

OIL SPILL PUBLIC INFO. CENTER



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EVOS
GC
1552
.P75
S42
1991
v.31

[Shoreline evaluations, 1991].

Prince William Sound EL-53 to EL-57

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-53

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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 71 m: Narrow 119 m: V.Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+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 subsurface oil and coatings as shown on attached sketch map. *Top 15cm should be raked off in area of pit #1 prior to bioremediation as shown on map. Work should be conducted between 6/15 and 8/14 based on above 2M and 7II constraints and with approval from USFWS and ADF&G concerning (5T).

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-53-A SUBDIVISION: A DATE 4/1/90

SCG
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL TREATMENT IS APPROPRIATE FOR THIS SUBDIVISION. TREATMENT SHOULD INCLUDE THE FOLLOWING: 1) WIRE BRUSHING OF SCATTERED AREAS OF COATINGS ON BOULDERS & ROCK FACES IN MITE AND WITE, AND 2) FURTHER SURVEY OF SUPRA TIDAL AFTER SNOW ^{COVER} MELT-OFF FOR DEBRIS COLLECTION WHERE NECESSARY.
 * ADEC'S COMMENT CONCERNING BOULDER SHADOW OILING PERTINE EMPHASIS ON THESE SHADOW AREAS BY WORKERS.
 SHOULD BE PLACED

ADEC
NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Subdivision A's oiling is primarily Boulder shadow oiling with the oil under and around large Rocks and crevices. The areas of Penetration are under these boulders, and all of the oil is difficult to reach. Hand Scrubbing & localized removal is appropriate for "A", whereas bio-remediation is NOT.

LAND MANAGER
NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with the USCB and ADEC. No high recreational values were noted in this subdivision.

SHORELINE OILING SUMMARY

REVISED
4/4/90

REVISION NO. 03/23/90

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-53
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION A
 EXXON A. SNOOK ADEC P. MONTESANO TIME 07:45 to 10:00
 TEAM NO.: 6 TIDE LEVEL: +3.5 to -1 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 600 m +60 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIV IS PRIMARILY VERT/HANG ROCK & BOULDERS
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 55 % B 40 % C 4 % P 1 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 0 % Hang 25 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 52 m N 100 m VL 298 m NO 150 m
458

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	SU	U	M	L
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT		X	✓	X	X		X		X	✓		
STAIN		X					X		X			
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL	Snow on beach only								S			X

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

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames NONE

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	UD	1	2	3	4	SU	U	M	L		
1	45		X				0-45	X				X		X					C/P
2	30					X	0-30	X						X					C/P
3	17		X				5-15	X				X			X				G/S
4	10		X				5-10	X				X		X					P/G
5	25		X				0-25	X				X		X					C/B

COMMENTS SUBDIVISION CONSISTS OF MOSTLY VERT/HANG ROCK AND BOULDER SLOPES WITH 3 SMALL AREAS OF HANG BOULDER/COBBLE/ROCK SLOPES. THE VERT/HANG R/B HAS A DISCONTINUOUS DK BROWN STAIN/COAT ≤ 1m WIDE AT THE HIGH TIDE LEVEL AND SOME UNOILED SECTIONS. THE 3 B/C/ AREAS ARE A SLIGHTLY LOWER ANGLE AND CONTAIN MEDIUM WIDTH COATS AND SOME SUBSURFACE PENETRATION. ACCESS TO PENETRATED SUBSTRATE IS DIFFICULT DUE TO LARGE SIZE OF SURFACE BOULDERS/COBBLE.

SHORELINE ECOLOGICAL SUMMARY

REVISOR
4/4/90

REVISION: 03/28/90

Segment ST/ ELOS3 Subdivision A Date (mo/day/yr) MARCH 31, 1990
Time (24 hr) 0745 → 1010 Biologist Jim Barry 760-600 m length

- (A) Substrate type and % of segments:
(1) Bedrock 55 (2) Boulder 40 (3) Cobble 4 (4) Pebble 1 (5) Sand 1 (6) Silt 1
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 40 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 (⊙)

Photographs: ST-6-2
Roll No. 18-20
Frames 18-20

BARNACLES

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

Wildlife Observations/ General Comments: 71000 WINDOW +5 → +1

Barnard Goldeneye - 4

Sea Otter - 2

Bald Eagle - 1

1/2 or more of transect surveyed from boat - low fucus less well studied from boat.

Ecological Considerations: 6V, 7II, 5-T2, 2M

IMPACTS TO SENSITIVITIES:

Herring Spawning Success may be inhibited by frequent or heavy boat traffic.

PWS 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 (4/20 to 5/10)
- 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 (7/21 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.

ADDITIONAL COMMENTSTIME 0745 - 1010
TIDE +5 → +1MAJOR SPECIESBARNACLES - BALANUS PACIFICUS?

- DISTRIBUTION PATTERN CONSISTENT BETWEEN PATCHES OF ~~THE~~ SEDIMENT ~~TYPE~~
eg. All cobble beaches had moderate Adult/juvenile + spat cover, with low zones having sparse cover.
- BARNACLES Present in open bare rock in all tide zones
 - THICK ALGAL cover in lower zones inhibits recruitment, especially on bedrock + boulders.

II MYTILUS

- Settlement of new individuals greatest in crevices + on Adult + juvenile mussels at the mid to high tide levels.
- Boulder + cobble fields have some cover at the surface, but sparse to moderate cover below the surface.

III GASTROPODSA. Periwinkles (Littorina) are by far the most abundant.

- 1 - DISTRIBUTION IS PATCHY, BUT are generally moderate to dense overall. Greatest densities tended to occur in some cobble areas and crevice habitats of bedrock + boulders.
- 2. Spat commonly found in crevices of bedrock
- 3. Egg masses found only under cobbles or boulders in unexposed ~~into~~ microhabitats.

B. Whelks - Scartesia dire and Nucella lamellosa are the dominant whelks. Both are present throughout the intertidal. Scartesia is most abundant in cobble areas.

C. Limpets.

- 1. Limpets were found on bedrock, boulders, and under cobble.
Upper zone limpets are mostly on boulder and bedrock.
Lower zone " " " under " " " cobble.

- 2. Major species . Tectaria scutum (common under cobble)
Tectaria pumila (common in mid to upper tidal zone pool)

IV FUCUS

- 1 - Sites where intertidal was heat-treated have a high proportion of withered plants in the upper zone. Many have started to regrow, many appear dead.
- 2. Sporlings are mixed in with adults throughout the intertidal, but are

OTHER SPECIES

- I ANIMALS - Several species were found under cobble & boulders in the mid. low zone
- SEA STARS - Several species
- Pycnopodia, Orthasterias, Dermasterias, Leptasterias, Pisaster
 - Leptasterias, Pycnopodia are present as juveniles

SEA CUCUMBER - Holothuria - 1 found under boulder in low zone

Bryozoans - (Crust forming animals) - Membranipora

Several others included in species list.

Species list - STARS INDICATE JUVENILES PRESENT

Sea Stars

- * Pycnopodia sp.
- Pisaster ochraceus
- * Leptasterias sp.
- Dermasterias
- Orthasterias sp.

Sea cucumber - Cucumaria sp.

* Bryozoans - Membranipora sp.

Tube worms

- * Spirotbis sp.
- * Serpula
- Unknown tubeworm

Other worms

- * Peanut Worms - Phascolosoma
- * Polychaete worms - 2-3 spp.

Sea Urchin - Strongylocentrotus drobachiensis

Barnacles

- * Balanus glandula

Snails - Semibalanus cariosus

Periwinkles

- * Littorina scutulata, L. sitkana

Whelks

- * Searlesia diva, Nucella lamellosa

Limpets

- * Tectura personata, T. scutum

Nudibranchs - Armina californica

Chitons

- Tonicella sp.
- Katharina tunicata
- Mopalia mucosa

* Mussels - Mytilus edulis

Fish - Pholadidae

Crabs - Oxorhynchus? spp.

* Pinnixidae?

Unknown?

PLANTS

Fucus distichus

Rhodomyxylon palmata

Ulva

Petrocelis

Ralfsia

Rhodomela

Enteromorpha

Spongomorpha

Scytosiphon

Several unknown

Filamentous green alga

Filamentous red alga

WILDLIFE

Barrow's Goldeneye - 4 over water
Sea Otter - 2
Bald Eagle - 1

ECOLOGICAL CONSIDERATIONS / COMMENTS

- 1) Special Sensitivities 6V, 711, 5-T2, 2M will likely not be affected by a 10 man team (clean up)
- 2) Several species appear to be actively recolonizing to this segment & indicating that if oil-related mortality occurred, recovery is progressing.
- 3) Oil covered sites or patches do not show as strong of recovery as do adjacent sites. (even within 1-2 inches for ~~near~~ barnacles, ~~anemones~~ Mytilus, Fucus).

ELOSS-B

~~From Boat~~

~~Dense Fucus - A, J~~

~~Dense Balanus / A J / S~~

~~Mytilus -~~

End of ELOSS-C

End of ELOSS

13%

ELOSS-A

0745-

START - to Beach 1

Cliff 7 Fucus r

7 Barn r A

MORV GASTRO 3

Sparsely Mytilus J

L. scutellata JUV.
L. scutellata JUV.

Beach 1

Boulder/Cobble 7 Fucus

Mod-Dense Gastros under boulders

L. sitkana egg masses, Adults

Dense Barn sp (A, B)

7 Fucus B

Brown Scum

4 Bullheads

Larvae - spores

#22 - Boulder field

2 GTER Eagle

#21 SUBSURFACE OILING 24

Pit #4

Small beach along first pt after Beach

juvenile stars

Cucumber

> ~~Star~~ Fucus sub
Dense young Branchy Fucus (S, A)
↳ (S, S)

Dense to moderate Balthicinis
Some (moderate) - Lempets

> Green slime

Alva

Urosperma

Spongymeria

Bryozoans on rocks

Moderate Haloscion

Beach #2

#20 young sponge below
Rock on low zone

77 BARN, Fucus

77 Spat ✓

22F

High zone - moderate dead
Adult Fucus

MID → Dense Fucus

Low -
→ red - moderate Fucus
Calliophyllis

Low

sub 20-30 cm

Pycnospira - along shore below
surface - every 2 m

Mytilus - NO ADULTS
Few juveniles
Moderate spat

Littorina - egg masses
Dense spat in crevices

Along Rock Cliff
Three or four w/ THICK
Modulus juveniles

PHOTO # 15, 18

Sparse Mytilus on adjacent
rocks

Low Cladophora - ca 2-3 m

THICK ULVA - MID zone on some rocks
Most w/ Fucus in mid zone

OTHER

Eggs, Marine

Beach 3 Low zone

> Pucus

> UVA

> Spirobis

> Calliphy 11/1

> Ectocarpus

PT ~ 3m²

26 Phaeocystis

2 Urchins

2 ? worms

1 Polydora

3 Loxorhynchus type crabs

1 Fish

Rest of beach similar to last
Cross Shore UVA on mudflats

Boulder Beach

> PUCUS 1 in upper

> " " in mid zone

> PUCUS A in mid towards

upper

END OF ELO53A

ELO53-B 10 10/10

NEXT PHOTO 17? SOLASTER
OR PUCUS
in low zone

#16 STAIN COAT OF
OIL IN UPPER ZONE

BOULDER/CURBIE BEACH
Pebbles

Rock over sand
clam in sand
covered - 2

> PUCUS anemones in high - most
> " " in mid - in throat

2011

Brown leaves

Sp. + Bannocks

OG C. DILLON

SKETCH MAP

SEGMENT EL-53

SUBDIVISION A

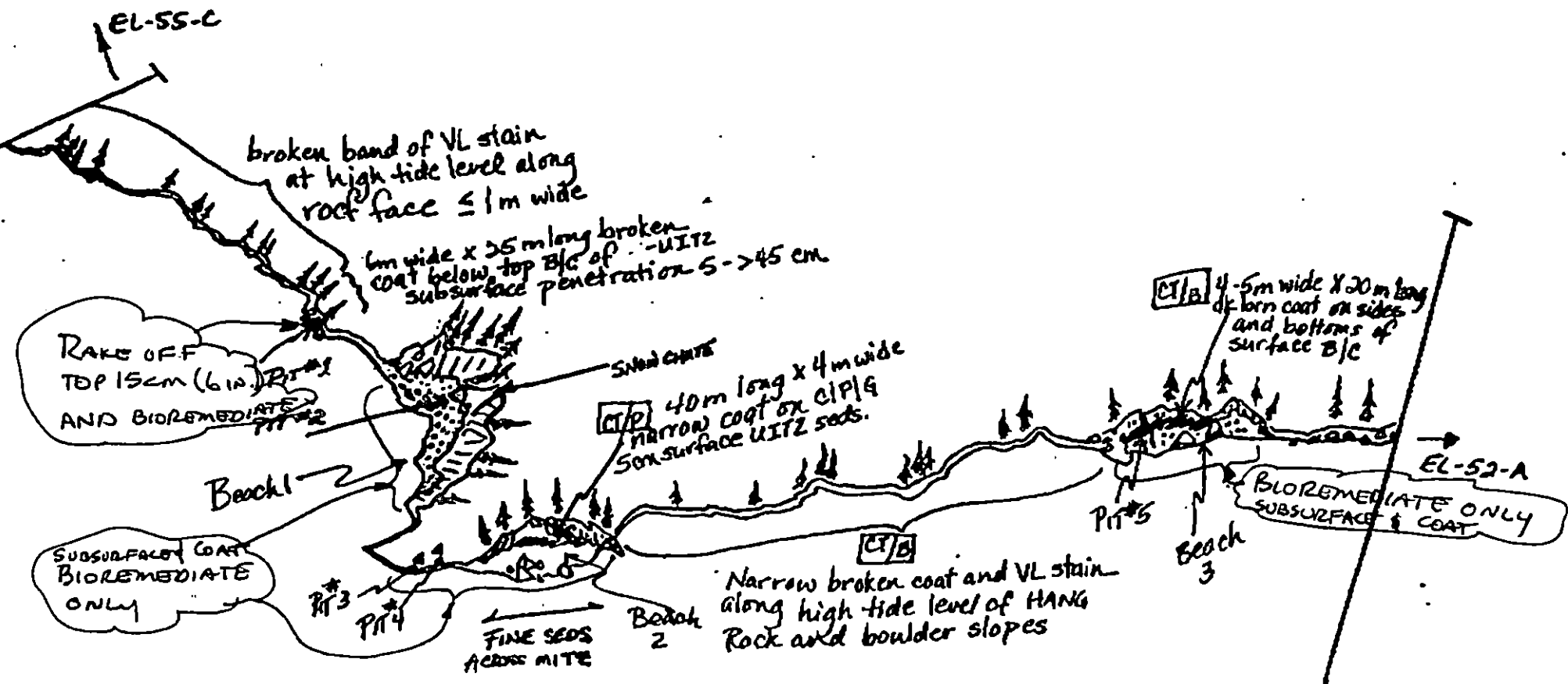
SUBDIVISION LENGTH = 600 MET.
760m

- Δ₁ Pit with subsurface oil
- Δ₂ Pit with no subsurface oil

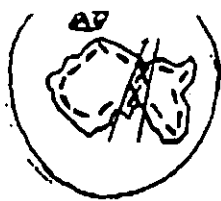
CT/B Broken distribution

CT/P Patchy distribution

Oil character length (m) CT 125 ST $\frac{485}{300}$ NO 150

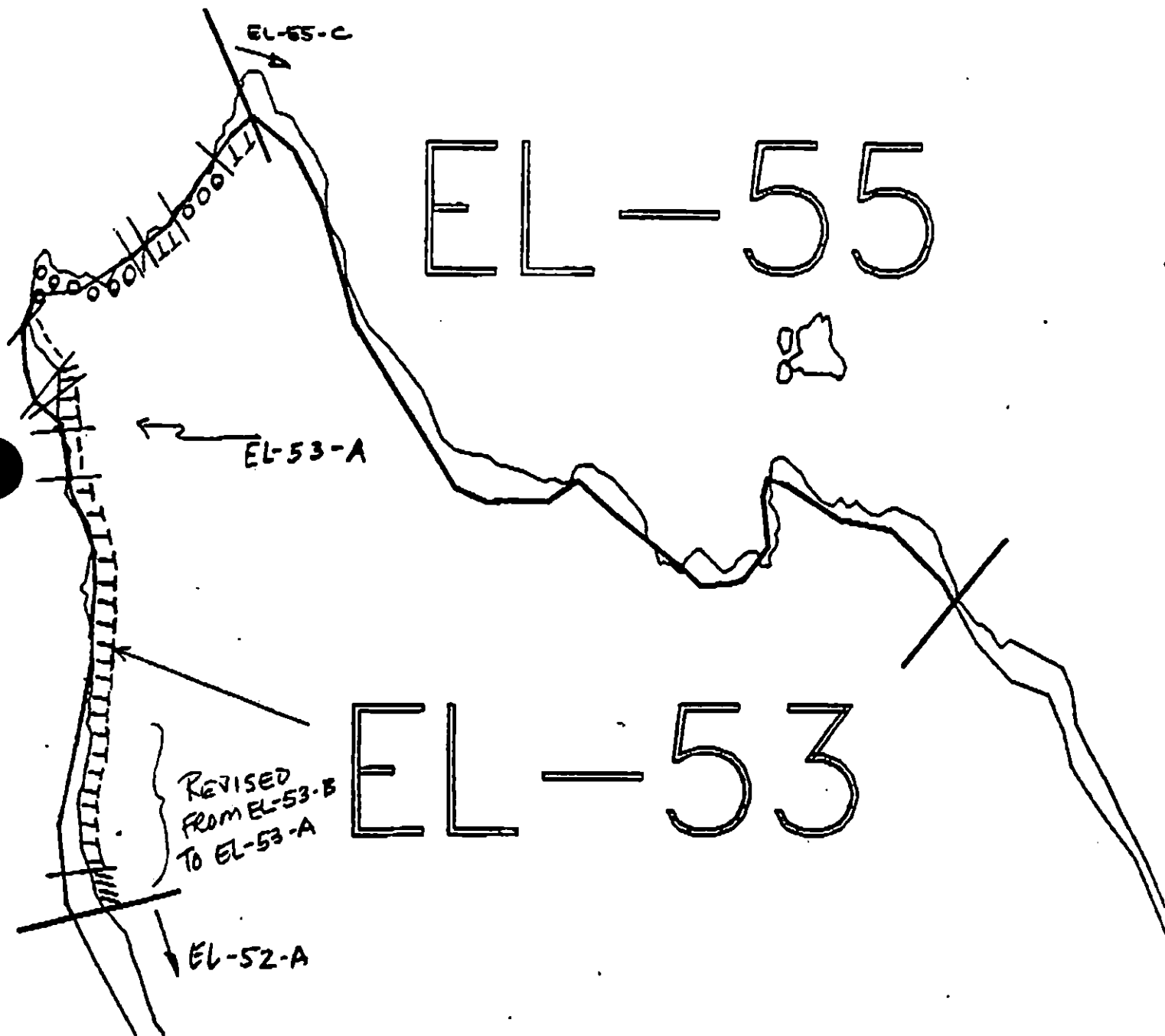


IPB.2002



EL-53-X B

REVISED on 4/4/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-53

ADEC Segment Length: 922m



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-53

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
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7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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Avoid damage to oiled intertidal and subtidal algae and seagrass.

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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: _____

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☒ 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 pick up of mousse, tar balls and oiled vegetation and bioremediation of coat, cover and subsurface oil areas. Areas should be treated between 6/16 and 8/14, based on above herring and deer constraints and with approval from ADF&G and USFWS regarding eagles.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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 1B Salmon stream mouth - spawning (7/10 to 8/31)
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- 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 Goshawk 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 Anchorage (5/1 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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST EL-53-AB SUBDIVISION: B DATE 4/1/90

SCG
NAME DAVID A. SCHNORR SIGNATURE David A. Schnorr

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

783/USGR

I CONCUR WITH BOTH THE LAND MANAGER'S AND ADEC'S COMMENTS BELOW.
IN ADDITION, THE SMALL ISLET OFF NW CORNER OF ^{THE} ISLAND SHOULD ^{NOT} BE DISTURBED AS IT SUPPORTS RICH MUSSEL BEDS & INTERTIDAL LIFE, AND THE VERY SMALL PATCH OF COATING PRESENT THERE IS HIGHLY EXPOSED TO WAVE ACTION.

(18)

ADEC
NAME Peter MONTESANO SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

If this island were thoroughly cleaned, it would once again have recreational value.

The entire island is ringed by a coat of varying concern, most of which is ~~Scrape/Scrubable~~ Scrape/Scrubable. Recoverable oil is trapped in 3 crevices, illustrated on the map. The N/S island-wide cracks contains saturated sediments, as well as coating on the rocks surfaces. The slope and angles make this cracks unwashable. The cracks is not bioremediation appropriate, and should be addressed by hand-wiping and substrate removal. Pavement forming grasses on the supratidal of the South beach should be collected. The Beach on the W side of the Sand, N/S crack is a small area but likely to form pavement and is hotwater washable. A

LAND MANAGER
NAME JANETIA PRITCHARD SIGNATURE Janetia Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This island has high recreational value and should be cleaned. Jar matted areas should be removed, by mowed. grassy patches should be carefully removed leaving grasses behind to recede the area stripped. The water wash of the area coated is a possibility which should be explored.

crew of 10 could significantly improve the island with 4-5 days of hand work.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ E1-53
 BIO T. BARRY LAND REP J. PRITCHARD SUBDIVISION 2-B
 EXXON A. SNOOK ADEC P. MONTESANO TIME 13:45 to 15:00
 TEAM NO.: 6 TIDE LEVEL: +5 to +7.5 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 272 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION IS AN ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 85 % B 8 % C 2 % P 1 % G 1 % S 1 % M 1 % V 1 %
 SLOPE: Long 5 % Hang 95 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 30 m M — m N 217 m VL 5 m NO 15 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	IC	IS	IP	IR	SP	ST	SL	SV	SU	U	M	LI
ASPHALT PAVEMENT												
POOLED												
COVER		X						X		X		
COAT		X						X		X		
STAIN												
MOUSSE			✓	X				X	✓	✓	X	
PATTIES												
TARBALLS	X				X					X		
FILM												
NO OIL										X	X	

PAVEMENT: H F S 7 sq. m by 0 c

PATTIES / TARBALLS 2 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Small wood

#BAGS 41

Photographs:

Roll No. ST-6-2

Frames 5, 6, 7, 10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	SP	ST	SL	SV	SU	U	M	LI		
1	20	X	X				50-15					X		X					P/G
1	20				X		15-20	X	X					X					P/G/S

COMMENTS ISLAND HAS A BROKEN, NARROW COAT AND COVER AROUND THE HIGH TIDE LEVEL. THE W. SIDE HAS A CREVICE AT THE UTLZ CONTAINING A DARK BROWN 8 CM DIAMETER X 2 CM DEEP MOUSSE SPOT WITHIN A NARROW COAT AND COVER. THE W. SIDE HAS A FISSURE IN THE BEDROCK RUNNING N-S TO EACH SHORE. THE B/C/P AT THE S. END ARE COATED. THE CENTER OF THE FISSURE HAS A SHALLOW ACCUMULATION OF SMALL SEDS AND GRASSY VEGETATION PATCHES APPROX 2-3m WIDE BY 30m LONG. THE SEDS ARE PENETRATED UP TO AT LEAST 20 CM. THERE IS A MOUSSED VEG PATCH.
 Page 1 of 2 ON THE UTLZ JUST E. OF THE FISSURE REVIEWED YH DATE 4-7-90
AND A MOUSSED GRASSY PATCH ON THE SITZ W. OF THE FISSURE

OG DILLON

SEGMENT ST/EL-53

SUBDIVISION #B

DATE 31 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/L/VL
- ☐ SSL
- ☐ 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/D
Broken Distribution

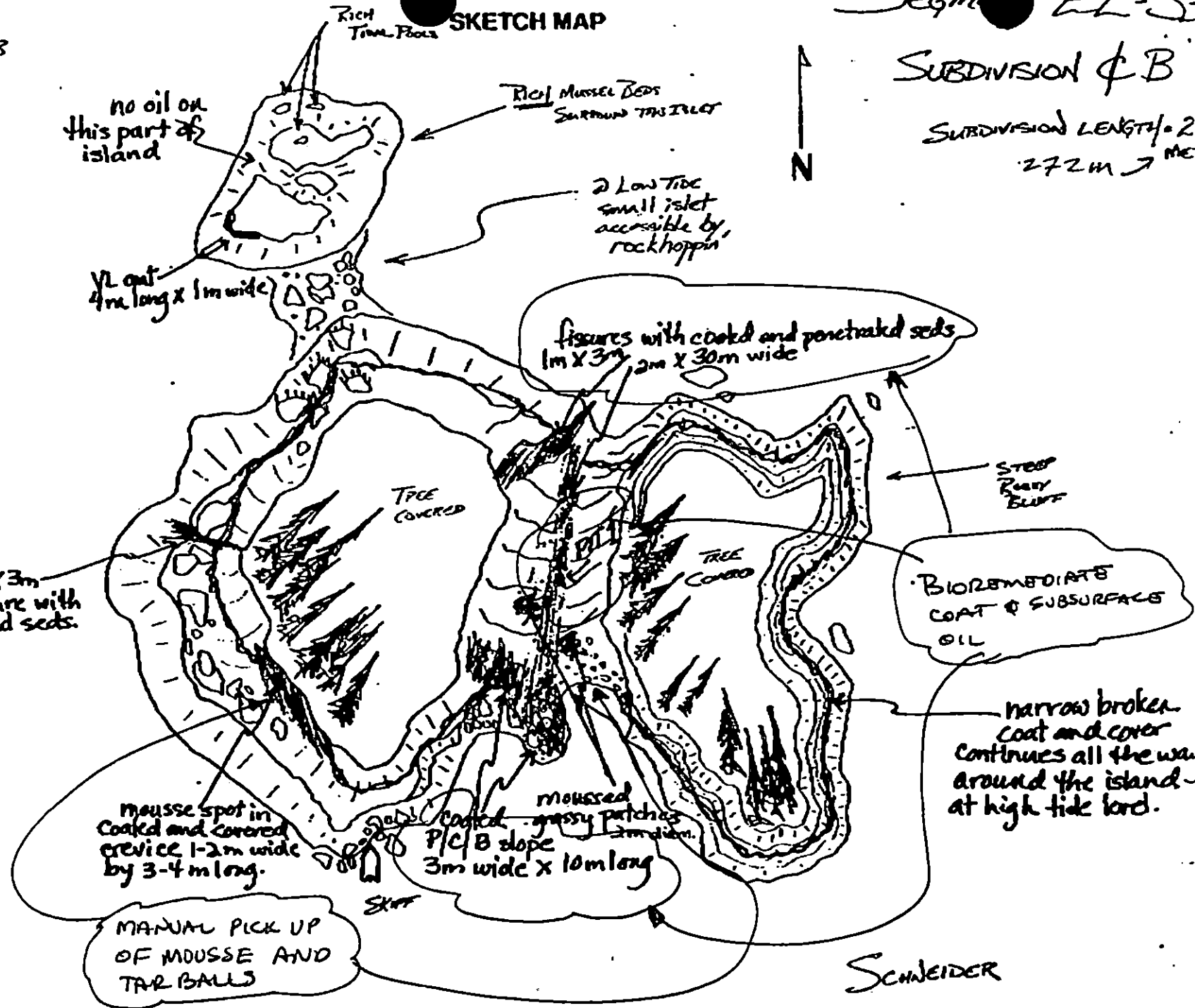
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 Δ
Photo location, direction, and number

SKETCH MAP



SEGMENT EL-53
SUBDIVISION #B

SUBDIVISION LENGTH 272m $\rightarrow$ MET

Oil Character Length (m): AP 40 PO 200 CV 2 ST 200 MS 2 PT 2 TB 2 FL NO

SHORELINE ECOLOGICAL SUMMARY

REVISED
4/4/90

REVISION: 03/22/90

Segment ST1 ELOS3 Subdivision E B Date (mo/day/yr) MARCH 31 1990

Time (24 hr) 1400 - 1500 Biologist Jim Barry 272 m

see OB FORM FOR THESE

Substrate type and % of segments:

(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 10 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: ST-6-2

Frames 8-10

BARNACLES

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

MYTILUS

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

STROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

MARBLE, SEA LION

TIDAL WINDOW +5 → +7

HIGH TO MID ZONES OBSERVED: FUCUS VISIBLE FROM SURFACE IN LOW ZONE

Ecological Considerations: 6V, 7U, 5-TZ, 2M

- Mussel beds are increasing - avoid disturbances that would remove or destroy large portions of these beds
- Special sensitivities ~~are not~~ (designated) are not relevant to this subdivision.

ADDITIONAL COMMENTS - LOW ZONE NOT OBSERVED DIRECTLY

MAJOR SPECIES

I BARNACLES - MOST OF SUBDIVISION C IS CLIFF FACE - 2 or 3 cobble beaches also are present

- Barnacle distributions have similar characteristics to ELOS3-A, but perhaps slightly denser.

- beaches (cobble) have moderate densities, except where oiled sediments are present.

II Mytilus -

Mytilus is present in high densities in exposed locations. Some other locations have lower densities, resulting in the general "moderate" density of adults and juveniles. Spots are dense in most crevice & mussel bed habitats.

III Gastropods - Dense in general over the middle and upper intertidal. Limpets are more abundant than on other subdivisions in ELOS3. Littorines too, are dense at most locations.

IV Fucus - Generally dense & shows denser recruitment of sporelings.

V Other species

1) Since the low intertidal and much of the middle zone were not accessible, I could not search for low zone species.

However, the fauna & flora appears to be recruiting heavily all around this island, with generally dense cover of biota.

2) Mussel beds, and Fucus, in particular, are recruiting.

3) Algal cover is generally high. & species diversity also is likely to be high.

ER53-B

1330

~~Collected in mid zone of water~~

~~Macrobrachium below - 5m~~

~~in~~

~~→~~

~~Branch Mytilus bed recovering~~

~~9 mussels of SASPIS?~~

~~57 Littorinae & Prot. Geomys~~

~~Pelagicia Cornucent~~

~~Mytilus Weylandi Scoter~~

~~3/4 per~~

~~END OF ER53-B~~

1330 end

REVISOR
4/4/90

ER53-B

OFFSHORE ISLAND

START 1400

11-? cover of mussels

10. → LITTORINAE

on Rhodomythra? in upper

level pool.

8. recovering mussels
on upper zone (Fucus bed)

walked around island

Tide pretty high

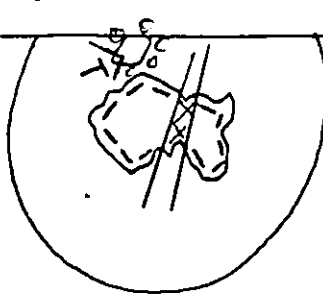
Some exposed mussels have health
impaired beds & were not treated
last year.

Dense Mytilus recolonizing
all over

Fucus some, but dense adults,
especially in mid zone

> 200 Littorinae, w/ moderate recolonizing

MAKE IT

EL-53-~~4~~B

Transferred from map by C. Dillon
 HH 4-5-90

Her way back to island cutoff

EL-55



EL-53

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m



METERS



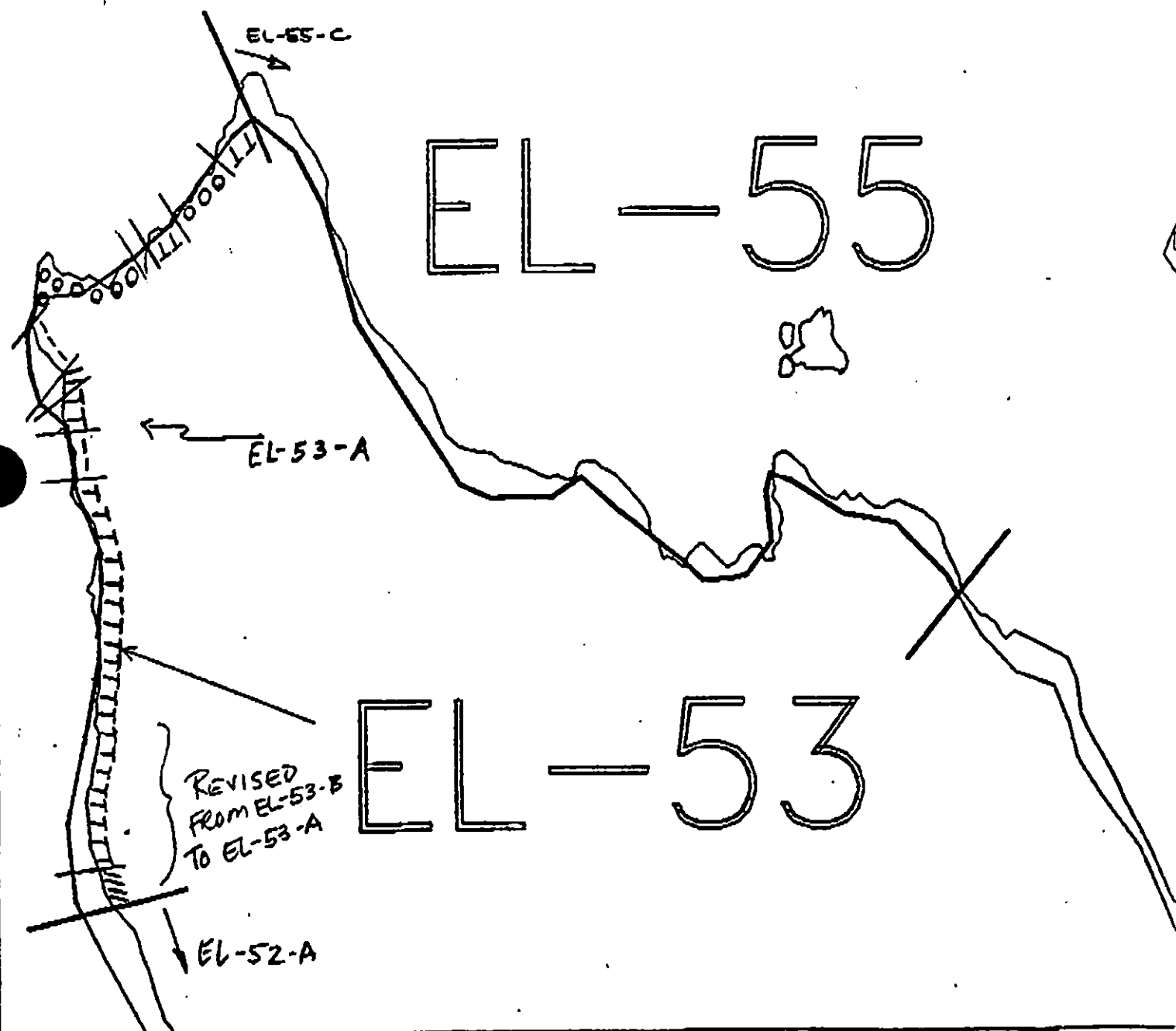
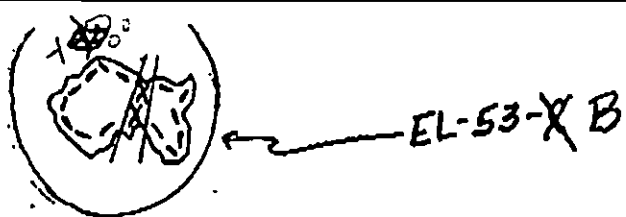
Map Key: PWS-138

Name: _____

Date: _____

Data Entered: _____

REVISED on 4/4/90



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

EL-53

ADEC Segment Length: 922m

0 100 200 300
METERS



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT EL-53 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation
Manual Raking

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

7II Subsistence: Deer Harvesting

Closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

6-10-90

Prepared By:

WIK

Date

6/8/90

EL-101

EL-100

WORK
AREAS

EL-55

EL-53

EL-54

EL-52



Exxon Company, USA
Map Key: PWS-EL-53

ECOLOGY MAP
SEGMENT EL-53
SUBDIVISION A (1 of 1)
METERS

- | | |
|---|---------------------|
| ★ | Seabird Colony |
| ▲ | Active Eagle Nest |
| △ | Inactive Eagle Nest |

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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 Z. Homan DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V. Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+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 subsurface oil and coatings as shown on attached sketch map. *Top 15cm should be raked off in area of pit #1 prior to bioremediation as shown on map. Work should be conducted between 6/15 and 8/14 based on above 2M and 7II constraints and with approval from USFWS and ADF&G concerning (5T).

TAG COMMENTS:

AT THE TIME OF TREATMENT, DABITE MONITORS TO ASSESS SUITZ.
MONITORS TO ASSESS FEASIBILITY (MANUALLY) TO RAKE AREA INDICATED.

TAG APPROVAL DATE: 4/17/90

ADEC JOHN BAUER John

EXXON ANDY TEE Andy

NOAA BILL WESCOTT Bill

USCG KENNY THORNTON Kenny

FOSC: T. E. L. DATE: 4-22-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-53 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation and manual raking after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

J. Fungli

Date

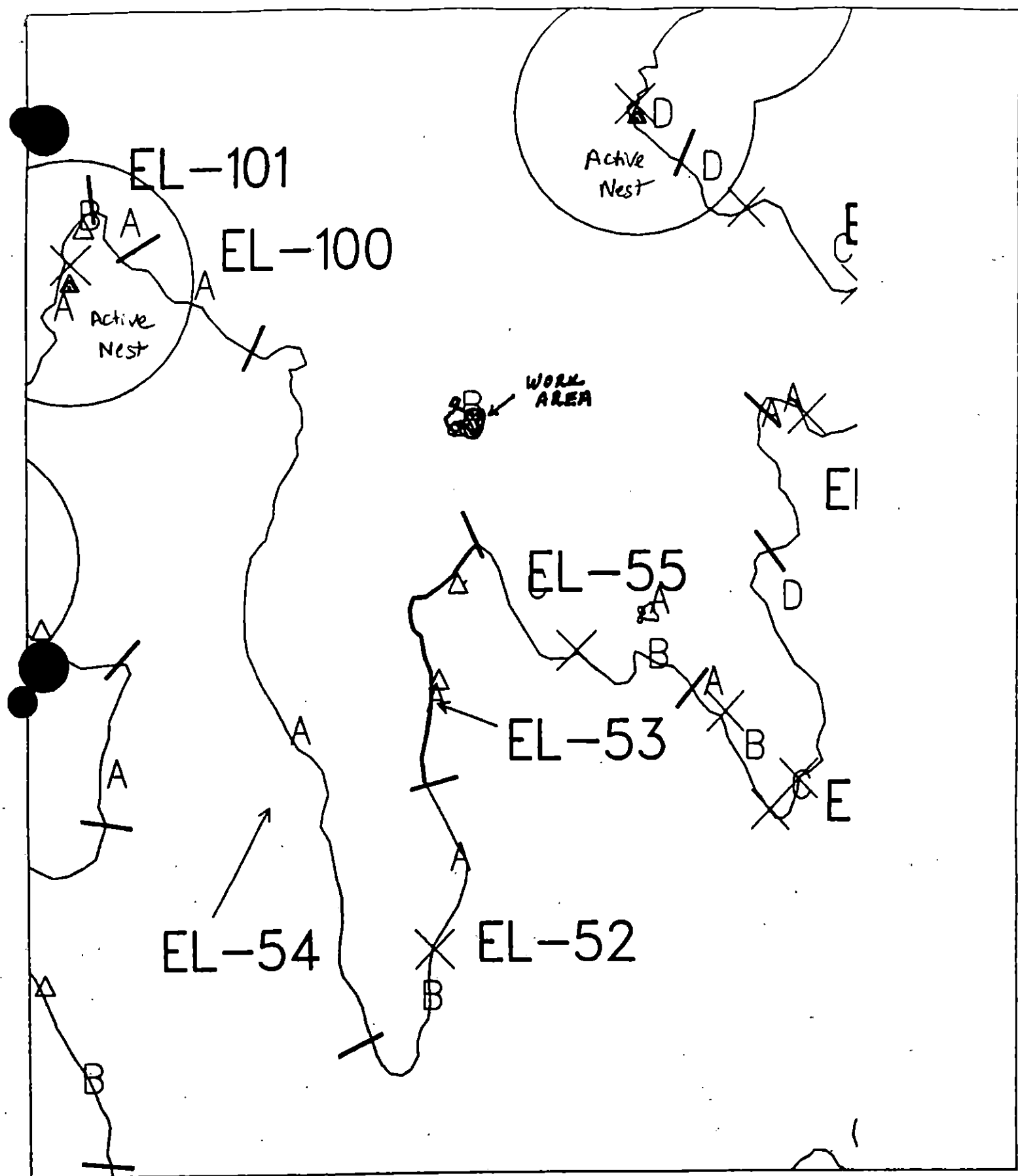
6/14/90

Prepared by

J. Phillips

Date

6/14/90



EXXON

Exxon Company, USA
 Map Key: PWS-EL-53
 June 08, 1990

ECOLOGY MAP
 SEGMENT EL-53
 SUBDIVISION B (2 of 2)
 METERS

0 428 855

- | | |
|---|---------------------|
| ★ | Seabird Colony |
| ▲ | Active Eagle Nest |
| △ | Inactive Eagle Nest |
- 1 inch = 1403 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

ARCHAEOLOGICAL CONSTRAINT: 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 (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Lacke Jean Orr DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V. Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of mousse, tar balls and oiled vegetation and bioremediation of coat, cover and subsurface oil areas. Areas should be treated between 6/16 and 8/14 based on above herring and deer constraints and with approval from ADF&G and USFWS regarding eagles. MANUAL RAKE IN AREA OF PIT 1 PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

SEE CONSTRAINTS ADDENDUM
dated 6/14/90 RP

TAG APPROVAL DATE: 4/21/90..
ADEC ART WERNER
EXXON ANDY TATE
NOAA BILL WESCOTT
USCG KENNETH KEANE

FOSC: WJL DATE: 6-8-90

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

ARCHAEOLOGICAL CONSTRAINT: 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 (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Owen DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V.Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of mousse, tar balls and oiled vegetation and bioremediation of coat, cover and subsurface oil areas. Areas should be treated between 6/16 and 8/14, based on above herring and deer constraints and with approval from ADF&G and USFWS regarding eagles.
MANUAL RAKE IN AREA OF PIT 1 PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC ACT WEINER
EXXON ANDY TGA
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: WJL DATE: 6-8-90

OG C. L. L. N

SEGMENT STKEL-53

SUBDIVISION #B

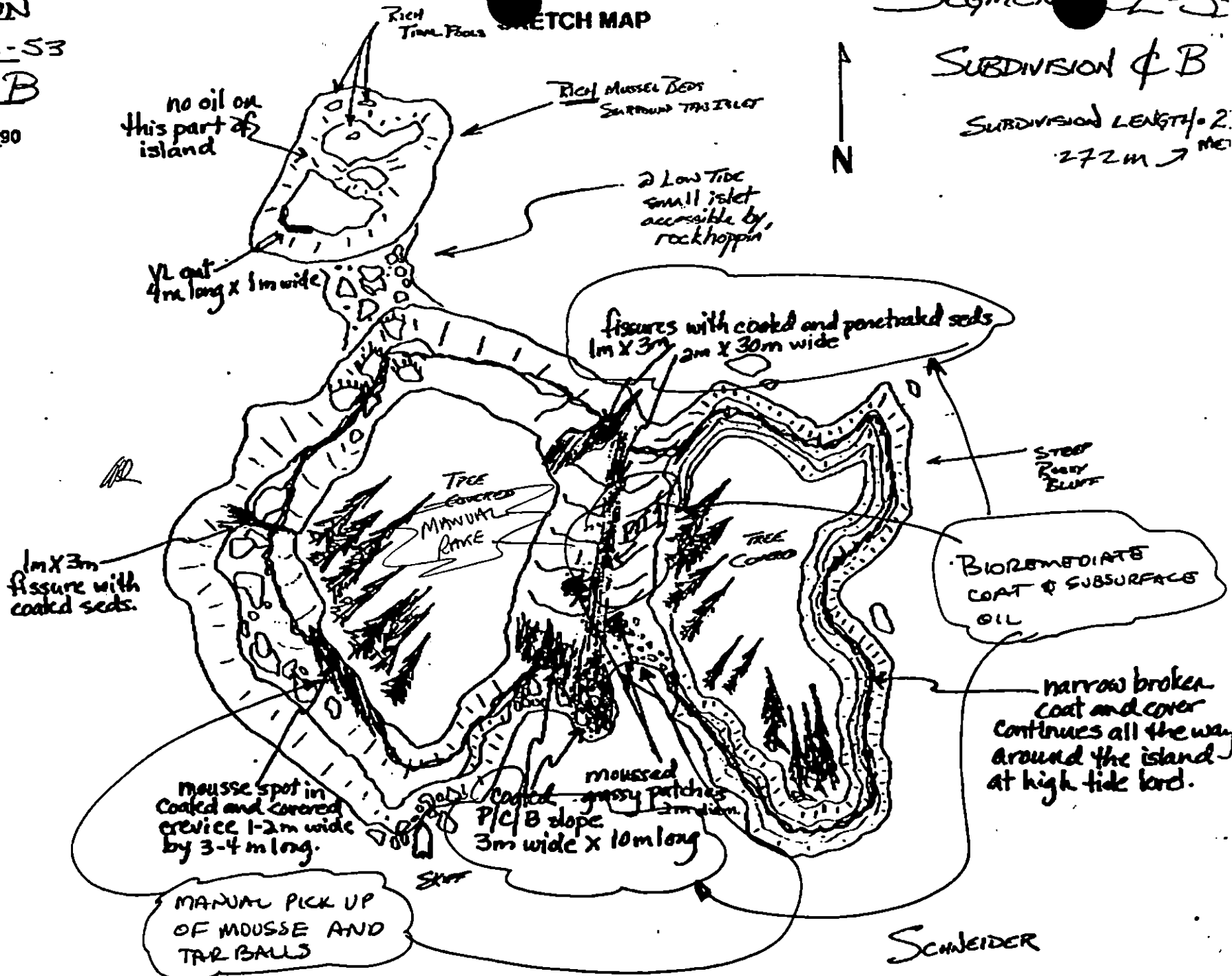
DATE 31 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/NE/SW
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 A
- Pl - No Subsurface Oil
- 2 A
- Pl - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- 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 40 ST 200 MS 2 PT _____ TB 2 FL _____ NO _____

REVISION: 000000

EL-53-~~4~~BTransferred from map by C. Dillon
HH 4-5-90

Her way had to island cut off

EL-55



EL-53

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m

METERS

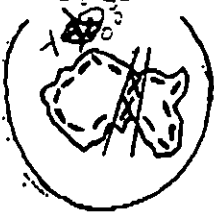
Map Key: PWS-138

Name: _____

Date: _____

Data Entered: _____

REVISED on 4/4/90



EL-53-X B

EL-55



EL-53

REVISED
FROM EL-53-B
TO EL-53-A

EL-55-C

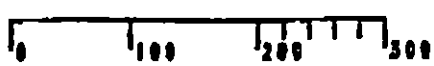
EL-53-A

EL-52-A

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

EL-53

ADEC Segment Length: 922m



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL 053 SUB: B REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 53 SUBDIVISION B DATE 4/28/91

ADEC

NAME Peter MontesanoSIGNATURE Peter Montesano☐ NTR ☒ TREATMENT RECOMMENDED.

- THE OIL REMAINS HIGH UP ON THE SADDLE AND ON THE PROTECTED BACK SIDE WHERE REMOVAL IS NECESSARY.

- REMOVE MOR + SOR IN AREAS B+D - simple, STANDARD Removal.

- PIT #9 IS MOR NOT MOR

EXXON

NAME C.M. KatsimpalisSIGNATURE C.M. Katsimpalis☒ NTR VERY SMALL OILED AREAS.

LANDMANAGER

NAME DENNIS G. Kennedy OF USFSSIGNATURE D. S. Kennedy☐ NTR

This island receives fairly good wave action and will self clean.
An active eagle nest is on the island and any clean up activity will have a cumulative effect on the birds.

USCG/NOAA

NAME MICHEL (NOAA) BEN ZEHONE (CG)SIGNATURE Michel Ben Zehone☐ NTR

The only remaining oil is on the southern side, which is sheltered from direct wave activity. LOCATIONS B+D ARE located in the high intertidal zone, and the oil is even more sheltered in these areas in deep, sediment filled crevices and depressions in bedrock. The oiled areas are readily accessible and have definite (bedrock) bottoms.

GOOD ACCURATE OG REPORT. AGREE W/ USFS ON EAGLE SENSATIVITY. THOUGHT SHOULD BE GIVEN IF REMOVAL OF MINOR OILING IS WORTH DISTURBING EAGLE - 3

DATE 4 / 28 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

EST. OIL CATEGORY LENGTH: W m M m N 12 m VL 0 m NO 422 m US 0 m

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

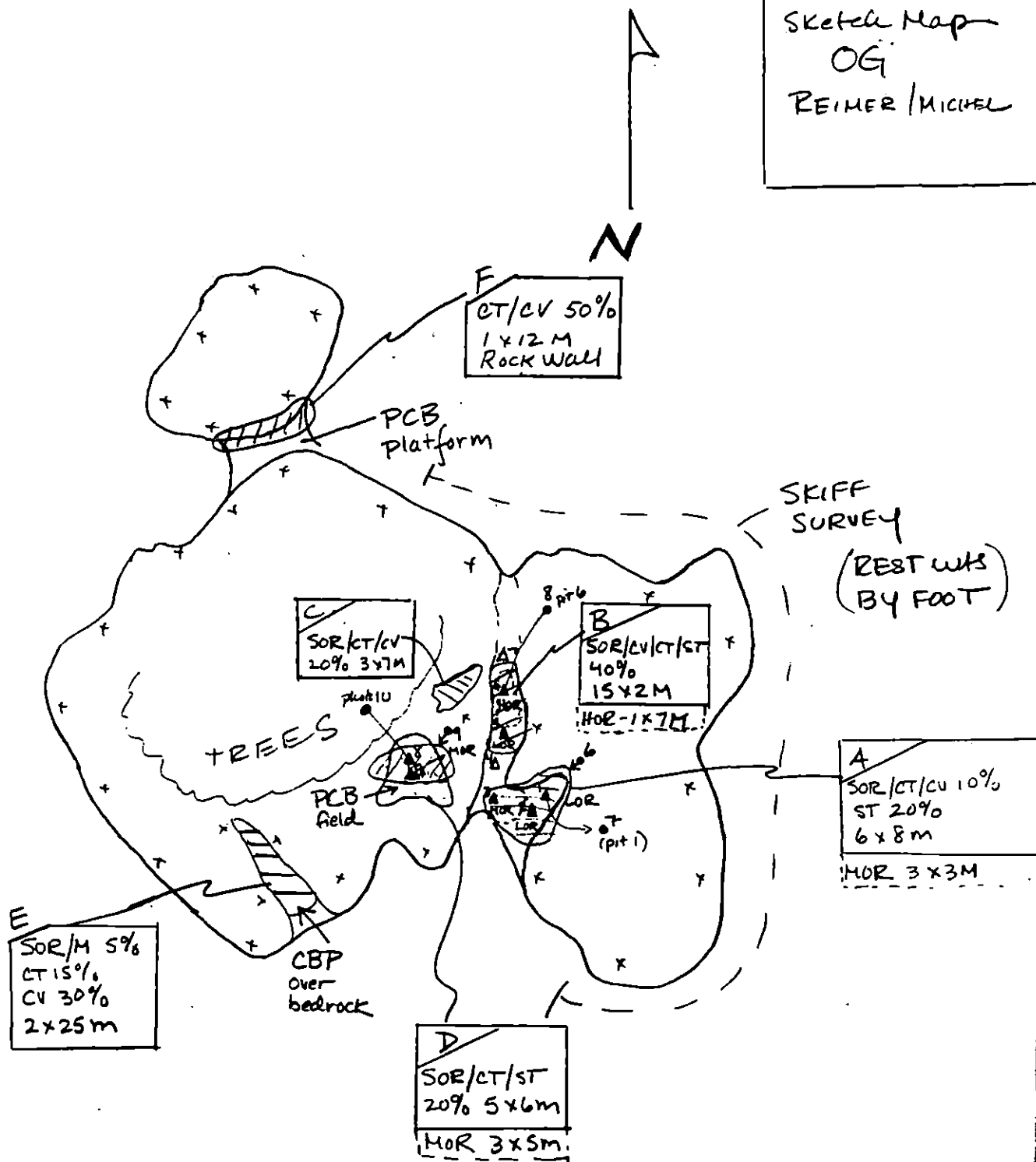
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 2 FRAMES 6-10

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

Sketch redrawn by Michel from Reimer field notes.

reviewed 5/8/91 K.C.
revised 5/11

EL Ø53 B
28 April 91
Sketch Map
OG
REIMER/MICHEL



~ 50 meters

reviewed 5/3/11
E. Reinwald 5/11

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
 DATE 28 Apr 1991
 SEGMENT # EL 53
 TIDAL HEIGHT(Range) 0' to 2'
 SUBDIVISION B
 BIOLOGIST BENSON
 SEA STATE 0'
 WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) In the UITZ, Verrucaria is moderately dense and barnacles are sparse. The MITZ % cover & diversity are moderate. In the LITZ, macroalgal diversity is high & both nudibranch & fish eggs were found. Recent recruitment of Fuus, barnacles & Littorina was observed.

(B) This location is similar to A, except that Mytilus and Pils 5-7 were common (moderate). In the event of cleanup activities here it may be difficult to avoid the mussels considering the topography. The skiff survey on the seaward side of the island revealed a population of mussels adequate to disperse propagules back into this location.

(C,D) — Algal diversity is lower here than in (A). The alga & Pils 8-9 Scytosiphon is moderately abundant here. In the LITZ, no biota was on oiled surfaces, but a pink oligochaete was found under cobbles nearby.

(E) — Verrucaria was attached to oiled surfaces in the LITZ. A few tidepools in the MITZ enhance diversity slightly.

(F) — No biota was found on oiled substrates. Biota similar to (A), with the addition of tidepools containing Anthopleura,

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	"tidepool sculpin"
Gulls/Kittiwakes	1	1	(? Oligocottus maculosus)
Shorebirds	—	—	
Corvids	3	5	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	—		
ales (specify)	—		

Shoreline subdivision map showing important biological features attached.

ES reviewed 5/11

Subdivision: EL 53 B

Team: 2

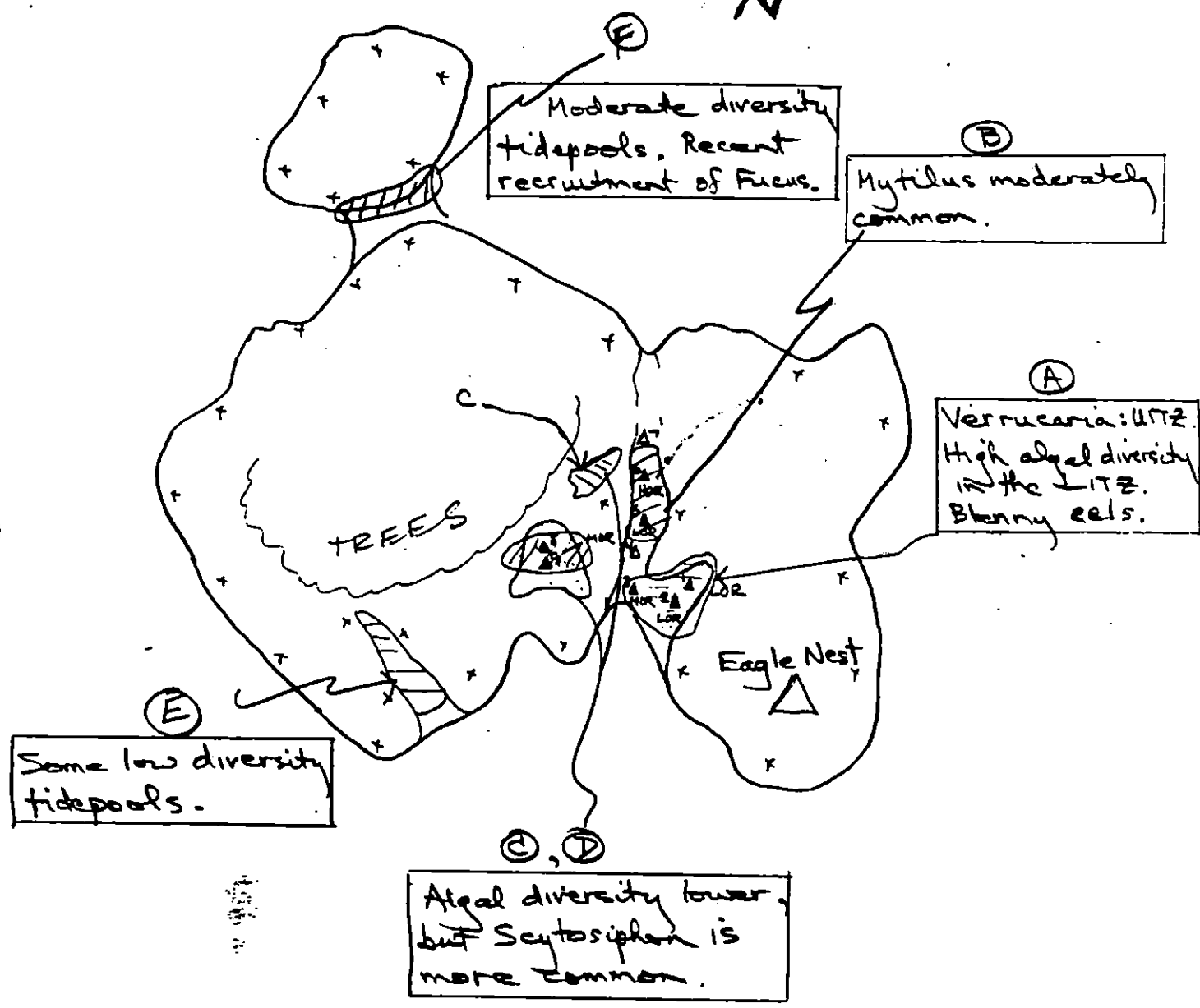
Bio: Benson

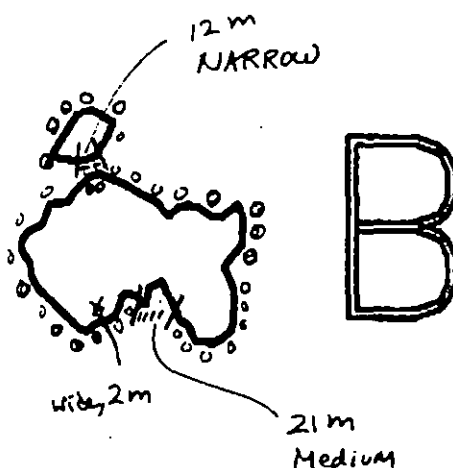
Comments (cont.) -

- ⑤ (cont.) *Odonthelia*, *Rhodanella*, *Gigartina* & *Fucus*.
Recent recruitment of *Fucus* was observed here.

This offshore island has moderately high wave exposure on the north & slightly more protected on the south side. The main biological sensitivity could be an eagle nest on the southeast corner of the island. The tidepools in location F provide enough additional diversity that reasonable care should be exercised to avoid them in the event of cleanup activities here. The biotic zonation on the north side is clearly delineated whereas distributions and recruitment on the south side are more spatially heterogeneous.

EL Ø53 B
 28 April 91
 Sketch Map
 (B10)
 John Benson





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

EL053 B
 ADEC Subsegment Length: 467m
 METERS
 0 100 200
 AK State Plane Zone 4
 201053B

Subdivision Field Map
 Map Key: KHEL053B
 Name: Reimer
 Date: 28 APR 91
 Date Entered:



SURFACE OIL MAP

reviewed 5/18/91 cc
 5/11

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

**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. #2 SEGMENT FL-53 SUBDIVISION A DATE 5/21/91

ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

Oiling conditions well documented. Some of the Boulder piles showed signs of
Coat deep into them, beyond reach and sight.

EXXON

NAME Frank Lee

SIGNATURE [Signature]

☒ NTR

Not enough oil on this segment to justify intensive
cleanup activity. The subsurface oiling was in areas
of rich beds

LANDMANAGER

NAME DENNIS S. Kennedy OF USFS

SIGNATURE [Signature]

☒ NTR

low amounts of oil left, no need for
future treatment

USCG/NOAA

NAME ADMIRAL D. S. JENSEN - BEATY ADMIRAL - BEATY
NAME BAIL M. P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR

As only small amounts of surface and subsurface were
found in this segment, no treatment recommended. D-3

CG- NO TREATMENT RECOMMENDED P.O. 3

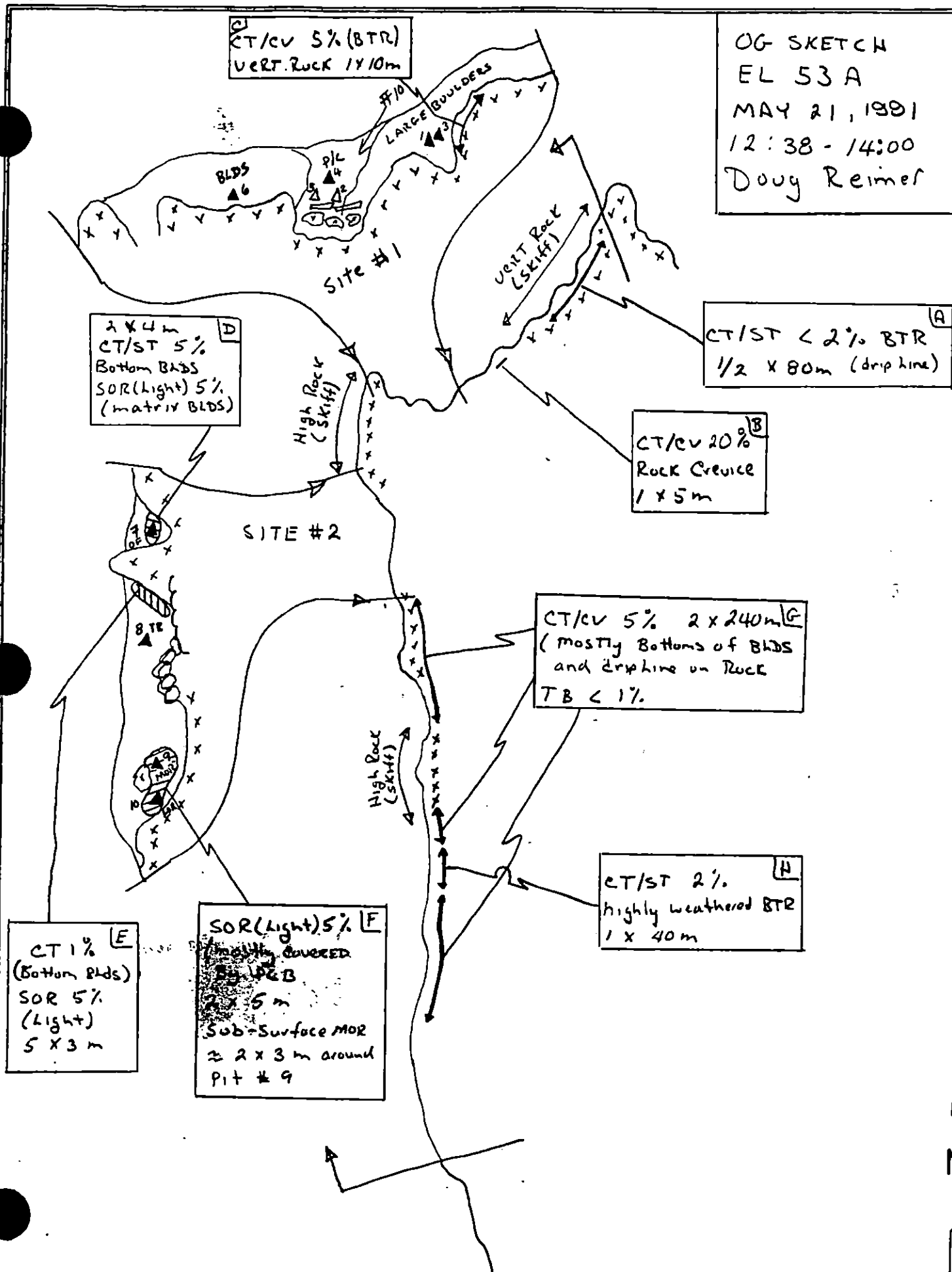
REVIEWED: MC 5/30/94
revised 5-25-94

DATE 5 12 / 191

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

Reviews: MC 5/30/91
revised 5-28-91

OG SKETCH
EL 53A
MAY 21, 1991
12:38 - 14:00
Doug Reimer



REVIEWED: 5/30/91
revised 5.28.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 21 May 91
 SEGMENT # EL-53 TIDAL HEIGHT(Range) 2 to 1 ft
 SUBDIVISION A BIOLOGIST S M Ban
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # - FRAME # -

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

- AB: CT/CU/ST high in ITZ - lichen zone or no biota as indicated.
 lower ITZ supports dense algae - Fucus & red brown algae
- C: CT/CU in green algae zone. Boulders in mid & lower ITZ support
 dense & diverse biota including Fucus recruits, very dense barnacle
 cat. Dense Littorines (large small) and limpets were observed as
 team walked down the beach. Upper zones near the pits were
 either naturally depauperate or supported dense green algae (Ulva)
- D: CT/ST high in ITZ in and around lichen zone. Pit #7 is situated
 in this zone. SOR is lower in the ITZ with adjacent spit (recent)
Fucus recruits, barnacles & small Littorines. Dense Fucus & green
 algae observed near the water line & subtidally.
- E: CT/SOR all high in ITZ within & around lichen & green algae.
 the mid & low ITZ of this beach support dense Fucus, barnacles
 & Littorines, lowest zones with dense Ulva
- F: SOR extends from the green algae zone to the barnacle zone.
 Littorines also observed in the SOR band.
- G+H: CT/CU high in ITZ within lichen zone. Lower zones support
 dense & diverse Fucus assemblage.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

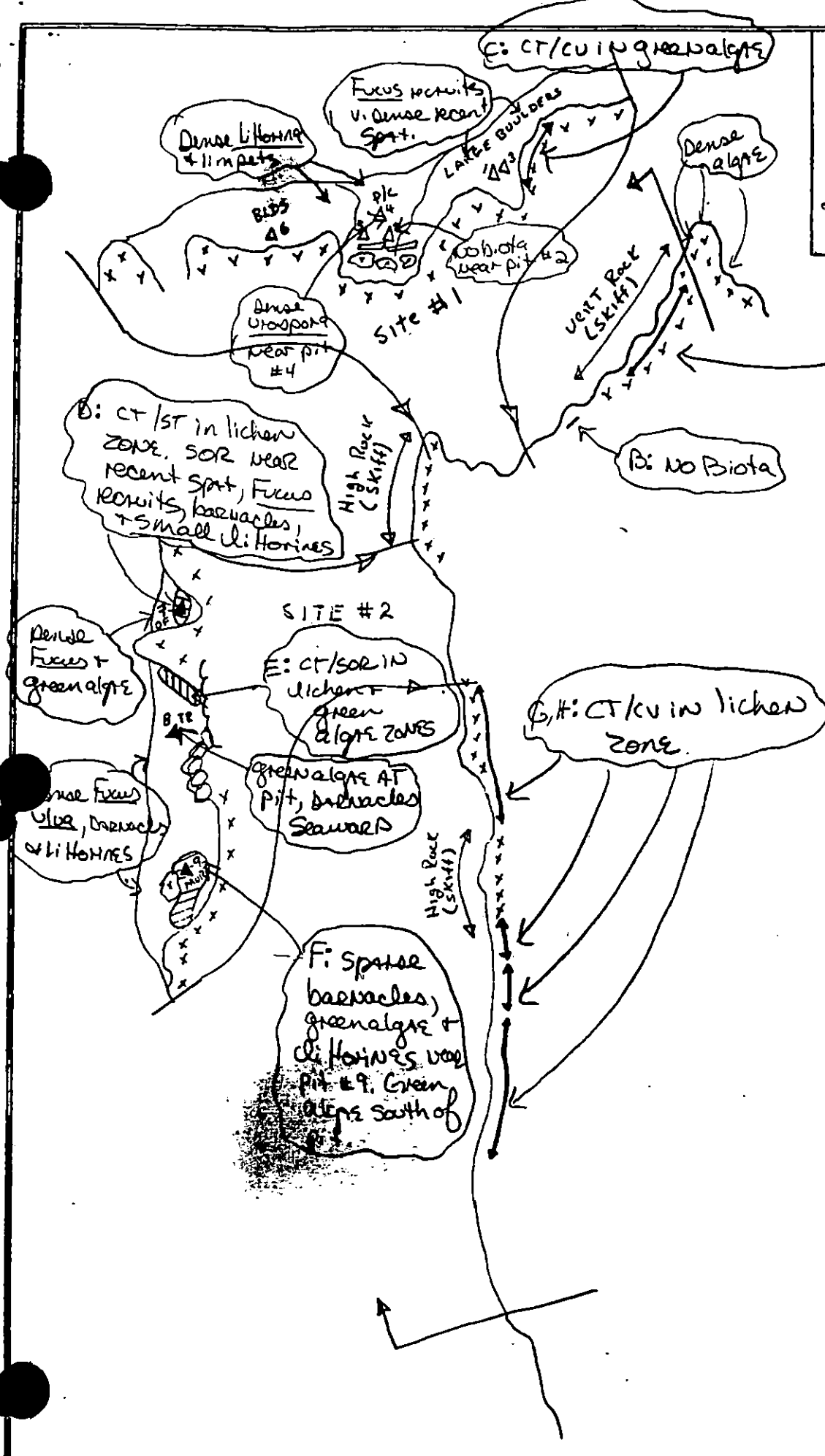
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Carnivores (specify)			

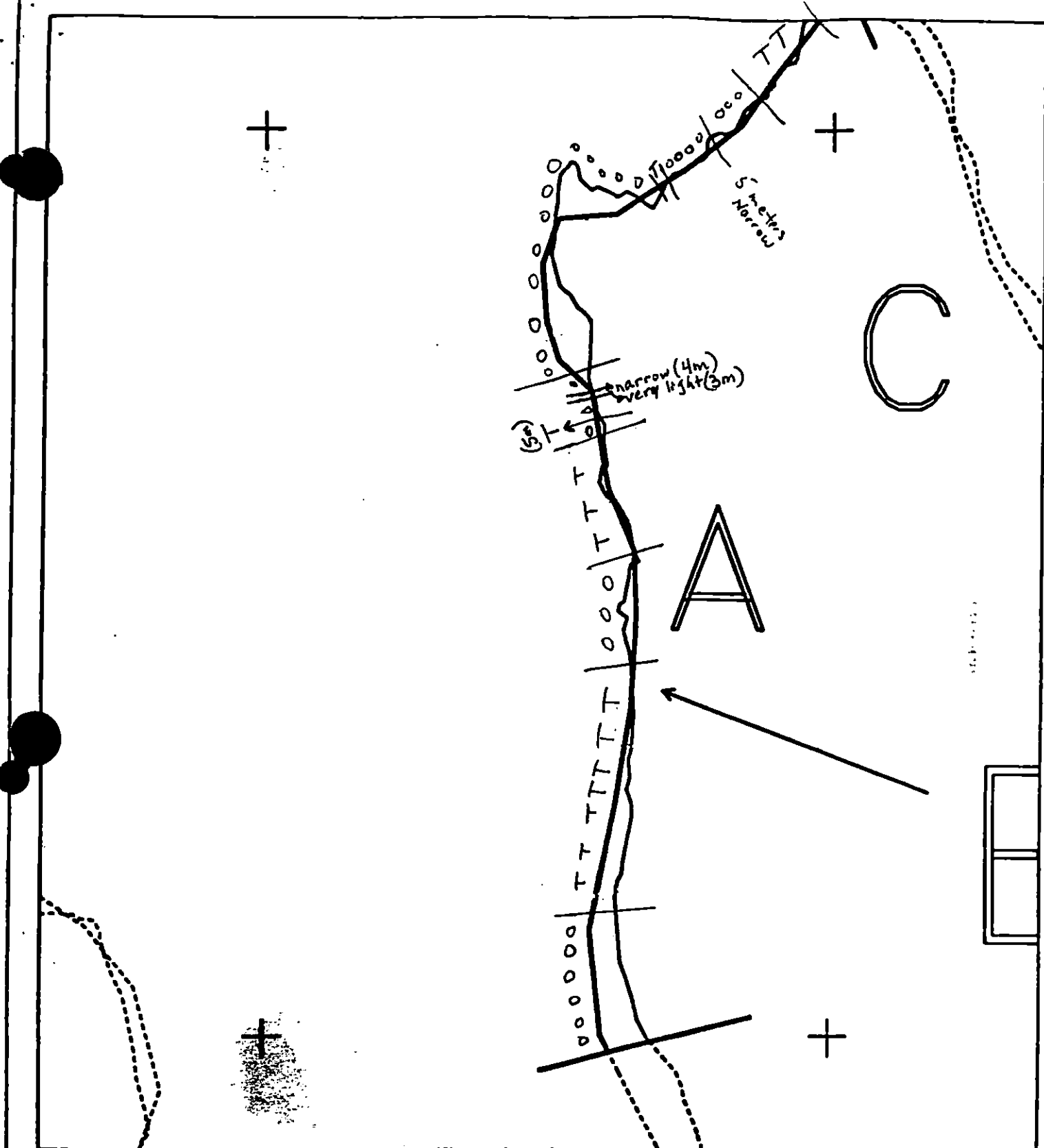
Shoreline subdivision map showing important biological features attached.

Date of photo: 21 May 91

OG SKETCH
 EL 53 A
 MAY 21, 1991
 12:38 - 14:00
 Doug Reimer

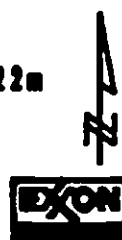
SWB 31 May 91





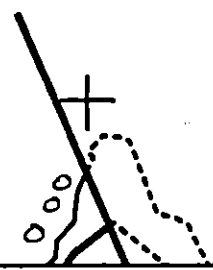
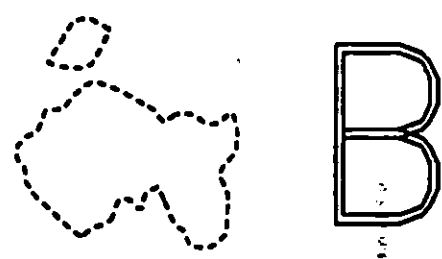
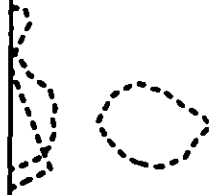
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 000 No Oil

EL053 A
 ADEC Subsegment Length: 022m
 METERS
 0 100 200
 AK State Plane Zone 4
 601853m



Subdivision Field Map
 Map Key: KNIEL053Aa
 Name: Reima
 Date: 5/21/91
 Date Entered:

Reviewed: MC 5/30/91
 Revised 8.28 94



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

EL053 A
ADEC Subsegment Length: 922m
METERS
AK State Plane Zone 4
401053ab



Subdivision Field Map
Map Key: KNELO53Ab
Name: Reimer
Date: 5/31/91
Date Entered:

Reviewed: MC 5/30/91
Reviewed 5.28.91

1991 MAYSAP EVALUATION

SEGMENT: EL 053 SUB: B REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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.). *End*

Reckel Don Dale

5/21/91

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 pickup of HSOR (EASILY ACCESSIBLE) AT LOCATION D + B. APPLY CUSTOMBLEN

FOSC: _____

TAG APPROVAL DATE: MAY 21 1991 FOSC APPROVAL DATE: 5/25/91

ADEC *[Signature]*

FOSC *[Signature]*

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

EXXON *[Signature]*

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 053 SUBDIVISION B DATE 4 / 28 / 91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED.

- THE OIL REMAINS HIGH UP ON THE SADDLE AND ON THE PROTECTED BACK SIDE WHERE REMOVAL IS NECESSARY.

- REMOVE MOR + SOR IN AREAS B+D - simple, STANDARD Removal.

- PIT #9 IS MOR NOT MOR.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE C.M. Katsimpalis

☒ NTR VERY SMALL OILED AREAS.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D. S. Kennedy

☐ NTR This island receives fairly good wave action and will self clean.

An active eagle nest is on the island and any clean up activity will have a cumulative effect on the birds.

USCG/NOAA

NAME MICHEL (NOAA) BILL ZEMONE (CG)

SIGNATURE MICHEL Bill Zemone

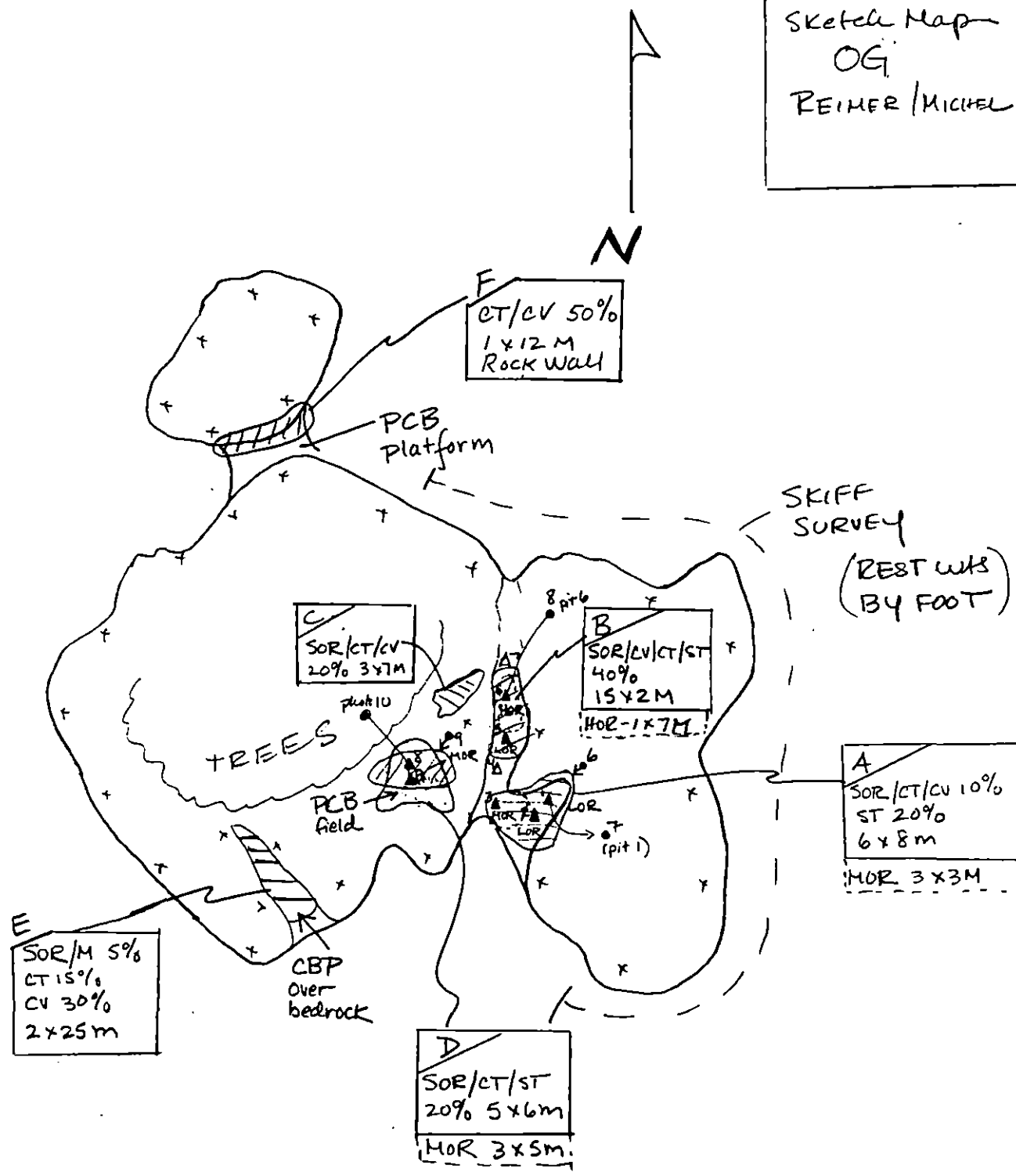
☐ NTR The only remaining oil is on the southern side, which is sheltered from direct wave activity. LOCATIONS B+D ARE located in the high intertidal zone, and the oil is even more sheltered in these areas in deep, sediment filled crevices and depressions in bedrock. The oiled areas are readily accessible and have definite (bedrock) bottoms.

CG-
GOOD ACCURATE OG REPORT. AGREE W/ USFS ON EAGLE SENSATIVITY. THOUGHT SHOULD BE GIVEN IF REMOVAL OF PIT#9 OILING IS WORTH DISTURBING EAGLE - 3

PAGE 1 OF 1

reviewed 5/8/91 KG
revised, 5/11

EL Ø53 B
 28 April 91
 Sketch Map
 OG
 REIMER / MICHEL



~ 50 meters

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 28 Apr 1991
 SEGMENT # EL 53 TIDAL HEIGHT (Range) 0' to 2'
 SUBDIVISION B BIOLOGIST BENSON
 SEA STATE 0' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) In the UITE, Verrucaria is moderately dense and barnacles are sparse. The MITZ % cover & diversity are moderate. In the LITE, macroalgal diversity is high & both nudibranch & fish eggs were found. Recent recruitment of Fucus, barnacles & Littorina was observed.

(B) This location is similar to A, except that Mutilus are Pds 5-7 more common (moderate). In the event of cleanup activities here it may be difficult to avoid the mussels considering the topography. The skirt survey on the seaward side of the island revealed a population of mussels adequate to disperse propagules back into this location.

(C) Algal diversity is lower here than in (A). The alga & Pds 8-9 Scytosiphon is moderately abundant here. In the LITE, no biota was on oiled surfaces, but a pink oligochaete was found under cobbles nearby.

(D) Verrucaria was attached to oiled surfaces in the LITE. A few tidepools in the MITZ enhance diversity slightly.

(E) No biota was found on oiled substrates. Biota similar to (A), with the addition of tidepools containing Anthopleura,

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	"tidepool sculpin"
Gulls/Kittiwakes	1	1	(? Oligocottus maculosus)
Shorebirds	—	—	
Corvids	3	5	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	—		
_____les (specify)	—		

Shoreline subdivision map showing important biological features attached.

Subdivision: EL 53 B

Team: 2

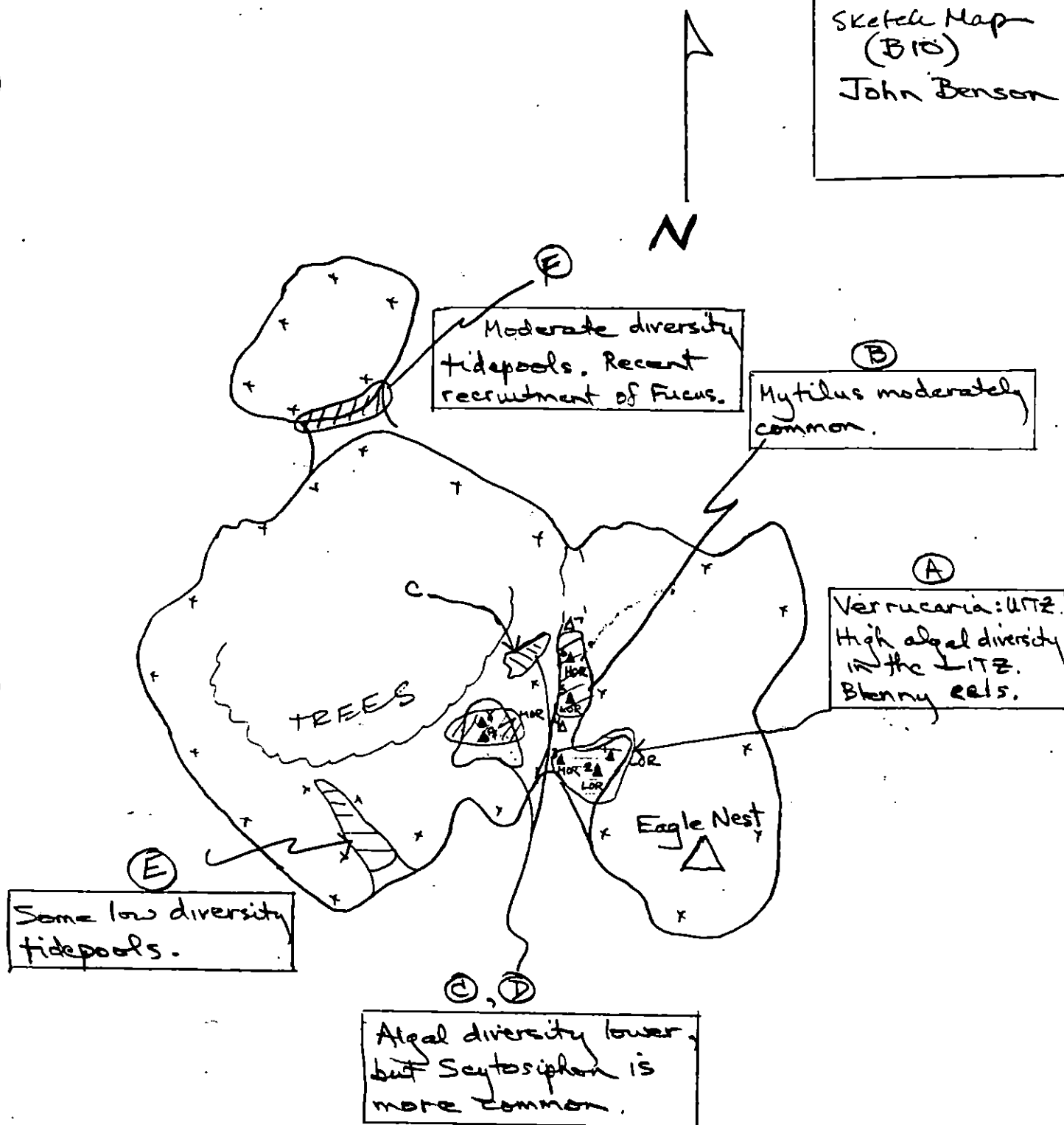
Bio: Benson

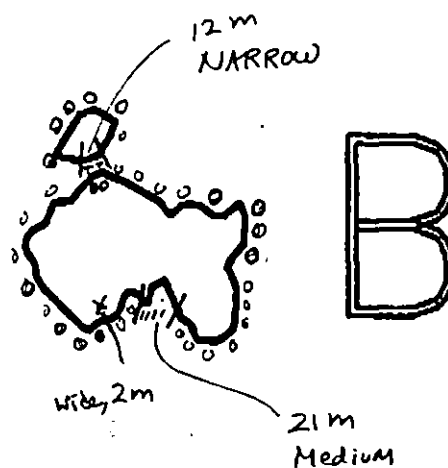
Comments (cont.) -

- Ⓕ (cont.) *Odonthalia*, *Rhodomela*, *Gigartina* & *Fucus*.
Recent recruitment of *Fucus* was observed here.

This offshore island has moderately high wave exposure on the north & slightly more protected on the south side. The main biological sensitivity could be an eagle nest on the southeast corner of the island. The tidepools in location F provide enough additional diversity that reasonable care should be exercised to avoid them in the event of cleanup activities here. The biotic zonation on the north side is clearly delineated whereas distributions and recruitment on the south side are more spatially heterogeneous.

EL Ø53 B
28 April 91
Sketch Map
(B10)
John Benson





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

EL053 B
 ADEC Subsegment Length: 487m
 METERS

5 100 200
 AK State Plane Zone 4
 8010536



Subdivision Field Map

Map Key: KNELO53B

Name: Reimer

Date: 28 APR 91

Date Entered:

SURFACE OIL MAP

reviewed 5/18/91 KG
 -- n n h

1991 MAYSAP EVALUATION

SEGMENT: EL 053 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/21/91

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: _____ **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**

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.

TEAM NO. #2 SEGMENT EL-53 SUBDIVISION A DATE 5/21/91

ADEC

NAME Peter MontesanoSIGNATURE *Peter Montesano*☒ NTR☐ TREATMENT RECOMMENDED

Oiling conditions well documented. Some of the Boulder piles showed signs of
Coat deep into them, beyond reach and sight.

EXXON

NAME Frank LeeSIGNATURE *Frank Lee*☒ NTR

Not enough oil on this segment to justify intensive
clean-up activity. The subsurface oiling was in areas
of rock boulder

LANDMANAGER

NAME DENNIS S. Kennedy OF USFSSIGNATURE *D.S. Kennedy*☒ NTR

low amounts of oil left, no need for
future treatment

USCG/NOAA

NAME DMT SINGER-BERTY Admiral-BertyNAME Bmt M.P. Z... USCGSIGNATURE *Bmt M.P. Z...*☐ NTR

As only small amounts of surface and subsurface were
found in this segment, no treatment recommended. Ds-B

CG- NO TREATMENT RECOMMENDED NO. 3

SEGMENT EL 53

SUBDIVISION A

DATE 5 / 21 / 91

ADEC Montesano

LANDMANAGER Kennedy for USFS

BMI Zenone

EXXON Box

USCG/NOAA D. Simecek - Beauty

TIME 12 : 38 to 1 : 00

TIDE LEVEL 2.39 ft. to 1.02 ft.ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 922 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 9 m VL 378 m NO 535 m US 0 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- 2 - 23 FRAMES 9-10

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R SN	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	17						X		5-9	Y				X			B-PG	
2	30							X	- - -	-				Y			C-P&S	
3	17						X		3-14	Y				X			B-PG	draps on clasts
4	17					X			11-14	Y				X			C-PG	
5	25							X	-					X			C-PG	
6	10						X		3-10	N				X			B-PG-C	draps on clasts
7	15					X			-	N				X			B-P&C	angular rock
* 8	10						X		3-5	Y	B	B		X			C-PG	draps on clasts
* 9	12								0-5	Y				X			PC-PG	sheltered behind

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

* NOTE: OIL ≤ 5 cm DEEP IS NOT SUBSURFACE

OG COMMENTS: Rocky shoreline with pocked B/c beaches. Oil consists of sporadic CT/cu in the form of a weathered bathtub ring (BTR) along the HIRZ on Rock cliffs, widening across moderate to steep sloped boulder beaches.

REVISIONS: MC 57399/
revised 5.28.94

DATE 5 12 / 19 91

[illegible]

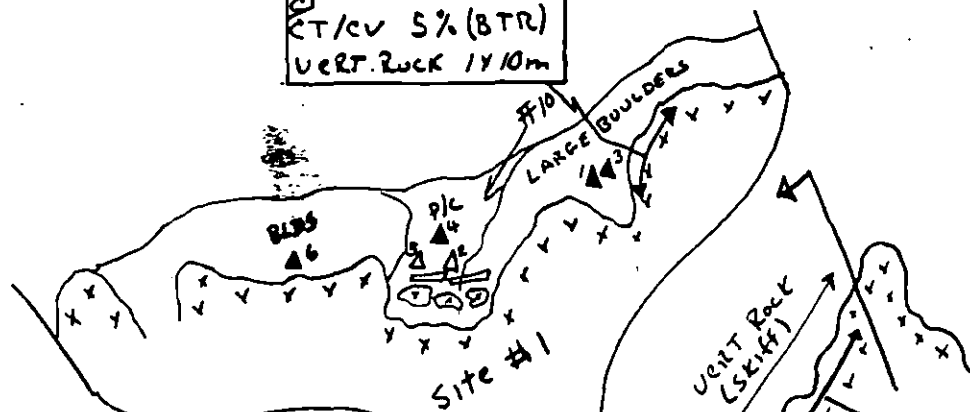
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

Reviews: MC 5/30/91
revised 5-28-91

CT/cv 5% (BTR)
VERT. ROCK 1 x 10m

OG SKETCH
EL 53A
MAY 21, 1991
12:38 - 14:00
Doug Reimer



2 x 4 m
CT/ST 5%
Bottom BLDS
SOR (light) 5%
(matrix BLDS)

CT/ST < 2% BTR^A
1/2 x 80m (drip line)

CT/cv 20%^B
Rock Crevice
1 x 5m

SITE #2

CT/cv 5% 2 x 240m^G
(mostly Bottoms of BLDS
and drip line on Rock
TB < 1%.

CT/ST 2%^H
highly weathered BTR
1 x 40m

CT 1%^E
(Bottom BLDS)
SOR 5%
(light)
5 x 3 m

SOR (light) 5%^E
Surface MOR
± 2 x 3 m around
pit # 9



REVIEWED: 5/30/91
revised 5.28.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
 DATE 21 May 91
 SEGMENT # EL-53.
 TIDAL HEIGHT(Range) 2 to 1 ft
 SUBDIVISION
 BIOLOGIST S M Ban
 SEA STATE calm
 WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # -
 FRAME # -

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

AB: CT/CU/ST high in ITZ - lichen zone or no biote as indicated.
 lower ITZ supports dense algae - Fucus & red brown algae

C: CT/CU in green algae zone. Boulders in mid & lower ITZ support dense & diverse biote including Fucus recruits, very dense barnacle mats. Dense Littorines (littorina) and limpets were observed as team walked down the beach. Upper zones near the pits were either naturally depauperate or supported dense green algae (Ulva)

D: CT/ST high in ITZ in and around lichen zone. Pit #7 is situated in this zone. SOR is lower in the ITZ with adjacent spit (Keent) Fucus recruits, barnacles & small Littorines. Dense Fucus & green algae observed near the water line & subtidally.

E: CT/SOR all high in ITZ within & around lichen & green algae. The mid & low ITZ of this beach support dense Fucus, barnacles & Littorines, lowest zones with dense Ulva

F: SOR extends from the green algae zone to the barnacle zone. Littorines also observed in the SOR band.

G&H: CT/CU high in ITZ within lichen zone. Lower zones support dense & diverse Fucus assemblages.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiw			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

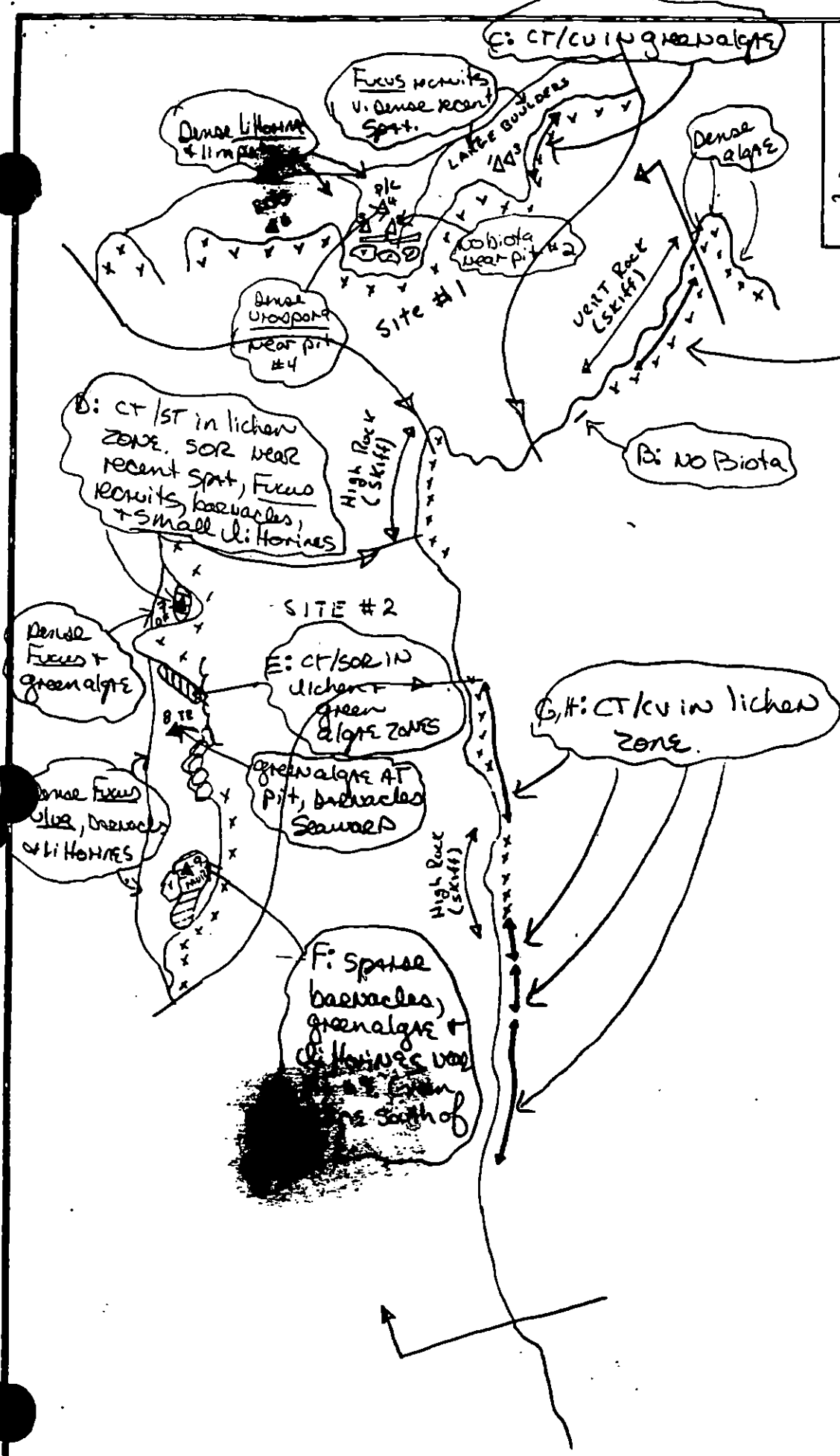
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

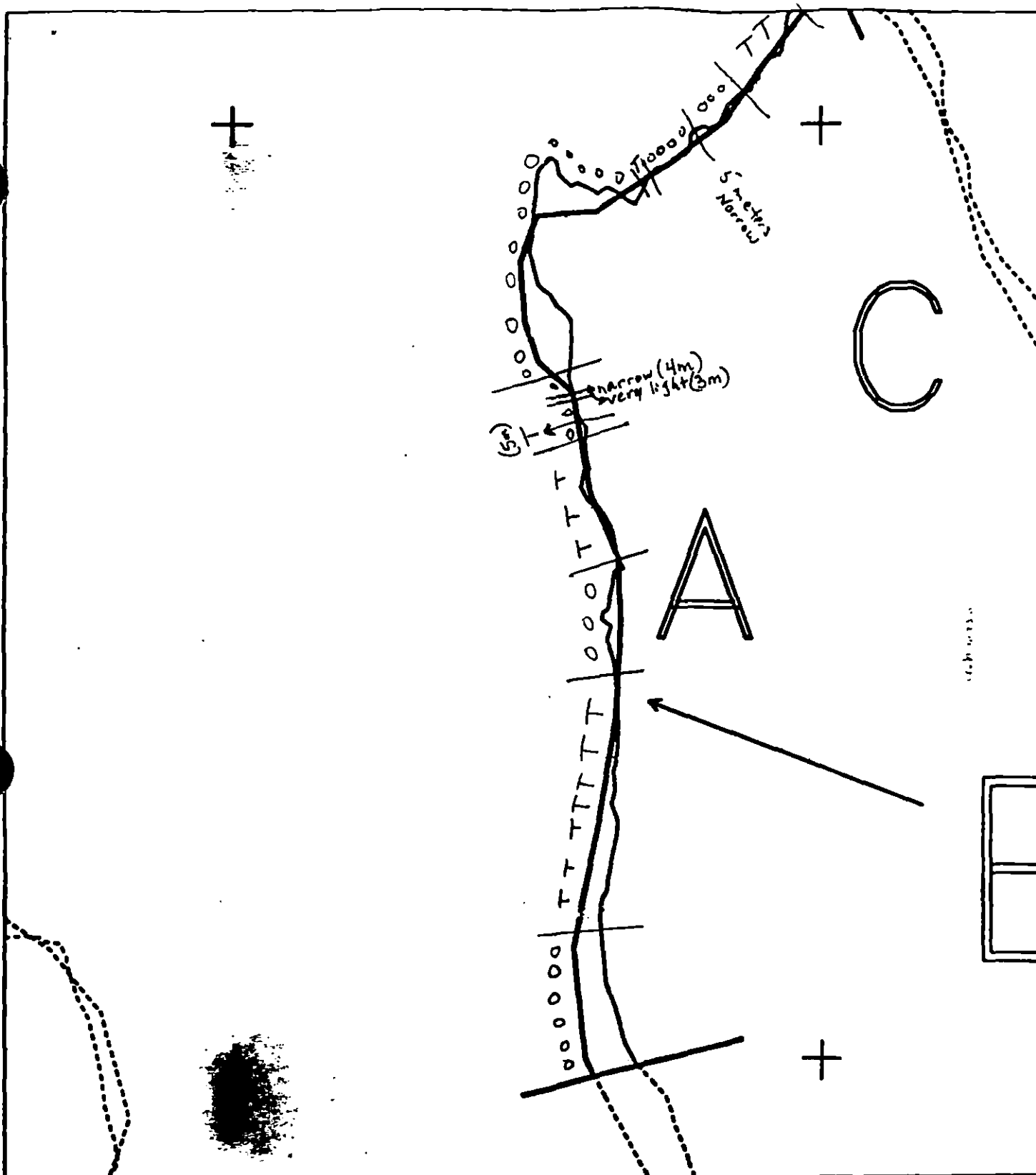
Shoreline subdivision map showing important biological features attached.

Pinned photos & m

OG SKETCH
 EL 53 A
 MAY 21, 1991
 12:38 - 14:00
 Doug Reimer

SMB 31 May 91



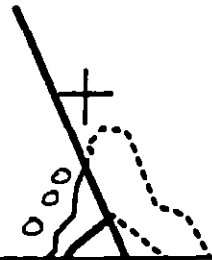
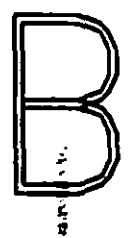
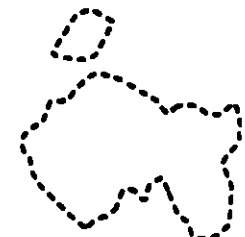
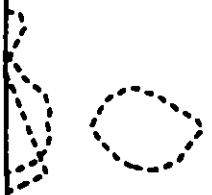


XXXX	Wide	EL053 A ADEC Subsegment Length: 822m METERS AK State Plane Zone 4 601053a	 	Subdivision Field Map
////	Medium			Map Key: KNI EL053Aa
----	Narrow			Name: <u>Reimer</u>
TTTT	Very Light			Date: <u>5/21/91</u>
0000	No Oil			Date Entered:

Reviewed: MC 5/30/91
 Revised 5.28 94

+

+



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

EL053 A
ADEC Subsegment Length: 922m
METERS
5 100 200
AK State Plane Zone 4
El053ab



Subdivision Field Map
Map Key: KNELO53Ab
Name: Reimer
Date: 5/31/91
Date Entered:

Reviewed: MC 5/30/91
Reviewed 5.28.91

ASAP TAG REVIEW SHEET

Segment: EL33 A Subd: A Site: 1

Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☒ NTR

Treatment
Recommended:

NTR

COAT only

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
☒ CG ☐ ☒ ADEC ☐ ☐ EXXON ☒ ☒ LAND MGR ☐

TAG 15 AUG 90

Reapply Customblen
(already sched.)
for BIO
reassess 9/1

ASAP TAG REVIEW SHEET

Segment: EL53

Subd: A Site: 2

Date
PRE-Review 14 Aug

Priority For Addressing In 1990

☐ HIGH

☐ MEDIUM

☐ LOW

☒ NTR

Treatment
Recommended:

NTR

Priority Site For Reassessment In 1991

YES ☒ NO
X CG ☐

YES ☒ NO
X ADEC ☐

YES ☐ NO
☐ EXXON ☒

YES ☒ NO
X LAND MGR ☐

ASAP TAG REVIEW SHEET

Segment: EL53 Subd: A Site: 3 Date PRE-Review 14 Aug

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment
Recommended:

NTR

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
 CG X X ADEC EXXON X X LAND MGR

ASAP FOLLOWUP RECOMMENDATIONS

Item: AS/EL 53A Subd.: A Site: 1 Date: 8/7/90 1990

Conditions Observed: MITZ pitior 15 to 40 cm @, compacted pebble substrate
Armor coating consisting of Cobble/bottom and distinct storm berm deposit in S.W. E.
with 2M, 5T, 6V, 7H. Sheen not observed in tide water during ASAP Survey; and
sheen history is not available. Insufficient data to assess biological/human health
hazards. ASAP Survey did not have sufficient time to determine extent of
oil.

Followup Recommendations: Mechanical investigation to determine extent of
oil (recommend 4" hand auger w/ 4ft. auger extension gasoline powered). Depending
on extent of deposit, i.e. MITZ extending to S.W. E. and the character of the oil.
a decision could be made on technique appropriate to restore site.

Completed by Pickup ☐ YES ☒ NO
 Crew:

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

REC Wesley Ghormley
 (name)

Wesley Ghormley
 (signature)

Comments: ADEC is very concerned about subsurface oil. Substrate is very
compacted sediment so custom blend will not penetrate. I highly recommend
mechanical excavation removal and HOT H₂O flooding to remove oil.

EXCON REY SOTELO
 (name)

Rey Sotelo
 (signature)

Comments: This site is a definite candidate for re-exploration of custom
blend in '90 and should be re-assessed in '91. The following recommendation
that is written for this site is to extreme for the control of oiling observed.
 (Amend:)

USCG

NOAA Art Weiner
 (name)

Art Weiner
 (signature)

Comments: AGREE w RECOMMENDATION TO ACCURATELY DEFINE EXTENT OF SUBSURFACE OIL.
RECOMMEND 1991 REASSESSMENT. IF OIL CONDITION PERSISTS, THE SUBSURFACE
RESERVOIR SHOULD BE MECHANICALLY TILLED + TREATED w CUSTOM BLEND OR REMOVED

Lead Rep. John Ebel
 (name)

John Ebel
 (signature)

Comments: North east view scene. Large patch, small beach length. Mud to low angle beach
can't head lands, small beach areas. Need land access. Intriguing site to stop.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL-53 SUBDIVISION: A SITE: 1 DATE 8-9-90

SCG PSI Leo Bersalona Leo Bersalona
NAME Art Weiner SIGNATURE Art Weiner

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

Assess EFFECTIVENESS OF CUSTODIAND ON HIGH
CONCENTRATION OF SUBSURFACE OIL [OR (15-40 cm+)].

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

Reassessment is requested to determine the condition of
Sub-surface oil. (OR 40cm in very tight Sediment)
- IF high OR is still present then additional work
will be requested.

LAND MANAGER
NAME John F. Felt SIGNATURE John F. Felt

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

To Evaluate the effectiveness of 90 treatment after winter conditions

EXXON
NAME Ray Sotelo SIGNATURE Ray Sotelo

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

If reassessment is done on this site in '91 it should be
treated as a low priority site.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ EL 53 SUBDIVISION: A SITE: 2 DATE 8-7-90

USCG NAME NOAA PSI Leo Bersapom Leo Bersapom SIGNATURE Art Weiner

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

ADEC NAME Wesley Ghormley SIGNATURE Wesley Ghormley

REASON: ☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
- No Further treatment at this time -

LAND MANAGER NAME Tola Ebel SIGNATURE Tola Ebel

REASON: ☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
No further treatment at this time

EXXON NAME Ray Sotelo SIGNATURE Ray Sotelo

REASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
No assessment should be necessary in '91.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 53 SUBDIVISION: A SITE: 3 DATE 8-7-90

USCG / NOOA PSI Leo Bersalona Leo Bersalona
NAME Art Weiner SIGNATURE Art Weiner

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

NO EFFECTIVE TREATMENT AVAILABLE FOR EXISTING OILING CONDITION

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

A Band of cover & SOR sediment is present at the MITZ under boulders. Reassess and if condition remains roll boulders to expose oil and manually remove SOR sediments.

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

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

I concur w/ NOAA & ADEC.

EXXON
NAME Rey Sotelo SIGNATURE Rey Sotelo

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

No reassessment should be necessary in '91.

2422 . 2

TOTAL EST LENGTH OF SHORELINE SURVEYED: 205 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 70 m N 135 m VL — m NO — m US 717 m

SITE 3

DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	U
			X		X		
			X		X		
			X		X		
		X			X		
				X		X	X

70

Frames 29 to 32

COMMENTS This subdivision is made up 3 beaches but the southern beach is only distinctive at

Reviewed
(Fur)

OG C. TULLON
DATE 3/31/90

SKETCH MAP

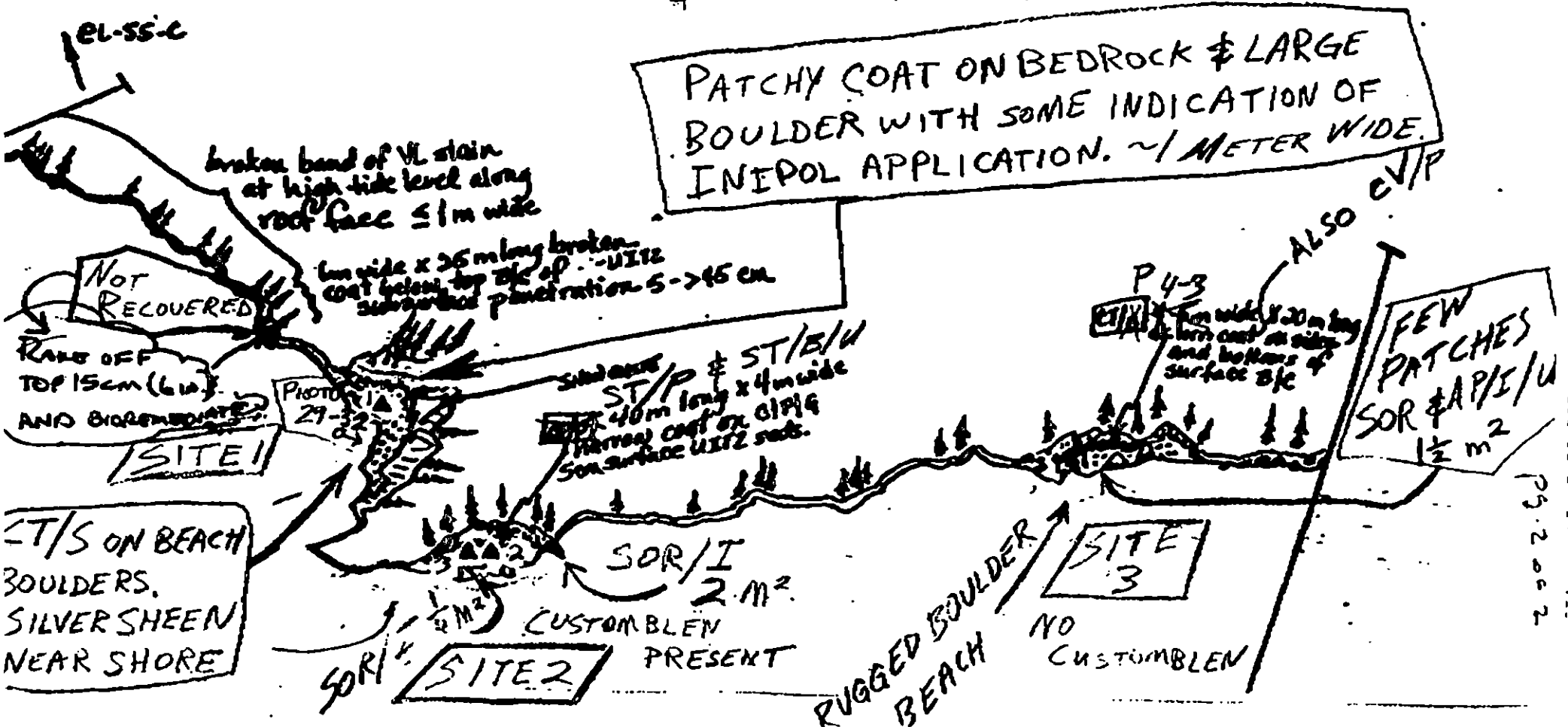
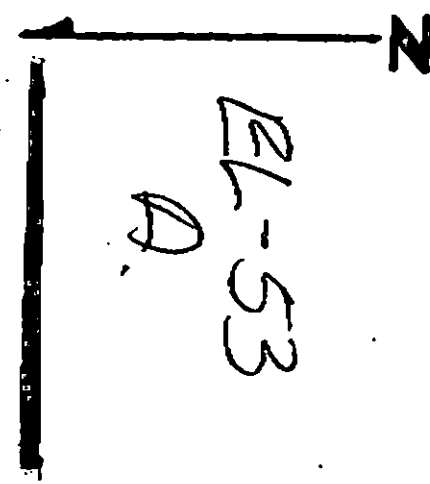
ASAP #2
AUG 7/1990
CHANEY
MAP FROM
SSAT MAP

SEGMENT EL-53 SUBDIVISION A

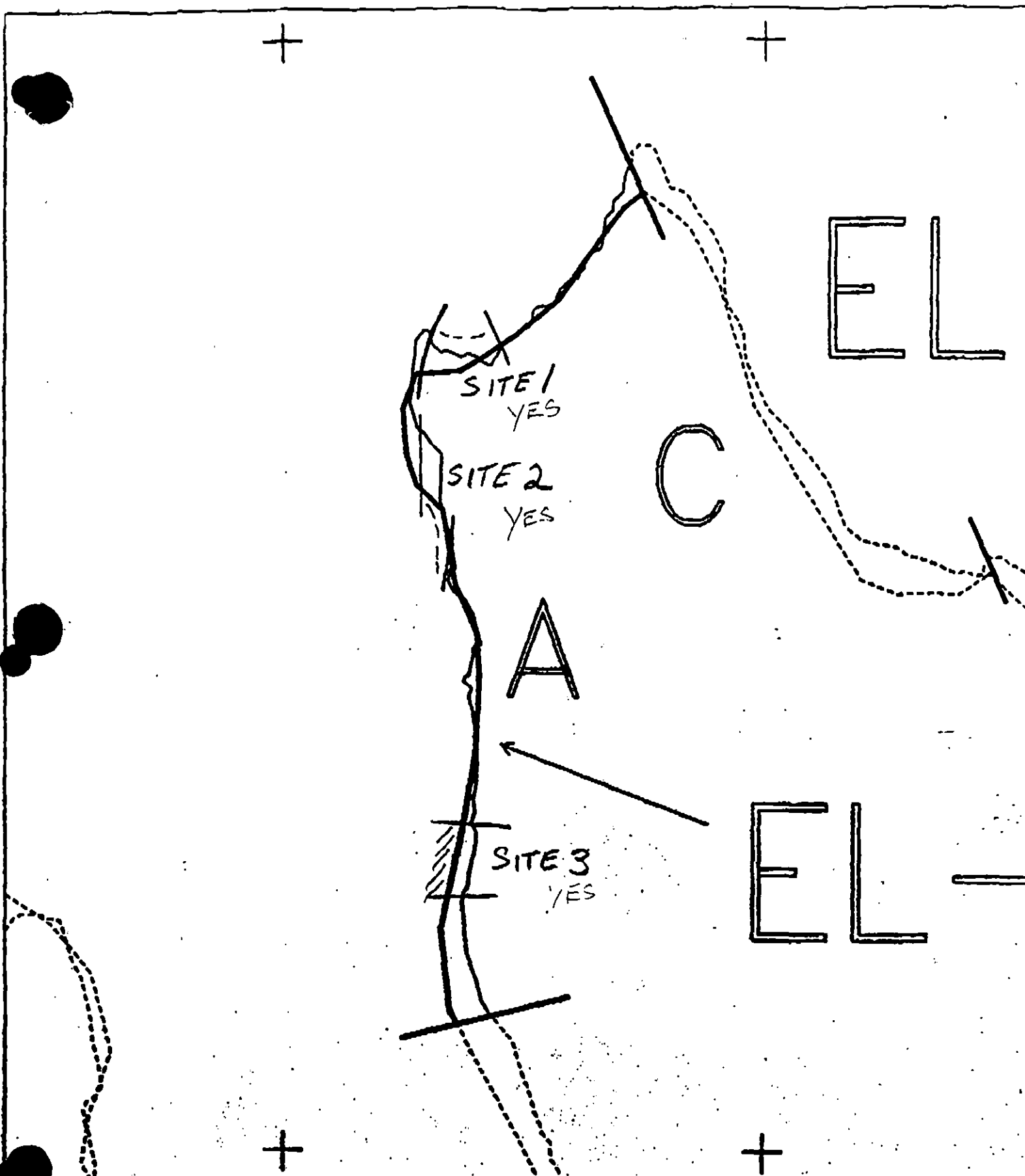
SUBDIVISION LENGTH 600m
760m

- A₁ Pit with subsurface oil
- A₂ Pit with no subsurface oil

- ☒ Broken distribution
- ☒ Patchy distribution



pg. 2 of 2

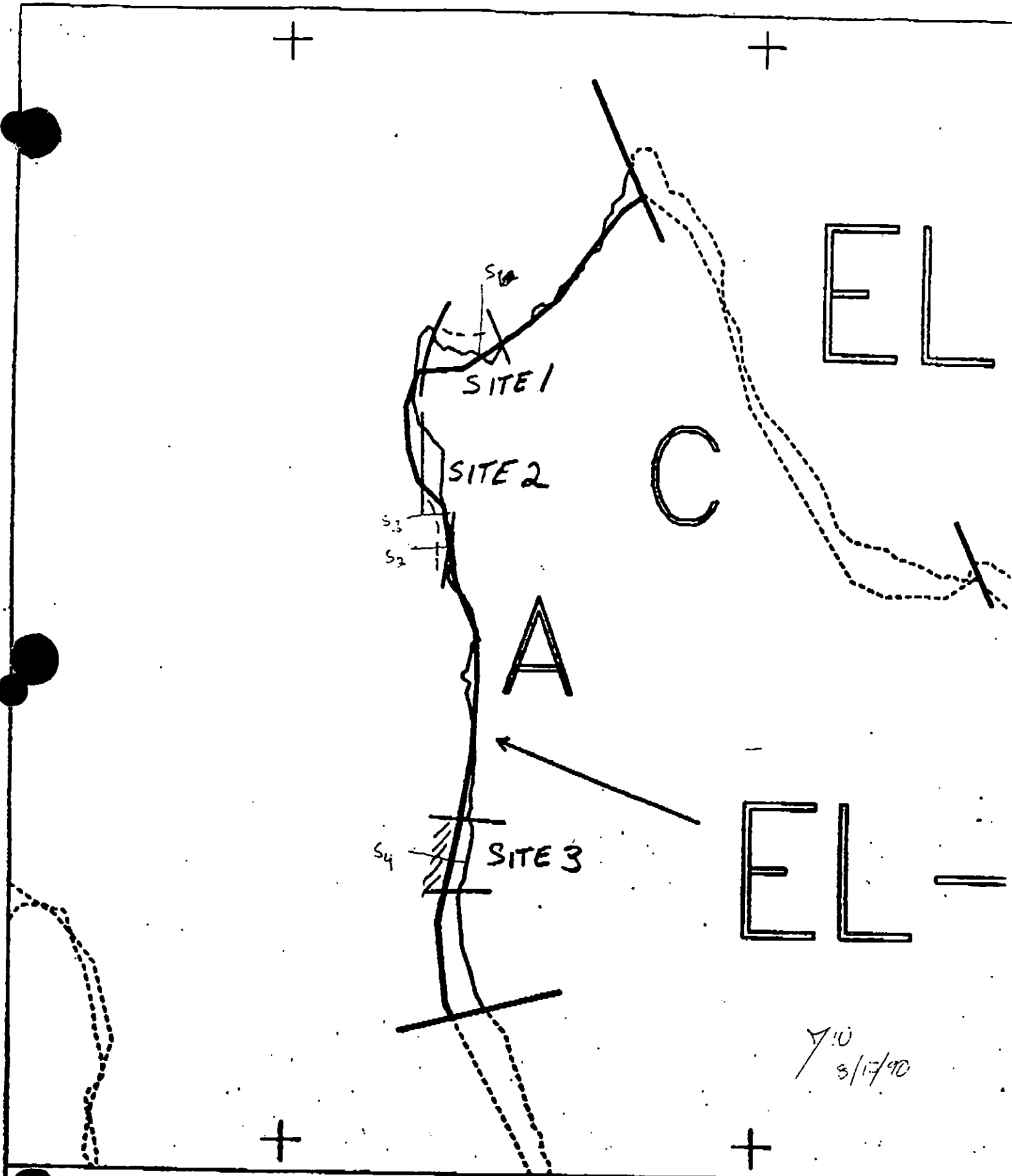


XXXX Wide
//// Medium
---- Narrow

EL-53 A
ADEC Subsegment Length: 922m
METERS

Subdivision Field Map
Map Key: KNIEL-53A
Name: CHANEY

100-100-100-100



EL-53. A	Subdivision Field Map.
ADEC Subsegment Length: 922m	Map Key: KNIEL-53A
METERS	Name: CHANEY
0 30 60 120 240	Date: AUG 7 1990

Wide
Medium
Narrow
Very Light

ASAP TAG REVIEW SHEET

Segment: EL53 Subd: B Site: 1 Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☒ NTR

Treatment
Recommended:

NTR

SOR - Patchy Not "H"

No Reassessment

This is a done deal

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
☒ CG ☒ ADEC ☐ EXXON ☒ LAND MGR

TAG 15 AUG 90
no 90 treatment
Reassess 91

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL53 Subd: B Site: #1 Date: 8/7/90 1990

Conditions Observed: Custom Blend granules on surface (applied ~5-6 weeks past) with little degradation to individual granules, or little permeation between sediments. SOR/H in UFTZ in B/C/M. CV/ET near base of B/C with 1" ST band around site. (SOR/H 1M x 8M) Shallow pit on site w/ black viscous mobile O.P. oil. Add'l SOR/H at 3M x 3M Site Southwest of first site. Surface sheen in tide pools; sheen in tide water.

Followup Recommendations: Manual removal of SOR/H until ^{the} sediments are ≤ OR/M. Manual removal CV down all surfaces. Use wire brush to break up coats. Roll cobbles to expose heavy coats. Manual till to natural underlying condition.

Completed by Pickup Crew:

☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC

Wesley Gihormley

Wesley Gihormley

Comments: Customblend applied on 7/12/90. No difference in appearance is present. Highly recommend more manual removal of saturated sediments. Black PC was present in pit that was constructed. Remove coat/stain w/ HOT H₂O (and) reapply custom blend when sediment oil mixture is ≤ 30K PM.

EXTRA

REV SATEL

Rev Satch

Comments: Reassessment is necessary in 91 to follow-up on customblend application. The manual pickup on this segment was completed on original schedule, it is my recommendation that removal of more sediment + material is on new

USCG

NOAA

ART WEINER

Art Weiner

Comments: AGREE TO MANUAL REMOVAL OF DECEASED SOR. CUSTOMBLEND SHOULD BE REAPPLIED IN AREAS WHERE IT IS NECESSARY. DO NOT AGREE TO MANUAL REMOVAL OF COATS + COVERS.

Lead Rep:

John Ebel

John Ebel

Comments: Wall Painted columns pointed against rocks. SOR/H exists at rift site between + W/land where foot travel would cause oil patch in fissure. Multiple Viscous the North South + East. Excellent Reclamation opportunity. Six seals on rock off top of island.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 53 SUBDIVISION: B SITE: # 1 DATE 8-9-90

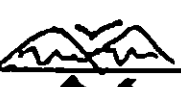
USCG/NOAA PSI Leo Bersalona Leo Bersalona

NAME ART WEINER SIGNATURE Art Weiner

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

EVALUATE EFFECTIVENESS OF CUSTOM BLEND ON
SUBSURFACE OIL [OR/OP].

ADEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley 

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

To evaluate the effects of custom blend.

Also to determine the presence of CT/CV's on bedrock, boulders
after winter activity.

- A determination of removal should be recommended
upon visual observation of CT/CV's after winter
storms. If still present they should be removed.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

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

This oil condition presents a hazard to wildlife esp. mammals.
Heavy coatings stick and adhere to boots and clothes. Mammals
which come into contact of sticky oil will lick fur to clean
themselves & ingest oil.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

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

This should not be a priority site for reassessment in '91. Most
all oil has been removed and customblend has been applied, so be
surprised to see more work done here.

TEAM NO. 1-41-2
 3G CHANEY
 ADEC GHORMLEY
 DATE AUG 17 190

EXXON SE-EL0
 USCG WEINER/BERSALONA
 LAND REP EBEL, JOHN (PDR)
 TIME 10:20 11:10

SEGMENT AS: EL 53
 SUBDIVISION B
 TOTAL NO. SITES 1
 TIDE LEVEL 1 10 4 1/2

TOTAL EST LENGTH OF SHORELINE SURVEYED: 55 m

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Sn
 OIL CATEGORY LENGTH: W — m M — m N 55 m VL — m NO — m US 4 1/2 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.			X			X		
POOLED								
COVER	X		X	X	X	X		
COAT	U	U	X	X	X	X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								X
EST. SITE LENGTH					55			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH								

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH								

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	20	X	X			5-20	N	X				PG-PGR
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs: ASAP?

Roll No. Roll #2

Frames 28

REVIEWED
3/11/00

COMMENTS The fissure which divides the island in half retains the most oil. It is trapped by the bedrock and well protected from wave energy. Although manual removal has been conducted, SOR sediments remain. Just southwest of the fissure is a region of broken coat and patchy cover. Based on the pit information it's likely that the remaining oil is localized and non-coated.

OG C. L. N
 SEGMENT STA EL-53
 SUBDIVISION #B
 DATE 31 May 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Size
- ☐ Sub/Div Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LRA
- ☐ SRA
- ☐ Photo Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

- 1A
No Subsurface Oil
- 2A
Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oil Vegetation
- Photo location, direction, and number

CUSTOMER HAD BEEN APPLIED

SOR 1/4 m² at base of rock. Rainbow sheens in tide pools CT & CV/S

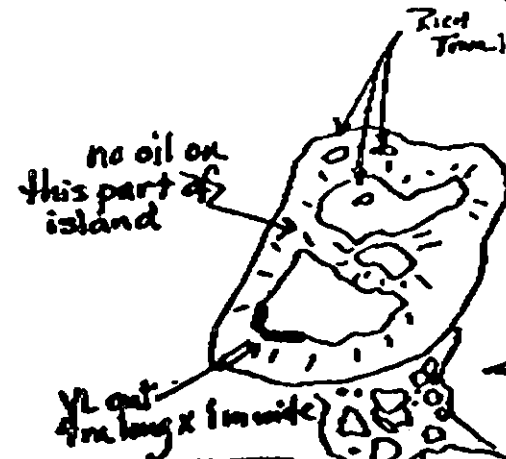
1m x 3m figure with cooked seeds.

SAME figures with cooked and punctured seeds 1m x 3m 2m x 2m wide

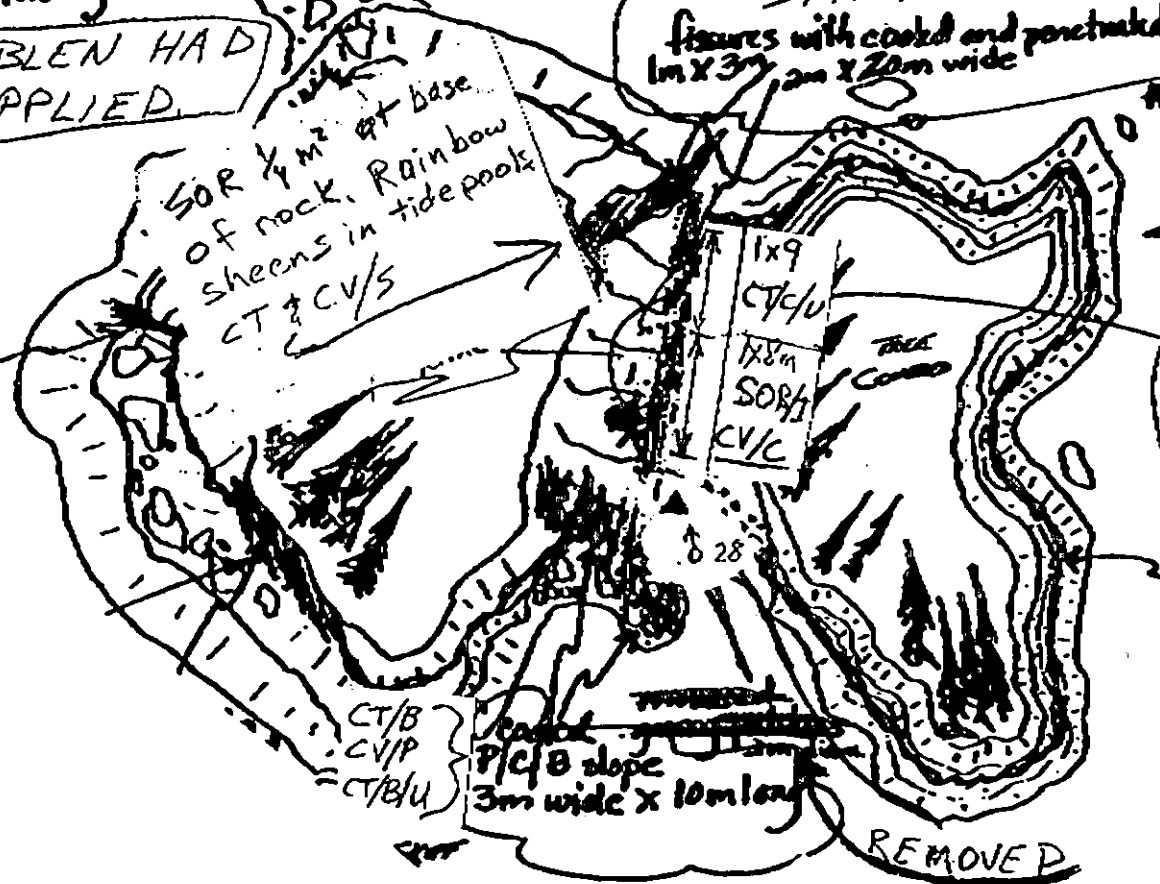
CT/B CV/P CT/B/U
 P/C/B slope 3m wide x 10m long

REMOVED

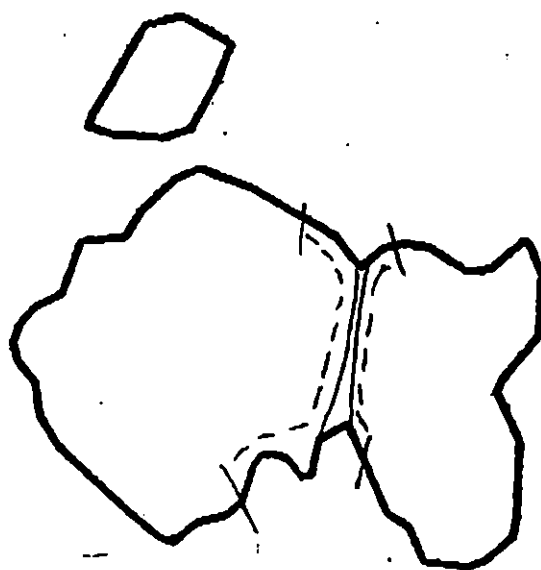
SEGMENT EL-5
 SUBDIVISION #B
 SURROUND LENGTH 272m



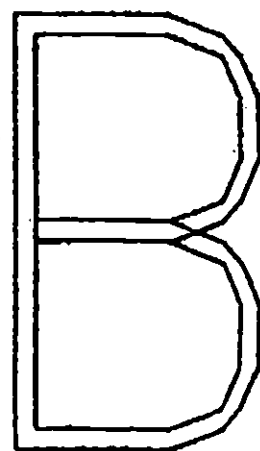
1m long x 1m wide



SCHLEIDER



1125
1135



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

EL-53 B

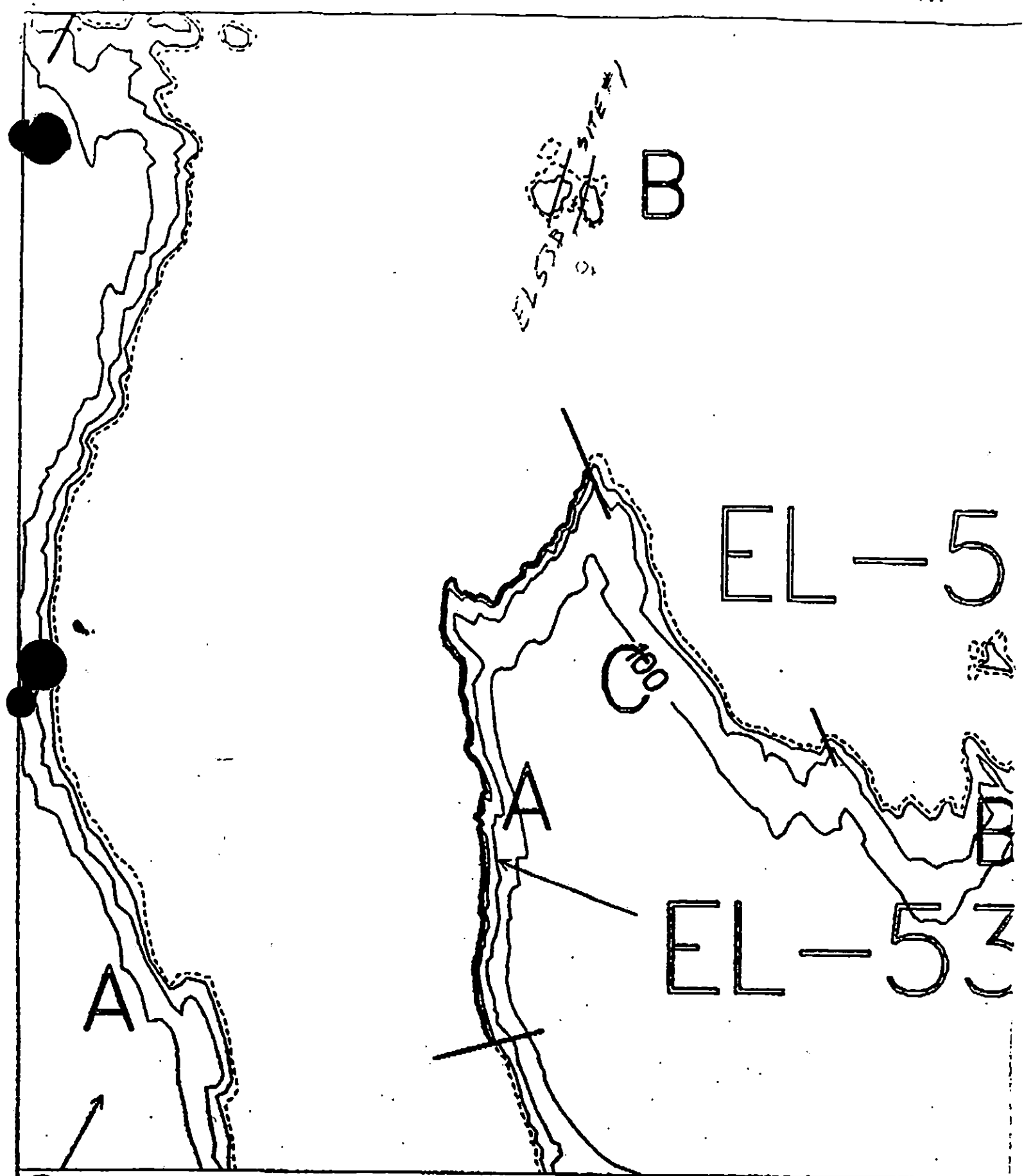
ADEC Subsegment Length: 467m
METERS

0 42 85

AK State Plane Zone 4 1:1000



Subdivision Field Map
Map Key: KNIEL-53B
Name: CHANEY
Date: AUG 7 1990
Not Filled.



SEGMENT EL-53

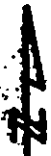
Segment Location Map

Map Key: KHEL-53

July 19, 1990

1:6987

METERS



SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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 Z. Homan DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V.Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+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 subsurface oil and coatings as shown on attached sketch map. *Top 15cm should be raked off in area of pit #1 prior to bioremediation as shown on map. Work should be conducted between 6/15 and 8/14 based on above 2M and 7II constraints and with approval from USFWS and ADF&G concerning (5T).

TAG COMMENTS:

AT THE TIME OF TREATMENT, OASIS MONITORS TO ASSESS SUITZ.
MONITORS TO ASSESS FEASIBILITY (MANUALLY) TO RAKE AREA INDICATED.

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAUER John
EXXON ANDY TEA Andy FOSC: E DATE: 4-22-90
NOAA Bu. Westcott Bu. Westcott
USCG KENNETH KEANE Kenneth Keane

Revision 4/4/90

OG C. DILLON

SKETCH MAP

SEGMENT EL-53

SUBDIVISION A

SUBDIVISION LENGTH = 600 MET.
760m

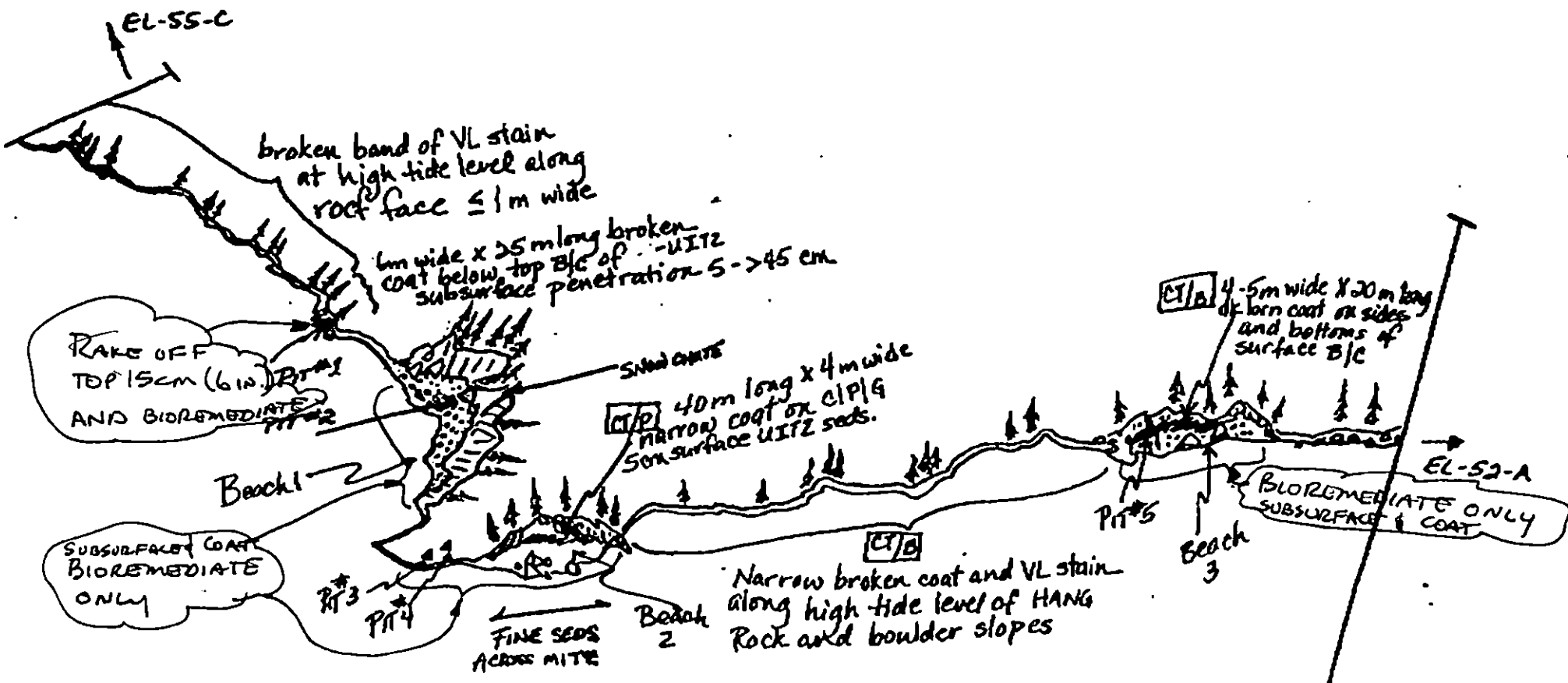
DATE 3/31/90

- Δ₁ Pit with subsurface oil
- Δ₂ Pit with no subsurface oil

CT/B Broken distribution

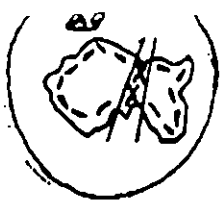
CT/P Patchy distribution

Oil character length (m) CT 125 ST $\frac{485}{300}$ NO 150

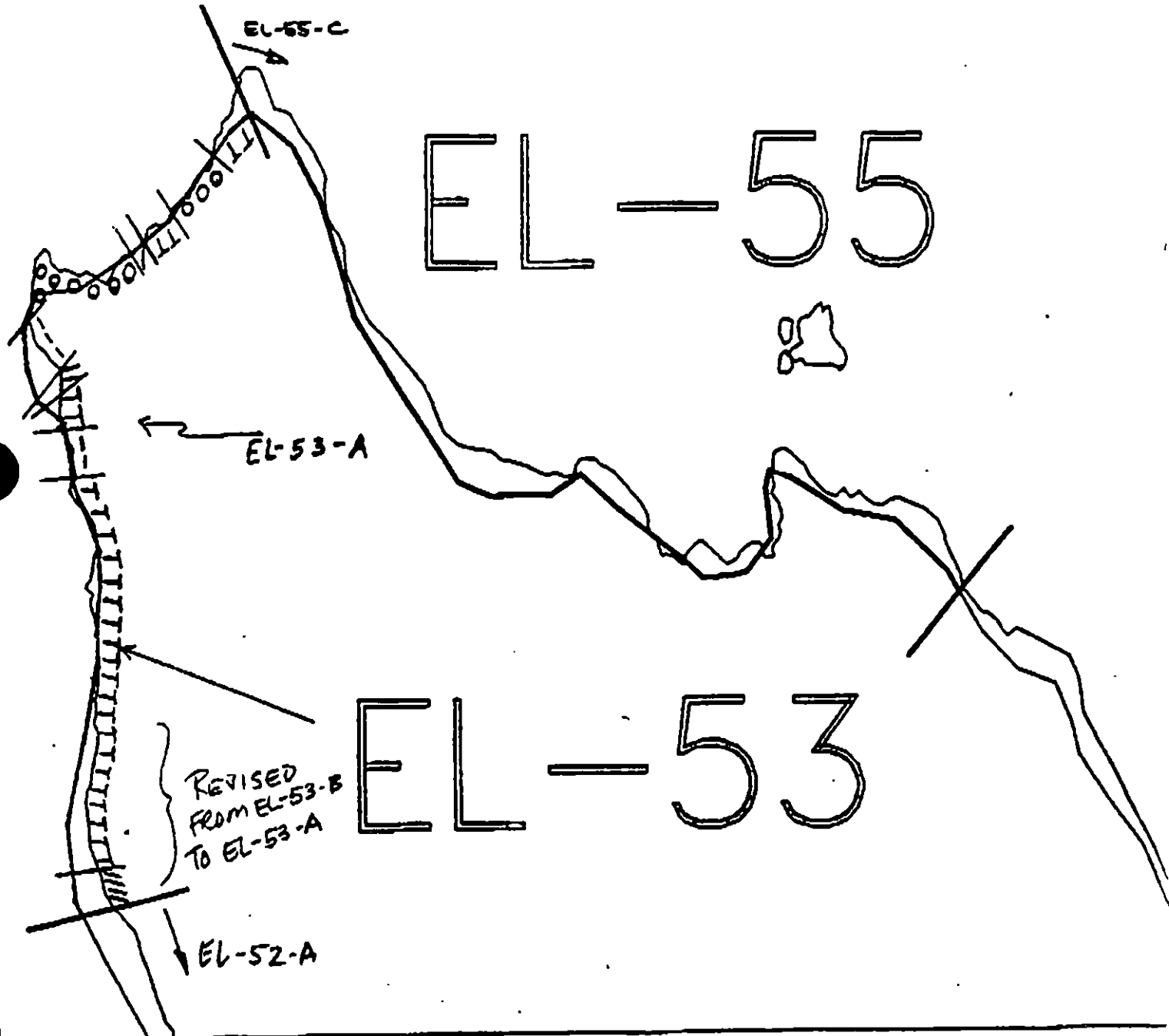


IPG.2 of 2

REVISED on 4/4/90



EL-53-XB



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-53

ADEC Segment Length: 922m



METERS



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-54

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EL-54 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6Y 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 substrate and biota.

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 24 m: Medium 36 m: Narrow 428 m: V.Light 2107 m: No Oil 84 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 50 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 areas shown on attached sketch map. Work should be conducted after 6/15 based on spawning constraints.

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 uncultivated intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) 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	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)
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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-54-A SUBDIVISION: A DATE 4/6/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider PSS/USCAR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

BIOREMEDIATION SHOULD BE UTILIZED ON LARGE COBBLE/PEBBLE BEACH ADJACENT TO EL-100. SITE SHOULD BE REASSESSED AGAIN AFTER SNOWMELT TO DETERMINE IF TREATMENT IS NECESSARY THERE. TILLING THE BERM AT THE UITE/SITE BOUNDARY WILL INCREASE THE EFFECTIVENESS OF THE BIOREMEDIATION AGENTS. REMAINDER OF SUBDIV REQUIRES NO FURTHER TREATMENT. ~~DB~~

ADEC NAME Peter Montesa SIGNATURE Peter Montesa

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Locations ~~of~~ OF Pit 1, 2, +3 have surface oiling among ~~these~~ Boulders, finer sediments, and Rock crevices. These areas are not bioremediable but require some handwiping and removal of surface materials. The pit #3 filled with interstitial water with DBR oil on it.

The last beach is just shy of EL100 is well documented on the map. except for a MITZ pit which revealed OR/OF oiling, to OC with NO BOH. found. This beach should be tilled and bioremediable. The Supratidal should be examined after snow melt, to uncover the extent of oiling. more aggressive forms of treatment should be considered if the oiling is more extensive than noted here. The area by Pit 6 must be manually removed.

LAND MANAGER NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The boulder slope does not require clean-up. Manual scraping of coast and pick up of oiled pebbles/gravel is recommended for the pocket beach across from the island. The beach adjacent to EL100 has a deeper penetration of oil and a higher recreational value than the other beach. Therefore, I recommend tilling and bioremediating the MITZ and SUPRA. Because there is still visible oil on the majority of the

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-54
 BIO J. BARRY LAND REP J. FRITCHARD SUBDIVISION A (1 of 1)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 13:00 to 15:40
 TEAM NO.: 6 TIDE LEVEL: +6 to +1.5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 2870 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock grass at W'most beach
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 70 % C 8 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 15 m M 20 m N 385 m VL 2250 m NO 200 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																
POOLED																
COVER																
COAT		X	X					X	X				X			
STAIN		X	X					X	X				X			
MOUSSE																
PATTIES																
TARBALLS																
FILM			X		X								X	X		
NO OIL	Snow on W'most 2 beaches												S			X

PAVEMENT: H F S 0 sq. m by 0

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 oiled pumps

#BAGS 1

Photographs:

Roll No. ST-6-4

Frames 1, 2, 5, 6, 10, 11

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	CP	NO		DO	UC	1	2	3	4	5	6	7	8	SU	U	M	U		
1	10	X					0-10	X					X					X					P/G
2	12	X					0-6	X					X					X					P/G/S
3	25	X					0-6						X						X				P/G
3	25	X					6-10	X	X										X				P/G/S
4	15	X	X				0-14	X					X						X				C/P/G
5	50				X		4-40	X	X									X					C/P
5	50	X					40-50	X					X					X					P
6	24	X					0-20	X					X	X									P

OG C.D. N

SEGMENT ST/ EL-54

SUBDIVISION A

DATE 04 April 90

SWITCH MAP

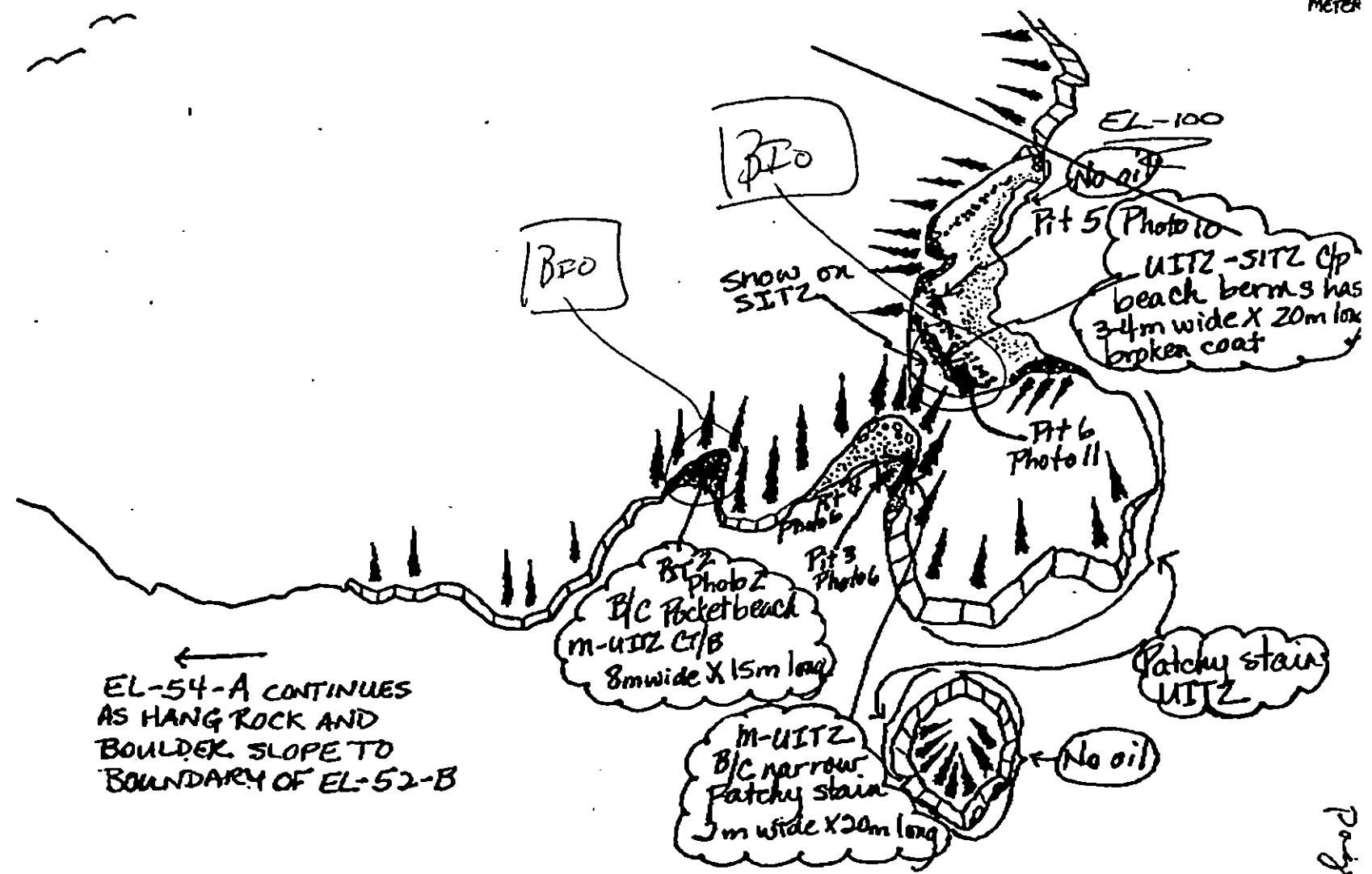
SEGMENT EL-5
SUBDIVISION A
LENGTH = 2.87
METER

CHECKLIST

- ☐ H Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ 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/B
Broken Distribution
- CT/P
Patched Distribution
- CT/S
Splashed Distribution
- Oil Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT 65 ST 800 MS _____ PT _____ TB _____ FL 1806 NO 200

SCHNEIDER

REVISION 2/7/90

Page 2 of 4

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/ EL 05Y Subdivision A Date (mo/day/yr) April 4 1990Time (24 hr) 1300 - 1440 Biologist Jim BARRY length = 2870 m(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 70 (3) Cobble 8 (4) Pebble 2 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 30 Moderate 55 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-6-4Frames 1-12

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:

Bald Eagles - 3 Ravens - 3 Deer Tracks - 1
 Goldeneye - 2 Crows - 1 Seal - 1
 Merganser - 1
 Unknown Duck - 1 Glaucous Gull - 3

Ecological Considerations: 6YUV, 711, 2M

- EEL GRASS BGD LIKELY ARE PRESENT ALONG PART OF THIS SUBDIVISION.
HERRING SPAWNING IN THIS AREA MAY BE DISTURBED BY HEAVY GOAT TRAFFIC.
- DEER WILDER TRACKS
- OTHER SENSITIVITIES NOT AFFECTED

START 1300 TOC WINDOW
STOP 1440 +6 → +2

General Comments

- 1) MOST OF THE SUBDIVISION IS COMPRISED BY HIGH ANGLE CLIFFS WITHIN THE WESTERN ARM OF NORTHWEST BAY. EXPOSURE TO SURF FOR THIS PORTION OF THE SEGMENT IS LOW. TOWARDS THE OUTER END OF THE BAY & OUTSIDE TOWARDS THE NW, THE EXPOSURE IS MODERATE TO HIGH, & BEACHES OF COBBLES & PEBBLES ARE FOUND ON THE SEGMENT
- 2) OVERALL, THE ABUNDANCES OF BIOTA WERE MODERATE, EXCEPT FOR FUCUS, WHICH GENERALLY WAS DENSE. THE DENSITIES OF INVERTEBRATES (MUSSELS, BARNACLES, GASTROPODS), VARIED BETWEEN EXPOSED & PROTECTED SITES, BEING MODERATE ON PROTECTED SHORES AND MORE DENSE ON EXPOSED SITES. COBBLE/PEBBLE BEACHES, ESPECIALLY ON SHELTERED SHORES, HAD RARE OR NO BIOTA.

II. MAJOR SPECIES

- BARNACLES - PROTECTED SHORES - MODERATE TO DENSE SPAT, WITH MODERATE JUVENILES AND ADULTS, MOSTLY *BALANUS GLANDULA*.
- B. MYTILUS - SPAT WERE OCCASIONALLY DENSE IN PATCHES ALONG SHELTERED SHORES, BUT GENERALLY WERE MODERATE TO SPARSE. ON EXPOSED HEADLAND BEDROCK, SPAT, JUVENILES AND SMALL ADULTS WERE DENSE, PARTICULAR NEAR BEACH 3.
- C. GASTROPODS.
- 1) PERIWINKLES - *LITTORINA* WAS MODERATELY ABUNDANT, BUT PATCHY
 - 2) WHELLS - MODERATE TO SPARSE ON MOST BEACHES
 - 3) LIMPETS - MODERATE ON MOST BEACHES, OCCASIONALLY DENSE
 - 4) FUCUS - Generally dense in the mid zone to low zone, especially along sheltered shores.

III SPECIES LIST.

A. MAJOR SPECIES

1) MARINE PLANTS

- A. DIATOMS/BLUE GREEN ALGAE D12
 B. GREEN ALGAE - CHLOROPHYTA
 SPONGOMORPHA/ALGOSIPHONIA D12
 ULVA M12
 UROSPORA M23
 C. RED ALGAE - RHODOPHYTA
 PORPHYRA - S12
 PETROCEUS - S12
 RHODOMELARIA - M12
 RHODYMENIA PALMATA - M123
 D. BROWN ALGAE - PHAEOPHYTA
 ALARIA PULCRA - M12
 FUCUS DISTICHTUS - D123*
 LAMINARIA SPP - M12
 HILDENBRANDIA - M12
 RALSIA SPP. - S12

SPAT ON
★ JUVENILES PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 Bedrock

2 BOULDER

3 COBBLE

2) ANIMALS

A. BARNACLES

- CITHAMALUS DALLI ★ M12
 BALANUS GLANDULA ★ M12
 SEMIBALANUS CARICUS ★ M12

B. HERMIT CRABS - PEGURIDAE - ★ M23

C. AMPHIPODS - S-23

D. MUSSELS - MYTILUS EDULIS ★ M12

E. SNAILS

- LITHORNA SCUTULATA M123*
 L. SITKANA ★ M123
 NUCELLA LAMELLOSA - S12
 N. SEMIANGUSTA - S12.

F. LIMPETS

- LOTIA DIGITALIS - S12*
 T. SCUTUM - M23*

G. SEA STARS

- PYCNOPODIA - S12*
 LEPTASTERIAS - M23*
 PISASTER GORACEDUS S12.

DERMASTERIAS S12

APRIL 4 1990

7/3/7

B. MINOR SPECIES

PLANTS

a) GREEN ALGAE - CHLOROPHYTA

CLADOPHORA M12

ENTEROMORPHA M123

b) RED ALGAE - RHODOPHYTA

BOSSELIA S12

CALLIANTHUS S12

CORALLINA S12

ENDOCLADIA S12

HALOSACCION GLANDIFORME M12 &

IRIDREA spp M12

LITHOTHAMNION - M12

MEMBRANOPTERA platyphylla? & M12

MICROCLADIA / PTIROCLADIA S12

MASTOCARPUS R12

CRYPTOSIPHONIA SP S12

c) BROWN ALGAE

COSTAZIA M12

GLYTOSIPHON M123

SEE PAGE 1 FOR CODES

2) ANIMALS

a) WORMS

NEMATODE spp S23

PLATYDOR spp R23

POLYCHAETES

SPIROBIS M23 &

SEPIA M12

CUCULIUS R12

UREIDAE R12

b) MOLLUSCA

A) Snails/Limpets

Tachyphynchus spp S23 &

Litha persona S12

Tectarius pennatus S12

Siphonaria sp M123 &

c) CRUSTACEA

Tonicella lineata S12

T. marginis S12

Katharina tunicata M12

3. Sea Stars
Orthasterias R12

4. Scallops - Podokesmus spp S1

5. Anemones

Anthopleura kanthogrammica

A. artemesia R12 &

Epiaetis S12 &

Tealia crassirostris S12

6. Crabs

Hemigrapsus oregonensis R23

Arctia lithodes / Neopagurus S

7. Bryozoans - Schizoporella? S23

8. Becheffers - Siphonaria S12

9. FISH - PHACIDAE - M23 &

COTTIDAE S12 &

April 4 1990

IV "Missing Species"?

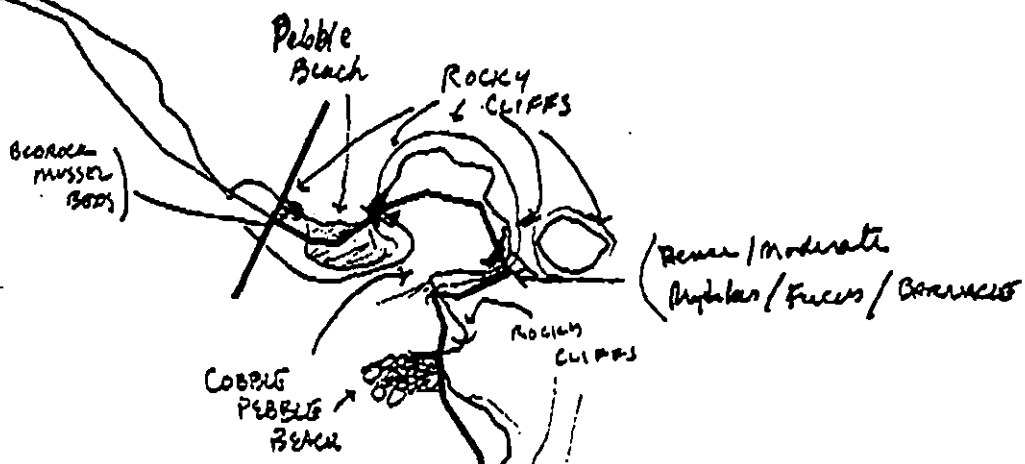
MOST OF THE BEACHES HAVE CLAM SHELLS ON THEM, INCLUDING scallops (*Chlamys* spp.), cockles (*Clinocardium* spp.), Macoma spp., Steam Clams (*Protothaca* spp.), and Butte Clam (*Saxidomus* sp.)

I found no juveniles or live adults on any of the beaches, although juveniles of some (*Protothaca* *staminea*, *Heatilla* *arctica*, *Macoma* spp.) have been found on nearby beaches.

V Oil Effects on beaches -

Protected sites within the Bay are more oiled than those outside the bay. Oil coatings was found under ~~the~~ boulders and cobble that sheered when disturbed by turning rocks. Bioturbation was present under rocks, but less so where oiling was heavier.

7/7



↓ PWS 137A

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

EL-54

ADEC Segment Length: 2679m

Map Key: PWS-137b

Name: _____

Date: _____

SKETCH MAP SECTION

COBBLE / POBBLE BEACH
AT END
OF SKETCH MAP

Patchy stain UITZ

Patchy stain UITZ

POCKET BEACH ON SKETCH MAP

patchy stain UITZ

EL-54-A
2870 m

Patchy film UITZ

145 m long broken stain 2-3 m wide

Per 1
Photo 1
UITZ continuous coat
3m wide X 30 m long

Patchy film and stain UITZ

↓ PWS 137A

XXXX Wide

//// Medium

--- Narrow

TTTT

EL-54

EXPLAN SEGMENT LENGTH: 2870m

ADEC Segment Length: 2879m

Map Key: PWS-137b

Name: C Dillon

Date: 4/4/90

EL-54

Patchy film UITZ

EL-54-A
2870 m

UITZ 1-2m wide 220m long sta
m-UITZ 2-3m wide patchy film

patchy film UITZ

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-54

EXXON SEGMENT LENGTH 2870m

ADEC Segment Length: 2679m



Map Key: PWS-1376

Name: C. DILLON

Date: 4/4/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-54 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation Manual Raking	WORK PRIOR TO 8/15

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater, ADF&G, 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

Subdivision closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncolled biota and substrate.
Restrict boat and air traffic and beach disturbance to essential minimum.

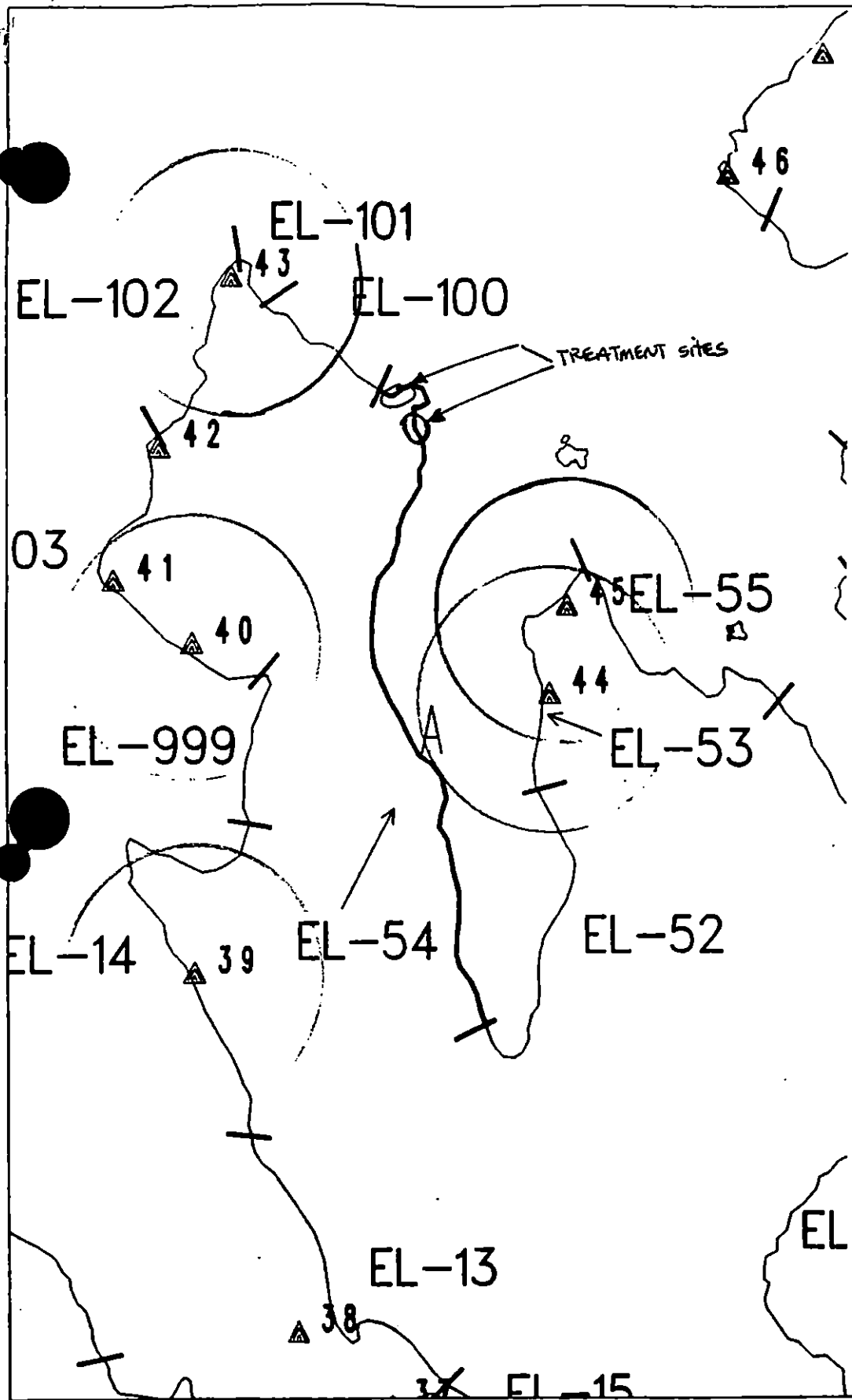
TAG ADDENDUM DATE 5/16/90.
ADEC Ant Weimer
EXXON Andy B. Baul
NOAA Joseph Talbot
USCG G.A. Heizer

FOSC

DATE 5-17-90

Prepared by: WIK

Date: 5/14/90



Exxon Company, USA
 Map Key: KNI-EL-54
 May 11, 1990



ECOLOGY MAP
 SEGMENT EL-54
 SUBDIVISION A (1 of 1)
 METERS
 0 400 800

- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

1 inch = 1588 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-54 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6Y 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 uncoiled substrate and biota.

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: Charles E. H. H. H. DATE: 4/18/90

OILING CATEGORIZATION:

Wide 24 m: Medium 36 m: Narrow 428 m: V. Light 2107 m: No Oil 84 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 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 areas shown on attached sketch map. Work should be conducted after 6/15 based on spawning constraints.

MANUAL RAKE PRIOR TO BIOREMEDIATION IN AREAS OF PITS 3, 4, +5.
AS INDICATED ON SKETCH.

TAG COMMENTS:

SUITZ SHOULD BE REASSESSED BY MONITORS DURING TREATMENT
SNOW PRESENT AT TIME OF SURVEY.

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER Art Weiner

EXXON ANDY GAN Andy Gan

NOAA Burt W. W. Burt W. W.

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 4-22-90

See Addendum dated 5/14/90 wjk

1991 MAYSAP EVALUATION

SEGMENT: EL 054 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 54 SUBDIVISION A DATE 4/28/91

ADEC

NAME PETER MONTESANOSIGNATURE Peter Montesano☐ NTR☒ TREATMENT RECOMMENDED

Concur w/ NOAA Comments. Storm berm relocation was performed on beach #1 which accounts for its cleanliness and our suspicion about an oil layer deep in the berm. With the exception of the area around Pits 7+9, Practical Technology has reached its limits and the widespread subsurface oil will have to remain. Sediment type, labor intensiveness, in the case of Pit #11, the proximity to mussels on a protected plateau, or, Beach #3, extensive growth throughout the tidal zones forbid treatment. Area "E" was oiliferous black oil w/ dead oiled clam shells. Only part of Subdiv. surveyed by mutual agreement.

→ Pits 7+9: Manually Till to depth + distribution of oil, map w/ share, and agitate w/ share through tides

EXXON

NAME

C.M. KATSIMPAKIS

SIGNATURE

C.M. Katimpakis☐ NTR

PITS 7 & 9 REPRESENT A RATHER SMALL, ISOLATED AREA. AGAIN, OG & BIO REPORTS REFLECT ACTUAL FINDINGS. NOTED DIVERSE BIO. COMMUNITY IN THIS SEGMENT

LANDMANAGER

NAME

Dennis S. KennedyOF USFS

SIGNATURE

D. S. Kennedy☐ NTR

The north beach did not show oil, this is probably due to high weather exposure. Beach #2 and beach #3 receives less weathering and is showing oil. The survey was well done and well documented. Area has heavy deer use. Note comment (D) by Biologist Benson on Biological summary form: Treatment near Oct 12 "supports diverse algal community that may be sensitive to any treatment activities."

USCG/NOAA

NAME

MICHEL (N)BRI ZENONE

SIGNATURE

MichelBri Zenone☐ NTR

This was a comprehensive survey. Though no subsurface oil was found in beach #1, there is likely some at depth. Beach #2 has a band of H₂O₂ along north wall - the sediments here are mostly pebble/granule and readily accessible. Beach #3, with a large cobble/boulder surface armor, has a zone of surface and subsurface oil that is accessible but difficult to get at.

ck-

H₂O₂ IN NARROW BAND PITS 7+9 DOES NOT ~~MAKE~~ MAKE A GOOD REPRESENTATION OF ENTIRE SEGMENT - OG REPORT EXTENSIVE + COMPLETE SHOWING GOOD REPRESENTATION - 3

SUBDIVISION A

DATE 4 / 28 / 91

DATE 4 / 28 / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

W 0 m M 15 m N 7 m VL 25 m NO 310 m US 2314 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- 2 - 2 FRAMES 1-5

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

Beach #2 had cobbles to granules - much finer-grained. Subsurface oil was found all along the Northern extent, where it has been

REVISED: MC 5/2/91
Revised 5.1

97

DATE 4 / 28 / 91

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

[OG comments by J. Michel, due to departure by Reimer]

REVIEWED: 5/2 MC
REVIEWED

71.

EL 54 A
28 APR 91
7:20- 8:36
Reimer

SKETCH MAP



BEACH #1

COBBLES

PEBBLE
COBBLE

CT/S
0.5x3m
10%

ST/S
2x4m 5%
UNDER BLDR

D
CT/T
0.5x4m
1% ROCK FACE
W/ PINE NEEDLES

HOR
no field data
assume 2x2m

CT/CV
0.25x8m
5% VERT
ROCK FACE

No Field Data
Assume
2x2m HOR

Pebble/Cobble
Granule Beach
#2

E
SOR/MED/P
2x7m 30%
UNDER COBBLES
IN SHELTERED CREVICE
BETWEEN ROCK WALLS

COBBLE/BOULDER BEACH
#3

F
SOR/P
5x15m
40% SURFACE CB
CICLA- ONLY INTER-
STITIAL + MATRIX
UNDERNEATH IS COVERED

G
CT/S
1x6m 5%

no field data
assume 2x2m

Revised: 5/2/91

revised
fy

NAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 28 Apr 1991

SEGMENT # EL 54

TIDAL HEIGHT(Range) -1.5' to 0

SUBDIVISION A

BIOLOGIST BENSON

SEA STATE 0'

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL # —

FRAME # —

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

① - No biota on oiled surfaces (~+13'). Dense Fucus & moderately dense Mytilus directly below oiled rocks.
MITZ: Fucus, Endocladia, Entromorpha, Odonthalia, & Littorina common on bedrock & boulder. LITZ: Costaria, Laminaria, Enderachne(?), Ulva, & adult & juvenile Littorina & Notoacmea. A dense Mytilus bed on bedrock at west end of beach.

② - Similar to ① except for a MITZ tidepool (low diversity in pool)

③ - No biota on oiled surfaces, but Verrucaria (above) & Balanus, Semibalanus & Littorina (below) nearby on bedrock & cobbles.
MITZ: Fucus & barnacles common, with rare Mytilus, Endocladia & Notoacmea on bedrock.

④ - Sparse Littorina on boulders just below oiled surface.
MITZ: bedrock platform near Pt #12 in east corner of cove supports diverse algal community that may be sensitive to any treatment activities.

⑤, ⑥ - Verrucaria, Littorina & Balanus above, and Mytilus, barnacles & Endocladia below oiled surface. Littorina & nudibranch egg masses. These species would likely re-recruit to this area if present ones were damaged by treatment activities.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—	—	—
Waterfowl	1	2	—
Gulls/Kittiwakes	2	41	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

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

Shoreline subdivision map showing important biological features attached.

Subdivision: EL 54-A

Team: 2

BIO: Benson

28 Apr 1991

Comments (cont.) -

- (F) - No biota on oiled surfaces. MITZ: moderately diverse invertebrates & algae on boulders & even on cobbles. LITZ: very diverse algae, amphipods, Dermasterias, polychaetes & unidentified egg cases.

The high diversity of algae & invertebrates here is probably due in part to its moderately high exposure near the mouth of Northwest Bay and to the abundance of stable bedrock substrate. Species typically found in high exposure bedrock habitats, such as *Alaria*, *Laminaria setchellii*, & *Pisaster ochraceus*, were found in abundance on the seaward side of the small island on the point of this subdivision. Recruitment appeared to be strong here.

EL 54 A
28 APR 91
7:20- 8:36
BENSON

SKETCH MAP - BIO [SEE OG LOCATION MAP]



Ⓐ
No biota on oiled surfaces.
Dense Fucus & Mutilus below.
MITZ & LITZ: diverse algae
& invertebrates; filamentous
green abundant on cobbles.

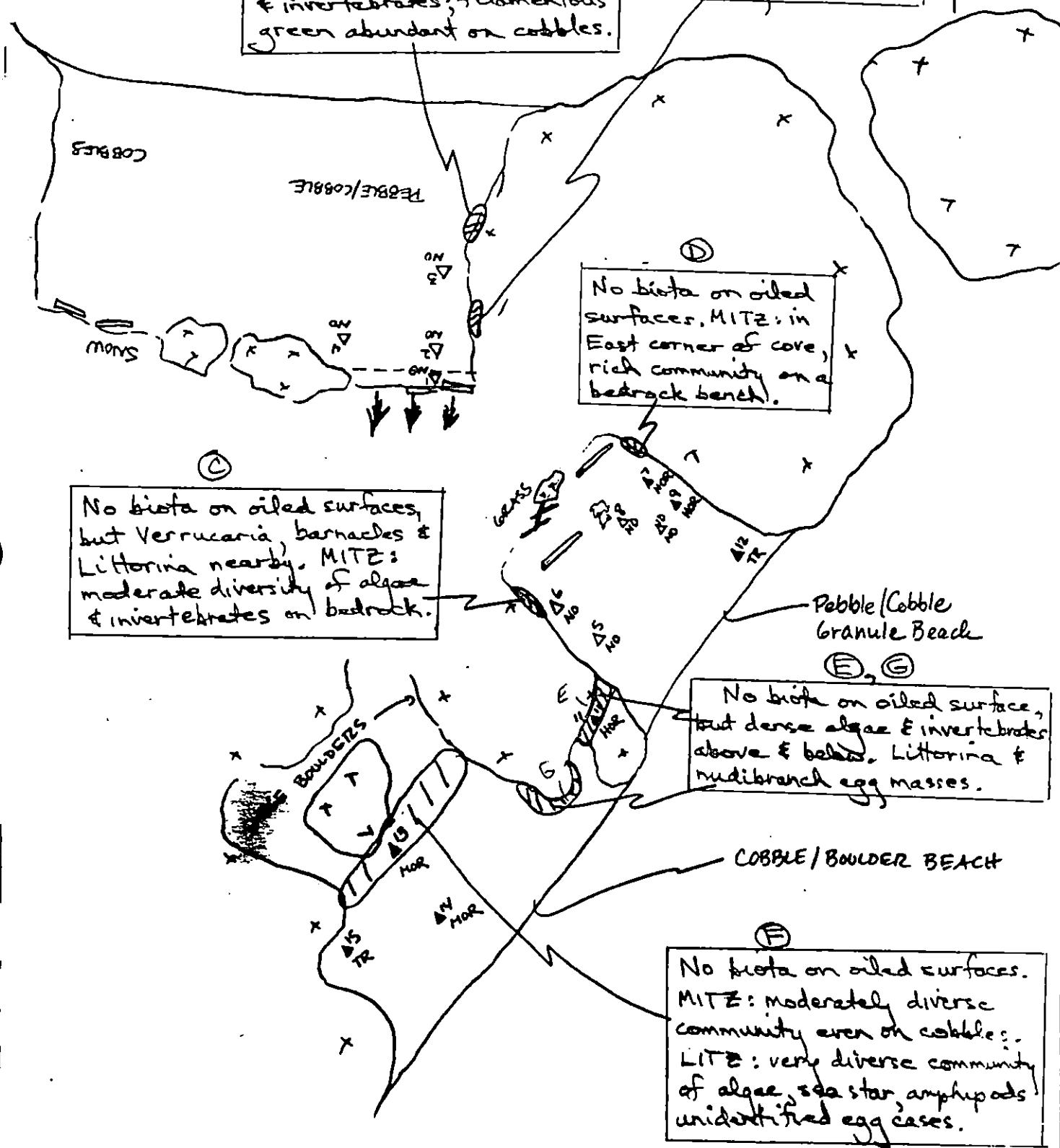
Ⓑ
Similar to Ⓐ
except for tidepools
nearby in LITZ.

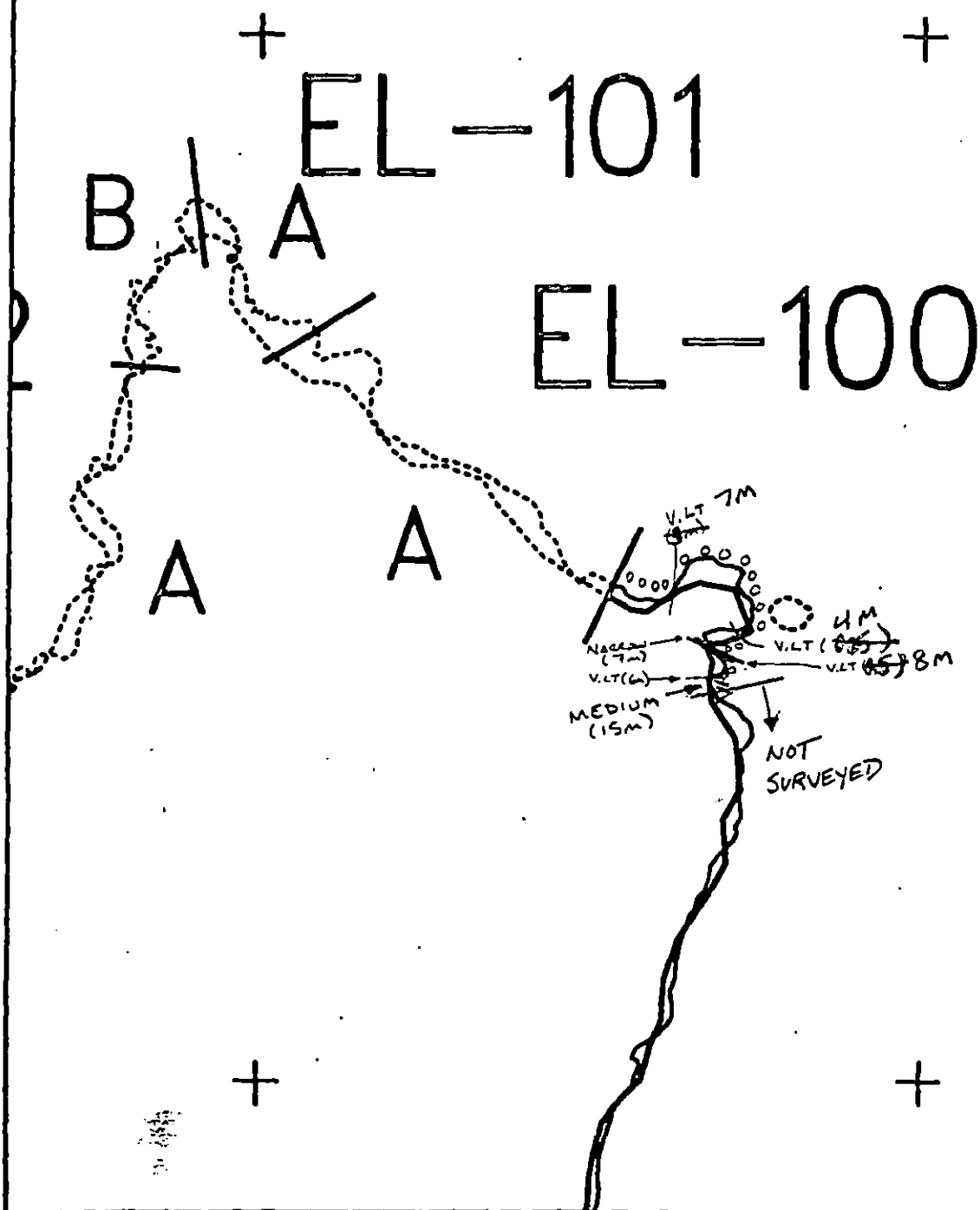
Ⓓ
No biota on oiled
surfaces, MITZ: in
East corner of core,
rich community on a
bedrock bench.

Ⓒ
No biota on oiled surfaces,
but Verrucaria, barnacles &
Littorina nearby. MITZ:
moderate diversity of algae
& invertebrates on bedrock.

Ⓔ
No biota on oiled surface,
but dense algae & invertebrates
above & below. Littorina &
nudibranch egg masses.

Ⓕ
No biota on oiled surfaces.
MITZ: moderately diverse
community even on cobbles;
LITZ: very diverse community
of algae, sea star, amphipods,
unidentified egg cases.





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

EL054 A
 ADEC Subsegment Length: 2070m
 METERS
 0 200 400
 AK State Plane Zone 4
 601094ab

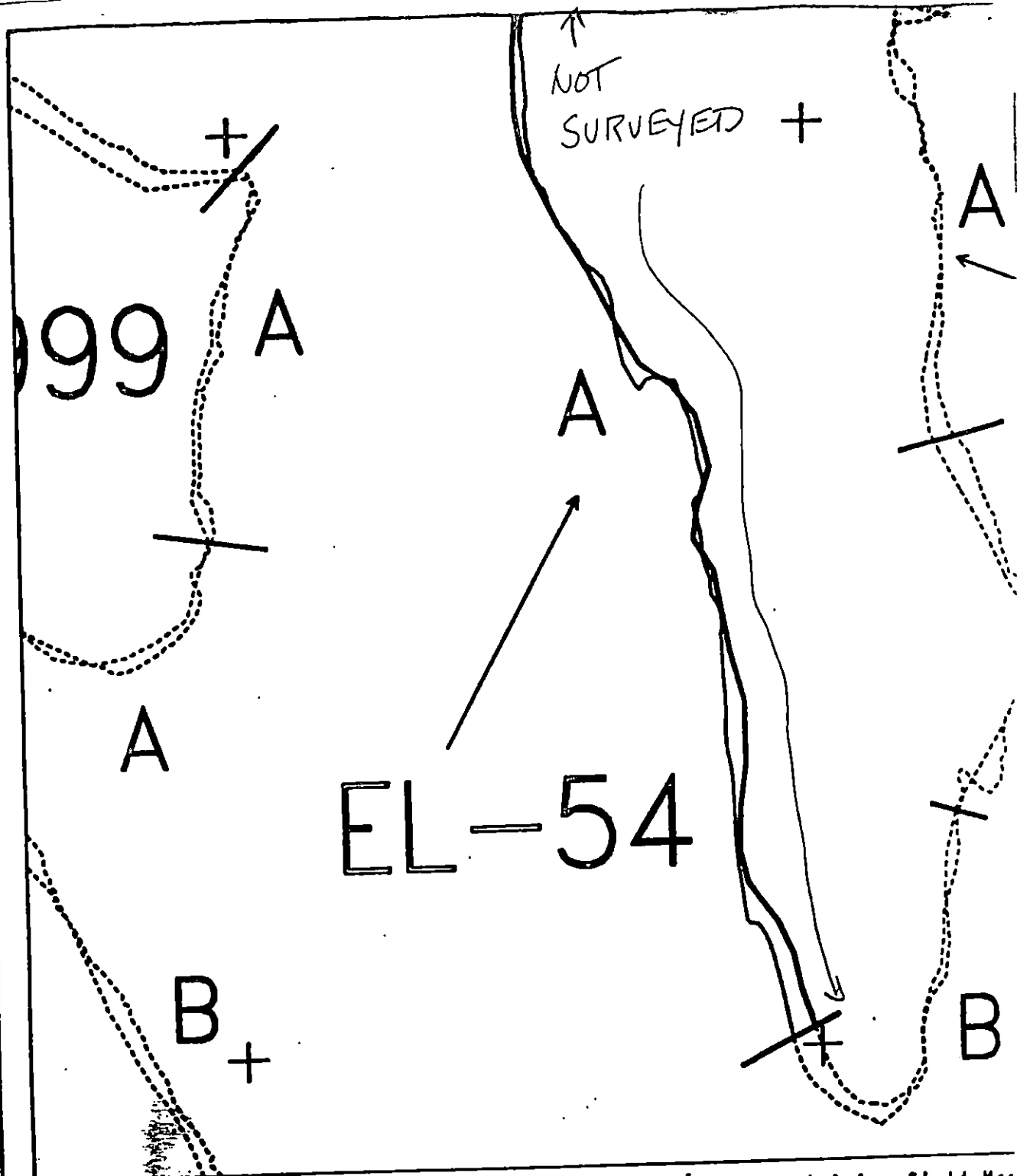
Subdivision Field Map
 Map Key: KNIEL054Ab
 Name: REIMER/Trim
 Date: 4/28/91
 Date Entered:



REVISOR: MC 5/8/9

revised 5.1

9/1



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

EL054 A
 ADEC Subsegment Length: 2070m
 METERS

5 200 400
 AZ State Plane Zone 4
 10105400



Subdivision Field Map
 Map Key: KMI054Aa
 Name: REIMER
 Date: 4/28/91
 Date Entered:

REVIEWED: MC 5/2/91

1991 MAYSAP EVALUATION

SEGMENT: EL 054 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Subsistence - deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Joan Owen Date: 5/14/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </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:

FOSC:

TAG APPROVAL DATE: May 14 1991 FOSC APPROVAL DATE: 5/20/91

ADEC [Signature] FOSC [Signature]

EXXON [Signature] E. E. PAGE, CDR, USCG

USCG T.M. Murphy CHIEF OF STAFF FOSC

NOAA [Signature]

The state will evaluate the need for further treatment.

56

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 54 SUBDIVISION A DATE 4/28/91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☐ NTR

☒ TREATMENT RECOMMENDED

Concurr w/ NOAA COMMENTS Storm berm relocation was performed on beach #1 which accounts for its cleanliness and our suspicion about an oil layer deep in the berm. With the exception of the area around Pits 7+9, Practical Technology has reached its limits and the widespread subsurface oil will have to remain. Sediment type, labor intensiveness, in the case of Pit #11, the proximity to mussels on a protected plateau, or beach #3, extensive growth throughout the tidal zones forbids treatment. Area "E" was oiliferous black oil w/ dead oiled clam shells. ONLY PART OF SUBDIV. SURVEYED BY MUTUAL AGREEMENT.

→ Pits 7+9: Manually Till to depth + distribution of oil, mop w/ snare, and agitate w/ snare through tide over.

EXXON

NAME

C.M. KATSIMPAKIS

SIGNATURE

C.M. Katimpakis

☐ NTR

PITS 7 & 9 REPRESENT A RATHER SMALL, ISOLATED AREA. AGAIN, OG & BIO REPORTS REFLECT ACTUAL FINDINGS. NOTED DIVERSE BIO. COMMUNITY IN THIS SEGMENT

LANDMANAGER

NAME DENNIS S. KENNEDY

OF USFS

SIGNATURE

D.S. Kennedy

☐ NTR

The north beach did not show oil, this is probably due to high weather exposure. Beach #2 and beach #3 receives less weathering and is showing oil. The survey was well done and well documented. Area has heavy deer use. Note comment (D) by Biologist Benson on Biological Summary form: Treatment near Pit 12 "Supports diverse algal community that may be sensitive to any treatment activities."

USCG/NOAA

NAME MICHEL (N)

3MI ZENONE

SIGNATURE

Michel

Bm. Zenone

☐ NTR

This was a comprehensive survey. Though no subsurface oil was found in beach #1, there is likely some at depth. Beach #2 has a band of HOR along north wall - the sediments here are mostly pebbles/granule and readily accessible. Beach #3, with a large cobble/boulder surface armor, has a zone of surface and subsurface oil that is accessible but difficult to get at.

CH-

HOR IN NARROW BAND PITS 7+9 DOES NOT ~~MAKE~~ ³ MAKE A GOOD REPRESENTATION OF ENTIRE SEGMENT - OG REPORT EXTENSIVE + COMPLETE SHOWING GOOD REPRESENTATION - 3

MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 2 OF 2

TEAM NO. 2

SEGMENT EL 5.4

SUBDIVISION A

DATE 4 / 28 / 91

[illegible]

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

* NOT SUBSURFACE OIL < 5 CM DEPTH

OG COMMENTS:

more sheltered. High OR was found as a band 4-10 cm thick along this area. High OR was also found in a pocket of C/P filling a bedrock crevice.

Beach #3 was a steep boulder/cobble beach with bedrock outcrops. SOR and MOR was found in a band at the U ITZ across the beach, with some MOR in the M-ITZ, beneath a clean surface of boulders and cobbles.

[OG comments by J. Michel, due to departure by Reimer]

Reviewed: 5/2 me
Reviewed 5.1

9/11

EL 54 A
28 APR 91
7:20- 8:36
Reimer

SKETCH MAP



BEACH #1

COBBLES

PEBBLE /
COBBLE

MONS

A
CT/S
0.5x3M
10%

B
ST/S
2.4x4M 5%
UNDER BLDR

D
CT/T
0.5x4M
21% ROCK FACE
W/ PINE NEEDLES

HOR
no field data
assume 2x8m

C
CT/CV
0.25x8M
5%, VERT
ROCK FACE

No Field Data
Assume
2x2m HOR

Pebble/Cobble
Granule Beach
#2

E
SOR/MED/P
2x7M 30%
UNDER COBBLES
IN SHELTERED CREVICE
BETWEEN ROCK WALLS

COBBLE/BOULDER BEACH
#3

F
SOR/P
5x15M
40% SURFACE CB
CLEAR-ONLY INTER-
STITIAL + MATRIX
UNDERNEATH IS CLEFT

G
CT/S
1x6M 5%

no field data
assume 2x2m

REVISOR: MC 5/2/91
revised 5/1
Jy

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 28 Apr 1991

SEGMENT # EL 54

TIDAL HEIGHT(Range) -1.5' to 0

SUBDIVISION A

BIOLOGIST BENSON

SEA STATE 0

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL # —

FRAME # —

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

(A) - No biota on oiled surfaces (~ +13'). Dense Fucus & moderately dense Mytilus directly below oiled rocks.
MITZ: Fucus, Endocladia, Enteromorpha, Odonthalia, & Littorina common on bedrock & boulder. LITZ: Costaria, Laminaria, Enderachne(?) Ulva, & adult & juvenile Littorina & Notacmea. A dense Mytilus bed on bedrock at west end of beach.

(B) - Similar to (A) except for a LITZ tidepool (low diversity in pool)

(C) - No biota on oiled surfaces, but Verrucaria (above) & Balanus, Semibalanus & Littorina (below) nearby on bedrock & cobbles.
MITZ: Fucus & barnacles common, with rare Mytilus, Endocladia & Notacmea on bedrock.

(D) - Sparse Littorina on boulders just below oiled surface.
MITZ: bedrock platform near Pit #12 in east corner of cove supports diverse algal community that may be sensitive to any treatment activities.

(E, G) - Verrucaria, Littorina & Balanus above, and Mytilus, barnacles & Endocladia below oiled surface. Littorina & nudibranch egg masses. These species would likely re-recruit to this area if present ones were damaged by treatment activities.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—	—	—
Waterfowl	1	2	—
Gulls/Kittiwakes	2	41	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

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

Shoreline subdivision map showing important biological features attached.

Subdivision: EL 54-A

Team: 2

BIO: Benson

23 Apr 1991

Comments (cont.) -

- ⑤ - No biota on oiled surfaces. MITZ: moderately diverse invertebrates & algae on boulders & even on cobbles. LITZ: very diverse algae, amphipods, Dermasterias, polychaetes & unidentified egg cases.

The high diversity of algae & invertebrates here is probably due in part to its moderately high exposure near the mouth of Northwest Bay and to the abundance of stable bedrock substrate. Species typically found in high exposure-bedrock habitats, such as *Aleria*, *Laminaria setchellii*, & *Pisaster ochraceus*, were found in abundance on the seaward side of the small island on the point of this subdivision. Recruitment appeared to be strong here.

EL 54 A
28 APR 91
7:20- 8:36
BENSON

SKETCH MAP - BIO [SEE OG LOCATION MAP]



Ⓐ
No biota on oiled surfaces.
Dense Fucus & Mutilus below.
MITZ & LITZ: diverse algae
& invertebrates; filamentous
green abundant on cobbles.

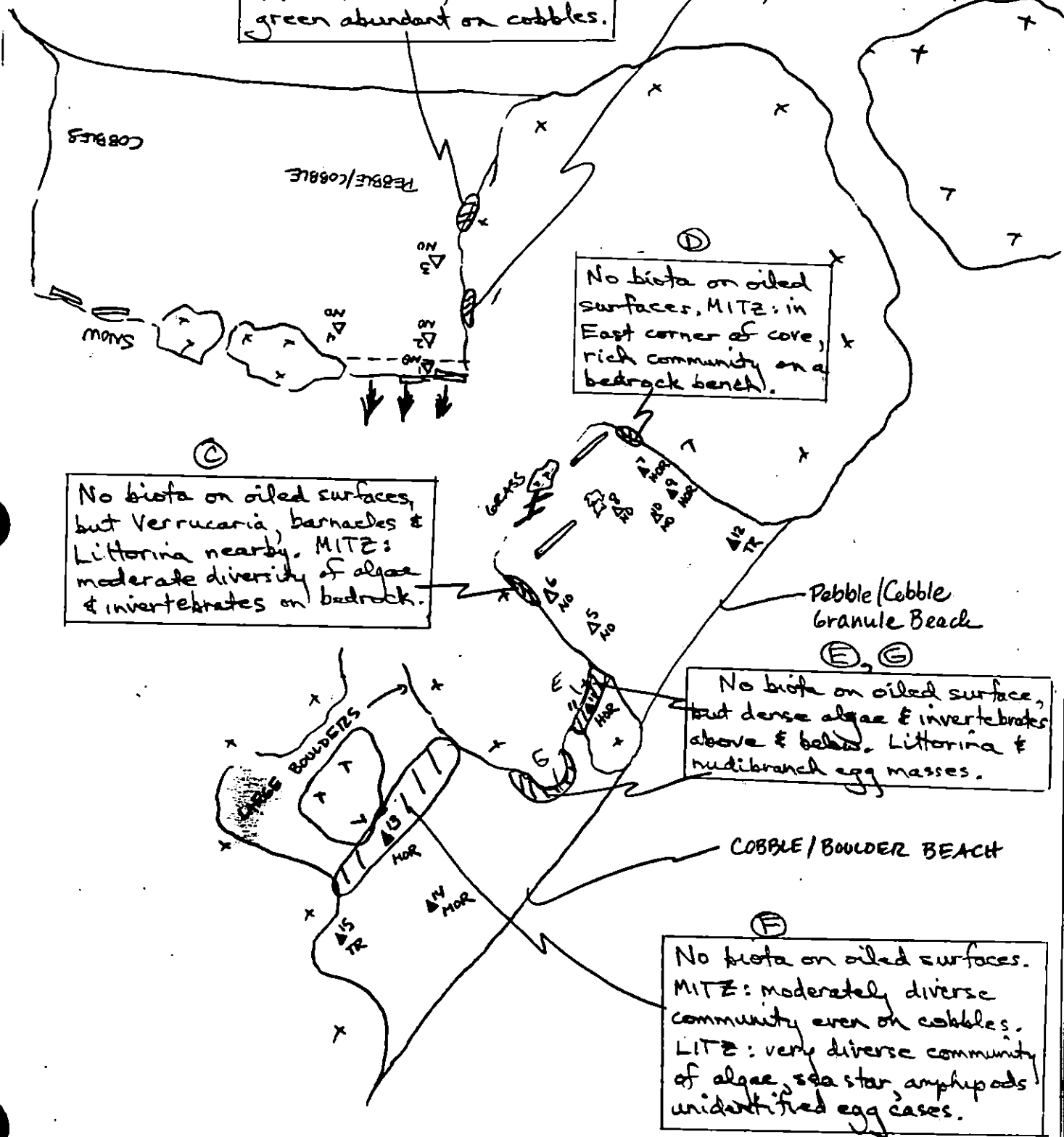
Ⓑ
Similar to Ⓐ
except for tidepool
nearby in LITZ.

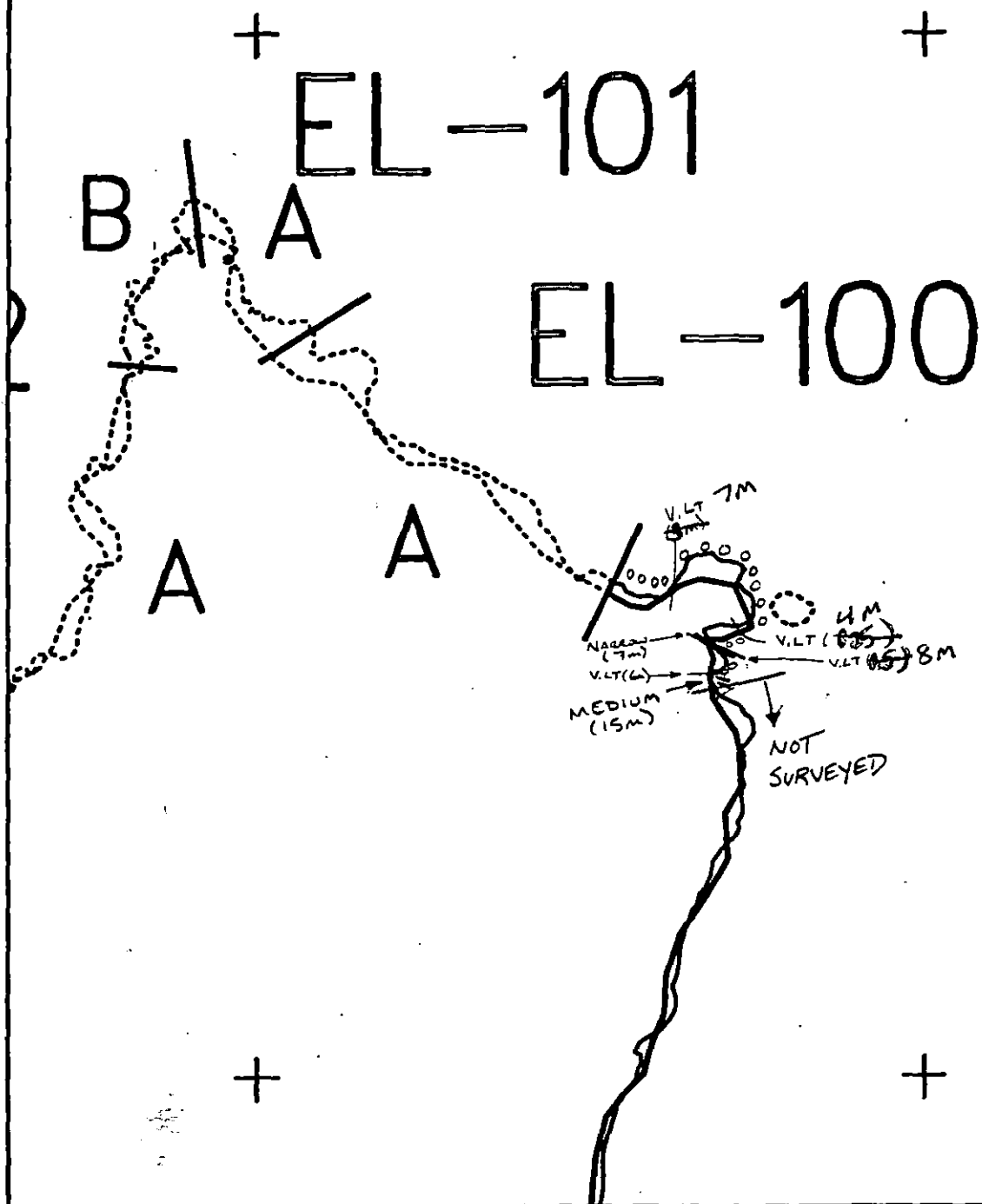
Ⓓ
No biota on oiled
surfaces, MITZ: in
East corner of cove,
rich community on a
bedrock bench.

Ⓒ
No biota on oiled surfaces,
but Verrucaria, barnacles &
Littorina nearby. MITZ:
moderate diversity of algae
& invertebrates on bedrock.

Ⓔ, Ⓒ
No biota on oiled surface,
but dense algae & invertebrates
above & below. Littorina &
nudibranch egg masses.

Ⓕ
No biota on oiled surfaces.
MITZ: moderately diverse
community even on cobbles.
LITZ: very diverse community
of algae, sea star, amphipods
unidentified egg cases.





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

EL054 A

ADEC Subsegment Length: 2679m
 METERS

5 200 400

AK State Plane Zone 4
 841054ab



Subdivision Field Map

Map Key: KNIEL054ab

Name: REIHER/Trim

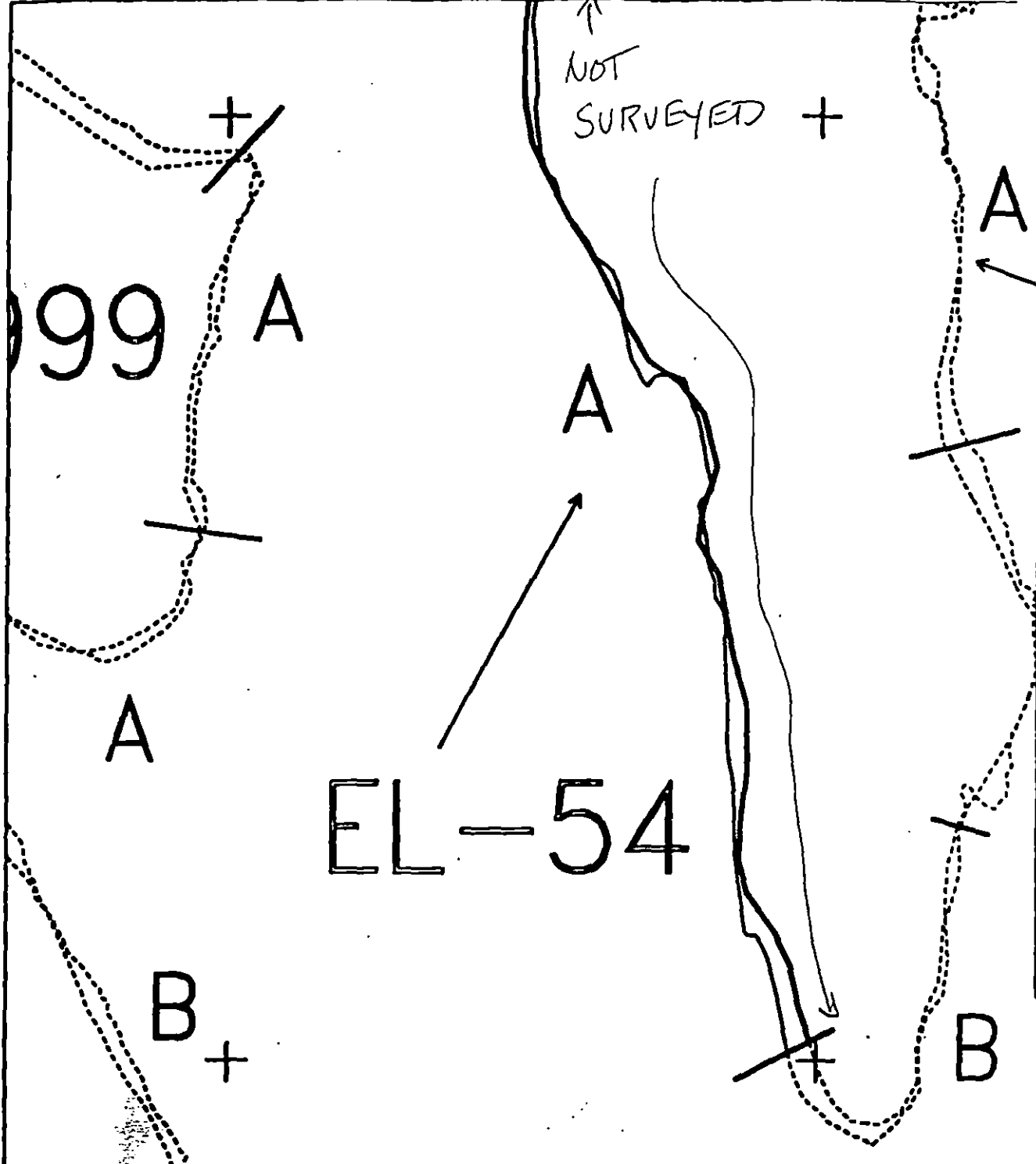
Date: 4/28/91

Date Entered:

REVISER: MC 5/2/91

revised 5.1

99



XXXX	Wide	EL054 A		 	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 2070m			Map Key: KNIELO54Aa
----	Narrow	METERS			Name: <u>REIMER</u>
TTTT	Very Light				Date: <u>4/28/91</u>
0000	No Oil	AK State Plane Zone 4 60105400			Date Entered:

REVIEWED: MC 5/2/91

SHORELINE EVALUATION

SEGMENT ST/ EL-54 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6Y 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 substrate and biota.

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: Charles E. H. H. H. DATE: 4/18/90

OILING CATEGORIZATION:

Wide 24 m: Medium 36 m: Narrow 428 m: V.Light 2107 m: No Oil 84 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 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 areas shown on attached sketch map. Work should be conducted after 6/15 based on spawning constraints.

MANUAL RAKE PRIOR TO BIOREMEDIATION IN AREAS OF PITS 3, 4, +5.
AS INDICATED ON SKETCH.
TAG COMMENTS:

SUITZ SHOULD BE REASSESSED BY MONITORS DURING TREATMENT
SNOW PRESENT AT TIME OF SURVEY.

TAG APPROVAL DATE: 4/18/90
ADEC ART WISNER Art Weines
EXXON ANDY-TEAL FOSC: My L DATE: 4-22-90
NOAA Burt Wernitt
USCG G.A. KEITER G.A. Keiter

OG C.D. N

SEGMENT ST/ EL-54

SUBDIVISION A

DATE 04 April 90

CHECKLIST

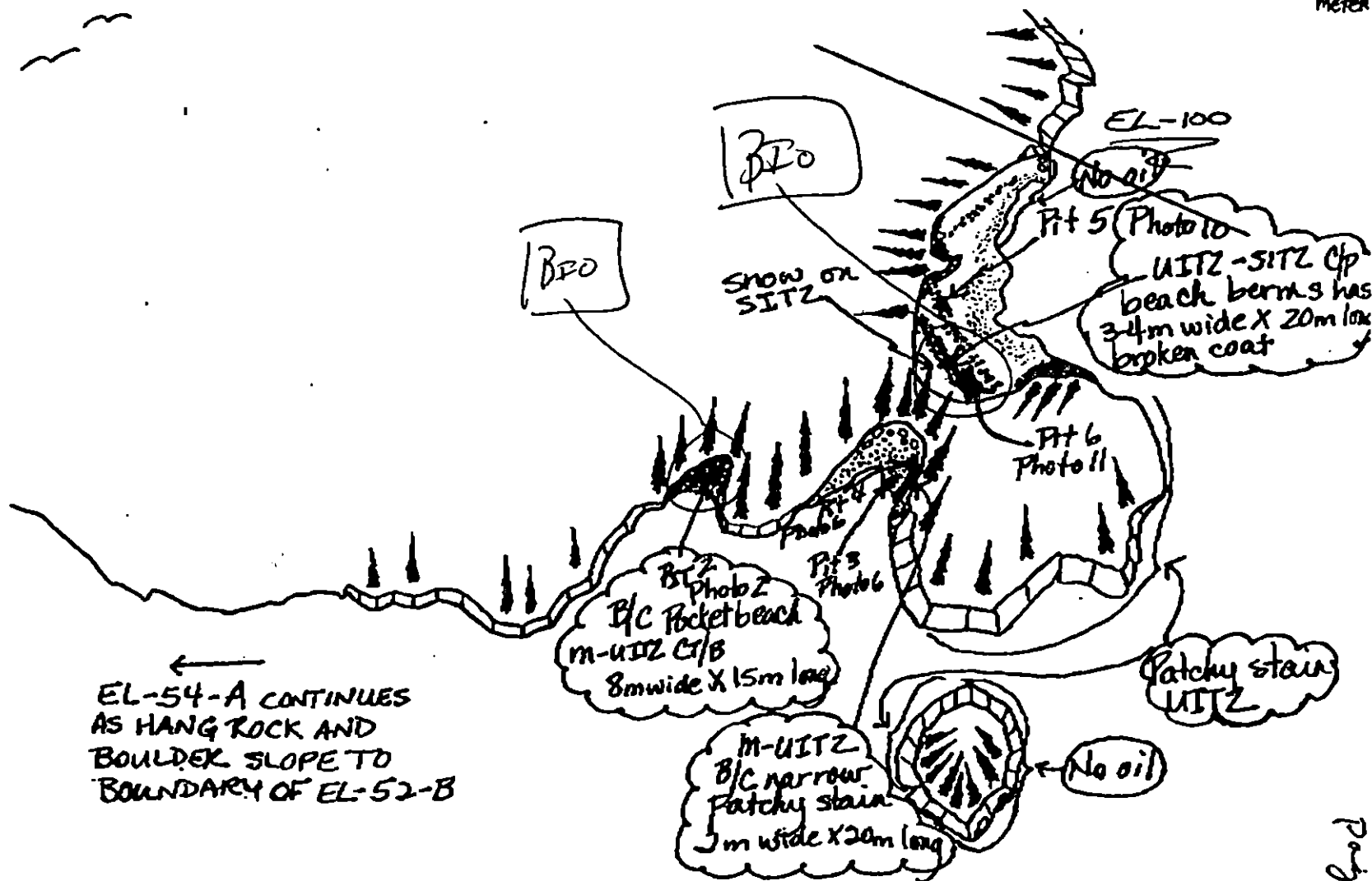
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

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
- ☐ Cited Vegetation
- ☐ 1 →
Photo location, direction, and number

ATCH MAP

SEGMENT EL-5
SUBDIVISION A
LENGTH = 2.87
METER



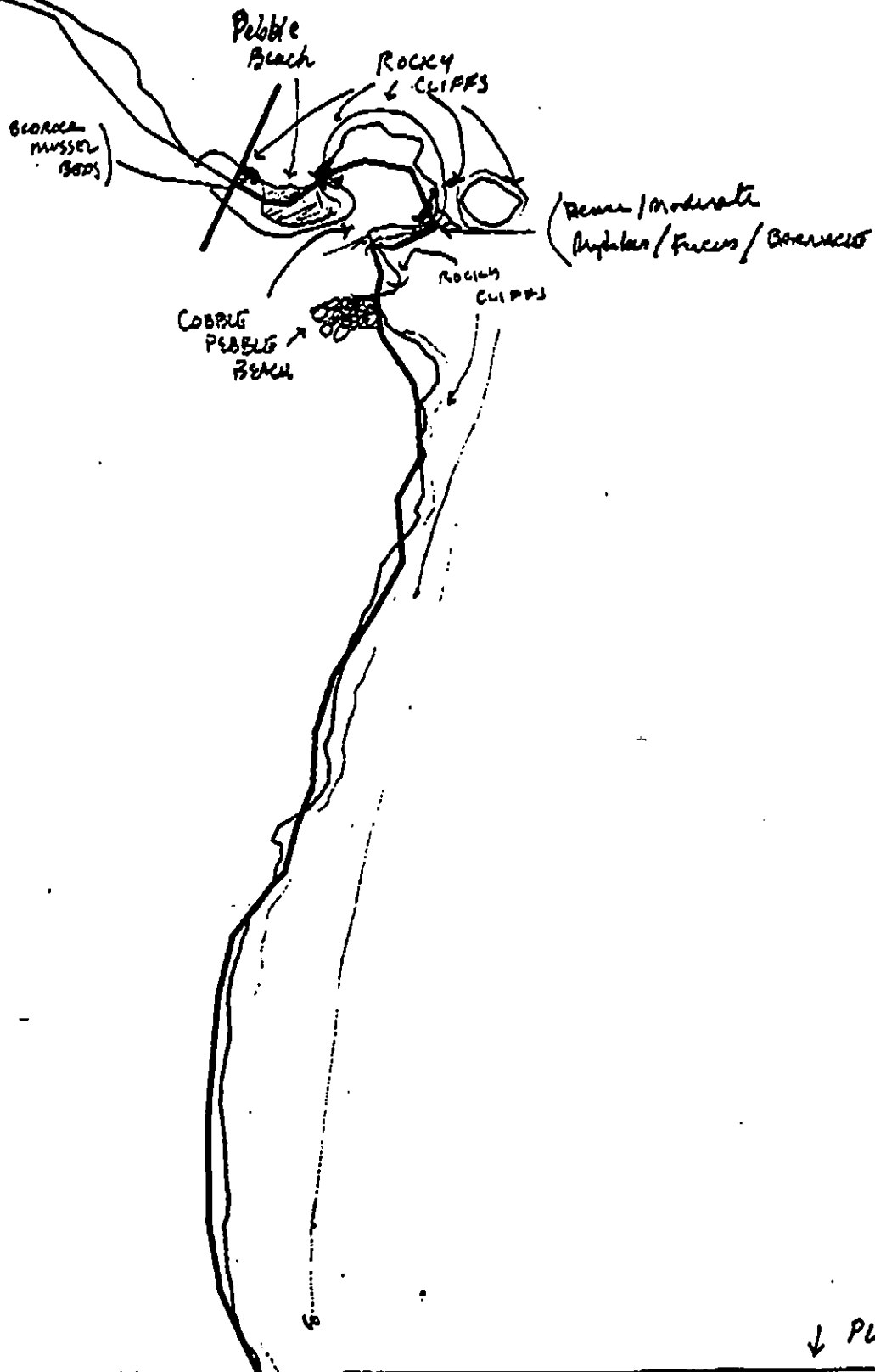
Oil Character Length (m): AP ☐ PO ☐ CV ☐ GT 65 ST 800 MS ☐ PT ☐ TB ☐ FL 1805 NO 200

SCHNEIDER

REVISION 207000

Page 2 of 4

7/1



XXXX Wide
//// Medium
--- Narrow

EL-54

ADEC Segment Length: 2679m

Map Key: PWS-137b

Name: C. DILLON

Date: 4/4/76

Page 3 of 4

SKETCH MAP
SECTION

COBBLE / POBBLE BEACH
AT END OF SKETCH MAP

Patchy stain UITZ

Patchy stain UITZ

POCKET BEACH ON SKETCH MAP

patchy stain UITZ

EL-54-A
2870 m

Patchy film UITZ

145 m long broken stain 2-3 m wide

Pst 1
Photo 1

UITZ continuous coat
3m wide X 30 m long

Patchy film and stain UITZ

↓ PWS 137A

XXXX Wide

/// Medium

--- Narrow

TTTT

EL-54

EXAM SEGMENT LENGTH: 2870m

ADEC Segment Length: 2879m

Map Key: PWS-137b

Name: C. Dillon

Date: 4/4/90

PWS 1376

page 4 of 4

EL-54

Patchy film UITZ

EL-54-A
2870 m

UITZ 1-2m wide 220m long sta
m-UITZ 2-3m wide patchy film

patchy film UITZ

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-54

Exxon Segment Length 2870m

ADEC Segment Length: 2679m



METERS

Map Key: PWS-1376

Name: C. DILLON

Date: 4/4/90

Date Entered:

OILING LENGTHS
TO BE PROVIDED
AT A LATER DATE

ST/EL-55-A

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-55

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/damage to unoiled biota and substrate.
Ensure that there is no disturbance of tide pools.

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 _____ m: Medium _____ m: Narrow _____ m: V. Light _____ m: No Oil _____ m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 7 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 cover and subsurface oil in areas shown on attached sketch map. Work should be conducted between 6/16 and 8/14 due to herring and deer constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-55-A SUBDIVISION: A DATE 3/31/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with both ~~parties~~ parties' comments below. The aesthet. of this small island could be improved with a minimum expenditure of man hours by a small work crew. Impact/traffic in the intertidal zone should be minimized as much as possible by the work crew during clean up. OK

ADEC

NAME Peter Montano SIGNATURE Peter Montano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS Subdivision A contains tide pools and other areas of rich/healthy intertidal life. The oiling is extremely stable with the exception of the SE corner where a light silver sheen was noted. In this area a small crew could effectively scrub, scrape, and remove contaminated beach materials. Additionally, coated rock scattered around the island is scrape/scrub-able. The island is a Damas and Moore Study Site and should also be considered of high recreational value.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC and would stress the importance of maintaining the intertidal life by utilizing a small crew for manual clean-up.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. FRITCHARD SUBDIVISION A (10F3)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 07:30 to 09:00
 TEAM NO.: 6 TIDE LEVEL: +4 to 0 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 261 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION IS AN ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 10 % C 5 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 85 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 20 m NO 211 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	E	S	W	SP	BP	GP	RP	SU	U	M	L
ASPHALT PAVEMENT												
POOLED												
COVER			X				X			X		
COAT		X		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			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE united pumpom.

#BAGS 1

Photographs:

Roll No. ST-6-1

Frames 26-32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UD	UC	SO PR	OR FW	GY SC	TEAL TL	LT	SU	UR	ME	LI					
1	20		X				0-5		X					X		X							P/G
2	7	X					0-7		X					X		X							C/P/B
							.																
							.																
							.																
							.																

COMMENTS SW quadrant of island has splatters of dark brown stain on bedrock on UITZ. P/G area at UITZ has VL stain and film to a 5cm depth. Rock face extending down toward shoreline has spotty coat and cover of dark brown oil on the underside of the outcrop and boulders at its base.

The center of the island has a group of outcrops and boulders with rubble/pebble substrate on the UITZ. These have a patchy surface coat and penetrated substrate to 7cm (pit 2). East side of island rock face

Page 1 of 2

REVIEWED 1/11

DATE 04/1/90

has a broken coat and cover inside a crevice. All oiling is on interior of island.

* Oiled interval of 0-5 cm in Pit 1 does not constitute subsurface oil.

OG C. Dillon
 SEGMENT ST/EL-55
 SUBDIVISION A
 DATE 30 1/MARCH 90

KETCH MAP

SEGMENT: EL-55
 SUBDIVISION: A

SUBDIVISION LENGTH: 261m

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LA/WL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pin Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pin - No Subsurface Oil

2 Δ
 Pin - Subsurface Oil

CT/C
 Continuous Distribution

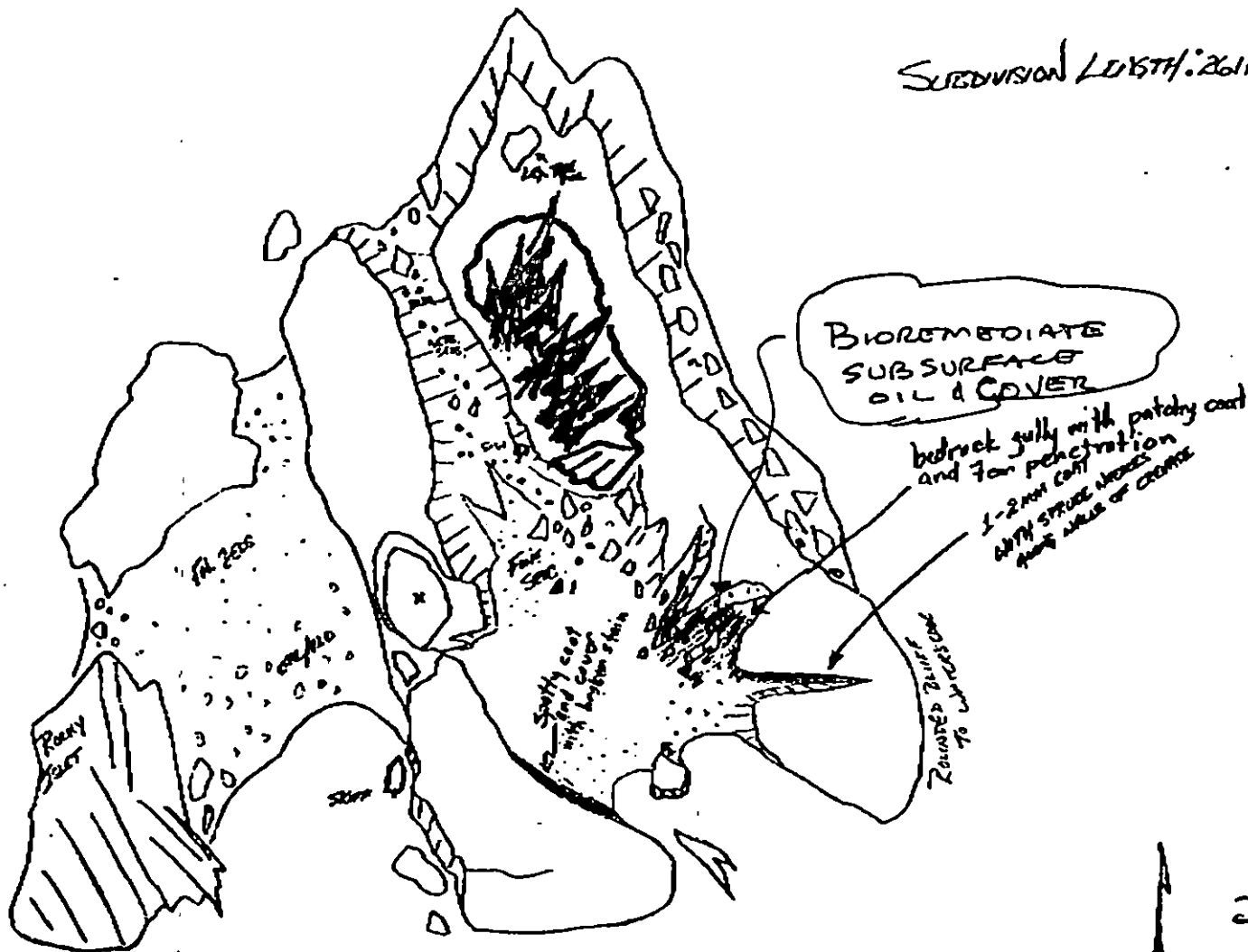
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$
 Photo location, direction,
 and number



Oil Character Length (m): AP _____ PO _____ CV 3m CT 3m ST 5m MS _____ PT _____ TB _____ FL _____ NO _____

SCHNEIDER

REVISION 02/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION 05/22/90

Segment ST / EL055 Subdivision A Date (mo / day / yr) 30 MAR 90

Time (24 hr) 0730 TO 0910 Biologist JIM BARRY Length 261 m

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 10 (3) Cobble 5 (4) Pebble 15 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 20 Low 0

(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: ST-6-1
Roll No.

Frames 23-33

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	
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	
6	6	6	6	6	6	6	6	6	6	6	6	

ASTROPODS

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	
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	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

SEA LION - COASTAL

SEA OTTER - "

BALD EAGLE - ADULT OVER FOREST

Ecological Considerations: 7 11, 2 M, 6 U

1) recovery evident in area

2) MUSSELS, BARNACLES, SEA STARS, ALGAE Present as juveniles

1) INTERFERENCE w/ HERRING SPAWN POSSIBLE IF OVERLAPPED w/ HEAVY BOAT TRAFFIC

SEE 5 ATTACHED PAGES

START 0730

STOP 0930

TIDE WINDOW +2 → -2

ISLAND ~ 950 m OFFSHORE

BARNACLES - *Balanus glandula*

- Bedrock - steep cliffs
 - Dense (All stages Adult (A) Juvenile (J), Spat (S))
most were small A, & J, > spat
 - High zone - High Adult densities, (~15 mm diameter) on steep cliffs
- denser than
 - MID - similar to high zone - $\frac{1}{2}$ dense juveniles & spat on open faces
 - Low - less - sparse - moderate → due to high algal cover
- Boulder - same as bedrock
- Cobble - much lower densities
Adults - rare to absent, juveniles - scarce, spat - sparse.
- Pebbles - all rare

Mytilus - *M. edulis* - saw no *M. californianus*

Bedrock -

High zone

Moderate abundance of juveniles & spat - not found as thick cover, but
common & dense in some crevices, especially J, Spat

Mid zone

Same, but somewhat more dense - still moderate relative to a well
developed mussel bed.

Low zone

Few mussels

Boulder - same as bedrock - slightly lower density.

Cobble - sparse on some cobble in HIGH to MID - Moderate overall

Pebbles - Generally low, except high (dense) on patchy
partially mussel bed on landing beach.

Fucus -

High zone

- Moderate Cover of Adults killed during treatment
or during winter.

- some individuals show evidence of regrowth from old thallus

- Juveniles present in Dense stands

- Sporelings dense in patches & moderate in others (moderate).

Made to Low Zone - Densest to area for *Fucus* sporelings juveniles, Adult
Similar on Bedrock, Boulder, and sometimes on large cobble.

Fucus is rare or absent from pebbles to small cobble.

GASTROPODS

LITTORINES

Littorina scutulata, L. sitkana

HABITAT LESS IMPORTANT FOR DIFFERENCES IN DENSITY, BUT SLIGHTLY
fewer on cobbles & pebbles

High - High densities of Littorines - A, J, S - on Bedrock, boulders

Mid - Dense on all but pebbles, where they are moderate, due to

Low - the presence of a ~~the~~ mussel bed.

Low - Moderate on all but pebbles

Nucella = whelk

Patchy, but occasionally dense in pools - mid to low

Limpets - Variable

Present on mussels - moderate

rare on some rock faces

moderate on others

Highest densities in mid to upper tide level.

Other Species

TIDE POOLS - LOW ZONE (POTENTIAL POOLING AREA FOR OIL)

- Sea stars abundant

Pycnopodia (Sunflower star)OrthasteriasDermasterias (Leather star)

These 2 abundant

Lots of juvenile sunflower stars

- Anemones

Metridium senileTealia crassicornisEpiactis spp.Anthopleura xanthogrammicaAnthopleura artemisia

Occasionally present in pools

- Hermit Crabs - moderate to sparse under rocks

Peanut worms - occasional under rocks (Phascolosoma spp.)- Nudibranchs - Arminia californica

- MOON SNAIL EGG CASE FOUND ON BEACH

Algae

HIGH ZONE

Petrocelis
Diatom films, Filamentous
Scytosiphon
Ulva
Unknown Filamentous
Cladophora?
Ralfsia
Fucus

Hildenbrandia?
Urospora
Spangnermopha

MID ZONE

Fucus distichus
Callophyllis Rhodomenia?
Rhodomenia
Scytosiphon
Ulva
Enteromorpha

Urospora
Spangnermopha

LOW ZONE

Halosaccion
Fucus
Ulva
Ralfsia

MISC. COMMENTS

THIS LITTLE ISLAND IS FAIRLY CLEAN: SEDIMENTS (under boulders and cobbles) have greater numbers of species and densities than E2056

WILDLIFE

SEA LION offshore

SEA OTTER

BAUD GAGLE - 1 over forest

30 MARCH 1990
SEGMENT ~~ELOSS~~

ELOSS-A

	Sensitivities	ELOSS	
ELOSS	711	Herring	
	2m	Deer Harvest	
	6u	Tentacle	
ELOSS4	6YUV	Anchorage	Tat Sites Special
	711	Herring	
	2m	Deer Harvest	
ELOSS3	6V	Anchorage	
	711	Deer Harvest	
	5F-2	BALD EAGLE NESTS	near-dune
	2m	Herring Spawn	
ELOSS2	1B	Stream mouth spawn	
	6YUV	Anchorage, Tent, Special	
	711	Herring	

ELOSS-A - Small Island

0730 -

TIME	OK FOR HIGH - MID	
	DENSE BARNACLE AND (A, J, S)	
	HIGH - MID	
	MODERATE TO SPARSE LOW	
	FOCUS MODERATE HIGH (A)	
	SPARSE " (J)	
	DENSE MID TO LOW	AJ

ELOSS-A

4/5

(MYTILUS) moderate HI-MID
AJS

LITTORIALS Dense - Mod
HIBIT - MID

Less on COBBLE or low

NO RARE LIMPETS
D CRABS

SPARSE PAGURIDS

2Y SPIN. PEANUT WORMS

Dense Managadia

Less on Here

> Healthy Adult Fucus

> Scytosiphon, Ulva
SCOTOPHUS

> Green Slime

> Brown Slime - Ralphsia

ELOSS-A

PHOTO 23. LOOK BACK A
FEW PAGES
(SANS 24)

PHOTO 23

FOREGROUND

FUCUS A(J)

BACKGROUND

MYTILUS (J)

Non-treated FUCUS Adults

PHOTO 22

POOL w/ ANEMONES

PHOTO 26 -

Corner/coast w/ Pine
needles on rock ledge
overhang

Found here & there

WSW West side

ELOSS-A

5/5

27 VICINITY OF PIT

28 PIT

29 VICINITY OF PIT

30 Crevice (rock) Central S
~ 20m ~ E of 27-29

31 Close up of dead Crack

32 Vicinity of " "

CAMERA fried after 33

33 - FUCUS

OTHER

Beach rubble - Had

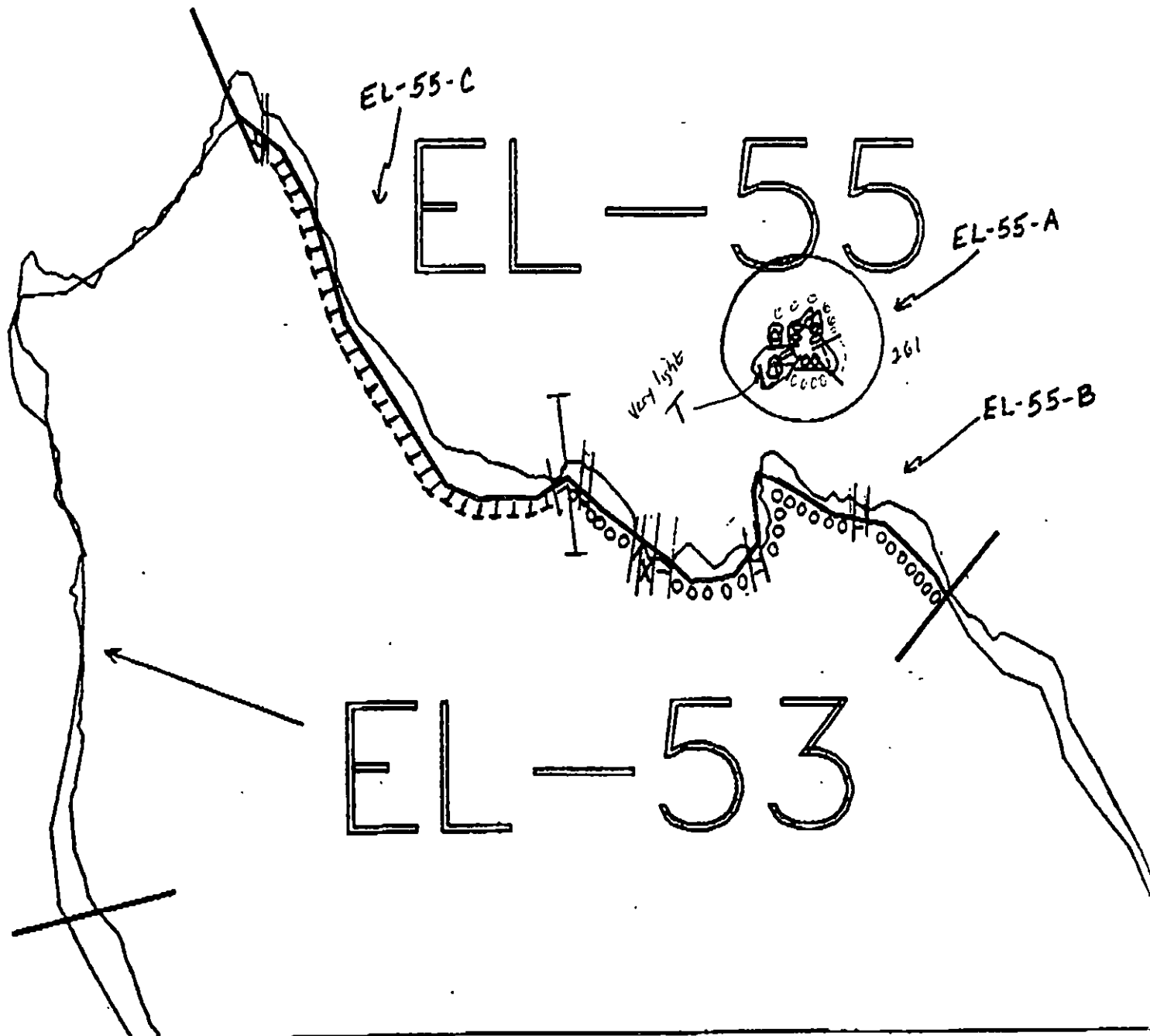
Dense - moderate Mytilus
as did many rock walls
Juwvils

Unpet juveniles sparse to
moderate on rock walls
+ Mytilus
Littorina?

Nudibranch in water

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
 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.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

OILING LENGTHS
TO BE PROVIDED
AT A LATER DATE

ST/EC-55-B

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-55

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/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 14 m: V.Light 0 m: No Oil 110 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 22+ 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 pick up of oiled vegetation, tar balls and bioremediation of areas with coat, cover or subsurface oil. Work should be conducted between 6/16 and 8/14 due to ecological constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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- 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.
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- 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.

~~2A~~ ~~Harbor 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.

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Restrict all activity to essential minimum, especially air traffic.

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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 management 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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL-55-B SUBDIVISION: B DATE 3/31/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

P83/USCGR

I concur strongly with both ADEC's and the Land Manager's position on this Subdivision. The recreational potential of the beach sites along this shoreline would be well served by the employment of the methods listed in their comments below.

DB

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The preceding report is an excellent depiction of Subdivision 3, and I concur with the ADNR Comments.

The various beaches of "B" require extremely labor intensive hand work to reach/remove the oiling. Hot water wands are locally appropriate for the E corner of Beach 3, which is in the most need of treatment. Bioremediate after consideration of other treatment methods.

LAND MANAGER

NAME Janetta Pritchard SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The three pebble and rubble beaches are ideal for bioremediation. Beach 3 has a potential for high recreational value. This beach should be tilled, if possible, to remove subsurface oil and bioremediate. SUT2 was covered with snow and should be evaluated when it's gone. Any solid vegetation should be removed. Tar spots removed manually.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION B (2 of 3)
 EXXON A SNOOK ADEC P. MONTESANO TIME 09:00 to 12:45
 TEAM NO.: 6 TIDE LEVEL: 0 to +5 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 515 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 ISLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 4 % G 1 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 40 m M 10 m N 100 m VL 130 m NO 235 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	OP	OR	OL	OF	NO	VO	UC	SV	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER		X	X									X		X		
COAT		X		X		X		X					X	X		
STAIN				X				X	X				X			
MOUSSE																
PATTIES																
TARBALLS				X		X								X		
FILM																
NO OIL													S			X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE oiled small trash#BAGS 41

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	SV BT	SV FW	SV G	SV TL	SV LT	SU	U	M	LI					
1	10	X					5 - 6		X					X		X							P/C
2	6				X		5 - 6		X					X		X							P
3	15		X				5 - 15		X					X		X							P/G
4	20				X		5 - 12		X					X		X							P/G
5	15		X				5 - 15	X						X		X							P/G
6	17	X					5 - 17	X						X		X							P/G/S

COMMENTS: Beach 1 - 12m long x 30 wide. Base of overhanging face rock at W. end of beach and underside of B/C on U1T2 has a broken coating 23m wide x 5-6m long. Rock face has a narrow, VL stain swash 4-5m long. Pits 1 and 2 on U1T2. Pit 1 dug through 1m long x 2m wide coat on B/C surface sed's. Pit 2 dug through same sed's. 1m below pit 1.

SEGMENT ST/ EL-55 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS: Beach 2 - 25m long X 35m wide. Broken coat 2-3m wide X 10m long across UITZ at W. corner. Pit 3 dug here. Base of outcrop on W. side of beach has 1-2m wide broken coat and cover with incorporated small vegetation (spruce needles) for length of 5m at high tide level. Pit 4 is 5m W. of Pit 3. Bedrock outcrops and boulders on W. half of Beach has 3m by 3m broken coat/cover on UITZ with 2-3cm penetration of pebble substrate. Steep B/C slope at extreme E. corner has 43m wide X 2m long coat/stain on UITZ; Pit 5 dug here. Beach 3 - 50m wide X 100m long C/B beach with HANG B/R at E + W ends terminating into headlands. E face rock to headlands has 100 m long X 1-2m wide broken coat/cover at high tide level. Back sides of outcrop/Boulders on MITZ has broken cover/coat. Pit 6 here. UITZ B/C (extends under snowline) has 10-12m wide X 20 m long broken cover/coat on surface B/C and 4cm penetration of pebble substrate. Small amount of oiled vegetation on SITZ and UITZ.

REVIEWED 04/14 DATE 4/1/90

REVIEWED 04/14 DATE 4/1/90

OG COLLON

SEGMENT ST 12-55

SUBDIVISION B

DATE 30 APR 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/VL
- ☐ 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

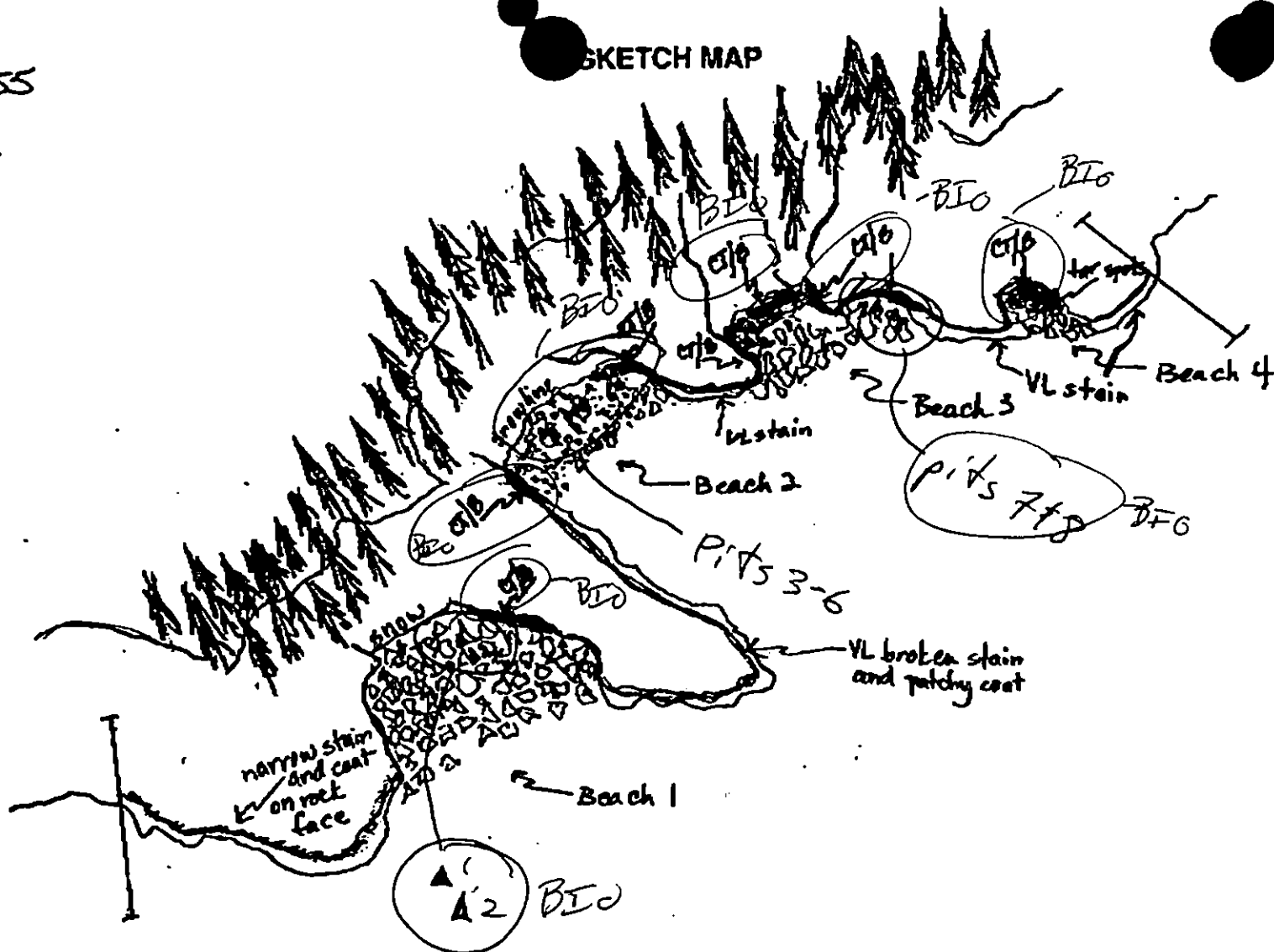
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 Δ
Photo location, direction, and number

SKETCH MAP



SENSITIVITIES:
Herring may spawn near beaches 1-4 (April-May)
Frequent boat traffic may interfere

Oil Character Length (m): AP _____ PO _____ CV 6.5 CT 6.5 CT 4.5 MS _____ PT _____ TB _____ FL _____ NO _____

REVISION 00/01/90

pg. 4 of 4

COMMENTS: Beach 3 (cont'd) - W. corner of UITZ B/C/P has 3-4 m wide x 10 m long broken surface coat that possibly extends under snowline. Pits 7+8 dug here. Extreme E. corner face rock has <1 m wide x 15 m long broken coat of dull black and light brown oil on UITZ with VL film and silver sheening on surrounding B/C HANG slope.

Beach 4 - 25 m long x 30 m wide. UITZ has 8-10 m wide x 20 m long broken coat on surface and sides of B/C/R and patchy cover. 4 cm saturated pebbles in substrate. Boulder slope at base of W. face rock has broken coat 3 m wide x 10 m long at UITZ with up to 4 cm penetration of pebble substrate. Tar splashes underneath and behind large boulders at base of W. cliff face. Tar spots are within patchy stain and broken coat along boulders. Final 75 m of subdivision is VERT/HANG rock with a narrow coat and stain in a broken band at the high tide level.

OG C. LON

SEGMENT ST/ R-55

SUBDIVISION B

DATE 30 April 90

CHECKLIST

☐ N Area
☐ Approx. Scale
☐ Seg/Sub Boundary
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LVL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ P/L Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

Pl - No Subsurface Oil

2 Δ

Pl - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

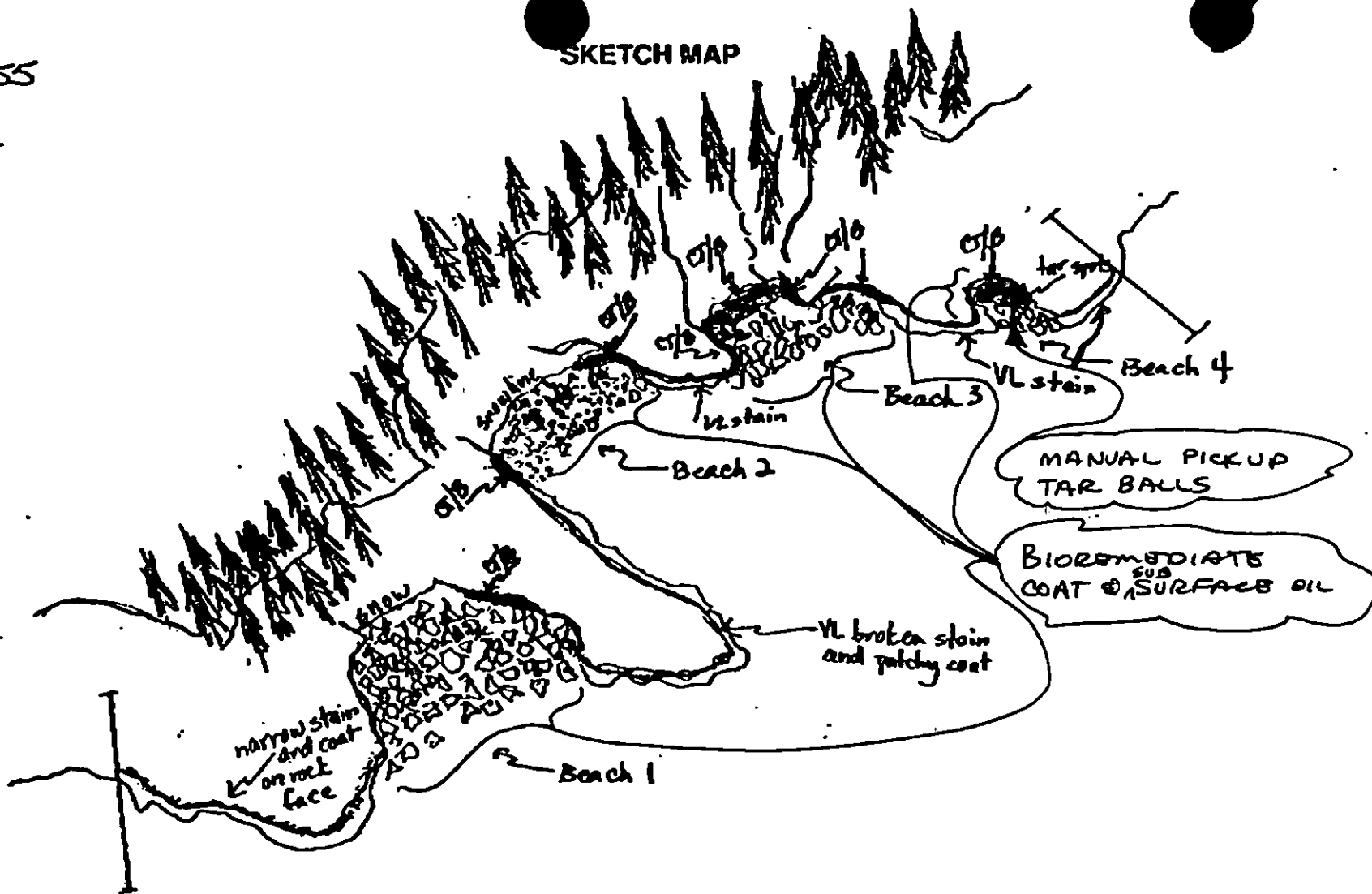
Splashed Distribution

Old Vegetation

1 Δ

Photo location, direction,
and number

SKETCH MAP



SENSITIVITIES:

Herring may spawn near beaches 1-4 (April-May)
Frequent boat traffic may interfere

Oil Character Length (m): AP _____ PO _____ CV/2m CT 275 ST 250 US _____

PT _____

TR 10 FI _____

NO _____

STATION 0000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/02/88

Segment ST / EL 055 Subdivision B Date (mo/day/yr) 30 Nov 1990

Time (24 hr) 0910-1230 Biologist BARRY 515 m length

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 50 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: ST-6-2

Roll No. 24-36

Frames 24-36

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:

Ravens - 2
Gull colonies - 1
River Otter - Tracks
Deer - Tracks

Ecological Considerations: 711, 2M, 6U

USE CAUTION DURING HERRING SPAWNING - FREQUENT BOAT TRAFFIC MAY INTERFERE

START 0910

END 1230

TIDE -2 → +4

MAJOR SPECIES - comments in addition to data sheet

BARNACLESGenerally dense *BALANUS BLANDULA*

- MOST JUVENILES - FEW LARGE LIVE ADULTS
- Dense to moderate in some LOW ZONE SITES WHERE SPAT & JUVENILES present on open space.
- OBVIOUS ON ~~B~~ BEDROCK
- UNDER SURFACE ON BOULDER AREAS.

~~PER~~

OIL RELATED DISTRIBUTION

BARNACLES SEEM TO SETTLE & GROW ADJACENT TO,
BUT NOT ON, WEATHERED OIL (COAT)

MYTILUS - *M. edulis*

- THIS SUBDIVISION HAS MODERATE DENSITIES OVERALL, BUT OCCASSIONALLY VERY DENSE STANDS OF ~~W~~ SMALL TO MID-SIZED AD. MUSSELS
- SPAT (MUSSELS < 5 mm) ARE OFTEN ABUNDANT (DENSE) IN AGGREGATIONS OF JUVENILES/ADULTS.
- DISTRIBUTION MUCH PATCHIER THAN BARNACLE, FUCUS, OR LITTORINES
- COBBLE BEACHES HAVE VERY FEW OR NO MYTILUS.

GASTROPODS

Generally includes LITTORINA spp (*L. scutulata*, *L. sitkana*),
LIMNETS, ~~AND~~ WHEELS.

- LITTORINES - Generally abundant throughout intertidal, somewhat less in upper zone.
- Limpets were present mostly as juveniles, with sparse adults
- WHEELS (*Nucella* and a few minor spp.) were sparse to moderate in general, and occasionally dense.
- Egg Cases were found for Littorina

FUCUS

- IN THE HIGH ZONE IN PARTICULAR, FUCUS SHOWS EVIDENCE OF MORTALITY, PROBABLY RELATED TO OIL CLEANING TREATMENTS & OIL CONTAMINATION.
 - THE BURL HOLDFAST "ROOTS" OF MANY PLANTS ARE WITHERED. SOME SHOW SIGNS OF REGROWTH
- MIDDLE TIDE FUCUS IS THE MOST DENSE & HAS THE GREATEST AMOUNT OF SETTLEMENT OR NEW INDIVIDUALS.

OTHER INTERTIDAL SPECIESALGAE

- General Algal Zonation was similar to ELOSS-1 - SEE ITS LIST OF SPECIES
- THE LOW TO MID ZONE: COBBLE BEACHES OFTEN ARE COVERED BY MICROSCOPIC GREEN ALGAE (DIATOMS, FILAMENTOUS CHLOROPHYTA)

ANIMALS

- 1) Animal life in this subdivision was rich in the low zone compared to ELOSS-6
- COBBLE BOULDER HABITATS IN LOW ZONES HAVE SEVERAL SPECIES OF CRABS, WORMS, SNAILS, ANEMONES, FISHES AND SEA STARS.
 - Groups not observed include brittlestars and clams

Species

Crab spp A
" " B
" " C

Hermit Crab - PAGURIDAE

WORMS

- SPIRORBIS
- SERPILLA
- GLYCERIDAE?

★ FISH -

- PRICKLEBACK (PHOLIDAE?)

SEA STARS

- Pycnopodia
- Solaster
- Dermasterias
- Pisaster
- Orthasterias

MUST IN EXPOSED MICROHABITATS

Anemones - Tealia sp
Anthopleura sp
Metridium spp
Epiactis

SNAILS

Nucella
Littorina

MUSSELS

Mytilus

BARNALES

Balanus

CHITONS

Tonicella ?

Pycnopodia & Dermasterias was dense (~1/m² in some areas)
(All ~15-30 cm)

limpets

±3 spp.

WILDLIFE OBSERVATIONS

RWENS - 2

GLAUCOUS GULL - 1 Adult flew over
? ALCID

RIVER OTTER TRACKS - ABOVE BEACH

SEA LION

DEER TRACKS

ECOLOGICAL COMMENTS

- 1) Several Species, including focus species, show signs of recovery

BARNACLES, MUSSELS, SEA STARS, LITTORINE SNAILS, LIMPETS, FUCUS
(ROCKWOOD)

- 2) Some ADULT LIMPETS & CHITONS WERE FOUND IN THIS SECTOR
KATHARINA TUNICATA

EL055-B

28

Time 0910

Beach

LIFF FACE - S end

7 *Mytilus* / *Fucus* (ass)

2 *Mytilus*

2 *Callinectes*

Cliff to S →

1/2 m oil on cover on boulders

Some recruitment marks

Generally heavy spat

Sparse - moderate *Limpet*

0 *Mytilus*

Fucus - dense

Low pool -

> crabs

> Sea stars

>> *Pycno*

> *Demasteria*

2 *Callinectes*

EL055-B

Coarse *Mytilus* upward

Moderate *Callinectes*

Decapod crabs - Collected

Beach cliff area

> Dead *Treatus* *Fucus*

> Regrowth in mid zone

Moderate recruitment

Low zone

> *Pycnopoda* (-20 cm dia)

> *Demasteria*

Moderate *Fucus* *Sporlings*

Dense adults on boulders

Mytilus ST-6-2

35 *Pycnopoda* on beach

Boulders

> Dead Adults - *Callinectes*

>> Green / Brown *Slime*

0 *Mytilus*

Sparse *Fucus* w/ Regrowth

Moderate *Sporlings*

TOWARDS N

ELOSS-B

Moderate mytilus
 > Eucus recruits, Bagnard

35 → Focus
 36 → " recruitment

7 Barnacles AJS

BIRDS

RAVEN

GLAUCOUS GULL

? ALCID

Moderate → mytilus AD/SPA-1

> Barnacles 1/5

Dense FUCUS

L1 Herring Juveniles, spot - mod
 recruits sparse

MOD ZONE

tons of Slime - Green/Brown
 Cobble community w/ Siphonophora

ELOSS-B

Small Pt to NW -

Green Slime

Dense BARNACLES

Patches of Green Crust

ZULLA

HIGH > Petrocoelus

NEXT Beach to N

COBBLE - 50m wide

Sand -

TIME 1044

MONKEY FACED 24 UNDER

ROCKS - ABUNDANT

in low zone ~ 5-10/m²

Dense Siphon spirorbis recruits

CHITONS (TONICERA?)

ON ROCK

* 33 PHOTO OF CHITONS

LOW ZONE

> Callophyllis

CLADOPHYTES?

6/7

CLOSS-B

Collected a couple bryozo
on wall
Same -

no mussels though
in cave - except
on large boulders / bedrock

WADLIFE

RAVEN

OTTER TRACKS

Deer track

Sea Lion

31 Mytilus recumbens in cave on
ROCK

30 VICINITY OF 30

Low zone beach
Green Sam (Diatom?)
on cobbles

A

CLOSS-B

Bedrock in cave
7 GILGIES
from boulders A

Lupinus sp. - mod

> Cladophora / ? Antelina Spp B
Collected →

mid zone

mixed w/ FUCUS (AJR)

-NOTOCEMATEA scutum Adult
~ 20 mm

microzone

Procs Tealia?

Striped Turtle

Green/Brown body

Dense mytilus 1/3 on water edge
Dense L. Hornia

lots of bryozo on area

29 KATHARINA in cave

28 METRIDIVM LIKE Anemone

ELOSS-B

28 FOCUS ADULTS/REMAINTS f
Scaphosiphon
in cave

Next cave

HIGH abundance of all
B, G, M, F

ADULTS FU - SPANKE

7000 - L. SCHULZ

Collected a Gastropod
killing a barnacle

Green Slime Above

BAULDER FIELD TO N
SLIME OR SCUM on TOP
BARNACLES, RALPSTH,
MYTILUS, LITTORINUS
underneath

Remnants = Mytilus, Balanus,
Littorina

NO FOCUS THIS HILL

7/7

ELOSS-B
BIRD TABLE seen 2x

POOL - MID - HIGH

> PABURIDS

> Nucella

Xiphochel

moderate Mytilus sp

Littorinus

dense aggregation + egg masses

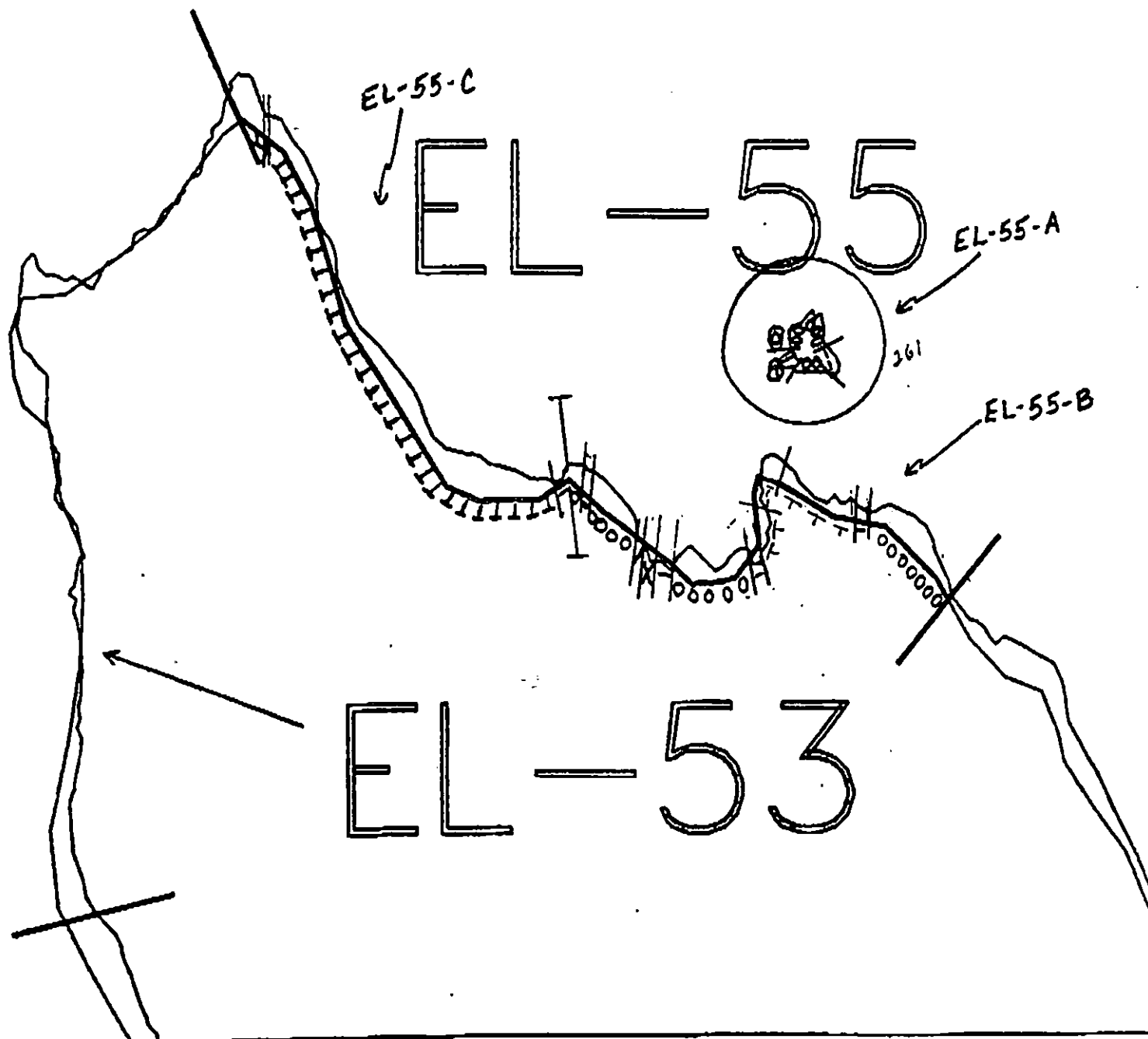
PHOTO 21

#28 - Pool in upper w/ Stromatolite

Small ELOSS-B

1230

R



OILING LENGTHS
TO BE PROVIDED
AT A LATER DATE

ST/EL-55-C

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-55

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/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 20 m: Narrow 11 m: V.Light 524 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15+ 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 coat area and subsurface oil. Work should be conducted after 6/15 based on herring constraints.

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 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) 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	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)
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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST EL-55-C SUBDIVISION: C DATE 3/31/90

SCG
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

90% OF THIS SUBDIVISION CONSISTS OF HIGH ANGLE TO VERTICAL ROCK CLIFF FACES WITH SEVERAL SMALL BOULDER/RUBBLE SLIDES THAT EXTEND INTO THE INTERTIDAL ZONE. DUE TO THE VERY LIGHT NATURE OF THE NARROW BAND OF OIL COAT/STAIN, ^{GENERATED} IT'S LIMITED DISTRIBUTION, AND ITS HIGH EXPOSURE TO STORM WAVE ACTION, I RECOMMEND THAT NO TREATMENT BE ATTEMPTED HERE. BIOREMEDIATION TECHNIQUES ARE INAPPROPRIATE IN THIS INSTANCE.

ADEC
NAME Peter Montesana SIGNATURE Peter Montesana

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS None of subdivision C is appropriate for bioremediation

The oiling on the east Boulder beach is not easily accessible, but should be considered worthy of treatment. The oiled pocket to the west end of "C" has oiled cobble, gravel trapped on/between bedrock which could be removed by a crew of 4 in a days time.

LAND MANAGER
NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The majority of this subdivision has a patchy stain/oil band. Some tar spots were found and could be manually removed. The boulders in this vicinity are not of high recreational value and do not warrant removal/clean up. Some skimming may take place without the benefit of additional cleaning.

SHORELINE OILING SUMMARY

REVISED NO. 08/22/90

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. FEITCHACH SUBDIVISION C (3 of 3)
 EXXON A. SAGOK ADEC P. MONTESANO TIME 12:45 to 13:50
 TEAM NO.: 6 TIDE LEVEL: +4 to +8 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 515 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 75 % B 20 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 65 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 3 m N 35 m VL 477 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	SP	BP	GP	TP	LP	UP	MP	VP	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X	✓	✓	✓		X	X				X			
STAIN			X	✓				X	X				X	✓		
MOUSSE																
PATTIES																
TARBALLS				X		X							X			
FILM																
NO OIL													X			X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	GP	TP	LP	UP	MP	VP	SU	U	M	L		
1	15	X					5 - 15	X					X					X					P/M

COMMENTS SUBDIVISION C begins with 75m long HANG headland rocks and HANG/LANG R/B slopes followed by a beach. The E corner of the beaches UITZ has a 1-2m wide x 4m long localized patch of coat/stain containing Pit 1. The center of the beach has a B/C UITZ with 2m wide x 8m long patchy stain and tar spots. W. end of B/C UITZ has 2-3m wide x 50m long patchy stain/coat. Boulders at W. end of subdivision has a 4m wide x 3m long patchy coat with 4cm penetration.

REVIEWED DMHDATE 4/1/90

OG C. lon

SEGMENT ST/ FL-55

SUBDIVISION C

DATE 30 / MARCH / 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil DNL
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

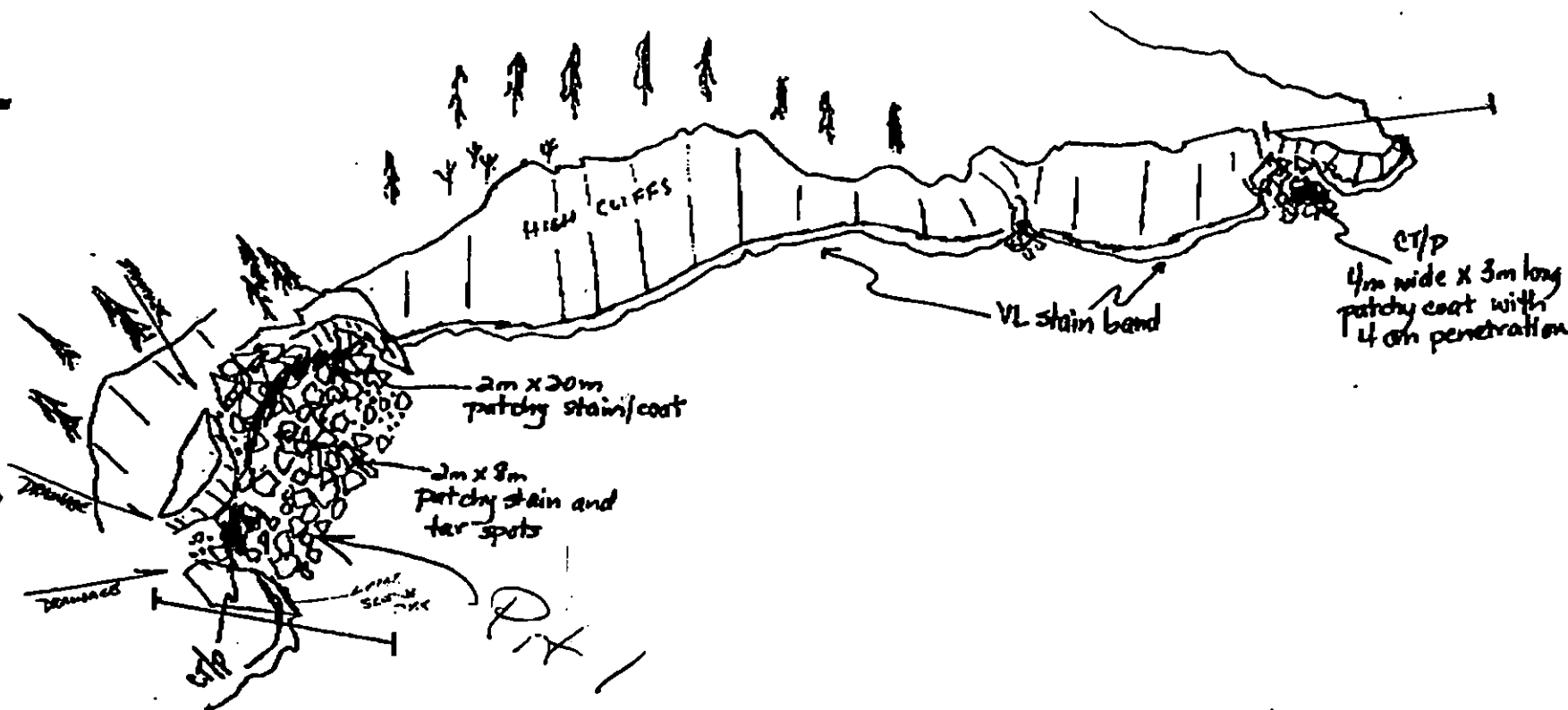
$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Spashed Distribution

Ciled Vegetation

1 $\Rightarrow$
Photo location, direction,
and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT 27m ST 450 MS _____ PT _____ TB 8m FL _____ NO _____

OG C. Leon

SEGMENT ST/ FL-55

SUBDIVISION C

DATE 30 1 MARCH 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PR - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

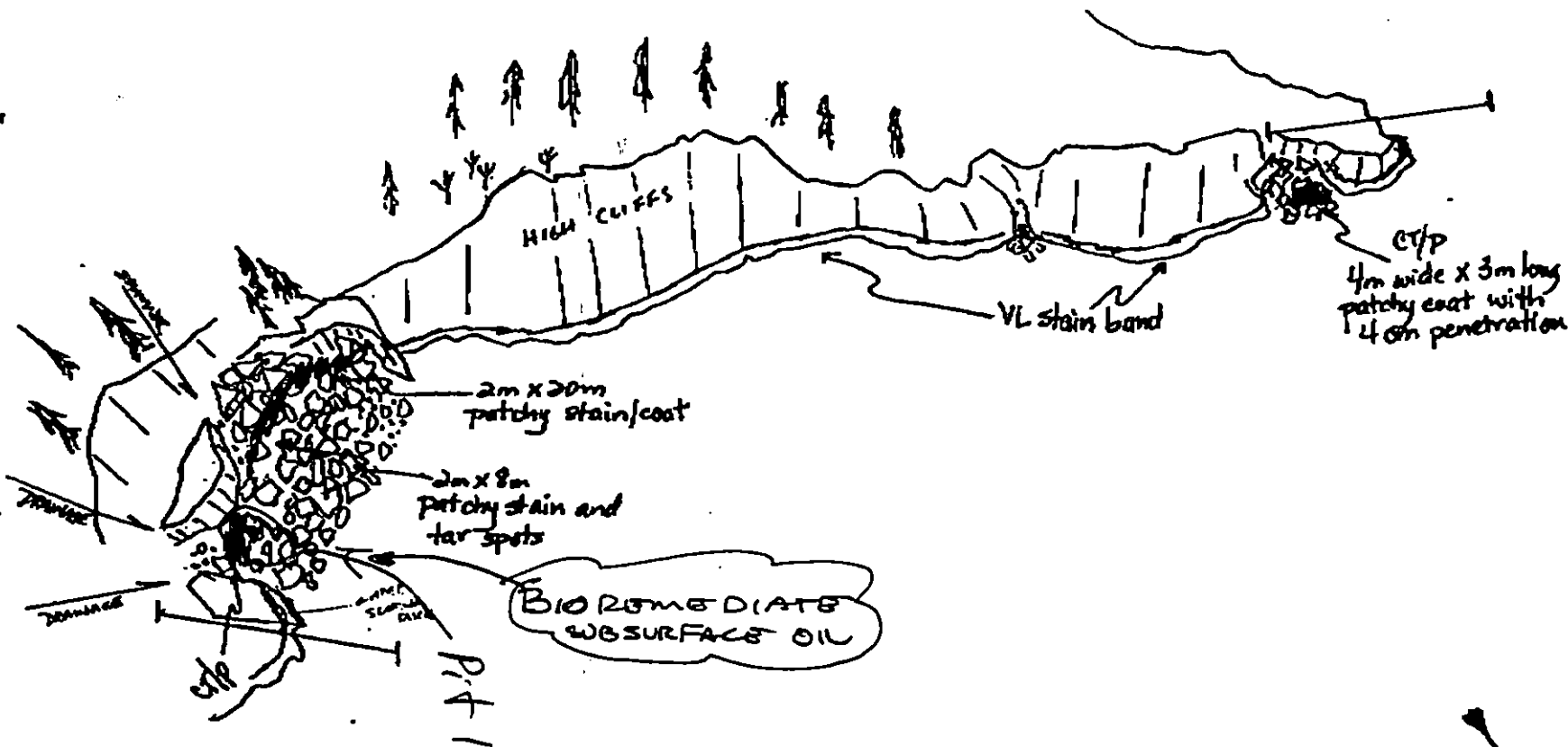
$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patched Distribution

$\boxed{CT/S}$
Splashed Distribution

Oiled Vegetation

1 $\bullet$
Photo location, direction,
and number



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/12/90

Segment ST / ELOSS Subdivision C Date (mo / day / yr) MARCH 30 1990

Time (24 hr) 1230-1340 Biologist BARRY

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 60 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-6-2

Frames 25

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

TIDE WINDOW DURING SURVEY = +4 → +7 ft. Low - mid TIDE USEFUL.
MOST OF SUBDIVISION IS CLIFF FACE SURVEYED BY BOAT AT FAIRLY HIGH TIDE. DIFFICULT OR IMPOSSIBLE TO OBSERVE.

Ecological Considerations: 7.11, 2M, 6U

1) INTERFERENCE w/ Herring spawn possible if heavy boat traffic exists

ELUSS - C

MARCH 30, 1990

1/3

COMMENTS

START 1230 TIDE = +4 → +7 ft
STOP 1330

MAJOR SPECIES

- comments augmenting data sheet

BARNACLES - BALANUS PATENT

- SPAT FOUND ON MOST SURFACES WITH BARE ROCK.

- ADULTS ~~THE~~ (> 1-1.5 cm) AB DENSE ON MANY ROCK CLIFFS; MORE than ~~most other sites~~ ELOS6

MYTILUS

- BOULDER AREAS & CLIFFS AT SOUTH END HAVE HIGH DENSITIES OF MYTILUS IN CREVICES. MOST ARE SMALL ADULTS, JUVENILES AND SPAT. ~~SOME (20-30%) ARE OF THESE~~

20 UNDER BOULDERS, MYTILUS IS LESS DENSE, BUT PRESENT

~~SPARSE~~ THESE SITES HAVE HIGH % DEAD MUSSELS.

- EXPOSED BEDROCK CLIFF FACE HAS SPARSE COVER OF MYTILUS

GASTROPODS

- LITTORINES (PERIWINKLES) COMMON AND THE MOST ABUNDANT GASTROPOD

- LITTORINA SCUTULATA, L. SITANA - MOST ABUNDANT IN BOULDER & COBBLE BEACHES, UNDER ROCKS

- EGG MASSES PRESENT

- LIMPETS -

ADULTS AND JUVENILES PRESENT, BUT SPARSE

- WHELKS

- NUCULA, SPARSE

FUCUS

- MOST OF SUBDIVISION HAS DENSE COVER OF ADULTS AND SPORGLINGS.

- EVIDENCE OF REGROWTH FROM WITHERED INDIVIDUALS

- LOWER ZONES (UNDERWATER) appear to have dense to moderate cover of FUCUS.

OTHER SPECIES

FEW DIRECT OBSERVATIONS WERE MADE OVER MOST OF
EXPOSED BEDROCK CLIFF: General Appearance Similar
to ELOSS-B

ECOLOGICAL COMMENTS

- OIL DAMAGE APPEARS ~~TO~~ LOW RELATIVE TO OTHER SITES,
ESPECIALLY IN MIDDLE TO LOW ZONE
- ALTHOUGH MYTILUS HASN'T YET RECRUITED, ~~AND~~ DARNALLS
& FOCUS SHOW EVIDENCE OF RECOVERY
- I EXPECT LOWER ZONES TO RECOVER ~~AND~~ RAPIDLY,
AT LEAST FOR COMMON SPECIES

WILDLIFE

BARROW'S GOLDENEYE

SEA LION

BALD EAGLE

ELASS-C

1230 -

TIDE?

Boulder Beach -

Sparse Fucus

Mytilus in crevices on Bedrock

Green/Brown Slime on granitic

Recruitment + regrowth of
Fucus

#25 - Fucus regrowth + recruitment
at beginning of B

BROWNACE - dense, > spurt
NOT > dead

Boulder field

Dense L. sitkana under &
dense Barn.

Can't see how young -

Looks like > Fucus

ELASS-C

Moderate to sparse

Mytilus cover

> spurt

Lycopodium green

Mytilus underneath $\bar{x} = 25\%$

Lots dead

Some dead large Adults

> Littorines

> Balanus

> > Sparse juv, Mytilus

> LINA / Raltia

Sparse Fucus recruits

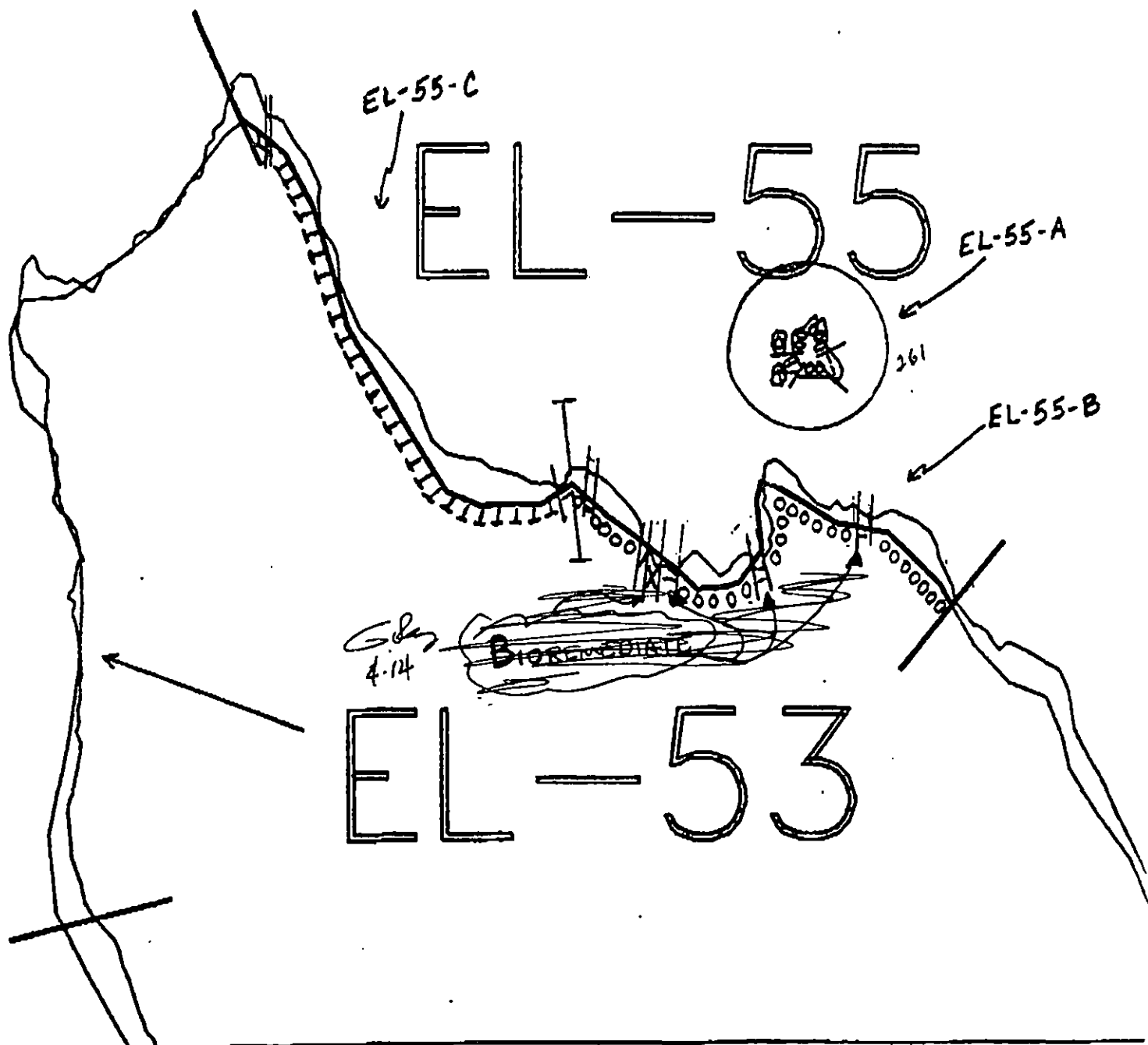
MID ZONE -

Sparse Mytilus adults $\bar{x} = 3\%$

Some dead

Dense Littorines

Sparse Lingula



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-55 SUBDIVISION A (1 of 3)

WORK WINDOW

Bioremediation
Spot Washing

WORK BEFORE 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

Closed to bioremediation and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Do not disturb or flush pollutants into tide pools.

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner Art Weiner
EXXON Amy Bae
NOAA Bukacinski
USCG C.A. Slater

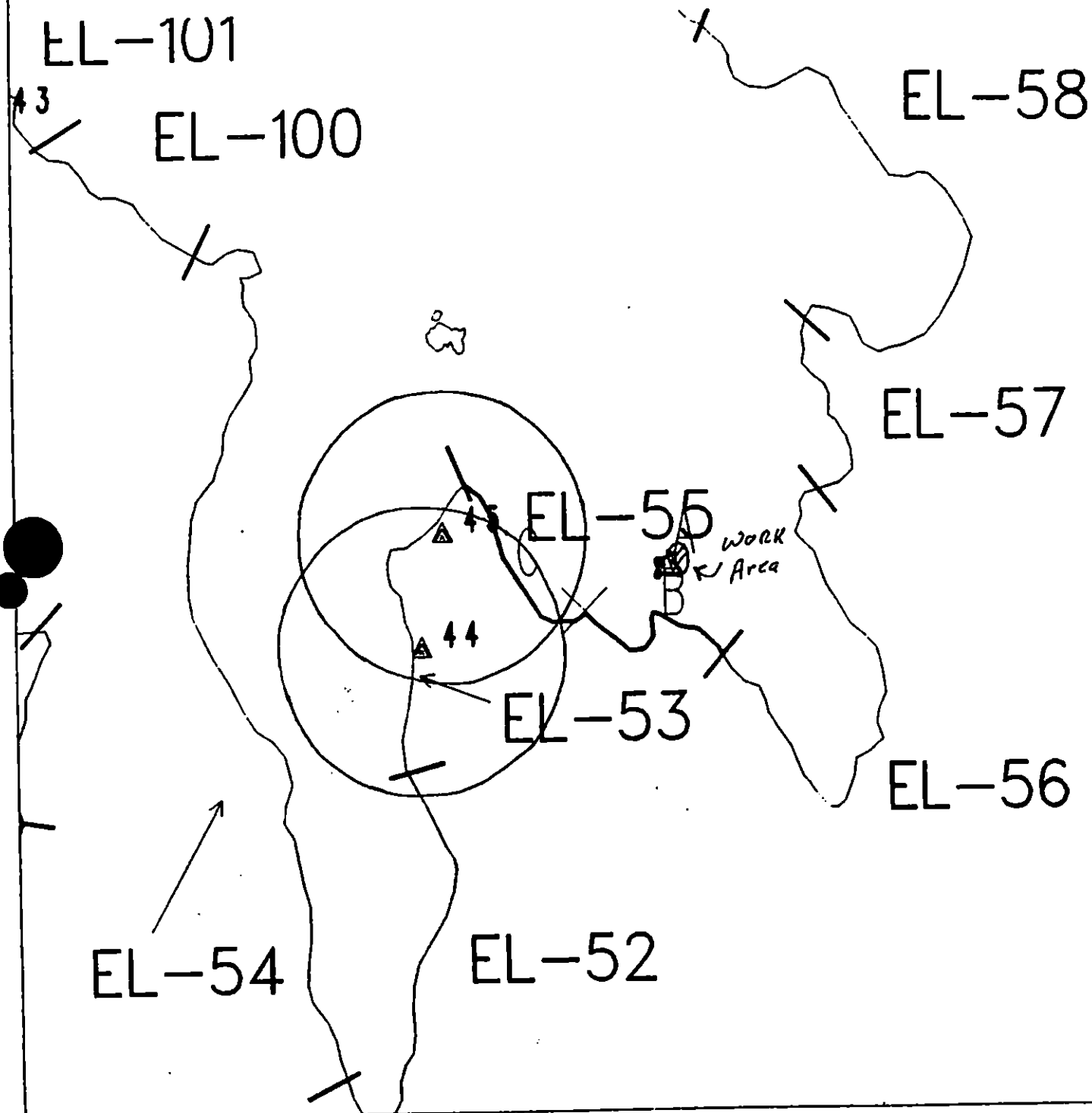
FOSC

DATE

MAY 29 1990

Prepared By: Claudia Meyer was

Date 5/28/90



Exxon Company, USA
Map Key: KNI-EL-55
May 11, 1990



ECOLOGY MAP
SEGMENT EL-55
SUBDIVISION A (1 of 1)



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1360 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/damage to unoiled biota and substrate.
Ensure that there is no disturbance of tide pools.

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: *Debra E. Hume*

DATE: 4/28/90

OILING CATEGORIZATION:

Wide m: Medium m: Narrow m: V. Light m: No Oil m
Subsurface Oil Observed: Yes X No Maximum Depth 7 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>X</u> Spot Washing: <u>X</u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of cover and subsurface oil in areas shown on attached sketch map. Work should be conducted between 6/15 and 8/14 due to herring and deer constraints.

See Constraint Addendum
5/28/90 WTK

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC JOHN BANER
EXXON ANDY TARR
NOAA GARY PETRAE
USCG BENNETH KEANE

FOSC: M L

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-55 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK PRIOR TO 8/15

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater, ADF&G, 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

No constraint for Manual Pickup; subdivision closed to Bioremediation and Manual Raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.
Restrict boat and air traffic, and beach disturbance to essential minimum.

TAG ADDENDUM DATE

ADEC Ast. Weiner Ast. Weiner
EXXON Andy Teal Andy Teal
NOAA Gary Petrac Gary Petrac
USCG GA. REITER GA. Reiter

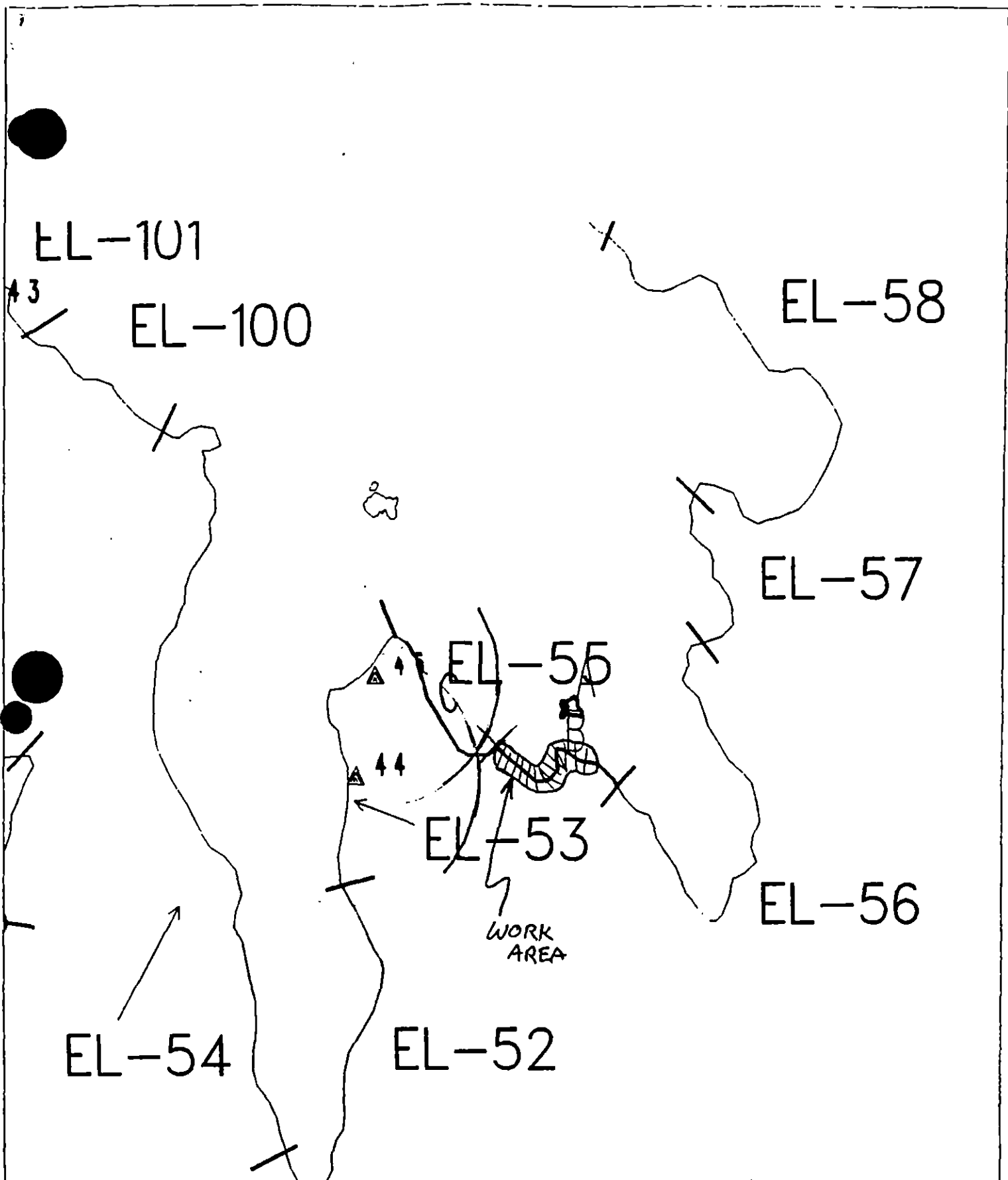
FOSC

DATE 5-17-90

Prepared by:

Andrew Meyer

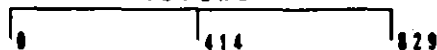
Date: 5/14/90



ECOLOGY MAP
SEGMENT EL-55

SUBDIVISION B (2 of 3)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1360 feet

Exxon Company, USA

Map Keys KNI-EL-55

May 11, 1990

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6U Recreation: Tent sites (6/1 to 9/15)

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/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: [Signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 14 m: V.Light 0 m: No Oil 110 m
Subsurface Oil Observed: Yes X No Maximum Depth 22+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of oiled vegetation, tar balls and bioremediation of areas with coat, cover or subsurface oil. Work should be conducted between 6/16 and 8/14 due to ecological constraints.

TAG COMMENTS: RAVE Prior to BIO IN AREAS OF TP 6, 7+8.

MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/26/90.

ADEC [Signature]

EXXON [Signature]

NOAA [Signature]

USCG [Signature]

FOSC: [Signature] DATE: 5-9-90

See Addendum dated 5/14/90

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6U Recreation: Tent sites (6/1 to 9/15)

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/damage to uncoiled biota and substrate. Ensure that there is no disturbance of tide pools.

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. Hume*

DATE: 4/28/90

OILING CATEGORIZATION:

Wide m: Medium m: Narrow m: V.Light m: No Oil m
Subsurface Oil Observed: Yes X No Maximum Depth 7 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>X</u> Spot Washing: <u>X</u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of cover and subsurface oil in areas shown on attached sketch map. Work should be conducted between 6/16 and 8/14 due to herring and deer constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC

JOAN BAKER

EXXON

ANDY TAYLOR

NOAA

GARY PETRAE

USCG

KENNETH KEANE

FOSC: KL

DATE: 5-12-90

OG

140N

SKETCH MAP

SEGMENT ST/EL-55

SUBDIVISION ADATE 30 March 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/WL
- ☐ SSI
- ☐ 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

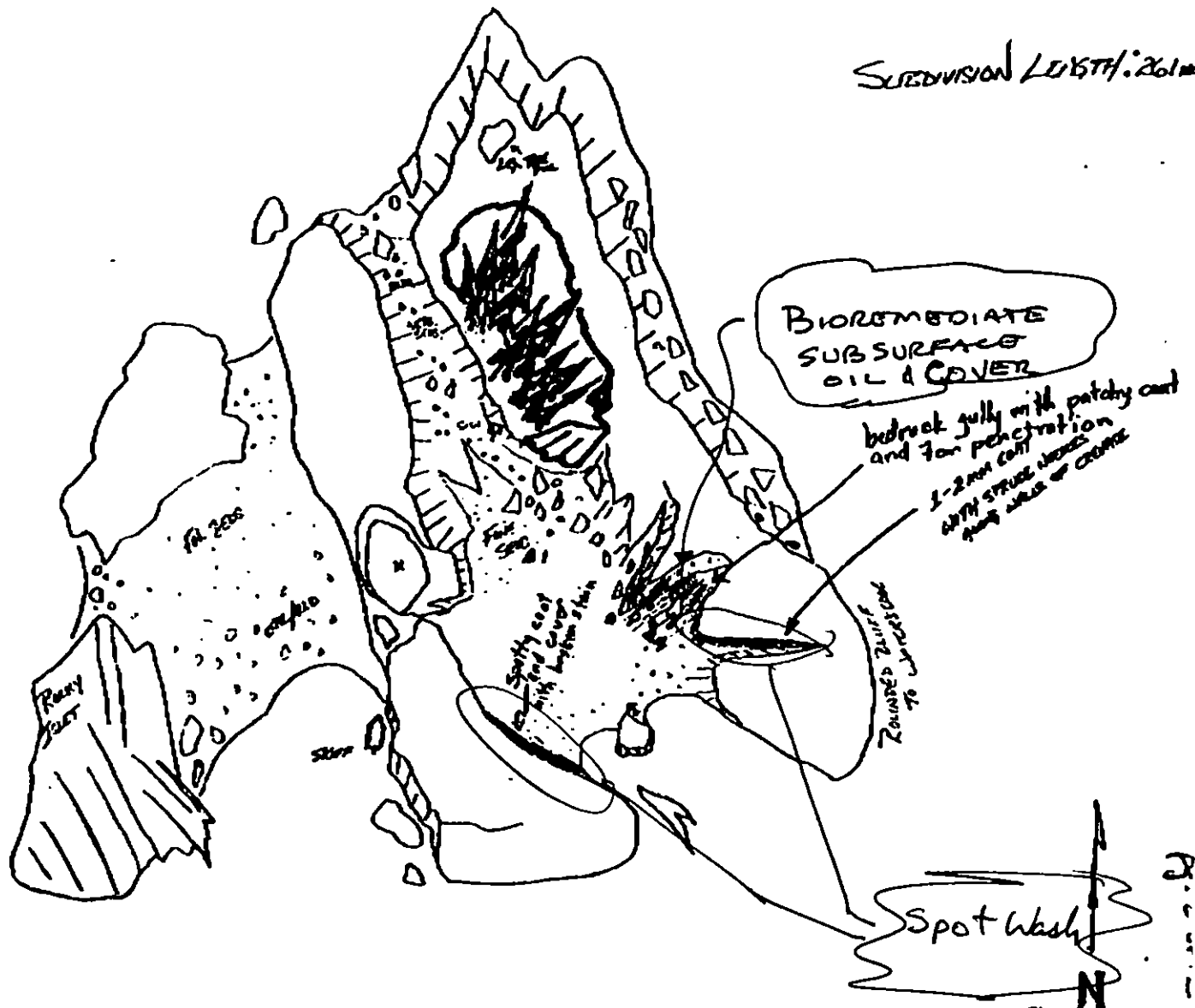
Patchy Distribution

CT/S

Splashed Distribution

Oil Vegetation

1 ➡

Photo location, direction,
and numberOil Character Length (m): AP _____ PO _____ CV 3M CT 2M ST 5M MS _____ PT _____ TB _____ FL _____ NO _____

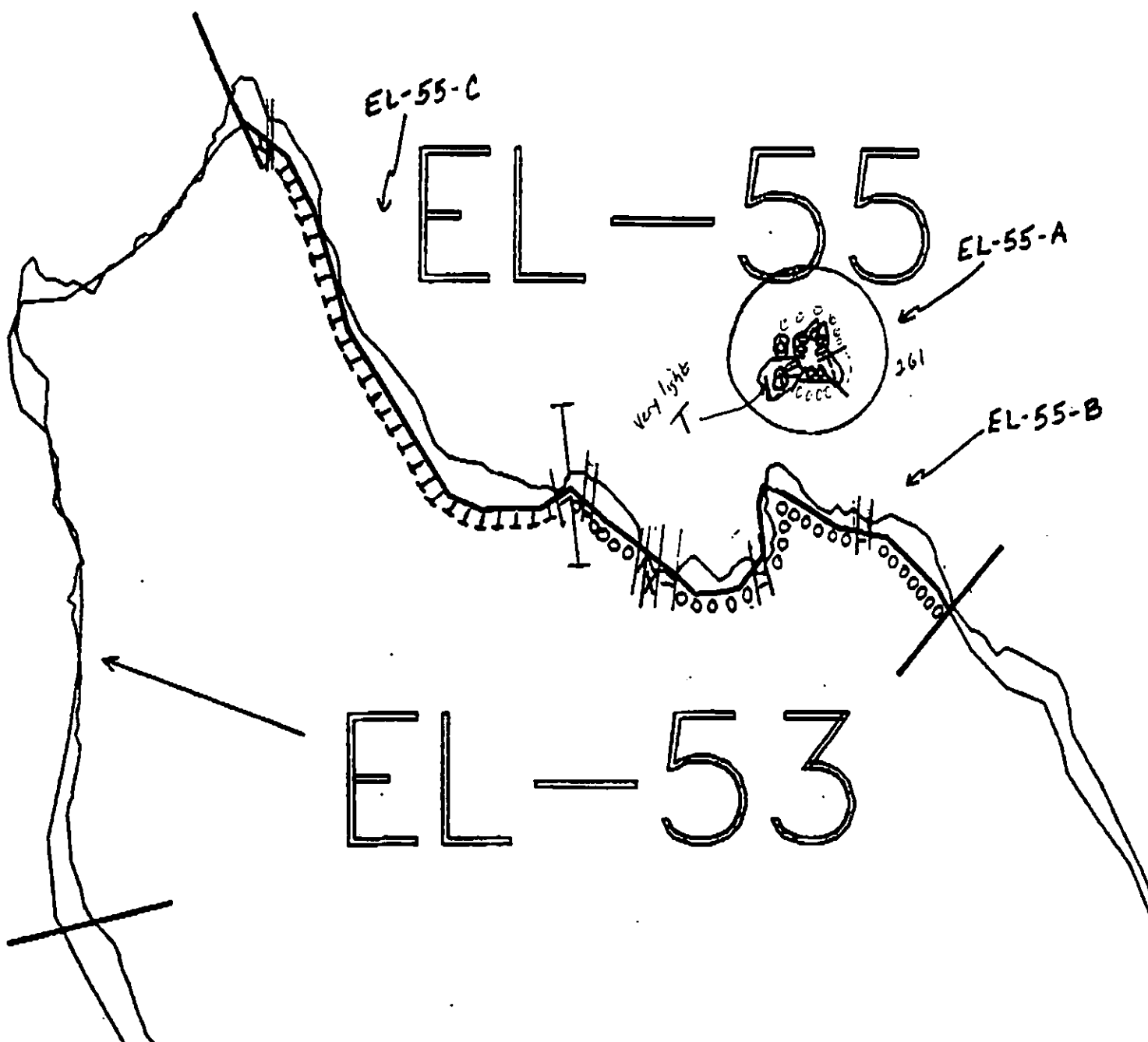
REVISION 000000

P.03

TO 01#-0019075643771#

TO

MAR-31-1990 22:56 FROM ARCTIC SALVOR



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

EL-55

ADEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/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: Charles E. H. [Signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 14 m: V.Light 0 m: No Oil 110 m
Subsurface Oil Observed: Yes X No Maximum Depth 22+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of oiled vegetation, tar balls and bioremediation of areas with coat, cover or subsurface oil. Work should be conducted between 6/16 and 8/14 due to ecological constraints.

TAG COMMENTS: RAVE PRIOR TO BIO IN AREAS OF TP 6, 7 & 8.

MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/26/90.
ADEC [Signature]
EXXON [Signature] FOSC: [Signature] DATE: 5-9-90
NOAA [Signature]
USCG [Signature]

OG C. LON

SEGMENT ST AL-55

SUBDIVISION B

DATE 30 APR 90

CHECKLIST

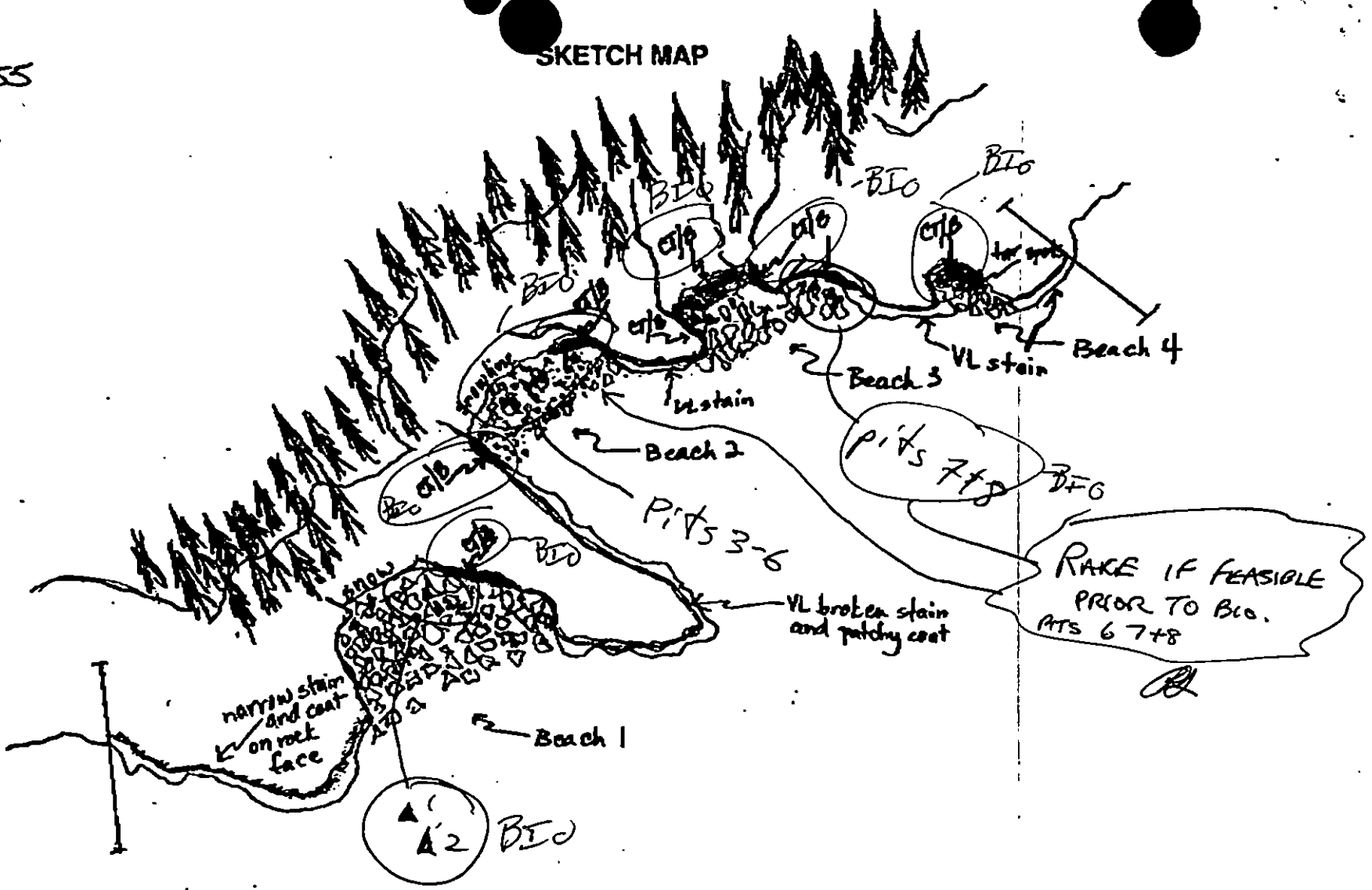
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HMLA WL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

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
Patched Distribution
- $\square$ CT/S
Splashed Distribution

- $\bullet \rightarrow$
Oiled Vegetation
- 1 $\bullet \rightarrow$
Photo location, direction, and number

SKETCH MAP



SENSITIVITIES:
Herring may spawn near beaches 1-4 (April-May)
Frequent boat traffic may interfere

Oil Character Length (m): AP 65 PO 65 CV 65 OT 65 ET 65 MS 65 PT 65 TB 65 FL 65 NO 65

REVISION: 03/20/90

100.4 of 4

OG C. Dillon

SEGMENT ST/ A-55

SUBDIVISION B

DATE 30 April 90

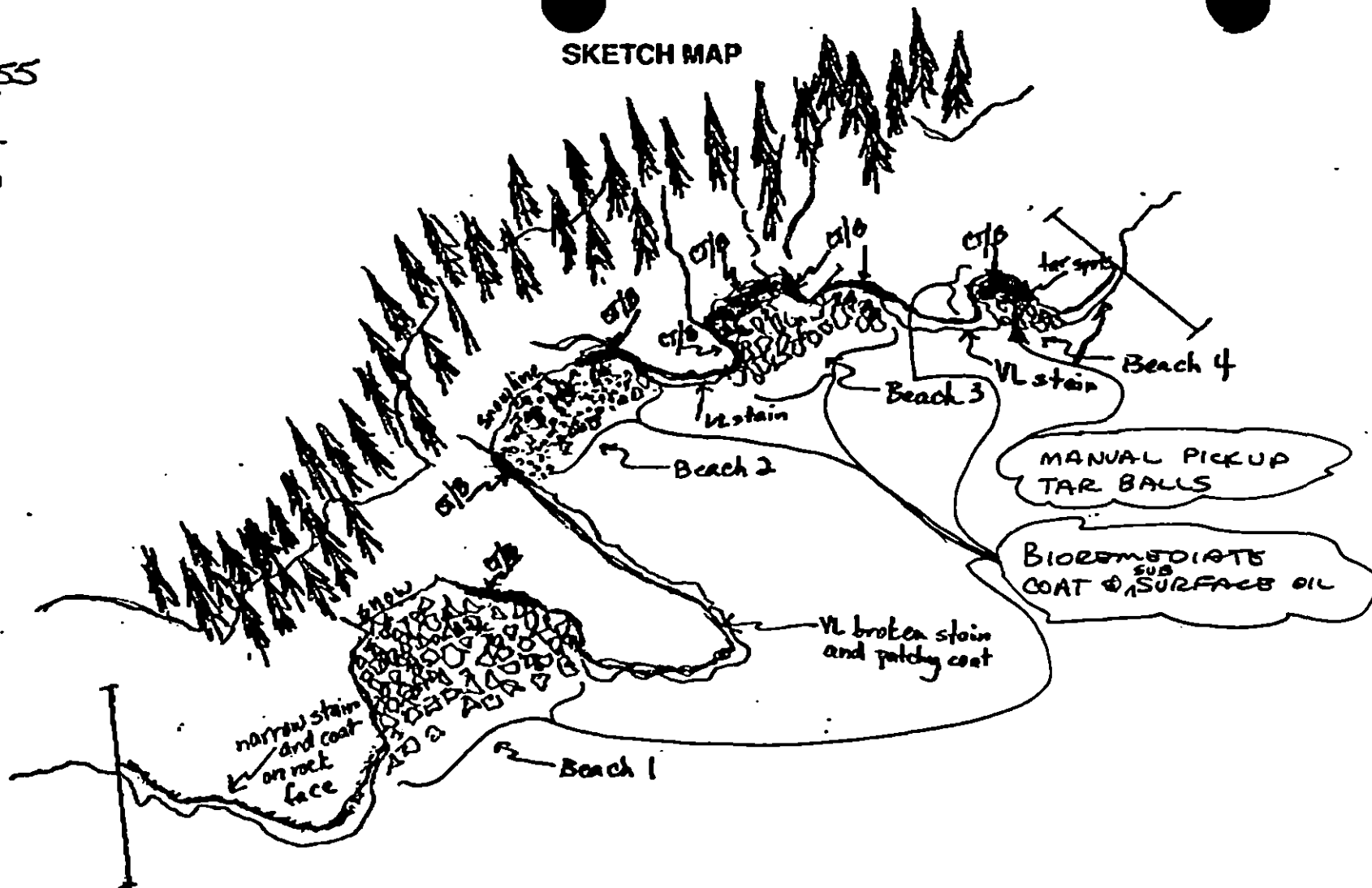
CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PB Location(s)
- ☐ Photo Location(s)

LEGEND

- 1
 PB - No Subsurface Oil
- 2
 PB - 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

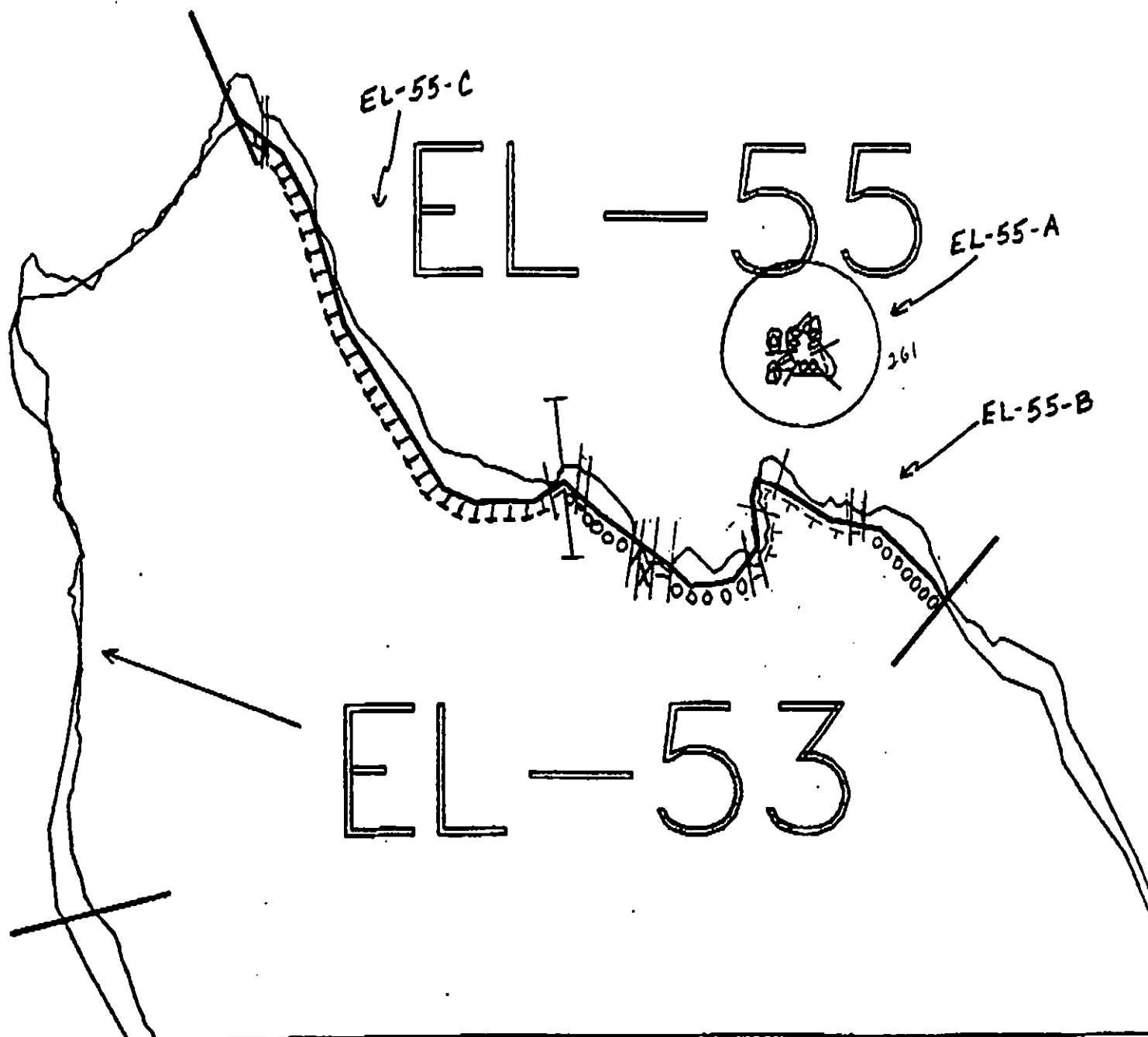
SKETCH MAP



SENSITIVITIES:

Herring may spawn near beaches 1-4 (April-May)
Frequent boat traffic may interfere

Oil Character Length (m): AP _____ PO _____ CV 19m CT 275 ST 250 VS _____ FT _____ TP 10 FL _____ NO _____



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m

0 100 200 300
METERS

Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
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/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. Adams* DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 20 m: Narrow 11 m: V. Light 524 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15+ 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 coat area and subsurface oil. Work should be conducted after 6/15 based on herring constraints.

RACE PRIOR TO BIO IN AREA OF TP1 IF FEASIBLE.

TAG COMMENTS:

FIGLO MONITORS TO AVOID PRESENCE OF TARBALLS/SPOT AND NEED FOR PICKUP.

TAG APPROVAL DATE: 4/26/90.

ADEC JOHN BAUER
EXXON ANDY TALL
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: L DATE: 5-9-90

OG C. Sullivan

SEGMENT ST/ EL-55

SUBDIVISION C

DATE 30 1 MARCH 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

$\square$ CT/C
Continuous Distribution

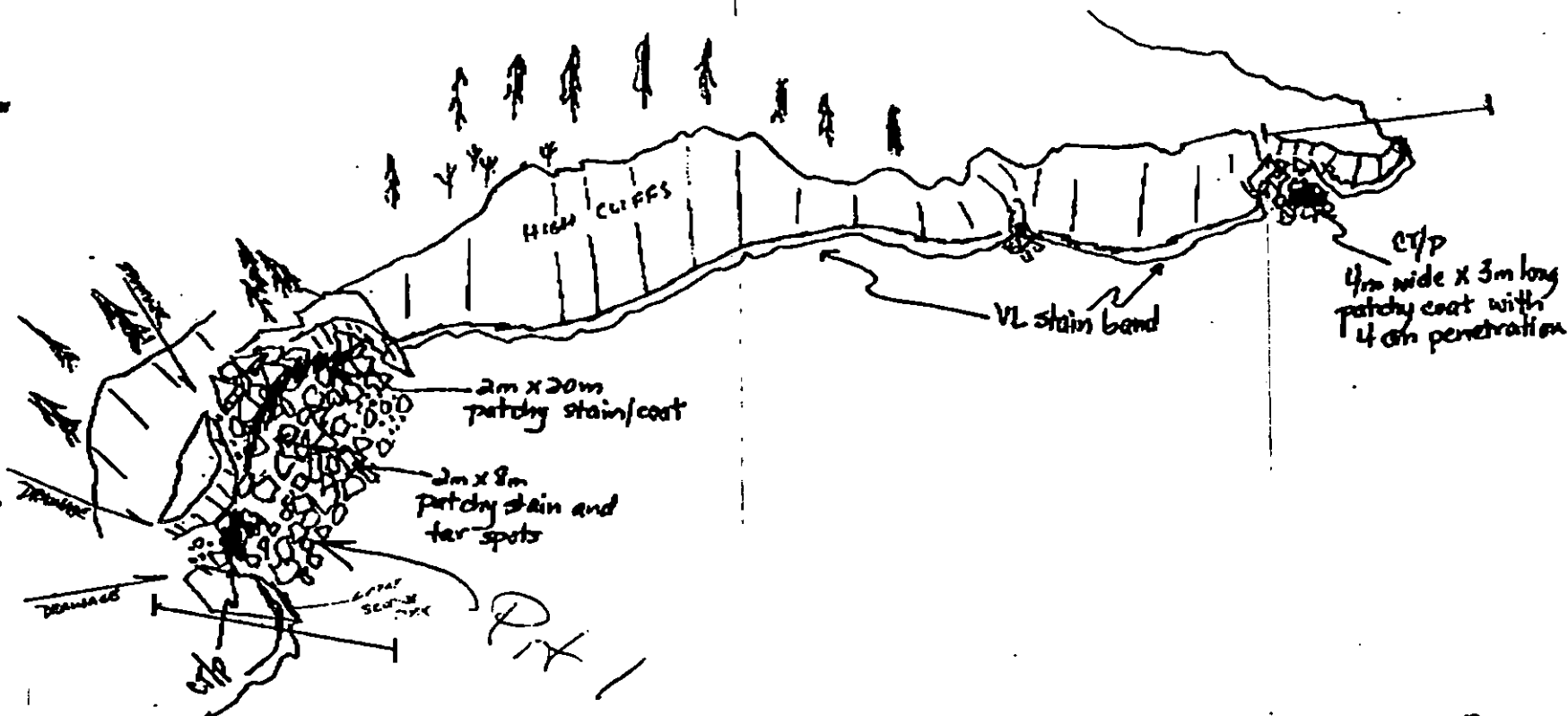
$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patched Distribution

$\square$ CT/S
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$
Photo location, direction,
and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT 27m ST 450 MS _____ PT _____ TB 8m FL _____ NO _____

OG C. DILLON

SKETCH MAP

SEGMENT ST/ FL-55

SUBDIVISION C

DATE 30 / MARCH 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PR - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

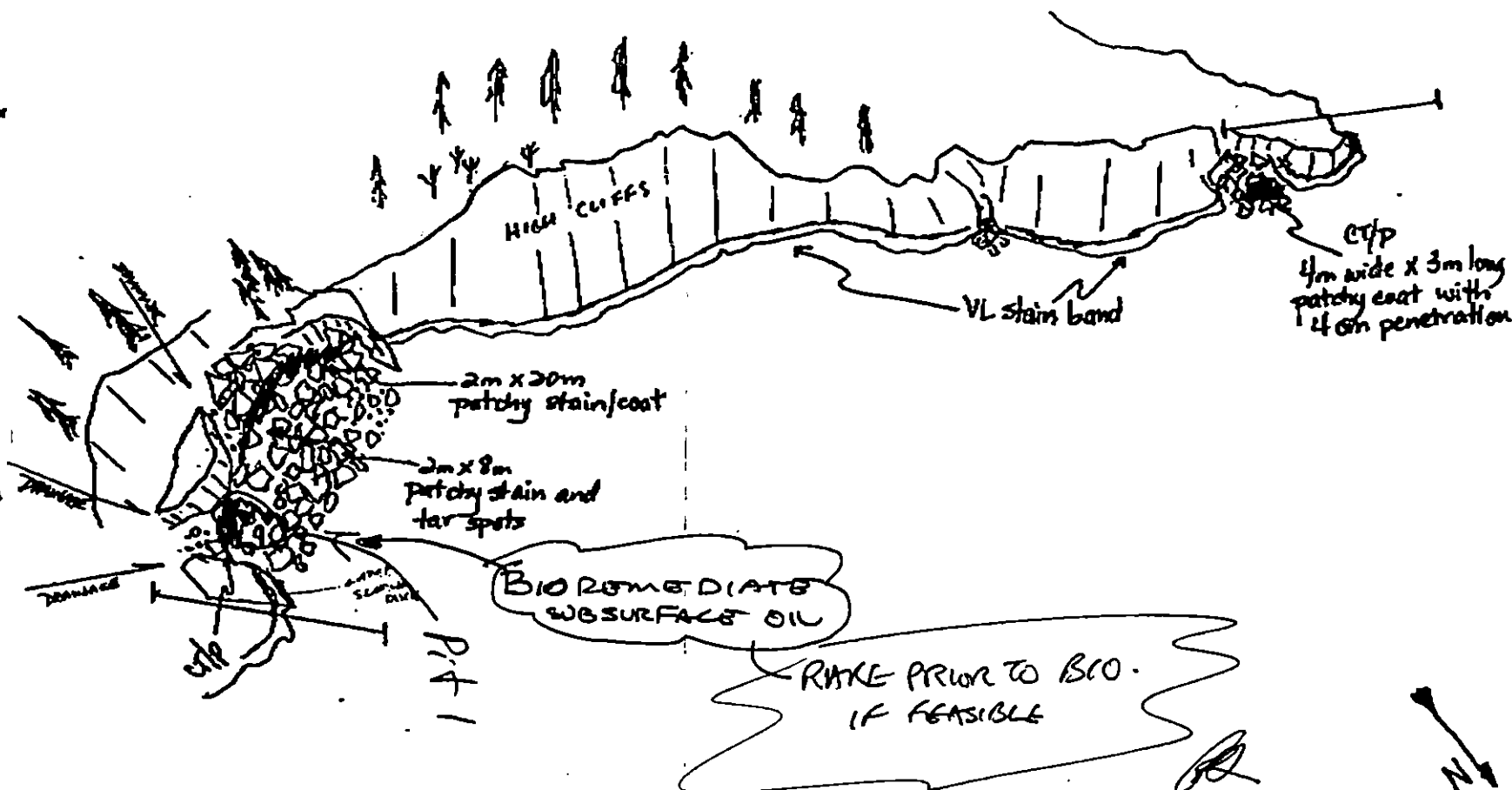
$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

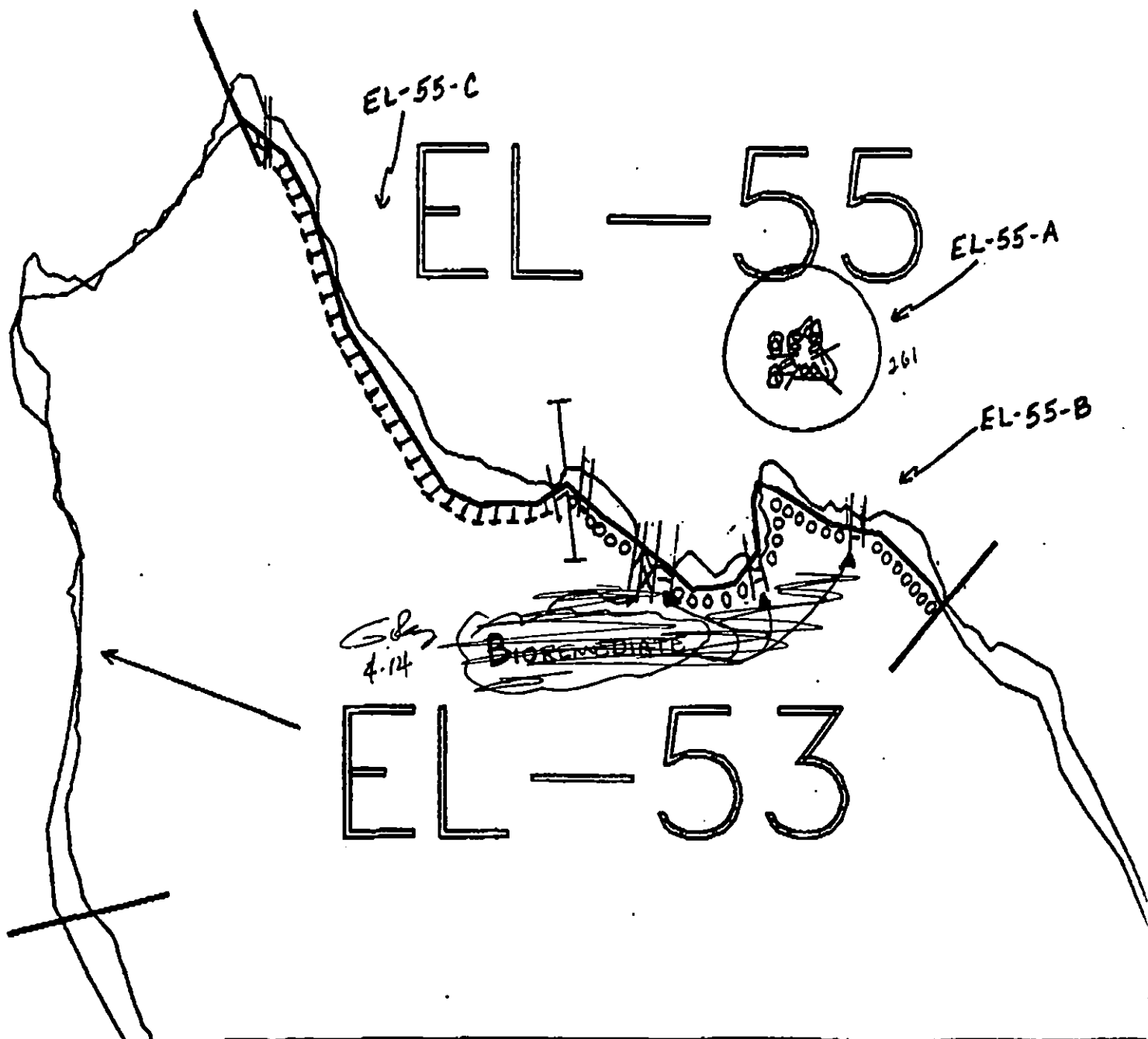
$\bullet \rightarrow$
Oiled Vegetation

1 $\bullet \rightarrow$
Photo location, direction,
and number



BARRY/SCHNEIDER

pg. 2 of 2



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL 055 **SUB:** C **REGION:** PWS **SURVEY DATE:** 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Anadromous stream, 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**

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-55 SUBDIVISION C DATE 4/28/91

ADEC

NAME PETER MONTESANOSIGNATURE Peter Montesano☒ NTR☐ TREATMENT RECOMMENDED

OIL CONTINUES TO PERSIST IN THE SUBSURFACE OF THE POCKET BEACHES. NO PITS WERE LOGGED FOR THE S or L ITZs, MOST OF THE LITZ WENT UNSURVEYED DUE TO TIDE LEVELS. SMALL SHEENS WERE NOTED ALONG SUBDIVISION, BUT THE DISTRIBUTION AND DEGREE OF OILING UNCOVERED DO NOT PRESENTLY WARRANT TREATMENT.

EXXON

NAME C.M. KOTSIMPALISSIGNATURE C.M. Kotsimpalis☒ NTR

VERY LIGHT DEGREE OF OILING FOUND IN THIS SEGMENT. DIVERSE BIO COMMUNITY NOTED. OG & BIO REPORTS TELL THE STORY.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFSSIGNATURE D.S. Kennedy☒ NTR

oil found was light and is being flushed by fresh water streams. Good bio diversity and habitat diversity. I feel that there is no treatment needed.

USCG/NOAA

NAME MICHEL (N) BOI ZEHONE (CG)SIGNATURE Michel Boi Zehone☒ NTR

MOST OF THE RESIDUAL OIL WAS FOUND IN THE MID AND UPPER ITZ OF THE POCKET BOULDER BEACHES. THERE IS EXTENSIVE FRESHWATER FLOW THROUGH THESE BEACHES AT THIS TIME AND SMALL SHEENS ARE COMMON. SUBSURFACE OIL CONCENTRATIONS ARE LOW (LOE N OF N TR) AND BEDROCK OCCURS AT SHALLOW DEPTHS. THIS AREA WAS SURVEYED IN DETAIL. Michel

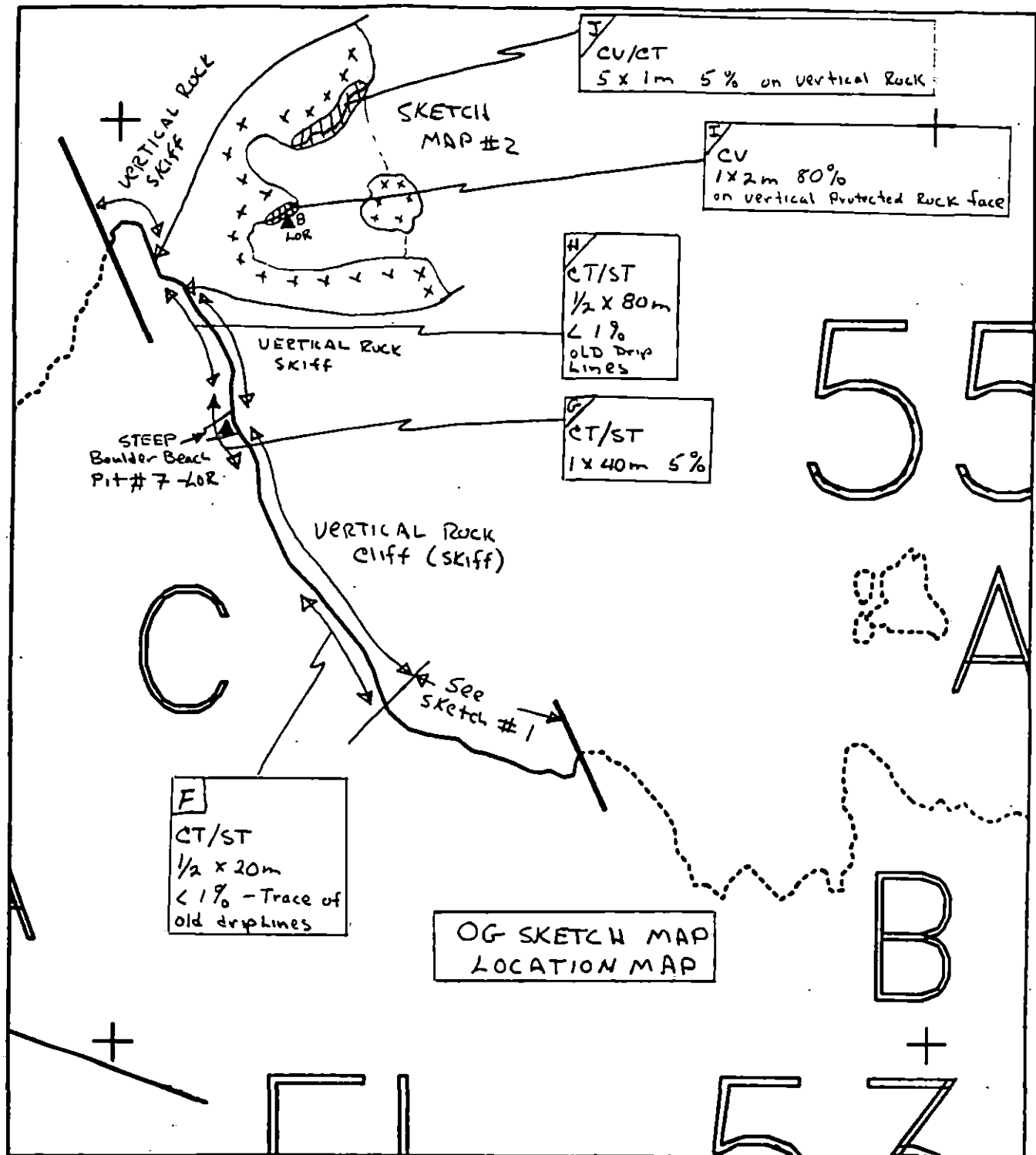
CG-

CONCUR W/ OG REPORT. SUBDIVISION SURVEYED IN DEPTH. NO TREATMENT IS RECOMMENDED. Boi Zehone

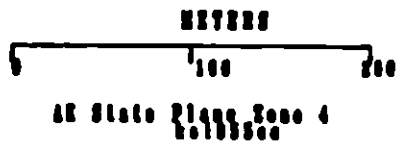
REVISED MC: 5/2/91

REVISIONS: MC 5/2/47
revised 5

REVIEWED: ML 5/2/91



EL055 C



Subdivision Field Map
 Map Key: KN12L055Ca
 Name: Reimer
 Date: 4/28/91

REVIEWED: MC 5/2/91
 Reviewed Z
 J.1:

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 25 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT (Range) +4' to 2.5'
 SUBDIVISION C BIOLOGIST BENSON
 SEA STATE 1' WIND SPEED/DIRECTION 5/E
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - Verrucaria was found in moderate % cover on the oiled rocks. Below the oiled rocks, a diverse & abundant community resides on the bedrock surfaces & tidepools and the boulders on the beach. The diverse MITZ community extends throughout the boulder beach, except the stream area, to the area of Pits #4&5.

(B) - One Littorina was crawling across the coast. Barnacles are below the coast and juvenile Mutilus and Fucus were found in a crevice about 2' below the coast. The MITZ boulder community is diverse & forms high % cover.

(C) - Filamentous green algae, as well as Verrucaria, is found in proximity to the oil here, probably due to the FW runoff. The MITZ boulder community is similar to that in (A) & (B), including Fucus, Odonthalia, Scytosiphon, barnacles & Littorina in abundance.

(D) & (E) - These two locations fit the consistent pattern along this subdivision described above. Nucella egg cases also found here.

(F), (H) - Obvious zonation created by dense bands of (top to bottom of rock face) Verrucaria, barnacles, Fucus + filamentous green algae + Odonthalia (especially under FW runoff).

(continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—	—	—
Waterfowl	—	—	—
Gulls/Kittiwakes	—	—	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

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

Shoreline subdivision map showing important biological features attached.

Team 2
Segment: EL 55-C
BIO: Benson
28 Apr 1991

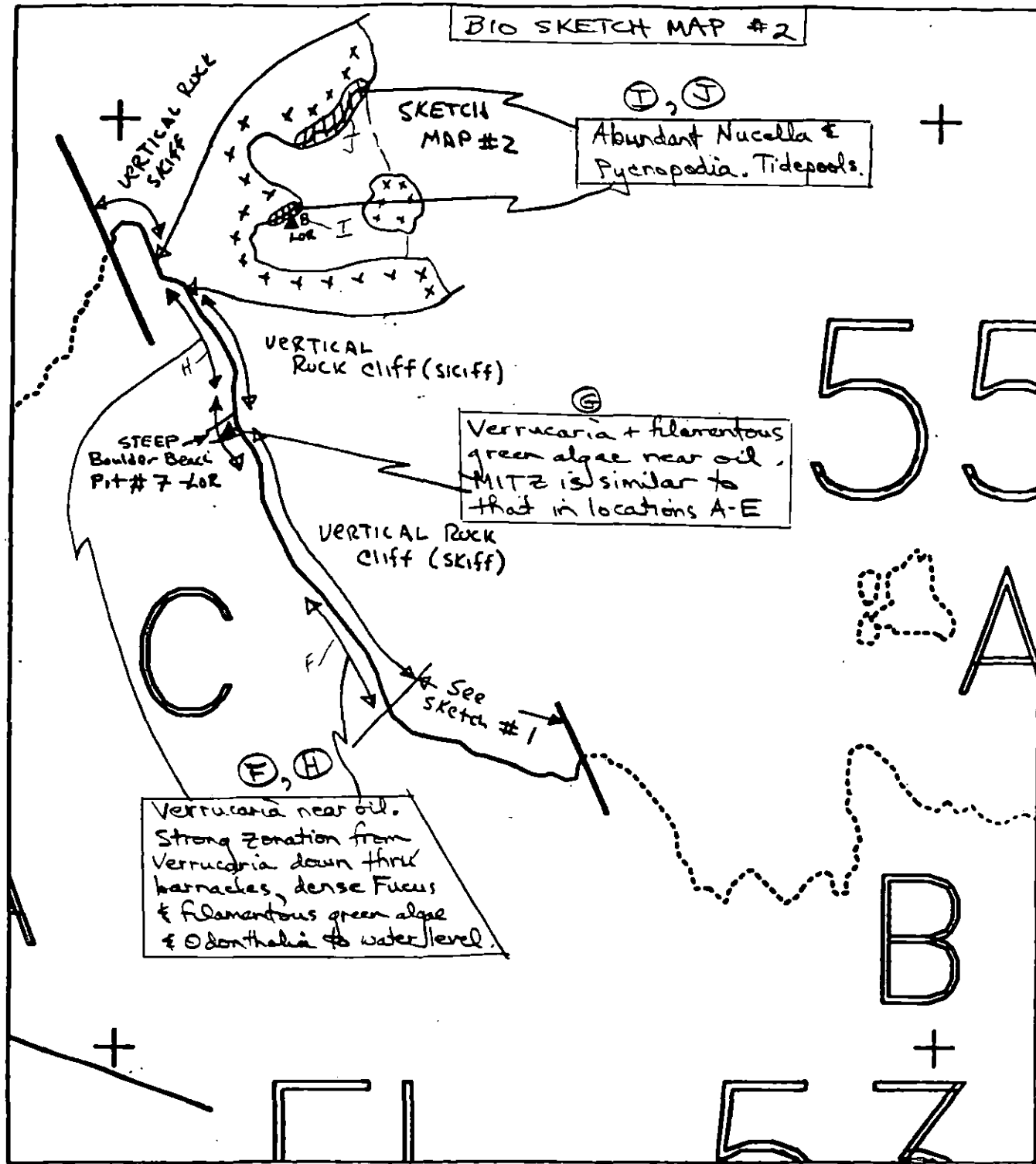
Comments (cont.)

⑥ - Biotically similar to bedrock face, except fewer barnacles in high - MITZ.

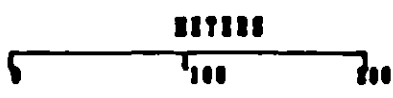
①, ② - Slightly more wave exposure here on the point. Nucella abundant, high % cover of Fucus & Odonthalia in MITZ, and tidepools found on mid-tidal bench.

The moderately-high species diversity and high biotic % cover reflect good recruitment, the stability of bedrock & boulder substrates, moderate wave exposure and the presence of tidepools and other habitat types in this subdivision.

BIO SKETCH MAP #2



BL055 C



AS State Plane Zone 4
NAD83

Subdivision Field Map
Map Key: BL055C
Name: Reimer
Date: 4/28/91
BIO: Benson

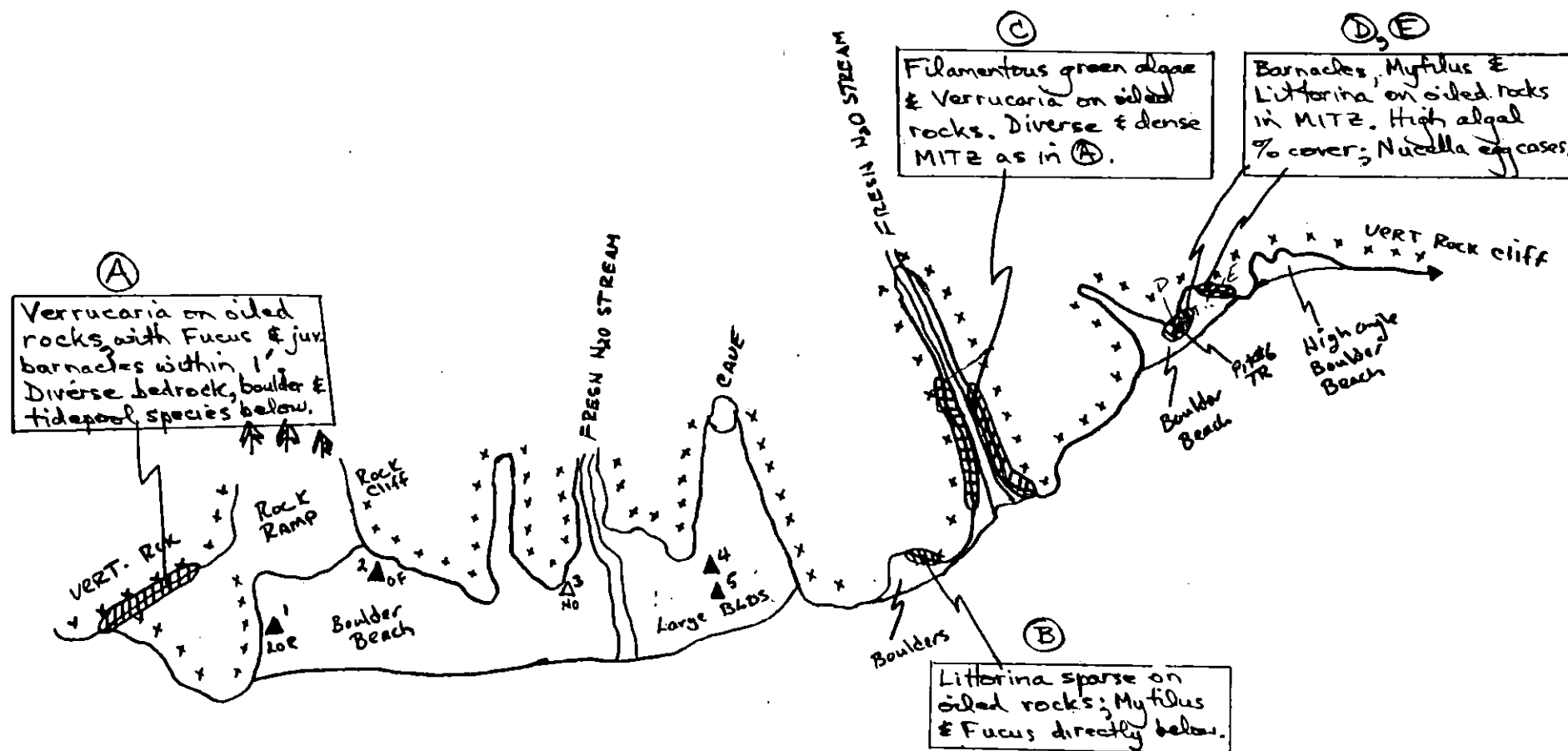
x x x () bedrock

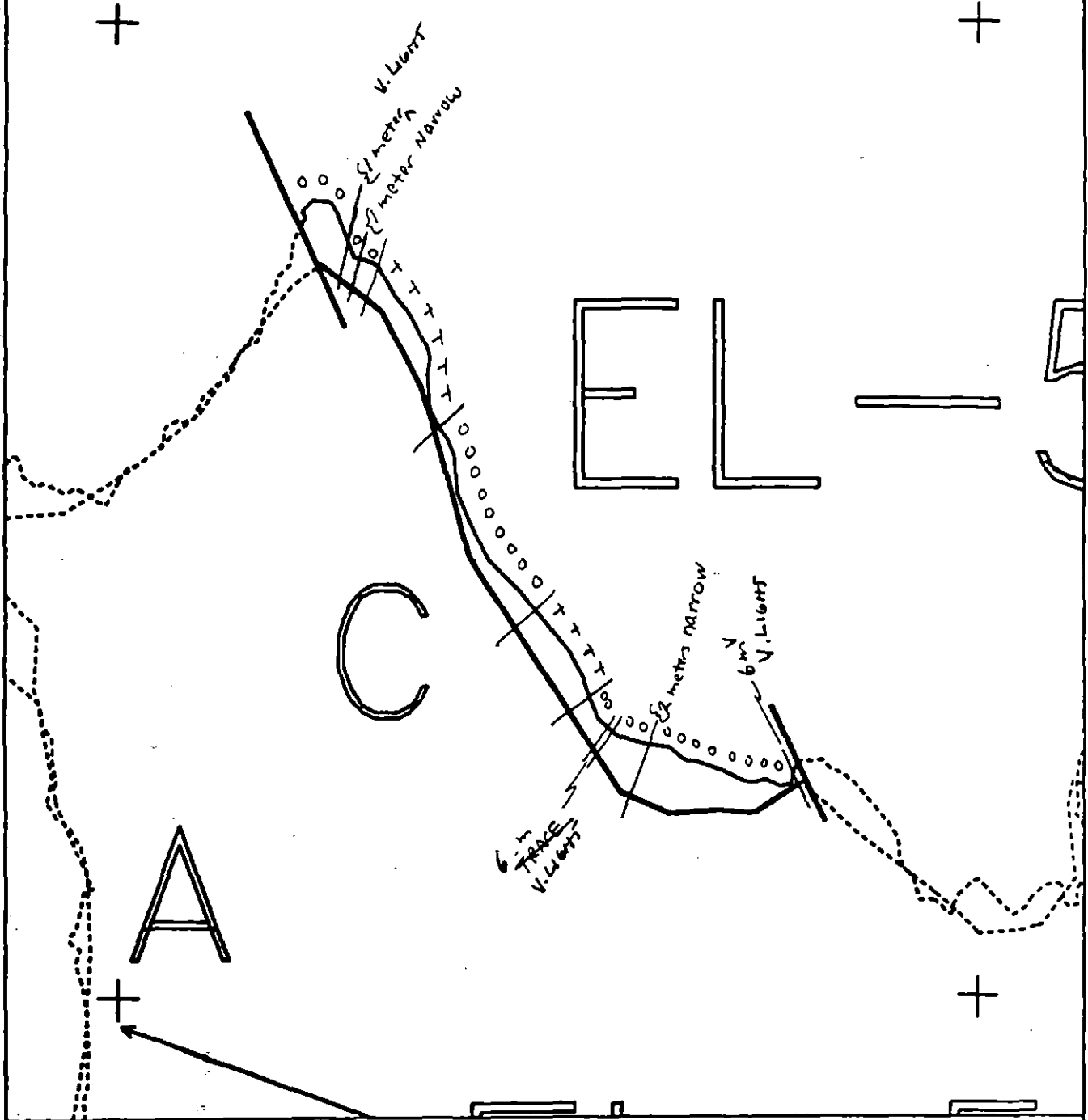
→ - Photo Locations

▲ - TREES

SKETCH MAP #1 SEE LOCATION MAP

SKETCH MAP (10)
EL 55 C
Benson
APRIL 28, 91
18:00 - 19:10

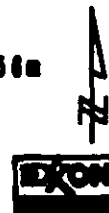




XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

EL055 C
 ADEC Subsegment Length: 550m
 METERS

5 100 200
 AK State Plane Zone 4
 8010550



Subdivision Field Map
 Map Key: KMIEL055C
 Name: Reimer
 Date: 4/28/91
 Date Entered:

REVISED: MC. 5/24/91

revised 2
 J

1991 MAYSAP EVALUATION

SEGMENT: EL 055 SUB: B REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles J. Hennes Date: 5/10/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>		<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: MAY 10 1991

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

FOSC APPROVAL DATE: 5/15/91

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 55 SUBDIVISION B DATE 4/28/91

ADEC

NAME PETER MONTESANOSIGNATURE Peter Montesano☐ NTR☐ TREATMENT RECOMMENDED

Subsurface oil remains throughout most of the pocket beaches along this subdivision, however the higher concentrations of oil are only accessible after removing a thin layer of B.C.S. The oil is removable through labor intensive manual means. The surface sediments (near pits 3,4,5) appear jagged and forbidding, but the oil is not far below the armor.

* The LETZ was NOT observed. ADNR lists this as a Recreational Use Segment.

EXXON

NAME L. M. MASSIMILISSIGNATURE L. M. Massimilis☐ NTR

OG & BIO REPORTS REFLECT A THOROUGH SURVEY. AREA OF SUBSURFACE OILING IN PITS 3,4 & 5 IS RELATIVELY SMALL.

LANDMANAGER

NAME DENNIS S. Kennedy OF USFSSIGNATURE D. S. Kennedy☐ NTR

East side of segment, pits 3/4/5, shows med-high subsurface oil residue and is accessible. This area is protected by island SSA; thus, weathering of oil maybe slower in this location.

USCG/NOAA

NAME MICHEL (N)BMI ZENQUE (CG)SIGNATURE MichelBmi Zenque☐ NTR

This was a detailed survey. Most of the surface oil is very light - even the SOR is widely scattered, small accumulations. The surface sediments on the beaches are very large and the slope is steep, but the MOR/ITOR is very near the surface.

CG-

CONCUR w/ OG & BIO REPORT - ALSO AGREE w/ EXXON REP COMMENTS ON PITS 3-4+5 3

TEAM NO. TWOOG DOUG REIMERBIO SANDY BENSONSEGMENT EL 55ADEC PETER MONTESANOLANDMANAGER DENNIS KENNEDY USFSSUBDIVISION BEXXON CHRIS KATSIMPALISBRI ZENONE - USCG,
USCG/NOAA JACQUE MICHAEL NOAADATE 4 / 28 / 91TIME 10:20 to 11:35
17 05 18 00TIDE LEVEL +0.9 ft. to +4.0 ft.
+7.5 +5.9ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 547⁵⁵⁰ mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE ←EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 526 m VL 45 m NO 479 m US 0 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										BC	M	1	1		X			
B				B							R	M	1	1		X			
C				P							BC	M	2	2		X			
D				S							PCG	M	2	3		X			
E				S							BCPG	M	3	3		X			
F				S							BCPG	M	3	3		X			
G						P					R	V	1	4			X		
H					B						R	V	1	6		X			
I				S							B	M	0.5	0.5		X			
J						T					R	V	0.5	1		X			
K						S					B	H	2	5		X			
L					S	P					R	V	1	10		X			
M	S										BCP	M	5	6			X		
N						S	S				R B	V	1	26		X			

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-

2 - 2

FRAMES 11-16

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	28					X			15 - 26	Y				X			B - PGSC	
2	10							X	-	Y				X			B - PGC	
3	26			X					16 - 25	Y	23	B		X			B - PG	WATER FILLED
4	20		X						3 - 19	Y					X		C - PGD	
5	35			X					8 - 34	Y	34	S			X		B - PG	
6	20						X		? - ?	?	17	S		X			BC - GP	
7	15			X					0 - 15	Y				X			BC - GP	
8	30							X	-	-	28	N				✓	CP - CP	
9	28							X	-	-					✓		P - P	STORM BERM

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

OG COMMENTS: THIS subdivision consists mostly of sloping/vertical rocky cliffs with small pocket beaches of coarse cobbles and large boulders, most which are very steep. Surface oil consists of coat/stain on the more sheltered rock faces and under sides of large boulders, and sor as small patches underneath boulders in wave shadows. Subsurface oil was found in the M/U ITZ, mostly as LOR/TR, except for the easternmost section where MOR/HOR occurred in areas sheltered by large bedrock outcrops.

[Comments by J. Michel]
Final Sketch

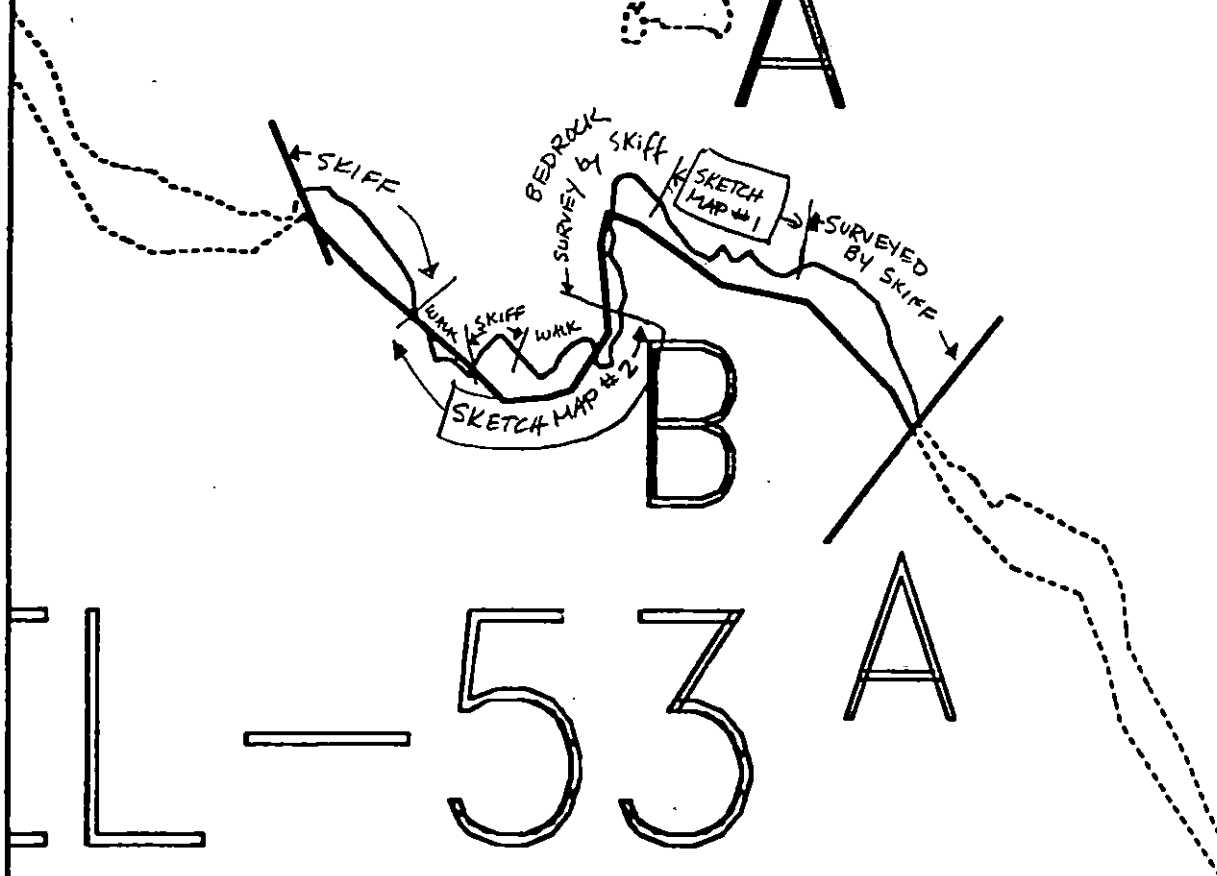
REVIEWED: MC 5/2/91

reviewed 5/1

Jy

EL-55

A



EL-53

A

B

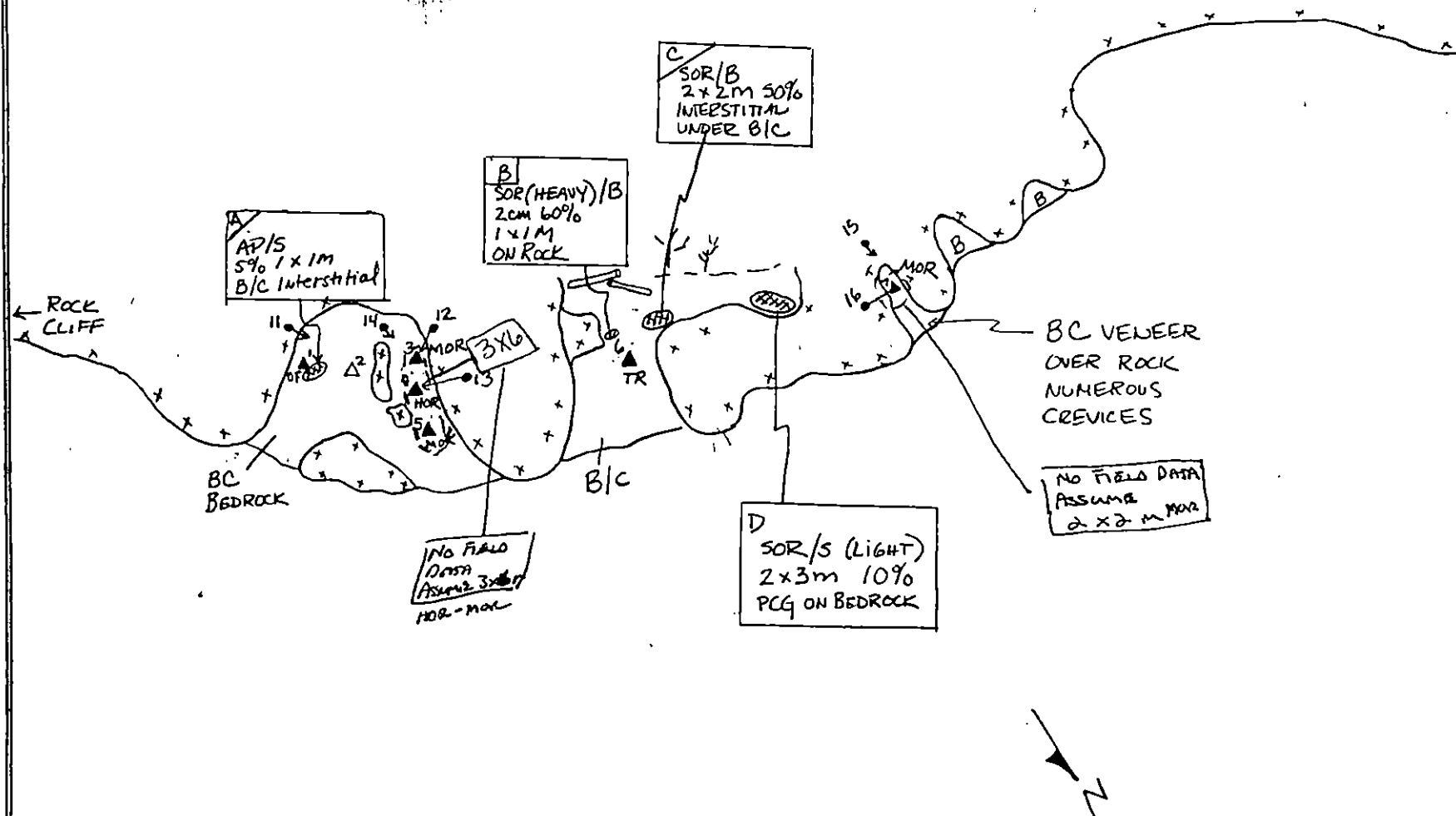
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EL055 B
 ABEC Subsegment Length: 547m
 METERS
 0 100 200
 AK State Plane Zone 6
 6010356

Subdivision Field Map
 Map Key: KMIEL0550
 Name: BEIMER
 Date: 4/28/91
 Date Entered:

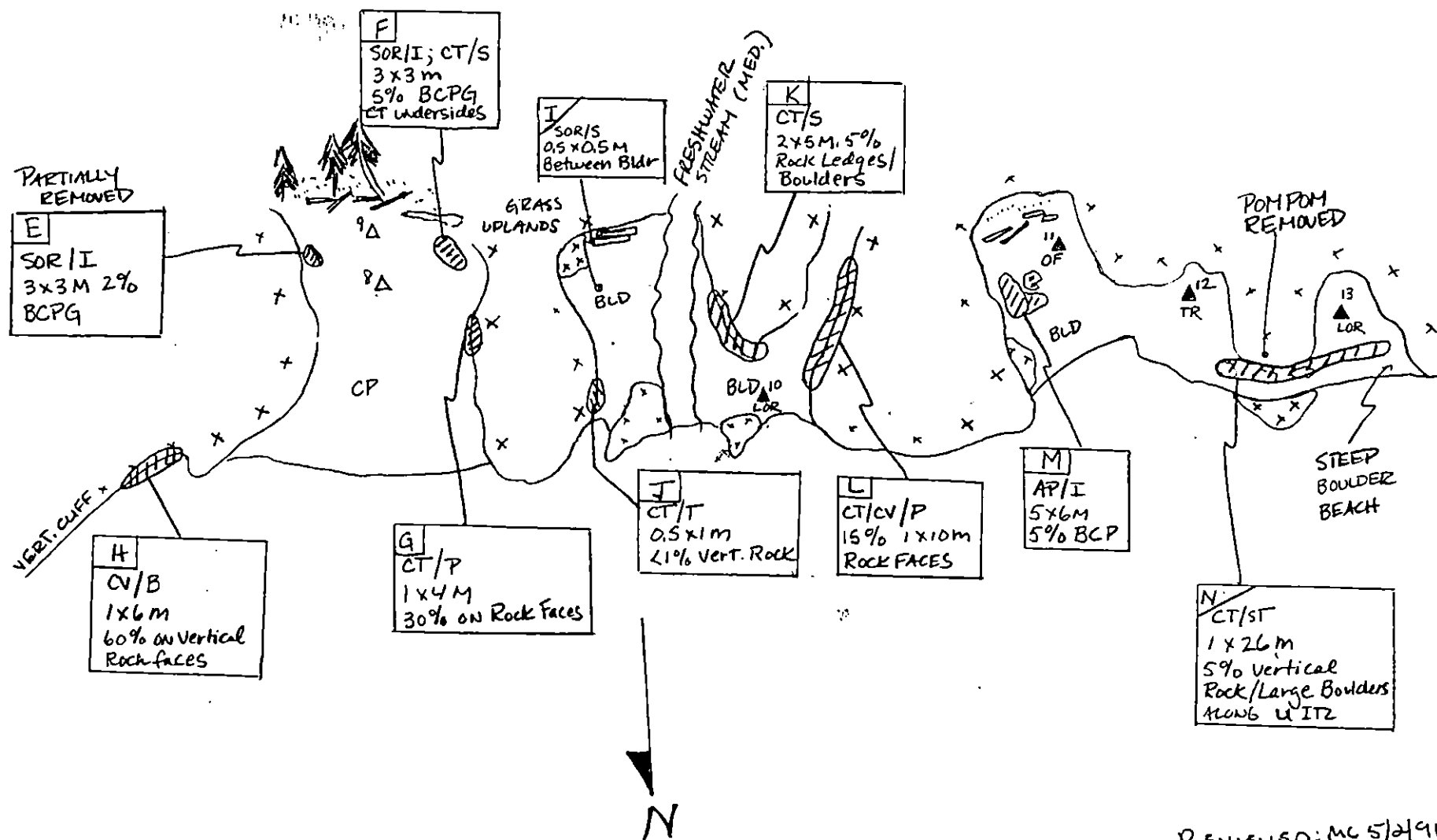
Reviewed: 5/2/91 MC

EL 55B
 SKETCH MAP #1
 4/28/91
 10:20 - 11:35



REVISOR: MC 56/91
 revised
 5:1 94

EL 55 B
 SKETCH MAP # 2
 4/28/91
 1705-1758



REVIEWED: MC 5/2/91
 reviewed 5.1
 11

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 28 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT (Range) AM: 3' to 6'; PM: 6' to 4'
 SUBDIVISION B BIOLOGIST BENSON
 SEA STATE 0' WIND SPEED/DIRECTION AM: calm; PM: 5/N
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ

(A) — Verrucaria & green filamentous algae on rocks near, but no biota on, oiled surfaces. In LITZ/supratidal, I also observed vomitus & scat (of marine mammal?) containing Saxidomus & Mytilus shell fragments and clam siphon skins. In MITZ, Fucus, Mytilus, barnacle & Littorina recruits (& Littorina egg masses).

(B), (C) — green filamentous algae & sparse barnacles on oiled surfaces. In MITZ, moderate density of Fucus & invertebrates. Also present: Ulva, Cladophora, Enteromorpha, Sargassum, Odonthalia, Mytilus, Notoacmea & barnacles.

(D) — Verrucaria & filamentous green algae on oiled surfaces. MITZ similar to (B) & (C): low-med diversity & densities.

(E), (F), (G) — Filamentous green (E) & Verrucaria (F, G) on oiled surfaces. MITZ: mostly cobble substrate with filamentous greens & sparse Balanus, Chthamalus, Littorina & limpets. Boulders have moderate amounts of Hildenbrandia & Fucus (including recruits).

(H) — No biota on CT; Verrucaria near CT. MITZ: low-med diversity with Fucus, filam greens, Enteromorpha, Porphyra, Balanus (also spat), Littorina (also egg masses).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	"tidepool sculpin"
Seabirds	1	4	(? Oligocottus maculosus)
Waterfowl	—	—	
Gulls/Kittiwakes	—	—	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	1	1	

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/2/91

REV

BIO: Benson

28 April 1991

Comments (cont.)

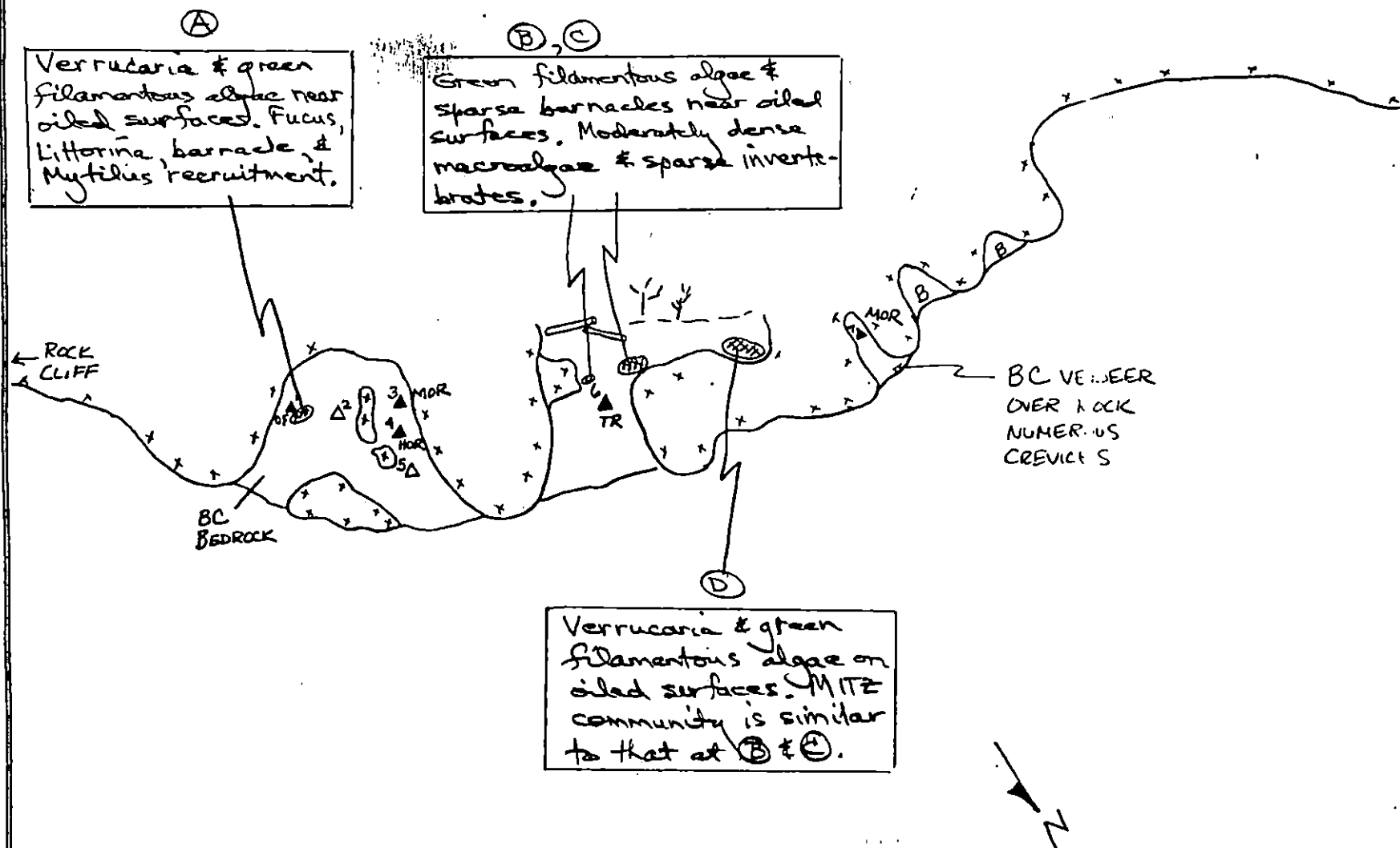
①, ⑦ - Verrucaria (I) & Hildenbrandia & barnacles (J) on oiled surfaces. Little biota above 9'-10' tide level. MITZ: low-mod diversity & % cover of Fucus (with recruits), Rhodomecha, Scytosiphon, barnacles & Littorina.

⑧, ④ - Verrucaria on oiled surfaces; Fucus in crack below (K) MITZ: similar to I, J, except tidepools in bedrock bench containing dense Odonthalia, coralline algae, Ralfsia, hermit crabs & isopods.

⑤, ⑥ - Verrucaria on oiled surfaces. Filamentous green algae throughout UITZ & MITZ; otherwise similar to ①, ⑦.

This site has low-moderate diversity & moderate % cover (except high on bedrock cliffs). These characteristics probably result in part because the offshore island, EL 55 A, reduces this subdivision's wave exposure & perhaps isolates it from water currents. Recruitment of Fucus, barnacles, Littorina, & Mytilus was observed, but is not abundant.

EL 55B
 BIO SKETCH MAP #1
 4/28/91
 BENSON

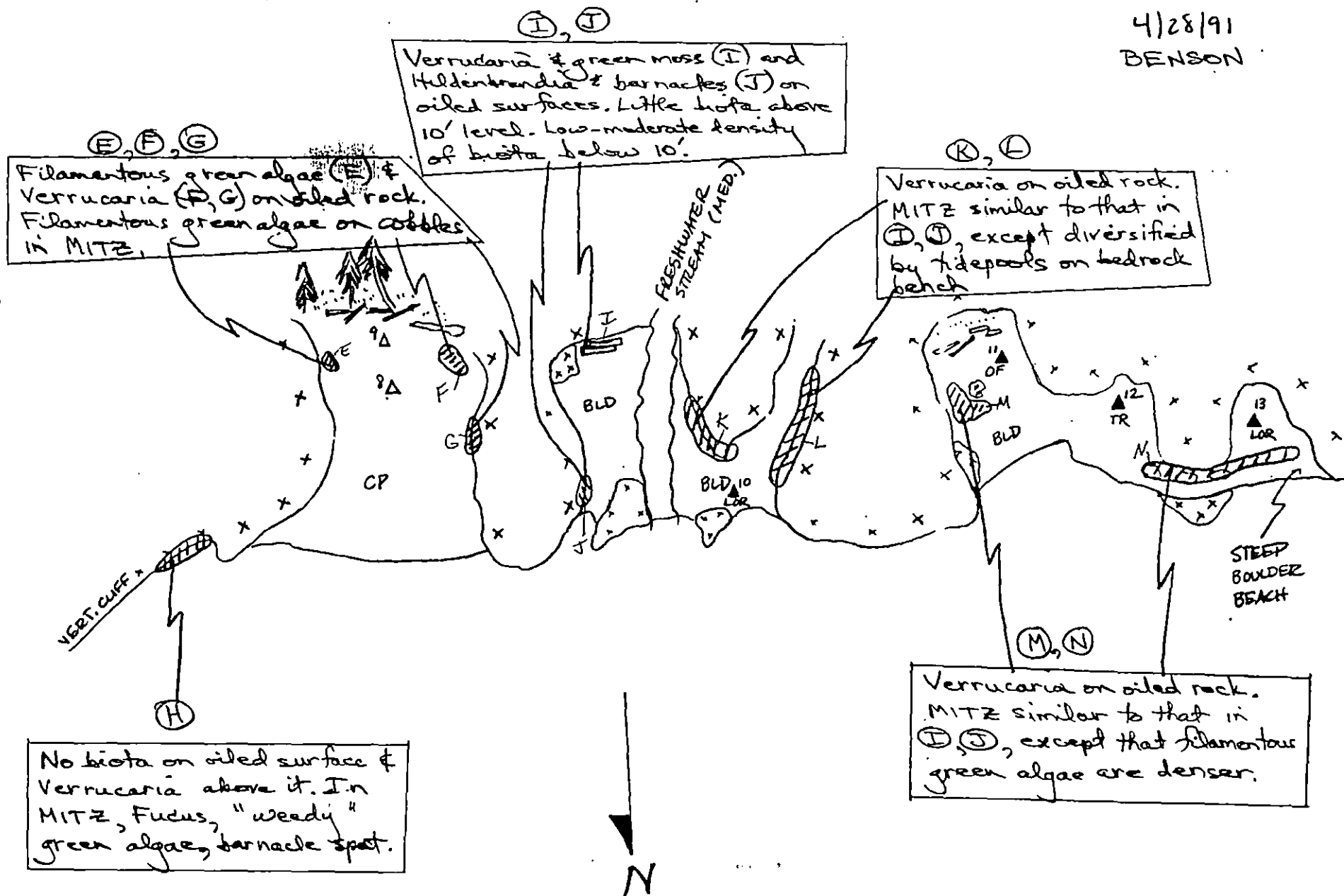


EL 55 B

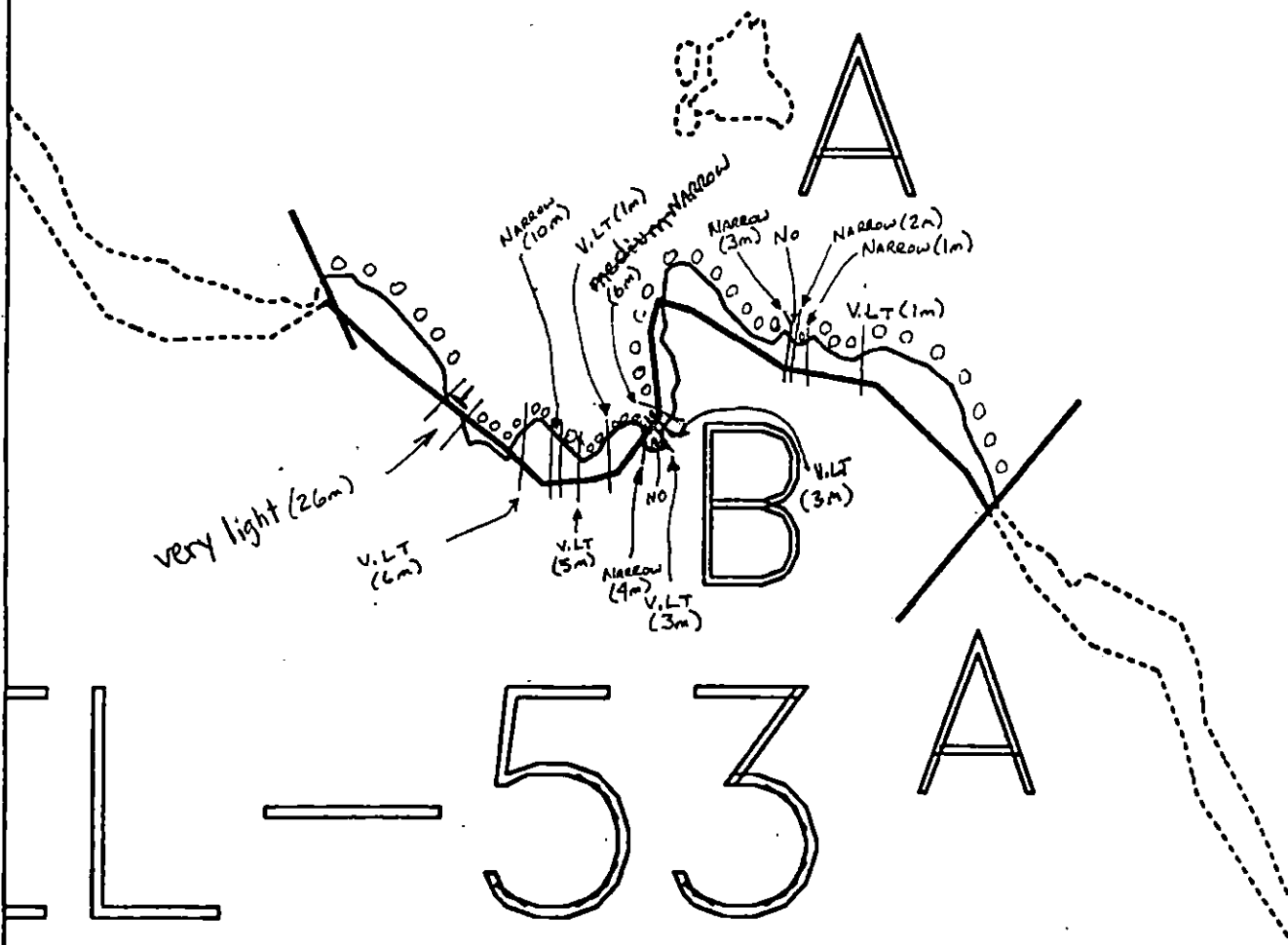
BIO SKETCH MAP #2

4/28/91

BENSON



EL-55



EL-53

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

EL055 B
 ADEC Subsegment Length: 547m
 METERS
 0 100 200
 AK State Plane Zone 4
 481055B

Subdivision Field Map
 Map Key: KNELO55B
 Name: TRIM FOR REIMER
 SURVEY
 Date: 28 APRIL '91
 Data Entered:

REVISED: MC 5/24/91

revised 5.1

g.y.

ASAP TAG REVIEW SHEET

Segment: EL55

Subd: A

Site: 1

Date

PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

X NTR

Treatment
Recommended:

NTR

Recommendation
Sheet
calls for
- manual
till

Recommendation Sheet - ID's
isolated subsurface mobile oil.

Priority Site For Reassessment In 1991

YES NO
X CG
NOAA

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 13 AUG
- Manual till ~~stop~~ sponge up PO.

Low Priority

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL-55 Subd.: A Site: 1 Date: 8/4/90 1990

Conditions Observed: Persistent bleeding of black mobile oil, Coats/
Covers on bedrock in sheltered areas

Followup Recommendations: AREA of subsurface oil needs to be
manually tilled and black mobile oil mopped up with pom-poms.
Coats/covers on bedrock in sheltered areas should be noted and if
present next year should be removed. After oil is removed custom
blend needs to be applied.

Completed by Pickup ☐ YES ☒ NO
Crew:

Priority for Addressing in 1990: ☐ High ☒ Mod. ☐ Low

ADEC

Wesley Ghormley
(name)

Wesley Ghormley
(signature)

Comments: Areas where pits were dug filled with black mobile oil, Pom-poms
were used by ASAP to absorb oil in pits dug. Coats/covers are a concern
if still present in 1991 Removal will be recommended.

Exxon

Ray Sotelo
(name)

Ray Sotelo
(signature)

Comments: Manually till/rake area shown on wash order map and re-
apply custom blend.

USCG

PSI Leo Bersalona
(name)

Leo Bersalona
(signature)

NOAA

ART WEINER

Art Weiner

Comments:

MOBILE OIL MUST BE TOTALLY REMOVED

This is an isolated incident and should be a low priority.

Land Rep.

John EBEL
(name)

John Ebel
(signature)

Comments: Due to rapid time constraints, rapid surveying failed to determine
the extent of O.P. oil. Pits should be excavated horizontally & vertically
across the tide zones to adequately locate oil for removal.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS1 ^{EL} 55 SUBDIVISION: A SITE: 1 DATE 8-4-90
 SCG/NOAA PSI Leo Bersalona, USCG Leo Bersalona
 NAME Art WEINER SIGNATURE Art Weiner

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

TO EVALUATE CUSTOMER BLEND TREATMENT.
 TO EVALUATE PERSISTENCE OF COATS ON VERTICAL SURFACES THAT HAVE NOT
 BEEN TREATED.

ADEC
 NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

TO evaluate follow up treatment. Coats/covers with
 spruce needles are a concern. They are very noticeable
 in sheltered areas. If still present in 1991 Removal
 will be recommended.

LAND MANAGER
 NAME John Ebel SIGNATURE John Ebel

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

I concur w/ NOAA, USCG and ADEC.

EXXON
 NAME REY SOTELO SIGNATURE Rey Sotelo

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

The amount of oil remaining is questionable so this site should
 be reassessed in '91 but not as a ^{high} priority.

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO ASAP #2 EXXON SOTELLO SEGMENT AS/ EL-55
 OG CHANEY USCG WEINER EBERSALONA SUBDIVISION A
 ADEC GHORMLEY LAND REP EDEL TOTAL NO. SITES 1
 DATE AUG 4 1990 TIME 16:40 to 18:00 TIDE LEVEL 5.5 to 4.0 ft F.O.F.
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 6.5 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W — m M — m N 2.5 m VL 30 m NO — m US 277 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER			X			X		
COAT			X		X	X		
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM		X			X	X	X	
NO OIL								
EST. SITE LENGTH					<u>55</u>			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH								

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH								

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	25		X			10-25	N			X		BC-BGR
1	2	25	X				5-15	Y			X		BCP-CMG
1	3	30		X			0-30	N			X		PG-PGB
1	4	30				X	.	Y	X				PG-PG
1	5	30			X		20-30	N	X	X			G-GC
1	6	25			X		0-25	N			X		P-PM
							.						
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Photographs:

Roll No. ASAP #2

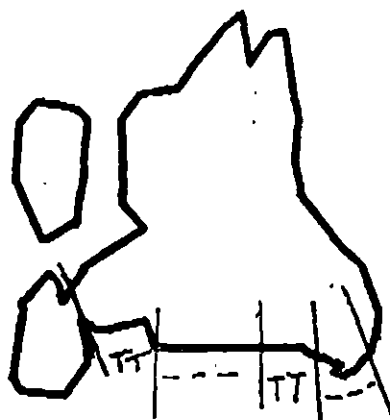
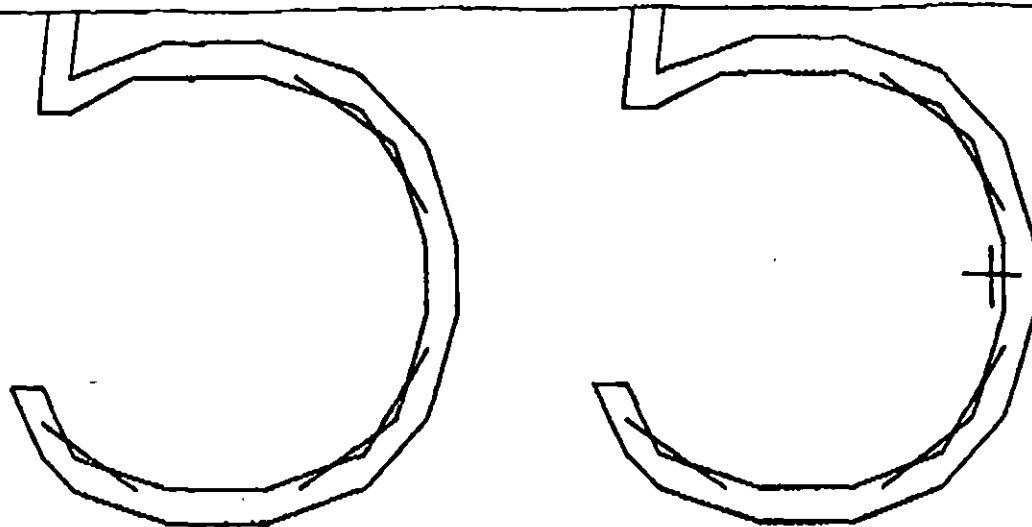
ROLL #2

Frames 8, 9, 10

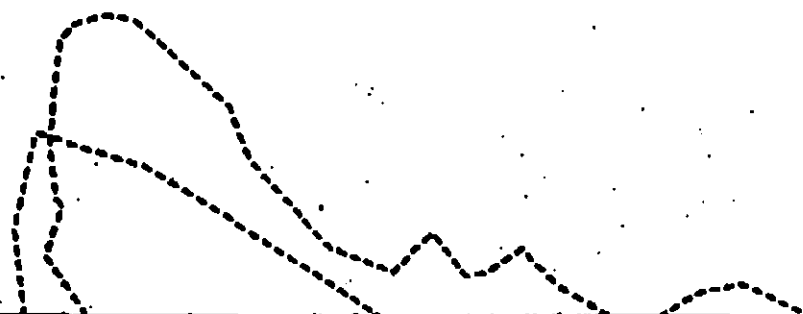
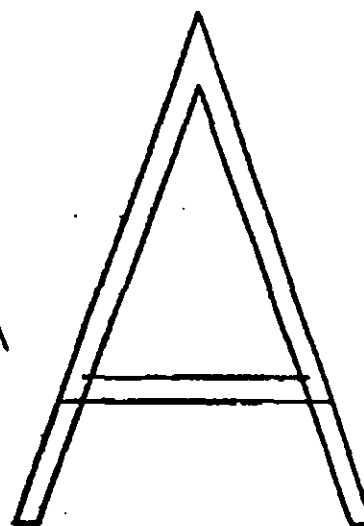
Black Mobile Oil
Fresh Looking Black

Rainbow Sheen

COMMENTS Area around pit 6 was originally listed as OP but ASAP only observed a rainbow film in the area. In the vicinity of pits 1 and 2, fresh looking black oil flowed into the pits along with ground water. Subsurface



SITE 1



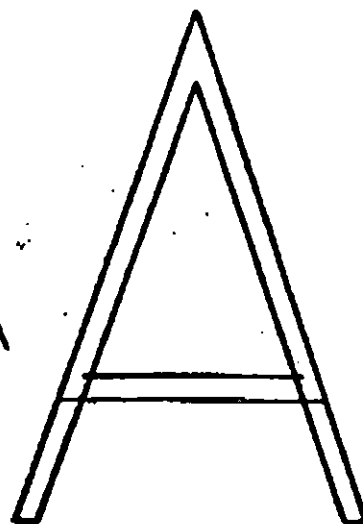
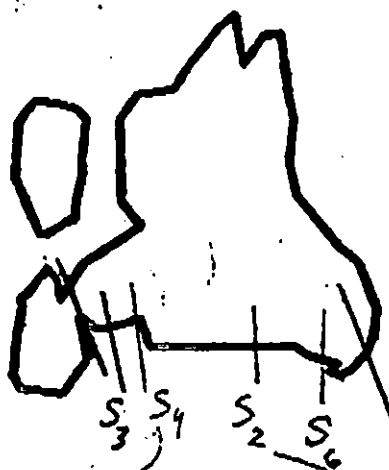
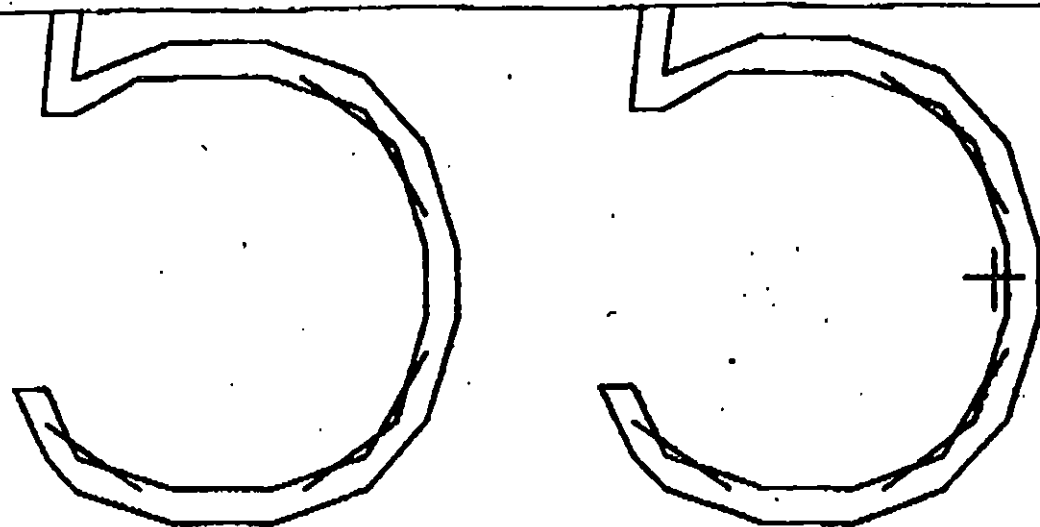
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light

EL-55 A
 ADEC Subsegment Length: 332m
 METERS

0 30 72



Subdivision Field Map
 Map Key: KNIEL-55A
 Name: CHANEY
 Date: AUG 5 1990



SITE 1

Photos 9, 10

Photo 8



XXXX
////

TTTT

Wide
Medium
Narrow
Very Light

EL-55 A
ADEC Subsegment Length: 332m
METERS



Subdivision Field Map
Map Key: KNIEL-55A
Name: CHANEY
0.10 - 1.00

1991 MAYSAP EVALUATION

SEGMENT: EL 055 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. H. [Signature] Date: 5/10/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>		<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: MAY 10 1991

FOSC APPROVAL DATE: 5/16/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 55 SUBDIVISION A DATE 4/28/91

ADEC

NAME PETER MONTESANO SIGNATURE Peter Montesano

☒ NTR ☐ TREATMENT RECOMMENDED

AP Removed.

OIL PERSISTS THROUGHOUT THE BEACH AREAS AS ILLUSTRATED, HOWEVER THE DEGREE AND DISTRIBUTION CANCEL ANY REASONABLE BENEFICIAL TREATMENT POSSIBILITIES; THIS IS ESPECIALLY THE CASE CONSIDERING THE NOAA REQUEST TO PREVENT DISRUPTION TO THE STUDY SITE.

PIT9 WAS VIRTUALLY HOR.

ADNR LISTS THIS ISLAND AS A RECREATIONAL USE AREA.

EXXON

NAME C.M. KATSIMPALIS SIGNATURE Cm Katsimpalis

☒ NTR

MOSTLY VERY LIGHT, SCATTERED DEGREES OF OILING REMAIN ON THE ISLAND.

REMOVED SMALL PATCH OF ASPHALT AT ADEC REQUEST.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS SIGNATURE D. S. Kennedy

☒ NTR

NOAA STUDY SITE

Bio reports low species diversity.
most by light or trace amounts of oil observed.

USCG/NOAA

NAME MICHEL (NOAA) Bm. ZENONE (CG) SIGNATURE Micheel Bm. Zenone

☒ NTR

THIS SUBDIVISION IS ONE OF THE NOAA BIOLOGY STUDY SITES. IT IS REQUESTED THAT NO FURTHER TREATMENT BE CONDUCTED HERE, SO NOT TO INTERFERE WITH THESE STUDIES. THE AP WAS REMOVED DURING OUR SURVEY.

CG-

OG REPORT REFLECTS TOTALLY ACCURATE ASSESSMENT. 3

DATE 4 / 28 / 91

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 11 m VL ~~3~~ m NO ~~524~~ m US 0 m

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 2 FRAMES 21-24

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

98

DATE 4 / 28 / 91

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

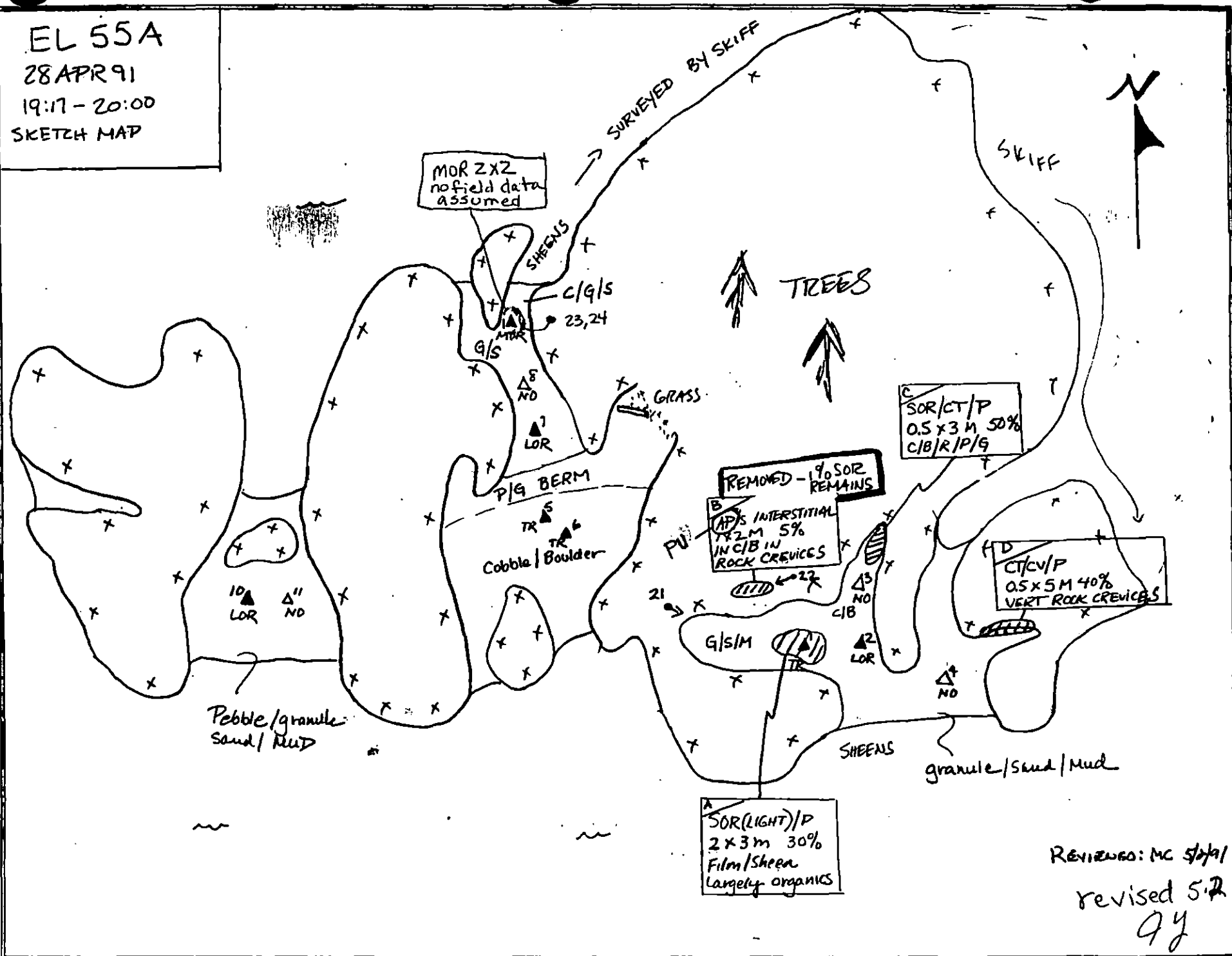
reviewed 5.2.94

EL 55A

28 APR 91

19:17 - 20:00

SKETCH MAP



REVIEWED: MC 5/2/91
revised 5.2
97

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 28 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT(Range) +2.5' to +1.5'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION 5/S
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ well.

①, ②, ③ - No biota on oiled rocks. The low-exposure, south side of this island supports a low-diversity, moderate biotic % cover community on cobbles & smaller substrates. MITZ: Algal biomass is predominantly *Fucus*, Enteromorpha & filamentous green algae. Shelly debris & drift vegetation on the shore suggest that *Saxidomus* & *Zostera* live in the LITZ sand & mud habitats. The bedrock outcrop south of these 3 locations has a few tidepools supporting a small number of additional species.

④ - Rare barnacles & Litterina on oiled bedrock wall. MITZ: a band of dense *Mytilus* lines the floor of this narrow crevice, and moderately dense *Mytilus* and barnacles grow at about 4'-6' tide level on the crevice walls.

Area of Pit #9: Litterina on oiled cobbles. *Mytilus* & *Fucus* nearby along walls & in crevices. Any possible treatment activities should attempt to minimize damage to these organisms.

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

continued on next page

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

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—		"blenny eel"
Pinnipeds(specify)	—		
Whales(specify)	—		

Shoreline subdivision map showing important biological features attached.

Subdivision: EL54 A

Team 2

BIO: Benson

28 Apr 1991

Comments (cont.)

Area of Pit #10 + LITZ: dense *Mytilus* bed in pebble/granule/sand. Highly susceptible to damage from foot traffic.

The low species diversity & biological productivity of this subdivision probably reflect low wave exposure (especially on the south side) and a history of vigorous cleanup efforts.

EL 55A

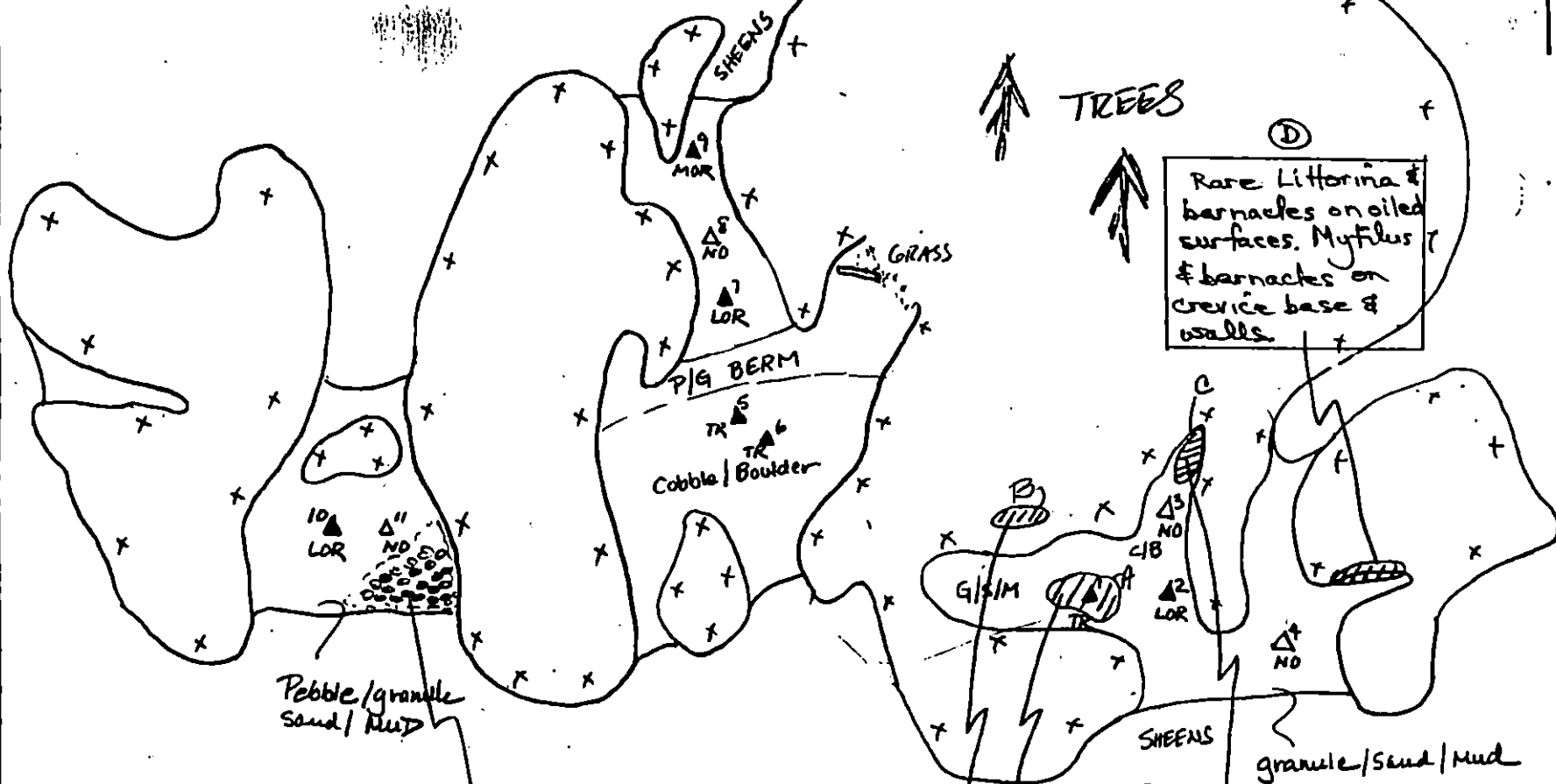
28 APR 91

19:17 - 20:00

SKETCH MAP (BIO)

Benson

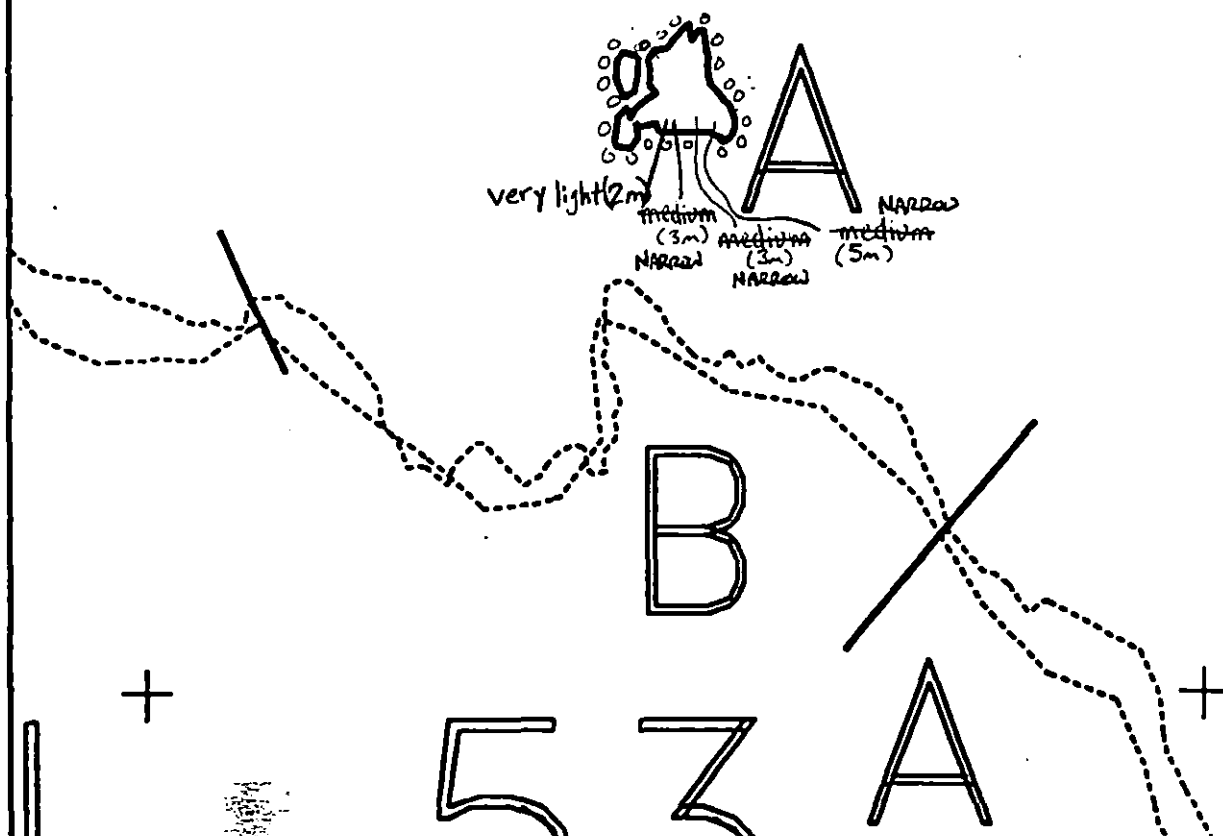
2 Mew Gulls



Dense Mytilus bed
in LITZ

No biofa on oiled rocks. MITZ:
low diversity, moderate biotic %
cover. Filamentous green algae,
Fucus, & Enteromorpha. Probably
Zostera & Saxidomus in low LITZ.

EL-55



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

EL055 A
 ADEC Subsegment Length: 332m
 METERS
 0 100 200
 AK State Plane Zone 4
 5010550

Subdivision Field Map
 Map Key: KNI055A
 Name: TRIMM FOR TRIMMER
 Survey Date: 28 APR '91
 Date Entered:

SURFACE OIL MAP

REVISION: M.C. 5/2/91
 revised 5.2
 98

1991 MAYSAP EVALUATION

SEGMENT: EL 055 SUB: C REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: *Charles H. Simon* Date: 5/10/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </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:

FOSC:

TAG APPROVAL DATE: MAY 10 1991 FOSC APPROVAL DATE: 5/14/91

ADEC *[Signature]* FOSC *[Signature]*

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

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-55 SUBDIVISION C DATE 4/28/91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☒ NTR

☐ TREATMENT RECOMMENDED

OIL CONTINUES TO PERSIST IN THE SUBSURFACE OF THE POCKET BEACHES. NO PITS WERE LOGGED FOR THE S or L ITZs, MOST OF THE LITZ WENT UNSURVEYED DUE TO TIDE LEVELS. SMALL SHEENS WERE NOTED ALONG SUBDIVISION, BUT THE DISTRIBUTION AND DEGREE OF OILING UNCOVERED DO NOT PRESENTLY WARRANT TREATMENT.

EXXON

NAME C.M. KOTSIMPALIS

SIGNATURE C.M. Kotsimpalis

☒ NTR

VERY LIGHT DEGREE OF OILING FOUND IN THIS SEGMENT. DIVERSE BIO COMMUNITY NOTED. OG & BIO REPORTS TELL THE STORY.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☒ NTR

Oil found was light and is being flushed by fresh water streams. Good bio diversity and habitat diversity. I feel that there is no treatment needed.

USCG/NOAA

NAME MICHEL (N) BONZEMONE (CG)

SIGNATURE Michel Bonzemo

☒ NTR

MOST OF THE RESIDUAL OIL WAS FOUND IN THE MID AND UPPER ITZ OF THE POCKET BOULDER BEACHES. THERE IS EXTENSIVE FRESHWATER FLOW THROUGH THESE BEACHES AT THIS TIME AND SMALL SHEENS ARE COMMON. SUBSURFACE OIL CONCENTRATIONS ARE LOW (LOE to OF to TR) AND BEDROCK CELLS AT SHALLOW DEPTHS. THIS AREA WAS SURVEYED IN DETAIL. Michel

CG-

CONCUR w/ OG REPORT. SUBDIVISION SURVEYED IN DEPTH. NO TREATMENT IS RECOMMENDED.

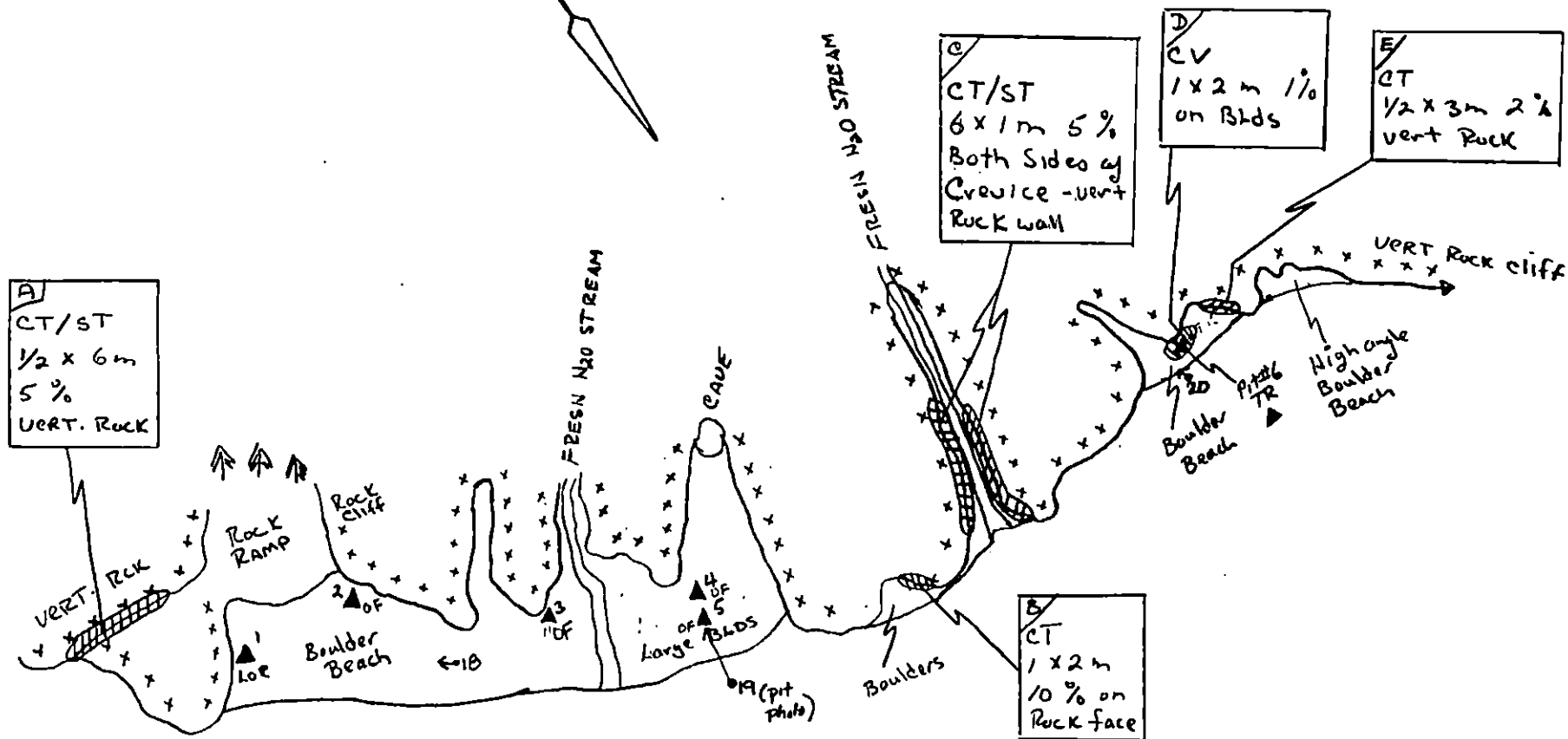
Bonziemo

92

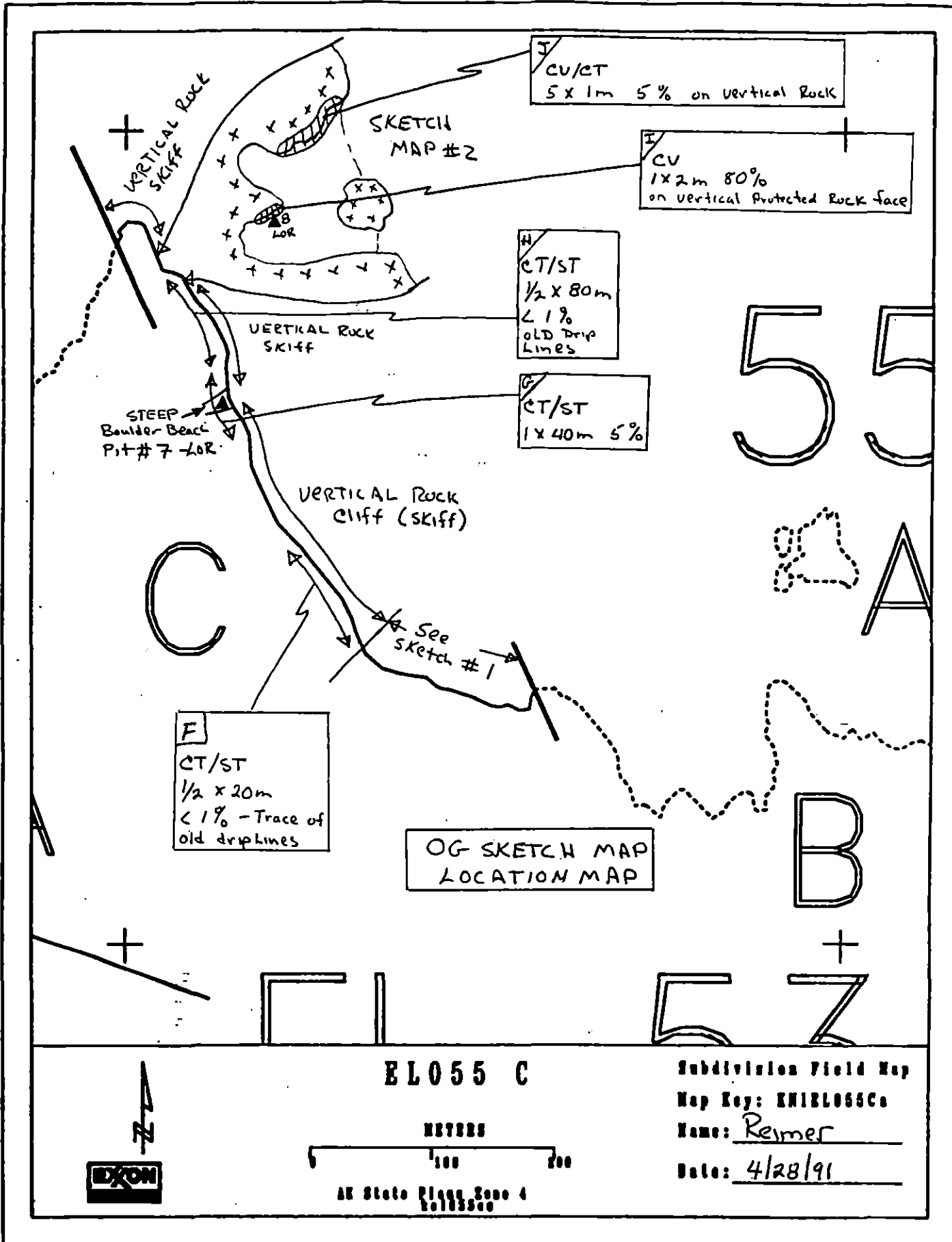
x x x - Rock
 → - Photo Locations
 ↑ - TREES

SKETCH MAP #1 SEE LOCATION MAP

SKETCH MAP
 EL 55 C
 Doug Reimer
 APRIL 28, 91
 18:00 - 19:10



Reviewed: MC 5/2/91
 reviewed 5.2
 98



Reviewed: MC 5/2/91
Reviewed S.2
JD

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 25 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT(Range) +4' to 2.5'
 SUBDIVISION C BIOLOGIST BENSON
 SEA STATE 1' WIND SPEED/DIRECTION 5/E
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- (A) - Verrucaria was found in moderate % cover on the oiled rocks. Below the oiled rocks, a diverse & abundant community resides on the bedrock surfaces & tidepools and the boulders on the beach. The diverse MITZ community extends throughout the boulder beach, except the stream area, to the area of Pits #4&5.
- (B) - One Littorina was crawling across the coast. Barnacles are below the coast and juvenile Mutilus and Fucus were found in a crevice about 2' below the coast. The MITZ boulder community is diverse & forms high % cover.
- (C) - Filamentous green algae, as well as Verrucaria, is found in proximity to the oil here, probably due to the FW runoff. The MITZ boulder community is similar to that in (A) & (B), including Fucus, Odonthalia, Scytosiphon, barnacles & Littorina in abundance.
- (D) & (E) - These two locations fit the consistent pattern along this subdivision described above. Nucella egg cases also found here.
- (E), (H) - Obvious zonation created by dense bands of (top to bottom of rock face) Verrucaria, barnacles, Fucus + filamentous green algae + Odonthalia (especially under FW runoff).

(continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—		
Waterfowl	—		
Gulls/Kittiwakes	—		
Shorebirds	—		
Corvids	—		
Other Birds	—		

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

Shoreline subdivision map showing important biological features attached.

Team 2
Segment: EL 55-C
BIO: Benson
28 Apr 1991

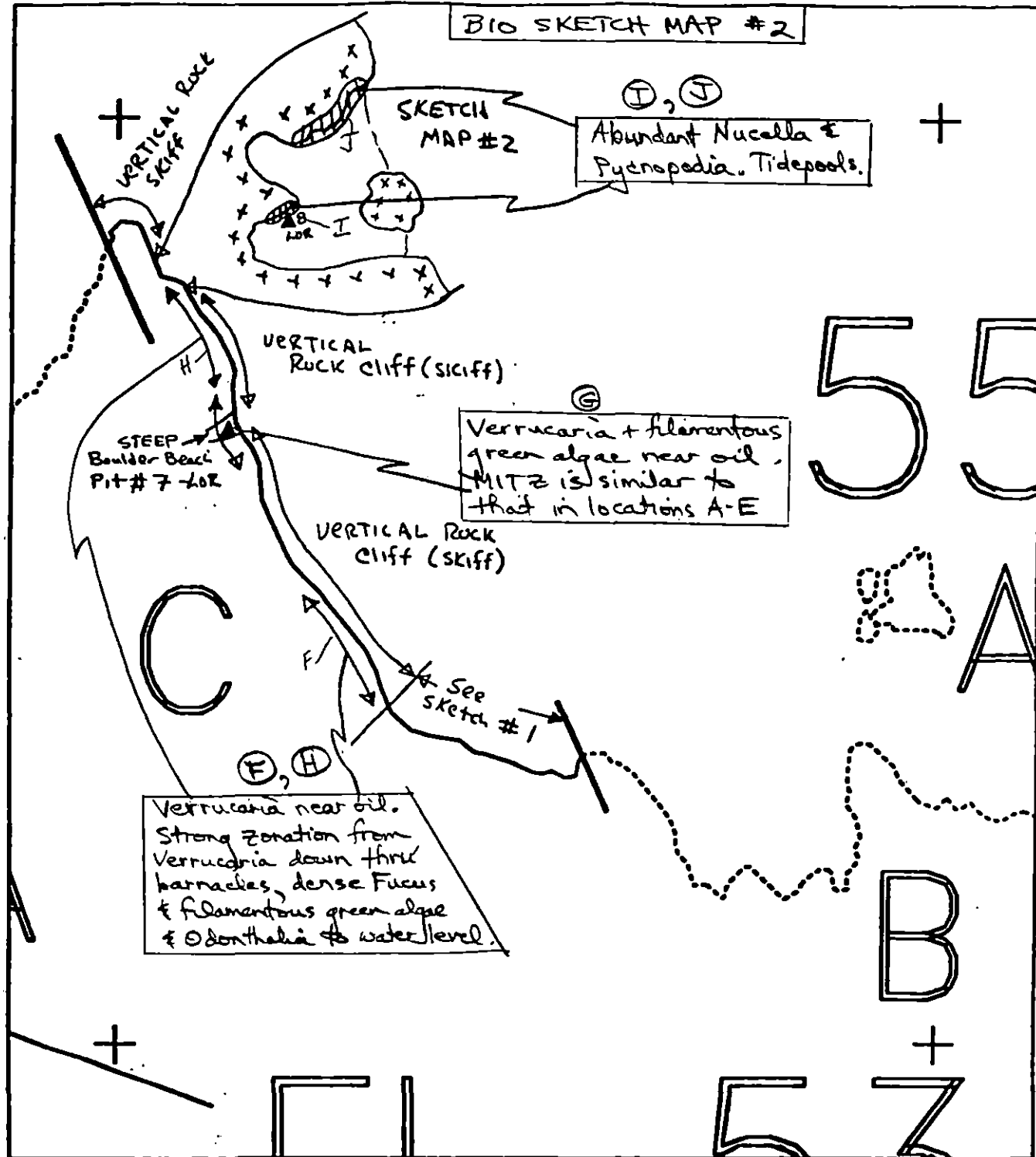
Comments (cont.)

⑥ - Biotically similar to bedrock face, except fewer barnacles in high - MITZ.

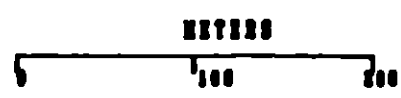
①, ② - Slightly more wave exposure here on the point. Nucella abundant, high % cover of Fucus & Odonthalia in MITZ, and tidepools found on mid-tidal bench.

The moderately-high species diversity and high biotic % cover reflect good recruitment, the stability of bedrock & boulder substrates, moderate wave exposure and the presence of tidepools and other habitat types in this subdivision.

BIO SKETCH MAP #2



EL055 C



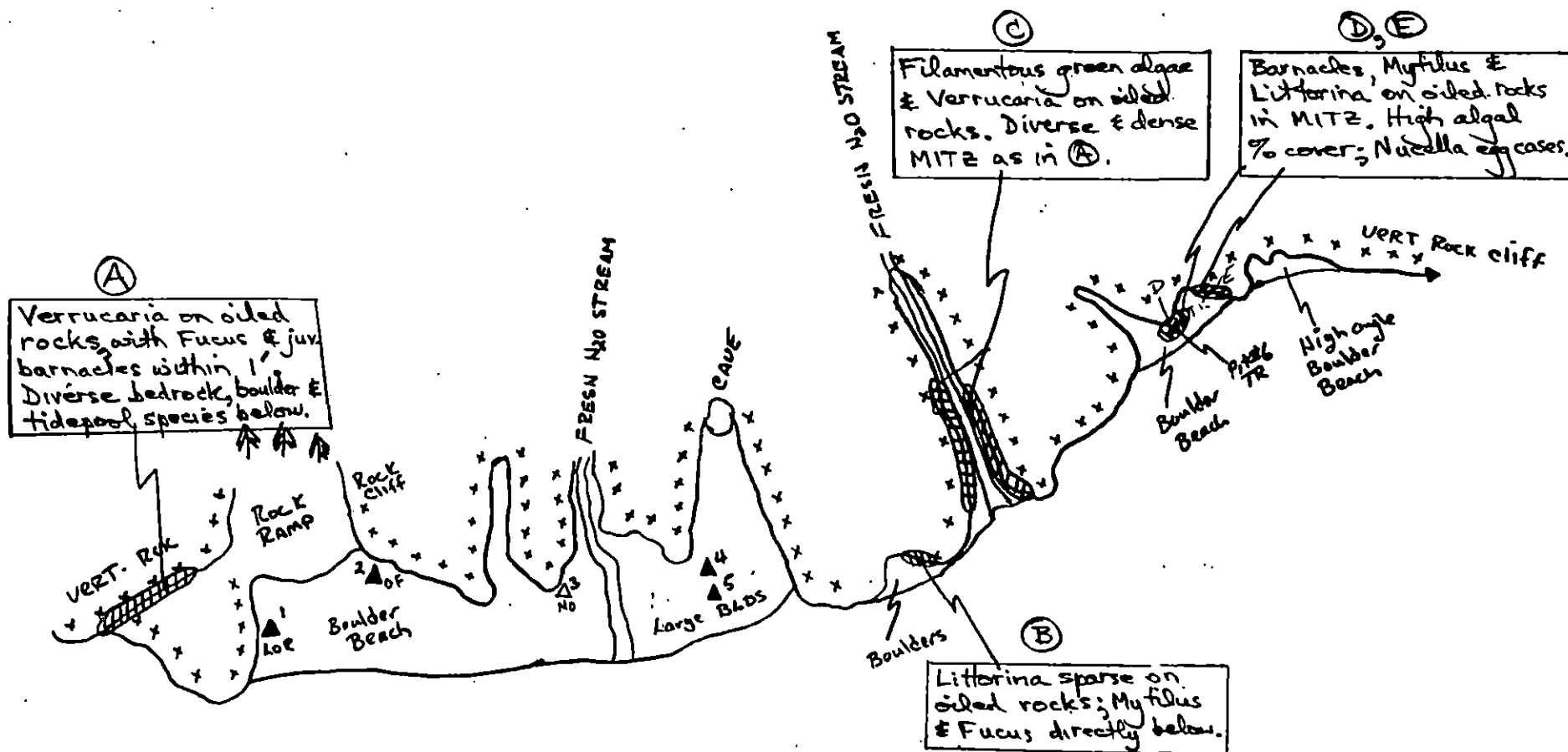
AS State Plane Zone 4
NAD83

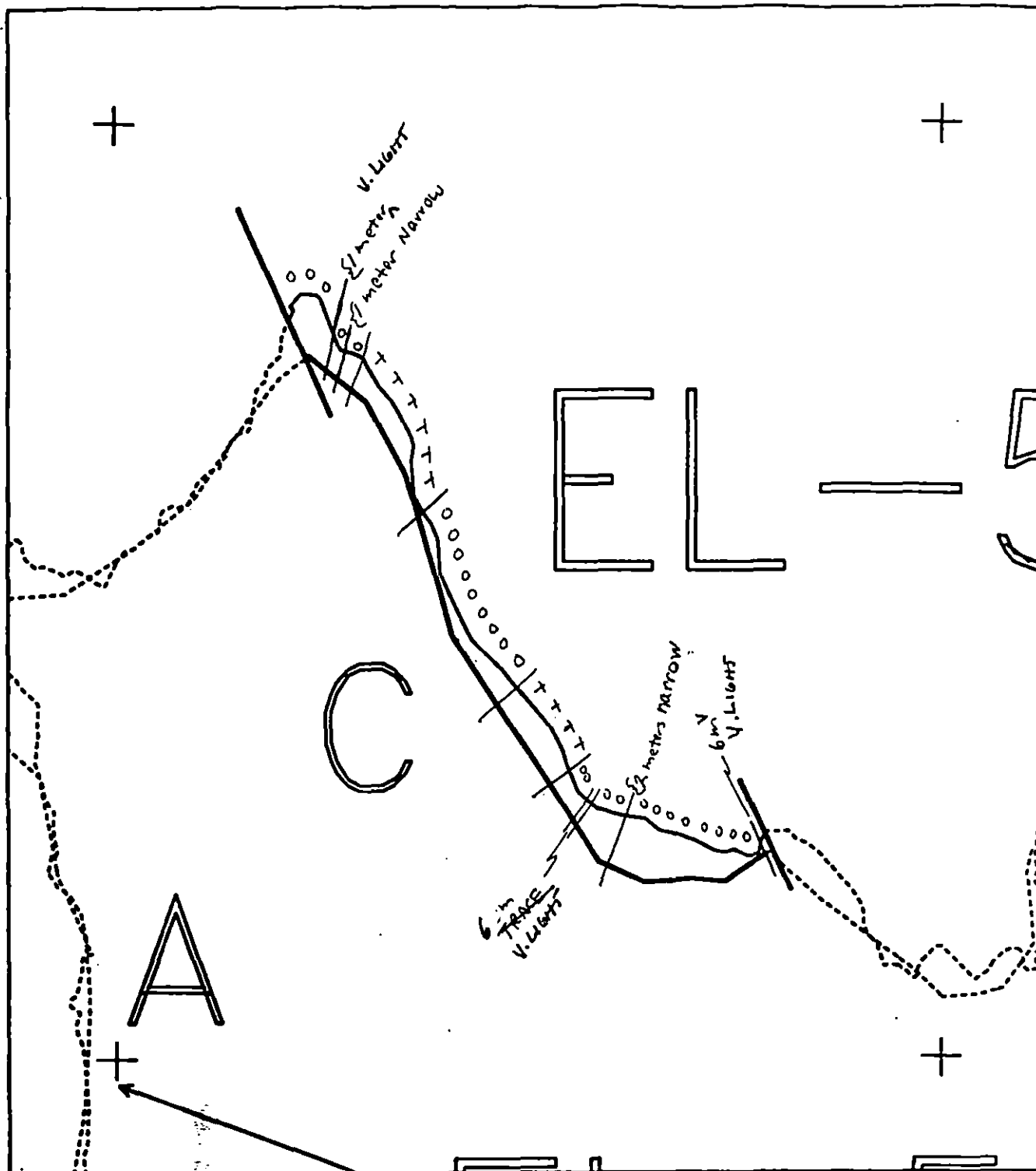
Subdivision Field Map
Map Key: EN12L055Ca
Name: Reimer
Date: 4/28/91
BIO: Benson

- * * * - rock
 → - Photo Locations
 ↑ - TREES

SKETCH MAP #1
 SEE LOCATION MAP

SKETCH MAP (10)
 EL 55 C
 Benson
 APRIL 28, 91
 18:00 - 19:10





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

EL055 C
 ADEC Subsegment Length: 550m
 METERS
 0 100 200
 AK State Plane Zone 4
 8010550

Subdivision Field Map
 Map Key: KNIEL055C
 Name: Reimer
 Date: 4/28/91
 Date Entered:

REVISED: MC. 5/1/91

revised 5.2
 JJ

1991 MAYSAP EVALUATION

SEGMENT: EL 055 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) **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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 55 SUBDIVISION A DATE 4, 28, 91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☒ NTR ☐ TREATMENT RECOMMENDED

AP Removed.

OIL PERSISTS THROUGHOUT THE BEACH AREAS AS ILLUSTRATED, HOWEVER THE DEGREE AND DISTRIBUTION CANCEL ANY REASONABLE ^{OR} BENEFICIAL TREATMENT POSSIBILITIES; THIS IS ESPECIALLY THE CASE CONSIDERING THE NOAA REQUEST TO PREVENT DISRUPTION TO THE STUDY SITE.

PIT 9 WAS VIRTUALLY HOP.

ADNR LISTS THIS ISLAND AS A RECREATIONAL USE AREA.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE C.M. Katsumpalis

☒ NTR

MOSTLY VERY LIGHT, SCATTERED DEGREES OF OILING REMAIN ON THE ISLAND.

REMOVED SMALL PATCH OF ASPHALT AT ADEC REQUEST.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D. S. Kennedy

☒ NTR

NOAA STUDY SITE

Bio reports low species diversity.
most by light or trace amounts of oil observed.

USCG/NOAA

NAME MICHEL (NMA)

BMI ZENQUE (CG)

SIGNATURE Micheel

Bmi Zenque

☒ NTR

THIS SUBDIVISION IS ONE OF THE NOAA BIOLOGY STUDY SITES. IT IS REQUESTED THAT NO FURTHER TREATMENT BE CONDUCTED HERE, SO NOT TO INTERFERE WITH THESE STUDIES. THE AP WAS REMOVED DURING OUR SURVEY.

CG-

OG REPORT REFLECTS TOTALLY ACCURATE ASSESSMENT. 3

SEGMENT EL 55

SUBDIVISION A

DATE 4 / 28 / 91

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 11 m VL ~~1~~ m NO 527 m US 1 m

[illegible]

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 2 FRAMES 21-24

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R G N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	16						X		5 - 16		10	B			X		SG - SMO	GLOBULES
2	27				X				22 - 25	Y	25	B		X			P - SGO	GLOBULES
3	20							X	-	-				X			PG - GSP	
4	15							X	-	-	10	N				X	GSM - GSM	
5	25						X		18 - 24	Y	18	B		X			P - GSD	Organic film on water
6	24						X		19 - 23	Y	23	B		X			P - GSM	
7	13				X				5 - 8	Y	7	B		X			GS - GSP	
8	15							X	-	-				X			GS - GSP	
9	11				X				0 - 11	N	9	B			X		C - GSP	water filled

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

OG COMMENTS:

Pit No. 1 - water filled. Largely organic material in pit.

PIT No. 5 - Oil globules on sediments

MOST OF THE BEDROCK SHORELINE WAS FREE OF OIL. THE EASTERNMOST POCKET BEACH HAD DEPRESSIONS IN THE BEDROCK FILLED WITH MUDDY SAND AND GRANULES, AND MOSTLY LIGHT OILING. THERE ARE THREE AREAS WITH LHM SOR REMAINING, ALONG WITH CT/CV ON THE MOST SHELTERED CLEFTS. THE CENTRAL BEACH HAD THE MOST OIL ON THE NORTHERN SIDE; SHEENS WERE BLEEDING FROM THE MIDDLE 172 IN VICINITY OF PIT #9. THE SEDIMENTS HERE ARE FINE SAND TO PEBBLES. ONLY PATCHY LIGHT OR WAS OBSERVED IN THE WESTERNMOST BEACH. [by J. Michel]

REVISED: MCS/2/91

reviewed
~~revised~~

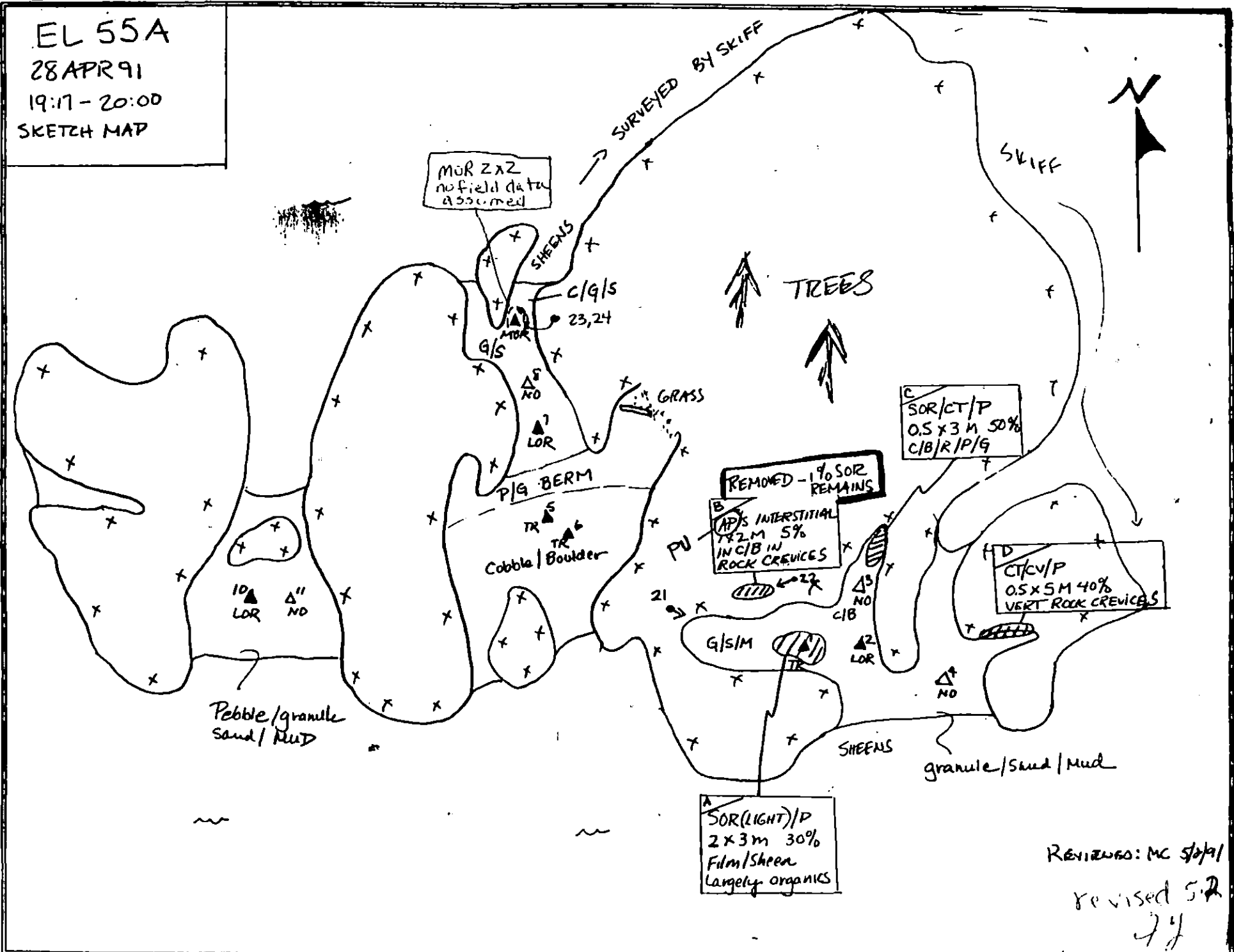
94

DATE 4 / 28 / 91

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

reviewed 5.294

EL 55A
28 APR 91
19:17 - 20:00
SKETCH MAP



HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 28 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT(Range) +2.5' to +1.5'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION 5/S
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ well.

(A), (B), (C) - No biota on oiled rocks. The low-exposure, south side of this island supports a low-diversity, moderate biotic % cover community on cobbles & smaller substrates. MITZ: Algal biomass is predominantly Fucus, Enteromorpha & filamentous green algae. Shelly debris & drift vegetation on the shore suggest that Saxidomus & Zostera live in the LITZ sand & mud habitats. The bedrock outcrop south of these 3 locations has a few tidepools supporting a small number of additional species.

(D) - Rare barnacles & Litterina on oiled bedrock wall. MITZ: a band of dense Mytilus lines the floor of this narrow crevice, and moderately dense Mytilus and barnacles grow at about 4"-6" tide level on the crevice walls.

Area of Pit #9: Litterina on oiled cobbles. Mytilus & Fucus nearby along walls & in crevices. Any possible treatment activities should attempt to minimize damage to these organisms.

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

Continued on next page

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

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—		"blenny eel"
Pinnipeds(specify)	—		
Whales(specify)	—		

Shoreline subdivision map showing important biological features attached.

Subdivision: ELS4A

Page 2

Team 2

BIO: Benson

28 Apr 1991

Comments (cont.)

Area of Pit #10 + LITZ: dense *Mytilus* bed in pebble/
granule/sand. Highly susceptible to damage from
foot traffic.

The low species diversity & biological productivity
of this subdivision probably reflect low wave exposure
(especially on the south side) and a history of
vigorous cleanup efforts.

EL 55A

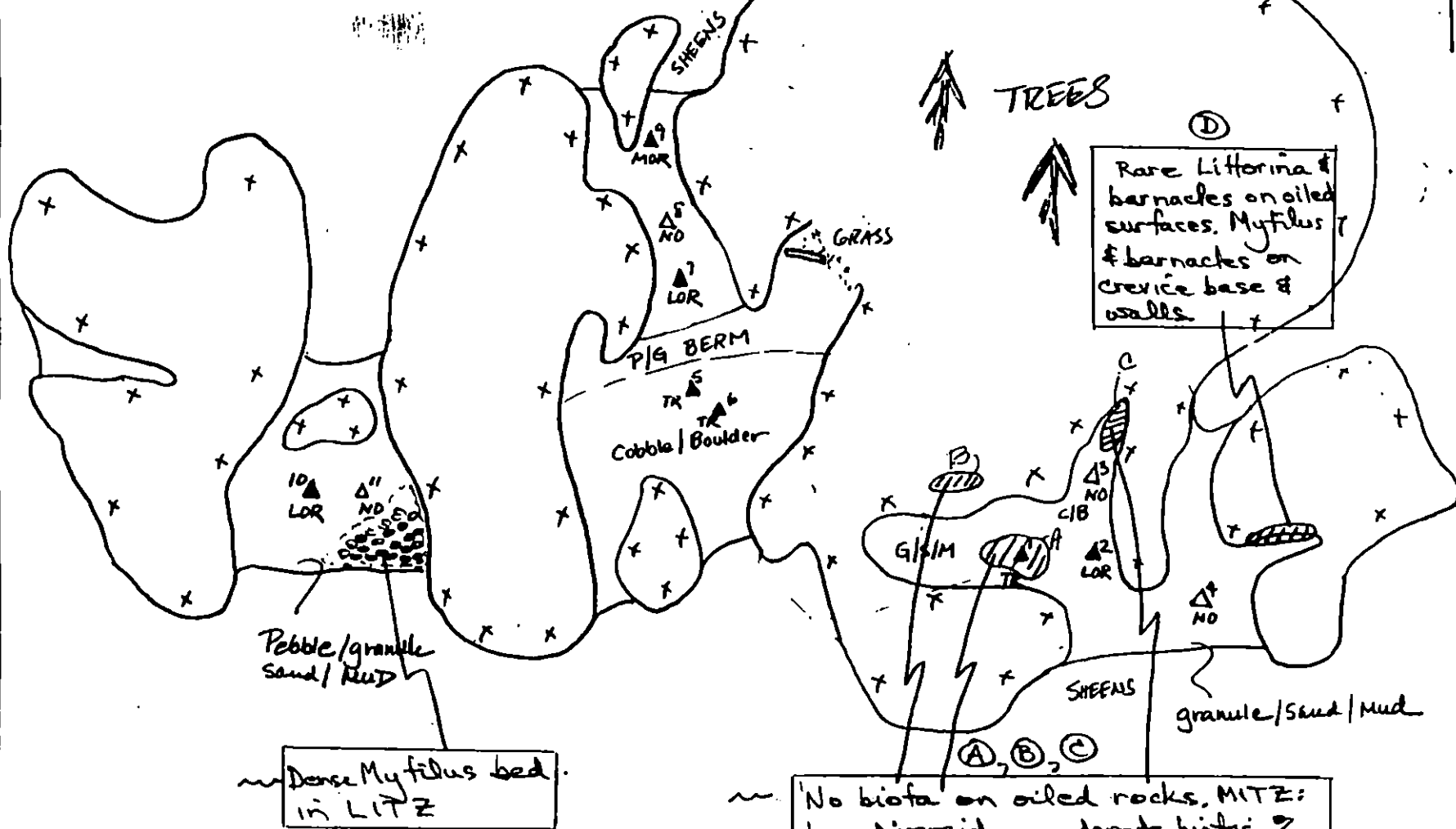
28 APR 91

19:17 - 20:00

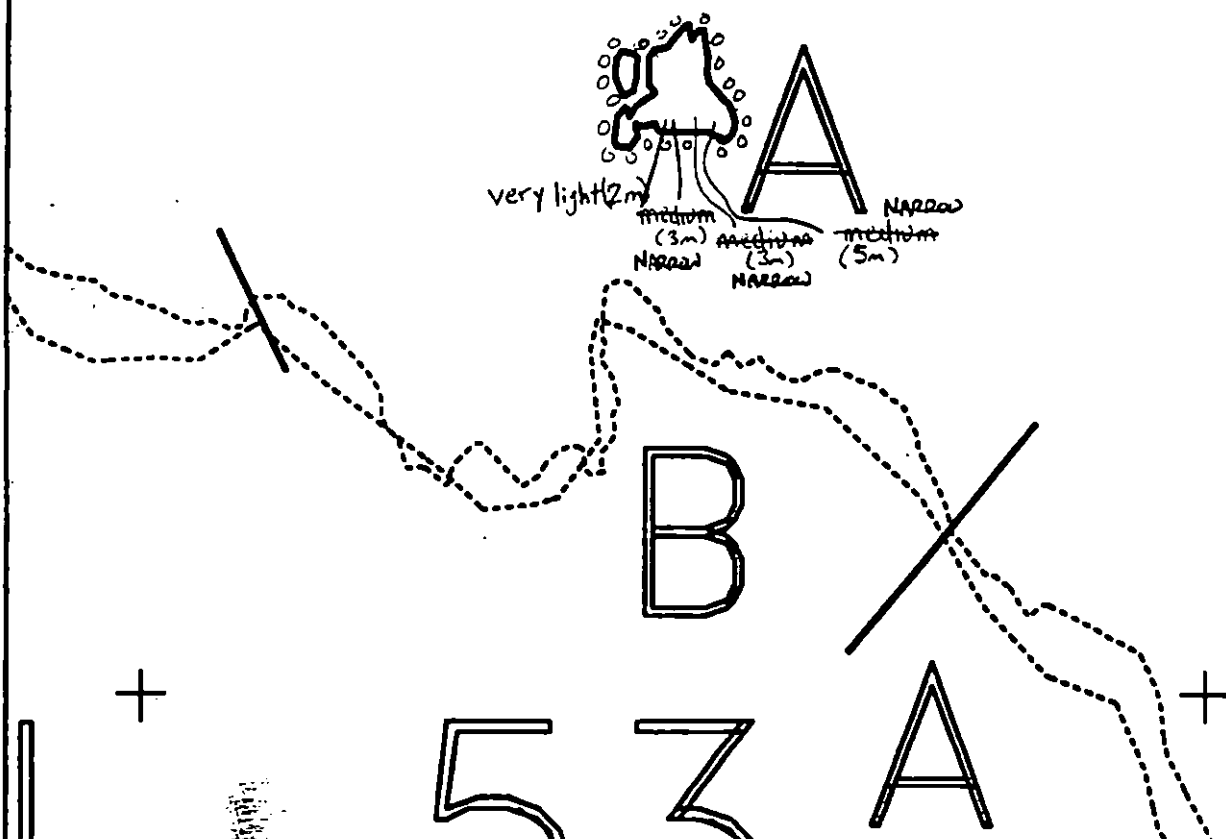
SKETCH MAP (BIO)

Benson

2 Mew Gulls



EL-55



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

EL055 A
 ADEC Subsegment Length: 332m
 METERS
 0 100 200
 AK State Plane Zone 4
 601055a

Subdivision Field Map
 Map Key: KNELO55A
 Name: TRIMM FOR REIMER
 Survey Date: 28 Apr '91
 Date Entered:

SURFACE OIL MAP

Revised M-C 5/2/91
 revised S-2
 JH

1991 MAYSAP EVALUATION

SEGMENT: EL 055 SUB: B REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) **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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 55 SUBDIVISION B DATE 4/28/91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☐ NTR

☐ TREATMENT RECOMMENDED

Subsurface oil remains throughout most of the pocket beaches along this subdivision, however the higher concentrations of oil are only accessible after removing a thin layer of B.C.S. The oil is removable through labor intensive manual means. The surface sediments (near pits 3,4,5) appear jagged and forbidding, but the oil is not far below the armor.

* The LITZ was NOT observed. AONR lists this as a Recreational Use Segment.

EXXON

NAME C. M. KATSIMBALIS

SIGNATURE Chris Katsumbalis

☐ NTR

OG & BIO REPORTS REFLECT A THOROUGH SURVEY. AREA OF SUBSURFACE OILING IN PITS 3,4 & 5 IS RELATIVELY SMALL.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D. S. Kennedy

☐ NTR

East side of segment, pits 3/4/5, shows med-high subsurface oil residue and is accessible. This area is protected by island SSA; thus, weathering of oil maybe slower in this location.

USCG/NOAA

NAME MICHEL (N)

BMI ZENQUE (CG)

SIGNATURE Michel

Bmi. T. P. Jean

☐ NTR

This was a detailed survey. Most of the surface oil is very light - even the SOR is widely scattered, small accumulations. The surface sediments on the beaches are very large and the slope is steep, but the MOR/HOR is very near the surface.

CG-

CONCUR w/ OG & BIO REPORT - ALSO AGREE w/ EXXON REP COMMENTS ON PITS 3-4+5 3

TEAM NO. LWOOG DOUG REIMERBIO SANDY BENSONSEGMENT EL 55ADEC PETER MONTESANOLANDMANAGER DENNIS KENNEDY USFSSUBDIVISION BEXXON CHRIS KATSIKALISBRI ZENONE - USCG
USCG/NOAA JACQUE MICHAEL NOAADATE 4/28/91TIME 10:20 to 11:35
17 05 18 00TIDE LEVEL +0.9 ft. to +4.0 ft.
+7.5 +5.9ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 547⁵⁵⁰ mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 52³⁶ m VL 45⁴⁵ m NO 479 m US 0 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										BC	M	1	1	X				
B				B							R	M	1	1	X				
C				P							BC	M	2	2	X				
D				S							PCG	M	2	3	X				
E				S							BCPG	M	3	3	X				
F				S							BCPG	M	3	3	X				
G						P					R	V	1	4			X		
H					B						R	V	1	6	X				
I				S							B	M	0.5	0.5	X				
J						T					R	V	0.5	1	X				
K						S					B	H	2	5	X				
L					S	P					R	V	1	10	X				
M	S										BCP	M	5	6			X		
N						S	S				RB	V	1	26	X				

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- 2 - 2 FRAMES 11-16

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	28						X		15-26	Y			X				B-PGSC	
2	10							X	-	Y			X				B-PGC	
3	26				X				16-25	Y	23	B	X				B-PG	WATER Filled
4	20		X						3-19	Y					X		C-PGD	
5	35				X				8-34	Y	34	S			X		B-PG	
6	20						X		?-?	?	17	S		X			BC-GP	
7	15				X				0-15	Y				X			BC-GP	
8	30							X	-	-	28	N					CP-CP	
9	28							X	-	-							P-P	STORM BERM

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

OG COMMENTS: THIS SUBDIVISION CONSISTS MOSTLY OF SLOPING/VERTICAL ROCKY CLIFFS WITH SMALL POCKET BEACHES OF COARSE COBBLES AND LARGE BOULDERS, MOST WHICH ARE VERY STEEP. SURFACE OIL CONSISTS OF COAT/STAIN ON THE MORE SHELTERED ROCK FACES AND UNDER SIDES OF LARGE BOULDERS, AND SOR AS SMALL PATCHES UNDERNEATH BOULDERS IN WAVE SHADOWS. SUBSURFACE OIL WAS FOUND IN THE M/U ITZ, MOSTLY AS LOR/TR, EXCEPT FOR THE EASTERMOST SECTION WHERE MOR/HOR OCCURRED IN AREAS SHELTERED BY LARGE BEDROCK OUTCROPS.

[Comments by J. Michel]
Final Sketch

REVISOR: MC 5/4/91

REVIEWED: *Jf*

DATE 4 128 / 91

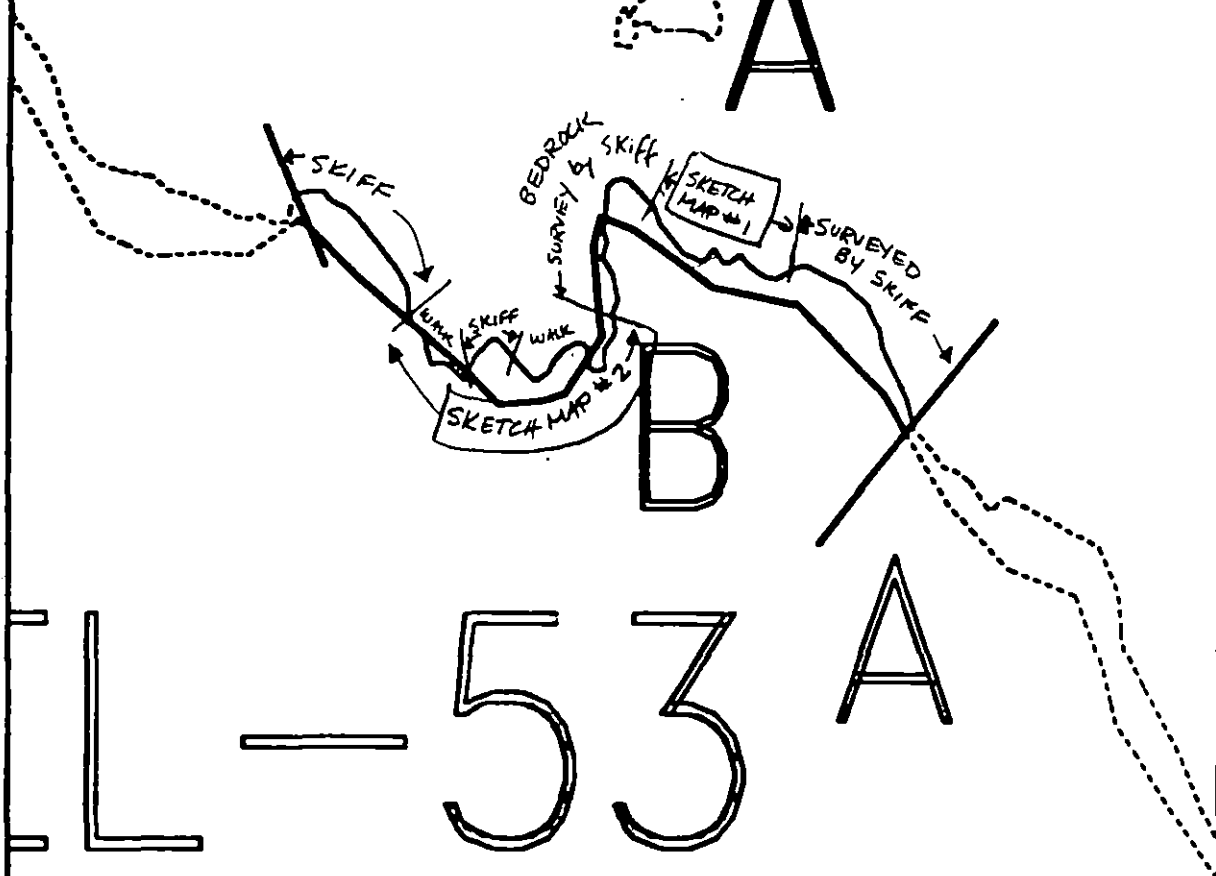
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

REVIEWED: MC 5/4/91

Yalnızca 1000

EL-55

A



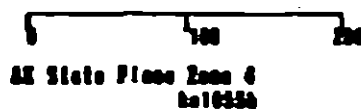
EL-53

A

B

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

EL055 B
 ADEC Subsegment Length: 547m
 METERS

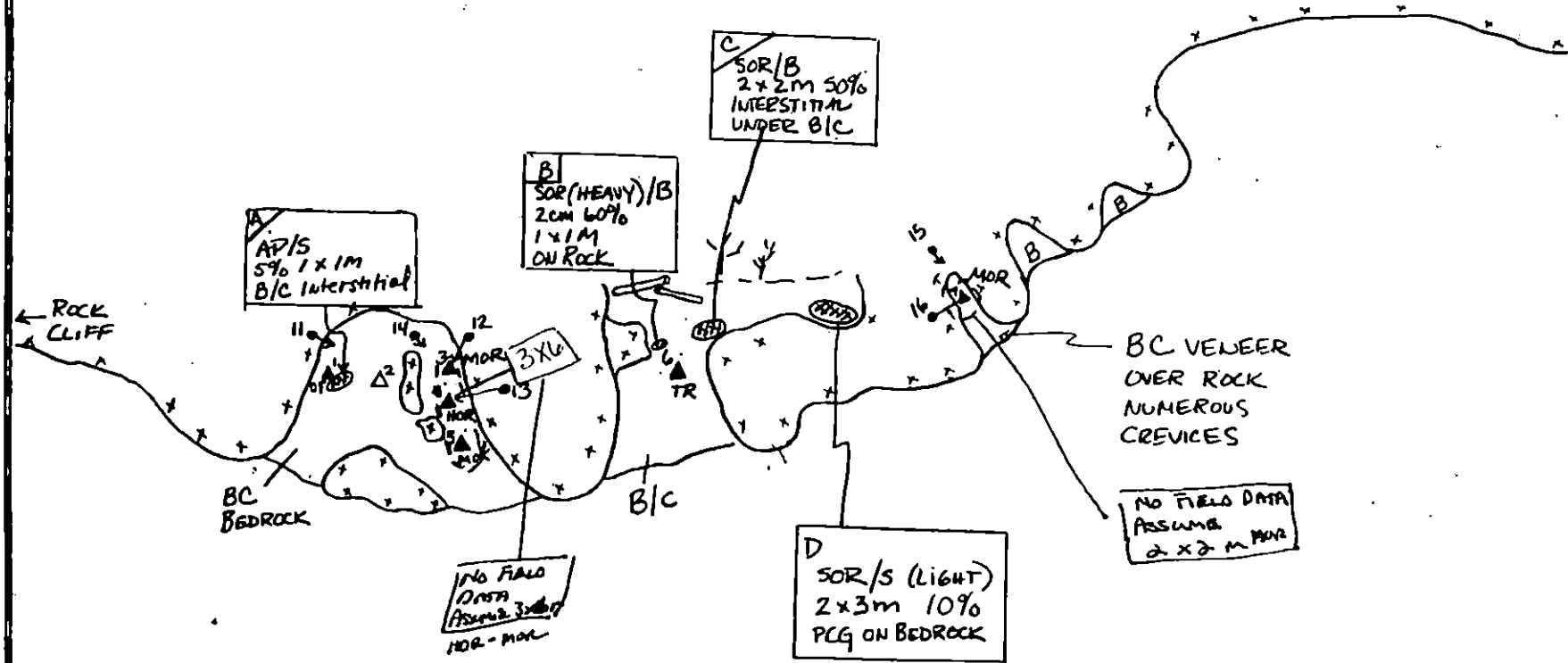


AK State Plane Zone 6
 4810350

Subdivision Field Map
 Map Key: KNELO55B
 Name: REIMER
 Date: 4/28/91
 Date Entered:

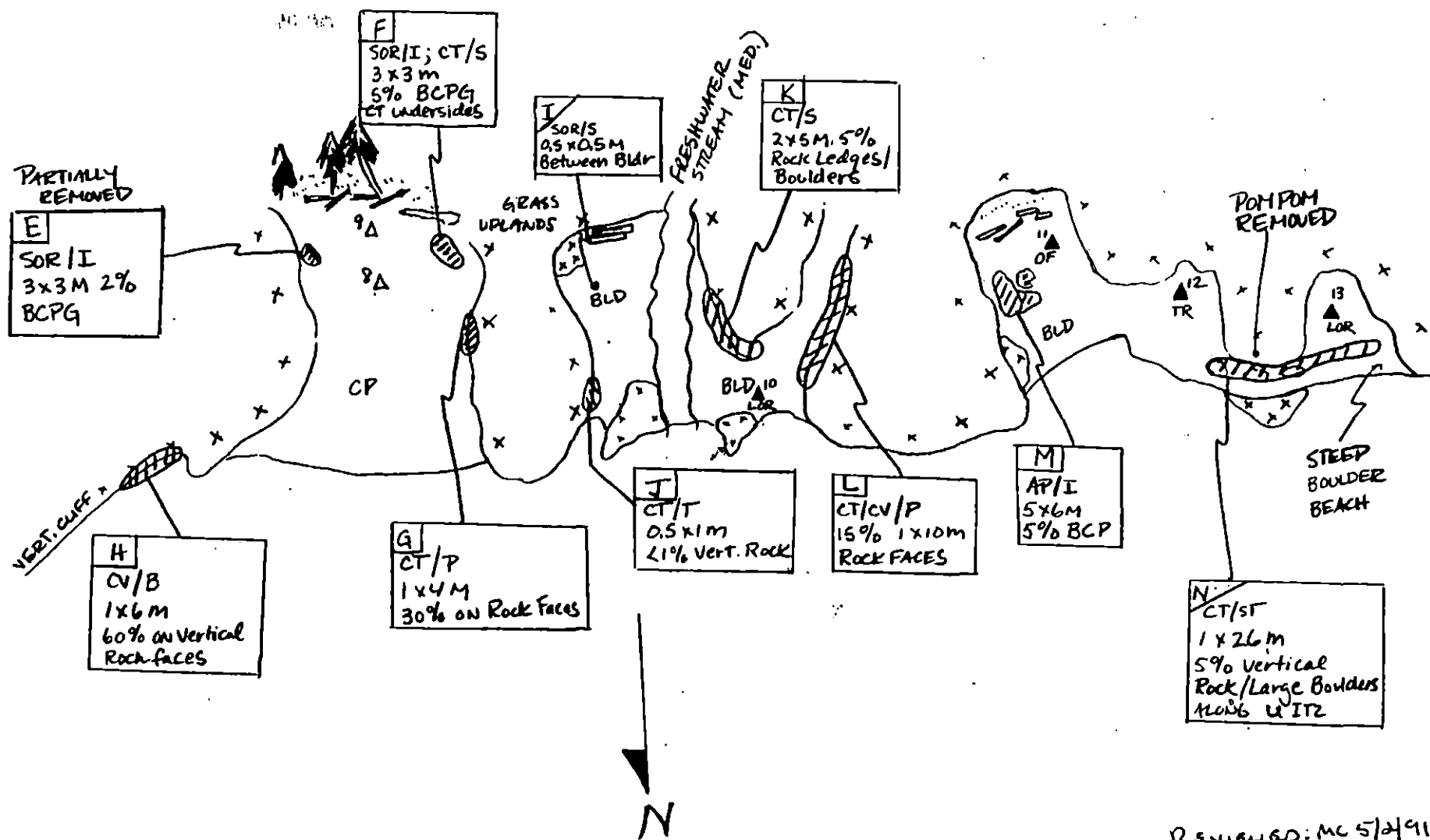
REVISION: 5/2/91 MC

EL 55B
 SKETCH MAP #1
 4/28/91
 10:20 - 11:35



REVISOR: MC 5/6/91
 10:15.00
 10:17.00

EL 55 B
 SKETCH MAP # 2
 4/28/91
 1705-1758



REVIEWED: MC 5/2/91
 removed 5.1
 74)

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 28 Apr 1991
 SEGMENT # EL 55 TIDAL HEIGHT (Range) AM: 3' to 6'; PM: 6' to 4'
 SUBDIVISION B BIOLOGIST BENSON
 SEA STATE 0' WIND SPEED/DIRECTION AM: calm; PM: S/N
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- I could not observe the LITZ
- (A) - Verrucaria & green filamentous algae on rocks near, but no biota on, oiled surfaces. In LITZ/supratidal, I also observed vomitus & scat (of marine mammal?) containing Saxidomus & Mytilus shell fragments and clam siphon skins. In MITZ, Fucus, Mytilus, barnacle & Littorina recruits (& Littorina egg masses).
- (B), (C) - green filamentous algae & sparse barnacles on oiled surfaces. In MITZ, moderate density of Fucus & invertebrates. Also present: Ulva, Cladophora, Enteromorpha, Scytosiphon, Odonthalia, Mytilus, Notoacmea & barnacles.
- (D) - Verrucaria & filamentous green algae on oiled surfaces. MITZ similar to (B) & (C): low-moderate diversity & densities.
- (E), (F), (G) - Filamentous green (E) & Verrucaria (F, G) on oiled surfaces. MITZ: mostly cobble substrate with filamentous greens & sparse Balanus, Chthamalus, Littorina & limpets. Boulders have moderate amounts of Hildenbrandia & Fucus (including recruits).
- (H) - No biota on CT; Verrucaria near CT. MITZ: low-moderate diversity with Fucus, filam greens, Enteromorpha, Porphyra, Balanus (also spat), Littorina (also egg masses).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	"tidepool sculpin"
Seabirds	1	4	(? Oligocottus maculosus)
Waterfowl	—	—	
Gulls/Kittiwake	—	—	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	1	1	

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/2/91

PCV

BIO: Benson

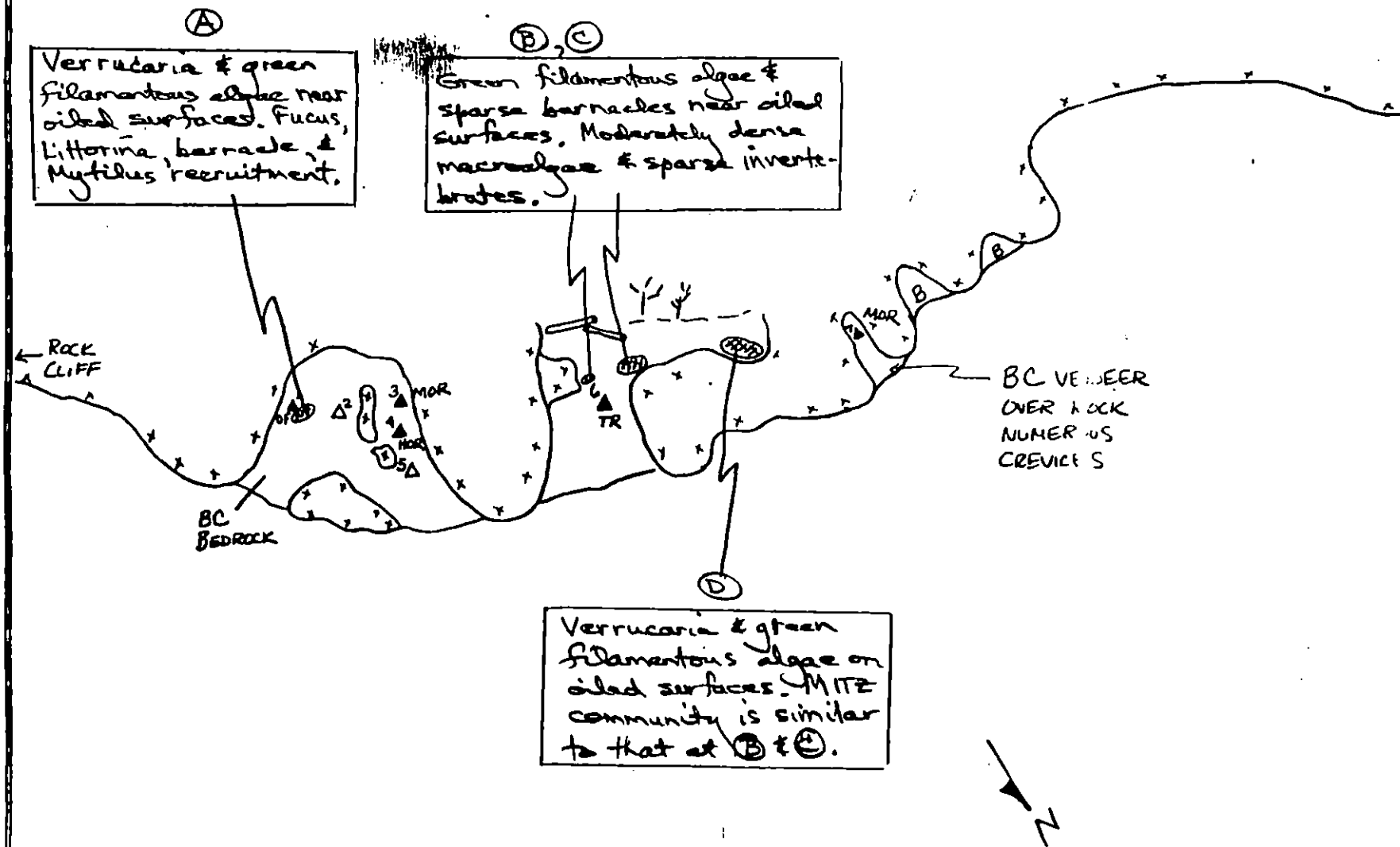
28 April 1991

Comments (cont.)

- ①, ② - Verrucaria (I) & Hildenbrandia & barnacles (J) on oiled surfaces. Little biota above 9'-10' tide level. MITZ: low-mod diversity & % cover of Fucus (with recruits), Rhodamela, Scytosiphon, barnacles & Littorina.
- ③, ④ - Verrucaria on oiled surfaces; Fucus in crack below (K). MITZ: similar to I, J, except tidepools in bedrock bench containing dense Odonthalia, coralline algae, Ralfsia, hermit crabs & isopods.
- ⑤, ⑥ - Verrucaria on oiled surfaces. Filamentous green algae throughout UITZ & MITZ; otherwise similar to ①, ②.

This site has low-moderate diversity & moderate % cover (except high on bedrock cliffs). These characteristics probably result in part because the offshore island, EL 55A, reduces this subdivision's wave exposure & perhaps isolates it from water currents. Recruitment of Fucus, barnacles, Littorina, & Mytilus was observed, but is not abundant.

EL 55B
 BIO SKETCH MAP #1
 4/28/91
 BENSON

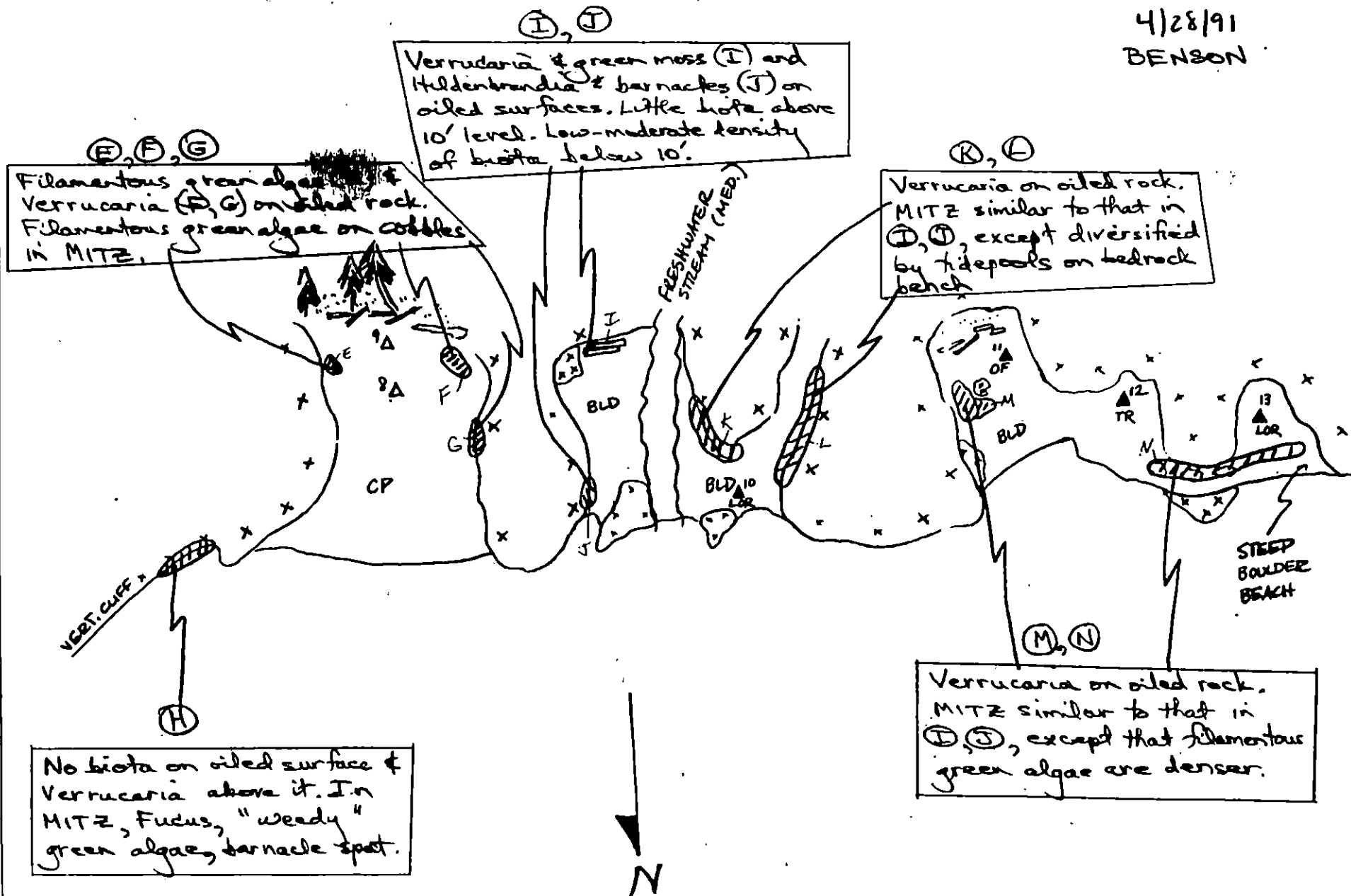


EL 55 B

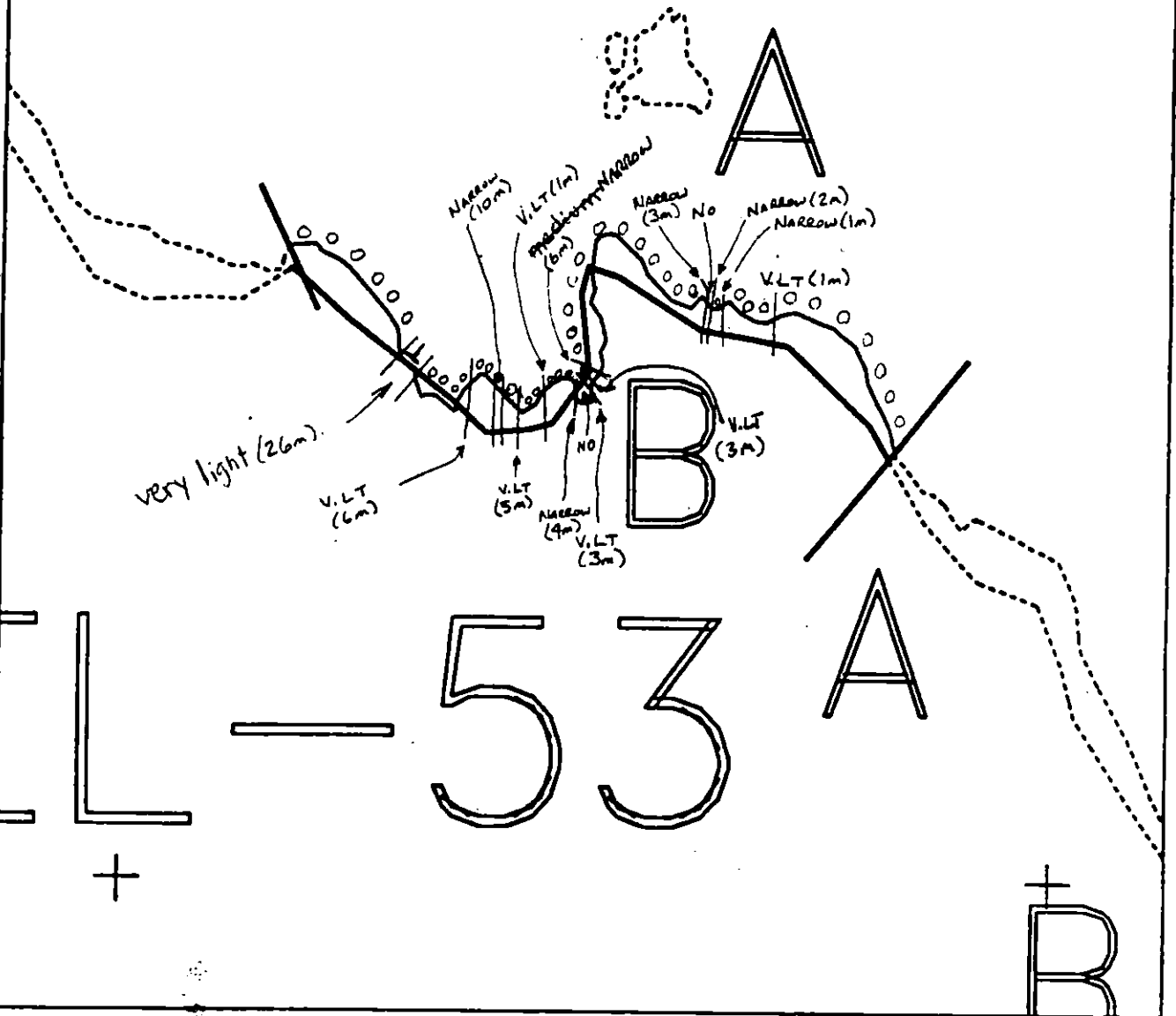
BIO SKETCH MAP # 2

4/28/91

BENSON



EL-55



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

EL055 B
 ADEC Subsegment Length: 547m
 METERS
 0 100 200
 AK State Plane Zone 4
 601055b

Subdivision Field Map
 Map Key: KNIEL055B
 Name: TRIMM FOR REIMER
 SURVEY
 Date: 28 April '91
 Date Entered:

REVISED: MC 5/2/91
 revised 5:1
 G.Y.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-56 SUBDIVISION A (1 of 4)

WORK WINDOW	
Bioremediation Spot Washing	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

Closed to bioremediation and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict disturbance of dense to moderate uncoiled *Fucus*, barnacles, and gastropods in the upper-lower intertidal zones. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15.

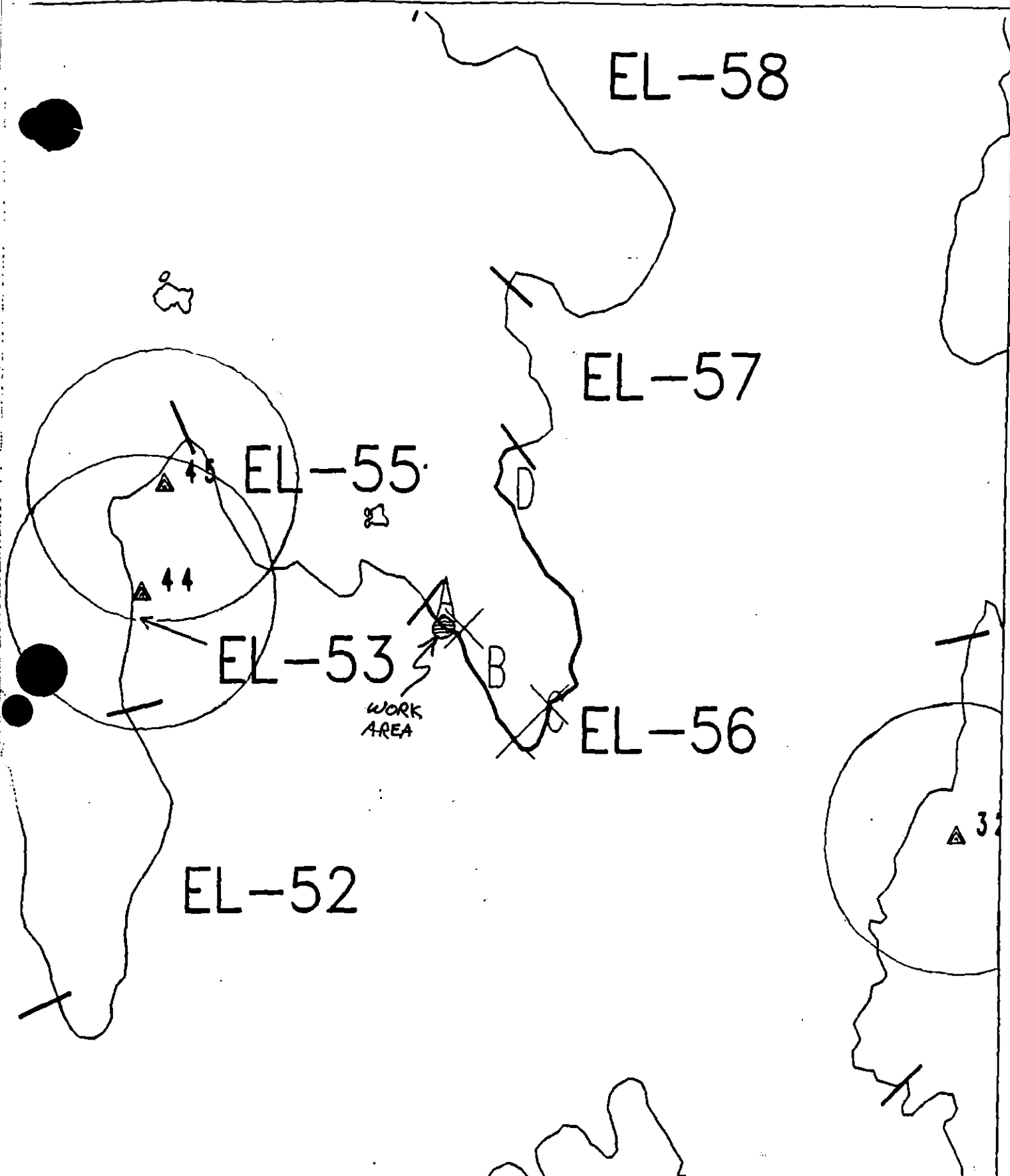
TAG APPROVAL DATE 5/24/90
ADEC Art Werner
EXXON ANDY TSH
NOAA B. Werner
USCG Mr. J. Hall

FOSC [Signature]

DATE 5-24-90

Prepared By: Andrea Meyer WTK

Date 5/22/90





Exxon Company, USA
Map Key: KNI-EL-56
May 11, 1990

ECOLOGY MAP
SEGMENT EL-56
SUBDIVISION A (1014)

METERS

0 383 765

★	Seabird Colony
△	Eagle Nest

1 inch = 1256 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION A (1 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 3/1; Recreation area (6U,V) - 6/1 to 9/15; Restrict disturbance of dense to moderate uncoiled fucus, barnacles, and gastropods where observed in the upper-lower intertidal zones.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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: Paul G. Holmes DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 18 m: Medium 0 m: Narrow 120 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> </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> </u> Other (see comments)

COMMENTS: Recommend bioremediation of surface coat on pocket beach. (See Sketch map). Work recommended after (6/15/90) based on constraints.

See Constraint Addendum
Dated 5/22/90 wmk

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

DEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wassett
USCG G.A. REITER

FOSC:

DATE: 4/9/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-56 SUBDIVISION B (2 of 4)

WORK WINDOW	
Bioremediation Spot Washing	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

Closed to bioremediation and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Restrict disturbance of *Fucus* in low and mid intertidal zones, and barnacles in upper and mid tidal zones.

TAG APPROVAL DATE 5/24/90
ADEC ART WEINER
EXXON ANDY TOL
NOAA B. W. SCOTT
USCG M. J. HALL

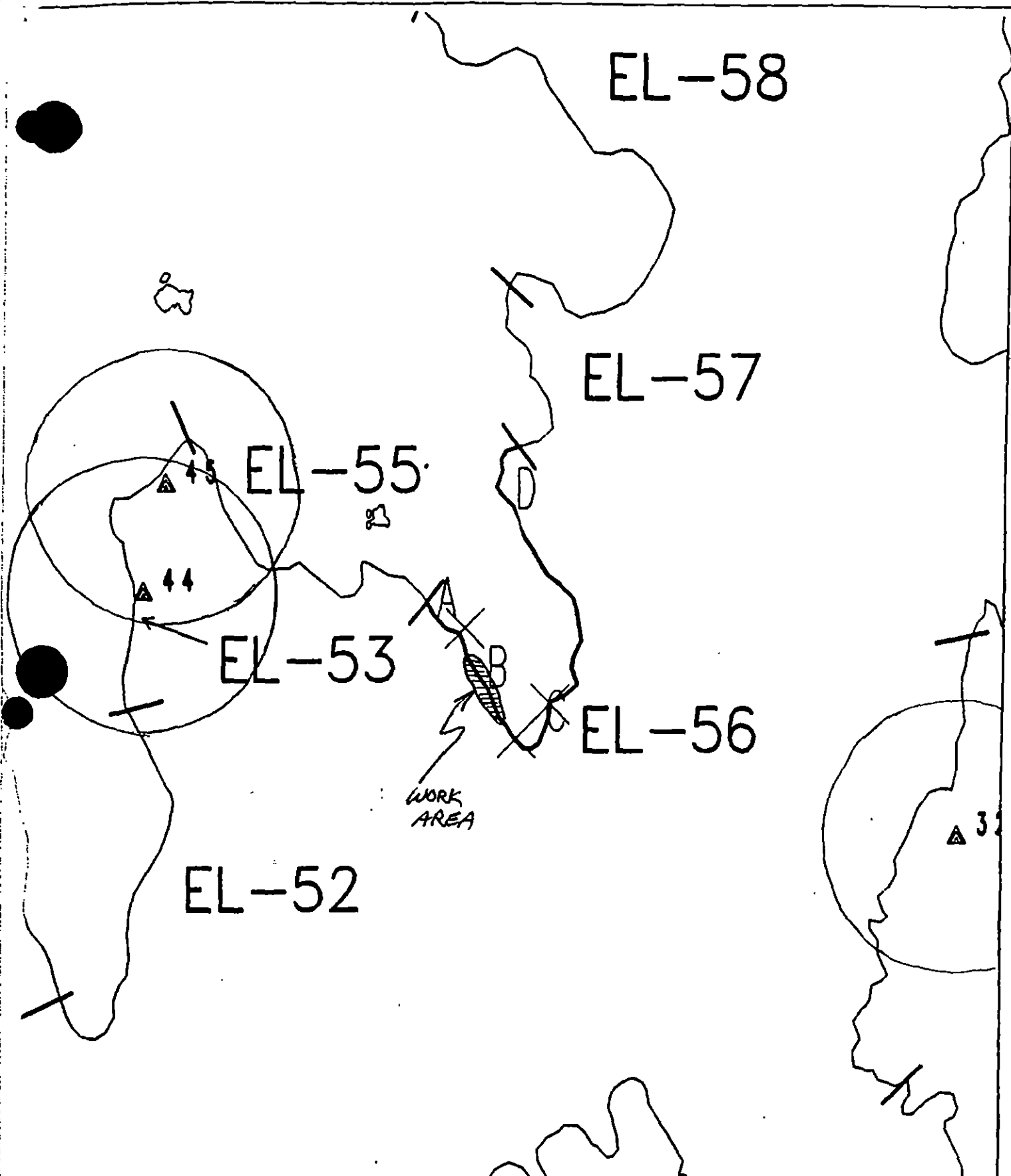
FOSC

DATE

5-24-90

Prepared By: Anders May WK

Date 5/22/90



Exxon Company, USA
Map Key: KNI-EL-56
May 11, 1990



ECOLOGY MAP
SEGMENT EL-56
SUBDIVISION B (2014)



- | | |
|---|----------------|
| ★ | Seabird Colony |
| △ | Eagle Nest |

1 inch = 1256 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION B (2 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Restrict disturbance of dense to moderate fucus in L and MITZ, and dense to moderate barnacles and gastropods in M and UITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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 Z. H. Hines DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 35 m: V. Light 0 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: Recommend restricted treatment in this subdivision as broken coating found on steep boulder beds is relatively inaccessible and placing crews on shoreline at this location would be hazardous. Please review Field Shoreline Comment Sheet. However those areas that are accessible should be spot washed as necessary, and bioremediated.

[See Constraint Addendum Dated 5/22/90] WTK

TAG COMMENTS: INIPOL NOT APPROPRIATE DUE TO CONCENTRATION OF FAVNA + FLORA. CUSTOMBLEN / GRANULAR FERTILIZER RECOMMENDED.

TAG APPROVAL DATE: 4/9/90.

ADEC JOHN BAUER

EXXON ANDY TATE

NOAA Bud Wescott

USCG G.A. REITER

FOSC: DATE:

Comply with sand management as best possible.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-56 SUBDIVISION C (3 of 4)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Tilling Spot Washing Other Approved Treatment	WORK PRIOR TO 8/15

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by ADF&G/Claudia Slater to Exxon/Tom Kelley 5/10/90

7II Subsistence: Deer Harvesting

No constraint to manual pickup; closed to bioremediation, manual tilling, and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 8/15. Restrict disturbance to unrolled *Fucus* and barnacles in low and mid tidal zones.

TAG ADDENDUM DATE 5/21/90.
ADEC Art Weiner
EXXON Andy Tarr
NOAA Joseph Tallant
USCG M. J. Hall

FOSC

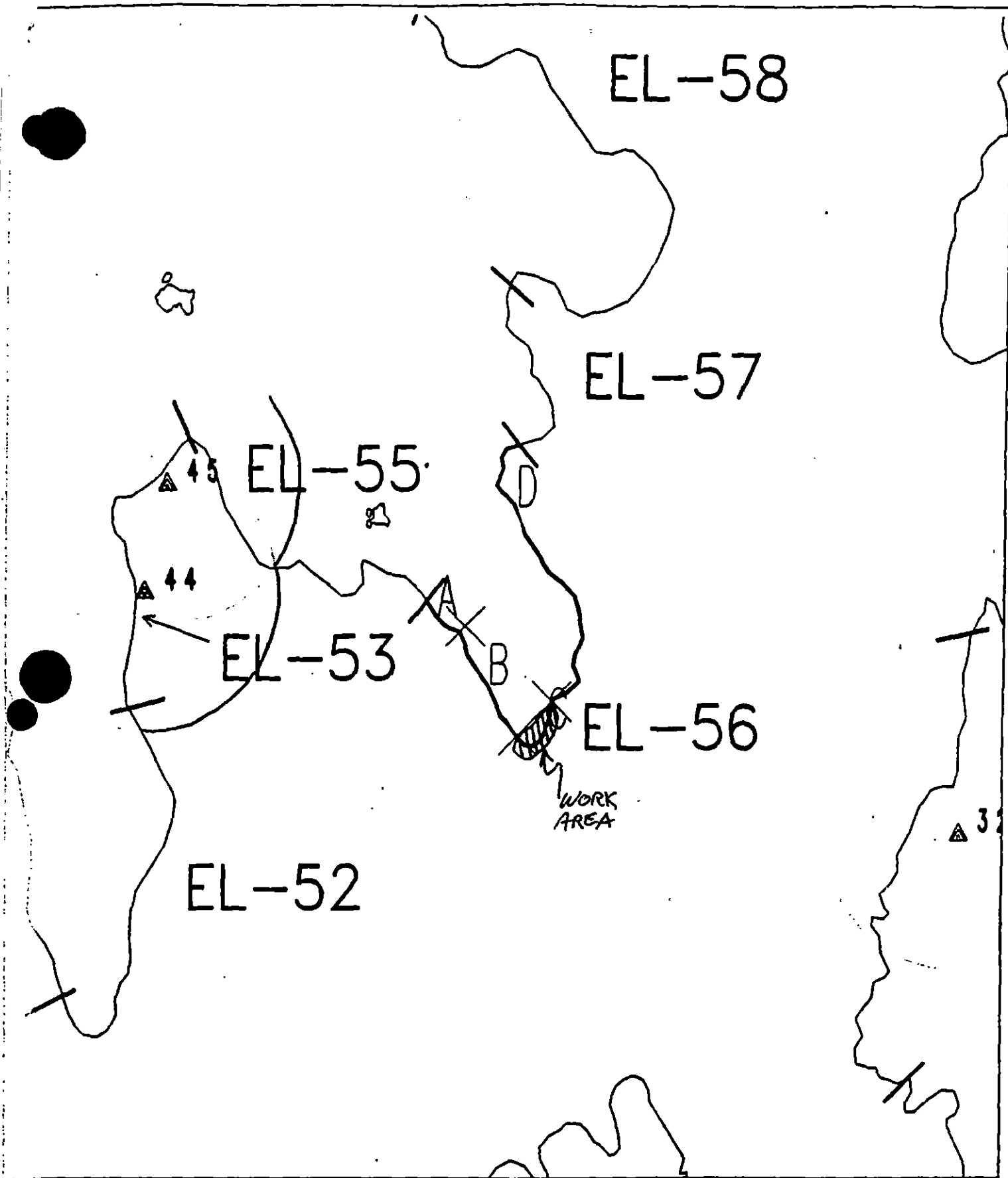
DATE 5-21-90

Prepared by:

Anden Meyer

Date:

5/20/90



Exxon Company, USA
Map Key: KNI-EL-56
May 11, 1990



ECOLOGY MAP
SEGMENT EL-56
SUBDIVISION C (3014)
METERS
0 303 765

- | | |
|---|----------------|
| ★ | Seabird Colony |
| △ | Eagle Nest |

1 inch = 1256 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION C (3 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 3/1; Recreation area (6U, Y) - 6/1 to 9/15; Restrict disturbance of uncoiled moderate fucus and barnacles in L and MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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.

~~press.~~
~~on~~
~~the~~

SHPO SIGNATURE: Charles J. Hume DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 88 m: Narrow 77 m: V.Light 48 m: No Oil 0 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: ☒ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☒ Other (see comments)

COMMENTS: The recommended treatment activities are as follows: 1) Spot washing with wands and sorbents in areas with continuous and broken cover, 2) Manual pickup of tar balls, 3) Manual tilling with hand tools followed by bioremediation in areas shown on sketch map. All work should be conducted after 6/15 based on constraints listed above.
SEE APPENDUM DATED 5/20/90
Rey C.

TAG COMMENTS: USE MANUAL AGGITATION IN CONJUNCTION WITH THE RISING TIDE TO REDUCE SPREADING AND HELP IN REMOVAL OF SUBSURFACE OIL. SNARE BOOMS + ABSORBENTS SHOULD BE MAINTAINED AT THE WATER / SHORE INTERFACE. WORKING WITH THE RISING TIDE WILL HAVE TO BE EVALUATED ON SITE TO DETERMINE FEASIBILITY AND PRACTICALITY.
LOGS TO BE RE-EVALUATED DURING TREATMENT ACTIVITY

TAG APPROVAL DATE: 5/9/90

ADEC JOHN BRUELL
EXXON ANDY BAC
NOAA Burt Wescott
USCG G.A. REITER

FOSC: DATE:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-56 SUBDIVISION D (4 of 4)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

7II Subsistence: Deer Harvesting

No constraint to manual pickup; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSTRAINTS

Avoid dense mussel beds when applying bioremediation. Restrict disturbance to mussel beds and barnacles in the mid to upper intertidal zone, and unrolled *Fucus* in MITZ. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15.

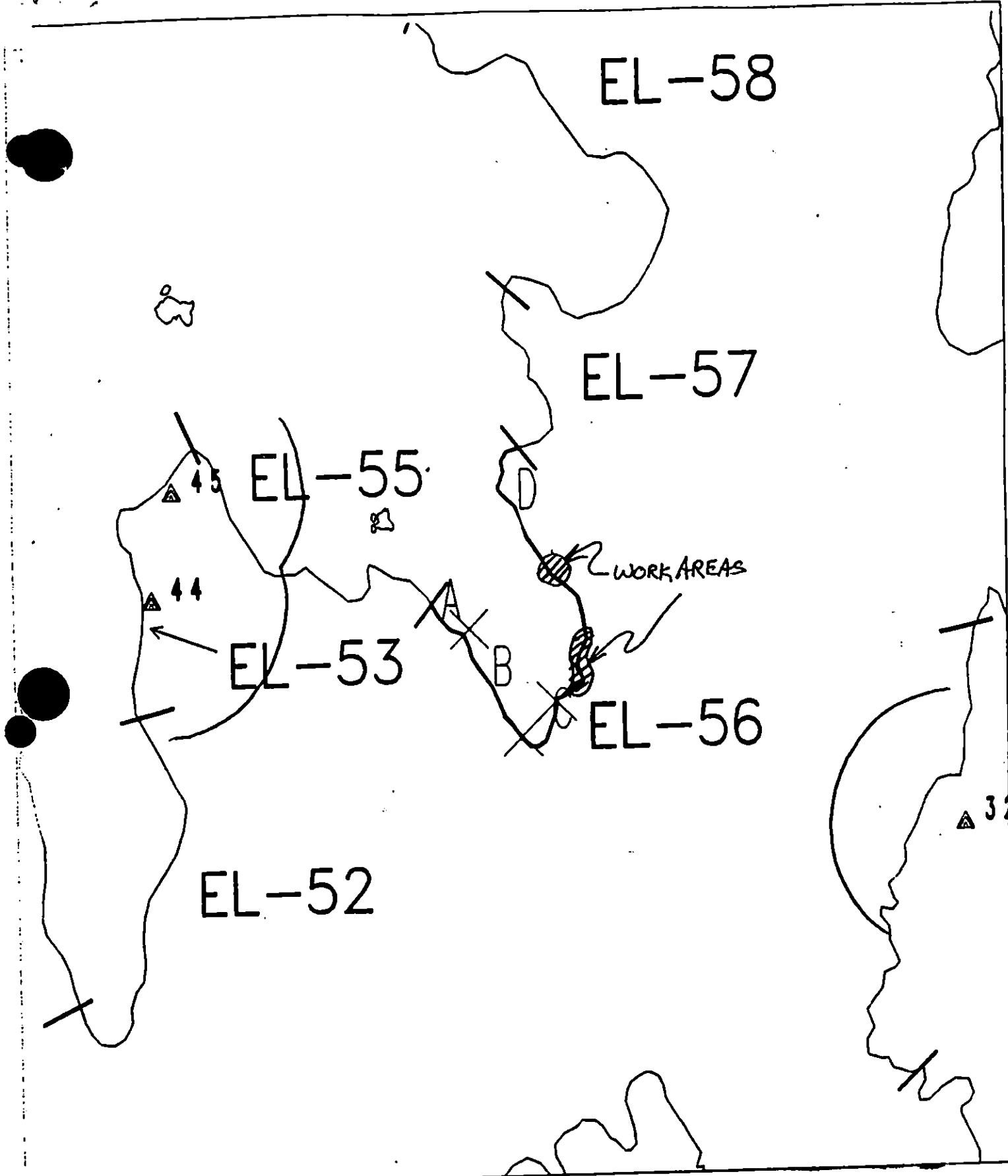
TAG ADDENDUM DATE 5/21/90.
ADEC Art Weiner
EXXON Amy Teal
NOAA Joseph K. Hall
USCG M. J. Hall, M.E.

FOSC My L

DATE 5-21-90

Prepared by: Andrea Meyer

Date: 5/20/90



Exxon Company, USA
Map Key: KNI-EL-56
May 11, 1990



ECOLOGY MAP
SEGMENT EL-56
SUBDIVISION D (4 of 4)
METERS
0 383 765

- | | |
|---|----------------|
| ★ | Seabird Colony |
| △ | Eagle Nest |

1 inch = 1256 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION D (4 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Restrict disturbing mytilus
beds, barnacles and gastropods in M or UITZ, or uncoiled fucus in
MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles E. Hohner DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 22 m: Narrow 339 m: V. Light 550 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 + 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: Recommend bioremediation in areas where broken coat
found on pocket beaches (see sketch map). Work should be done
after 6/15/90 based on constraints.

AVOID DENSE MUSSEL AREAS WHEN APPLYING BIOREMEDIANTS

PICKUP OILED VEGETATION + TAR PATTIES

LOGS TO BE RE-EVALUATED AT TIME OF TREATMENT ACTIVITY

SEE ADDENDUM DATED 5/20/90
TRXC.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Burt Westcott, Burt Westcott

USCG G.A. Reiter, G.A. REITER

FOSC:

DATE: 4-10-90

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION A (1 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 3/1; Recreation area (6U,Y) - 6/1 to 9/15; Restrict disturbance of dense to moderate uncoiled fucus, barnacles, and gastropods where observed in the upper-lower intertidal zones.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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: April 9, 1990

OILING CATEGORIZATION:

Wide 18 m: Medium 0 m: Narrow 120 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> </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> </u> Other (see comments)

COMMENTS: Recommend bioremediation of surface coat on pocket beach. (See Sketch map). Work recommended after 6/15/90 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Bu-1 Wescott
USCG G.A. REITER

FOSC:

DATE: 19 April 1990

0978-6449-2010-2410

OG. C. Division
SEGMENT 52
SUBDIVISION A
DATE 3, 29/90

= indicate drainages

INDEX MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- Width
- Length
- % Cover
- ☒ Substrate Character
- ☒ Est. HWLAWI
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pk Location(s)
- Photo Location(s)

LEGEND

Fig. 4. No Subsurface Oil

2 ▲
Plt. Subsurface On

CT/C
Continuous Distribution

CT/8

Broken Distribution

[CT/P]

Patchy Distribution

 P M B

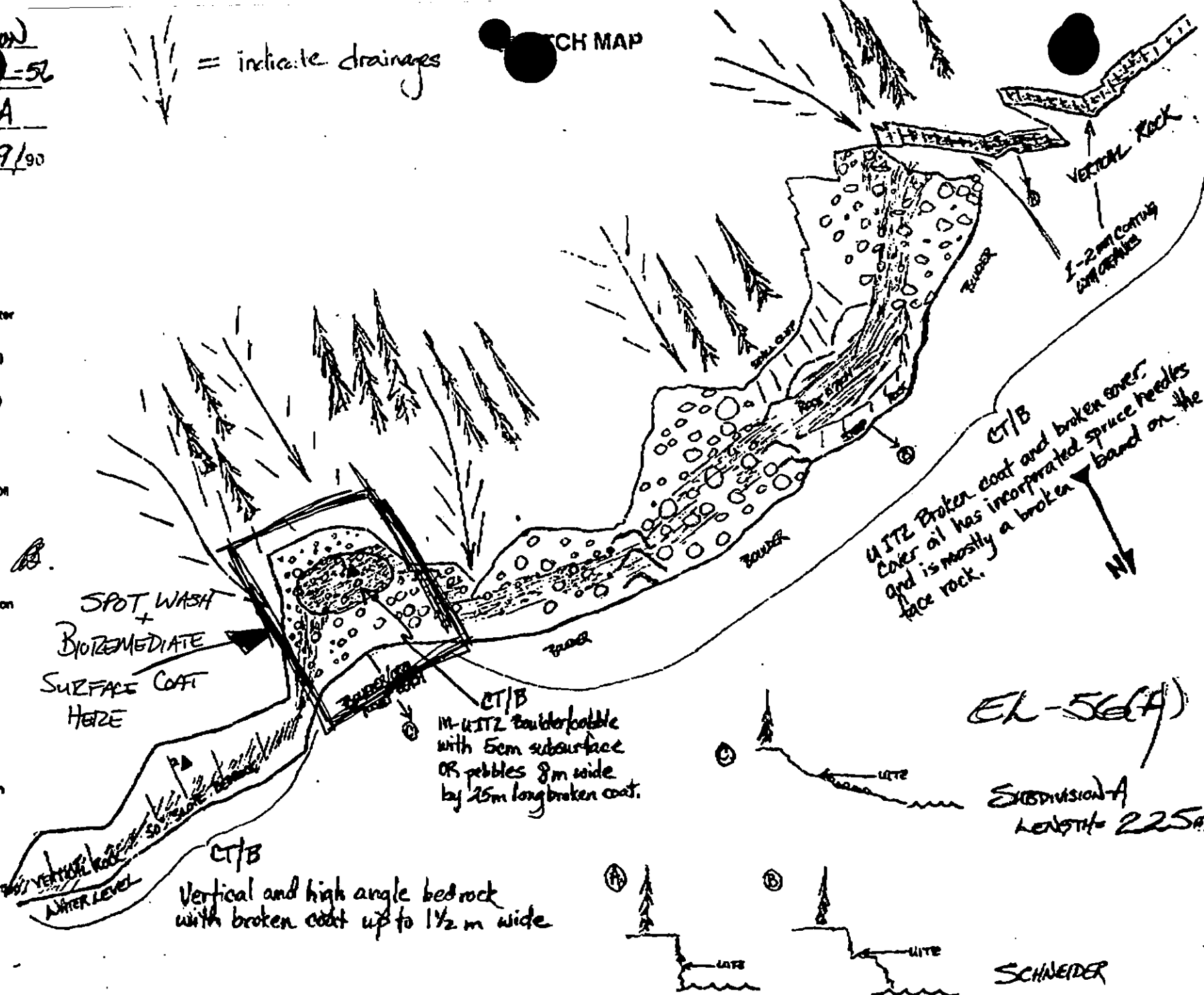
Splashed Distribution

Cold Vegetation

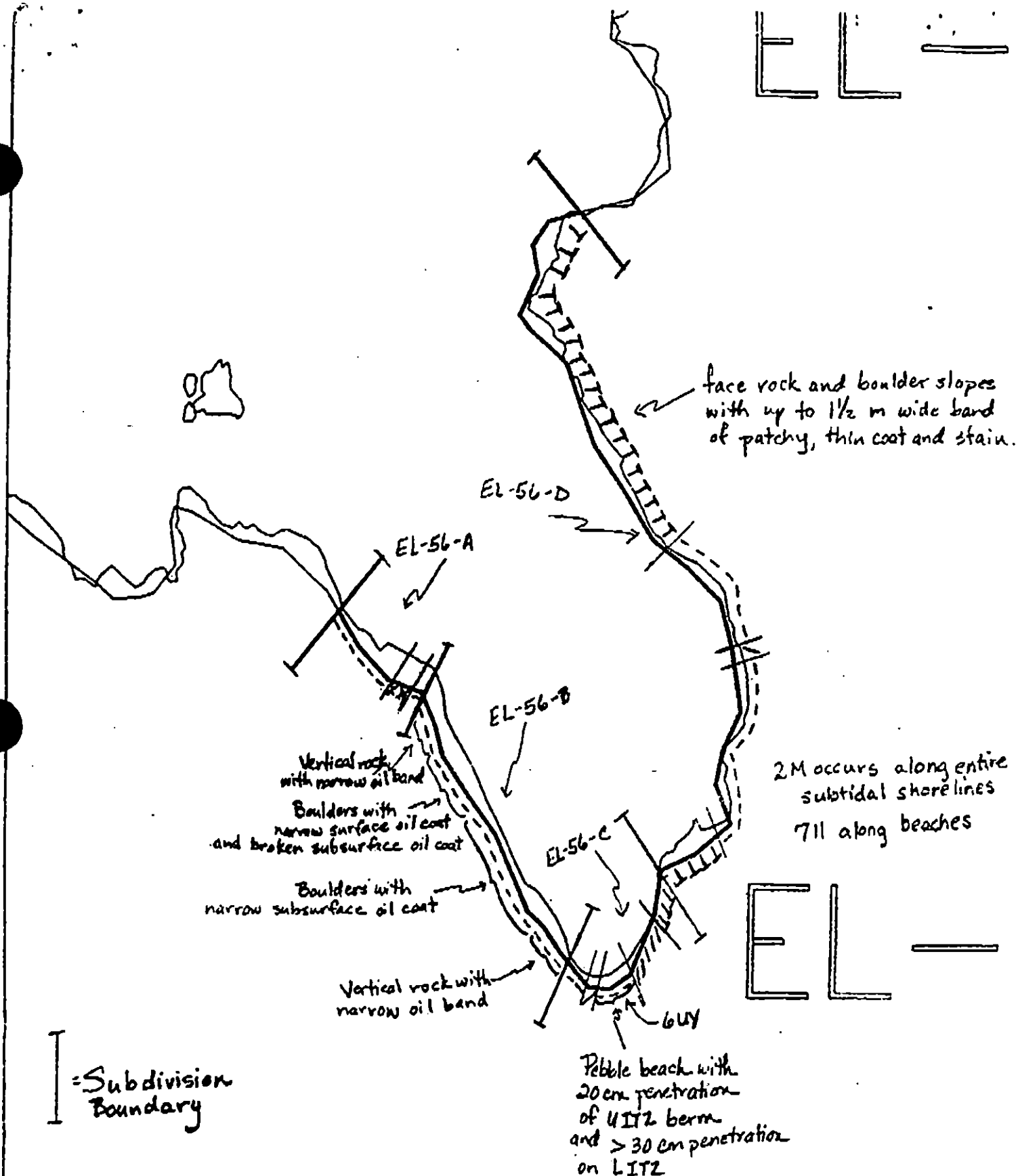
Photo location, direction
and number

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

REVISION: 02/4/98



EL -



EL -

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-56

ADEC Segment Length: 1613m



Map Key: PWS-139

Name: C. DILLON

Date: 3/29/90

Data Entered:

4



1

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the

SHPO SIGNATURE: Charles E. Holmes DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 351m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 + cm

RECOMMENDATIONS:

RECOMMENDATIONS:
☐ No Treatment Recommended ☐ Snare/Absorbent Booms
☐ Treatment Recommended ☐ Oil Snare (pom poms)

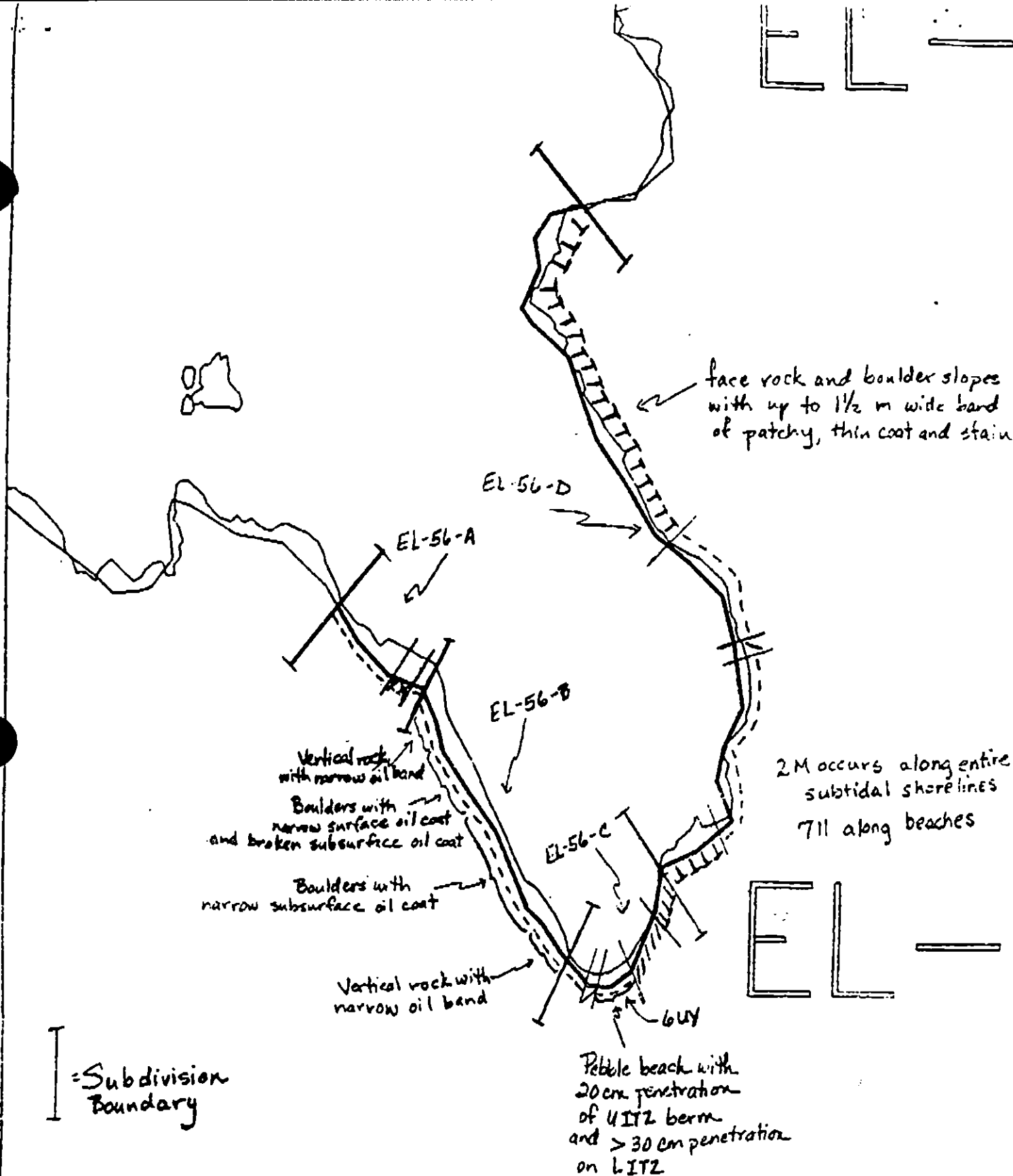
COMMENTS: Recommend restricted treatment in this subdivision as
broken coating found on steep boulder beds is relatively inaccess-

TAG COMMENTS: INIPOL NOT APPROPRIATE DUE TO CONCENTRATION OF
FAUNA + FLORA. CUSTOMBLEN/GRANULAR FERTILIZER

TAG APPROVAL DATE: 4/9/98
 ADEC JOHN BAUER
 EXXON ANDY TATE
 NOAA Burl Wescott
 USCG G.A. DEITER

FOSC: DATE: 4-19-90

~~Comply with Land Manager~~
~~requirements as best possible.~~



EL-56

ADEC Segment Length: 1613m

METERS

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION C (3 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 3/1; Recreation area (6U, Y) - 6/1 to 9/15; Restrict disturbance of uncoiled moderate fucus and barnacles in L and MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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: *Charles H. Hume* DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 88 m: Narrow 77 m: V.Light 48 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 + cm

RECOMMENDATIONS:

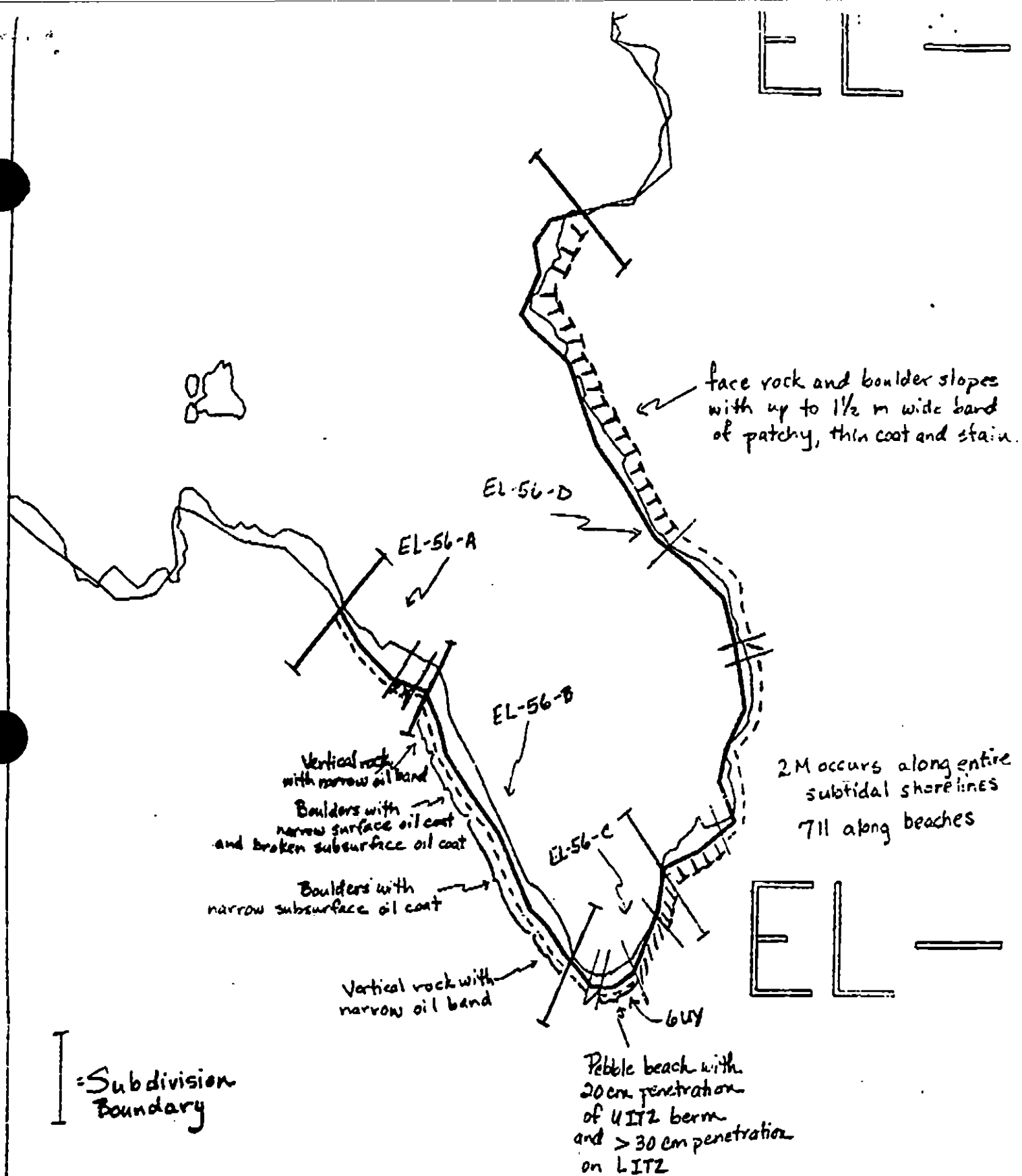
☐ No Treatment Recommended	☒ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☒ Spot Washing: ☒ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☒ Other (see comments)

COMMENTS: The recommended treatment activities are as follows: 1) Spot washing with wands and sorbents in areas with continuous and broken cover, 2) Manual pickup of tar balls, 3) Manual tilling with hand tools followed by bioremediation in areas shown on sketch map. All work should be conducted after 6/15 based on constraints listed above.

TAG COMMENTS: USE MANUAL AGGITATION IN CONJUNCTION WITH THE RISING TIDE TO REDUCE SNEAWING AND HELP IN REMOVAL OF SUBSURFACE OIL. SNARE BOOMS + ABSORBENTS SHOULD BE MAINTAINED AT THE WATER/SHORE INTERFACE. WORKING WITH THE RISING TIDE WILL HAVE TO BE EVALUATED ON SITE TO DETERMINE FEASIBILITY AND PRACTICALITY.
• LOGS TO BE RE-EVALUATED DURING TREATMENT ACTIVITY

TAG APPROVAL DATE: 4/9/90

ADEC *John Bauer*
EXXON *ANDY ETC* FOSC: *My* DATE: 4-19-90
NOAA *Burt Wasscott*
USCG *G.A. REITER*



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 1613m

0 100 200 300
METERS

Map Key: PWS-139

Name: C. Dillon

Date: 3/29/90

Data Entered:

00 C. D. N
 SEGMENT ST/ EL-56
 SUBDIVISION C
 DATE 3/29/90

SEGMENT EL-56 SUBDIVISION C

SKETCH MAP

SUBDIVISION LENGTH = 300 METERS

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWA
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

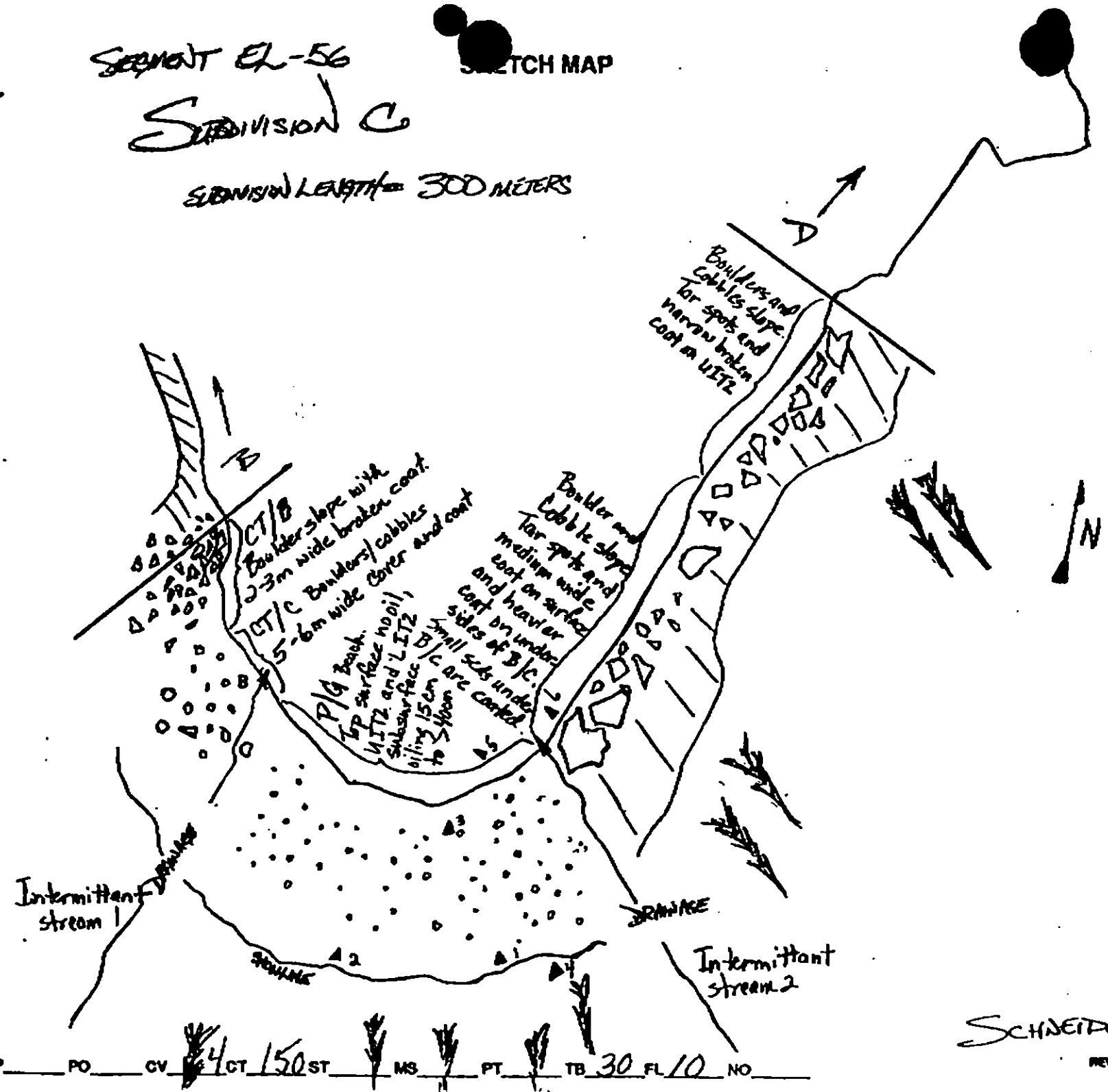
- 1 Δ
 PH - No Subsurface Oil
- 2 Δ
 PH - Subsurface Oil
- CT/C

 Continuous Distribution
- CT/B

 Broken Distribution
- CT/P

 Patchy Distribution
- CT/S

 Splashed Distribution
- $\bullet$
 Oil Character Length
- $\bullet$
 Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 4 CT 150 ST _____ MS _____ PT _____ TB 30 FL 10 NO _____

SCHNEIDER

OG COLLON

SEGMENT ST/ EL-56

SUBDIVISION C

DATE 3/29/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWLAWL
- ☐ 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

Offed Vegetation

1 $\rightarrow$
Photo location, direction,
and number

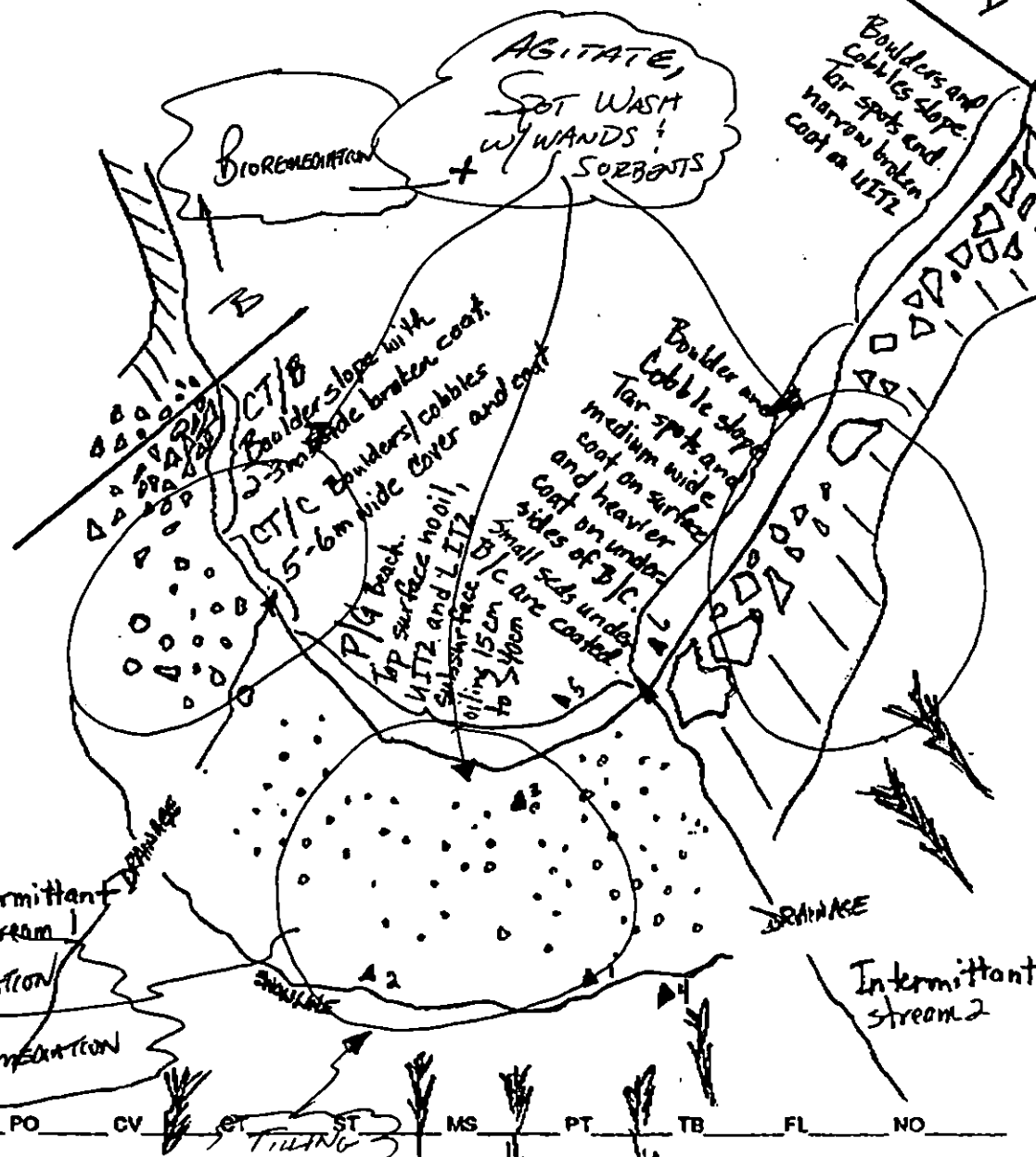
Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO

SEGMENT EL-56

SKETCH MAP

SUBDIVISION C

SUBDIVISION LENGTH = 300 METERS



SCHNEIDER

REVISION 03/24/90

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION D (4 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Restrict disturbing mytilus
beds, barnacles and gastropods in M or UITZ, or uncoiled fucus in
MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered
during shoreline treatment, stop work in the vicinity, mark 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: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 22 m: Narrow 339m: V.Light 550m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 + 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: Recommend bioremediation in areas where broken coat
found on pocket beaches (see sketch map). Work should be done
after 6/15/90 based on constraints.

AVOID DENSE MUSSEL AREAS WHEN APPLYING BIOREMEDIANTS

PICKUP OILED VEGETATION + TAR PATCHES
LOGS TO BE RE-EVALUATED AT TIME OF TREATMENT ACTIVITY.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burl Westcott, Burl Westcott
USCG G.A. Reiter, G.A. KETTER

FOSC: D. E. Wyl DATE: 4-19-90

SPRING

SKETCH MAP

MENT ST/EL - 56

DIVISION 0

E03 129/90

ECKLIST

- Arrow
- Upper Scale
- log/Sub Entry
- Dist
- Width
- Length
- Cover
- Substrate Character
- St. HWA/LWA
- ISL
- Yaffle Location(s)
- W Location(s)
- Flow Location(s)

GEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Mixed Distribution

CT/B

on Distribution

CT/P

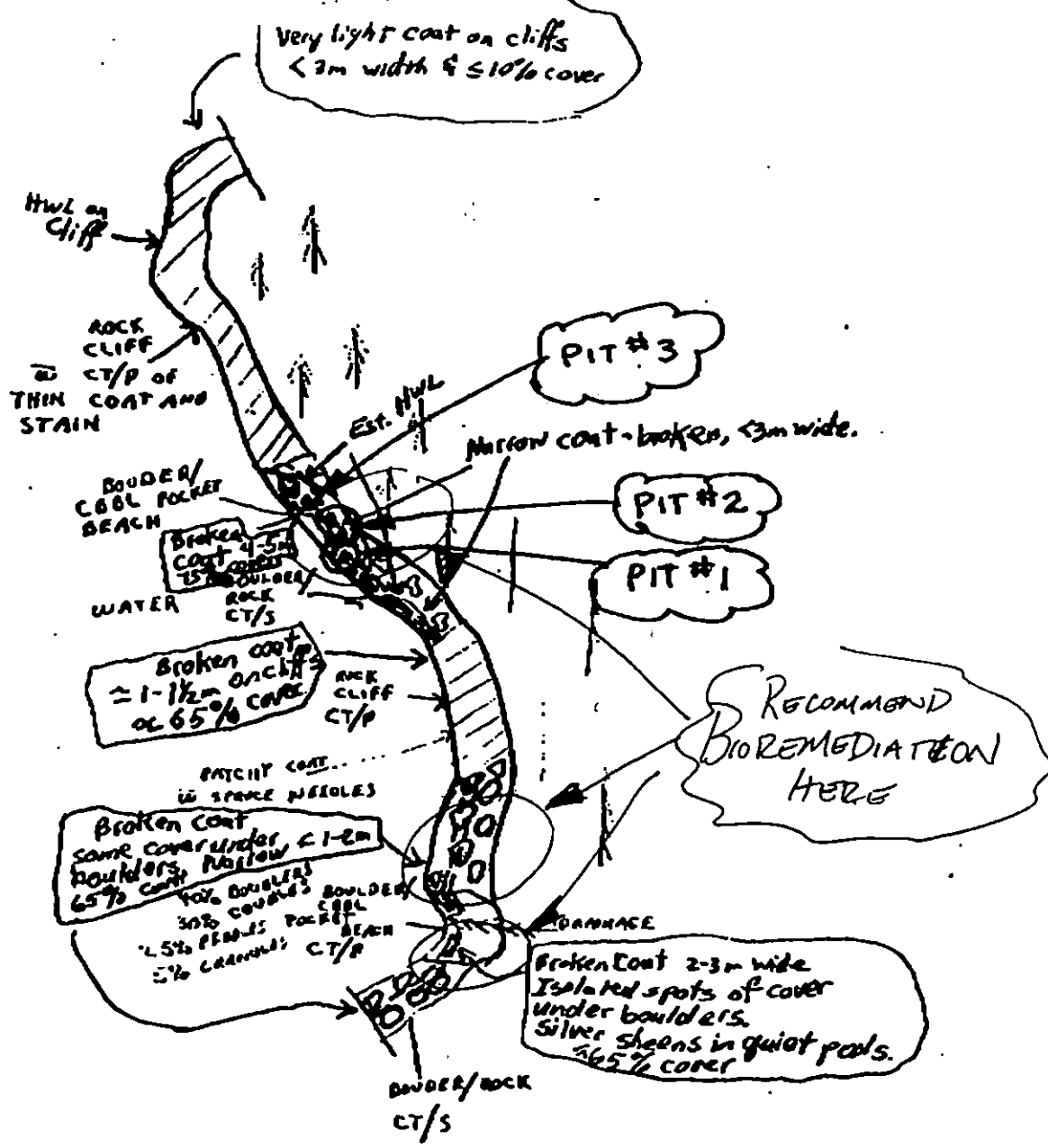
by Distribution

CT/S

shed Distribution

Vegetation

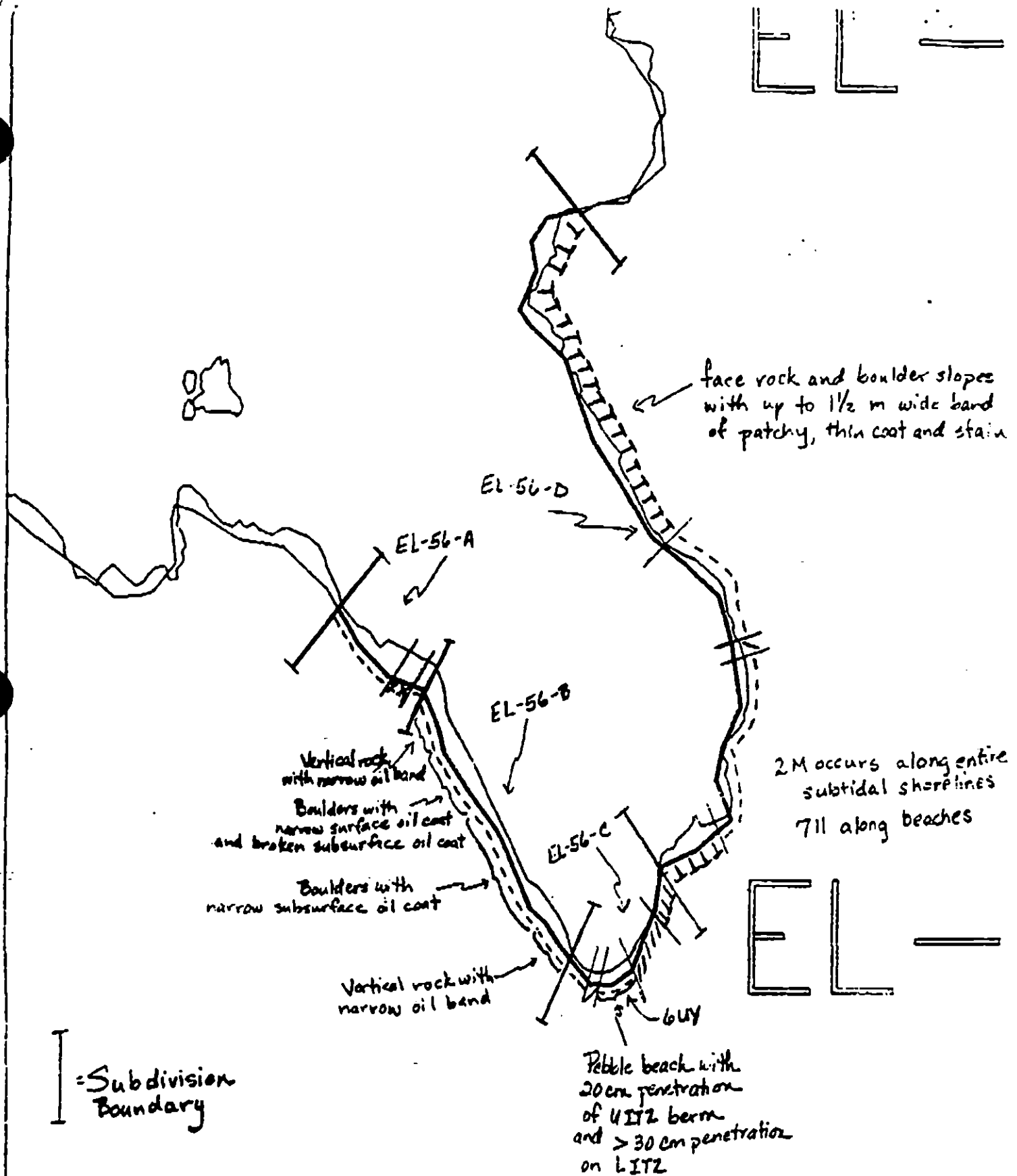
to location, direction,
number



0 100m
Approx

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

EL -



EL -

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-56

ADEC Segment Length: 1613m

0 100 200 300

Map Key: PWS-139

Name: C. Dillon

Date: 3/29/90

1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: C REGION: PWS SURVEY DATE: 4/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. H. D. M. A. R. S. Date: 5/9/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>NSM</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u>_____</u>	<u>_____</u>	<u>_____</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: _____

FOSC: _____

TAG APPROVAL DATE: MAY 29 1991

FOSC APPROVAL DATE: 5/13/91

ADEC [Signature]

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

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

Ecological/Constraints
Page 2

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION C DATE 4/26/91

ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☐ NTR

☒ Treatment Recommended

ADNR lists this site as a Recreational use area which accounts for the upland trail. A large Percentage of the subsurface oil would be released by mechanical Tilling - mid to upper ITZ's. Some of the upper oiling may be out of reach of the available tines. Tilling should occur between the two runoffs on the pocket beach, along the water's edge on the rising tide. The beach is set up for easy recovery, easy access for an LCU. The entire operation would be quick and simple and above the green zone.

Portion of Segment to East probably had undiscovered oil trapped below large boulders, as suggested by Sheen.

EXXON

NAME CHARIS KATSIMPALIS

SIGNATURE [Signature]

☒ NTR

SUBSURFACE OIL IN POCKET ^{BEACH} IS NOT TO A DEGREE WHICH WARRANTS FURTHER TREATMENT. SMALL AMOUNTS OF OIL ELSEWHERE IN THIS SUBDIVISION ARE NOT IN NEED OF TREATMENT. I THINK NATURE IS WELL CAPABLE OF HEALING THIS AREA NOW.

LANDMANAGER

NAME D.S. Kennedy

OF USFS

SIGNATURE [Signature]

☐ NTR

The area shows some recreational use. boat/kayak visits. There is a trail used by humans and prob deer. Human use most likely for hunting and site seeing. The area seems to be flushing on its own thus I would suggest no treatment to a very light hand on the land for any future work.

USCG/NOAA

NAME MICHEL

SIGNATURE [Signature]

☐ NTR

WE FOCUSED ON THE POCKET BEACH WHERE MOST OF THE REMAINING OIL WAS THE SUBSURFACE OIL IS RESTRICTED TO THE CENTER OF THE BEACH. GCIMS ANALYSIS OF A SAMPLE FROM A SITE SIMILAR TO PIT 2 ^(JAN 1991) SHOWED THE OIL TO BE HIGHLY WEATHERED, WITH NO NAPHTHALENE HOMOLOGS PRESENT. THE ABUNDANT FRESHWATER DISCHARGE SHOULD CONTINUE TO FACILITATE FLUSHING/WEATHERING.

CONCUR W/ EXXON, USFS, & NOAA. NATURE WILL BE THIS BEACH'S BEST HEALER & CLEANER

[Signature]
USCG

OG COMMENTS: moderate slope pocket pebble beach at the head of Cove, High angle Boulder beaches to either side. Oiling consists of sporadic coat behind boulders and in crevices, minor SOR found in crevices between and under boulders. Sub-surface Lens of LOR-MOR found in mid-lower part of Pebble beach. No subsurface oil was found in the Uitz and Storm berm, except in pit # 5 which is along the side of the stream in the transition to boulder beach.

XX BEDROCK

→ GRASS

LOGS

FOREST

→ Photo
LOCATIONS

A

Intersitial
Behind Boulders
CT 2%
6 x 80m

C

2 x 6m 8%
SOR(Light)

D

SOR 5%
4 x 4m
Rope

Rope
PU

SKETCH MAP (OG)

EL 56 C

Doug Reimer

26 April 91

19:24 - 20:45

E

4 x 40m
SOR(Light) 2%
Intersitial
between Bould.

F

CT 1%
3 x 15

POM POM Wedged in Rock
NOT Removed

POM POM
Removed

2 LOR
103
3 MOR
5

23 x 20m
MOR
MC

B

10 x 60m
film 2%
silver sheen
in Run off across
Beach

STAKES

SNOW

STREAM

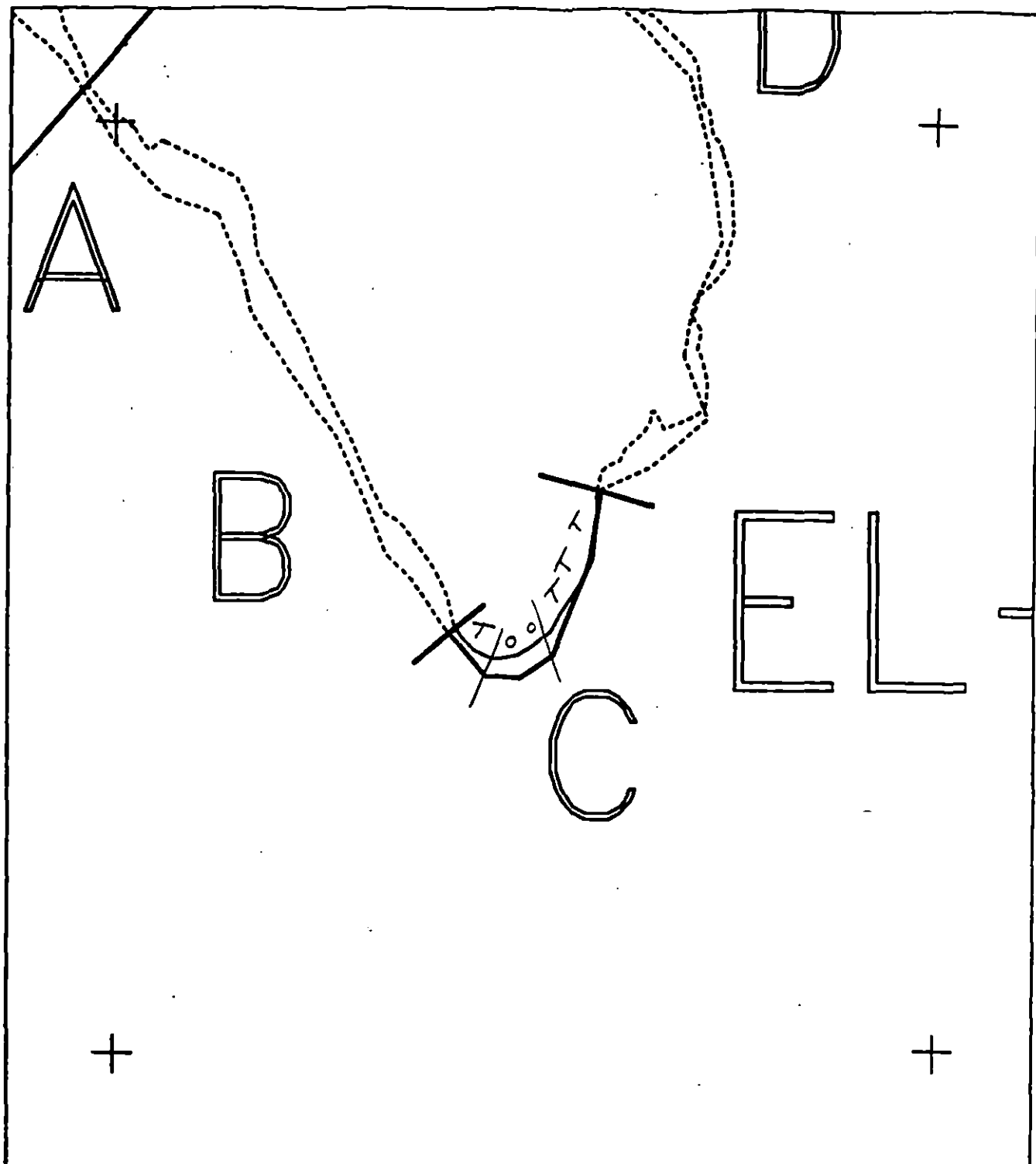
STREAM

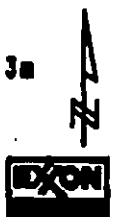
BOULDER BEACH

TREES

BOULDER BEACH

SILVER SHEEN IN H2O



XXXX Wide //// Medium ---- Narrow TTTT Very Light 0000 No Oil		EL056 C ADEC Subsegment Length: 213m METERS 0 100 200 AK State Plane Zone 6 841050a			Subdivision Field Map Map Key: KMIEL056C Name: <u>Reimer</u> Date: <u>4/26/91</u> Date Entered:
--	--	---	--	---	---

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE Apr 26 1991
 SEGMENT # EL 056 TIDAL HEIGHT(Range) +1' to +5'
 SUBDIVISION C BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- (A) Black lichen is moderately abundant in UITZ; barnacles rare. Filamentous green algae are moderate
- (B) Fucus adults & juveniles are moderately dense, with recruitment found on boulder surfaces & in cracks. Barnacles also moderate, & with moderate recruitment. Filamentous green algae is dense, especially in MITZ where FW runoff flows. Individual Fucus & barnacles appear to be small specimens.
- (C) Filamentous green algae is again dense, esp. in MITZ & LITZ.
- (D) Filamentous green algae are the only significant organisms in UITZ, but they are moderate. They are dense in MITZ & LITZ, on pebbles as well as cobbles where FW runs.
- (E) Filamentous algae are moderately dense in UITZ and dense in MITZ & LITZ. Fucus is moderate in MITZ & LITZ

This entire subdivision is characterized by very low diversity, moderate biomass (due primarily to filamentous greens & Fucus), and rather small individual organisms. These observations, and good recruitment of Fucus & barnacles, suggest that the community is in a state of recovery (green filamentous algae earliest) in a low productivity area.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS Most existing species should recruit again, even if harmed by any possible future cleanup.

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

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

Shoreline subdivision map showing important biological features attached.

XX BEDROCK

TP GRASS

LOGS

FOREST

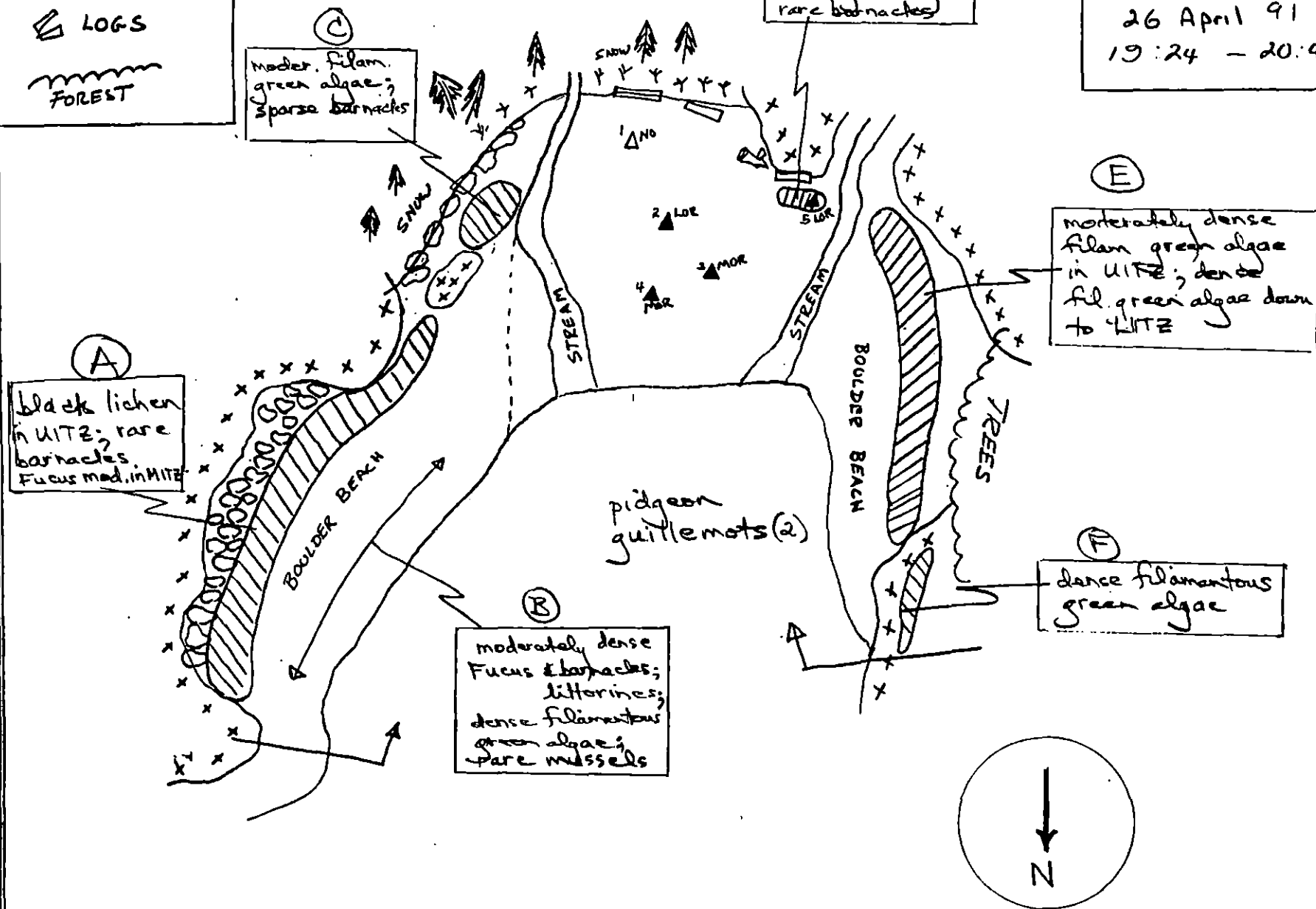
SKETCH MAP (BIO)

EL 56 C

John Benson

26 April 91

19:24 - 20:45



U.S. Department
of Transportation

United States
Coast Guard



Memorandum

Subject: EXXON WORKPLAN FOR SEGMENT EL056C

Date:

From: DEPUTY CHIEF OF OPERATIONS

Reply to
Attn. of:

To: FOSC

Via: Chief of Operations

1. This workplan has been evaluated by the Technical Advisory Group (TAG). The workplan was either adopted as is by TAG, or modified to gain concurrent acceptance.

2. BIA / CVC / DNR / NFS / NNF&WS / NPS / Land Manager/owner input was received with positive / negative comment. Their comment sheets are attached.

3. Recommend FOSC approval of this workplan.

E. J. MADDEN



United States
Department of
Agriculture

Forest
Service

Exxon Valdez Oil Spill Response
201 E. 9th Avenue, Suite 206
Anchorage, AK 99501
907-271-2547

Reply to: 1590

Date: May 13, 1991

Subject: Segment Approvals

To: Federal On Scene Coordinator:

On May 13, 1991 the Forest Service, U.S. Department of Agriculture received segment recommendations from the Technical Advisory Group. We agree with the recommendations for 1991 cleanup as presented for the following segments --

SM 005 (A), SM 005 (B), SM 006 (A), SM 007(A)

GR 002 (A), GR 007 (A), GR 008 (A), GR 103 (A)

Kn 129 (A), KN 401 (B)

PR 002 (A), PR 12 (A), PR 13 (A)

LS 60 (A), SE 042 (A)

-EL 56 (C)

The recommendation from TAG was left blank for segments EL 56 (A), (B), and (D). The initial recommendation was no treatment on these segments, to which we concurred. However, we had requested removal of the flagging that remained in subdivision (D).

Our initial response to segments PR 008 (A), (B), and (C) were made as a group, based primarily on the need to treat subdivision (C). The entire survey team reported recoverable HOR in subdivision C. Looking at each subdivision on its own makes treatment of subdivisions (A) and (B) questionable. However, with a crew in the area to treat (C) and high recreation use of (A) and (B), we request reconsideration of having manual pick up and/or manual tiling in all subdivisions. Please let me know if this request creates unusual difficulties.

This agreement is based on current observations and is solely for the purpose of planning and scheduling 1991 response treatment action. It in no way implies that the state or Federal Government will not in the future determine that further restoration or other treatment, or compensation therefor, is warranted regarding this area, or that the area is considered by the state or Federal Government to be adequately "clean" or "restored" for the purposes of any claim which the state or Federal Government has brought or may bring against Exxon, Inc. or any other potentially responsible party.

LEO KEELER
Oil Spill Liaison

Caring for the Land and Serving People

cc: GRD



1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: D REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles H. Homan

Date: 5/8/91

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: MAY 8 1991

FOSC APPROVAL DATE: 5/10/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION D DATE 4/27/91

ADEC

NAME Peter Montesano

SIGNATURE

Peter Montesano

☒ NTR

☐ Treatment Recommended

The OG Report accurately characterizes this Subdivision most of which is boulder or Rock headlands. It is likely that there is oil below some of the large boulders which is completely inaccessible. The deposits of MOR are not easily accessed for treatment due to beach morphology. The deposits of SOR/SOFr AP are not in concentrations or distribution worthy of treatment.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE

C.M. Katsimpalis

☒ NTR

ACCURATE INFO. IS REFLECTED IN OG & BIO REPORTS.

GOOD SURVEY OF THIS BEACH!

* NOTE LAND MNGRS. REQUEST FOR REMOVAL OF FLAGGING, ETC. WHEN NO LONGER NEEDED.

LANDMANAGER

NAME DENNIS KENNEDY OF USFS

SIGNATURE

D.S. Kennedy

☒ NTR

most notable visual impacts in the area are from clean up efforts - flagging, paint, etc. Agree that no treatment is needed except for removing plot and area markings

USCG/NOAA

NAME MICHEL (N)

BRI ZENOU (CG)

SIGNATURE

Michel

Bri Zenou

☒ NTR

This Subdivision WAS SURVEYED IN DETAIL. The highest concentrations of oil was M.O.R. in granules/pebble beach between sites H + I, in spite of significant freshwater flow through the beachface. Sheens were common in the freshwater runoff and nearshore water, indicating mobilization of the subsurface oil. The rest of the oil in the subdivision is widely scattered and inaccessible.

CG

CONCUR w/OG's REPORT. AGREE NO TREATMENT ON THIS SUBDIVISION. 3

TEAM NO. TWOOG DOUG REIMERBIO SANDY BENSONSEGMENT EL 56ADEC PETER MONTESANOLANDMANAGER DENNIS KENNEDY USFSSUBDIVISION DEXXON CHRIS KATSIMPALISBRI ZENONE - USCG
USCG/NOAA JACQUE MICHAEL NOAADATE 4/27/91TIME 7:32 to 9:37TIDE LEVEL -1 ft. to +3 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 910 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W — m M — m N 27 m VL 58 m NO 525 m US — 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	
A1				S							BCPG	H	3	20	X	X			Light - interstitial
B				S		S		S			BCPG	M	3	10	X	X			Light - interstitial
C				S		T					B	H	20	3		X			
D				S	T	T					BCR	H	3	4.0		X			Light - interstitial
E				S	S	S					BCP	H	2	4	X	X			moderate SOR
F					P						R	V	2	20		X			Rock face
G				P							BCP	H	2	2	X	X			sheltered Pocket
H						S	S				BC	M	4	30		X			
I				S	S	S					BC	H	6	60		X			Light Interstitial SOR
J						S					R	V	1/2	140		X			Rock face
K					S						R	V	1	1		X			Rock face
A2				S									1	3					light-interstitial

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- 2-1 FRAMES 6-10

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR BRSN	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	10			X					3 - 7	Y	8	B			X		BC-GCR	Bottom Rock
2	23			X					3 - 20	Y	20	B		X			B - P	
3	30							X	-	Y					X		P - PG	
4	35							X	-	Y					X		P - PG	
5	27			X					6 - 27	N	22	B		X			B - GP	Water filled
6	20			X					5 - 20	N	15	B			X		PG - GPC	Water filled
									-									
									-									
									-									

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

OG COMMENTS: The southern half of the subdivision was surveyed by foot, and consists of predominantly steep boulder beaches. Oiling consists of sporadic coat/cover splash on sheltered sides of boulders/rock or in interstitial crevices. finer matrix material between and under boulders has sporadic SOR, generally light except for one pocket @ location G. Some Subsurface MOR was found on lower angle beaches associated with STREAMS. The Northern part of the subdivision was survey by skiff. It consists of steep Rock cliff with sporadic narrow boulder apron. One section (J) contained a 1/2 meter very discontinuous band along the high tide line.

REVISOR: J. Y. 4/30/91

REVIEWER: M.C. 4/30/91

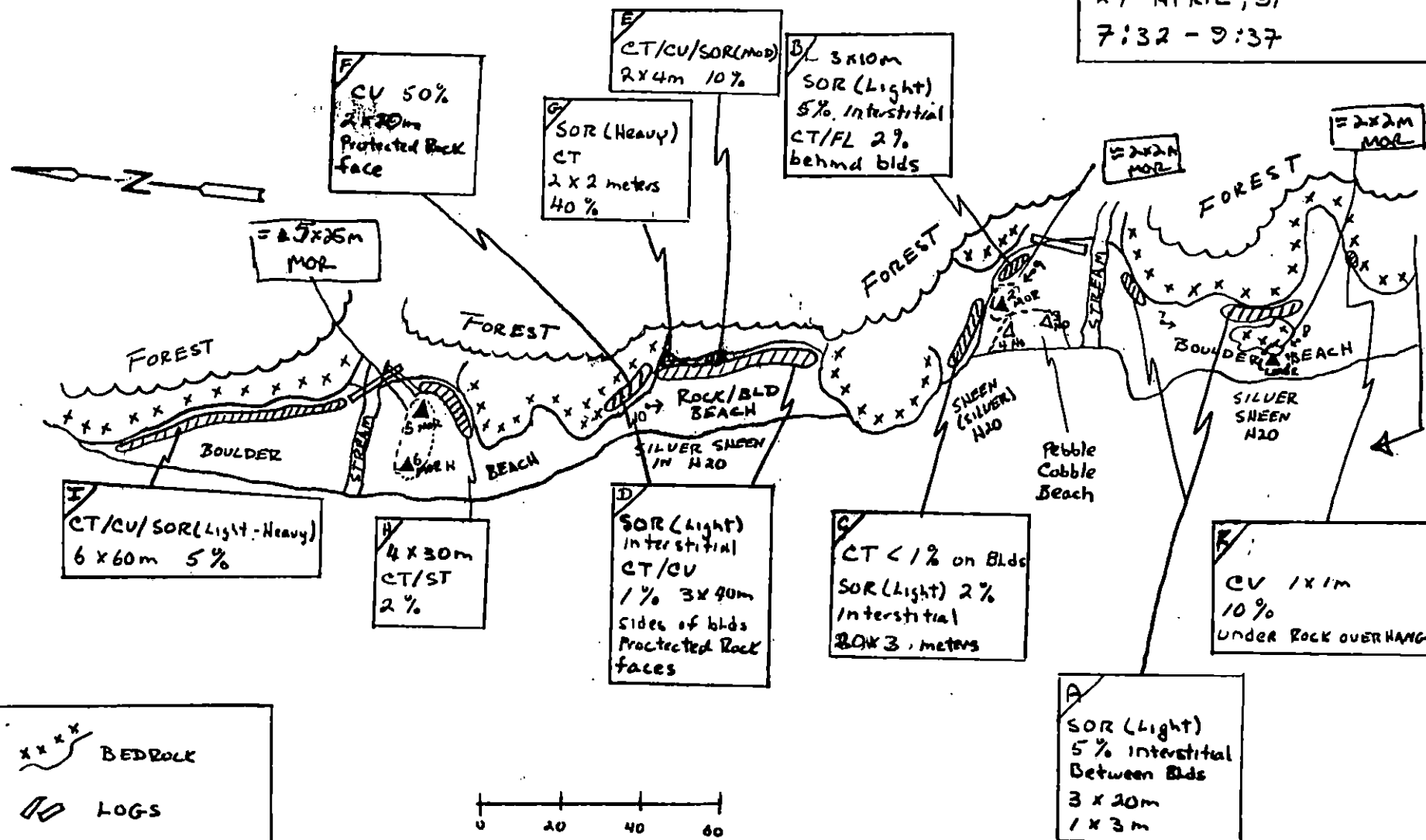
SKETCH MAP #1 (OG)

EL 56 D

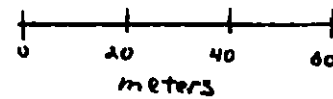
Doug Reimer

27 APRIL, 91

7:32 - 9:37

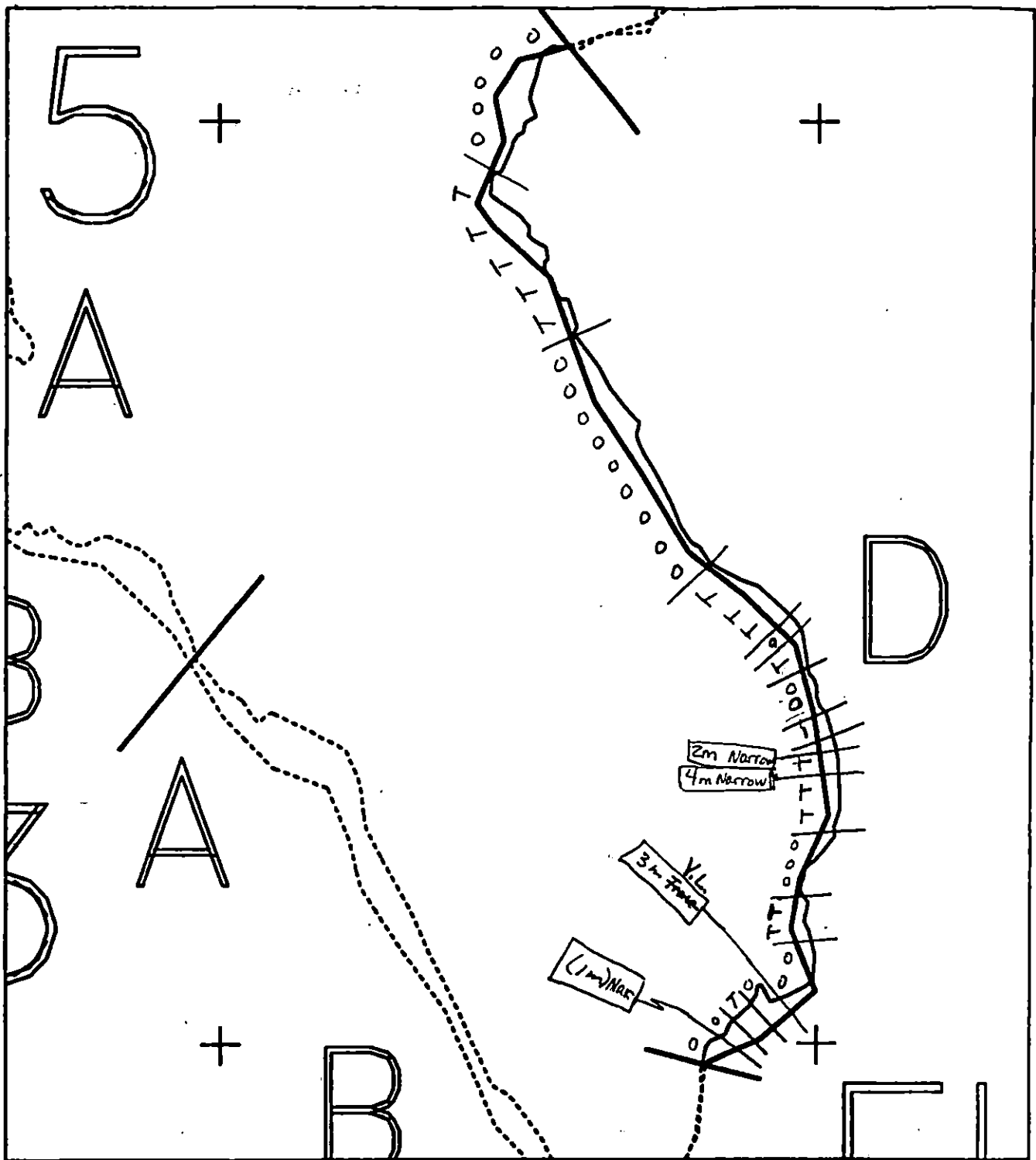


xxx BEDROCK
 // LOGS
 wavy FOREST
 → PHOTO LOCATIONS



Revisions: J.V. 4/30/91
 Revised: MC. 4/30/91

SEE LOCATION MAP



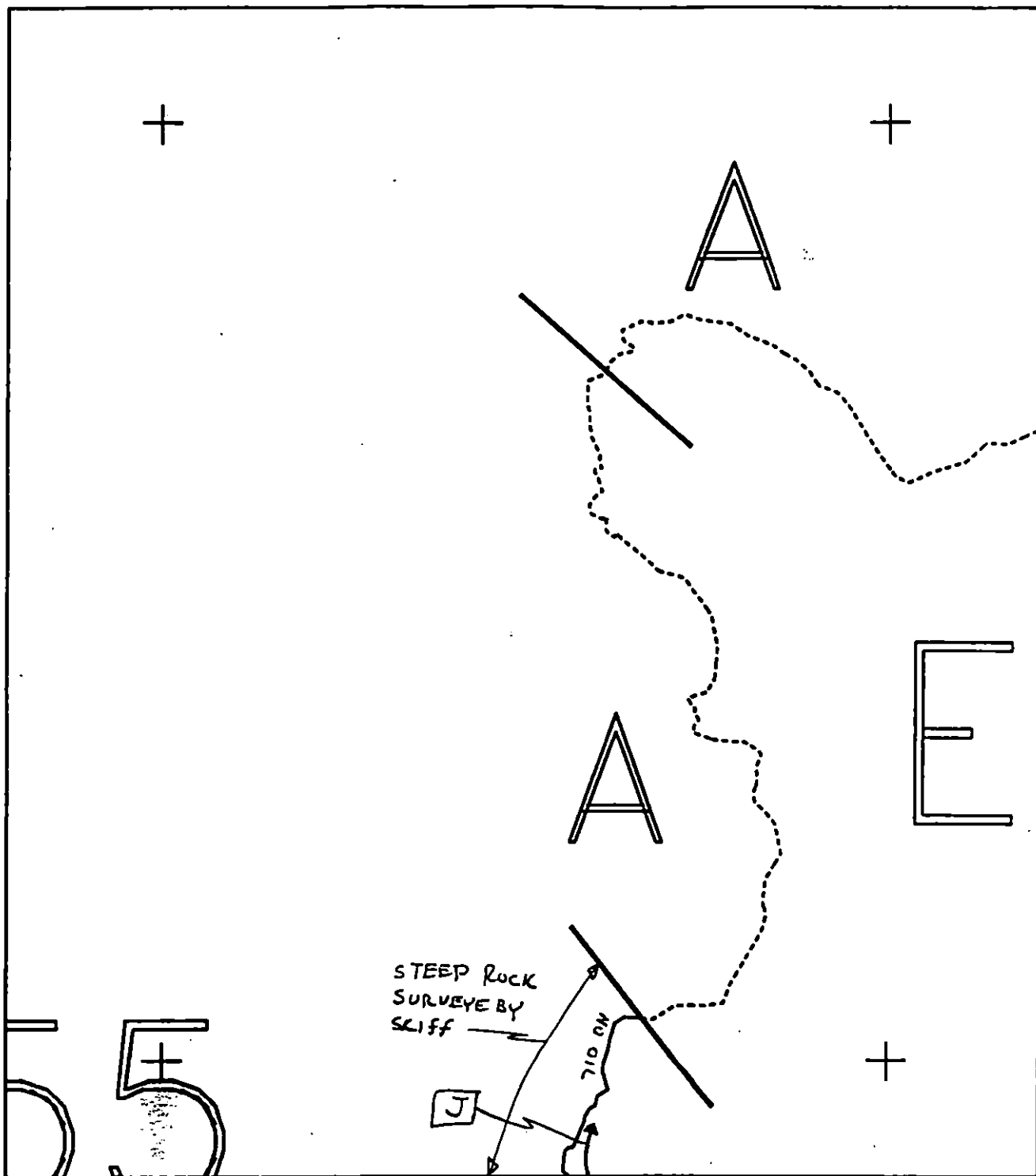
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EL056 D
 ADEC Subsegment Length: 810m
 METERS
 0 100 200
 AK State Plane Zone 4
 601056d



Subdivision Field Map
 Map Key: XNIEL056D
 Name: Reimer
 Date: 4/27/91
 Date Entered:

REMOVED: M.C. 4/30/91
 REMOVED: J.Y. 4/30/91



EL056 D

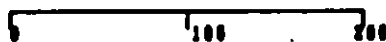
Subdivision Field Map

Map Key: ENRLO5606

Name: Reimer

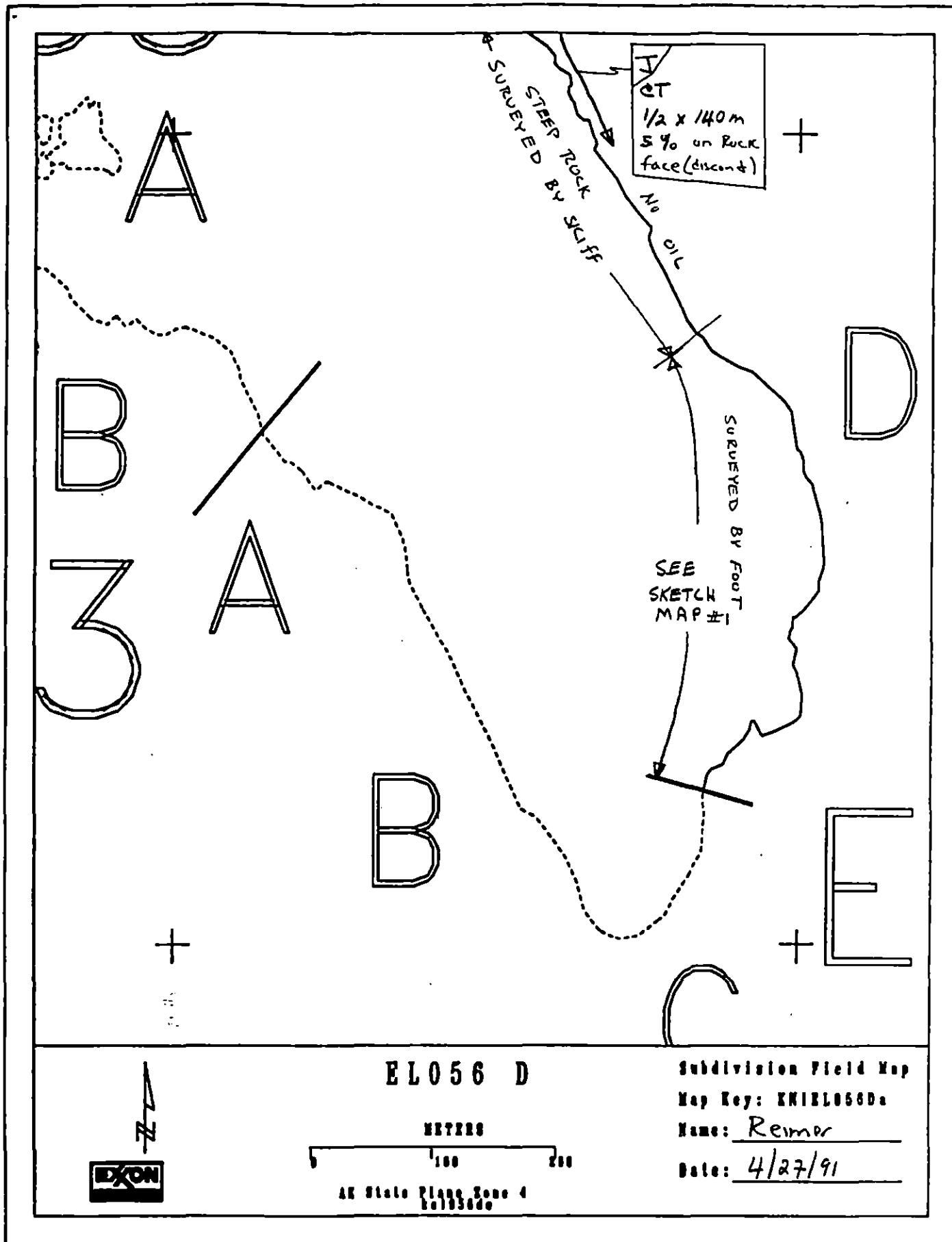
Date: 4/27/91

METERS



AK State Plane Zone 4
22103606





REVIEWED: M.C. 4/30/91
REVIEWED: J.Y. 4/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 27 Apr 1991

SEGMENT # EL 56

TIDAL HEIGHT(Range) -1' to +2'

SUBDIVISION D

BIOLOGIST Benson

SEA STATE 1'

WIND SPEED/DIRECTION 5 mph/W

PHOTOGRAPHS: ROLL # —

FRAME # —

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

(A), (K), (D), (C) — Density & especially, diversity of invertebrates & algae is higher than in subdivision C (which is more protected). Recruitment of barnacles, Fucus and Littorines is moderately dense. Littorina egg masses were found only in (D) & (C). Filamentous green algae are very abundant, but a fairly diverse assemblage of other macroalgae are also present. A bald eagle circled overhead momentarily in (C), then flew away.

(D), (E), (F) — Similar to communities at above locations, but distinguished by dense barnacles on boulders & bedrock in the MITZ & UITZ. Gray-brown polychaetes (4" long) in small sandy pockets. Oil has completely covered some barnacles on boulder & bedrock in the UITZ.

(G), (H), (I) — Barnacles are sparse on substrates near the oil, and throughout the intertidal in (H) & (I). Filamentous green algae, again, form the dominant biotic cover, but the growth is not as lush as in locations described above.

(J) — We observed this steep bedrock shore from the boat; nonetheless, it was clearly moderately diverse & abundant community.

Perhaps the greater exposure of subdivision D (than C) accounts for the greater

WILDLIFE OBSERVATIONS species diversity & recruitment there. It appears TO BE COMPLETED IN ALL SUBDIVISIONS that barnacles & Fucus may have been adversely affected by oiling & cleanup.

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	—
Seabirds	1	1	—
Waterfowl	—	—	—
Gulls/kittiwakes	2	3	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

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

Shoreline subdivision map showing important biological features attached.

SKETCH MAP #1 (BIO)

EL 56 D

BENSON

27 APRIL, 91

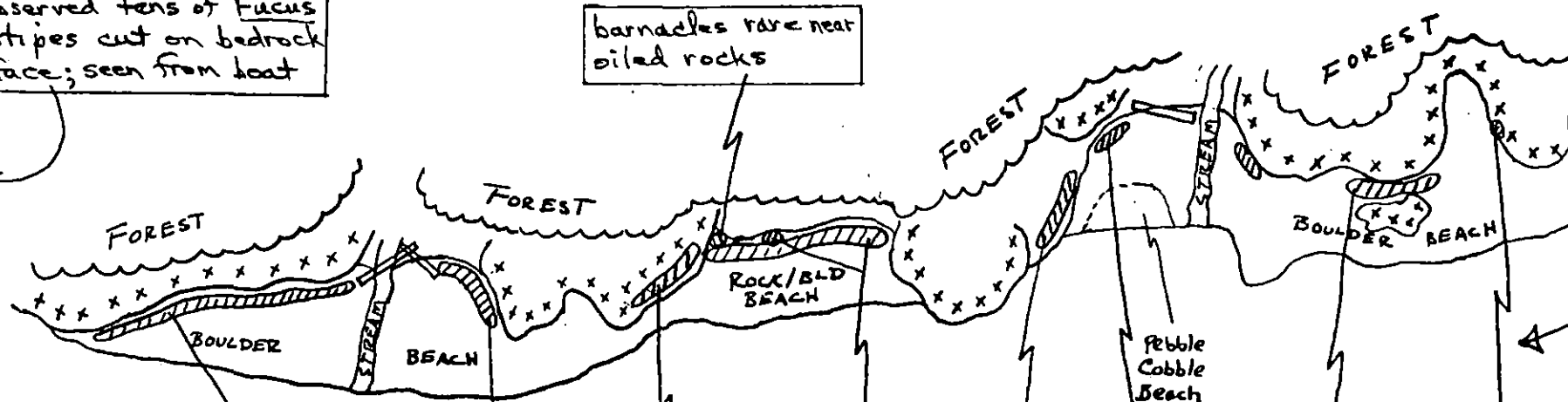
7:32 - 9:37

(J)

(see OG location map)
observed tens of Fucus
stripes cut on bedrock
face; seen from boat

(G)

barnacles rare near
oiled rocks



(H), (I)

sparse barnacles on
boulders throughout
inter-tidal; filamentous
green algae still dense,
as throughout subdivision

(D), (E), (F)

Community on boulders
moderately dense, but
greater density of
barnacles in MITZ
& LITZ (except where
covered with oil)

(B), (C)

moderately dense &
diverse algae &
invertebrates,
including egg masses
of littorines on the
boulders & bedrock

(A), (K)

moderate density &
diversity of algae,
especially, & inverte-
brates on boulders
from UITZ to LITZ

x x x BEDROCK

|| LOGS

wavy line FOREST

arrow PHOTO LOCATIONS

Common
merganser

SEE LOCATION MAP

1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: A REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Mark Z. H. Dimer

Date: 5/8/91

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 8 1991

FOSC APPROVAL DATE: 5/13/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION A DATE 4/27/91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☒ NTR

☐ TREATMENT RECOMMENDED

SEGMENT WELL DOCUMENTED BY OG; AREA "N" DID HAVE A TRACE FROM 5-7 CM. THE OILING FOUND WAS CONSISTENTLY THIN WITH THE SEGMENT BEING LARGELY BEDROCK AND BOULDER. THERE IS POSSIBLY OIL TRAPPED DOWN IN THE BOULDERS WHICH WAS INACCESSIBLE. INTERSTITIAL AND NEAR SHORE SHEELS WERE NOTED.

EXXON

NAME C. M. KATSIMPALIS

SIGNATURE C. M. Katsumpalis

☒ NTR

OG & BIO SUMMARIES PROVIDE ACCURATE DATA.

LANDMANAGER

NAME DENNIS KENNEDY

OF USFS

SIGNATURE D. S. Kennedy

☒ NTR

Segment consists of large rocks and boulders this subsurface oil character is in question. Visual observations show scattered occurrences of oil. also good Bio documentation showing diverse plants/animals.

USCG/NOAA

NAME MICHEL (N)

Bm. ZENONE (CG)

SIGNATURE Michel

Bm. Zenone

☒ NTR

MINOR amounts of oil were observed, and only in the boulder beaches. The subdivision was well surveyed. Slight sheens were in the runoff and nearshore water at each beach.

USCG

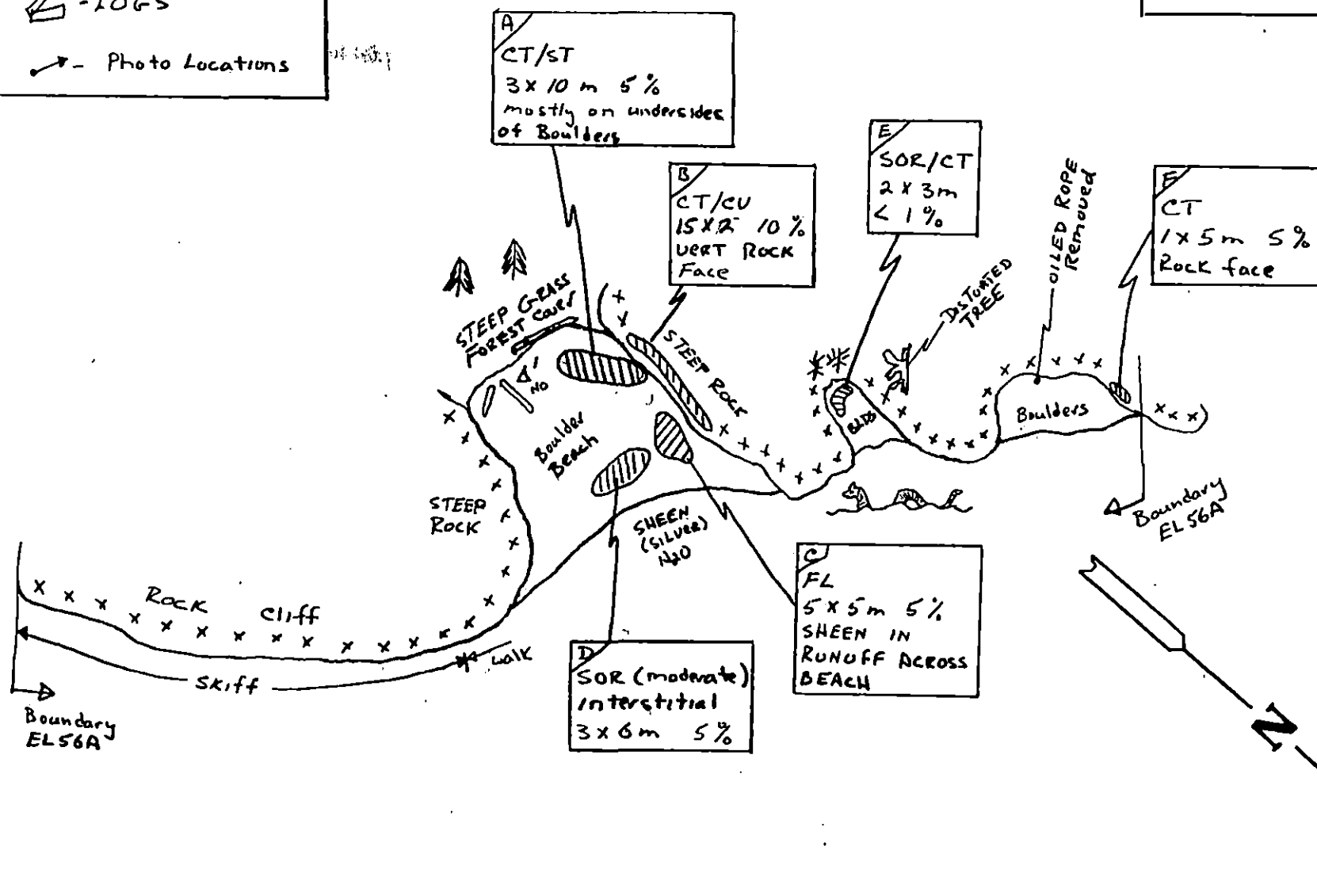
Good OG REPORT. + Bio Report - Z

PAGE 1 OF 1

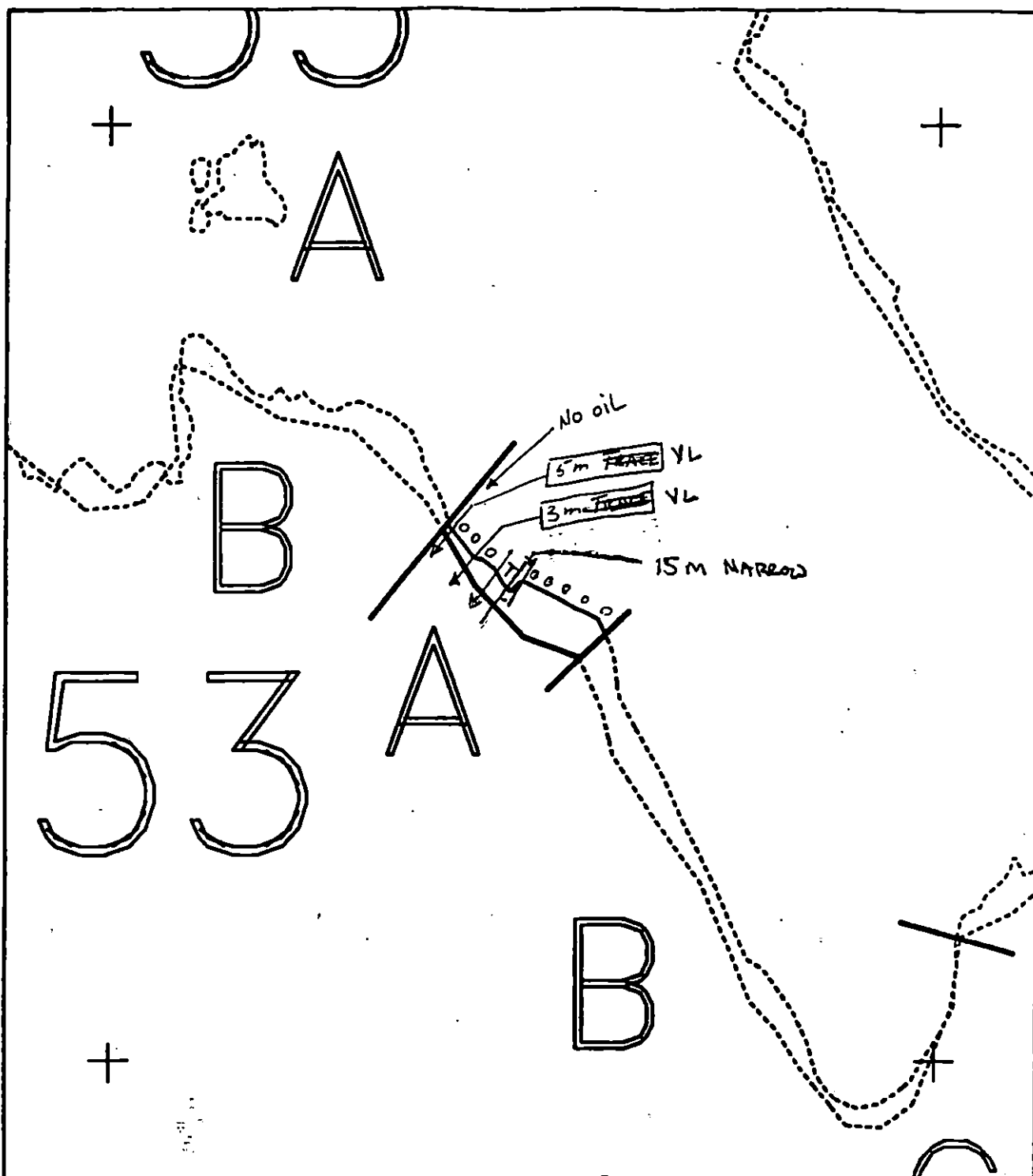
REVISED: MC 4/30/91

- ▲ - Evergreens
- ✱ - Disjunctive TREES
- x x x - Rock
- ▢ - LOGS
- - Photo Locations

SKETCH MAP (OG)
 EL 56 A
 Doug Reimer
 27 April, 91
 10:30 - 11:12



REVIEWED: M.C. 4/30/91



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

EL056 A

ADEC Subsegment Length: 130m
 METERS

0 100 200
 AK State Plane Zone 6
 601090



Subdivision Field Map

Map Key: KNELO56A

Name: Reimer

Date: 4/27/91

Date Entered:

REVISED: MC. 4/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 27 Apr 1991
 SEGMENT # EL 56 TIDAL HEIGHT(Range) +5' to +6'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) & (B) — Verrucaria, filamentous green algae & recently recruited barnacles are moderately abundant on boulders & bedrock in the LITZ & MITZ near the oil. The LITZ could not be observed (it was covered by water). The lower MITZ is described in (C) & (D). Some bare Fucus stripes were found.

(C) & (D) — Both adult & recently recruited Fucus, barnacles & Littorines were moderately abundant on the boulders in the MITZ. There is also a moderately diverse assemblage of other macroalgae, such as filamentous green algae, Hildenbrandia, & Endocladia.

(E) & (F) — These are moderately diverse communities with high % cover of biota that are not dominated by filamentous green algae.

This subdivision supports a moderately diverse biota with high % cover and a significant amount of recruitment of Fucus, barnacles & Littorines. It appears to be much better developed biologically than adjacent subdivision B. (The LITZ could not be observed).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

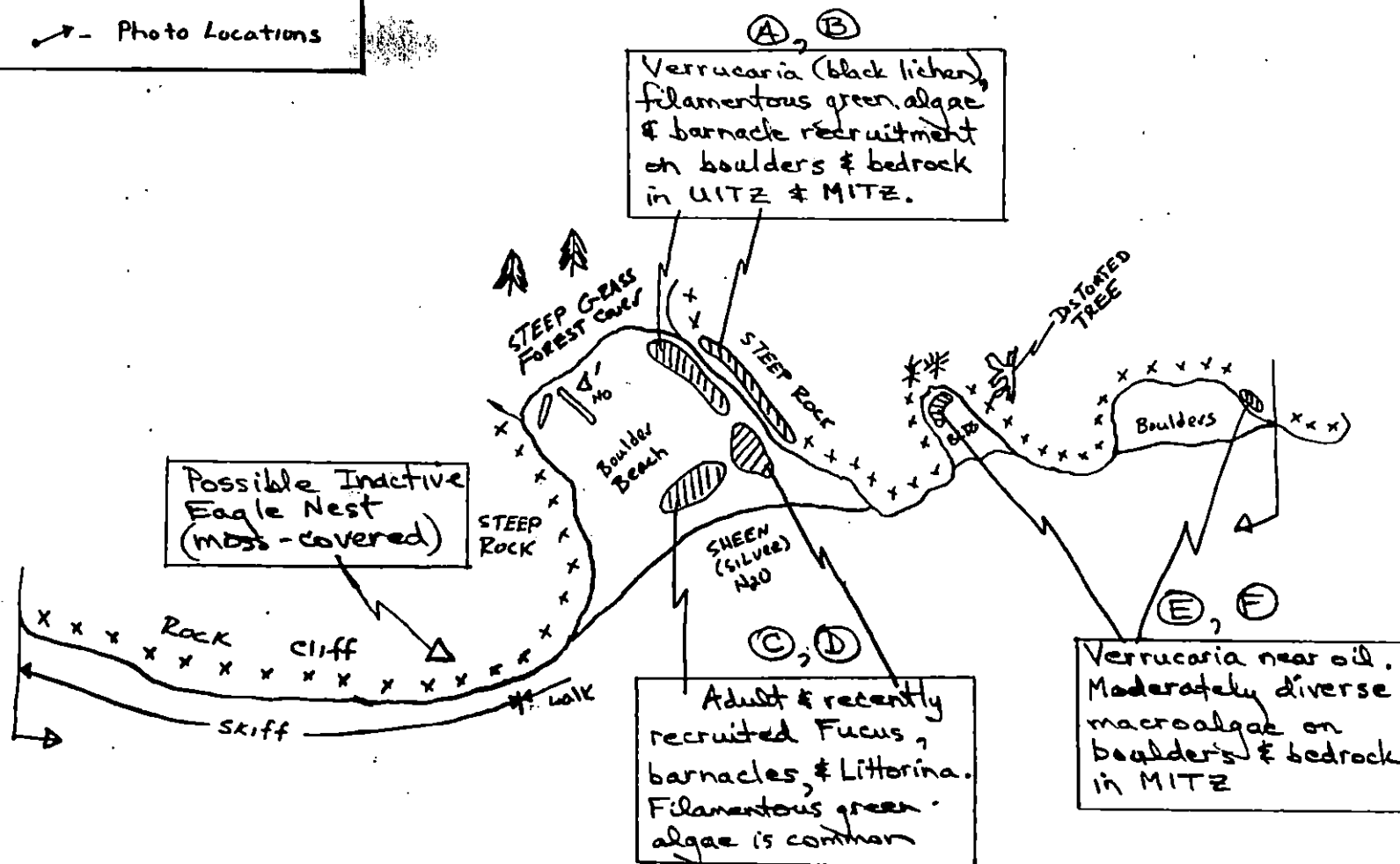
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—		—
Seabirds	—		
Waterfowl	—		
Gulls/Kittiwakes	—		
Shorebirds	—		
Corvids	—		
Other Birds	—		

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

Shoreline subdivision map showing important biological features attached.

- ▲ - Evergreens
- ✱ - Disjunctive TREES
- x - Rock
- ▤ - LOGS
- - Photo Locations

SKETCH MAP (BIO)
 EL 56 A
 BENSON
 27 April, 91
 10:30 - 11:12



1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: B REGION: PWS SURVEY DATE: 2/27/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Adams Date: 5/8/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </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:

FOSC:

TAG APPROVAL DATE: MAY 8 1991 FOSC APPROVAL DATE: 5/13/91

ADEC John Bane FOSC E. E. Page

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

USCG ESM

NOAA James

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION B DATE 4/27/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☒ NTR

☐ Treatment Recommended

MOST OF SEGMENT IS DEEP BOULDER PILES OR HEADLANDS WITH NO REASONABLE ACCESS. NO HEAVY CONCENTRATIONS OF OIL FOUND, HOWEVER IN ACCESSIBLE OIL INEVITABLY EXISTS DEEP WITHIN THE BOULDER PILES. SURVEY ADEQUATE AND NO TREATMENT PRESENTLY REQUIRED.

EXXON

NAME C. M. LATSIMPALIS

SIGNATURE C. M. Latsimpalis

☒ NTR

VERY LIGHT, SCATTERED OILING CONDITIONS REMAIN HERE. OG & BIO REPORTS PROVIDE PERTINENT INFO.

LANDMANAGER

NAME DENNIS KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☒ NTR

Very light film can be observed, although not common. Area seems light on expected vegetative growth. Thus no treatment recommended.

USCG/NOAA

NAME MICHEL(N) ZENONE (CG)

SIGNATURE Michel Zenone

☒ NTR

We were not able to survey this subdivision in great detail because of the cover of very large boulders. Frequent inspections were made off between boulder crevices, with only scattered occurrences of visible oil. There were very few and small sheens on tidepools and in nearshore waters.

USCG -

CONCUR W/ OG'S REPORT. AGREE W/ OTHERS THAT NO TREATMENT IS THE WAY TO GO.

REVISOR: M.C. 5/2/91

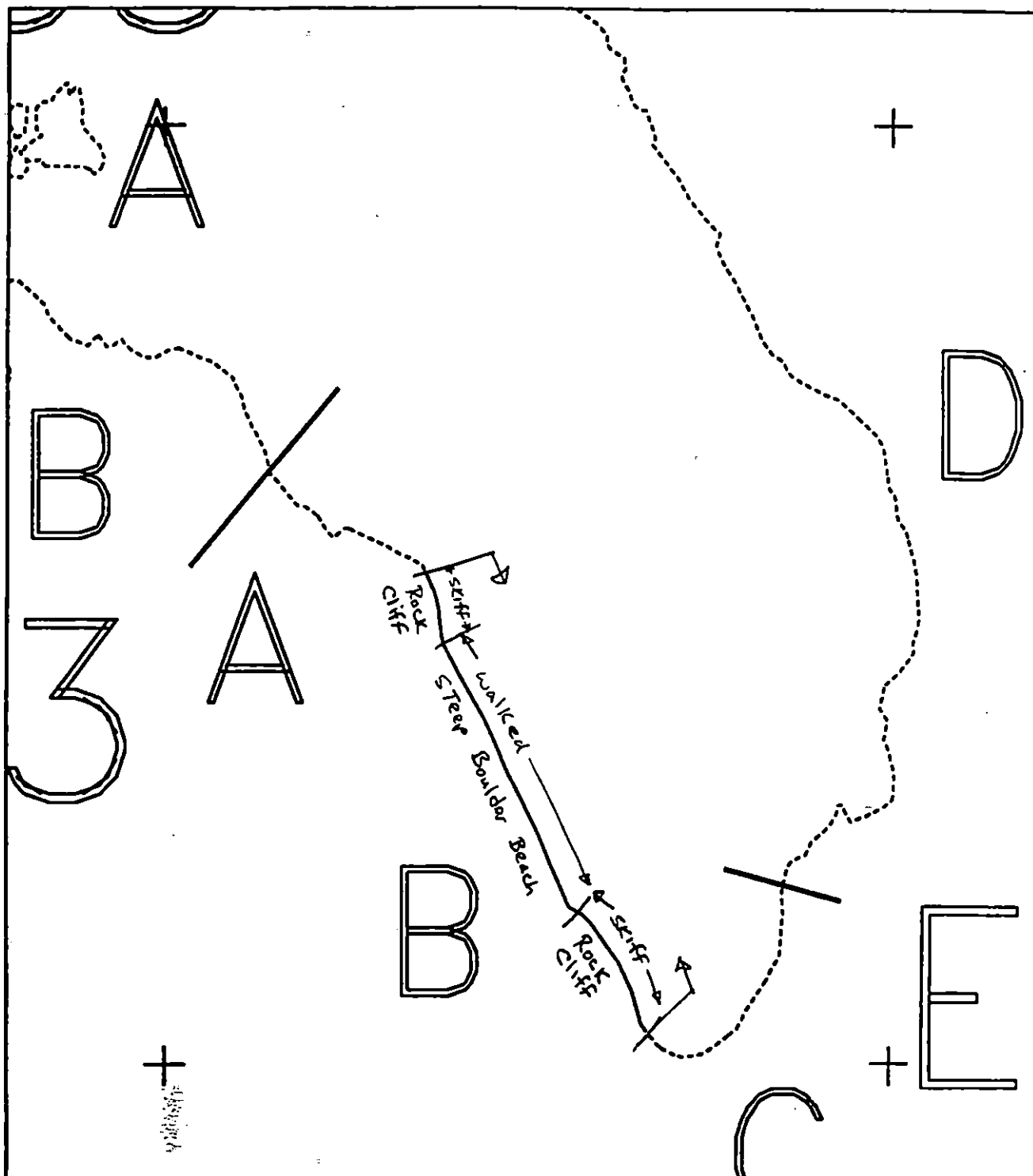
PAGE 1 OF 1

W - m M - m N - m VL 203 m NO 148 m US - m

FRAMES 11-14

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

REVISED: J.Y. 4/30/91
REVISED: M.C. 4/30/91





EL056 B

METERS

0 100 200

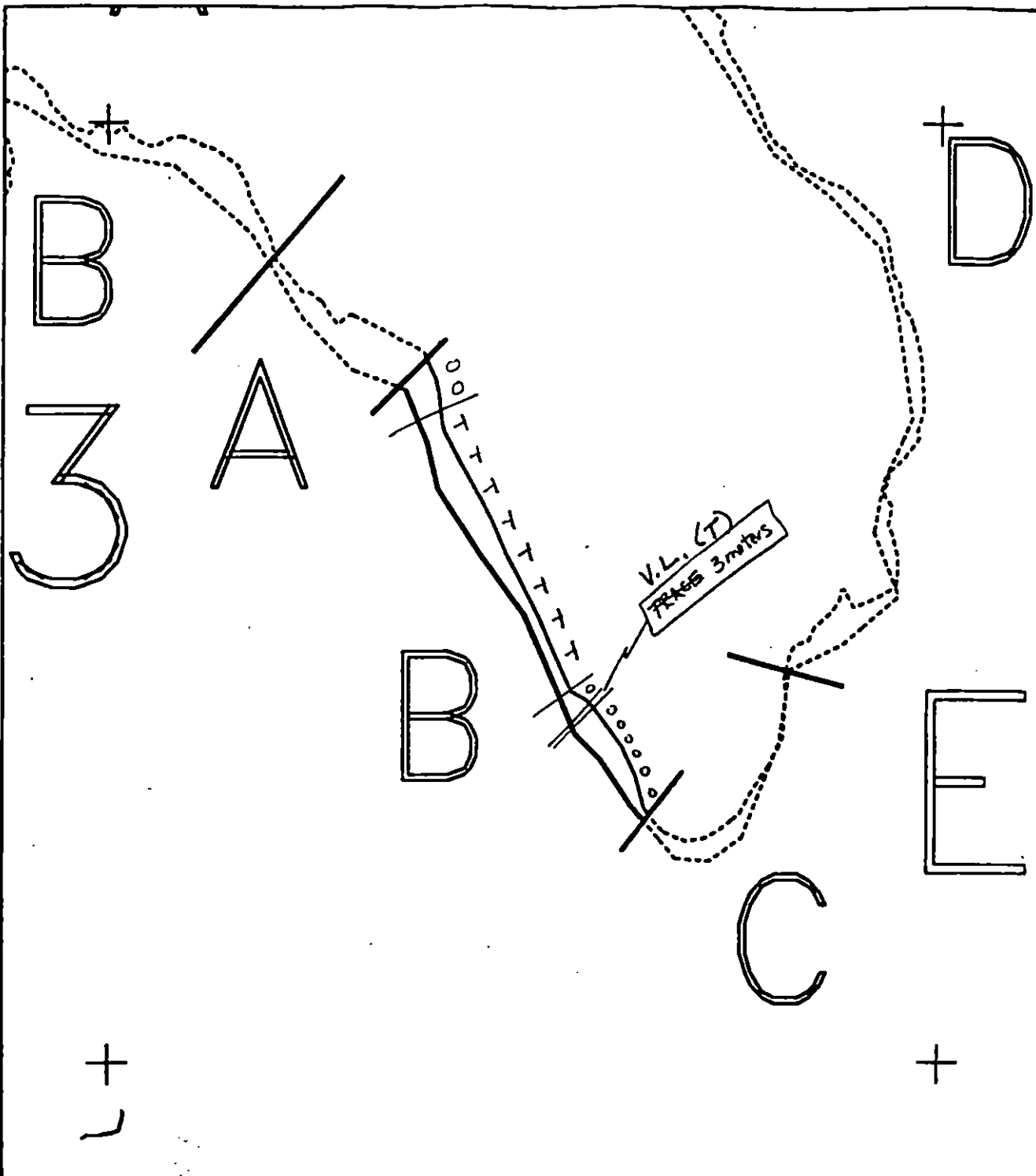
AK State Planning Zone 4
EL056B

Subdivision Field Map

Map Key: ENRLE056Ba

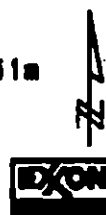
Name: Reimer

Date: 4/27/91



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

EL056 B
 ADEC Subsegment Length: 351m
 METERS
 0 100 200
 AK State Plane Zone 4
 601050b



Subdivision Field Map
 Map Key: KNELO56B
 Name: Reimer
 Date: 4/27/91
 Date Entered:

REVISOR: M.C. 4/30/91
 REVISOR: J.Y. 4/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 27 Apr 1991

SEGMENT # EL 56

TIDAL HEIGHT(Range) +2' to +5'

SUBDIVISION B

BIOLOGIST Benson

SEA STATE 1'

WIND SPEED/DIRECTION 5 mph/W

PHOTOGRAPHS: ROLL # —

FRAME # —

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

(A) - High percent cover of green, brown, & red algae in the U1TZ, MITZ & L1TZ. Filamentous green algae was common, but not dominant. Species diversity is moderate. Fucus recruits are common throughout MITZ.

(B) - Surprisingly low species diversity for boulder substrate - boulder surfaces strongly dominated by filamentous green algae. Cut Fucus stipes were observed, suggesting that vigorous cleanup was performed here. Even so, it is surprising that the community is so species poor, when adjacent areas support more diverse communities.

This very rocky shore has strikingly heterogeneous biotic communities. The heterogeneity does not seem explainable by substrate type, substrate aspect, or wave exposure.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

SKETCH MAP #1 (BIO)
EL 56 B
BENSON
27 APRIL 1991
0945 - 1030

B
3

A

A

Rock
Cliff

Boulder
slope

(B)

High % cover of
filamentous green algae,
but all other organisms
are extremely rare

(A)

High % cover,
moderate diversity,
Fucus recruits

B

Rock
Cliff

Raven



EL056 B

METERS

0 100 200

AK State Plane Zone 4
Datum: NAD83

Subdivision Field Map

Map Key: KNI2L056B

Name: _____

Date: _____

1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: A REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION A DATE 4/27/91

ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano



NTR

☐ TREATMENT RECOMMENDED

SEGMENT WELL DOCUMENTED BY OG; AREA "A" DID HAVE A TRACE FROM S-7 CA. THE OILING FOUND WAS CONSISTENTLY THIN WITH THE SEGMENT BEING LARGELY BEDROCK AND BOULDER. THERE IS POSSIBLY OIL TRAPPED DOWN IN THE BOULDERS WHICH WAS INACCESSIBLE. INTERSTITIAL AND NEAR SHORE SHEENS WERE NOTED.

EXXON

NAME C. M. KATSIMPALIS

SIGNATURE C. M. Katsimpalis



NTR

OG & BIO SUMMARIES PROVIDE ACCURATE DATA.

LANDMANAGER

NAME DENNIS KENNEDY

OF USFS

SIGNATURE D. S. Kennedy



NTR

Segment consists of large rocks and boulders thus subsurface oil character is in question visual observations show scattered occurrences of oil. also good bio documentation showing diverse plants/animals.

USCG/NOAA

NAME MICHEL (N) Bm. ZENONE (CG)

SIGNATURE Michel

Bm. ZENONE



NTR

MINOR amounts of oil were observed, and only in the boulder beaches. The subdivision was well surveyed. Slight sheens were in the runoff and nearshore water at each beach.

USCG

Good OG REPORT. + Bio Report - J

PAGE 1 OF 1

SEGMENT EL 56

SUBDIVISION A

DATE 4, 27, 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 20 m N 15 m VL 20 m NO 15 m US 1 m

[illegible]

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 / MAYBAP-

FRAMES 15-17

[illegible]

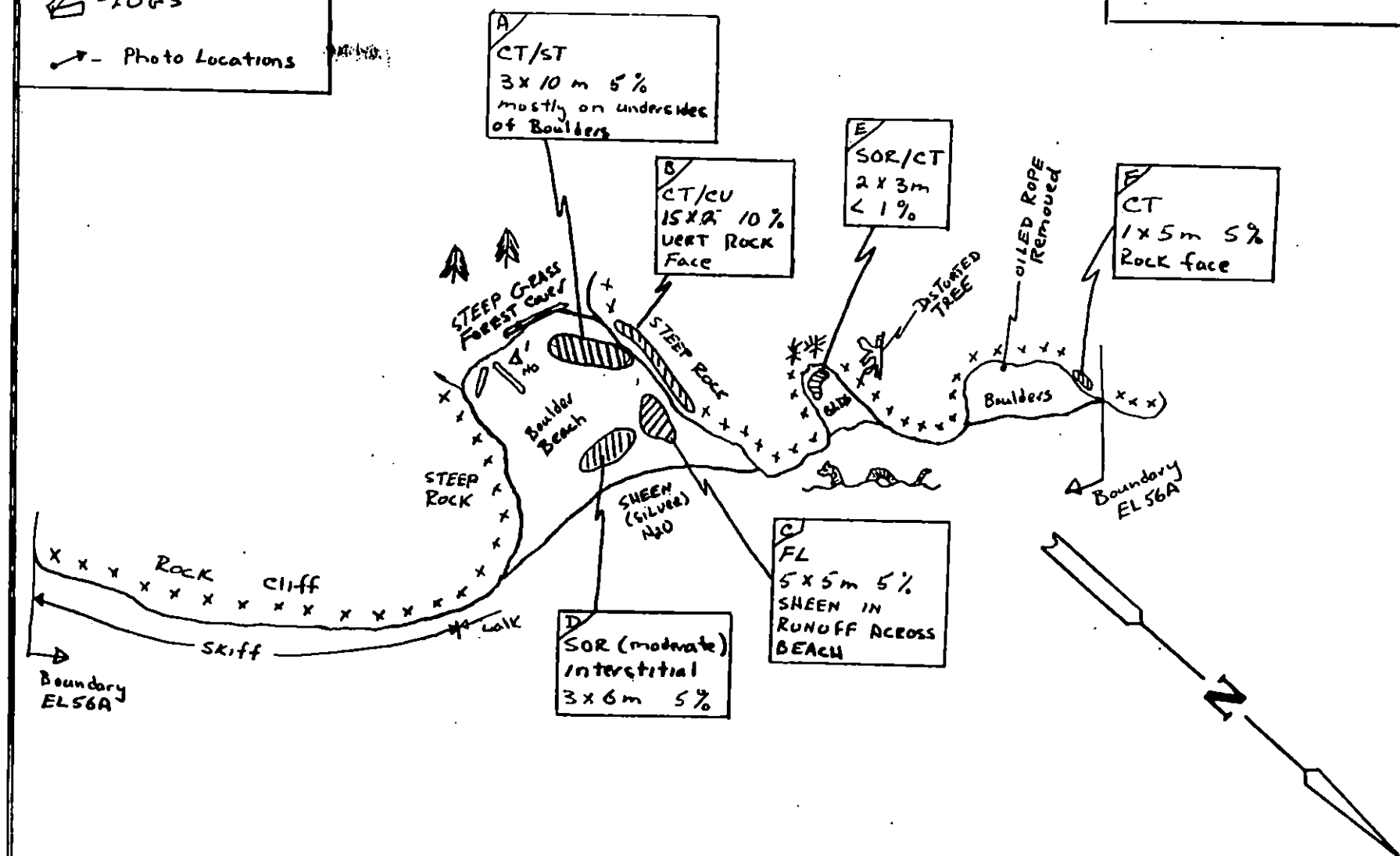
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS: The south end of the subdivision is rock cliff. This section was SCATED BY SKIFF with NO oil observed. The NORTH half consists of Three boulder Beaches separated by Rocky headlands. The southern most beach (Largest one) contains most of the oiling with coat and stain on the under sides of boulders in the UITZ. Interstitial SOR and film across the MITZ Sheen was observed in Runoff across beach and in the near shore. Only a Trace of SOR/CT was found in the Second Pocket beach, and only Coat on Rock wall at the north end of third beach.

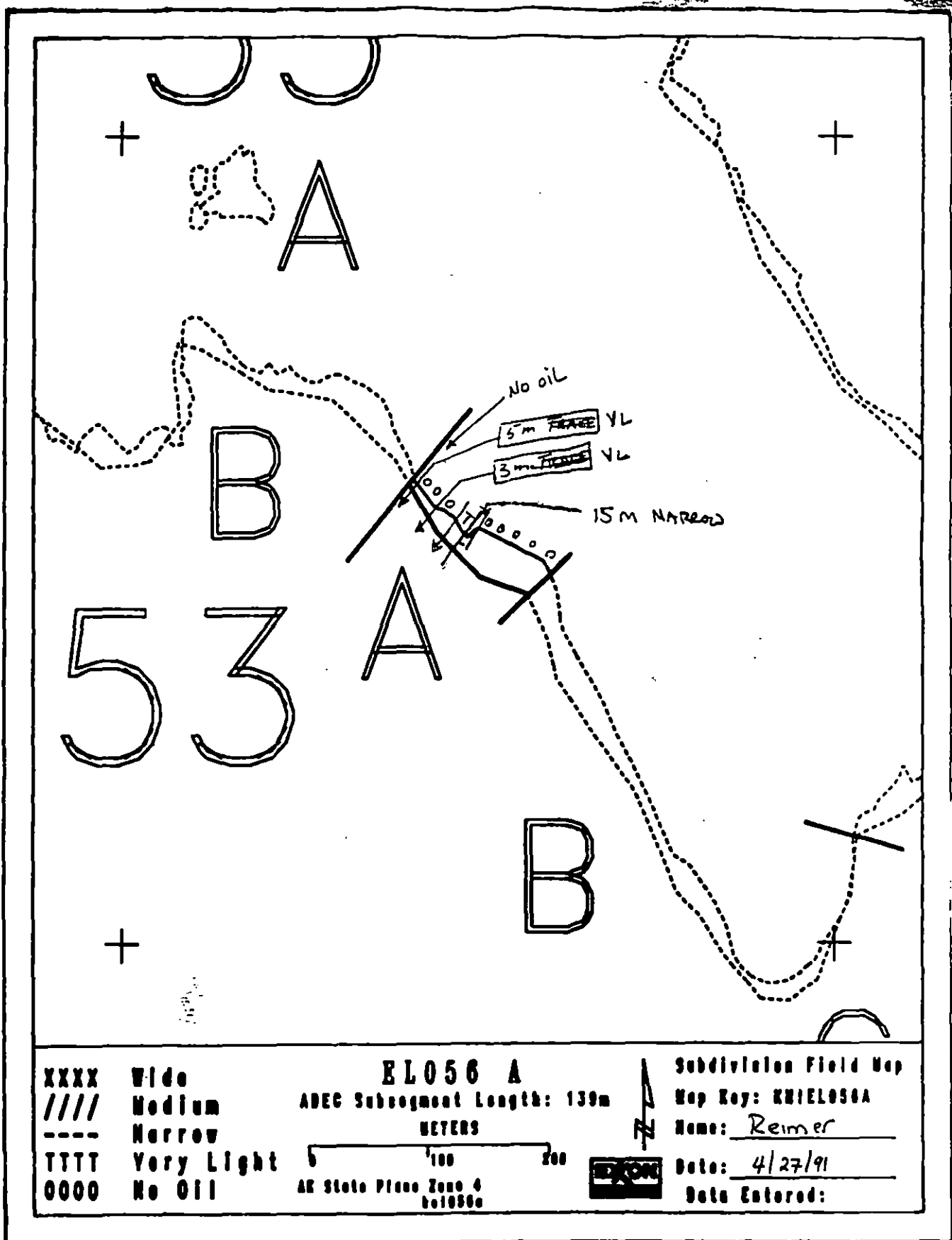
REVISED: MC 4/30/91

- ▲ - Evergreens
- ✱ - Disjunctive TREES
- x - Rock
- ◁ - LOGS
- - Photo Locations

SKETCH MAP (OG)
 EL 56A
 Doug Reimer
 27 April, 91
 10:30 - 11:12



REVIEWED: M.C. 4/30/91



REVISED: M.C. 4/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 27 Apr 1991
 SEGMENT # EL 56 TIDAL HEIGHT(Range) +5' to +6'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) & (B) - Verrucaria, filamentous green algae & recently recruited barnacles are moderately abundant on boulders & bedrock in the UITZ & MITZ near the oil. The LITZ could not be observed (it was covered by water). The lower MITZ is described in (C) & (D). Some bare Fucus stripes were found.

(C) & (D) - Both adult & recently recruited Fucus, barnacles & Littorines were moderately abundant on the boulders in the MITZ. There is also a moderately diverse assemblage of other macroalgae, such as filamentous green algae, Hildenbrandia, & Endocladia.

(E) & (F) - These are moderately diverse communities with high % cover of biota that are not dominated by filamentous green algae.

This subdivision supports a moderately diverse biota with high % cover and a significant amount of recruitment of Fucus, barnacles & Littorines. It appears to be much better developed biologically than adjacent subdivision B. (The LITZ could not be observed).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

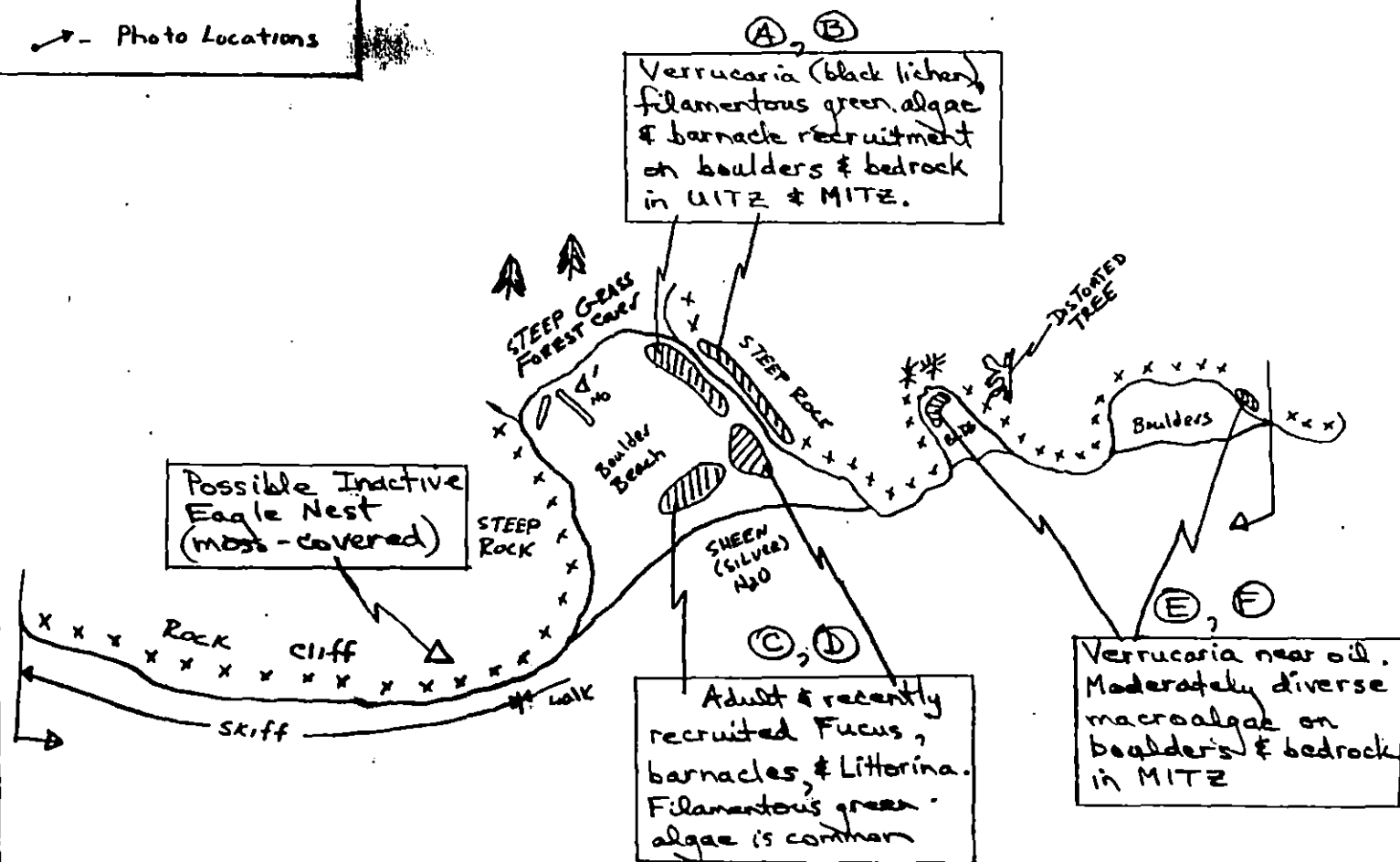
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—		—
Seabirds	—		
Waterfowl	—		
Gulls/Kittiwakes	—		
Shorebirds	—		
Corvids	—		
Other Birds	—		

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

Shoreline subdivision map showing important biological features attached.

- ▲ - Evergreens
- ≠ - Disjunctive TREES
- x x x - Rock
- ▤ - LOGS
- - Photo Locations

SKETCH MAP (BIO)
 EL 56 A
 BENSON
 27 April, 91
 10:30 - 11:12



1991 MAYSAP EVALUATION

SEGMENT: EL 56 **SUB:** B **REGION:** PWS **SURVEY DATE:** 2/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION B DATE 4/27/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano



NTR

☐ Treatment Recommended

MOST OF SEGMENT IS DEEP BOULDER PILES OR HEADLANDS WITH NO REASONABLE ACCESS. NO HEAVY CONCENTRATIONS OF OIL FOUND, HOWEVER IN ACCESSIBLE OIL INEVITABLY EXISTS DEEP WITHIN THE BOULDER PILES. SURVEY ADEQUATE AND NO TREATMENT PRESENTLY REQUIRED.

EXXON

NAME C. M. LATSIMPALIS

SIGNATURE C. M. Latsimpalis



NTR

VERY LIGHT, SCATTERED OILING CONDITIONS REMAIN HERE. OG & BIO REPORTS PROVIDE PERTINENT INFO.

LANDMANAGER

NAME DENNIS KENNEDY OF USFS

SIGNATURE D.S. Kennedy



NTR

Very light film can be observed, although not common. Area seems light on ~~oiled~~ vegetative growth. Thus no treatment recommended.

USCG/NOAA

NAME MICHEL(N) ZENONE (CG)

SIGNATURE Michel Zenone



NTR

We were not able to survey this subdivision in great detail because of the cover of very large boulders. Frequent inspections were made off between boulder crevices, with only scattered occurrences of visible oil. There were very few and small sheens on tide pools and in near shore waters.

USCG -

CONCUR W/ OG'S REPORT. AGREE W/ OTHERS THAT NO TREATMENT IS THE WAY TO GO.

PAGE 1 OF 1

SEGMENT EL 56

SUBDIVISION B

DATE 4 / 27 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

W - m M - m N - m VL 203 m NO 148 m US - m

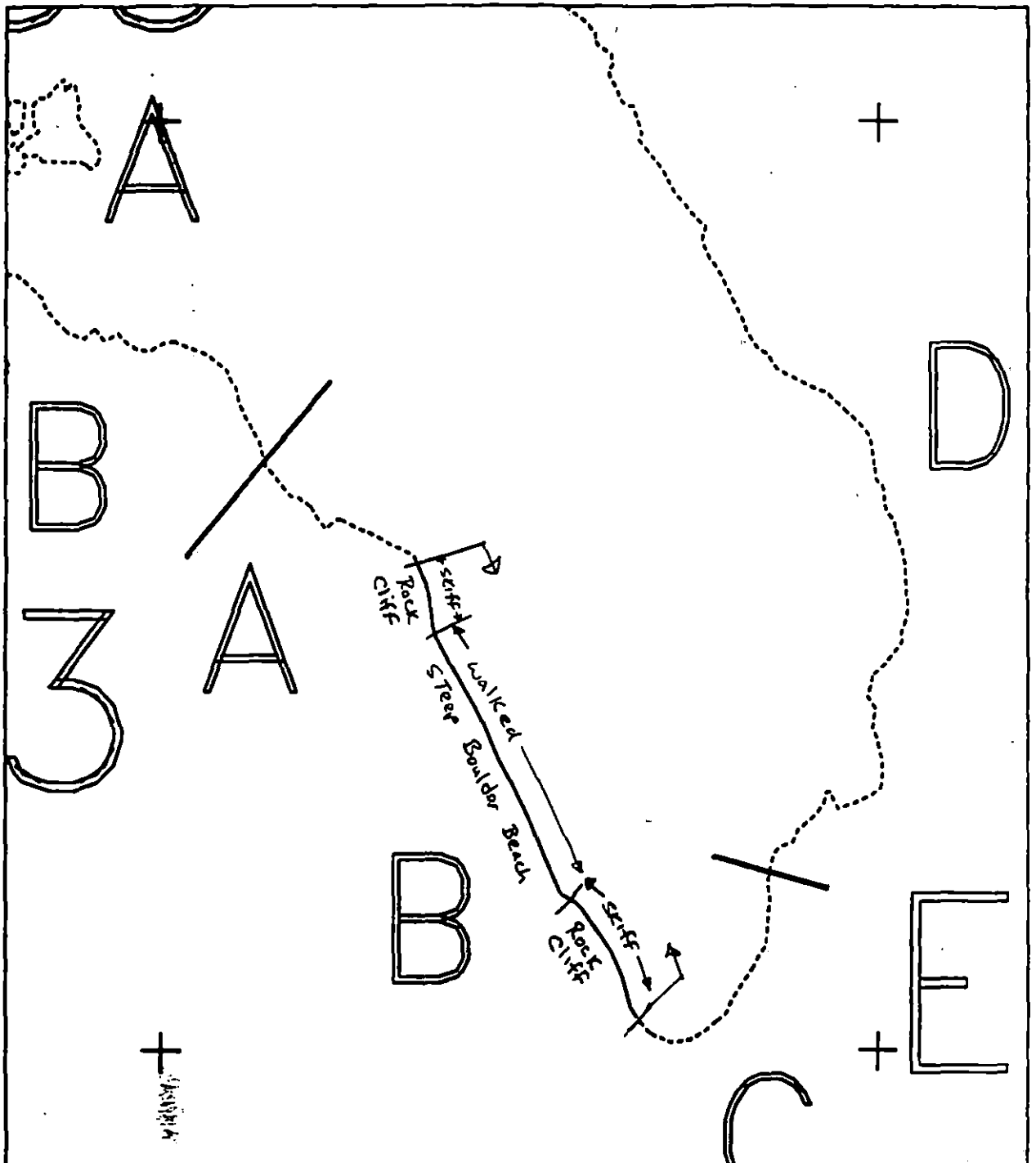
DISTRIBUTION: C = 91-100%; B = 81-90%; P = 71-80%; S = 61-70%; T = <60%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 1 FRAMES 11-14

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

OG COMMENTS: Steep Rocky/boulder shoreline. Oiling consists of sporadic CU/CT/ST on sheltered sides of Rock faces and boulders. Minor subsurface oil was found in crevices where able to dig pits. The surface oil was highly weathered and associated with organic films (slime)

REVISED: J.Y. 4/30/91
REVIEWED: M.C. 4/30/91



EL056 B

METERS



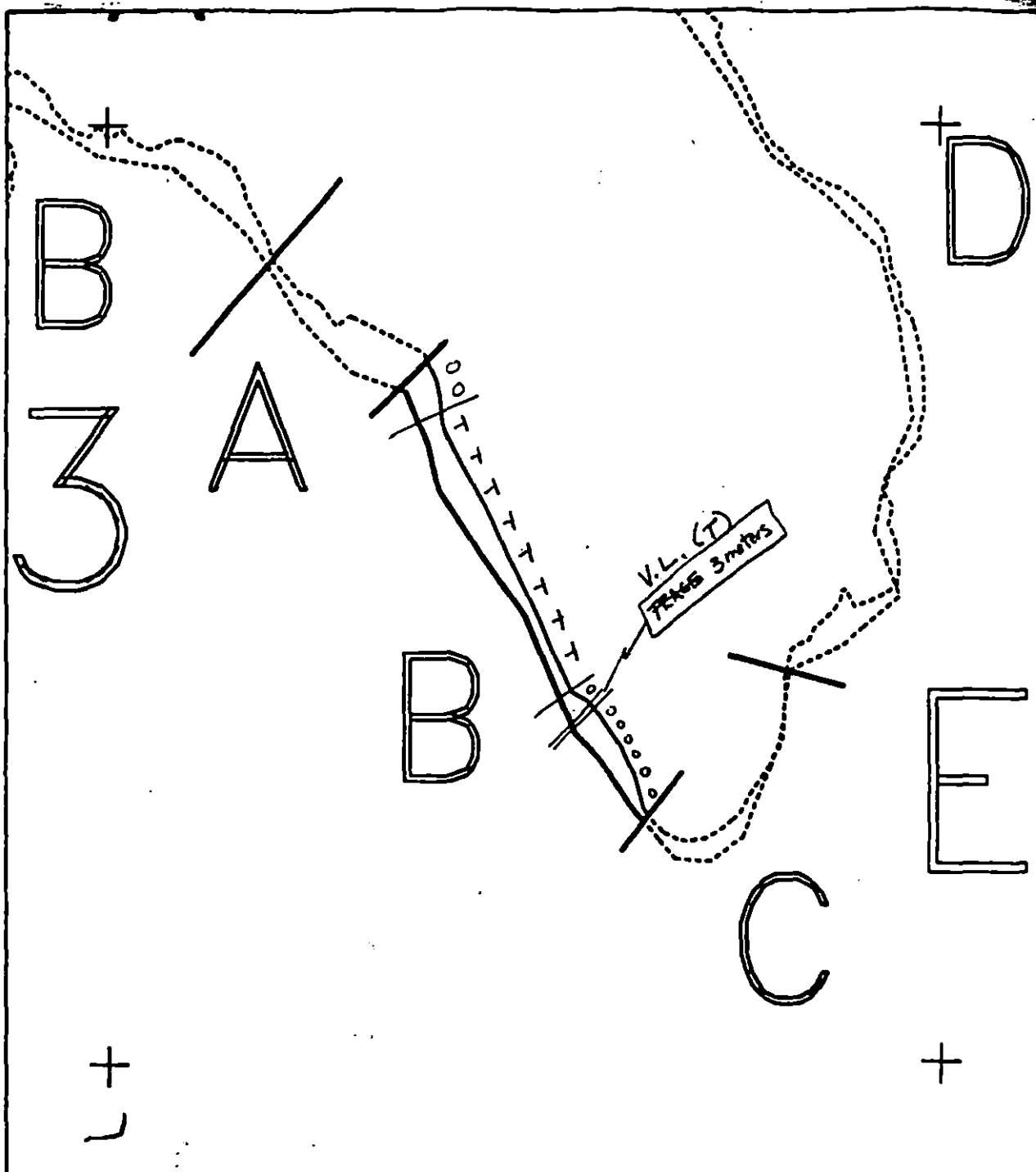
AS State Planning Zone 4
20100000

Subdivision Field Map

Map Key: EN12L0000a

Name: Reimer

Date: 4/27/91



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

EL056 B
 ADEC Subsegment Length: 381m
 METERS
 0 100 200
 AK State Plane Zone 4
 6010506



Subdivision Field Map
 Map Key: KNELO508
 Name: Reimer
 Date: 4/27/91
 Date Entered:

REVISOR: M.C. 4/30/91
 REVISOR: J.Y. 4/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 27 Apr 1991
 SEGMENT # EL 56 TIDAL HEIGHT(Range) +2' to +5'
 SUBDIVISION B BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION 5 mph/W
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - High percent cover of green, brown, & red algae in the UITE, MITE & LITE. Filamentous green algae was common, but not dominant. Species diversity is moderate. Fucus recruits are common throughout MITE.

(B) - Surprisingly low species diversity for boulder substrate - boulder surfaces strongly dominated by filamentous green algae. Cut Fucus stipes were observed, suggesting that vigorous cleanup was performed here. Even so, it is surprising that the community is so species poor, when adjacent areas support more diverse communities.

This very rocky shore has strikingly heterogeneous biotic communities. The heterogeneity does not seem explainable by substrate type, substrate aspect, or wave exposure.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

1991 MAYSAP EVALUATION

SEGMENT: EL 56 **SUB:** D **REGION:** PWS **SURVEY DATE:** 4/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION D DATE 4 / 27 / 91

ADEC

NAME Peter Montesano

SIGNATURE

Peter Montesano☒ NTR☐ Treatment Recommended

The OG Report accurately characterizes this Subdivision most of which is boulder or Rock headlands. It is likely that there is oil below some of the large boulders which is completely inaccessible. The deposits of MOR are not easily accessed for treatment due to beach morphology. The deposits of SOR/SOP/AP are not concentrations or distribution worthy of treatment.

EXXON

NAME

C.M. Katsimpalis

SIGNATURE

C.M. Katsimpalis☒ NTR

ACCURATE INFO. IS REFLECTED IN OG & BIO REPORTS.

GOOD SURVEY OF THIS BEACH!

* NOTE LAND MNGRS. REQUEST FOR REMOVAL OF FLAGGING, ETC. WHEN NO LONGER NEEDED.

LANDMANAGER

NAME

DENNIS KENNEDY OF USFS

SIGNATURE

D.S. Kennedy☒ NTR

most notable visual impacts in the area are from clean up efforts - flagging, paint, etc. Agree that no treatment is needed except for removing plot and area markings

USCG/NOAA

NAME

MICHEL (N)BRI ZENOUR (CG)

SIGNATURE

MichelBri Zenour☒ NTR

This subdivision was surveyed in detail. The highest concentrations of oil was M.O.R. in granules/petle beach between sites H+I, in spite of significant freshwater flow through the beach face. Sheens were common in the freshwater runoff and nearshore water, indicating mobilization of the subsurface oil. The rest of the oil in the subdivision is widely scattered and inaccessible.

CG

CONCUR w/ OG's REPORT. AGREE NO TREATMENT ON THIS SUBDIVISION. 3

TEAM NO. IWDOG DOUG REIMERBIO SANDY BENSONSEGMENT EL 56ADEC PETER MONTESANOLANDMANAGER DENNIS KENNEDY USFSSUBDIVISION DEXXON CHRIS KATSIAPALISBRI ZENONE - USCG
USCG/NOAA JACQUE MICHAEL NOAADATE 4 / 27 / 91TIME 7:32 to 9:37TIDE LEVEL -1 ft. to +3 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 910 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH:

W 27 m M 58 m N 20 m VL 365 m NO 525 m US — 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	
A1				S							BCPG	H	3	20	X	X			Light - interstitial
B				S		S		S			BCPG	M	3	10	X	X			Light - interstitial
C				S		T					B	H	20	3		X			
D				S	T	T					BCP	H	3	40		X			Light - interstitial
E				S	S	S					BCP	H	2	4	X	X			moderate SOR
F					P						R	V	2	20		X			Rock face
G				P							BCP	H	2	2	X	X			sheltered Pocket
H						S	S				BC	M	4	30		X			
I				S	S	S					BC	H	6	60		X			Light Interstitial SOR
J						S					R	V	1/2	140		X			Rock face
K					S						R	V	1	1		X			Rock face
AZ				S									1	3					light - interstitial

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 1 FRAMES 6-10

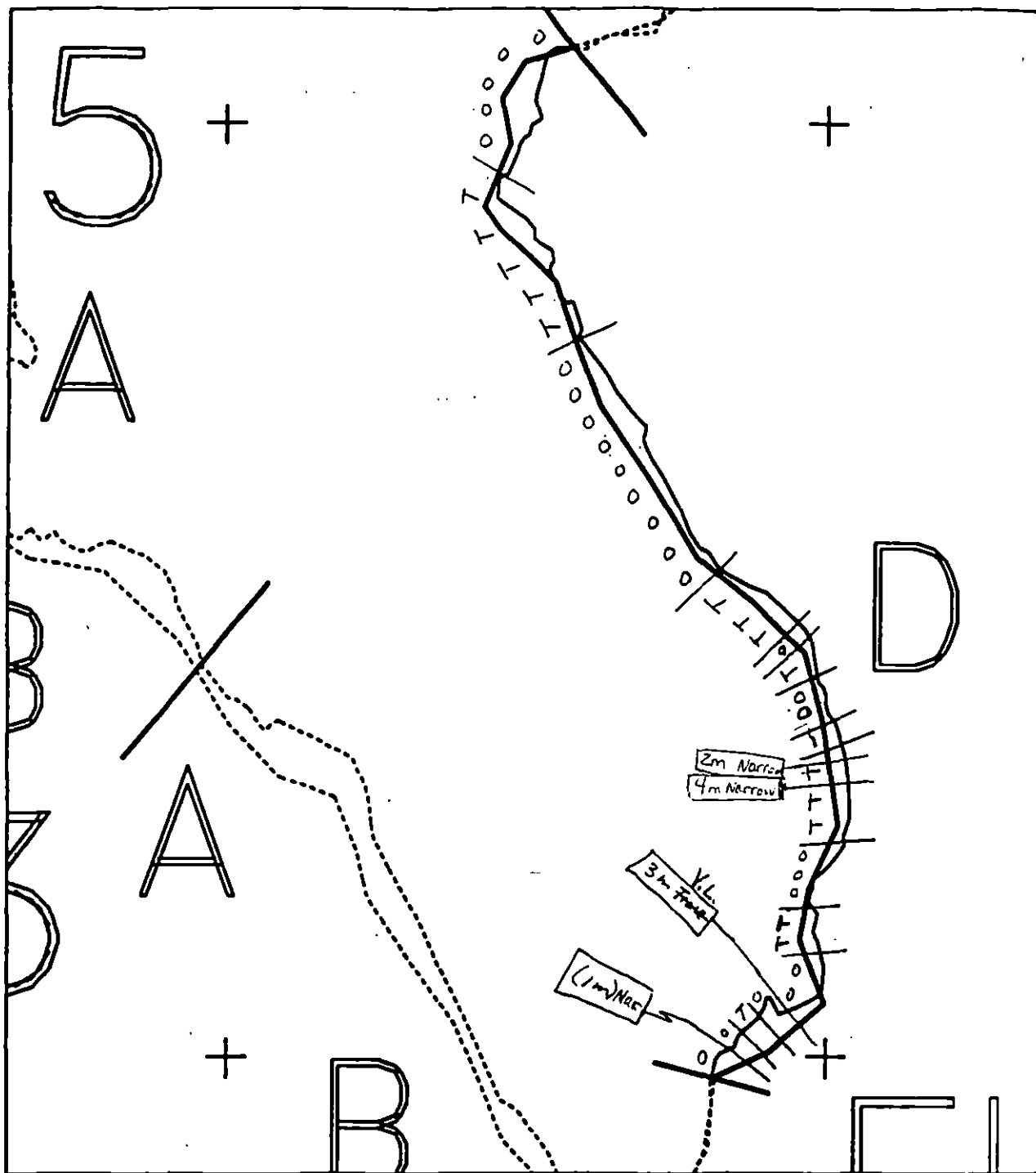
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	70			X					3 - 7	Y	8	B			X		BC-GCR	Bottom Rock
2	23			X					3 - 20	Y	20	B		X			B - P	
3	30							X	-	Y					X		P - PG	
4	35							X	-	Y					X		P - PG	
5	27			X					6 - 27	N	22	B		X			B - GP	Water filled
6	20			X					5 - 20	N	15	B			X		PG - GPC	Water filled
									-									
									-									

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

OG COMMENTS: The southern half of the subdivision was surveyed by foot, and consists of predominantly steep boulder beaches. Oiling consists of sporadic coat/cover splash on sheltered sides of boulders/rock or in interstitial crevices. finer matrix material between and under boulders has sporadic SOR, generally light except for one pocket @ location G. Some Subsurface MOR was found on lower angle beaches associated with STREAMS. The northern part of the subdivision was surveyed by skiff. It consists of steep rock cliff with sporadic narrow boulder apron. One section (J) contained a 1/2 meter very discontinuous band along the high tide line.

REVISOR: J.Y. 4/30/91

REVIEWER: M.C. 4/30/91



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

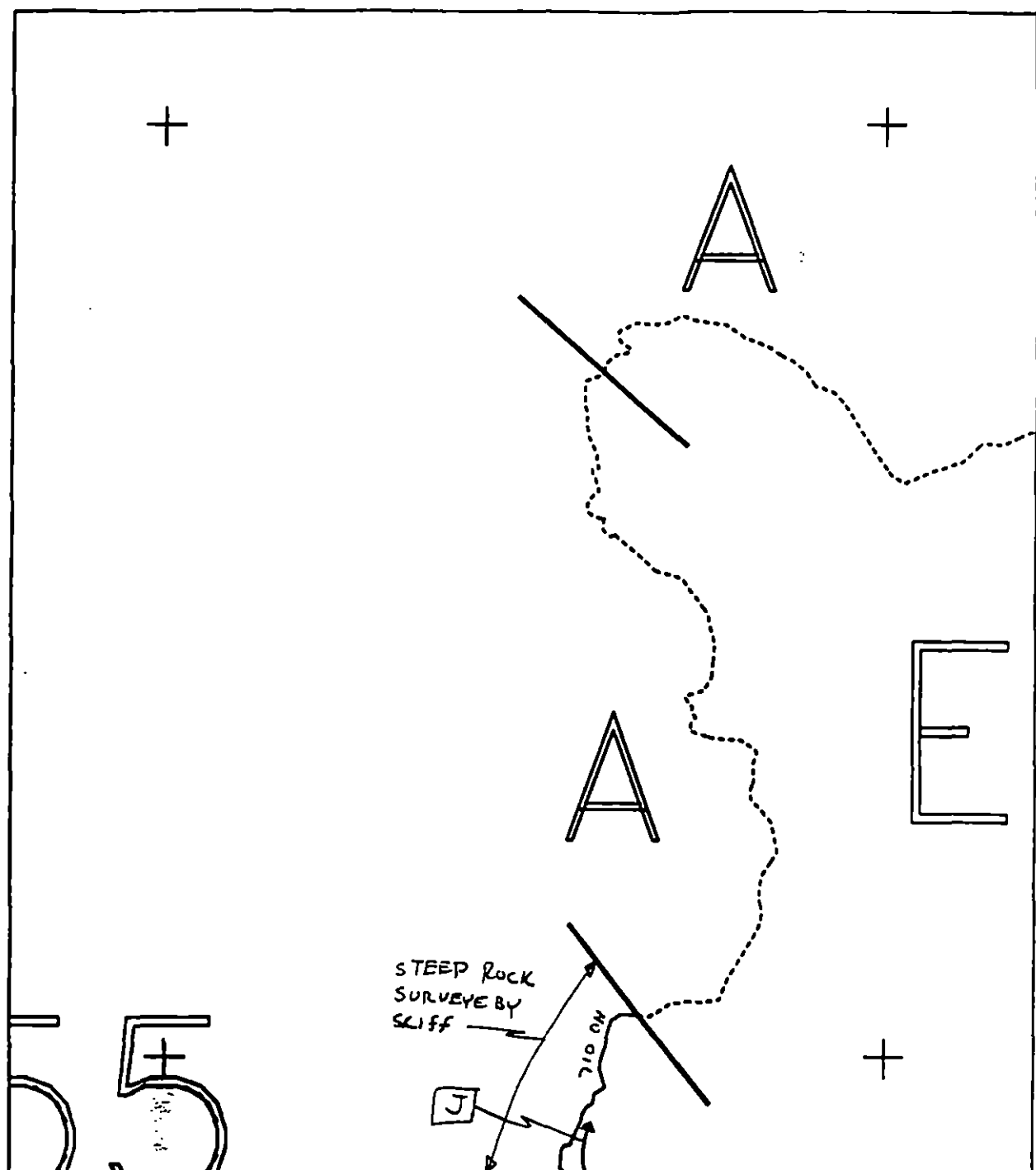
EL056 D
 ADEC Subsegment Length: 910m
 METERS

0 100 200
 AK State Plane Zone 6
 601086da



Subdivision Field Map
 Map Key: KMIEL056Da
 Name: Reimer
 Date: 4/27/91
 Date Entered:

REMOVED: M.C. 4/30/91
 REMOVED: J.Y. 4/30/91



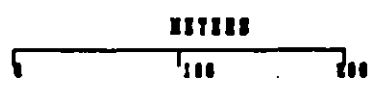
EL056 D

Subdivision Field Map

Map Key: EN12L05605

Name: Reimer

Date: 4/27/91



AK State Plane Zone 4
NAD83

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2

DATE 27 Apr 1991

SEGMENT # EL 56

TIDAL HEIGHT(Range) -1' to +2'

SUBDIVISION D

BIOLOGIST Benson

SEA STATE 1'

WIND SPEED/DIRECTION 5 mph/W

PHOTOGRAPHS: ROLL # —

FRAME # —

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

(A), (K), (D), (C) — Density & especially, diversity of invertebrates & algae is higher than in subdivision C (which is more protected). Recruitment of barnacles, Fucus and littorines is moderately dense. Littorina egg masses were found only in (D) & (C). Filamentous green algae are very abundant, but a fairly diverse assemblage of other macroalgae are also present. A bald eagle circled overhead momentarily in (C), then flew away.

(D), (E), (F) — Similar to communities at above locations, but distinguished by dense barnacles on boulders & bedrock in the MITZ & LITZ. Gray-brown polychaetes (4" long) in small sandy pockets. Oil has completely covered some barnacles on boulder & bedrock in the LITZ.

(G), (H), (I) — Barnacles are sparse on substrates near the oil, and throughout the intertidal in (H) & (I). Filamentous green algae, again, form the dominant biotic cover, but the growth is not as lush as in locations described above.

(J) — We observed this steep bedrock shore from the boat; nonetheless, it was clearly moderately diverse & abundant community.

Perhaps the greater exposure of subdivision D (than C) accounts for the greater

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

species diversity & recruitment there. It appears that barnacles & Fucus may have been adversely affected by oiling & cleanup.

FISH OBSERVED

BIRDS	# OF SPECIES	TOTAL BIRDS	SPECIES PRESENT
Eagles	1	1	—
Seabirds	1	1	—
Waterfowl	—	—	—
Gulls/Kittiwakes	2	3	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

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

Shoreline subdivision map showing important biological features attached.

7:32 - 9:37

⑤

(see OG location map)
observed tens of Fucus
stripes cut on bedrock
face; seen from boat

Ⓒ

barnacles rare near
oiled rocks

Observed tens of Fucus stripes cut on bedrock face; seen from boat

barnacles rare near oiled rocks

FOREST

Boulder Beach

Stream

Rock/Bld Beach

Pebble Cobble Beach

FOREST

Stream

Boulder Beach

FOREST

(H), (I)

sparse barnacles on boulders throughout intertidal; filamentous green algae still dense as throughout subdivision

(D), (E), (F)

Community on boulders moderately dense but greater density of barnacles in MLTZ & LITZ (except where covered with oil)

(B), (C)

moderately dense & diverse algae & invertebrates, including egg masses of littorines on the boulders & bedrock

(A), (K)

moderate density & diversity of algae, especially, & invertebrates on boulders from UTLZ to LITZ

Common Merganser

LEGEND:

- *** BEDROCK
- || LOGS
- wavy FOREST
- PHOTO LOCATIONS



BEDROCK

LOGS

Forest FOREST

➔ PHOTO LOCATIONS

Common
Merganser

SEE LOCATION MAP

1991 MAYSAP EVALUATION

SEGMENT: EL 56 SUB: C REGION: PWS SURVEY DATE: 4/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 56 SUBDIVISION C DATE 4/26/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR

☒ Treatment Recommended

ADNR lists this site as a Recreational use area which accounts for the Upland Trail. A large Percentage of the subsurface oil would be released by mechanical Tilling - mid to upper ITZ's. Some of the upper oiling may be out of Reach of the available TINES. Tilling should occur between the two runoffs on the pocket beach, along the water's edge on the rising tide. The beach is set up for easy recovery, easy access for an LCU. The entire operation would be quick and simple and above the green zone.

Portion of Segment to East probably had undiscovered oil trapped below large boulders, as suggested by Sheen.

EXXON

NAME CHARIS KATSIMPALIS

SIGNATURE Charis Katsimpalis

☒ NTR

SUBSURFACE OIL IN POCKET ^{BEACH} IS NOT TO A DEGREE WHICH

WARRANTS FURTHER TREATMENT. SMALL AMOUNTS OF OIL ELSEWHERE IN THIS SUBDIVISION ARE NOT IN NEED OF TREATMENT. I THINK NATURE IS WELL CAPABLE OF HEALING THIS AREA NOW.

LANDMANAGER

NAME D.S. Kennedy

OF USFS

SIGNATURE D.S. Kennedy

☐ NTR

The area shows some recreational use - boat/kayak visits. There is a trail used by humans and prob deer. Human use most likely for hunting and auto seeing. The area seems to be flushing on its own thus I would suggest no treatment to a very light hand on the land for any future work.

USCG/NOAA

NAME MICHEL

SIGNATURE Michel

☐ NTR

WE FOCUSED ON THE POCKET BEACH WHERE MOST OF THE REMAINING OIL WAS. THE SUBSURFACE OIL IS RESTRICTED TO THE CENTER OF THE BEACH. GC/MS ANALYSIS OF A SAMPLE FROM A SITE SIMILAR TO PIT 2 ^(SAN 101) SHOWED THE OIL TO BE HIGHLY WEATHERED, WITH NO NAPHTHALENE HOMOLOGS PRESENT. THE ABUNDANT FRESHWATER DISCHARGE SHOULD CONTINUE TO FACILITATE PUSHING/WEATHERING.

CONCUR W/ EXXON, USFS, & NOAA. NATURE WILL BE THIS BEACH'S BEST HEALER.
CLEANER

Brian P. Flynn
USCG

SUBDIVISION *c*

DATE 4 / 26 / 91

DATE 4 / 26 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 1 FRAMES -5

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

OG COMMENTS: moderate slope pocket pebble beach at the head of Cove, High angle Boulder beaches to either side. Oiling consists of sporadic coat behind boulders and in crevices, minor SOR found in crevices between and under boulders. Sub-surface Lons of LOR-MOR found in mid-lower part of Pebble beach. No subsurface oil was found in the Uitz and Storm berm, except in pit # 5 which is along the side of the stream in the transition to boulder beach.

X X BEDROCK

→ GRASS

LOGS

FOREST

→ Photo
LOCATIONS

A
Intertidal
Behind Boulders
CT 2%
6 x 80m

C
2 x 6m 8%
SOR(Light)

POM POM
Removed

D
SOR 5%
4 x 4 m
Rope

Rope
PLU

SKETCH MAP (OG)

EL 56 C

Doug Reimer

26 April 91

19:24 - 20:45

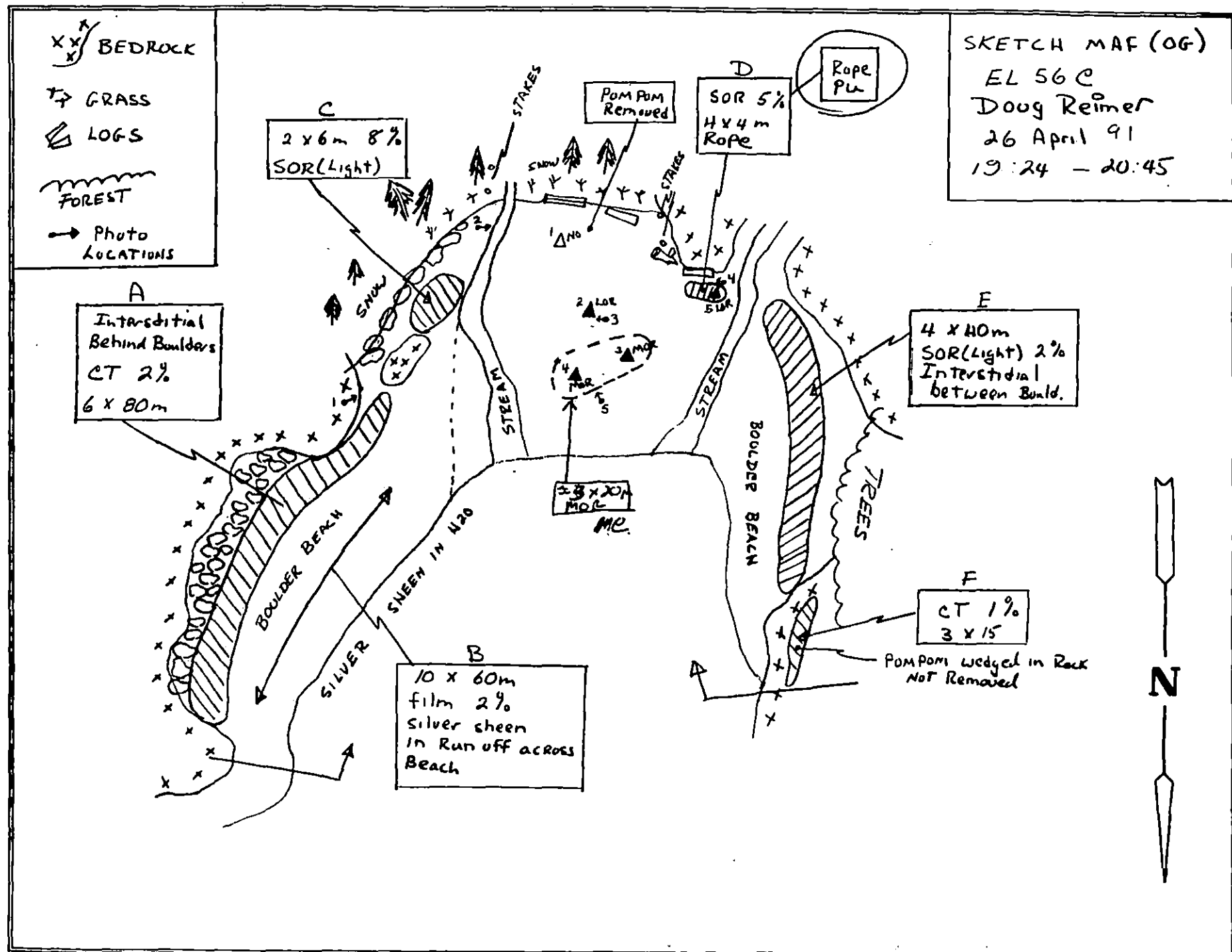
E
4 x 40m
SOR(Light) 2%
Intertidal
between Build.

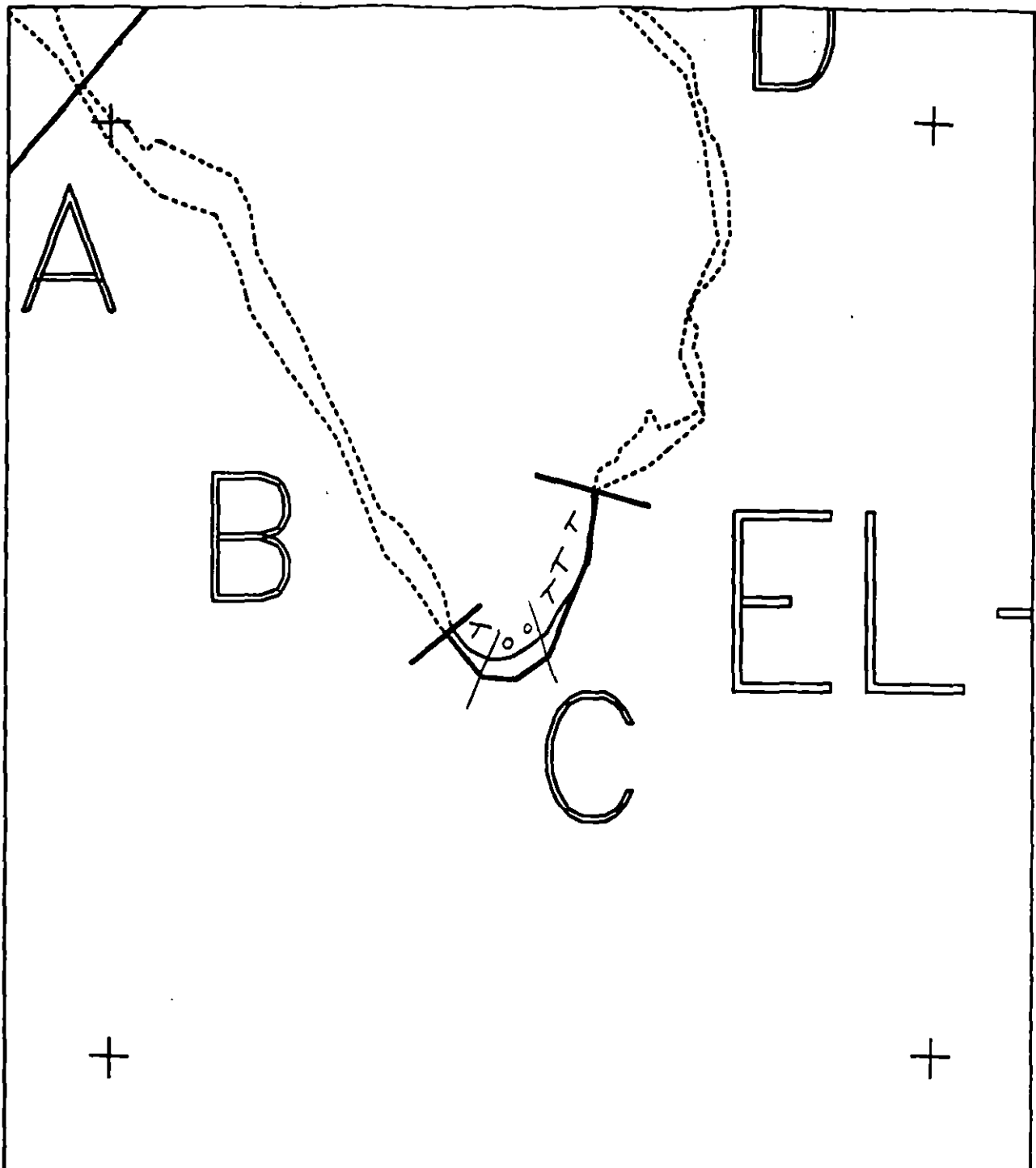
F
CT 1%
3 x 15

POM POM Wedged in Rock
Not Removed

B
10 x 60m
film 2%
Silver sheen
in Run off across
Beach

2 x 20m
MOC
MC





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

EL056 C
 ADEC Subsegment Length: 213m
 METERS
 5 100 200
 AK State Plane Zone 6
 601856a

Subdivision Field Map
 Map Key: KNELO56C
 Name: Reimer
 Date: 4/26/91
 Date Entered:



NAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE Apr 26 1991
 SEGMENT # EL 056 TIDAL HEIGHT (Range) +1' to +5'
 SUBDIVISION C BIOLOGIST Benson
 SEA STATE 1' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- (A) Black lichen is moderately abundant in U1TZ; barnacles rare. Filamentous green algae are moderate
- (B) Fucus adults & juveniles are moderately dense, with recruitment found on boulder surfaces & in cracks. Barnacles also moderate, & with moderate recruitment. Filamentous green algae is dense, especially in MITZ where FW runoff flows. Individual Fucus & barnacles appear to be small specimens.
- (C) Filamentous green algae is again dense, esp. in MITZ & LITZ.
- (D) Filamentous green algae are the only significant organisms in U1TZ, but they are moderate. They are dense in MITZ & LITZ, on pebbles as well as cobbles where FW runs.
- (E) Filamentous algae are moderately dense in U1TZ and dense in MITZ & LITZ. Fucus is moderate in MITZ & LITZ

This entire subdivision is characterized by very low diversity, moderate biomass (due primarily to filamentous greens & Fucus), and rather small individual organisms. These observations, and good recruitment of Fucus & barnacles, suggest that the community is in a state of recovery (green filamentous algae earliest) in a low productivity area.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

Most existing species should recruit again, even if harmed by any possible future cleanup.

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

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

Shoreline subdivision map showing important biological features attached.

xx BEDROCK

→ GRASS

▨ LOGS

~~~~~  
FOREST

SKETCH MAP (BIO)

EL 56 C

John Benson

26 April 91

19:24 - 20:45

(A)  
black lichen  
in UITE; rare  
barnacles  
Fucus mod. in UITE

(C)  
moder. filam.  
green algae;  
sparse barnacles

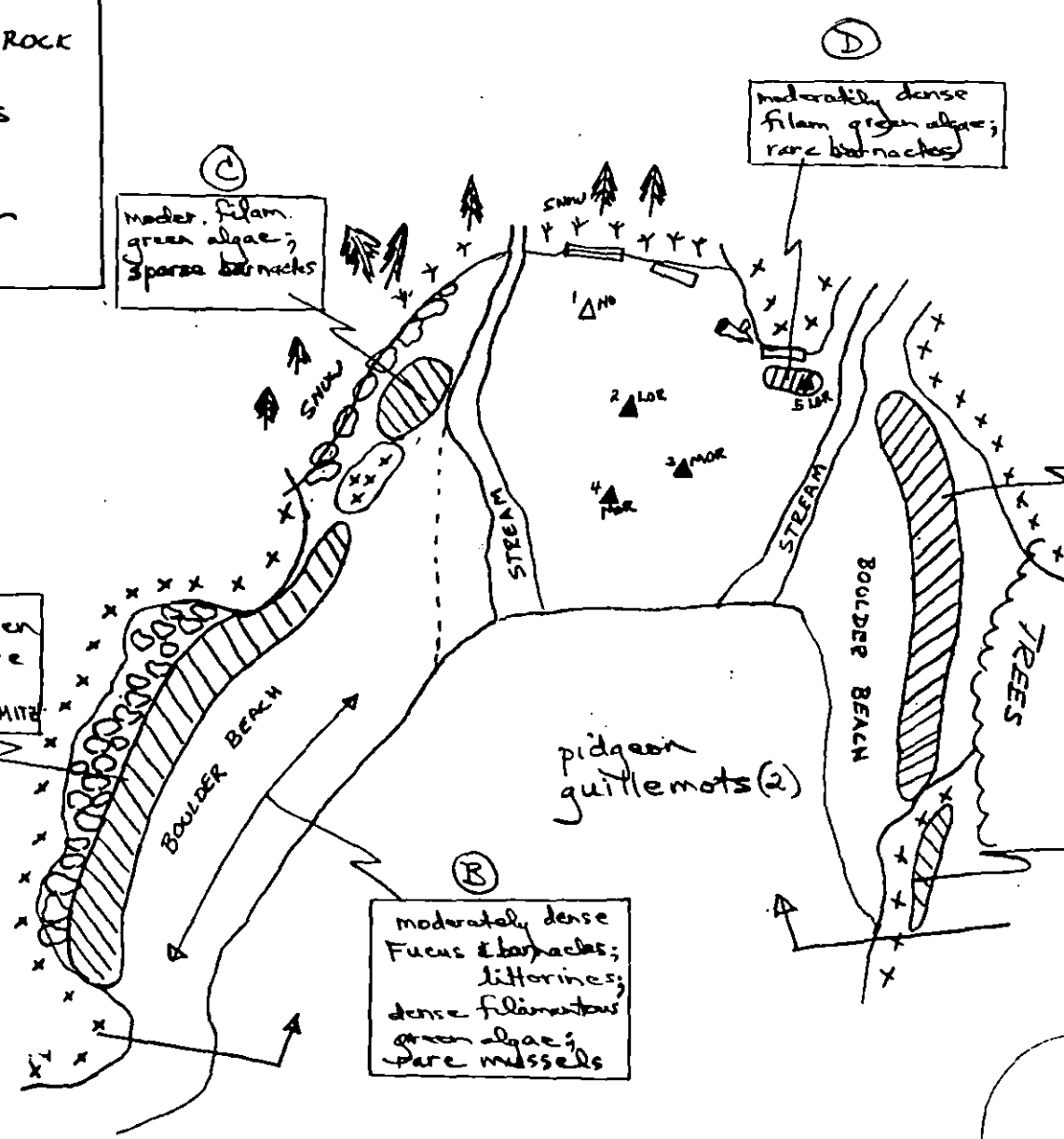
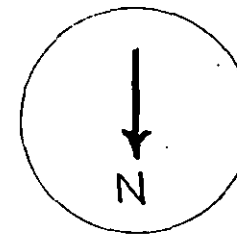
(D)  
moderately dense  
filam green algae;  
rare barnacles

(E)  
moderately dense  
filam green algae  
in UITE; dense  
fil. green algae down  
to LITE

(F)  
dense filamentous  
green algae

(B)  
moderately dense  
Fucus & barnacles;  
littorines;  
dense filamentous  
green algae;  
rare mussels

pidgeon  
guillemots (2)



# ASAP TAG REVIEW SHEET

Segment: EL56 Subd: C Site: L Date  
PRE-Review 11 AUG 90

## Priority For Addressing In 1990

     HIGH      MEDIUM      LOW X NTR

Treatment  
Recommended: NTR — BASED ON AVAIL. INFO.

ONLY HAVE OG / ASAP RECOMMEND.  
SHEET

## Priority Site For Reassessment In 1991

|                            |                              |                               |                                  |     |    |     |    |
|----------------------------|------------------------------|-------------------------------|----------------------------------|-----|----|-----|----|
| YES                        | NO                           | YES                           | NO                               | YES | NO | YES | NO |
| <u>    </u> CG <u>    </u> | <u>    </u> ADEC <u>    </u> | <u>    </u> EXXON <u>    </u> | <u>    </u> LAND MGR <u>    </u> |     |    |     |    |

NO COMMENT SHEET

13 TAG  
AUG

— TAG SITE VISIT  
Sched for 14 AUG

## ASAP FOLLOWUP RECOMMENDATIONS

EL  
 Incident: AS/ 56 Subd.: C Site: \_\_\_\_\_ Date: 8/5 1990

**Conditions Observed:** STORMBERM IN SITE CONTAINS MODERATE TO HIGH LEVELS OF "OR". HEAVY "OR" DOWN TO 30cm - LIGHT "OR" FROM 30-55cm. PIT IN MITE RELEASED A SMALL AMOUNT OF OIL. ENTIRE AREA HAS BEEN TREATED W/ CUSTOMBLEND, BUT HAS NOT BEEN TILLED AS PER WORK ORDER. ADJACENT BOULDER FIELDS HAVE BROKEN COATS. BEACH AND UPLANDS HAVE EXCEPTIONALLY HIGH RECREATION POTENTIAL. FRESHWATER STREAM ON WEST SIDE OF BEACH CONTAINED SHEEN THAT ORIGINATED IN STORM BERM.

**Followup Recommendations:** OIL IN STORMBERM SHOULD BE ELIMINATED. THE BERM COULD BE RELOCATED TO THE MITE, WASHED + BIOREMEDIATED. REMAINING COATS ON BOULDERS SHOULD BE TREATED WITH INIPOL. ABSORBENT + CONTAINMENT BOOM SHOULD BE UTILIZED DURING RELOCATION + WASHING PROCEDURES.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC

Wesley G. Hornley  
 (name)

Wesley Hornley  
 (signature)

**Comments:** Storm berm needs to be relocated and possibly flushed retrieving oil with per-pumps or shovels. Entire area is still heavily impacted with oil. It should be a high priority for remainder of 90 and also 91.

Baton

Ray Smith  
 (name)

(signature)

**Comments:** THIS SITE NEEDS TAG EVALUATION.

NOAA/USCG

ART WEINER  
 (name)

Art Weiner  
 (signature)

**Comments:** THE STORMBERM IS QUITE POROUS (PEBBLE/GRANULE) AND COULD BE TILLED IN SUCH TO THE EXTENT THAT ALL OILED SEDIMENTS ARE EXPOSED TO THE ACCOMPANYING INIPOL TREATMENT. CUSTOMBLEND SHOULD BE APPLIED AS THE FINAL TREATMENT.

Land Rep.

John Ebel  
 (name)

John Ebel  
 (signature)

**Comments:** Important Recreational designated site. Maintain highest standards & best treatment methods available. Contact w/ ADEC. Remove all Oiled debris.



REGION: PRINCE WILLIAM SOUND

SEGMENT: EL-57

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 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
- 7H 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/ EL-57 SUBDIVISION A (1 OF 1) DATE 4/4/90

### SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)  
6U Recreation: Tent sites (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 uncoiled 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 94 m: Medium 111 m: Narrow 34 m: V.Light 0 m: No Oil 344 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 60 cm

### RECOMMENDATIONS:

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

COMMENTS: Recommend \*hand tilling of areas shown on attached sketch map followed by bioremediation. Also recommend spot washing with wands and absorbents in areas shown on map. Work should be conducted after 6/1 based on above herring constraints.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-57

SUBDIVISION: A

DATE 04/04/90

**JSCG**

NAME AEC Vandepels

SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest a hot water wash + bio. for the 30 x 70-80 M beach southern most in this section. The next beach section to the north needs bio.

**ADEC**

NAME

Michele Baer

SIGNATURE

MBaer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Beginning at the southern end of the map, the 2 x 5 FLP/L requires tilling, then applying bioremediation to the patch of C.P. further north in this segment is a section with several areas of coat & cover on top of the rocks and underneath to 60 cm. This area is the worst of the beaches we've seen and I would consider high priority. Between 30 m x 30 m and 3 m x 20 m section, the upper intertidal zone requires tilling to at least 60 cm of the patch. of coat and cover and the MITZ require hot water wash throughout. The next C.P. beach to the north also requires H.W. wash on the 20 x 1 and 80 m x 4 m sections. Refer to the pictures 21, 24, 25, 26 for a view of the 1st beach and pictures 18, 28, and 27 for a view of the 2nd beach. The areas are very accessible and low exposure.

**LAND MANAGER**

NAME DAN KOENIG

SIGNATURE D. Koenig

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THIS SEGMENT HAS SEVERAL SITES OF CV THROUGHOUT. STARTING ON THE SOUTHERN END OF THE SEGMENT THE FIRST 30 M X 30 M CV/B SHOULD BE TREATED WITH HOT WATER WASH. THE 2 M X 5 M FL/P SHOULD BE TREATED WITH FERTILIZER. THE 30 M X 20 M - 5 M X 20 M - 80 M X 4 M CV/B PATCHES SHOULD ALSO BE TREATED WITH HOT WATER WASH.

30

## SHORELINE OILING SUMMARY

REVISION NO. 08/22/90

OG J. Springer USCG R. Vandepelt SEGMENT ST/ EL 57  
 BIO P. Crook LAND REP D. Logan SUBDIVISION A (1081)  
 EXXON T. Tomblin ADEC M. Baer TIME 17:15 to 18:45  
 TEAM NO.: 5 TIDE LEVEL: r2 to +3.5 DATE 04/04/90  
 EST. SUBDIVISION LENGTH: 654 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N  
 SURFACE SEDIMENTS: R 15 % B 60 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0 %  
 SLOPE: Lang 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High  
 OIL CATEGORY LENGTH: W 90 m M 100 m N 59 m VL 0 m NO 405 m

## SURFACE OIL

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

PAVEMENT: H F S \_\_\_\_\_ sq. m by \_\_\_\_\_ cr

PATTIES / TARBALLS \_\_\_\_\_ BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

| OILED DEBRIS | AMOUNT |    |    |
|--------------|--------|----|----|
|              | SM     | MD | LG |
| Logs         |        |    |    |
| Vegetation   |        |    |    |
| Trash        |        |    |    |
| Debris       |        |    |    |

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE \_\_\_\_\_

#BAGS \_\_\_\_\_

Photographs:

Roll No. ST-5-3Frames 17-28

## 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 |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|---|---|---|---|---|----------|---|---|---|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | 1                | 2 | 3 | 4 | 5 | 6 | SU       | U | M | L |       |                      |
| 1       | 45             |                          | X  |    |    |    | 20-45                  | X     |    |                  |   |   |   | X |   |          |   | X |   |       | CPGR                 |
| 2       | 60             |                          | X  |    |    |    | 0-45                   | X     |    |                  |   |   |   | X |   | X        |   |   |   |       | CPG                  |
| 2       | 60             | X                        |    |    |    |    | 45-50                  | X     |    | X                |   |   |   |   |   | X        |   |   |   |       | CPG                  |
| 3       | 60             |                          |    | X  |    |    | 10-60                  | X     |    |                  |   | X |   |   |   | X        |   |   |   |       | CP                   |
| 4       | 60             |                          |    |    | X  |    | 15-60                  | X     |    |                  |   | X |   |   |   | X        |   |   |   |       | CPG                  |
| 5       | 40             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   |   | X        |   |   |   |       | P                    |

COMMENTS

Grafitti carved in oil coat.

25

OG J. Sp...er  
 SEGMENT ST/ EL 57  
 SUBDIVISION A  
 DATE 04/04/90

# SKETCH MAP

## CHECKLIST

☒ M Aerial  
☒ Approx. Scale  
☒ Seg/Sub Bdry  
☒ Oil Dist  
☒ Width  
☒ Length  
☒ Cover  
☒ Substrate Character  
☒ Est. HML/LWL  
☒ SSL  
☐ Profile Location(s)  
☐ Profile(s)  
☐ P/L Location(s)  
☐ Photo Location(s)

## LEGEND

1 ▲

Pt - No Subsurface Oil

2 ▲

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

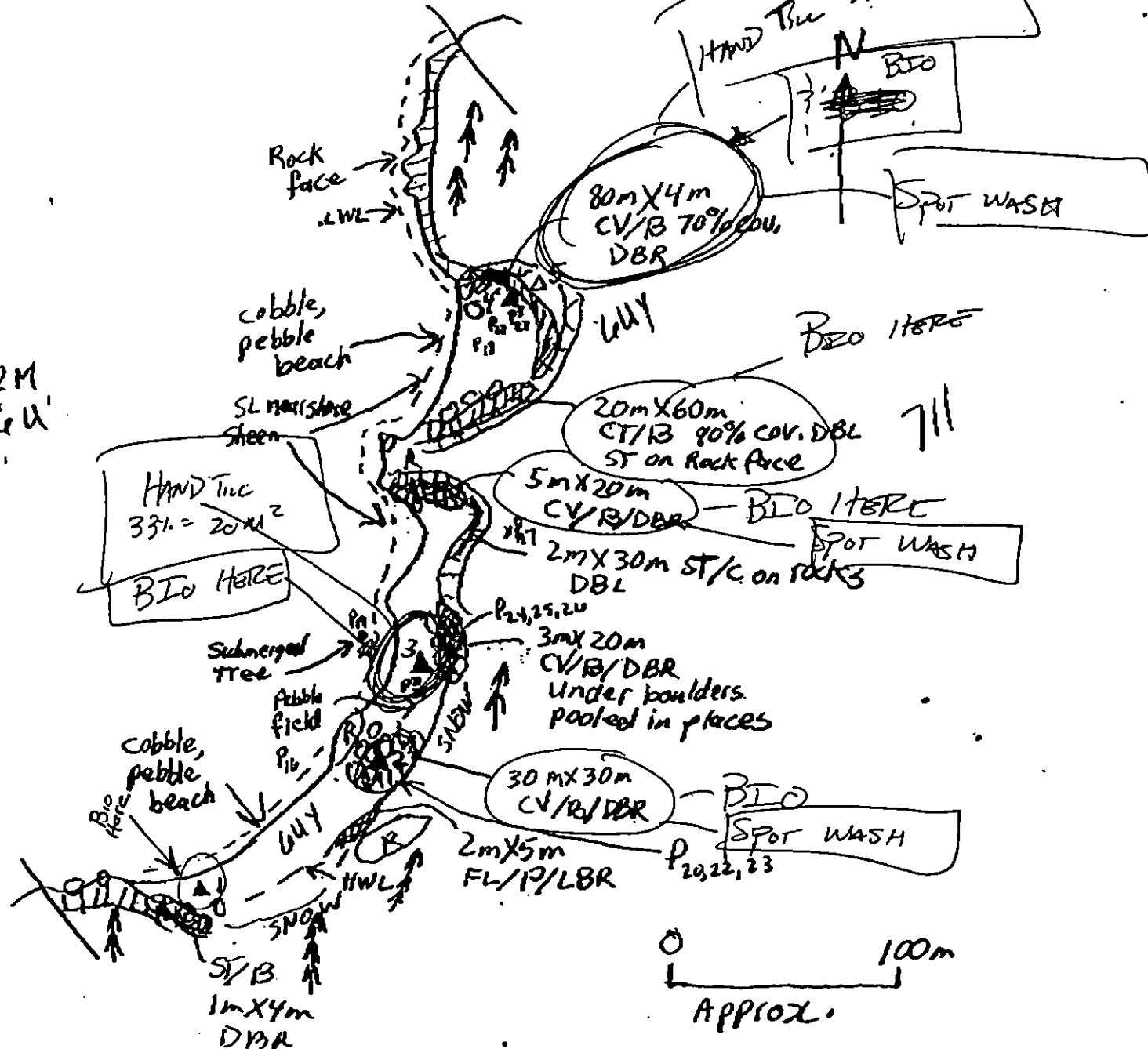
Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

92



Oil Character Length (m): AP PO CV 150 CT 60 ST 34 MS PT TB FL 5 NO 405

REVISION: 03/24/88

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST FL57 Subdivision A Date (mo/day/yr) 4/4/90  
 Length 654m

Time (24 hr) 1720-1845 Biologist Crank Tide Height +2.2 +3.5  
 pg 1 of 2

(A) Substrate type and % of segments:  
 (1) Bedrock 15 (2) Boulder 60 (3) Cobble 20 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 10 Low 60

(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. 57-5-3

Frames 17, 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:

2 Bald Eagles - Adults, 1 flying; 1 in tree  
 Heard Eagle screech in distance  
 Most of LITZ unexposed.

## Ecological Considerations:

711 - Deer Harvesting  
 2M - Herring Spawning  
 6U - Tent Sites  
 1V - Seals 1/50 Distraction

- Se beach has low fauna in cobble  
 - Northern Beach has mod. fauna in cobble  
 - Although the overall biota on this subdivision is low on the rock outcrops recruitment is moderate as is the biotic concentrations

SEGMENT: ST/EL 57 SUBDIVISION A LENGTH 654m BIOLOGIST Crant

DATE 4/1/40 TIME 1720 - 1845 TIDE HEIGHT +2 → +3.5

pg 2 of 2

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

FLORA:

| SPECIES                 | UTZ | MTZ | LITZ | COMMENTS  |
|-------------------------|-----|-----|------|-----------|
| BOSSIELLA/CORALLINA     |     | 1   |      | Tide pool |
| CALLIARTHRON/CORALLINA  |     |     |      |           |
| CLADOPHORA SPP          |     | 1   |      |           |
| COSTARIA SPP            |     |     |      |           |
| ENDOCLADIA MURICATA     |     |     |      |           |
| FILAMENTOUS GREENS      | 123 | 123 | 123  |           |
| FILAMENTOUS REDS        |     |     | 123  |           |
| GLOIOPELTIS FURCATA     |     | 1   |      |           |
| HALOSACCION GLANDIFORME |     |     |      |           |
| LAMINARIA SPP           |     |     | 1    |           |
| LITHOTHAMNION           |     |     | 1    |           |
| NEREOCYSTIS SPP         |     |     |      |           |
| PORPHYRA SPP            |     | 12  | 12   |           |
| RALPHSIA/HILDENBRANDIA  |     | 12  | 12   |           |
| RHODOMELA LAMIX         |     | 1   |      |           |
| RHODOMENIA PALMATA      |     | 1   | 1    |           |
| SCYTOSIPHON SPP         |     | 123 | 123  |           |
| ULVA SPP                |     |     | 12   |           |
| ZOSTERA MARINA          |     |     |      |           |
| Enteromorpha            |     |     | 1    |           |

FAUNA:

|                                  |    |     |     |                          |
|----------------------------------|----|-----|-----|--------------------------|
| ANTHOPELURA SPP                  |    |     |     |                          |
| (SEMI) BALUNUS CARIOSUS          |    | 1   | 12  |                          |
| B. GLANDULA                      | 12 | 123 | 123 |                          |
| BRYOZOANS                        |    |     |     |                          |
| CHITONS (OTHER THAN K. TUNICATU) |    |     |     |                          |
| CLAMS                            |    |     |     |                          |
| CRABS                            |    |     |     |                          |
| DERMASTERIAS IMBRICATA           |    |     |     |                          |
| KATHARINA TUNICATA               |    |     |     |                          |
| LEPTASTERIAS HEXACTIS            |    |     |     |                          |
| LIMPETS                          |    | 12  | 12  |                          |
| LITTORINA SPP                    | 12 | 123 |     |                          |
| NUCELLA SPP                      |    |     |     |                          |
| PAGURUS SPP                      |    |     | 3   |                          |
| PISASTER OCHRACEUS               |    |     |     |                          |
| POLYCHAETES                      |    |     |     |                          |
| PYDNOPODIA HELIANTHOIDES         |    |     |     |                          |
| SEARLESIA DIRA                   |    |     |     |                          |
| SERPULIDS                        |    |     |     |                          |
| SIPHONARIA THERSITES             |    |     |     |                          |
| TEALIA                           |    |     |     |                          |
| 2cm long Segmented Worm          |    | 3   |     | Mad & Deny concentration |

29

EL-5

27

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO M. 0:1

EL-57

ADEC Segment Length: ~~700m~~ 654



Map Key: PWS-140

Name: J. Springer

Date: 04/04/90

Date Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-57 SUBDIVISION A (1 of 1)

### WORK WINDOW

Bioremediation  
Mechanical/Manual Tilling  
Spot Washing  
Other Approved Treatment

WORK PRIOR TO 8/15

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by ADF&G/Claudia Slater to Exxon/Tom Kelley 5/10/90.

7II Subsistence: Deer Harvesting Closed to bioremediation, mechanical/manual tilling, spot washing, and other approved treatment after 8/15.

### OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90  
ADEC Art Weiser  
EXXON AWT/GAR  
NOAA Joseph T. ...  
USCG Mr. J. Hall

FOSC

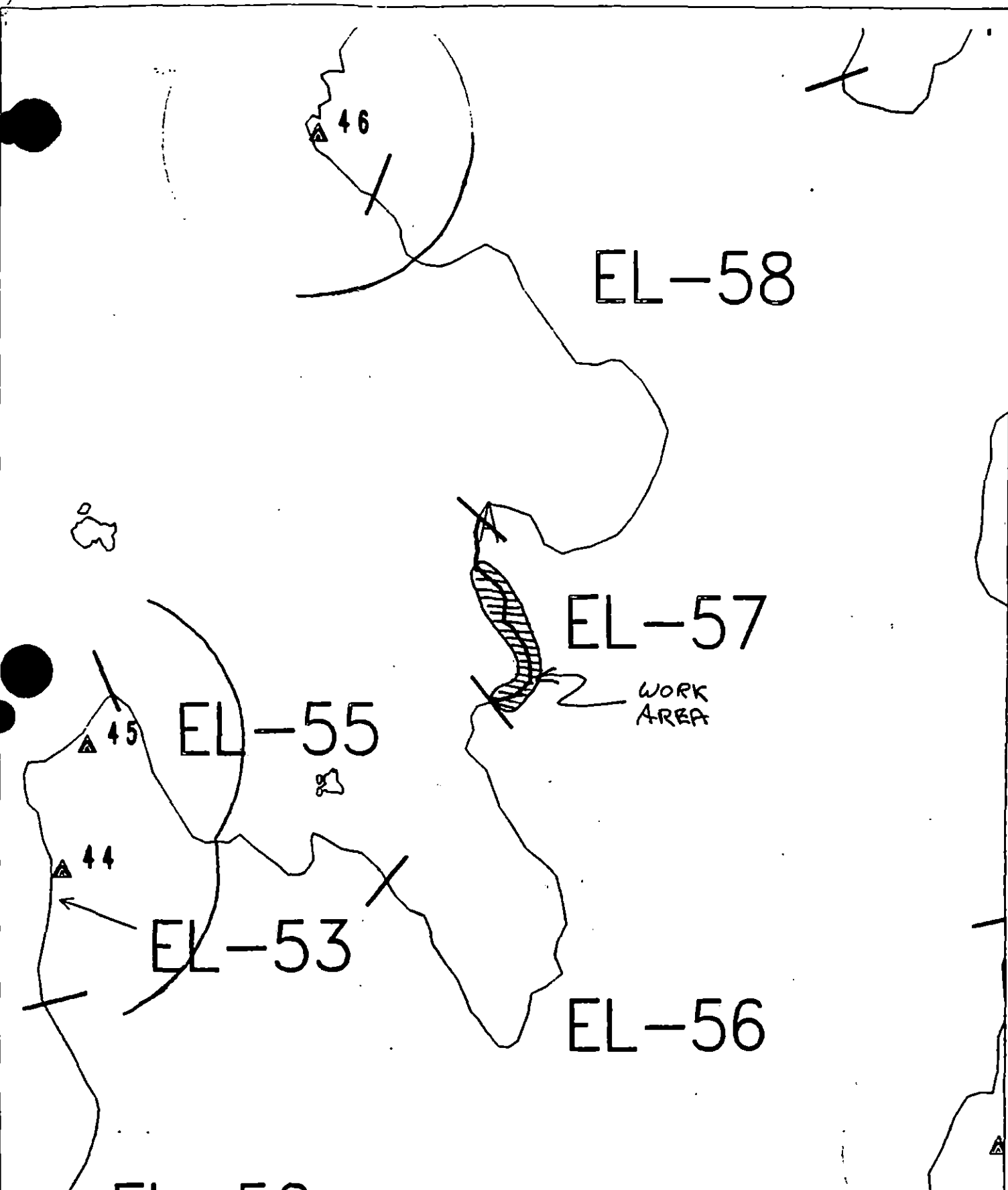
DATE 5-21-90

Prepared by:

Anda Meyer

Date:

5/19/90



**EXXON**  
Exxon Company, USA  
Map Keys KNI-EL-57  
MAY 11 1997

**ECOLOGY MAP**  
SEGMENT EL-57  
SUBDIVISION A (1 of 1)  
METERS  
0 335 671

- |   |                |
|---|----------------|
| ★ | Seabird Colony |
| △ | Eagle Nest     |

1 inch = 1101 feet

## SHORELINE EVALUATION

SEGMENT ST/ EL-57 SUBDIVISION A (1 OF 1) DATE 4/4/90

### SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)  
6U Recreation: Tent sites (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 uncoiled 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. Hoffman

DATE: 4/20/90

### SOILING CATEGORIZATION:

Wide 94 m: Medium 111 m: Narrow 34 m: V.Light 0 m: No Oil 344 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 60 cm

### RECOMMENDATIONS:

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| <u>    </u> No Treatment Recommended    | <u>    </u> Snare/Absorbent Booms      |
| <u>X</u> Treatment Recommended          | <u>X</u> Oil Snares (pom poms)         |
| <u>    </u> Manual Pickup               | <u>X</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: Recommend \*hand tilling of areas shown on attached sketch map followed by bioremediation. Also recommend spot washing with wands and absorbents in areas shown on map. Work should be conducted after 6/1 based on above herring constraints.

MANUAL / MECHANICAL TILLING. PRIOR TO BIOREMEDIATION AS INDICATED ON SKETCH.

SEE APPENDUM (DATED 5-19-90) FOR CHANGES.

TAG COMMENTS: C. DASH

TAG APPROVAL DATE: 4/14/90

ADEC ART WILSON  
EXXON ANDY GALT  
NOAA Burt Wasscott  
USCG KENNETH KATNE

FOSC: W. J. L.

DATE: 4-26-90

## SHORELINE EVALUATION

SEGMENT ST/ EL-57 SUBDIVISION A (1 OF 1) DATE 4/4/90

### SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6U Recreation: Tent sites (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 uncoiled 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 94 m: Medium 111 m: Narrow 34 m: V.Light 0 m: No Oil 344 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 60 cm

### RECOMMENDATIONS:

**No Treatment Recommended**

| X   | Treatment Recommended |
|-----|-----------------------|
| 1   | 1                     |
| 2   | 1                     |
| 3   | 1                     |
| 4   | 1                     |
| 5   | 1                     |
| 6   | 1                     |
| 7   | 1                     |
| 8   | 1                     |
| 9   | 1                     |
| 10  | 1                     |
| 11  | 1                     |
| 12  | 1                     |
| 13  | 1                     |
| 14  | 1                     |
| 15  | 1                     |
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| 92  | 1                     |
| 93  | 1                     |
| 94  | 1                     |
| 95  | 1                     |
| 96  | 1                     |
| 97  | 1                     |
| 98  | 1                     |
| 99  | 1                     |
| 100 | 1                     |

**Manual Pickup**

X    Bioremediation

           Tarmat:            Breakup

                     Removal

### Snare/Absorbent Booms

X Oil Snares (pom poms)

X Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

                     Beach Cleaner

X\* Other (see comments)

COMMENTS: Recommend \*hand tilling of areas shown on attached sketch map followed by bioremediation. Also recommend spot washing with wands and absorbents in areas shown on map. Work should be conducted after 6/1 based on above herring constraints.

MANUAL / MECHANICAL TILING PRIOR TO BROADCASTING AS INDICATED ON SKETCH.

**TAG COMMENTS:**

**TAG APPROVAL DATE:**

**ADEC**

**EXXON****NOAA**

USCG

**FOSC:**

**DATE:**

TAG APPROVAL DATE: 4/16/80.  
ADEC ART WEINER  
EXXON AMY GALT  
NOAA Burt Wescott  
USCG Kenneth Keane

FOSC: W L DATE: 4-26-80

OG J. Springer  
 SEGMENT ST/ LL57  
 SUBDIVISION A  
 DATE 04/04/90

# CHECKLIST

- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Endry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Real. HML/LML
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)

## LEGEND

1  $\Delta$   
 P/L - No Subsurface Oil

2  $\Delta$   
 P/L - Subsurface Oil

CT/C  
 Continuous Distribution

CT/B  
 Broken Distribution

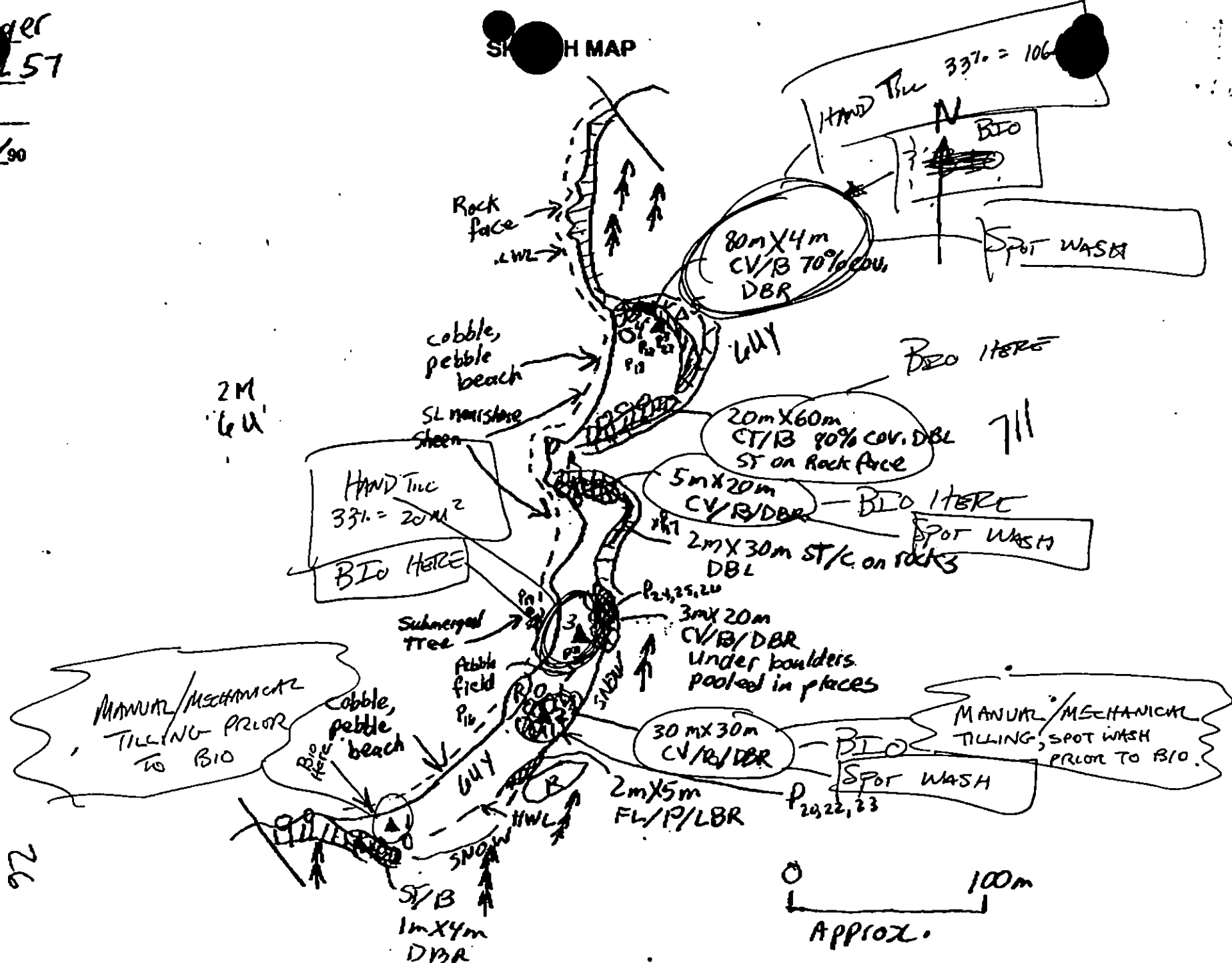
CT/P  
 Patchy Distribution

CT/S  
 Streaked Distribution

Oiled Vegetation

1  $\rightarrow$   
 Photo location, direction,  
 and number

## SKETCH MAP



0 100m  
 APPROX.

Oil Character Length (m): AP 150 CT 60 ST 34 MS 5 PT 405

REV 000000/0100

EL-5

27

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-57

ADEC Segment Length: ~~654~~ 654



Map Key: PWS-140

Name: J. Springer

Date: 04/04/90

Date Entered:

# 1991 MAYSAP EVALUATION

SEGMENT: EL 057 SUB: A REGION: PWS SURVEY DATE: 4/27/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Richard Oren

Date: 5/17/91

## RECOMMENDATIONS:

|                               | INITIAL       | TAG           | FOSC          |
|-------------------------------|---------------|---------------|---------------|
| TREATMENT REQUIRED (Y or N)   | <u>N</u>      | <u>N</u>      | <u>N</u>      |
| Manual Pickup (Check as Req.) | <u>      </u> | <u>      </u> | <u>      </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: TAG VISIT PERFORMED 6/12/91, NTR CONFIRMED.

6/13/91 John Williams - Exxon  
John Williams - NOAA Edmond WCCG  
John Bauer - ADEC

FOSC: TAG MAKE ON SITE VISIT + REASSESS  
NEED FOR CLEANUP - RESUBMIT RECOMMENDATION  
AFTER ON SCENE EVALUATION

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 6/10/91

ADEC [Signature]

FOSC E. E. PAGE, CDR, USCG

EXXON [Signature]

CHIEF OF STAFF, FOSC  
 The state will evaluate the need for further treatment.

USCG [Signature]

ReAssessment conducted - NTR

NOAA [Signature]

John Bauer  
6-13-91

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

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

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-57 SUBDIVISION A DATE 4/27/91

## ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☐ NTR

☒ TREATMENT RECOMMENDED

THIS SEGMENT WILL REQUIRE A THOROUGH VISIT AND INSPECTION BY TAG; NO RESPONSIBLE WORK ORDER CAN BE WRITTEN BASED ON THIS REPORT ALONE. EXTENSIVE WORK WILL BE NEEDED TO ADDRESS THE EXTREMELY VARIED DEGREES AND DISTRIBUTION. A COMBINATION OF MECHANICAL AND MANUAL WORK: MECHANICAL NEAR PITS 1-5, MANUAL WORK AT PIT 16, AND FURTHER MAN/MECH TO BE DETERMINED DURING VISIT. NOTE: BIO MAP IS IRRELEVANT SINCE IT DEALS ONLY WITH SURFACE CONDITIONS; THIS IS AN ADNR RECREATIONAL USE SITE; STORM BERM RELOCATION WAS ALREADY PERFORMED BY PITS 1-4; AND PITS 2+16 WERE HOR NOT MOR.

## EXXON

NAME C. M. KATSIMPAKIS

SIGNATURE C. M. Katsimpakis

☐ NTR

OG & BIO REPORTS ACCURATELY REFLECT FINDINGS OF OUR SURVEY. AREA OF PITS #1 THRU #7 CONTAINS SUFFICIENT SUBSURFACE OILING TO WARRANT FURTHER TAG REVIEW.

## LANDMANAGER

NAME DERMIS S. KENNEDY

OF USFS

SIGNATURE D. S. Kennedy

☐ NTR

Bio shows good diversity over all of subdivision. This is important to note even though the major oil finds are sub surface, any treatment must consider the impact on the known biota.

## USCG/NOAA

NAME MICHEL (N)

SIGNATURE Michel

☐ NTR

The survey was very detailed and thorough. There are two areas of significant subsurface oil and both are in beaches sheltered by tombolos. THE OIL WAS between MOR/HOR in pits 2+16. IN BOTH AREAS, THE SURFACE SEDIMENTS ARE CLEAN. IN THE BEACH WHICH HAD BERM RELOCATION LAST YEAR, THE BERMS ARE CLEAN, BUT DEEP MOR REMAINS AS LEAST 6-18 CM THICK. THE BEACH SURFACE IS RELATIVELY FINE-GRAINED. THE SECOND AREA (NEAR PIT 16) IS VERY DIFFERENT, WITH LARGE COBBLE VENEER, POORLY SORTED AND MUDDY SUBSURFACE SEDIMENTS.

\* FOR USCG COMMENTS SEE PAGE 2 COMMENT SHEET

# MAYSAP FIELD SHORELINE COMMENT SHEET

PAGE 2

TEAM NO. 2 SEGMENT EL-57 SUBDIVISION A DATE 4/27/91

## ADEC

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

## EXXON

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

## LANDMANAGER

NAME \_\_\_\_\_ OF \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

## USCG/NOAA

NAME BMI ZENONE SIGNATURE Bmi M. Zenone

☐ NTR Good OG REPORT - CONCUR w/ HIS DOCUMENTATION. PITS 1-7 WERE VERY DEEP. WHICH RAISES A QUESTION FOR FURTHER TREATMENT. (NET BENEFIT VS DISTURBANCE)  
PIT #16 WAS WELL DESCRIBED BY NOAA COMMENTS. THERE IS A POSSIBILITY OF BENEFIT THROUGH SOME SORT OF TREATMENT IF THIS AREA WERE TO BE SURVEYED MORE EXTENSIVELY - IT WARRENTS A CLOSER LOOK.

TEAM NO. TWOOG DOUG REIMERBIO SANDY BENSONSEGMENT FL 57ADEC PETER MONTESANOLANDMANAGER DENNIS KENNEDY USFSSUBDIVISION AEXXON CHRIS KATSIMPALISBmI ZENONE - USCG  
USCG/NOAA JACQUE MICHAEL NOAADATE 4/27/91TIME 16:50 to 19:15

TIDE LEVEL \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 582 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH:

W — m M 60 m N 60 m VL 5 m NO 457 m US — m

| L<br>O<br>C | SURFACE OIL CHARACTER |    |    |     |    |    |    |    |    |    | SURFACE<br>SEDIMENT<br>TYPE | SHORE<br>SLOPE<br>V H M L | AREA       |             | ZONE |    |    |    | NOTES                        |
|-------------|-----------------------|----|----|-----|----|----|----|----|----|----|-----------------------------|---------------------------|------------|-------------|------|----|----|----|------------------------------|
|             | AP                    | MS | TB | SOR | CV | CT | ST | FL | DB | NO |                             |                           | WIDTH<br>m | LENGTH<br>m | S    | UI | MI | LI |                              |
| A           |                       |    |    | P   |    | S  |    |    |    |    | BCGS                        | M                         | 8          | 10          |      |    | X  |    | algae covered / SOR in fines |
| B           |                       |    |    | S   |    | S  |    |    | S  |    | BCPG                        | M                         | 4          | 5           |      |    | X  |    | oiled log                    |
| C           |                       |    |    |     |    |    |    | B  |    |    | PG                          | M                         | 1          | 2           |      | X  |    |    | oiled organics along NWL     |
| D           |                       |    |    | S   | S  | P  |    |    |    |    | BC                          | H                         | 6          | 25          |      | X  |    |    |                              |
| E           |                       |    |    |     |    |    |    | P  |    |    | PG                          | M                         | 1/2        | 6           |      | X  |    |    | oiled organics along NWL     |
| F           |                       |    |    |     | S  | P  |    |    |    |    | RB                          | H                         | 3          | 15          |      | X  |    |    |                              |
| G           |                       |    |    |     | P  |    |    |    |    |    | BC                          | M                         | 2          | 10          |      | X  |    |    |                              |
| H           |                       |    |    | S   |    | S  |    |    |    |    | BCPF                        | M                         | 2          | 5           |      |    | X  |    | interstitial SOR             |
| I           |                       |    |    |     |    | P  |    |    |    |    | BR                          | H                         | 2          | 30          |      | X  |    |    |                              |
| J           |                       |    |    | S   |    | P  |    |    |    |    | BCP                         | M                         | 3          | 10          |      | X  |    |    |                              |
| K           |                       |    |    |     |    | S  | S  |    |    |    | RB                          | H                         | 2          | 15          |      | X  |    |    |                              |

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

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

PHOTO ROLL # MAYSAP- \_\_\_\_\_

FRAMES \_\_\_\_\_

| PIT<br>NO. | PIT<br>DEPTH<br>(cm) | SUBSURFACE<br>OIL CHARACTER |     |     |     |    |    |    | OILED<br>ZONE<br>cm-cm | CLEAN<br>BELOW<br>Y/N | H2O<br>LEVEL<br>(cm) | SHEEN<br>COLOR<br>B R S N | PIT<br>ZONE |    |    |    | SURFACE-<br>SUBSURFACE<br>SEDIMENTS | NOTES        |
|------------|----------------------|-----------------------------|-----|-----|-----|----|----|----|------------------------|-----------------------|----------------------|---------------------------|-------------|----|----|----|-------------------------------------|--------------|
|            |                      | OP                          | HOR | MOR | LOR | OF | TR | NO |                        |                       |                      |                           | S           | UI | MI | LI |                                     |              |
| 1          | 60                   |                             |     |     | X   |    |    |    | 7-60                   | N                     | 53                   | B                         |             | X  |    |    | P-PG                                | Berm / water |
| 2A         | 45                   |                             |     |     | X   |    |    |    | 29-39                  | N                     | 40                   | B                         |             | X  |    |    | P-PG                                | water filled |
| 2B         |                      |                             |     | X   |     |    |    |    | 39-45                  |                       |                      |                           |             | X  |    |    |                                     |              |
| 3A         | 39                   |                             |     |     | X   |    |    |    | 14-24                  | N                     | —                    |                           |             |    | X  |    | CP-PG                               | Caved in     |
| 3B         |                      |                             |     | X   |     |    |    |    | 24-39                  |                       |                      |                           |             |    | X  |    |                                     |              |
| 4          | 45                   |                             |     | X   |     |    |    |    | 14-43                  | Y                     |                      |                           |             | X  |    |    | PC-PG                               | mud @ 43     |
| 5A         | 50                   |                             |     |     | X   |    |    |    | 4-14                   | Y                     | 46                   | B                         |             | X  |    |    | P-PG                                | Mud @ 48     |
| 5B         |                      |                             |     |     |     | X  |    |    | 14-23                  |                       |                      |                           |             | X  |    |    |                                     |              |
| 5C         |                      |                             |     | X   |     |    |    |    | 23-48                  |                       |                      |                           |             | X  |    |    |                                     |              |

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

**OG COMMENTS:** Subdivision is a section of alternating rocky headlands and pocket boulder/cobble beaches, with the exception of two tombolo features which have sheltered the beaches behind. Oiling consists of coat/crow on sides and bottoms of boulders predominantly along the NWL. Patches of SOR were found around and under cobbles/boulders in MITZ (A, H). Sub surface oil was found predominantly at South end of Segment behind tombolo, and again behind tombolo at North end of Sketch #2 - HOR, and appears to be distributed through MITZ - MITZ.

 REVISED: MC 5/3/91  
 REVISOR: SIZ  
 JH

## MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 2 OF 2

TEAM NO. 2

SEGMENT EL 57

SUBDIVISION A

DATE 4 / 27 / 91

[illegible]

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

**OG COMMENTS:**

REVISOR: MC 5/3/91  
Reviewed 5.2

*ry*

LOCATION  
MAP

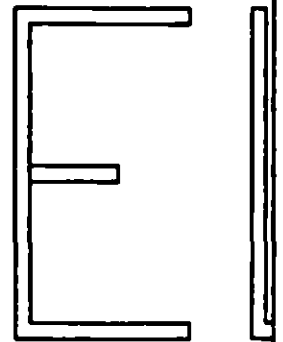
Cliff - No oil observed  
Vertical Rock  
Skiff

WALK  
SKETCH MAP  
#2

Skiffed  
No oil  
observed  
Rock cliff

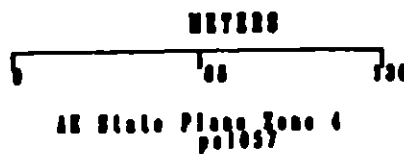
WALK  
SKETCH MAP  
#1

0 50  
100



EL057A

Segment Reference Map  
Map Key: PVSELO67

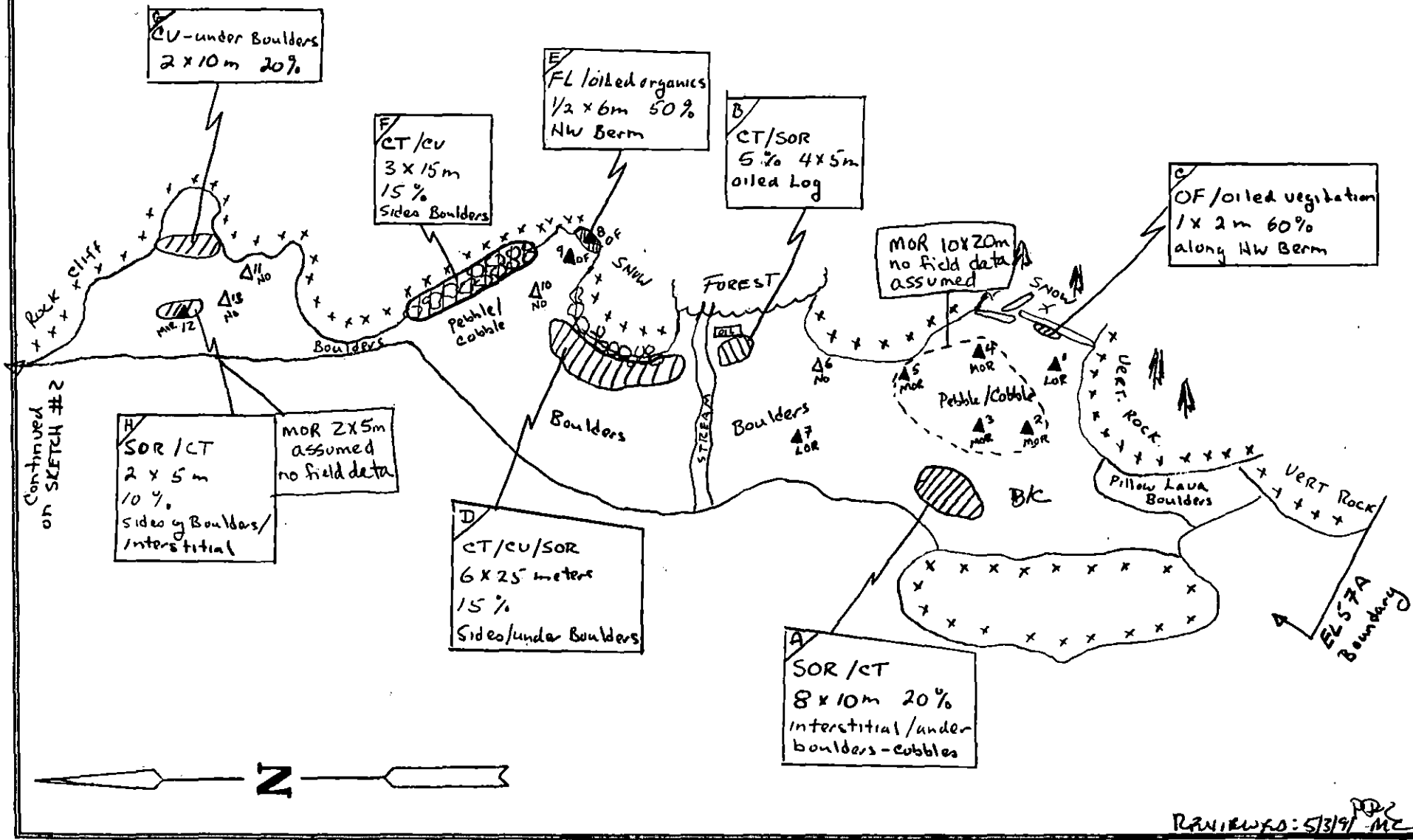


EAGLE NEST

- Bedrock
- Logs
- Large Boulders
- Photo Locations

# SKETCH MAP #1

SKETCH MAP (OG)  
 EL 57A  
 Doug Reimer  
 27 April, 81  
 16:50 - 19:15



REVISED: 5/3/91  
 revised 5.2  
 04

x Backrock

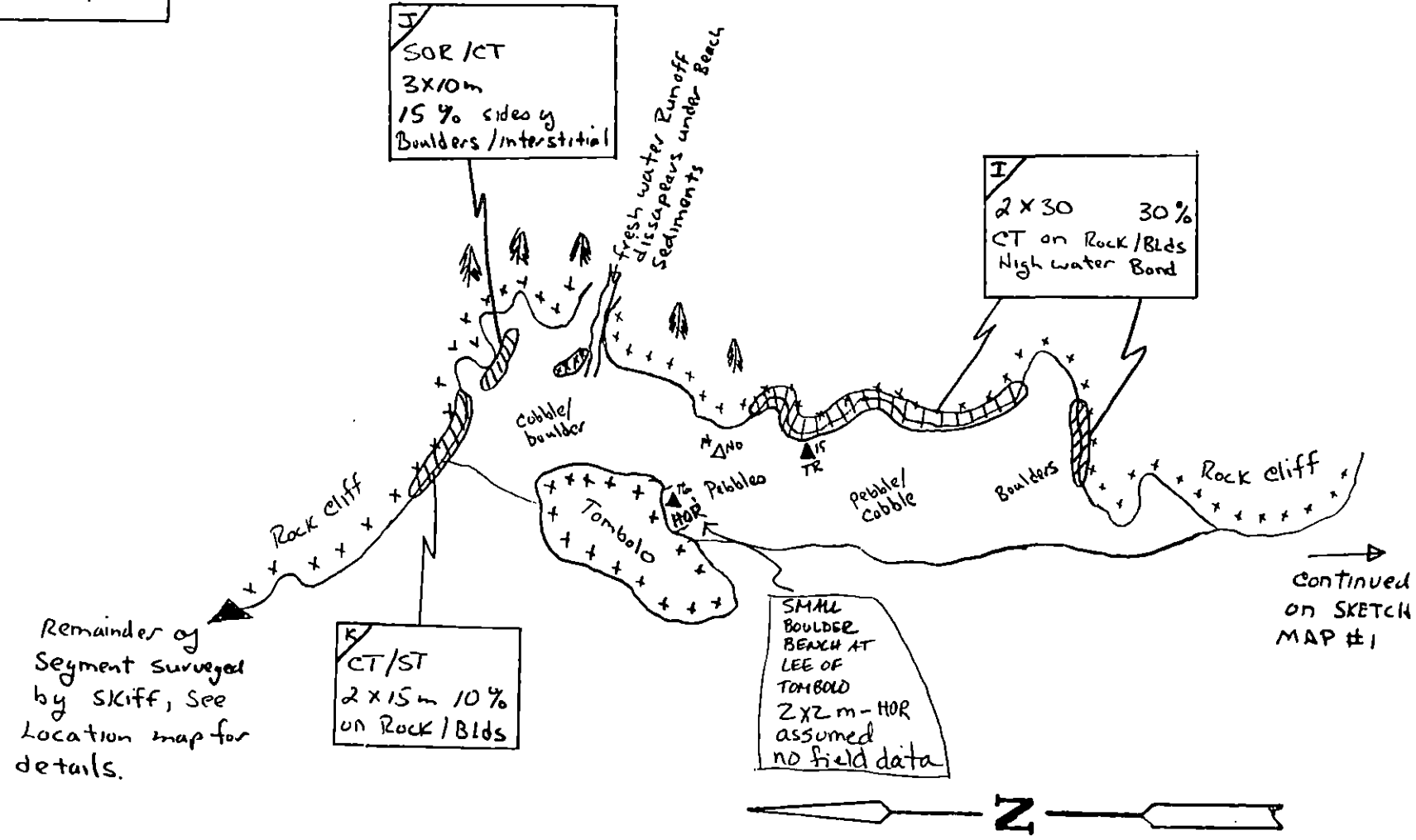
≡ - Logs

→ - Photo Locations

↑ - TREES

# SKETCH MAP #2 See Location MAP

SKETCH MAP #2  
EL 57A  
Doug Reimer  
27 April, 91  
16:50 - 19:15



REVIEWED: MC 5/3/91

revised 5.2  
7/4

xx) Be

Log

Large Boulders

# SKETCH MAP SEE LOCATION MAP

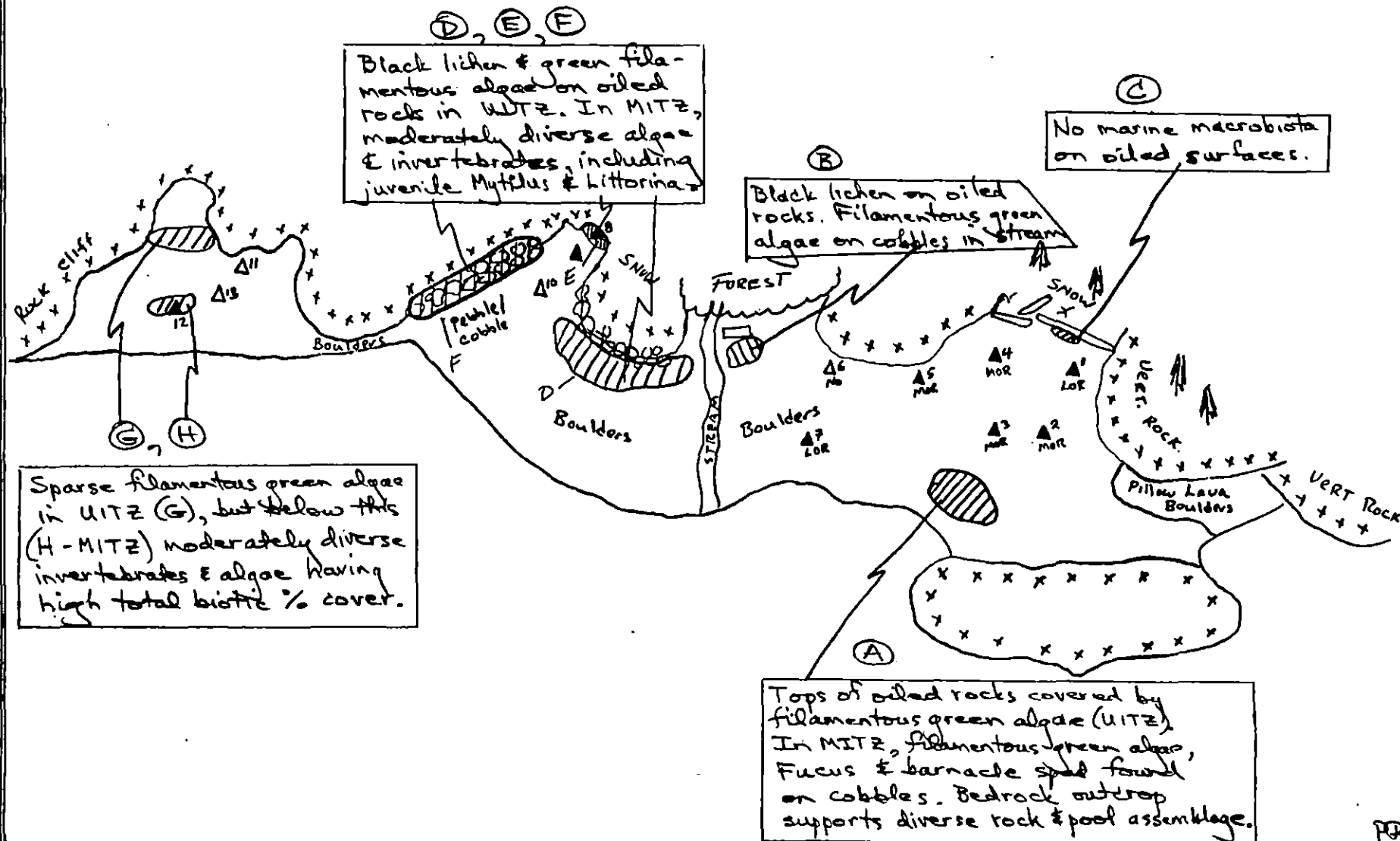
SKETCH MAP (10)

EL 57 A

BENSON

27 April, 81

16:50 - 19:15



## MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 27 Apr 1991  
 SEGMENT # EL 57 TIDAL HEIGHT(Range) +5' to +1'  
 SUBDIVISION A BIOLOGIST BENSON  
 SEA STATE 1' WIND SPEED/DIRECTION 5/W  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- (A) - Boulder tops dominated by green filamentous algae in U1T2 (Freshwater runoff occurs here). Boulders in M1T2 & L1T2 and the tombolo, especially, support moderately high diversity of invertebrates & algae. Recruitment of *Fucus* & barnacles seen. Moderately abundant pinkish polychaetes found below cobble-armor.
- (B) - Black lichen occurs near oiled rocks & filamentous green algae dominates rock surfaces in the stream down to the L1T2.
- (C) - No macrobiota associated with these rocks in supratidal.
- (D), (E), (F) - Black lichen (*Verrucaria*) & green filamentous algae grow on oiled rocks in U1T2. In the M1T2 below these oiled rocks, a moderately diverse invertebrate & algal community forms a moderately high total biotic % cover on the boulders. Recent recruitment of *Fucus*, *Littorina*, barnacles & *Mytilus* has occurred.
- (G) & (H) - Sparse filamentous green algae in U1T2 (no FW runoff observed), but again a moderately diverse & abundant community was observed on the boulders below. Juvenile *Littorina* seen.
- (I) - Only sparse barnacles observed on oiled rocks, but that is typical in U1T2. In M1T2 & L1T2, boulders support moderately diverse algae & invertebrates with high total biotic % cover.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on next page)

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | 1            | 1           | —                                |
| Seabirds         | —            | —           |                                  |
| Waterfowl        | 1            | 1           |                                  |
| Gulls/kittiwakes | 2            | 2           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | —            | —           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS     | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|--------------------|------------|-------------------------|------------|
| Sea Otters         | —          | —                       |            |
| Pinnipeds(specify) | 1          |                         |            |
| Harbor seal        |            |                         |            |
| Whales(specify)    | —          |                         |            |
|                    |            |                         |            |

Shoreline subdivision map showing important biological features attached.

Team 2  
Segment EL 57-A  
BIO: BENSON  
27 Apr 1991

- ① (cont.) - The biotic % cover of the pebbles & cobbles is much lower. The tombolo bedrock supports a moderately diverse community enhanced by the presence of tidepools and their associated biota. The beach could be accessed on either side of tombolo.
- ② - Barnacles, *Fucus* & a few other species formed a moderate % cover on boulders. For MITZ boulder & tombolo communities, see comments in ①.
- ③ - Near the oiled rocks, a high % cover of filamentous green algae & *Verrucaria* was observed. A lush algal community was observed in the LITZ, along with sparse barnacle recruitment.

This is a physically and biological diverse subdivision with generally high % cover (except on the pebble beaches) and moderately high biotic diversity. The presence of tidepools & large crevices on the tombolos significantly enhances the biotic diversity.

Back

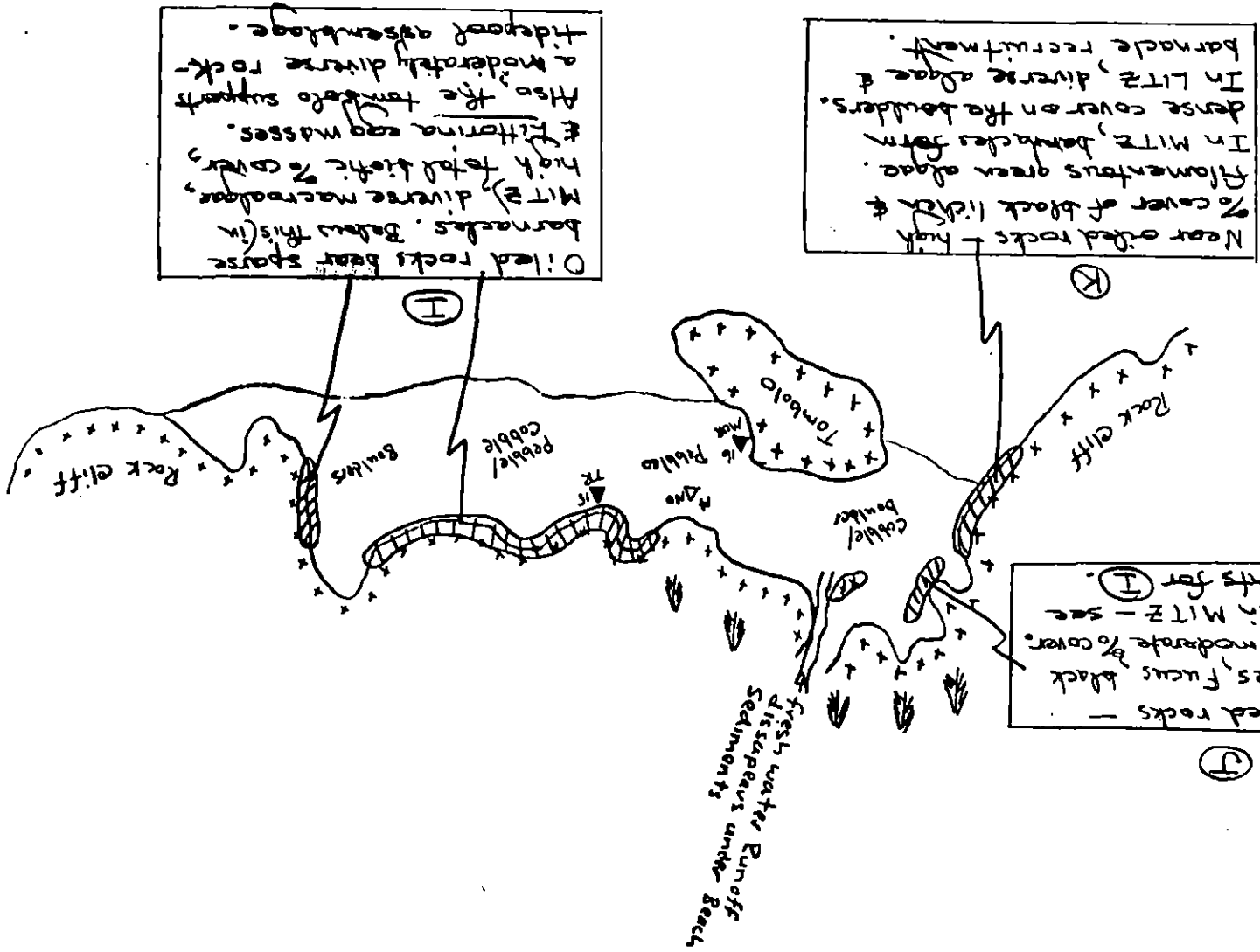
Logs

Photo locations

Trees

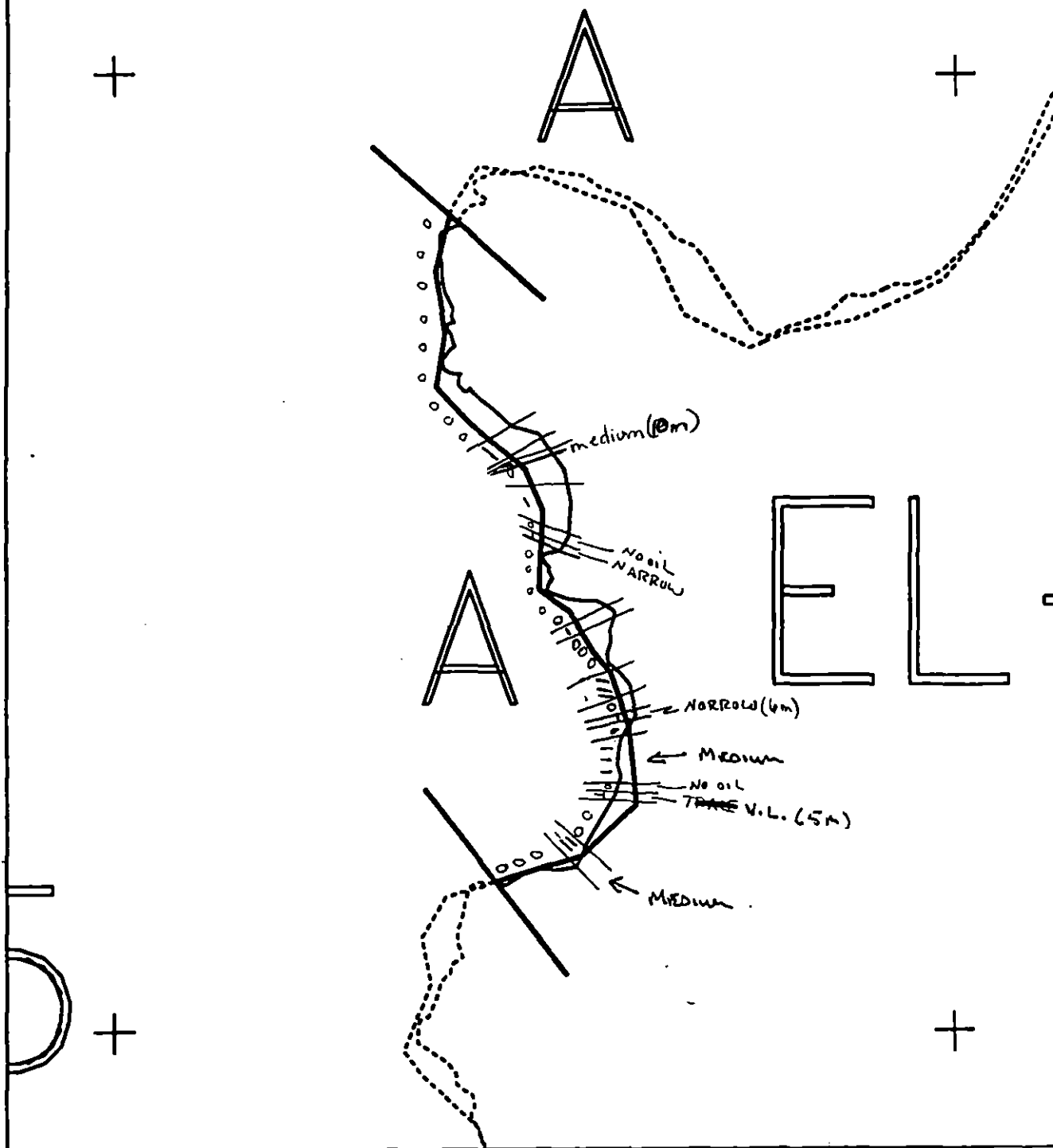
SKETCH MAP #2  
See location MAP

SKETCH MAP (BIO)  
EL 57A  
BENSON  
27 April '91  
16:50 - 19:15



bold eagle

common merganser



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

**EL057 A**  
 ADEC Subsegment Length: 502m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 proj 570



Subdivision Field Map  
 Map Key: PWSEL057A  
 Name: Reimer  
 Date: 4/27/91  
 Date Entered:

REVIEWED: MC 5/3/91

revised 5.2

gy

1991 MAYSAP EVALUATION

SEGMENT: EL 057 SUB: A REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) 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**

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

## MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-57 SUBDIVISION A DATE 4/27/91

## ADEC

NAME PETER MONTESANOSIGNATURE Peter Montesano☐ NTR☒ TREATMENT RECOMMENDED

THIS SEGMENT WILL REQUIRE A THOROUGH VISIT AND INSPECTION BY TAG; NO RESPONSIBLE WORK ORDER CAN BE WRITTEN BASED ON THIS REPORT ALONE. EXTENSIVE WORK WILL BE NEEDED TO ADDRESS THE EXTREMELY VARIED DEGREES AND DISTRIBUTION. A COMBINATION OF MECHANICAL AND MANUAL WORK: MECHANICAL NEAR PITS 1-5, MANUAL WORK AT PIT 16, AND FURTHER MAN/MECH TO BE DETERMINED DURING VISIT. NOTE: BIO MAP IS IRRELEVANT SINCE IT DEALS ONLY WITH SURFACE CONDITIONS; THIS IS AN ADNR RECREATIONAL USE SITE; STORM BERM RELOCATION WAS ALREADY PERFORMED BY PITS 1-4; AND PITS 2+16 WERE HOR NOT MOR.

## EXXON

NAME C M KATSIMPAISSIGNATURE C M Katsimpais☐ NTR

OG & BIO REPORTS ACCURATELY REFLECT FINDINGS OF OUR SURVEY. AREA OF PITS #1 THRU #7 CONTAINS SUFFICIENT SUBSURFACE OILING TO WARRANT FURTHER TAG REVIEW.

## LANDMANAGER

NAME DEWMSS. KennedyOF USFSSIGNATURE D.S. Kennedy☐ NTR

Bio shows good diversity over all of subdivision. This is important to note even though the major oil finds are subsurface, any treatment must consider the impact on the known biota.

## USCG/NOAA

NAME MICHEL (N)SIGNATURE Michel☐ NTR

The survey was very detailed and thorough. There are two areas of significant subsurface oil and both are in beaches sheltered by tombolos. THE OIL WAS between MOR/MOR in pits 2+16. IN BOTH AREAS, THE SURFACE SEDIMENTS ARE CLEAN. IN THE BEACH WHICH HAD BERM relocation last year, the berms are clean, but deep MOR remains AS A LEASE 6-15 cm thick. The beach surface is relatively fine-grained. The second area (near pit 16) is very different, with large cobble veneer, poorly sorted and muddy subsurface sediments.

FOR USCG COMMENTS SEE PAGE 2 COMMENT SHEET

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-57 SUBDIVISION A DATE 4/27/91

ADEC

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

EXXON

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

LANDMANAGER

NAME \_\_\_\_\_ OF \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☐ NTR

USCG/NOAA

NAME BMI ZENONE SIGNATURE Bmi M. Zenone

☐ NTR Good OG REPORT - CONCUR w/ HIS DOCUMENTATION. PITS 1-7 WERE VERY DEEP. WHICH RAISES A QUESTION FOR FURTHER TREATMENT. (NET BENEFIT VS DISTURBANCE)  
PIT #16 WAS WELL DESCRIBED BY NOAA COMMENTS. THERE IS A POSSIBILITY OF BENEFIT THROUGH SOME SORT OF TREATMENT IF THIS AREA WERE TO BE SURVEYED MORE EXTENSIVELY - IT WARRENTS A CLOSER LOOK.

SEGMENT EL 57

SUBDIVISION A

DATE 4 / 27 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

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

TOTAL LENGTH SHORELINE SURVEYED: 582 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W — m M 60 m N 60 m VL 5 m NO 457 m US — m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-\_\_\_\_\_ - \_\_\_\_\_ FRAMES

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |     |     |     |    |    |    | OILED ZONE<br>cm-cm | CLEAN BELOW<br>Y/N | H2O LEVEL<br>(cm) | SHEEN COLOR<br>B R G N | PIT ZONE |    |    |    | SURFACE-SUBSURFACE SEDIMENTS | NOTES        |
|---------|----------------|--------------------------|-----|-----|-----|----|----|----|---------------------|--------------------|-------------------|------------------------|----------|----|----|----|------------------------------|--------------|
|         |                | OP                       | HOR | MOR | LOR | OF | TR | NO |                     |                    |                   |                        | S        | UI | MI | LI |                              |              |
| 1       | 60             |                          |     |     | X   |    |    |    | 7-60                | N                  | 53                | B                      |          | X  |    |    | P-PG                         | Berm / water |
| 2A      | 45             |                          |     |     | X   |    |    |    | 29-39               | N                  | 40                | B                      |          | X  |    |    | P-PG                         | water filled |
| 2B      |                |                          |     | X   |     |    |    |    | 39-45               |                    |                   |                        |          | X  |    |    |                              |              |
| 3A      | 39             |                          |     |     | X   |    |    |    | 14-24               | N                  | -                 |                        |          |    | X  |    | CP-PG                        | Caused       |
| 3B      |                |                          |     | X   |     |    |    |    | 24-39               |                    |                   |                        |          |    | X  |    |                              |              |
| 4       | 45             |                          |     | X   |     |    |    |    | 14-43               | Y                  |                   |                        |          | X  |    |    | PC-PG                        | mud @ 43     |
| 5A      | 50             |                          |     |     | X   |    |    |    | 4-14                | Y                  | 46                | B                      |          | X  |    |    | P-PG                         | Mud @ 43     |
| 5B      |                |                          |     |     |     | X  |    |    | 14-23               |                    |                   |                        |          | X  |    |    |                              |              |
| 5C      |                |                          |     | X   |     |    |    |    | 23-48               |                    |                   |                        |          | X  |    |    |                              |              |

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

**OG COMMENTS:** Subdivision is a section of alternating rocky headlands and pocket boulder/cobble beaches, with the exception of two tombolo features which have steep, vertical beaches behind. Gravel consists of coat/cover on sides and bottoms of boulders predominantly along the UWL. Patches of SOR were found around and under cobbles/boulders in MITZ (A, H). Sub surface oil was found predominantly at South end of Segment behind Tombolo, and again behind tombolo at North end of Slatch #2 - HORIZ, and appears to be distributed through UITZ - MITZ.

Revised: MC 573/9/  
Revised 5.

Fi

DATE 4 / 27 / 91

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

Py

LOCATION  
MAP

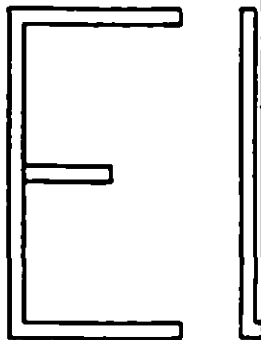
Skiff  
Observed Rock  
Cliff - No oil observed

SKETCH MAP  
#2

Skiffed  
No oil  
observed  
Rock cliff

Walk  
SKETCH MAP  
#1

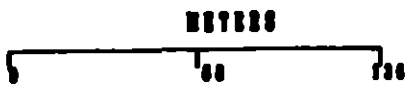
0 50  
100



EL057A

Segment Reference Map

Map Key: PVSELO67



AK State Planning Zone 4  
001057



EAGLE NEST

Bedrock

Logs

- Large Boulders

→ - Photo Locations

# SKETCH MAP #1

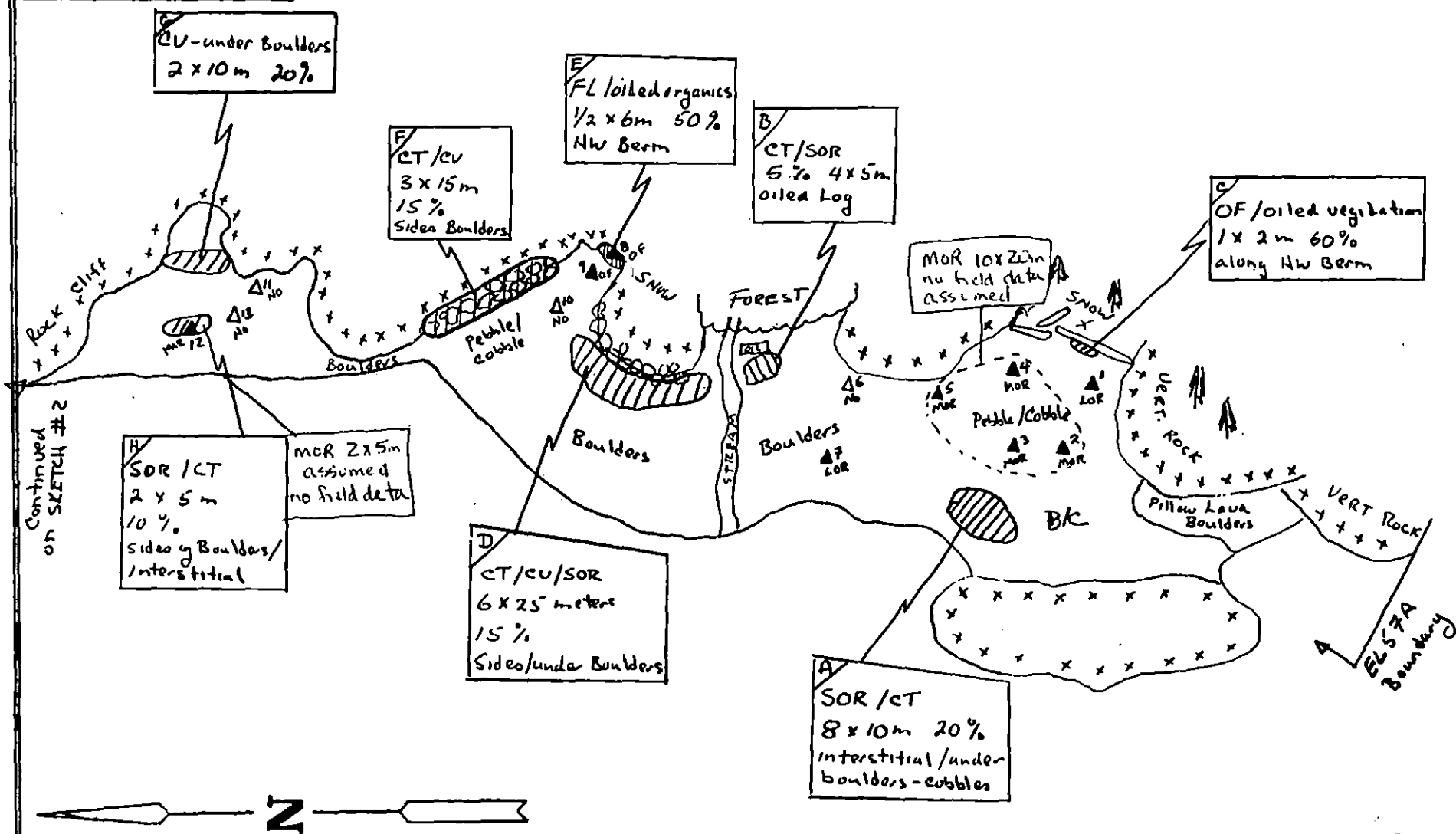
SKE MAP (OG)

EL 57 A

Doug Reimer

27 April, 81

16:50 - 19:15



REVIEWED: 5/13/91 ME

REVISOR: 5/2

7/1

X - ROCK

≡ - Logs

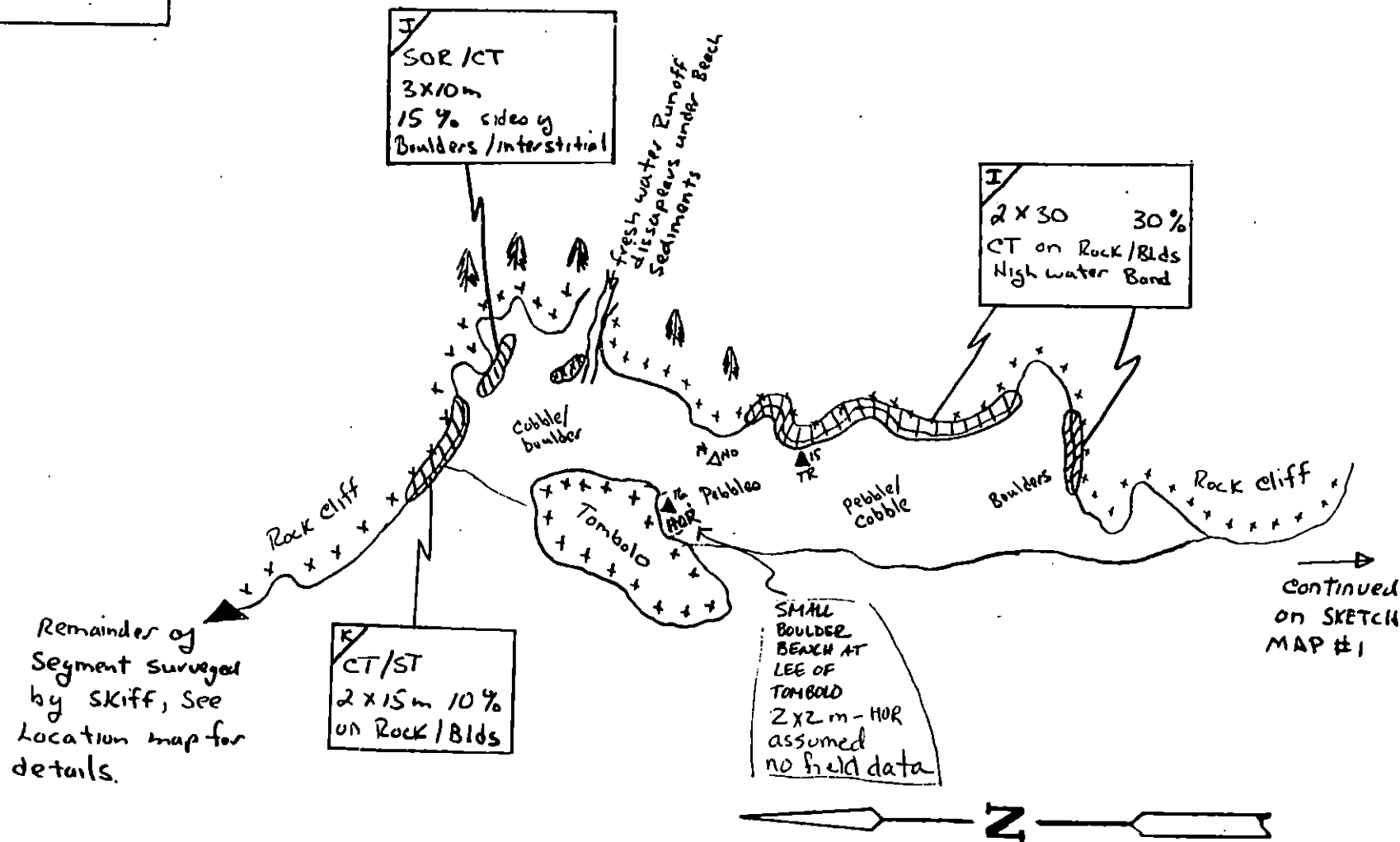
→ - Photo Locations

↑ - TREES

# SKETCH MAP #2

See Location MAP

SKETCH MAP #2 (G)  
EL 57A  
Doug Reimer  
27 April, 91  
16:50 - 19:15



REVIEWER: MC 5/3/91

revised 5.2  
111

8

Logs

Large Boulders

# SKETCH MAP #1 SEE LOCATION MAP

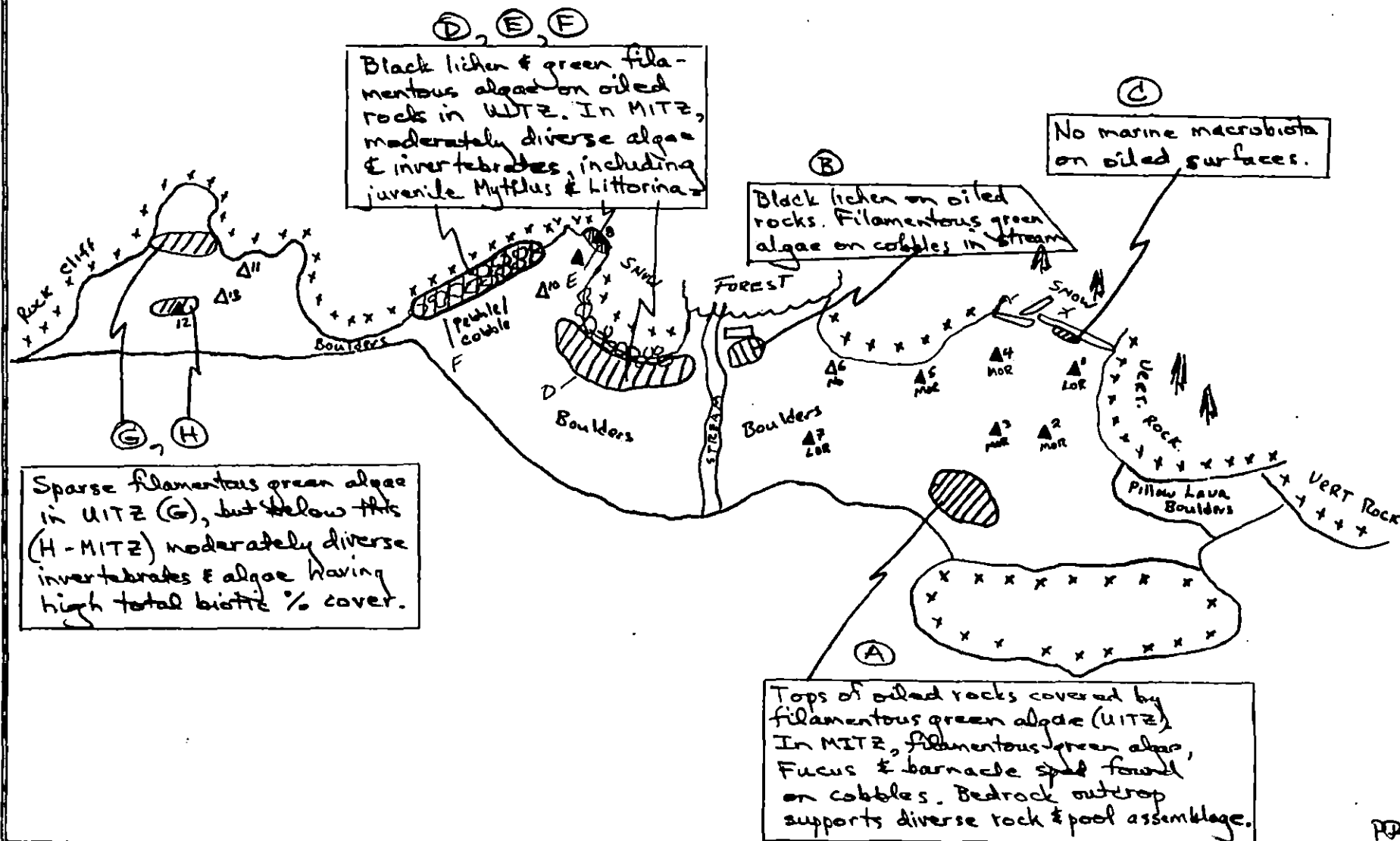
SKETCH MAP #10

EL 57 A

BENSON

27 April, 81

16:50 - 19:15



# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  
 SEGMENT # EL 57  
 SUBDIVISION A  
 SEA STATE 1'  
 PHOTOGRAPHS: ROLL # —  
 DATE 27 Apr 1991  
 TIDAL HEIGHT(Range) +5' to +1'  
 BIOLOGIST BENSON  
 WIND SPEED/DIRECTION 5/W  
 FRAME # —

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

- (A) - Boulder tops dominated by green filamentous algae in U1T2 (Freshwater runoff occurs here). Boulders in M1T2 & L1T2 and the tombola, especially, support moderately high diversity of invertebrates & algae. Recruitment of Fucus & barnacles seen. Moderately abundant pinkish polychaetes found below cobble-armor.  
 (B) - Black lichen occurs near oiled rocks & filamentous green algae dominates rock surfaces in the stream down to the L1T2.  
 (C) - No macrobiota associated with these rocks in supratidal.  
 (D), (E), (F) - Black lichen (Verrucaria) & green filamentous algae grow on oiled rocks in U1T2. In the M1T2 below these oiled rocks, a moderately diverse invertebrate & algal community forms a moderately high total biotic % cover on the boulders. Recent recruitment of Fucus, Littorina, barnacles & Mytilus has occurred.  
 (G) & (H) - Sparse filamentous green algae in U1T2 (no FW runoff observed), but again a moderately diverse & abundant community was observed on the boulders below. Juvenile Littorina seen.  
 (I) - Only sparse barnacles observed on oiled rocks, but that is typical in U1T2. In M1T2 & L1T2, boulders support moderately diverse algae & invertebrates with high total biotic % cover.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

## FISH OBSERVED SPECIES PRESENT

| BIRDS            | # OF SPECIES | TOTAL BIRDS |   |
|------------------|--------------|-------------|---|
| Eagles           | 1            | 1           | — |
| Seabirds         | —            | —           |   |
| Waterfowl        | 1            | 1           |   |
| Gulls/Kittiwakes | 2            | 2           |   |
| Shorebirds       | —            | —           |   |
| Corvids          | —            | —           |   |
| Other Birds      | —            | —           |   |

## LAND MAMMALS

| MARINE MAMMALS     | # OBSERVED | SPECIES | # OBSERVED |
|--------------------|------------|---------|------------|
| Sea Otters         | —          | —       |            |
| Pinnipeds(specify) | 1          |         |            |
| Harbor seal        |            |         |            |
| Whales(specify)    | —          |         |            |
|                    |            |         |            |

Shoreline subdivision map showing important biological features attached.

Team 2

Segment EL 57-A

BID: BENSON

27 Apr 1991

- ① (cont.) - The biotic % cover of the pebbles & cobbles is much lower. The tombolo bedrock supports a moderately diverse community enhanced by the presence of tidepools and their associated biota. The beach could be accessed on either side of tombolo.
- ② - Barnacles, Fucus & a few other species formed a moderate % cover on boulders. For MITZ boulder & tombolo communities, see comments in ①.
- ③ - Near the oiled rocks, a high % cover of filamentous green algae & Verrucaria was observed. A lush algal community was observed in the LITZ, along with sparse barnacle recruitment.

This is a physically and biological diverse subdivision with generally high % cover (except on the pebble beaches) and moderately high biotic diversity. The presence of tidepools & large crevices on the tombolos significantly enhances the biotic diversity.

- ▲ - TREES

SKETCH MAP #2

See Location MAP

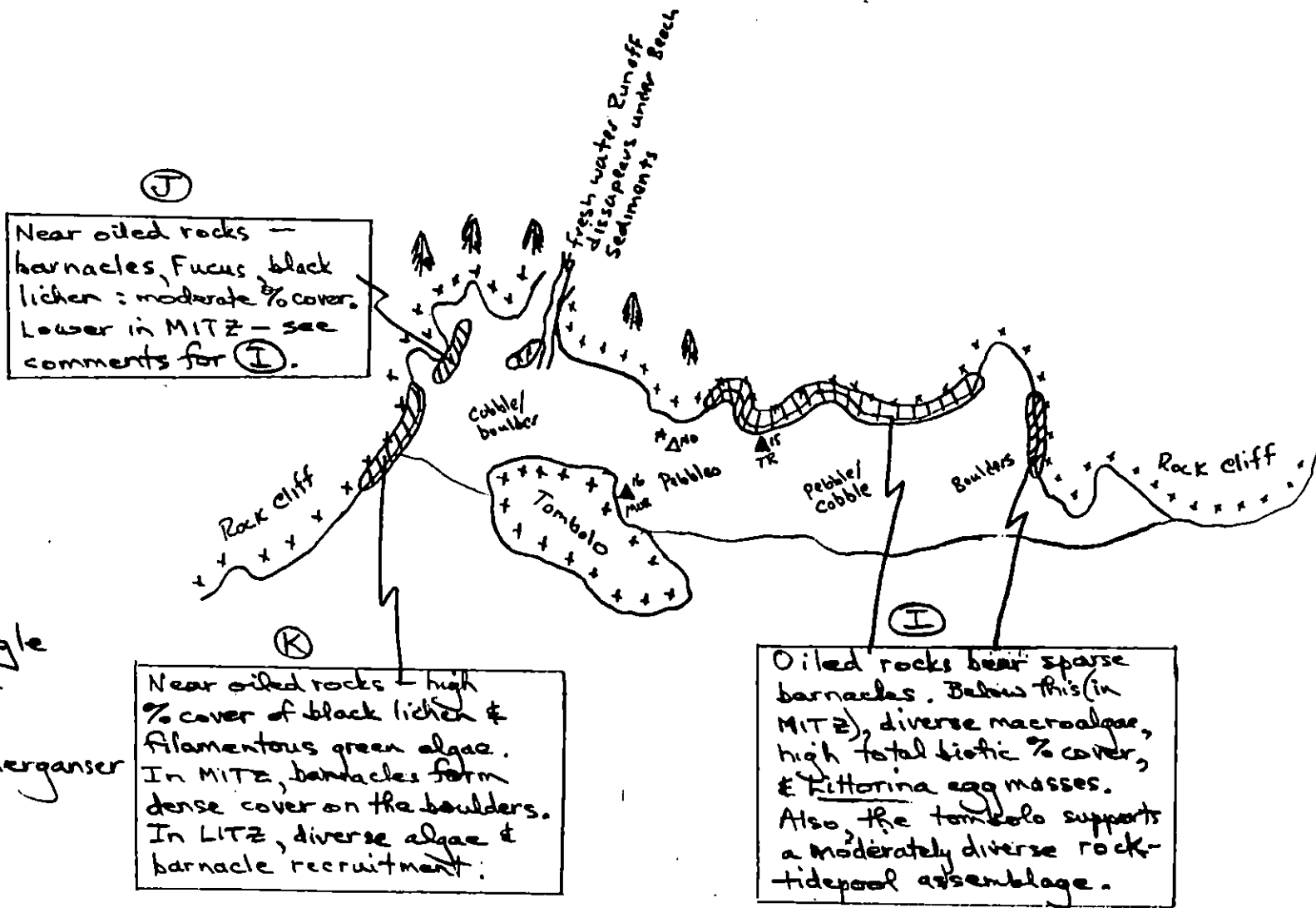
SKETCH MAP (BIO)

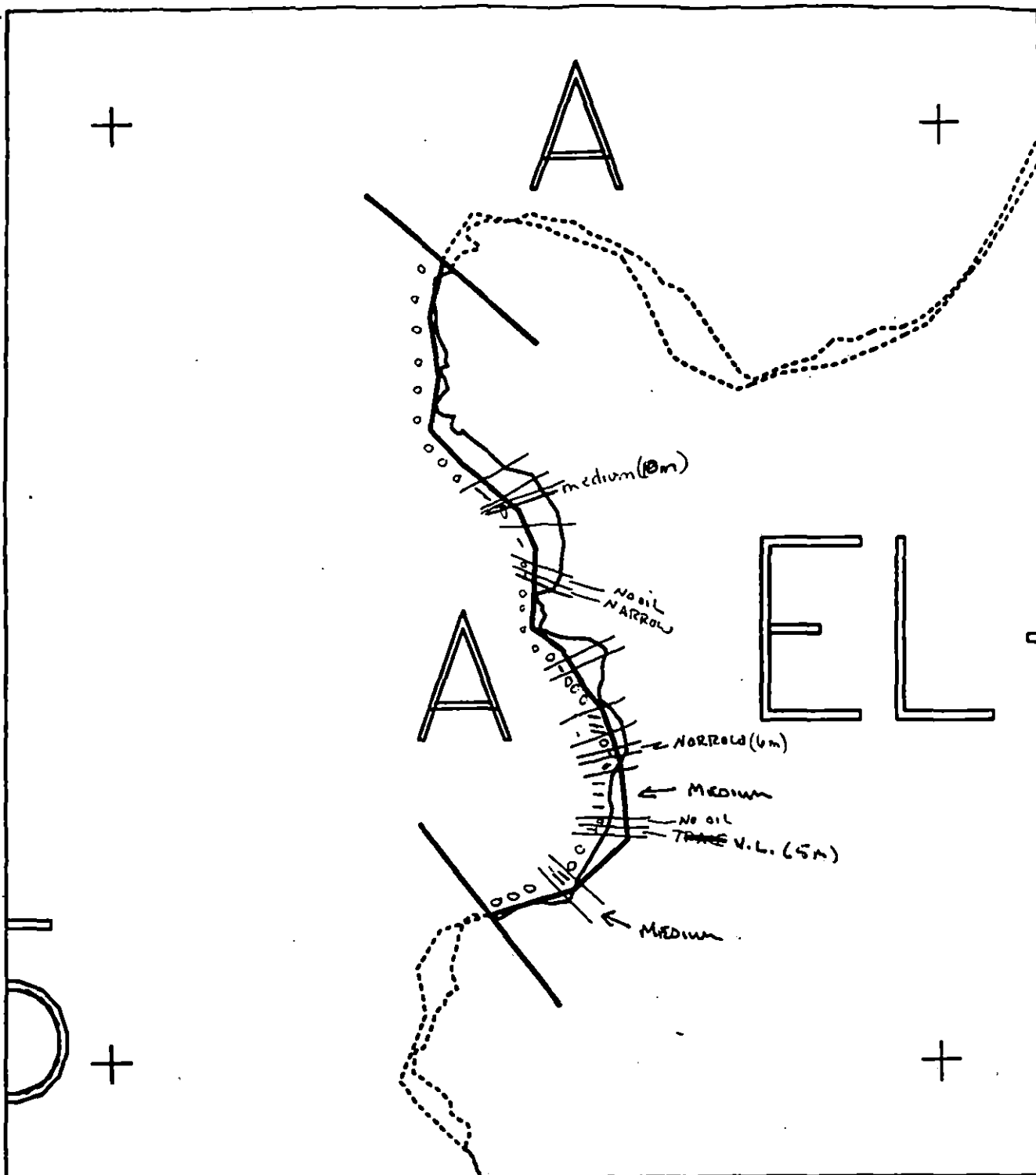
EL 57A

BENSON

27 April, 91

16:50 - 19:15





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

EL057 A

ADEC Subsegment Length: 582m

METERS

0 100 200

AK State Plane Zone 4  
 pr10570



Subdivision Field Map

Map Key: PWSEL057A

Name: Reimer

Date: 4/27/91

Date Entered:

REVIEWED: MC 5/3/91

revised

7/7

**ARLIS**  
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