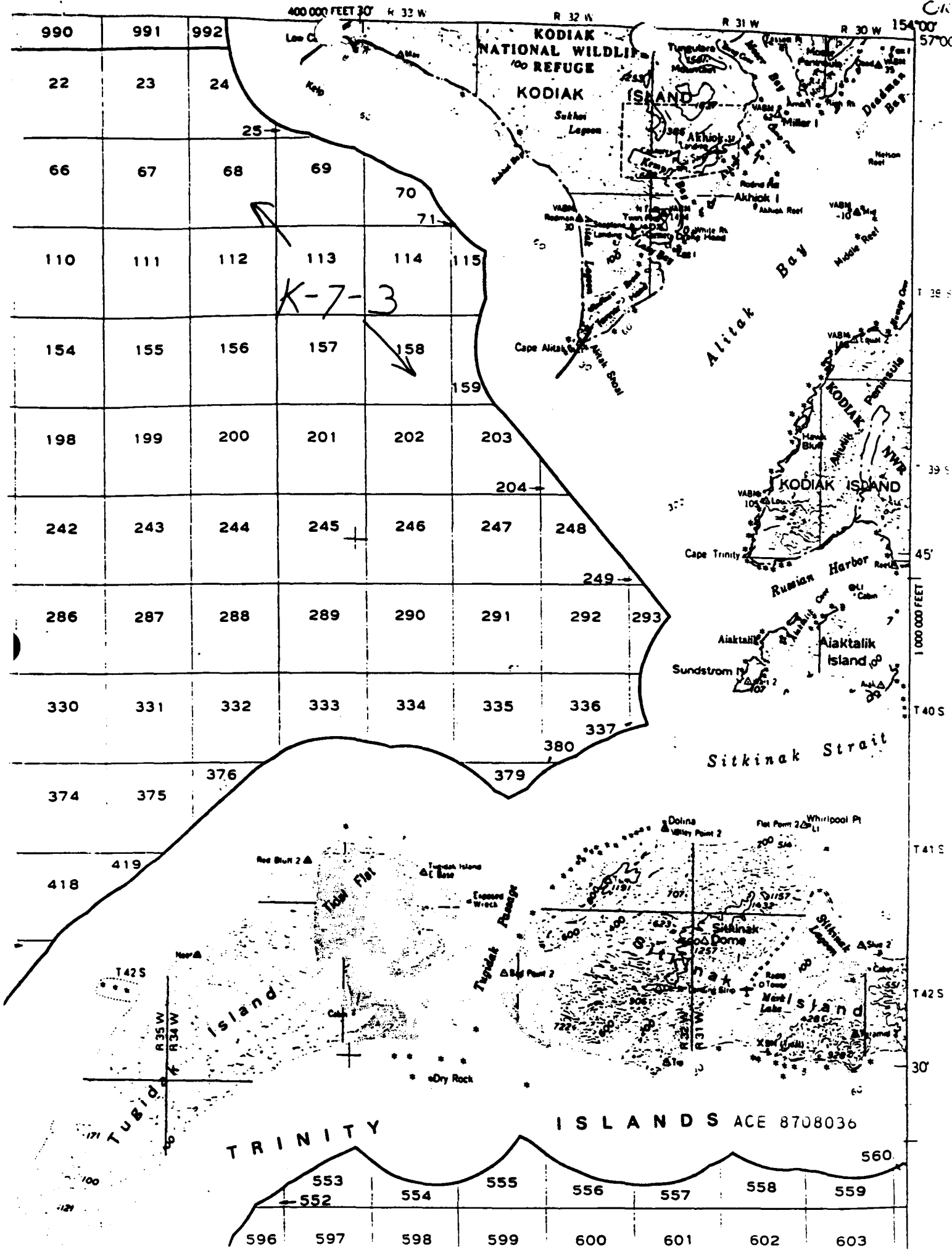
MAHMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 other 3 Black swans in cove

BIRDS: Gulls

GENERAL OBSERVATIONS: Pascher mussels splatter coating rocks & rock faces
Littorines abundant and living on oiled rocks. Oiled Littorines, Lispeps, or
Mytilus slow to respond.



KODIAK ISLAND
CAPE ALITAK
SEGMENT
K7-2-LC-7

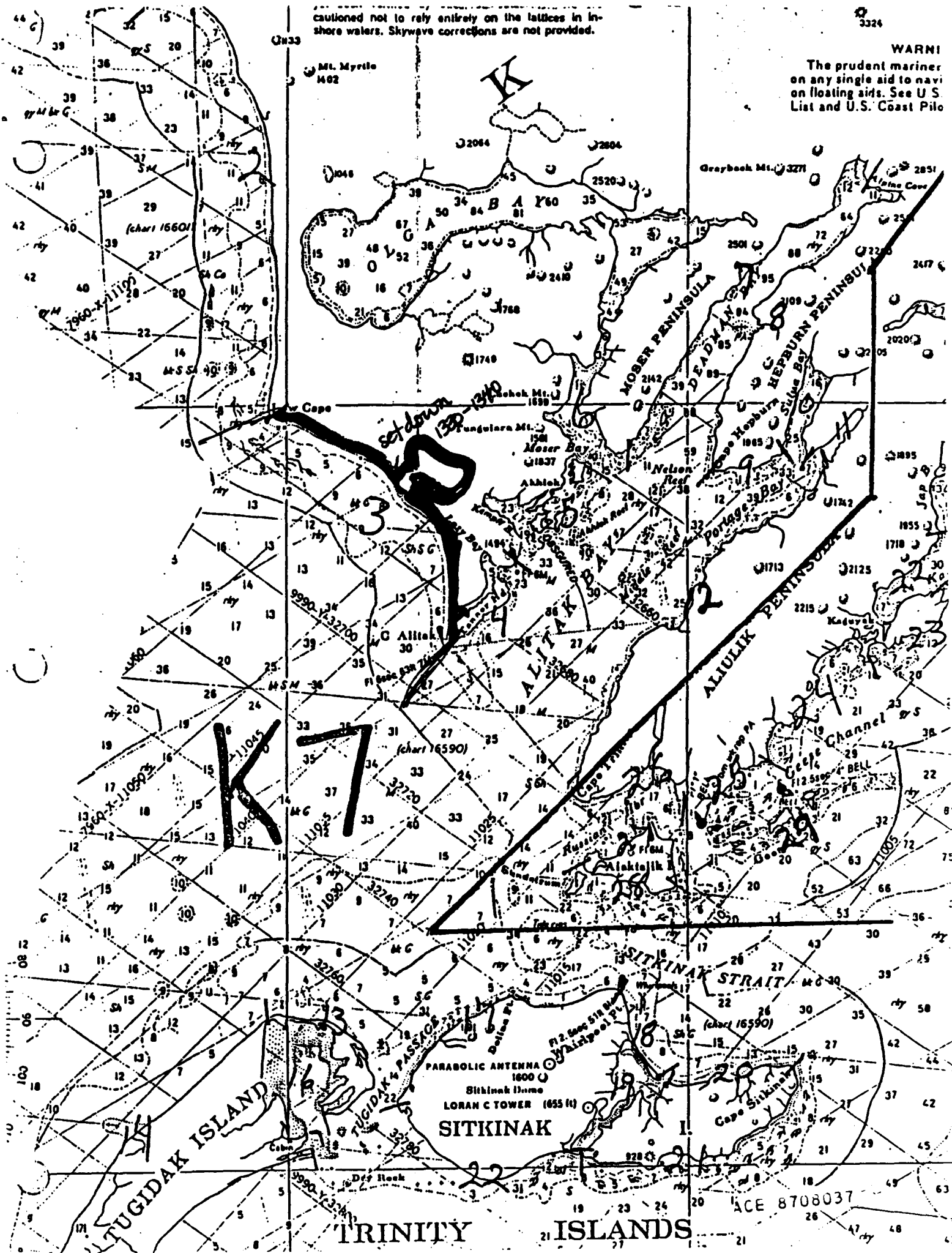


cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

3324

WARNI

The prudent mariner on any single aid to navigation on floating aids. See U.S. List and U.S. Coast Pilot



ACE 8708037

K7-03

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89 SHORELINE SEGMENT LC-2

LOCATION: (see enclosed map) LOW CAPE-KODIAK ISLAND
ROCKY BEACH SOUTH EAST OF LOW CAPE

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Recommend letting natural processes clean this segment.
However, if cleanup is to be undertaken, appropriate techniques include:

Hot water and/or high pressure washing.

Manual removal of tar with sorbent rags.

Other approved techniques as appropriate.

Priorities Considerations: Class 5-B

Critical resources not immediately present, however KISCC considers this a sensitive area due to local salmon use areas and pinniped haulouts.

Ecological Constraints (from site survey):

Avoid contamination of lower intertidal zone during cleanup.

Archeological Constraints (from site survey):

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

Douglas Regan
State Historic Preservation Officer *

Date: 6/29/89

EXXON: *[Signature]*

Date: 7/1/89

FOSC: *[Signature]* *acknowledged*
by director *ELUD 7/11*

Date: 7/20/89

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: June 18/89 Time: 11:37

Observer: Mike Miles

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION Kodiak Island South of Cape

SEGMENT I.D. K7-3-LC-2

LENGTH OF SHORELINE SEGMENT: 7900 m

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

SHORELINE:

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

Slope: LAUG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B80% / C15% / P5% / G / S / M / R

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs + sea

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 1 No. Bands 5cm x 25cm Width 100

Sporadic: Y/N Segment 1 Min/Max Dia 5cm Impact Width 100

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes No No. Layers 1 Oil Weathering 100

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 100 % H/M/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 100 % SU/SP/VP/MID/LO

Tar Formation 0 %

Comments:

See attached comment sheet

ACE 8708039

Mike Miles
June 18 / 89

KODIAK ISLAND
South of Low Cape
K7-3-LC-2

PAGE 1 OF 2

COMMENTS

SHORELINE OIL EVALUATION

The backshore in this segment consists of a 30 m high cliff composed of unconsolidated sediments. The foreshore consists of a low angle cobble boulder beach with a sand pebble veneer/berm at the high tide line.

This segment was flown over 4 times in a helicopter - one at 3 to 5 m off the beach at a very slow speed. The only oil observed was adjacent to a poorly defined headland area (see location map) which projects further seaward than the surrounding portions of this segment. The oil consists of a very light concentration of tar "spots" on the mid to upper ITZ. Spots are generally 0.2 to 3 cm in diameter and occur preferentially on the larger boulders.

Given the weathered state of this oil, hot water +/or high pressure washing will possibly be required for effective clean-up. However
con't. />

MIKE MILES
JUNE 18 / 89

KODIAK ISLAND
SOUTH OF LOW CAPE
K7-3-LC-2

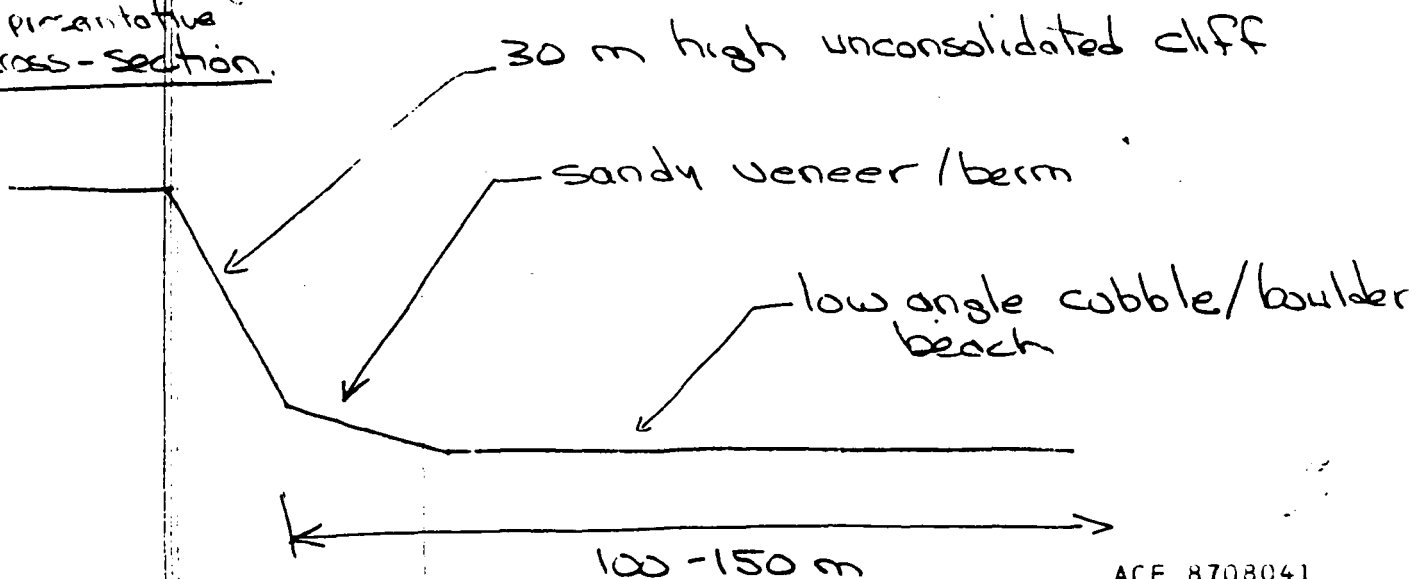
PAGE 2 OF 2

COMMENTS

SHORELINE OIL EVALUATION

given the ^{large} size of the boulders on this beach and the low gradient of the Shoreline, recovery of the small amount of oil on this beach will be difficult. Manual oil removal ~~is~~ using Sorbent towels on a hot day might also be an effective treatment. However substantial effort would be required ~~and~~ in order to pick up a comparatively small quantity of oil. The best alternative is likely to let ~~the~~ natural wave action clean this beach - which will likely occur over a relatively short time period [1 year?].

representative
Cross-section.



ACE 8708041

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) ST-2

Sample Numbers Collected: N/A

ECOLOGICAL EVALUATION

LOCATION: Low Cape SITE: Rocky beach SE of Low Cape OBSERVER: J. Tarpley

LOCATION PREFIX: K-7/LC-2 SEG. NO.: K-7-3-LC-2 LENGTH: 7870 (M)

DATE: 6/18/89 TIME (HHMM): 1115 TIDE HT.: +0.25 (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

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

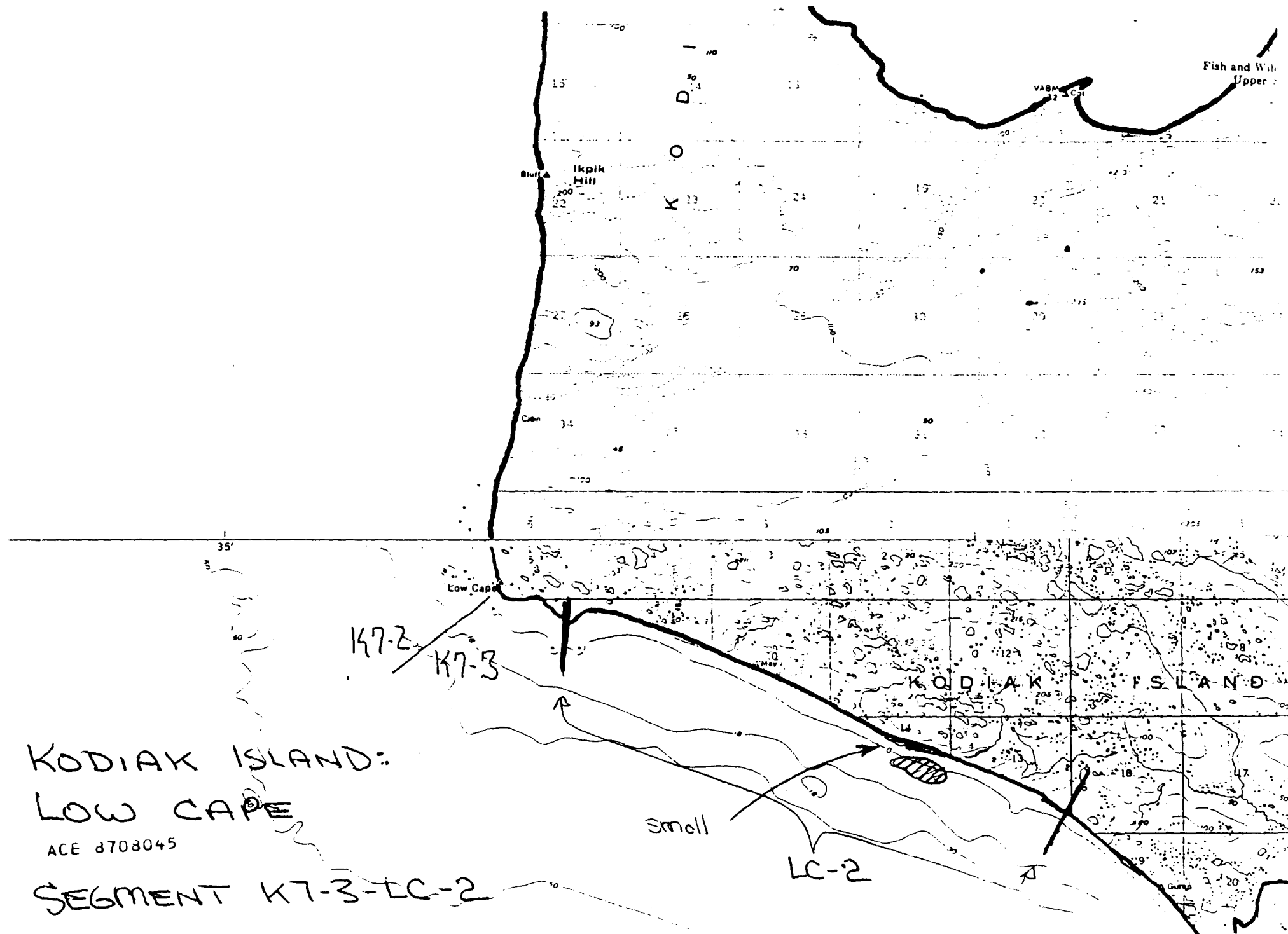
OTHER OBSERVATIONS: Clams shells. All biota concentrated in higher ITZ pools. Moderate amount of drift high on beach.

CLEANUP PRECAUTIONS: Avoid oil contamination of lower ITZ.

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

BIRDS: Gulls

GENERAL OBSERVATIONS: Parrake splatter on rocks, little if any apparent effect on organisms.





(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE _____

SHORELINE SEGMENT K-7-3-LC-2

LOCATION: (see enclosed map) Rocky beach SE of Lewis Cape.
Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Let natural processes clean this beach. However if clean up is to be undertaken appropriate techniques include:

- i) high pressure &/ or hot water washing
 - ii) manual removal of tar with solvent rags
 - iii) other techniques as appropriate
- } See comment sheet

Priorities Considerations: 5-B

- Critical resources not immediately present, however KISCC considers this a sensitive area due to local salmon use areas and pinuped haulouts.

Ecological Constraints (from site survey):

- Avoid contamination of lower ITZ during cleanup.

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8708047 -12

(version 5/02/89)

K07-03

SHORELINE CLEANUP PROGRAM

DATE 6/29/89 SHORELINE SEGMENT LC-3

LOCATION: (see enclosed map) LOW CAPE-KODIAK ISLAND

SANDY BEACH SOUTH EAST OF LOW CAPE TO SOUTH SIDE OF SUKHOI BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. Very small quantities of oil occur on this segment and there is high potential for wave action to clean this area.

Priorities Considerations: Class 5-A

KISCC considers this a sensitive area due to salmon runs in Sukhoi Bay.

Ecological Constraints (from site survey):

Should oiling occur and cleanup take place. Avoid contamination of Sukhoi Bay.
Stay out of grassy areas.

Archeological Constraints (from site survey):

If cleanup is planned, archaeological constraints must be reconsidered.

Douglas Reger
State Historic Preservation Officer *

Date: 6/29/89

EXXON: *[Signature]*

Date: 7/1/89

FOSC: *[Signature]* *Revis 7/3/89*

Date: 7/15/89

Revisit for reoiling; future conditions
* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT K7-3 LC-3

LOCATION: (see enclosed map) LOW CAPE-KODIAK ISLAND

SANDY BEACH SOUTH EAST OF LOW CAPE TO SOUTH SIDE OF SUKHOI BAY

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. Very small quantities of oil occur on this segment and there is high potential for wave action to clean this area.

Priorities Considerations: Class 5-A

KISCC considers this a sensitive area due to salmon runs in Sukhoi Bay.

Ecological Constraints (from site survey):

Should oiling occur and cleanup take place. Avoid contamination of Sukhoi Bay.
Stay out of grassy areas.

Archeological Constraints (from site survey):

If cleanup is planned, archaeological constraints must be reconsidered.

Douglas R.eyer
State Historic Preservation Officer *

Date: 6/29/89

EXXON: *Jack A. Rickman*

Date: 7/20/89

FOSC: _____

Date: _____

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

(version 5/16/89)

June

SHORELINE OIL EVALUATION FORM - KODIAK

Date: 18/89 / Time: 16:40

Observer: Mike Miles

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KODIAK ISLAND ^{entrance to}

SEGMENT I.D. K-7-3-100

LENGTH OF SHORELINE SEGMENT: 5250 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B5% / C30% / F30% / G20% / S15% / M % / R %

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

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment No. Bands Width

Sporadic: Y/N Segment Min/Max Dia .3 cm Impact Width 3-7 m

Est. Oil Thickness where > 1cm: 4/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0% "Free" Oil 0% Spattered 100% H/M/L/VL Sheen %

OIL WEATHERING (OW)

Fresh Oil 0% SU/SP/VP/MID/LO Choc Mousse 0% SU/SP/VP/MID/LO

Pancake Mousse 0% SU/SP/VP/MID/LO Asphalt Mousse 100% SU/SP/VP/MID/LO

Tar Formation 0%

Comments:

ACE 8708050

See attached comment sheet

MIKE MILES
June 18 / 89

KODIAK ISLAND
ENTRANCE TO SUKHOT BAY
K-7-3-LC-3

COMMENTS
SHORELINE OIL EVALUATION

This segment consists of the entrance to Sukhot Bay and the section of narrow pebble / cobble beach to the north.

No oil was found on the outer exposed section of coast. Occasional small (1-3 mm) dried tar "spots" occur on pebbles and cobbles in more sheltered locations in the bay entrance. This material, which does not have the potential to be mobilized, can be expected to be cleaned during the next few high tide storms.

No clean-up activities are recommended.

ECOLOGICAL EVALUATION

LOCATION: Low Cape → Cape Alitak SITE: Sand beach North of Sukhoi Bay OBSERVER: J. Tarpley
 LOCATION PREFIX: K7/LC SEG. NO.: K-7-3-W-3 LENGTH: 5250 (M)
 DATE: 6/18/84 TIME (HHMM): 1100 & 1615 TIDE HT.: +2.0 (M)

OILED ZONE: Splash (High) Medium Low

SUBSTRATUM: Rocks Boulder (Cobble Gravel Sand) Mud

LIVE BIOTA

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

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

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

Littorina

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

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

OTHER OBSERVATIONS: Drift algae & wood scattered along high tide line
and stream bed. Clam, Mytilus, Snail, Razor clam shells abundant.
Cancer Crab carapaces also abundant in drift.

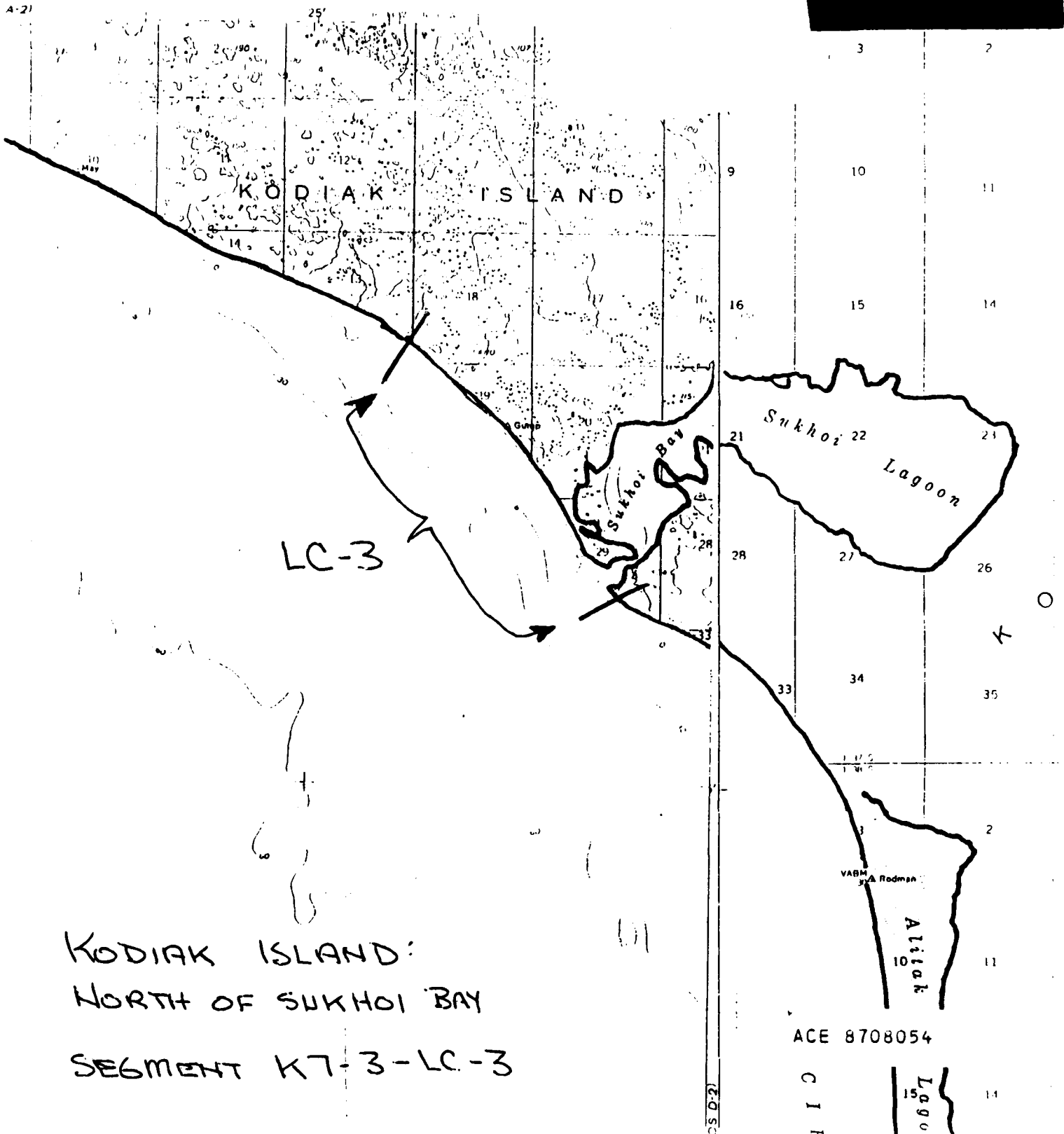
CLEANUP PRECAUTIONS: None

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 Other NONE

BIRDS: NONE

GENERAL OBSERVATIONS: At ~1100h fly over to inspect beach. At 1615 land
on south point of entrance to Sukhoi Bay. No biota. High energy beach.

TRINITY ISLANDS
AL
1 63 360 SERIES



KODIAK ISLAND:
NORTH OF SUKHOI BAY
SEGMENT K7-3-LC-3

ACE 8708054

C I F

Lago

DOCUMENTATION:

Map/Aerial photo marking segment boundaries see attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE _____

SHORELINE SEGMENT K-7-3-LC-3

LOCATION: (see enclosed map) Sandy beach S.E. of Low Cape
to south side of Sukhoi Bay, Kodiak Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

Clean-up activities are not recommended due to the
very small quantities of oil on this segment and the
high potential for wave action to clean this area

Priorities Considerations: 5-A

- KISCC considers this a sensitive area due to salmon runs in Sukhoi Bay.

Ecological Constraints (from site survey):

- Should oiling occur and cleanup take place. Avoid contamination of Sukhoi Bay.
- Stay out of grassy areas.

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

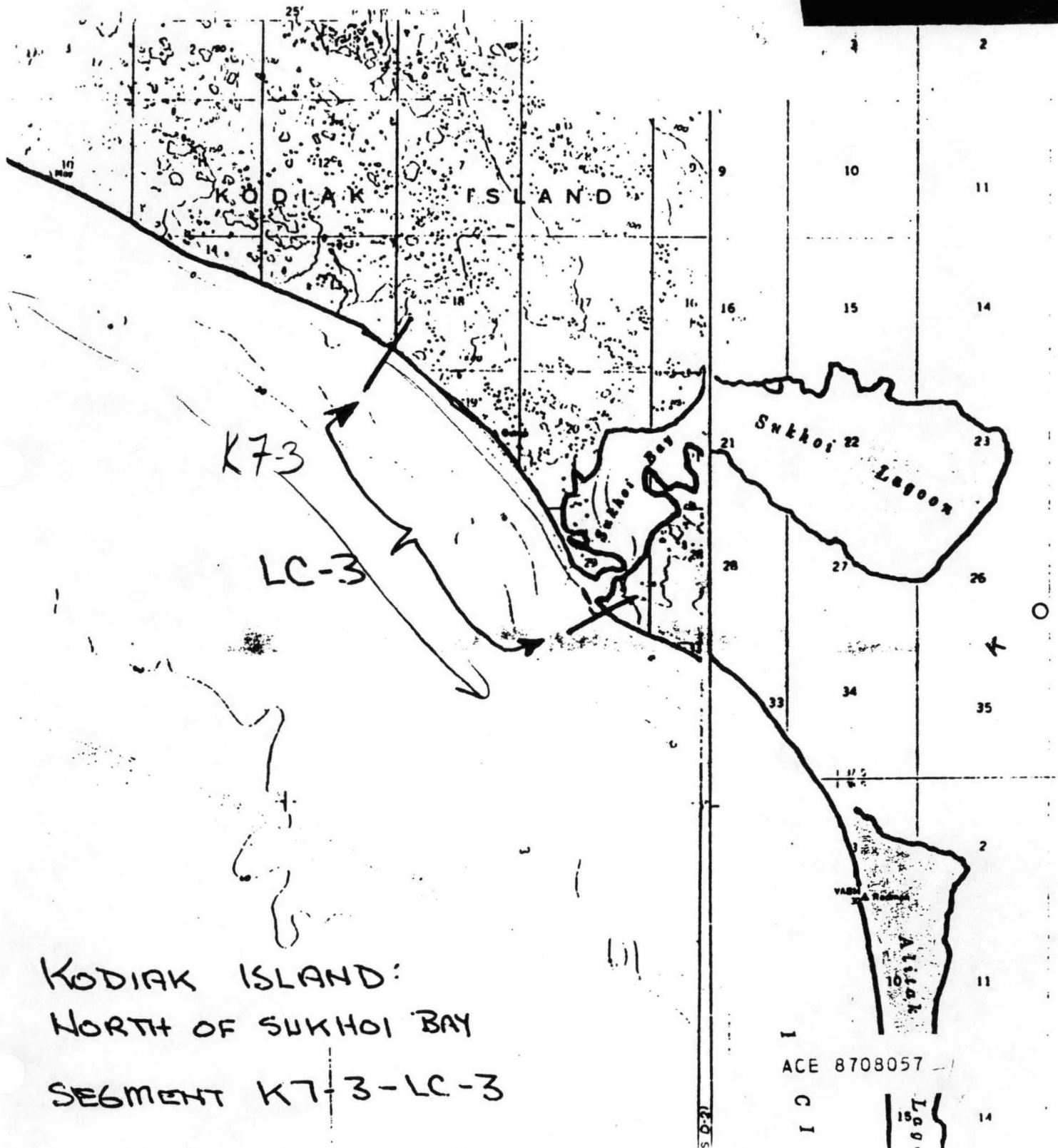
Date: _____

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

TRINITY ISLANDS

AL

1 63 360 SERIES



KODIAK ISLAND:
NORTH OF SUKHOI BAY
SEGMENT K7-3-LC-3

K07-03

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT LC-4

LOCATION: (see enclosed map) ROCKY BEACH SOUTH OF SUKHOI BAY
BETWEEN LOW CAPE AND CAPE ALITAK, KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. No oil observed.

Priorities Considerations:

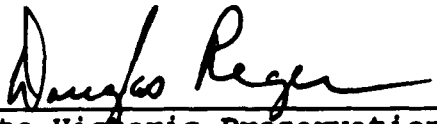
Critical resources not immediately present. However, the KISCC considers this a sensitive area due to local pinniped haulouts.

Ecological Constraints (from site survey):

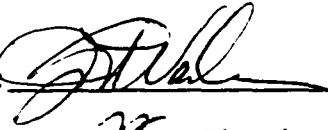
No constraints. Cleanup is not recommended at this time, due to lack of oil. Should cleanup be initiated, an ecological evaluation should be performed.

Archeological Constraints (from site survey):

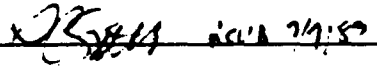
If cleanup is planned, additional archaeological evaluation is recommended.


State Historic Preservation Officer *

Date: 6/29/89

EXXON: 

Date: 7/1/89

FOSC: 

Date: 7/5/89

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

ACE 8708058

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT K7-3 LC-4

LOCATION: (see enclosed map) ROCKY BEACH SOUTH OF SUKHOI BAY
BETWEEN LOW CAPE AND CAPE ALITAK, KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. No oil observed.

Priorities Considerations:

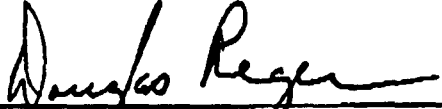
Critical resources not immediately present. However, the KISCC considers this a sensitive area due to local pinniped haulouts.

Ecological Constraints (from site survey):

No constraints. Cleanup is not recommended at this time, due to lack of oil. Should cleanup be initiated, an ecological evaluation should be performed.

Archeological Constraints (from site survey):

If cleanup is planned, additional archaeological evaluation is recommended.


State Historic Preservation Officer *

Date: 6/29/89

EXXON: 

Date: 7/20/89

FOSC: _____

Date: _____

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: JUNE 18 1989 / Time: 11:00

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: SUN Cloud/Rain/Snow/Fog

LOCATION

LOCATION KODIAK ISLAND ^{→ a few touch and go landings only}
ALUTKA LAGOON SEGMENT I.D. K-7-3-LC-4

LENGTH OF SHORELINE SEGMENT: 4400 m

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

calm day only

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B45% / C45% / P5% / ~~S~~ / S5% / M % / R %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type loss and
Small amount
drifted seaw

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment % No. Bands Width

Sporadic: Y/N Segment % Min/Max Dia Impact Width

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes/No No# Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0% "Free" Oil 0% Spattered 0% H/U/L/VL Sheen 0%

OIL WEATHERING (OW)

Fresh Oil 0% SU/SP/VP/MID/LO Choc Mousse 0% SU/SP/VP/MID/LO

Pancake Mousse 0% SU/SP/VP/MID/LO Asphalt Mousse 0% SU/SP/VP/MID/LO

Tar Formation 0%

ACE 8708060

Comments:

This segment consists of a cobble boulder beach with
sand pebble veneer/springs tide berm in the upper ITZ. The
back shore is formed by a 5 m high cliff composed of
unconsolidated sediments.

This beach was flown 4 times, once at 3-5 m from the beach
surface at very slow speed. A number of touch and go stops.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) IT-2

Sample Numbers Collected: N/A

ACE 8708061

ECOLOGICAL EVALUATION

LOCATION: Law Cape to Cape Alitak SITE: Sukhoi Bay South to Cape Alitak OBSERVER: J. Tarpley
 LOCATION PREFIX: K7/LC SEG. NO.: K-7-3-LC-4 LENGTH: 4375 (M)

DATE: 6/18/89 TIME (HHMM): 1100 TIDE HT.: +0.25 (M)

OILED ZONE: Splash High Medium Low Ø

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

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

OTHER OBSERVATIONS: _____

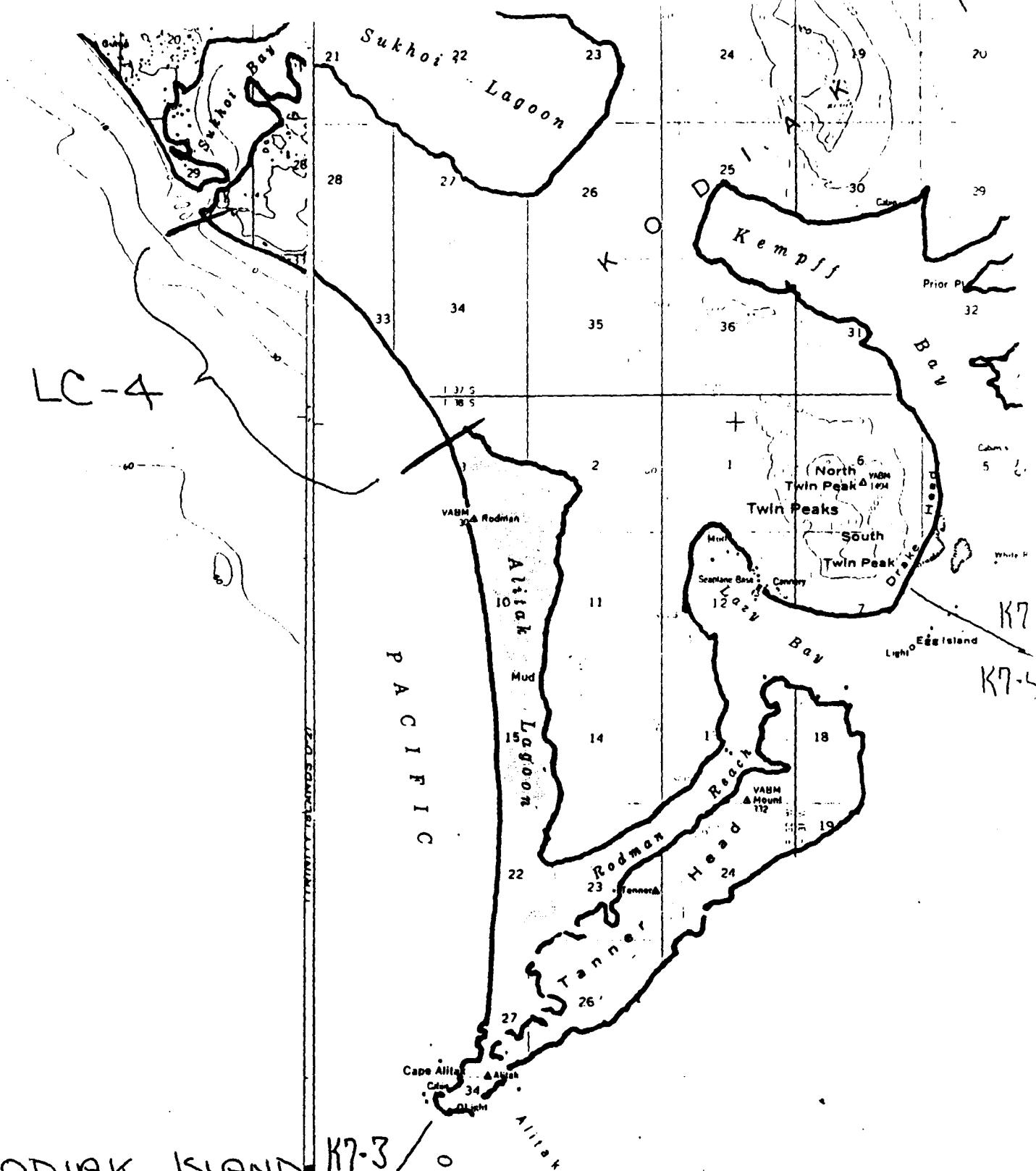
CLEANUP PRECAUTIONS: _____

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
 other Grizzly Bear on Beach

BIRDS: Gulls

GENERAL OBSERVATIONS: Fly over close to ground - No oil spotted
therefore did not get out of chopper to survey beach.

LC-4



KODIAK ISLAND K7-3
SOUTH OF SUKHOI BAY K7-4
SEGMENT K7-3-LC-4

ACE 8708064

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE _____

SHORELINE SEGMENT K-7-3-LC-4

LOCATION: (see enclosed map) Rocky beach south of Sukhoi Bay
between Low Cape and Cape Alitak, Kodiak Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

. No oil was observed and no clean-up activities are required

Priorities Considerations: HBL

- Critical Resources not immediately present, However, the KISCC considers this a sensitive area due to local pinniped haulouts.

Ecological Constraints (from site survey):

- None, since cleanup is not recommended at this time due to lack of oil
- Should cleanup be initiated, an ecological evaluation should be performed.

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. none. no clean-up recommended at this time.

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

K07-03

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89 SHORELINE SEGMENT LC-5

LOCATION: (see enclosed map) LOW CAPE-BEACH PARALLEL TO ALITAK
LAGOON BETWEEN LOW CAPE TO CAPE ALITAK, KODIAK ISLAND

ADEC NO. K7-3 SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. No oil observed.

Priorities Considerations:

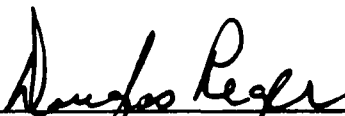
Critical resources not immediately present. However, KISCC considers this a sensitive area due to local pinniped haulouts.

Ecological Constraints (from site survey):

None, since cleanup is not required. Should this site become oiled and cleanup become necessary, ecological evaluations must be performed at that time.

Archeological Constraints (from site survey):

If cleanup is planned, additional archaeological evaluation is recommended.


State Historic Preservation Officer *

Date: 6/29/89

EXXON: 

Date: 7/1/89

FOSC:  RUD 7/7/89

Date: 7/15/89

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

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6/29/89

SHORELINE SEGMENT K2-3 LC-5

LOCATION: (see enclosed map) LOW CAPE-BEACH PARALLEL TO ALITAK LAGOON BETWEEN LOW CAPE TO CAPE ALITAK, KODIAK ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time, subject to FOSC approval. No oil observed.

Priorities Considerations:

Critical resources not immediately present. However, KISCC considers this a sensitive area due to local pinniped haulouts.

Ecological Constraints (from site survey):

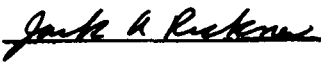
None, since cleanup is not required. Should this site become oiled and cleanup become necessary, ecological evaluations must be performed at that time.

Archeological Constraints (from site survey):

If cleanup is planned, additional archaeological evaluation is recommended.


State Historic Preservation Officer *

Date: 6/29/89

EXXON: 

Date: 7/20/89

FOSC: _____

Date: _____

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

ACE 8708067

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

Date: JUNE 18 1989 Time: 11:00

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION KODIAK ISLAND: LAGOON ALITAK

SEGMENT I.D. K-7-3-LC-5

LENGTH OF SHORELINE SEGMENT: 7200 m

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

calm day only

SHORELINE:

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

Slope: LAUG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B ___ % / C ___ % / P 70 % / G ___ % / S 30 % / M ___ % / R ___ %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type logs and some drift seaweed

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment # _____ No. Bands _____ Width _____

Sporadic: Y/N Segment # _____ Min/Max Dia _____ Impact Width _____

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: 0 cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers _____ Oil Weathering _____

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

OIL MORPHOLOGY

Pooled Oil 0 % "Free" Oil 0 % Spattered 0 % H/H/L/VL Sheen 0 %

OIL WEATHERING (OW)

Fresh Oil 0 % SU/SP/VP/MID/LO Choc Mousse 0 % SU/SP/VP/MID/LO

Pancake Mousse 0 % SU/SP/VP/MID/LO Asphalt Mousse 0 % SU/SP/VP/MID/LO

Tar Formation 0 %

This segment consists of a sandy-pebbly barrier beach extending along the front of Alitak Lagoon. Continuous

Comments:

ACE 8708068

This segment of coast was flown 4 times and once at slow speed 3 to 5 m above the beach surface. A number of stop and go landings were made to inspect sub-surface materials.

No oil was observed and clean-up activities are not required

ECOLOGICAL EVALUATION

LOCATION: Low Cape to Cape Alitak SITE: Beach segment of Alitak Lagoon OBSERVER: J. TarpleyLOCATION PREFIX: K-7/LC SEG. NO.: K-7-3-LC-5 LENGTH: 7220 (M)DATE: 6/18/89 TIME (HHMM): 1100 TIDE HT.: +0.25 (M)OILED ZONE: Splash High Medium Low ØSUBSTRATUM: 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/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/N

OTHER OBSERVATIONS: _____

CLEANUP PRECAUTIONS: _____

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions 1 Whales _____
Other Sea Lion offshoreBIRDS: Gulls in Alitak LagoonGENERAL OBSERVATIONS: This segment was surveyed from the air with short stops to check for oil. No oil was seen, therefore evaluations were not performed.

SEGMENT
LC-5

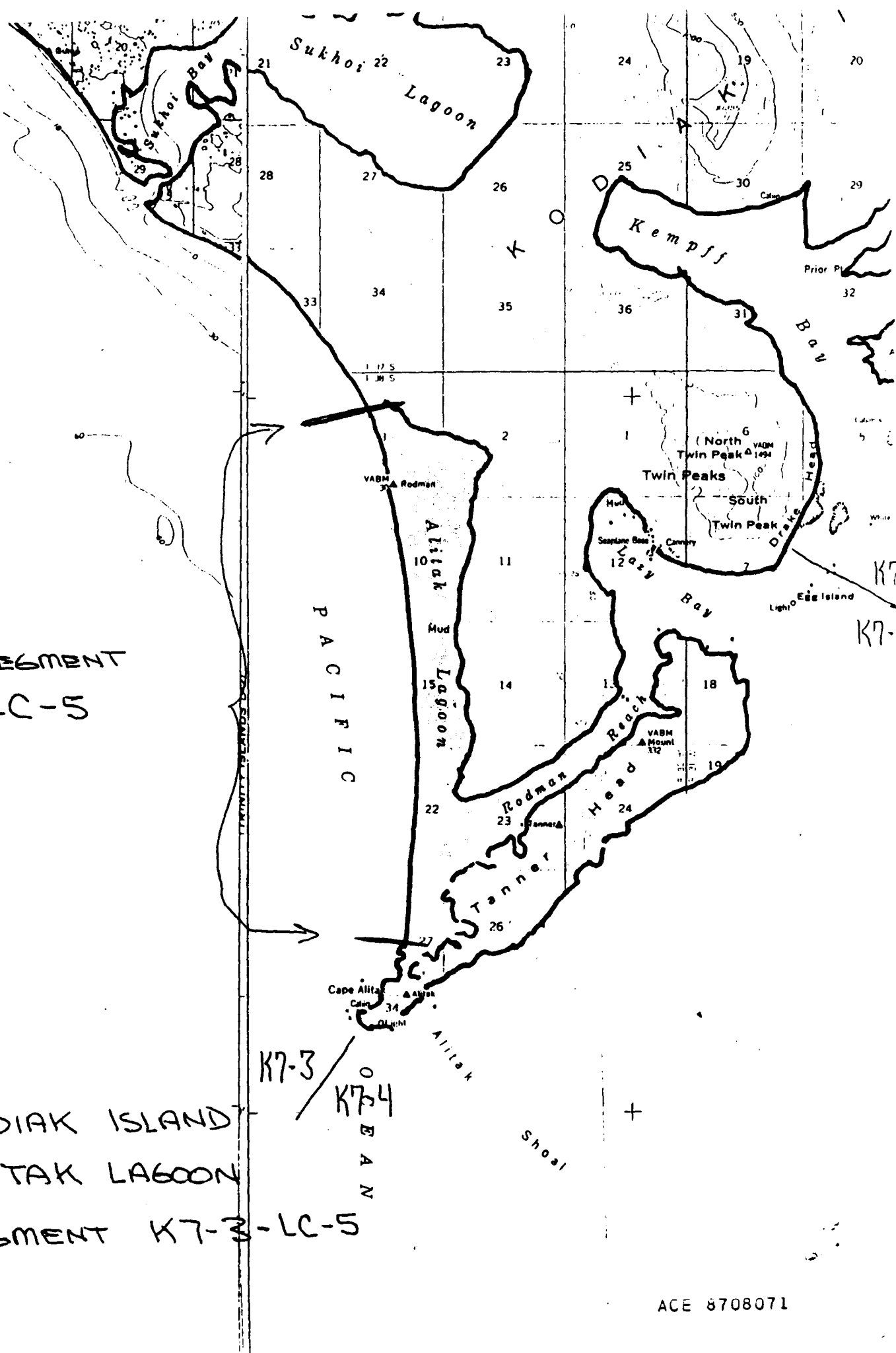
KODIAK ISLAND

ALITAK LAGOON

SEGMENT K7-3-LC-5

K7-3 / K7-4

OCEAN



DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) JT-2

Sample Numbers Collected: N/A

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE _____

SHORELINE SEGMENT K-7-3-LC-5

LOCATION: (see enclosed map) Beach parallel to Alitak Lagoon between Low Cape to Cape Alitak, Kodiak Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

- no oil was observed and no-clean up activities are recommended

Priorities Considerations: ~~==~~

- Critical Resources not immediately present. However, KISCC considers this a sensitive area due to local pinpoint haulouts.

Ecological Constraints (from site survey):

- None, since clean up is not required.

Should this site become oiled and cleanup be necessary, ecological evaluations must be performed at that time.

Archeological Constraints (from site survey):

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

State Historic Preservation Officer *

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 8708073 -/

TYPE A SHORELINE CLEANUP WORK ORDER

K 7-3

Date: 7-7-89 Shoreline Segment: LC-6

Location: (Attach map) Cape ALITAK - KODIAK ISLAND

ADEC No. _____ Shoreline Assessment Date: 6-18-89

Recommended Cleanup Activity(ies):

Manually remove small quantities of contaminated debris and patches of mosses.

Priority Considerations:

Class A: The NISCC considers this a sensitive area due to perennated haulouts.

Class 4: lightly oiled

Ecological Constraints (from site survey):

Keep off dune and hillside vegetation.

Archaeological Constraints:

If any archaeological or historical sites or artifacts are discovered during the cleanup activity, they must remain undisturbed and the Exxon archaeologist C. Mobley contacted (as per procedures in the "Guideline for Shoreline Cleanup") and the State Historic Preservation Office notified as soon as possible.

Submitted by: *[Signature]*
Exxon

Date: 7-7-89

State Historic Preservation Officer Telephone Approval (Required)

Date: _____

Approved: *See attachment*
Assistant OSC Western Alaska (if appropriate)

Date: _____

Approved: *[Signature]*
Federal On-Scene Coordinator
by [Signature]

Date: 7/13/89

4/30/89

ACE 8708074

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 6/21/89

SHORELINE SEGMENT LC-6

LOCATION: (see enclosed map) CAPE ALITAK-KODIAK ISLAND

ADEC NO. K7-3 SHORELINE ASSESSMENT DATE: 6/18/89

Recommended Cleanup Activity(ies):

- Manually remove small quantities of contaminated debris and patches of mousse.

Use other approved methods as appropriate.

Priorities Considerations:

Class A: The KISCC considers this a sensitive area due to pinniped haulouts.

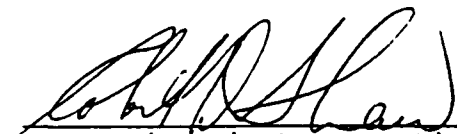
Class 4: Lightly oiled.

Ecological Constraints (from site survey):

Keep off dune and hillside vegetation.

Archeological Constraints (from site survey):

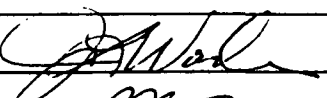
Archeological monitor required during cleanup. Cleanup crews should be restricted to the active beach. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup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


State Historic Preservation Officer *

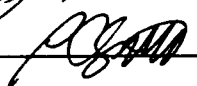
Date: June 23, 89

ISCC: _____

Date: _____

EXXON:  _____

Date: 7/7/89

FOSC:  _____

Date: 7/13/89

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

(version 5/16/89)

SHORELINE OIL EVALUATION FORM - KODIAK

JUNE 18
Date: 1989 / Time: 13:27

Observer: MIKE MILES

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION KODIAK ISLAND:
LOCATION CAPE ALITAK

SEGMENT I.D. K7-3-LC-6

LENGTH OF SHORELINE SEGMENT: 1530 m

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

calm day
only

SHORELINE:

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

Slope: LAUC/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 5 / C 5 / P 5 / G 10 / S 5 / M / R 50

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type Logs and seaweed

OIL

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

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

OIL DISTRIBUTION

Continuous: Y/N Segment 20 No. Bands 1 Width ≤ 8 m

Sporadic: Y/N Segment 20 Min/Max Dia ≤ 5 cm Impact Width ≤ 8 m

Est. Oil Thickness where > 1cm: N/A cm SU / SP / UP / MID / LO

Est. Oil Penetration: ≤ 30 cm SU / SP / UP / MID / LO

Layers? Yes/No No. Layers Oil Weathering

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

OIL MORPHOLOGY

Pooled Oil 0 "Free" Oil 0 Spattered 100 H/M/L/VL Sheen 0

OIL WEATHERING (OW)

Fresh Oil 0 SU/SP/VP/MID/LO Choc Mousse 45 SU/SP/VP/MID/LO

Pancake Mousse 5 SU/SP/VP/MID/LO Asphalt Mousse 50 SU/SP/VP/MID/LO

Tar Formation 0

ACE 8708076

Comments:

This section of coast consists of a series of rocky headlands with small coves containing pebble, cobble and boulder beaches.

See map for details of oil contamination

Clean-up: manual removal

- possibly relocate ~~the~~ contaminated sections of spruce haw bar

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) 5T-2

Sample Numbers Collected: N/A

ACE 8708077

18350525 P.13

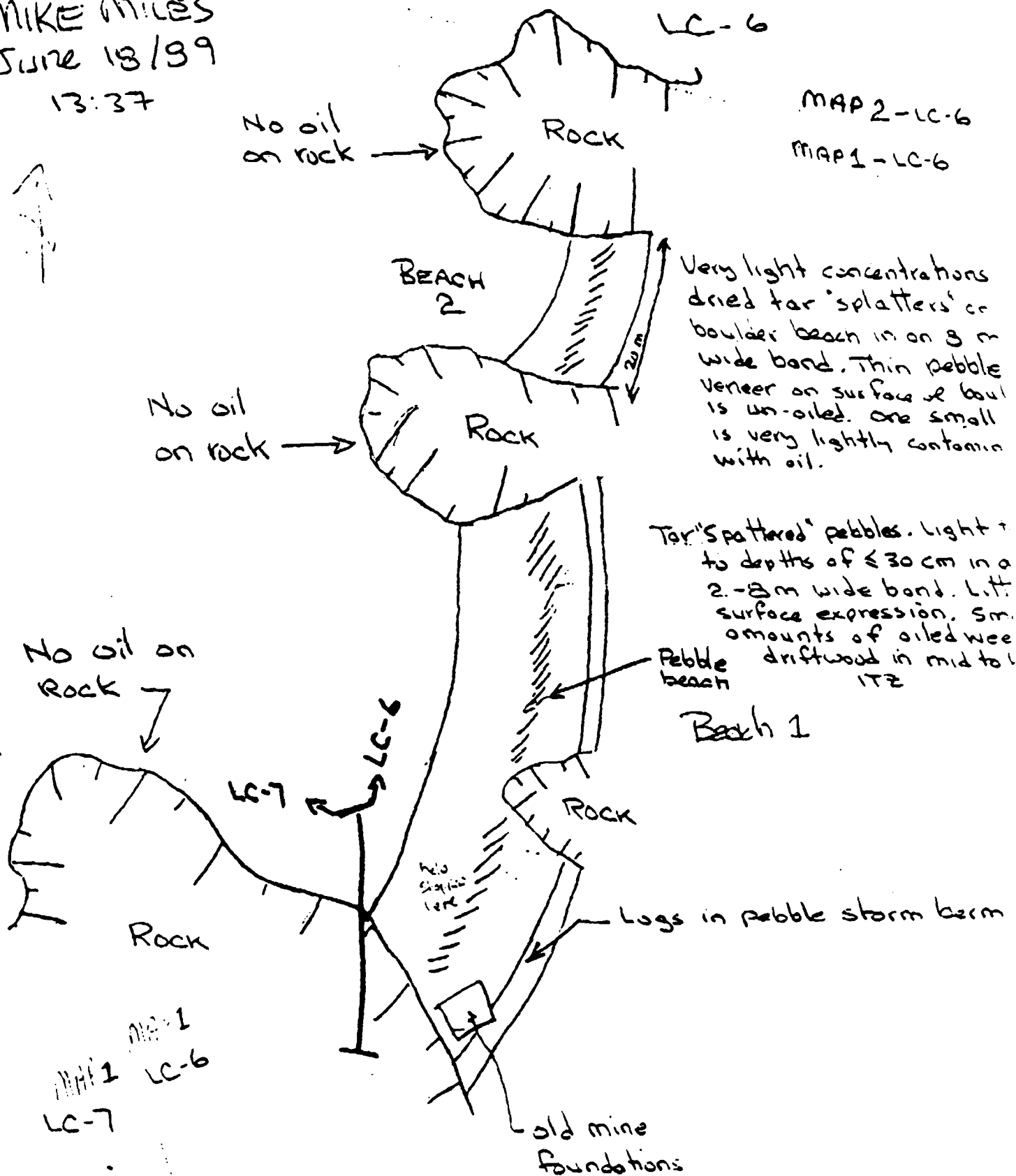
10

JUN-18-1988 10:28 FROM

MIKE MILES
JUNE 18/89
13:37

MAP 1 OF 2
CAPE ALTAK
LC-6

MAP 2-LC-6
MAP 1-LC-6



MIKE MILES
JUNE 13/89
14:07

LC-5
LC-6

MAP 2 OF 2
CAPE ALITAK
LC 6



No
OIL

BEACH 4

No OIL ON
HEADLANDS

Rock

LINE

MAP 2
MAP 1

LC-6
LC-6

BEACH
3

Sand
Pebble
beach

collan
sand

Sand
pebble
beach

Lake

occasional
mousse 'fa'

Logs on mi
high ITZ

A few tor splittes
1 cm in diameter
occur occasionally
on cobbles. No oil
penetration. Driftwood
un-oiled or very lightly
oiled. Some small patches of
oiled weed could be hand
removed.

ACE 8708079

Steep gradient boulder beach
Light concentration of < 5 cm
spots over on 8 m wide area.
oiled debris. Locally some moderate
oil concentrations about the base of
larger boulders.

ECOLOGICAL EVALUATION

LOCATION: Low Cape to Cape Alitak SITE: Cape Alitak OBSERVER: J. Tarpley
 LOCATION PREFIX: K-7/LC SEG. NO.: K-7-3-LC-6 LENGTH: 1530 (M)
 DATE: 6/18/89 TIME (HMM): 1310 TIDE HT.: +2.0 (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

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

Littorina

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

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

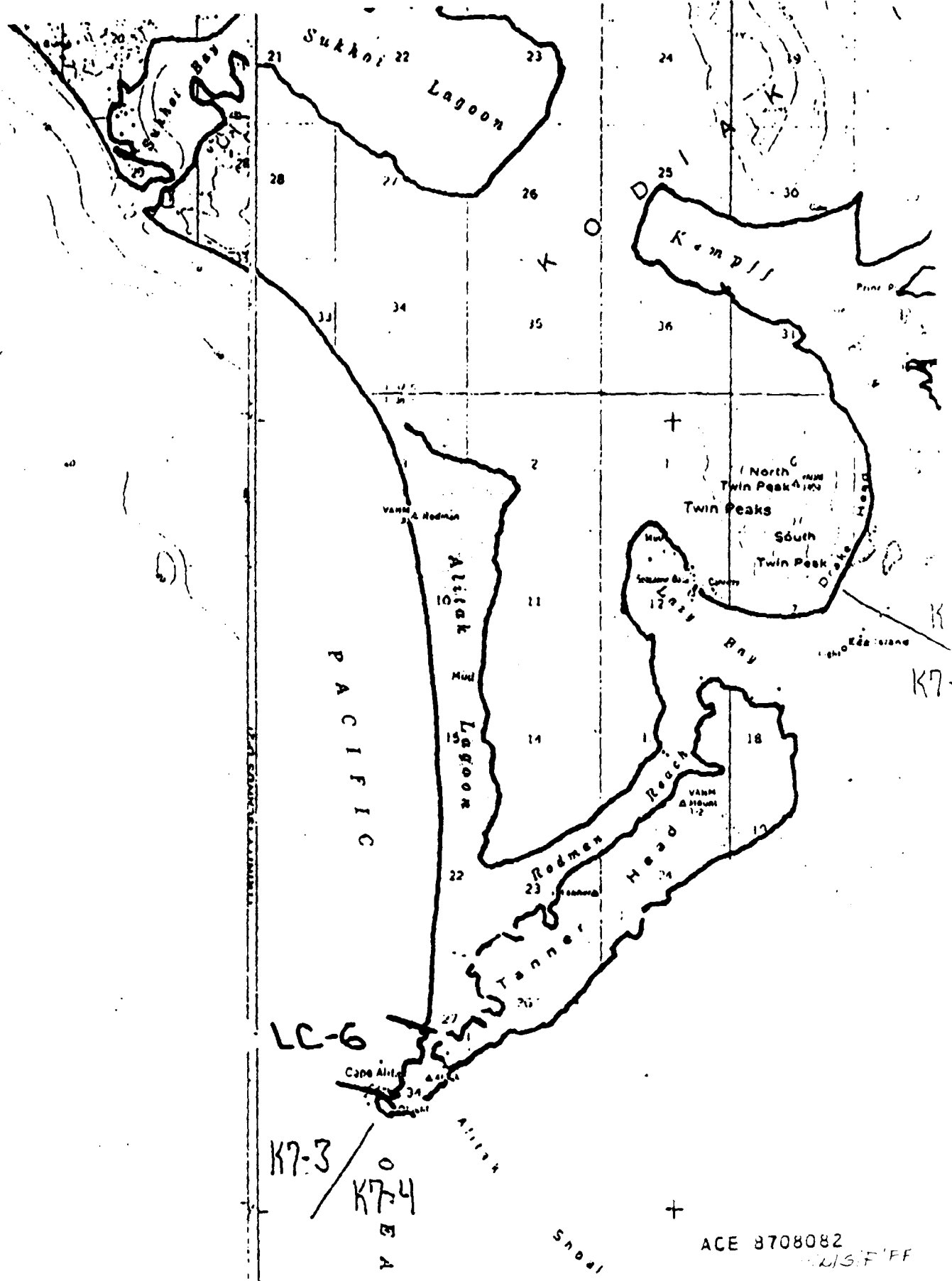
OTHER OBSERVATIONS: Highly oiled drift material in high strand line
Amphipods present on beaches

CLEANUP PRECAUTIONS: Stay off of dunes & hillside vegetation

MAMMALS: Otters Harbor Seals Sea Lions Whales
 other Deer Tracks

BIRDS: Gulls, Bald Eagle

GENERAL OBSERVATIONS: Rocky outcroppings rich w/plant and animal life
(intertidally) sparse gravel beaches. High energy beaches.



KODIAK ISLAND
CAPE ALITAK
SEGMENT

K7-4

ACE 7963953

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/07/89

SHORELINE SEGMENT K7-4-LB-1

LOCATION: (see enclosed map) Lazy Bay, Rodman Beach, Alitak
Lagoon and Tanner Head

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/05/89

Recommended Cleanup Activity(ies):

-No cleanup recommended due to essential absence of oil
(only one log with one small tar splash). Subject to FOSC
reassessment at a later date.

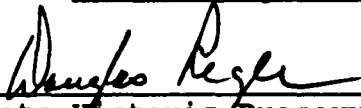
Priorities/Considerations:

Ecological Constraints (from site survey):

-If cleanup recommendation is modified at a later date the
ecological constraints must be reconsidered.

Archaeological Constraints (from site survey):

-If cleanup is planned, a full archaeological assessment
of this segment is required.



State Historic Preservation Officer *

Date: 8/12/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATIONA. General

1. Date: 2/5/89 2. Time: 8:25-12:30 3. Observer: KAROLIN DEBUSSCHE
 4. Surveyed From: Foot/Boat/Helio/Plane 5. Weather: Sun/Cloud/Rain/Snow/Fog
 6. Location: LAZY BAY ROYAL BEACH, LITIA LAGOON, TAMNER HEAD 7. Segment #: K7-4 LB-1
 8. Length of shoreline segment: 46000 yds 9. Tidal Stage $\pm$ -0.2 to 4 ft.
 10. Access: Foot/Vehicle/Boat/Barge/Helio/Float Plane
 11. Total Percentage of Segment Accessible: 95 %
 12. Access Restrictions: SOME VERTICAL CLIFF, SHALLOW IN LAGOON, HIGH WAVE ENERGY IN TAMNER HEAD

B. Shoreline

13. Shoreline Type: SPI/BEA/COV/HLD/STRT/CLF/DAF
 14. Slope: LANG/HANG/VERT
 15. Wave Exposure: High/Med/Low
 16. Sediment: B10 % / C15 % / P25 % / G10 % / S15 % / M10 % / R5 %
 17. Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type LOGS & ALGAE

C. Oil Summary

18. Degree of Oiling: Heavy/Moderate/Light/Very Light/No Oil Observed
 19. Area of Beach Impact: Width of Band: 0.01 yds
 Continuous: Total % of Segment 0
 Sporadic: Total % of Segment 0.00001
 No Oil: Total % of Segment 100
 20. Est. Oil Thickness where >1in: 0 in 21. Est. Oil Penetration: 0 in
 22. Pooled Oil: 0 % "Free" Oil: 0 % Coated: H6 % / M0 % / LX %
 23. Fresh 0 % Mousse 0 % Tar Formation: 100 %
 24. Drift Debris Oiled? Yes/No Sup/Up/Mid/Low Amount: H/M/L

Comments:

SEGMENT CONSIST OF 3 MORPHOLOGIC UNITS: LAZY BAY, LITIA LAGOON, AND TAMNER HEAD. SINCE NO OIL WAS OBSERVED EXCEPT FOR ONE DRIFT LOG IN ZONE 3 (AND ONE SMALL TAR SPLASH) THESE UNITS ARE CONSIDERED 0 AS ONE SEGMENT FOR OIL PURPOSES - FIELD NOTES

SEE PAGE 2 FOR SUPPLEMENTAL INFORMATION

SUPPLEMENTAL SHORELINE OIL EVALUATION25. Oil Type

Fresh	<u>0</u>	%
Mousse	<u>0</u>	%
Weathered	<u>0</u>	%
Tar	<u>100</u>	%
	<u>100</u>	%

26. Total Oil Coverage

	Length(yd)	Width (yd)
Very Light:	<u>.01</u>	<u>.01</u>
Light:	_____	_____
Moderate:	_____	_____
Heavy:	_____	_____

27. Oil Distribution

pooled/continuous
coating/ splat
cracks / crevices
patties (>10cm diameter)
balls (< 10cm diameter)
asphalt pavement

SP	H	M	M	Thick >1in	Length(yd)	Width(yd)	Burial Depth
		X			0.01	0.01	-

28. Preliminary Cleanup Est.

Total TYPE A: 0 yds.
Total TYPE B: 0 yds.
Total TYPE A/B: 0 yds.

29. Remobilization Potential: High/Medium/Low

DOCUMENTATION:

Map/Aerial photo marking segment boundaries ATTACHED

VTR: Y/N Tape Number (s) _____

Photography: Y/N Roll Number (s) A1-15-24

FIELD NOTES & MAP OF DEGREE OF OILING

Additional Comments:

* FLY: CHFS

... SE ... COVES ... HT ...
ROCK ... HT CHFS ...

* LOCATION (10)

... 500 FT ... DUNE FIELD ...

... HT ... FLGHS HT H/L
OVER ... PHT ...

... ONE OILED LOG WITH ...
2000 ...

* FLY: SPIT ... IN SECTION ...

... COVES ...

LOSS HT ...

... DUNE FIELD ...
INCREASE ... GOING EAST ...

* FLY: HT ...

... HT ...
... DUNE FIELD WITH PHT ...

LOSS HT ...

* LOCATION (11) ...

... OILED ...
... PHT ...

LOSS HT ...

ACE 8708089

2130

... TO GET FUSE BEFORE NEXT SEGMENT

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 8/5/89 Location LAZY BAY - Site CAPE ALITAK

Location Prefix K7-4 Segment # LB-1 Length 76,000 METERS

Survey Method:

Air 97% (A - indicate on map) Boat _____ (A - indicate on map)

Ground 3% (G - indicate on map)

Known cultural resources (AHRS #) XTI-061, XTI-016 Data Source AHRS DATA FILES

Oil conditions/beach visibility NO OIL OBSERVED, EXCEPT A SINGLE TAR

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

Cultural resources observed in beach zone (AHRS code) HTI

Cultural resources observed in tree fringe (AHRS code) _____

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

Shore Profile INCLUDED CLIFFS, MODERATE SLOPES, AND SAND DUNES

Fresh Water Sources STREAMS, PONDS

Sea Exposure HIGH ENERGY ON OUTER ALITAK SPIT & TANNER HEAD; BEACH, & ALITAK LAGOON

Access/Safety BOAT, HELICOPTOR

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 _____

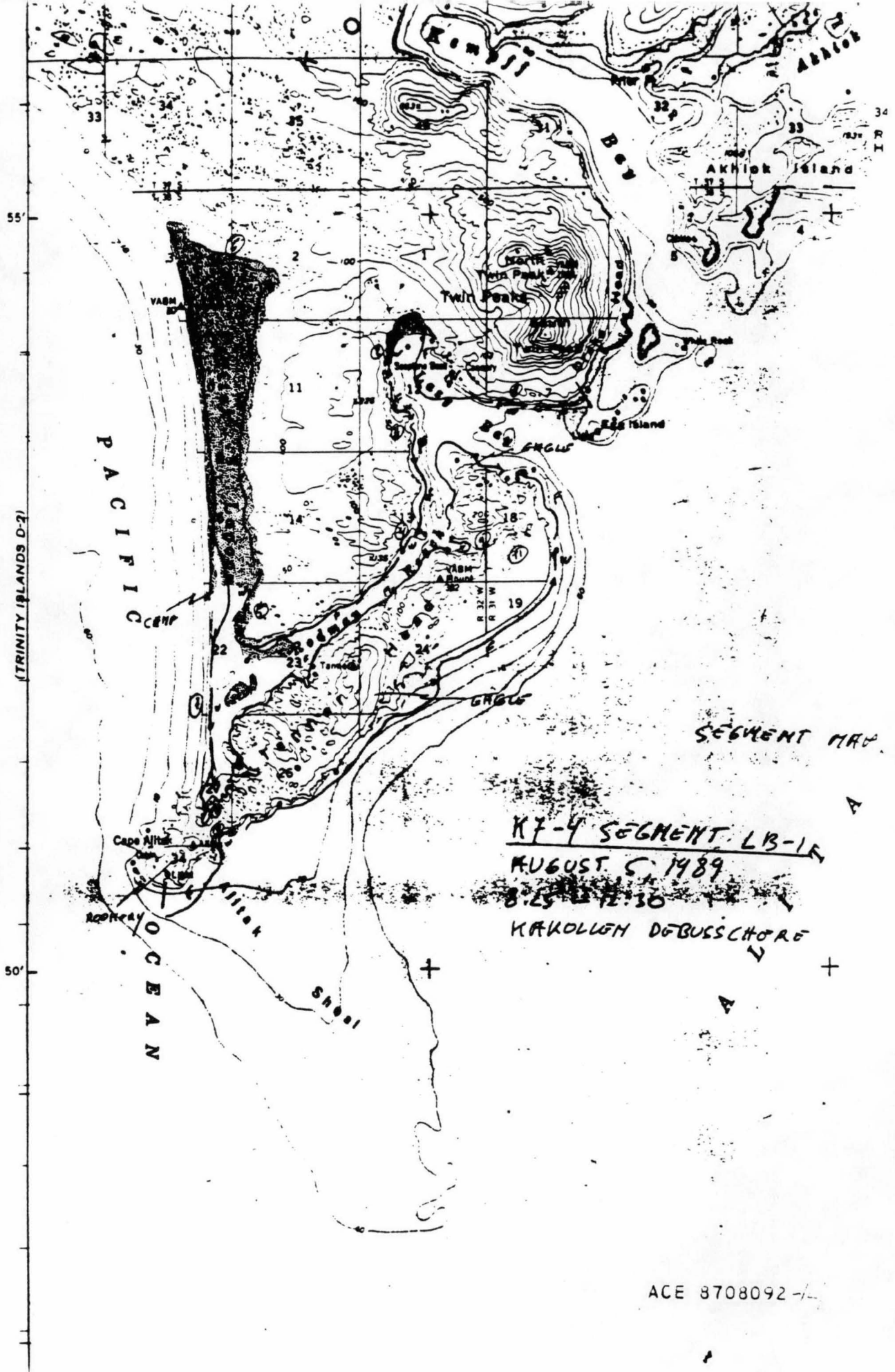
B/W Roll # A1 Frames 15-24

Observer(s) A. CROWELL

Time survey started 0830 Time survey ended 1230

Cultural resource considerations/restraints:

STANDARD CONSTRAINTS IF ANY CLEAN-UP UNDERTAKEN



1
- K7-13

ACE 7963954

47
(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/21/89

SHORELINE SEGMENT K7-13-TI-1

LOCATION: (see enclosed map) Tugidak Island- East end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/21/89

Recommended Cleanup Activity(ies):

- Manual removal of mousse patties in upper intertidal zone.
(see note map #1)

Priorities/Considerations: Class 5-A

- Permit required by AK department of Fish & Game.
- See attached memo from ADF&G for cleanup considerations.
- Boat access may be restricted to calm days.

Ecological Constraints (from site survey):

- If mousse pads extend north from the area of note Map #1 into Shoreline observed to be seal haul out area or west into bird nesting area proceed with manual removal of mousse pads; do not use mechanical equipment in these areas and follow ADF&G guidelines.
- Remain below storm tide line.
- Complete cleanup before 8/15/89.

Archaeological Constraints (from site survey):

- Archaeological monitor required prior to and during clean-up. No access to forest/upland zone by beach crews during cleanup.

J. David Millikan
State Historic Preservation Officer *

Date: 7/23/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 7/21/89 Time: 0915
 Surveyed From: Foot/Boat/Helio/Plane

Observer: M. Acton
 Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: Tugidak Island - East end Segment ID: K7-13-TI-1
 Segment Length: 15 km m. Access: Vehicle/Boat/Barge/Helio/Float Plane
 Access Restrictions: Seal haul out, bird nesting Boat access during low wave energy periods

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Wave Exposure: High/Med/Low
 Sediment: B % / C 33 % / P 32 % / G&S 33 % / M % / R %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment _____ SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment 15 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u>1.5 km</u>	<u>3 m</u>	Penetration/Rework:	_____ cm	SU/SP/H/M/L
Light:	_____	_____	Burial Depth:	_____ cm	SU/SP/H/M/L
Moderate:	_____	_____			
Heavy:	_____	_____			

Mobilization Potential: High/Medium/Low

Drift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: Driftwood

OIL MORPHOLOGY

	%	H/M/L/VL	SU/SP/H/M/L
Pooled Oil:	_____		SU/SP/H/M/L
"Free" Oil:	_____		SU/SP/H/M/L
Splattered:	_____	H/M/L/VL	SU/SP/H/M/L
Coated:	_____	H/M/L/VL	SU/SP/H/M/L
Pancakes/Balls:	<u>100</u>		SU/ <u>SP</u> /H/M/L

Preliminary Cleanup Est.

Total TYPE A: 1.5 km m
 Total TYPE B: _____ m
 Total TYPE A/B: _____ m

OIL WEATHERING

	%	SU/SP/H/M/L
Fresh:	_____	SU/SP/H/M/L
Mousse:	_____	SU/SP/H/M/L
Weathered Mousse:	<u>100</u>	SU/SP/H/M/L
Asphalt Mousse:	_____	SU/SP/H/M/L
Tar:	_____	SU/SP/H/M/L

COMMENTS

Segment surveyed by helio. Approx 2 km section of shoreline surveyed on foot.
 NW section was not surveyed due to seal haul out areas. SW section of segment
 was not surveyed due to nesting birds. See Note Map #1.
 See Segment Map for location of note map.

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached Map

VTR: Y/N Tape Number(s) _____

Photography: YN Roll Number(s) MA3

Sample Numbers Collected: _____

te Map #1

N

back shore
Area

A

dune w/
grass

driftwood

back shore
zone

A-A' 35m
looking N

A'

cobbles

Small cobbles
Debbbs

subtidal
zone

3m band in SP zone, very light mousse pads

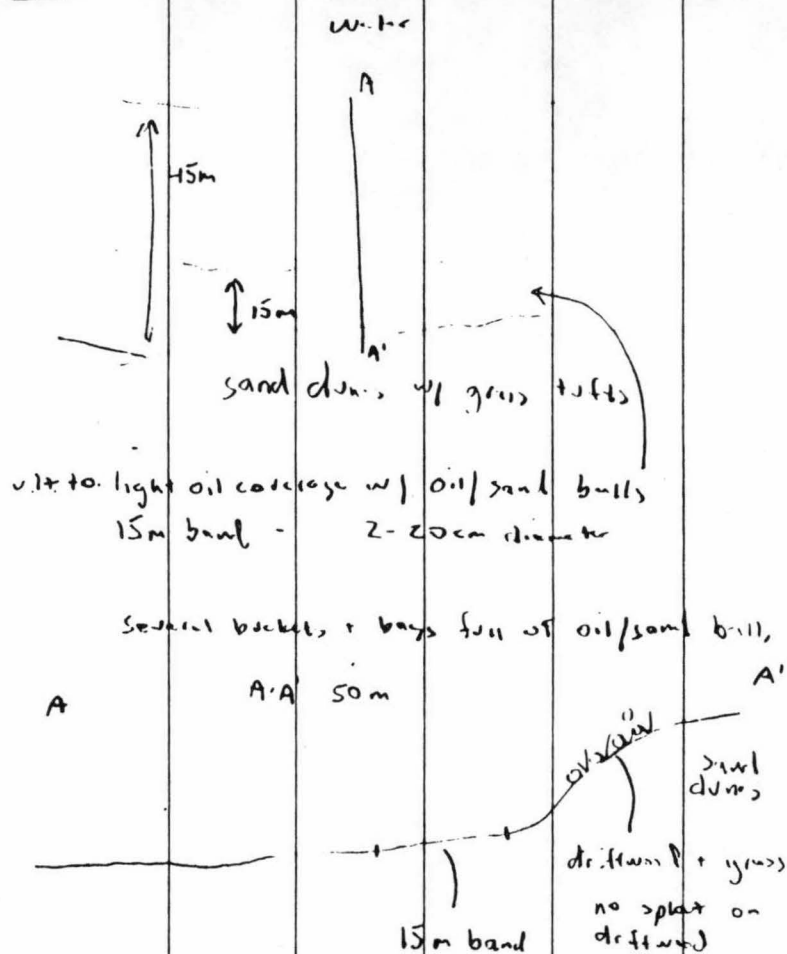
mousse pads on surface to 5-15cm BGS

This 3m band of mousse pads extended the length of the shoreline surveyed on foot

0930 hrs - Tide approx +1'

Manual removal of mousse pads recommended

29



1330

2 mile zone of oil/sand in SPhone
dune beach - no cobbles

at 1330 splat on cobbles on scup

✓ 11 to 11 splat

100-1000

1500 return Kad...
Lund Kad... 11:00

7/21

0815 Depart Kad...

Security Frick

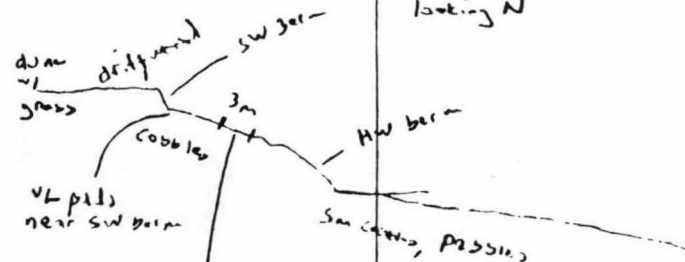
0915 start T-judok

MAS-18 N

19 S

pebble/cobble beach

A A' 35m



to light(-)
v. 11, massive splats in 3m zone of SPhone

massive splats extend from surface to approx 5cm-15cm

MAS-20-21 massive splats, coarse up

1 massive / 2 m² in 3m band of SPhone

sometimes heavier

massive is into cobbles enough to appear reasonable immersion
laterally

tar ball spotted 3cm diameter

overall beach - VL

3m band - VL to L-

walked approx 1.5km - at West - less massive

lift off 1105

seal - bird nesting

Action
Plan
Jordan

Copy: Jack
Weiss ADIC

30

ACE 8708097

MEMORANDUM

State of Alaska

TO

Distribution

DATE 7-24-89

FILE NO

TELEPHONE NO 486-5033

FROM

SUBJECT Requirements for Tugidik Island
Oil spill shore clean-up

Edward W Weiss
Fisheries Technician III
Habitat Division
Alaska Department of Fish and Game

After discussing the matter with Wayne Dolezal our Habitat Biologist in Anchorage, the department has developed the following requirements for the oil spill treatment effort on Tugidik Island. We recommend that the Kodiak Intergency Shoreline Clean-up Committee transmit the following information to Exxon so that Exxon may more completely prepare plans for shoreline treatment on Tugidak Island.

A. OPERATIONAL CONSTRAINTS/CONCERNS

1. Clean-up effort needs to be completed or terminated on most of the island by August 15, 1989, unless an extension is authorized by the Alaska Department of Fish and Game and the National Marine Fisheries Service.
2. The current 1500 foot minimum for aircraft operations is maintained in areas being used by seals. Recommended island approach traffic patterns are found on the attached map.
3. We suggest that clean-up efforts be maximized in the lagoon area, around the north of the island and down the west side, first (see enclosed map). In this way critical harbor seal use areas will be cleaned by the deadline. An extension, should it be needed, may be granted for the remainder of the island.
4. We prefer medium to large crew size so the clean-up will be completed quickly and disturbance to wildlife species will be short termed.
5. Clean-up crews will restrict activity to areas below storm tide lines. Crews are to avoid upland and marsh areas.
6. All oil and oil contaminated debris that is collected during the clean-up effort must be removed from Tugidak Island prior to September 30, 1989. We prefer that bags be removed daily if operationally possible.

B. PERMIT REQUIREMENTS: A Special Area Permit issued by ADF&G is required prior to shoreline treatment related activities on Tugidak Island. The Special Area Permit Application must be completed and forwarded to ADF&G at least five days prior to anticipated start date. As an advisory the

ACE 8708098

following conditions are included for your planning purposes.

1. ADF&G will authorize the use of ATVs for transport of oil contaminated debris and personell from work areas, provided:
 - + Use of ATVs is restricted to areas below storm tide lines.
 - + Only ATVs of the 3 and 4 wheeler size are used. No full sized vehicles.
2. Land based camps will be permitted provided:
 - + Human waste and garbage that is created as a result of the clean-up activities must be removed from the island. Campsite areas are to be left as clean as they were prior to use.
 - + We prefer that campsites are set up on the East or Gulf of Alaska side of the island, south of the lagoon area. If necessary other locations will be evaluated on a case by case basis.
 - + Areas used are left as clean or cleaner than they were found.

C. Justifications:

The time period between August 15 and September 30 is a critical time for harbor seal haulouts. During this period harbor seals are hauled out on the beaches for molting into their winter coats. Undue exposures to the cold waters and stress from disturbances can cause abnormalities in coat formation resulting in mortalities.

The area of the island above the storm tide lines (the upland and marsh areas) and the lagoon area at the northeast end of the island are extremely important habitat areas. These areas are used extensively by nesting and migrating birds. Undue disturbances may cause increased mortality. The sand and gravel beaches in and around the lagoon are important haulout and use areas for harbor seals. This is the reasoning behind the restrictions on use above the storm tide zones and the lagoon area.

The necessary permits may be obtained through the ADF&G Anchorage office, Habitat Division. These can be FAX to Kodiak. If you have any further questions you can contact either myself at 486-5033, or Wayne Dolezal or Don McKay at 267-2285. Thank you.

Enclosures.

Special Area Permit Application

Tugidik Island Critical Habitat Area advisory notice

Distribution.

Gary Penn Marine Ecologist SCAT

Mark Kuwanda ADF&G Habitat Division

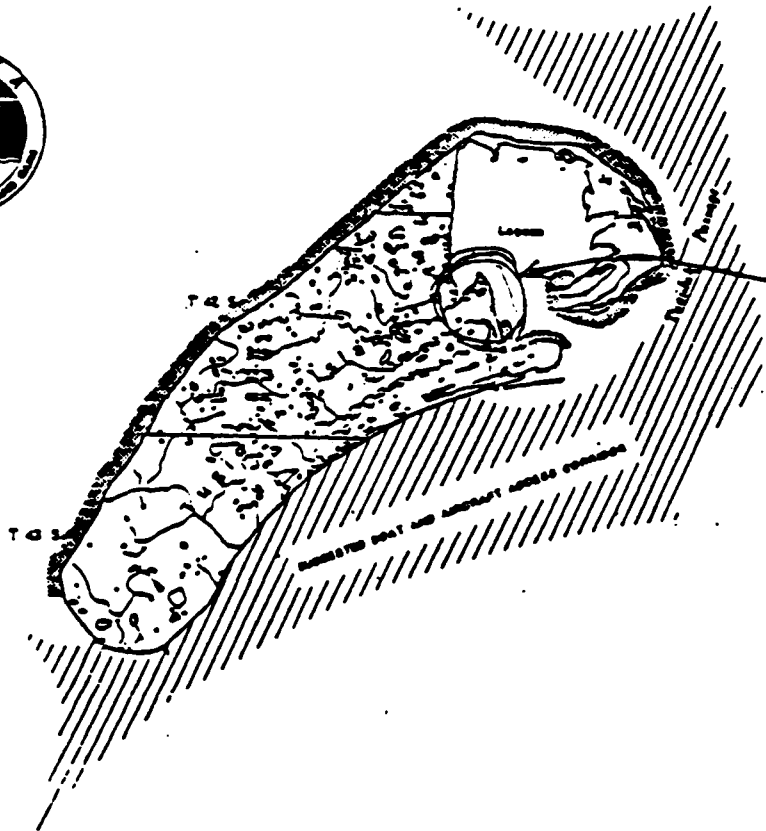
Ken Middleton ADF&G Habitat Division

Kodiak Interagency Shoreline Clean-up Committee

TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE (July 1988)

Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~XXXXXX~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a // pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.



*Zone of particular
concern, seals
to avoid for 8/1/88
clearing operations*

Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

This application must be completely filled out in order for the
Department to consider approval of a proposed project or activity.
Use type or print clearly in ink. If a question is not applicable
to your project, or you do not know the answer, please so indicate on
appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITEName of Special Area TUGIAIK ISLAND CRITICAL HABITAT AREASpecific project location ALL OIL IMPACTED BEACHES BELOW STORM
TIDE LINETownship 41, 42, 43 Range 33, 34, 35 Meridian SEWARD Section _____Quarter Section _____ USGS Map TRINITY ISLANDS B2, B3, C2, C3Is the project on: private land _____ state land X

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: TUGIAIK ISLAND LAGOON

Is the project in the coastal zone? Yes X No _____
If yes, attach a completed Coastal Project Questionnaire to this
application. COASTAL PROJECT QUESTIONNAIRE WAIVED

DESCRIPTION OF THE PROJECT

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708102

*If you are uncertain as to whether your proposed project lies

ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

is application must be completely filled out in order for the
partment to consider approval of a proposed project or activity.
ease type or print clearly in ink. If a question is not applicable
your project, or you do not know the answer, please so indicate on
a appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

_____ Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITE

Name of Special Area _____

Specific project location _____

Township _____ Range _____ Meridian _____ Section _____

Quarter Section _____ USGS Map _____

Is the project on: private land _____ state land _____

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: _____

Is the project in the coastal zone?* Yes _____ No _____
If yes, attach a completed Coastal Project Questionnaire to this
application.

DESCRIPTION OF THE PROJECT OR ACTIVITY

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708103

*If you are uncertain as to whether your proposed project lies
in a critical habitat area, contact the Wildlife Division office.

The timeframe for the project or activity, including the specific time periods for any inwater work or other activities which may disturb fish or wildlife.

A description of construction methods, types and quantities of equipment and number of people involved.

A description of water use including methods of withdrawal, rate of withdrawal, and the total quantity of water required.

A list of fill and excavation quantities including the types of material and the source.

A map and description showing how access will be gained to the project area (use USGS 1:63,360 scale maps where available).

A detailed map or plan view, drawn to scale, and any cross-sectional views necessary to show project features and local topography including the location of all facilities and project dimensions.

A current aerial photograph of the project location (if available).

D. OTHER PERMITS

Identify other state or federal permits or authorizations obtained or applied for: _____

MITIGATION: As a condition of project approval, applicants will be required to compensate fully for damage to fish and wildlife and their habitat by employing the most appropriate techniques. Where determined necessary by the department, a mitigation plan pursuant to 5 AAC 95 will be required.

I HEREBY CERTIFY THAT ALL INFORMATION PROVIDED ON OR IN CONNECTION WITH THIS APPLICATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature of Applicant

Date

Name of Applicant (please print)

SUBMIT APPLICATION BY MAIL OR IN PERSON TO THE APPROPRIATE DEPARTMENT OF FISH AND GAME HABITAT DIVISION OFFICE.

Habitat Division Addresses:

JUNEAU (Southeast Alaska - Region I)

P.O. Box 20, Douglas, AK 99824-0020 (465-4290)

ANCHORAGE (Southcentral, Southwest and Western Alaska - Regions II and IV)

333 Raspberry Rd., Anchorage, AK 99518-1599 (344-0541)

FAIRBANKS (Interior and Arctic Alaska - Region III)

1563 University Avenue, Fairbanks, AK 99701 (479-3104)

ECOLOGICAL EVALUATION

LOCATION: Kodiak SITE: Trinity Islands - Tagidak OBSERVER: G. Penn
 LOCATION PREFIX: K7-13 SEG. NO.: TI-1 LENGTH: 15 km (M)
 DATE: 07/21/89 TIME (HMM): 09:15 TIDE HT.: 0.3 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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: Generally sand/Gravel Beach w/ (1) erosional
escarpments or (2) Low lying grassed dunes; not conducive to
rich intertidal emergent biota.

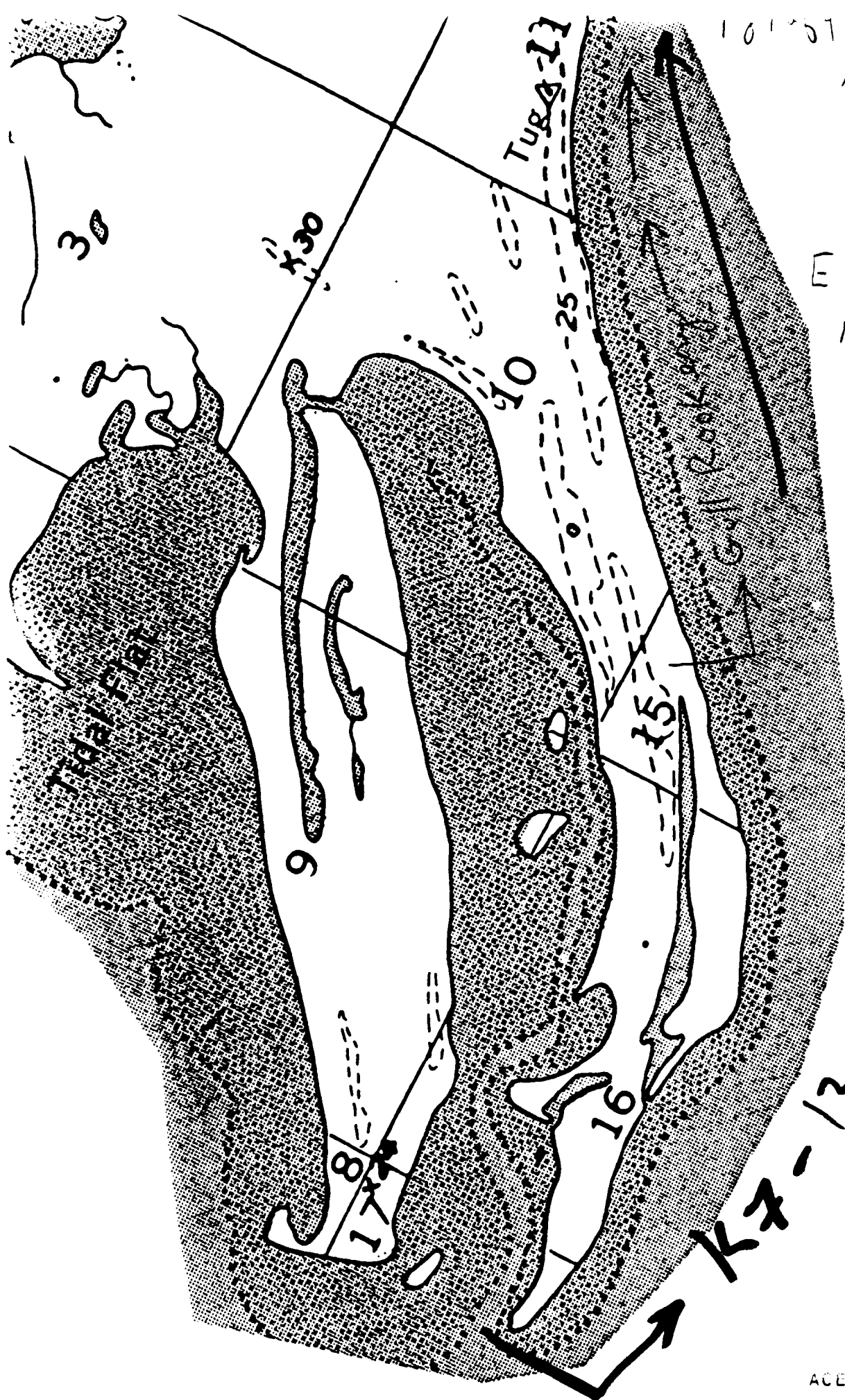
* CLEANUP PRECAUTIONS: Remain clear of grassed areas - use no motorized
vehicles on Beach if seals encountered. Complete prior to Aug 15, 1989
Avoid eagle nest areas (see maps)

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

BIRDS: Eagles

GENERAL OBSERVATIONS: _____

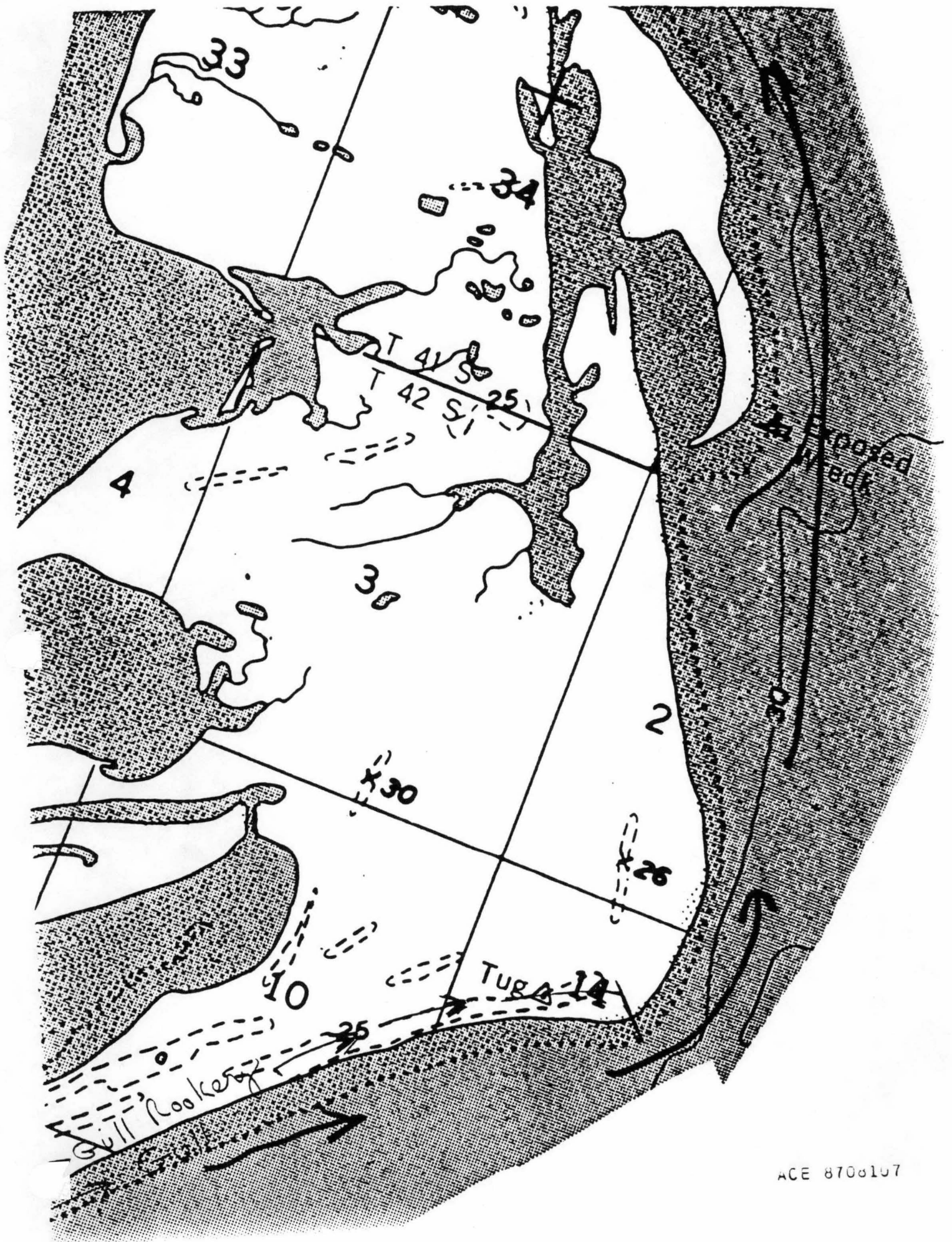
* See attached AFTG Summaries, maps, restrictions

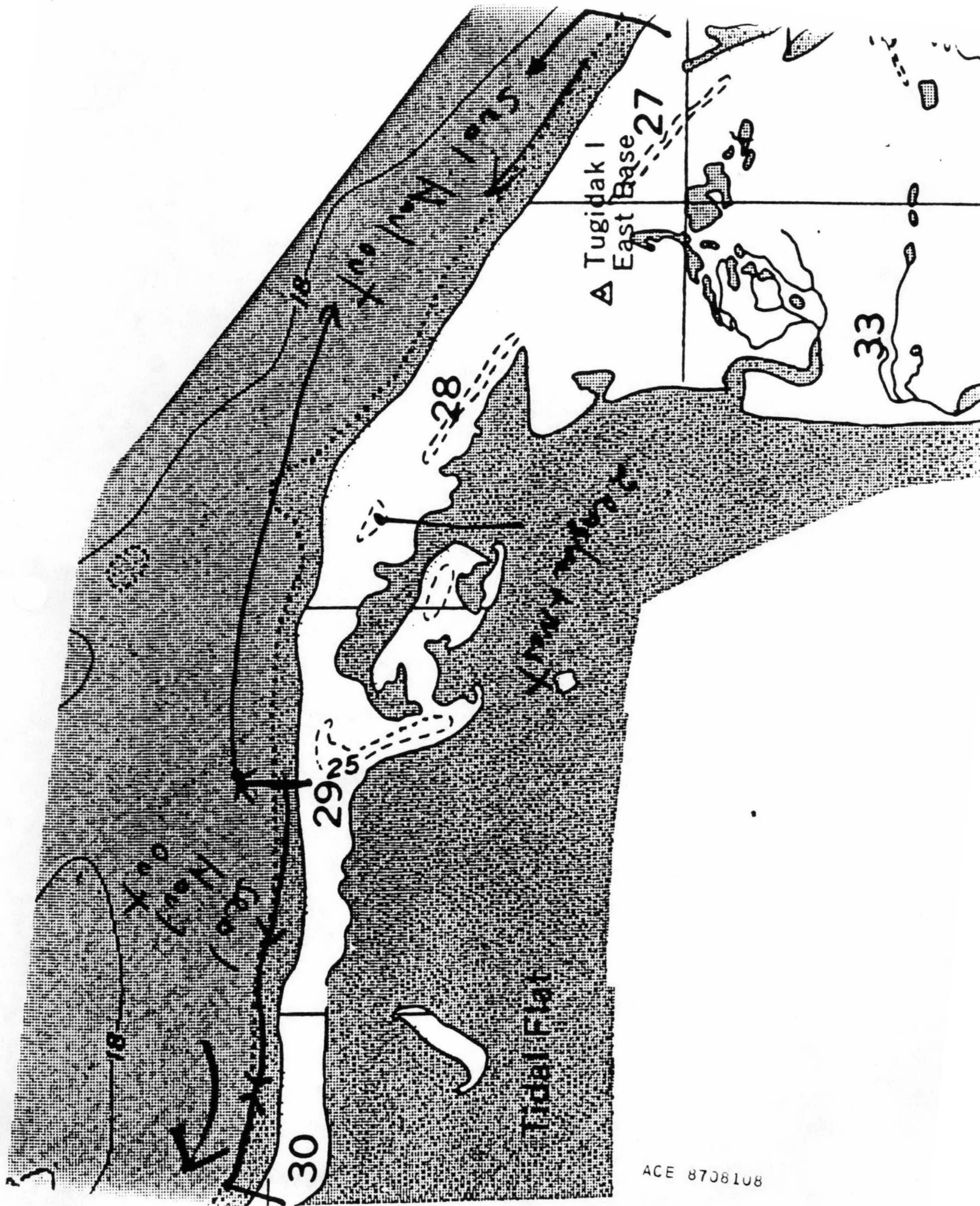


101-57
K7-13
-II-1

Ecological
map

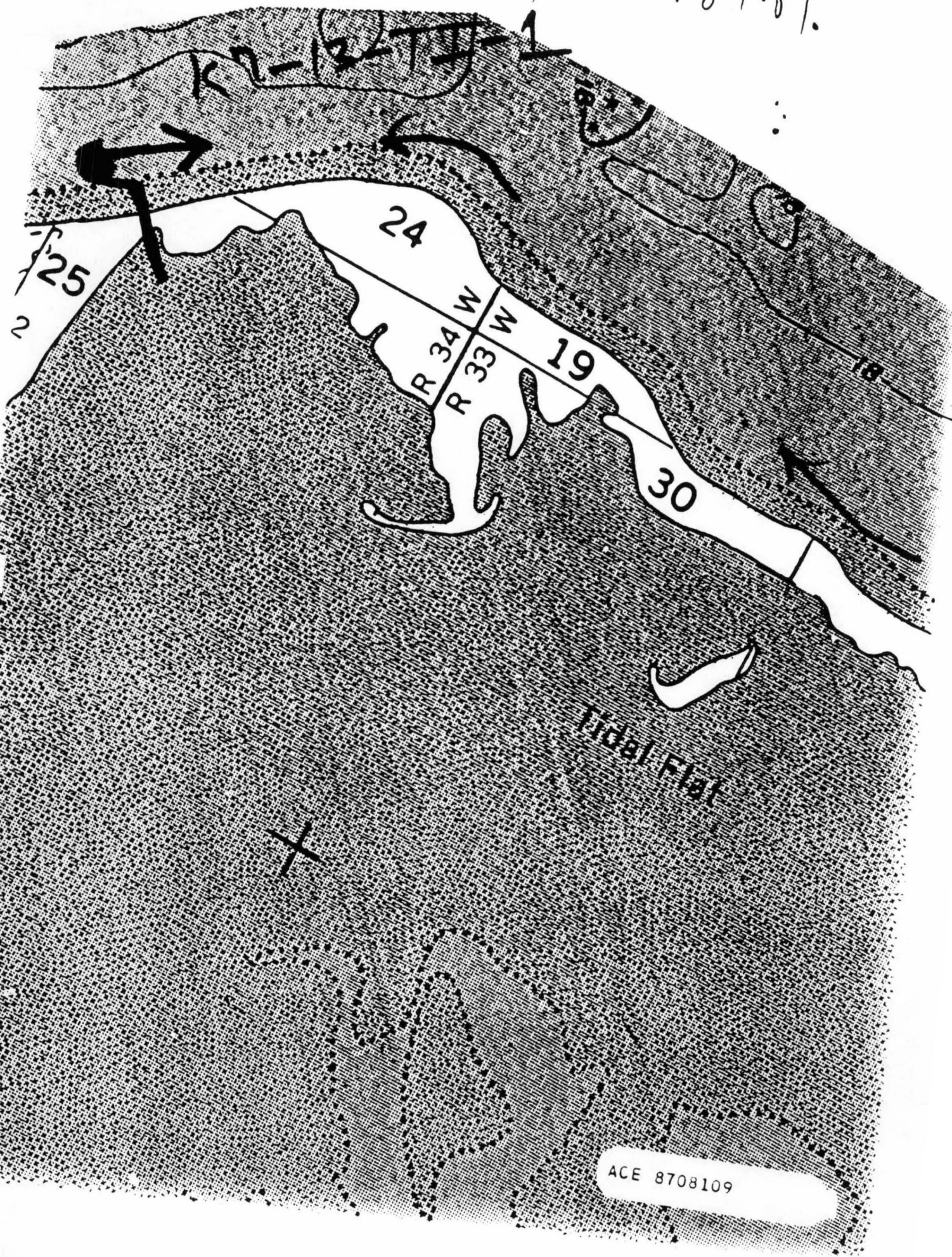
K7-13-TI-1





ACE 8708108

pg 3 of 4



October 21, 1987
(with 1986 resource update)

Tugidak Island Fish and Wildlife Resources

Tugidak Island is unique in the Gulf of Alaska not only because of its unusual number of extremely productive and diverse fish and wildlife habitats but also because those habitats have remained in a relatively natural, undisturbed state. To date very little human disturbance has occurred on the island to threaten the vulnerable groundnesting birds, harbor seal pupping areas, and rich lagoon environment.

Marine mammals: Tugidak is most renowned for its harbor seal population. Tugidak Island has historically supported one of the largest harbor seal populations in the world, estimated at 15,000 to 20,000 animals with peak concentrations of hauled out seals reaching 14,000 at a time. Tugidak Island is also a major pupping area for harbor seals in the Gulf of Alaska with annual production once estimated at a high of 5,500 pups. That population is now substantially depressed but remains one of the largest known. Seals haul, pup, and molt on beaches found along the west and northeast side of the island and in the vicinity of the mouth of the lagoon.

Sea otters are common in the nearshore waters around Tugidak Island. Approximately 400 to 700 sea otters are found in the vicinity of Tugidak Island, with medium to high densities along the south side of the island.

Birds: The interspersed of many different habitat types on Tugidak Island associated with cliff and bluff shores; sand and rocky beaches; spits, bars and tideflats; freshwater streams and lakes; saltwater marshes and lagoons; vast eelgrass beds; freshwater wetlands; and uplands attracts some of the greatest diversity of bird life known to nest on and visit any one island in the Gulf of Alaska.

The island serves as a valuable spring and fall resting and feeding area and as a production area for birds migrating from the Pacific coast of North America. Because Tugidak Island is low, treeless, and free of introduced predators, all birds nest on the ground and are particularly susceptible to habitat destruction, predation, and trampling.

- At least 56 species of birds occur on Tugidak Island. Thirty eight species are known to nest there, and 26 of these species are considered common or abundant.
- Wetland habitats throughout the island provide nesting habitat for waterfowl, shorebirds, tundra swans and loons, with wetlands habitats along the south shore supporting nesting concentrations of mallards, pintails, gadwalls, green-winged teal and wigeon.
- Snow geese concentrate on the island during spring migration to rest and feed.
- The lagoon supports spring and fall concentrations of ducks and shorebirds. Black brant and white-fronted geese also concentrate in the lagoon in the fall to rest and feed. The lagoon area provides winter habitat for emperor geese, a species that has recently experienced a serious population decline.
- The coastal waters surrounding Tugidak Island are a major overwintering area for waterbirds, primarily seaducks.
- Five seabird colonies are documented on Tugidak Island, totalling nearly 4,000 nesting birds. Glaucous-winged gulls are the most abundant seabird, followed by arctic terns, mew gulls, and cormorants.
- Of particular significance are records of ^{ten} ~~six~~ ground nesting bald eagles. These bald eagle nests are located on bluffs or slight rises in the terrain throughout the island.
- Peregrine falcons are also reported to nest on the island's bluffs.
- Several thousand ptarmigan nest in upland areas of the island.

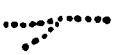
Fish and Shellfish: The lagoon and nearshore waters of Tugidak provide a productive marine environment for several species of fish and shellfish. The island's stream systems provide habitat for anadromous fish.

- There are ^{five} ~~three~~ documented salmon stream systems on the island supporting chum and/or coho salmon.
- The lagoon is a productive rearing and feeding area for large numbers of Pacific herring.

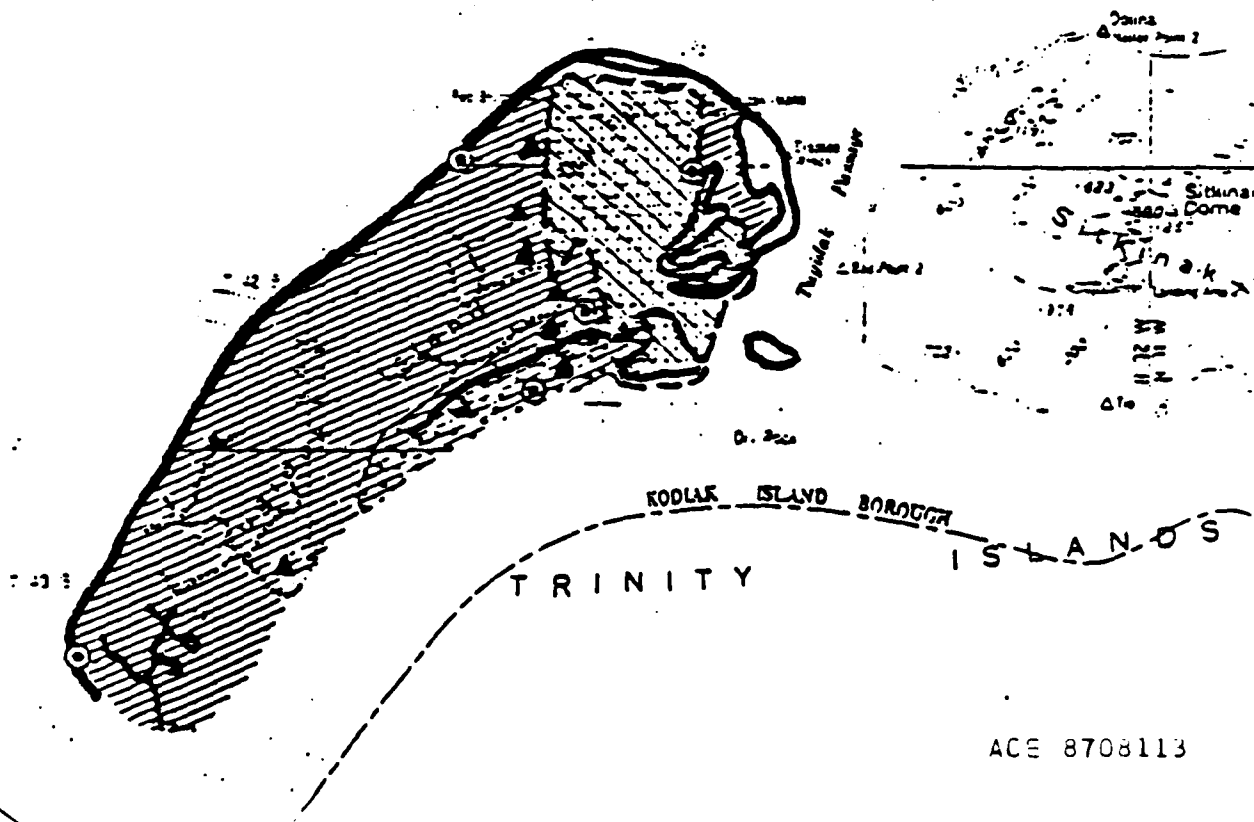
- Known razor clam concentrations occur along the bars at the mouth of the lagoon.
- Based upon frequent observations of small Dungeness crab carapaces and exoskeletons washed up along the lagoon's shores and large commercial catches of Dungeness crab directly offshore of the lagoon, the shallow waters and large eelgrass beds found in the lagoon are thought to provide an important nursery rearing area for Dungeness crab.

Archaeological Sites: Eight archaeological sites have been documented on the island. Although largely unexplored, they appear to indicate abundant prehistoric use of the island, with a majority of the sites located along the lagoon.

LEGEND

-  Known Black Brant and White-Fronted Geese Fall Concentration Area
-  Known Snow Geese Spring Concentrations (Entire Island)
-  Known Tundra Swan Nesting Concentrations (Entire Island)
-  Known Spring and Fall Duck Concentrations
-  Known Duck Nesting Concentrations
-  Known Bald Eagle Nests  *Additional Bald Eagle Nests found during 1988*
-  Seabird Colony
-  Known Harbor Seal Haul-out Concentrations
-  Known Pacific Herring Rearing and Feeding Area
-  Anadromous Fish Stream
-  *Anadromous Fish Streams identified during 1988*

KODIAK ISLAND BOROUGH

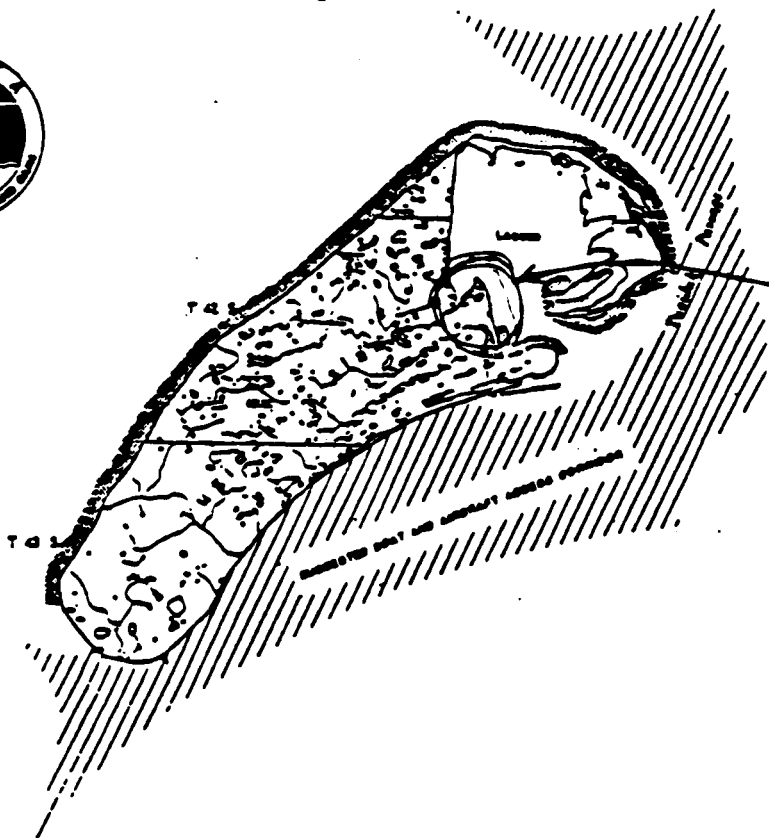


ACE 8708113

TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE (July 1988)

Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~XXXX~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a // pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.

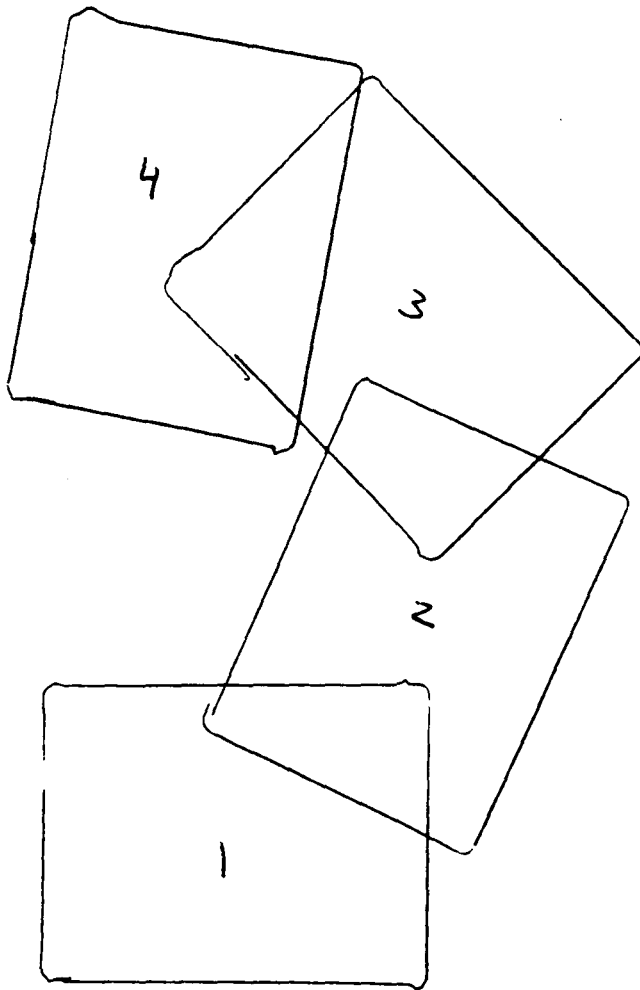


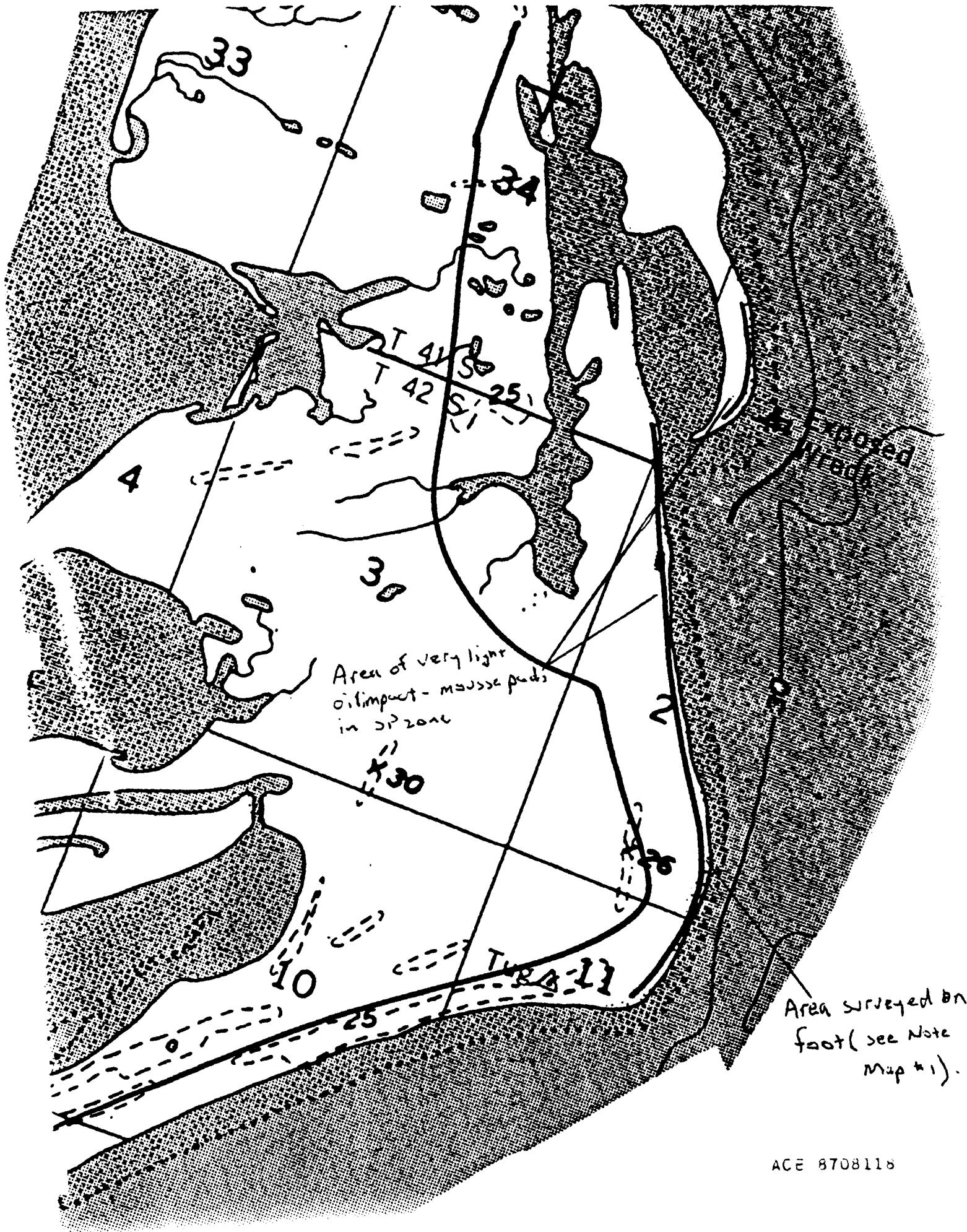
*Zone of particular
concern, seals
to avoid for any
cleanup operations*

Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

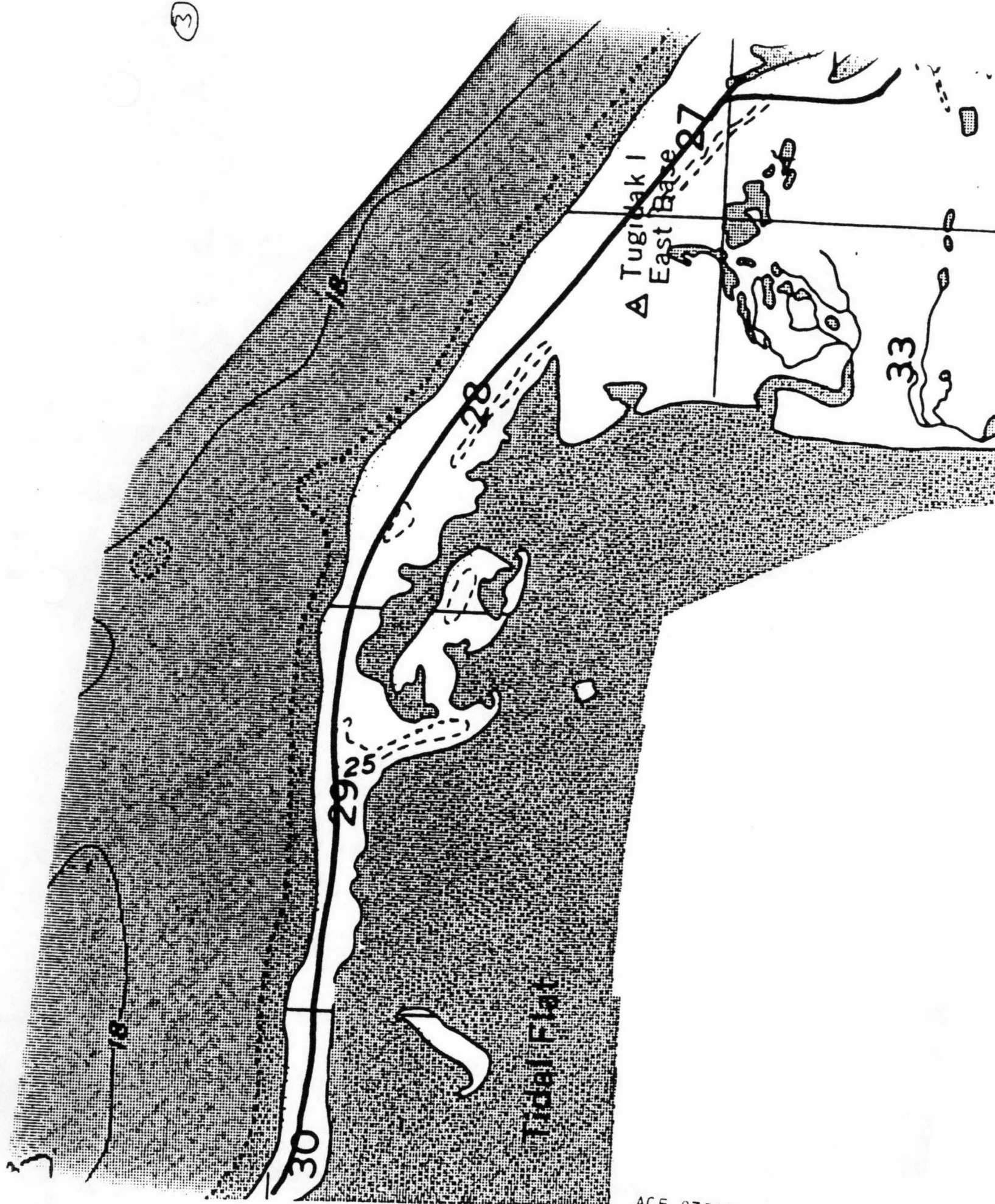
For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

Segment Map Index





3

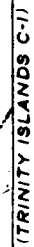


Tidal Flat

ACE 8708119

(TRINIT

154°20'
56°37'30"



K7-14

-S

ACE 7963955

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/21/89

SHORELINE SEGMENT K7-14-TI-2

LOCATION: (see enclosed map) Tugidak Island- west shore

ADEC NO. K7 SHORELINE ASSESSMENT DATE: 7/21/89

Recommended Cleanup Activity(ies):

- Manual removal of mousse patties (see map #1 for typical location of patties along beach profile).

Priorities/Considerations: Class 5-A

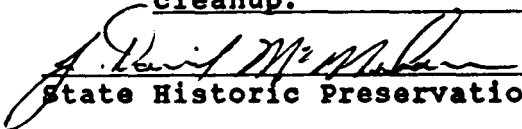
- Permit required by AK department of Fish & Game.
- See attached memo from ADF&G for cleanup considerations.
- Boat access may be restricted to calm days.

Ecological Constraints (from site survey):

- If northern portion of segment is impacted by oil, proceed with manual cleanup; do not use mechanical equipment in this seal haul out area and follow ADF & G guidelines.
- Remain below storm tide line.
- Avoid eagle nests.
- Complete cleanup before 8/15/89.

Archaeological Constraints (from site survey):

- Archaeological monitor required prior to and during clean-up. No access to forest/upland zone by beach crews during cleanup.


State Historic Preservation Officer *

Date: 7/28/89

EXXON: _____

Date: _____

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 7/21/89

SHORELINE SEGMENT K7-14-TI-2

LOCATION: (see enclosed map) Tugidak Island- west shore

ADEC NO. K7 SHORELINE ASSESSMENT DATE: 7/21/89

Recommended Cleanup Activity(ies):

- Manual removal of mousse patties (see map #1 for typical location of patties along beach profile).

Priorities/Considerations: Class 5-A

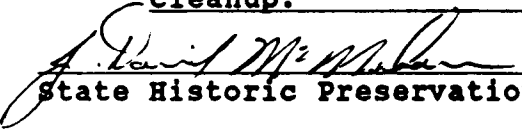
- Permit required by AK department of Fish & Game.
- See attached memo from ADF&G for cleanup considerations.
- Boat access may be restricted to calm days.

Ecological Constraints (from site survey):

- If northern portion of segment is impacted by oil, proceed with manual cleanup; do not use mechanical equipment in this seal haul out area and follow ADF & G guidelines.
- Remain below storm tide line.
- Avoid eagle nests.
- Complete cleanup before 8/15/89.

Archaeological Constraints (from site survey):

- Archaeological monitor required prior to and during clean-up. No access to forest/upland zone by beach crews during cleanup.


State Historic Preservation Officer *

Date: 7/28/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 7/21/89 / Time: 1400
 Surveyed From: Foot/Boat/Helio/Plane

Observer: M. Acton
 Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

Location: Tugidak Island - West shore Segment ID: 167-14-T1-2
 Segment Length: 30 km m. Access: Vehicle/Boat/Barge/Helio/Float Plane
 Access Restrictions: Boat access during low energy periods

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Wave Exposure: High/Med/Low
 Sediment: B % / C 15 % / P % / G&S 75 % / M % / R 10 %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment 50 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u>15 km</u>	<u>3-7</u>	Penetration/Rework:	<u> </u> cm	SU/SP/H/M/L
Light:	<u> </u>	<u> </u>	Burial Depth:	<u> </u> cm	SU/SP/H/M/L
Moderate:	<u> </u>	<u> </u>			
Heavy:	<u> </u>	<u> </u>			

Mobilization Potential: High/Medium/Low

Drift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: Driftwood, seaweed

OIL MORPHOLOGY

Pooled Oil:	<u> </u> %		SU/SP/H/M/L
"Free" Oil:	<u> </u> %		SU/SP/H/M/L
Splattered:	<u>10</u> %	H/M/L/ <u>VD</u>	SU/ <u>SP</u> /H/M/L
Coated:	<u> </u> %	H/M/L/VL	SU/SP/H/M/L
Pancakes/Balls:	<u>90</u> %		SU/ <u>SP</u> /H/M/L

Preliminary Cleanup Est.

Total TYPE A: 2 km m
 Total TYPE B: m
 Total TYPE A/B: m

OIL WEATHERING

Fresh:	<u> </u> %	SU/SP/H/M/L
Mousse:	<u> </u> %	SU/SP/H/M/L
Weathered Mousse:	<u>90</u> %	SU/SP/H/M/L
Asphalt Mousse:	<u> </u> %	SU/SP/H/M/L
Tar:	<u>10</u> %	SU/SP/H/M/L

COMMENTS

Shoreline south of Red Bluff is narrow sand beach with limited SP zone at base of bluffs. Very little oil was observed west of Red Bluff.

Shoreline north of Red Bluff is wide (50m) sand beach with very light oil impact consisting of mousse pads and oil/sand pads in a 5 m band in the SP zone, see Note Map #1

Shoreline north of Note Map #1 area is a seal haul out and was not surveyed.

See Segment maps for location of Note Map.

ACE 8708124

DOCUMENTATION:

Map/Aerial photo marking segment boundaries See Attached Maps

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) MA 3

Sample Numbers Collected: _____

Note Map #1

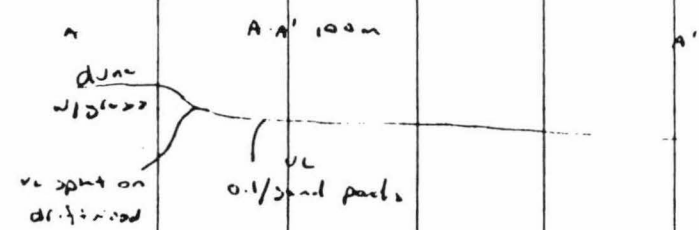


5m (3-7m) band in SP zone of mussels and
oil/sand pads on surface down to approx 5cm BGS
Band extends from approx 0.5km W of of Rad Duff to
2 km east of Rad Duff
Seaweed oiled in driftline

1400 hrs Tide approx +4'

1115 Set down

oil/sand pad L-15cm in SP zone
5m band Vlt oiling
sandy beach w/ cobbles



1150 Set down

MAS-22 oil/sand pad cleanup

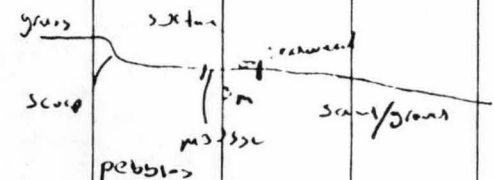
At crest of spit VL oil/sand pad 150m x 10m

MA3-23 on crest of spit
MA3-23 W
24 E

At set down zone - 100m VL oil/sand

1320 lift off

1310, 1320 VL mousse at drift line - SP zone
3m band mousse up to 15cm thick on



1325 - one pad observed

1335 - no oil observed

1340 2 small pads in drift line

MAS-25 N

26 S

1345 no oil

1350 no oil

1355 shutdown

MAS-27 cleanup of massive pad +
28 W
29 E

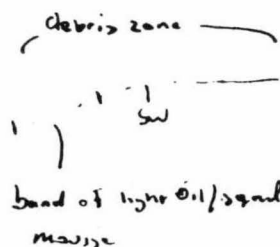
approx 3-4m band of oil/sand pad + massive pad
in SP zone light impact in 3-4m band

VL split on debris in SP zone

on surface around 1355

approx band widens to approx 6-7m as progress
to E

surface to approx 5cm
seaward extension drift line



A

A-A' 50m

1.10.14 1435

ACE 8708127

1440 - 10m band vlt mouse
near SW line

1455 7m band in SP zone

1505 vlt split
high anemone - almost
wet cliff band

1510 vlt split + water bottle in debris
2m band SP zone

1515 spoke w/ minis

1530 Cruise along SW shore
noticed similar mouse band

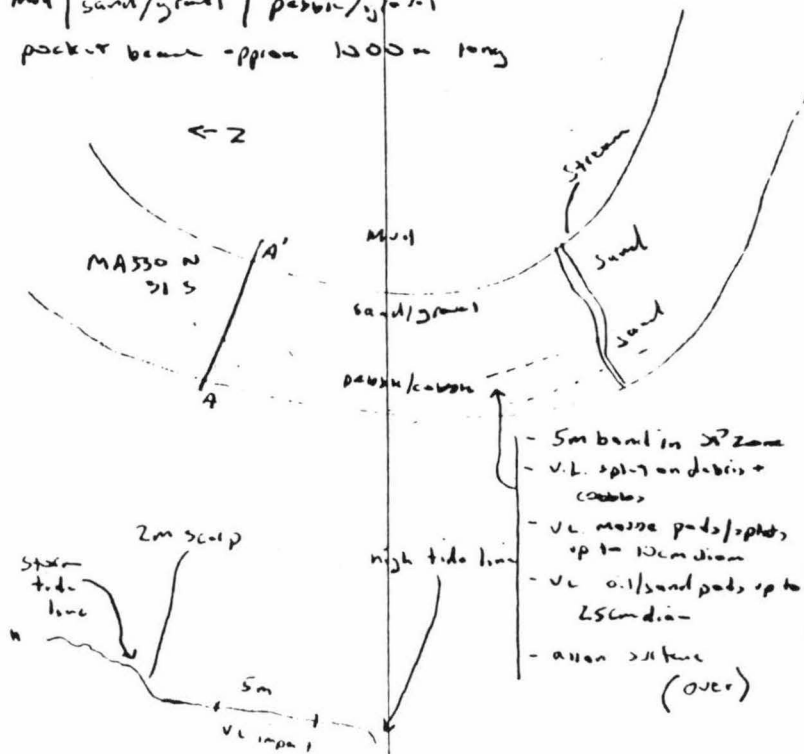
Return at Akhwa

1715 Arrive Kodick

ACE 8708128

7/22 Sunday Action Jordan 6:30pm Vlt
0810 departure Penn Weir ADIA
To Tugidak Island
Tugidak - O/O Weir
0900 Start Vgok Bay K8-9-UB-8.

Start at Gull Pt.
① 1st pocket beach N of Gull Pt 0905
med | sand/gravel | pebbles/gravel
pocket beach approx 1200m long



MEMORANDUM

State of Alaska

TO

Distribution

DATE 7-24-89

FILE NO

TELEPHONE NO 486-5033

FROM

SUBJECT Requirements for Tugidik Island
Oil spill shore clean-up

Edward W Weiss
Fisheries Technician III
Habitat Division
Alaska Department of Fish and Game

After discussing the matter with Wayne Dolezal our Habitat Biologist in Anchorage, the department has developed the following requirements for the oil spill treatment effort on Tugidik Island. We recommend that the Kodiak Intergency Shoreline Clean-up Committee transmit the following information to Exxon so that Exxon may more completely prepare plans for shoreline treatment on Tugidak Island.

A. OPERATIONAL CONSTRAINTS/CONCERNS

1. Clean-up effort needs to be completed or terminated on most of the island by August 15, 1989, unless an extension is authorized by the Alaska Department of Fish and Game and the National Marine Fisheries Service.
2. The current 1500 foot minimum for aircraft operations is maintained in areas being used by seals. Recommended island approach traffic patterns are found on the attached map.
3. We suggest that clean-up efforts be maximized in the lagoon area, around the north of the island and down the west side, first (see enclosed map). In this way critical harbor seal use areas will be cleaned by the deadline. An extension, should it be needed, may be granted for the remainder of the island.
4. We prefer medium to large crew size so the clean-up will be completed quickly and disturbance to wildlife species will be short termed.
5. Clean-up crews will restrict activity to areas below storm tide lines. Crews are to avoid upland and marsh areas.
6. All oil and oil contaminated debris that is collected during the clean-up effort must be removed from Tugidak Island prior to September 30, 1989. We prefer that bags be removed daily if operationally possible.

- B. PERMIT REQUIREMENTS: A Special Area Permit issued by ADF&G is required prior to shoreline treatment related activities on Tugidak Island. The Special Area Permit Application must be completed and forwarded to ADF&G at least five days prior to anticipated start date. As an advisory the

ACE 8708129

following conditions are included for your planning purposes.

1. ADF&G will authorize the use of ATVs for transport of oil contaminated debris and personell from work areas, provided:
 - + Use of ATVs is restricted to areas below storm tide lines.
 - + Only ATVs of the 3 and 4 wheeler size are used. No full sized vehicles.
2. Land based camps will be permitted provided:
 - + Human waste and garbage that is created as a result of the clean-up activities must be removed from the island. Campsite areas are to be left as clean as they were prior to use.
 - + We prefer that campsites are set up on the East or Gulf of Alaska side of the island, south of the lagoon area. If necessary other locations will be evaluated on a case by case basis.
 - + Areas used are left as clean or cleaner than they were found.

C. Justifications:

The time period between August 15 and September 30 is a critical time for harbor seal haulouts. During this period harbor seals are hauled out on the beaches for molting into their winter coats. Undue exposures to the cold waters and stress from disturbances can cause abnormalities in coat formation resulting in mortalities.

The area of the island above the storm tide lines (the upland and marsh areas) and the lagoon area at the northeast end of the island are extremely important habitat areas. These areas are used extensively by nesting and migrating birds. Undue disturbances may cause increased mortality. The sand and gravel beaches in and around the lagoon are important haulout and use areas for harbor seals. This is the reasoning behind the restrictions on use above the storm tide zones and the lagoon area.

The necessary permits may be obtained through the ADF&G Anchorage office, Habitat Division. These can be FAX to Kodiak. If you have any further questions you can contact either myself at 486-5033, or Wayne Dolezal or Don McKay at 267-2285. Thank you.

Enclosures.

Special Area Permit Application

Tugidik Island Critical Habitat Area advisory notice

Distribution.

Gary Penn Marine Ecologist SCAT

Mark Kuwanda ADF&G Habitat Division

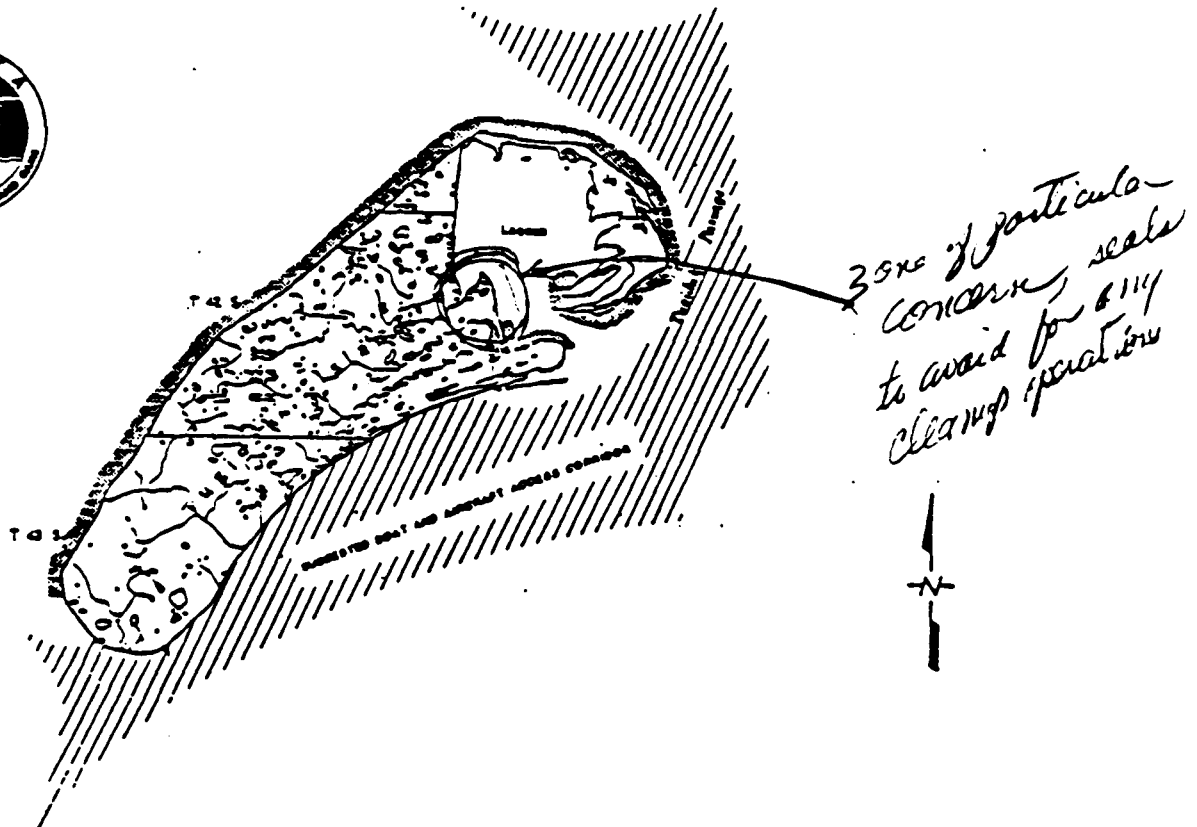
Ken Middleton ADF&G Habitat Division

Kodiak Interagency Shoreline Clean-up Committee

TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE (July 1988)

Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~XXXXXX~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a // pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.



Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

This application must be completely filled out in order for the
Department to consider approval of a proposed project or activity.
Use type or print clearly in ink. If a question is not applicable
to your project, or you do not know the answer, please so indicate on
the appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITEName of Special Area TUGIAIK ISLAND CRITICAL HABITAT AREASpecific project location ALL OIL IMPACTED BEACHES BELOW STORM
TIDE LINETownship 41, 42, 43 Range 33, 34, 35 Meridian SEWARD Section _____Quarter Section _____ USGS Map TRINITY ISLANDS B2, B3, C2, C3Is the project on: private land _____ state land X

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: TUGIAIK ISLAND LAGOON

Is the project in the coastal zone? Yes X No _____
If yes, attach a completed Coastal Project Questionnaire to this
application. COASTAL PROJECT QUESTIONNAIRE WAIVED

DESCRIPTION OF THE PROJECT OR ACTIVITY

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708133

*If you are uncertain as to whether your proposed project lies

ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

This application must be completely filled out in order for the
Department to consider approval of a proposed project or activity.
Please type or print clearly in ink. If a question is not applicable
to your project, or you do not know the answer, please so indicate on
the appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITE

Name of Special Area _____

Specific project location _____

Township _____ Range _____ Meridian _____ Section _____

Quarter Section _____ USGS Map _____

Is the project on: private land _____ state land _____

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: _____

Is the project in the coastal zone?* Yes _____ No _____
If yes, attach a completed Coastal Project Questionnaire to this
application.

DESCRIPTION OF THE PROJECT OR ACTIVITY

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708134

*If you are uncertain as to whether your proposed project lies
within a Special Area, consult the Division office.

The timeframe for the project or activity, including the specific time periods for any inwater work or other activities which may disturb fish or wildlife.

A description of construction methods, types and quantities of equipment and number of people involved.

A description of water use including methods of withdrawal, rate of withdrawal, and the total quantity of water required.

A list of fill and excavation quantities including the types of material and the source.

A map and description showing how access will be gained to the project area (use USGS 1:63,360 scale maps where available).

A detailed map or plan view, drawn to scale, and any cross-sectional views necessary to show project features and local topography including the location of all facilities and project dimensions.

A current aerial photograph of the project location (if available).

D. OTHER PERMITS

Identify other state or federal permits or authorizations obtained or applied for: _____

MITIGATION: As a condition of project approval, applicants will be required to compensate fully for damage to fish and wildlife and their habitat by employing the most appropriate techniques. Where determined necessary by the department, a mitigation plan pursuant to 5 AAC 95 will be required.

I HEREBY CERTIFY THAT ALL INFORMATION PROVIDED ON OR IN CONNECTION WITH THIS APPLICATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature of Applicant

Date

Name of Applicant (please print)

SUBMIT APPLICATION BY MAIL OR IN PERSON TO THE APPROPRIATE DEPARTMENT OF FISH AND GAME HABITAT DIVISION OFFICE.

Habitat Division Addresses:

JUNEAU (Southeast Alaska - Region I)

P.O. Box 20, Douglas, AK 99824-0020 (465-4290)

ANCHORAGE (Southcentral, Southwest and Western Alaska - Regions II and IV)

333 Raspberry Rd., Anchorage, AK 99518-1599 (344-0541)

FAIRBANKS (Interior and Arctic Alaska - Region III)

1565 University Avenue, Fairbanks, AK 99701 (479-3104)

ECOLOGICAL EVALUATION

LOCATION: Kodiak SITE: Trinity Island - Tag, Idak OBSERVER: G. Penn
 LOCATION PREFIX: K7-15 SEG. NO.: TI-2 LENGTH: 30 km (M)
 DATE: 07/21/89 TIME (HHMM): 1400 TIDE HT.: 1.2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

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

Littorina

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

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

OTHER OBSERVATIONS: Generally sand/gravel beach w/ ① Erosional
escarpment or ② Low lying grass covered dunes; not conducive
to rich intertidal emergent biota.

*CLEANUP PRECAUTIONS: Remain clear of grassed areas - Use no motorized
vehicles on beach if seals encountered. Complete prior to Aug 15, 1989
Avoid Eagle nests (if noted)

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

BIRDS: EAGLES

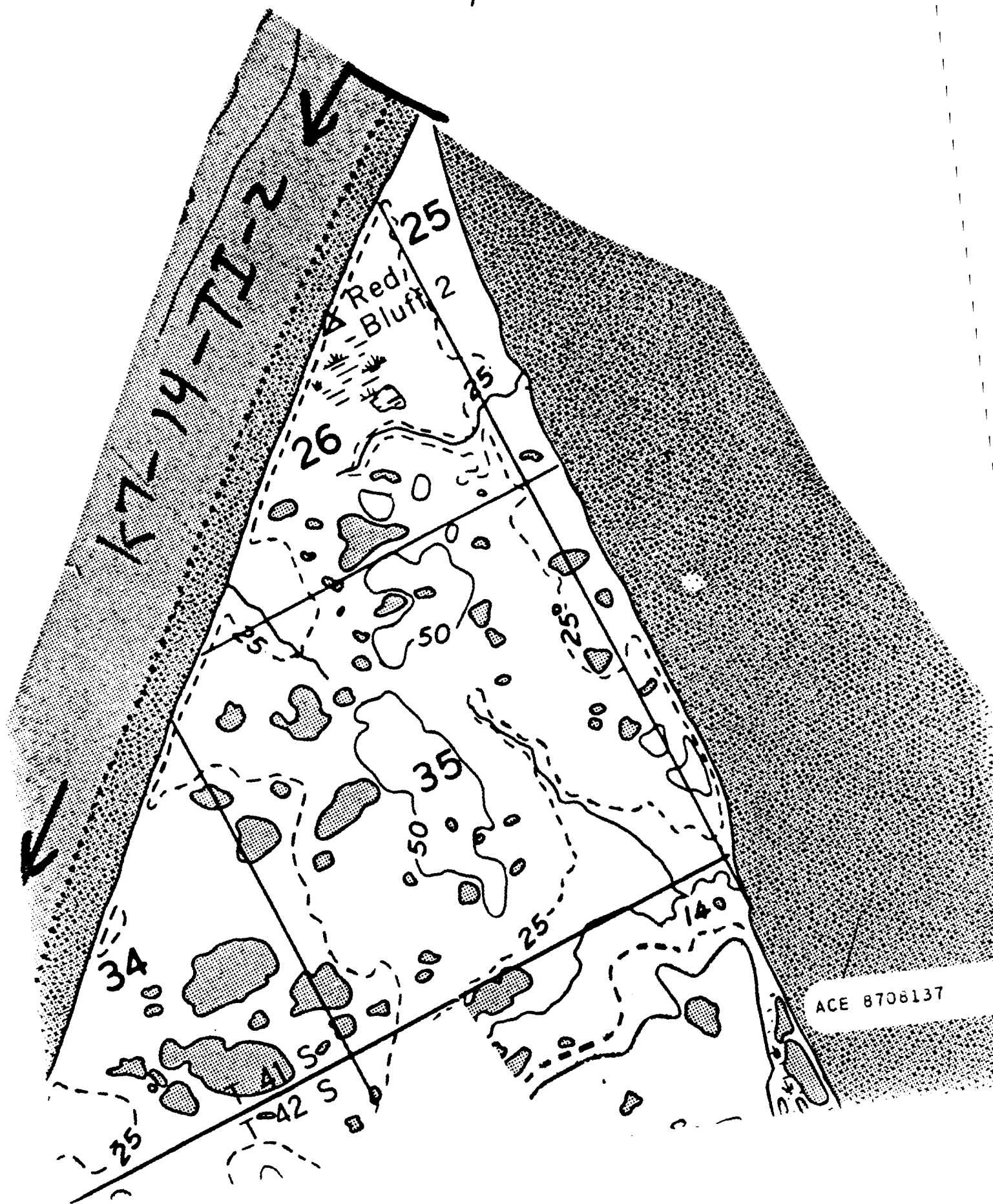
GENERAL OBSERVATIONS: _____

* See p 110 and AFOB summaries, maps, restrictions

pg 1 of 6

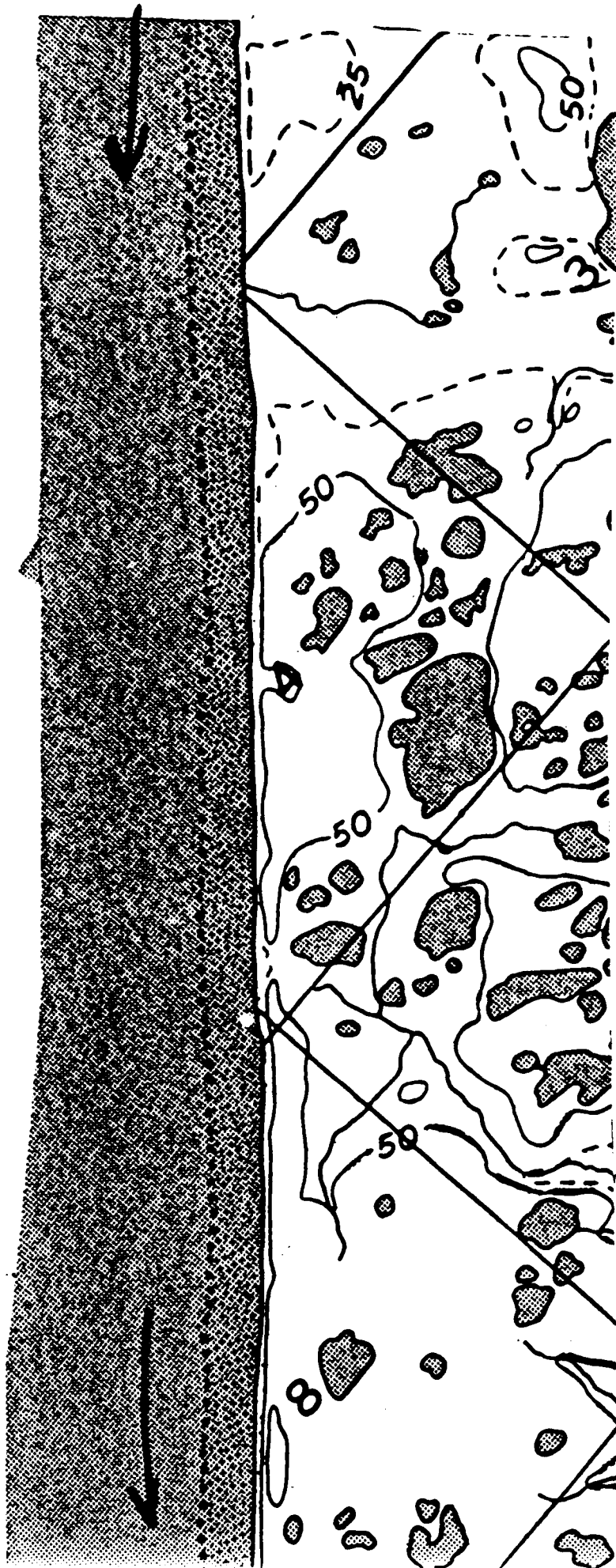
Ecological Maps

TI-2



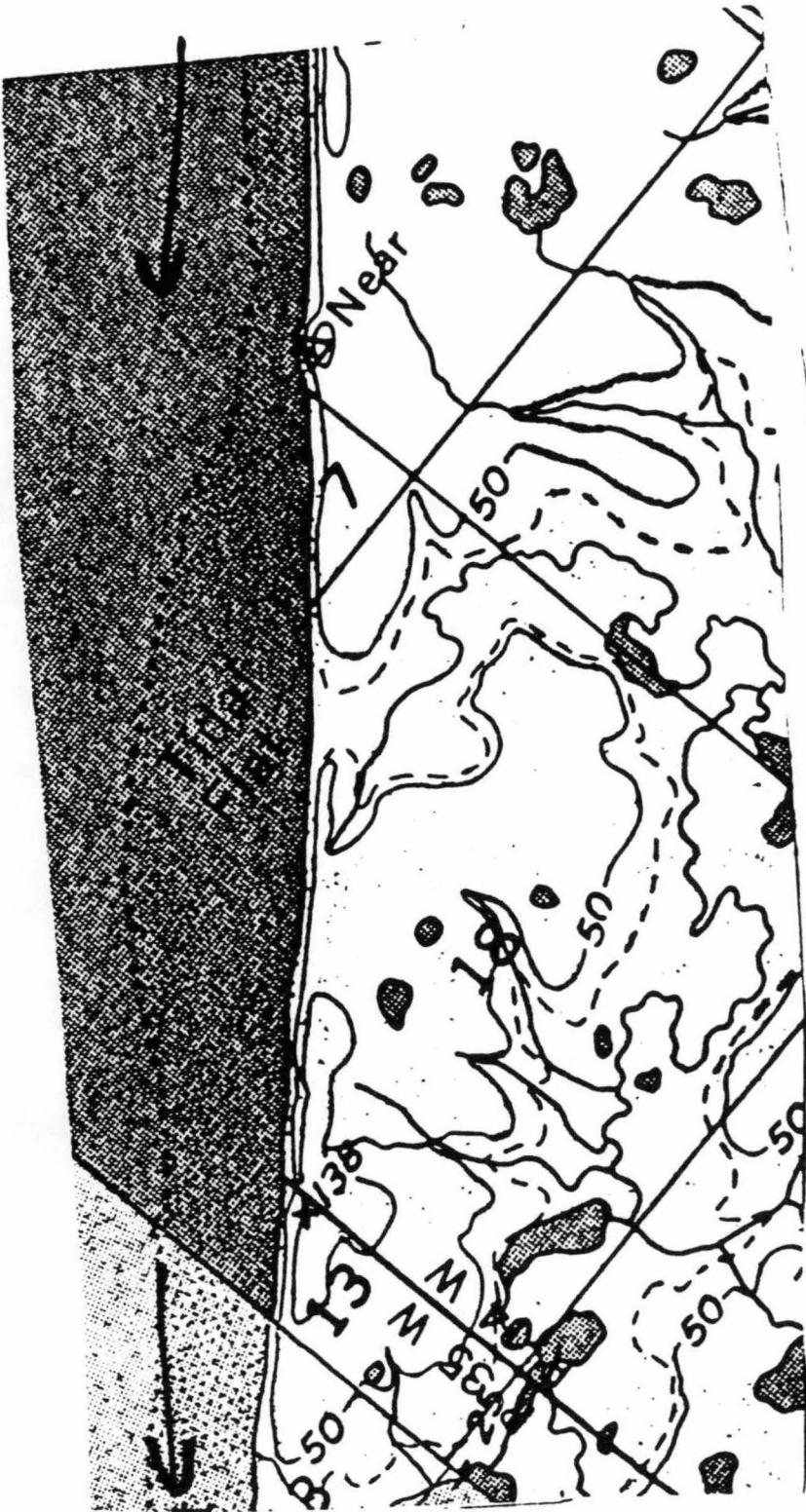
ACE 8708137

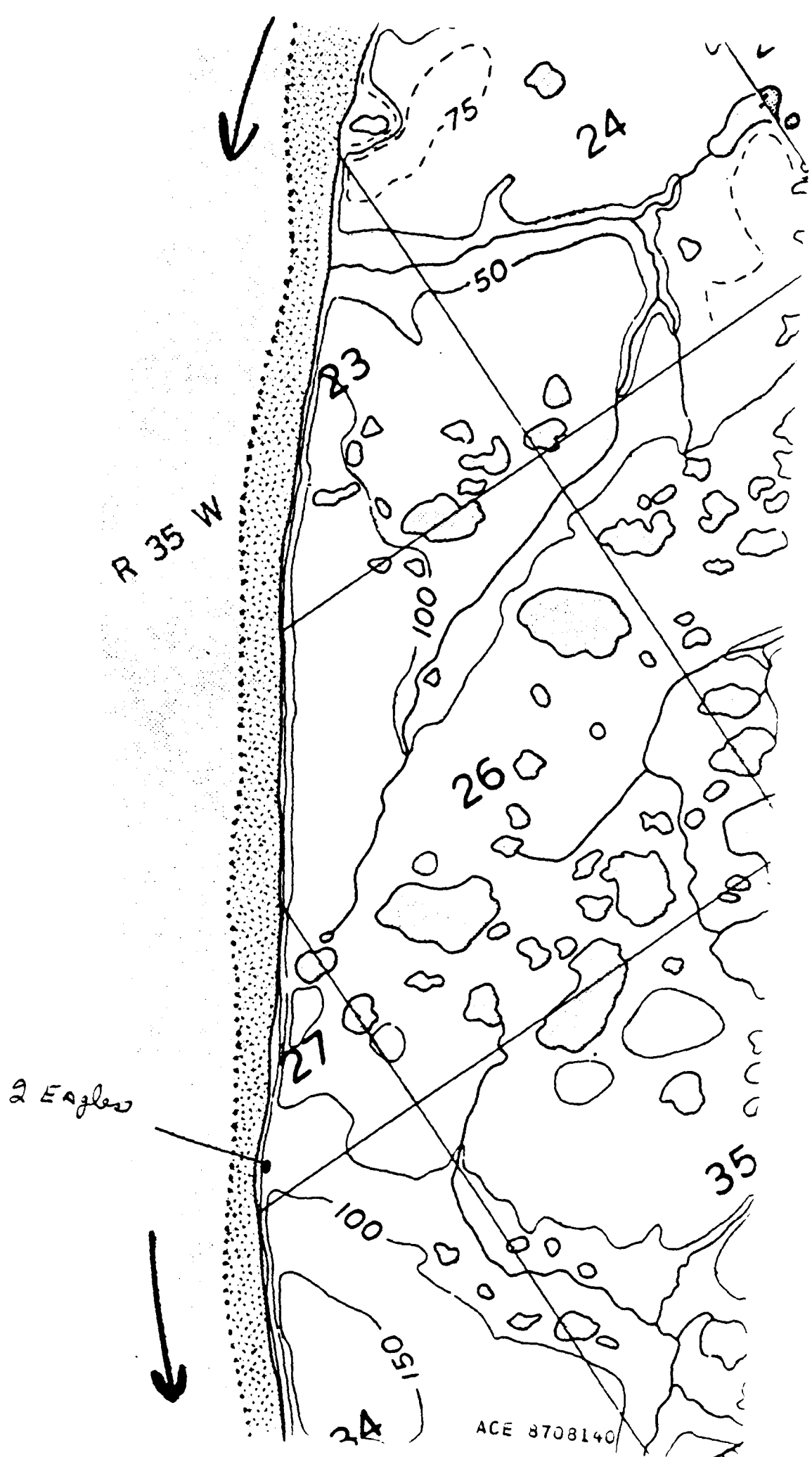
Pg 2 of 6

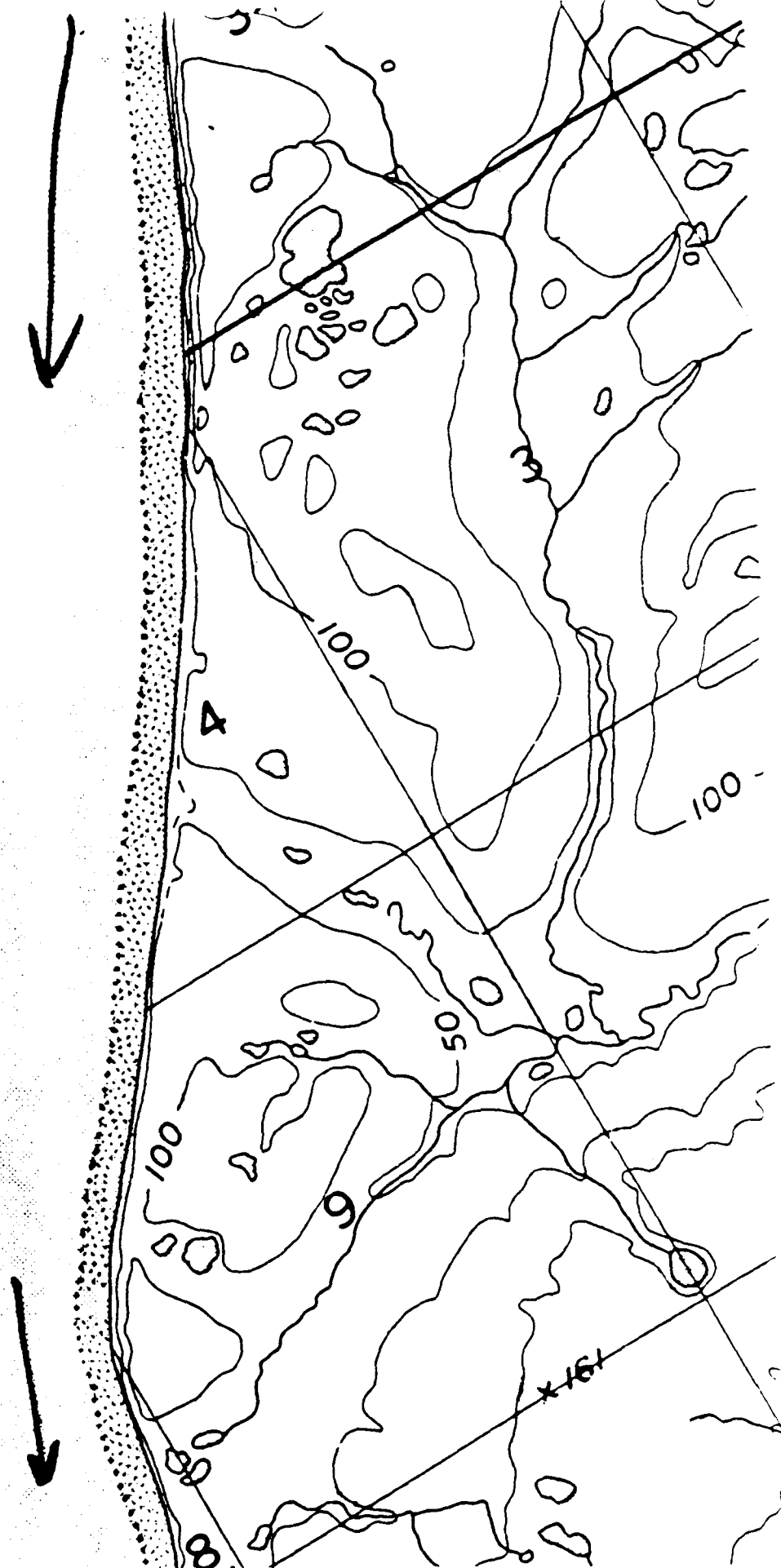


ACE 8708138

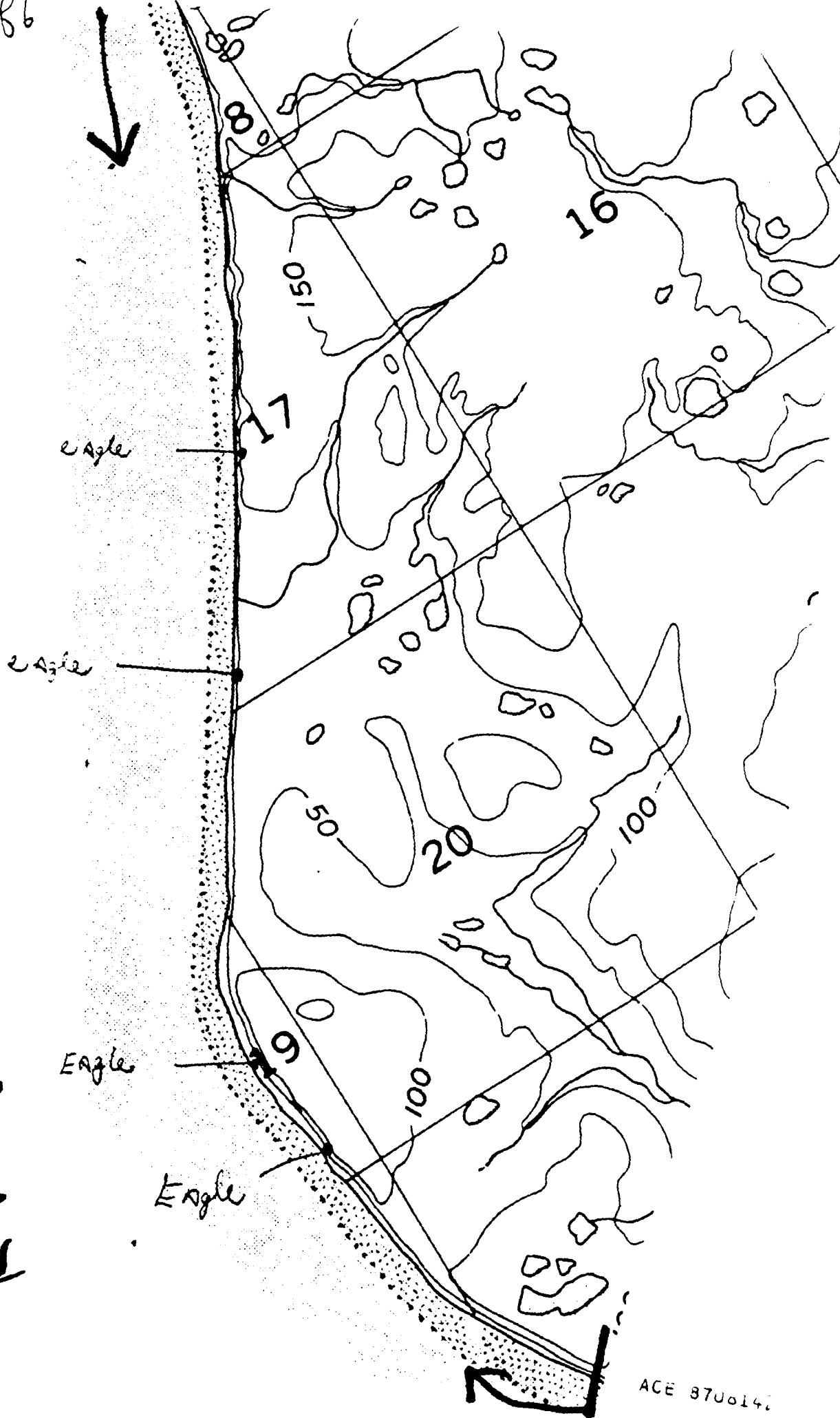
pg 3 of 6







K7-14 TI-2



October 21, 1987
(with 1986 resource update)

Tugidak Island Fish and Wildlife Resources

Tugidak Island is unique in the Gulf of Alaska not only because of its unusual number of extremely productive and diverse fish and wildlife habitats but also because those habitats have remained in a relatively natural, undisturbed state. To date very little human disturbance has occurred on the island to threaten the vulnerable groundnesting birds, harbor seal pupping areas, and rich lagoon environment.

Marine mammals: Tugidak is most renowned for its harbor seal population. Tugidak Island has historically supported one of the largest harbor seal populations in the world, estimated at 15,000 to 20,000 animals with peak concentrations of hauled out seals reaching 14,000 at a time. Tugidak Island is also a major pupping area for harbor seals in the Gulf of Alaska with annual production once estimated at a high of 5,500 pups. That population is now substantially depressed but remains one of the largest known. Seals haul, pup, and molt on beaches found along the west and northeast side of the island and in the vicinity of the mouth of the lagoon.

Sea otters are common in the nearshore waters around Tugidak Island. Approximately 400 to 700 sea otters are found in the vicinity of Tugidak Island, with medium to high densities along the south side of the island.

Birds: The interspersed of many different habitat types on Tugidak Island associated with cliff and bluff shores; sand and rocky beaches; spits, bars and tideflats; freshwater streams and lakes; saltwater marshes and lagoons; vast eelgrass beds; freshwater wetlands; and uplands attracts some of the greatest diversity of bird life known to nest on and visit any one island in the Gulf of Alaska.

The island serves as a valuable spring and fall resting and feeding area and as a production area for birds migrating from the Pacific coast of North America. Because Tugidak Island is low, treeless, and free of introduced predators, all birds nest on the ground and are particularly susceptible to habitat destruction, predation, and trampling.

- At least 56 species of birds occur on Tugidak Island. Thirty eight species are known to nest there, and 26 of these species are considered common or abundant.
- Wetland habitats throughout the island provide nesting habitat for waterfowl, shorebirds, tundra swans and loons, with wetlands habitats along the south shore supporting nesting concentrations of mallards, pintails, gadwalls, green-winged teal and wigeon.
- Snow geese concentrate on the island during spring migration to rest and feed.
- The lagoon supports spring and fall concentrations of ducks and shorebirds. Black brant and white-fronted geese also concentrate in the lagoon in the fall to rest and feed. The lagoon area provides winter habitat for emperor geese, a species that has recently experienced a serious population decline.
- The coastal waters surrounding Tugidak Island are a major overwintering area for waterbirds, primarily seaducks.
- Five seabird colonies are documented on Tugidak Island, totalling nearly 4,000 nesting birds. Glaucous-winged gulls are the most abundant seabird, followed by arctic terns, mew gulls, and cormorants.
- Of particular significance are records of ^{ten} ~~six~~ ground nesting bald eagles. These bald eagle nests are located on bluffs or slight rises in the terrain throughout the island.
- Peregrine falcons are also reported to nest on the island's bluffs.
- Several thousand ptarmigan nest in upland areas of the island.

Fish and Shellfish: The lagoon and nearshore waters of Tugidak provide a productive marine environment for several species of fish and shellfish. The island's stream systems provide habitat for anadromous fish.

- There are ^{five} ~~three~~ documented salmon stream systems on the island supporting chum and/or coho salmon.
- The lagoon is a productive rearing and feeding area for large numbers of Pacific herring.

- Known razor clam concentrations occur along the bars at the mouth of the lagoon.
- Based upon frequent observations of small Dungeness crab carapaces and exoskeletons washed up along the lagoon's shores and large commercial catches of Dungeness crab directly offshore of the lagoon, the shallow waters and large eelgrass beds found in the lagoon are thought to provide an important nursery/rearing area for Dungeness crab.

Archaeological Sites: Eight archaeological sites have been documented on the island. Although largely unexplored, they appear to indicate abundant prehistoric use of the island, with a majority of the sites located along the lagoon.

LEGEND



Known Black Brant and White-fronted Geese Fall Concentration Area



Known Snow Geese Spring Concentrations (Entire Island)



Known Tundra Swan Nesting Concentrations (Entire Island)



Known Spring and Fall Duck Concentrations



Known Duck Nesting Concentrations



Known Bald Eagle Nests *▲ Additional Bald Eagle Nests found during 1988*



Seabird Colony



Known Harbor Seal Haul-out Concentrations



Known Pacific Herring Rearing and Feeding Area

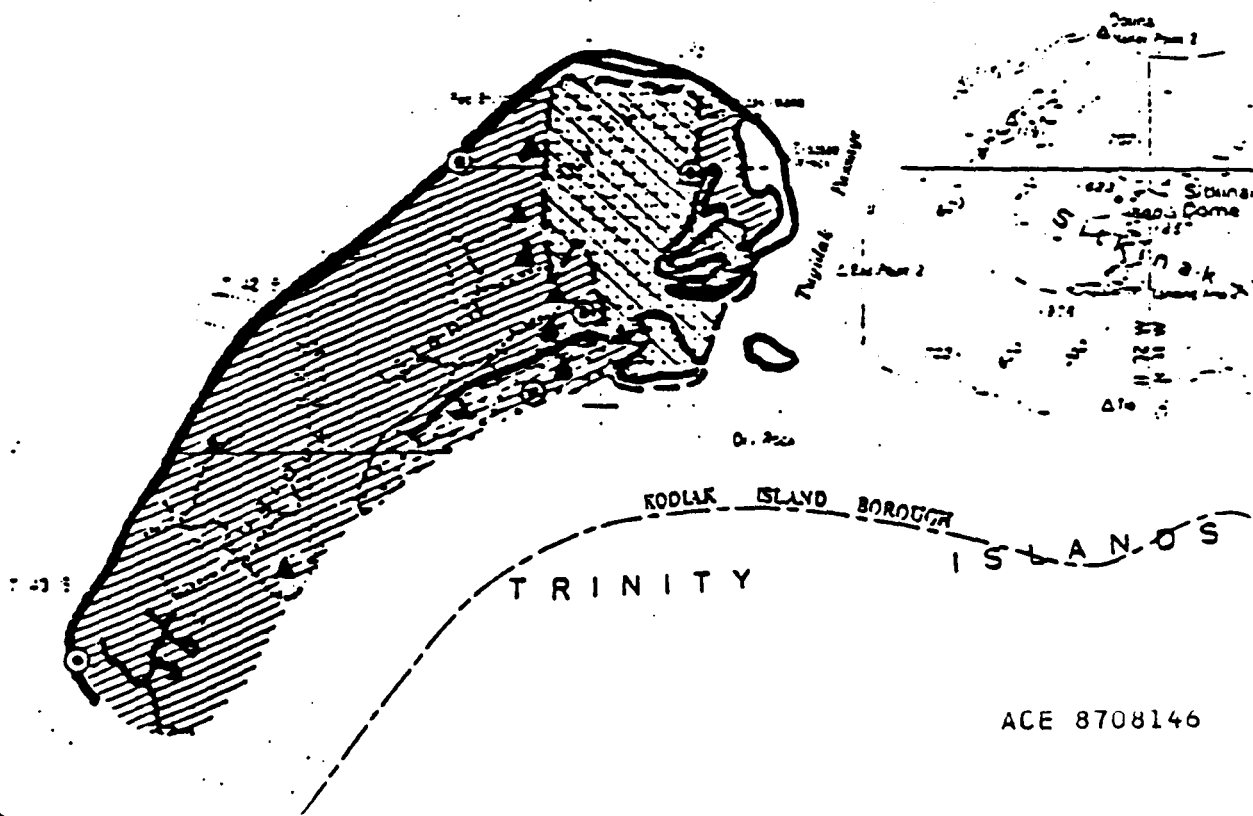


Anadromous Fish Stream



Anadromous Fish Streams identified during 1988

KODIAK ISLAND BOROUGH



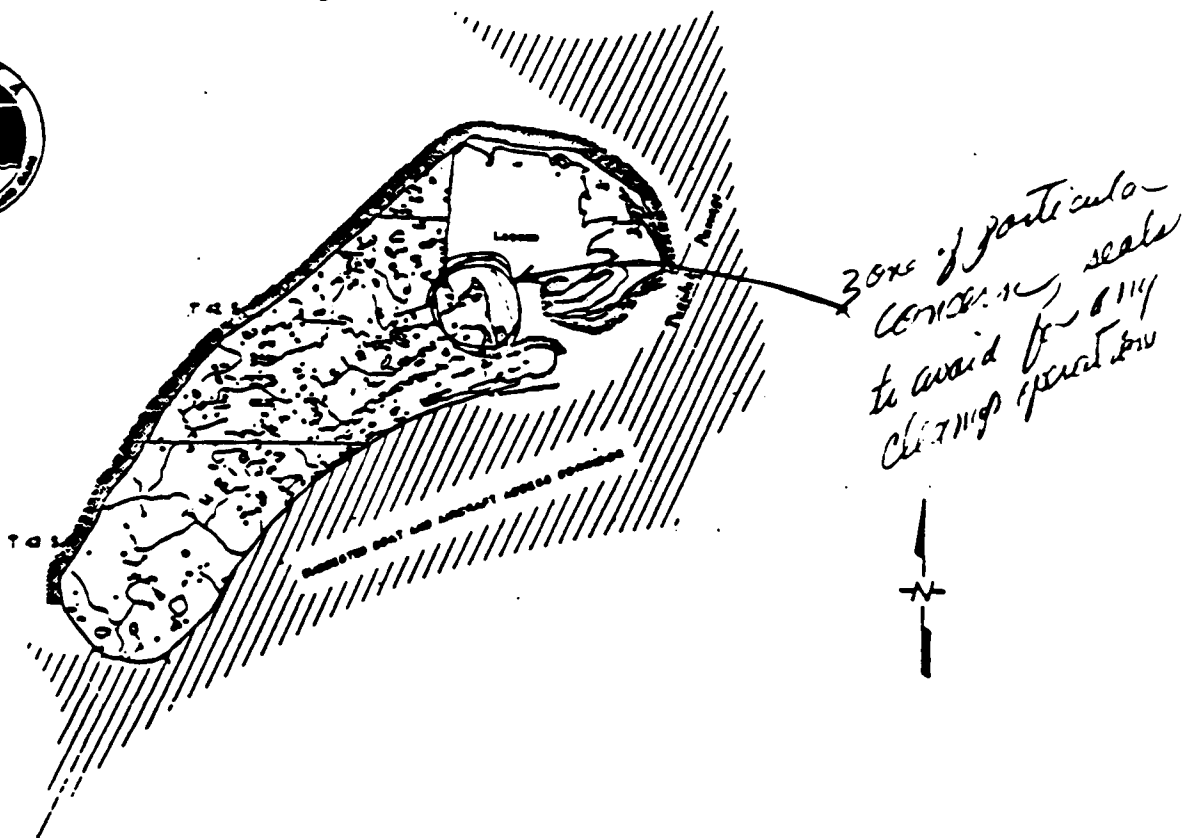
ACE 8708146

TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE

(July 1988)

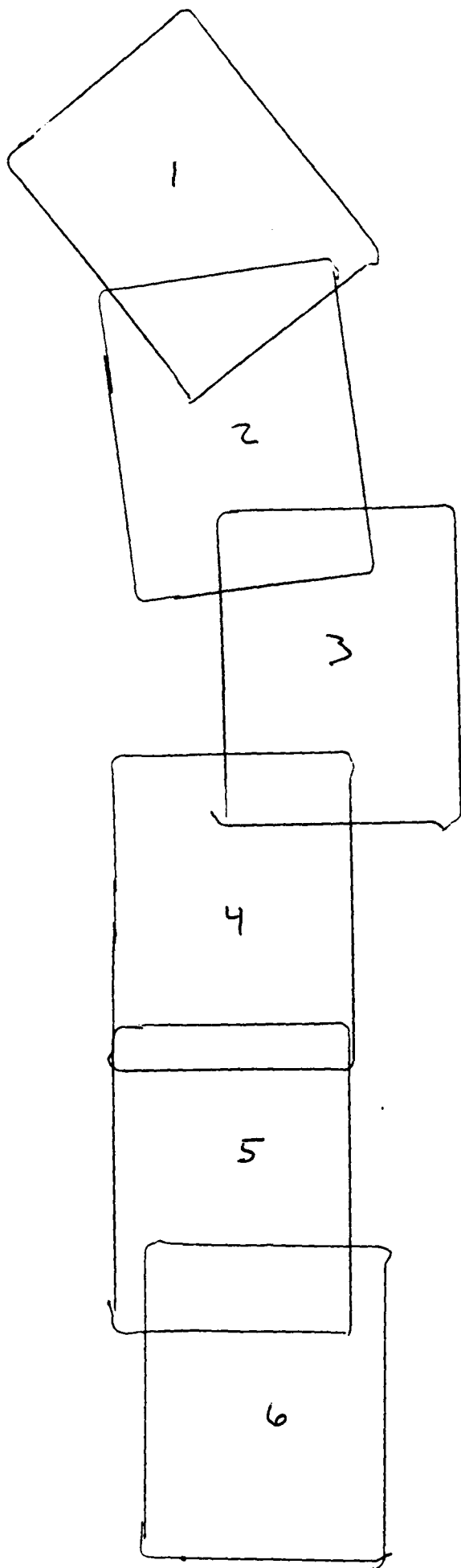
Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~stippled~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a ~~hatched~~ pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.



Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

ACE 8708147

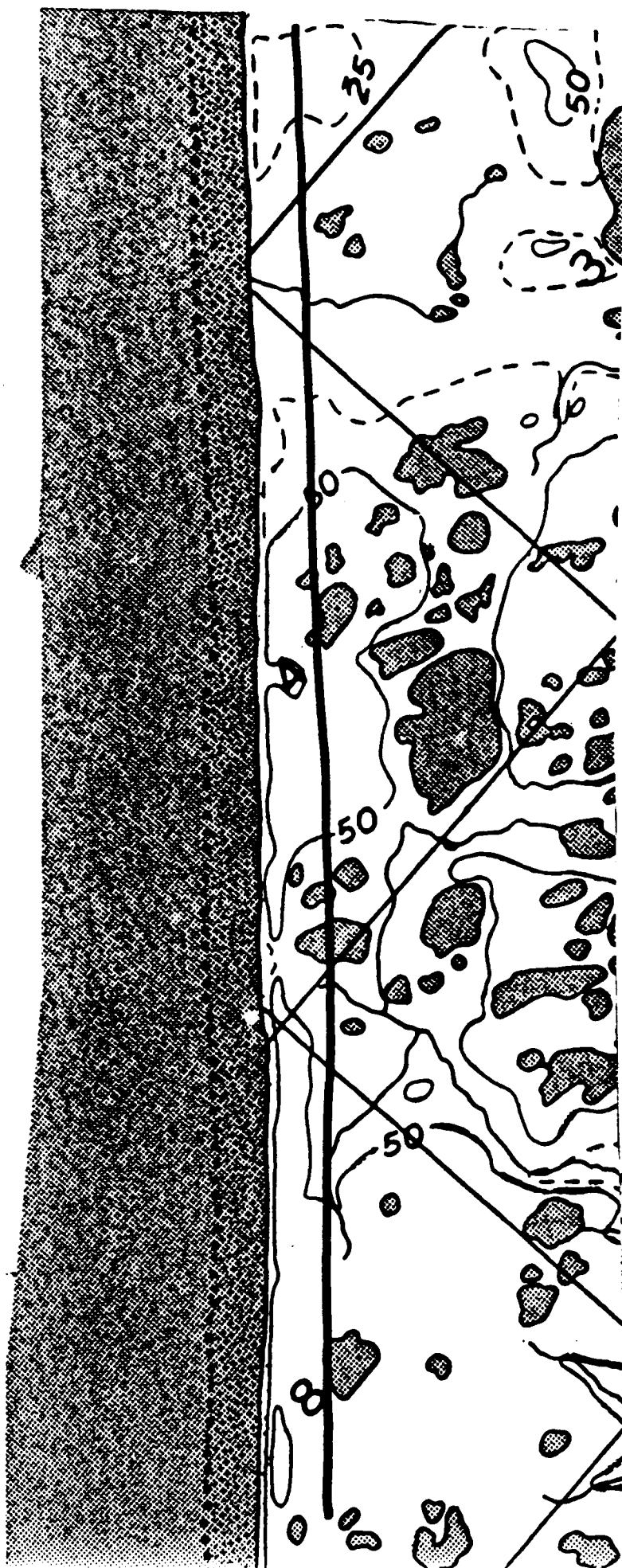


①

~~Red~~
~~Bluff~~ 2

T-42 S

②

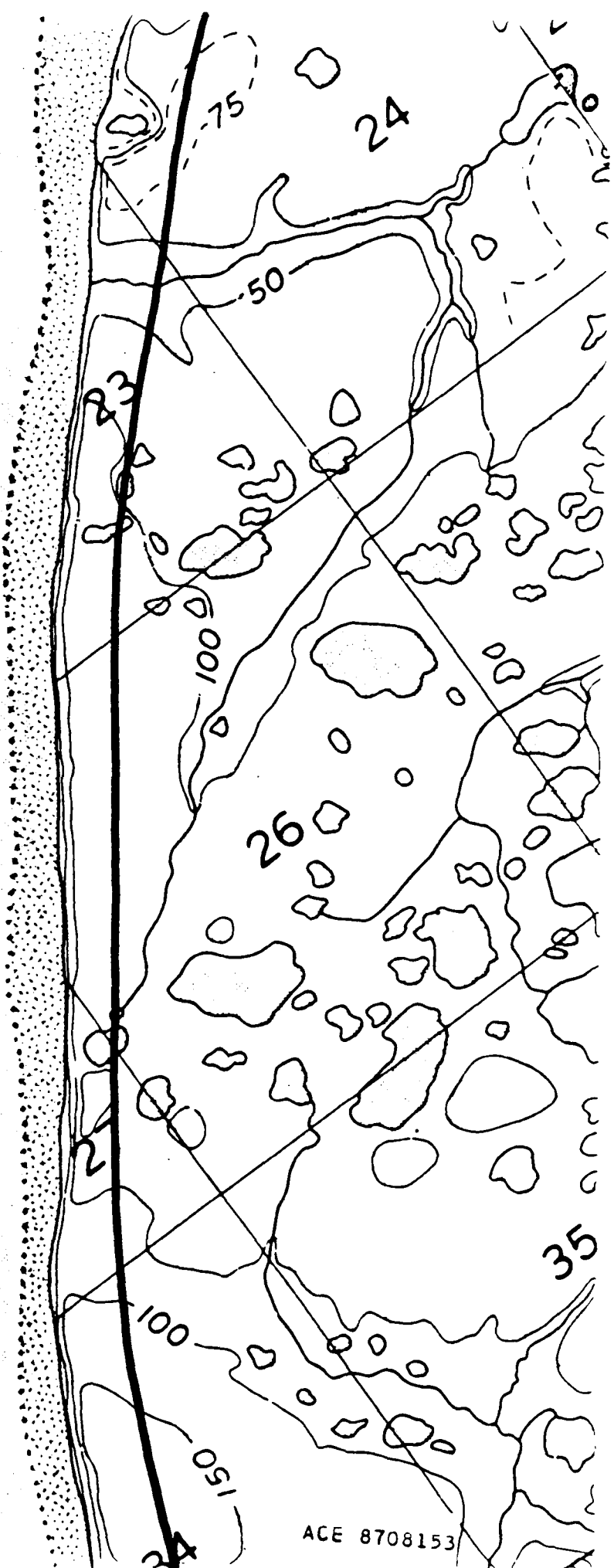


ACE 8708151

ACE 8708152

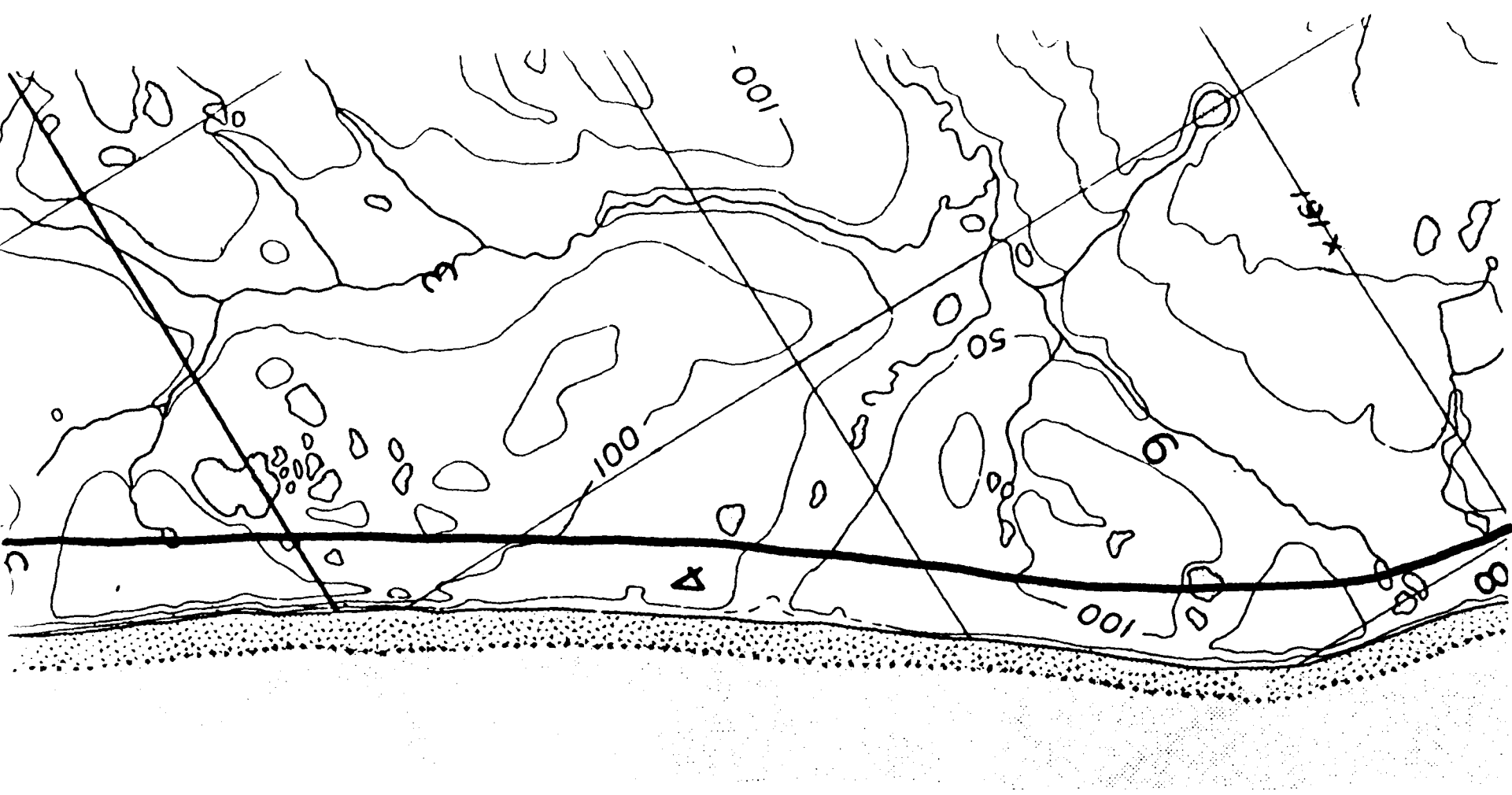
④

R 35 W

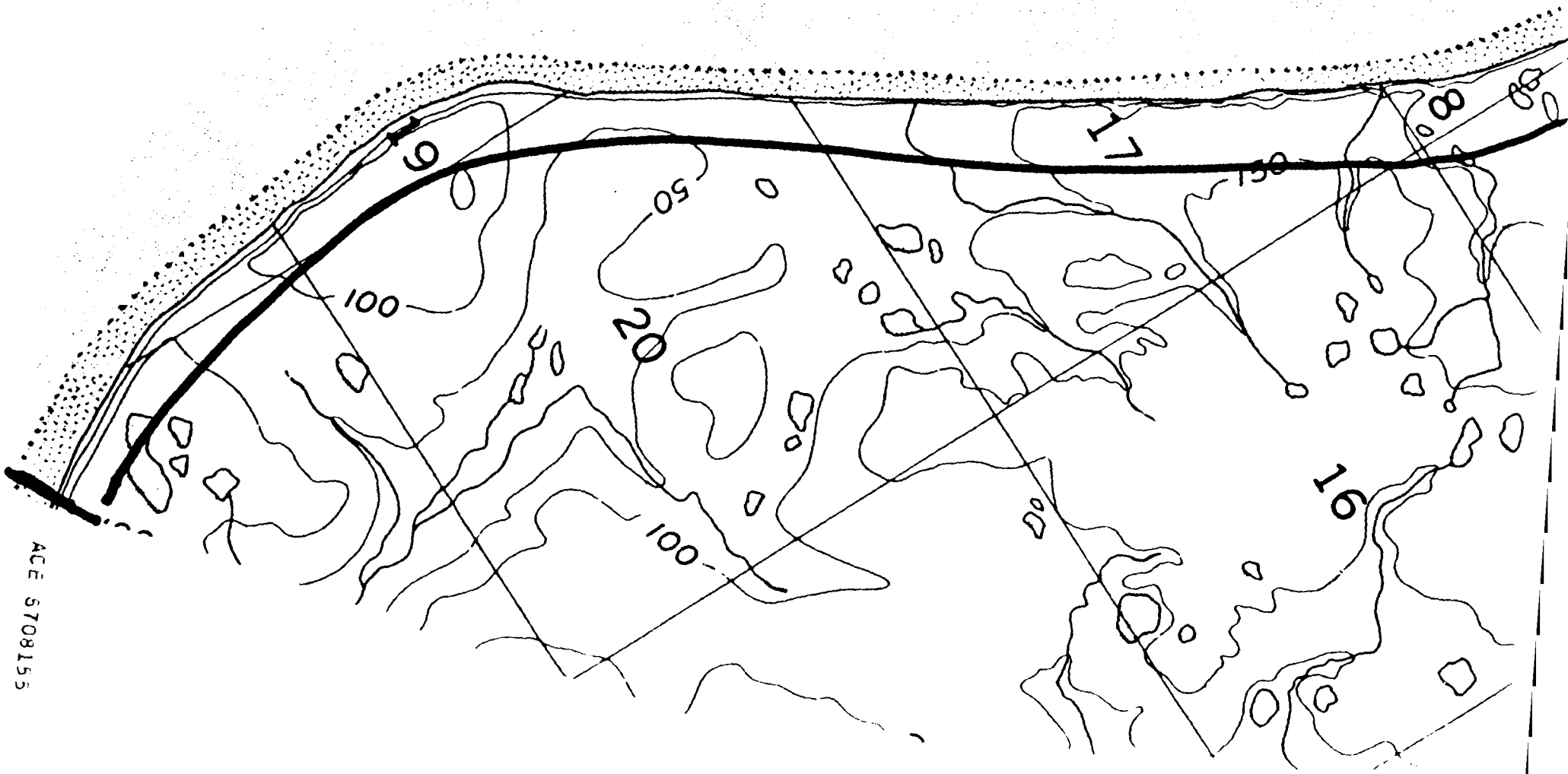


ACE 8708153

⑤



ACE 8708154



ACE 5708155

K7-15

ACE 7963956

12
(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/24/89 SHORELINE SEGMENT K7-15-TI-3

LOCATION: (see enclosed map) Tugidak Island- East shore

ADEC NO. K7 SHORELINE ASSESSMENT DATE: 7/24/89

Recommended Cleanup Activity(ies):

- Manual removal of mousse patties (see map #1) along approximate 16 km section of segment.

Priorities/Considerations: Class 5-A

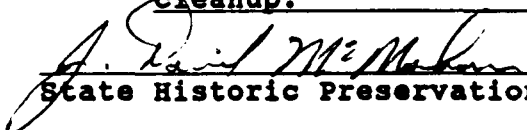
- Permit required by AK department of Fish & Game.
- See attached memo from ADF&G for cleanup considerations.
- Boat access may be restricted to calm days.

Ecological Constraints (from site survey):

- Remain below storm tide line.
If seals present, use no mechanical equipment.
- Avoid eagle nests.
- Complete cleanup before 8/15/89.

Archaeological Constraints (from site survey):

- Archaeological monitor required prior to and during clean-up. No access to forest/upland zone by beach crews during cleanup.


State Historic Preservation Officer *

Date: 7/28/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

SHORELINE OIL EVALUATION

Date: 7/24/89 / Time: 1030
 Surveyed From: Food/Boat/Helio/Plane

Observer: M. Acton
 Weather: Sun/Cloud/Rain/Snow/Fog

CATION

Location: Tugidak Island - East shore Segment ID: K7
 Segment Length: 28 km m. Access: Vehicle/Boat/Barge/Helio/Float Plane
 Access Restrictions: Boat access during low wave energy periods

SHORELINE

Shoreline Type: SPI/BEA/COV/HLD/STRT Slope: Lo/Med/Hi/Vert
 Wave Exposure: High/Med/Low
 Sediment: B % / C 30 % / P % / G&S 70 % / M % / R %

OIL

Avg. Degree of Oiling: HEAVY / MODERATE / LIGHT / VERY LIGHT / NONE OBSERVED
 Area of Impact: SU/SP/H/M/L

OIL DISTRIBUTION

Continuous % of Segment SU/SP/H/M/L H/M/L/VL
 Sporadic % of Segment 60 SU/SP/H/M/L H/M/L/VL

Total	Length(m)	Width(m)	Thickness >1cm:	cm	SU/SP/H/M/L
Very light:	<u>16 km</u>	<u>4</u>	Penetration/Rework:	cm	SU/SP/H/M/L
Light:			Burial Depth:	cm	SU/SP/H/M/L
Moderate:					
Heavy:					

Mobilization Potential: High/Medium/Low

Shift Debris Oiled? Y/N Amount: H/M/L/VL SU/SP/H/M/L Type: Driftwood, seaweed

OIL MORPHOLOGY

Oiled Oil:	%	SU/SP/H/M/L
Free Oil:	%	SU/SP/H/M/L
Plattered:	<u>5</u> %	H/M/L/VL SU/SP/H/M/L
Coated:	%	SU/SP/H/M/L
Pancakes/Balls:	<u>95</u> %	SU/SP/H/M/L

Preliminary Cleanup Est.

Total TYPE A: 16 km m
 Total TYPE B: m
 Total TYPE A/B: m

IL WEATHERING

Resh:	%	SU/SP/H/M/L
Mousse:	% <td>SU/SP/H/M/L</td>	SU/SP/H/M/L
Weathered Mousse:	<u>95</u> %	SU/SP/H/M/L
Asphalt Mousse:	%	SU/SP/H/M/L
Bar:	<u>5</u> %	SU/SP/H/M/L

COMMENTS

Approx 4m wide band of very light oil impact consisting of oil/sand pads was observed in the SP zone for approx 16 km of the segment (see Note Map #1).
 Band of very light oil impact was observable from helio.
 See segment maps for locations of Note Map.

DOCUMENTATION:

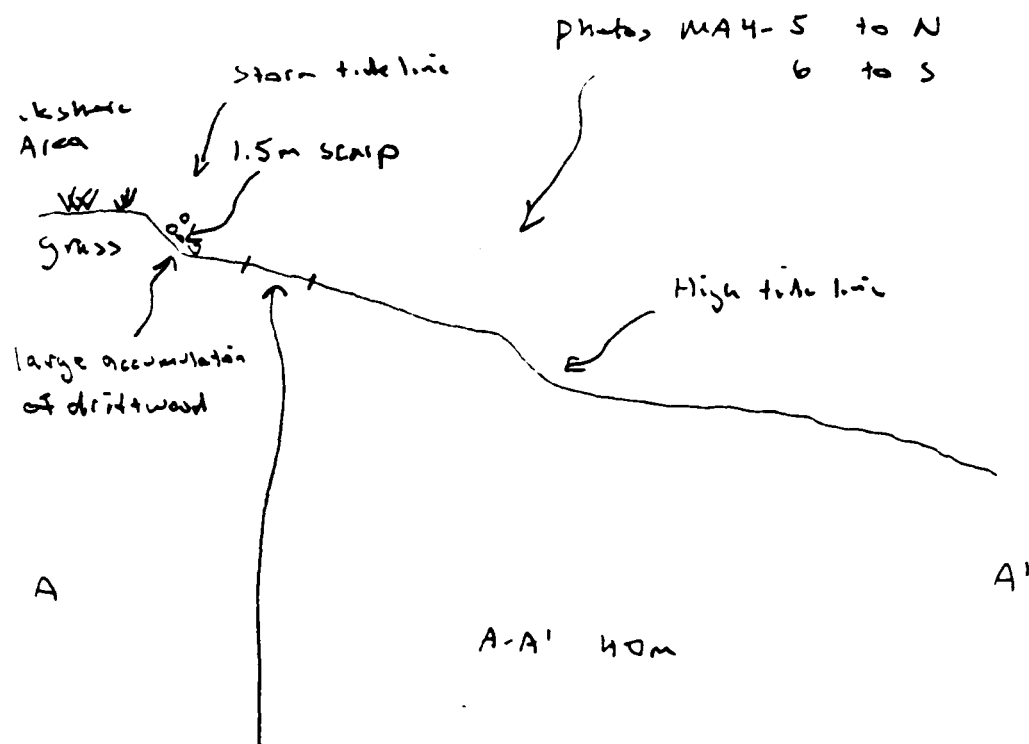
Map/Aerial photo marking segment boundaries See Attached

VTR: Y/N Tape Number(s) _____

Photography: Y/N Roll Number(s) MA-4

Sample Numbers Collected: _____

Note Map #1



4m band of very light oil impact, oil/sand pads on surface
band is just below driftwood line

Manual removal recommended

29

7/24

Action Weiss Area.
Penn Shore, US
Jordan

Depart Kodiak 0830 for Trinity Is

Arrive Tugidak 0925

0935 VL sphere 2 bands

1005 no oil sand band

1030 approx.

Spoke w/ Mr. Garber

grass
STL
15m scarp
large driftwood
MTL

A

4m band

very light oil/pet
mass removal

photos 4A4-5
6 5

1130 Same band of oil/sand

band
Sand
50
Coastline

A

1155

A-A' 49m

A-A'
49m

A'

oil/sand pads on surface
band is just below the
driftwood line

40

from ladies camp to tide flat entrance - same band
of oil/sand pads - VL in front

ACE 8708161

MEMORANDUM

State of Alaska

TO

Distribution

DATE: 7-24-89

FILE NO

TELEPHONE NO 486-5033

FROM

SUBJECT: Requirements for Tugidik Island
Oil spill shore clean-up

Edward W Weiss
Fisheries Technician III
Habitat Division
Alaska Department of Fish and Game

After discussing the matter with Wayne Dolezal our Habitat Biologist in Anchorage, the department has developed the following requirements for the oil spill treatment effort on Tugidik Island. We recommend that the Kodiak Intergency Shoreline Clean-up Committee transmit the following information to Exxon so that Exxon may more completely prepare plans for shoreline treatment on Tugidak Island.

A. OPERATIONAL CONSTRAINTS/CONCERNS

1. Clean-up effort needs to be completed or terminated on most of the island by August 15, 1989, unless an extension is authorized by the Alaska Department of Fish and Game and the National Marine Fisheries Service.
2. The current 1500 foot minimum for aircraft operations is maintained in areas being used by seals. Recommended island approach traffic patterns are found on the attached map.
3. We suggest that clean-up efforts be maximized in the lagoon area, around the north of the island and down the west side, first (see enclosed map). In this way critical harbor seal use areas will be cleaned by the deadline. An extension, should it be needed, may be granted for the remainder of the island.
4. We prefer medium to large crew size so the clean-up will be completed quickly and disturbance to wildlife species will be short termed.
5. Clean-up crews will restrict activity to areas below storm tide lines. Crews are to avoid upland and marsh areas.
6. All oil and oil contaminated debris that is collected during the clean-up effort must be removed from Tugidak Island prior to September 30, 1989. We prefer that bags be removed daily if operationally possible.

- B. PERMIT REQUIREMENTS: A Special Area Permit issued by ADF&G is required prior to shoreline treatment related activities on Tugidak Island. The Special Area Permit Application must be completed and forwarded to ADF&G at least five days prior to anticipated start date. As an advisory the

ACE 8708162

following conditions are included for your planning purposes.

1. ADF&G will authorize the use of ATVs for transport of oil contaminated debris and personell from work areas, provided:
 - + Use of ATVs is restricted to areas below storm tide lines.
 - + Only ATVs of the 3 and 4 wheeler size are used. No full sized vehicles.
2. Land based camps will be permitted provided:
 - + Human waste and garbage that is created as a result of the clean-up activities must be removed from the island. Campsite areas are to be left as clean as they were prior to use.
 - + We prefer that campsites are set up on the East or Gulf of Alaska side of the island, south of the lagoon area. If necessary other locations will be evaluated on a case by case basis.
 - + Areas used are left as clean or cleaner than they were found.

C. Justifications:

The time period between August 15 and September 30 is a critical time for harbor seal haulouts. During this period harbor seals are hauled out on the beaches for molting into their winter coats. Undue exposures to the cold waters and stress from disturbances can cause abnormalities in coat formation resulting in mortalities.

The area of the island above the storm tide lines (the upland and marsh areas) and the lagoon area at the northeast end of the island are extremely important habitat areas. These areas are used extensively by nesting and migrating birds. Undue disturbances may cause increased mortality. The sand and gravel beaches in and around the lagoon are important haulout and use areas for harbor seals. This is the reasoning behind the restrictions on use above the storm tide zones and the lagoon area.

The necessary permits may be obtained through the ADF&G Anchorage office, Habitat Division. These can be FAX to Kodiak. If you have any further questions you can contact either myself at 486-5033, or Wayne Dolezal or Don McKay at 267-2285. Thank you.

Enclosures.

Special Area Permit Application

Tugidik Island Critical Habitat Area advisory notice

Distribution.

Gary Penn Marine Ecologist SCAT

Mark Kuwanda ADF&G Habitat Division

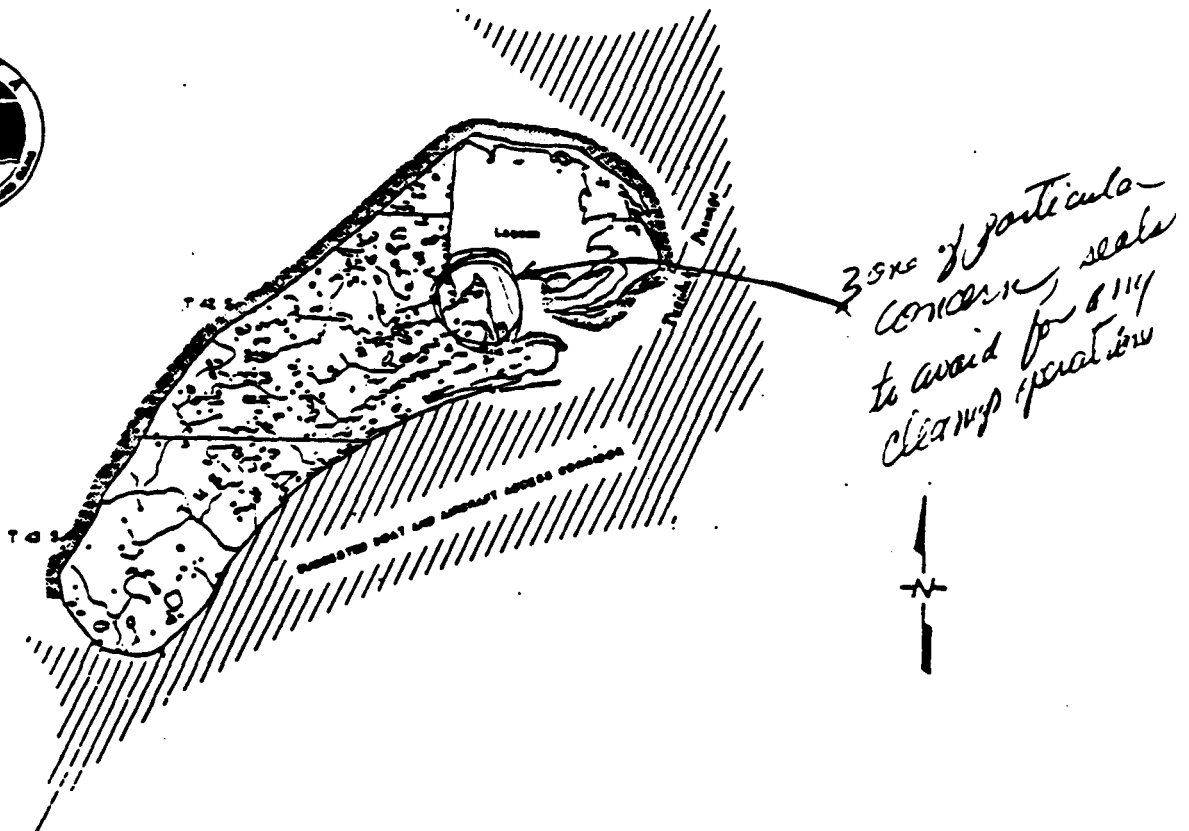
Ken Middleton ADF&G Habitat Division

Kodiak Interagency Shoreline Clean-up Committee

TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE (July 1988)

Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~stippled~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a // pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.



Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

A application must be completely filled out in order for the
Department to consider approval of a proposed project or activity.
Use type or print clearly in ink. If a question is not applicable
to your project, or you do not know the answer, please so indicate on
appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITEName of Special Area TUGIAIK ISLAND CRITICAL HABITAT AREASpecific project location ALL OIL IMPACTED BEACHES BELOW STORM
TIDE LINETownship 41, 42, 43 Range's 33, 34, 35 Meridian SEWARD Section —Quarter Section — USGS Map TRINITY ISLANDS B2, B3, C2, C3Is the project on: private land _____ state land X

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: TUGIAIK ISLAND LAGOON

Is the project in the coastal zone? Yes X No _____
If yes, attach a completed Coastal Project Questionnaire to this
application. COASTAL PROJECT QUESTIONNAIRE WAIVED.

DESCRIPTION OF THE PROJECT OR ACTIVITY

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708166

*If you are uncertain as to whether your proposed project lies

**ALASKA DEPARTMENT OF FISH AND GAME
SPECIAL AREAS PERMIT APPLICATION**

(For approval of a project or activity within
a state game refuge, game sanctuary or critical habitat area)
Pursuant to 5 AAC 95

This application must be completely filled out in order for the
Department to consider approval of a proposed project or activity.
Please type or print clearly in ink. If a question is not applicable
to your project, or you do not know the answer, please so indicate on
the appropriate line.

APPLICANT

Name: _____

Company: _____

Address: _____

Phone (day): _____

Name of Responsible Party in the Field: _____

LOCATION OF PROJECT SITE

Name of Special Area _____

Specific project location _____

Township _____ Range _____ Meridian _____ Section _____

Quarter Section _____ USGS Map _____

Is the project on: private land _____ state land _____

federal land _____ municipal land _____ ownership unknown _____

Waterbodies crossed or otherwise affected: _____

Is the project in the coastal zone? Yes _____ No _____
If yes, attach a completed Coastal Project Questionnaire to this
application.

DESCRIPTION OF THE PROJECT OR ACTIVITY

On separate, attached sheets provide complete plans and
specifications and all other details necessary to fully describe
the scope of the proposed project or activity. Include, at a
minimum, the following information:

The purpose of the project or activity.

ACE 8708167

*If you are uncertain as to whether your proposed project lies
within a Special Area, consult the Fish and Game Division office.

The timeframe for the project or activity, including the specific time periods for any inwater work or other activities which may disturb fish or wildlife.

A description of construction methods, types and quantities of equipment and number of people involved.

A description of water use including methods of withdrawal, rate of withdrawal, and the total quantity of water required.

A list of fill and excavation quantities including the types of material and the source.

A map and description showing how access will be gained to the project area (use USGS 1:63,360 scale maps where available).

A detailed map or plan view, drawn to scale, and any cross-sectional views necessary to show project features and local topography including the location of all facilities and project dimensions.

A current aerial photograph of the project location (if available).

D. OTHER PERMITS

Identify other state or federal permits or authorizations obtained or applied for: _____

MITIGATION: As a condition of project approval, applicants will be required to compensate fully for damage to fish and wildlife and their habitat by employing the most appropriate techniques. Where determined necessary by the department, a mitigation plan pursuant to 5 AAC 95 will be required.

I HEREBY CERTIFY THAT ALL INFORMATION PROVIDED ON OR IN CONNECTION WITH THIS APPLICATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature of Applicant

Date

Name of Applicant (please print)

SUBMIT APPLICATION BY MAIL OR IN PERSON TO THE APPROPRIATE DEPARTMENT OF FISH AND GAME HABITAT DIVISION OFFICE.

Habitat Division Addresses:

JUNEAU (Southeast Alaska - Region I)

P.O. Box 20, Douglas, AK 99824-0020 (465-4290)

ANCHORAGE (Southcentral, Southwest and Western Alaska - Regions II and IV)

333 Raspberry Rd., Anchorage, AK 99518-1599 (344-0541)

FAIRBANKS (Interior and Arctic Alaska - Region III)

1565 University Avenue, Fairbanks, AK 99701 (479-3104) ACE 8708168

ECOLOGICAL EVALUATION

LOCATION: Kodiak SITE: Trinity Islands - Tugidak OBSERVER: G. Penn
 LOCATION PREFIX: K7-15 SEG. NO.: TI-3 LENGTH: 28 km (M)
 DATE: 01/23/89 TIME (HHMM): 10:30 TIDE HT.: 1.2 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

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

Littorina

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

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

OTHER OBSERVATIONS: Generally sand/gravel beach w/ (1) Erosional
escarpment or (2) Low lying grass-covered dunes; not conducive
to rich intertidal emergent biota.

* CLEANUP PRECAUTIONS: Remain clear of grassed areas - use no
motorized vehicles on beach if seals encountered. Complete prior
to Aug. 15, 1989. Avoid Eagle Nest areas. (See maps)

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

BIRDS: Eagles

GENERAL OBSERVATIONS: _____

* See attached AF+G Summaries, maps, restrictions

October 21, 1987
(with 1986 resource update)

Tugidak Island Fish and Wildlife Resources

Tugidak Island is unique in the Gulf of Alaska not only because of its unusual number of extremely productive and diverse fish and wildlife habitats but also because those habitats have remained in a relatively natural, undisturbed state. To date very little human disturbance has occurred on the island to threaten the vulnerable groundnesting birds, harbor seal pupping areas, and rich lagoon environment.

Marine mammals: Tugidak is most renowned for its harbor seal population. Tugidak Island has historically supported one of the largest harbor seal populations in the world, estimated at 15,000 to 20,000 animals with peak concentrations of hauled out seals reaching 14,000 at a time. Tugidak Island is also a major pupping area for harbor seals in the Gulf of Alaska with annual production once estimated at a high of 5,500 pups. That population is now substantially depressed but remains one of the largest known. Seals haul, pup, and molt on beaches found along the west and northeast side of the island and in the vicinity of the mouth of the lagoon.

Sea otters are common in the nearshore waters around Tugidak Island. Approximately 400 to 700 sea otters are found in the vicinity of Tugidak Island, with medium to high densities along the south side of the island.

Birds: The interspersed of many different habitat types on Tugidak Island associated with cliff and bluff shores; sand and rocky beaches; spits, bars and tideflats; freshwater streams and lakes; saltwater marshes and lagoons; vast eelgrass beds; freshwater wetlands; and uplands attracts some of the greatest diversity of bird life known to nest on and visit any one island in the Gulf of Alaska.

The island serves as a valuable spring and fall resting and feeding area and as a production area for birds migrating from the Pacific coast of North America. Because Tugidak Island is low, treeless, and free of introduced predators, all birds nest on the ground and are particularly susceptible to habitat destruction, predation, and trampling.

- At least 56 species of birds occur on Tugidak Island. Thirty eight species are known to nest there, and 26 of these species are considered common or abundant.
- Wetland habitats throughout the island provide nesting habitat for waterfowl, shorebirds, tundra swans and loons, with wetlands habitats along the south shore supporting nesting concentrations of mallards, pintails, gadwalls, green-winged teal and wigeon.
- Snow geese concentrate on the island during spring migration to rest and feed.
- The lagoon supports spring and fall concentrations of ducks and shorebirds. Black brant and white-fronted geese also concentrate in the lagoon in the fall to rest and feed. The lagoon area provides winter habitat for emperor geese, a species that has recently experienced a serious population decline.
- The coastal waters surrounding Tugidak Island are a major overwintering area for waterbirds, primarily seaducks.
- Five seabird colonies are documented on Tugidak Island, totalling nearly 4,000 nesting birds. Glaucous-winged gulls are the most abundant seabird, followed by arctic terns, mew gulls, and cormorants.
- Of particular significance are records of ^{ten} ~~six~~ ground nesting bald eagles. These bald eagle nests are located on bluffs or slight rises in the terrain throughout the island.
- Peregrine falcons are also reported to nest on the island's bluffs.
- Several thousand ptarmigan nest in upland areas of the island.

Fish and Shellfish: The lagoon and nearshore waters of Tugidak provide a productive marine environment for several species of fish and shellfish. The island's stream systems provide habitat for anadromous fish.

- There are ^{five} ~~three~~ documented salmon stream systems on the island supporting chum and/or coho salmon.
- The lagoon is a productive rearing and feeding area for large numbers of Pacific herring.

- Known razor clam concentrations occur along the bars at the mouth of the lagoon.
- Based upon frequent observations of small Dungeness crab carapaces and exoskeletons washed up along the lagoon's shores and large commercial catches of Dungeness crab directly offshore of the lagoon, the shallow waters and large eelgrass beds found in the lagoon are thought to provide an important nursery rearing area for Dungeness crab.

Archaeological Sites: Eight archaeological sites have been documented on the island. Although largely unexplored, they appear to indicate abundant prehistoric use of the island, with a majority of the sites located along the lagoon.

LEGEND



Known Black Brant and White-fronted Geese
Fall Concentration Area



Known Snow Geese Spring Concentrations
(Entire Island)



Known Tundra Swan Nesting Concentrations
(Entire Island)



Known Spring and Fall Duck Concentrations



Known Duck Nesting Concentrations



Known Bald Eagle Nests ▲ *Additional Bald Eagle Nests found during 1988*



Seabird Colony



Known Harbor Seal Haul-out Concentrations



Known Pacific Herring Rearing and Feeding Area

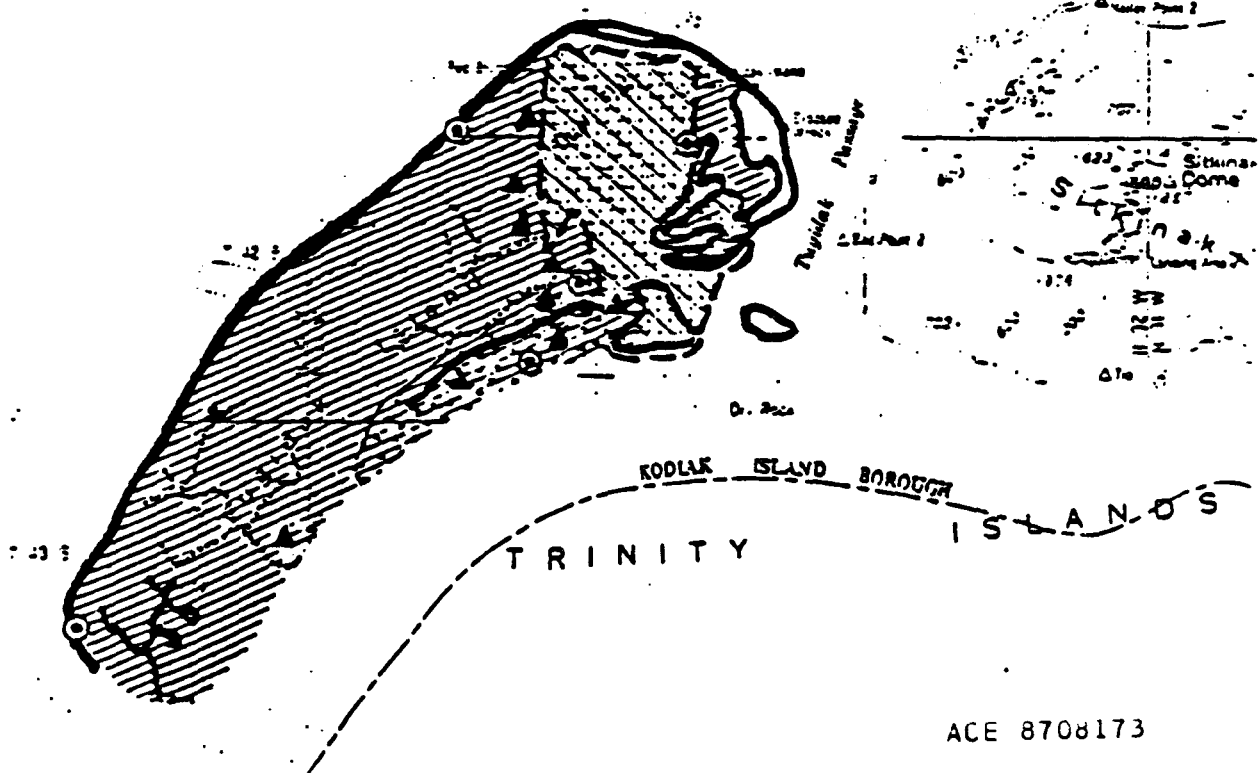


Anadromous Fish Stream



Anadromous Fish Streams identified during 1988

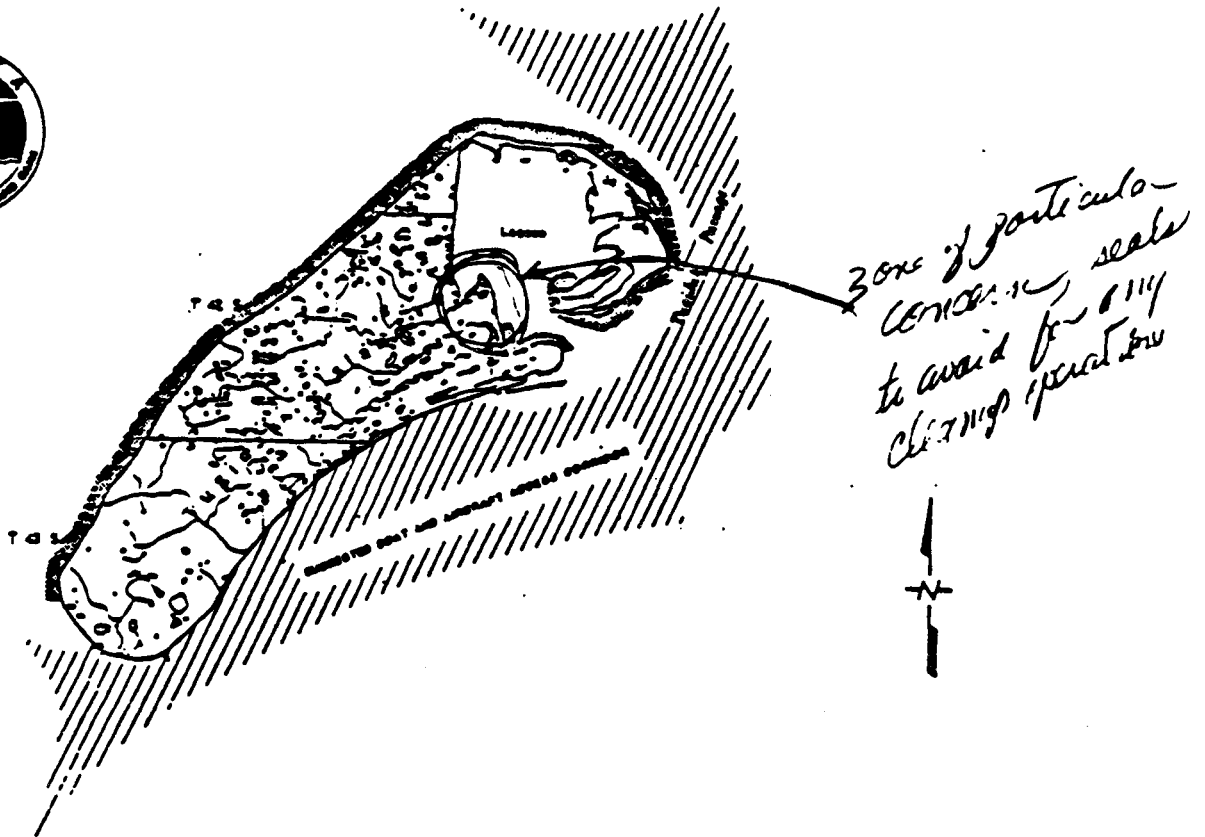
KODIAK ISLAND BROOKSIDE



TUGIDAK ISLAND CRITICAL HABITAT AREA

ADVISORY NOTICE (July 1988)

Attention: To avoid disturbance of pupping and molting marine mammals, all beaches (shown with the ~~stippled~~ pattern) should be avoided during the period May 1 to October 1. In addition, aircraft overflights of these beaches from May 1 to October 1 should be made at a minimum altitude of 1,500 feet above ground level. Likewise, overflights of the lagoon from October 1 to April 30 should be made at a minimum altitude of 1,500 feet above ground level to avoid disturbing wintering waterfowl. Suggested boat and aircraft access corridors are depicted with a ~~stippled~~ pattern. Prior to operation of an off road vehicle within the Tugidak Island Critical Habitat Area a permit must first be obtained from the Alaska Department of Fish and Game.



Note: Tugidak Island Critical Habitat Area consists of all state land above the mean high tide line and the land and water below the mean high tide line in the lagoon at the northeast end of the island.

For further information and permits contact the Alaska Department of Fish and Game, Division of Habitat, 333 Raspberry Road, Anchorage, Alaska, 99518. Phone 907-267-2284.

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK