

OIL SPILL PUBLIC INFO. CENTER



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[Shoreline evaluations, 1990].

PY-01 – PY-17

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ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-1 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.
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OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

[Signature]

Date

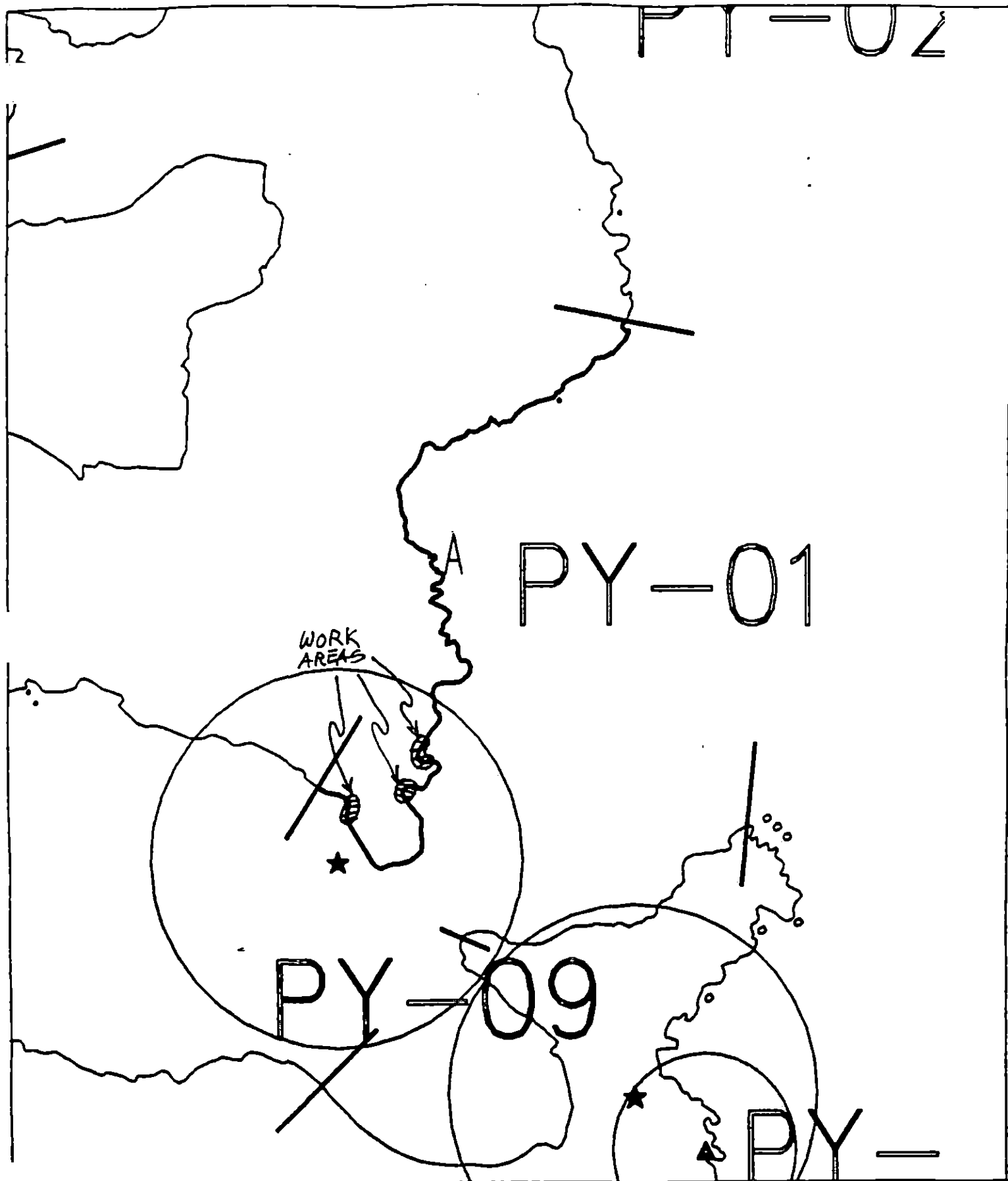
6/12/90

Prepared by

[Signature]

Date

6/12/90



Exxon Company, USA
Map Key: KEN-PY-1

ECOLOGY MAP
SEGMENT PY-1
SUBDIVISION A (1 of 2)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PY-02 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. V. ...

DATE: 5/8/90

OILING CATEGORIZATION:

Wide 397 m: Medium 1275 m: Narrow 3214 m: V. Light 599 m: No Oil 5874 m
Subsurface Oil Observed: Yes X No Maximum Depth 12 cm

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
X Spot Washing: X Wands
 Beach Cleaner
 Other (see comments)

COMMENTS: Recommended treatment includes manual pickup of tarmats, pooled oil and mousse followed by bioremediation in areas indicated on sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle constraints.

TAG COMMENTS: MONITORS TO PAY PARTICULAR ATTENTION TO APPLICATION OF BIOREMEDIATION TO AVOID THE DENSE INTERIOR BIOTA. IF MANUAL REMOVAL OF MOUSE IS NOT POSSIBLE DUE TO INACCESSIBILITY SPOT WASH WITH OIL SNARE.

TAG APPROVAL DATE: 5/8/90

ADEC ART WEAVER
EXXON ANDY ...
NOAA GARY ...
USCG G.A. ...

FOSC: My L

DATE: 5-12-90

Bioremediation not authorized

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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unilled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- ✓ST** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V 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)
TH Finfish harvesting
7H Deer harvesting (8/15 to 2/26)
7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358

Page 1.00 2

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY-002 SUBDIVISION: A DATE Apr 25, 1990NOAA
HSCGNAME Donald A MacDonnell SIGNATURE Donald A. MacDonnell☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED - Manual cleaning

COMMENTS Heavy areas of coat and cover were found along with accumulations of mousse 15 cm and greater. This segment brought out serious problems with the shoreline oiling summary form. The list of surface oil characters misleads terms which describe the character of the oil with terms that describe the distribution of the oil. 'Asphalt pavement', 'mousse' and 'tarballs' are terms which describe the character of the oil while 'pooled', 'cover', 'coat', 'stain', ~~film~~ and 'film' describe the distribution of the oil (thickness) and 'patches' describe horizontal distribution. In the past when mousse was observed it was listed as mousse although it could have been put down as coat, cover or pooled. The form does not agree with the oiling summary form.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I am suggesting manual removal of pooled oil and mousse patches and asphalt pavements in this segment. All forms of oiling characteristics persists in this segment. The OG map shows in detail where the oil persists. This oil should be easily removed with the use of shovels or hand tools. I agree with data on SSAT Forms.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

FIELD SHORELINE COMMENT SHEET

SEGMENT ST./ PY-002 SUBDIVISION: A DATE Apr. 26, 1990~~NOAA~~
~~WDCG~~

NAME

Donald A. MacDonald

SIGNATURE

Donald A. MacDonald☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTEDCOMMENTS *continued.*

The area, as shown on sketch map B, where the thick deposit of mounds was reported on and among the boulders and in the stream, should be manually cleaned using shovel and trowel because a relatively large amount of oil could be picked up with a minimum of effort.

~~ADEC~~
~~NAME~~~~SIGNATURE~~~~☐ NO TREATMENT RECOMMENDED~~~~☐ TREATMENT SUGGESTED~~~~COMMENTS~~LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PEO2 SUBDIVISION: _____ DATE 4/26/90

USCG
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

LAND MANAGER - USFWS

NAME Mary Rector SIGNATURE Mary Rector

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

persists in this subdivision on several low angle boulder and rubble beaches
bulwark as asphalt pavement, pooled oil, cover, coat stain mousse and tarballs
surface oil exists to at least a depth of 12 cm. A "bathtub ring" remains on
steep rock face in the eastern portion of the cove. Asphalt pavement, pooled oil,
and tarballs should be removed using hand tools including shovels, trowels
etc. In many cases cobbles and small boulders must be turned, mousse
removed from the underside and removed from sub-surface sediments. Oil persists
piled mousse in the interstices of boulders and cobbles. From points of exposure
and trowels will be necessary to recover it. In several areas mousse is
visible and readily recoverable and should be treated. At the site indicated
to enlargement (Sketch map B) Spot washing may be necessary in addition
usual pick-up. Due to the extent of oiling in this cove, a detailed map outlining
areas to be treated will be provided by the land manager (USFWS). A USFWS
map must be on site for treatment.

SHORELINE OILING SUMMARY

REVISION NO. 001/00

on Sawyer NOAA USCG MacDonald SEGMENT ST/ py2
Carr LAND REP Partner SUBDIVISION A (1 OF 1)
 EXON Bayer ADEC Reed TIME 16:30 to 21:15 +07:00 to 08:15
 TEAM NO. 18 TIDE LEVEL +6.0 to +4.0 +2.0 +3.0 DATE Apr 12/25/90
 EST. SUBDIVISION LENGTH: 12975 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 70 % B 20 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 0 % Vert 90 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 550 m M 1025 m N 3150 m VL 530 m NO 7720 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	HC	RS	PF	IS	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												

PAYEMENT H F 45 sq. m by 4 cm

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE non oil, oiled
sorbent pad, m.c.

BAGS 4

Photographs:

Roll No. ST-18-8

Frames 27-34

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEER (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	VS	1	2	3	4	SU	U	M	U				
1	20						0-2														B-C, S, C
2	20						0-12														B-S, C
3	15																				C-S, G
4	20						0-5														B-P, G
5	10						0-5														B-C, S

COMMENTS

OG S yer

SEGMENT ST/ PY2

SUBDIVISION A

DATE Apr 1 25 90

CHECKLIST

- ☐ N Arcs
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ PFI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PFI - No Subsurface Oil

2 Δ

PFI - 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

MS/b 2x3m
MS/s 2x20m
CV/s; CT/s
FI/s

upto 8cm
thick

SKETCH MAP-A

Low angle
boulder
beach

CT/P 2x8m

AP/ 3x5m;
AP/ 3x8m;
ST/S; FL/S/RW
MS/s; small amount
of debris

AP/s/s
1m²

MS/s 7x25m
CT/s

AP/s/s 2x4m
MS/P 2x4m
CV/P 4x25m

MANUAL
TRACER
DEPOSITS

Low angle
boulder
+ sand
beach

dug in a patch
of MS/s

Wildcat
Cove

oil
observed

No

MS/b + IP;
CV/b, IP, + IS;
CT/b, IP, + IS;
FI/s; PO/P + IS
* See enlargement
(sketch map-B)

CT/P
2m wide

MS/s
CV/s
CT/s

MS/P
4x3m
4cm thick

CT/P 2x8m
oiled rope

MS/P 4x
CT/P

MS/s

FI/s/s

0 900m

Oil Character Length (m): AP 20 PO 10 CV 130 CT 350 ST 50 FL 70 RW 100 MS 115

OG Sa 2c

SEGMENT ST/ PY2

SUBDIVISION A (part of)

DATE Apr 125 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/V/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

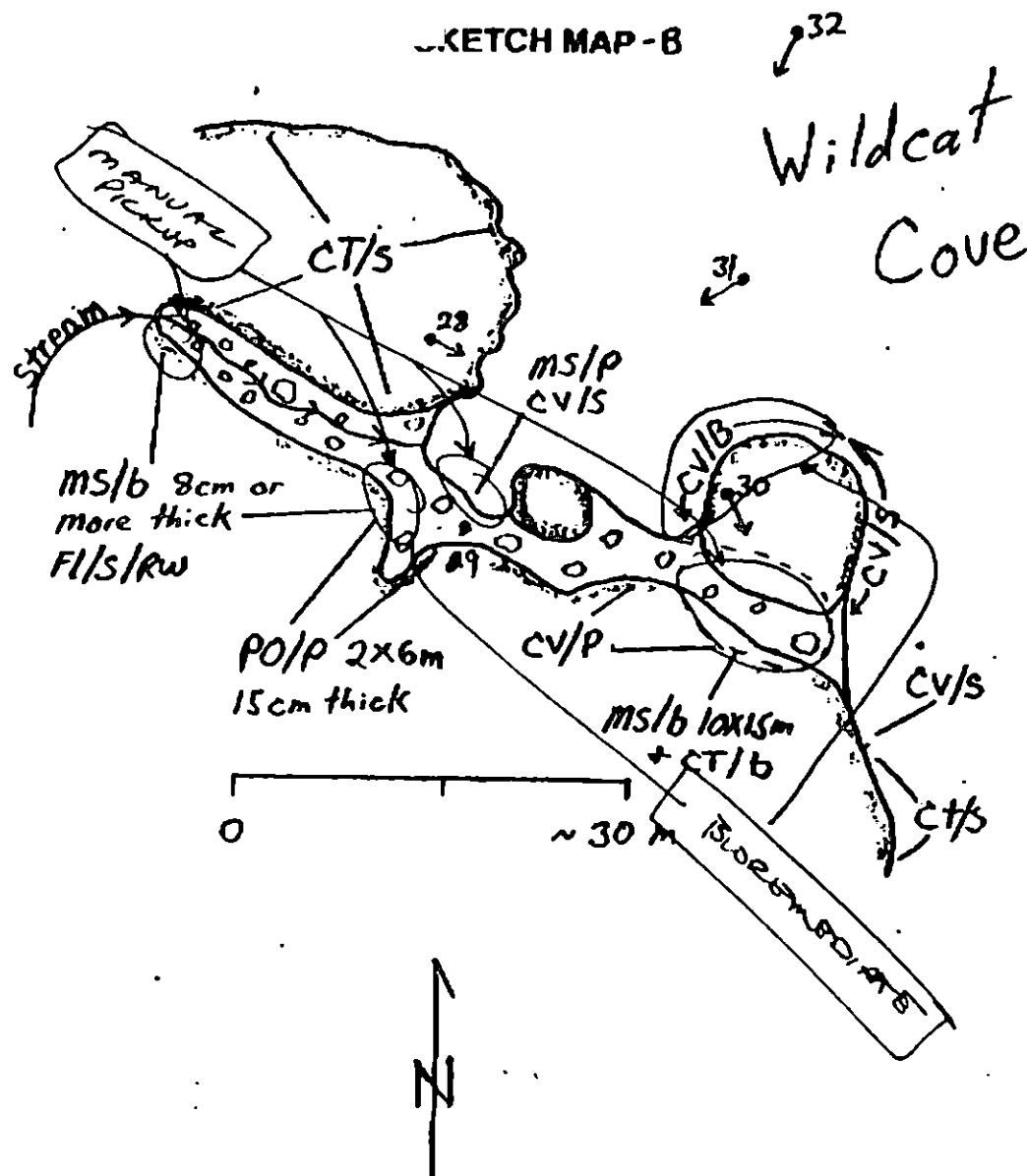
lll

Oil Vegetation

1 →

Photo location, direction,
and number

SKETCH MAP - B



→ See Map A

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TR _____ FI _____ NO _____

SHORELINE ECOLOGICAL SUMMARY

 Segment ST / PY-2 Subdivision A Date (mo / day / yr) 4-28-80 ^{REVISION 02/22/78}
4-24 (1630)

 Time (24 hr) 4-24 (0700) Biologist MARK CARR

 (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 50 Moderate 10 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: ST-18-8
 Roll No.

 Frames 27-34

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT IN WATER & LOWER TIDAL ZONE.
NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

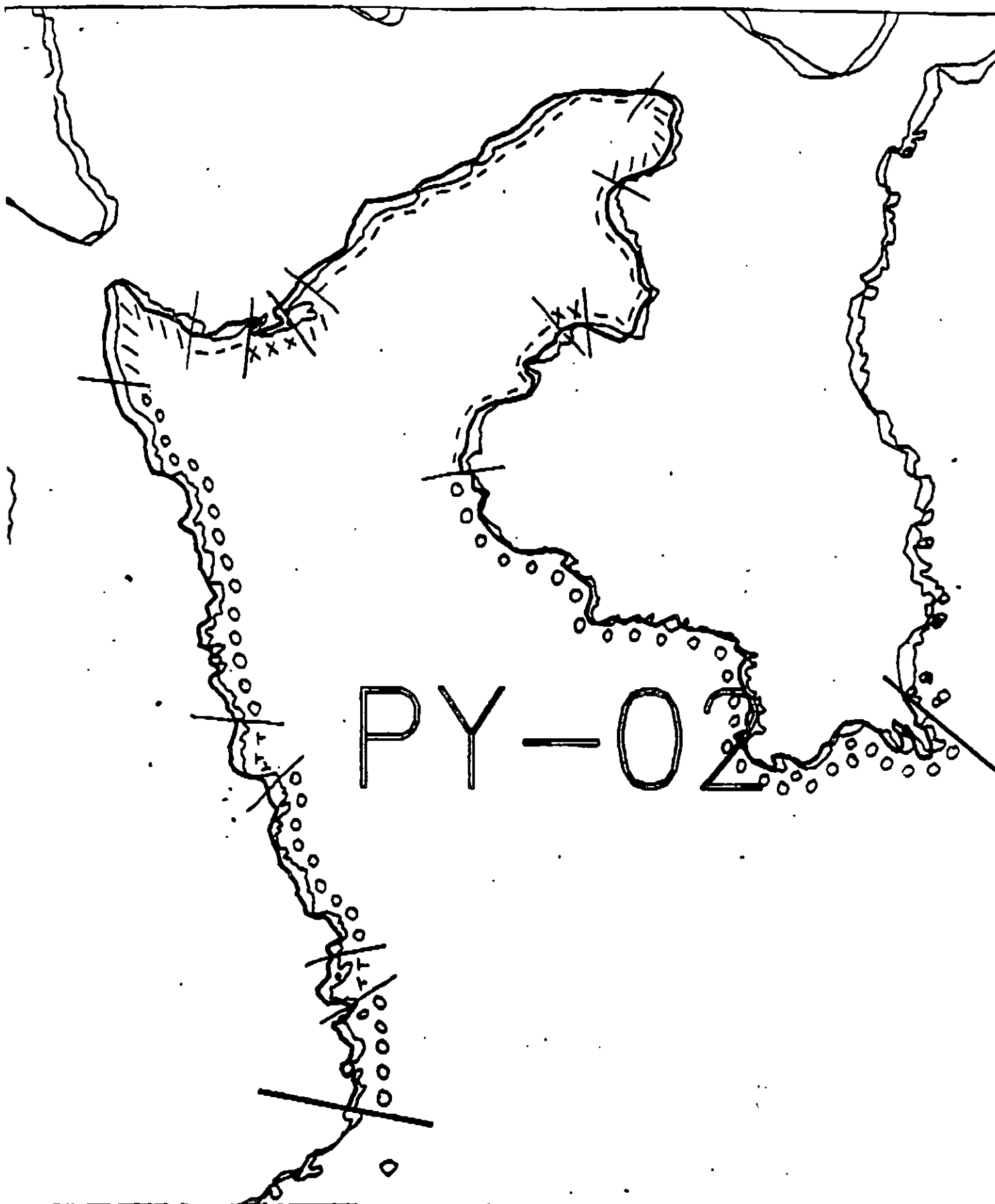
NOT PRESENT

Wildlife Observations/ General Comments:

Sea otter (3), Harlequin ducks (3), Oyster catcher (2), bald eagle (2) mature, river otter (1)

Ecological Considerations:

ST (bald eagle nest), 4QQ (National Wildlife Refuge)



XXX Wide

/// Medium

--- Narrow

TTT Very Light

PY-2

ADEC Segment Length: 11559m



Map Key: KEN-900

Name: SawyerDate: 4-25-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-2 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

Spot Washing

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

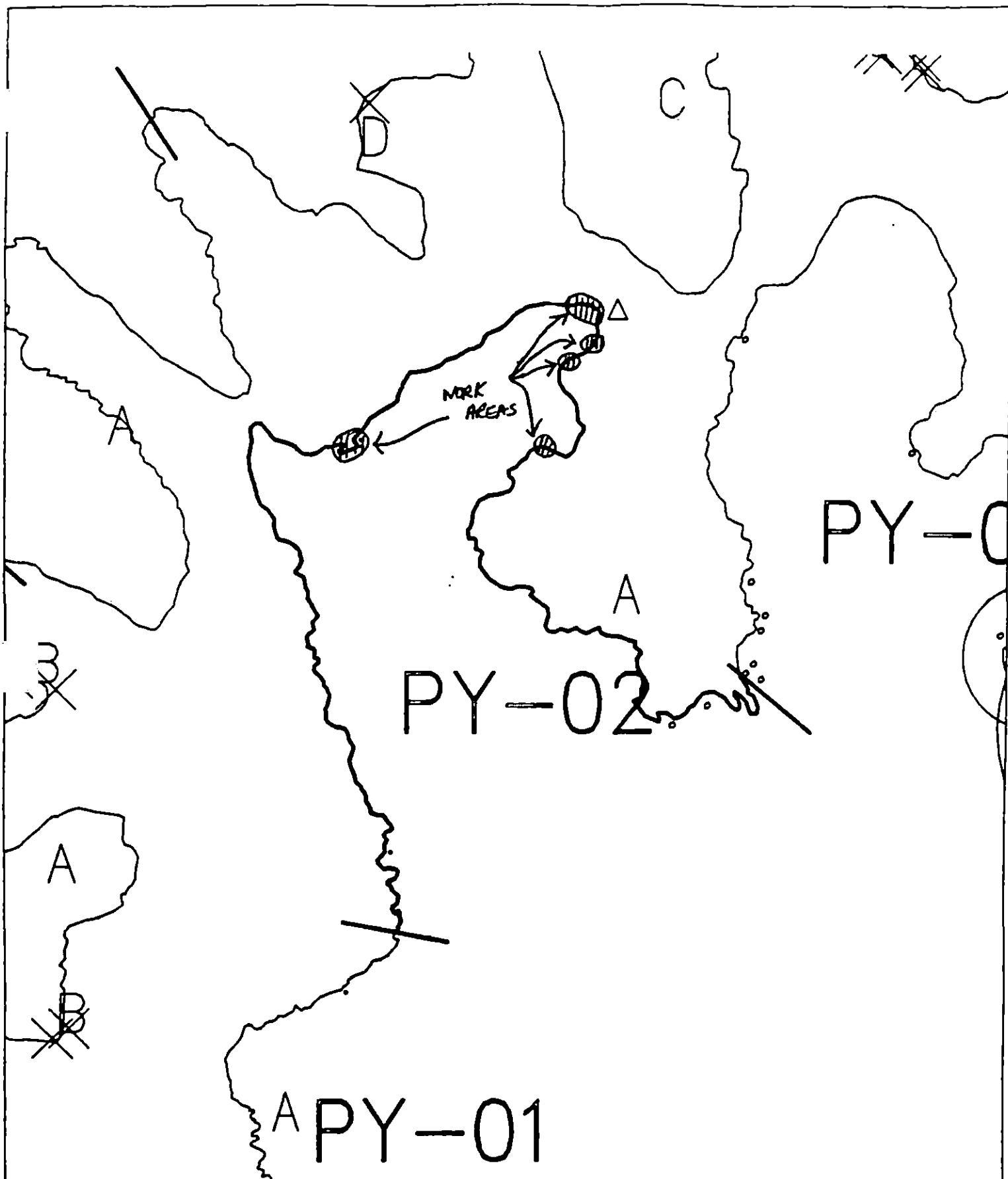
6/14/90

Prepared by

[Signature]

Date

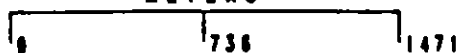
6/14/90



Exxon Company, USA
Map Key: KEN-PY-2
June 10, 1990



ECOLOGY MAP
SEGMENT PY-2
SUBDIVISION A (1 of 1)
METERS



★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

1 inch = 2414 feet

SHORELINE EVALUATION

SEGMENT ST/ PX-04 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3),3Q Harbor seal and sea lion molting (8/15 to 9/15)
4QQ National Wildlife Refuge
5R Seabird colony (5/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbance to the pinniped haulout areas and seabird rookeries.

SHPO SIGNATURE: Charles H. Hume DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2572 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

ADEC Art Warden Int Warden

EXXON Andy Ten

NOAA Gary Petros

USCG G.A. HEITER

FOSC: W L

DATE: 5-9-90

- 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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morton 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
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- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 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 (8/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (5/15 to 8/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (5/15 to 2/28)
J Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 004 SUBDIVISION: A (141) DATE 4/25/90

NOAA

~~USCG~~NAME DONALD A. MacDONALD SIGNATURE Donald A. MacDonald☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The entire segment was surveyed from the ship. The segment include seabird colonies and sea lion haulout and pupping areas. There were no visible signs of oil. The entire segment is subject to high wave action. Hundreds of sea birds and numerous sea lions were seen. The segment consists of the southern and southwestern shore of outer island.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed in this segment. This segment consists of vertical rock walls. Seabirds rest on rock walls. I agree with data on SSAT Forms.

LAND MANAGER - USFWS

NAME Mary Potter SIGNATURE Mary Potter☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed in this segment (PY-4 no longer includes the oiled beach at the far northern end of Outer Island). This segment has several critical wildlife habitats including a seabird rookery with black legged Kittiwakes, glaucous winged gulls, red faced cormorants and pelagic cormorants. The SE and southern portion of Outer Island is also a major sea lion rookery and haulout.

SHORELINE OILING SUMMARY

REVISION NO. 04/15/90

OG Sawyer NOAA MacDonald SEGMENT ST/ PY-4
 Carr LAND REP Partner SUBDIVISION A (1 OF 1)
 XON Boyer ADEC Reed TIME 11:10 to 11:30
 TEAM NO. 18 TIDE LEVEL +3.5 to +5.0 DATE Apr 1 25 1990
 EST. SUBDIVISION LENGTH: 2479 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 5 % Vert 95 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2479 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	26	27	28	29	30	31	32	33	SV	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-18-8Frames 35 & 36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OP	NO		VO	VC	26	27	28	29	30	31	32	33	SV	U	M	U				

COMMENTS PY-4A: Nearly all of this segment is comprised of bedrock cliffs, except for one high angle boulder beach. Hence, no pits were dug.

TW

4/27/90

OG Sawyer

SEGMENT ST/ py-4

SUBDIVISION A

DATE Apr 25 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/APL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

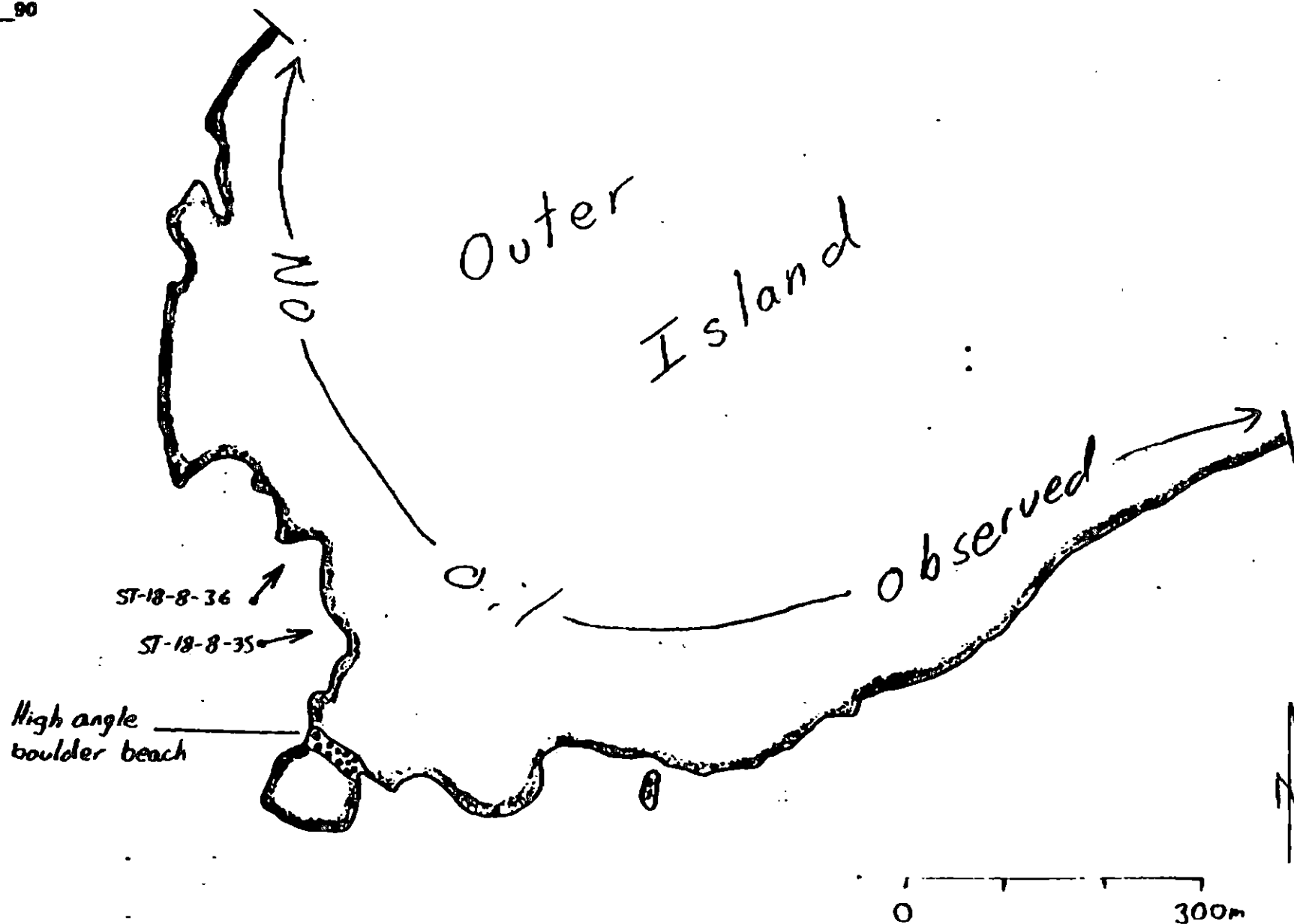
eee

Oil Vegetation

1 →

Photo location, direction,
and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/70

Segment ST / PY-4 Subdivision A Date (mo / day / yr) 7-25-90
 Time (24 hr) 11:10 Biologist MARK CARR

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 80 Moderate 10 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: ST-18-8
 Roll No. ST-18-8
 Frames 35 & 36

BARNACLES

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bed													NOT PRESENT
Bould	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			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bed													NOT PRESENT IN UPPER AND LOWER INTERTIDAL
Bould	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			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bed													INACCESSIBLE
Bould	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			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
Bed													NOT PRESENT IN UPPER AND LOWER INTERTIDAL
Bould	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:

Stellar's sea lion (10)
 red-faced cormorant (~90)
 glaucous-winged gull (~300)
 Ecological Considerations:

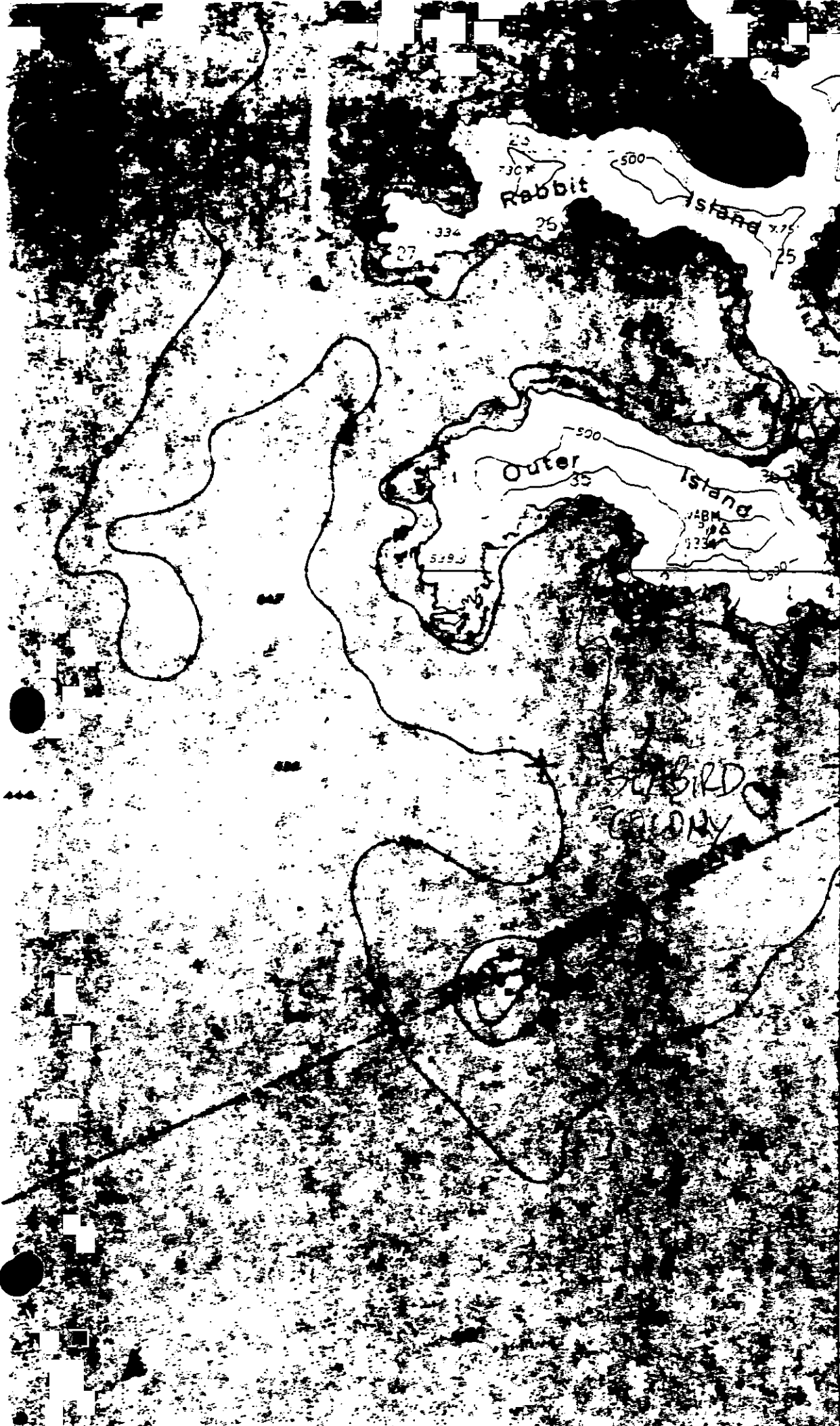
bold eagle (3) (1 immature, 2 mature).
 oyster catcher (3), pigeon guillemot (10)
 black-legged kittiwake (~800) on rocks

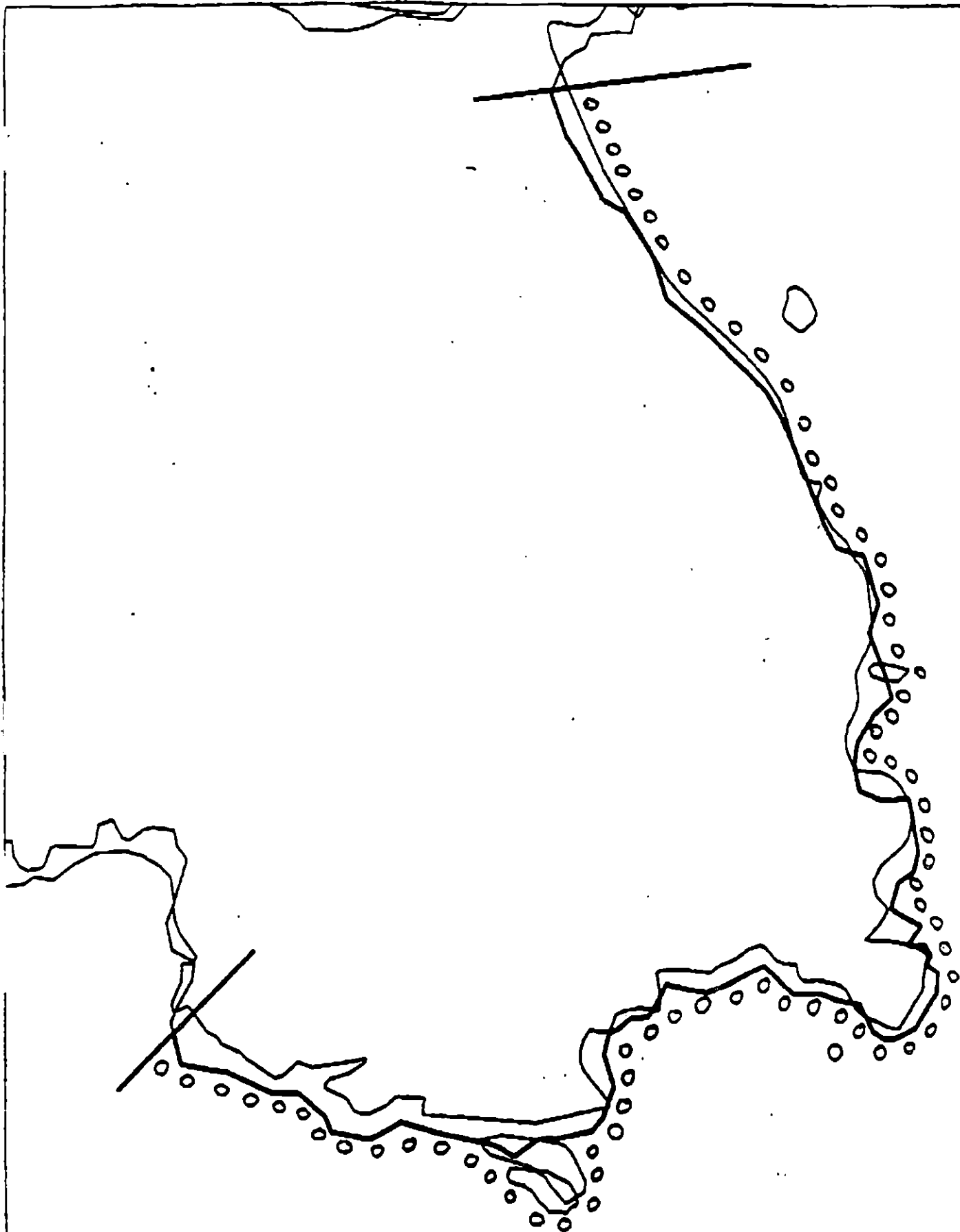
OR (Seabird colony), 3 PQ (pinniped pupping and molting), 4 QQ (National Wildlife Refuge).

ECOLOGICAL
MAP

3NP, 3CG
4GG
5R

PY-04





XXXX Wide

//// Medium

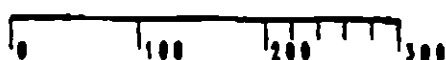
--- Narrow

TTTT Very Light

oooo " " "

PY-4

ADEC Segment Length: 2370m



Map Key: KEN-920

Name: Sawyer

Date: Apr. 25, 1990

SHORELINE EVALUATION

SEGMENT ST/ PY-05 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

5R Seabird colony (5/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Michael D. Trogen DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 32 m: Narrow 0 m: V. Light 2139 m: No Oil 9521 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of area of
subsurface oil as indicated on attached sketch map. Due to seabird
colony time constraints, contact USFWS for specific work dates.

TAG COMMENTS: MANUAL REMOVAL OF AVAILABLE MOUSE PRIOR TO
BIOREMEDIATION

TAG APPROVAL DATE: 5/15/90

ADEC Art Wenter Art Wenter

EXXON Andy Ken Real

NOAA Joseph Robert John

USCG G.A. Reiter G.A. Reiter

FOSC: myl

DATE: 7-10-90

Bioremediation not Authorized

- 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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- ✓ 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorage (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / Py-05 SUBDIVISION: A (1 of 1) DATE 4/24/90

AA
USCG

NAME Donald A. MacDonnell SIGNATURE Donald A. MacDonnell

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Special concerns of NOAA include the presence of marine mammals (sea otters) in the area. The SSAT forms are well done.

ADEC
NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS I am recommending manually removal of the patchy mounds on the pocket beach in the N/W corner of Py-05. Shovels or hand trowels should do the trick. There is also patchy coat on the boulders in this pocket beach. Some scattered coat persists throughout the segment I agree with data on SSAT Forms.

LAND MANAGER - USFWS

NAME Mary Porter SIGNATURE Mary Porter

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Oil persists in this segment primarily as splatters of coat and stains on several boulder beaches. At the boulder beach in the NW portion of the cove there is a 45% patchy coats in a 12 m x 25 m area and patchy mounds in a 3x10 m. area. Scattered throughout is cover and stains. The patchy mounds between boulders and visible should be removed manually. This mound is still fairly soft and can be removed with shovels and trowels. The rest of the boulders is fairly hard and firm at this time.

SHORELINE OILING SUMMARY

REVISION NO. 26-199

OG Sawyer NOAA USCG MacDonald SEGMENT ST/ PY-5
 NO Carr LAND REP Partner USFWS SUBDIVISION A (1 OF 1)
 XON Boyer ADEC Read TIME 07:45 to 11:00
 TEAM NO. 18 TIDE LEVEL -2.0 to +6.0 DATE Apr 124 1990
 EST. SUBDIVISION LENGTH: 12918 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 15 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 5 % Vert 80 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 25 m N 0 m VL 2250 m NO 10643 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

 PAVEMENT H F S 0 sq. m by 0 cm

 PATTIES / TARBALLS 1 BAGS

 NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

 YES ☒ : NO ☐

 TYPE buoy, net, moor

 #BAGS 3

Photographs:

 Roll No. ST-18-8

 Frames 24-26

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	1	2	3	4	5	SU	U	M	U				
1	15																					B-C, R
2	15																					B-C, P, R
3	10																					B-C, R
4	15						3-7															B-C, B
5	15						0-15													Y		B-P, B
6	20						0-20													Y		B-P, G

COMMENTS ST/PY-5 comprises mostly granitic bedrock with a few low angle boulder beaches. Little or no oil was observed in this segment with the exception of a small boulder beach in the northwest part (see sketch map).

 REVIEWED RAT

 DATE 792199

SEGMENT STAYS

SUBDIVISION A

DATE Apr 1 24 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Off Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NWL/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

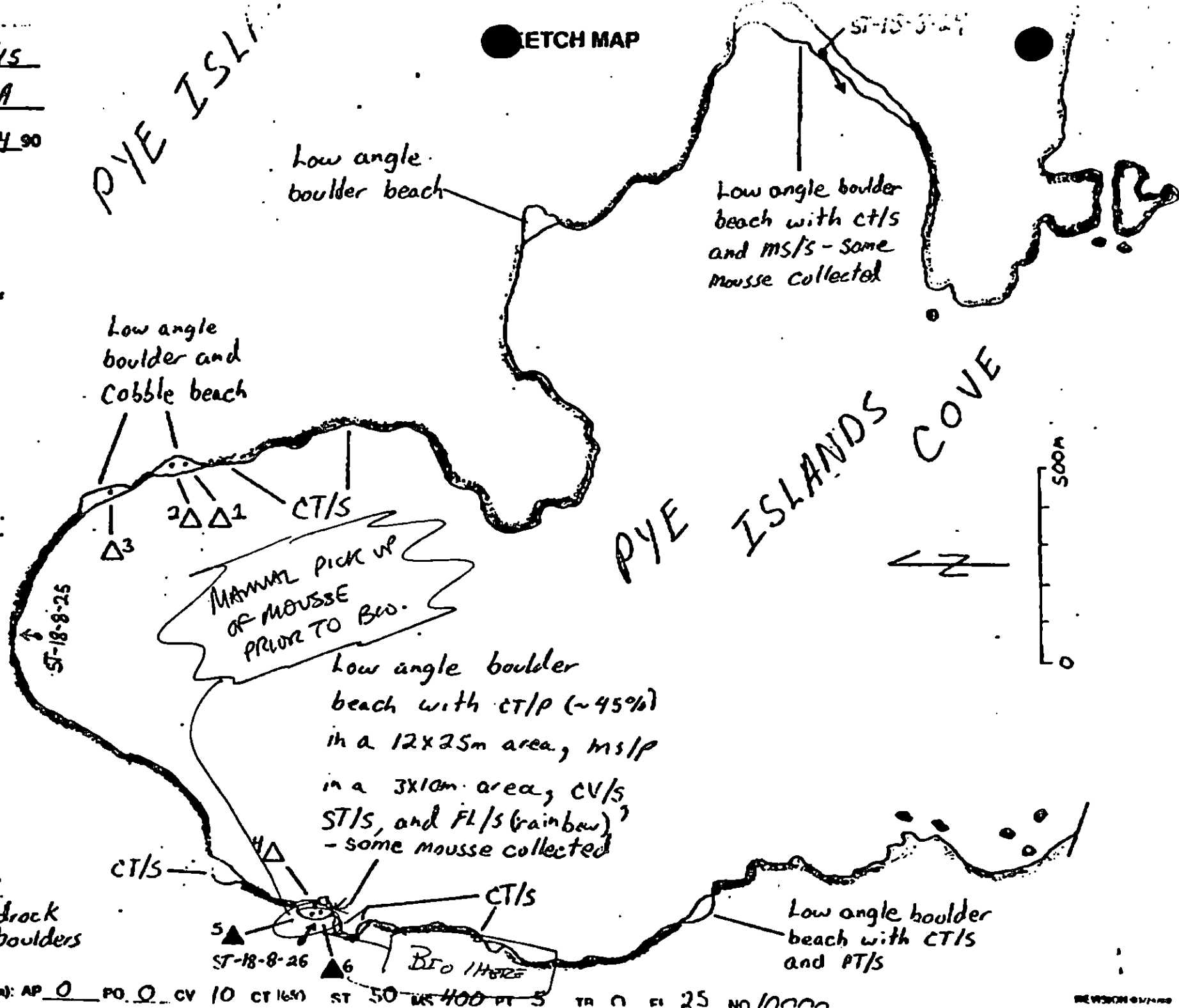
LEGEND

- 1 Δ
- Pt - No Subsurface Oil
- 2 Δ
- Pt - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- eee
- Oil Vegetation
- 1 o→
- Photo location, direction, and number

bedrock ± boulders

Oil Character Length (m): AP 0 PO 0 CV 10 CT 1650 ST 50 MS 400 PT 5 TR 0 FI 25 NO 10000

ETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/PY-5 Subdivision A Date (mo/day/yr) 4-29-90
 Time (24 hr) 0745 Biologist MARK CARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 80 (2) Boulder 15 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 70 Moderate 20 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-18-8
 Frames 24-26

BARNACLES

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

MYTILUS

Dense			Moderate			Sparse			Rare			
3CD	1U	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT NOT PRESENT IN ANY ZONE
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			
3CD	1U	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
3CD	1U	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT NOT PRESENT AT ANY ZONE
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	

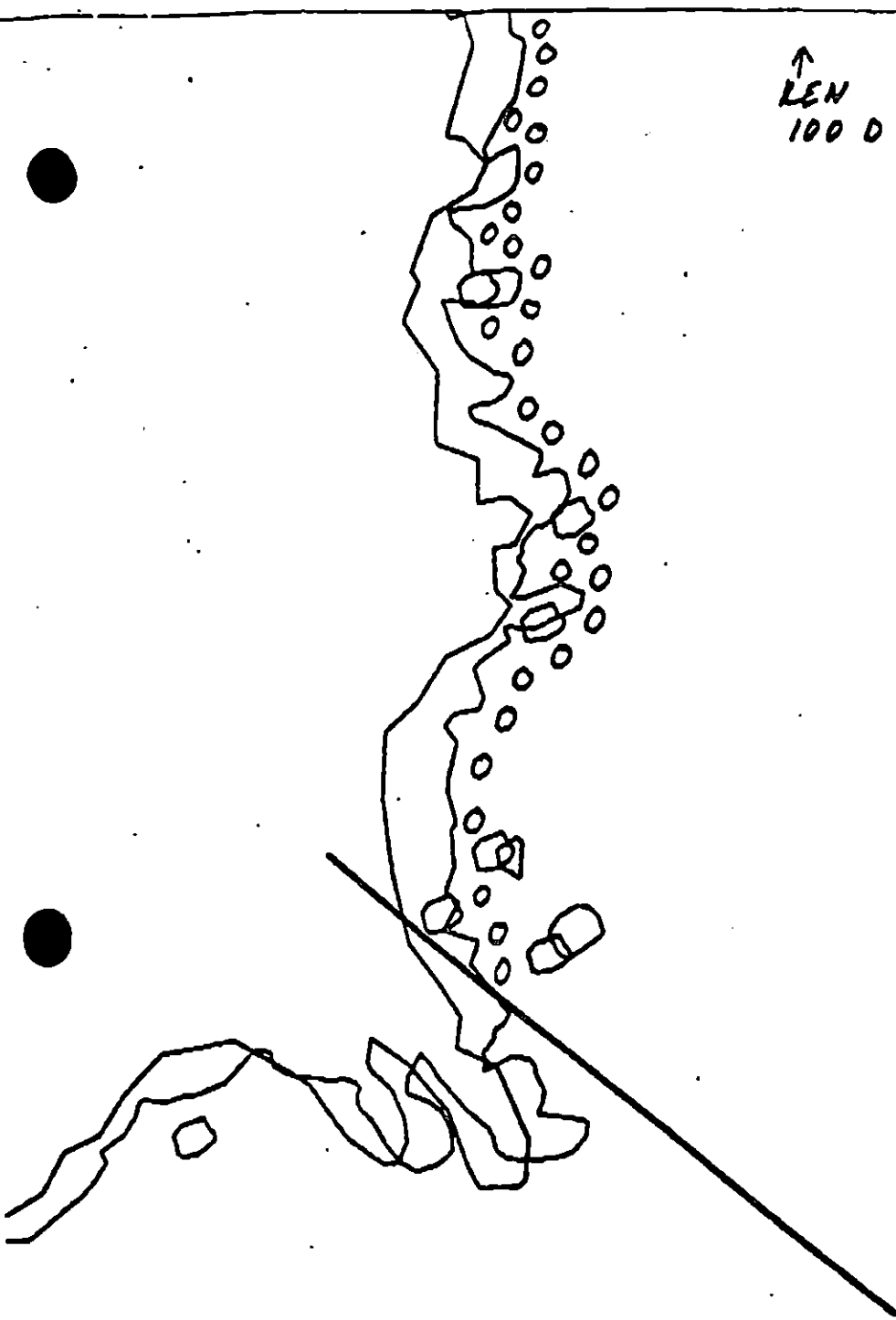
Wildlife Observations/ General Comments:

glaucous-winged gulls (72), red-crested cormorant (1), oyster-catcher (2), harlequin duck (18), N.W. crows (2), bald eagle (8), sea otter (1)

Ecological Considerations:

ST (Active bald eagle nest), 4QQ (National Wildlife Refuge)

Sensitivity Codes



↑
KEN
100 0

KEN
100B →

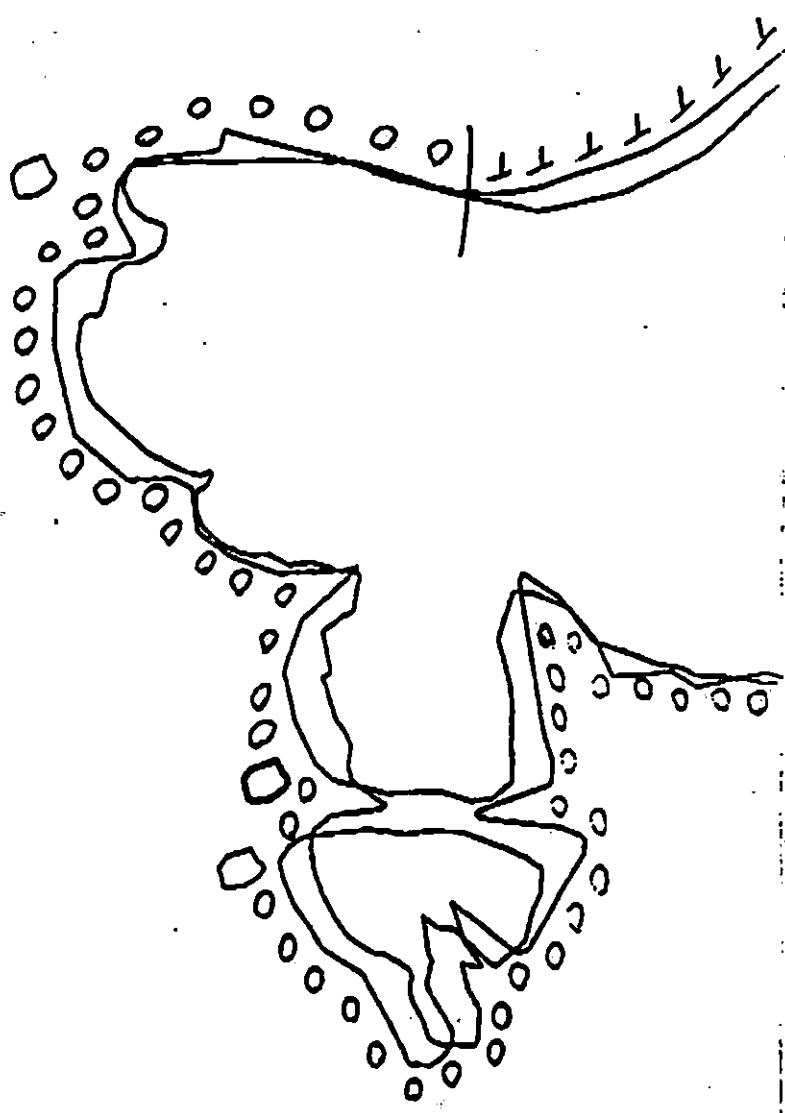
● XXX Wide
//// Medium
--- Narrow
TTTT Very Light

PY-5

ADEC Segment Length: 100m



Map Key: KEN-1000
Name: Sawyer
Date: 4-25-90



← KEN
100A

KEN
100C →

PY-5

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

ADEC Segment Length: 100m



Map Key: KEN-100b

Name: Sawyer

Date: 4-24-90



K

P

N

KEN
1008

XXX Wide
/●/ Medium
--- Narrow
TTT Very Light
OOO No Oil

PY-5

AOEC Segment Length: 100m

0 100 200 300

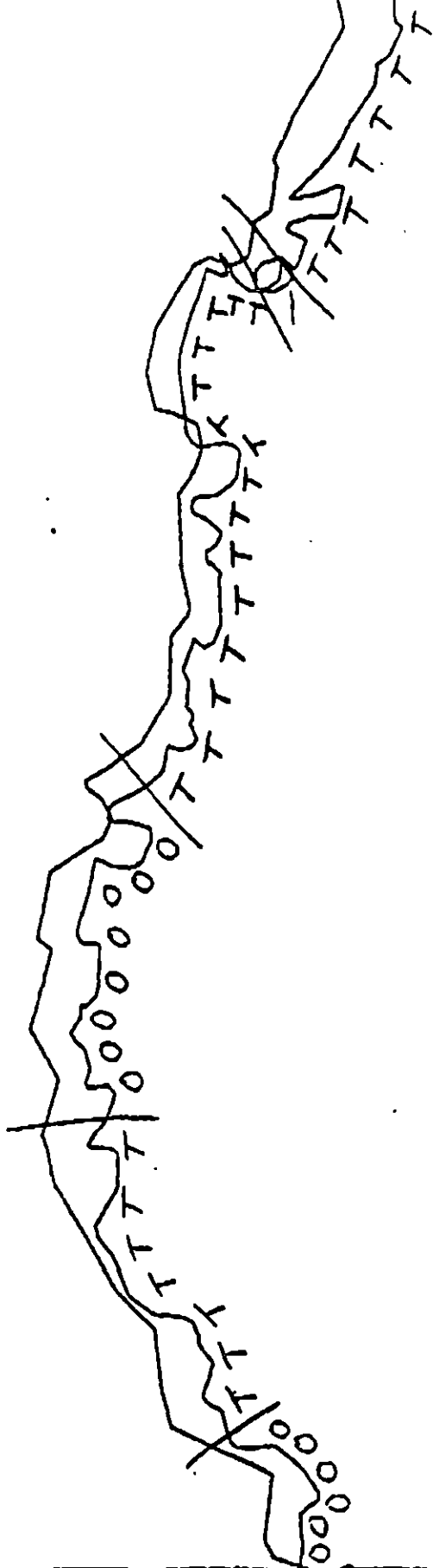


Map Key: KEN-100c

Name: Sawyer

Date: 4-24-90

Notes: ...



↑
KEN
100G

KEN
100E →

↓ KEN
100A

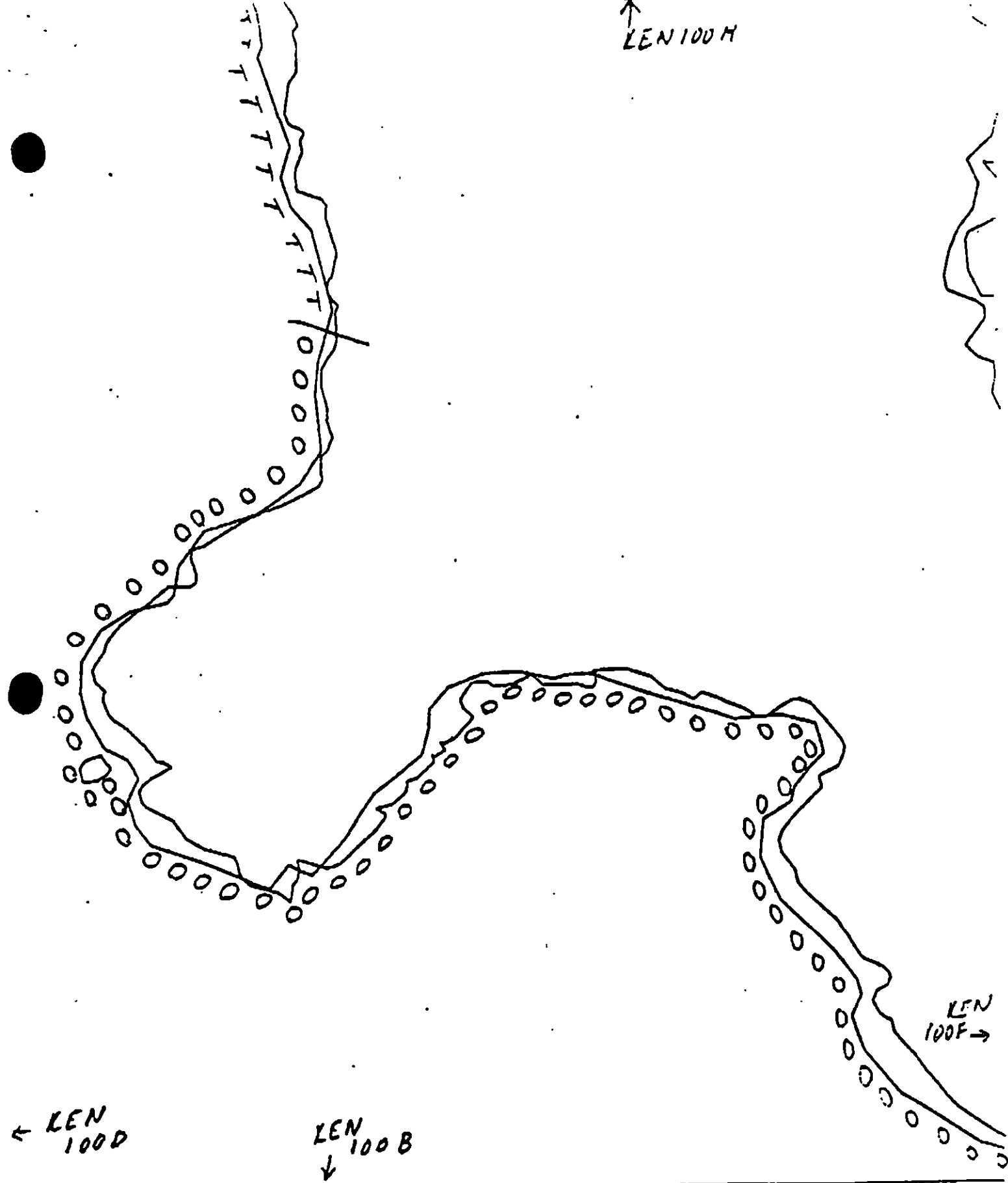
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PY-5.

ADEC Segment Length: 100m



Map Key: KEN-100d
Name: Sawyer
Date: 4-24-90
Data Entered:



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

PY-5

ADEC Segment Length: 100m

0 100 200 300
meters

Map Key: KEN-1000
 Name: Sawyer
 Date: 4-24-90
 Date Entered:

↑
KEN
1001



-KEN
1003

KEN 1002
↓

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

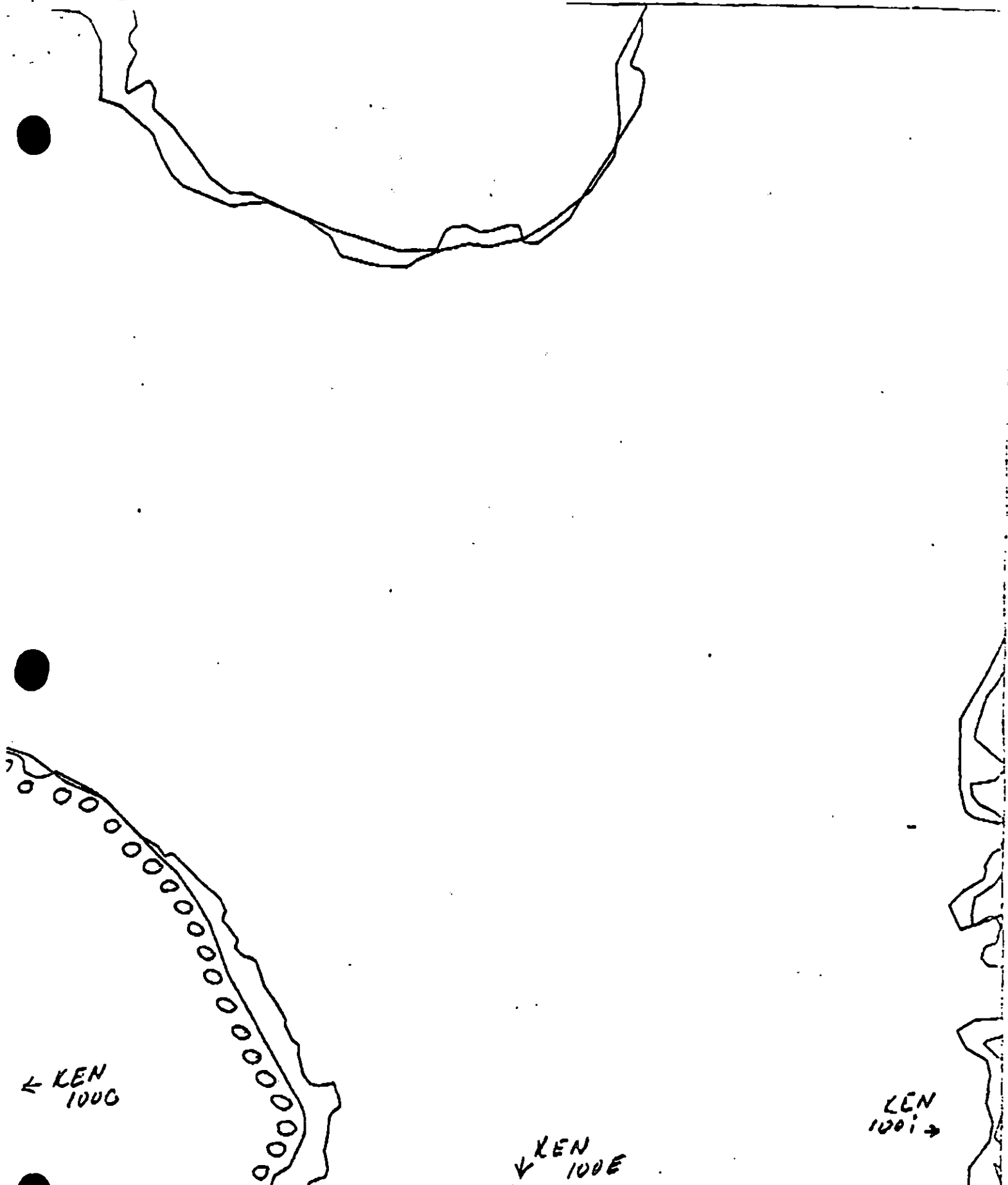
PY-5

ADEC Segment Length: 100m

Map Key: KEN-1001

Name: Sawyer

Date: 4-24-90



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

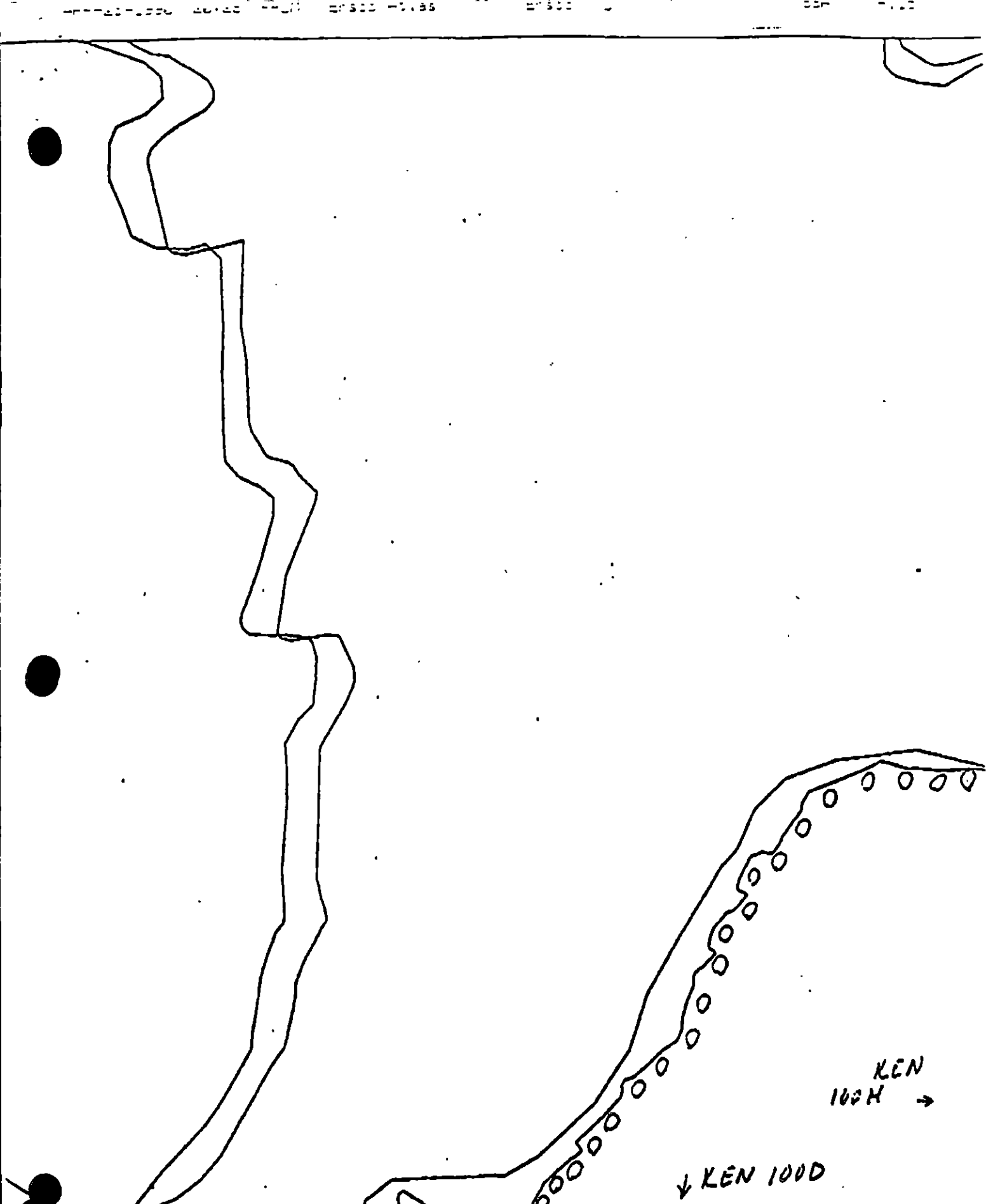
PY-5

ADEC Segment Length: 100m

0 1.00 1.25 1.50 1.75 2.00



Map Key: KEN-100h
Name: Sawyer
Date: 4-24-90



XXXX Wide
//// Medium
--- Narrow
TTTT "

PY-5

ADEC Segment Length: 100m



Map Key: KEN-100g
Name: Sawyer
Date: 4-24-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-5 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

CULTURAL RESOURCE EVALUATION REQUIRED PRIOR TO TREATMENT

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT. Work site is more than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

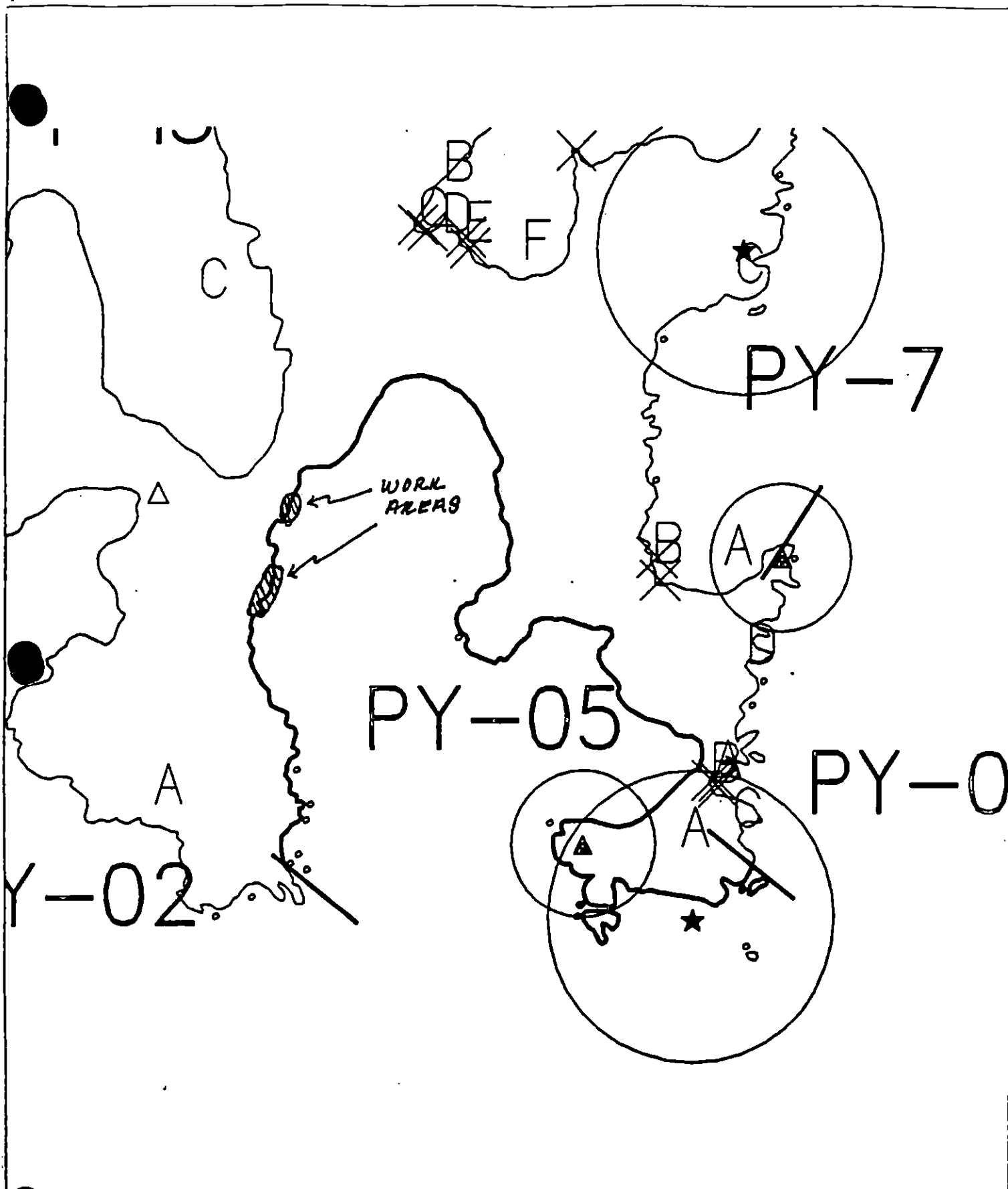
Date

7-11-90

Prepared by

Date

7/10/90



Exxon Company, USA
 Map Key: KEN-PY-5
 June 10, 1990



ECOLOGY MAP
 SEGMENT PY-5
 SUBDIVISION A (1 of 1)
 METERS
 0 720 1450

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

1 inch = 2393 feet

SHORELINE EVALUATION

SEGMENT ST/ PY-06 SUBDIVISION A (1 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400). Restrict air traffic to essential minimum. Approach and takeoff from and to seaward only. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/ damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hoffman DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 47 m: Narrow 0 m: V.Light 0 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>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: Manual removal of pooled oil, oily trash and debris, bio-remediate. Should be done before 5/1, weather and safe access permitting. No air traffic or work crew access from 5/1 to 9/1.

TAG COMMENTS: DUE TO LAND MANAGER COMMENTS (USFW) ON BIOREMEDIATION, INIPOL MAY NOT BE APPROVED BY THE LAND MANAGER. SHOULD THAT BE THE CASE WE RECOMMEND THE USE OF CUSTOMBLEW FOR THE BIOREMEDIATION APPLICATION.

TAG APPROVAL DATE: 4/13/90.

ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Burt Wernitt
USCG G.A. REITER

FOSC: DATE: 4-20-90

Do not bioremediate!

SEGMENT ST 1 PY 06 SUBDIVISION: A DATE APRIL 1, 1990

USEG NOAA
ME JACQUI MICHEL SIGNATURE J. Michel

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of oiled debris and readily recoverable oil — especially the pooled oil in the upper 172 on the north end of the beach (mapped as broken distribution). Cleanup will be effective only if done early. If we have to wait until Sept., the oil will harden further. Hopefully, cleanup can be completed prior to the bird colony critical time window (1 May).

ADEC
NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I am suggesting manual removal of the pooled oil and the oiled debris, keeping in mind the time window for the bird colonies.

LAND MANAGER- USFWS

NAME Mary Partner SIGNATURE Mary Partner

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Oiled debris and readily recoverable oil should be removed, especially in the NW corner of the beach. Due to the limited oil cleanup methods available adequate treatment will be difficult. Because of the presence of critical wildlife nearby including a bald eagle nest, peregrine falcon nest and seabird colony cleanup must be completed by early May. If significant sheening occurs further treatment should be considered.

REVISION NO. 02/21/90

OG MANN USCG/ADAA MICHEL SEGMENT ST/ PY 6
 BIO CARR LAND REP PORTNER - FWS SUBDIVISION A
 EXXON BOYER ADEC PEED TIME 12:15 to 13:00
 TEAM NO.: 18 TIDE LEVEL: 0.0 to +0.1 DATE APRIL 1 1990
 ST. SUBDIVISION LENGTH: 180 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANTS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: all to over
 SURFACE SEDIMENTS: R 30 % B 68 % C 2 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 70 % Hang 0 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 40 m N 30 m VL 30 m NO 80 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	W	M	N	VL	W	M	N	VL	W	M	N	VL	BU	U	M	L
ASPHALT PAVEMENT																
POOLED		✓	✓	✓				✓					✓			
COVER				✓	✓								✓	✓		
COAT			✓		✓								✓	✓		
STAIN			✓		✓								✓	✓		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																✓

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	0	0	0
Trash		✓	
Debris		✓	

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE —

#BAGS —

Photographs:

Roll No. 18-2

Frames 26-28, 32-39

SUBSURFACE OIL *Note: the average boulder size on this beach is 1-2m (diameter).*

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	W	M	N	VL	W	M	N	VL	BU	U	M	L		
1	25					✓	-															NO	BCP throughout
2	25	✓					0-5	✓					✓		✓	✓							"
3	25	✓					0-5	✓					✓		✓	✓							"
4	25	✓					0-5	✓					✓		✓	✓							"
5	25					✓	-																
6	25					✓	-																
7	25	✓					0-15	✓					✓		✓							"	"
8	25		✓				0-15	✓					✓		✓							"	"

COMMENTS

Regarding pits: subsurface oil is considered any oil that is in interstices below the generalized surface where the boulders sit. It is not a continuous unit but is discontinuous around the boulders (nor is it continuous between the boulders). Boulder surfaces have mostly < 10% cv, ct, and (mostly) stain left as remnant patches on protected surfaces.

REVIEWED BAT DATE 4 Apr 90

Segment ST / PY 6 Subdivision A (of A-D) Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1150 Biologist M. LARR(A) Substrate type and % of ^{SUBDIVISION} segments:
(1) Bedrock 5 (2) Boulder 95 (3) Cobble — (4) Pebble — (5) Sand — (6) SH —(B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense — Moderate — Low 100%

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

Photographs:
Roll No. 2Frames 26-28, 32-39

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4
5	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

NOT PRES. IN UPPER.
NOT PRESENT
(IN LOWER TIDAL,
BOTH SUBSTRATES)

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4
5	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

NOT PRES. IN LOWER TIDAL
NOT PRESENT
IN UPPER & LOW.

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4
5	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

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4
5	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

NOT PRES. IN UPPER &
IN MIDDLE, MIDDLE
NOT PRESENT

Wildlife Observations/ General Comments:

Bald eagle (1), mature.

Ecological Considerations:

Sensitivity codes: S-T (Bald eagle nest), S-R (seabird colony),
Y-QQ (Nat. Wildlife Refuge).

OG M
 SEGMENT ST/PY6
 SUBDIVISION A
 DATE APRIL 1 1 90

CHECKLIST

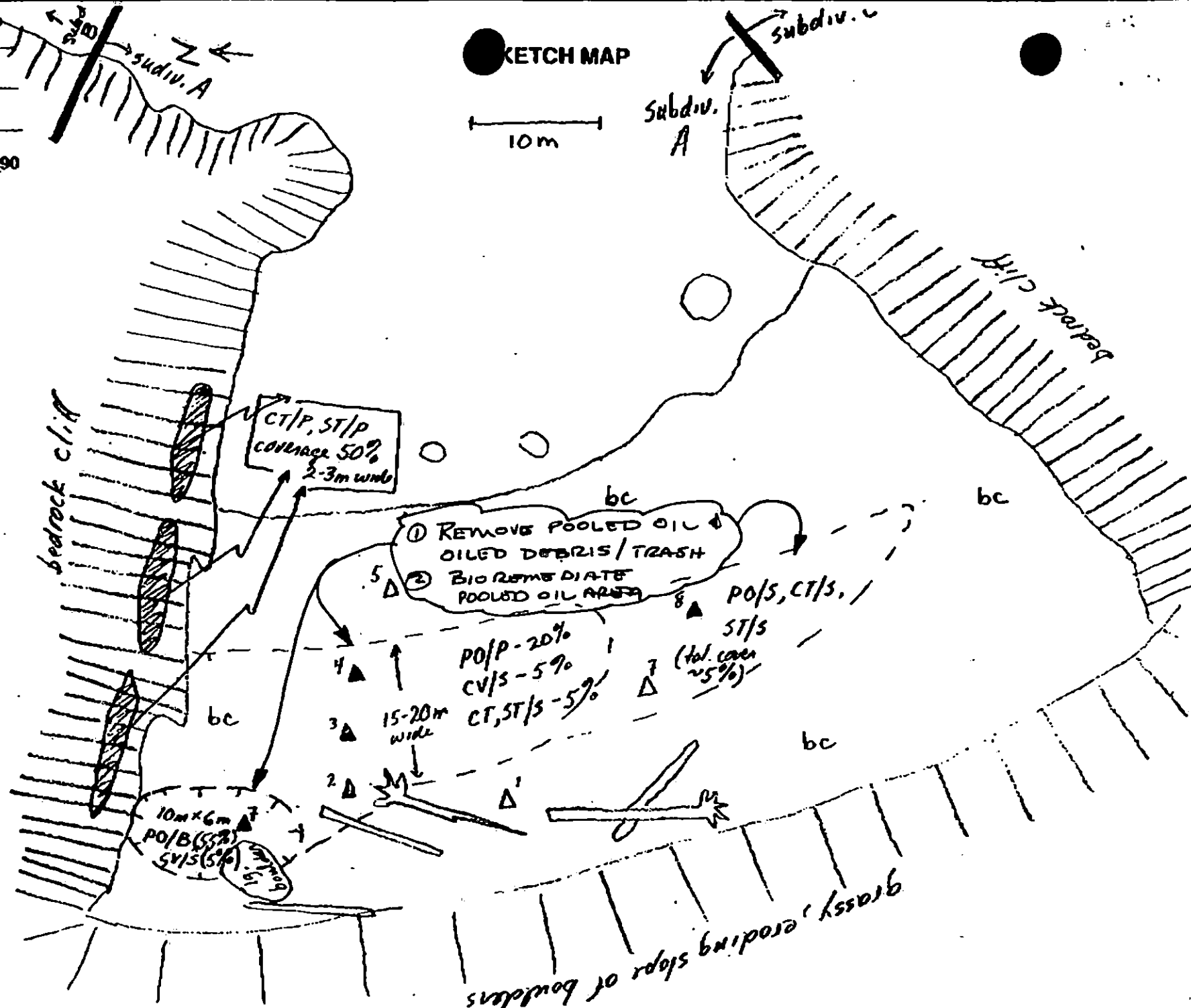
- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Boundary
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PN Location(s)
- ☒ Photo Location(s)

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
- Spotted Distribution
- Oiled Vegetation
- 1 →
- Photo location, direction, and number

SKETCH MAP

10m



Oil Character Length (m): AP 0 PO 40 CV 40 CT 95 ST 95 MS 0 PT 0 TB 0 FL 0 NO 30

REVISION: 8/24/00

4

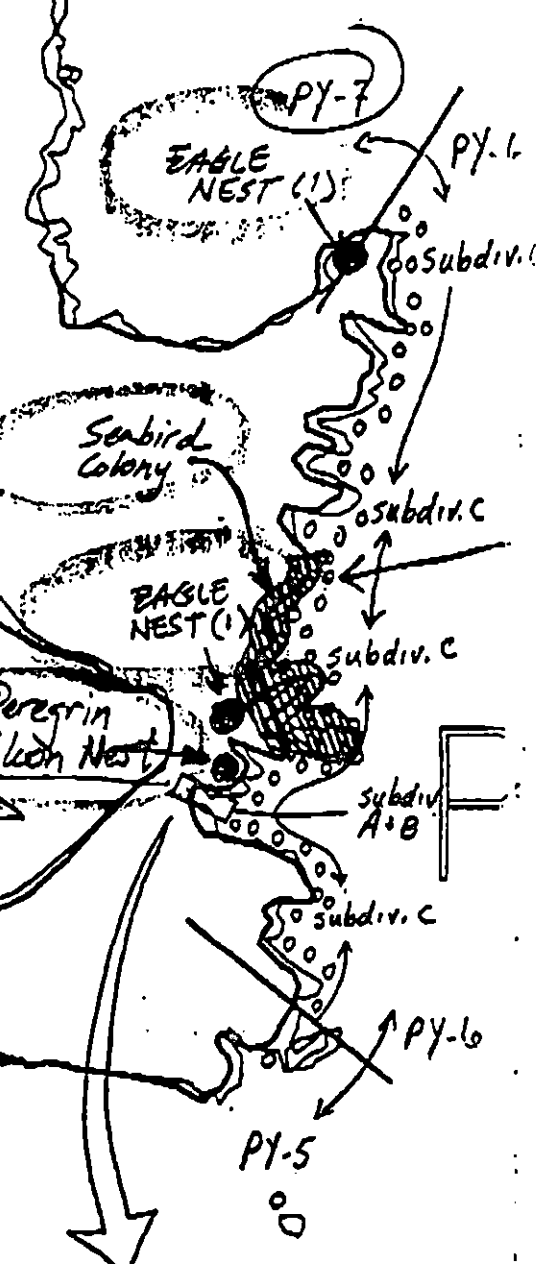
Sensitive Sites

PY-

PY-05

due to convoluted shoreline, it is impossible to show boundaries of subdiv. A + B.

I suggest you enter this to GIS as 100 of "medium" somewhere in this cove.



data entry: put 2 "11"s in this area somewhere

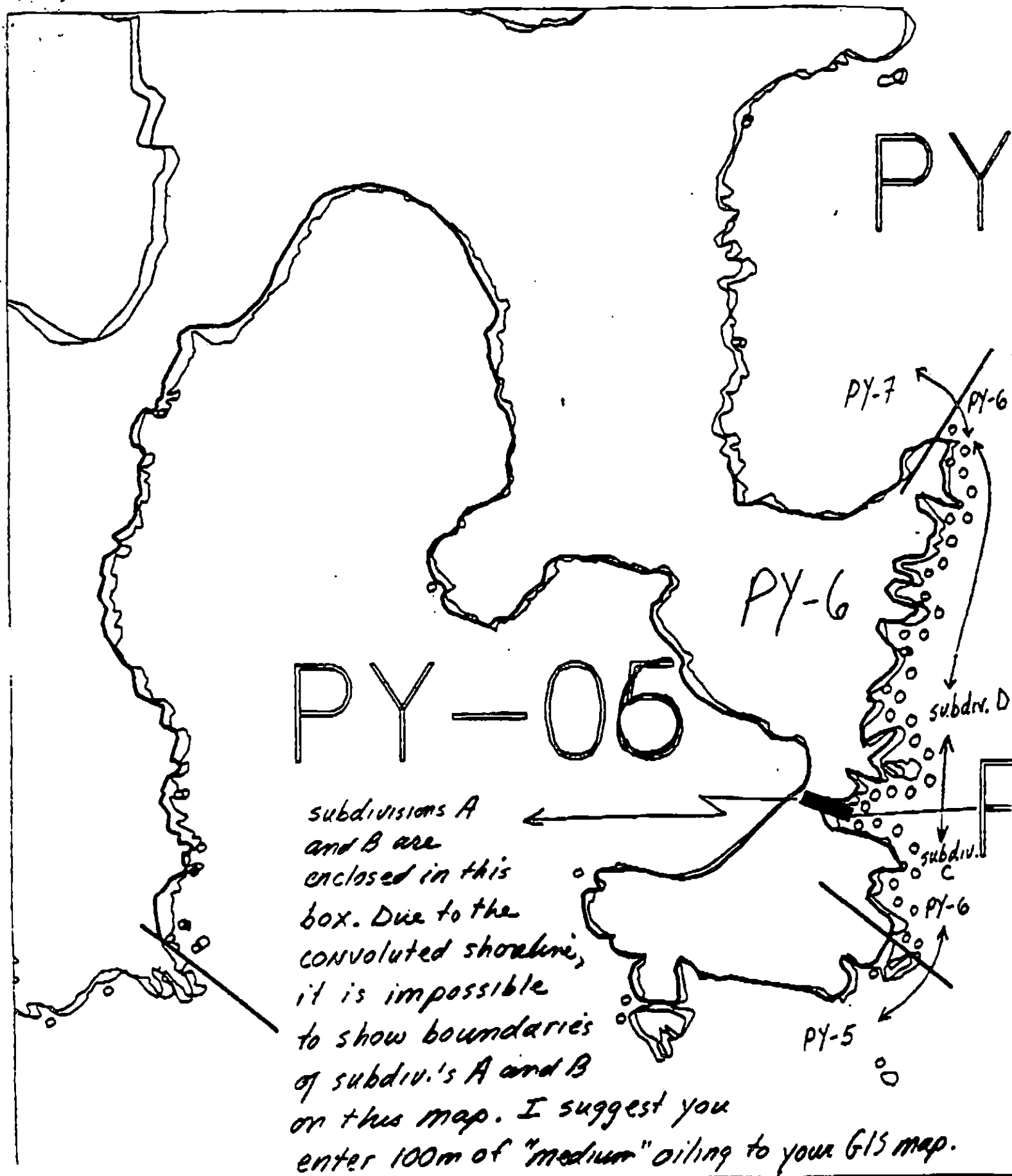
XX Wide
 /// Medium
 --- Narrow
 TTTT Very Light

PY-6

ADEC Segment Length: 15052m



Map Key: KEN-1010
 Name: Mann
 Date: _____



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

PY-6

AOEC Segment Length: 15052m

Map Key: KEN-1010

Name: MarrDate: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ PY-06 SUBDIVISION B (2 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400). Restrict air traffic to essential minimum. Approach and takeoff from and to seaward only. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/ damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. H. Hines DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 42 m: Narrow 0 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BRUER John Bruer

EXXON ANDY GR Andy Gr

NOAA Bull Wescott Bull Wescott

USCG G. A. FETTER G. A. Fetter

FOSC: DATE: 4-20-90

SEGMENT ST/ PY 06 SUBDIVISION: B DATE APRIL 1, 1990

~~NOAA~~

NAME

JACQUI MICHEL

SIGNATURE

Michel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

This site is inaccessible.

~~ADEC~~

NAME

JOHN R. REED

SIGNATURE

John R. Reed

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

This site is inaccessible.

~~AND MANAGER - USFWS~~

NAME Mary Portner

SIGNATURE

Mary Portner

~~☐ NO TREATMENT RECOMMENDED
COMMENTS~~

~~☐ TREATMENT SUGGESTED~~

Oil remains in the form of stain, coat cover and pooled to a height of 15m. in the Hoot Pt. Crack. Due to the inaccessability of the area it cannot be adequately treated. Weathering of this oil since 1989 is negligible.

REVISION NO. 08/21/89



SHORELINE OILING SUMMARY

REVISION NO. 02/22/88

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PV 06
 BIO CARR LAND REP PORTNER - FWS SUBDIVISION B Hoof Point Crack
 EXXON BOVER ADEC REED TIME 11:50 to 12:15
 TEAM NO.: 18 TIDE LEVEL: +0.2 to 0.0 DATE APRIL 1 / 1 / 90
 IT. SUBDIVISION LENGTH: 120 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NA to _____
 SURFACE SEDIMENTS: R 90 % B 10 % C _____ % P _____ % G _____ % S _____ % M _____ % V _____ %
 SLOPE: Long 10 % Hang _____ % Vert 90 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 90 m N 10 m VL 0 m NO 70 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	R	SP	BR	OR	OL	OF	NO	TL	LO	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

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

OILED DEBRIS <u>yes</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. 18-2Frames 29-31

SUBSURFACE OIL

NO PITS DUG BECAUSE SITE IS INACCESSIBLE TO FOOT TRAFFIC.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	SP OR	BR TR	BY BL	GR TL	LR	SU	U	M	L			
C							-														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

* We observed Hoof Point Crack by binoculars from atop a 100' cliff.

This site is inaccessible due to high cliffs. The spectacular oiling of its walls was the result of oil spraying ^{upward} during big waves. Weathering of the oil on the walls has been slight since last August - except for the lowest parts of these walls.

OG 10/2
 SEGMENT ST/P/06
 SUBMISSION B
 DATE April 1 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sub. Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ E.g. HML/LWL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

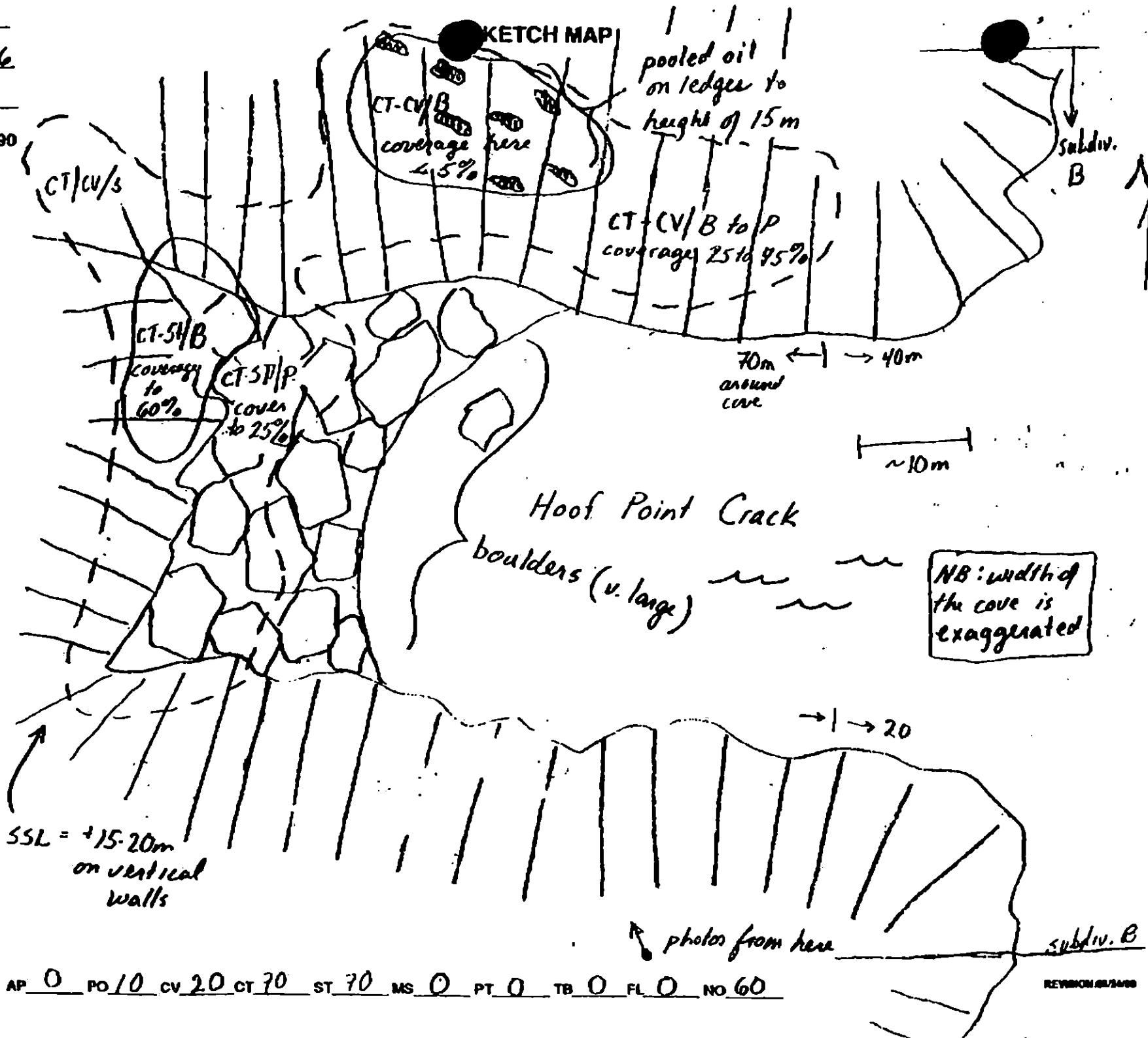
- 1 Δ
 PE - No Subsurface Oil
- 2 Δ
 PII - Subsurface Oil
- CT/C

 Continuous Distribution
- CT/B

 Broken Distribution
- CT/P

 Patchy Distribution
- CT/S

 Splashed Distribution
- ☒ Oil Vegetation
- 1 $\Rightarrow$
 Photo location, direction, and number



Oil Character Length (m): AP 0 PO 10 CV 20 CT 70 ST 70 MS 0 PT 0 TB 0 FL 0 NO 60

REVISION 01/24/90

Segment ST / PY 6 Subdivision B (of A-D) Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1230 Biologist M. LARR(A) Substrate type and % of segments: ^{SUBDIVISION}
(1) Bedrock _____ (2) Boulder _____ (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): ^{SUBDIVISION} Dense _____ Moderate _____ Low _____

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

Photographs: Roll No. 2Frames 29-31

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	

ASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	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 eagle (2), both immature.

Ecological Considerations:

*Sensitivity codes: same as PY-6 A.**5R - SEABIRD COLONY (1 MAY - 1 SEP)**5T - BALD EAGLE NEST (1 MAR - 1 JUNE)**4QQ - USFWS REFUGE**Site is inaccessible, so ecological data were not collected.*

(4)

4

Sensitive Sites

PY-

PY-05

PY-7
EAGLE NEST (1)

PY-1

Subdiv.

Seabird Colony

EAGLE NEST (1)

Peregrin Falcon Nest

subdiv. A+B

subdiv. C

PY-10

PY-5

due to convoluted shoreline, it is impossible to show boundaries of subdiv. A+B.

I suggest you enter this to GIS as 100 of "medium" somewhere in this cove.

data entry: put 2 "11"s in this area somewhere

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

PY-6

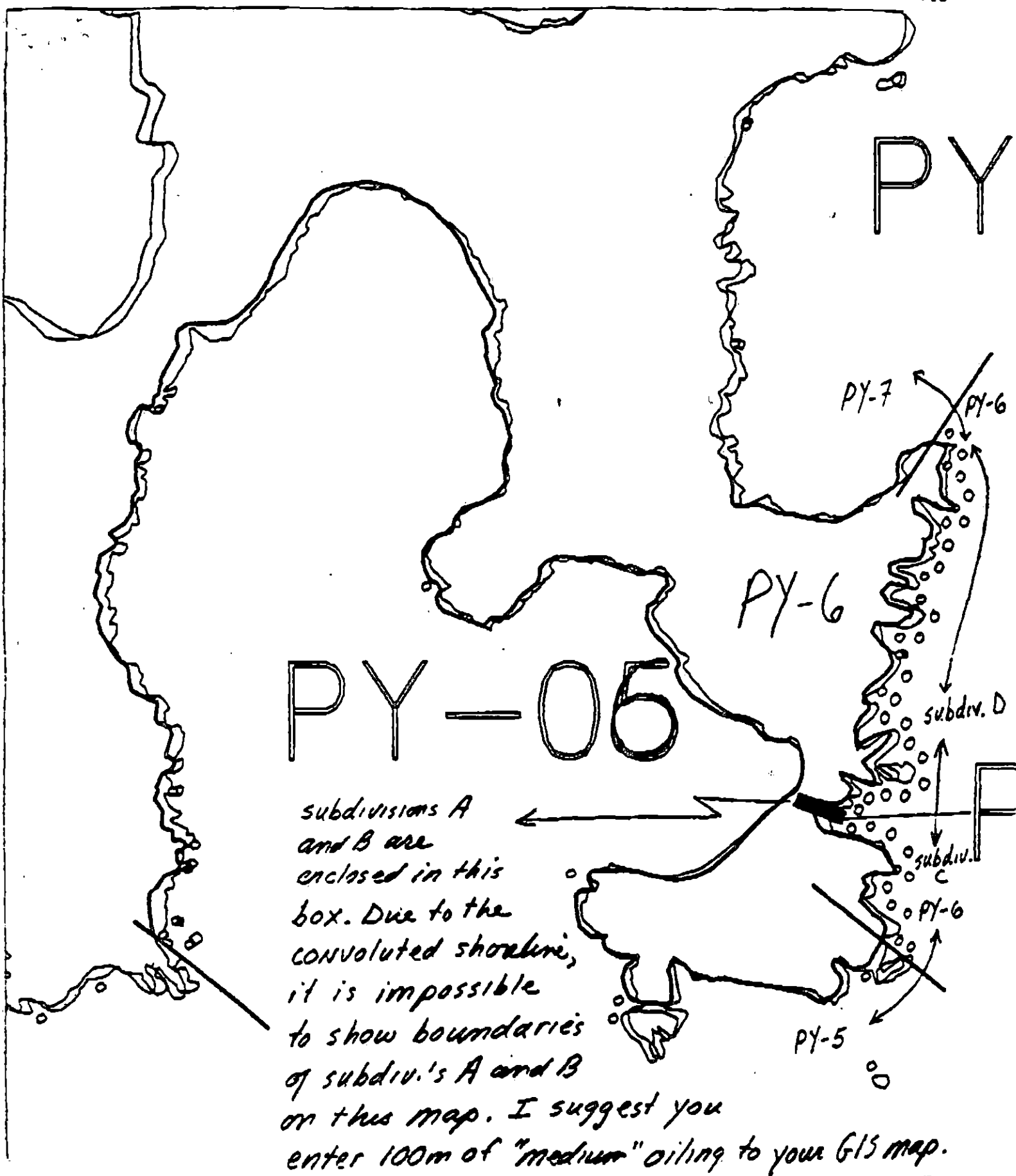
ADEC Segment Length: 15052m

0 500 1000 1500

Map Key: KEX-1010

Name: Mann

Date:



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

PY-6

ADEC Segment Length: 15052m

Map Key: KEN-1010

Name: MannDate: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ PY-06 SUBDIVISION C (3 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400). Restrict air traffic to essential minimum. Approach and takeoff from and to seaward only. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/ damage to uncoiled biota and substrate.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 785 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC John Bauer
EXXON ANDY TETZ
NOAA Bill Wescott
USCG G.A. REIDER

FOSC: DATE: 4-20-90

SEGMENT ST/ PY-6 SUBDIVISION: C DATE 4/1/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE J Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo oil was observed.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo oil was spotted.

LAND MANAGER

NAME Mary Partner SIGNATURE Mary Partner☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo oil was observed

SHORELINE OILING SUMMARY

REVISION NO. 02/89/90

OG Mann USCG/NOAA MICHEL SEGMENT ST/ PY-6
 BIO Carr LAND REP Palmer (USEWS) SUBDIVISION C
 EXXON Boyer ADEC REED TIME 13:00 to 13:20
 TEAM NO.: 18 TIDE LEVEL: _____ to _____ DATE 4/1/90
 EST. SUBDIVISION LENGTH: 3618 m GREEN ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 95 % B 5 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 45 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 3708 m
GREEN

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SP	BR	OR	OL	OP	NO	TL	LR	SU	U	M	U
ASPHALT																
PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S 0 sq. m by 0 cr

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE N/A

#BAGS N/A

Photographs:

Roll No. none

Frames none

SUBSURFACE OIL no pits dug because: 1) coastline inaccessible 2) substrate = bedrock

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (OIL-ON)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UC	SP	BR	OR	OL	OP	NO	TL	LR	SU	U	M	U		

COMMENTS

We failed to find any oil here. Lighting was good, tide level was suitable, and the rock is light-colored. This subdivision is uniform in geomorphology and oiling (none) and so compresses everything in PY-6 except subdivisions A and B.

SKETCH MAP

SEGMENT PY6

SUBMISSION C

DATE 4/1/90

CHECKLIST

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

NO sketch - NO OIL

LEGEND

1 

Pt - No Subsurface Oil

2 

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Beaten Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 

Photo location, direction,
and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 750

Segment ST / PY-6 Subdivision C (of A-D) Date (mo / day / yr) 4/1/90

Time (24 hr) 1330 Biologist M. CARR

(A) Substrate type and % of segments: ^{SUBSTRATE}
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____

(B) Overall % cover of biota (% of segment): ^{COVER} Dense 70 Moderate 20 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. _____

Frames NONE

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Glaucon-winged gull (2 colonies = 250 indivs) Floating dead mt. goat! (1)
 Surf scoter (5) sea otter (1) (a real find)
 Pigeon guillemot (1) Commorants, red-breast (100)

Ecological Considerations:

Sensitivity codes: Same as PY-6 A

52 - SENS. 2D Colony 1 MAY - 1 SEPT

ST - ACTIVE EAGLE NEST 1 MAR - 1 JUNE

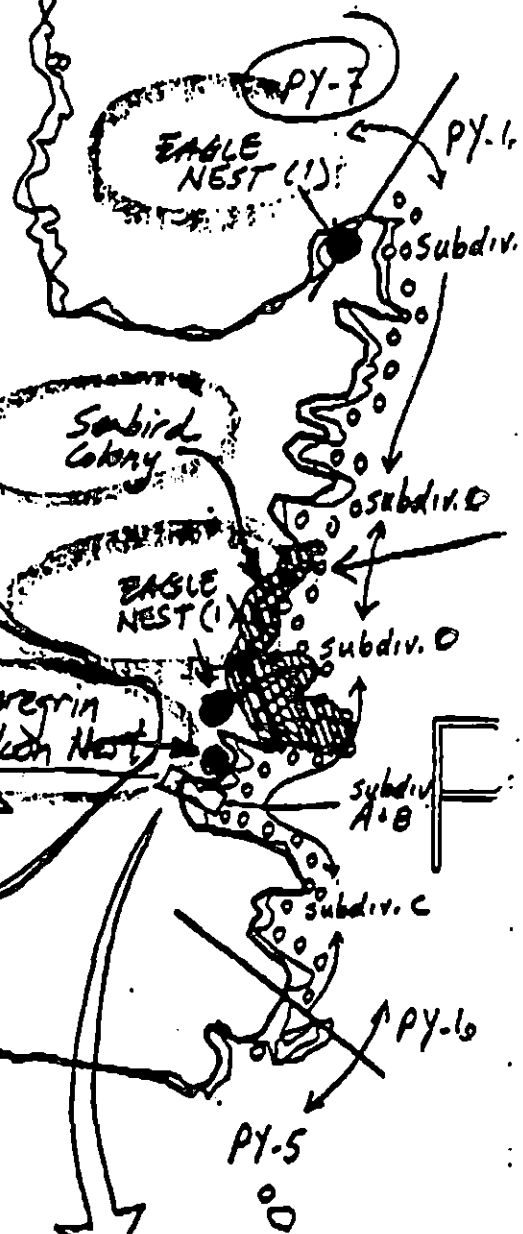
42Q - NAT'L WILDLIFE REFUGE

- Boulders are so large, floral & faunal abundances are very similar to bedrock.

Sensitive Sites

PY-

PY-05



due to convoluted
shoreline, it is
impossible to show
boundaries of
subdiv. A + B.

I suggest you enter
this to GIS as 100 of "medium"
somewhere in this cove.

data entry: put
2 1/2" in this area
somewhere

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

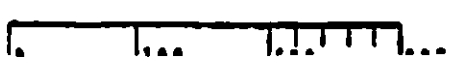
PY-6

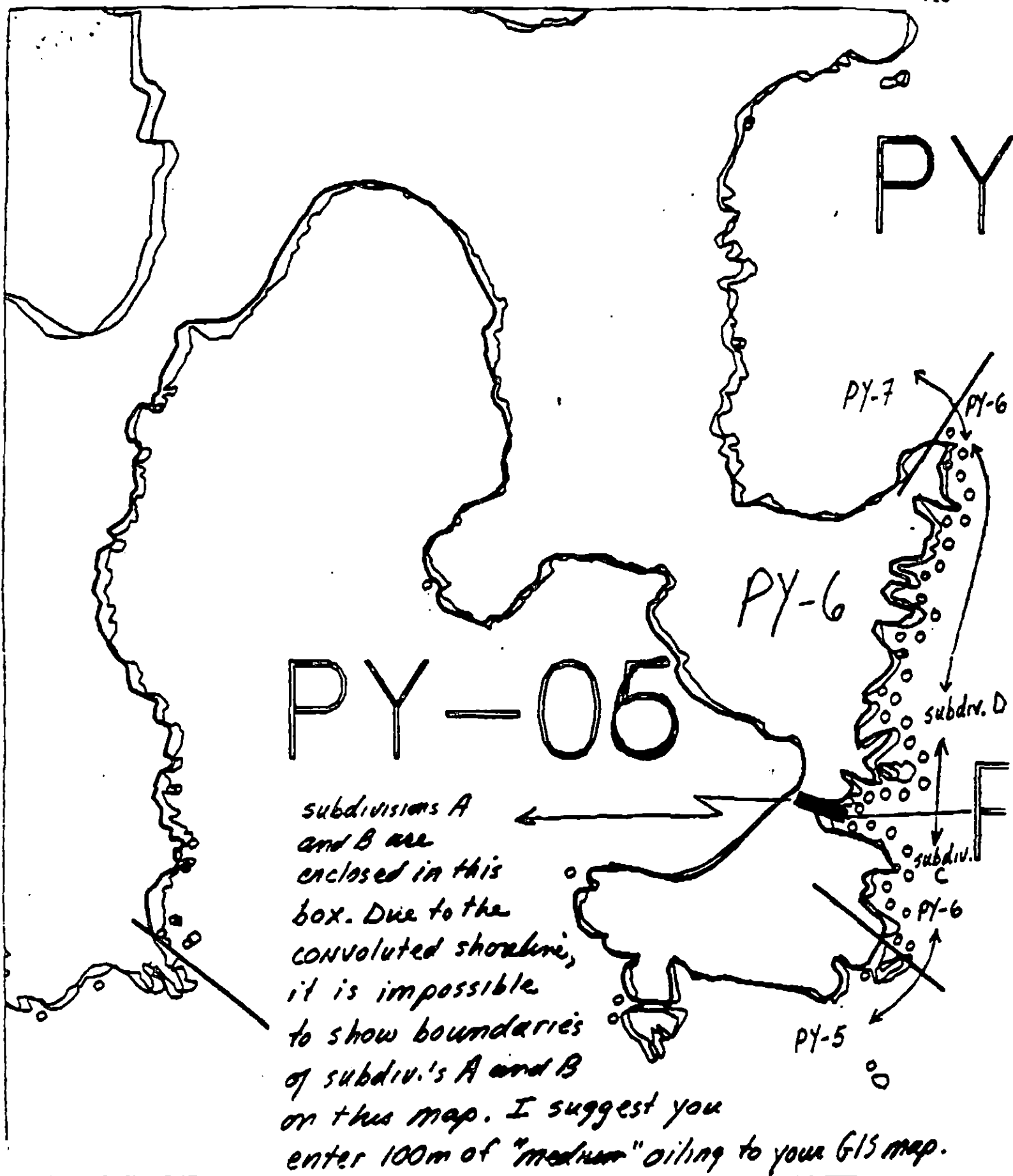
ADEC Segment Length: 15052m

Map Key: KEN-1010

Name: Mann

Date: _____





XXXX Wide

//// Medium

--- Narrow

TTTT Very light

PY-6

ADEC Segment Length: 15052m

Map Key: KEN-1010

Name: MerrDate: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ PY-06 SUBDIVISION D (4 OF 4) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400). Restrict air traffic to essential minimum. Approach and takeoff from and to seaward only. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/ damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles Hoffman DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2611 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUER
EXXON ANDY TOTE
NOAA Burt W. Wooten
USCG G.A. Reiter
FOSC: DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 6 SUBDIVISION: D DATE 4/1/90USCG/NOAANAME JACQUE MICHEL SIGNATURE Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil observed.

ADECNAME JOAN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil was spotted.

LAND MANAGERNAME Mary Partner SIGNATURE Mary Partner☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil was observed

SHORELINE OILING SUMMARY

REVISION NO. 06/22/90

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PYL
 BIO CARR LAND REP PARTNER-FWS SUBDIVISION D
 EXXON GOYER ADEC REED TIME 13:00 to 13:20
 TEAM NO.: 18 TIDE LEVEL: +0.1 to 0.0 DATE 4 / 1 / 1990
 EST. SUBDIVISION LENGTH: 2950 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANTS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 0 % Vert 90 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2950 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													✓	✓	✓	✓

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

OILED DEBRIS <u>N</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. N/AFrames N/A

SUBSURFACE OIL SHORELINE WAS INACCESSIBLE / SHEER ROCK CLIFF

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	7	8	SU	U	M	L		
C							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

We failed to find any oil on this subdivision. Lighting was good, tide level was suitable, and the rock is light colored (and it was dry). This subdivision is uniform in geomorphology and oiling (no oil).

JG Mamm

SKETCH MAP

SEGMENT ST/ PY-6

SUBDIVISION 0

DATE 4 / 1 / 90

CHECKLIST

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

LEGEND

1 

PH - No Subsurface Oil

2 

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spashed Distribution

Oiled Vegetation

1 

Photo location, direction,
and number

NO SKETCH - NO OIL

Oil Character Length (mi): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 2950

NSA 2904-03/2470

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PY-6 Subdivision D (of A-D) Date (mo / day / yr) 4/1/90
 Time (24 hr) 1300 Biologist M. CARR

- (A) Substrate type and % of segments: ^{SUBDIVISION}
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
 (B) Overall % cover of biota (% of segment): ^{SUBDIVISION} Dense 70 Moderate 20 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. —

Frames NONE

BARNACLES

	Dense	Moderate	Sparse	Rare	
→ 1U					
→ 2					
3	3	3	3	3	
4	4	4	4	4	
5	5	5	5	5	
6	6	6	6	6	

NOT PRESENT

MYTILUS

	Dense	Moderate	Sparse	Rare	
→ 1U					
→ 2					
3	3	3	3	3	
4	4	4	4	4	
5	5	5	5	5	
6	6	6	6	6	

NOT PRESENT

GASTROPODS

	Dense	Moderate	Sparse	Rare	
→ 1U					
→ 2					
3	3	3	3	3	
4	4	4	4	4	
5	5	5	5	5	
6	6	6	6	6	

NOT PRESENT

FUCUS

	Dense	Moderate	Sparse	Rare	
→ 1U					
→ 2					
3	3	3	3	3	
4	4	4	4	4	
5	5	5	5	5	
6	6	6	6	6	

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

Sensitivity codes: ST (Bald eagle nest)
 SR (Seabird colony)
 4 QQ (Natural Wildlife Refuge)

SENSITIVE SITES

PY

PY-05

subdivisions A and B are enclosed in this box. Due to the convoluted shoreline, it is impossible to show boundaries of subdiv.'s A and B on this map. I suggest you enter 100m of "medium" oiling to your GIS map.

SEABIRD COLONY

PY-7
EAGLE NEST (1)

PY-6
EAGLE NEST (1)

Peregrin
Falcon
Nest

subdiv. D

subdiv. C

PY-5

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

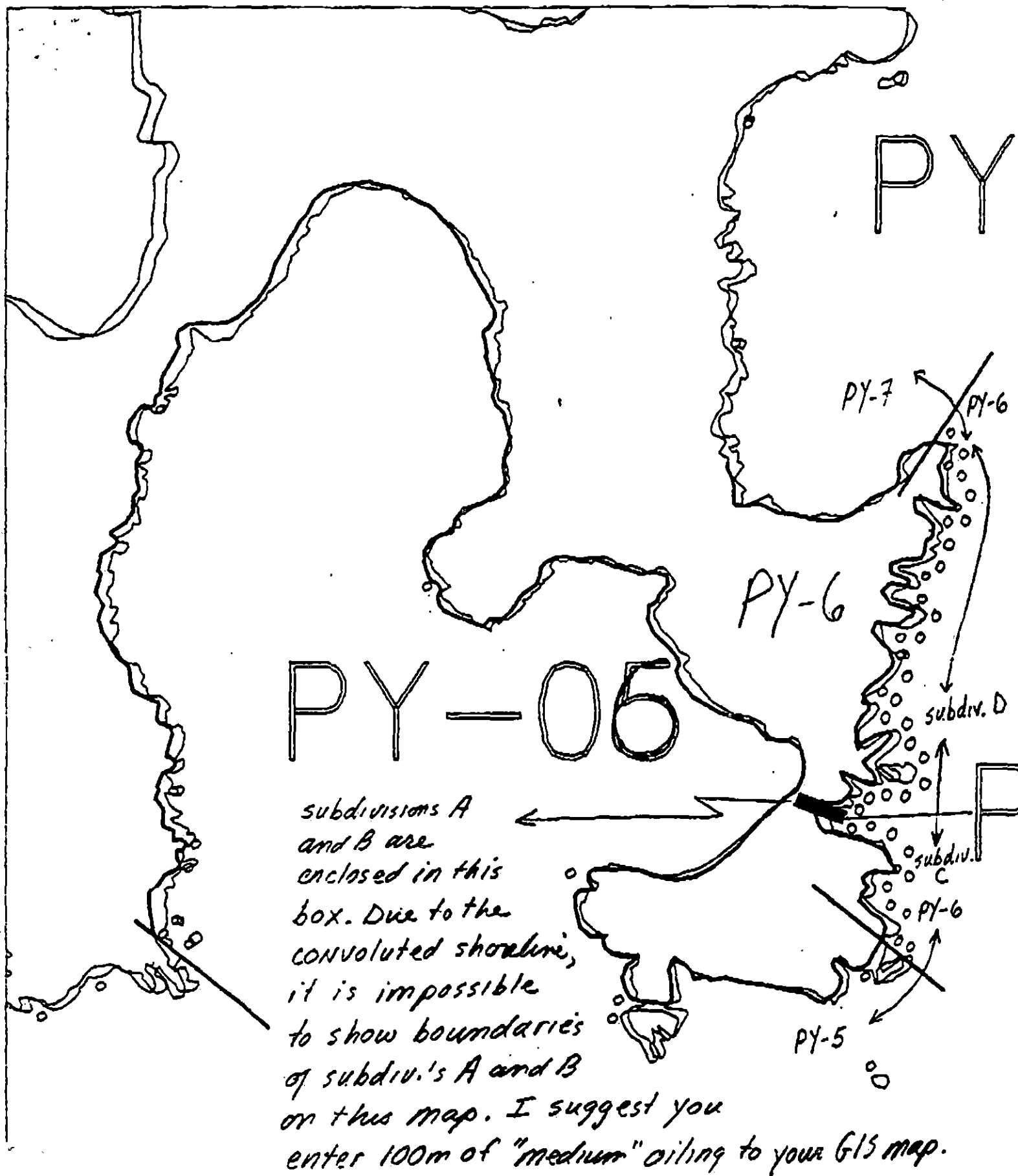
PY-6

ADEC Segment Length: 15052m

Map Key: KEN-1010

Name: Mann

Date: 4/1/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

PY-6

ADEC Segment Length: 15052m

Map Key: KEN-1010

Name: MannDate: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ PY-07 SUBDIVISION A (1 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 7/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict air traffic to essential minimum. Air approach from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 82 m: No Oil 810 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MONITORS TO ASSESS SUITZ DURING TREATMENT
OF ADJACENT SEGMENTS TO CONFIRM OBSERVATIONS
SAVING COVER RESTRICTED COMPLETE OBSERVATIONS DURING
SOFT.

TAG APPROVAL DATE: 4/17/90.
ADEC ART WEINER
EXXON ANDY TEATZ
NOAA Bill Wescott
USCG KENNETH KEANE

FOSC: [Signature]

DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 07 SUBDIVISION: A DATE APRIL 1, 1990~~USEC~~ NOAANAME JACQUI MICHELSIGNATURE *Jacqui Michel*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNONE.ADECNAME JOHN R. REEDSIGNATURE *John R. Reed*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNo COMMENTS.LAND MANAGER - USFWSNAME Mary PartnerSIGNATURE *Mary Partner*☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Weathering has occurred below the upper intertidal zone. Above the upper intertidal zone weathering has been ^{and superlittoral} less extensive. An area in the upper intertidal ^{discussed} in 1989 as having standing mounds 10 cm deep and heavily coated boulders is now covered with fresh rock and snow and difficult to assess.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG Mann USCG/NOAA MICHEL SEGMENT ST/ PY-7
 BIO Carr LAND REP Partner - FWS SUBDIVISION A
 EXXON Boyer ADEC REED TIME 1405:1420 1515:1545
 TEAM NO.: 18 TIDE LEVEL: +1.2 to +4.1 DATE 4/1/1990
 EST. SUBDIVISION LENGTH: 900 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 35 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 60 m NO 340 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES				
	C	S	P	N	SP	SM	SL	ST	TL	LR	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER				✓		✓					✓	✓		
COAT				✓		✓					✓	✓		
STAIN				✓		✓					✓	✓		
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL													✓	✓

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

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. noneFrames noneSUBSURFACE OIL No pits possible due to bedrock/large boulder substrate.

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	UO	SP	SM	SL	ST	TL	SU	U	M	U		

COMMENTS

Oiling on this segment consists of sparse spots of CV, CT, and ST. These spots show little evidence of wave erosion since their deposition last summer. This shoreline is high-angled, inaccessible on foot, and exposed to heavy waves. Bedrock is granitic making a vivid

Mann

PY-7 Subdiv. A.

Comments

4/1/90

We visited the cove described as site A (during the August 1989 SCAT). Much oil has disappeared through natural processes at this site where it existed as CV and CT on boulder tops in the UITE and as pooled (mousse) in boulder interstices in the UITE. This area of boulders rests directly on bedrock and winter storm waves have rolled and battered these stones, removing all but a $\leq 5\%$ ST/s. Above the UITE, weathering has been much less effective. I have included the northern bedrock outcrop originally mapped in Site A (1989) in subdivision B in this report. Here, in the supratidal zone, little or no weathering of oil spots has occurred. At the SW end of 1989's site A, fresh rockfall debris and snow obscure the previously -oiled rocks. I suspect little oil is left here (beyond CT/s, ST/s) because waves have eroded the front of this gully-debris deposit.

D.H.M.

OG MAUN

SKETCH MAP

SEGMENT ST/ PI-7

SUBDIVISION A

DATE 4 / 1 90

CHECKLIST

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

No sketch provided

LEGEND

1 
Pit - No Subsurface Oil

2 
Pit - Subsurface Oil


Continuous Distribution


Broken Distribution


Patchy Distribution


Scattered Distribution

Oil on Vegetation

1 
Photo location, direction,
and number

DHM 

Oil Character Length (m): AP 0 PO 0 CV 60 CT 60 ST 60 MS 0 PT 0 TB 0 FL 0 NO 840

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / PY-7 Subdivision A (of A-C) Date (mo / day / yr) 4/1/90Time (24 hr) 1400 Biologist M. LARR(A) Substrate type and % of ^{Subdivision} segments:
(1) Bedrock 90 (2) Boulder 10 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —(B) Overall % cover of biota (% of ^{Subdivision} segment): Dense 70 Moderate 20 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. —Frames NONE

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Bald eagle (2) nature w/ nest, Harlequin ducks (5)
 Golden-eye (1) Sea otter (1) Cormorants: red-faced (5) pelagic (1)

Ecological Considerations:

Sensitivity codes: 4QQ (National Wildlife Refuge), 5-T (Bald eagle nest),
 5-R (Seabird colony)

- Boulders so large, floral & faunal abundances very similar to bedrock.

PY-8

and 345 PM 1/1/90

PY-7

v. light

NVO

Narrow

v. light

30 mof
v. light

subd. v. C

subdiv. B

subdiv. A

Subdiv.
A

start 205 PM 4/1/90

NVO = No Visible
Oil

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

PY-7

ADEC Segment Length: 512m

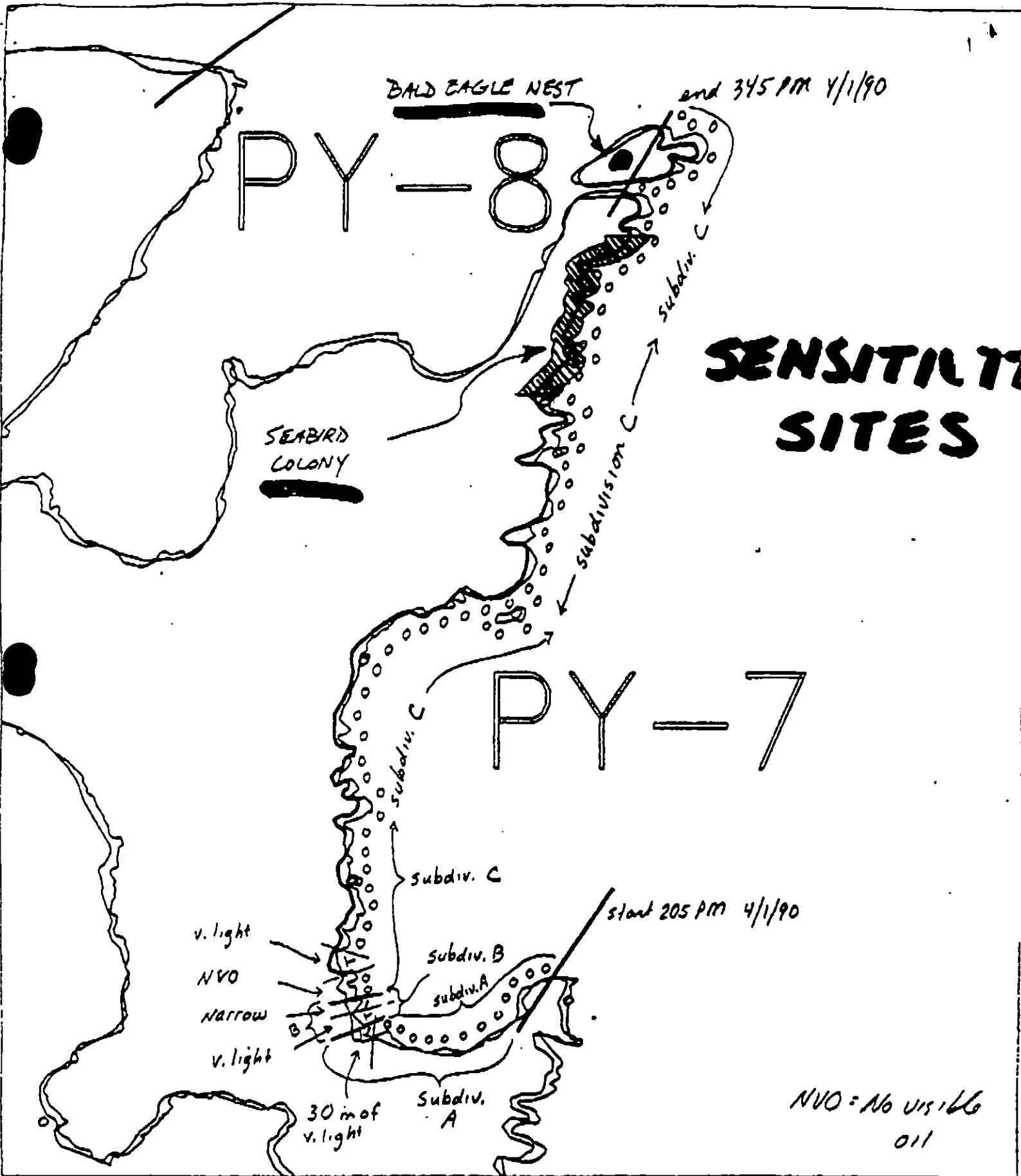
0 500 500 900

Map Key: KEN-102

Name: Marr

Date: 4/1/90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

PY-7

ADEC Segment Length: 512m



Map Key: KEN-102

Name: Mann

Date: 4/1/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-07 SUBDIVISION B (2 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 7/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (400).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict air traffic to essential minimum. Air approach from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: Charles Z. Hahn DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 63 m: V.Light 60 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </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: Manual removal of oiled trash and debris. Work done ASAP before 5/1 weather and safe access permitting.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC Art Weir D. H. Deane

EXXON ANDY ISAL Paul

NOAA Burt Weir Burt Weir

USCG KENNETH KEANE Kenneth Keane

FOSC: DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET 7

SEGMENT ST / PY 07 SUBDIVISION: B DATE APRIL 1, 1990USEG NOAANAME JACQUI MICHEL SIGNATURE J. Michel☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of oiled debris only. MOST OF THE REMAINING SHORELINE OIL IS ON THE UPPER/SUPRA TIZ ON A VERTICAL ROCK WALL - NOT AMENABLE TO MANUAL REMOVAL/BIOREMEDIATION.

ADECNAME JOHN R. REEDSIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual Removal of oiled debris. Due to the lack of oil removal technology, and location of the oil at the site, the contamination will be very hard to remove.

LAND MANAGER - USFWSNAME Mary PortnerSIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Remove oiled net, boom and debris. Due to the nature and location of the oil, current cleanup technology will not provide adequate treatment for oil on the boulders, bedrock and rock face.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mann USCG/NOAA ELICHEL SEGMENT ST/ PY-7
 BIO Can LAND REP Partners - FWS SUBDIVISION B
 EXXON Boyer ADEC REED TIME 14:20 to 15:15
 TEAM NO.: 18 TIDE LEVEL: +1.4 to +3.5 DATE 4/1/1990
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 40 % B 59 % C 1 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 35 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 30 m N 304 m VL 50 m NO 10 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	R	SP	OR	OL	OF	NO	TL	TR	LR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED				✓		✓								✓		
COVER				✓				✓					✓	✓		
COAT		✓	✓	✓				✓					✓	✓		
STAIN		✓	✓	✓				✓					✓	✓		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL														✓	✓	

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

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS NA

Photographs:

Roll No. NoneFrames NoneSUBSURFACE OIL NO PITS DWG because substrate is bedrock and lg. boulder

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	SP	OR	OL	OF	NO	TL	TR	LR	SU	U	M	L		
1							-																
							-																
							-																
							-																
							-																
							-																

COMMENTS

This subdivision is at back of the shallow bay in PY-7. Its unifying features are splashes of CT to CV by black oil residue evident on boulder and bedrock surfaces in the upper and supratidal zones. Oily debris and trash are trapped between boulders. We noted little change in oiling conditions here from August 1989. Wave erosion of oil is slight.

Access is difficult and foot travel treacherous.

OG Mann

SKETCH MAP

← N
~10m

SEGMENT ST/ PY-7

SUBDIVISION B

DATE 4/1/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Sub Entry
- ☒ Oil Dist.
- ☒ Depth
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Est. HML/AWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pt - No Subsurface Oil
- 2 Δ
Pt - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Spotted Distribution
- Oiled Vegetation
1 →
- Photo location, direction, and number

1 to 2m of 25% coverage by CT and ST

40% cover by CT and ST partially weathered by waves

60% cover by CT and ST partially weathered by waves

ST/S, CT/S, CV/S
20m x 15m
with CV/S to Po/S under boulders

CT/S and CV/S ~5% coverage

CV/S and CT/S ~25%
15m x 10m

(base = upper limit of UITE)
(SSL = +10m height on cliffs)

Oil Character Length (m): AP 0 PO 20 CV 35 CT 35 ST 35 MS 0 PT 0 TB 0 FL 0 NO 10

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / PY-7 Subdivision B (of A-C) Date (mo / day / yr) 4 / 1 / 90
 Time (24 hr) 1433 Biologist M. CARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 5 (2) Boulder 95 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense — Moderate — Low 100%
- (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. —
 Frames NONE

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

NONE!

Ecological Considerations:

Sensitivity codes: see PY-7-A sheet

ST
4 & 6

PY-8

and 345 PM 7/1/90

PY-7

v. light
NVO
narrow
v. light

subdiv. C
subdiv. B
subdiv. A
30 m of v. light
Subdiv. A

Start 205 PM 4/1/90

NVO = No Visible Oil

XXXX Wide
//// Medium

PY-7

---- Narrow

ADEC Segment Length: 512m

TTTT Very Light

0000 No Oil

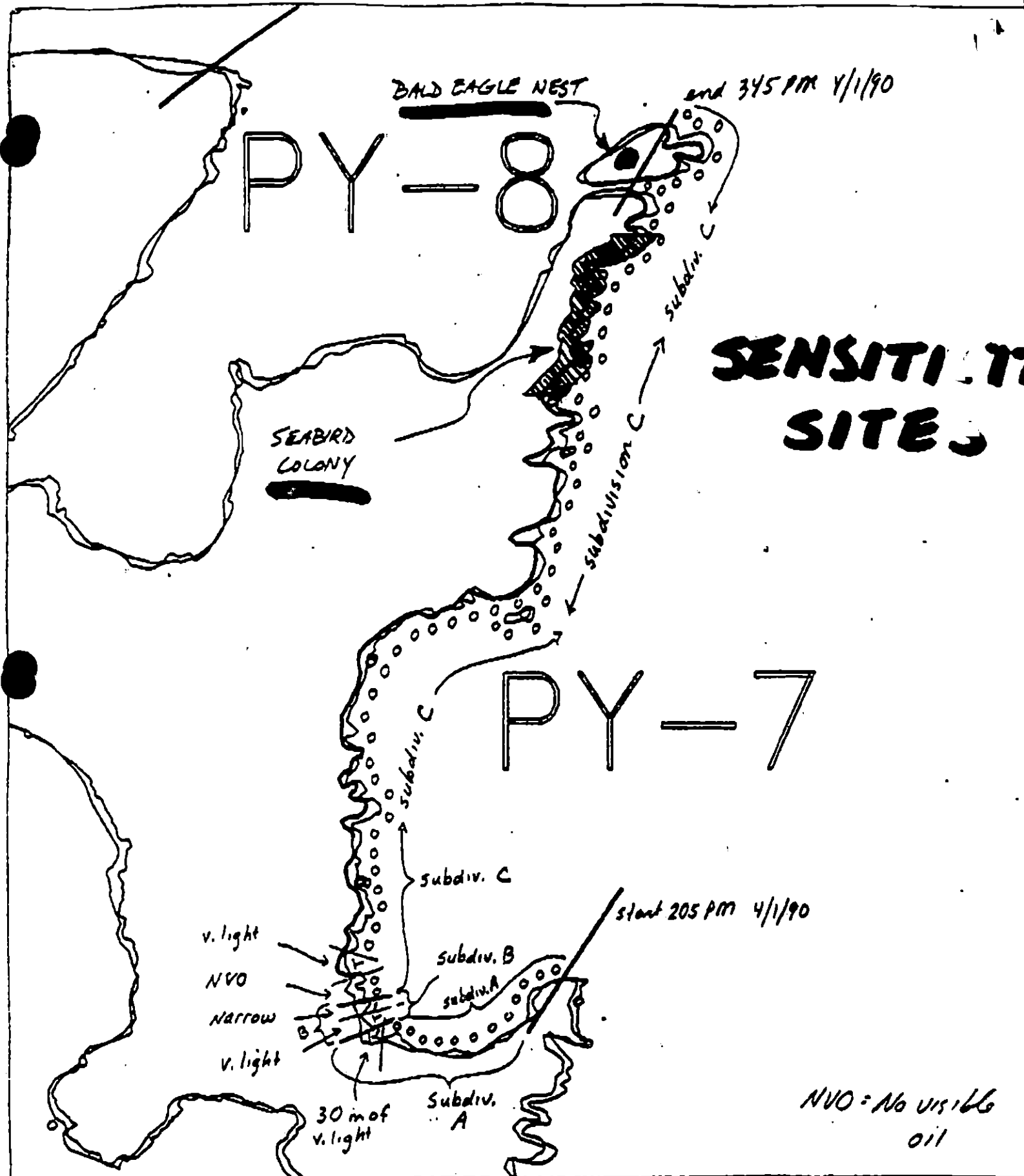


Map Key: KEN-102

Name: Mann

Date: 4/1/90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

PY-7

ADEC Segment Length: 512m



Map Key: KEN-102

Name: Mar

Date: 4/1/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-07 SUBDIVISION C (3 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 7/1; Seabird colony (5R) - 5/1 to 9/1; National Wildlife Refuge (4QQ).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict air traffic to essential minimum. Air approach from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: Charles J. Holmes DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 126 m: No Oil 5071 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Warner Int. Affairs

EXXON Andr. Tetz Reg.

NOAA Burt Wescott Bureau of Oceanography

USCG Kenneth Keane Commander

FOSC: DEY DATE: 4-22-90

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PY-7
 BIO CARR LAND REP PORTNER - PWS SUBDIVISION C
 EXXON BOYER ADEC REED TIME 16:05 to 14:20
 TEAM NO.: 18 TIDE LEVEL: +1.2 to +4.1 DATE 7/1/90
 EST. SUBDIVISION LENGTH: 5400 m 5919 ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 35 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 150 m NO 5250 m
 5769

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	5	1	0	10	5	1	0	10	5	1	0	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S N/A sq. m by N/A cm

PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE N/A

#BAGS N/A

Photographs:

Roll No. None

Frames None

SUBSURFACE OIL No pits because of inaccessible bedrock

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DB)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	10	5	1	0	10	5	1	0	SU	U	M	L		
C.							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

This is a high wave-energy shoreline of spectacular granite cliffs and irregular coves. Calm seas, dry rocks, and a close inspection by boat makes me confident that no oil exists here.

OG MANU

SKETCH MAP

SEGMENT ST/ PY-7

SUBDIVISION C

DATE 4.1.1 90

CHECKLIST

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

LEGEND

1 

Pit - No Subsurface Oil

2 

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oil Vegetation

1 

Photo location, direction,
and number

No sketch provided.

Oil Character Length (m): AP 0 PO 0 CV 150 CT 150 ST 0 MS 0 PT 0 TB 0 FL 0 NO 510
5250

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/90

Segment ST / PY-7 Subdivision C (of A-C) Date (mo / day / yr) 4 / 1 / 90
 Time (24 hr) 1405 Biologist M. LARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 90 (2) Boulder 10 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
 (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 70 Moderate 20 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. —

Frames NONE

BARNACLES

	Dense	Moderate	Sparse	Rare	
→ 1U	<u>3</u>	<u>2</u>	<u>1</u>	<u>1</u>	
→ 2	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	
3	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	
4	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	NOT PRESENT
5	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	
6	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	

MYTILUS

	Dense	Moderate	Sparse	Rare	
→ 1U	<u>1M</u>	<u>1L</u>	<u>1U</u>	<u>1M</u>	
→ 2	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	
3	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	
4	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	NOT PRESENT
5	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	
6	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	

GASTROPODS

	Dense	Moderate	Sparse	Rare	
→ 1U	<u>1M</u>	<u>1L</u>	<u>1U</u>	<u>1M</u>	
→ 2	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	
3	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	
4	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	NOT PRESENT
5	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	
6	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	

FUCUS

	Dense	Moderate	Sparse	Rare	
→ 1U	<u>1M</u>	<u>1L</u>	<u>1U</u>	<u>1M</u>	
→ 2	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	
3	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	
4	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	NOT PRESENT
5	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	
6	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	

Wildlife Observations/ General Comments:

Ecological Considerations:

Sensitivity codes: Same as PY-7-A

EAGLE NESTS (ST)
 NATIONAL WILDLIFE REFUGE (U & G)

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY-7 SUBDIVISION: C DATE 4/1/90USCG/NOAANAME JACQUI MICHEL SIGNATURE J. Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The v. light oil on this exposed rocky shore does
not warrant further treatment.

ADECNAME JOAN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very light splashes on bedrock and large boulders.
I have read and agree with all information on SSAT forms.

LAND MANAGER - USFWSNAME Mary Partner SIGNATURE Mary Partner☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Due to the amount and location of the oil in this
subdivision treatment would be difficult.

PY-8

and 345 PM 7/1/90

PY-7

v. light

NVO

Narrow

v. light

30 m of
v. light

Subdiv. B

subdiv. A

Subdiv. A

start 205 PM 4/1/90

NVO = No Visible
oil

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

PY-7

ADEC Segment Length: 512m

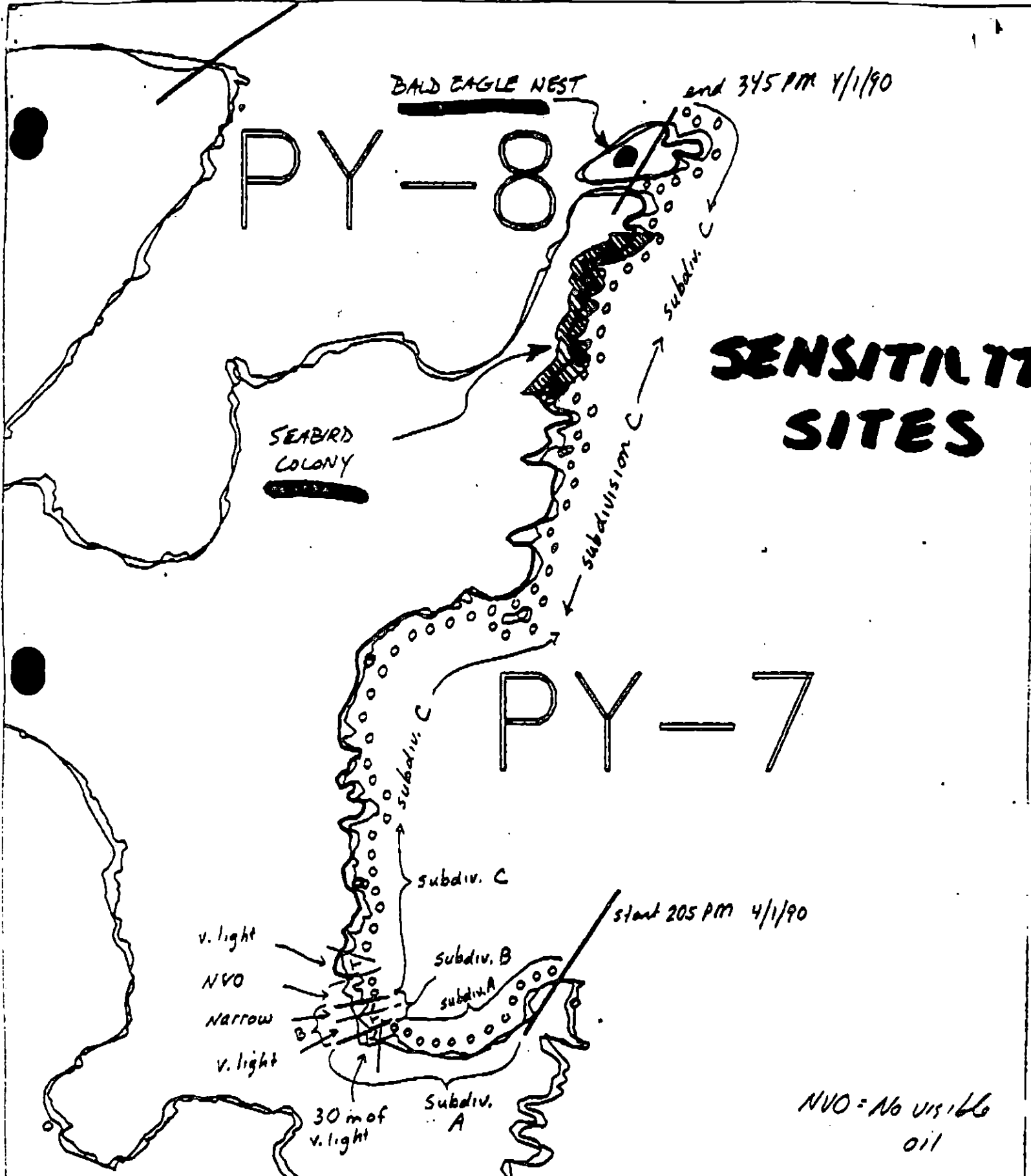


Map Key: KEN-102

Name: Mann

Date: 4/1/90

Date Entered:



SENSITIVITY SITES

XXXX Wide	PY-7	Map Key: KEN-102
//// Medium	ADEC Segment Length: 512m	Name: <u>Marr</u>
--- Narrow		Date: <u>4/1/90</u>
TTTT Very Light		Data Entered:
OOOO No Oil		

SHORELINE EVALUATION

SEGMENT ST/ PY-008 SUBDIVISION A (1 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Bald eagle nest (3/1 to 9/1)

4QQ National Wildlife Refuge.

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Farmer DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 735 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat: Breakup
 Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Wanner Dyt Wanner

EXXON Arvo Tera Arvo Tera

NOAA Burt Werroft Burt Werroft

USCG Kenneth Keane Kenneth Keane

FOSC: My L DATE: 4-12-90

KODIAK ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
 1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
 1H Remote release site
 1I Gill net area
 1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1.
 East side Kodiak, East side Afognak - 7/4 to 10/1.
 1K Purse seine hook-off
 1L Set net sites
 USFWS setnet uplands permit 5/15 to 9/15.
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/15 to 6/30)
 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 (5/10 to 6/30)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 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 8/31)
 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 (8/1 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 (6/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/1 to 1/7)
 7JJ Invertebrate harvesting
 7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY-8 SUBDIVISION: A DATE 3/30/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NO OIL FOUND.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NO OIL SPOTTED. I have read and agree with all
information on S.S.A.T. Form.

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner

☒ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

no oil observed.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 08 SUBDIVISION: A Through F DATE 30 MAR 90

USEG NOAA

NAME JACQUI MICHELSIGNATURE J Michel☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted to the point that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REEDSIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I Am recommending some type of manual removal for subdivisions A.-F, such as shore hard trowel. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT forms. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary PortnerSIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand trowels, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil could also benefit from small scale manual removal of mousse patches. I feel this was a good survey and the SSAT forms.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

COG Mann USCG Michel SEGMENT ST/ PY-8
 BIO Carr LAND REP Partner SUBDIVISION A 1046
 EXXON Boyer ADEC Reed TIME 6:45 to 7:00
 TEAM NO.: 18 TIDE LEVEL: 14 to 12 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 250 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 70 % B 30 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 250 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	S	P	R	BR	RW	SL	TL	LB		SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											SN	✓	✓	✓

PAVEMENT: H F S NO sq. m by 0 cm

PATTIES / TARBALLS NO BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 18-1

Frames 1-2

SUBSURFACE OIL * NO PITS NO LANDING

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		UD	UC	BR	RW	SL	TL	LB		SU	U	M	L		
C																					

COMMENTS * No pits dug.

We inspected this shoreline by small boat. I have no reason to suspect the presence of subsurface oil.

7W 4/8/90

OG MANAI

SKETCH MAP

SEGMENT ST/ PYKEE

SUBDIVISION A

DATE 30 / Mar 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/L/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Ptg Location(s)
- ☐ Photo Location(s)

LEGEND

1 

Ptg - No Subsurface Oil

2 

Ptg - 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

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 750

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST/ PYOB Subdivision A (OF A-F) Date (mo / day / yr) 3/30/90Time (24 hr) 0645 Biologist M. CARR(A) Substrate type and % of segments SUBSTRATE
(1) Bedrock 70 (2) Boulder 30 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): SUBSTRATE
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 (O)

Photographs: 1
Roll No. 1Frames 52

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

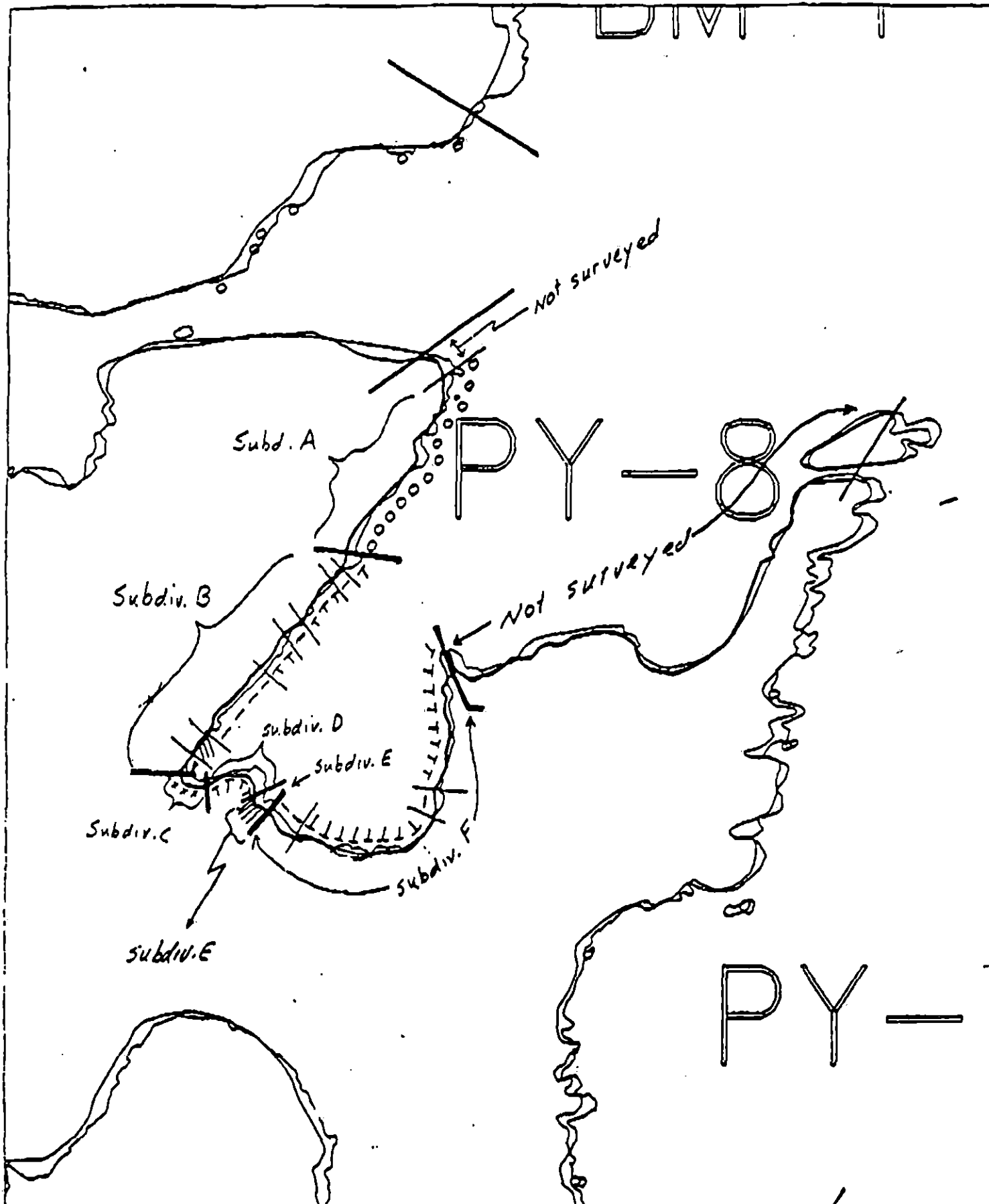
	Dense	Moderate	Sparse	Rare	
→ 1U	1M	1L	1U	1M	1L
→ 2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
					(2) X = NOT PRES. NOT PRESENT

Wildlife Observations/ General Comments:

White-winged scoter (2) Glaucous-winged gull (0)
 Bald eagle (2 adults + 2 imm.)
 Red-tailed cormorant (1) Harlequin duck (10) } For entire PYOB Segment

Ecological Considerations:

(1) Dense cover of other algae in low intertidal includes: Alaria,
 crustose coralline,
 "Rhodoglossum"
 "Plocamium"
 Halosaccion
 Another fairly red



XXXX Wide
 /// Medium
 --- Narrow

PY-8

ADEC Segment Length: 5970m

Map Key: KEN-96

Name: Mamr

SHORELINE EVALUATION

SEGMENT ST/ PY-008 SUBDIVISION B (2 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Bald eagle nest (3/1 to 9/1)

4QQ National Wildlife Refuge.

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles Z. Holmes

DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 97 m: Narrow 479 m: V.Light 391 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

 No Treatment Recommended

 X Treatment Recommended

 X Manual Pickup

 X Bioremediation

 X Tarmat: Breakup

 X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of mousse and removal of tarmat in area shown on attached sketch map. Conduct treatment activities after 6/1 per above eagle constraints and obtain approval from ADF&G and USFWS.

BIOREMEDIATE AS INDICATED ON SKETCH FOLLOWING MANUAL REMOVAL

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weiner Art Weiner

EXXON Andy Teal Andy Teal

NOAA Bruce Wescott Bruce Wescott

USCG Kenneth Kethan Kenneth Kethan

FOSC: ML

DATE: 5-3-90

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 (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 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 / PY-8 SUBDIVISION: B DATE 3/30/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE *J. Michel*

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Removal of pavement and mousse patches in areas marked medium and narrow.

ADEC

NAME John R. Reed SIGNATURE *John R. Reed*

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual Removal of asphalt and mousse patches will be possible with a shovel or hand trowel. Pom Poms could also be helpful on mousse between boulders. I have Read and agree with all information on S.S.A.T. Form.

LAND MANAGER - USFWS

NAME Mary Butner SIGNATURE *Mary Butner*

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Asphalt pavement (see map) should be removed. Mousse/patches should be removed using hand trowels, shovels, pom poms.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 08 SUBDIVISION: A Through F DATE 30 MAR 90~~USEG~~ NOAANAME JACQUI MICHEL SIGNATURE J. Michel☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted to the point that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I Am recommending some type of manual removal for subdivisions A.-F, such as shown + Rowel. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT forms. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand trowels, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil could also benefit from small scale manual removal. I feel this was a good survey and

SHORELINE OILING SUMMARY

CG Mann USCG Michel SEGMENT ST/ PY-8
 O Carr LAND REP Portner - RWS SUBDIVISION B
 EXXON Boyer ADEC Reed TIME 7:00 to 7:30
 TEAM NO.: 18 TIDE LEVEL: +2 to +1 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 990 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 70 % B 30 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 90 m N 486 m VL 414 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	10	15	17	18	19	20	21	22	SU	U	M	U
ASPHALT PAVEMENT				✓				✓		✓		
POOLED												
COVER				✓				✓		✓		
COAT			✓					✓		✓		
STAIN			✓					✓		✓		
MOUSSE			✓					✓		✓		
PATTIES												
TARBALLS												
FILM			✓					✓		✓		
NO OIL									SN		✓	✓

PAVEMENT: H (F) S 5 sq. m by 8 cm

PATTIES / TARBALLS 30 30 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			
	SM	MD	LG	
Logs				DEBRIS COLLECTED ☐ YES ☒ NO
Vegetation				
Trash				
Debris				
				TYPE <u>—</u>
				#BAGS <u>—</u>

Photographs:

Roll No. 18-1

Frames 3-6

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		UD	UC	20	21	22	23	SU	U	M	U		
1	20		✓				0-10		✓				✓		✓			NO	BC
2	15		✓				0-15	✓					✓		✓			NO	BC

COMMENTS

This is a steep, rocky coast with 2 areas of 1m wide x 10m long CT to CV by dark brown mousse set within an otherwise narrow to very light stretch of oil character. The NE part of this shoreline has no visible oil. There is a virtual absence of debris (oiled or clean). Pit locations shown on segment map

at 1 and 2

OG MA

SEGMENT ST/ PI-8

SUBDIVISION B

DATE 3 / 30 / 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. H/W/L/V/L
- ☐ SSR
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

- 1
 PI - No Subsurface Oil
- 2
 PI - Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Oil Vegetation
- Photo location, direction, and number

NO-OIL.

No sketch map.

See attached oil
categorization map for
oil distribution.

revised by
Darr Mann

4/10/90

Oil Character Length (m): AP 5 PO 0 CV 110 CT 350 ST 350 MS 100 PT 0 TB 0 FL 0 NO 350

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / PY08 Subdivision B Date (mo / day / yr) 3/30/90Time (24 hr) 0700 Biologist M. CARR(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 30 (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: 1
Roll No. Frames 3-6

BARNACLES

	Dense		Moderate			Sparse			Rare			
→ 1U	<u>30</u>	1L	<u>30</u>	1M	1L	1U	1M	<u>30</u>	1U	1M	1L	
→ 2	2	2	<u>30</u>	<u>30</u>	2	2	2	<u>30</u>	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

	Dense		Moderate			Sparse			Rare			
→ 1U	1M	1L	1U	<u>30</u>	1L	1U	1M	1L	<u>30</u>	1M	<u>30</u>	
→ 2	2	2	2	2	2	2	<u>30</u>	2	<u>30</u>	2	<u>30</u>	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

	Dense		Moderate			Sparse			Rare			
→ 1U	1M	1L	<u>30</u>	<u>30</u>	<u>30</u>	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	<u>30</u>	<u>30</u>	<u>30</u>	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

	Dense		Moderate			Sparse			Rare			
→ 1U	1M	1L	1U	<u>30</u>	<u>30</u>	<u>30</u>	1M	1L	1U	1M	1L	
→ 2	2	<u>30</u>	2	<u>30</u>	2	2	2	2	2	2	2	(2) U = NOT PRES.
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
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	

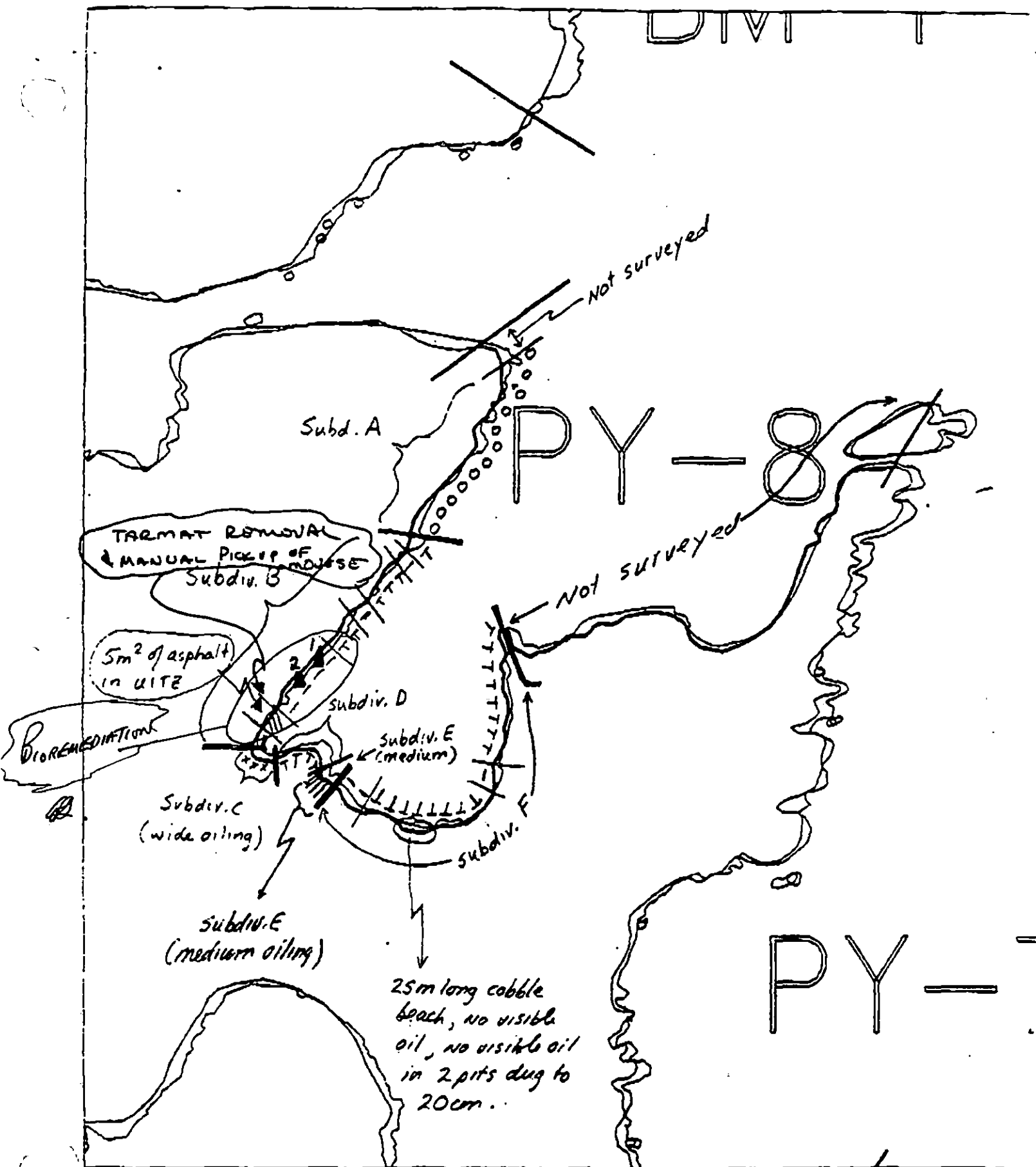
Wildlife Observations/ General Comments:

Included in subdivision A sheet.

Ecological Considerations:

① Same as subdivision A sheet

Sensitivity codes: 5T



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PY-8

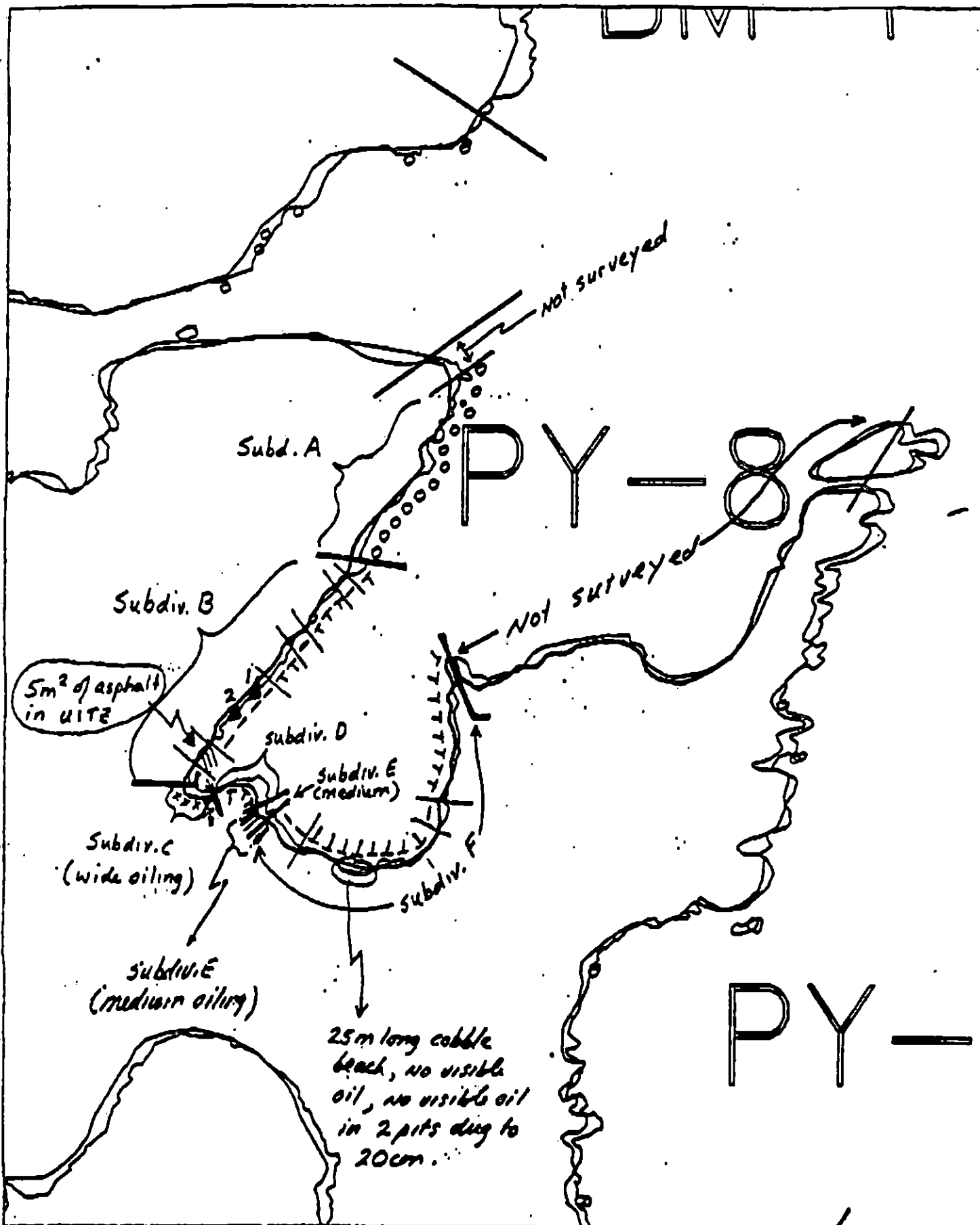
ADEC Segment Length: 5970m

450

60

Map Key: KEN-96

Name: MamrDate: 3/30/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PY-8

ADEC Segment Length: 5970m

45° 60 1:18,000

0 300 600 900

Map Key: KEN-96

Name: Mann

Date: 3/30/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-8 SUBDIVISION B (2 of 6)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Bald eagle nest is outside Subdivision B of Segment PY-8 and more than 400m from work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

DATE

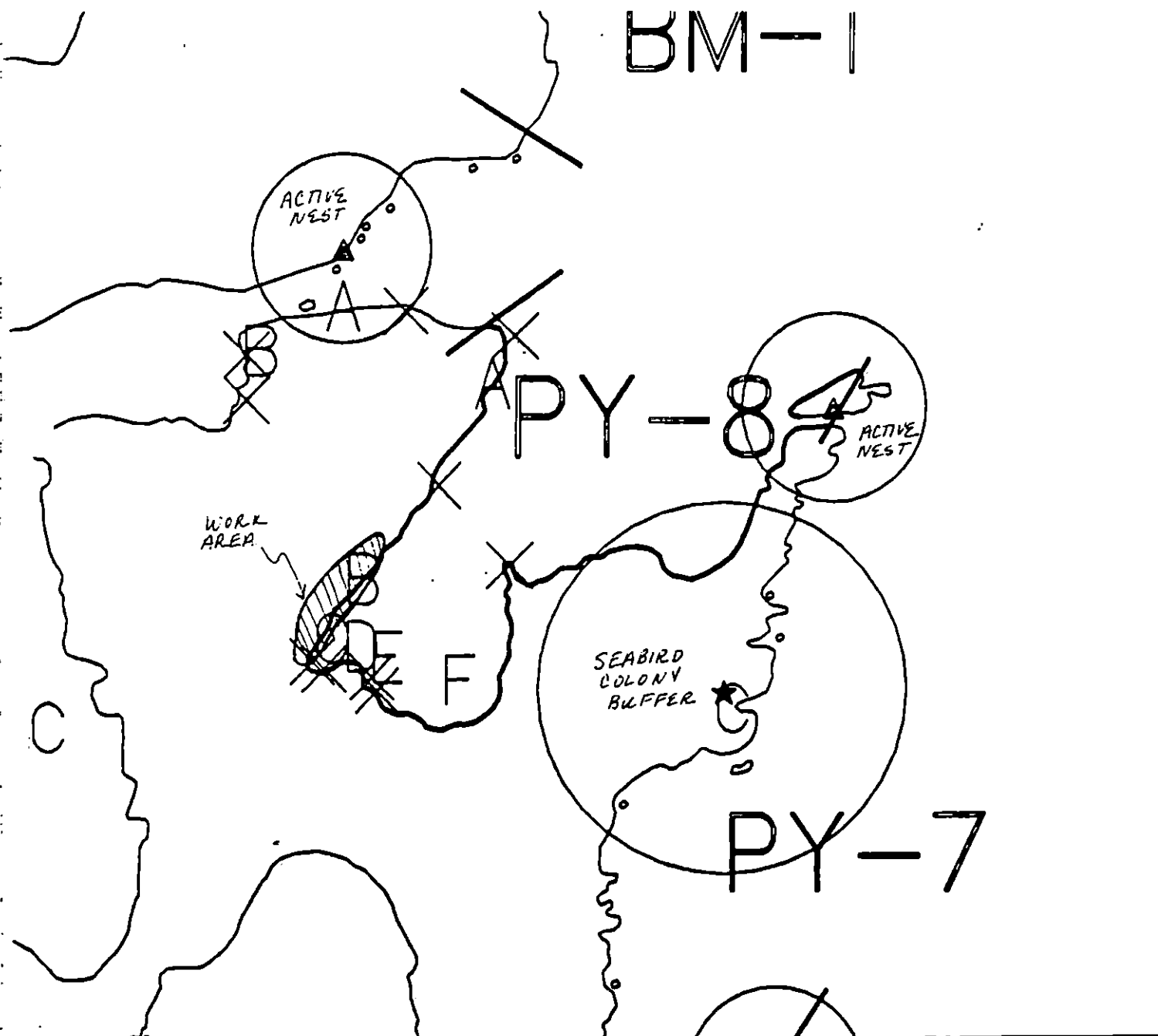
6/13/90

Prepared By:

[Signature]

Date

6/12/90



Exxon Company, USA

Map Key: KEN-PY-8

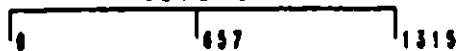
June 10, 1990

ECOLOGY MAP

SEGMENT PY-8

SUBDIVISION B (2 of 6)

METERS



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

1 inch = 2157 feet

SHORELINE EVALUATION

SEGMENT ST/ PY-008 SUBDIVISION C (3 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Bald eagle nest (3/1 to 9/1)

4QQ National Wildlife Refuge.

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hume

DATE: 4/17/90

OILING CATEGORIZATION:

Wide 110m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of mousse and bioremediation of broken cover. Conduct treatment activities after 6/1 per above eagle constraints and obtain approval from ADF&G and USFWS.

USE HAND TOOLS TO REMOVE MOUSSE AMONGST BOULDERS. MECHANICAL EQUIPMENT MAY BE APPROPRIATE TO ACCESS MOUSSE. FEASIBILITY OF BACKHOE USE TAG COMMENTS: MUST BE DETERMINED BY OPERATIONS + MONITORS PRIOR TO MOBILIZATION.

TAG APPROVAL DATE: 4/17/90

ADEC Art Weiner

EXXON Andy Tetz

NOAA Burt Warratt

USCG Kenneth Keane

FOSC: H L

DATE: 5-3-90

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 (8/7 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 uncoiled 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 (8/1 to 9/15)
6V	Anchorage (8/1 to 9/15)
6W	Forest Service cabins (8/1 to 9/15)
6X	Lodge (8/1 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 / PX-8 SUBDIVISION: C DATE 3/30/90USCG/NOAANAME JACQUI MICHEL SIGNATURE _____☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual removal of mousse/patties on this pocket beach is highly recommended. Bioremediation should be considered, but only after manual removal of the thick oil deposits. But, manual removal will have to be conducted to the point where bioremediation would be effective, i.e., removal of the mousse to a coat/cover.

ADECNAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual Removal of mousse with shovel or hand trowel. Cobbles and boulders could be turned over and scraped without causing any erosion. I tested this method in the field and feel that it is a viable form of cleanup. This site could also be considered for bio remediation after manual cleanup. I have read and agree with all information on S.S.A.T. Form

LAND MANAGER - USFWSNAME Mary PortnerSIGNATURE Mary Portner☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I recommend manual removal of the mousse/patties using trowels, pom poms etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to > 10cm. It would be beneficial to turn many of the cobbles and small boulders and remove the mousse on the underside of the rocks and down to clean substrate. I feel this was a good survey and concur with the information on the

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 08 SUBDIVISION: A Through F DATE 30 MAR 90

~~DEC~~ NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted in the print that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I am recommending some type of manual removal for subdivisions A-F such as shovel and crowbar. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT FORMS. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand tools, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil could also benefit from small scale manual removal of mousse patches. I feel this was a good survey and I concur with the information on the SSAT forms.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG MANN USCG/NOAA MICHEL SEGMENT STI PY-8
 BIO CARR LAND REP PARTNER-FWS SUBDIVISION C
 EXXON BOYER ADEC REED TIME 7:30 to 9:30
 TEAM NO.: 18 TIDE LEVEL: +2 to -2 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 130 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 70 % C 20 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 20 m M 20 m N 0 m VL 0 m NO 0 m
MC MC MC

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cm
 total mousse
 PATTIES/TARBALLS 2000 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

oiled
 DEBRIS COLLECTED
☒ YES ☐ NO

TYPE MOUSSE

#BAGS 2

Photographs:

Roll No. 18-1

Frames 6-14

*SN = SNOW

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			1	2	3	4	5	6	7	8	SU	U	
1	15		✓				0-10	✓							✓		✓		NO (CPE) throughout
2	10	✓					0-5	✓							✓		✓		" "
3	40					✓	0-0	-							-		✓		" "
4	30		✓				0-3	✓							✓			✓	" "
5	15	✓					0-6	✓							✓		✓		" "
6	20	✓					0-5	✓							✓		✓		" "

COMMENTS

The winter storm berm is surprisingly clean. Abrasion by moving cobbles
 has cleaned most of the stones in this low berm. Seaward erosion of
 last year's oiled surface has transferred material into this berm.
 Bedrock and sediments are granitic so oil shows up well.

SHORELINE OILING SUMMARY (PAGE 2 of)

REVISION 03/22/90

SEGMENT ST/ PY-8 SUBDIVISION C

SUBSURFACE OIL (CONTINUED)

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		VO	UC	SL BT	OR FM	SL BL	SL BT	SL BT	SU	U	M	U			
7	20					✓	- - -	-	-								✓		NO (BL) throughout		
8	10		✓				0-3		✓						✓			✓	NO " "		
9	35					✓	- - -									✓		NO " "			
10	20	✓					0-5		✓					✓		✓		NO (CPG) throughout			
11	15					✓	- - -									✓		NO (CB) throughout			
12	20				✓		0-20	✓				SL				✓		NO (CG) Throughout			
							.														
							.														
							.														
							.														
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							.														
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							.														
							.														

COMMENTS

Regarding pits :

- #1 boulder armor, pit at upslope edge of surface oiling
- #4 a single patty, 10cm², underlies surface boulders here
- #9 dug in 1989/90 winter storm berm
- #10 ends on top of boulder or bedrock
- #11 dug in 1989/90 winter storm berm
- #12 silver sheen in water, dug in 1989/90 winter storm berm

REVIEWED 7W DATE 4/9/90

OG IN
 SEGMENT STI PY-8
 SUBDIVISION C
 DATE 3, 30 90

- CHECKLIST**
- ☒ N Arrow
 - ☒ Approx. Scale
 - ☒ Sop/Sub Bdry
 - ☒ Oil Dist.
 - ☒ Width
 - ☒ Length
 - ☒ % Cover
 - ☒ Substrate Character
 - ☒ Est. H/W/L/W/L
 - ☒ SSL
 - ☒ Profile Location(s)
 - ☒ Profile(s)
 - ☒ Pit Location(s)
 - ☒ Photo Location(s)
 - SEE NOTES

- LEGEND**
- 1 ▲ Pit - No Subsurface Oil
 - 2 ▲ Pit - Subsurface Oil
 - CT/C Continuous Distribution
 - CT/B Broken Distribution
 - CT/P Patchy Distribution
 - CT/S Splashed Distribution
 - Oiled Vegetation
 - 1 ● Photo location, direction, and number
- Oil Character Length (m): AP PO CV CT ST MS PT TB O FL NO IO

SKETCH MAP
 inner Morning Cove

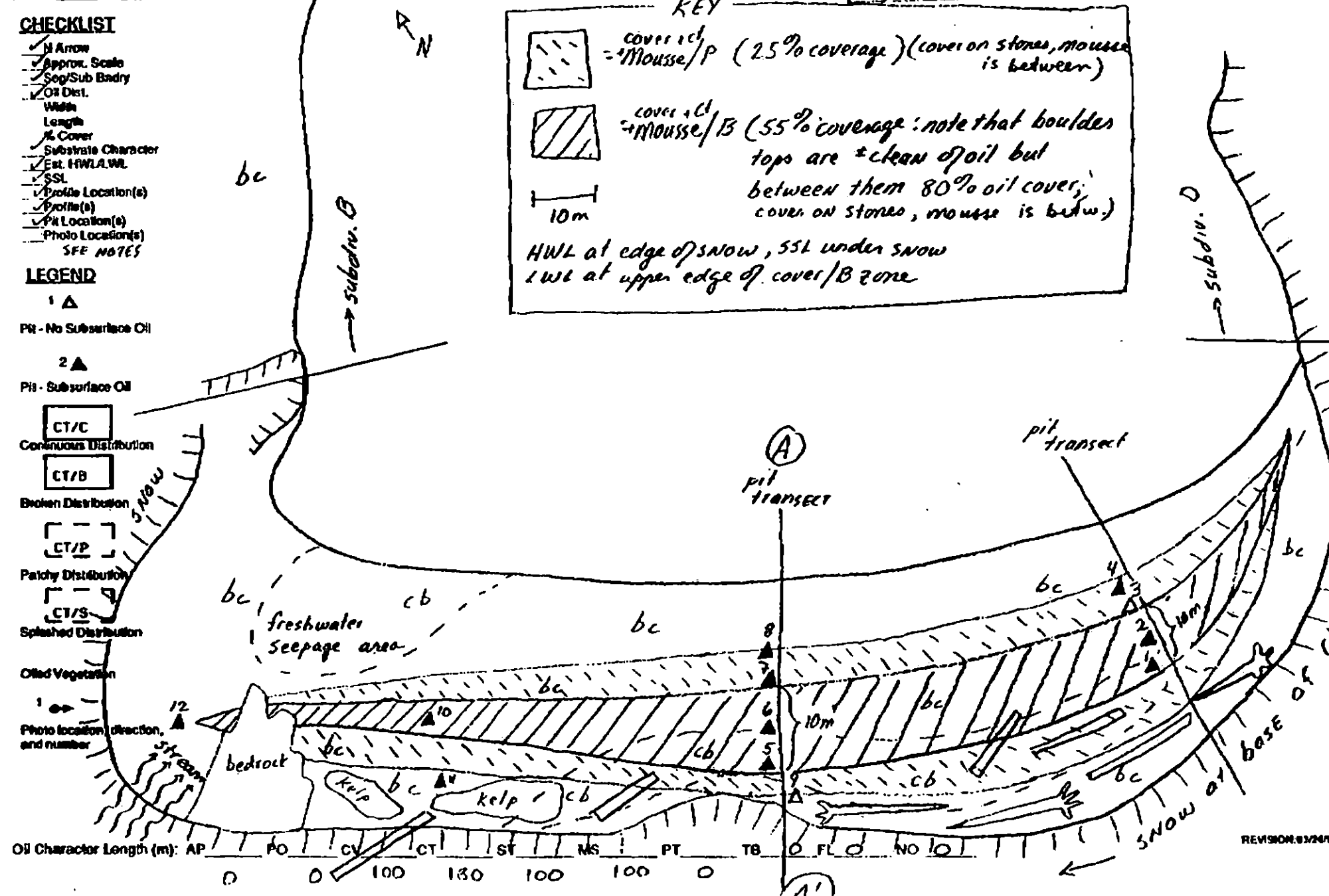
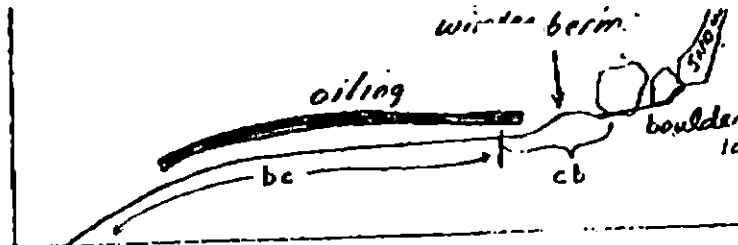
KEY

cover 1/4
 = Mousse/P (25% coverage) (cover on stones, mousse is between)

cover 1/2
 = Mousse/B (55% coverage: note that boulder tops are *clean of oil but between them 80% oil cover; cover on stones, mousse is betw.)

10m

HWL at edge of snow, SSL under snow
 LWL at upper edge of cover/B zone



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST / PY08 Subdivision C Date (mo / day / yr) 3/30/90

Time (24 hr) 0800 Biologist M. LARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 10 (2) Boulder 70 (3) Cobble 20 (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 10 Moderate 40 Low 50
- (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: 1
 Roll No. 1

Frames 7-14

BARNACLES

	Dense		Moderate		Sparse		Rare		
→ 1U	2	1L	1U	1M	1L	1U	1M	1L	LOW ZONE w/ NO BEDROCK
→ 2	2	2	X	2	2	2	2	2	
→ 3	3	3	3	3	3	3	3	3	NOT PRESENT (all 3 zones)
4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	

MYTILUS

	Dense		Moderate		Sparse		Rare		
→ 1U	1M	1L	1U	1M	1L	1U	1M	1L	NOT PRESENT in upper zone
→ 2	2	2	2	2	2	2	2	2	LOW ZONE w/ NO BEDROCK
→ 3	3	3	3	3	3	3	3	3	all 3 zones
4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	

GASTROPODS

	Dense		Moderate		Sparse		Rare		
→ 1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	2	2	2	
→ 3	3	3	3	3	3	3	3	3	NOT PRESENT (all 3 zones)
4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	

FUCUS

	Dense		Moderate		Sparse		Rare		
→ 1U	1M	1L	1U	1M	1L	1U	1M	1L	1L - NOT PRESENT U, M; LOW w/ bedrock
→ 2	2	2	2	2	2	2	2	2	2 - 4 4 upper
→ 3	3	3	3	3	3	3	3	3	NOT PRESENT (all 3 zones)
4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

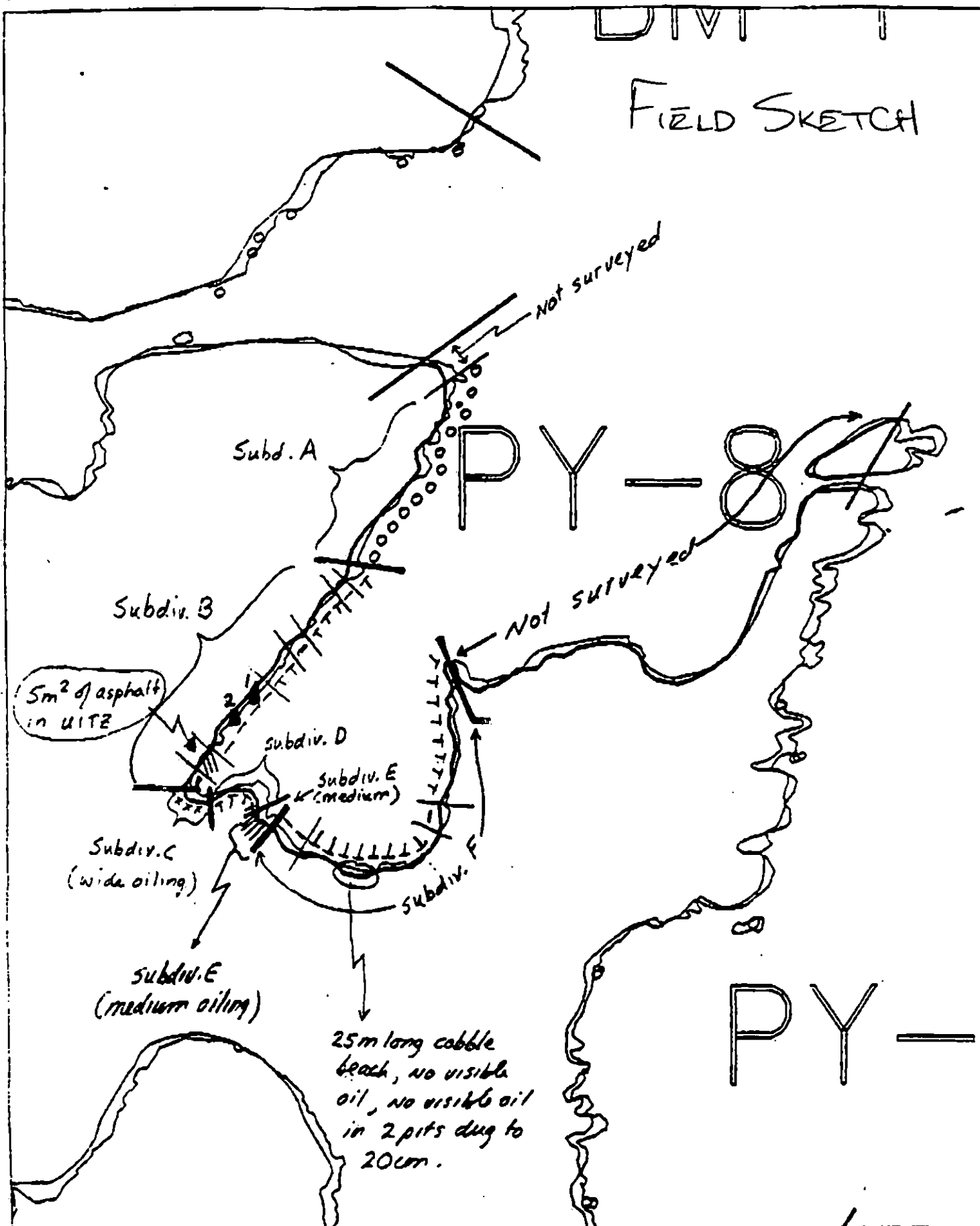
Summarized on subdivision A sheet.

Ecological Considerations:

① Same as subdivision A data sheet.

Sensitivity codes: 5T

FIELD SKETCH



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

PY-8

ADEC Segment Length: 5970m

Map Key: KEN-96

Name: Mann

Date: 3/30/9

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-8 SUBDIVISION C (3 of 6)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Hand Tools & Mechanical Equipment	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T **Bald Eagle Nest**

NO CONSTRAINT. Bald eagle nest is outside Subdivision C of Segment PY-8 and more than 400m from work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

6-10-90

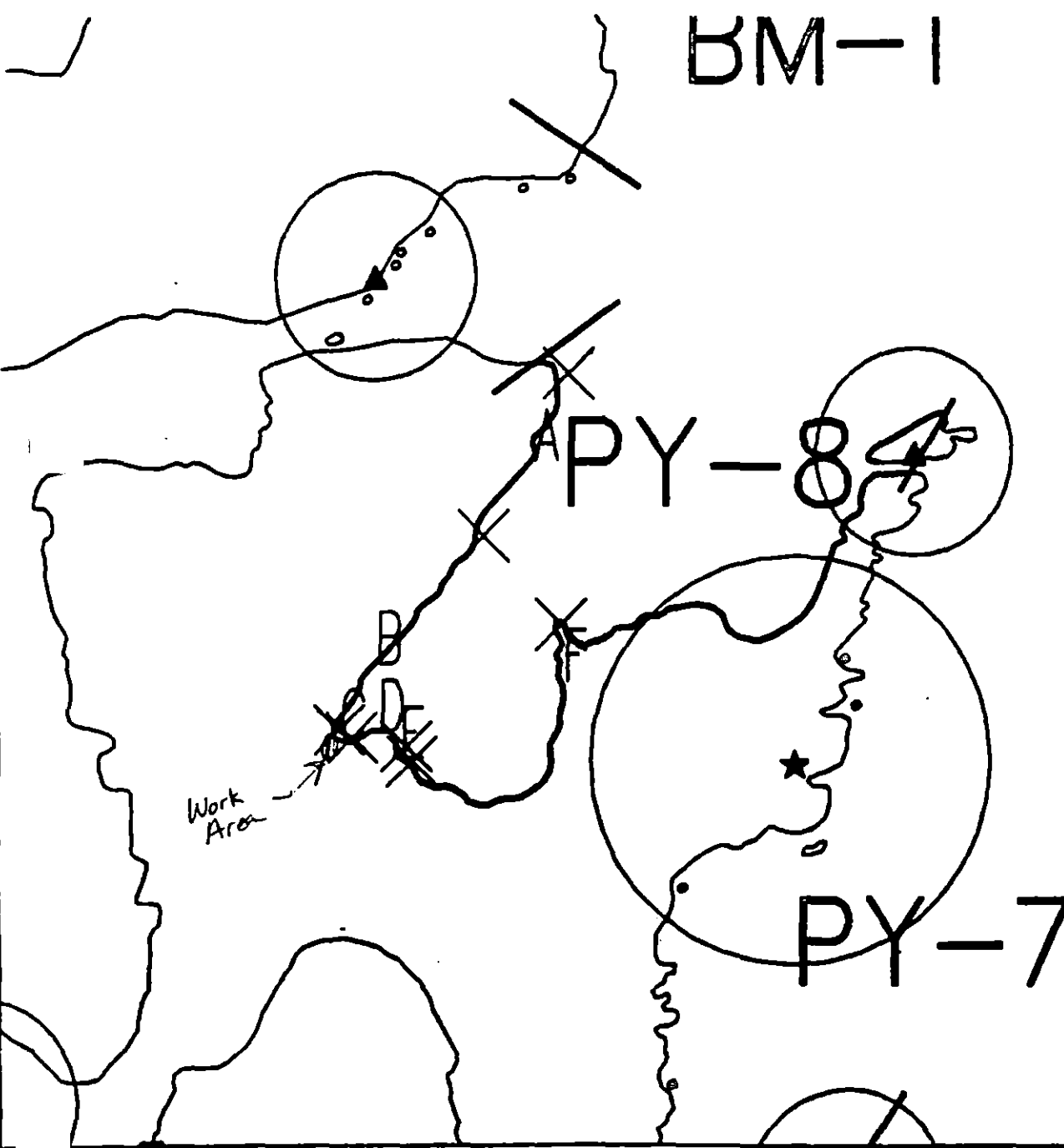
Prepared by

J.P. Phillips

6-10-90

Date

6/10/90



Exxon Company, USA

ECOLOGY MAP

SEGMENT PY-8

SUBDIVISION C (3 of 4)

METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PY-008 SUBDIVISION D (4 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Bald eagle nest (3/1 to 9/1)

4QQ National Wildlife Refuge.

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles Z. Adams

DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 234 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat: Breakup
 Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weimer
EXXON AWY Kat
NOAA Barl Weisatt
USCG KENNETH KIRBY

FOSC:

DATE: 4-22-90

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 (8/7 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 unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 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/ PY 8 SUBDIVISION: D DATE 3/30/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MOSTLY ROCKY HEADLAND - NO TREATMENT WARRANTED ON
ROCK FACE OILING

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

VERY Light oiling on bedrock outcrop. No treatment
Required. I have Read and agree with all information
on S. S. A. T. Form.

LAND MANAGER

NAME Mary Partner SIGNATURE Mary Partner☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very light oiling was noted on this bedrock projection. Due to
the character and amount of oil, available treatment methods
would be ineffective and may not be warranted.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 08 SUBDIVISION: A Through F DATE 30 MAR 90

USEG NOAA

NAME JACQUE MITCHEL SIGNATURE J. Mitche

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted in the event that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I am recommending some type of manual removal for subdivisions A-F such as shore had-rowel. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT forms. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand tools, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil could also benefit from small scale manual removal of mousse patches. I feel this was a good survey and I concur with the information on the SSAT forms.

SHORELINE OILING SUMMARY

REVISION NO. 02/28/90

OG Maan USCG Michel SEGMENT ST/ PY 8
 BIO Care LAND REP Pontier (USFWS) SUBDIVISION D
 EXXON Boyer ADEC Reed TIME 9:30 to 9:50
 TEAM NO.: 19 TIDE LEVEL: -2 to -2 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 180 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 80 % B 20 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 60 % Vert 40 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 180 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	R	P	B	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER			✓					✓			✓		
COAT			✓					✓			✓		
STAIN			✓					✓			✓		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										SN		✓	✓

PAVEMENT: H F S 00 sq. m by 10 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS NO	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. noneFrames noneSUBSURFACE OIL None

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		UC	UC	1	2	3	4	5	SU	U	M	U		

COMMENTS

No pits dug because bedrock at surface. Oiling is in the form of patches, 1-2m ^{and 2-4m long} wide, coat to cover w/ conifer needles, mostly on lee faces of rock. These patches have oil cover of about 60%. Oil cover of entire subdivision is ~10%.

SKETCH MAP

*no map drawn*OG MANUSEGMENT ST/ PK 8SUBDIVISION DDATE 3 / 30 90**CHECKLIST**

- ☐ Name
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt 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

Patched Distribution

CT/S

Splashed Distribution

Oil on Vegetation

→

Photo location, direction,
and number

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST / PY08 Subdivision D Date (mo / day / yr) 3 / 30 / 90Time (24 hr) 0930 Biologist M. CARR(A) Substrate type and % of ^{subdivision} segments:
(1) Bedrock 100 (2) Boulder 0 (3) Cobble 0 (4) Pebble 0 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of ^{subdivision} segment): Dense 60 Moderate 20 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: 1
Roll No. 1Frames NONE

BARNACLES

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

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT NOT PRES. IN UPPER AND LOWER
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

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

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT NOT PRES IN UPPER
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:

Summarized on subdivision A sheet.

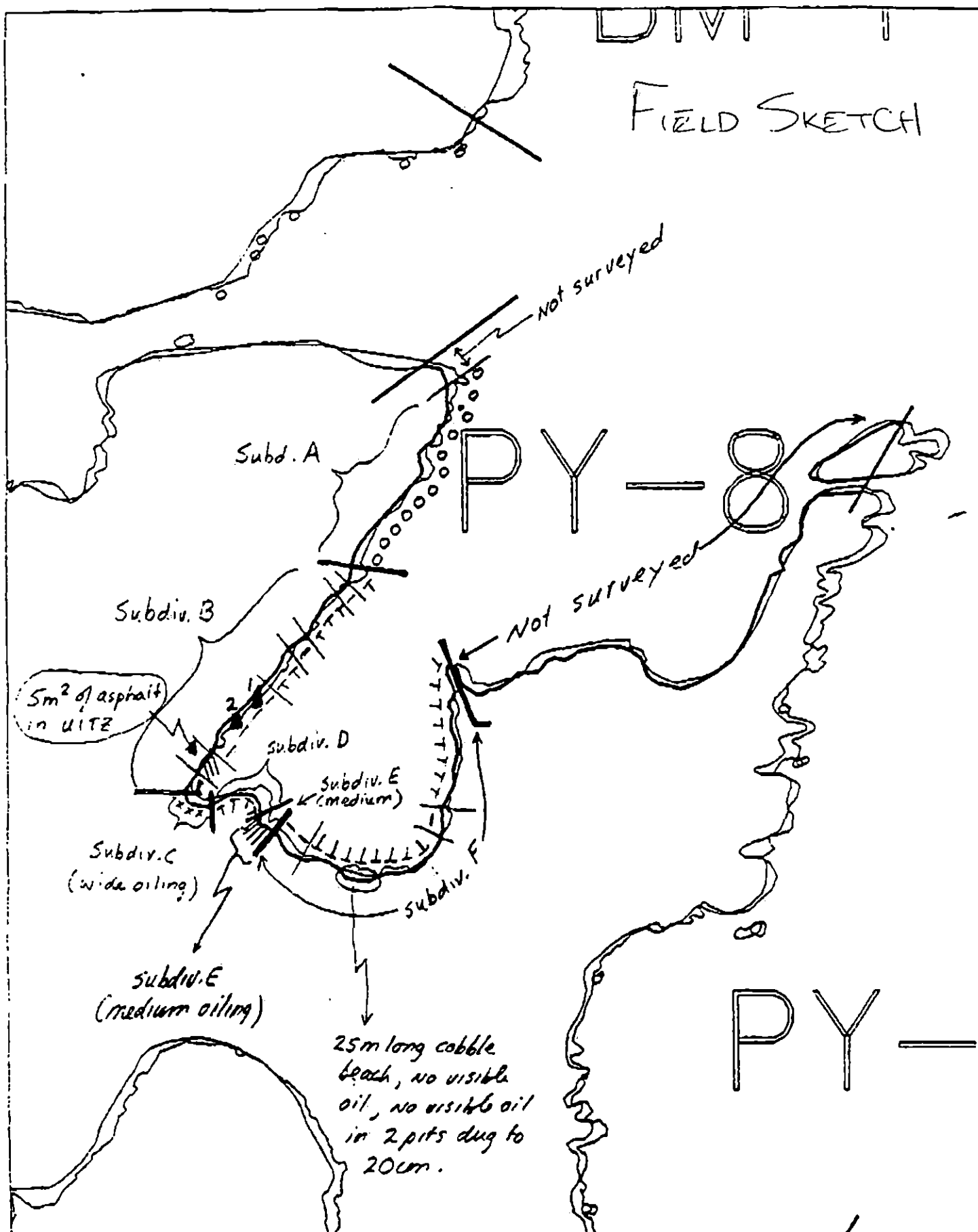
Ecological Considerations:

① Same as subdivision A sheet.

Sensitivity codes: ST

UPPER ZONE w/ FUCUS. (MODERATE LOWER)
LOWER ZONE w/ DENSE COVER OF ALGAE:

FIELD SKETCH



XXXX Wide
 //// Medium
 --- Narrow

PY-8

ADEC Segment Length: 5970m

Map Key: KEN-96

Name: *Mann*

Date: 3/30/90

SHORELINE EVALUATION

SEGMENT ST/ PY-08 SUBDIVISION E (5 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Active eagle nest (3/1 to 6/1)

4QQ National Wildlife Refuge

Takeoff from and to seaward only. Contact USFWS prior to cleanup.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles Z. Johnson

DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 99 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of mousse and bioremediate coat areas as shown on attached sketch map. Work should be conducted after 6/1 with approval from ADF&G and USFWS based on above eagle constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weiner

EXXON Andy Lee

NOAA Burt Warratt

USCG Kenneth Keane

FOSC: WJL

DATE: 5-3-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 TY 8 SUBDIVISION: E DATE 3/30/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual removal of mousse/patties is highly recommended on the pocket beach. Bioremediation should also be considered, but only after manual removal of the mousse to a coat/cover thickness so that bioremediation is most likely to be effective.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual Removal of mousse from substrate with shovel or hand trowel. This site could also be considered for bio remediation after manual cleanup. I have Read and agree with all information on S.S.A.T. Forms

LAND MANAGER - USFWS

NAME Mary Partner SIGNATURE Mary Partner☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

I recommend manual removal of the mousse/patties using trowel, pom pom etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to >10 cm. Cobbles and small boulders should be turned and the mousse on the underside scraped off. Remaining mousse should be removed to clean substrate. I feel this was a good survey and concur with the SSAT forms.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 08 SUBDIVISION: A Through F DATE 30 MAR 90

NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted in the event that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I am recommending some type of manual removal for subdivisions A-F such as shove and shovel. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT forms. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand tools, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil could also benefit from small scale manual removal of mousse patches. I feel this was a good survey and I concur with the information on the SSAT forms.

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG Major USCG Michel SEGMENT ST/ py-8
 BIO can LAND REP Hatman (USFWS) SUBDIVISION E
 EXXON Boyer ADEC Reed TIME 9:50 to 11:15
 TEAM NO.: 12 TIDE LEVEL: -2 to 0 DATE 3/13/90
 EST. SUBDIVISION LENGTH: 40 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 70 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Ven 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 40 m N 0 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	NO	RE	PR	RE	NO	RE	PR	RE	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT		X	✓					✓		✓	X	
STAIN			✓					✓		✓	✓	
MOUSSE		✓	X	✓				✓		✓	✓	X
PATTIES				✓				✓				✓
TARBALLS												
FILM												
NO OIL									SN			

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / ~~TARBALLS~~ ~ 200 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 15-1Frames 15-21

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	OP	NO		UG	UG	NO	RE	PR	RE	SU	U	M	U		
1	25				✓		0-25	✓					✓		✓			NO	BCPG throughout
2	20		✓				0-5		✓				✓		✓			NO	CPG "
3	30		✓				0-10		✓				✓		✓			NO	CPG "
4	20		✓				0-20	✓					✓		✓			NO	BCPG "
5	10	✓					0-5		✓				✓		✓			NO	CG "
6	10	✓					0-5		✓				✓		✓			"	CG "

COMMENTS

Two bands of oiling - one in MITZ and lower UITE, the other in UITE.

Pit #3: well-developed cobble armor

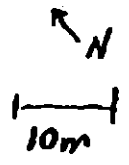
Pit #4: couldn't dig further. Oil is in form of balls of oiled granules

Pit #5: 1/2 of pit clear, 1/2 through mousetraps

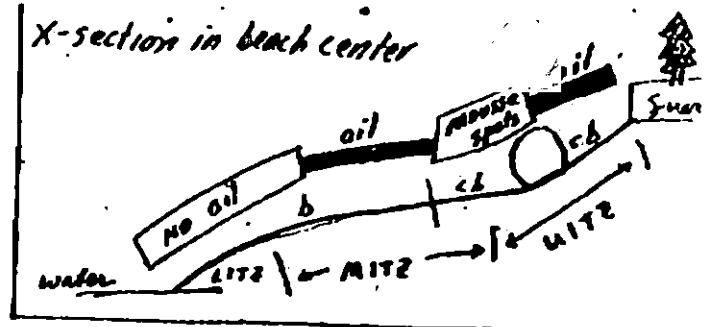
This is a narrow bc beach between two bedrock points.

APR-23-1990 22:34 FROM ENSCO Atlas ENSCO TO SSAT P.18

OG MAN
 SEGMENT STI PY-8
 SUBDIVISION E
 DATE 3, 30 90



SKETCH MAP



CHECKLIST

- ✓ Obj Arrow
- ✓ Approx. Scale
- ✓ Seg/Sub Body
- ✓ Oil Dist.
- ✓ Width
- ✓ Length
- ✓ % Cover
- ✓ Substrate Character
- ✓ Est. HML/LVL
- ✓ (SS) Snow-covered
- ✓ Profile Location(s)
- ✓ Profile(s)
- ✓ P/L Location(s)
- ✓ Photo Location(s)
- Sea notes

LEGEND

- 1 Δ
- PR - No Subsurface Oil
- 2 Δ
- PR - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

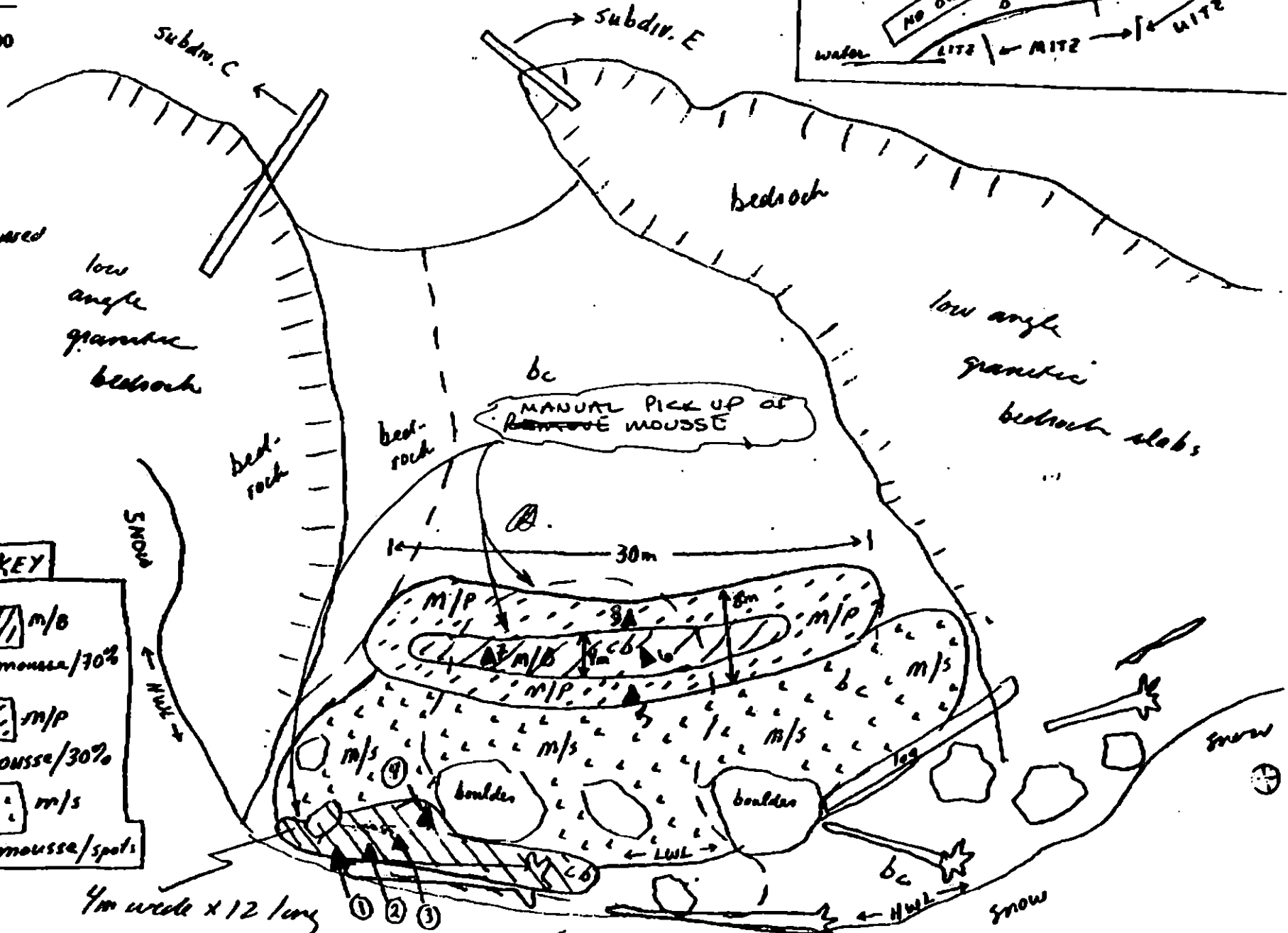
CT/S
 Splashed Distribution

C/V
 Capped Vegetation

Photo location, direction, and number

KEY

	m/b
= mousse/30%	
	m/p
= mousse/30%	
	m/s
= mousse/spots	



Oil Character Length (m): AP 0 PO 0 CV 0 CT 30 ST 30 MS 30 PT 30 TB 0 FL 0 NO 10

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/ PY08 Subdivision E Date (mo / day / yr) 3/30/90Time (24 hr) 1108 Biologist M. CARR(A) Substrate type and % of ^{subdivision} segments:
(1) Bedrock _____ (2) Boulder 100% (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of ^{subdivision} segment): Dense 30 Moderate 30 Low 40

(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: 1
Roll No. _____Frames 15-21

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	X	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 (IN UPPER 1L)

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	X	X	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	X	X	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 (IN UPPER)

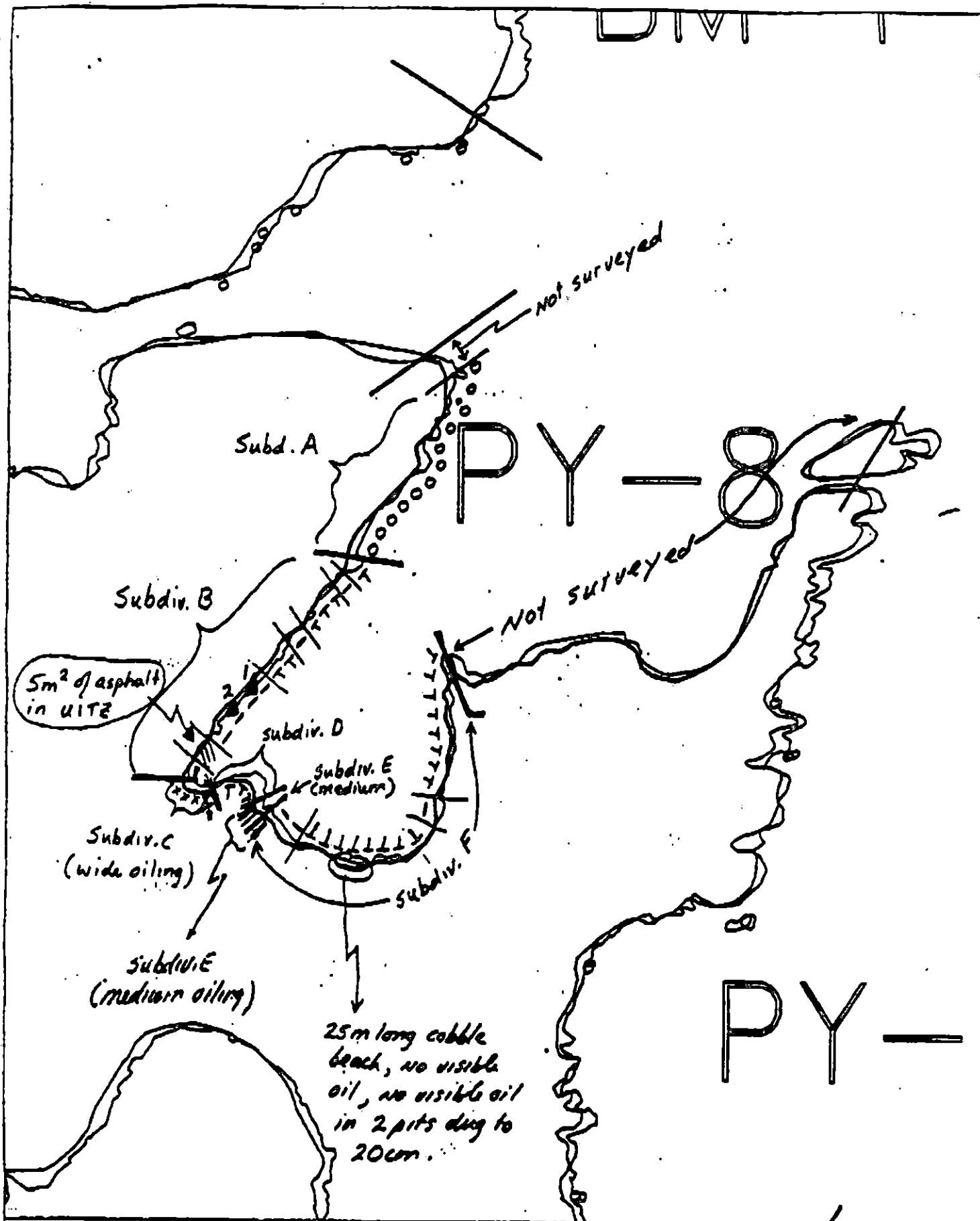
Wildlife Observations/ General Comments:

Summarized on subdiv sheet A.

Ecological Considerations:

① Same at subdivision A start.

Sensitivity codes: 5T



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

PY-8

ADEC Segment Length: 5970m

45° 60 1:18,000

0 300 600 900

Map Key: KEN-96

Name: Mann

Date: 3/30/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-8 SUBDIVISION E (5 of 6)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Bald eagle nest is outside Subdivision E of Segment PY-8 and more than 400m from work site. —

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

6-10-90

Prepared by

6-10-90

Date

6/10/90

SHORELINE EVALUATION

SEGMENT ST/ PY-08 SUBDIVISION F (6 OF 6) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T Active eagle nest (3/1 to 9/1)

4QQ National Wildlife Refuge

Takeoff from and to seaward only. Contact USFWS prior to cleanup.
See attached Ecological Constraints Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 255 m: V.Light 1067m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

MANUAL PICKUP OF MOUSSE AS INDICATED ON MAP.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC ART WENDEL Dgt Weimer

EXXON ANDY TEAL

NOAA Bruce Wescott

USCG KENNETH KERR

FOSC: W L DATE: 5-12-90

USFWS Rep to be on scene.

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 (8/7 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 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 (8/1 to 9/15)
6V	Anchorage (8/1 to 9/15)
6W	Forest Service cabins (8/1 to 9/15)
6X	Lodge (8/1 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 / PY-8 SUBDIVISION: F DATE 3/30/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE *J. Michel*☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of mousse accumulations in
areas marked as narrow on map.

ADEC

NAME JOHN R. REED SIGNATURE *John R. Reed*☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual Removal of mousse between boulders with
shovel, hand trowel, or pom poms. I have read and
agree with all information on S.S.A.T. Forms.

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE *Mary Portner*☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of mousse between boulders using
trowels, shovels, pom poms especially in area marked
narrow on PY-8 map.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 08 SUBDIVISION: A Through F DATE 30 MAR 90~~USEG~~ NOAANAME JACQUI MICHEL SIGNATURE J. Michel☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The mousse patches can be readily removed manually. Some are quite thick (>10 cm), especially under large boulders/cobbles. Bioremediation should be considered for the subdivisions C and E, pocket beaches which have the heaviest oiling. However, manual removal will have to be conducted to the point that bioremediation would work, i.e., removal of mousse to a coat/cover.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I Am recommending some type of manual removal for subdivisions A.-F, such as shown + Rowel. Boulders and cobbles should be turned over and the thick mousse scraped off. I tested this treatment in the field and feel that it is a viable form of removing the thick mousse patches found on subdivisions C and E. Subdivisions C and E could also be candidates for bioremediation if the thick mousse is removed to a coat or cover. I would like to add that I concur with all the information on the SSAT FORMS. A GOOD SURVEY!

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Extensive patches of mousse remain in subdivisions C and E. It appears to be recoverable using hand trowels, pumps etc. Under the cobbles and boulders the mousse is thick, sometimes penetrating to 10 cm. It may be beneficial to turn many of the cobbles and small boulders and remove the mousse. The remaining subdivisions with oil benefit from small scale manual removal and sewer and

SHORELINE OILING SUMMARY

REVISION NO. 05/28/90

OG Mann USCG Michel SEGMENT ST/ PY-8
 BIO Carr LAND REP Partner - FWS SUBDIVISION F
 EXXON Boyer ADEC Reed TIME 11:20 to 12:15
 TEAM NO.: 18 TIDE LEVEL: +1 to +6 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 1260 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 70 % B 30 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 270 m VL 990 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			✓					✓			✓		
STAIN				✓		✓					✓	✓	
MOUSSE				✓				✓			✓		
PATTIES													
TARBALLS													
FILM													
NO OIL										SN			✓

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

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE * TR#BAGS 2

Photographs:

Roll No. 18-1Frames 22-26

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (OIL-CL)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L		

COMMENTS

5 hardhats and face shields + 2 ponypumps + oiled bags. No pits due to lack of places to dig. In the 2 areas of narrow oiling shown on map, cover and mousse exist in 1 to 2 m wide band in UITE. These are well-hidden under/behind large boulders. Splashes of ST and CT are scattered along the shoreline in the UITE. No sketch map is provided because this additional detail would provide no further useful information.

OG MANN
SEGMENT ST/ PYB
SUBDIVISION F
DATE 3 / 30 90

NO SKETCH MAP

CHECKLIST

☐ N Arrow
☐ Apprx. Scale
☐ Seg/Sub Bndry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LVL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pt Location(s)
☐ Phase Location(s)

*No sketch map provided per
Oiling
Comments on Shoreline Summary ~~Sheet~~*

LEGEND

1 
Pt - No Subsurface Oil

2 
Pt - Subsurface Oil


Continuous Distribution


Streak Distribution


Patchy Distribution


Isolated Distribution


Wind Vegetation


Flow location, direction,
and number

SHORELINE ECOLOGICAL SUMMARY

REVISION 002-90

Segment ST / PY08 Subdivision F Date (mo / day / yr) 3 / 30 / 90Time (24 hr) 1145 Biologist M. CARR(A) Substrate type and % of ^{sub div.} segments:
(1) Bedrock 10 (2) Boulder 20 (3) Cobble (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of ^{sub div.} segment): Dense 50 Moderate 50 Low

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

Photographs: 1
Roll No. Frames 22-26

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

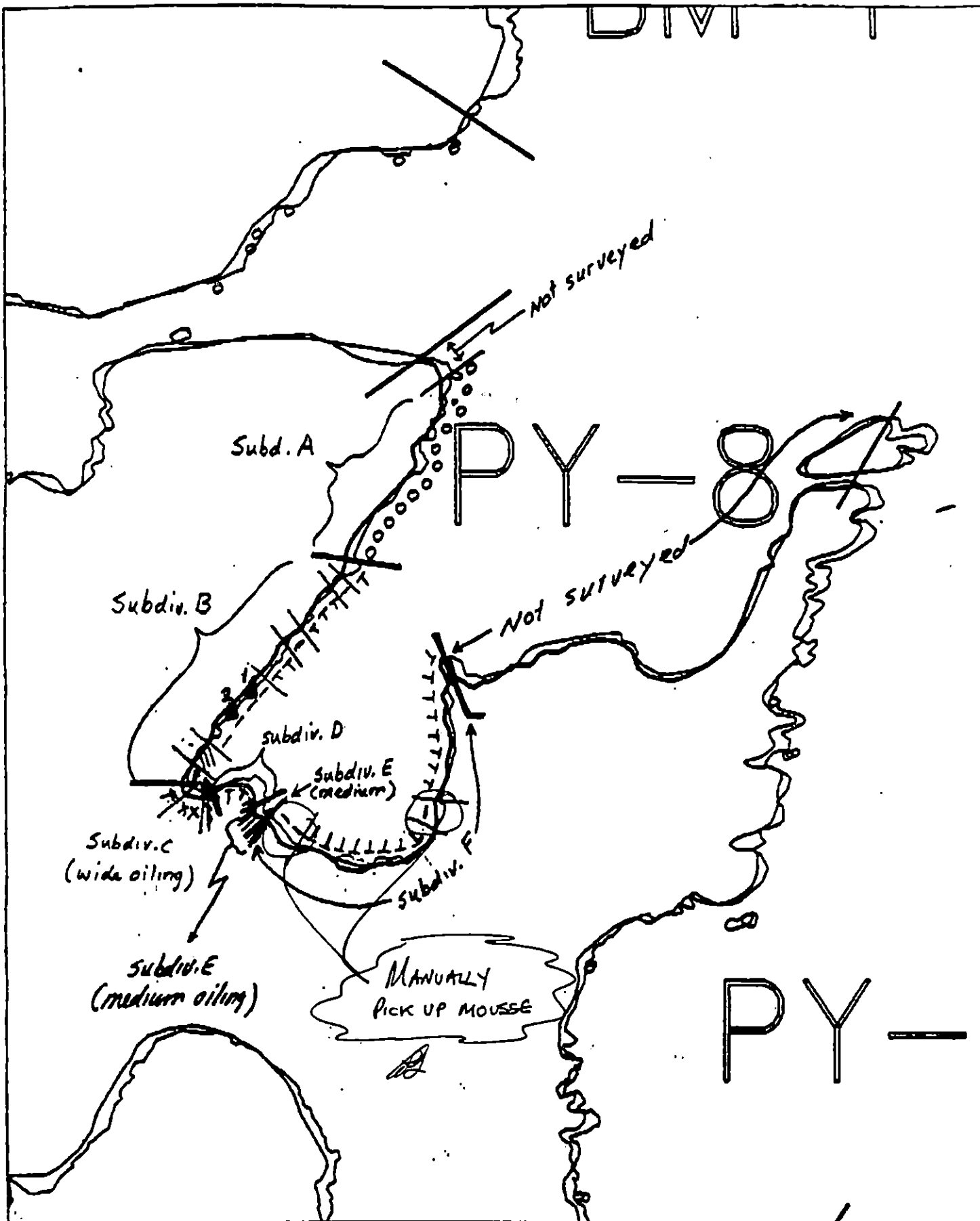
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

Summarized on subdivision A sheet

Ecological Considerations:

*Same as subdivision A sheet plus "Rhodymenia" w/ Fucus in mid-mts**Sensitivity codes: ST**GASTROPODS INCREASE: LIMNORHYNCH & KATHARINA hirsuta*



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

PY-8

ADEC Segment Length: 5970m

Map Key: KEN-96

Name: Mann

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-8 SUBDIVISION F (6 of 6)

WORK WINDOW

Manual Pickup

OPEN
(USFWS REP TO BE ON SCENE)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT Bald eagle nest is outside Subdivision F of Segment PY-8 and more than 400m from work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

B. Zanghi

Date

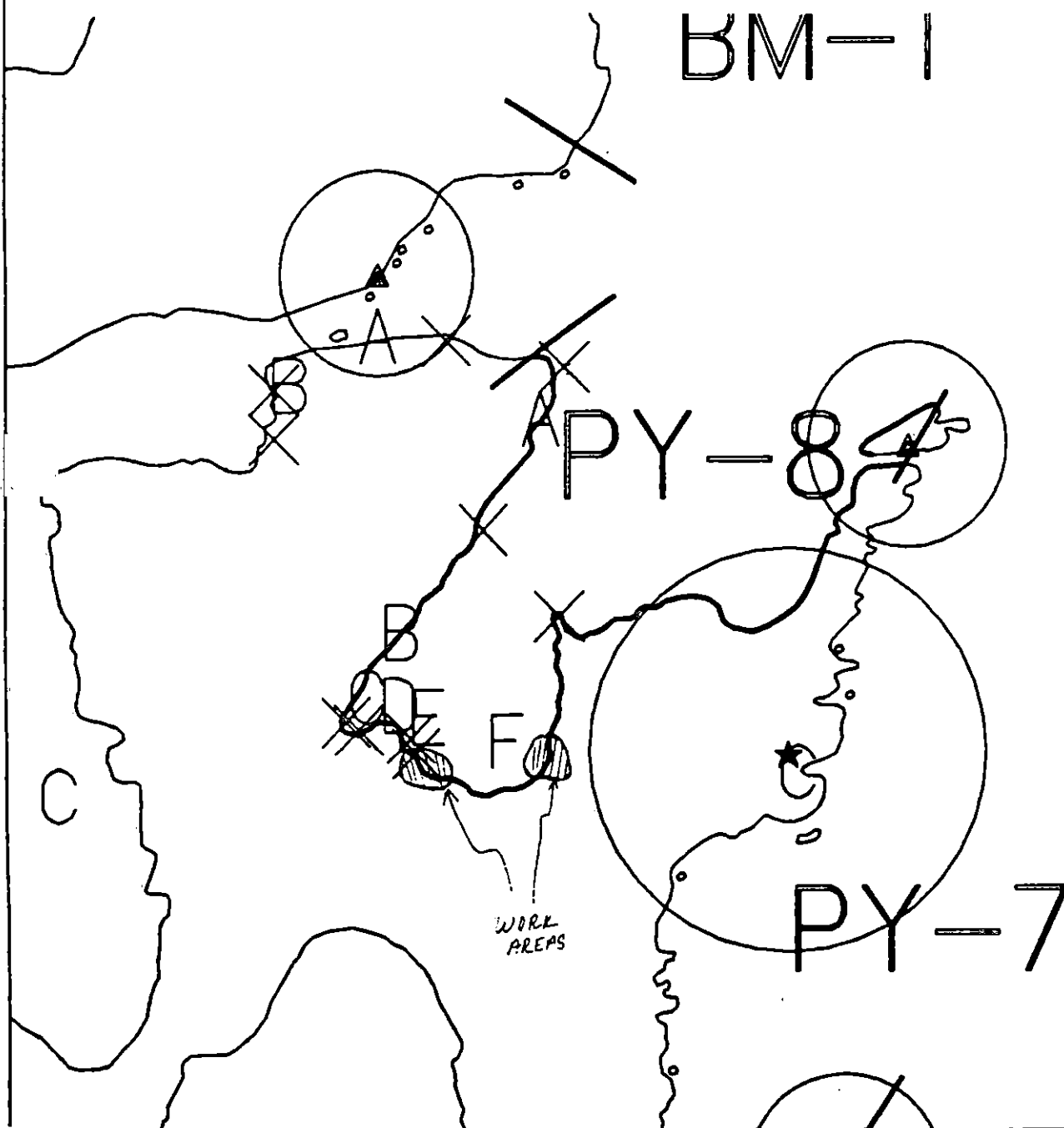
6/29/90

Prepared by

J. Phillips

Date

6/14/90



Exxon Company, USA
Map Key: KEN-PY-8
June 10, 1990



ECOLOGY MAP
SEGMENT PY-8
SUBDIVISION F (6 of 6)
METERS
0 657 1315

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

1 inch = 2157 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

National Wildlife Refuge (4QQ). No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Johnson

DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 1235m: No Oil 1089 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC Art Weiner D. J. Winters

EXXON Andy Cox Paul

NOAA Bruce Wascott Paul W. Wascott

USCG G.A. Reiter G.A. Reiter

FOSC:

DATE: 5-1-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 09 SUBDIVISION: A DATE 4/4/90

USCG/NOAA

NAME SALOMI MICHEL SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Even the two areas highlighted on the sketch site maps have very light oil as scattered splatters which do not warrant further treatment

ADEC

NAME JOHN R. REED SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very light and scattered splatters on large boulders. Does not need cleanup. I have read and agree with all data on S.S.A.T. Forms..

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The scattered mousse is located primarily between and under very large boulders in the 2 areas outlined on the map. The oil in this subdivision would be difficult to recover with current treatment technology.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/88

CG Mean USCG Michel SEGMENT ST/ PY-9
 D Call LAND REP Partner USFWS SUBDIVISION A
 EXXON BOYER ADEC REED TIME 16:48 to 18:08
 TEAM NO.: 18 TIDE LEVEL: +1 to +2 DATE Apr 14 / 90
 EST. SUBDIVISION LENGTH: 2890 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NE to SW
 SURFACE SEDIMENTS: R 80 % B 20 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1390 m NO 1500 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	R	P	B	BR	OR	OL	OF	NO	TL	SU	UI	ME	U
ASPHALT PAVEMENT														
POOLED														
COVER				✓		✓						✓		
COAT				✓		✓						✓		
STAIN														
MOUSSE				✓						✓		✓		
PATTIES				✓						✓		✓		
TARBALLS														
FILM														
NO OIL											✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 18-3Frames #31, 32, 33, 34

SUBSURFACE OIL*

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-dm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	BR	OR	OL	OF	NO	TL	SU	UI	ME	U		
1	20		✓				0-5		✓						✓		✓			NO	Boulders
2	20		✓				0-5		✓						✓		✓			NO	"
3	20		✓				0-20	✓							✓		✓			NO	"

COMMENTS * pits are all at sketch site #1.

typical west side shoreline on the Pye Islands: steep granite bedrock shores with a sprinkling of shattered, angular boulders. A significant reduction in oiling has occurred since 1989 along the south shore of the cove comprising PY-9.

MANN

SKETCH MAP

PROJECT SITE P

DIVISION A

DATE 4.4.90

CHECKLIST

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

LEGEND

- 1 No Subsurface Oil
- 2 Subsurface Oil
- Coastal Distribution
- Bay Distribution
- Poly Distribution
- Shaded Distribution
- d Vegetation
- to location, direction, number

No separate sketch map - see oil category length map.

CU/CT/MS/PT lengths are based on an estimated 3% occurrence in the VL Shoreline oiling category.

Character Length (m): AP 0 PO 0 CV 50 CT 50 ST - MS 50 PT 50 TB 0 FL 0 NO 2840

APR-04-1990 21:21 FROM Ensc Atlas Ensc TO SSAT P.05

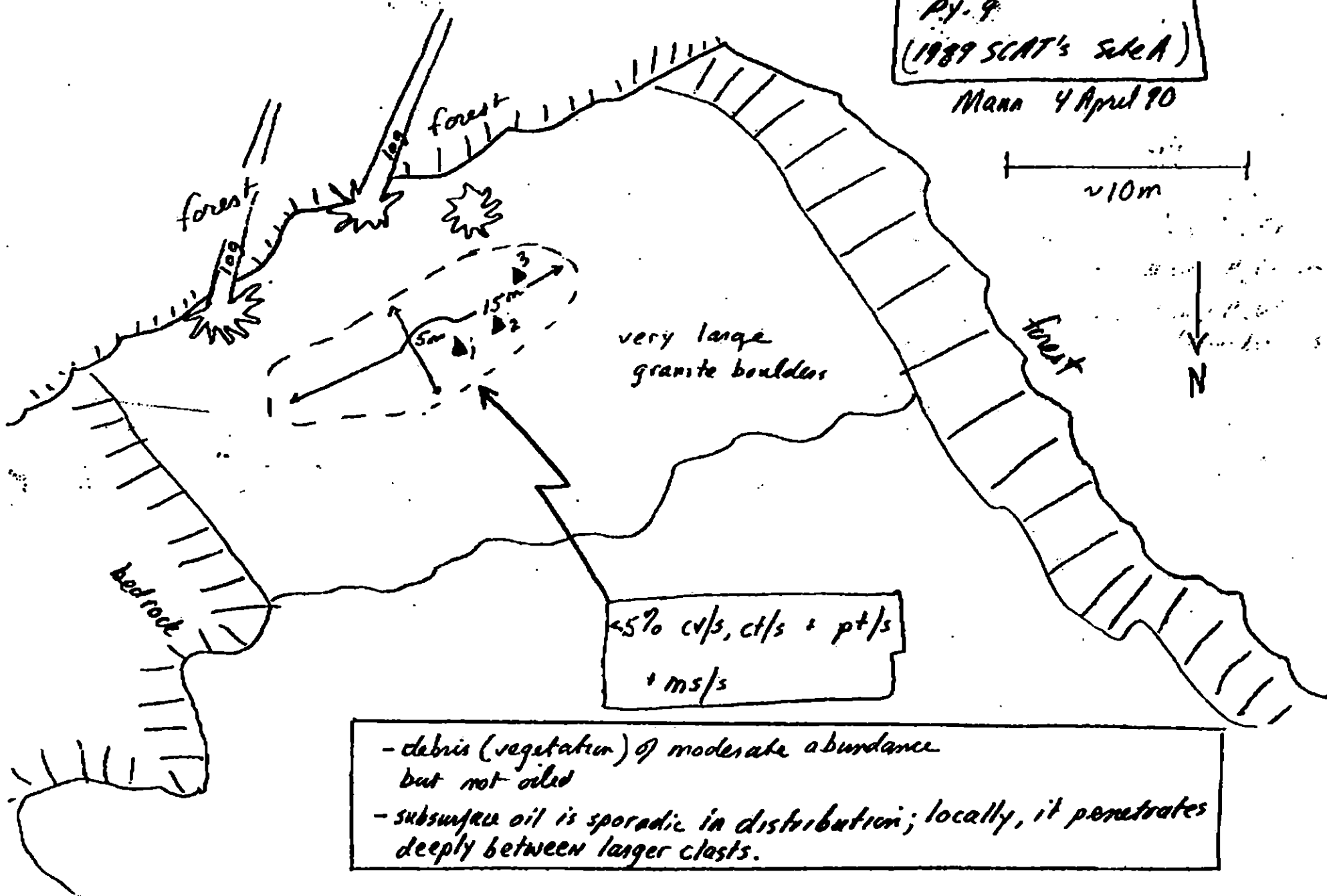
(this is not a subdivision sketch map)

Site sketch #1
Py. 9
(1989 SCAT's Site A)

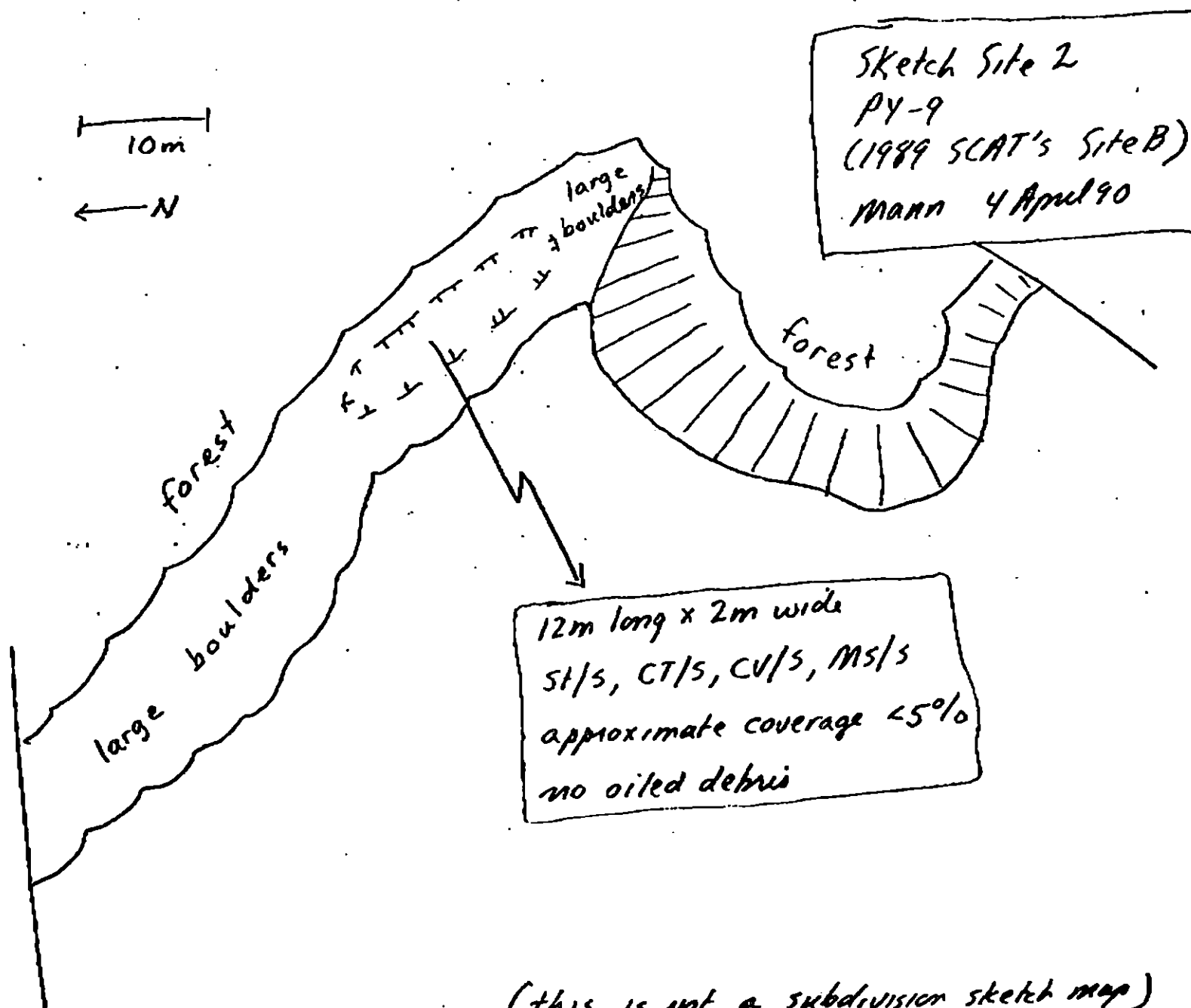
Mana 4 April 90

~10m

N



- debris (vegetation) of moderate abundance but not oiled
- subsurface oil is sporadic in distribution; locally, it penetrates deeply between larger clasts.



(this is not a subdivision sketch map)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/90

Segment ST/ PY 9 Subdivision A (of A) Date (mo / day / yr) 4 / 4 / 90Time (24 hr) 1648 Biologist M. CARR

- (A) Substrate type and % of segments: ^{SUBDIVISION}
 (1) Bedrock 80 (2) Boulder 20 (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): ^{SUBDIVISION} Dense 60 Moderate 30 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: 3
Roll No. 3Frames 31-34

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:

White-winged scoter (6) Bald eagle (2) (both mature)

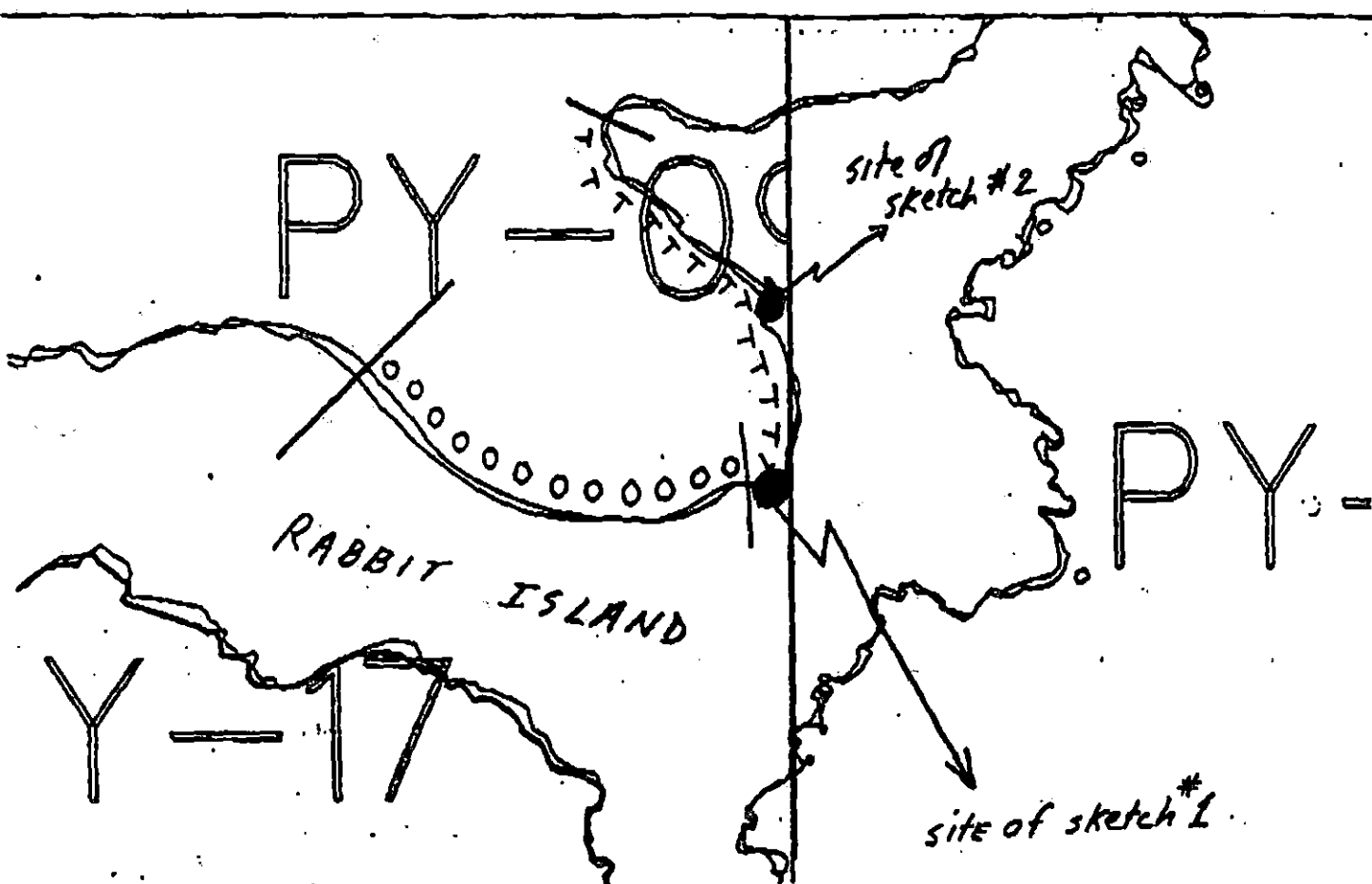
Land otter (1)

Common Loon (1)

Ecological Considerations:

Sensitivity codes: 4-BQ (National Wildlife Refuge)

PY-9



Mann. 4/4/90 PYE ISLANDS

SHORELINE EVALUATION

SEGMENT ST/ PY-010 SUBDIVISION A 1 OF 1 DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4QQ National Wildlife Refuge (no time constraints given)

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to uncoiled substrate and biota.

SHPO SIGNATURE: *Mark Z. Homan* DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 763 m: No Oil 2379 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC *A. Heuvel*
EXXON *ANDY TGA* FOSC: *L* DATE: 4-20-90
NOAA *Burl Westcott*
USCG *G.A. HEITER* *G.A. Heiter*

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 10 SUBDIVISION: A DATE 4/6/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE Michel

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The very occasional splatters of oil on this exposed rocky shore and small pocket beaches do not warrant further treatment.

ADEC

NAME JOHN R. REED SIGNATURE John R Reed

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Very light splatters on bedrock boulder substrate. No cleanup needed. I have read and agree with all data on S.S.A.T. Forms.

LAND MANAGER/USFWS

NAME Mary Partner SIGNATURE Mary Partner

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Oil on this shoreline is very light and exists primarily in the form of scattered splatters and stain. I feel this was good survey and agree with the information on the SSA forms.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mann ^{NOAA} USCG Michel SEGMENT ST/ PY-10
 BIO Carr LAND REP Partner USFWS SUBDIVISION A
 EXXON Bayer ADEC Reed TIME 18:27 to 18:47
 EAM NO.: 18 TIDE LEVEL: 0.7 to 0.9 DATE 4/16/90
 EST. SUBDIVISION LENGTH: 3744 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 95 % B 5 % C 0 % P 0 % G 2 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 50 % Vert 45 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W ? m M 0 m N 0 m VL 374 m NO 2870 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES				
	C	R	P	S	SP	OR	OL	OF	NO	TL	LR	SU	U	M	U
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT				✓		✓							✓		
STAIN				✓		✓							✓		
MOUSSE															
PATTIES															
TARBALLS															
FILM															
NO OIL												✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			1
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE NA 0#BAGS NA 0

Photographs:

Roll No. ST 18-YFrames 8SUBSURFACE OIL No pits dug due to bedrock and boulder substrate.

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		VO	UC	20/25 OR	10/12 OR	05 OR	02/03 OR	01 OR	SU	U	M	U			
				-			.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

This is a steep and inaccessible shoreline with a wide fringe of kelp. Oiling is sparse and takes the form of widely-separated clusters of splashes and drips.

OG 11 11

SEGMENT 1 PY-10

SUBMISSION A

DATE 4 1 6 90

KETCH MAP

CHECKLIST

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

NO sketch Required

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

➡

Photo location, direction,
and number

The oil character length was estimated based on an estimated 4% (CT) and 6% (ST) occurrence within the VL oil category

Oil Character Length (m): AP 0 PO 0 CV 0 CT 40 ST 60 MS 0 PT 0 TB 0 FL 0 NO 3644

REVISION 02/00/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/85

Segment ST / PY-10 Subdivision A (of A) Date (mo / day / yr) 4 / 6 / 90Time (24 hr) 1827 Biologist M. CARR(A) Substrate type and % of segments: ^{SUBDIVISION}
(1) Bedrock 95 (2) Boulder 5 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): ^{SUBDIVISION} Dense 60 Moderate 30 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 (O)

Photographs: 4
Roll No. Frames 8

BARNACLES

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

NOT PRESENT IN MID
LOW TIDAL ZONE
NOT PRESENT

MYTILUS

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

NOT PRESENT
NOT PRESENT IN
LOW TIDAL ZONE

GASTROPODS

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

NOT PRESENT
NOT PRESENT IN LOW
TIDAL ZONE

FUCUS

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

NOT PRESENT
NOT PRESENT IN LOW
TIDAL ZONE

Wildlife Observations/ General Comments:

Bald eagle (4) all mature

Sea otter (10)

Surf scoter (8)

Ecological Considerations:

Cormorants (23)

Harlequin duck (4)

White-winged scoter (2)

Land otter (2)

Sensitivity codes: 4-00 (National Wildlife Refuge)

↑
KEN 82C

P

Y

—

1

KEN
82B →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

PY-10

ADEC Segment Length: 3142m

0 100 200 300

Map Key: KEN-82a

Name: Mann-PY-10

Date: 4/6/90

Data Entered:

P

Y

-

1



XXXX Wide

//// Medium

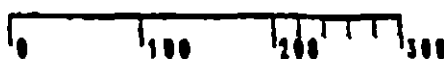
--- Narrow

TTTT Very Light

OOOO No Oil

PY-10

ADEC Segment Length: 3142m



Map Key: KEN-82c

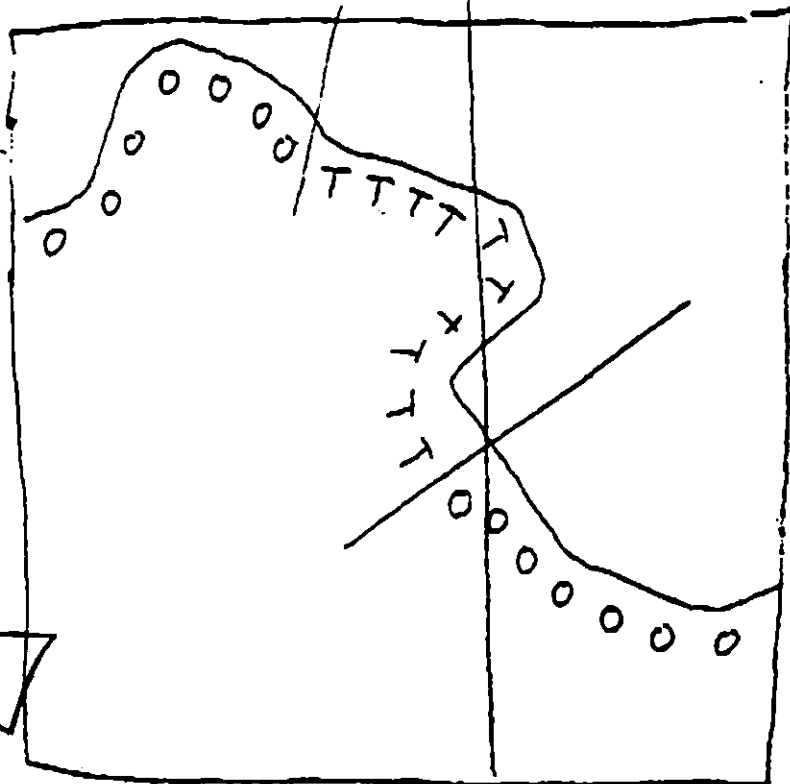
Name: Mann PY-10

Date: 6 April 90

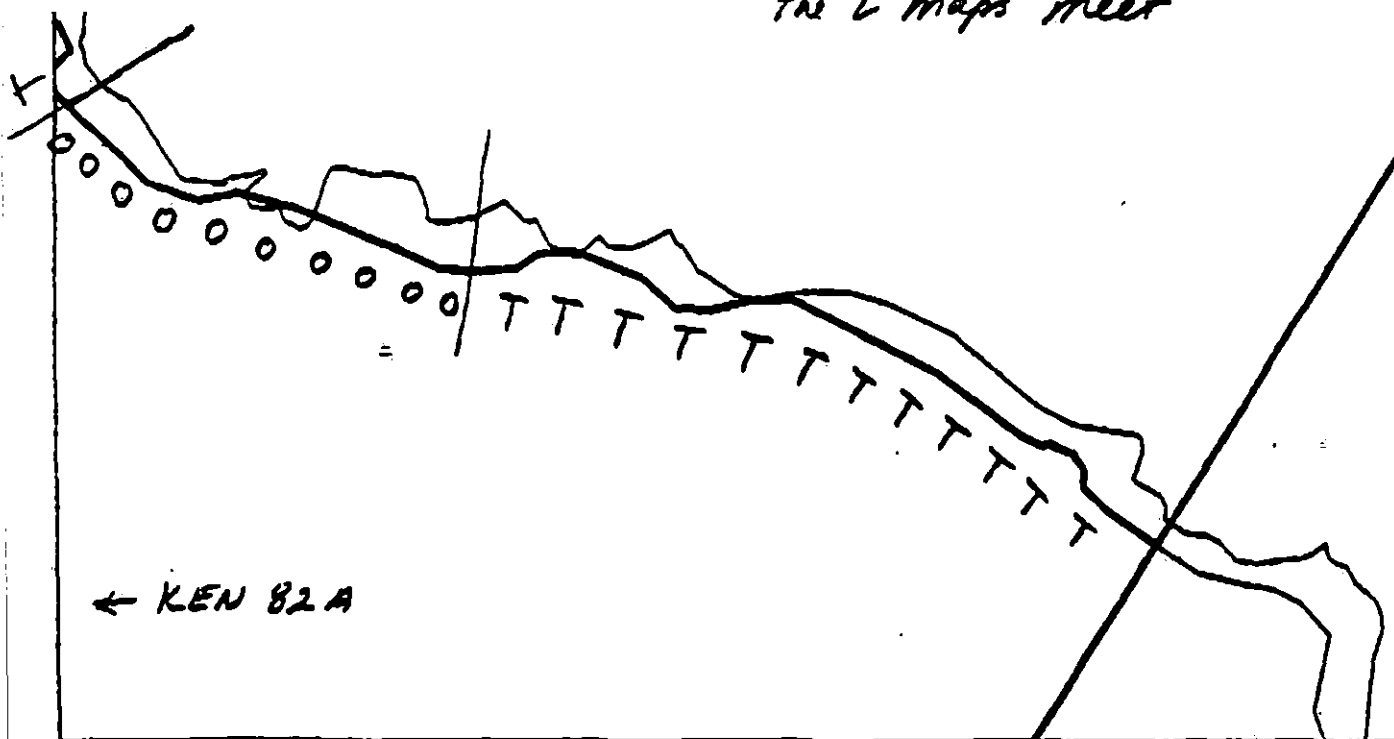
Data Entered:

map edge

E →



blowup to show categories where
the 2 maps meet



YXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

PY-10

ADEC Segment Length: 3142m



Map Key: KEN-82b

Name: PY-10/Mann

Date: 4/6/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-11 SUBDIVISION A (1 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

National Wildlife Refuge (4QQ). No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Adams DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 1496 m: No Oil 1632 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weiner Dick Weiner

EXXON Andy Gatz Paul

NOAA Burt Wescott Burt Wescott

USCG Kenneth K. H. K. Kenneth K. H. K.

FOSC: [Signature] DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 11 SUBDIVISION: A DATE 4/4/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The very scattered OIL ON ROCK WALLS DOES NOT
WARRANT FURTHER TREATMENT.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very scattered splatters on large boulders
does not need cleanup. I have read and
agree with all maps and data on SSAT forms.

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very scattered mussels (1 per 10-20m). Sporadic coral and
stain on rock walls.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mann USCG Michel SEGMENT ST/ 11
 BIO Carr LAND REP Partner USFWS SUBDIVISION A
 EXXON Boyer ADEC Reed TIME 15:00 to 15:15
 TEAM NO.: 18 TIDE LEVEL: +2 to +1.5 DATE 4/14/90
 EST. SUBDIVISION LENGTH: 3606 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 70 % B 30 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 80 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1616 m NO 1990 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	S	BR	OR	OL	OP	NO	TL	LR	LA	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER				✓		✓							✓			
COAT				✓		✓							✓			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 18-3#
Frames 25 + 26SUBSURFACE OIL No pits dug due to inaccessibility and lack of sediment cover.

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	OP	NO		VO	UC	BR	OR	OL	OP	NO	TL	LR	LA	SU	U	M	U		

COMMENTS

This subdivision encompasses narrow, steep bedrock shores backed by steep, forested slopes. Oiling consists of widely scattered (1 per 10-20m of shoreline) spots of coat and cover as well as long stretches where no oil is visible.

OG MANN

SKETCH MAP

SEGMENT ST/ PY 11

SUBDIVISION A

DATE 4 14 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LVL
- ☐ 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

Oil on Vegetation

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

No sketch map provided (see GIS map)

CV/CT lengths are based on an estimated 3% occurrence within the VL category

Character Length (m): AP 0 PO 0 CV 50 CT 50 ST 0 MS 0 PT 0 TB 0 FL 0 NO 1990

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PY 11 Subdivision A (of A-C) Date (mo / day / yr) 4/4/90Time (24 hr) 1330 Biologist M. CARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock 70 (2) Boulder 30 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 60 Moderate 20 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 3Frames 25, 26

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	LOW INTERTIDAL ZONE
→	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→	2	2	2	2	2	2	2	2	2	2	2	2	LOW INTERTIDAL ZONE
→	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→	2	2	2	2	2	2	2	2	2	2	2	2	LOW INTERTIDAL ZONE
→	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
	5	5	5	5	5	5	5	5	5	5	5	5	
	6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→	2	2	2	2	2	2	2	2	2	2	2	2	LOW INTERTIDAL ZONE
→	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
	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:

Steller's jay (1) Harlequin duck (13)
 Bald eagle (1) Crows; pelagic (1) red-faced (1)
 Sea otter (2)

Ecological Considerations:

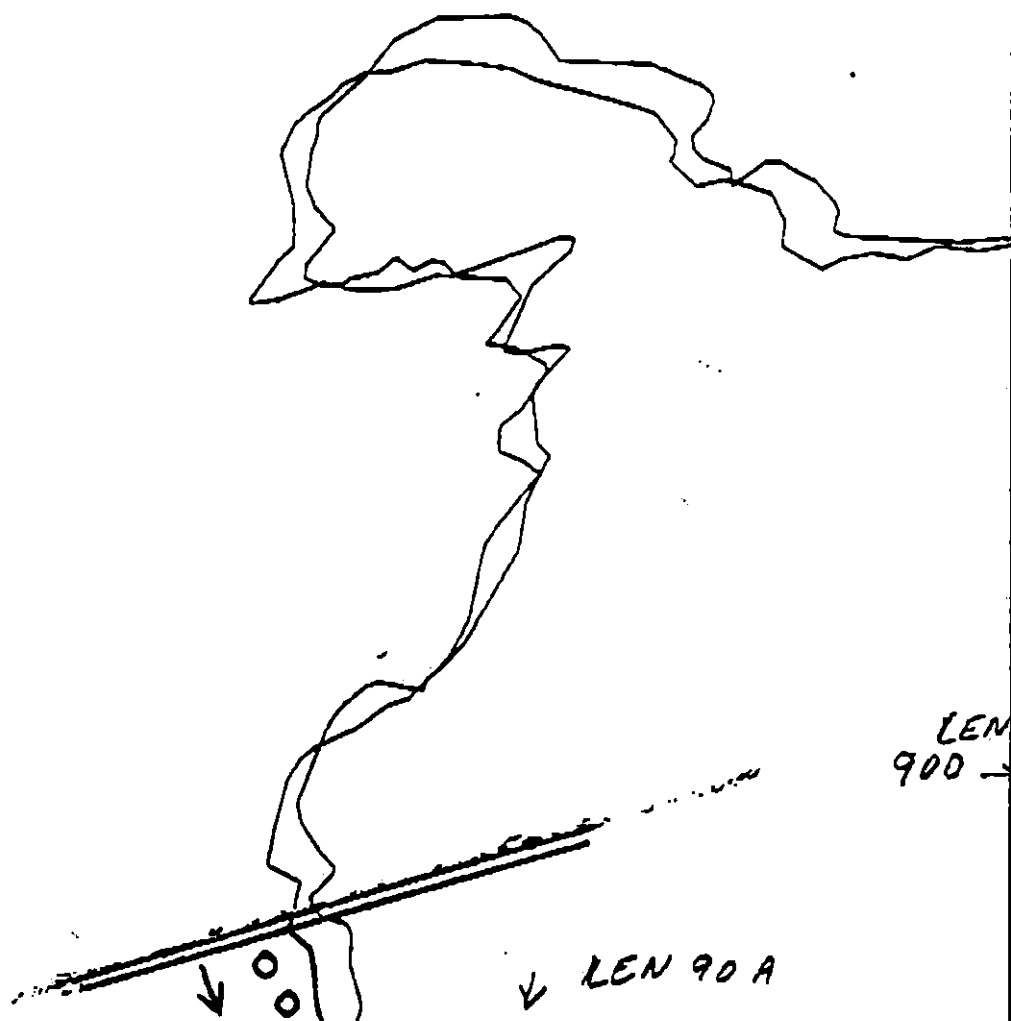
Sensitivity codes: 4-QQ (National Wildlife Refuge)

P

Y

—

1



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

PY-11 subdiv A

ADEC Segment Length: 4719m



Map Key: KEN-90c

Name: MONA

Date: April 4, 90

Data Entered:

↑
KEN 90C

PY-11 (Subdiv. A)

P

Y

—

1

Subdivision C

18-3
#30
1

KEN
90B →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

PY-11

ADEC Segment Length: 4719m

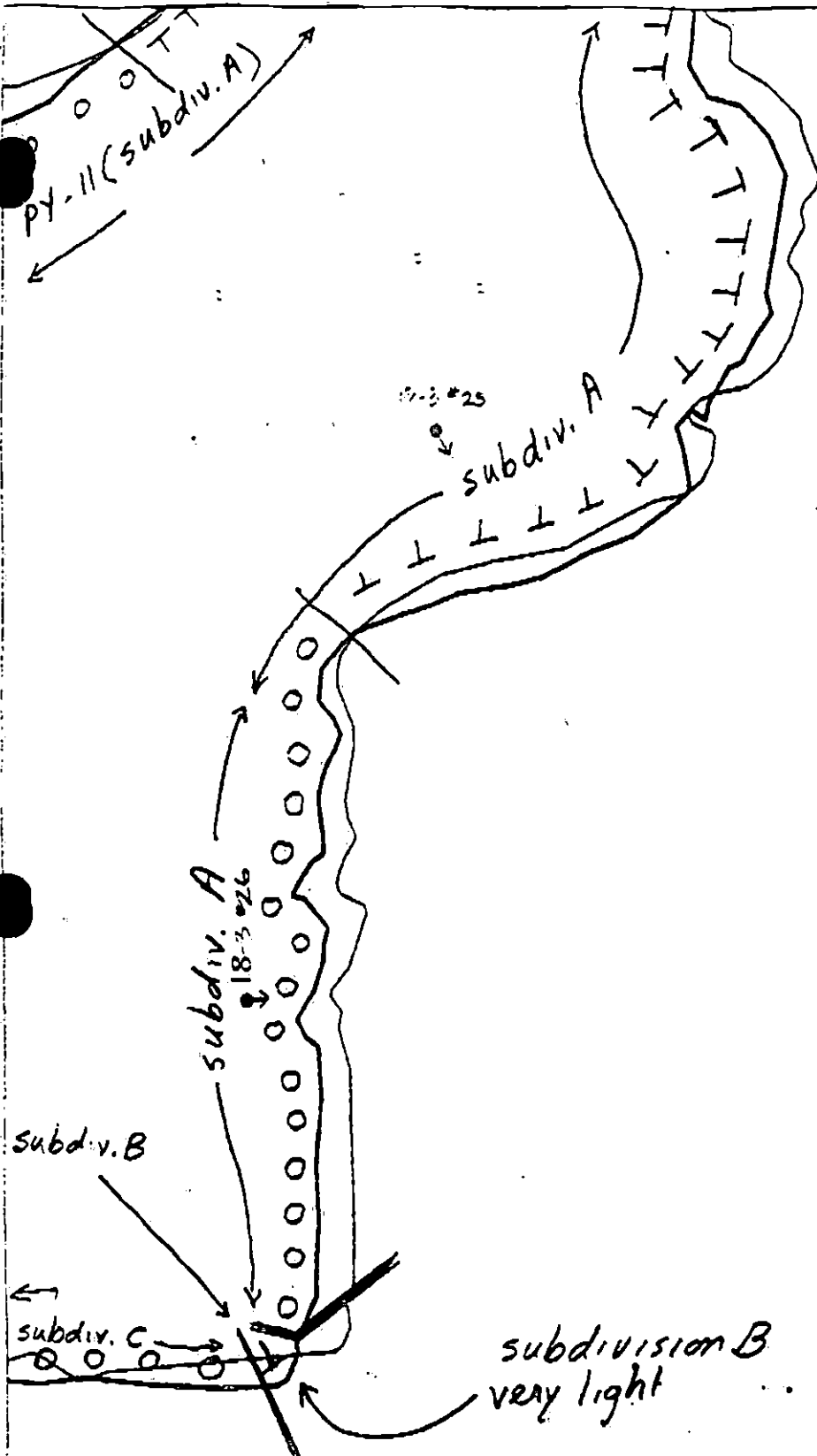


Map Key: KEN-90a

Name: Mann

Date: 4 April 90

Data Entered:



↑
KEN
900

← KEN
90A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

PY-11:6000

ADEC Segment Length: 4719m

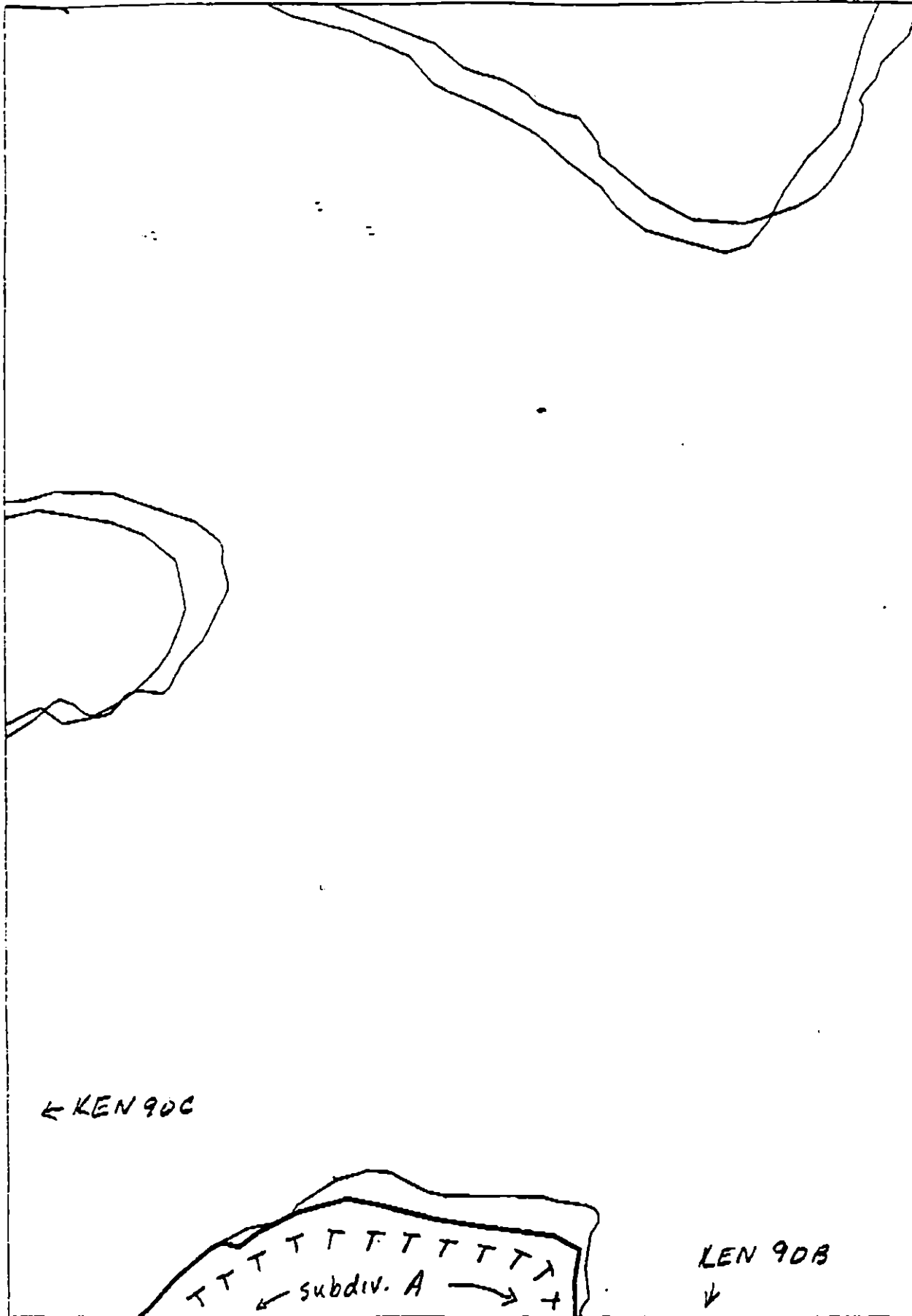


Map Key: KEN-90b

Name: MANN

Date: 4 April 90

Date Entered:



XXXX Wide

//// Medium

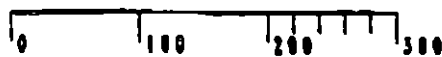
---- Narrow

TTTT Very Light

0000 No Oil

PY-11

ADEC Segment Length: 4719m



Map Key: KEN-90d

Name: Mann

Date: 4 April 90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-11 SUBDIVISION B (2 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

National Wildlife Refuge (4QQ). No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Dunn

DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 62 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 16 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 in area shown on attached sketch map. No time constraints identified.

PRIOR TO BIOREMEDIATION, REMOVE SURFACE BOBBLES TO ACCESS SUBSURFACE OIL. MANUALLY REMOVE MOUSSE USING HAND TOOLS AND OIL SWABES.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC Art Wierse
EXXON ANDY TEATZ
NOAA Bruce Wierse
USCG KENNETH KEANE

FOSC: My L

DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 11 SUBDIVISION: B DATE 4/4/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE Michel

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The only section requiring consideration for treatment is the area of subsurface oil. However, about 15 cm of ^{clean} cobbles would have to be removed to get to the oiled zone. If a technique is developed for treatment of this type of oil (which includes thick zones of mousse up to several cm's thick), then it should be attempted here. Although there is moderate wave energy, the surface sediments are pretty coarse - limiting the potential for natural removal w/in 1-2 years.

ADEC NAME JOHN R REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
This is a site with subsurface oil. It was seen water washed last summer. The washing seems to have driven the mousse down about 15 cm. There are clean cobbles on top. The oiled layer is approx. 8 cm thick. Manual removal of oiled substrate with shovels or hand trowels. I have read and agree with all data on S.S.A.T. Forms.

LAND MANAGER -USFWS

NAME Mary Fortner SIGNATURE Mary Fortner

☒ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Despite manual pickup and H/W at this site in 1989 oil remains beneath the surface boulders and cobbles as residual oil over pooled oil in a 10m x 5m area (see map). 15 cm of red. clean cobbles would need to be removed to reach the oiled zone. The only currently available technique for treatment would be to turn the cobbles and boulders and remove the oil to clean substrate. This is a rich, healthy intertidal in the mid to lower intertidal and any treatment employed must take this into consideration. Inipol would not be effective

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mann USCG Michel SEGMENT ST/ PH11
 BIO Carr LAND REP Partner SUBDIVISION B
 EXXON Boyer ADEC Reed TIME 15:16 to 15:44
 TEAM NO.: 18 TIDE LEVEL: 1.5 to 1.5 DATE 4/14/90
 EST. SUBDIVISION LENGTH: 75 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: all to over
 SURFACE SEDIMENTS: R 10 % B 85 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 10 m VL 65 m NO 0 m

SURFACE OIL NOTE: if est'd from surface oil: W 0, M 0, N 0, VL 75, NO 0 m

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	TC	TR	TP	TS	SP	SW	SL	ST	LT	SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER				✓	✓					✓			
COAT				✓	✓					✓			
STAIN				✓	✓		✓			✓			
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										✓		✓	✓

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

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. 18-3Frames # 27, 28, 29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CL)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UG	SP	SW	SL	ST	LT	SU	UI	MI	U		
1	30					✓	-		✓						✓				NO	B.C throughout
2	25		✓				0-5		✓				✓		✓				NO	" "
3	25					✓	-		✓						✓				NO	" "
4	20		✓				0-5		✓				✓		✓				NO	BC over PGCB
5	25					✓	-		✓						✓				NO	" " "
6	20		✓				0-7		✓				✓		✓				NO	CB over PGCB

COMMENTS

This tiny subdivision was site F during our August 1989 SCAT of Py-11. Oiling has been reduced greatly on the surface of this subdivision since my visit last August. However, fresh-looking (light brown) mousse exists in the subsurface. Dr. Michel suggests it was washed there during washing operation. Abrasion marks on stone surfaces indicate this site.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 06/23/90

SEGMENT ST/ PY-11 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

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	SL	BR	DR	FR	ST	BL	TL	SR	SU	UI	MI	U		
6	20	✓					7-16		✓						✓			✓				NO	CB over PGCB
7	15		✓				0-10	✓							✓			✓				NO	BC over PGCB
7	15	✓					10-15	✓							✓			✓				NO	BC " "
8	20					✓	.		✓									✓				NO	C throughout
9	15		✓				0-6		✓						✓			✓				NO	BC over PGCB
9	15	✓					6-14		✓						✓			✓				NO	" " "
10	15					✓	.		✓									✓				NO	B over CPGB
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

DMP

SKETCH MAP

SEGMENT ST/ 11

DIVISION 3

DATE 7/1/90

HECKLIST

___ N Azous
 ___ Approx. Scale
 ___ Seg/Def Bndry
 ___ Oil Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. HW/LW/L
 ___ SSL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ P/L Location(s)
 ___ Photo Location(s)

LEGEND

A hand-drawn map of a coastal area. The map shows a coastline on the right side. Various distribution zones are marked with boxes and labels:

- 1 ▲** **1 - No Subsurface Oil**: Located at the top left.
- 2 ▲** **2 - Subsurface Oil**: Located below the first zone.
- CT/C** **controlled Distribution**: A solid box containing the text.
- CT/B** **broken Distribution**: A solid box containing the text.
- CT/P** **sandy Distribution**: A dashed box containing the text.
- CT/S** **plashed Distribution**: A dashed box containing the text.
- Red Vegetation**: A label at the bottom left.
- 1 ●** **VERTICAL PHOTO**: A location marker at the bottom right, with the text "photo location, direction, and number" below it.

Character Length (in): AP 0 PO 0 CV 65 CT 65 ST 12 MS 10 PT 0 TB 0 FL 0 NO 0

PREFACE

FILED-84-1350 21.2.84 ENSCO INC., as

11-11-68

70

22
REVISION: 03/22/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PY 11 Subdivision B (of A-C) Date (mo / day / yr) 4 / 4 / 90Time (24 hr) 1500 Biologist M. CARR(A) Substrate type and % of ^{SUBDIVISION} segments:
(1) Bedrock 95 (2) Boulder 5 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 40 Moderate 40 Low 20

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

Photographs: Roll No. 3Frames 27-29

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	} LOW INTERTIDAL INACCESSIBLE 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	} LOW INTERTIDAL INACCESSIBLE 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	

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	} LOW INTERTIDAL INACCESSIBLE 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

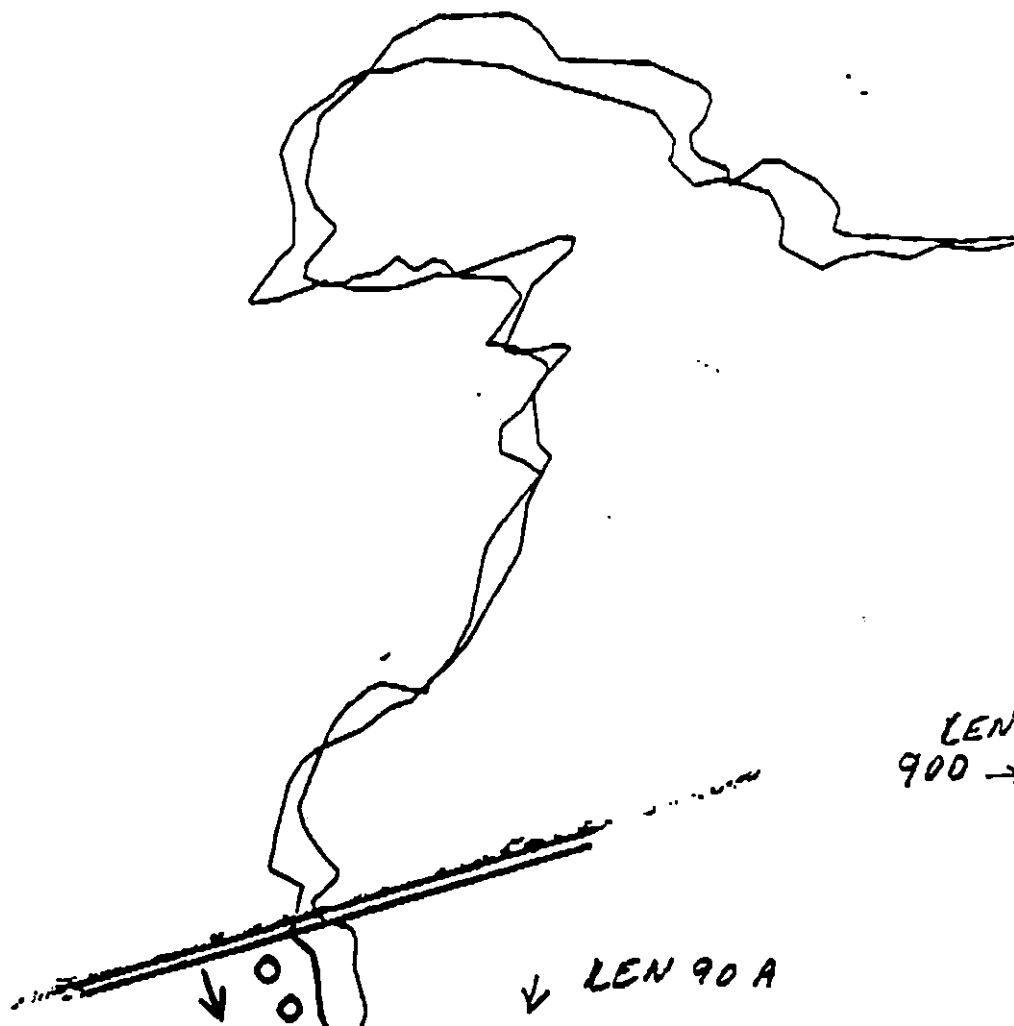
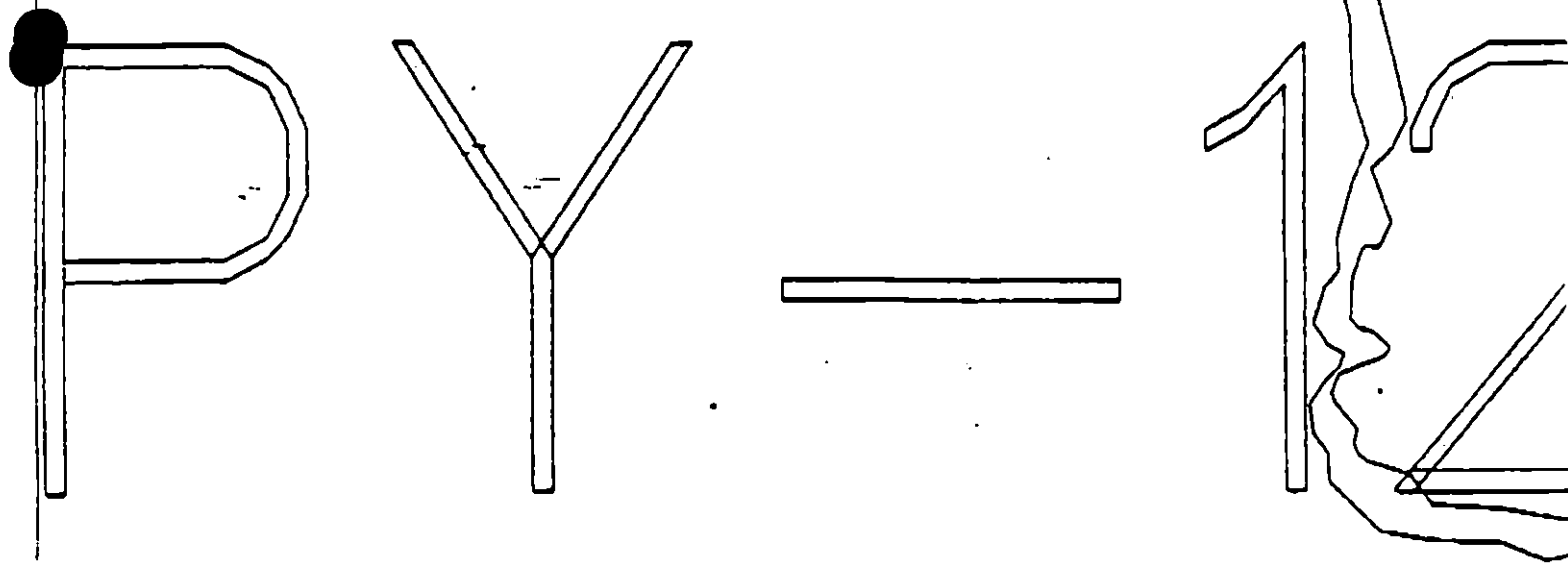
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	} NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

Harbor seal (1)

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



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

PY-11 subdiv A

ADEC Segment Length: 4719m



Map Key: KEN-90c

Name: Monn

Date: April 4, 90

Data Entered:

11

← KEN 90C



LEN 90B



XXXX Wide

//// Medium

---- Narrow

PY-11

ADEC Segment Length: 4719m

Map Key: KEN-90d

Name: Mann

U.S. 100

↑
LEN 90C

10

PY-11 (Subdiv. A)

P

Y

—

11

not observed

Subdivision C

18-3

#30

LEN
90B →

XXXX Wide

//// Medium

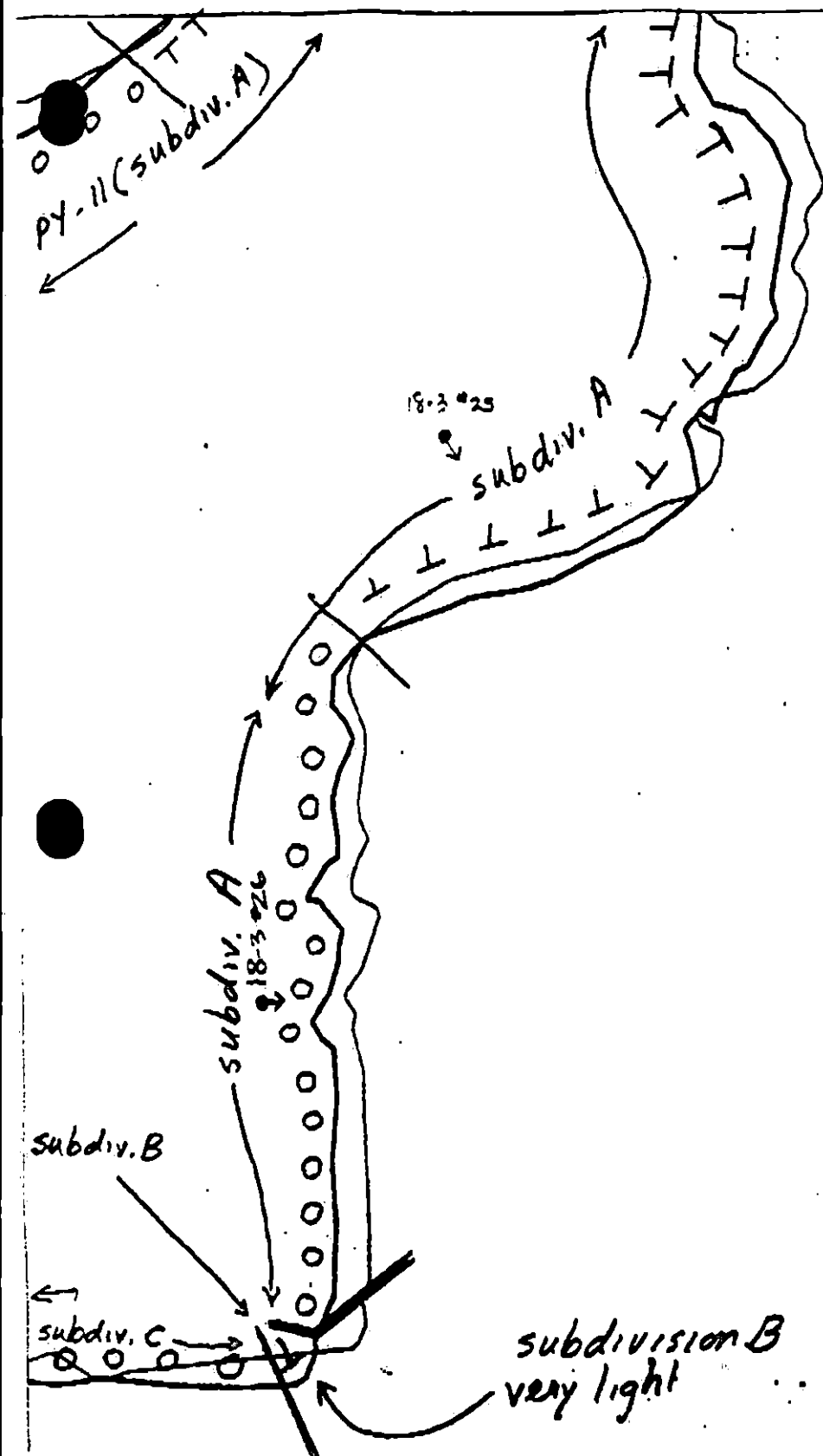
--- Narrow

PY-11

ADEC Segment Length: 4719m

Map Key: KEN-90a

Name: Mann



SHORELINE EVALUATION

SEGMENT ST/ PY-11 SUBDIVISION C (3 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

National Wildlife Refuge (4QQ). No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: *Mark E. H. [Signature]*

DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 174 m: No Oil 1355 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat: Breakup
 Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC *Art Weimer* *Art Weimer*
EXXON *ANDY TAY* *Andy TAY*
NOAA *Burt W. [Signature]* *Burt W. [Signature]*
USCG *KENNETH K. [Signature]* *Kenneth K. [Signature]*

FOSC: *[Signature]*

DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

20

SEGMENT ST / PY 11 SUBDIVISION: C2 DATE 4/4/90USCG/NOAA
NAME JACQUI MICHEL SIGNATURE Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The very light to no oil does NOT WARRANT
FURTHER TREATMENT.

ADEC
NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very light and sporadic splatters. Does not
need clean up. I have read and agree with all
data and maps on SSAT Forms.

LAND MANAGER/USFWS
NAME Mary Porter SIGNATURE Mary Porter☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very light sporadic oiling in the form of cover coat and stain.

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Mann USCG Michel SEGMENT STI # P4011
 BIO Carr LAND REP Portman (USFWS) SUBDIVISION C
 EXXON Boyer ADEC Reed TIME 15:44 to 16:02
 TEAM NO.: 18 TIDE LEVEL: +1.5 to +1.0 DATE 4/14/90
 EST. SUBDIVISION LENGTH: 1170 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 90 % B 9 % C 1 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 150 m NO 1020 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	5	1	0	SW	W	W	W	W	W	W	W	SW	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER				✓		✓								✓		
COAT				✓		✓								✓		
STAIN				✓		✓								✓		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS C

Photographs:

Roll No. 18-3Frames # 30SUBSURFACE OIL No pits dug due to inaccessibility and lack of sediment cover.

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		UG	UC	SW	W	W	W	W	W	W	W	BU	U	M	U		
C																							

COMMENTS

This subdivision is much like subdivision A. Oiling consists of
 1 spot of coat and/or cover per 10m of shoreline.

BAT 10 Apr 90

UG MONTIV

SEGMENT ST/ PY/11

SUBDIVISION C

DATE 4/4 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 ▲
P/L - No Subsurface Oil

2 ▲
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 ➡
Photo location, direction,
and number

No separate sketch map provided (see GIS map)

cu/CT/ST lengths estimated based on 1% occurrence within the VL category

Oil Character Length (m): AP 0 PO 0 CV 2 CT 2 ST 2 MS 0 PT 0 TB 0 FL 0 NO 1168 1020

REVISION 02/24/90

APR-04-1990 21:37 FROM ENSCO ATLAS ENSCO TO SSAT P.01

SHORELINE ECOLOGICAL SUMMARY

23
REVISION: 10/2/88

Segment ST / PY 11 Subdivision C (of A-C) Date (mo / day / yr) 4 / 4 / 90

Time (24 hr) 1350 Biologist M. CARR

(A) Substrate type and % of segments: ^{SUBDIVISION}
(1) Bedrock 70 (2) Boulder 60 (3) Cobble (4) Pebble (5) Sand (6) SR

(B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 70 Moderate 20 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: 3
Roll No.

Frames 30

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

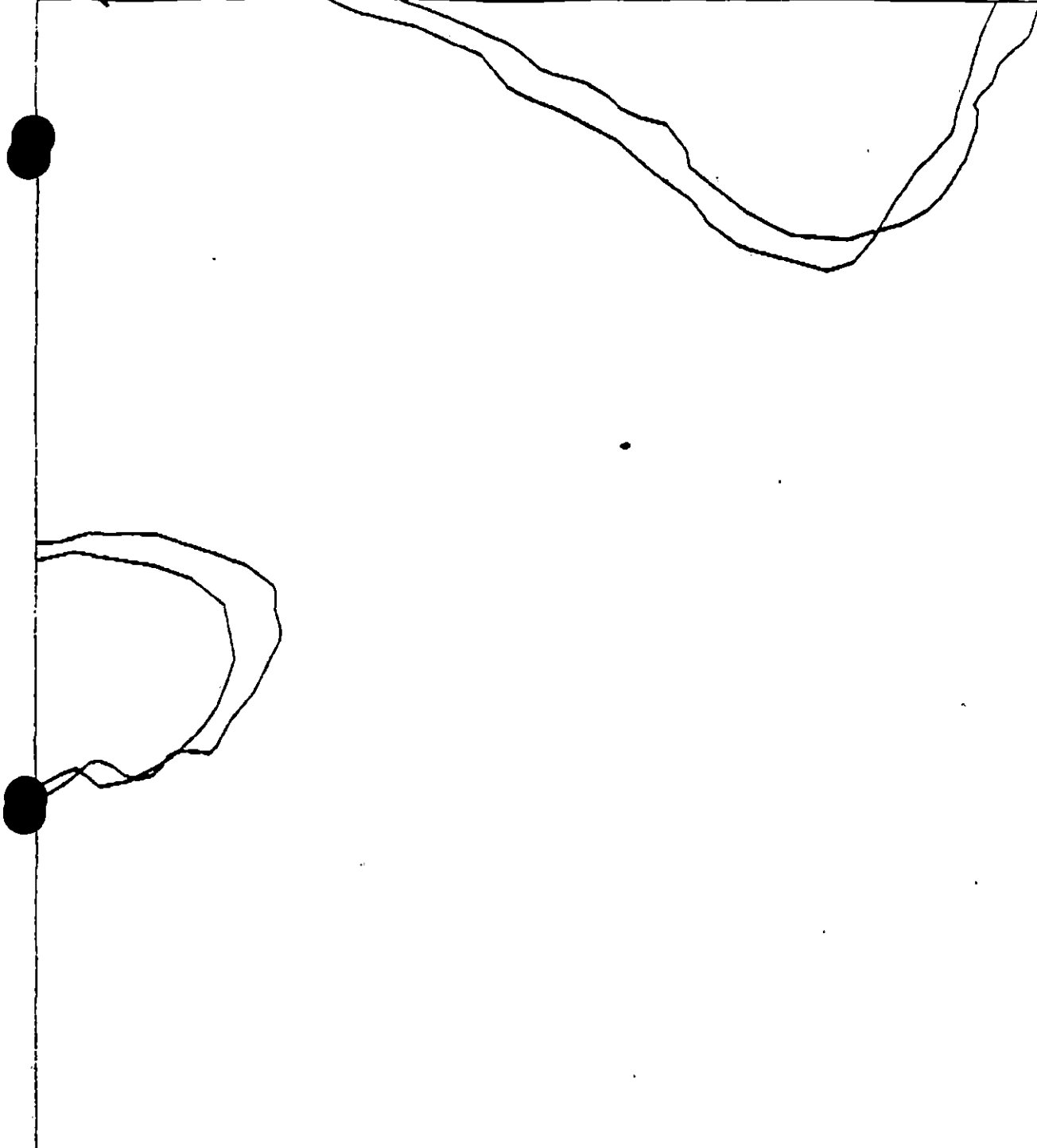
Wildlife Observations/ General Comments:

Pelagic commorant (1)

Bald eagle (1)

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



← KEN 90C

LEN 90B



TTTTT subdiv. A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

PY-11

ADEC Segment Length: 4719m



Map Key: KEN-90d

Name: Mann

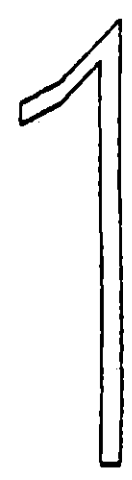
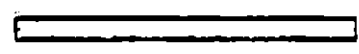
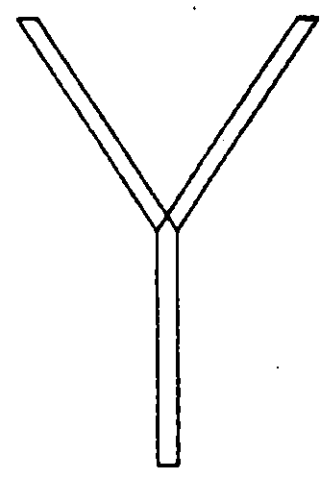
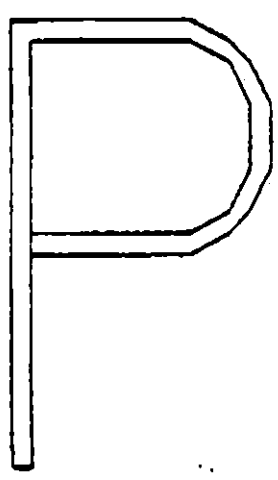
Date: 4 April 90

Data Entered:

↑
LEN 90C

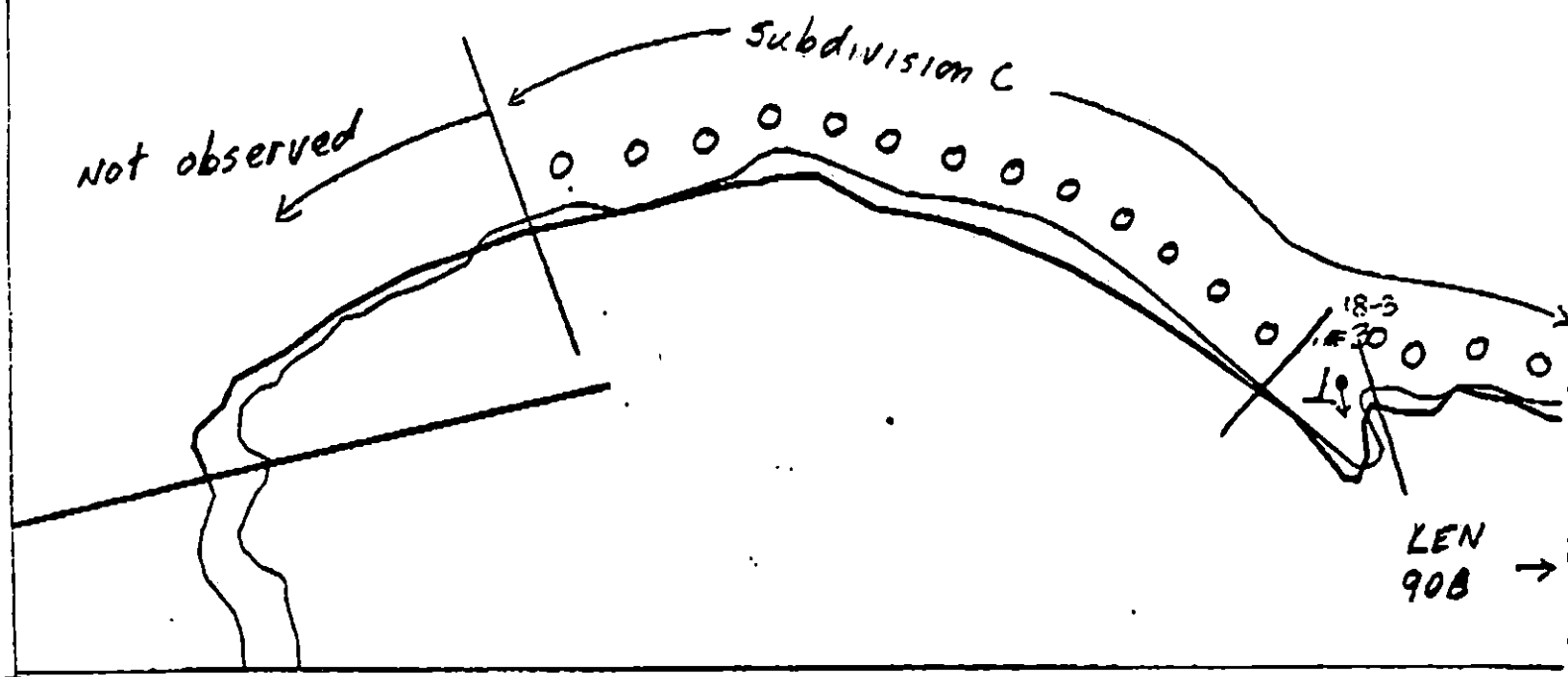
10

PY-11 (Subdiv. A)



not observed

Subdivision C



LEN
90B →

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

PY-11

ADEC Segment Length: 4719m

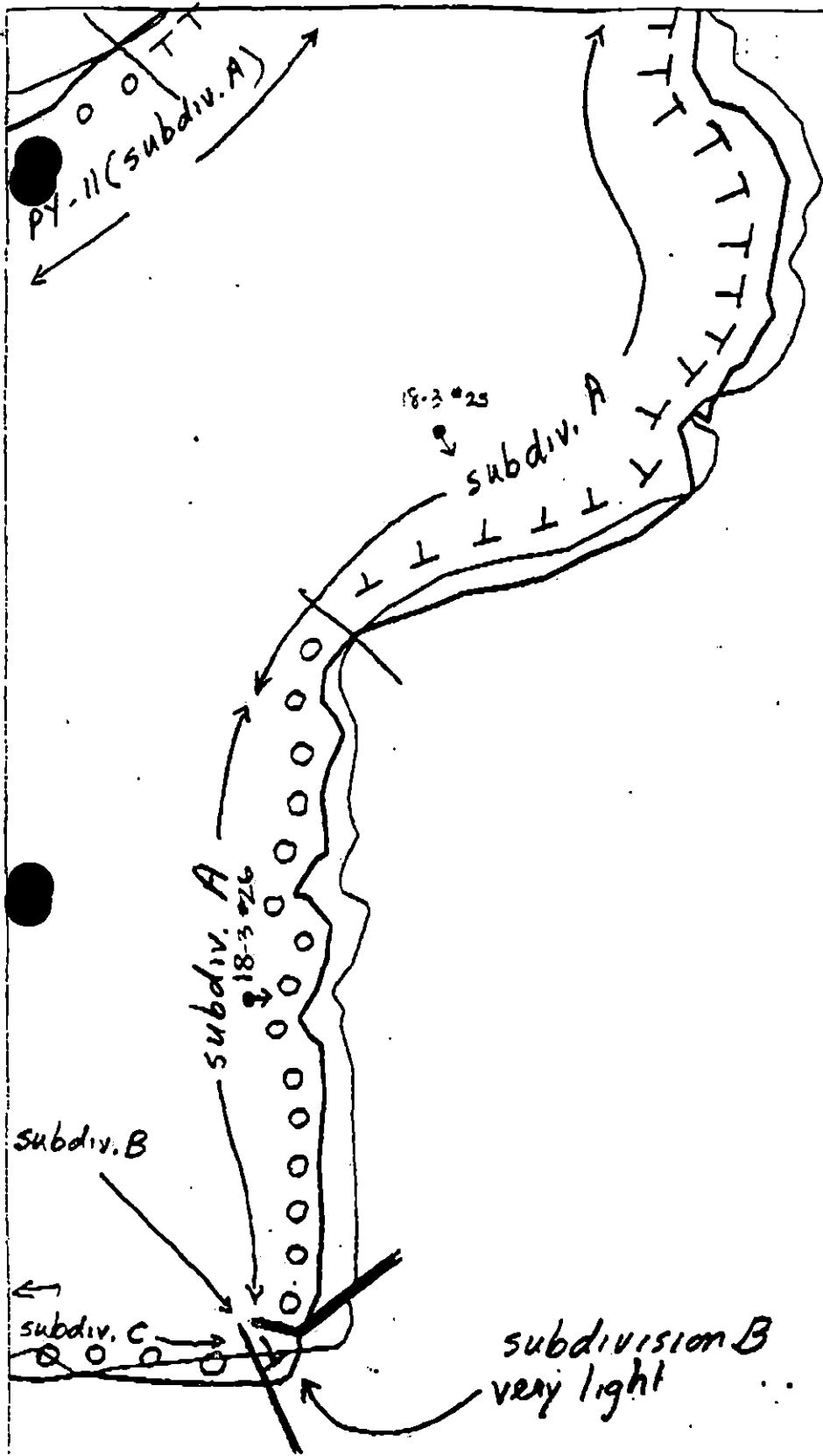


Map Key: KEN-90a

Name: Mann

Date: 4 April 90

Data Entered:



↑
KEN
900

9

← KEN
90A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PY-11

ADEC Segment Length: 4719m



Map Key: KEN-90b

Name: MANN

Date: 4 April 90

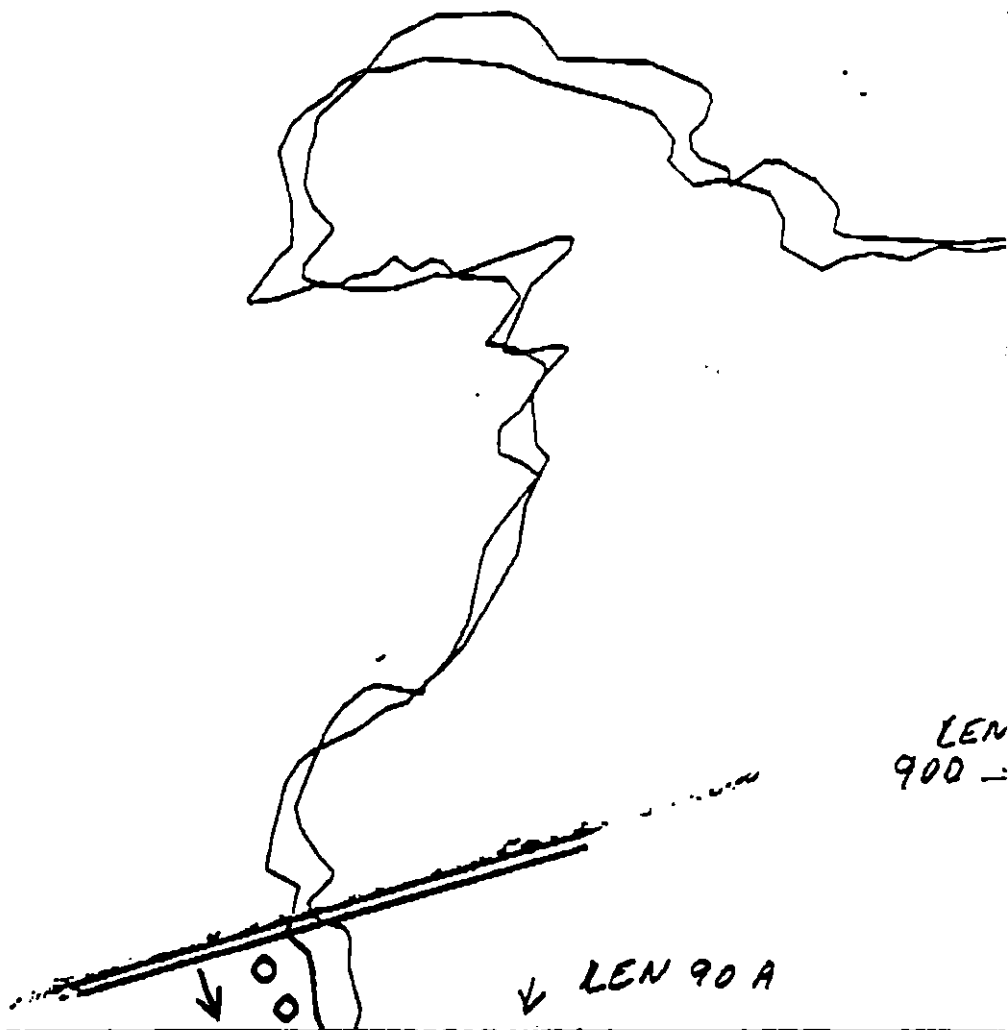
Date Entered:

P

Y

—

1



LEN
900

LEN 90 A

XXXX Wide

//// Medium

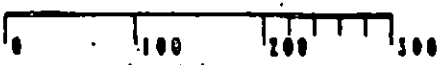
--- Narrow

TTTT Very Light

0000 No Oil

PY-11 subdiv A

ADEC Segment Length: 4719m



METERS

Map Key: KEN-90c

Name: MONA

Date: April 4, 90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-012 SUBDIVISION A (1 OF 3) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4QQ National Wildlife Refuge

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to uncoiled biota and substrate.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1639 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Burt W. W. W. W. W.
USCG G.A. REITER

FOSC: my L DATE: 5-1-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 12 SUBDIVISION: A DATE 4/3/90USCG / NOAANAME JACQUI MICHEL SIGNATURE *Jacqui Michel*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

NO OIL WAS OBSERVED.

ADECNAME JOHN R. REED SIGNATURE *John R. Reed*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

NO OIL WAS SPOTTED.

LAND MANAGER - USFWSNAME Mary Portner SIGNATURE *Mary Portner*☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

No oil was observed.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG MAUN USCG/NOAA MICHEL SEGMENT STI PY-12
 BIO CARR LAND REP PORTNER - FWS SUBDIVISION A
 EXXON BOVER ADEC REED TIME 13:45 to 13:55
 TEAM NO.: 18 TIDE LEVEL: +2.3 to +2.3 DATE 4/13/90
 EST. SUBDIVISION LENGTH: 1600 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 95 % B 5 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 25 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1600 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	N	P	S	SP	OR	OL	OF	NO	LAB	SU	U	M	L
ASPHALT														
PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											✓	✓	✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. N/AFrames N/ASUBSURFACE OIL No pits dug due to inaccessibility and bedrock substrate.

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			SP	OR	OL	OF	NO	LAB	SU	U	M	L		

COMMENTS

Shorelines here are typical of the more protected shores of the Pys Islands. Steep hillides forested with spruce and mountain hemlock and in steep bedrock slopes and rubble at the high tide line. Dead, drowned trees are common. Oiling is insignificant but where it occurs, little evidence of wave-attraction since last August exists.

JG MANN

SKE I MAP

SEGMENT ST/ 12

SUBDIVISION A

DATE 4 / 3 90.

CHECKLIST

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

NO SKETCH WAS NEEDED.

LEGEND

1 Δ

1Δ - No Subsurface Oil

2 Δ

2Δ - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Scattered Distribution

CT/S

Stashed Distribution

Island Vegetation

1 →

into location, direction,
of number

Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 1600

REVISION: 03/24/90

APR-03-1990 22:47 FROM Ensco Atlas

Ensco TO

SSAT P.02

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / PY-12 Subdivision A (of A-C) Date (mo / day / yr) 4 / 3 / 90Time (24 hr) 1345 Biologist M. LARR(A) Substrate type and % of ^{Subdivision} segments:
(1) Bedrock 95 (2) Boulder 5 (3) Cobble (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of ^{Subdivision} segment): Dense 70 Moderate 20 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. Frames NONE

BARNACLES

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 1	2	2	2	2	2	2	2	2	2	2	2	2	
→ 2	2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	5	
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	
→ 1	2	2	2	2	2	2	2	2	2	2	2	2	
→ 2	2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	4	
5	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	NOT PRESENT IN LOW IN

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

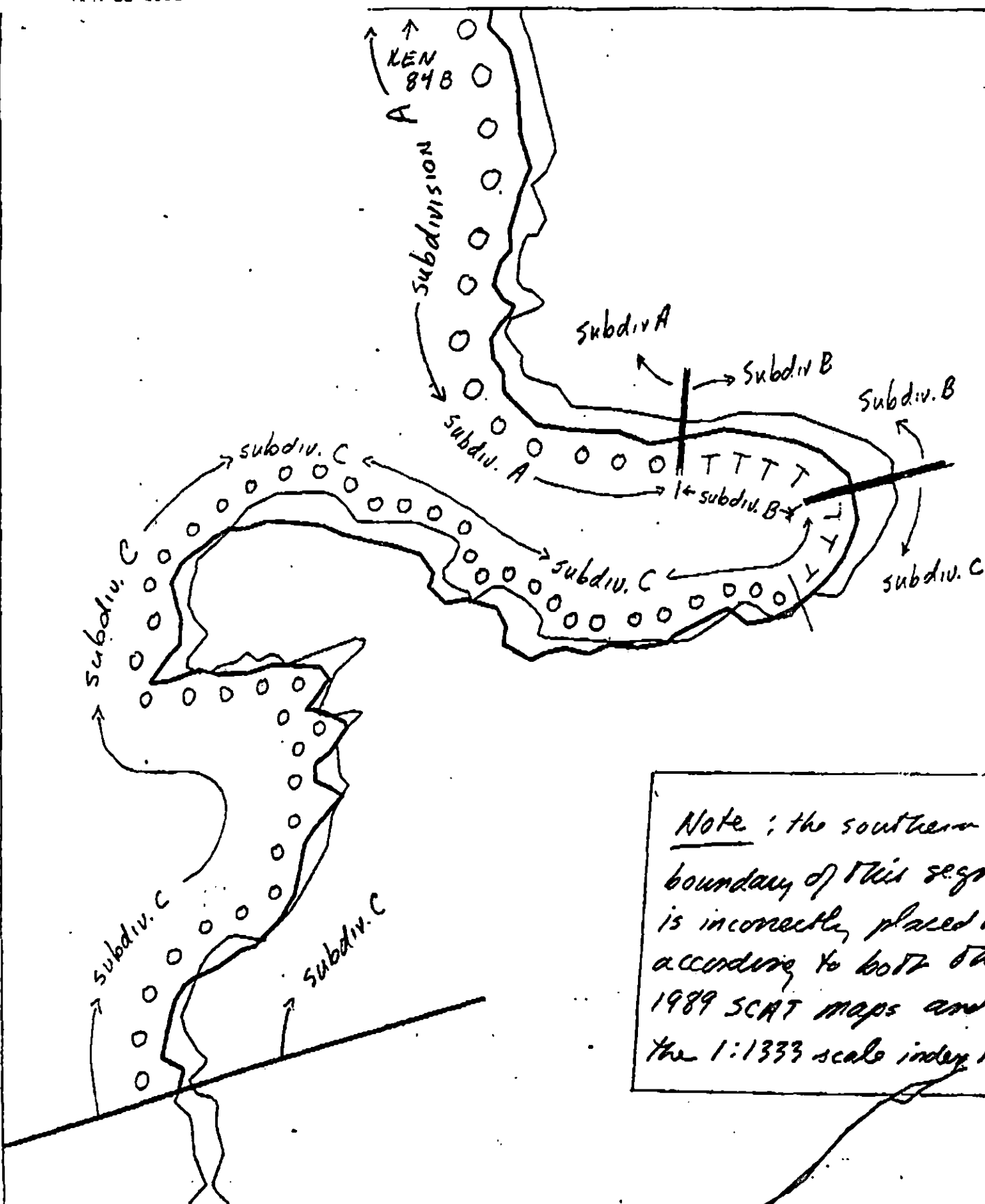
Blue Oyster-Catcher (1) Bald eagle (mature) (1)

Cormorant (1)

Harlequin ducks (10)

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



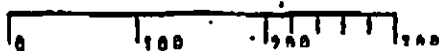
Note : the southern boundary of this segment is incorrectly placed here according to both the 1989 SCAT maps and the 1:1333 scale index map.

XXX Wide
/// Medium
--- Narrow

P Y - 1 2

ADEC Segment Length: 4210m

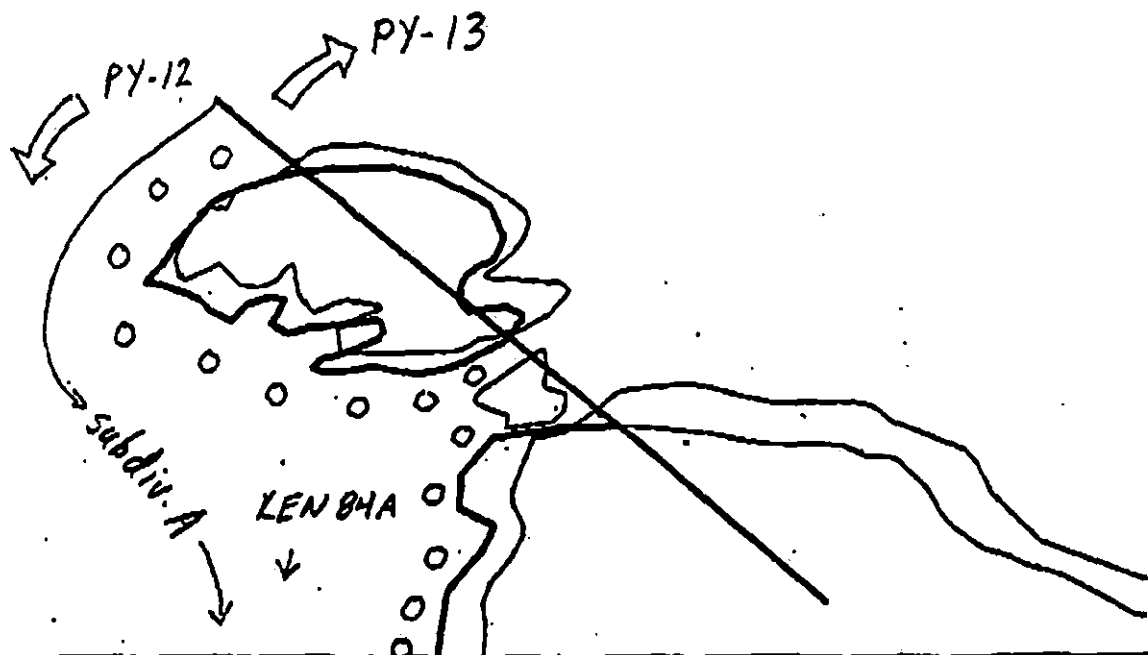
TTTT Very Light



Map Key: KEN-84a

Name: Mann

Date: 3 April 90



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

PY-12

ADEC Segment Length: 4210m

Map Key: KEN-846

Name: ManrDate: 4/3/90

SHORELINE EVALUATION

SEGMENT ST/ PY-012 SUBDIVISION B (2 OF 3) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hines DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 223 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Manual removal of pooled oil and mousse patties, followed by bioremediation.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BAUER John Bauer
EXXON ANDY GAY Andy Gay FOSC: W L DATE: 5-1-90
NOAA Bryl Wright Bryl Wright
USCG G.A. REITER G.A. Reiter Do not bioremediate IAW Lm's desires.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 PY 12 SUBDIVISION: B DATE 4/3/90

CG/NOAA
NAME JACQUI MICHEL SIGNATURE Michel

☐ NO TREATMENT RECOMMENDED
COMMENTS ☒ TREATMENT SUGGESTED

Manual removal of pooled oil and mousse patches is highly recommended. These are widely scattered but they are quite large individually.

ADEC
NAME JOHN R. REED SIGNATURE John R. Reed
☐ NO TREATMENT RECOMMENDED
COMMENTS ☒ TREATMENT SUGGESTED

Manual removal of mousse and pooled oil with shovel or hand trowel. I have read and agree with all information on the S.S.A.T. Forms.

LAND MANAGER - USFWS
NAME Mary Portner SIGNATURE Mary Portner
☐ NO TREATMENT RECOMMENDED
COMMENTS ☒ TREATMENT SUGGESTED

Pooled oil and mousse patches should be manually removed. This could be accomplished using hand trowels and shovels. At this time the oil is soft and relatively easy to recover by picking and moving cobbles. No significant weathering of the oil has occurred along this shoreline.

SHORELINE OILING SUMMARY

REVISION NO. 03/25/90

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PY-12
 BIO CARR LAND REP PORTUPE- PWS SUBDIVISION B
 EXXON BOYER ADEC 2660 TIME 13:55 to 19:20
 TEAM NO.: 19 TIDE LEVEL: +2.0 to +1.8 DATE 4/3/90
 EST. SUBDIVISION LENGTH: 300 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 50 % B 45 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 75 % Hang 25 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 300 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SP	BR	OR	OL	OF	NO	TL	LR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED				✓				✓					✓			
COVER				✓				✓					✓			
COAT				✓				✓					✓			
STAIN																
MOUSSE																
PATTIES				✓				✓					✓			
TARBALLS																
FILM																
NO OIL													✓		✓	✓

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 20 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE PT, PO#BAGS 1

Photographs:

Roll No. ST 18-3Frames 20-24

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	UC	SP	BR	OR	OL	OF	NO	TL	LR	SU	U	M	L		
1	15					✓	-											✓					B.C
2	20					✓	-											✓					B.C
3	15					✓	-											✓					B.C
4	20					✓	-											✓					B.C
							-																
							-																

COMMENTS

Oiling here is very similar to what we observed last August while Scating this shoreline.

OX: MANU

SEGMENT ST/ PY-12

SUBDIVISION B

DATE 1/13/90

CHECKLIST

- ☒ Marine
- ☒ Marine, Seals
- ☒ Subsurface Entry
- ☒ On Deck
- ☒ Depth
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/ML
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Pt. - No Subsurface Or

2 Δ

Pt. - Subsurface Or

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

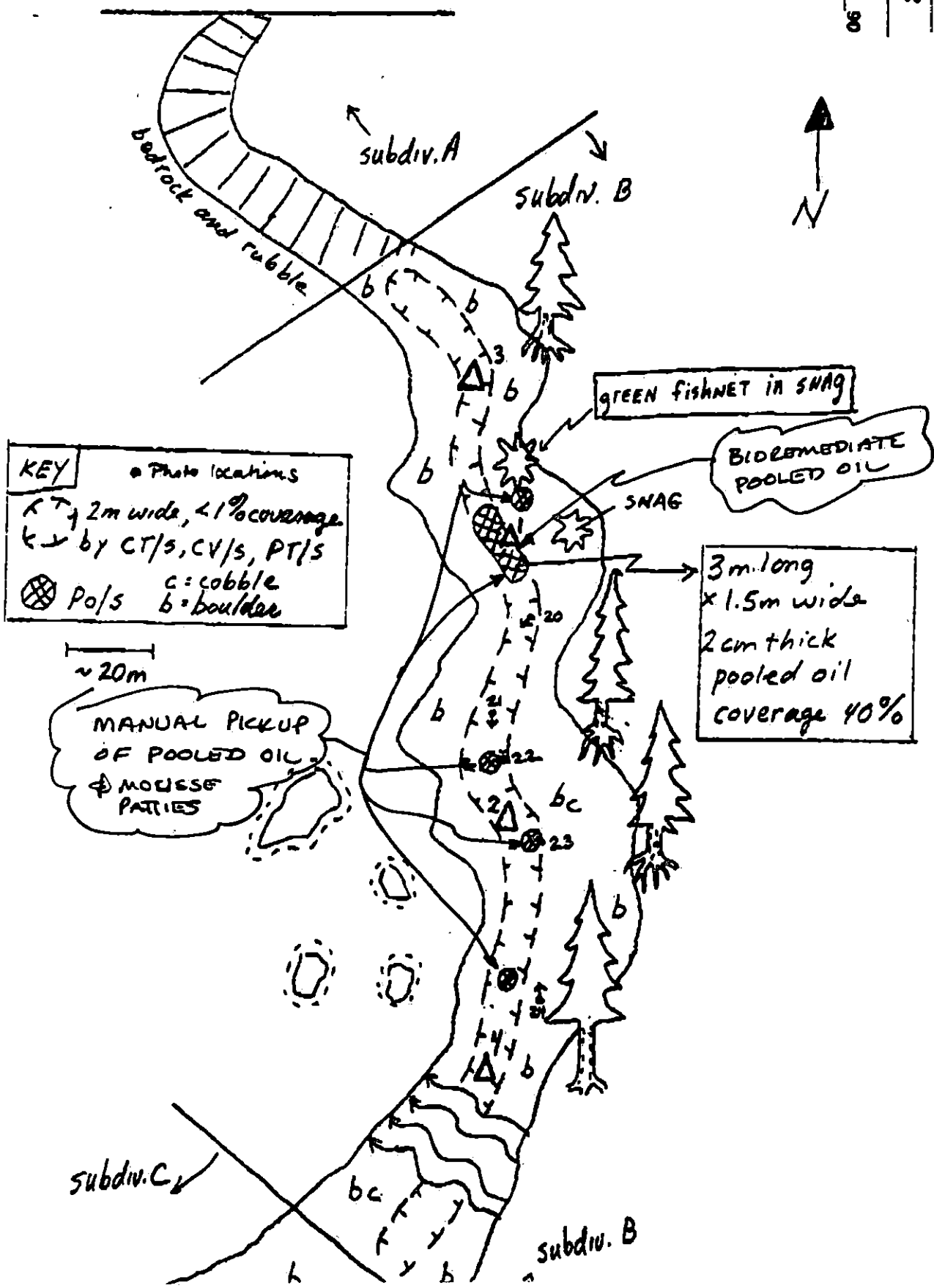
Spotted Distribution

Other Vegetation

1 $\rightarrow$

Photo location, direction, and number

SKETCH MAP



*The cullet is widely but evenly scattered with <1% coverage.

Oil Character: light (m): AP 0 PO 6 CV150 CT150 ST 0 MS 0 TB 0 FL 0 NO 50

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

Segment ST/ PY-12 Subdivision B (of A-C) Date (mo/day/yr) 4/3/90
 Time (24 hr) 1440 Biologist M. CARR

- (A) Substrate type and % of ^{subdivision} segments:
 (1) Bedrock _____ (2) Boulder 90 (3) Cobble 10 (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of ^{subdivision} segment): Dense 50 Moderate 20 Low 30
- (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. 3Frames 20-24

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
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 (EVERYWHERE?)
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	X	3	3	3	X	X	X	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	

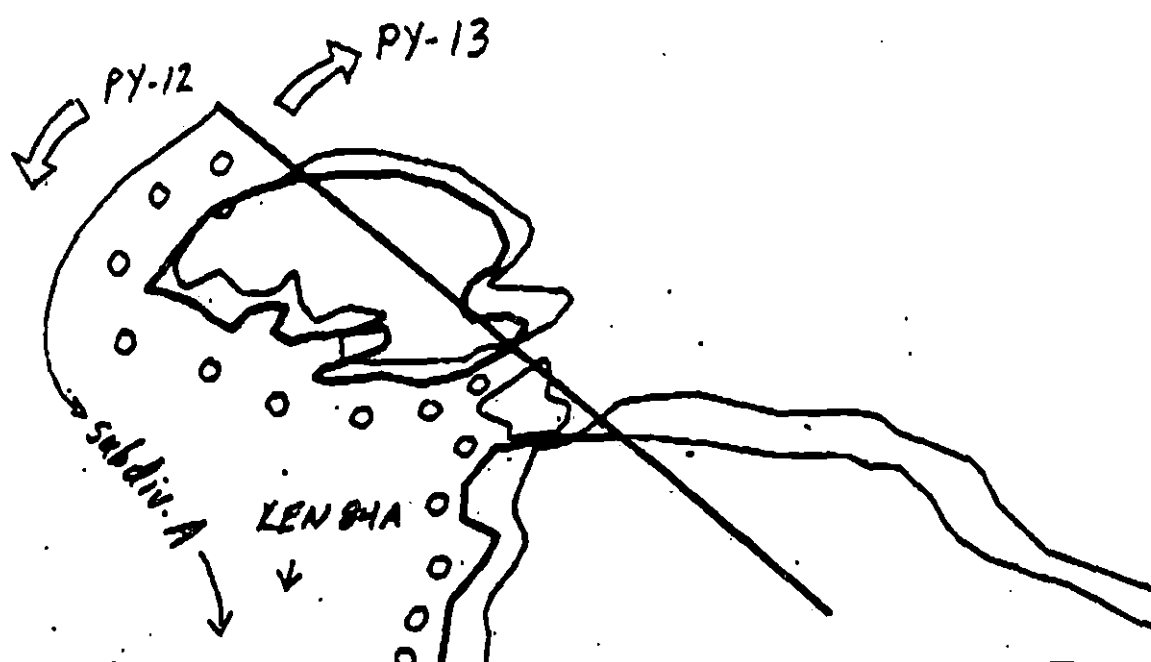
FUCUS

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

Wildlife Observations/ General Comments:

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



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

PY-12

ADEC Segment Length: 4210m



Map Key: KEN-04b

Name: Mann

Date: 4/3/90

WORK PLAN ADDENDUM

Segment PY-012

Subdivision B

Dated 5/16/90

MODIFICATION

1. REASON FOR MODIFICATION

- FOSC requirement.
- Landowner recommendation.

2. ADJUSTMENT TO WORK PLAN

- Custumblen may be used in the ITZ as indicated on the sketch following manual removal of mousse and patties.
- A USFWS representative must be on site for treatment.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE

TAG APPROVAL DATE 5/18/90

ADEC Art Weaver Art Weins

KXON Amy TATE [Signature]

0AA Gary Petrac Gary Petrac

JSCG G.A. KETTER G.A. DENT

FOSC  DATE 5-18-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PY-12 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN (USFWS MONITOR REQ.)
Bioremediation*	OPEN (USFWS MONITOR REQ.)

*Customblen may be used in ITZ following manual pickup.

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No applicable time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

A. J. Jorgensen

Date

7/3/90

Prepared by

Ray R. Conner

Date

7-3-90

PY-12

WORK
AREAS

PY-11

ECOLOGY MAP SEGMENT PY-12

SUBDIVISION B (2 of 3)

METERS

0 472 944

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

1 inch = 1549 feet



Exxon Company, USA
Map Keys KEN-PY-12
June 10, 1990



SHORELINE EVALUATION

SEGMENT ST/ PY-012 SUBDIVISION C (3 OF 3) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4QQ National Wildlife Refuge

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hume

DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 161 m: No Oil 1875 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC JOHN BAUER

EXXON ANDY GIB

NOAA Burt W. Wright

USCG G.A. BEITER

FOSC:

DATE: 5-1-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PX 12 SUBDIVISION: C DATE 4/3/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE Michel☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Widely scattered patches and CT/ST do not
warrant further treatment

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Very widely scattered. Does not require cleanup.

AND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner☒ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

oil in the form of coat, stain and patches is widely
scattered along this shoreline.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PY-12
 BIO CARR LAND REP PARTNER - PWS SUBDIVISION C
 EXXON BOYER ADEC PEED TIME 14:20 to 14:50
 TEAM NO.: 18 TIDE LEVEL: +1.8 to +1.7 DATE 4/3/90
 EST. SUBDIVISION LENGTH: 2130 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 35 % B 10 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 220 m NO 1910 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. N/AFrames N/ASUBSURFACE OIL *No landings made due to inaccessibility.*

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	1	2	3	4	5	6	7	8	SU	U	M	U		

COMMENTS

See comments for Subdivision A.

711

4/9/90

MANN

SKETCH MAP

MENT ST/ PT

DIVISION C

E 4 / 3 90

ECKLIST

1 Arrow
Upper. Scale
log/Club Entry
x Dist.
With
Length
Cover
Lithology Character
at HMLA/VL
SL
Vette Location(s)
Vette(s)
x Location(s)
Note Location(s)

NO SKETCH. WAS NEEDED.

XEND

Δ

to Subsurface Oil

2 Δ

Subsurface Oil

CT/C

CT/C Distribution

CT/S

n Distribution

CT/P

y Distribution

CT/S

red Distribution

Vegetation

→

location, direction,
vector

Assumes 10% coverage of CT/ST/MS in area denoted as very light.

Fracture Length (m): AP 0 PO 0 CV 0 CT 22 ST 22 MS 0 PT 22 TB 0 FL 0 NO 2108

REVISION 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 12/22/78

Segment ST / PY-12 Subdivision C (of A-C) Date (mo / day / yr) 4 / 3 / 90

e (24 hr) 1550 Biologist M. CARR

(A) Substrate type and % of ^{subdivision} segments:
(1) Bedrock 85 (2) Boulder 10 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of ^{subdivision} segment): Dense 70 Moderate 20 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.

Frames NONE

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

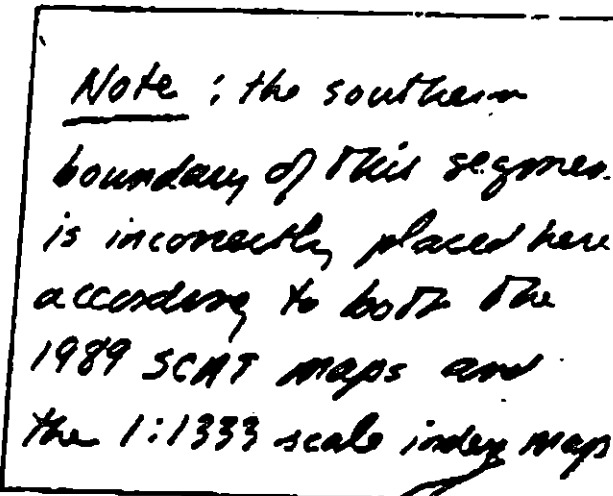
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

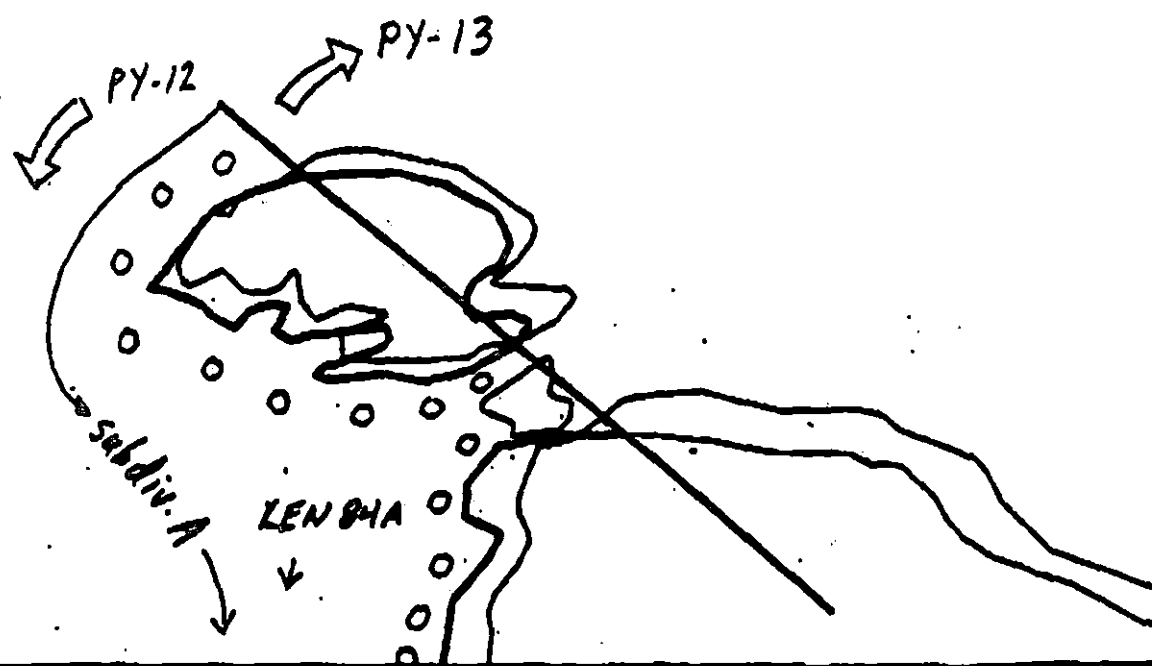
Commutants (2) Sea otter (1 mature, 1 pup) (2)
Harlequin ducks (8) Glaucous-winged gull (1)

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



Date: 3 April 90



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

PY-12

ADEC Segment Length: 4210m



Map Key: KEN-04b

Name: Mann

Date: 4/3/90

SHORELINE EVALUATION

SEGMENT ST/ PY-013 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge
5T Bald eagles observed in segment (possible nest area)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Adams DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 3089 m: No Oil 5149 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC Art Weiser Det. Glemis
EXXON ANN TEE
NOAA Burt Westcott Burt Westcott
USCG Kenneth Kene Kenneth Kene
FOSC: [Signature] DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 13 SUBDIVISION: A DATE 4/3/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE Michel☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The very scattered splatters of oil on this moderate energy, rocky shoreline do not warrant further treatment.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Very scattered. Does not need cleanup. I have read and agree that all information on SSAT Forms are correct.

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The oil is very scattered along this shoreline. Treatment is not warranted at this time.

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG MANU USCG/NOAA MICHEL SEGMENT STI PY 13
 BIO CARR LAND REP PORTNER - BUS SUBDIVISION A
 EXXON BOYER ADEC REED TIME 12:55 to 13:42
 TEAM NO.: 18 TIDE LEVEL: +3.5 to +2.4 DATE 4 / 3 / 90
 EST. SUBDIVISION LENGTH: 8601 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3060 m NO 5541 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SP	BR	FW	GL	SL	DR	TL	LR	SU	UI	ME	U
ASPHALT PAVEMENT																
POOLED																
COVER				✓		✓								✓		
COAT				✓		✓								✓		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													✓		✓	✓

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

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. ST 18-3Frames 18-19

SUBSURFACE OIL NO PITS WERE DUG BECAUSE OF BEDROCK and boulder substrate.

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	SP	BR	FW	GL	SL	DR	TL	LR	SU	UI	ME	U		
(							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

PY-13 has slightly higher wave energy than PY-12. It is otherwise very similar in geomorphology and oiling.

OG NN

SKETCH MAP

SEGMENT ST/ PY13

SUBDIVISION A

DATE 4 / 1 / 3 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

No sketch was made

LEGEND

1 

PH - No Subsurface Oil

2 

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

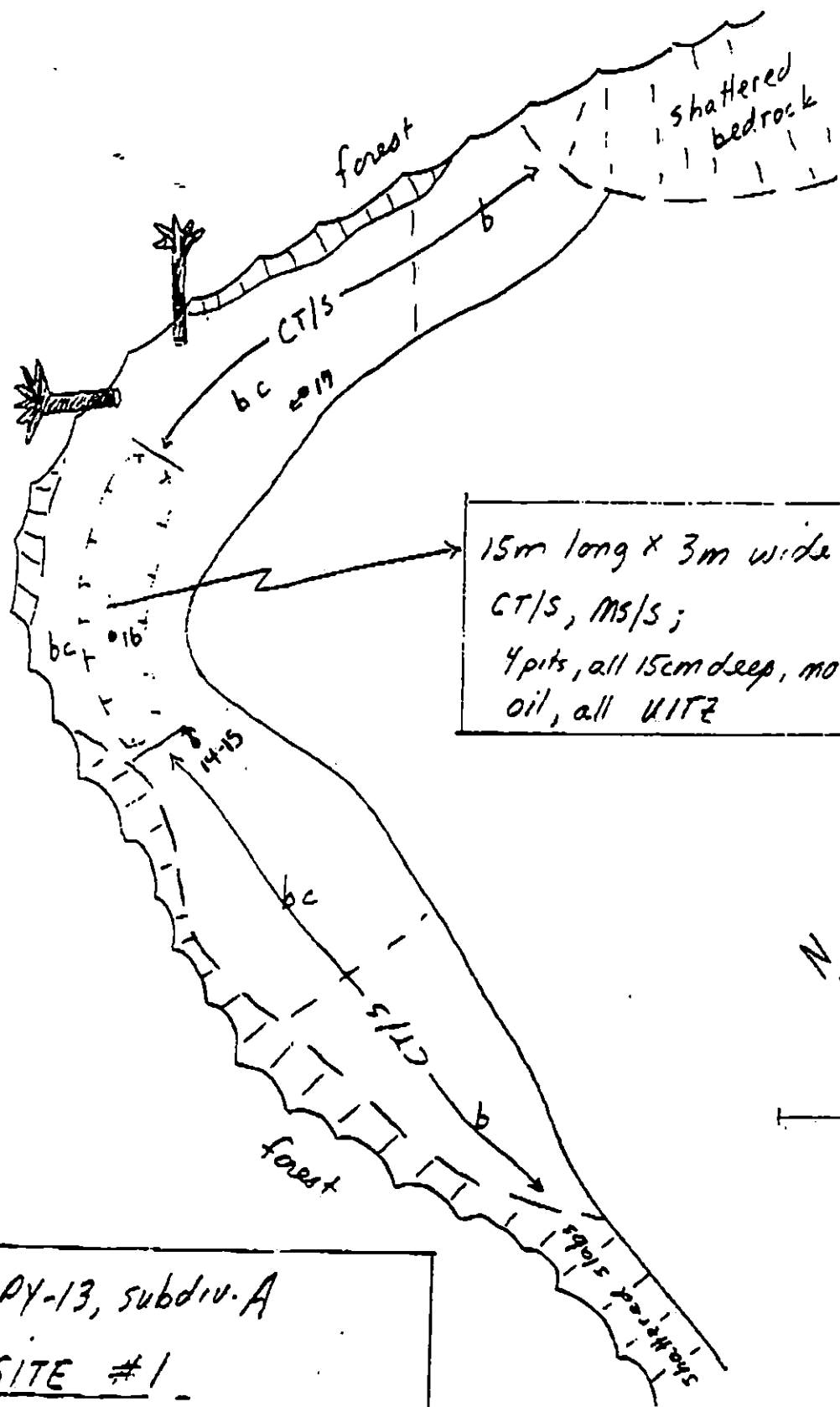
Oiled Vegetation

1 

Photo location, direction,
and number

Assumes 5% CV/CT coverage within the VL category.

Oil Character Length (m): AP 0 PO 0 CV 80 CT 80 ST 0 MS 0 PT 0 TB 0 FL 0 NO 8601



Segment PY-13, subdiv. A
SKETCH SITE #1

(This was Site B of the August 1989
 Seat report)

This is Not a subdivision map.

Manner 100

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PY13 Subdivision A (of: A) Date (mo / day / yr) 4/3/90

Time (24 hr) 1255 Biologist M. CARR

(A) Substrate type and % of ^{subdivision} segments:
(1) Bedrock 90 (2) Boulder 10 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____

(B) Overall % cover of biota (% of ^{subdivision} segment): Dense 60 Moderate 30 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: Roll No. 3

Frames 18, 19

BARNACLES

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

MYTILUS

Dense	Moderate	Sparse	Rare	
1U 2 3 4 5 6 1M 2 3 4 5 6 1L 2 3 4 5 6	1U 2 3 4 5 6 1M ⊙ 2 3 4 5 6 1L 2 3 4 5 6	1U ⊙ 2 3 4 5 6 1M ⊙ 2 3 4 5 6 1L 2 3 4 5 6	1U 2 3 4 5 6 1M 2 3 4 5 6 1L 2 3 4 5 6	NOT PRESENT IN SAND Z NOT PRESENT

GASTROPODS

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

FUCUS

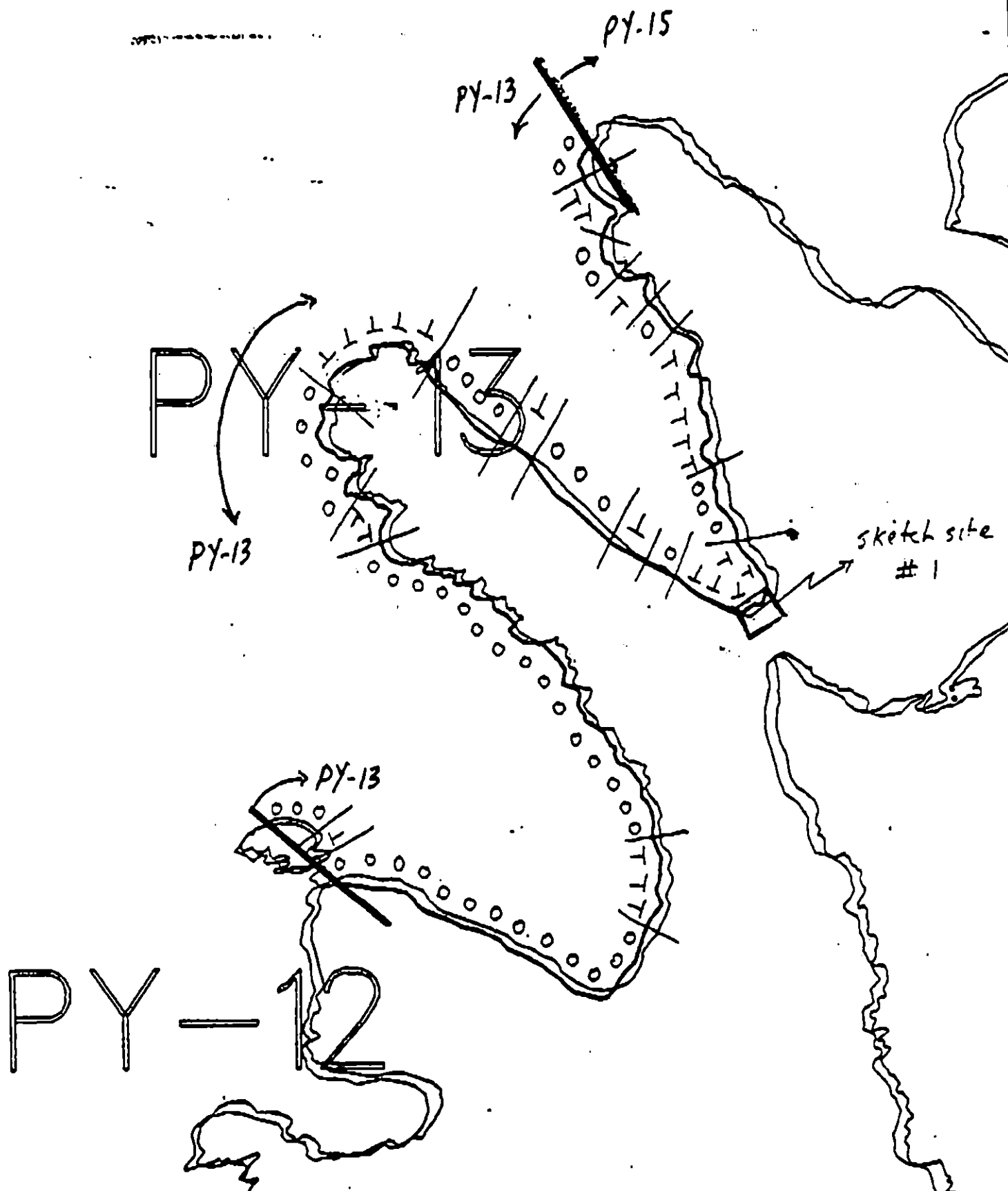
Dense	Moderate	Sparse	Rare	
1U 2 3 4 5 6 1M 2 3 4 5 6 1L 2 3 4 5 6	1U 2 3 4 5 6 1M ⊙ 2 3 4 5 6 1L 2 3 4 5 6	1U ⊙ 2 3 4 5 6 1M ⊙ 2 3 4 5 6 1L 2 3 4 5 6	1U 2 3 4 5 6 1M 2 3 4 5 6 1L ⊙ 2 3 4 5 6	NOT PRESENT

Wildlife Observations/ General Comments:

Surf scoter (6) Black oyster-catcher (6) Harlequin duck
Raven (1) Sea otter (3) (2 mature + 1 pup)
Red-faced cormorant (1) Bald eagle (3) (2 mature + 1 immature)

Ecological Considerations:

Sensitivity codes: 4-QQ (Natural Wildlife Refuge)



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

PY-13 1:18000

ADEC Segment Length: 7924m

0 500 1000 1500
METERS

Map Key: KEN-85

Name: MannDate: 4/3/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-014 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4QQ National Wildlife Refuge

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Danner DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 1844 m: No Oil 1823 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90.

ADEC Art Weimer Art Weimer

EXXON Andy Tera Andy Tera

NOAA Bruce Warratt Bruce Warratt

USCG G.A. Reiter G.A. Reiter

FOSC: W L

DATE: 5-1-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 14 SUBDIVISION: A DATE 4/6/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE Jacqui Michel☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The very light oil occurs in a large cove and the central part of the northern shore, as scattered splatters on rocks and accumulations at the base of boulders in pocket beaches. No further treatment is warranted. This segment is readily exposed to wave energy.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Very light oiling in bedrock and boulder substrate that is mostly in the form of splatters. The small pocket beach (site sketch #1) is where type B cleanup took place last year. This site is mostly stain and does not require cleanup. I have read and agree with all data on S.S.A.T. forms.

LAND MANAGER - USFWS

NAME Mary Fortner SIGNATURE Mary Fortner☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

No oil remaining in this zone occurs as 3 separate 5m x 2.3m and areas of stain, coat and mucus widely scattered in the Eastern portion of the segment and as coat and stain in a 3m x 2.5m band in the cove to the west. I feel this was a good survey and agree with the SSAT forms.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mann NORM Michel SEGMENT ST/ PY-14
Cart LAND REP Partner - USFWS SUBDIVISION A
 XON BOYER ADEC Recd TIME 15:47 to 16:55
 TEAM NO.: 18 TIDE LEVEL: 9.0 to 1.5 DATE 4/6/90
 EST. SUBDIVISION LENGTH: 3425 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 45 % Vert 45 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1782 m NO 1843 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IR	IP	IS	SB	SB	SB	SB	SB	SB	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT				✓	✓						✓			
STAIN				✓	✓						✓			
MOUSSE														
PATTIES				✓	✓						✓			
TARBALLS														
FILM														
NO OIL											✓		✓	✓

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

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE HA 0#BAGS 0

Photographs:

Roll No. ST-8-VFrames 1-3

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	UO	SB	SB	SB	SB	SB	SB	SU	U	M	U		
1	30		✓	-			0-25	✓					✓			✓				NO	CB Throughout
2	30		✓				0-25	✓					✓			✓				"	" "
3	30		✓				0-25	✓					✓			✓				"	" "

COMMENTS * all pits were dug at the sketch site.

The oil remaining on this steep, bouldery coastline is hard to find. At sketch site 2, most of the remnant oil is down between the boulders and cobbles of the shore - probably washed there by the type B cleanup.

145-05-1550 22:35 FROM Enco Rias Enco TU 5547 P.11

SKETCH MAP

3 MANN
SEGMENT ST/ PY-14
SUBDIVISION A
DATE 4 / 6 90

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

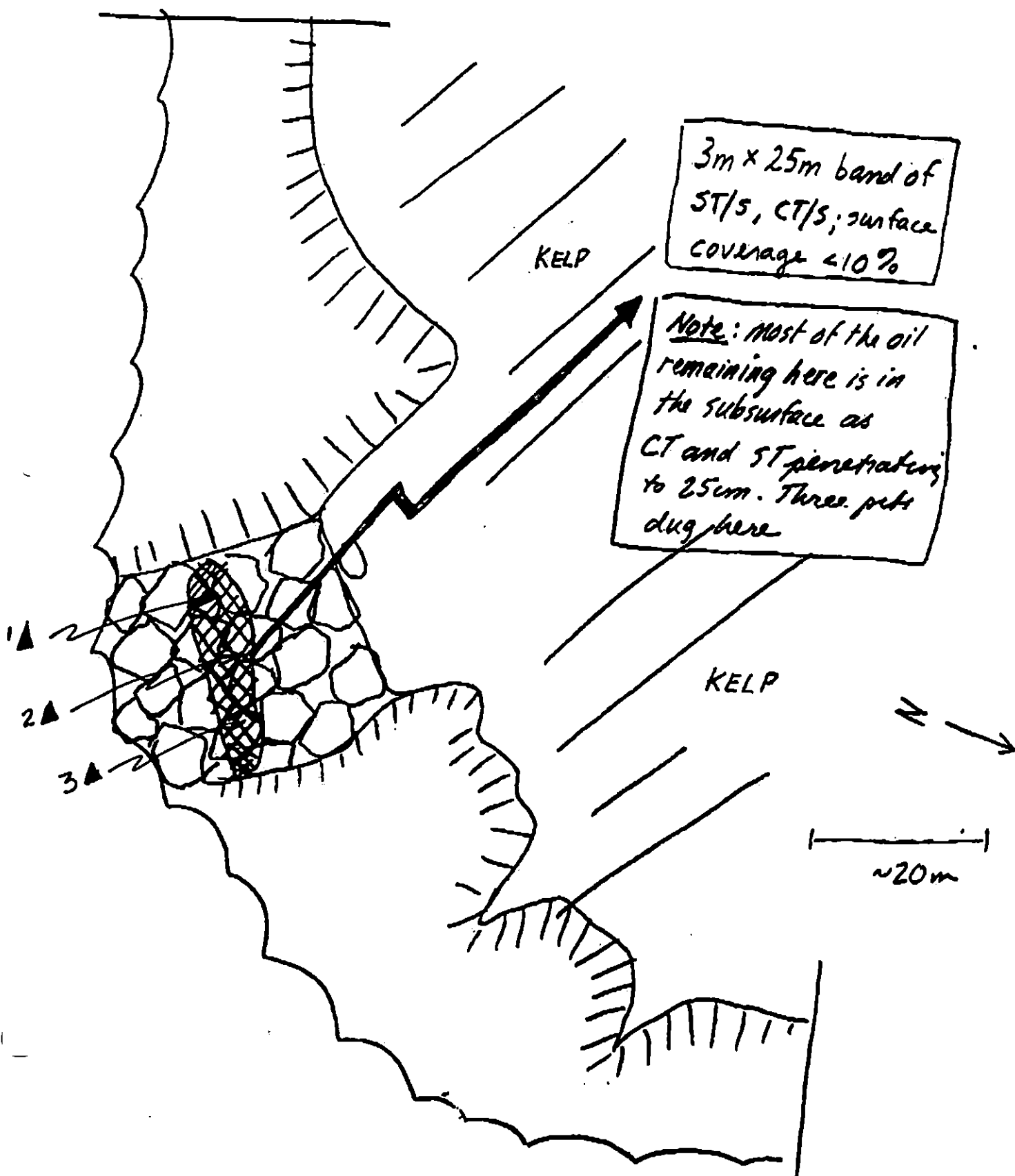
NO sketch required

- LEGEND
- 1 1 - No Subsurface Oil
 - 2 2 - Subsurface Oil
 - CT/C
Continuous Distribution
 - CT/B
Common Distribution
 - CT/P
Patchy Distribution
 - CT/S
Scattered Distribution
 - 1 1
into location, direction, and number

30% of VL is CT + ST
41% of VL is PT/S

Character Length (m): AP 0 PO 0 CV 0 CT 500 ST 500 MS 0 PT 60 TB 0 FL 0 NO 3125

PY-14 6 April 1990 Mann Team 18 Site Sketch Map #1
(Site A in August 1989)



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST / PY-14 Subdivision A (of A) Date (mo / day / yr) 4 / 10 / 90
me (24 hr) 1545 Biologist M. CARR

- (A) Substrate type and % of segments; ^{SUBDIVISION}
(1) Bedrock 90 (2) Boulder 10 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) SR _____
- (B) Overall % cover of biota (% of segment); ^{SUBDIVISION} Dense 80 Moderate 10 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. 4
Frames 1-3

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
NOT PRESENT ON COBBLE
AT ANY TIDAL ZONE

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 IN LOW -
NOT PRESENT
NOT PRESENT ON COBBLE
AT ANY TIDAL ZONE

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
NOT PRESENT IN MID
AND LOWER ZONES.

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
NOT PRESENT IN COBBLE
AT ANY TIDAL ZONE.

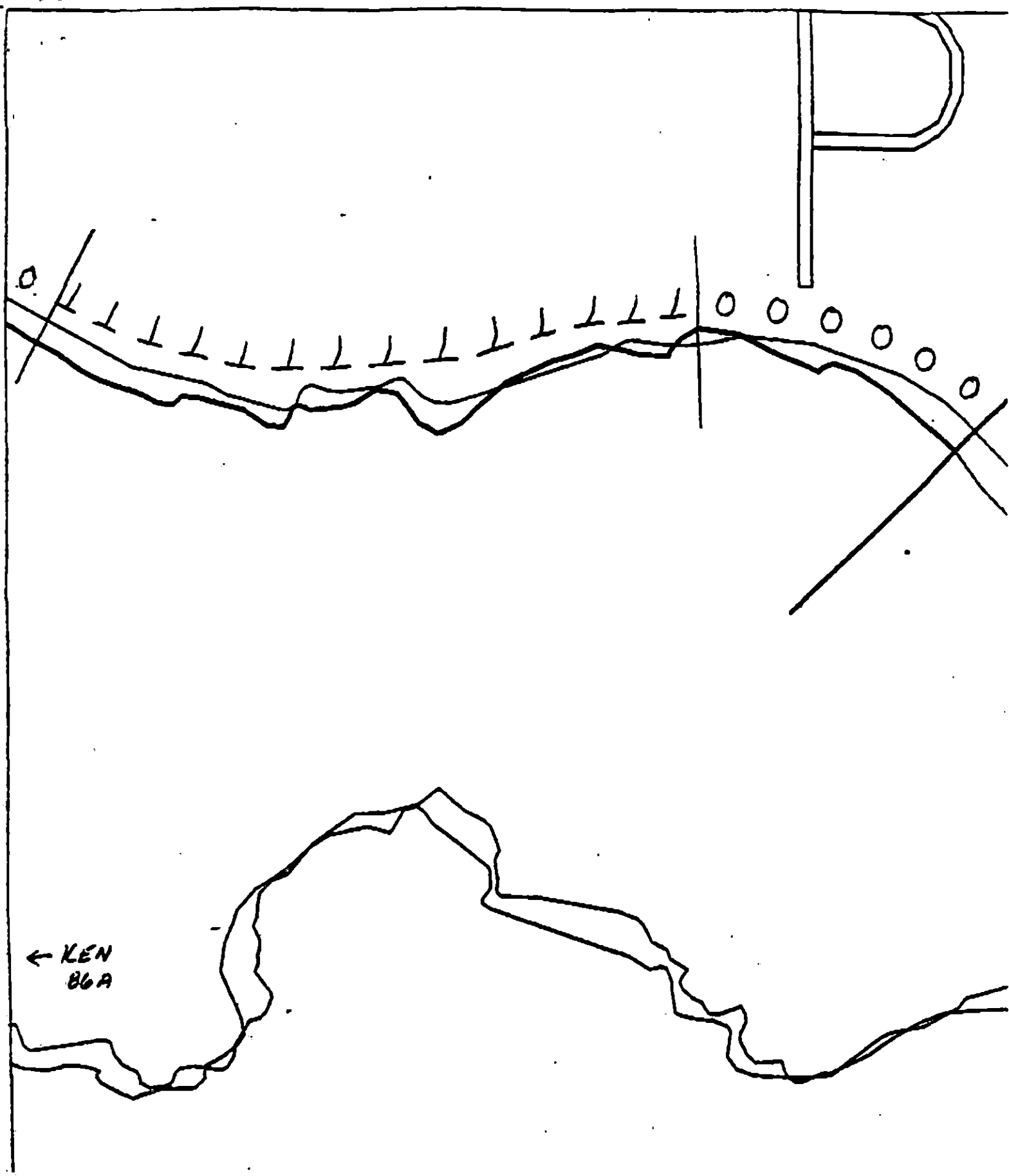
Wildlife Observations/ General Comments:

Common (3) unid.
Bald eagle (3) all mature
Sea otter (4) 3 mature - / one pup.

Surf scoters (13)
Harlequin ducks (8)

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



← KEN
86A

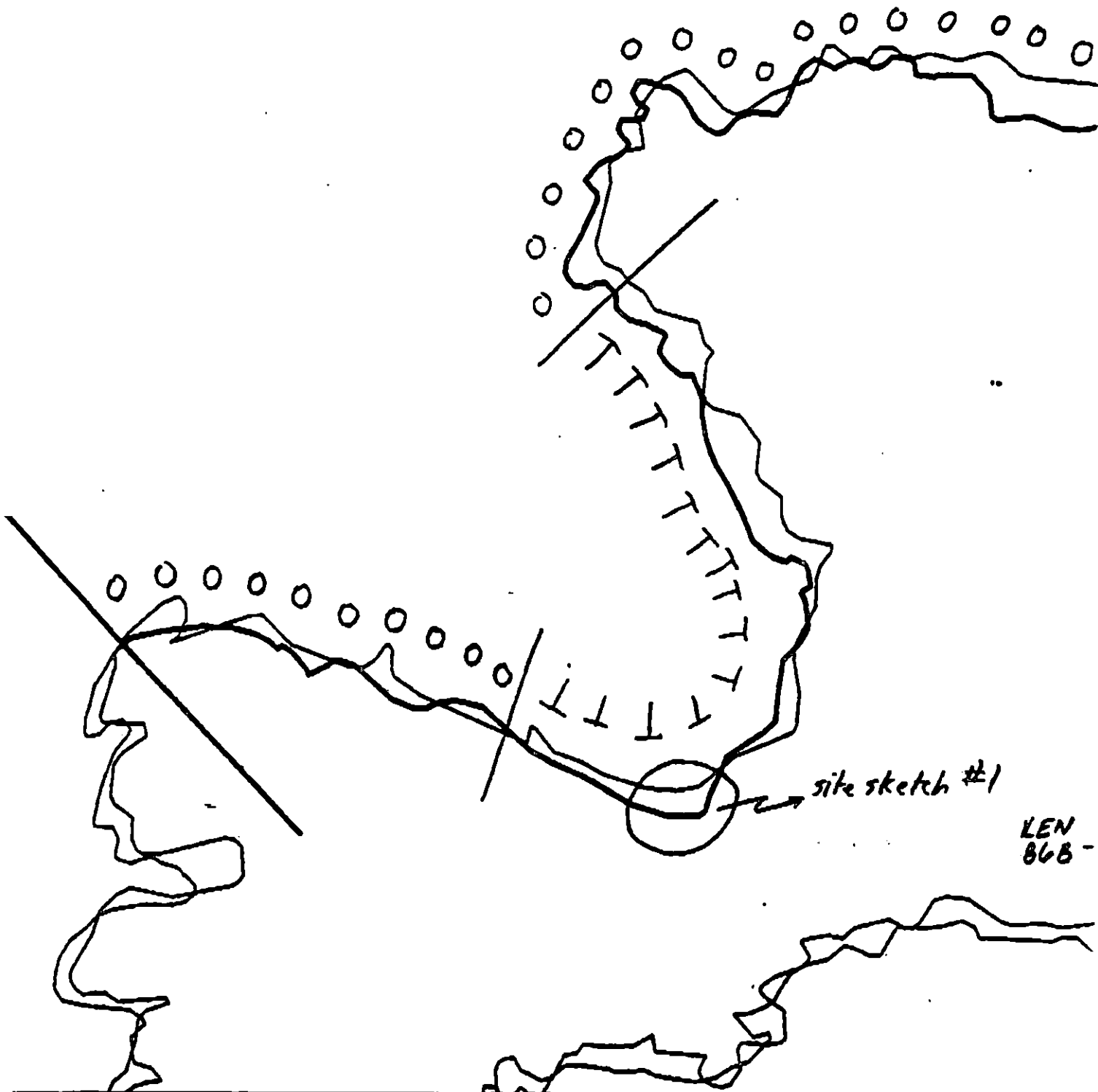
XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light

PY-14

ADEC Segment Length: 3667m



Map Key: KEN-86b
 Name: Mann/PY-14
 Date: 4/6/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PY-14

ADEC Segment Length: 3667m

Map Key: KEN-86a

Name: Mann/PY-14

Date: 4/6/90

LEN
868-

SHORELINE EVALUATION

SEGMENT ST/ PY-015 SUBDIVISION A (1 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
National Wildlife Refuge (4QQ)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles Z. [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 845 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Wierse
EXXON ANN TET
NOAA Bull Wierse
USCG KENNETH KEANE

FOSC: [Signature] DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 15 SUBDIVISION: A DATE 3/31/90

USCG / NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

The very light distribution of oil does not warrant any further treatment

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

DUE TO THE LOCATION AND AMOUNT OF OIL I AM SUGGESTING NO TREATMENT.

LAND MANAGER - USFWS

NAME Mary Portner SIGNATURE Mary Portner

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Oiling in this subdivision consists of sporadic coat and stain on mostly vertical rock faces. Due to the distribution and character treatment will be difficult.

SHORELINE OILING SUMMARY

REVISION NO. 002670

OG MANU USCG/ANRA MICHEL SEGMENT ST/ PY 15
 BIO CARR LAND REP PARTNER - FWS SUBDIVISION A
 EXXON BOYER ADEC REED TIME 10:45 to 11:00
 TEAM NO.: 18 TIDE LEVEL: -1.1 to -1.0 DATE 3 / 31 / 90
 EST. SUBDIVISION LENGTH: 950 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: WEST to EAST
 SURFACE SEDIMENTS: R 100 % B 0 % C 0 % P 0 % G 0 % S 12 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 950 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	E	P	S	1	2	3	4	5	W	U	M	V
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

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

OILED DEBRIS <u>NU</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. N/AFrames

SUBSURFACE OIL NO PITS DUG. THIS SUBDIVISION IS ALL BEDROCK AND INACCESSIBLE.

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	1	2	3	4	5	W	U	M	V		
<u>0</u>																				

COMMENTS

This granitic rocky shore has only very scattered oil as drips and thin bands along the high tide line.

OG Manor

SEGMENT ST/ PY-15

SUBDIVISION A

DATE 3/1/90

CHECKLIST

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

Other Vegetation

1 

Photo location, direction,
and number

SKETCH MAP

(No sketch map made of
this large subdivision
— see GIS map).

Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 25 MS 0 PT 0 TB 0 FL 0 NO 915

REVISIONS

2.5

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST PY 15 Subdivision A (of A-D) Date (mo/day/yr) 3-31-90Time (24 hr) 1211 Biologist M. CARR(A) Substrate type and % of ^{Subdivision} segments:
(1) Bedrock 70 (2) Boulder 30 (3) Cobble (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of ^{Subdivision} segment): Dense 70 Moderate 20 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. Frames NONE

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:

Common Merganser (2)

Barrow's golden-eyes (15-20)

Surf scoter (2)

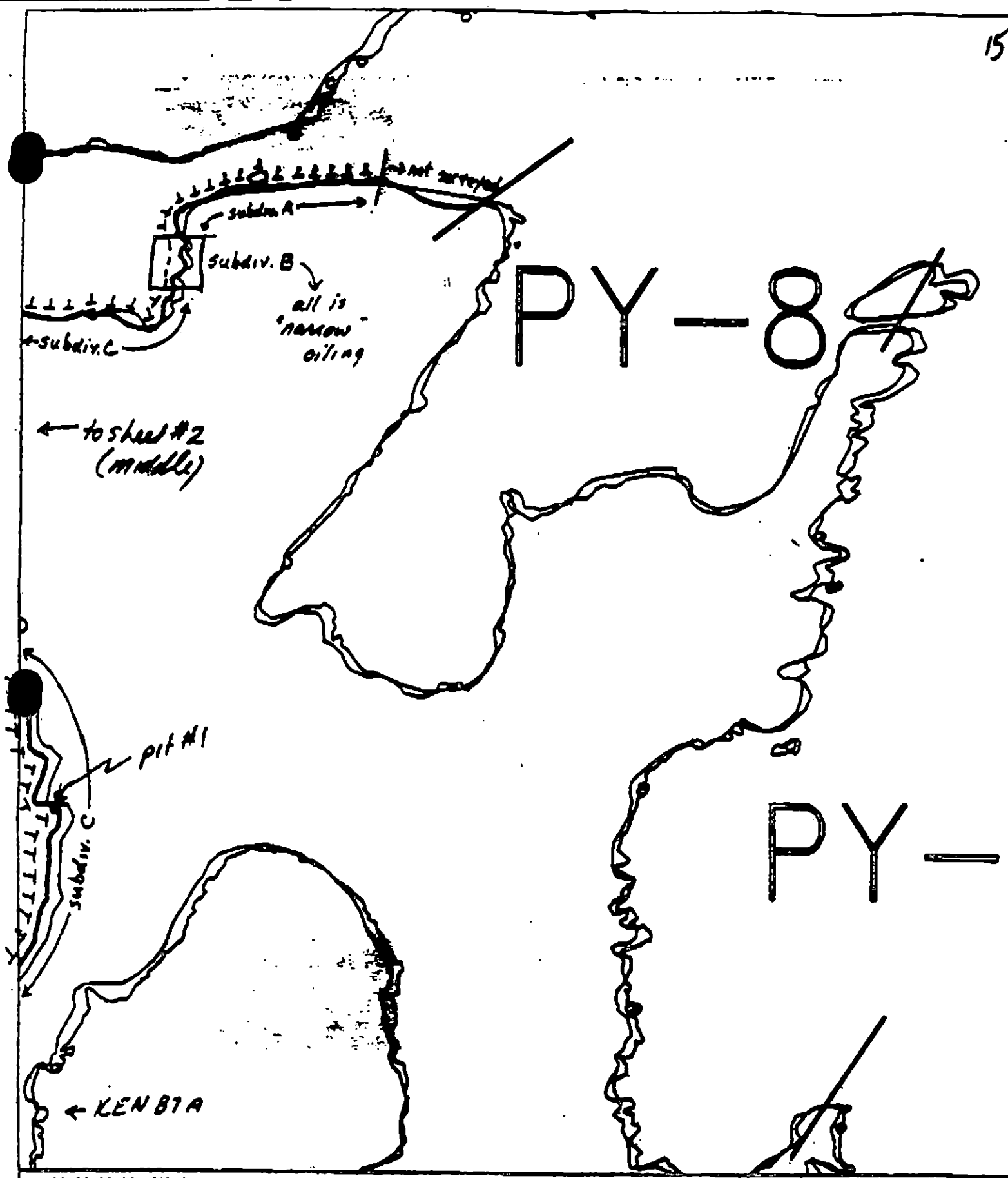
Ecological Considerations:

Sea otter (1)

Harlequin duck (19)

Mink/martin (1) in upper intertidal.

Sensitivity codes: 4-QQ (National Wildlife Refuge)



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

PY-15

ADEC Segment Length: 11802m



Sheet 3 of 3 (east)

Map Key: KEN-87b

Name: Mann

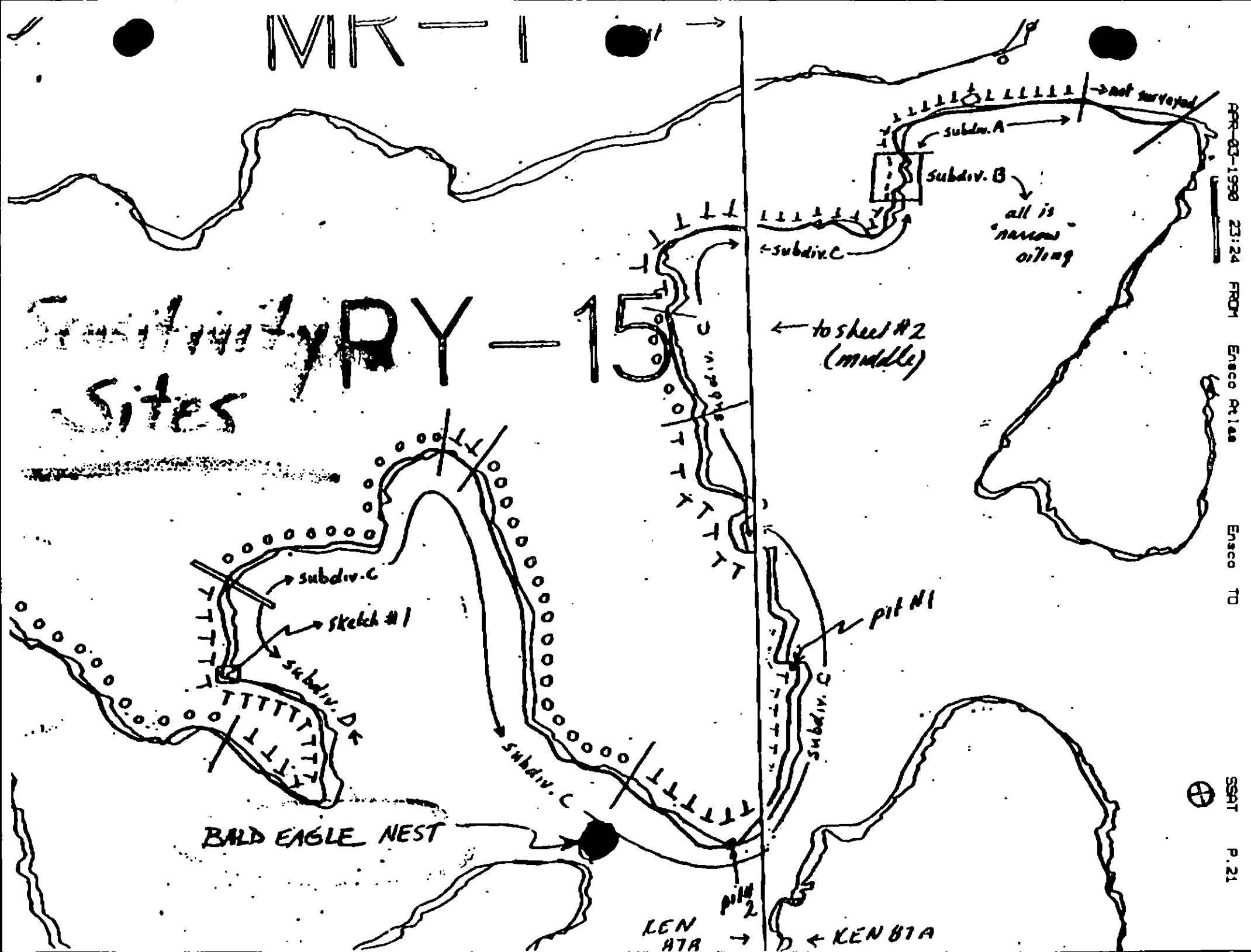
Date: 31 March 90

Date Entered:

MR-1

Surveying Sites

RY-15



SHORELINE EVALUATION

SEGMENT ST/ PY-015 SUBDIVISION B (2 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
National Wildlife Refuge (4QQ)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles J. H. Jones DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 239 m: V. Light 0 m: No Oil 0 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> X </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u> X </u> Removal	<u> </u> Other (see comments)

COMMENTS: The treatment recommendations are as follows: 1) Manual pick up of mousse and pooled oil, 2) Tarmat removal and, 3) Bioremediate area of pooled oil and broken cover as shown on attached sketch map. No time constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC ART WEAVER
EXXON ANDY TATE
NOAA Bruce W. Wickett
USCG KENNETH KEANE

FOSC:

DATE: 4-22-90

Bioremediation subject to Land Owner approval - if not obtained, do not bioremediate!

FIELD SHORELINE COMMENT SHEET

6

SEGMENT ST / PY 15 SUBDIVISION: B DATE 31 Mar 90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of pavements + mousse patches by shovels;
 Manual removal by wiping w/ pom-poms of pooled oil -
 especially in crevices in rocks.

ADEC

NAME JOHN R. REED SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual Removal of asphalt pavements, pooled oil, and
 mousse patches could be accomplished with shovels or
 hand trowels. Pom Poms may also be used on the
 pooled oil. I have read and agree with all information
 on the S.S.A.T. Forms.

LAND MANAGER

NAME Mary Portner SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Despite treatment in 1989 residual oil remains at this site.
 I recommend manual removal of the asphalt pavement
 indicated on the map, using shovels and hand trowels.
 Pooled oil and mounds on and between the boulders and
 cobbles should be recovered using pom-poms w/ extensions,
 hand trowels etc.

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG MANN/Michel NOAA USCG MICHEL SEGMENT ST/ PY 15
 BIO CARR LAND REP POETNER SUBDIVISION B
 EXXON BOYER ADEC REED TIME 11:00 to 12:15
 TEAM NO.: 18 TIDE LEVEL: -1 to +1 DATE 3/31/90
 EST. SUBDIVISION LENGTH: 150 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 30 % B 60 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 150 m VL 150 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT		✓							✓		✓		
POOLED				✓					✓			✓	
COVER		X		✓					✓		✓	X	
COAT				✓					✓		✓	✓	
STAIN				✓					✓		✓	✓	
MOUSSE				✓					✓		✓		
PATTIES				✓					✓		✓	✓	
TARBALLS													
FILM													
NO OIL										✓			✓

PAVEMENT: H (F) S 20 sq. m by 5 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS <u>NO</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE NA#BAGS NA

Photographs:

Roll No. 18-2Frames 4-15

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	UD	1	2	3	4	5	SU	U	M	U		
1	10					✓	-								✓				N	B.C.G
2	20				✓		0-20	✓			✓				✓				N	G.P
3	20				✓		0-20	✓			✓				✓				N	C.P.G
4	20				✓		0-20	✓			✓					✓			N	C.P.G
5	15					✓	-									✓			N	B.C.P
6	25					✓	-									✓			N	B.C.P.G

COMMENTS PITS # 2,3,4 REACHED PEAT/SOIL HORIZON.

The shore here consists of boulder and cobble accumulations between bedrock points. Oil spots and splashes on slabs show little evidence of erosion by waves. Asphalt is present as remnants in area of cobble-boulder.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 02/22/90

SEGMENT ST/ Py 15 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-ON)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC		SU	U	M	LI		
7	20					✓	.						✓			B.G. PG
8*	10					✓	0.0		✓	✓		✓				P.C. B
9	20					✓	0.5		✓	✓			✓			C PG
10	5					✓	.						✓			C.P.B
11	10					✓	.						✓			C PG
12	10					✓	.						✓			C PG B
13	10					✓	.							✓		C PG B
							.									
							.									
							.									
							.									
							.									
							.									
							.									
							.									

COMMENTS PIT 9 HAD A SHEEN^(silver) ON WATER SURFACE.

Pit #8 was purposefully dug through a patch of asphalt. The asphalt pavement is 5cm thick.

REVIEWED

BAP

DATE 10 Apr 90

OG Mann
SEGMENT ST/PY. 15
SUBDIVISION B
DATE 3/31/90

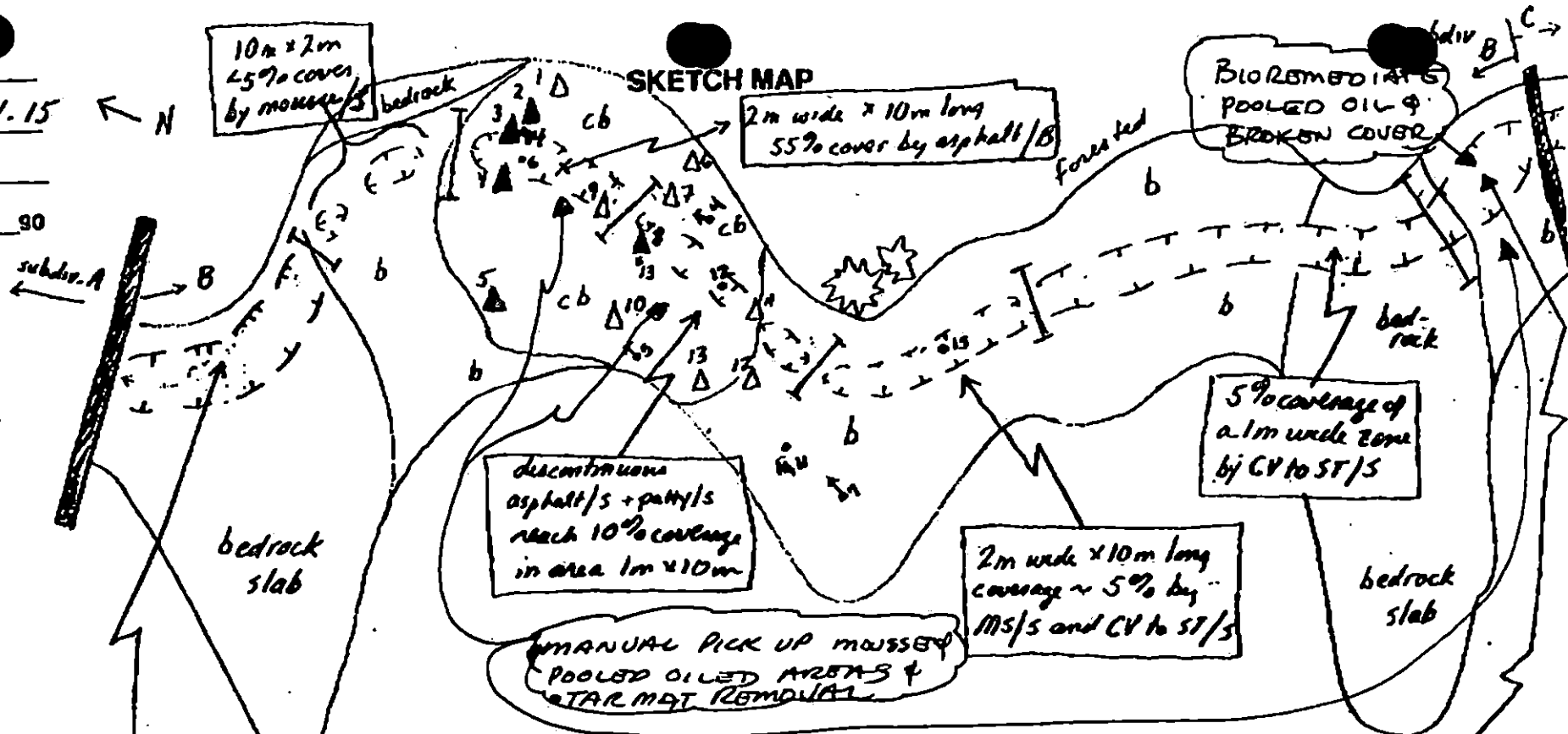
CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Segments Only
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

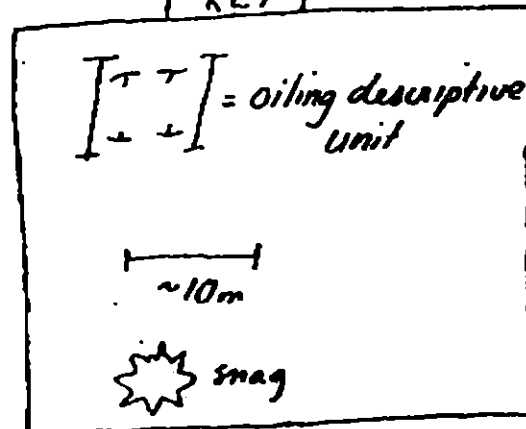
LEGEND

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

SKETCH MAP



KEY



25m wide x 5m long
- upper surfaces of stones: stain - 20%
- lower surfaces of stones: CT to CV - 80%
- mouse/pooled/s - 45%

Oil Character Length (m): AP 20 PO 5 CV 150 CT 150 ST 150 MS 0 PT 10 TB 0 FL 0 NO 0

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/ PY 15 Subdivision B (of A-D) Date (mo / day / yr) 3 / 31 / 90Time (24 hr) 1050 Biologist M. CARR(A) Substrate type and % of ^{Subdivision} segments:
(1) Bedrock 30 (2) Boulder 60 (3) Cobble 10 (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of ^{Subdivision} segment): Dense 60 Moderate 20 Low 20

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

Photographs:
Roll No. 2Frames 4-15

BARNACLES

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

COBBLE NOT IN LOWER ZONE
NOT PRESENT

MYTILUS

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

NOT PRESENT IN LOWER ZONE
NOT PRESENT IN Boulders
NOT PRESENT
COBBLE NOT IN LOWER ZONE

GASTROPODS

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

NOT PRESENT
COBBLE NOT IN LOWER ZONE

FUCUS

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

NOT PRESENT IN LOWER ZONE
NOT PRESENT
COBBLE NOT IN LOWER ZONE

Wildlife Observations/ General Comments:

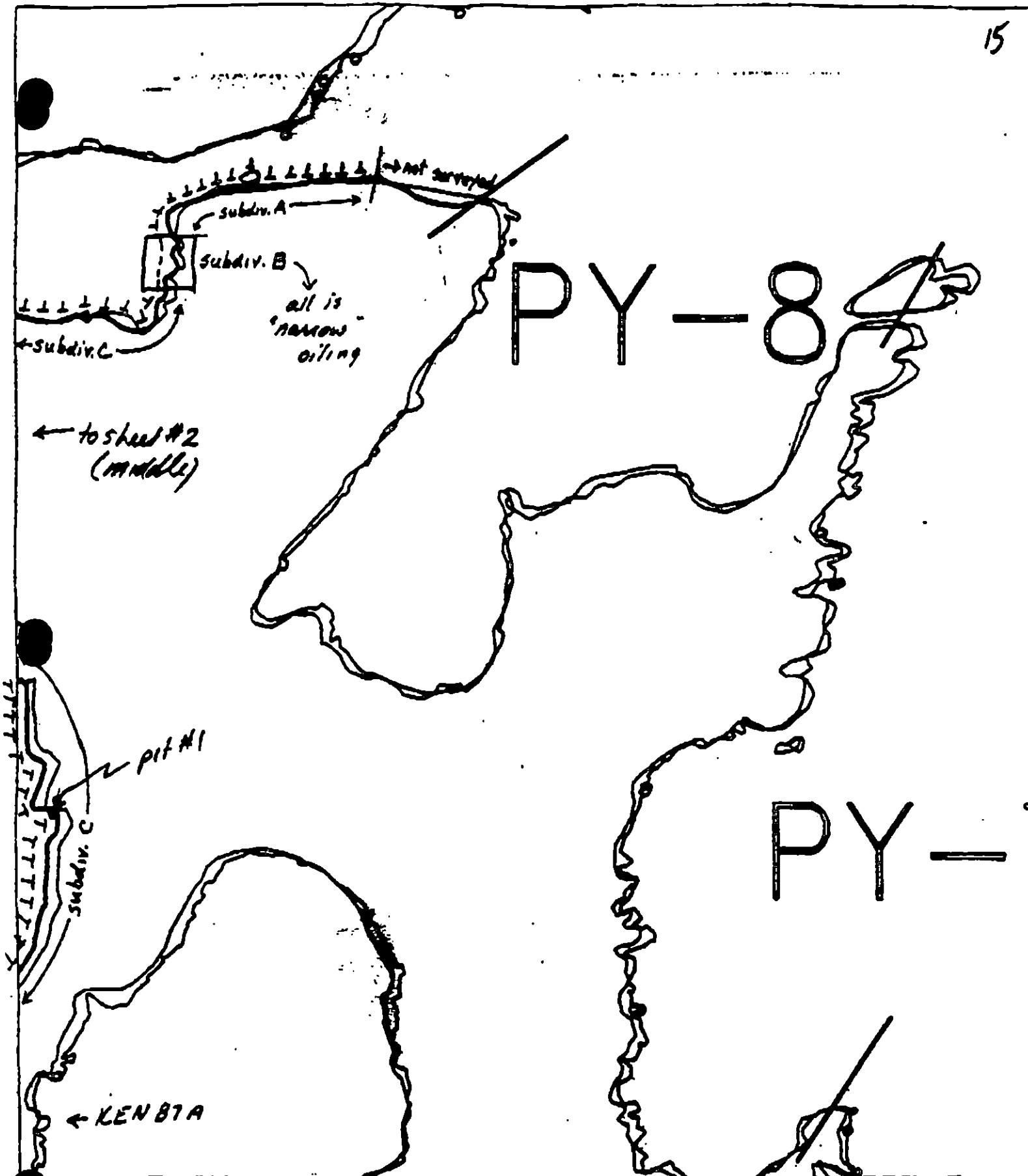
Comment: (1)

Ecological Considerations:

Cobble/boulder area known to have been hot-water treated, with dense barnacle cover and high littorine; moderate mytilus recruitment.

Sensitivity codes: 4-QQ (National Wildlife Refuge)

15



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PY-15

ADEC Segment Length: 11802m

Sheet 3 of 3 (east)

Map Key: KEN-87b

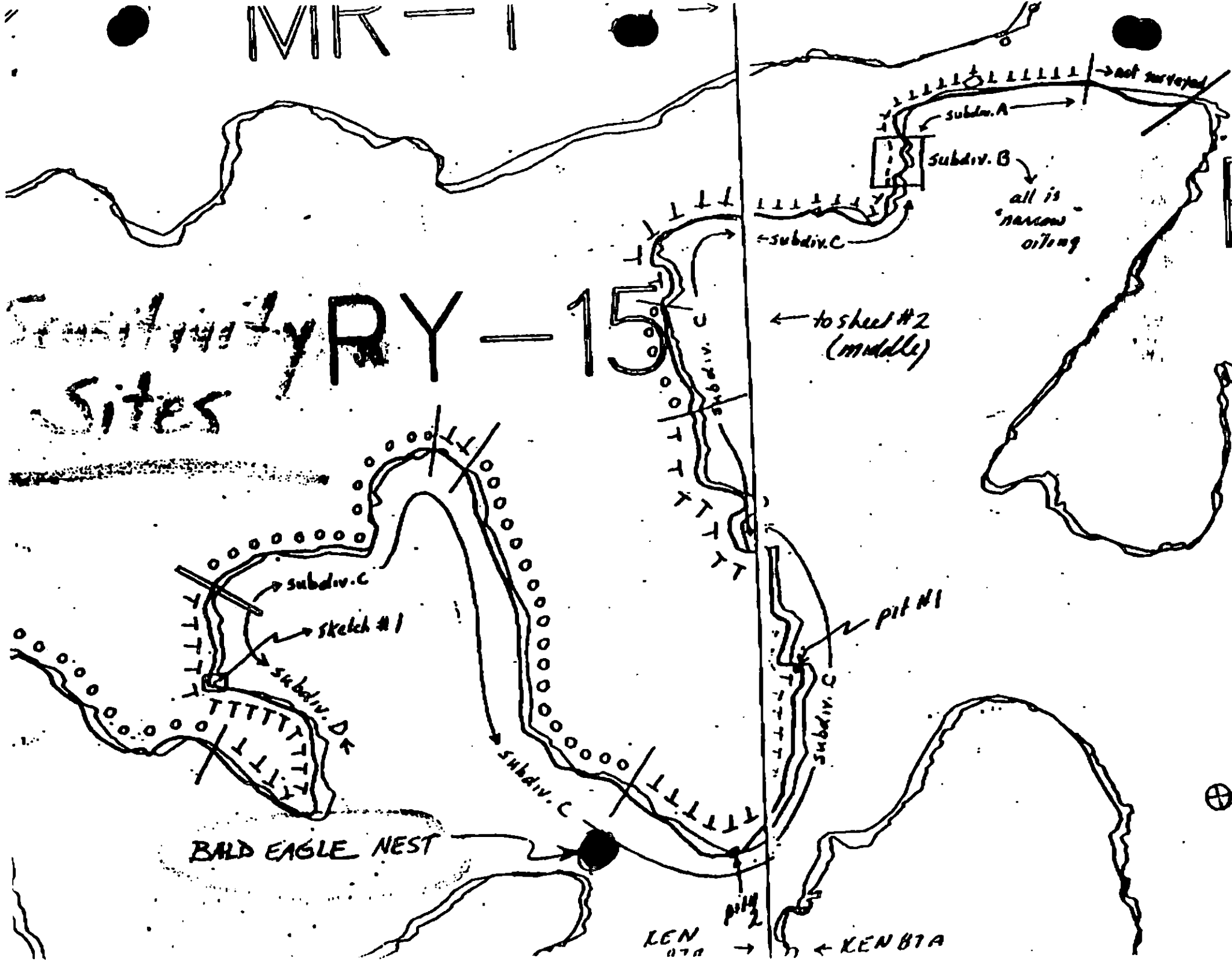
Name: Mann

Date: 31 March 90

MR-1

Smithsonian
Sites

RY-15



APR-03-1990 23:24 FROM Enaco Atlas ENACO TO SSAT P.21

SHORELINE EVALUATION

SEGMENT ST/ PY-015 SUBDIVISION C (3 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
National Wildlife Refuge (4QQ)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to uncoiled biota and substrate.

SHPO SIGNATURE: *Charles E. Hahn* DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 4083m: No Oil 3110 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC *Art Weiser Dpt Weiser*
EXXON *AWAY TGA* FOSC: *[Signature]* DATE: 4-22-90
NOAA *Bu. I Weiser Bu. I Weiser*
USCG *Kenneth Ketter*

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 15 SUBDIVISION: C DATE 31 MAR 90

USCG / NOAA

NAME JACQUI MICHEL

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

The small amount of scattered oil on bedrock does not warrant further treatment.

ADEC

NAME JOHN R. REED

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Small amount of very light oil does not warrant treatment. I have read and agree with the information on the S.S.A.T. Form.

LAND MANAGER - USFWS

NAME Mary Portner

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Oiling in this subdivision consists of sporadic coat and stain on mostly vertical rock faces. Due to the distribution and character of the oil treatment will be difficult.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG MANN USCG/MMT MICHEL SEGMENT ST/ PY 15
 BIO CARR LAND REP PARTNER - FWS SUBDIVISION C
 EXXON BOYER ADEC REED TIME 12:15 to 12:40
 TEAM NO.: 18 TIDE LEVEL: +0.5 to +2.0 DATE 3/31/90
 EST. SUBDIVISION LENGTH: 7050 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: EAST to WEST
 SURFACE-SEDIMENTS: R 80 % B 20 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 65 % Hang 0 % Ven 35 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3850 m NO 3200 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	10	15	20	25	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT				✓	✓				✓			
STAIN				✓	✓				✓			
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									✓		✓	✓

PAVEMENT: H F S N/A sq. m by 0PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS <u>N</u>	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. N/AFrames N/A

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	1	2	3	4	SU	U	M	U		
1	20					✓	-							✓				N	C.B
2	20					✓	-							✓				N	C.B
							-												
							-												
							-												
							-												

COMMENTS

This monotonous granite shoreline is formed of bedrock slabs and faces with associated angular boulders. There is very little finer sediment. Oiling is consistently splashes and short stretches (< 3m long) of Coated oil. Geomorphology and oiling is identical to Subdivision A and D. Very little weathering of oil is evident from conditions in 1989 (August).

OG Mann

SEGMENT STI PY-15

SUBDIVISION C

DATE 4/2/90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWS/LWL
- ☐ SS
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 

Fl - No Substrate Oil

2 

Fl - Substrate Oil

CT/C

Coastal Distribution

CT/B

Beach Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Cited Vegetation

1 

Photo location, direction,
and number

SKETCH MAP

*No sketch map made of this
extensive subdivisions
see 6/5 map*

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02-20-90

Segment ST PY-15 Subdivision C (of A-D) Date (mo / day / yr) 5 / 31 / 90

Time (24 hr) 1215 Biologist M. CARR

(A) Substrate type and % of ^{Substratum} segments:
(1) Bedrock 80 (2) Boulder 20 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of ^{Substratum} segment): Dense 70 Moderate 20 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. —
Frames NONE

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	

1L NOT PRESENT IN LOW INT
2L NOT PRESENT IN BOLD

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	

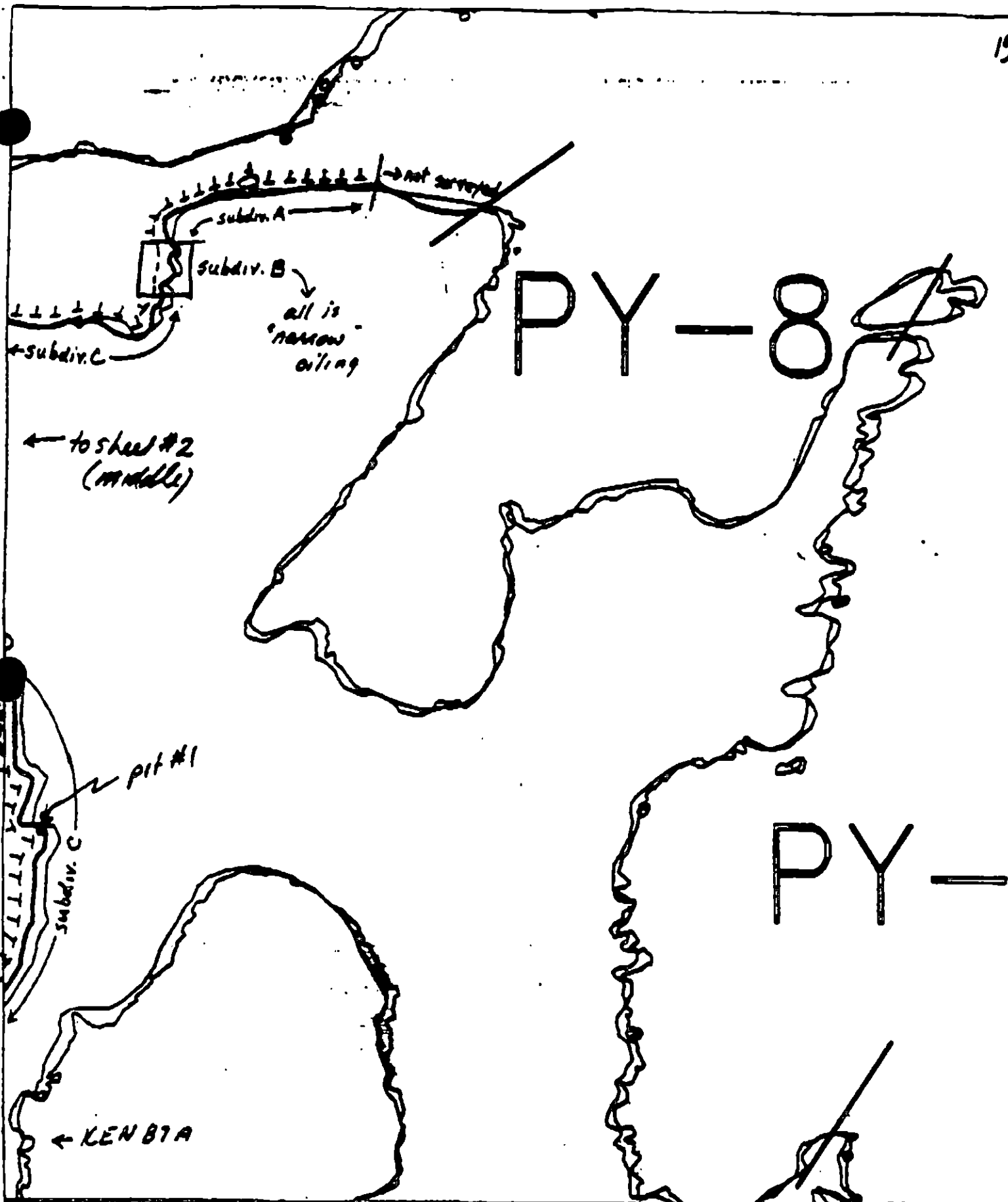
FUCUS

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:

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

AAAA M. A. I.

PY-15

ADEC Segment Length: 11882m

0 300 600 900

Sheet 3 of 3 (east)

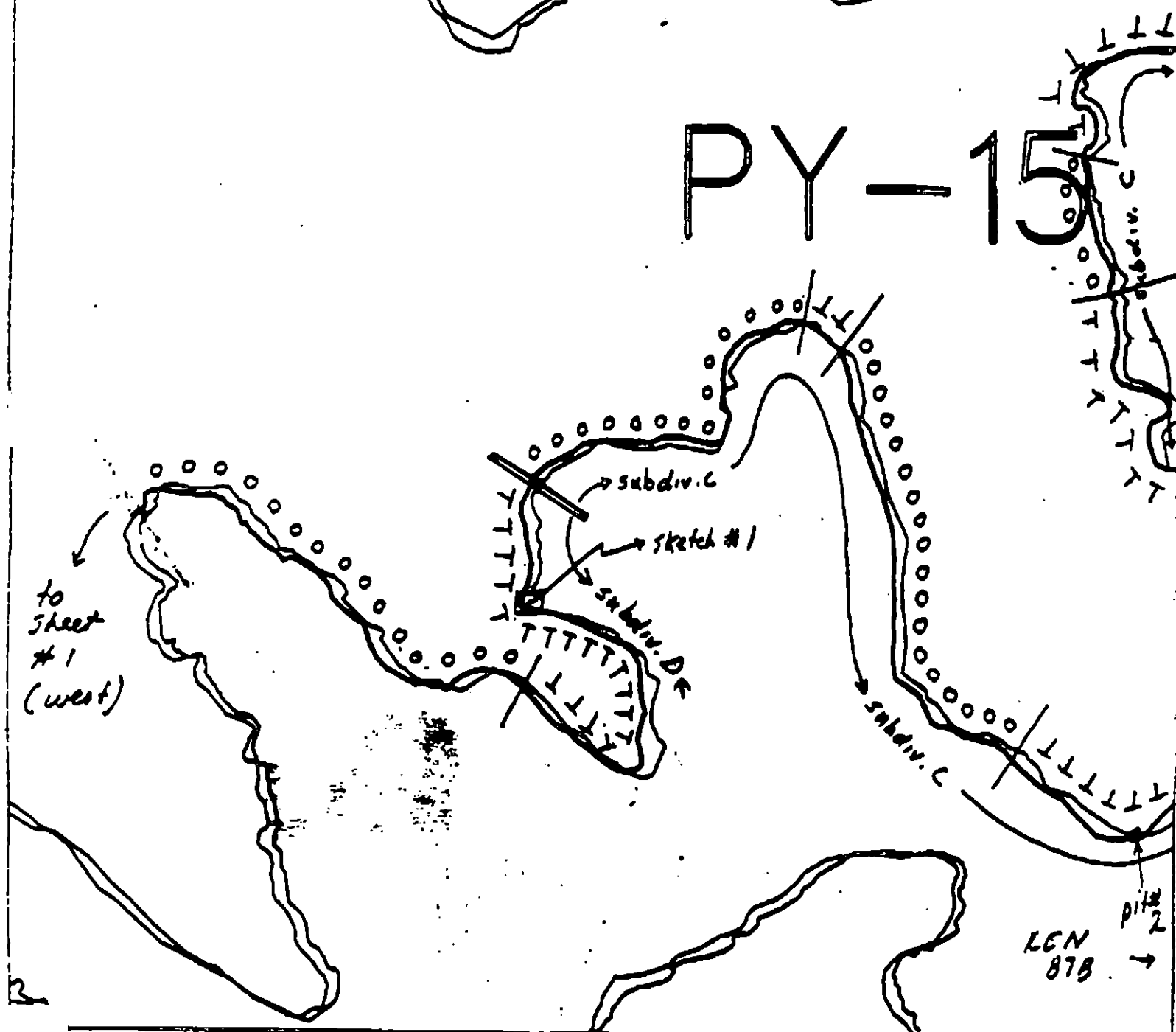
Map Key: KEN-87b

Name: MannDate: 31 March 90

MR-1

to sheet # 3
past →

PY-15



XXX Wide

//// Medium

----- Narrow

TTTT Very Light

P Y - 15

ADEC Segment Length: 11882m

Sheet 2 of 3 (middle)

Map Key: KEN-87c

Name: _____

Date: _____

SHORELINE EVALUATION

SEGMENT ST/ PY-015 SUBDIVISION D (4 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

National Wildlife Refuge (4QQ) and bald eagle nest (5T) - 3/1 to 6/1.
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hennes DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1638m: No Oil 1569 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal and bioremediation of pooled oil as shown on attached sketch map. Conduct work after 6/2 per above eagle constraint.

TAG COMMENTS:

DUE TO PROXIMITY OF TIDE POOLS AND LOW ENERGY ENVIRONMENT BIOREMEDIATION SHOULD NOT BE USED. NO ACCESS SHOULD BE ALLOWED TO THE TIDE POOL AREA. USF+W REPRESENTATIVE TO BE ONSITE.

TAG APPROVAL DATE: 4/17/90

ADEC ART WEINER Art Weiner

EXXON ANDY TATE Andy Tate

NOAA Bud Wescott Bud Wescott

USCG KENNETH KEANE Kenneth Keane

FOSC: My L DATE: 4-22-90

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 uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PY 15 SUBDIVISION: D DATE 2 APR 90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE J. Michel

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The oiled sediments adjacent to the tidal pools (see sketch for site #1) should be manually removed. No other cleanups is recommended elsewhere on this subdivision.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual Removal of oiled sediments with a shovel or hand trowel is suggested. There is a very rich inter-tidal pool at this site that should be monitored during cleanup. I have read and agree with all the information on the S.S.A.T. Forms.

LAND MANAGER

NAME Mary Fortner SIGNATURE Mary Fortner

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Oiled sediments adjacent to the tidal pools may be removed with a shovel and trowel. Due to the presence of rich tidal pools on the bedrock any treatment utilized should be done very carefully so that sensitive tidal pools are not contaminated or promoted. A very small crew should be used and an agency monitor must be on site. (See Sketch 1).

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG MANN USCG / NIAA MICHEL SEGMENT ST/ PY 15
 BIO CARR LAND REP PORTNER - RUS SUBDIVISION D
 EXXON BOYER ADEC REED TIME 13:50 to 15:40
 TEAM NO.: 18 TIDE LEVEL: +1.1 to +2.5 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 3240 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: EAST to WEST
 SURFACE SEDIMENTS: R 80 % B 20 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 65 % Hang 0 % Vert 35 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1620 m NO 1620 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	AC	AS	AP	AL	1	2	3	4	5	6	SU	U	M	L
ASPHALT PAVEMENT														
POOLED			✓			✓						✓		
COVER														
COAT			✓	✓		✓						✓		
STAIN				✓		✓						✓		
MOUSSE				✓		✓						✓	✓	
PATTIES														
TARBALLS														
FILM														
NO OIL											✓			✓

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

OILED DEBRIS NO	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. ST 18-3Frames (12-17)SUBSURFACE OIL *all pits at site of sketch #1*

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	15					✓	-										✓			N	B, C, P <i>Harrison</i>
2	15					✓	-										✓			N	B, C, P "
3	15					✓	-										✓			N	B, C, P "
							-														
							-														
							-														

COMMENTS

Geomorphology and oiling are identical in character to subdivisions A and C. Very little weathering of oil is evident from August 1989.

OG 100

SEGMENT STI PY-15

SUBDIVISION D

DATE 4 1 2 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Bdy Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HYDRAUL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pk Location(s)
- ☐ Photo Location(s)

LEGEND

1 

Pk - No Subsurface Oil

2 

Pk - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oil on Vegetation

1 

Photo location, direction,
and number

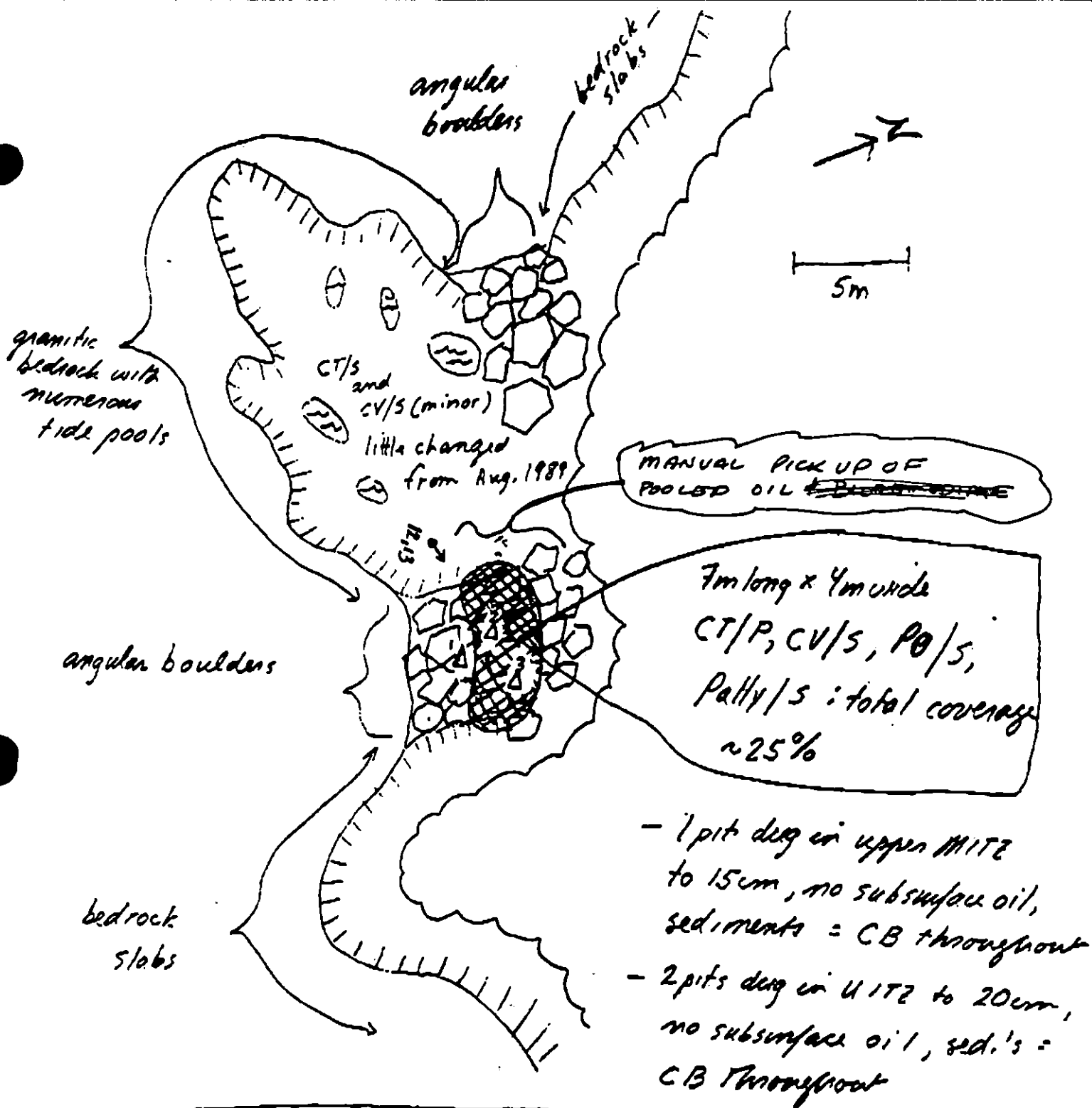
SKETCH MAP

NO sketch map made of this
extensive subdivision.

See GIS and small sketch site.

Oil Character Length (m): AP 1 PO 1 CV 0 CT 10 ST 20 MS 0 PT 0 TB 0 FL 0 NO 1620

REVISION: 01/24/90



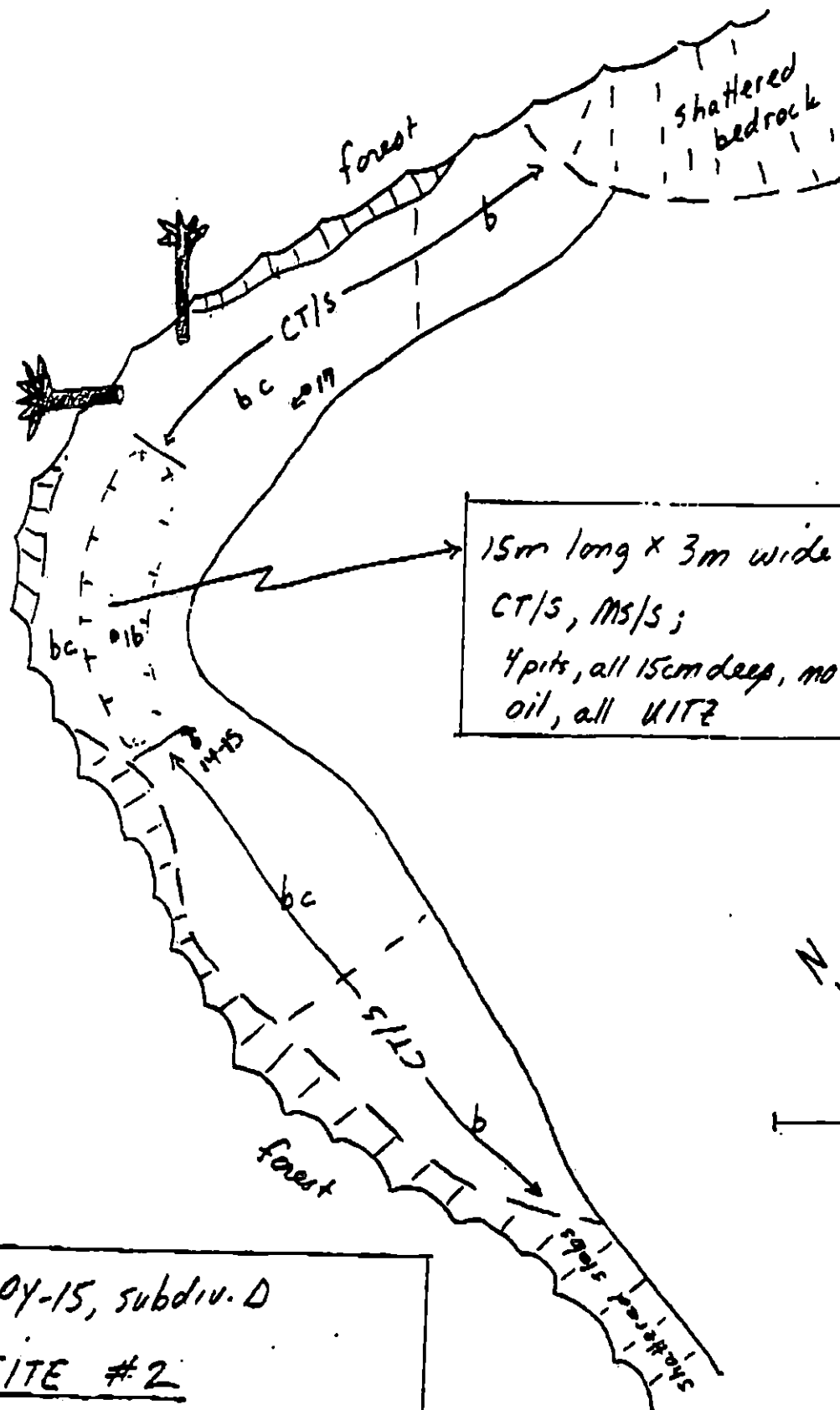
Sketch Site #1, Subdiv. D

Sketch of oiling in PY-15, subdiv. D
(this was "PY-15, Site D" during 1989, August
SCAT Report)

This is NOT a
Subdivision map

NB: a sketch site is a place where oil occurs but the affected area is either too small (< 25m) or not different enough from oiling along the rest of subdivision to warrant classification as a separate subdivision.

Memo
4/10/90



Segment PY-15, subdiv. D
SKETCH SITE #2

(This was Site B of the August 1989
Scot report)

This is Not a subdivision map.



Manner 10n

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / PY-15 Subdivision D (of A-D) Date (mo / day / yr) 4 / 2 / 90Time (24 hr) 1350 Biologist M. LARR(A) Substrate type and % of segments:
(1) Bedrock 80 (2) Boulder 20 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense 70 Moderate 20 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. 3Frames 12-17

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Common merganser, ♀ - (1)

Common: aud. (3), double crested (1)

white-winged scoter (2)

Harlequin ducks (15)

Surf scoter (4)

Bald eagle (mature) (2)

Sea otter (0)

Land otter (1)

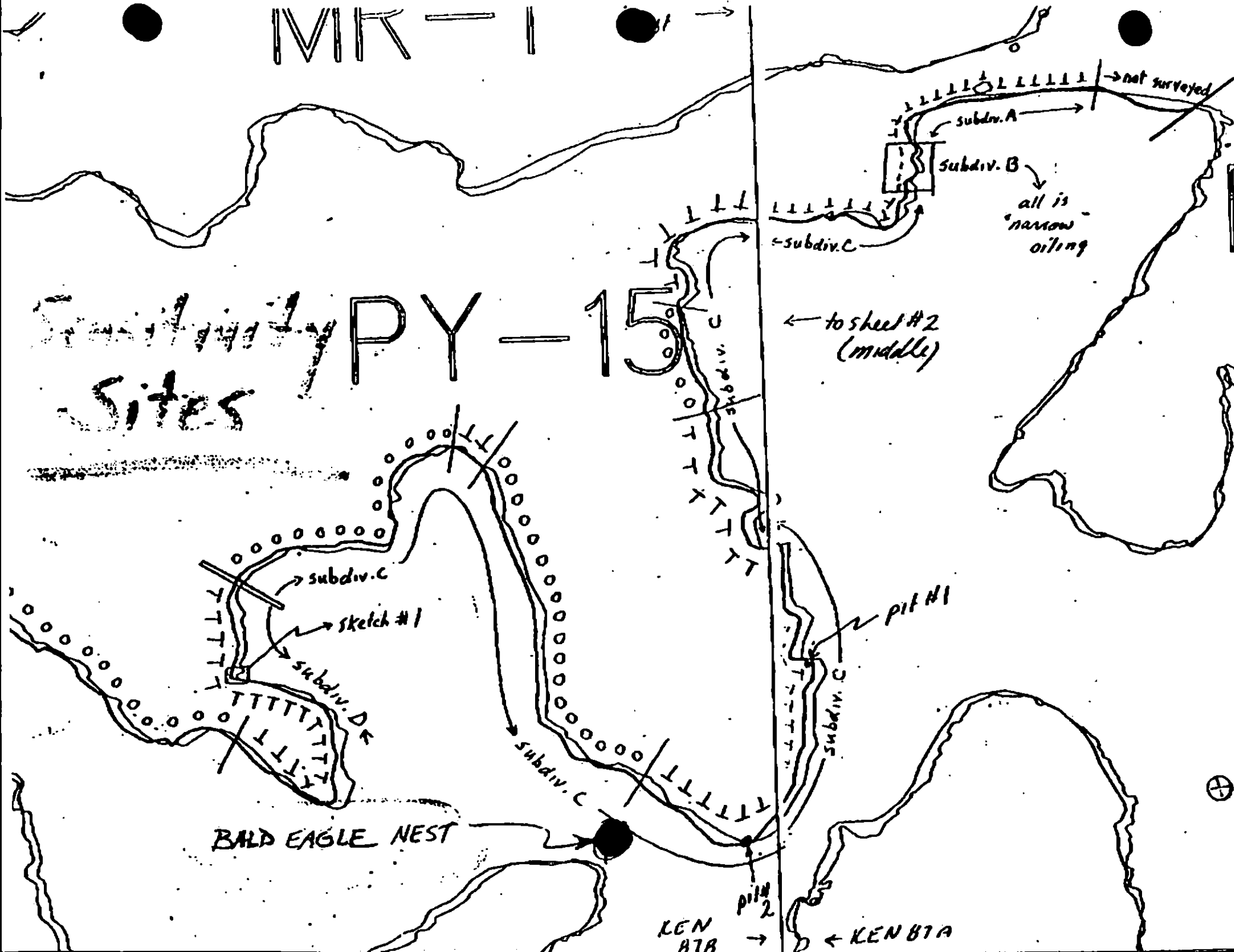
Ecological Considerations:

Sensitivity codes: ST (Bald eagle nest), 4-QQ (National Wildlife Refuge)

MR-1

Sensitivity
Sites

PY-15

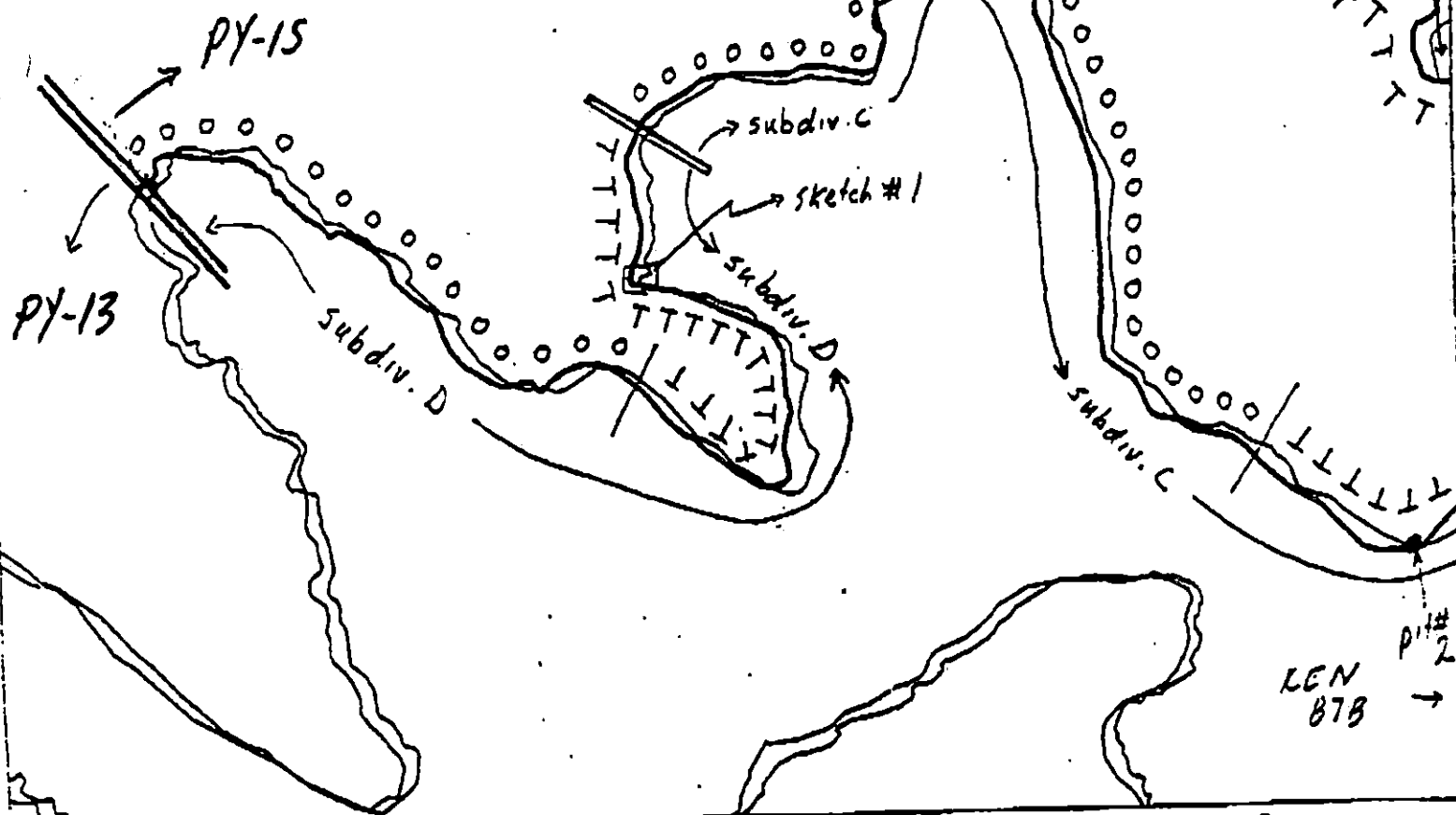


APR-03-1998 23:24 FROM Ensco Atlas Ensco TO SSAT P.21

MR-1

to sheet #3
east →

PY-15



XXXX Wide D: 1260m
 /// Medium 1350m
 --- Narrow 1260m
 TTTT Very Light

ADEC Segment Length: 11862m

PY-15 1:18,000

0 500 1000 1500

Sheet 2 of 2

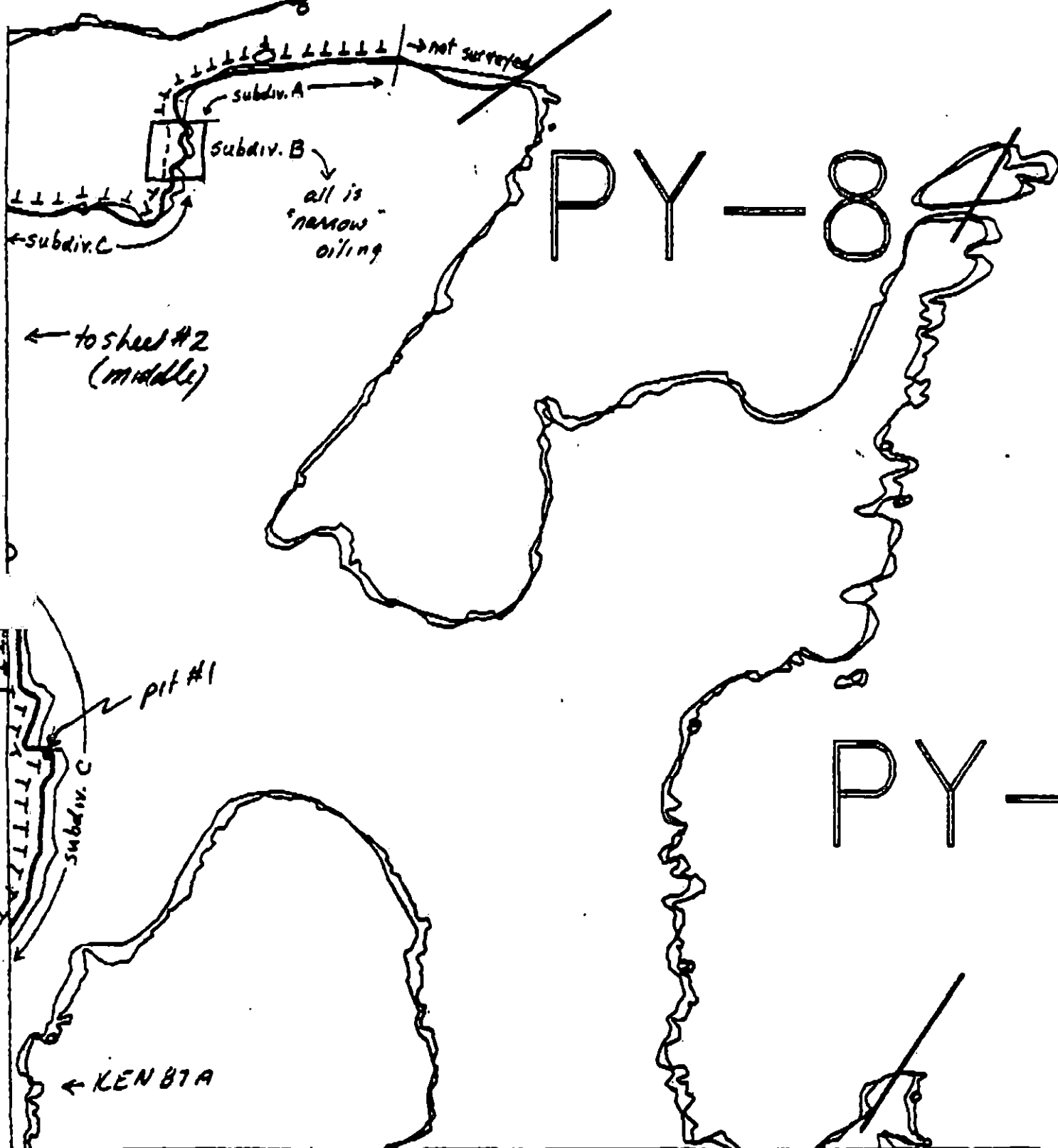
Map Key: KEN-870

Name: Mann

Date: 3/31/90

Data Entered:

15



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

PY-15

ADEC Segment Length: 11802m



Sheet 3 of 3 (east)

Map Key: KEN-87b

Name: Mann

Date: 31 March 90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PY-016 SUBDIVISION A (1 OF 2) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting (30,Q) - 8/15 to 9/15; National Wildlife Refuge (4QQ); Seabird colony (5R) 5/1 to 9/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Homan DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 59 m: V.Light 0 m: No Oil 77 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:

4/14/90.
ADEC JOHN BAUER
EXXON ANDY TETZ FOSC: W L DATE: 5-1-90
NOAA Burt Was. III
USCG G.A. REITER

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
- 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.

FIELD SHORELINE COMMENT SHEET 4

SEGMENT ST/ PY 16 SUBDIVISION: A DATE APRIL 1, 1990USEG NOAANAME JACQUI MICHEL SIGNATURE J. Michel☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The band of oil on the ^{VERTICAL} rock wall on the north side of the BEACH IS V. HIGH (UPPER AND SUPRA ITZ) AND NOT AMENABLE TO BIOREMEDIATION.

THERE IS NOTHING ELSE PRESENT SUITABLE FOR MANUAL REMOVAL.

ADECNAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

DUE TO THE STATE AND LOCATION OF THE OIL I AM RECOMMENDING NO TREATMENT. I AGREE WITH ALL INFO ON SSAT FORMS.

LAND MANAGER - USFWSNAME Mary Fortner SIGNATURE Mary Fortner☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The coat to cover present on the north wall and on the boulders on the NW part of the beach is dry and tarry and not suitable for bioremediation or manual removal. If sheering does occur from this beach it should be reevaluated for treatment.

SHORELINE OILING SUMMARY

REVISION NO. 02/23/89

OG MANN USCG/NOAA MICHEL SEGMENT ST/ PY 16
 BIO GARR LAND REP PORTNER - FWS SUBDIVISION A
 EXXON BOYER ADEC REED TIME 09:00 to 09:45
 TEAM NO.: 18 TIDE LEVEL: +6.5 to +3.5 DATE 4/1/1990
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 85 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 95 % Hang 0 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 20 m NO 60 m
 40

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	W	Y	OR	GR	BL	PK	LT	DR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER	✓		X			✓							X	✓	X	
COAT			✓			✓							✓	X		
STAIN			✓			✓							✓	X		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL															✓	✓

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

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE FISHING DEBRIS#BAGS 2

Photographs:

Roll No. 18-2Frames (16-22)

SUBSURFACE OIL NO DIGGING POSSIBLE - BOULDERS ARE VERY LARGE AND INTERLOCKED.

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	UO	W	Y	OR	GR	BL	PK	LT	DR	SU	U	M	U		

COMMENTS MOST OF THIS BEACH IS CLEAN EXCEPT FOR A 15m x 7m ^{OILED} BOULDER PATCH IN THE LEE OF A LARGE BED ROCK KNOB AND A ZONE OF 80% COVER 1m WIDE ON THE VERTICAL ROCK WALL COMPRISING THE NORTH END OF THE BEACH. THIS BAND EXTENDS ABOVE THE HIGH TIDE, WHERE THE OIL COVERAGE DECREASES TO ~30%. THE OILED BOULDERS HAVE COAT AND STAIN, BOTH ON THE SURFACE AND DOWN TO THE SECOND LAYER OF BOULDERS. THERE HAS BEEN A SIGNIFICANT REDUCTION IN THE AMOUNT OF OIL SINCE 1989.

PAGE CHARGES:

w

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00000008

 Segment ST 1 PY 16 Subdivision A (EAST) (of A-B) Date (mo / day / yr) 4 / 1 / 90
Time (24 hr) 0850 Biologist M. CARR

- (A) Substrate type and % of segments ^{SWBD / 17.5m}
 (1) Bedrock 5 (2) Boulder 5 (3) Cobble — (4) Pebble — (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): ^{SWBD / 17.5m} Dense — Moderate — Low 100%
- (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. 2Frames 16-20

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	1L ← NOT PRES. ON BEDROCK
3	3	3	3	3	3	3	3	3	3	3	2 ← LOWER INTER. INACCESSIBLE
4	4	4	4	4	4	4	4	4	4	4	3
5	5	5	5	5	5	5	5	5	5	5	4
6	6	6	6	6	6	6	6	6	6	6	5
											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	1L ← NOT PRESENT ON OTHER SUBSTRATE
3	3	3	3	3	3	3	3	3	3	3	2 ← NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	3
5	5	5	5	5	5	5	5	5	5	5	4
6	6	6	6	6	6	6	6	6	6	6	5
											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	1L ← NOT PRESENT ON BEDROCK
3	3	3	3	3	3	3	3	3	3	3	2 ← LOWER INTER. INACCESSIBLE
4	4	4	4	4	4	4	4	4	4	4	3
5	5	5	5	5	5	5	5	5	5	5	4
6	6	6	6	6	6	6	6	6	6	6	5
											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	1L ← NOT PRESENT ON EITHER SUBSTRATE
3	3	3	3	3	3	3	3	3	3	3	2 ← NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	3
5	5	5	5	5	5	5	5	5	5	5	4
6	6	6	6	6	6	6	6	6	6	6	5
											6

NOT PRESENT

Wildlife Observations/ General Comments:

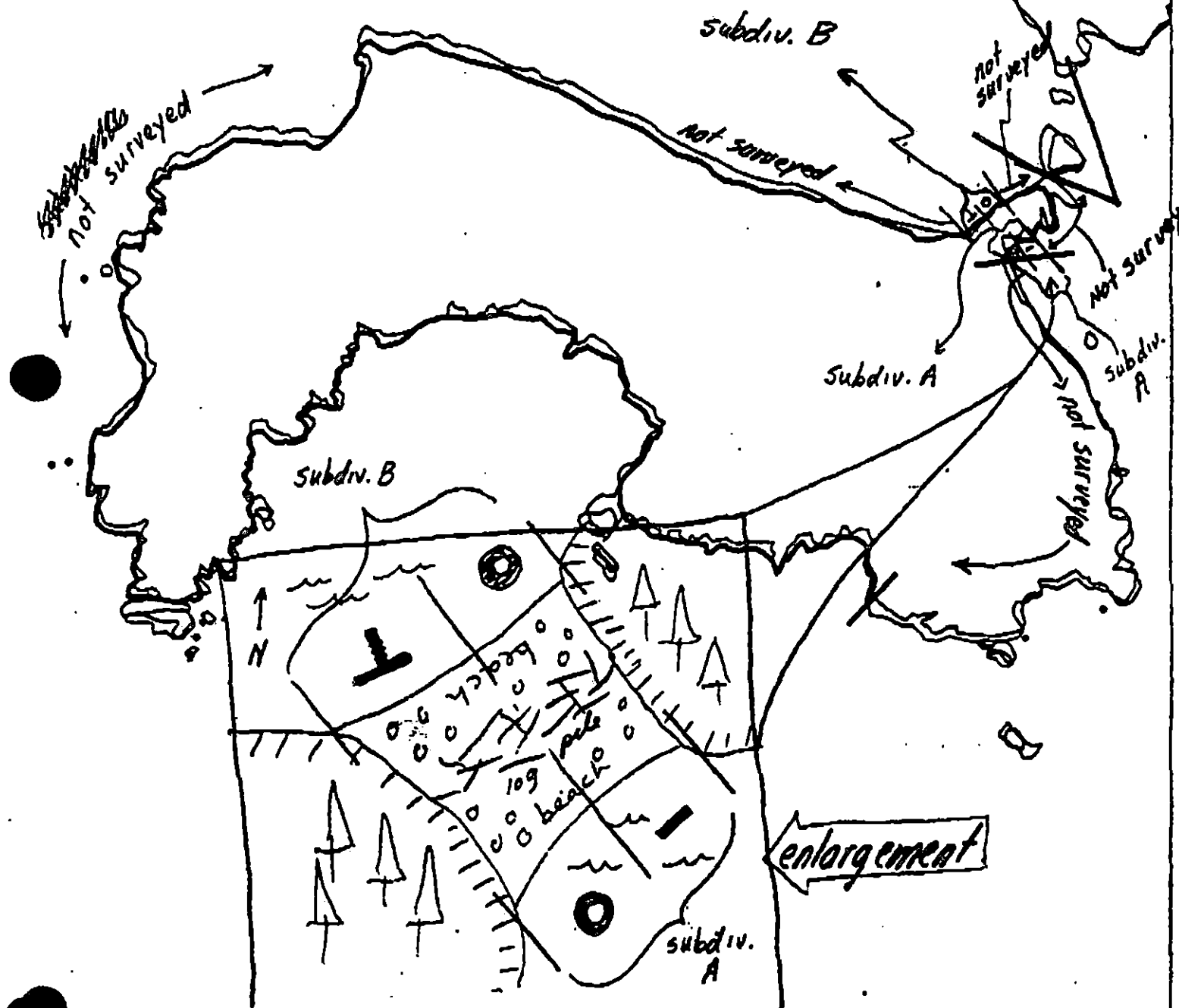
seen other w/ pup = (2) Commonest (unid.) (5)
 Glaucous-winged gull (60)

Biological Considerations:

- site is exposed to extremely strong wave action.
- Organisms appear to have been scoured from both substrate types.

Sensitivity codes: 4-QQ (Nat. Wildlife Ref), 5-R (Seabird colony),

PY-16



XXXX Wide

//// Medium

---- Narrow

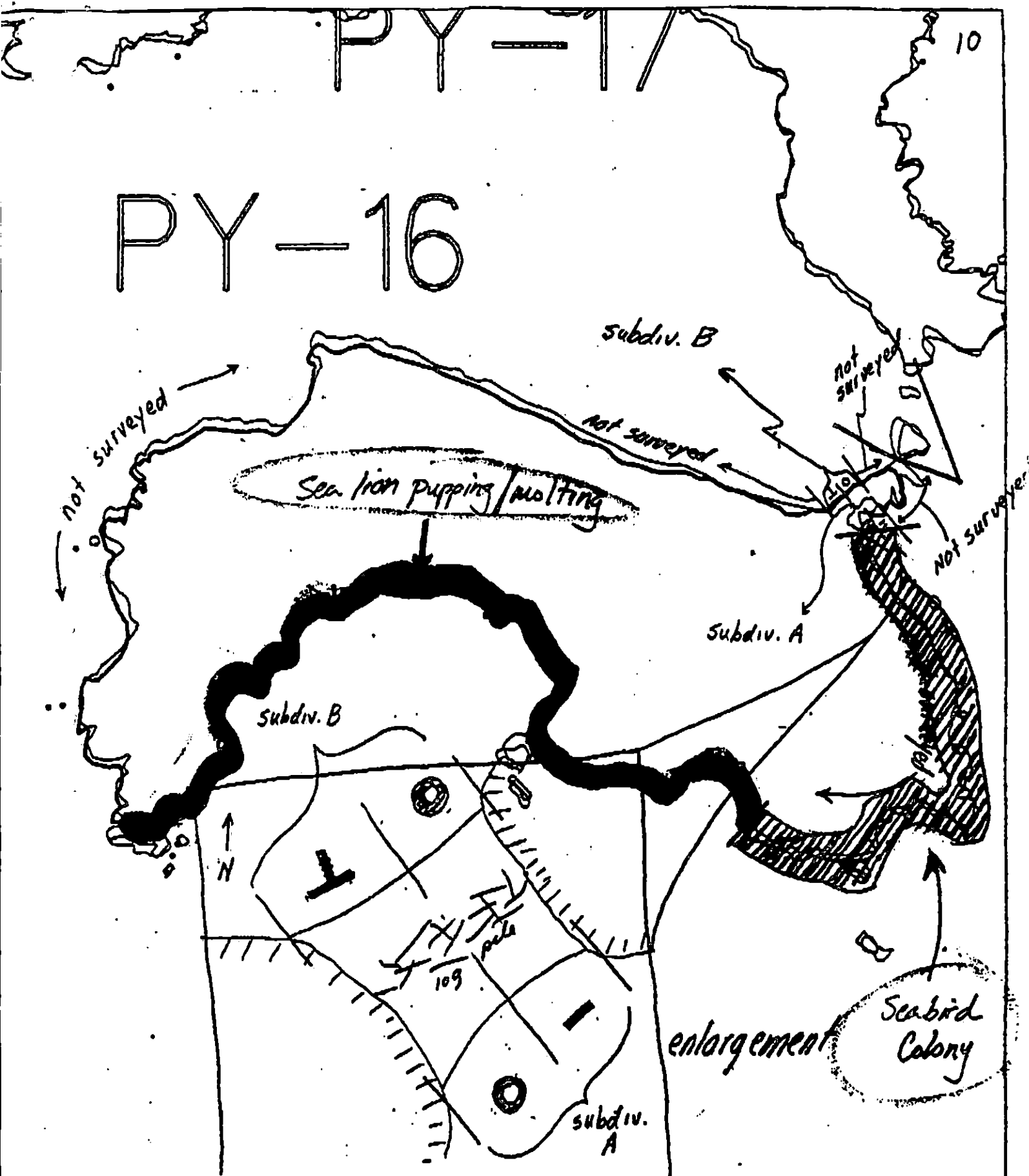
TTTT Very Light

PY-16

ADEC Segment Length: 9857m

Map Key: KEN-880

Name: MainDate: 1 Apr 90



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

PY-16

ADEC Segment Length: 9857m

Map Key: KEN-88a

Name: _____

Date: _____

SHORELINE EVALUATION

SEGMENT ST/ PY-016 SUBDIVISION B (2 OF 2) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting (3O, Q) - 8/15 to 9/15; National Wildlife Refuge (4QQ); Seabird colony (5R) 5/1 to 9/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. H. H. H. DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 104 m: No Oil 81 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90.

ADEC Art Weaver Det. Williams
EXXON ANDY TSE FOSC: W L DATE: 5-1-90
NOAA Burt Wesscott
USCG G.A. REITER G.A. Reiter

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 unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 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

5

3MENT ST/ PY 16 SUBDIVISION: B DATE APRIL 1, 1990USCG NOAANAME JACQUI MICHEL SIGNATURE J. Michel☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ALL THE AGENCIES AGREED THAT FURTHER TREATMENT WAS NOT WARRANTED.

ADECNAME JOHN R. REED SIGNATURE John R. Reed☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

THIS IS A VERY SMALL AREA OF SPLASHES THAT DOES NOT WARRANT FURTHER TREATMENT. I AGREE WITH ALL INFO ON S.S.A.T. FORMS.

LAND MANAGER - USFWSNAME Mary Patner SIGNATURE Mary Patner☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

There is a small oiled area approx 5 x 7 m remaining on the south end of the boulder beach. The oil is present primarily in the form of coat and stain on and between boulders. There are scattered splashes throughout the rest of the beach. The amount and character of the oil may not warrant treatment at this time.

SHORELINE OILING SUMMARY

REVISION NO. 002398

2

OG Maan USCG Michel SEGMENT STI PY16
) Cape LAND REP Portner USFWS SUBDIVISION B
 XON Cayan ADEC Red TIME 9:45 to 10:10
 TEAM NO.: 18 TIDE LEVEL: +5.5 to +4.0 DATE APRIL 1 1990
 EST. SUBDIVISION LENGTH: 80 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: all to directions
 SURFACE SEDIMENTS: R 0 % B 100 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 7 m NO 7.3 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE floating debris#BAGS 2

Photographs:

Roll No. 18-2Frames 23-25SUBSURFACE OIL NO

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	RO		UD	UC	1	2	3	4	5	SU	U	M	L		
0							-													
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS

On south end of boulder beach, there is a 5x7m zone of splashes of OT & ST oil between the boulders. Elsewhere there are a few areas of very small splashes of oil, some of which looked like tracks from workers on last year's cleanup.

OG PYD 16NN

SK H MAP

SEGMENT ST/ PYD/L

SUBDIVISION 3

DATE 1 APRIL 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ➡

Photo location, direction,
and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 7 ST 7 MS 0 PT 0 TB 0 FL 0 NO 73

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST PY 16 Subdivision B (west) (of A-B) Date (mo/day/yr) 4/1/90Time (24 hr) 0920 Biologist M. CARR

- (A) Substrate type and % of ^{SUBDIVISION} segments:
 (1) Bedrock — (2) Boulder 100 (3) Cobble — (4) Pebble — (5) Sand — (6) SR —
- (B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense — Moderate — Low 100 %
- (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. 2Frames 23-25

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	X	2	X	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 (IN ANY ZONE)
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	X	X	X	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 (IN UPPER ZONE)
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
→ 2	2	2	2	2	2	2	2	X	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:

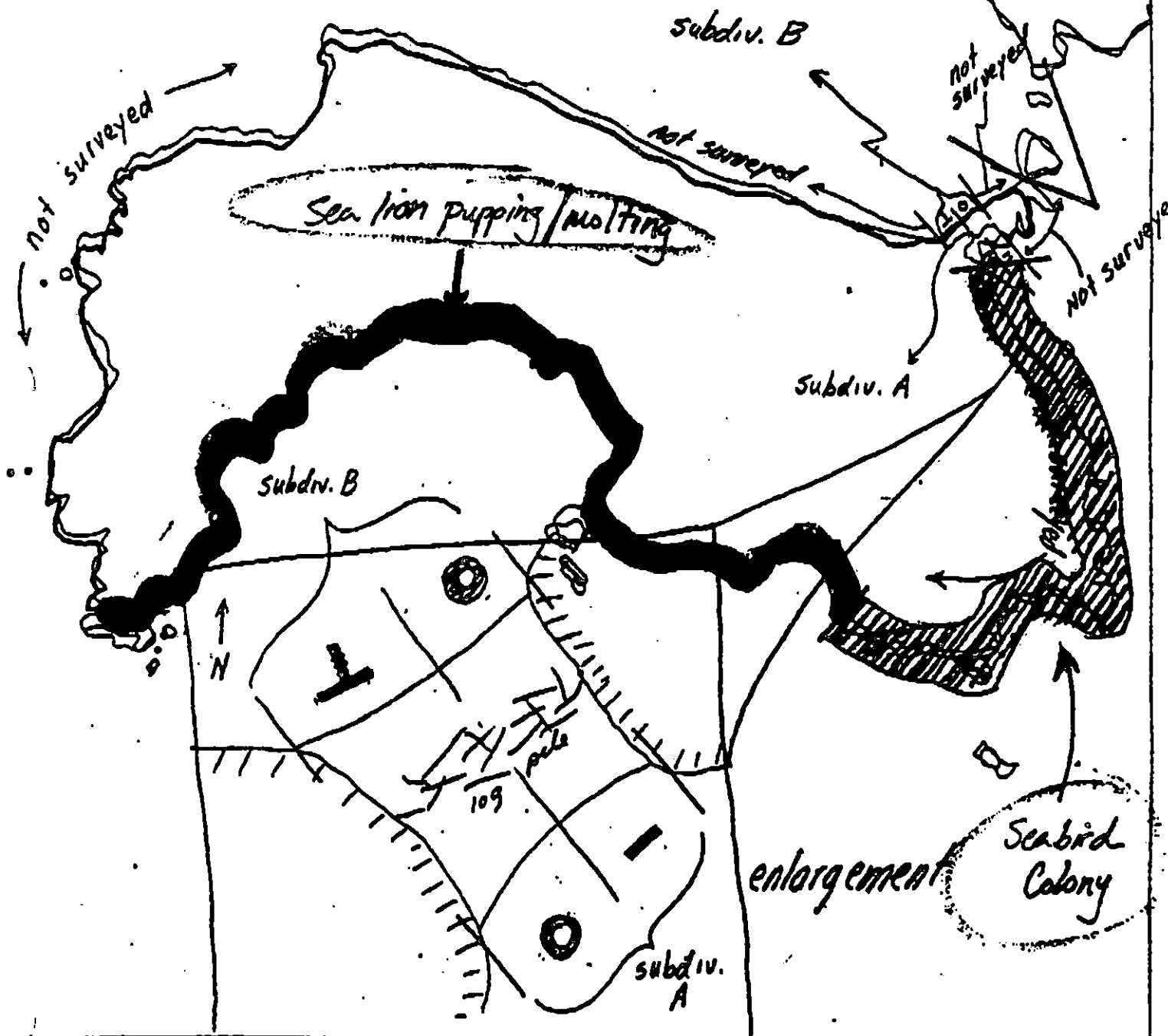
Bald eagle (immature) (1) Bald eagle (6 = 2 mature, 4 unidentified)
 Sparrow (Fox?) (1)

Ecological Considerations:

Many drift logs w/ no epifauna or epiflora.

Sensitivity codes: same as p. 10 A. Sensitive sites are not in immediate vicinity of contaminated area.

PY-16



XXXX Wide

//// Medium

--- Narrow

TTTT

PY-16

ADEC Segment Length: 9857m

Map Key: KEN-88c

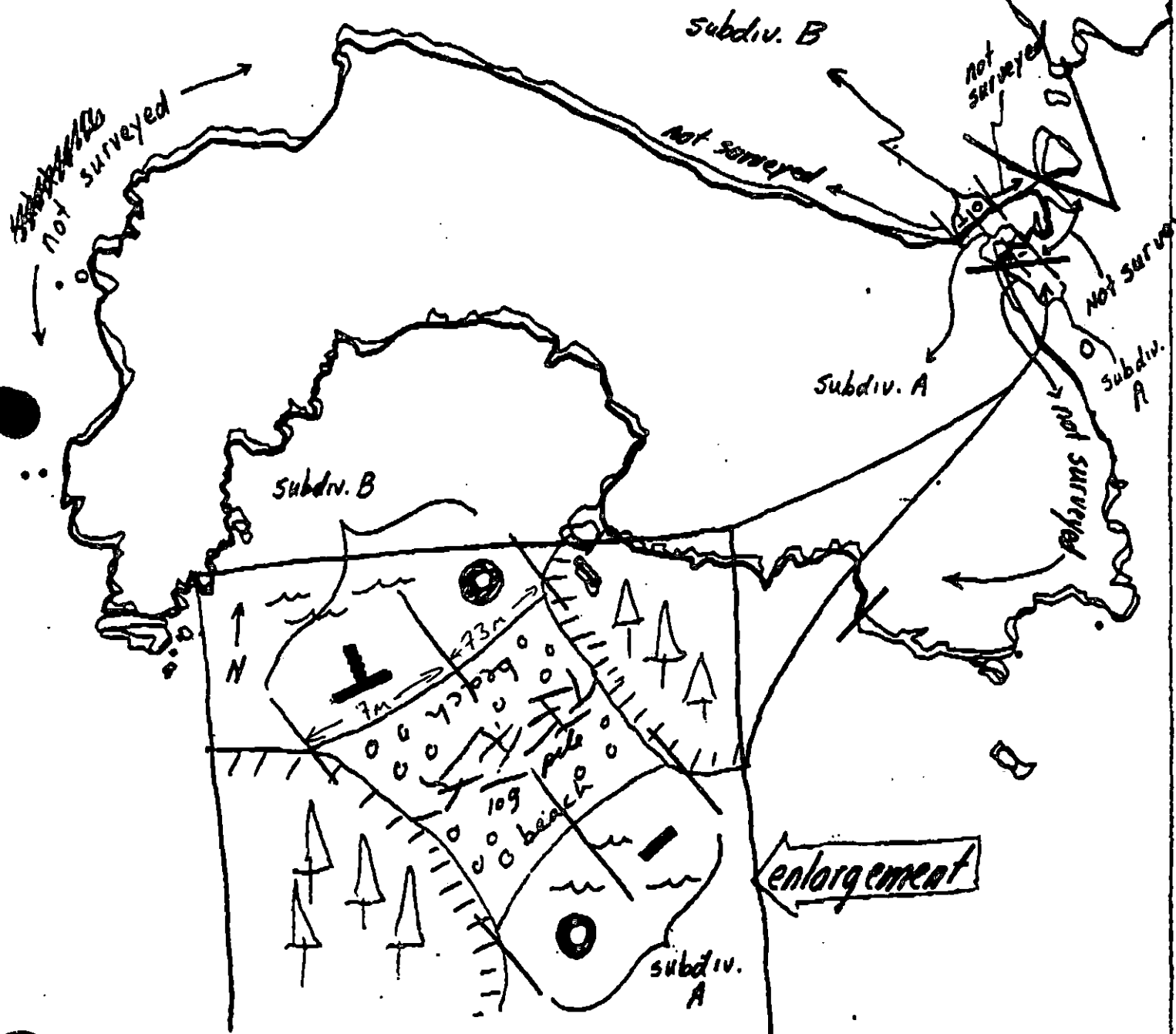
Name: _____

Date: _____

PY-16

PY-16

6



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

PY-16

ADEC Segment Length: 9857m

Map Key: KEN-88c

Name: MANN

Date: 1 Apr 90

SHORELINE EVALUATION

SEGMENT ST/ PY-17 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
National Wildlife Refuge (4QQ).

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: *Charles R. Shaw* DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2039m: No Oil 3129 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC Art Wenger *Art Wenger*

EXXON Andy Tera *Andy Tera*

NOAA Burt Wescoft *Burt Wescoft*

USCG Kenneth K. K. K. *Kenneth K. K. K.*

FOSC: *My L* DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ PY 17 SUBDIVISION: A DATE 4/6/90

USCG/NOAA

NAME JACQUI MICHEL SIGNATURE Jacqui Michel

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The very light oil contamination does not warrant further treatment. This segment is readily exposed to wave activity.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Very steep shoreline of bed rock and boulders with high wave energy. Very scattered splashes does not warrant treatment. I have read and agree with all data on S.S.A.T. Forms.

LAND MANAGER - USFWS

NAME Mary Partner SIGNATURE Mary Partner

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Oil contamination in this segment is very light. I feel this was a good survey and agree with the SSAT forms

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Manh ^{NOAA} USGS Michel SEGMENT ST/ PY-17
 BIO Carr LAND REP KEUS Partner SUBDIVISION A
 EXXON Boyer ADEC Reed TIME 16:55 to 18:09
 TEAM NO.: 18 TIDE LEVEL: +1.5 to 0.7 DATE 4/6/90
 EST. SUBDIVISION LENGTH: 6354 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 45 % Vert 45 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1980 m NO 4874 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	NO	NE	SE	SW	BA	BR	GY	SL	TL	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS 0

Photographs:

Roll No. ST 18-4Frames (4-7)

Substrate

SUBSURFACE OIL No pits dug because of inaccessibility and bedrock/boulders

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		VO	VC	BL	BR	OR	RY	GY	SL	OS	TL	LA	SU	U	M		
C							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

This is a steep and inaccessible shoreline with a wide fringe of kelp.
 Oiling is sparse and takes the form of widely-separated clusters of
 splatters ^{and drips} usually on the sides of boulders and outcrops.

PAT

OG Mann

SKETCH MAP

SEGMENT STI PY-17

SUBDIVISION A

DATE 7 / 6 90

CHECKLIST

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

NO sketch required

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Other Vegetation

1 ➡

Photo location, direction,
and number

The oil character length is estimated by assuming 10% occurrence in the VL category.

Oil Character Length (m): AP 0 PO 0 CV 0 CT 200 ST 200 MS 0 PT 0 TB 0 FL 0 NO 6154

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PY-17 Subdivision A (of A) Date (mo / day / yr) 4 / 6 / 90

Time (24 hr) 1655 Biologist M. CARR

(A) Substrate type and % of segments: ^{SUBDIVISION}
(1) Bedrock 40 (2) Boulder 10 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____

(B) Overall % cover of biota (% of ^{SUBDIVISION} segment): Dense 80 Moderate 10 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: 4
Roll No. _____

Frames 4-7

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
NOT PRESENT ON COBBLE AT ANY TIDAL ZONE

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 IN LOW ZONE
NOT PRESENT
NOT PRESENT ON COBBLE AT ANY TIDAL ZONE

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
NOT PRESENT IN MID AND LOW TIDAL ZONES

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
NOT PRESENT IN COBBLE AT ANY TIDAL ZONE

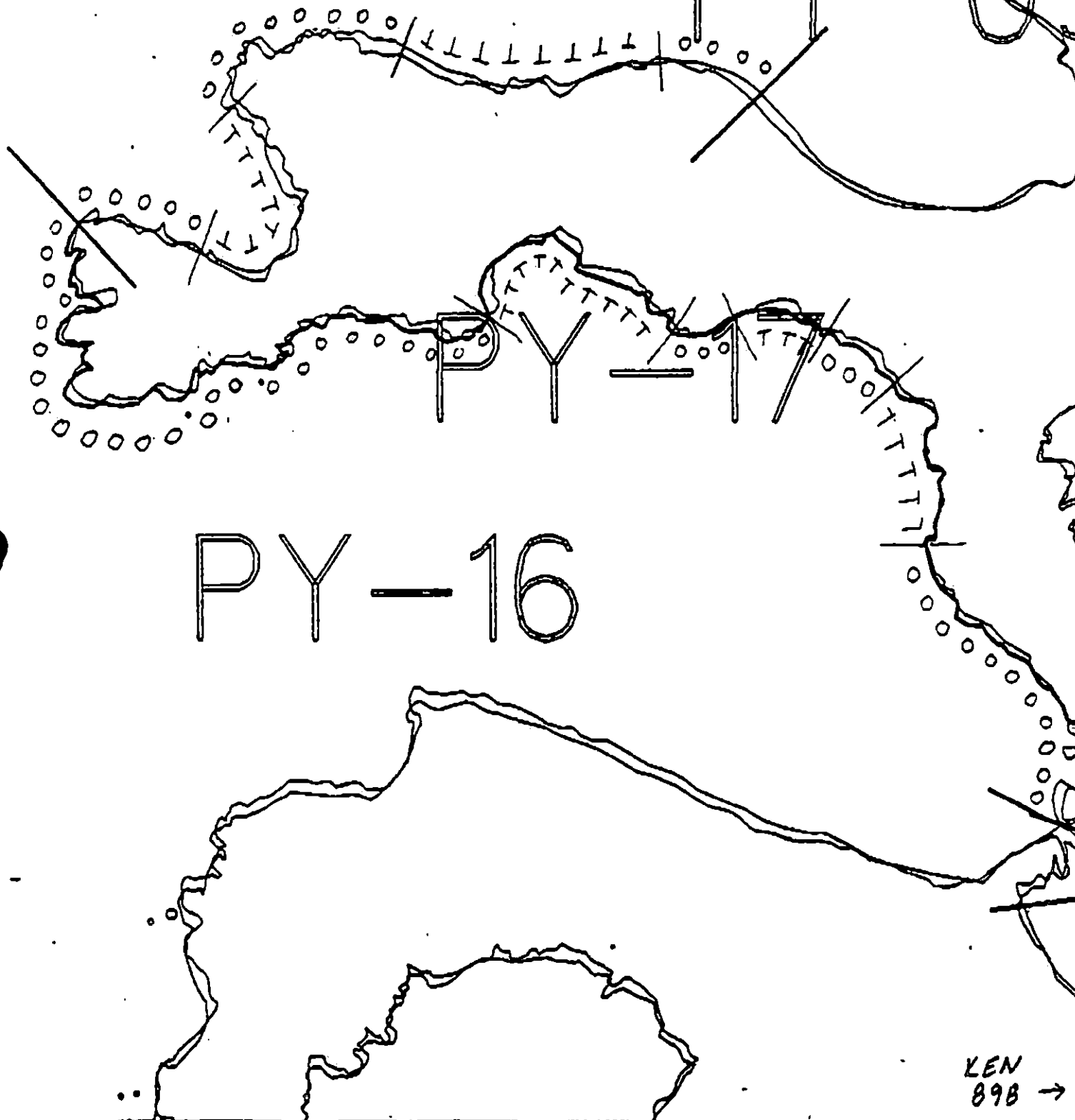
Wildlife Observations/ General Comments:

Ecological Considerations:

Sensitivity codes: 4-QQ (National Wildlife Refuge)

PY-14

PY-00



PY-16

KEN
89B →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Data

PY-17

ADEC Segment Length: 6140m



"corrected" 4-9-90

Map Key: KEN-89a

Name: Mann

Date: 4/6/90

Data Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska