

OIL SPILL PUBLIC INFO. CENTER



3 6653 00006440 6

EVOS
GC
1552
.P75
S42
1991
v.35

[Shoreline evaluations, 1991].

Prince William Sound ER-09 to ER-20

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

ARLIS

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

1991 MAYSAP EVALUATION

SEGMENT: ER 009 SUB: A REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry Release,
Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

TEAM NO. 5 SEGMENT ER-9 SUBDIVISION A DATE 5, 14, 91

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pickup in area D this segment is adjacent to other segments in Foxfarm bay area that need manual pickup so work orders can be coordinated here for manual crews.

EXXON

NAME John Deen SIGNATURE [Signature]

☒ NTR WHILE THERE IS ENOUGH OIL PRESENT IN THE AP REFERENCED AT SITE "D" TO ACT AS AN ADHESIVE, THE CONCENTRATION IS SO SMALL THAT BREAKING IT BY HAND DOES NOT SOIL A WHITE GLOVE LINER.

LANDMANAGER

NAME Steve Wingo OF CVC-FS SIGNATURE [Signature]

☐ NTR
☒ TREATMENT RECOMMENDED

Asphalt needs picked-up by Chenega or Ucco.

Site - D needs manual as this is Fox Farm Bay. A High use area by everybody. Especially Chenega. This area is the site of a yearly picnic by school kids of Chenega who also camp-out here several times a year.

NO BIO.

USCG/NOAA

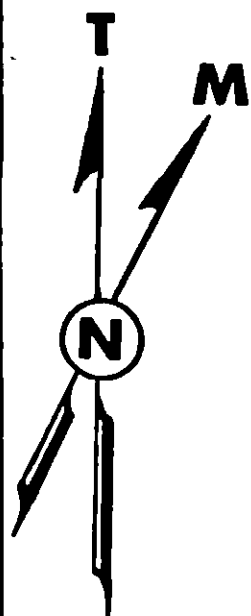
NAME DREHER/CLINE SIGNATURE CWO K. R. Dreher

☒ NTR Observed only traces and splashes of inert oil residue, i.e. asphaltic material, that pose no threat to the surrounding environment. Any further attempts at removal would do more harm than the oil residue remaining.

AP patches in sites D + E could be removed easily. Tidal / Low area containing these sites is open w/ easy access. Removal of AP is recommended. : : c

AP 1991
06 SKETCH MAP
GREG CHANEY/CLINE
TEAM 5

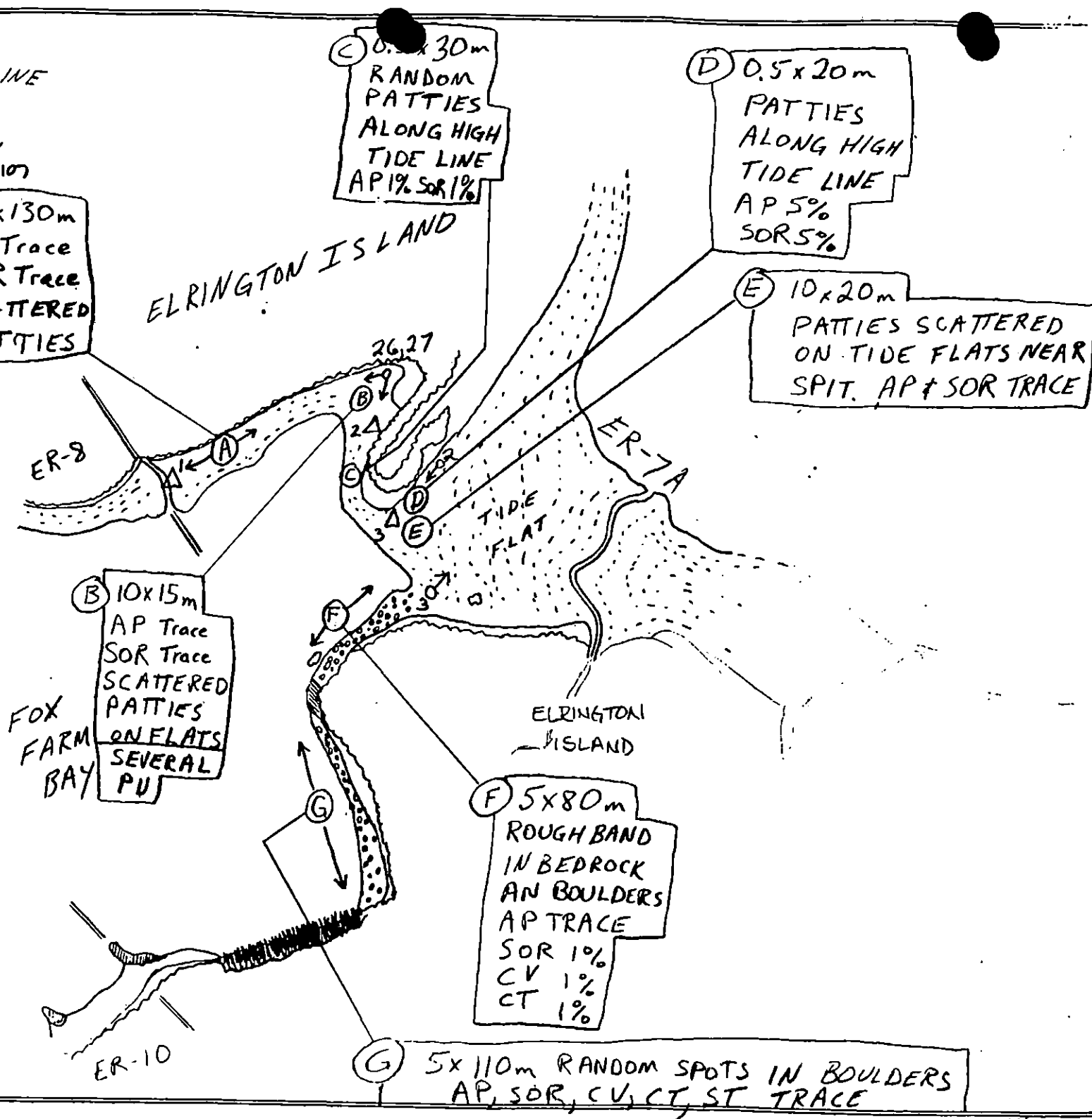
SEGMENT: ER9 A
DATE: MAY 14 1991
AIR P.H.: PIN-C 005-107



LEGEND

BEDROCK	
BOULDERB	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



AYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 14 May 1991

pg 1 of 2

SEGMENT # ER-9

TIDAL HEIGHT(Range) +2 → +3

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION <5 knots/N

PHOTOGRAPHS: ROLL #16

FRAME # 3

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ, 2m from the south stream bank. Within the site there is seasonal vegetation, a sparse concentration of barnacles, *Fucus*, *Littorina* snails, and limpets. The biota appear to be healthy, barnacles + snails on inner plates while sea urchins and the *Fucus* conceptacles were maturing. Biota cover is ~20%. Similar species concentration found in the MITZ. Also present is a sparse intertidal mussel bed; *Scytosipron* and *Ulva* (alga). Biota cover is ~5%.

(B) Area is located in the UITZ at the back of the cove. A few barnacles are present within the site covering less than 1% of the surface sediments. The MITZ is a granular beach. At ~+4' tide level to the water there is a mussel bed. Distribution is patchy, on the west side of the cove the mussel bed has ~50% surface cover, on the east side the concentration is sparse ~25% and between the two is a bare concentration ~5%.

(C) Area is located on the west side of the cove in the UITZ. Within the site black lichen and barnacles cover <1% of the surface sediments. Below the site there are barnacles, *Littorina*, filamentous green algae and *Fucus* covering ~5% of the surface. *Fucus* sporlings and maturing conceptacles are present.

(D) Area is located high in the UITZ. Within the site there are barnacles attached to pebbles covering <1% of the surface.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	2	4	
Gulls/kittiwakes	1	8	
Shorebirds	1	4	
Corvids			
Other Birds	1	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED 16-19 MAY

Rev'd 5/21/91 AM

Team # 5

Segment # ER-9

Subdivision A

Sea State 0

Date 14 May 1991

Tidal Height +2 → +3

Biologist Crank

Wind Speed / Direction <5 knots / N

pg 2 of 3

Comments (cont.)

(E) Area is near F) in the MITZ tidal flat. Within the site there is a moderate concentration of Fucus and barnacles covering ~60% of the surface. Recruitment is occurring both Fucus sporelings and a recent barnacle settlement are present. Fucus is reproductively active; conceptacles were maturing. In close proximity to the area, the elevation drops slightly, biota cover increases to >70%. Also present is a rare to sparsely concentrated mussel bed. See Photo MAYSAP-S-Roll 16-Frame 3 for an overview of the tide flat.

(F, G) Areas are located west of the tide flats in the SUPRA-UTZ and MITZ. In the SUPRA and UTZ, biota cover is approximately 5%.

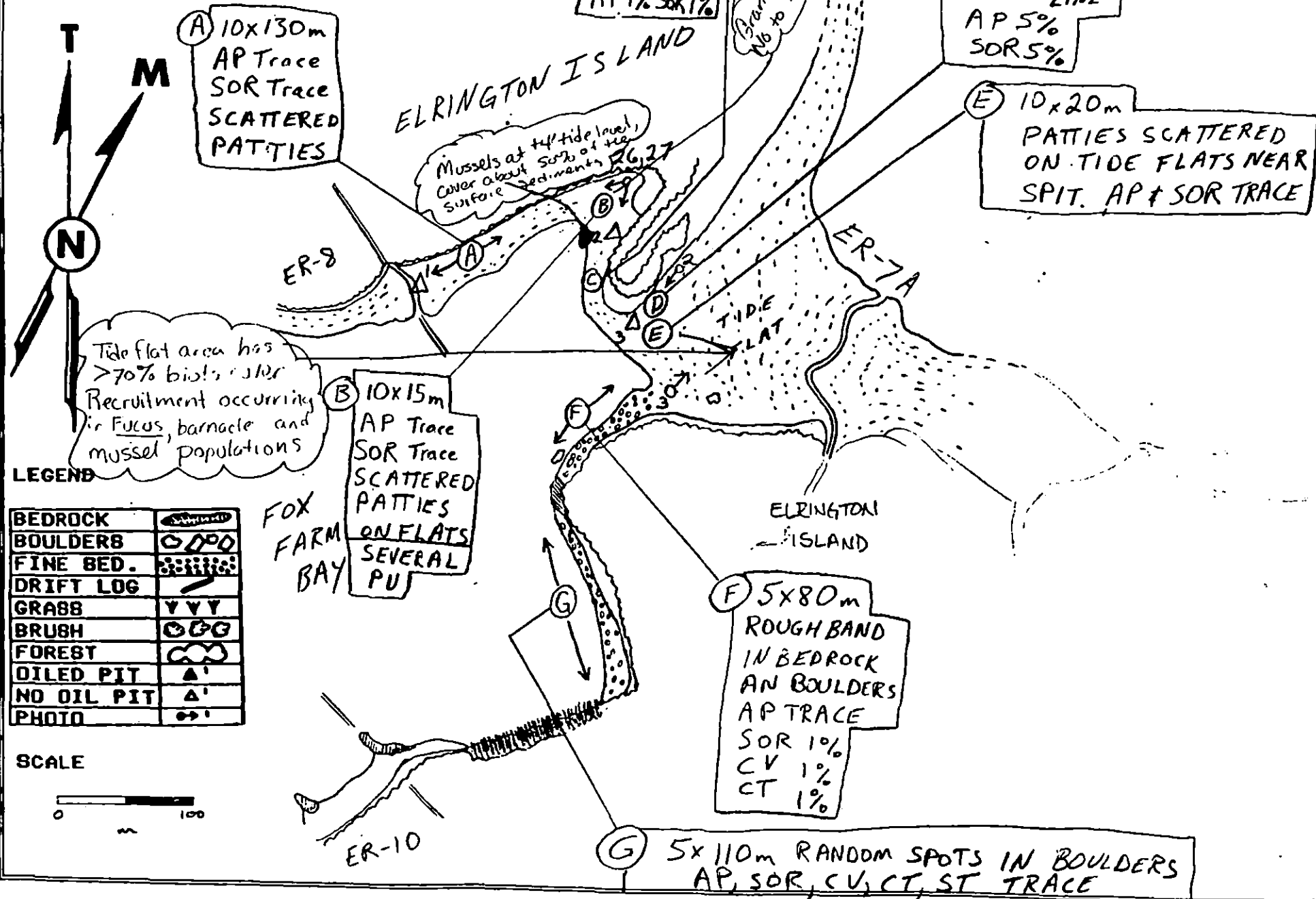
The biota on this subdivision appears to be healthy. The tidal flat is the most sensitive area in this subdivision. Mechanical equipment, including 4-wheelers, could create a net-environmental loss. If tidal flat is accessed, it should be restricted to manual pick-ups.

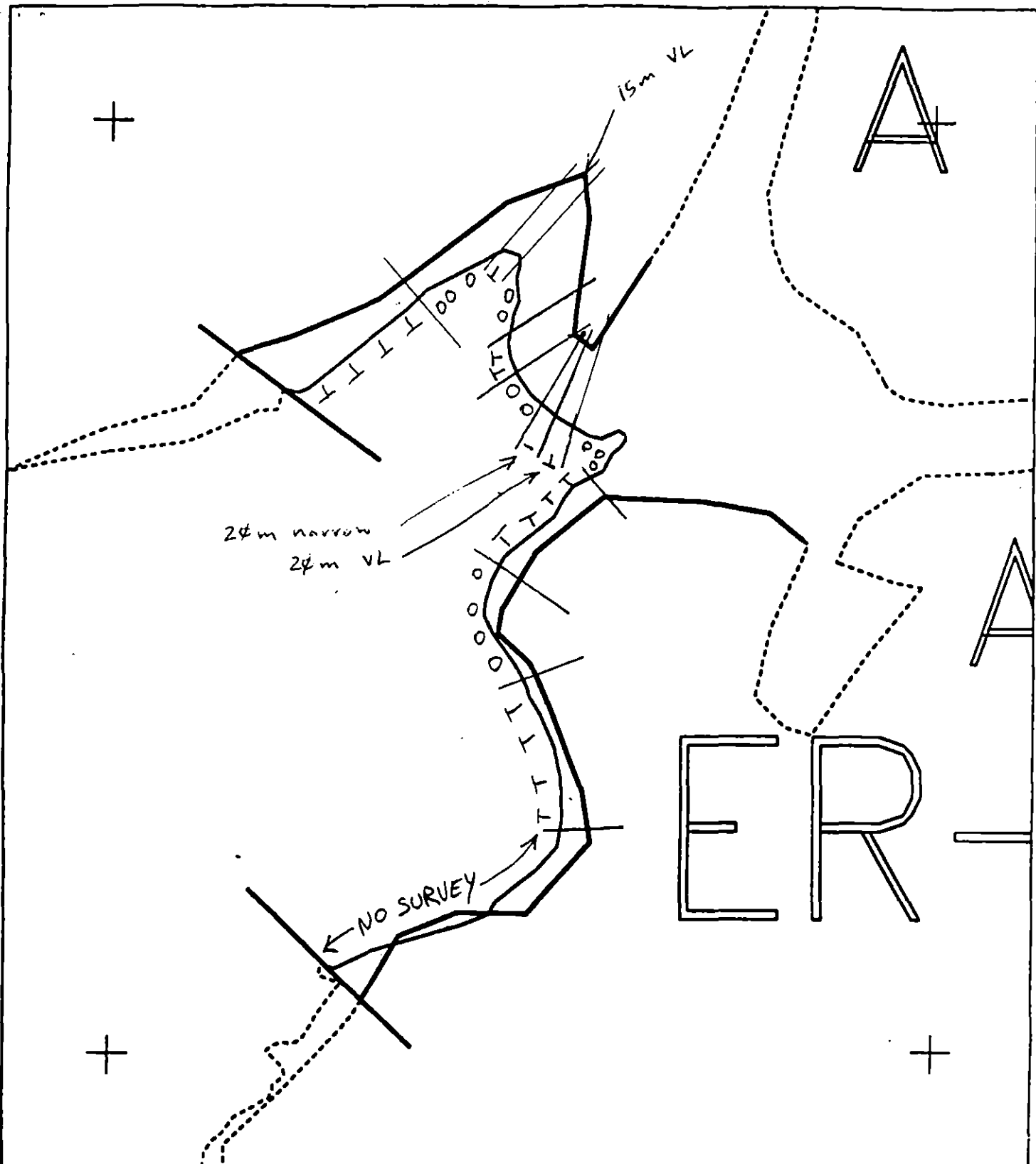
MA 1991
 SKETCH MAP & Bio Map
 GREG CHANEY / CLINE / Crank
 TEAM 5

SEGMENT: ER 9 A

DATE: MAY 14 1991

AIR P.N. PIN-C 005-107





XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER009 A
 ADEC Subsegment Length: 1152m
 METERS
 0 100 200
 AK State Plane Zone 4
 per000a



Subdivision Field Map
 Map Key: PWSE009A
 Name: GREG CHANEY
 Date: MAY 14 1991
 Date Entered:

EG revised 5/19
 REVISED CB 19 MAY

1991 MAYSAP EVALUATION

SEGMENT: EV 009 SUB: A REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest,
Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: Charles E. Holmes Date: 5/10/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 10 1991

FOSC APPROVAL DATE: 5/15/91

ADEC

FOSC

EXXON

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG

NOAA

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-9 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Hoyer SIGNATURE [Signature]☒ NTR

AP and TB's were observed and recovered by Ueca crew, our team surveyed the northern half of this segment and the only remaining oil is SOR + trace oiling. No treatment recommended at this time.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]☒ NTR

No oil observed. No treatment needed.

LANDMANAGER

NAME Steve Ward OF CVC SIGNATURE [Signature]☒ NTR

No Sub-Surface or Fount. Slight stain with spruce needles was present on Rock faces. Not present in any sizeable amount. Small patches were removed. No treatment recommended at this time.

USCG/NOAA

NAME HODGES/DREHER SIGNATURE [Signature]☒ NTR

No oil observed.

5

SEGMENT EV-9

SUBDIVISION A

DATE April, 27, 191

ENERGY LEVEL: ☐ H ☐ M ☒ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 10 m VL 1 m NO 239 m US 478 m

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5 - 21

FRAMES 18-22

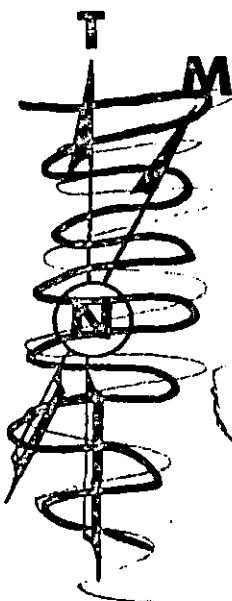
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS:

Reviewed: F.W. 5/2/91
Reviewed: M.C. 5/4/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-9-A
 DATE: April 27 1991
 AIR P.#: NONE

MAGNETIC NORTH



LEGEND

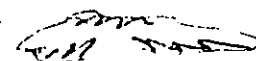
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

IKTUA
 BAY

SCALE APPROX. 65
 METERS

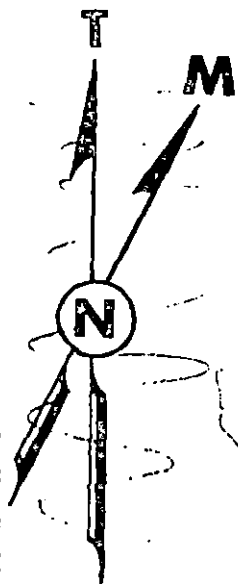


LOW ROCKS



Reviewed: F.W. 5/2/91
 Reviewed: M.C. 5/7/91

MAYSAP 1991
 OG SKETCH MAP: Bio Sketch
 GREG CHANEY: Crank
 TEAM 5
 SEGMENT: EV-9-A
 DATE: April 27 1991
 AIR P.#: NONE

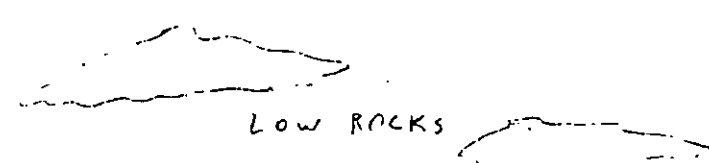
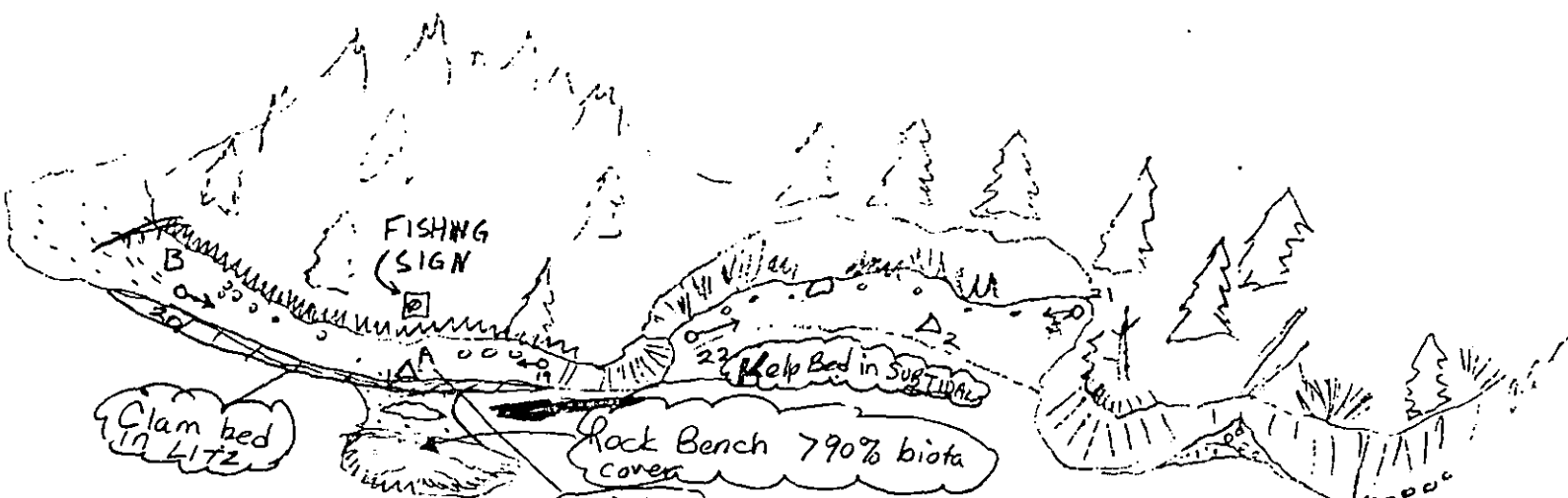


MAG NORTH →

LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 27 Apr

SEGMENT # EV-9

TIDAL HEIGHT(Range) +1.5 → +3.0

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION 0

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is high in UITZ located 5m behind a rock bench. In the angular cobble and gravel there are sparse barnacles, *Littorina* and limpets. Mussels are rare. Three meters SE of area barnacles are moderate, *Fucus* sporadically are rare and mussels are sparse.

(B) Area is in the UITZ consisting of angular small boulders and cobble. Rare barnacles and *Littorina* are present within the area. One meter below, barnacles, mussels, *Littorina* and limpets are sparse. Five meters below there are patches of *Fucus* and *Scytosiphon*.

This is a rich, diverse and healthy intertidal zone. Subtidal *Laminaria* (Kelp) beds begin just offshore. There are clam beds in the LITZ with at least 4 spp (*Prototheca*, *Trexus*, *Macoma*, *Saxidomus*). Scallop and oyster shells were also present. Barnacles were moderate in the LITZ; MITZ decreasing to sparse in the UITZ. Mussels were sparse on the beach. *Littorina* juveniles were moderate and adults sparse.

There is a rock bench approx 5m east of area A with 79% biota coverage including *Ulva*, *Odonthalia*, *Scytosiphon* (algae), moderate mussels, *Fucus*, barnacles, *Littorina* and limpets.

Oystercatchers were feeding in LITZ and other scat found in UITZ

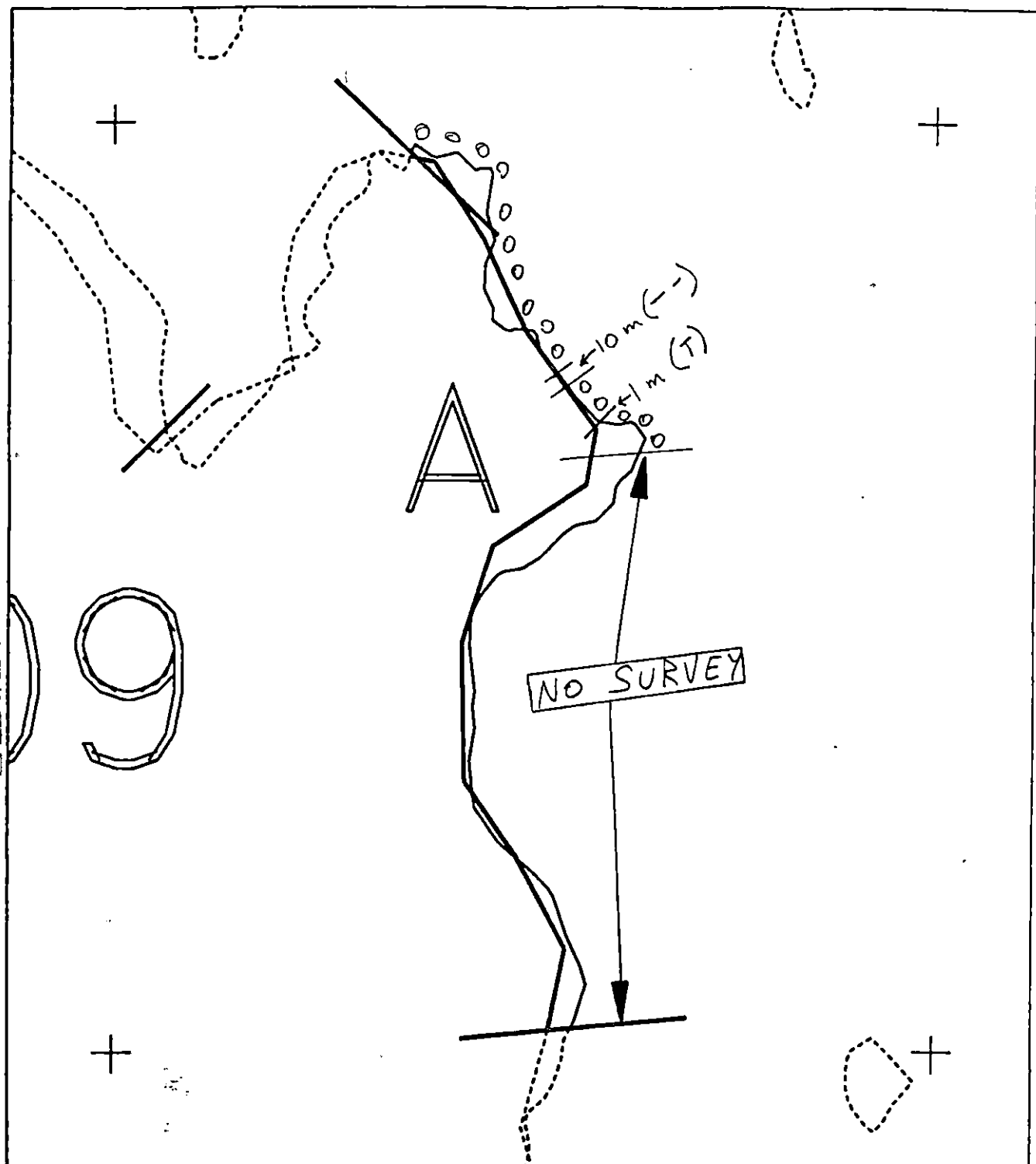
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Juvenile eels
Seabirds	2	4	
Waterfowl			
Gulls/kittiwakes	2	30	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	7	Deer	1 - also hares
Pinnipeds (specify)	2 Harbor Seals in H ₂ O 1a Seals lions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.



XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EV009 A

ADEC Subsegment Length: 728m
 METERS

5 100 200
 AZ State Plane Zone 4
 proj000a



Subdivision Field Map
 Map Key: PWSEV009A
 Name: Greg Chaney
 Date: April 27 1991
 Date Entered:

REVIEWED: F.W. 5/2/91

REVIEWED: M.C. 5/4/91

SHORELINE EVALUATION

SEGMENT ST/ ER-09 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Chuck Z. Holmer DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 399 m: V.Light 677 m: No Oil 71 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: <u> </u> Wands
☒ Tarmat: <u> </u> Breakup	☐ <u> </u> Beach Cleaner
☒ <u>X</u> Removal	☐ Other (see comments)

COMMENTS: Recommend manual removal of tarballs, mousse, oiled vegetation and debris from locations shown on sketch map. Work should be conducted after 6/1. Avoid disturbance to "set-aside" study site (Exxon AP-16) in adjacent segment (ER-07).

BIOREMEDIATION FOR THE AREA INDICATED ON SKETCH

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC ART WEINER
EXXON ANDY TATE FOSC: DATE: 4-25-90
NOAA Burl Wescott
USCG KENNETH KEANE

00 Rick Murty

SEGMENT 57/ER-09

SUBDIVISION A

DATE 03 / Apr / 90

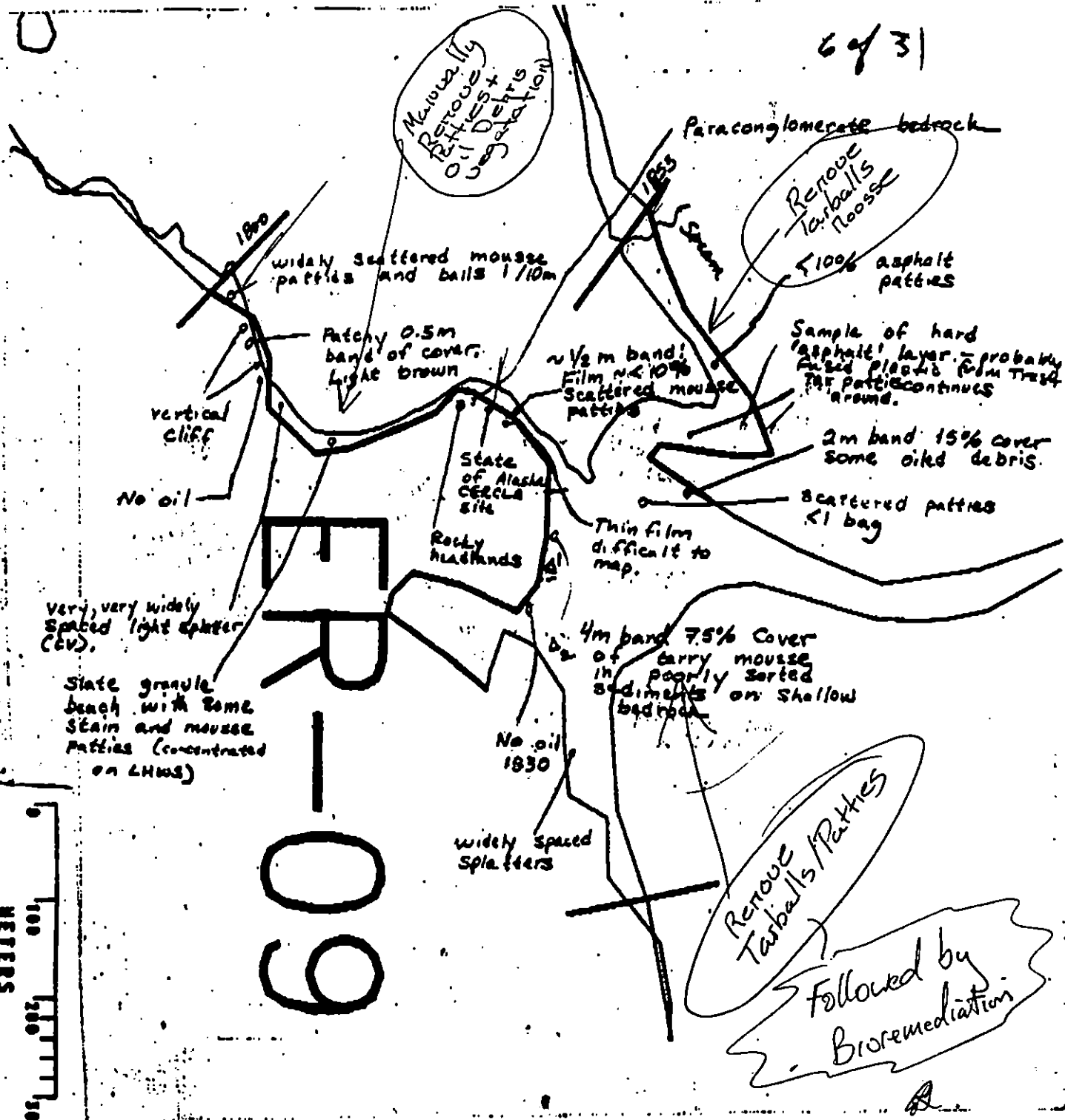
CHECKLIST

- ☐ M Animal
- ☐ Aquatic, Seabird
- ☐ Seagulls, Brdly
- ☐ Or Dab
- ☐ Wreck
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Eel, WHALAN
- ☐ Seal
- ☐ Purple Location(s)
- ☐ Purple(s)
- ☐ Purple Location(s)
- ☐ Purple Location(s)

LEGEND

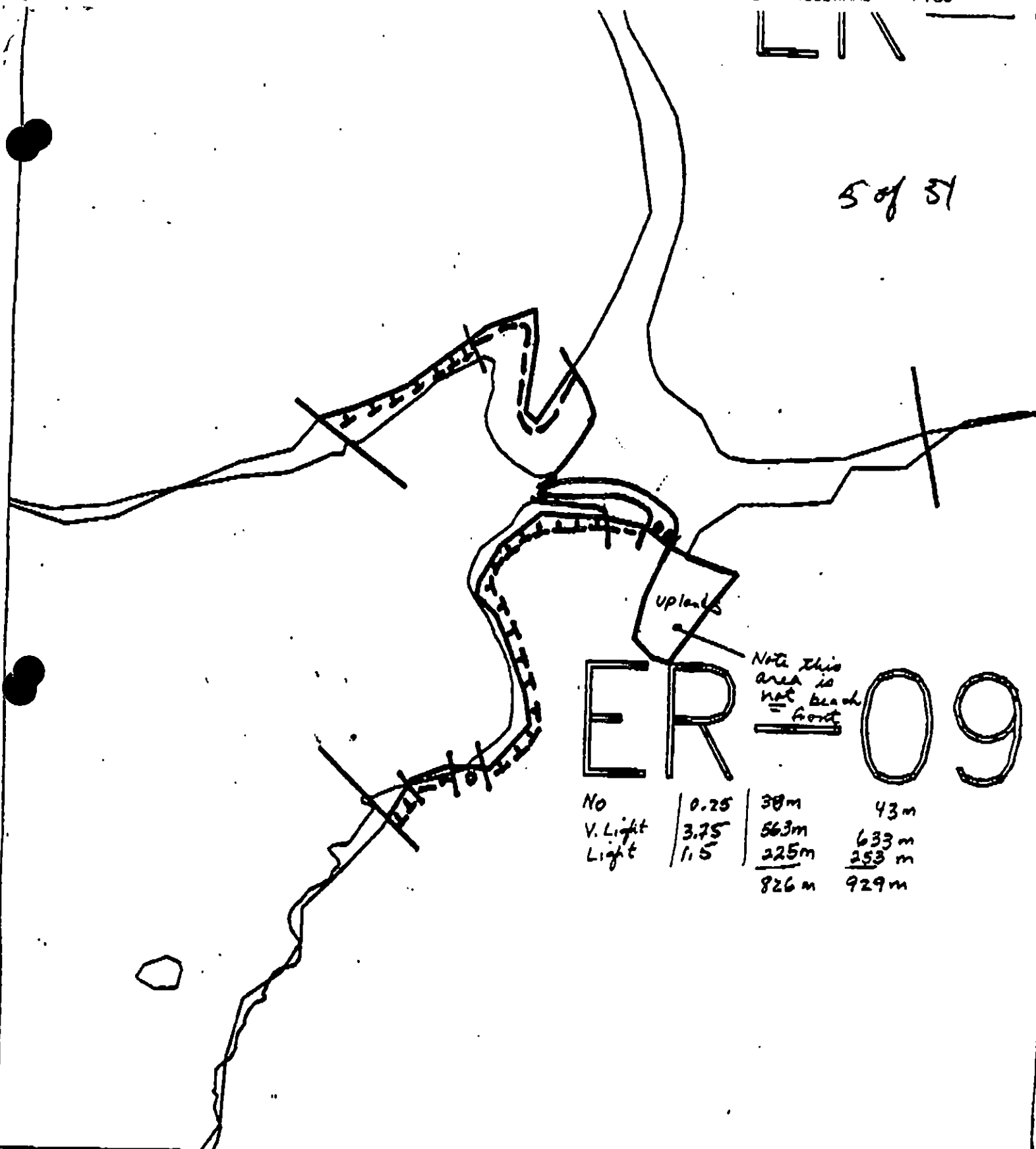
- 1 A
- 2 A
- R - Submarine Oil
- CT/C
- CT/B
- Subs. Dissection
- CT/P
- Patchy Dissection
- CT/S
- Spatial Dissection
- Old Vegetation
- 1 a+
- Probe location, direction, and number

6431



ON Character (m): AP PO CV NO CT ST 6.33 US 253 TB 6.33 R NO 43

5 of 31



ER

Note this
area is
not beach
front

09

No	0.25	38m	43m
V. Light	3.75	563m	633m
Light	1.5	225m	253m
		826m	929m

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-9

ADEC Segment Length: 1454m



METERS

Map Key: PWS-175

Name: R. Marty

Date: 03 April 1990

Date Entered:

WORK PLAN ADDENDUM

Segment ER-09

Subdivision A.

Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR BIO EXTENSION WITHIN THE SUBDIVISION:

2. ADJUSTMENT TO WORK PLAN

- ADD BIOREMEDIATION AS INDICATED ON THE SKETCH

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Chak Z. Dima 6/22/90

Inspection Constraint Applies

Refer: Archaeological Constraint on original work plan.

TAG APPROVAL DATE 6/20/90

ADEC Ran Williams R. Williams

EXXON Amy Tan Paul

NOAA Joseph Igloo J. Tan

USCG G.A. REITER G.A. Reiter

FOSC my L DATE 7-10-90

Prior to working subdivision,
check with US F+WL to ensure
their people are out of the area.
↓
camps included

1991 MAYSAP EVALUATION

SEGMENT: ER 009 SUB: A REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry Release,
Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: Mark E Holmes Date: 5/30/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

2

Y

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC: MANUSCRIPT REMOVAL AD / 145012

RECREATIONAL + SUBSISTENCE USE AREA (most primitive)
WORK CAN BE EASILY DONE - OF REPORT
INDICATES SPLASH "AP" - SHOULD BE PICKED UP!

TAG APPROVAL DATE:

FOSC

~~E. E. PAGE, CDR, USCG~~

CHIEF OF STAFF, FOSC

The ~~State~~ ^{CHIEF OF STAFF / FOSC} will evaluate the need for further treatment.

ADEC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-9 SUBDIVISION A DATE 5/14/91

ADEC

NAME John Hayes SIGNATURE [Signature]☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pickup in area D this segment is adjacent to other segments in Foxfarm Bay area that need manual pickup so work orders can be coordinated here for manual crews.

EXXON

NAME John Deen SIGNATURE [Signature]

☒ NTR WHILE THERE IS ENOUGH OIL PRESENT IN THE AP REFERENCED AT SITE "D" TO ACT AS AN ADHESIVE, THE CONCENTRATION IS SO SMALL THAT BREAKING IT BY HAND DOES NOT SOIL A WHITE GLOVE LINER.

LANDMANAGER

NAME Steve Wingo OF CVC-FS SIGNATURE [Signature]☐ NTR ☒ TREATMENT RECOMMENDED

Asphalt needs picked-up by Chenega or Ueco.

Site - D needs manual as this is Fox Farm Bay. A High use area by everybody. Especially Chenega. This area is the site of a yearly picnic by school kids of Chenega who also camp-out here several times a year.

NO BIO.

USCG/NOAA

NAME DREHER/CLINE SIGNATURE [Signature]

☒ NTR Observed only traces and splashes of inert oil residue, i.e. asphaltic material, that pose no threat to the surrounding environment. Any further attempts at removal would do more harm than the oil residue remaining.

AP patches in sites D + E could be removed easily. Tidal / low area containing these sites is open w/ easy access. Removal of AP is recommended. : c

5

OG CHANEY

BIO CRANK

SEGMENT ER-9

ADEC HAYES

LANDMANAGER WARD for CUC

SUBDIVISION A

DEAN

USCG/NOAA DREHER/CLINE

DATE MAY 14 1911

TIME 20 : 10 to 21 : 00

TIDE LEVEL 2 ft. to 3 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 942 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 20 m VL 390 m NO 532 m US 210 m

[illegible]

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5 - $\frac{15}{16}$ FRAMES $\frac{25-27}{1-3}$

[illegible]

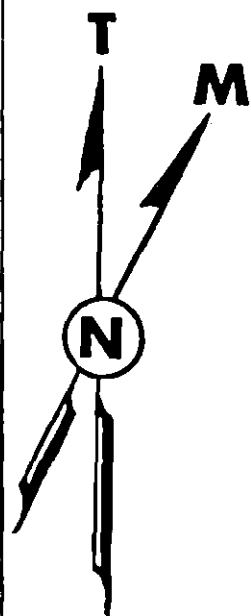
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: SEVERAL PATTIES WERE RECOVERED FROM AREA (B) HOWEVER TIME DID NOT ALLOW FOR EXTENSIVE PICKUP AT SITE (D).

✓ raised 5/19
REVIEWED CA 19 MAY

MAY 1991
OG SKETCH MAP
GREG CHANEY/CLINE
TEAM 5

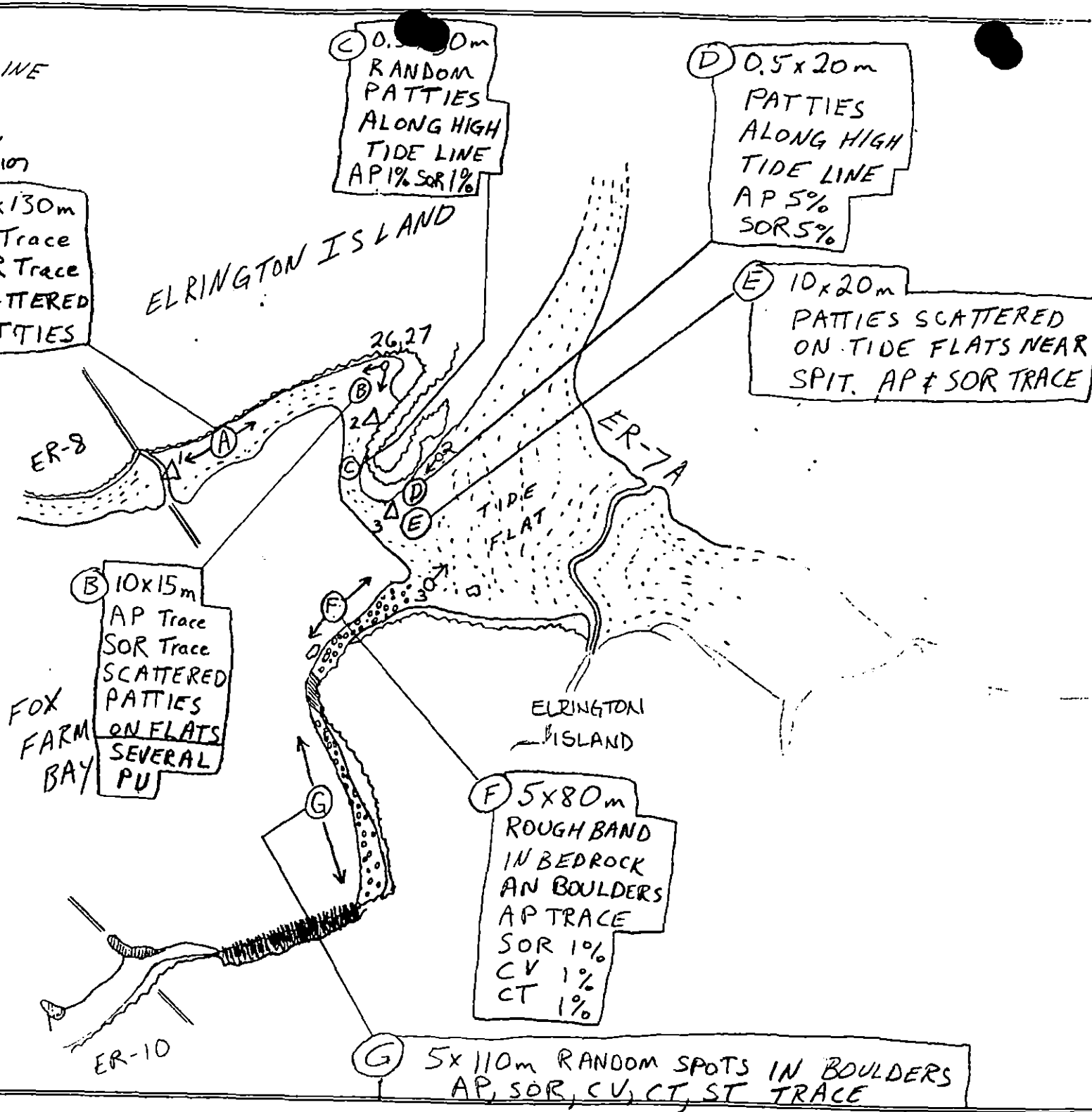
SEGMENT: ER9 A
DATE: MAY 14 1991
AIR P.#: PIM-G 005-107



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 14 MAY 1991

pg 1 of 2

SEGMENT # ER-9

TIDAL HEIGHT(Range) +2 → +3

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION <5 knots/N

PHOTOGRAPHS: ROLL #1/Lp

FRAME # 3

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ, 2m from the south stream bank. Within the site there is seasonal vegetation, a sparse concentration of barnacles, *Fucus*, *Littorina* snails, and limpets. The biota appear to be healthy, barnacles + snails on inner plates when spawning and the *Fucus* conceptacles were maturing. Biota cover is ~20%. Similar species concentrations found in the MITZ. Also present is a sparse intertidal mussel bed; *Scytosiphon* and *Ulva* (alga). Biota cover is ~50%.

(B) Area is located in the UITZ at the back of the cove. A few barnacles are present within the site covering less than 1% of the surface sediments. The MITZ is a granular beach. At ~+4' tide level to the water there is a mussel bed. Distribution is patchy, on the west side of the cove the mussel bed has ~50% surface cover, on the east side the concentration is sparse ~20% and between the two is a rare concentration ~5%.

(C) Area is located on the west side of the cove in the UITZ. Within the site black lichen and barnacles cover <1% of the surface sediments. Below the site there are barnacles, *Littorina*, filamentous green algae and *Fucus* covering ~5% of the surface. *Fucus* sporlings and maturing conceptacles are present.

(D) Area is located high in the UITZ. Within the site there are barnacles attached to pebbles covering <1% of the surface.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	2	4	
Gulls/Kittiwakes	1	8	
Shorebirds	1	4	
Corvids			
Other Birds	1	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Bales(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED 16 19 MAY
D. J. K. O. N. A.

Team # 5
Segment # ER-9
Subdivision A
Sea State 0

Date 14 May 1991 pg 2 of 2
Tidal Height +2 $\rightarrow$ +3
Biologist Crank
Wind Speed / Direction < 5 knots / N

Comments (cont.)

(E) Area is also F) in the MITZ tidal flat. Within the site there is a moderate concentration of Fucus and barnacles covering ~60% of the surface. Recruitment is occurring both Fucus sporelings and a recent barnacle settlement are present. Fucus is reproductively active; conceptacles were maturing. In close proximity to the area, the elevation drops slightly, biota cover increases to > 70%. Also present is a rare to sparsely concentrated mussel bed. See Photo MAYSAP-S-Roll 16-Frame 3 for an overview of the tide flat.

(F, G) Areas are located west of the tide flats in the SUPRA-UITZ and MITZ. In the SUPRA and UITZ biota cover is approximately 5%.

The biota in this subdivision appears to be healthy. The tidal flat is the most sensitive area in this subdivision. Mechanical equipment, including 4-wheelers, could create a net-environmental loss. If tidal flat is accessed, it should be restricted to manual pick-ups.

MAY 1991

SKETCH MAP & Bio Map

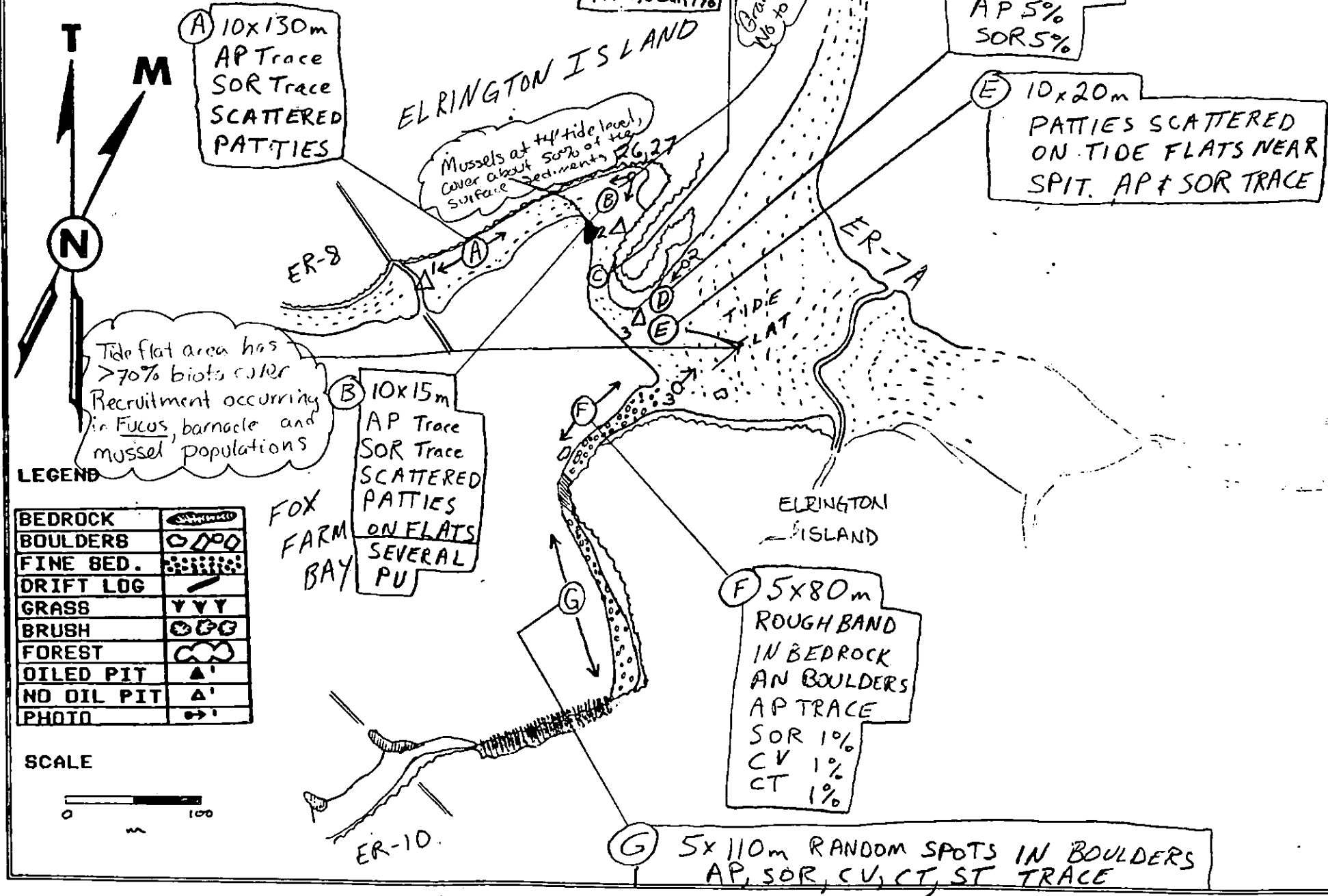
GREG CHANEY/CLINE/Crank

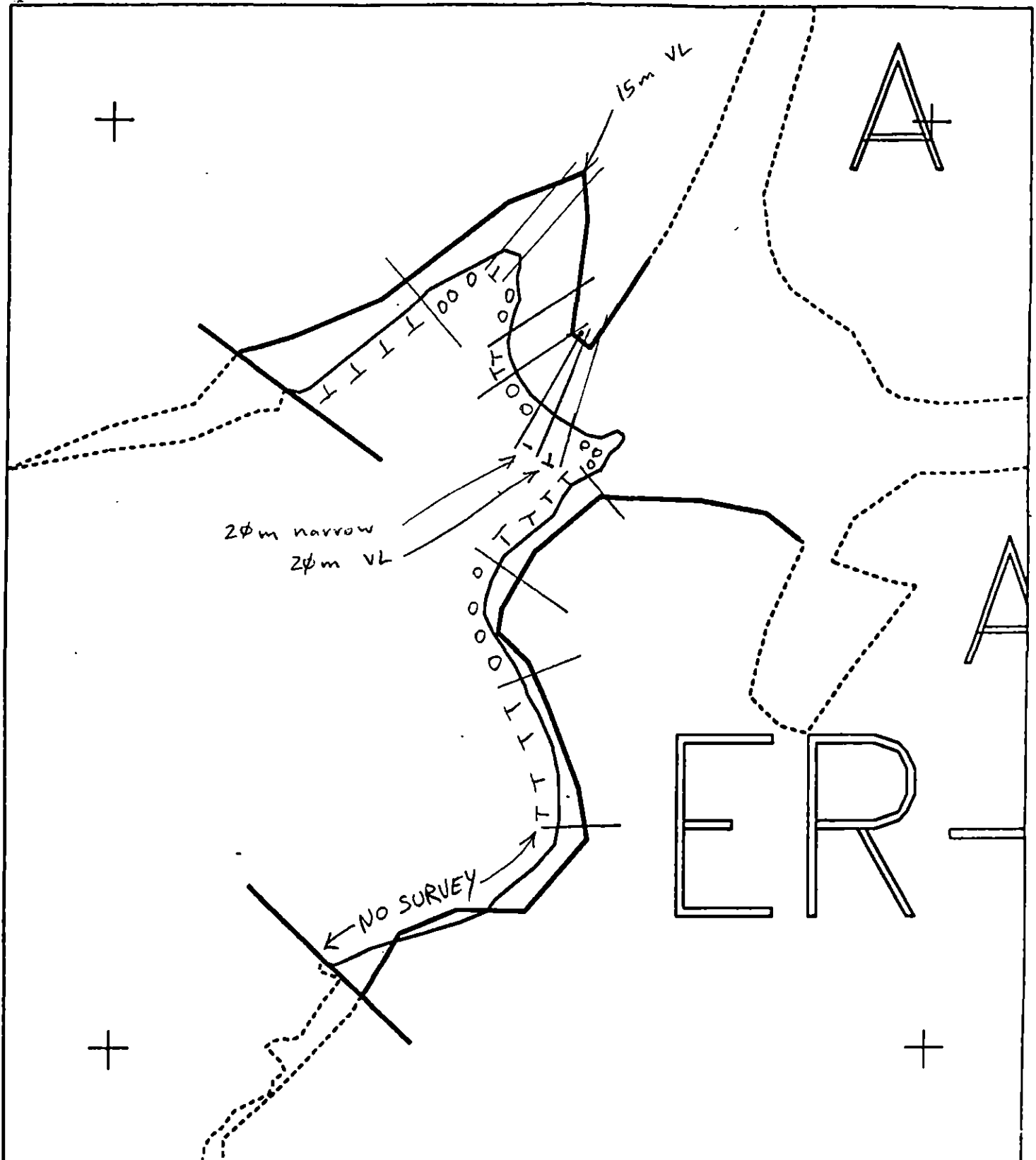
TEAM 5

SEGMENT: ER9 A

DATE: MAY 14 1991

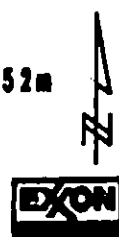
AIR P.#: PM-G 005-107





XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER009 A
 ADEC Subsegment Length: 1152m
 METERS
 0 100 200
 AK State Plane Zone 4
 per000a



Subdivision Field Map
 Map Key: PWSER009A
 Name: GREG CHANEY
 Date: MAY 14 1991
 Date Entered:

EC revised 5/19
 REVISED CD 19 MAY

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-09

SUBDIVISIONS: A (1 OF 1)

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncultivated intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SHORELINE EVALUATION

SEGMENT ST/ ER-09 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 399 m: V.Light 677 m: No Oil 71 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Recommend manual removal of tarballs, mousse, oiled vegetation and debris from locations shown on sketch map. Work should be conducted after 6/1. Avoid disturbance to "set-aside" study site (Exxon AP-16) in adjacent segment (ER-07).

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

3 of 31

SEGMENT ST/ ER-9 SUBDIVISION: _____ DATE 23 APRIL 90USCGNAME LARRY FLETCHER SIGNATURE Larry R Fletcher☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUALLY REMOVE TAR PATTIES.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SALE SIGNATURE David M Sale☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① MANUAL REMOVAL OF TAR PATTIES
- ② INCLUDE ROCK WASHING IN AREA OF CERCLA SITE TO REMOVE TARRY PATCHES ON ROCKS

RECOMMEND CLEANING AT TIDE LEVELS BELOW 4' TO REMOVE TAR PATTIES FROM TOMBOLO

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Listed as priority 1 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. A-frame shelter located among spruce trees on the TomboLO. Recommend manual removal of mousse and asphalt patties. Possible washing of tarry mousse cover near CERCLA site. Follow-up with bioremediation.

SHORELINE OILING SUMMARY

REVISION NO. 002590

OG R. Mally USCG LARRY FLETCHER SEGMENT ST/ ER-09
 BIO B. Linder LAND REP Leigh Carter SUBDIVISION A (1081)
 EXXON J. Gernicki ADEC Dave Sals TIME 18:00 to 18:53
 TEAM NO.: 10 TIDE LEVEL: +1.2 to +1.7m DATE 04/03/90
 EST. SUBDIVISION LENGTH: 929 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: to counter clock wise
 SURFACE SEDIMENTS: R 20 % B 0 % C 10 % P 15 % G 15 % S 40 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 253 m VL 633 m NO 43 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	C	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER			X	✓								
COAT												
STAIN				X								
MOUSSE												
PATTIES			X									
TARBALLS				X								
FILM												
NO OIL									X	X	X	

PAVEMENT: H F S _____ sq. m by _____ cm

PATTIES / TARBALLS 10 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST/10/7Frames 9-13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm) (0-100)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		WET OF	RES. ON	CL. OF	CL. OF	NO		UP	DOWN		SU	U	M	V		
* 1	12	X					0-10	X		X	X				Y	R
2	20					X	.				X				N	G.S
							.									
							.									
							.									
							.									

COMMENTS * Pried out rock fragment

Revision

RM 4/3/90

MW 4/14/90

OG Rich Lurly

SEGMENT ST/ER-09

SUBDIVISION 4

DATE 03 / April 90

CHECKLIST

M Arrow
 Approx. Scale
 Sample Only
 Oil Dbl.
 Width
 Length
 % Cover
 Substrate Character
 E.g. IHHALM
 SCL
 Pseudo Location (s)
 Photo Location (s)
 Photo Location (s)

LEGEND

1 A

P1 - No Subsurface Oil

2 A

P1 - Subsurface Oil

C/C/C

C/B

Bottom Disturbed

C/T/P

Paddy Disturbed

C/T/S

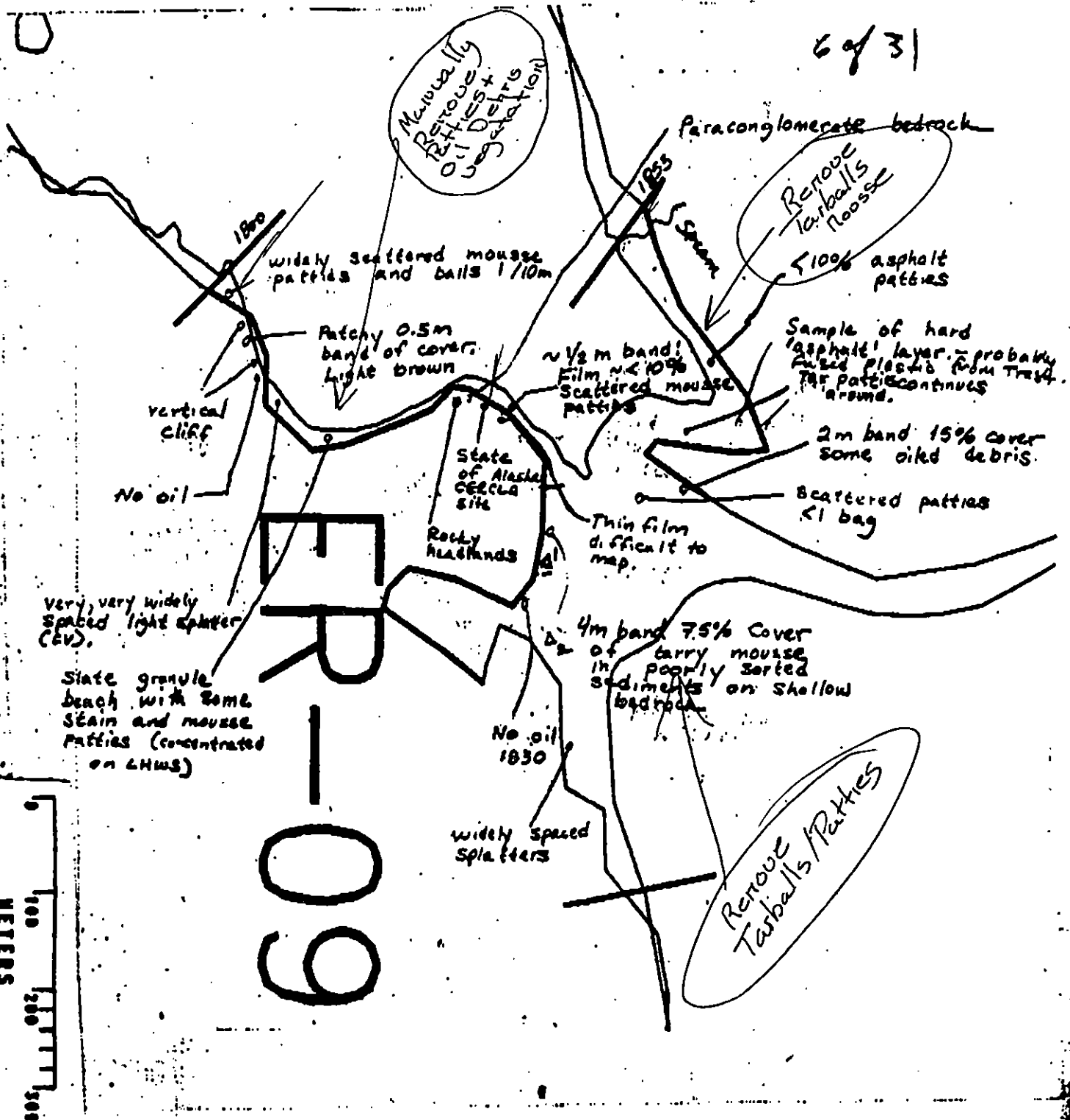
Spartan Disturbed

Clad Vegetation

1 A

Photo location, direction, and number

6 of 31



ER-09

METERS

ON Character: (m) AD PO CV NPO CT ST 633 MS T 255 TB 633 R NO 43

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST/10/EA 9 Subdivision A Date (mo/day/yr) 4/3/90
 1900 - 1900
 Time (24 hr) _____ Biologist Lemon Rain _____

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder _____ (3) Cobble 10 (4) Pebble 15 (5) Sand 55 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 15%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
 Photographs: _____
 Roll No. ST/10/7
 Frames 9-13

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

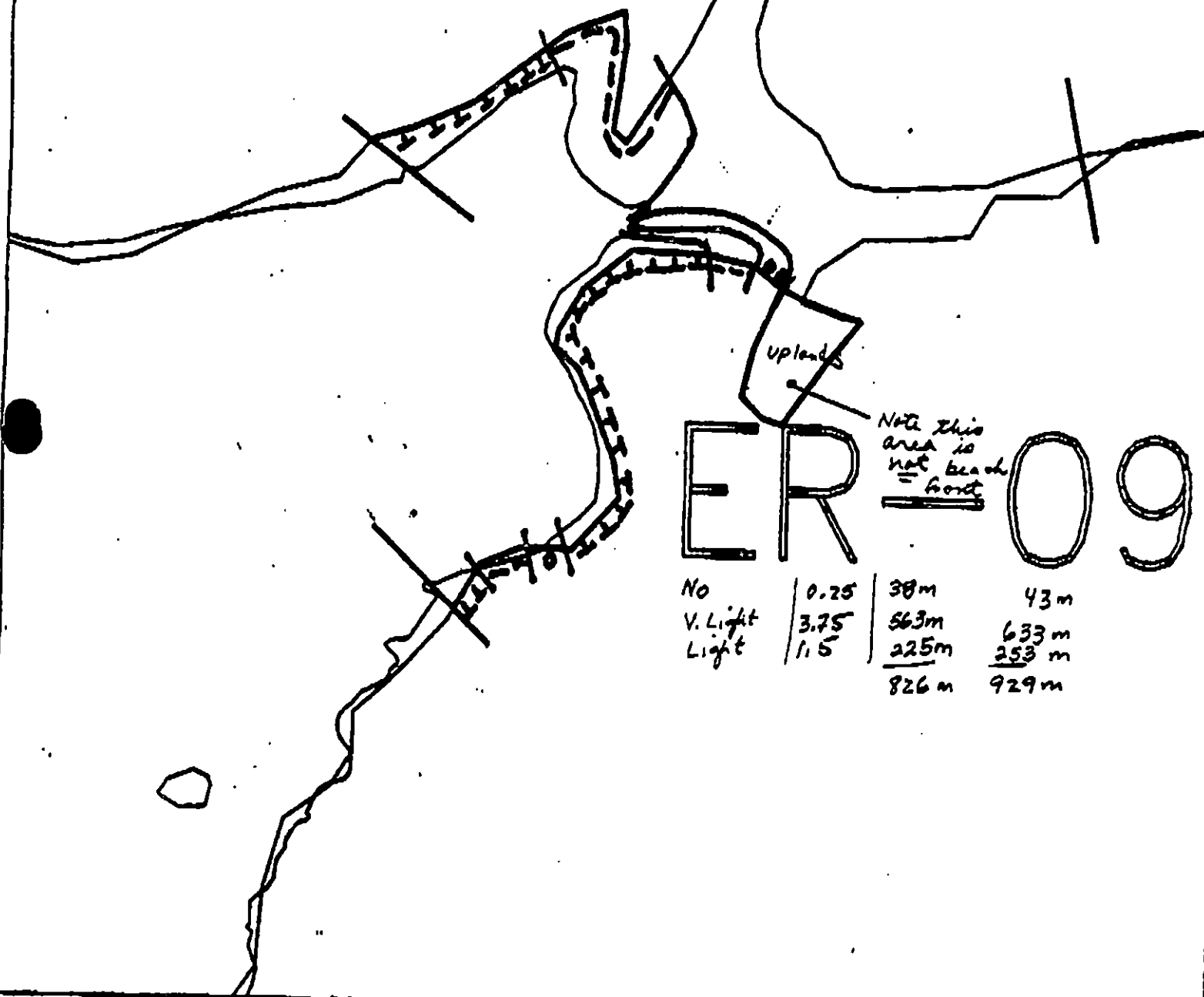
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: one bird skeleton observed. Low zone not visible except from skiff; Lamprolaima seen in front of bedrock areas. Apparently raised clam beds here similar to EA 10; Padadasmus cap shells not uncommon also. Trash has been buried on this beach leaving pavements of melted plastic. oil is at 10' level.

Ecological Considerations: Stream between EA 9 and EA 8 was examined; one insect larva found; no fish fry. Deer harvest, hatchery release, onchocercosis. There may be clam beds of recreational value at tide levels lower than available for this survey.

5 of 31



XXXX Wide

ER-9

/// Medium

--- Narrow

ADEC Segment Length: 1454m

TTTT Very Light

0000 No Oil



METERS

Map Key: PWS-175

Name: R. Marty

Date: 03 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-9 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

Tarmat Removal **OPEN**

Bioremediation

WORK AFTER 6/1 AND PRIOR TO 7/20

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F Sawmill Bay Hatchery Release

No Constraint to Manual Pickup or Tarmat Removal;
closed to Bioremediation prior to 6/1.

1K Purse Seine Hookoff

No constraint to Manual Pickup or Tarmat Removal.
Closed to Bioremediation after 7/20.

7II Subsistence: Deer Harvesting

No Constraint to Manual Pickup or Tarmat Removal;
closed to Bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unrolled biota and substrate, and avoid disturbance to study site (Exxon AP-16) in adjacent Segment ER-7. Restrict boat and air traffic to a minimum after 7/20.

TAG ADDENDUM DATE

5/18/90

ADEC

EXXON

NOAA

USCG

Art Weimer

Andy Weimer

Joseph T. Baker

G.A. Reiter

FOSC

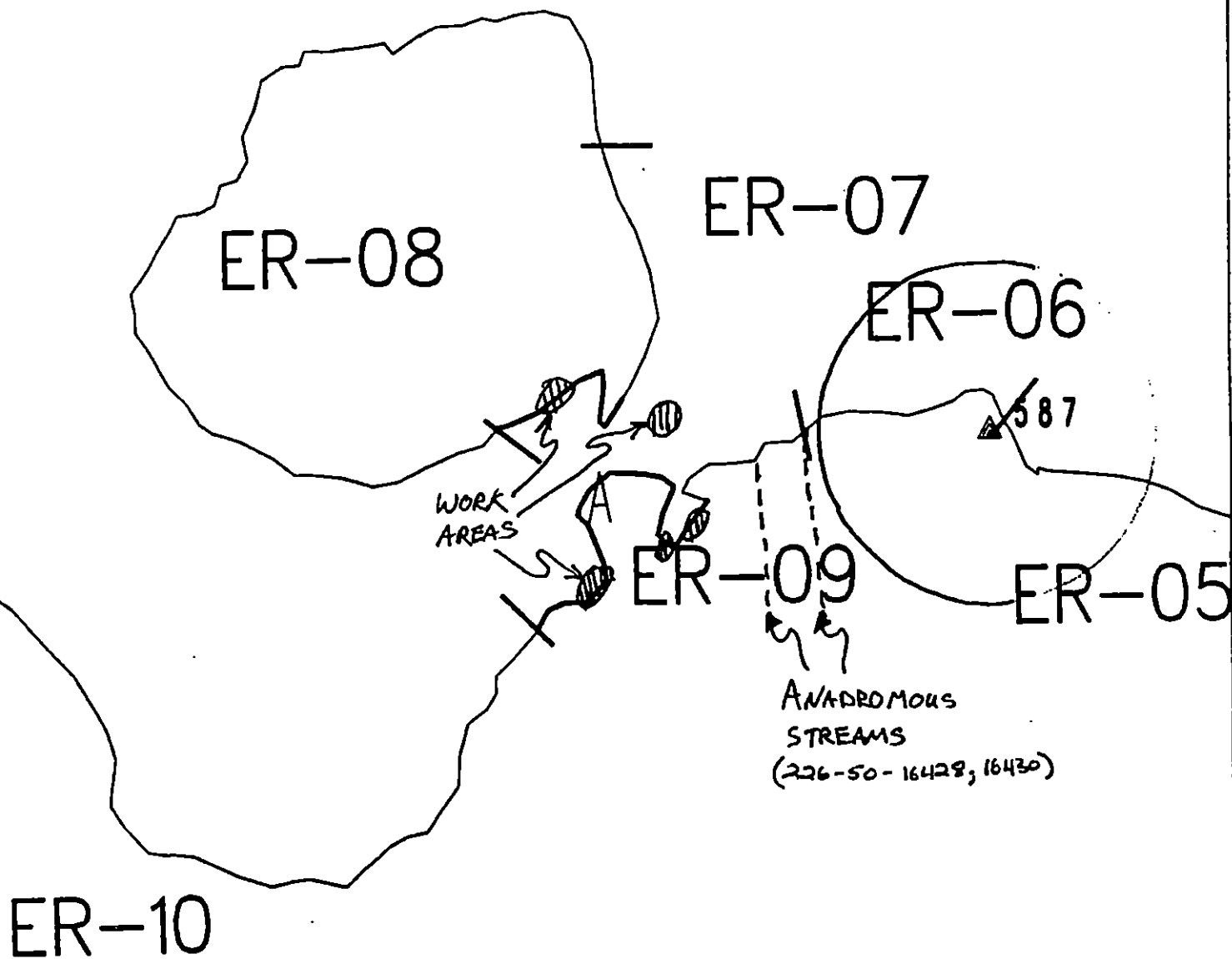
DATE 5-18-90

Prepared by:

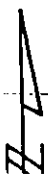
Arden May

Date:

5/17/90



Exxon Company, USA



ECOLOGY MAP SEGMENT ER-9

SUBDIVISION A (1 of 1)

UTM 18N



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ ER-09 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Chuck E. Holmer DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 399 m: V. Light 677 m: No Oil 71 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual removal of tarballs, mousse, oiled vegetation and debris from locations shown on sketch map. Work should be conducted after 6/1. Avoid disturbance to "set-aside" study site (Exxon AP-16) in adjacent segment (ER-07).
BIOREMEDIATION FOR THE AREA INDICATED ON SKETCH

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC ART WEINER
EXXON ANDY TATE
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: DATE: 4-25-90

For Work Window, See Addendum Dated 5/17/90 wtk

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-09 SUBDIVISION A Site 1+2 DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt, Residual oil and tarballs on segment.

Site #1 SOR/H/B PT/S TB/S

Site #2 AP/P/B See sketch map for locations

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually remove AP SOR/H and PT/TB also recommend reapplication of Bio on Site 1 work areas identified on sketch map.

3. TIMING ISSUES

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS).

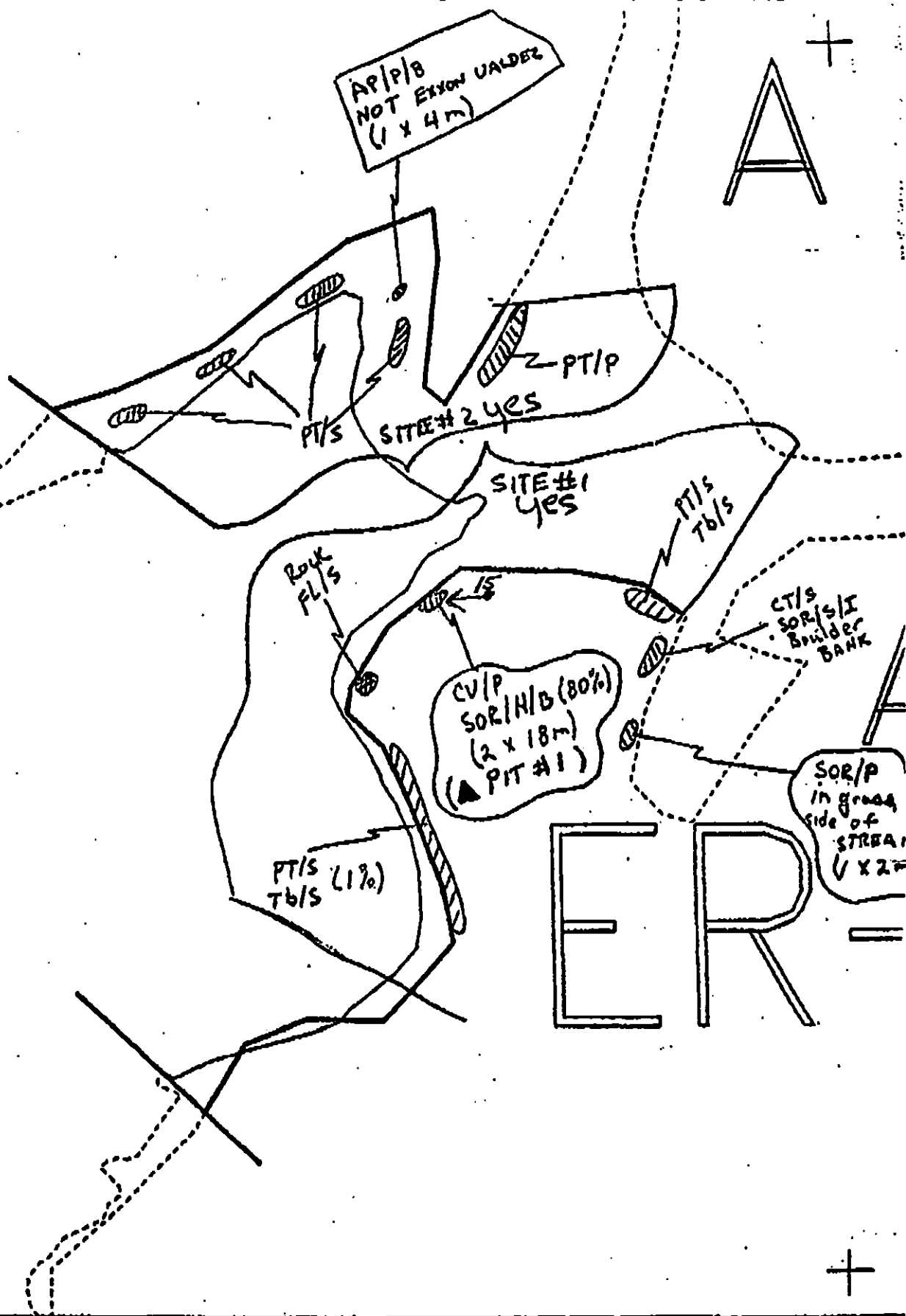
ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature] (If field rep is on scene)

→ NOTE THAT 9 & 7 PUT UP TO EACH OTHER, THIS END OF 9 IS ALL THAT NEEDS WORKED ON 9.



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ER-9 A

ADEC Subsegment Length: 1152m

METERS

0 100 1000

AK State Plane Zone 4 113771
 per-9c

Subdivision Field 1

Map Key: PWSE-9A

Name: Reimer

Date: 8/1/90

Data Entered:



WORK PLAN MODIFICATION RECOMMENDATION

ASAP
SEGMENT ER-09 SUBDIVISION A Site 1+2 DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt, Residual oil and torballs on segment.

Site #1 SOR/H/B PT/S TB/S

Site #2 AP/P/B See sketch map for locations

2. SUGGESTED ADJUSTMENT TO WORK PLAN

*Manually remove AP SOR/H and PT/TB also
recommend reapplication of Bio on Site 1 work areas identified
on sketch map.*

3. TIMING ISSUES

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING
MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC
ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS).

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature]

(If field rep is on scene)

→ NOTE THAT 947 PUT UP TO EACH OTHER, THIS END OF 9 IS ALL
THAT NEEDS-WORKED ON 9.

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-09 SUBDIVISION A ^{Site 1+2} DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt, Residual oil and tarballs on segment.

Site #1 SOR/H/B PT/S TB/S

Site #2 AP/P/B See sketch map for locations

2. SUGGESTED ADJUSTMENT TO WORK PLAN

*Manually remove AP SOR/H and PT/TB also
recommend reapplication of Bio on site 1 work areas identified
on sketch map.*

3. TIMING ISSUES

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING
MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC
ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS).

ADEC *[Signature]*

EXXON *[Signature]*

USCG *[Signature]*

LAND MANAGER *[Signature]*

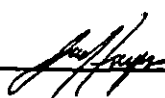
(If field rep is on scene)

→ NOTE THAT 947 PUT UP TO EACH OTHER, THIS END OF 9 IS ALL
that needs-works on 9

SEGMENT AS/ ER-9 SUBDIVISION: A SITE: 1 DATE 8/1/90**USCG**NAME MR. Michael D. BrownSIGNATURE ☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

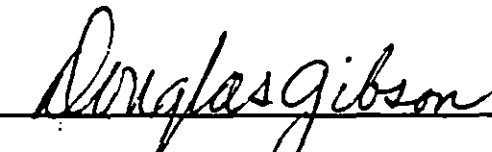
REASON:

ADECNAME John HayesSIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

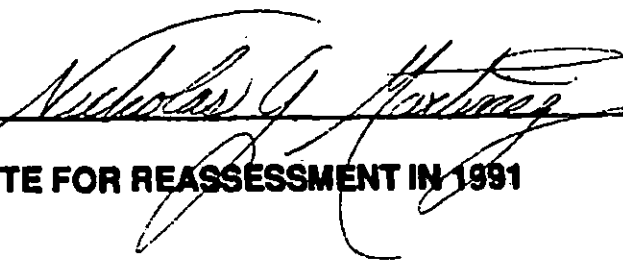
REASON:

Oil remaining on site 1 consists of heavy SOR at some subsurface to 10cm. In addition there is a stream on this site that should be reevaluated as there was oil remaining in the form of SOR on the northern bank. See sketch map for SOR + TB locations.

LAND MANAGERNAME DOUGLAS GIBSONSIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXONNAME MartinezSIGNATURE ☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SEGMENT AS/ ER-9 SUBDIVISION: A SITE: 2 DATE 8/1/90**USCG**NAME MSR Michael D. Brown SIGNATURE Michael D. Brown☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

ADECNAME John Hayes SIGNATURE John Hayes☒ YES
REASON:☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

Oiling consists of AP/P in 5 areas along this sub-section.
 Recommended manual R.U. in 1990. See sketch for location.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING
 MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC
 ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS)

EXXONNAME Martinez SIGNATURE Martinez☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

PAGE 1 OF

TOTAL EST LENGTH OF SHORELINE SURVEYED: 950

OIL CATEGORY LENGTH: W 0 m M 0 m N 70 m VL 350m NO 530m US 202 m

SITE 1

SITE 2

SITE 3

DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	LI
	P				P		
		X	✓		X _L	X	
				X			X
				450			

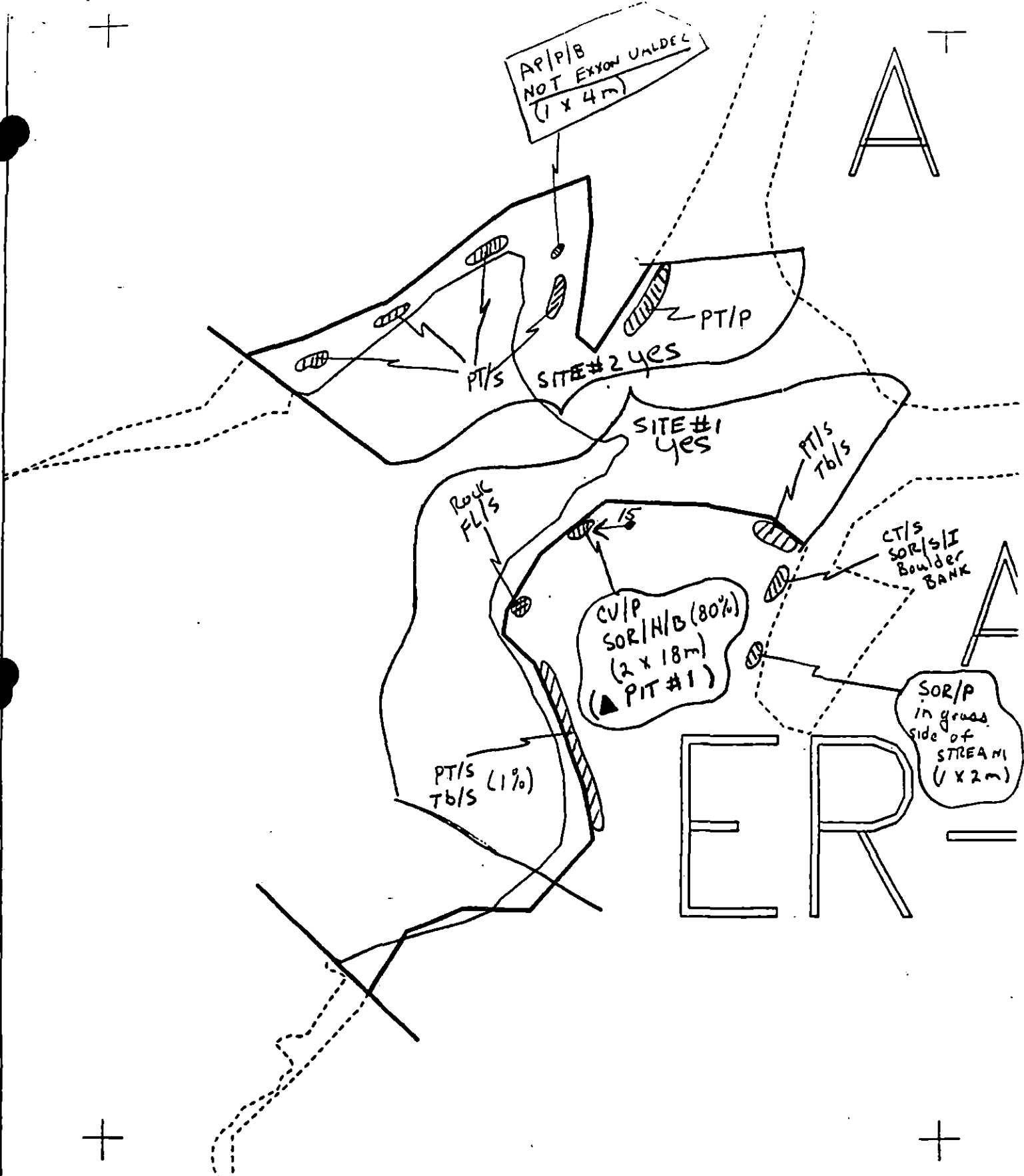
[illegible][illegible]

Roll No.

Frames

COMMENTS The only significant oiling in this segment is a small 2 x 18 m area on a Rock/Boulder Terrace with Heavy SUR remaining after it appears some manual work was done. The remaining oil is in the form of Sparacle Tarballs and Patties

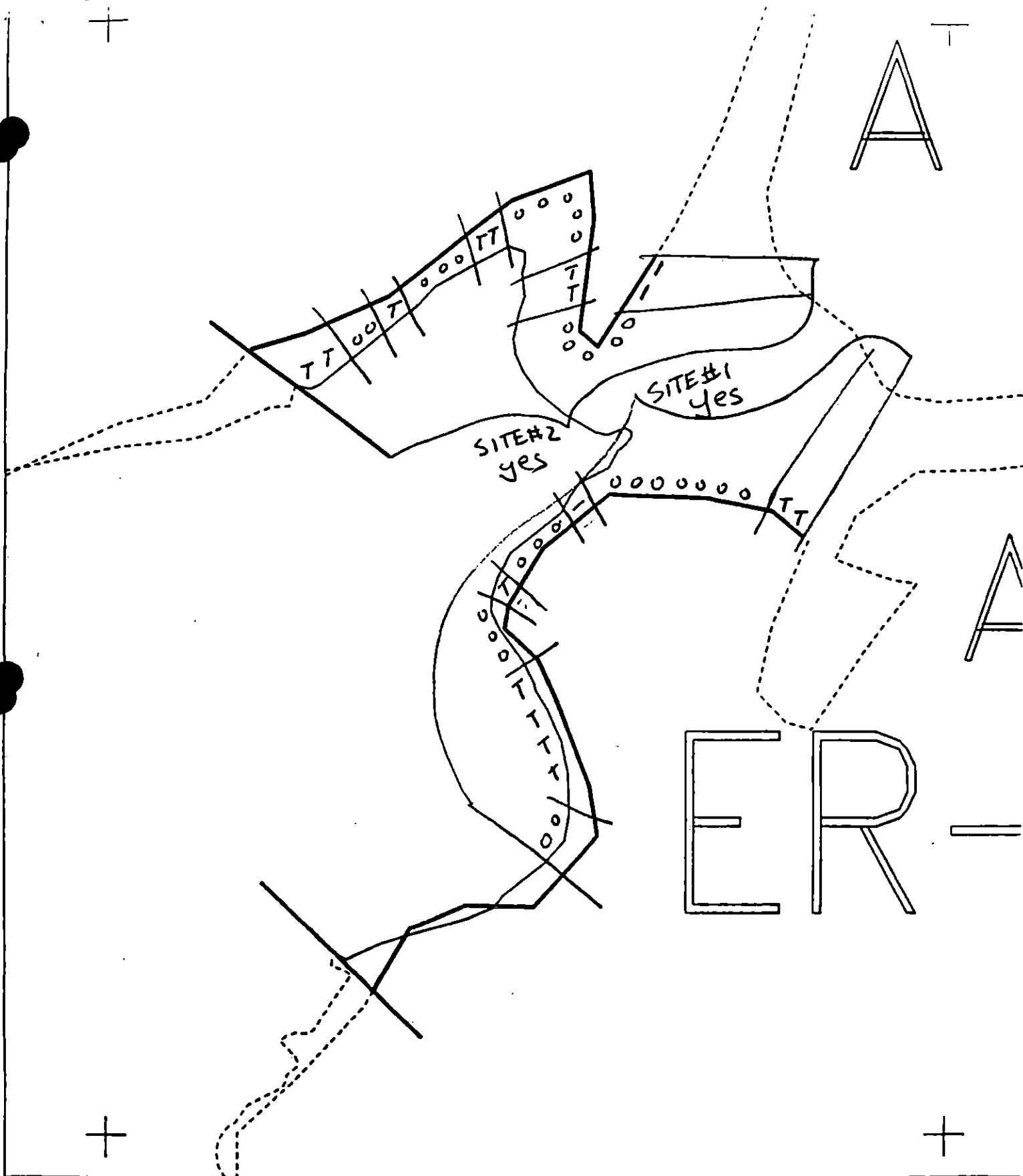
REVISION NO. 7/27/88



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ER-9 A
 ADEC Subsegment Length: 1152m
 METERS
 0 100 192
 AK State Plane Zone 4 1:3771
 per-9a

Subdivision Field Map
 Map Key: PWSE-9A
 Name: Reimer
 Date: 8/1/90
 Date Entered:



XXXX
 ///

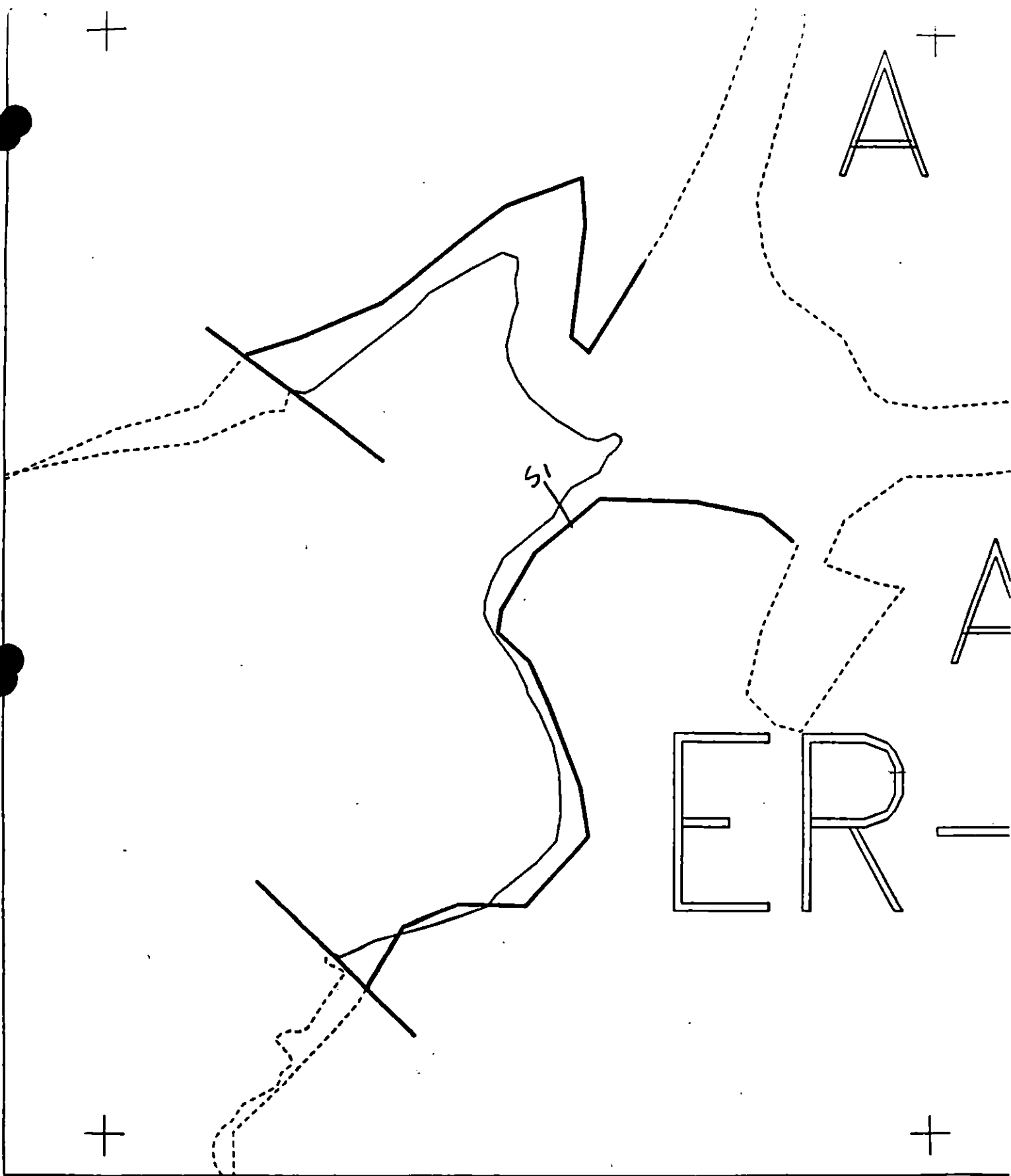
 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER-9 A
 ADEC Subsegment Length: 1152m
 METERS
 0 50 100
 AR State Plane Zone 4 1:3771
 per-9a



Subdivision Field Map
 Map Key: PWSE-9A
 Name: Reimer
 Date: 8/1/90
 Data Entered:



XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER-9 A
 ADEC Subsegment Length: 1152m
 METERS
 0 100 102
 AK State Plane Zone 4 1:3771
 per-9a



Subdivision Field Map
 Map Key: PWSE-9A
 Name: Reimer
 Date: 8/1/90
 Data Entered:

GENERAL DATA

SEG ID: ER-9 SBDV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 500 OIL CATEGORIES: W 0 M 0 N 26 VL 350 NO 530 U 202 f.w.
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: N

SURFACE DATA

CHAR #: 1 OIL CHAR: SOR OIL DIST: CONT BRKN H PTCH X SPLH I
TIDAL ZONE: SU UI 4/4 MI LI

CHAR #: 2 OIL CHAR: CV OIL DIST: CONT BRKN PTCH X SPLH
TIDAL ZONE: SU UI X MI LI

CHAR #: 3 OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI LI

CHAR #: 4 OIL CHAR: T.B. OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 5 OIL CHAR: ^{FL}Fm OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI LI

CHAR #: 6 OIL CHAR: N.O. OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-9 SUBDIV: A SITE: 1PIT # 1 PIT DEPTH 10^{FW} OIL CHARACTER OR OIL INTVAL: FROM 0 TO 10
CLEAN BELOW: N PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD X COB X PEB X GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

GENERAL DATA

SEG ID: ER-9 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
SITE LGTH 450 OIL CATEGORIES: W 0 M 0 N 70 VL 350 NO 530 U 202 PW
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: N

SURFACE DATA

CHAR #: 1 OIL CHAR: AR OIL DIST: CONT BRKN P PTCH SPLH
TIDAL ZONE: SU UI P MI LI

CHAR #: 2 OIL CHAR: T.B. OIL DIST: CONT BRKN PTCH X SPLH V
TIDAL ZONE: SU UI X/V MI X LI

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-10 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK 6/1 - 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS:

1F	Sawmill Hatchery Release	No constraint to manual pickup and tarmat removal; closed to Bioremediation prior to 6/1.
1K	Purse Seine Hook-Off	No constraint to manual pickup and tarmat removal; closed to Bioremediation after 7/20.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to Bioremediation after 8/15.

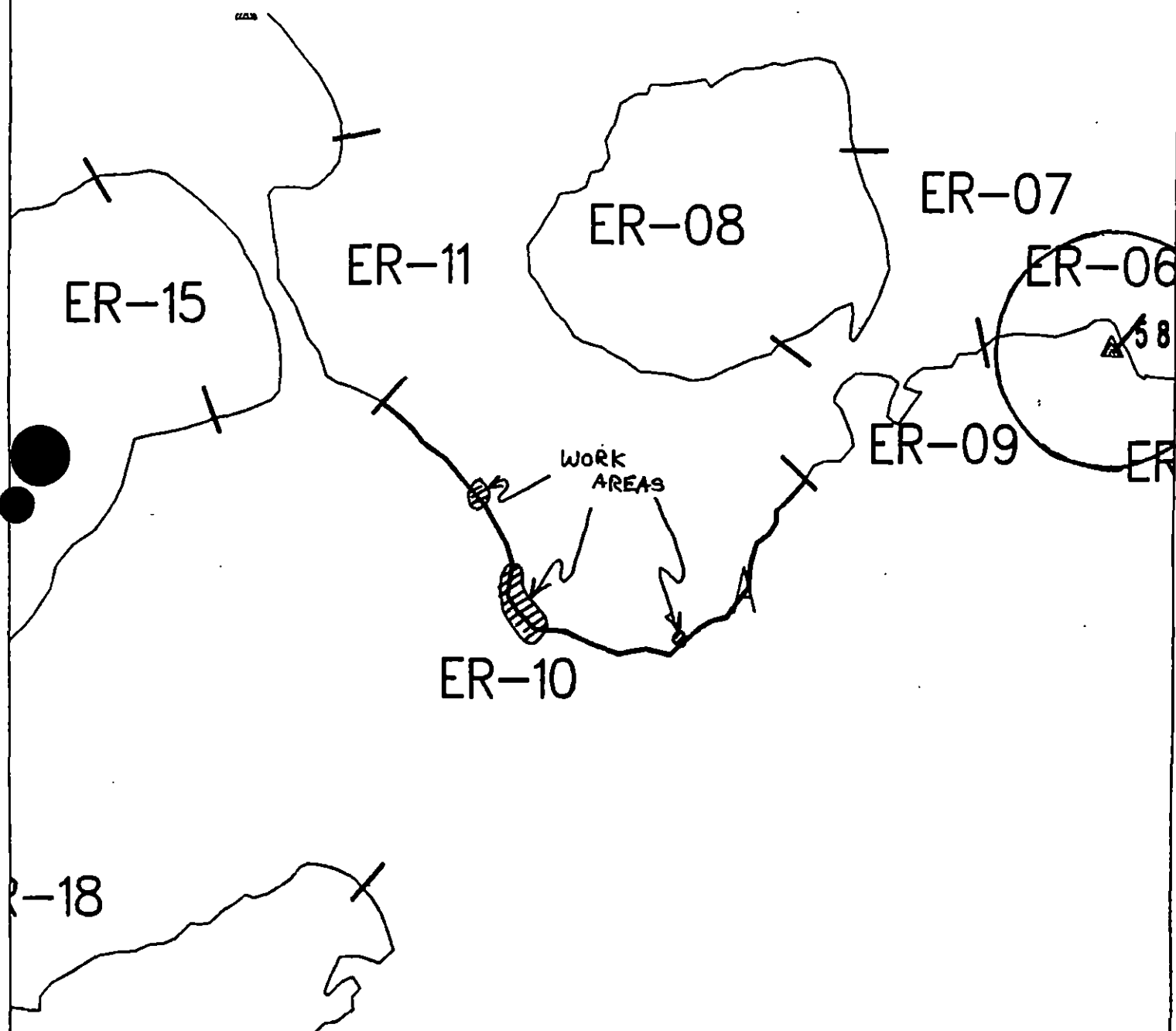
OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unrolled substrate and blots.

TAG ADDENDUM DATE 5/21/90.
ADEC Art Weiner Art Weiner
EXXON Amor Tan Amor Tan FOSC my L DATE 5-21-90
NOAA Joseph Tullott Joseph Tullott
USCG W. J. Hall W. J. Hall

Prepared by: Anda Meyer

Date: 5/20/90



EXXON
Exxon Company, USA
Map Key: PMS-ER-10
May 11, 1990



ECOLOGY MAP
SEGMENT ER-10
SUBDIVISION A (L of L)
METERS
0 519 1037

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1701 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-10 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Tent
sites (6U) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered
during shoreline treatment, stop work in the vicinity, mark the
location of the find and contact a member of Exxon's Cultural Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Hanna DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 226 m: V.Light 928 m: No Oil 1104 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Manually remove tarballs and tarmat. Bioremediate as
indicated on sketch map. Work after 6/1.

SEE APPENDUM (DATED 5-28-90) FOR
ADDITIONAL ECOLOGICAL TIME CONSTRAINT.

TAG COMMENTS: C.DASH

TAG APPROVAL DATE: 4/12/90.
ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Buck Wescott
USCG M. J. HALL

FOSC: DATE: 4-19-90

SHORELINE EVALUATION

SEGMENT ST/ ER-10 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Tent
sites (6U) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered
during shoreline treatment, stop work in the vicinity, mark the
location of the find and contact a member of Exxon's Cultural Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Adams DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 226 m: V.Light 928 m: No Oil 1104 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Manually remove tarballs and tarmat. Bioremediate as
indicated on sketch map. Work after 6/1.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90.

ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Burl Wescott
USCG M. J. HALL

FOSC:

DATE: 4-19-90

3 R. Mar 1974

EMENT ST/ EE-10

DIVISION A

April 3 / 90

HECKLIST

- Name
- Age
- Sex
- Occupation
- Length
- Weight
- Substrate Character
- Est. HWA/L
- Profile Location(s)
- Profile(s)
- Photo Location(s)

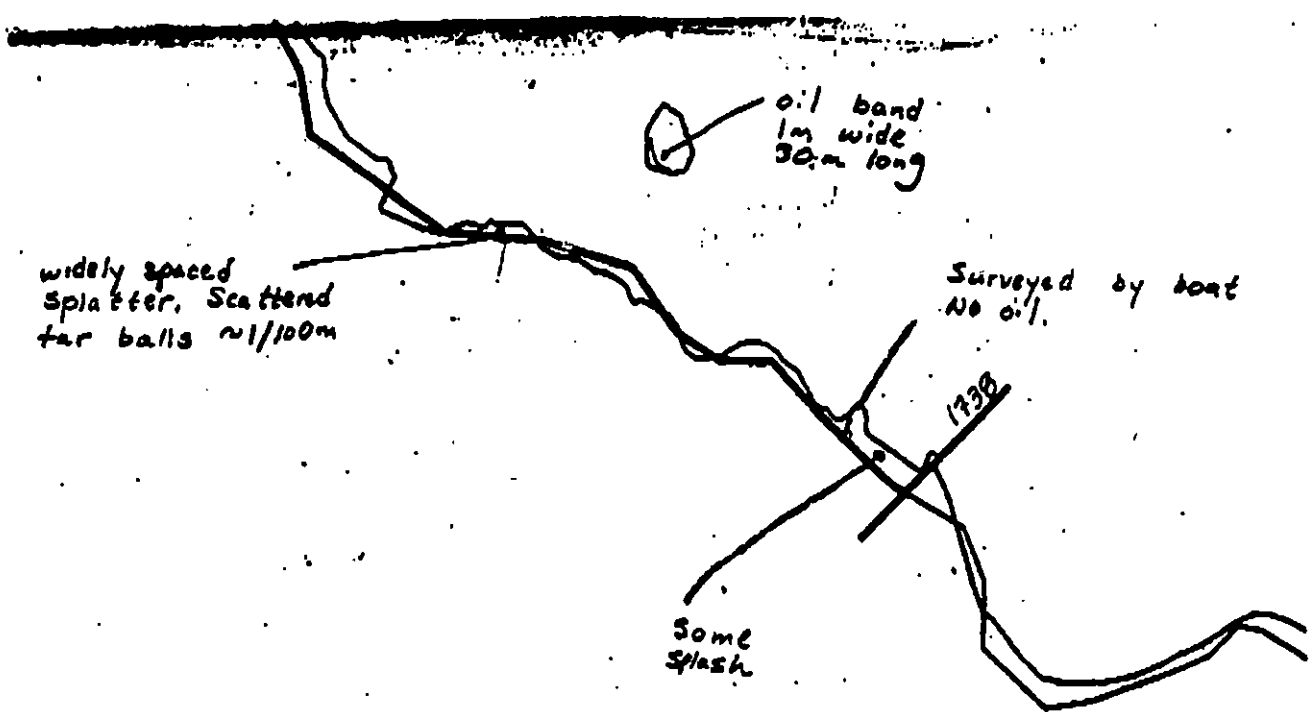
LEGEND

- 1 A
- 2 A

- 3 Substrate Oil
- CT/C
- CT/B

- 4 Substrate Oil
- CT/C
- CT/B
- 5 Substrate Oil
- CT/C
- CT/B
- 6 Substrate Oil
- CT/C
- CT/B
- 7 Substrate Oil
- CT/C
- CT/B
- 8 Substrate Oil
- CT/C
- CT/B
- 9 Substrate Oil
- CT/C
- CT/B
- 10 Substrate Oil
- CT/C
- CT/B

SKETCH MAP



2/2

12 of 31

Character Length (m): AP PO CV CT ST MS PT TB FL NO

SEGMENT ST/ ER-10

SUBDIVISION A

DATE April, 3/90

CHECKLIST

☐ N Area
☐ Approx. Scale
☐ Segment Body
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LWL
☐ SST
☐ Profile Location(s)
☐ Profile(s)
☐ PH Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

[CT/P]
 Patchy Distribution

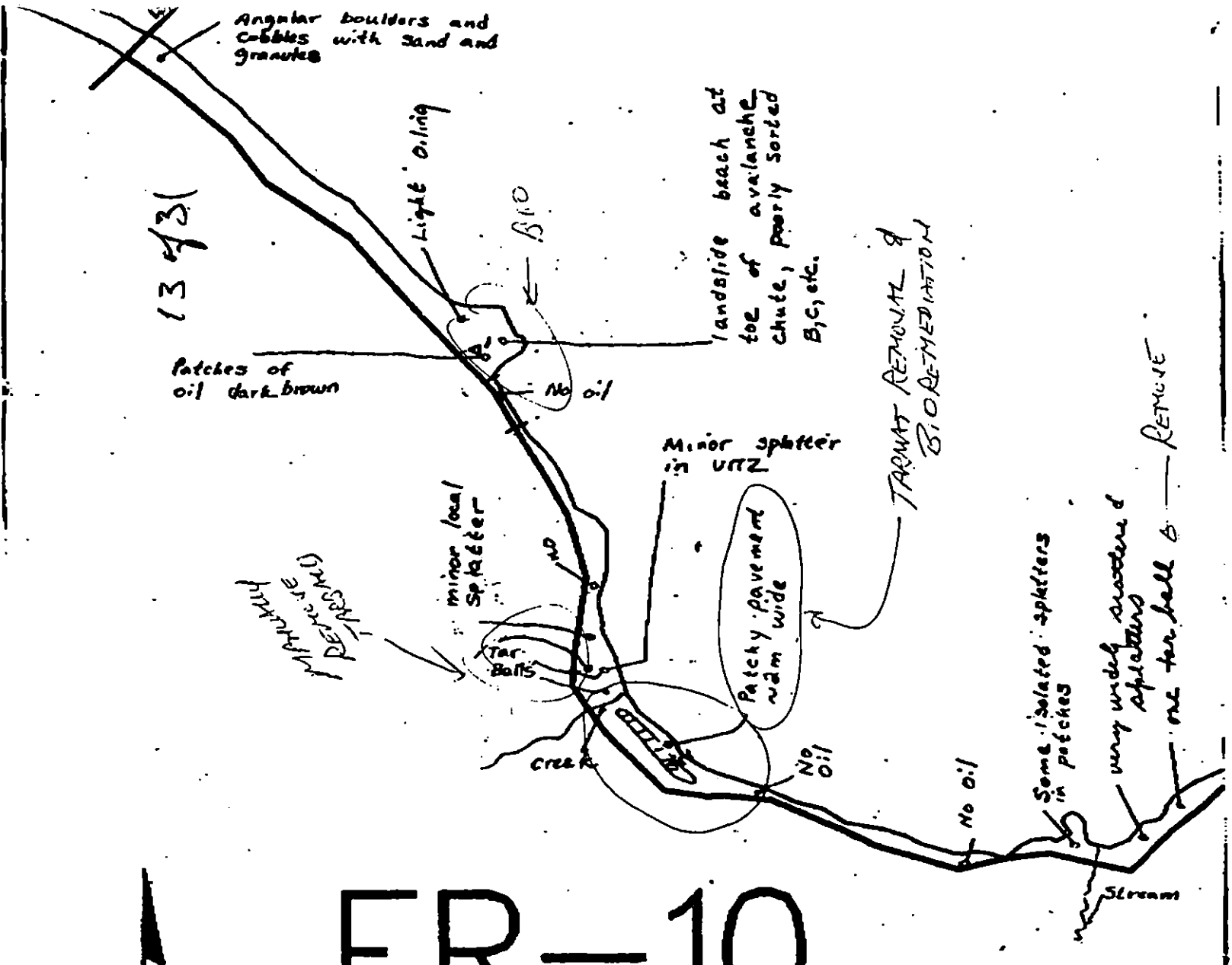
[CT/S]
 Splashed Distribution

Oil Vegetation



ER-10

Oil Character Length (m): AP 105 FPO 105 CV 159 ST 105 MS 977 PT 1194 TB 977 FL NO



1/2

No	7.7	1,155	1194 m
V. Light	6.3	945	972 m
Narrow	1.7	255	264 m
		<u>2355 m</u>	<u>2434 m</u>

11 of 31

ER-10

PWS
1468 →

XXX Wide
 /// Medium

ER-10

--- Narrow
 TTTT Very Light

ADEC Segment Length: 2259m

Map Key: PWS-1468

Name: MARTYDate: 4-3-90

10/31

ER-09

← PWS
146A

XXXX Wide

ER-10

Map Key: PWS-146b

Name: _____

Date: _____

Data Entered: _____

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 2250m

0 100 200 300



1991 MAYSAP EVALUATION

SEGMENT: ER 010 SUB: A REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: Timothy A. Hume

Date: 6/04/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/08/91

ADEC

FOSC

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT ER-10 SUBDIVISION A DATE 5/26/91

ADEC

NAME Wesley Ghorumley SIGNATURE Wesley Ghorumley

☒ NTR ☐ TREATMENT RECOMMENDED

The majority of this segment consisted of boulder/cobble beaches. Tar balls & a few patties were removed. ONE area has SNOW at the SUTZ due to AN AVALANCHE area (Possible clean up debris under SNOW?) VISIT area when IN the VICINITY this Summer to be sure NO debris are buried under SNOW.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo

☒ NTR

No surface or subsurface oil remains - no ~~further~~ further treatment required.

LANDMANAGER

NAME DAVE BLANCHET OF USFS SIGNATURE J. David Blanchet

☒ NTR LOW ENERGY ENVIRONMENT. HIGH ANGLE, ANGULAR BOULDER/COBBLE; AND BEACHE SHORELINE. TAR BALLS & PATTIES FOUND & BROKEN UP OR COLLECTED. MINIMAL CAMPING OPPORTUNITIES

USCG/NOAA

NAME DAHLIN/MOONEY SIGNATURE Tim Mooney / Dahlin

☒ NTR This is a low energy environment with a addition to high angle boulder beach. There was only a few spots of recoverable oil which was recovered. The mid to lower intertidal biota is very rich and dense. No treatment recommended. No further surveys needed.

PAGE 1 OF 1

SEGMENT ER-10

SUBDIVISION A

DATE 26 / MAY / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 1 m VL 0 m NO 2258 m US 0 m

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 3 - 21 FRAMES 16

SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

No sub-surface oil was identified in any of the pits.

reviewed 6/28/91 KG
10/1/91 KG

OG 1946

FOX
FARM
ISLAND

FOX
FARM BAY

0812 M.

(SPLAT)

(A)
CT/ 20%
0.02 X 1

SLIDES

FOREST

AZ

TREES

LEGEND

- (P)--- PATIE COLLECTED
- (TB) - TARBALL, COLLECTED
- W, S WALKED; SKIPPED

0 200 400

APPROX. SCALE

ER-10A
26 MAY 91
0613 - 0812 M
FIELD MAPPING
J. DAYLIN
NOAA
OG-JARDER

REVISED FIELD MAP BY JHARDER

06-24-96
REVISED 5/28/91 KLG



A +

- B1 low/mid scattered focus increasing up slope on patte Basileo substrate Barnacles
- B2 Some plus limpets / barnacles in mid.
- B4 Focus / chiton / limpets / barnacles

1 15cm C/G over mid/L clear

+

B-21-16

613
B1

SPI. B2

B2 + B4
Barnacles
mid mid high
Angry

Snow on
Avalanche Cliffe

Driftline
.02 x1
20%

1 Patte

2 Terbell's

ER-10

A

FIELD MAPPING
BY J. DAHLIN

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ERO10 A
ADEC Subsegment Length: 2250m
METERS
0 200 400
AK State Plane Zone 4
proj1000



Subdivision Field Map
Map Key: PWERO10Aa
Name: DAHLIN (NOAA)
Date: 26 May 91
Data Entered:

MAP 1991
OG SKETCH MAP

GREG CHAMBERLAIN

TEAM 5

SEGMENT: ER 10 A

DATE: 16 MAY 91

AIR P.#: PIM-C 005-106

N

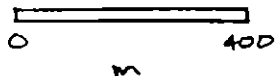
W

T

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

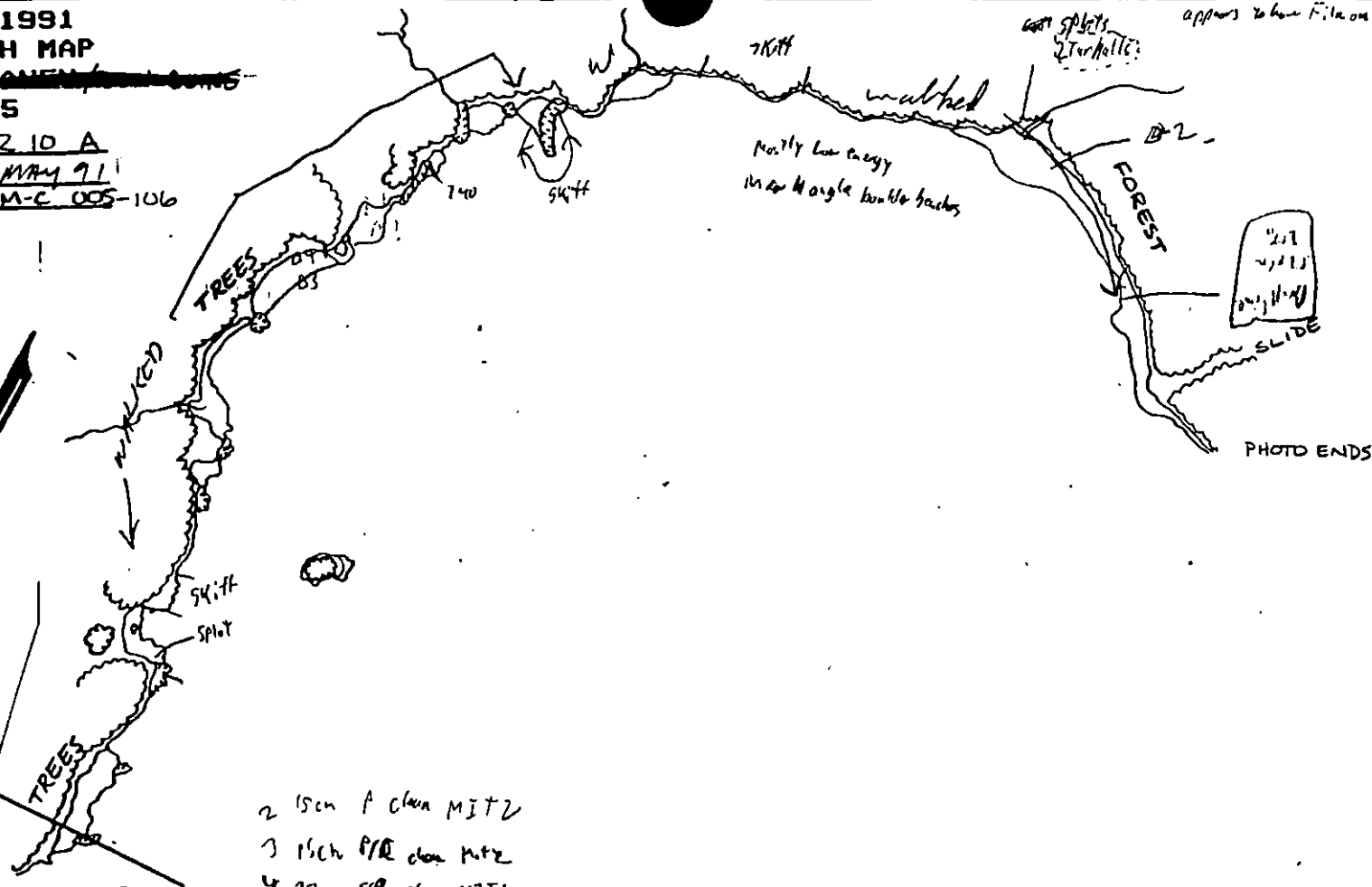


- 2 15cm A clean MITZ
- 3 15cm PR clean MITZ
- 4 30cm SP clean MITZ

FIELD NOTES BY
DAHLIN

ORIGINAL FIELD NOTES

OG 6424



appears to have Film on (copy)

SPOTS
Turkelle

mostly low energy
in the mangrove boulder beaches

FOREST

201
5/11/91
10:11 AM

PHOTO ENDS

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/81
 SEGMENT # ER 10 TIDAL HEIGHT(Range) 0 TO -2'
 SUBDIVISION A BIOLOGIST Stoker
 SEA STATE Calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
Low energy shore of mixed substrate (mostly boulder) beaches with
bedrock exposures.
This segment was not surveyed by myself. As described,
benthos appears to be the usual community of rocky facies and
hermatypes, limpets and Littorina, etc.
No recoverable or treatable oil remains on this segment.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	Unident ducks	8	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)	Sea lion - 1		
_____es(specify)			

Shoreline subdivision map showing important biological features attached.

A +

+

ER-10

A

+

+

XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

ER010 A

ADEC Subsegment Length: 2258m

METERS

0 200 400
AK State Plane Zone 4
per 100m



Subdivision Field Map

Map Key: PWSE010Aa

Name: HARPER

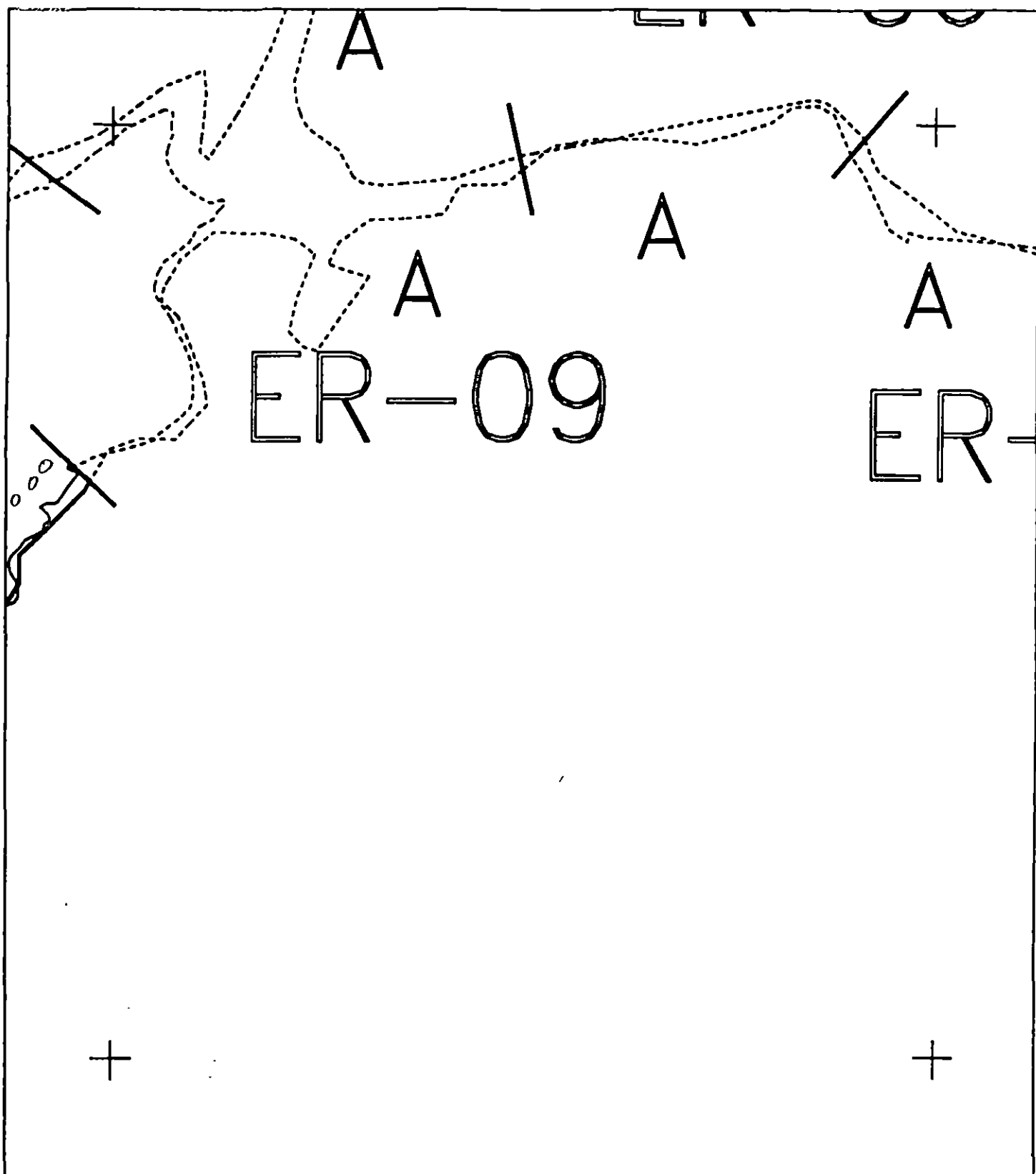
Date: 26 May 91

Date Entered:

Reviewed: MC 5/28/91

SURFACE OILING SUMMARY MAP
1042

... Of ... 3 of 6



XXXX
////

TT
OOO

Wide
Medium
Narrow
Very Light
No Oil

ER010 A
ADEC Subsegment Length: 2258m
METERS
AK State Plane Zone 4
per010ab



Subdivision Field Map
Map Key: PWSER010Ab
Name: HARPER
Date: 26 May 91
Date Entered:

SURFACE OILING SUMMARY MAP
2 of 2

Reviewed: 5/28/91 MC
reviewed 5/28/91 KG

1991 MAYSAP EVALUATION

SEGMENT: ER 010 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/26/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	_____	_____
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT ER-10 SUBDIVISION A DATE 5/26/91

ADEC

NAME Wesley Ghorumley SIGNATURE Wesley Ghorumley

☒ NTR

☐ TREATMENT RECOMMENDED

The majority of this segment consisted of boulder/cobble beaches. Tar balls & a few patties were removed. One area has snow at the Suez due to an avalanche area (possible clean up debris under snow?) visit area when in the vicinity this summer to be sure no debris are buried under snow.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo

☒ NTR

No surface or subsurface oil remains - no further treatment required.

LANDMANAGER

NAME PAVE BLANCHET OF USFS SIGNATURE [Signature]

☒ NTR

LOW ENERGY ENVIRONMENT. HIGH ANGLE, ANGULAR BOUNDER/COBBLE, AND BEACH STORING. TARBALLS & PATTIES FOUND & BROKEN OR COLLECTED. MINIMAL CAMPING OPPORTUNITIES

USCG/NOAA

NAME DAHLIN/MOONEY SIGNATURE [Signature]

☒ NTR

This is a low energy environment with a medium to high angle boulder beach. There was only a few spots of recoverable oil which was recovered. The mid to lower intertidal biota is very rich and dense. No treatment recommended. No further surveys needed.

PAGE 1 OF 1

DATE 26 / MAY / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 1 m VL 0 m NO 2258 m US 0 m

DISTRIBUTION: C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE

PHOTO ROLL # MAYSAP- 3 - 21 FRAMES 16

SHEEN COLOR: B - BROWN: R - RAINBOW: S - SILVER: N - NONE

No sub-surface oil was identified in any of the pits.

reviewed 5/28/91 KG
Reviewed: MC 5/28/91

OG 1946

FOX
FARM
ISLAND

FOX
FARM BAY

0812 m.

ER-10A

26 MAY 91

0613 - 0812 M

FIELD MAPPING

J. DAHLIN

NOAA

CG-JARDER

LEGEND

(P) - PATIE
COLLECTED

(TB) - TARBALL,
COLLECTED

W, S WALKED; SKIFFED

0 200 400

APPROX. SCALE

SLIDES

FOREST

(A)
CT/ 20%
0.02 X 1

AZ

(TB) 2

(SPLAT)

TREES

TREES

0613 m.

REVISED FIELD MAP BY JHARDER

06-24-91

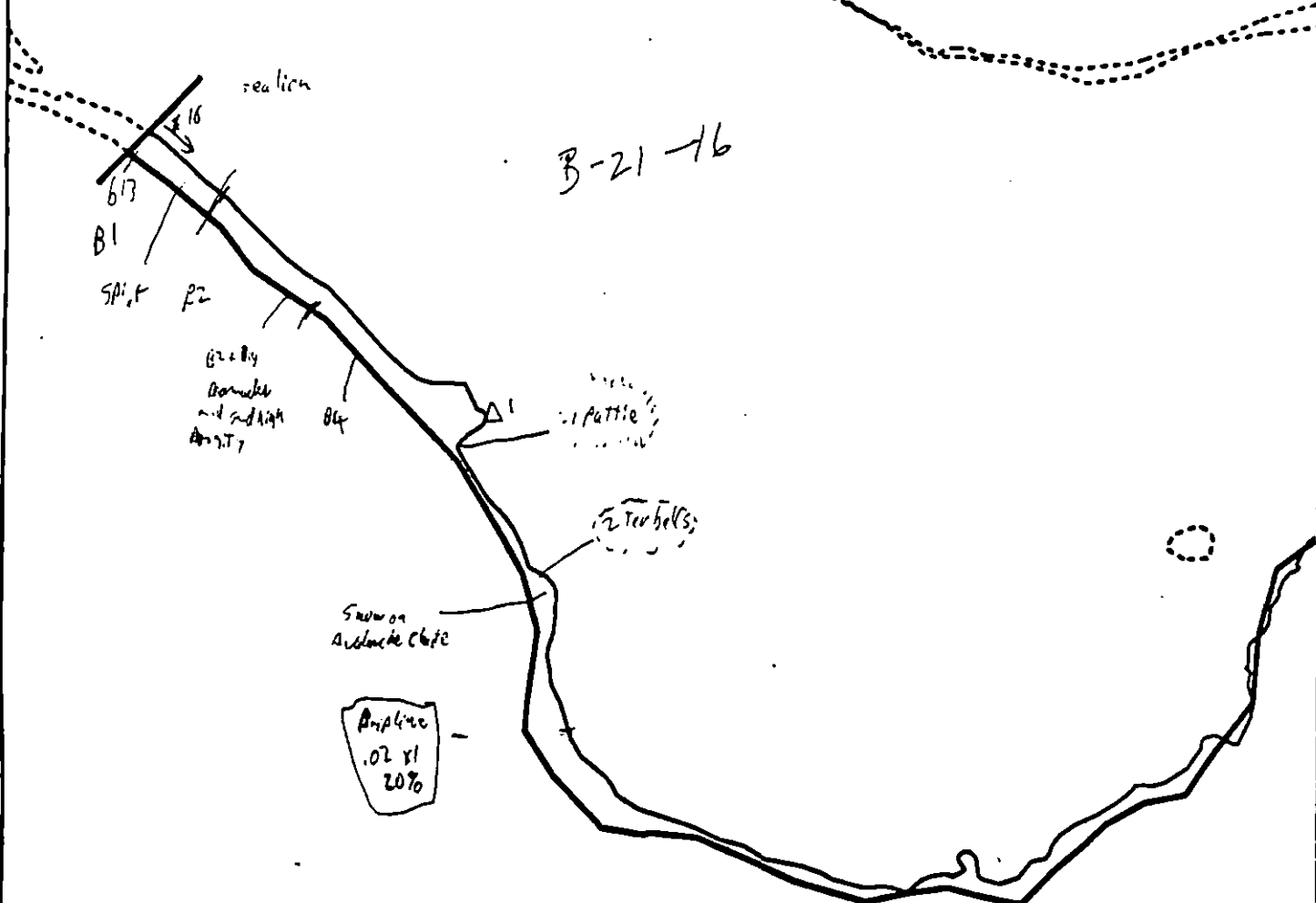
A +

- B1 low/mid scattered faeces increasing up slope on patchy Boulder substrate. Barnacles
- B2 Same plus limpets/bryozoans in mid.
- B3 Faeces/Chironomid/limpets; Barnacles

1 15cm C/L over mid C/L

+

B-21-16



ER-10

A

FIELD MAPPING
BY J. DAHLIN

XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

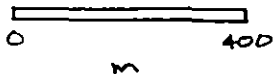
ER010 A
 ADEC Subsegment Length: 2250m
 METERS
 0 200 400
 AK State Plane Zone 4
 projection

Subdivision Field Map
 Map Key: PWSE010Aa
 Name: DAHLIN (NDAA)
 Date: 26 May 91
 Date Entered:

AIR P.#: PIM-C 005-106

2 15cm P clean MITZ
3 15cm P/R clean MITZ
4 30cm SP clean U3TL

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

FIELD NOTES BY
DAHLIN

ORIGINAL FILED NOTES
pg 2

De la

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/81
 SEGMENT # ER 10 TIDAL HEIGHT (Range) 0 to -2'
 SUBDIVISION A BIOLOGIST Stoker
 SEA STATE Calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

Low energy shore of mixed substrate (mostly boulder) beaches with
beach exposures.

This segment was not surveyed by myself. As described,
birds appear to be the usual community of gullies, terns and
shorebirds, limpets and Littorina, etc.

No recoverable or treatable oil remains on this segment.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	<u>1</u>	<u>1</u>	
Seabirds			
Waterfowl	<u>Unident. Ducks</u>	<u>8</u>	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	<u>Sea lion - 1</u>		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

A +

+

ER-10

A

+

+

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER010 A

ADEC Subsegment Length: 2259m

METERS

AK State Plane Zone 4
per 610aa



Subdivision Field Map

Map Key: PWSER010Aa

Name: HARPER

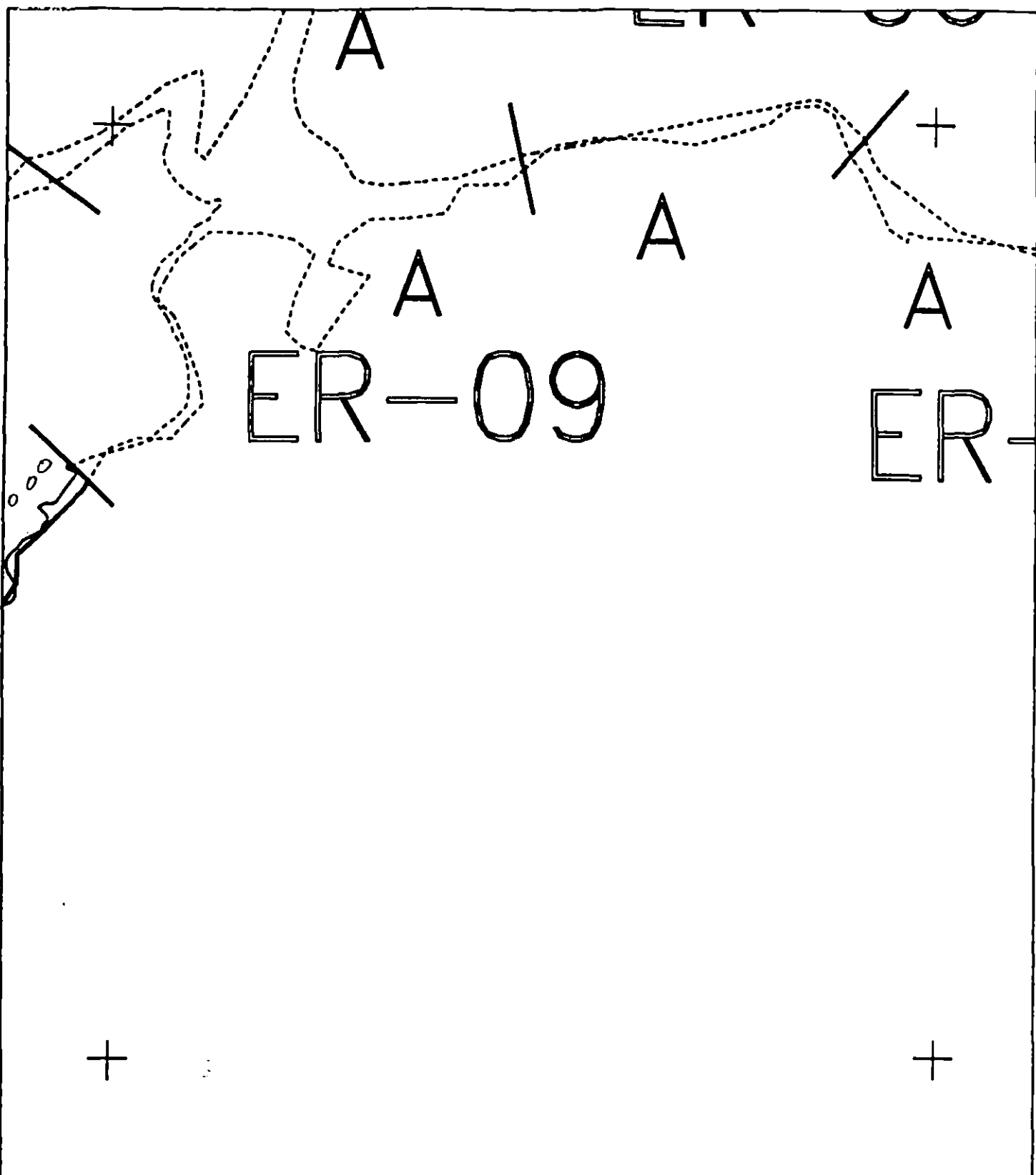
Date: 24 May 91

Date Entered:

Reviewed: MC 5/28/91

SURFACE OILING SUMMARY MAP
1 of 2

OF 3 of 6
revised 5/28/91 KG



XXXX Wide
//// Medium
---- Narrow
TTT Very Light
OOO No Oil

ER010 A
ADEC Subsegment Length: 2250m
METERS
AK State Plane Zone 4
part 10ab



Subdivision Field Map
Map Key: PWSE010Ab
Name: HARPER
Date: 26 May 91
Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: ER 011 SUB: A REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy A. Smith for SHD May 31, 1991

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>	<u>X</u>	<u>Y</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL: Manual pickup AP at location A through L.

TAG: ADD AREA N To AP Pickup

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-11 SUBDIVISION A DATE 5/14/91

ADEC

NAME

John Hays

SIGNATURE

[Signature]

☐ NTR ☒ Treatment Recommended

Due to size of oiling bands AP 90s on Og oiling summary do not represent isolated + numerous patches of AP observed. Coverage was 70-80% in individual patches. Recommend manual pickup followed by raking of oiled sediments remaining. Additionally recommend that work crew walk + work entire segment as oiling is in all areas (except 100m area of p + #6) A-P oil extends into MITZ. Good trees

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]

☒ NTR REMAINING OIL OBSERVED AS "AP" WAS OF VERY LOW CONCENTRATION. IF ADDITIONAL TREATMENT IS PERFORMED, IT SHOULD BE LIMITED TO "BREAK UP" rather than PICK-UP. "NO BIO" SPECIFIED BY LAND MANAGER.

LANDMANAGER

NAME

Steve WARD

OF

CUC/FS

SIGNATURE

[Signature]

☐ NTR

Lots of asphalt still laying along entire sub-div. should be worked by local on scene crews. Asphalt patches from 2' dia. to 2' dia. remain. should be removed. from entire area. Chenega Local Response. 3 hrs work by 6 people is more feasible than bees eating the grass growing through this for the next 4 years. NO-BIO-

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

[Signature]

☒ NTR ^{KPD} observed no sheening. AP observed was well weathered and very cohesive on top. Further clean-up operations would cause more environmental harm than the oil to be removed. KPD

Note the extensive number of surficial oiling sites consisting almost exclusively of AP. The occurrence of AP in the northern portion of the subdivision is particularly high. Access to this site is very easy; removal of AP by a manual crew is also easy. Oiling was simply too extensive to be retained during the survey. Lagoon shown on map is a unique feature to this area, and seems to provide a habitat for birds (see Bio sheet). ~~do not recommend further treatment~~

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. **5**

OG **CHANEY**

BIO **CRANK**

SEGMENT **ER-11**

ADEC **HAYES**

LANDMANAGER **WARD** for **USFS CUC**

SUBDIVISION **A**

EXXON **DEAN**

USCG/NOAA **DREHER/CLINE**

DATE **MAY 14, 1991**

TIME **10:35** to **12:00**

TIDE LEVEL **2.0** ft. to **6.0** ft.

ENERGY LEVEL: ☐ H ☐ M ☒ V

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: **1250** m

NEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W **—** m M **50** m N **19** m VL **505** m NO **676** m US **0** m

924

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S										BCPS	L	3	30		✓			Between Ridges & Cobs.
B	S										BCPS	L	12	90		✓			See 2ND MAP
C	T										CPS	L	20	50		✓			Distinct Dispersed Patch
D	S										CPS	L	15	20		✓			Patches AP
E	P										PS	L	5	12		✓			Patches on a flat
F	P										PS	L	0.5	15		✓			Patches on flats
G	C										S	L	0.25	0.25		✓			ONE PATCH
H	T										S	L	5	15		✓			VERY SMALL Patches
I	T										S	L	10	20		✓			RANDOM SMALL Patches
J	S										S	L	2	20		✓			DISCONTINUOUS
K	P										S	L	3	30		✓			SAND IN MATRIX
L	S										SG	L	15	60		✓			Patches 30cm diam.
M	S										CSG	L	5	120		✓			BAND NARROWS TO THE S.
N	P										CGB	L	2	2		✓			PATCH OF AP
O	T					T	T				CGB	M	5	80		✓			RANDOM SMALL PATCHES
P				P							GS	L	1	2		✓			AP Patch Removed

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5

FRAMES 10-15

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	30		✓						0-3	Y	—	—		✓			CB-CBS	Through AP
2	30		✓						0-8	Y	—	—			✓			Through AP
3	25		✓						0-2	Y	—	—		✓			C.P - CPG	Through AP
4	15		✓						0-2	Y	—	—			✓		CPG-PG	AP 3 m ²
5	51							✓	-						✓		SG-SG	
6	30							✓	-						✓		SG-SG	
7	40							✓	-					✓			GS-GS	
									-									

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: EXTENT OF AP ALSO CORRELATES CLOSELY WITH THE EXTENT OF SUBSURFACE HOR. MULTIPLE PITS WERE DUG AROUND THOSE RECORDED AND DID NOT YIELD OIL. AS 2ND MAP SHOWS THIS OILING IS DISCONTINUOUS AND VERY COMPLEX BUT CLOSELY RESEMBLES SURFICIAL AP OILING EXTENT WITH 50% BURIED AND 50% EXPOSED ON THE SURFACE.

REVIEWED: F.W. 5/24/91

REVIEWED: MC 5/24/91

MO MAP 1991
OG BRANCH MAP
GREG CHANEY
TEAM 5

MAP 1 of 2

SEGMENT: ER-11A
DATE: MAY 14 1991
AIR P.#: PIM-C-167

LARGE PLANT TIED
TO A TREE

A 3x30m AP PATCHES 5%
BETWEEN BOULDERS & COBBLES

B 12x90m SEE NEXT PAGE
AP PATCHES 3%

C PATCHES DISPERSED BUT
DISTINCT AP ~ 3cm THICK < 1%
20x50m

D PATCHES AP 5% 15x20m

E DRIFT LOG ROOTS
5x12m FLAT AP. 20%

F 0.5x15m AP 20%

M 5x120 RANDOM PATCHES AP 2%
BAND NARROWS TOWARD
THE SOUTH

O 5x80m AP, CV, CT < 1%

N AP 2x2m
20%

2m² SOR — AP PATCH PU

AVE BEACH
WIDTH ~ 40m

I RANDOM SMALL PATTIES
AP ON SAND 10x20m
J 2x20m AP 5%
DISCONTINUOUS
G 1/4 m² Patch AP IN SAND
K 3x30m AP 40%
SAND IN MATRIX
L 15x60m 30cm diam.
PATTIES 2% AP

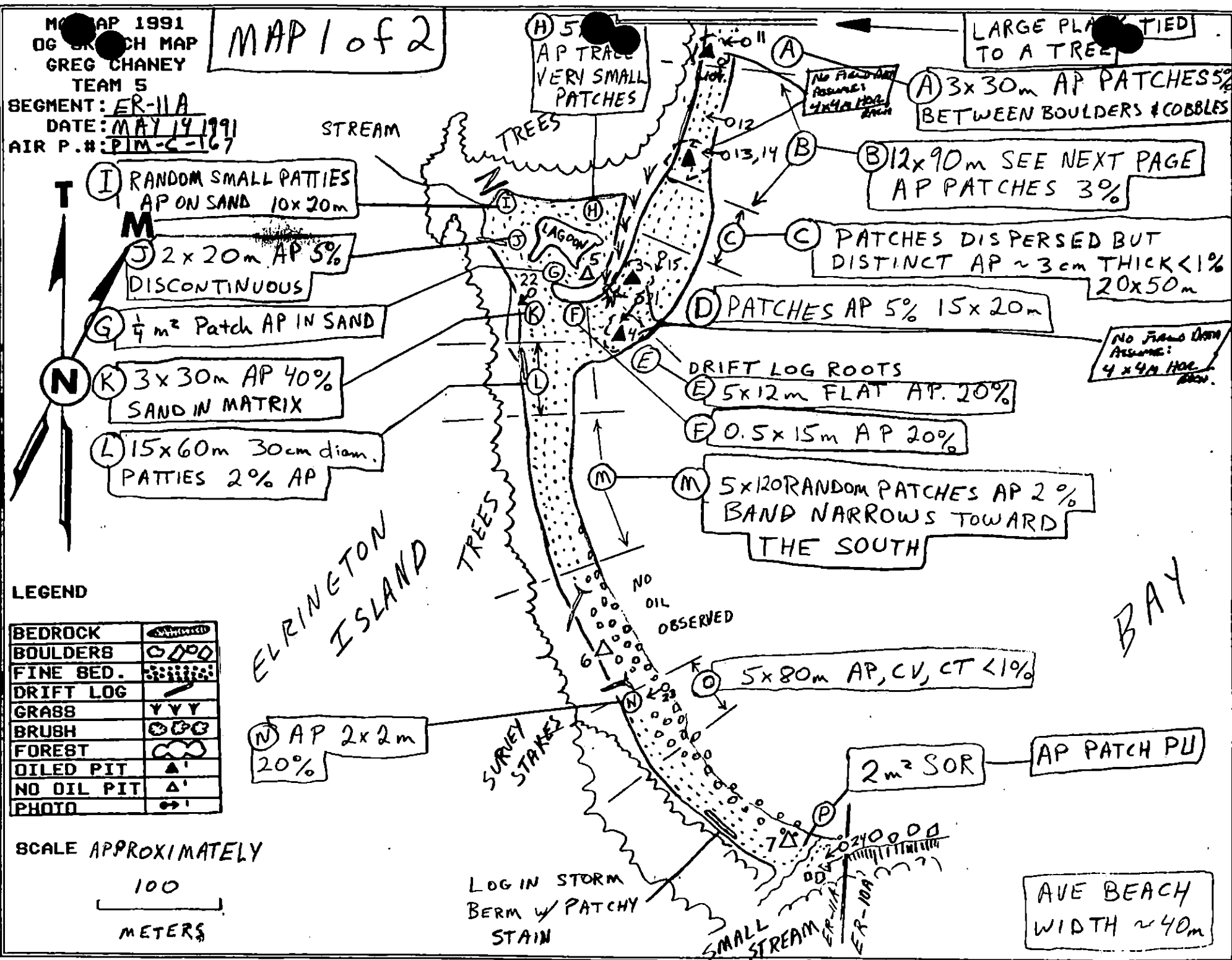
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY

100
METERS

REVIEWED: F.W. 5/24/91
REVIEWED: M.C. 5/24/91



MAP
2 of 2

LARGE PLANK
TIED TO A
SMALL TREE
WITH YELLOW
ROPE

EL RINGTON
ISLAND

ER-12C
ER-11A

INSET OF
NORTH
ER-11-A
GREG CHANEY
MAY 19 1991
TEAM 5
MAYSAP

A



SIDE VIEW
AP PARTIALLY BURIED
BY SAND & PEBBLES

A₁

PATCHES OF
VERY THIN AP WHICH
CREATES THIN DISCONTINUOUS
HOR WHEN BURIED BY SAND
AND PEBBLES

B

SMALL
DISPERSED
PATCHES AP
ABOUT 3cm
THICK

C

BAY

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 4

TEAM # 5

DATE 14 May 1991

SEGMENT # ER-11

TIDAL HEIGHT (Range) +2 → +6

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0-1

WIND SPEED/DIRECTION 5-10/N

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A,B,C) Areas are located in the UITZ and MITZ. Within the site barnacles are rare, amphipods are common and in the MITZ there are rare concentrations of *Fucus* and mussels. Biota cover in the UITZ is up to 1% and in the MITZ up to 5%. Below the site in the low MITZ (~+3' tide), *Littorina*, limpets and barnacles are sparse and mussels are rare. *Fucus* below (A) and (B) is sparse but at the south end of C there is a moderate concentrated patch. Biota cover below A + B is 20%; below C is 50%. These areas are located on a rounded cobble stretch of beach.

(D,E) Areas are located in a depression between a neap and spring berm, elevation of the depression places the organisms in the MITZ. There is a sparse intersand mussel bed, moderate to sparsely concentrated *Fucus* and barnacles and moderately concentrated *Littorina* and limpets. Biota cover in area D is 50%; biota cover in area E is 30%. There is an abundant amount of shell hash in the sand and clam shells are strewn about in the depression. Down shore of the neap berm, *Fucus* is moderately concentrated and there is a clam bed at the water's edge (~2-3' tide). Biota cover is 50%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds <i>Murre & Murrelets</i>	2	15	
Waterfowl	1	5	
Gulls/Kittiwakes	2	10	
Shorebirds - <i>Semi Palm Plover, Ducter, Sandpiper</i>	3	~110	
Corvids	1 Crow	1	
Other Birds - heard terrestrial	species - no 10		

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Phipeds (specify)	9 Seals		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

 REVIEWED: MC 5/24/91
 D. A. 5/24/91

Team #5
Segment # ER-11
Subdivision A
Sea State 0-1'

Date 14-May 1991
Tidal Height +2 → +6
Biologist Crank
Wind Speed / Direction S-10/N

pg 2 of 4

Comments (cont.)

(F) Area is located in the drift line. Sparsely concentrated barnacles and Littorina are present. Biota cover is 10%. Below the site, to the water, there are sparse patches of Fucus and sparsely concentrated barnacles and Littorina. Biota cover is 10%.

(G) Area is in the sandy ULTZ. Barnacles attached to pebbles cover less than 1% of the surface area.

(H) Area is located high in the ULTZ at the back of the lagoon. There is no macrobiota in the site.

(I, J) Areas are located at the back of the lagoon, near the water's edge on granular / pebble sediments. Barnacles attached to pebbles cover <1% of the surface area. Areas (H), (I) & (J) are high-use areas for shore birds. Semi-palmated plovers were working the area during survey.

(K) Area is located in the SOPRA. The rye grass is just beginning to sprout, covering 50% of the surface.

Team # 5
Segment # ER11
Subdivision A
Sea State 0-11

Date 14 May 1991 pg 3 of 4
Tidal Height +2 $\rightarrow$ +6
Biologist Crank
Wind Speed / Direction 5-10 / N

Comments (cont.)

(L) Area is located in the UITZ. Rarely concentrated barnacles (tightly sealing their inner plates), Littorina and Fucus (with maturing conceptacles) and filamentous green algae cover 1-5% of the surface area. Amphipods and oligochaete worms are common under the veneer. Ten meters below the site Fucus covers 30-50% of the surface. Low in the MITZ there is a clam bed, post-spill Saxidomus clam were found.

(M) Area is located in the UITZ and MITZ. The UITZ is similar to (L); in the MITZ Fucus tapers out and barnacles become moderate. Biota cover is 50%. Below the site in the low MITZ the clam bed is still present. There are sparse interpebble mussels; Littorina and limpets have a moderate concentration with many egg masses present, and nemertean worms are present under the veneer.

(N) Area is located low in the UITZ. Sparsely concentrated barnacles and Littorina cover 20% of the surface. Ten meters below the site, Fucus and barnacles have a moderate to dense concentration, mussels are moderate and Littorina are dense. Biota cover is 80%.

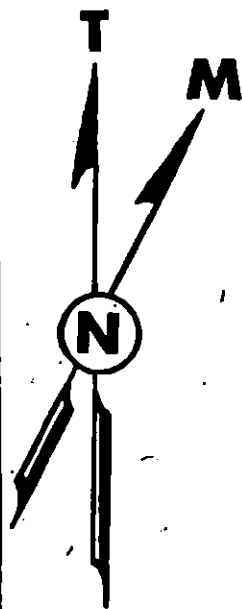
Team # 6
Segment # ER-11
Subdivision A
Sea State 0-1'

Date 14 May 1991
Tidal Height +2 $\Rightarrow$ +6
Biologist Crank
Wind Speed / Direction 5-10/N

Comments (cont.)

- (O) Area is located in the UITZ. Barnacles and Littorina cover ~10% of the surface sediments. The MITZ is similar to area (N).
- (P) Area is located in the UITZ. No macrobiota was located in the area. No surface macrobiota was located below the site in the sand sediments.

MAY 1991
 OG SKETCH MAP / Bio
 GREG CHANEY / Crank
 TEAM 5
 SEGMENT: ER-11A
 DATE: MAY 14 1991
 AIR P.#: PIM-C-167



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY

100

METERS

Lagoon is high use
 area for Semi-palmated
 Plovers

LARGE PLANK TIED
 TO A TREE

Yard: 500

Moderately concentrated
 EXUS

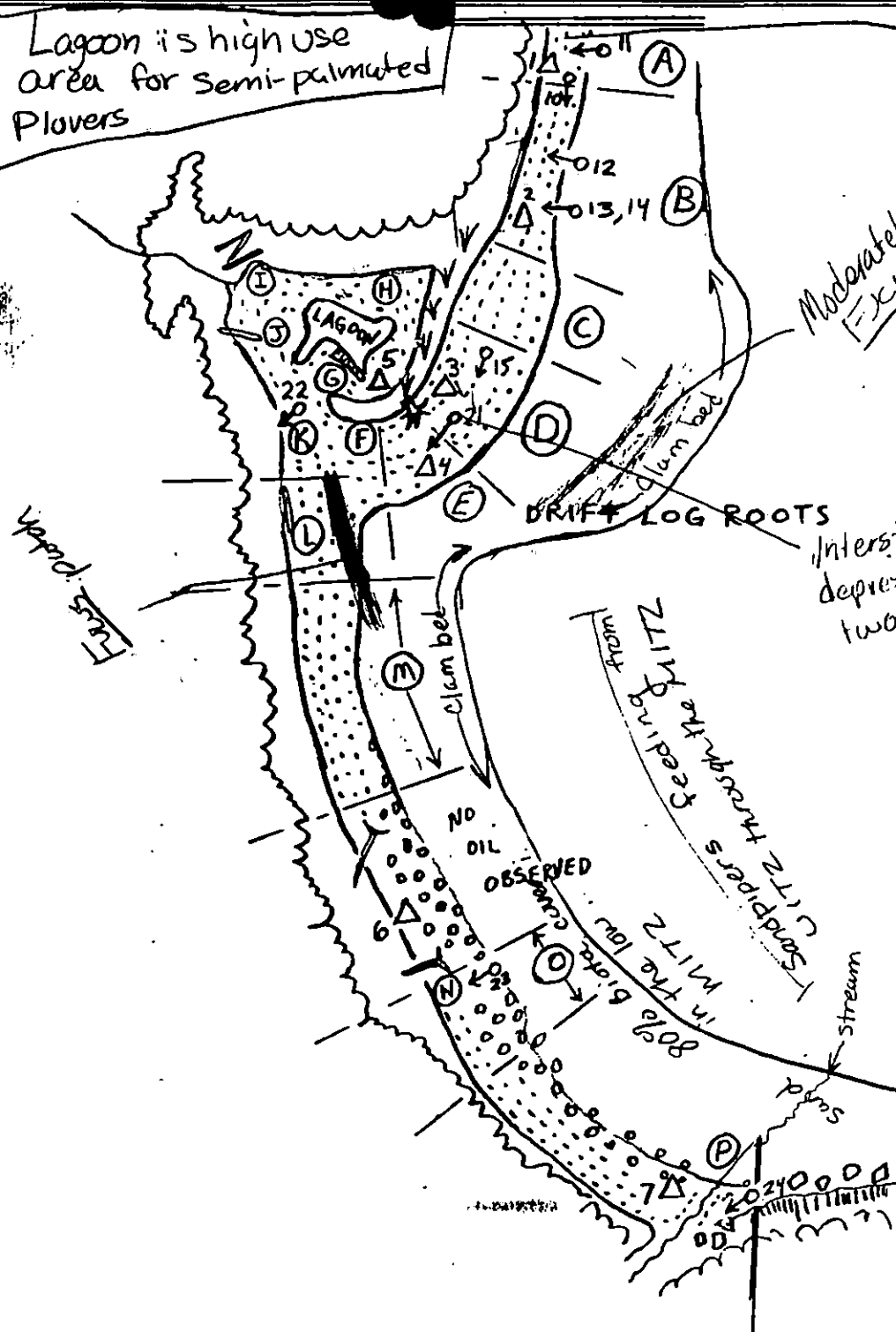
Interstitial mussels found in the
 depression formed between
 two storm berms.

DRIFT LOG ROOTS

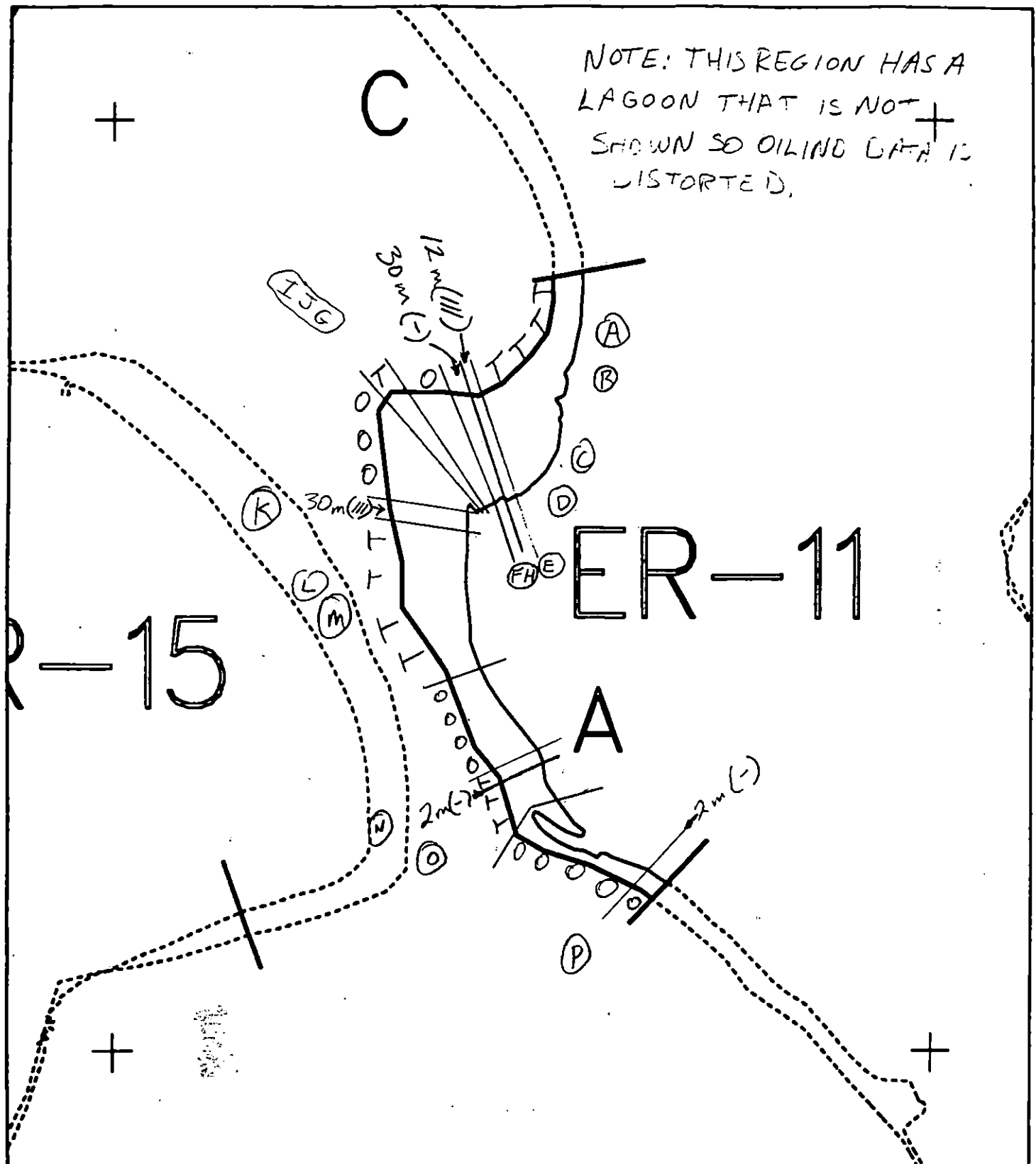
Sandpipers feeding
 through the
 CLTZ through the
 M1T2
 80% Biotic
 in the low
 water

stream

Mean low water



NOTE: THIS REGION HAS A LAGOON THAT IS NOT SHOWN SO OILING DATA IS DISTORTED.



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ER011 A
 ADEC Subsegment Length: 1250m
 METERS
 0 200 400
 AK State Plane Zone 4
 profile



Subdivision Field Map
 Map Key: PWSE011A
 Name: CHANEY
 Date: MAY 19 1991
 Date Entered:

REVIEWED: F.W. 5/24/91
 REVISOR: MC 5/24/91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-11 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

Bioremediation

WORK 6/1 to 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal. Closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/20.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG APPROVAL DATE 5/29/90
ADEC ART WEINER
EXXON ANDY KEAR
NOAA B. Wescott
USCG G.A. FOSTER

FOSC

DATE

MAY 29 1990

Prepared By: Anda May WTK

Date 5/28/90

ER-12

▲ 588

R-16

15

ER-15

WORK
AREA

ER-11

ER-08

ER-10



Exxon Company, USA

Map Key: PMS-ER-11

May 11, 1990



ECOLOGY MAP
SEGMENT ER-11
SUBDIVISION A (1 of 1)

METERS

0 377 754



Seabird Colony



Eagle Nest

1 inch = 1236 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-11 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1; Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Anchor-
ages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are
uncovered during shoreline treatment, stop work in the
vicinity, mark the location of the find and contact a
member of Exxon's Cultural Resource Program immediately
(564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Mark Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 1093m: Narrow 157 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Manual removal of asphalt tarmat and oiled debris. Bio-
remediation as indicated on sketch map. Work after 6/1 based on
hatchery constraints.

See Constraint Addendum 5/20/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAKER
EXXON ANDY TEAL FOSC: DATE:
NOAA Bud Wescott
USCG G.A. REITER

SHORELINE EVALUATION

SEGMENT ST/ ER-11 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1; Contact ADF&G for dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Anchorages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles J. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 1093 m: Narrow 157 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Manual removal of asphalt tarmat and oiled debris. Bio-remediation as indicated on sketch map. Work after 6/1 based on hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAKER
EXXON ANDY TEAL
NOAA Bud Wescott
USCG G.A. REITER

FOSC: W L

DATE: 4-20-90

SEGMENT ST/ EC-11

SUBDIVISION A

DATE 03 / Apr / 90

CHECKLIST

N. Area
 Approx. Date
 Approx. Study
 CR Data
 CR Data
 Length
 % Cover
 Sediment Character
 Ext. Material
 Photo Location(s)
 Photo Location(s)
 Photo Location(s)

LEGEND

1 A
 2 A
 PI - Sediments CI
 PI - No Sediments CI
 CT/C
 Continuous Distribution
 CT/B
 Broken Distribution
 CT/P
 Patchy Distribution
 CT/S
 Spotted Distribution
 Dead Vegetation
 Photo location, direction, and number

18 of 31

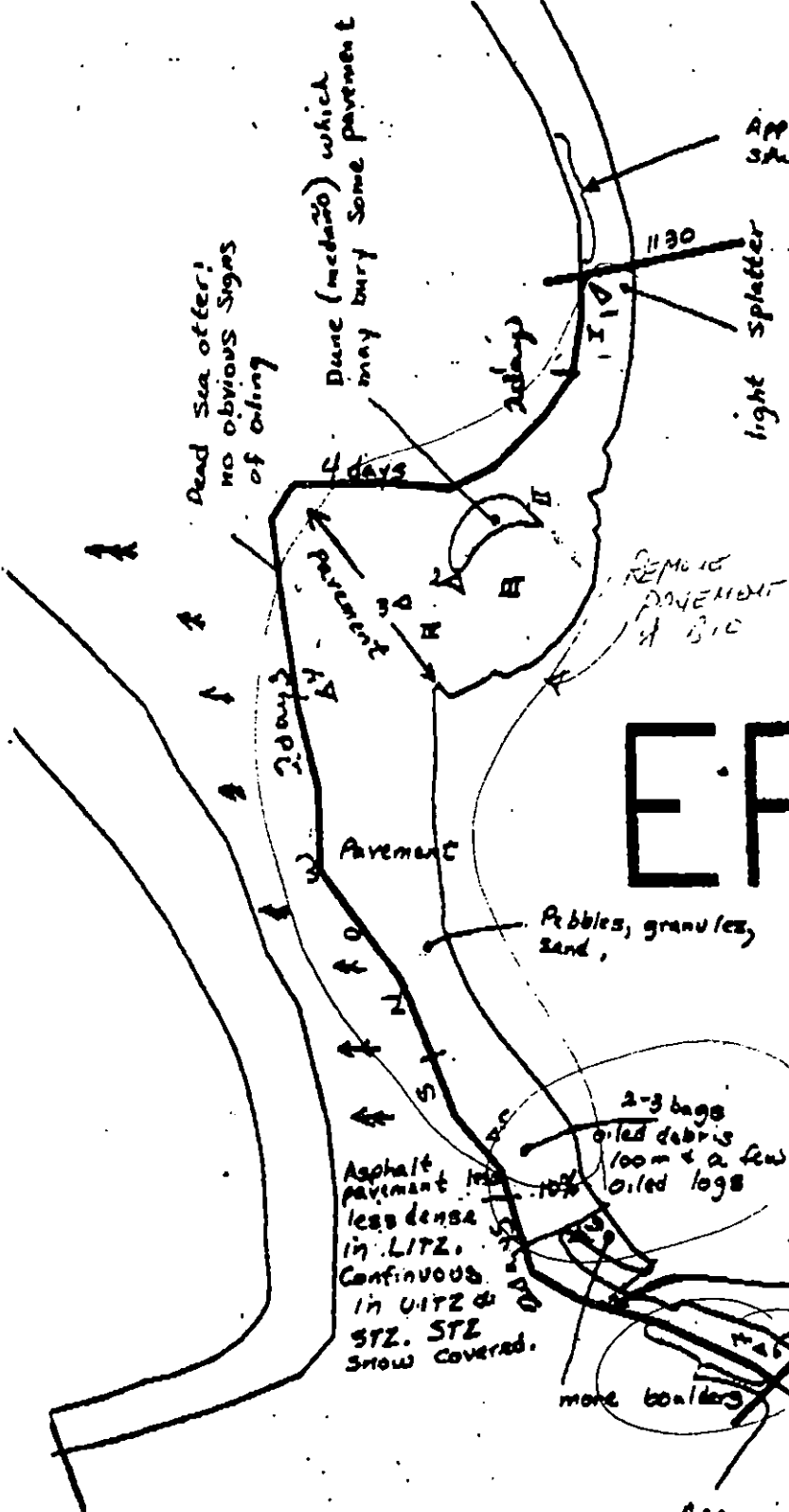
Approximate location of Exxon study site AP-10

0 100 200 300
 METERS

NOTES: Days are estimates for a 12 man crew.
 I. Light patches + spcl for first 50m. Then 4m band: ~60% cover; dark brown. Pavement is soft, 2cm thick.
 II. Pavement continues in UITS STZ: soft, 2cm thick.
 III. Entire beach is paved 30m wide 25% cover 5cm thick.

ER-11

IV. Pavement buried in UITS by well sorted sediments.



Approximate location of Exxon study site AP-17

surface oil much less, well sorted pebble berm appears to cover pavement.

ON Character Length (m): AP 1291 PO CV 1291 CT ST NS PT TB FL NO

SKETCH MAP

620937

Light 1.0" = 150m
Medium 7.75" = 1163m
1313m

ER-11

XXXX Wide

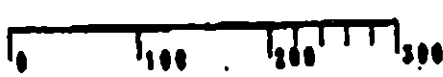
//// Medium

--- Narrow

TTTT Very Light

ER-11A

ADEC Segment Length: 1250m



Map Key: PWS-147

Name: Rich Marty

Date: 3 April 1990

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: ER 011 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	_____	_____
Manual Pickup (Check as Req.)	<u>X</u>	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Manual pickup AP at location A through L.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

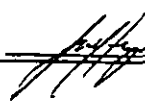
TEAM NO. 5 SEGMENT ER-11 SUBDIVISION A DATE 5/14/91

ADEC

NAME

John Hayer

SIGNATURE

☐ NTR Treatment Recommended

Due to size of oiling birds AP %s on oiling summary do not represent isolated & numerous patches of AP observed. Coverage was 70-80% in individual patches. Recommend manual pickup followed by picking of oil sediments remaining. Additionally recommend that work crew walk & work entire segment as oiling is in all areas (except 100m area of p+46) A^{thru} Pool oil extends into MITZ. Good trees

EXXON

NAME

John Dean

SIGNATURE



☒ NTR REMAINING OIL OBSERVED AS "AP" WAS OF VERY LOW CONCENTRATION. IF ADDITIONAL TREATMENT IS PERFORMED, IT SHOULD BE LIMITED TO "BREAK UP" rather than PICK-UP. "No Bio" SPECIFIED BY LAND MANAGER.

LANDMANAGER

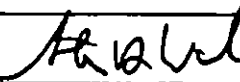
NAME

Steve Ward

OF

CUC/FS

SIGNATURE

☐ NTR

Lots of asphalt still laying along entire sub-div. should be worked by local on scene crews. Asphalt patches from 2' dia. to 2' dia. remain should be removed from entire area. Chemega Local Response. 3 hrs work by 6 people is more feasible than deer eating the grass growing through this for the next 4 years. No Bio

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE



☒ KPO NTR Observed no sheening. AP observed was well weathered and very cohesive on top. Further clean-up operations would cause more environmental harm than the oil to be removed. KPO

☐ Note the extensive number of surficial oiling sites consisting almost exclusively of AP. The occurrence of AP in the northern portion of the subdivision is particularly high. Access to this site is very easy; removal of AP by a manual crew is also easy. Oiling was simply too extensive to be retained during the survey. Lagoon shown on map is a unique feature to this area, and seems to provide a habitat for birds (see Bio sheet). No recommend further treatment

TEAM NO. 5OG CHANEYBIO CRANKSEGMENT ER-11ADEC HAYESLANDMANAGER WARD for USFS CUCSUBDIVISION AEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY 14 1991TIME 10:35 to 12:00TIDE LEVEL 2.0 ft. to 6.0 ft. ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1250 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W — m M 50 m N 19 m VL 505 m NO 676 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S										BCPS	L	3	30		✓			Between Bldgs & Cobs.
B	S										BCPS	L	12	90		✓			See 2ND MAP
C	T										CPS	L	20	50		✓			Distinct Dispersed Patch
D	S										CPS	L	15	20		✓			Patches AP
E	P										PS	L	5	12		✓			Patches on a flat
F	P										ES	L	0.5	15		✓			Patches on flats
G	C										S	L	0.25	0.25		✓			ONE PATCH
H	T										S	L	5	15		✓			VERY SMALL Patches
I	T										S	L	10	20		✓			RANDOM SMALL Patches
J	S										S	L	2	20		✓			DISCONTINUOUS
K	P										S	L	3	30		✓			SAND IN MATRIX
L	S										SG	L	15	60		✓			Patches 30m diam.
M	S										CSG	L	5	120		✓			BAND NARROWS TO THE S.
N	P										CGB	L	2	2		✓			PATCH OF AP
O	T					T	T				CGB	M	5	80		✓			RANDOM SMALL PATCHES
P				P							GS	L	1	2		✓			AP Patch Removed

DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5

FRAMES 21-23

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER								OILED ZONE	CLEAN BELOW	H2O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	cm-cm					S	UI	MI	LI		
1	30		✓						0-3	Y					✓			CB-CBS	Through AP
2	30		✓						0-8	Y					✓			Through AP	
3	25		✓						0-2	Y					✓			CP-CPG	Through AP
4	15		✓						0-8	Y					✓			CPG-PG	AP 3 m ²
5	51							✓	-						✓			SG-SG	
6	30							✓	-						✓			SG-SG	
7	40							✓	-						✓			GS-GS	
									-										
									-										

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: EXTENT OF AP ALSO CORRELATES CLOSELY WITH THE EXTENT OF SUBSURFACE HOR. MULTIPLE PITS WERE DUG AROUND THOSE RECORDED AND DID NOT YIELD OIL, AS 2ND MAP SHOWS THIS OILING IS DISCONTINUOUS AND VERY COMPLEX BUT CLOSELY RESEMBLES SURFICIAL AP OILING EXTENT WITH 50% BURIED AND 50% EXPOSED ON THE SURFACE.

REVIEWED: F.W. 5/24/91

REVIEWED: MC 5/24/91

MAYBAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: ER-11A
 DATE: MAY 19 1991
 AIR P.#: PIM-C-167

MAP 1 of 2

LARGE LOG TIED TO A TREE

- I RANDOM SMALL PATCHES AP ON SAND 10x20m
 J 2x20m AP 5% DISCONTINUOUS
 G 1/4 m² Patch AP IN SAND
 K 3x30m AP 40% SAND IN MATRIX
 L 15x60m 30cm diam. PATCHES 2% AP

STREAM

TREES

H AP TRACE
 VERY SMALL PATCHES

A 3x30m AP PATCHES BETWEEN BOULDERS & COBBLES
 B 12x90m SEE NEXT PAGE AP PATCHES 3%

C PATCHES DISPERSED BUT DISTINCT AP ~ 3cm THICK < 1% 20x50m
 D PATCHES AP 5% 15x20m

E DRIFT LOG ROOTS 5x12m FLAT AP. 20%
 F 0.5x15m AP 20%

M 5x120 RANDOM PATCHES AP 2% BAND NARROWS TOWARD THE SOUTH

No Field Data Assume: 4x4m HOC

LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 100
 METERS

ELRINGTON ISLAND

TREES

NO OIL OBSERVED

N AP 2x2m 20%
 SURVEY STAKES

LOG IN STORM BERM w/ PATCHY STAIN
 SMALL STREAM

5x80m AP, CV, CT < 1%

2m² SOR AP PATCH PU

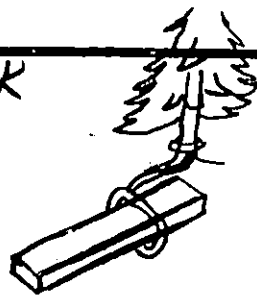
AVE BEACH WIDTH ~ 40m

BAY

REVISED: F.W. 5/24/91
 REVISED: M.C. 5/29/91

MAP
2 of 2

LARGE PLANK
TIED TO A
SMALL TREE
WITH YELLOW
ROPE



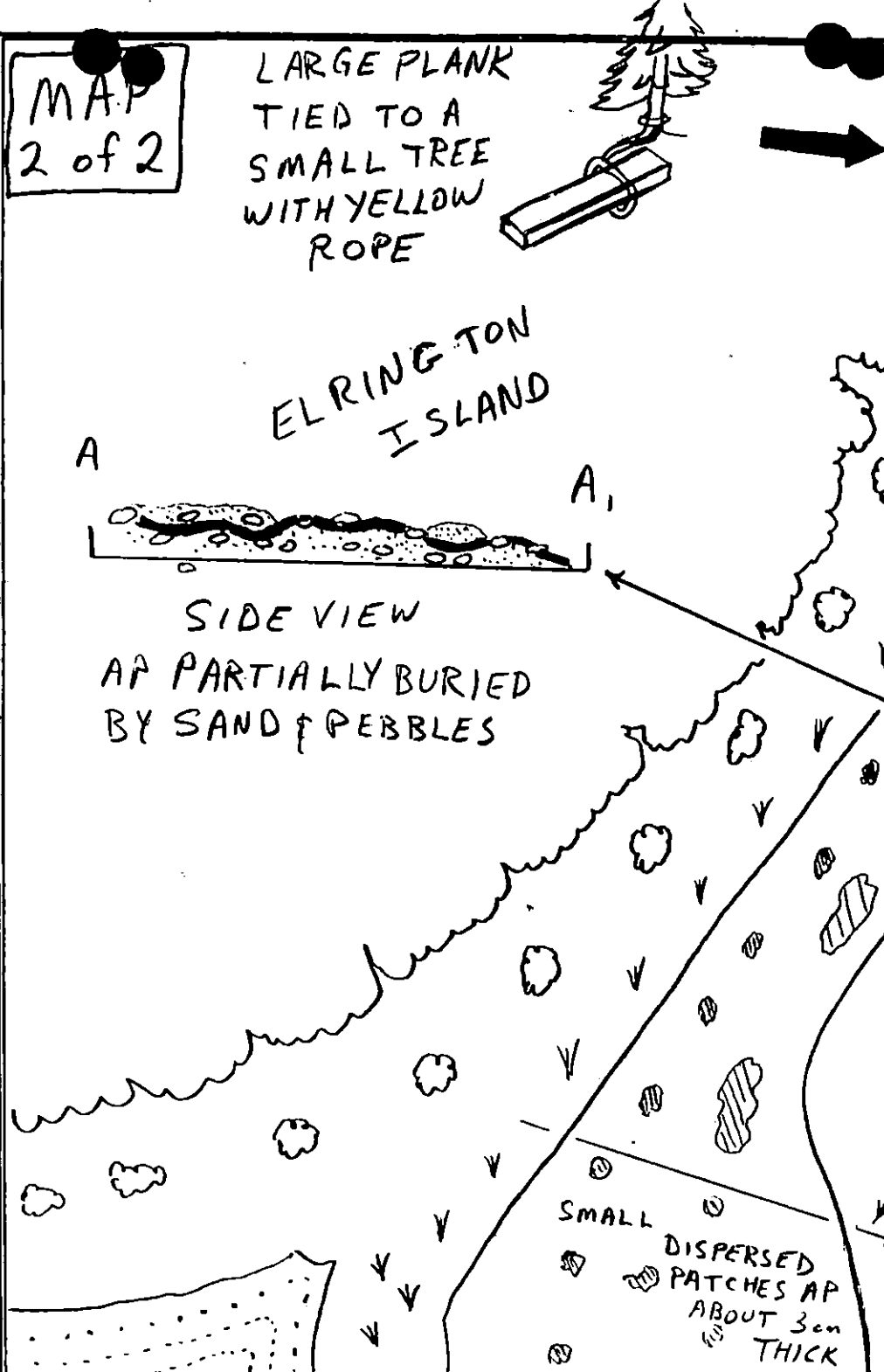
ELRING TON
ISLAND

A



SIDE VIEW
AP PARTIALLY BURIED
BY SAND & PEBBLES

A₁



ER-12C
ER-11A

INSET OF
NORTH
ER-11-A
GREG CHANEY
MAY 19 1991
TEAM 5
MAYSAP

PATCHES OF
VERY THIN AP WHICH
CREATES THIN DISCONTINUOUS
HOR WHEN BURIED BY SAND
AND PEBBLES

B

C

BAY

RENEWED: F W SLAY/4
REVISED: M-Slay/91

TEAM # 5

DATE 14 May 1991

SEGMENT # ER-11

TIDAL HEIGHT (Range) +2 → +6

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0-1

WIND SPEED/DIRECTION 5-10/N

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A,B,C) Areas are located in the UITZ and MITZ. Within the site barnacles are rare, amphipods are common and in the MITZ there are rare concentrations of *Fucus* and mussels. Biota cover in the UITZ is up to 1% and in the MITZ up to 5%. Below the site in the low MITZ (~+3' tide), *Littorina*, limpets and barnacles are sparse and mussels are rare. *Fucus* below (A) and (B) is sparse but at the south end of C there is a moderate concentrated patch. Biota cover below A & B is 20%; below C is 50%. These areas are located on a rounded cobble stretch of beach.

(D,E) Areas are located in a depression between a neap and spring berm, elevation of the depression places the organisms in the MITZ. There is a sparse intersand mussel bed, moderate to sparsely concentrated *Fucus* and barnacles and moderately concentrated *Littorina* and limpets. Biota cover in area D is 50%; biota cover in area E is 30%. There is an abundant amount of shell hash in the sand and clam shells are strewn about in the depression. Down shore of the neap berm, *Fucus* is moderately concentrated and there is a clam bed at the water's edge (~2-3' tide). Biota cover is 50%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds	2	15	
Waterfowl	1	5	
Gulls/kittiwakes	2	10	
Shorebirds - Semipalmated Plover, Sandpiper	3	~110	
Corvids	1 Crow	1	
Other Birds - hooded murrelet	species - no 10		

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)	9 Seals		
Ceaus (specify)			

Shoreline subdivision map showing important biological features attached.

 REVIEWED: MC 5/24/91
 Revised: 5/24/91

Team #5
Segment # ER-11
Subdivision A
Sea State 0-1'

Date 14 May 1991
Tidal Height +2 → +6
Biologist Crank
Wind Speed / Direction S-10/N

Comments (cont.)

(F) Area is located in the drift line. Sparsely concentrated barnacles and Littorina are present. Biota cover is 10%. Below the site, to the water, there are sparse patches of Fucus and sparsely concentrated barnacles and Littorina. Biota cover is 10%.

(G) Area is in the sandy ULTZ. Barnacles attached to pebbles cover less than 1% of the surface area.

(H) Area is located high in the ULTZ at the back of the lagoon. There is no macrobiota in the site.

(I, J) Areas are located at the back of the lagoon, near the water's edge on granular / pebble sediments. Barnacles attached to pebbles cover <1% of the surface area. Areas (H), (I), & (J) are high-use areas for shore birds. Semi-domesticated plovers were working the area during survey.

(K) Area is located in the SOPRA. The rye grass is just beginning to sprout, covering 50% of the surface.

Team # 5
Segment # ER11
Subdivision A
Sea State 0-11

Date 14 May 1991 pg 3 of 4
Tidal Height +2 → +6
Biologist Crank
Wind Speed / Direction 5-10 / N

Comments (cont.)

(L) Area is located in the UITZ. Rarely concentrated barnacles (tightly sealing their inner plates), Littorina and Fucus (with maturing conceptacles) and filamentous green algae cover 1-5% of the surface area. Amphipods and oligochaete worms are common under the veneer. Ten meters below the site Fucus covers 30-50% of the surface. Low in the MITZ there is a clam bed, post-spill Saxidomus clam were found.

(M) Area is located in the UITZ and MITZ. The UITZ is similar to (L); in the MITZ Fucus tapers out and barnacles become moderate. Biota cover is 50%. Below the site in the low MITZ the clam bed is still present. There are sparse interpebble mussels; Littorina and limpets have a moderate concentration with many egg masses present, and nemertean worms are present under veneer.

(N) Area is located low in the UITZ. Sparsely concentrated barnacles and Littorina cover 20% of the surface. Ten meters below the site, Fucus and barnacles have a moderate to dense concentration, mussels are moderate and Littorina are dense. Biota cover is 80%.

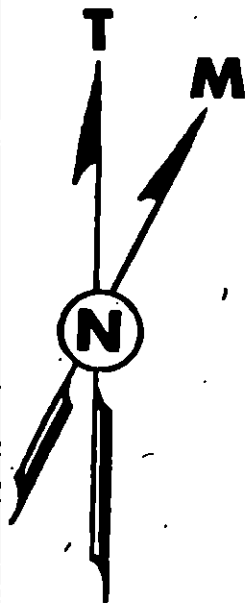
Team # 6
Segment # ER-11
Subdivision A
Sea State 0-1'

Date 14 May 1991
Tidal Height +2 $\Rightarrow$ +6
Biologist Crank
Wind Speed / Direction 5-10/N

Comments (cont.)

- (O) Area is located in the UITZ. Barnacles and Littorina cover ~10% of the surface sediments. The MITZ is similar to area (N).
- (P) Area is located in the UITZ. No macrobiota was located in the area. No surface macrobiota was located below the site in the sand sediments.

HAWAII 1991
 OG SKETCH MAP / Bio
 GREG CHANEY / Crank
 TEAM 5
 SEGMENT: ER-11A
 DATE: MAY 14 1991
 AIR P.H. PIM-C-167

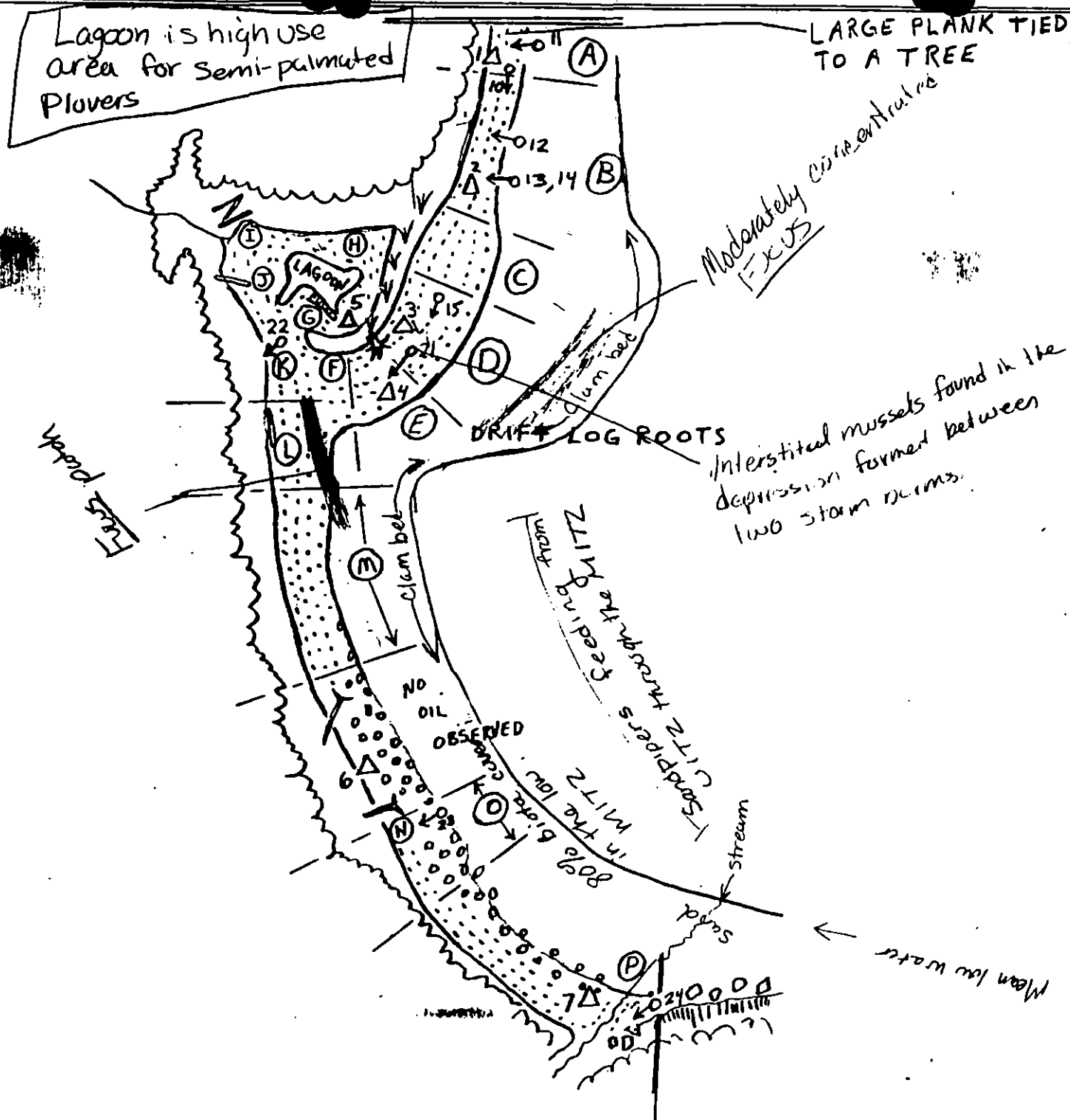


LEGEND

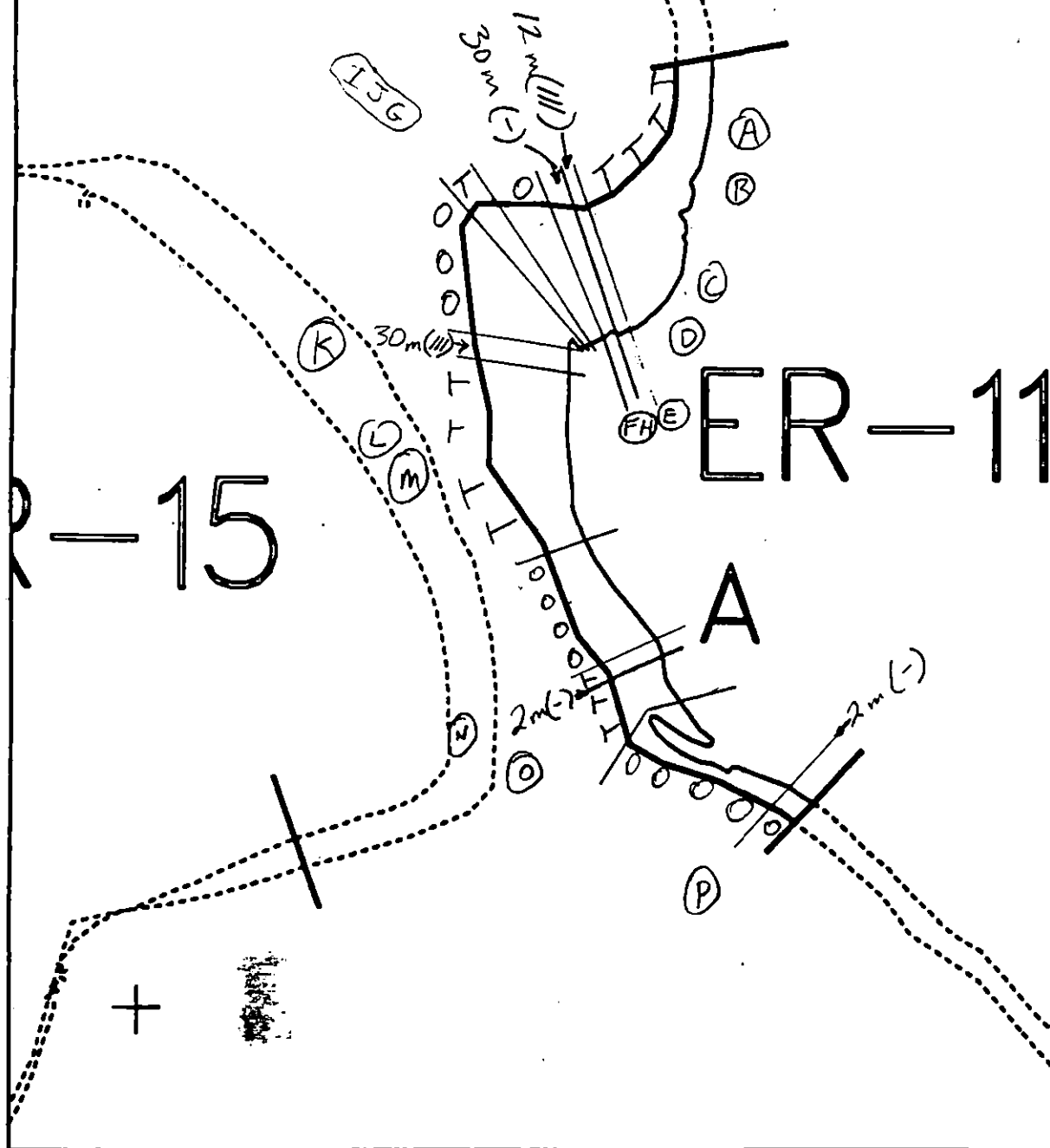
BEDROCK	
BOULDERB	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY

100
 METERS



NOTE: THIS REGION HAS A LAGOON THAT IS NOT SHOWN SO OILING LINE IS DISTORTED.



XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER011 A
 ADEC Subsegment Length: 1250m
 METERS
 0 200 400
 AK State Plane Zone 4
 per011a



Subdivision Field Map
 Map Key: PWSE011A
 Name: CHANEY
 Date: MAY 19 1991
 Date Entered:

Reviewed: F.W. 5/24/91
 Reviewed: MC 5/24/91

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11 SUBDIVISION A DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Extensive AP/SIF + SOR/HAM in M4+5 zones along segment. See sketch map for location of AP + SOR.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

- ① Manually rake and aerate AP + SOR.
- ② Apply custumblers.

3. TIMING ISSUES

ADEC [Signature]

EXXON

USCG

LAND MANAGER [Signature] (If field rep is on scene)

Tx

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11 SUBDIVISION A DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Extensive AP/S/F + SOR/H+M in M.U. + S zones
along segment. See sketch map for location of AP + SOR.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

- ① Manually rake and aerate AP + SOR.
- ② Apply custombren.

3. TIMING ISSUES

ADEC [Signature]

EXXON

USCG

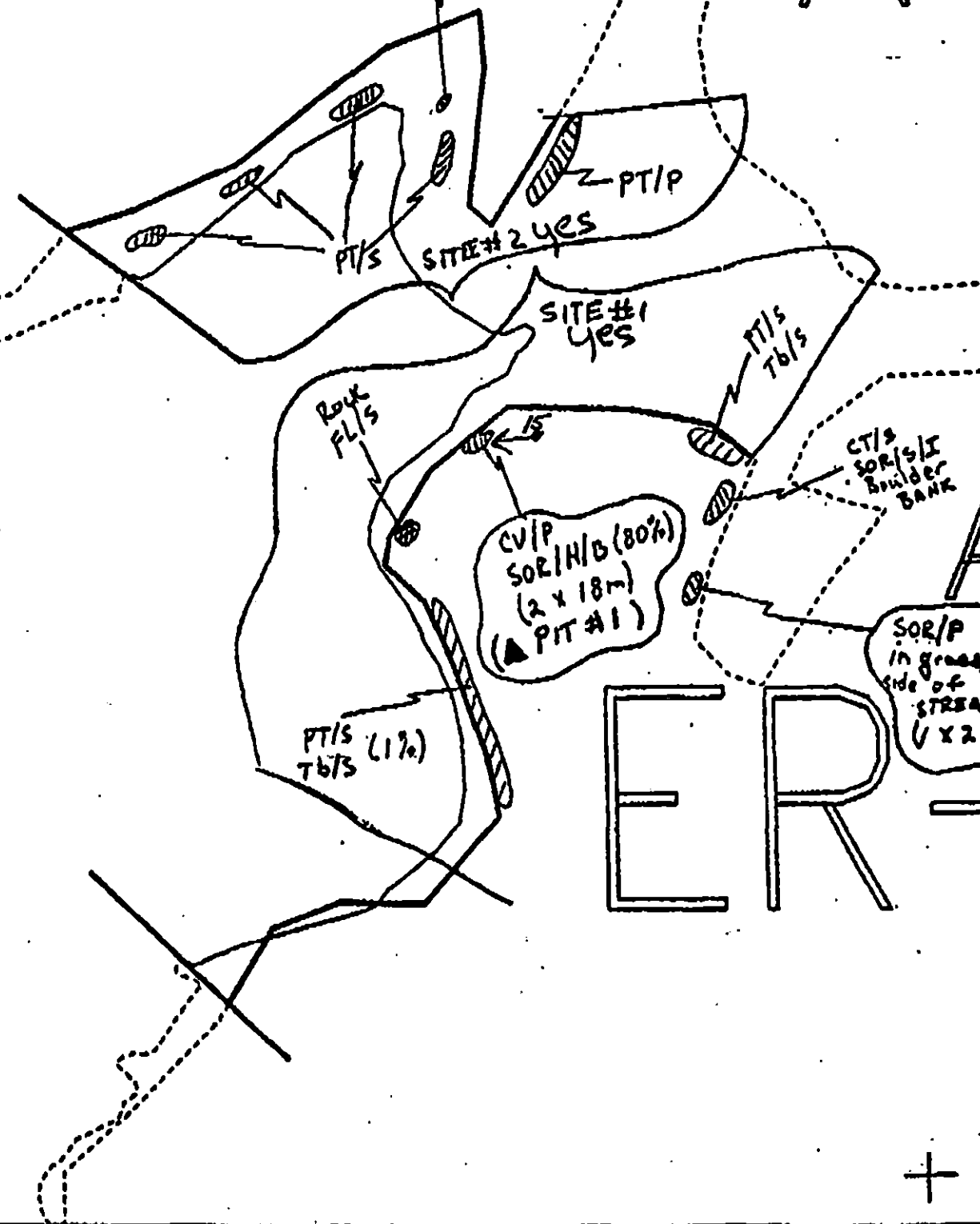
LAND MANAGER [Signature] (If field rep is on scene)

TX

OR

AP/P/B
NOT EXON VALDES
(1 x 4 m)

A



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ER-9 A
 ADEC Subsegment Length: 1152m
 METERS
 0 10 100
 AK State Plane Zone 4 113771
 per-9c

Subdivision Field
 Map Key: PWSE-9A
 Name: Reimer
 Date: 8/1/90
 Date Entered:



SEGMENT AS ER-11 SUBDIVISION: A SITE: 1 DATE 8/2/90**USCG**NAME MSIC Michael D. Brown SIGNATURE Michael D. Brown

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
 REASON:

ADECNAME John Hayes SIGNATURE John Hayes

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
 REASON:

Recommend on work order modification that AP+SOR
 be raked, aerated and customblended. Site should be reassessed.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
 REASON:

EXXONNAME Martinez N.W. SIGNATURE N.W. Martinez

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
 REASON:

Seeing S.O.R. appear where tar mat was
 removed. S.O.R. is almost a soft friable
 mat, no thickness to it 1-2cm.

PAGE 1 OF

SURFACE OIL

SITE 1

SITE 2

SITE 3

[illegible][illegible]

SUBSURFACE OIL

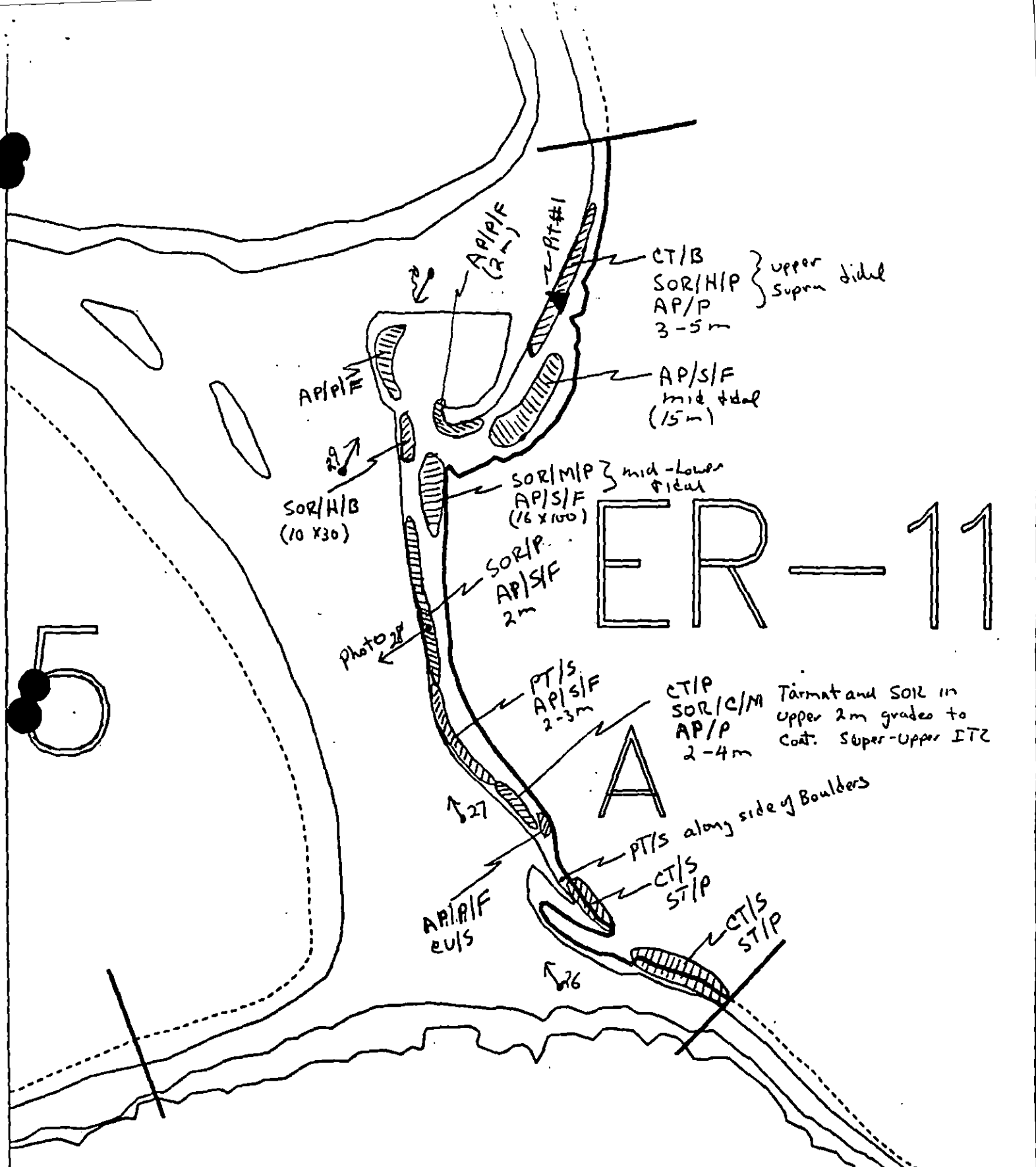
[illegible]**Photographs:**

Roll No. ASAP-01-01

Frames 26-30

REVIEWED
8/6/90 YW

COMMENTS The majority of this site has fine-grained Tarmut. The predominant concentration is in a 2-3m band in the UITE, however sporadic to patchy areas are found in and around cobbles in mid and lower ITZ as well. Much of this site has had manual removal, and Tarmuts are



SEGMENT ER-11A

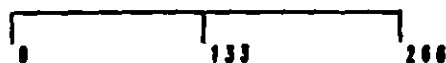
Segment Location Map

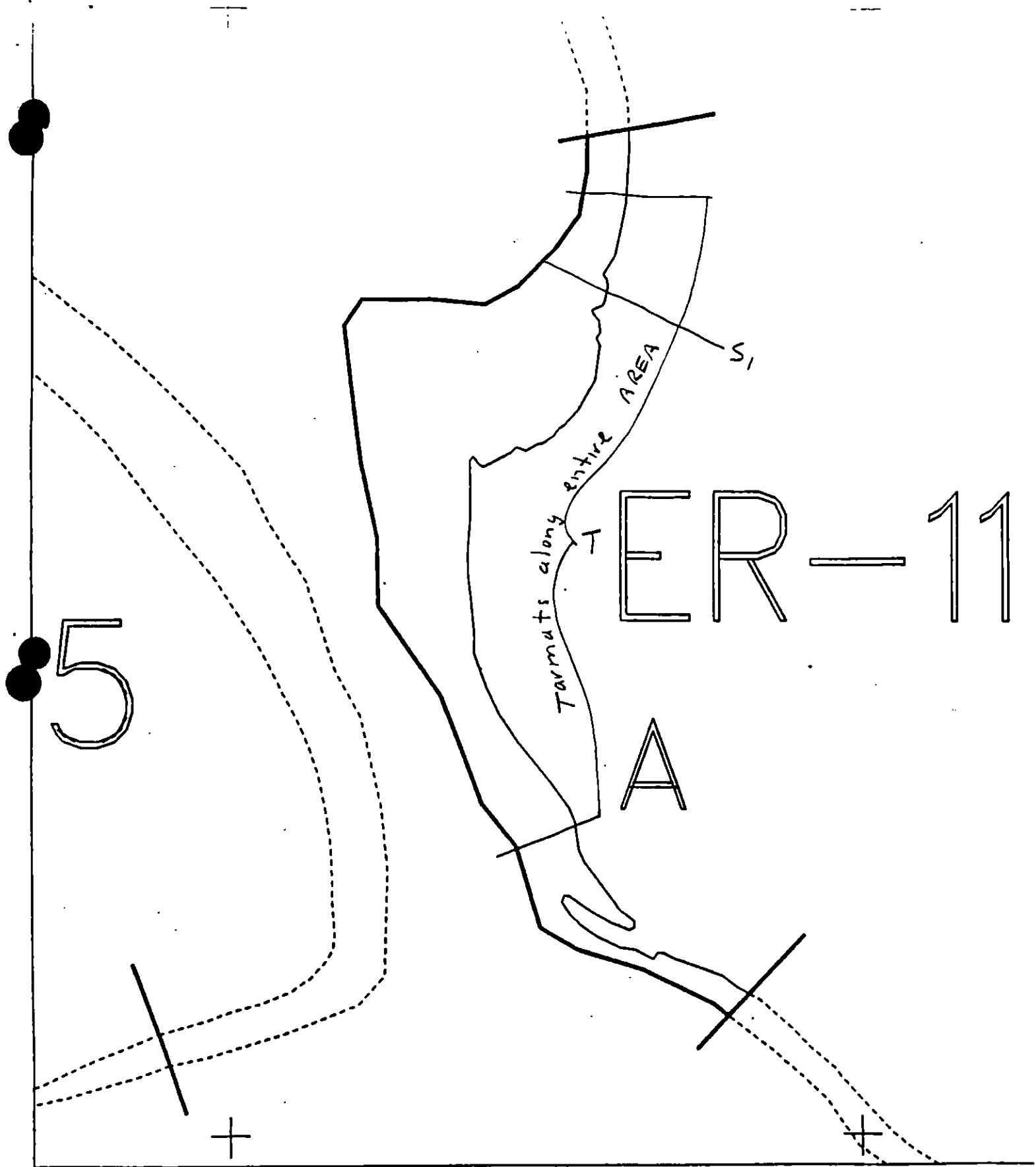
Map Key: PWSE-11

July 19, 1990

1:5245

METERS





5

Tarmats along entire AREA

ER-11

A

S1

XXXX
/////

TTTT
0000

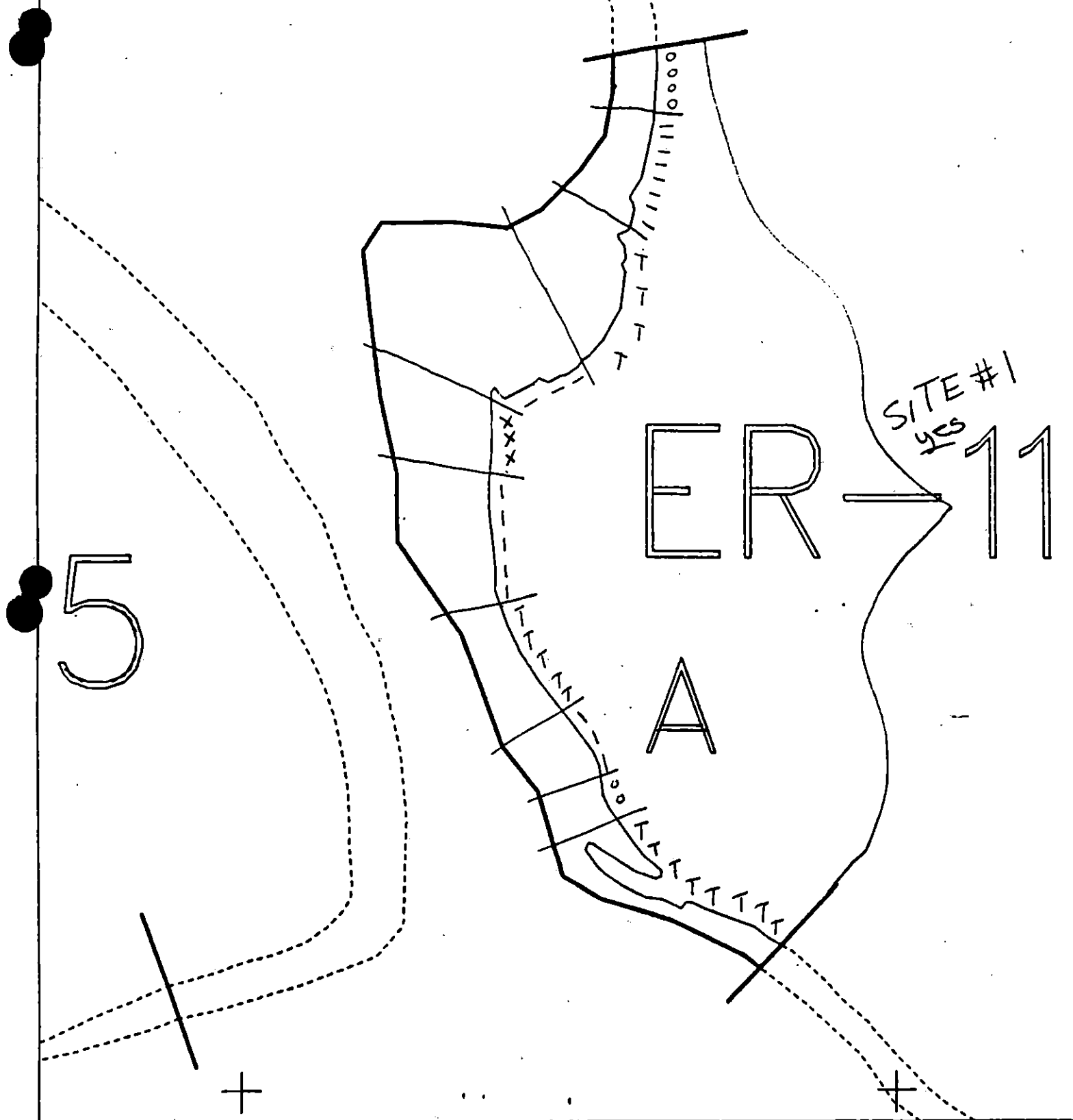
Wide
Medium
Narrow
Very Light
No Oil

ER-11 A
ADEC Subsegment Length: 1250m
METERS
0 133 268
AK State Plane Zone 4 1:5245
per-11a



Subdivision Field Map
Map Key: PWSE-11A
Name: Reimer
Date: 8/1/90
Data Entered:





XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER-11 A
ADEC Subsegment Length: 1250m
METERS
0 133 260
AK State Plane Zone 4 1:5245
per-11a



Subdivision Field Map
Map Key: PWSE-11A
Name: Reimer
Date: 8/2/96
Date Entered:

GENERAL DATA

SEG ID: ER-11 SBOV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH: OIL CATEGORIES: W N VR NO U
1991 REASSESSMENT: USCG: ADEC: EDMGR: EXXON:

SURFACE DATA

CHAR #: 7 OIL CHAR: CT OIL DIST: CONT — BRKN X PTCH X SPLH X
TIDAL ZONE: SU 0 UI X MI — LI —

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 3 OF 3SEGMENT ID: ER-11 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 20 OIL CHARACTER OR OIL INTVAL: FROM 0 TO 3
CLEAN BELOW: u PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD - COB X PEB X GRN X SAN X MUD - VEG -

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI

WORK PLAN ADDENDUM

Segment ER-11

Subdivision A

Dated 7/11/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FROM FIELD FOR MECHANICALLY ASSISTED TILLING OF A "BURIED LENSE" AS PER ATTACHED.

2. ADJUSTMENT TO WORK PLAN

TAG REVIEW OF THE AREA IN QUESTION ON 7/10 ~~REMOVED~~ IDENTIFIED THE FOLLOWING.

- LENSE FOUND AS INDICATED HOWEVER MAXIMUM THICKNESS FOUND 1-3 CM. BAND WAS CHARACTERIZED AS BROKEN + PATCHY USUALLY W. A 1M BAND. THE REMAINING OIL WAS CRUMBLY IN NATURE AND AT LOW CONCENTRATION.

TAG RECOMMENDATION: — NO FURTHER TREATMENT REQUIRED

SHPO APPROVAL NEEDED YES NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 7/11/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAL Andy Teal

NOAA Burl Wescott Burl Wescott

USCG G.A. REITER G.A. Reiter

FOSC ML DATE 7-11-90

ER-11 A (1052) 6/4/90

* Areas recommended for
mech. tilling prior to
bioremediation on
attached Work Plan
Modification Recommendation

Area is a lagoon and should
not be mechanically tilled

----- Areas with subsurface lenses of oil
and these areas recommended for tilling

R. G. McCreary
P. J. Calvey / USC

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11 SUBDIVISION A (141) DATED 6/4/90
 MODIFICATION CLASS I CLASS II CLASS III X

1. REASON FOR MODIFICATION-

A "lense" of oil ran approx. 800 of the 1200m of the beach segments where this lense reached the surface it was manually removed. However areas ^{between} ^{manual} treatment ^{zones} in High-Supra intertidal zone are characterized by a lense of oil approx. 10cm thick from between 3 and 10cm below the surface of the substrate. These areas with a subsurface are marked on the attached map.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

ER-11 A(141) is recommended for bioremediation. However, in order to effectively expose oil in the subsurface lense to the biopile or Compostblend and to facilitate its effectiveness, I recommend that the area marked on attached map be mechanically tilled. For areas below High intertidal zone no mech. tilling is recommended. Because of the lagoon's sensitivity, no mech. tilling in this area.

3. TIMING ISSUES

TAO field assessment 7/10/90 area identified approx 1-3 cm thick below the cobble veneer within of the sporadic patches 1-3m broken BU172 - natural degradation occurring ^(drilling in patches) no further treatment required. Picked up oil soaked sorbent pad.

ADEC

EXXON

USCG

LAND MANAGER

Dale W. Dasher ETOFF 6-11-90

Phone 2202 USCG 6/11/90

(If field rep is on scene)

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-11

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ ER-11 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1; Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Anchor-
ages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: Cultural resource survey in progress.
Shoreline treatment cannot proceed until field data have been
assessed and a formal archaeological constraint entered on the
shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 1093m: Narrow 157 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Manual removal of asphalt tarmat and oiled debris. Bio-
remediation as indicated on sketch map. Work after 6/1 based on
hatchery constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

16 of 3

SEGMENT ST/ ER-11 SUBDIVISION: _____ DATE 03 APRIL 90**USCG**NAME LARRY FLETCHER SIGNATURE Larry R Fletcher☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

1. MANUALLY REMOVE ASPHALT AND TAR PATTIES.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SAE SIGNATURE David M Sae☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

- ① MANUAL REMOVAL OF ASPHALT AND TAR BALLS/PATTIES
 - WILL REQUIRE SCRAPING OFF SOME SEDIMENTS
 - USE OF BORCAT W/ OVERSIZED TIRES MAY BE APPLICABLE ON TH. SEGMENT. [NOTE: SOME ASPHALT MAY BE UNDER SPRING BERRY]
- ② CLEAN BOULDERS OF COVELL
 - RAIN CAUSING SEEP ON ROCKS SHOWS SOME OIL MOBILITY
 - MOBILE OIL MUST BE REMOVED
- ③ BIOREMEDIATE

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Listed as priority 1, 3 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. The segment has nice sandy beaches and flat areas for tent camping, especially around the lagoon at pits 2, 3 and 4. Recommend manual removal of asphalt pavement and debris followed by bioremediation, especially in the areas around the boulders.

SHORELINE OILING SUMMARY

REVISION NO. 000001

OG R. MACH USCG LARRY FLETCHER SEGMENT ST/ ER-11 744
 BIO B. Lumb LAND REP Laugh Canyon SUBDIVISION A (1 OF 1)
 EXXON J. Gernicki ADEC Dave Sales TIME 11:30 to 13:30
 TEAM NO.: 10 TIDE LEVEL: +2m to +0.8m DATE 04/03/90
 EST. SUBDIVISION LENGTH: 1207 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 5 % C 45 % P 25 % G 10 % S 15 % M 0 % V
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 1140 m N 147 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	S	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT		X	✓	0					X✓				X✓	X✓	X✓	X✓
POOLED									0				0	0	0	0
COVER		X	✓						X✓				X✓	X✓	X✓	X✓
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F (8) 4275 sq. m by 4
 PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL
 Note: Sheen quite local & very light

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation	X		
Trash		X	
Debris		X	

DEBRIS COLLECTED
☐ YES ☒ NO
 TYPE 0
 #BAGS 0

Photographs:

Roll No. ST/10/6
 Frames 21-29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in) (000-000)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	RES. ON	LOC. CL	SP. OF	NO			1	2	3	4	5	6	7	8	9	U		
* 1	15		X				0-2	X						X			X		N	S
* 2	12	X					0-3	X					X				X		N	S
3	60					X	NA									X			N	S
* 4	15	X					0-3	X								X			N	PMS
* 5	35	X					0-2	X					X			X			Y	PMS
* 6	19	X					0-5	X					X				X		N	S

7 56
 COMMENTS

Widely distributed soft asphalt patches.

* OILED INTERVAL ^{<5cm} IN PIT NOS. 1, 2, 4, 5 AND 6
 DO NOT CONSTITUTE SUBSURFACE OIL

Revision N S
 RM 4/3/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER/11 Subdivision A Date (mo/day/yr) 4/3/90
 Time (24 hr) 1100 - 1330 Biologist Lemon Rain 15 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder 5 (3) Cobble 45 (4) Pebble 25 (5) Sand 25 (6) SM
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 20%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/6

Frames 21-29

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: One sighting each for osprey, seahorse, seal, eagle, deer troc, 15 gulls. Dead otter *Enhydra lutra* in lagoon; no evidence of oil. The drift line at the snow line had 35% amphipod coverage and an oligochaete (annelide).

Ecological Considerations: deer harvest, hatchery release.

62 of 81

Light 1.0" = 150m
 Medium 7.75" = $\frac{1163m}{1313m}$

ER-11

XXXX Wide

//// Medium

--- Narrow

TTTT

ER-11A

ADEC Segment Length: 1250m

Map Key: PWS-147

Name: Rich Marty

Date: 3 April 1990

1991 MAYSAP EVALUATION

SEGMENT: ER12A SUB: A REGION: PWS SURVEY DATE: _____ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

Ecological/Constraints (see page two for details) _____

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature: Timothy J. Adams Date: 6/19/91RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

YYY

Manual Pickup (Check as Req.)

XXX

Spot Washing

XXX

Bio-Customblen Only

XXX

Bio-Inipol/Customblen

Other

Other

 COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF AP FOLLOWED BY CUSTOMBLEN AS REQUIRED

FOSC: _____

TAG APPROVAL DATE: JUNE 18 1991 FOSC APPROVAL DATE: 6/27/91

ADEC

John Bane

FOSC

EE

EXXON

RealE. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG

Ed Mall

NOAA

Long

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL SPILL RESPONSE CENTER
4241 B St., Suite 202
Anchorage, AK 99503

PHONE: (907) 563-1126

FAX: (907) 563-3541

TO: TERRY MURPHY CG FAX 263-17306

LOCATION: TOM KELLEY - EXXON FAX 564-3771

FAX NUMBER: _____

NUMBER OF PAGES FOLLOWING: 2

FROM: BAUER

DATE: 6/14/91

COMMENTS: WORK ORDER MODIFICATION FOR
ER 12A. NEED REVIEW AND YOUR
SIGNATURE IF ACCEPTABLE.

ANY QUESTIONS CONCERNING THIS FAX PLEASE CALL:
(907) 563-1126 ext. 247.

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-012 SUBDIVISION A DATED 6/11/91MODIFICATION CLASS I CLASS II CLASS III

1. REASON FOR MODIFICATION Segment was not surveyed this season during Maysap. Band of AP in ER-012B extends into ER-012A.

130 x 3m 20% AP - See map

2. SUGGESTED ADJUSTMENT TO WORK PLAN

- ① Manually remove surface AP
- ② Roll cobbles to expose heavily oiled sediments & manually remove OP + HOR sediments.

3. TIMING ISSUES N/A

4. OTHER

ADEC EXXON USCG LAND MANAGER Steve Under-CUC (if field rep is on scene) CUCDNR Leigh Carlson

Ray Saklo recommended I refer this to Scott Newman for a signature as he was the

A-12B
dated 09

N

Cliffington Passage

-12A-

130K3 Band of AP*

12m wide here 10% AP

50K3 Band of AP
80% P.V.

ER-012B -

Eagle Buffer Zone in 12C

-12C-

(A) 5K2m
20650R

* Also recommended for further treatment. Band identified is only sitting on segment that requires treatment. Rest of segment has light or no sitting.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-12 SUBDIVISION B DATE 5 / 14 / 91

ADEC

NAME John Hays SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pickup of AP in section B on sketch map.
This band extends into 12A which was not on our lot for surveying.
Recommend manual crew extend pickup of AP band into ER-01A.

EXXON

NAME John DEAN SIGNATURE [Signature]

☒ NTR Most OILING OBSERVED WAS COAT OR CRACK, NOT RECOVERABLE.

LANDMANAGER

NAME Steve WARD OF CVC/FS SIGNATURE [Signature]

☐ NTR AREA B on this Sub-needs manual pick-up the oiling also extends into the next Sub (ER-12-A) so one team could clean this up. See OG map. This oil is more than asphaltic thick Runny Sludge.
NO BIO-

USCG/NOAA

NAME DREHER / CLINE SIGNATURE CWO K. L. Dreher [Signature]

☒ NTR No sub surface oil observed. Primarily cover and coat.

Sporadic AP (site B) could be removed, but does not appear to present a hazard to local biota. I don't see a particular need for further treatment - low priority. DRE

5.

Original

BIO **CRANK**

SEGMENT ER 12

LANDMANAGER WARD for CUC

SUBDIVISION 15

USCG/NOAA DREHER/CLINE

DATE MAY, 14 / 91

TIDE LEVEL -1.5 ft. to 1.5 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W - m M 50 m N 2 m VL - m NO 365 m US 0 m

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5 - 15

FRAMES 18

SHEEN COLOR: B - BROWN: R - RAINBOW: S - SILVER: N - NONE

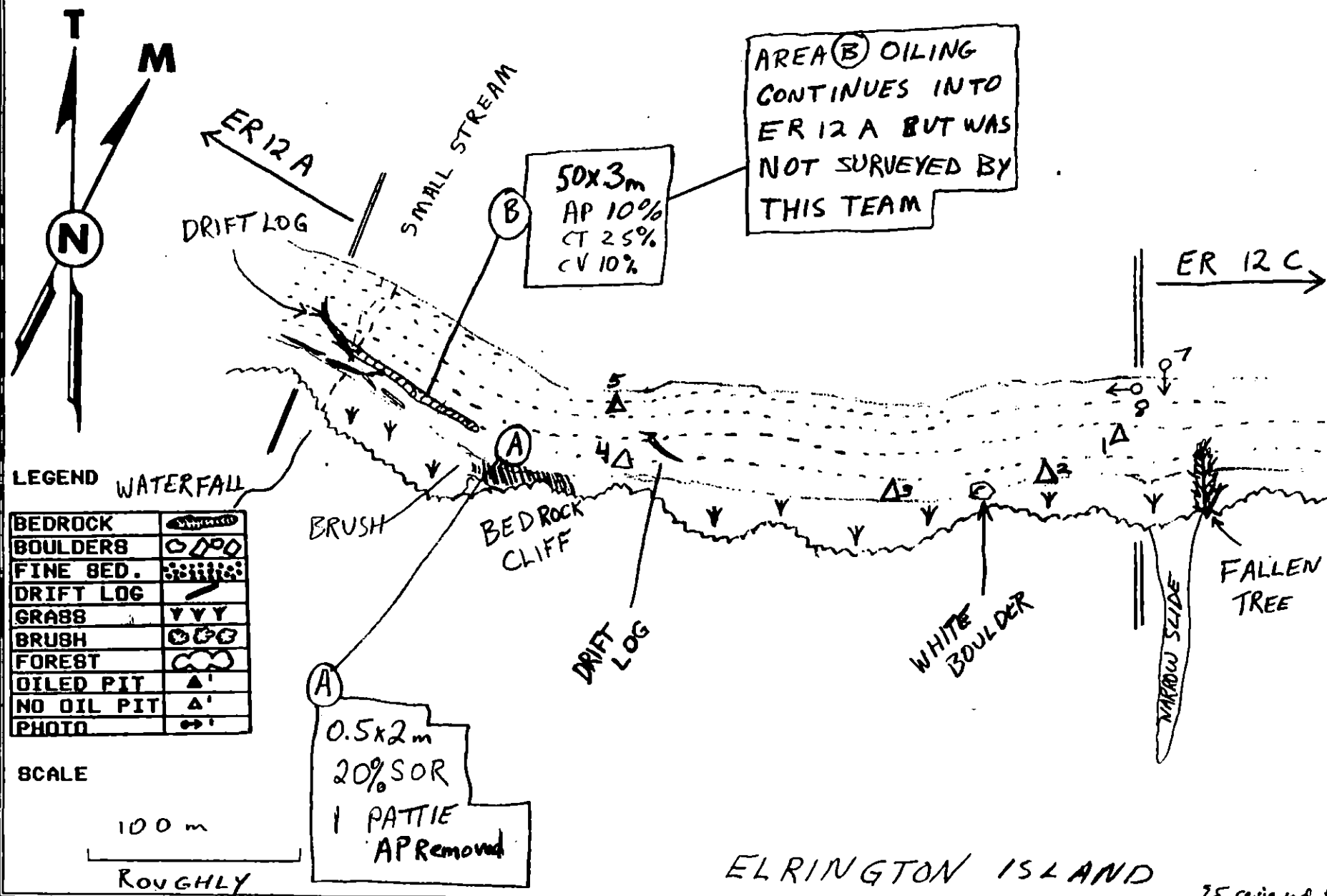
OG COMMENTS: BOUNDARIES FOR THIS SUBDIVISION ARE DIFFICULT TO LOCATE BECAUSE SSAT REPORT IS VAUGE. MAJORITY OF OIL IS LOCATED ON THE WESTERN EDGE OF THE SEGMENT AND CONTINUES INTO SEGMENT ER-12-A. AREA (B) IS A BAND OF OIL THAT CONTAINS DISTINCT AP PATCHES BETWEEN SMALL BOULDERS. THE BOULDERS RETAIN CT & CV IN THE BAND.

Reviewed 5/19
Reviewed: F.W. 5/23/91

MAY 8AP 1991
 OG SKETCH MAP
 GREG CHANEY

TEAM 5
 SEGMENT: ER 12 B
 DATE: MAY 14 1991
 AIR P.H: PIM-2-005-160

EL RINGTON PASSAGE



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5 **DATE** 14 May 1991 pg Lot 1
SEGMENT # ER-12 **TIDAL HEIGHT (Range)** -1 → +1.5
SUBDIVISION B **BIOLOGIST** Crank
SEA STATE 1/ **WIND SPEED/DIRECTION** 10 knots / N
PHOTOGRAPHS: ROLL # **FRAME #**

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A,B) Arcus are located in the UITZ. There is a rare concentration of barnacles. The barnacles did not tightly seal their inner plates when stimulated. Barnacle spat is present as well as many barnacle scars. Amphipods are common, found in dense pockets under cobble veneer. Oligochaete worms 2-5cm long are also present under cobbles. Freshwater runoff is present in area 'B'.

This is a high energy, rounded cobble beach. This harsh environment creates a low biota surface cover, particularly in the MITZ and UITZ, where <1% to ~3% of the exposed surfaces are covered. Barnacles in the MITZ tightly sealed their inner plates when stimulated. In the LITZ, there are stretches where the sediments have been stabilized by algae. In those areas surface cover is ~70% including *Alaria*, *Laminaria*, Bull Kelp, bladed red and green algae, filamentous red and green algae, rare concentrations of barnacles and mussels. Sea stars, Pyrosomadia are also present. Arcus not stabilized by algae have ~5% biota cover.

Bull Kelp Bed is located nearshore.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl			
Gulls/Kittiwakes/Terns	3	18	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

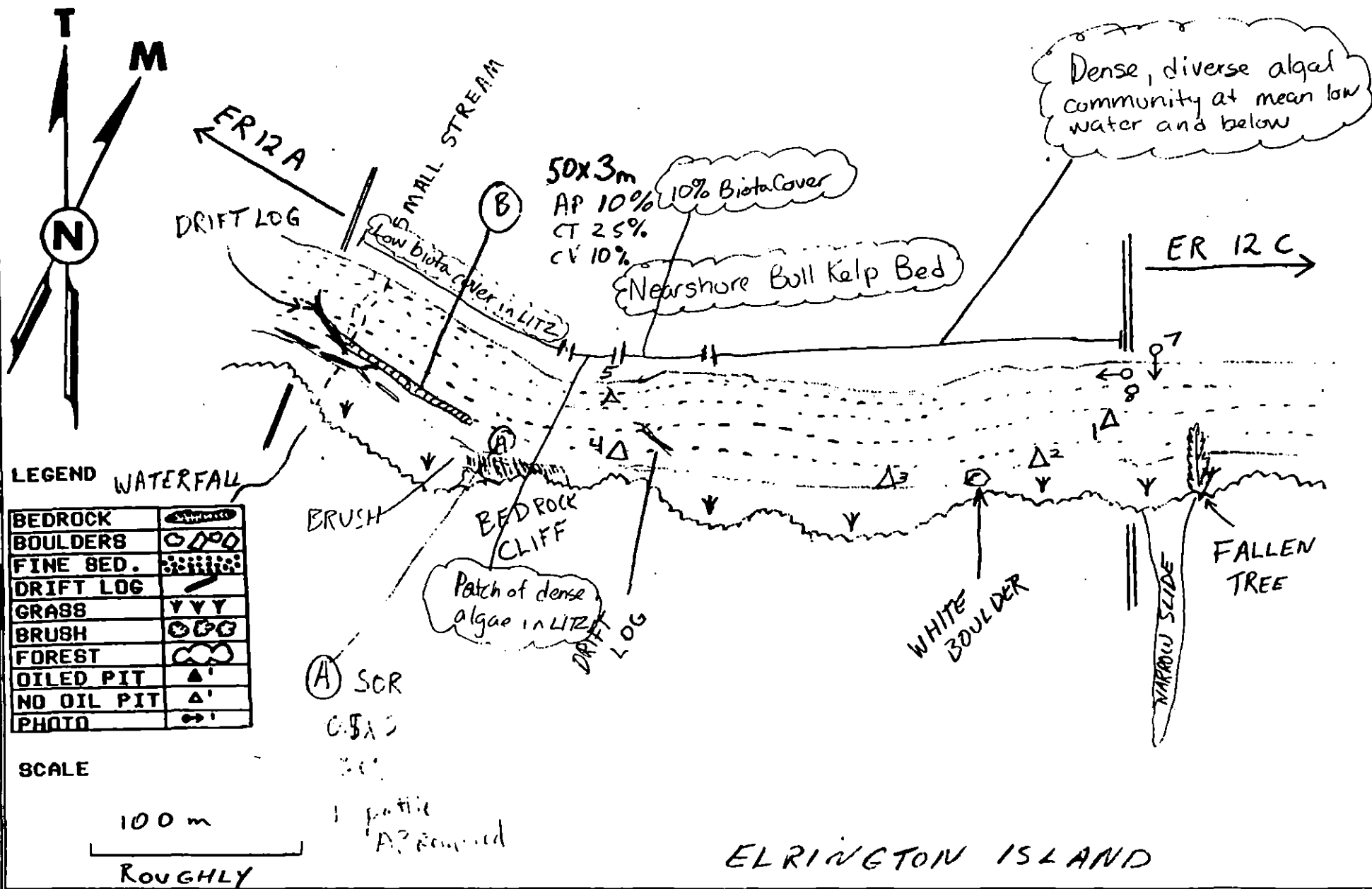
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Amphipeds (specify)	12 Sealions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

DESIGNED: E.W. Sibley

MAY 1991
 OG SKETCH MAP: Bio Map
 GREG CHANEY & Crank
 TEAM 5
 SEGMENT: ER 12 B
 DATE: MAY 14/1991
 AIR P.N. PIM-C-005-160

ELRINGTON PASSAGE



1991 MAYSAP EVALUATION

SEGMENT: ER 012 SUB: B REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest,
Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy A. Smith for SHPO

May 31, 1991

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u> </u>	<u>X</u>	<u>X</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG: MANUAL PICKUP OF AP AT LOCATION B

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

[Signature]

FOSC

[Signature]
E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

EXXON

[Signature]

USCG

[Signature]

NOAA

[Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-12 SUBDIVISION B DATE 5 / 14 / 91

ADEC

NAME John Hays SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pickup of AP in section B on sketch map.
This band extends into 12A which was not on our list for surveying.
Recommend manual crew extend pickup of AP band into ER-DA.

EXXON

NAME John Dean SIGNATURE [Signature]

☒ NTR Most OILING OBSERVED WAS COAT OR COVER, NOT RECOVERABLE.

LANDMANAGER

NAME Steve Ward OF CVC/FS SIGNATURE [Signature]

☐ NTR AREA B on this Sub-needs manual pick-up. the oiling also extends into the next Sub (ER-12-A) so one team could clean this up. See OG map. This oil is more than asphaltic thick Runny Sludge.
NO BIO-

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. L. Disher [Signature]

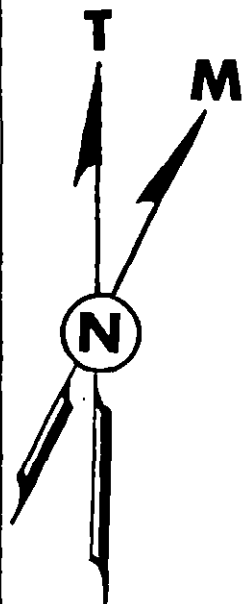
☒ NTR No subsurface oil observed. Primarily cover and coat.

Sporadic AP (site B) could be removed, but does not appear to present a hazard to local biota. I don't see a particular need for further treatment - low priority. DUC

MAY 1991
 OG SKETCH MAP
 GREG CHANEY/CLINE
 TEAM 5

GENERAL ORIENTATION MAP

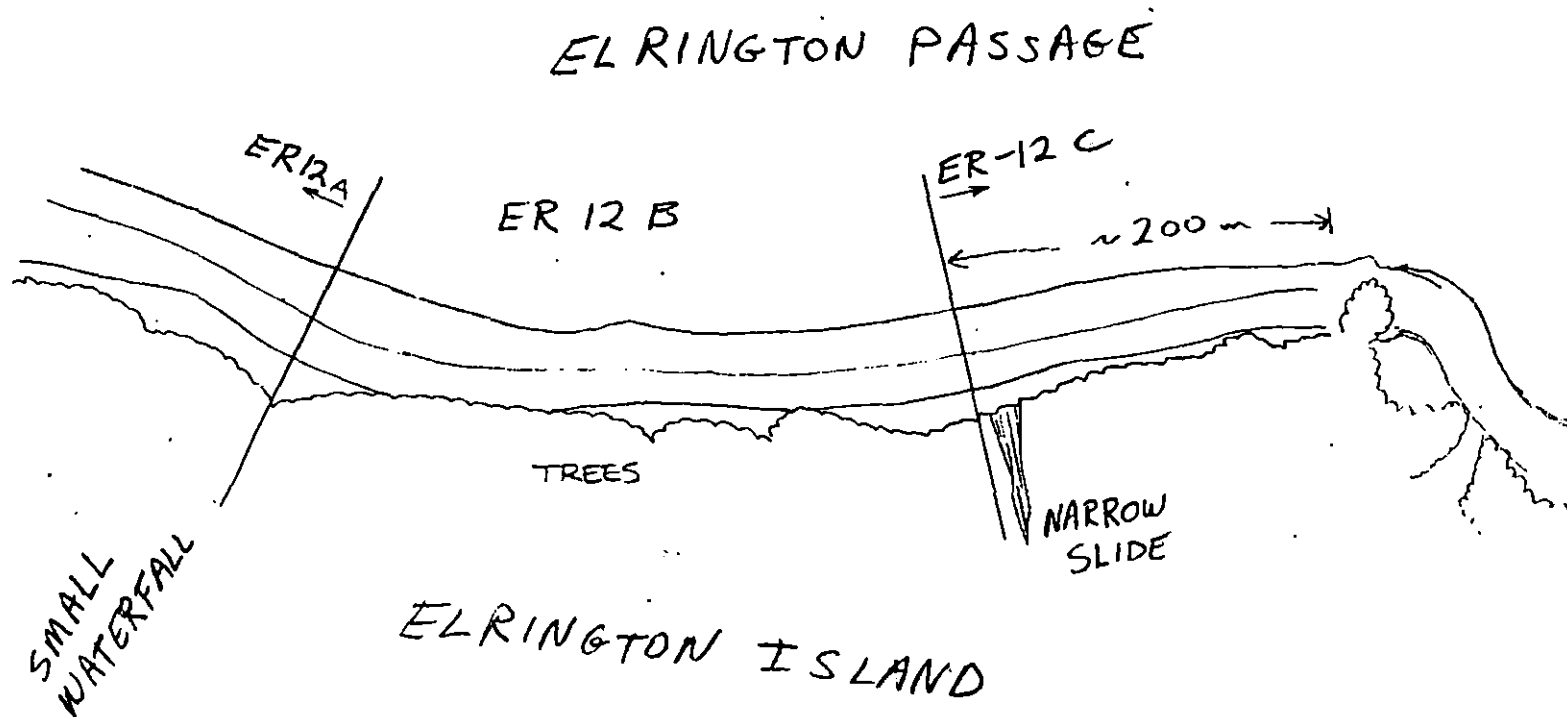
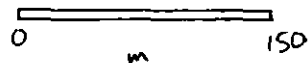
SEGMENT: ER 12 B
 DATE: MAY 14 1991
 AIR P.#: PIM-C 005-160



LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5 DATE 14 May 1991 pg Lot 1
 SEGMENT # ER-12 TIDAL HEIGHT (Range) -1 → +1.5
 SUBDIVISION B BIOLOGIST Crank
 SEA STATE 1' WIND SPEED/DIRECTION 10 knots /N
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A,B) Areas are located in the UITZ. There is a rare concentration of barnacles. The barnacles did not tightly seal their inner plates when stimulated. Barnacle spat is present as well as many barnacle scars. Amphipods are common, found in dense patches under cobble veneer. Oligochaete worms 2-5cm long are also present under cobbles. Freshwater runoff is present in area 'B'.

This is a high energy, rounded cobble beach. This harsh environment creates a low biota surface cover, particularly in the MITZ and UITZ, where <1% to ~3% of the exposed surfaces are covered. Barnacles in the MITZ tightly sealed their inner plates when stimulated. In the LITZ, there are stretches where the sediments have been stabilized by algae. In these areas surface cover is ~70% including *Alaria*, *Laminaria*, Bull kelp, bladed red and green algae, filamentous red and green algae, rare concentrations of barnacles and mussels. Sea stars, *Polydora* are also present. Areas not stabilized by algae have ~5% biota cover.

Bull Kelp Bed is located nearshore.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl			
Gulls/Kittiwakes/Terns	3	18	
Shorebirds			
Corvids			
Other Birds			

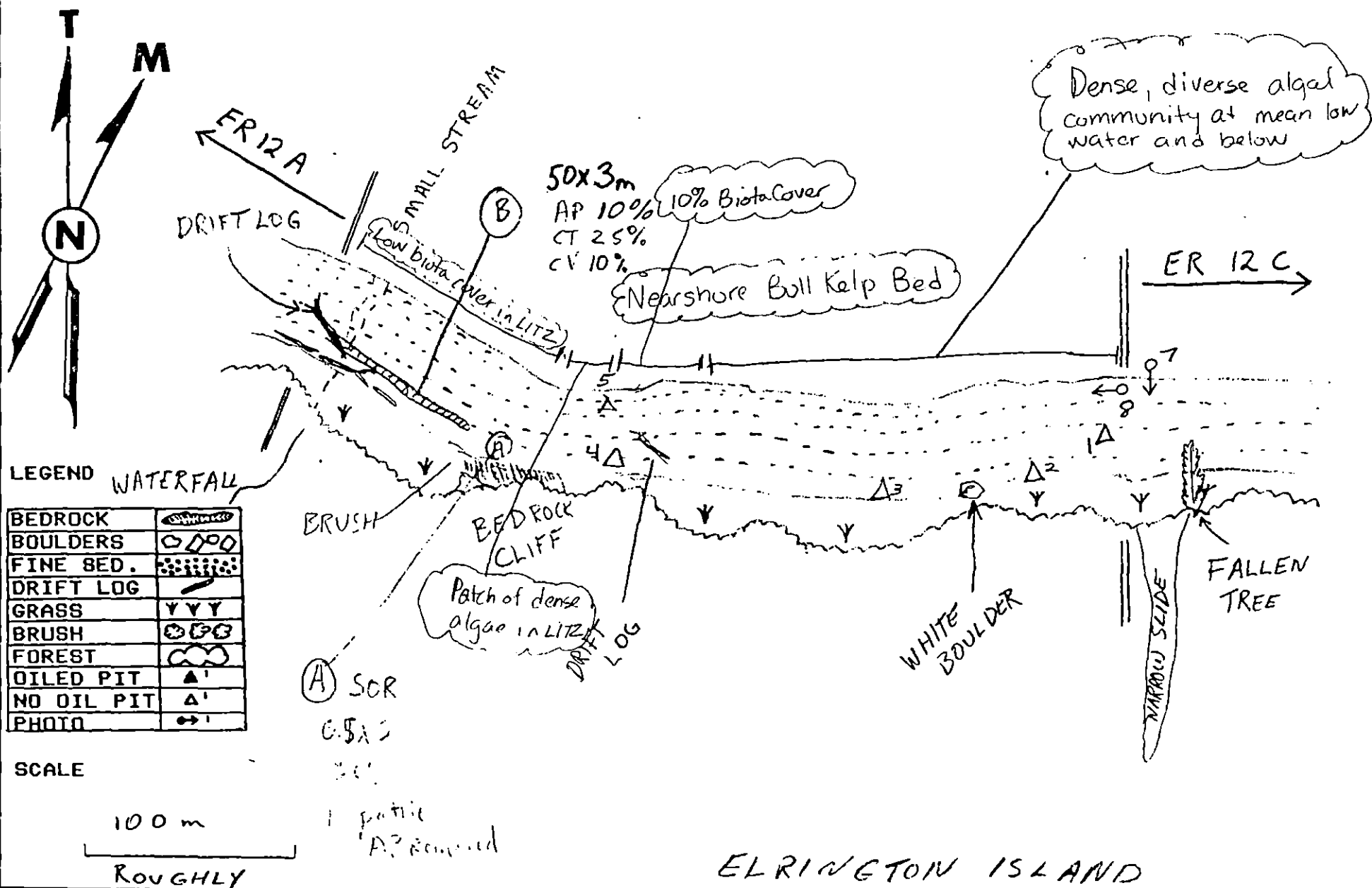
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Amphipeds (specify)	12 Sealions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: F.W. 5/23/91
 P. 1 5/23/91

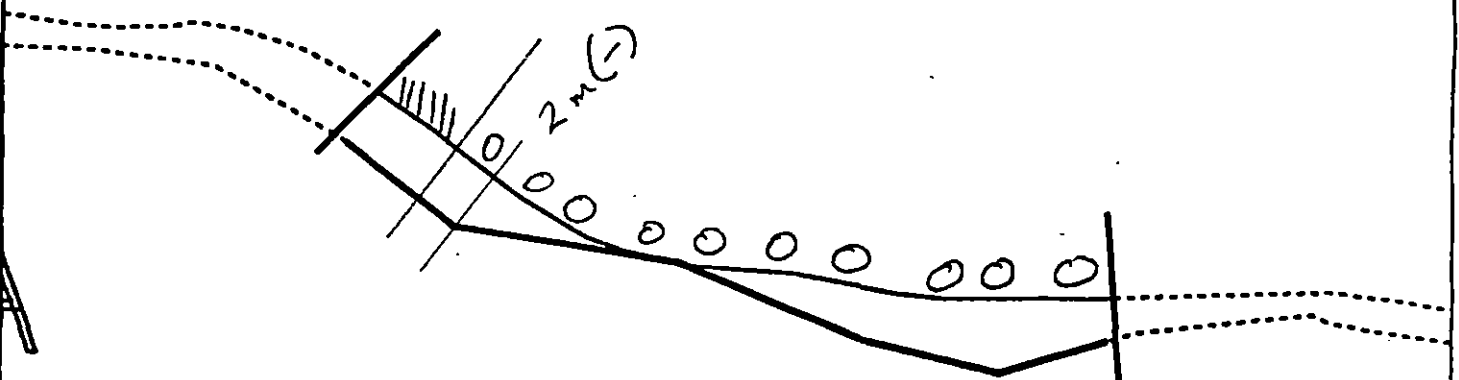
MAY 1991
 OG SKETCH MAP, Bio Map
 GREG CHANEY & Crank
 TEAM 5
 SEGMENT: ER 12 B
 DATE: MAY 14/1991
 AIR P.#: PIM-C-005-160

EL RINGTON PASSAGE



ER

B

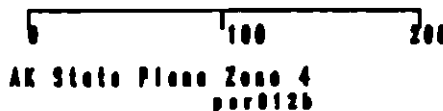


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER012 B

ADEC Subsegment Length: 417m

METERS



Subdivision Field Map

Map Key: PWSE012B

Name: CHANEY

Date: MAY 14 1991

Date Entered:

ES reviewed 5/19
REVIEWED: F.W. 5/23/91

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Jones DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 417 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on salmon and eagle nest constraint and after the approval of USFWS regarding eagle nest.

TAG COMMENTS: Remove ASPHALT PATCHES INDICATED ON SKETCH.

TAG APPROVAL DATE: 4/24/90
ADEC ART WEINER
EXXON ANDY TAYLOR
NOAA Joseph Talbott
USCG M. J. Hall

FOSC:

DATE: 5-3-90

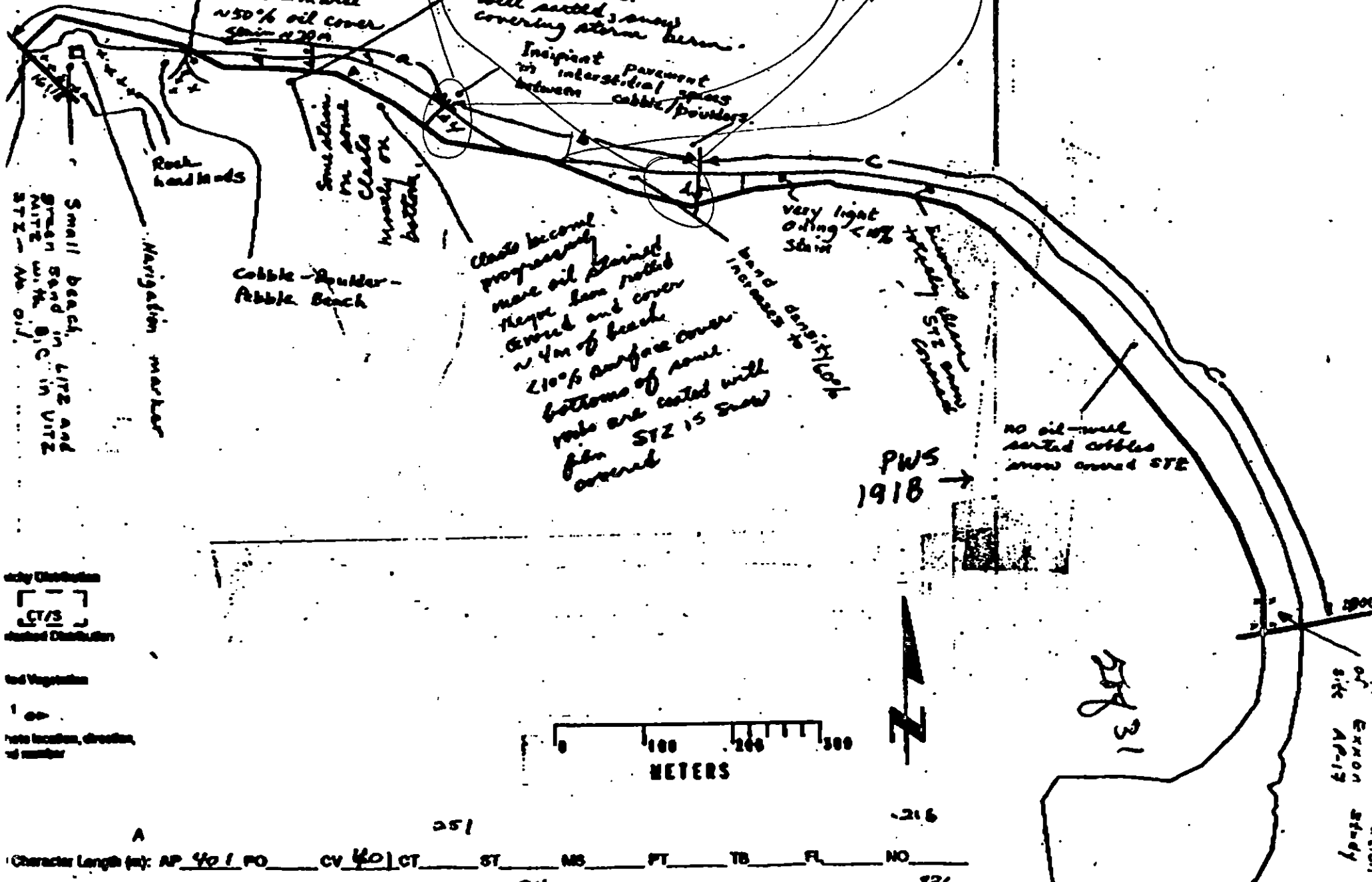
SKETCH MAP

Rich Marty

EMENT ST/ER-12

SDIVISION A-C

TE 02 / April 90



City Distribution

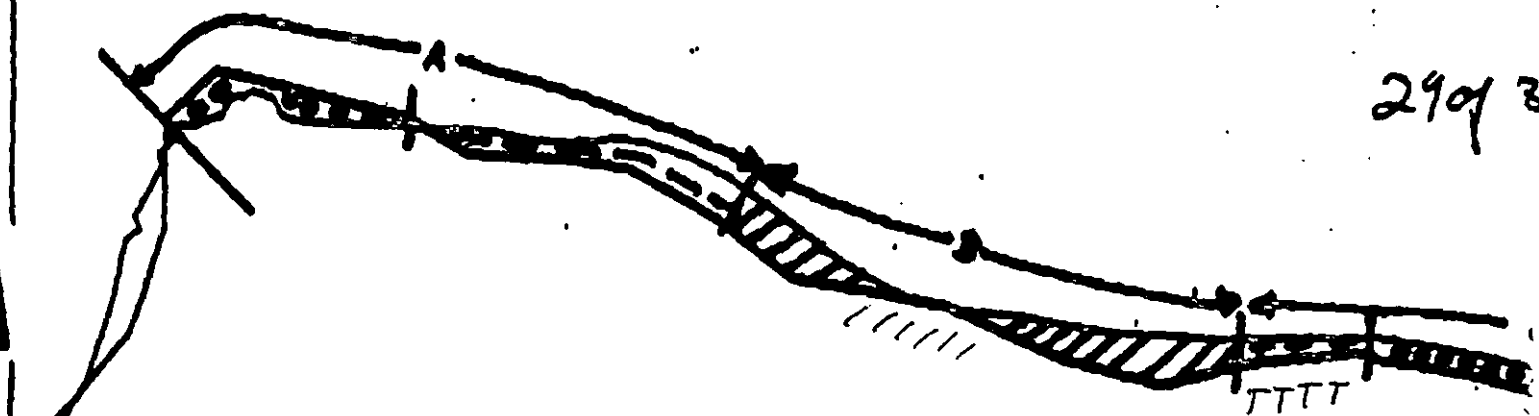
CT/S
Rocked Distribution

Red Vegetation

100
Note location, direction,
and number

ER-

29 of 3



No	Inches			Unad/			Normalised		
	A	B	C	A	B	C	A	B	C
	1.5"		5	195m		280m	216		836
Very Light			25"			75m			84
Light	1.5"			225m			251		
Med		3.4			360m			401	

1605 167 161 1700

Eagle Nest SW

PWS 1918

R-16

XXXX Wide

//// Medium

--- Narrow

ER-12

ABEC Segment Length: 1788m

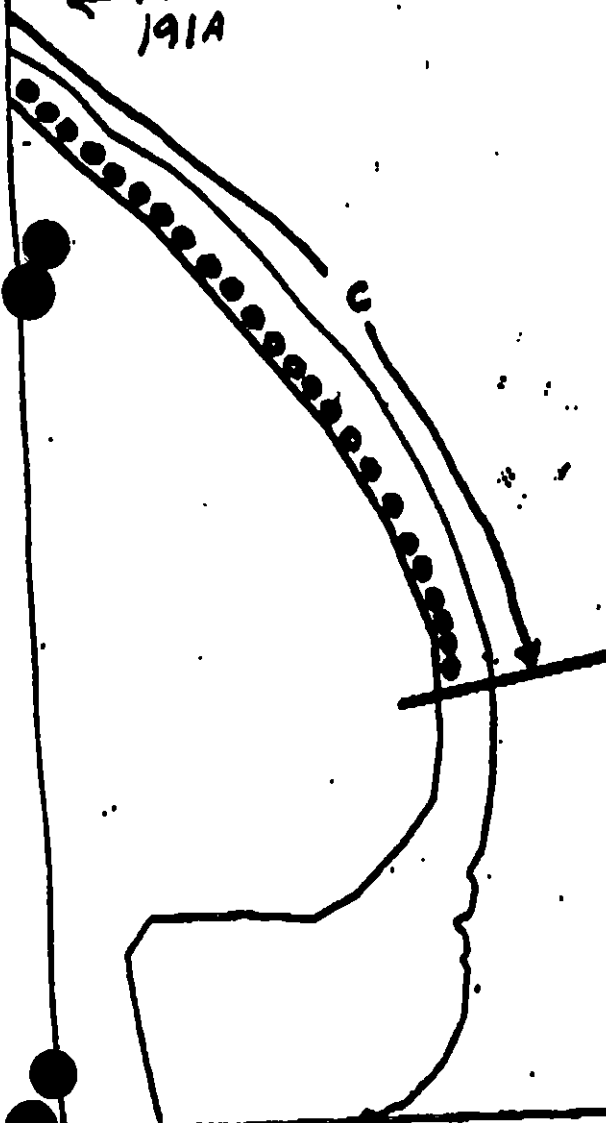
Map Key: PWS-1918

Name: R. Marty

Date: 2 April 1990

30/31

← PWS
191A



XXXX Wide

//// Medium

--- Narrow

TTT Very light

ER-12

ADEC Segment Length: 17.88m

Map Key: PWS-191b

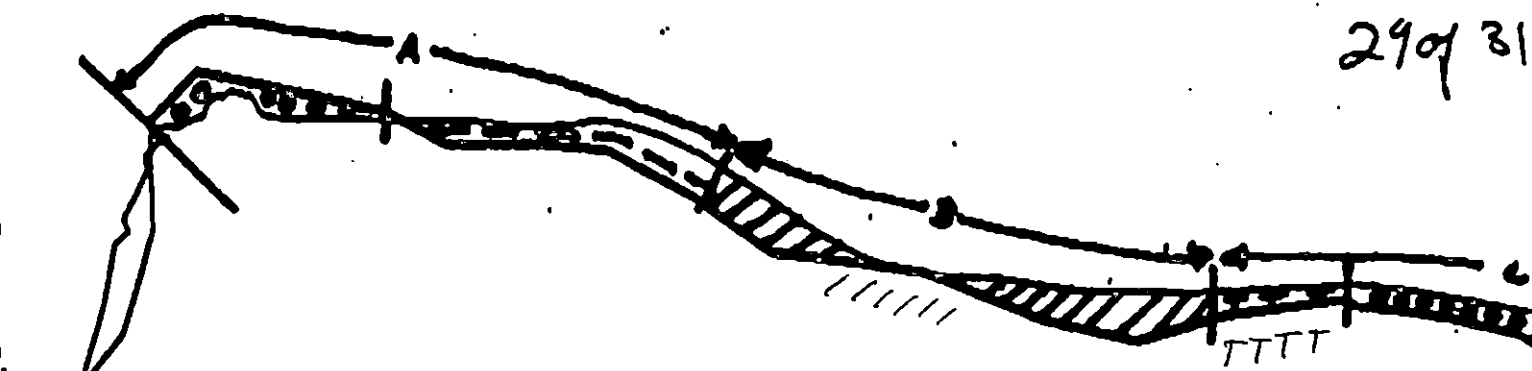
Name: Richard Marty

Date: 2 April 1990



ER-

29 of 31



	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	145m		750m	216		836
Very Light			0.5"			75m			84
Light	1.5"			225m			2.51		
Med		2.4			360m			401	
						1605	467	461	1780

PWS
1918-

R-16

XXXX Wide

//// Medium

---- Narrow

ER-12

ADEC Segment Length: 1788m

Map Key: PWS-1918

Name: R. MartyDate: 2 April 1990

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in Subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Charles E. Hume DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 107 m: No Oil 771 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ <u> </u> Beach Cleaner
<u> </u> Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90.
ADEC ART WEINER Art Weiner
EXXON Amy Tetz Amy Tetz
NOAA Joseph Talbot Joe Talbot
USCG M. J. HALL M. J. Hall

FOSC: W L DATE: 5-3-90

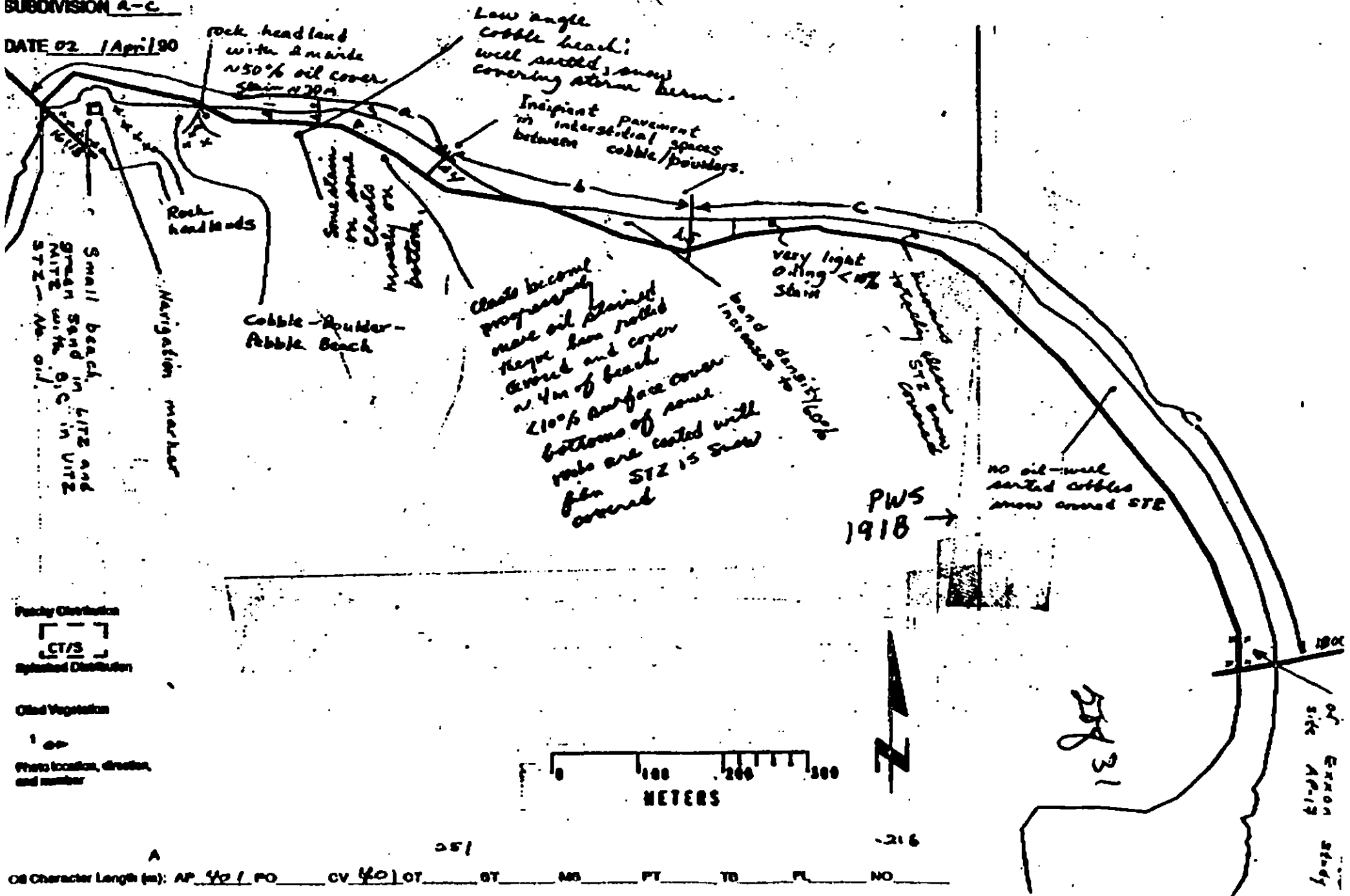
SKETCH MAP

OG Rick Marty

SEGMENT ST/ER-12

SUBDIVISION A-C

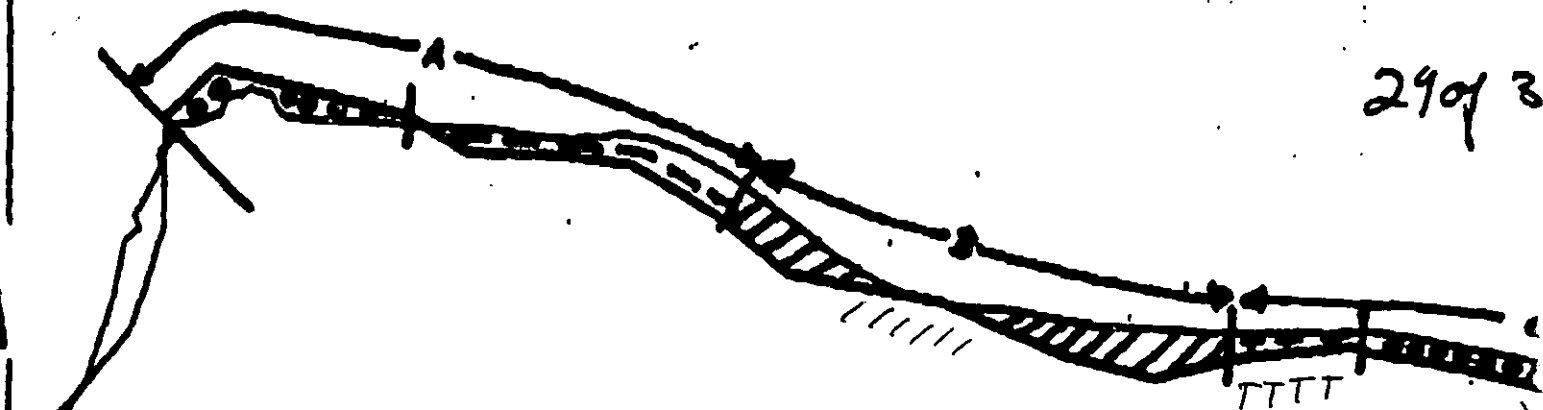
DATE 02 / Apr / 90



Ecology Map

ER-

29 of 3



	Inches			Unad/			Normal-mad		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	149m		75m	216		836
Very Light			25"			75m			84
Light	1.5"			225m			251		
Med		2.4			360m			401	
1605 469 401 1780									

Eagle
Nest
SWPWS
1918

R-16

XXXX Wide

//// Medium

--- Narrow

ER-12

ABEC Segment Length: 1780m

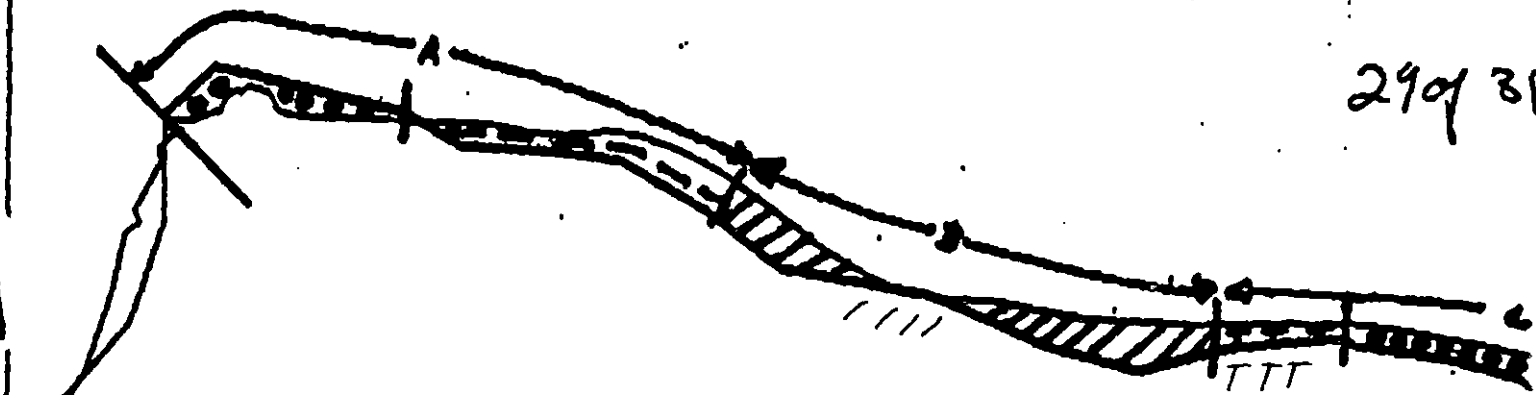
Map Key: PWS-1910

Name: R. Mary

Date: 2 April 1990

ER-

29 of 31

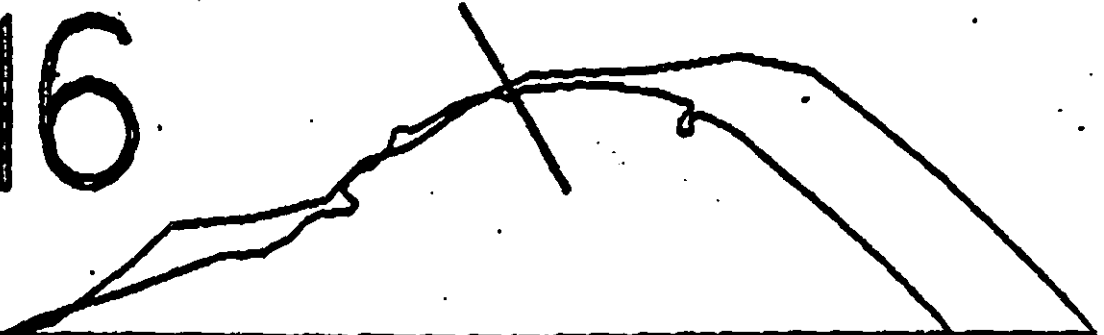


	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.3"		5	195m		750m	216		836
Very Light			25"			75m			94
Light	1.5"			225m			251		
Med		2.4			360m			401	

1605 462 701 1780

PWS
1918-

R-16



XXXX Wide

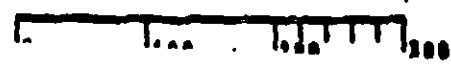
//// Medium

--- Narrow

TTTT Very Light

ER-12

ADEC Segment Length: 1788m



Map Key: PWS-1918

Name: R. Mary

Date: 2 April 1990

Note Entered:

30/31

← PWS
191A

XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

ER-12

ADEC Segment Length: 1738m



Map Key: PWS-101b
Name: Richard Marty
Date: 2 April 1990
Date Entered:

30/31

← PWS
191A

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

ER-12

ADEC Segment Length: 1738m

Map Key: PWS-191b

Name: Richard Mar.

Date: 2 April 1990

--- entered

1991 MAY8AP EVALUATION

SEGMENT: ER 012 SUB: B REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-12 SUBDIVISION B DATE 5 / 14 / 91

ADEC

NAME John Hays SIGNATURE [Signature]

☐ NTR ☒ TREATMENT REQUIRED

Recommend manual pickup of AP in section B on sketch map
This band extends into 12A which was not on our list for surveying.
Recommend manual crew extend pickup of AP band into ER-0A.

EXXON

NAME John DEAN SIGNATURE [Signature]

☒ NTR Most OILING OBSERVED WAS COAT OR COVER, NOT RECOVERABLE.

LANDMANAGER

NAME Steve WARD OF CVC/FS SIGNATURE [Signature]

☐ NTR AREA B on this Sub-needs manual pick-up. The oiling ALSO Extends into the next Sub (ER-12-A) so one team could clean this up. See OG map. This oil is more than asphaltic thick Runny Sludge.
NO Bio-

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. L. Dicker [Signature]

☒ NTR No subsurface oil observed. Primarily cover and coat.

Sporadic AP (site B) could be removed, but does not appear to present a hazard to local biota. I don't see a particular need for further treatment - low priority. DUE

SEGMENT ER 12

SUBDIVISION B

DATE MAY, 14, 91

EST. OIL CATEGORY LENGTH: W - m' M 50 m N 2 m VL - m NO 365 m US 0 m

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

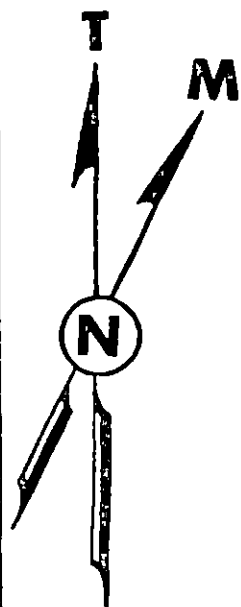
OG COMMENTS: BOUNDARIES FOR THIS SUBDIVISION ARE DIFFICULT TO LOCATE BECAUSE SSAT REPORT IS VAUGE. MAJORITY OF OIL IS LOCATED ON THE WESTERN EDGE OF THE SEGMENT AND CONTINUES INTO SEGMENT ER-12-A. AREA (B) IS A BAND OF OIL THAT CONTAINS DISTINCT AP PATCHES BETWEEN SMALL BOULDERS THE BOULDERS RETAIN CT & CV IN THE BAND.

raised 5/19

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY/CLINE
 TEAM 5

SEGMENT: ER 12 B
 DATE: MAY 14 1991
 AIR P.#: PIM-C 005-160

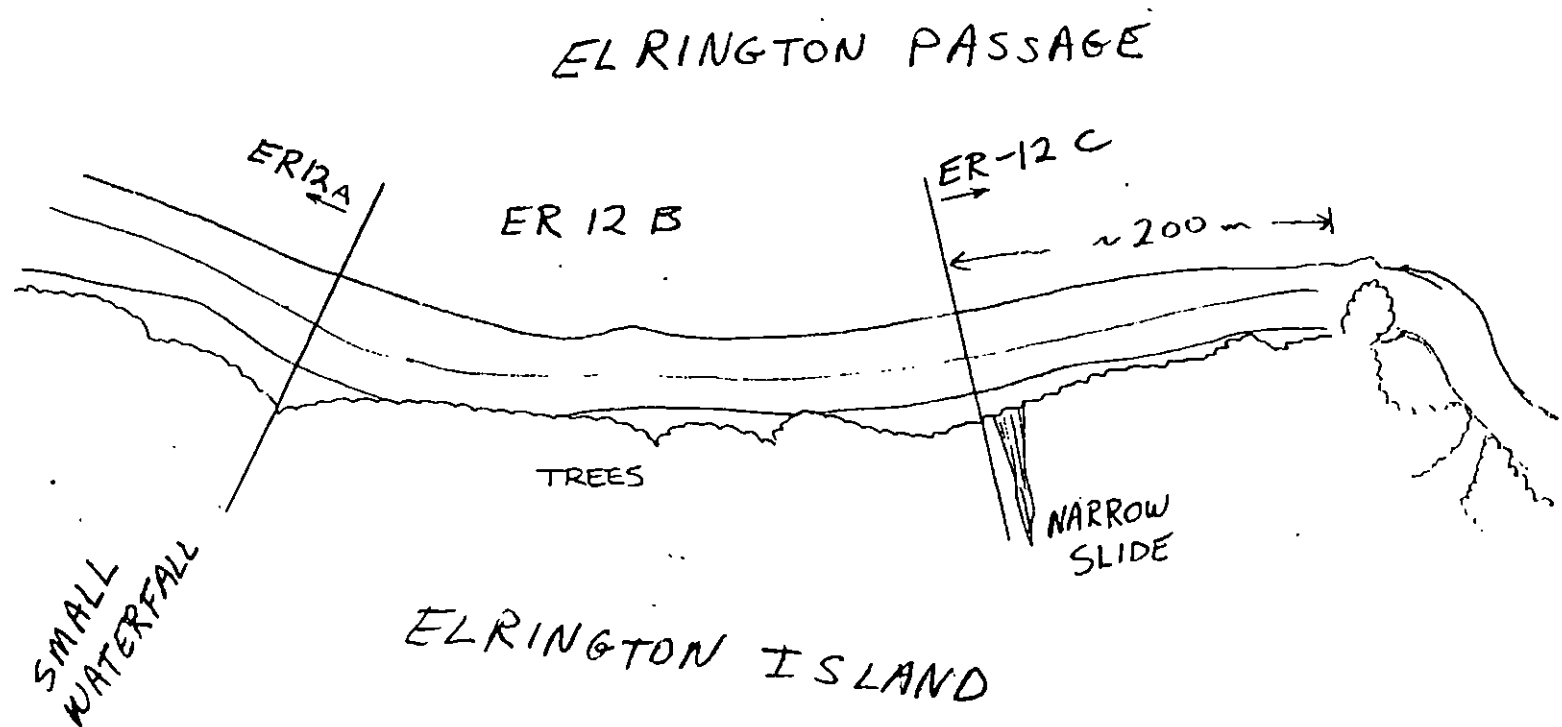
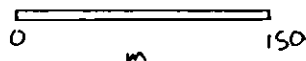
GENERAL ORIENTATION MAP



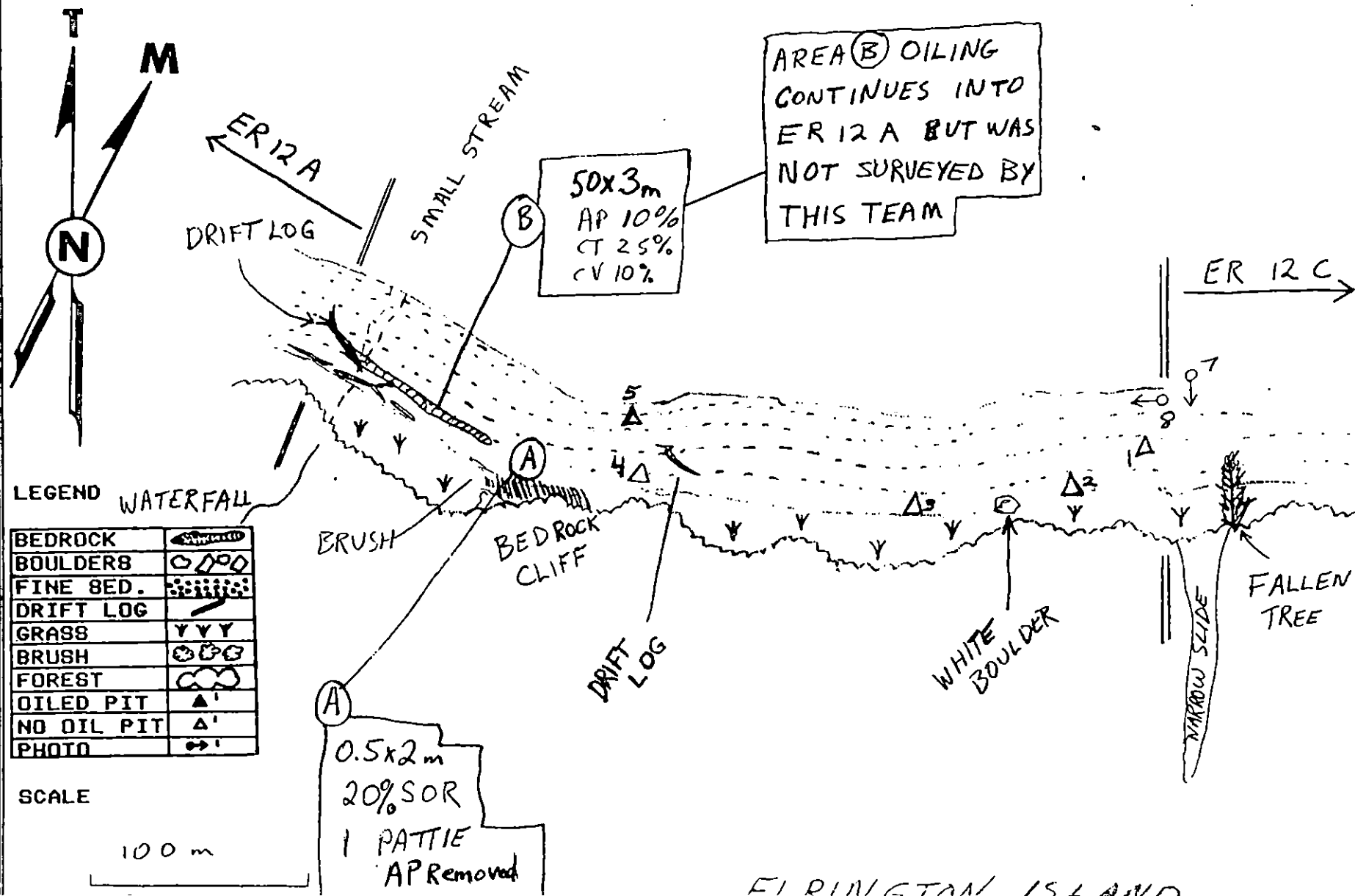
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



EL RINGTON PASSAGE



KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 14 May 1991

SEGMENT # ER-12

TIDAL HEIGHT (range) -1 → +1.5

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 10 knots /N

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A,B) Arcus are located in the UITZ. There is a rare concentration of barnacles. The barnacles did not tightly seal their inner plates when stimulated. Barnacle spat is present as well as many barnacle scars. Amphipods are common, found in dense patches under cobble veneer. Oligochaete worms 2-5cm long are also present under cobbles. Freshwater runoff is present in area 'B'.

This is a high energy, rounded cobble beach. This harsh environment creates a low biota surface cover, particularly in the MITZ and UITZ, where <1% to ~3% of the exposed surfaces are covered. Barnacles in the MITZ tightly sealed their inner plates when stimulated. In the LITZ, there are stretches where the sediments have been stabilized by algae. In these areas surface cover is ~70% including *Alaria*, *Laminaria*, Bull kelp, bladed red and green algae, filamentous red and green algae, rare concentrations of barnacles and mussels. Sea stars, *Pyrosopodia* are also present. Arcus not stabilized by algae have ~5% biota cover.

Bull Kelp Bed is located nearshore.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl			
Gulls/Kittiwakes/Terns	3	18	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	12 Sealions		
Whales (specify)			

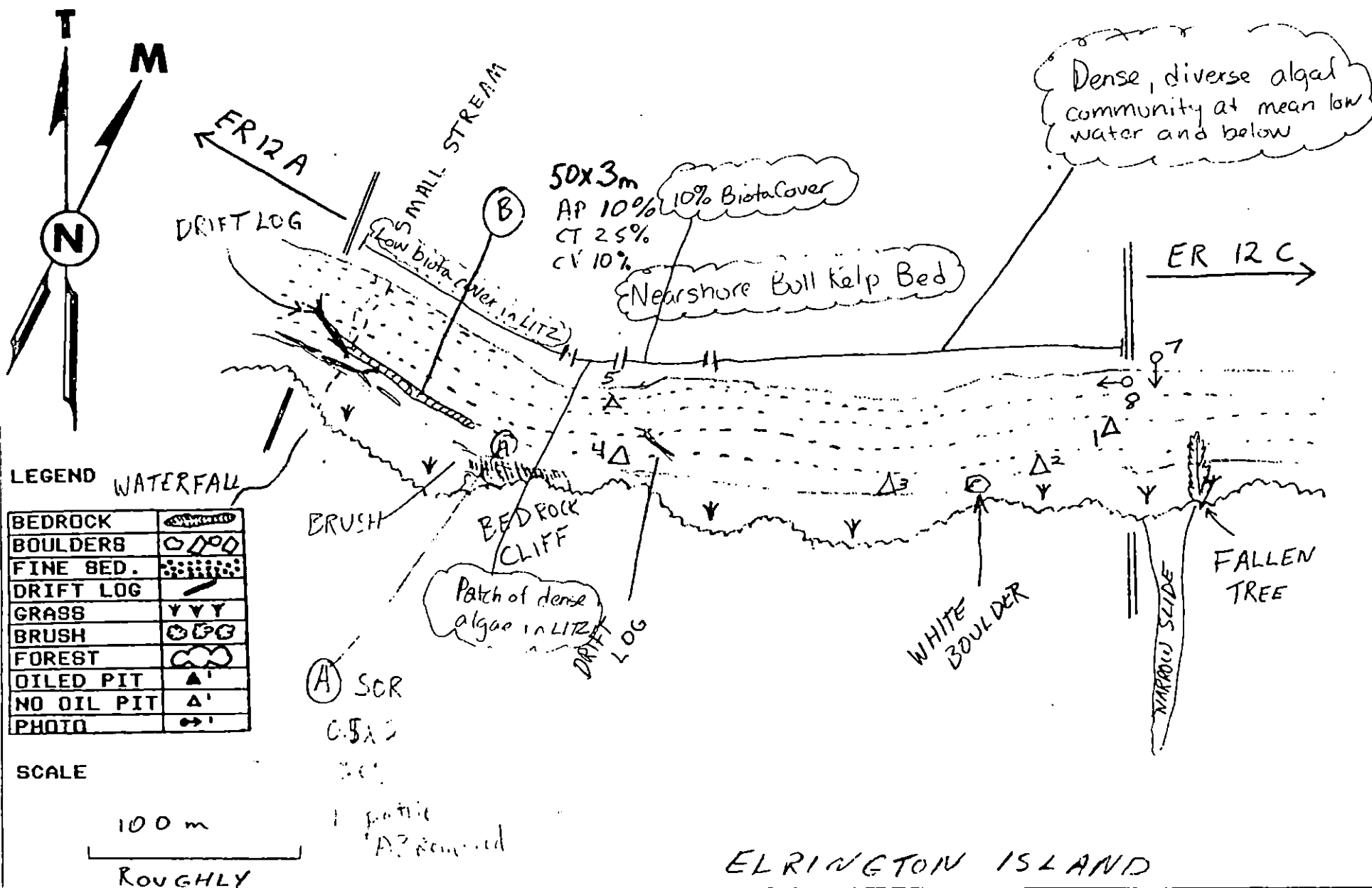
Shoreline subdivision map showing important biological features attached.

REVIEWED: F.W. 5/23/91
Rev'd 5/23/91

MAYSAP 1991
OG SKETCH MAP & Bio Map
GREG CHANEY & Grant

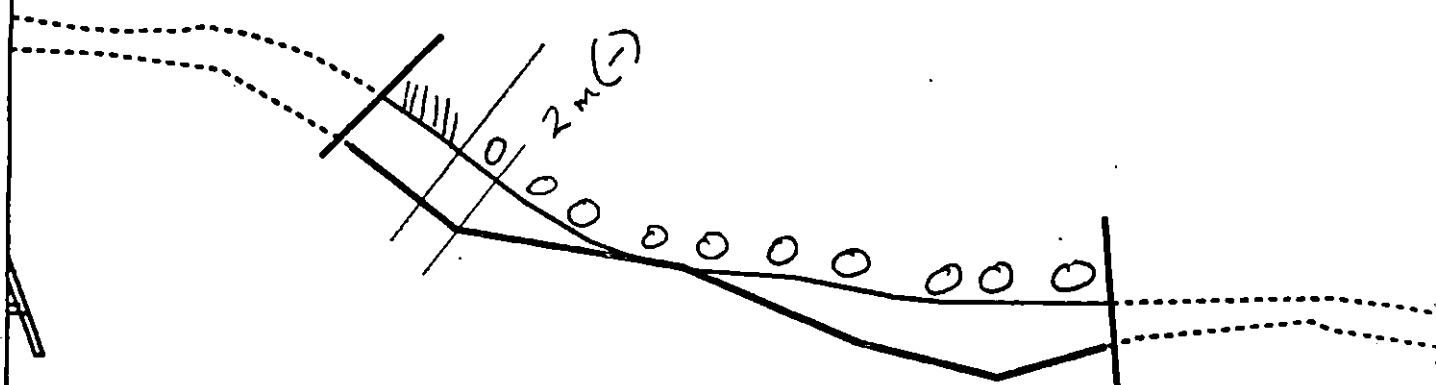
TEAM 5
SEGMENT: ER 12 B
DATE: MAY 14 1991
AIR P.#: PIM-C-005-160

EL RINGTON PASSAGE



+

ER



B

+

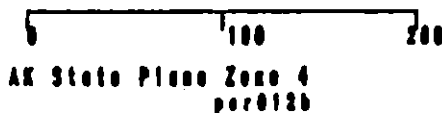
+

XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER012 B

ADEC Subsegment Length: 417m

METERS



AK State Plane Zone 4
 per012b



Subdivision Field Map

Map Key: PWSE012B

Name: CHANEY

Date: MAY 14 1991

Date Entered:

ES reviewed 5/19

REVIEWED: F.W. 5/23/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-12

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in Subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 107 m: No Oil 771 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☒ No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-12 SUBDIVISION: C DATE 02 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

26 of 31

ADEC

NAME DAVID M. SNE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed as priority 2, 4 by PWSCA. Listed as public use area
in PWS area plan.

476790

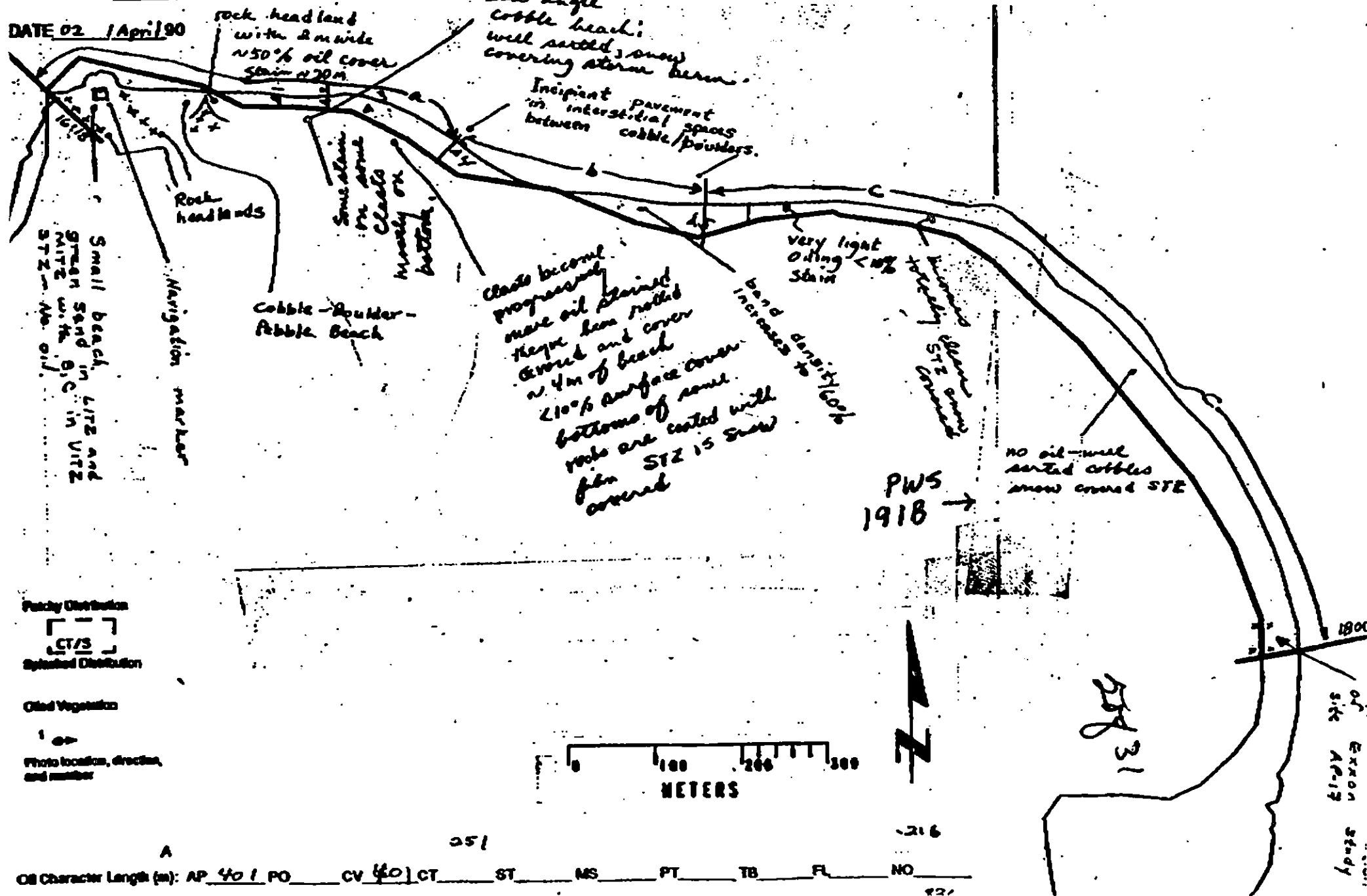
OG Rick Mary

SEGMENT ST/ER-12

SUBDIVISION A-C

DATE 02 / April 90

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/ER12 Subdivision C Date (mo/day/yr) 4/2/90
 Time (24 hr) 1730-1800 Biologist Bob Lemon

27 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder 45 (3) Cobble 50 (4) Pebble 5 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 5%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:

Roll No. ST/10/6Frames 19-20

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: Under cobbles at waterline, polychaetes, flatworms, phlebotomids and nematodes. 2 eagles sighted. Little drift on this beach. Lower zone not surveyed

Ecological Considerations: Bald eagle, deer harvest, hatchery release.

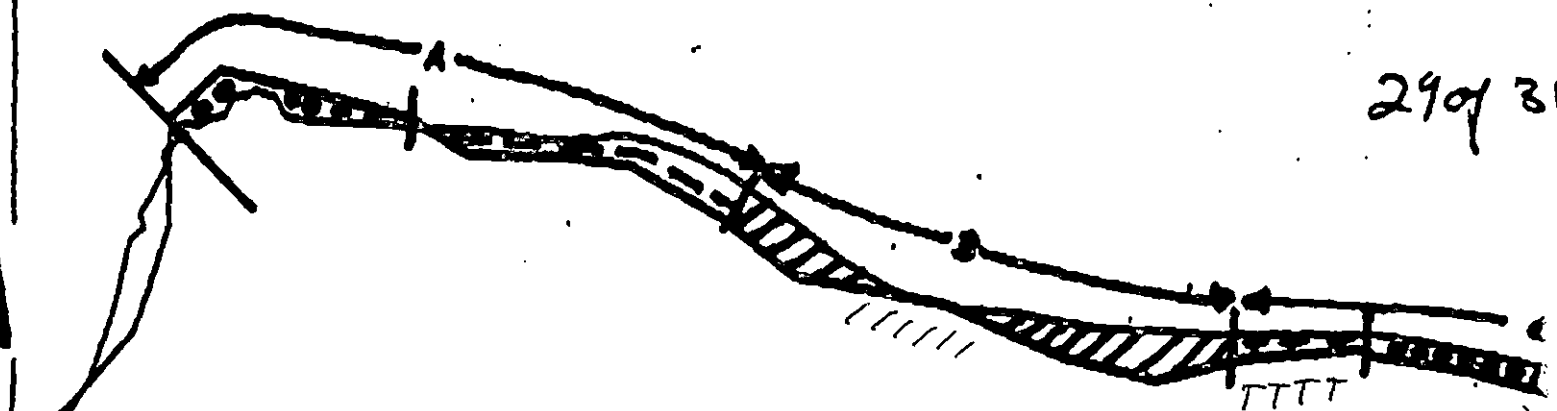
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7I Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

Ecology Map

ER-

29 of 31



	Inches			Unad			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.3"		5	145m		750m	216		836
Very Light			25"			75m			84
Light	1.3"			225m			251		
Med		2.4			360m			401	

1605 162 161 1780

Eagle
Nest
CWSPWS
1918

R-16

XXXX Wide

//// Medium

---- Narrow

ER-12

ADEG Segment Length: 1786m

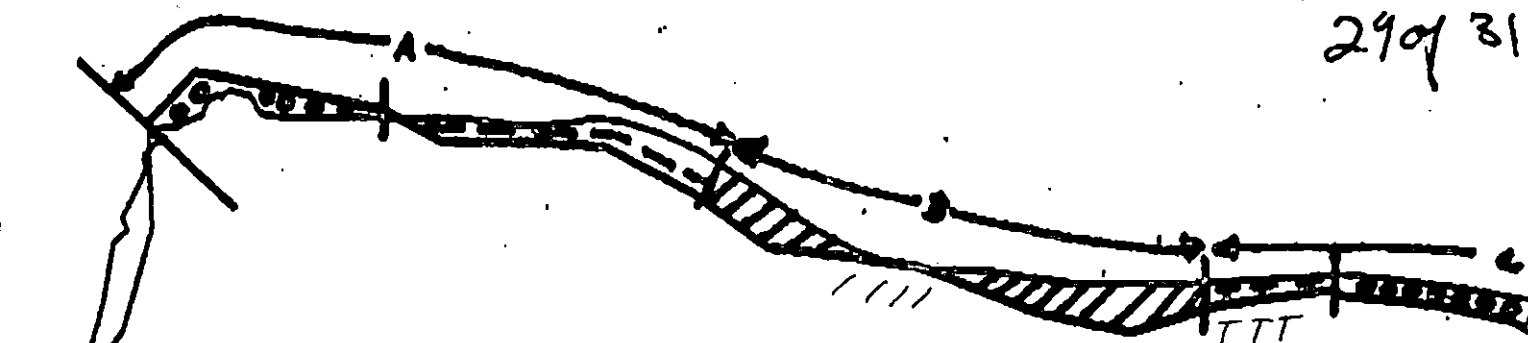
Map Key: PWS-1918

Name: E. Marty

Date: 2 April 1990

ER-

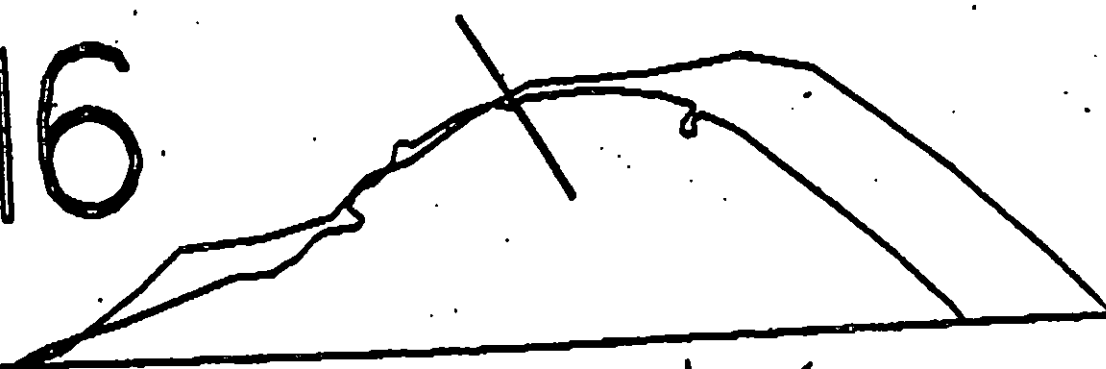
29 of 31



	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.3"		5	145m		750m	216		836
Very Light			0.5"			75m			94
Light	1.5"			225m			251		
Med		2.4			360m			401	
				1605			467	461	1700

PWS
1918-

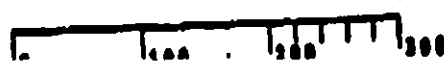
R-16



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light

ER-12

ADEC Segment Length: 1788m



Map Key: PWS-1910
 Name: R. Marty
 Date: 2 April 1990
 Date Entered:

30/31

← PWS
191A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ER-12

ADEC Segment Length: 1738m


METERS

Map Key: PWS-191b

Name: Richard Martu

Date: 2 April 1990

Date Entered:

30 / 31

← PWS
191A

XXXX Wide

//// Medium

--- Narrow

--- Very Narrow

ER-12

ADEC Segment Length: 1738m

Map Key: PWS-191b

Name: Richard Mart

Date: 2 April 1990

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-12 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK 6/1 - 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/20
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates no active nests within 400m of the work area.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 6/01/90

ADEC Ran Morris

EXXON Amn-GA

NOAA G.A. Reiter

USCG G.A. Reiter

FOSC DR Prome, CDR, USCG DATE 6/2/90

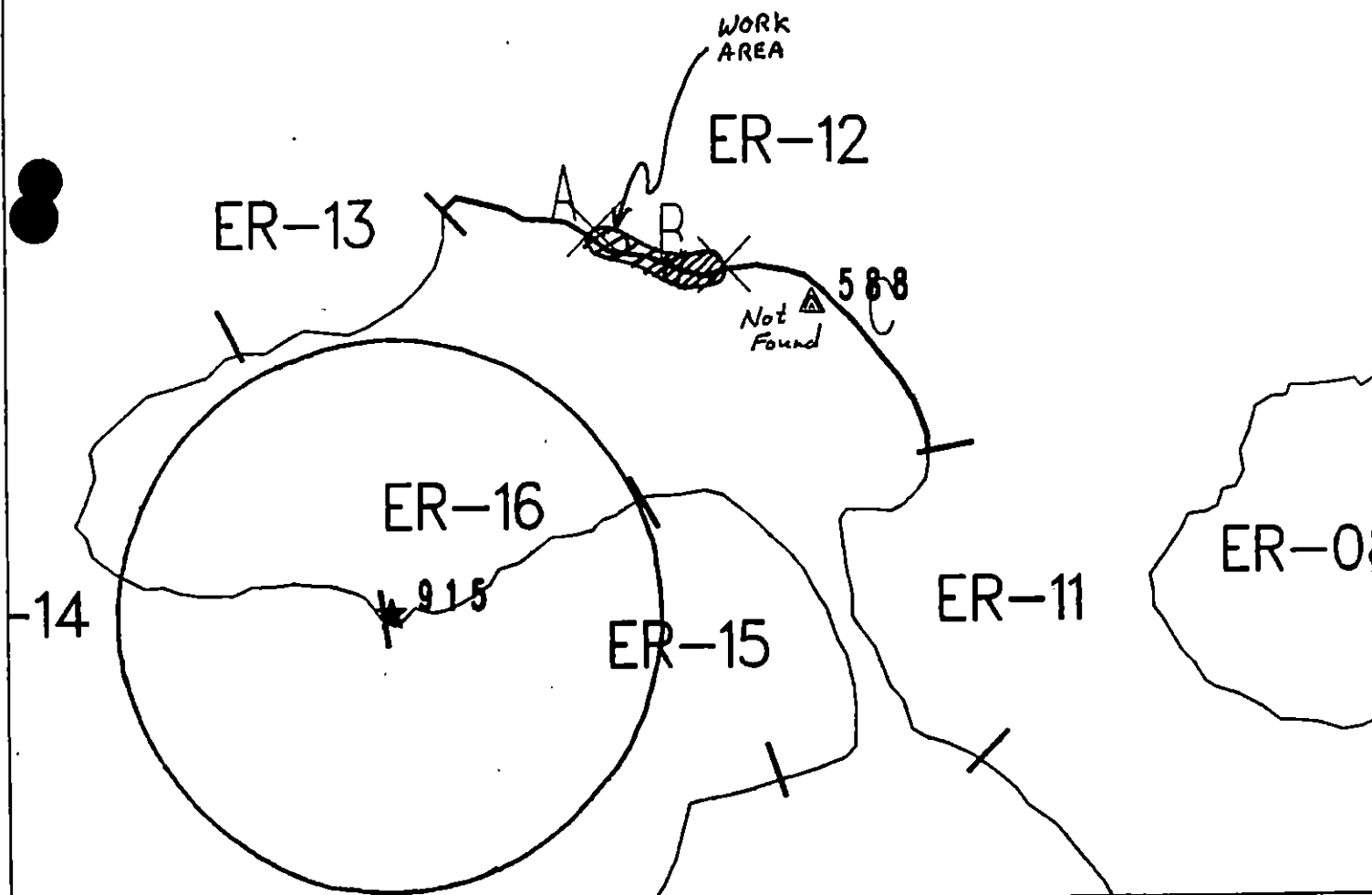
Acting

Prepared by: Anda Meyer

Date: 5/31/90

Incorporates information from
USFWS bald eagle surveys 5/26/90.

EV-63



Exxon Company, USA
Map Key: PMS-ER-12
May 11, 1990



ECOLOGY MAP 5/30
SEGMENT ER-12
SUBDIVISION B (2 of 3)

METERS

0 517 1034

★ Seabird Colony
▲ Eagle Nest

1 inch = 1696 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles J. H. Jones DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 417 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on salmon and eagle nest constraint and after the approval of USFWS regarding eagle nest.

SEE CONSTRAINT ADDENDUM DATED 5/31/90

TAG COMMENTS: REMOVE ASPHALT PATCHES INDICATED ON SKETCH.

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER
EXXON ANDY TERN
NOAA Joseph Talbot
USCG M. J. Hall

FOSC: DATE: 5-3-90

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE [Signature]

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 259 m: V.Light 0 m: No Oil 204 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ Beach Cleaner
<u> </u> Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

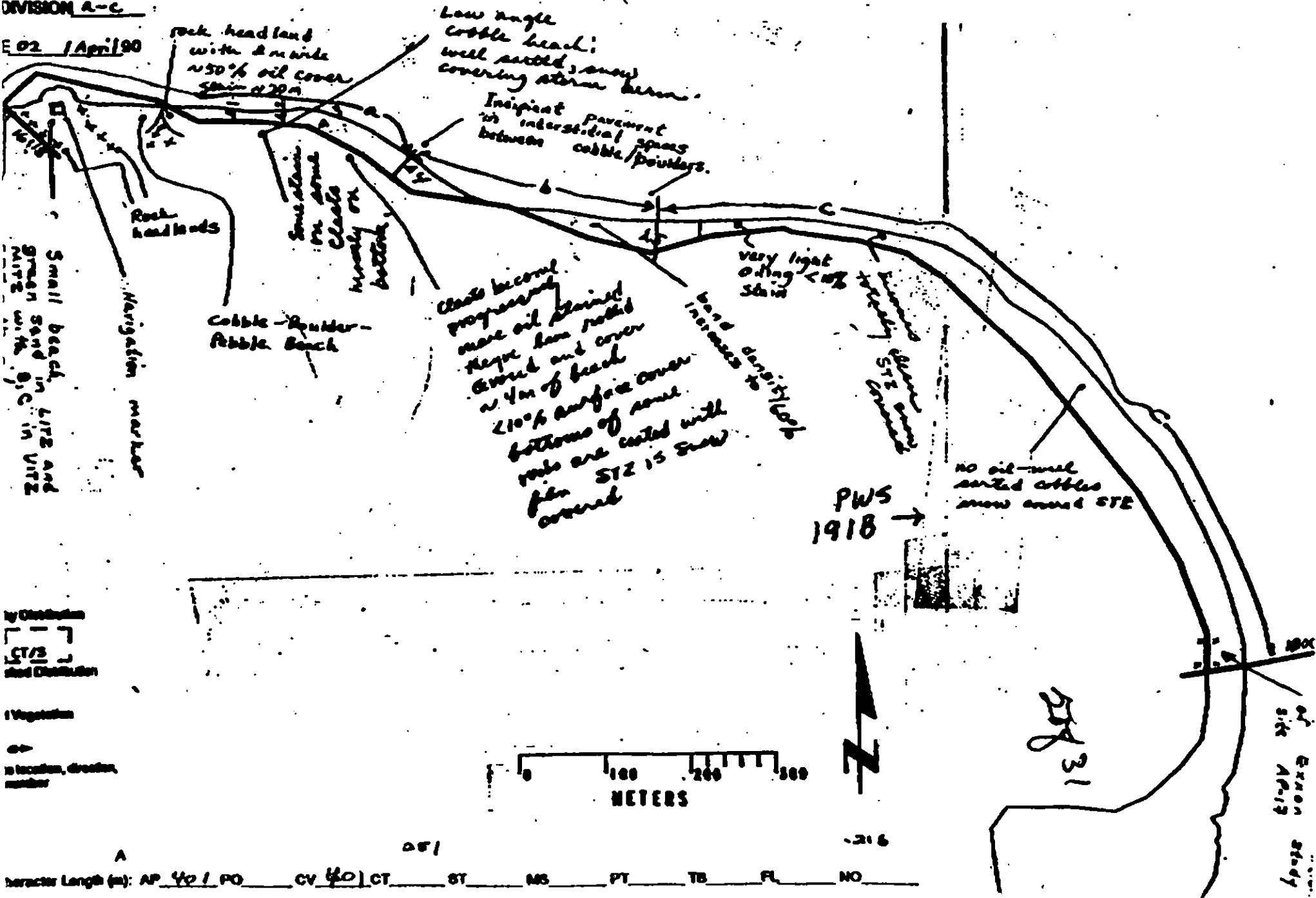
ADEC ART WEINER
EXXON Amy [Signature]
NOAA Joseph Talbot
USCG M. J. HALL

FOSC: [Signature]

DATE: 5-3-90

SKETCH MAP

Rich Marty
 WENT ST/ER-12
 DIVISION A-C
 E 02 / Apr/90



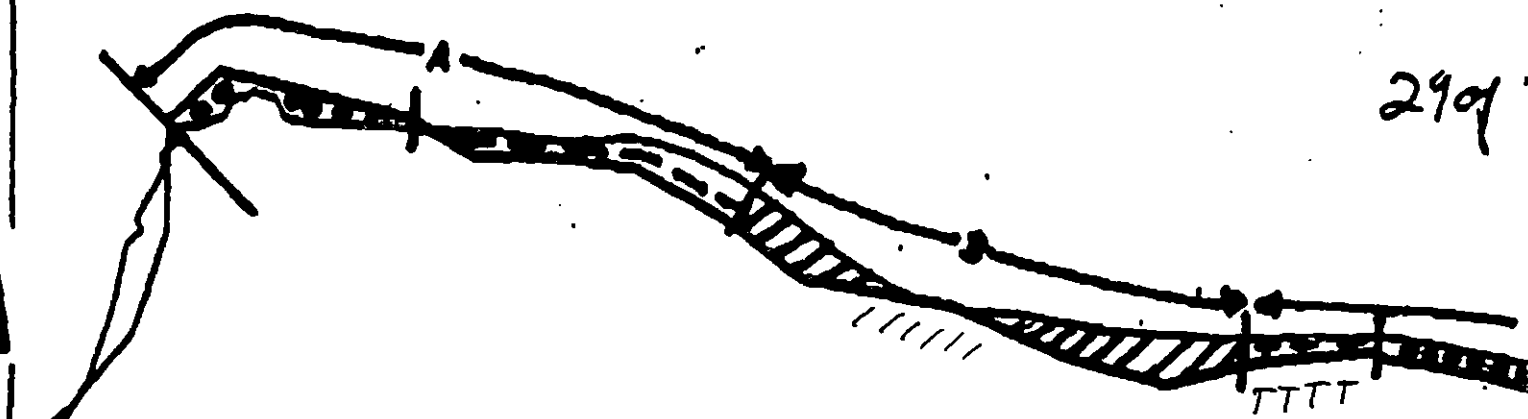
by Observation
 CT/S
 shed Observation
 Vegetation
 in location, direction, number

Character Length (m): AP 40 / PO CV 40 / CT ST MS PT TB FL NO

Ecology Map

ER-

29 of 3



No	Inches		Unadj		Normalized		
	A	B	A	B	A	B	C
Very Light	1.5"		145m		216		836
Light					75m		84
Med	1.5"		225m		251		
		2.4		360m		401	

1605 160 161 162

Eagle
Nest
SWSPWs
1918

R-16

XXXX Wide

//// Medium

--- Narrow

ER-12

ABCC Segment Length: 1788m

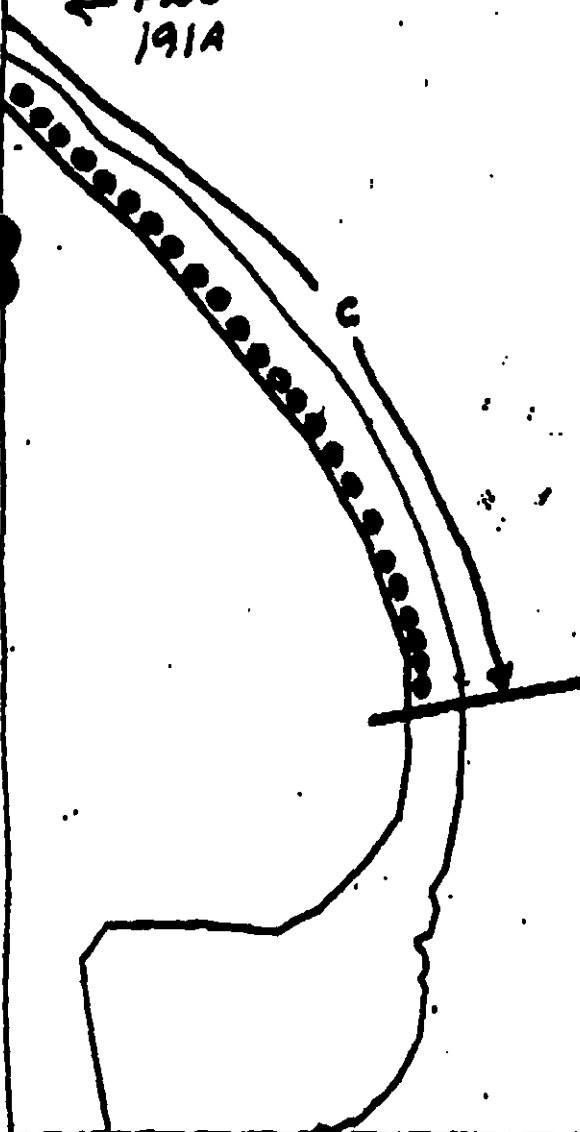
Map Key: PWS-1918

Name: E. Marty

Date: 2 April 1990

309 31

← PWS
191A



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ER-12

ABEC Segment Length: 1738m

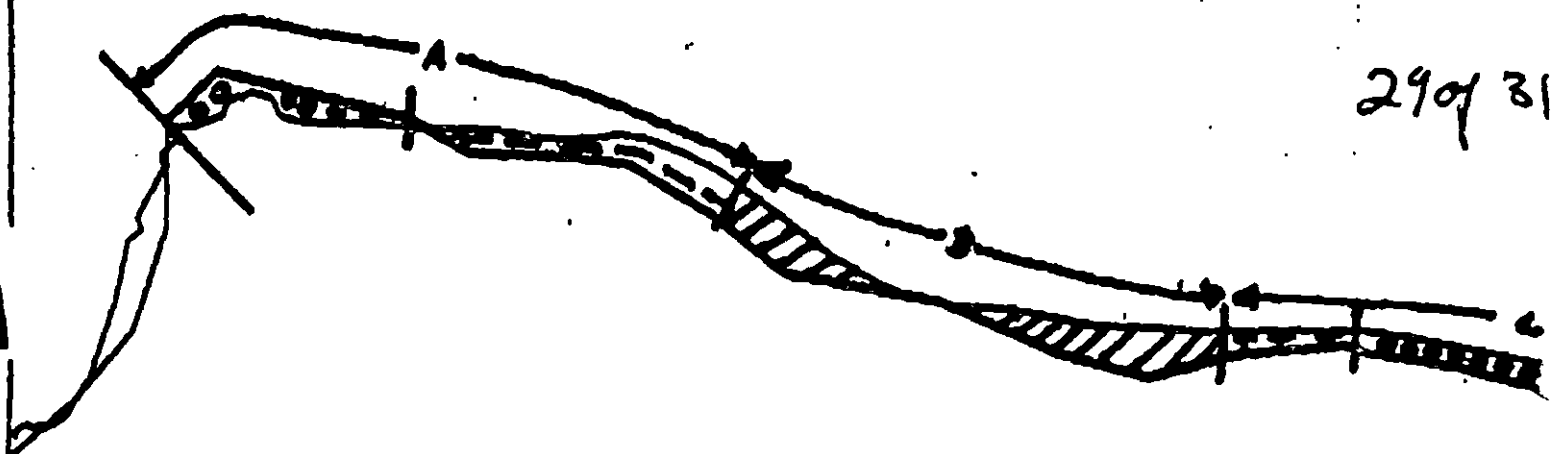
Map Key: PWS-191b

Name: Richard Marty

Date: 2 April 1990

ER-

29 of 31



	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	195m		750m	216		836
Very Light			0.5"			75m			84
Light	1.5"			225m			251		
Med		2.4			360m			401	
							1605	467	1780

PWS
1918-

R-16

XXXX Wide

//// Medium

---- Narrow

ER-12

ABCC Segment Length: 1788m

Map Key: PWS-1918

Name: R. MaryDate: 2 April 1990

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-12

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 259 m: V.Light 0 m: No Oil 204 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30 cm

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / FR-12 SUBDIVISION: A DATE 02 APRIL 90**USCG**NAME LARRY FLETCHERSIGNATURE Larry R Fletcher☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

21 of 31

ADECNAME David M. SaxeSIGNATURE David M Saxe☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**LAND MANAGER**NAME Leigh CarlsonSIGNATURE Leigh Carlson

ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Listed as priority 2;4 by PWS CA. Listed as public use area
in PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 000000

E. M. 1987 USCG LARRY FLETCHER SEGMENT ST/ ER-12
 B. L. 1987 LAND REP Larry Fletcher SUBDIVISION A (10F3)
 EXXON J. C. 1987 ADEC Dave S. 1987 TIME 16:15 to 18:00
 TEAM NO.: 10 TIDE LEVEL: +1.2m (4') to +1.8m (6') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 400 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 45 % C 45 % P 2 % G 3 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 251 m VL 0 m NO 216 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	E	S	W	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT				X				X	X	X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												X

PAVEMENT: None H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR. RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☐ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST/10/6

Frames 11-13

SUBSURFACE OIL *oiled interval < 5cm in pits 1-3 does not constitute subsurface oil

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5			
1	20		X				0-3	X				X		X		S
2	39				X		0-30	X				X		X		S
3	10		X				0-9	X				X		X		S

COMMENTS

Note: stained cloths run up
 under the snow in the STZ
 make up ~10% cover across
 MITZ, VITZ

Revision

RM 4/2/90

TW

4/19/90

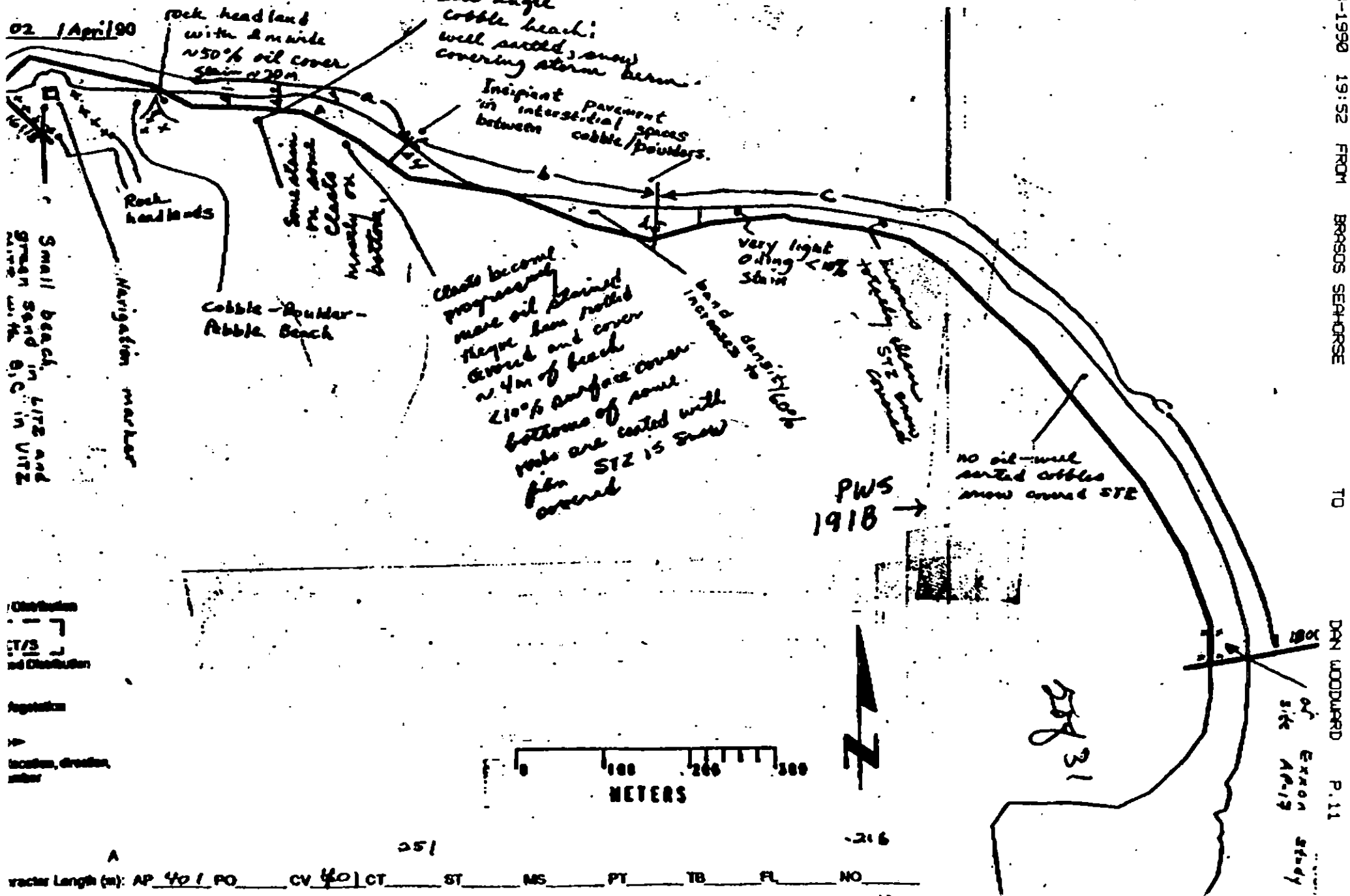
Rich Marty

SKETCH MAP

ENT ST/ ER-12

VISION A-C

02 / April 90



APR-04-1990 19:52 FROM BRASOS SEAHORSE

TO

DAN WOODWARD P.11

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/12/90

Segment ST/10/BR 12 Subdivision R Date (mo / day / yr) 4 / 2 / 90
1630 - 1700
 Time (24 hr) _____ Biologist Bob Lemon 20 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 45 (3) Cobble 45 (4) Pebble 5 (5) Sand _____ (6) SR _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 15%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/6
 Frames 1-9

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: Lower zone not visible except by wading. Most biota found under cobbles; gammarid amphipods, onchidella borealis. Bedrock made up very little of this segment. Drift and detritus feeders sparse. 1 other sighting and tracks.

Ecological Considerations: Bald eagle, deer harvest, hatchery release.

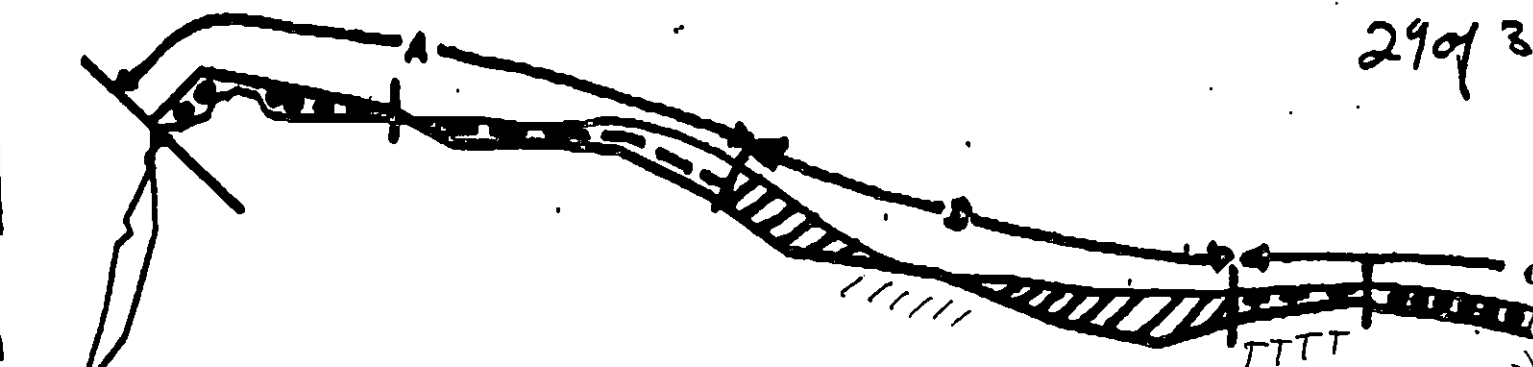
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

Ecology Map

ER-

29 of 3



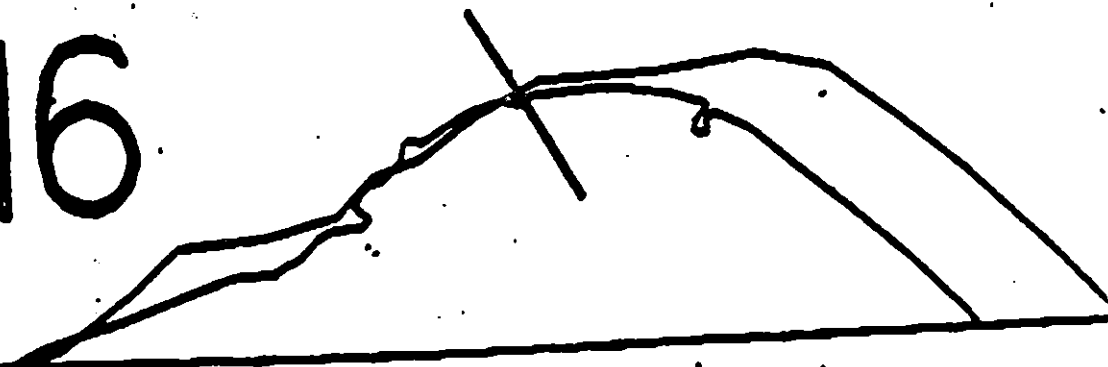
	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	149m		750m	216		836
Very Light			0.5"			75m			94
Light	1.5"			225m			251		
Med		2.4			360m			401	

1605 462 461 1780

Eagle Nest SW

PWS 1918

R-16



XXXX Wide
 /// Medium
 --- Narrow

ER-12

ADEC Segment Length: 1788m



Map Key: PWS-1910
 Name: B. Marty
 Date: 2 April 1990

309 31

← PWS
191A

XXXX Wide

//// Medium

--- Narrow

ER-12

ADEC Segment Length: 1750m

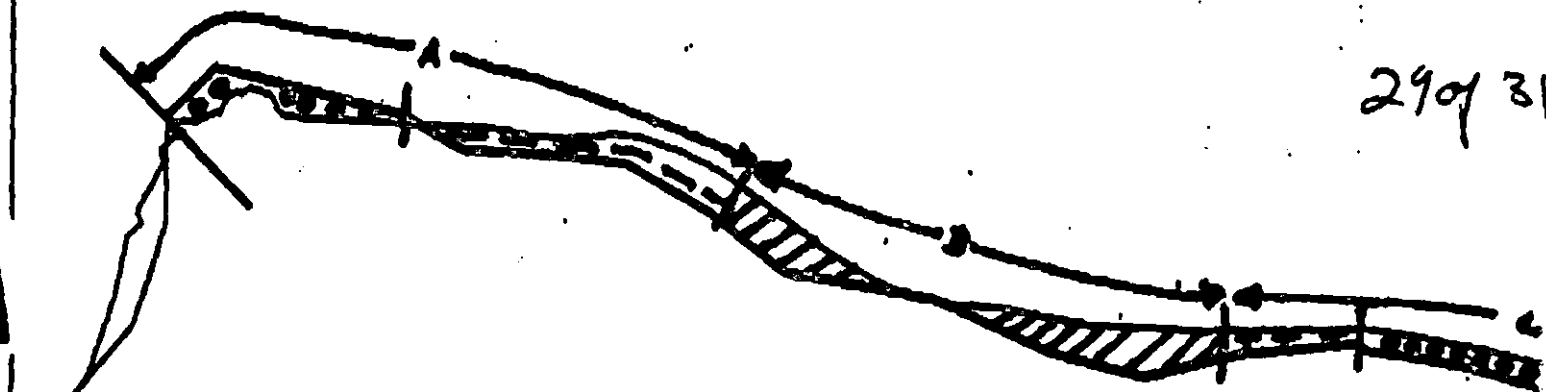
Map Key: PWS-191b

Name: Richard Martin

Date: 2 April 1990

ER-

29 of 31



	INCHES			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	199m		750m	216		836
Very Light			2.5"			75m			64
Light	1.5"			225m			2.51		
Med		2.4			360m			401	

1605 462 461 1700

PWS
1918 -

R-16

XXXX Wide

//// Medium

--- Narrow

ER-12

ABEC Segment Length: 1788m

Map Key: PWS-1910

Name: R. MartyDate: 2 April 1990

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-12

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 417 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: _____ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on salmon and eagle nest constraint and after the approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ FM-12 SUBDIVISION: B DATE 02 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUALLY REMOVE TAR MATS (ASPHALT) AS MUCH AS POSSIBLE.
2. BREAK-UP ANY REMAINING OIL.
3. BIO-REMEDIATE.

23 of 31

ADEC

NAME DAVID M. SAGE SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① MANUALLY REMOVE TAR MATS AS MUCH AS POSSIBLE.
- ② CLEAN ROCKS OR COVER UNTIL STAIN REMAINS
 - A) HOSE WASHING (BACKPACKS)
- ③ TURN TO EXPOSE ROCKS TO FURTHER WEATHERING
- ④ BIO-REMEDIATE

THOUGH THIS SECTION WILL BE DIFFICULT TO CLEAN, THE ENVIRONMENTAL RESTRAINT OF HATCHERY RELEASE REQUIRES ELIMINATION OF ALL POSSIBLE WORK-ON.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Listed as priority 2,4 by PWSCA. Listed as public use area in PWS area plan. Treatment as mentioned above by ADEC.

Most of the oiling is on cobble/boulder beach that is usable for recreational uses.

SHORELINE OILING SUMMARY

REVISION NO. 000070

CG R. Mac USCG LARRY FLETCHER SEGMENT ST/ ER-12
B. Smith LAND REP Lang. Connors SUBDIVISION B (20F3)
XON J. Gagnon ADEC Paula Sals TIME 10:15 to 10:00
 TEAM NO.: 10 TIDE LEVEL: +1.2m (4') to +1.8m (6') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 401 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow 22 of 31
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 45 % C 45 % P 2 % G 3 % S 0 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 401 m N 0 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	6	7	8	M	U	N	L
ASPHALT PAVEMENT			X							X			X	X		
POOLED																
COVER			X							X			X	X		
COAT																
STAIN																
MOUSSE																
PATTIES													5			
TARBALLS													2			
FILM													0			
NO OIL													E			X

PAVEMENT: H F 962 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		2	
Vegetation		1	
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST/10/6Frames 14-18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		SP	OR	OL	OP	NO			1	2	3	4	5	6	7	8			
4	15	X					0-3	X									X	N	S.G
5	15	X					0-3	X									X	N	S
																	5		
																	2		
																	0		
																	E		

COMMENTS

"Pavement" is extremely soft.
 Becomes progressively better
 developed to east. Then there
 is a sharp drop in oiling
 to Subsegment C

* OILED INTERVAL < 5 cm. IN PIT NOS. 4 AND 5.
 DO NOT CONSTITUTE SUBSURFACE OIL

Revision

RM 4/2/90

7W

4/17/90

APPROVED:

DATE:

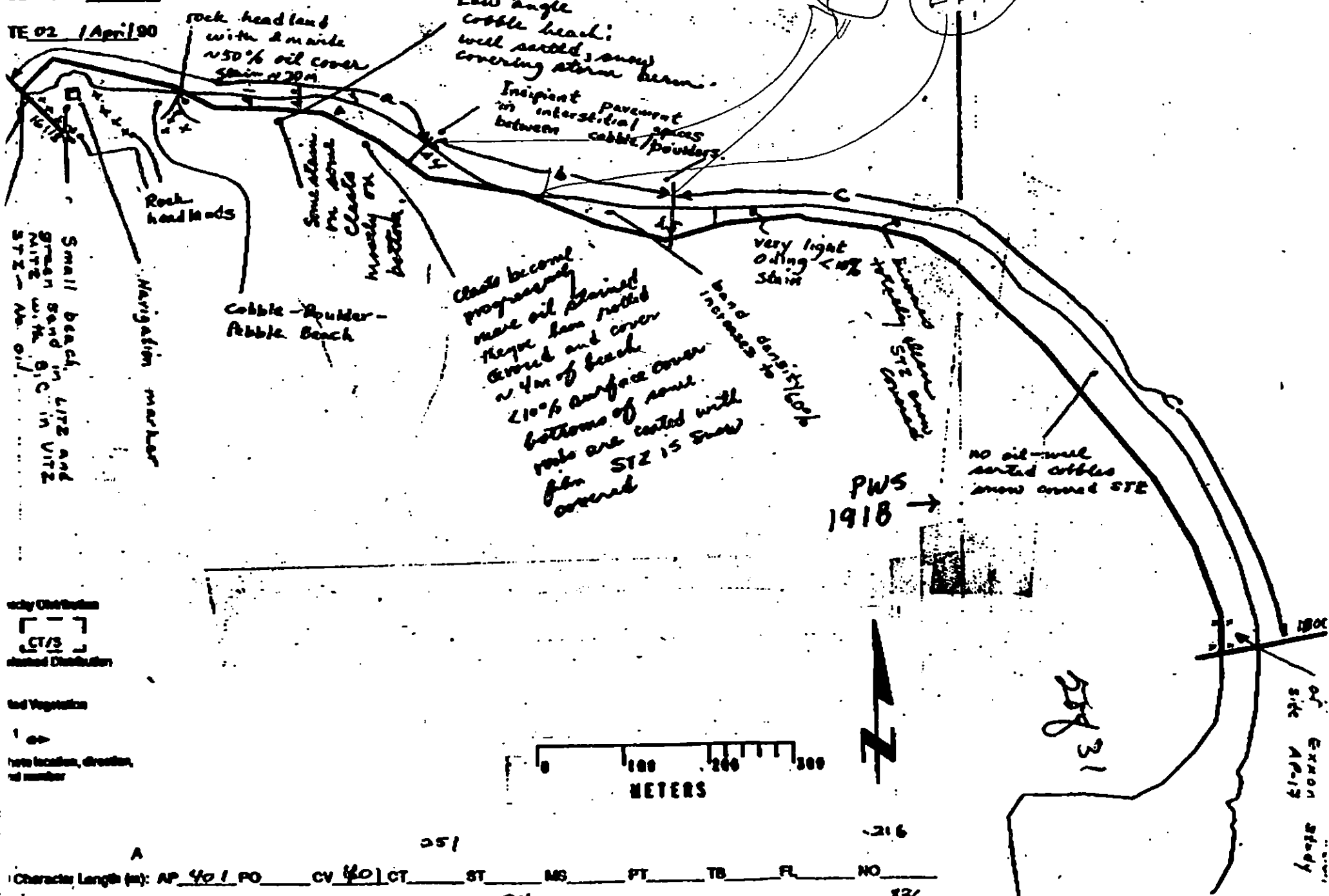
SKETCH MAP

Rich Marty

EMENT ST/ER-12

BDIVISION A-C

TE 02 / April 90



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/ER 12 Subdivision B Date (mo/day/yr) 4/2/90Time (24 hr) 1700-1730 Biologist Bob Lemon

24 of 31

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder 45 (3) Cobble 50 (4) Pebble 5 (5) Sand (6) SM (B) Overall % cover of biota (% of segment): Dense Moderate Low 10%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
Roll No. ST/10/6Frames 14-18

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: amphipods at water line. Live Littorines in old. Lower zone not surveyed. Little drift on this beach

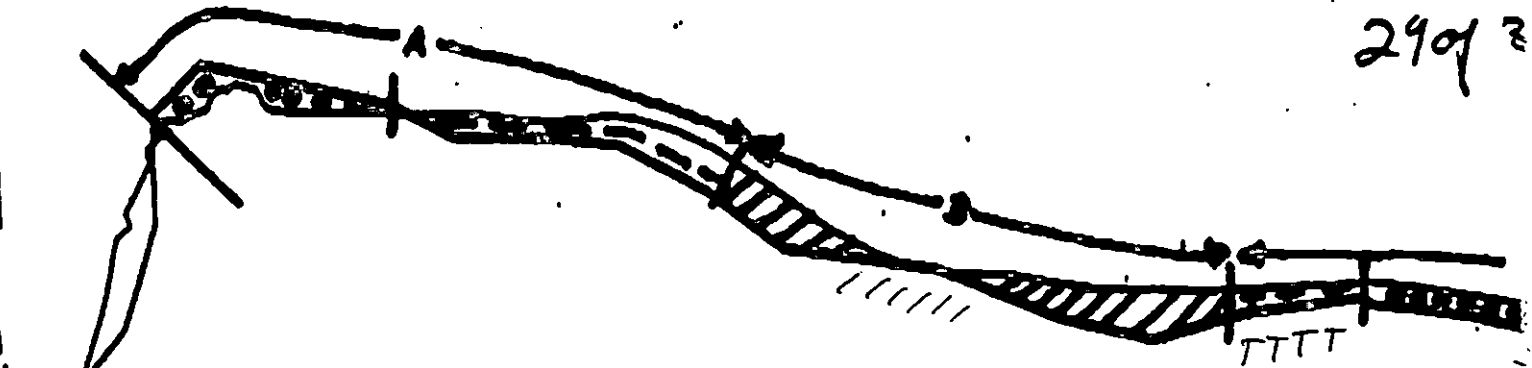
Ecological Considerations: Bald eagle, deer harvest, hatchery release.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

ER-

29 of 3

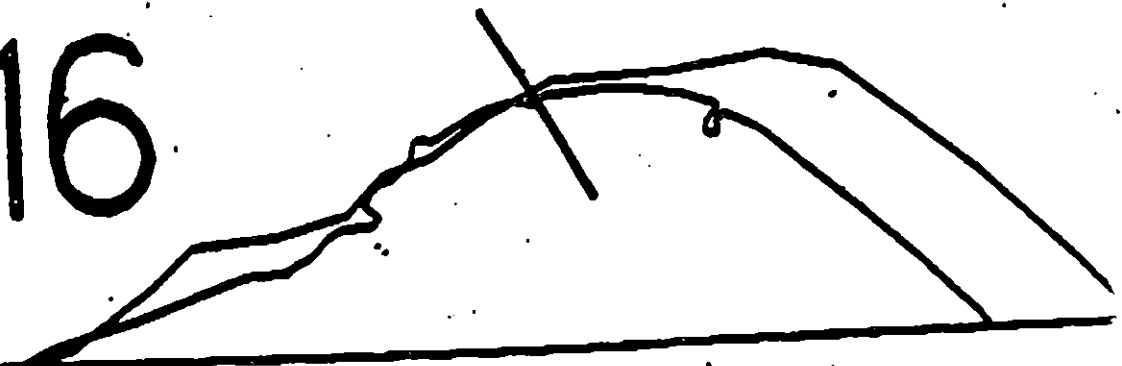


Eagle
Nest
CWS

PW:
1918

	Inches			Unadj			Normal road		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	149m		730m	216		836
Very Light			2.5"			75m			84
Light	1.5"			225m			251		
Med		2.4			360m			401	
						1605	462	461	1288

R-16



XXXX Wide
 /// Medium
 --- Narrow

ER-12

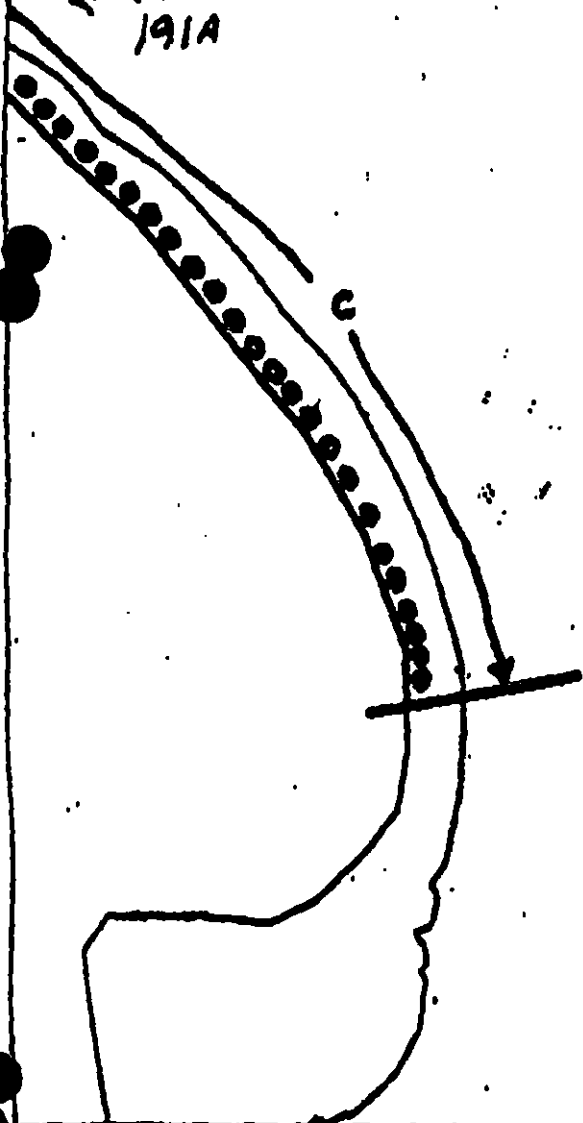
ADCC Segment Length: 1788m



Map Key: PWS-191c
 Name: R. Mary
 Date: 2 April 1990

30/31

← PWS
191A



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

ER-12

ADEC Segment Length: 1738m

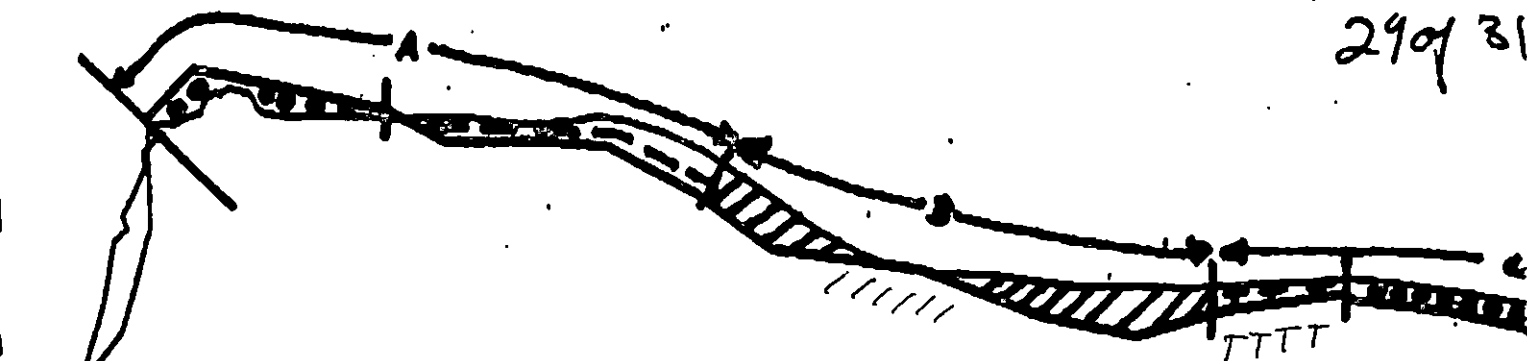
Map Key: PWS-191b 2

Name: Richard Marty

Date: 2 April 1990

ER-

29 of 31



	Inches			Unadj			Normal/mad		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	149m		750m	216		836
Very Light			0.5"			75m			94
Light	1.5"			225m			251		
Med		2.4			360m			401	
						1605	467	461	1780

PWS
1918-

R-16

XXXX Wide
 //// Medium
 --- Narrow

ER-12

ADEC Segment Length: 1788m

Map Key: PWS-1918

Name: B. MartyDate: 2 April 1990

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ ER-13

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ ER-13 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/20 to 5/10; subsistence deer harvest area (7II) - 8/15 to 2/28; Special use area (6Y).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 716 m: No Oil 109 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-13 SUBDIVISION: _____ DATE 02 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE *Larry R Fletcher*

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SALE SIGNATURE *David M Sale*

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

What looked like stain on this segment was masked by diatoms and porphyra (red algae), as well as filamentous green algae. Other intertidal life, such as mussels, littorina, limpets, seemed to be in good health. Even if the oil we spotted was actually oil, ~~that~~ it is as a stain.

LAND MANAGER

NAME Leigh Carlson SIGNATURE *Leigh Carlson* ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed as priority 2, 4 by PWSCA. Listed as public use area in PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

PG B. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-13
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION A (LOFI)
 EXXON J. Garmicki ADEC Dave Sals TIME 14:30 to 16:05
 TEAM NO.: 10 TIDE LEVEL: +0.5m (1.5') to +1.1m (3.5') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 888 m ☐ Sun ☐ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 15 % B 30 % C 20 % P 15 % G 20 % S 20 % M 5 % V 5 %
 SLOPE: Long 50 % Hang 50 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 767 m M 121 m N 121 m VL 767 m NO 121 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	60	65	20	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

PAVEMENT: H F S sq. m by cmPATTIES / TARBALLS BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST/10/6Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OP	RES. OR	Lay. OL	SLIM OF	NO		UO	HO	30	40	50	60	70	80	90	100	20	U	M	L		
1	50					X	-												X			N	P, G
2	35					X	-												X			N	P, G
3	32					X	-													X		N	S
							-																
							-																
							-																

COMMENTS

Difficult to differentiate between
stains of oil and algae growing
on rocks.

Revision:

RM 4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER13 Subdivision none Date (mo/day/yr) 4/2/90
1440 - 1600
 Time (24 hr) _____ Biologist Bob Lemon 6°C

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 30 (3) Cobble 20 (4) Pebble 15 (5) Sand 20 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 60% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (⊙)

Photographs:

Roll No. ST/10/6Frames 1-10

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: Biota rich on isolated bedrock; absent in scour channels. Possible oil rain band appears to be diatom scuzz in high zone. 2 generations of *Halosaccion* occupying same spots locally abundant. Porphyra (*RHODOPHYTA*) locally abundant in high zone boulders. Filamentous greens locally abundant in low zone boulder tops. ~~Small other algae~~

Ecological Considerations: deer harvest, hatchery release

OG Rich Marty

SEGMENT ST/ ER 13

SUBDIVISION A

DATE 04/02/90

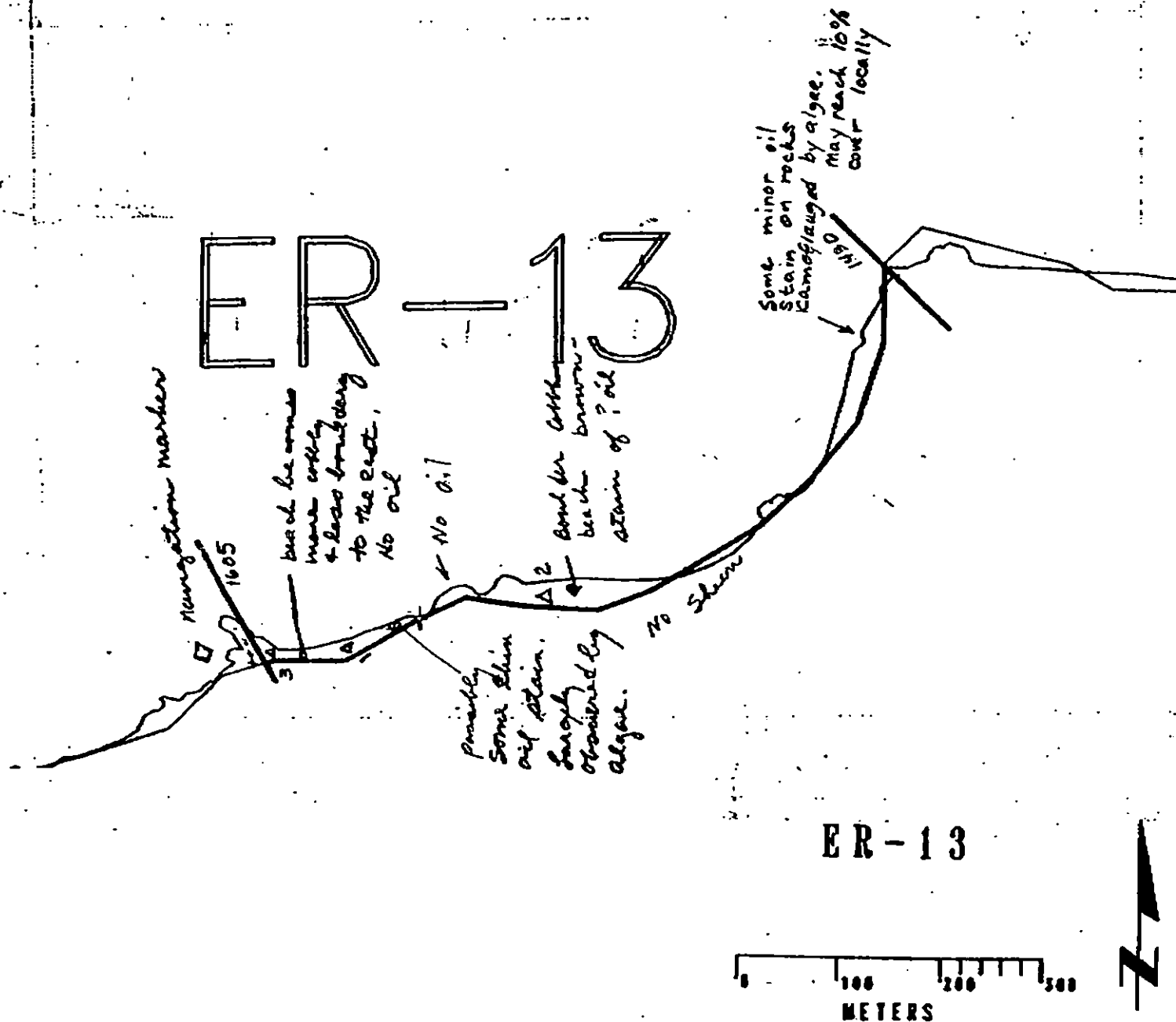
CHECKLIST

- ☐ Narrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli Location(s)
- ☐ Photo Location(s)

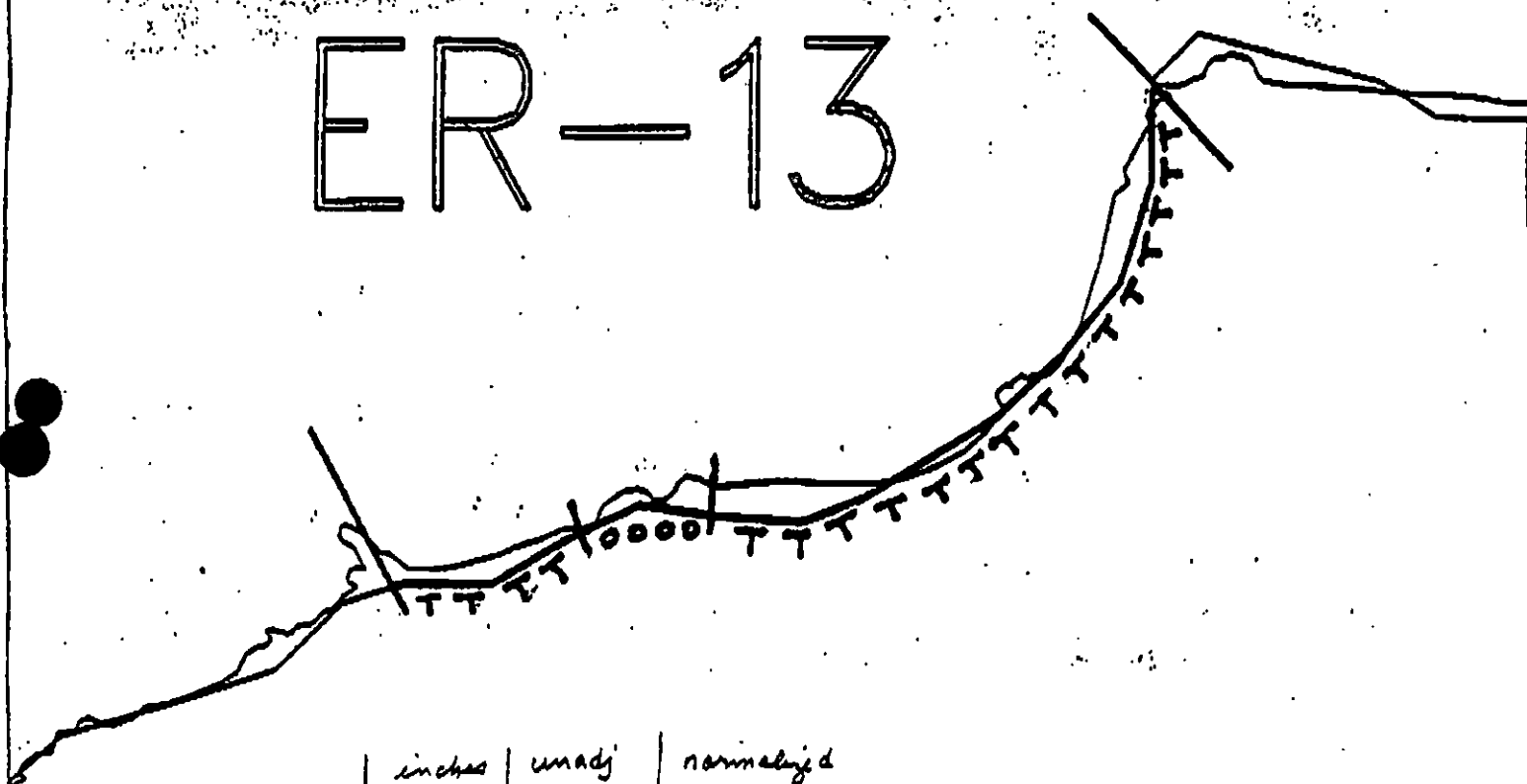
LEGEND

- 1 Pli - No Subsurface Oil
- 2 Pli - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 Photo location, direction, and number

SKETCH MAP



ER-13



	inches	unadj	normalized
Very light	4.75"	713	767
No	0.75"	113	121
		826	888

ER-16

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-13

ADEC Segment Length: 825m



Map Key: PWS-149

Name: MARTYDate: 4-2-90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-13 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/20 to 5/10; subsistence deer harvest area (7II) - 8/15 to 2/28; Special use area (6V).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Charles E. Holmes DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 716 m: No Oil 109 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90

ADEC JOHN BAUER John Bauer

EXXON ARMY TGAZ

NOAA Burl Westcott

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 4-19-90

OG Red Marty

SEGMENT ST/ ER-13

SUBDIVISION A

DATE 04/02/90

CHECKLIST

- ☐ Name
- ☐ Approx. Scale
- ☐ Significant Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Eel, RW, L, M, L, M, L
- ☐ S.S.L.
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

Pt. - No Surface Oil

2 ▲

Pt. - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

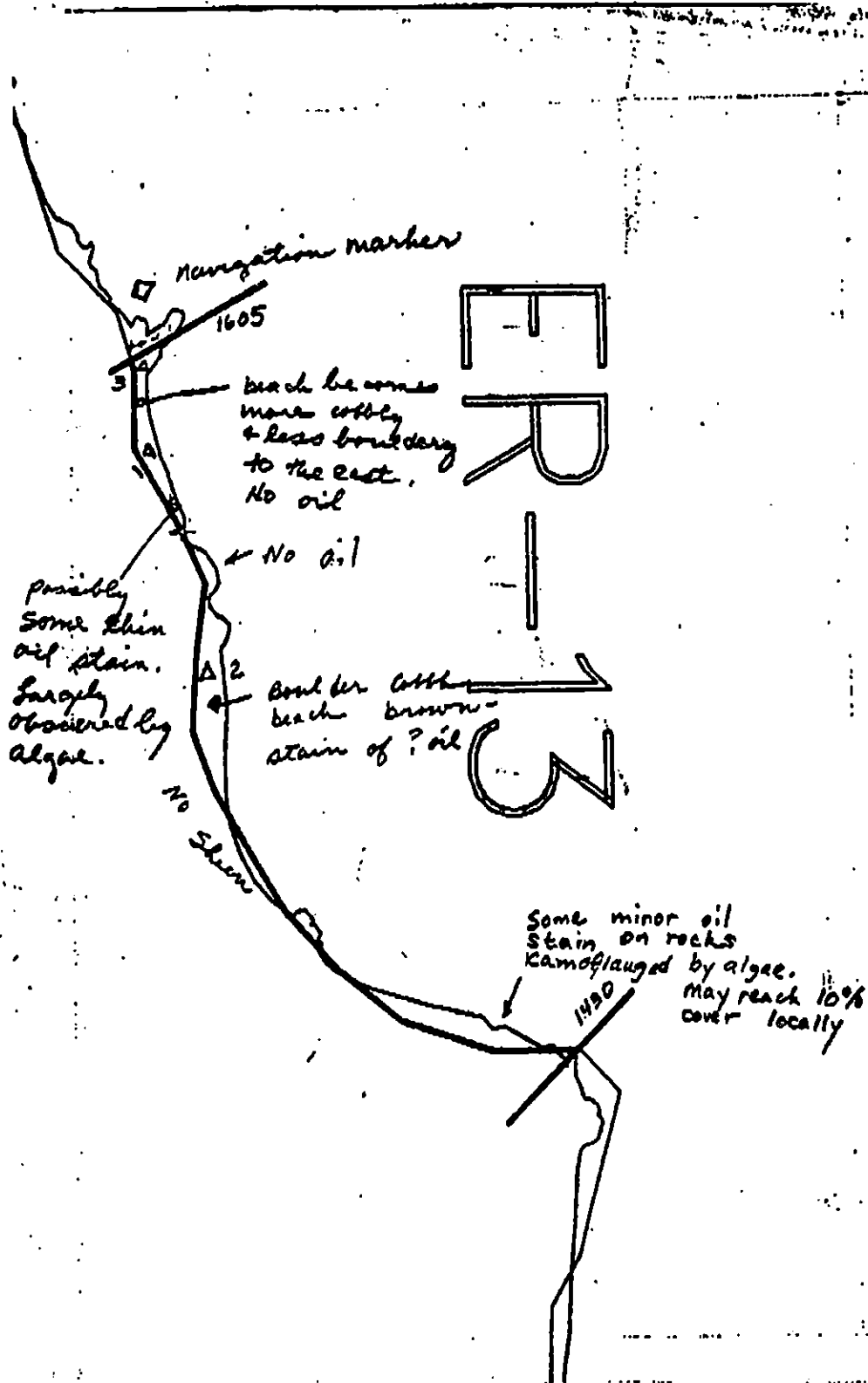
Spotted Distribution

Old Vegetation

1 0-4

Photo location, direction, and number

SKETCH MAP



ER-13



Oil Character Length (m): AP PO CV CT ST 767 MS PT TB FL NO 121

ER-13

Very light
No

inches	unadj	normalized
4.75"	713	767
0.75"	113	121
	826	888

ER-16

ER-13

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 825m



Map Key: PWS-149

Name: MARTYDate: 4-2-90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ ER-14

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ ER-14 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Seabird colony (5R) - 5/1 to 9/1; Anchorages (6V) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep traffic and disturbance to minimum, especially in vicinity of bird colony. Restrict air traffic to absolute minimum.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1782 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☒ No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: No treatment recommended. No oil found during survey.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-14 SUBDIVISION: _____ DATE 01 APRIL 90USCGNAME LARRY FLETCHER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME DAVID M. SALE SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

If fall survey (Walk-a-Thon) was correct in oil estimate, a lot of cleaning has occurred over the winter. all that remains is staining. Access is difficult

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Bird rookery shown for segment in PWS area plan.

(15)

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG R. Marty USCG Larry Fletcher SEGMENT ST/ ER-14
 BIO B. Lemme LAND REP Leigh Carlson SUBDIVISION A (1 OF 1)
 EXXON J. Gyanichin ADEC Dave Sale TIME 16:00 to 16:45
 TEAM NO.: 10 TIDE LEVEL: +1.5m(+5') to +1.8m(+6') DATE 04/01/90
 EST. SUBDIVISION LENGTH: 2433 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 50 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2433 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IB	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST/10/4

Frames 25-36-37?

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DB)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	U		

COMMENTS

(10)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER14 Subdivision none Date (mo / day / yr) 4 / 1 / 90
1600-1645
 Time (24 hr) 1600-1645 Biologist Bob Lerman

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 80% Moderate Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/4
 Frames 25 - 36 ~ 37?

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT SCORED NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: surveyed via skiff drive by, low zone not seen and not scored here, several pictures taken. Gastropods could not be seen well enough to score them here. N.W. shore had a greater proportion of plants perhaps not fairly recognized here. Nereocystis kelp on both sides.

Ecological Considerations: seabird colony, deer harvest, hatchery release, anchorages

OG Rich
 SEGMENT ST/ ER-14
 SUBDIVISION A

DATE 1 April 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bdry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LA/WL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pit Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

$\bullet$
 Oiled Vegetation

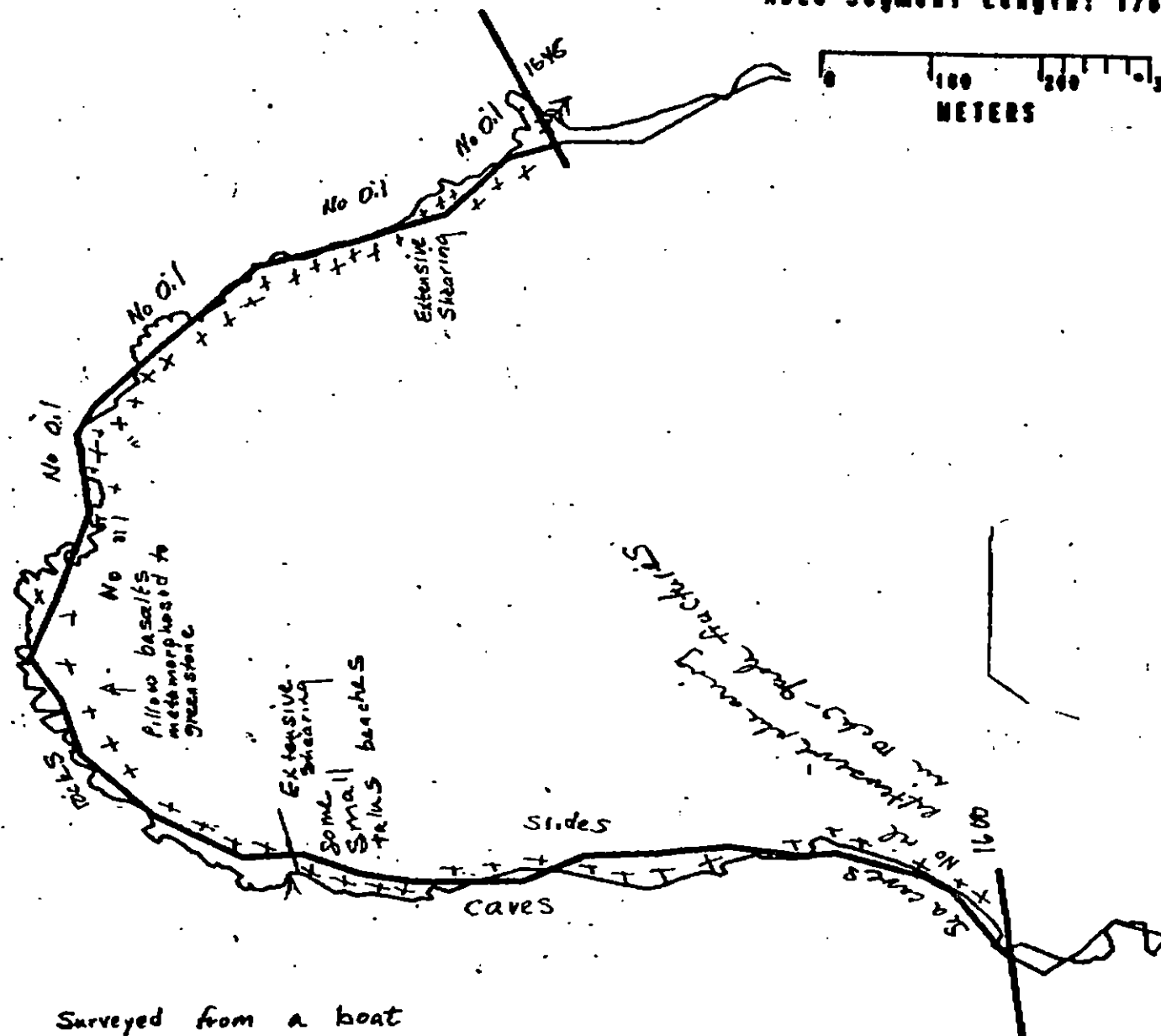
$\rightarrow$
 Photo location, direction,
 and number

SKETCH MAP

ER-14

ADEC Segment Length: 1782m

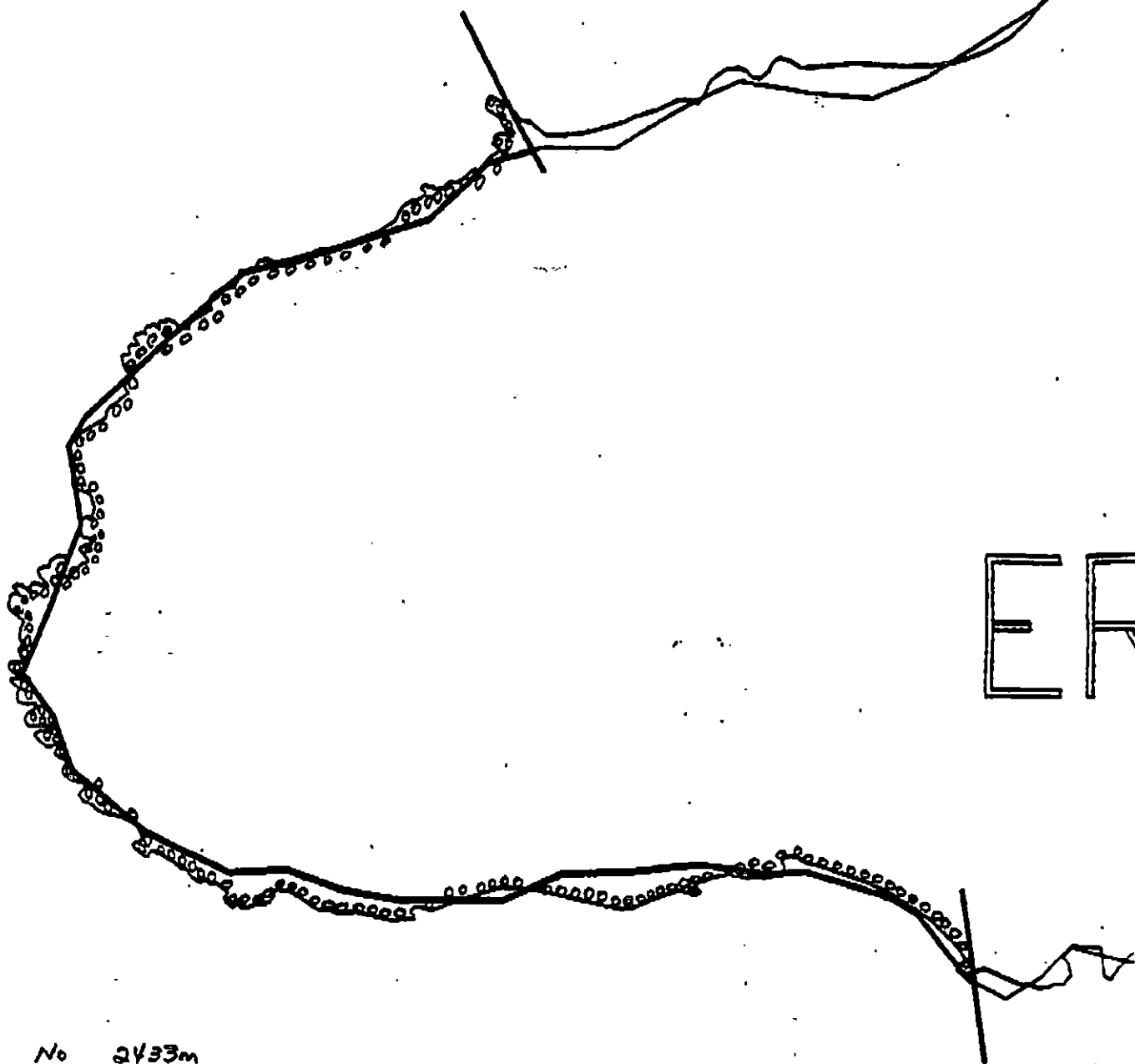
0 100 200 300
 METERS



Surveyed from a boat
 no pedestrian access.

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO 2433

REVISION: 23/24/90



No 2433m

(13)

YXXX Wide

/// Medium

--- Narrow

TTTT Very Light

O000 No Oil

ER-14A

ADEC Segment Length: 1782m



METERS



Map Key: PWS-150

Name: R. Marty

Date: 1 April 1990

Data Entered:



EF

No 2433m

(14)

ER-14A

ADEC Segment Length: 1782m



XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

Map Key: PWS-150
Name: R. Marty
Date: 1 April 1990
Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-14 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Seabird colony (5R) -
5/1 to 9/1; Anchorages (6V) - 6/1 to 9/15; Deer harvesting (7II) -
8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep traffic and disturbance to
minimum, especially in vicinity of bird colony. Restrict air
traffic to absolute minimum.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Lachlan Dan DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1782 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: No treatment recommended. No oil found during survey.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER

EXXON ANNY TEE

NOAA Bucklescott

USCG G.A. REITER

FOSC: DATE: 4-19-90

OG Rich Mary
SEGMENT ST/ ER-14
SUBDIVISION A

DATE 1 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

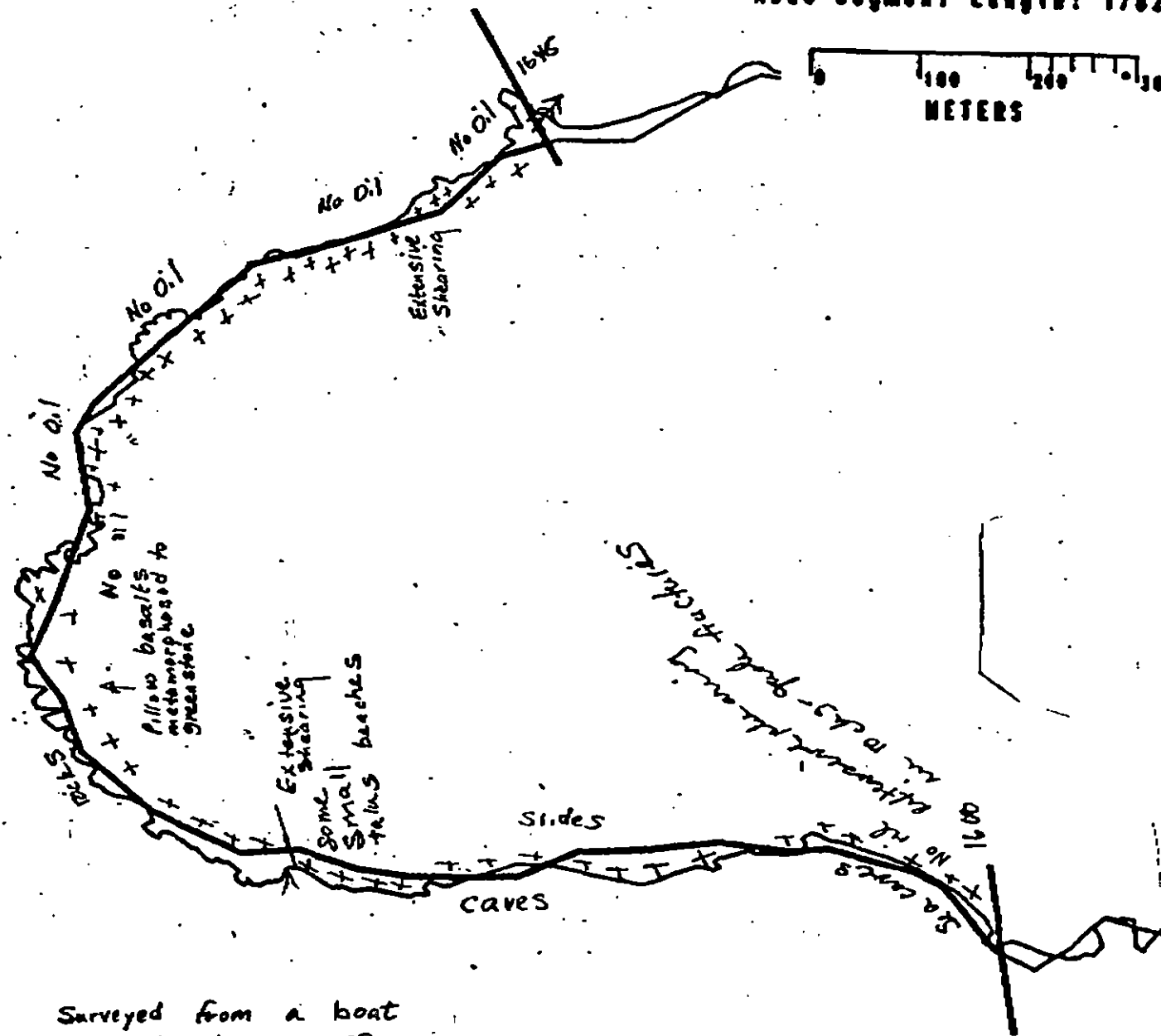
- 1 ▲
Pit - No Subsurface Oil
- 2 ▲
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 ➡
Photo location, direction, and number

(12)

SKETCH MAP

ER-14

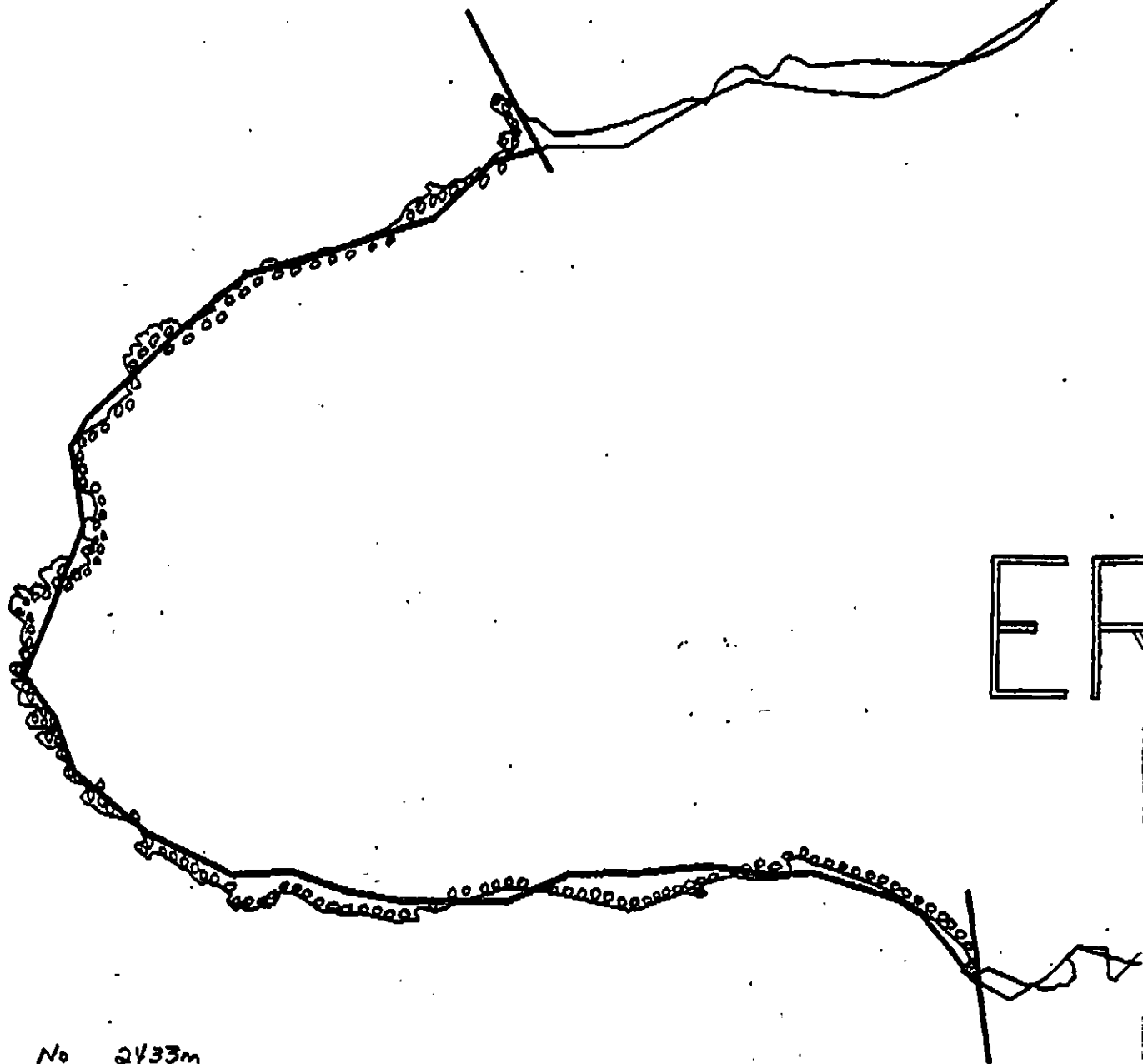
ADEC Segment Length: 1782m



Surveyed from a boat
no pedestrian access.

Oil Character Length (m): AP — PO — CV — CT — ST — MS — PT — TB — FL — NO 2433

REVISION: 25/04/90



No 2433m

(13)

ER-14A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 1782m

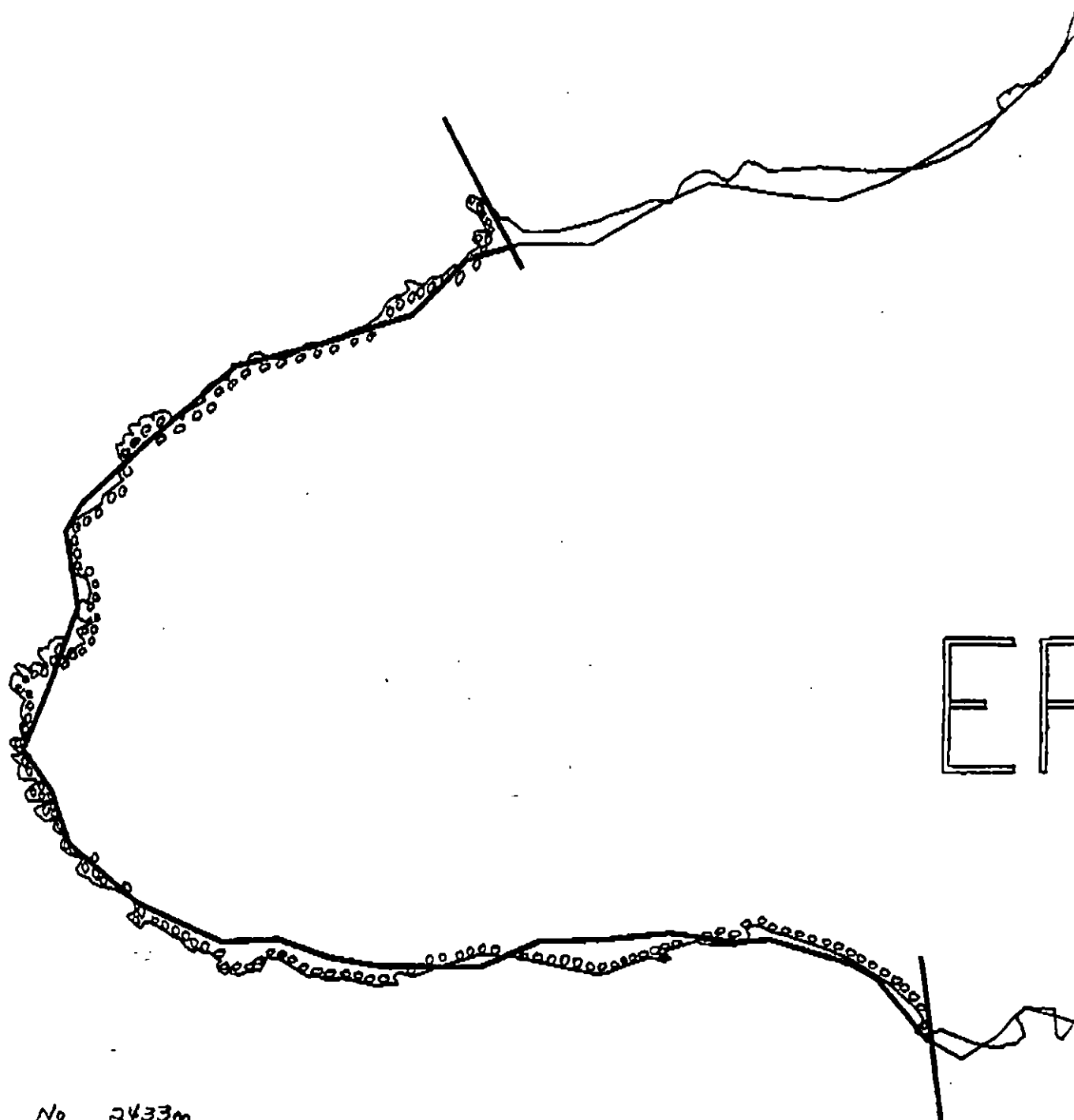


Map Key: PWS-150

Name: R. Marty

Date: 1 April 1990

Date Entered:



No 2433m

ER-14A

ADEC Segment Length: 1782m

0 100 200 300
METERS



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Map Key: PWS-150

Name: R. Marty

Date: 1 April 1990

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ ER-18

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/_ER-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence
deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V.Light 813 m: No Oil 1207 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 27 cm

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST ER-18 SUBDIVISION: _____ DATE 02 APRIL 90USCGNAME LARRY FLETCHER SIGNATURE Larry R Fletcher☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME DAVID M. SALE SIGNATURE David M Sale☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

"Bathub Ring" on rocks seems to be stable and not likely to mobilize. No treatment recommended as long as segment does not begin to shear as warmer temps occur.

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Listed as priority 1 by PWSCA. Listed as public use area in PWS area plan. Segment is located adjacent to good anchorage area in South Twin Bay. The splatters of oil in the middle portion of the segment are mainly in symmetrical lines that are easily visible from a boat. For aesthetic purposes, rearranging some of the boulders would breakup the unnatural line created by the oiling.

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-18
B. Lumber LAND REP Leigh Carlson SUBDIVISION A (1 of 1)
J. Czarnicki ADEC Dave Sale TIME 10:50 to 13:30
TEAM NO.: 10 TIDE LEVEL: +1.5m (5') to +0.3m (1') DATE 04/02/90
EST. SUBDIVISION LENGTH: 2379 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 20 % Hang 40 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 206 m VL 856 m NO 1317 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	BU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X		X	X

PAVEMENT: H F S None sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		2	0
Vegetation		2	0
Trash			
Debris			

Note: sheen was probably produced from a float of fishing boats in bay on 04/01

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-10/5

Frames 10-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		10	15	20	25	30		UP	LC	30	35	40	45	50	55	BU	U	M	L		
1	16					X	-											X		N	P, C
2	29					X	5-27		X	X								X		Y	B, M
3	25					X	-											X		N	S
4	12					X	5-10		X	X								X		N	P
5	9					X	5-7		X	X								X		N	G
							-														

COMMENTS

Note: Snow in Supratidal zone.

Revision

RM 4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION 03/25/90

Segment ST/10/ER18 Subdivision none Date (mo/day/yr) 4/2/90
 Time (24 hr) 1100 - 1330 Biologist Bob Lemon Wind 6 mph NE

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble (5) Sand 20 (6) SR
- (B) Overall % cover of biota (% of segment): Dense 10% Moderate Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/5

Frames 10-28

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/General Comments: Barnacles ranged from high through low zones; many large old Semibalanus cariosus present. Fucus in reproductive condition. Sensitive or unusual organisms included Pogonus hermotensis, Spicorbus (ANNELIDA), Telia (ANTHROZOA), Katharina (POLYPODOPHORA), Onchidella borealis (OPISTHOBRANCH), Alaria and Nereocystis beds below today's tide.

Ecological Considerations: Deer harvest, hatchery release. Also many shells and perhaps a suitable habitat for Saxidomus giganteus, and Tresus copan (BIVALES) were found about mid segment. Anadromous stream was not confirmed; snow covered above the tide line; the intertidal runoff was inspected.

OG R. MartySEGMENT ST/ ER-18SUBDIVISION 1DATE 04/02/90

CHECKLIST

Name
 Approx. Scale
 Sediment Body
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. I/M/L/W/L
 SSI
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

1 Δ

Pit - No Substrates Or

2 Δ

Pit - Substrates Or

Continuous Distribution

CT/B

Broken Distribution

CT/P

Pondy Distribution

CT/S

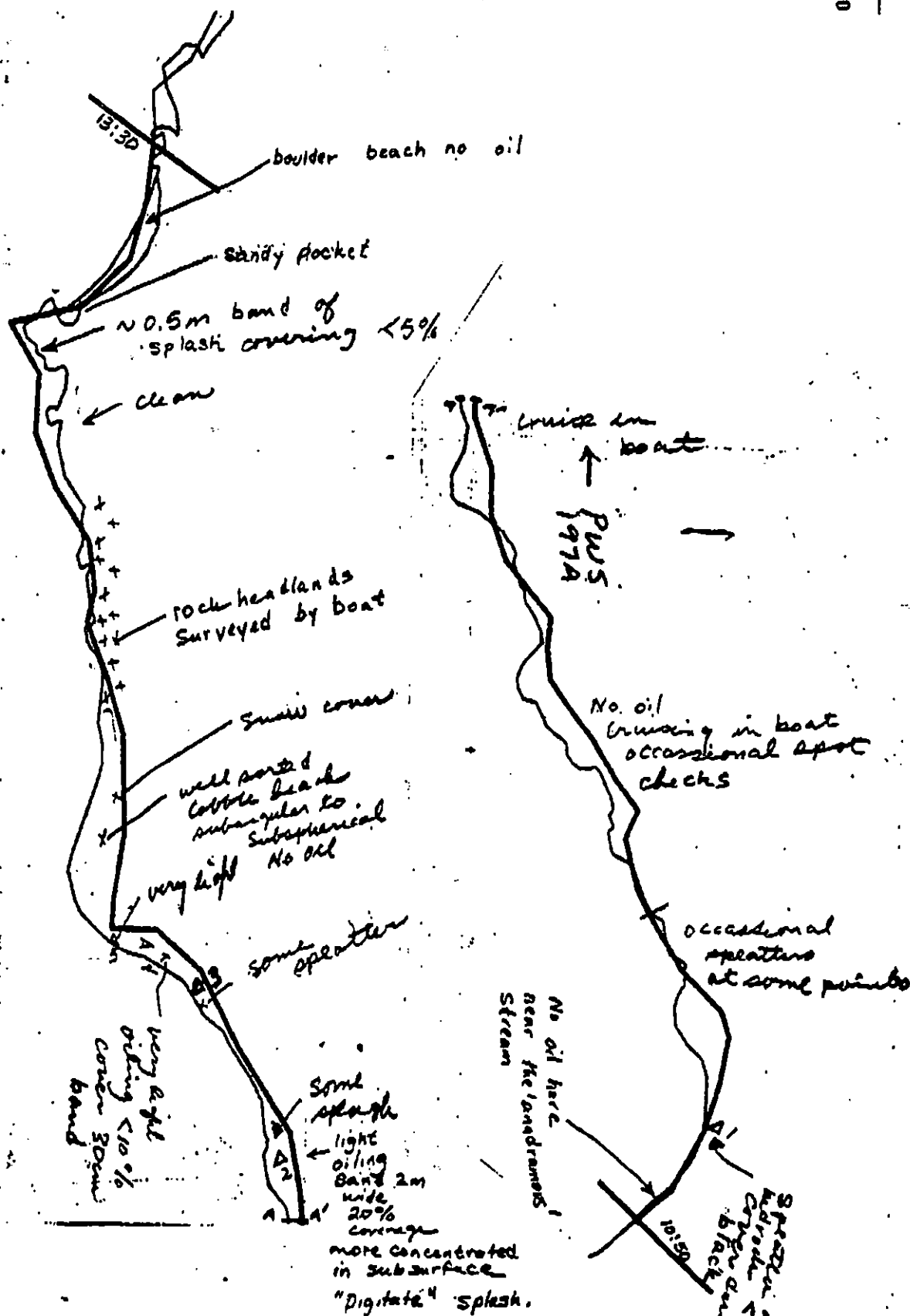
Splashnet Distribution

Oiled Vegetation

1 $\bullet$

Photo location, direction, and number

SKETCH MAP



ER-18

ON CT Length (m): AP

PO

CV

CT 1062 ST 500

M

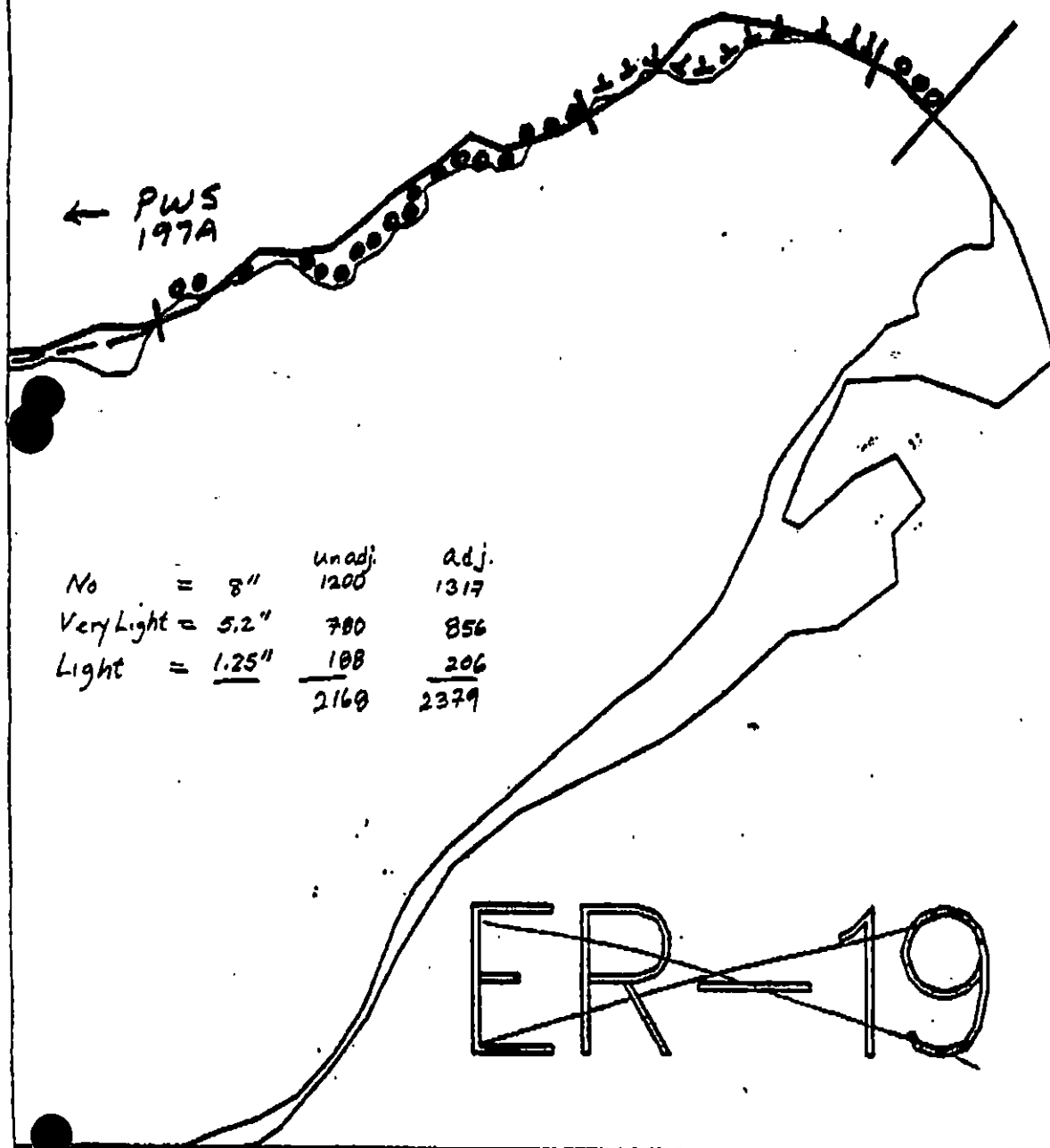
PT

TB

FL

NO





XXXX Wide

//// Medium

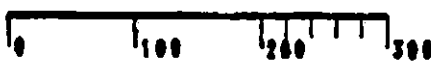
--- Narrow

TTTT Very Light

0000 No Oil

ER-18

ADEC Segment Length: 2379m



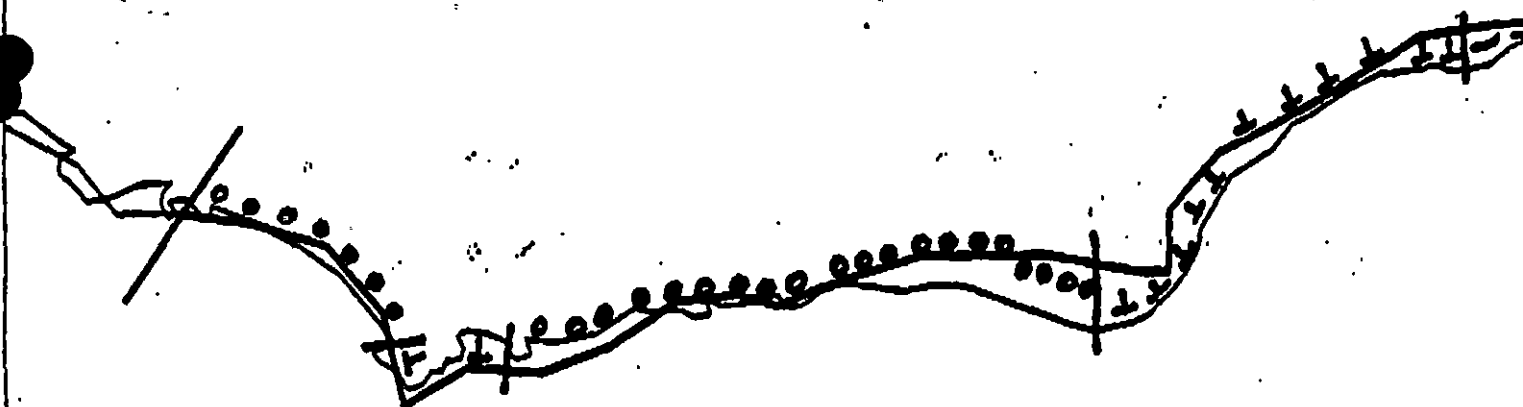
Map Key: PWS-197b

Name: Rick Marty

Date: 2 April 1990

Date Entered:

ER-18



PWS
197B -

XXXX Wide

//// Medium

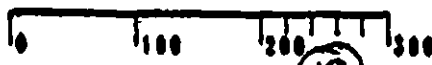
--- Narrow

TTT Very Light

OOO No. 011

ER-18

ADEC Segment Length: 2379m



Map Key: PWS-1970

Name: Rich Marty

Date: 2 April 1990

Note Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-18 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation	WORK 6/1 TO 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	Closed to Bioremediation prior to 6/1.
1K	Purse Seine Hook-off	Closed to Bioremediation after 7/20.
7II	Subsistence: Deer Harvesting	Closed to Bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Restrict boat and air traffic to a minimum after 7/20.

TAG ADDENDUM DATE 5/18/90
ADEC Art Weimer Art Weimer
EXXON Woy TSM Paul FOSC
NOAA Joseph Talbot
USCG G.A. Reiter DATE 5-18-90

Prepared by: Andru Mann wjk

Date: 5/17/90

ER-17

ER-10

ER-18

ER-19

ER-23

ER-22



Exxon Company, USA
Map Key: PWS-ER-18



ECOLOGY MAP
SEGMENT ER-18
SUBDIVISION A (1 of 4)
METERS

★ Seabird Colony
▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ ER-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence
deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

1/10/90
ti

SHPO SIGNATURE: Charles E. Hines DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V. Light 813 m: No Oil 1207 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS: DUE TO THE HIGH HUMAN USE OF THIS ENHANCEMENT
BIOREMEDIATE THE STAINED AREA FOLLOWING FURTHER
DETERMINATION BY FIELD MONITORS

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY TSAI
NOAA Burt Warratt
USCG M. J. HALL

FOSC: DATE: 4-14-90

SHORELINE EVALUATION

SEGMENT ST/ ER-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence
deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are
uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276). Actual re-

SHPO SIGNATURE: Charles E. Hines DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V.Light 813 m: No Oil 1207 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

RECOMMENDATIONS:

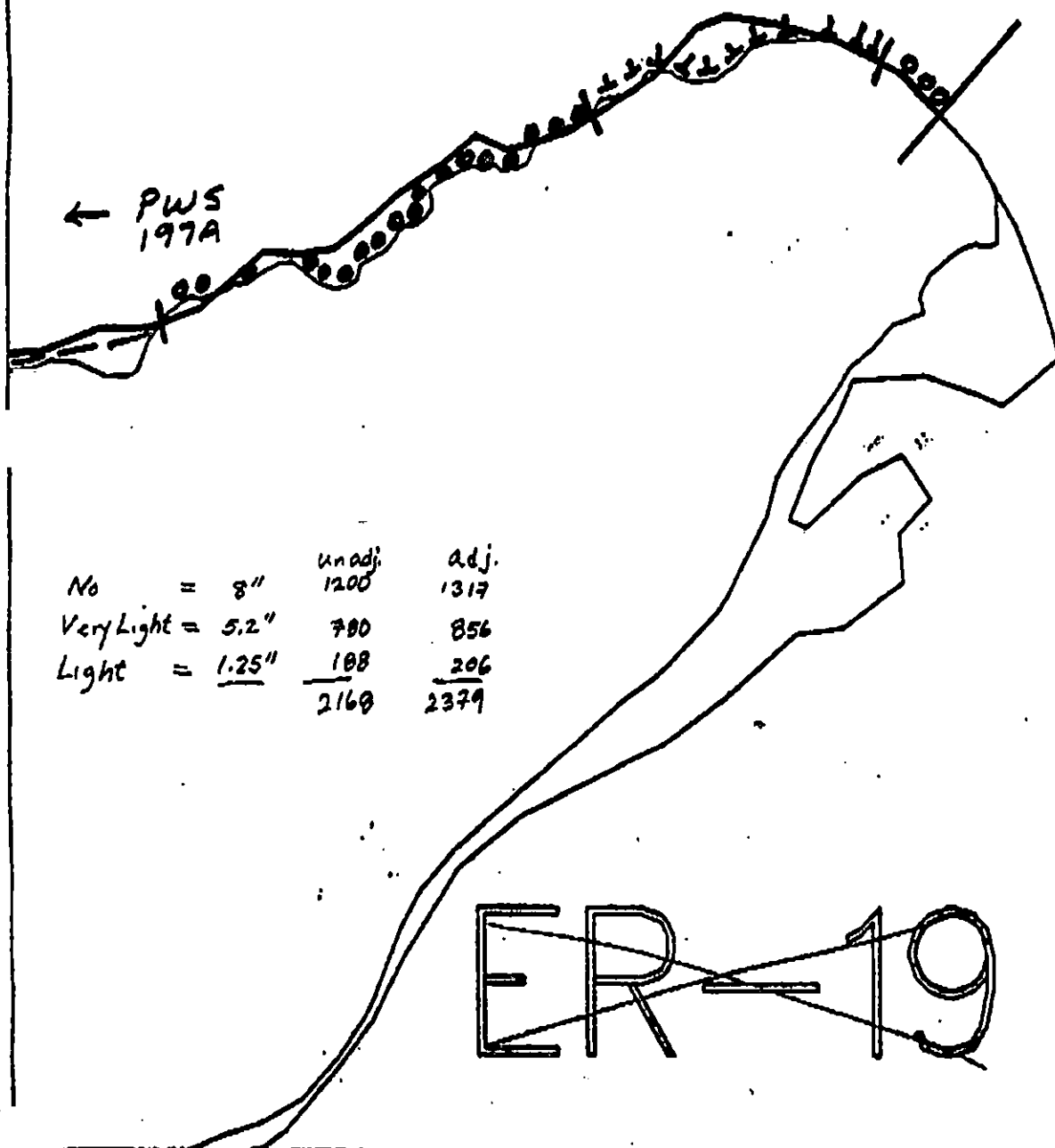
☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS: DUE TO THE HIGH HUMAN USE OF THIS EMBAYMENT
BIOREMEDIATE THE STAINED AREA FOLLOWING FURTHER
DETERMINATION BY FIELD MONITORS

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Warratt
USCG M. J. HALL
FOSC: W L DATE: 4-19-90

more concentrated
in subsurface
"Digitate" splash.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

AAAA " " " "

ER-18

ADEC Segment Length: 2379m

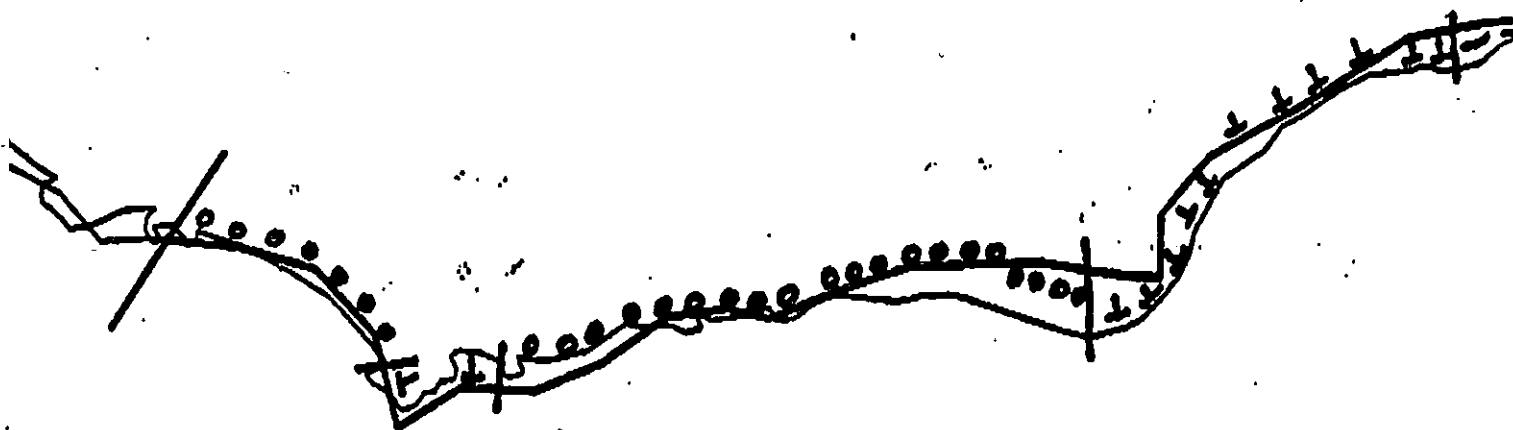
0 100 200 300

Map Key: PWS-197b

Name: Rich MartyDate: 2 April 1990

1/2

ER-18



PWS
197B

XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 OOOO No Oil

ER-18

ADEC Segment Length: 2379m



Map Key: PWS-1970

Name: Rich Marty

Date: 2 April 1990

Date Entered:

2/2

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ ER-19

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ ER-19 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Stream mouth (cata-
log no. 16406) Fry outmigration (1A) - 3/1 to 5/15; Spawning (1B) -
7/10 to 8/31; Deer harvesting (7II) - 8/15 to 2/28; South Twin Bay
is a recreational anchorage (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No specific subdivision con-
straints identified.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 306m: No Oil 2330 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS: No treatment recommended due to only isolated minor stain
found during survey.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-19 SUBDIVISION: _____ DATE 01 APRIL 90USCGNAME LARRY FLETCHERSIGNATURE *Larry R Fletcher*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME DAVID M. SALESIGNATURE *David M Sale*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

see Land Mgr. comments below. Rounded cobble beach seems to have rubbed itself clean under high energy environment. Colder did not allow pits deeper than 15-20 cm.

LAND MANAGERNAME Leigh CarlsonSIGNATURE *Leigh Carlson*ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Listed in PWS area plan for public use/anchorage. Listed as priority 1 by PWSCA. Area directly behind storm berm still covered by snow. Did not appear likely to have oiled debris under snow cover.

(8)

SHORELINE OILING SUMMARY

REVISION NO. 203878

OG R. Manty USCG Larry Fletcher SEGMENT ST/ EE-19
 BIO B. J. Manty LAND REP Leigh Carlson SUBDIVISION A (10FI)
 XON J. G. Manty ADEC Dave Sale TIME 14:05 to 16:30
 TEAM NO.: 10 TIDE LEVEL: +0.6m (2') to +2.0m (6.5') DATE 04 / 01 / 90
 EST. SUBDIVISION LENGTH: 2.163 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: 14:05 to 16:30
 SURFACE SEDIMENTS: R 50 % B 10 % C 10 % P 10 % G 10 % S 10 % M 10 % V 10 %
 SLOPE: Long 10 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 150 m M 150 m N 150 m VL 150 m NO 2013 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	S	E	W	1	2	3	4	S	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN				X							X	
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									S	X		X

PAVEMENT: H F S 1 sq. m by 1 cmPATTIES / TARBALLS NONE BAGSNEAR SHORE SHEENT NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST/10/4Frames 18-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/IN)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	S	U	M	U		
1	15					X	.									X			PC
2	10					X	.								X				PC
3	12					X	.								X				PG
4	15					X	.								X				C
							.												
							.												

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER19 Subdivision none Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1400-1530 Biologist Bob Lemon(A) Substrate type and % of segments:
(1) Bedrock 1 (2) Boulder 1 (3) Cobble 50 (4) Pebble 39 (5) Sand 10 (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate Low 4%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST/10/4Frames 18-24

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	②	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/General Comments: sparse drift line at about +10 had Diptera (INSECTA) and Amphipods in sparse abundance. Supratidal snow had deer, bear, and other tracks - 1 eagle sitting. The water covered the low zone but wading led me to believe there was little change from general trend at the water line.

Ecological Considerations: deer harvest, hatchery release, stream spawning.

9

OG R. Marty

SEGMENT ER-19

SUBDIVISION A

DATE 1 April 80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Dist Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pt - No Subsurface Oil

2 Δ
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

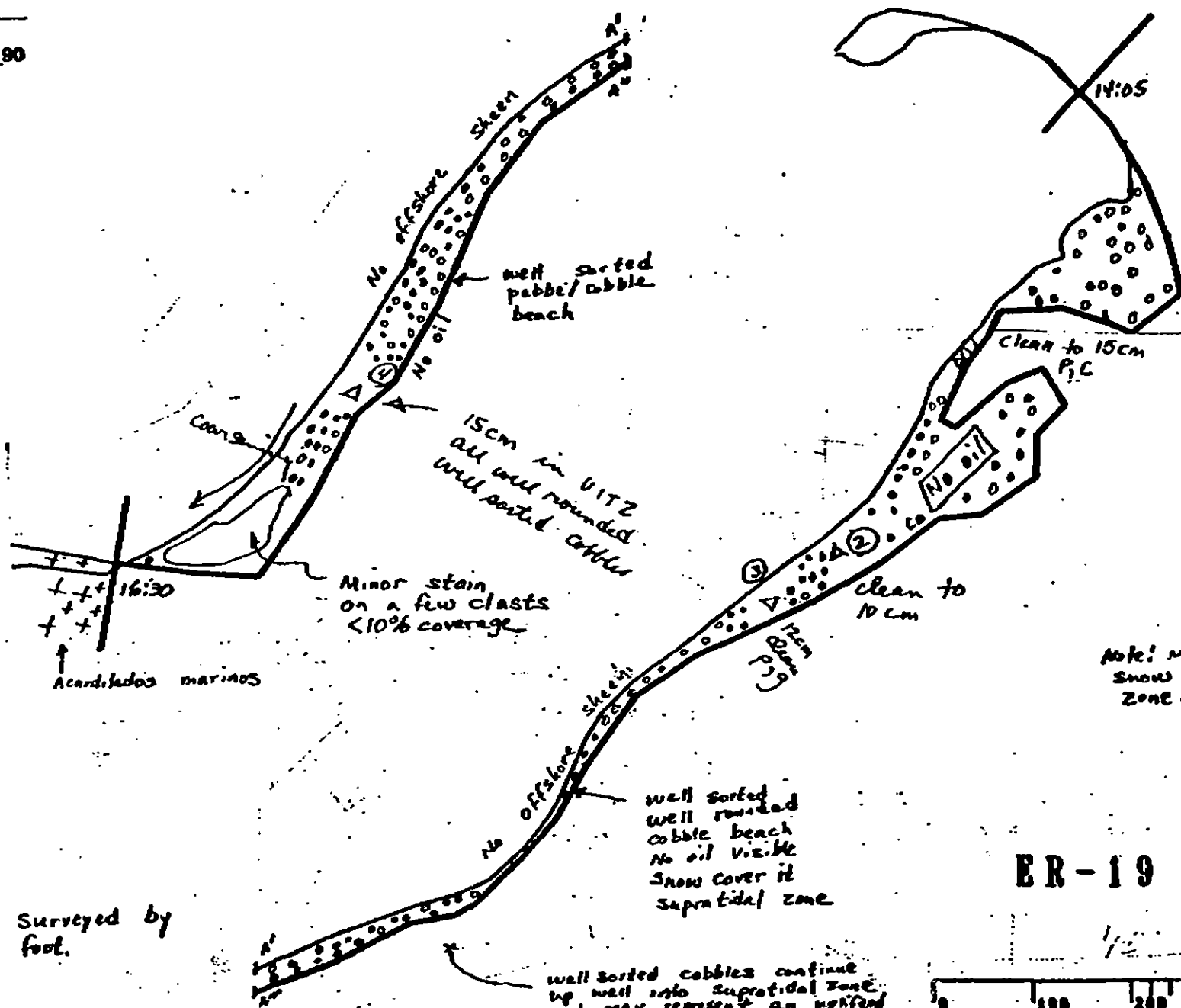
Oiled Vegetation

1 ●

Photo location, direction, and number

Surveyed by
foot.

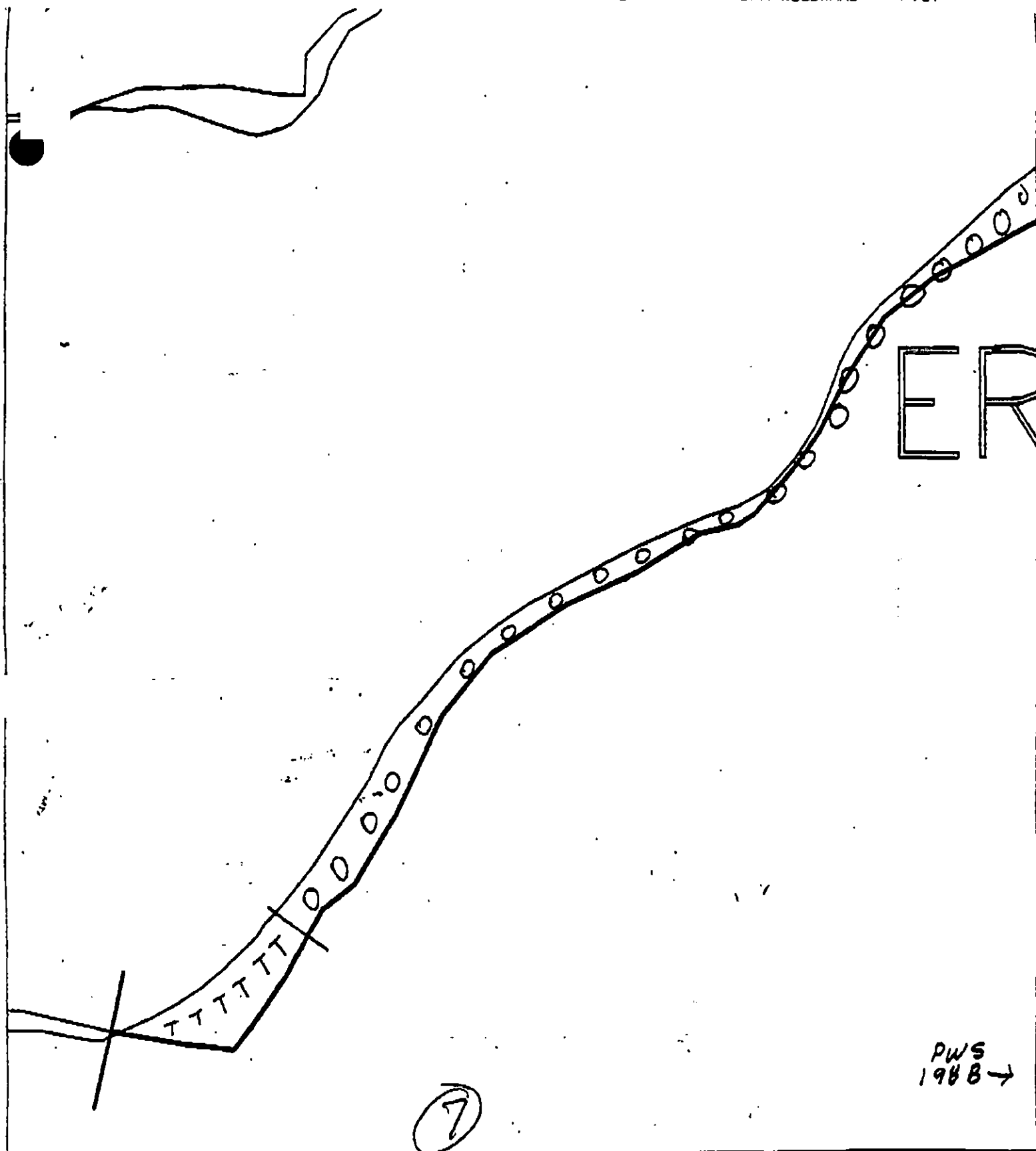
SKETCH MAP



Oil Character Length (m): AP PO CV CT ST 150m MS PT TB FL NO 2013

ER-19





XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-19 A

ADEC Segment Length: 2163m

0 100 200 300
METERS

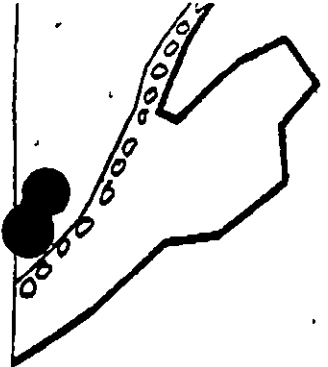
Map Key: PWS-1988

Name: R. MartyDate: 1 April '90

Data Entered:

3/3

↑
PWS
1980



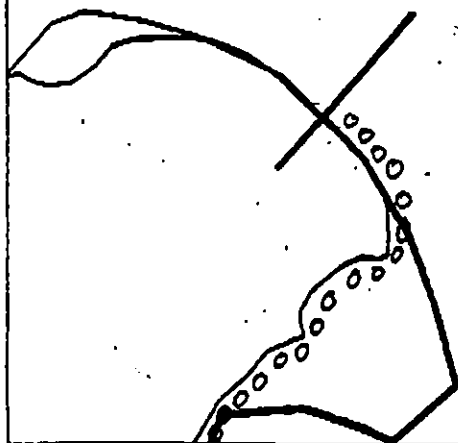
← PWS 198A

⑥

XXXX Wide	ER-19A	Map Key: PWS-198b	z/3
//// Medium			
---- Narrow			
TTTT Very Light			
0000 No Oil			
ADEC Segment Length: 2163m		Name: <u>R. Morley</u>	
100 200 300 METERS		Date: <u>1 April '90</u>	
		Date Entered:	



ER-10



(5)

↓ PWS 1988

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-19A

ADEC Segment Length: 2163m



METERS

Map Key: PWS-1988

Name: R. MartyDate: 1 April '90

Date Entered:

1/3

SHORELINE EVALUATION

SEGMENT ST/ ER-19 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Stream mouth (cata-
log no. 16406) Fry outmigration (1A) - 3/1 to 5/15; Spawning (1B) -
7/10 to 8/31; Deer harvesting (7II) - 8/15 to 2/28; South Twin Bay
is a recreational anchorage (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No specific subdivision con-
straints identified.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Rachel Jean Dale DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 306m: No Oil 2330 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: No treatment recommended due to only isolated minor stain
found during survey.

TAG COMMENTS: RECREATION USE TO HS MEDIUM USE BY ISCC
MINOR STAIN IN ONE LOCATION, DOES NOT WARRANT
INTRUSION

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER
EXXON ANDY TEE FOSC: [Signature] DATE: 4-19-90
NOAA Burl Wessott
USCG G.A. RETTER, G.A. Retter

OG R. M. 19

SEGMENT ST/ER-19

SUBDIVISION A

DATE 1 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NWLA/WL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PT - No Subsurface Oil

2 Δ
PB - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

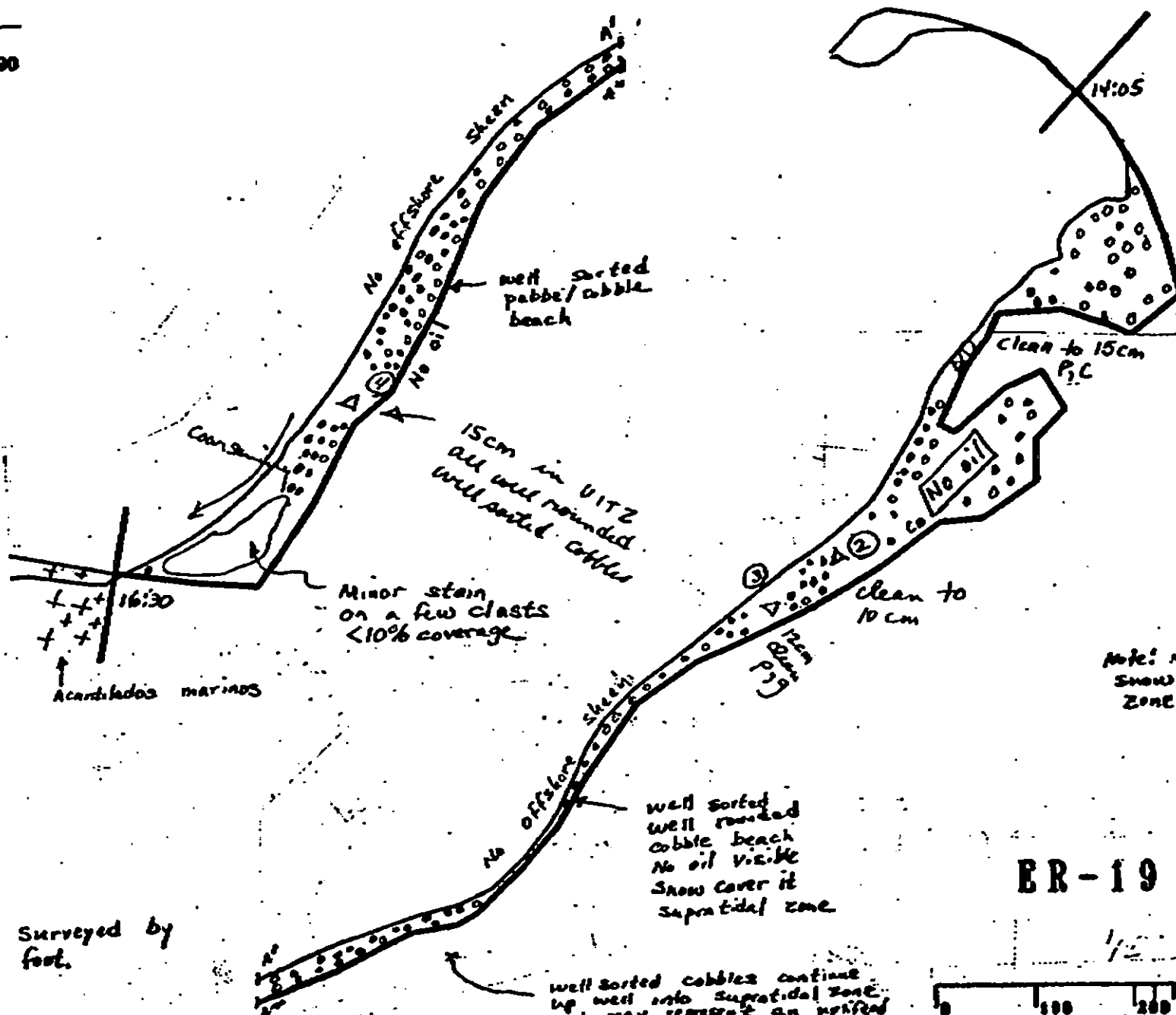
CT/S
Splashed Distribution

Cilled Vegetation

1 →
Photo location, direction,
and number

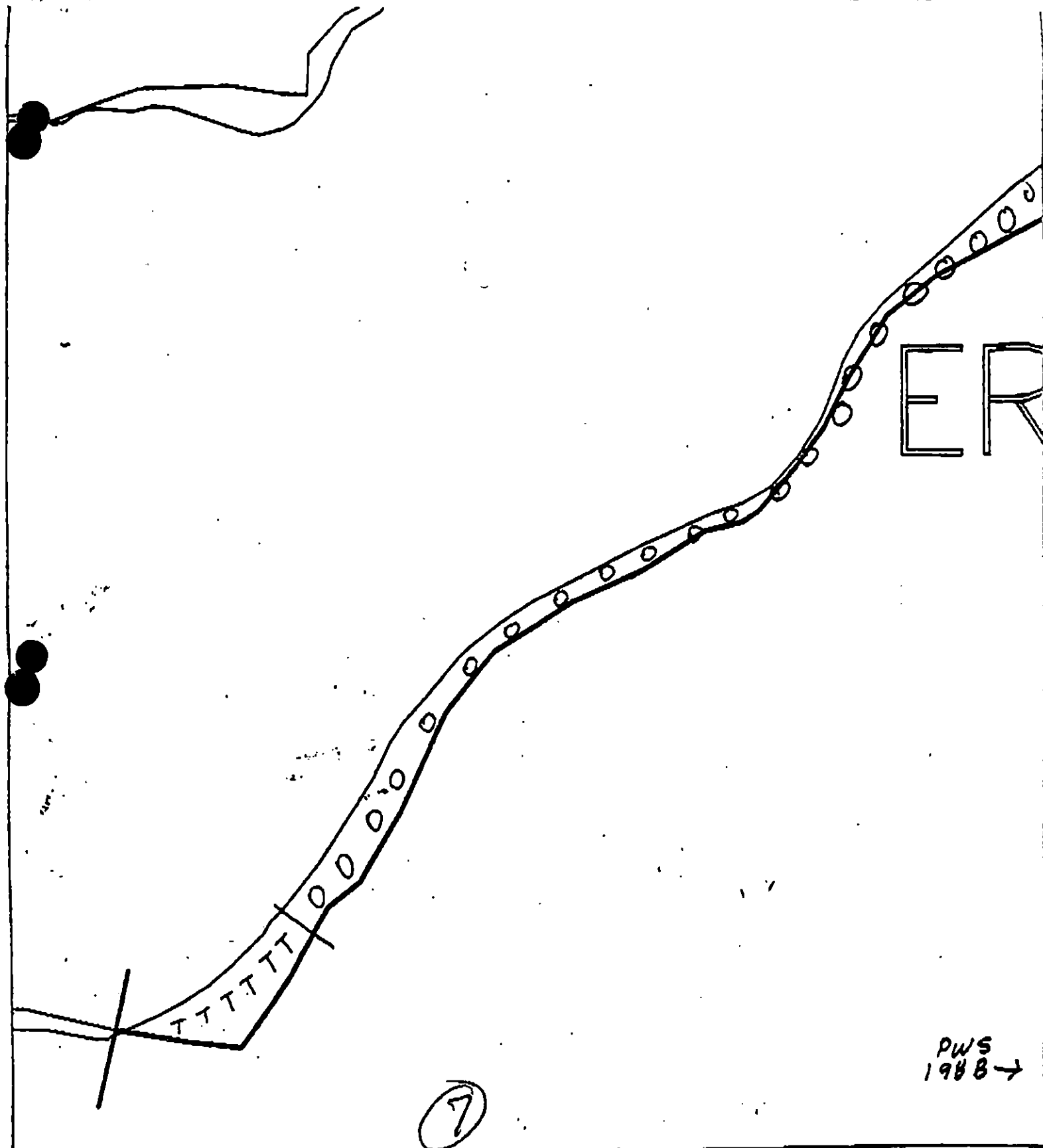
Oil Character Length (m): AP PO CV CT ST 100m MS PT TB FL NO 30m

ATCH MAP



ER-19

0 100 200 300
METERS

PWS
1988 →

XXXX Wide

ER-19 A

//// Medium

---- Narrow

ADEC Segment Length: 2163m

TTTT Very Light

0000 No Oil



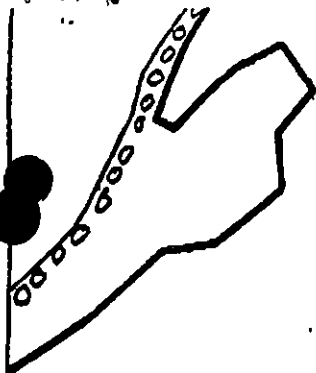
Map Key: PWS-1988

Name: R. MartyDate: 1 April '90

Data Entered:

3/3

↑
PWS
1980



← PWS 198A

⑥

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-19A

ADEC Segment Length: 2163m



METERS

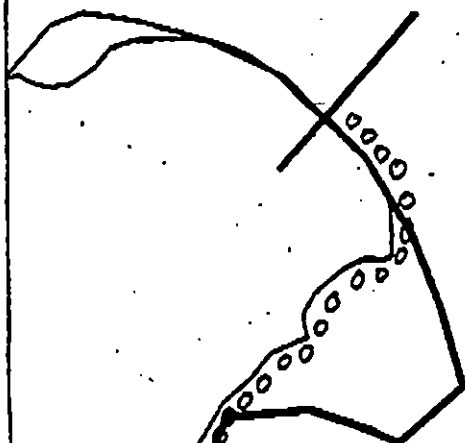
Map Key: PWS-198b

Name: R. Morley

Date: 1 April '90

Date Entered:

ER-10



(5)

↓ PWS 1988

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-19A

ADEC Segment Length: 2163m

0 100 200 300
METERS

Map Key: PWS-1988

Name: R. Marty

Date: 1 April '90

Data Entered:

1/3

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-19 A STREAM NO: 226-50-16406 DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is included in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: J. David McMillan DATE: 5/2/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

_____ Treatment Recommended

_____ Manual Pickup

_____ Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/7/90

ADEC Art Weimer Det. Green

EXXON Andy Tom

NOAA Gary Petrac

USCG G.A. REITER

FOSC: h L

DATE: 5-15-90

152

OG WILLIAMS FIELD

SEGMENT ST/ E2019

STREAM 226-50-16406

DATE 21 APR 90

SKETCH MAP

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

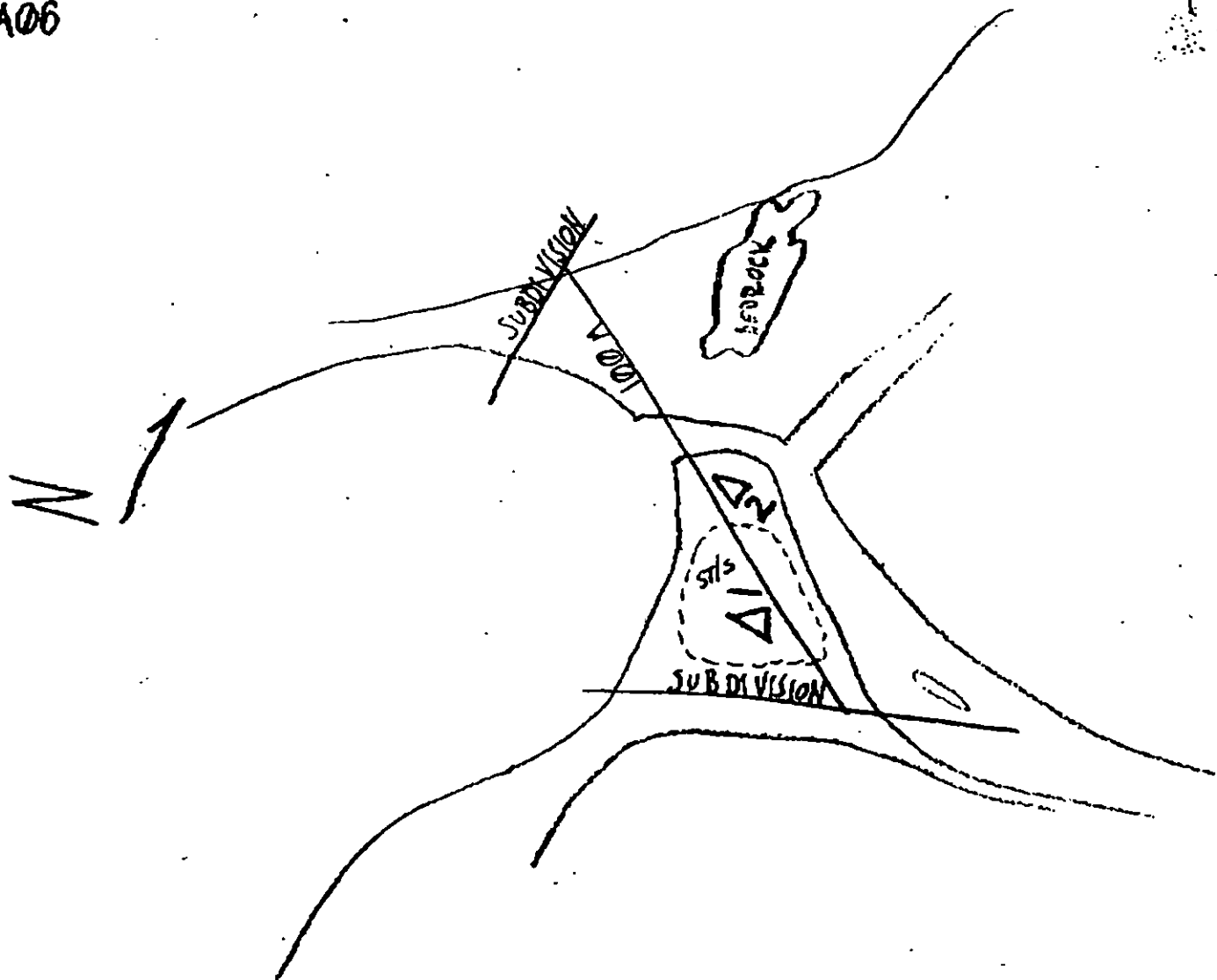
Spashed Distribution

lll

Clad Vegetation

1 ➡

Photo location, direction,
and number



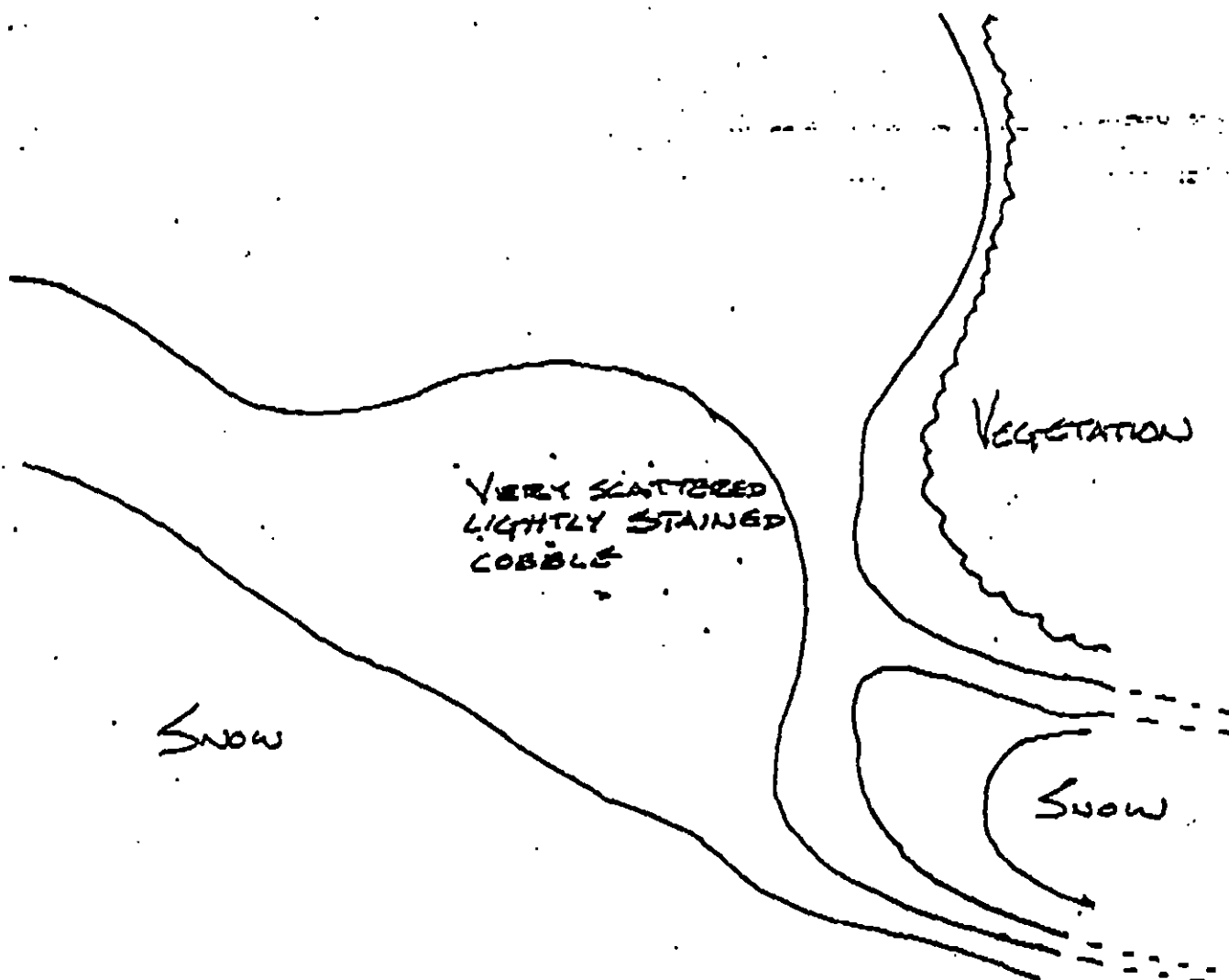
Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

NEWBORN 820000

7/52

48 PHOTOLOG

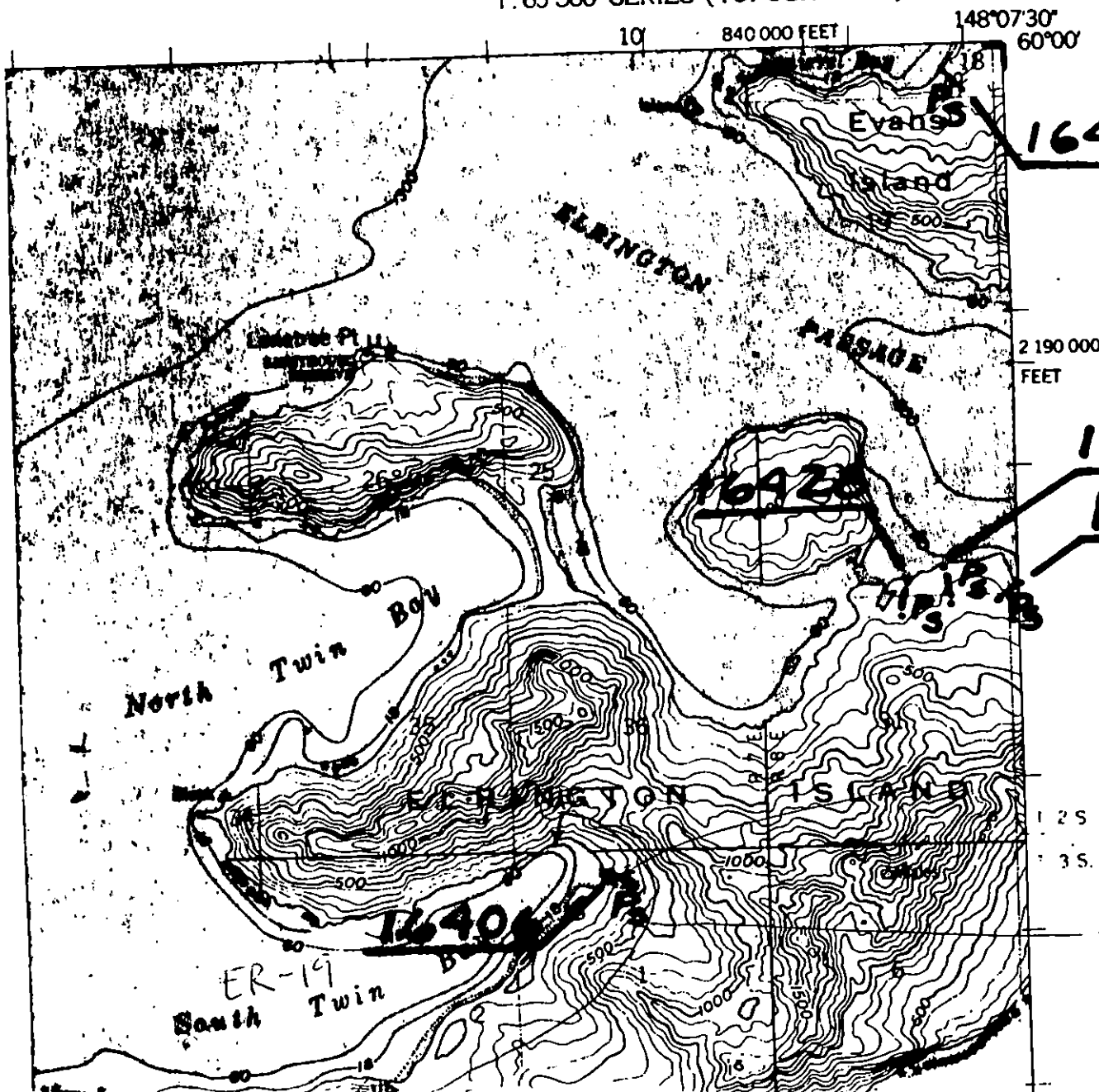
DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM

BLIVING SOUND (D-4) QUADRANGLE
ALASKA

1:63 360 SERIES (TOPOGRAPHIC)

(SEWARD (A-3))



16448

16430

16432

ECO MAP

SUBSSEA SIMON
16 K1-A (1 of 1)

SEE MAP (E)

OG R. Marby

SEGMENT SY-17

SUBDIVISION A

DATE 1 April 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Significant Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLAVE
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/S
Broken Distribution

CT/P
Patchy Distribution

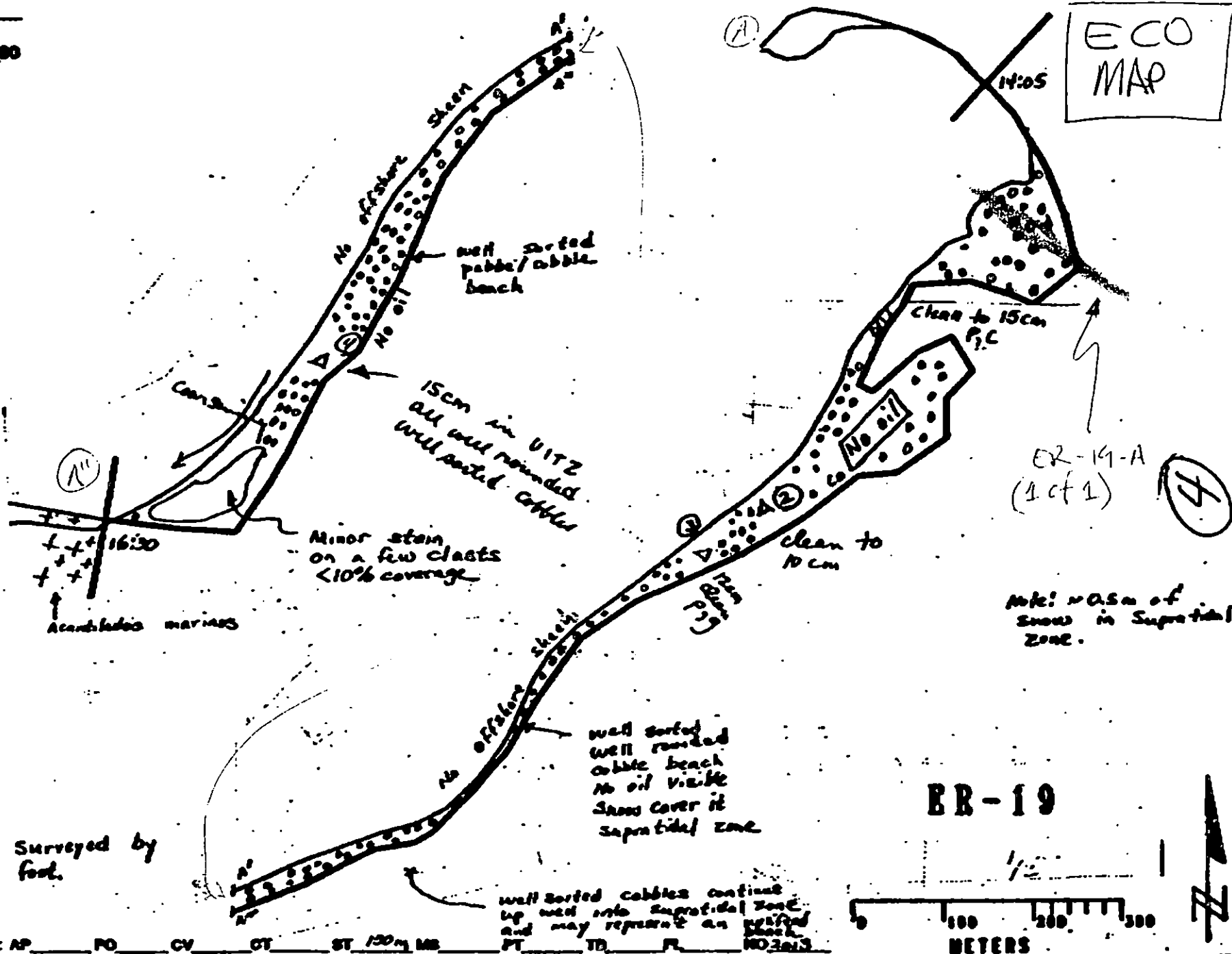
CT/S
Splashed Distribution

Cited Vegetation

1 →
Photo location, direction,
and number

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST 100m MB _____ PT _____ TD _____ PL _____ NO 3013

SKETCH MAP



ER-19

METERS

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-19 A

STREAM NO: 226-50-16406

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-19 A STREAM NO: 226-50-16406 DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unhoiled biota and substrate. Subject stream is included in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ Snare/Absorbent Booms
_____ Treatment Recommended	_____ Oil Snares (pom poms)
_____ Manual Pickup	_____ Absorbents (pads, rolls, etc)
_____ Bioremediation	_____ Spot Washing: _____ Wands
_____ Tarmat Removal	_____ Beach Cleaner
	_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

✓ **Salmon stream mouth - fry outmigration (3/1 to 5/15)**

✓ **Salmon stream mouth - spawning (7/10 to 8/31)**

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C **Salmon fry nursery area (4/31 to 7/31)**

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Ester Hatchery release (4/15 to 6/15)**

1E **Main Bay Hatchery release (4/20 to 6/15)**

✓ **Sawmill Bay Hatchery release (4/15 to 6/1)**

1G **Cannery Creek Hatchery release (4/21 to 6/1)**

1H **Remote release site**

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I **Gill net area (6/7 to 8/31)**

1J **Purse seine area (7/20 to 9/30)**

1K **Purse seine hook-off (7/20 to 9/30)**

1L **Set net sites (6/11 to 7/25)**

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncultivated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P **Harbor seal and sea lion pupping (5/15 to 7/1)**

3O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m - 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U **Recreation: Tent sites (6/1 to 9/15)**

6V **Anchorage (6/1 to 9/15)**

6W **Forest Service cabins (6/1 to 9/15)**

6X **Lodge (6/1 to 9/15)**

6Y **Special use destination**

7Z **Subsistence area: Salmon harvesting (5/1 to 9/30)**

7H **Finfish harvesting**

7J **Deer harvesting (8/15 to 2/28)**

Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

13/52

SEGMENT ST ER 019 SUBDIVISION: 16406 DATE 4/21/90

USCG

NAME CWO J. MC MARTIN SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADPKE

ADEG

NAME Michael Wiesner SIGNATURE [Signature]NAME No team member SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

LAND MANAGER

NAME No team member SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

2/52

Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

21 April 1990

ASC # 226-50-16406Segment ER-019

Observations Very scattered, very lightly stained surface cobble along the mid-intertidal zone west of the stream channel. No visible signs of significant quantities of buried oil.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16484Segment EV-071A

Observations A 1 meter wide asphalt/tar band rings the upper-intertidal zone immediately adjacent to the stream channel. This ring extends 15 meters north and 50 + meters southwest of the stream channel. An armor of lightly oiled large cobbles and boulders covers a heavily oiled 5 cm thick band of small gravels and sands. The oil band abuts both sides of the stream channel.

Treatment Recommendations Manual removal of all oiled substrate smaller than 5 cm. Larger oiled cobbles and boulders should be relocated more than 25 m from stream channel.

ASC # 226-40-16509Segment EV-070A

Observations Sporadic stain, asphalt, tar, and buried mousse are distributed throughout the intertidal zone adjacent to the stream channel. Significant quantities of buried oil not observed.

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ ER019
 BIO MICHAEL FOWCETT LAND REP TOM CROWE - ADEG STRATA 22650164061 OF
 EXXON GUS GARCIA ADFG MIKE WIEDNER TIME 13:19 to 13:45
 TEAM NO. 15 TIDE LEVEL 6 FT DATE 21 / APR / 90
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 8 % B 10 % C 60 % P 20 % S 10 % M 0 % V
 SLOPE: Long 20 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 30 m NO 50

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	N	E	S	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN					X	X					X	
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X	X		X

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAG

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you collect DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. AS-15-2

Frames 1-4

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	SU	U	M	U				
1	35					X	.									X			N		G/P/C
2	30					X	.									X			N	25	G/P/C
							.														
							.														
							.														
							.														

COMMENTS

REVIEWED JW

DATE 4-25-90

152

OG WILL REID
SEGMENT ST/ E 2019

SKETCH MAP

STRAH 226-50-16406

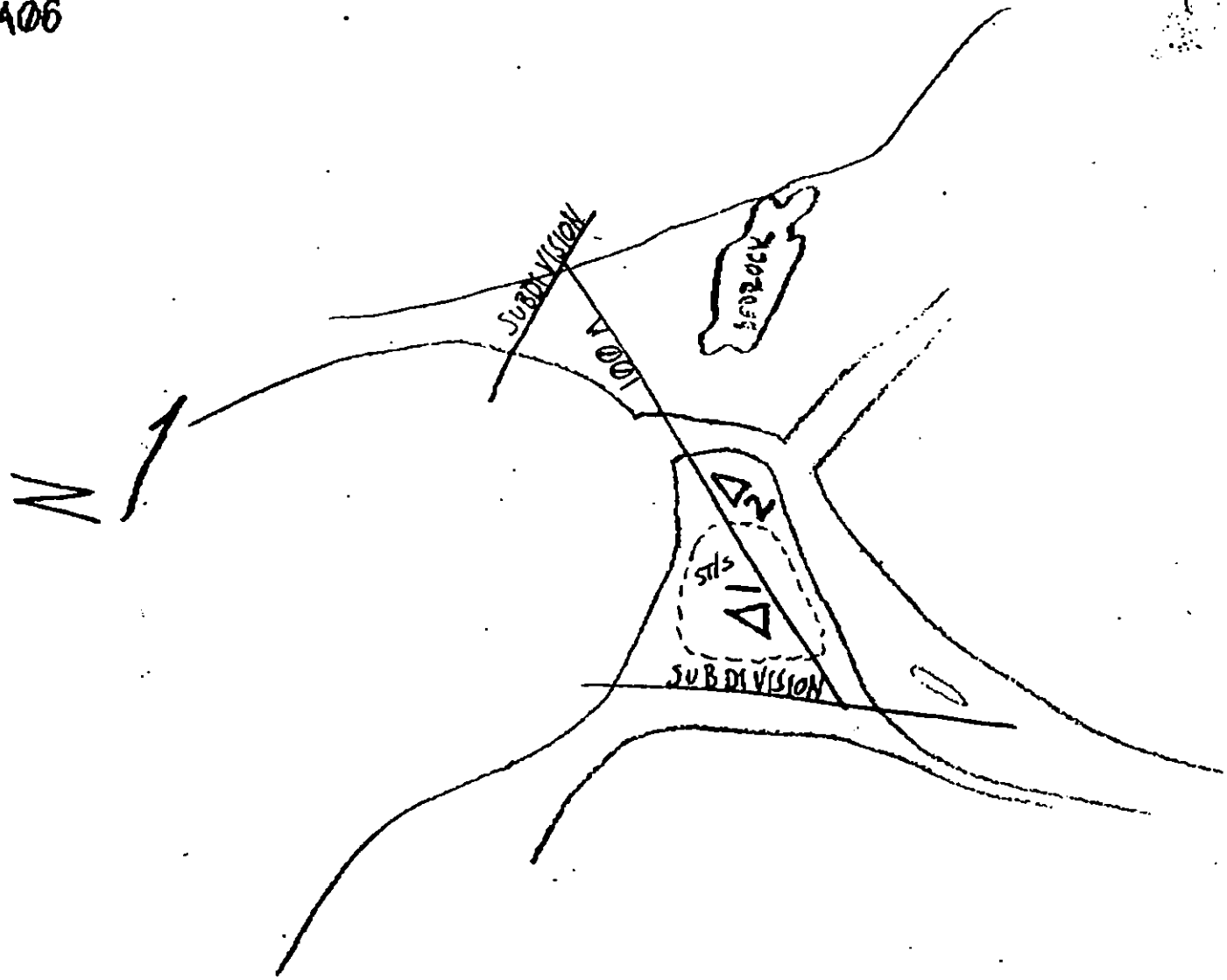
DATE 21 / APR 00

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Plt - No Subsurface Oil
- 2 Δ
Plt - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- eee
Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number



6/52

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS OS TS AVS SOM MMS PTA 2 REGION: PMS KP,CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 4/21/90 15 HIGH TIDE TIMES: 1109, 1234 21 TEAM RECORDER: M. WIEDMER

4 START TIME: 1315 16 HIGH TIDE HTS: 9.4, 10.3 22 OBSERVERS: T. CROWE

5 STOP TIME: 1342 17 LOW TIDE TIMES: 0512, 1730 23 AGENCY: ADFG

6 SECTENT #: ER-019 18 LOW TIDE HTS: 2.9, 1.1 24 PHOTOS TAKEN: Y (N)

7 STATION #: 226-50-16406 19 TIDE HT AT SURVEY: 7.4' Roll #: _____ Frames: _____

8 K-UNITS: _____ (Ebb) Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPES: _____

9 STAT AREA: _____ 20 USCG QUAD: SEWARD A3 Starts: _____ Ends: _____

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number: _____

12 SOURCE: Map Loran 011: _____

13 LOCATION: SOUTH TWIN BAY, S.W. ELLINGTON IS. Sediment: _____

14 DESCRIPTION: _____ Biological: _____

Yeter: _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	Y	N	H	L	Y	N	H
27 SURFACE COVERAGE	100	20		21	100	10		0
28 SURFACE THICKNESS	20.1 mm	0	0		0	0	0	
29 PENETRATION	21 mm	0	0		0	0	0	

30 OVERALL OIL IMPACT: N (VL) L N H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky (Stain)

32 OILED DEBRIS? Y (N)

33 SHORELINE TYPE: Headland Low-lying Rocks Beach (Cove)
Lagoon Marsh

34 WAVE EXPOSURE: High Moderate (Low) 35

35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 35
Gravel 30 Sand 30 Mud/silt _____

36 CATALOGED ANAD. FISH BREAST? (Y) N

37 CATALOG #: 226-50-16406

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? Y (N)

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: _____

43 ANADROMOUS FISH PRESENT? (Y) N
FRY PRESUMED

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

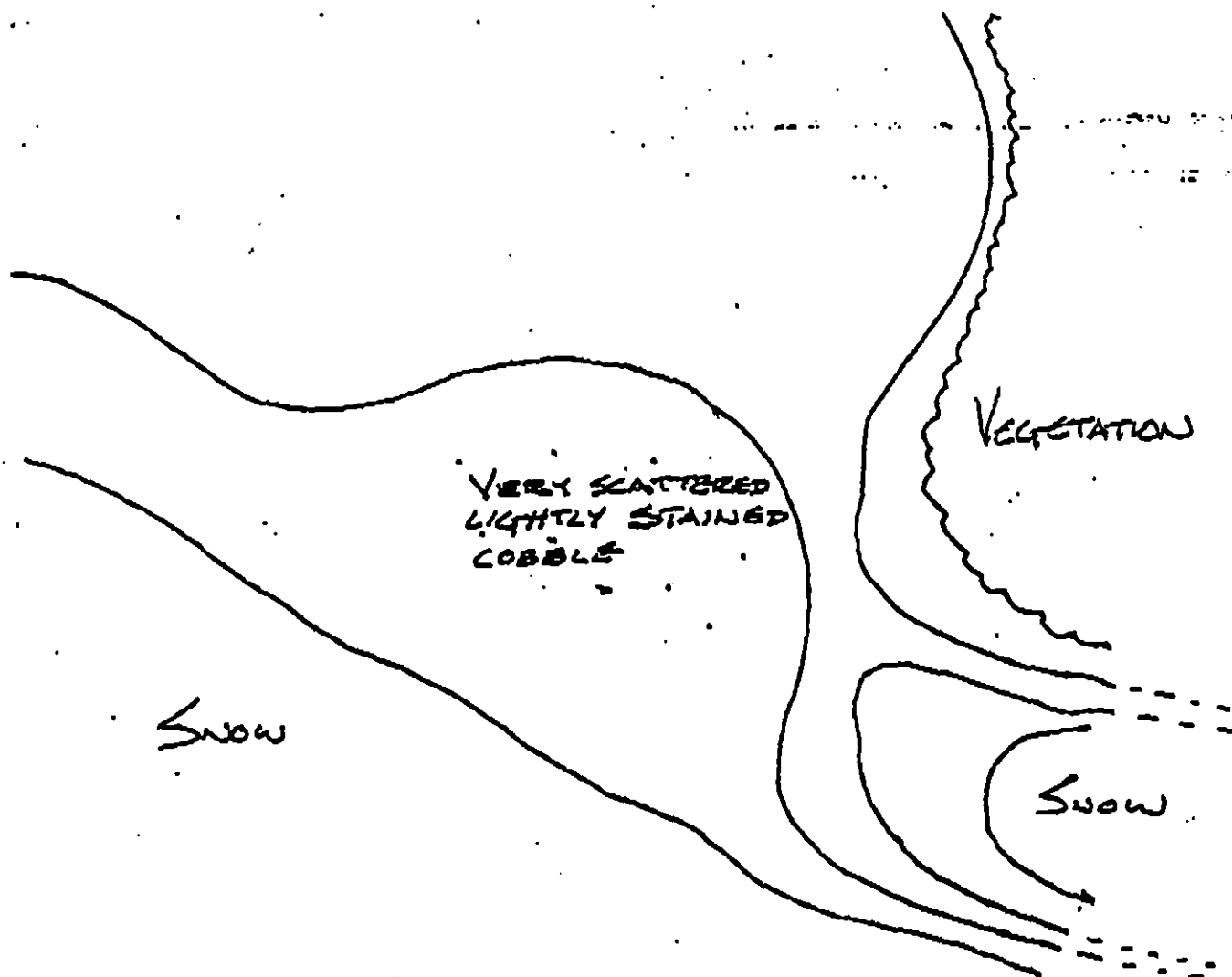
COMMENTS: VERY SCATTERED LIGHTLY STAINED COBBLES IN
MID-INTERTIDAL ZONE: NO TREATMENT RECOMMENDED.

7/52

48 PHOTOLOG

50 (S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM

12/52

Segment ER 19

4/21/90

Stream 226-40-16406

Michael Fawcett

Ecologist's Summary

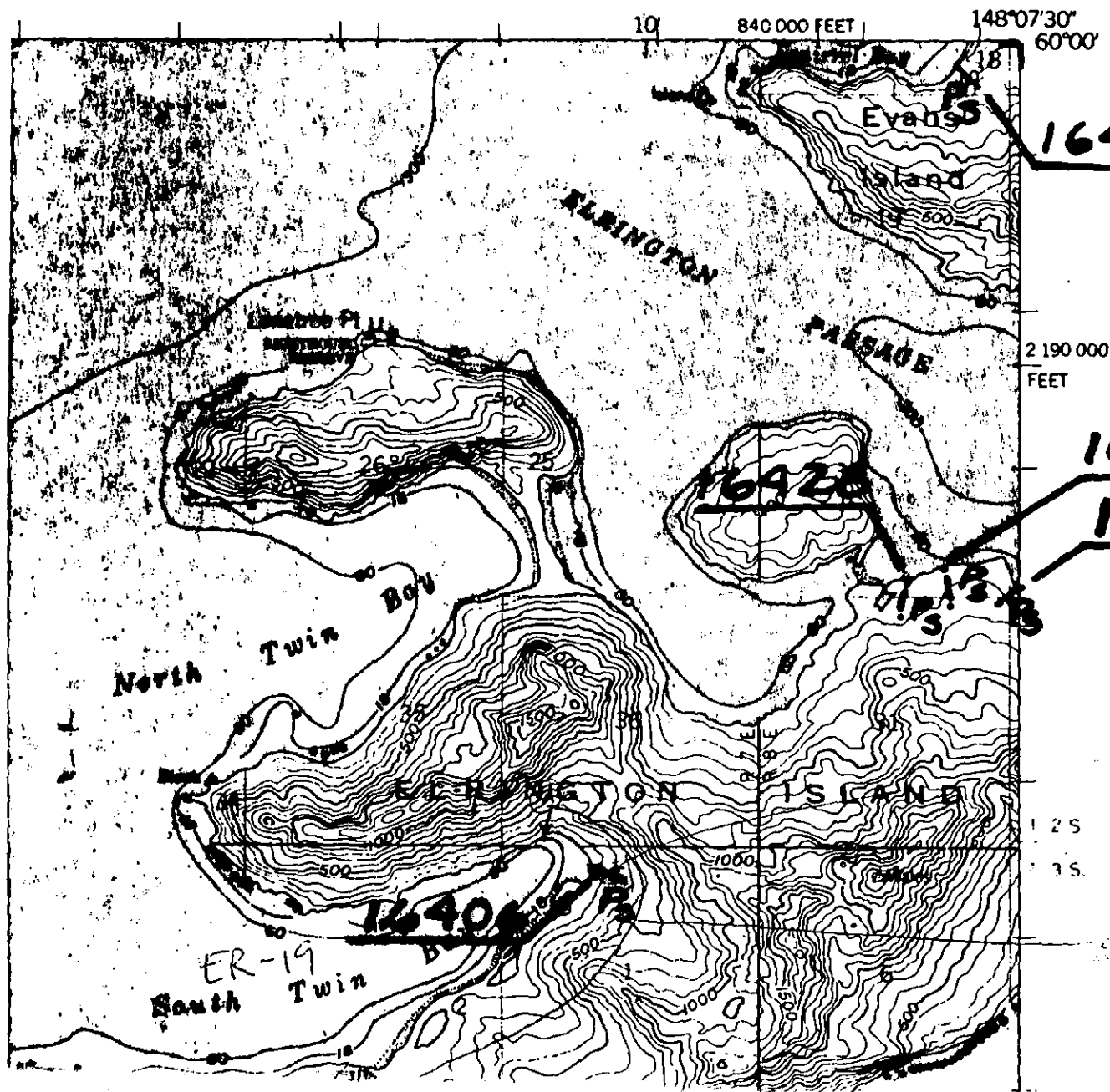
This stream lies at the end of a narrow bay, the stream mouth on a cobble/pebble/gravel beach, with larger boulders and scattered bedrock toward the north shore. Dense stands of Fucus and barnacles occupy the larger boulders in MTZ and LTZ. Scattered very light oil stains found in VTZ, no treatment recommended. One harbor seal seen.

M Fawcett

BLIVING SOUND (D-4) QUADRANGLE
ALASKA

1:63 360 SERIES (TOPOGRAPHIC)

(SEWARD (A-3))



16448

16430

16432

ECO MAP

SUBJECT STRONG
16 K-A (1 of 1)

SLI MAP (2)

OG R. Marby

SEGMENT ER-19

SUBDIVISION A

DATE 1 April 90

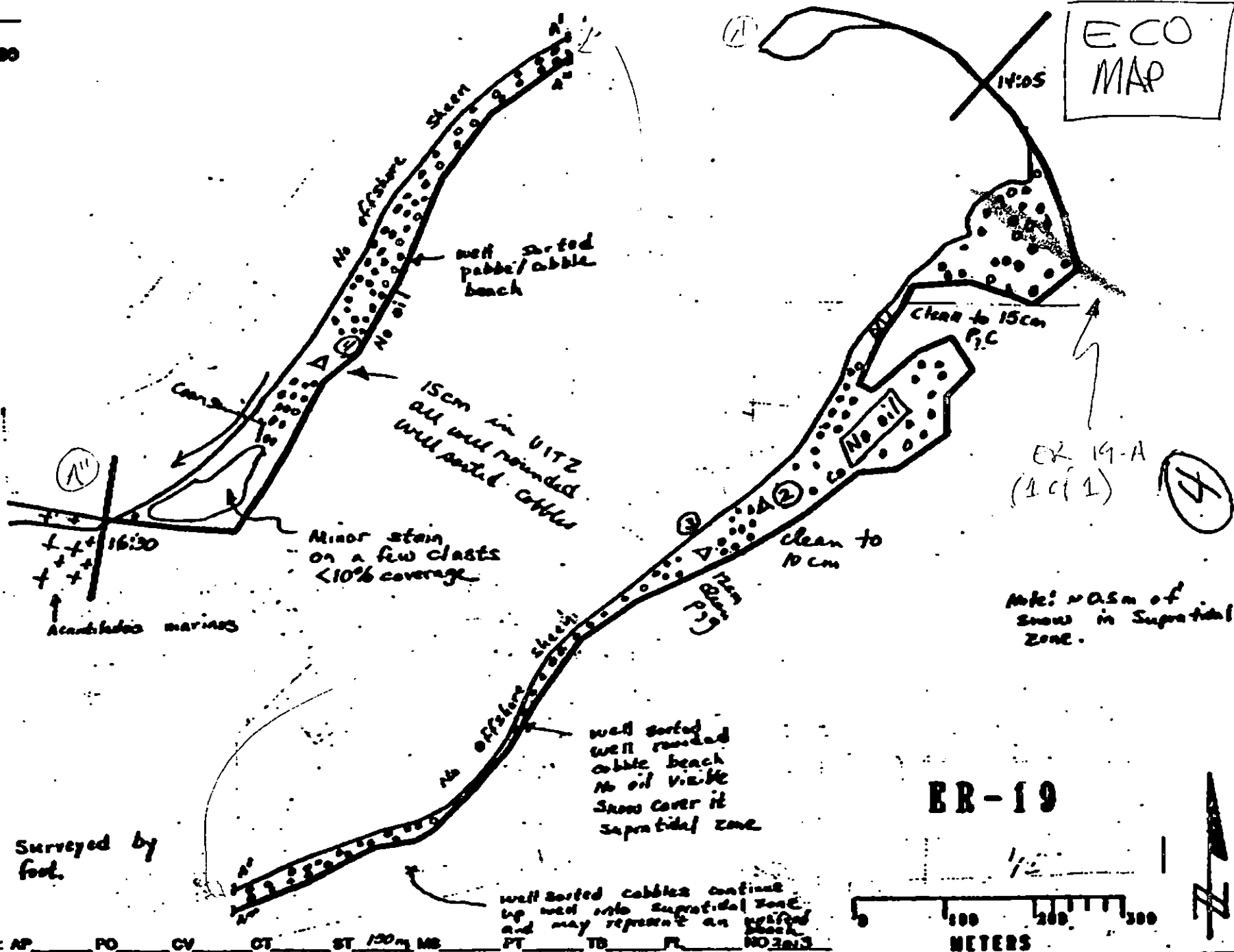
SKETCH MAP

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Sup/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLAWL
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- ☒ Δ PT - No Substrate Oil
- ☒ Δ PT - Substrate Oil
- ☒ CT/C Coarse Distribution
- ☒ CT/B Broken Distribution
- ☒ CT/P Patchy Distribution
- ☒ CT/S Splashed Distribution
- ☒ Cld Vegetation
- ☒ $\rightarrow$ Photo location, direction, and number



Oil Character Length (m): AP PO CV CT ST 150m MB PT TB PL NO 3m 13

ER-19

0 100 200 300
METERS

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-20

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION A (1 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 98 m: Narrow 47 m: V.Light 180 m: No Oil 96 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 25 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommend bioremediation of area shown on sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SEGMENT ST/ ER20 SUBDIVISION: A DATE 08 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

1. MANUALLY REMOVE ANY TAR PARTICLES OR BALLS.
2. BIO-REMEDIATE.

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

- ① Remove subsurface sediments and oil,
- ② WASH oil from beach face, including cleaning crevices and fracture joints of oil.
- ③ Bioremediate

Care should be taken to remove oiled sediments from beneath boulder piles, to avoid later mobilization.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Uses for the area include subsistence finfish and deer harvesting. This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

3 of 17

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-20
 BIO Bob Lemen LAND REP Leigh Carlson SUBDIVISION A
 EXXON Jon Czarnecki ADEC Dave Sale TIME 08:27 to 09:30
 TEAM NO.: 10 TIDE LEVEL: 1.1m(3.5') to 1.7m(5.5') DATE 07 / April / 90
 EST. SUBDIVISION LENGTH: 463 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 35 % Hang 55 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 85 m N 27 m VL 163 m NO 188 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	R	NO	BR	FW	OL	SL	TL	SU	UI	M	U
ASPHALT PAVEMENT														
POOLED														
COVER		✓		X				✓	X			✓	X	
COAT			X					X				X		
STAIN				X				X				X		
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X		X	X

PAVEMENT: H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			
	SM	MD	LG	
Logs	2			DEBRIS COLLECTED ☐ YES ☒ NO
Vegetation		2		
Trash				
Debris				
				TYPE _____
				#BAGS <u>0</u>

Photographs:

Roll No. 35/10/9

Frames 18-23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	VO	BR	FW	OL	SL	TL	SU	UI	M	U		
1	22	X					0-3	X				X			X				N	B, C
	22				X		3-4		X			X			X				N	B, C
2	27	X					0-10	X						X	X				N	B, C
			X				10-25		X					X	X				N	B, C
3	6	X					0-6	X						X	X				N	C, Rubble
4	24		X				0-12		X					X		X			N	C, G / Rock

COMMENTS

Revision
 R. Marty 8 April 1990

2 of 17

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER 20 Subdivision A Date (mo/day/yr) 4/7/90
0830-0930
 Time (24 hr) 0830-0930 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 60 (2) Boulder 15 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 60% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs:
 Roll No. ST/10/9

Frames 18-23

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	X	X	X	2	2	2	2	2	2
3	3	3	X	3	3	3	X	X	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	2	X	1L	X	1M	X
3	3	3	3	3	3	X	3	3	X	X	X
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

ASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	X	X	2	2	2
3	3	3	3	3	3	X	X	X	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	X	2	X	2	2	2
3	3	3	3	X	3	X	3	X	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: Mixed red algae made up much of the low zone cover. *Demostrius* (ASTEROID), gammarid amphipods, *Serpentaria* and other polychaetes were common in the low zone. 2 waterfowl and 1 deer in 2 eagle sightings were made.

Ecological Considerations: Stream mouth spawning, finfish harvest, deer harvest.

58

Map Key: PWS-157
Name: _____
Date: _____
Date Entered: _____

**Medium
Narrow**

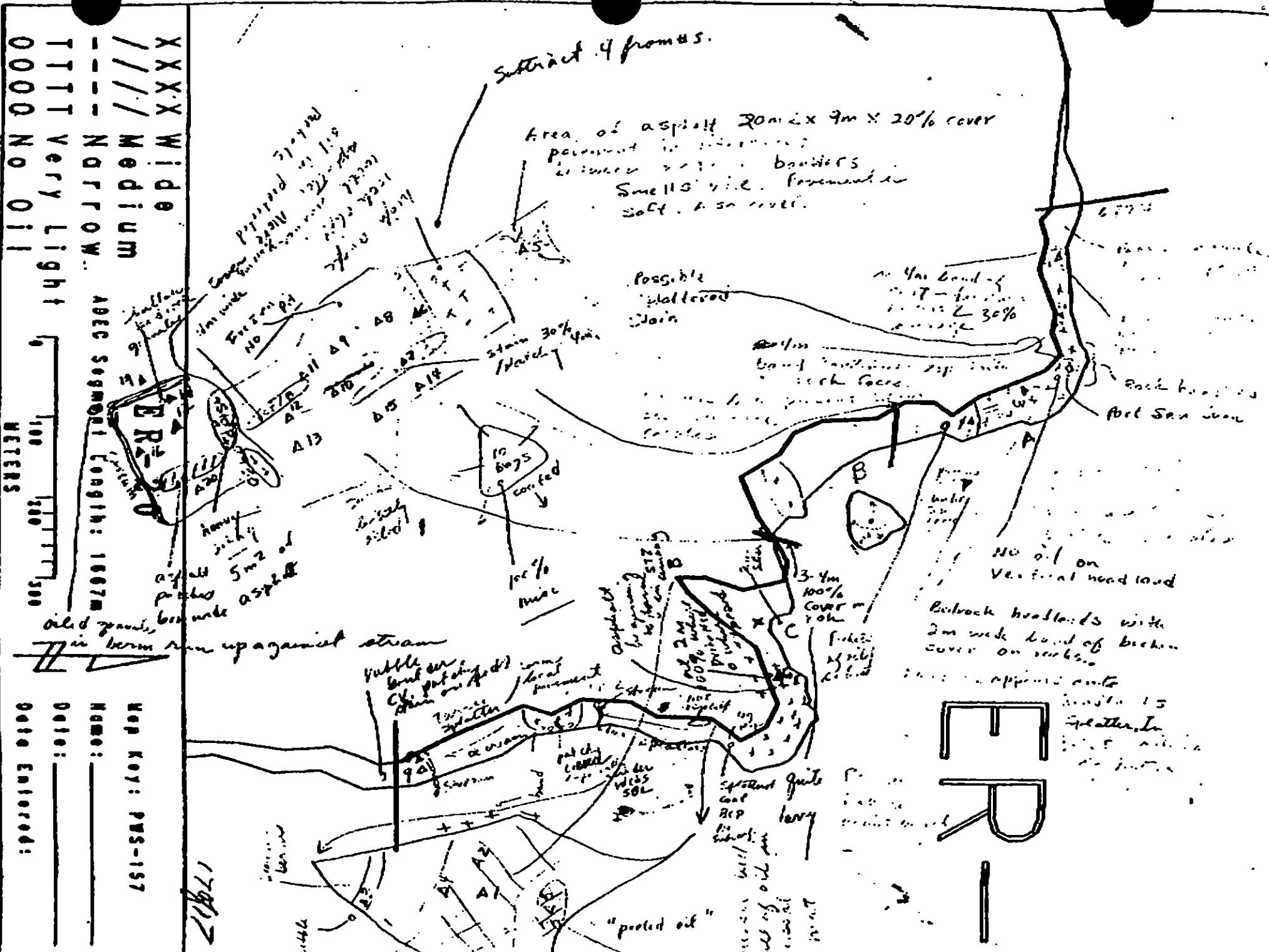
ABC Segment Length: 1667m

Map Key: PMS-157

100

SECRET

FOR ENJOY



OG Party
SEGMENT ST/ER20

KETCH MAP

SUBDIVISION A

DATE 7 April 90

CHECKLIST

☐ M Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWA,VA
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pts Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

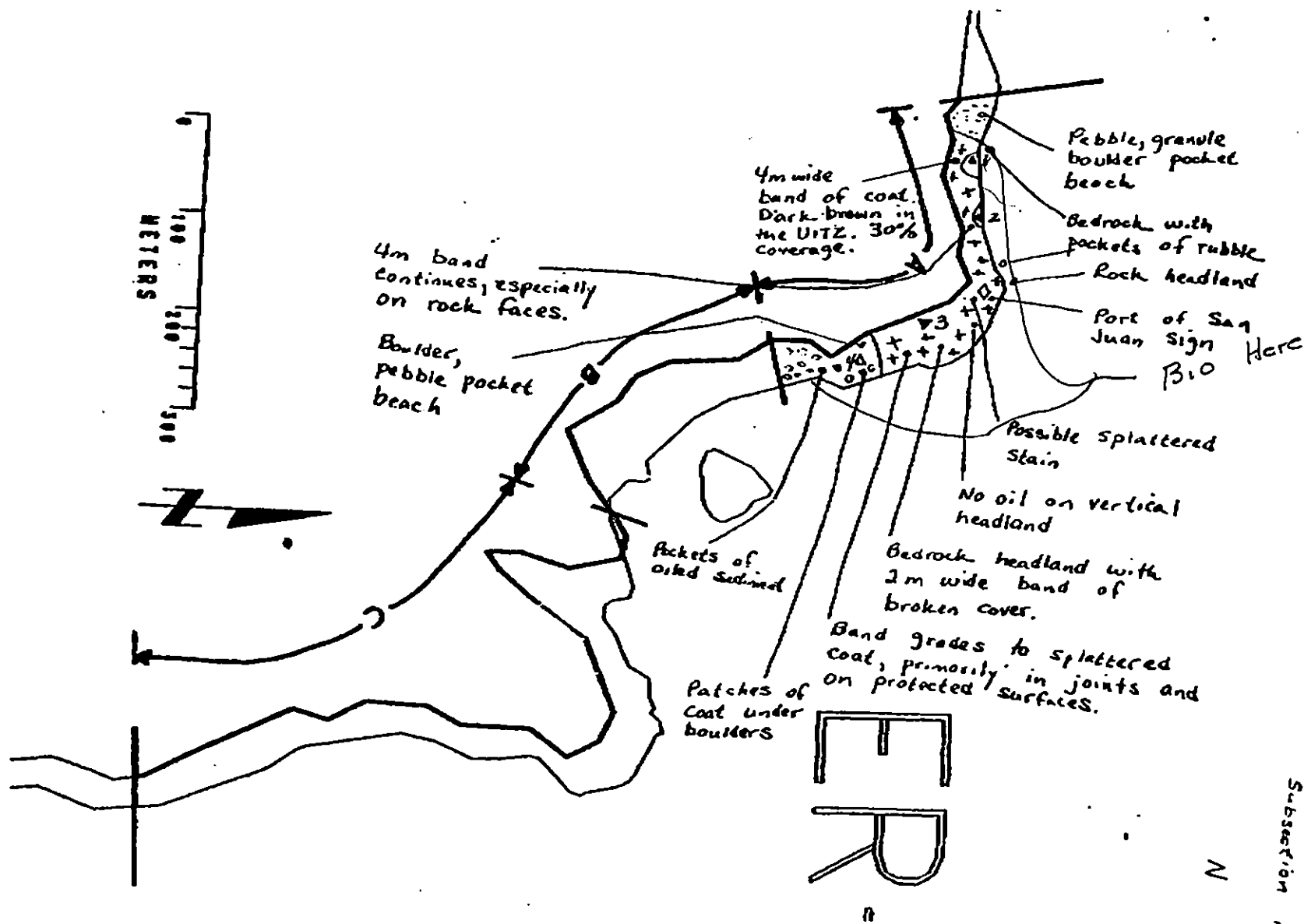
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splattered Distribution

Oiled Vegetation

Photo location, direction, and number



Oil Character Length (m): AP 40 PO 210 CV 40 CT 40 ST 40 MS PT TB FL NO

ER-

		unconn.	harmed.
A mod.	0.5"	75m	95m
A light	0.15"	23m	27m
A vi	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C vi	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

15 of 17

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-20 A

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-20

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION B (2 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 221*m: Medium 320**m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 46+cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Recommend 1) removal of tarmat and asphalt patches, and 2) bioremediation with raking of areas indicated on sketch map.

* 221m Exxon length (no islet shown on ADEC map)

** 320m ADEC length

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SEGMENT ST / ER20 SUBDIVISION: B DATE 08 APRIL 9.

USCG

NAME LARRY FLETCHER

SIGNATURE

Larry R Fletcher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

ENTIRE SUB DIVISION HAS HEAVY SUB-SURFACE OIL. NO SHEEN
SIGHTED AT THIS TIME, HOWEVER THE HEAVY OILING MAY BEGIN
TO SHEEN LATER DURING WARM WEATHER.

ADEC

NAME DAVID M. SAGE

SIGNATURE

David M Sage☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

This section remains very badly oiled, and, because of
proximity to hatchery and the village of Chonaga, should
be completely cleaned up. All treatment methods should be considered.

- ① wash oil with high pressure from behind fence
- ② remove and/or clean oiled sediments below boulder piles
- ③ oiled sediments in main beach area will either require
flushing by implantation of pipe in upper beach; or removal
of sediments. Attention should be paid to oiled gravel & debris
in upper beach near stream.

LAND MANAGER

NAME Leigh Carlson

SIGNATURE

Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Uses for the area include subsistence finfish and deer harvesting.
This subdivision contains a salmon stream which is oiled and should
be looked at by ADF+G. The segment is heavily oiled and will
need some type of washing or other intensive method to remove it.

REVISION NO. 03/22/00

SURFACE OIL

24-38

781

SHORELINE OILING SUMMARY (PAGE ___ of ___)

REVISION 03/22/90

SEGMENT ST/ ER 20 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

Pits continued from previous page

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm-cm (PAL-GM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW	BR	DR	RM	BY	BL	DR	FL	BU	U	M	U		
7	40					X	.											X				N	G, S, Peat
8	43			X			11 - 43	X						X					X			N	G, S, Peat
* 9	6			X			1 - 22	X						X						X		N	G, S, Peat
10	17					X	.														X	N	G, S
11	20					X	.														X	N	G, S
12	25					X	.													X		N	P
* 13	25			X			10 - 16	X						X				X				N	P
* 14	27		X				0 - 27	X						X				X				N	P
* 15	34		X				0 - 4	X						X				X				N	S, G
16	50					X	.														X	N	G
							.																
							.																
							.																
							.																

COMMENTS

Revision

RM 07 April 1990

* oil is same as nr
constitute subsurface oil.

8/17

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER30 Subdivision B Date (mo/day/yr) 4/7/90
 1530-1700
 Time (24 hr) _____ Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 10 (3) Cobble 30 (4) Pebble 20 (5) Sand 30 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 20%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/10 and ST/10/9
 Frames 1-14 and 24-38

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	X	X	X	2	2	2	
3	3	3	3	3	3	X	X	X	3	3	3	
4	4	4	4	4	4	X	X	X	4	4	4	
5	5	5	5	5	5	X	X	X	5	5	5	
6	6	6	6	6	6	X	X	X	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	X	X	X	X	X	X	
3	3	3	3	3	3	X	X	X	X	X	X	
4	4	4	4	4	4	X	X	X	X	X	X	
5	5	5	5	5	5	X	X	X	X	X	X	
6	6	6	6	6	6	X	X	X	X	X	X	

ASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	X	X	X	2	2	2	
3	3	3	3	3	3	X	X	X	3	3	3	
4	4	4	4	4	4	X	X	X	4	4	4	
5	5	5	5	5	5	X	X	X	5	5	5	
6	6	6	6	6	6	X	X	X	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	X	X	X	2	2	2	
3	3	3	3	3	3	X	X	X	3	3	3	
4	4	4	4	4	4	X	X	X	4	4	4	
5	5	5	5	5	5	X	X	X	5	5	5	
6	6	6	6	6	6	X	X	X	6	6	6	

Wildlife Observations/ General Comments: This subdivision is exposed to a 70 mile NE. fetch and gets a lot of storm and it also got a lot of oil. Therefore large areas are unoccupied - 16 pits were dug in this subdivision.

Ecological Considerations: Stream mouth spawning, finfish harvest, deer harvest.

10/17

100 000 000
METERS

Map Key: PWS-157
Name: _____
Date: _____
Data Entered: _____

Subtract 4 from 5.

Area of asphalt 20m x 7m x 20% cover
 pavement in center
 2 m x 2 m boulders
 Smells like pavement
 soft. As on road.

possible
plotted
join

1. 4000 - 1000 = 3000
 2. 3000 - 1000 = 2000
 3. 2000 - 1000 = 1000
 4. 1000 - 1000 = 0

Port San Juan

No. 1 on
Ventral head land

Redrock headlands with
2m wide band of beach
cover on rocks.

Spencer, Ia
Oct 15 1892

"poetic oil"

N

Subsection 8

ER-

Soft asphalt pavement
in the crevices between
rocks. There
is also a heavy cover
on some clasts.
-55% continuous

Covered low lying island (CV/C).
far over the entire island
and about 10 km. in diameter
and 10 km.

high angle rock
cliff with minor
splatter on exposed
surfaces, but more
oil in cracks
30% cover 4m
wide

Bio

Renovate
Pavement

Manually
Renovate
Asphalt

Asphalt patches
6m wide 50%
cover very soft

Rake + Bio
This area

TCH MAP

Moderately
sorted
pebble
cobble
beach
ground
frozen
no pits

4m wide
band of
broken coat

Approximately
5m of pavement

Shallow bedrock
with a veneer of
granules.

Oiled granules in
storm drains run up
against the stream



OG R.N.
SEGMENT ST/ ER 20
SUBDIVISION 8
DATE 7 April 90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Which
- Length
- % Cover
- Substrate Character
- Est. HML/LWL
- SSL
- Profile Location(s)
- Profile(s)
- PH Location(s)
- Photo Location(s)

LEGEND

- 1 Δ PH - No Subsurface Oil
- 2 Δ PH - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splintered Distribution
- Oiled Vegetation
- 1 ●●● Photo location, direction, and number

9/8/17

Oil Character Length (m): AP 220 PO CV 370 CT 200 ST 300 MS PT TB FL NO



ER-20

Map Key: PWS-157

ADEC Segment Length: 1667m

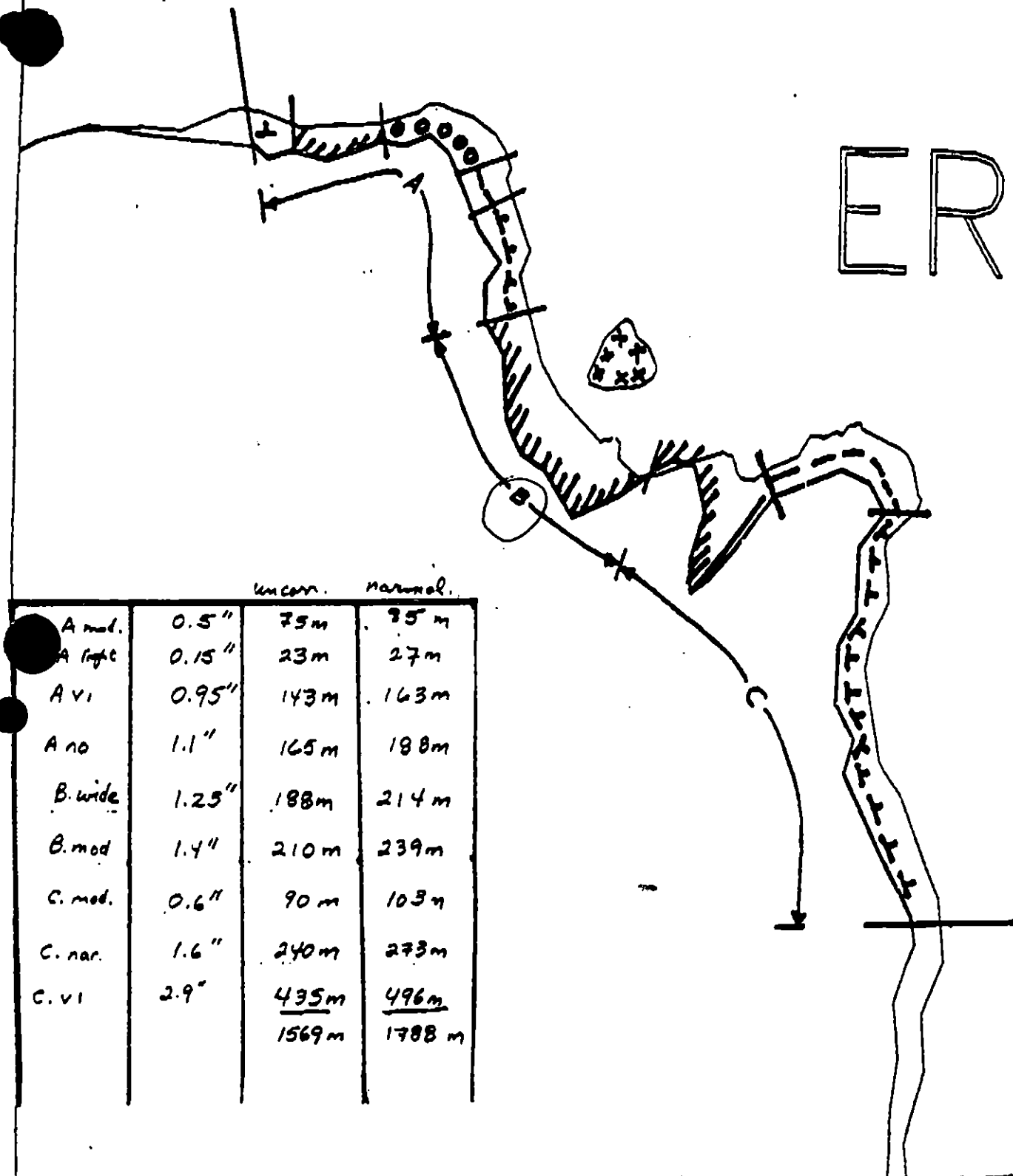
NAME: R. Marty

Date: 7 April 1990

A horizontal scale bar labeled "METERS" with markings at 0, 100, 200, and 300.

Data Entered:

ER-



15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-20

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 318 m: Narrow 147 m: V.Light 462 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 40 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☒ Snare/Absorbent Booms
☒ Treatment Recommended	☒ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☒ Spot Washing: ☒ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☒ Other (see comments)

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

SEGMENT ST 1 ER20 SUBDIVISION: C DATE 08 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

THIS SUB DIVISION IS HEAVILY OILED. NO SHEEN SIGHTED AT THIS TIME, HOWEVER IT MAY BEGIN TO SHEEN LATER DURING WARM WEATHER.

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① EARLY TARRED COAT ON BEDROCK MUST BE WASHED UNTIL STAIN REMAINS.
- ② OILED SEDIMENTS MUST BE REMOVED OR CLEANED IN PLACE WITH ROCK WASHING.
- ③ OIL TAIL ON SURFACE OF BEACH [ENLARGEMENT] WAS BECOMING MOBILE IN WARM SUN.
- ④ REMOVE OILED DEBRIS.
- ⑤ BIOREMEDIATE

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNIR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Uses for the area include subsistence finfish and deer harvesting.

This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

12817

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-20
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION C 1/2
 EXXON Jon Czorneki ADEC Dave Sale TIME 17:00 to 19:00
 TEAM NO.: 10 TIDE LEVEL: 10.9m (1) to 0.15m (25) DATE 07 April 1990
 EST. SUBDIVISION LENGTH: 872 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N 10 S
 SURFACE SEDIMENTS: R 15 % B 30 % C 15 % P 15 % G 15 % S 5 % M 5 % V 5 %
 SLOPE: Long 90 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 103 m N 273 m VL 496 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	BR	OR	OL	GR	BL	TL	LR	TR	SU	UI	ML	UL
ASPHALT PAVEMENT				X						X		X				
POOLED		X								X					X	
COVER		X	0	✓						X			X		0	
COAT				X						X			X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																X

PAVEMENT: H F (S) 5 sq. m by 5 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS 0

Photographs:

Roll No. ST/10/10Frames 15-26

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL Cm - cm (Inches)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			VO	VC	BR OR	OR RV	OL BL	GR TL	LR	SU	U	M	U			
* 1	24	X					0.4		X					X			X				Y	P, M
* 2	15			X			2.4		X	X							X				Y	P, M, P, B, C, S
3	37					X	.										X				N	P, S
* 4	15	X					0.15	X						X			X				N	G, S
* 5	6			X			1.6	X						X			X				N	S
* 6	62			X			6.40	X									X					G

COMMENTS

Revision

RM 07 April 1990

* oil depths ≤ 5 m do not

constitute subsurface oil.

11 of 17

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/20/90

SEGMENT ST/ ER-20 SUBDIVISION C

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

Pil 7 - light silver sheen on water in pil

Revision

RM 7 April 1990

16 of 17

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22/79

Segment ST/106K 22 Subdivision C Date (mo / day / yr) 4 / 7 / 79

Time (24 hr) 1700 - 1900 Biologist Lemon

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 30 (3) Cobble 15 (4) Pebble 15 (5) Sand 20 (6) Silt 5

(B) Overall % cover of biota (% of segment): Dense Moderate 55% Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 57/10/10

Frames 15 - 26

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: Gastropods include Oncidella borealis, Oligochaeta living in oil pit 1. Most remarkable were Mytilus beached on 6 cm of oil pit 5. Frankia roll 10, many deer tracks & scat along E. Shore.

Ecological Considerations: Inspected stream, no larva & some quick fish (4 cm) darted away; pit by stream was oiled. Protothaca staminea (BIVALVE) shells not uncommon suggesting possible oiled beds of commercial value. Stream mouth spawning. fin fish harvest, deer harvest.

174/17

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

OG P. J. Marty

SEGMENT WATER 20

SUBDIVISION C

DATE 7 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. FNNL/VNL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

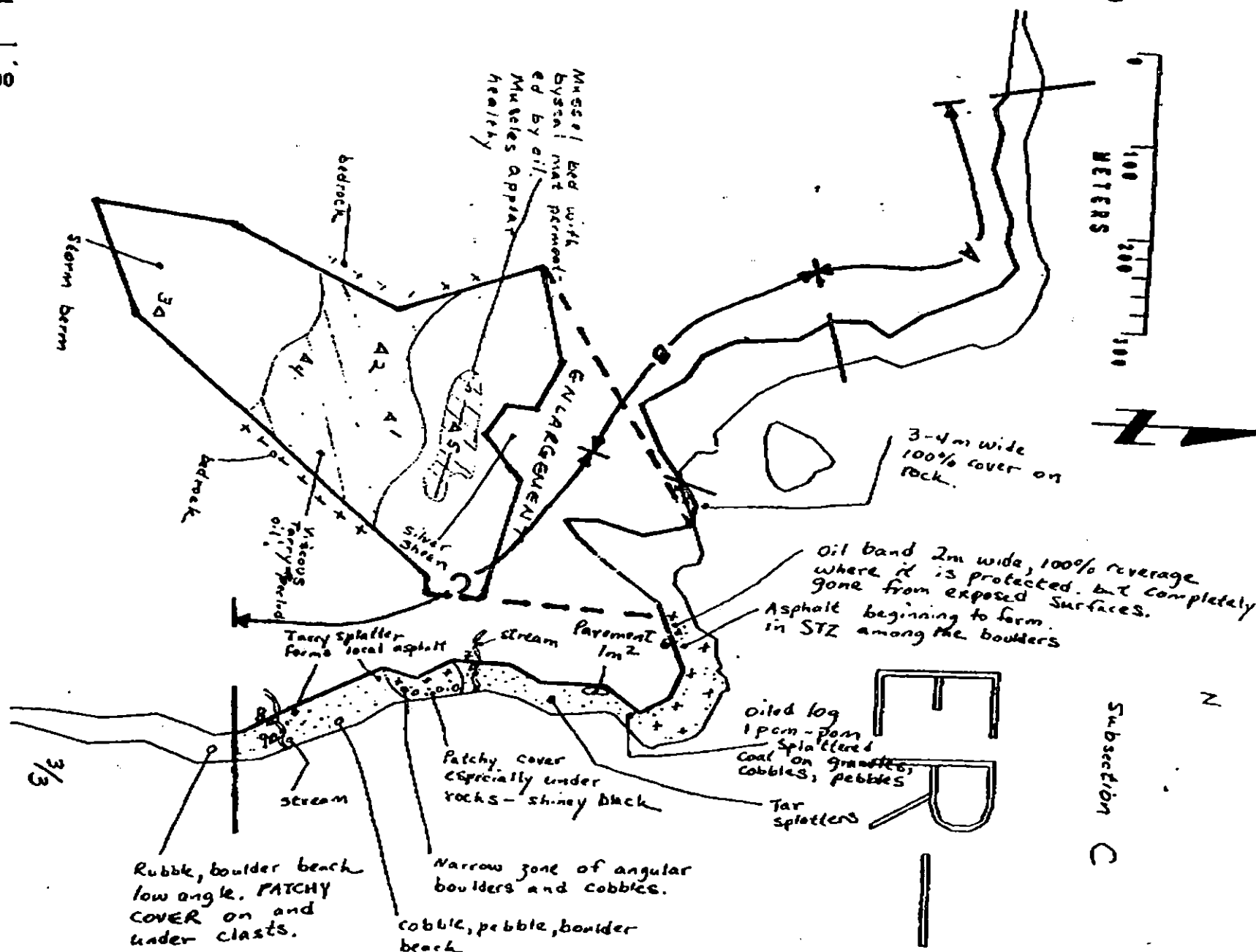
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 $\bullet \rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP 5 PO 60 CV 70 CT 735 ST MS PT TB FL NO

REVISION: 02/2/90

ER-

uncorr. normal.

A mod.	0.5"	75m	95m
A light	0.15"	23m	27m
A v1	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C v1	2.9"	<u>435m</u> 1569m	<u>496m</u> 1788m

15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



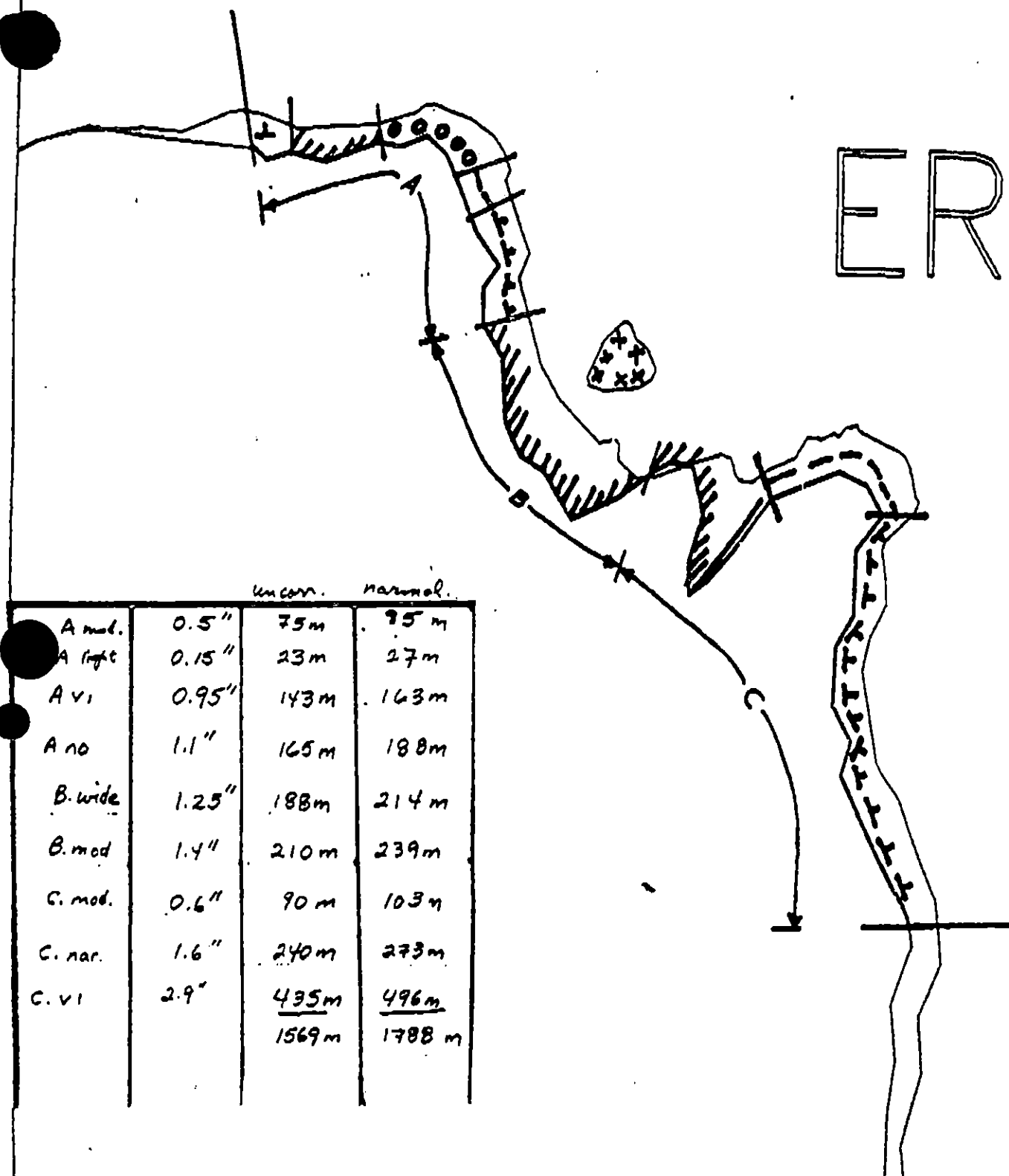
METERS

Map Key: PWS-157

Name: R. MartyDate: 7 April 1990

Data Entered:

ER-



		uncorr.	normal.
A mod.	0.5"	75m	95m
A light	0.15"	23m	27m
A v1	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C v1	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

15 of 17

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION A (1 of 3)

WORK WINDOW	
Bioremediation	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	Closed to bioremediation after 7/25.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7HH	Subsistence: Finfish Harvesting	Closed to bioremediation after 7/1.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Restrict beach disturbance to essential minimum after 8/15. ^{WPK} No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

WPK DATE 6-10-90

Prepared by:

WPKelley

Date:

6/9/90

LV-51

EV-50

EV-52

TREATMENT
AREA

No boat, beach
Aircraft access
USFWS survey
5/26/90

ER-20

ACTIVE
NEST C



Exxon Company, USA
Map Key: PWS-ER-20

ECOLOGY MAP
SEGMENT ER-20
SUBDIVISION A (1 of 3)
METERS

- ★ Seabird Colony
- ▲ Active Eagle Nest
- △ Inactive Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION A (1 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. H. H. H. DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 98 m: Narrow 47 m: V. Light 180 m: No Oil 96 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend bioremediation of area shown on sketch map.

See Constraint Addendum Dated 6/9/90 WKC

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.

ADEC Art Weimer Art Weimer
EXXON ANDY TCH ANDY TCH
NOAA Burt Wescott Burt Wescott
USCG Kenneth K. K. K. Kenneth K. K.

FOSC: DATE:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 7/25.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, manual raking, and bioremediation within 400m of active nest.
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup and tarmat removal. Closed to bioremediation and manual raking after 7/1.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

Prepared by: W. Kelly

FOSC [Signature] DATE 6-10-90
Date 6/9/90

LV-51

EV-50

EV-52

ER-20

No Boat, beach
Aircraft Access
USFWS Survey
5/26/90
(Lockhart)

ACTIVE
NEST

TREATMENT
AREA



Exxon Company, USA
Map Key: PMS-ER-20
June 04, 1990

ECOLOGY MAP
SEGMENT ER-20
SUBDIVISION B (2 of 3)

METERS

0 417 834

- ★ Seabird Colony
- ▲ Active Eagle Nest
- △ Inactive Eagle Nest

1 inch = 1368 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION B (2 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 221m: Medium 320**m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 46cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend 1) removal of tarmat and asphalt patches, and 2) bioremediation with raking of areas indicated on sketch map. Trash + debris

* 221m Exxon length (no islet shown on ADEC map)

** 320m ADEC length [See Addendum dated 6/9/90] wnc

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC Art Weiner Art Weiner
EXXON Ann Tack Ann Tack
NOAA Burt Wieroff Burt Wieroff
USCG Kenneth Keady Kenneth Keady

FOSC: [Signature] DATE: 4-27-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Mechanical Tilling Spot Washing Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|-----|---------------------------------|--|
| 1K | Purse Seine Hook-off | No constraint to manual pickup and oiled log/debris burning; closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 7/25. |
| 5T | Bald Eagle Nest | USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, bioremediation, mechanical tilling, spot washing, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation mechanical tilling, spot washing, and other approved treatment more than 400m from active nest. |
| 7HH | Subsistence: Finfish Harvesting | No constraint to manual pickup. Closed to bioremediation after 7/1. |
| 7II | Subsistence: Deer Harvesting | No constraint to manual pickup. Closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 8/15. |

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC

Date

6-12-90

Prepared by

Date

6/12/90

LV-51

▲ 434

▲ 375

▲ 435

▲ 437

▲ 436

EV-50

EV-52

ER-20

TREATMENT AREAS

ACTIVE NEST

▲ 368

Eagle Nest
Buffer Zone



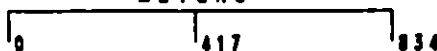
Exxon Company, USA
Map Key: PMS-ER-20

REV. 11. 1988 6/4/90

ECOLOGY MAP SEGMENT ER-20

SUBDIVISION C (3 of 3)

METERS



Seabird Colony



Eagle Nest

1 inch = 1368 feet

WORK PLAN ADDENDUM

Segment ER-20

Subdivision: C

Dated: 5/9/90

MODIFICATION

1. REASON FOR MODIFICATION

- Snow melt in SUITZ revealed additional tarmats, requested from field
for further clarification to continue access and removal of asphalt lens.

2. ADJUSTMENT TO WORK PLAN

- Manually remove asphalt lens that continues under the storm berm.
Manually rake down clean storm berm material into the UITS to access
the lens where practical. Clean material removal should not exceed
a depth of 12".
- Consultation with Cultural Resource Staff indicates no concern
archaeologically no further action required.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/9/90.

ADEC ART WENNER Det Wenner
EXXON ANNY TEAL
NOAA Bur Wescott
USCG D.D. ROME

FOSC [Signature] DATE 5-9-90

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Marken E. Hume DATE: 4/23/90

OILING CATEGORIZATION:

Wide_0_m: Medium_318_m: Narrow_147_m: V.Light_462_m: No Oil_0_m
Subsurface Oil Observed: Yes_X No Maximum Depth 40 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> X </u> Snare/Absorbent Booms
<u> X </u> Treatment Recommended	<u> X </u> Oil Snares (pom poms)
<u> X </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> X </u> Bioremediation	<u> X </u> Spot Washing: <u> X </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> X </u> Other (see comments)

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling. MECHANICAL TILLING SHOULD NOT BE ALLOWED IN THE AREA OF DENSE MUSSEL BEDS IN THE LITZ

SOS CONSTRAINTS ADDENDUM dated 6/12/90

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/21/78

ADEC ART WELNER Art Weiner

EXXON ARMY TEAR

NOAA Burl Wescott Burl Wescott

USCG Ken... 74 Ken... 6... 1...

FOSC: W L DATE: 4-27-90

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION A (1 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Holmes DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 98 m: Narrow 47 m: V.Light 180 m: No Oil 96 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of area shown on sketch map.

TAG COMMENTS:

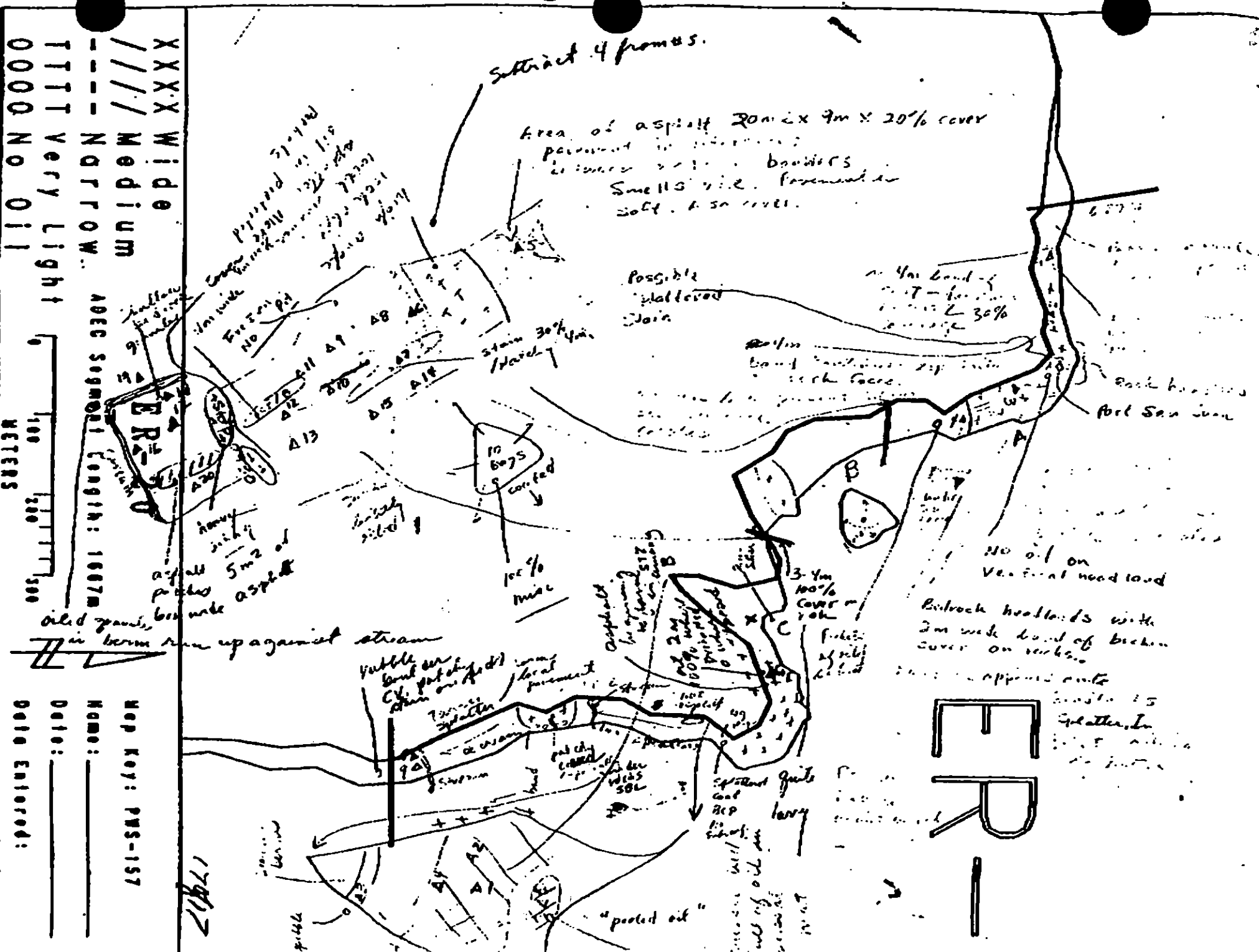
TAG APPROVAL DATE: 4/21/90.

ADEC Art Weiner Art Weiner
EXXON ANDY TEAL Andy Teal
NOAA Burt Wescott Burt Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC: Myh

DATE: 4-27-90

Map Key: PWS-157
Name: _____
Date: _____
Data Entered: _____



Subtract 4 from 45.

Area of asphalt 20m x 9m x 20% cover
 pavement in stream
 to lower water level boulders
 Smells like pavement in
 soft. A. 50 level.

Possible
 Blattered
 Chain

No 4m band of
 oil - but
 in 30%
 cover

Bedrock
 band 20m x 20m x 20m
 rock face.

Rock boulders
 Port San Juan

No oil on
 Vertical head land

Bedrock headlands with
 2m wide band of broken
 cover on rocks.

ER

Spatter in
 15
 15

"poiled oil"

Spattered quite
 heavy
 full of oil in
 stream

10 bags
 covered

100%
 misc

Stain 30%
 Watchy

AS
 A1
 A2
 A3
 A4
 A5
 A6
 A7
 A8
 A9
 A10
 A11
 A12
 A13
 A14
 A15
 A16
 A17
 A18
 A19
 A20

Cover protected
 asphalt
 in protected
 area
 rock face
 asphalt
 5m x 2m
 patches
 brown asphalt

ER

ADEC Segment Length: 1667m

Map Key: PWS-157

Name:

Date:

Date Entered:

XXXX Wide
 Medium
 NOT FLOW
 Very Light
 0000 No Oil

METERS
 100
 200
 300

oil in term run up against stream

Vulcan
 band car
 oil patching
 stream
 local
 pavement

patchy
 covered
 asphalt
 50m

17/11/77

OG Realty
SEGMENT ER20

SUBDIVISION A

DATE 7 April 90

ETCH MAP

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pk Location(s)
- ☐ Photo Location(s)

LEGEND

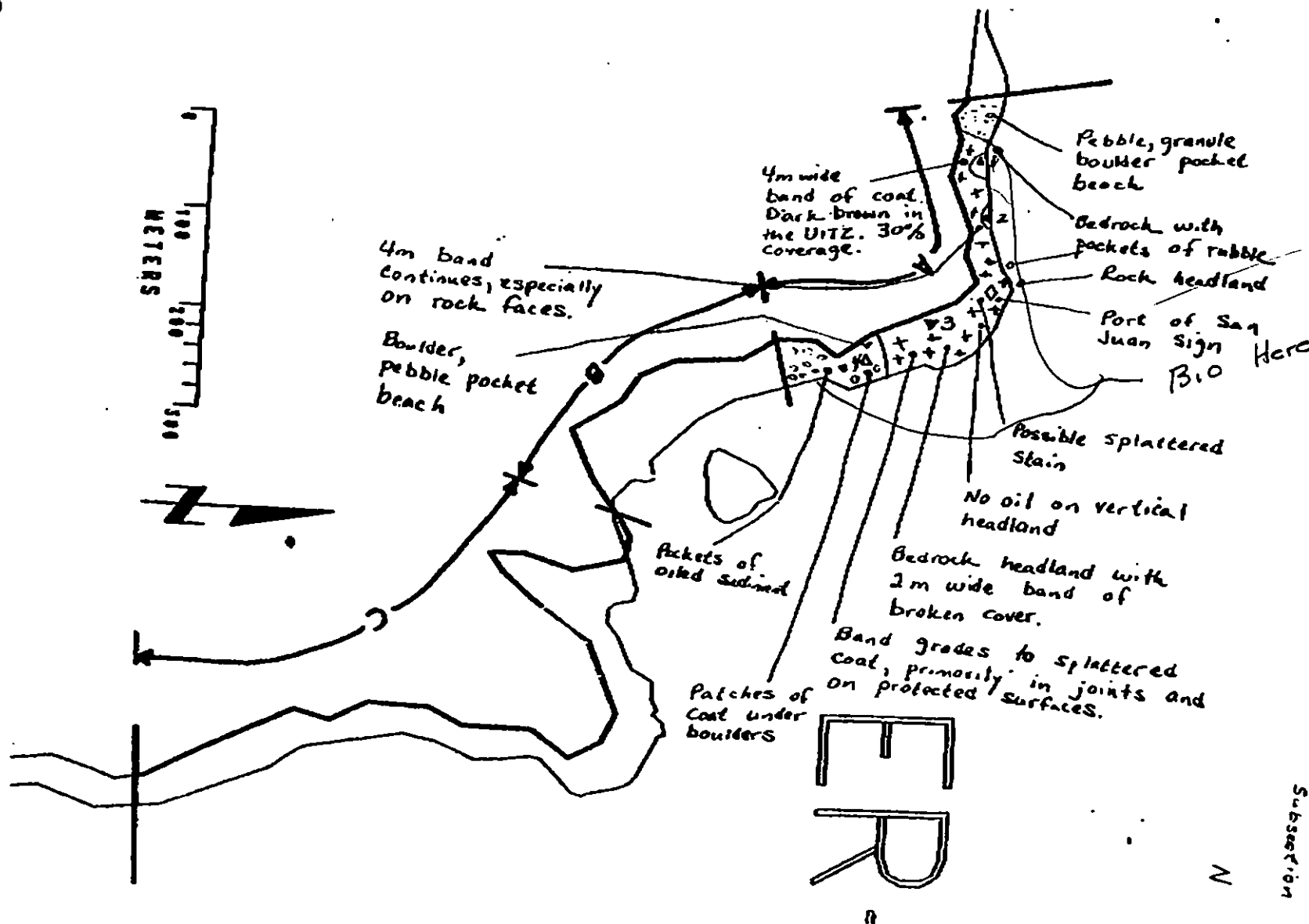
- 1 Δ
- Pk - No Subsurface Oil
- 2 Δ
- Pk - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

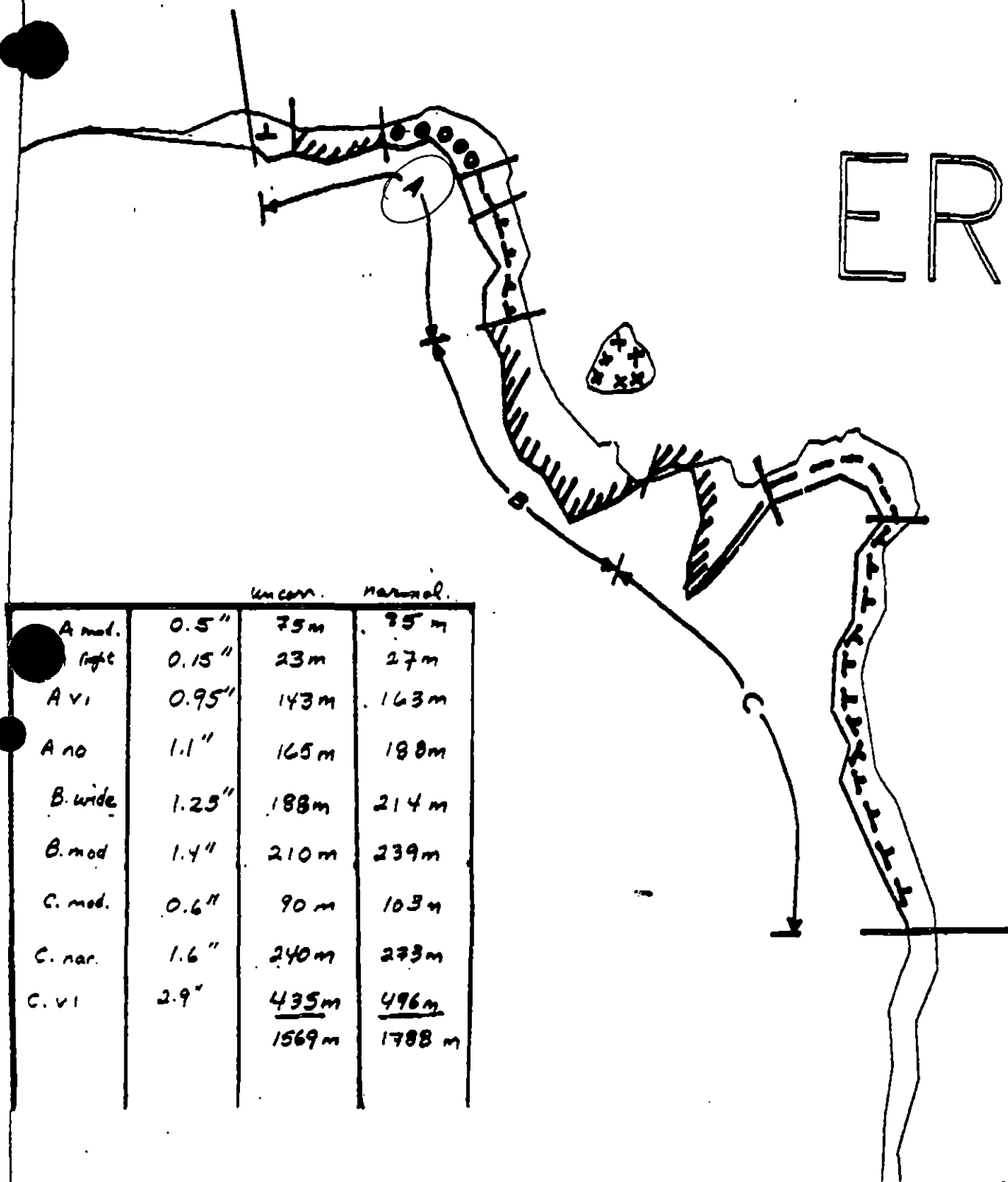
Patchy Distribution
- CT/S

Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 40 CT 210 ST 40 MS _____ PT _____ TB _____ FL _____ NO _____

ER-



		uncorr.	normal.
A mod.	0.5"	75m	75m
light	0.15"	23m	27m
A vi	0.95"	143m	143m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C. vi	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

15 of 17

XXXX Wide

ER-20 A

Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

/// Medium

ADEC Segment Length: 1667m

--- Narrow

TTTT Very Light

0000 No Oil



SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION B (2 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: *Paula E. Holmes*

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 221*m: Medium 320**m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 46+cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend 1) removal of tarmat and asphalt patches, and 2) bioremediation with raking of areas indicated on sketch map.

* 221m Exxon length (no islet shown on ADEC map)

** 320m ADEC length

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.

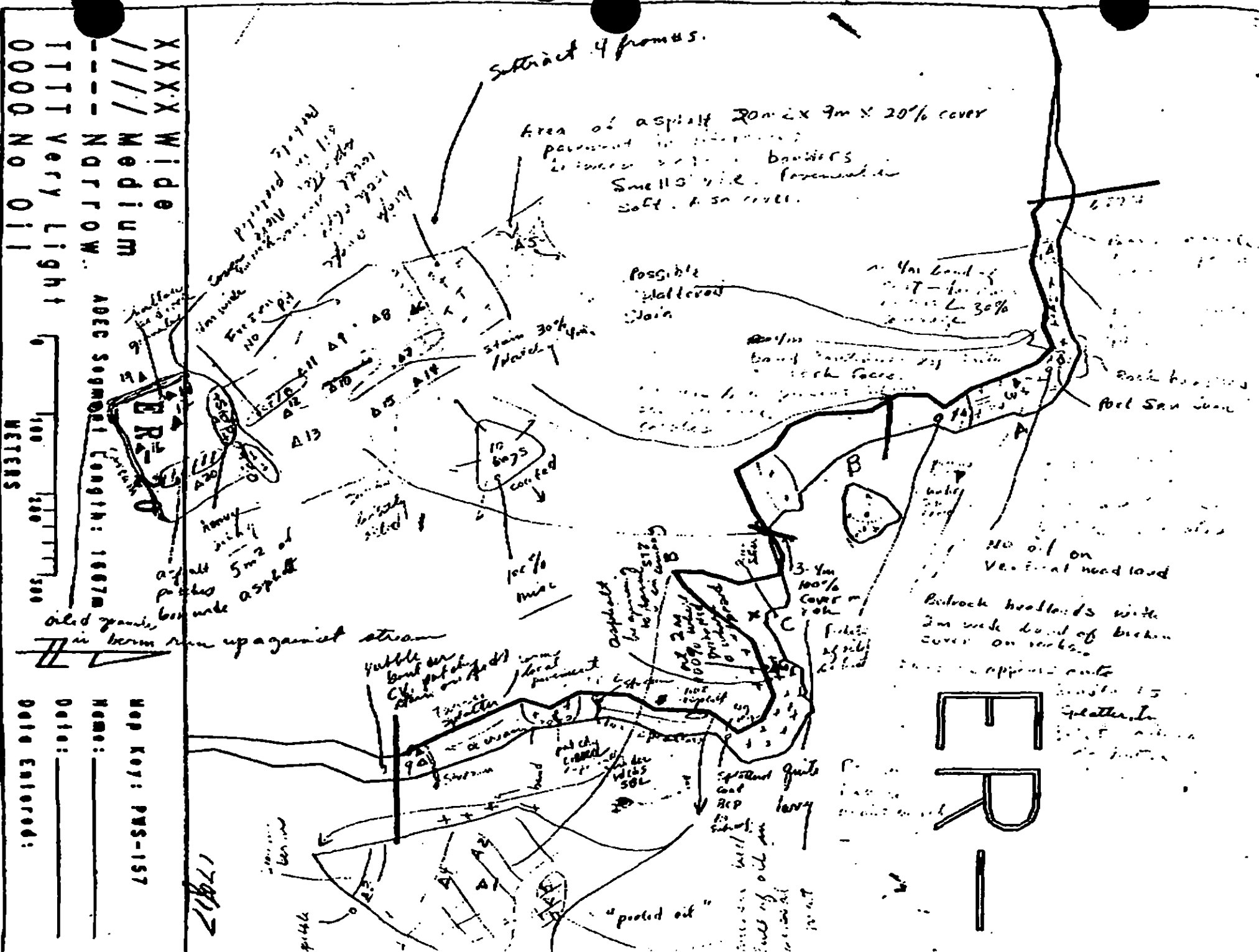
ADEC Art Weiner Art Weiner
EXXON Andy Tate Andy Tate
NOAA Bruce Werro Bruce Werro
USCG Kenneth Keane Kenneth Keane

FOSC: *[Signature]*

DATE: 4-27-90

TRASH + DEBRIS

Map Key: PMS-157
Name: _____
Date: _____
Data Entered: _____



N

ER-

MANUAL PAVE
Prior to BIO

Soft asphalt pavement
in places between
the main road. There
is also a tarry cover
on some clasts.
- 55% continuous

Sub Section B
Pick UP
OILED DEBRIS
+ TRASH

Covered low lying island (CV/C)
for over the entire island
and about 10 km. to the
north of the

high angle rock
cliff with minor
splatter on exposed
surfaces, but more
oil in cracks
30% cover 4m
wide

ETCH MAP

Moderately
sorted
pebble
cobble
beach

ground
frozen
no pits

4 m wide
band of
broken coat

Approximately
5m² of pavement

Shallow bedrock
with a veneer of
granules.

Oiled granules in
storm drains run up
against the stream

BIO

Renove
Powercoat

Manually
Renove
Asphalt

Asphalt patches
6m wide 50%
cover very soft

Pave + Bio
This area



OG R. 17
SEGMENT 01 ER 20
SUBDIVISION 0
DATE 7 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Sediment Character
- ☐ Est. HML/LVL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- 2 Δ
- PH - No Subsurface Oil
- PH - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation

Photo location, direction,
and number

9/8/17

Oil Character Length (m): AP 220 PO CV 370 CT 200 ST 300 MS PT TB FL NO

ER-

uncorr. normal.

A mod.	0.5"	75m	75m
A light	0.15"	23m	27m
A vi	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C. vi	2.9"	<u>435m</u> 1569m	<u>496m</u> 1788m

15 of 17

XXXX Wide

ER-20

Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

/// Medium

ADEC Segment Length: 1667m

--- Narrow

TTTT Very Light

0000 No Oil



ER-

		uncorr.	normal.
A mod.	0.5"	73m	95m
light	0.15"	23m	27m
A v.	0.95"	143m	163m
A no	1.1"	165m	188m
B. wide	1.25"	188m	214m
B. mod	1.4"	210m	239m
C. mod.	0.6"	90m	103m
C. nar.	1.6"	240m	273m
C. v.	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m



15 of 17

XXXX Wide

ER-20

Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

/// Medium

ADEC Segment Length: 1667m

--- Narrow

TTTT Very Light

0000 No Oil



SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Walter Holmes DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 318 m: Narrow 147 m: V.Light 462 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

 No Treatment Recommended X Snare/Absorbent Booms
 X Treatment Recommended X Oil Snares (pom poms)
 X Manual Pickup _____ Absorbents (pads, rolls, etc)
 X Bioremediation X Spot Washing: X Wands
_____ Tarmat: _____ Breakup _____ Beach Cleaner
 _____ Removal X Other (see comments)

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling. MECHANICAL TILLING SHOULD NOT BE ALLOWED IN THE AREA OF DENSE MUSSEL BEDS IN THE LITZ

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/21/78

ADEC ART WEINER Art Weiner

EXXON *AM/TEAR Deal*

NOAA Burt Wescott Burt Wescott

USCG KENNETH KEANE *Kenneth Keane*

FOSC: W C DATE: 4-27-90

SKETCH MAP

___ N Arrow
 ___ Approx. Scale
 ___ Seg/Sub Bndry
 ___ Oil Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. HAIL/A/VIL
 ___ SSL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ Pit Location(s)
 ___ Photo Location(s)

LEGEND

14

Plt - No Subsurface Oil

2 ▲

PK - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distributions

CT/P

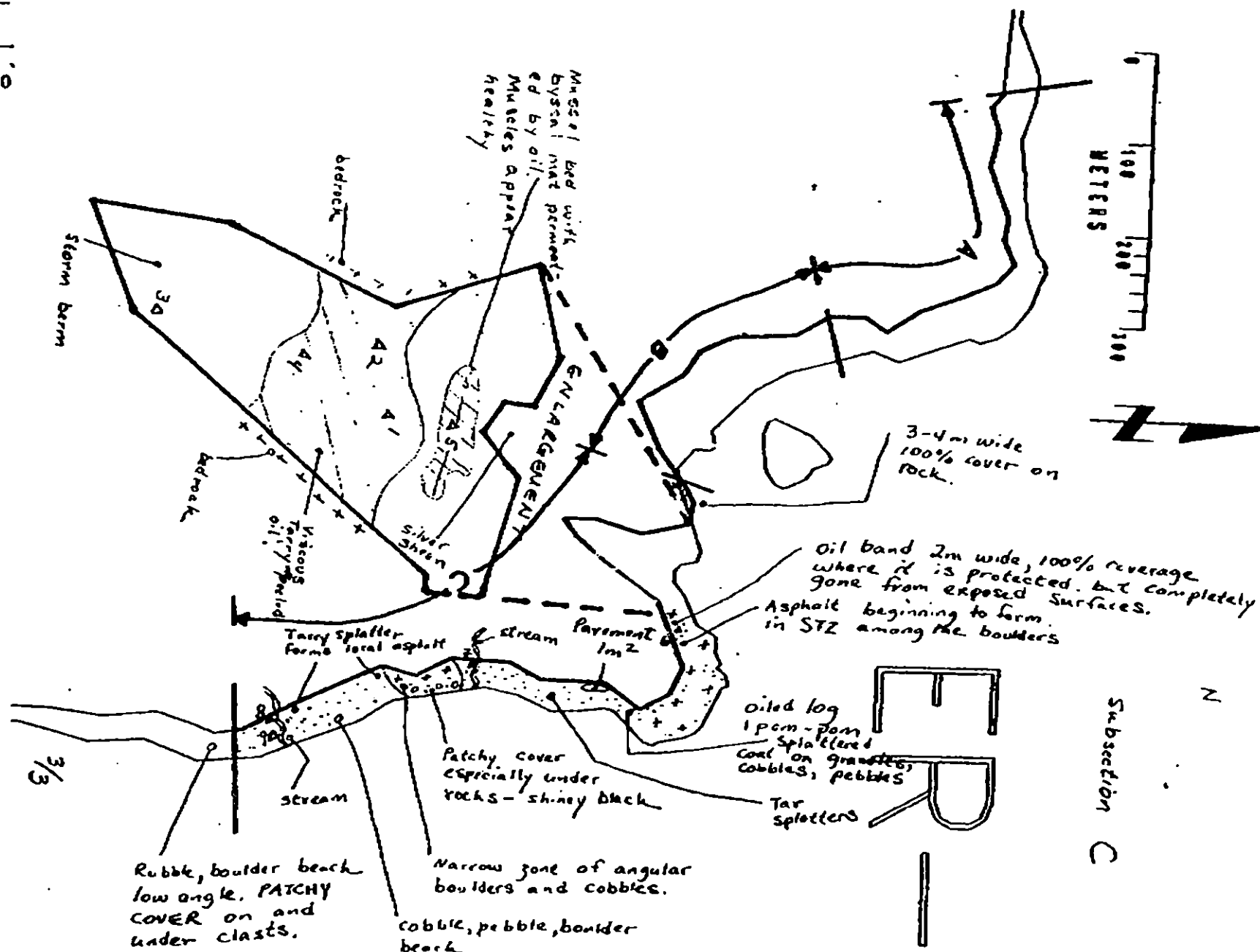
Patchy Distribution

CT/5

Saturated Distribution

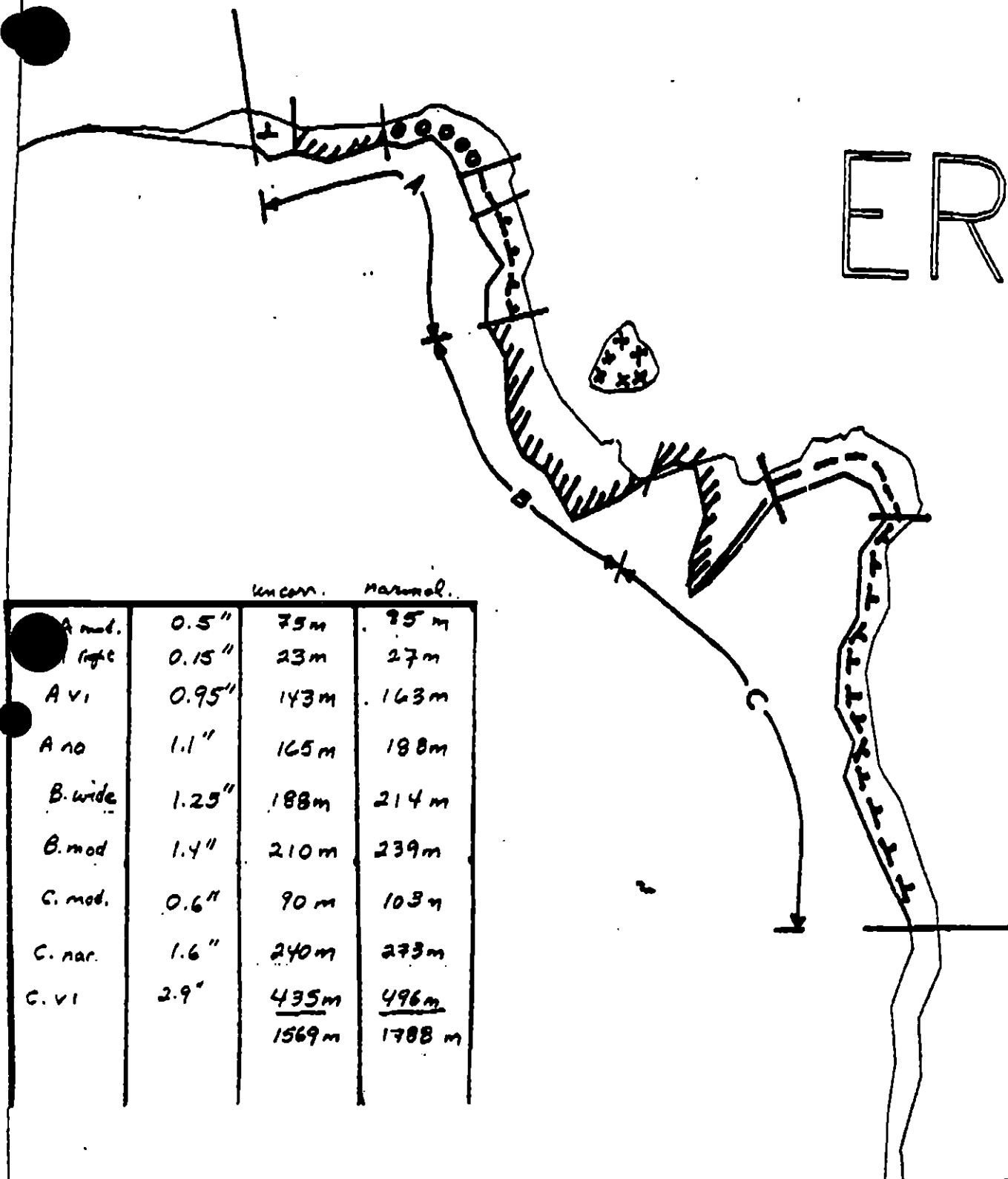
Climatic Vegetation

10

**Photo location, direction,
and number**

139

ER-



15 of 17

XXXX Wide

ER-20

Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

/// Medium

--- Narrow

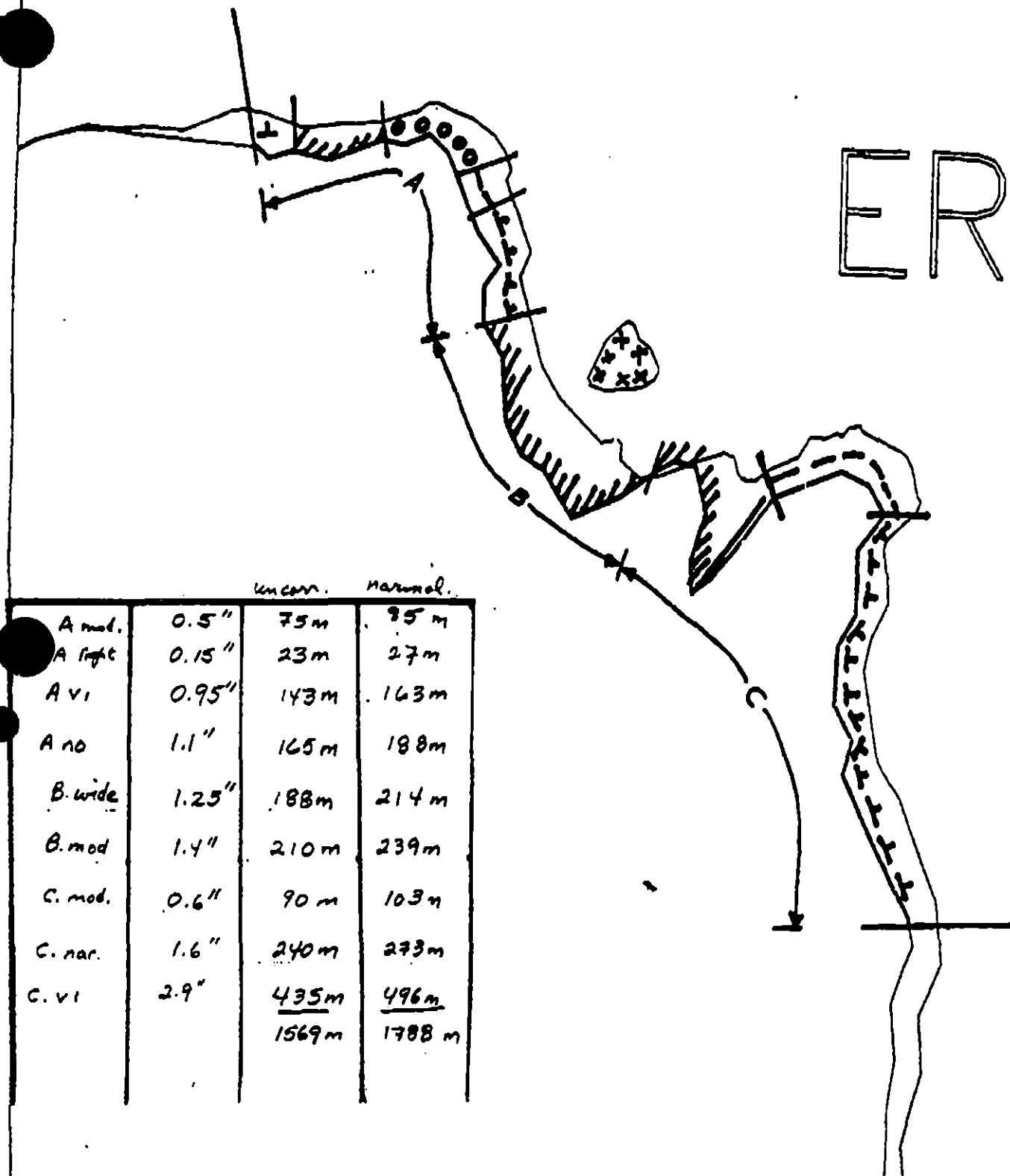
TTTT Very Light

0000 No Oil

ADEC Segment Length: 1667m



ER-



15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

AOEC Segment Length: 1667m



Map Key: PWS-157

Name: R. MartyDate: 7 April 1990

Data Entered:

WORK PLAN ADDENDUM

Segment ER-20

Subdivision: C

Dated: 5/9/90

MODIFICATION

1. REASON FOR MODIFICATION

- Snow melt in SUITZ revealed additional tarmats, requested from field
for further clarification to continue access and removal of asphalt lens.

2. ADJUSTMENT TO WORK PLAN

- Manually remove asphalt lens that continues under the storm berm.
Manually rake down clean storm berm material into the UITSZ to access
the lens where practical. Clean material removal should not exceed
a depth of 12".
- Consultation with Cultural Resource Staff indicates no concern
archaeologically no further action required.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/9/90.

ADEC ART WIGNER Dnt Wigners
EXXON ANNY TGAZ RGAZ
NOAA Burt Wescott Burt Wescott
USCG D.D. ROME DD Rome

FOSC [Signature] DATE 5-9-90

1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: A REGION: PWS SURVEY DATE: 5/19/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) **Fry release,**
Subsistence - Deer harvesting, Subsistence - Finfish harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy Smith for SHPS 6/17/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u> </u>	<u>X</u>	<u>X</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u>X</u>	<u>X</u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL: _____

TAG: MANUAL P/U OF EASILY ACCESSIBLE AP/HBOR AT
LOCATIONS A, H + I FOLLOWED BY CUSTOMBLN

FOSC: _____

TAG APPROVAL DATE: June 7 1991

FOSC APPROVAL DATE: 6/11/91

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

E. E. PAGE, CDR, USCG
 CHIEF OF STAFF, FOSC

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-20 SUBDIVISION A DATE 5 / 9 / 91

ADEC

NAME John Hays SIGNATURE [Signature]

☐ NTR

Recommend manual ptying of AP+SOR/H in areas A, I, + H.
Additionally recommend use of trowels to manually remove oil aerate
subsurface sediments between boulders in area H.

EXXON

NAME JOHN DEAN SIGNATURE [Signature]

☒ NTR

MOST REMAINING OILING IS CT, CV. MANUAL WORK
WOULD YIELD VERY SLIGHT RECOVERY. LAND MANAGER
SPECIFIES "NO BIO"

LANDMANAGER

NAME Steve WARD OF CVC/FS SIGNATURE [Signature]

☐ NTR

SEVERAL POCKET BEACHES CONTAIN ASSESSIDE SUBSURFACE OIL THAT
CAN EASILY BE REMOVED. LOTS OF OIL IS TRAPPED BETWEEN THESE ROCKS.
HIGH - PRIORITY USE AREA. BETTER DIS. BY CHENEGAH Y. HATCHERY AT
PORT SAN JUAN. OIL ~~WILL~~ BECOME MOBILE WITH HEAT.

High use Area

NO-BIO. / Chenequa Local Resp.

USCG/NOAA

NAME DREHER/CLINE SIGNATURE [Signature]

☒ NTR

FURTHER CLEAN UP OPERATIONS IN THIS SEGMENT WOULD CAUSE MORE ENVIRONMENTAL HARM
THAN THE OIL TO BE REMOVED. KAD

☐ NTR

SURFACE OILING OF ROcks includes traces of AP which could be easily
removed by manual treatment. On the east-facing side of the segment,
subsurface oiling was noted around site H. Manual washing and agitation
of the coarse sediments in this area is recommended. DRC

TEAM NO. 5

MAYSAP SHORELINE OILING SUMMARY

PAGE ____ OF ____

OG CHANEYBIO CRANKSEGMENT ER-20ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION AXON DEANUSCG/NOAA DREHER/CLINEDATE MAY, 19 1991TIME 10:20 to 11:30 AMTIDE LEVEL 3.0 ft. to -0.5 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 326 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W - m M 19 m N 30 m VL 170 m NO 107 m US 120 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S				S	S					B	M	5	5		✓			Boulder Pocket
B					S	S					CB	H	1	10		✓			
C					S	S					RBC	H	4	4		✓			
D				T	T	S	S				B	H	3	40		✓			
E				T	T						BR	H	2	25		✓			
F					T	T					BR	H	2	25		✓			
G					T	T					B	H	2	40		✓			ANGULAR BOULDERS
H				S	S	P					B	H	2	20		✓			
I	T			S	S	P					BR	H	5	10		✓			
J					T	T					BR	V	1	40		✓			
*A					T	T	T				B	H	4	50		✓			
*A		T		S	S	S	S				B	H	7	35		✓			

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5 - 19 FRAMES 14-17

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR BR SN	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	30							✓	-	-	-	N			✓		PG-PG	
2	35							✓	-	-	-	-			✓		PG-PG	
3A	15	✓							0-5	Y	-	-			✓		BC-PG	UNDER BLDRS
3B					✓				5-10	Y	-	-			✓		BC-PG	AREA (A) 2x10m
4	15							✓	-	-	-	-			✓		PG-PGB	
*5	15							✓	?	?	-	-			✓		Bc-LPB	
*6	15							✓	?	?	-	-			✓		BC-CPB	
*7	10	✓							0-10	N	-	-			✓		PG-GB	Between Boulders
*8	10	✓							10-10	Y	-	-			✓		PG-PAR	
*9	25							✓	-	-	-	-			✓		PG-PGB	

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THIS SUBDIVISION IS PRIMARILY COMPOSED OF A SERIES OF SMALL FISSURE COVES SEPERATED BY ROCKY HEADLANDS. THESE ARE TRAPS FOR OIL WHILE THE HEADLANDS ARE RELATIVELY OIL FREE.

*SOUTHERN MOST POCKET BEACH SURVEYED & ADDED 5/22/91 (with ER-20B)

REVISED: MC 5/28/91

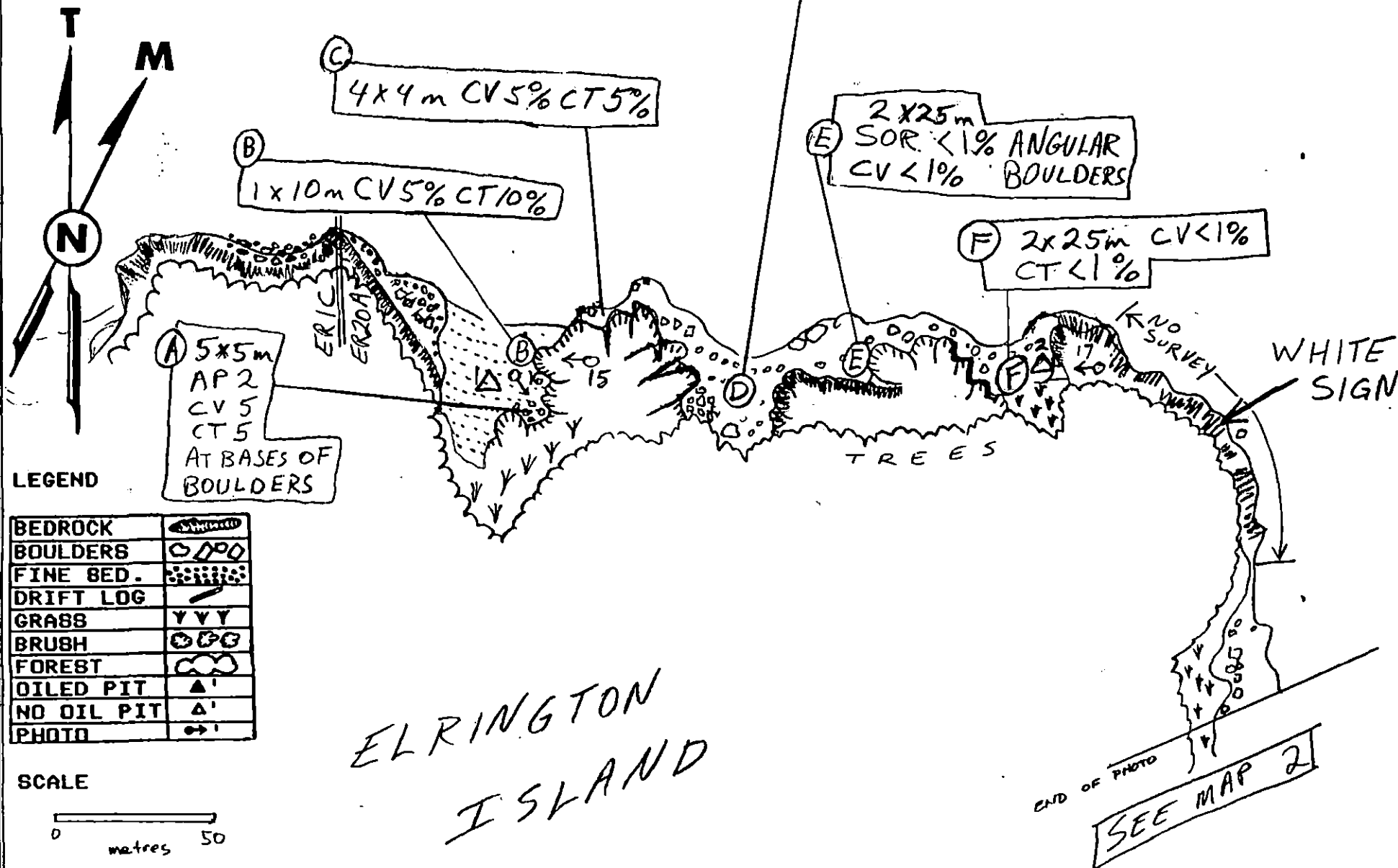
revised 5.28.91

re-revised 5.31.91

MAY 1991
 OG SOUTH MAP
 GREG CHANEY / DON CLINE
 TEAM 5
 SEGMENT: ER20 A
 DATE: MAY 19 1991
 AIR P.#: PIM-C 005-121

① 2x4 CV<1% CT1% ST2%
 SOR/H AROUND BOULDER
 BASES TR

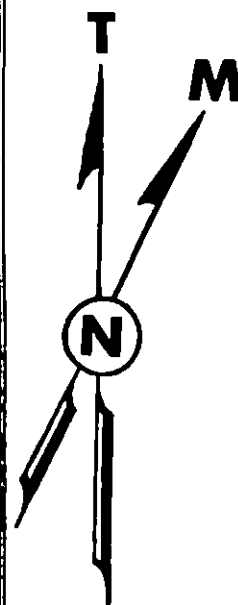
MAP 1 of 4



Reviewed: MC 5/24/91
 reviewed 5.28 91

MAY 19 1991
 06 8 11 MAP
 GREY HANEY
 TEAM 5
 SEGMENT: ER 20 A
 DATE: MAY 19 1991
 AIR P.#: PIMC005-121

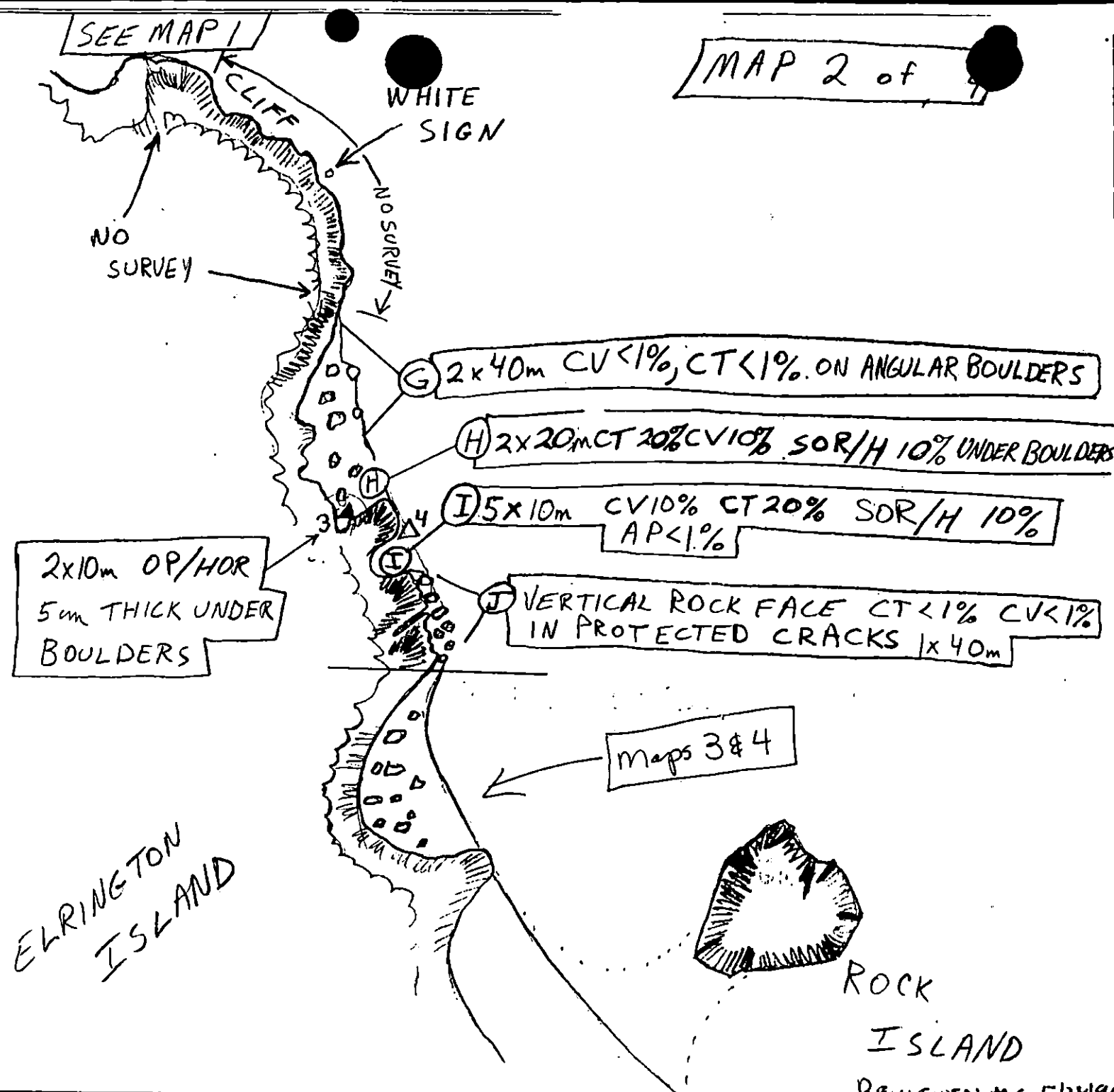
MAP 2 of 4



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 ROUGHLY
 50
 METERS

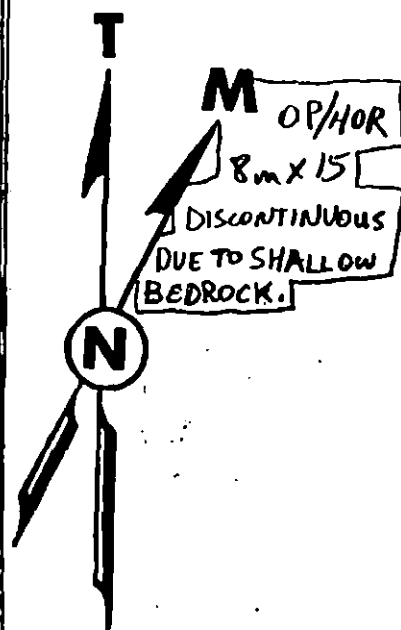


Reviewed: MC 5/24/91
 reviewed 5.28 91

MAP 1991
 DRAFT MAP
 CHANEY
 TEAM 5
 SEGMENT: ER-20-A
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

Surface
 Map 3 of 4

Areas A' & B'



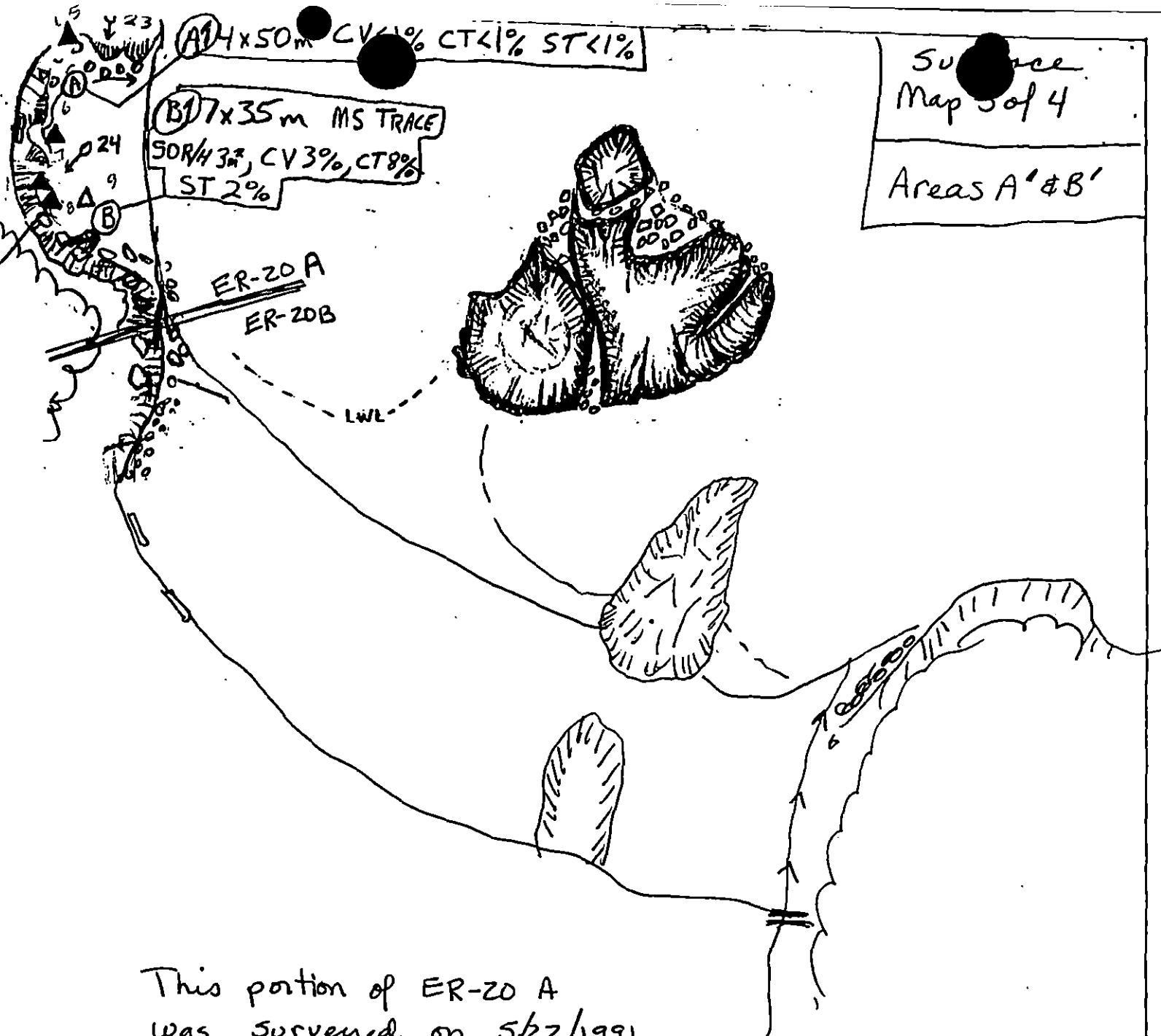
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATE
 50
 METERS

This portion of ER-20 A
 was surveyed on 5/22/1991
 as part of ER-20 B survey
 as it was missed the first time.

revised for
 addendum 5.31.9194

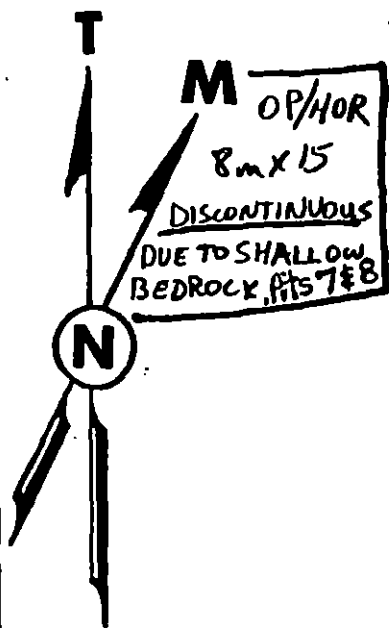


MAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: ER-20-A
DATE: MAY 22 1991
AIR P.#: NONE AVAILABLE

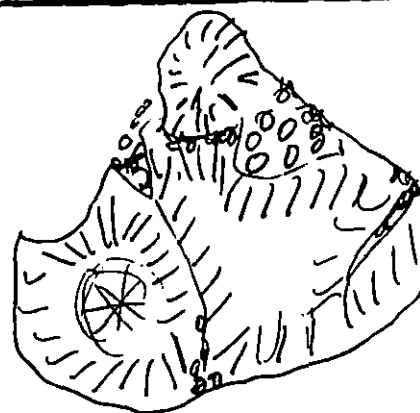
SUBSURFACE OILING MAP

Map 4 of 4

Areas
A' & B'



ER-20 A
ER-20 B



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
50
METERS

This portion of ER-20 A was surveyed on 5/22/91 as part of ER-20 B survey.

revised for addendum
5.31.91 gy

MAYSAP BIOLOGICAL SUMMARY FORM

pg. 1 of 3

TEAM # 5

DATE 19 May 1991

SEGMENT # ER-20

TIDAL HEIGHT (Range) +2 → -0.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0-1'

WIND SPEED/DIRECTION 5 knots/SE

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ. Within the site there is a rare concentration of barnacles and *Fucus*. A sparse to moderate concentration of *Littorina* is present on the undersides of the sediments. Tar spot algae is present. Biota cover on the sediment surface is <1%. Directly below the site there is a 4m² patch of moderately concentrated *Fucus* and barnacles covering ~60% of the sediments.

(B) Area is located in the MITZ and UITZ along a rock face. There are sparse to moderately concentrated barnacles, mussels, *Littorina* and *Nucella* (various). In the MITZ there is also a sparse concentration of post-larval mussels. Biota cover is ~40%.

(C) Area is located in the MITZ. Black lichen encrusts about 50% of the sediments within the site. White lichen and moss are also present. Low in the site there are rare concentrations of *Fucus* and barnacles.

(D) Area is located in the UITZ. Encrustose green algae and black lichen cover ~40% of the sediments; sparse concentration of *Littorina* and rare concentrations of barnacles and *Fucus* cover ~1% of the sediments. Barnacle scars are present.

In the MITZ between the pocket beaches a moderate concentration of *Fucus* and *Neorhodomela larix* (alga) cover ~50% of the sediments. In the LITZ bladed/filamentous red and green algae cover ~80% of the surface.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	5	Pricklebacks
Seabirds	1	1	Gunnels
Waterfowl			
Gulls/Kittiwakes	3	82	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	7		
Pinnipeds (specify)	8 Sealions		
Es (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/28/91

Team # 5
Segment # ER-20
Subdivision A
Sea State 0-1

Date 19 May 1991 pg 2 of 3
Tidal Height +2 $\rightarrow$ -0.5
Biologist Crank
Wind Speed / Direction 5 knots / SE

Comments (cont.)

(E, F) Areas are located in the UITZ. Within the areas sparse concentrations of Fucus (with sporelings) and barnacles and moderately concentrated Littorina and limpets cover ~30% of the surface sediments. The MITZ and LITZ is similar to that previously described.

(G, H) Areas are located in the UITZ with rare concentrations of Fucus sporelings, barnacles, Littorina, limpets, white lichen and moss. Biota cover is <1%. At the top of the band black lichen encrusts 30% of the sediments. Directly below the site, low in the UITZ, far spot algae, sparsely concentrated barnacles, Littorina and limpets and rare Fucus sporelings cover ~10% of the sediments. In the MITZ, 5m. below the site, on boulders, moderately concentrated adult, juvenile and spat barnacles; patches of mussels; rare concentrations of snails; and a sparse to rare concentration of Fucus cover ~50% of the sediments. Approx 5% of the Fucus plants present are 'stipe-only'. In the LITZ algae is dominant covering ~90% of the sediments. Alaria, Ulva, Enteromorpha, Palmaria, Membranoptera, Scytosiphon, Fucus and assorted filamentous red and green algae are present. Under the sediments, sparse concentrations of Littorina, limpets and Nucella (whelks) as well as abundant prickleback and gunnel fish were present.

Team #5
Segment # ER-20
Subdivision A
Sea State 0 $\rightarrow$ 1'

Date 19 May 1991 pg 3 of 3
Tidal Height +2 $\rightarrow$ -0.5
Biologist Crank
Wind Speed / Direction 5 knots / SE

Comments (cont.)

(I, J) Areas are located high in the UITZ. Black lichen encrusts ~30% of the sediments. White & yellow lichen, moss and seasonal plants are present.

Below the site in the MITZ moderately concentrated mussels, Littorina and limpets of various age classes; and moderate to densely concentrated barnacles of various age classes are present. Biota cover is ~75%. The LITZ is similar to that described for areas G & H.

In this subdivision, recruitment is occurring in the barnacle, Littorina, Fucus, limpet, Alaria, and mussel populations. Present oiling conditions does not appear to be adversely affecting the biota.

See addendum -
next page for
areas A1 & B1

Reviewed M.B. 5/28/91

MAYSAP BIOLOGICAL SUMMARY FORM

*ADDENDUM

(from ER-20B survey.)

TEAM # 5

DATE 23/24 May 1991

SEGMENT # ER-20

TIDAL HEIGHT (Range) +2.5 → +1.0 / +1 → +3

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1' / 0

WIND SPEED/DIRECTION 5 knots/N / no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

* (A) Area is located in the UITZ. High in the area black lichen encrusts ~50% of the sediments. Low in the area rare concentrations of *Littorina*, barnacles and *Fucus* sporlings are present. Biota cover is <1%. In the MITZ, among the boulders, there are moderate concentrations of *Fucus*, *Littorina* and limpets. There are also sparse concentrations of adults, juvenile and spat barnacles, and rare to sparse patches of mussels, various age classes present. Biota cover ~70%. On the pebble beach area between areas A & B, there is similar biota; concentrations are sparse to rare. Biota cover ~20.

* (B) Area is located in the UITZ. Black lichen encrusts ~30% of the sediments and + continuous green algae covers ~1%. Low in the site, barnacles also cover ~1%. The MITZ is a cobble/pebble/granule beach. Biota is similar to the MITZ biota in site A, but concentrations are sparse to rare. Barnacles are the dominant species. *Littorina* egg masses are common and are maturing. Juvenile barnacles, mussels, *Fucus*, *Littorina* and limpets are present.

* (C) Area is in the UITZ, along a bedrock face. Low in the site, barnacles cover ~10% of the surface area. The MITZ has a moderate *Fucus*, barnacle, *Littorina* and limpet concentration. Small tidepools are present with coralline algae and anemones. Biota cover is ~10%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

* Includes ER-20B information —

BIRDS # OF SPECIES TOTAL BIRDS FISH OBSERVED SPECIES PRESENT

Eagles	1	1	Pink Salmon Fry
Seabirds	2	37	Juvenile eels
Waterfowl	2	2	
Gulls/Kittiwakes/tern	2	8	
Shorebirds			
Corvids	1	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS # OBSERVED SPECIES # OBSERVED

Sea Otters	1		
Pinnipeds (specify)	1 Sealion		
	2 Harbor Seal		
Whales (specify)			

shoreline subdivision map showing important biological features attached.

MAY 1991
OG SURVEY MAP
GREG CHANEY / DON CLINE
TEAM 5

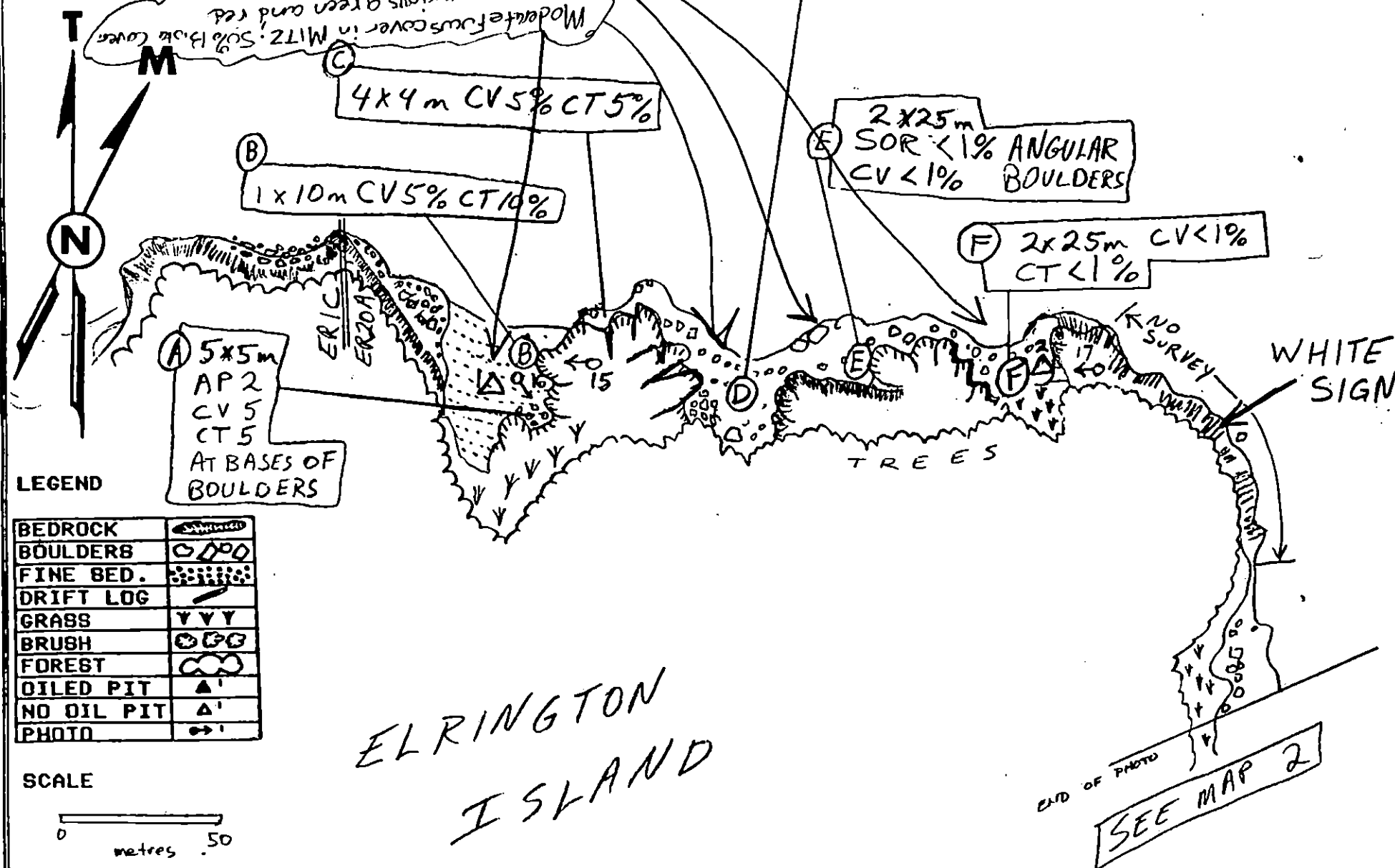
SEGMENT: ER20A

DATE: MAY 19 1991

AIR P.#: PIM-12500-7

D 2x4 CV<1% CT1% ST2%
SOR/H AROUND BOULDER
BASES TR

MAP 1 of 2



EL RINGTON
ISLAND

SEE MAP 2

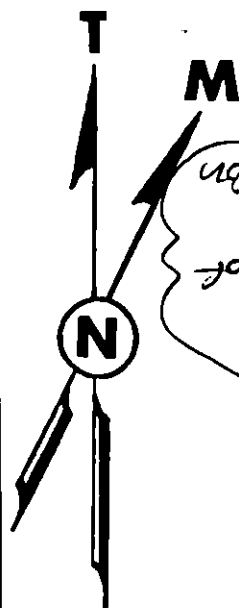
Reviewed M.B. 5/2/91

MAP 2 1991
OG WATCH MAP
GREG CHANEY
TEAM 5
SEGMENT: ER 20 A
DATE: JAN 19 1991
AIR P.#: PIMC005-121

SEE MAP 1

MAP 2 of 2

See addendum map 3



the surface in the LITZ,
Fucus covers ~50% of
~5% of the Fucus population
is 'shp-candy'.

NO
SURVEY

WHITE
SIGN

NO SURVEY

Heavy mussel recruitment

G 2x40m CV<1%, CT<1% ON ANGULAR BOULDERS

H 2x20m CT 20% CV 10% SOR/H 10% UNDER BOULDERS

I 5x10m CV 10% CT 20% SOR/H 10%
AP<1%

2x10m OP/HOR
5cm THICK UNDER
BOULDERS

J VERTICAL ROCK FACE CT<1% CV<1%
IN PROTECTED CRACKS 1x40m

END OF SURVEY

Heavy Barnacle
recruitment

In the LITZ, algae
is dominant; covering
~40% of the
surface sediments

ELDRINGTON
ISLAND

ROCK
ISLAND

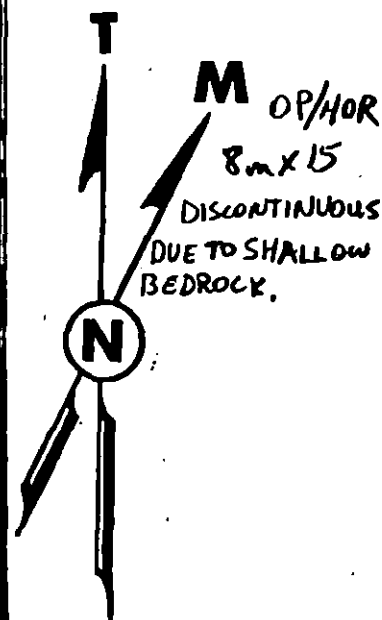
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

ROUGHLY
50
METERS

MAY 1991
 OG SKETCH MAP/D's Map
 GREG CHANEY/Crank
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

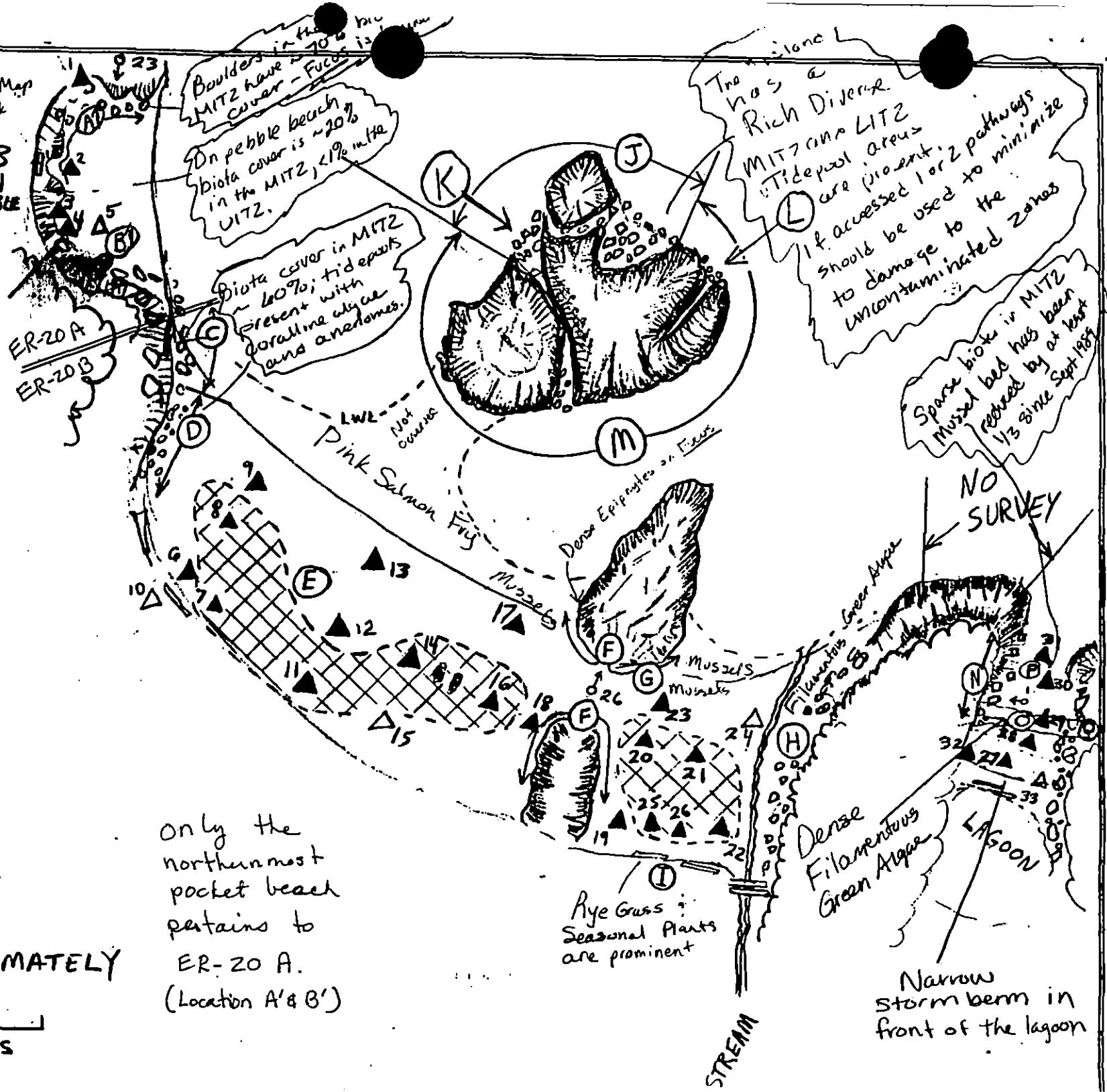


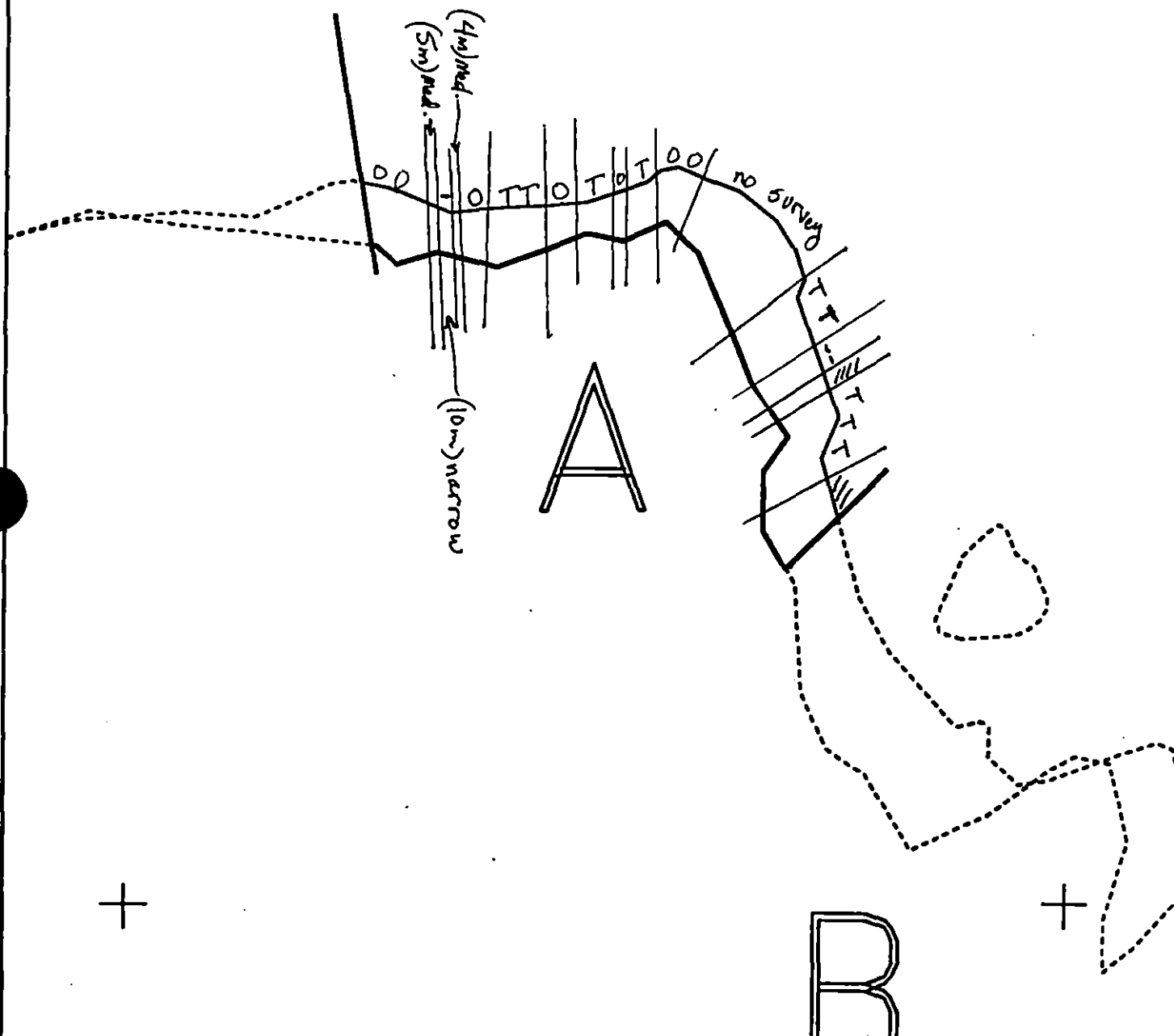
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 50
 METERS

Only the
 northernmost
 pocket beach
 pertains to
 ER-20 A.
 (Location A' & B')





XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ERO20 A
 ADEC Subsegment Length: 446m
 METERS
 0 100 200
 AK State Plane Zone 4
 par020a

Subdivision Field Map
 Map Key: PWSER020A
 Name: CHANEY (JY)
 Date: May 19, 1991
 Date Entered:



addendum of 5.22.91 survey - southern pocket beach - redone - 5.31.94

1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: B REGION: PWS SURVEY DATE: 5/23/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Subsistence - Deer harvesting, Subsistence -
Finfish harvesting

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy Smith for SHPO

6/07/91

TK

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>	<u>X</u>	<u>X</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u>X</u>	<u>X</u>	<u>X</u>
Other Mechanical and Till	<u>X</u>	<u>X</u>	<u>X</u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL: Manual pickup of AP at locations G, O, and Q. Mechanical
till area of Op/HOR. Apply Customblen and Inipol. Avoid mussel
bed at location G.

TAG: MECHANICALLY TILL ALL THREE POCKET BEACHES AS
REQUIRED

FOSC: PROVIDE TRANSPORTATION TO LAND MANAGERS
TO ALLOW MONITORING OPERATION. *E.E. Page*

TAG APPROVAL DATE: JUNE 7 1991FOSC APPROVAL DATE: 6/11/91

ADEC

FOSC

EXXON

E. E. Page
 E. E. PAGE, CDR, USCG
 CHIEF OF STAFF, FOSC

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

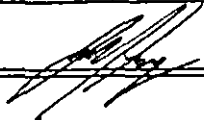
TEAM NO. 5 SEGMENT ER-20 SUBDIVISION B DATE 5/23/91

ADEC

NAME

John Hayes

SIGNATURE

☐ NTR ☒ Treatment Recommended

These heavily oiled North Ferry beach previously broken into ER-20B + ER-20C are now all within 20B.

Areas E & F's. See sketch map for HOR/OP lenses observed. Recommend these lenses be mechanically tilled.

Areas O & P. Mechanical tilling above & below peat bog, manual removal above peat w/ restoration of storm berm by means of rebuilding with clean sediments from a nearby area.

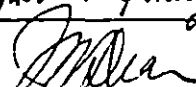
Both these sites had W.P.M. that were signed & pending in 1990 for additional work.

EXXON

NAME

John Dean

SIGNATURE



☐ NTR THIS SEGMENT DEFINITELY HAS SUFFICIENT OILING TO REQUIRE ADDITIONAL CLEAN-UP. THERE ARE CONSIDERATIONS IMPORTANT TO DETERMINING TECHNIQUES, ONE IS THE PEAT BED IN APPROX. CENTER AND OTHERS ARE DISCUSSED IN CG REPORT.

LANDMANAGER

NAME

OF

SIGNATURE

☐ NTR

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE



☐ NTR This pocket beach was heavy with oil last year when I worked it. Additional clean up both manual and mechanical tilling are recommended. There are sufficient quantities of surface matting and subsurface OP to warrant clean up.

Extensive oiling exists here, as noted in oiling summary and sketch map. Note comments in both OG + BIO reports re: fresh water lagoon behind storm berm. This is believed to be an important site to Chenega residents; further consideration is warranted.

TEAM NO. 5 SEGMENT ER-20 SUBDIVISION B DATE 5/23/91

ADEC

NAME

John Hess

SIGNATURE

[Signature]

☐ NTR

☒ Treatment Recommended

These heavily oiled North Frying beach partially broken into EA-20B + EA-20C are now all within JOB.

Areas E & F. See sketch map for HOR/OP lenses observed. Recommend these lenses be mechanically tilled.

Area O+P. Mechanical tilling above & below peat bog, manual removal above peat and restoration of storm berm by means of rebuilding with clean sediments from a nearby area.

Both these sites had W.R.M. that were signed & pending in 1990 for additional work.

EXXON

NAME

John Dean

SIGNATURE

[Signature]

☐ NTR

THIS SEGMENT DEFINITELY HAS SUFFICIENT OILING TO REQUIRE ADDITIONAL CLEAN-UP. THERE ARE CONSIDERATIONS IMPORTANT TO DETERMINING TECHNIQUES, ONE IS THE PEAT BED IN APPROX. CENTER AND OTHERS ARE DISCUSSED IN CG REPORT.

LANDMANAGER

NAME

Steve Ward

OF CR/FS

SIGNATURE

[Signature]

☐ NTR

THIS AREA NEEDS MAJOR Storm Burn Restoration. Storm Burn is almost washed away. 150 or more Swan Shells have been removed and Erosion is removing the Storm Burn. When this happens the only fresh water on this End of Eyrington will be gone. This Storm Burn is also a major Contamination Still Exist in or on, Hove oil in Sub surface on top of Peat moss. must be removed on Sheering and mobile oil could move to the Hatchery. this Area is the highest priority. High use by Chemoga, Substance Heavy mineral waste needed and possibly mechanical. See ADEC and OG comments.

USCG/NOAA

NAME

DEEHER/CLINE

SIGNATURE

[Signature]

☐ NTR

THIS pocket beach was heavy with oil last year when I worked it. Additional clean up both manual and mechanical tilling are recommended. There are sufficient quantities of surface matting and subsurface OP to warrant clean up.

Extensive oiling exists here, as noted in oiling summary and sketch map. Note comments in both OG + BIO reports re: fresh water lagoon behind storm berm. This is believed to be an important site to Chemoga residents; further consideration is warranted.

REVISOR: MC 511/91 revised 5.31.91 9y (CONT.)

SEGMENT ER 20

SUBDIVISION B

DATE MAY 23, 1991

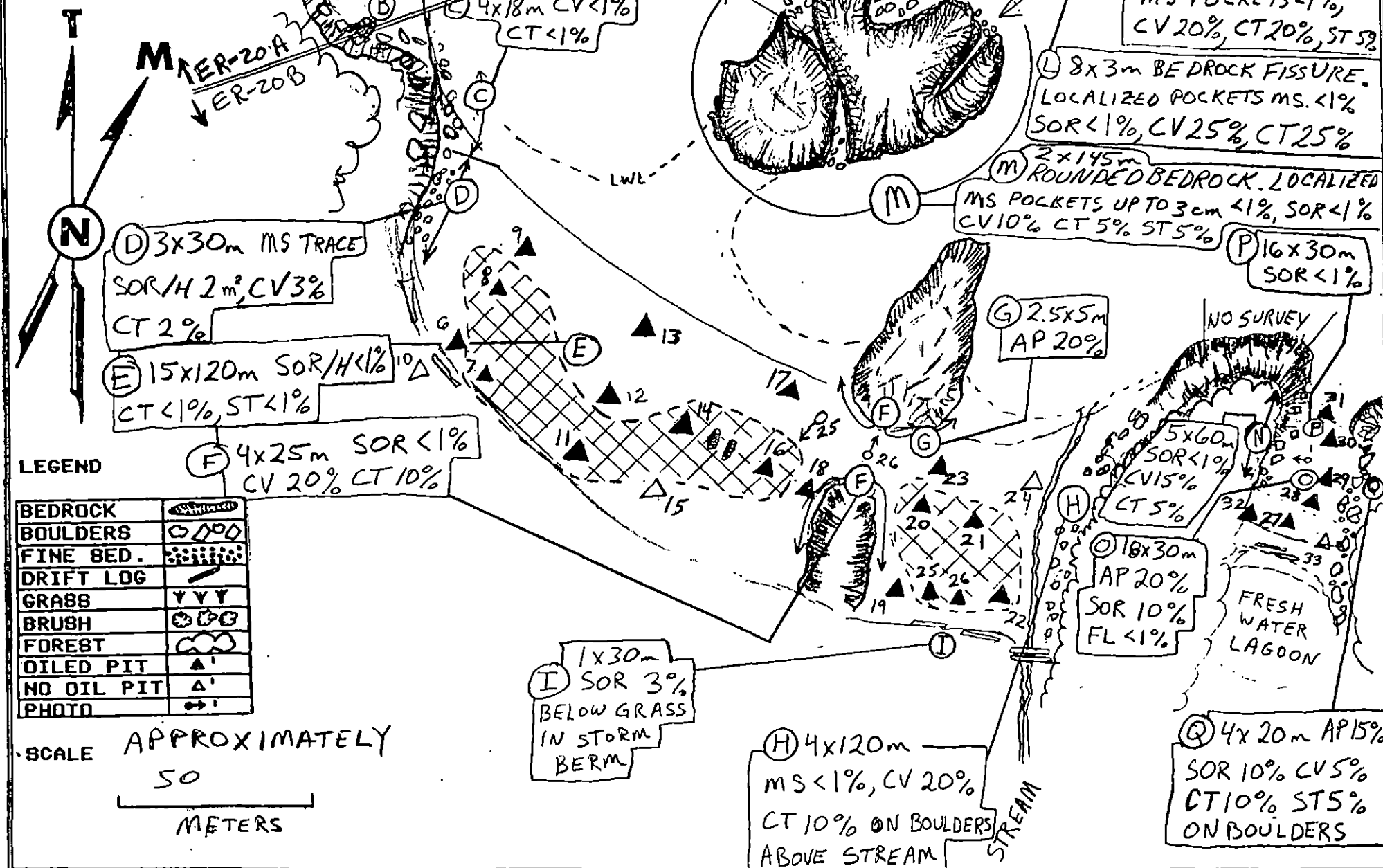
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	40							✓	-	-	-	-	✓				P-P	
12	25	✓	✓						20-38		-	-		✓			CP-PGP	
13	25			✓					10-15	Y	-	-		✓			CP-CP	
14	30						✓		2-	?	15	S			✓		BR-CPG	
15	40		✓						10-15	Y	-	-		✓			C-PGC	
16	20	✓						✓	-	-	-	-		✓			P-PG	
17	25						✓		5-10	Y	-	-		✓			P-PG	PHOTO 25
18	30								2-	?	-	-			✓		C-PCG	
19	30			✓					15-20	Y	-	-		✓			CP-CPG	
20	20	✓							10-15	Y	-	-		✓			GP-GPC	
21	20	✓							10-13	Y	-	-		✓			P-P	
22	60		✓						10-15	Y	-	-		✓			PC-PGB	
23	25							✓	45-48		-	-		✓			G-G	STREAM BANK
24	20							✓	2-		-	-		✓			GP-PG	
25	40	✓						✓	-		15	N		✓			GP-PGR	
26	45		✓						20-35		-	-		✓			PG-PG	
27	25			✓					30-45	Y	-	-		✓			PG-PG	
28	12	✓							0-10	Y	-	-		✓			P-PG	
29	20				✓				0-10	Y	5	B		✓			CP-CP Ref	
30	20				✓				0-10	Y	-	-		✓			CP-CPG	
31	25						✓		5-10	Y	-	-			✓		CP-CPG	Lower MITB
32	25				✓				2-	?	10	S			✓		CP-CPG	UPE LITZ
33	30							✓	0-10	Y	-	-		✓			CP-CPG	
									-		-	-	✓				PG-PG	
									-		-	-						
									-		-	-						
									-		-	-						

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THE BEACH CONTAINS NUMEROUS CRACKS IN BEDROCK WHICH HAVE TRAPPED MOUSSE UP TO 3cm. DEEP. THE COVE ON THE EXTREME EASTERN SIDE OF THE SUBDIVISION WAS ORIGINALLY PART OF SUBDIVISION "C" BUT THE PRESENT COMPUTER MAPS SHOW THE SUBDIVISION BOUNDARY ~100m EAST OF THE SSAT SURVEY BOUNDARY. THIS CAUSED CONSIDERABLE CONFUSION FOR THOSE FAMILIAR WITH THE OLD DIVISION POINT. THE BEACH AT AREA ① HAS SEVERAL AP PATCHES IN THE U'ITZ. ACCORDING TO THOSE WHO HAVE BEEN WATCHING THIS BEACH, SIGNIFICANT QUANTITIES OF SEDIMENT HAVE BEEN REMOVED FROM THIS BEACH. THIS MAY CAUSE EROSION OF THE STORM BERM & ALTER THE FRESH WATER LAGOON BEHIND THE BEACH. IF ANY FURTHER SEDIMENT REMOVAL IS CONDUCTED, REPLENISHING THE U'ITZ WITH COBBLES FROM AN UPLIFTED AND INACTIVE STORM BERM COULD BE CONSIDERED.

reviewed 5.31.94
PREPARED: 6/1/91 MC

YSAP 1991
 SKETCH MAP
 LG CHANEY
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE



MAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: ER-20-B
DATE: MAY 22 1991
AIR P.#: NONE AVAILABLE

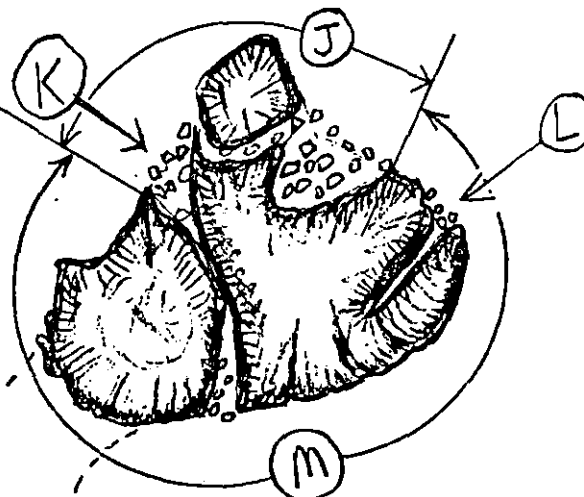
SURFACE OILING MAP

Page # 2



M ER-20A
OP/HOR
8m x 15
DISCONTINUOUS
DUE TO SHALLOW
BEDROCK PITS 3 & 4

ER-20A
ER-20B



CENTER OF
POCKET BEACH
OP 5x5m

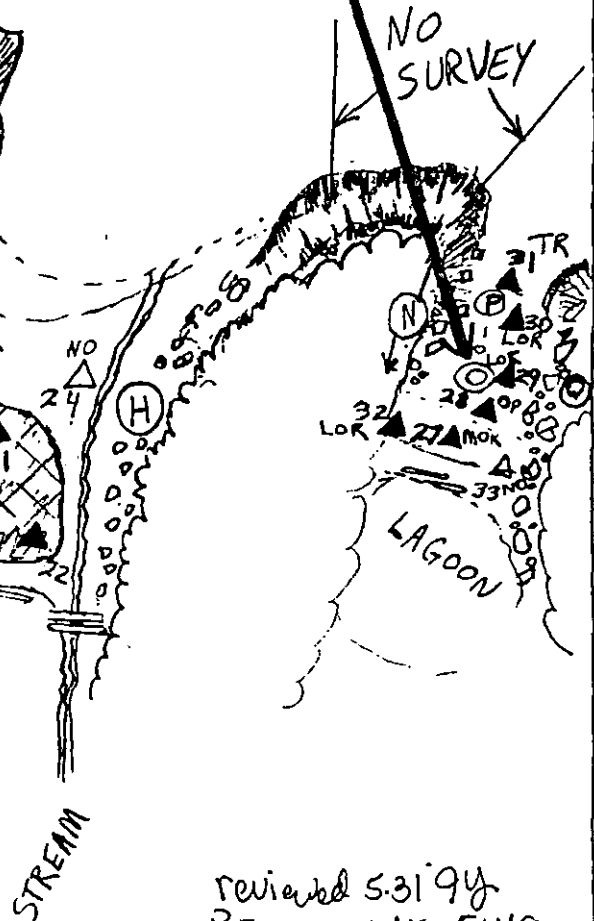
HOR/OP
ROUGHLY 15x100m
PEBBLE/COBBLE
BEACH

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
50
METERS

HOR/OP
BETWEEN
BEDROCK
AND STREAM.
PEBBLE BEACH.
APPROX 20x30m



Reviewed 5.31.94
Reviewed by: MC 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 10 of 6

TEAM # 5

DATE 23/24 May 1991

SEGMENT # ER-20

TIDAL HEIGHT(Range) +2.5 → +1.0 / +1 → +3

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 1' / 0

WIND SPEED/DIRECTION 5 knots/N / no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ. High in the area black lichen encrusts ~50% of the sediments, low in the area rare concentrations of *Littorina*, barnacles and *Fucus* sporelings are present. Biota cover is <1%. In the MITZ, among the boulders, there are moderate concentrations of *Fucus*, *Littorina* and limpets. There are also sparse concentrations of adults, juvenile and spat barnacles, and rare to sparse patches of mussels, various age classes present. Biota cover ~70%. On the pebble beach area between areas A & B, there is similar biota; concentrations are sparse to rare. Biota cover ~20.

(B) Area is located in the UITZ. Black lichen encrusts ~30% of the sediments and + numerous green algae covers ~1%. Low in the site, barnacles also cover ~10%. The MITZ is a rubble/pebble/granule beach. Biota is similar to the MITZ biota in site A, but concentrations are sparse to rare. Barnacles are the dominant species. *Littorina* egg masses are common and are moulting. Juvenile barnacles, mussels, *Fucus*, *Littorina* and limpets are present.

Area is in the UITZ, along a bedrock face. Low in the site, barnacles cover ~10% of the surface area. The MITZ has a moderate *Fucus*, barnacle, *Littorina* and limpet concentration. Small tidepools are present with coralline algae and anemones. Biota cover is ~60%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Pink Salmon Fry
Seabirds	2	37	Juvenile eels
Waterfowl	2	2	
Gulls/Kittiwakes/Tern	2	8	
Shorebirds			
Corvids	1	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds(specify)	1 Sealion		
	2 Harbor Seal		

Shoreline subdivision map showing important biological features attached.

REVIEWED: 6/1/91 MC
P. J. J. J. J. J.

Team # 5

Segment # ER-20

Subdivision B

Sea State 1 / 0

Date 23/24 May 1991

Tidal Height $+2.5 \rightarrow +6$ / $+1 \rightarrow +3$

Biologist Crank

Wind Speed / Direction 5 N / no wind

pg 2 of 6

Comments (cont.)

(D) Area is in the UITZ, among boulders and bedrock. Low in site barnacles cover 1% of the surface. The MITZ is similar to the MITZ in site C.

(E) Area is the UITZ on a pebble beach. No intertidal macrobiota was found within the site. In the MITZ, most of the sediments are pebbles (cobbles and small boulders are also present). Biota includes: sparse concentrations of barnacles with spat and scars; sparse to moderate limpets and Littorina of various age classes, egg masses were present; filamentous green algae and rare mussels of various age classes. Biota cover is ~20%. Pink salmon fry are feeding nearshore.

(F) Area is in the UITZ and MITZ, on the same beach as E. The UITZ is a pebble matrix with similar biota species and concentrations as E. The MITZ has boulders and a bedrock outcrop and pebbles. There is a mussel bed. The northwest side is sparsely concentrated and appears to have extended further at one time. The southeast side is dense (5m x 15m). Various age classes, including post-spill are present.

Reviewed by: 6/1/91 MC

Team # 5

Segment # ER-20

Subdivision B

Sea State 1/0

Date 23/24 May 1991

pg 3 of 6

Tidal Height +2.5 → +6 / +1 → +3

Biologist Crank

Wind Speed / Direction 5 N / no wind

Comments (cont.)

(F continued) There are sparse concentrations of barnacles and Fucus. Barnacle spat is present. The Fucus appears unhealthy and is covered with epiphytic plants. Littorina and limpets are also sparse with several age classes and egg masses. Biota cover is ~50%.

(G) Area is an asphalt patch in the MITZ, adjacent to the dense mussel bed. There is a moderate concentration of live mussels in the patch.

(H) Area is east of the small salmon stream, approximately 10 m, located in the UITZ along boulders. High in the site black lichen covers ~50% of the sediments. Low in the site filamentous green algae dominates. Rare barnacles and Fucus sporlings are also present. Biota cover is ~70%. In the MITZ, there is a moderate concentration of Fucus, mussels, Littorina and limpets. Barnacles are sparse. Epiphytes are present on the Fucus but not as heavy as in area F. Biota cover is ~70%.

NOT AN ADFEG DESIGNATED
FRESH STREAM

Team # 5

Segment # ER-20

Subdivision B

Sea State 1' / 0

Date 23/24 May 1991

pg 4 of 6

Tidal Height $2.5 \rightarrow 1.6 / +1 \rightarrow +3$

Biologist Crank

Wind Speed / Direction 5 N / no wind

Comments (cont.)

(H) Area is located in the SUPRA, above area F. Rye grass and seasonal plants are prominent.

(J, K, L & M) Areas are located on an island in front of area E, in the SUPRA and UITZ. In the SUPRA and high UITZ black lichen encrusts 50% of the surface area. Low in the sites sparse concentrations of barnacles, *Littorina* and limpets and rare mussels cover ~10% of the surface. In the MITZ, below the sites there are moderate concentrations of *Fucus*, *Littorina*, limpets and pulmonate snails; moderate to sparse concentrations of mussels and sparse barnacles. *Scallesia* (whelk), *Piaster* and *Leptasterias* (sea stars) and *Scytosiphon* and *Nerhodomete* (arise (algae)) are present. In small tidepools there are sea urchins, anemones and coralline algae. Biota cover is ~70%. In the LITZ, algae is dominant *Fucus*, bladed reds and greens, filamentous reds and greens, *Halosaccion* and *Alaria* (kelp) cover ~90% of the surface. *Pycnopodia* (sea star) are present and *Littorina* and nudibranch egg masses were found.

Reviewed: 6/1/91 mc

Team # 5

Date 23/24 May 1991

pg 5 of 6

Segment # ER-20

Tidal Height +2.5 → 6 / +1 → +3

Subdivision B

Biologist Crank

Sea State 1' / 0

Wind Speed / Direction 5 N / no wind

Comments (cont.)

Areas N-Q are on a single pocket beach that in 1989 and 1990 were part of subdivision C. This is a Dames & Moore Pre/Post Treatment evolution beach. Some changes since 1990 include: a reduction in the storm berm width, a reduction by at least a third of the mussel bed (even the bisse threads were gone in the LITZ), clam bed is greatly reduced (I could only find one viable clam, a juv *Saxidomus*, after 5 min. of looking - in 1989 *Prototheca* were sparsely concentrated on this beach) and the *Fucus* on the beach proper has been reduced, although not visibly so on the boulder borders.

(N) Area is located in the UITZ along the west boulder border. Filamentous green algae, sparse barnacles and rare concentrations of mussels and *Fucus* are present within the site. Biota cover is ~10%. In the MITZ there is a moderate concentration of *Fucus* with epiphytic plants; sparse concentrations of filamentous green algae, *Littorina* and limpets and rare barnacles. Biota cover ~70%. In the exposed LITZ there are dense *Littorina* and limpets, moderate *Fucus* and rare barnacles and mussels. Biota cover is 45%. *Alaria* kelp is present below the tide level.

REVIEWED: 6/1/91 MC

Team # 5

Date 23/24 May 1991

pg 6 of 6

Segment # ER-20

Tidal Height $+2.5 \rightarrow 6 / +1 \rightarrow +3$

Subdivision B

Biologist Crank

Sea State 1/10

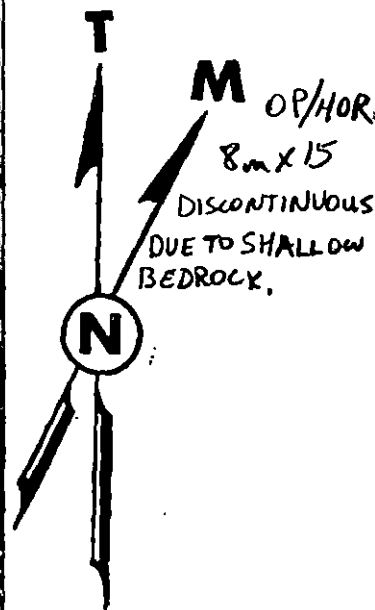
Wind Speed / Direction 5N / no wind

Comments (cont.)

- (O) Area is an asphalt patch in the UITZ. Filamentous green algae cover 90% of the surface sediments and oligochaete worms cover <1% under the veneer. Other macrobiota was not found.
- (P) Area is in the MITZ, below (O). There are: a moderate to sparse mussel bed; sparse barnacles; rare *Fucus* and dense *Littorina* and limpets. Biota cover is ~30%. In the exposed LITZ *Fucus* is sparse, mussels are rare individual juvenile zells, rare clams (one live found), and oligochaete worms. Biota cover ~30%.
- (Q) Area is located in the UITZ along the east boulder border. Within the site, filamentous green algae cover ~10% of the surface sediments. Below the site, in the MITZ there are dense concentrations of *Littorina* and limpets; sparse mussels. There is a sparse barnacle band and below that a moderate *Fucus* band with dense epiphytic algae. Biota cover is ~50%.

The lagoon and lake present behind the storm berm in areas N-Q are reported by Chenega residents to be the only freshwater source on the northern end of Elfrington.

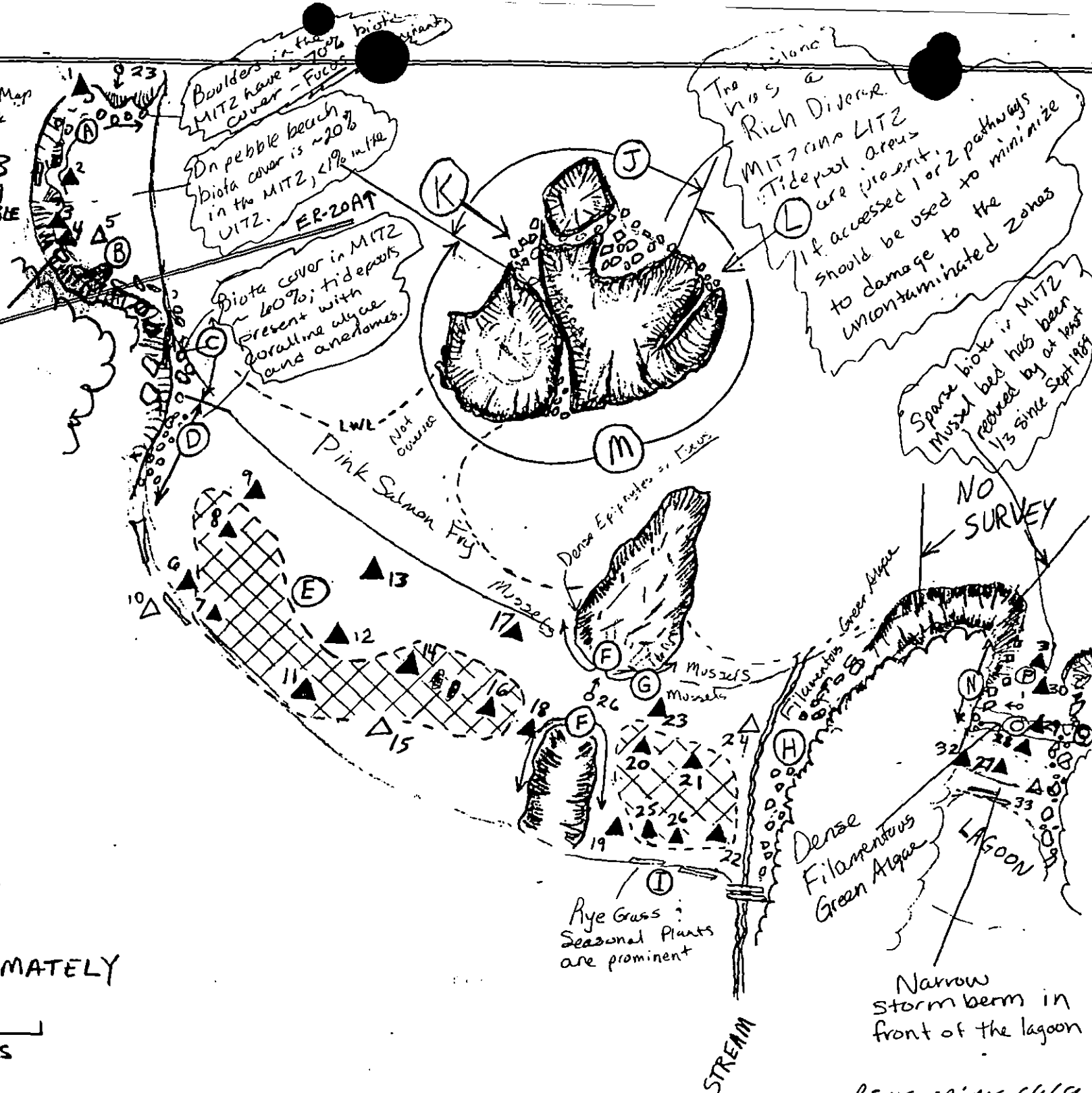
MAYSAP 1991
 OG SKETCH MAP/B: Map
 GREG CHANEY/Crank
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

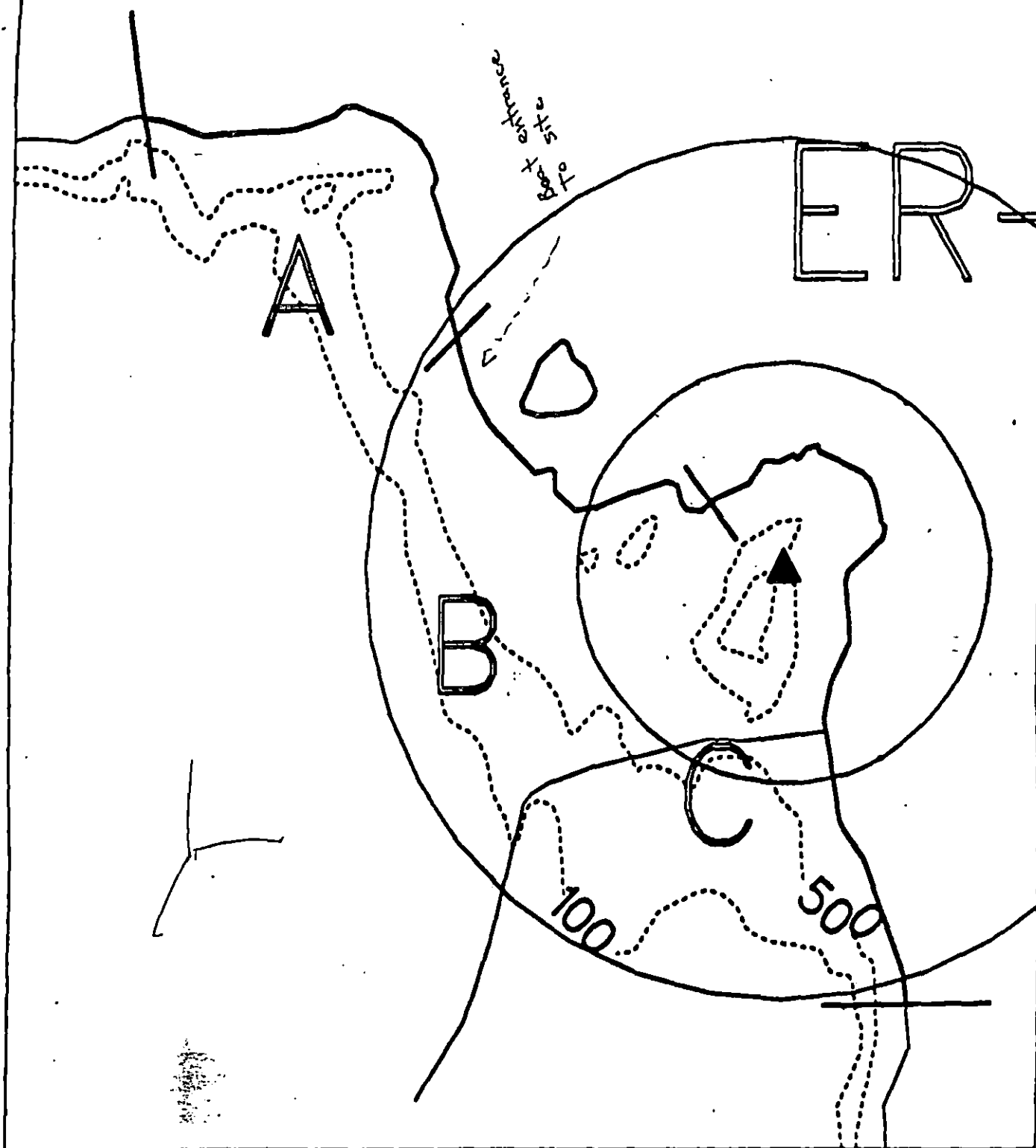


LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 50
 METERS

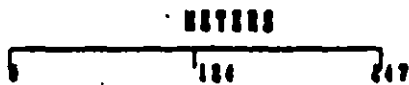




ER020

Segment Reference Map

Map Key: PUSER020



AS State Plane Zone 4
per 020



EAGLE NEST

USFWS 5/23-24/91

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/23/91 5/24/91 Shoreline Segment/Subdivision ER020 B

Shoreline activity Assessment Team Survey

FWS Observer 5/24/91 6:15 AM

Time - End
5/23/91 7:30 PM
5/24/91 8:00 PM

Surveyors/workers _____

Nest in view/monitored: ☒ Y ☐ N Adult in nest: Y ☐ N ☐ Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N ☐ Unk.

Time	Type of human activity/eagle response
<u>5/23/91 6:00 PM</u>	<u>An active eagles nest was shown on</u>
_____	<u>the eagle survey maps. A quite</u>
_____	<u>entrance to the site put crews on</u>
_____	<u>the beach. An eagle sat calmly</u>
_____	<u>near the nest and finally flew</u>
<u>5/24/91 6:15 AM</u>	<u>across the channel. No bird was located</u>
_____	<u>in the nest. The crews finished their</u>
_____	<u>survey the next morning with no</u>
_____	<u>activity from the nest.</u>

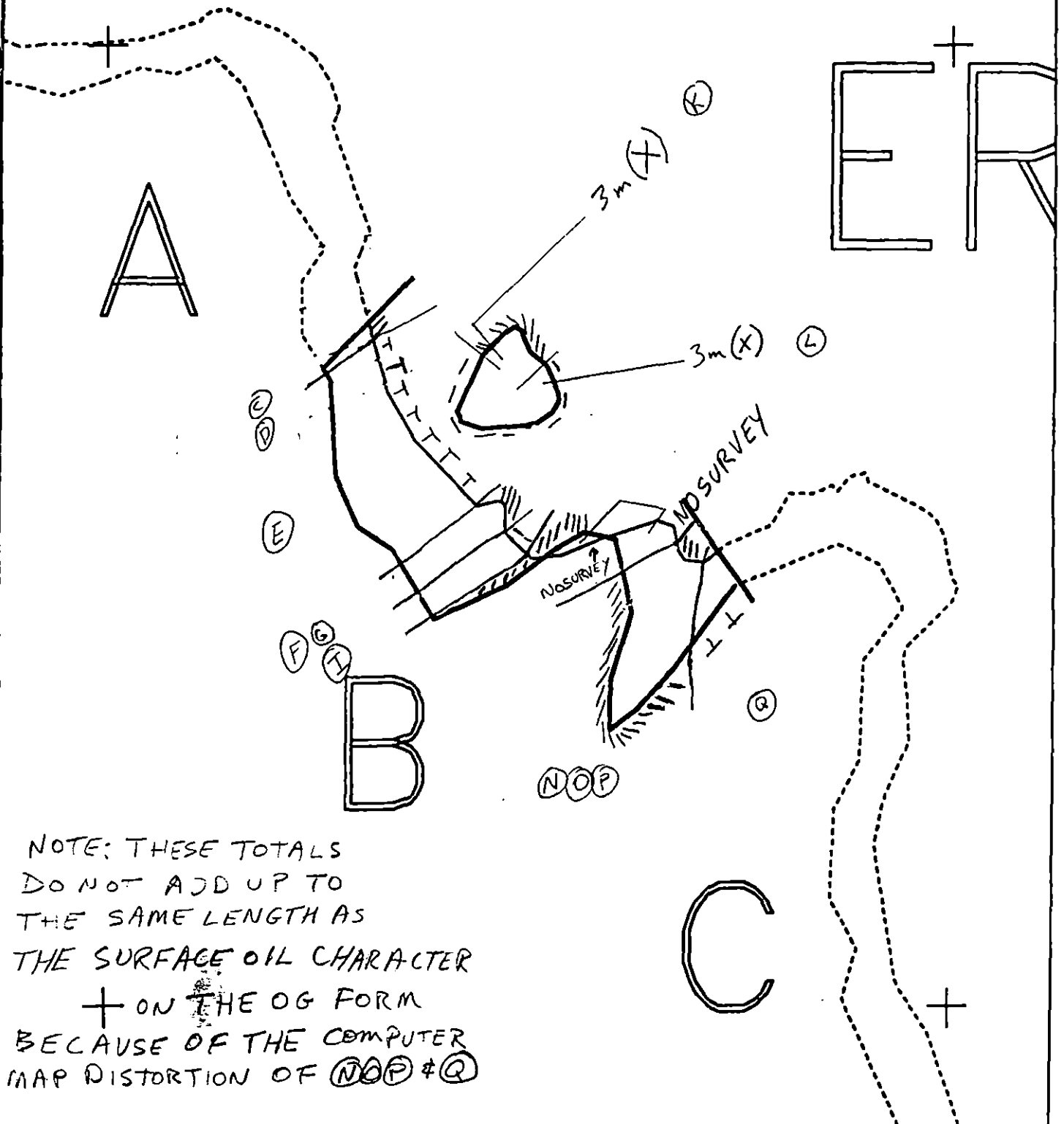
Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: A monitor should be present at
this site, but the bird observed near the
nest wasn't upset.

FWS Observer Mike Duke

Date 5/24/91



ER020 B		Subdivision Field Map
ADEC Subsegment Length: 833m		Map Key: PWSE020B
METERS		Name: CHANEY
		Date: MAY 24 1991
AK State Plane Zone 4 per 020b		Date Entered:

Revised: MC 6/1/91
revised 5.31 94

1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: C REGION: PWS SURVEY DATE: 5/24/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, Fish harvest area, Subsistence - Deer harvesting, Subsistence - Finfish harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). YAB

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>	<u>X</u>	<u>Y</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL: Manual pickup of easily accessible AP at locations B and C.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/11/91

ADEC John Bauer

FOSC E. E. Page

EXXON Beal

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG Edna

NOAA John S

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER 20 SUBDIVISION C DATE MAY 24, 91

ADEC

NAME John Hager SIGNATURE [Signature]

- ☐ NTR By Treatment Recommended
Recommended manual pickup of AP in area B, light work & accessible
good for small crew.

EXXON

NAME JOHN DEAN SIGNATURE [Signature]

- ☒ NTR OILING OBSERVED WAS NOT OF RECOVERABLE CHARACTER OR
LOCATION. ADDITIONAL WORK WOULD PROVIDE NO NET BENEFIT.

LANDMANAGER

NAME Steve WARD OF CWC / FS SIGNATURE [Signature]

- ☐ NTR Surface and Sub-Surface oil in Beginning of Sub-division.
Oiled Area is Right Beside ER-20-B which needs lots of manual
and mechanical work - Good chance to Local Response Area.

NO-BIO.

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. L. Dreher [Signature]

- ☒ ^{KRL} NTR Observed AP at base of large boulders to the east of the pocket beach.
Further cleanup operations would cause more environmental harm than the
oil to be removed. KRL

- ☐ NTR Significant patches of AP were found throughout the subdivision,
notably at Site B at the north end of the subdivision. This area is
on accessible pocket beach. Subsurface oiling noted on summary
occurs in an area of difficult access. KRL

PAGE _____ OF _____

DATE MAY 124 191

ENERGY LEVEL: ☐ H ☒ M ☐ U

WEATHER: ☒ SUN ☐ CLOUDS ☒ FOG ☐ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W — m M 25 m N 75 m VL 260 m NO 208 m US 40 m

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 22 FRAMES 2-4

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

* OIL < 5 cm DEEP IS NOT SUBSURFACE

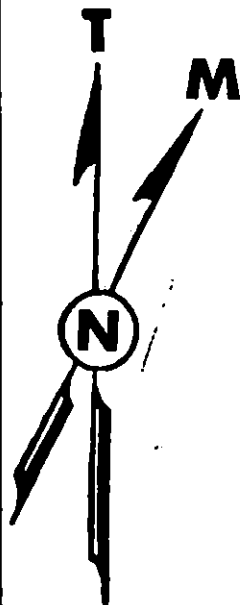
OG COMMENTS: HOR IN PIT 1 MATCHES DISTRIBUTION OF AP IN AREA C. THE HOR LAYER COULD BE CONSIDERED SUBSURFACE ONLY BECAUSE OIL WAS BELOW BOULDERS. HOR/OP IN PITS 2 & 4 ROUGHLY 2x10m BOUNDED BY RED ROCK.

AREA (E) SOME SPLATTERS ARE LIGHT BROWN MOUSSE AND APPEAR TO BE RECENT LANDINGS.

Reviews: AC 6/1/91
revised 5-30-94

MAY 24 1991
 OG 8 CH MAP
 GREG CHANEY / DON CUNTE
 TEAM 5

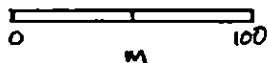
SEGMENT: ER 20 C
 DATE: MAY 24 1991
 AIR P.#: PIM-C 05-66



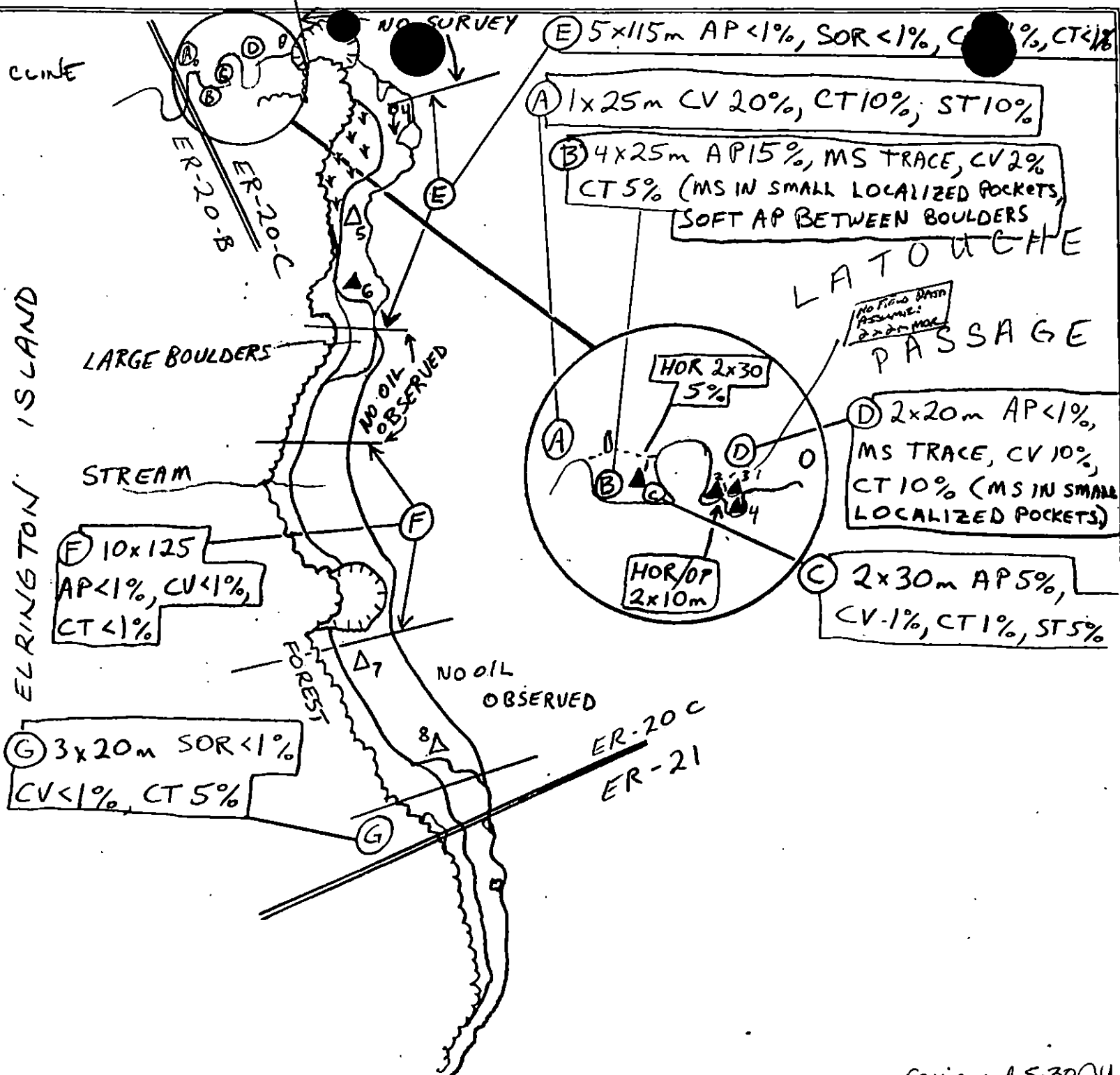
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



ELRINGTON ISLAND



Reviewed 5:30 PM
 Revised 1 MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 24 May 1991

Pg 1 of 3

SEGMENT # ER-20

TIDAL HEIGHT(Range) +3 → +6

SUBDIVISION C

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

The Lower Intertidal Zone was not exposed during survey. Boundaries on this subdivision have been changed since 1990 survey. (A) Area is in the UITZ along a bedrock face. No intertidal biota was located within the site. Directly below filamentous green algae is dominate. Sparsely concentrated barnacles are also present. Biota cover is 20%. In the MITZ there are dense concentrations of Littorina and limpets. Moderate concentrations of encrusting red algae, and Fucus and sparse concentrations of barnacles and mussels. Biota cover is ~50%.

(B;C) Areas are in the UITZ. Encrusting green algae, black lichen and rare tufts of moss cover ~20% of the surface sediments. Directly below the site for 1m there are rare to sparse concentrations of Fucus sporlings and barnacles and sparse Littorina and limpets. Biota cover is 10%. In the MITZ, barnacles are sparse, Fucus is sparse to moderately concentrated and Littorina and limpets are moderate. There are epiphytes on the Fucus plants. Amphipods are common. Biota cover is ~60%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl		1	
Gulls/Kittiwakes	1	8	
Shorebirds			
Corvids	1	1	
Other Birds	1	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)	1 Harbor Seal		
Marines(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 6/1/91 Reviewed M.B. 5/30/91

Team # 5
Segment # ER-20
Subdivision C
Sea State 0

Date 24 May 1991 pg 2 of 3
Tidal Height +3 → +6
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

(D) Area is in the U1TZ on a pebble beach with cobbles and bedrock.

There is a 15% filamentous green algae cover on the cobble and bedrock. No other micro-biota was found within the site. In the M1TZ on bedrock sides there are inoderately concentrated barnacles (with adults, juveniles and spat); sparse mussels, *Littorina* and limpets and rare to moderate (in exposed headland) *Fucus*. Biota cover is ~10%. In the pebbles there are rare individual *Littorina*, limpets, barnacles and mussels. Biota cover is <1%.

(E) Area is in the U1TZ. High in the site black lichen cover 50% of the sediments. Low in the site, sparse concentrations of *Littorina*, limpets, *Fucus* (with sporelings) and rare barnacles cover ~10% of the sediment. In the M1TZ, moderately concentrated *Fucus* is the dominant species (mature conceptacles are present). *Littorina* and limpets are also moderate with various age classes present. Barnacles, small white sea cucumbers (*Eupentaca*), and pulmonate snails are sparsely concentrated. *Nucella* (whelks) and tar spot algae are rare. Biota cover 70%. There is an approx. 20m pebble beach in area with 30% biota cover. In R < 1/3 of area.

Team # 5

Segment # ER-20

Subdivision C

Sea State 0

Date 24 May 1991

Tidal Height T3 $\rightarrow$ T6

Biologist Crank

Wind Speed / Direction no wind

pg 3 of 3

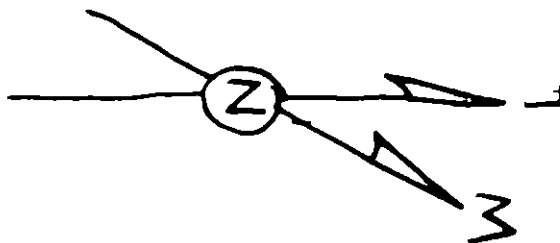
Comments (cont.)

(F) Area is located in the MITZ and UITZ; includes an anadromous stream (1 of 2, known by Changan residents, to exist on Elrington Island). Filamentous green algae covers sediments 5m either side of the stream from the UITZ to the water. In the UITZ, black lichen encrusts 50% of the sediments. Rare concentrations of *Littorina*, limpets and barnacles cover <1% of the sediments. Most of the MITZ is similar to the MITZ in area E with 70% biota cover. There is a ~40 m stretch of pebbles, 10 m from the east stream bank, where *Fucus* is rare and barnacles are the dominant species. Biota Cover is ~20%.

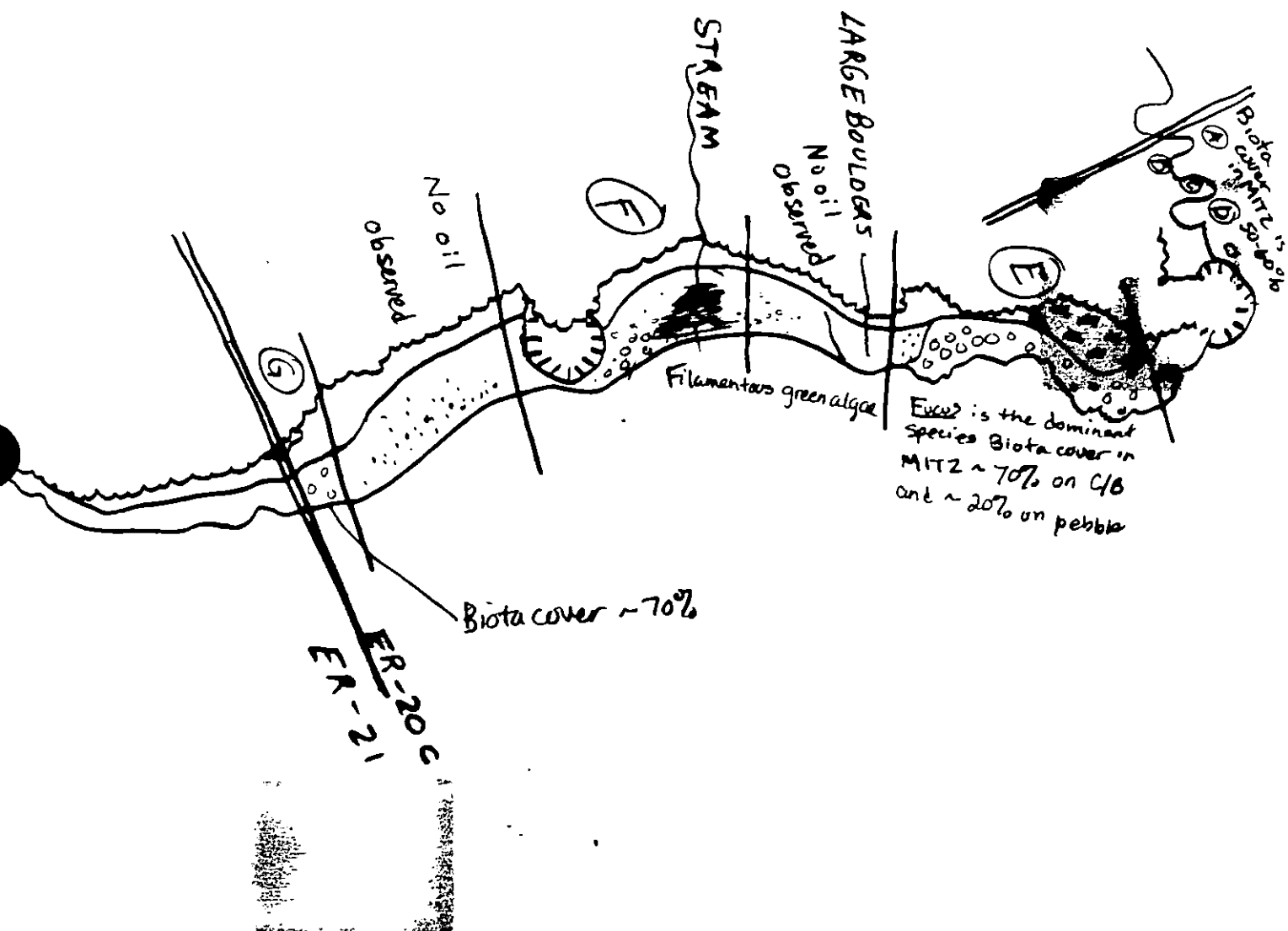
(G) Area is the eastern Boulder border of the site in the UI. Black lichen encrusts 50% of the surface sediments. Sparse concentrations of moss and rye grass are also present in the site. The MITZ has similar biota cover to area E.

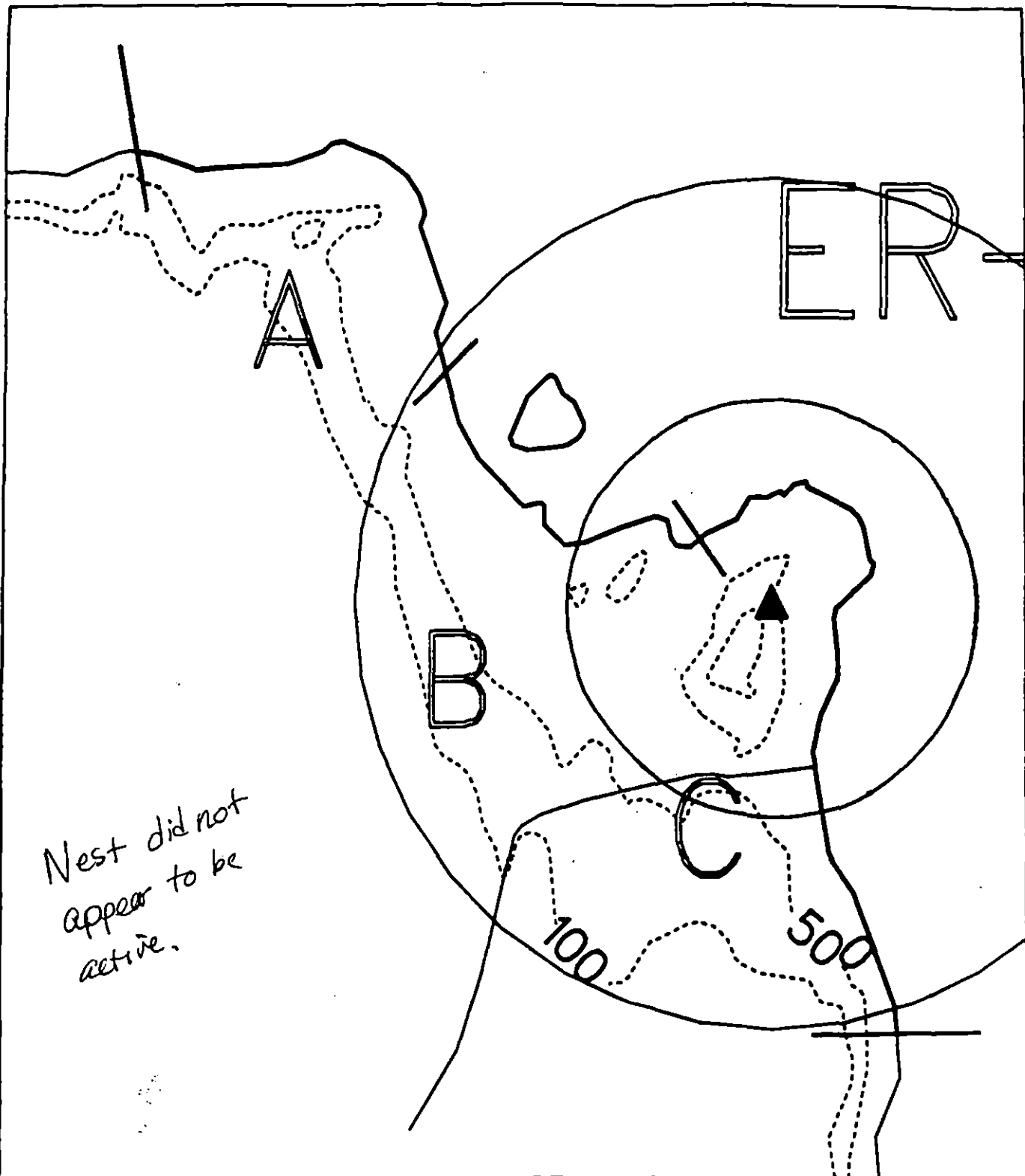
This subdivision's boundaries have been change since 1989. The Dames; Moore test site is now in ER-20B.

MAYSAP 1991
 BIO SKETCH MAP
 CLINE/CHANEY/CRAIK
 TEAM 5
 SEGMENT ER 20 C
 MAY 24 1991



EL RINGTON ISLAND

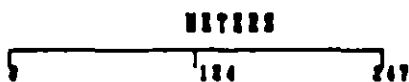




Nest did not
appear to be
active.

ER020C

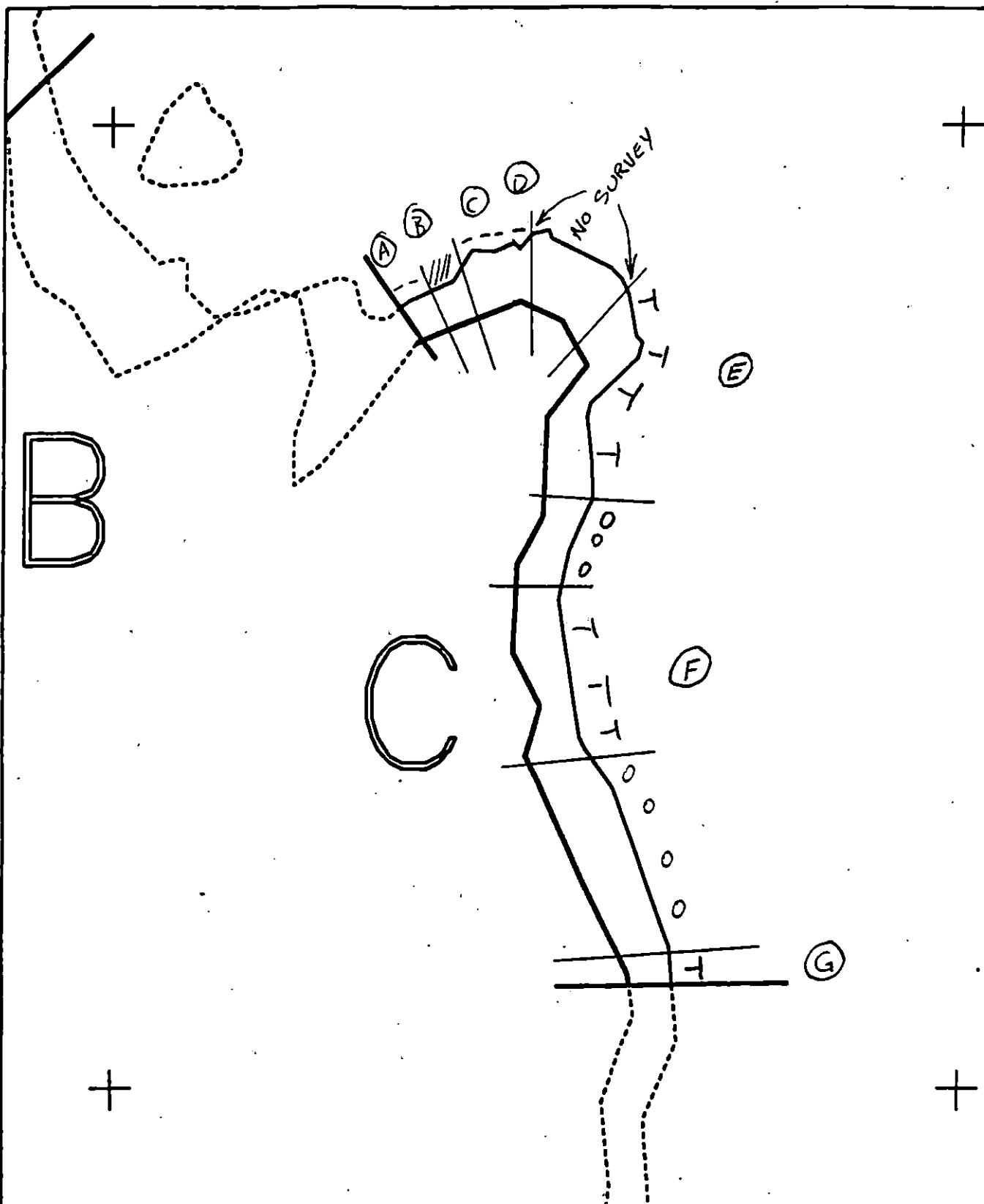
Segment Reference Map
Map Key: PVSE020



AK State Plane Zone 4
proj20



EAGLE NEST



XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER020 C
 ADEC Subsegment Length: 608m
 METERS

0 100 200
 AK State Plane Zone 4
 pr0200



Subdivision Field Map
 Map Key: PWSE020C
 Name: CHANEY
 Date: MAY 24 1991
 Date Entered:

REVIEWED: MC 611/91
 revised 5.30.94

1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: B REGION: PWS SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence - Deer harvesting, Subsistence - Finfish harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
TREATMENT REQUIRED (Y or N)	<u>Y</u>	_____	_____
Manual Pickup (Check as Req.)	<u>X</u>	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	<u>X</u>	_____	_____
Other <u>Mechanical and Till</u>	<u>X</u>	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Manual pickup of AP at locations C, O, and Q. Mechanical till area of Op/HOR. Apply Customblen and Inipol. Avoid mussel bed at location G.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

1991 MAYBAP EVALUATION

SEGMENT: ERL-26 SUB: B REGION: FL-5 SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) 6:00 to 4:15 4/1-9/15

Ecological/Constraints (see page two for details) C, F, H, I

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	_____	_____
Manual Pickup (Check as Req.)	<u>X</u>	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	<u>X</u>	_____	_____
Other <u>Mechanical Till</u>	<u>X</u>	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Manual pickup of AP at locations C, O, and Q.
Mechanical till area of OP/HOR. Apply customblen and
inipol. Avoid mussel bed at Location G.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

SCG _____

NOAA _____

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☒ NTR

Treatment Recommended

These heavily oiled North Ferry beach previously broken into ER-20B + ER-20C are now all within 20B.

Areas E & F. See sketch map for HOR/OP lenses observed. Recommend these lenses be mechanically tilled.

Areas O & P. Mechanical tilling above & below peat bog, manual removal above peat w/ restoration of storm berm by means of rebuilding with clean sediments from a nearby area.

Both these sites had W.P.M. that were signed & pending in 1990 for additional work.

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]

☐ NTR

THIS SEGMENT DEFINITELY HAS SUFFICIENT OILING TO REQUIRE ADDITIONAL CLEAN-UP. THERE ARE CONSIDERATIONS IMPORTANT TO DETERMINING TECHNIQUES, ONE IS THE PEAT BED IN APPROX. CENTER AND OTHERS ARE DISCUSSED IN CG REPORT.

INDMANAGER

NAME

OF

SIGNATURE

☐ NTR

USCG/NOAA

NAME

DEBHR/CATNE

SIGNATURE

GWD K. L. Ducker

[Signature]

☐ NTR

This pocket beach was heavy with oil last year when I worked it. Additional clean up both manual and mechanical tilling are recommended. There are sufficient quantities of surface matting and subsurface OP to warrant clean up.

Extensive oiling exists here, as noted in oiling summary and sketch map. Note comments in both OG & BIO reports re: fresh water lagoon behind storm berm. This is believed to be an important site to Chenega residents; further consideration is warranted.

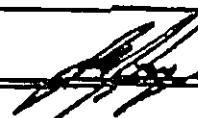
TEAM NO. 5 SEGMENT EB-20 SUBDIVISION B DATE 5/23/91

ADEC

NAME

John Hays

SIGNATURE

☐ NTR☒ Treatment Recommended

These heavily oiled North Fishy beach partially broken into EB-20B + EB-20C are now all within 20B.

Areas E & F are. See sketch map for HOR/OP lanes described. Recommend these lanes be mechanically tilled.

Area O+P. Mechanical tilling above a false peat bog, manual removal above peat at restoration of storm berm by means of rebuilding with clean sediments from a nearby area.

Both these sites had W.R.M. that were signed + pending in 1990 for additional work.

EXXON

NAME

John Dean

SIGNATURE

☐ NTR

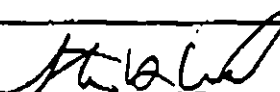
THIS SEGMENT DEFINITELY HAS SUFFICIENT DRIFT TO REQUIRE ADDITIONAL CLEAN-UP. THERE ARE CONSIDERATIONS IMPORTANT TO DETERMINING TECHNIQUES, ONE IS THE PEAT BED IN APPROX. CENTER AND OTHERS ARE DISCUSSED IN CG REPORT.

LANDMANAGER

NAME

Steve WardOF CR/FS

SIGNATURE

☐ NTR

THIS AREA NEEDS MAJOR Storm Burn Restoration. Storm Burn is almost washed away. 150 on more Super Shales have been removed and erosion is removing the storm burn. When this happens the only fresh water on this end of Exington will be given this storm burn is also a drain. Major contamination still exists in or on, more oil in sub surface on top of peat mass. Must be removed on sheering and mobile oil could move to the Hatchery. This area is the highest priority. High use by Chemga, Subsistence Heavy Manual Work needed and possibly mechanical. See ADEC and OG comments.

USCG/NOAA

NAME

DEBHER/CLANG

SIGNATURE

☐ NTR

This pocket beach was heavy with oil last year when I worked it. Additional clean up both manual and mechanical tilling are recommended. There are sufficient quantities of surface matting and subsurface OP to warrant clean up.

Extensive oiling exists here, as noted in oiling summary and sketch map. Note comments in both OG + BIO reports re: fresh water lagoon behind storm berm. This is believed to be an important site to Chemga residents; further consideration is warranted.

TEAM NO. 5OG CHANEYADEC HAYESEXXON DEAN

17:33

19:15

ME 06:30 to 07:45BIO CRANKLANDMANAGER WARD for CVCUSCG/NOAA DREHER/CLINE

+2.5

+6

TIDE LEVEL +1 ft. to +3 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSEGMENT ER-20SUBDIVISION BDATE MAY, 23, 1991SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 793 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W 6 m M 404 m N 225 m VL 158 m NO - m US 40 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
C																			
C					T	T					R	V	4	18					
D		T		S	S	S					B	H	3	30					MS 40/cm between Bldgs (Fw)
E				T		T	T				CP	M	15	120					RANDOM PEBBLES OILED
F				T	P	S					BR	H	4	25					PATCH OF CV IN UITS
G	P										CP	L	2.5	5					PATCH AP
H		T			P	S					BR	H	4	120					BOULDERS
I				S							CP	M	1	30					BELOW GRASS
J		T			P	P	S				RBC	H	4	65					LOCAL POCKETS IN BLDGS
K		T		S	P	S	S				RB	HV	7	3					FISSURE-OIL TRAP
L		T		T	P	P					RB	HV	8	3					FISSURE-OIL TRAP
M		T		T	S	S	S				RB	HV	2	145					LOCALIZED MS to 3cm
N				T	P	S					B	HV	5	60					LARGE BOULDERS w/ CV
O	P			S				T			CP	L	18	30					AP PATCHES IN UITS
P				T							CP	L	16	30					RANDOM PATCHES SOR MITZ
Q-P				S	S	S	S				BC	MH	4	20					AP BETWEEN BLDGS

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 22 FRAMES 22-26

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
6	30								5-10	Y	-	-					PC-PG	
7	30								25-30	Y	-	-					P-PC	
8	75								?	?	25	S					P-PCG	
9	30								?	?	25	S					PC-PC	

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: the northernmost pocket beach on maps is part of ER-20A. This information has been transferred to that file. (5.31.91 qy) Loc. A & B.

AREA E IN SPECIFIC LOCATIONS IN LOWER STORM BERM PATCHES SOR/H WHICH WOULD BE OP IF SUBSURFACE. TOTAL 4m². AN EXTENSIVE HOR/OP OIL LENSE WAS FOUND UNDER THIS BEACH APPROX 15 x 100m.

SIMILAR LENSE WAS OBSERVED TO THE EAST ADJACENT TO THE SMALL STREAM, THE LARGE ROUNDED ROCK ISLAND IN FRONT OF

REVISOR: MC 6/1/91 revised 5.31.91 qy (CONT.)

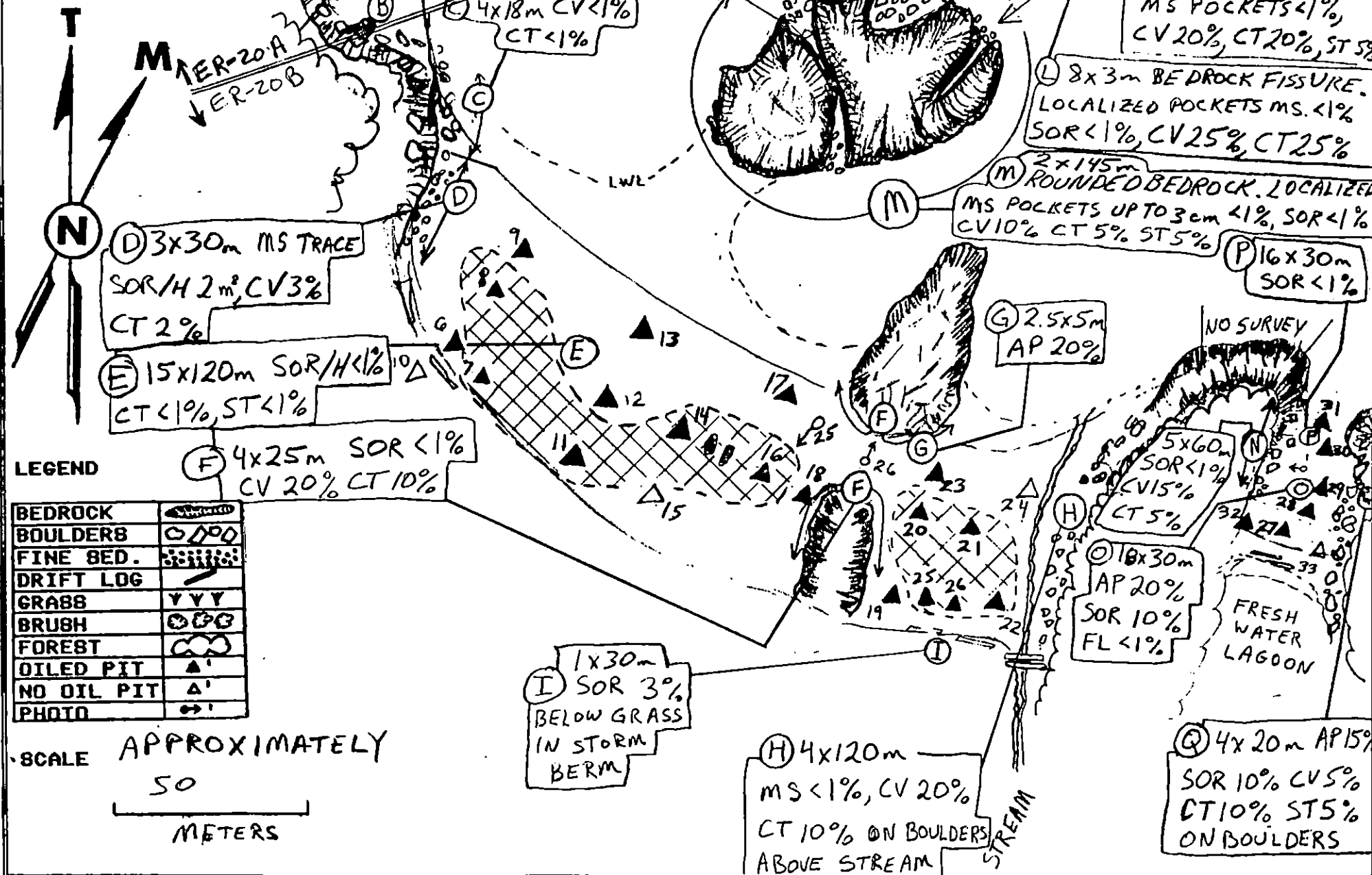
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
12	40							✓	-	-	-	-	✓				P-P	
12	40	✓	✓						20-38								CP-PGP	
12	25			✓					10-15	Y	-	-	✓				CP-CP	
13	25						✓		2-	?	15	S		✓			BR-CPG	
14	30		✓						10-15	Y	-	-	✓				C-PGC	
15	40							✓	-		-	-	✓				P-PG	
16	20	✓							5-10	Y	-	-	✓				P-PG	PHOTO 25
17	25					✓			2-	?	-	-		✓			C-PCG	
18	30			✓					15-20	Y	-	-	✓				CP-CPG	
19	30			✓					10-15	Y	-	-	✓				GP-GPC	
20	20	✓							10-13	Y	-	-	✓				P-P	
21	20	✓							10-15	Y	-	-	✓				PC-PCB	
22	60		✓						45-48				✓				G-G	STREAM BANK
23	25						✓		2-		-	-	✓				GP-PG	
24	20							✓	-		15	N		✓			GP-PGR	
25	40	✓							20-35		-	-	✓				PG-PG	
26	45		✓						30-45	Y	-	-	✓				PG-PG	
27	25			✓					0-10	Y	-	-	✓				P-PG	
28	12	✓							0-10	Y	5	B	✓				CP-CP Peak	
29	20				✓				0-10	Y	-	-	✓				CP-CPG	
30	20				✓				5-10	Y	-	-		✓			CP-CPG	Lower MITB
31	25					✓			2-	?	10	S			✓		CP-CPG	UPPE LITZ
32	25				✓				0-10	Y	-	-	✓				CP-CPG	
33	30						✓		-		-	-	✓				PG-PG	
									-		-	-						
									-		-	-						
									-		-	-						

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THE BEACH CONTAINS NUMEROUS CRACKS IN BEDROCK WHICH HAVE TRAPPED MOUSSE UP TO 3cm. DEEP. THE COVE ON THE EXTREME EASTERN SIDE OF THE SUBDIVISION WAS ORIGINALLY PART OF SUBDIVISION "C" BUT THE PRESENT COMPUTER MAPS SHOW THE SUBDIVISION BOUNDARY ~100m EAST OF THE SSAT SURVEY BOUNDARY. THIS CAUSED CONSIDERABLE CONFUSION FOR THOSE FAMILIAR WITH THE OLD DIVISION POINT. THE BEACH AT AREA ① HAS SEVERAL AP PATCHES IN THE U'ITZ. ACCORDING TO THOSE WHO HAVE BEEN WATCHING THIS BEACH, SIGNIFICANT QUANTITIES OF SEDIMENT HAVE BEEN REMOVED FROM THIS BEACH. THIS MAY CAUSE EROSION OF THE STORM BERM & ALTER THE FRESH WATER LAGOON BEHIND THE BEACH. IF ANY FURTHER SEDIMENT REMOVAL IS CONDUCTED, REPLENISHING THE U'ITZ WITH COBBLES FROM AN UPLIFTED AND INACTIVE STORM BERM COULD BE CONSIDERED.

reviewed 5.31 94
REVIEWED: 6/1/91 MC

MAYBAP 1991
 SKETCH MAP
 REG CHANEY
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.N.: NONE AVAILABLE



TSAP 1991
OG SKETCH MAP
GREG CHANEY

TEAM 5

SEGMENT: ER-20-B

DATE: MAY 22 1991

AIR P.#: NONE AVAILABLE

SUBSURFACE OILING MAP

Map # 2



ER-20A
OP/HOR
8m x 15
DISCONTINUOUS
DUE TO SHALLOW
BEDROCK PITS 3 & 4

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
50
METERS

HOR/OP

ROUGHLY 15 x 100m

PEBBLE/COBBLE
BEACH

HOR/OP

BETWEEN
BEDROCK
AND STREAM.

PEBBLE BEACH.
APPROX 20 x 30m

CENTER OF
POCKET BEACH
OP 5 x 5m

NO
SURVEY

LAGOON

STREAM

reviewed 5.31.94
R = ... MC 61191

TEAM # 5

DATE 23/24 May 1991

SEGMENT # ER-20

TIDAL HEIGHT(Range) +2.5 → +1.0 / +1 → +3

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 1 / 0

WIND SPEED/DIRECTION 5 knots/N / no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ. High in the area black lichen encrusts ~50% of the sediments. Low in the area rare concentrations of *Littorina*, barnacles and *Fucus* sporlings are present. Biota cover is <1%. In the MITZ, among the boulders, there are moderate concentrations of *Fucus*, *Littorina* and limpets. There are also sparse concentrations of adults, juvenile and spat barnacles, and rare to sparse patches of mussels, various age classes present. Biota cover ~70%. On the pebble beach area between areas A & B, there is similar biota; concentrations are sparse to rare. Biota cover ~20.

(B) Area is located in the UITZ. Black lichen encrusts ~30% of the sediments and numerous green algae covers ~1%. Low in the site, barnacles also cover ~1%. The MITZ is a rubble/pebble/granule beach. Biota is similar to the MITZ biota in site A, but concentrations are sparse to rare. Barnacles are the dominant species. *Littorina* egg masses are common and are moulting. Juvenile barnacles, mussels, *Fucus*, *Littorina* and limpets are present.

Area C is in the UITZ, along a bedrock face. Low in the site, barnacle cover ~10% of the surface area. The MITZ has a moderate *Fucus*, barnacle, *Littorina* and limpet concentration. Small tidepools are present with coralline algae and anemones. Biota cover is ~40%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Pink Salmon fry
Seabirds	2	37	juvenile eels
Waterfowl	2	2	
Gulls/Kittiwakes	2	8	
Shorebirds			
Corvids	1	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)	1 Sealion		
	2 Harbor Seal		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: 6/1/91 MC
Randy Allen

Team # 5

Segment # ER-20

Subdivision B

State 1 / 0

Date 23/24 May 1991

pg 2 of 4

Tidal Height $+2.5 \rightarrow +6$ / $+1 \rightarrow +3$

Biologist Crank

Wind Speed / Direction 5 N / no wind

Comments (cont.)

- (D) Area is in the MITZ, among boulders and bedrock. Low in site barnacles cover 1% of the surface. The MITZ is similar to the MITZ in site C.
- (E) Area is the UITZ on a pebble beach. No intertidal macrobiota was found within the site. In the MITZ, most of the sediments are pebbles (cobbles and small boulders are also present). Biota includes sparse concentrations of barnacles with spat and siphon; sparse to moderate limpets and Littorina of various age classes; egg masses were present; filamentous green algae and rare mussels of various age classes. Biota cover is ~20%. Pink salmon fry are feeding nearshore.
- (F) Area is in the UITZ and MITZ, on the same beach as E. The UITZ is a pebble matrix with similar biota species and concentrations as E. The MITZ has boulders and a bedrock outcrop and pebbles. There is a mussel bed. The northwest side is sparsely concentrated and appears to have extended further at one time. The southeast side is dense (5m x 15m). Various age classes, including spat and spall are present.

Team # 5
Segment # ER-20
Subdivision B
Sea State 1/0

Date 23/24 May 1991 pg 3 of 4
Tidal Height $+2.5 \rightarrow +6 / +1 \rightarrow +3$
Biologist Crank
Wind Speed / Direction S N / no wind

Comments (cont.)

(F continued) There are sparse concentrations of barnacles and Fucus. Barnacle spot is present. The Fucus appears uniformly and is covered with epiphytic plants. Littorina and limpets are also sparse with several age classes and egg masses. Biota cover is ~50%.

(G) Area is an asphalt patch in the MITZ, adjacent to the dense mussel bed. There is a moderate concentration of live mussels in the patch.

(H) Area is east of the small salmon stream, approximately 10 m, located in the UITZ along boulders. High in the site black lichen covers ~50% of the sediments. Low in the site filamentous green algae dominates. Rare barnacles and Fucus sporlings are also present. Biota cover is ~70%. In the MITZ there is a moderate concentration of Fucus, mussels, Littorina and limpets. Barnacles are sparse. Epiphytes are present on the Fucus but not as heavy as in area F. Biota cover is ~70%.

NOT AN ADFEG DESIGNATED
AND STREAM

Team # 5

Segment # ER-20

Subdivision B

Sea State 1' / 0

Date 23/24 May 1991

pg 4 of.

Tidal Height 2.5 $\rightarrow$ 4.6 / +1 $\rightarrow$ +3

Biologist Crank

Wind Speed / Direction 5 N / no wind

Comments (cont.)

(H) Area is located in the SUPRA above area F. Rye grass and seasonal plants are prominent.

(J, K, L & M) Areas are located on an island in front of area E, in the SUPRA and UITZ. In the SUPRA and high UITZ black lichen encrusts 50% of the surface area. Low in the sites sparse concentrations of barnacles, *Littorina* and limpets and rare mussels cover ~10% of the surface. In the MITZ, below the sites there are moderate concentrations of *Fucus*, *Littorina*, limpets and pulmonate snails; moderate to sparse concentrations of mussels and sparse barnacles. *Scarlusia* (whelk), *Piaster* and *Leptasterias* (sea stars) and *Scytosiphon* and *Nerthodrometa* (erix (algae)) are present. In small tidepools there are sea urchins, anemones and coralline algae. Biota cover is ~70%. In the LITZ, algae is dominant. *Fucus*, bladed reds and greens, filamentous reds and greens, *Halosaccus* and *Alaria* (kelp) cover ~90% of the surface. *Pycnopodia* (sea star) are present and *Littorina* and nudibranch egg masses were found.

Reviewed: 6/1/91 me

Team # 5

Date 23/24 May 1991

pg 5 of 6

Segment # ER-20

Tidal Height +2.5 → 6 / +1 → +3

Subdivision B

Biologist Crank

State 1' / 0

Wind Speed / Direction 5 N / no wind

Comments (cont.)

Areas N-Q are on a single pocket beach that in 1989 and 1990 were part of subdivision C. This is a Dames & Moore Pre/Post Treatment evaluation beach. Some changes since 1990 include: a reduction in the storm berm width, a reduction by at least a third of the mussel bed (even the bisse threads were gone in the LITZ), clam bed is greatly reduced (I could only find one viable clam, a juv *Saxidomus*, after 5 min. of looking - in 1989 *Prototheca* were sparsely concentrated on this beach) and the *Fucus* on the beach proper has been reduced, although not visibly so on the boulder borders.

(N) Area is located in the UITZ along the west boulder border. Filamentous green algae, sparse barnacles and rare concentrations of mussels and *Fucus* are present within the site. Biota cover is ~10%. In the MITZ there is a moderate concentration of *Fucus* with epiphytic plants; sparse concentrations of filamentous green algae, *Littorina* and limpets and rare barnacles. Biota cover ~70%. In the exposed LITZ there are dense *Littorina* and limpets, moderate *Fucus* and rare barnacles and mussels. Biota cover is 40%. *Alaria* kelp is present below the tide level.

Reviewed: 6/1/91 mc

Team # 5

Date 23/24 May 1991

pg 6 of 6

Segment # ER-20

Tidal Height $2.5 \rightarrow 6 / +1 \rightarrow +3$

Subdivision B

Biologist Crank

State 1/10

Wind Speed / Direction 5N / no wind

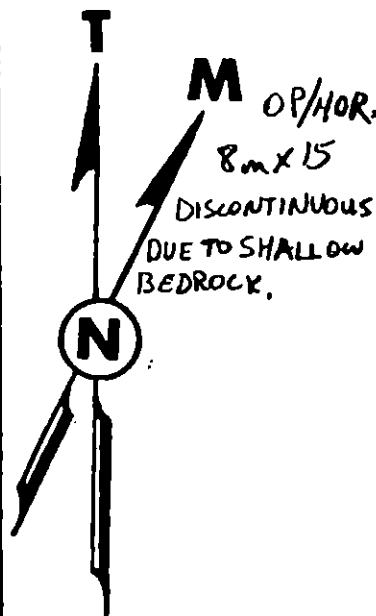
Comments (cont.)

- (O) Area is an asphalt patch in the UITZ. Filamentous green algae cover 90% of the surface sediments and oligochaete worms cover <1% under the veneer. Other macrobiota was not found.
- (P) Area is in the MITZ, below (O). There are: a moderate to sparse mussel bed; sparse barnacles; rare *Fucus* and dense *Littorina* and limpets. Biota cover is ~35%. In the exposed LITZ *Fucus* is sparse, mussels are rare individual juvenile zells, rare clams (one live found), and oligochaete worms. Biota cover ~30%.
- (Q) Area is located in the UITZ along the east boulder border. Within the site filamentous green algae cover ~10% of the surface sediments. Below the site, in the MITZ there are dense concentrations of *Littorina* and limpets; sparse mussels. There is a sparse barnacle band and below that a moderate *Fucus* band with dense epiphytic algae. Biota cover is ~50%.

The lagoon and lake present behind the storm berm in areas N-Q are reported by Chenega residents to be the only freshwater source on the northern end of Elfrington.

REVIEWED: 6/1/91 MLC

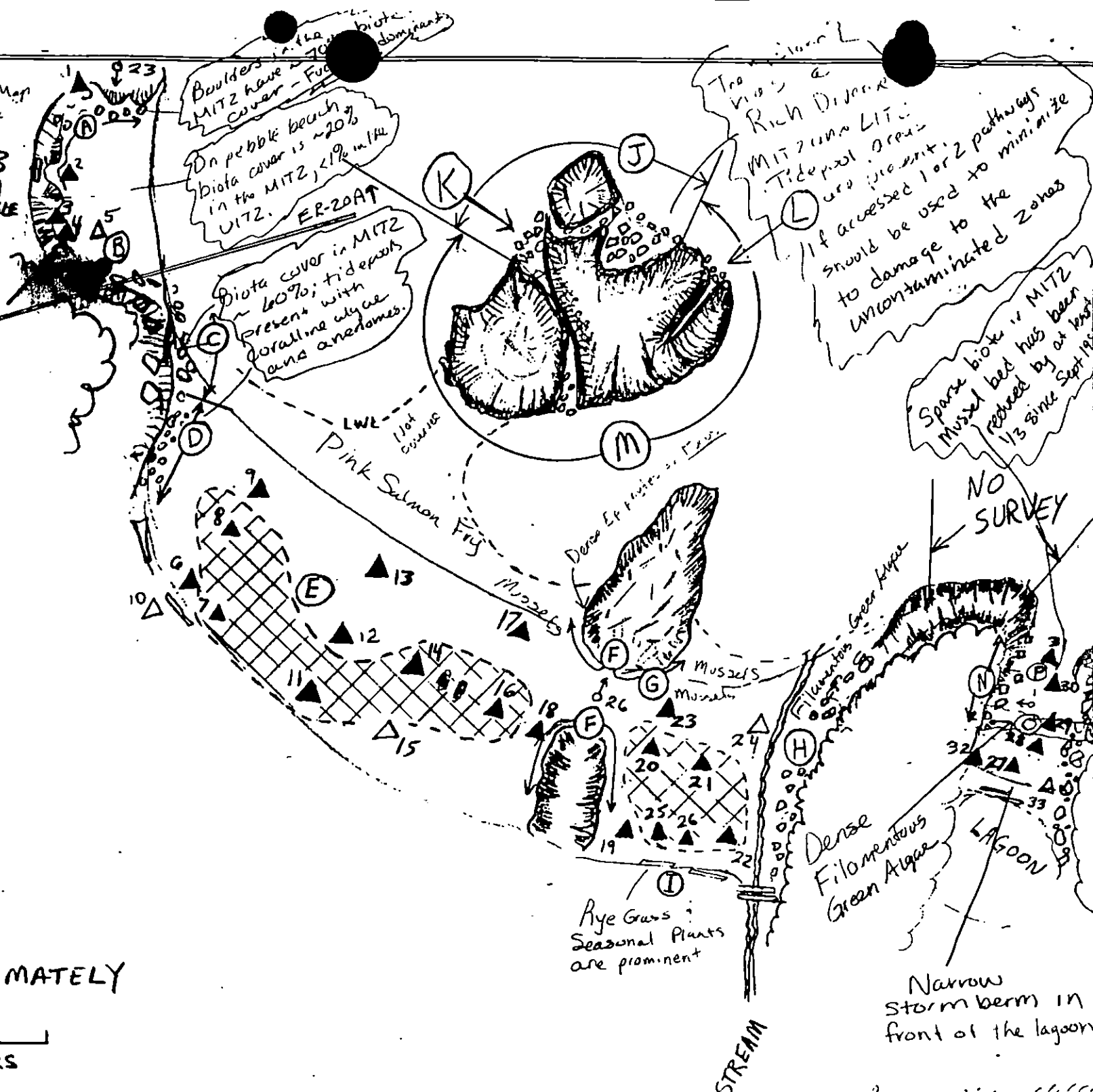
MAY 8AP 1991
 OG SKETCH MAP/D's Map
 GREG CHANEY/Crank
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

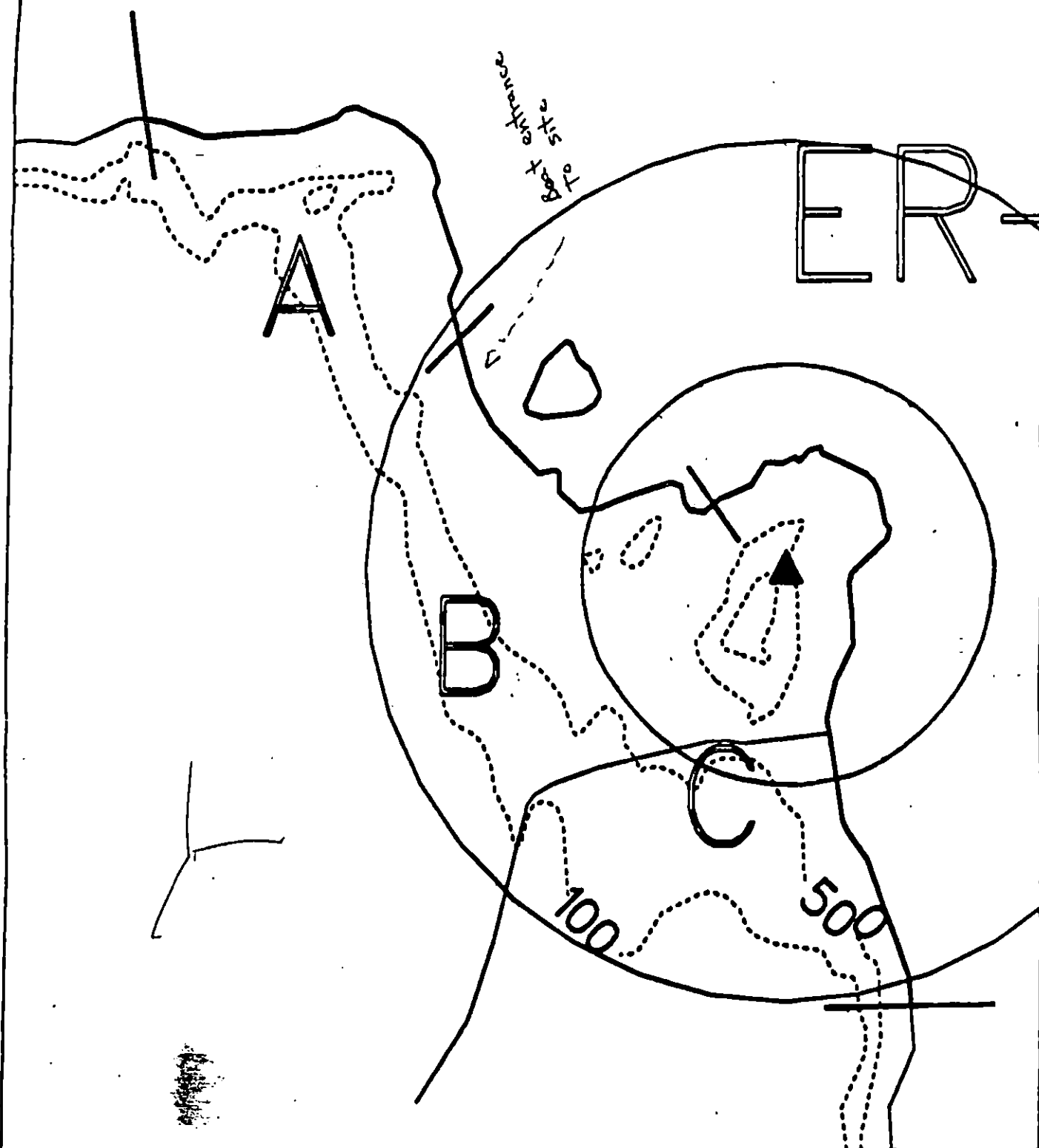


LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 50
 METERS







ER020

100 200

AS Histo Plots, Zone 1

Segment Reference Map

Map Key: PUSER020



EAGLE NEST

USPWS 5/23/2013

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/23/91 5/24/91 Shoreline Segment/Subdivision ER020 B

Shoreline activity Assessment Team Survey

Time - Begin 5/23/91 6:00 PM Time - End 5/23/91 7:30 PM
FWS Observer 5/24/91 6:15 AM 5/24/91 8:00 PM

Surveyors/workers _____

Nest in view/monitored: ☒ Y ☐ N Adult in nest: Y ☐ N ☐ Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N Unk.

Time	Type of human activity/eagle response
<u>5/23/91 6:00 PM</u>	<u>An active eagles nest was shown on</u>
_____	<u>the eagle survey maps. A quite</u>
_____	<u>entrance to the site put crews on</u>
_____	<u>the beach. An eagle sat calmly</u>
_____	<u>near the nest and finally flew</u>
<u>5/24/91 6:15 AM</u>	<u>across the channel. No bird was located</u>
_____	<u>in the nest. The crews finished their</u>
_____	<u>survey the next morning with no</u>
_____	<u>activity from the nest.</u>

Survey/_____ activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: A monitor should be present at
this site, but the bird observed near the
nest wasn't upset.

FWS observer Mike Luke Date 5/24/91

1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: A REGION: PWS SURVEY DATE: 5/19/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 8/15 - 9/15Ecological/Constraints (see page two for details) Fry release,
Subsistence - Deer harvesting, Subsistence - Finfish harvestingARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR

Recommended manual pickup of AP+SOR/H in areas A, I, + H.
Additionally recommend use of trowels to manually remove oil aerate subsurface sediments between boulder in area H.

EXXON

NAME John Dean SIGNATURE [Signature]

☒ NTR

MOST REMAINING OILING IS CT, CV. MANUAL WORK WOULD YIELD VERY SLIGHT RECOVERY. LAND MANAGER SPECIFIES "NO BIO"

LANDMANAGER

NAME Steve Ward OF CUC/FS SIGNATURE [Signature]

☐ NTR

SEVERAL POCKET BEACHES CONTAIN ASSESIDE SUBSURFACE OIL THAT CAN EASILY BE REMOVED. LOTS OF OIL IS TRAPPED BETWEEN THESE ROCKS. HIGH-PR: ONLY USE AREA. BETTER IS. BY CHENESEY. HATCHERY AT PORT SAN JUAN. OIL ~~WILL~~ BECOME MOBILE WITH HEAT.
High use Area

NO-BIO./Chenegey Local Resp.

USCG/NOAA

NAME DRGHER/CLINE SIGNATURE [Signature]

☒ NTR

FURTHER CLEAN UP OPERATIONS IN THIS SEGMENT WOULD CAUSE MORE ENVIRONMENTAL HARM THAN THE OIL TO BE REMOVED. RRD

☐ NTR

SURFACE OILING OF ROSE INCLUDES TRACES OF AP WHICH COULD BE EASILY REMOVED BY MANUAL TREATMENT. ON THE EAST-FACING SIDE OF THE SEGMENT, SUBSURFACE OILING WAS NOTED AROUND SITE H. MANUAL WASHING AND AGITATION OF THE COARSE SEDIMENTS IN THIS AREA IS RECOMMENDED. RRD

TEAM NO. 5OG CHANEYBIO CRANKSEGMENT ER-20ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION AEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY, 19, 1991TIME 10:20 to 11:30 AMTIDE LEVEL 3.0 ft. to -0.5 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 326 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH:

W - m M 19 m N 30 m VL 170 m NO 107 m US 120 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S				S	S					B	M	5	5		✓			Boulder Pocket
B					S	S					CB	H	1	10		✓			
C					S	S					RBC	H	4	4		✓			
D				T	T	S	S				B	H	3	40		✓			
E				T	T						BR	H	2	25		✓			
F					T	T					BR	H	2	25		✓			
G					T	T					B	H	2	40		✓			ANGULAR BOULDERS
H				S	S	P					B	H	2	20		✓			
I	T			S	S	P					BR	H	5	10		✓			
J					T	T					BR	V	1	40		✓			
*A1					T	T	T				B	H	4	50		✓			
*B1		T		S	S	S	S				B	H	7	35		✓			

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

5 - 19 FRAMES 14-17

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	30							✓	-	-	-	N			✓	PG-PG		
2	35							✓	-	-	-	-			✓	PG-PG		
3A	15	✓							0-5	Y	-	-			✓	BC-PG	UNDER BLDRS AREA (H) 2x10m	
3B				✓					5-10	Y	-	-			✓	BC-PG		
4	15							✓	-	-	-	-			✓	PG-PGB		
5	15							✓	? -	?	-	-			✓	Bc-LPB		
6	15							✓	? -	?	-	-			✓	BC-CPB		
7	10	✓							0-10	N	-	-			✓	PG-GB	Between Boulders	
8	10	✓							10-10	Y	-	-			✓	PG-PGR		
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE																		
9	25							✓	-	-	-	-			✓	PG-PGB		

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THIS SUBDIVISION IS PRIMARILY COMPOSED OF A SERIES OF SMALL FISSURE COVES SEPERATED BY ROCKY HEADLANDS. THESE ARE TRAPS FOR OIL WHILE THE HEADLANDS ARE RELATIVELY OIL FREE.

*SOUTHERN MOST POCKET BEACH SURVEYED & ADDED 5/22/91 (with ER-20B)

REVISED: MC 5/28/91

revised 5.28 94

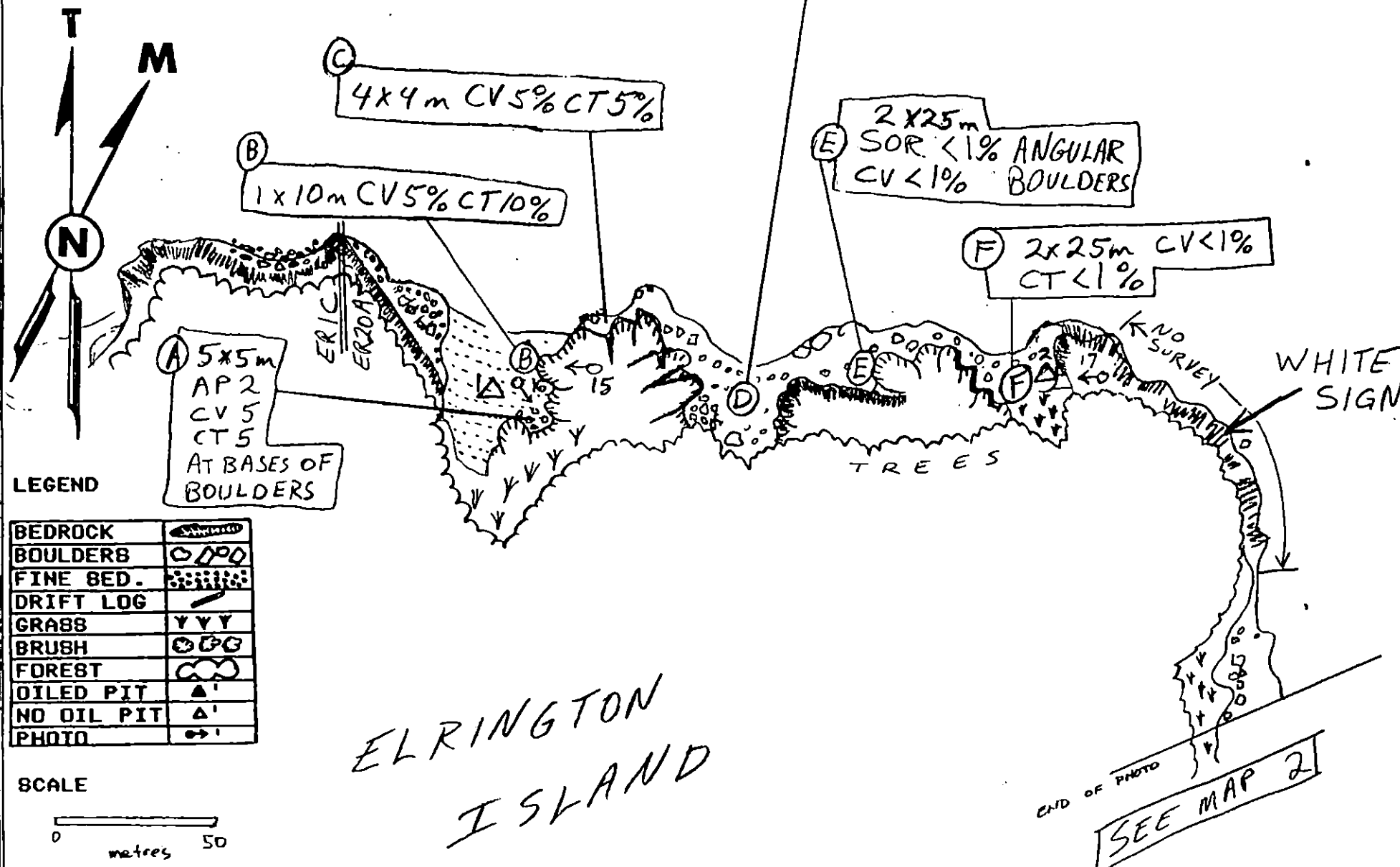
revised 5.31 94

MAP 1991
OG WATCH MAP
GR CHANEY / DONI CLINE
TEAM 5

SEGMENT: ER20 A
DATE: MAY 19 1991
AIR P.#: PIM-C 005-121

2x4m CV<1% CT1% ST2%
SOR/H AROUND BOULDER
BASES TR

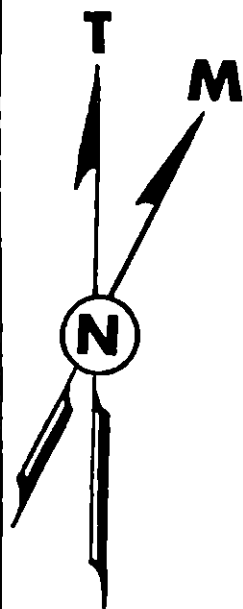
MAP 1 4



REVIEWED: AC 5/24/91
COMPILED: C. J. B. 7/91

MAP 1991
 DRAFT MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: ER 20 A
 DATE: MAY 19 1991
 AIR P.#: PIMC005-121

MAP 2 of 4

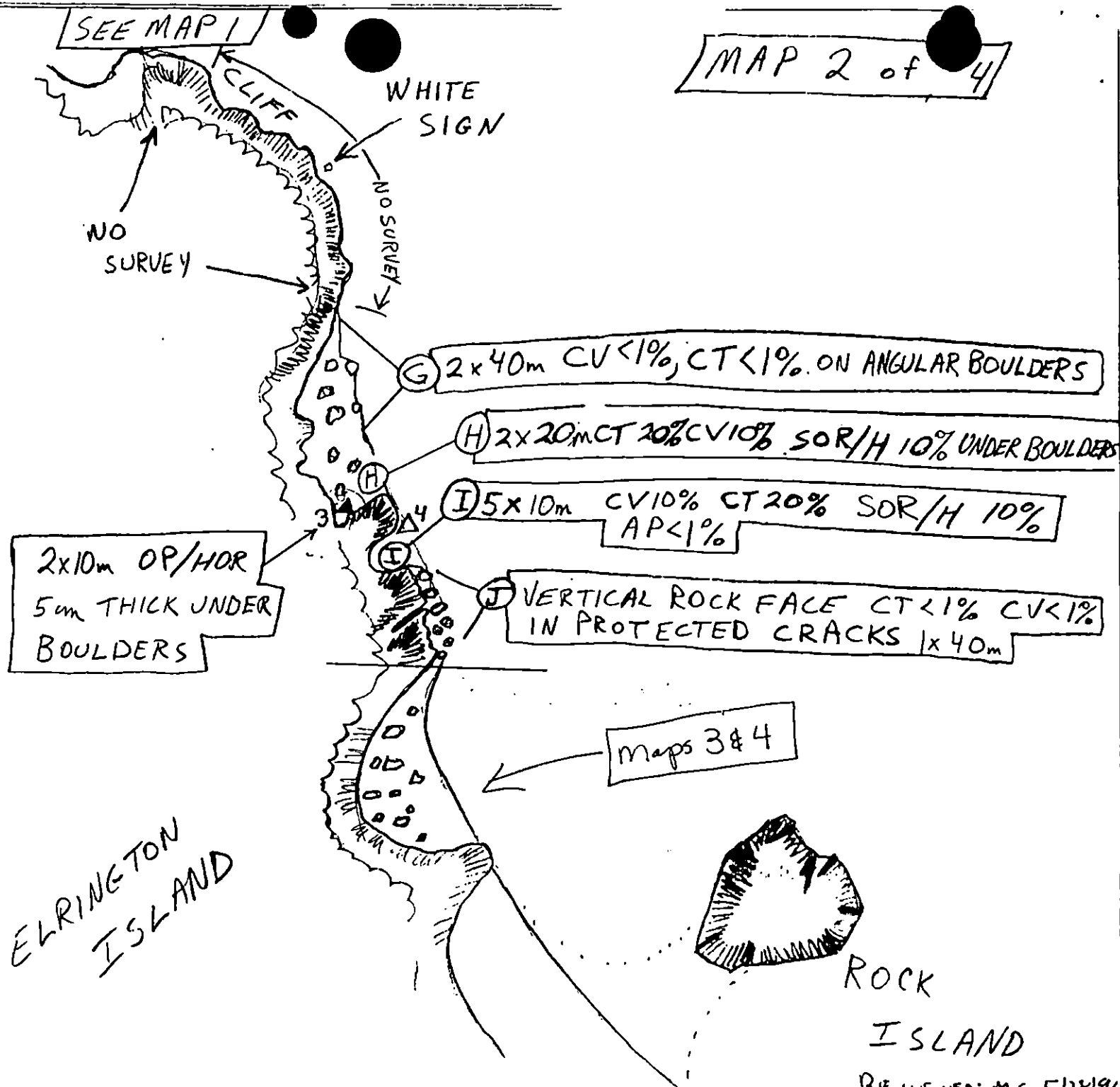


LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

ROUGHLY
 50
 METERS

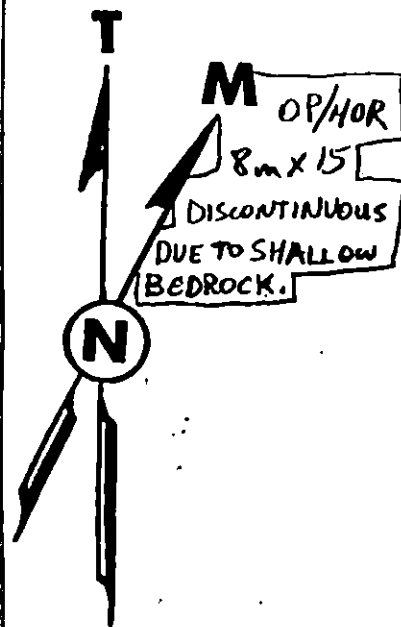


REVIEWED: MC 5/28/91
 reviewed 5.28 94

MAYBAP 1991
 SKETCH MAP
 REG CHANEY
 TEAM 5
 SEGMENT: ER-20-A
 DATE: MAY 22 1991
 AIR P.N.: NONE AVAILABLE

face
 Map 3 of 4.

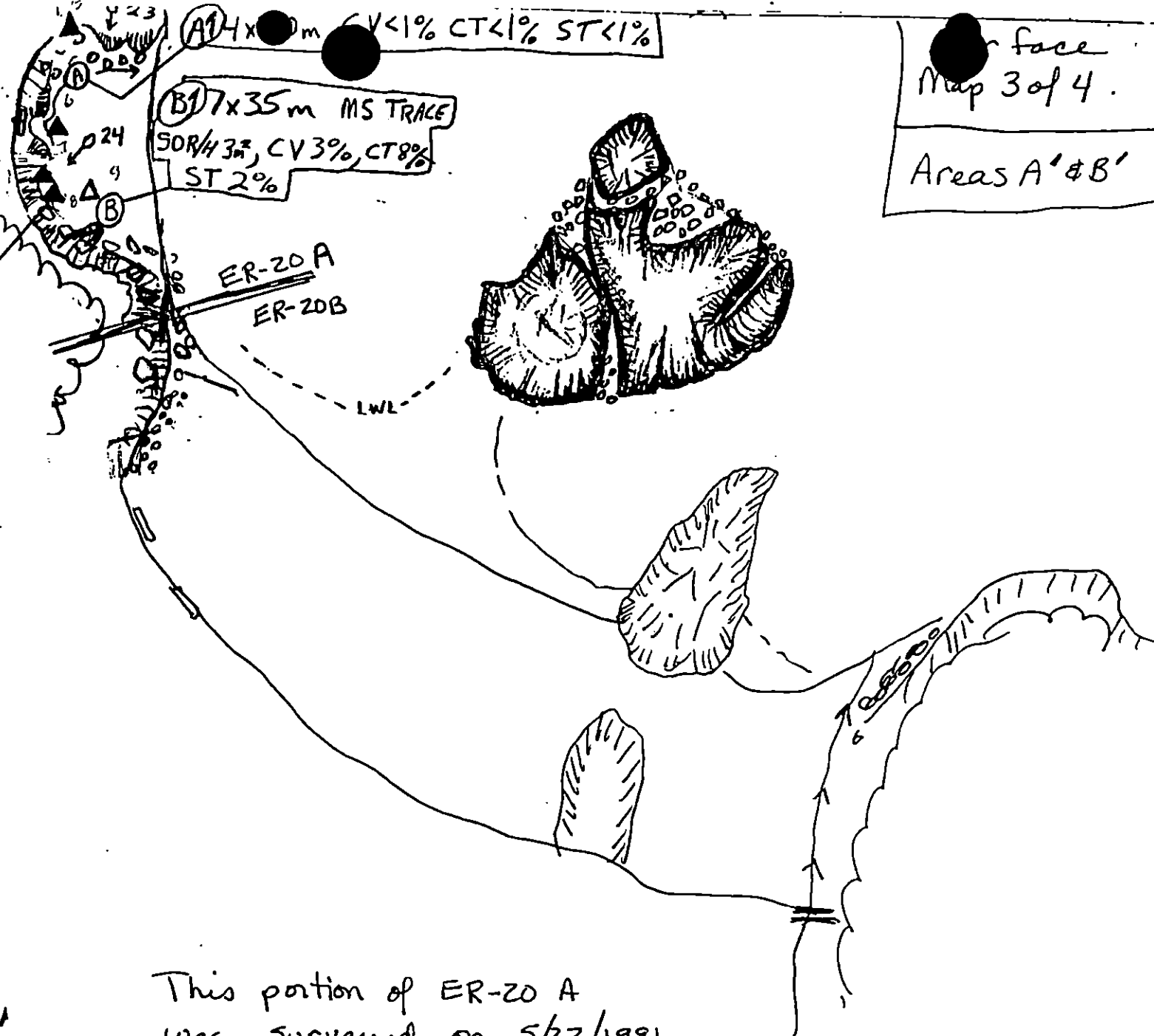
Areas A' & B'



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATE
 50
 METERS



This portion of ER-20 A
 was surveyed on 5/22/1991
 as part of ER-20 B survey
 as it was missed the first time.

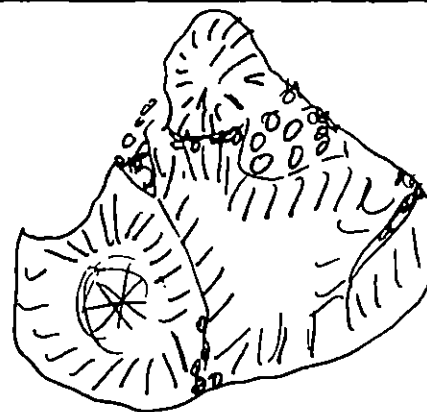
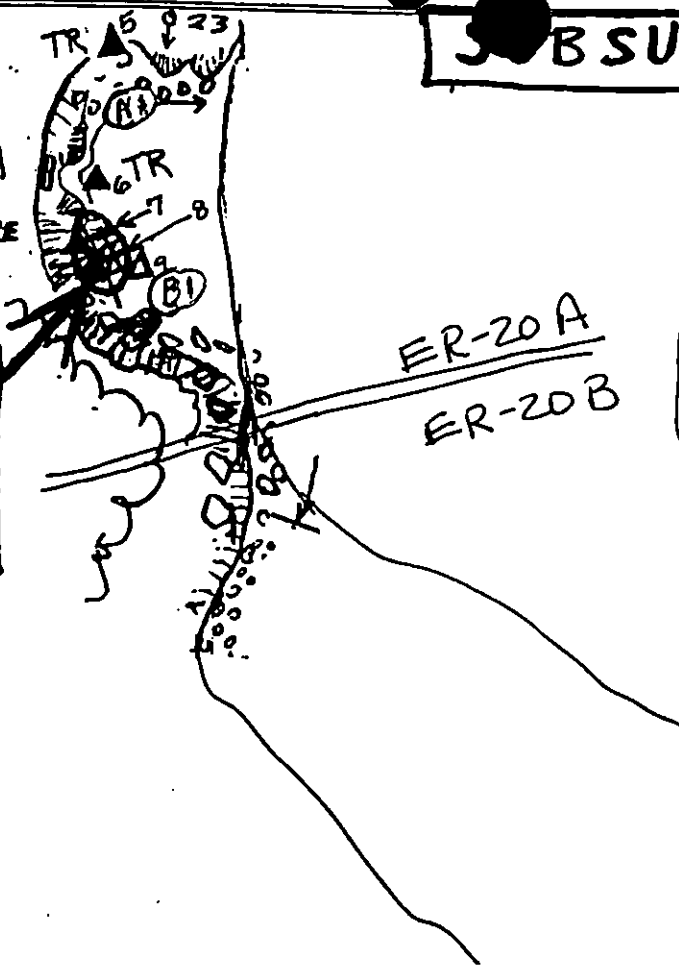
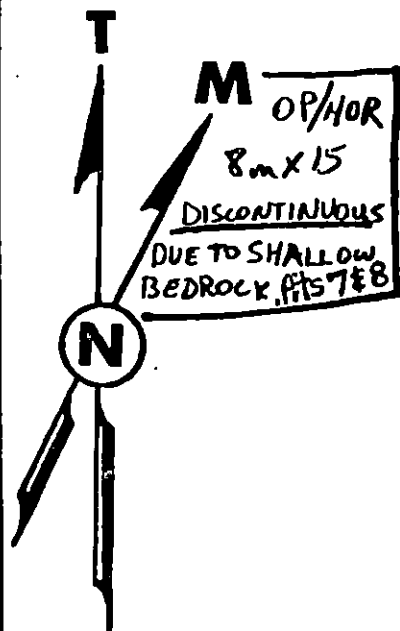
revised for
 addendum 5.31.919y

YBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: ER-20-A
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

SUBSURFACE OILING MAP

Map 4 of 4

Areas
 A' & B'



LEGEND

BEDROCK	
BOULDERB	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 50
 METERS

This portion of ER-20 A was surveyed on 5/22/91 as part of ER-20 B survey.

revised for addendum
 5.31.91 94

TEAM # 5

DATE 19 May 1991

SEGMENT # ER-20

TIDAL HEIGHT (range) +2 → -0.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0-1'

WIND SPEED/DIRECTION 5 knots/SE

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the ULTZ. Within the site there is a rare concentration of barnacles and *Fucus*. A sparse to moderate concentration of *Fucus* is present on the undersides of the sediments. Tar spot algae is present. Biota cover on the sediment surface is ~1%. Directly below the site there is a 4m² patch of moderately concentrated *Fucus* and barnacles covering ~10% of the sediments.

(B) Area is located in the MITZ and ULTZ along a rock face. There are sparse concentrations of barnacles, mussels, *Littorina* and *Nucella* (various). In the MITZ there is also a sparse concentration of post-larval mussels. Biota cover is ~40%.

(C) Area is located in the ULTZ. Black lichen encrusts about 50% of the sediments within the site. White lichen and moss are also present. Low in the site there are rare concentrations of *Fucus* and barnacles.

(D) Area is located in the ULTZ. Encrusting green algae and black lichen cover ~40% of the sediments; sparse concentration of *Littorina* and rare concentrations of barnacles and *Fucus* cover ~1% of the sediments. Barnacle scars are present.

In the MITZ between the pocket beaches a moderate concentration of *Fucus* and *Neorhodomonella* (algae) cover ~50% of the sediments. In the LITZ bladed/filamentous red and green algae cover ~80% of the surface.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	5	Pricklebacks
Seabirds	1	1	Grunnells
Waterfowl			
Gulls/kittiwakes	3	82	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	7		
Pinnipeds (specify)	8 Seals		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/20/91

Team # 5
Segment # ER-20
Subdivision A
Sea State 0-1

Date 19 May 1991 pg 2 of 3
Tidal Height +2 → -0.5
Biologist Crank
Wind Speed / Direction 5 knots/SE

Comments (cont.)

(E, F) Areas are located in the UITZ. Within the areas sparse concentrations of Fucus (with sporelings) and barnacles and moderately concentrated Littorina and limpets cover ~30% of the surface sediments. The MITZ and LITZ is similar to that previously described.

(G, H) Areas are located in the UITZ with rare concentrations of Fucus sporelings, barnacles, Littorina, limpets, white lichen and moss. Biota cover is <1%. At the top of the hard black lichen encrusts 30% of the sediments. Directly below the site, low in the UITZ, far spot algae, sparsely concentrated barnacles, Littorina and limpets and rare Fucus sporelings cover ~10% of the sediments. In the MITZ, 5m. below the site, on boulders, moderately concentrated adult, juvenile and spat barnacles; patches of mussels; rare concentrations of snails; and a sparse to rare concentration of Fucus cover ~50% of the sediments. Approx 5% of the Fucus plants present are 'stipe-only'. In the LITZ algae is dominant covering ~90% of the sediments. Alaria, Ulva, Enteromorpha, Palmaria, Membranoptera, Scytosiphon, Fucus and assorted filamentous red and green algae are present. Under the sediments, sparse concentrations of Littorina, limpets and Nucella (whelks) as well as abundant prickleback and gunnel fish were present.

Reviewed M.B. 5/20/91

Team #5
Segment # ER-20
Subdivision A
State 0 $\rightarrow$ 1'

Date 19 May 1991 pg 3 of 3
Tidal Height +2 $\rightarrow$ -0.5
Biologist Crank
Wind Speed / Direction 5 knots / SE

Comments (cont.)

(I, J) Areas are located high in the UITZ. Black lichen encrusts ~30% of the sediments. White & yellow lichen, moss and seasonal plants are present. Below the site in the MITZ moderately concentrated mussels, Littorina and limpets of various age classes; and moderate to densely concentrated barnacles of various age classes are present. Biota cover is ~75%. The LITZ is similar to that described for areas G & H.

In this subdivision, recruitment is occurring in the barnacle, Littorina, Fucus, limpet, Alaria, and mussel populations. Present oiling conditions does not appear to be adversely affecting the biota.

See addendum -
next page for
areas A1 & B1

TEAM # 5

DATE 23/24 May 1991

SEGMENT # ER-20

TIDAL HEIGHT (Range) 12.5 → 10 / +1 → +3

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1 / 0

WIND SPEED/DIRECTION 5 knots/N / no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

* (A) Area is located in the UITZ. High in the area black lichen encrusts ~50% of the sediments. Low in the area rare concentrations of *Littorina*, barnacles and *Fucus* sporlings are present. Biota cover is <1%. In the MITZ, among the boulders, there are moderate concentrations of *Fucus*, *Littorina* and limpets. There are also sparse concentrations of adults, juvenile and spat barnacles, and rare to sparse patches of mussels, various egg classes present. Biota cover ~70%. On the pebble beach area between areas A & B, there is similar biota; concentrations are sparse to rare. Biota cover ~20.

* (B) Area is located in the UITZ. Black lichen encrusts ~30% of the sediments and - silicious green algae covers ~1%. Low in the site, barnacles also cover ~1%. The MITZ is a rubble/pebble/granule beach. Biota is similar to the MITZ biota in site A, but concentrations are sparse to rare. Barnacles are the dominant species. *Littorina* egg masses are common and are moulting. Juvenile barnacles, mussels, *Fucus*, *Littorina* and limpets are present.

* Area is in the UITZ, along a bedrock face. Low in the site, barnacles cover ~10% of the surface area. The MITZ has a moderate *Fucus*, barnacle, *Littorina* and limpet concentration. Small tidepools are present with coralline algae and anenomes. Biota cover is ~10%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

* Includes ER-20 B information —

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Pink Salmon Fry
Seabirds	2	37	Juvenile eels
Waterfowl	2	2	
Gulls/kittiwakes/tern	2	8	
Shorebirds			
Corvids	1	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)	1 Sealion		
	2 Harbor Seal		
Other (specify)			

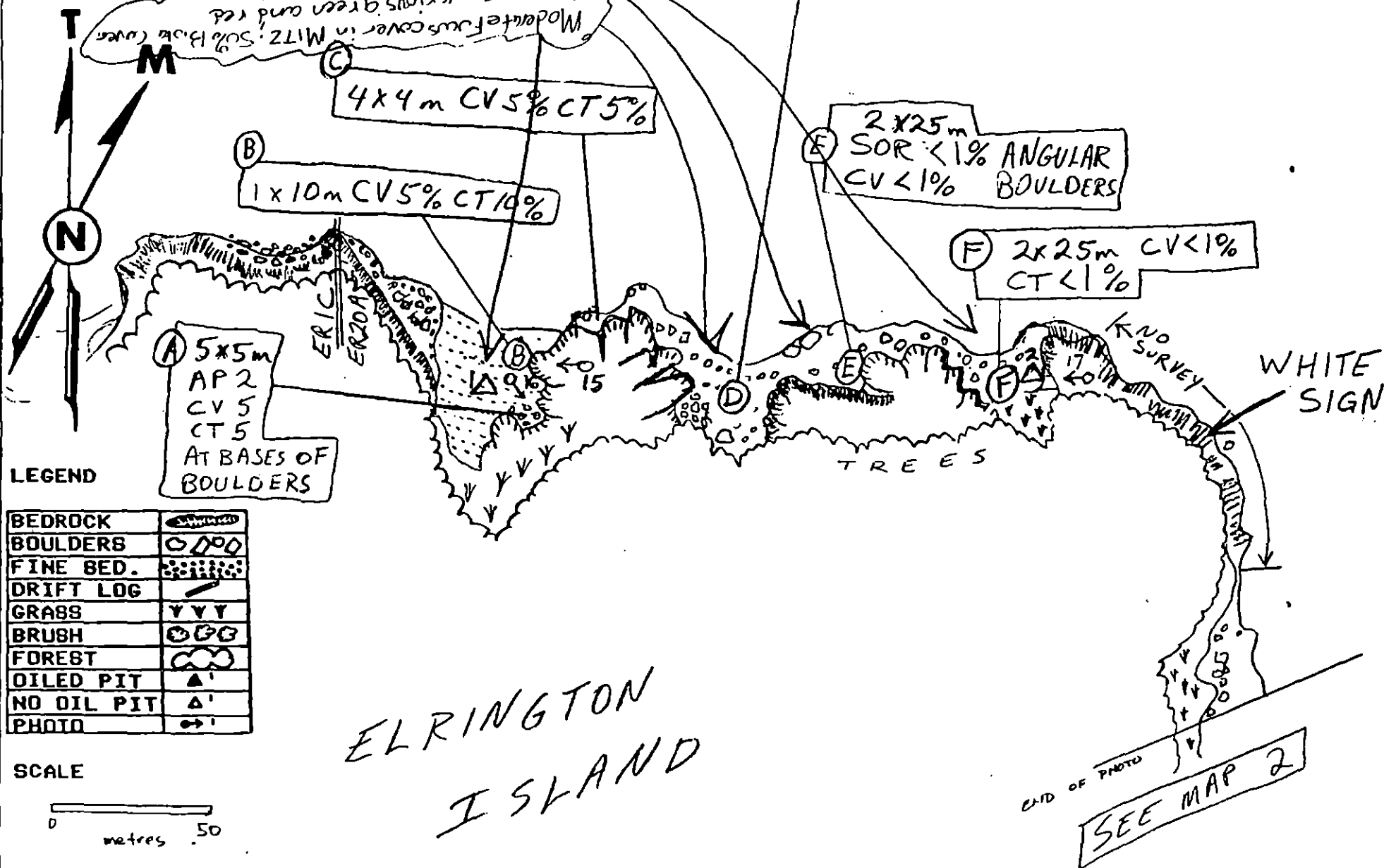
Shoreline subdivision map showing important biological features attached.

MAP 1991
 DRAFT MAP
 GREG CHANEY / DON CLINE
 TEAM 5

SEGMENT: ER20 A
 DATE: MAY 19 1991
 AIR P.N.: PIM-C

2m CV<1% CT1% ST2%
 SOR/H AROUND BOULDER
 BASES TR

MAP 1 2



EL RINGTON
 ISLAND

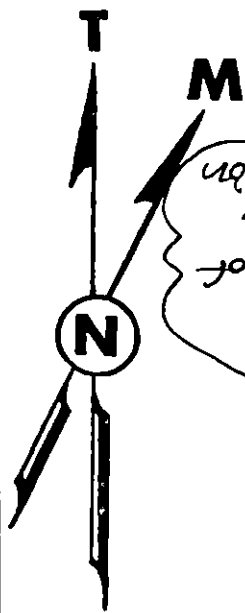
Revised M.B. 5/25/14

YSAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: ER 20 A
 DATE: MAY 19 1991
 AIR P.#: PIMC005-121

SEE MAP 1

MAP 2 of 2

See addendum May 3



Focus covers ~50% of the surface in the LITZ.
 ~5% of the focus population is 'stipe-only'.

NO SURVEY

WHITE SIGN

NO SURVEY

Heavy Mussel Recruitment

G 2x40m CV<1%, CT<1% ON ANGULAR BOULDERS

H 2x20m CT 20% CV 10% SOR/H 10% UNDER BOULDERS

I 5x10m CV 10% CT 20% SOR/H 10% AP<1%

2x10m OP/HOR
 5cm THICK UNDER BOULDERS

J VERTICAL ROCK FACE CT<1% CV<1% IN PROTECTED CRACKS 1x40m

END OF SURVEY

Heavy Barnacle Recruitment

In the LITZ, algae is dominant; covering ~40% of the surface sediments

ELDRINGTON ISLAND

ROCK ISLAND

LEGEND

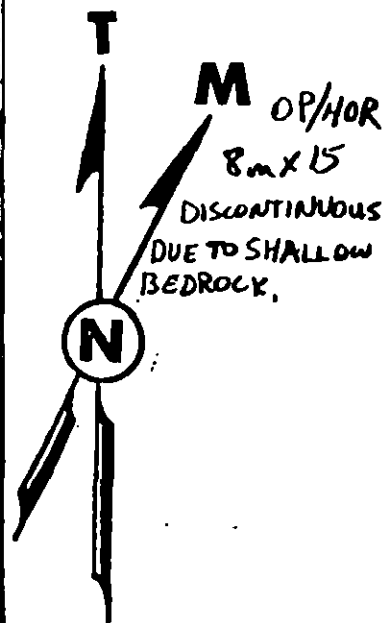
BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

ROUGHLY
 50
 METERS

Revised M.B. 5/24/91

BAP 1991
 OG SKETCH MAP/0.5 Map
 GREG CHANEY/Crank
 TEAM 5
 SEGMENT: ER-20-B
 DATE: MAY 22 1991
 AIR P.#: NONE AVAILABLE

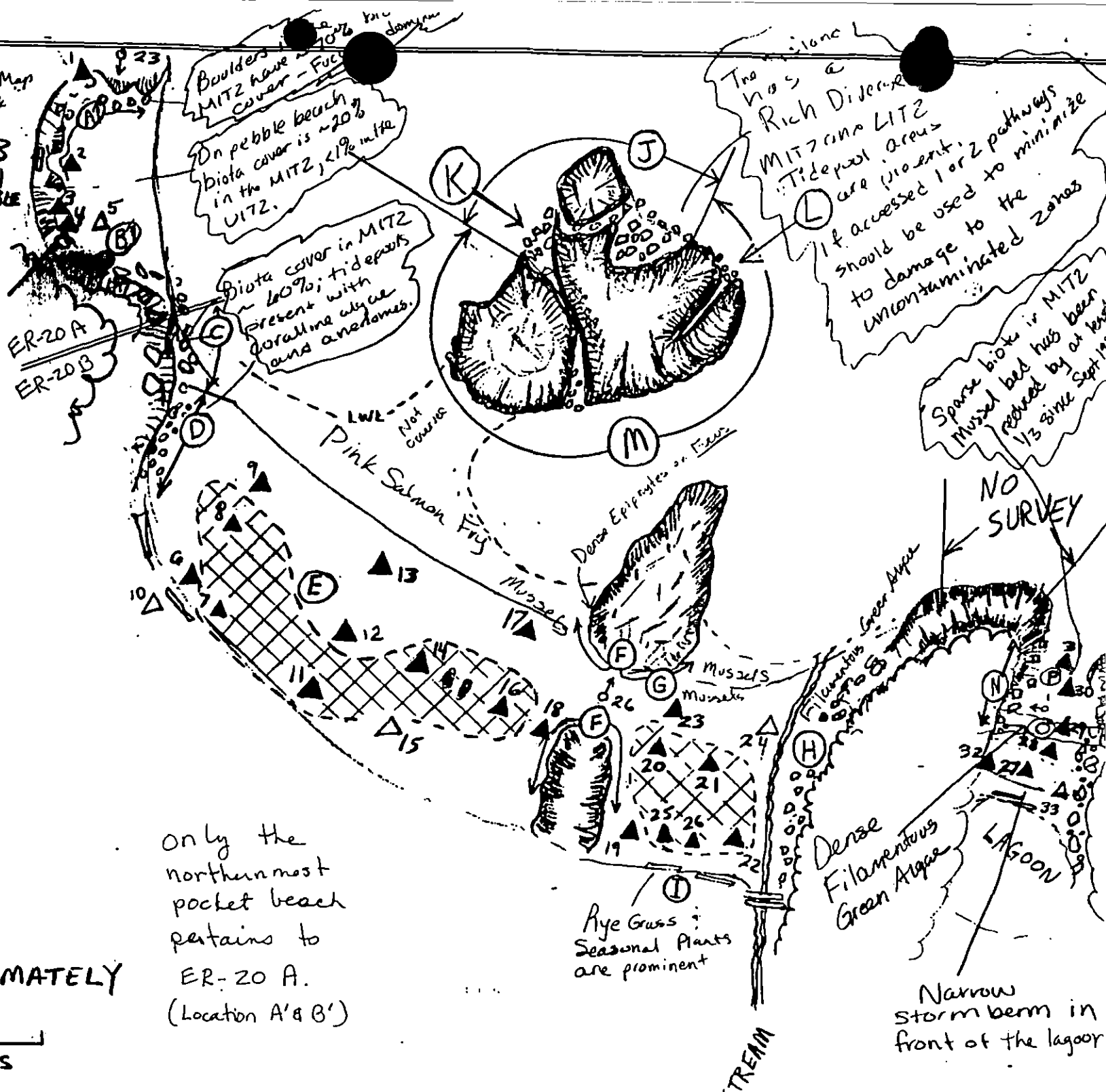


LEGEND

BEDROCK	
BOULDER	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE APPROXIMATELY
 50
 METERS

Only the
 northernmost
 pocket beach
 pertains to
 ER-20 A.
 (Location A' & B')



1991 MAYSAP EVALUATION

SEGMENT: ER 020 SUB: C REGION: PWS SURVEY DATE: 5/24/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest,
Anadromous stream, Fish harvest area, Subsistence - Deer har-
vesting, Subsistence - Finfish harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
TREATMENT REQUIRED (Y or N) <u>Y</u>	<u>Y</u>	_____	_____
Manual Pickup (Check as Req.) <u>X</u>	<u>X</u>	_____	_____
Spot Washing _____	_____	_____	_____
Bio-Customblen Only _____	_____	_____	_____
Bio-Inipol/Customblen _____	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Manual pickup of easily accessible AP at locations B and
C.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence, Finfish Harvesting: Unlimited treatment.

TEAM NO. 5 SEGMENT ER 20 SUBDIVISION C DATE MAY 24, 1991

ADEC

NAME John Hager SIGNATURE [Signature]

☐ NTR By Treatment Recommended
Planned manual pickup of AP in area B, light work & accessible
good for small crew.

EXXON

NAME John Dean SIGNATURE [Signature]

☒ NTR OILING OBSERVED WAS NOT OF RECOVERABLE CHARACTER OR
LOCATION. ADDITIONAL WORK WOULD PROVIDE NO NET BENEFIT,

NDMANAGER

NAME Steve WARD OF CUC / FS SIGNATURE [Signature]

☐ NTR Surface and Sub-Surface oil in Beginning of Sub-division.
Oiled Area is Right Beside ER-20-B which needs lots of manual
and mechanical work - Good chance to Local Response Area.

No-Bio.

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K.L. Dreher [Signature]

☒ ^{KRD} NTR Observed AP at base of large boulders to the east of the pocket beach.
Further clean up operations would cause more environmental harm than the
oil to be removed. KRD

☐ NTR Significant patches of AP were found throughout the subdivision,
notably at Site B at the north end of the subdivision. This area is
on accessible pocket beach. Subsurface oiling noted on summary
occurs in an area w/ difficult access. KRD

TEAM NO. 2OG CHANEYBIO CRANKSEGMENT ER-20ADEC HAYESLANDMANAGER WARDUSFS CVCSUBDIVISION CEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY 124 191TIME 07:50 to 09:10TIDE LEVEL 3.5 ft. to 5.5 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☒ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 508 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

TIDE POOL SHEEN

EST. OIL CATEGORY LENGTH: W - m M 25 m N 75 m VL 260 m NO 208 m US 40 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					P	S	S				RB	VH	1	25		✓			
B	P	T			S	S					BC	H	4	25		✓			SOET AP BETWEEN BLDR
C	S				S	S	S				BC	H	2	30		✓			
D	T	T			S	S					BR	HV	2	20		✓			
E	T			T	T	T					RB	H	5	115		✓			SPLATTERS ON BOULDER
F	T				T	T					BC	M	10	125		✓	✓		" " "
G				T	T	S					B	H	3	20		✓			

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5-22 FRAMES 2-4

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
* 1	20		✓						0-5	Y	-	-		✓			B-BCP	THROUGH APING
2	35		✓						30-34	Y	-	-		✓			B-BCP	
3	30			✓					15-20	Y	-	-		✓			BT-BPC	
4	15	✓							5-8	Y	-	-		✓			BP-BPM	
5	15							✓	-		10	N		✓			B-BCP	
6	15						✓		0-10	Y	-	-		✓			BP-BCP	DROPS ON CLAST.
7	30							✓	-		-	-		✓			GP-GP	
8	30							✓	-		-	-		✓			P-P	

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

* ALL < 5 cm DEEP IS NOT SUBSURFACE

OG COMMENTS: HOR IN PIT 1 MATCHES DISTRIBUTION OF AP IN AREA C. THE HOR LAYER COULD BE CONSIDERED SUBSURFACE ONLY BECAUSE OIL WAS BELOW BOULDERS. HOR/OP IN PITS 2 & 4 ROUGHLY 2x10m BOUNDED BY BEDROCK.

AREA (E) SOME SPLATTERS ARE EIGHT BROWN MOUSSE AND APPEAR TO BE RECENT LANDINGS.

REVIEWED: AC 6/1/91
revised 5-30-94

MAYBAP 1991

SKETCH MAP

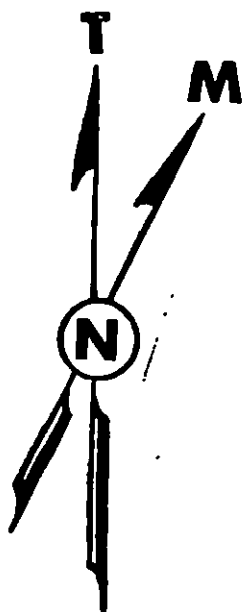
CHANEY/DON CURTIS

TEAM 5

SEGMENT: ER-20-C

DATE: MAY 24 1991

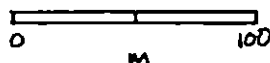
AIR P.#: PM-C 005-66



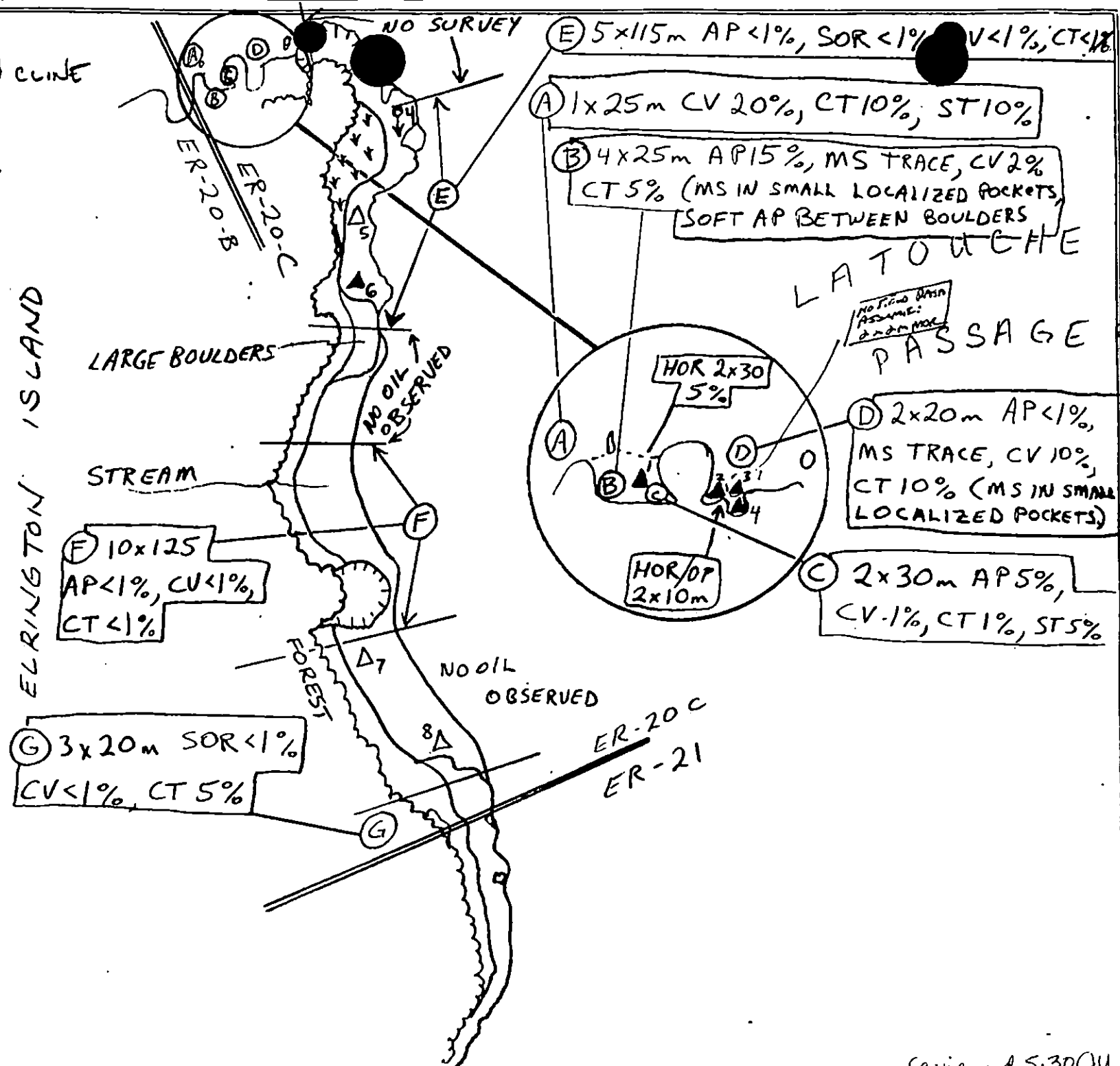
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



ELRINGTON ISLAND



reviewed 5.30.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 24 May 1991

pg 1 of 3

SEGMENT # ER-20

TIDAL HEIGHT(Range) +3 → +6

SUBDIVISION C

BIOLOGIST Crank

STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

The Lower Intertidal Zone was not exposed during survey. Boundaries on this subdivision have been changed since 1986 survey. (A) Area is in the UITZ along a bedrock area. The intertidal biota was located within the site. Directly below filamentous green algae is dominate. Sparsely concentrated barnacles and sea urchins cover 10-20%. In the MITZ there are dense concentrations of Littorina and limpets, Modiolus, and various encrusting red algae, and Fucus and sparse concentrations of barnacles and mosses. Biota cover is ~50%.

(B,C) Areas are in the UITZ. Encrusting green algae, black licorice and rare tufts of moss cover ~20% of the surface sediments. Directly below the site for 1m there are rare to sparse concentrations of Fucus sporophytes and barnacles and sparse Littorina and limpets. Biota cover is 10%. In the MITZ, barnacles are sparse, Fucus is sparse to moderately concentrated and Littorina and limpets are moderate. There are epiphytes on the Fucus plants. Amphipods are common. Biota cover is ~60%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl		1	
Gulls/kittiwakes		8	
Shorebirds			
Corvids		1	
Other Birds		1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	1 Harbor Seal		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 6/1/91 Reviewed M.B. 5/30/91

Team # 5

Segment # ER-20

Subdivision C

Sea State 0

Date 24 May 1991

pg 2 of 2

Tidal Height +3 → +6

Biologist Crank

Wind Speed / Direction no wind

Comments (cont.)

(D) Area is in the MITZ on a pebble beach with cobbles and bedrock.

There is a 15% filamentous green algae cover on the cobbles and bedrock. No other macrobiota was found within the site. In the MITZ on bedrock sides there are moderately concentrated barnacles (with adults, juveniles and spat); sparse mussels, *Littorina* and limpets and rare to moderate (on exposed headland) *Fucus*. Biota cover is ~60%. In the pebbles there are rare individual *Littorina*, limpets, barnacles and mussels. Biota cover is <1%.

(E) Area is in the UITZ. High in the site black lichen cover 50% of the sediments. Low in the site sparse concentrations of *Littorina*, limpets, *Fucus* (with sporelings) and rare barnacles cover ~10% of the sediments. In the MITZ, moderately concentrated *Fucus* is the dominant species (mature conceptacles are present). *Littorina* and limpets are also moderate with various age classes present. Barnacles, small, white sea cucumbers (*Eupentaca*), and pulmonate snails are sparsely concentrated. *Nucella* (whelks) and tar spot algae are rare. Biota cover 70%. There is an approx. 20m pebble beach in area with 30% biota cover.

Reviewed M.B. 5/30/91

Team # 5

Date 24 May 1991

pg 3 of 3

Segment # ER-20

Tidal Height T3 $\rightarrow$ T6

Subdivision C

Biologist Crank

Sea State 0

Wind Speed / Direction no wind

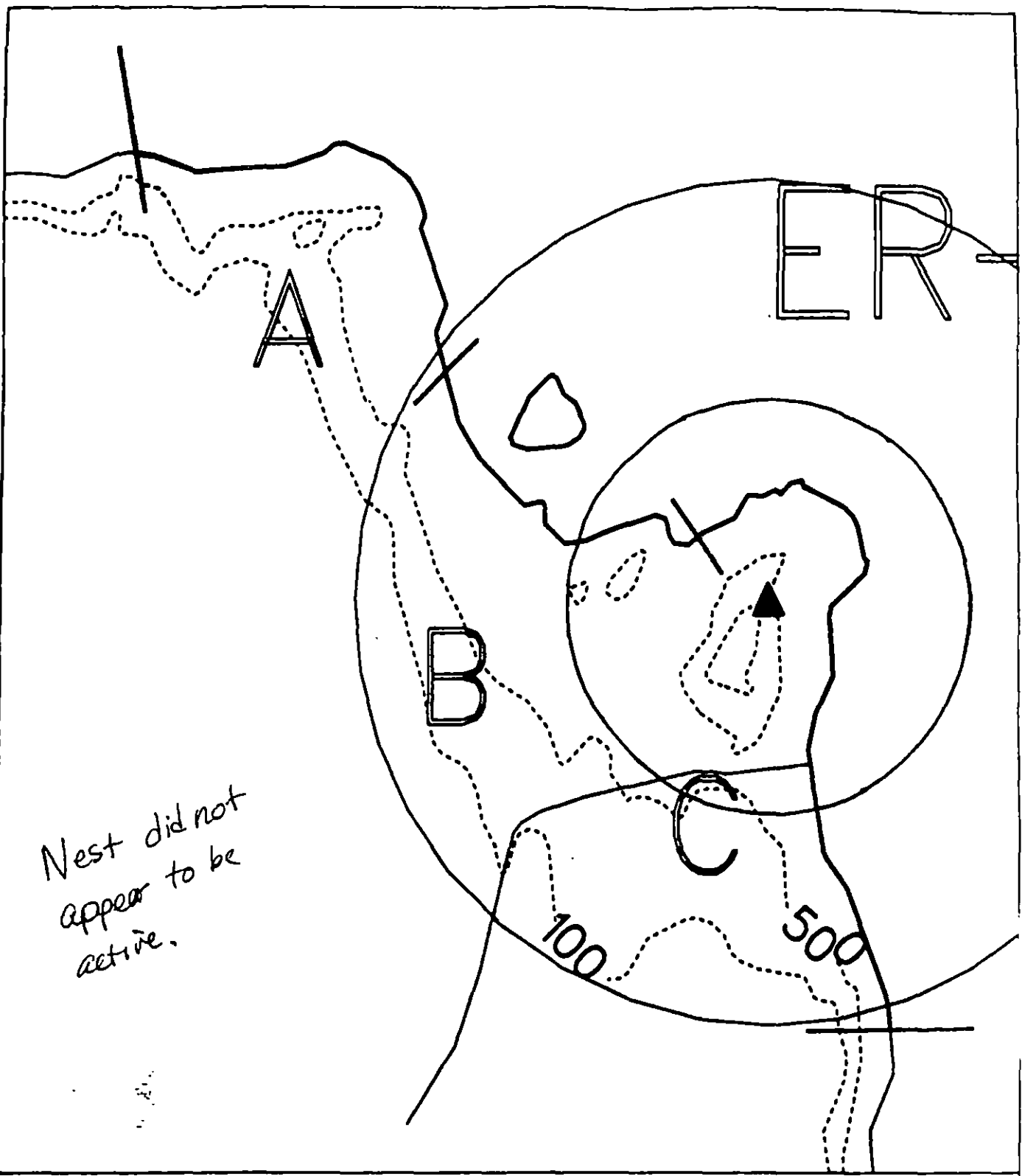
Comments (cont.)

(F) Area is located in the MITZ and UITZ; includes an anastomosing stream (1 of 2, known by Cnergan residents, to exist on Elrington Island). Filamentous green algae covers sediments 5m either side of the stream from the UITZ to the water. In the UITZ, black lichen encrusts 50% of the sediments. Rare concentrations of *Littorina*, limpets and barnacles cover <1% of the sediments. Most of the MITZ is similar to the MITZ in area E with 70% biota cover. There is a ~40 m stretch of pebbles, 10 m from the east stream bank, where *Fucus* is rare and barnacles are the dominant species. Biota cover is ~20%.

(G) Area is the eastern boulder border of the site in the UI. Black lichen encrusts 50% of the surface sediments. Sparse concentrations of moss and ryegrass are also present in the site. The MITZ has similar biota cover to area E.

This subdivision's boundaries have been change since 1989.

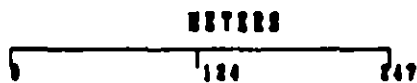
The Dames & Moore test site is now in ER-20B.



ER020C

Segment Reference Map

Map Key: PVSR020

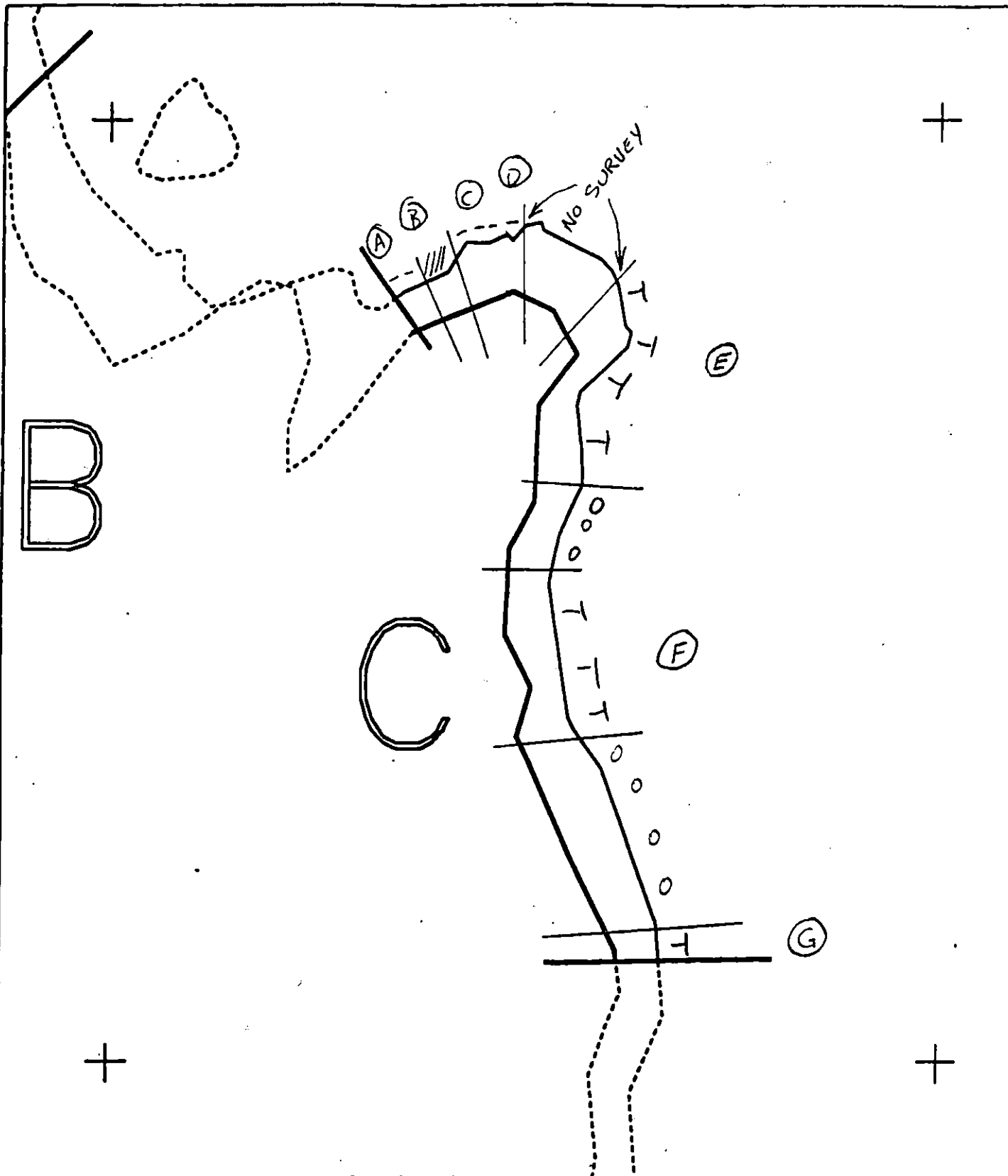


AS State Plane Zone 4
part 20



EAGLE NEST

Reviewed M.B. 5/30/01



XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER020 C
 ADEC Subsegment Length: 608m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr020c

Subdivision Field Map
 Map Key: PWSE020C
 Name: CHANEY
 Date: MAY 24 1991
 Date Entered:

REVIEWED: MC 6/11/91
 revised 5.30 98

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: ER 20 SUB: A REGION: PWS SURVEY DATE: Exxon Survey

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

Ecological/Constraints (see page two for details) _____

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657 (Anchorage) or 229-1514 (24 hrs.). ced

Chuck E. Hume for SHPO

6/27/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

Y

Y

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

X

Y

COMMENTS:

INITIAL: _____

TAG: ADD INIPOL LOCATIONS A H + I

FOSC: _____

TAG APPROVAL DATE: June 26 1991

FOSC APPROVAL DATE: 6-29-91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

Post-It™ brand fax transmittal memo 7671		# of pages	1
To	JOINT EXXON/CG REP	From	OPS/LT Christensen
Co.	DON BULLINGER	Co.	OPS
Dept.	OPS	Phone #	263-1758
Fax #	011-872-150-2452	Fax #	263-1736

REVISION 1
7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	OPEN CLOSED
Bioremediation Mechanical Tilling Spot Washing Other Approved Treatment	OPEN CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse Seine Hook-off

No constraint to manual pickup and oiled log/debris burning; closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 7/25.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision C. ~~Closed~~ to manual pickup, bioremediation, mechanical tilling, spot washing, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation mechanical tilling, spot washing, and other approved treatment more than 400m from active nest.

7HH Subsistence: Finfish Harvesting

No constraint to manual pickup. Closed to bioremediation after 7/1.

7II Subsistence: Deer Harvesting

No constraint to manual pickup. Closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC

Date

6-12-90

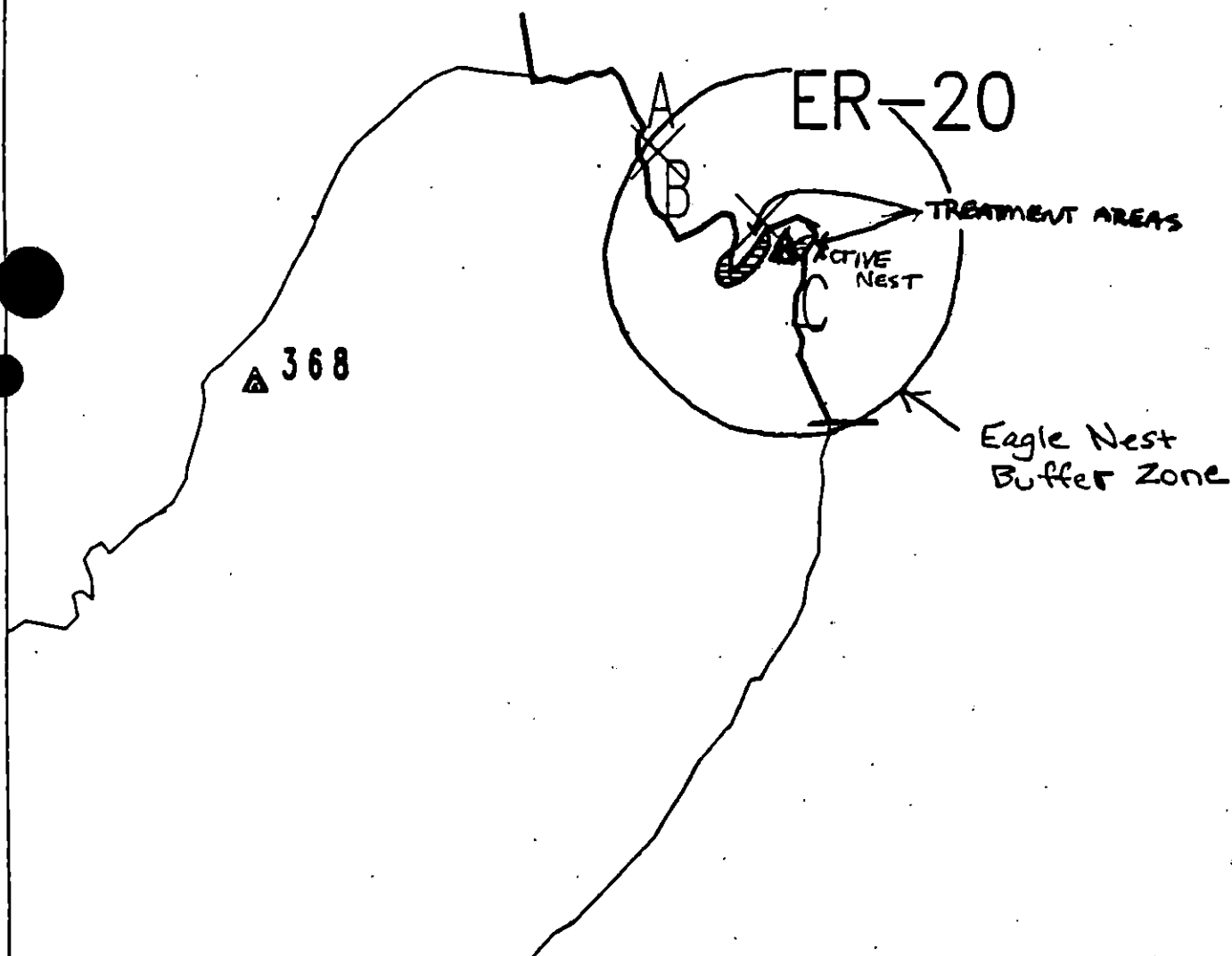
Prepared by

Date

6/12/90

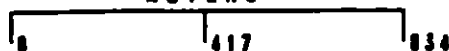
OPEN AS PER USFWS SURVEY OF 7/12
JUN 1990
OPEN AS PER DISCUSS W/ GAIL EMMAN ON 7/20 (SEE ATTACHED NOTE)
Change Revision
G.A. Reiter
for FOSC

LV-51



Exxon Company, USA
Map Key: PMS-ER-20

ECOLOGY MAP
SEGMENT ER-20
SUBDIVISION C (3 of 3)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1368 feet

REV 11-1988 61490

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:

DATE: 4/23/90

BOILING CATEGORIZATION:

Wide 0 m: Medium 318 m: Narrow 147 m: V.Light 462 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

No Treatment Recommended

 X Snare/Absorbent Booms

X Treatment Recommended

X Oil Snakes (pom poms)

 X Manual Pickup

 Absorbents (pads, rolls, etc)

X Bioremediation

 X Spot Washing: X Wands

 Tarmat: Breakup

Beach Cleaner

 Removal

 X Other (see comments)

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling. MECHANICAL TILLING SHOULD NOT BE ALLOWED IN THE AREA OF DENSE MUSSEL BED IN THE LITZ.

SIZE CONSTRAINTS APPROVED 6/12/90

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC ART WEINER Art Weiner

EXXON *ANY TALK*

NOAA Bill Wessett Bill Wessett

USCG Ken: 74 Kdrc

FOSC: W L DATE: 4-17-90

WORK PLAN ADDENDUM

Segment ER-20

Subdivision: C

Dated: 5/9/90

MODIFICATION

1. REASON FOR MODIFICATION

- Snow melt in SUITZ revealed additional tarmats, requested from field
for further clarification to continue access and removal of asphalt lens.

2. ADJUSTMENT TO WORK PLAN

- Manually remove asphalt lens that continues under the storm berm.
Manually rake down clean storm berm material into the UITZ to access
the lens where practical. Clean material removal should not exceed
a depth of 12".
- Consultation with Cultural Resource Staff indicates no concern
archaeologically no further action required.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/9/90.

ADEC ART WENNER Det Warr
EXXON ANNY TETZ
NOAA Burt Wescott
USCG D.D. Rome

FOSC

[Signature]

DATE 5-9-90

FAX TRANSMITTAL COVER SHEET

WE ARE TRANSMITTING VIA A RICOH FAX 07

OUR NEW FAX NUMBER IS 907-573-5135.

DATE: July 11, 1990
TIME: 2:30p

SENT TO: EXXON

ATTENTION: TOM KELLY

THIS FAX IS BEING SENT BY: Gail Evanoff

NUMBER OF PAGES (INCLUDING THIS SHEET): 1

FAX 564-3771

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK AS SOON
AS POSSIBLE. (907) 573-5118.

.....
☐ ORIGINALS WILL BE SENT VIA: ☐ US MAIL - EXPRESS MAIL
☐ US MAIL - FIRST CLASS
☐ HAND DELIVERY - _____
☐ ORIGINALS WILL NOT BE SENT ☐ OTHER - _____
.....

NOTE. RE: ER 20 (B) (C). CVC is willing to extend the
workwindow up to July 25, 1990 for manual raking and pickup to
proceed. NOTE: I have not been able to confer with CVC land Mgrs.
regarding segment readiness for bioremediation. CVC proposes to submit
its recommendation 7/12/90. Thank you.

FAX OPERATOR: [Signature]

REVISED 01/10/89

BY DJT

* Discussed ER20C with Gail E. 7/21/90
Asked Gail if we could go in & finish Manual work
and Big, even though after July 1 date (Substation)
She said OK. I told her. would look at beam area

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK