



EVOS
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S42
1989
v.6

[Shoreline evaluations, 1989].

Volume 6

Chenega Island

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ISLANDS (Locations)

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

* GEOLOGIC SEDIMENT TYPE

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

** DEGREE OF OILING

Heavy	HV
Moderate	MD
Light	LT
No Oil	NO
Unobserved	UN

AREA OF BEACH IMPACT

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

ADEC IMPACT SURVEY

Heavy	HVY
Moderate	MOD
Light	LT
No Oil	NO
Unobserved	UNOBS

SHORELINE TYPE

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

Comments:

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

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



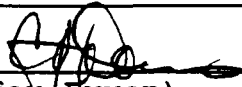
(version 5/13/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island Anadramous

Stream Block

Includes Shoreline Segments: CH-1, CH-2,

Submitted :  Date: 7/5/89
(for Exxon)

ISCC Approval: Sharon K. Christopher Date: 7-10-89

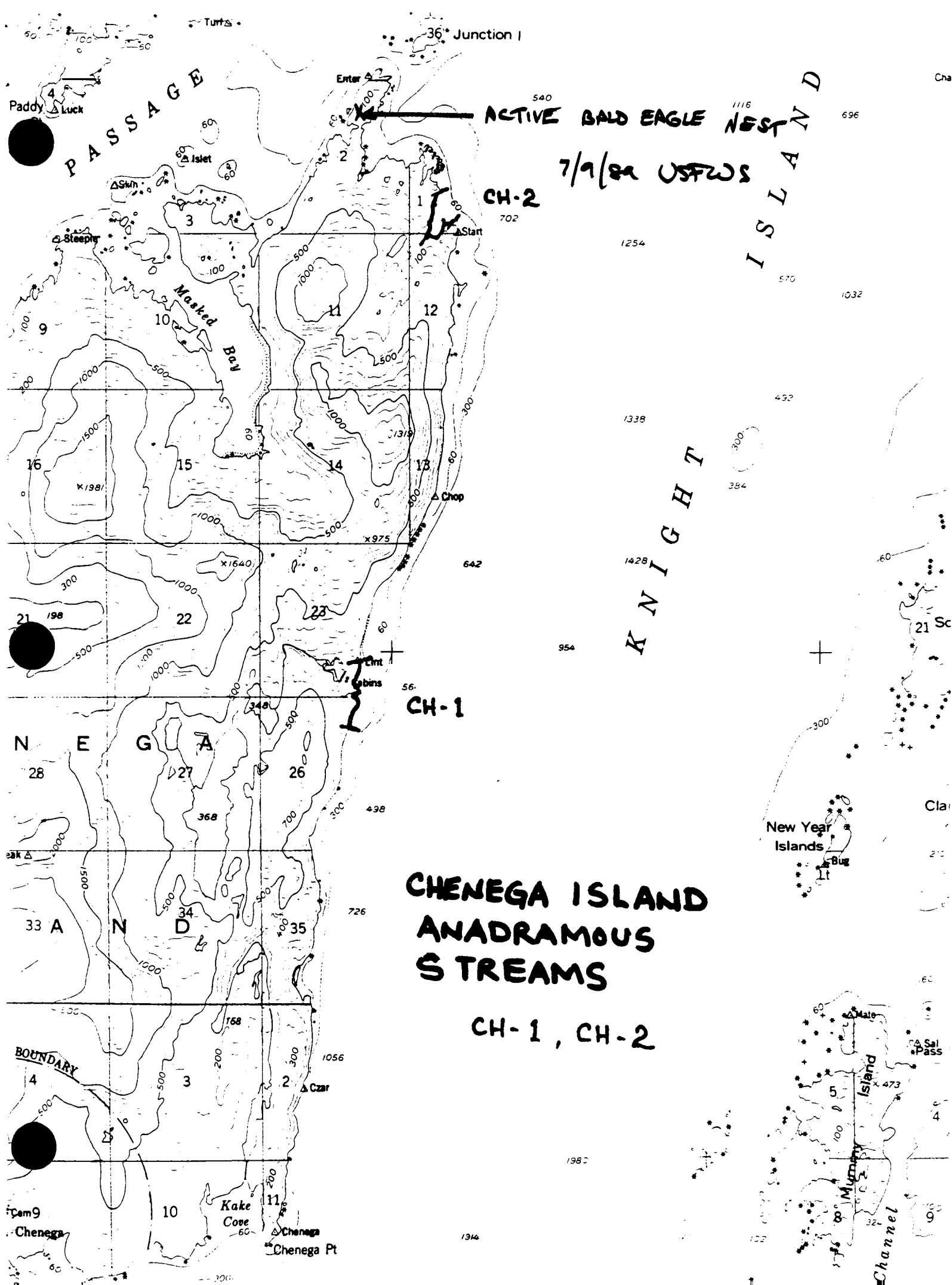
FOSC Approval:  Date: 7/11/89

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

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/4/89

SHORELINE SEGMENT CH-1

LOCATION: (see enclosed map) Chenega Island - Anadramous

stream at center of eastside

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.
- MANUAL REMOVAL OF OIL IN AREAS ADJACENT TO THE STREAM (TO BE

Priorities Considerations: DETERMINED BY RAT. 7/10/89 SC

Class 1: Heavy to light oil/time sensitive

A: Subsistence resources present

7/10/89 SC
Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. A cataloged anadramous stream is located within this segment. Contact ADF&G and RAT 48 hours prior to beginning cleanup activities in this segment. ~~A bald eagle nest may be present. See advisory.~~ CURRENTLY NOT ACTIVE. PROTECT ~~THE~~ STREAM FROM SHEENS. 7/10/89 SC

Archeological Constraints (from site survey):

No access to the forest zone is permitted 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.

Charles W. Homan
State Historic Preservation Officer *

Date: July 4, 1989

ISCC: Sharon K. Christopher

Date: 7-10-89

EXXON: Deal

Date: 7/10/89

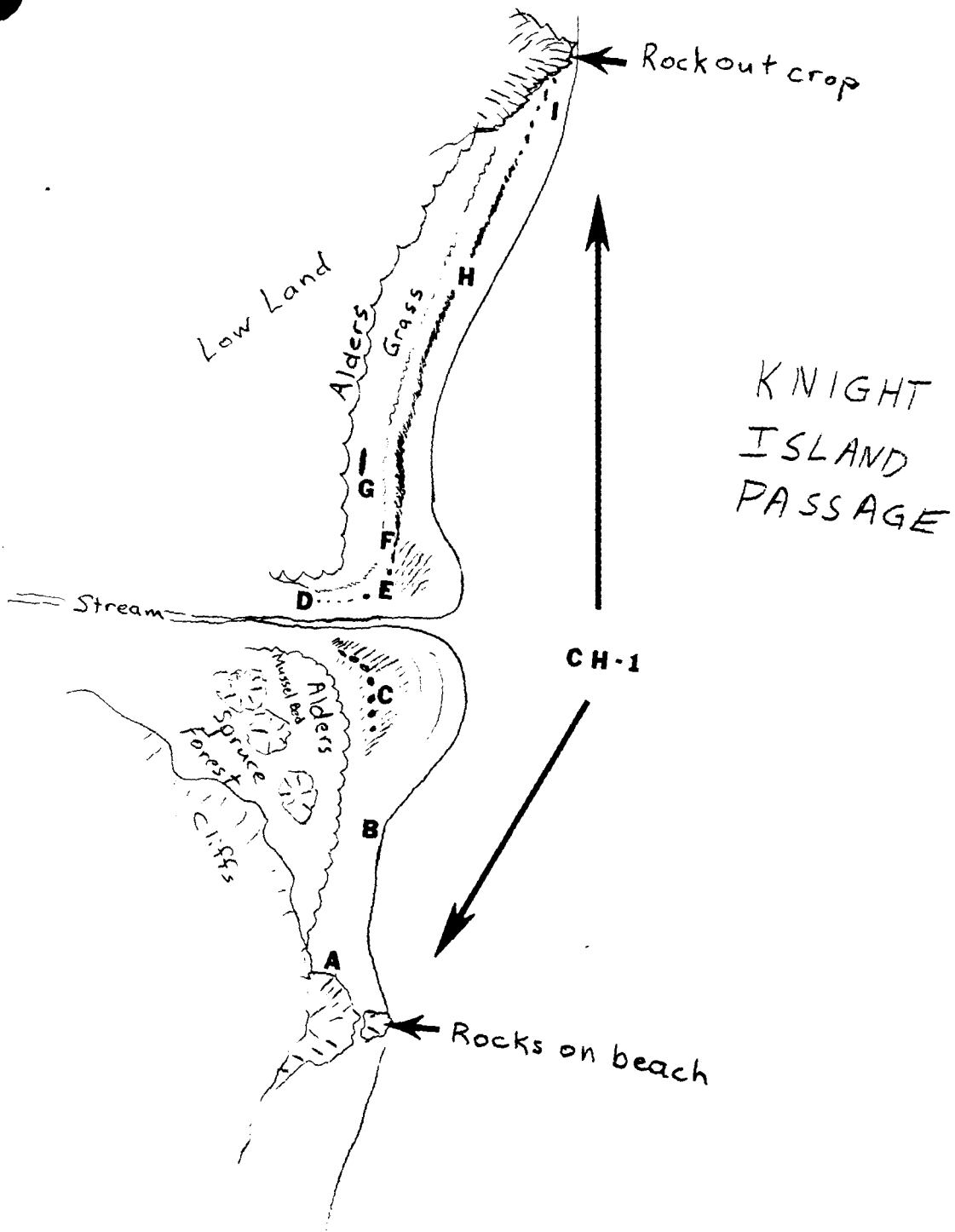
FOSC: C. E. Robbins

Date: 7/12/89

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 28 Time: 7:30 AMObserver: Greg ChaneySurveyed From: Foot Boat/Helio/PlaneWeather: Sun Cloud/Rain/Snow/Fog**LOCATION**LOCATION East Central Chenega Is. SEGMENT NUMBER CH-1LENGTH OF SHORELINE SEGMENT: 780 mACCESS: Foot/Vehicle Boat Barge Helio Float Plane**SHORELINE:**Shoreline Type: SPI BEA COV HLD STRTSlope: LANG HANG VERWave Exposure: High Med LowSediment: B 10% / C 60% / P 20% / G 5% / S 5% / M —% / R —%Drift Debris on Beach: Yes NoSupra Upper Mid Lower Type Sea weed
Drift logs**OIL**Degree of Oiling: Heavy Moderate Light No Oil UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 30% Width of Band: 6 + mSporadic: Y/N % of Segment 30% max observedEst. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 25 cmPooled Oil: —% "Free" Oil: 10% Coated: H 50% / M 20% / L 20%Fresh 5% Mousse 20% Tar Formation: 75%Drift Debris Oiled? Yes No Supra Upper Mid Lower Amount: H M L/**Comments:**

Moderate to heavy oiling restricted to beach north of stream. Exposed surface of rocks is covered with black tarry oil. At depth some mousse is present. In areas of heaviest concentration some oil was running in the sun. Hot water should be attempted, Cold water will not prove effective.



For Key To Letter Codes, See Next Page.

- A. 30 cm pits dug at HWL and MWL. No oil observed
- B. 30 cm pit dug at HWL. No oil observed.
- C. Along high water line band of oiled sand patches. Up to 40 cm in diameter. 30 cm pit on sand patch; penetration 10 cm. On mid tidal beach several stones are splattered with oil. Shaded area has an average concentration of 50 cm^2 tar per square meter of beach. Photos # 2 & 3 of oiled sand mats.
- D. Band of tarry pine needles approx. 10 cm wide.
- E. Band of oiled sand patches on large cobbles and small flat boulders. 30 cm pit. penetration up to 10 cm. On mid tidal beach several stones are splattered with oil. Shaded area has an average concentration of 50 cm^2 tar per square meter of beach.
- F. Oiled drift debris. Along band of drift seaweed. 30 cm pit was dug, 5 cm penetration observed.
- G. At base of alders behind storm berm, creosote treated. Photos 4 and 5.
- H. Band over 6 meters wide of oiled flat cobbles. Penetration over 25 cm.
- I. Band width decreases to 1 meter and becomes patchy.

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Crank

LOCATION PREFIX: CU SEG. NO.: 1 LENGTH: 780 (M)

DATE: 07/02/89 TIME (HHMM): 0705 TIDE HT.: -2 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Dense continuous 1-2 m band South side of stream - Patchy: Sparse on North side

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

Associated with boulders, intergravel bed adjacent to South side of stream

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

Majority (70+%) are small (less than 1cm wide)

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: Gunnels, sepioid worms, clam shells, crab molt,

moon snail shell, Filamentous green algae, Laminaria, Eel grass bed

Sea stars: (Solaster, Piasar, Leather Star, Pynipodia) 15 in engine, Red Mites

CLEANUP PRECAUTIONS: Anadromus Stream, Possible ^{Bald} Eagle Nest (Eagle ^{in tree} screeched
as ravens flew by, happened twice) Contact Fish & Game 48 hrs prior to cleanup

MAMMALS: Otters — Harbor Seals — Sea Lions 3 Whales —
Other —

BIRDS: 24 Pigeon Guillemots, 1 Murre, 2 Raven, 1 Artic Loon, 1 Merganser

1 hummingbird
GENERAL OBSERVATIONS: Beach on south side of stream light 1-2m band
in High ITZ, Beach on north side of stream moderate 3-6m
band.

Stream did not flow below the High ITZ. Small lake $\approx$ 100 yds behind
storm berm.

(version of 6/27/89)

CULTURAL RESOURCE EVALUATION

Date July 2, 1989 Location Chenege Island Site East Coast

Location Prefix CH Segment # 1 Length 780m

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRS #) SEW-69 Data Source de Laguna

Oil conditions/beach visibility heavy oiling on part of beach

Width of beach zone surveyed 30 m Tree fringe surveyed 20m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) CMT's, CBN's

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

Shore Profile 50m wide gravel beach at stream mouth

Fresh Water Sources anadromous stream

Sea Exposure east exposure to Knight Island Passage

Access/Safety easy access onto gravel beach

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # SL-5 Frames 9-13

Observer(s) Ludwig

Time survey started 0715 Time survey ended 0915

Cultural resource considerations/restraints:

usual constraints

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/4/89

SHORELINE SEGMENT CH-2

LOCATION: (see enclosed map) Chenega Island - Anadramous
stream on northeast side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus), free oil and patches of mousse.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

- Class 1: Heavy to light oil/time sensitive
A: Subsistence resources present

Ecological Constraints (from site survey): Work at minus tide to clean contaminated lower intertidal zone. Take appropriate measures to protect Laminaria bed at South end of segment. A cataloged anadramous^{for} stream is located within this segment. Contact ADF&G and RAT 48 hours prior to beginning cleanup activities in this segment. Minimize activities in marsh grass adjacent to stream.

ADFG permit issued. Minimize shear
No mechanical means in stream after 7/10.

Archeological Constraints (from site survey):

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

Charles E. H. H. H.
State Historic Preservation Officer *

Date: July 4, 1989

ISCC: _____

Date: _____

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 7/4/89

SHORELINE SEGMENT CH-2

LOCATION: (see enclosed map) Chenega Island - Anadramous

stream on northeast side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus), free oil and patches of mousse.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 1: Heavy to light oil/time sensitive

A: Subsistence resources present

Ecological Constraints (from site survey): Work at minus tide to clean contaminated lower intertidal zone. Take appropriate measures to protect Laminaria bed at South end of segment. A cataloged anadramous stream is located within this segment. Contact ADF&G and RAT 48 hours prior to beginning cleanup activities in this segment. Minimize activities in marsh grass adjacent to stream. AFTER JULY 10, NO MECHANICAL CLEANUP ADJACENT TO STREAM. SEE ATTACHED PERMIT. PROTECT STREAM FROM SHEEN WITH CONTAINMENT BOOM OR OTHER EFFECTIVE MEASURES.

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. Hoffman
State Historic Preservation Officer *

Date: July 4, 1989

ISCC: Sharon K. Christopher

Date: 7-10-89

EXXON: Deal

Date: 7/10/89

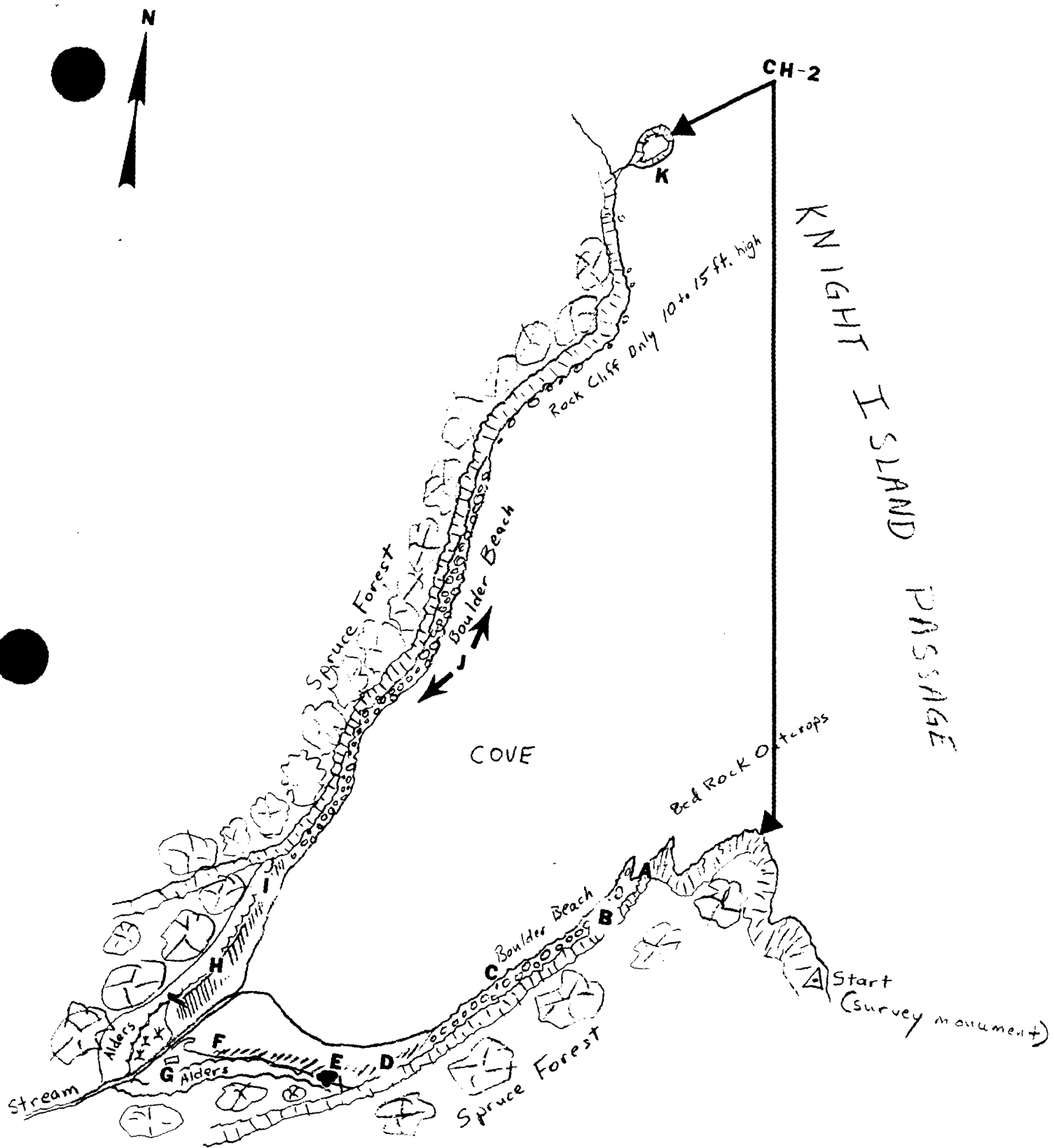
FOSC: C. E. Robison

Date: 7/12/89

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 28 Time: 9:59 AMObserver: Greg ChaneySurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION N.W. Chenega IslandSEGMENT NUMBER CH-2LENGTH OF SHORELINE SEGMENT: 1010 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 45% / C 20% / P 5% / G 5% / S ___% / M ___% / R 25%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 70% Width of Band: 6 m⁺ mSporadic: Y/N % of Segment 30%Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: 25^{observed max} cmPooled Oil: 0% "Free" Oil: 10% Coated: H 60% / M 20% / L 0%Fresh 10% Mousse 20% Tar Formation: 70%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/L**Comments:**

Heaviest oil concentration is along north shore of cove.
Near stream mouth band of oil is roughly 20m wide
but average width is closer to 6m. along steeper
boulder beach. One sheet of plywood was located in grass
marsh which was covered with oiled seaweed. 2 workers should
remove this & access should be restricted so grass is not
trampled.



For Key To Letter Codes, See Next Page.

- A. Behind bedrock outcrops patches of oil are on smaller grained deposits. In lower inter tidal zone (ITZ) one 7 meter wide band of oil is located. Photograph #8.
- B. Oiled band at base of cliff in large boulders.
- C. At 2 ft. tide level sporadic oil on boulders, heavy at times. Sheen was observed on the water adjacent to the beach.
- D. Oil band widens to 10 meters but is very thin and sporadic. Some fucus is effected.
- E. Large boulder. Log at base with orange spray paint dot. Oil band becomes more concentrated
- F. Oil band thins to 1 meter wide.
- G. Grassy Salt marsh. Ply wood drift wood covered with oiled drift debris. Should be removed by 2 crew members. Restrict access to this area to avoid trampling. Several patches of oiled drift debris are located in this area. Photograph #9
- H. Oiled drift seaweed. In this region oil band is up to 20 meters wide. A pit 30 cm. deep was d

Concentrated mousse and goopy oil was observed to a depth of 25 cm.

● Pit 20 cm deep was dug. Oil penetration observed to 15 cm. Photo #10

J. Large grained boulder beach. Boulders are rough and up to 1 meter wide. Oil band is over 6 meters wide in specific locations. Cliff is behind boulder beach but rarely is higher than 15 ft.

● Boulder beach gives way to sheer cliff 10 to 15 ft. high. Distinct black oil band is visible along this rock face. Small island at "K" has a few mature spruce trees on the top.

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Crank

LOCATION PREFIX: CU SEG. NO.: 2 LENGTH: 1010 (M)

DATE: 07/2/89 TIME (HHMM): 0957 TIDE HT.: + 2 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

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 Moderate Sparse Y/N None Y/N

Moderate patches on boulders, sparse individuals

Moderate patch of Nucella at South end

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

OTHER OBSERVATIONS: Laminaria Bed at south end, numerous filamentous green algae, Sea Stars: Pigstar: Leather star, Anemones: Pycurus
Anadromus Stream - Marsh grass

CLEANUP PRECAUTIONS: Suggest working at minus tide and using appropriate
precautions to protect Laminaria Bed from contamination, Notify Fish: Base
48 hrs prior to cleanup

MAMMALS: Otters — Harbor Seals — Sea Lions — Whales 1 Minke
Other 2-3 day old Bear scat in woods

BIRDS: Gulls

GENERAL OBSERVATIONS: Fresh sheen on water surface

(version of 6/27/89)

CULTURAL RESOURCE EVALUATION

Date July 2, 1989 Location Chonaga Island Site North east corner

Location Prefix CH Segment # 2 Length 10.0m

Survey Method:

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

Ground X (G - indicate on map)

Known cultural resources (AHRs #) none Data Source —

Oil conditions/beach visibility heavy oiling on section of beach

Width of beach zone surveyed 30 m Tree fringe surveyed 20m

Cultural resources observed in beach zone (AHRs code) 0

Cultural resources observed in tree fringe (AHRs code) PMT's

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

Shore Profile wide beach at mouth of stream at head of long narrow bay

Fresh Water Sources amorphous stream

Sea Exposure north east exposure to Knight Island Pass

Access/Safety easy access at head of bay

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

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

Photos: Color Roll # _____ Frames _____

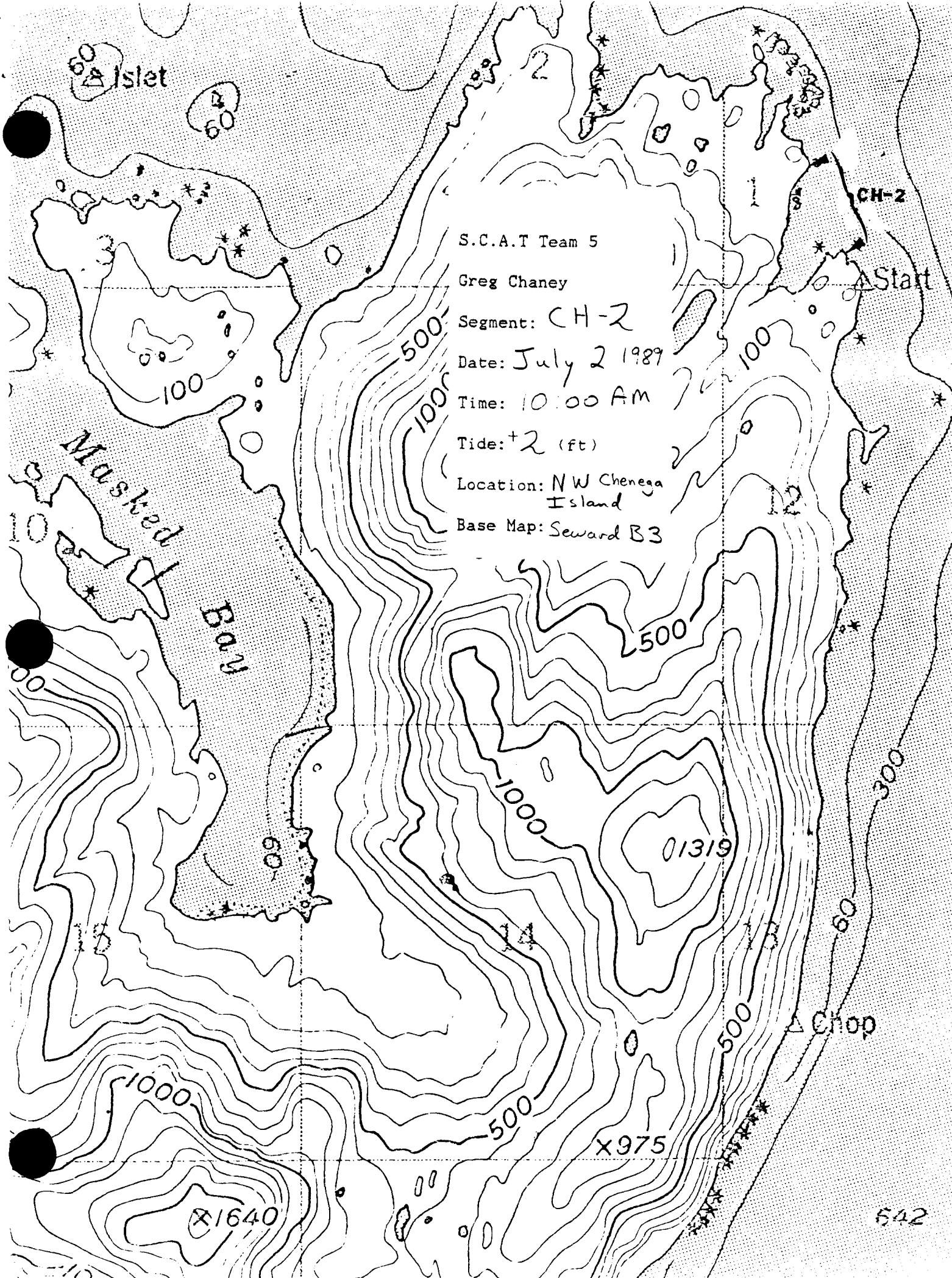
B/W Roll # EL-5 Frames 14

Observer(s) Ludwig

Time survey started 1000 Time survey ended 1130

Cultural resource considerations/restraints:

usual constraints



S.C.A.T Team 5

Greg Chaney

Segment: CH-2

Date: July 2 1989

Time: 10:00 AM

Tide: +2 (ft)

Location: NW Chenega
Island

Base Map: Seward B3

CH-2

Start

Masked Bay

01319

X975

X1640

642

CH-2
AUG-04-1989 23:44 FROM ST. THOMAS 8354018

8/5/89
TO 8355305 P.02

SEG CH-2 INSPECTION #

TREATMENT MANUAL, 6/15/89

DATE 1 Aug. 89

SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash



Non-mechanical POM POM IN ISCUATED



Water deluge



Other SNARE BOOM IN TIDAL ZONE

Exxon

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

Comments TREATMENT OF SEGMENT CH-2 IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature [Signature]

Date: 8/1/89 Time: 00:20

Printed Name GUS GARCIA

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes

☒ No

0

Heavy

0

Medium

15

Light

10

Very Light

75

None

100 %

Comments Beach/stream
area within 300+ feet
not worked due to active
salmon stream.

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments None available.

Signature

Date: 1/1 Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments Light oil around base of large
boulders - hot washed.

Signature [Signature]

Date: 08/01/89 Time: 2100

Printed Name V. PSHEVLOZKY, PSC

COPY:

EXXON

ADEC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORTLocation (see enclosed map): Chenega Island East BlockIncludes Shoreline Segments: CH-3, CH-4, CH-5, CH-6, CH-7, CH-8Submitted : [Signature] Date: 7/15/89
(for Exxon)Recommendation
ISCC Approval: Shawn K. Christopher Date: 7/19/89FOSC Approval: [Signature] Date: 7/21/89

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

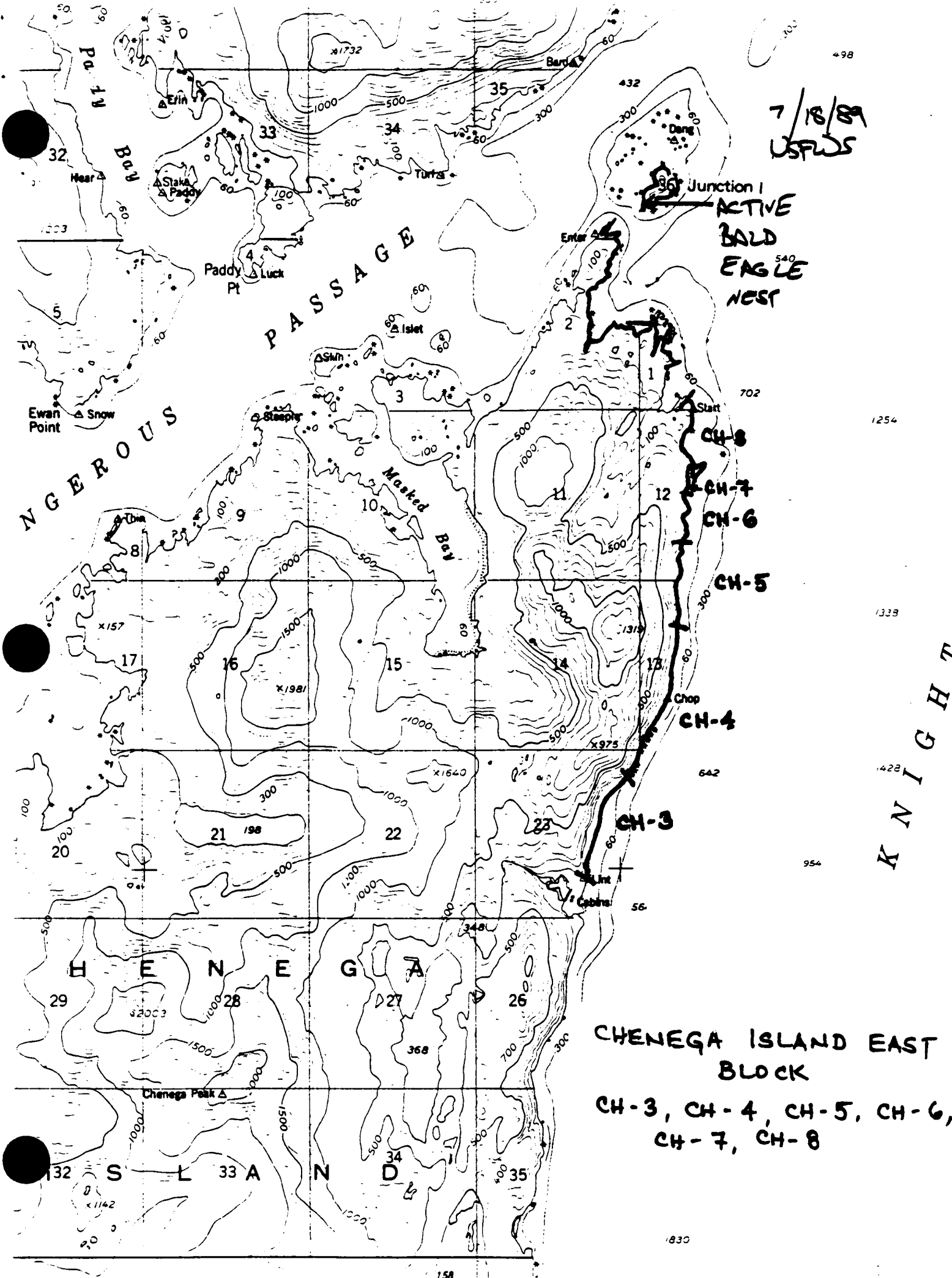
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USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO

SCOT: Chenega
Village Corp. lands -
whole block -

ACA 7/21



7/18/89
USFWS

ACTIVE
BALD
EAGLE
NEST

CHENEGA ISLAND EAST
BLOCK
CH-3, CH-4, CH-5, CH-6,
CH-7, CH-8

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-3

LOCATION: (see enclosed map) Shingle Beach North of Anadromous
Fish Stream: East Central Chenega Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 2: Heavily oiled.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone and kelp beds.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: July 12, 1989

ISCC: Sharon K. Christopher
EXXON: [Signature]

7/19/89

Date: 89-07-19

FOSC: [Signature] CES/William

Date: 7/24/89

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 2 89 Time: 8:35 PMObserver: Greg ChaneySurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION East Chenega IslandSEGMENT NUMBER CH-3LENGTH OF SHORELINE SEGMENT: 1120 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowFlat shingle rocks on beachSediment: B 40% / C 40% / P 10% / G 5% / S 5% / M -% / R -%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type logs seaweedOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / L

max.

Continuous: Y/N % of Segment 20% Width of Band: 10⁺ mSporadic: Y/N % of Segment 80%

max observed

Est. Oil Thickness where > 1cm: - cm Est. Oil Penetration: 25 cmPooled Oil: 0% "Free" Oil: 0% Coated: H 20% / M 50% / L 30%Fresh 0% Mousse 0% Tar Formation: 100%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

As indicated on sketch map, Northern 1/4 of segment has heavy oiling. Asphalt pavement is beginning to form in some areas. Majority of oil is discontinuous patches. These areas should be scouted by cleanup crew for heavier localized patches. At high tide Omni Boom Barge might be deployed but beach should be scouted to insure enough draft is available.

SKETCH MAP CH-3

CHENECA ISLAND

CH-3

Steep Forested Cliffs

Large Boulder Beach

3 meter band tar

4' piling driven in beach, covered at 2 ft. tide

Discontinuous tar

Bed rock outcrop on beach

Large Uprooted Tree Laying On Beach

Tar band ~ 8 meters wide

25 cm. penetration observed in storm berm and high inter tidal zone

Continuous tar pavement forming

10 meter band continuous tar

15 cm penetration observed

3 meter band continuous tar

Patchy Discontinuous Tar Deposits

35 cm. pit in storm berm, no oil observed

Patchy Discontinuous Tar Deposits

Photo #13

Uprooted Trees Laying On Beach

Photo #12

Discontinuous Tar Band

Penetration 15 cm observed

Rough Band Discontinuous Tar Approx. 5 meters wide

Lint (Survey Monument)

KNIGHT ISLAND PASSAGE



ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: John

LOCATION PREFIX: CH SEG. NO.: 3 LENGTH: 1010 (M)

DATE: 07/02/89 TIME (HHMM): 2030 TIDE HT.: +4 ft

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: Laminaria bed at -3' water level.

CLEANUP PRECAUTIONS: Use appropriate measures to protect lower TZ from
contamination, paying particular attention to Laminaria (Kelp) beds.

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

BIRDS: Immature Bald Eagle missing a primary feather (42%) on both wings

GENERAL OBSERVATIONS: Dense Starfish population in lower TZ.

Low amount of biota present in this segment.

(version of 6/27/89)

CULTURAL RESOURCE EVALUATION

Date July 2, '89 Location Chenega Island site East Coast

Location Prefix CH Segment # 3 Length 1010m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility heavy in areas

Width of beach zone surveyed 20 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile narrow gravel beach and steep hillside

Fresh Water Sources none

Sea Exposure open exposure to Knight Island Passage

Access/Safety easy access in calm conditions

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

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

Photos: Color Roll # — Frames —

B/W Roll # — Frames —

Observer(s) Ludwig

Time survey started 2030 Time survey ended 2145

Cultural resource considerations/restraints:

usual constraints

S.C.A.T. Team 5

Greg Chaney

Segment: CH-3

Date: July 2 1989

Time: 8:30 pm

Tide: 4.5 (ft)

Location: East
Chenega Is.

Base Map: Seward 63

X1640

X975

642

CH-3

Int

Cabins

56.

sted
Bay

Chop

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-4

LOCATION: (see enclosed map) Boulder Based Cliffs North East
Chenega Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):

- Use moderate to high pressure hot water washing on rock and oiled logs. May be good area for OMNI boom. ^{SC} ⁶ ^{8907M} ^{7/11/89} UNLESS PRESSURE AND TEMPERATURE ARE LOWERED, DO NOT USE OMNI BOOM ON INTERTIDAL AREA.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 3: Moderate oil.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):

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

Charles Z. Adams
State Historic Preservation Officer *

ISCC: Sharon K. Christopherson

EXXON: L. H. H. H.

FOSC: C. E. Nollin

Date: July 12, 1989

7/19/89
Date: 89-07-19

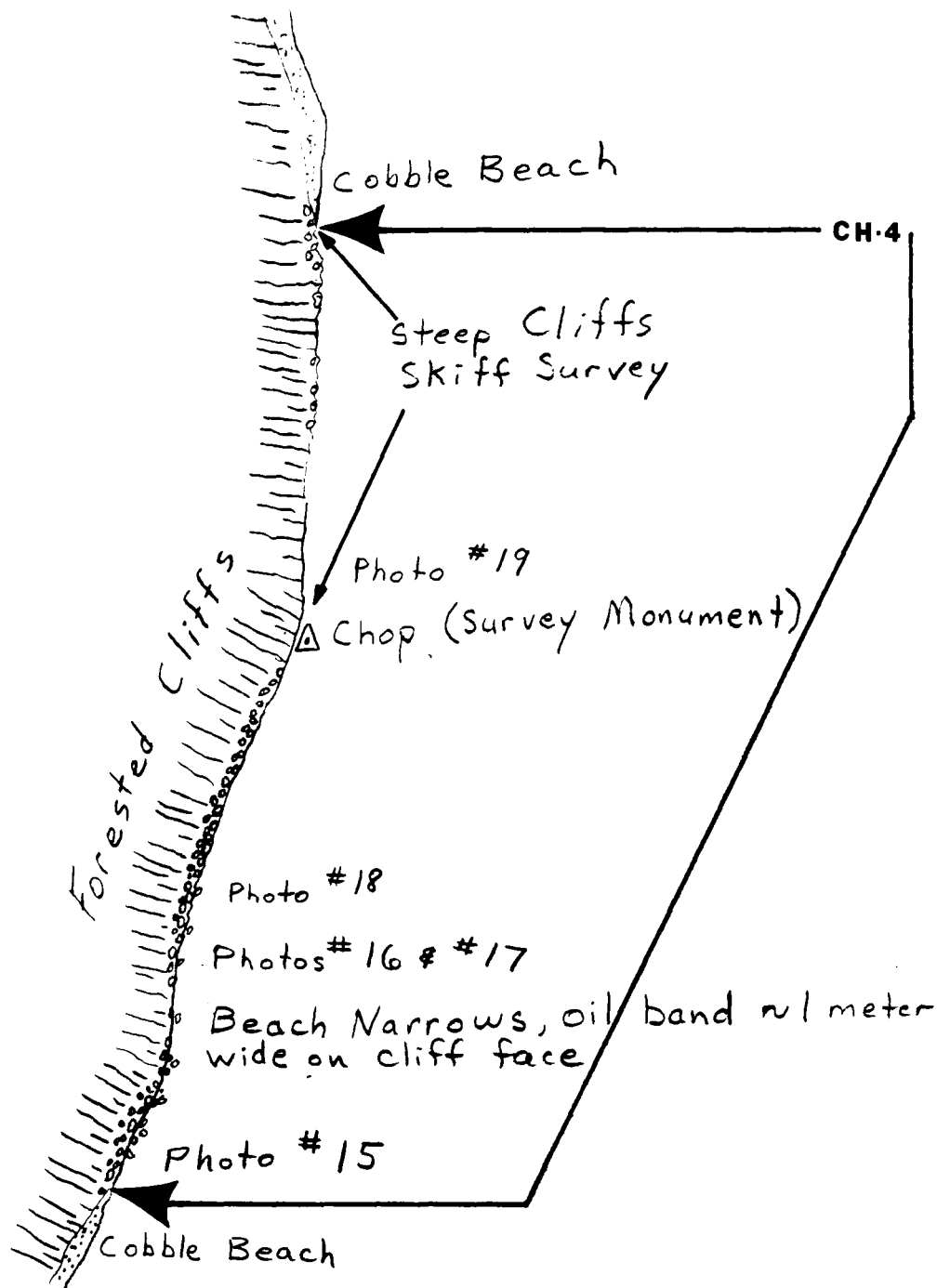
Date: 7/21/89

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 3rd Time: 7:40 AMObserver: Greg ChaneySurveyed From: Foot Boat Helio/PlaneWeather: Sun/ Cloud Rain/Snow/FogLOCATIONLOCATION NW Chenega Island SEGMENT NUMBER CH4LENGTH OF SHORELINE SEGMENT: 1450 mACCESS: Foot/Vehicle/ Boat Barge Helio/ Float Plane - Fair weather onlySHORELINE:Shoreline Type: SPI/ BEA COV/ HLD STRTSlope: LANG/ HANG VERWave Exposure: High/ Med /LowSediment: B 50% / C 5% / P -% / G -% / S -% / M -% / R 45%Drift Debris on Beach: Yes/No Supra/ Upper /Mid/Lower Type A few drift logsOILDegree of Oiling: Heavy/ Moderate /Light/No Oil/UnobservedArea of Beach Impact: SU / SP / (H) / M / LContinuous: Y/N % of Segment 20% Width of Band: 5 mSporadic: Y/N % of Segment 80% EstimateEst. Oil Thickness where > 1cm: - cm Est. Oil Penetration: 15 cmPooled Oil: -% "Free" Oil: -% Coated: H 20% / M 50% / L 30%Fresh -% Mousse -% Tar Formation: 100%Drift Debris Oiled? Yes/No Supra/ Upper /Mid/Lower Amount: H/M/ (L)

Comments:

Segment consists of cliffs with boulders at the base. Where cliff reaches below HWL, oil band narrows to 1 meter - 1 to 2 mm thick. Where boulders reach above high tide line, a rough band 5 meters wide of tarry oil is located at HWL. Very difficult to see oil from offshore due to black bedrock. Omni Boom Barge would be the best way to treat these boulder bands.



At highest tide line along boulder beaches - a rough band at base of cliff in boulders 5 meters wide
 Along cliff faces - 1 meter band oily tar
 oil difficult to see off shore due to black rock.
 Omn. Barge recommended.

ECOLOGICAL EVALUATION

LOCATION: Shagoda's Island SITE: _____ OBSERVER: Crane

LOCATION PREFIX: 24 SEG. NO.: 4 LENGTH: 450 (M)

DATE: 07/03/89 TIME (HHMM): 0745-0925 TIDE HT.: -2.5 to -1.5 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA Terr. at litt. with boulder cover

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

Fucus (algae): 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

Mytilus (Mussels): 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: Dense sea star population (Echinaster, etc.)
Kelp (Laminaria) Bed starting at -3 ft - 1/2 height.

CLEANUP PRECAUTIONS: Take appropriate measures to protect Lower ITZ

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions 5 Whales _____
Other _____

BIRDS: Pigeon Guillemots (6), Hummingbird (1), Gulls (5)

GENERAL OBSERVATIONS: Moderate oiling in Splash and High ITZ, occasional oiled
in Mid ITZ. Lower ITZ appears to be oil free.

Var. of biota seen: Algae - bladed reds, greens, Kelp, etc.
Small Crabs Tube Worms
Small Crabs Orange Sponges
Clams Red Sponges

(version of 6/27/89)

CULTURAL RESOURCE EVALUATION

Date July 3, 1989 Location Chenega Is. Site East Coast
Location Prefix CH Segment # 4 Length 450m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility moderate oiling in sections

Width of beach zone surveyed 20 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile narrow, steep boulder beach at base of steep hillside

Fresh Water Sources none

Sea Exposure open exposure to Knight Island Passage

Access/Safety good access in calm conditions

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # — Frames —

B/W Roll # — Frames —

Observer(s) Ludwig

Time survey started 0735 Time survey ended 0915

Cultural resource considerations/restraints:

usual constraints

S.C.A.T Team 5

Greg Chaney

Segment: CH-4

Date: June 3 '89

Time: 7:40 AM

Tide: -2.0 ft)

Location: East
Chenega Island
Base Map:
Seward-B3

01319

Chop

CH-4

Lint

Cabins

56

642

81640

sted
Bay

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-5

LOCATION: (see enclosed map) Boulder/Cobble beach at
northeast side of Chenega Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):

- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rocks and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 4: Light oil.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone. ~~Advise ADEC 48 hours prior to cleanup that a possible Bald Eagle nesting site is located in this segment.~~ NOT ACTIVE NEST.

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *
ISCC: Shawn K. Christopher
EXXON: L. H. H. H.
FOSC: OS Robin

Date: July 12, 1989
7/19/89
Date: 89-07-19
Date: 7/21/89

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 3 89 Time: 9:40 AMObserver: Greg ChaneySurveyed From: Foot Boat Helio/PlaneWeather: Sun/ Cloud /Rain/Snow/FogLOCATIONLOCATION North East Chenega Is SEGMENT NUMBER CH5LENGTH OF SHORELINE SEGMENT: 900 mACCESS: Foot/Vehicle/ Boat Barge Helio/ Float PlaneFair weather onlySHORELINE:Shoreline Type: SPI/ BEA /COV/HLD/STRTSlope: LANG/ HANG /VERWave Exposure: High/ Med /LowSediment: B 50% / C 35% / P 5% / G 5% / S -% / M -% / R 5%Drift Debris on Beach: Yes/NoSupra/ Upper /Mid/Lower TypeFew drift logs & 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: 3 mSporadic: Y/N % of Segment 90%Est. Oil Thickness where > 1cm: - cm Est. Oil Penetration: 10 cmPooled Oil: -% "Free" Oil: -% Coated: H 10% /M 30% /L 70%Fresh -% Mousse 10% Tar Formation: 90%Drift Debris Oiled ? (Yes)/No Supra/ Upper /Mid/Lower Amount: H/M/L

Comments:

Entire tide range is lightly splattered with tar.
Coverage rarely exceeds 25% of stone surface.
On underside of stones, mousse is present but concentration is not high. Very light sheen observed coming off rocks at 0 ft. tide. Oil band is continuous at south end of segment but becomes discontinuous toward the north.
(3m at high water)

ECOLOGICAL EVALUATION

LOCATION: Seapage Island SITE: _____ OBSERVER: Crar

LOCATION PREFIX: 25 SEG. NO.: 5 LENGTH: 900 (M)

DATE: 07/03/89 TIME (HHMM): 0425-1430 TIDE HT.: -1.5 to +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 ^{Mosses} Sparse Y/N None Y/N

Patchy distribution with concentration varying from sparse to moderate

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N ^{Mosses} Sparse Y/N None Y/N

Patchy distribution with concentration varying from sparse to moderate

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: Sea Stars were dense, Pricklebacks common, A. Waterfowl were at northern end of island

CLEANUP PRECAUTIONS: Take appropriate measures to protect water from contamination. Contact Fish Guard 43 hrs prior to cleanup. Site is a potential nesting site for Bald Eagles.

MAMMALS: Otters 1 Harbor Seals _____ Sea Lions 5 Whales 4 Orcas ²³ 22

BIRDS: ^{2 Nature} 2 Bald Eagles in same tree - ~1/3 of one eagle's tail feathers were discolored (dark) near tip. (possible Nest in area - unable to verify) Stellar Jay

GENERAL OBSERVATIONS: Orcas & Sea Lions had a brief interaction

continued in their separate directions

(version of 6/27/89)

~~POST-OPERATIVE~~ CULTURAL RESOURCE EVALUATION

Date July 3, 1989 Location Chenega Is. Site east coast
Location Prefix CH Segment # 5 Length 900

Survey Method:

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

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility band of mod. oil in upper intertidal

Width of beach zone surveyed 30 m Tree fringe surveyed 0-5m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile 30-50m wide beaches at base of steep hillside

Fresh Water Sources 2 small trickles of water

Sea Exposure open exposure to Knight Island Passage

Access/Safety easy access in calm weather

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

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

Photos: Color Roll # — Frames —

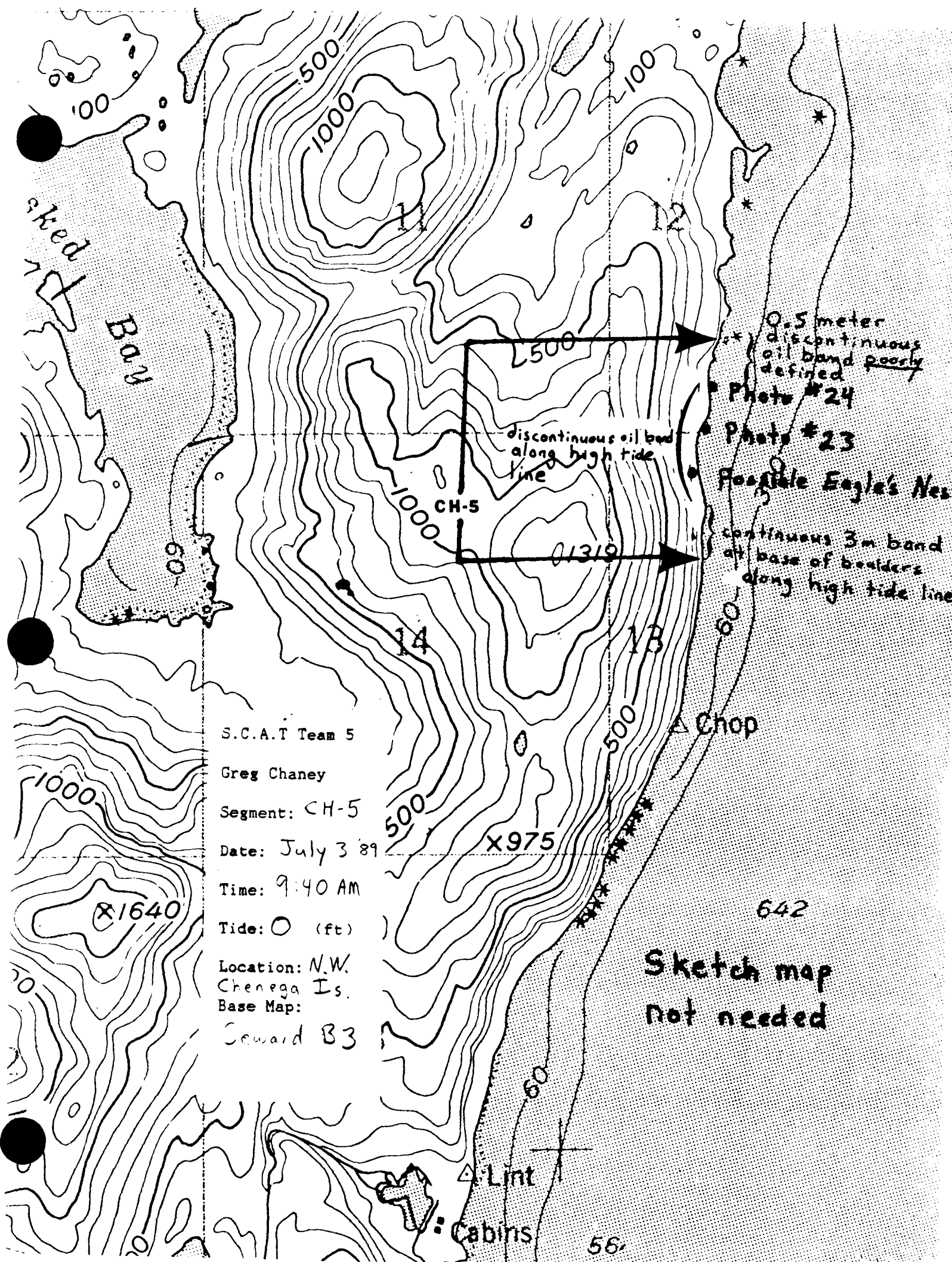
B/W Roll # — Frames —

Observer(s) Ludwig

Time survey started 0920 Time survey ended 1130

Cultural resource considerations/restraints:

usual constraints



S.C.A.T Team 5

Greg Chaney

Segment: CH-5

Date: July 3 89

Time: 9:40 AM

Tide: 0 (ft)

Location: N.W.
Chenega Is.
Base Map:

Seward B3

Sketch map
not needed

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-6

LOCATION: (see enclosed map) Northeast Chenega Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on beach at north end of segment.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 4: Light oil.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):

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

Charles Z. Hanner
State Historic Preservation Officer *

ISCC: Sharon K. Christopher

EXXON: [Signature]

FOSC: [Signature]

Date: July 12, 1989

7/19/89

Date: 890719

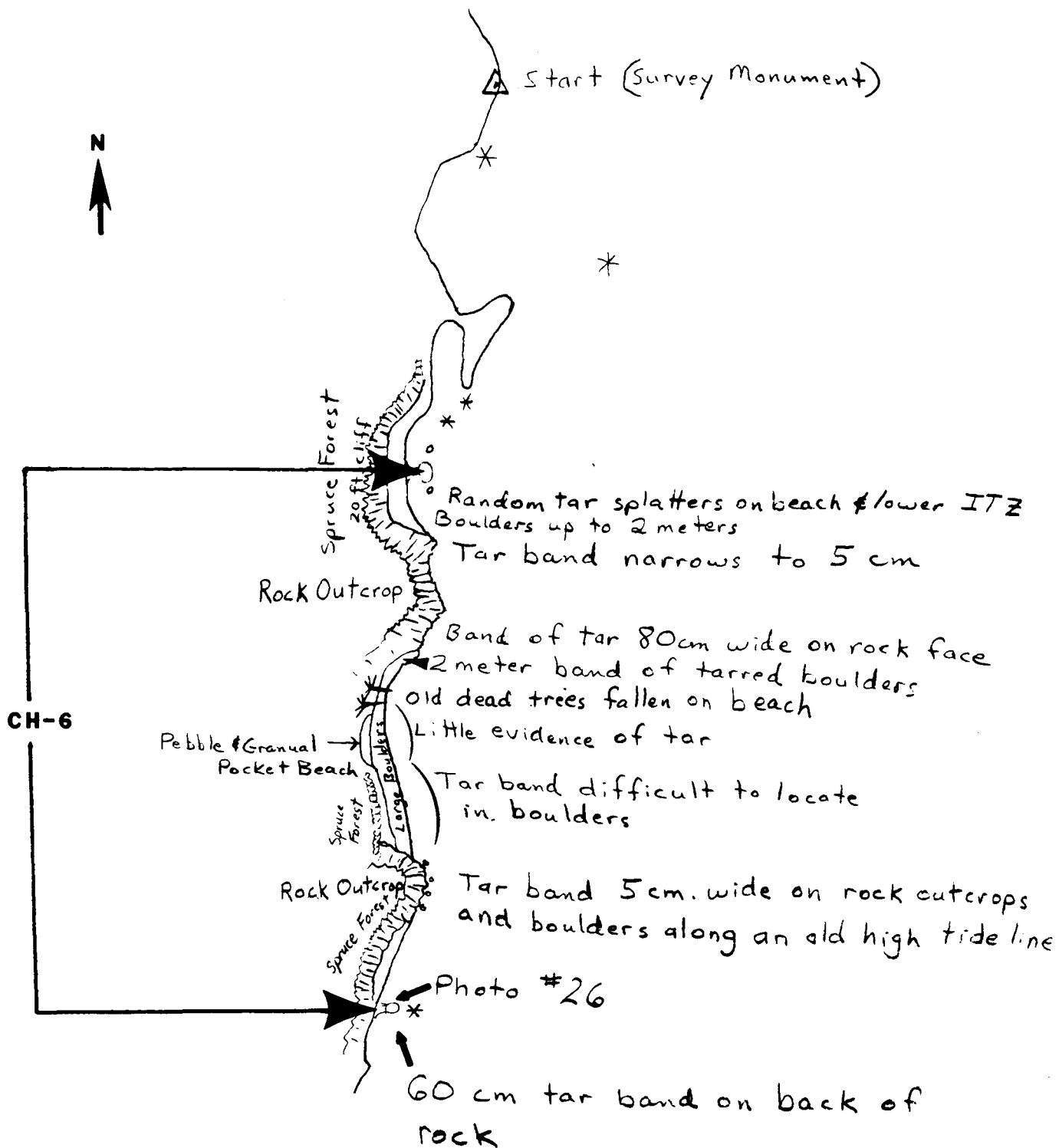
Date: 7/21/89

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

POST-CLEANUP SHORELINE OIL EVALUATIONDate: July 3'89 Time: 19:20Observer: Greg ChaneySurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION NE Chenega Island SEGMENT NUMBER CH-6LENGTH OF SHORELINE SEGMENT: 560 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane*Fair weather only*SHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B 50% / C 5% / P 5% / G - / S - / M - / R 40%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type drift logs
sea weedOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 60% Width of Band: 2 m ^{Max.}Sporadic: Y/N % of Segment 40%Est. Oil Thickness where > 1cm: 5 cm Est. Oil Penetration: 5 cmPooled Oil: - % "Free" Oil: - % Coated: H 10 % / M 20 % / L 70 %Fresh - % Mousse - % Tar Formation: 100 %Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Oil is mostly in the form of weathered tar. Heaviest
concentration on boulders near cliff as indicated on map
Northern portion of segment has increased splattering
of rocks in lower intertidal zone



ECOLOGICAL EVALUATION

LOCATION: Cheraga Island SITE: _____ OBSERVER: John

LOCATION PREFIX: 2- SEG. NO.: _____ LENGTH: 5160 (M)

DATE: 1/13/89 TIME (HHMM): 1100 TIDE HT.: +4 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud Vertical face of cliff

LIVE BIOTA

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

Dense on vertical rock faces, sparse on boulders.

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

Found on 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

Dense on vertical rock faces, sparse on boulders.

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

OTHER OBSERVATIONS: Small fish

CLEANUP PRECAUTIONS: Work as might be taken appropriate

Small fish

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

Other Old Bear scat

BIRDS: Hummingbird

GENERAL OBSERVATIONS: _____

(version of 6/27/89)

NOPT-OCEANIC CULTURAL RESOURCE EVALUATION

Date July 3 '89 Location Chenega Is Site east coast
Location Prefix CH Segment # 6 Length _____

Survey Method:

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

Known cultural resources (AHRS #) none Data Source -

Oil conditions/beach visibility moderate in sections

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

Cultural resources observed in beach zone (AHRS code) CMT

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile 20-50m wide beaches, steep cliffs with limited access to forest

Fresh Water Sources several water seeps

Sea Exposure open exposure to Knight Island Passage

Access/Safety easy access onto beaches in calm weather

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

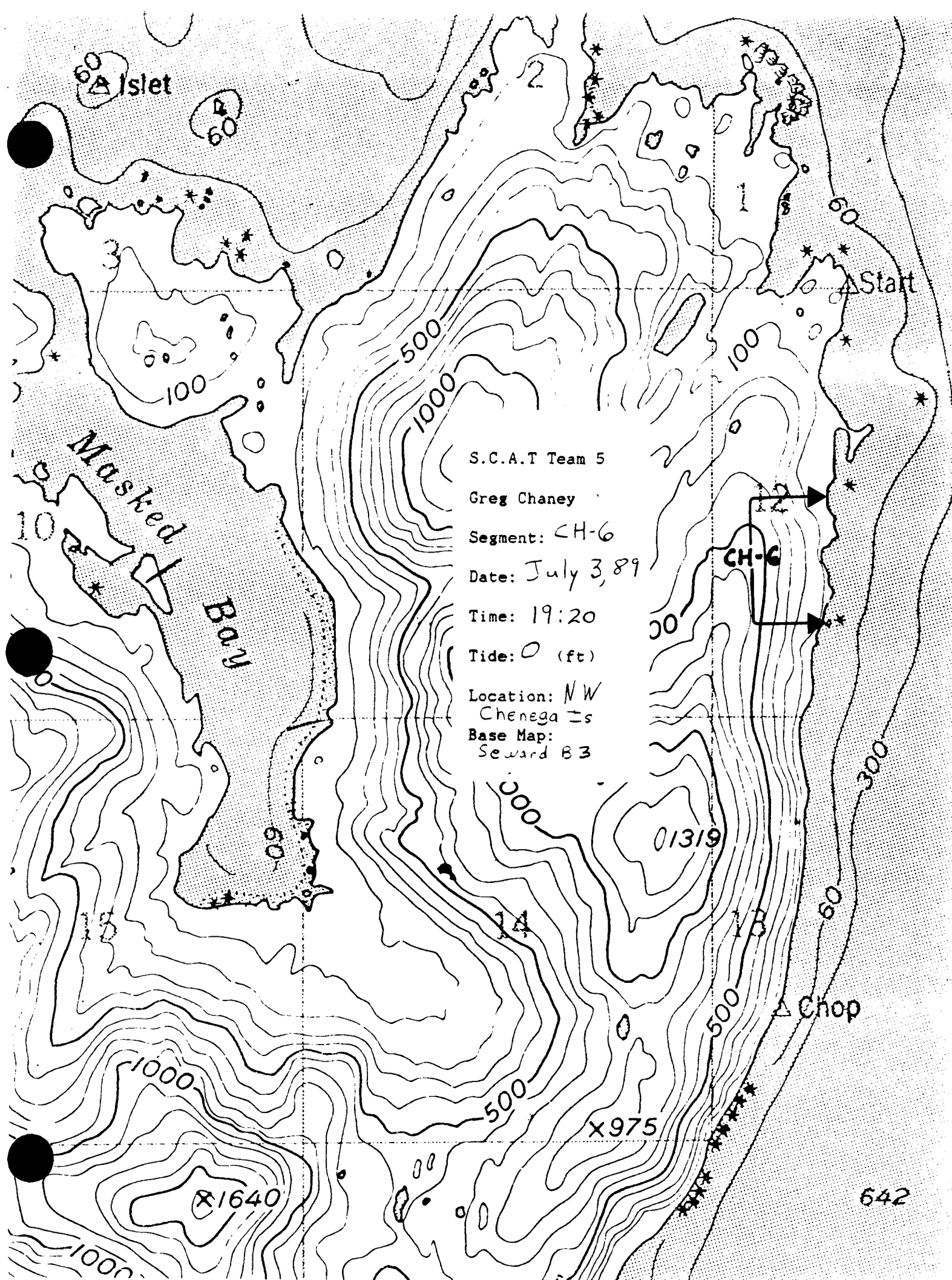
B/W Roll # SL-5 Frames 15

Observer(s) Ludwig

Time survey started 1900 Time survey ended 2045

Cultural resource considerations/restraints:

usual constraints



S.C.A.T Team 5

Greg Chaney

Segment: CH-6

Date: July 3, 89

Time: 19:20

Tide: 0 (ft)

Location: NW
Chenega Is

Base Map:
Seward B3

CH-6

642

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-7

LOCATION: (see enclosed map) Northeast Chenega Island.

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 2: Heavy oil.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone and eelgrass beds. Limit foot traffic on intergravel/cobble mussel beds.

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. Adner
State Historic Preservation Officer *

Date: July 12, 1989

ISCC: Sharon K. Christopher

7/19/89

EXXON: [Signature]

Date: 89-07-19

FOSC: [Signature]

Date: 7/21/89

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

POST-CLEANUP SHORELINE OIL EVALUATIONDate: July 3 89 Time: 20:30Observer: Greg ChaneySurveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATIONLOCATION NW Chenega Is.SEGMENT NUMBER CH-7LENGTH OF SHORELINE SEGMENT: 450 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:High tide onlyShoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANGOVERWave Exposure: High/Med/LowSediment: B 15% / C 20% / P 20% / G 10% / S 5% / M -% / R 30%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 / L

Max.

Continuous: Y/N % of Segment 80% Width of Band: 6⁺ mSporadic: Y/N % of Segment 20%Est. Oil Thickness where > 1cm: - cm Est. Oil Penetration: 4 cmPooled Oil: -% "Free" Oil: -% Coated: H 60% / M 30% / L 10%Fresh -% Mousse -% Tar Formation: 100%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

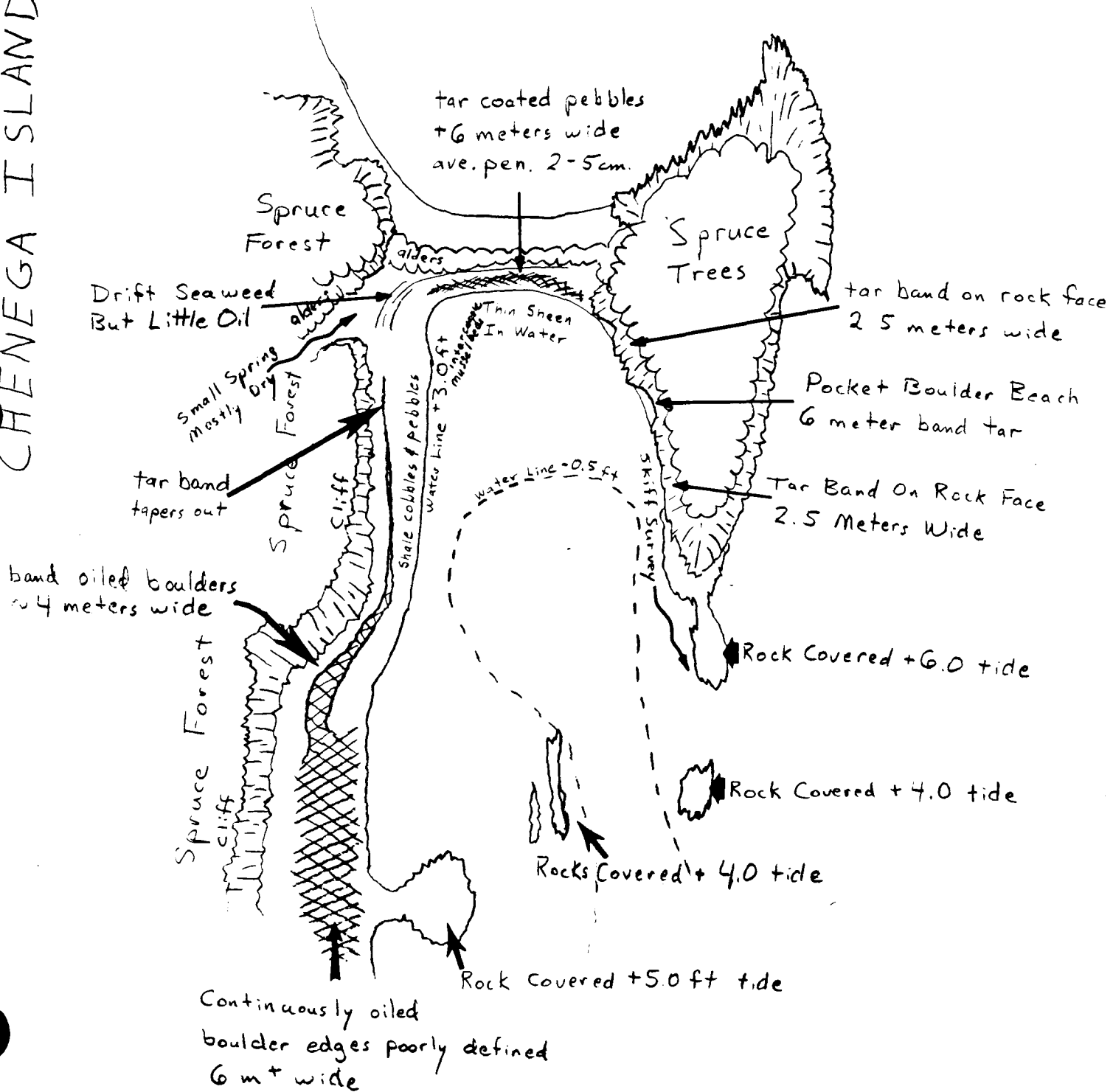
Comments:

Cove could only be entered at high tide. Although Oil is wide and continuous, penetration is not extreme due to flat shale on beach. It may be difficult to get a skimmer into cove with ~~large~~ barge. Cove should be scouted by someone with specific barge dimensions. Tar is very ~~heavy~~ weathered and will require hot water to mobilize. Thin sheen observed along shore line.

CH-7



CHENEGA ISLAND



ECOLOGICAL EVALUATION

LOCATION: Crenea Island SITE: _____ OBSERVER: Crank

LOCATION PREFIX: 214 SEG. NO.: 7 LENGTH: 450 (M)

DATE: 07/03/89 TIME (HHMM): 2025 TIDE HT.: +3 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

SE - bottom mussel beds - see map for location

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

SE st. cove - moderate to dense concentration in cove
West side of cove on vertical face, Balanus heavily contain hard

Littorina

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

Patches of Nucella

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

OTHER OBSERVATIONS: Eelgrass bed in cove, clam shells, other
and more

CLEANUP PRECAUTIONS: Limit traffic on intergravel/cobble mussel beds. Take
appropriate measures to protect lower intertidal zone and eelgrass beds.

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales _____
Other Old Bear scat

BIRDS: _____

GENERAL OBSERVATIONS: Heavy amount of drift Fucus at rear of cove

(version of 6/27/89)

~~POST-CLEANUP~~ CULTURAL RESOURCE EVALUATION

Date July 3 '89 Location Chenequa Is site east coast
Location Prefix CH Segment # 7 Length _____

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source Ø

Oil conditions/beach visibility heavy in places

Width of beach zone surveyed 50 m Tree fringe surveyed 20m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile low energy cove

Fresh Water Sources water seeps

Sea Exposure protected cove that opens to Knight Island Passage

Access/Safety easy access with boat or helicopter

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 _____

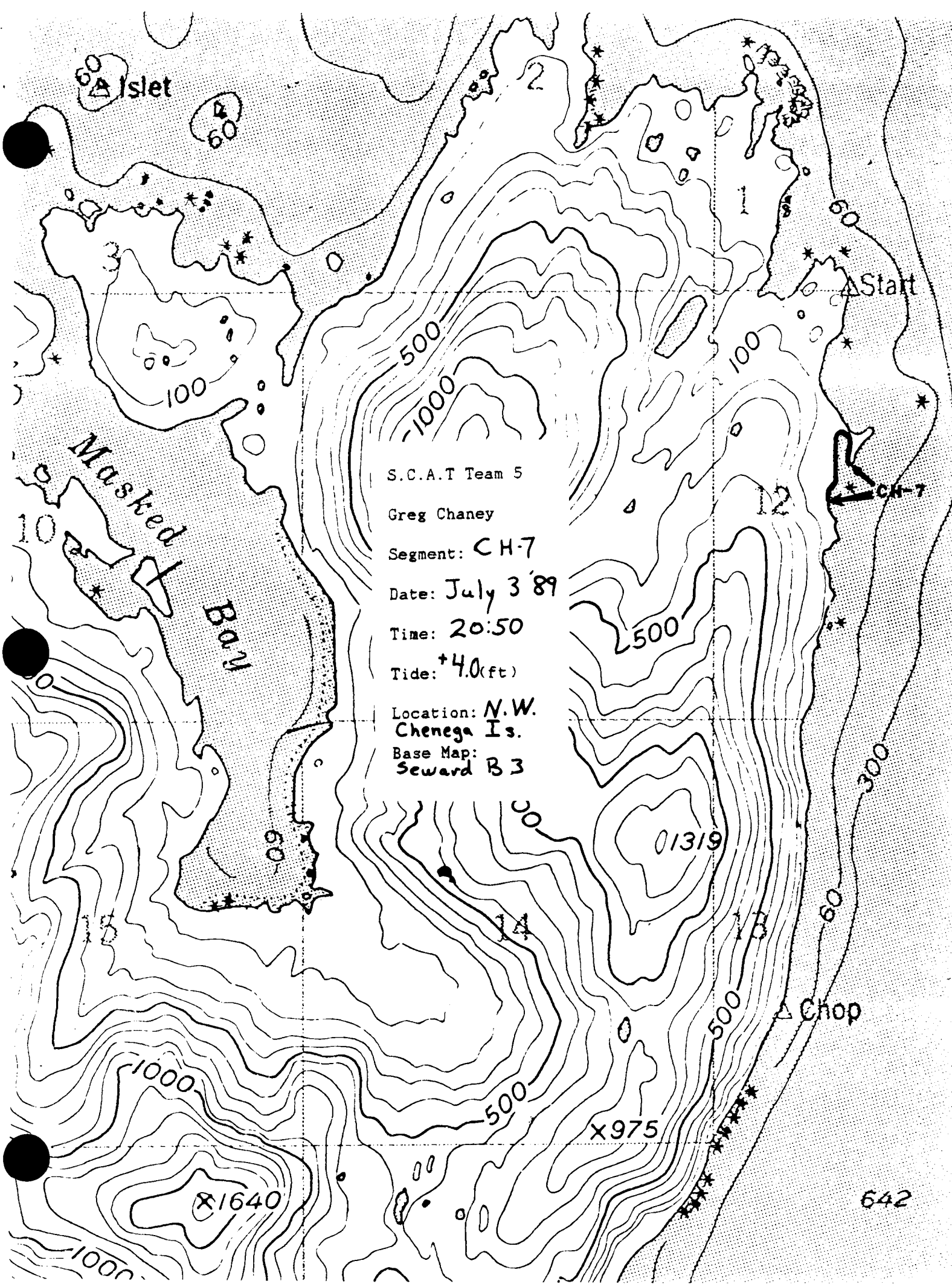
B/W Roll # SL-5 Frames 16-18

Observer(s) Ludwig

Time survey started 2045 Time survey ended 2145

Cultural resource considerations/restraints:

usual constraints



S.C.A.T Team 5

Greg Chaney

Segment: CH-7

Date: July 3 '89

Time: 20:50

Tide: +4.0(ft)

Location: N.W.
Chenega Is.

Base Map:
Seward B 3

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-8

LOCATION: (see enclosed map) Northeast Chenega Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/4/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated driftwood and fucus.
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 2: Heavy oil.

B: Resources absent.

Ecological Constraints (from site survey):

Work at mid tide and/or take appropriate measures to protect lower intertidal zone. Avoid disturbing seal haulout site (noted on map).

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

ISCC: Sharon K. Christopher

EXXON: [Signature]

FOSC: [Signature]

Date: July 12, 1989

7/19/89

Date: 89-07-19

Date: 7/2/89

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

POST-CLEANUP SHORELINE OIL EVALUATIONDate: July 4th Time: 8:00 AMObserver: Greg ChaneySurveyed From: Foot Boat Helio / PlaneWeather: Sun / Cloud / Rain / Snow / FogLOCATIONLOCATION N.W. Chenega Is. SEGMENT NUMBER CH-8LENGTH OF SHORELINE SEGMENT: 1120 mACCESS: Foot / Vehicle Boat Barge / Helio / Float Plane Fair WeatherSHORELINE:Shoreline Type: SPI BEA / COV HLD / STRTSlope: LANG HANG VERWave Exposure: High Med / LowSediment: B 30% / C 10% / P 10% / G 10% / S 20% / M - / R 20%Drift Debris on Beach: Yes / NoSupra Upper / Mid / Lower Type Drift logs
SeaweedOILDegree of Oiling: Heavy / Moderate / Light / No Oil / UnobservedArea of Beach Impact: SU / SP / (H) / (M) / L:Continuous: (Y) / N % of Segment 80% Width of Band: 20 to 1 mSporadic: (Y) / N % of Segment 20%

Max. Observed

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 30 cmPooled Oil: — % "Free" Oil: trace % Coated: H 40% / M 20% / L 40%Fresh — % Mousse — % Tar Formation: 100 %Drift Debris Oiled? Yes / No Supra Upper / Mid / Lower Amount: H (M) / L

Comments:

Head lands and rock faces are typically coated with a 1-2 meter band tar. Pocket beaches are coated with tar bands up to 20 meters wide. Penetration is usually highest at storm berm and thins to the lower intertidal zone. Light sheen observed where water contacted beach

CH-8



Fishing Marker



North End
CH-8

"Seal Rock"

Not Surveyed Due To
Seals

Pocket Beach Oiled Zone ~20 meters wide
Penetration 20cm High Intertidal Thins to
0 in Low Intertidal
~1 meter band on bedrock face
~20 foot cliff

Spruce
Forest +

Photo #34

Rock Terrace

8 Meter Band Tar Fucus
and Boulders

Tar
2 meter band
Boulder Bases
Tar Splatters
On Boulders

CHENEGA
ISLAND

spring
very small

Bed
Rock Out
crop

Spruce
Forest

2 meter
pocket of
pebbles
freeoil running
off on local
rocks.

Photo #33
18 meter band
penetration 15-20cm
50% surface tar
Rock shelf
light pen.
10cm.

25 cm penetration
Photo #31

Photo #32

Saturated Sediment
Penetration Observed
30cm. Unable to
dig deeper

Tar Band
Poorly
Defined

Spruce
Trees

Pocket Boulder
Beach

Tar Band
~60cm Wide
on Bedrock
Face. Thin Coat

South End CH8

ECOLOGICAL EVALUATION

LOCATION: Perceps Island SITE: _____ OBSERVER: Frank
 LOCATION PREFIX: CH SEG. NO.: 8 LENGTH: 1120 (M)

DATE: 28, 04, 89 TIME (HHMM): 0720 TIDE HT.: -0.5 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Patchy, sparse to none attached to cobble/gravel on beaches.

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

Continuous and dense to moderate concentrations along rocky headlands and lg boulders. Patchy, sparse to none attached to cobble/gravel on beaches.

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

Continuous with moderate concentrations from dense to moderate on rock faces. Heavily oiled along boulder fields on vertical rock faces. Patchy & sparse along cobble/gravel on beaches.

Littorina

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

Patchy with moderate to sparse concentrations

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

Patchy with moderate to sparse concentrations

OTHER OBSERVATIONS: Sea Stars / Piaster, Leather, Scleract, Tidepools, barnacles

Crabs, Anemones, Tidepools, Eelgrass, Sea Urchins, Bivalves

CLEANUP PRECAUTIONS: Seal haul out (observed 1 pup, 5 adults) NE

Clean at mid tide taking appropriate measures to protect the Lower ITZ.

MAMMALS: Otters — Harbor Seals 6 Sea Lions 1 Whales —
 other Scapula, Pronghorn, Deer

BIRDS: Hummingbird

GENERAL OBSERVATIONS: _____

(version of 6/27/89)

~~POST-CLEANUP~~ CULTURAL RESOURCE EVALUATION

Date July 4/89 Location Chenega Is. Site east coast

Location Prefix CH Segment # 8 Length _____

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility heavy to moderate in areas

Width of beach zone surveyed 80 m Tree fringe surveyed 20

Cultural resources observed in beach zone (AHRS code) 0

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile 50 to 80 m wide beaches separated by rocky headlands

Fresh Water Sources water seeps

Sea Exposure open exposure to Knight Island Passage

Access/Safety good access in calm conditions

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # SL-5 Frames 19, 20

Observer(s) Ludwig

Time survey started 0715 Time survey ended 1010

Cultural resource considerations/restraints:

usual constraints

S.C.A.T. Team 5

Greg Chaney

Segment: CH-8

Date: July 4 1989

Time: 8:00 AM

Tide: -1.0 ft)

Location: N.W.
Chenega Is.

Base Map:

Seward B 3

CH-8

Chop

X975

X1640

642

Lint

Cabins

56

SEG CH 3 INSPECTION # 1
DATE 8-3-89

SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☐ Mechanical
☒ Warm water wash	☒ Non-mechanical <u>Pm Pm IN TIDE LINE</u>
☒ Water deluge	☒ Other <u>SNARE ROOM IN TIDE ZONE</u>

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature Leonard Herbst Date: 8/3/89 Time: 19:15

Printed Name EOG GARCIA LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	
Percent	Degree of Oiling
_____	Heavy
_____	Medium
<u>3%</u>	Light
<u>15%</u>	Very Light
<u>82%</u>	None
100 %	

Subsurface Oil

☒ Yes ☐ No

Comments PRESENT IN SLATS/SLATS
TYPE GRAVEL.

Reassessment

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

ADEC rep Comments REASSESSMENT AT A LATER DATE RECOMMEND

Signature Dale Gardner Date: 8/3/89 Time: 19:25

Printed Name DALE GARDNER

FOSC rep

Demobilization approved / disapproved

Comments OIL PRESENT WILL SHOWN SLIGHTLY AS WAVES
WORK SHOPS.

Signature Thomas D. Johnson Date: 8/3/89 Time: 19:32

Printed Name THOMAS D. JOHNSON LT USCG

COPY: EXXON ADEC FOSC ISCC

8/5/89
PDB

TREATMENT MANUAL, 6/15/89

INSPECTION #

DATE 1 Aug. 89

SEGMENT

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash



Non-mechanical POM POM IN ISOLATED



Water deluge



Other SWARE BOOM IN TIDAL ZONE

Exxon

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

Comments TREATMENT OF SEGMENT CH-4 IS COMPLETE.

READY FOR DEMOBILIZATION/DEPLOYMENT TO A NEW SEGMENT

Signature [Signature]

Date: 8/1/89 Time: 20:00

Printed Name CH-4

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☐ Yes

☒ No

0

Heavy

Comments cliffs and rock debris.

5

Medium

10

Light

15

Very Light

70

None

100 %

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments None available.

Signature

Date: 1/1 Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments Small 1-2 meter band of light oil at base of cliff.

Signature V. Pshenkovsky

Date: 08/01/89 Time: 2100

Printed Name V. PSHEVLOVSKY, PSC

INSPECTION # _____ SEGMENT _____
DATE 1 Aug. 89 INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash	☐ Mechanical
☐ Warm water wash	☒ Non-mechanical <u>POM POM IN ISOLATED</u>
☐ Water deluge	☐ Other _____

Exxon

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

Comments TREATMENT OF SEGMENT CH-5 IS COMPLETE.
READY FOR DEPLOYMENT TO A NEW SEGMENT.

Signature [Signature] Date: 8/1/89 Time: 20:30
Printed Name GOS GARCIA

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil	
Percent	Degree of Oiling
<u>0</u>	Heavy
<u>0</u>	Medium
<u>3</u>	Light
<u>0</u>	Very Light
<u>97</u>	None
100 %	

Subsurface Oil
☐ Yes ☒ No
Comments light oil
on upper tidal
zone

Reassessment

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

ADEC rep Comments None available

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

FOSC rep

Comments Demobilization approved/disapproved
Minimal cleaning required.

Signature V. Pshenitsky Date: 08/01/89 Time: 2100
Printed Name V. PSHEVLOZKY, PSC

SEG CH6 INSPECTION #

SEGMENT

DATE 1 Aug 89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☒Non-mechanical POM POM IN ISOLATED AREA☐

Water deluge

☒Other DEBRIS REMOVAL

Exxon

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

Comments TREATMENT OF SEGMENT CH6 IS COMPLETE.READY TO DEMOBILIZE AND DEPLOY TO A NEW SEGMENT.Signature Gus GarciaDate: 8/1/89 Time: 20:20Printed Name GUS GARCIA

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

0
0
5
3
92

Heavy

Medium

Light

Very Light

None

100 %

Subsurface Oil

☒ Yes☐ NoComments Oil on boulders on cliffs (light oil)

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments None available

Signature

Date: / / Time:

Printed Name

FOSC rep

Comments

Demobilization approved / disapprovedlittle to no cleaning requiredSignature V. PSHEVLOZKYDate: 08/01/89 Time: 2100Printed Name V. PSHEVLOZKY

INSPECTION RECORD

Other VERBES REMOVAL

Printed Name GUS GARCIA

Printed Name V. PSHEVODZKY, PSC

SEG CH 8 INSPECTION # 1

SEGMENT

DATE 8-3-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☐ Mechanical
☒ Warm water wash	☒ Non-mechanical <u>Pam Pam Isolated A.</u>
☒ Water deluge	☒ Other <u>Spare boom in Tidal zone</u>

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature Leonard Herbst Date: 8/3/89 Time: 19:15

Printed Name GOS GARCIA, Leonard Herbst, EXXON 3

LEONARD HERBST

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

<u>8%</u>	Heavy
<u>15%</u>	Medium
<u>25%</u>	Light
<u>57%</u>	Very Light
	None

100 %

Subsurface Oil

☒ Yes ☐ No

Comments Majority of oil
trapped in lobes / cracks in
along upper intertidal berm

Reassessment

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

ADEC rep Comments OIL IMPACT SEVERE ENOUGH FOR

SEGMENT TO NEED ANOTHER ASSESSMENT AT

A LATER DATE

Signature Dale Gardner Date: 8/3/89 Time: 19:25

Printed Name DALE GARDNER

FOSC rep

Demobilization approved/disapproved

Comments Areas will continue to monitor stream

Signature Thomas D. Harrison Date: 8/3/89 Time: 19:35

Printed Name THOMAS D. HARRISON LT USCG

COPY: EXXON ADEC FOSC ISCC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA ISLAND NORTHEAST BLOCK

Includes Shoreline Segments: CH-9, CH-10, CH-11

Submitted :

W. W. Westkamp
(for Exxon)

Date:

7-8-89

ISCC Approval:

Sharon K. Christopherson

Date:

7-12-89

FOSC Approval:

C. S. Robinson

Date:

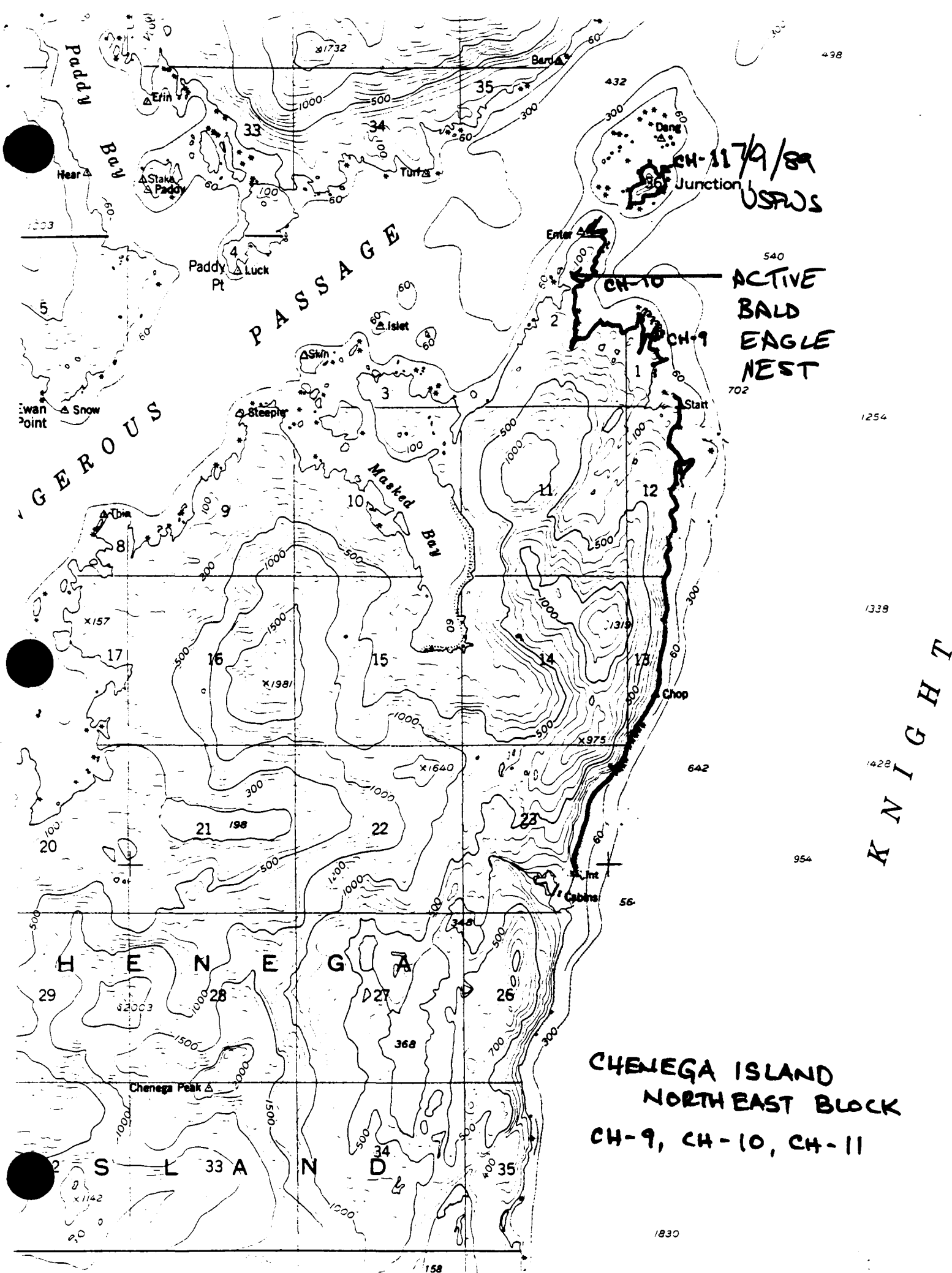
7-13-89

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

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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



498

CH-11 7/9/89
USFWS

540
CH-10
CH-9
ACTIVE
BALD
EAGLE
NEST
702

1254

1339

1428

954

K N I G H T

CHENEGA ISLAND
NORTH EAST BLOCK
CH-9, CH-10, CH-11

1830

158

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT CH-9

LOCATION: (see enclosed map) CHENEGA ISLAND-NORTHEAST SIDE

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/04/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus) and free oil.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure washing on rock.
Use other approved methods as appropriate.

Priorities Considerations:

- Class 2: Heavy oil.
- Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Restrict access to grassy knolls. Avoid walking on inter-gravel mussel beds in northern portion of segment (lagoon and marsh areas). Use appropriate measures to protect lagoon. *minimizing disturbance*
Don't go into water (tidy)

Archeological Constraints (from site survey):

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

Charles E. Holmes
State Historic Preservation Officer *

Date: July 8, 1989

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 4 89 Time: 10:30 AMObserver: Greg ChaneySurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION N.W. Chenega Island SEGMENT NUMBER CH 9LENGTH OF SHORELINE SEGMENT: 940 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane > Fair weather
? ? High tideSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B25% / C25% / P10% / G3% / S2% / M10% / R25%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 60% Width of Band: up to 20 mSporadic: Y/N % of Segment 40%

Max. Observed

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 30 cmPooled Oil: —% "Free" Oil: 5% Coated: H30% / M40% / L30%Fresh 10% Mousse —% Tar Formation: 90%Drift Debris Oiled ? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Very sheltered Cove with rocks covering entrance.
Should be scouted to see if barges and boats can
get inside. Although salt marsh is oiled, access should
be restricted. Extensive mussel beds are not oiled in lower
inter tidal zone, special care should be taken not to oil these
mussels. Salt marsh should be boomed off to prevent
contamination during cleanup activities.

North End
CH-9

CH-9

Rocks

Bar Exposed At -1' Tide

Tar Patches

Tar Patches

Rock Outcrop

Water at oil level at +4.0ft tide

Spruce Trees

Grass Flats

Tidal Channel

Photo 37

Salt Water Lagoon

Spruce Forest

Oiled Debris at base of grass

CHENEGA ISLAND

Light Sheen observed on Water. Some Oil In Mud.

Bar Exposed At -1' Tide

Bar Exposed At -1' Tide

Rock face tar band over 2 meters high
Pocket Pebble Beach 17 meter band oil flowing in Sun. Pen. to +30 cm.

Rock face w/ tar band over 2 meters high
Boulders coated with tar over 2mm thick

Pocket Pebble/Granular Beach. Oil Band ~20 meters wide. Penetration to 25 cm.

5 to 6 meter band oiled boulder bases

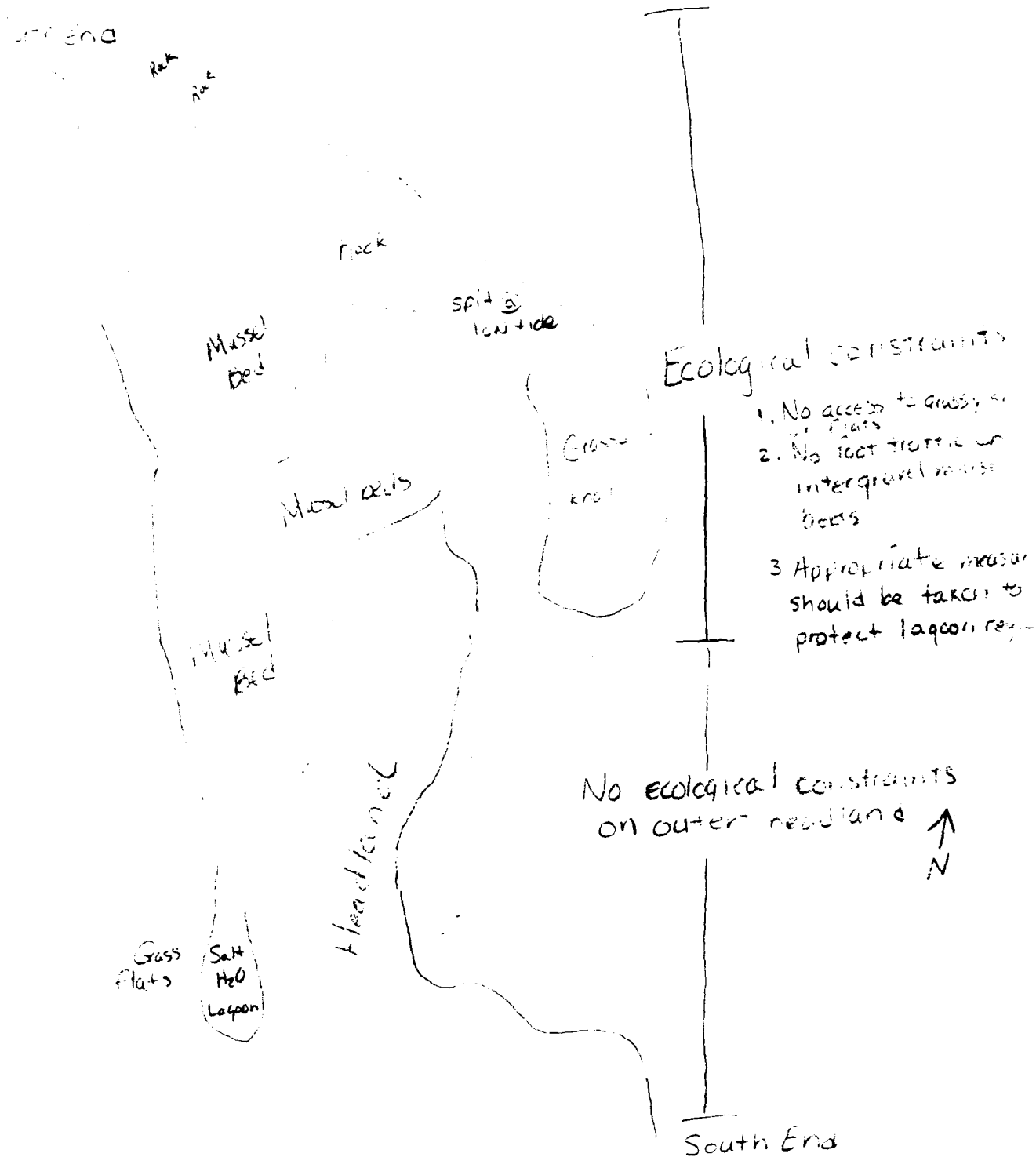
Photo # 36

Fishing Marker



South End
CH-9





CH 9
Map 2
Ecological Constraints

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: Number 2/3 of section
San Mateo Island OBSERVER: Crank
LOCATION PREFIX: CH SEG. NO.: 9 LENGTH: 740 m (M)
DATE: 07/04/89 TIME (HHMM): 1120 TIDE HT.: +3 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

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

Extensive intergravel mussel beds forming spit between beach and island barriers

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: "Lagoon" with tidal creek leading from outer lagoon
Area covered with Marsh Grass banks, Eelgrass Bed

CLEANUP PRECAUTIONS: Restrict foot traffic on intergravel mussel beds; Grassy knoll
Work at Mid-tide taking appropriate measures to protect Lower I.T.Z.

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

BIRDS: Hummingbird

GENERAL OBSERVATIONS: —

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: ^{Southern 1/2 of section} upto Island Barrier OBSERVER: Crank
LOCATION PREFIX: CH SEG. NO.: 9 LENGTH: 940 (meters) (M)
DATE: 07/04/89 TIME (HHMM): 1015 TIDE HT.: -1 (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

Rocky headlands interspersed with sand and cobble boulder

LIVE BIOTA

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

Cont. dense on headlands Patchy on boulders

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

Several small patches creating a discontinuous band on headlands

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

Cont. and dense on headlands Patchy on boulders Sparse on cobble

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: Due to the extent of contamination of this portion of section CH9 at this time + no ecological restrictions are suggested.

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

BIRDS: Hummingbird

GENERAL OBSERVATIONS: _____

(version of 6/27/89)

~~POST-CLEANUP~~ CULTURAL RESOURCE EVALUATION

Date July 4 '89 Location Chenega Is Site east coast
Location Prefix CH Segment # 9 Length _____

Survey Method:

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

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility heavy

Width of beach zone surveyed 60 m Tree fringe surveyed 10m

Cultural resources observed in beach zone (AHRS code) Ø

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile long, narrow, low-energy cove with rocky headlands to both sides

Fresh Water Sources pond

Sea Exposure mouth of cove exposed to Knight Island Passage

Access/Safety easy access

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

Monitoring during cleanup needed yes no Collection yes no

Photos: Color Roll # _____ Frames _____

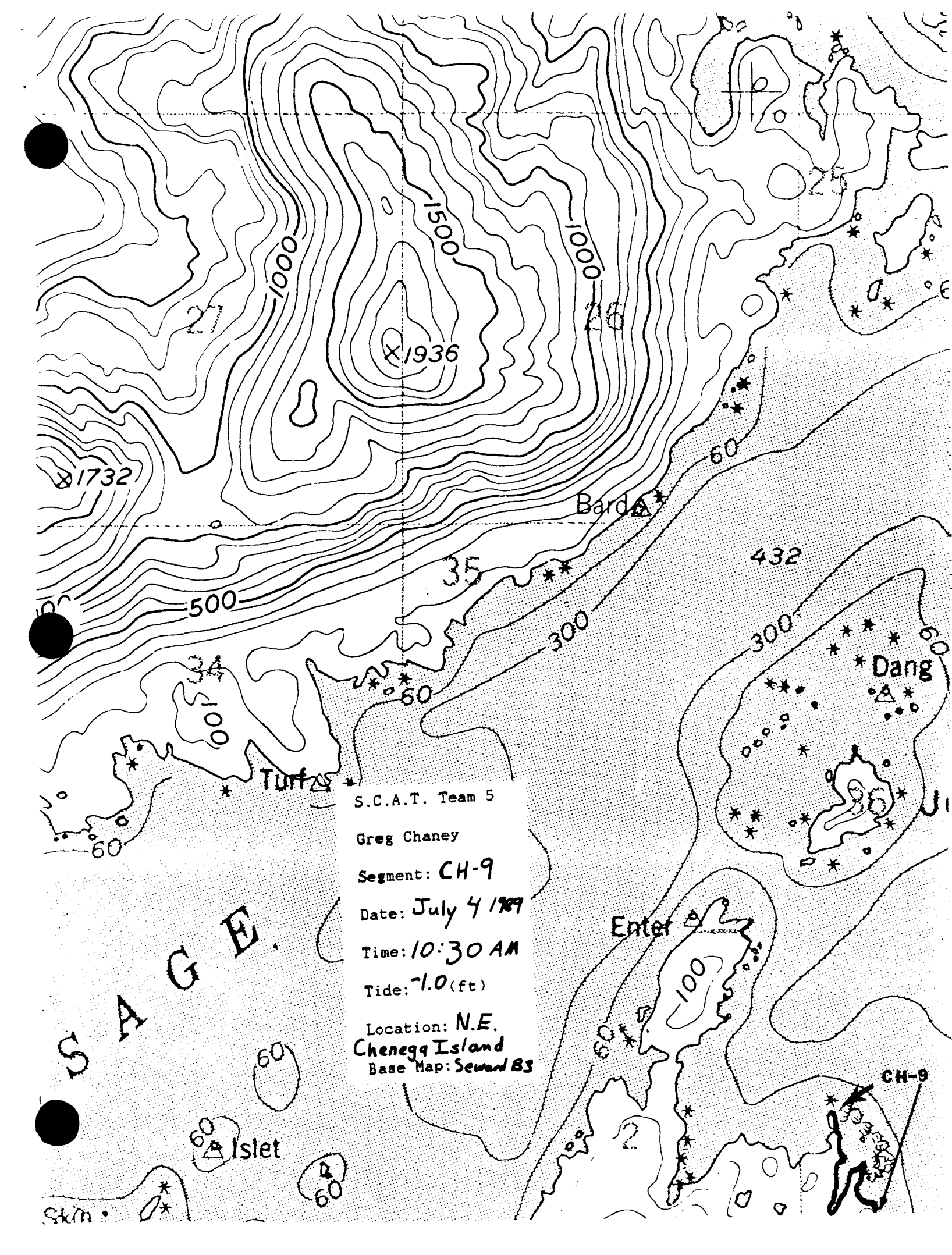
B/W Roll # SL-5 Frames 21

Observer(s) Ludwig

Time survey started 1020 Time survey ended 1210

Cultural resource considerations/restraints:

usual constraints



A topographic map of Chenegq Island, showing contour lines and various geographical features. Handwritten annotations include 'SAGE' in large letters, 'S.C.A.T. Team 5', 'Greg Chaney', 'Segment: CH-9', 'Date: July 4/1989', 'Time: 10:30 AM', 'Tide: -1.0 (ft)', 'Location: N.E. Chenegq Island', and 'Base Map: Seward B3'. Specific locations marked on the map include 'Turf', 'Bard', 'Enter', 'Dang', and 'Islet'. Contour lines are labeled with values such as 500, 1000, 1500, 300, and 60. A peak is marked with 'X/1936' and another with '81732'. The map also shows a coastline with stars and dots, and a small area labeled 'CH-9' in the bottom right corner.

S.C.A.T. Team 5
Greg Chaney
Segment: CH-9
Date: July 4/1989
Time: 10:30 AM
Tide: -1.0 (ft)
Location: N.E.
Chenegq Island
Base Map: Seward B3

SAGE

Islet

SkM

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT CH-10

LOCATION: (see enclosed map) CHENEGA ISLAND-NORTHEAST SIDE

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/4-5/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus), free oil and patches of mousse.
Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
Use moderate to high pressure warm to hot water washing on rock and oiled logs.
Use other approved methods as appropriate.

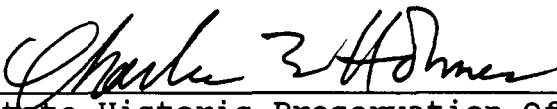
Priorities Considerations:

- Class 2: Heavy oil.
- Class B: Resources absent.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Restrict access to grassy knolls. ~~Two~~ (active bald eagle nests ~~are~~ present in this area. See advisory. *r. sh*)

Archeological Constraints (from site survey):

No access to the forest zone 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: July 8, 1989

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 4th / July 4 1989
July 5 / Time: 21:30Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/FogLOCATIONLOCATION N.W. ChenegaSEGMENT NUMBER CH-10LENGTH OF SHORELINE SEGMENT: 2690 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane Fair weatherSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B20% / C20% / P10% / G5% / S5% / M-% / R40%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Drift logs
Drift seaweedOILDegree of Oiling: Heavy/Moderate/Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: YN % of Segment 70% Width of Band: 1 to 25 mSporadic: YN % of Segment 30%Est. Oil Thickness where > 1cm: - cm Est. Oil Penetration: up to 45 cmPooled Oil: -% "Free" Oil: 5% Coated: H30% / M50% / L15%Fresh 5% Mousse 5% Tar Formation: 90%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

This segment is made up of a series of small pocket beaches separated by rocky headlands. On headlands there is usually a one meter band of tar and some oiled fucus. On beaches oil spreads out and in places penetration is ~30 cm in high intertidal and gets very shallow toward the lower intertidal zone. Oil sheen is common near shore during high tides.

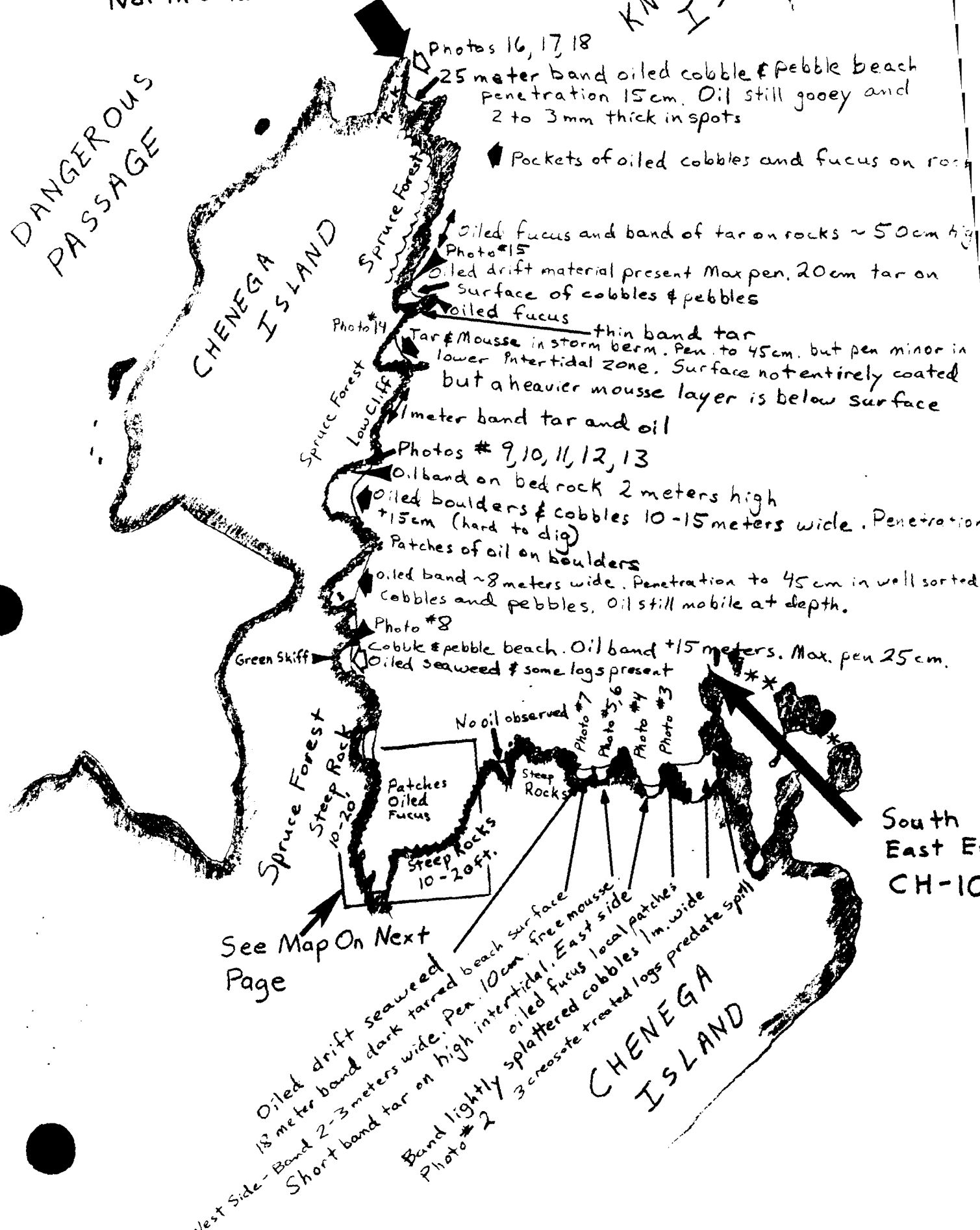
Segment CH-10



KNIGHT ISLAND PASSAGE

North End CH-10

DANGEROUS PASSAGE



Photos 16, 17, 18

25 meter band oiled cobble & pebble beach
penetration 15cm. Oil still gooey and
2 to 3mm thick in spots

Pockets of oiled cobbles and fucus on rocks

oiled fucus and band of tar on rocks ~ 50cm high

Photo #15
oiled drift material present Max pen. 20cm tar on
surface of cobbles & pebbles
oiled fucus

Photo #14
Tar & Mousse in storm berm. Pen. to 45cm. but pen minor in
lower intertidal zone. Surface not entirely coated
but a heavier mousse layer is below surface
1 meter band tar and oil

Photos # 9, 10, 11, 12, 13

Oil band on bed rock 2 meters high
oiled boulders & cobbles 10-15 meters wide. Penetration
+15cm (hard to dig)
Patches of oil on boulders

oiled band ~ 8 meters wide. Penetration to 45cm in well sorted
cobbles and pebbles. Oil still mobile at depth.

Photo #8
Cobble & pebble beach. Oil band +15 meters. Max. pen 25cm.
Oiled seaweed & some logs present

Green Skiff

No oil observed

Photo #7
Photo #5, 6
Photo #4
Photo #3

Patches
Oiled
Fucus
Steep Rocks
10-20 ft.

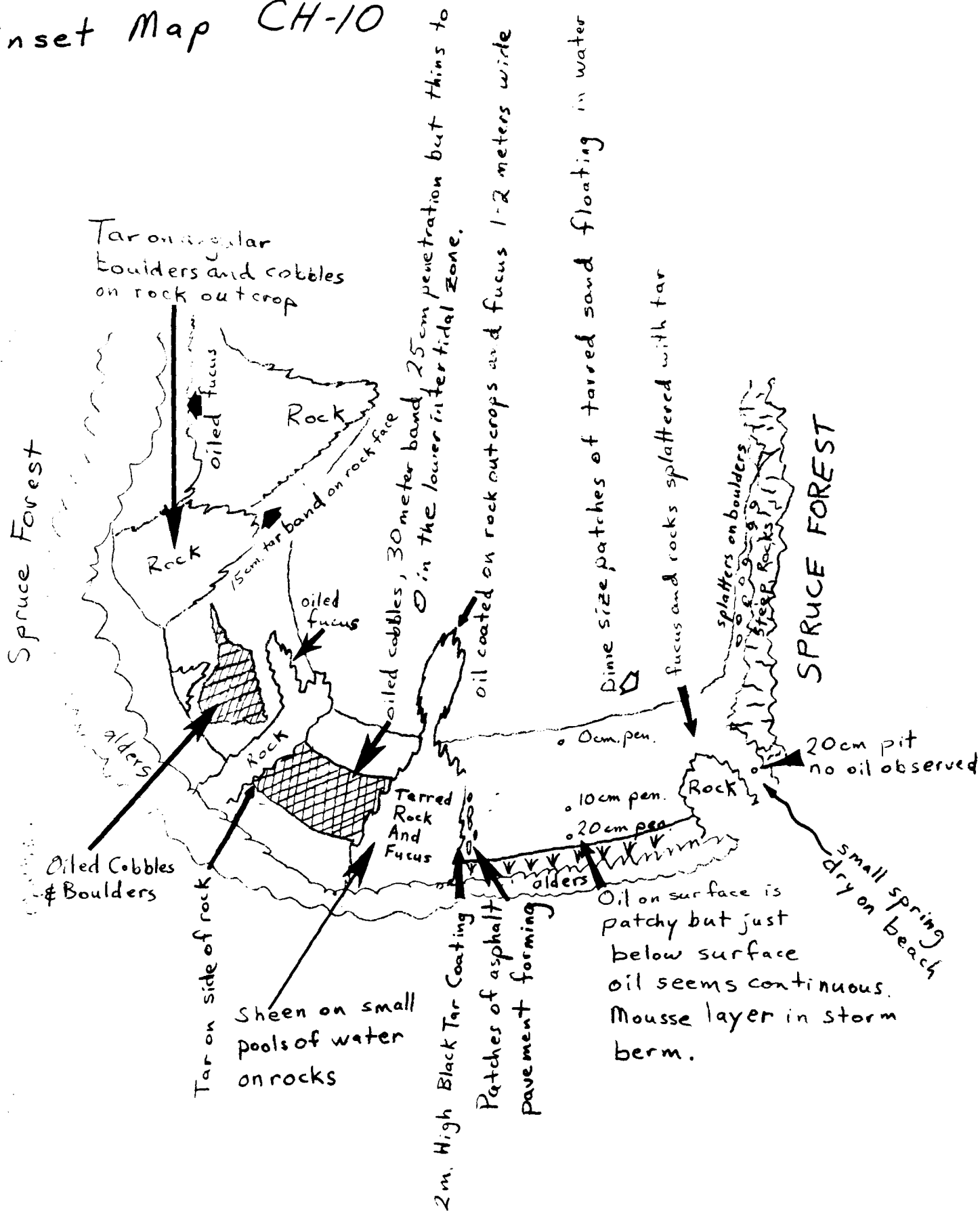
See Map On Next
Page

West Side - Oiled drift seaweed
18 meter band dark tarred beach surface
Pen. 10cm. free mousse
Band lightly splattered cobbles 1m. wide
Photo #2
3 creosote-treated logs predate spill

CHENEGA ISLAND

South
East End
CH-10

Inset Map CH-10



ECOLOGICAL EVALUATION

LOCATION: Innegal Island SITE: _____ OBSERVER: 1000
 LOCATION PREFIX: CH SEG. NO.: 10 LENGTH: 240 (M)
 DATE: 07 04 89 TIME (HHMM): 12100-1330 TIDE HT.: -2 ft

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: Large population of sea stars (several species), other Sea
live urchins

CLEANUP PRECAUTIONS: Standard constraints restrict access to
quarry rock

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

BIRDS: Endemic, Arctic Gulls, Hummingbirds

GENERAL OBSERVATIONS: This seamount consists of Rocky Heron

On the beaches, the biota dramatically declines to patches of Fucus
and other low growth. There are few sea stars, sea urchins, and other biota on the sand and
treatment procedures.

(version of 6/27/89)

POST-OIL SPILL CULTURAL RESOURCE EVALUATION

Date July 4 & 5, 1989 Location Chenega Is. Site north east corner

Location Prefix CH Segment # 10 Length 2,690 m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility sections with moderate or heavy oiling

Width of beach zone surveyed 50 m Tree fringe surveyed 20 m

Cultural resources observed in beach zone (AHRS code) —

Cultural resources observed in tree fringe (AHRS code) CHT's

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

Shore Profile bay with 20 to 50 m wide gravel pocket beaches separated by low headland

Fresh Water Sources stream

Sea Exposure mouth of bay has open exposure to Knight Island Passage

Access/Safety easy access at head of bay

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

Monitoring during cleanup needed yes no Collection yes no

Photos: Color Roll # _____ Frames _____

B/W Roll # SL-5 Frames 22-26

Observer(s) Ludwig

Time survey started 2100 Time survey ended 2210
715 1300

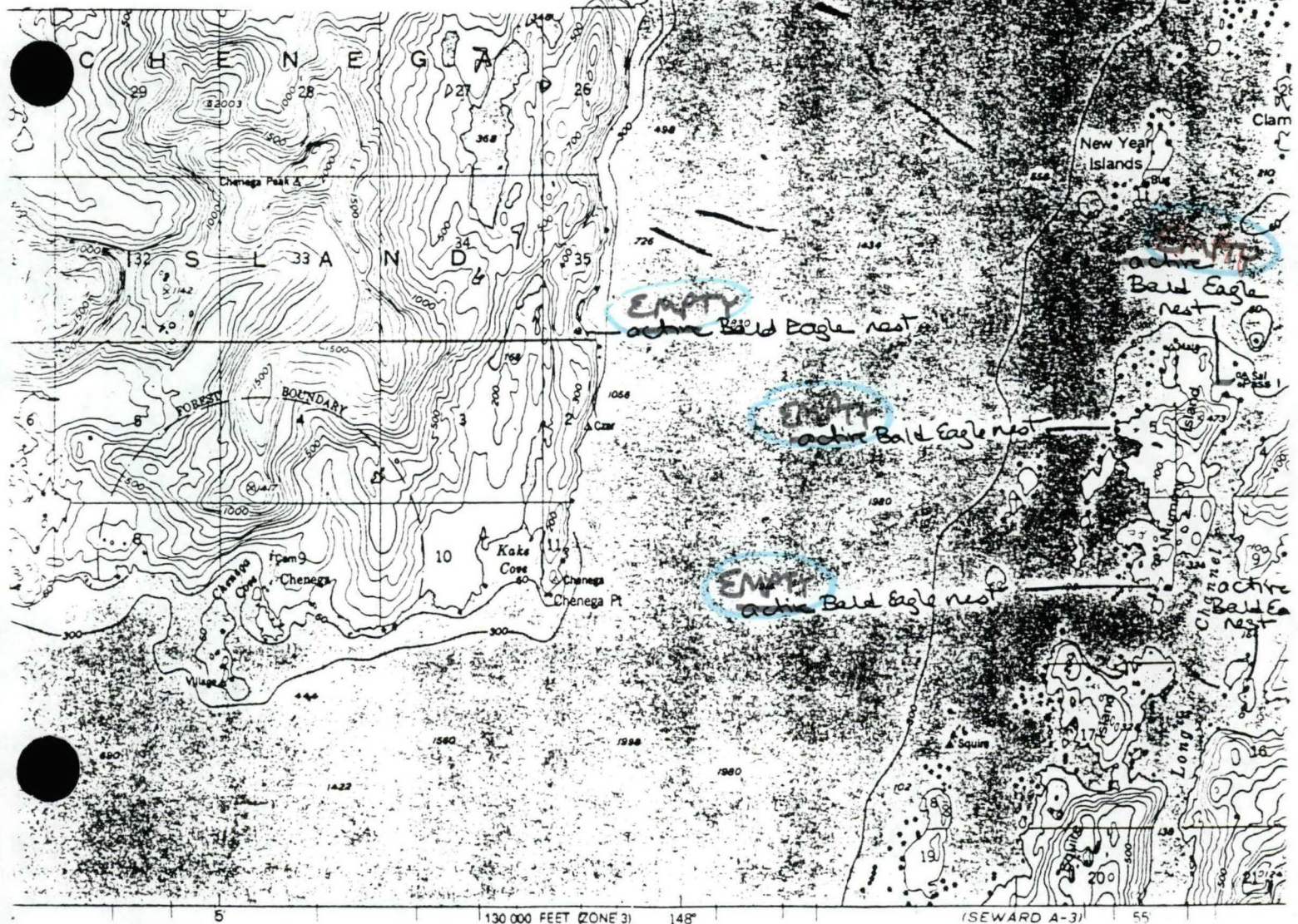
Cultural resource considerations/restraints:

usual constraints



ALASKA DEPT OF
FISH AND GAME

CH-10



X/1936

S.C.A.T. Team 5

Greg Chaney

Segment: CH-10

Date: July 4 1989

Time: 21:30

Tide: 3 (ft)

Location: N.W. Chenega

Base Map: Seward B3

81732

27

1000

1500

1000

26

25

60

500

34

100

Tuff

432

300

Dang

CH-10

Enter

100

60

2

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60

Islet

60

SAGE

SkM

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/08/89

SHORELINE SEGMENT CH-11

LOCATION: (see enclosed map) JUNCTION ISLAND-NORTH OF CHENEGA
ISLAND

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/06/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus) and free oil.

Flood/flush with warm to hot water (up to 140 F) on low angle beaches.

Use moderate to high pressure warm to hot water washing on rock and oiled logs.

Use other approved methods as appropriate.

No cleanup of rocks over
Priorities Considerations:

Class 2-4: Heavy to light oil.

Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. A sensitive seabird colony is located on the northern end of Junction Island. This area should be avoided. ~~A possible bald eagle nest is located at the northern end of the island. See advisory.~~ *Empty prohibit access to island over*

Archeological Constraints (from site survey):

No access to forest zone 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.

Charles E. Holmes

State Historic Preservation Officer *

Date: July 8, 1989

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

CLEANUP SHORELINE OIL EVALUATIONDate: July 6 / Time: 08:50Observer: Greg ChaneySurveyed From: Foot Boat Helio/PlaneWeather: Sun Cloud/Rain/Snow/FogLOCATIONLOCATION Junction IslandSEGMENT NUMBER CH-11LENGTH OF SHORELINE SEGMENT: 1580 mACCESS: Foot/Vehicle Boat Barge Helio Float PlaneSHORELINE:*Fair weather only*Shoreline Type: SPI BEA COV HLD / STRTSlope: LANG HANG VERWave Exposure: High Med / LowSediment: B 10 % / C 5 % / P 3 % / G 3 % / S 3 % / M 1 % / R 75 %Drift Debris on Beach: Yes / NoSupra 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 90 % Width of Band: 1 to 15 mSporadic: Y / N % of Segment 10 %Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: UP TO 20 cmPooled Oil: trace % "Free" Oil: 10 % Coated: H 10 % / M 30 % / L 50 %Fresh 20 % Mousse — % Tar Formation: 80 %Drift Debris Oiled ? Yes / No Supra / Upper / Mid / Lower Amount: H / M / L

Comments:

Shoehn observed off shore at high tide. Peat layer under most beaches has kept pen. to a minimum but oil is concentrated on surface as a result. Very small pockets of standing oil were observed in cracks in bedrock outcrops.

Salt marsh is located on eastern side of island & oil is present but access should be restricted. Majority of oil is ~~at~~ at the +6 ft tide level. See sketch Map for further info.

Entire island is surrounded by ~1 meter band of tar on vertical rock faces. Oil is heaviest where bed rock faces meet cobbles. Oil seems to run down rock face and collect on cobble/boulder base material.

Oil tends to stay near the surface because the beaches are underlain with an impermeable peat layer. Relic submerged stumps are found on several pocket beaches.

Sheen observed offshore at high tide.



Hand wands and Vacuums may prove useful in cleaning out standing oil in small cracks and crevasses in bedrock

ECOLOGICAL EVALUATION

LOCATION: Island SITE: _____ OBSERVER: Crane
 LOCATION PREFIX: CH SEG. NO.: 11 LENGTH: 1580 (M)
 DATE: 07/06/89 TIME (HHMM): 2115-2315 TIDE HT.: -1.55

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: Terns and Gulls dive bombing Bald Eagle sitting in tree

Large amount of unattached Fucus and empty mussel shells on beach
grift area. Eelgrass and Kelp (Laminaria) Beds along most of the shore

CLEANUP PRECAUTIONS: Work at tide level 16 ft or higher. Off North shore

Small islands used by seals for haulout and rookery. Suggest posturing
up until end of Olfedogeny season. Probable Eelgrass root at shore
Access to same 43 hrs prior to cleanup Restrict access on grassy areas

MAMMALS: Otters scat Harbor Seals 2 pups Sea Lions _____ Whales _____
 Other _____

BIRDS: King Bald Eagles, Pair of Sooty Terns, Arctic Skuas

GENERAL OBSERVATIONS: Difficult access on SE side due to shallow water

(version of 6/27/89)

~~TEST AREA~~ CULTURAL RESOURCE EVALUATION

Date July 5 & 6 '89 Location Chenega Is. Site Junction Island

Location Prefix CH Segment # 11 Length 1,580 m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source 0

Oil conditions/beach visibility moderate to heavy in 1+2 m wide band

Width of beach zone surveyed 30 m Tree fringe surveyed 20 m

Cultural resources observed in beach zone (AHRS code) 0

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile 20-40 m wide pocket beaches, low 1-3 m high bedrock outcrops and headlands

Fresh Water Sources none

Sea Exposure open exposure to Knight Island Passage

Access/Safety good access with boat in calm weather

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

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

Photos: Color Roll # — Frames —

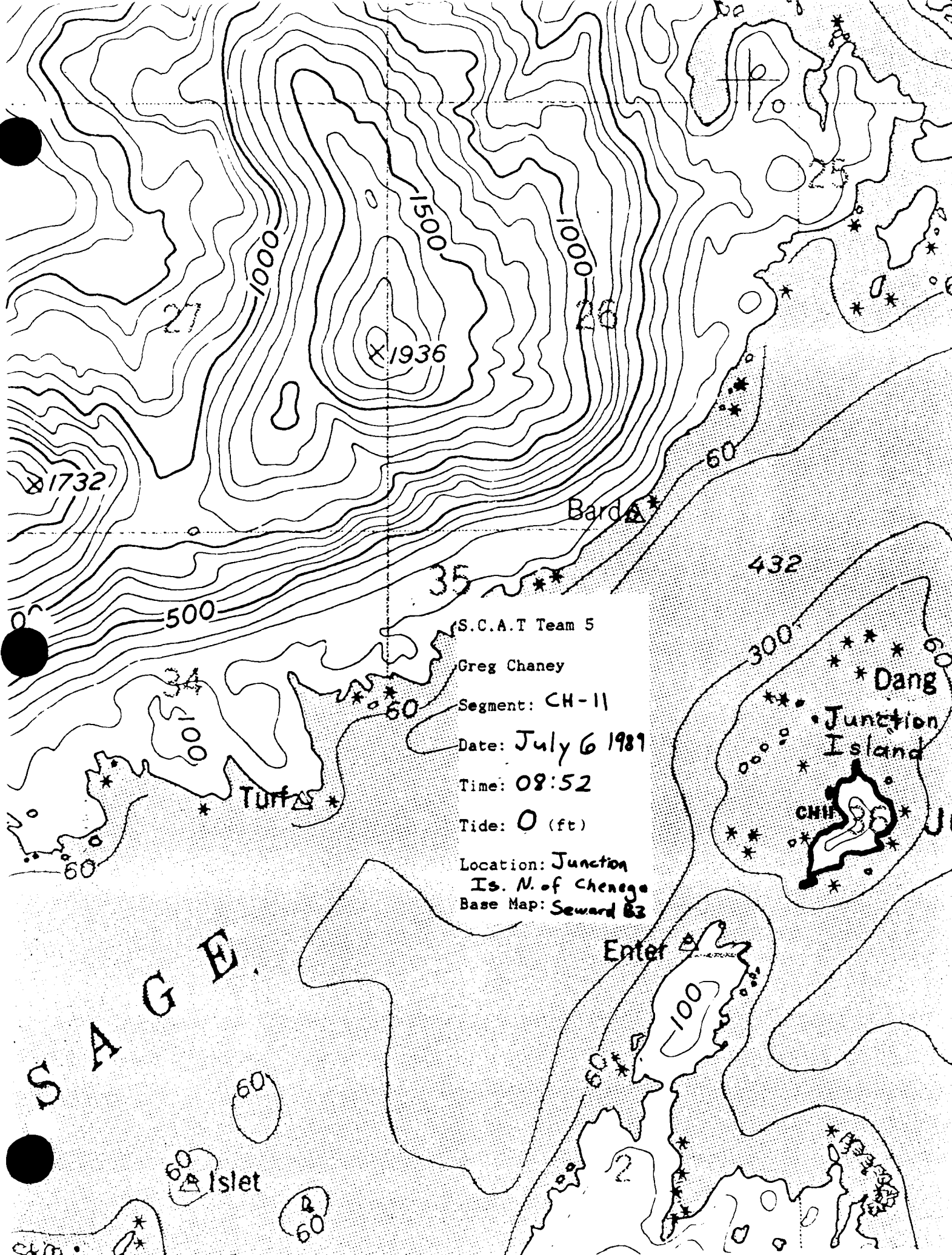
B/W Roll # SL-5 Frames 27, 28

Observer(s) Ludwig

Time survey started 2110 Time survey ended 745
2310 1130

Cultural resource considerations/restraints:

usual constraints



S.C.A.T Team 5

Greg Chaney

Segment: CH-11

Date: July 6 1981

Time: 08:52

Tide: 0 (ft)

Location: Junction
Is. N. of Chenega
Base Map: Seward 63

SAGE

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432

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Dang

Junction
Island

CH-11

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SEG CH-9 INSPECTION # 1DATE 8-3-89SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☐ Mechanical
☒ Warm water wash	☒ Non-mechanical <u>Pom Pom Isolated A.</u>
☒ Water deluge	☒ Other <u>Shore Boom in Tidal Zone</u>

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature Leonard Herbst Date: 8/3/89 Time: 19:15

Printed Name GOS GARCIA, LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Percent Degree of Oiling

<u>6%</u>	Heavy
<u>15%</u>	Medium
<u>20%</u>	Light
<u>59%</u>	Very Light
	None

100 %

Subsurface Oil

☒ Yes ☐ No

Comments TRAPPED IN GRAVEL/CORALS
SHORE AREAS.

Reassessment

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

ADEC rep Comments OIL IMPACT SEVERE ENOUGH TO
WARRANT REASSESSMENT AT A LATER DATE

Signature Dale Gardner Date: 8/3/89 Time: 19:30

Printed Name DALE GARDNER

FOSC rep

Demobilization approved disapproved

Comments UPPER TIDE HAS MAJORITY OF TRAPPED OIL - AREAS
WILL CONTINUE TO PRODUCE SHEEN. NO CROSS CONTAMINATION.

Signature Thomas D. Harrison Date: 8/3/89 Time: 19:38

Printed Name THOMAS D. HARRISON LT USCG

COPY: EXXON ADEC FOSC ISCC

TREATMENT MANUAL, 6/15/89

SEG CH-10 INSPECTION # 1

SEGMENT

DATE 1-3-89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash

Non-mechanical Pom Pom in isolated AL

Water deluge

Other 5 No. 6 Boom in TIDAL ZON.

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature

Leonard HerbstDate: 8/3/89 Time: 19:15

Printed Name

SSG GARCIA LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling



Yes



No

U. E. J.J. S.W. S.P. W. S.

	Heavy
<u>34%</u>	Medium
<u>10%</u>	Light
<u>15%</u>	Very Light
<u>72%</u>	None

100 %

Comments SOME OF THE GRAVEL/
COARSE BEACH AREAS HAVE TRAPPED
OIL.

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep

Comments

OIL IMPACT SEVERE ENOUGH FORSEGMENT TO WARRANT ANOTHER EVALUATION AT ALATER DATE

Signature

DALE GARDNERDate: 8/3/89 Time: 19:30

Printed Name

DALE GARDNER

FOSC rep

Demobilization approved/disapproved

Comments

WASTED AREAS W/ SUBSURFACE OIL WILL PRODUCESOME SILENT.

Signature

Thomas D. GardnerDate: 8/13/89 Time: 19:39

Printed Name

Thomas D. Gardner LT USCG

SEG CH-11 INSPECTION # 1
DATE 8-3-89SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☒ Hot water wash	☐ Mechanical
☒ Warm water wash	☒ Non-mechanical <u>Lim' Pom Isolate 40 AL</u>
☒ Water deluge	☒ Other <u>Shore Boom in TIDAL ZONE</u>

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature Leonard Herbst Date: 8/3/89 Time: 19:15

Printed Name Sgt GARCIA LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

Subsurface Oil

☒ Yes ☐ No

<u>1%</u>	Heavy
<u>5%</u>	Medium
<u>12%</u>	Light
<u>44%</u>	Very Light
	None

100 %

Comments MAJORITY OF ISLANDS
FREE FROM SUBSURFACE OIL.

Reassessment

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

ADEC rep Comments

Signature Dale Gardner Date: 8/3/89 Time: 19:40

Printed Name DALE GARDNER

FOSC rep

Demobilization approved/disapproved

Comments ISLANDS ONLY MINORLY IMPACTED - NO CROSS
CONTAMINATION

Signature Thomas D. Johnson Date: 8/13/89 Time: 1942

Printed Name Thomas D. Johnson LT USCG

COPY: EXXON ADEC FOSC ISCC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island North Block

Includes Shoreline Segments: CH-12, CH-13

Submitted :

C. J. [Signature]
(for Exxon)

Date: 7/18/89

ISCC Approval:

RECOMMENDATION

Jaqueline [Signature]

Date: 7/29/89

FOSC Approval:

R. C. [Signature], by dir.

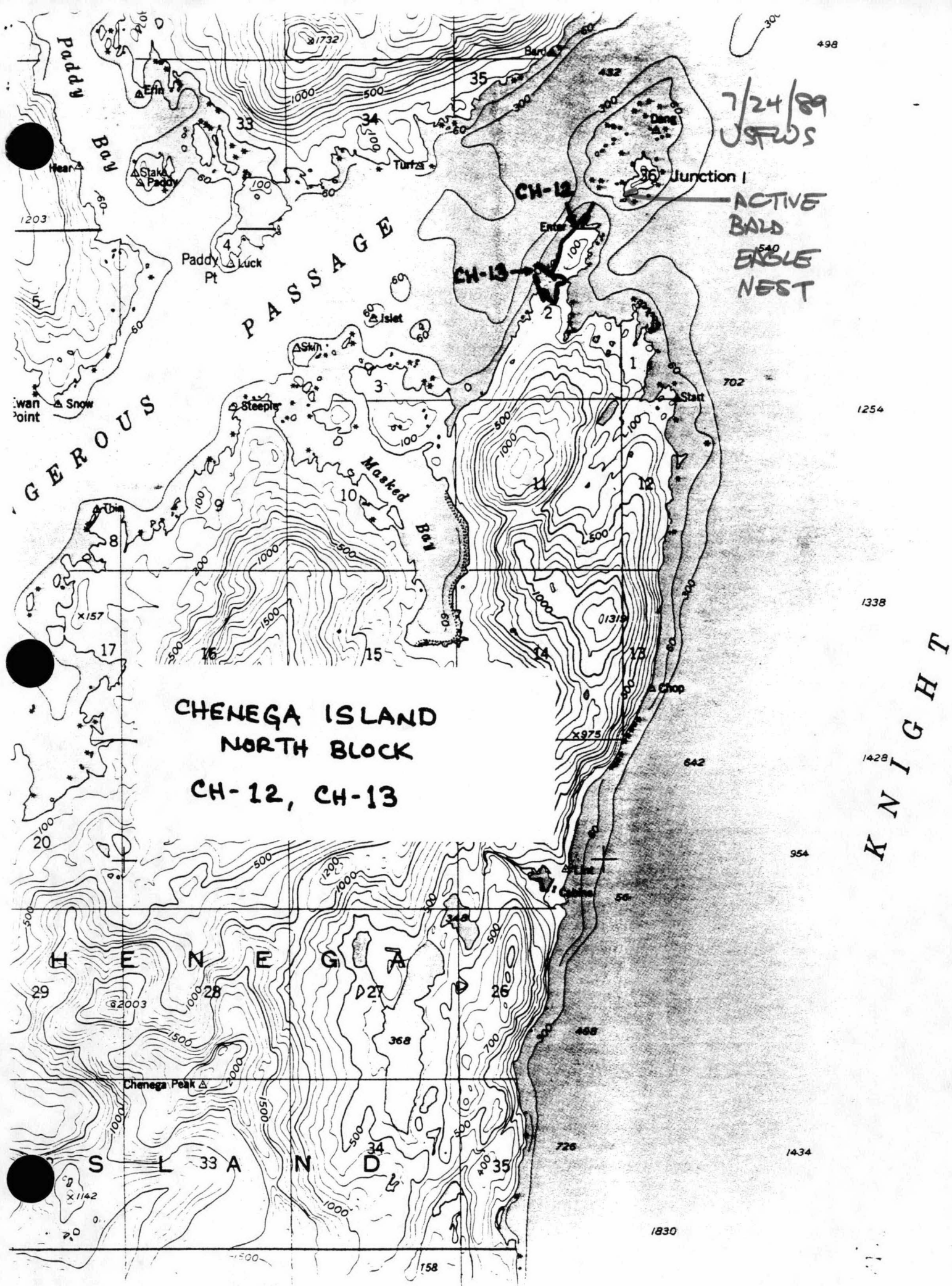
Date: 7/29/89

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

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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



(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-12

LOCATION: (see enclosed map) North Chenega Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/6/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 3-4: moderate to light oil

Class A: resources present, including active eagle nest

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

Active Bald Eagle nest. ~~Cleanup activity should be delayed as eagles exhibited nest defense behavior. Contact ADE&C for further constraints. SEE ADVISORY IN MANUAL.~~

Archeological Constraints (from site survey):

If cleanup is planned for that portion of the segment shown on the map as unsurveyed due to eagle nest, then an archaeological survey should be conducted prior to 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. (NOTE: THE ARCHEOLOGICAL SURVEY OF THE EAGLE NEST AREA WAS CONDUCTED ON 7/28/89 AND THE SURVEY REPORT IS ATTACHED. THERE ARE NO OTHER CONSTRAINTS.)

State Historic Preservation Officer *

ISCC: Jaqueline Michel

EXXON: [Signature]

FOSC: A.C. Alejandro, by dir.

Date: July 21, 89

Date: 7/29/89

Date: 8907-29

Date: 7/29/89

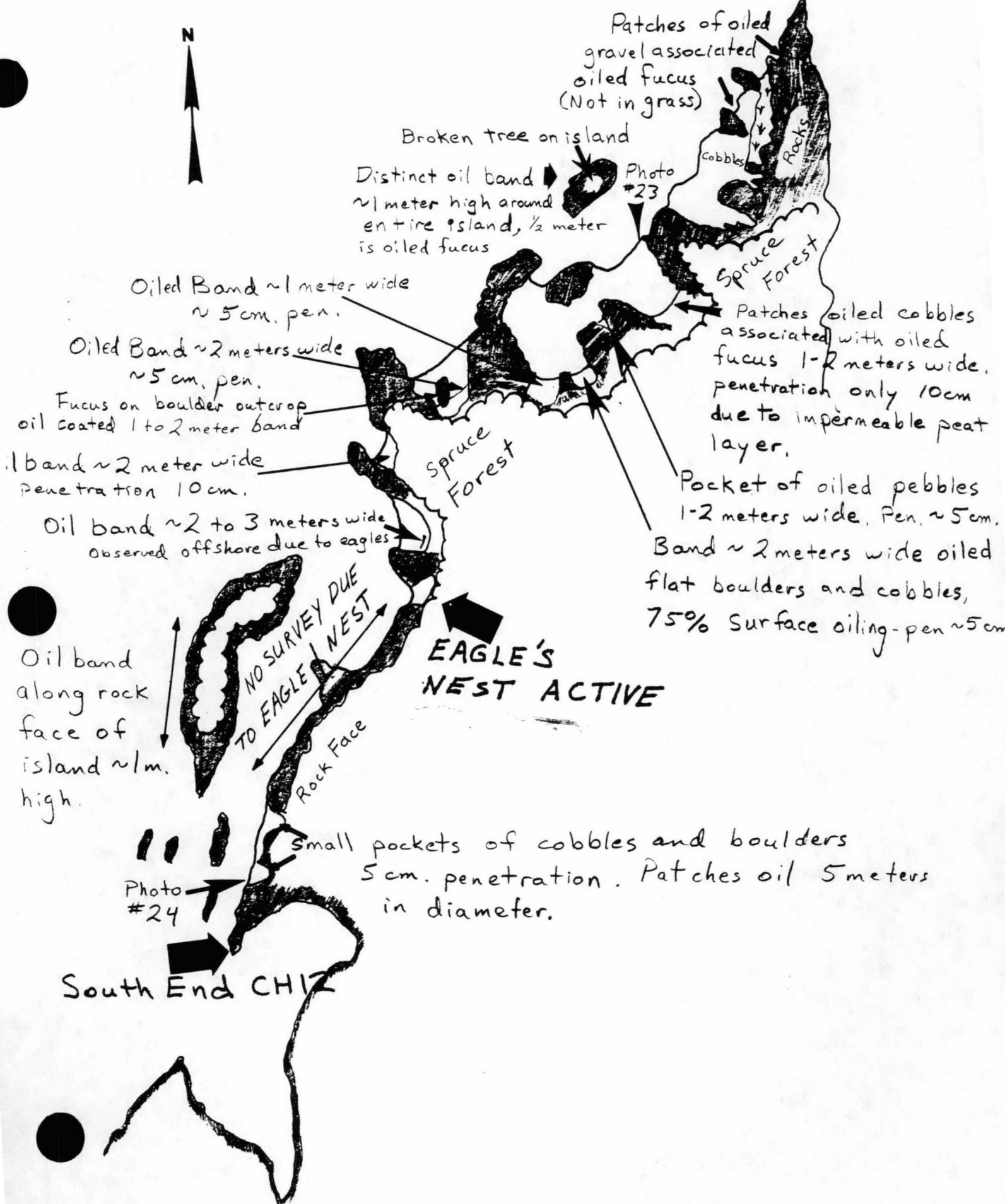
* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

CLEANUP SHORELINE OIL EVALUATIONDate: July 6 89 Time: 11:50 AMObserver: Greg ChaneySurveyed From: Foot Boat Helio/PlaneWeather: Sun Cloud/Rain/Snow/FogLOCATIONLOCATION North Chenega IslandSEGMENT NUMBER CH-12LENGTH OF SHORELINE SEGMENT: 1130 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane Fair weatherSHORELINE:Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B25% / C15% / P5% / G5% / S0% / M0% / R50%*Few logs*Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type Some 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 to 2 mSporadic: Y/N % of Segment 20Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 5-10 cmPooled Oil: —% "Free" Oil: 5% Coated: H20% / M35% / L40%Fresh 20% Mousse —% Tar Formation: 80%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Unable to survey ~20% of segment due to active eagle's nest. Before cleanup is undertaken, the area indicated should be surveyed. Penetration was not high due to ^{peat layer} under beach sediments. Some oil is fairly fresh in appearance and concentrated at the surface due to peat layer. Small pockets of moderate oiling observed at south end of segment.

North End CH-12



Patches of oiled gravel associated oiled fucus (Not in grass)

Broken tree on island

Distinct oil band ~1 meter high around entire island, 1/2 meter is oiled fucus

Photo #23

Cobbles

Rocks

Spruce Forest

Oiled Band ~1 meter wide ~5 cm. pen.

Oiled Band ~2 meters wide ~5 cm. pen.

Fucus on boulder outcrop oil coated 1 to 2 meter band

Oil band ~2 meter wide penetration 10 cm.

Oil band ~2 to 3 meters wide observed offshore due to eagles

Oil band along rock face of island ~1 m. high.

NO SURVEY DUE TO EAGLE'S NEST

EAGLE'S NEST ACTIVE

Patches oiled cobbles associated with oiled fucus 1-2 meters wide, penetration only 10 cm due to impermeable peat layer.

Pocket of oiled pebbles 1-2 meters wide, Pen. ~5 cm.

Band ~2 meters wide oiled flat boulders and cobbles, 75% Surface oiling - pen ~5 cm

Small pockets of cobbles and boulders 5 cm. penetration. Patches oil 5 meters in diameter.

Photo #24

South End CH12

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Crane
 LOCATION PREFIX: CH SEG. NO.: 12 LENGTH: 1130 (M)
 DATE: 07/06/89 TIME (HHMM): 1140 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 ^{Moderate} Sparse Y/N None Y/N

Continuous - dense on rock faces, moderate to sparse on cobbles

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

Extensive intercobble mussel beds

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N ^{Moderate} Sparse Y/N None Y/N

Continuous - dense on rock face, moderate to sparse on cobbles

Littorina

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

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

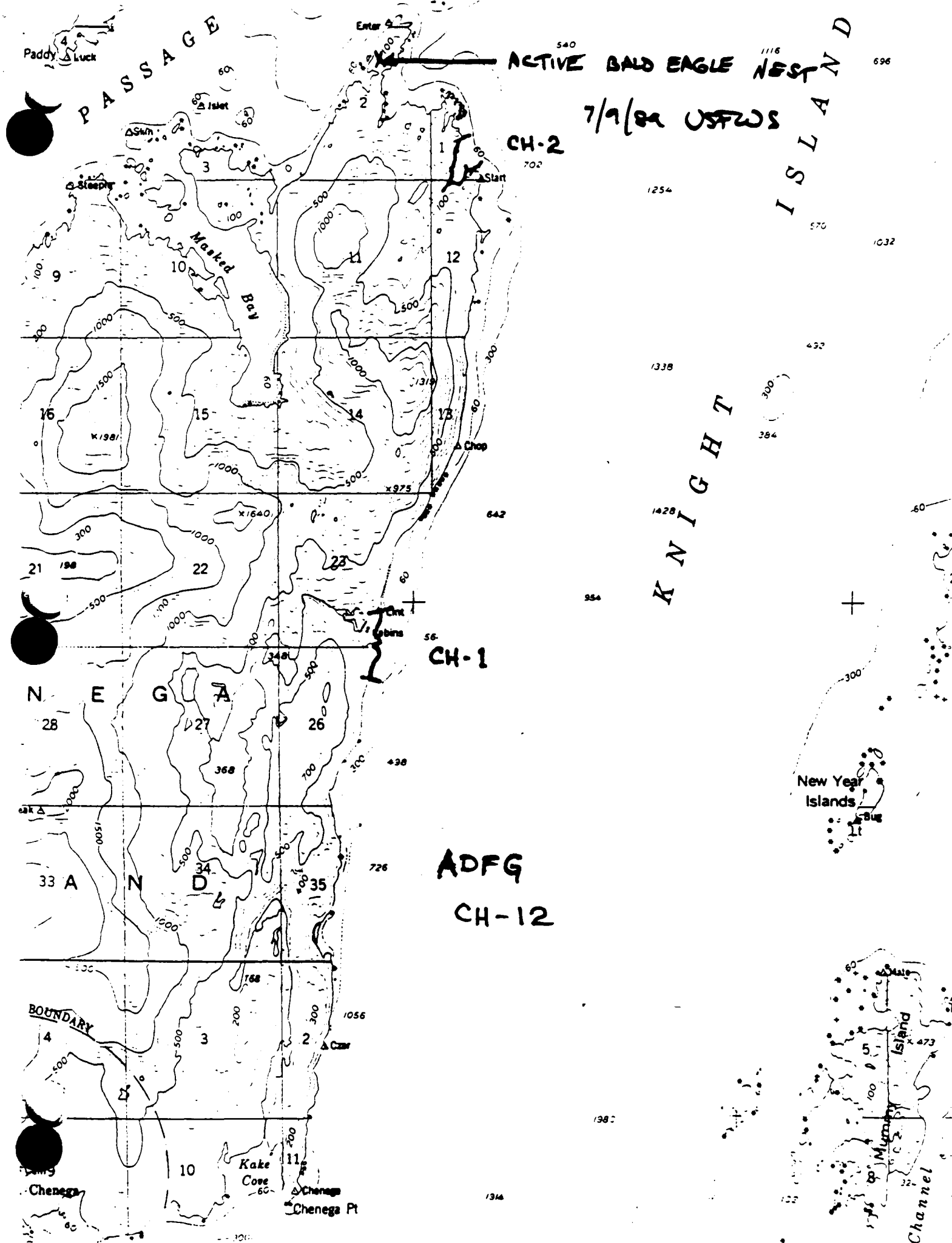
OTHER OBSERVATIONS: Eelgrass beds, clams, shells

CLEANUP PRECAUTIONS: Bald Eagle Nesting site contact Fish: Game
otherwise Normal Constraints.

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

BIRDS: See Map for Bald Eagle Nest site - pair of eagles, other birds

GENERAL OBSERVATIONS: Unable to walk beach under eagle nest as eagle
was exhibiting nest defense behavior.



(version of 6/27/89)

~~PRELIMINARY~~ CULTURAL RESOURCE EVALUATION

Date July 6 '89 Location Chenega Is. Site north end

Location Prefix CH Segment # 12 Length _____

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source ⊖

Oil conditions/beach visibility moderate to heavy

Width of beach zone surveyed 30 m Tree fringe surveyed 20m

Cultural resources observed in beach zone (AHRS code) ⊖

Cultural resources observed in tree fringe (AHRS code) ⊖

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

Shore Profile 20-40m wide gravel beaches separated by low bedrock
outcrops & headlands

Fresh Water Sources none

Sea Exposure West exposure to Dangersnes Passage

Access/Safety good access in calm weather

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

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

Photos: Color Roll # — Frames —

B/W Roll # SL-5 Frames 29, 30

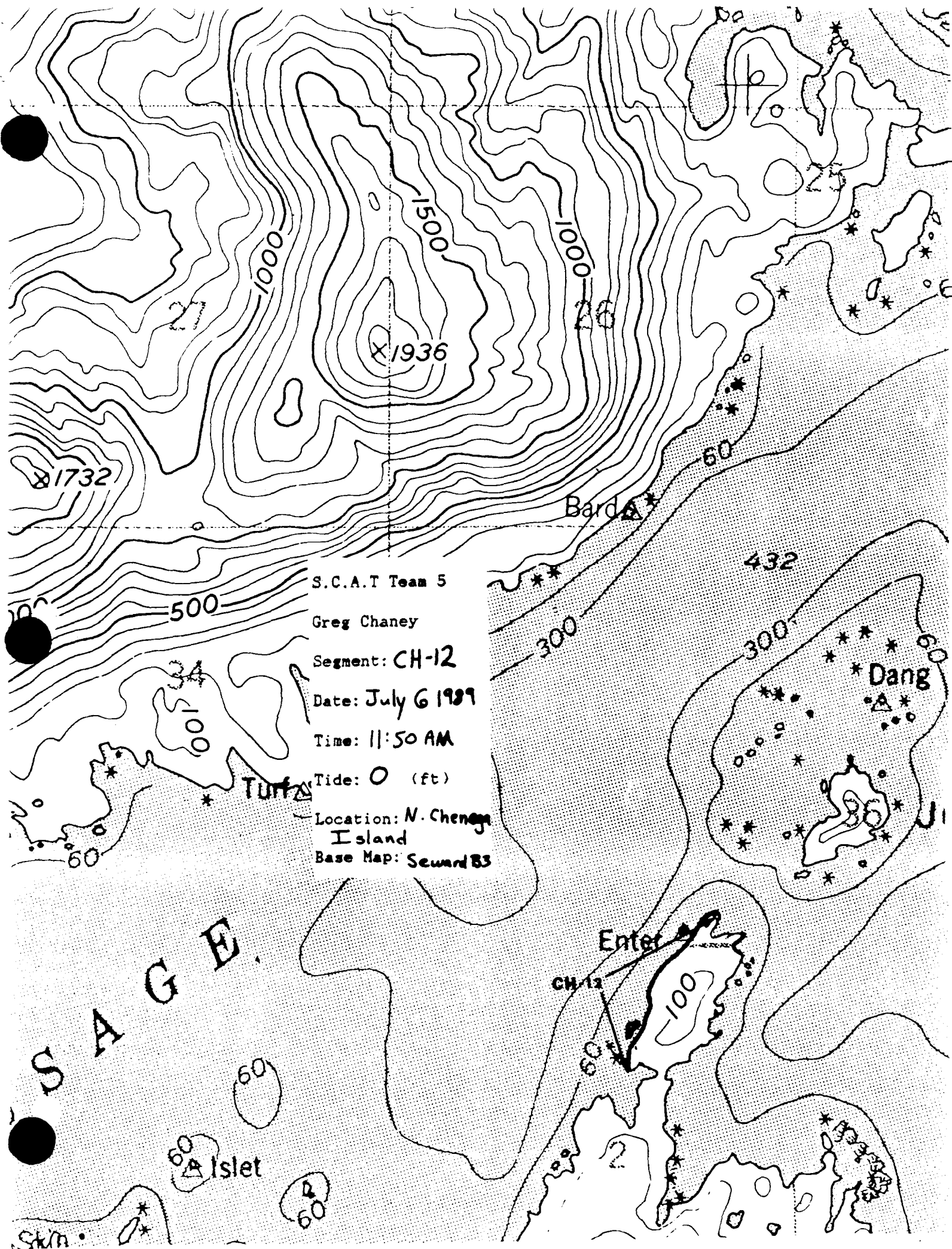
Observer(s) Ludwig

Time survey started 1140 Time survey ended 1300

Cultural resource considerations/restraints:

usual constraints

A beach (see map) with an active eagle's nest was not surveyed.
Should cleanup be planned for that beach, an archaeological
survey must first be conducted.



(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-13

LOCATION: (see enclosed map) North Chenega

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/6/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated fucus. See map for location.
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.
- ~~- Operation should be conducted at + 10 ft. tide only.~~
- ~~- The AREA INDICATED ON THE SKETCH MAP FOR THE SOUTH END OF SEGMENT 13 TO BE CLEANED ON +10' TIDE, SHOULD BE CLEANED ON A FALLING TIDE ONLY TO PREVENT SNEAKS FROM ENTERING THE SALT MARSH AREA.~~

Priorities Considerations:

Class 2: heavy oil

Class A: resources present, sensitive salt marsh

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Cleanup activity should not be conducted, ~~in Salt Marsh until appropriate technology is available and at that time areas should be reevaluated. Until that time restrict access to Salt Marsh.~~ Care should be taken not to remove healthy fucus.

Archeological Constraints (from site survey):

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

[Signature]
State Historic Preservation Officer *

ISCC: Jacqueline Michele

EXXON: [Signature]

FOSC: A. P. Alejandro, by des.

Date: 7/29/89

Date: 7/29/89

Date: 89-07-29

Date: 7/29/89

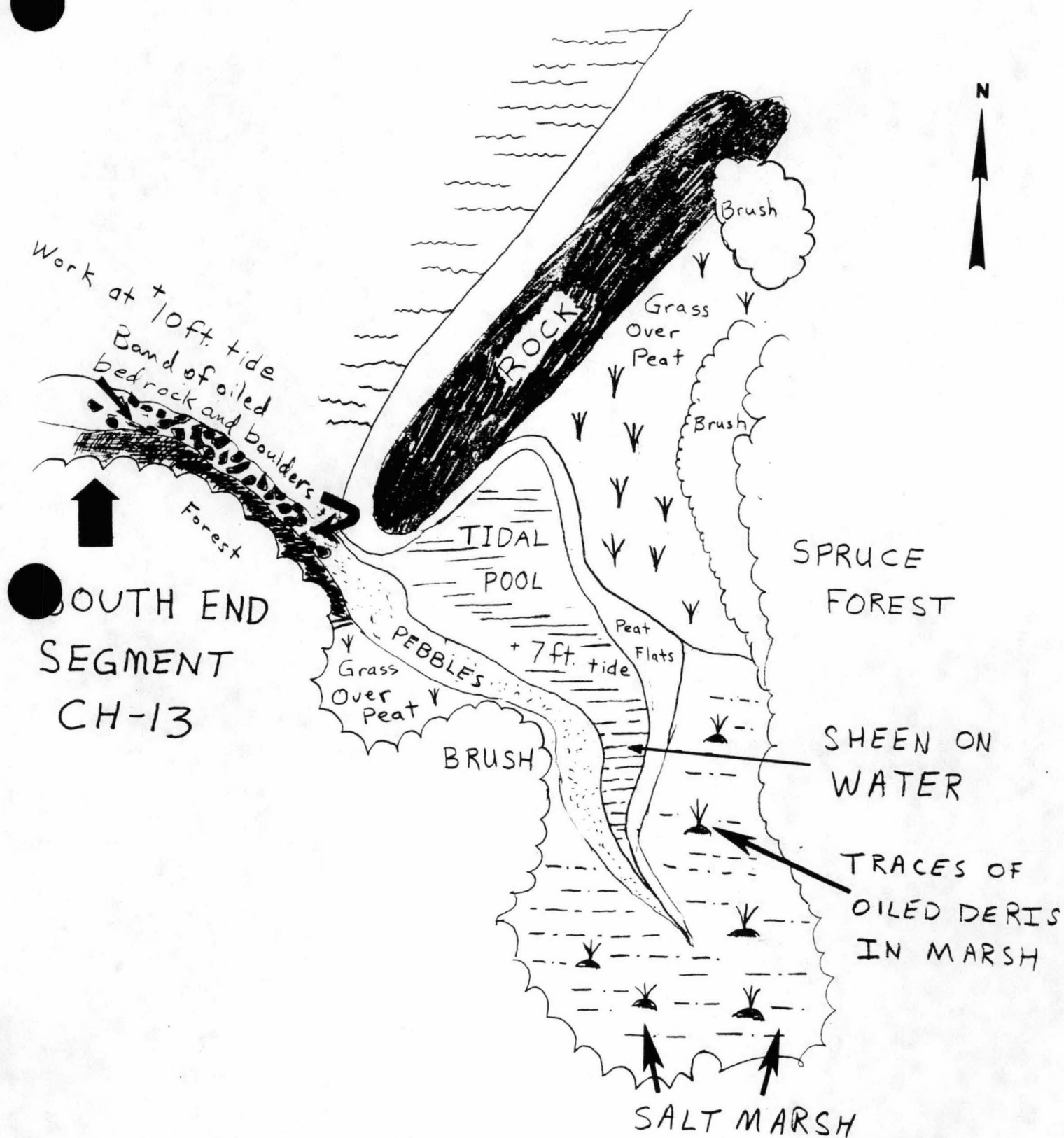
* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

CLEANUP SHORELINE OIL EVALUATIONDate: July 6 89 Time: 21:10Observer: Greg ChaneySurveyed From: (Foot) Boat/Helio/PlaneWeather: (Sun) Cloud/Rain/Snow/FogLOCATIONLOCATION N. Chenega Island SEGMENT NUMBER CH-13LENGTH OF SHORELINE SEGMENT: 450 mACCESS: Foot/Vehicle/(Boat)/(Barge)/(Helio)/Float PlaneSHORELINE:Shoreline Type: SPI/(BEA)/(COV)/(HLD)/STRTSlope: (LANG)/(HANG)/(VER)Wave Exposure: High/Med/(Low)Sediment: B 10% / C 20% / P 20% / G 10% / S 10% / M 10% / R 20%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: 4-7 mSporadic: Y/N % of Segment 30Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 10 cm ^{max. observed}Pooled Oil: —% "Free" Oil: 10% Coated: H 30% / M 30% / L 30%Fresh 50% Mousse —% Tar Formation: 50%Drift Debris Oiled? (Yes)/No (Supra)/(Upper)/Mid/Lower Amount: H/M/(L)

Comments:

This is a very complex environment. Salt marsh has been oiled but any cleanup attempt may cause more problems than it would solve. The oil in this region is very fresh in appearance. Little penetration has occurred due to impermeable substrate. Outer beaches could benefit from hot water flushing at +10 ft. tide. Extensive precautions should be taken to avoid further oiling of marsh area.

CONTINUED FROM LAST PAGE



ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Crank
 LOCATION PREFIX: CH SEG. NO.: 13 LENGTH: 450 (M)
 DATE: 07/06/89 TIME (HHMM): 2100-2245 TIDE HT.: 4.0 + (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

Continuous population - dense on rocky headlands and cove, Moderate along cobble Sparse on point

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

Continuous population - moderate along rock faces - Extensive intercobble bed dense along cove especially at mouth channel between Marsh and cove.

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

Continuous population - moderate along rock faces - Dense on cobble and in cove

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: Peat Bog Marsh Area behind cove with narrow channel opening
Redgrass Beds

CLEANUP PRECAUTIONS: Restrict Access to Salt Marsh (located
on map). Work at mid-tide or higher.

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

BIRDS: Bald Eagle, Terns, Gulls

GENERAL OBSERVATIONS: Numerous empty, unattached mussel and
clam shells in cobble along northern end of segment

(version of 6/27/89)

~~ENVIRONMENTAL~~ CULTURAL RESOURCE EVALUATION

Date July 6 '89 Location Chenega IS. Site Northwest corner

Location Prefix CH Segment # 13 Length _____

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) none Data Source —

Oil conditions/beach visibility sections of heavy oil

Width of beach zone surveyed 50 m Tree fringe surveyed 15m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) CMT'S

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

Shore Profile wide bay with extensive peat deposit

Fresh Water Sources small water seeps

Sea Exposure open exposure to Dangerous Passage

Access/Safety easy access in calm weather

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # SL-5 Frames 31-34

Observer(s) Ludwig

Time survey started 2100 Time survey ended 2245

Cultural resource considerations/restraints:

usual constraints

S.C.A.T. Team 5

Greg Chaney

Segment: CH-13

Date: July 6 1981

Time: 21:30

Tide: 4.0 (ft)

Location: N. Chenaga

Base Map: Seward
B3

X 1936

X 1732

500

34

Turf

S A G E

Islet

Enter

CH-13

432

300

Dang

36

25

26

60

3ard

100

2

60

60

60

skin

CH 12

Shoreline Treatment Process(es) Completed for this Segment

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

Exxon

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

Comments Treatment of segment CH-12 is completeReady for demobilization and deployment to next segmentSignature Robert A. AllenDate: 8/20/89 Time: 3:30 PMPrinted Name Robert A. Allen

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

<u>0</u>	Heavy
<u>1</u>	Medium
<u>25</u>	Light
<u>10</u>	Very Light
<u>64</u>	None
100 %	

Subsurface Oil
☒ Yes ☐ No

COMMENT BELOW

Reassessment

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

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling

<u>0</u>	Heavy
<u>1</u>	Medium
<u>20</u>	Light
<u>10</u>	Very Light
<u>69</u>	None
100 %	

Subsurface Oil
☒ Yes ☐ No

COMMENT BELOW

Reassessment

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

ADEC rep

Comments No gross contamination observed. Oil on shore is light and concentrated in small patches. Some light submergence oil.

Signature Joseph S. SmithDate: 8/20/89 Time: 1:53Printed Name Joseph S. Smith

FOSC rep

Demobilization approved/disapprovedComments no gross contaminationSignature [Signature]Date: 8/20/89 Time: 1:53Printed Name [Name]

COPY: EXXON ADEC FOSC ISCC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island Southeast Block

Includes Shoreline Segments: CH-14, CH-15, CH-16, CH-17

Submitted :

(for Exxon)

Date: 7/18/89

Recommendation
ISCC Approval:

Sharon K. Christopherson

Date: 7/26/89

FOSC Approval:

A. C. Alejandro, by dir

Date: 7/27/89

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

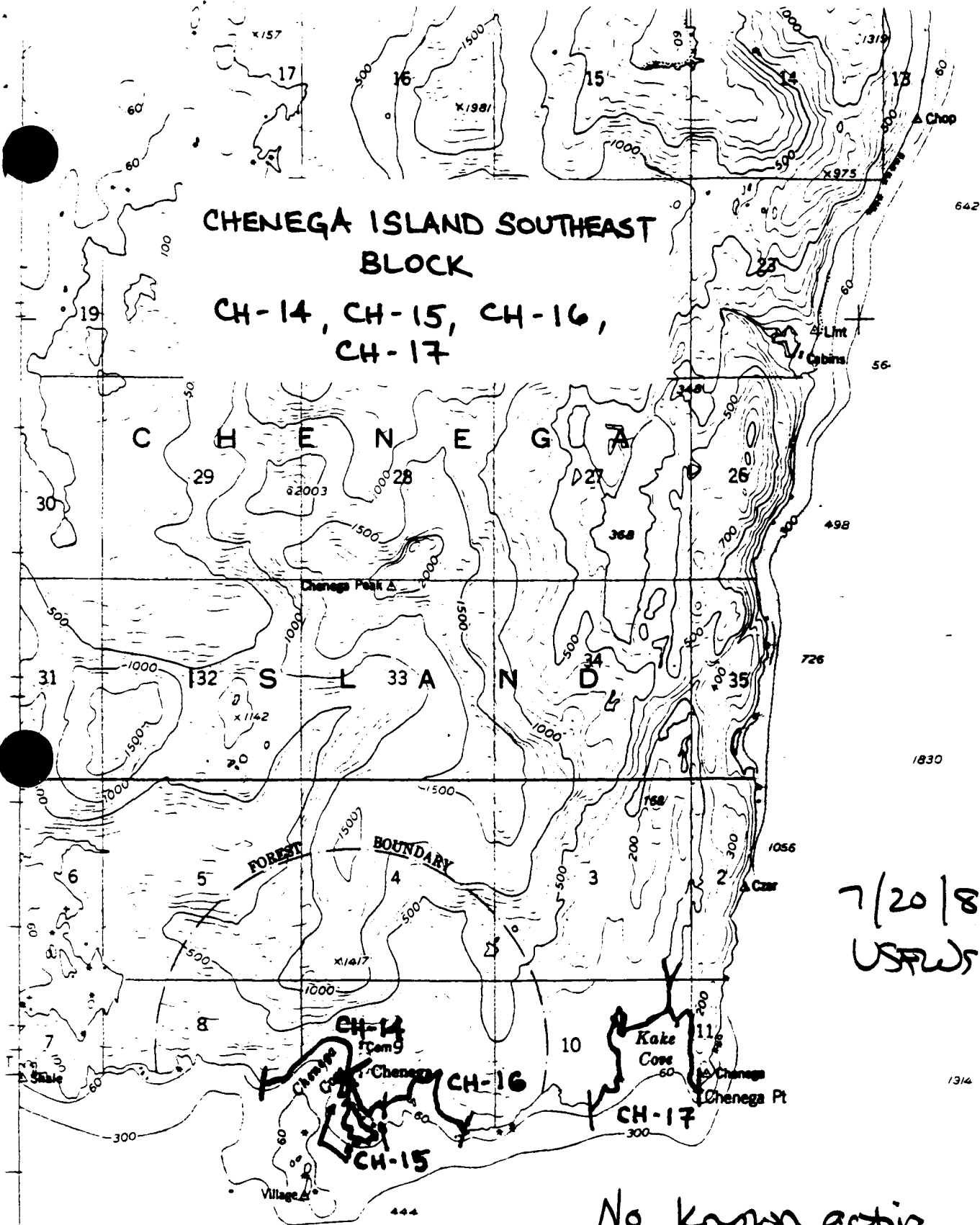
Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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

CHENEGA ISLAND SOUTHEAST
BLOCK

CH-14, CH-15, CH-16,
CH-17



No known active
bald eagle nests in
this area
at this time

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-14

LOCATION: (see enclosed map) Chenega Cove, South Chenega Island

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

Recommended Cleanup Activity(ies):

- No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to ecological and archeological constraints.

If cleanup is conducted:

- Manually remove contaminated drift material (fucus).
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 4: light oil

Class A: resources present

Ecological Constraints (from site survey):

Cleanup not recommended as crew activities and redistribution of oil could cause more damage to biota than present oil.

If cleanup is conducted:

- Avoid mussel beds around small springs (see map).
- Limit access to waterfalls.
- Work at 8ft.tide + or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):

No cleanup recommended due to visibility and fragility of Old Chenega Village remains. If cleanup is conducted inspection by an archaeological monitor is ~~recommended~~ during cleanup of sensitive portions of the segment, and 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.

sc 7/25/89
Required
6/8/89

[Signature]
State Historic Preservation Officer *

Date: 1/20/89

ISCC: Sharon K Christopher

Date: 7/26/89

EXXON: [Signature]

Date: 8/17-26

FOSC: A.C. Alejandro, by dir.

Date: 7/27/89

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

SHORELINE OIL EVALUATION

Date: July 7 89 Time: ~10:00 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Chenega Cove/Chenega Is. SEGMENT NUMBER CH-14

LENGTH OF SHORELINE SEGMENT: 1200 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B40% / C25% / P10% / G5% / S^{trace}-% / M⁻-% / R20%

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type Very few
logs

OIL

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

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

Continuous: Y/N % of Segment 30 Width of Band: 1-2 m

Sporadic: Y/N % of Segment 60

Ave. Observed

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

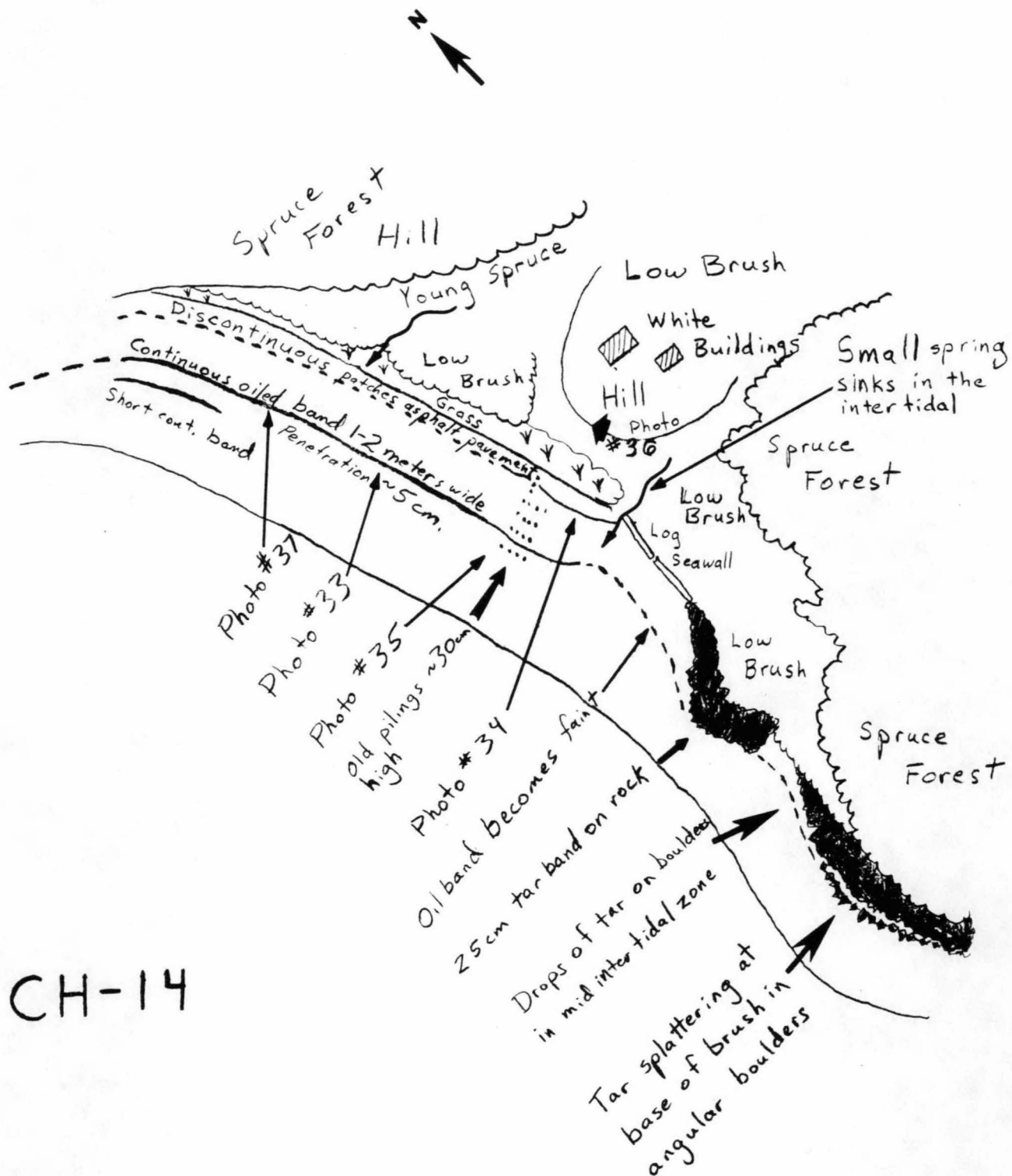
Pooled Oil: -% "Free" Oil: -% Coated: H10% / M20% / L70%

Fresh -% Mousse -% Tar Formation: 100%

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

Comments:

Distinct band of oil at base of hill along beach. Majority of unit has random drips and patches of oil along a former high tide line. Little penetration has occurred due to moist fine grain matrix underlying cobble beach. At high portion of the beach near grass a rough band of asphalt like patches are present.



CH-14

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Frank
LOCATION PREFIX: CH SEG. NO.: 14 LENGTH: 1200 (M)
DATE: 07/07/89 TIME (HHMM): 0830-1300 TIDE HT.: 0 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N ^{Moderate} Dense Y/N Sparse Y/N None Y/N
Contin. ex rocks/boulders
Moderate ex rocks/boulders *Sparse along cobble/gravel* *Dense at Stream Channel*

Mytilus (Mussels): Patchy Y/N Contin. Y/N ^{Moderate} Dense Y/N Sparse Y/N None Y/N
Continuous moderate on boulders *Patchy along boulder/cobble reach with a few large dense beds* *Intergravel beds by stream channel*
Small ridge - more than 80% are less than 2cm long and 1.5cm wide

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Continuous and dense throughout section

Littorina
Patchy Y/N Contin. Y/N ^{Moderate} Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N ^{Moderate} Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Kelp (Laminaria) and Eelgrass Beds. Leather and Sun Stars
Part of deer skull and leg. 2 small waterfalls (the one NE has small fresh water influence on
beach but disappears near a pipe. Small stream below Schoolhouse. Variety of nesting birds
beginning to hatch

CLEANUP PRECAUTIONS: Normal constraints plus crews should avoid
mussel bed by small stream. Limit Access to Waterfalls

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

BIRDS: Hummingbird, Gulls, Murrelets, Oystercatchers

GENERAL OBSERVATIONS: _____

CULTURAL RESOURCE EVALUATION

Date 7/7/89 + 7/11/89 Location SE Chonaga Island Site _____

Location Prefix CH Segment # 14 Length 1200 m

Survey Method:

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

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) SEW-019, SEW-039 Data Source AHRS

Oil conditions/beach visibility very light oil, band of moderate, good visibility

Width of beach zone surveyed 26 m Tree fringe surveyed _____

Cultural resources observed in beach zone (AHRS code) HTI, HTD, FCR, PLG

Cultural resources observed in tree fringe (AHRS code) CBN, PLG, HTD, HTI, CMT, CMY

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

Shore Profile narrow Talus beach at west end, wide low-energy gravel beach

Fresh Water Sources one major stream at NE Chonaga at head of bay
Cove, other smaller streams

Sea Exposure partly open, small islands at Chonaga Cove entrance

Access/Safety easy access, safe anchorage in cove

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 # MM4:13-24 MM2:1-24, MM3:1-18 MM6:2-12

B/W Roll # SL6:2-17 ~~SL6:1-17~~

Observer(s) Madonna Moss, Stephanie Ludwig

Time survey started 5 different times ~~11:00 AM~~ Total 14 1/2 hrs

Cultural resource considerations/restraints:

- * Periodic monitor needed if cleanup is conducted. However, recommendation is no cleanup, based on visibility + vulnerability of cultural resources. Documented impacts to cultural resources have occurred since the oil spill, by persons unknown. This form is a composite of 7/7/89 + 7/11/89 forms.

Bight Δ

FOREST

BOULDER

Discontinuous Patches of oil
Photo #32 Band average 20 cm.
Discontinuous band of oil spattered between boulders
Photo #31 - Trace of random drips on boulders 20 cm high
Photo #29 - Boulder pocket - Drips Oil Along High Tide Line

X1417

S.C.A.T Team 5
Greg Chaney
Segment: CH-14
Date: July 7 89
Time: 8:40
Tide: 0 (ft)
Location: Chenega
Cove, Chenega Is.
Base Map: Seward
B3

Shale

Cem 9
Chen
See Sketch Map

Village Δ

44.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-15

LOCATION: (see enclosed map) South of Chenega Cove on Chenega Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/8/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to light oil, and ecological and archaeological constraints.

If cleanup is conducted:

- Use moderate to high pressure warm to hot water washing on rock and oiled logs.

Priorities Considerations:

Class 4: light oil

Class A: resources present

Ecological Constraints (from site survey):

No cleanup is recommended at this time as biota may suffer greater damage from cleanup than from existing oil. If cleanup occurs, restrict access to intercobble mussel beds and grassy knolls, avoid foot traffic in between islands as it is a sensitive shell fish area; work at +7' tide or higher using booms, sorbent and other appropriate means to protect lower and middle intertidal zones. ~~and contact ADF&G 48 hrs. prior to cleanup as there is a possible eagle nest.~~ NO ACTIVE NEST.

SC 7/25
7/25/89
SC 7/25/89
REQUIRE

Archeological Constraints (from site survey):

~~No cleanup recommended due to visibility and fragility of Old Chenega Village remains. If cleanup is conducted inspection by an archaeological monitor is recommended during cleanup of sensitive portions of the segment, and 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.~~

SC 7/25
REQUIRE

[Signature]
State Historic Preservation Officer *

Date: 7/20/89

ISCC: Sharon K. Christopher

Date: 7/26/89

EXXON: [Signature]

Date: 8/2/89

FOSC: A.C. Alejandro, by del.

Date: 7/27/89

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

SHORELINE OIL EVALUATION

Date: July 8 1988 Time: 10:30 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION South of Chenega Cove

SEGMENT NUMBER CH-15

LENGTH OF SHORELINE SEGMENT: 2350 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 15% / C 10% / P 5% / G 3% / S 2% / M trace% / R 65%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

small amount drift logs & seaweed

OIL

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

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

Continuous: Y/N % of Segment 10 Width of Band: up to 1 m

Sporadic: Y/N % of Segment 80

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 2-3 cm

Pooled Oil: —% "Free" Oil: —% Coated: H 5% / M 30% / L 65%

Fresh —% Mousse —% Tar Formation: 100%

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

Comments:

Majority of segment has traces of tar however oiling is not extensive and appears to have remained on the surface.
Most concentrated oil has remained on the beach on the north border of the segment. Access to the channel between the small island and the main island of Chenega is restricted to high tide only.
Cleanup may not be a high priority however if conducted handwands with local use of vacuum pumps and sorbents is recommended. Extra care should be taken to work at high tides to avoid damaging the lower intertidal.



2 thin bands ~ 2 cm wide tar along former high tide line

Discontinuous splatters along high tide line
50% coverage within 1 meter band on cobble & boulder beach
random drops to lower intertidal zone

North End
CH-15

Discontinuous
band of tar drips
along former tide line

4 distinct bands
of oil in rock cut
2 to 6 cm wide

Oil line on rock
face ~ 5 cm wide

Discontinuous band
of drips along former
high tide line

Occasional dripline and
splattering on bedrock face

Pocket beach with light splattering
of cobbles. 20 cm pit. No pen.
observed.

Trace of oil on pocket beach
2 bands ~ 5 cm. wide

Random drips and splatters along rock faces
but distinct band was not observed

Tar band tapers to 0.5 meters
with ~ 50% coverage

Tar band
tapers
out

Shallow sea caves
Vertical bedding in rock
Low Round Rock

EAST EDGE
CH-15

20 cm pit no oil observed
Tar ball and random splatters
Photo #6

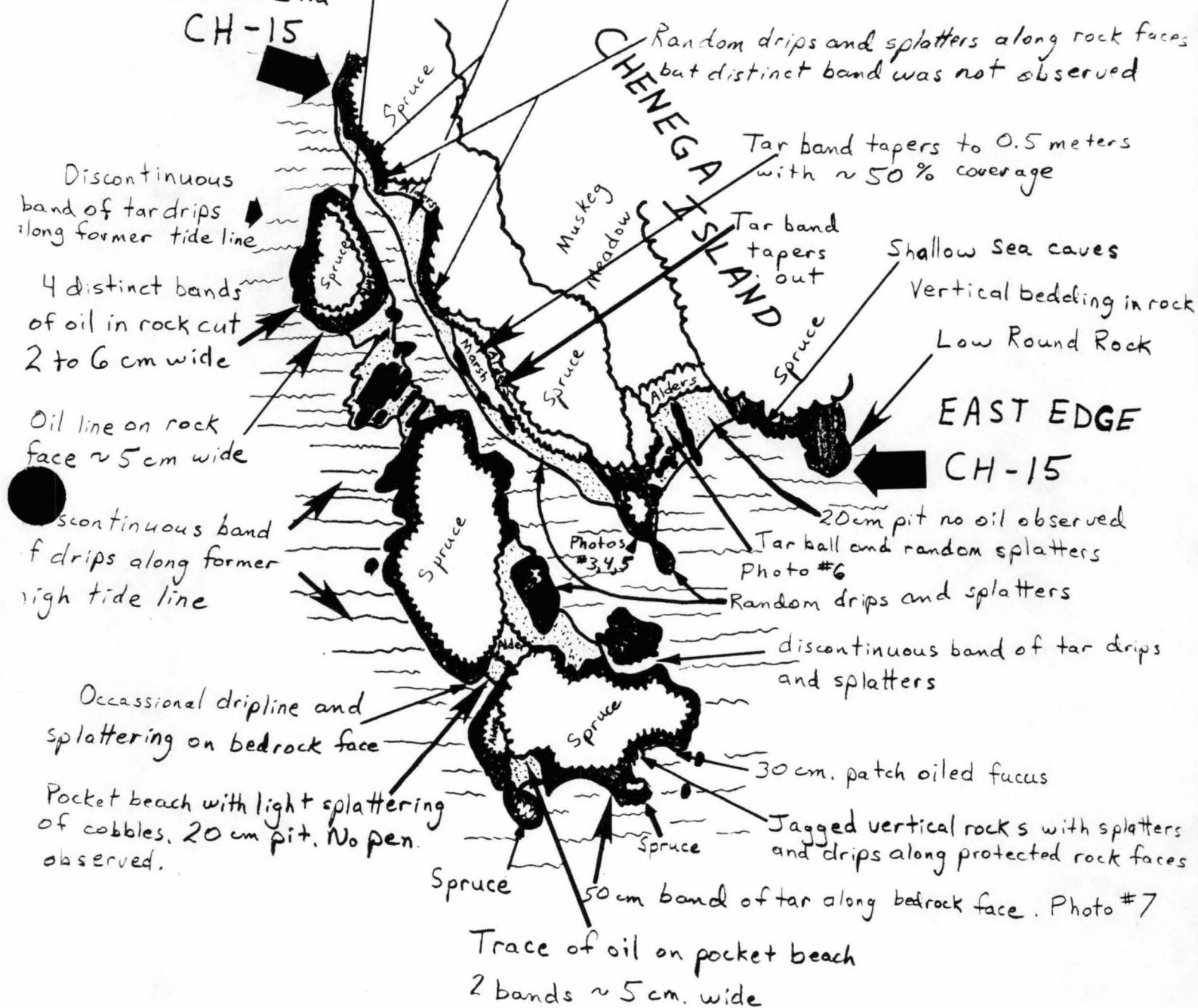
Random drips and splatters

discontinuous band of tar drips
and splatters

30 cm. patch oiled fucus

Jagged vertical rocks with splatters
and drips along protected rock faces

50 cm band of tar along bedrock face. Photo #7



ECOLOGICAL EVALUATION

LOCATION: Chesaga Island SITE: The small island OBSERVER: Crank
 LOCATION PREFIX: CH SEG. NO.: 15 LENGTH: 2350 (total seg) (M)
 DATE: 07/09/89 TIME (HHMM): 1020-1445 TIDE HT.: Ø ft
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand ^{feet} Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense ^{Moderate} Y/N Sparse Y/N None Y/N
 Intertidal with moderate to dense concentrations along headlands & vertical rock faces.
Patchy and sparse on beaches. Small Port Bay covered with Fucus
Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Extensive intercobble bed on beaches and ^{spits} Sparse along headlands and vertical rock faces.
Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense ^{Moderate} Y/N Sparse Y/N None Y/N

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Nacella present in a few dense patches

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

OTHER OBSERVATIONS: Kelp (Laminaria) Seds along west side. Eelgrass beds in channel. Crabs abundant. Other Ssd almost solid crab shells.

CLEANUP PRECAUTIONS: Suggest no clean-up activity at this time so biota may suffer greater ecological damage from clean-up than from existing oil. If cleaned Restrict access to intercobble mussel beds; grassy knolls, work at mid tide or higher. Limit access to channel. Possible Eagle Nest - Contaminated?

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

BIRDS: Bald Eagle flushed from interior by Archeologist - possible nest in could not locate.
Hummingbird, Raven, juncos, crows, crow, Grouse with 2 chicks, Duck with 5 ducklings.
 GENERAL OBSERVATIONS: —

ECOLOGICAL EVALUATION

LOCATION: Chenega Sound SITE: Surfside OBSERVER: Crank

LOCATION PREFIX: CH SEG. NO.: 15 LENGTH: 2350 (total run) (M)

DATE: 07/08/89 TIME (HHMM): 0945 TIDE HT.: _____ (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N ^{Moderate} Sparse Y/N None Y/N

Continuous population with concentrations varying dense to sparse. A few large patches on rocks.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N ^{Moderate} Sparse Y/N None Y/N

Continuous population dense on beaches is intercobble/gravel beds, moderate to sparse along boulders and headlands.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N ^{Moderate} Sparse Y/N None Y/N

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: Early morning a school of Pinkies came into bay.
Channel has extensive eelgrass, clam and mussel beds - It is dug in
in lower intertidal - Lots of clam shells on beach. Shore & rock crabs, Seabirds

CLEANUP PRECAUTIONS: Due to the small amount of oiling, cleanup
procedures may cause greater ecological damage than benefit. If
restrict foot traffic from intertidal/gravel/cobble mounds, work at mid-tide or higher -
LITZ and MITZ. Limit access to channel.

MAMMALS: Otters 1 Harbor Seals _____ Sea Lions _____ Whales _____
 Other Beaver trail and fresh scat, Deer on each side of
to Chugach still shedding winter coat

BIRDS: 2-3 birds seen in bay, mostly in the water

GENERAL OBSERVATIONS: _____

(Version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 7/11/89 Location SEWARD B-3 quad Site southeast Cherega Cove

Location Prefix CH Segment # 15 Length 2350

Survey Method:

Air (A - indicate on map) Boat 10% (A - indicate on map)

Ground 90% (G - indicate on map)

Known cultural resources (AHRS #) 49-SEW-19 Data Source AHRS, delaguerre

Oil conditions/beach visibility very light oil, good visibility

Width of beach zone surveyed 20 m Tree fringe surveyed 150 m

Cultural resources observed in beach zone (AHRS code) HT1, HTD, PL6, SHP

Cultural resources observed in tree fringe (AHRS code) CBN, PL6, HT1, HTD, CMT
CMY, RCS, SHP, FCR

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

Shore Profile A real mix: gravel pocket cove to steep near-vertical rock shoreline

Fresh Water Sources minimal

Sea Exposure protected

Access/Safety poor - channel between islands + Cherega Island gets shallow

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 # MM3 F 19-24; 1 Frames

MM4 F 1-24; MM5 1-15; MM6 F-13

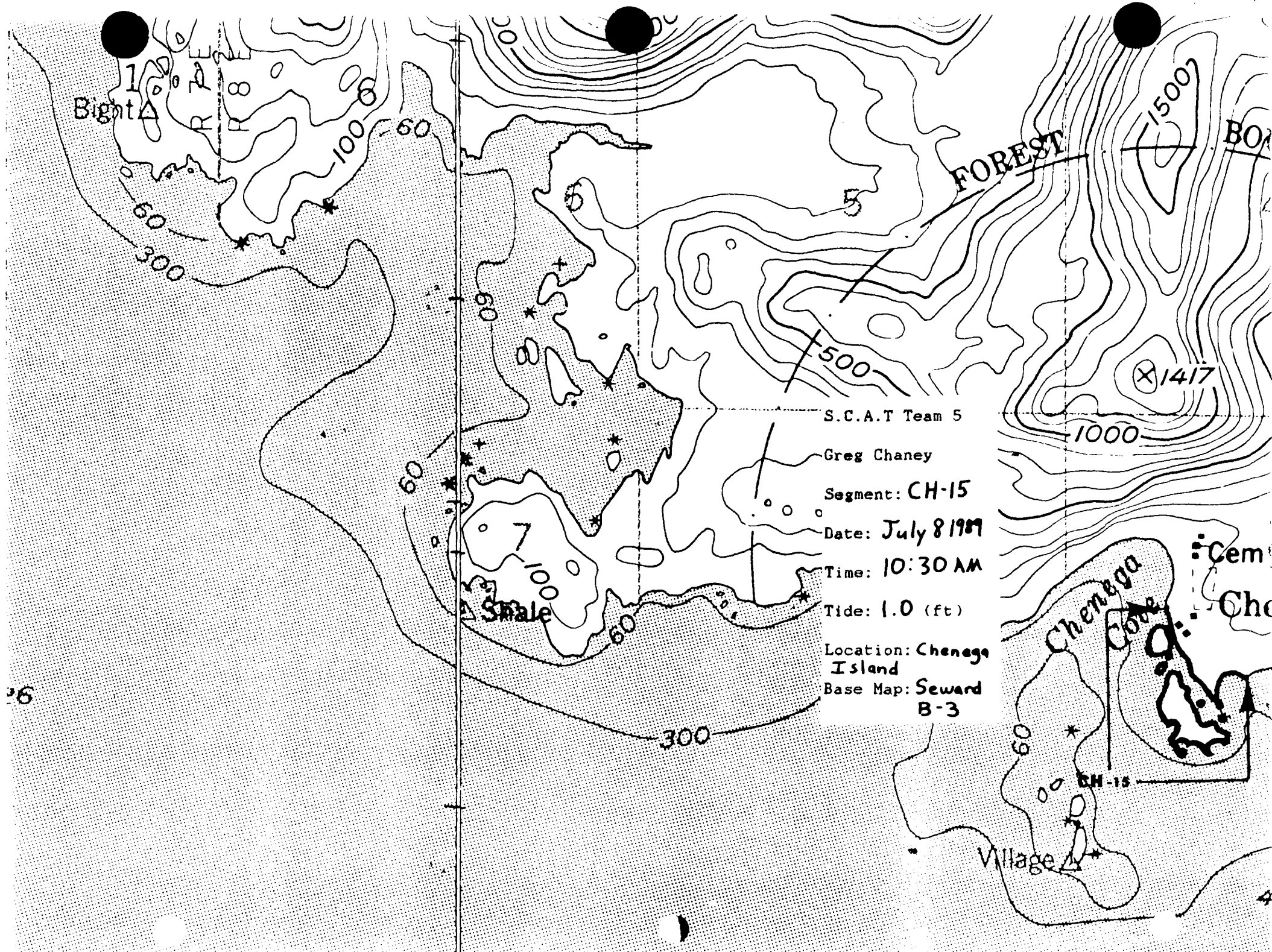
Observer(s) MMoss

Time survey started 7/8 1000-1500 Time survey ended total 14 hrs

7/9 1000-1230, 1330-2010 ←

Cultural resource considerations/restraints: I recommend that no clean-up occur because vulnerability + visibility of cultural resources. Personnel from clean-up crews or support vessels should not be able to land at all.

Cherega village is a significant historic site + with associated activities on nearby islands. This is also private property. Even if clean-up occurs in vicinity of this site, we should consider sending in an archaeological monitor in addition to representative of Cherega Native Corporation.



S.C.A.T Team 5

Greg Chaney

Segment: CH-15

Date: July 8 1989

Time: 10:30 AM

Tide: 1.0 (ft)

Location: Chenega
Island

Base Map: Seward
B-3

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-16

LOCATION: (see enclosed map) Small Bay east of Chenega Cove on
Chenega Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/9/89

Recommended Cleanup Activity(ies):

- Manually harvest dying fucus.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches and/or manually break up the tar/asphalt pavement.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 2-4: heavy oil on eastern edge with light oil on most of segment.

Class B: resources absent

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Restrict foot traffic on intergravel/cobble mussel beds and peat area. Restrict access to stream banks, this contains pink salmon. ~~Contact ADF&G and RAT 48 hrs prior to cleanup.~~ NOT CATALOGED. S 7/25/89 10 89226

Archeological Constraints (from site survey):

No ~~access~~ to Old Chenega Village 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.

[Signature]
State Historic Preservation Officer *

Date: July 20, 1989

ISCC: Sharon K Christopher

Date: 7/26/89

EXXON: [Signature]

Date: 8907-26

FOSC: A.C. Cleland, by dir.

Date: 7/27/89

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

SHORELINE OIL EVALUATION

Date: July 10, 87 Time: 12:00 noon

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION SE Chenega Island

SEGMENT NUMBER CH-16

LENGTH OF SHORELINE SEGMENT: 1600 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B10% / C25% / P15% / G15% / S5% / M-% / R30%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type dead fucus

OIL

Degree of Oiling:

one location
→ Heavy/Moderate/Light/No Oil/Unobserved

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

8 max.

Continuous: Y/N % of Segment 10 Width of Band: 1-2 ave. m

Sporadic: Y/N % of Segment 85

Max. Observed

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

Pooled Oil: —% "Free" Oil: —% Coated: H10% / M30% / L60%

Fresh —% Mousse Trace% Tar Formation: 100%

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

Comments:

Majority of segment has experienced discontinuous oiling. Light oiling is characteristic of the majority of segment but on eastern edge a small pocket of asphalt pavement was located which was 8 meters wide. Most oil observed consisted of tar and seemed unlikely to cause reoiling in the future. In some locations bits of dead oiled fucus have washed up on the beach. Although penetration has been restricted to the surface 5cm in most locations, tar is becoming cohesive near the surface.

Discontinuous band of asphalt tar pavement $\sim$ 1 to 2 meters wide. Random drops over most of the beach.

Oil band was not observed in stream channel or associated grass lands

- Tar band tapers out
- Discontinuous band of random splatters at cliff base on boulders

2 discontinuous bands of tar on rock face ~ 20 cm high. Patches heavier at times.

Continuous band oil 1 meter high on vertical rock faces. Pockets up to 3 meters wide in boulders
Photo #12

Oil band 3 to 4 meters wide Photo #13

~ Pocket oil 4meters in boulders

Pocket beach asphalt pavement ~ 8
meters wide. Penetration ~ 5 cm.

Oil becomes discontinuous and patchy
Band of tar ~ 75 cm on rock face

2 EAST EDGE CH-16

20 cm. pit,
buried oil located
little oil 0-5 cm
oiled granuals 5-10 cm
No oil obs. 10-20 cm

Granular & pebble beach
30 cm. pit, no oil observed

Random splattering
of oil on boulders at
former high tide line
little penetration.

Trace of dead oiled
fucus on high tide
line

~10 cm. band
discontinuous tar
dripline on large
beach boulders

10-40 cm band
discontinuous oiled
fucus & cobbles
5 cm. pen.

Omni
Barge
may
prove
effective
on this
shore

~2 meter wide
Continuous band oil
with traces of mousse
at boulder bases

WEST
EDGE CH-16

2 EAST EDGE CH-16

ECOLOGICAL EVALUATION

LOCATION: Chenega Island SITE: _____ OBSERVER: Crank

LOCATION PREFIX: CH SEG. NO.: 14 LENGTH: _____ (M)

DATE: 07/10/89 TIME (HHMM): 1015 TIDE HT.: +3 feet

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Very rocky area with population concentrated in cracks and crevices. In pockets dense - moderate to sparse patches.

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

Extensive intergravel mussel bed by stream and at east end of segment. or head area.

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

Continuous population with dense to moderate concentrations

Littorina

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

Spaced to moderate or patches - dense on head area

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

Spaced to moderate or patches - dense on head area

OTHER OBSERVATIONS: ^{small} Pink Salmon Stream (confined by logjam) with small pools

Many small tide pools

CLEANUP PRECAUTIONS: If cleaned work at +9.0' or higher tide - protecting LITZ & MITZ.

Restrict foot traffic on intergravel mussel beds and reef area. Restrict stream access.

MAMMALS: Otters 1 Harbor Seals 1 ^{Seal Pup on Island NW of Chenega} Sea Lions 3 Whales _____

BIRDS: Oystercatcher, Bald Eagle, Crow, Raven, Hummingbird

GENERAL OBSERVATIONS: _____

(version of 4/29/81)

CULTURAL RESOURCE EVALUATION

Date 7/10/89 Location SEWARD B-3 Site bight on Southeast Chenega Island

Location Prefix CH Segment # 16 Length 1600 m

Survey Method:

Air (A - indicate on map) Boat 20% (A - indicate on map)

Ground 80% (G - indicate on map)

Known cultural resources (AHRS #) not in this segment Data Source

Oil conditions/beach visibility oil is light-moderate, visibility still good

Width of beach zone surveyed up to 80 m Tree fringe surveyed up to 100 m

Cultural resources observed in beach zone (AHRS code)

Cultural resources observed in tree fringe (AHRS code) CMT

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

Shore Profile mosaic of pocket beaches between headlands + good-sized stream

Fresh Water Sources stream at head of cove may be anadromous, smaller rivulet

Sea Exposure some swells from Knight Island Passage

Access/Safety moderate

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # Frames

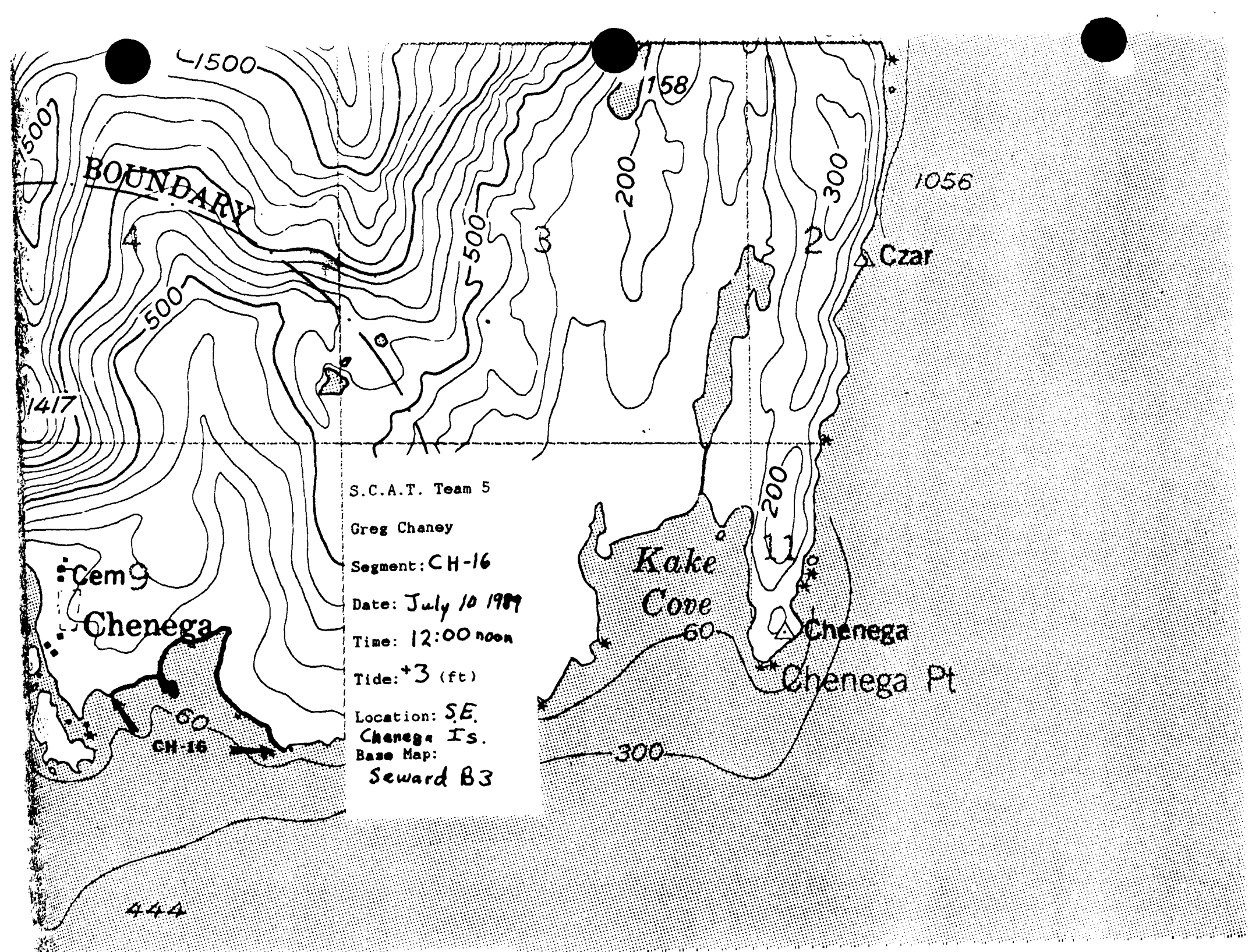
B/W Roll # MM 5 MM 6 Frames 17-24 3 1

Observer(s) M. Moss

Time survey started 1040 Time survey ended 1500

Cultural resource considerations/restraints:

Standard Constraints - Keep clean-up crews away from 49-SEW-19



1500

158

BOUNDARY

1056

200

300

Czar

500

500

1417

S.C.A.T. Team 5

Greg Chaney

Segment: CH-16

Date: July 10 1989

Time: 12:00 noon

Tide: +3 (ft)

Location: S.E.

Chenega Is.

Base Map:

Seward B3

Cem 9

Chenega

60
CH-16

Kake
Cove

60

Chenega

Chenega Pt

300

444

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT Ch-17

LOCATION: (see enclosed map) Kake Cove, Southeast Chenega

Island

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/11/89

Recommended Cleanup Activity(ies):

No cleanup, recommended at this time (subject to FOSC reassessment at a later date) due to light oil, moderate wave exposure, and ecological constraints.

If cleanup is conducted:

- Use moderate to high pressure warm to hot water washing on rock. Take precautions to protect anadromous fish streams.
- Use other approved methods as appropriate.

Priorities Considerations:

Ecological Constraints (from site survey):

No cleanup recommended at this time as procedures may cause more damage to biota than present oil.

If cleanup is conducted:

Work at mid tide+ or take appropriate measures to protect lower intertidal zone; restrict foot traffic on banks of both streams, tidal channels, and intergravel mussel beds; ^{contact} ADF&G and RAT 48 hrs prior to cleanup due to presence of anadromous fish streams; ^{PROHIBIT} limit access to marshlands; and do not disturb rock terraces with oyster catcher chick.

Archeological Constraints (from site survey):

^{7/25/89}
⁵⁴⁵⁷⁻²⁶ If cleanup is conducted, ~~inspection by an archaeological monitor during cleanup of northern third of segment is required.~~ 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.

[Signature]
State Historic Preservation Officer *

Date: July 30 1989

ISCC: Sharon K. Christopher

Date: 7/26/89

EXXON: [Signature]

Date: 87-07-26

FOSC: A. C. Alejandro, by dir.

Date: 7/27/89

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

SHORELINE OIL EVALUATION

Date: July 11/89 Time: 12:30 noon

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Kake Cove, Chenega Is.

SEGMENT NUMBER CH-17

LENGTH OF SHORELINE SEGMENT: 3150 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 5% / C 10% / P 5% / G 10% / S 10% / M —%^{trace} / R 50%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type seaweed & drift
wood

OIL

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

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

Continuous: Y/N % of Segment 5% Width of Band: 3 to 25 cm

Sporadic: Y/N % of Segment 20%

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

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

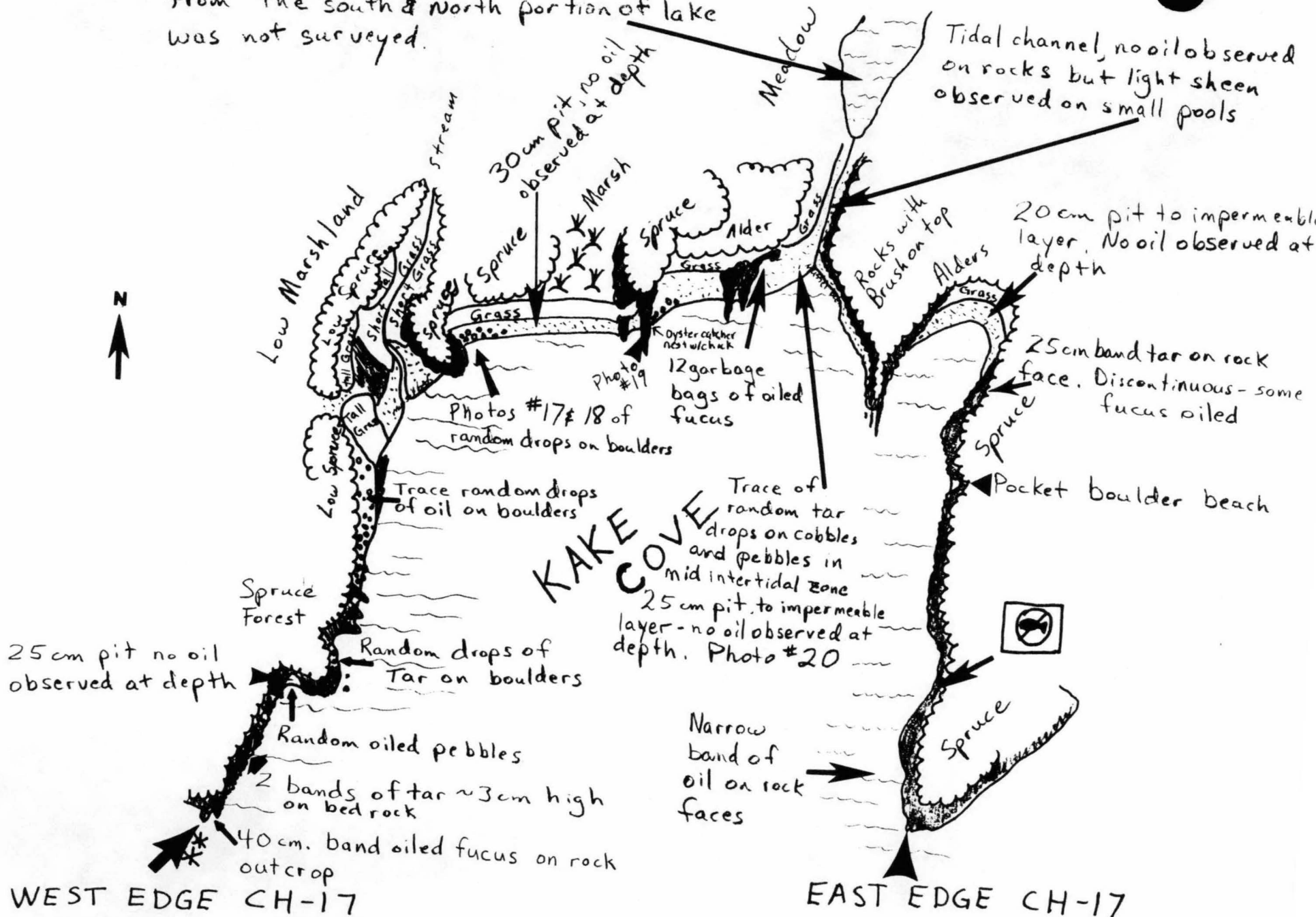
Fresh —% Mousse —% Tar Formation: 100%

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

Comments:

Kake Cove has traces of light oiling. The only significant amount of oil noted was observed in narrow bands on bedrock faces. Random drops of oil were observed on isolated cobbles in mid to high intertidal zone. The narrow bands of tar on bedrock faces could be treated with hot water at high pressure at +8 ft tide but this treatment may cause a risk to the anadromous fish streams in Kake Cove. Other than removal, no technique known to me is suitable for treatment of random drops of tar on pebbles and cobbles in this sensitive environment.

No sheen observed on lake but wind was from the south & north portion of lake was not surveyed.



ECOLOGICAL EVALUATION

LOCATION: Cherega Island SITE: _____ OBSERVER: Crank

LOCATION PREFIX: CH SEG. NO.: 17 LENGTH: 3150 (M)

DATE: 07/11/89 TIME (HHMM): 1000 TIDE HT.: +3 Feet (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

turning on pocket reaches continuous and dense to sparse along middle of, 3rd line, rock level and low area

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

along and beds by both streams. Dense to Moderate patches on headlands

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

continuous with dense to moderate concentrations.

Littorina

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

moorcroft: Nucella also present in sparse numbers

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

OTHER OBSERVATIONS: Twelve full garbage sacks, in a group, just beyond the intertidal. Eelgrass and Kelp beds. Clam bed

CLEANUP PRECAUTIONS: At this time, suggest clean-up not recommended as clean up may cause more damage to biota than present oil. If clean-

up is done, foot traffic on beach, tidal flat of both streams intergranular mussel bed and clam bed. Work at +1/2 tide or higher

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

Other _____

BIRDS: Pair of oystercatchers chick, Bald Eagle, Crows

GENERAL OBSERVATIONS: Marshland has high potential as bird feeding ground.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 7/11/89 Location SEWARD B-3 quad Site Southwest Corner Chenega Island

Location Prefix CH Segment # 17 Length 3150 m

Survey Method:

Air (A - indicate on map) Boat 40% (A - indicate on map)

Ground 60% (G - indicate on map)

Known cultural resources (AHRS #) 49-SEW-68 Data Source delaguna 1956:3 ^{AHRS}

Oil conditions/beach visibility oil is light - good visibility

Width of beach zone surveyed up to 75 m Tree fringe surveyed up to 75 m

Cultural resources observed in beach zone (AHRS code) RCS, HAD, hammerstone (?) ^{FCR}

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

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

Shore Profile broad gravel beaches punctuated by bedrock outcrops / enclosed by steep rocky shoreline at West + east ends of segment

Fresh Water Sources anonymous stream w/ lake, 1 active creek, 1 dry creek bed

Sea Exposure some protection from Chenega Point peninsula, open to some Knight Is. Passage swell

Access/Safety good

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

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

Photos: Color Roll # Frames

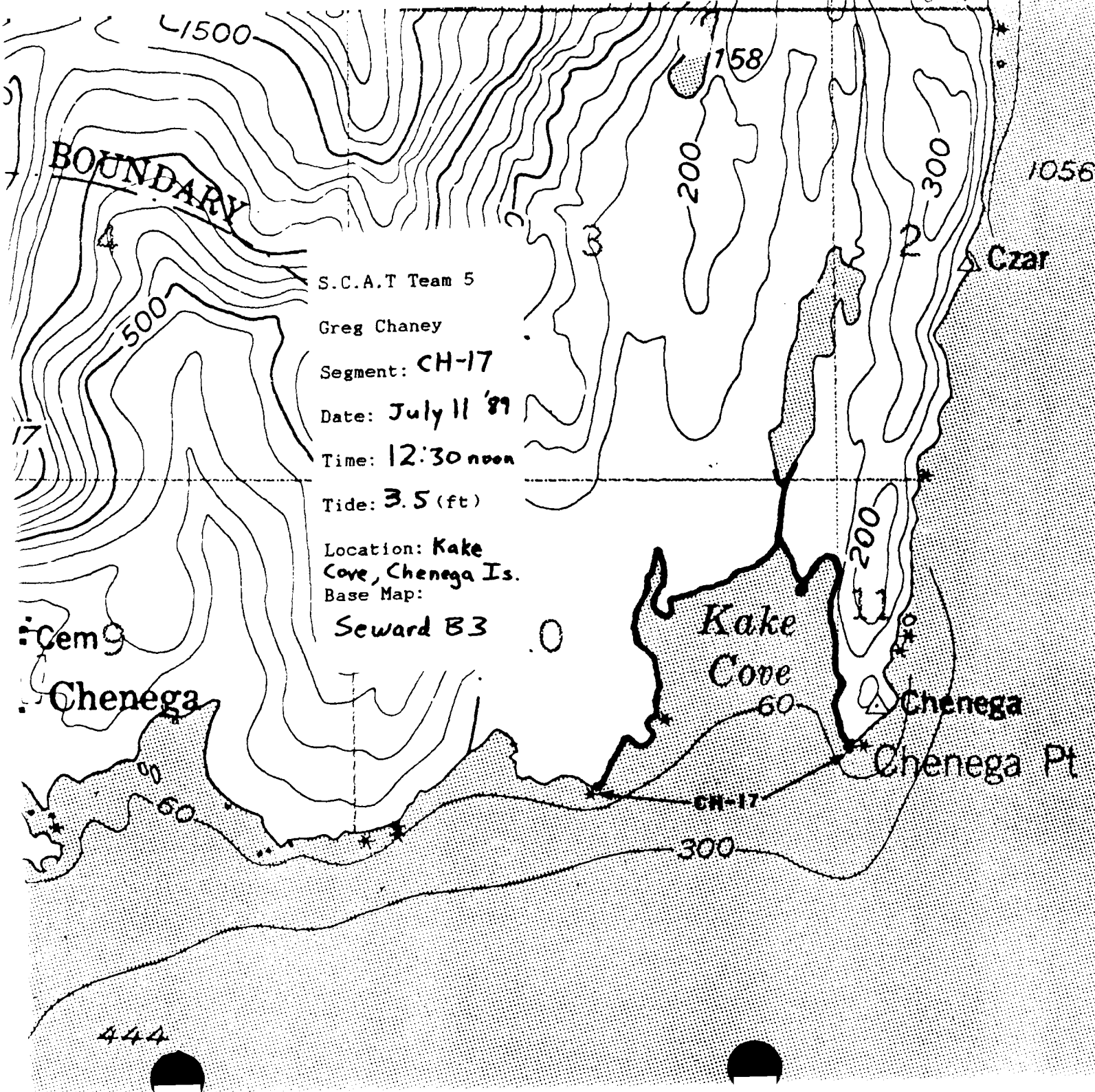
B/W Roll # MM6 Frames 15-22

Observer(s) MMSS

Time survey started 1115-1500; 1600-1800 Time survey ended total hrs.: 5 3/4

Cultural resource considerations/restraints:

Due to presence of 49-SEW-68 where delaguna collected artifacts in the intertidal zone (exact location unknown), evidence of substantial Native use of area, and the presence of the largest salmon-producing stream on Chenega Island, an archaeological monitor should be present during any clean-up operation along this segment



S.C.A.T Team 5

Greg Chaney

Segment: CH-17

Date: July 11 '89

Time: 12:30 noon

Tide: 3.5 (ft)

Location: Kake
Cove, Chenega Is.
Base Map:

Seward B3

SEG C/H-16 INSPECTION # 1

SEGMENT

DATE 8/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☒Non-mechanical Beach Crew☐

Water deluge

☐

Other

Exxon

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

Comments Treatment of segment C/H-16 is complete.
Ready for Demobilization and Deployment to next areaSignature Michael J. Tydings Date: 8/19/89 Time: 3:20 PMPrinted Name Michael J. TYDINGS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling0
2
5
10
299/93
100 %Heavy
Medium
Light
Very Light
None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling0
2
5
10
92
100 %Heavy
Medium
Light
Very Light
None

Subsurface Oil

☐

Yes

☒

No

COMMENT BELOW

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

Subsurface Oil

☐

Yes

☒

No

COMMENT BELOW

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments Some light oil -> medium oil found under boulders on grave 1
and cobbles - salmon running up streamalso jumping in baySignature Albert E. EberDate: 8/19/89 Time: 1526Printed Name Albert E. Eber

FOSC rep

Demobilization approved/disapprovedComments NO CROSS CONTAMINATIONSignature DonDate: 8/19/89 Time: 1530Printed Name Don

COPY: EXXON ADEC FOSC ISCC

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA ISLAND SOUTH BLOCK

Includes Shoreline Segments: CH-18, CH-19, CH-20

Submitted :

(for Exxon)

Date: 8-7-89

ISCC ~~Approval:~~ Recommended

Sharon K. Christopher

-Date: 8-4-89

FOSC Approval:

Q-57066

Date: 8-5-85

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:

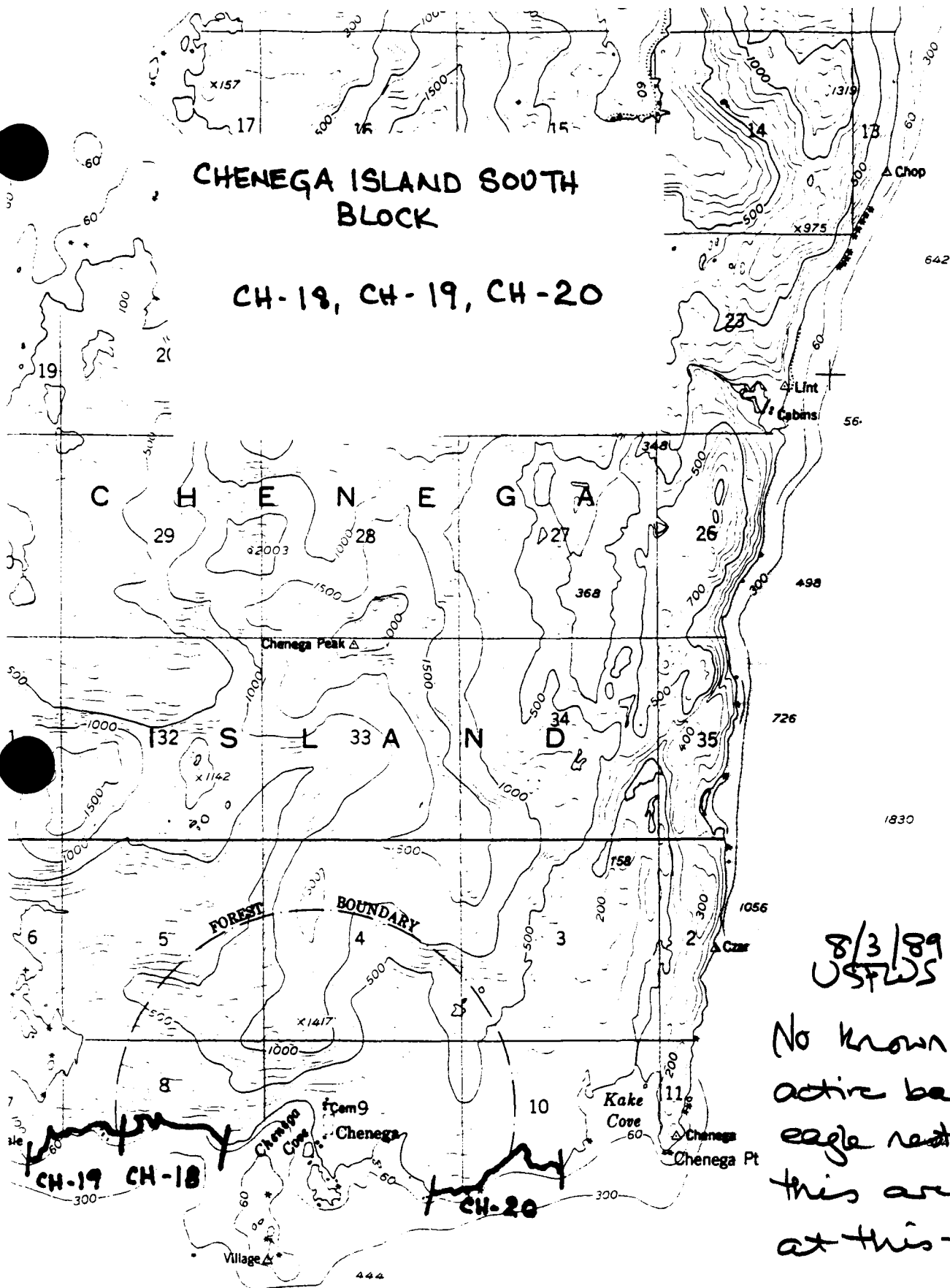
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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

ACA
8/5

CHENEGA ISLAND SOUTH BLOCK

CH-18, CH-19, CH-20



8/3/89
USFWS

No known
active bald
eagle nests in
this area
at this time

******* SCOT NOTE *******

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

READ THIS FIRST

**SHORELINE SEGMENTS WITHIN CHENEGA ISLAND SOUTH BLOCK
ARE ON LANDS OWNED BY CHENEGA VILLAGE CORPORATION.
PERMIT NO ACCESS TO UPLAND AREAS AT ANY TIME.**

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/23/89

SHORELINE SEGMENT CH-18

LOCATION: (see enclosed map) Chenega Island - South end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/17/89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to light oil moderate wave exposure and ecological constraints.

Priorities Considerations:

Class 5: Very light oil.

Class A: Resources present including potential anadromous fish stream, active eagle nest, and subsistence use.

Ecological Constraints (from site survey):

This is a very sensitive and diverse ecological area. The lower intertidal zone is healthy and lush. The area has a high potential for natural cleaning.

Archeological Constraints (from site survey):

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


State Historic Preservation Officer *

Date: 7-31-89

ISCC: Sharon K. Christopher

Date: 8-4-89

EXXON: L. Atkinson

Date: August 4, 1989

FOSC: C. E. Robbin

Date: 8-5-89

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

SHORELINE OIL EVALUATION

Date: July 15, 89 Time: 06:45 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION S. Chenega Is.

SEGMENT NUMBER CH-18

LENGTH OF SHORELINE SEGMENT: 1150 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B 5 % / C 5 % / P 5 % / G 5 % / S 5 % / M - % / R 65 %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type Small amount logs & seaweed

OIL

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

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

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

Sporadic: Y/N % of Segment 60 %

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

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

Fresh - % Mousse - % Tar Formation: 100 %

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

Comments:

The segment is characterized by a trace of oil deposited along a former high tide line. This drip line of tar is discontinuous and ~20 cm wide but much lighter in many locations. At approximately the 12 foot tide level on the small stream mouth the band of oil is apparent. Although the tar was observed adjacent to the stream, no tar was observed in the active stream bed.



Discontinuous band tar drops and small patches at ~12 ft. tide level

Small spring dry in intertidal zone
Small pond

ACTIVE
EAGLE'S
NEST

low spruce

10-20 cm dripline

WEST EDGE

CH-18

low round rocks

SPRUCE
FOREST

stream

No
Oil
observed

Band of discontinuous tar at base of boulders. ~20 cm. wide. Oil noted near stream channel

Random boulders with dripline of tar

Pocket Boulder Beach

10 cm band oil on headland

EAST EDGE

CH-18

20 cm band dripline tar on rock face.

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: South Chenequa Island OBSERVER: S.L. Dearn

LOCATION PREFIX: _____ SEG. NO.: CH-18 LENGTH: 1150 (M)

DATE: 07/15/89 TIME (HHMM): 0645-0945 TIDE HT.: 1.0 - 5.0 ft

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

On rocky headlands & vertical walls - Fucus forms a ^{dense} continuous band. It is patchy on cobbles on beach area. Drift Fucus present up on beach at high tide mark - not oiled. Some shallow subtidal seaweeds observed (large blades of Kelp, Agarum). Mats of green algae in intertidal zone.

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

Several small patches in crevices of large boulders/rocks. High numbers of dead mussels ~ 75%.

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

Patchy & dense on cobbles on beach. Dense, continuous bands on vertical rock walls. Many larger barnacles (B. cariosus) are dead ~ 80%. Most small barnacles (B. glandula) are alive.

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N Many Nucella present

Widely scattered across beach, some small dense aggregations in crevices under Fucus.

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

Under Fucus blades and on bare rocks. Many small individuals probably recently settled.

OTHER OBSERVATIONS: ^{Deer tracks on beach} ^{are more} ~~pre-tide pool w/ many organisms - White urchins, sculpin, coralline algae, fan worm~~ ^{Many 20-30 cm starfish} ~~Surfgrass/Scirpus in some tide pools & in sparse patches in shallow subtidal zone.~~ ^{(at least 15) - these seem to be gathered in one particular area - reason for this is unknown however} ~~do not appear to be very healthy. Several other starfish (2 different kinds) noted - one of which is apparently dying.~~ ^{1 eagle nest at W end of segment (SEE MAP). Two potential anadromous fish streams located}

CLEANUP PRECAUTIONS: Care must be taken to avoid contamination of streams, especially if appropriate personnel designate them as anadromous fish streams. Foot traffic on beach area in Fucus zone should be limited to avoid trampling this seaweed which is used as a refuge for many organisms. Also minimize ~~much as possible the amount of oily runoff from any cleanup that may occur.~~ ^{seen offshore} Maintain a distance of at least 300 ft from headland where eagle nest is located.

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

BIRDS: 1 mating pair of Bald Eagles w/ nest. Several Black-legged Kittiwakes 1-2 Rufous Hummingbirds. 10-12 fledgling waterbirds - probably grebes.

GENERAL OBSERVATIONS: Segment has little to no oiling. Two streams are present that have low potential as anadromous fish streams (pending assessment by ADFG). Eagle nest is present within segment. Several small eelgrass beds are located in the shallow subtidal areas. Fucus band refuges many different organisms. Overall segment has moderate organism diversity & several ecologically sensitive areas.

Other observations cont. - A low potential anadromous fish stream is located at Western end of segment. This stream is currently dry - but does enter into intertidal zone, therefore has potential for being a salmon spawning area (particularly pink salmon). ^{streambed} is running & has potential for a salmon spawning area. These need to be evaluated by appropriate personnel (ADFG fishery biologist) & charted if necessary.

CULTURAL RESOURCE EVALUATION

Date JULY 15, 1989 Location CHENECA IS. site S.W. Portion

Location Prefix CH Segment # CH-18 Length 1150 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (40%) (A - indicate on map)
Ground X (60%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____

Oil conditions/beach visibility Light / Almost total

Width of beach zone surveyed 10-60 m Tree fringe ^{VARIABLE} surveyed 0-35 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT (see notes p. 42-4)

General observations justifying survey method and segment's site probability

Shore Profile Variable Cobble / gravel

Fresh Water Sources Very small streams 2 & one seep
(B-5; B-6;)

Sea Exposure Opens to Whale Bay, Ice Bay & influenced by Knight Pass

Access/Safety B-1 boulders - with caution - others quite accessible in any but severe weather conditions.

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

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

Photos: Color Roll # _____ Frames _____

B/W Roll # ^{Roll # 3} Frames 6-7 Frames 6-7

Observer(s) Rumack

Time survey started 0645 Time survey ended 0945

Cultural resource considerations/restraints:

Standard constraints - and if heavy Beach
cleanup occurs (unlikely) Keep workers out of
tree Fringe. (B-5; B-6)

The map is a topographic representation of a coastal area, likely Seward Peninsula, Alaska. It features contour lines indicating elevation, with labels such as 60, 100, 300, 500, 1000, and 1500. A survey track, labeled 'CH-18', is shown as a series of connected points and lines, starting from the coast and moving inland. Key geographical features include 'Snale' (a small island or point), 'Chenega Cove', 'Village A', 'Cem 9', and 'Chen'. A 'FOREST' area is marked in the upper right. A 'BOAT' is indicated near the top right. A 'Bight A' is labeled in the upper left. A 'Base Map: Seward B3' is noted. A 'Date: July 15 1989' and 'Time: 6:45' are recorded. A 'Tide: 1.0 (ft)' is noted. A 'Location: S. Chenega' is specified. A 'Segment: CH-18' is identified. A 'Greg Chaney' is mentioned. An 'S.C.A.T. Team 5' is noted. A 'X1417' is marked on the map. A '44' is written in the bottom right corner.

Topographic map showing contour lines (60, 100, 300, 500, 1000, 1500) and a survey track labeled CH-18. Key features include:

- FOREST
- BOAT
- S.C.A.T. Team 5
- Greg Chaney
- Segment: CH-18
- Date: July 15 1989
- Time: 6:45
- Tide: 1.0 (ft)
- Location: S. Chenega
- Base Map: Seward B3
- Snale
- Chenega Cove
- Village A
- Cem 9
- Chen
- X1417
- 44

Topographic map of Seward Peninsula, Alaska, showing contour lines, elevation, and various geographical features. The map includes labels for 'Bight', 'FOREST', 'BOULDER', 'S.C.A.T. Team 5', 'Greg Chaney', 'Segment: CH-18', 'Date: July 15 1989', 'Time: 6:45', 'Tide: 1.0 (ft)', 'Location: S. Chenega', 'Base Map: Seward B3', 'CH-18', 'Chenega Cove', 'Village', 'Cem 9', and 'Chen'. The map also shows contour lines with elevations such as 60, 100, 300, 500, 1000, and 1500. A shaded area is labeled 'CH-18'.

Topographic map of Seward Peninsula, Alaska, showing contour lines, a survey track, and various geographical features. The map includes labels for 'Bight', 'FOREST', 'BOULDER', 'Cem 9', 'Chenega Cove', 'Village', and 'Snale'. A survey track is marked with 'CH-18' and 'CH-19'. A data block on the right provides details about the survey team, date, time, tide, and location.

Map Labels:

- Bight
- FOREST
- BOULDER
- Cem 9
- Chenega Cove
- Village
- Snale
- CH-18
- CH-19

Survey Data:

- S.C.A.T. Team 5
- Greg Chaney
- Segment: CH-18
- Date: July 15 1989
- Time: 6:45
- Tide: 1.0 (ft)
- Location: S. Chenega
- Base Map: Seward B3

Bight
 100
 60
 300
 100
 60
 5
 500
 1500
 1000
 60
 300
 60
 100
 7
 3
 Snale
 CH-18
 Chenega Cove
 Village A
 Cem 9
 Chen
 44

FOREST
 S.C.A.T. Team 5
 Greg Chaney
 Segment: CH-18
 Date: July 15 1989
 Time: 6:45
 Tide: 1.0 (ft)
 Location: S. Chenega
 Base Map: Seward B3

Bight
 100
 60
 300
 100
 60
 5
 500
 1500
 1000
 60
 300
 60
 100
 7
 3
 Snale
 CH-18
 Village A
 Cem 9
 Chen
 44

FOREST
 S.C.A.T. Team 5
 Greg Chaney
 Segment: CH-18
 Date: July 15 1989
 Time: 6:45
 Tide: 1.0 (ft)
 Location: S. Chenega
 Base Map: Seward B3

Bight A
 FOREST
 BOAT
 S.C.A.T. Team 5
 Greg Chaney
 Segment: CH-18
 Date: July 15 1989
 Time: 6:45
 Tide: 1.0 (ft)
 Location: S. Chenega
 Base Map: Seward B3
 Cem 9
 Chen
 Village A
 Snale
 CH-18
 1417
 44

[illegible][illegible][illegible][illegible][illegible]

The map is a topographic representation of a coastal area, likely Seward Peninsula, Alaska. It features contour lines indicating elevation, with labels such as 60, 100, 300, 500, 1000, and 1500. A survey track, labeled 'CH-18', is marked with a series of points and a line. Key geographical features include 'Snale', 'Chenega Cove', 'Village A', 'Cem 9', and 'Chen'. A 'FOREST' area is also indicated. The map includes a coordinate grid with letters A through J and numbers 1 through 10. A scale bar is present in the bottom right corner, showing distances in miles (0 to 10) and kilometers (0 to 16). A north arrow is located in the bottom right corner.

Map Data:

- S.C.A.T. Team 5
- Greg Chaney
- Segment: CH-18
- Date: July 15 1989
- Time: 6:45
- Tide: 1.0 (ft)
- Location: S. Chenega
- Base Map: Seward B3

Map Labels:

- Bight A
- FOREST
- BOAT
- CH-18
- CHENEGA COVE
- CHEN
- Cem 9
- Village A
- Snale

Contour Lines:

- 60
- 100
- 300
- 500
- 1000
- 1500

Scale:

- 0 10 Miles
- 0 16 Kilometers

North Arrow

44.

The map is a topographic representation of a coastal area, likely Seward Peninsula, Alaska. It features contour lines indicating elevation, with labels such as 60, 100, 300, 500, 1000, and 1500. A survey track, labeled 'CH-18', is marked with a series of points and a line. Key geographical features include 'Snale', 'Chenega Cove', 'Village A', 'Cem 9', and 'Chen'. A 'FOREST' area is also indicated. The map includes a coordinate grid with letters A through J and numbers 1 through 10. A scale bar is present in the bottom right corner, showing distances in miles (0 to 10) and kilometers (0 to 16). A north arrow is located in the bottom right corner.

Map Data:

- S.C.A.T. Team 5
- Greg Chaney
- Segment: CH-18
- Date: July 15 1989
- Time: 6:45
- Tide: 1.0 (ft)
- Location: S. Chenega
- Base Map: Seward B3

Map Labels:

- Bight A
- FOREST
- BOAT
- CH-18
- CHENEGA COVE
- CHENEGA
- Cem 9
- Village A
- Snale

Contour Lines:

- 60
- 100
- 300
- 500
- 1000
- 1500

Scale:

- 0 10 Miles
- 0 16 Kilometers

North Arrow

44.

The map is a topographic representation of a coastal area, likely Seward Peninsula, Alaska. It features contour lines indicating elevation, with labels such as 60, 100, 300, 500, 1000, and 1500. A survey track, labeled 'CH-18', is marked with a series of points and a line. Key geographical features include 'Snale', 'Chenega Cove', 'Village A', 'Cem 9', and 'Chen'. A 'FOREST' area is also indicated. The map includes a coordinate grid with letters A through J and numbers 1 through 10. A scale bar is present in the bottom right corner, showing distances in miles (0 to 10) and kilometers (0 to 16). A north arrow is located in the bottom right corner.

Map Data:

- S.C.A.T. Team 5
- Greg Chaney
- Segment: CH-18
- Date: July 15 1989
- Time: 6:45
- Tide: 1.0 (ft)
- Location: S. Chenega
- Base Map: Seward B3

Map Labels:

- Bight A
- FOREST
- BOAT
- CH-18
- CHENEGA COVE
- CHENEGA
- Cem 9
- Village A
- Snale

Contour Lines:

- 60
- 100
- 300
- 500
- 1000
- 1500

Scale:

- 0 10 Miles
- 0 16 Kilometers

North Arrow

44.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/23/89

SHORELINE SEGMENT CH-19

LOCATION: (see enclosed map) Chenega Island - South end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7-16-89

Recommended Cleanup Activity(ies):

No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to very light oil, moderate wave exposure and ecological constraints.

Priorities Considerations:

Class 4-5: Very light oil.

Class A: Subsistence resources present.

Ecological Constraints (from site survey):

The intertidal zone in this segment is very healthy and lush. The oil present is very light and weathered. Also, the nearby marsh and subtidal eel grass beds are healthy and uncontaminated.

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.

Roffe Buzzell
State Historic Preservation Officer *

Date: 7-31-89

ISCC: *Sharon K. Christopher*

Date: 8-4-89

EXXON: *L. M.*

Date: August 4, 1989

FOSC: *C. E. Rabbitt*

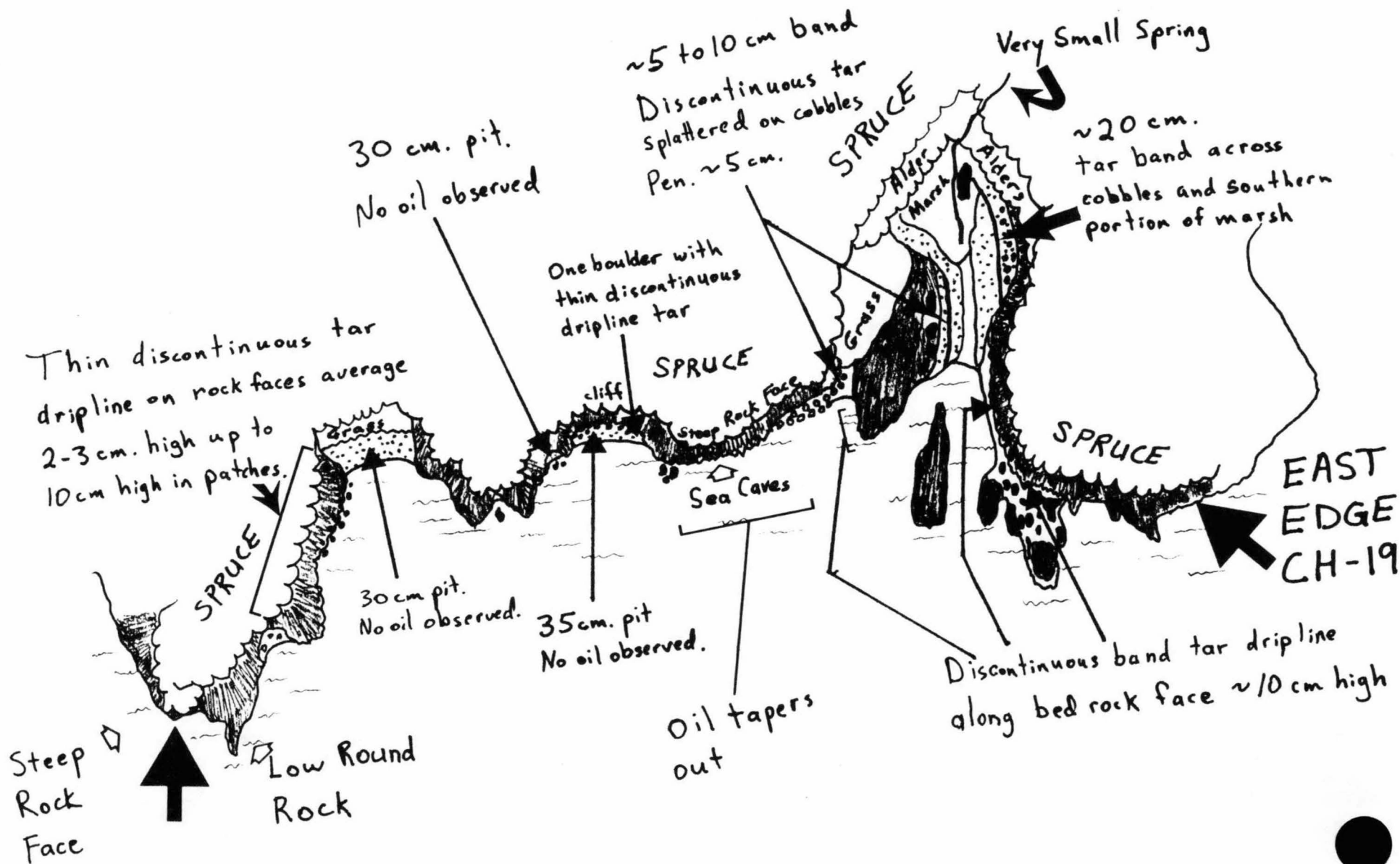
Date: 8-5-89

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

SHORELINE OIL EVALUATIONDate: July 16 '89 Time: 07:45 AMObserver: Greg ChaneySurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/Fog**LOCATION**LOCATION S.E. Chenega IslandSEGMENT NUMBER CH-19LENGTH OF SHORELINE SEGMENT: 1050 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane**SHORELINE:**Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B25% / C10% / P10% / G5% / S—% / M—% / R50%Drift Debris on Beach: Yes/NoSupra/Upper/Mid/Lower Type logs seaweed**OIL**Degree of Oiling: Heavy/Moderate/Very Light/No Oil/UnobservedArea of Beach Impact: SU / SP / H / M / LContinuous: Y/N % of Segment 0 Width of Band: — mSporadic: Y/N % of Segment 40Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: 5 cm ^{Max. Observed}Pooled Oil: —% "Free" Oil: —% Coated: H—% / M30% / L70%Fresh —% Mousse —% Tar Formation: 100%Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/**Comments:**

This coastal segment has some tar drip lines along ^{the} 11 to 12 foot high tide line. The tar observed was very stable and no sheen was seen in the vicinity. Discontinuous splattering was observed on the ~~western~~ eastern cobble and marsh region. Use of small high pressure hot water washing systems could ^{prove to} be the best way to clean the bedrock faces.

Splattered cobbles could be washed with sorbents underneath. Treatment may not be advised due to potential impact on a healthy intertidal zone and tar did not appear to be aesthetically offensive.



WEST EDGE
CH-19

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: S. Cherega Island OBSERVER: S.L. Dearn

LOCATION PREFIX: _____ SEG. NO.: CH-19 LENGTH: 1050 (M)

DATE: 07/16/89 TIME (HHMM): 07:45-1045 TIDE HT.: 0.0-5.0 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

All algae looks very healthy. Lots of mats of green algae (Ulva).

Fucus - patchy clumps across cobble/boulder beach; dense continuous bands on vertical walls of rock outcrops.

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

Some areas of rocky headlands + outcroppings have snack dense beds of Mussels.

Mostly clusters of mussels primarily located along cracks + ledges of rock outcroppings.

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

Barnacles form dense, continuous band along vertical rock outcroppings. larger boulders/cobbles covered w/ barnacles on beaches.

Littorina

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

Common amongst + under Fucus blades, + on green algal mats. Many Nucella.

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

Present under Fucus blades. Mostly Notoacmaea persona.

(See map)

OTHER OBSERVATIONS: Small marsh area located = light oiling ("bathtub ring") on grasses within marsh. Many barnacles in higher zone are dead (empty tests present). Many mussels in these areas are also dead (shells gaping without tissue present). Dead mussels are both attached to rocks + free on beach. Many 20-yrn seas in low intertidal. Several eelgrass beds in shallow subtidal areas of pocket coves. On several rocks facing east high concentrations of Nucella lamellosa (eg, 125 individuals within a 30 x 30 cm area). Large areas of a kelp (Agardhi) in shallow subtidal areas.

CLEANUP PRECAUTIONS: Oil is present in very low amounts. If any clean up occurs - care must be taken not to trample Fucus zone or cause thermal damage by using hot water. Care must also be taken not to cause disturbance to offshore eelgrass beds by access vehicles or by o recontamination from clean up operation.

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

BIRDS: 1 bald eagle, black-legged Kittiwakes, 2 pigeon guillemots

GENERAL OBSERVATIONS: Healthy intertidal area w/ small marsh area on shore + eelgrass beds off-shore. Little to no oiling (a slight "bathtub ring" in areas + very few high intertidal Fucus plants lightly affected.)

CULTURAL RESOURCE EVALUATION

Date JULY 16, '89 Location CHENEGA IS. Site South Side
Location Prefix CH Segment # 19 Length 1050 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (60%) (A - indicate on map)
Ground X (40%) (G - indicate on map)

* Known cultural resources (AHRS #) Reported SEW 044 Data Source AHRS

Oil conditions/beach visibility quite Light / 95%

Width of beach zone surveyed 20-60 m Tree fringe surveyed 20-30 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT's

General observations justifying survey method and segment's site probability

Shore Profile Typified By Rocky BLUFFS/CLIFFS & Steep Headland

Fresh Water Sources a Couple meager streams / Numerous Seeps

Sea Exposure UNamed across from Icy Bay & Ula Bay

Access/Safety In Reasonable Calm Weather all Beaches quite accessible

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 # 3 Frames 8-12

Observer(s) _____

Time survey started 0745 HRS Time survey ended 1030 HRS

Cultural resource considerations/restraints:

Standard Constraints - oil Concentration quite
Slight doubtful whether Cleanup occurs, however if so
Keep Workers on Beach.

* Could Not Locate - though some promising areas
were investigated

S.C.A.T Team 5

Greg Chaney

Segment: CH-19

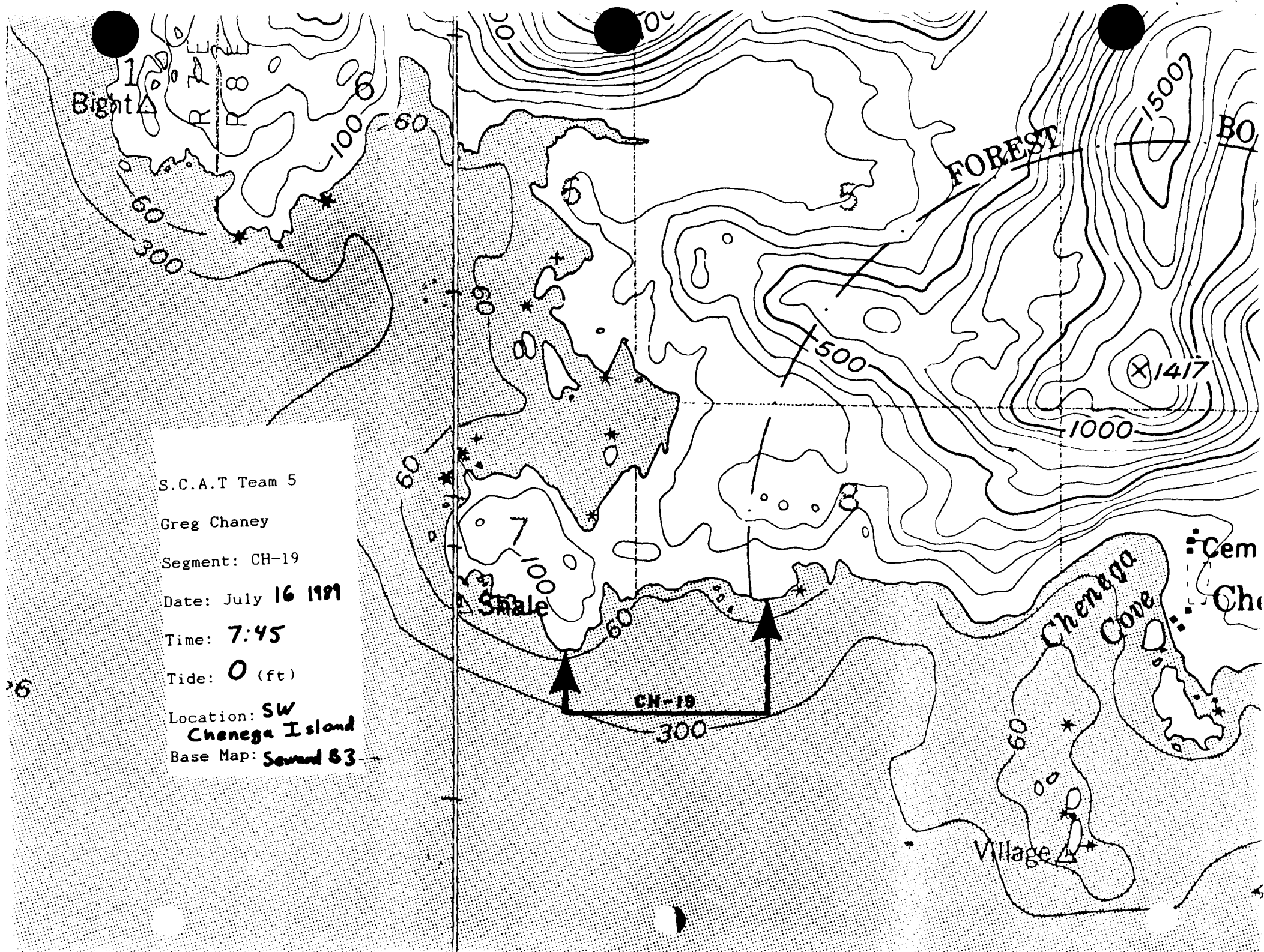
Date: July 16 1991

Time: 7:45

Tide: 0 (ft)

Location: SW
Chenega Island

Base Map: Seward 83



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/23/89

SHORELINE SEGMENT CH-20

LOCATION: (see enclosed map) Chenega Island - South end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/17/89

Recommended Cleanup Activity(ies):

Manually remove contaminated drift material (fucus and driftwood), pooled oil and patches of mousse.

Manually harvest heavily contaminated fucus.

Break up and remove incipient asphalt pavement by appropriate methods. ~~On fine grained beaches, disking or relocating the contaminated berm sediments into the middle intertidal zone would accelerate natural cleaning. This is a moderately exposed shoreline segment in which the sediments would be reworked and redistributed back up the intertidal zone. Do not relocate sediments near the stream.~~

DISKING NOT RECOMMENDED FOR THIS SEGMENT.

Priorities Considerations:

Class 4: Light oil.

Class A: Subsistence resources present.

Ecological Constraints (from site survey):

Harvest only heavily oiled Fucus. Avoid trampling healthy fucus on lower shore face. Work at mid tide + or take appropriate measures to protect the lower intertidal zone. Anadromous fish stream No. 16260 is located within segment. Contact ADF&G and RAT at least 48 hours prior to any cleanup.

Archeological Constraints (from site survey):

Inspection by an Archeological Monitor is recommenced during cleanup 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.

[Signature]
State Historic Preservation Officer *

Date: 7-31-89

ISCC: [Signature]

Date: 8-4-89

EXXON: [Signature]

Date: August 4, 1989

FOSC: [Signature]

Date: 8-5-89

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

SHORELINE OIL EVALUATION

Date: July 17 81 Time: 07:00 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun Cloud/Rain/Snow/Fog

LOCATION

LOCATION South Chenega Island

SEGMENT NUMBER CH-20

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: B20 / C10 / P5 / G10 / S10 / M- / R45

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type Seaweed Drift logs

OIL

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

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

Continuous: Y/N % of Segment 10% Width of Band: 1-2 m

Sporadic: Y/N % of Segment 60%

Est. Oil Thickness where > 1cm: 1 cm Est. Oil Penetration: 15 cm ^{Max. Observed}

Pooled Oil: trace "Free" Oil: 10 Coated: H10 / M40 / L40

Fresh 5 Mousse - Tar Formation: 95

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

Comments:

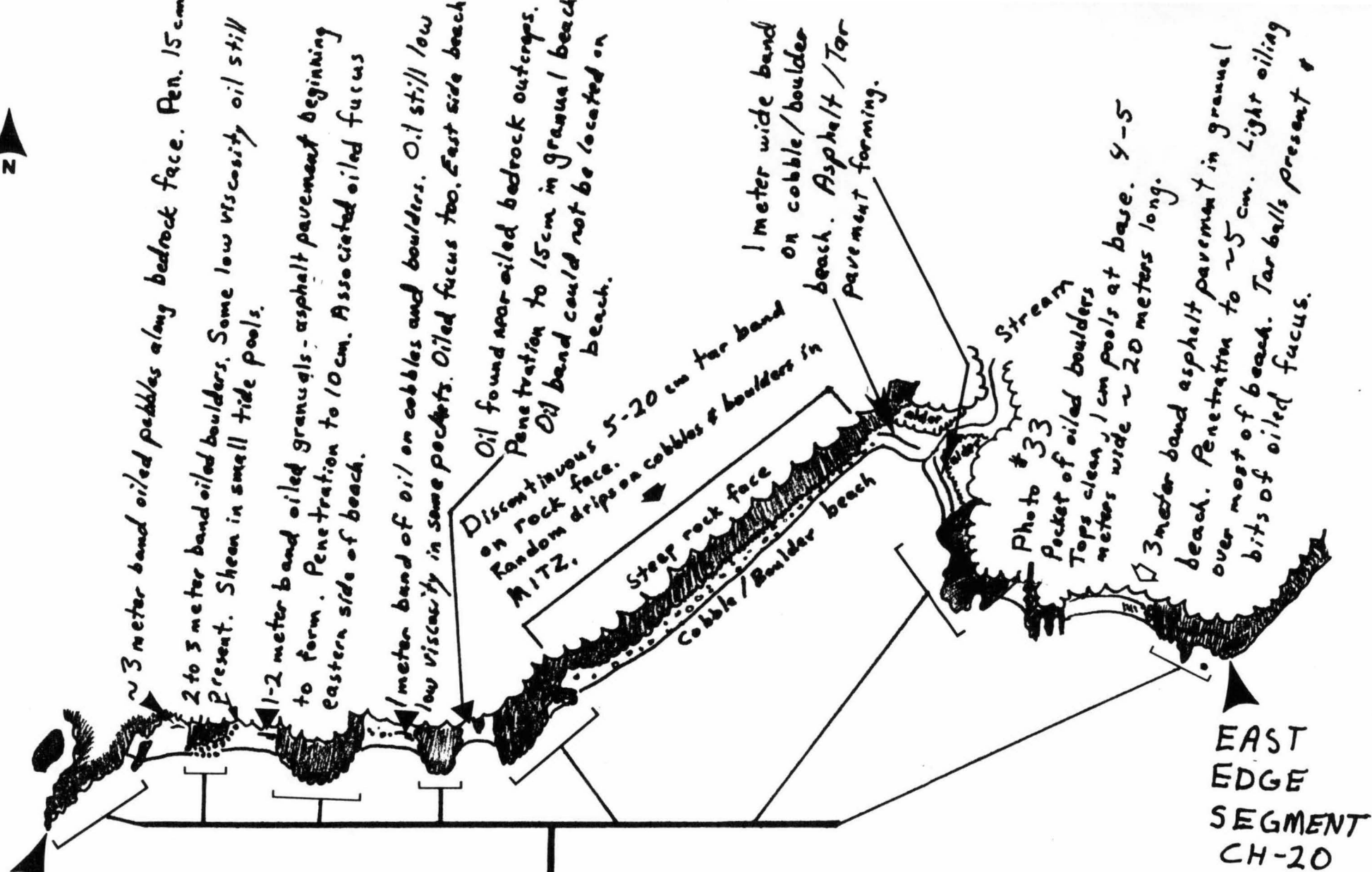
Oil is most apparent on bed rock faces. Highest concentrations of oil were observed on boulders on the east side of pocket beaches. This deposition was not continuous along the finer grained portion of the beach. Patches of heavily oiled fucus were observed on the boulders and bedrock faces. Local patches of standing oil were observed in the oiled boulder regions. Some free oil was present in the hot

Sun.



EAST
ND
EGMENT
CH-20

Oil band up to 1 meter on vertical rock faces. Due to low rugged rock, oil patches up to 2 meters in specific locations. Oiled fucus occurs in this band. Light sheen on some tide pools on rocks.



ECOLOGICAL EVALUATION

LOCATION: Point Barrow, Alaska SITE: S. Cheneau Island OBSERVER: S. L. Dearn

LOCATION PREFIX: _____ SEG. NO.: CH-20 LENGTH: 1400 (M)

DATE: 07/17/81 TIME (HHMM): 0700-1130 TIDE HT.: 2.0-26.5 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Continuous dense bands of Fucus on vertical walls of rock outcroppings. Up to 0.5-1.0m of this heavily oiled in places
Scattered patches of Fucus on cobble/boulders across beach. At least 10 additional species of alg

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Small groups found under Fucus blades. In some areas, mussels coated lightly with oil.
Clusters scattered across beach areas of coves - on cobbles, along cracks, lines in boulders + on faces of rock

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Barnacles in some areas moderately to heavily coated with oil. Approx. 10% dead barnacles in heavy oil zone
Continuous bands on faces of vertical rock outcroppings. Dense clusters on large cobbles + boulders across beach

Littorina

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

Mostly scattered throughout intertidal zone, found mostly associated with green algal mats + w
Fucus blades. Live individuals observed moving on light - moderately oiled Fucus blades.

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

Very few limpets observed. Found under Fucus blades. Empty shells of limpets scattered across

OTHER OBSERVATIONS: ADF+G fish stream #16260 located within segment. No oil observed on ba
of this stream however oil is on the beach of the cove. Many 20cm diameter (or more) were observed
(ie >200). Laminaria + Agarum kelp beds in shallow subtidal. Edgewise beds also present - sev
fish observed from boat within these algal beds. Jellyfish observed just offshore (Caryac)

CLEANUP PRECAUTIONS: Heavily oiled Fucus should be removed to avoid recontamination of
area. Care should be taken during cleanup to maintain as much of the healthy Fucus as
possible, regardless of the cleanup procedure utilized. It is imperative to have healthy plants
in the area in order to recolonize the cleared regions. If absorbent pads are utilized - ma
sure they are placed effectively to absorb washed oil. ADF+G stream #16260 is located in segment. Contact ADF+G + Rat at least 48 hrs. prior to
clean up

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

BIRDS: 2 bald eagles (1 sitting in tree feeding offshore) several Stellar Jays in nearby woods, 1 surf scoter
Several black-legged Kittiwakes offshore

GENERAL OBSERVATIONS: Areas of the segment particularly eastern sides of pocket coves are
moderately to heavily oiled. 0.5-1.0m of Fucus zone is heavily oiled in places. Fucus in these
heavy oil places is dead as are most of the barnacles + mussels beneath the Fucus. Dense
Continuous bands of healthy Fucus occur mostly on rocky outcroppings of headlands. The shallow
subtidal region appears to support a wide diversity of organisms

CULTURAL RESOURCE EVALUATION

Date JULY 17 Location CHENEGA IS. Site S.E. AREA
Location Prefix CH Segment # 20 Length 1400 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (15%) A - indicate on map
Ground X (85%) G - indicate on map

Known cultural resources (AHRS #) NONE Data Source —

Oil conditions / beach visibility 95%+ MODERATE - TO LT. HEAVY IN AREA.

Width of beach zone surveyed 10 - 40 m Tree fringe surveyed 0 - 25 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT'S

General observations justifying survey method and segment's site probability

Shore Profile Varies from Fine grained gravel/cobble mix to
- BOULDER SPAWN.

Fresh Water Sources SOME Streams & Seeps

Sea Exposure Opens Close to Knight Passage

Access/Safety MOST Beaches very accessible - Some require
Caution & Some waves

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 _____

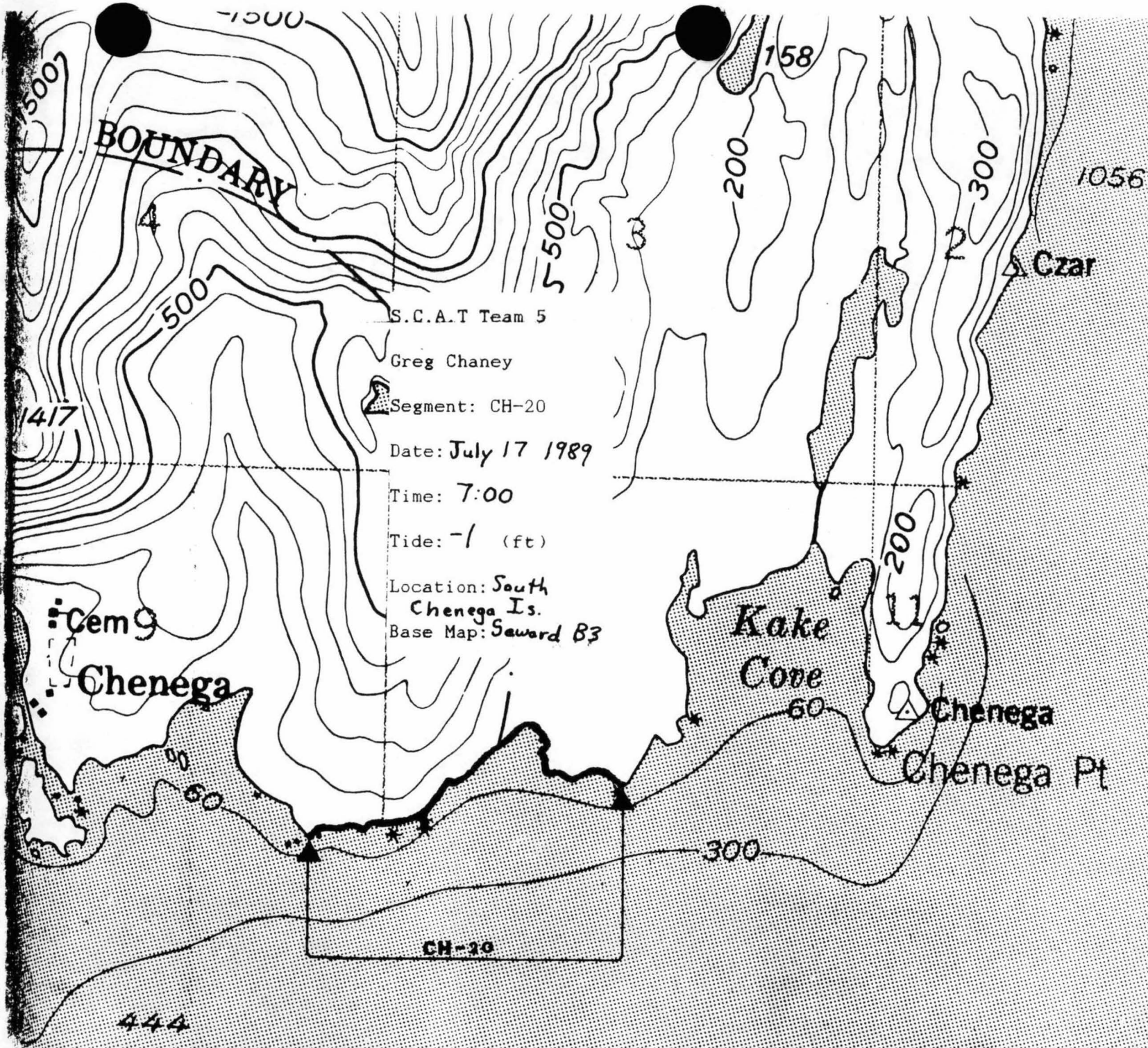
B/W Roll # 3 Frames 13 - 21

Observer(s) Robert MACK

Time survey started 0700 hrs Time survey ended 1115 hrs

Cultural resource considerations/restraints:

- * Standard Constraints with the addition of
a "part time" Archeolog. monitor. Due to the
Known History of the area (DeLaGuna, et al) and the
fact of comparatively large number of CMT'S (25 total)
are quite concentrated, I am recommending a
archeo. monitor to be used in the role of periodic
monitoring. (perhaps initially, when clean up begins
and again during cleanup - for a couple day "drop in"



BOUNDARY

S.C.A.T Team 5

Greg Chaney

Segment: CH-20

Date: July 17 1989

Time: 7:00

Tide: -1 (ft)

Location: South
Chenega Is.
Base Map: Seward B3

Cem 9

Chenega

Kake
Cove

Chenega

Chenega Pt

CH-20

444

TREATMENT MANUAL, CHANGE 1

SEG CH-18 INSPECTION # 1

SEGMENT

DATE 8/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐

Hot water wash
Warm water wash
Water deluge

☐
☐
☒

Mechanical
Non-mechanical
Other No Treatment Recommended

Exxon

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

Comments Treatment of segment CH-18 is complete.

Ready for demobilization and deployment to new segment

Signature Michael J. Tindles

Date: 8/19/89 Time: 8:20 AM

Printed Name Michael J. Tindles

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling

0
0
1
0
99
100 %

Heavy
Medium
Light
Very Light
None

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling

0
0
1
0
99
100 %

Heavy
Medium
Light
Very Light
None

☒ Subsurface Oil Yes ☐ No

COMMENT BELOW

Reassessment

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

☒ Subsurface Oil Yes ☐ No

COMMENT BELOW

Reassessment

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

ADEC rep

Comments a thin band of oil (100m long) was visible on SE corner of section ch-18. Eagles and nest spotted.

Signature Albert Ebel

Date: 8/19/89 Time: 1534

Printed Name Albert Ebel

FOSC rep

Demobilization approved/disapproved

Comments no cleanup done no treatment needed

Signature Paul J. Lewis

Date: 8/19/89 Time: 1545

Printed Name Paul J. Lewis

SEG CH-19 INSPECTION# 1

SEGMENT

DATE 8/19/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐
☐
☐Hot water wash
Warm water wash
Water deluge☐
☐
☒Mechanical
Non-mechanical
Other No Treatment Recommended

Exxon

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

Comments Treatment of segment CH-19 is complete. Ready for demobilization and deployment to new segment.Signature Michael J. TydingsDate: 8/19/89 Time: 4:00 PM

Printed Name

Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil
Percent Degree of Oiling0
0
1
0
99
100 %Heavy
Medium
Light
Very Light
None

Subsurface Oil

☐

Yes

☒

No

COMMENT BELOW

Reassessment

☐

Yes - necessary

☒

No - not necessary unless re-oiled

Existing Shoreline Condition As Visually Determined by ADEC

Surface Oil
Percent Degree of Oiling0
0
0
1
99
100 %Heavy
Medium
Light
Very Light
None

Subsurface Oil

☐

Yes

☒

No

COMMENT BELOW

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

at a thin band was detected about 1/2" x 20' on a gravel beach

Signature

Harbert EhlDate: 8/19/89Time: 1553

Printed Name

Harbert Ehl

FOSC rep

Demobilization approved/disapproved

Comments

NO CONTAMINATION - NO CLEAN UP NEEDED - NO TREATMENT NEEDED

Signature

Ray CurDate: 8/19/89Time: 1550

Printed Name

Ray Cur

CH-20

SEG CH-20 INSPECTION #

SEGMENT

DATE 8/25/89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

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

Exxon

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

Comments Treatment for CH-20 is complete. Ready for demobilization and deployment to new segment.

Signature Michael J. Tydings Date: 8/25/89 Time: 1:10 PM

Printed Name Michael J. TYDINGS

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil		
Percent	Degree of Oiling	
<u>0</u>	Heavy	
<u>10</u>	Medium	
<u>15</u>	Light	
<u>0</u>	Very Light	
<u>75</u>	None	
100 %		

Existing Shoreline Condition As Visually Determined by ADEC

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

Subsurface Oil

☐ Yes ☒ No

COMMENT BELOW

Reassessment

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

Subsurface Oil

☐ Yes ☐ No

COMMENT BELOW

Reassessment

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

ADEC rep

Comments WAS UNABLE TO CONTACT ADEC

Signature

Date: / / Time:

Printed Name

FOSC rep

Demobilization approved/disapproved

Comments

Signature

Date: 8/25/89 Time:

Printed Name

THE FOSC rep

(version 5/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA POINT NORTH BLOCK

Includes Shoreline Segments: CH-21, CH-22, CH-23

Submitted : Wm. Stump Date: 7/23/89
(for Exxon)

ISCC ^{RECOMMENDATION} Approval: Jacqueline Michel Date: 7/31/89

FOSC Approval: C. G. Robbins Date: 7/31/89

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

Distribution:

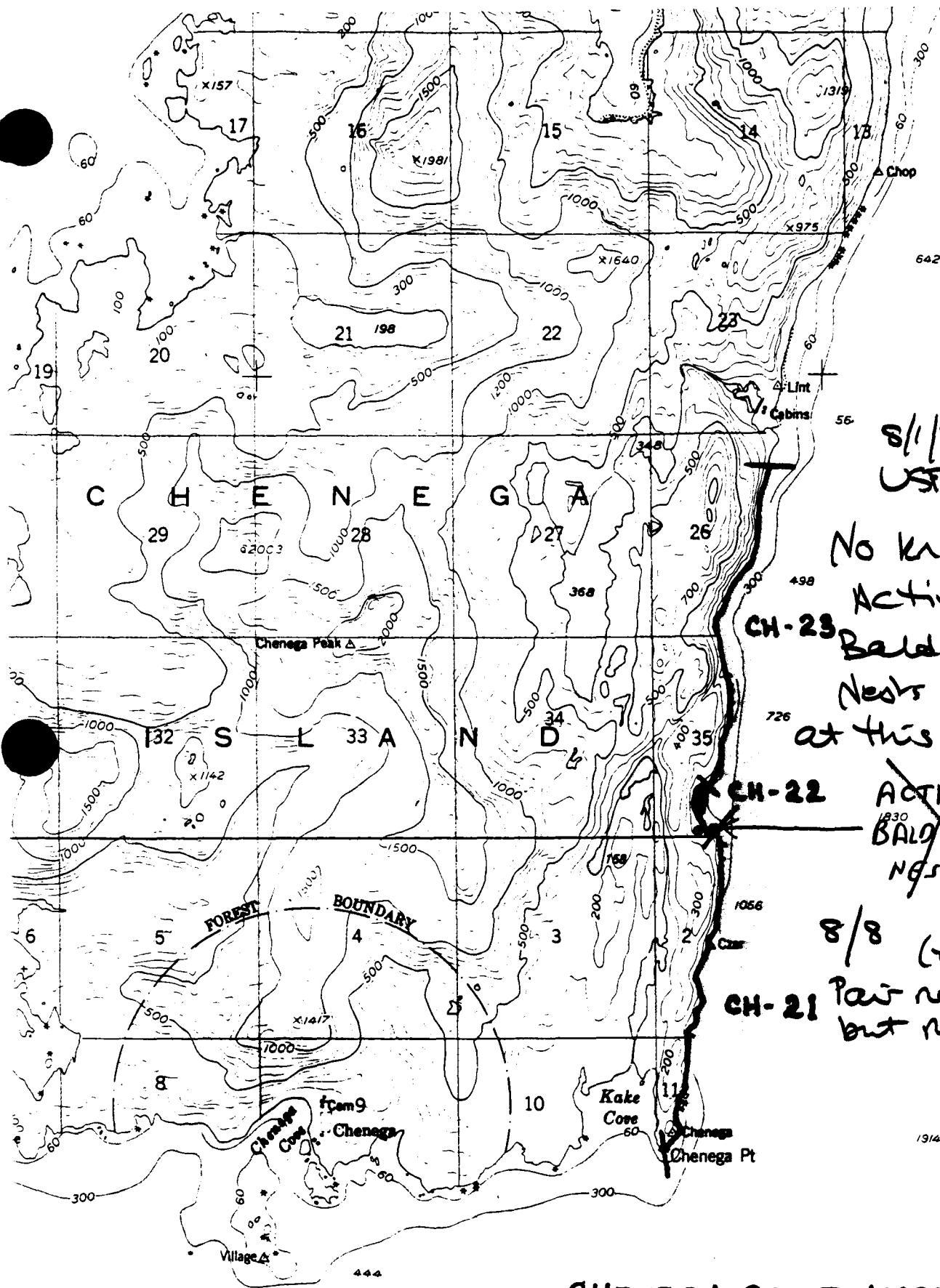
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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

AAH

SCOT NOTE

SHORELINE SEGMENTS WITHIN
THIS BLOCK ARE ON LANDS
OWNED BY CHENEGA VILLAGE
CORPORATION. NO ACCESS TO
UPLAND AREAS AT ALL TIMES.



CHENEGA POINT NORTH BLOCK

CH-21, CH-22, CH-23

(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/26/89

SHORELINE SEGMENT CH-21

LOCATION: (see enclosed map) CHENEGA ISLAND-Southeast end

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/18/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus).
- Harvest heavily oiled fucus in upper intertidal zone.
- Flood/flush with warm to hot water (up to 140 F) on low angle gravel beach.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 4: Light oil.

Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect healthy and lush lower intertidal zone. Harvest only heavily oiled fucus. An active bald eagle's nest is located at the north end of this segment. (See advisory). NOTIFY RAT BOAT 48 HOURS PRIOR TO CLEANUP ACTIVITIES IN THIS SEGMENT.

8907-31
Jm
7/31/89

Archeological Constraints (from site survey):

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

Angela Regan
State Historic Preservation Officer *

Date: 7/28/89

ISCC: Jaqueline Michel

Date: 7/31/89

EXXON: Wm. Stalip

Date: 7/29/89 8907-31

FOSC: A. E. Robison

Date: 7/31/89

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

SHORELINE OIL EVALUATION

Date: July 18 1987 Time: 7:30 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION S.E. Chenega Is.

SEGMENT NUMBER CH-21

LENGTH OF SHORELINE SEGMENT: 2700 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: B20 % / c5 % / P3 % / G2 % / S- % / M- % / R70 %

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type small amount drift logs & seaweed

OIL

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

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

Continuous: Y/N % of Segment 20% Width of Band: up to 1 m

Sporadic: Y/N % of Segment 60% Max. Observed

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

Pooled Oil: - % "Free" Oil: trace % Coated: H10 % / M20 % / L70 %

Fresh 5 % Mousse 5 % Tar Formation: 90 %

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

Comments:

The segment is characterized by steep rock faces and a thin band of tar along a former high tide line. Pocket beaches and cracks in rock often contain higher concentrations of oil. The most significant amount of oil was located at a small pebble and boulder beach near survey monument Czar. The sediments of this beach were coated near the storm berm and to a lesser degree near the lower intertidal zone.

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: SE. Cherega Island OBSERVER: S. L. Dearn

LOCATION PREFIX: _____ SEG. NO.: CH-21 LENGTH: 2700 (M)

DATE: 07 / 18 / 89 TIME (HHMM): 0700-1035 TIDE HT.: 21.0 - 22.5 ft.

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 present in dense, continuous bands on rocky headlands + vertical walls between pocket coves. On the beach, Fucus is in scattered patches on cobbles + boulders. In areas of oil deposition (primarily pocket coves) upper 0.5 m of Fucus layer is lightly - heavily oiled.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Clusters of mussels located along small ledges on rock faces, on sides + bases of cobbles + boulders across beaches + in sand cases - spreading in clusters out down from cobbles/boulders onto gravel beach. Some patches of mussels are lightly oiled - but these individuals do not appear to be dead. Small areas of mussels are dead due to Nucella predation (evidenced by presence of radula drill holes in mussels).

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 A continuous dense band of barnacles occurs on rocky headlands + vertical rock wall faces. Barnacles are patchy across beaches on cobbles + boulders. In areas of heavy oil deposition, barnacles are dead or very slow to react. In the areas, approx. 80% of barnacles are dead.

Littorina

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

Relatively few littorines are present in many areas of the segment.

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

Limpets (mostly *Notacmaea persona*) located usually under *Fucus* blades.

OTHER OBSERVATIONS: Several *Nucella lamellosa* observed laying eggs. Many different sea stars (4 species). Several species of kelp (3), at least 20 different species of algae, and a wide variety of invertebrates were observed within this segment. Several patches of eelgrass were also noted very close to shore.

CLEANUP PRECAUTIONS: Stay 300ft away from shore while near eagle nests. If oiling on rock walls is clean, cleanup is to take place @ + 4.0 ft tide level or not at all. The rich + diverse intertidal + subtidal should be disturbed as little as possible. Heavily oiled drift *Fucus* attached *Fucus* should be manually removed from segment to avoid recontamination of nearby areas (intertidal + subtidal zones + flowing water).

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

BIRDS: 2 bald eagles - adults associated w/ a nest; 1 eaglet observed within nest (young bird was not seen). Black-legged Kittiwakes, 2 Ravens, Sandpipers (2).

GENERAL OBSERVATIONS: This segment has an extremely rich + diverse mid-to-low intertidal zone. It supports many species of algae + invertebrates. There are eagles actively nesting. It is most definitely an ecologically sensitive area - both intertidally + subtidally.

S.C.A.T. Team 5

Greg Chaney

Segment: CH-21

Date: July 18 1989

Time: 07:30 AM

Tide: -1 (ft)

Location: SE.
Chonega Is.

Base Map:
Seward B3

Continued

Steep bare rock face

Pocket beach with oiling. Pebbles and boulders. Penetration to 15 cm. Oiled sorbent on beach. Band ~10 meters wide.

Up to 1 meter band oil in boulders near bases. Still flowing in the sun. Eagle's Nest. Chick Observed.

20 cm. high tar dripline on boulders and rocks.

Pocket granular beach. Trace of oil. 50 cm band on bedrock faces.

~1 meter band oil on bedrock face in crevass.

Boulder pocket beach. 6 meter band oil on boulder bases. Sheen on small pools. No Penetration observed. Surface coating only.

20 cm. oil on bedrock faces. Thin band

Chonega Pt
South End CH-21

CULTURAL RESOURCE EVALUATION

Date July 18 Location CHENEGA IS site S.E. Edge (cont)
Location Prefix CH Segment # 21 Length 2700 meters

Survey Method:

Air _____ (A - indicate on map) Boat X (90%) (A - indicate on map)
Ground X (10%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source —

Oil conditions/beach visibility SLIGHT — MODERATELY HEAVY / 95%

Width of beach zone surveyed 5-25 m Tree fringe surveyed 10-30 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) CMT's

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

Shore Profile Much of it was Homogenous Steep Rocky CLIFFS to H₂O

Fresh Water Sources 1 seep! ~~OTHER FOUNTAINS~~

Sea Exposure Knight Is. PASSAGE

Access/Safety Variable - MANY AREAS w/ REASONABLE CALM ARE GOOD

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

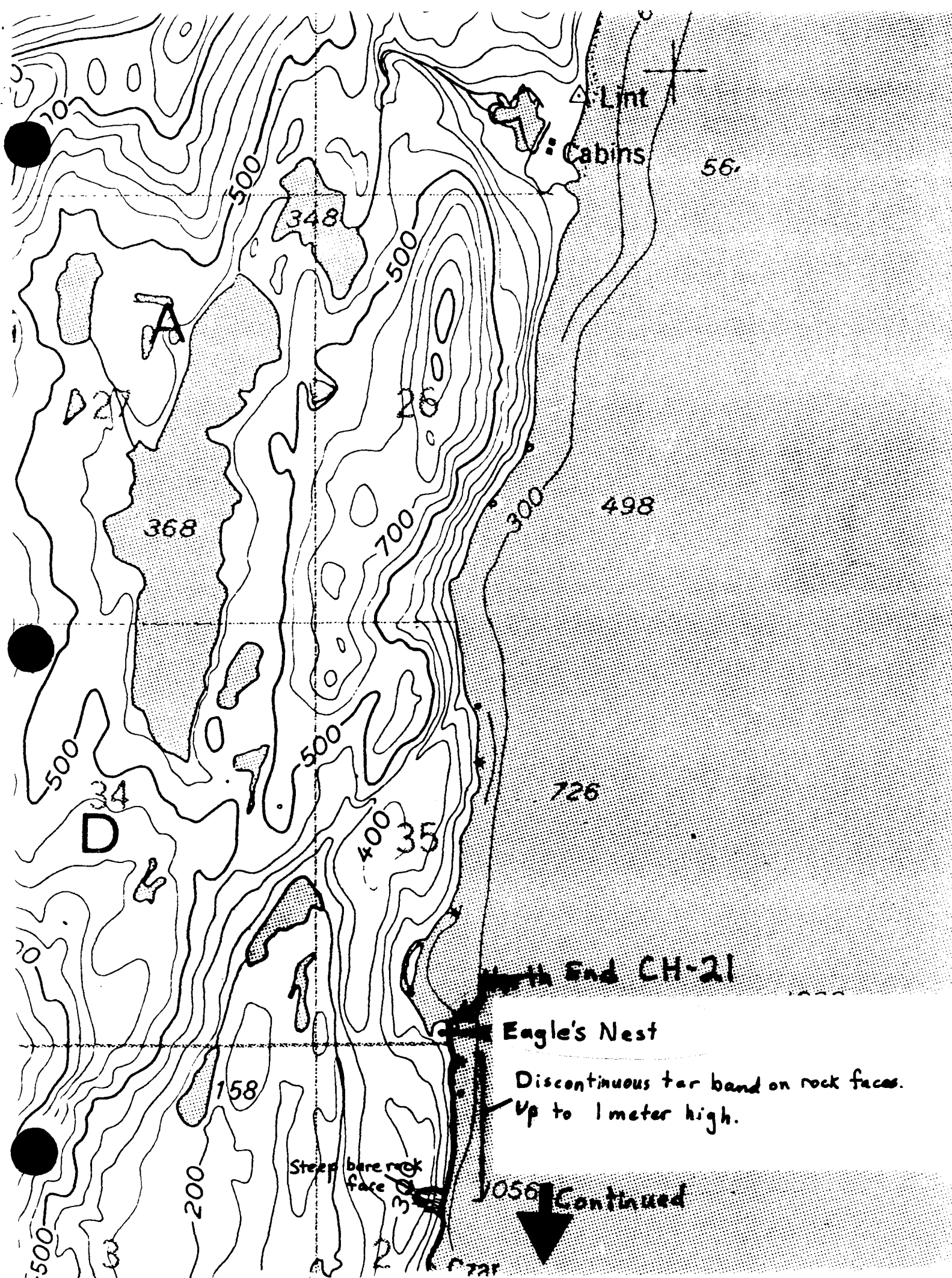
B/W Roll # 3 - _____ → Frames 24
#4 - FRAMES 12

Observer(s) _____

Time survey started 0700 hrs Time survey ended 1035 hrs.

Cultural resource considerations/restraints:

Standard Constraints



(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE 7/26/89

SHORELINE SEGMENT CH-22

LOCATION: (see enclosed map) CHENEGA ISLAND-Southeast side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/18/89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus), and patches of mousse.
- Harvest oiled fucus.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class 2-4: Heavy to light oil.

Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. ~~Do not enter~~ marsh area. Avoid foot traffic over entire intertidal zone.

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

Douglas Reyer
State Historic Preservation Officer *

Date: 7/25/89

ISCC: Jaqueline Michel

Date: 7/31/89

EXXON: [Signature]

Date: 89-07-31

FOSC: CE Robbins

Date: 7/31/89

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

SHORELINE OIL EVALUATION

Date: July 18 1987 Time: 11:00 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION SE Chenega Is.

SEGMENT NUMBER CH-22

LENGTH OF SHORELINE SEGMENT: 800 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: B20% / C15% / P5% / G10% / S___% / M20% / R40%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type Drift logs
Seaweed

OIL

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

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

Continuous: Y/N % of Segment 30% Width of Band: up to 8 m

Sporadic: Y/N % of Segment 20% Max. Observed

Est. Oil Thickness where > 1cm: ___ cm Est. Oil Penetration: 35 cm

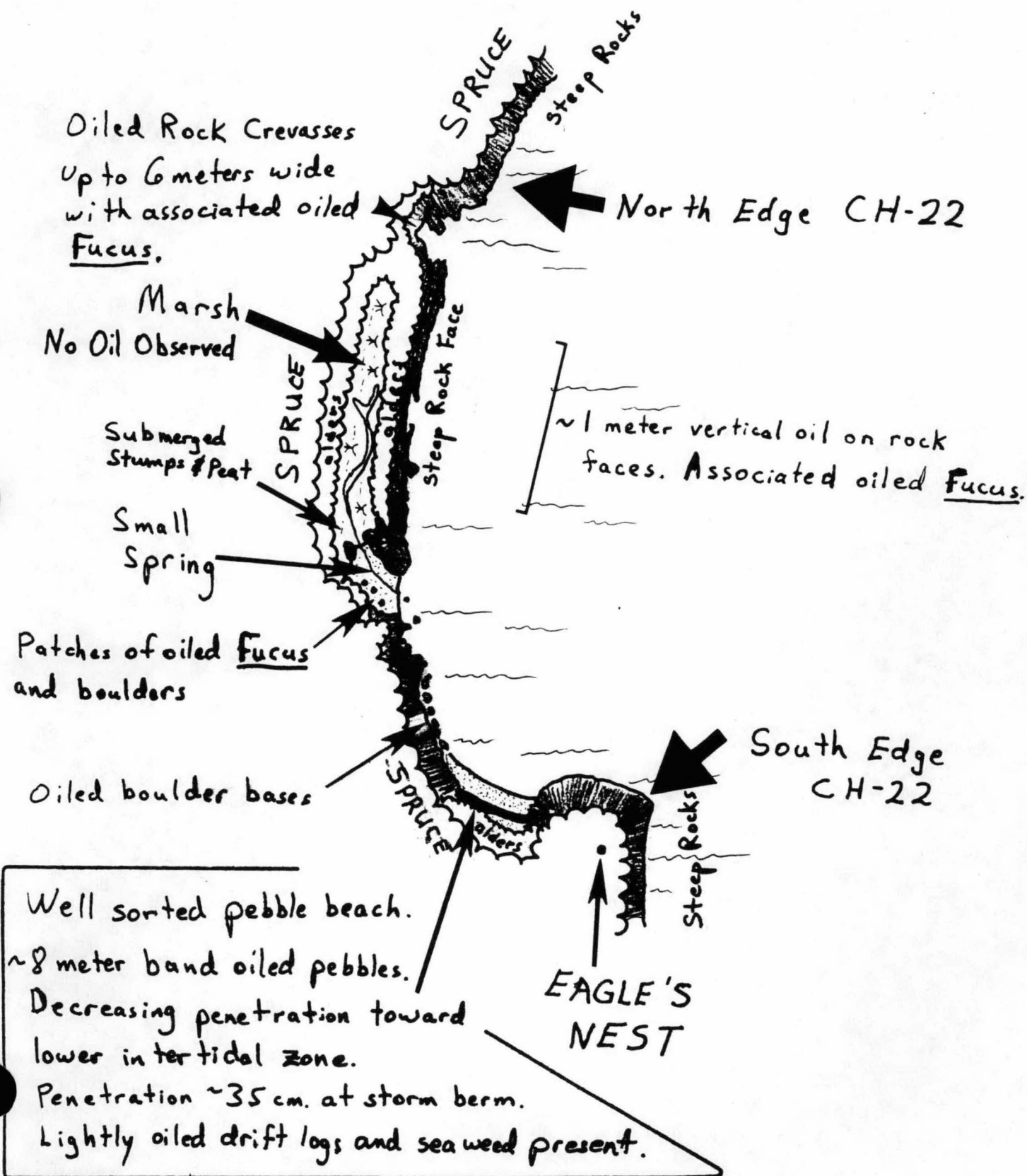
Pooled Oil: ___% "Free" Oil: ___% Coated: H 30% / M 40% / L 30%

Fresh 30% Mousse 10% Tar Formation: 60%

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

Comments:

Small pocket beach at southern portion of segment has the
most concentrated oil observed. Penetration up to 35 cm was
observed in the storm berm but depth of Penetration
decreases rapidly toward the lower intertidal zone. No oil was
observed in marsh.



ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: S.E. Chesea Island OBSERVER: S.L. Dearn

LOCATION PREFIX: _____ SEG. NO.: CH-22 LENGTH: _____ (M)

DATE: 07 / 18 / 89 TIME (HHMM): 1040 - 1230 TIDE HT.: 02.5 - 07.5 ft.

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 - continuous, dense band on headland points. Occasional patches on larger boulders on beach. "Lines" of lightly/moderately oiled fucus run horizontally across Fucus band on rocky points on S. side of segment. On N. side of segment, there are some heavily oiled Fucus plants.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Clusters of mussels occur on the larger boulders in the beach area, along small ledges on the vertical rock walls - under Fucus blades. Many small individuals (<1 cm) are dead + gaping.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense on headlands + rock walls + on larger cobbles/boulders on beach. Some of upper barnacles located within band of oil/tar deposition are oiled but still alive.

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

Present but not extremely abundant, scattered across beaches.

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

Found usually under Fucus blades. Many small individuals ~5mm.

OTHER OBSERVATIONS: Segment contains area of flat, recessed land. A marsh/pond system has developed on the land + empties via a brook/stream into intertidal area. Several small fish observed in marsh/pond. Since this runs into the intertidal - there may be a low potential for it to be an anadromous fish stream. No identification on 1985 ADF + G fish stream maps - Need to confirm w/ ADF prior to any cleanup operations.

CLEANUP PRECAUTIONS: Oiled Fucus should be removed manually. Limit foot traffic (i.e. # crew) into entire area of intertidal. Do not enter marsh area. Avoid trampling seaweeds in intertidal area.

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

BIRDS: 2 Crows

GENERAL OBSERVATIONS The Marsh area is an ecologically sensitive region of segment. Care must be taken not to disturb it. Regions of segment have considerable oiling. This seemed to have affected the upper areas of the Fucus zone, gravel beach + barnacle zone.

CULTURAL RESOURCE EVALUATION

Date 18 July 1989 Location CHENE A IS. Site S. East Coast
Location Prefix CH. Segment # 22 Length 800 m.

Survey Method:

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

Ground X (100%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____

Oil conditions/beach visibility Moderate to Severe patches

Width of beach zone surveyed 10-15 m Tree fringe surveyed 10-30 m

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) SOME CONCENTRATION OF CMTS (See Notes)

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

Shore Profile _____

Fresh Water Sources ONE SMALL STREAM IN EXTREME S.E. CORN.

Sea Exposure TO KNIGHT ISLAND PASSAGE

Access/Safety SOMEWHAT PROTECTED - REASONABLY WELL ACCESSED AT GRAVEL BEACH

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

Periodic Monitoring during cleanup needed yes ^(See Comments) Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # 4 Frames 3, 4, 5

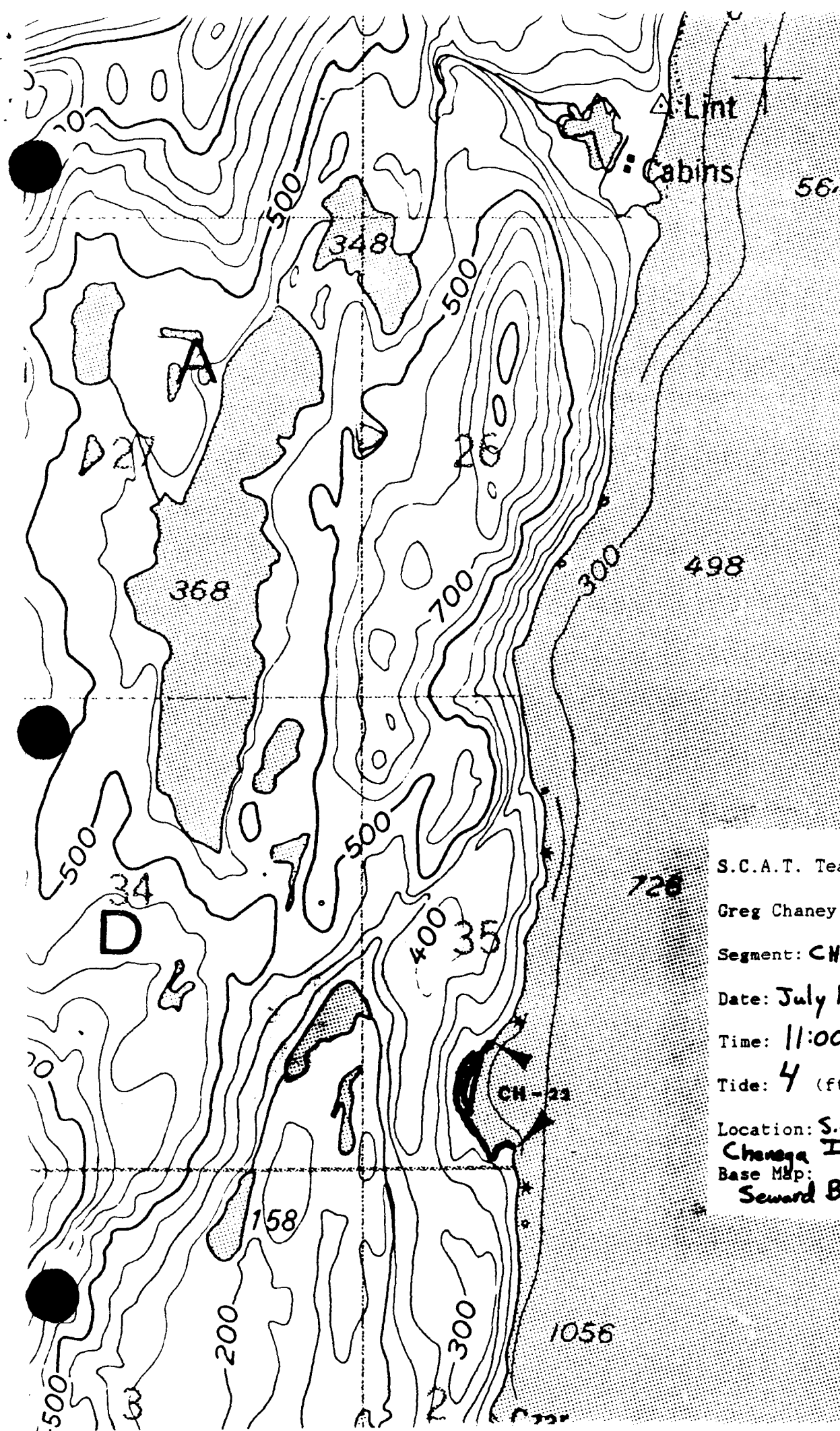
Observer(s) Robert MACK

Time survey started 1040 Time survey ended 1230 HRS

Cultural resource considerations/restraints:

STANDARD CONSTRAINTS - PERIODIC MONITOR -
DROP IN ON CLEANUP PROCESS - COULD WORK
WITH PERIODIC MONITORING RECOMMENDED
SAME FO CH-19 - AGAIN DUE TO SOME
OF A CONCENTRATION (11) CMTS - and this
appeared (Eco-Setting) most favorable than - a
long part of the lower east coast.





S.C.A.T. Team 5

Greg Chaney

Segment: CH-22

Date: July 18 1989

Time: 11:00 AM

Tide: 4 (ft)

Location: S.E. Chana Is.

Base Map: Seward B3

30

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 7/26/89

SHORELINE SEGMENT CH-23

LOCATION: (see enclosed map) CHENEGA ISLAND-East side

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 7/19/89

Recommended Cleanup Activity(ies):

- Harvest heavily oiled fucus in southern portion of this segment.
- No other cleanup recommended at this time (subject to FOSC reassessment at a later date), due to light oil and medium wave exposure.

Priorities Considerations:

Class 4: Light oil.

Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect rich lower intertidal zone. An anadromous stream is located in the adjacent segment to the north (CH-01). (STREAM NOS. 226-20-16280). CONTACT ADFG PRIOR TO CLEANUP.

JM
7/11/89

Archeological Constraints (from site survey):

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

CO 89-07-5

Angelo Reger
State Historic Preservation Officer *

Date: 7/28/89

ISCC: *Jaqueline Michel*

Date: 7/31/89

EXXON: *Wm. St. John*

Date: 7/28/89 89-07-7

FOSC: *C. E. Robbins*

Date: 7/31/89

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

SHORELINE OIL EVALUATION

Date: July 19/1987 Time: 07:30 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION East Chenega Island

SEGMENT NUMBER CH-23

LENGTH OF SHORELINE SEGMENT: 2600 m

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

SHORELINE:

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

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B30 % / C5 % / P3 % / G2 % / S % / M % / R60 %

Drift logs

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type

OIL

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

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

Continuous: Y/N % of Segment — Width of Band: up to 1 m

Sporadic: Y/N % of Segment 30%

Est. Oil Thickness where > 1cm: — cm Est. Oil Penetration: None Observed cm

Pooled Oil: — % "Free" Oil: — % Coated: H 10 % / M 10 % / L 80 %

Fresh — % Mousse — % Tar Formation: 100 %

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

Comments:

This segment is characterized by steep rock faces and coarse boulder beaches. Sporadic dripline of tar was present on rock faces. Tar observed was stable and did not seem likely to cause reoiling in the future. No cleanup of tar on rock faces recommended at this time. In southern portion of segment Fucus which has been oiled may be manually removed.

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: E. Chugach Is. OBSERVER: S.L. Dearn
 LOCATION PREFIX: _____ SEG. NO.: CH23 LENGTH: 2600 (M)
 DATE: 07/19/1987 TIME (HHMM): 0730 - 0945 TIDE HT.: -2.5 - +5 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Continuous band of Fucus along vertical rock walls. Upper 0.5m of Fucus lightly - heavily oiled in pocket beaches.

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

Small clumps present in most of segment. N end of segment contains ↑ # of mussels

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

Some barnacles in areas of oiling - covered w/ moderate coating of oil. Many individuals still alive.

Littorina

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

Lower numbers of Littorines scattered across / throughout segment. Under Fucus Not in dense aggregations.

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

Lower numbers of limpets scattered across segment.

OTHER OBSERVATIONS: Low intertidal zone appears rich. Many plants + invertebrates. Fauna / Flora very diverse + abundant.

CLEANUP PRECAUTIONS: Some areas relatively inaccessible due to steep rock wall. Lower intertidal region very rich in plants + animals. Do not clean at tides lower than 1/4 ft, if cleanup is performed. Make note of any oiled areas from stream in adjacent segment (North of CH23).

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

BIRDS: 2 Pigeon guillemots, Black-legged Kittiwakes, 3 Eagles flying by (separate)

GENERAL OBSERVATIONS: Very rich lower intertidal area. Some oiling in discontinuous band has lightly heavily coated some Fucus + barnacles - these are higher in the intertidal region.

CULTURAL RESOURCE EVALUATION

Date 7-19-89 Location CHINEGA ISLAND Site EAST COAST

Location Prefix CH Segment # 23 Length 2,600 M

Survey Method:

Air _____ (A - indicate on map) Boat X (50%) (A - indicate on map)

Ground X (50%) (G - indicate on map)

Known cultural resources (AHRS #) NONE Data Source _____

Oil conditions/beach visibility Discontinuous moderate oil band at extreme South end of Segment - little or no oil in Northern 2/3 of Segment.

Width of beach zone surveyed 10 m Tree fringe surveyed Ø

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile Vertical or high angle rock cliff with boulder apron - steep forest slope to ITZ

Fresh Water Sources No streams running at this time - may be seasonal creeks.

Sea Exposure Unprotected coastline open to west towards Knight Island passage.

Access/Safety No protected bays or coves - deep water access up to ITZ.

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

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

Photos: Color Roll # NONE Frames _____

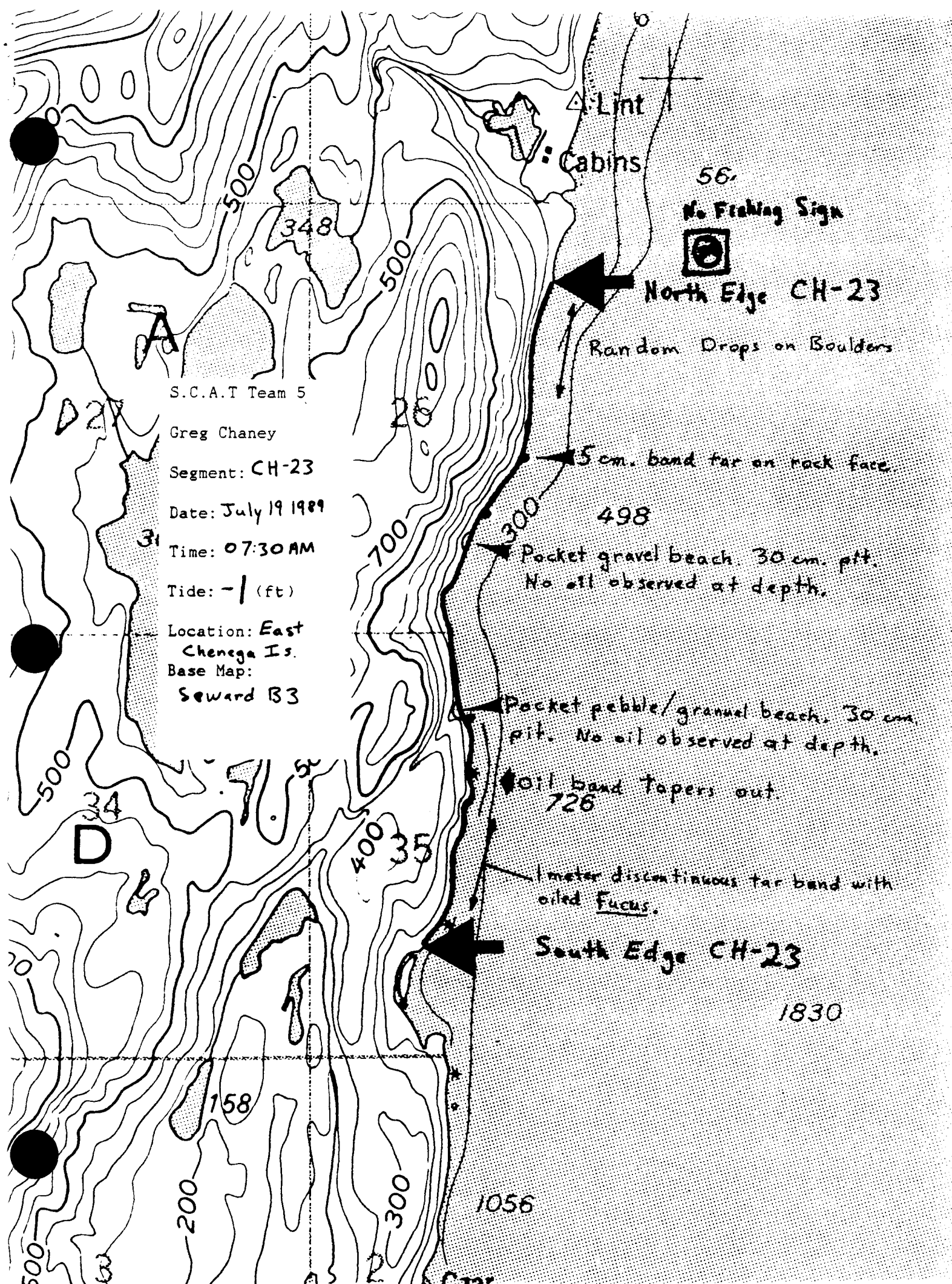
B/W Roll # NONE Frames _____

Observer(s) Bob Bitt

Time survey started 0733 Time survey ended 0923

Cultural resource considerations/restraints:

Standard Statement - no additional archaeological restraints.



S.C.A.T Team 5

Greg Chaney

Segment: CH-23

Date: July 19 1989

Time: 07:30 AM

Tide: -1 (ft)

Location: East
Chenega Is.

Base Map:

Seward B3

Lint

Cabins

56

No Fishing Sign



North Edge CH-23

Random Drops on Boulders

5 cm. band far on rock face

498

Pocket gravel beach 30 cm. pit.
No oil observed at depth.

Pocket pebble/gravel beach 30 cm.
pit. No oil observed at depth.

Oil band tapers out.

726

1 meter discontinuous tar band with
oiled Fucus.

South Edge CH-23

1830

8/5/89 *AKB*
SEG CH21 INSPECTION # 1
DATE 8-4-89

TREATMENT MANUAL, 6/15/89

SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

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

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature Gary Frierson Date: 8/4/89 Time: 1:43 PM

Printed Name GARY FRIERSON

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

- Subsurface Oil

Percent Degree of Oiling

☒ Yes ☐ No

_____	Heavy
<u>22%</u>	Medium
<u>3%</u>	Light
<u>5%</u>	Very Light
<u>90%</u>	None

100 %

Comments SOME CORROS. SEEN
WAS MINOR AMTS ONLY.

Reassessment

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

ADEC rep Comments ADEC FIELD SURVEY WAS PRESENT DURING
INSPECTION.

Signature _____ Date: / / Time: _____

Printed Name _____

FOSC rep

Demobilization approved/disapproved

Comments MOBILIZATION NOT REQUIRED @ THIS TIME

Signature Thomas D. Harrison Date: 8/4/89 Time: 1350

Printed Name THOMAS D. HARRISON LT USCG

COPY: EXXON ADEC FOSC ISCC

SEG CH22 INSPECTION # 1DATE 8/5/89SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment



Hot water wash



Mechanical



Warm water wash

Non-mechanical SNARE BEOM

Water deluge



Other _____

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.Signature [Signature]Date: 8/5/89 Time: 9:30 AMPrinted Name LEONARD HARBIST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling



Yes



No

Heavy

Medium

3%

Light

2%

Very Light

95%

None

100 %

Comments _____

Reassessment



Yes - necessary



No - not necessary unless re-oiled

ADEC rep Comments Deserves a reassessment at a later date.Signature [Signature]Date: 8/15/89 Time: 9:25Printed Name DALE GARDNER

FOSC rep

Demobilization approved/disapproved

Comments Possible mobilization on Coast if tank OKSignature [Signature]Date: 8/15/89 Time: 9:25Printed Name THOMAS O. Candler Jr.

CH 23
AUG-04-1989 23:32

FROM

ST. THOMAS

6354018

TO

9805905

P.02

TREATMENT MANUAL, 6/15/89

SEG C1723 INSPECTION # 1DATE 8-4-89

SEGMENT

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐

Hot water wash

☐

Mechanical

☐

Warm water wash

☐

Non-mechanical

☐

Water deluge

☐

Other

Exxon

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

Comments TREATMENT OF THIS SEGMENT IS COMPLETE.READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature

G. C. Frierson

Date:

8/4/89

Time:

1:43 PM

Printed Name

~~G. C. Frierson~~ Gary Frierson

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

Subsurface Oil

Percent Degree of Oiling

☒ Yes☐ No

Heavy

Medium

Light

Very Light

None

100 %

Comments CORRELY AREA HASMINOR OILING ONLY

Reassessment

☒

Yes - necessary

☐

No - not necessary unless re-oiled

ADEC rep

Comments

ADEC HEDYSARNEYWASPRESENT DURINGINSPECTION

Signature

Date: / / Time:

Printed Name

FOSC rep

Comments

Demobilization approved/disapprovedMOBILIZATION. NOT REQUIRED @ THIS TIME

Signature

Thomas A. ...Date: 8/4/89 Time: 1348

(version 8/04/89)

SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA ISLAND NORTHWEST BLOCK

Includes Shoreline Segments: CH-900

Submitted :

W F Wiskamp
(for Exxon)

Date: 8-29-89

ISCC Recommendation:

Sharon K. Christopher

Date: 9-1-89

FOSC Approval:

C E Robbins

Date: 9-1-89

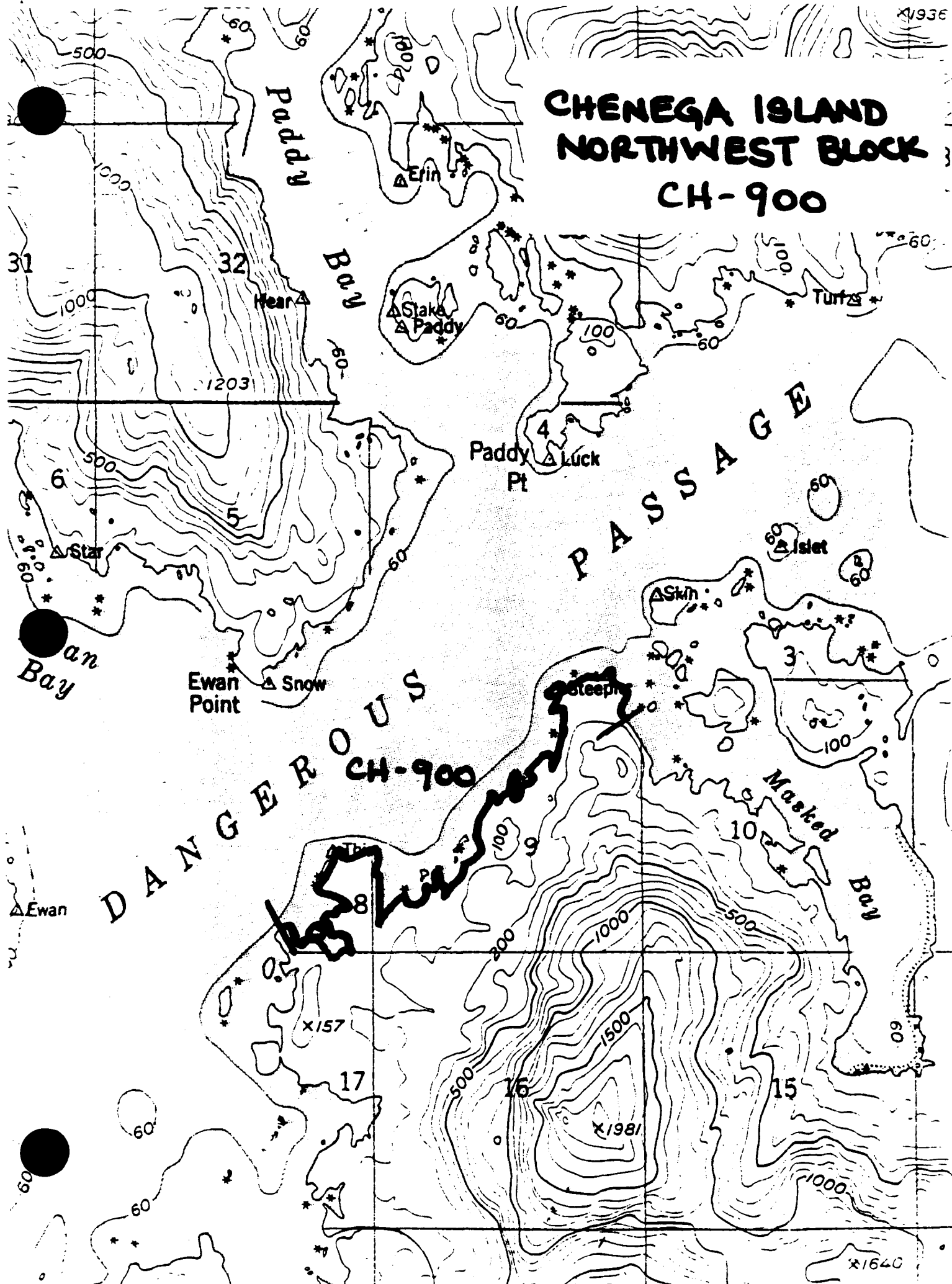
The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative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

Distribution:

Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

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

CHENEGA ISLAND NORTHWEST BLOCK CH-900



******* SCOT NOTE *******

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

READ THIS FIRST

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

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/27/89

SHORELINE SEGMENT CH-900

LOCATION: (see enclosed map) CHENEGA ISLAND-SOUTH OF

MASKED BAY (CHENEGA ISLAND NORTHWEST BLOCK)

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

Recommended Cleanup Activity(ies):

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

Priorities Considerations:

No oil

Ecological Constraints (from site survey):

A cataloged anadromous stream (#16200) is located in this segment. If cleanup is planned notify ADF&G and RAT forty eight hours prior to beginning cleanup activities.

Archeological Constraints (from site survey):

If cleanup is planned, a full archeological assessment is required.



State Historic Preservation Officer *

Date: Aug 29, 89

ISCC: Sharon K. Christopher

Date: 9-1-89

EXXON: Daniel R. Tipton

Date: 9.1.89

FOSC: C. E. Nollan

Date: 9-1-89

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

SHORELINE OIL EVALUATIONDate: 8/20/89 Time: 13:20Observer: G. MACDONALDSurveyed From: Foot/Boat/Helio/PlaneWeather: Sun/Cloud/Rain/Snow/FogLOCATION Chenega I, south ofLOCATION Masked Bay.SEGMENT NUMBER CH-900LENGTH OF SHORELINE SEGMENT: 4,300 mACCESS: Foot/Vehicle/Boat/Barge/Helio/Float PlaneSHORELINE:submerged rocks; navigation hazard.Shoreline Type: SPI/BEA/COV/HLD/STRTSlope: LANG/HANG/VERWave Exposure: High/Med/LowSediment: B₁₀% / C₁₀% / P₁₅% / G₁₀% / S_{TR}% / M_{TR}% / R₄₅%Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type _____

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

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

NOT APPLICABLE

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

Sporadic: Y/N % of Segment _____

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

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

Fresh _____% Mousse _____% Tar Formation: _____%

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

Comments:rock strewn coastline, narrow embayments with intertidal
grassy wetland;discontinuous trace tar line(s), < 3 m wide,typically @ up. HRTZ → SR, on steep rock.

DOCUMENTATION:

Map Aerial photo marking segment boundaries

Attached

VTR: Y/N Tape Number(s)

Photography: Y/N Roll Number(s)

Sample Numbers Collected:

none



8/20/89

G. MADDON

SEGMENT CH-900

DANGEROUS PASSAGE

low relief, mod. sketched, steep
rocky shore; trace-faint
discontinuous terr band < 3cm wide
@ up. HITZ. Steeply bedded, easily
weathered sediments.

KEY

trace oil
(≤ 0.1 m wide)

stream

THIN

Sea Grass

STEEPLE

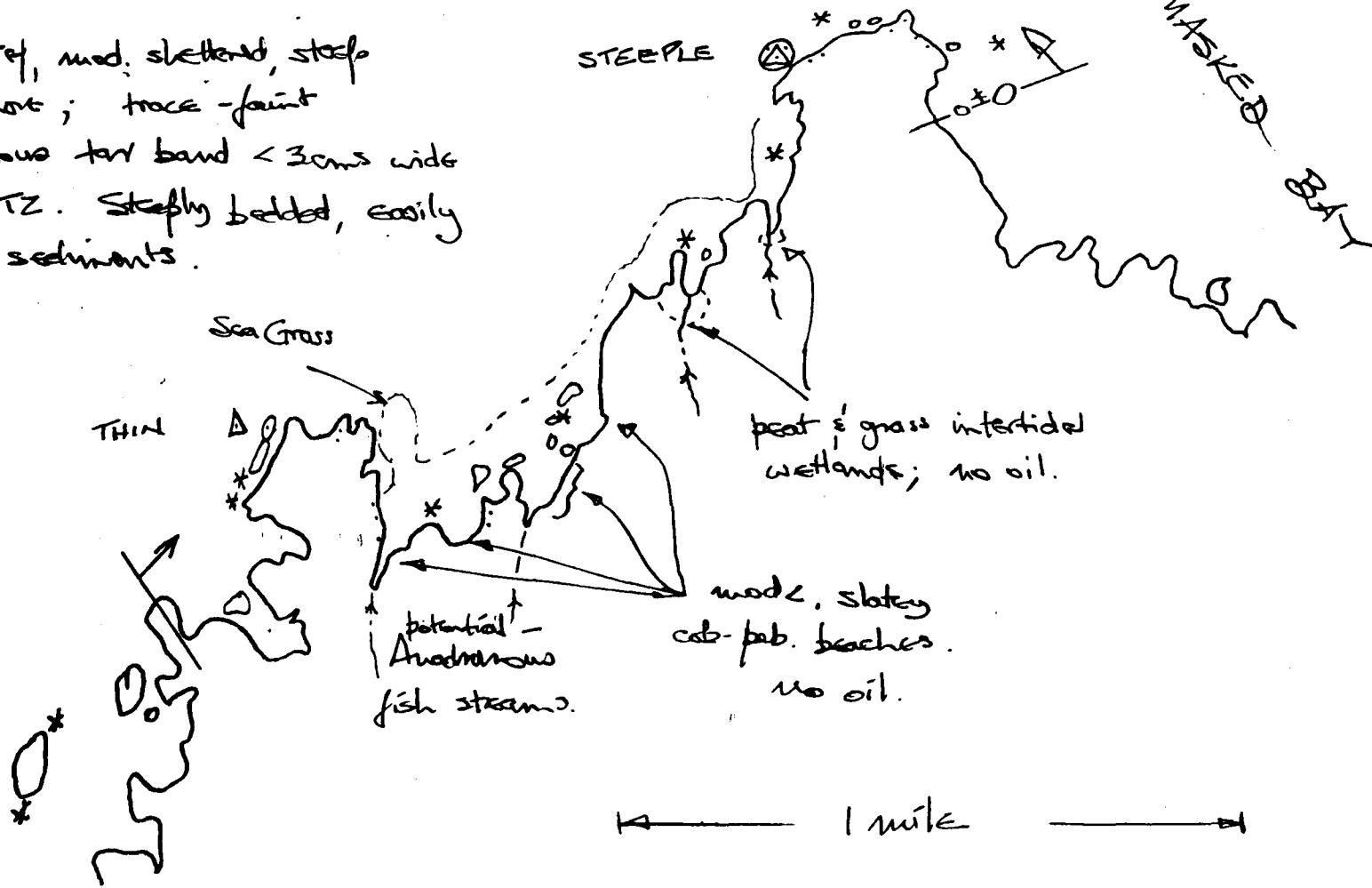
MASKED

peat & grass intertidal
wetlands; no oil.

mod. slopy
cob-pab. beaches.
no oil.

potential
Anadromous
fish streams.

1 mile



8/20 SEGMENT CH.-900
13.20 HRS Δ THIN $\rightarrow$ Δ STEEPLE.

mod. sheltered, steep rocky coast,
discontin. trace for line (1) @ up HITZ
 < 3 cm wide total.

mod. $\angle$. angular / shattered sub-crb beaches,
after of intertidal grasslands; no oil.

Sea Grass abundant; muddy fines $<$
LWL.

≤ 3 thin for lines @ SP+ @ Δ
STEEPLE; $\sim 1-2$ cm max., < 5 m long.

14.20 HRS

END of SEGMENT

ECOLOGICAL EVALUATION

LOCATION: Prince William Sound SITE: W. Chenequa Is. OBSERVER: S. Dearn
 LOCATION PREFIX: _____ SEG. NO.: (South of Mashed Bay) CH-900 LENGTH: 4,300 (M)
 DATE: 08 / 20 / 89 TIME (HHMM): 1320-1415 TIDE HT.: 5.5-9.0 ft
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Dense, continuous bands present, especially on larger boulders, rocks + cobbles.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 Small infrequent patches present on sides of rock walls. Some present amongst gravel/pebbles near fish streams.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
 A narrow dense, continuous band present on vertical rock walls. ^{survives} Also present on tops of larger cobbles + boulders.

Littorina

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

Scattered throughout the high intertidal zone, especially among Fucus ^{blacks}

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

Scattered throughout high intertidal - especially on bare cobbles higher up

OTHER OBSERVATIONS: Seagrass beds nearshore (see MAP). Potential anadromous fish streams also located (see MAP). Several grassy wetlands areas. Small clean beds near eelgrass beds. Subsurface kelp beds in rocky shallow subtidal area.

CLEANUP PRECAUTIONS: No cleanup is recommended due to the low/insufficient amounts of oil + higher numbers of ecologically sensitive areas within segment.

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

BIRDS: 2 Eagle (1 adult + 1 subadult (2yrs)), 5 Common Mergansers

GENERAL OBSERVATIONS: A wide variety of habitats are present within this segment. This increase in habitat diversity results in an increased species diversity + organism abundance.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date 8-20-89 Location Dangerous Passage Site Chenequa, N. coast

Location Prefix CH Segment # CH-900 Length 4300m

Survey Method:

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

Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source AHRS

Oil conditions/beach visibility Trace to none, good visibility

Width of beach zone surveyed 2 m Tree fringe surveyed 2m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

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

Shore Profile fore-shoaled cobble/gravel to 2m beach/bedrock

Fresh Water Sources several freshwater and possible anastomosing streams

Sea Exposure semi-protected

Access/Safety good access barring offshore reefs, safety good

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

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _____ Frames _____

B/W Roll # _____ Frames _____

Observer(s) P. G. Phipps

Time survey started 1330 Time survey ended 1430

Cultural resource considerations/restraints:

Standard Constraints

Ewan Bay

REF. MAP
SEGMENT

CH-900

DANGEROUS

Ewan

Snow

Steeple

Tbin

X157

17

X1981

15

10

Ma

3

60

60

60

60

100

200

500

1500

1000

500



6/10/89
G. MARDEN

SEGMENT CH-900

DANGEROUS PASSAGE

low relief, mod. skeletoned, steep
rocky shore; trace-faint
discontinuous tar band < 3cms wide
@ up. H.T.Z. Steeply bedded, easily
weathered sediments.

KEY

trace oil
(< 0.1m wide)

stream.

