OIL SPILL PUBLIC INFO. CENTER
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EVOS
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S42
1990
v.25

[Shoreline evaluations, 1990].

PD-01 – PR-16

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ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-001 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual/Mechanical Tilling Manual/Mechanical Raking Spot Washing	WORK PRIOR TO 7/20

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

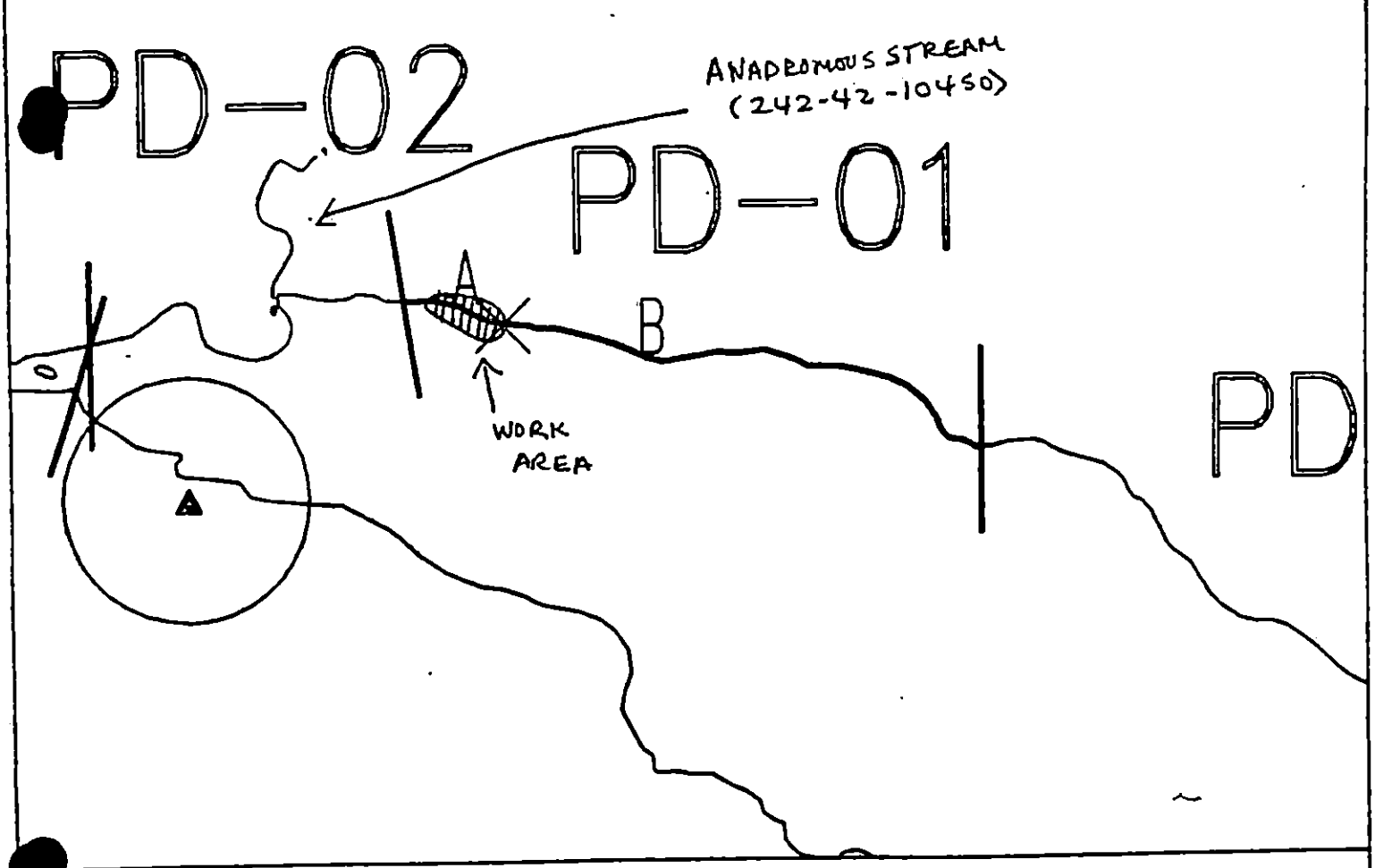
1J	**Purse Seine Area**	No constraints to manual pickup and tarmat removal. Closed to bioremediation, manual/mechanical raking, manual/mechanical tilling, and spot washing after 7/20.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [signature] Date 6-10-90

Prepared by J. P. Phillips Date 6/10/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT PD-1

SUBDIVISION A (1 of 2)

METERS

★ Seabird Colony

▲ Eagle Nest

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-001 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual/Mechanical Tilling Manual/Mechanical Raking Spot Washing	WORK PRIOR TO 7/~~20~~ 23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MONAHAN W/ LEE BURN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

ADF&G ON 7/20

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	No constraints to manual pickup and tarmat removal. Closed to bioremediation, manual/mechanical raking, manual/mechanical tilling, and spot washing after 7/~~20~~. 23.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-10-90

Prepared by J. P. Phillips Date 6/10/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-001 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	**OPEN**
Bioremediation	**WORK PRIOR TO 7/20**

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

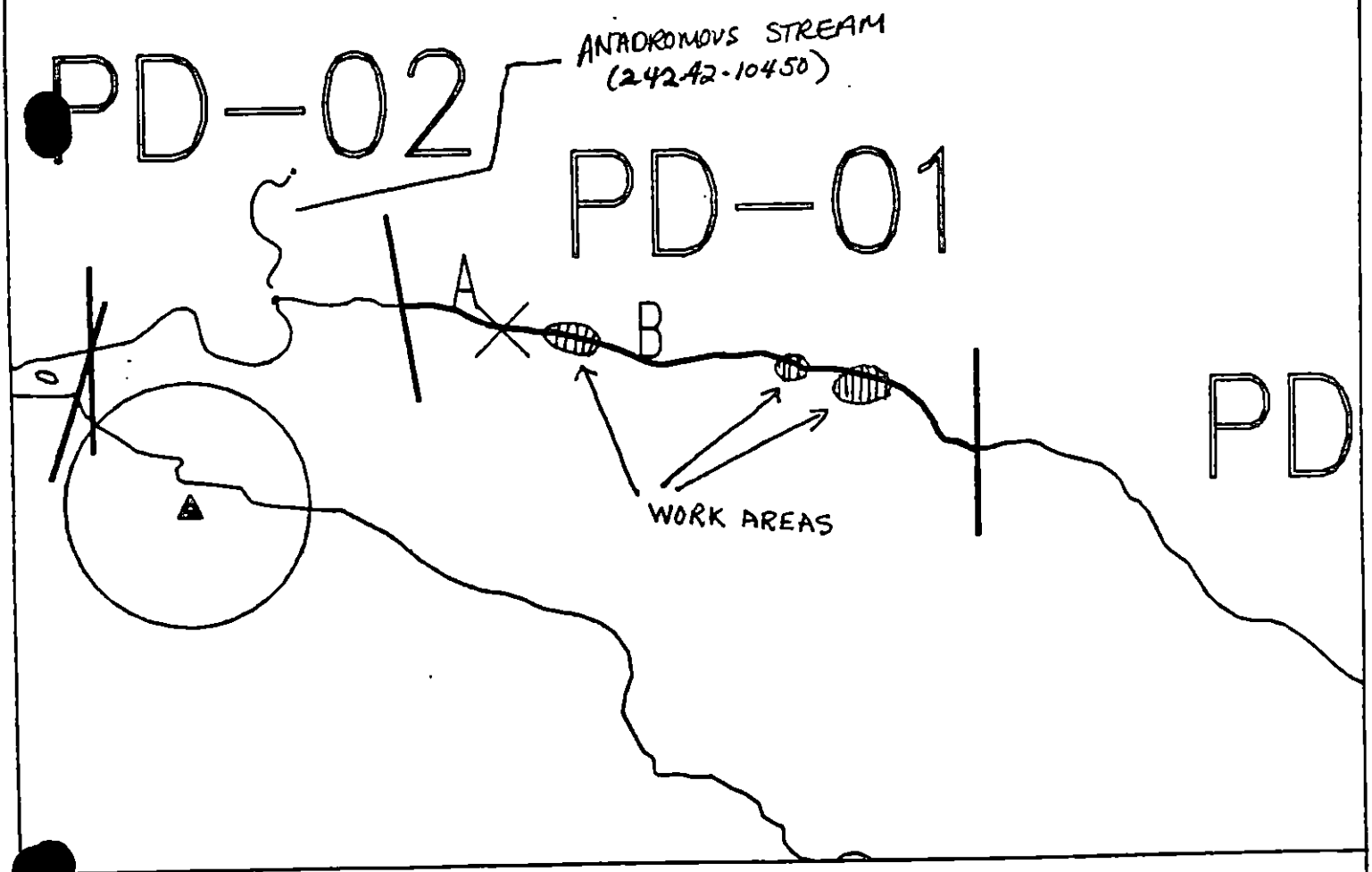
1J	**Purse Seine Area**	No constraints to manual pickup. Closed to bioremediation after 7/20.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [signature] DATE 6-10-90

Prepared By: Reg D. Coulter Date 06/09/90



Exxon Company, USA

ECOLOGY MAP

SEGMENT PD-1

SUBDIVISION B (2 of 2)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PD-02 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 242-42-10460 (CHs, COs, P), 242-42-10450 (Ps, CHs)

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31)
1J	Purse seine area (6/20 to 9/30)
4GG	Alaska State Parks
6NN	Recreation: Sportfishing
6U	Recreation: Tent sites (6/1 to 9/15)
6W	Recreation: Forest Service cabins (6/1 to 9/15)
6Y	Recreation: Special use destination
8AA	Sensitive Estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SHPO SIGNATURE: [signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide____m: Medium____m: Narrow____m: V.Light____m: No Oil____m
Subsurface Oil Observed: Yes X No____ Maximum Depth 10 cm

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
X Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
MHG ~~X~~ Bioremediation	____Spot Washing:____Wands
X Tarmat Removal	____Beach Cleaner
	____Other (see comments)

COMMENTS: Recommended treatment includes 1) tarmat removal and 2) manual pickup of mousse, patties, and debris in areas indicated on sketch map, and 3) ~~bioremediation in areas indicated on sketch map. Apply bioremediation in area of stream with ADF&G approval~~. Work should be conducted between 5/15 and 7/9 with ADNR/ADF&G approval.

* TAG COMMENTS: PRIOR TO MAY 1 - MANUAL PICKUP ONLY - FORMAL PROCESSING OF THE PACKAGE WILL OCCUR THROUGH THE NORMAL PROCESS - ANTICIPATED REVIEW MAY 1 or 2. ~~TAG recommendation on Final Approval for treatment~~ 5/15/90
Monitor to assess loss.
Remove oiled sediments in area of pit 11.

INTERIM STATUS

MHG

TAG APPROVAL DATE: 4/28/90.
ADEC JOHN BAUER [signature]
EXXON AMY TEAL [signature]
NOAA Gary Petrov [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 5-6-90

THIS WORK IS AUTHORIZED WITH KNOWLEDGE OF FOSC PRIOR TO HIS SIGNATURE.
CDR G.A. REITER [signature]
JOHN BAUER [signature]

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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 / PD-002 SUBDIVISION: ALL DATE 20 April 1990

USCG - NOAA
NAME Miles O. Hayes SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS This complex area was studied carefully by the c-
and the biologist. We searched thoroughly for oil concentrations
and I believe we found most of it, even the most randomly
distributed small patties. There was very little pure oil.
Because this is the mouth of an anadromous stream, manual
pickup should begin ASAP. Early attention is needed because
the grass on the marsh surface, where many of the manual
patties are located, is beginning to sprout.

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS There were scattered manual patties on the sand bar of the
stream delta and near the mouth of the anadromous stream. In the N.E. cove
of the lagoon there are a band of manual patties 1m x 50m.
Refer Manual Pick up of the manual patties is recommended.

ADNR / DPOR
LAND MANAGER
NAME Roger McCampbell SIGNATURE Roger McCampbell

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS I concur w/ the SSAT team findings. This area
needs to be worked ASAP w/ ADF&G + DNR presence. Tidal
flats w/ grass covered gravel bars have many tar patties that
require pickup - Avoid unnecessary trampling of spring growth
grasses. Avoid picking up grass roots w/ oil.
Again over heavy pickup. Avoid walking on mud flats.
This is in Kachemak Bay State Wilderness Park - it is a high
[illegible] use area & important fisheries.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO 04.17.90

OG Glenn Heyman ~~USGS~~ NOAA Miles Hayes SEGMENT ST/ PD-002
BIO Daniel Raider AD LAND REP Roger McCampbell SUBDIVISION A (1 OF 1)
EXXON John Dean ADEC Russel Kunkre TIME 14:00 to 18:45
TEAM NO. 17 TIDE LEVEL +6 to +2 DATE 4 / 21 / 90
EST SUBDIVISION LENGTH: 1560 m ☒ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 0 % B 10 % C 35 % P 40 % G 3 % S 2 % M 10 % V 0 %
SLOPE Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 50 m VL 490 m NO 1020 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/c	/a	/p	/s						su	ui	mi	li
ASPHALT PAVEMENT		X	✓			X/✓					✓		X
POOLED													
COVER				X		X				X	X		
COAT			X	✓		X/✓		X/✓			X/✓	X/✓	
STAIN													
MOUSSE			✓	X				X/✓			X/✓	X/✓	
PATTIES			X	✓		X/✓	X/✓				X/✓	X/✓	
TARBALLS				X		X					X	X	
FILM													
NO OIL													

PAVEMENT H F (S) 32 sq. m by 2 cm

(PATTIES) (TARBALLS) 250 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL M

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

DID YOU COLLECT DEBRIS? YES ☐ NO ☒

TYPE

#BAGS

Photographs:

Roll No. 2

Frames 11-36

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	LI				
1	33					X	•		X							X			N	—	—	P-C/PCBS
2	25					X	•		X							X			N	—	—	P-C/PCS
3	28					X	•		X							X			N	—	—	P-C/PS
4	20					X	•		X								X		N	N	15	PG/PGS
5	34					X	•		X							X			N	—	—	PC/PC
6	20					X	•		X							X			N	—	—	PV/VMSGP

COMMENTS

See attached sheet for comments.

REVIEWED [illegible] DATE 24 Apr 90

SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ PD-002 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

	PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE SUBSURFACE SEDIMENTS
			OP	OR	OL	OP	NO		UO	UC	BR	DBR	RN	OY	YL	DBR	TR	LBR		SU	LS	MS	U				
1	7	40					X	·		X											X			N	N	36	PG/PGS
	8	35					X	·		X											X			N	—	—	P/GS
	9	30					X	·		X											X			N	Y	28	P/PGS
	10	30					X	·		X											X			N	N	28	P/PGS
2	11	18	X					5-10		X	X										X			Y	—	—	PG/GP
								·																			
								·																			
								·																			
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								·																			
								·																			

COMMENTS

1- 1 clump of fine sediments about 2-3 in across held together by MS in pit.

2- Pit 11 dug in estuary-type environment, doesn't fit readily into ITZ location.

REVIEWED BAT DATE 24 Aug 90

OG-COMMENTS -ST/PD-002 A (1 of 1)

PD-002 is dominated by Slide Creek fan delta. A lagoon lies in the NE part of the segment and is protected from West Port Dick Arm by a large cobble-pebble beach bar. The delta is separated from Port Dick Creek to the west by a narrow cobble-boulder beach + rock outcrop section.

The fan delta has a series of braided channels with low relief interchannel pebble bars in the central fan area with higher relief cobble-pebble swash bars on the E and W sides of the main channel area. Most of the TB + PT observed in the delta area are located on the upper sides of these swash bars. The PT/TB's vary from 10 cm to over 50 cm in diameter. They grade into an AP mat-type appearance. The exterior of the PT/TB/AP is dull black to dark gray and the interior has a dark brown mousey appearance. The PT/TB/AP is intermixed w/ C/P/G. The PT and MS in the upper fan area is commonly observed at the base of healthy vegetation (grass).

Oiling in the lagoon area is mostly concentrated on the E-NE side. Commonly observe clumps of MS with grass and small debris. Also see P + /S of CT + CV on N + NW side of lagoon in rock crevasses, on few rock faces, and on few stumps and logs.

Heyman

SEGMENT ST 002

SUBDIVISION A (1 of 1)

DATE 4 / 20 / 90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bndy
- 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

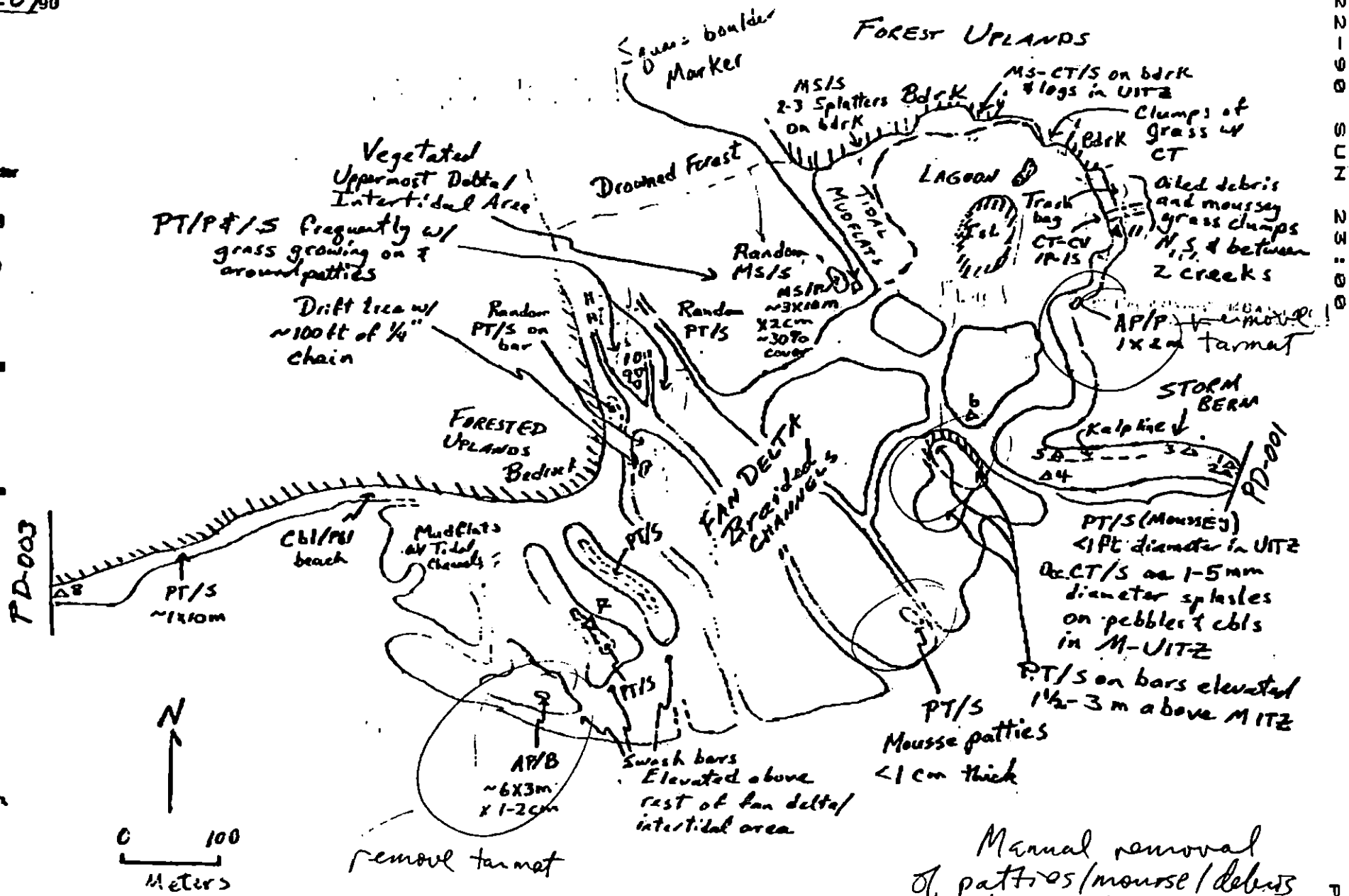
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

S CH MAP



Manual removal of patties/mousse/debris on entire subdivision.

Oil Character Length (m): AP 2 PO 0 CV 1 CT 0 ST 0 MS 0 PT 70 TB 0 FL 0 NO 100

REVISION 03/91

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10.22.90

Segment ST / PD-002 Subdivision A Date (mo / day / yr) 4/20/90

Time (24 hr) 14:00 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
(1) Bedrock Ø (2) Boulder 10 (3) Cobble 35 (4) Pebble 43 (5) Sand 2 (6) Silt 10

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 25 Low 20 None 25

(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. 2
Frames 11-36

BARNACLES

Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
2	2	2	2	2	2	2	X	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

MYTILUS

Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
2	2	2	2	2	2	2	X	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

GASTROPODS

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

NOT PRESENT

Wildlife Observations/ General Comments:

List of wildlife on attached sheet

General Comments on attached sheets

Ecological Considerations:

1A, B - 241-16-10450

1 J

4 GA

6 U, Y, W, NN

8 AA

PO-002

Bio Comments
Daniel Raider
4/20/90

This entire segment has a number of varying habitats, including: a rocky/cobbly beach, mud tidal flats, a series of anadromous streams, grassy bars (periodically inundated w/ salt water and periodically exposed), intertidal bars with moderate to dense amounts of Fucus and barnacle coverage, and a drowned forest.

The Eastern-most beach area is composed of angular cobble, rare boulders and no bedrock. There is a line of vegetation debris in the berm area and the Upper Intertidal Zone line, and is composed of: 1) kelp; 2) fucus; 3) Zostera, 4) ulva
On the beach itself:

- sparse fucus in the MTZ on cobble + boulder
- rare barnacle in the MTZ on cobble
- moderate barnacles in the LTZ (walked out to LTZ from shoreline)

- Anadromous streams
  - sparse to moderate fucus (adult) on cobble - predominantly sparse; moderate kelp in patches along the edges of the streams

- Intertidal fan delta
  - A great deal of the fan is exposed cobble with fucus (adult) ranging from rare to dense in concentration. The dense areas tend to be in clumps of roughly 10 meters X 10 meters

- rare Littorina sitkana in UTZ on bedrock
- Opened clam shells surrounding the mudflat
-

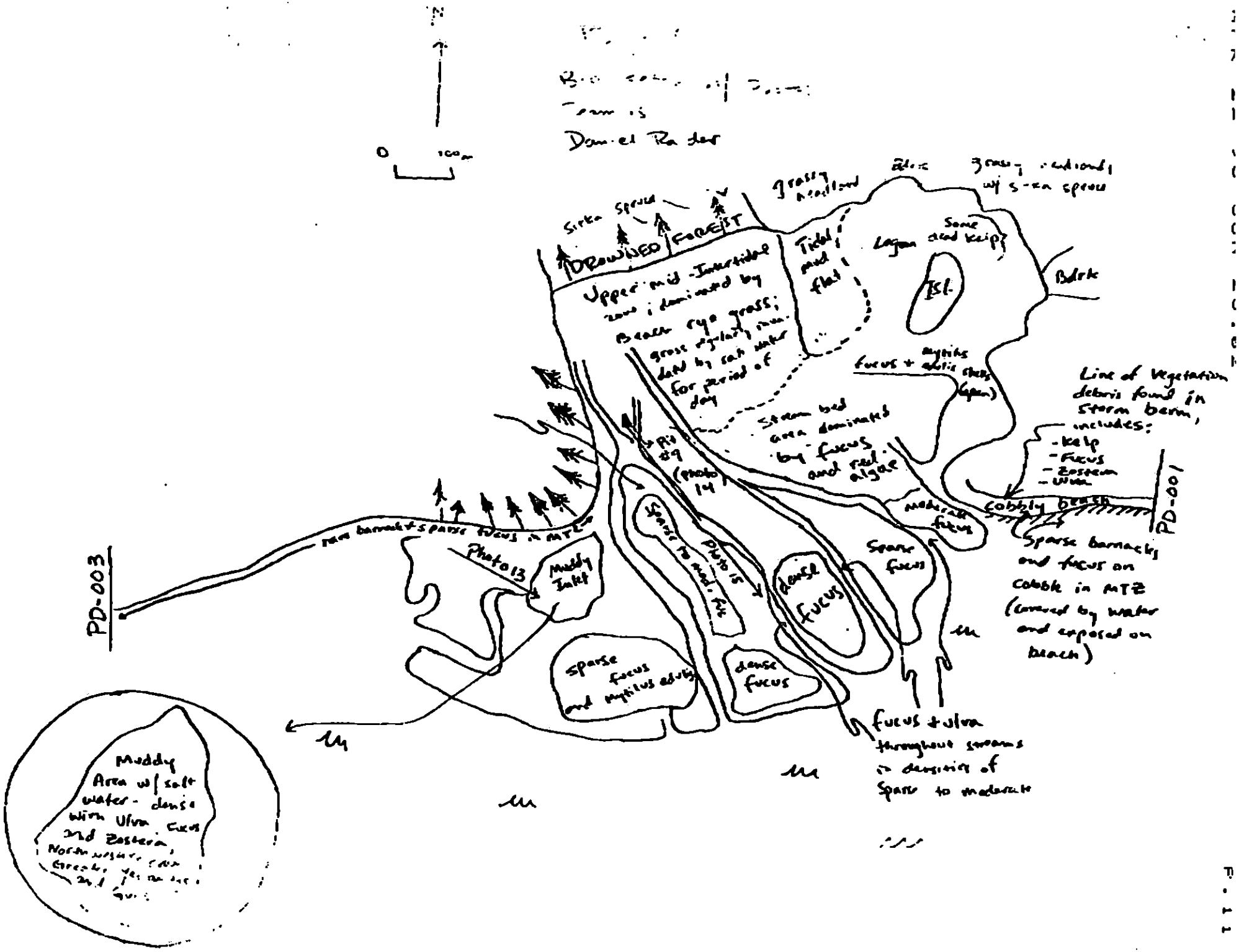
PD-002

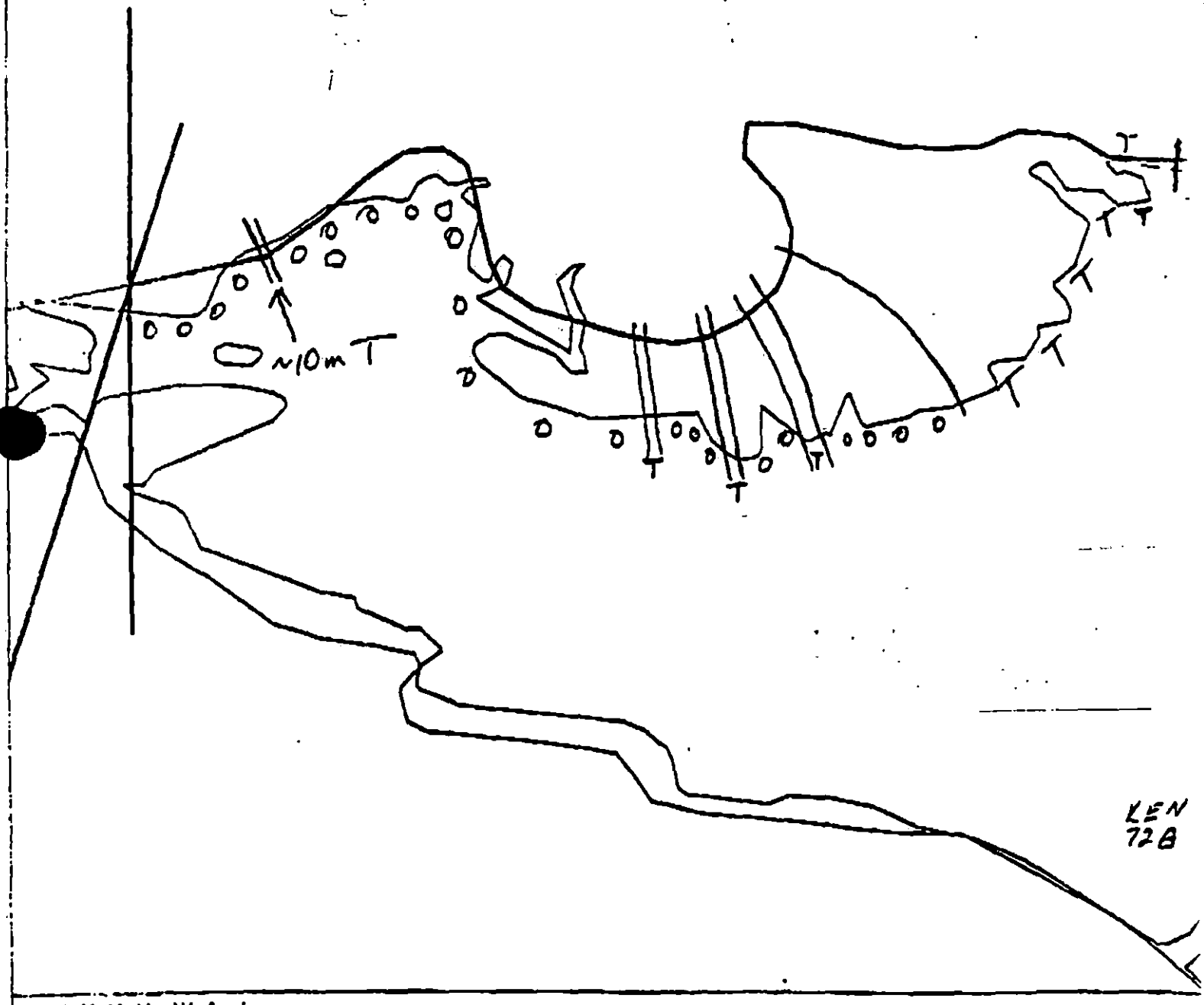
Sited wildlife PO-1, P-2 & PO-3

Bird	Estimated Number 21 April	22 April
1) Mallard	53	25
2) Northern Pintail	3	
3) Harlequin Duck	17	15
4) Goldeneye (Barrow's and/or common)	15-20	10 ±
5) Buffle head	10	10 ±
6) Common Merganser	2 (pair)	2 (pair)
7) Greater Yellowlegs	2 (pair)	
8) Mew Gull	12	10-20
9) Bald Eagle	2	1
10) Glaucous-winged Gull	20+	10-20
11) Northwestern Crow	27	29
12) American Dipper	1	1
13) Green-winged Teal		9
14) American Crow	3	29
15) Red-Necked Grebe		1

<u>Note on list</u>: This was compiled at PO-002, but may be applied to entire region as these species may also be seen from PO-001 + PO-003

Credit to Mike Hayes for helping generate this thorough list.


N
0
100m
Sitka Spruce
DROWNED FOREST
Upper mid-Intertidal zone; dominated by Beach rye grass; grass regularly inundated by salt water for period of day
Tidal mud flat
grassy meadow
Lagoon
Some dead kelp
Isl.
Bdrk
grassy meadow w/ sitka spruce
Fucus + mytilus edulis (lagoon)
Stream bed area dominated by fucus and red algae
Pit #9 (photo 14)
Line of Vegetation debris found in storm berm, includes:
- kelp
- Fucus
- Zostera
- Ulva
cobbly beach
PD-001
Sparse barnacles and fucus on cobble in MTZ (covered by water and exposed on beach)
moderate fucus
Sparse fucus
dense fucus
Sparse fucus and mud flat
Photo 15
Photo 13
Muddy Inlet
sparse fucus and mytilus edulis
dense fucus
rare barnacles + sparse fucus in MTZ
PD-003
fucus + ulva throughout streams in densities of sparse to moderate
Muddy Area w/ salt water - dense with Ulva, Fucus and Zostera



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

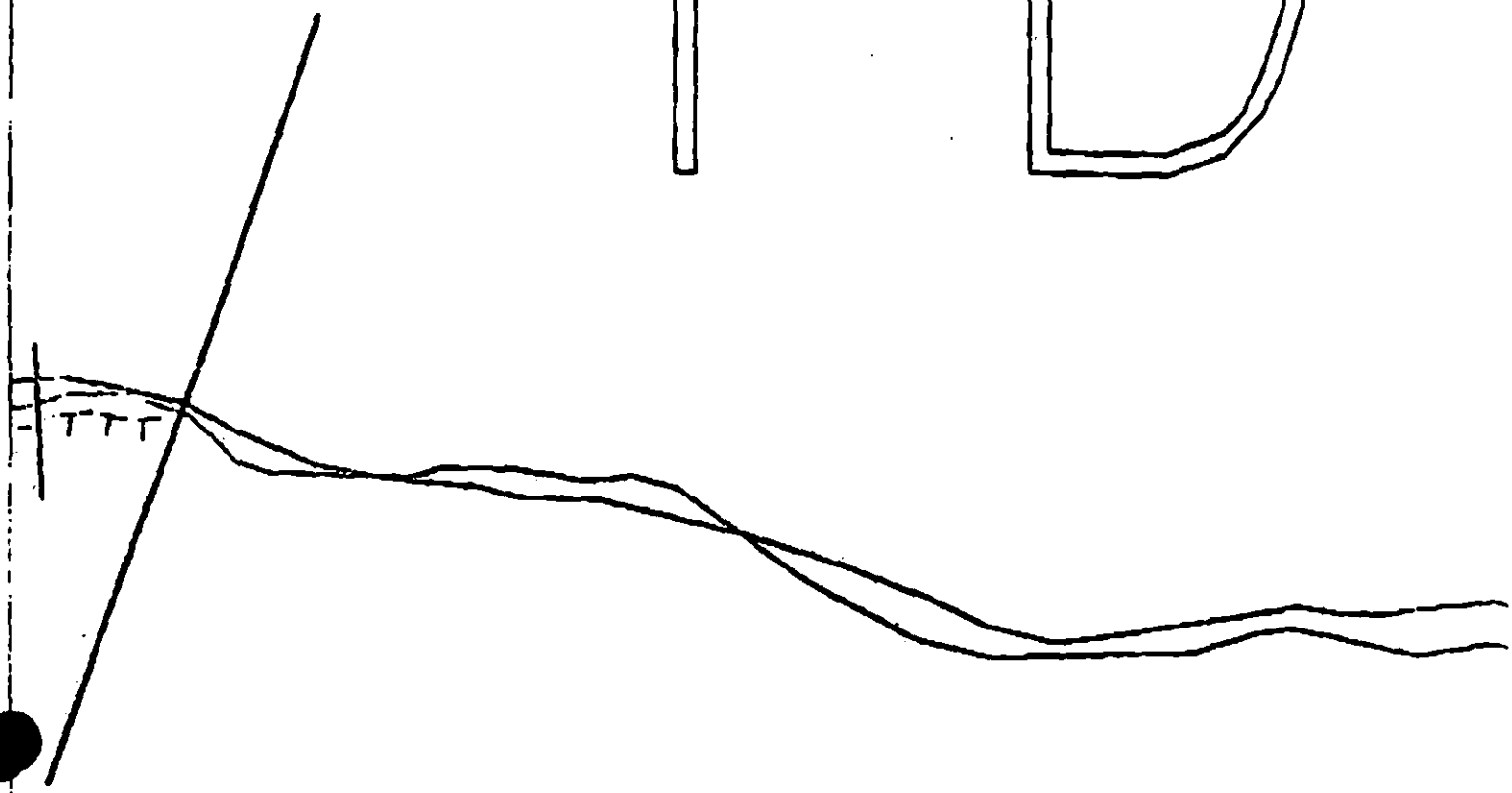
PD-2

ADEC Segment Length: 1503m

0 100 200 300
METERS

Map Key: KEN-72a
Name: G. Heyman
Date: 4-20-90
Data Entered:

PD-



← KEN 72A

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

PD-2

ADEC Segment Length: 1603m

0 100 200 300
METERS

Map Key: KEN-72b
Name: G. Meyer
Date: 4-20-90
Date Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/PD-002 STREAM NO: 242-42-10450 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/20 to 9/30)
4GA State Marine Park Alaska State Wilderness Park
6NN Recreation: Sportfishing
8AA Sensitive estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Avoid landing in mussel beds.

SHPO SIGNATURE: [illegible] DATE: 5/22/90

Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) manual removal of tarmat, patties and oiled debris, 2) bioremediation of coat and cover areas as indicated on the attached sketch map. Contact ADNR for entry permit. Work from 5/16 to 7/9.

TAG COMMENTS:

TAG APPROVAL DATE: 5/18/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tear [illegible]
NOAA Gary Petrone Gary Petrone
USCG G.A. Reiter G.A. Reiter

FOSC [illegible] DATE: MAY 25 1990

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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)
HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
JJ 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 / AD - 2 SUBDIVISION: _____ DATE 9/27/93

USCG
NAME CWO McMahon SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
1. MANUAL CLEAN-UP: REMOVE TAR PATTIES
NOTE: LOCAL VEGETATION IS GROWING AT A RAPID RATE AND WILL SOON COVER THE PATTIES + TAR MATS MAKING CLEAN-UP NEAR IMPOSSIBLE.

ADEC
NAME Doug Hill SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Manual pickup and removal at patties; Rapid rate of vegetation growth requires that this area be cleaned as soon as possible - now!

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

REVISION NO. 03/21/90

OG William Reid USCG McMahon SEGMENT ST/ PD 002
BIO Michael Fawcett LAND REP STREAM
EXXON Gus Garcia ADFG Doug Gill TIME 11:30
TEAM NO. 15 TIDE LEVEL DATE 29 / APR / 90
EST. SUBDIVISION LENGTH: 200 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B ___ % C 20 % P 50 % G 30 % S ___ % M ___ % V ___
SLOPE: Lang 95 % Hang 5 % Vert ___ % WAVE EXPOSURE: ☒ Low ☐ Med ☐ H
OIL CATEGORY LENGTH: W ___ m M 50 m N ___ m VL 50 m NO ___

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AC	AB	AP	AS	BR/BK	DBR/RW	OY/OR	DBR/TL	LBR/BG	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER			X	X				X			X		
COAT			X	X		X					X		
STAIN													
MOUSSE			X	X				X			X	X	
PATTIES			X	X				X			X	X	
TARBALLS													
FILM													
NO OIL										X			X

PAVEMENT H F S ___ sq m by ___
PATTIES / TARBALLS ___
NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you Co
DEBRIS
☐ YES
TYPE ___
#BAGS ___

Photographs:
Roll No. AS-15-7
Frames 12-14

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▼	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	BR/BK	DBR/RW	OY/OR	DBR/TL	LBR/BG	SU	UI	MI	LI				
							•															
							•															
							•															
							•															
							•															
							•															

COMMENTS

REVIEWED ___ DATE 5-30-9

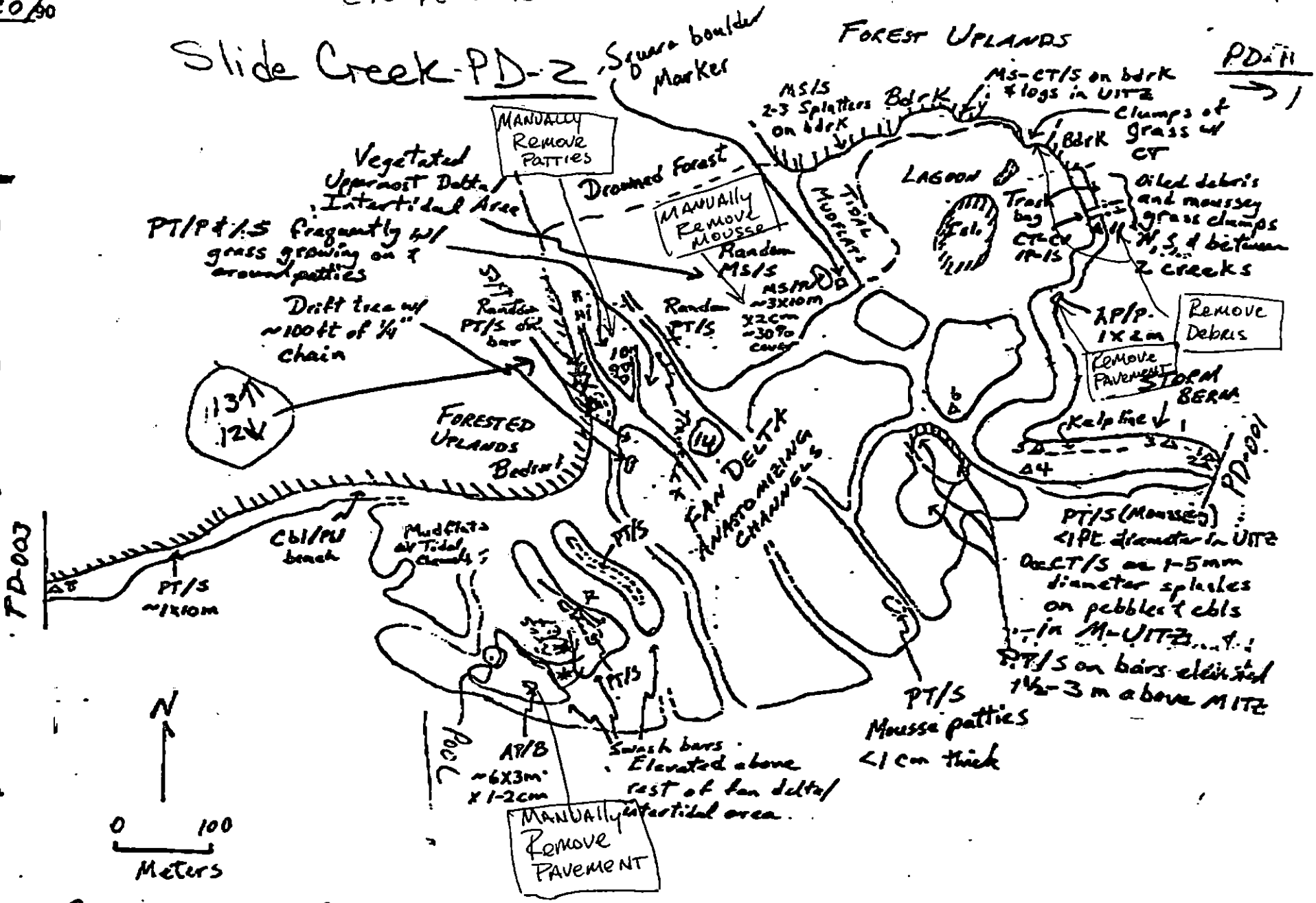
SEGMENT ST. 002

SUBDIVISION A (1 of 1)

DATE 4 / 20 / 90

242-42-10450

Slide Creek-PD-2



CHECKLIST

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

LEGEND

1 △ - No Subsurface Oil

2 ▲ - Subsurface Oil

CT/C Continuous Distribution

CT/B Patchy Distribution

CT/P Patchy Distribution

CT/S Scattered Distribution

Dense Vegetation

Photo location, direction, number

Character Length (m): AP 8 PO ____ CV 1 CT 50 ST ____ MS ____ PT 70 TB ____ FL ____ NO ____

REVISIONS

GMENT ST. [illegible]002

BDIVISION A (1 of 1)

TE 4 / 20 / 90

ECKLIST

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

GEND

1 △ No Subsurface Oil

2 ▲ Subsurface Oil

CT/C nuous Distribution

CT/B n Distribution

CT/P y Distribution

CT/S ed Distribution

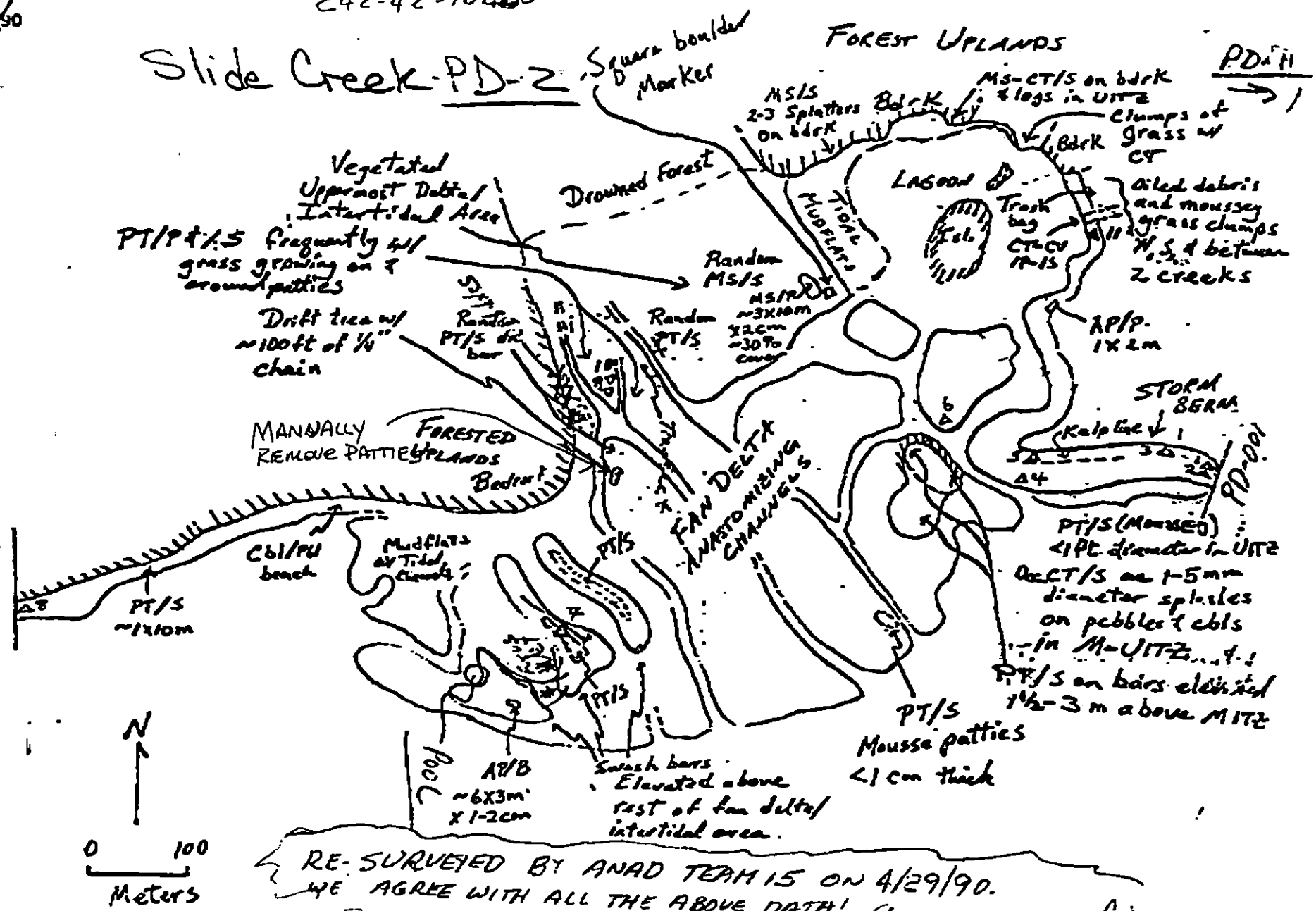
ee /egetation

location, direction, mber

SK CH MAP

DRAWN BY: WILLIAM LE?
29 APR 90

242-42-10460



RE-SURVEYED BY ANAD TEAM 15 ON 4/29/90.
WE AGREE WITH ALL THE ABOVE DATA!

racter Length (m): AP 8 PO ____ CV 1 CT 50 ST ____ MS ____ PT 70 TB ____ FL ____ NO ____

APR-30-90 MON 10:34

15/71

ADF&G MULTI-ASSESSMENT DATA FORM

ANADSCAT

1 SURVEY TYPE: BS (SS) DS TS AVS SCHA MMHS PTA 2 REGION: PWS (KP,CR) K,AP

METHOD: Aerial (Ground) Boat

3 DATE: 4/29/90 15 HIGH TIDE TIMES: Cordova-Correction 1650 / 21 ~~TEAM RECORDER~~: Gus Gaestaldi

4 START TIME: 1155 16 HIGH TIDE HTS: 12.8 / 22 OBSERVERS: William Reid (w/ Mike Faucett), Mike McMahon

5 STOP TIME: 1332 17 LOW TIDE TIMES: 1140 / 23 AGENCY: Doug Hill (ADF&G)

6 SEGMENT #: PD-2 18 LOW TIDE HTS: -1.5 / 24 PHOTOS TAKEN: Y (N)

7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____

8 K-UNIT: _____ Ebb (Stack) (Flood) Stack 25 VIDEO TAKEN: Y (N) TAPE#: _____

9 STAT AREA: 242-42 20 USGS QUAD: _____ Start: _____ End: _____

10 LAT: 59° 18' 09"N ~~242-42-10~~ 11 LONG: 151° 18' 03" W 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map (Lorah) Oil _____

13 LOCATION: AFS #242-42-10450 Sediment _____

14 DESCRIPTION: Head of West Arm Port Dick - Grass & Gravel flats and lagoon Area (Northwest portion of flats) Biological _____

EXTENT OF OIL Water _____

	SHORELINE L	SHORELINE W	SHORELINE M²	SHORELINE %	STREAM L	STREAM W	STREAM M²	STREAM %
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse (Tar) Asphalt (Sticky) (Stain)

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove Lagoon Marsh

34 WAVE EXPOSURE: High Moderate (Low)

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 242-42-10450

38 STREAM NAME: Slide Creek

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? (Y) N

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: PD-001, 002, 003, 004

43 ANADROMOUS FISH PRESENT? (Y) N → Chum Fry

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground
Chum		200

COMMENTS: Priority Cleanup Area (ADF&G - Doug Hill) Recommend that a crew arrive "ASAP" to manually pick up and remove the "numerous" tar balls and patties in this system (found throughout the grass flats, lagoon area, and on the gravel bars). Rapidly growing vegetation will soon obscure much of the

would like is
ea clean. bowl

PD-002
242-42-10450

48 PHOTOLOG Slide Creek 16/31
Homer Zone

FRAME(S) DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM

- Note the presence of asphalt mats in nearby PD-0
This mat was treated with Inipol in 1989.
Oil in PD-001&004 also pose a potential threat to the grass flats and lagoon area of PD-002.

- Channels within the "Flats" area are used by Pink and Chum salmon - As well as the lagoon and Slide creek itself. Chum fry observed in the chann of the flats.

- The flats area is also used heavily by migratory waterfowl

- SEA otters and land otters frequent the area

- Mussel beds are present at the mid to lowe intertidal portion of this system.

- BALD EAGLES Frequent this area.

I agree with recommendations. Michael H Fawcett

AN ADF&G person will be present during the cleanup operation.

■ Sample taken
■ Photo frame # and shot direction.

Segment PD002 4/29/90
Stream No. 242-42-10450 Michael Fawcett
Ecological summary

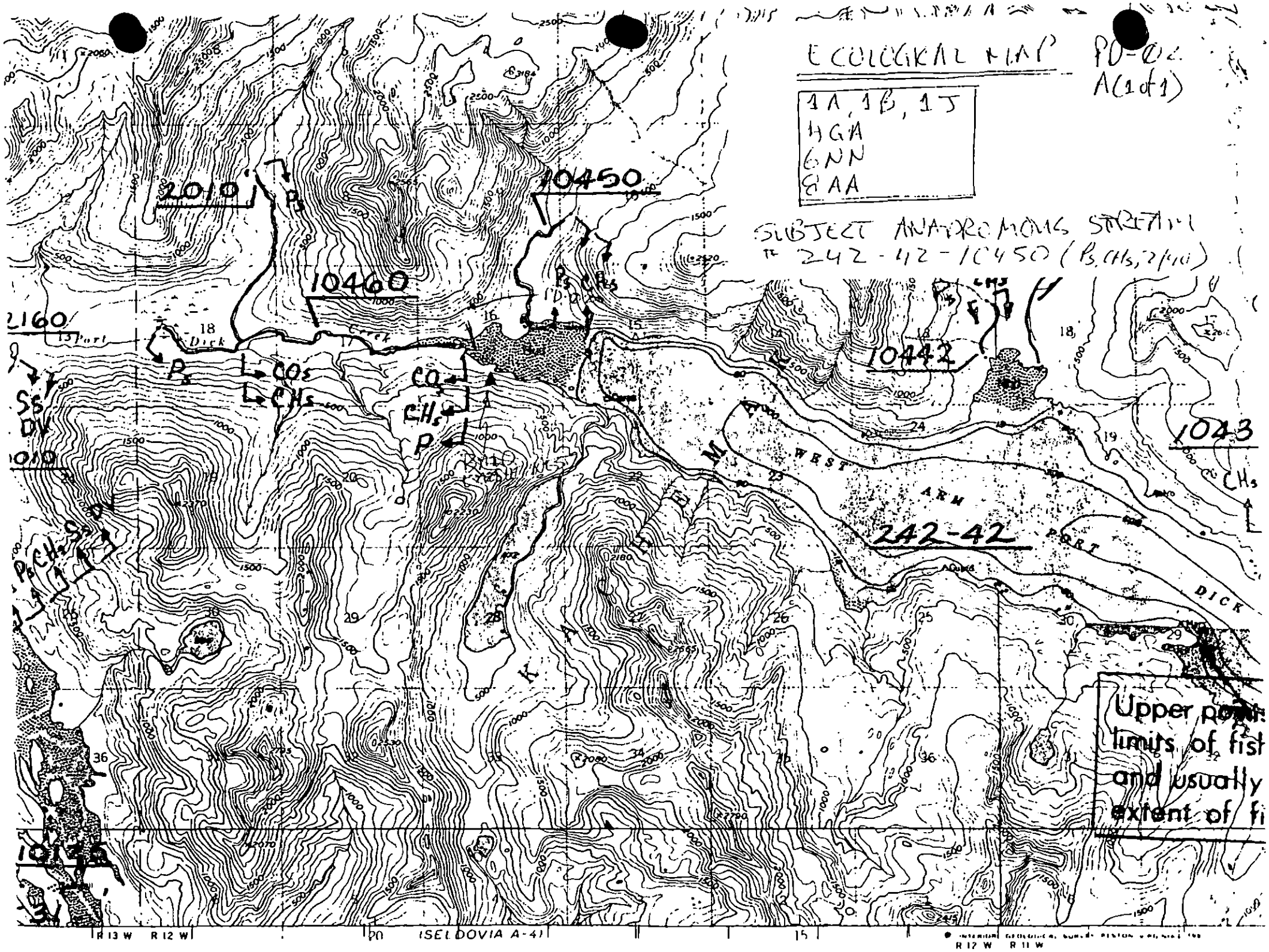
This is a large braided stream with an intertidal delta area at least 400m wide. The lower 200m or so consists of cobble/pebble/gravel channels, berms, and flats with large, diverse populations of Fucus and mussels, with infaunal, clams, crustaceans, worms, etc. Two sea otters were seen near the mouth, and craters in gravel flats indicated recent clam-digging by otters. The upper 200m or so of the intertidal area consists of marsh grass-covered flats interspersed with stream channels, and a lagoon in the Northeast corner. The lagoon has mussel beds, eelgrass, infaunal clams, and a soft mud bottom. Remaining oil consists of sporadic small tar mats throughout the MTZ and LTZ. Manual removal is suggested. Considering the large areal extent of the scattered tar mats, manual removal by a crew of 10 people or so can probably be accomplished with minimal damage to the intertidal biota. Skiff operators should be advised to avoid landing in mussel beds.

Michael Fawcett

ECOLOGICAL MAP PD-02
A(1 of 1)

1A, 1B, 1J
4GA
6NN
8AA

SUBJECT ANADROMOUS STREAM
242-42-10450 (Ps, CHs, 2/4/11)



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-42-10450

SEGMENT PD-002 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Less Than 100m From Stream	WORK 5/15 to 7/10 (ADF&G MONITOR REQ.)
Bioremediation More Than 100m From Stream	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (242-42-10450) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.
1J	Purse Seine Area	Closed to bioremediation 7/20 to 9/5. No constraint to manual pickup and tarmat removal.

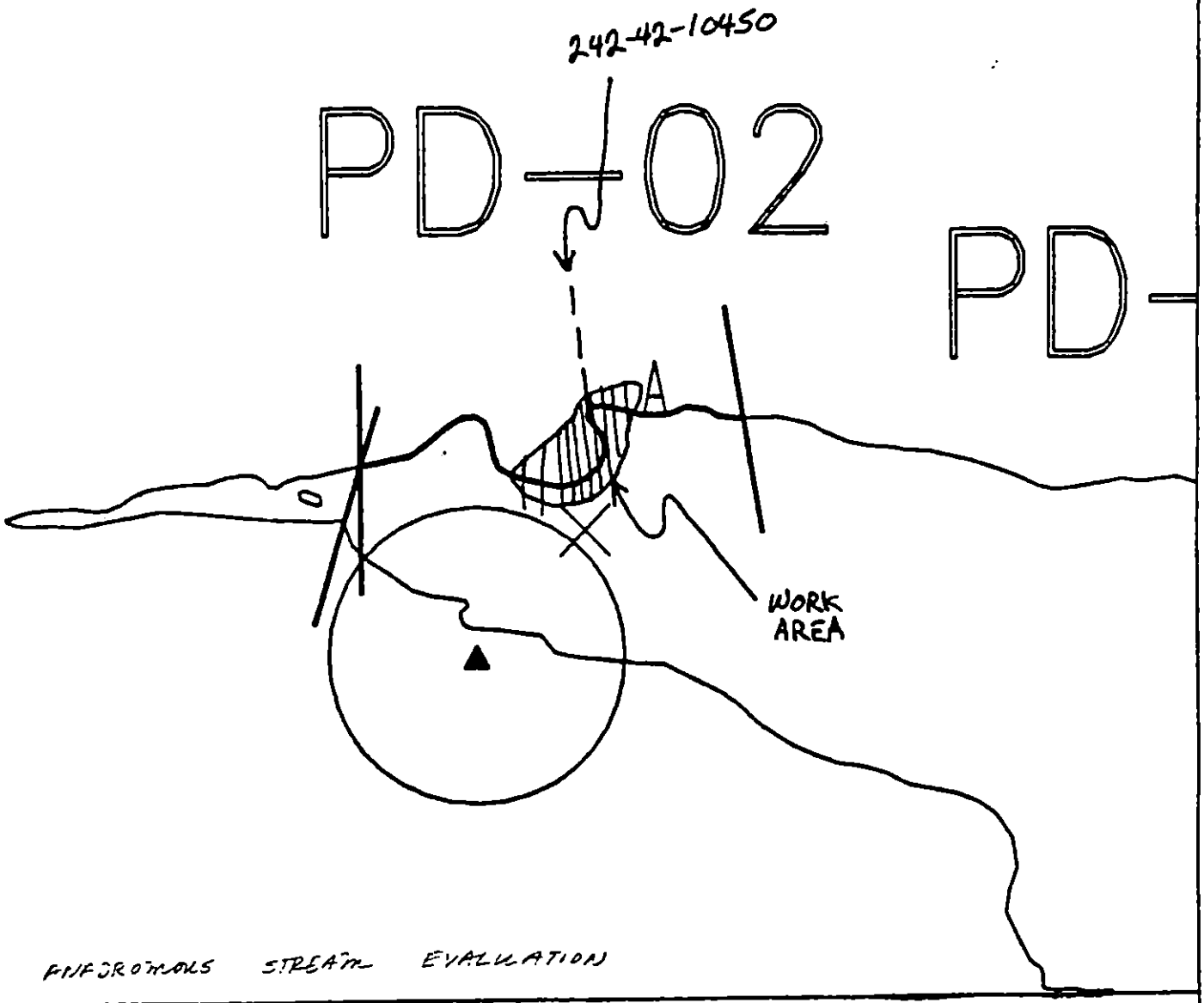
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Sensitive estuary.

SEE SUBDIVISION CONSTRAINT ADDENDUM PD-002A FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC D Faraghi Date 6/29/90

Prepared by P Phillips Date 6/14/90



EXXON

Exxon Company, USA
Map Key: KEN-PD-2
Nov 17, 1990

ECOLOGY MAP
SEGMENT PD-2
SUBDIVISION A (1 of 1)

METERS
0 460 920

★ Seabird Colony
▲ Eagle Nest

1 inch = 1509 feet

SHORELINE EVALUATION

SEGMENT ST/ PD-03 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (6/20 to 9/30)
4GG Alaska State Parks
6NN Recreation: Sportfishing
8AA Sensitive Estuary

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: [signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide____m: Medium____m: Narrow____m: V.Light____m: No Oil____m
Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

- [x] No Treatment Recommended
- [ ] Treatment Recommended
- [x] Manual Pickup
- [ ] Bioremediation
- [ ] Tarmat Removal
- [ ] Snare/Absorbent Booms
- [ ] Oil Snares (pom poms)
- [ ] Absorbents (pads,rolls,etc)
- [ ] Spot Washing:____Wands
- [ ] Beach Cleaner
- [ ] Other (see comments)

COMMENTS:

* TAG COMMENTS: MANUAL PICKUP OF TARBALL / TAR PATTIES

PRIOR MAY 1 - INTERIM APPROVAL FOR TAR PATTY / TARBALL PICKUP.

TAG Recommendation

Final ~~Approval~~ for Treatment on May 5, 1990 [initials] AP JBauer

TAG APPROVAL DATE: 4/28/90
ADEC JOHN BAUER [signature]
EXXON ANDY TEAL [signature]
NOAA Gary Petrac [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 5-6-90

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)
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AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
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AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

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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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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.
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P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
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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 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)
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

R

SEGMENT ST / PD-3 SUBDIVISION: A DATE 4/21/90

USCG NOAA
NAME Miles O. Hayes SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
I have read and agree with OG and biologist's comments for PD-003. Widely scattered mousse patties found almost to the upper limit of the tide. Manual pick-up is recommended for this important anadromous stream mouth. Clean up should begin ASAP because growth of grass may obscure the patties.

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Scattered mousse patties were found along the north shore of the anadromous steam bed and on the sand bars.

Manual pick up of the patties is recommended.

ADNR / DPOR
LAND MANAGER
NAME Roger McCampbell SIGNATURE Roger McCampbell

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Concur w/ SSFT report. Manual picking ASAP is recommended while grass is still only small shoots.
Avoid grass isthmus below cabin - too much trampling.
Lots of salmon (pink?) fry & amphipods.
Mousse patties found 800 m up stream.
Check w/ SHPO. This a high human use area w/in Kachemak Bay State Wilderness Park.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO 36 12-90

OG Glenn Heyman NOAA ~~USCG~~ Miles Hayes SEGMENT ST/ PD-003
BIO Daniel Raider ADNR LAND REP Roger MacCampbell SUBDIVISION 4 1 OF 1
EXXON John Dean ADEC Russel Kunkel TIME 14:20 to 17:00
TEAM NO. 12 TIDE LEVEL +6 to +1.5 DATE 4/21/90
EST SUBDIVISION LENGTH: 1800 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W & W to E
SURFACE SEDIMENTS: R 4 % B 5 % C 30 % P 45 % G 10 % S/ % M5 % V 0 %
SLOPE Lang 96 % Hang 0 % Vert 4 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 800 m NO 1000 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rb	rp	rs						su	ui	mi	u
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X					X	X	
STAIN													
MOUSSE				X				X			X		
PATTIES				X		X	X				X	X	
TARBALLS													
FILM													
NO OIL										X			X

PAVEMENT H F S Ø sq. m by Ø cm

PATTIES TARBALLS 15 BAGS

NEAR SHORE SHEEN? NO BR RW SL FI

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT ~~DEBRIS~~? - PT YES ☒ NO ☐
TYPE PT
#BAGS 2

Photographs:
Roll No. 3
Frames 1-3

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE SUBSURFACE SEDIMENTS
		op	or	ol	of	ho		uo	uc						su	ui	mi	u				
1	20					X	-		X							X			N	N	17	PG/PGS
2	25					X	-		X								X		N	—	—	PG/PGR
3	10					X	-		X								X		N	—	—	PC/PGS
4	15					X	-		X							X			N	—	—	PC/PGS
							-															
							-															

COMMENTS * Trench ~10' long X 15 cm deep.

PD-3 encompasses the lower 900 m of Port Dick Creek, based on the ADEC map. PT/S reaches up to 800 m up the creek. Three types of oiling were observed: 1) CT/S on the outcrop @ the S end of PD-3, 2) PT/S along the grassy channel bars & along the N shore - appear as dark gy to blk exterior w/ dk brown mousey interior - w/ cm fluts, and 3) MS/S between boulders at the N end of the segment.

REVIEWED MH DATE 4-26-90

DGG Hazmat

SEGMENT S D-003

SUBDIVISION A (1.4)

DATE 4/21/90

TCH MAP

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

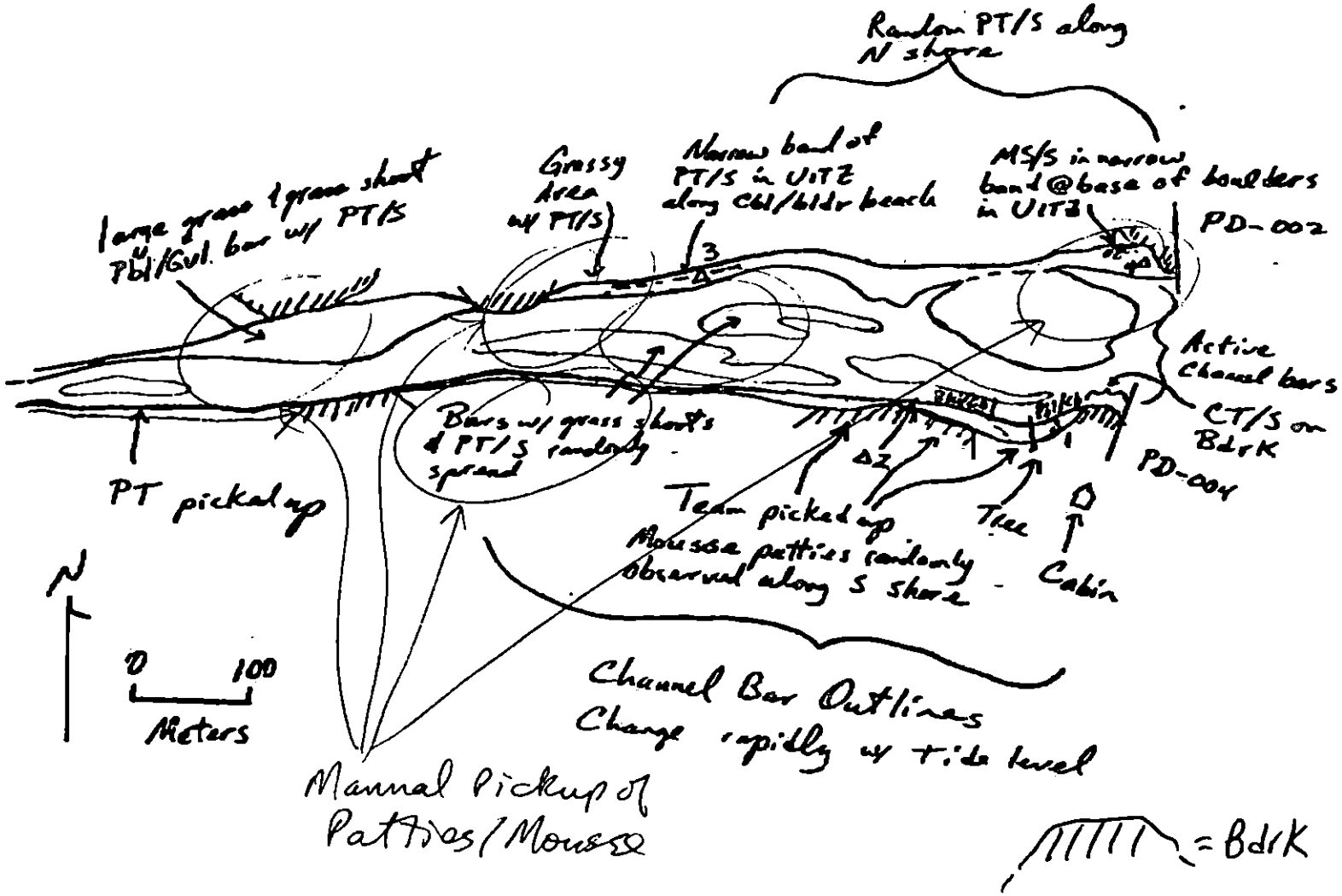
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

ooo Oiled Vegetation

1 ⊙ Photo location, direction, and number



Oil Character Length (m): AP ___ PO ___ CV ___ CT 15 ST ___ MS 5 PT 780 TB ___ FL ___ NO 1000

REVISION/DATE

SHORELINE ECOLOGICAL SUMMARY

REVISION 8/22/90

Segment ST / TD 003 Subdivision A Date (mo / day / yr) 4/21/90

Time (24 hr) 14:00 Biologist DANIEL RAIDER

(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 5 Moderate 35 Low 60

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

Photographs:
Roll No. 3
Frames 1-3

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	X 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	X 3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	X 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	
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	X 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	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	X 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	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:

See Bio comment Sheet and species list

Ecological Considerations:

1A, B - 241-16-10460

1J

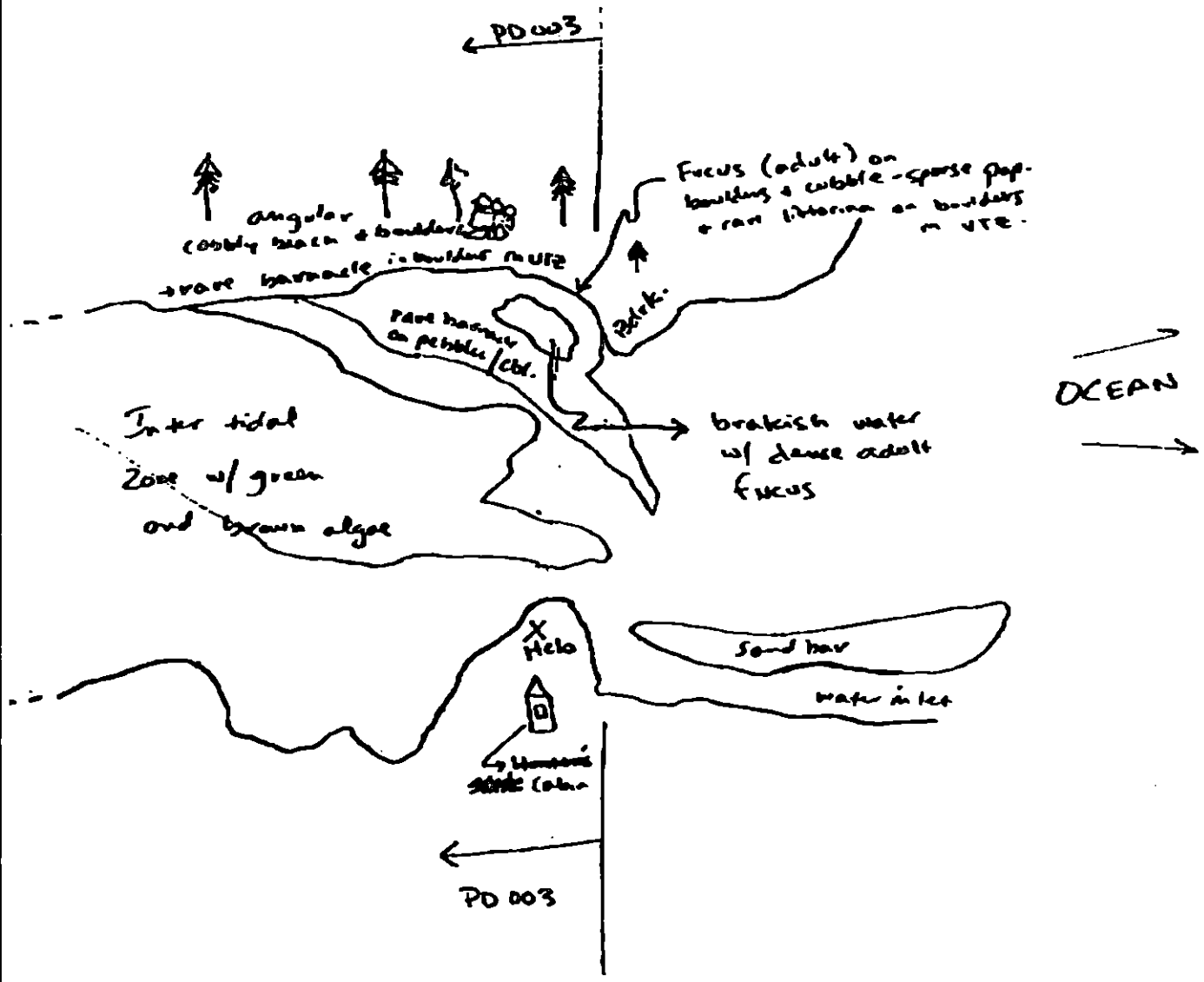
4GA

XAA

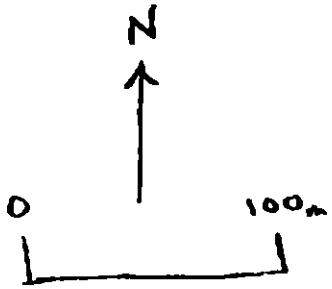
6NN

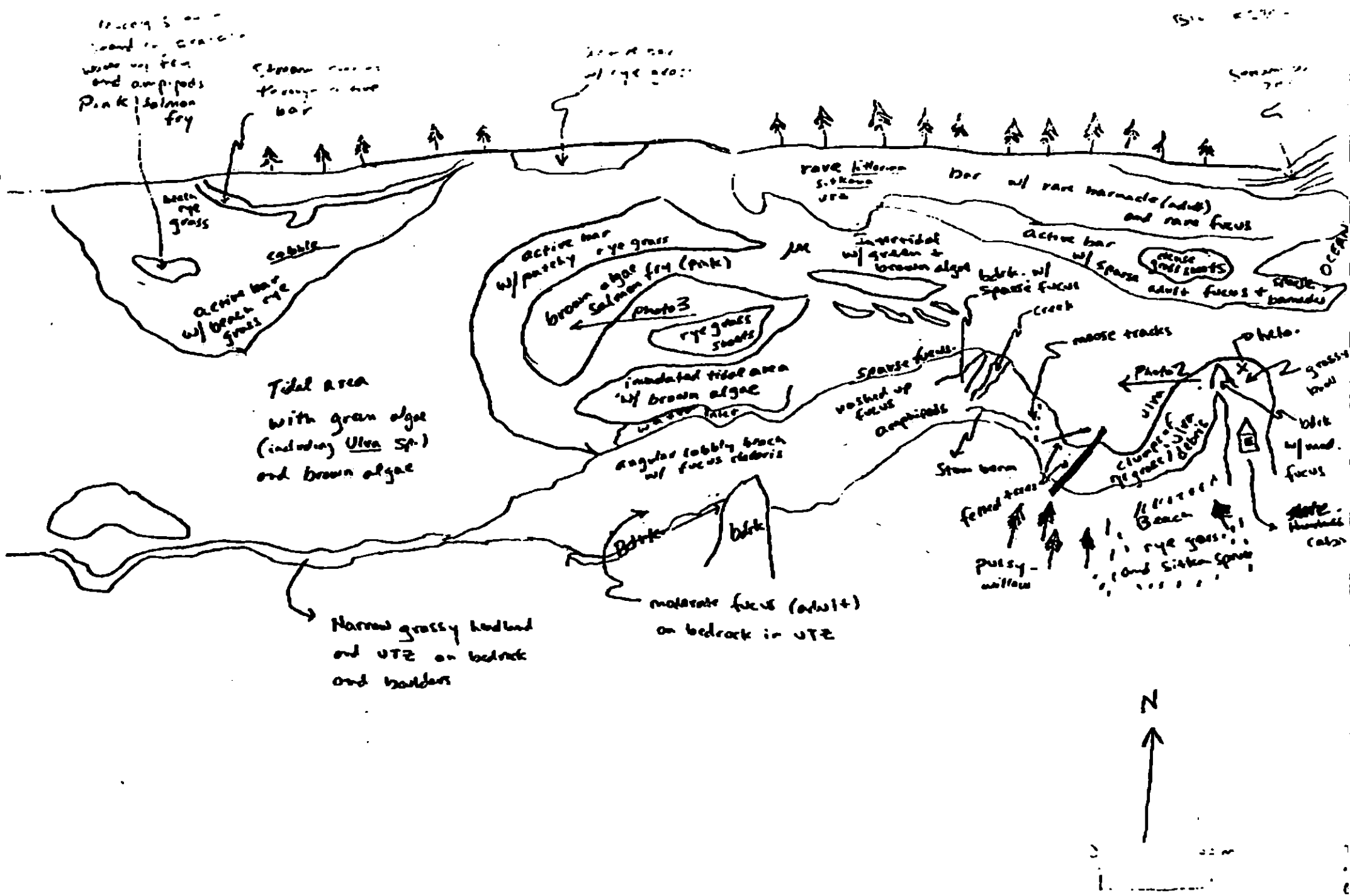
1/21/90

SKETCH



NOTE: THIS PAGE (1) IS EASTERN MOST SECTION OF THE SEGMENT AND CAN BE JOINED WITH THE WESTERN HALF (PAGE 2) USING THE HUNTER'S CABIN AS AN EASY REFERENCE. THEY ARE IN SLIGHTLY DIFFERENT SCALES.




Pink salmon fry
bar
w/ rye grass
rye grass
cobble
active bar w/ patchy rye grass
active bar w/ patchy rye grass
brown algae
salmon fry (pink)
photo 3
rye grass shoots
inundated tidal area w/ brown algae
water lilies
angular cobbly beach w/ fucus radicis
Tidal area
with green algae (including Ulva sp.) and brown algae
Narrow grassy lowland and UTZ on bedrock and boulders
moderate fucus (adult) on bedrock in UTZ
bar w/ rare barnacle (adult) and rare fucus
intertidal w/ green & brown algae
active bar w/ sparse
adult fucus + barnacles
OCEAN
sparse fucus
washed up fucus
amphipods
moose tracks
photo 2
ulva
clumps of ulva, rye grass & debris
grassy knoll
blk w/ mud. fucus
Beach
rye grass and Sitka spruce
pussy-willow
fenced areas
Stew barn
N

PD -003

TEAM 17

BIO COMMENTS

4/21/90 , 14:00

Segment PD-003 consists of a fragmented Anadromous Stream (241-16-10960) cut by a series of active cobble/sand bars. These bars are dominated primarily by a beach rye grassy, which in some areas exhibits a clumpy, mound-like appearance and in others forms a mat of grass. Both last year's growth (an annual grass, this consists of dead stalk and decomposing material) and this year's new shoots are visible.

Brackish waters may be found throughout the Anadromous stream system and consist of Salmon fry[1] and an abundant number of amphipods (believed to be chums). The brackish waters consist also of red and green algae, bordered by the annual beach rye grass. The number of fry is not yet abundant.

Typical ~~Mid~~ Intertidal life is not found throughout the segment, with evidence of rare barnacles extending roughly 200 meters into the segment (facing west). Yet, opened *Mytilus edulis* shells may be found throughout the segment, evidence that the intertidal zone extends the entire region.

The new rye grass shoots that are developing (3-4" in

---

1 Pink Salmon fry was spotted, but this area may contain Pink Salmon, Coho Salmon and/or Chum Salmon.

height, presently) will grow rapidly in the coming 2-4 weeks. Any clean-up that may take place in the stream area should be performed as soon as possible, or efficient/effective techniques will no longer be available, short of cutting the grass in many areas.

Overall, the streams and stream mouth appear healthy and productive. Oiled sections are relatively low and do not exhibit much sign of damage. And yet, a mousse patty found at roughly 450-500 meters up the stream mouth (heading west).

RECRUITMENT & MORTALITY

Due to the nature of the segment no major signs of either recruitment or mortality were seen. The area consisted of rare barnacles and fucus. None appeared oiled or stained. Opened clam shells (Saxidomous giganteus and Mytilus edulis shells were seen sporadically, but may be attributed to being imported by intertidal wave action.

No sign of new settlements of fucus were seen although adult fucus was located on bedrock on both the southern and northern sides.

Recruitment of beach rye grass (Genus and species unknown) was extremely high as many bars were dense with their new shoots.

Additional Bio Comment

- A Cased Caddis Larva example was sited. This indicates the presence of aquatic insects; along with the abundant amphipods sited, these are two good food sources for fish.

Sited wildlife PD-1, P-2 & PD-3 Estimated Number

Bird	21 April	22 April
1) Mallard	53	25
2) Northern Pintail	3	
3) Harlequin Duck	17	15
4) Goldeneye (Barrow's and/or common)	15-20	10±
5) Buffle head	10	10±
6) Common Merganser	2 (pair)	2 (pair)
7) Greater Yellowlegs	2 (pair)	
8) Mew Gull	12	10-20
9) Bald Eagle	2	1
10) Glaucous-winged Gull	20+	10-20
11) Northwestern Crow	27	21
12) American Dipper	1	1
13) Green-winged Teal		9
~~14) American Coot~~	~~3~~	~~7/8~~
15) Red-Necked Grebe		1

Note on list: This was compiled at PD-002, but may be applied to entire region as these species may also be seen from PD-001 + PD-003

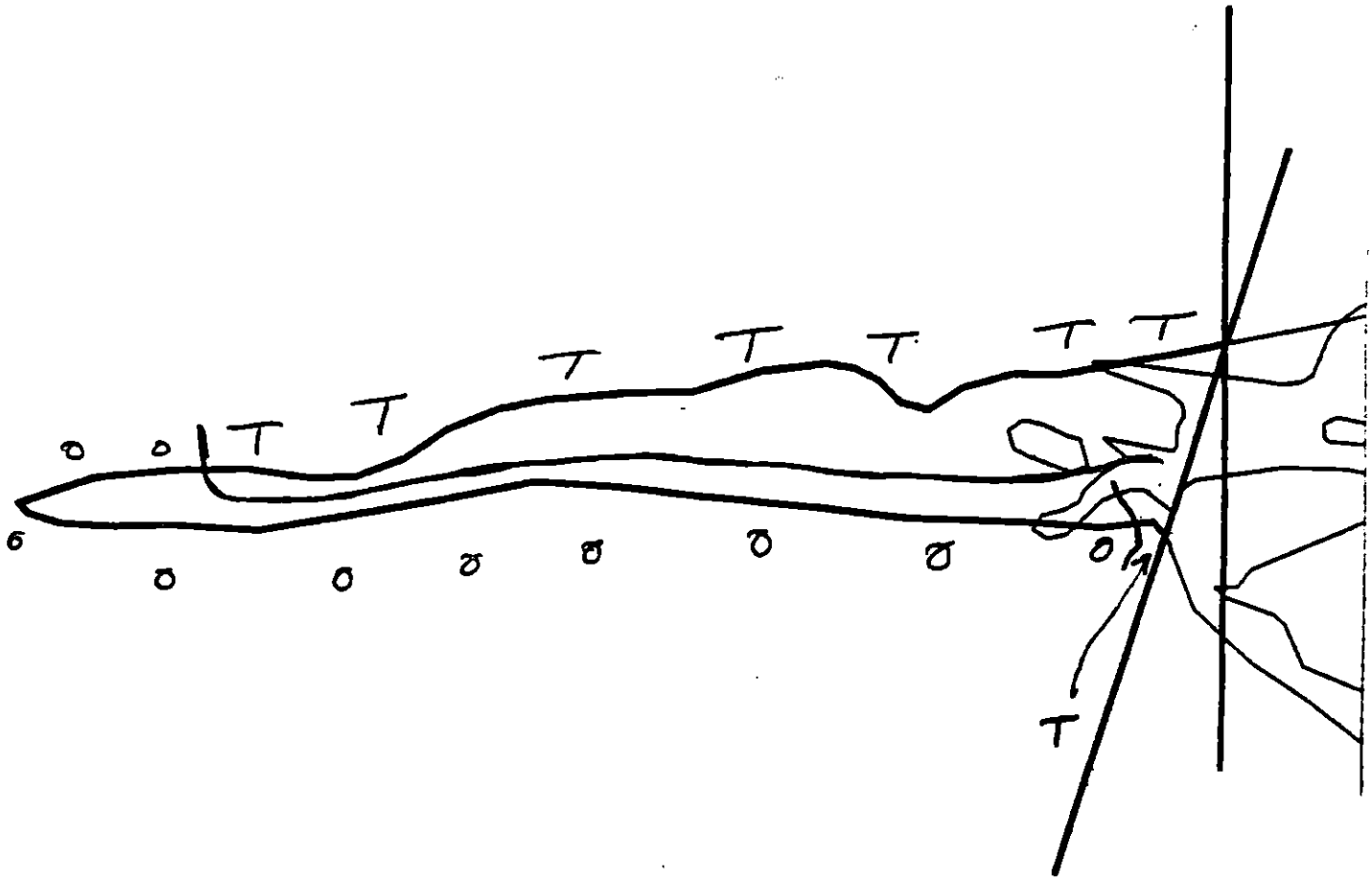
Credit to Miles Hayes for helping generate this thorough list.

SEGMENT ST: PD-003 SUBDIVISION A LENGTH _____ BIOLOGIST [illegible]

DATE 4/21/90 TIME 14:00 TIDE HEIGHT _____

1 = BEDROCK 2=BOULDER 3=COBBLE 5=SAND 6=SILT

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA				
	CALLIARTHRON/CORALLINA				
	CLADOPHORA SPP				
	COSTARIA SPP				
	ENDOCLADIA MURICATA				
	FILMAENTOUS GREENS		3	3	
	FILAMENTOUS REDS				
	GLOIOPELTIS FURCATA				
	HALOSACCION GLANDIFORME				
	LAMINARIA SPP				
	LITHOTHAMNION				
	NEREOCYSTIS SPP				
	PORPHYRA SPP				
	RALPHSIA/HILDENBRANDIA				
	PHODOMELA LARIX				
	RHODOMENIA PALMATA		3		
	SCYTOSIPHON SPP				
	ULVA SPP		3		
	ZOSTERA MARINA				
	ENTOROMORPHA				
	Fucus distichous		3		
FAUNA:	ANTHOPLEURA SPP				
	(SEMI) BALUNUS CARIOSUS				
	B GLANDULA	1,2			
	BRYOZOANS				
	CHITONS (other than K. TUNICATA)				
	CLAMS				
	CRABS				
	DERMASTERIAS IMBRICATA				
	KATHARINA TUNICATA				
	LEPTASTERIAS HEXACTIS				
	LIMPETS				
	LITTORINA SPP				
	NUCELLA SPP				
	PAGURUS SPP				
	PISASTER OCHRACEUS				
	POLYCHAETES				
	PYCNOPODIA HELIANTHOIDES				
	SEARLESIA DIRA				
	SERPULIDS				
	SIPHONARIA THERSITES				
	TEALIA				



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

PD-3

ADEC Segment Length: 1964m

0 100 200 300
METERS

Map Key: KEN-73
Name: G. Heyman
Date: 4-26-90
Date Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/PD-003 STREAM NO: 242-42-10460 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
4GA	State Marine Park Alaska State Wilderness Park	
6U	Recreation:	Tent sites (6/1 to 9/15)
6W	Recreation:	Forest Service cabins (6/1 to 9/15)
6Y	Recreation:	Special use destination
6NN	Recreation:	Sportfishing
8AA	Sensitive estuary	

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). No additional ecological constraints.

SHPO SIGNATURE: Rachel Joan Dan DATE: 5/22/90

Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
____Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
____Bioremediation	____Spot Washing:____Wands
____Tarmat Removal	____Beach Cleaner
	____Other (see comments)

COMMENTS: Recommend manual pick up of patties. Work should be scheduled in conjunction with work in PD002, 5/16 to 7/1.

TAG COMMENTS:

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON [illegible]

NOAA Gary Petrage Gary Petrage

USCG G.A. Reiter G.A. Reiter

FOSC [illegible] DATE: MAY 25 1990

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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)
JJ 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 / PD-3 SUBDIVISION: DATE 4/29/95

USCG
NAME Chris McMahon SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUAL CLEAN-UP; REMOVE TAR PATTIES

(SEE NOTE PD2 4/29/95)

ADFG
ADEC
NAME Doug Hill SIGNATURE Douglas D Hill

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Recommend Manual pickup and removal of patties found ~~distribute~~ distributed amongst the grass Plots as well as the patties found on the North shore (see Attached maps).

Rapid rate of vegetation growth requires that oil be picked up as soon as possible — now!

LAND MANAGER
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

REVISION NO. 03/21/90

SHORELINE SUMMARY (NOAA) 1/2

OG William Reid USCG McMahon SEGMENT ST/ PD003
BIO Michael Fawcett LAND REP
EXXON Gus Garcia ADFG ~~[illegible]~~ Doug Hill STREAM 24-42-10460 OF
TEAM NO. 15 TIDE LEVEL Time 13:10 to 14:45
DATE 29 / APR / 90
EST. SUBDIVISION LENGTH: 650 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B 2 % C 18 % P 50 % G 30 % S ___ % M ___ % V ___
SLOPE: Lang 95 % Hang <5 % Vert ___ % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ___ m M 500 m N ___ m VL ___ m NO 150

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AC	AB	IP	AS	DBR/BR	DBR/RW	OY/OR	DBR/TC	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X					X		
STAIN													
MOUSSE				X				X			X		
PATTIES				X				X			X	X	
TARBALLS													
FILM													
NO OIL										X			X

PAVEMENT H F S ___ sq. m by ___

PATTIES / TARBALLS ___ . 8

NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you Col DEBRIS ☐ YES ☒ NO

TYPE ___

#SAGS ___

Photographs:

Roll No. AS-15-7

Frames 15-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURF SUBSURF SEDIMENT
		OP	OR	OL	OF	HO		UO	UC	DBR/BR	DBR/RW	OY/OR	DBR/TC	LBR	SU	UI	MI	LI				

COMMENTS

REVIEWED [signature] DATE 5-1-90

SKETCH MAP

MENT STI__ 03

DIVISION A (10 A1) stream 242-42-10450

: 4/21/90

CKLIST

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END

Subsurface Of

Surface Of

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T/B
Distribution

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Distribution

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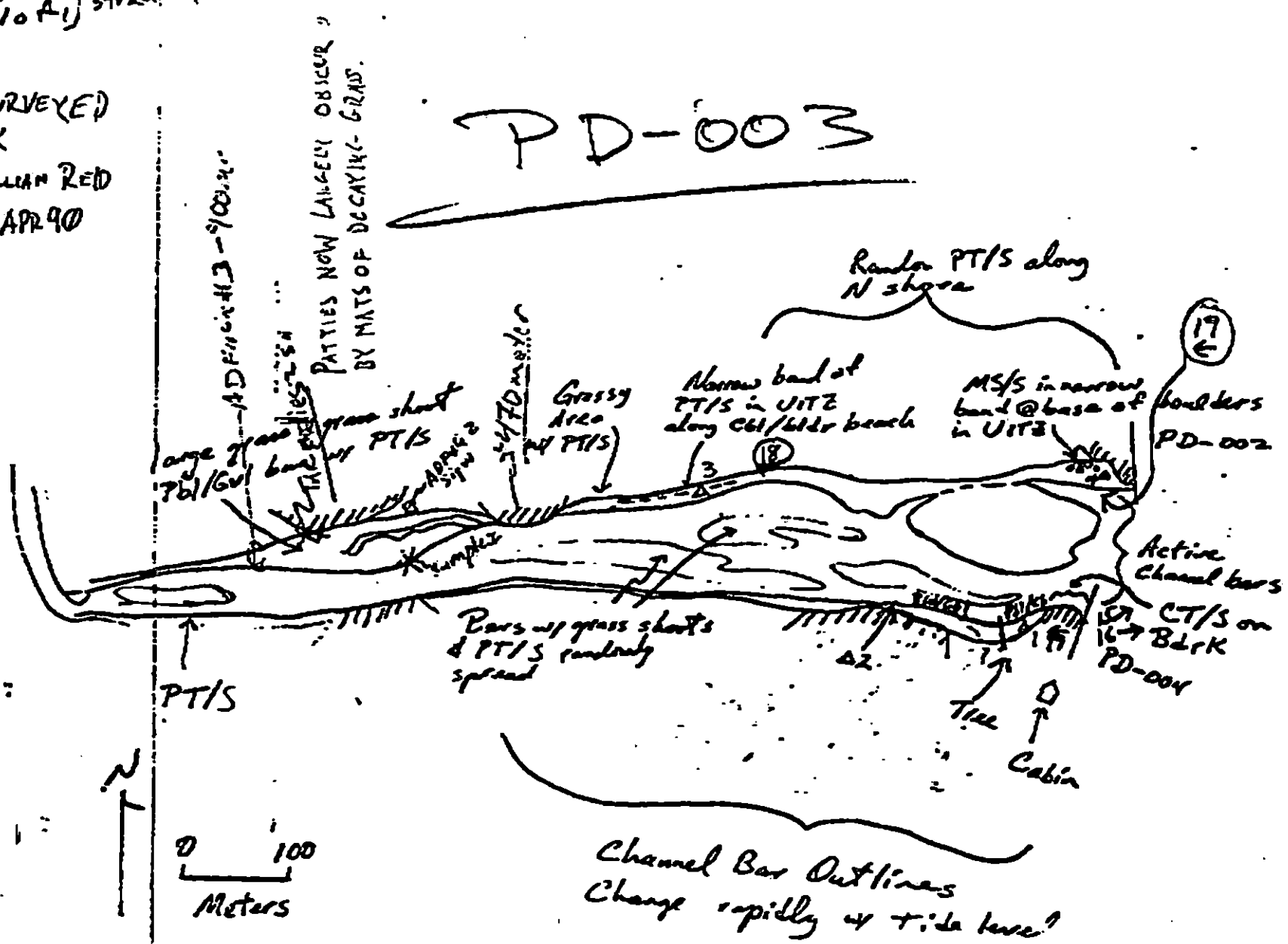
SURVEYED BY WILLIAM REID 29APR90



ter Length (m): AP_____ PO_____ CV_____ CT 151 ST_____ MS 5 PT 700 TB_____ FL_____ NO 900

REVISION

SKETCH MAP

MENT ST PD 003

DIVISION A (10 A1)

4 121/90

CKLIST

Arrow
prox. Scale
p/Sub Bndry
Dist.
pth
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Cover
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END

Subsurface Oil

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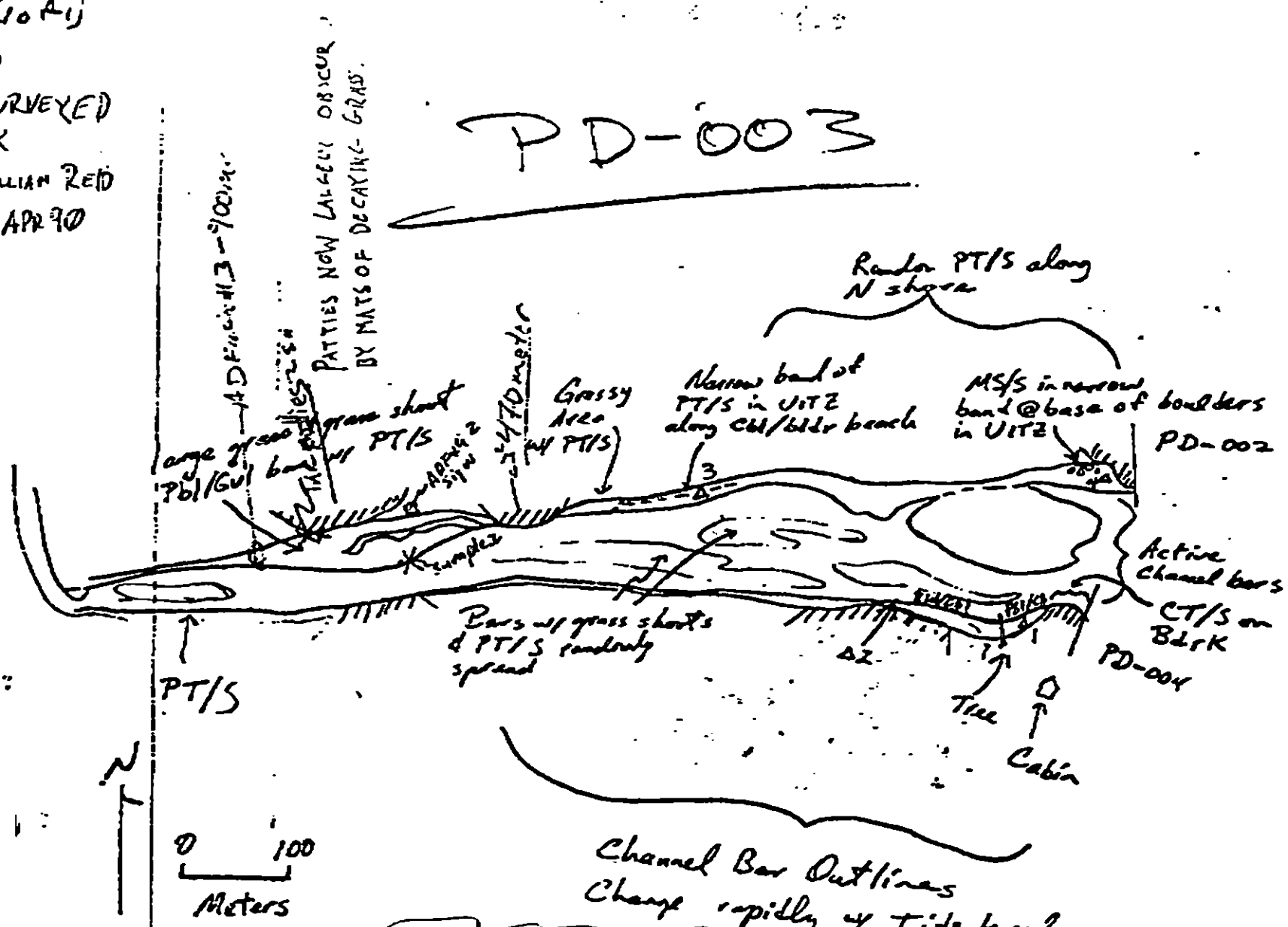
SURVEYED BY WILLIAM REID 29APR90



RE-SURVEYED BY ANAD TEAM 15 ON 4/29/90. WE AGREE WITH ALL THE ABOVE DATA.

r Length (m): AP____ PO____ CV____ CT 151 ST____ MS 5 PT 700 TB____ FL____ NO 900

REVIEW/ANALYSIS

-30-90 MON 10:21 P.04

ADF&G MULTI-ASSESSMENT DATA FORM ANADSCAT

1 SURVEY TYPE: BS OS DS TS AVS SCHA HHHS PTA

2 REGION: PWS KP.C. LAP

METHOD: Aerial Ground Boat

3 DATE: 4/29/90

4 START TIME: 1330

5 STOP TIME: 1445

6 SEGMENT #: PD-003

7 STATION #:

8 K-UNIT:

9 STAT AREA: 242-42

10 LAT: 59°17'06"

11 LONG: 151°16'06"W

12 SOURCE: Map Loran

13 LOCATION: AFS #242-42-10460

14 DESCRIPTION: Head of Port Dick-Grass-tide flats, stream bank ~~and lagoon area at shallowest portion of creek mouth~~ DH

EXTENT OF OIL

15 HIGH TIDE TIMES: 1650 /

16 HIGH TIDE HTS: 12.8 /

17 LOW TIDE TIMES: 1140 /

18 LOW TIDE HTS: -1.5 /

19 TIDE HT AT SURVEY:

Ebb Slack Flood Slack

20 USGS QUAD:

21 ~~TEAM RECORDER~~: Gus Gracesa (KP.C.), William Reid (WK), Mike Fawcett (W), John McMahan (W)

22 OBSERVERS:

23 AGENCY: Doug Hill LAP

24 PHOTOS TAKEN: Y N

Roll #: Frame:

25 VIDEO TAKEN: Y N TAPE#:

Start: End:

26 SAMPLES TAKEN? Y N Number

Oil

Sediment

Biological

Water

	SHORELINE L	SHORELINE W	SHORELINE H²	SHORELINE %	STREAM L	STREAM W	STREAM H²	STREAM %
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder Cobble Gravel Sand Mud/silt

36 CATALOGED ANAD. FISH SRCH? Y N

37 CATALOG #: 242-42-10460

38 STREAM NAME: Port Dick Cr

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

41 OIL ON BEACH ADJACENT TO MOUTH? Y N (within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? Y N

Where: PD #1, 2, 4

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground
Chum		100
Pink		25

Priority Cleanup AREA - ADF&G (Doug Hill)

COMMENTS: Recommendations: Preferable to get a crew into this Area "As Soon As Possible" due to the growth of vegetation which will, in a short period of time, greatly impede locating the numerous tarballs and patties - many of which are already becoming concealed by grass and beach areas - Oil Found

D like this AREA ved NOW!

PD-003

46 PHOTOLOG Port Dick Creek

242-~~[illegible]~~242-10460 Homer Zone

FRAME(S) DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

Would also like to stress the preference to remove the oil in PD 001, 002, and 004 which poses a potenti threat to this system - this oil is oriented such that it could possible be washed into Pt. Dick Cr A portion of PD-001 was treated with Inipol (a large Asphalt mat - which we would like removed ASAP).

- MANUAL Pick up and removal is recommended
- Port Dick Creek is ~~both~~ a Coho, Chum and Pink Salm stream. Numerous chum fry were observed on recent surveys. Pink fry found dead on banks o stream on 4/29/90 (Approx. 30).
- This stream is also used by migratory waterfo
- Mussel beds are present at the mid to low intertidal portion of this stream.
- BALD Eagles frequent Pt. Dick Creek.

I agree with recommendations. Michael H Faure

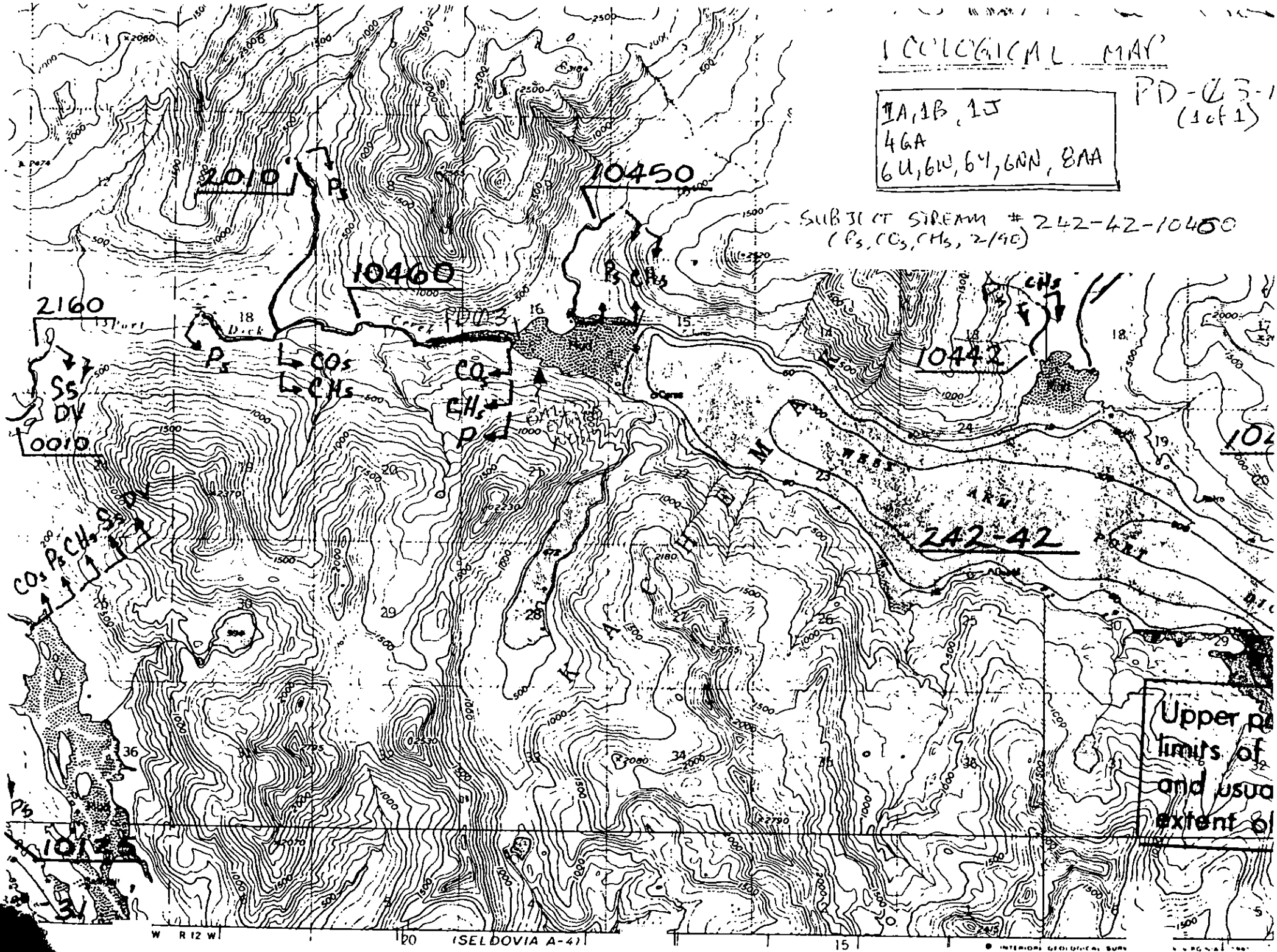
- AN ADF&G observer ~~should~~ will be present during the Cleanup operation

- Sample taken
- Photo frame # and shot direction.

Segment PD 003 4/29/90
Stream No. 242-42-10460 Michael Fancett
Ecological summary

This large braided stream has an intertidal portion nearly 1 km long, consisting of mobile gravel/pebble sediments. A few grassy patches occur along the edges of the floodplain. The banks of the floodplain consist mostly of boulders, cobble, and pebbles. Little or no attached marine biota occurs beyond 200 m upstream from the ADF&G cabin. Below the cabin there are extensive beds of Fucus, mussels and clams similar to those in the adjacent segment PD 002. Remaining oil consists of sporadic small tar mats and bits of pavement along the north bank, mostly upstream from the cabin. Manual removal is recommended. There are no ecological constraints re[illegible] biota.

Pink and chum salmon fry were found [illegible] in small side channels, and a number of dead fry of both species were found stranded in a grassy area and on a pebble bank. These appeared to have died after being stranded by the receding tide.


ECOLOGICAL MAP
PD-CS-1
(1 of 1)
1A, 1B, 1J
4GA
6U, 6W, 6Y, 6NN, 8AA
SUBJECT STREAM # 242-42-10450
(Ps, COs, CHs, 2/90)
2010
10450
10460
2160
10442
242-42
0010
10123
Ps
COs
CHs
Ss
DV
Upper
limits of
and usua
extent o
(SELDOVIA A-4)

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-42-10460

SEGMENT PD-3 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous stream (242-42-10460) is in Subdivision A. No constraint to manual pickup.
1J	**Purse Seine Area**	No constraint to manual pickup.

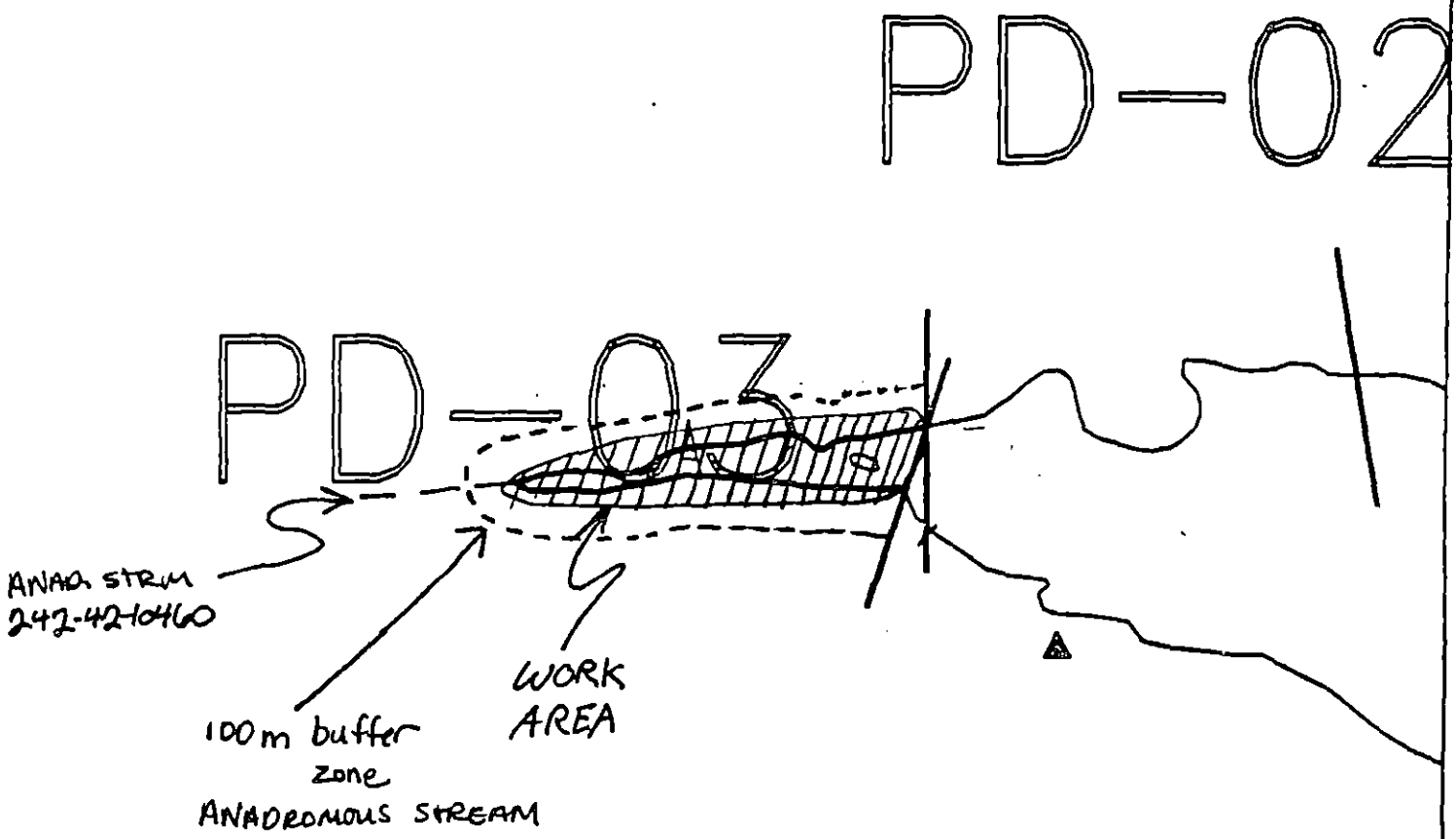
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Sensitive estuary.

SEE SUBDIVISION CONSTRAINT ADDENDUM PD-3A FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC _____ Date 6-10-90

Prepared by J.P. Phillips Date 6/10/90



ANADROMOUS STREAM EVAL

EXXON

Exxon Company, USA
Map Key: KEN-PD-3

ECOLOGY MAP
SEGMENT PD-3
SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

▲ Eagle Nest

Memo

Date: 5/31/90

To: John Bauer, ADEC TAG

From: Russell Kunibe RK

Subject: A section of PD-4A which was overlooked during the SSAT.

Doug Hill, ADFG, has brought to my attention that there was a section of beach in segment PD-4A which was not looked at by the SSAT. In looking at the sketch maps for the SSAT report on PD-4A it seems that there is a segment of beach approximately 300 M. long from the west end of sketch map D to the end of the segment. This section of beach runs from the point to the north of the Port Dick Cabin and includes the beach in front of the Cabin and to the east of the cabin for about 250 M. There are scattered mousse patties along this beach which need to be picked up. Please address this matter in the TAG so there will not be any confusion when the clean up crews get to this segment.

cc. Doug Lockwood, Gulf of Alask Operations.
C:\russell\memopd4.530

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation and Spot Washing Less Than 100m From Stream	WORK PRIOR TO 6/25 (ADF&G MONITOR REQ.)
Bioremediation and Spot Washing More Than 100m From Stream	WORK PRIOR TO 6/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

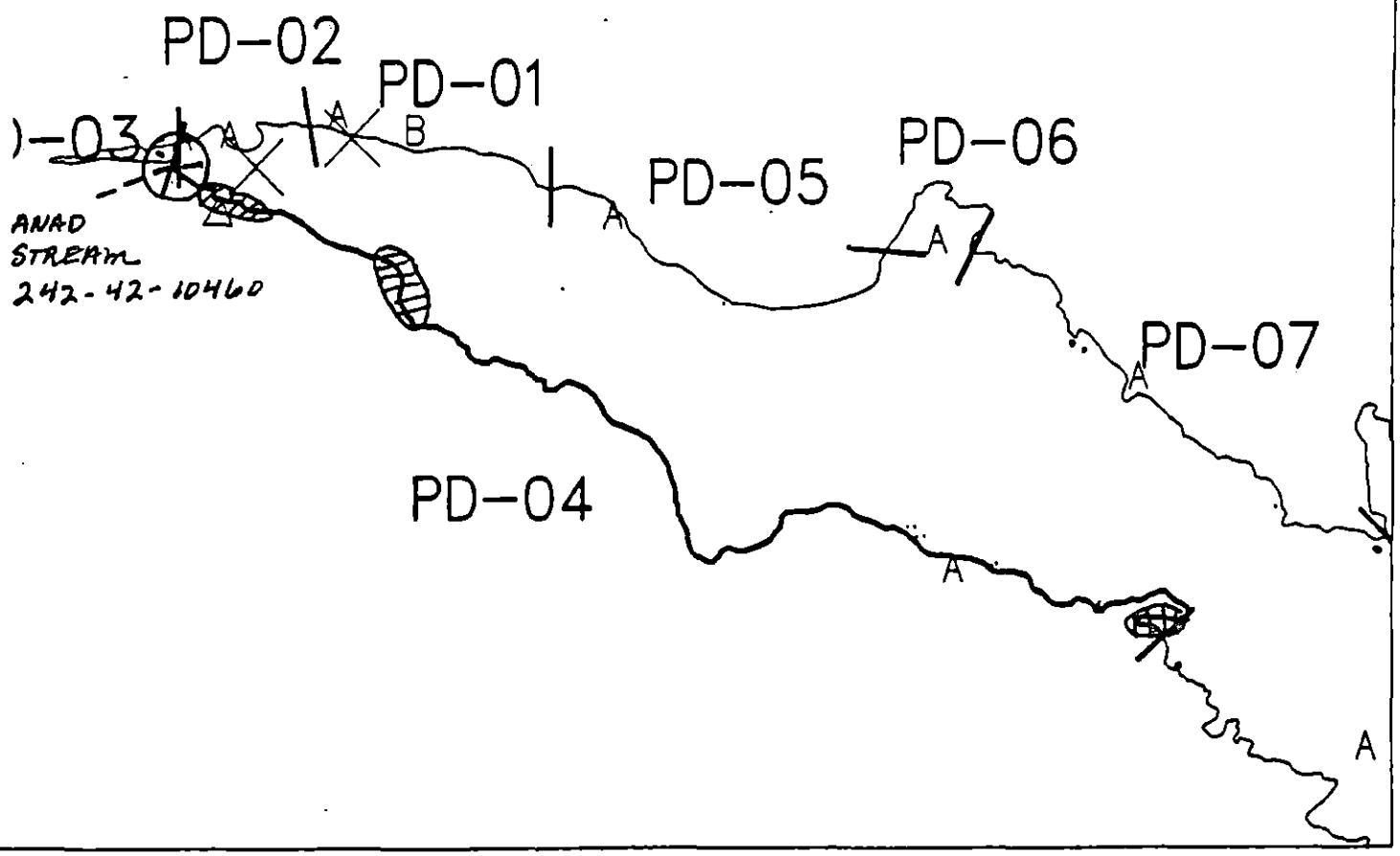
1A,1B	**Salmon Stream**	ADF&G catalogued anadromous stream (242-42-10460) is in Subdivision A. This subdivision is closed to bioremediation and spot washing less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and spot washing are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and spot washing more than 100m from stream. No constraint to manual pickup and tarmat removal.
1J	**Purse Seine Area**	Closed to bioremediation after 6/25.
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

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum after 6/25. No flushing of pollutants or sediments into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation and spot washing in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC _____ Date 6-19-90

Prepared by _____ Date 6/16/90



EXXON

Exxon Company, USA
Map Key: KEN-PD-4
June 10, 1990

ECOLOGY MAP
SEGMENT PD-4
SUBDIVISION A (1 of 1)

METERS
0 1448 2897

★ Seabird Colony
Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 4752 feet

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT PD-04 SUBDIVISION A DATED 8/3/90

MODIFICATION CLASS I X CLASS II _____ CLASS III _____

1. REASON FOR MODIFICATION

Surface OR, mousse, asphalt pavement, cover, coat on boulders and cobbles still remain at this site. With the degree of oiling present more work should be done at this site.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Header flood along with warm-water wash. Along with manual removal and bio remediation (customblen).

3. TIMING ISSUES

Work should be completed by September 15, 1990.

ADEC John R. Lee

EXXON Keith Mitchell does not agree

* I do not concur, subdivision is scheduled for Bid (RC) & Aug. I feel manual removal before RC is warranted

USCG [illegible]

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

TAG FOLDER

FIELD SHORELINE COMMENT SHEET

EGMENT AS / PD04 SUBDIVISION: A SITE: 1 DATE 3 Aug 1990

USCG

NAME SCHULTZ GREGORY J SIGNATURE Gregory J Schultz

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: SOR, Patchy SCATTERED TARMAT (FRIABLE)

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

surface OR, scattered mousse, patchy tarmat, and cover on boulders and cobbles still remain at this site. This site could use some manual removal 1990. Needs Reassesment spring 1991.

LAND MANAGER

NAME David K. Kenay ADNR SIGNATURE

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Observed scattered mousse, tarmats and cover on boulders and cobbles in this subdivisitn. Some mousse appears to be coalescing and pooling in depressions after treatment and granular applied this summer. Subdivisim needs additional treatment to remove mousse and CP sediment in 1990 and needs reassessment in 1991.

EXXON

NAME Keith Miles SIGNATURE Keith Miles

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Area still oiled and is producing light silver sheen.

ASAP SHORELINE OILING SUMMARY

TEAM NO. 04 EXXON Keith Miles SEGMENT AS/ PD-4
OG Rich Marty ~~USGS~~ USCG G. Schultz SUBDIVISION A
ADEC Randy Reed LAND REP Dave Kenagy DNR TOTAL NO. SITES 1
DATE 03 / Aug / 90 TIME 08:15 to 08:50 TIDE LEVEL ≈ 5' to 3.5'
TOTAL EST LENGTH OF SHORELINE SURVEYED: 40 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 40 m N — m VL — m NO — m US — m

SURFACE OIL

CHARACTER	SITE 1 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 2 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 3 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT			I			I	I																	
S.O.R.			X			X	X																	
POOLED																								
COVER		X				X	X																	
COAT																								
STAIN																								
MOUSSE				X			X	X																
PATTIES/T.B.																								
FILM																								
NO OIL					X																			
EST. SITE LENGTH					40 m																			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OF	NO	OILED INTERVAL (CM-CM)	CLEAN BELOW (Y/N)	PIT ZONE SU	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS
	No	Pits											

Photographs:
Roll No. —
Frames —

COMMENTS Some sheen coming off. Agency people say that the remainder of segment is less oiled.

REVISION NO. 7/27/90

OG Sawyer

SEGMENT ST/ PD4

SUBDIVISION A

DATE Apr 1 27 90

ONLY SKETCH PROVIDED

SKETCH MAPS – B+C

CHECKLIST

___ N Arrow
___ Approx. Scale
___ Segment Body
___ 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

Photo location, direction, and number

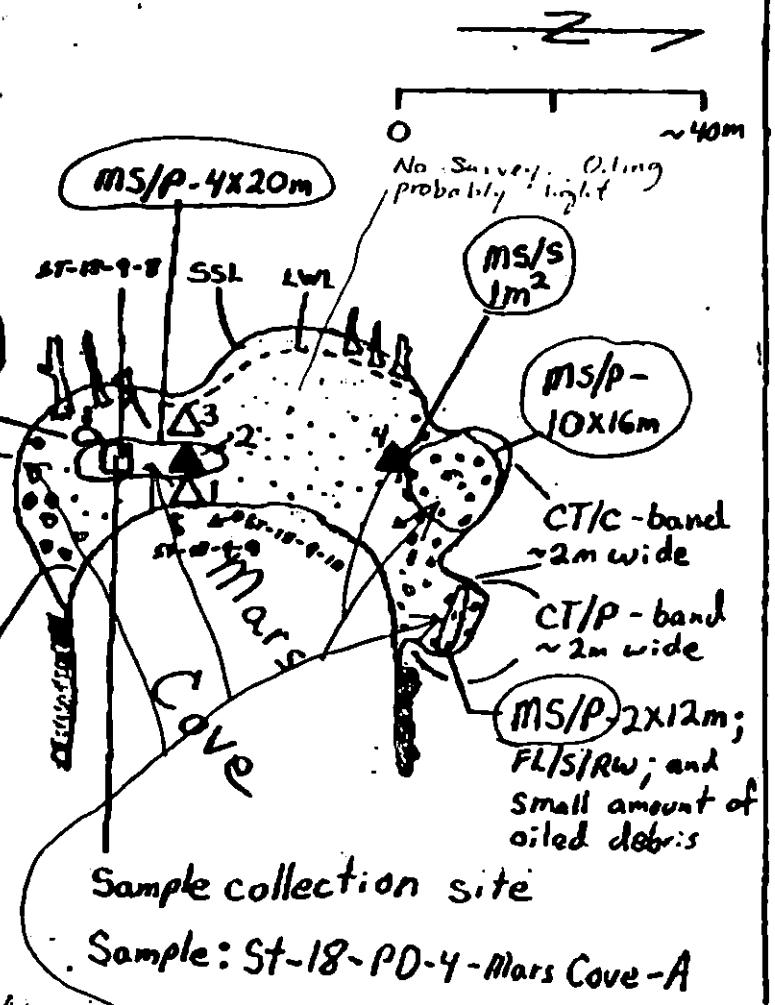
Bedrock cliffs

→ See Sketch Map A

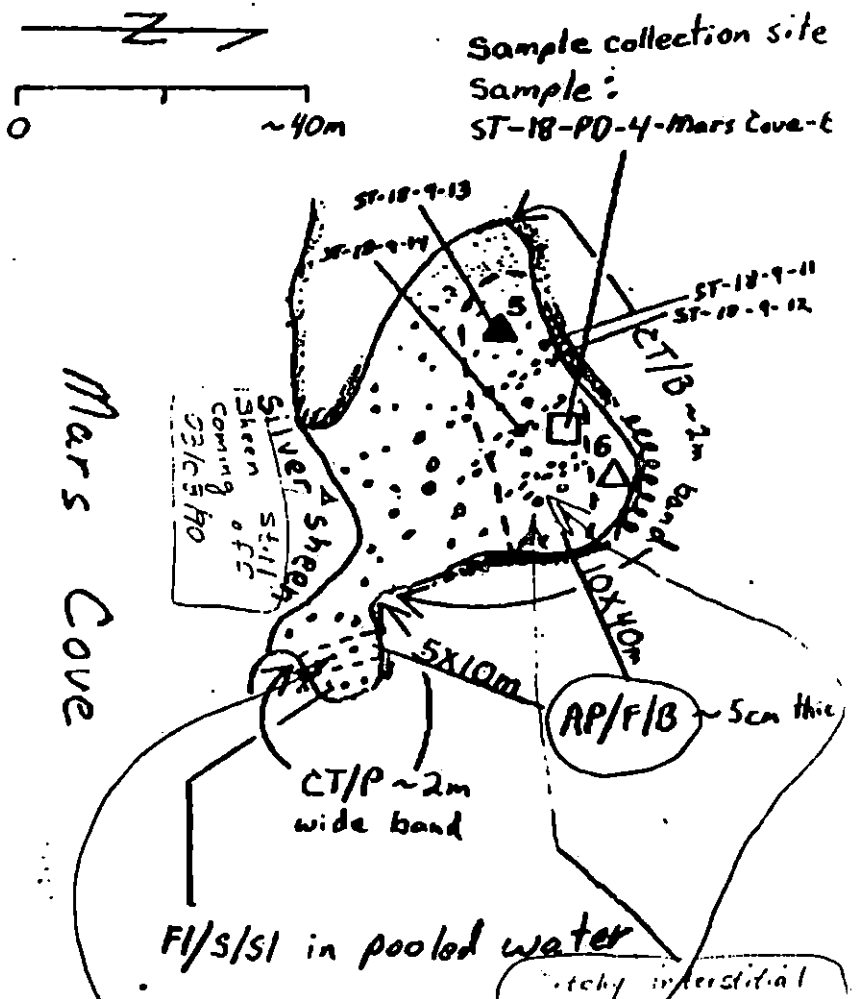
Oil Character Le

AP 40m PO ___ CV ___ CT 40m ST ___ MS ___ TB ___ FL ___ RO ___

Sketch Map B
NOT SURVEYED
(enlargement)



Sketch Map C
(enlargement)



MANUALLY REMOVE TARMATS & MOUSSE PATTIES

Patchy interstitial tarmats ... band on rocks (over 3/8/90 – Some SOR. Mousse patties scattered aro...

ASAP TAG REVIEW SHEET

Segment: PD04 Subd: A Site: 1 Date PRE-Review 11AUG90

Priority For Addressing In 1990

____ HIGH ____ MEDIUM X LOW ____ NTR X N/A

Treatment Recommended: BIO, → SOR MP of Tarmat, Mousse

Priority Site For Reassessment In 1991

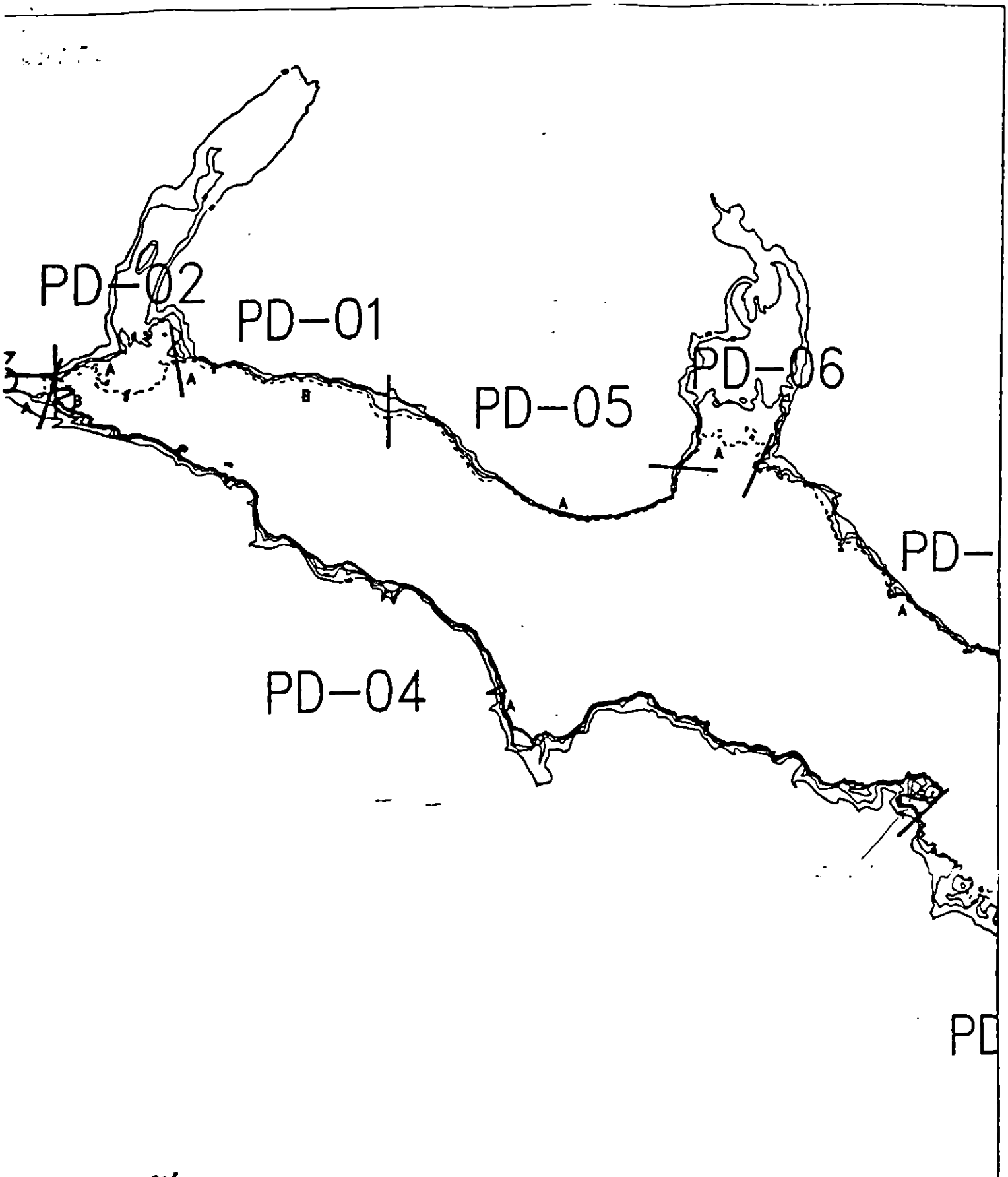
YES ✓ CG NO ___	YES ✓ ADEC NO ___	YES ✓ EXXON NO ___	YES ✓ LAND MGR NO ___

TAG 13AUG90

Manual Pickup Mousse Patties

+ BIO (INAPOL)

Medium Priority



SEGMENT PD-4

Segment Location Map

Map Key: KENPD-4

July 18, 1990

1:44483

METERS

0 1130 2260

SHORELINE EVALUATION

SEGMENT ST/ PD-004 SUBDIVISION B (2 OF 2) DATE 6/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawing (7/10 to 8/31)
1J Purse seine area (7/20 to 9/30)
4GA Alaska State Wilderness Park
6NN Recreation: Sportfishing

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: Charles E Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 271 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended
X Treatment Recommended
X Manual Pickup
____Bioremediation
____Tarmat Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____Beach Cleaner
____Other (see comments)

COMMENTS: Recommended treatment is manual pick up of mousse as annotated on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6-16-90 FOSC [signature] Date 6-22-90
ADEC Ray Morris [signature]
NOAA Joseph S Talbott, JC for Exxon [signature]

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PD004 SUBDIVISION: B DATE 2 JUNE 90

USCG
NAME CWO J. MC MAHON SIGNATURE J. McMahon

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUAL PICK-UP, ONLY WITHIN SUBDIVISON B, APPROX 400M IN LENGHT, OF TAR MATS (ASPHALT).

STIPULATION: THERE WAS CONFUSION IN THE FIELD AS TO THE PRECISE 400M STRETCH WHICH THE HOMER DEC REP. HAD IDENTIFIED TO BE SCAT'd. MY RECOMMENDATIONS ONLY APPLY TO THE AREA I OBSERVED AS CONFIRMED BY THE BELOW DEC REP: DIANE MUNSON. THIS DOES NOT APPLY TO ANY OTHER AREA OF PDA.

ADEC
NAME Dianne Munson SIGNATURE Dianne Munson

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

· This subdivision is the area of concern that Russell Kunibe (ADEC Home xpressed to TAG.

Oiling consists of sporadic mousse accumulations for approximately 400 m oil penetration was observed at 1.5 cm.

This subdivision lies within Kachemak Bay State Wilderness Park, contains an anadromous stream which supports a large commercial run for lower Cook Inlet.

Recommend manual removal of mousse accumulations.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

NONE WAS PRESENT DURING SURVEY

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Bryan Rimm USCG John McMahon SEGMENT ST/ —
RIO — LAND REP — SUBDIVISION 3 (2 OF 3)
XON Rick Eichner ADEC Diane Munson TIME 15:50 to 17:58
TEAM NO. 00 TIDE LEVEL +3.0 to +4.5 DATE June 2 / 90
EST. SUBDIVISION LENGTH: 400 m ■ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ■ Grass ■ Forest ☐ Rock
SURVEYED FROM: ■ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 5 % B 5 % C 30 % P 45 % G 10 % S 5 % M 0 % V 0 %
SLOPE : Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ■ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 400 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BRL/PK	DBL/RW	CY/SV	DBR/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE				■		■			■		■		
PATTIES													
TARBALLS													
LM													
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	NO	AMOUNT SM	MD	LG
Logs	X			
Vegetation	X			
Trash	X			
Debris	X			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE —

#BAGS 0

Photographs:

Roll No. BT-SS-01

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BRL/PK	DBL/RW	CY/SV	DBR/TL	LBR	SU	UI	MI	U				
1	10		■				0-1.5		■					■		■			—	N	—	C/P-S-G-M
							.															
							.															
							.															
							.															
							.															

COMMENTS (SEE ATTACHED OG COMMENTS) —

REVIEWED BAT DATE 6 Jun 90

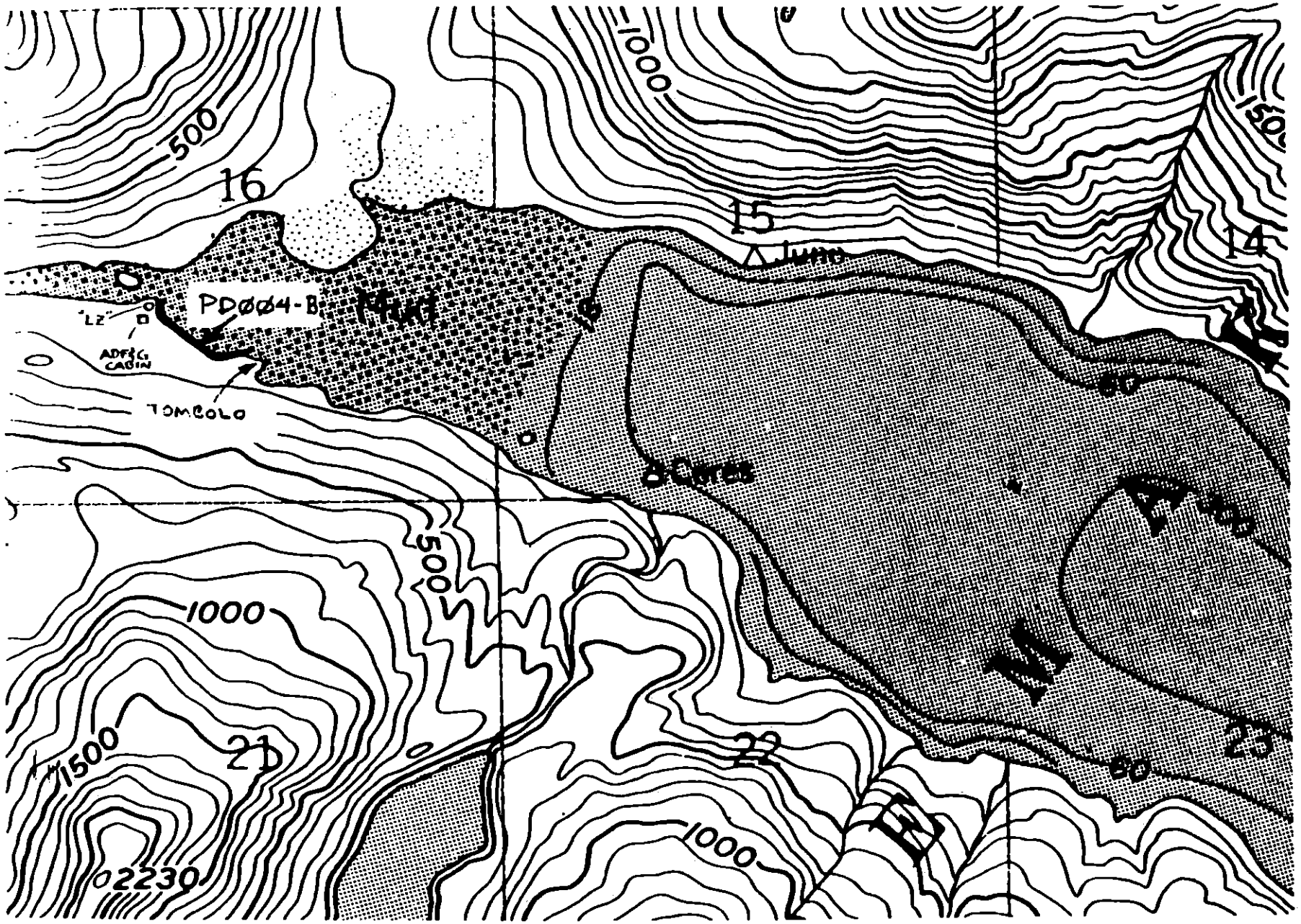
OG Comments - PD004-B

The shoreline surveyed extends from the landing zone by the ADF&G cabin (the mouth of Port Dick Creek) approximately 400 m east to a tombolo. This is the area of concern that Russell Kunibe (ADEC-Homer) outlined in the attached memo to TAG.

The boundary between PD004-A and PD004-B is the western-most tombolo described by Tom Sawyer (OG) during the original PD004-A survey of April 27, 1990. The shoreline (supra- to mid-intertidal zones) from the tombolo to the landing zone adjacent to the ADF&G cabin consists of angular cobble, pebble veneer with finer material (sand, granule, and mud) underneath. Tidal (mud) flats associated with Port Dick Creek are found in the lower-intertidal zone of subdivision PD004-B. A small creek outlet dissects the subdivision with angular pebble, granule deposits, and bedrock occasionally outcrops as rocky headlands throughout the subdivision.

Oiling is limited to splattered mousse (MS/S) deposits in the upper-intertidal zone for the length of the subdivision (400 m). Splatters occur with a frequency of 1 to 5 meters in a one meter band. The mousse has a dull black crust with the typical light brown 'moussy' consistency in the middle. The mousse is beginning to 'soak' into the finer sediments underneath the cobble, pebble veneer, thus forming incipient asphalt pavement. Oil penetration is 1.5 cm to date. The mousse is not mobile unless storm activity strips off the beach material, an unlikely event since the oil has been stranded for over one year.

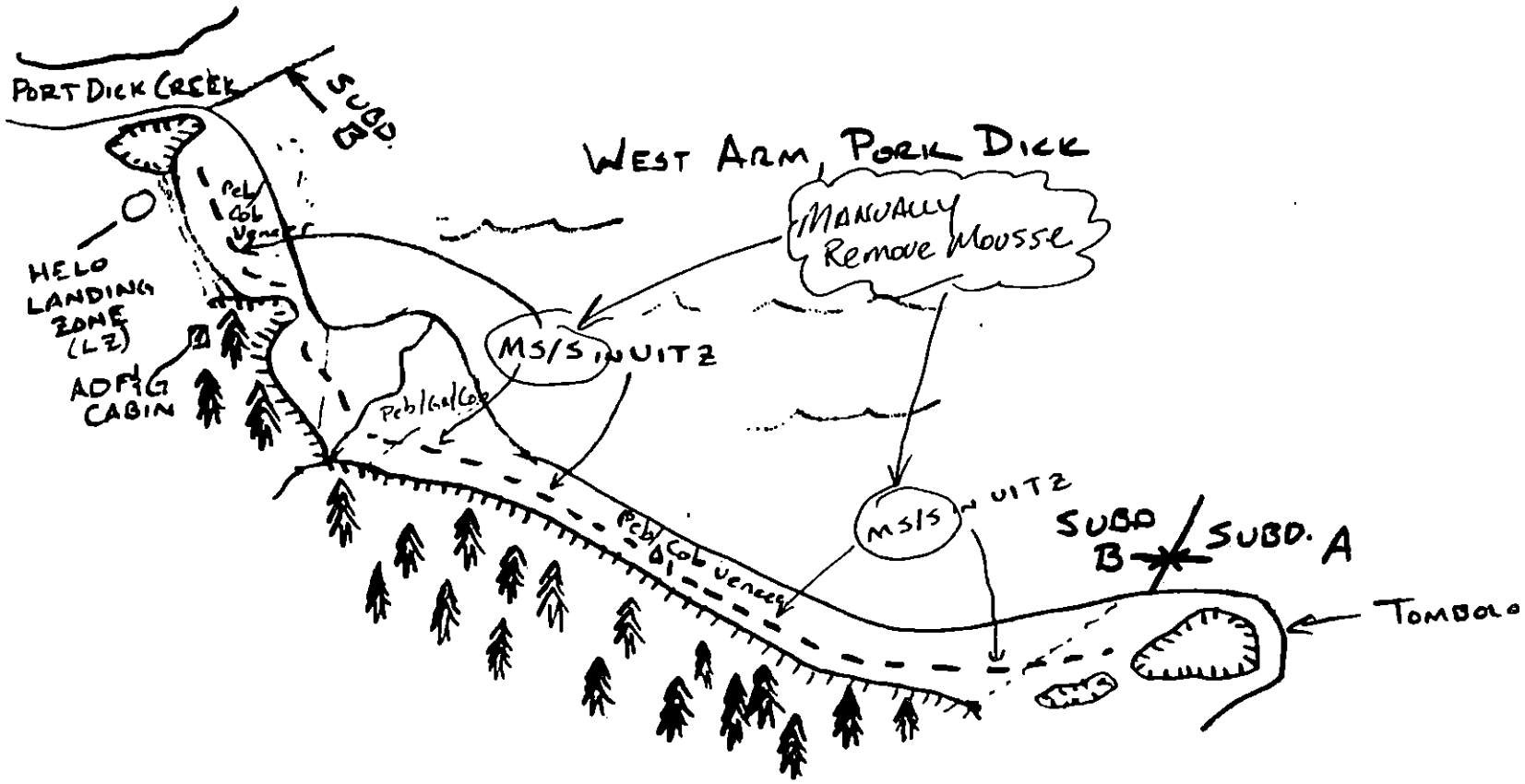
One pit was excavated to 10 cm in the upper-intertidal zone. The cobble, pebble veneer overlays the finer sand, granule and mud substrate. Oil (MS/S) was observed between the veneer material, incorporated into the substrate to a depth of 1.5 cm. The mousse is approximately 0.5 cm thick above the sediment. The veneer shields the surface mousse from wind and wave exposure.


500
16
1000
15
14
PD004-B
"LZ"
ADF&G CABIN
TOMBOLO
500
1000
1500
21
22
23
1000
2230

SKETCH MA

N

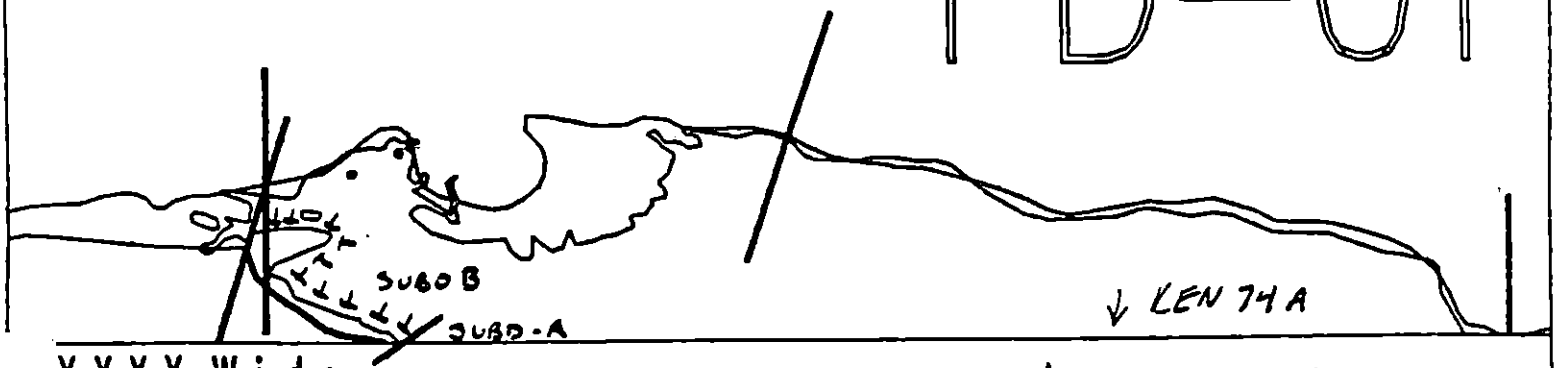
OG: BRYAN TRIMM
5T/PD004-B
2 JUNE '90



OIL CHARACTER LENGTHS (m) AP-Ø, PO-Ø, CV-Ø, ST-Ø, MS-400, PT-Ø, TB-Ø, FL-Ø, NO-Ø

PD-02

PD-01



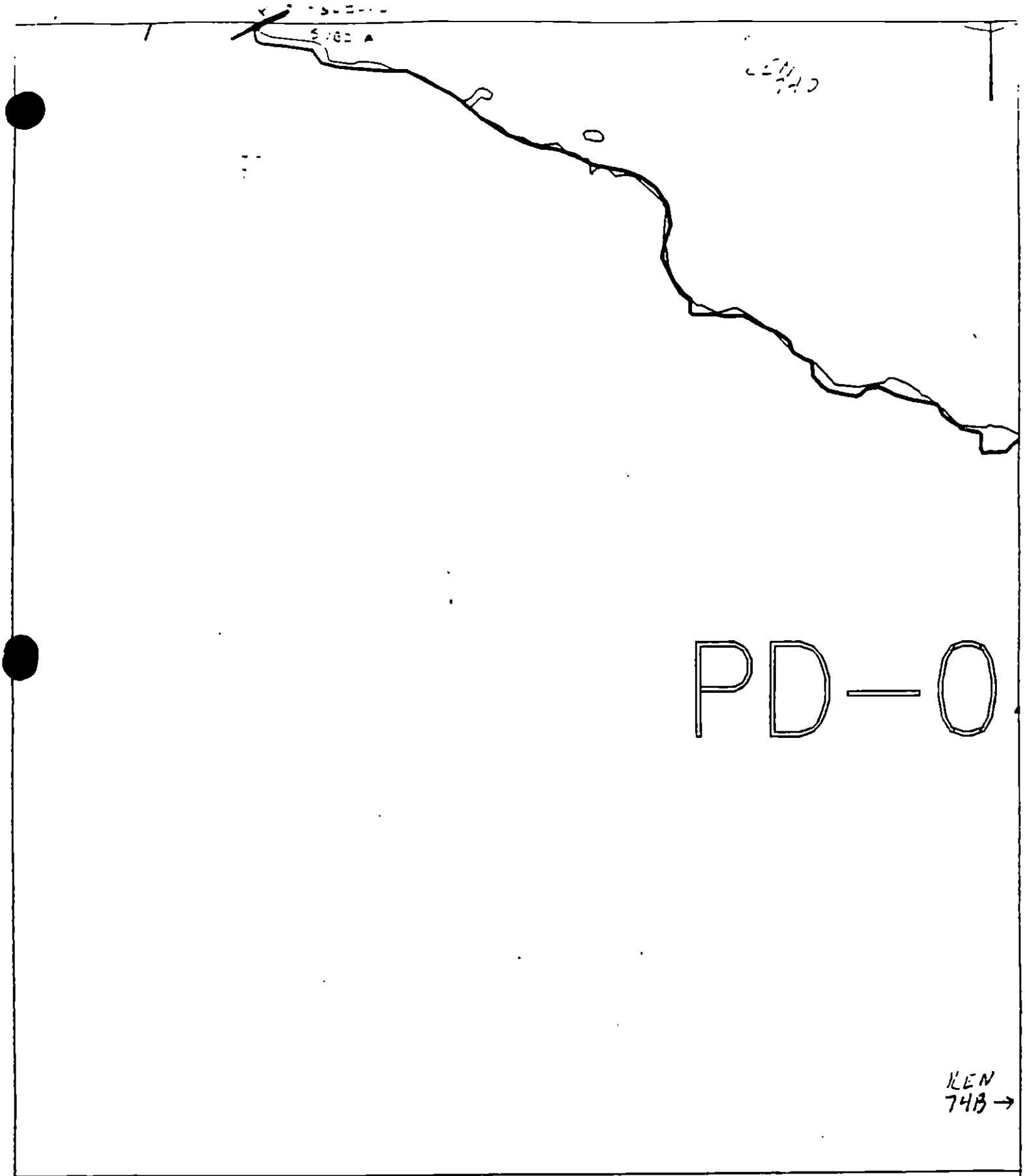
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PD-4-"B"

ADEC Segment Length: 11307m

0 300 600 900

Map Key: KEN-74d
Name: B. TRIMM
Date: 2 JUNE 90
Data Entered:



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

PD-4-"B"

ADEC Segment Length: 11307m

0 300 600 900

Map Key: KEN-74a
Name: B. TRIMM
Date: 2 JUNE 98
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-04 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

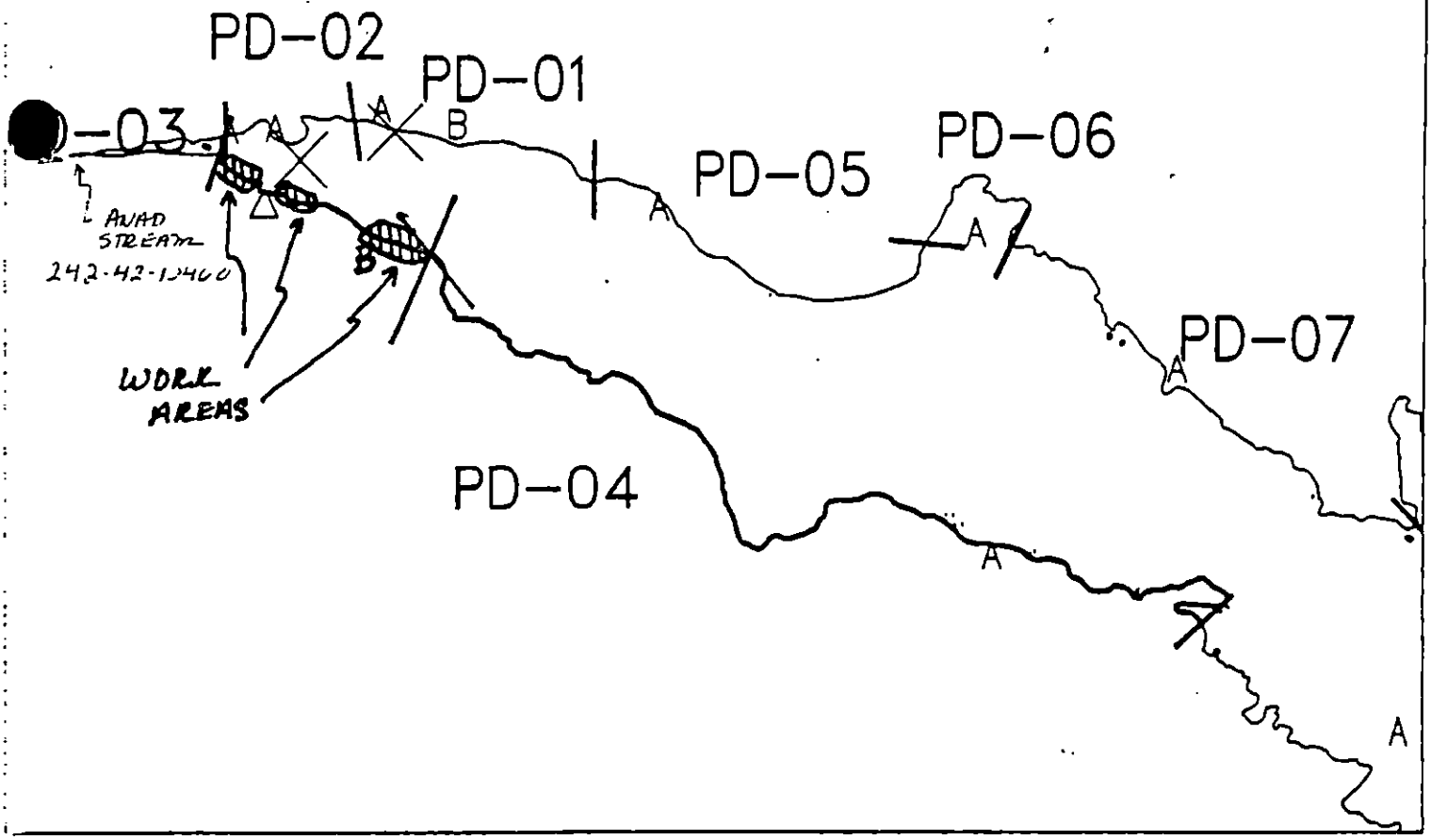
1A,1B	**Salmon Stream**	ADF&G catalogued anadromous stream is more than 100m from work site. No constraint to manual pickup.
1J	**Purse Seine Area**	No constraint to manual pickup.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-25-90

Prepared by _____ Date 6/25/90



Exxon Company, USA
Map Key: KEN-PD-4
June 10, 1990

ECOLOGY MAP
SEGMENT PD-4
SUBDIVISION B (2 of 2)

METERS
0 1448 2897

★ Seabird Colony
Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 4752 feet

SHORELINE EVALUATION

SEGMENT ST/ PD-05 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1J Purse seine area (6/25 to 8/31)
4GA Alaska State Wilderness Park
6NN Recreation: Sportfishing

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. David McMahan DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 90 m: V.Light 300 m: No Oil 2828 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of tarmat and mousse followed by bioremediation in areas indicated on sketch map. Work should be conducted before 6/25 based on fishing constraints.

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/8/90.
ADEC Art Weston Art Weston
EXXON Andy Teas [illegible]
NOAA Gary Petrae Gary Petrae
USCG G.A. Reiter G.A. Reiter
FOSC: [illegible] DATE: 5-12-90

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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
6WW Sport Fishing
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ 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 / PD005 SUBDIVISION: A DATE 4/26/1990

~~USCG~~ NOAA

NAME Donald A. MacDonald SIGNATURE Donald A. MacDonald

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

The segment is mostly clean with splashes of oiling in the central portion of the segment. I have no questions about the SSAT forms as filled out.

ADEC

NAME John R. Reed SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of mousse patches in this area with shovels will be easy. Some were picked up as we surveyed. Most of the scattered mousse patches were in the MITZ. I agree with SSAT Forms.

LAND MANAGER

NAME Sharie Methven-Toney SIGNATURE Sharie Methven-Toney

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS This segment is within Kachemak Bay State Wilderness Park. I agree with SSAT team data. This area has high recreation and wildlife resource values, good anchorage areas. I recommend manual removal of mousse patties. The area is a high use area with commercial ~~and~~ fishing and sport fisherman.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Sawyer ~~USCG~~ NOAA MacDonald SEGMENT ST/ PD5
Carr LAND REP Mathvan-Toney SUBDIVISION A (1 OF 1)
ION Boyer ADEC Reed TIME 18:30 to 20:00
TEAM NO. 18 TIDE LEVEL +6.0 to +2.5 DATE Apr / 26 / 90
EST. SUBDIVISION LENGTH: 3247 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 35 % B 35 % C 15 % P 15 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 65 % Hang 0 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 100 m VL 330 m NO 2817 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SU	UI	MI	LI
ASPHALT PAVEMENT				/		/					/		
POOLED													
COVER													
COAT				/		/					/		
STAIN													
MOUSSE				/		/					/		
PATTIES													
BALLS													
FILM				/		/					/	/	
NO OIL										/			/

PAVEMENT H (F) (S) 7 sq. m by 3 cm (200)

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS NO	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☒ NO ☐

TYPE Asphalt Patches

#BAGS 2

Photographs:

Roll No. ST-18-9

Frames 6-7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SW	UI	MI	LI				
1	20					/			/							/						P-S, G
2	25					/			/								/			N	10	P-S, G
3	20					/			/							/						P-S, G
4	40					/			/							/						P-P
5	25					/			/							/						P-P

COMMENTS PD-5 comprises a rather long (~1.5Km) low angle boulder and cobble beach and bedrock cliffs along the eastern part of this section. Little oil was observed in the sediments and much (most) of the relatively heavy oil accumulations were collected.

REVIEWED DATE

OG Sawyer

SEGMENT ST/ PD 5

SUBDIVISION A

DATE Apr 1 27 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

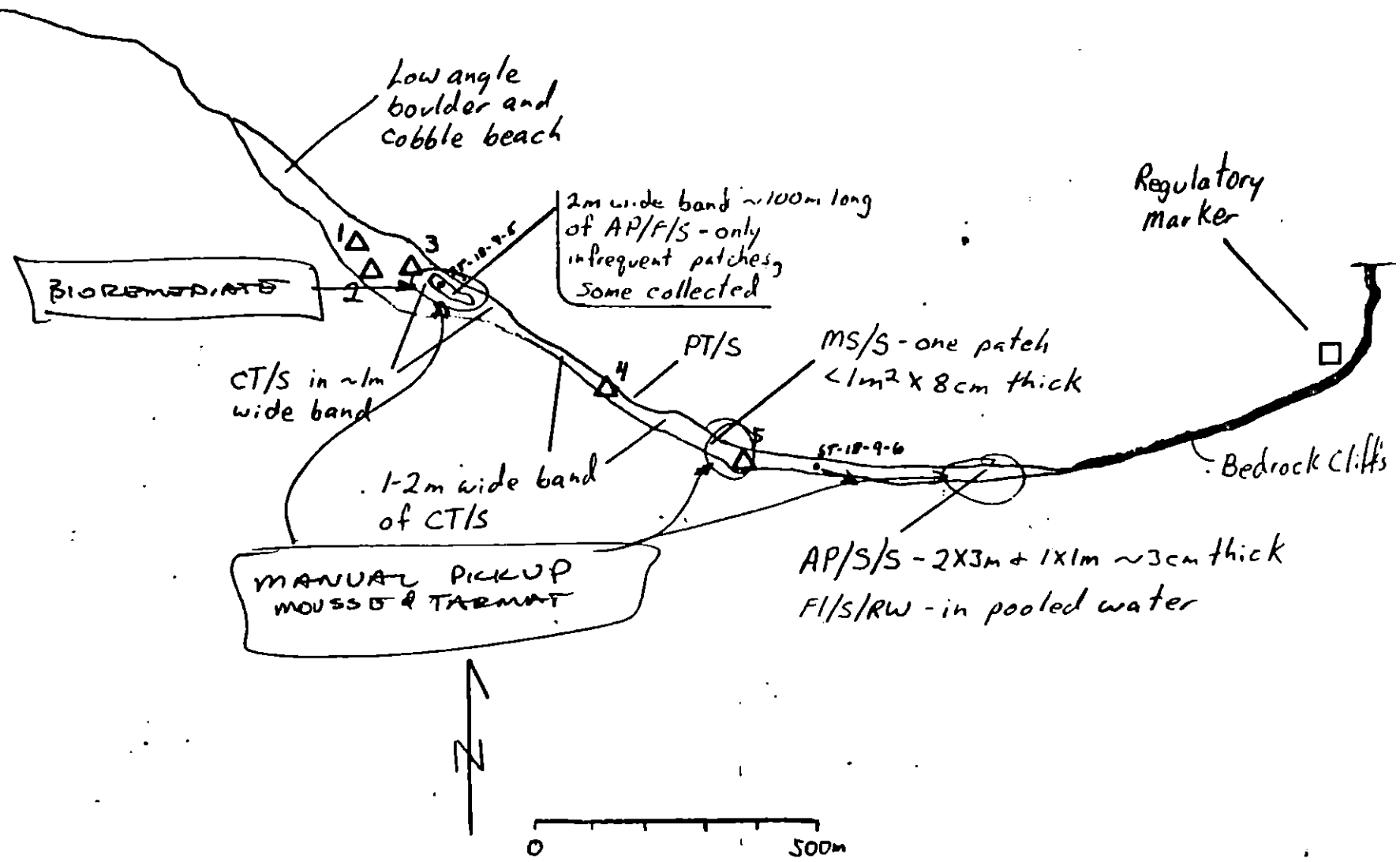
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION 10/22/88

Segment ST / PD-5 Subdivision A Date (mo / day / yr) 4-26-90

Time (24 hr) 1810 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 35 (3) Cobble 15 (4) Pebble 15 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 40 Low 80

(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-18-9
Frames 6 & 7

BARNACLES

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L	
BEDROCK	(X)	(X)											← NO BEDROCK IN LOW TIDAL
BOULD	2	2	2	2	(X)	X	X	2	2	2	2	2	
COBB	3	3	3	3	3	3	3	X	3	3	3	X	← NOT PRESENT IN UPPER ZONE
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	← NOT PRESENT IN ANY ZONE
	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 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L	
BED													← NOT PRESENT IN UPPER & ← NO BEDROCK IN LOW TIDAL
BOULD	2	2	2	2	(X)	2	2	2	2	(X)	2	2	← NOT PRESENT IN LOWER ZONE
COBB	3	3	3	3	3	3	3	3	3	3	X	3	
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	← NOT PRESENT IN UPPER & LOW ZONE
	5	5	5	5	5	5	5	5	5	5	5	5	← NOT PRESENT IN ANY ZONE.
	6	6	6	6	6	6	6	6	6	6	6	6	

NOT PRESENT

GASTROPODS

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L	
BED							X	X					← NO BEDROCK IN LOW TIDAL ZONE.
BOULD	2	2	2	(X)	(X)	(X)	2	2	2	2.	2	2	
COBB	3	3	3	3	3	3	3	X	3	3	3	X	
PEBB	4	4	4	4	4	4	4	X	4	4	4	X	← NOT PRESENT IN UPPER TIDAL ZONE.
	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 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L	
BED													← NOT PRESENT IN UPPER ZONE ← NO BEDROCK IN LOW TIDAL ZONE
BOULD	2	2	(X)	2	(X)	2	2	2	2	X	2	2	
COBB	3	3	3	3	3	3	3	X	X	3	3	3	
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	← NOT PRESENT IN UPPER ZONE.
	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 ANY ZONE

NOT PRESENT

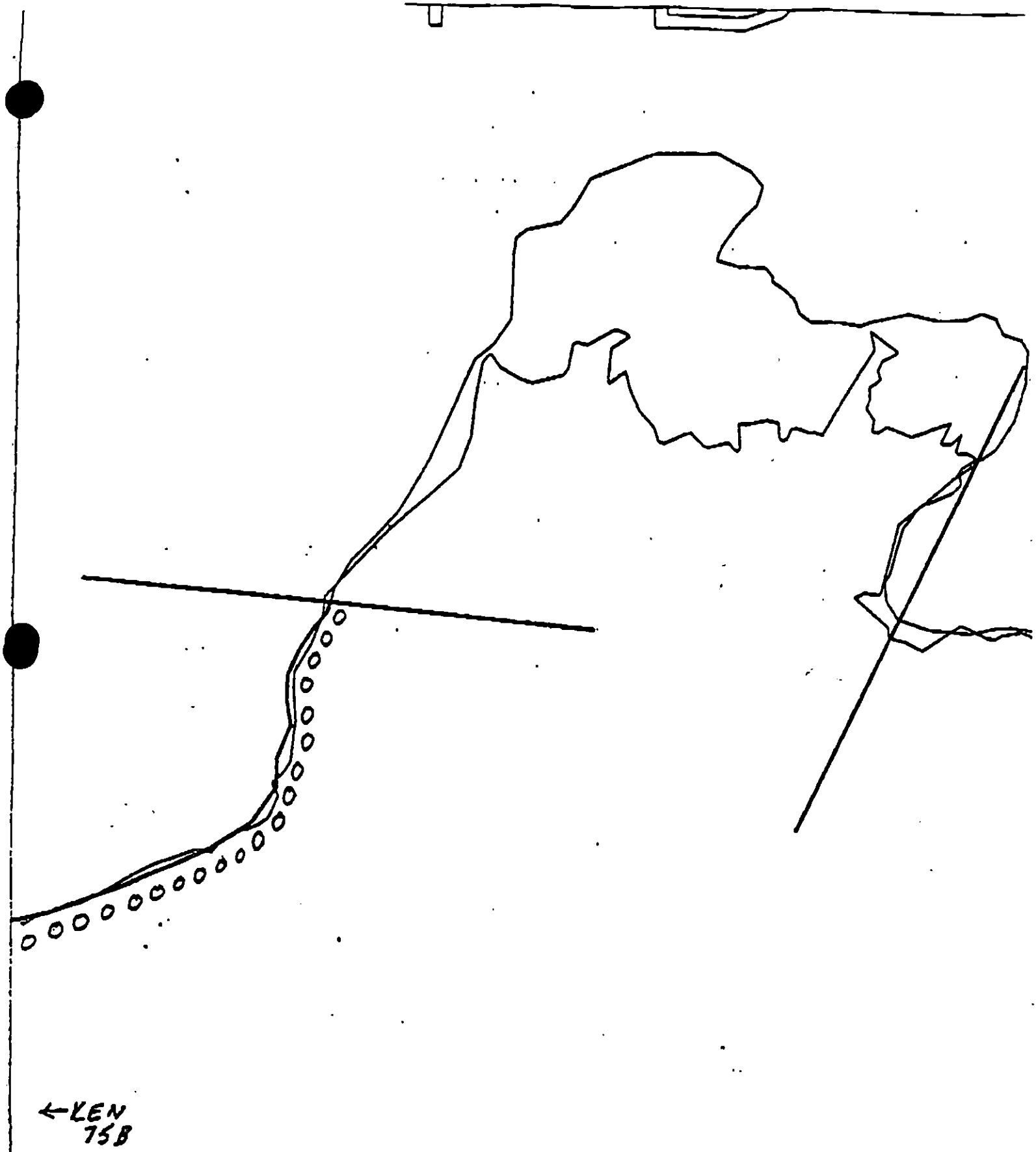
Wildlife Observations/ General Comments:

Black bear (1), unid. hawk (1), harlequin duck (2), river otter (3), merganser (1).

Ecological Considerations:

1 J (Purse seine area), 1 GA (Alaska State Park/Wilderness), 6 NN (Sport fishing)

Dense beds of laminarian algae in shallow subtidal.

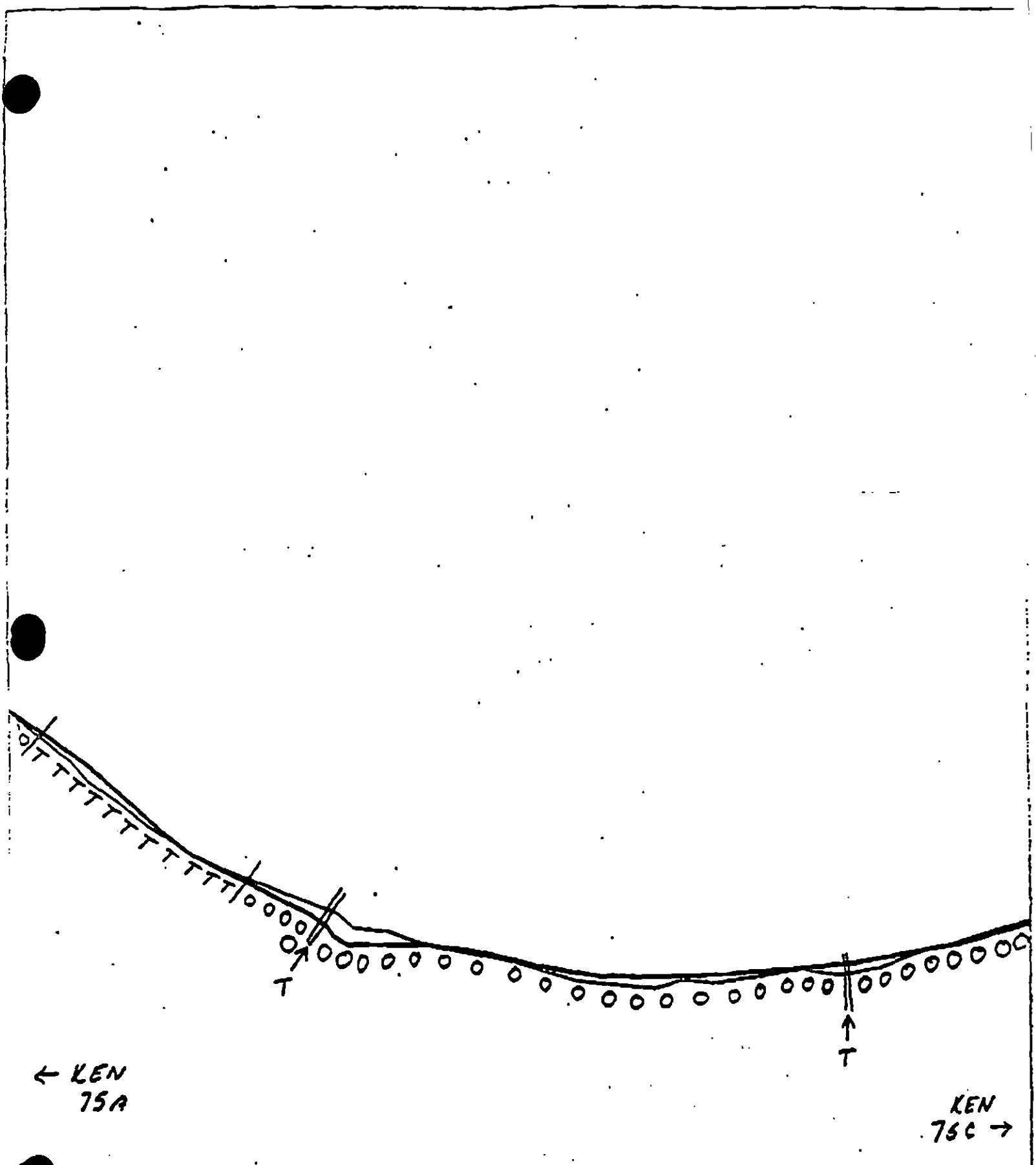


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

PD-5

ADEC Segment Length: 3217m

Map Key: KEN-75c
Name: Sawyer
Date: 4-26-90

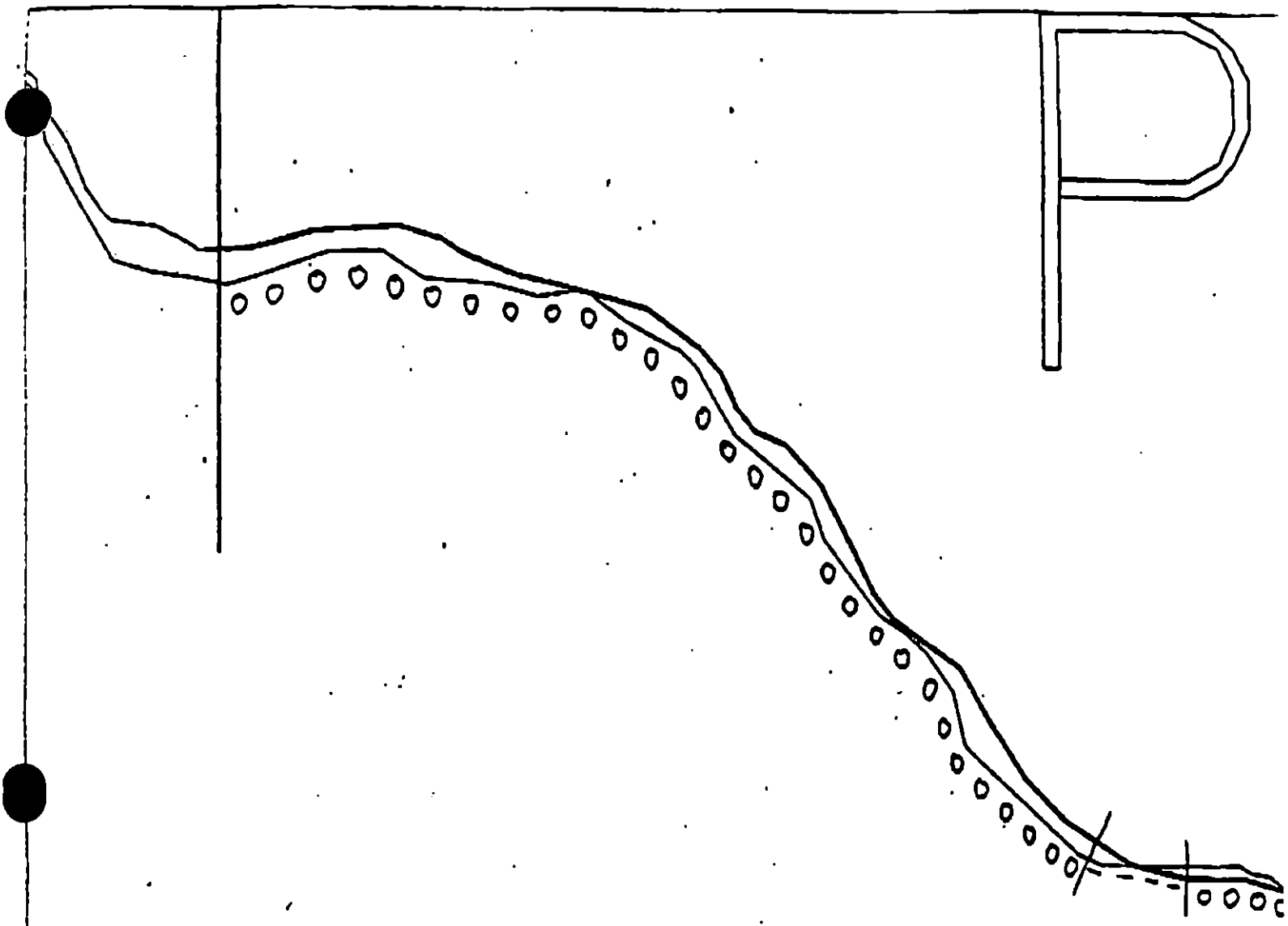


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

PD-5

ADEC Segment Length: 3217m

Map Key: KEN-75b
Name: Sawyer
Date: 4-26-90



KEN
75B →

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

PD-5

ADEC Segment Length: 3217m

Map Key: KEN-75a
Name: Sawyer
Date: 4-26-90

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-05 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO ~~8/25~~ 7/23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MANNILLAN W/ LEE GUNN, ADF&G ON 7/20 PP.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	Closed to bioremediation between ~~8/25~~ 7/23 and 8/31. No Constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Restrict boat and air traffic to essential minimum after ~~8/25~~ 7/23.

TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Andy Tear
NOAA Jessica Tallant
USCG M. J. Hale

FOSC _____ DATE 5-21-90

Prepared by: Arden Meyer Date: 5/20/90

SHORELINE EVALUATION

SEGMENT ST/ PD-06 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (6/25 to 8/31)
4GG Alaska State Parks
6NN Recreation: Sportfishing
8AA Sensitive Estuary

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: Charles Eff Lomen DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1754 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: May 5 1990
ADEC Art Weiner Art Weiner
EXXON Mark N. Silbert Mark N. Silbert FOSC: [illegible] DATE: 5-9-90
NOAA Guy Petrae Guy Petrae
USCG C.A. Reiter C.A. Reiter

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 Suzomoto 424-7511

1I **Gill net area (6/7 to 8/31)**
1J **Purse seine area (7/20 to 9/30)**
1K **Purse seine hook-off (7/20 to 9/30)**
1L **Set net sites (6/11 to 7/25)**
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncited 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

[illegible], 3P **Harbor seal and sea lion pupping (5/15 to 7/1)**
[illegible], 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 **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**
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 / PD006 SUBDIVISION: A DATE 4/26/1990

NOAA ~~USCG~~

NAME Donald H. MacDonald SIGNATURE Donald H. MacDonald

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Only surveyed a portion of the western shore which the ADEC survey had indicated as very lightly oiled; the rest of the segment which encompasses a rich tidal flat, was indicated by the ADEC survey as having no oil. The segment also includes an anadromous fish stream. No oil was observed.

ADEC

NAME John R. Reed SIGNATURE John R Reed

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed in this segment. I agree with SSAT data.

LAND MANAGER

NAME SHARIE Methven-Toney SIGNATURE Sharie Methven-Toney

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Agree with SSAT team data. PD-6 is within Kachemak Bay State Wilderness Park. The area is a high wilderness use area, recreation use, wildlife resource values, sportfishing. The area encompasses a rich tidal flat - clams, mussels and scallops. The area offers good anchorages and tent sites.

SHORELINE OILING SUMMARY

REVISION NO. 9/1/90

OG Sawyer ~~USCG~~ NOAA MacDonald SEGMENT ST/ PO6
BIO Carr LAND REP Methven-Toney SUBDIVISION A (1 OF 1)
EXXON Beyer ADEC Reed TIME 20:00 to 20:15
TEAM NO. 18 TIDE LEVEL +4.5 to +4.0 DATE Apr 1 26 / 90
EST. SUBDIVISION LENGTH: 1841 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 20 % B 10 % C 30 % P 0 % G 0 % S 40 % M 0 % V 0 %
SLOPE: Lang 60 % Hang 0 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1841 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	PC	PB	PP	PS	BBL/BR	DBL/BW	OL/BK	BRN/TL	LBR/LT	SU	UI	MI	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 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS NO	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE —

#BAGS 0

Photographs:

Roll No. ST-18-9

Frames NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	CM	UO	UC	BBL/BR	DBL/BW	OL/BK	BRN/TL	LBR/LT	SU	UI	MI	U				
1	20					/			/								/			N	15	C-C, P, G
2	25					/			/							/						C, P-C, P, G
3	20					/			/								/					C, P-C, P, G

COMMENTS ST/PO6 comprises a rather extensive tidal flat, bordered by bedrock cliffs and boulder-cobble beaches. No oil was observed.

REVIEWED BAT DATE 29 Apr 90

OG Sawyer

SEGMENT ST/ PD-6

SUBDIVISION A

DATE Apr 1 28 90

CHECKLIST

- N Area
- Approx. Beds
- 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

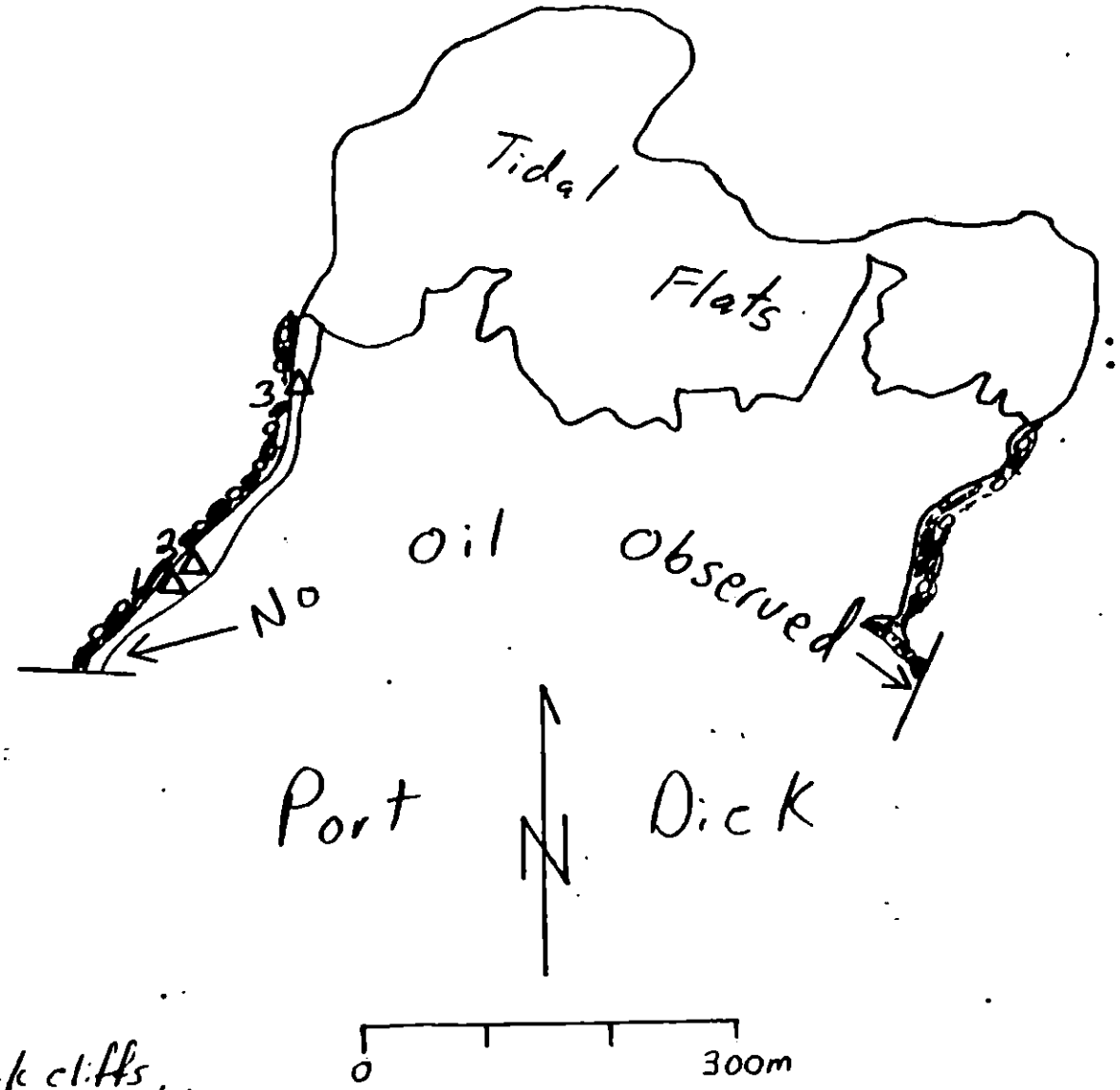
CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Other

SKETCH MAP



Bedrock cliffs w/ boulders at base

Oil Character Length (m): AB ○ PO ○ OL ○ CT ○ ST ○ MO ○ PT ○ TB ○ FL ○ NO 18'11

REVISION

SHORELINE ECOLOGICAL SUMMARY

REVISION: 6/92/10

Segment ST / PD-6 Subdivision A Date (mo / day / yr) 4-26-90

Time (24 hr) 2000 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 10 (3) Cobble 30 (4) Pebble 0 (5) Sand 40 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 10 Low 80

(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	
BED	X	X											
BOULD	X	2	2	2	X	2	2	2	2	2	2	2	SUBSTRATUM NOT PRESENT IN LOW TIDAL ZONE.
COBB	3	3	3	3	3	3	X	X	3	3	3	X	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT ON SAND
	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					X					X			
BOULD	2	X	2	2	2	2	2	2	2	X	2	2	SUBSTRATUM NOT PRESENT IN LOW TIDAL ZONE
COBB	3	X	3	3	3	3	3	3	3	3	3	X	NOT PRESENT IN LOW ZONE. NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT ON SAND
	6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L		1M	1L	1U		1L	1U	1M	1L	
BED				X				X					
BOULD	X	X	2	2	2	2	2	2	2	2	2	2	SUBSTRATUM NOT PRESENT IN LOW TIDAL ZONE
COBB	X	3	3	3	3	3	3	X	X	3	3	3	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT ON SAND
	6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

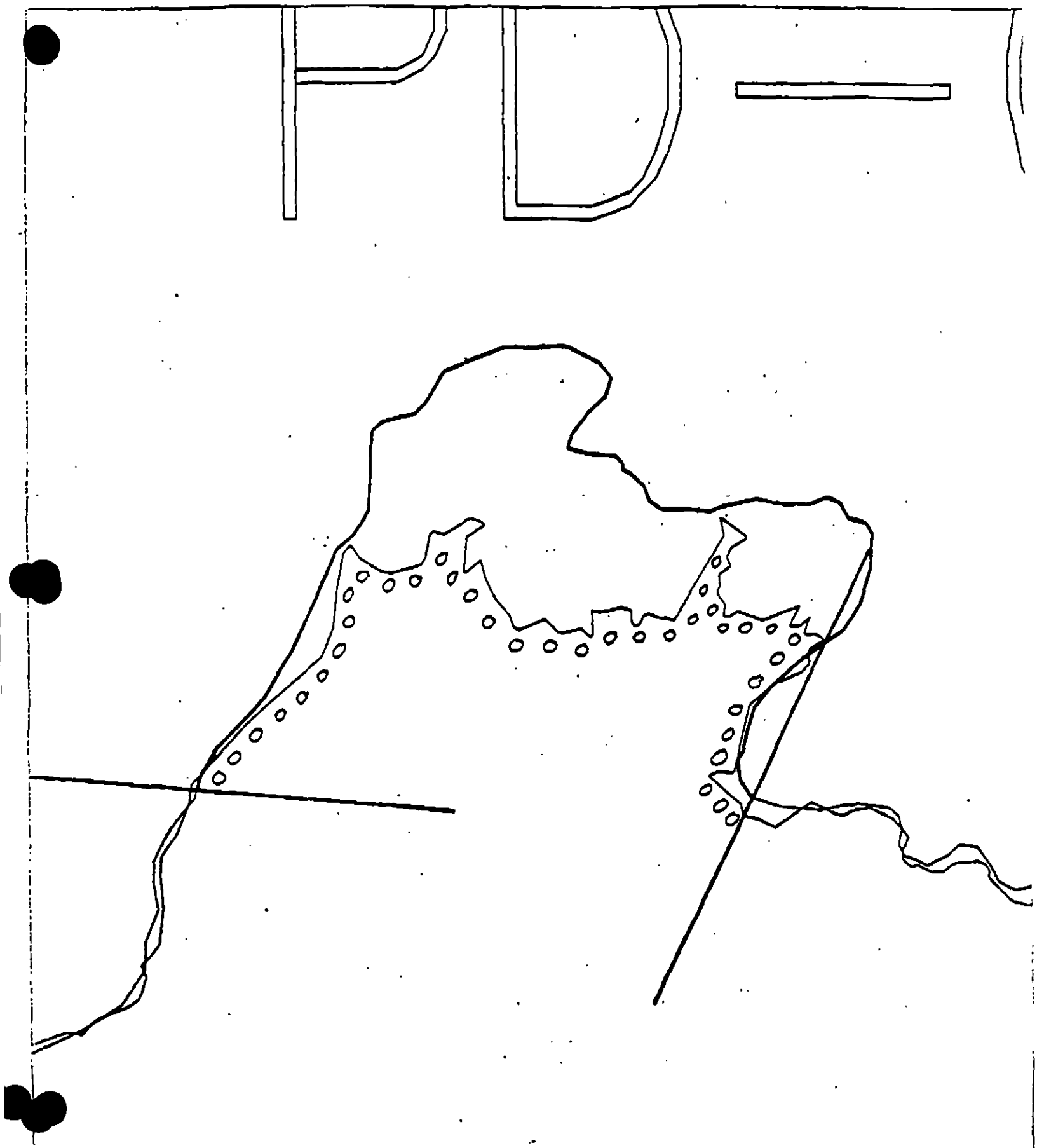
	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
BED										X		X	NOT PRESENT IN MID-ZONE
BOULD	2	2	2	2	2	2	2	X	2	X	2	2	SUBSTRATUM NOT PRESENT IN LOW TIDAL ZONE.
COBB	3	X	3	3	3	X	3	3	3	X	3	3	NOT PRESENT
	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT ON SAND
	6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

Harlequin ducks (17), merganser (1), glaucous-winged gull (10), bald eagle (1)
Clams abundant in LTZ and shallow subtidal.

Ecological Considerations:

1A,B (Salmon stream), 1J (Purse seine area), 4GA (Alaska State Park/Wilderness
6NN (Sportfishing), 8AA (sensitive estuary).



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

PD-6

ADEC Segment Length: 1754m

Map Key: KEN-76

Name: Sawyer

SHORELINE EVALUATION

SEGMENT ST/ PD-07 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1J Purse seine area (6/25 to 8/31)
4GA Alaska State Wilderness Parks
6NN Recreation: Sportfishing

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. David McMahan DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 28 m: V.Light 209 m: No Oil 4608 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

X No Treatment Recommended
_____Treatment Recommended
_____Manual Pickup
_____Bioremediation
_____Tarmat Removal
_____Snare/Absorbent Booms
_____Oil Snares (pom poms)
_____Absorbents (pads,rolls,etc)
_____Spot Washing:_____Wands
_____Beach Cleaner
_____Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/8/90
ADEC Art Weiner Art Weiner
EXXON Andy Tear
NOAA Gary Petrasy Gary Petrasy
USCG G.A. Reiter G.A. Reiter

FOSC: [illegible] DATE: 5-12-90

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
✓ —1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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
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 / PD007 SUBDIVISION: A DATE 4-26-1990

NORA ~~USCG~~

NAME Donald A. MacDonald SIGNATURE Donald A. MacDonald

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Only a few scattered patches of mousse were present. The segment has cobble and boulder beaches along with bedrock face; the intertidal zone was sparsely settled. The segment starts just east of the tidal flats of PD006. The Bio and Og did a good job.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Very scattered mousse patches in this segment, most were picked up as we surveyed. No treatment is recommended. I agree with SSAT Data.

LAND MANAGER

NAME SHARIE MEITHVEN-TONEY SIGNATURE Sharie Meithven-Toney

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS The area is within Kachemak Bay State Wilderness Park. I agree with SSAT data on PD7. This area has high recreation values, wildlife values, good anchorages, tent sites and popular with pleasure boaters and commercial fisherman. This area receives heavy human use.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

IG Sawyer ~~USCG~~ NOAA MacDonald SEGMENT ST/ PO 7
IO Carr LAND REP Mathyen-Toney SUBDIVISION A (/ OFT)
EXXON Bayer ADEC Reed TIME 20:20 to 22:00
TEAM NO. 18 TIDE LEVEL +4 to +2.5 DATE Apr 12 6 /90
EST. SUBDIVISION LENGTH: 5120 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 15 % C 5 % P 5 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 0 % Vert 70 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 40 m VL 400 m NO ~~4920~~ 4680 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	PC	PS	P	PS	BK/DK	DBR/BR	OLV/BR	DBR/OR	LBR/OR	SU	UI	MI	U
ASPHALT PAVEMENT				/		/					/		
POOLED													
COVER													
COAT				/		/					/		
STAIN													
MOUSSE				/				/			/		
PATTIES													
TARBALLS													
FILM				/		/					/	/	
NO OIL										/			/

collected → 5 → 5

PAVEMENT H (F) (S) → 1 sq. m by 3 cm

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS NO	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE Asphalt pavem

#BAGS 2

Photographs:

Roll No. ST-18-9

Frames NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BK/DK	DBR/BR	OLV/BR	DBR/OR	LBR/OR	SU	UI	MI	U				
1	35					/			/							/						P-G, P, S
2	30					/			/							/						P-G, S
3	25					/			/								/					P-P, C
4	35					/			/							/						P-P, S, C
5	15		/				0 · 5*		/		/					/						C-P, S, C

COMMENTS * Oiled interval < 5cm in pit #5 does not constitute subsurface oil

RAT

OG Sawyer

EGMENT ST/ PD7

UBDIVISION A

ATE Apr 1 28 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 △ - No Subsurface Oil

2 ▲ - Subsurface Oil

CT/C - Continuous Distribution

CT/B - Broken Distribution

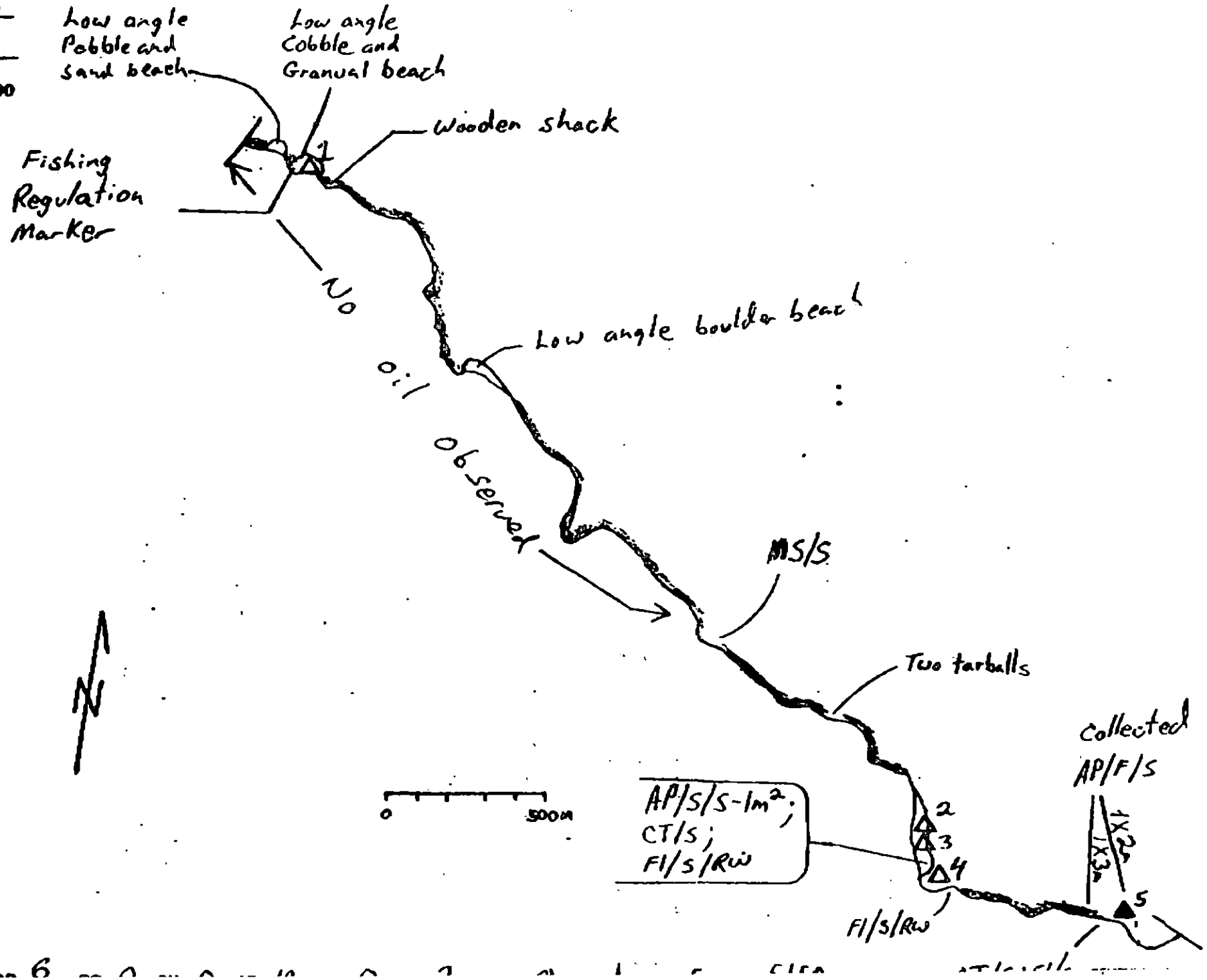
CT/P - Patchy Distribution

CT/S - Scattered Distribution

Stained Vegetation

Photo location, direction, and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 60/22.1

Segment ST / PD-7 Subdivision A Date (mo / day / yr) 4-26-90

Time (24 hr) 2020 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 15 (3) Cobble 5 (4) Pebble 5 (5) Sand 5 (6) Silt 0

(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. ——

Frames NONE

BARNACLES

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
BED	X	X										
BOULD	X	X	2	2	2	2	2	2	X	2	2	2
COBB	3	3	3	3	3	3	3	3	3	3	3	3
SAND	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 ANY 3

NOT PRESENT

MYTILUS

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
BED					X		X		X			
BOULD	2	2	2	2	2	2	2	2	2	2	X	2
COBB	3	3	3	3	3	3	3	3	3	3	3	3
SAND	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 2' LOW

NOT PRESENT IN ANY ZONE

NOT PRESENT

GASTROPODS

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
BED							X	X	X			
BOULD	2	2	2	2	2	2	X	X	X	2	2	2
COBB	3	3	3	3	3	3	3	3	3	3	3	3
SAND	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 ANY

NOT PRESENT

FUCUS

	Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
BED		X					X		X			
BOULD	2	X	2	2	2	X	X	2	2	2	2	2
COBB	3	3	3	3	X	3	3	3	X	3	3	3
SAND	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 ZONE

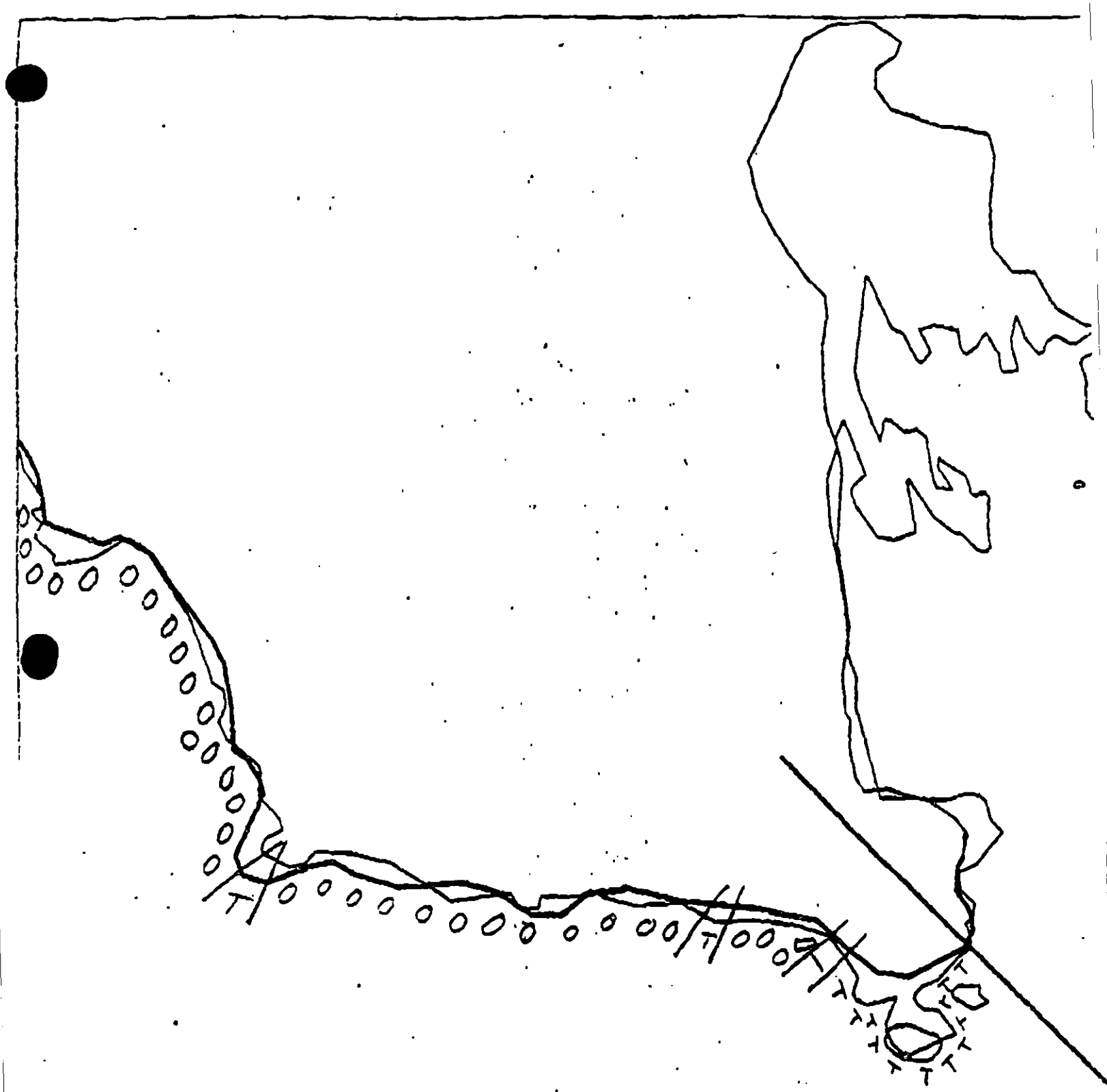
NOT PRESENT

Wildlife Observations/ General Comments:

bald eagle (1), harlequin ducks (14), river otter (3), grebe (1), black bear (1)

ecological Considerations:

1J (purse seine area), 4GA (Alaska State Park/Wilderness), 6NN (sportfishing)



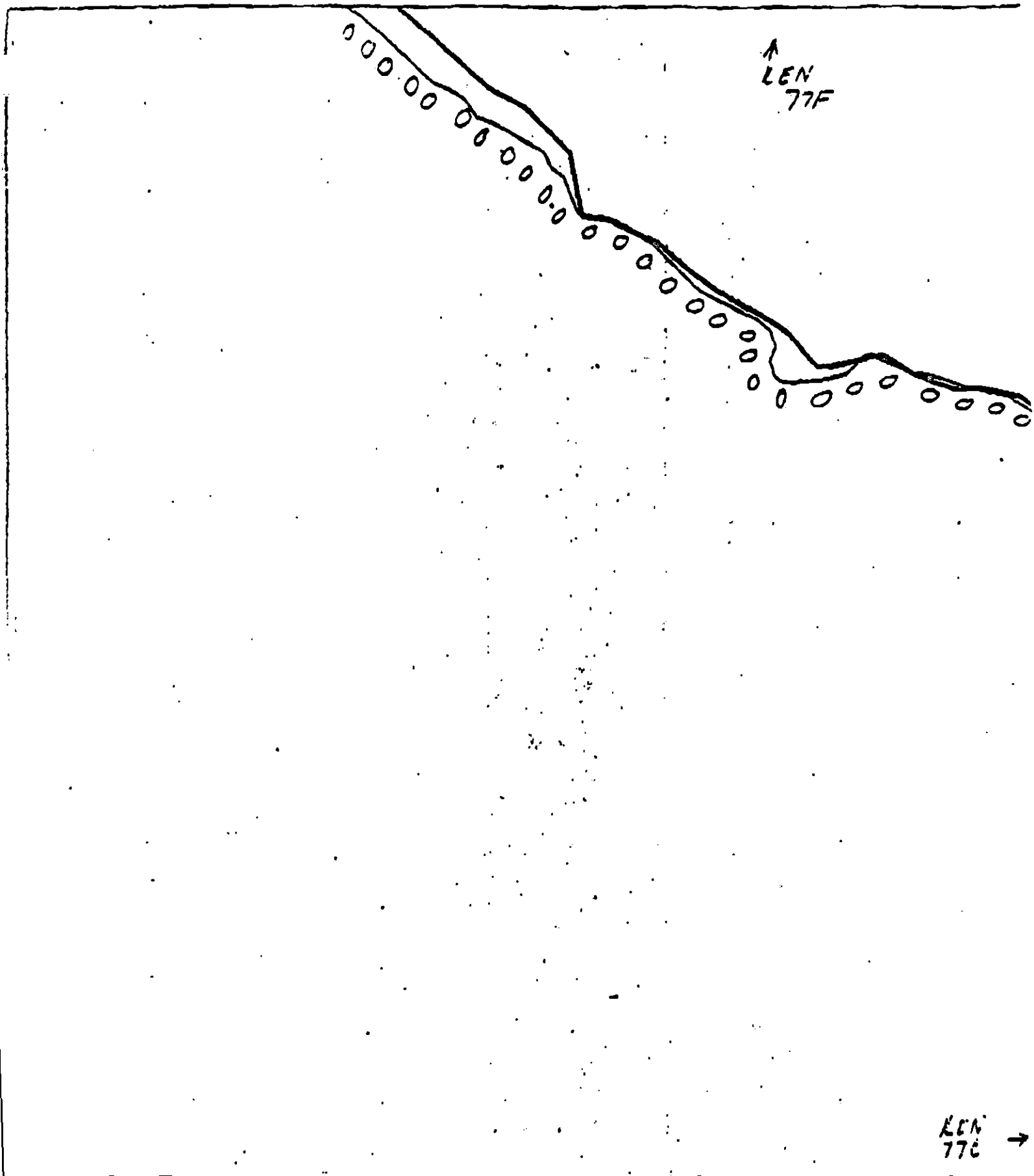
← LEN 778

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

PD-7

ADEC Segment Length: 4851m

Map Key: KEN-77c
Name: Sawyer



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

PD-7

ADEC Segment Length: 4951m

Map Key: KEN-77b

Name: Sawyer

PD-

← LEN 77E

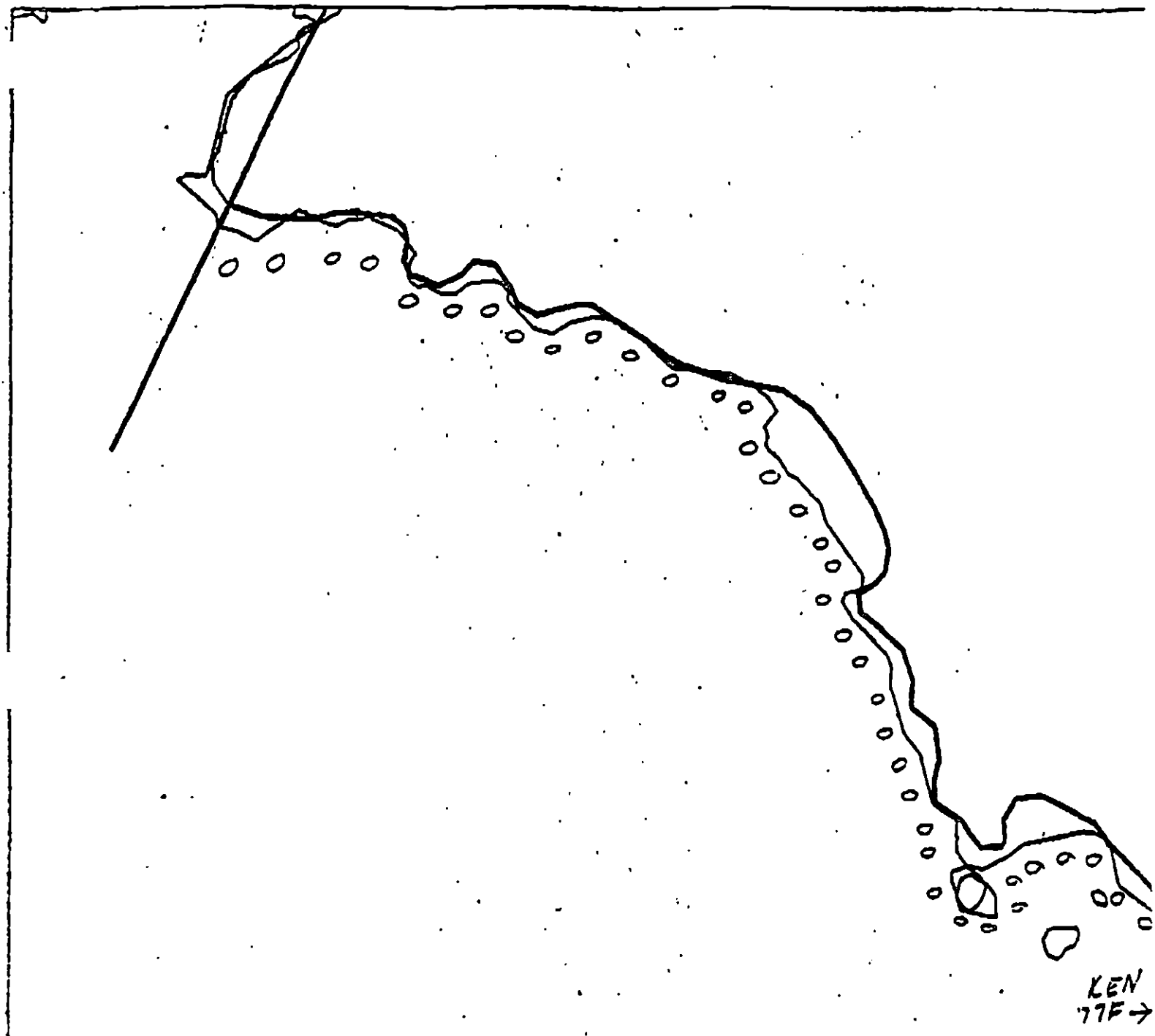
↓ LEN 77B

XXXX Wide
//// Medium
-.-.-- Narrow
TTTT Mean High

PD-7

ADEC Segment Length: 495lm

Map Key: KEN-77!
Name: Sawyer



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

PD-7

ABEC Segment Length: 4951m

Map Key: KEN-77e
Name: Sawyer

SHORELINE EVALUATION

SEGMENT ST/ PD-08 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 242-42-10430
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (6/25 to 8/31)
4GG Alaska State Parks
6NN Recreation: Sportfishing
8AA Sensitive Estuary
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. David McMahan DATE: 5/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 3240 m: No Oil 2267 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ___

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: Collect debris and Mousse as indicated on sketch map.

TAG APPROVAL DATE: May 5 1990
ADEC Art Weiner Art Weiner
EXXON Mark N. Silbert Mark N. Silbert FOSC: [illegible] DATE: 5-12-90
NOAA Gary Petrone Gary Petrone
USCG G.A. Reiter G.A. REITER

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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

NP 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 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
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 / PD-08 SUBDIVISION: A (1 of 1) DATE 4/23/90

NOAA ~~USCG~~
NAME DONALD A. MACDONALD SIGNATURE Donald A. MacDonald

☐ ~~NO TREATMENT RECOMMENDED~~ ☐ ~~TREATMENT SUGGESTED~~

COMMENTS
Mousse coat and film found along the western shore of the segment. The eastern side of the western arm of segment had an anadromous fish stream and fish (possibly salmonid) fry were observed within this arm.

ADEC
NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Mousse patties in PD-08 could be manually removed by shovel. The banks of the anadramous stream were clean. This is an area of high recreational value. I agree with data on SSAT Forms.

LAND MANAGER
NAME SHARIE MEthven-Toney SIGNATURE Sharie Methven-Toney

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS ~~Best~~ PORT DICK-West Arm Segment PD8 is located within Kachemak Bay State Wilderness Park. The area offers unique recreation activities, fishing- sportfishing and commercial clam digging. The area has two large tidal [illegible]rs and one anadromous fish stream, extremely high wilderness values. The area has high wildlife values in the tidal flats and uplands.
I recommend manual cleanup of mousse patties, (accessible using skiffs) and the removal of boom chain and cable which were found in the segment.
I agree with data on the SSAT forms.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Sawyer ~~USCG~~ NOAA MacDonald SEGMENT ST/ PO-008
Carr LAND REP Methven-Toney SUBDIVISION A (1 OF 1)
KON Bayer ADEC Reed TIME 16:30 to 20:00
TEAM NO. 18 TIDE LEVEL +4.5 to +2.0 DATE Apr 1 23 /90
EST. SUBDIVISION LENGTH: 6559 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 5 % G 0 % S 10 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 10 % Vert 60 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3959 m NO 2600 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rb	rp	rs						su	ui	mi	u
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				/		/					/		
STAIN													
MOUSSE				/		/			/		/	/	
PATTIES													
BALLS													
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 NO	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☒ NO ☐
TYPE pom-pom, fiberg. rods
#BAGS 1

Photographs:
Roll No. ST-18-8
Frames 19-23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG						su	ui	mi	u				
1	15		/				0-4		/				/			/				Y	10	B-G, B
2	30					/			/									/			5	P-G, S
3	20					/			/									/				m-S, G
4	25					/			/								/					P-S, m
5	20					/			/							/						C-G
6	20					/			/							/						P-P

COMMENTS ST/PO-008 has two large tidal flats, a few small lagoons, and one or two anadromous fish streams. On either side of the eastern embayment are debris (cable and chain) that was possibly related to booming operations.

REVIEWER RAT

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ PO-008 SUBDIVISION A (1 OF 1)

JBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	BR/BK	OR/RB	DT/RE	DBR/TL	LBR	SU	UI	MI	LI				
7	25					/			/								/				20	C-S,m
8	25					/			/								/				20	C-S,m

COMMENTS

REVIEWED BAT DATE 25 Apr 90

OG Sauy

SEGMENT ST/PO-008

SUBDIVISION A

DATE Apr 1 23 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

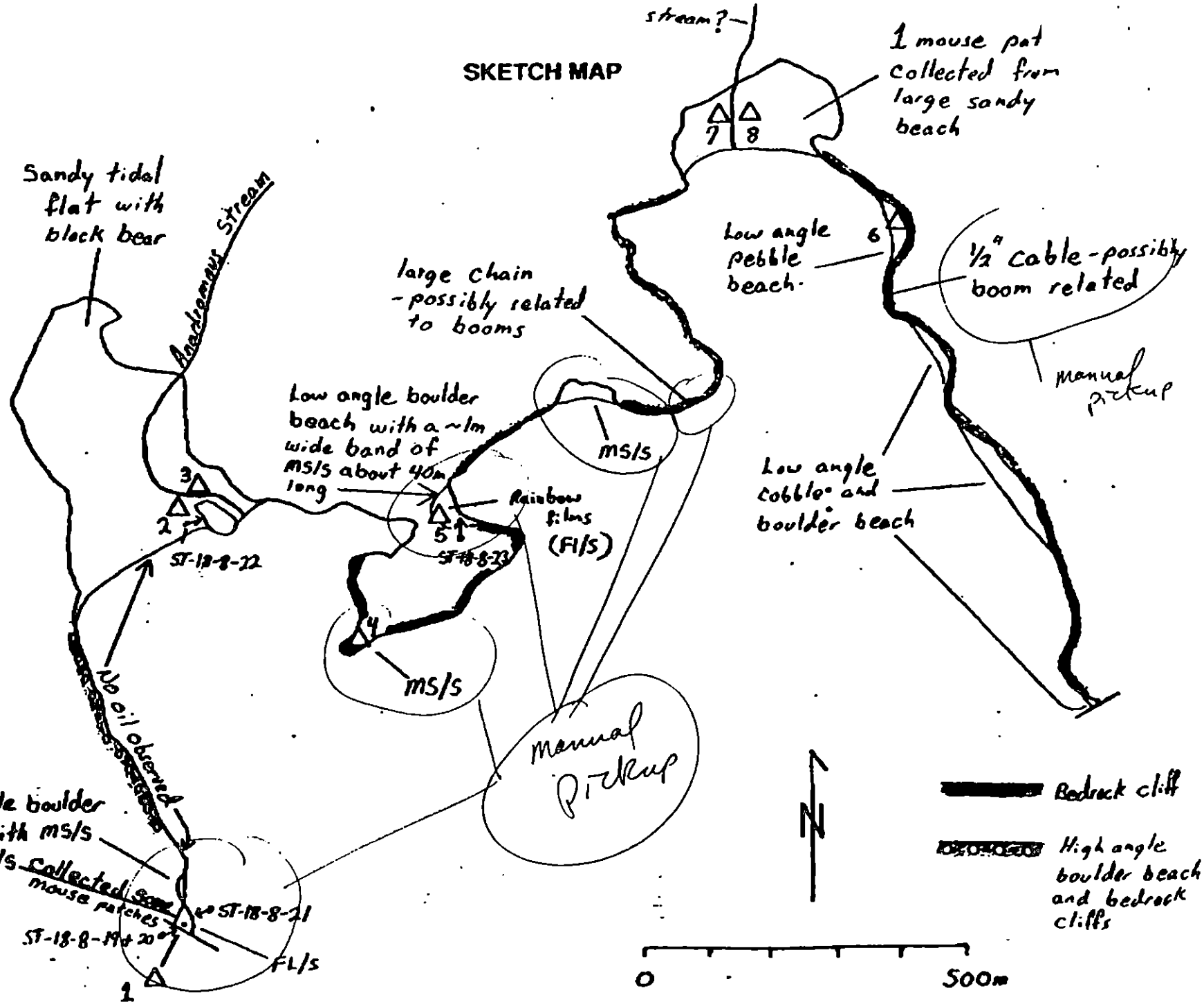
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/88

Segment ST / PD-8 Subdivision A Date (mo / day / yr) 4-23-90

ne (24 hr) 1630 Biologist MARK CARR

(A) Substrate type and % of ~~segment~~ SUBDIVISION:
(1) Bedrock 60 (2) Boulder 15 (3) Cobble 10 (4) Pebble 5 (5) Sand 10 (6) Silt 10

(B) Overall % cover of biota (% of ~~segment~~ SUBDIVISION): Dense 90 Moderate 5 Low 5

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

Photographs: Roll No. ST-18-8

Frames 19-23

BARNACLES

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
BED	1	1	X	1	1	1	1	1	1	1	1	1	
BOULD	2	2	2	2	2	X	X	2	2	2	2	2	
COBB	3	3	3	3	3	3	X	X	X	3	3	3	NOT PRESENT
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN AN ZONE.
SILT	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	1	1	1	1	1	1	1	1	1	1	1	X	NOT PRESENT IN ANY ZONE
BOULD	2	X	2	2	2	2	2	2	2	2	2	X	
COBB	3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	X	5	5	5	5	5	5	5	5	5	NOT PRESENT IN UPP & LOWER ZONE.
SILT	6	6	6	6	6	6	6	6	6	6	6	6	NOT PRESENT IN ANY ZONE.

GASTROPODS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
BED	1	1	1	1	1	1	1	1	X	1	1	1	
BOULD	2	2	2	2	2	2	2	2	2	2	2	2	
COBB	3	3	3	3	3	3	3	3	3	X	X	X	NOT PRESENT
PEBB	4	4	4	4	4	4	4	4	4	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY ZONE.
SILT	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	1	1	1	1	1	1	1	1	X	1	1	1	NOT PRESENT IN UPP
BOULD	2	2	2	2	2	X	X	X	2	2	2	2	
COBB	3	3	3	3	X	3	3	3	X	3	3	3	NOT PRESENT
PEBB	4	4	4	4	X	4	4	4	X	4	4	4	
SAND	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY Z
SILT	6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

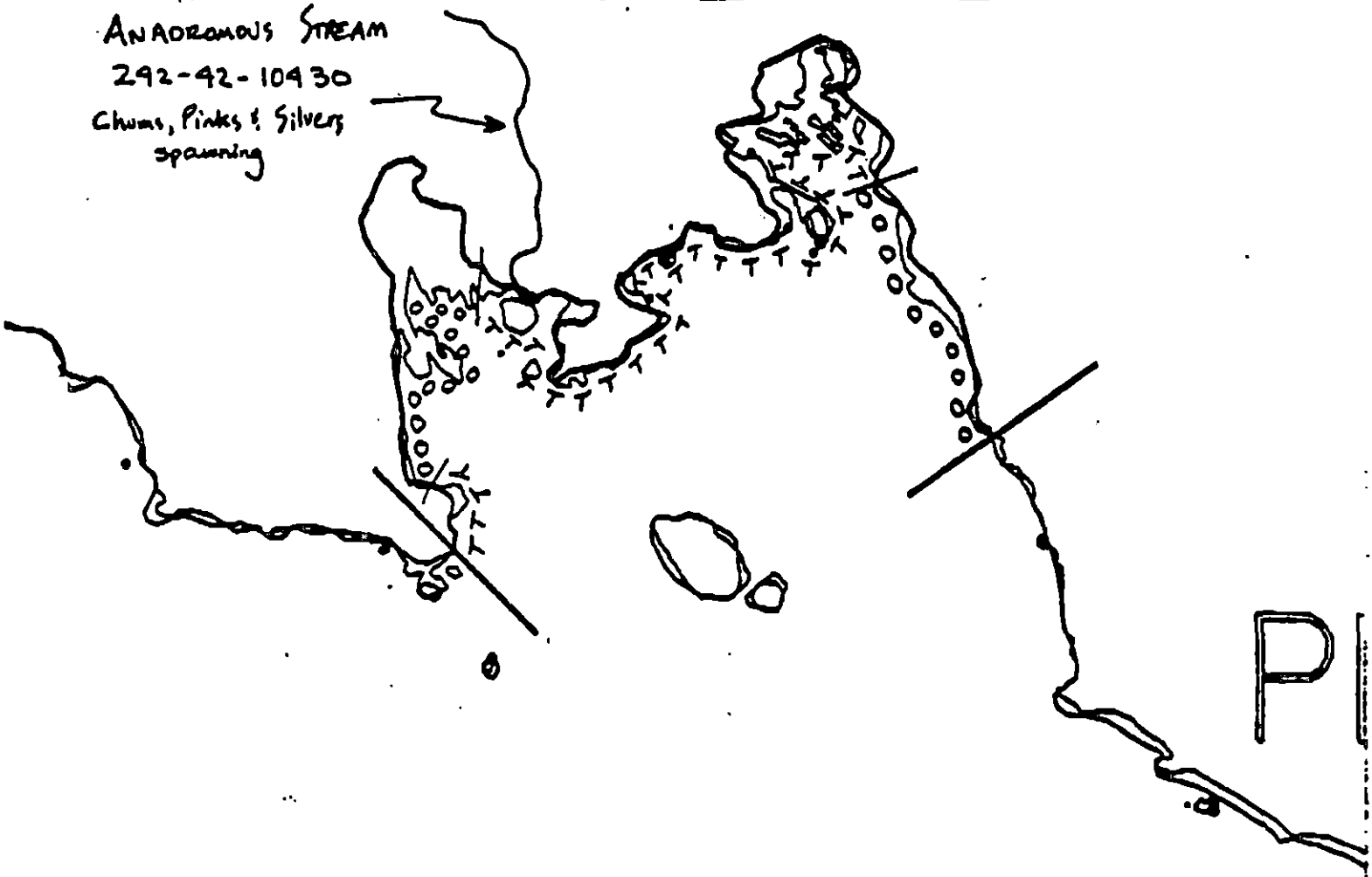
Harlequin ducks (26), black bear (1), salmonid fry (4-5cm) @ 200, bufflehead (14), NW crow (9), surf scoters (8), mallard duck (8)

Ecological Considerations:

1A,B (Salmonid stream) - 2, 1J (Purse seine area), 4GA (Alaska State Park/ Wilderness), 6 M,N (Sportfishing), 8AA (Sensitive estuary).

ECOLOGY MAP	
1A, 1B	4GA
1J	6NN
8AA	

PD-8



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

PD-8

ADEC Segment Length: 5369m

0 300 600 900

Map Key: KEN-78
Name: Bayou Amm
Date: ~~4/23/90~~ 4/25/90

PD-8

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

PD-8

ADEC Segment Length: 5369m

0 300 600 900

Map Key: KEN-78
Name: Sawyer
Date: 4-23-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous stream (242-42-10430) is present in Subdivision A. No constraint to manual pickup.
1J	**Purse Seine Hook-off**	No constraint to manual pickup.
8AA	**Sensitive Estuary**	No constraint to manual pickup.

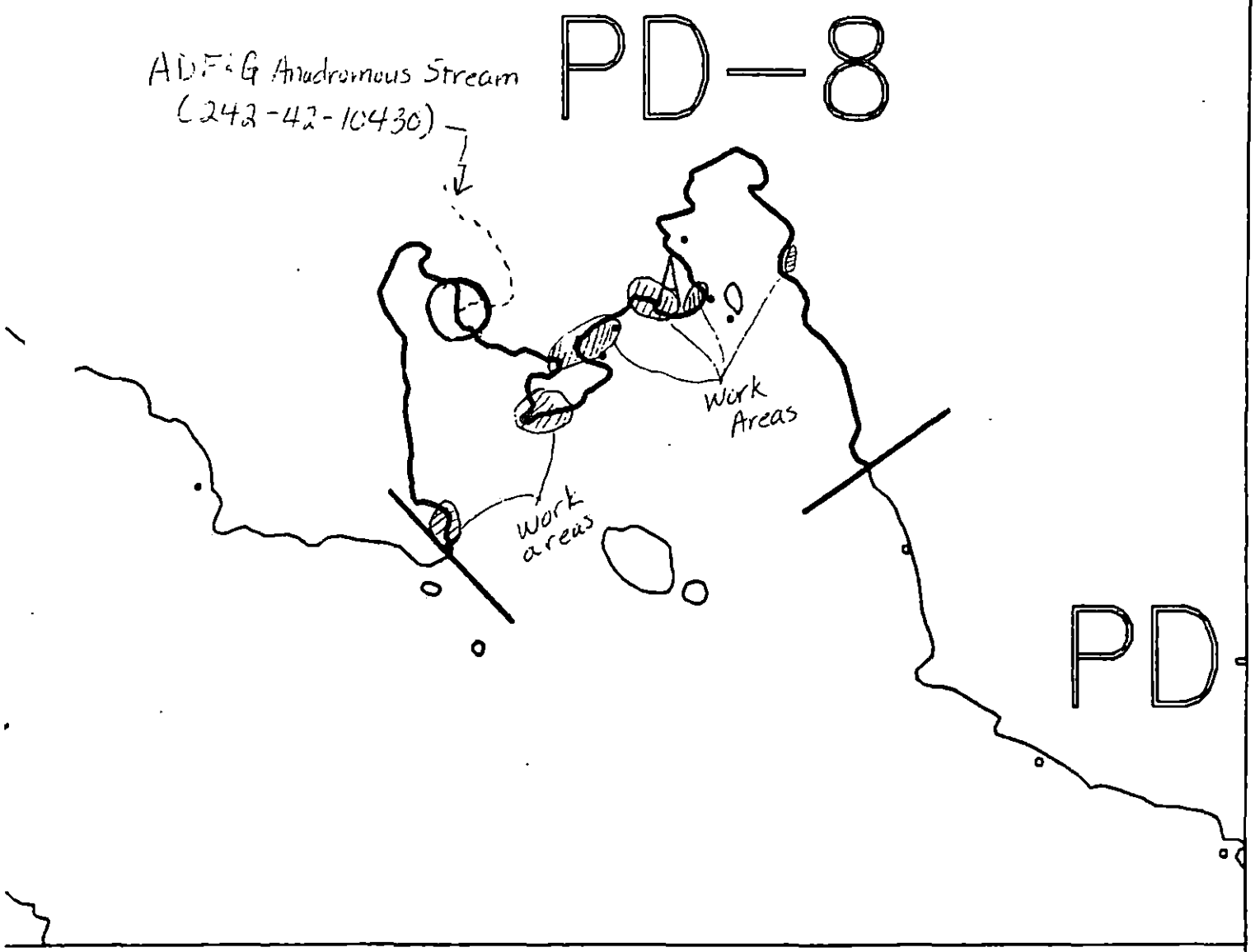
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance of stream bed or banks. Restrict boat and air traffic to essential minimum after 6/25. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Sensitive estuary, restrict beach disturbance to essential minimum.

TAG APPROVAL DATE 6/01/90
ADEC Ray Morris RNO
EXXON Andy Tabb
for NOAA G.A. Reiter
USCG G.A. Reiter G.A. Reiter

FOSC D.D. Rome, CDR, USCG Acting DATE 6/2/90

Prepared By: Linda Meyer WYK Date 5/31/90



EXXON

Exxon Company, USA
Map Key: KEN-PD-8
May 17, 1990

ECOLOGY MAP
SEGMENT PD-8
SUBDIVISION A (1 of 1)

METERS
0 549 1098

★ Seabird Colony
▲ Eagle Nest

1 inch = 1803 feet

SHORELINE EVALUATION

SEGMENT ST/ PD-010 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-3 All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/20 to 9/30)
4GA State Marine Park Alaska State Parks
6NN Recreation: Sportfishing

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: Rachel Joan Orr DATE: 5/22/90

OILING CATEGORIZATION:

Wide 28 m: Medium 3 m: Narrow 0 m: V.Light 0 m: No Oil 8766 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 12cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) manual pick up of mousse patties and 2) manual removal of tarmats in areas indicated on sketch map. Work between 6/1 to 7/10 with approval of USFWS regarding eagle nest.

TAG COMMENTS: BIOREMEDIATE (CUSTOMBLEN) AS REQUIRED FOLLOWING TARMAT REMOVAL.

AVOID DENSE MUSSEL BEDS DURING APPLICATION OF CUSTOMBLEN.

TAG APPROVAL DATE: 5/21/90
ADEC Art Weiner
EXXON Andy Tell
NOAA Joseph Talbott
USCG G.A. Reiter
FOSC [signature] DATE: MAY 25 1990

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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
6NN Sport Fishing
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ 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 / PD10 SUBDIVISION: A DATE 4-26-90

NOAA ~~USCG~~

NAME DONALD A. MACDONALD SIGNATURE Donald A. MacDonald

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS The only oiling that was seen was on the small peninsula in the southeast section of the segment. The intertidal zone was very healthy with a wide diversity of plant and animal life. As usual all members of the team were in basic agreement as reported on the other forms.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I am Recommending manual cleanup of broken asphalt pavement on the eastern beach of the pennisula [redacted] in the [redacted] S/E end of the segment. This is a 30 x 25 m patch of asphalt in a boulder and cobble beach. Some of the boulders will need to be turned over for better access to the pavement. I agree with data on SSAT Form

LAND MANAGER

NAME SHARIE METHVEN-TONEY SIGNATURE Sharie Methven-Toney

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Port Dick-West Arm Segment PD10 is within Kachemak Bay State Wilderness Park, and has high recreation & wildlife resource values. Two erclan Study Sites Signs should be removed after project. Several tent sites and good anchorage within segment. One cultural site is east of segment. The one boulder and cobble beach with oil we found is located on the east of the segment which we recommend manual cleanup removal of oil and moving the rocks over. I agree with SSAT forms. The area is used with sport fishing and commercial fishing.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

Sawyer NOAA ~~USCG~~ MacDonald SEGMENT ST/ PD 10
Carr LAND REP Methven-Toney SUBDIVISION A (1 OF 1)
EXXON Bayer ADEC Reed TIME 07:15 to 11:10
TEAM NO. 18 TIDE LEVEL -1.5 to +0.5 DATE Apr 1 26 / 90
EST. SUBDIVISION LENGTH: 6109 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 40 % B 20 % C 10 % P 30 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 60 % Hang 0 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 25 m M 5 m N 0 m VL 0 m NO 6079 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AO	IS	IP	IS	DBL BR	DBL RW	GY SL	DBR TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT		/				/					/	/	
POOLED													
COVER													
COAT			/			/					/	/	
STAIN													
MOUSSE			/	\				X	X		X	X	
PATTIES													
TARBALLS				/		/		/			/		
FILM				X		\	/				\	/	/
NO OIL										/			

PAVEMENT H (F) S 750 sq. m by 8 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS NO	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?
YES ☒ ~~NO ☒~~
TYPE 1 TARBALL
#BAGS 1

Photographs:
Roll No. ST-18-9
Frames 1-5

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	DBL BR	DBL RW	GY SL	DBR TL	LBR	SU	UI	MI	U				
1	20					/			/							/						P-G,B
2	25					/			/							/						P-S,P
3	25					/			/								/					P-S,P
4	30					/			/							/						P-S,P,C
5	25					/			/								/				20	P-G,P
6	25					/			/							/						P-C,P

COMMENTS ST/PD10A comprises several low angle pebble beaches of varing size. The headland extending eastward of pit #8 has the only oil observed in this segment. The shoreline south of this segment was examined because oil was observed and there is a cultural site.

RAT 28 Apr 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ P010 SUBDIVISION A (1 OF 1)

UBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BLK/BR	DBR/RB	GY/SL	DGR/TL	LBR	SU	UI	MI	LI				
7	25					/			/							/						P-C,S
8	15		/				0-2		/				/			/						C-P,S
9	15.		/				0-12		/				/			/				BR		B-G,B
10	15		/				0-4		/				/				/					B-C,S,B
11	20					/			/							/						P-S,P
12	20					/			/								/			N	18	P-S,P
13	20					/			/									/				P-C,S,P
14	20					/			/							/						P-S,P

COMMENTS

REVIEWED BAC DATE 28 APR 90

OG Sawyer

SEGMENT ST/ PD10

SUBDIVISION A

DATE Apr 1 26 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

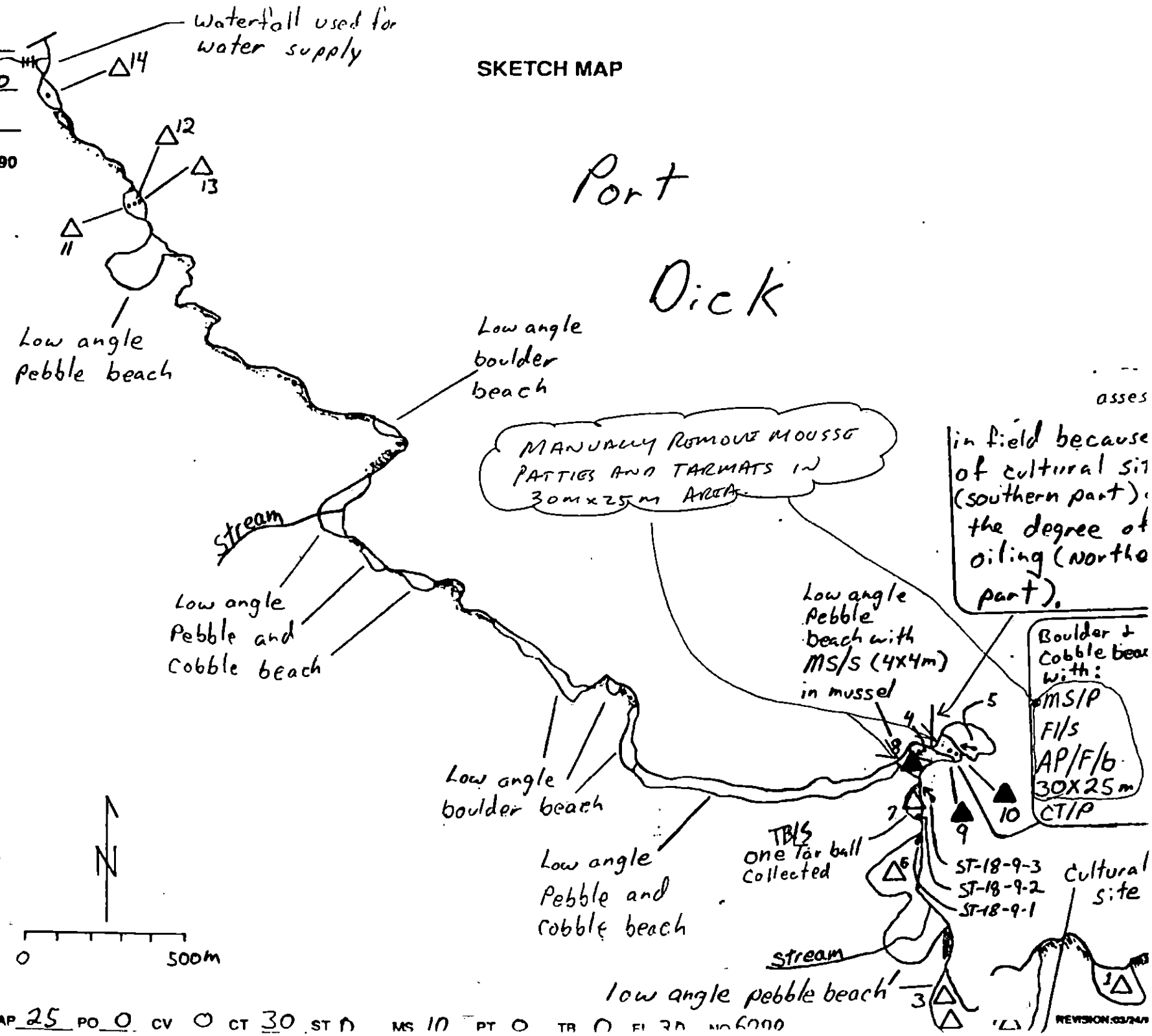
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ↔ 2 vertical Photo location, direction, and number

SKETCH MAP



in field because of cultural sit (southern part) the degree of oiling (northe part).

Oil Character Length (m): AP 25 PO 0 CV 0 CT 30 ST 0 MS 10 PT 0 TB 0 FL 30 NO 6000

REVISION: 03/24/9

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PD-10 Subdivision A Date (mo / day / yr) 4-26-90

Time (24 hr) 0715 Biologist MARK CARR

(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 20 (3) Cobble 10 (4) Pebble 30 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 15 Low 5

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

Photographs:
Roll No. ST-18-9
Frames 1-5

BARNACLES

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
BED	X	X										X
BOULD	2	X	2	2	2	2	X	2	X	2	2	2
COBB	3	3	3	3	3	3	3	X	3	3	3	3
PEBB	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 UPPER & LOWER TIDAL ZONE.
NOT PRESENT IN ANY TIDAL ZONE.

MYTILUS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
BED		X					X					
BOULD	2	2	2	2	X	2	2	2	2	2	2	2
COBB	3	3	3	3	X	3	3	3	3	3	3	3
PEBB	4	4	4	4	4	4	4	X	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 TIDAL ZONE.
NOT PRESENT
NOT PRESENT IN UPP. OR LOWER TIDAL ZONE

GASTROPODS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
BED		X			X	X	X					
BOULD	X	2	2	2	X	X	2	2	2	2	2	2
COBB	3	3	3	3	X	3	3	3	X	3	3	3
PEBB	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 TIDAL ZONE
NOT PRESENT
NOT PRESENT IN ANY TIDAL ZONE.

FUCUS

	Dense			Moderate			Sparse			Rare		
	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
BED					X			X				
BOULD	2	2	2	2	X	2	2	2	X	X	2	2
COBB	3	3	3	3	3	3	3	X	3	3	3	X
PEBB	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 ZONE
NOT PRESENT IN UPPER ZONE.
NOT PRESENT
NOT PRESENT IN ANY TIDAL ZONE.

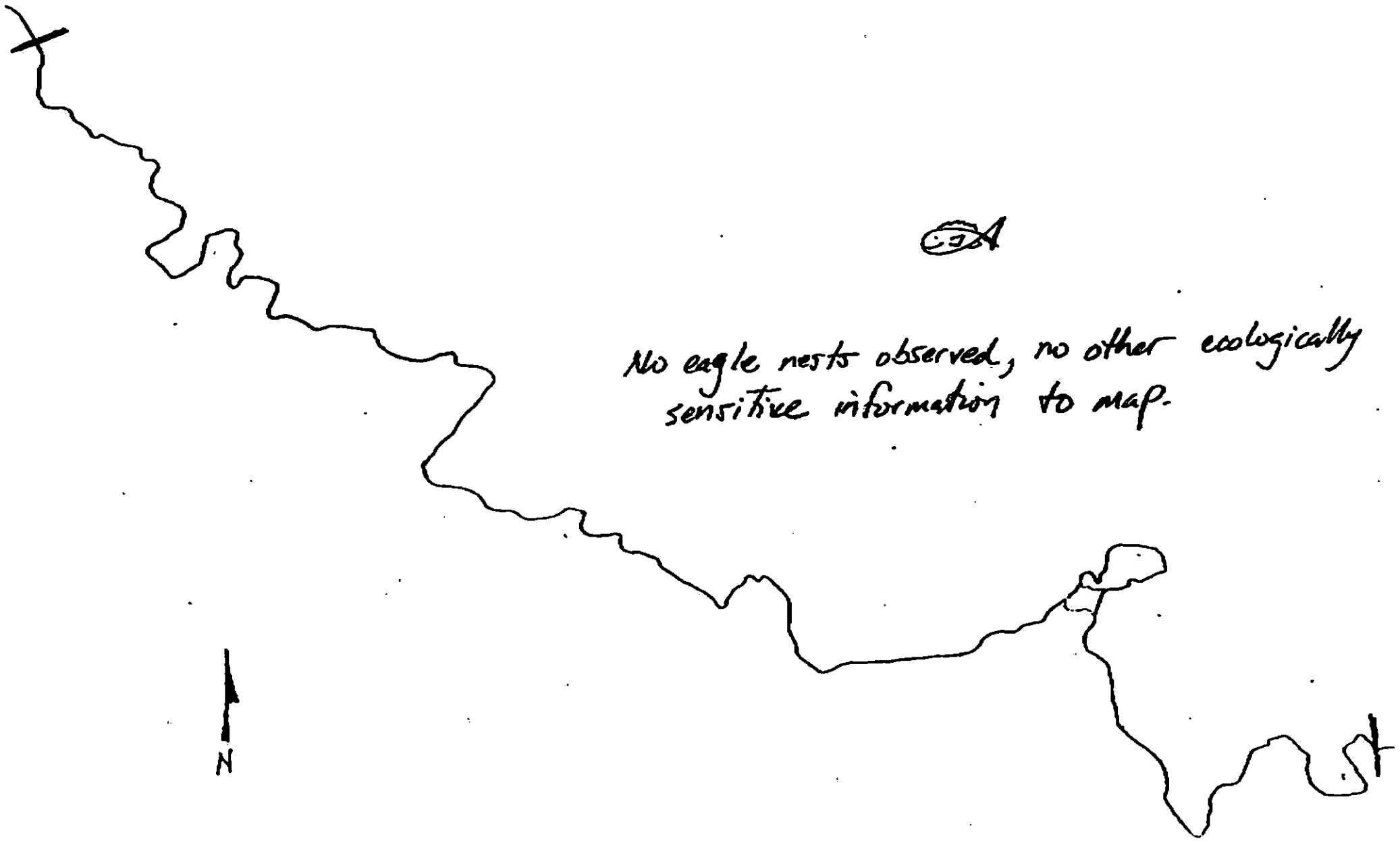
Wildlife Observations/ General Comments:
Bald eagle (5) including 1 immature, ruby-crowned kinglet (song), mink tracks (1), varied thrush (song), golden-eye (20), N.W. crow (1), harlequin ducks (26), mallard duck (3), glaucous-winged gull (5).

Ecological Considerations:
First observation of "recruited" (≈ 2mm) Mytilus and littorines (≈ 2mm) inhabiting oiled substratum. Recruits occupied mussel bed imbedded in asphalt.

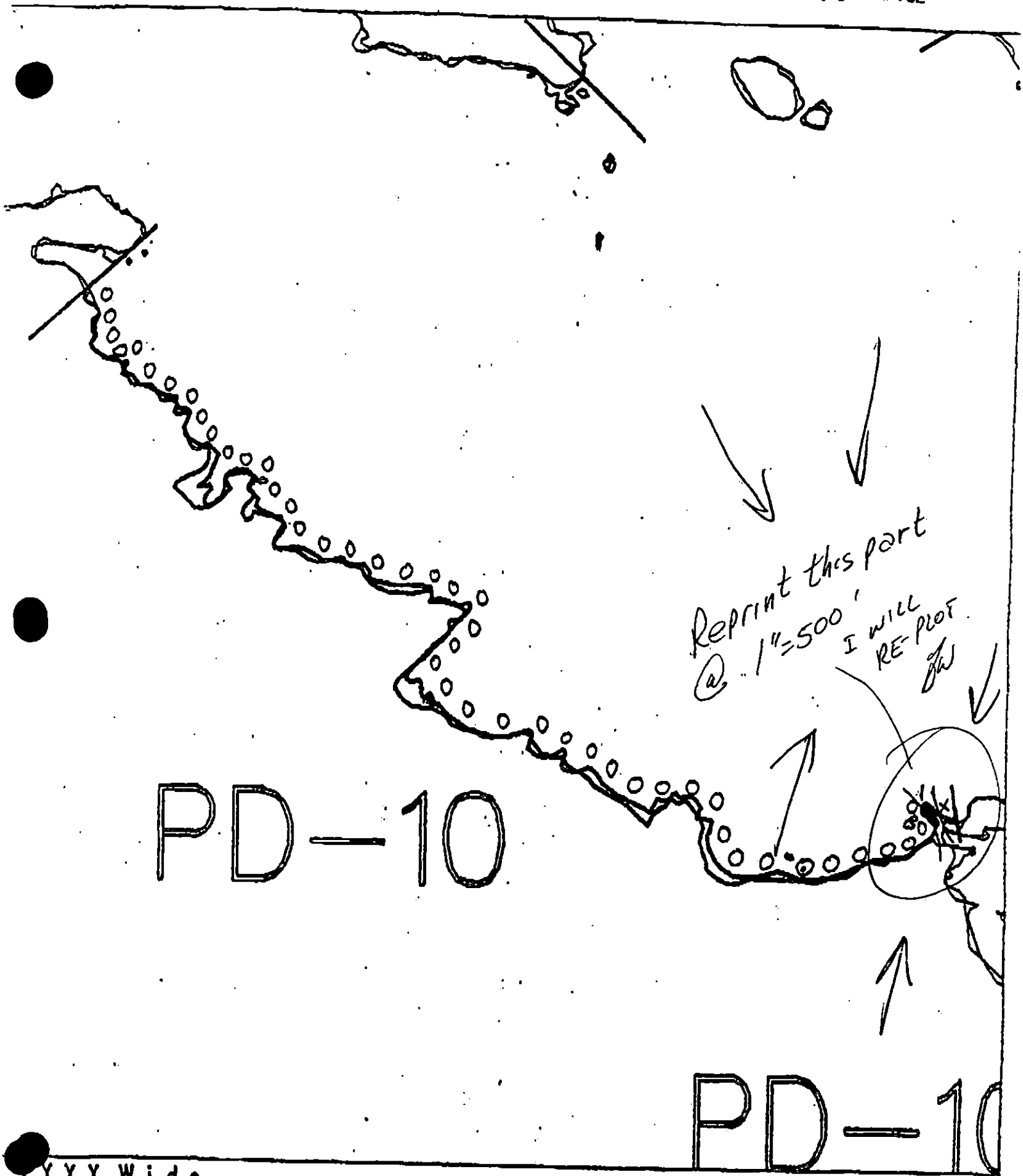
ST (Bald eagle nest) - 2 1 + 1D ...

BIO SKETCH – ECOLOGY MAP

PD-10 (4-26-90)



No eagle nests observed, no other ecologically sensitive information to map.

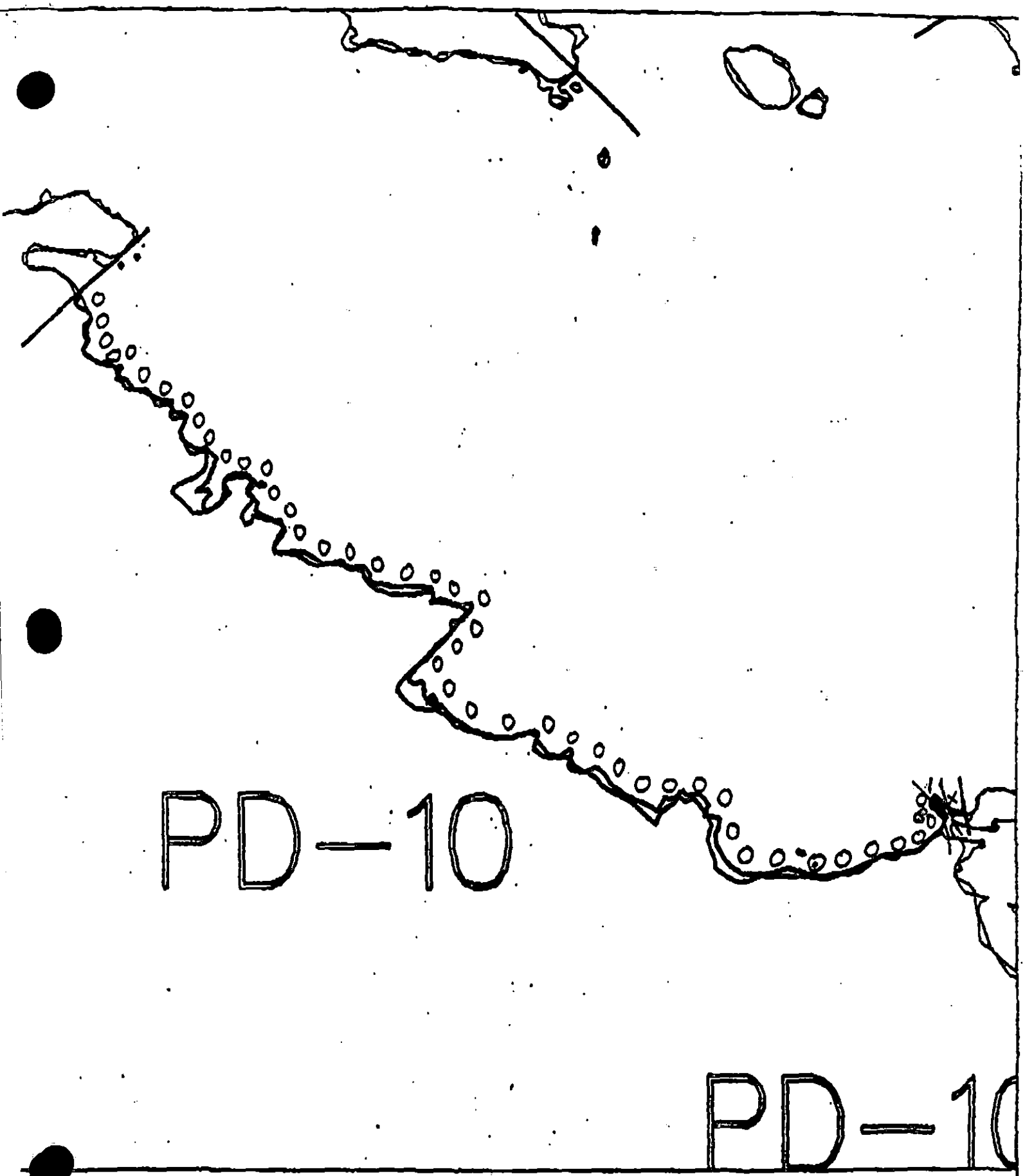


XXXX Wide
//// Medium
---- Narrow
TTTT Very light

PD-10

Approx. Segment Length: 5935m

Map Key: KEN-PD-10a
Name: Sawyer
Date: 4-26-90

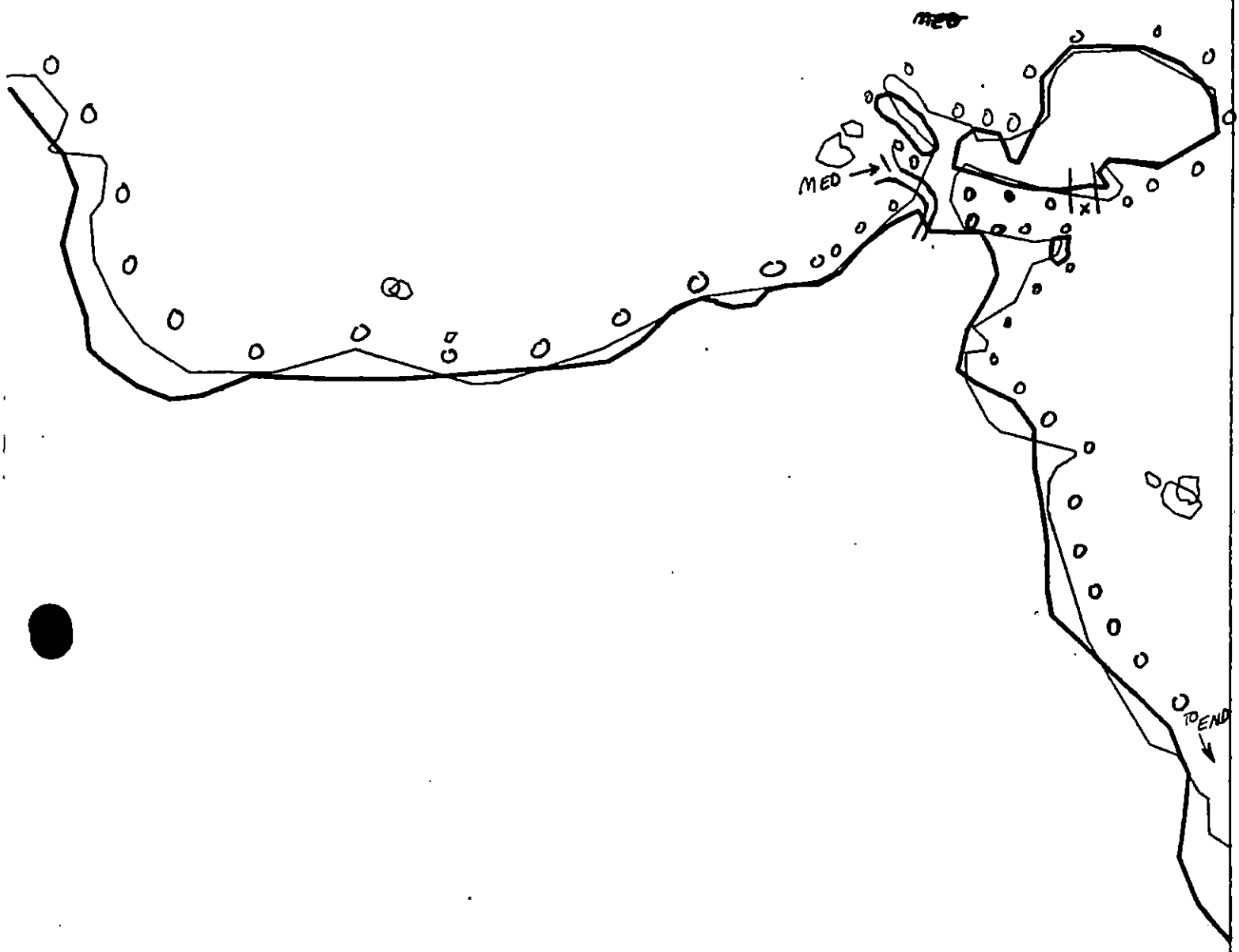


XXXX Wide
//// Medium
---- Narrow
TTTT Very light

PD-10

Approx. Segment Length: 5935m

Map Key: KEN-PD-10a
Name: Sawyer
Date: 4-26-90



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

PD-10

ADEC Segment Length: 216m

0 100 200 300
METERS

Map Key: PD-10c

Name: _____

Date: _____

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-10 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

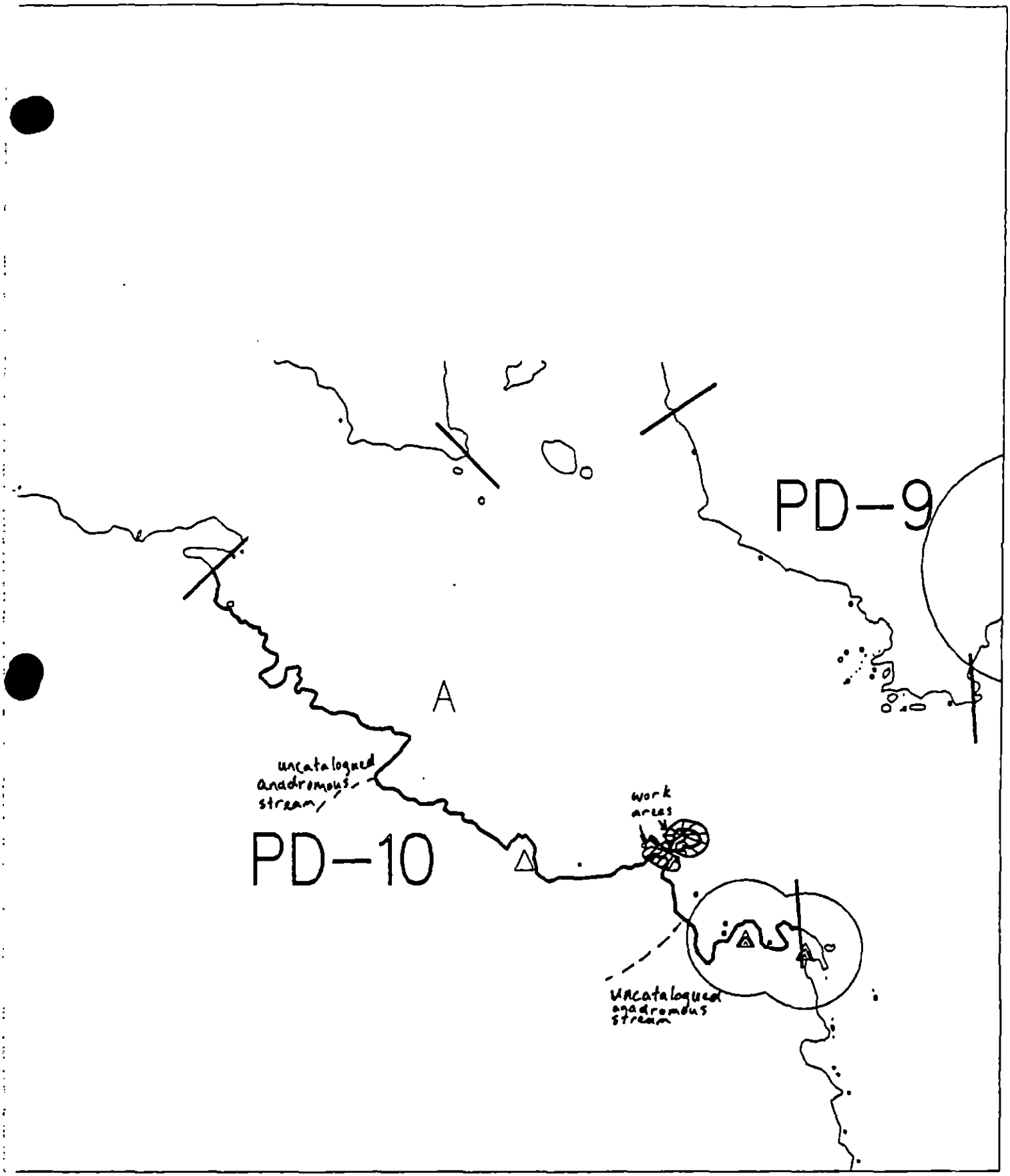
1A,1B	**Salmon Stream**	An ADF&G uncatalogued anadromous stream is in Subdivision A and more than 100m from work site. No constraint to manual pickup, tarmat removal and bioremediation.
1J	**Purse Seine Area**	Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC _____ Date 6-19-90

Prepared by _____ Date 6/16/90



EXXON

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

ECOLOGY MAP
SEGMENT PD-10

SUBDIVISION ___ (___of___)

METERS

0 888 1778

★ Seabird Colony
Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 2917 feet

SHORELINE EVALUATION

SEGMENT ST/ PD-11 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/20 to 9/30)
8AA Sensitive Estuary
4GG Alaska State Wilderness Park

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: Charles Z Holman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 11443 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: 4/20/90.
ADEC ART WEINER
EXXON Andy Tear
NOAA Bob Wescott
USCG KENNETH KEANE

FOSC: ____ DATE: 4-26-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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 / PD 11 SUBDIVISION: 4 DATE 4/8/90

USCG / NOAA
NAME JACQUI MICHEL SIGNATURE J Michel

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
We looked at all the likely areas for deposition of oil and failed to find any. The delta platform showed evidence of reworking on the seaward edge, but the landward section is very low energy. The subtidal had abundant infauna and a rich, diverse algae growth and seagrasses.

ADEC
NAME JOHN R. REED SIGNATURE John R Reed

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
This is a large segment with a lot of vertical cliffs with small pocket beaches mixed in, and also a large intertidal delta at the head of the bay. No oil was observed in this segment. I have read and agree with all data on S.Sht. for

LAND MANAGER DNR/DPOR
NAME Jeffrey S. Johnson SIGNATURE Jeff S Johnson

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS:
I concur with assessment. We skirted the segment by skiff, South to North, made landings on 2 small beaches, walked the intertidal delta in Taylor Bay, and checked the beaches on the east side of Taylor Bay, without finding oil. I recommend checking past records to determine where cleanup/treatment has occurred exactly + inspect that location specifically. If tar mats are found, I recommend manual removal by shovel. No oiled debris.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Mann USCG NOAA Michel SEGMENT ST/ PD-11
BIO Carr LAND REP Johnson - DNR SUBDIVISION A
EXXON Boyer ADEC Reed TIME 4:35 to 6:50
TEAM NO.: 18 TIDE LEVEL: +6 to +1 DATE 4 / 8 / 90
EST. SUBDIVISION LENGTH: 14,029 m ☑ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☑ Forest ☐ Rock
SURVEYED FROM: ☑ Foot ☑ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 20 % B 15 % C 25 % P 25 % G 5 % S 5 % M 5 % V 0 %
SLOPE: Lang 40 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☑ Low ☑ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 14,029 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BRN/BK	DBL/BK	GY/BK	DBL/TL	LBR/TL	SU	UI	MI	LI
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 NO	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☑ NO

TYPE N/A

#BAGS N/A

Photographs:

Roll No. none

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BRN/BK	DBL/BK	GY/BK	DBL/TL	LBR/TL	SU	UI	MI	LI		
1	35					✓	•									✓			N	PC throughout
2	40					✓	•									✓			N	P throughout
3	30					✓	•									✓			N	PCG Throughout
4	50					✓	•						•				✓		Y	P mud organic Through-
5	25					✓	•									✓			Y	out " "
6	25					✓	•										✓		Y	" "

COMMENTS Segment PD-11 is a diverse shoreline that includes vertical sea cliffs, cobble/pebble pocket beaches, as well as several large, bay-head deltas. We made 2 landings on pocket beaches along the southwest section of PD-11 and failed to find any trace of oil. Six of us searched the large delta surface at the NW end of the segment and failed to spot any oil. We walked all the pebble-cobble-mud beaches (and delta) on the NE end of the segment and failed to find oil. This is a biologically diverse and geologically spectacular area.

REVIEWED BA DATE 12 APR 90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PD-11 Subdivision A (1 of 2 SHEETS) Date (mo / day / yr) 4/8/90

Time (24 hr) 1635 Biologist M. CARR

(A) Substrate type and % of ~~segments~~ SUBDIVISION:
(1) Bedrock 20 (2) Boulder 15 (3) Cobble 25 (4) Pebble 30 (5) Sand 5 (6) Silt 5

(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. [redacted]

Frames DONE

BARNACLES

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M		1U	1M	1L	1U	1M	1L	
Bedrock			1L	1U	1M		1U	1M	1L	1U	1M	1L	
Boulder			2	2			2	2	2	2	2	2	
Cobble	3	3	3	3		3		3		3	3	3	NOT PRESENT
Pebble	4	4	4	4		4		4		4	4	4	
Sand	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY ZONE
	6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U		1L		1M		1U	1M	1L	
Bed													
Bould	2	2	2	2		2		2		2	2	2	
Cobb	3		3	3	3	3		3		3	3	3	NOT PRESENT
Pebb.	4		4	4	4	4		4		4	4	4	
Sand	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY ZONE
	6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

	Dense			Moderate			Sparse			Rare			
	1U	1M	1L	1U	1M	1L		1M		1U	1M	1L	
Bed													
Bould	2	2	2	2		2		2		2	2	2	
Cobb	3	3	3	3		3		3		3	3	3	NOT PRESENT
Pebb	4	4	4	4	4	4				4	4	4	
Sand	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY ZONE.
	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	
Bed													
Bould	2	2	2	2				2	2	2	2	2	
Cobb	3		3	3	3			3	3	3	3	3	NOT PRESENT
Pebb	4		4	4	4		4	4	4	4	4	4	
Sand	5	5	5	5	5	5	5	5	5	5	5	5	NOT PRESENT IN ANY ZONE
	6	6	6	6	6	6	6	6	6	6	6	6	

* Wildlife Observations/ General Comments:

Cobble, pebble and sand substrates comprise back bay tidal flats. Bedrock and boulder line the western length of bay.

Ecological Considerations:

Note that small cobble beaches along western length of bay are comprised of well-rounded rocks indicative of heavy wave action. Consequently, no organisms were observed there other than mussels (S) and barnacles (S) restricted to a few very large boulders. (S = sparse).

* see page 2.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/28/90

Segment ST / PD-11 Subdivision A (SHEET 2 of 2) Date (mo / day / yr) 4/8/90

Time (24 hr) 1635 Biologist M. CARR

(A) Substrate type and % of ~~segment~~ 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.____
Frames —

BARNACLES

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Cormorants (8) red-faced (1) pelagic.
Glaucous-winged gulls (≈100)
Harlequin ducks (10)

Grebe (1) unid.
Mountain goat (3)
Bald eagle (1), mature
Harbor seal (2)

N.W. crows (50)
Sea otter (5)
Mallard ducks (3:
Magpies (2)

Ecological Considerations:

Lesser scaup / Common goldeneye (80)

Saxidomus giganteus (butter clam) (# = ?)
Protothaca staminea (Pacific littleneck) (# =
Polinices pallida (moon snail) (# = ?)

Sensitivity code information - unavailable!

OG Manor

SEGMENT ST/ PD-11

SUBDIVISION A

DATE 4/18 90

SKETCH MAP

No sketch

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

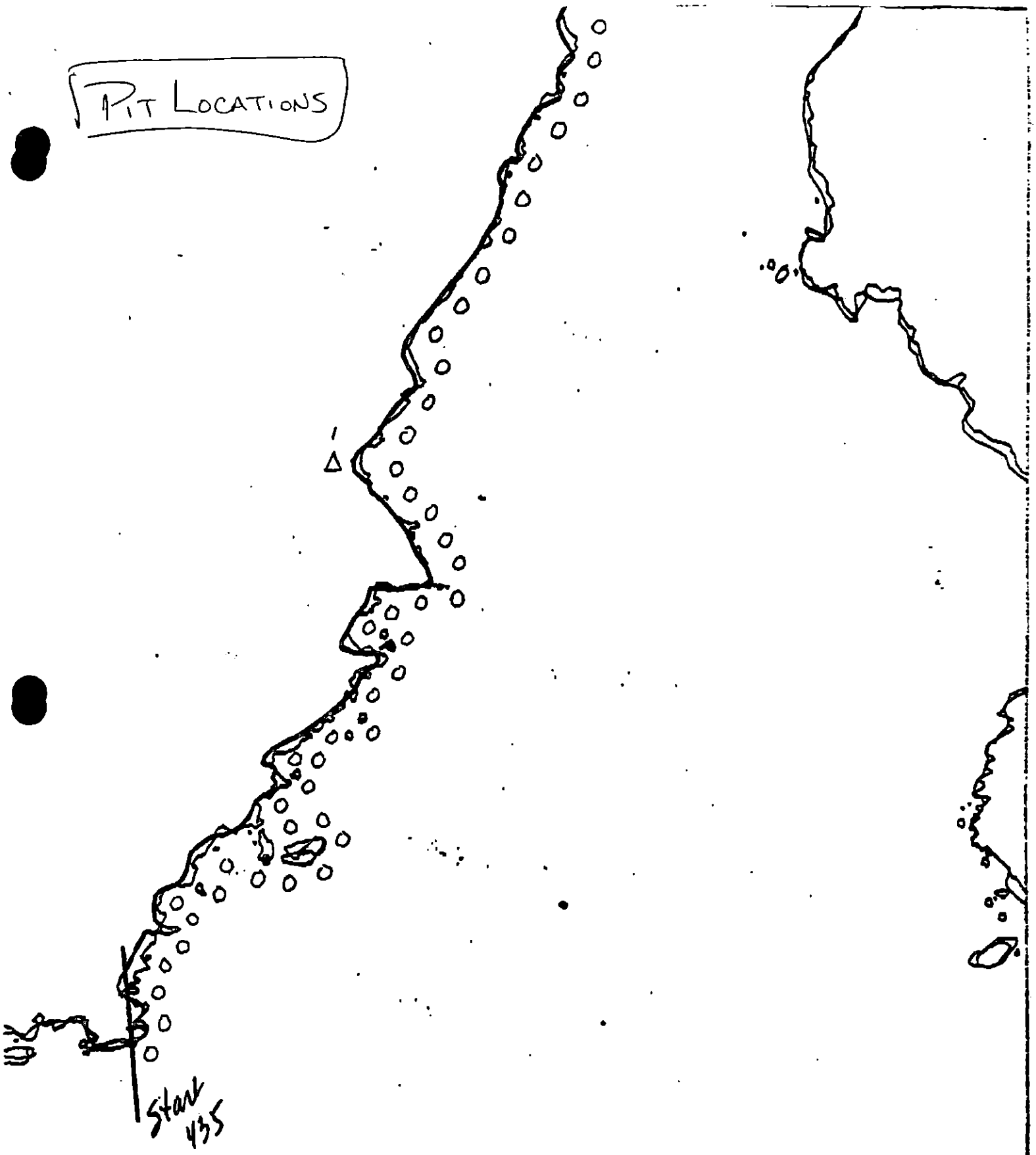
CT/S
Splashed Distribution

Oiled Vegetation

1 ⊶
Photo location, direction, and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST ___ MS 0 PT 0 TB 0 FL 0 NO 14,029

REVISION: 03/02/90



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

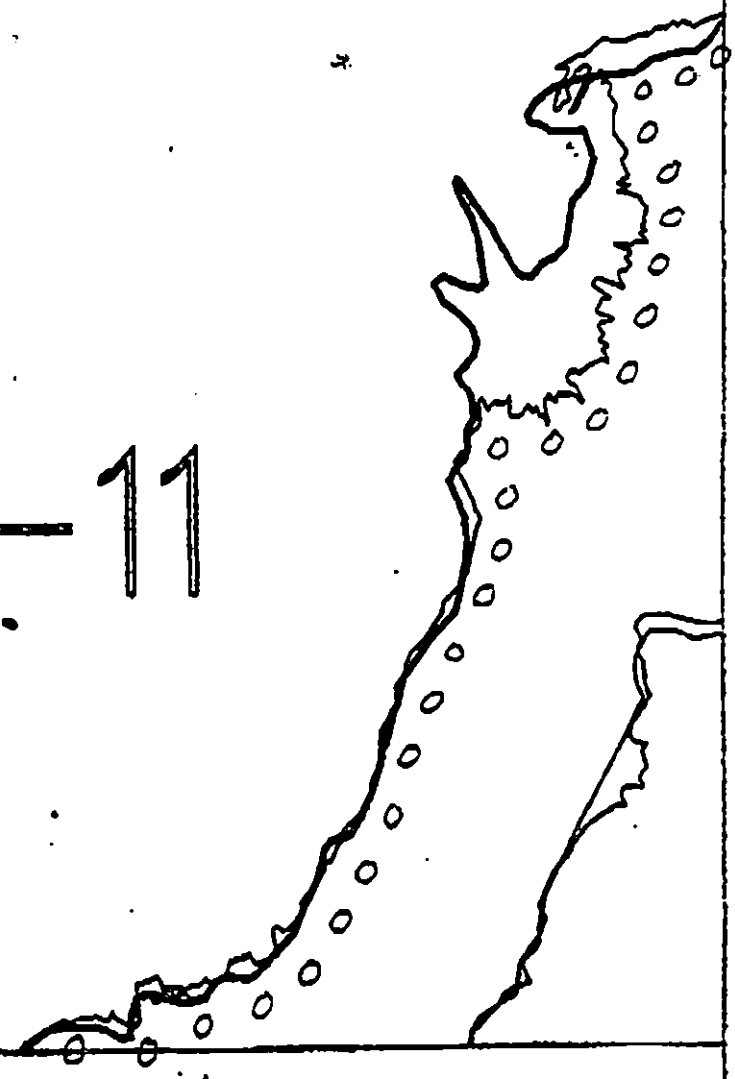
PD-11

EXXON Segment Length: 14029m

0 300 600 900
METERS

Map Key: PWS-PD-11a
Name: MANN
Date: 4/8/90
Date Entered:

PIT LOCATIONS



PD-11

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

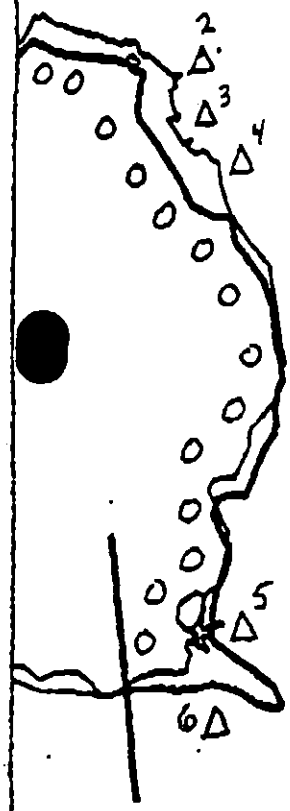
PD-11

EXXON Segment Length: 14029m

0 300 600 900
METERS

Map Key: PWS-PD-11c
Name: Mann
Date: 4/8/90
Data Entered:

PIT LOCATIONS



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

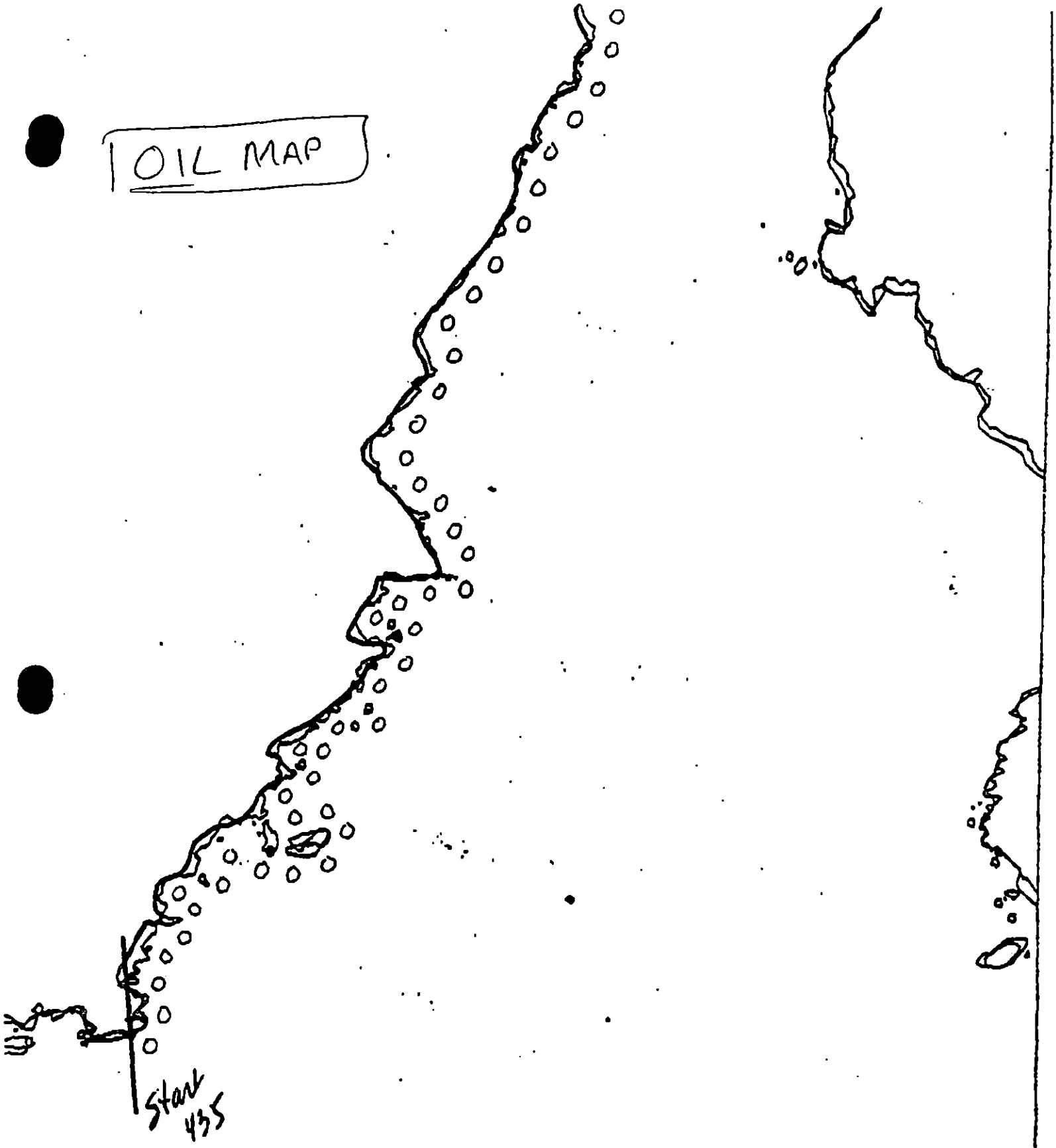
PD-11

EXXON Segment Length: 1402.9m

0 500 1000 1500
METERS

Map Key: PWS-PD-11d
Name: Mann
Date: 4/8/90
Date Entered:

OIL MAP



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

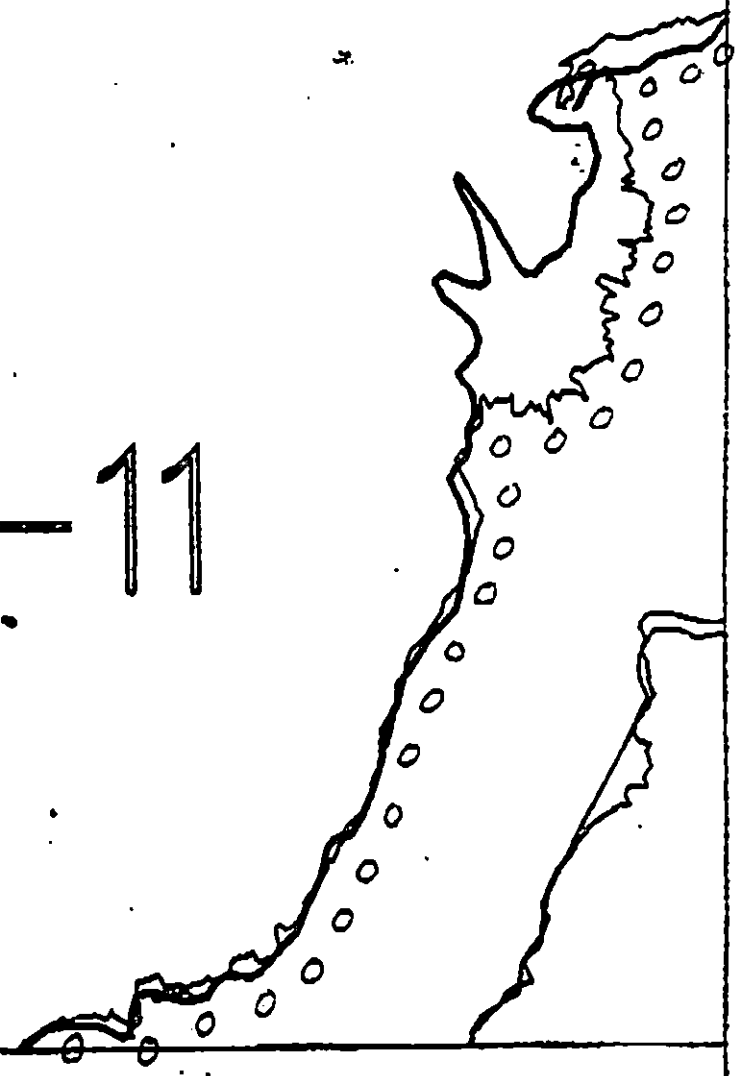
PD-11

EXXON Segment Length: 14029m

0 300 600 900
METERS

Map Key: PWS-PD-11a
Name: MANN
Date: 4/8/90
Date Entered:

OIL MAP



PD-11

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

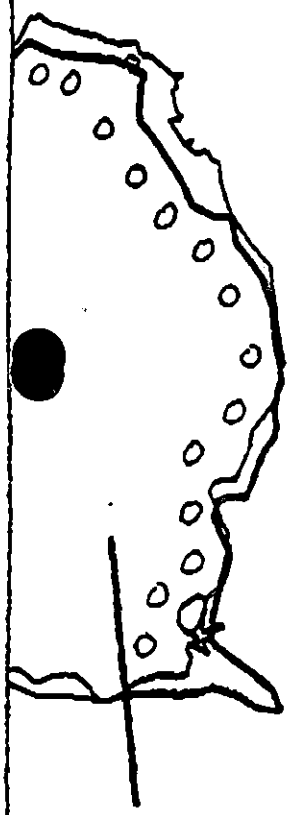
PD-11

EXXON Segment Length: 14029m

0 300 600 900
METERS

Map Key: PWS-PD-11c
Name: Mann
Date: 4/8/90
Date Entered:

OIL MAP



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

PD-11

EXXON Segment Length: 14029m

0 300 600 900
METERS

Map Key: PWS-PD-11d
Name: Mann
Date: 4/8/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PE-1 SUBDIVISION A (1 of 1)

	WORK WINDOW
Tarmat Removal	WORK FROM 7/1 to 8/15
Bioremediation	WORK FROM 7/1 TO 7/31

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

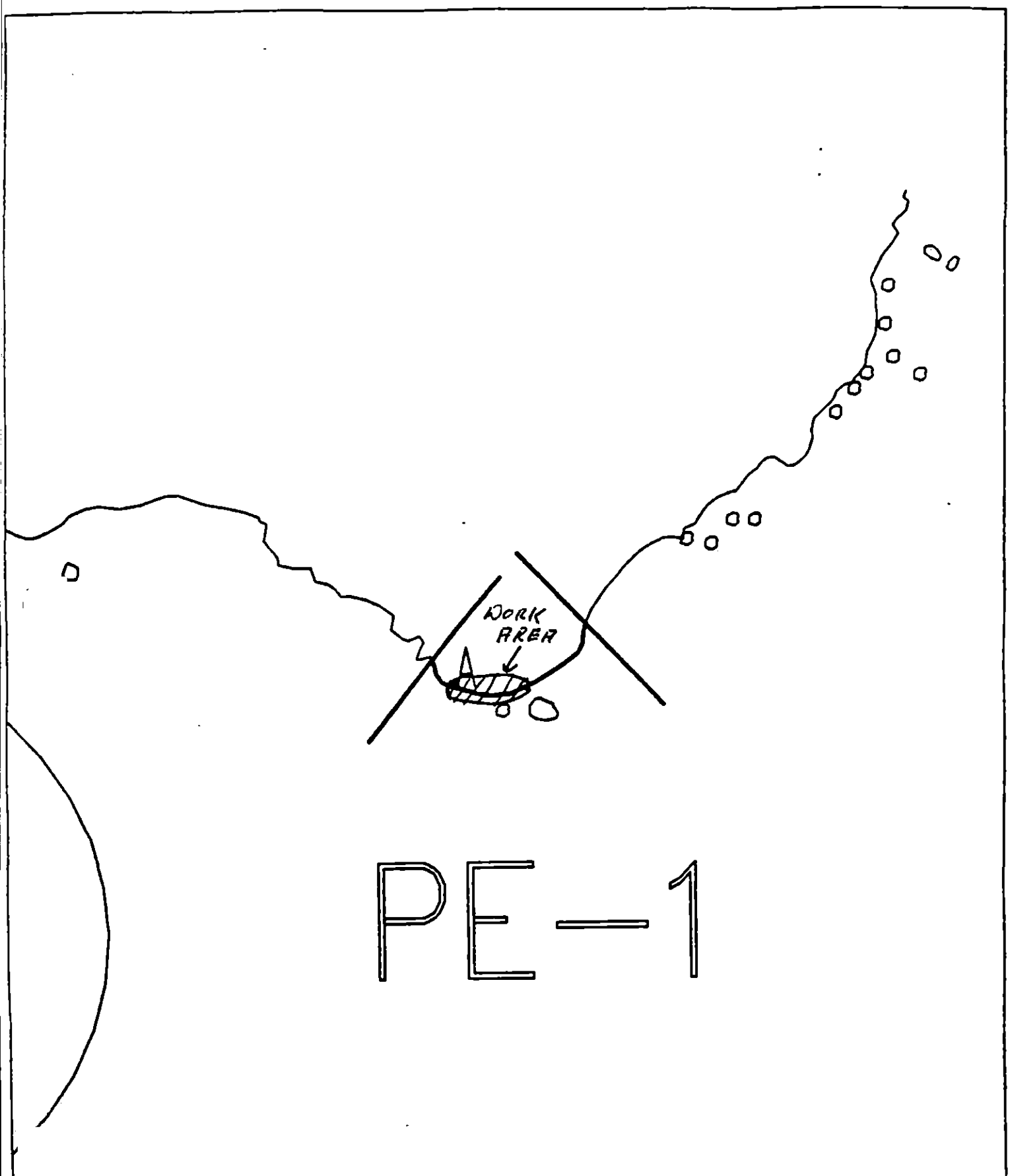
3N,O,P,Q	Harbor Seal And Sea Lion Pupping and Molting	Closed to bioremediation before 7/1 and after 7/31. Closed to tarmat removal before 7/1 and after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals or sea lions are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC _____ Date 6-10-90

Prepared by J. P. Phillips 6-10-90 Date 6/10/90



EXXON

ECOLOGY MAP
SEGMENT PE-1

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PE-002 SUBDIVISION A (1 OF 1) DATE 5/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
9BB Privately developed lands
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: [illegible] DATE: [illegible]

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 807 m: No Oil 626 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ___

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is removal of oiled rope and remaining tar patties as shown on attached sketch map.

TAG COMMENTS: ___

TAG APPROVAL DATE: 6/16/90
ADEC Ray Morris [illegible]
EXXON Andy Teal [illegible] FOSC: [illegible] DATE: 7-10-90
NOAA Joseph Talbott [illegible]
USCG G.A. Reiter [illegible]

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PE SUBDIVISION: 2 DATE 5-29-90

USCG
NAME AEC Vandepeels SIGNATURE AEC Vandepeels

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS 20 pits were dug ranging in depth from 20 to 61 cm. No oil was found in any pit. The tarballs that were found were picked up by the survey team. The oiled length of rope that was found was left. It was partly buried in among other debris (non spill related).

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 / PE -2 SUBDIVISION: A DATE 5/31/90

USCG
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Most of the recoverable oil was picked up by the survey crew. There is 1 large oily line toward the south end of the segment which should be picked up.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Perl Island
Land Representative Report
for May 29, 1990, Oil Inspection Trip

Perl Island
Land Representative Report
for May 29, 1990, Oil Inspection Trip

People present:

Rex Coulter - EXXON Supervisor
Marty Cramer - Oil geologist on contract to EXXON
John Dixon - Biologist on contract to EXXON
Russell Kunibe - Alaska Department of Environmental Conservation
Chief Rich Vandepels - U.S. Coast Guard
Stephen Anderson - Land owners representative
Harley Hess - Homesteader and island resident

2 ERA Helicopter pilots

We began the survey on the southern beach property line. We dug seven holes with no oil found in the sandy/stoney beach up to the salmon stream that empties into the ocean. This segment had many small oil splatters on rocks with larger coating on various pieces of driftwood. The predominant feature was a 3 foot square tangle of rope and electical wire which was heavily oiled.

The second segment moves north from the stream along the gradually sloping, fine-sand beach up to the steep gravel bank near the lodge. We dug thirteen more holes in this segment with no oil found. Again, we found small oil splatters on rocks and some coating on driftwood. Toward the north end we started to find numerous spruce needle tar balls 2-3 inches in length. This region is the predominant area where the oil came ashore in April/May of 1989. Attached are some of David Loutrell's April, June, and July 1989 still photographs of the oil. David, Harley, and lodge employees were on the island when the oil came ashore. Their response was to gather and bag between three and four hundred bird carcasses that might kill predators. Harley describes the oil in this area as apprearing like 500 cows had walked the beach leaving their droppings behind. This region is the area that I surveyed and videotaped during a May 10, 1989, inspection trip with other ranch owners. (I gave Marty Cramer a copy of the video tape on May 31, 1990.)

The short section from the front of the lodge to the northern most point of the beach contained many 2-3 inch tar balls mixed with spruce needles and other debris. We gathered many of these in Zip-lock bags as we walked through the area. An extremely large tar ball was found about the size of a flattened football. The party members were very impressed with the size and kept it mostly intact for origin analysis and possible display. No holes were dug.

The final section of beach turns east from the point to the cliffs. We walked through this section and observed no oil. We dug no holes.

While I can't conclude where the oil from April and May 1989 currently resides, I am pleased that it is not more readily noticeable. My recommendation for the Perl Island beach would be to remove the large oil/rope tangle near the salmon stream and have the same party walk the beach to recover more of the tar balls. Our ranch partners could then monitor the beach for more oil that may be discovered or come ashore.

Stephen W. Anderson
6/1/90

SHORELINE OILING SUMMARY

REVISION NO 34-390

OG Marty Cramer USCG [illegible] SEGMENT ST/ [illegible]
BIO John Dixon LAND REP Steve Anderson SUBDIVISION A (1 OF 1)
EXXON Rex Cantler ADEC Russel Kunike TIME 11:40 to 14:00
TEAM NO. A TIDE LEVEL +2 to -0.8 to +2 DATE 5/29/90
EST. SUBDIVISION LENGTH: 1433 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Grass to SE Fir and Trees at NE end
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
SURFACE SEDIMENTS: R 5 % B 5 % C 30 % P 20 % G 10 % S 30 % M — % V — %
SLOPE: Lang 70 % Hang 30 % Ver — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 883 m NO 550 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rs	rp	ra	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	su	us	ms	u
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X				X			
STAIN				X		X				X			
MOUSSE													
PATTIES				X						X			
TARBALLS				X		X				X			
FILM													
NO OIL											X	X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES (TARBALLS) 0.6 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE TARBALLS

#BAGS 0.5

Photographs:

Roll No. JD-1

Frames 9-20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE-SUBSURFACE SEDIMENTS
		op	or	ol	of	no		vo	vg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	su	us	ms	u	-			
1	30	-	-	-	-	X	- • -	-	-	-	-	-	-	-	X	-	-	-	-	-	-	S - S/P
2	20	-	-	-	-	X	- • -	-	-	-	-	-	-	-	-	X	-	-	-	-	-	P/C - S/P
3	20	-	-	-	-	X	- • -	-	-	-	-	-	-	-	-	-	X	-	-	-	-	C/P - S/P
4	30	-	-	-	-	X	- • -	-	-	-	-	-	-	-	-	X	-	-	-	-	-	S - S/P/C
5	45	-	-	-	-	X	- • -	-	-	-	-	-	-	-	X	-	-	-	-	-	-	C/B - S/P
6	40	-	-	-	-	X	- • -	-	-	-	-	-	-	-	-	X	-	-	-	-	-	S/P - S/G

COMMENTS Oiling was primarily tiny splatters (dots) on occasional cobbles and pebbles in SUT2 at south end of segment and splatters on a few logs and pieces of driftwood along south and central portions of segment. Numerous tarballs ranging from 1-10 cm in diameter were found along spring high tide line in north central part of segment. Along with one mousse patty that appeared to be more representative of light oil or waxy crude. The patty and most of the tarballs were recovered by survey team. One length of oiled rope was found half buried and tangled in debris at south end. It was not recovered

REVIEWED BAT DATE 6 June 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/12/90

SEGMENT ST/ PE-2 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	DBR/BR	DBR/PR	OY/YL	DBR/TL	LBR/TL	SU	UI	MI	LI				
7	40					X	-									X						P/G/S - S/G/P
8	35					X	-									X						S/P - S/G
9	50					X	-									X						S/P - S/G/P
10	61					X	-									X						S/G - S/G/P
11	55					X	-								X							S/G/P - S/G
12	25					X	-								X							S - S/G
13	50					X	-									X						S/P - S
14	60					X	-									X						S - S
15	45					X	-								X							S - S
16	45					X	-									X						S - S
17	45					X	-									X						S - S
18	45					X	-										X					S - S
19	50					X	-								X							S - S
20	50					X	-									X						S - S

COMMENTS

REVIEWED BAT DATE 6 June 90

Control No.
(Office Use Only)

PHOTOGRAPHY LOG

ROLL NO. PE-2 FROM 5/29 TO 5/29
TEAM NO. _____ PWS / (KENAI) / KODIAK / AK. PENINSULA

FRAME NUMBER	PHOTO-GRAPHER	DATE	SITE ID	LOCATION/COMMENTS see attached maps
1	Coulter	5/29	PE-2	West across 11m x 13 garbage pit
2	Coulter	"	"	" (seaward) across 11m x 9.5m garbage pit
3	"	"	"	South " " " " "
4	"	"	"	East " " " " "
5	"	"	"	North " " " " "
6	"	"	"	Trash piles in garbage pit
7	"	"	"	" " " " "
8	"	"	"	" " " " "
9	Dixon	"	"	From S boundary of segment (Property line) Toward rocky sp
10	"	"	"	" " " " " N toward other end of segme
11	"	"	"	Isopods & Littorina egg masses under MITE boulder
12	"	"	"	Rock spit at S end of segment c. 0' - Dense algae
13	"	"	"	" " " " " " " " " "
14	"	"	"	" " " " " " " " " "
15	"	"	"	Oiled line tangled in cable on storm berm - Seal seg
16	"	"	"	" " " " " " " " " "
17	"	"	"	Oiled drift on sand berm - 100m N of stream
18	"	"	"	Weathered mousse patch - mid-segment berm
19	"	"	"	N boundary of segment from storm berm
20	"	"	"	View E from rock outcrop at N boundary of segment
21	Coulter	"	"	Trash pile next to House
22	"	"	"	" " " " "
23	"	"	"	Trash pile and house
24	"	"	"	Trash can
25	DIXON	5/29	US-2	From back beach - mid segment View East
26	"	"	"	" " " " " " View West
27	"	"	"	From [redacted] berm - mid segment View East
28	"	"	"	" " " " " View West
29	Coulter	5/29	IN Lab	Field Sample - Rec has id info

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PE-2 Subdivision A Date (mo / day / yr) 5/29/90

Time (24 hr) 1130-1400 Biologist John Dixon

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 30 (4) Pebble 30 (5) Sand 30 (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 5 Low 85

(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. PE-2
Frames F9-20

BARNACLES

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

NOT PRESENT

MYTILUS

Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
2	2	2	2	2	2	2	2	2	2	X	2
3	3	3	3	3	3	3	3	3	3	X	3
4	4	4	4	4	4	4	4	4	4	X	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 PRE

GASTROPODS

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

NOT PF

FUCUS

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

NOT P NT

Wildlife Observations/ General Comments: Water line during survey: -0.7 to +4.5
Gulls (~200) waterfowl (~100), shorebirds
The estimates of overall abundance in the above matrix are not very meaningful because of the extreme habitat heterogeneity. The areas of rock outcrop had high cover & diversity, whereas the extensive cobble/pebble beach was extremely depauperate.

Ecological Considerations: See Attached sheet.
The rocky spit & dense mussel beds in the cobble/pebble/gravel flats south of the stream mouth should be avoided. The beach below the area where mussel patches were collected is a low energy cobble/pebble beach & not sensitive.

OG M. Cramer

SEGMENT ST/ PE-2

SUBDIVISION A

DATE 5 / 29 90

CHECKLIST

- ✓ N Arrow
- ✓ Approx. Scale
- ✓ Seg/Sub Bndry
- ✓ Off Dist.
- Width
- Length
- % Cover
- ✓ Substrate Character
- ✓ Est HWL/LWL
- ✓ SSL
- ✓ Profile Location(s)
- ✓ Profile(s)
- ✓ Pit Location(s)
- ✓ Photo Location(s) (Sen. Attached)

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

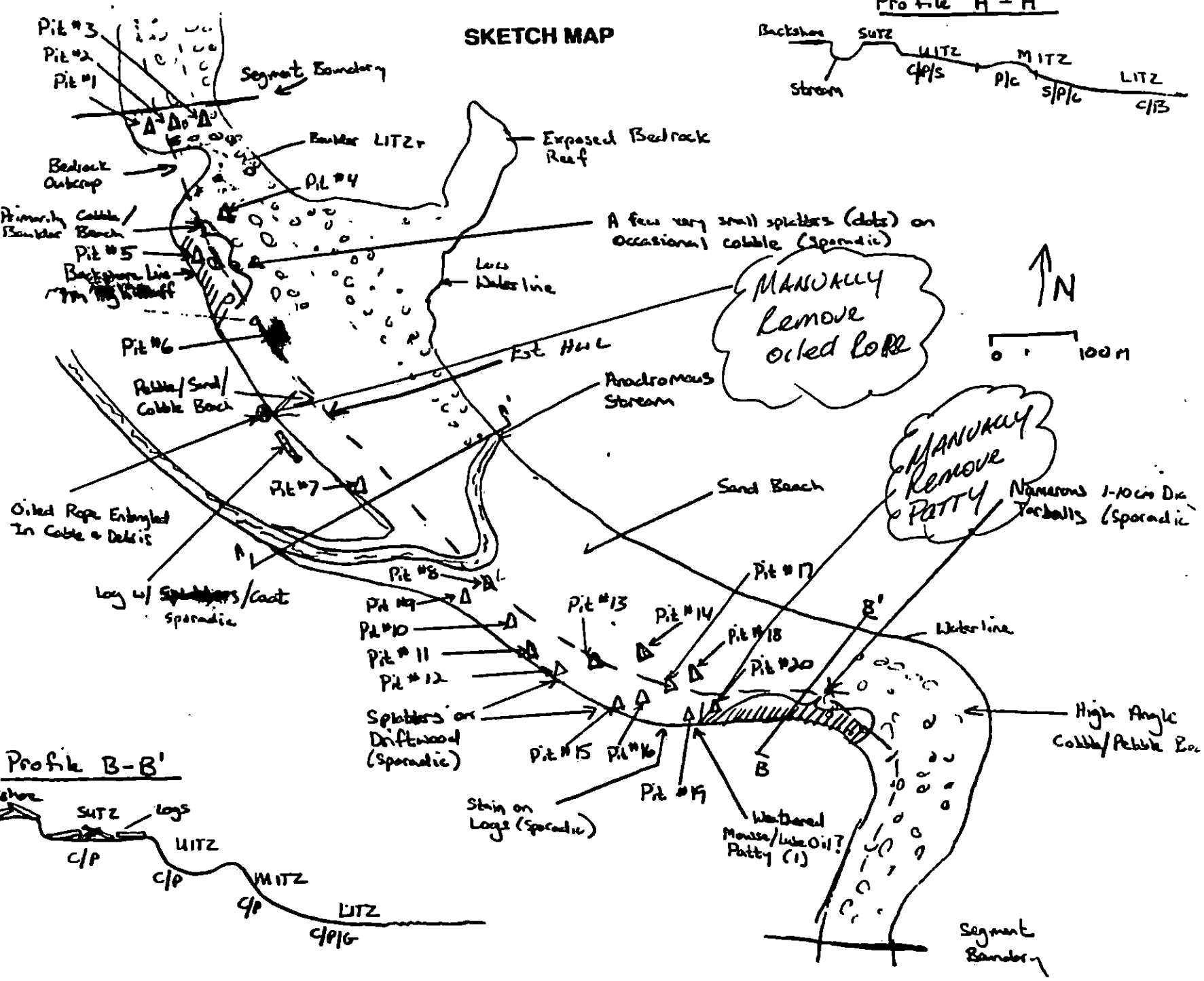
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

SKETCH MAP



Oil Characteristics (m): AP____ PO____ CV____ CT 1 ST 1 MS____ T____ TB 75 FL____ NO 550

Segment: PE-02 Subdivision: A Date: 05/29/90
Time of survey: 1130-1400 Waterline during survey: -0.7 - +4.5 feet
Biologist: John Dixon

ECOLOGICAL SUMMARY

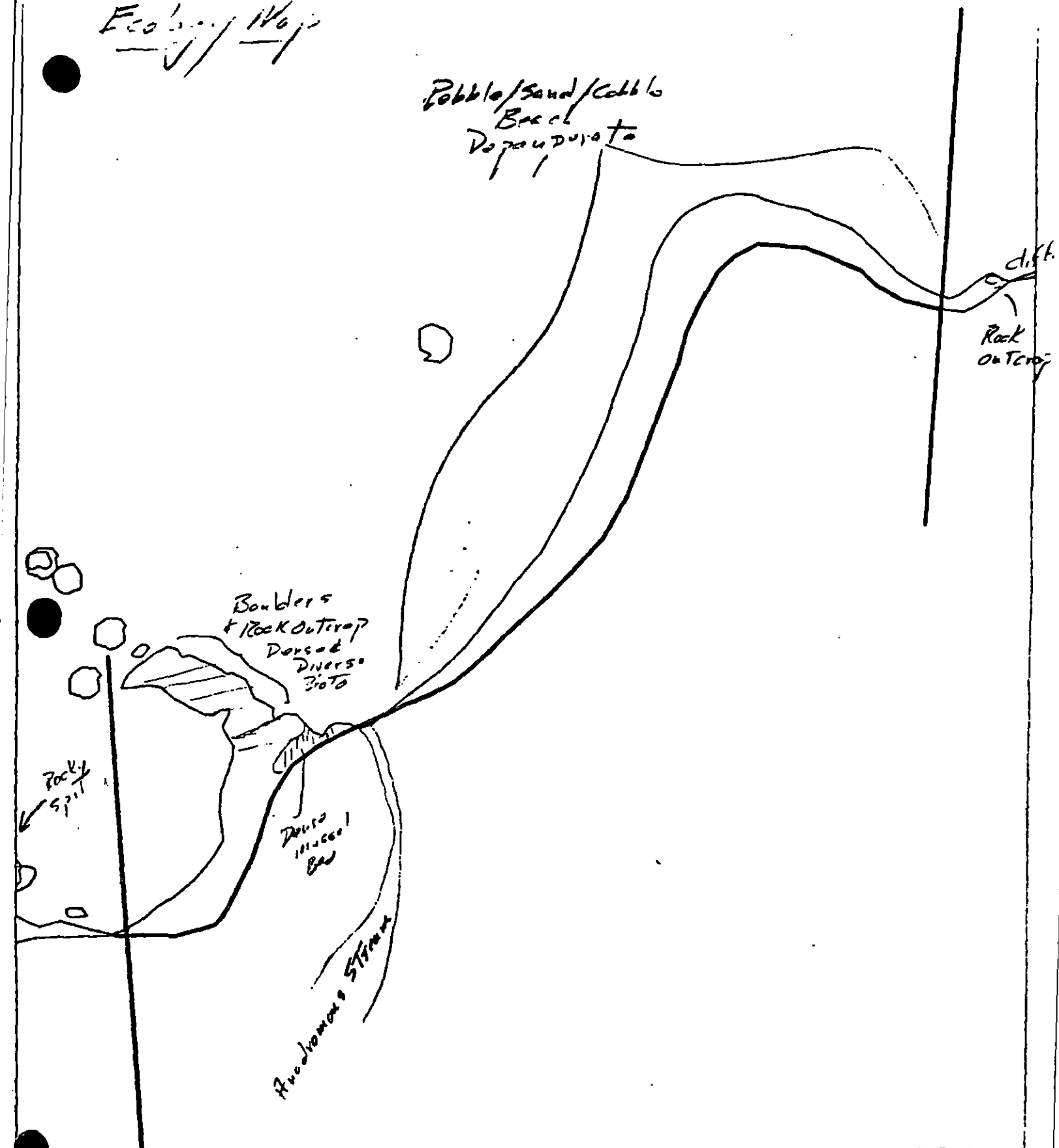
This 1433-m long segment is made up of three major habitat types: (1) rock outcrop with a patchy boulder veneer; (2) gently sloping, protected cobble/pebble beach, and; (3) high energy pebble/sand/cobble beach. The southern part of the segment is partially in the shadow of two rocky spits and wave energy and the coarseness of the substrate tends to increase toward the north, where the beach is also narrower and steeper.

Rock outcrop and boulders, and protected cobbles make up less than 20 percent of the segment but contain essentially all of the biota. The stable outcrop and boulders have 80 to 100 % algal cover in the LITZ and MITZ. Alaria is very abundant in the lower areas and juvenile plants (< 10 cm long) are common. Ulva, Fucus, Palmaria, and filamentous reds and greens are also abundant. Under the boulders, the most prominent organisms were the seastar Leptasterias (around 30 % brooding eggs), the whelk Searlsia, the isopod Idotea, and hermit crabs. Higher on the shore Alaria drops out and Fucus is more abundant. Besides the algae seen lower on the shore, Odonthalia, Halosaccion, Urospora, and Porphyra are common. The barnacle Semibalanus carriosus was common on outcrops in the MITZ. Grazing snails were rare.

The protected cobble/pebble beach in the LITZ supports about 80% algal cover with many of the species seen on the more stable substrates present. Alaria was less abundant and Fucus more so. Littorines are sparse in the LITZ but increase in abundance higher on the shore. In the lower areas the cobbles and pebbles are set in a a sandy gravel matrix and hence the crevice fauna is not well represented. In the MITZ the cobbles are larger and more protected. Littorina scutulata recruits (c. 2 mm) are common. Under the rocks there are very high densities of hermit crabs, the isopods Idotea and Gnorimosphaeroma and many Littorina egg masses. In the area south of the anadromous stream, there is substantial freshwater runoff and many shallow pools. Rhodomela larix is abundant and mussels, Mytilus edulis, dense among the pebbles and gravel.

The only marine organisms noted on the sandy high energy beaches were amphipods in the HITZ.

Ecology Map



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

PE-2·A

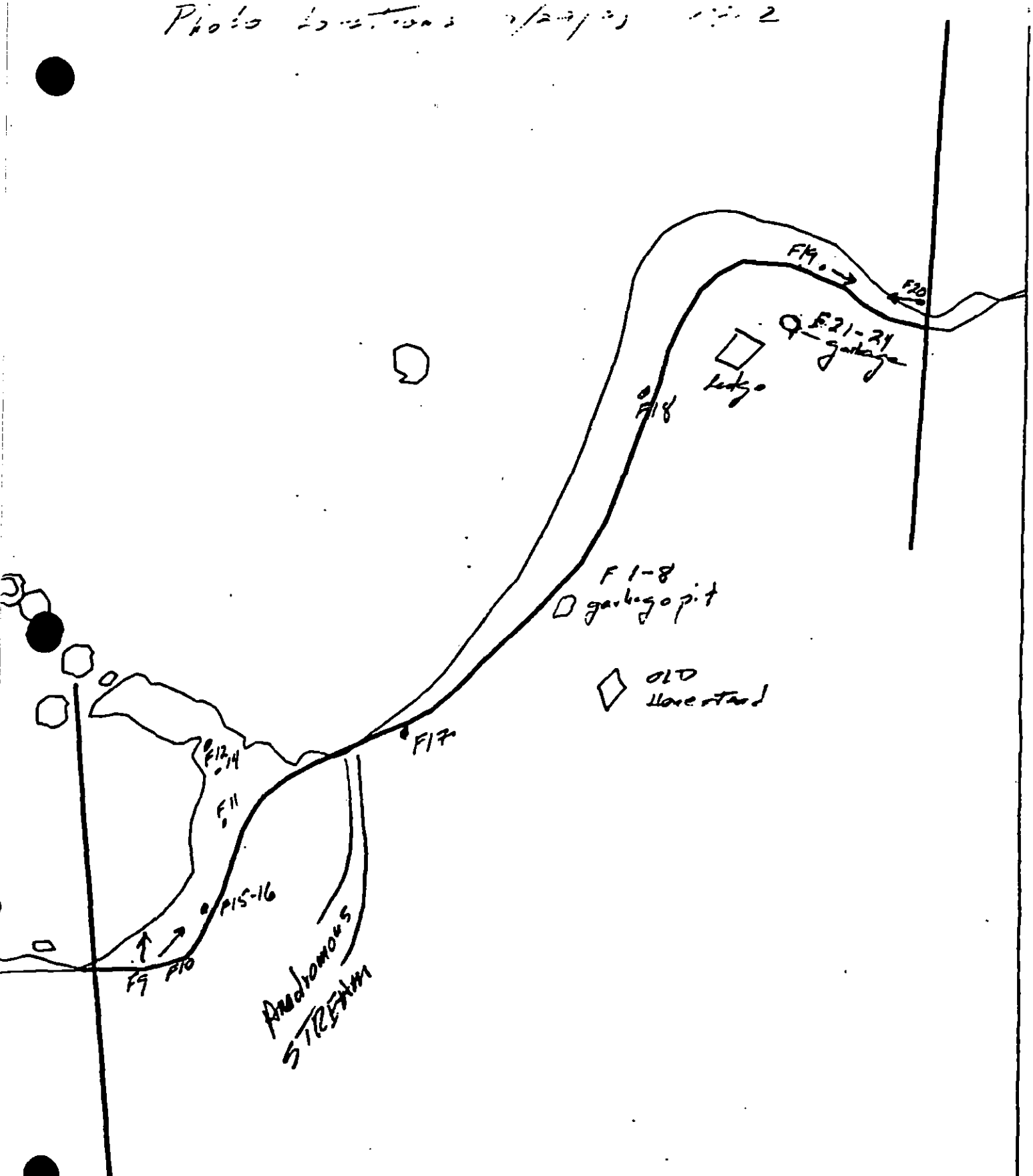
ADEC Segment Length: 1433m

Map Key: KEN-PE-2

Name: _____

Date: _____

Photo locations map No. 2



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

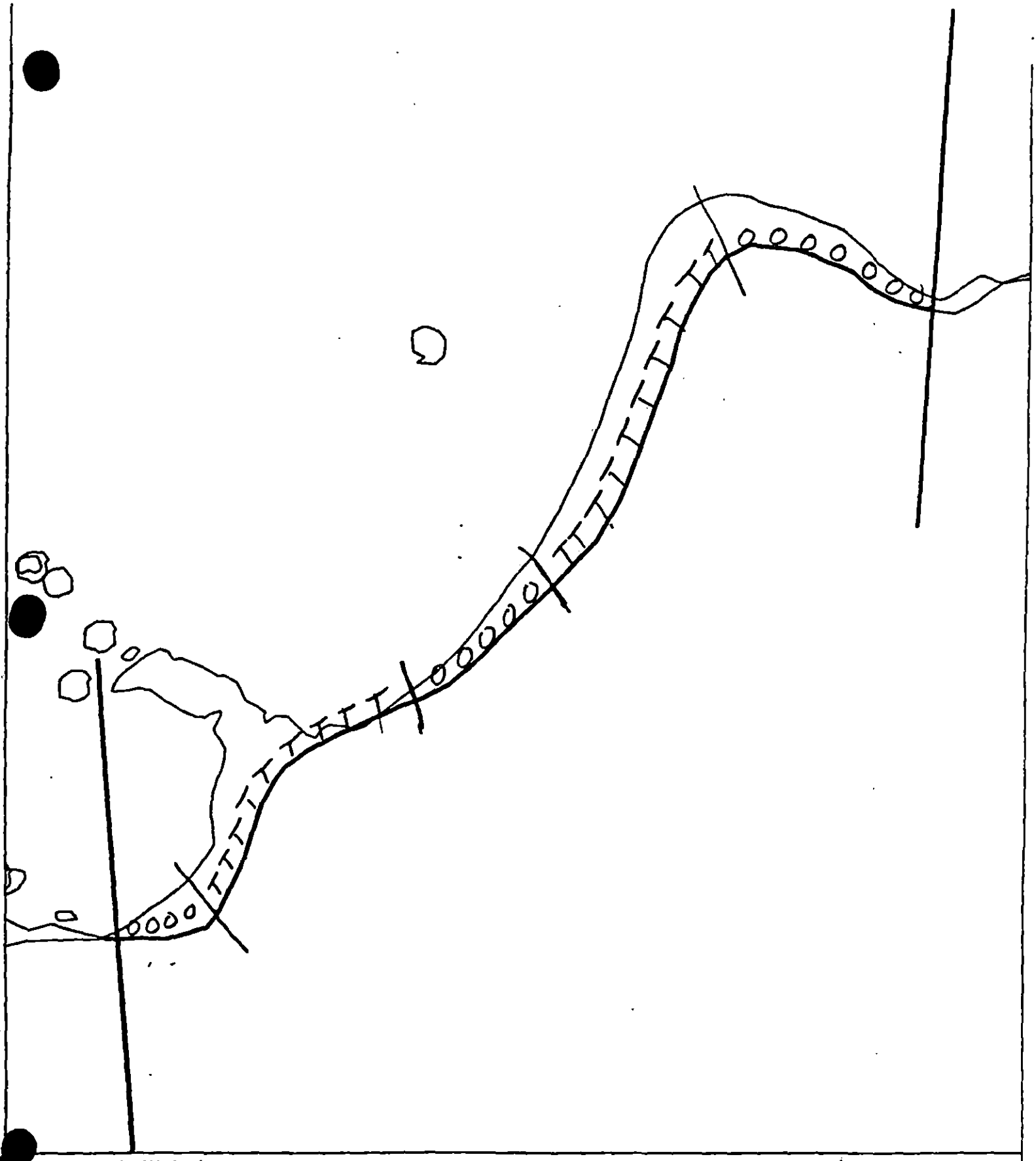
PE-2

ADEC Segment Length: 1433m

Map Key: KEN-PE-2

Name: _____

Date: _____



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

PE-2

ADEC Segment Length: 1433m

Map Key: KEN-PE-2
Name: Marty Cramer
Date: 5/29/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PE-2 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

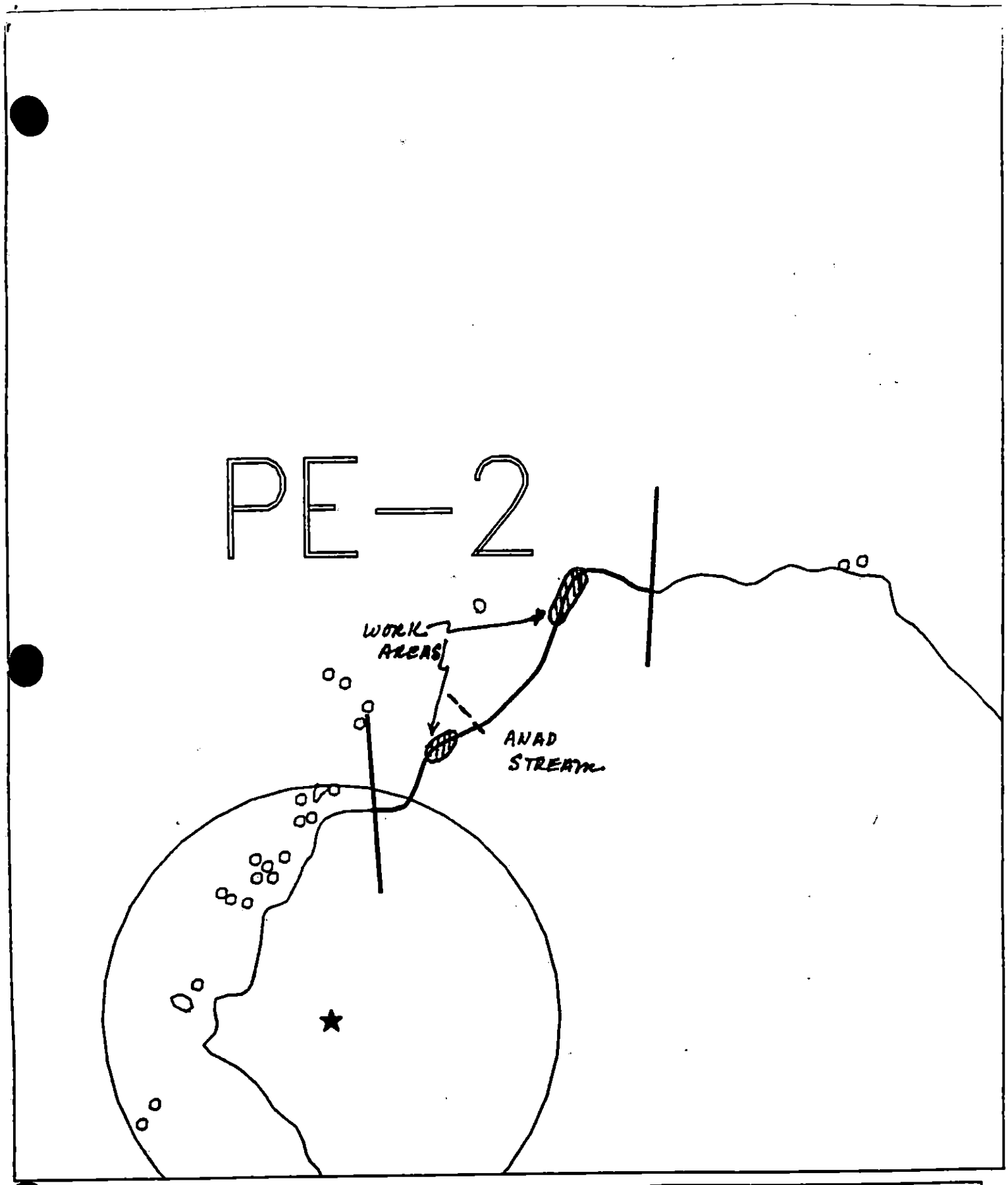
1A,B Salmon Stream An ADF&G uncatalogued anadromous stream is in Subdivision A. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC [signature] Date 7-11-90

Prepared by J.P. Phillips Date 7/10/90



EXXON

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

ECOLOGY MAP
SEGMENT PE-2
SUBDIVISION 4 (1 of 1)

METERS
0 451 902

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1480 feet

SHORELINE EVALUATION

SEGMENT ST/ PK-01 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; stream mouth (catalog #12970) Fry outmigration (1A) - 3/1 to 5/15; Salmon spawning (1B) - 7/10 to 8/31; Seabird colony (5R) - 5/1 to 9/1; Active bald eagle nest (5T) - 3/1 to 6/1; Deer harvesting (7II) - 8/15 to 2/28.

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

SHPO SIGNATURE: [illegible] DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 610 m: No Oil 491 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: 4/11/90.

ADEC JOHN BAUER [illegible]
EXXON ANDY TGA [illegible]
NOAA Bud Wescott [illegible]
USCG G.A. REITER G.A. Reiter

FOSC: [illegible] DATE: 4-26-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / Pk-1 SUBDIVISION: A DATE 31 MAR 90

USCG CWO2
NAME John McMahon SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
1. Oil is Asphalt (inert) and does not warrant a clean-up. It is very sticky & sparse

ADEC
NAME Greg Winter SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

WHILE THE OIL PRESENT IN ~~PKGOT~~ PK-1, SUBDIVISION A IS, IN MOST CASES EASILY REMOVED, THE SPARSE DISTRIBUTION MAKES THIS A POOR CANDIDATE FOR TREATMENT.

LAND MANAGER
NAME DNR NRMI Mike Bennett SIGNATURE Mike Bennett

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
Very spare oil present. Area use sensitive resources referenced as mixture of herring spawning, limited recreation & subsistance. The limited amount of oil would not impact the present use. No treatment recommended.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 03/2

OG D. Fitzgerald USCG S. McMahon SEGMENT ST/ PK-1
BIO D. Raider LAND REP DNR M. Bennet SUBDIVISION A (1 OF 2)
EXXON S. Nauman ADEC G. Winter TIME 9:30 to 11:10
TEAM NO.: #15 TIDE LEVEL: 0 to -20 cm DATE 31 / MAR / 90
EST. SUBDIVISION LENGTH: 1130 m ☐ Sun ☑ Clouds ☑ Fog ☑ Rain ☑ Snow
UPLANDS DESCRIPTION: ☐ Grass ☑ Forest ☑ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: West to East
SURFACE SEDIMENTS: R 5 % B 40 % C 40 % P 5 % G 5 % S 5 % M ___ % V ___
SLOPE: Lang 5 % Hang 85 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ___ m M ___ m N ___ m VL 650 m NO 480 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BRL/BR	DBR/RW	OY/OL	DBR/TL	LBR/SL	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES				X		X					X		
TARBALLS				X		X					X		
FILM													
NO OIL										X		X	X

PAVEMENT: H F S NONE sq. m by ___

PATTIES / TARBALLS < 1/4 bag BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE ___

#BAGS ___

Photographs: CAMERA BROKEN

Roll No. ___

Frames ___

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	BRL/BR	DBR/RW	OY/OL	DBR/TL	LBR/SL	SU	UI	MI	LI		
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS - Priority 1
- very, very sporadic occurrence of patties and tarballs, some embedded with pebbles and granules on large cobbles and boulders
- not pits dug due to beach composition (most boulders and large cobbles) and the overall lack of oil on the beach
- two creosote logs along the supratidal zone (not related to oil spill)

REVIEWED JW DATE 4-1-90

ADEC GW

SCAT TEAM P.02

SHORELINE ECOLOGICAL SUMMARY

REVISION: [illegible]

Segment ST / PK 001 Subdivision A Date (mo / day / yr) 3/31/90

Time (24 hr) 9:30 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 40 (3) Cobble 40 (4) Pebble 10 (5) Sand 5 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 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:
Roll No. None
Frames

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:
Eagle flying at treetop levels, nudibranch in lower intertidal zone

Ecological Considerations:

2M (4/1 - 6/15) Herring Spawning
7II (8/15 - 3/1) Deer Harvesting
5R (5/1 - 9/1) Seabird Colony
5T (3/1 - 6/1) Active Bald Eagle Nest → Sited Eagles in Area
1B (7/10 - 9/1) Salmon - Stream mouth Spawning

Positive sitting

PK 001, Subdivision A Biology Comments

- Fucus was of greatly varying densities; In western quarter of subdivision moderate amounts of fucus in the Middle Mid-Intertidal Zone; then, moving east, there is a break of roughly 50 meters in the center of the embayment where no fucus is present, + continues with Moderate to Dense amounts of fucus after + 50 meters to end of subdivision. Green filamentous algae is dense in the 50 meter break.
- Red 'fucus' is located in the Mid-Intertidal Zone
- Barnacle spat is erratic (low-medium localized densities) wh it is located with fucus specifically.
- No evidence of dead/dying flora or fauna
- Abundant lichen in Upper Intertidal Zone
- Some small, sporadic and localized mytilus on Eastern 1/4 of segment - juveniles predominantly
- Moderate Ulva located in Lower Mid-Intertidal Zone with fucus
- No animal tracks seen in snow

ADEC BJ

OG Fitzgerald

SEGMENT ST/ Pk-1

SUBDIVISION A

DATE 31 / MAR 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

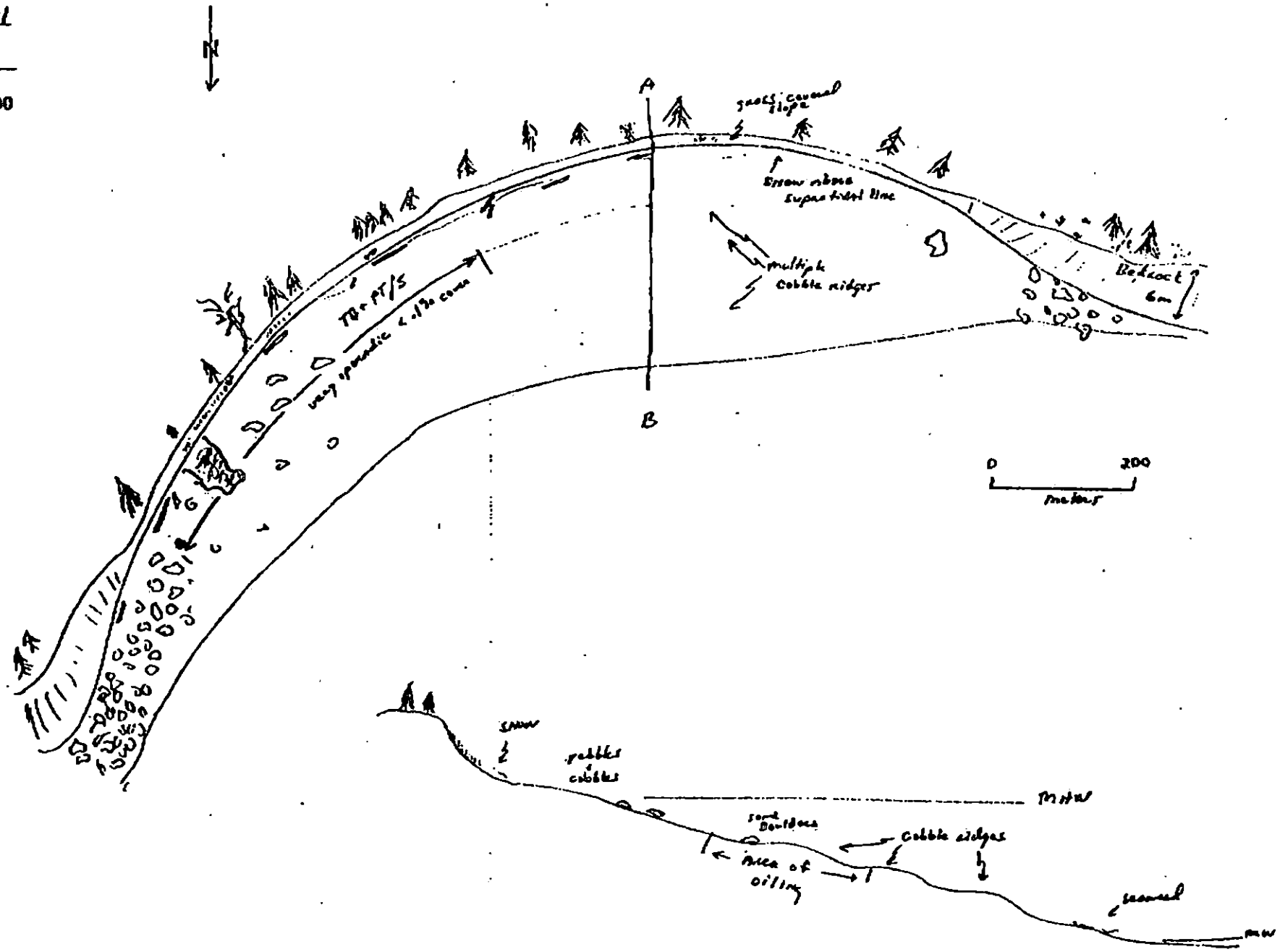
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

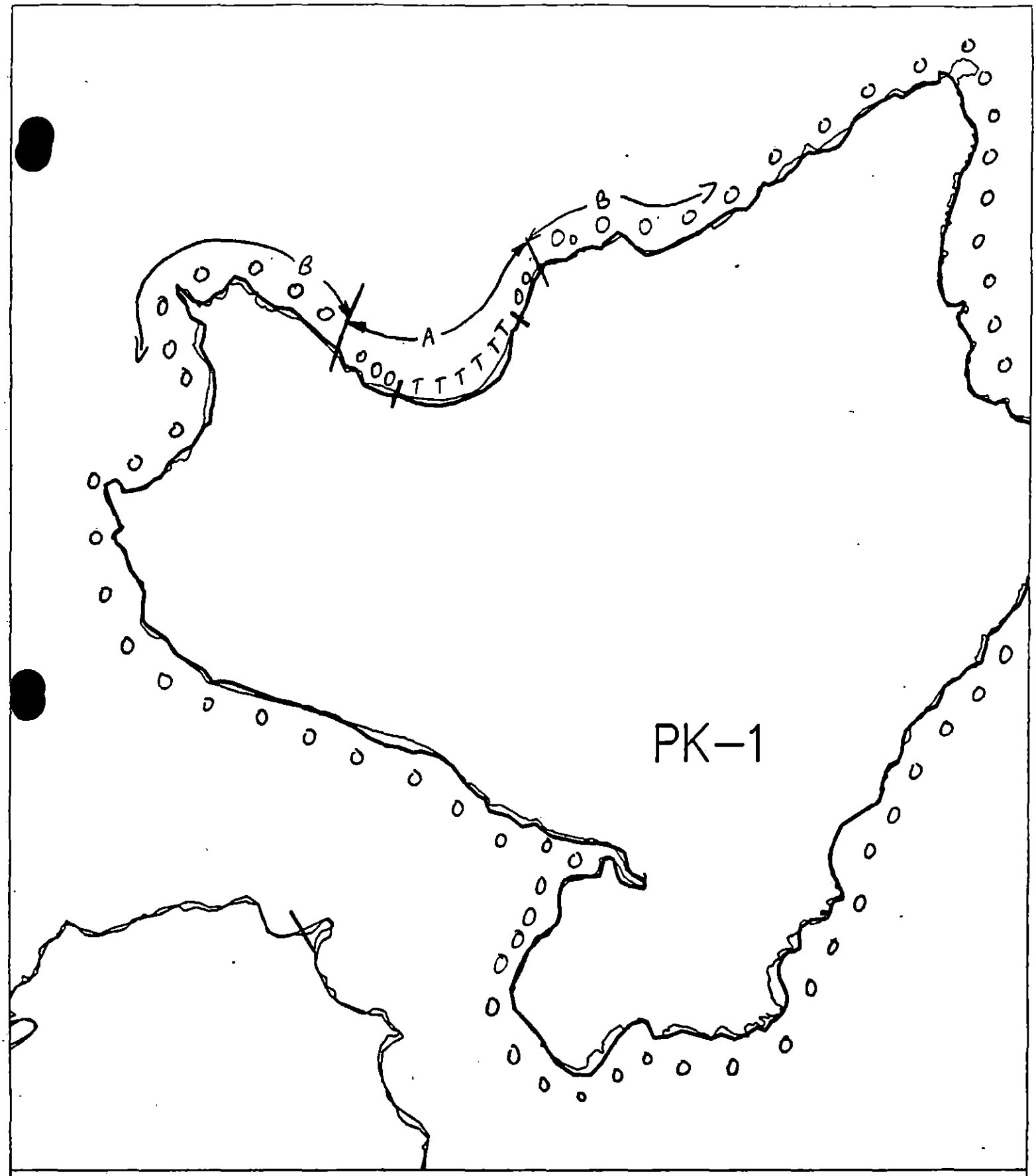
1 Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP ____ PO ____ CV ____ CT ____ ST ____ MS ____ PT 300 TR 340 FL ____ NO 480 m

REVISION:03/1400



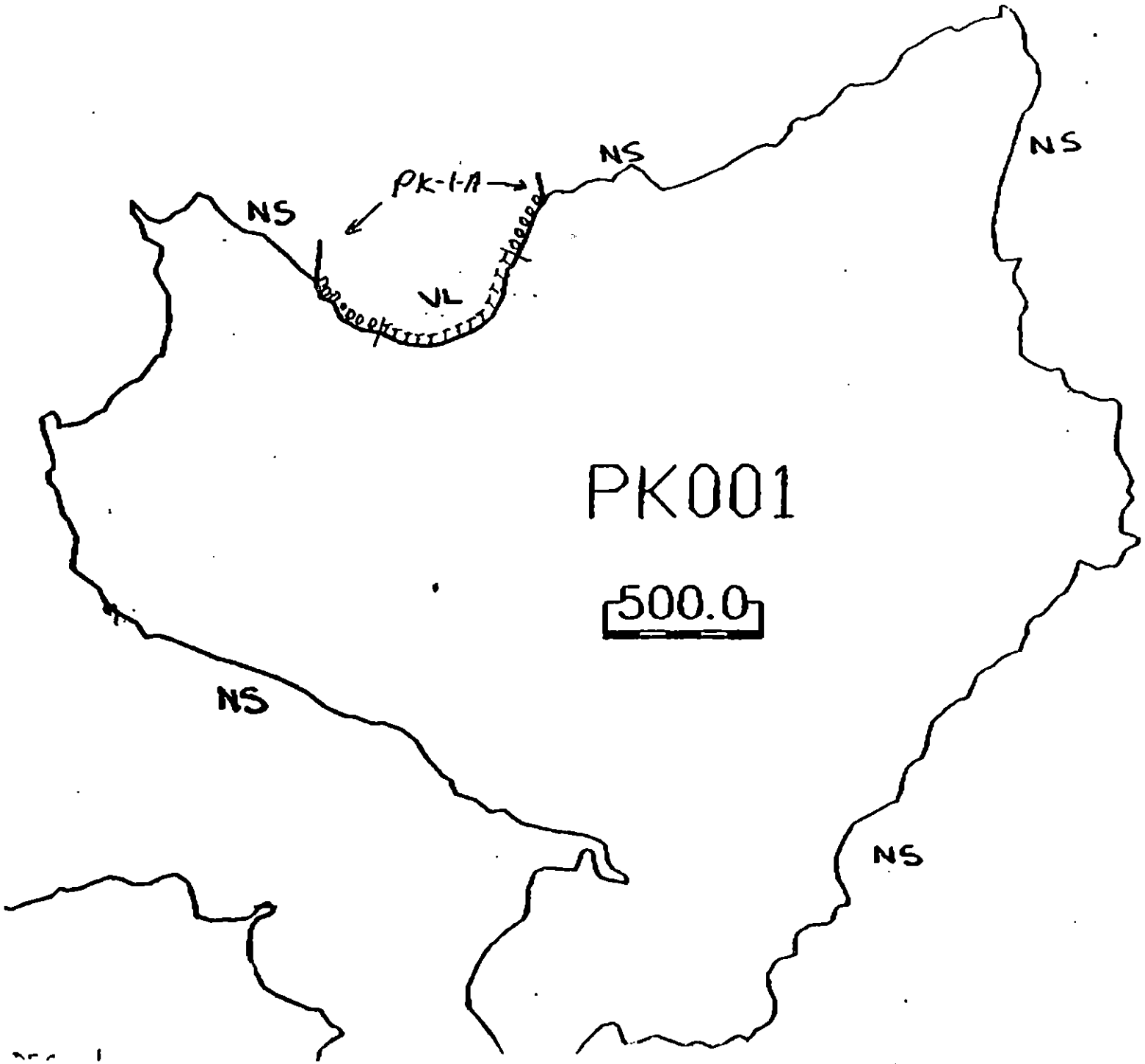
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PK-1A

ADEC Segment Length: 15455m

0 300 600 900
METERS

Map Key: PWS-612a
Name: FITGERALD
Date: 3-31-90
Data Entered:



Duncan M. Fitzgerald
31 March 1990

(Note - only map given)

OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

SHORELINE EVALUATION

SEGMENT ST/ PK-01 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Stream mouth (catalog #12970) Fry outmigration (1A) - 3/1 to 5/15; Spawning (1B) - 7/10 to 8/31; Seabird colony (5R) - 5/1 to 9/1; Active bald eagle nest (5T) - 3/1 to 6/1; Deer harvesting (7II) - 8/15 to 2/28.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 12916 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: 4/12/90.

ADEC JOHN BAUER John Bauer

EXXON ANDY TOR Andy Tor

NOAA Burl Westcott Burl Westcott

USCG M. J. HALL M. J. Hall

FOSC: [illegible] DATE: 5-12-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PK-001 SUBDIVISION: _____ DATE 3/31/90

USCG
NAME CWO2 J. MC MAHON SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

1. NO OIL, tarballs observed.

ADEC
NAME GREG WINTER SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

IT WAS DIFFICULT TO SEE THE SHORELINE FROM MY VANTAGE POINT IN THE HELICOPTER, HOWEVER, DEC SHORELINE ASSESMENT STAFF INDICATED THAT THERE WAS NOT A PROBLEM IN THIS AREA.

LAND MANAGER
NAME Mike Bennett ADNR- NRMI SIGNATURE Mike Bennett

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Segment resource priorities for the area assessed as being misc. bird use, low level recreation and subsistence. Area observed during a helo. over flight- not previously assessed. Deer / eagles and other wildlife present and did not appear to be stressed. No treatment recommended.

REVISION NO. 03/31/90

SHORELINE OILING SUMMARY

REVISION NO. 0.

OG D. Fitzgerald USCG J. McMahon SEGMENT ST/ Pk-1
BIO D. Raiden LAND REP ONR M. Bennet SUBDIVISION B
EXXON S Norman ADEC G. Winter TIME 14:55 to 15:45
TEAM NO.: #15 TIDE LEVEL: 210cm to 235cm above mean DATE 31 / Mar / 90
EST. SUBDIVISION LENGTH: 14325 m ☑ Sun ☑ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☑ Grass ☑ Forest ☑ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☑ Helo WORKING DIRECTION: counter clockwise around to
SURFACE SEDIMENTS: R 25 % B 40 % C 25 % P 5 % G 4 % S 1 % M ___ % V ___
SLOPE: Lang 25 % Hang 55 % Vert 20 % WAVE EXPOSURE: ☐ Low ☑ Med ☐ High
OIL CATEGORY LENGTH: W ___ m M ___ m N ___ m VL ___ m NO 14325

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT: H F S ___ sq. m by ___

PATTIES / TARBALLS ___ BAG

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTE ☐ YES ☐ NO

TYPE ___

#BAGS ___

Photographs:

Roll No. ___

Frames ___

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	HO	(CM-CM)	UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI		
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS

- Surveyed from Helicopter and no oil was observed.

Page 1 of 4

REVIEWED JW DATE 4-1-90

ADEC GW

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PK-001 Subdivision B Date (mo / day / yr) 3/31/90

Time (24 hr) 14:55 Biologist DANIEL RANDER

N/A (A) Substrate type and % of segments:
(1) Bedrock____ (2) Boulder____ (3) Cobble____ (4) Pebble____ (5) Sand____ (6) Silt____

N/A (B) Overall % cover of biota (% of segment): Dense____ Moderate____ Low____

N/A (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. NONE
Frames____

N/A **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	NOT PRESE
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	

N/A **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	NOT PRESEI
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	

N/A **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	NOT PRESEI
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	

N/A **FUCUS**

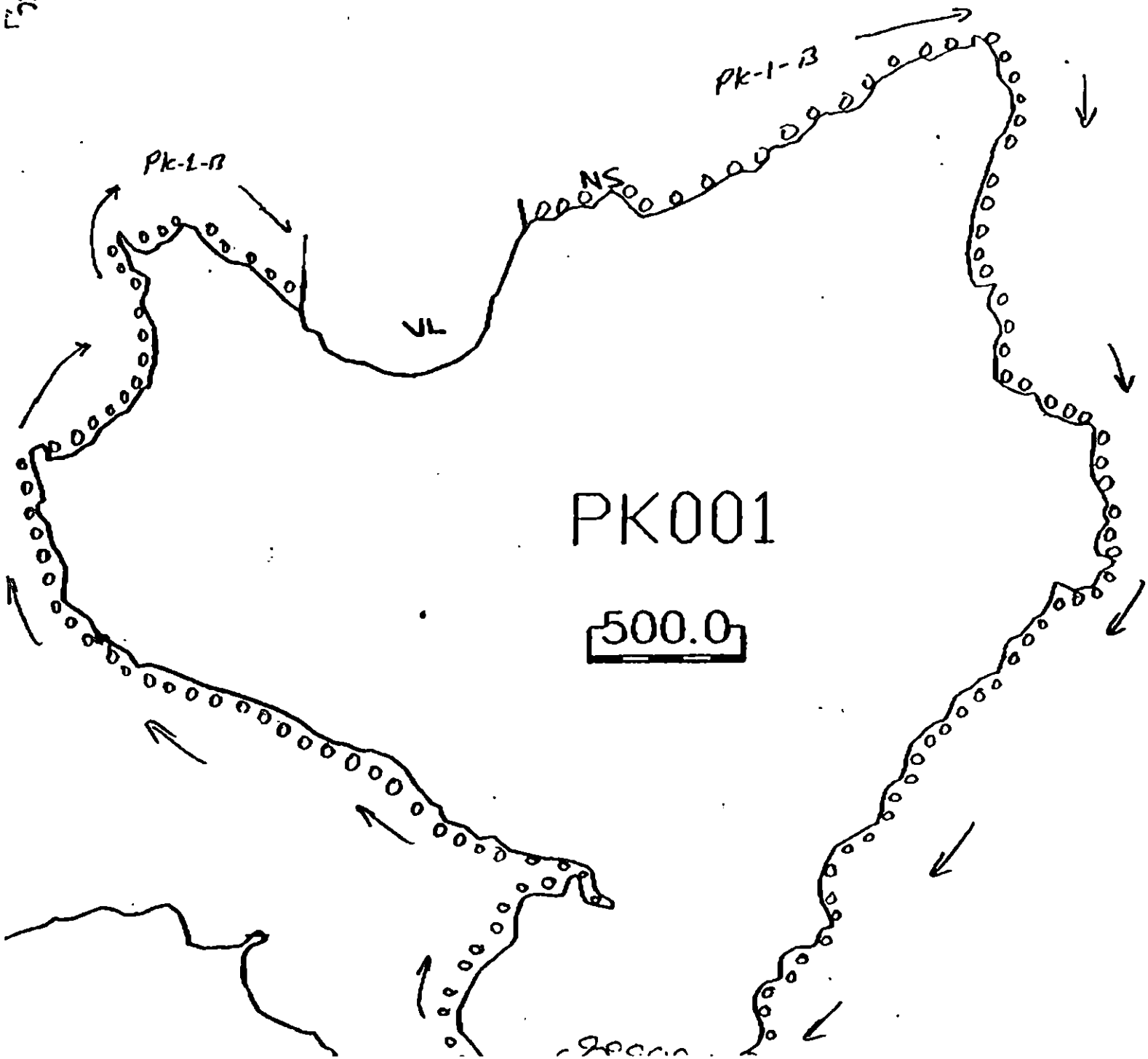
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESEI
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:
- ~12 Deer
- ~6 Eagles in flight

Ecological Considerations:

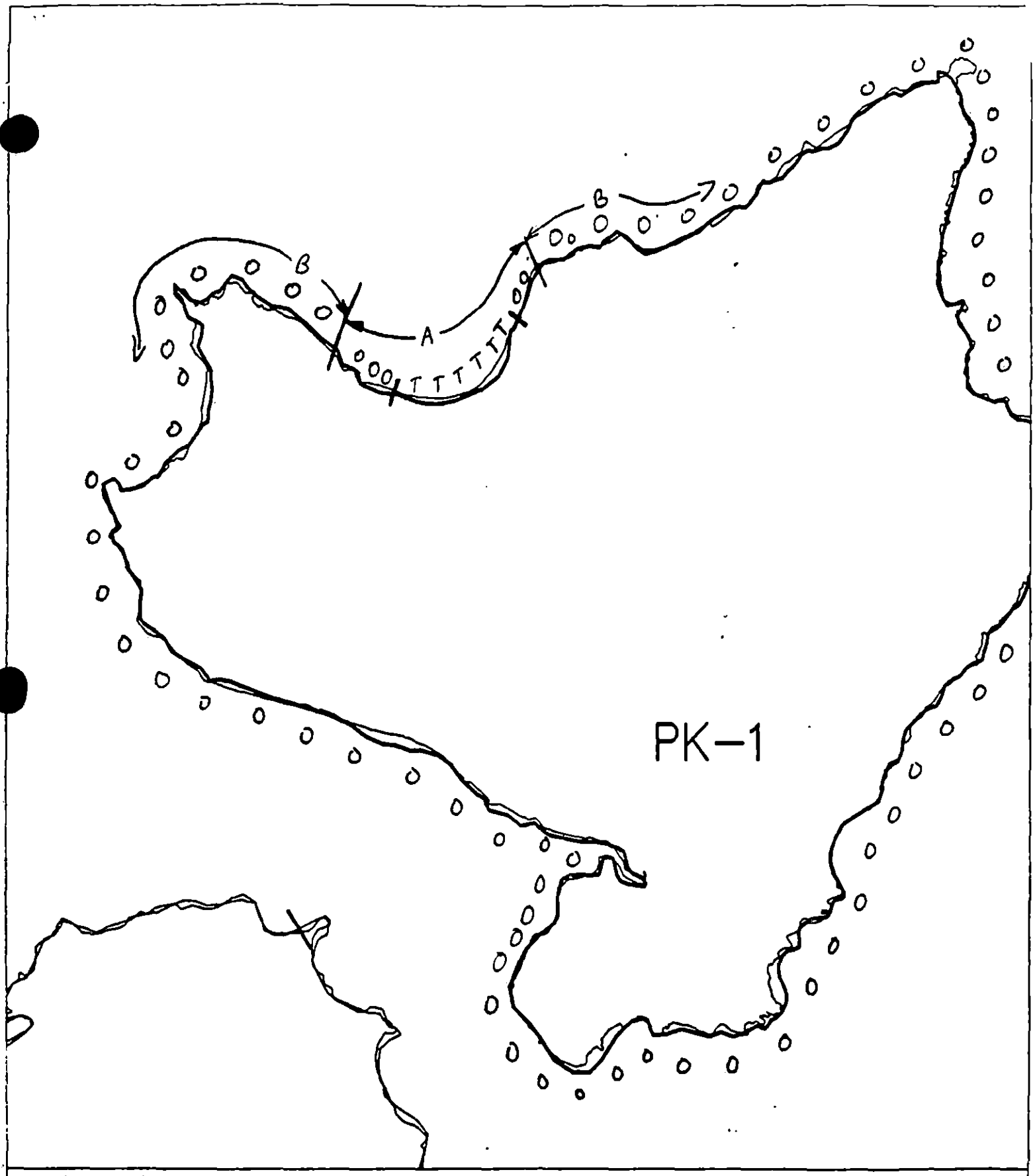
NOTE: VIEWED PK001-B from HELICOPTER AND COULD NOT ASSESS FROM CLOSE-UP.

ADEL



HELO SURVEY
Duncan M. F. McGeehee
31 March 1990
(note only map available)

OILING	
H	- Heavy
M	- Moderate
L	- Light
VL	- Very Light
N	- None
NS	- Not Surveyed



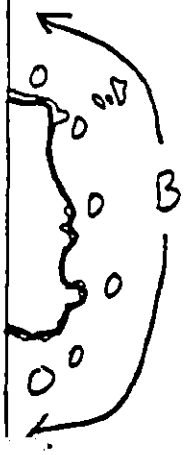
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PK-1

ADEC Segment Length: 15455m

0 300 600 900
METERS

Map Key: PWS-612a
Name: FITGERALD
Date: 3-31-90
Data Entered:



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

PK-1

ADEC Segment Length: 15455m

0 300 600 900
METERS

Map Key: PWS-612b
Name: FITZGERALD
Date: 3-31-90
Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ PL-01 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Seabird colony (5R) - 5/1 to 9/1; Harbor seal and sea lion pupping and molting (3N, O, P, Q) - 5/15 to 9/15. Contact ADF&G prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled biota and substrate. Restrict all activity to minimum.

SHPO SIGNATURE: Charles E. Holmes DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2654m: No Oil 1601 m

Subsurface Oil Observed: Yes X No ____ Maximum Depth 25 cm

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended based on only light oiling found and desire to limit intrusion. Please review Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90.

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Burl Wescott

USCG G.A. BEITER

FOSC: ____ DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PL - 1 - A SUBDIVISION: A (ALL ISLANDS) DATE 4/1/90

USCG
NAME GARY OTT SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME MICHAEL J. EBEL SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

PL-1-A

LAND MANAGER - U.S.D.A. - FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [signature] 4/1/90

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 08/22/90

OG Randy McBride USCG NOAA Gary Ott SEGMENT ST/ PL-1
BIO Lewis Shapman LAND REP U.S.F.S. Don Breitinger SUBDIVISION A (1 OF 1)
EXXON Leonard Herbst ADEC Mike Ebel TIME 09:51 to 10:15
TEAM NO.: 12 TIDE LEVEL: 04' to 3.90' DATE 04/01/90
EST. SUBDIVISION LENGTH: 3892 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 10 % B 5 % C 10 % P 40 % G 35 % S ____ % M ____ % V ____ %
SLOPE: Lang 5 % Hang 50 % Vert 45 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M ____ m N ____ m VL ____ m NO 1600 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BR/BK	RW/PK	GY/SL	BWN/TL	ABN	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED				X				X			X		
COVER													
COAT		X		O				X/O			X/O		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM			X	O	X	O					X	O	
NO OIL										X			X

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

PATTIES / TARBALLS ____ BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE ____

#BAGS ____

Photographs:

Roll No. ST-12-2

Frames 2-6

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR/BK	RW/PK	GY/SL	BWN/TL	ABN	SU	UI	MI	LI		
1	25				X		5-25	X			X	X				X				G, P
2	24					X	·		X								X			P, G
3	8					X	·											X		C, P, G
							·													
							·													
							·													

COMMENTS

This tight pocket beach (9 m X 26 m) is considered a variant along this predominately [95%] high angle/vertical cliff shoreline w/ boulders. Very light oiling was found within the detrital organic wracklines and adjacent rock cliffs. The other 95% of Pleiades Islands is characterized by an oil mark w/ drip marks at the HWL (Coat w/ broken distribution).

REVIEWED JW DATE 4-2-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PL-1 Subdivision A Date (mo / day / yr) 4/1/90

Time (24 hr) 0945-1015 Biologist SHARMAN

(A) Substrate type and % of ~~segment~~ SUBDIV.:
(1) Bedrock 10 (2) Boulder 5 (3) Cobble 10 (4) Pebble 40 (5) ~~Sand~~ Granule 35 (6) Silt ____

(B) Overall % cover of biota (% of ~~segment~~ SUBDIV.): Dense ____ Moderate ____ Low X

(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-12-2
Frames 1-6

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	X	X	X	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	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

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	X	X	X
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Wildlife - 5 harbor seals, 2-3 pairs adult eagles, 1 subadult eagle, 3 cormorants, 2 goldeneyes, 2 pigeon guillemots, 1 Steller's jay, 1 fox sparrow. Eagles abundant here, though we observed no nests. No seabirds concentrating or resting out, no pinnipeds concentrating or hauling out yet. Survey done (this subdivision) in rather atypical narrow pebble pocket beach walled in by vertical bedrock cliffs. See next page for intertidal comments.

Ecological Considerations: Collectively, the Pleiades Islands comprise a single segment given Environmental Priority 1 due to harbor seal and sea lion pupping and resting, and colonial seabird nesting. According to the Priorities and Windows table, the open work window is 7/1-8/15. However, from the individual restrictions, the work window does not open until 9/15. Constraints appear to be incorrect since low constraints (5) give a high treatment priority (1). Sensitivity Codes are: 6Y, 3N, 3P, 3O, 3Q, 5R.

General Comments - intertidal zone: Intertidal community here appears healthy and normal except within 1-m wide (in places) tar band on vertical rock faces, through top of barnacle zone. Within this band barnacle mortality approximates 50%, vs. ≈ 5% elsewhere. These tar bands coat the barnacles and are themselves sometimes coated with adhering evergreen needles. An interesting and uncommon pattern observed here is where an oil line or splotches were "elevated" up into the Verrucaria (spelling?) black lichen supratidal zone on bedrock walls. The oil has apparently killed the lichen, causing it to slough off to expose the light-colored rock beneath, thereby presenting the reverse coloring pattern to the usual case of black oil or tar stains on light-colored rock.

OC R. A. McBride

SEGMENT ST/ PL-1

SUBDIVISION A

DATE 4 / 1 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

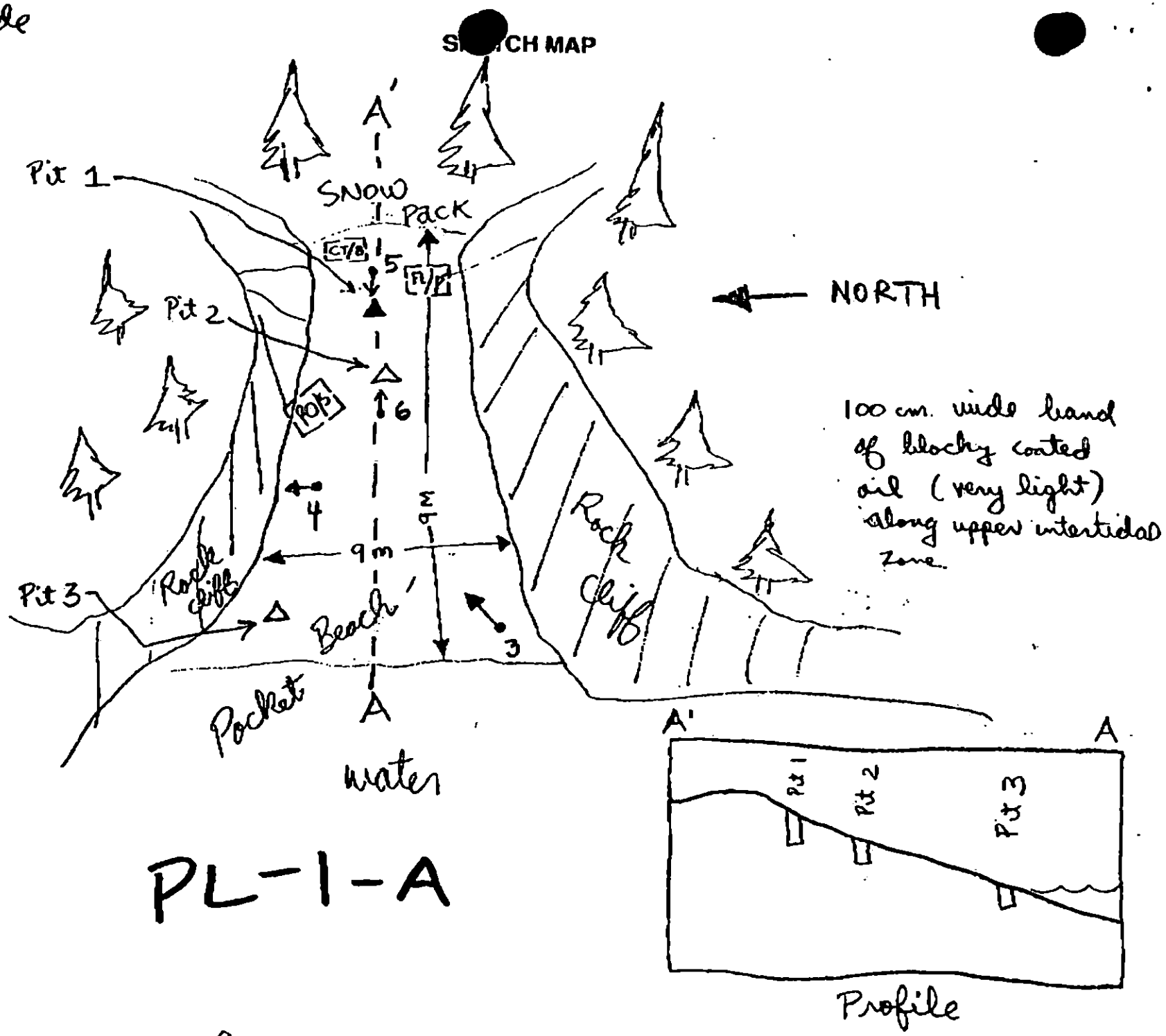
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number



PL-1-A

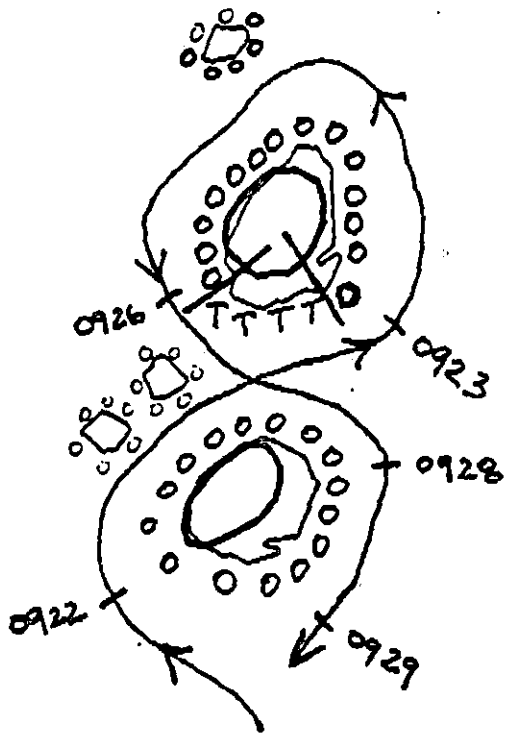
Oil Character Length (m): AP____ PO____ CV____ CT 9 ST____ MS____ PT____ TB____ FL 9 NO____

REVISION: 03/26/90

Pleiades Islands

PL-1-A

KNIGHT ISLAND Passage



PWS 502A

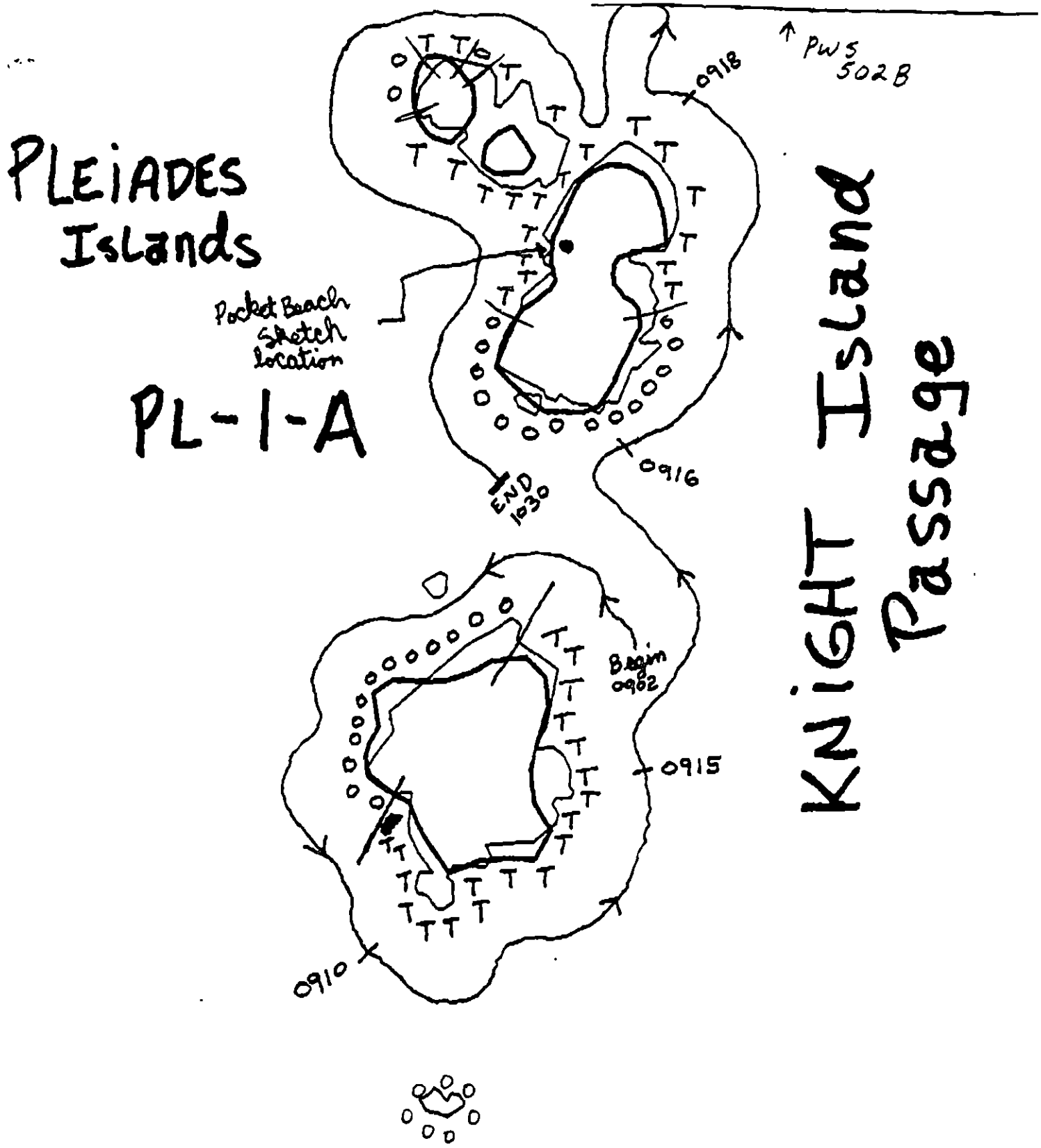
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

PL-1

ADEC Segment Length: 2472m

0 100 200 300
METERS

Map Key: PWS-502b
Name: Randy McBride
Date: 4/1/90
Date Entered:



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

PL-1

ADEC Segment Length: 2472m

0 100 200 300
METERS

Map Key: PWS-502a
Name: Randy McBride
Date: 4/1/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PN-01 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/15)
1L Set net sites (6/11 to 7/25)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Note that adjacent segment to south also has an eagle nest.
6Y Recreation: Special use destination
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: Charles E. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 230 m: Narrow 92 m: V.Light 570 m: No Oil 556 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1)manual tarmat removal, 2) bioremediation of areas shown on attached sketch maps. Work should be conducted after 7/25 based on set net constraints, and with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90
ADEC ART WEBER
EXXON ANDY TEAL
NOAA Gary Petrose
USCG G.A. Reiter

FOSC: DATE: 5-18-90

NOTIFY CVC 24HRS. IN ADVANCE OF WORK

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 Monson 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 Suzomoto 424-7511

1I **Gill net area (6/7 to 8/31)**
1J **Purse seine area (7/20 to 9/30)**
1K **Purse seine hook-off (7/20 to 9/30)**
✓ 1L **Set net sites (6/11 to 7/25)**
Contact ADF&G for specific dates locations and constraints Restrict boat and air traffic to essential minimum When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels contact ADF&G for consultation and authorization
AGENCY CONTACT PERSON ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**
Contact ADF&G for confirmation dates and locations may vary Restrict boat traffic to essential minimum Avoid damage to unoiled 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 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 **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**
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

10/17

SEGMENT ST / PN01 SUBDIVISION: A DATE 24 APR 90

NAME Robert Jensen SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Treat only areas shown as medium and narrow bands of oil on the PN-1 segment map.

ADEC

NAME Rowann F. Hudnall SIGNATURE Rowann F. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Oil variable. In pocket beaches bands of cover on cobble should be partially removed manually before bioremediation. I don't know if bioremediation is advisable for the oily cobble that overlies a peat bog/submerged forest. Other oiling does not require treatment

LAND MANAGER (CVC)

NAME LARRY EVANOFF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUAL REMOVAL OF PATTIES AND TARBALLS. TILING IS SOME AREAS AND WASHING. TROWEL/SCRAPE TAR FROM FACE OF ROCK AND ROCK CRAVICES. NO BIOREMEDIATION RECOMMENDED.

REVISION NO. 03/01/90

1/17

REVISION NO. 3A

SHORELINE OILING SUMMARY

OG HARBER USCG R. JENSEN SEGMENT ST/ PN-001
BIO J. DIXON LAND REP LARRY EVANOFF SUBDIVISION A (1 OF 1)
EXXON J. ELLISON ADEC R. HUDWALL TIME 9:30 to 11:00
TEAM NO. 2 TIDE LEVEL 1.3' TO 6.3' DATE 4 / 24 / 90
EST. SUBDIVISION LENGTH: 1860 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 70 % B 15 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0
SLOPE : Lang ____ % Hang ____ % Vert ____ % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 150 m N 60 m VL 660 m NO 900 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rb	rp	rs						su	ui	mi	u
ASPHALT PAVEMENT			X			X					X		
POOLED													
COVER		✓	X			X ✓				✓	X ✓		
COAT				X		X					X		
STAIN				X					X		X		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL												X	X

PAVEMENT (H) F S 6 sq. m by 3

PATTIES / TARBALLS 0 BAG:

NEAR SHORE SHEEN? NO BR (RW) SL TL ON BE

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE Post POM, DM Boom

#BAGS 1

Photographs:

Roll No. ST-2-202

Frames 31 - 33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE SUBSURFAC SEDIMENTS
		op	or	ol	of	no		uo	uc						su	ui	mi	u				
1	20					X	-									X				N		P,S
2	10		X				0-2		X				X			X				N		C/V,S
3	20		X				0-6		X				X			X				N		C/V,S
4	10				X		0-7		X				X			X				N		B,C/S,G
5	15				X		0-7	X	X				X				X			N		B,C/S,G
6	2		X				0-2	X					X				X			Y	2	B,C,P/S,G

COMMENTS

REVIEWED MH DATE 4-26-90

REVISION 04-12-90

SHORELINE OILING SUMMARY (PAGE 2)

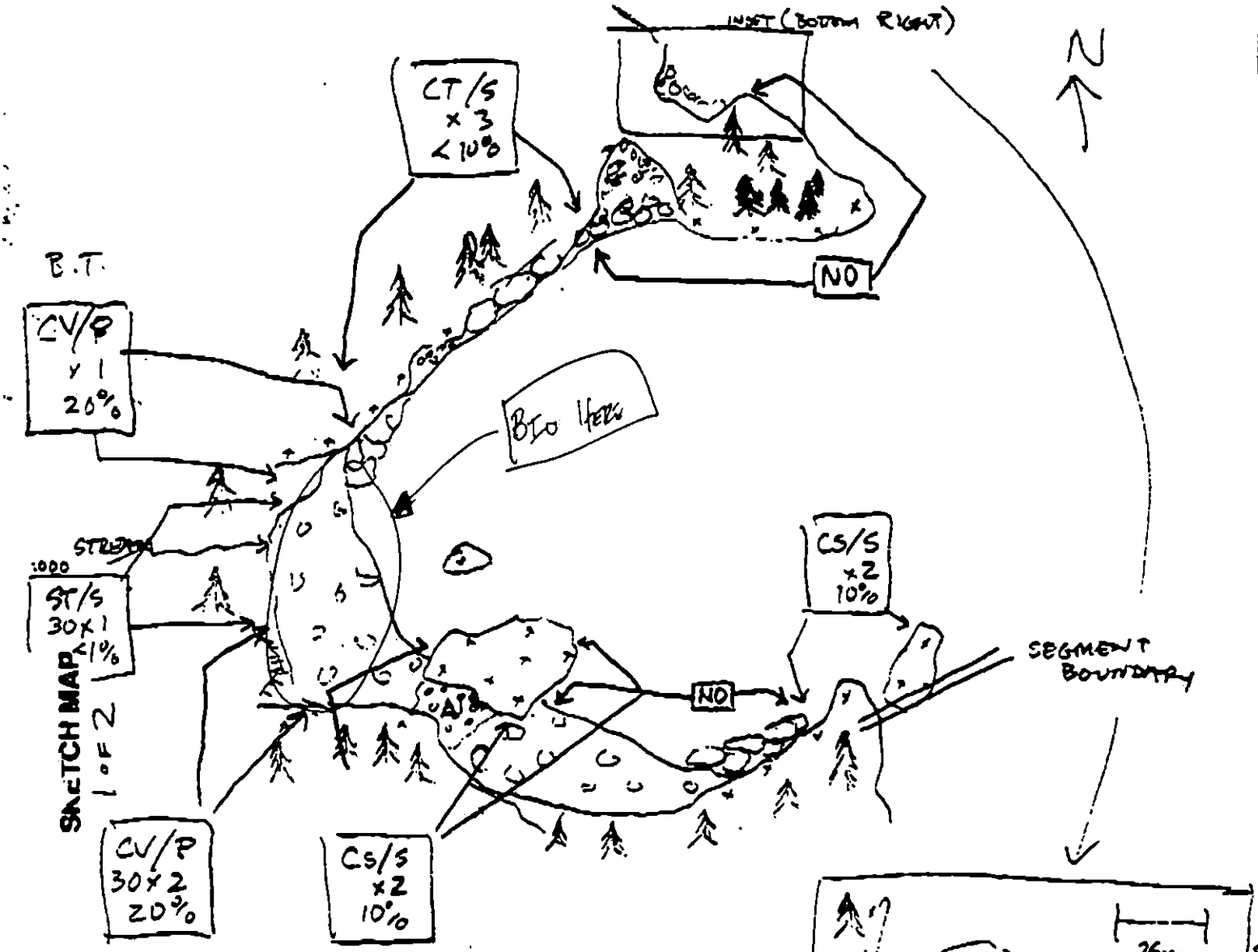
SEGMENT ST/ PN-001 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

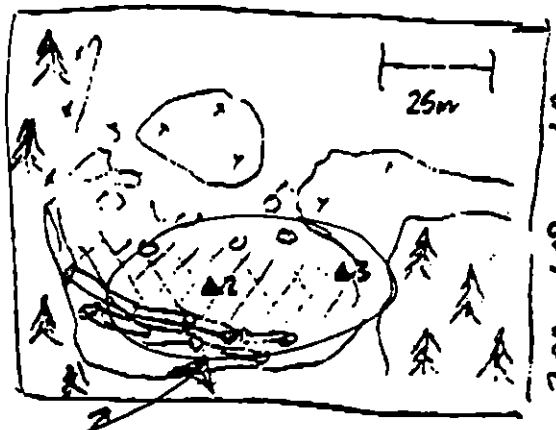
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE SUBSURFAC SEDIMENT
		CP	CR	CL	CF	HO		UO	UO						SU	LI	MI	LI				
7	5	X					0-3	X			X					X						P/S,P

COMMENTS

REVIEWED_____ DATE_____



SKETCH MAP 1 of 2



SMALL POCKET COVE IS DROWNED PEAT AND FOREST W STUMP
PATCHY OILING IN SUB, WITE ON BASES OF COBBLES; IN SURFACE PEAT.
SHEENING

PITS

Δ1	PS	0-20	NO
▲2	C/V,S		
	0-2		OR
	2-10		N.O
▲3	C/V,S		
	0-6		OR
	6-20		N.O.

OG ____ PAER

SEGMENT ST/ PN-001

SUBDIVISION A

DATE 4/24/90

CHECKLIST
- L-N Area
- Approx. Scale
- Segmt/Sub Bndy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SEL
- Photo Location(s)
- Pit(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 Spotted Distribution
- RRR Other Vegetation
- 1 Any Photo location, direction, and number

Oil Character Length (mi): AP 2 PO ____ CV 300 CT 608 ST 60 MS ____ PT ____ TB ____ FL ____ NO ____

OG ____) ____ 2P EOR

SEGMENT STI PN-001

SUBDIVISION A

DATE 4/24/90

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

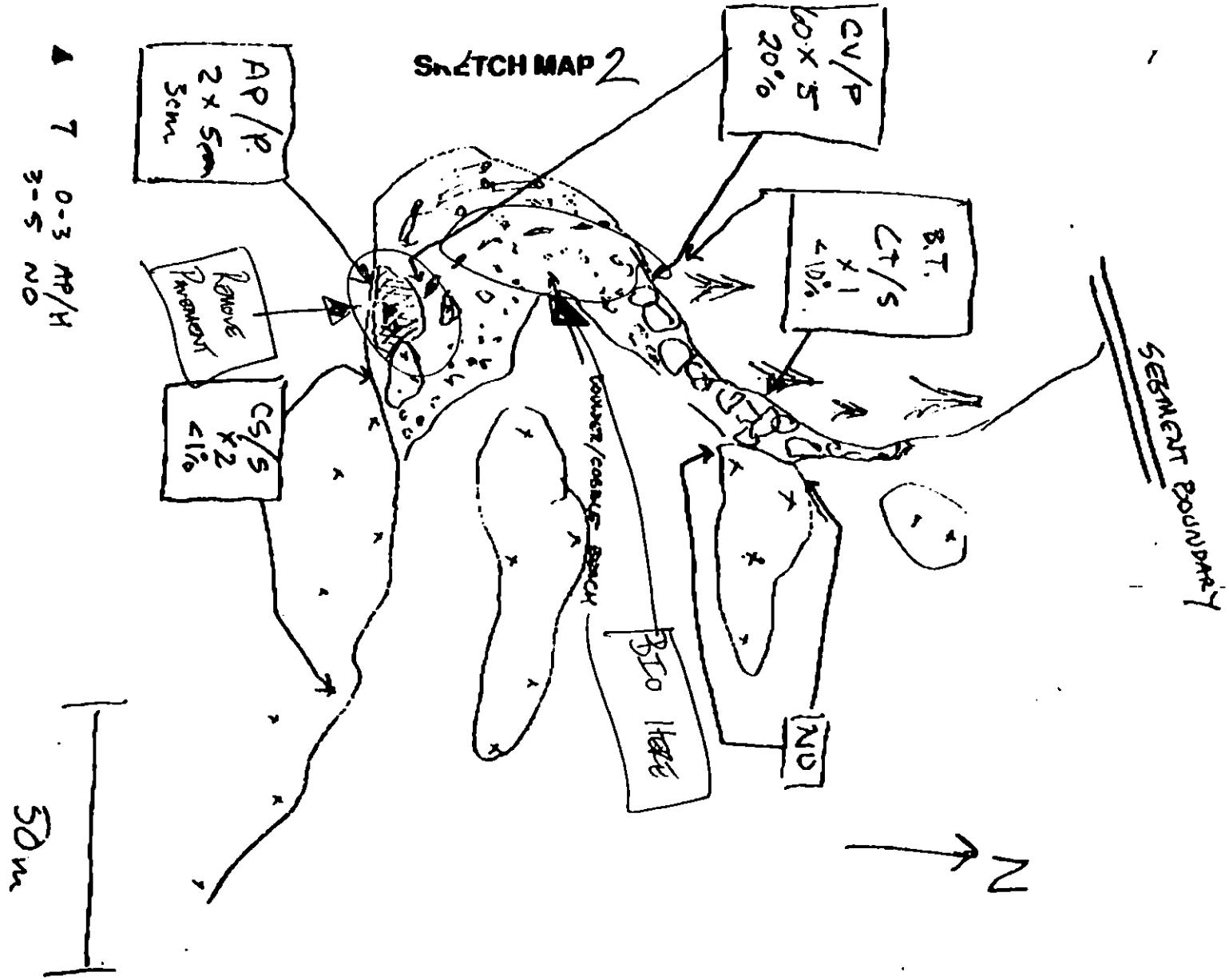
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



▲ 7 0-3 AP/H 3-5 NO

6/12

Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB FL NO

SUMMARY OF OILING OBSERVATIONS

for EN-001A

This segment is located immediately to the south of the mouth of Eshamy Bay.

The shoreline segment is predominantly rocky with narrow rock ramps and cliffs, rubble beaches and cobble/boulder pocket beaches. Intertidal zone widths are usually less than 30m. Wave exposure is moderate to high. The crenulated coastline prevents any systematic longhsore transport of sediment, and the material that has accumulated on the pocket beaches is derived from in situ weathering of the bedrock; pocket beach sediments are immature, i.e. very angular.

Oiling varies greatly within the segment. Much of the rock headland areas are oil-free or exhibit a 0.5m high dripline near the HWL. Two of the pocket beaches near the middle of the segment are categorized as having medium oiling. In one case there is a patchy covering of oil in a 20x40m area of the MITZ and UITZ (see cover Sketch Map), and in the other case a broken cover occurs in about 60% of a 30x20m area (see inset in Sketch Map 1). Both areas have subsurface oil with some of the subsurface oil in the more southerly of the two pocket beaches incorporated into the upper surface of relict peat deposits.

111

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/92

Segment ST / PN-01 Subdivision A Date (mo / day / yr) 04/24/90

Time (24 hr) 0945-1100 Biologist John Dixon

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 15 (3) Cobble 10 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 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. ST-2-202
Frames 31-33

BARNACLES

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

GASTROPODS

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

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	2	X	X	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	X	X	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: Waterline during survey: +2.1 - +6.3. Several oyster catchers in intertidal.

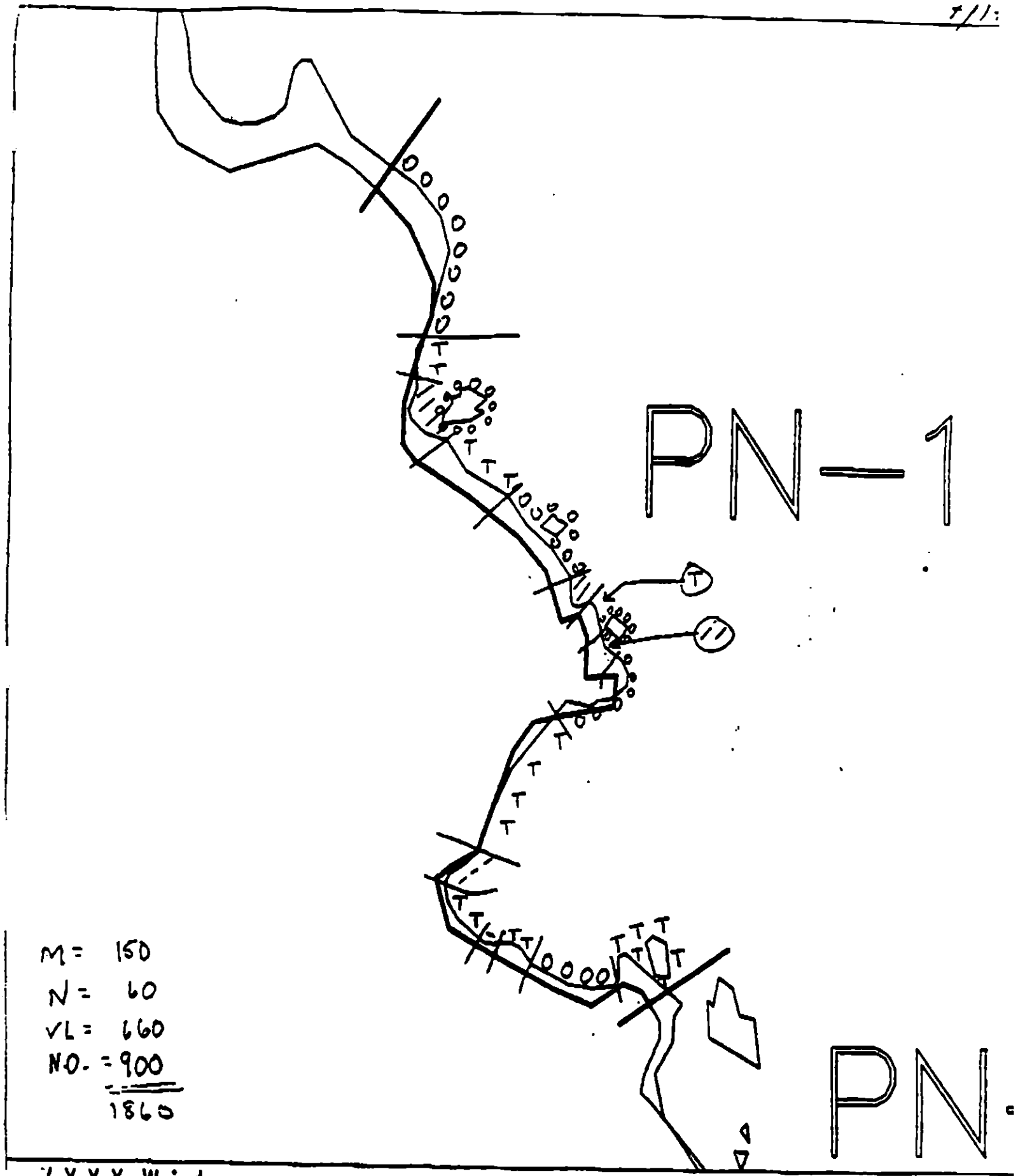
Ecological Considerations: Listed sensitivities: 1 E, L; 5T; 6Y. Mostly bedrock cliffs & ramps with a few boulder/cobble pocket beaches. Lower areas nearly 100% algal cover. Fucus, Balanus glandula most abundant space holders on higher slope. Mytilus patchy & not abundant overall. Many sea stars & whelks.

Tuesday 04/24/90 0945-1100 +2.1 - +6.3 ft

PN-01 "A"

This 1860-m long segment is mostly rocky cliffs and narrow ramps with occasional pocket beaches of boulder and cobble rubble. Some of the outcrops form small benches with tide pools in the upper intertidal zone.

Although the lower intertidal zone was submerged, it appeared similar to that observed in segments PN-02 & PN-03, with algae covering nearly 100 % of the substrates. Pycnopodia could also be seen from the surface and were abundant. The middle and upper zones were dominated by Fucus and Balanus glandula. Fucus was abundant higher on the shore on vertical cliffs than on more gently sloping beaches, probably because vertical areas stay wetter. Much recruitment of Fucus. Balanus glandula was the dominant barnacle except in pools and the underside of tilted slabs where B. carriosus was abundant. There was a narrow, broken band of mussels between about +5 and +7 feet in the intertidal. Sea stars (Pycnopodia, Pisaster ochraceous, Dermasterias, and Evasterias) and whelks (Nucella lamellosa) very abundant. The pocket beaches support a less diverse and less abundant biota. Balanus glandula, Littorina sitkana, L. scutulata, Fucus, and filamentous green algae were the most abundant organisms. Few recently recruited littorines, but littorine egg masses common under boulders and cobbles.



M = 150
N = 60
VL = 660
NO. = 900
1860

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

PN-1

ADEC Segment Length: 1448m

0 100 200 300
Meters

Map Key: PWS-503
Name: HARPER
Date: 24 April 90
Date Entered:

ECOLOGY MAP

ST (1)
1E, 1L
6Y

PN-1

BALD EAGLE NESTS

M = 150
N = 60
VL = 660
NO. = 900
1860

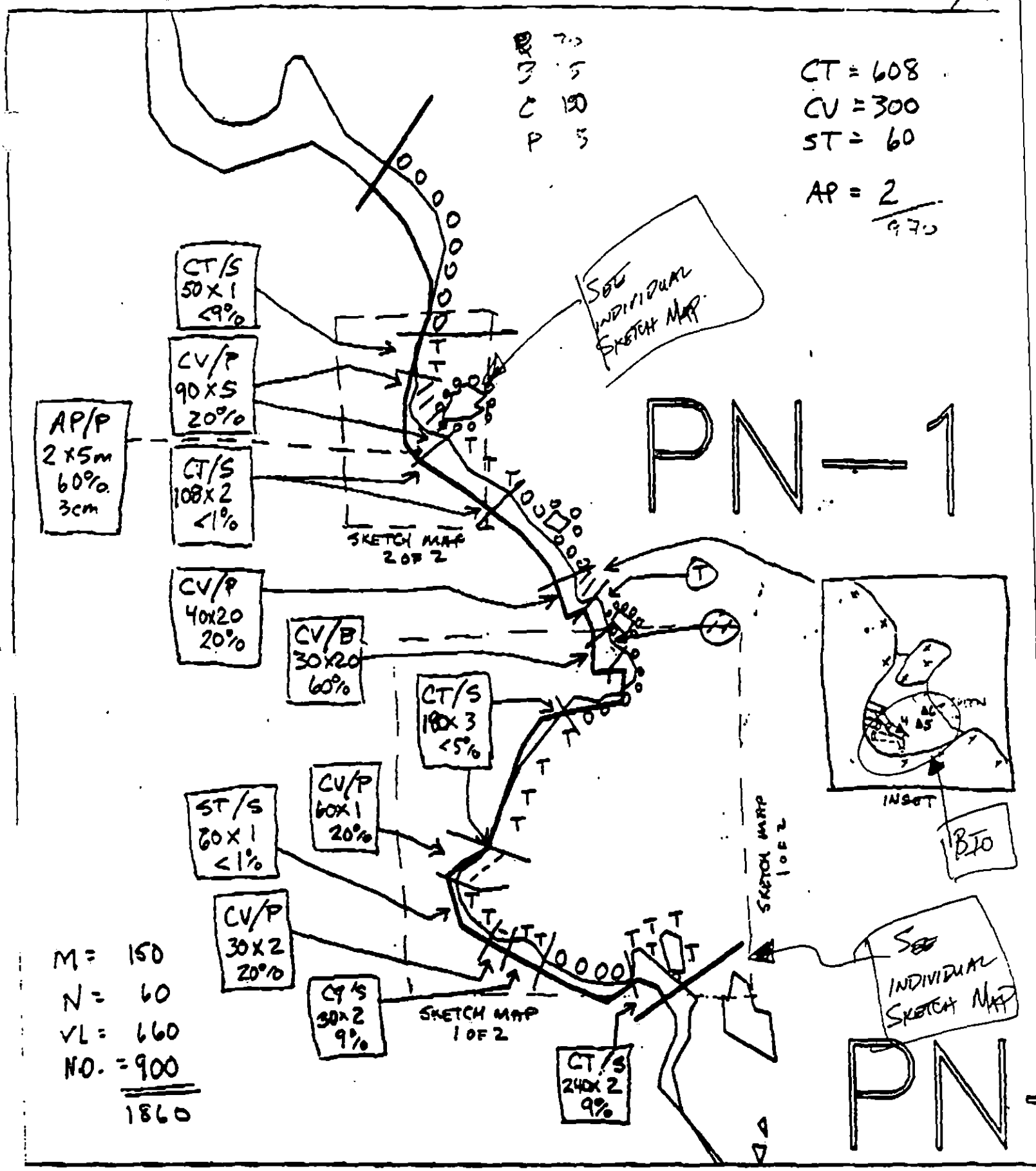
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PN-1

ADEC Segment Length: 1448m

0 100 200 300
METERS

Map Key: PWS-503
Name: HARPER
Date: 24 April 90
Data Entered:



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

PN-1

ADEC Segment Length: 1448m

0 100 200 300
METERS

Map Key: PWS-503
Name: HARPER
Date: 24April90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PN-1 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal Less Than 400m From Nest	CLOSED
Tarmat Removal More Than 400m From Nest	OPEN
Bioremediation Less Than 400m From Nest	CLOSED
Bioremediation More Than 400m From Nest	WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

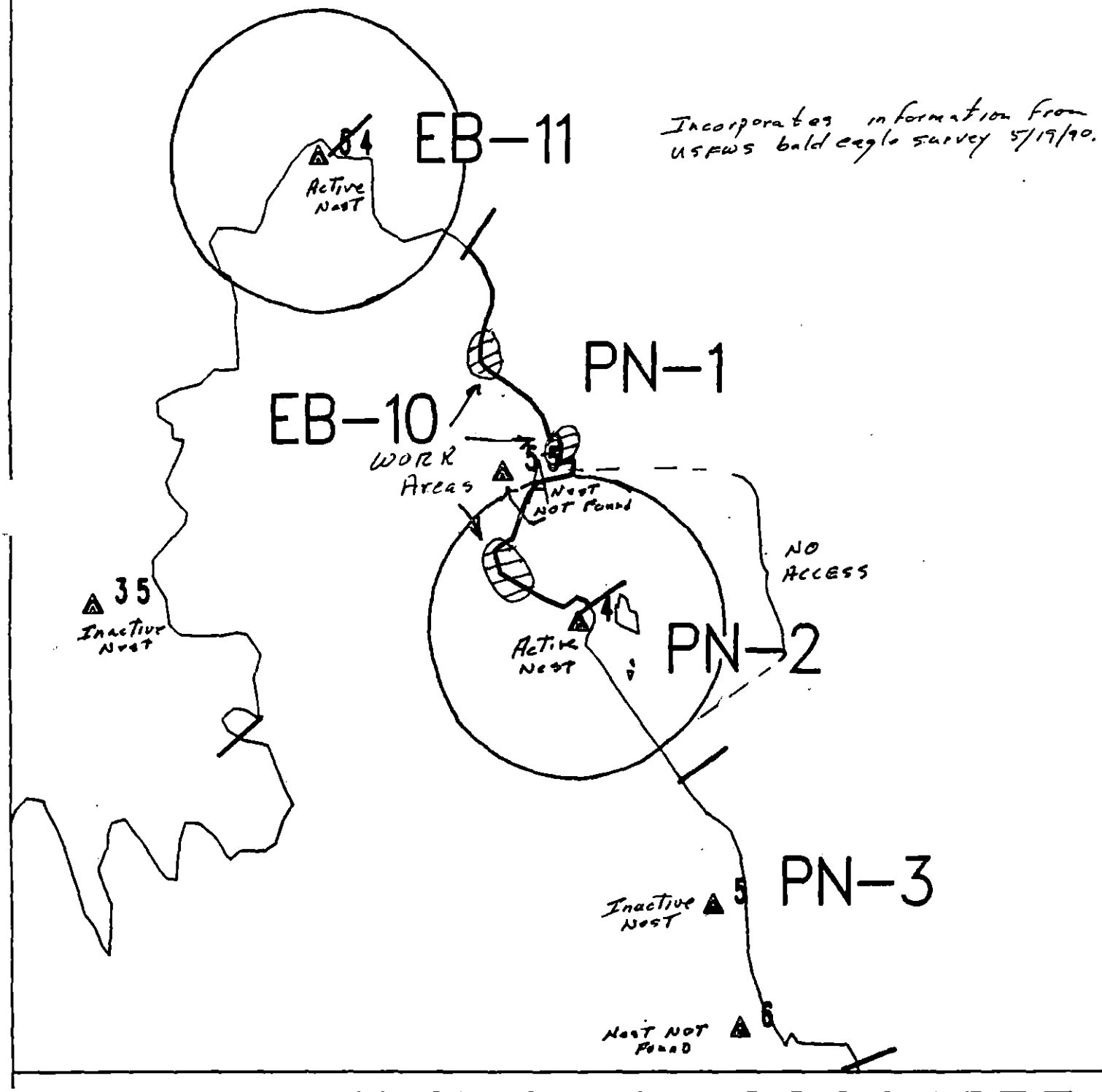
1E	**Main Bay Hatchery Release**	No constraint to tarmat removal. Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	**Gill Net Area**	No constraint to tarmat removal. Closed to bioremediation after 6/7.
1L	**Set Net Sites**	No constraint to tarmat removal. Closed to bioremediation from 6/11 to 7/25.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates an active nest in Subdivision A. Closed to tarmat removal and bioremediation less than 400m from active nest. No constraint to tarmat removal and bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain ~~800~~m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 400 6/2

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Andy Tear
NOAA Joseph Talbott
USCG G.A. Reiter
FOSC Zanoffi Date 6/4/90

Prepared by Andrew Meyer Date 6/2/90



EXXON

Exxon Company, USA

Map Key: PWS-PN-1

May 11, 1990

ECOLOGY MAP 6/2

SEGMENT PN-1

SUBDIVISION A (1 of 1)

METERS

0 369 739

★ Seabird Colony

▲ Eagle Nest

1 inch = 1212 feet

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT PN-01 SUBDIVISION A (A.) DATED 8-3-90

MODIFICATION

1. REASON FOR MODIFICATION:
Small pocket beach just south of segment boundary will require further treatment in 1990. At South end of this pocket beach is an area approx. 12m x 7. Patchy distribution of AP, weathered mousse, interstitial weathered mousse, and subsurface OP and OR oil is present.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:
A 10 person work crew would require approx 1/2 day to manually remove, till, and bioremediate the oiled portions of this small pocket beach on PN-01.

3. TIMING ISSUES:
Treatment required in 1990.

4. ADDITIONAL COMMENTS:

ADEC Bob McCrea Robert B. McCrea

EXXON Randall K. Boyer

USCG [illegible]

LAND MANAGER Steve Ward CIR (If field rep is on scene)

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / PN-1A SUBDIVISION: A SITE: 1 DATE 03 AUG 90

JSCG

NAME Don Davis (USCG) David Noe (NOAA) SIGNATURE [signature] / David E. Noe

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

INTERMITTANT PATCHES OF TAR DISCOVERED BETWEEN ROCKS. SOME PATCHES WORKED BY VECO WORKERS. SOME ADDITIONAL MANUAL TREATMENT REQUIRED. RECOMMEND NO TREATMENT THIS YEAR, BUT REASSESS IN 1991 FOR RESIDUALS. - D.C.

Note: Relatively high energy beach. Would recommend '90 treatment (low priority) & '91 reassessment. - DCN

ADEC

NAME Bob McCready SIGNATURE Robert G. McCready

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

A substantial amount of AP, weathered mousse, and OP & OB subsurface oil to 15cm deep remained on this beach after treatment with Inipol. A Work Order Mod. Recommendation was submitted calling for mechanical treatment to aid in clearing cobble and small boulders to expose oiling. Without mechanical aid, a 10 person work crew would require 3-5 days to adequately treat this area.

LAND MANAGER

NAME Steve Ward CVC SIGNATURE [signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No manual was done, though it should have been. Manual in 90, Re bio - 91 yes. Check Sub-Surface agreeably

EXXON

NAME RANDALL E. BOYD SIGNATURE Randall E. Boyd

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THIS SEGMENT WAS INIPOLED WITH OUT MANUAL TREATMENT AND REQUIRED IT. A WORK MODIFICATION HAS BEEN SENT IN FOR THIS SEGMENT. IF NO WORK IS DONE (MANUAL REMOVAL OF AP/P, THEN A 1991 REASSESSMENT IS REQUIRED. IF THIS SEGMENT IS RETREATED THIS YEAR, THEN A 1991

REVISION NO. 7/28/90

[illegible] HANDY PICKER

[illegible] MURRAY [illegible] ~~USS~~ NOAA DAVE PICE SUBS. SO:

AGEC BOB McCREAKIN LAND REP STEVE WARD TOTAL NO SITES

DATE 8/3/90 TIME 10:45 to 10:55 USCG TIDE LEVEL 16.5 to 16.6

TAL EST LENGTH OF SHORELINE SURVEYED: 150 m DON ORVIS

URVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow

OIL CATEGORY LENGTH: W ___ m M 5 m N — m VL 10 m NO 135 m US ___ m

SURFACE OIL

CHARACTER	SITE 1 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 2 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 3 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT			X			X																		
S.O.R.																								
POOLED																								
COVER			U			X																		
COAT			I			X																		
STAIN			X	X		X																		
MOUSSE																								
PATTIES/T.B.																								
FILM																								
NO OIL					X		X	X																
EST. SITE LENGTH																								

NEEDS ONGING MAP

BSURFACE OIL

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

Photographs:

Roll No. ϕ

Frames ϕ

REVIEWED 8/8/90 Y/W

MMENTS

- oil appeared in the upper intertidal zone at the south-end of a pocket beach
- CV/P – occurred beneath boulders averaging 0.40m diameter
- CT/P – interstitial – observed in a pebble/cobble matrix
- AD/P – occurred in a 2x5m area

REVISION NO. 7/27/88

SEGMENT STI PN-001

SUBDIVISION A

DATE 4 24 90

CHECKLIST

- Pit Arrow
- Approx. Scale
- Segment Body
- 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

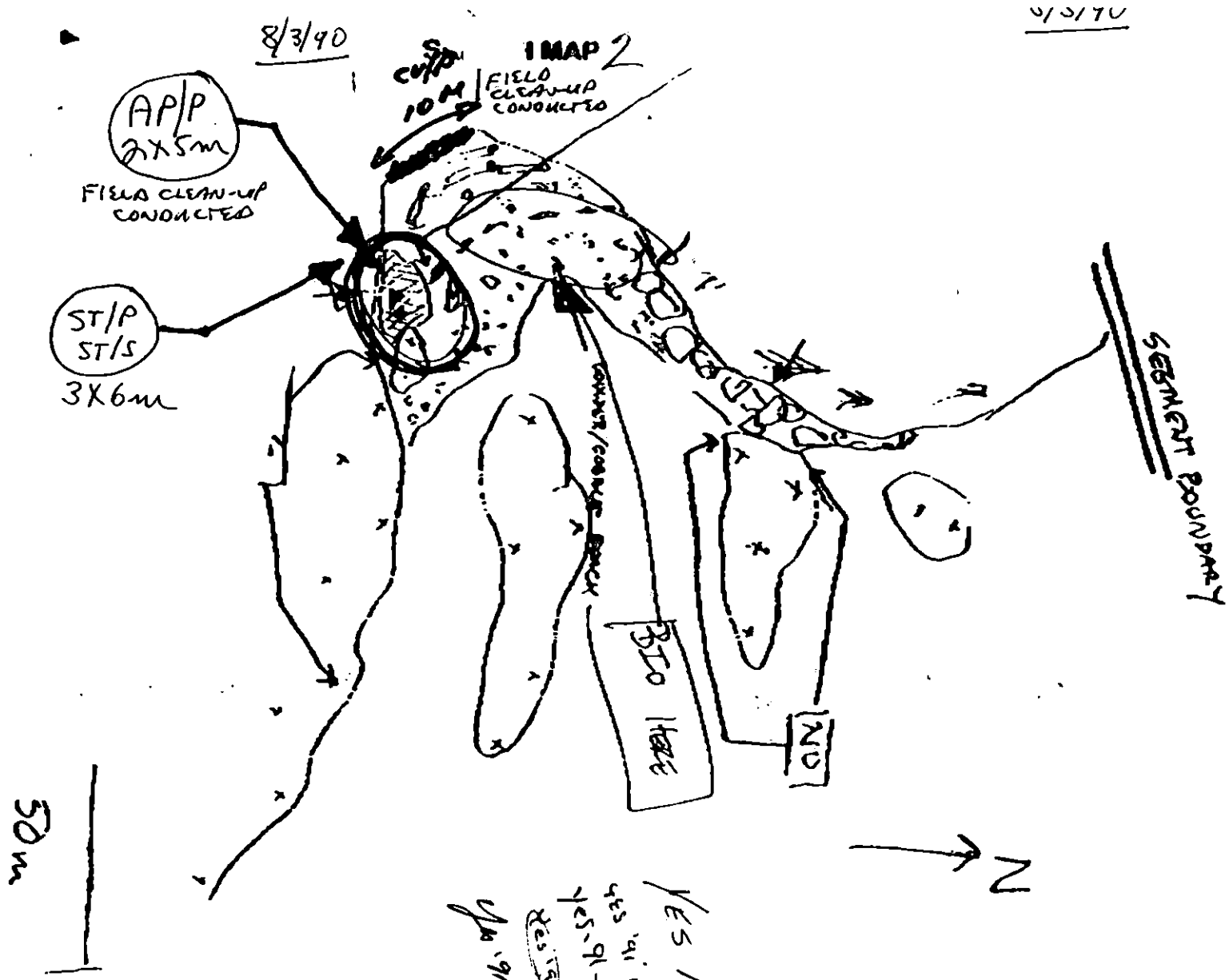
CT/B Broken Distribution

CT/P Patchy Distribution

Substrate Distribution

Wet Vegetation

Photo location, direction, and number



YES 1991, Landfill Bypass!
YES '91 Omega USCG
YES-91 - Not Cal EPA
YES 1991 OCN
Jan '91 Phase 6. McCl
ADEC

1 Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS PT TR FI MO

REVISIONS

ASAP TAG REVIEW SHEET

Segment: PN01 **Subd:** A **Site:** 1 **Date PRE-Review** 11AUG90

Priority For Addressing In 1990

____ HIGH ____ MEDIUM ____ LOW X NTR

Treatment Recommended: NTR

HIGH ENERGY BEACH

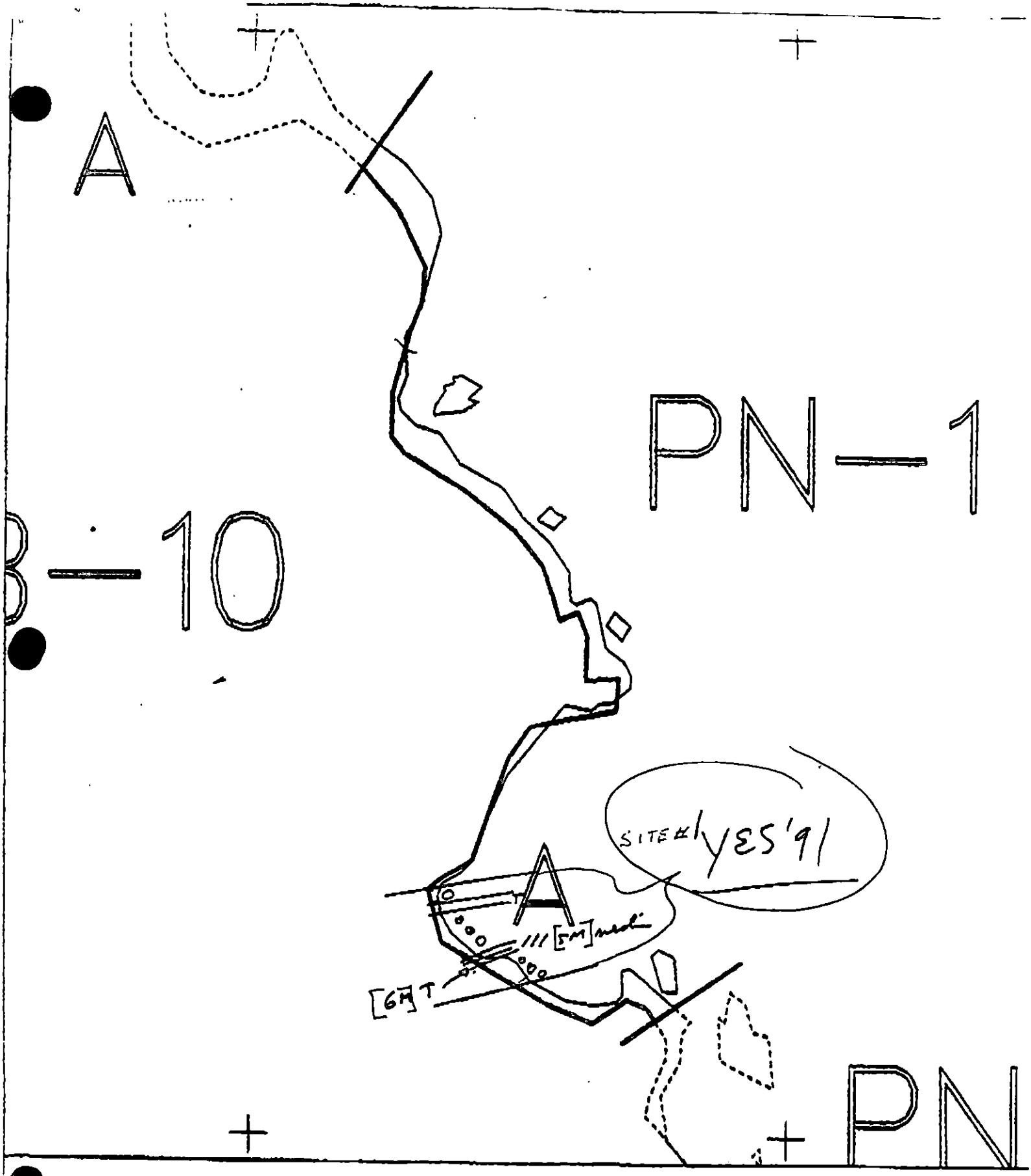
Priority Site For Reassessment In 1991

YES ✓ NO ___ CG ___ YES ✓ NO ___ ADEC ___ YES ✓ NO ___ EXXON ___ YES ✓ NO ___ LAND MGR ___

TAG 13AUG90

Manual Pickup of AP & Re BIO

Low Priority



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

PN-1 A

ADEC Subsegment Length: 1448m

METERS

0 144 288

AK State Plane Zone 4 1:5673

EXXON

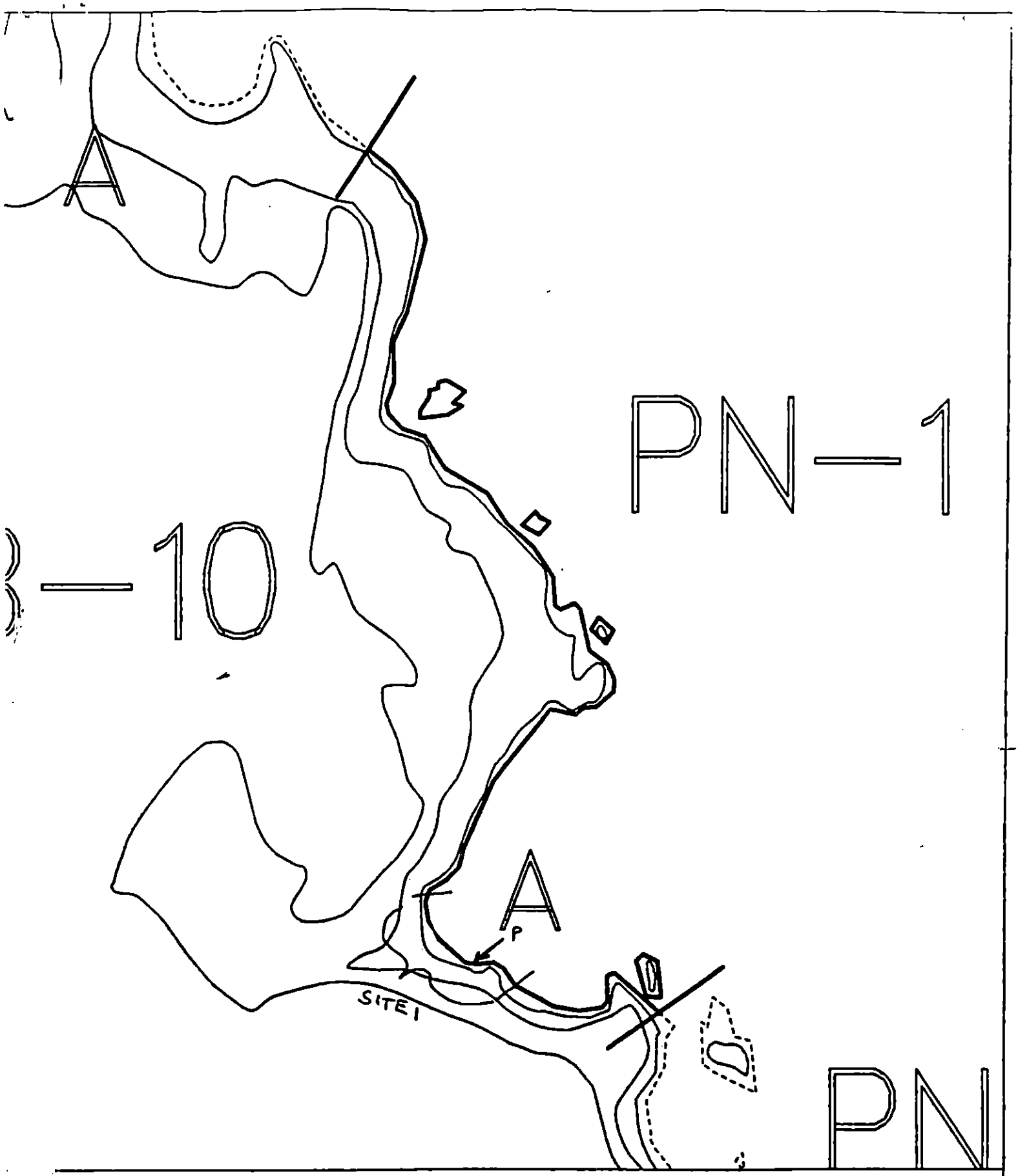
Subdivision Field Map

Map Key: PWSPN-1A

Name: NAKASHIMIA

Date: 8/7/90

Data Entered:



SEGMENT PN-1

Segment Location Map

Map Key: PWSPN-1

July 19, 1990

1:5673

EXXON

N

METERS

0 144 288

SHORELINE EVALUATION

SEGMENT ST/ PN-02 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/15)
1L Set net sites (6/11 to 7/25)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)

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: Charles E Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 10 m: Medium 49 m: Narrow 0 m: V.Light 110 m: No Oil 808 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of areas indicated on sketch map. Work should be conducted after 7/25 due to hatchery and set net constraints and with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: ____

TAG APPROVAL DATE: May 5, 1990
ADEC Art Weiner
EXXON Mark N. Silbert Mark N. Silbert FOSC: ____ DATE: 5-18-90
NOAA Gary Petrac Gary Petrac
USCG G.A. Reiter G.A. REITER NOTIFY CVC 24HRS. IN ADVANCE of work,

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 Suzomoto 424-7511

1I **Gill net area (6/7 to 8/31)**
1J **Purse seine area (7/20 to 9/30)**
1K **Purse seine hook-off (7/20 to 9/30)**
1L **Set net sites (6/11 to 7/25)**
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

P **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. 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 (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 (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 267-2369

FIELD SHORELINE COMMENT SHEET

6/11

EGMENT ST / PN02 SUBDIVISION: _____ DATE 4/24/90

AME Robert G. Janson SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

Treat offshore Islet and segment North end [redacted] pocket beach.

DEC

AME Rowann I. Hudnall SIGNATURE Rowann I. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

North end of segment and islet off shore need treatment. ~~Bioremed~~ Suggest bioremediation for pocket beach; Spot washing for patch of oil on ~~chanore~~ islet.

AND MANAGER

AME LARRY EVANOFF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

MANUAL PICK-UP OF SOILED GRAVEL AND WOODED WASHING. SOME TILING MAY BE [redacted] NEEDED

REVISION NO. 03/31/89

1/11

REVISION NO. 06/13/90

SHORELINE OILING SUMMARY

OG HARPER USCG VERNSEN SEGMENT ST/ PN-002
BIO DIXON LAND REP LARRY EVANOFF SUBDIVISION A (1 OF 1)
EXXON ELLISON ADEC R. HUDNALL TIME 8:30 to 9:30
TEAM NO. 2 TIDE LEVEL -1.3 TO 1.3 DATE 04 / 24 / 90
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 60 % B 30 % C 10 % P ___ % G ___ % S ___ % M ___ % V ___ %
SLOPE : Lang 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☐ Low ☑ Med ☐ High
OIL CATEGORY LENGTH: W 10 m M 40 m N 0 m VL 130 m NO 720 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	c	ra	p	ra						su	us	m	u
ASPHALT PAVEMENT													
POOLED													
COVER			X	✓				X ✓			X ✓		
COAT				X				X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by ___ cm

PATTIES / TARBALLS 0 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 ___

#BAGS ___

Photographs:

Roll No. ST-2-202

Frames NONE

SUBSURFACE OIL NO PITS DUE TO V. COARSE SUBSTRATE

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	op	no		uo	uc						su	us	m	u				
							-															
							-															
							-															
							-															
							-															
							-															

COMMENTS This is primarily a rocky section of shoreline with bedrock ramps and cliffs. A pocket beach of pebble/cobble material is present near the south end and a boulder/cobble/rubble beach occurs at the north end. Oiling is confined to the northern end with a bath tub ring on bedrock surfaces, including a "heavy oil" area on the offshore islet, and a patchy oil cover

REVIEWED ___ DATE ___

SKETCH MAP

SEGMENT S W-002

SUBDIVISION A

DATE 4 / 24 / 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Bndy
- ___ 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

lll
Oiled Vegetation

1 ⇒
Photo location, direction, and number

No sketch map
see annotated oil
category map

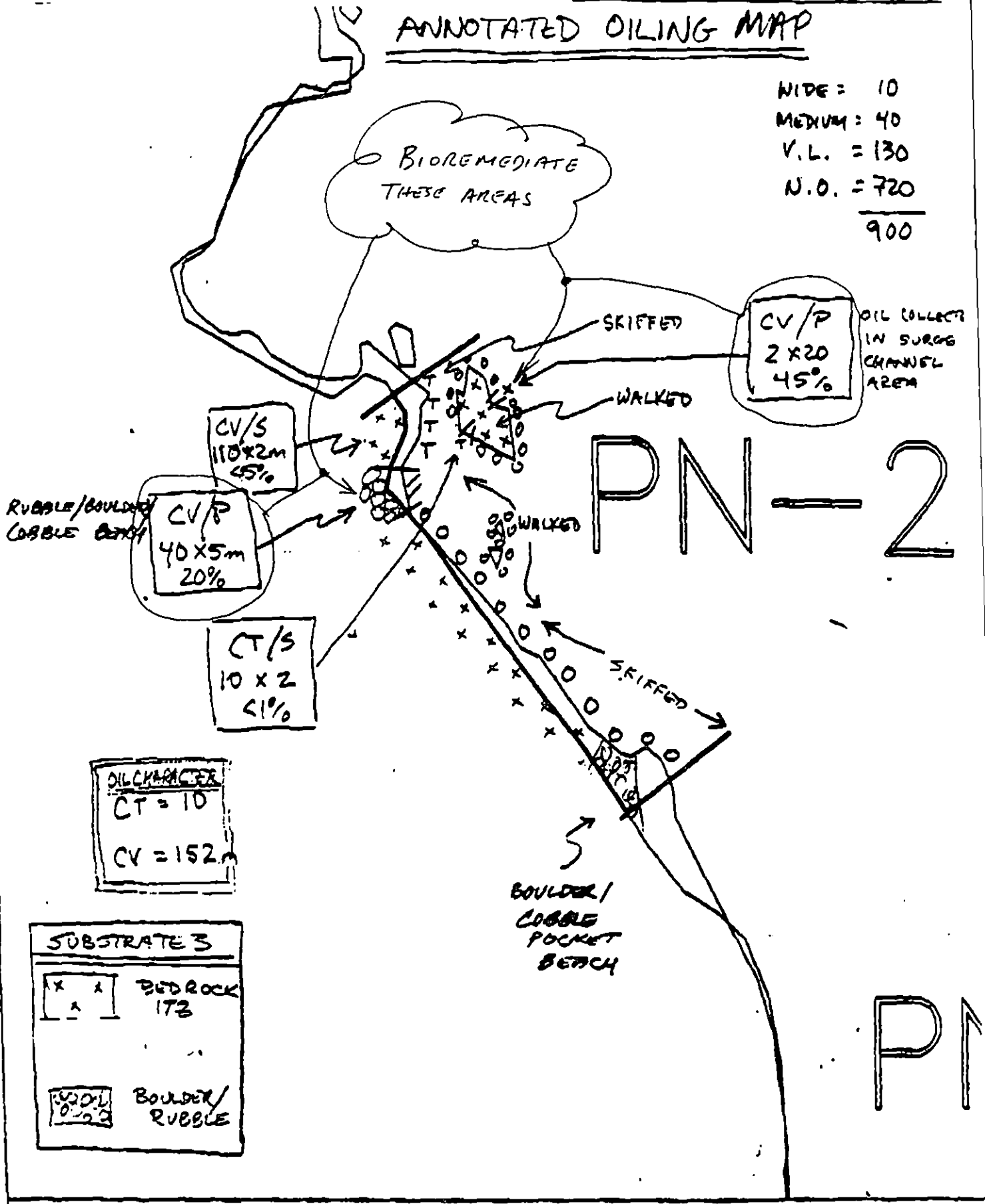
n/a

Oil Character Length (m): AP_____ PO_____ CV 152 CT 10 ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION

ANNOTATED OILING MAP

WIDE = 10
MEDIUM = 40
V.L. = 130
N.O. = 720
900



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

ST-PN-2A

ADEC Segment Length: 566m

0 100 200 300
METERS

Map Key: PWS-504
Name: J Hager
Date: 24 Aug 90
Date Entered:

7/1

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PN-02 Subdivision A Date (mo / day / yr) 04/21/90

Time (24 hr) 0900 - 0940 Biologist John Dixon

(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 30 (3) Cobble 10 (4) Pebble 0 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 35 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. None
Frames

BARNACLES

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

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	X	X	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	X	X	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	X	X	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	X	3	3	3	X	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	X	2	2	2	X	X	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	X	X	X	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: waterline during survey: -0.1 - +1.8
2 eagles in standing dead tree at boundary between PN-2 & PN-1
while most previously reported, bald eagle not observed.

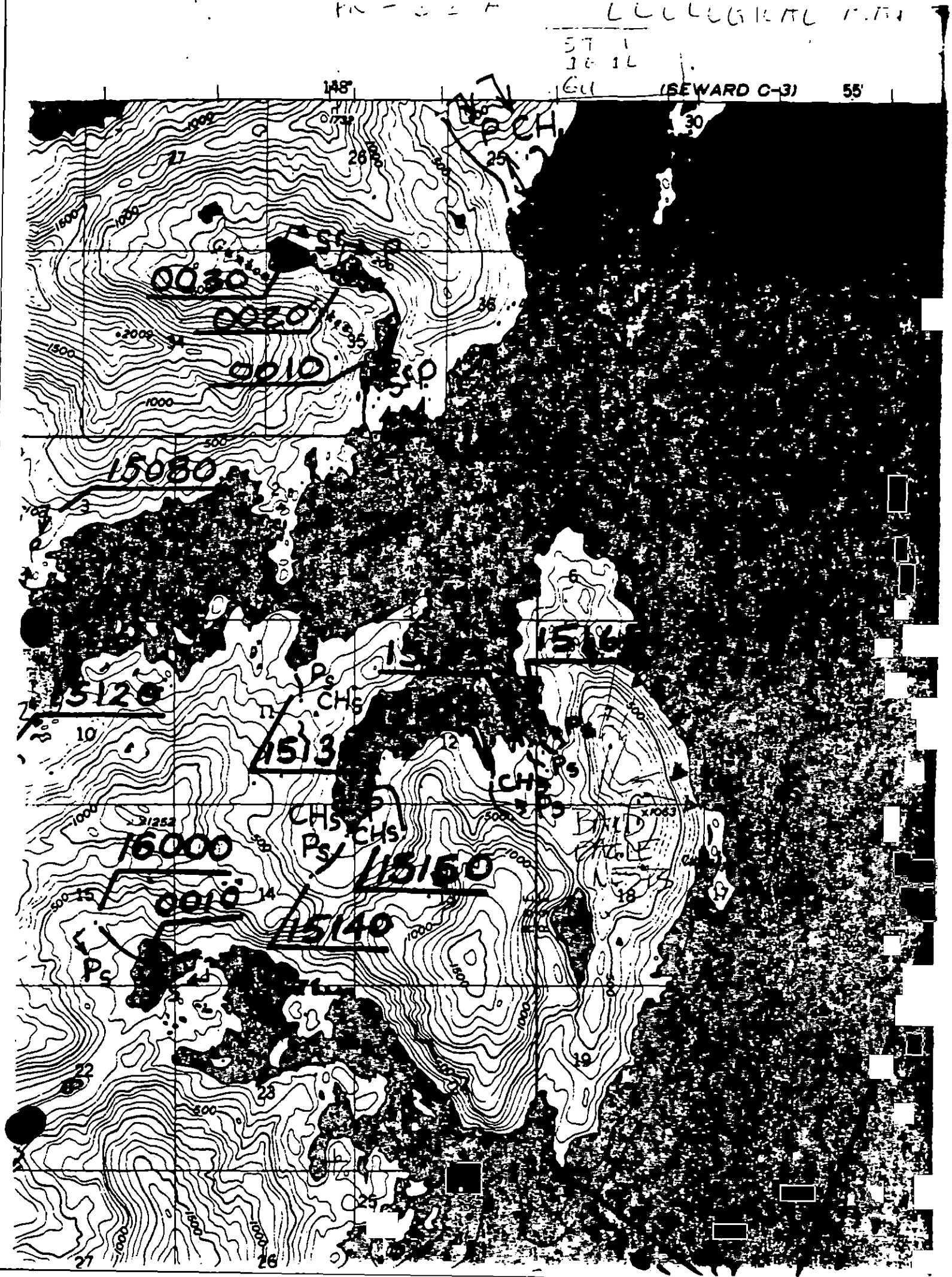
Ecological Considerations: Listed sensitivities: 5T; 6U, 1L; 1E.
Bedrock cliffs + ramps + few boulder/cobble pocket beaches. Low shore sparse algal cover. Mid & upper zones dominated by Fucus. Below glacial deposits. Sea stars & chitons very abundant.

Tuesday 04/24/90 0900-0940 -0.1 - +1.8 ft

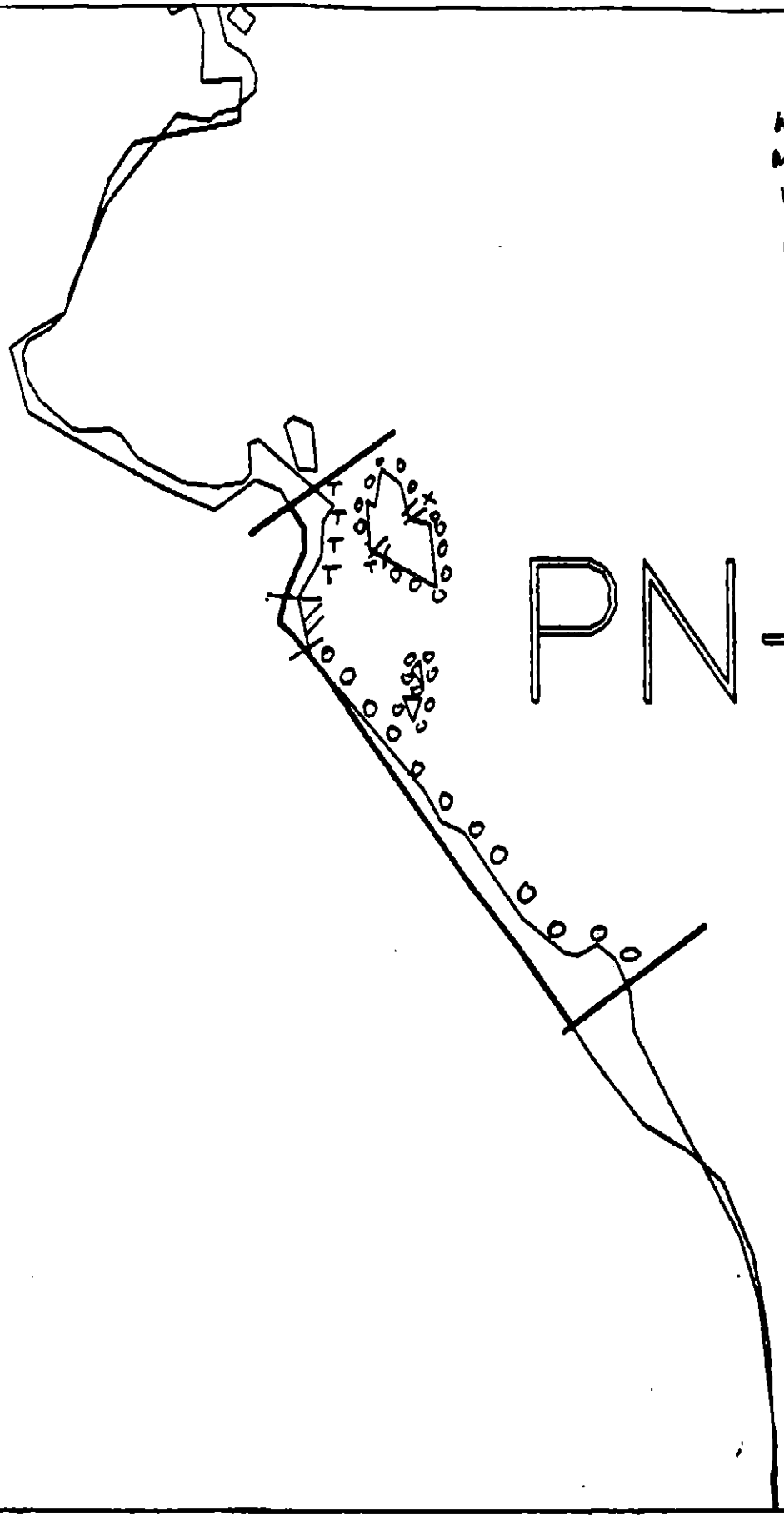
PN-02 "A"

This 900-m long segment consists mostly of bedrock cliffs and ramps. About 30% of the segment was too steep to walk and was examined from the skiff. There are boulder/cobble pocket beaches at each end of the segment & a small outcrop island at the north end.

The biota was very similar that in the adjacent segment, PN-03. The lower intertidal was nearly 100% covered by algae. Fucus, Ulva, Rhodomenia, Palmeria, and filamentous reds were all prominent. Alaria was present on low rocks. There was a very high density of the sea stars. Pycnopodia, Pisaster ochraceous, Dermasterias, and Evasterias. Leptasterias (few brooding) and the sea cucumber, Eupentacta, were common under low rocks. Balanus glandula was the most abundant barnacle and formed a distinct zone in the upper intertidal. B. carriosus were not abundant. Mytilus occurred in relatively dense patches in upper part of the middle intertidal, but overall covered less than 5% of the substrate. Fucus was the dominant holder of space in the middle zone.


148°
(SEWARD C-3)
55'
30
25
26
27
35
36
1000
1500
2000
500
0030
0020
0010
15080
15120
15130
15160
15140
16000
0010
CHS
Ps
BIRD
10
12
13
14
15
18
19
22
23
24
25
26
27

WIDE = 10
MEDIUM = 40
V.L. = 130
N.O. = 720
900



PN-2

PN

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

PN-2

ADEC Segment Length: 566m

0 100 200 300
METERS

Map Key: PWS-504
Name: J Hanger
Date: 24 Jan 90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PN-2 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	**Main Bay Hatchery Release**	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	**Gill Net Area**	Closed to bioremediation after 6/7.
1L	**Set Net Sites**	Closed to bioremediation from 6/11 to 7/25.
5T	**Bald Eagle Nest**	Closed to bioremediation. USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates an active nest within 400m of the work area.

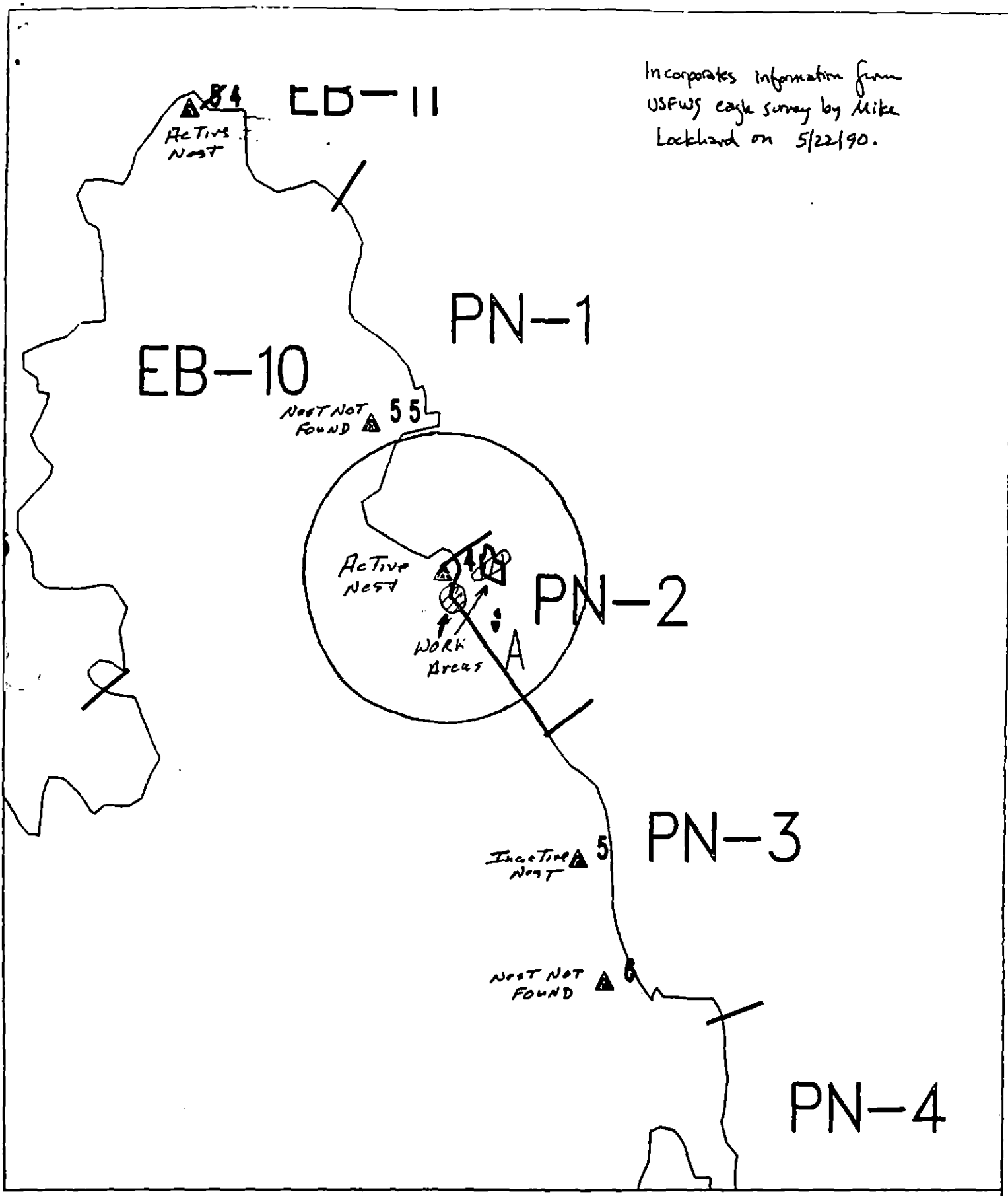
OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Amy Tan
NOAA Joseph Talbott
USCG Bill Reiter

FOSC _____ Date 6/5/90

Prepared by Andrea Mey Date 6/3/90



EXXON

Exxon Company, USA

Map Key: PWS-PN-2

M. 11 1990

ECOLOGY MAP

SEGMENT PN-2

SUBDIVISION A (1 of 1)

METERS

0 358 717

★ Seabird Colony

▲ Eagle Nest

1 inch = 1175 feet

SHORELINE EVALUATION

SEGMENT ST/ PN-03 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/15)
1L Set net sites (6/11 to 7/25)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Recreation: Special use destination

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: Charles E. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1079 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: May 5, 1990
ADEC Art Weiner Art Weiner
EXXON Mark N. Silbert Mark N. Silbert FOSC: ____ DATE: 5-18-90
NOAA Gary Petrone Gary Petrone
USCG G.A. Reiter G.A. Reiter ~~[illegible]~~

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
✓ 1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

1P 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 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)
JJ 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

EGMENT ST / PN03 SUBDIVISION: _____ DATE 4/24/90

AME Robert G. Jansen SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

OMMENTS

ADEC

IAME Rowanne Hudnall SIGNATURE Rowanne T. Hudnall

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No oil observed.

AND MANAGER

NAME LARRY EVANOFF SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 08/21/90

SHORELINE OILING SUMMARY

REVISION NO 06-13-90

OG HARPER USCG R. JENSEN SEGMENT ST/ PN-003
BIO V. DIXON LAND REP LARRY EVANOFF SUBDIVISION A (1 OF 1)
EXXON V. ERLISON ADEC R. HUNTALL TIME 08:00 to 08:30
TEAM NO. 2 TIDE LEVEL -2.0 TO -1.3 DATE 4 / 24 / 90
EST. SUBDIVISION LENGTH: 990 m ☐ Sun ☑ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☑ Forest ☐ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 50 % B 20 % C 20 % P 10 % G ___ % S ___ % M ___ % V ___ %
SLOPE : Lang 10 % Hang 30 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 990 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	ra	rp	rs						su	ui	mi	li
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT H F S 0 sq. m by ___ cm

PATTIES / TARBALLS 0 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 ___

#BAGS ___

Photographs:

Roll No. ST-2-202

Frames 30

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFAC SEDIMENTS
		op	or	ol	of	no		uo	uo						su	ui	mi	li				
1	20					X	-									X						P/S,G
2	20					X	-									X						P/S,G
3	20					X	-										X					
							-															
							-															
							-															

COMMENTS This segment has a 70m long pocket beach at the south end but for the most part is bedrock ramps and cliffs devoid of sediment. Exposure is moderate from the north east.

No oil was observed within the segment, either on the pocket beach (including 3 pits) or on the bedrock cliffs and ramps.

REVIEWED MH DATE 4-26-90

OG VIKEK

SEGMENT ST PN-003-A

SUBDIVISION A

DATE 4 24 90

SKETCH MAP

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bndy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/AWL
- SSL
- Profile Location(s)
- Profile(s)
- Fill Location(s)
- Photo Location(s)

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

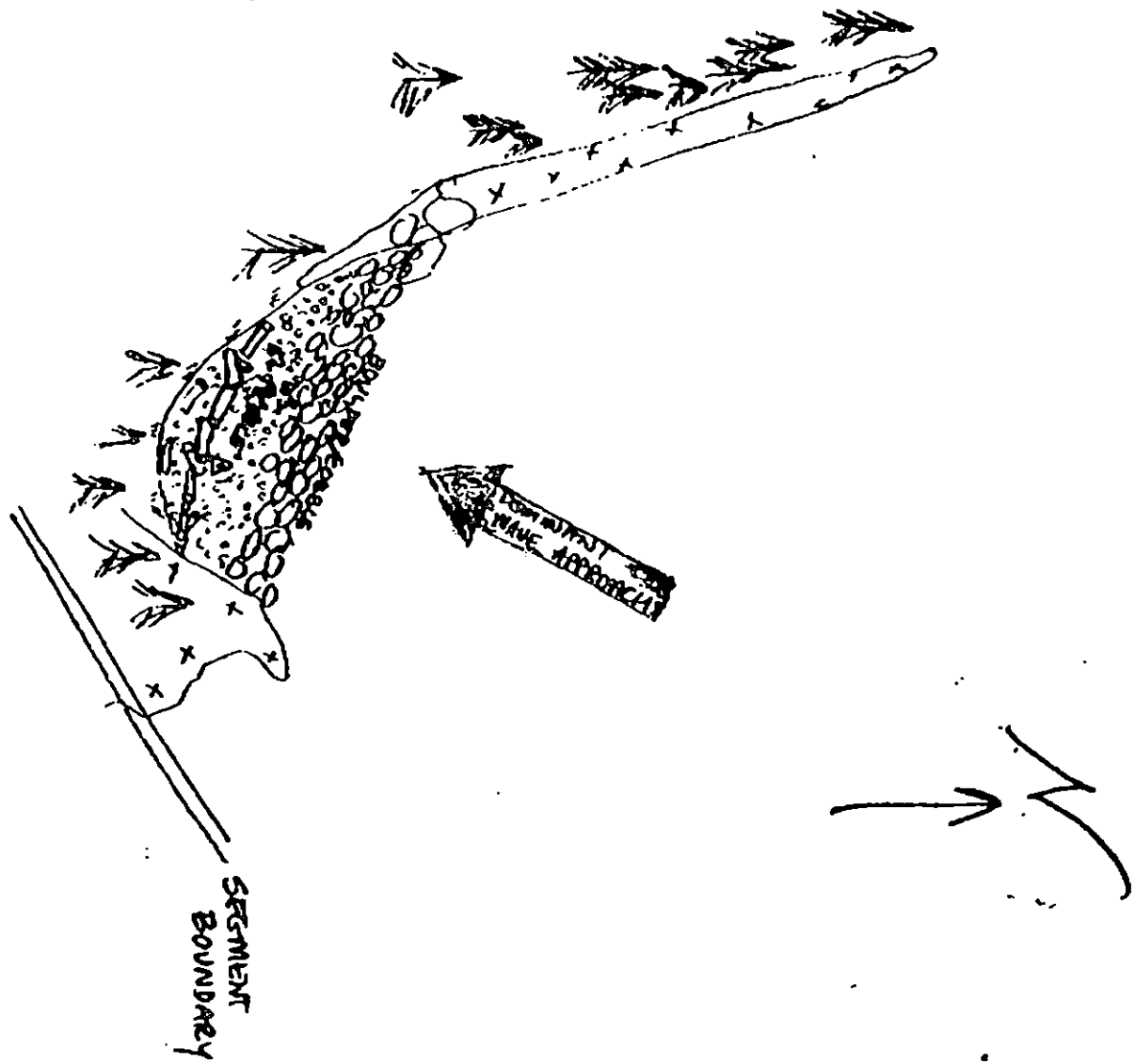
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

lll Oiled Vegetation

1 ⇔ Photo location, direction, and number



Δ1 0-20 P/S,G N.O.

Δ2 0-20 P/S,G N.O.

Δ3 0-20 P/S,G N.O.

Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO 970

REVISIONS

N.O. = 990m

PN-3

SKETCH MAP

SKIFF

WALKED

SKETCH MAP

BEDROCK & RUBBLE ITZ

PEBBLE/COBBLE BEACH

PIT LOGS

Δ 1 0-20 P/S,G N.O. (UITZ)

Δ 2 0-20 P/S,G N.O. (UITZ)

Δ 3 0-20 P/S,G. N.O. (MITZ)

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ST-PN-3-A

ADEC Segment Length: 1079m

0 100 200 300

METERS

Map Key: PWS-SOS

Name: HARPER

Date: 24APR90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/01/90

Segment ST / PN-03 Subdivision A Date (mo / day / yr) 04/24/90

Time (24 hr) 0730-0900 Biologist John Dixon

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 20 (3) Cobble 20 (4) Pebble 10 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 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. ST-2-202
Frames 23-24
(S. of segment but same line)

BARNACLES

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Waterline during survey: -2.2 - -0.1
No eagles seen during survey.

Ecological Considerations: Listed Sensitivities: 1E.L; ST-2; 6U.Y.
Vertical Cliffs of large to boulder blocks dominant substrate.
Plant-dominated zone in mid & low zones. Remarkable densities of seastars & whelks. Biologically rich area.

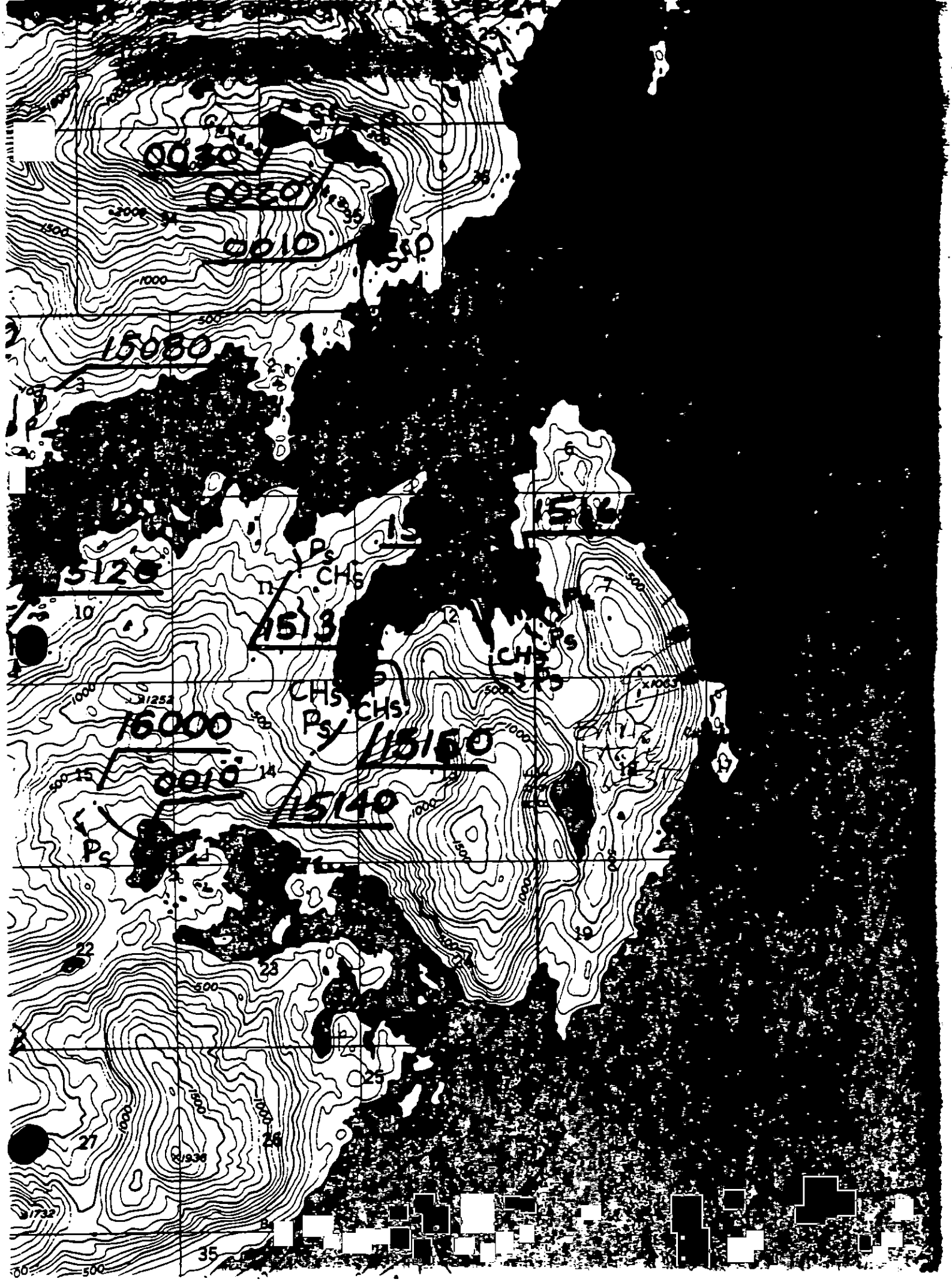
9/1

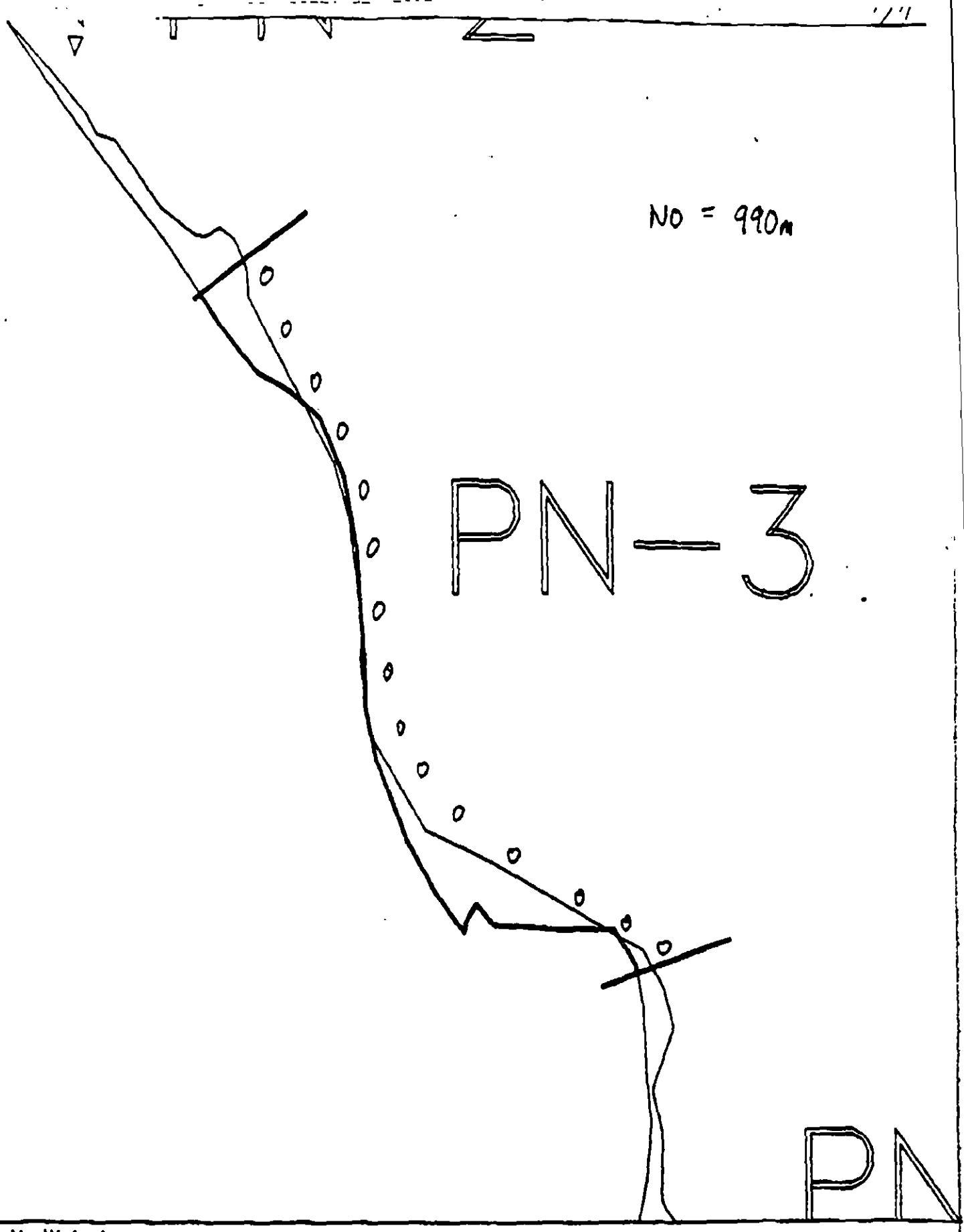
Tuesday 04/24/90 0730-0930 -2.2 - -0.1 ft

PN-03 "A"

This 990-m long segment begins in the south at a boulder/cobble pocket beach. The central 1/3 of the segment is bedrock cliff and the northern end is also made up mostly of bedrock cliffs and ramps with small boulder pocket beaches.

The lower intertidal was nearly 100% covered by algae. Fucus, Ulva, Rhodomenia, Palmeria, and filamentous reds are all prominent. Agarum and Laminaria saccharina were also present. There was an amazing density of sea stars in the lower and middle intertidal. Pycnopodia occurred at densities of 5 - 10 / sq m on the more gently sloping beaches. Pycnopodia, Pisaster ochraceous, Dermasterias, and Evasterias were all abundant throughout the segment. Leptasterias were not observed. Balanus glandula was the most abundant barnacle and formed a distinct zone in the upper intertidal. B. carriosus were not abundant. Mytilus occurred in relatively dense patches in upper part of the middle intertidal, but overall covered less than 5% of the substrate. Fucus was the dominant holder of space in the middle zone.


00030
00020
00010
15030
15020
15010
15013
16000
15150
15140
Ps
CHs
Psy
CHs
1252
1732
1936
1063



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

ST-PN-3-A

ADEC Segment Length: 1079m

0 100 200 300
METERS

Map Key: PWS-SOS
Name: HARRIER
Date: 24APR90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PN-04 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or otherwise damage mussel beds.

SHPO SIGNATURE: [signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 45 m: V.Light 91 m: No Oil 181 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) bioremediation of areas shown on attached sketch map (avoid mussel beds). No specific work constraints.
MANUALLY RAKE PRIOR TO BIO AS INDICATED ON SKETCH.

TAG COMMENTS: LEASEE TO BE NOTIFIED PRIOR TO TREATMENT AT TIME OF SCHEDULING - CONTACT ADEC 265-4627 LEANN ROBINSON

TAG APPROVAL DATE: 4/21/90.
ADEC ART WEINER [signature]
EXXON ANDY TEAL [signature]
NOAA Bud Weeks [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 5-18-90
NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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 / PN-004 SUBDIVISION: A DATE 4-7-90

USCG
NAME Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual removal of asphalted areas.

ADEC
NAME Patrick J. Endres SIGNATURE Patrick J. Endres

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The oiling I observed on PN-004 consisted of a stain on surface cobble/boulder with sporadic oil retention in the first inch of the fine sediment at the base of the cobbles. One area of asphalt noted in the blitz. Oiling existed in a primarily abiotic environment, with moderate wave exposure. The asphalted area exists behind a bedrock outcrop that may inhibit natural remediation. Manual removal of this portion is possible. If treatment occurs it can be attempted above the mean low tide. A few cabins existed upland, apparently used by set net fishermen. This may influence treatment decisions.

LAND MANAGER
NAME Larry M. Evanoff SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

REMOVE ASPHALT AREAS MANUALLY. TROWEL/SCRAPE AS MUCH OIL FROM SURFACE. NO BIOREMEDIATION.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG N. Biggar USCG K. Dreher SEGMENT ST/ PN-004
BIO K. Coates LAND REP L. Evanoff-CVC SUBDIVISION A (1051)
EXXON G. Stiles ADEC P. Endres TIME 18:15 to 19:00
TEAM NO.: 14 TIDE LEVEL: +1 to +0.5 DATE 4/17/90
EST. SUBDIVISION LENGTH: 570m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 50 % B 5 % C 20 % P 25 % 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 15 m VL 55 m NO 455 m
US 386

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BR	RW	OL	TL	SL	SU	UI	MI	LI
ASPHALT PAVEMENT		X				X					X		
POOLED													
COVER													
COAT		X				X					X		
STAIN				X		X					X		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										S		X	X

20% snow

PAVEMENT: H F (S) 15 sq. m by 5 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE
#BAGS

Photographs: ST-14-
Roll No. 2
Frames 19, 20

SUBSURFACE OIL

* oiled interval < 5cm in Pits # 1 & 2 does not constitute subsurface oil

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OL	OF	NO	OILED INTERVAL (CM-CM)	BELOW UO	UC	OIL / FILM COLOR BR	RW	OL	TL	SL	PIT ZONE SU	UI	MI	LI	ANA	SUBSURFACE SEDIMENTS
* 1	8	X					0-2		X	X						X				p, g
* 2	10	X					0-1		X	X	X					X				p, g
* 3	10	X					0-5		X						X					c, p, g
4	10					X	-		X							X				b, c, p
5	20					X	-		X							X				p, c
6	20					X	-		X								X			p, c

COMMENTS Oil spatter is spread out over broad area of beach (≈4m wide band) - Very thin layer of oil seen in upper 2cm of surface on north end of subdivision. A patch of asphalt occurs on a pebble, upper tidal zone towards the N part of the beach. The coastline is quite open and the beach appears to be moderately high energy.

PJP ADE

Page 1 of 2

REVIEWED TW DATE 4/13/90

1 of 2.

REVISION: 09/22/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PN004 Subdivision A Date (mo / day / yr) 04.07.90

Time (24 hr) 1830-1910 Biologist KA Coates

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 5 (3) Cobble 20 (4) Pebble 25 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of 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: Roll No. ST-14-2 Frames 19-20

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: Known sensitivities: recreation – special, anchorage; set net sites; Main Bay hatchery release. Deer tracks and droppings abundant in supralittoral; offshore water birds feeding; eagles perching, ? feeding in area.

Ecological Considerations:
Broken and fractured bedrock habitat in lower beach has a densely populated and diverse community. Very dense mussel populations also extend into cobble habitat immediately adjacent to bedrock. Bivalve (including mussels) could be significant to subsistence harvesting and are

POTE ABEC

gment: ST PN004 Subdivision: A Date: 04.07.90
Time: 1830-1910 Biologist: KA Coates

Eco. Consid. (cont'd)
machinery, as well as to suspended particulates and dissolved materials.

Notes:

1. Dead, oil coated Littorines found in supralittoral on bedrock.

2. Large, central bedrock intrusion very broken and with a complex, dense flora and fauna from mid to upper intertidal habitats. Mussels and Littorines dense from upper intertidal to lower mid-tide. Littorines also dense in cracks and crevices in supralittoral. Lower mid-intertidal pools with Balanus canosus, limpets, Katharina tunicata, small sculpins, and covered with Lithothamnium and ? Ralfsia / Petroculis. Lower intertidal pools with attached Agarum cribrosum & Laminaria saccharina, also Polysiphonia and other small branching reds. Dermasterias and Pycnopodia moderately abundant just below water.

3. On cobble beaches, oligochaetes abundant in algal strand of Fucus, Palmeria, Corallina and hemlock needles. At lower intertidal, small limpets, spirorbids and bryozoans abundant on underside of cobbles. Hiatella arctica shells in underlying silt-pebble substrate. Small Pycnopodia moderately abundant just below low water.

4. Pebble beach to southeast of bedrock without barnacles, Fucus, mussels or gastropods from upper to lower; also without lower intertidal algae.

OG N. Y.

SEGMENT ST/ PN-04

SUBDIVISION BA

DATE 4/7 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

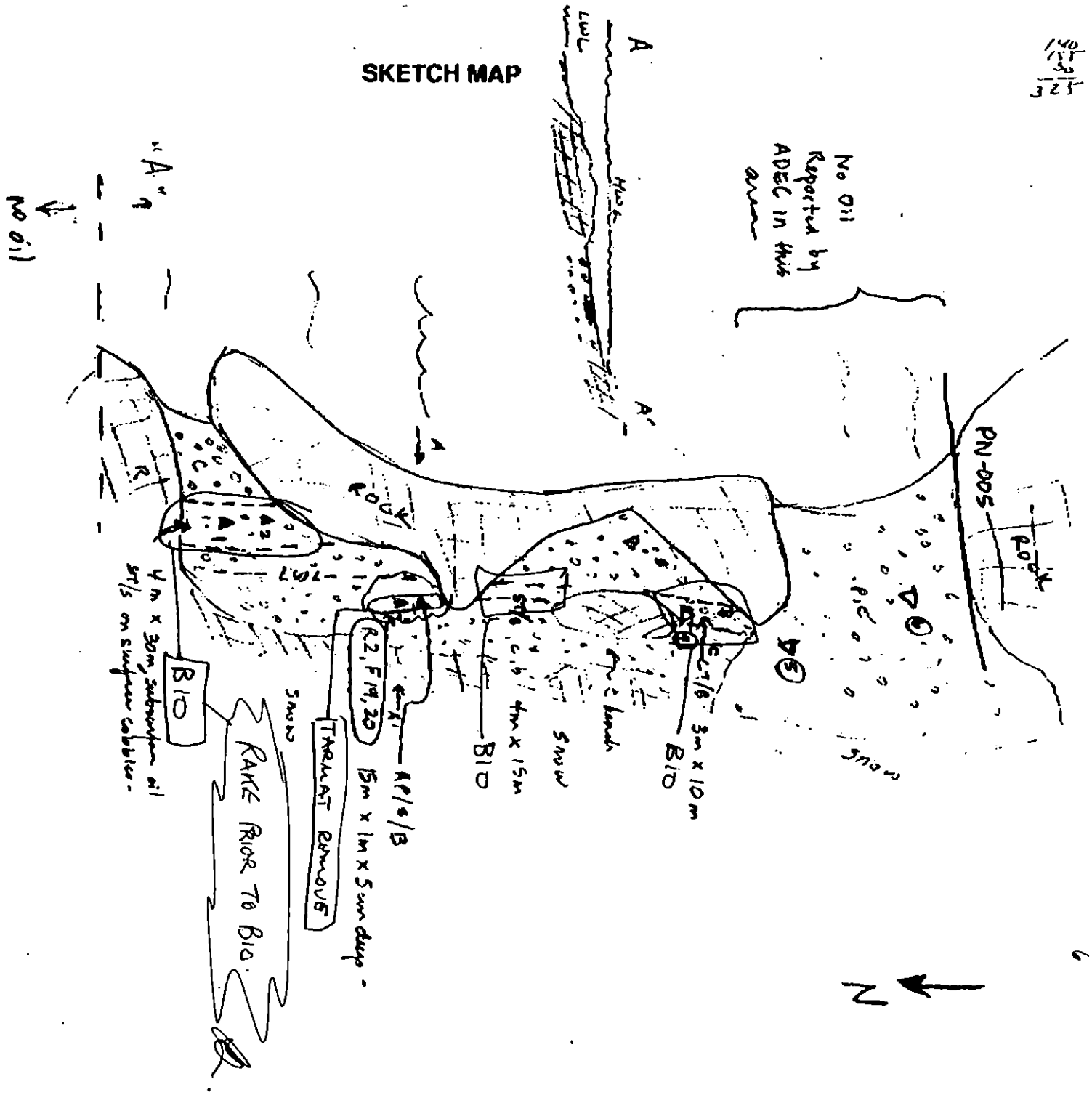
CT/S Splashed Distribution

Oiled Vegetation

1 ⊕ Photo location, direction, and number

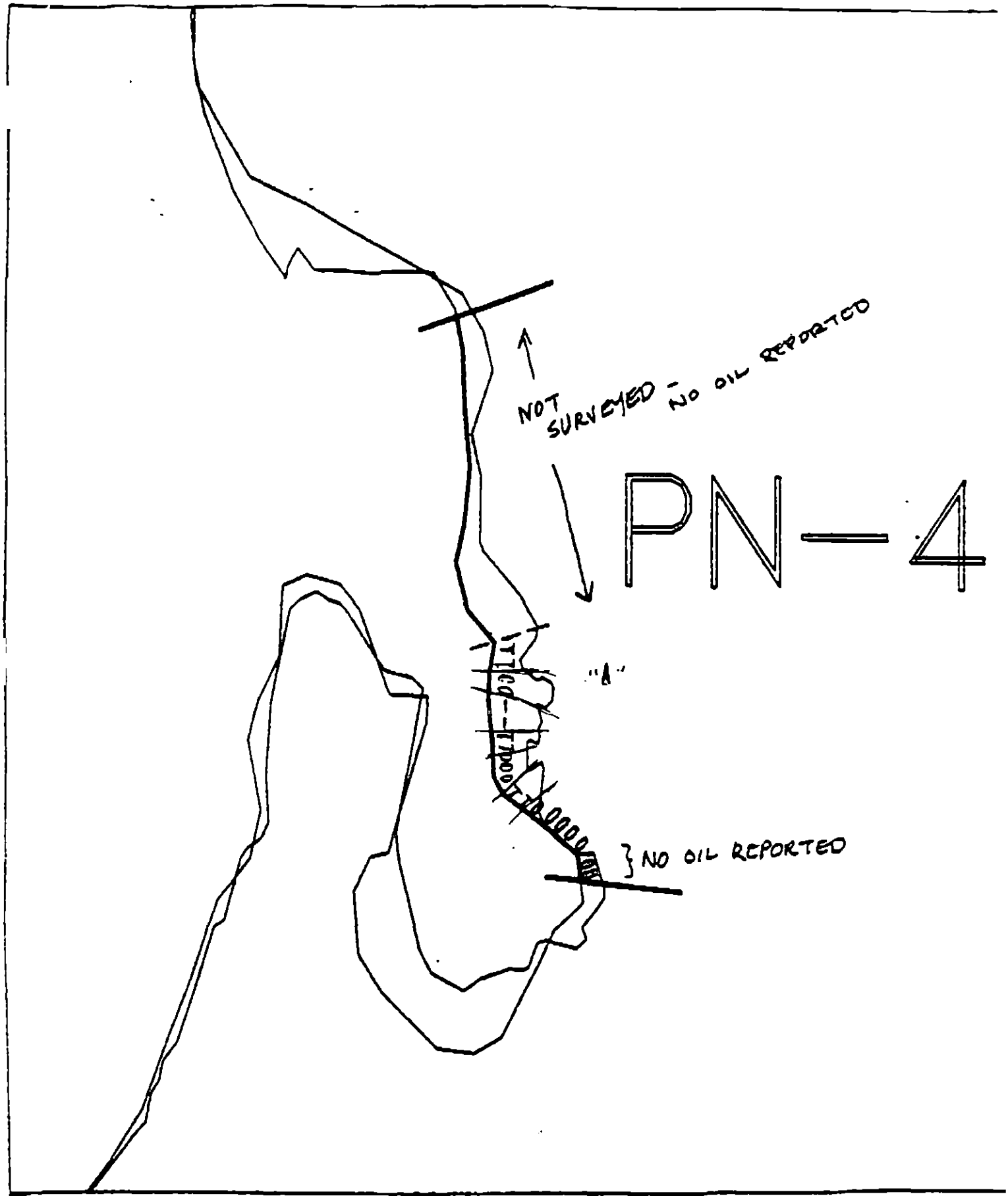
ATE ADEC

SKETCH MAP



Oil Character Length (m): AP 15 PO 0 CV 0 CT 10 ST 45 MS 0 PT 0 TB 0 FL 0 NO 235

REVISION:03/24/90



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

PN-4

ABEC Segment Length: 705m

0 100 200 300

Map Key: PWS-S06
Name: N. Biggar
Date: 4-7-90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PN-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	CLOSED
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	**Main Bay Hatchery Release**	No constraint to tarmat removal. Subdivision open to bioremediation and manual raking 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	**Gill Net Area**	No constraint to tarmat removal. Closed to bioremediation after 6/7.
1L	**Set Net Sites**	No constraint to tarmat removal. Closed to bioremediation from 6/11 to 7/25.
5T	**Bald Eagle Nest**	Closed to tarmat removal, bioremediation and manual raking. USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates an active nest within 400m of the work area.

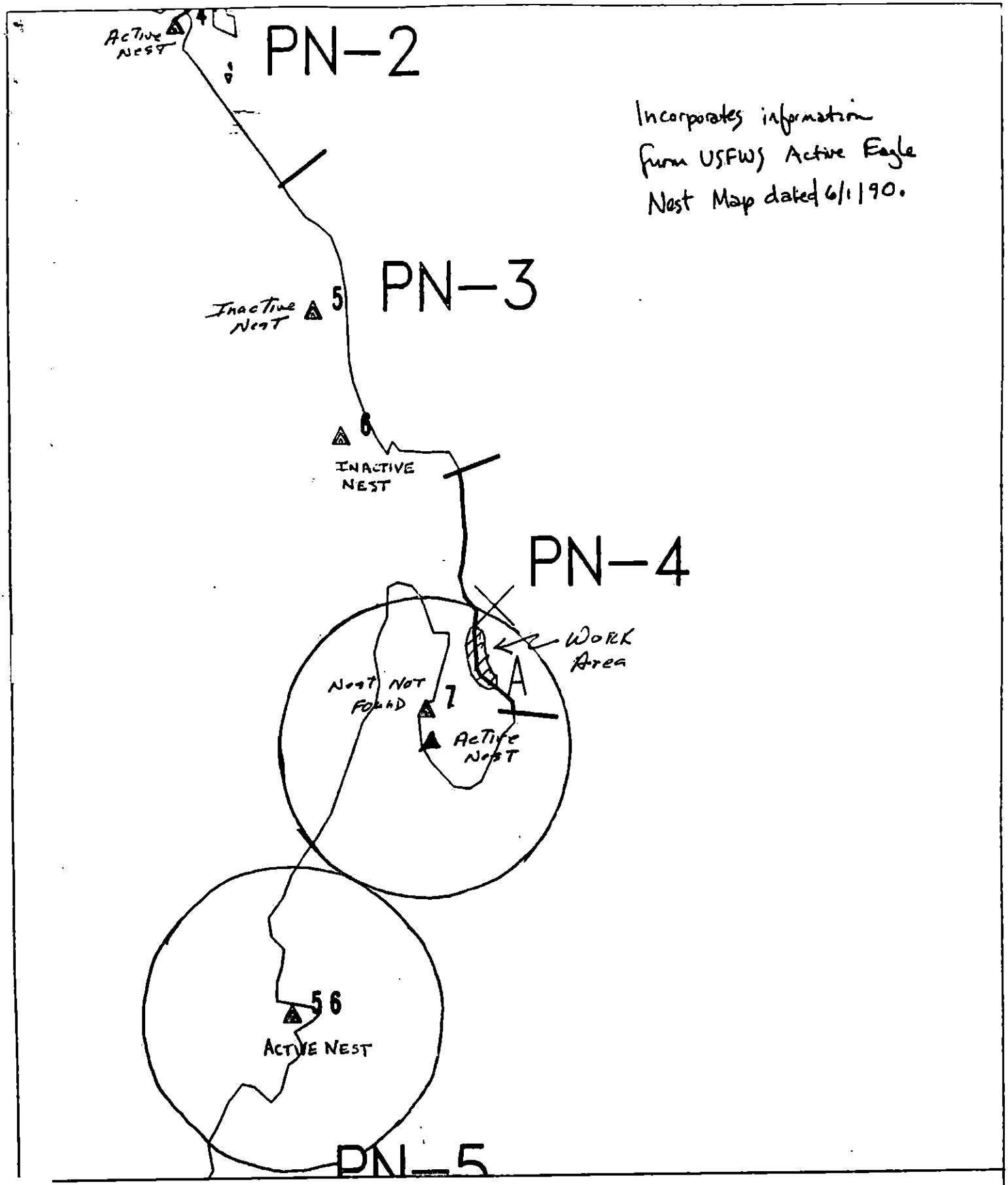
OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

TAG APPROVAL DATE 6/04/90
ADEC Ray Menses
EXXON Andy Gar
NOAA Joseph Tikott
USCG

FOSC Date 6/7/90

Prepared by Date 6/4/90



EXXON

Exxon Company, USA

Map Key: PWS-PN-4

ECOLOGY MAP 6/31/90

SEGMENT PN-4

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PN-05 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
5T-4 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination

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: [signature] DATE: 4/29/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 228 m: V.Light 2087 m: No Oil 1877 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 25+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of tarmat, ~~2)*manual pick up or burning of oiled logs and debris if >10% coverage.~~ Work should be conducted after 6/1 with approval from USFWS regarding eagle nests.

TAG COMMENTS: MONITORS TO ASSESS NEED TO BURN LOGS

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER [signature]
EXXON ANDY TEAL [signature]
NOAA Gary Patrac [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

(7)

SEGMENT ST / PN-005 SUBDIVISION: A DATE 4/8/90

USCG
NAME Kerwin L. Dreher SIGNATURE CWO2 K. R. Dreher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Recommend manual removal of scattered small asphalt patchs. Cut and remove oiled tree branches by cabin.

ADEC
NAME PATRICK J ENDRES SIGNATURE Patrick J. Endres

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
most of this segment had very light to no oil. Characterized by a tar band < 1 meter. One area (pocket beach) had a small asphalt patch. manual removal is fesabule if it can be relocated. Retrieval could be accomplished above a +9 ft. tide to avoid intertidal biota damage by foot-travel. Removal of oiled limbs near the set net fishing cabin. See map for specific locations.

LAND MANAGER
NAME LARRY M. EVANOFF SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
MANUAL REMOVE ASPHALT AREAS. REMOVE SOILED LIMBS FROM TREE AT THE HEAD OF COVE ON PT. NOWELL (CABIN NEAR BY).

SHORELINE OILING SUMMARY

REVISION NO. (2)

OG N. Bingay USCG K. Dreher SEGMENT ST/ PN-005
BIO W.R. Coates LAND REP L. Erzroff SUBDIVISION A 1 of 1
EXXON G. Stiles ADEC P. Endres TIME : to :
TEAM NO.: 14 TIDE LEVEL: +2 to +8.5 DATE 4 / 7 / 90
EST. SUBDIVISION LENGTH: 4m +85 ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow 4/8/90
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock 9:00-11:
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S 3:30-4
SURFACE SEDIMENTS: R 25 % B 65 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang ____ % Hang ____ % Vert ____ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 400 m VL 1790 m NO 2825 m
US 130

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	NO	FB	IP	PB						SU	UI	MI	LI
ASPHALT PAVEMENT	X					X				X			
POOLED													
COVER		X	X	X		X					X		
COAT													
STAIN				X		X					X		
MOUSSE													
PATTIES													
TARBALLS		X				X					X		
FILM													
NO OIL										X		X	X

shore 10%

PAVEMENT: H F 1/2 sq. m by 2 cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE pen pens

#BAGS 1

Photographs:

Roll No. RZ

Frames 21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	NO		UO	UC						SU	UI	MI	LI		
1	20					X	-		X						X					c, p, g
2	15					X	-		X							X				c, p
3	15					X	-		X							X				c, p, g
4	15					X	-		X							X				b, c, p, g
5	10					X	-		X							X				c, p
6	25		X				8 - 25	X								X				c

drops down through cobbles - no readily oil

COMMENTS

Oiling along segment is minimal, and consists of patchy thin (< 10cm) band almost entirely on rock face and boulders at about 11 to 13 feet above MSL. Locally, along S 1/2 of segment, covering on boulders (S side) reached 1 m - wide drip zone. Coverline is quite uneven, and consists primarily of boulders at the base of rock face.

Only evidence of oil was at UITZ, at elevations @ 11-13' above MSL; therefore survey was continued to slide up to 8 1/2 ft.

Page 1 of ____ REVIEWED JW DATE 4/13/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PN005 Subdivision 1A — 1B * Date (mo / day / yr) 04.08.90 (3)

Time (24 hr) 0940-1000 / 1750-1810 Biologist R.A. Coates

* see maps following.

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 30 (3) Cobble 60 (4) Pebble 10 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 50 Low 45

(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-14-2
Frames 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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: Known sensitivities: recreation — special; eagle nests: Main Bay hatchery set net sites. Note: no eagle's nests sighted 8 April, 1990. 3 pairs mature eagles perching; mink; deer skull + abundant droppings & black bear scat.

Ecological Considerations:
observed oiling on holders and bedrock situated higher than highest settlement of barnacles. Dense, diverse flora and fauna restricted to lower mid and lower intertidal. In combination with bedrock area, segment is quite diverse although productivity varies considerably over length of segment.

Segment: ST-PN006 Subdivision: BioAi Date: 04.08.90 (4)
Time: 0940-1000 Biologist: KA Coates
1750-1810

Notes:

1. Ecological summary is only for two beaches designated in earlier surveys as lightly oiled. All* segment was walked.

2. No very recent barnacle spat was observed throughout the segment.

3. Nucella canaliculata abundant on bedrock faces from lower mid-intertidal; also sparse, large Notoacmea scutum near low intertidal. Pycnopodia present just below low water and just above.

Large, dark green or black amphipods abundant under rocks at water edge. Serpulids abundant under cobble at LI.

* as completely as physically possible.

OG Bigger

SEGMENT ST/ PN-005

SUBDIVISION A

DATE 4/17/90

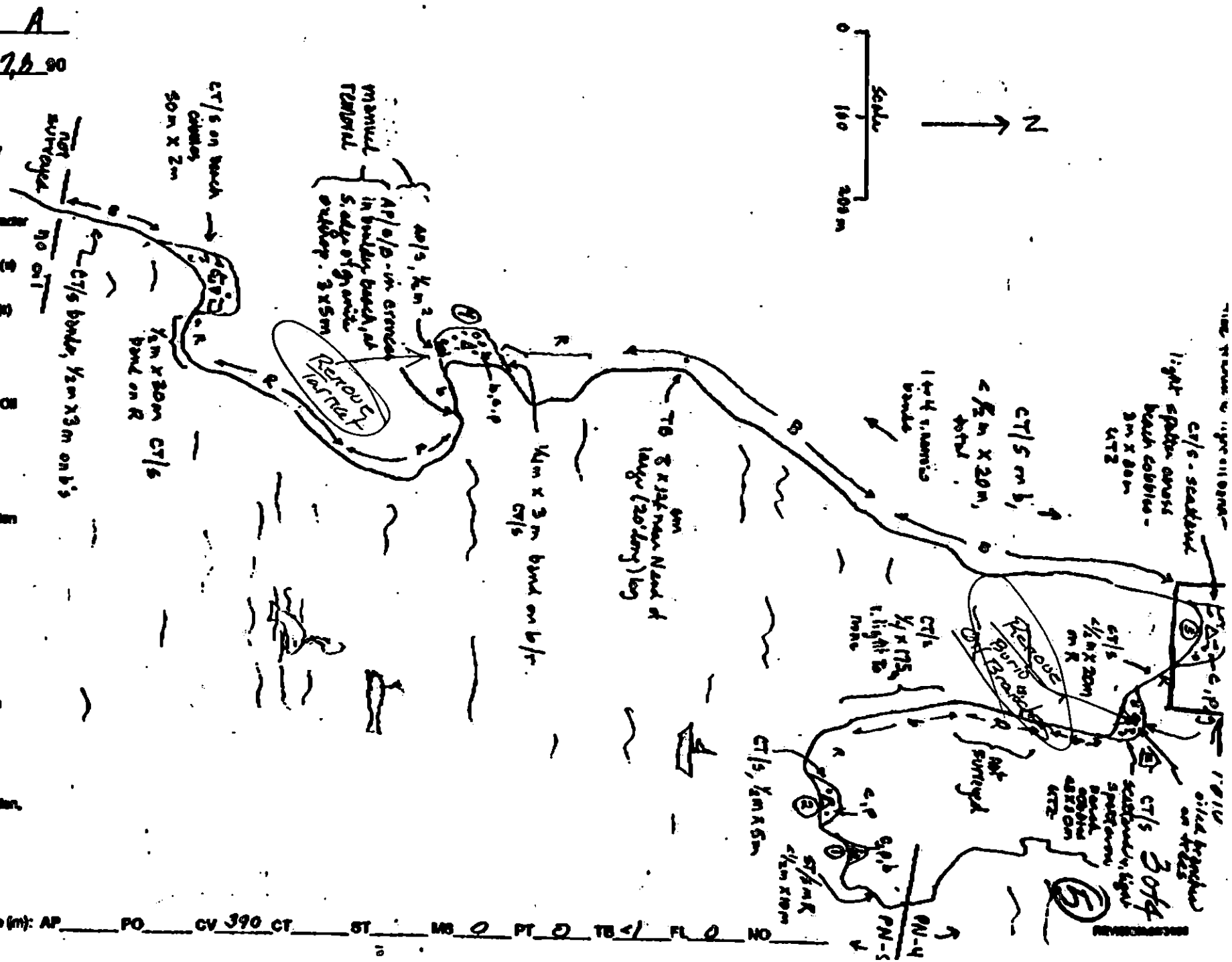
SKETCH MAP A

CHECKLIST

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

LEGEND

- Pit - No Subsurface Oil
- 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



Oil Character Length (m): AP____ PO____ CV 390 CT____ ST____ MB 0 PT 0 TB <1 FL 0 NO____

OG N. gm

SEGMENT STI PN-005

SUBDIVISION A

DATE 4 / 8 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Entry
- ___ OB 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

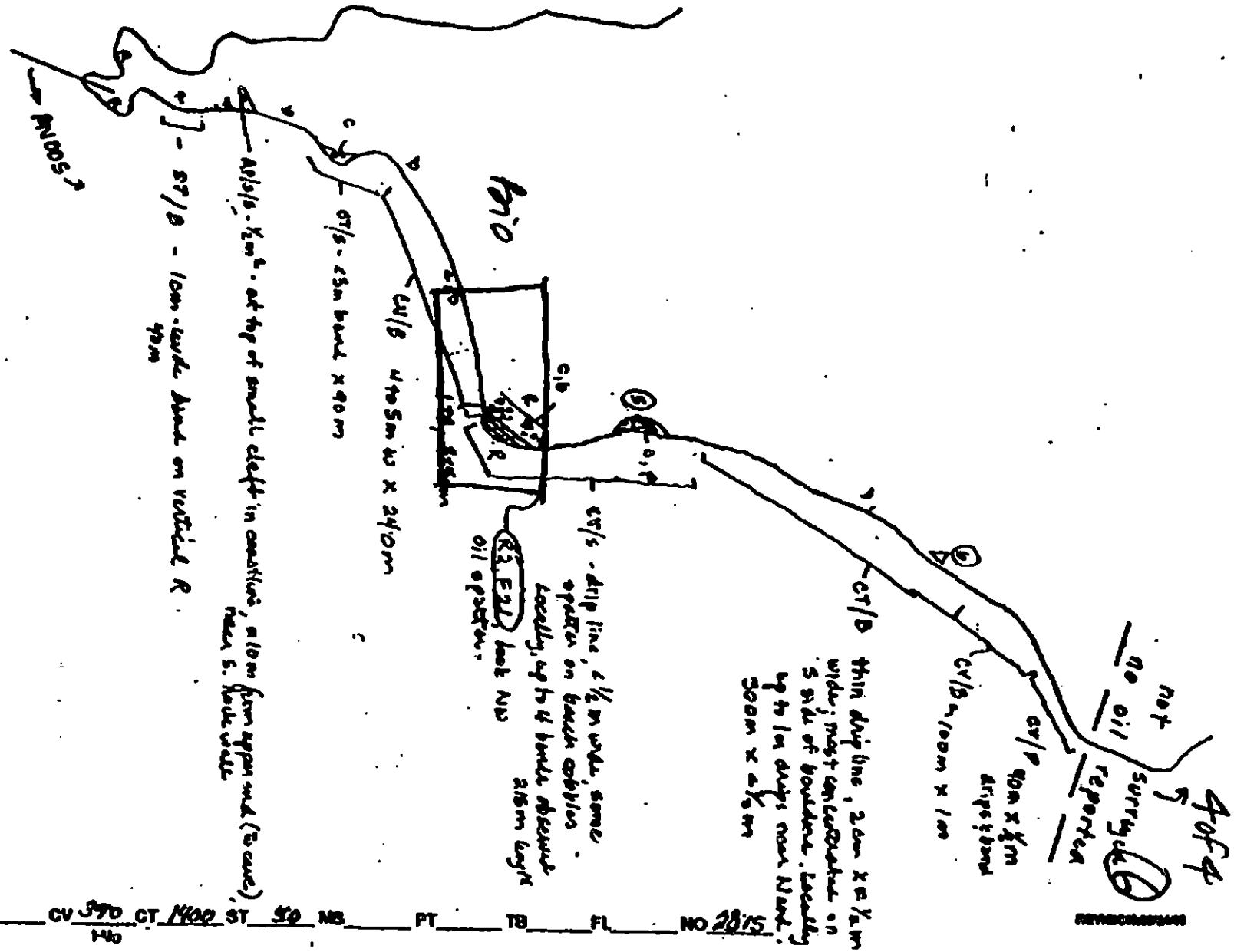
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

SKETCH MAP B

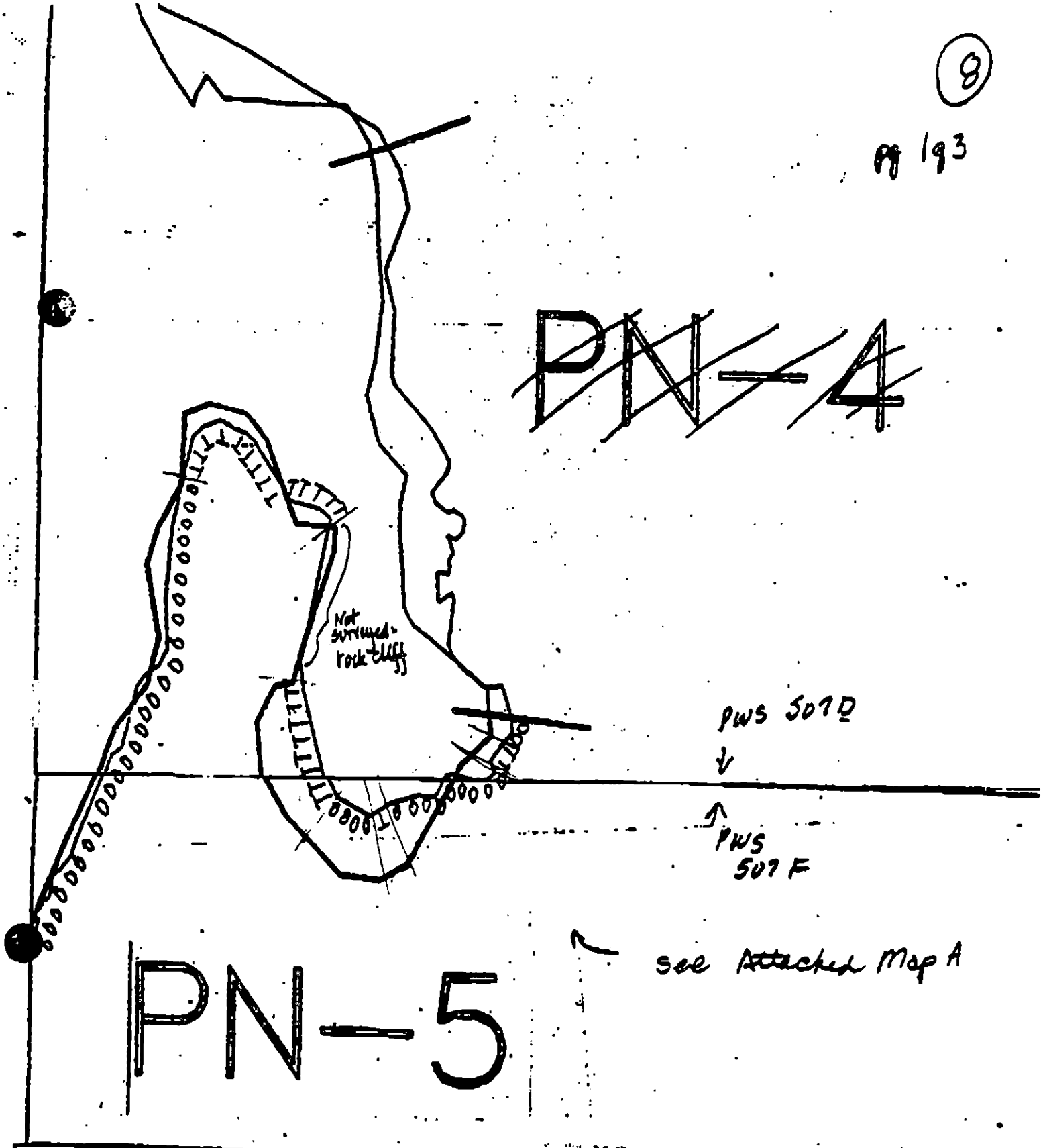


Oil Character Length (m): AP >1 PO ___ CV 390 (Hb) CT 1400 ST 50 MS ___ PT ___ TB ___ FL ___ NO 2815

REVISIONS

(8)

pg 193



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

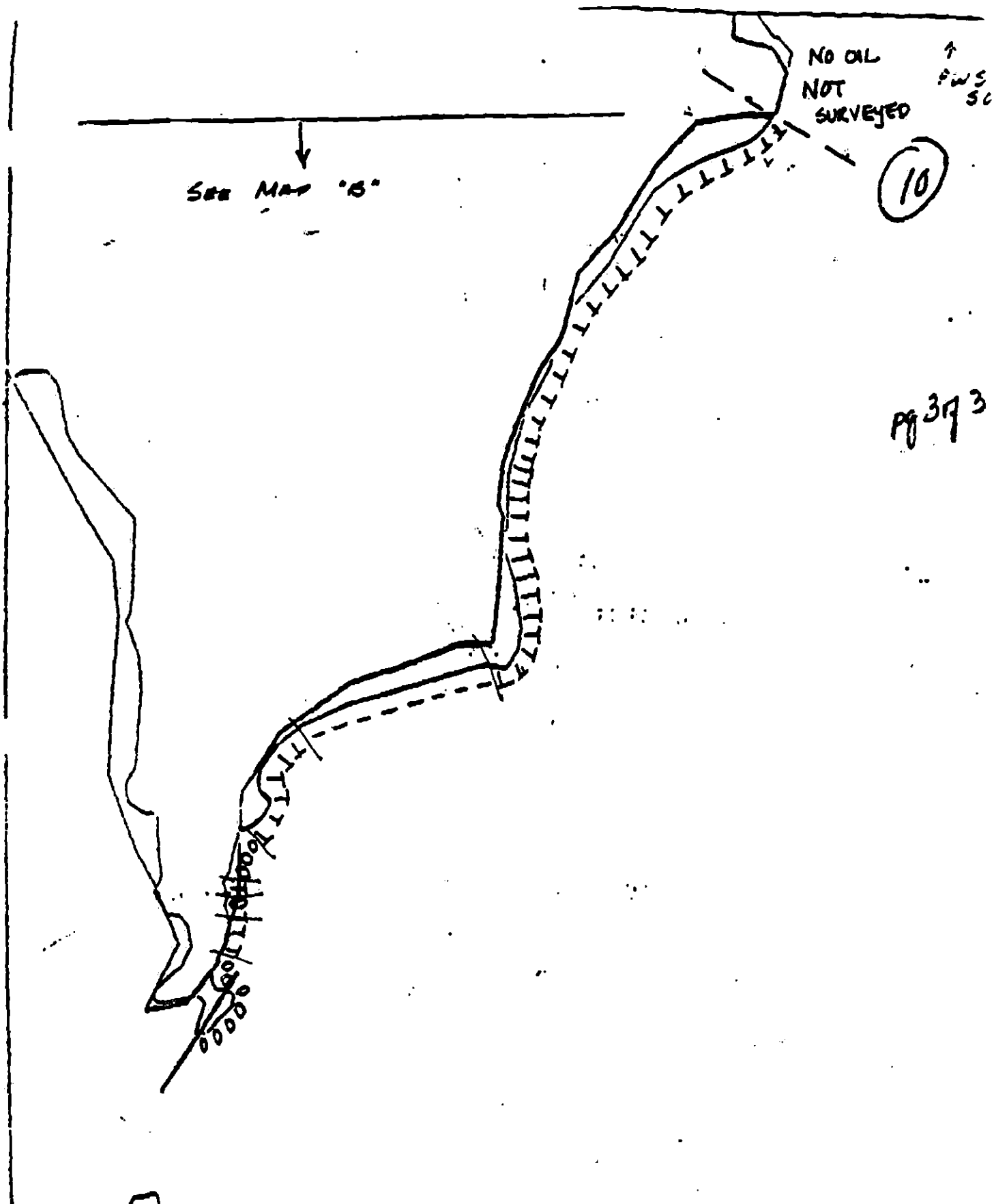
PN-5

ADEC Segment Length: 4785m

0 100 200 300
METERS

Map Key: PWS-507d
Name: Norma Biggs
Date: 4/9/90
Date Entered:

TOTAL P.06



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

PN-5

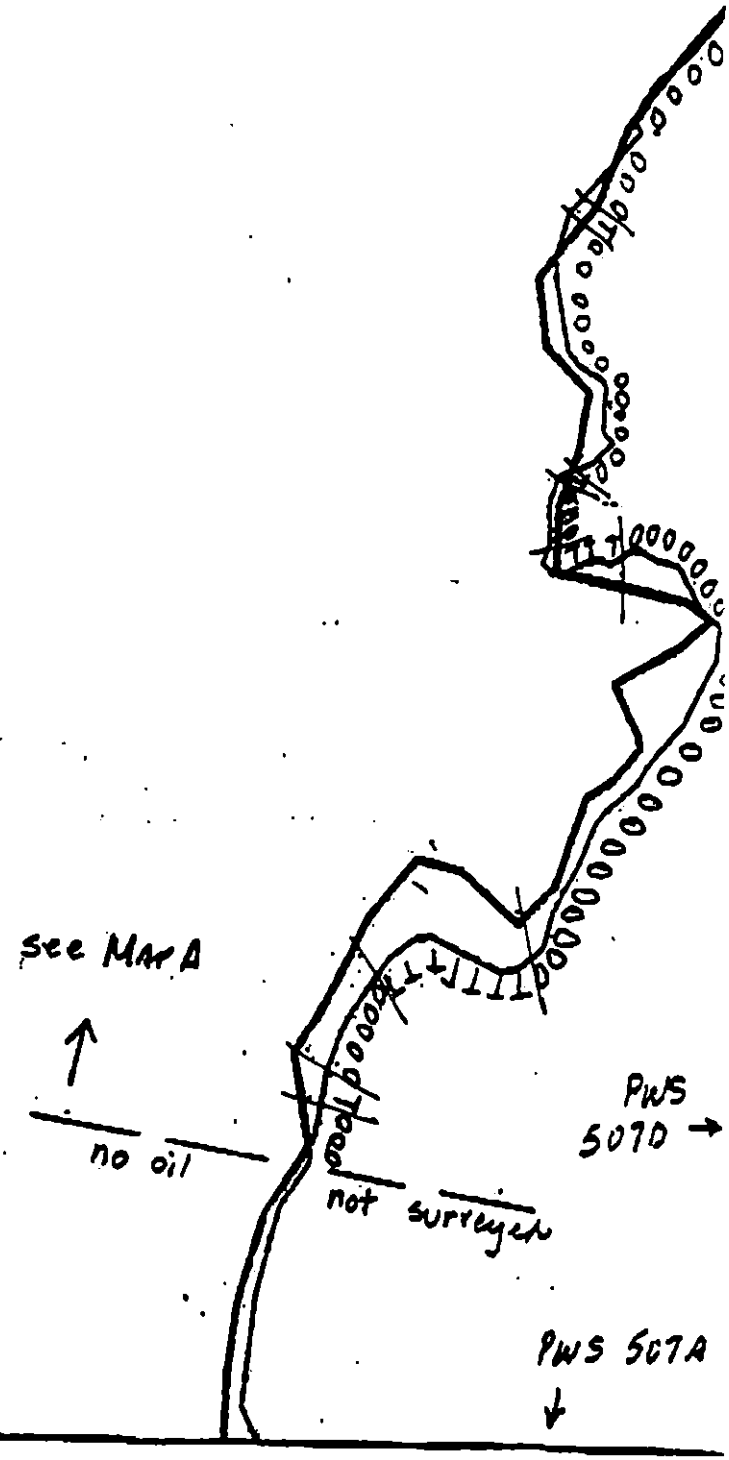
ADEC Segment Length: 4785m

0 100 200 300
METERS

Map Key: PKS-507a
Name: N. Biggs
Date: 4/9/10
Data Entered:

(9)

pg 2 of 3



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

PN-5

ADEC Segment Length: 4785m

0 100 200 300
METERS

Map Key: PWS-507c
Name: N. BIGGAR
Date: 4/9/90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PN-5 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup and Tarmat Removal Inside Active Eagle Nest Buffer Zone	**CLOSED**
Manual Pickup and Tarmat Removal Outside Active Eagle Nest Buffer Zone	**OPEN**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	**Main Bay Hatchery Release**	No constraints to manual pickup and tarmat removal.
1I	**Gill Net Area**	No constraints to manual pickup and tarmat removal.
1L	**Set Net Sites**	No constraints to manual pickup and tarmat removal.
5T	**Bald Eagle Nests**	USFWS bald eagle impact assessment completed on 5/19/90 by Mike Lockhart indicates 3 active nests within Subdivision A. Closed to manual pickup and tarmat removal, inside eagle nest buffer zone established by USFWS. No constraint to manual pickup and tarmat removal outside buffer zone.

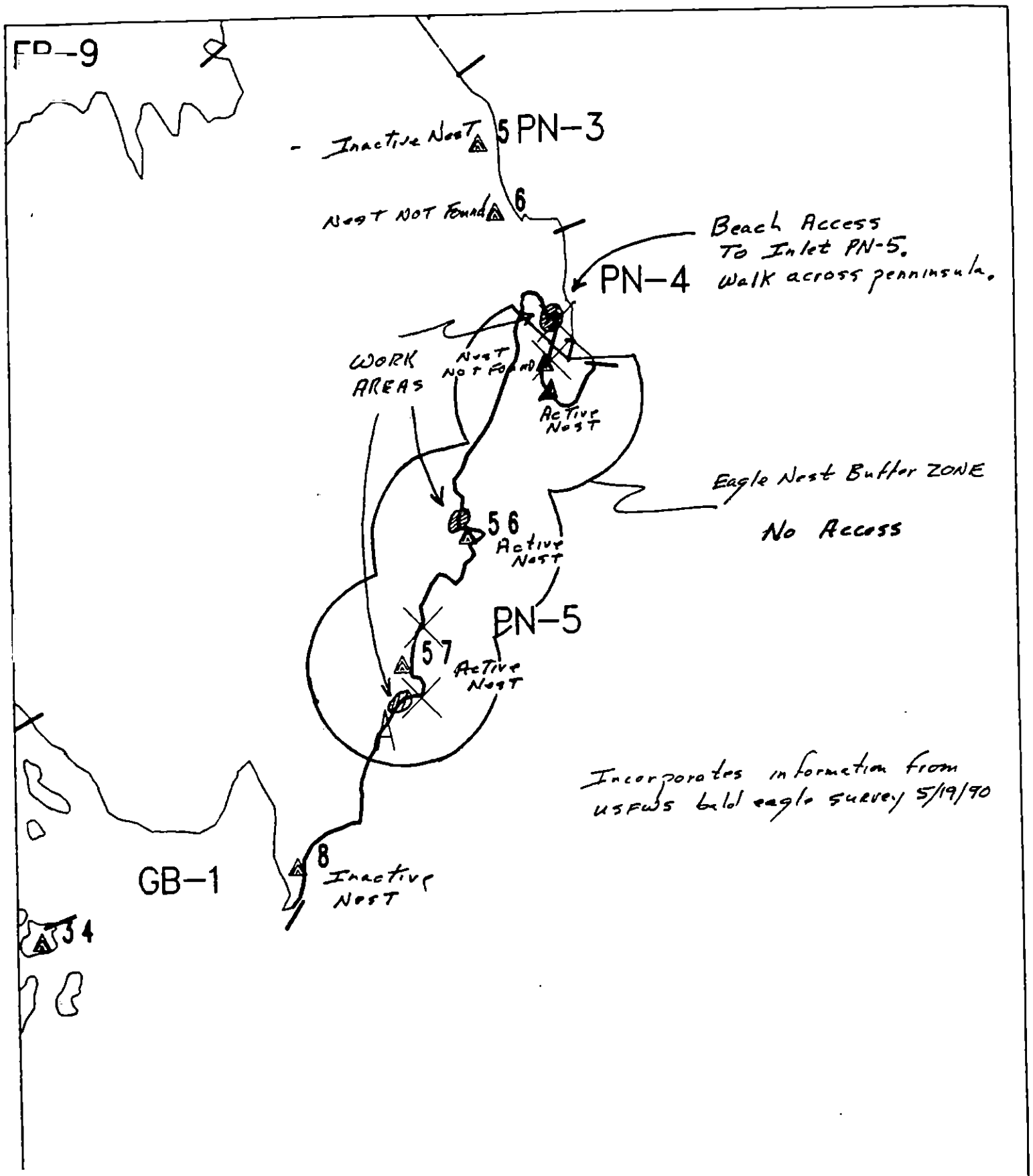
OTHER ECOLOGICAL CONSIDERATIONS

Use access corridor designated by USFWS. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within active eagle nest buffer zone. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests When set net sites are present, restrict beach operations to essential minimum, between 6/1, to 7/25. JPP

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

FOSC _____ DATE 6-10-90

Prepared by: J.P. Phillips Date: 6/9/90



EXXON

Exxon Company, USA

Map Key: PWS-PN-5

ECOLOGY MAP 6/2

SEGMENT PN-5

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PP-01 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4GG Alaska State Parks
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: [signature] DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 24 m: No Oil 1993 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: MONITORS TO ASSESS AREA INDICATED ON SKETCH FOR SIGNIFICANCE OF REMAINING OIL

TAG APPROVAL DATE: May 7 1990
ADEC Art Weiner [signature]
EXXON Andy Tal [signature]
NOAA Gary Petrae [signature]
USCG G.A. Reiter G.A. Reiter

FOSC: [signature] DATE: 5-12-90

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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
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 / PP1 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/27/90

USCG NAME JERRY SCHULTZ SIGNATURE Jerry Schultz

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC NAME MIKE EBEL SIGNATURE Michael J. Ebel

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS No further impact recommended.

PP-1-A: Moving from Petroff Point Northward was a large sand beach which midway through the segment graded into cobble boulders & finally bedrock cliffs. Because the sand beach was observed to have heavy oil during the 1989 ADEC survey we dug a transect of 3 pits every 50m moving along the length of the shoreline. No subsurface oil was found. About ½ gallon of small tarballs (and 2 patties) were collected from the UTZ-STZ boundary. One small splash of coal was observed on boulders.

~~LAND MANAGER~~ - NPS

NAME MIKE TETREAU SIGNATURE

~~☐ NO TREATMENT RECOMMENDED~~ ~~☐ TREATMENT SUGGESTED~~

COMMENTS

NPS is not the primary land manager for this segment. Good survey, it does not appear that treatment is necessary.

SHORELINE OILING SUMMARY

REVISION NO. 06-13

OG Randy Siegel USCG Jerry Sahulle SEGMENT ST/ PP-1
BIO Lewis Sherman LAND REP Peter Zoller (CRC) SUBDIVISION A (1 OF 1)
EXXON Leonard Herbst ADEC Mike Ebel TIME 11:10 to 12:25
TEAM NO. 12 TIDE LEVEL -0.85' to 3.03' DATE 4 / 27 / 90
* EST. SUBDIVISION LENGTH: 1907 m * ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow 53°
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 5 % B 5 % C 10 % P 30 % G 30 % S 20 % M Ø % V Ø
SLOPE: Lang 25 % Hang 75 % Vert Ø % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 1 m NO 1906 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S						SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X				X			X		
STAIN													
MOUSSE													
PATTIES				X				X			X		
TARBALLS				X				X		X	X		
FILM													
NO OIL												X	X

PAVEMENT H F S Ø sq. m by Ø c

PATTIES / TARBALLS 10 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

None

DID YOU COLLECT DEBRIS? YES ☒ NO ☐
Coast Guard
TYPE Plastic/gar
BAGS 1

Photographs:

Roll No. None

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE SUBSURFA SEDIMENT
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	U				
1	60					X	0.0		X								X			—	—	S
2	60					X	0.0		X							X				—	—	S
3	40					X	0.0		X						X					—	—	S
4	43					X	0.0		X						X					—	—	S
5	54					X	0.0		X							X				—	—	S
6	65					X	0.0		X								X			—	—	S

COMMENTS * No Exxon segment length provided to me. Length indicated was taken from computer map.

Length of shoreline consisting almost entirely of granular surface sediments - increasing coarseness from south (sand) to north (cobbles). 28 pits were dug, concentrated at southern end of beach - no oil observed. One stretch of beach had small pellet-like tarballs, extend from UI to the [redacted] zone. All observed tarballs were picked

REVIEWED GH DATE 4-29-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06-13-90

SEGMENT ST/ PP-1 SUBDIVISION A (2 OF 3)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	LI				
7	100					X	0·0		X								X			—	—	S
8	75					X	0·0		X							X				—	—	S
9	50					X	0·0		X						X					—	—	S
10	54					X	0·0		X								X			—	—	S
11	90					X	0·0		X							X				—	—	S
12	80					X	0·0		X						X					—	—	S
13	70					X	0·0		X								X			—	—	S
14	70					X	0·0		X							X				—	—	S
15	85					X	0·0		X						X					—	—	S
16	90					X	0·0		X								X			—	—	S
17	70					X	0·0		X							X				—	—	S
18	43					X	0·0		X						X					—	—	S
19	50					X	0·0		X								X			—	—	S
20	60					X	0·0		X							X				—	—	S

COMMENTS

3/16

REVIEWED MH DATE 4-29-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ PP-1 SUBDIVISION A (3 OF 3)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	LI				
21	43					X	0-0		X								X					S
22	40					X	0-0		X							X						C, S
23	30					X	0-0		X						X							C, S
24	54					X	0-0		X								X					C, S
25	20					X	0-0		X							X						C, S
26	37					X	0-0		X						X							C, S
27	25					X	0-0		X								X					C, S
28	30					X	0-0		X							X						C, S
							.															
							.															
							.															
							.															
							.															
							.															

COMMENTS

4/16

REVIEWED GH DATE 4-29-90

SEGMENT STA P-1

SUBDIVISION A

DATE 4 / 27 90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bndry
- Off 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 Spotted Distribution

Mixed Vegetation

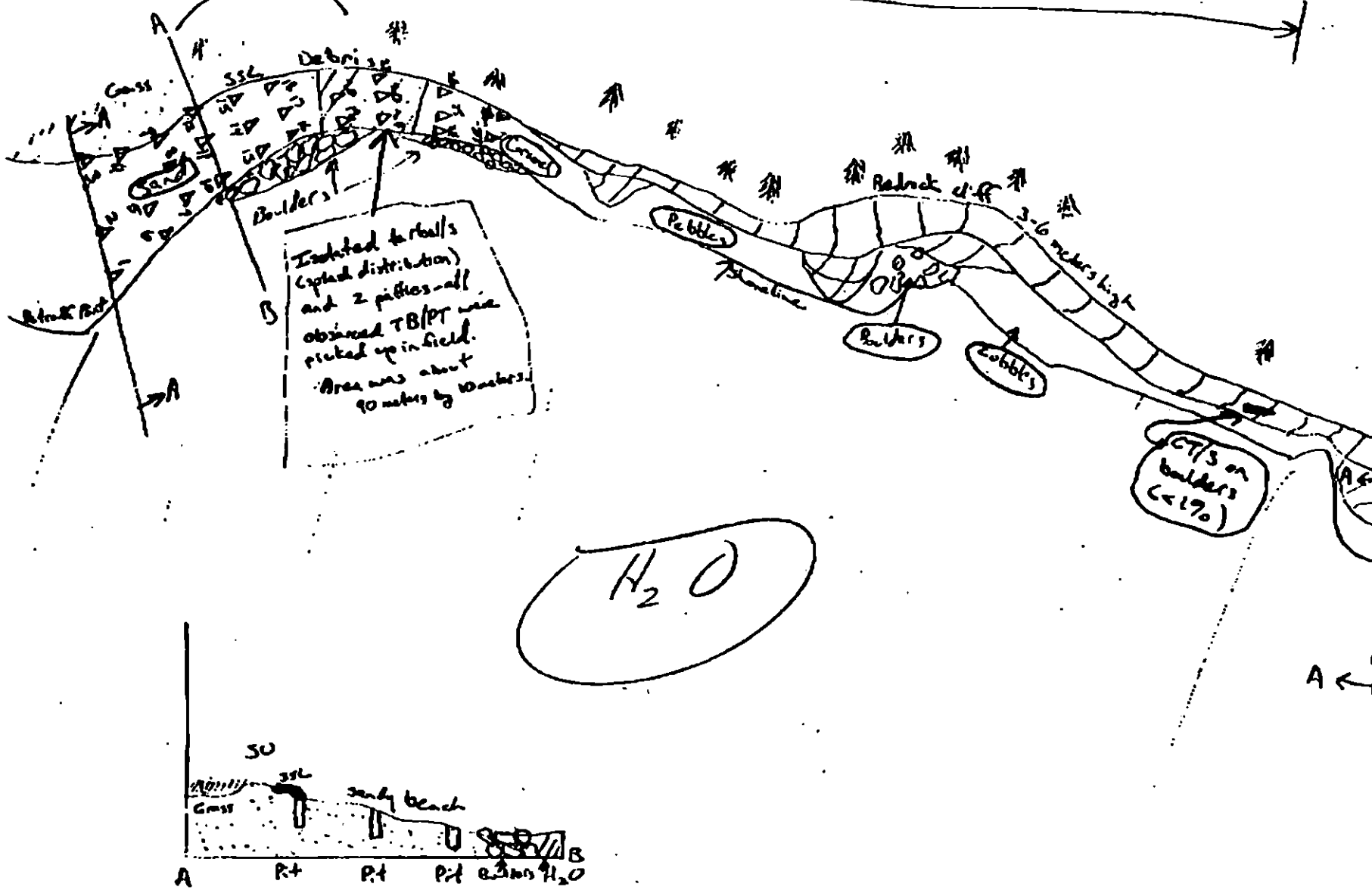
1 Photo location, direction, and number

SKETCH MAP

N

MONITORS TO ASSESS IN AREA OF DRAINAGE SYSTEM.

19.00 meters



91/59

Character Length (m): AP ∅ PO ∅ CV ∅ CT 1 ST ∅ MS ∅ PT ∅ TB ∅ FL ∅ NO 1906

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION 08/97

Segment ST / PP-1 Subdivision A Date (mo / day / yr) 4/27/90

Time (24 hr) 1115-1245 Biologist SHARMAN

(A) Substrate type and % of ~~segment~~ SHORELINE:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 10 (4) Pebble 30 (5) Sand + granules 50 (6) Silt ____

(B) Overall % cover of biota (% of ~~segment~~ SHORELINE): Dense ____ Moderate ____ Low X

(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 -

BARNACLES

Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 1L
2	2	2	2	X	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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (NUCELLA, LITTORINA, LIMPETS)

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

NOT PRESENT

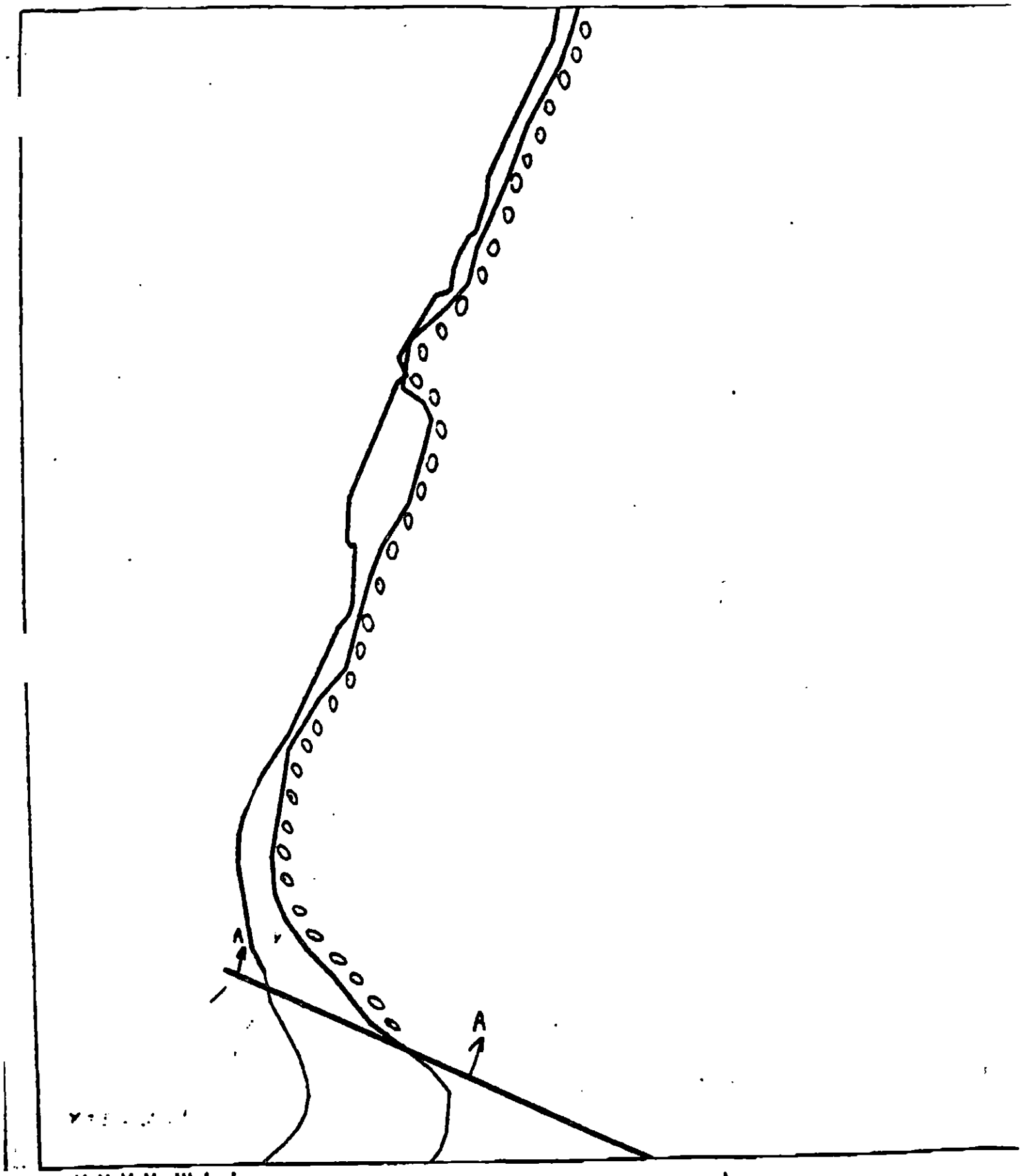
Wildlife Observations/ General Comments: 1 pigeon guillemot, 2 sea lions, 1 river otter. Very abundant river otter track + sign of digging in the sandy supratidal, LT-B, and MT-B. Also some goose track. 1 Belted kingfisher, 1 pelagic cormorant. Varied shorebird foraging in foreshore. The shoreline and bluffs of this segment are essentially barren macrobiotically - a very few shells of Mya + Saxidomus. (cont.)

Ecological Considerations:
We received no information regarding resource sensitivities previously identified for this segment. We observed no eagle nests, pinniped haulouts, anadromous streams, etc., and so no buffering is detailed. Biological communities here are healthy and normal re. their substrate types. This segment cannot benefit biotically from further human disturbance.

PP-1 Shoreline Ecological Summary (cont.) Sharman 4/27/90
(Page 2 of 2)

General Comments (cont.):

On other portions, however, and below the sand beach in a couple places (in LT2) are boulder fields which support a reasonably diverse & productive intertidal community. Sub-boulder habitats support, for example, Grainosphaeroma, Idotea, periwinkles, amphipods, nereids, and limpets. Algae in the boulderfields include Laminarians, elvaka, 3 red foliose spp., Polysiphonia/Porosiphonia forms, Fucus, and green filamentous (Acrosiphonia?). Barnacles, mussels, Fucus, and limpets appear to be recruiting fairly well. Generally healthy intertidal assemblages.



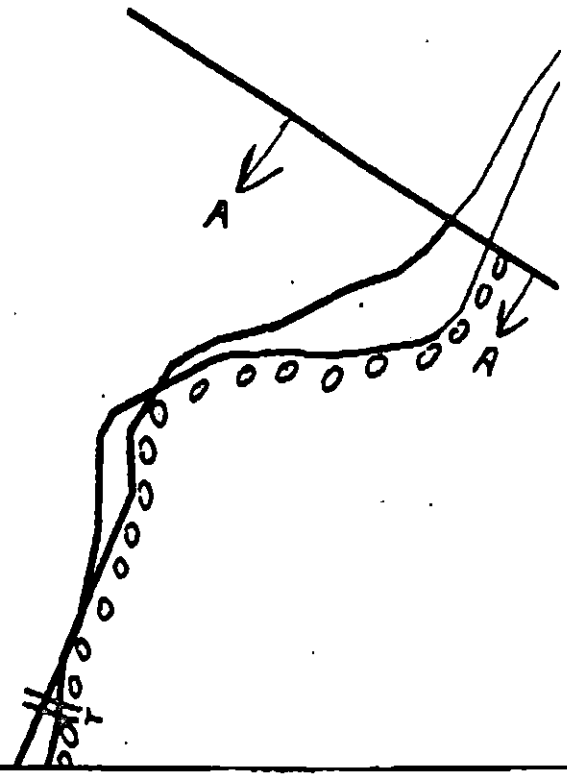
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

PP-1

Approx. Segment Length: 1907m

0 100 200 300
meters

Map Key: KEN-PP-1a
Name: Rudy Siegel
Date: 4/27/90
Date Entered:



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

PP-1

Approx. Segment Length: 1907m

0 100 200 300
METERS

Map Key: KEN-PP-1b
Name: Bob Siegel
Date: 4/27/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PR-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 53 m: V.Light 548 m: No Oil 458 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Location 4 only - manually rake 150M squared storm berm to MITZ and bioremediate. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest.

TAG COMMENTS: USE SORBENTS + SPOT WASH DURING STORM BERM RELOCATION SHOULD IT BE WARRANTED (SIGNIFICANT OIL)

TAG APPROVAL DATE: 5/3/90
ADEC Art Werner
EXXON Andy Tear
NOAA Gary Rohde
USCG Kenneth Keane

FOSC: ____ DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 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.	
[illegible]	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)
[illegible]		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 / PR-002 SUBDIVISION: A DATE 4/21/90

USCG
NAME Scott Rainsford SIGNATURE Scott Rainsford

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS The segment has oiling of coat splashes throughout on boulder faces ("dripline or bathtub ring"). Some areas [Loc. #3, 4, 5, + 6] have partially saturated sediments and mousse accumulations underside of boulders sporadically found on pocket cobble/~~gravel~~ boulder/pebble beaches (designated as CT/I and MS/S). Loc. #3 has small areas between boulders where gravel sediments were oiled, 2 cm thick. Loc. #2 + Loc. #3 could be spot-treated with water flush but they are adjacent to tidal pool, so the area is too sensitive for treatment. In location #4, more pooled mousse patches occur: with very shallow bedrock. The small amount (area of 1.5M x 5M) can be shovelled up if a crew is already th

see Loc #3 on map

over

LAND MANAGER
NAME U.S. Forest Service SIGNATURE Ken Keeler
Ted Keeler

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Only concern is oiled vegetation in area 4. This should be removed - but is low priority. Area also has oiled gravels in storm berm. This is minor concern by itself, but could be treated if a crew is in the area - did recommend a general bioremediation to storm berm area, but no need to tear the berm down. [illegible] recommended for Tentative National Clean-

REVISION NO. 08/21/89

(APEC comments cont.)

On the Storm berm in Loc. #4, an oiled light film exists on gravel, extending down to 20 cm across the beach in a band approx 3 M wide x 30 M long. This could be tilled up and exposed to weathering. (The sediments w/ pooled mousse on northside of beach indicated previously can be treated at this time).

In Location #5, a thin film or stain coats pebbles in storm berm. See sketch map of Location #5. Sediments are coated 4 cm deep under 1 cm layer of clean dry cobbles; extends an area of 1/2 M x 12 M. This area could be tilled up and exposed to weathering.

In Location #6, mousse accumulations are sporadically found in gravel and on underside of boulders. Rainbow sheen is occassionally seen in pooled water under boulders. The area is very porous and may be good for bioremediation. However the boulder size and numbers may not be beneficial conditions for bioremediation because of lack of adhering for the material. An eagle's nest is in area. Either no treatment is recommended in Loc. #6, or it needs to be looked at for possible bioremediation.

SHORELINE OILING SUMMARY

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ PR-2
BIO MA. SCOTT LAND REP L. KEELER WFS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC LORI STRATTON TIME 14:30 to 17:20
AM NO. 3 TIDE LEVEL +5 to +1 DATE 4 / 21 / 90
T. SUBDIVISION LENGTH: 1060 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 15 % B 30 % C 20 % P 30 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 40 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 50 m VL 640 m NO 370 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AB	AB	AP	AB						SW	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER	X			X				X		X	X		
COAT				X		X				X	X		
STAIN				X				X		X	X		
MOUSSE				X				X			X		
PATTIES													
TARBALLS													
FILM													
NO OIL												X	X

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS? YES ☐ NO ☒
TYPE G.
#BAGS 0

Photographs:
Roll No. ST-3-3
Frames 6,7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (YN)	▼ T	SURFACE · SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	US						SW	UI	MI	U				
1	25				X		5-20		X	X					X					-	-	PG
2	10	X					5-10		X							X				SR		PSR
3	20				X		5-20		X	X						X				SL	12	CPR
4	25					X	- -										X			-	22	ASB
5	30					X	- -									X				-	-	CPG
6	30					X	- -								X					-	-	P

COMMENTS Rugged exposed shore w/ pronounced pocket beaches. Surface oil as CT/S, pervasive & predominant, @ UI-SWTZ; also MS/S in bedrock traps and as small patches on sand @ 4 & 5. Sub-surface I as coat and stain on pebbles in storm berms and as mousse saturated sand in traps as mentioned above.

REVIEWED [signature] DATE 4/23/90

OG G.M. DNR

SEGMENT ST/ PR-2

SUBDIVISION A

DATE 4 / 21 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

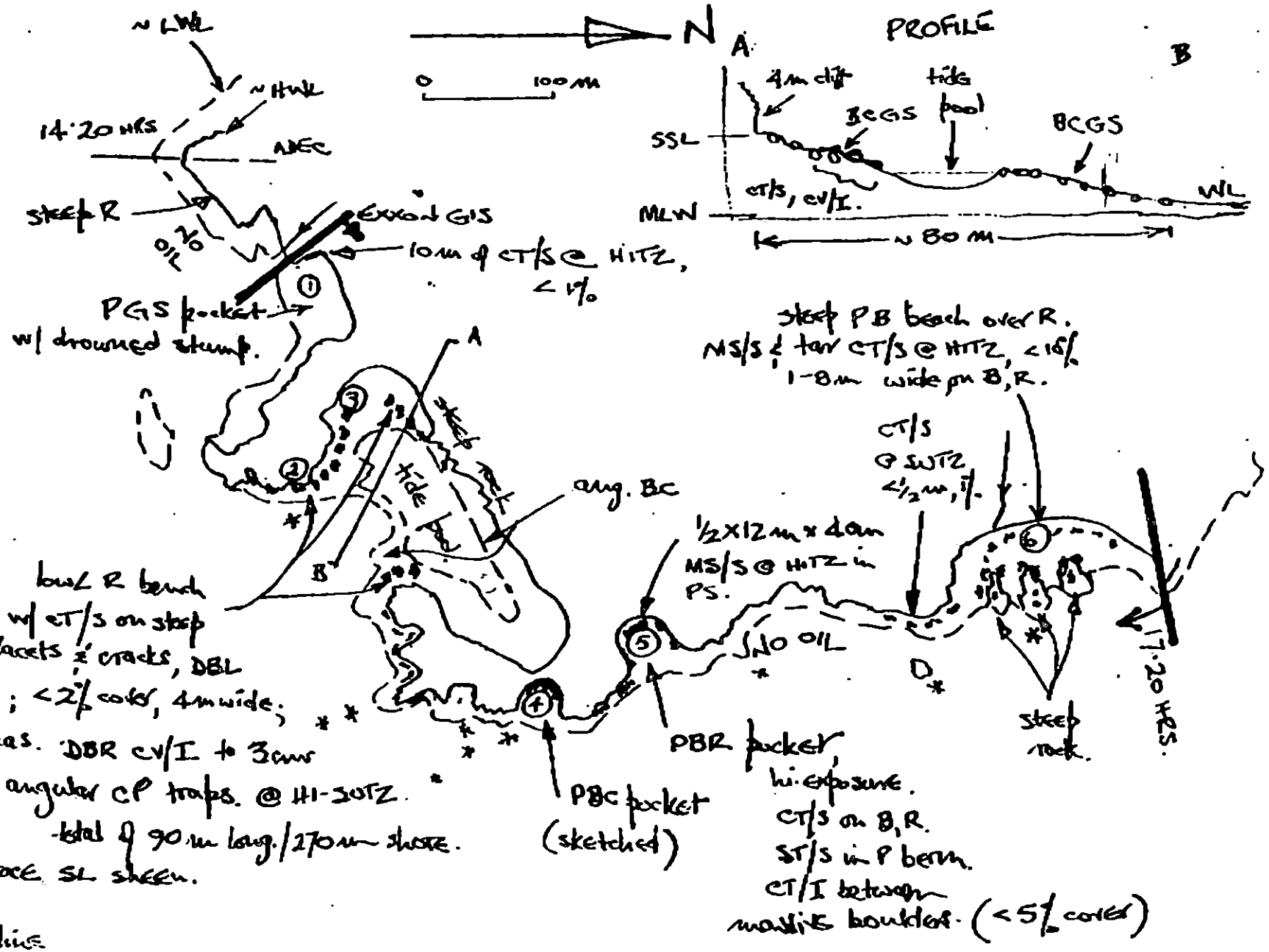
← STREAM

Oiled Vegetation

1 ↔ Photo location, direction, and number

→ ~ CT/S as drifline < 0.1 m wide

SKE MAP



Oil Character Length (m): AP — PO — CV 90 CT 500 ST 100 MS 20 PT — TB — FL — NO 450

REVISION 5/21/90

OG [redacted]

LORI STRATTON, DEC.

SEGMENT ST/ PR-02

SUBDIVISION A location (3)

DATE 4/21/90

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

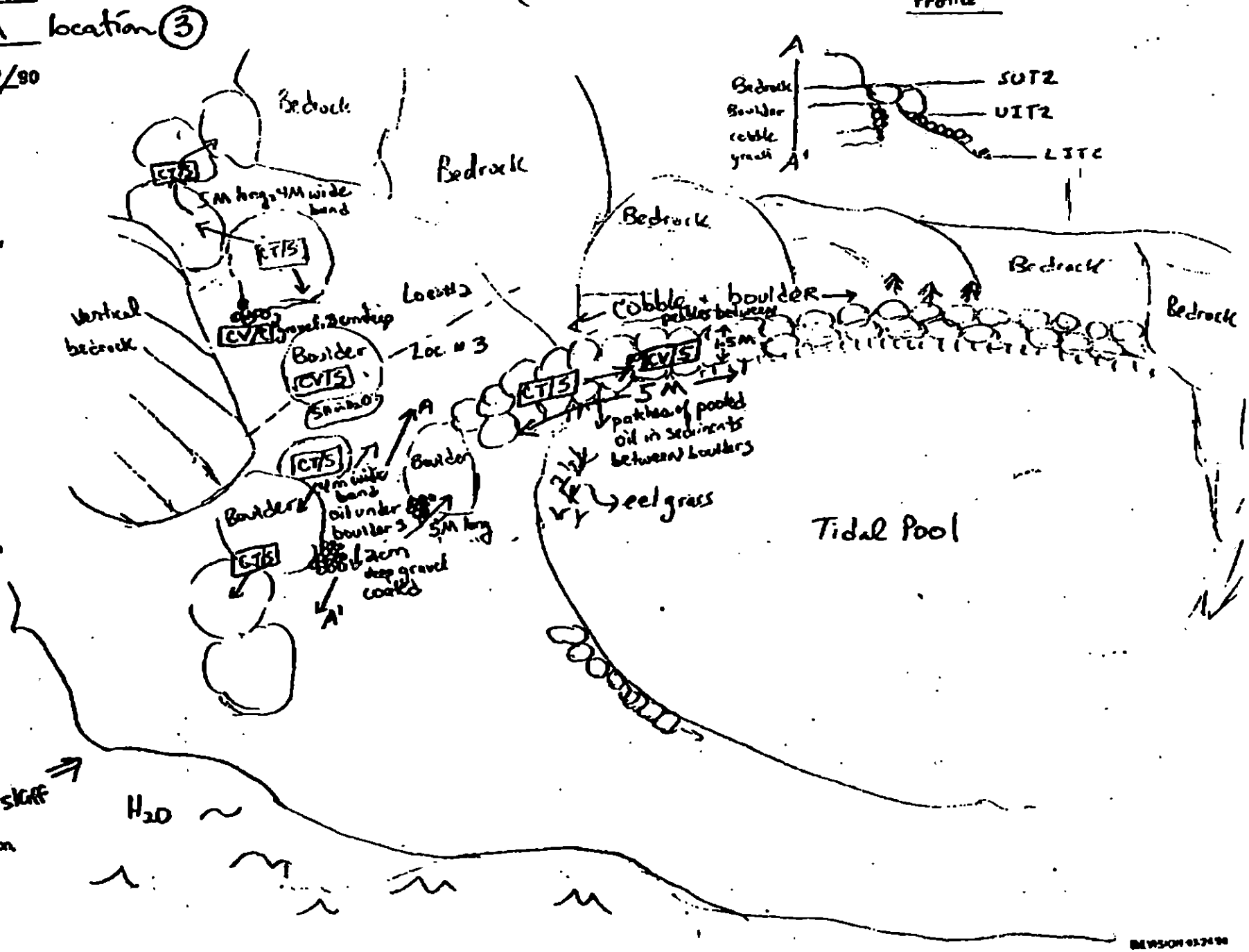
CT/S Splashed Distribution

Oiled Vegetation

1 ⊕ Photo location, direction, and number

[redacted]ETCH MAP

(Location #3)



Oil Character Length (m) AP — PO 5 CV 5 CT 10 ST ___ MS ___ PT ___ TB ___ FL ___ NO ___

OG 6. NORWALD

SEGMENT ST/ PR-2

SUBDIVISION A location (4)

DATE 4 / 21 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Bndry
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/WL
- ___ 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

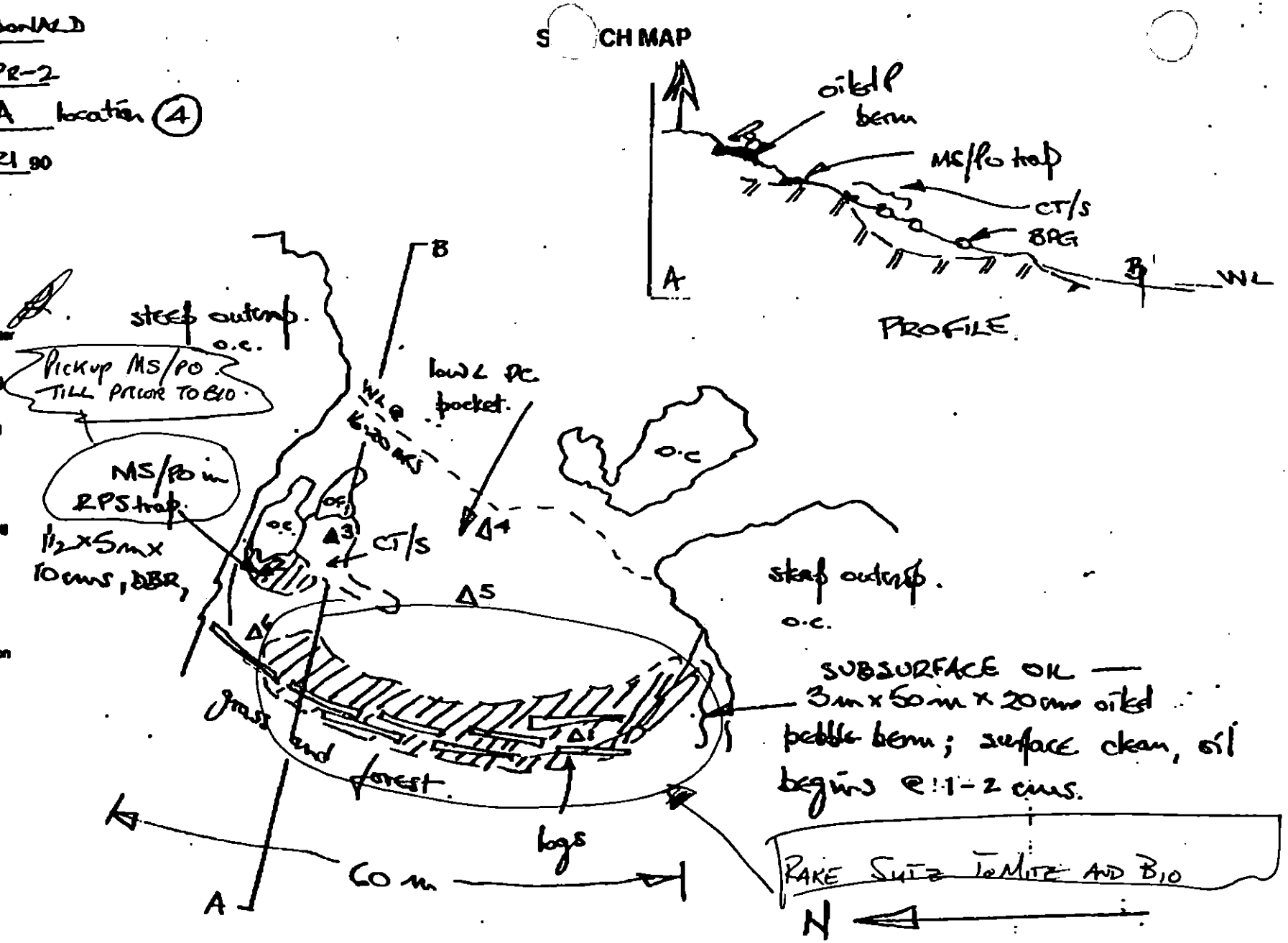
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP ___ PO ___ CV ___ CT 60 ST 20 MS 5 PT ___ TB ___ FL ___ NO ___ this sketch.

REVISION 07/24/90

OG C ____ LORI STRATTON, DEC.

SEGMENT ST/ PR-02

SUBDIVISION A location (5)

DATE 4/21/90

TCH MAP
(Location #5)

CHECKLIST

- ___N Arrow
- ___Approx. Scale
- ___Seg/Sub Entry
- ___Oil Dist.
- Width
- Length
- % Cover
- ___Substrate Character
- ___Est. HWL/AWL
- ___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

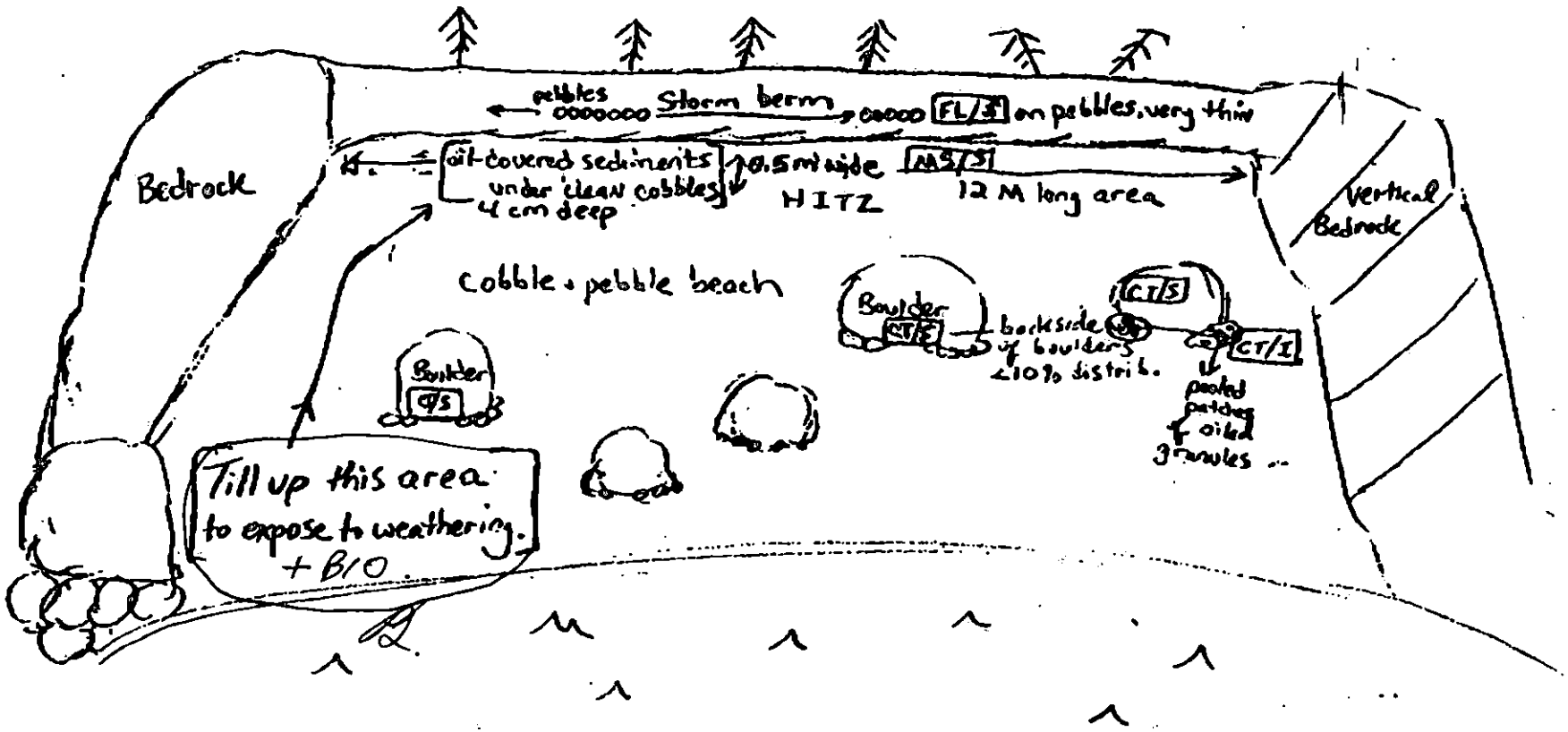
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PR-2 Subdivision A Date (mo / day / yr) 7/21/90

Time (24 hr) 1420-1730 Biologist M.A. Scott

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 30 (3) Cobble 20 (4) Pebble 35 (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 15 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. ST-3-3
Frames 6-7

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

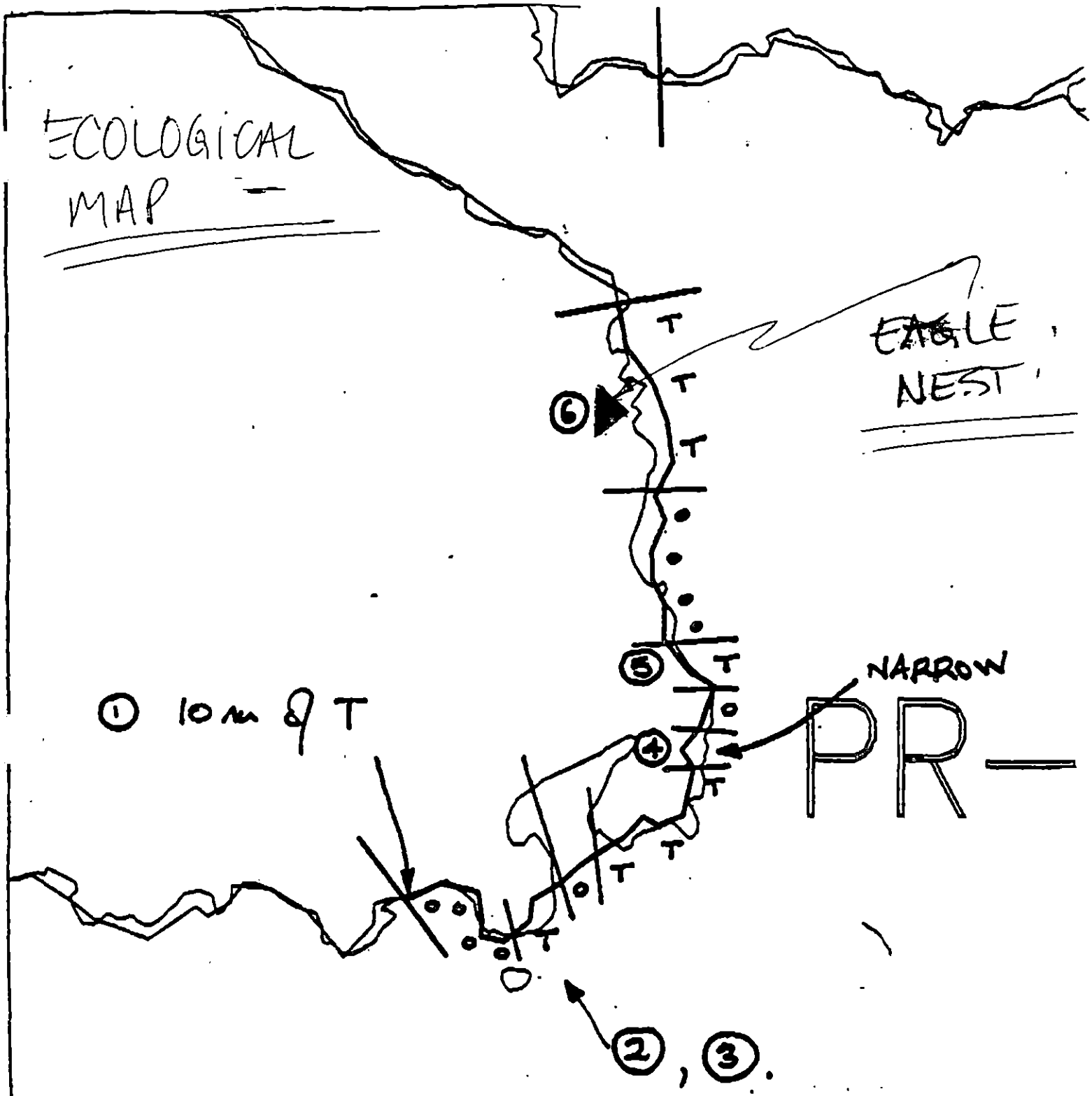
Wildlife Observations/ General Comments:

4 cormorants
9 golden eyes
4 seals

- large backshore tide pool (120m x 30m) feed by small stream in NE corner, berm height separating pool from ocean at ~110'; boulder/cobble substrate; diverse biota - 20% bed, fish fry (salmonids?); oil in SYE in SW corner; no obvious mortality in oiled area; Fucus reproductive, barnacle spat on substrate surrounding pool

Ecological Considerations:

eagle nest (as shown on cs-map)
rock/boulder - dense, diverse biota particularly in M+LTB; patches of dense Mytilus in MTB
boulder/cobble/pebble - low density, low diversity
backshore tide pool - well established community w/ fish fry (salmonids?), scalpins, Zostera bed



① beach location numbers.

7.

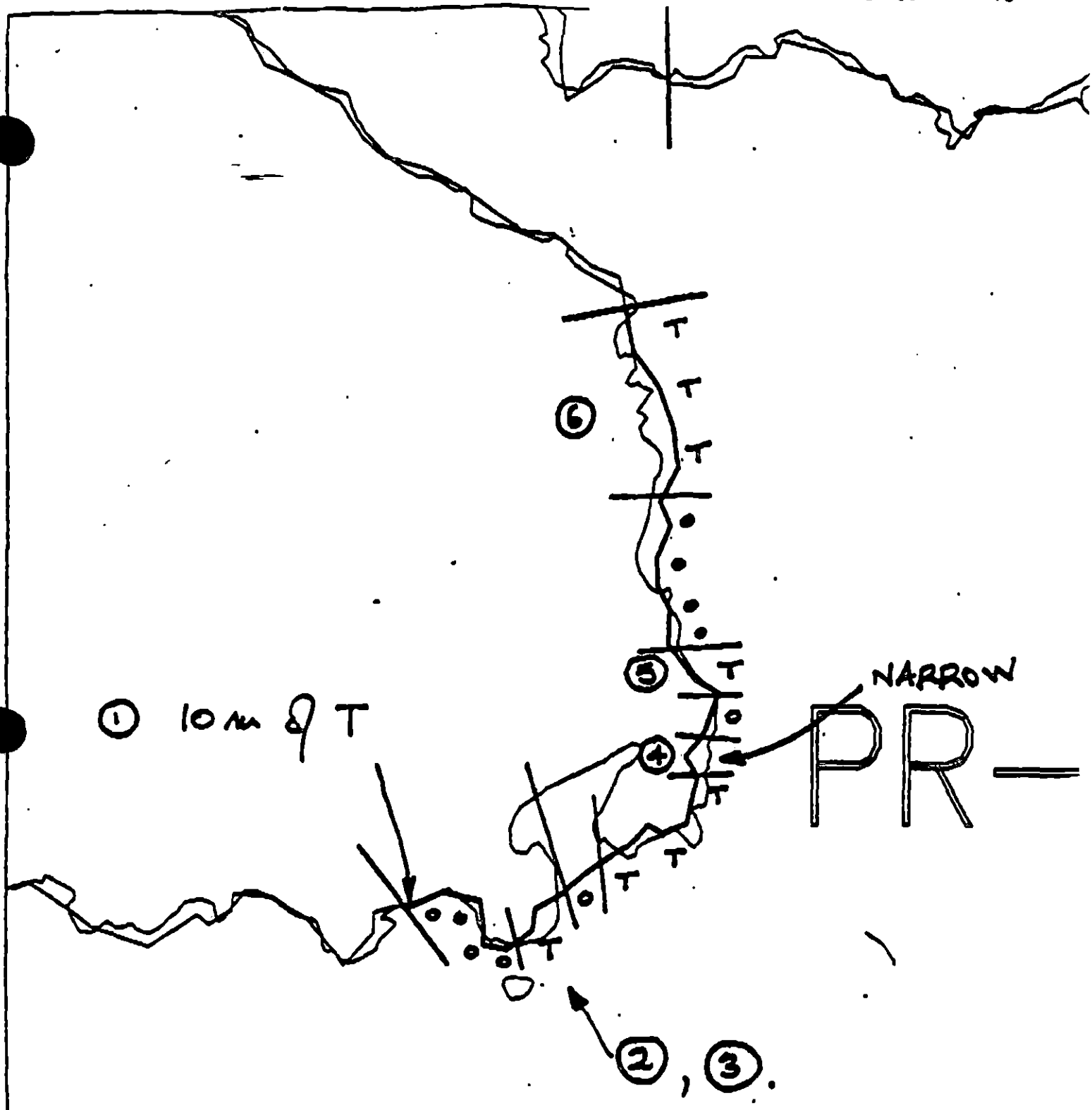
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PR-2A

ADEC Segment Length: 1060m

0 100 200 300
METERS

Map Key: PWS-516
Name: G.M.
Date: 4/22/90
Date Entered:



1 beach location numbers.

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

PR-2A

ADEC Segment Length: 1060m

0 100 200 300
METERS

Map Key: PWS-516
Name: G.M.
Date: 4/22/90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-2 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation Manual Raking Spot Washing Other Approved Treatment	**OPEN**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/10/90 by Mike Lockhart indicates no active nests within 400m of the work area.

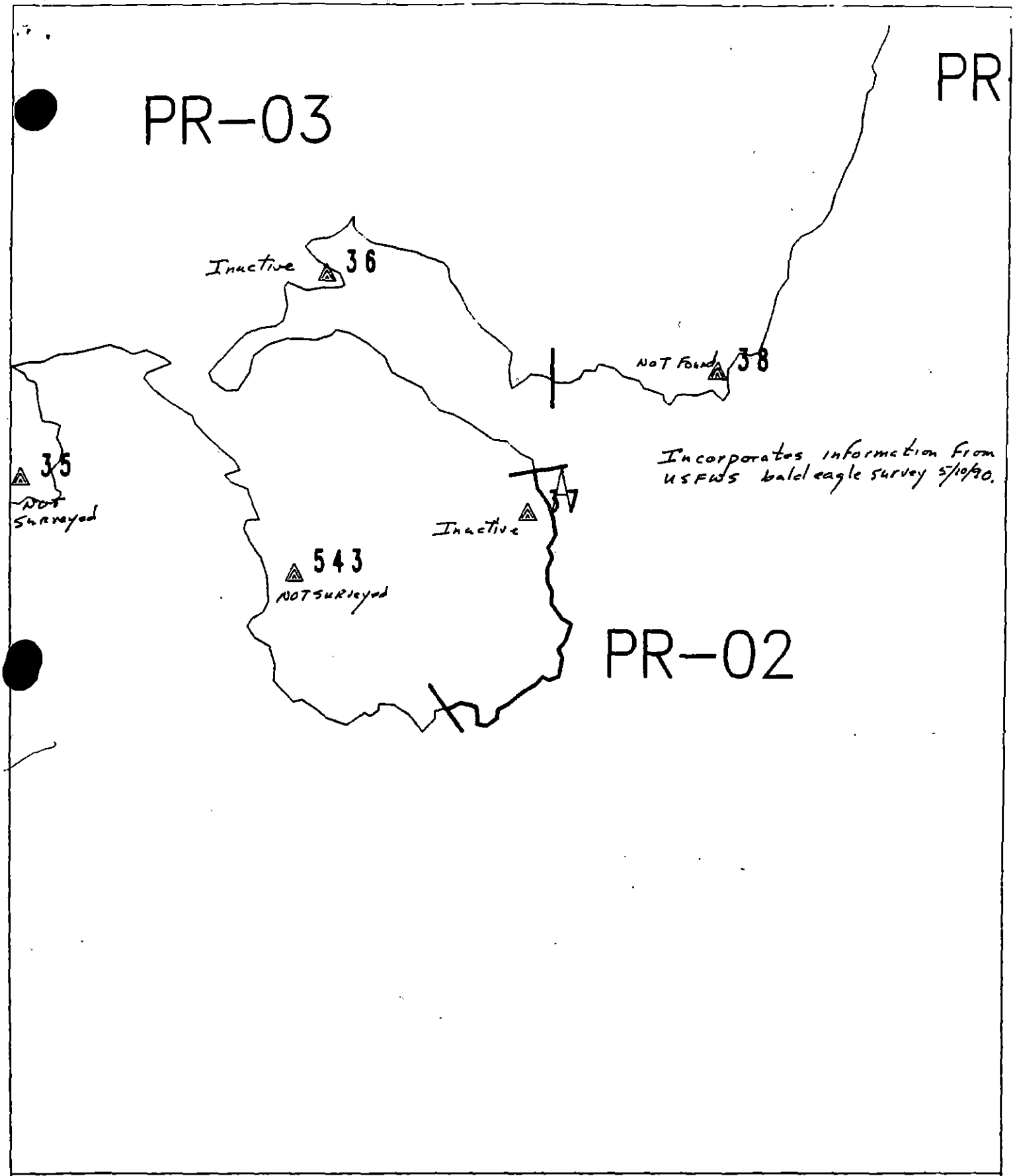
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/01/90
ADEC Ray Morris Ray Morris
EXXON Amy Tan
NOAA G.H. Reiter
USCG G.H. Reiter G.H. Reiter

FOSC D.D. Rome, CDR, USCG Acting DATE 6/2/90

Prepared By: Linda Meyer WHK Date 5/31/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-2
May 11, 1990

ECOLOGY MAP 5/31

SEGMENT PR-2

SUBDIVISION A (1 of 1)

METERS

0 365 730

★ Seabird Colony

▲ Eagle Nest

1 inch = 1198 feet

WORK PLAN ADDENDUM

Segment PR-002 Subdivision A Dated 6/13/90

MODIFICATION

1. REASON FOR MODIFICATION

- Joint request from field by ADEC, Exxon, and USCG.

2. ADJUSTMENT TO WORK PLAN

- Mechanical tilling and relocation of stormberm to MITZ.
- Bioremediation

ARCHAEOLOGICAL CONSTRAINT: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.
>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

SHPO APPROVAL NEEDED YES X SHPO SIGNATURE [signature] 6/19/90

NO _____ Requires Inspection constraint

TAG APPROVAL DATE 6/15/90.

ADEC Ray Morris [signature]

EXXON Andy Tear [signature] FOSC [signature] DATE 7-10-90

NOAA Joseph Talbott [signature]

USCG G.A. Reiter [signature] G.A. REITER

SHORELINE EVALUATION

SEGMENT ST/ PR-03 SUBDIVISION A (1 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Special use designation (6Y) - 6/1 to 9/15; 2 Active Bald Eagle nests (5T) - 3/1 to 6/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance to dense fucus beds in Lower ITZ.

SHPO SIGNATURE: [signature] DATE: April 6, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 57 m: V.Light 0 m: No Oil 52 m
Subsurface Oil Observed: Yes___ No X Maximum Depth_____

RECOMMENDATIONS:
_____No Treatment Recommended
X Treatment Recommended
_____Manual Pickup ___Snare Booms/Sorbents X Tarmat ~~Breakup~~/Removal
X Bioremediation SPOT WASHING ____Other
____Wands
____Beach Cleaner

Comments: Bioremediate only after 6/1/90 in area indicated on attached computer map. Pick up small tarmat indicated

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER [signature]
EXXON ANDY TEAL [signature] FOSC: [signature] DATE: 4-19-90
NOAA Burl Wescott [signature]
USCG G.A. REITER G.A. Reiter

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-03 SUBDIVISION: A, 1 OF 4 DATE 03/30/90

USCG
NAME Bri David S. Thomas SIGNATURE [illegible]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
only After all Have oiled areas
clean very low priority

ADEC
NAME Clare Crosby SIGNATURE Clare S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Manual pickup of any pavement - Band of
Oil is concentrated in protected areas.
Oil is [illegible] fine sediments -

LAND MANAGER
NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Very light Oil in CRACKS sheltered by boulders
Character = COVER.

REVISION NO. 03-21-90

RECEIVED
MAR 31 1990

SHORELINE OILING SUMMARY

Revised No. 03/22/90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ PR-03
BIO DAVE LANGE LAND REP MARSHA MARTIN SUBDIVISION A 1 of 4
EXXON FRANK BOX ADEC CLARA CROSBY TIME 07:30 to 08:15
TEAM NO.: 13 TIDE LEVEL: +2 to 0 DATE 3 / 30 / 90
EST. SUBDIVISION LENGTH: 130 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
SURFACE SEDIMENTS: R 20 % B 30 % C 30 % P 10 % G 10 % S ____ % M ____ % V ____ %
SLOPE: Lang 80 % Hang ____ % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M ____ m N 65 m VL ____ m NO 65 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SBL/BR	DBL/RW	GY/SL	DRK/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT			X			X						X	
POOLED													
COVER			X			X					X		
COAT			X					X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

PAVEMENT: (H) F S 0.1 sq. m by 1 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-13-1
Frames 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	SBL/BR	DBL/RW	GY/SL	DRK/TL	LBR	SU	UI	MI	U		
1	10					X	-									X				C
2	10					X	-									X				C
							-													
							-													
							-													
							-													

COMMENTS
① No subsurface oil observed, beneath boulders or in shallow pits.
② Most surface oil a thin coat.

REVIEWED ____ DATE ____

OG Rice FILLIE

SEGMENT ST/ PR-03

SUBDIVISION A

DATE 3 / 30 90

S CH MAP

① No detailed sketch map.

② Only V. Light Oil (splatters) in Upper Intertidal Zone.

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 1 PO ___ CV ___ CT ___ ST ___ MS ___ PT ___ TB ___ FL ___ NO

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PR 003 Subdivision A Date (mo / day / yr) 3-30-90

Time (24 hr) 7:30 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 30 (4) Pebble 10 (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 25 Low 65

(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-13-1
Frames 1

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	X	3	X	3	3	3	3	X	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	
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	
3	3	3	3	X	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

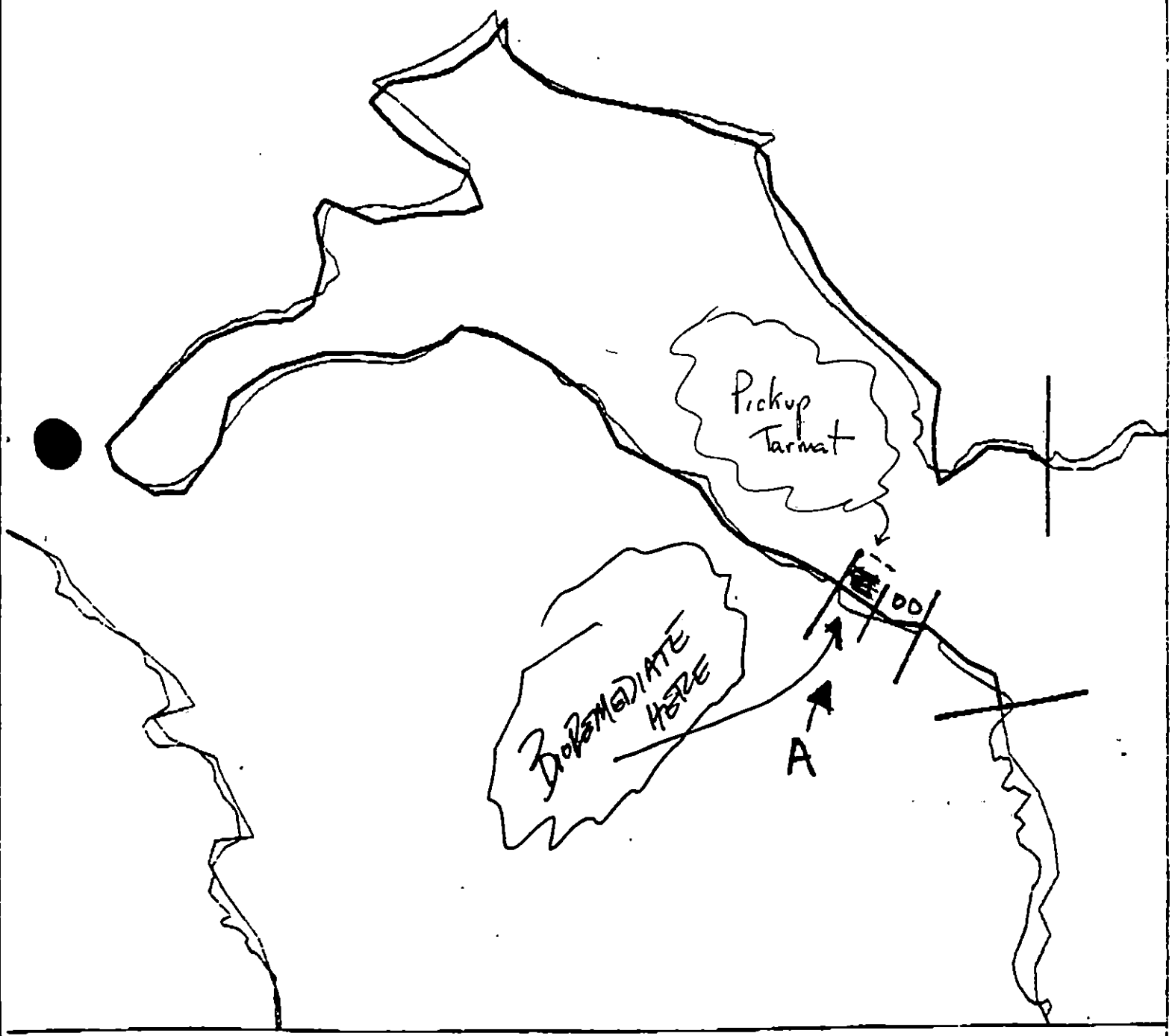
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M				1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	X	3	X	3	3	3	3	X	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:
1. Present low intertidal: Halosaccion, Ulva/Enteromorpha, Ceramium, coralline algae
mid intertidal: Nucella
2. Otter present in area
3. Several different shorebirds observed in Area

Ecological Considerations:
T-Active Bald Eagle Nests: Bald Eagles seen in area, but no nests observed
2. There are several dense Fucus beds in low intertidal which would be susceptible to foot traffic

R-03

SEGMENT: ST/PR-03
SUBDIVISION: A, 1 of 4



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

PR-3

ADEC Segment Length: 2919m

0 100 200 300

Map Key: PWS-517
Name: GILLIE
Date: 3-31-90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-3 SUBDIVISION A (1 of 4)

WORK WINDOW	
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. USFWS bald eagle impact assessments conducted on 5/10/90 and 5/19/90 by Mike Lockhart indicate no active nests within 400m of the work area.

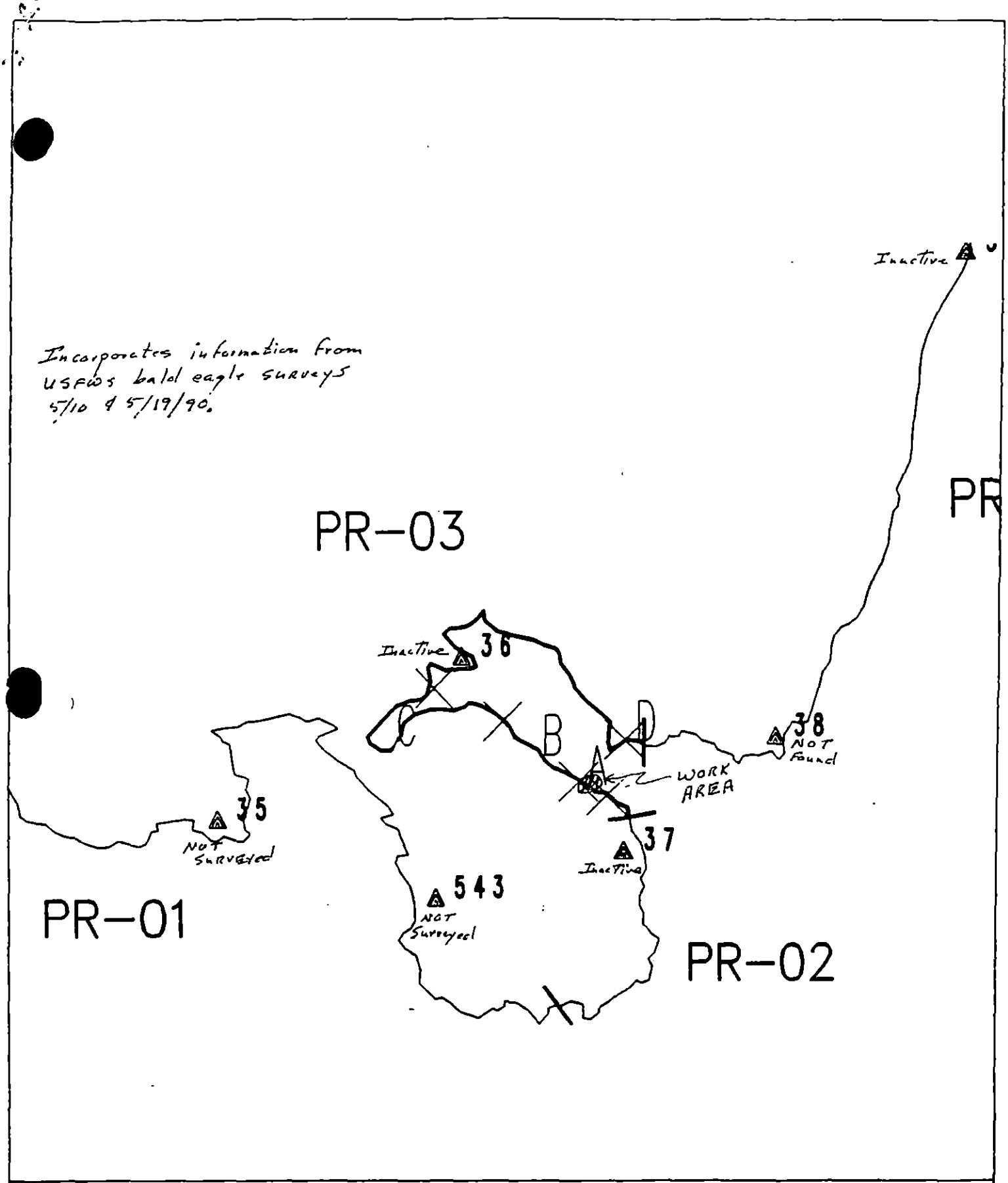
OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbance to dense *Fucus* beds in lower intertidal zone.

TAG APPROVAL DATE 6/01/90
ADEC Ray Morris Ray Morris
EXXON Amy Tekel
for NOAA G.A. Reiter
USCG G.A. Reiter G.A. Reiter

FOSC D.D. Rowe, CDR, USCG DATE 6/2/90

Prepared By: Andrew Meyer WRK Date 5/31/90



EXXON

Exxon Company, USA

Map Key: PWS-PR-3

May 11, 1990

ECOLOGY MAP 5/30

SEGMENT PR-3

SUBDIVISION A (1 of 4)

METERS

0 449 898

★ Seabird Colony

▲ Eagle Nest

1 inch = 1473 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-03 SUBDIVISION B (2 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Special use designation (6Y) - 6/1 to 9/15; 2 Bald Eagle nests (5T) - 3/1 to 6/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict foot traffic from dense fucus bed in lower ITZ.

SHPO SIGNATURE Charles E. Hilmer DATE: April 6, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 131m: Narrow 76 m: V.Light 0 m: No Oil 142m
Subsurface Oil Observed: Yes___ No X Maximum Depth_____

RECOMMENDATIONS:
___No Treatment Recommended
X Treatment Recommended
___Manual Pickup ___Snare Booms/Sorbents X Tarmat Breakup/Removal
X Bioremediation SPOT WASHING ___Other
___Wands
___Beach Cleaner

Comments: Recommend ~~breakup~~ removal of tar mat indicated on OG map. Also recommend bioremediation in area indicated on attached computer map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER
XXON ANDY [illegible]
OAA Earl Wescott
USCG G.A. REITER

FOSC: [illegible] DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-03 SUBDIVISION: B, 1 of 4 DATE 03/30/90

USCG
NAME Bm1 David S. Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS only After all other oiled Areas are Cleaned, very low Priority.

ADEC
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual cut-up of pavement. (N.B. Pavement is resting on beach w/ fine, clean sediments) No spill technique recommended for this area.

LAND MANAGER
NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Two bands oiled sediments under cobble. Oiling in cracks in ROCK outcrops (coat/cover).

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

RECEIVED
MAR 31 1990

OG Rick Gillie USCG BM 1 Thomas SEGMENT ST/ PR-03
BIO DAVE Lohse LAND REP Marsha Martin SUBDIVISION B
EXXON FRANK BOX ADEC Clara Cresby TIME 08:45 to 09:45
TEAM NO.: 13 TIDE LEVEL -1 to -2 DATE 3 / 30 / 90
EST SUBDIVISION LENGTH 350 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
SURFACE SEDIMENTS: R 10 % B 20 % C 50 % P 15 % G 5 % S ____ % M ____ % V ____ %
SLOPE: Lang 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M 150 m N 75 m VL ____ m NO 125 m

SURFACE OIL

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	IMPACTED ZONES SU	UI	MI	LI
ASPHALT PAVEMENT			X						X		X		
POOLED													
COVER													
COAT			X						X		X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F (S) 20 sq. m by 5 cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-13-1
Frames 2, 3, 4, 5

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OF	OP	OL	OF	NO	OILED INTERVAL (CM-CM)	BELOW UO	UC	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	PIT ZONE SU	UI	MI	LI	ANA	SUBSURFACE SEDIMENTS
1	15					X	-		X							X				C, S
							-													
							-													
							-													
							-													
							-													

COMMENTS

Page 1 of ____ REVIEWED TW DATE 3-31-90

OG Rick 1 -LIE

SEGMENT ST/ PR-03

SUBDIVISION B, 1 of 4

DATE 3 / 30 90

SKETCH MAP

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

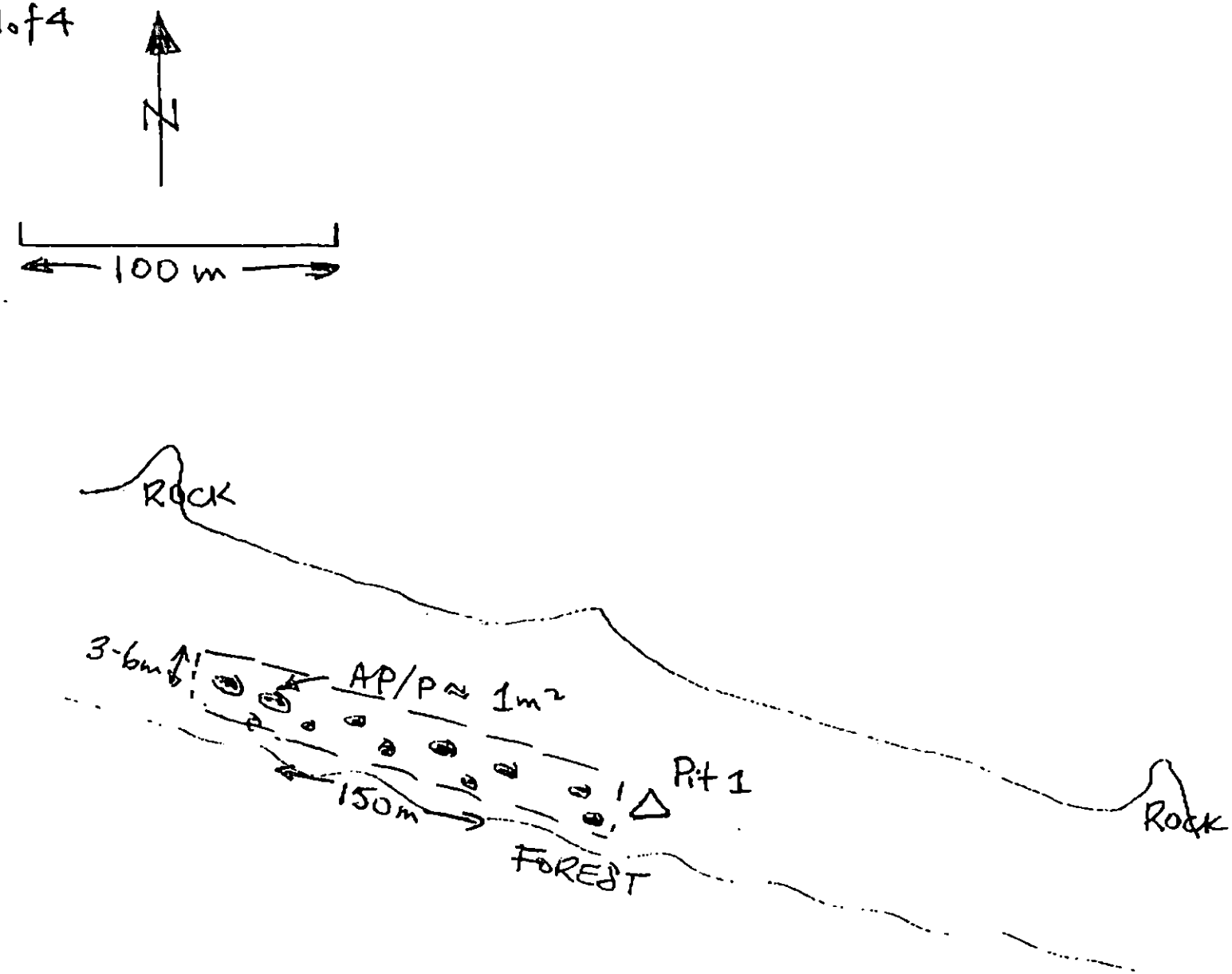
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP 125 PO ____ CV ____ CT 100 ST ____ MS ____ PT ____ TB ____ FL ____ NO 125

REVISION:03/24/88

REVISION: 03/22/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PR003 Subdivision B Date (mo / day / yr) 3-30-90

Time (24 hr) 8:45 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 20 (3) Cobble 50 (4) Pebble 15 (5) Sand 5 (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 80

(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-13-1
Frames 2-5

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

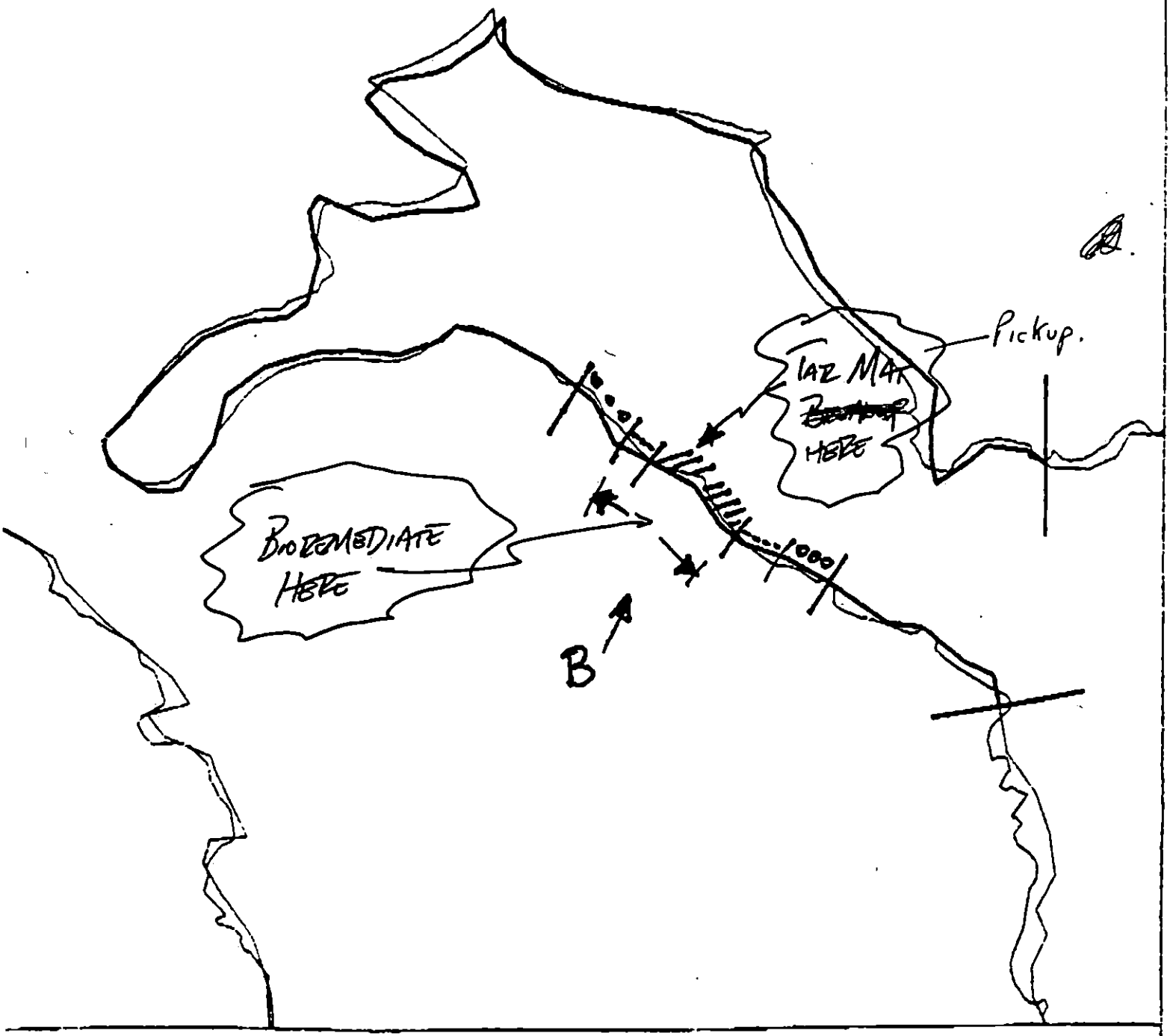
1. Present in low intertidal - Pagurus, Nucella egg cases, Cladophora, Ulva, Halosaccion, Ralfsia, Ectocarpus
   mid intertidal - Ralfsia
2. Dead deer skeleton found at high tide line - skin present only on knees
3. ducks observed in area
4. 25-50% barnacle mortality in mid-intertidal

Ecological Considerations:

- Eagles present in area, but no nests were seen
2. There is one locally dense Fucus bed in low intertidal which would be susceptible to foot traffic

R-03

SEGMENT: ST/PR-03
SUBDIVISION: B, 1 of 4



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

PR-3

ADEC Segment Length: 2919m

0 100 200 300
METERS

Map Key: PWS-517
Name:
Date:
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-3 SUBDIVISION B (2 of 4)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nests**	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/10/90 and 5/19/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

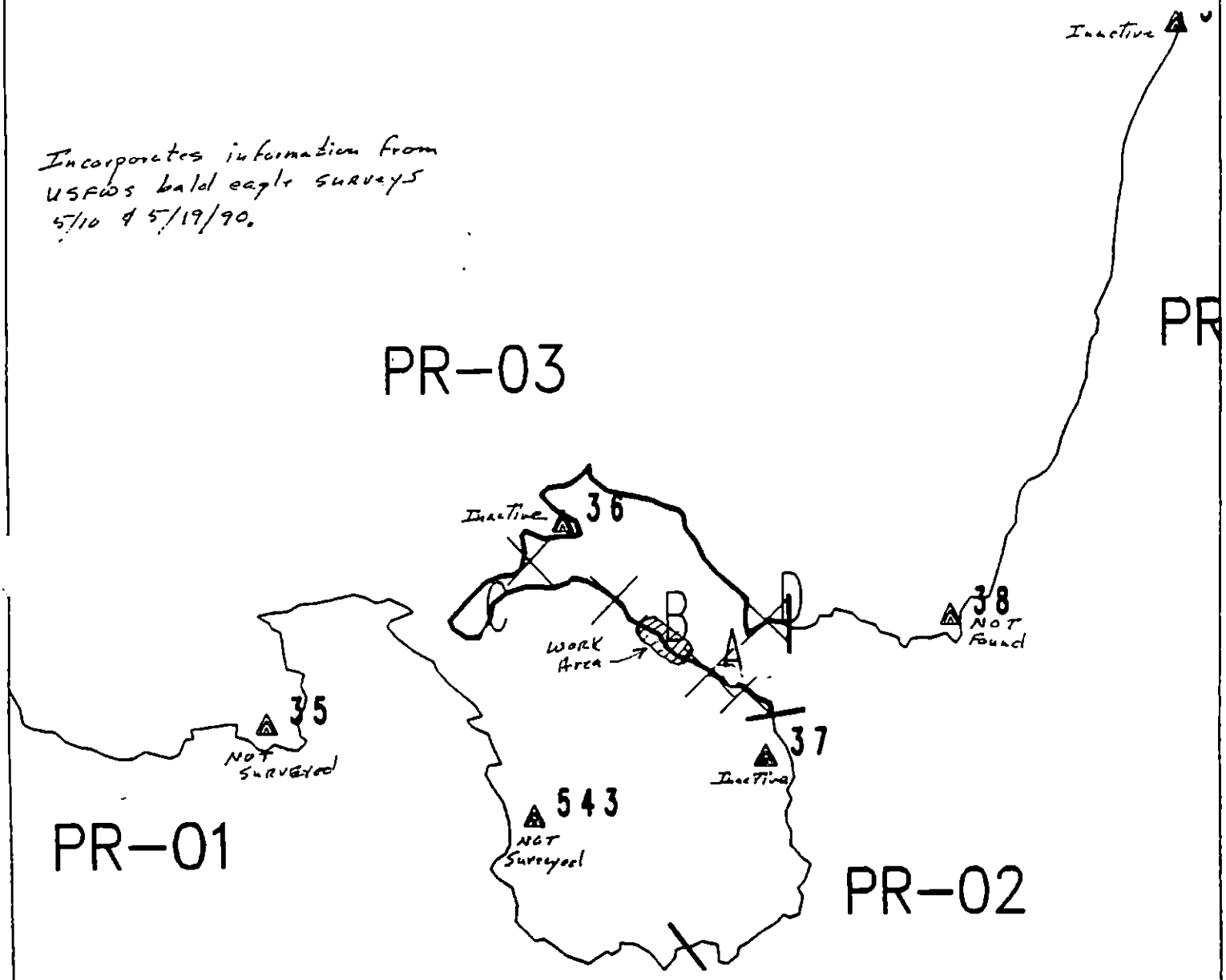
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Restrict foot traffic in dense *Fucus* beds of lower intertidal zone.

TAG APPROVAL DATE 6/01/90
ADEC Ray Morris
EXXON Andy Tear
for NOAA G.A. Reiter
USCG G.A. Reiter G.A. Reiter

FOSC D.O. Rome, CDR, USCG DATE 6/2/90
Acting

Prepared By: Arden Mayer WTK Date 6/3/90

Incorporates information from USFWS bald eagle surveys 5/10 & 5/19/90.



EXXON

Exxon Company, USA
Map Key: PWS-PR-3
May 11, 1990

ECOLOGY MAP 5/30

SEGMENT PR-3

SUBDIVISION B (2 of 4)

METERS

0 449 898

★ Seabird Colony

△ Eagle Nest

1 inch = 1473 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-03 SUBDIVISION C (3 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Special use designation (6Y) - 6/1 to 9/15; 2 active Bald Eagles nests (5T) - 3/1 to 6/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance to dense fucus beds in lower ITZ.

SHPO SIGNATURE: [signature] DATE: April 8, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 100m: V.Light 120m: No Oil 685m
Subsurface Oil Observed: Yes___ No X Maximum Depth___

RECOMMENDATIONS:
X No Treatment Recommended
X Treatment Recommended
___Manual Pickup ___Snare Booms/Sorbents X Tarmat Breakup/Removal
___Bioremediation SPOT WASHING ___Other
___Wands
___Beach Cleaner

Comments: Recommend Minimal treatment due to light amount of surface splashes found and the recommendation to minimize human impact in this area. (ADEC) Pickup tarmats as indicated on sketch.

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER [signature]
EXXON ANDY GAL [signature]
NOAA Burl Wescott [signature]
USCG G.A. REITER G.A. Reiter

FOSC: [signature] DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-03 SUBDIVISION: C, 1 of 4 DATE 3/30/90

USCG
NAME Bri David S. Thomas SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

STATE
NAME Clara L. Crosby SIGNATURE Clara L. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Concentration of L. oiling at High Water line - on N. Shore w/ sporadic mousse balls throughout segments - Human impact should be minimized.

LAND MANAGER
NAME MARSHA MARTIN SIGNATURE Marsha Martin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Rubber Raft located near head of cove, had a yellow tie rope extending to upland. Minimal oil sighted. Fairly Dense Fucus in low tidal zone

Trailer ☐ RR

RECEIVED
MAR 31 1990

SHORELINE OILING SUMMARY

OG Rick Gillie USCG BM1 Thomas SEGMENT ST/ PR-03
BIO Dave Lohse LAND REP Marsha Martin SUBDIVISION C 1 of 4
EXXON FRANK Bo[illegible] ADEC Clara Crosby TIME 10:00 to 11:30
TEAM NO.: 13 TIDE LEVEL: -2 to 0 DATE 3/30/90
EST. SUBDIVISION LENGTH: 900 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 10 % B 10 % C 30 % P 20 % G 20 % S 5 % M 5 % V ____ %
SLOPE: Lang 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M ____ m N 100 m VL 100 m NO 700 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/S	/P	/S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT			X						X		X		
POOLED													
COVER													
COAT				X					X		X		
TAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F (S) 5 sq. m by 2 cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A
DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-13-1
Frames 6

SUBSURFACE OIL NONE OBSERVED

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	U		
1	10					X	-													C
2	10					X	-													C
3	10					X	-													C
							-													
							-													
							-													

COMMENTS

① Band (0.5m wide) of AP/S on north side of head of inlet.

GILLIE -

TST/ PR-

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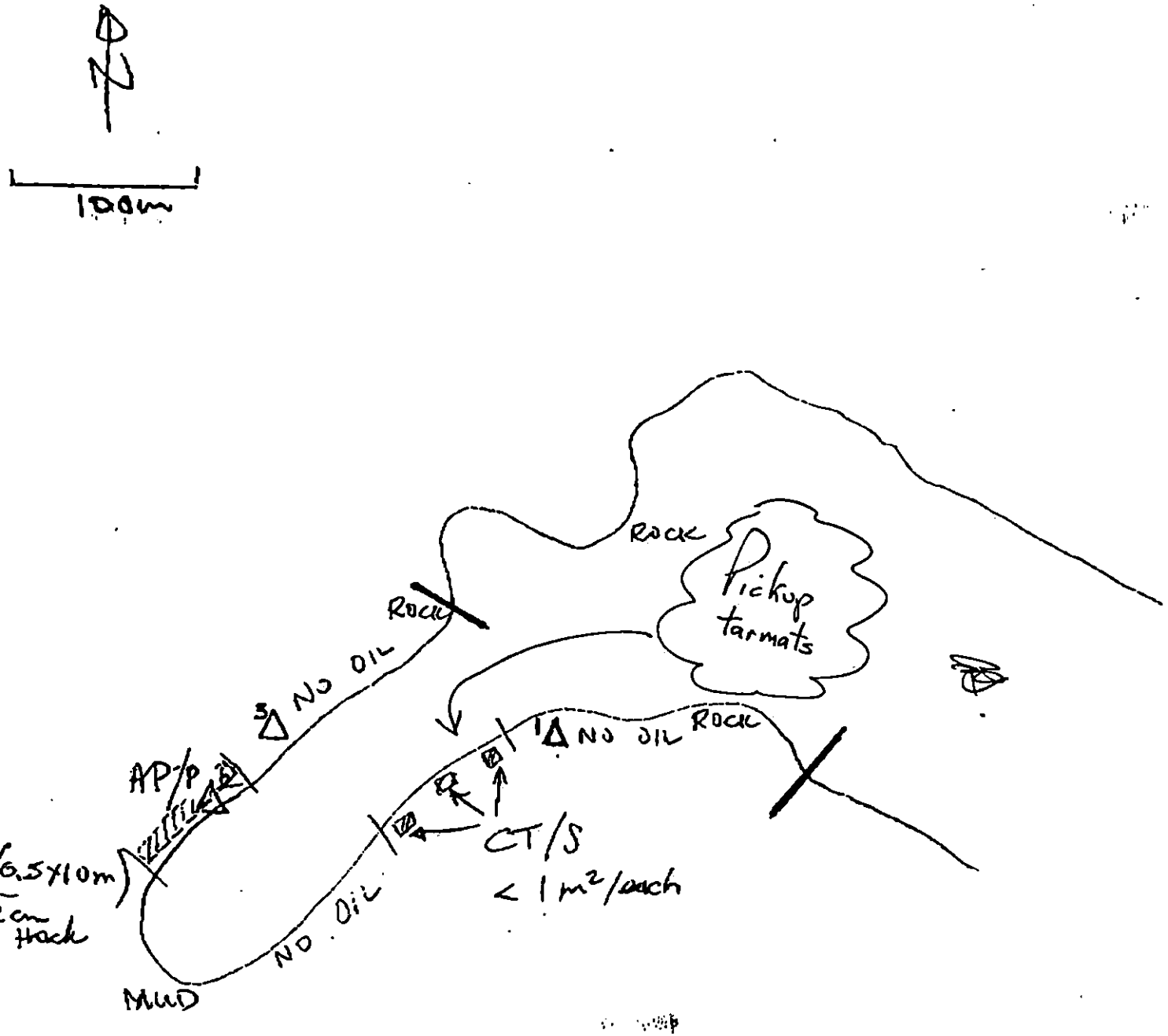


Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____

REVISION:01/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

ment ST / PR 003 Subdivision C Date (mo / day / yr) 3-30-90

Time (24 hr) 10:00 Biologist David Lohr

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 10 (3) Cobble 30 (4) Pebble 30 (5) Sand 30 (6) Silt 10

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 35 Low 60

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

Photographs:
Roll No. ST-13-1
Frames 6

BARNACLES

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

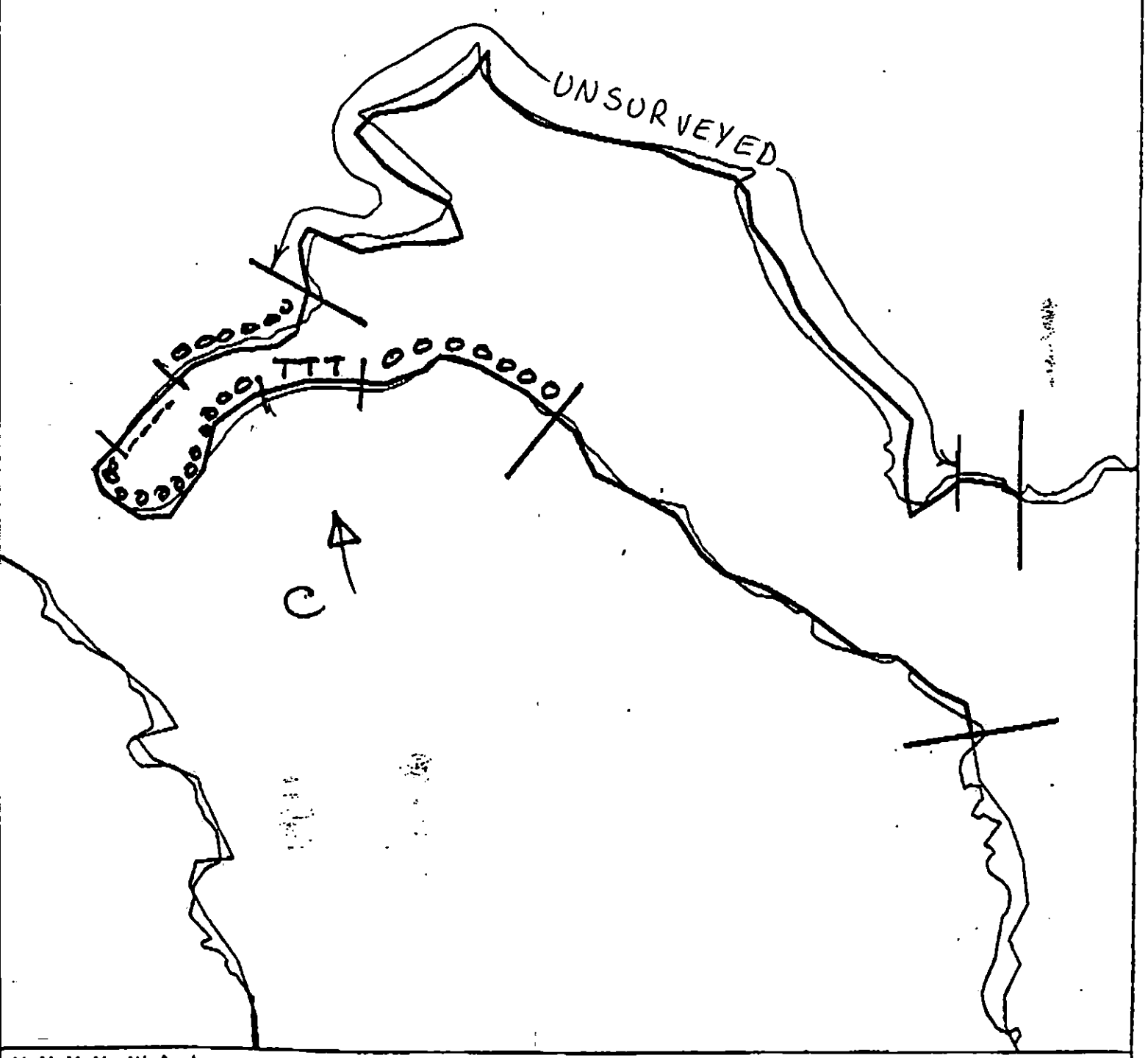
1. mussels found in sand were alive, but not attached
2. Extensive bed of unattached Fucus around back of cove - H_2S present
3. Adult and juvenile crabs (Hemigrapsus?) present in mid intertidal

ogical Considerations:

1. on way to subdivision D found several dead Pycnopodia
1. ST - Eagles present in area, but no nests were seen
2. Dense Fucus bed south of easternmost headland would be susceptible to foot traffic

R-03

SEGMENT: ST/PR-03
SUBDIVISION: C, 1 of 4



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

PR-3

ADEC Segment Length: 2919m

Map Key: PWS-517
Name: GILLIE

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-3 SUBDIVISION C (3 of 4)

WORK WINDOW	
Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/10/90 and 5/19/90 by Mike Lockhart indicate no active nests within 400m of the work area.

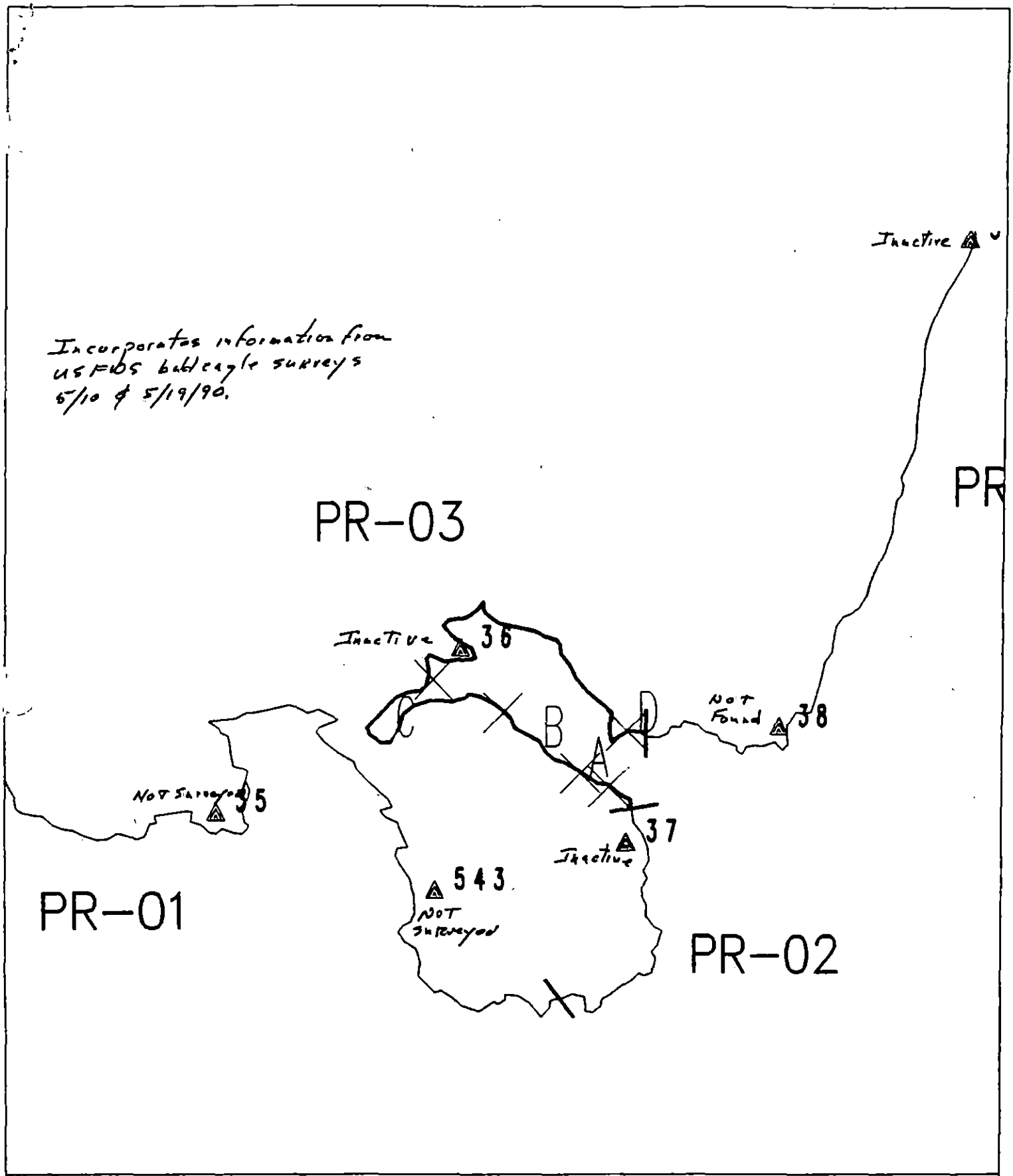
OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Minimize disturbance to dense *Fucus* bed in loser intertidal zone.

TAG APPROVAL DATE 6/01/90
ADEC Ray Menefee
EXXON Andy Tam
NOAA G.A. Reiter
USCG G.A. Reiter

FOSC D.D. Rome, CDR, USCG DATE 6/2/90

Prepared By: Linda Meyer WTK Date 5/31/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-3
May 11, 1990

ECOLOGY MAP 5/31

SEGMENT PR-3

SUBDIVISION C (3 of 4)

METERS

0 449 898

★ Seabird Colony

△ Eagle Nest

1 inch = 1473 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-03 SUBDIVISION D (4 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Special use designation (6Y) - 6/1 to 9/15; 2 Active Bald Eagle nests (5T) - 3/1 to 6/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above

SHPO SIGNATURE: [illegible] DATE: April 6, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 71 m: No Oil 0 m
Subsurface Oil Observed: Yes___ No X Maximum Depth___

RECOMMENDATIONS:
___No Treatment Recommended
X Treatment Recommended
___Manual Pickup ___Snare Booms/Sorbents ___Tarmat Breakup/Removal
X Bioremediation SPOT WASHING ___Other
___Wands
___Beach Cleaner

Comments: Recommend bioremediation of sporadic surface coat found in this subdivision. See attached computer map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER [illegible]
EXXON ANDY TSAI [illegible] FOSC: [illegible] DATE: 4-19-90
NOAA Burl Westcott [illegible]
USCG G.A. REITER G.A. Reiter

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-03 SUBDIVISION: D, 1 OF 4 DATE 03/30/90

USCG
NAME BM2 David E. Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Only After all other oiled areas are cleaned
Very low Priority.

EC
NAME Clara Crosby SIGNATURE Clara L. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
High Energy area - Remaining oil - at base of large boulders - very difficult to recover - Tar balls or product on finer sediments (P,S) which could be manually removed - (< 1 sq. m. < 2.5 cm DP.) (High Energy P/C/R Beach at NE end of PR003 was surveyed. No Oil Observed)

LAND MANAGER
NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

RECEIVED
REVISION NO. 03/22/90
MAR 31 1990

SHORELINE OILING SUMMARY

G Rick Gillie USCG BM 1 Thomas SEGMENT ST/ PR-03
BIO Dave Lohse LAND REP Marsha Martin SUBDIVISION D, 1 of 4
EXXON Frank Boe ADEC Clara Crosby TIME 11:50 to 12:10
TEAM NO.: 13 TIDE LEVEL: +2 to +2 DATE 3 / 30 / 90
EST. SUBDIVISION LENGTH: 80 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 20 % B 70 % C 10 % P ____ % G ____ % S ____ % M ____ % V ____ %
SLOPE: Lang 40 % Hang 40 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M ____ m N ____ m VL 80 m NO ____ m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X				X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F S N/A sq. m by ____ cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A
DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-13-1
Frames 7, 8, 9

SUBSURFACE OIL (BOULDER BEACH, UNABLE TO MOVE BOULDERS)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI		
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS
① Only oil present as a coating on the sides and base of boulders.

R Gill

ENT ST/ DK-03

VISION D 1 of 4

3, 30 90

SKETCH

No sketch Map

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cter Length (m): AP____ PO____ CV____ CT 80 ST____ MS____ PT____ TB____ FL____ NO____

REVISION:03/24/99

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

ment ST / PR003 Subdivision D Date (mo / day / yr) 3-30-90

Time (24 hr) 11:50 Biologist David Cha

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 70 (3) Cobble 10 (4) Pebble ____ (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 75

(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-13-1
Frames 7-9

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	2	X	2	X	2	2	2	
3	3	3	3	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	X	2	
	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	X	X	X	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	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	X	2	2	2	X	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	

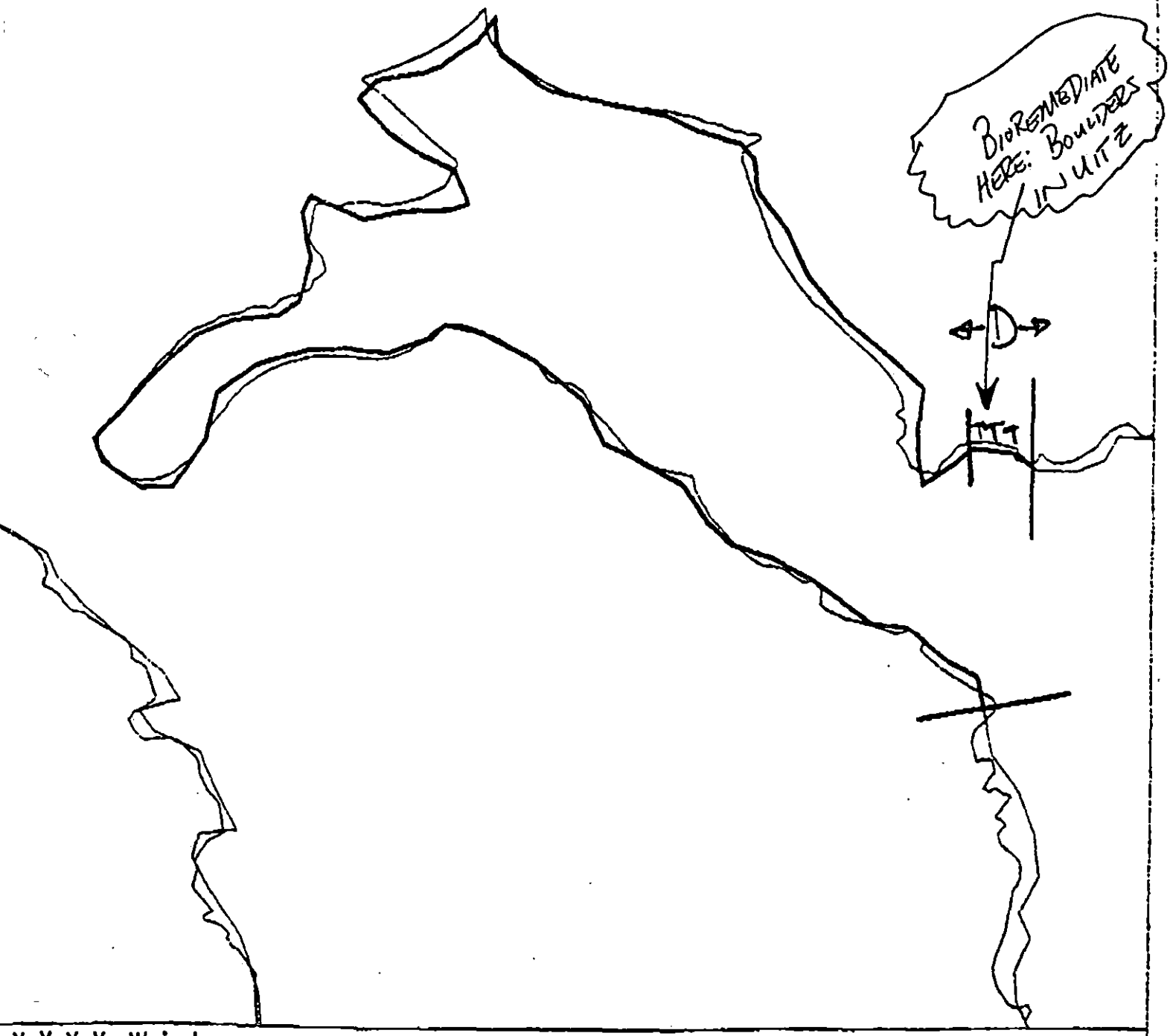
Wildlife Observations/ General Comments:

1. Bedrock was mistakenly not sampled - appeared qualitatively similar to boulders

Biological Considerations:

R-03

SEGMENT: 3T/PR-03
SUBDIVISION: D, 1 of 4



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

PR-3

ADEC Segment Length: 2919m

Map Key: PWS-517
Name: GILLIE

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-3 SUBDIVISION D (4 of 4)

WORK WINDOW

Bioremediation **OPEN**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessments completed on 5/10/90 and 5/19/90 by Mike Lockhart indicate no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

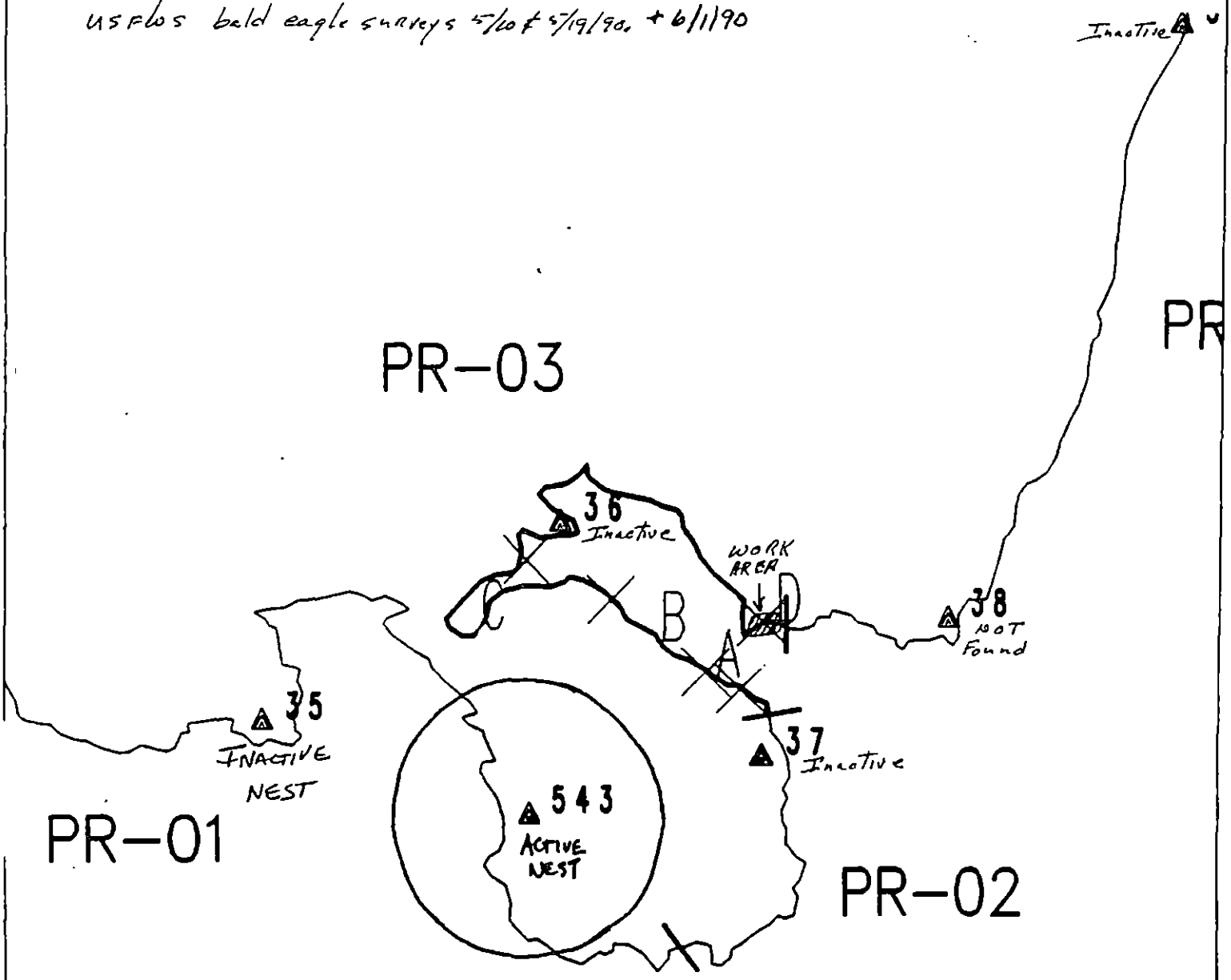
TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Andy Gan
NOAA John Talbot
USCG G.A. Reiter

FOSC D Zamoffi DATE 6/4/90

Prepared By: Andrea Meyer Date 6/2/90

[redacted]

Incorporates information from
USFWS bald eagle surveys 5/10 & 5/19/90 + 6/1/90



ECOLOGY MAP 6/

SHORELINE EVALUATION

SEGMENT ST/ PR-04 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
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: Rachel Jean Orr DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 83 m: Narrow 34 m: V.Light 1502 m: No Oil 1488 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of areas shown on attached sketch map. Work should be conducted between 7/2 and 7/31 based on pinniped constraints, after approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC Art Werner
EXXON Amy Tsai
NOAA Gary Petrov
USCG Kenneth Keane

FOSC: [signature] DATE: 6-8-90
Consider storm berm relocation —

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

[illegible] Harbor seal and sea lion pupping (5/15 to 7/1)
[illegible] 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 8/1)
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

[illegible] 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)
[illegible]H Finfish harvesting
7[illegible] Deer harvesting (8/15 to 2/28)
7JJ 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/ PR-04 SUBDIVISION: A DATE 4/21/90

USCG
NAME MAURICE J. SHARPE SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME STEPHEN FERGUSON SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED

COMMENTS

(1) Pocket cove (M-oiling) South/end -> Spot wash might work -> Area is low energy compared to rest of segment

(2) 2nd M-oiling - Recommend no treatment (90%) ~~no~~ large boulders - unable to spot wash - Bio also not effective

(3) Narrow oiling near N/end seg line for PD-4 -> storm berm - break down - Bio, Rocky outcropping + horizontal bed. with C/ST/ST spot flush

(4) Rest of segment -> recommend natural erosion process to continue.

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Listed as public use area in PWS area plan. Listed as priority 2.4 by PWSCA. Segment also listed for tent sites. Most of the oil found on this segment was on the sides and underneath boulders on the pocket beaches consisting mainly of large boulders. These beaches are hard to walk on or land a skiff on. Most of the cobble/pebble beaches other than the last one at the north end of the segment are free of oil on the surface. Recommend treatment as suggested by ADEC above.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG ——— USCG R. SHARPE SEGMENT ST/ PR-04
BIO G. PANN LAND REP L. CARLSON SUBDIVISION A 1 OF 1
EXXON S. REID ADEC S. FERGUSON TIME 2:15 to 7:40
TEAM NO. 4 TIDE LEVEL +6' to +4.5' DATE 04 / 21 / 90
EST. SUBDIVISION LENGTH: 3106 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
SURFACE SEDIMENTS: R 10 % B 60 % C 30 % P Ø % G Ø % S Ø % M Ø % V Ø %
SLOPE: Lang 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
OIL CATEGORY LENGTH: W Ø m M 150 m N 88 m VL 1403 m NO 1465 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rb	rp	rs						su	ui	mi	u
ASPHALT PAVEMENT													
POOLED		X				X					X		
COVER		△		X		X		△		△	X		
COAT	X	△	•	O		X△ • O					X△ • O		
STAIN	X	△	•	O		X△ • O					X△ • O		
MOUSSE													
PATTIES											x		
TARBALLS													
FILM													
NO OIL												X	X

PAVEMENT H F S Ø sq. m by Ø cm
PATTIES / TARBALLS Ø 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 Ø
#BAGS Ø

Photographs:
Roll No. ST-4-2
Frames 12 — 15

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	op	no		uo	uo						su	ui	mi	u				
1	35					X	Ø - Ø		X								X		N	N	20	C, P, G
2	45					X	Ø - Ø		X						X				N	—	—	C, P, G
3	90					X	Ø - Ø		X							X			N	—	—	C, P, G
4	45					X	Ø - Ø		X							X			N	—	—	C, P, G
5	30					X	Ø - Ø		X							X			N	—	—	C, P, G
6	45					X	Ø - Ø		X									X	N	N	40	C, P, G

COMMENTS

See map.

REVIEWER JW DATE 4/24/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

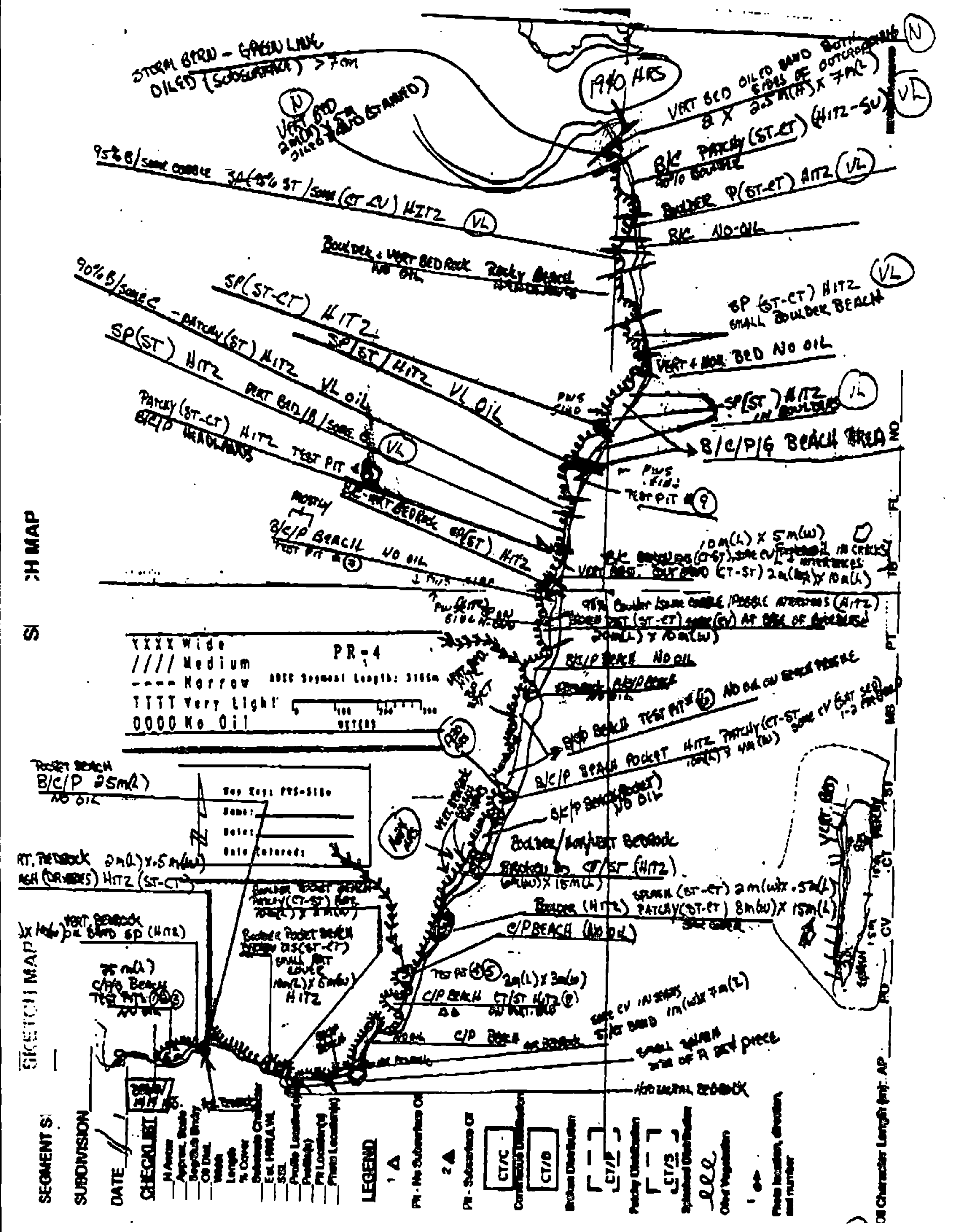
SEGMENT ST/ PR-04 SUBDIVISION A (1 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	LI				
7	40					X	0-0		X								X		N	—	—	B, C, P, G
8	40					X	0-0		X							X			N	—	—	B, C, P
9	30					X	0-0		X							X			N	—	—	B, C, P, G
10	20		X				0-4	X					X		X				N	—	—	V, C, G
10	20				X		4-7		X	X					X				N	—	—	V, C, G

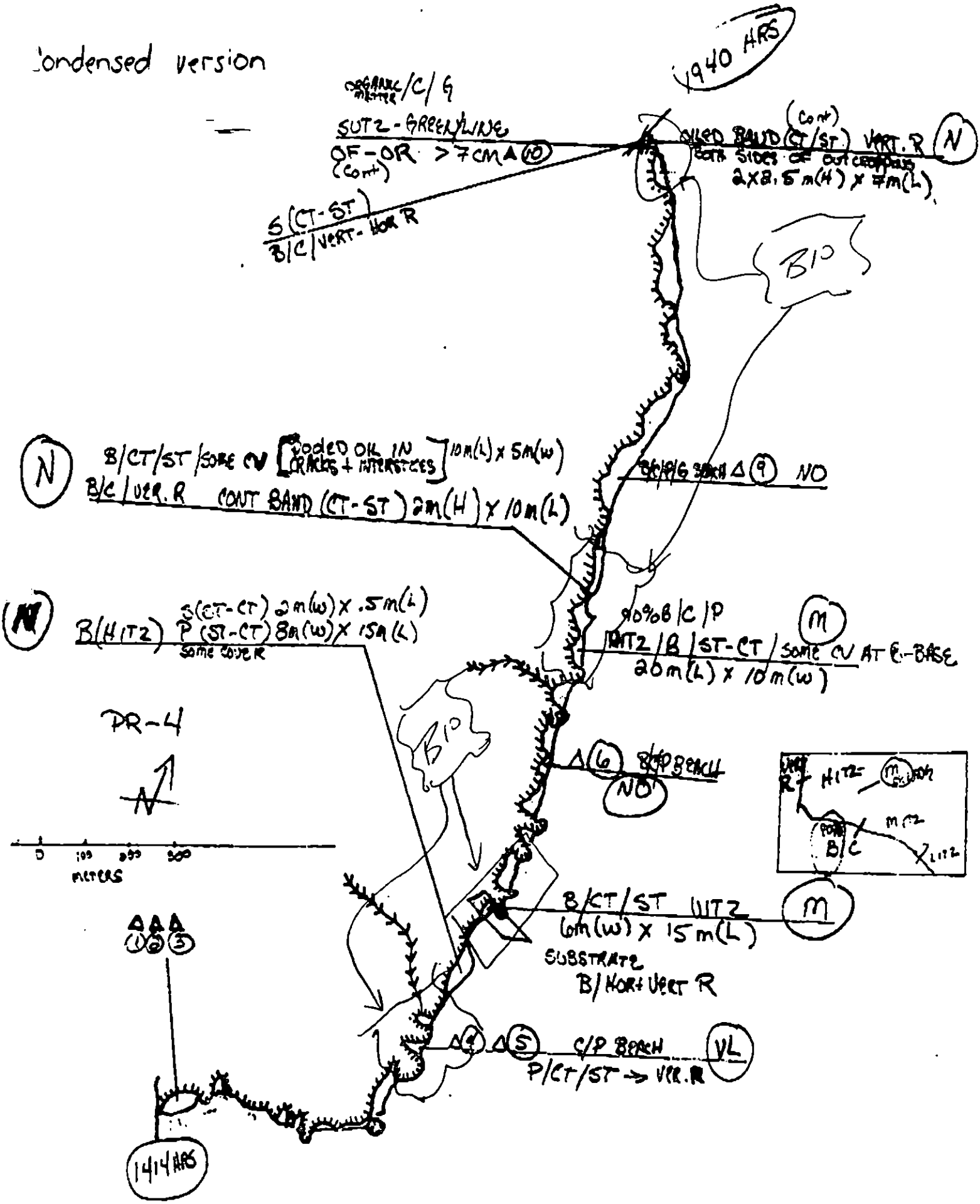
COMMENTS

REVIEWED TW DATE 4/24/90



SKETCH MAP
PR-4
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil
METERS
SEGMENT
SUBDIVISION
DATE
CHECKLIST
LEGEND
1910 HRS
STORM BERM - GREEN LINE
OILED (SUBSURFACE) > 7 cm
VERT BED OILED BAND BOTH SIDES OF OUTCROP
VERT BED
95% B/SOME COBBLE
B/C PATCHY (ST-CT)
BOULDER P (ST-CT) HITZ
R/C NO OIL
BOULDER & VERT BED ROCK ROCKY BEACH NO OIL
90% B/SOME C - PATCHY (ST) HITZ VL OIL
SP(ST-CT) HITZ
SP(ST) HITZ VL OIL
SP(ST) HITZ
PATCHY (ST-CT) HITZ TEST PIT
B/C/P HEADLANDS
SP (ST-CT) HITZ SMALL BOULDER BEACH
VERT & HOR BED NO OIL
B/C/P/G BEACH AREA
TEST PIT
B/C/P BEACH NO OIL
10m(L) X 5m(W)
B/P BEACH NO OIL
B/C/P BEACH POCKET
POCKET BEACH B/C/P 25m(L) NO OIL
B/C/P BEACH (POCKET) NO OIL
BOULDER (HITZ)
C/P BEACH (NO OIL)
C/P BEACH CT/ST HITZ
C/P BEACH
HORIZONTAL BEDROCK
SMALL SPLASH
HITZ

Condensed version



SHORELINE ECOLOGICAL SUMMARY

REVISION 03/28/90

Segment ST / PR-4 Subdivision A Date (mo / day / yr) 4-21-90

Time (24 hr) 1415 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 60 (3) Cobble 30 (4) Pebble Ø (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 5 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:
Roll No. ST-4-2
Frames 12, 13, 14

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	X	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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	X	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	X	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

NOT PRESENT

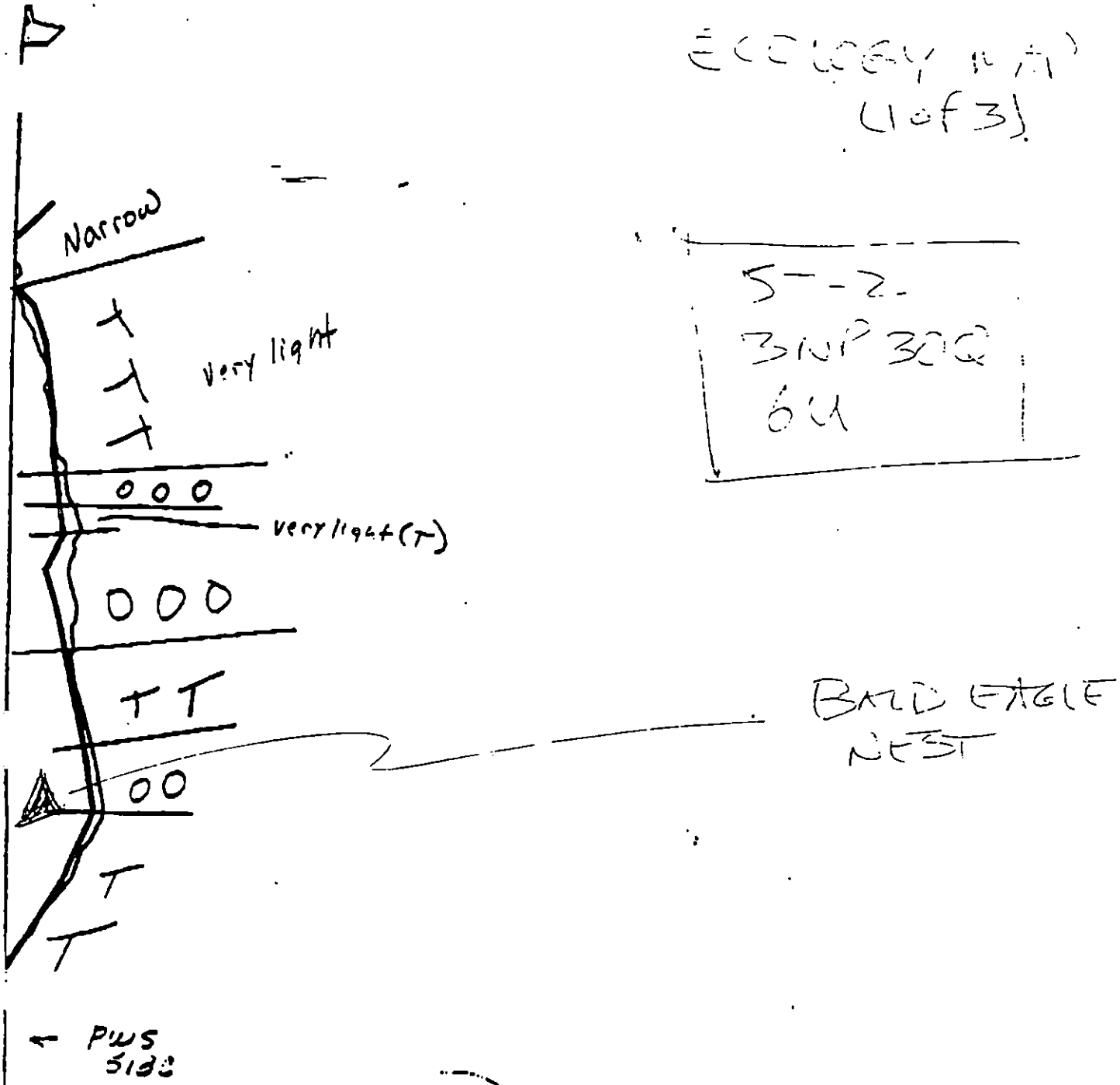
Wildlife Observations/ General Comments:

2 Seals 5 gulls

3 eagles

Ecological Considerations:

ECOLOGY MAP
(1 of 3)



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

PR-4

ADEC Segment Length: 3106m

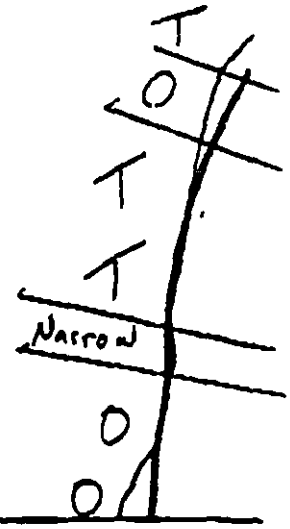
no OG

Map Key: PWS-5184

Name: TEAM 4 effort

Date: 4/19/90

ECOLOGY MAP (2 of 3)



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

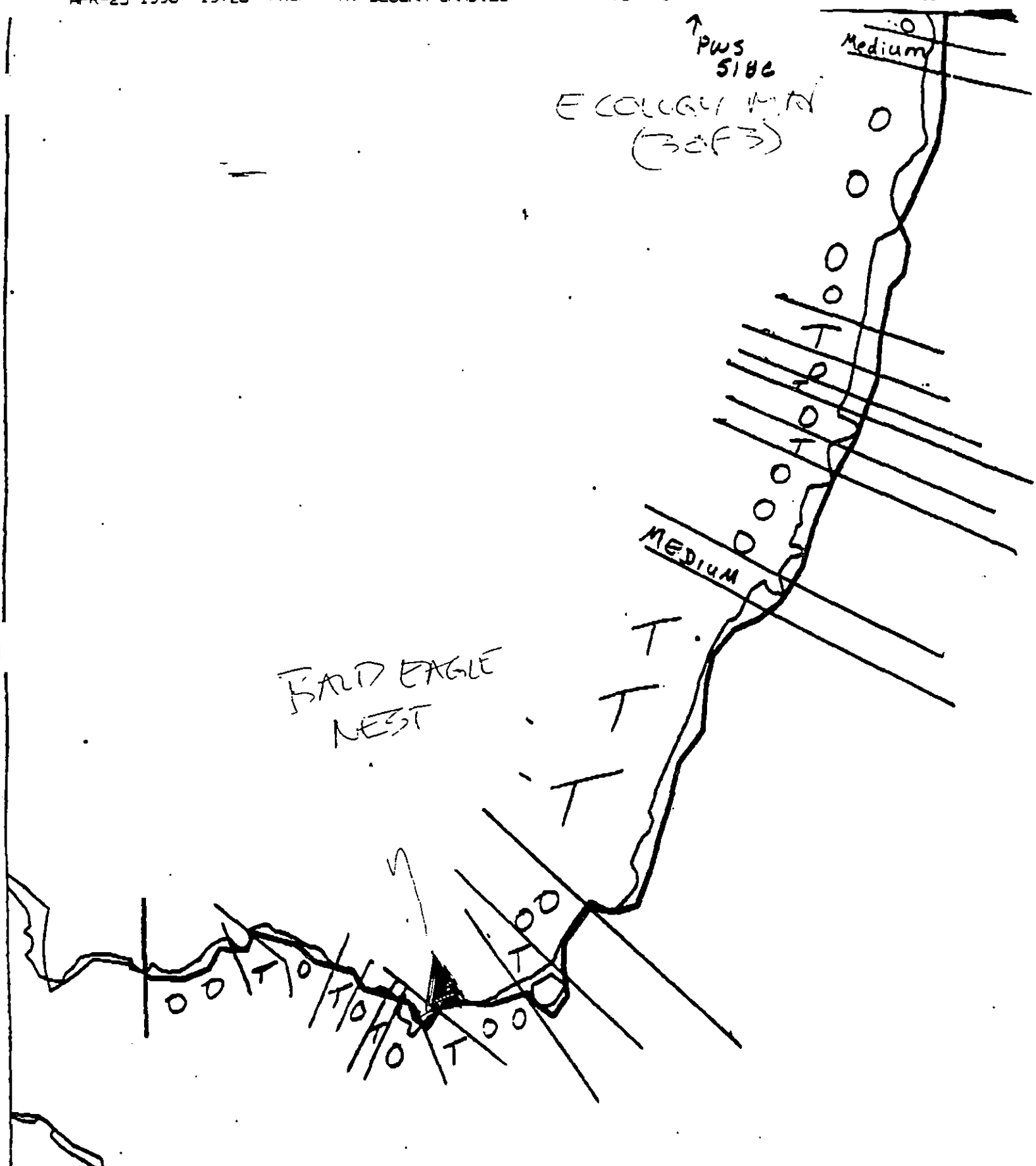
PR-4

ADEC Segment Length: 3168m

Map Key: PWS-518c NOOG

Name: TEAM 4 COOP

11/10/90



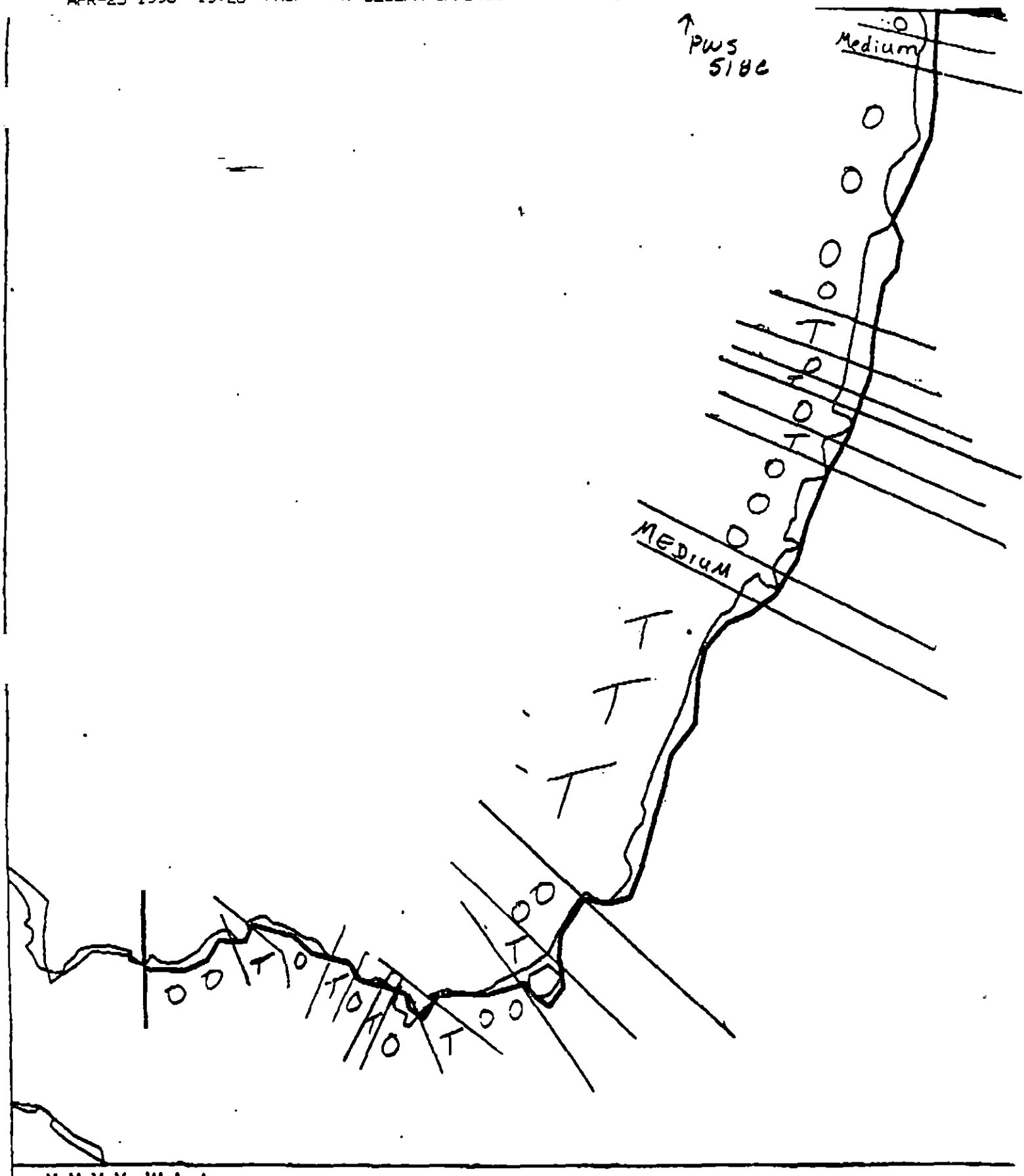
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PR-4

ADEC Segment Length: 3105m

0 100 200 300

Map Key: PWS-518c
Name: TEAM 4 CO-OP
Date: 4/19/90



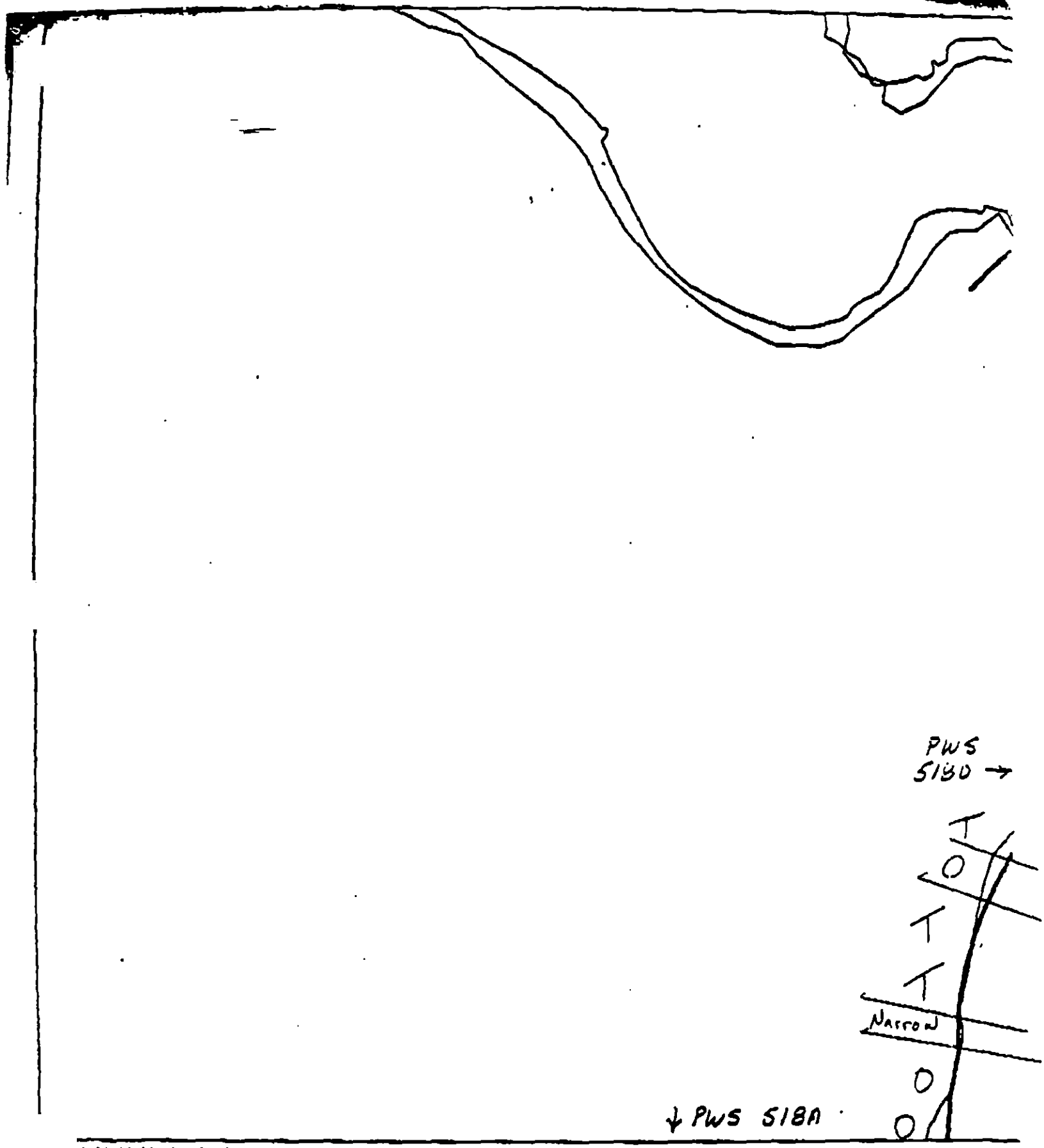
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PR-4

ADEC Segment Length: 3106m

0 100 200 300

Map Key: PWS-518c
Name: TEAM 4 CO-OP
Date: 4/19/90

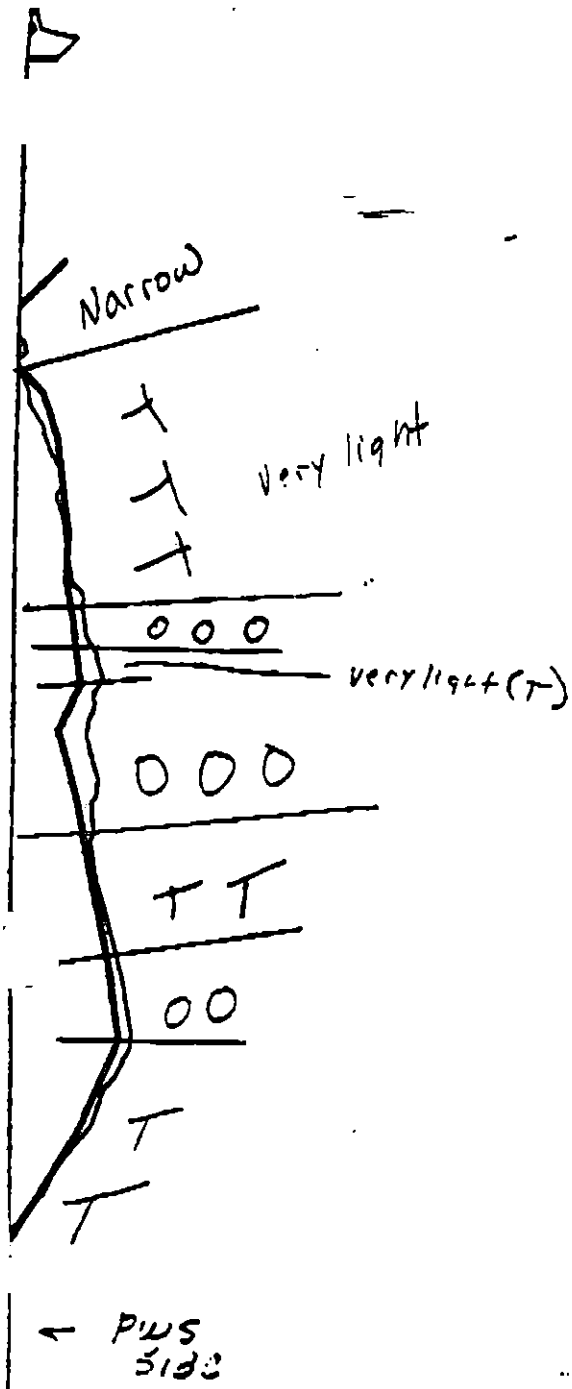


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

PR-4

ADEC Segment Length: 3108m

Map Key: PWS-518a
Name: TEAM 4 COOP
11/10/90



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

PR-4

ADEC Segment Length: 3106m

Map Key: PWS-5183 no OG
Name: TEAM 4 effort
Date: 4/19/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation Storm Berm Relocation (consider)	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

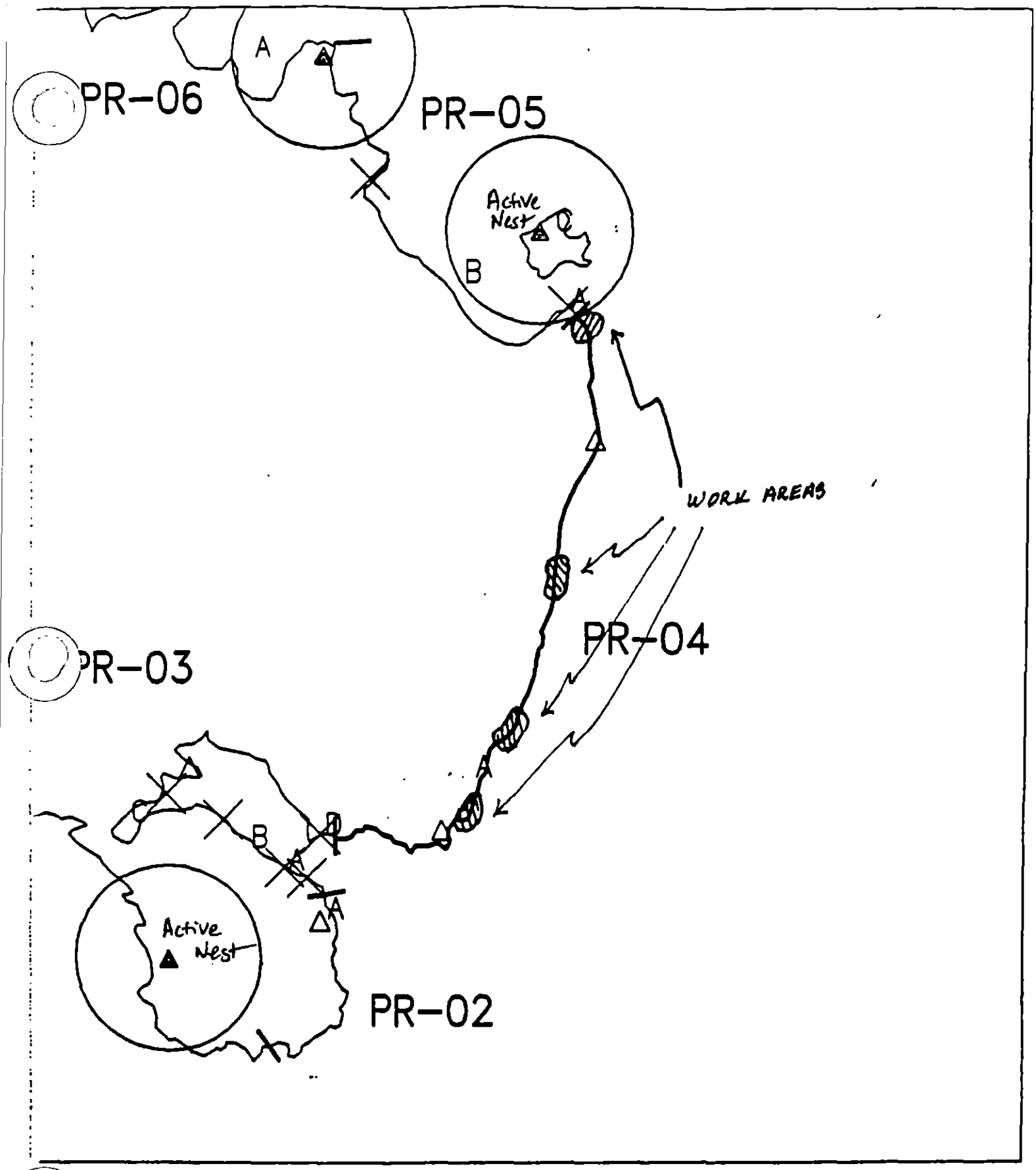
3N,O,P,Q	**Harbor Seal & Sea Lion Pupping and Molting**	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC [signature] Date 6/14/90

Prepared by [signature] Date 6/14/90



Exxon Company, USA
Map Key: PWS-PR-4
June 09, 1990

ECOLOGY MAP
SEGMENT PR-4
SUBDIVISION A (1 of 1)

METERS
0 557 1114

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1828 feet

REVISION 1
7/27/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
TARMAT REMOVAL	OPEN
Bioremediation	
Storm Berm Relocation	OPEN
~~(consider)~~	
MANUAL TILL	

ADD TARMAT REMOVAL & MANUAL TILLING AS PER WORK PLAN DATED 7/16/90

7/27/90

D.E. 7-27-90

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	**Harbor Seal & Sea Lion Pupping and Molting**	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
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

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC [signature] Date 6/14/90

Prepared by [signature] Date 6/14/90

WORK PLAN ADDENDUM

Segment PR04 Subdivision A Dated 07/16/90.

MODIFICATION

1. REASON FOR MODIFICATION

- MORE MANUAL WORK REQUIRED PRIOR TO BIO. AS IDENTIFIED BY THE BIO TEAM.

2. ADJUSTMENT TO WORK PLAN

- MANUAL REMOVAL OF POOLED OIL
- MANUAL REMOVAL OF TAR PATTIES
- MANUAL TILL AS SHOWN ON SKETCH PRIOR TO BIO
- MANUAL TILL + PULL DOWN STORM BERM WHERE HEAVIEST OILING EXISTS. PRIOR TO BIO.

SHPO APPROVAL NEEDED YES X SHPO SIGNATURE Rachel Dean Owen 7/17/90

NO _____ STANDARD CONSTRAIT APPLIES

TAG APPROVAL DATE 07/16/90.

ADEC Ray Morris, R. Morris

EXXON Amy Tear

NOAA Burl Wescott

USCG G.A. Reiter G.A. Reiter

FOSC _____ DATE 7-21-90

OIL M. Co

SEGMENT ST/ PR-4

SUBDIVISION_____

DATE 7 / 12 90

CHECKLIST

- __N Arrow
- __Approx. Scale
- __Seg/Sub Bndry
- __Off 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

S...CH MAP

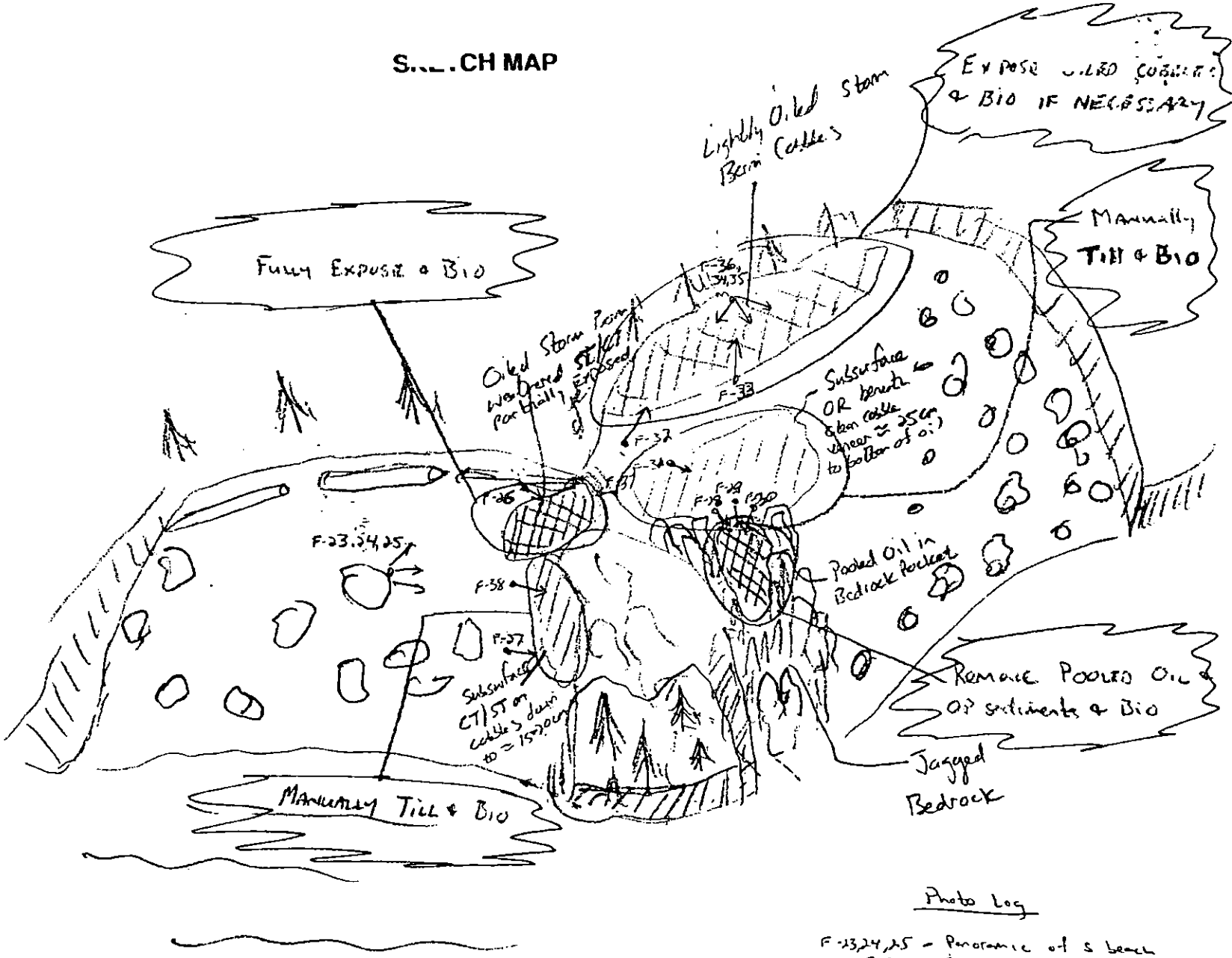
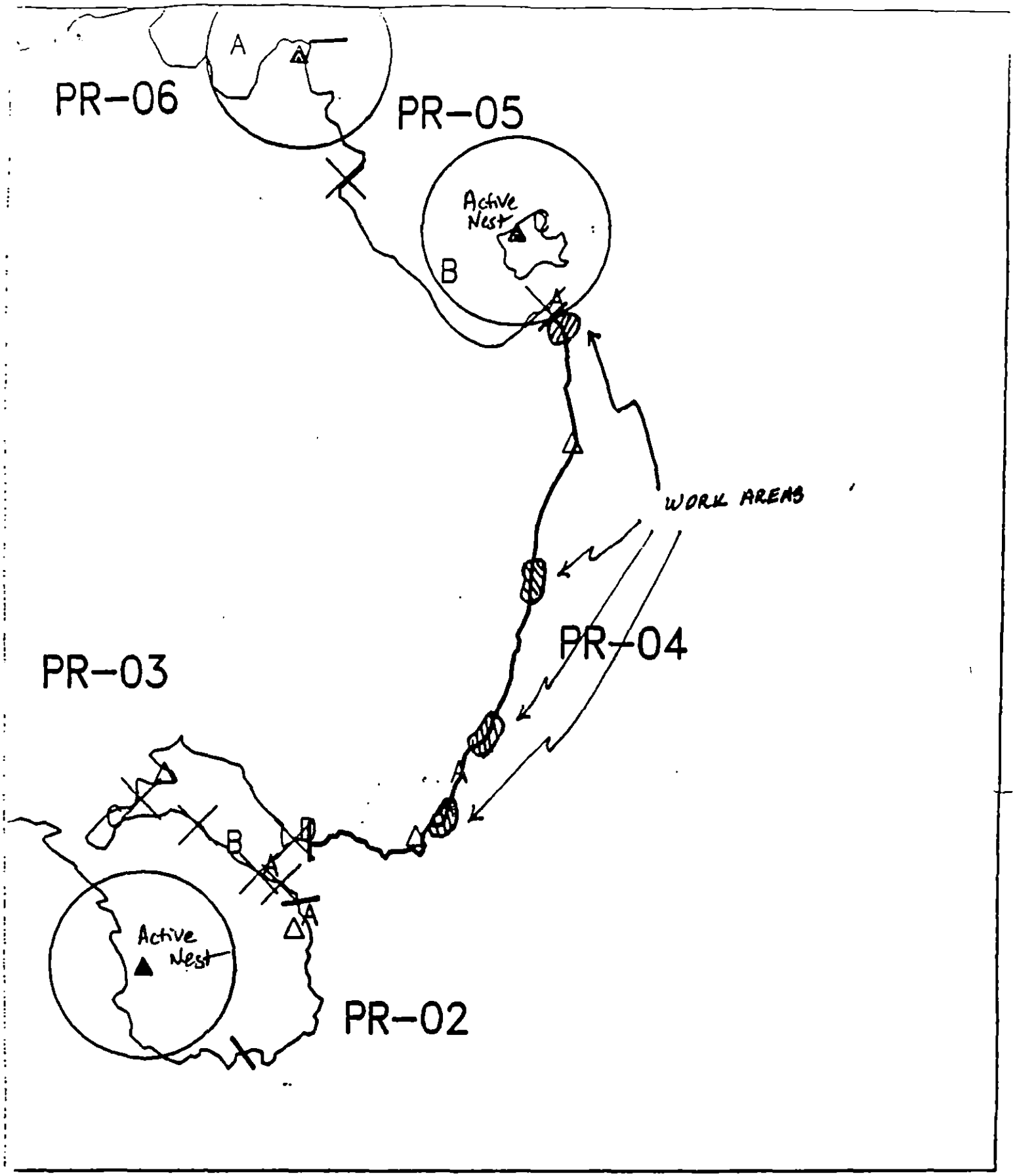


Photo Log

F-23,24,25 - Panoramic of S beach
F-26 - Oiled pebbles/cobbles in storm berm
F-27 - Oiled sediments at base of panorama

Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION:03/24/90



Exxon Company, USA
Map Key: PWS-PR-4
June 09, 1990

ECOLOGY MAP
SEGMENT PR-4
SUBDIVISION _A_ (_1_ of _1_)

METERS
0 557 1114

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1828 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-05 SUBDIVISION A (1 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Main Bay Hatchery release area (1E) - 4/20 to 5/10; Salmon set net sites (1L) - 6/1 to 7/25. Contact ADF&G for specific dates; Bald eagle nest (5T) - 3/1 to 6/1. Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to treatment for confirmation of dates and avoidances; Special use ~~designation~~ destination (6Y) - 6/1 to 9/15.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 67 m: V.Light 0 m: No Oil 0 m

Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of debris and oiled vegetation/drift. Bioremediation of areas indicated on sketch map. Work between 6/1 and 7/10 based on eagle nest and stream mouth spawning constraints.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/13/90.

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAL Andy Teal

NOAA Burl Westcott Burl Westcott

USCG G.A. REITER G.A. Reiter

FOSC: [illegible] DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

GMENT ST / PR-05 SUBDIVISION: A, 1 of 3 DATE 03/30/90

USCG
NAME Bri David S Thomas SIGNATURE [illegible]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Only After all other Areas cleaned
Very low Priority.

ADEC
NAME Clara E. Crosby SIGNATURE Clara E. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Oiled debris & vegetation - manual removal - Medium to high energy beach - Oiling on C has been worn away - residual oiling left - however immediately below C is a layer of Saturated Sediment (6.5). to 7.5 cm - with sun exposure & heat - expect oil to become mobile or bleed.

LAND MANAGER
NAME MARSHA MARTIN SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
complicated area, stain on vertical rock crops cobbles stained. Snow browned by boots. coat/cover in sheltered crevasses higher up.

REVISION NO. 03/21/89

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick Gillie USCG Ron I Thomas SEGMENT ST/ PR-05
IO Dave Lohse LAND REP Marsha Martin SUBDIVISION A 1 of 3
EXXON Frank Boe ADEC Clara Crosby TIME 13:15 to 13:45
TEAM NO.: 13 TIDE LEVEL: +6 to +8 DATE 3 / 30 / 90
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 25 % B 40 % C 30 % P 5 % G ___ % S ___ % M ___ % V ___ %
SLOPE: Lang 50 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ___ m M ___ m N 60 m VL ___ m NO ___ m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BRN/BK	DBR/BR	OLV/GR	DBRO/TL	LBRO/YL	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT	X		✓					X✓			X	✓	
STAIN			X					X			X	X	
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

PAVEMENT: H F S N/A sq. m by ___ cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ___
#BAGS ___

Photographs:
Roll No. ST-13-1
Frames 10, 11, 12, 13, 14, 15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UG	BRN/BK	DBR/BR	OLV/GR	DBRO/TL	LBRO/YL	SU	UI	MI	LI		
1	25					X	-									X				G, S
							-													
							-													
							-													
							-													
							-													

COMMENTS
① Oiled Debris - grass and drift-wood debris
② Subsurface oil (10-15 cm depth): Continuous band 2m x 10 m in UI ZONE.

REVIEWED JW DATE 4-2-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PR 005 Subdivision A Date (mo / day / yr) 3-30-90

ime (24 hr) 13:15 Biologist David Lohr

(A) Substrate type and % of segments:
(1) Bedrock 25 (2) Boulder 40 (3) Cobble 30 (4) Pebble 5 (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 75

(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-13-1
Frames 10-15

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:
1. Cormorant, otter, sea lion observed in area
2. Bald Eagle observed just beyond southern end of segment
3. oiled vegetation found at or above high tide line

Ecological Considerations: 4. deer tracks observed
5. Barnacles on oiled vertical wall were covered w/ oil
70% alive, 30% dead

1. 1B – Salmon Stream Mouth spawning – no comment
6Y – Special Use destination – no comment

✓

OG R. C[illegible]LIE

SEGMENT ST/ PR-05

SUBDIVISION A, 1 of 3

DATE 3/30/90

SK[illegible]CH MAP

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

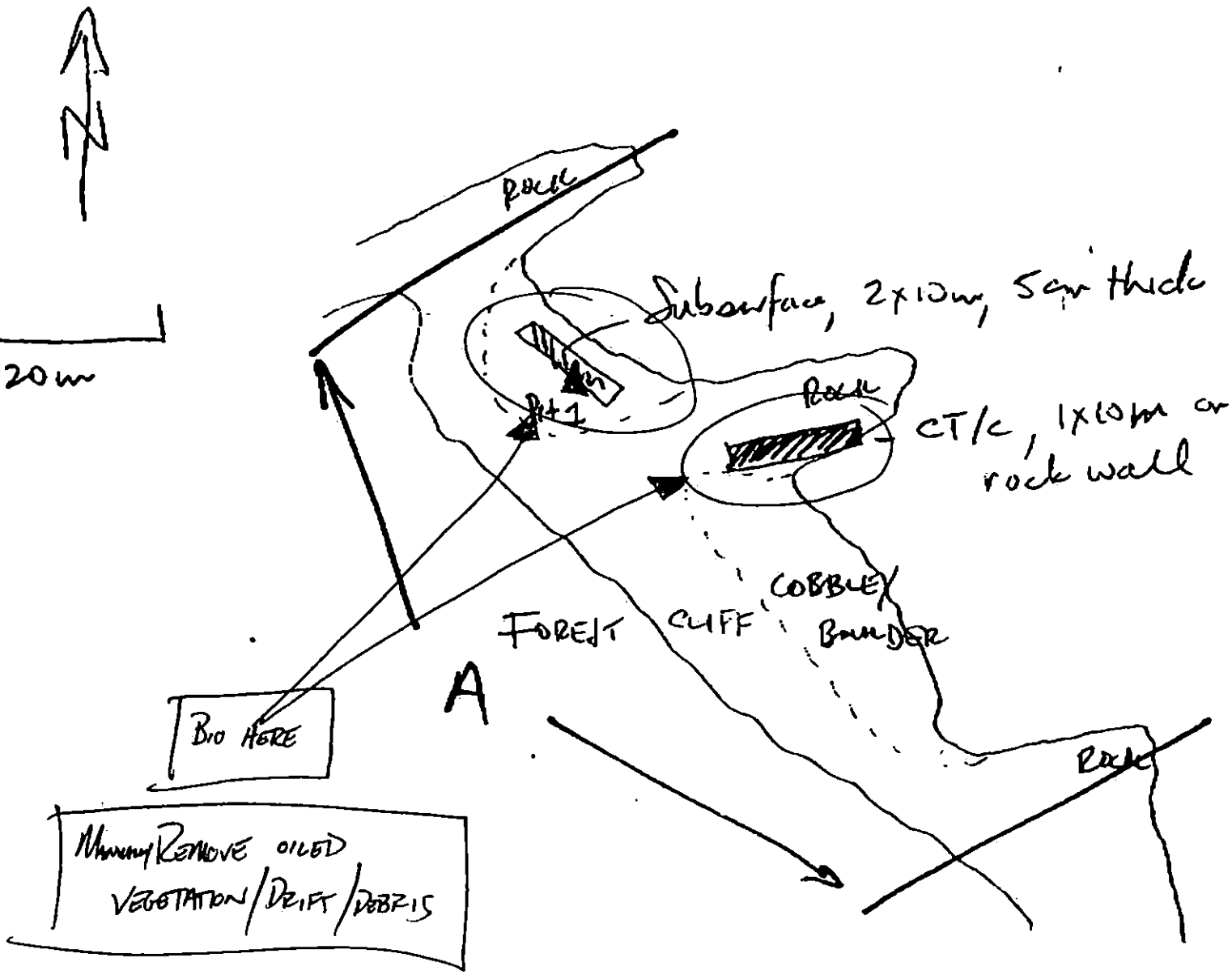
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

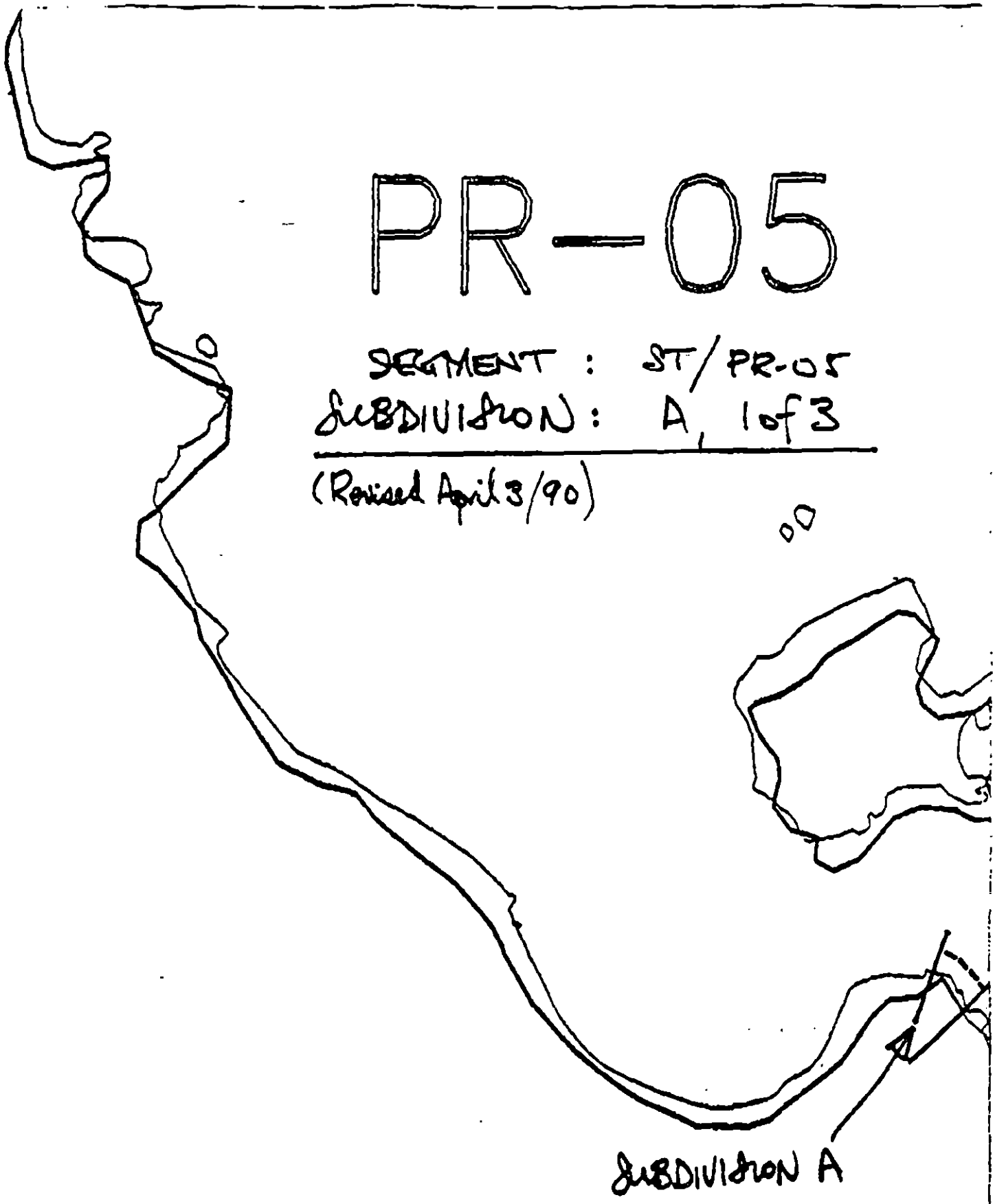
Oiled Vegetation

Photo location, direction, and number



Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____

REVISION:03/29/90



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

PR-5

ADEC Segment Length: 3713m

0 100 200 300
METERS

Map Key: PWS-831a
Name:
Date:
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-5 SUBDIVISION A (1 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK 6/4 - 6/8 OR AFTER 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	**Main Bay Hatchery Release**	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15. No constraint to manual pickup.
1L	**Set Net Sites**	Closed to bioremediation from 6/11 to 7/25. No constraint to manual pickup.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS 6/1/90 map indicates an active nest within 400m of the work area. However, work area is outside FWS buffer zone designated on 5/10/90 and 5/20/90 by Mike Lockhart.

OTHER ECOLOGICAL CONSIDERATIONS

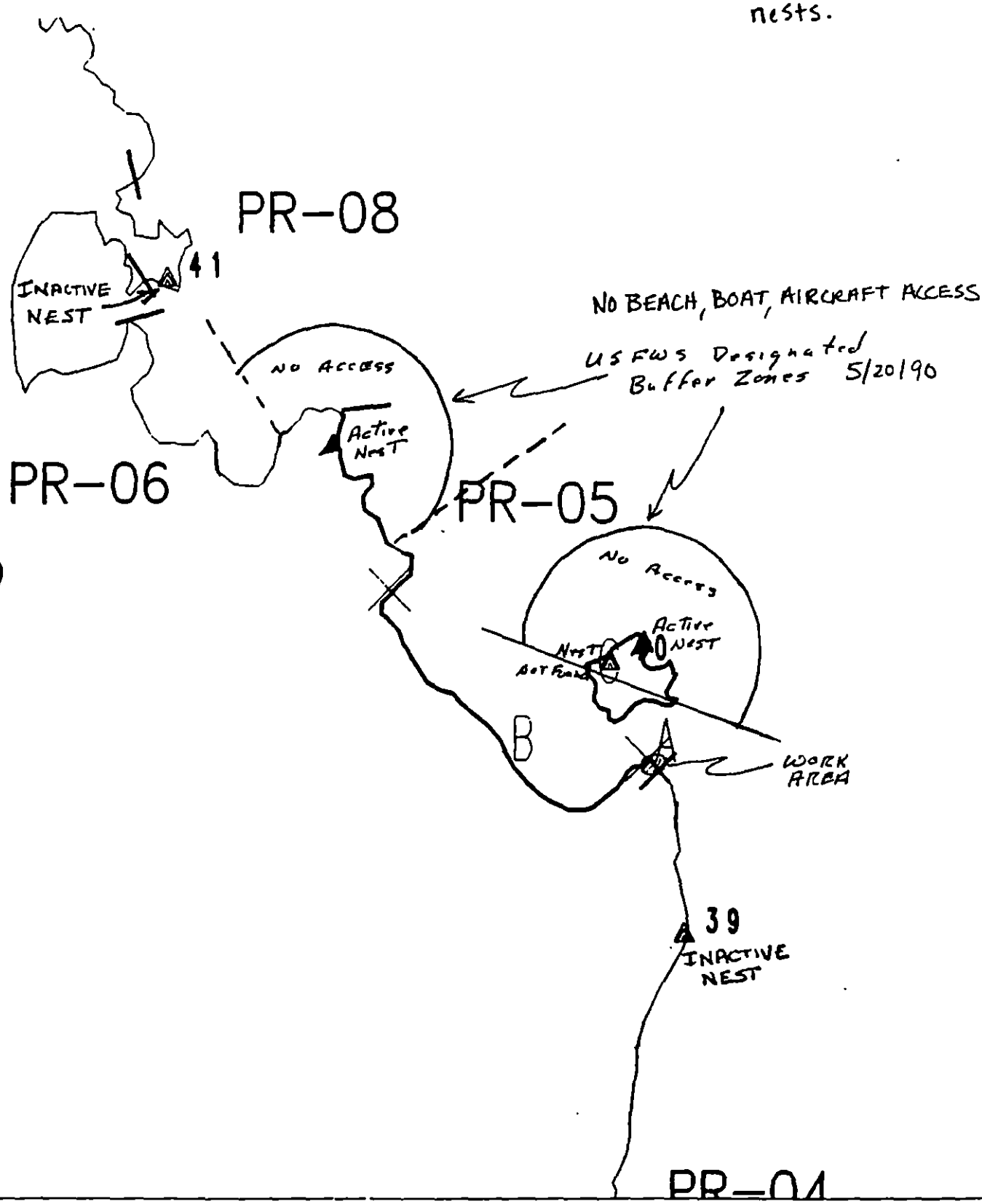
Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within USFWS designated buffer zones. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. When set net sites are present, restrict beach operations to essential minimum. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE
ADEC Ray Morris
EXXON Andy Teal
NOAA
USCG

FOSC _____ Date 6 June 90

Prepared by _____ Date 6/6/90

* USF+WS 6/1/90 map of active bald eagle nests.



EXXON

Exxon Company, USA
Map Key: PWS-PR-5

ECOLOGY MAP
SEGMENT PR-5
SUBDIVISION A (1 of 3)

METERS

★ Seabird Colony
▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PR-05 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Main Bay Hatchery release area (1E) - 4/20 to 5/10; Salmon set net sites (1L) - 6/1 to 7/25. Contact ADF&G for specific dates; Bald eagle nest (5T) - 3/1 to 6/1. Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to treatment for confirmation of dates and avoidances; Special use designation (6Y) - 6/1 to 9/15.

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

SHPO SIGNATURE: Charles E Holman DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 144 m: Narrow 148 m: V.Light 127 m: No Oil 921 m
Subsurface Oil Observed: Yes x No ____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of small tarmat and bioremediation of areas shown on sketch map. Work after 6/1 based on bald eagle nesting constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUER John Bauer
EXXON Andy Tan
NOAA Burl Wright
USCG G.A. Reiter, G.A. Reiter
FOSC: DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-05 SUBDIVISION: B, 1 of 3 DATE 3/31/90

USCG
NAME David S Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Suggest treatment of Sites # 6, 7, 9 & 10 - Rec. Sketch map
Due to some confusion with terminology would like to clarify subsurface oiling in pits 1-4 - this oiling is a continuation of surface oiling indicated by asphalt/c & coat/c. ~~cover~~ cc to depth indicated.

LAND MANAGER
NAME MARSHA MARTIN SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Fuel drum in Supra tidal zone located behind log N.ERN portion segment, (in oiled portion segment)

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. [redacted]

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ PR-05
O DAVE Lohse LAND REP Marsha Martin SUBDIVISION B 1 of 3
XON FRANK Boy ADEC Clara Crosby (DNR) TIME 07:30 to 10:15
TEAM NO.: 13 TIDE LEVEL: +5 to -1 DATE 3 / 31 / 90
EST. SUBDIVISION LENGTH: 1,350 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ [redacted]
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to N[redacted]
SURFACE SEDIMENTS: R 10 % B 30 % C 30 % P 20 % G 10 % S 0 % M 0 % V 0 %
SLOPE: Lang 80 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 100 m N 200 m VL 250 m NO 800 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SBL/BR	DBL/RW	CT/SL	DBR/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT	X			X		X					X		
POOLED													
COVER													
COAT	X			✓				X✓			X✓		
STAIN				X		X					X		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F (S) 5 sq. m by 5 cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE
#BAGS

Photographs:
Roll No. ST-13-1
Frames 16, 17, 18, 19, 20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	CT/SL	DBR/TL	LBR	SU	UI	MI	U		
1	15	X					5-15		X				X			X				C, G, P
2	10	X					5-10		X				X			X				P, G, S
3	15		X				5-15	X					X			X				C, P
4	15				X		5-15	X					X			X				C

COMMENTS

GENERAL: OIL – RESIDUAL OIL COATING IN POCKETS WITH SOME SUB-SURFACE OIL IN SOME LOCATIONS.

REVIEWED JW DATE 4-2-90

REVISION: 03/22/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PR 005 Subdivision B Date (mo / day / yr) 3-31-90

Time (24 hr) 7:30 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 30 (3) Cobble 30 (4) Pebble 20 (5) Sand 10 (6) Silt ___

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 45 Low 35

(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-13-1 Frames 16-20

BARNACLES

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

FUCUS

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

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

5 - no streams observed in this subdivision

- 6Y - no comment

1. Dense Fucus beds in low intertidal at sites 1, 10, and between 2 and 3 (see 06 sketch map) would be susceptible to foot traffic.

2. If clean-up is desired at site 6, care should be taken to avoid disturbin

Shoreline Ecological Summary

Segment ST-PROOS Subdivision B 3-31-90

Biologists David Lohse

Wildlife Observations / General Comments

1. present in low intertidal - Scytosiphon, Halosacion, unidentified branching red algae, unidentified "blade-like" red algae (Iridea?)

   mid intertidal - Nuella, Ralfsia, Anthopleura, coralline algae, Endocladia (?), Enteromorpha, Cladophora, Chitons

   high intertidal - Enteromorpha: very dense in spots, covering large extents of boulder/cobble beaches

2. cormorants, ravens, and several different shore birds observed in area

3. deer tracks present above high tide line

4. oil-covered barnacles found in high intertidal at site 6 (see OG Sketch map) Juvenile barnacles present in area, some of which are covered with oil also.

OG Rick Ellis

SEGMENT ST. R-05

SUBDIVISION B 1 of 3

DATE 3, 31 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

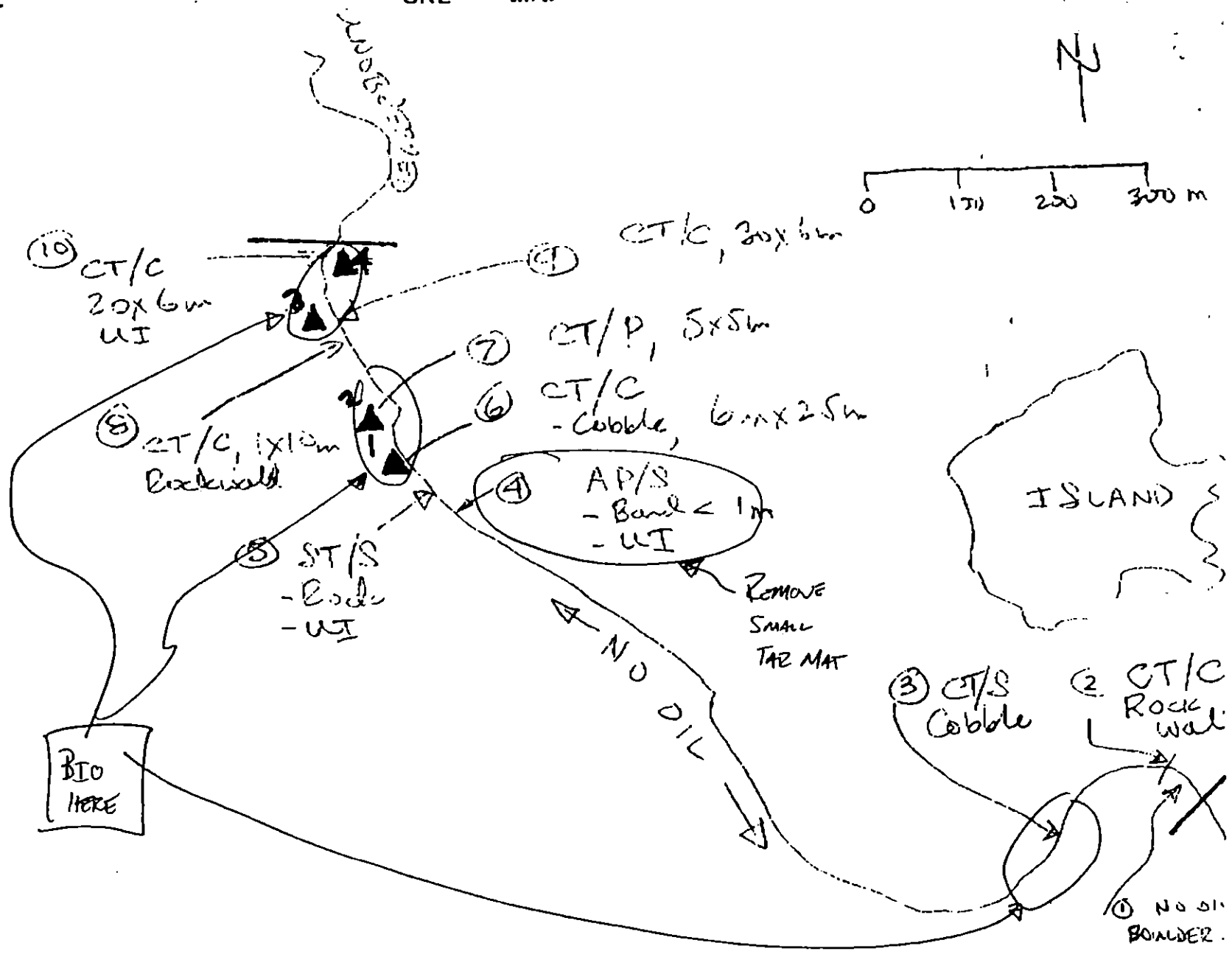
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number

SKE MAP

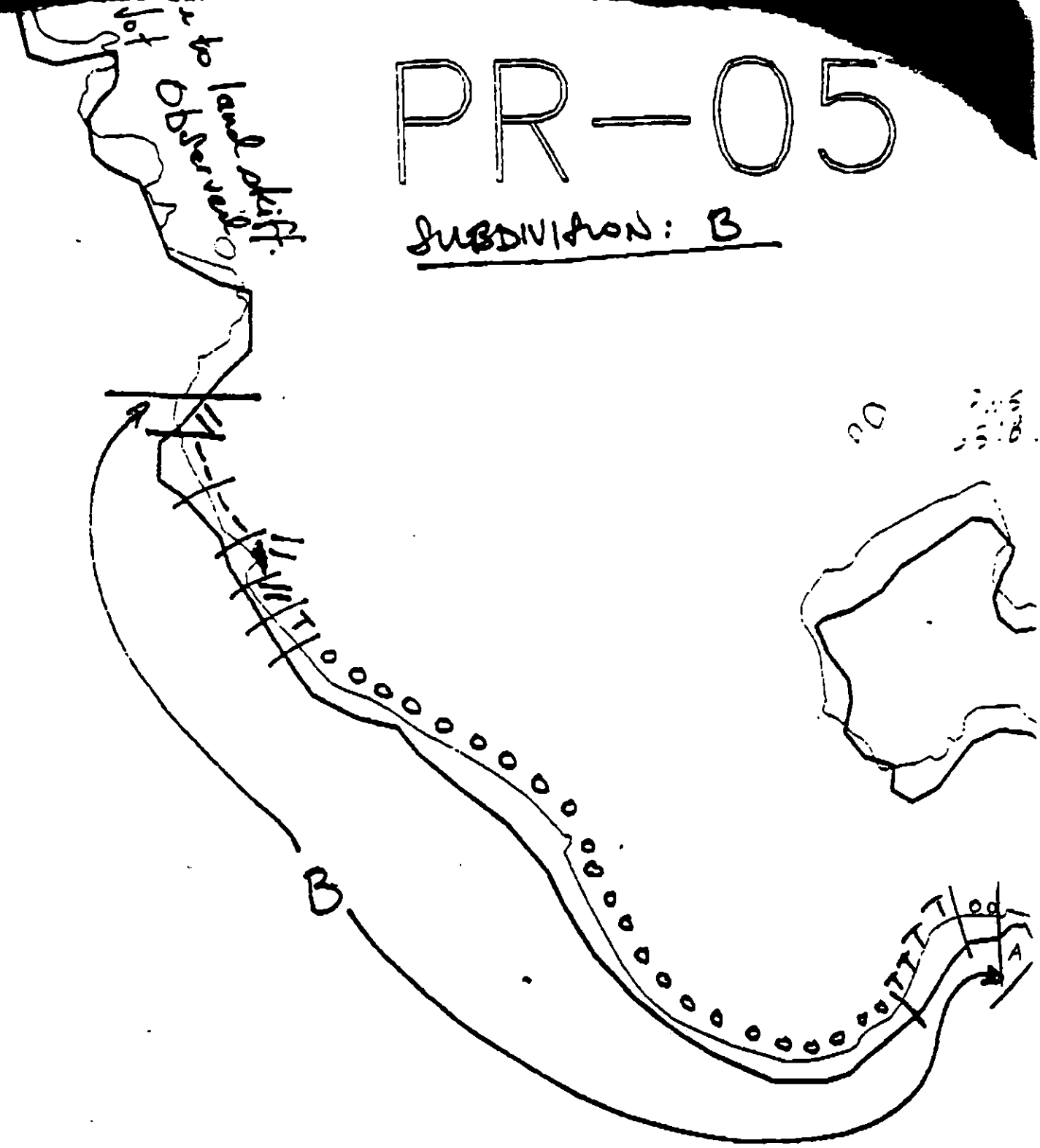


Oil Character Length (m): AP___ PO___ GV___ CT 590 ST___ MS___ PT___ TB___ FL___ NO___

REVISION 05/24/90

PR-05

SUBDIVISION: B



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

PR-5

ADEC Segment Length: 3713m

0 100 200 300

Map Key: PWS-631a

Name:

Date:

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-5 SUBDIVISION B (2 of 3)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	WORK 6/4 - 6/8 OR AFTER 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	**Main Bay Hatchery Release**	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15. No constraint to tarmat removal.
1L	**Set Net Sites**	Closed to bioremediation from 6/11 to 7/25. No constraint to tarmat removal.
5T	**Bald Eagle Nests**	NO CONSTRAINT. USFWS bald eagle impact assessments completed on 5/10/90 and 5/20/90 by Mike Lockhart indicate no active nests within 400m of the work area.

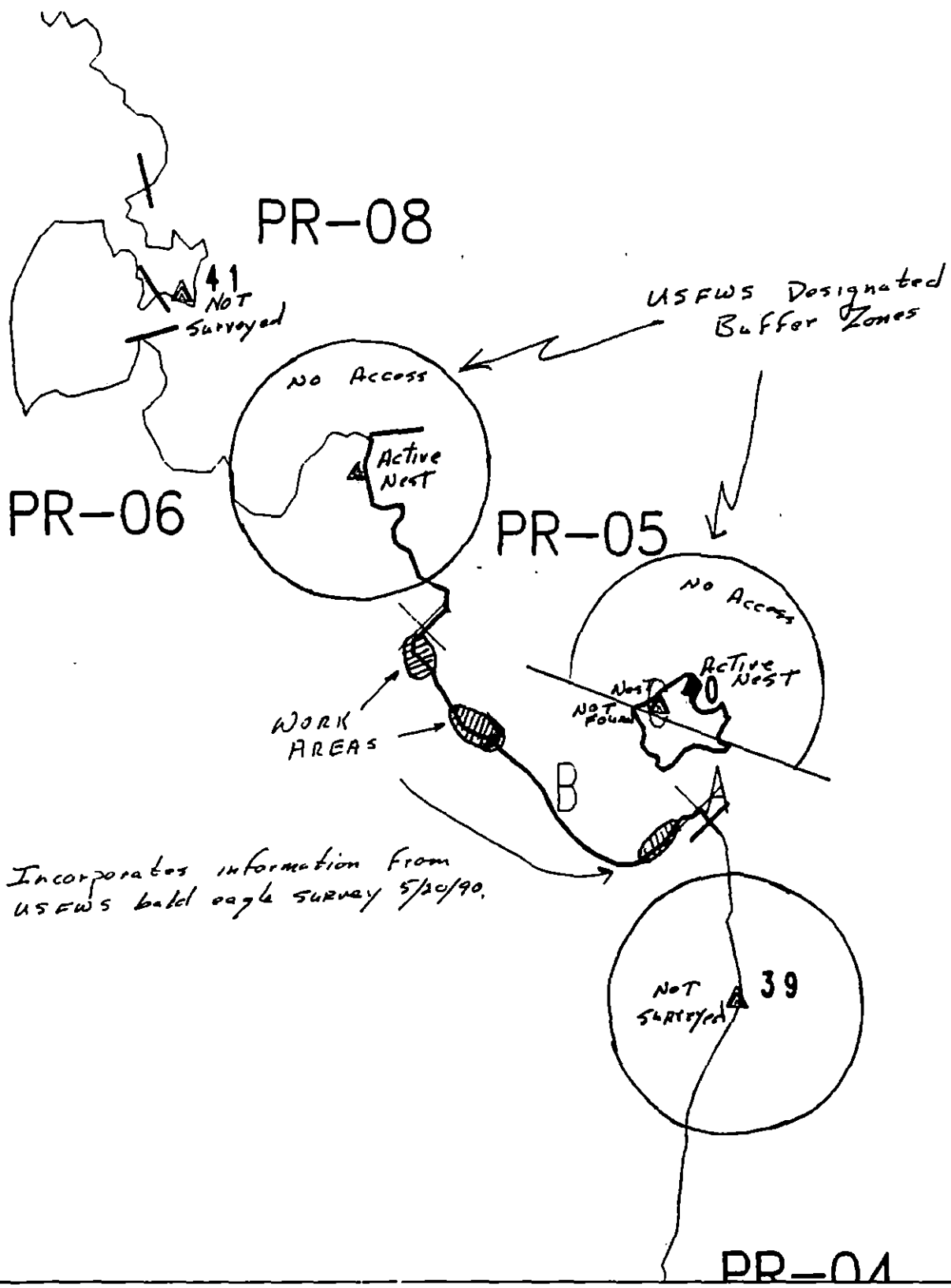
OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within USFWS designated buffer zones. Air approach and takeoff from and to seaward only; maintain ~~800m~~ 400 horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid trampling *Fucus* in the lower intertidal zone. 6/2

TAG APPROVAL DATE 6/04/90.
ADEC Roy Morris
EXXON Terry Tan
NOAA Joseph Tullott
USCG C.A. Reiter

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/2/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-5
May 11, 1990

ECOLOGY MAP 2/2

SEGMENT PR-5

SUBDIVISION B (2 of 3)

METERS

0 474 948

★ Seabird Colony

▲ Eagle Nest

1 inch = 1555 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-05 SUBDIVISION C (3 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Main Bay Hatchery release area (1E) - 4/20 to 5/10; Salmon set net sites (1L) - 6/1 to 7/25. Contact ADF&G for specific dates; Bald eagle nest (5T) - 3/1 to 6/1. Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to treatment for confirmation of dates and avoidances; Special use designation (6Y) - 6/1 to 9/15.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 195 m: Narrow 21 m: V.Light 794 m: No Oil 70 m

Subsurface Oil Observed: Yes X No ____ Maximum Depth 20+cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas indicated on sketch map. Work after 6/1 based on eagle nesting constraints.

TAG COMMENTS: MONITORS TO ASSESS FOR TAR PATTIES

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAL Teal FOSC: [illegible] DATE: 4-20-90

NOAA Burl Wescott [illegible]

USCG G.A. REITER G.A. Reiter

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / PR-05 SUBDIVISION: C DATE 3/31/1990

USCG
NAME David S. Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Suggest flush @ Site 2 on sketch map.
please note any Biological restraints
(Also note - Subsurface oiling is a continuation of Surface oiling - this "discrepancy" is due to ~~statement of any~~ confusion of terms.)

LAND MANAGER
NAME MARSHA MARTIN DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

In gap between uplands - Rock w/ splatters or patty ranging from 2 sq. inches to 2" wide x 1 long x ½" thick to 1" thick in upper tidal zone [illegible] band. Did not observe southern [illegible] = shared w/ OTHERS.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 01/22/90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ PR-05
SIO DAVE Lohse LAND REP Marsha Martin SUBDIVISION C, 1 of 3
EXXON FRANK Boy ADEC Clara Crosby (DNR) TIME 10:30 to 11:45
TEAM NO.: 13 TIDE LEVEL: -1 to 0 DATE 3 / 31 / 90
EST. SUBDIVISION LENGTH: 1,000 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 50 % B 40 % C 10 % 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 150 m N 150 m VL 600 m NO 100 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT	X							X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F S N/A sq. m by ____ cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

N/A
DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No ST-13-1
Frames 21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	U		
1	20				X		5-20	X					X			X				P, S, C
2	10	X					5-10		X				X			X				C
							-													
							-													
							-													
							-													

COMMENTS
GENERAL: MEDIUM OILED COBBLE BEACH (2
WITH SHALLOW SUBSURFACE OIL
ON EAST SIDE OF ISLAND

Page 1 of

REVIEWED ____ DATE 4-2-90

G KICK LINE

EGMENT ST/ 1 05

UBDIVISION C, 1 of 3

ATE 3/31/90

CHECKLIST

- ✓ N Arrow
- ✓ Approx Scale
- ✓ Seg/Sub Bndry
- ✓ Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSI
- 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

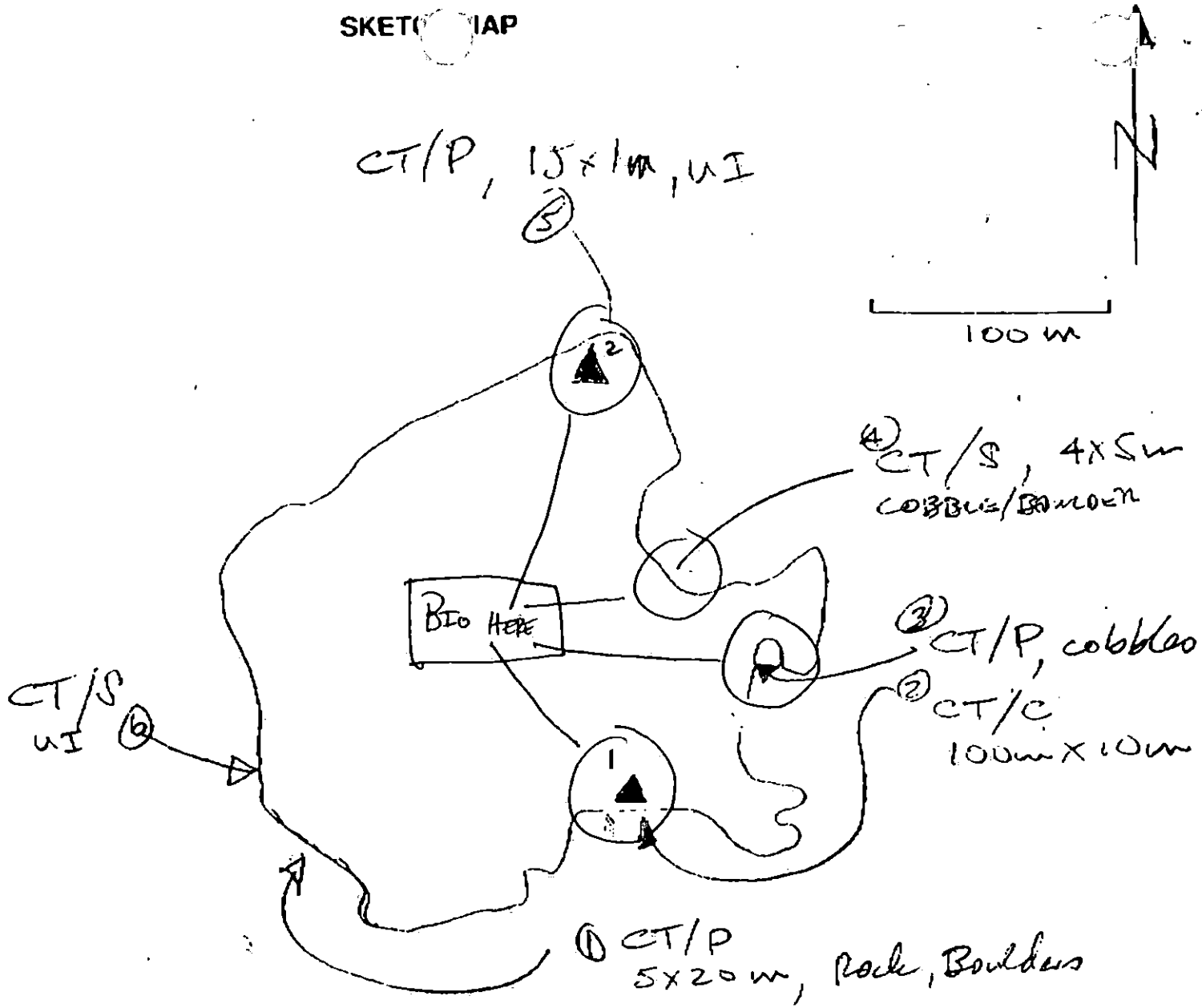
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ◆▸ Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP____ PO____ CV____ CT 900 ST____ MS____ PT____ TB____ FL____ NO____

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PR005 Subdivision C Date (mo / day / yr) 3-31-90

me (24 hr) 10:30 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 40 (3) Cobble 10 (4) Pebble ____ (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment). Dense 5 Moderate 65 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. ST-13-1
Frames 21

BARNACLES

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

NOT PRESENT

MYTILUS

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

Should be cobble, not pebble — should be cobble, not pebble

NOT PRESENT

GASTROPODS

Dense 1U	Dense 1M	Dense 1L	Moderate 1U	Moderate 1M	Moderate 1L	Sparse 1U	Sparse 1M	Sparse 1L	Rare 1U	Rare 1M	Rare 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

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

- no streams observed in this subdivision

6Y- no comment

4. Dense Fucus beds in low intertidal at site 2 (OG sketch map) would be susceptible to foot damage

Shoreline Ecological Summary 2 of 2

Segment ST-PR005 Subdivision C 3-31-90

Biologist David Lohse

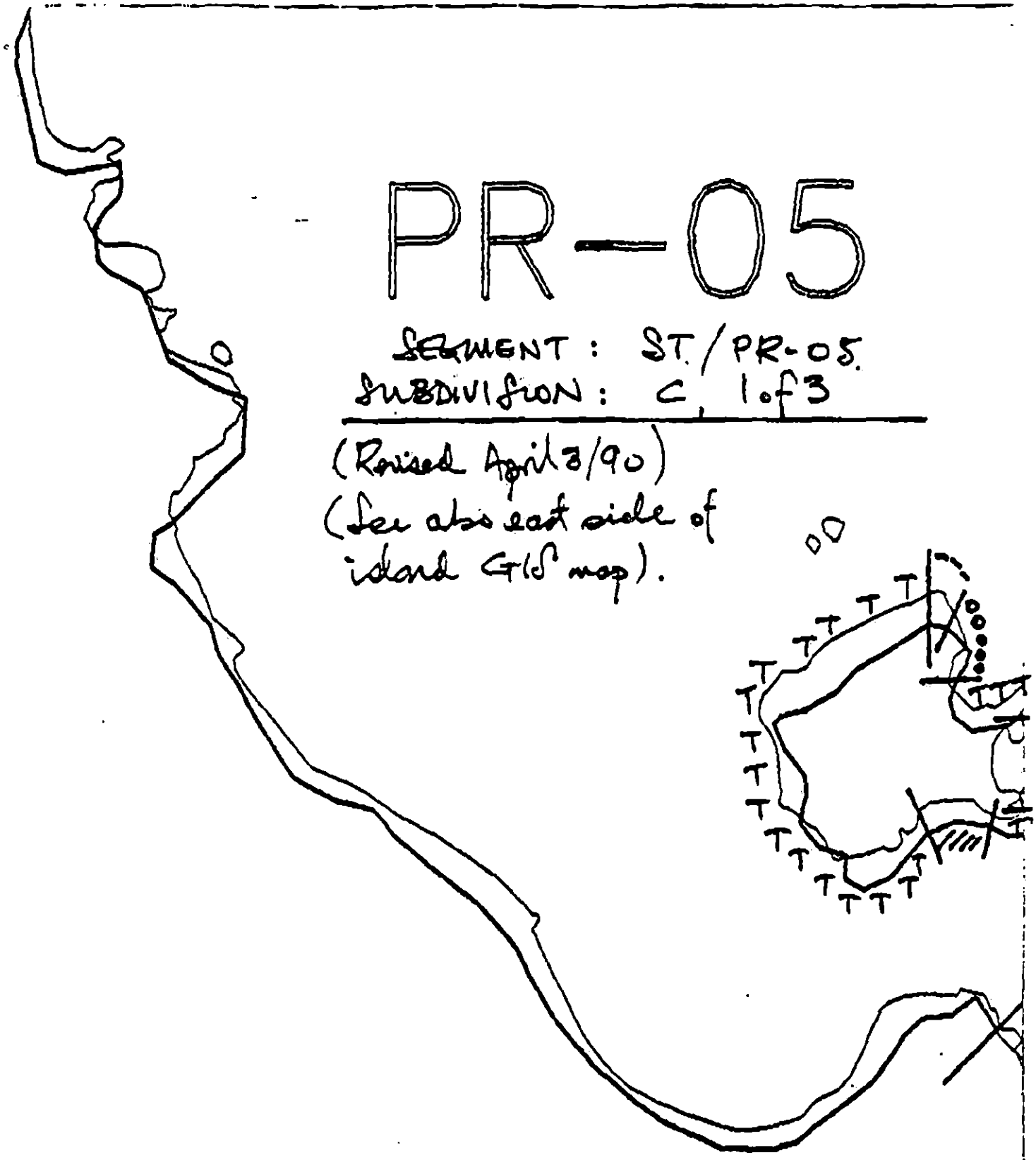
Wildlife observations / General Comments

- present in low intertidal - Pycnopodia, Pisaster ochraceus, Ulva, coralline algae, Scytosiphon
  - mid intertidal - Porphyra, Enteromorpha (dense in spots on boulders/cobble beaches), 2 unidentified red algal species - one "blade-like" and the other branching (also found in Subdivision B).
  - high intertidal - Anthopleura found in tide pool
- one Bald Eagle observed flying in area
- otter observed in area
- ~~barnacles~~ some barnacles at Site 6 and mussels at Site 3 (see OG sketch map) were covered with oil
- Skeletal remains and some fur of dead otter (?) found at Northern end of Island. No oil observed.

PR-05

SEGMENT: ST/PR-05
SUBDIVISION: C, 1 of 3

(Revised April 3/90)
(See also east side of island GIS map).



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

PR-5

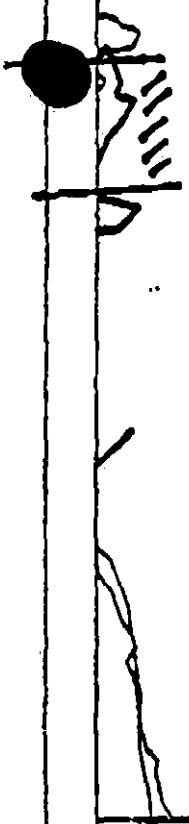
ADEC Segment Length: 3713m

0 100 200 300
METERS

Map Key: PWS-631a
Name:
Date:
Data Entered:

SEGMENT : ST/PR-05
SUBDIVISION : C, 1 of 3

(Revised April 8/90)
(East side of Island)



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

PR-5

ADEC Segment Length: 3713m

0 100 200 300
METERS

Map Key: PWS-631b
Name:
Date:
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-5 SUBDIVISION C (3 of 3)

WORK WINDOW	
Bioremediation Inside Active Eagle Nest Buffer Zone	CLOSED
Bioremediation Outside Active Eagle Nest Buffer Zone	WORK 6/4 - 6/8 OR AFTER 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

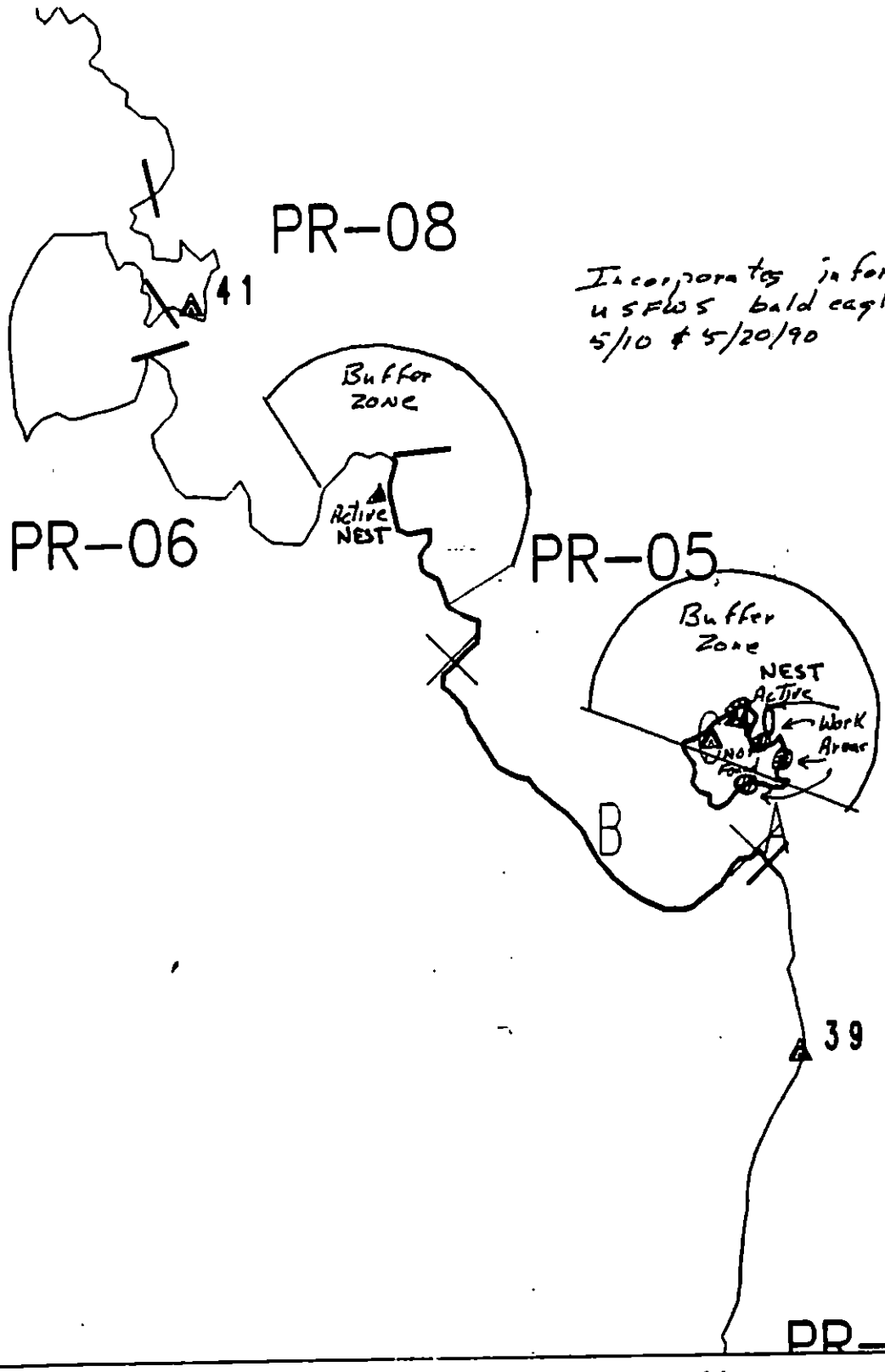
1E	**Main Bay Hatchery Release**	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1L	**Set Net Sites**	Closed to bioremediation 6/11 - 7/25
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessments conducted on 5/10/90 and 5/20/90 by Mike Lockhart indicate an active nest in Subdivision C. Closed to bioremediation inside the active eagle nest buffer zone established by USFWS. No constraint to bioremediation outside active eagle nest buffer zone.

OTHER ECOLOGICAL CONSIDERATIONS

No personnel or boats within active eagle nest buffer zone. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain ~~800~~ 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris R. Morris
EXXON Andy Tear
NOAA Joseph Talbott
USCG C.A. Reiter C.A. Reiter
FOSC Date 6/4/90

Prepared by Andrea Meyer Date 6/2/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-5
May 11, 1990

ECOLOGY MAP 6/1

SEGMENT PR-5

SUBDIVISION C (3 of 3)

METERS

0 474 948

★ Seabird Colony

▲ Eagle Nest

1 inch = 1555 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-06 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6U Recreation: Tent sites (6/1 to 9/15)
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: Rachel Donn Orr DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 457 m: No Oil 930 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner Art Weiner
EXXON Andy Tsr
NOAA Gary Petrac
USCG Kenneth Kenny

FOSC: ____ DATE: 5-12-90
Conduct manual picking of mousse in conjunction with cleanup on adjacent shoreline.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A		Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B		Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C		Salmon fry nursery area (4/31 to 7/31)
1D		Esther Hatchery release (4/15 to 6/1)
1E		Main Bay Hatchery release (4/20 to 5/10)
1F		Sawmill Bay Hatchery release (4/15 to 6/1)
1G		Cannery Creek Hatchery release (4/21 to 6/1)
1H		Remote release site
1I		Gill net area (6/7 to 8/31)
1J		Purse seine area (7/20 to 9/30)
1K		Purse seine hook-off (7/20 to 9/30)
1L		Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M		Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled 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.
✓ [illegible]	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 / PR-006 SUBDIVISION: A DATE 4/21/90

USCG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Oil consisted of very splotchy CT/splash on boulders. In Location #5 occassional patches of mousse accumulations are found under boulders and between boulders on sediments. Sporadic areas are over a 5M area (6M max). The beach is exposed to high energy and the area can be left to natural weathering. In Location #3, a band of CT/S extends over beach and in a triangular entrapment area (5M x 10M) under mossy cliff, partially saturated gravel exist with some pooled mousse. RW sheen are in pools of water between boulders. This area should be hot water-flushed (spot treated) with sufficient absorbant mate

LAND MANAGER
NAME _____ SIGNATURE _____

24

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Oil was located under ~~[illegible]~~ boulders and on vertical faces of boulders. Oil under rocks had black color but did not appear mobile.

No physical treatment or biological enhancement is warranted here.

Continue Natural Cleaning.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

OG G. MACDONALD USCG G. RAINSFORD SEGMENT ST/ PR - 6
BIO MA. SCOTT LAND REP L. KEELER NFS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC LORI J. STRATTON TIME 19:20 to 20:30
TEAM NO. 3 TIDE LEVEL +3.5 to +4.5 DATE 4 / 21 / 90
ST. SUBDIVISION LENGTH: 1390 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW
SURFACE SEDIMENTS: R 80 % B 20 % C 50 % P 5 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 470 m NO 920 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rb	rp	rs	BR	RW	OL	SL	TL	su	us	ms	u
ASPHALT PAVEMENT													
POOLED													
COVER				X				X		X			
COAT				X		X				X	X		
STAIN													
MOUSSE				X				X			X		
PATTIES													
TARBALLS													
FILM													
NO OIL												X	X

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?.
YES ☐ NO ☒
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-3-3
Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UO	BR	RW	OL	SL	TL	su	us	ms	u				
1	20					X	— · —								X					—	5	CP
2	15					X	— · —									X				—	8	BCG
3	10					X	— · —											X		—	2	CGS
4	15					X	— · —									X				—	10	BG
5	10					X	— · —								X					—	—	BGP
6	15					X	— · —									X				—	5	CP

COMMENTS Mod. exposed low ∠ bight composed to two broad bays bound by steep outcrops. Surface oil only, as CT/S @ HI-SUTZ and rare oil covered granules to 2cm deep between boulders. [Note: persistent traces of non-'89 tar on this shore].

REVIEWED JW DATE 4/23/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / PR-6 Subdivision A Date (mo / day / yr) 4/21/90

Time (24 hr) 1750-2030 Biologist M A Scott

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 20 (3) Cobble 50 (4) Pebble 10 (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 75

(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. Ø
Frames Ø

BARNACLES

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

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2				2	2	2	NOT PRESENT
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			NOT PRESENT
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:
1 sea lion 4 harlequin ducks
3 eagles
4 seals
1 sea otter

Ecological Considerations:
MTZ - rock + boulders - occasional dense beds of Mytilus; dense, diverse biota, well established community
cobble/boulder beaches - low diversity, low density

22

OG G. MA[redacted]rNALD

SEGMENT ST/ PR-6

SUBDIVISION A

DATE 4 / 21 90

CHECKLIST

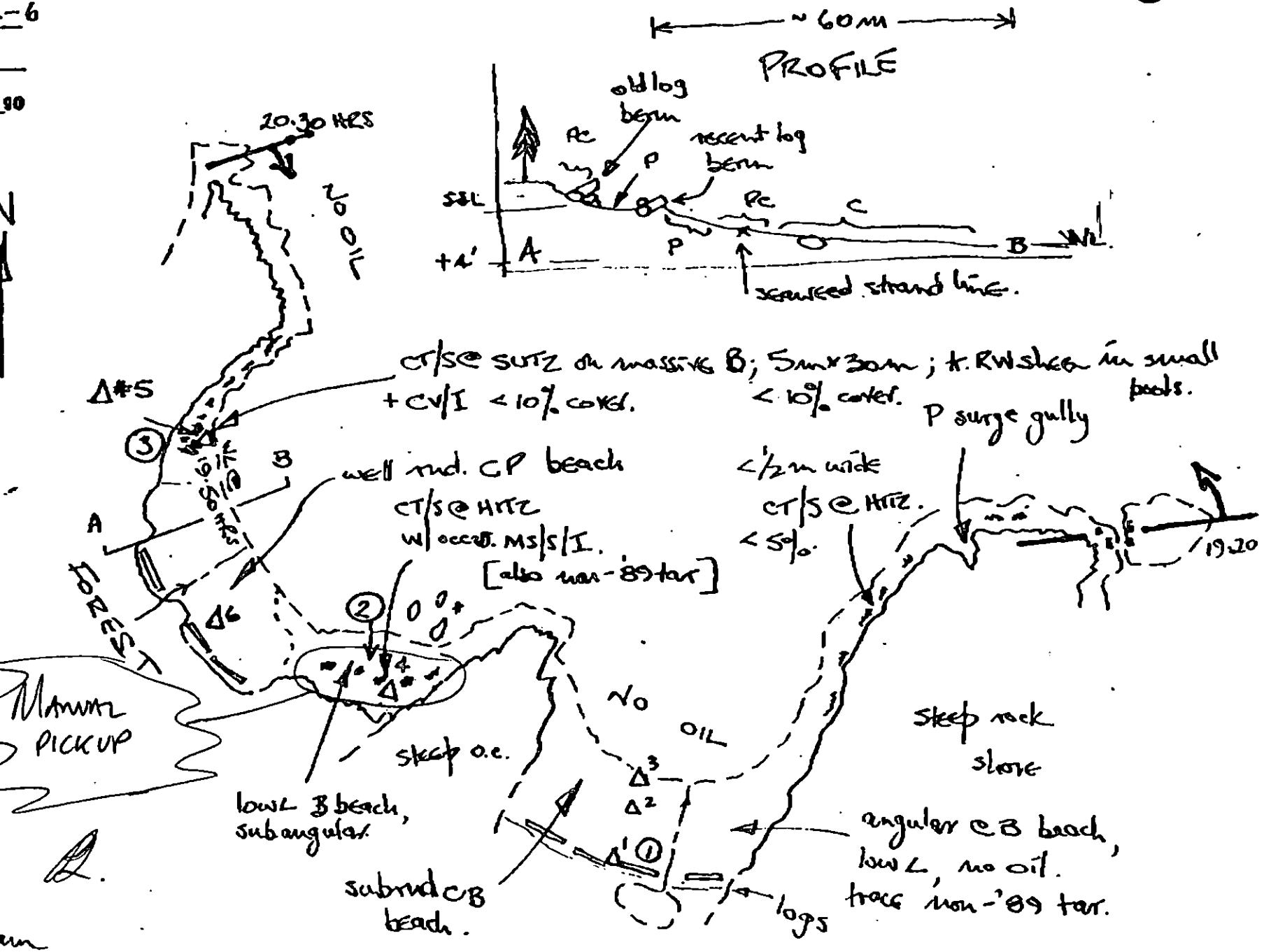
- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Body
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

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
- → Stream

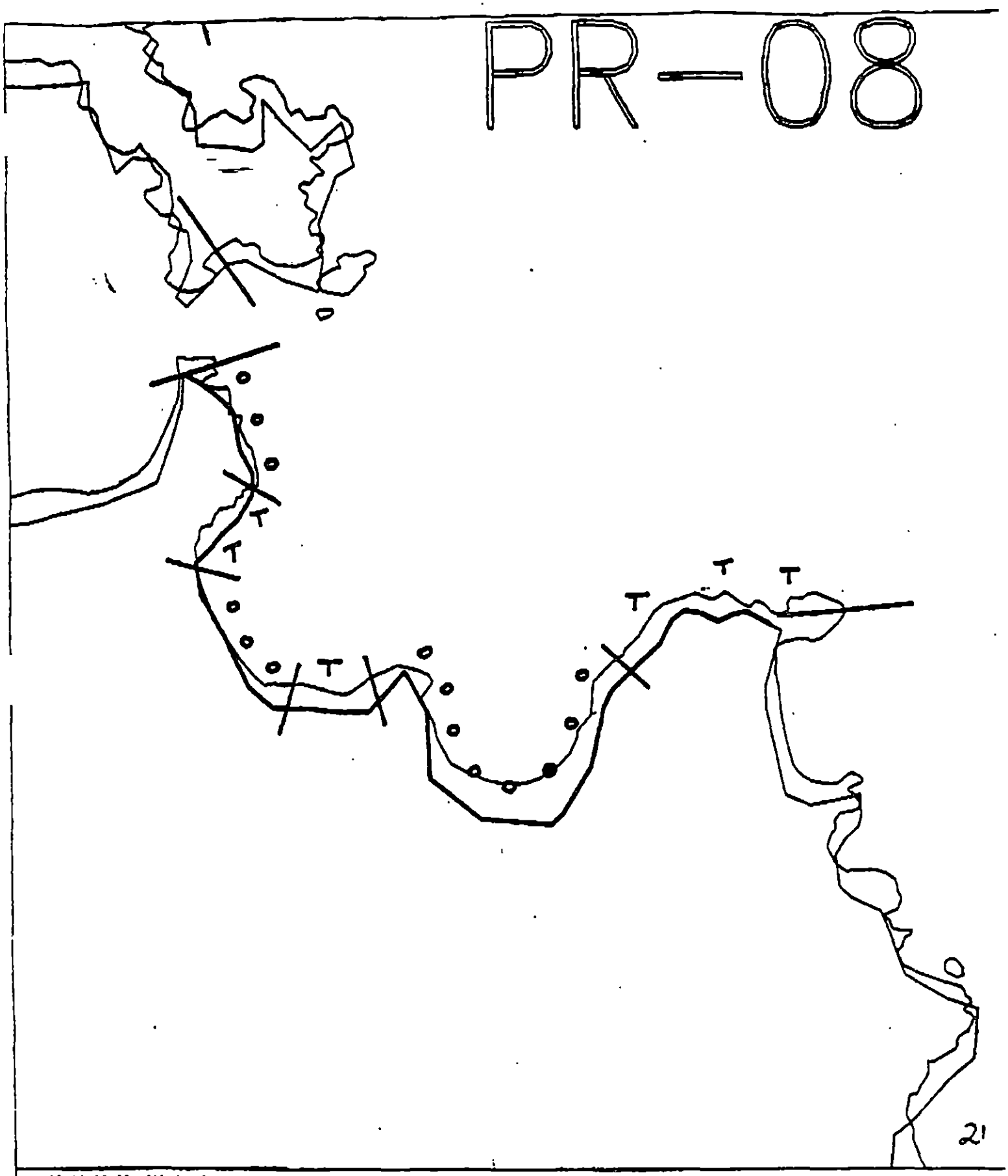
① DEC LOCATION.

SKE[redacted] MAP



Oil Character Length (m): AP — PO — CV 30 CT 470 ST — MS — PT — TB — FL — NO 920

REVISION: 05/24/90



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

PR-6A

ADEC Segment Length: 1587m

0 100 200 300
METERS

Map Key: PWS-520
Name: G.M.
Date: 4/21/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PR-07 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Stream mouth (request ADF&G provide catalog no.) out migration (1A) - 3/1 to 5/15; Spawning (1B) - 7/10 to 8/31; Anchorages (6V) - 6/1 to 9/15; Special use designation (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: None identified.

SHPO SIGNATURE: Marlen E Holmes DATE: April 11, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 738m: Narrow 485m: V.Light 490m: No Oil 0 m
Subsurface Oil Observed: Yes____ No____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Treatment activities are recommended as follows: 1) Removal of tar mat in area indicated on sketch map, 2) Bioremediation in areas indicated on sketch map but not within 100m of stream, 3) Removal of oiled vegetation near anadromous stream. Work should be performed between 5/15 to 7/10 based on stream constraints given above. SPOT WASH AS REQUIRED AND INDICATED ON SKETCHES

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC JOHN BAUER
EXXON ANDY ISAZ
NOAA Byrl Wescott
USCG G.A. REITER

FOSC: DATE: 4-19-90

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

DG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ PR-07
RIO DAVE Lowe LAND REP Marsha Martin SUBDIVISION A 1 of 1
IKON FRANK Cox ADEC Clara Crosby TIME 12:30 to 14:45
AM NO: 13 TIDE LEVEL: +2 to +6 DATE 3/31/90
EST SUBDIVISION LENGTH: 1000 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 20 % B 20 % C 40 % P 20 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 400 m N 300 m VL 300 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT	X	*	✓			*✓					*✓	X	
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM				X			X						X
NO OIL										X			

PAVEMENT: H F (S) 25 sq. m by 2 cm

PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? NO BR (BW) (SL) TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE

#BAGS

Photographs:

Roll No. ST-13-1

Frames 22, 23, 24, 25

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR		SU	UI	MI	U		
1	15		X				5-15		X		X						X				P, G, S
2	10				X		5-10	X				X					X				G, S
3	10				X		5-10	X				X					X				G, S
4	10				X		5-10	X				X						X			G, S
5	10				X		5-10	X				X						X			G, S
6	10	X					5-10	X			X						X				G, S

COMMENTS

REVIEWED JW DATE 4-1-90

FIELD SHORELINE COMMENT SHEET

MENT ST / PR-07 SUBDIVISION: A, 1 of 1 DATE 3/31/90

USCG
NAME David S. Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
MENTS
Treatment Suggested for Site #1 [(Re: Sketch Map) - Considered Subsurface oil character at this Site / OP ~~See~~ & finer sediments with C)], Site 2 & 3 & 4. as well as around stream mouth @ 8 - (manual removal of oiled vegetation) Area in priority 1B -

LAND MANAGER
NAME MARTIN DNR SIGNATURE Marla Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
FOURTEEN ANCHORS stashed in upland (site 2) in N. East part of cove. Rope on East side stream. Salmon stream, Sediments silver/gray sticky in many areas throughout zone. DEFINITE smell in sediment.

REVISION NO. 03/21/90

SHORELINE ECOLOGICAL SUMMARY

1 of 2

REVISION: 03/22/90

Segment ST / PR007 Subdivision A Date (mo / day / yr) 3-31-90

Time (24 hr) 12:30 Biologist David Cohen

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 20 (3) Cobble 40 (4) Pebble 20 (5) Sand ___ (6) Silt ___

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 35 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. ST-13-1
Frames 22-25

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~~	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	
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	
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)	
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:

See page 2

Ecological Considerations:

1B - no fish in stream, but oil found in area
6U - no comment
6Y - no comment

. Dense mussel bed in low intertidal at site 1 would be susceptible to foot traffic

Shoreline Ecological Summary

Lot 2

Segment ST-PR007 Subdivision A 3-31-90

Biologist David Lohr

Wildlife observations/General comments

1. present in low intertidal on bedrock - Ectocarpus, Scytosiphon, Halosacion
2. cormorants, several shore birds, otter observed in area
3. deer tracks found above high tide line
4. bald eagle call heard, but none were seen
5. oiled vegetation found at site 8 (OG map)
6. oiled barnacles found in mid intertidal site 2 and high intertidal site 5 (OG Map)
7. Southern 1/3-1/2 of cove (sites approximately 7-10 on OG map) are virtually bare of all organisms except Enteromorpha, which covers virtually all the cobbles/boulders in this section in mid-high intertidal/Low intertidal in these sites not sampled due to tide level. Northern portion of cove has abundances ranging from rare - mod in some areas for barnacles, mussels, and fucus

SITE R14

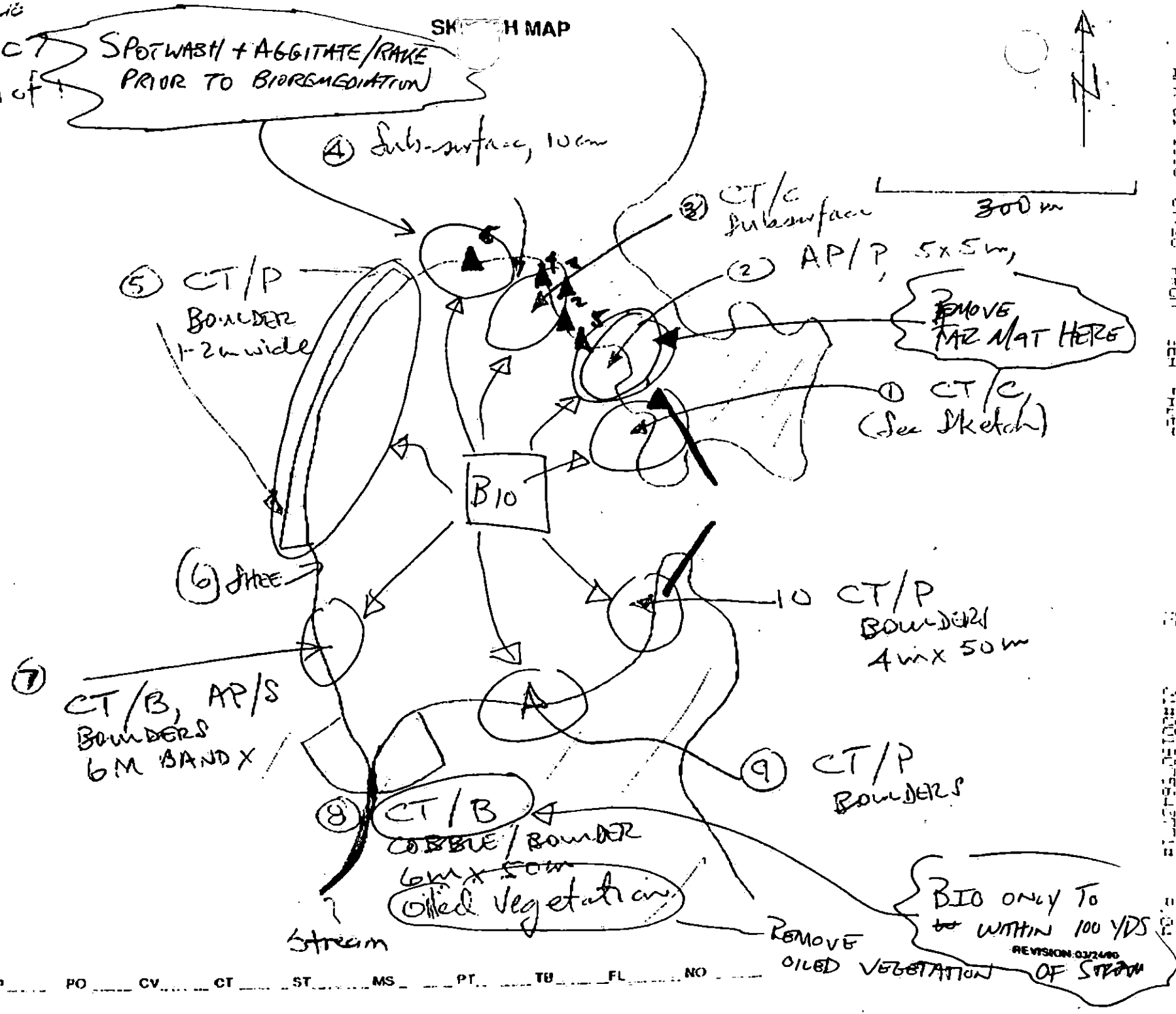
SEGMENT S OR-C7

SUBDIVISION A, 1 of 1

DATE 3/31/90

SPOTWASH + AGGITATE/RAKE PRIOR TO BIOREMEDIATION

SKETCH MAP



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

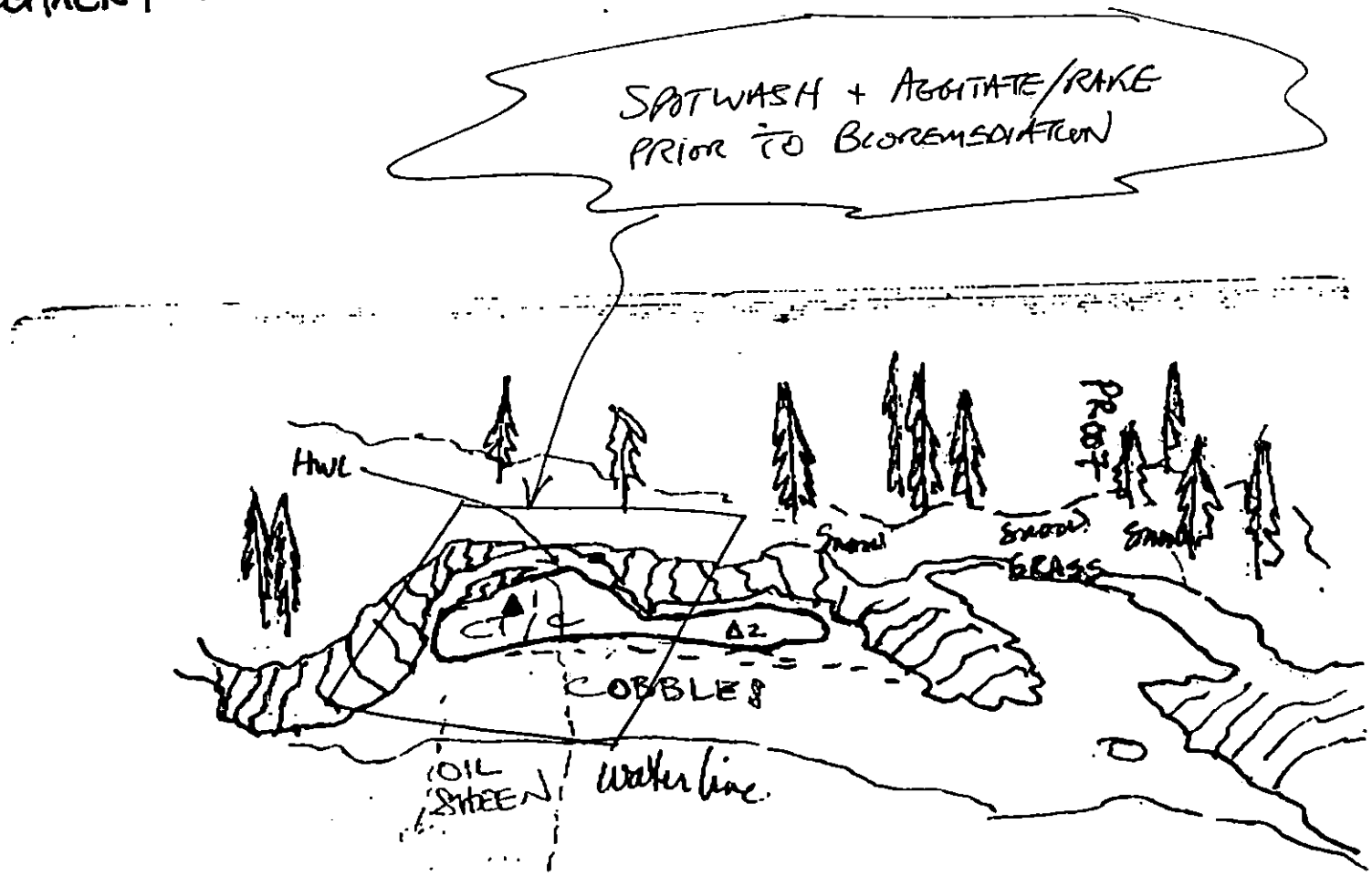
1 ●→ Photo location, direction, and number

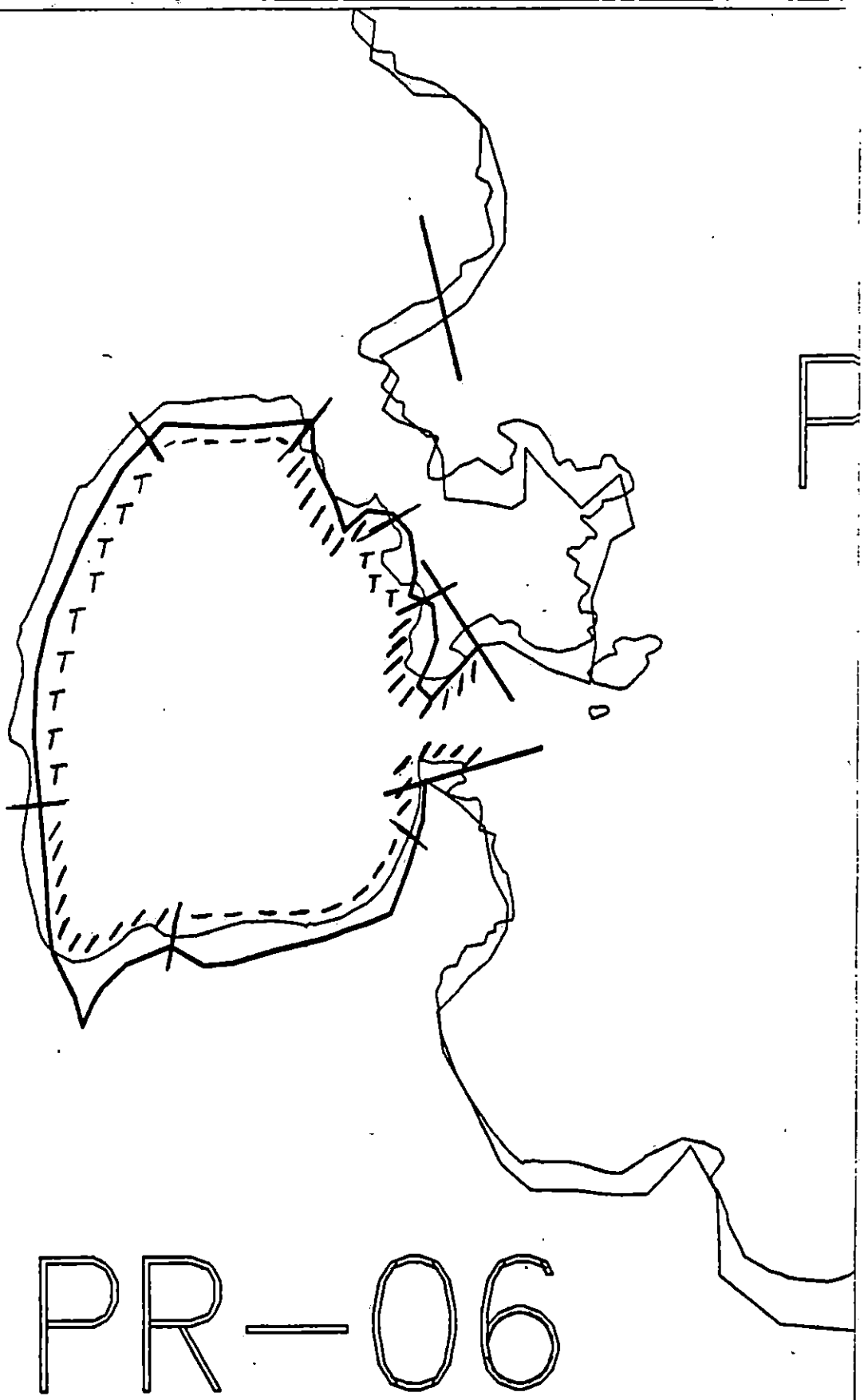
Oil Character Length (m): AP ____ PO ____ CV ____ CT ____ ST ____ MS ____ PT ____ TB ____ FL ____ NO ____

REVISION 03/24/90

SITE: 1

SEGMENT: PR-07





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

PR-7

ADEC Segment Length: 1777m

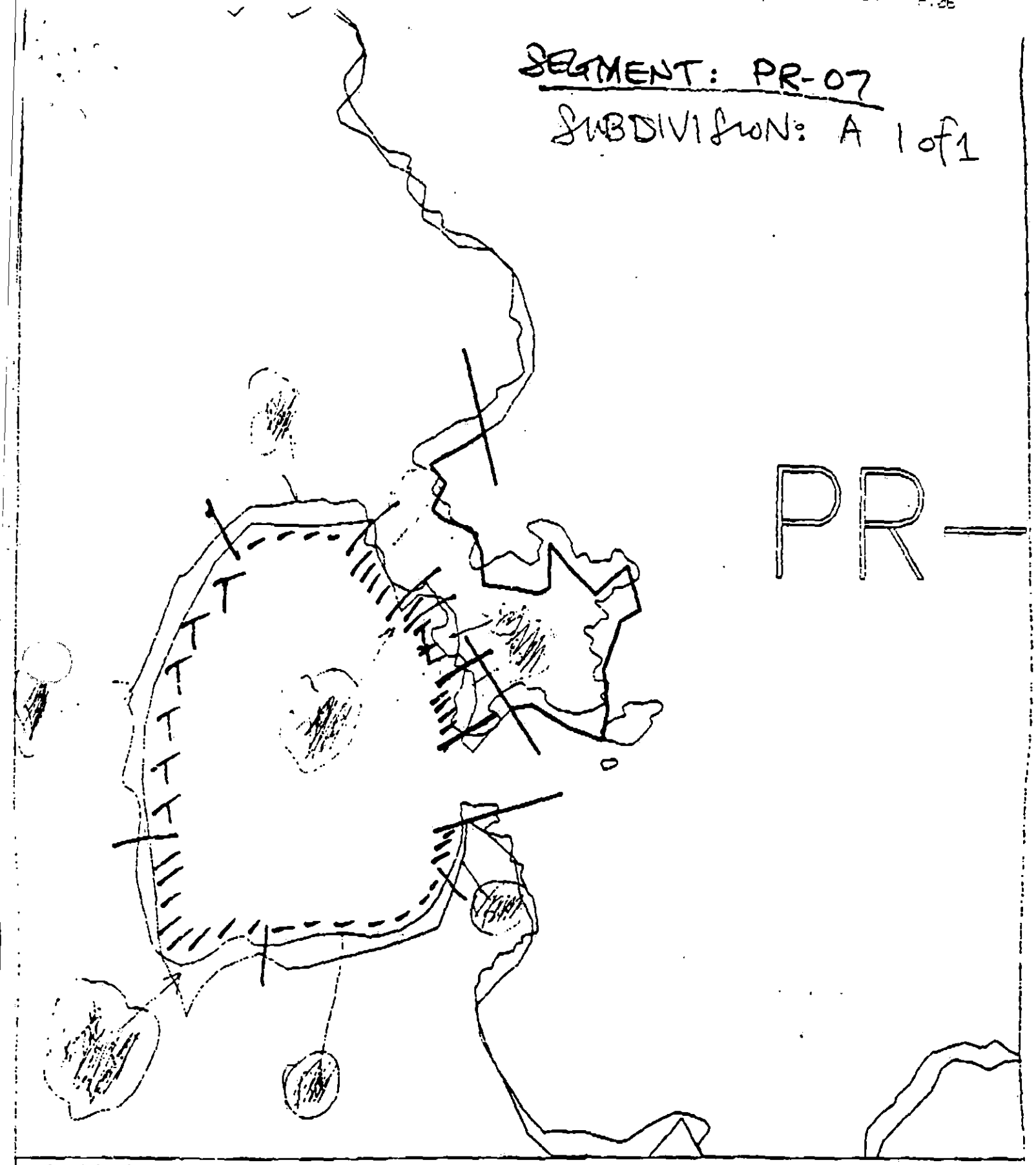
0 100 200 300
METERS

Map Key: PWS-633
Name: GILLIE
Date: 3-31-90
Data Entered:

SEGMENT: PR-07

SUBDIVISION: A 1 of 1

PR—



XXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

~~PR-8~~

ADEC Segment Length: 855m

0 100 200 300

meters

Map Key: PWS-522

Name: _____

Date: _____

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Spot Washing Bioremediation	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	NO CONSTRAINT. The stream in Subdivision A is not an ADF&G catalogued anadromous stream.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/20/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area.

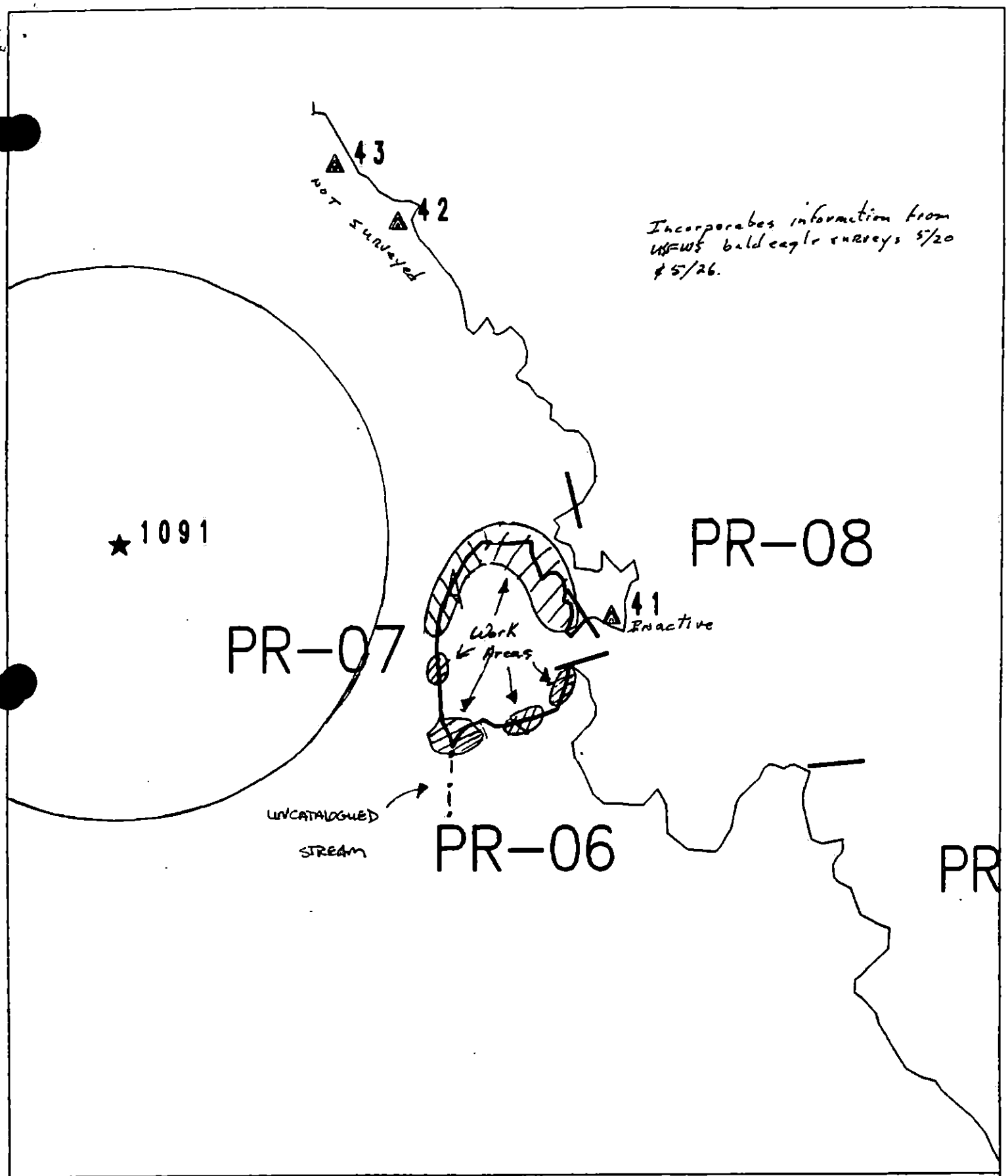
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/01/90
ADEC Ron Monroe
EXXON Andy Tam
NOAA
USCG C.A. Reiter C.A. Reiter Retired

FOSC D.W. Rome, CDR, USCG Date 6/2/90

Prepared by Andrea Megan Date 5/31/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-7
May 11, 1990

ECOLOGY MAP 5/30
SEGMENT PR-7
SUBDIVISION A (1 of 1)

METERS
0 379 757

★ Seabird Colony
▲ Eagle Nest

1 inch = 1243 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-08 SUBDIVISION A (1 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest at north boundary of subdivision.

SHPO SIGNATURE: [signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 147 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 32 cm

RECOMMENDATIONS:

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

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

COMMENTS: Recommend bioremediation of area indicated on sketch map. Work should be conducted between 6/1 and 9/1.

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/4/90
ADEC ART WEINER [signature]
EXXON Andy Tear [signature]
NOAA Gary Petrac [signature]
USCG G.A. Reiter G.A. Reiter

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

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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
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 / PR-08 SUBDIVISION: A DATE 4/22/90

USCG
NAME M.J. SHARPE SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME STEPHEN FERGUSON SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS

BIO REMED FOR EAST AREA OF BEACH (C/B) IN SUBDIVISION

LAND MANAGER
NAME Leigh Carlsen SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Ecological considerations listed as recreation (special use). Recommend bioremediation for cobble/boulder beach in subdivision. Nice beach for human use/recreation.

REVISION NO. 03/21/89

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG K. RAMSEY USCG R. Sharpe SEGMENT ST/ PR-8 Page 1 of 2
BIO G. PENN LAND REP L. Carlson SUBDIVISION A (1 OF 3)
EXXON S. REID ADEC S Ferguson TIME 3:40 to 4:54
TEAM NO. 4 TIDE LEVEL 5' to 1.5' DATE 4 / 22 / 90
EST. SUBDIVISION LENGTH: 186 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 20 % B 30 % C 47 % P 2 % G 0 % S 1 % M Ø % V Ø %
SLOPE: Lang 60 % Hang 0 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 186 m NO Ø m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/c	/m	/p	/n						su	u	m	l
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X					X	X	X
STAIN				X		X					X	X	X
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X			

PAVEMENT H F S Ø sq. m by Ø cm
PATTIES / TARBALLS Ø BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MO	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☐ NO ☒
TYPE Ø
#BAGS Ø

Photographs:
Roll No. —
Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						su	u	m	l	—	—	—	—
1	15			X			9 - 12		X				X				X		N	Y	12.5	B, C, P, G, S
2	32				X		8 - 32	X		X						X			N	Y	245	B, C, S
3	40					X	— - —		X							X			N	—	—	B, C, S
4	15					X	— - —		X								X		N	Y	12.5	B, C, G, S
							.															
							.															

COMMENTS This subdivision consisted of a cobble + boulder beach with a little pocket of sand in the Litz. There was coat + stain which which was sporatic splash on boulders in the mitz + at the mitz/hi. line. There was subsurface oiling which is described on the next page and a slight bathtub ring on bedrock wall + splash of DBK stain.

REVIEWED TW DATE 4/24/90

(+)

REVISION 03/22/90

SEGMENT ST/ RR-8 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						BU	UI	BE	LI		

COMMENTS

Pit 1. Oil can't be seen because its the same color as sediments. However it shows up when you rub it on your hands, Then it leaves dark brown residual beads & leaves a silver sheen in water. Therefore, it must be a film but undefineable.

Pit 2. Sediments are black sands + can't distinguish any definate oiling. However, the 1st 8cm of sed. rubs clean. Below 8cm the sed. looked wetter + oil rubs off on hands.

Judging from pits, there appears to be subsurface film just in the corner of this beach in mitz to mid Hitz. You loose the film in upper Hitz. Film area appears to cover an area 3m wide x 3-4 m long.

REVIEWED JW DATE 4/24/90

OG K. RA[redacted]EY

SEGMENT ST/ PR-8

SUBDIVISION _____

DATE 4 / 22 90

CHECKLIST

- ✓ N Arrow
- ___ Approx. Scale
- ___ Sea/Sub Bndy
- ___ 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

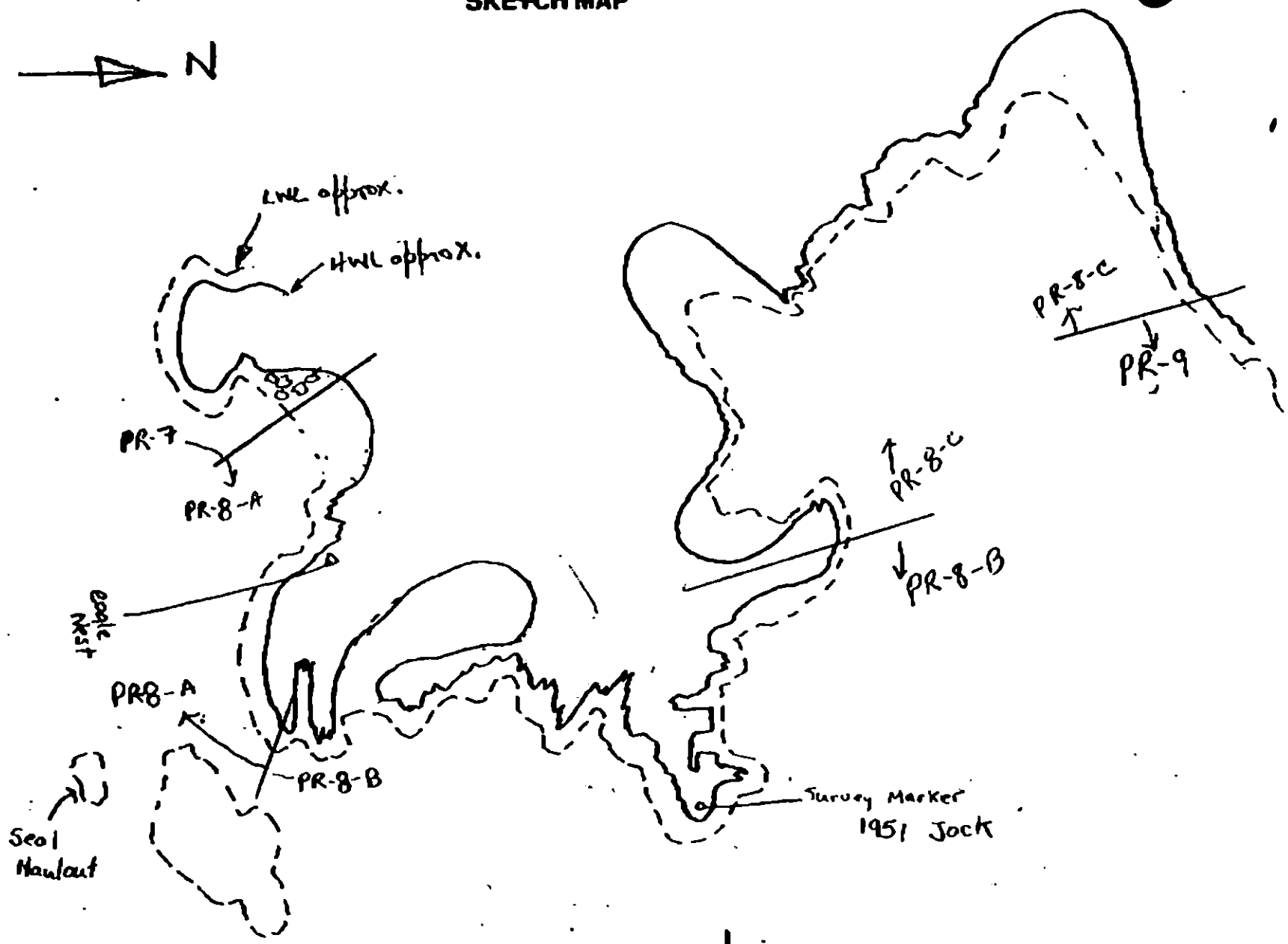
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⊶ Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION 88/04/18

APR-23-1990 18:25 FROM MV BEULAH JAMIES TO 18----0019075645-5771:# P.06

OG Y[redacted]AMSEY

SEGMENT ST/ PR-8

SUBDIVISION A

DATE 4 / 22 90

CHECKLIST

- ✓ N Arrow
- ✓ Approx. Scale
- ✓ Sag/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

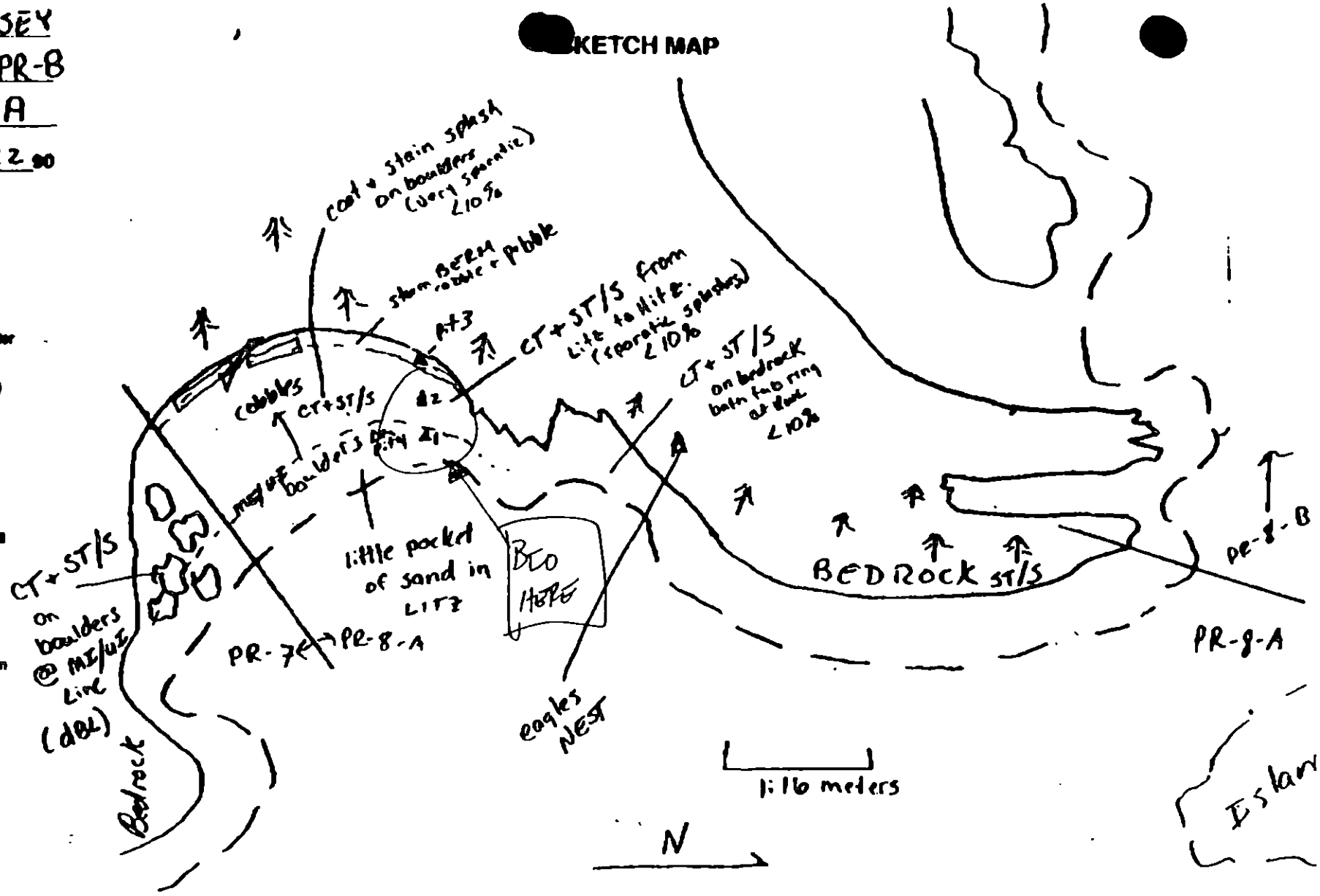
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

[redacted]KETCH MAP



Oil Character Length (m): AP Ø PO Ø CV Ø CT 186 ST 186 MB Ø PT Ø TB Ø FL 4 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/

Segment ST / PR-8 Subdivision A Date (mo / day / yr) 04/22/90

Time (24 hr) 1540 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 47 (4) Pebble 2 (5) Sand 1 (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 10 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. ST-4-2
Frames 16

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:
5 fur seals 2 song sparrows
4 crows
1 cormorant

Seal Haul-out - see map
Eagle Nest (on Ecology Map) - Co-firmed

Ecological Considerations:

ECOLOGICAL MAP

PR-

EAGLE NEST

TTTO very light

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

PR-8 A

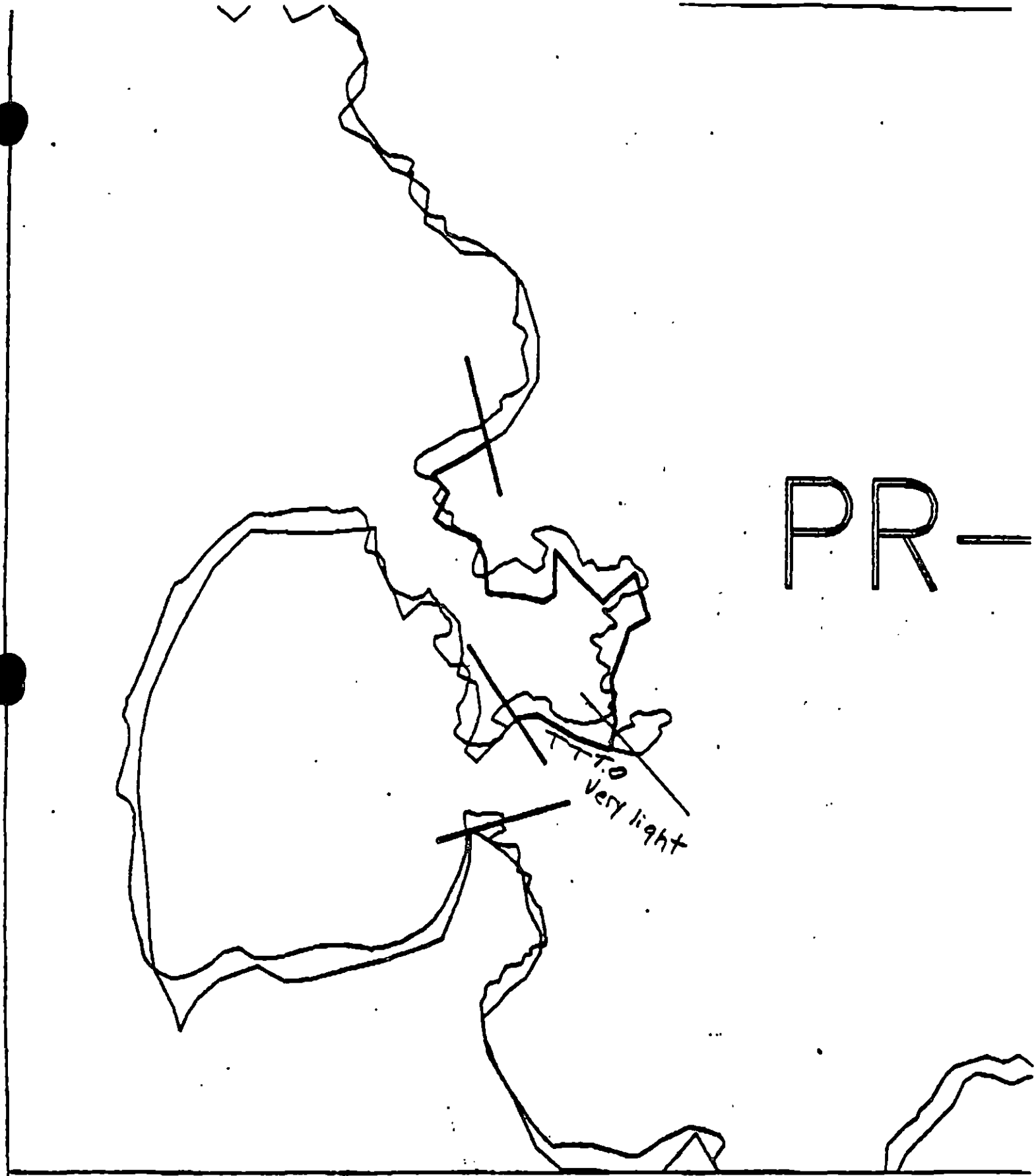
ADEC Segment Length: 865m

0 100 200 300
METERS

N

Map Key: PWS-522
Name: K RAMSEY
Date: 4/22/90
Date Entered:

(8)



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

PR-8 A

ADEC Segment Length: 865m

0 100 200 300
METERS

Map Key: PWS-521
Name: K. RAMSEY
Date: 4/22/90
Date Entered:

8

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-8 SUBDIVISION A. (1 of 3)

WORK WINDOW

Bioremediation **OPEN**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/20/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area.

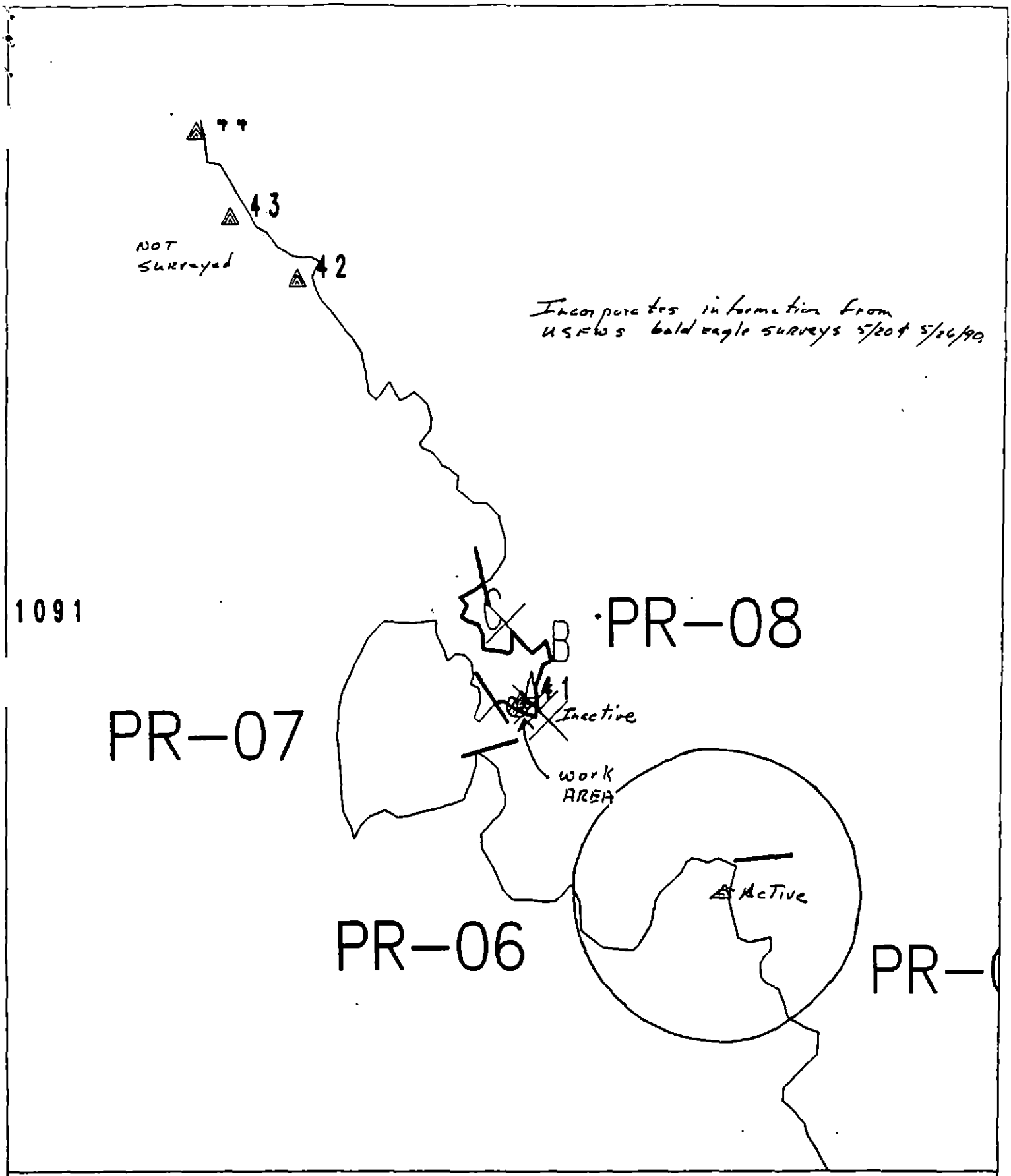
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON Andy Tear
NOAA Joseph Talbott
USCG G.A. Reiter

FOSC _____ DATE 6/4/90

Prepared By: _____ Date 6/2/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-8
May 11, 1990

ECOLOGY MAP 6/1
SEGMENT PR-8
SUBDIVISION A (1 of 3)

METERS
0 355 710

★ Seabird Colony
▲ Eagle Nest

1 inch = 1164 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-08 SUBDIVISION B (2 OF 3) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
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: Marla Holmes DATE: 5/6/90

OILING CATEGORIZATION:

Wide 0 m: Medium 11 m: Narrow 41 m: V.Light 271 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 30+cm

RECOMMENDATIONS:

____ No Treatment Recommended	____ Snare/Absorbent Booms
X Treatment Recommended	X Oil Snares (pom poms)
X Manual Pickup	____ Absorbents (pads,rolls,etc)
X Bioremediation	X Spot Washing: 2 Wands
____ Tarmat Removal	____ Beach Cleaner
	____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) spot washing into pom poms in areas indicated on sketch map, 3) bioremediation of area following spot wash. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/4/90
ADEC Art Weiner
EXXON Andy Tsin
NOAA Gary Petrae
USCG G.A. Reiter

FOSC: ____ DATE: 5-9-90

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 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
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 / PR-8 SUBDIVISION: B DATE 4/23/90

USCG

NAME M.J. SHARPE SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED

COMMENTS

OILED POM-POM WAS REMOVED, OILED VEGETATION REMAINED. AGREE WITH ADEC.

ADEC

NAME STEPHEN FERGUSON SIGNATURE Stephen Ferguson

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED

COMMENTS

POCKET AREA JUST ACROSS FROM PR-8A → (HIT2) → WIDE OILING → SPOT WASH OF SATURATED SEDIMENTS WOULD REDUCE OILING PROBLEM → BUT IN DOING SPOT WASH WOULD NEED ADEQUATE SNARE BOOM TO CATCH SHEENS + OIL. THE LIT2 + MIT2 HAS VERY LITTLE OILING IN DOING A SPOT WASH YOU RUN INTO THE PROBLEM OF OILING LIT2 + MIT2 IF PROPER BOOMING IS NOT SET UP. MANUAL CLEAN-UP ALSO IS POSSIBLE BUT NOT VERY FEASIBLE DUE TO BOULDERS OVER SURFACE + SUBSURFACE OILING. THIS AREA IS A LOW ENERGY POCKET, LEADING TO THE CONCLUSION THAT IT WOULD BE A VERY SLOW PROCESS OF NATURAL REMOVAL. ALSO AREA DROPPED BY QUAKE SPOT WASH + BIO-REMED AS WELL AS CU/B BETWEEN BOTH AREAS DESCRIBED ABOVE.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Ecological considerations for segment listed as recreation (special use). Oiled pockets on this subdivision consist mainly of boulders on top of and surrounded by bedrock. The main human use on this site would be hiking and climbing around on it as it is not a good site for landing a skiff on or setting up a tent. Site is adjacent to pocket beaches that are good for camping. Recommend treatment as suggested by ADEC above.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG K Ramsey USCG R. Sharpe SEGMENT ST/ PR-8
BIO G. PENN LAND REP L. Carlson SUBDIVISION B (2 OF 3)
EXXON S PENN ADEC S FERGUSON TIME 4:54 to 6:10
TEAM NO. 4 TIDE LEVEL 1.5' to 1.0 DATE 4 / 23 / 90
EST. SUBDIVISION LENGTH: 372 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 80 % B 20 % C Ø % P Ø % G Ø % S Ø % M Ø % V Ø %
SLOPE: Lang Ø % Hang 20 % Vert 80 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W Ø m M 10 m N 11 m VL 351 m NO Ø m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
ASPHALT PAVEMENT													
POOLED													
COVER	●	X						X			X		
COAT		O	X	●		●		X			X	●	
STAIN		O		X		X					O X	●	
MOUSSE	X							X			X		
PATTIES													
TARBALLS													
FILM													
NO OIL										X			X

PAVEMENT H F S Ø sq. m by Ø cm

PATTIES / TARBALLS Ø BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE Pom-Pom

#BAGS 1

Photographs:

Roll No. ST-4-2

Frames 16 – mousse on top + OP under

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						SU	M	MS	U				
1	26	X					0 - 10	X					X			X			N	Y	25	B, C, G, S, M
1	26	X					10 - 20		X				X			X			N	Y	25	B, C, G, S, M
2	31	X					1 - 30	X					X			X			N	—	—	B, C, S, M
3	30					X	— —		X						X				N	—	—	R, G, S
							-															
							-															

COMMENTS

This segment consisted of vertical rockface with bouldered pockets + crevices. There was a CT and ST splace on bedrock large boulders dBL in color + found in MHTZ + HITZ. The 1st crevice was an area ≈ 10m wide x 9m long. The US area of this crevice had mousse which covered a 10m wide x 9m long area at the base. with subsurface OP oiling beneath. Around Pit #6 the mousse was no longer seen but bracey continued to be trapped (next page)

REVIEWED JW DATE 4/24/90

SHORELINE OILING SUMMARY (PAGE 1 of 2)

REVISION 03/29/88

SEGMENT ST/ PR-8 SUBDIVISION B 2 of 3

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC						SU	UI	MI	LI		

COMMENTS

in boulders + bedrock cracks which looked like motor oil. An area 3-4 m long x 4m wide up to SU line. Past this first pocket crevice was an area dropped by the 64 Quake. It was ≈ 20m long x 8M wide. Here the veg. found in what is now UI was oiled and a patchy coat covered sediments ≈ 8m long x 3m wide. The mitz + Hitz had coat + stain splash on large boulders. The Rock face wall along this area had a sporatic bath tub ring splash where areas had washed off to break up the ring. Just Past the Survey marker (1951 - Jock) was a crevice where a small patch of cont. cover was trapped between boulders + bedrock. a rainbow sheen was seen in run off just below in Hitz. Patch of cover was ≈ 2.5-3.0 m wide x 2.5-3 m long; splashes of coat + stain was seen on large boulders in mitz + Hitz.

REVIEWED TW DATE 4/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/91

Segment ST / PR-8 Subdivision A Date (mo / day / yr) 04/22/90

Time (24 hr) 540 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 80 (2) Boulder 20 (3) Cobble Ø (4) Pebble Ø (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 10 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. ST-4-2

Frames 16

BARNACLES

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

GASTROPODS

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

Wildlife Observations/ General Comments:

5 fur seals 2 song sparrows
4 crows
1 cormorant

Ecological Considerations:

OG K. [redacted]USEY

SEGMENT ST/ PR-8

SUBDIVISION _____

DATE 4 / 22 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

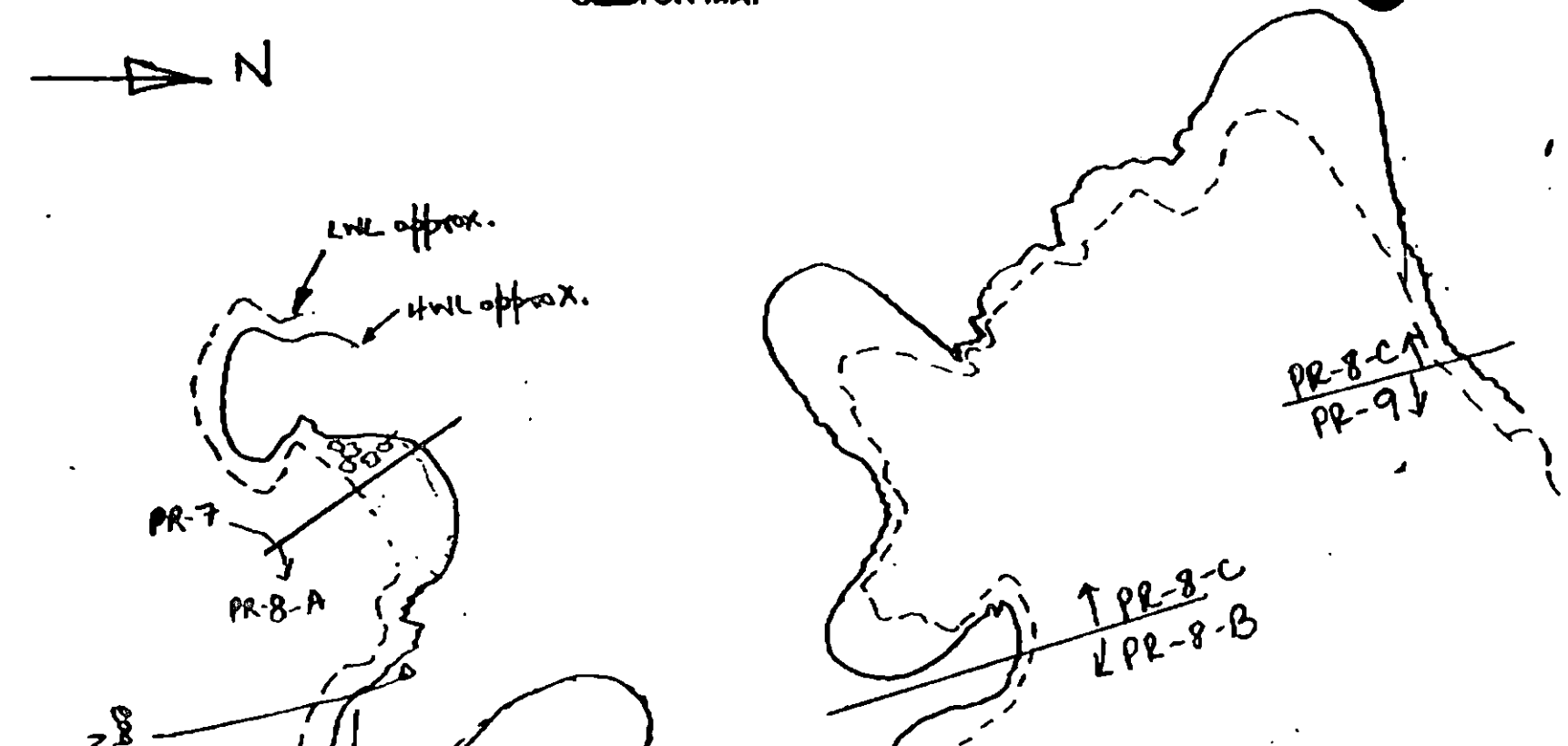
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⊕ Photo location, direction, and number

S[redacted]TCH MAP



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION

OG K. R[redacted]sey

SEGMENT ST/ PR-8

SUBDIVISION B

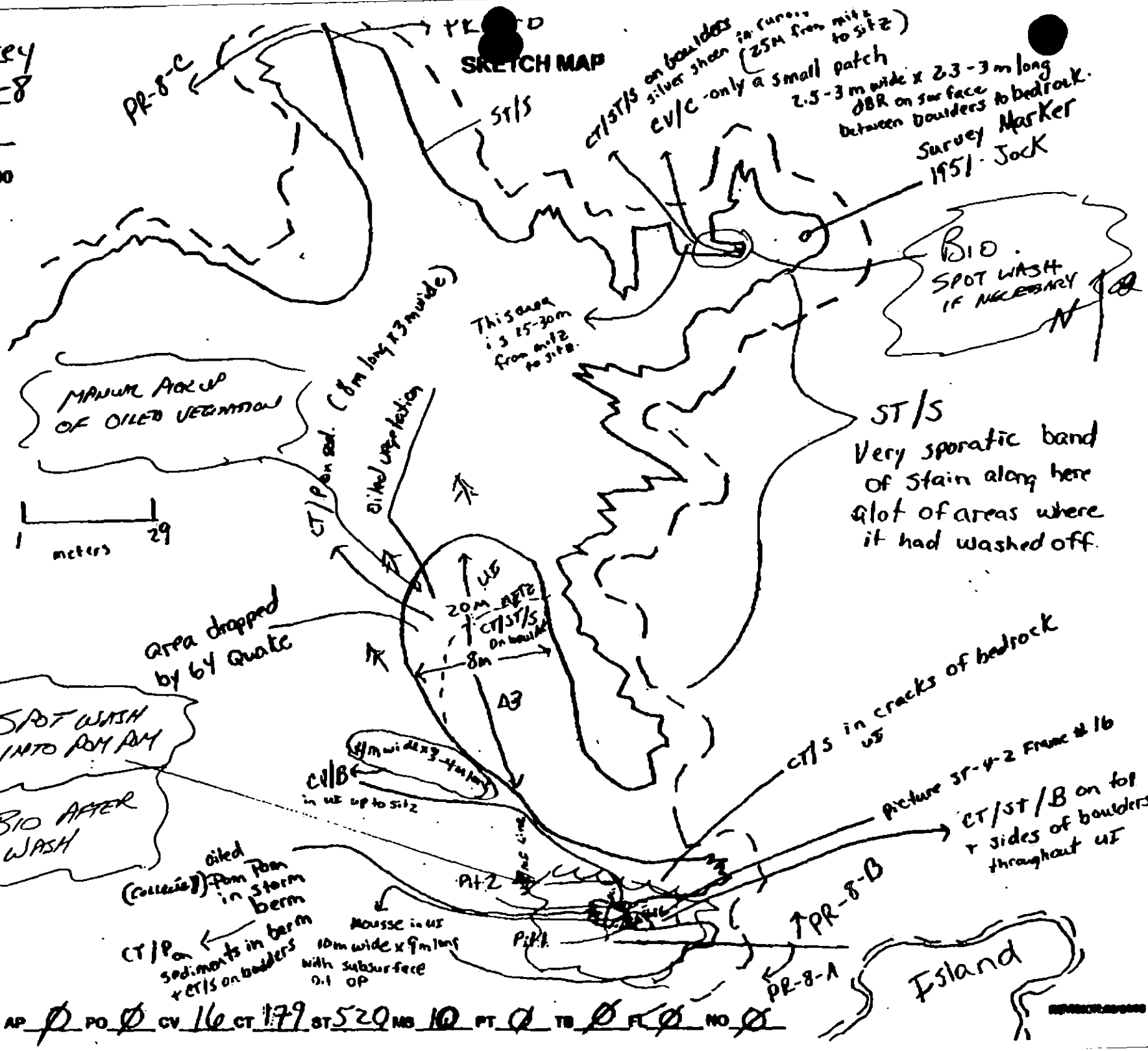
DATE 4/22/90

CHECKLIST

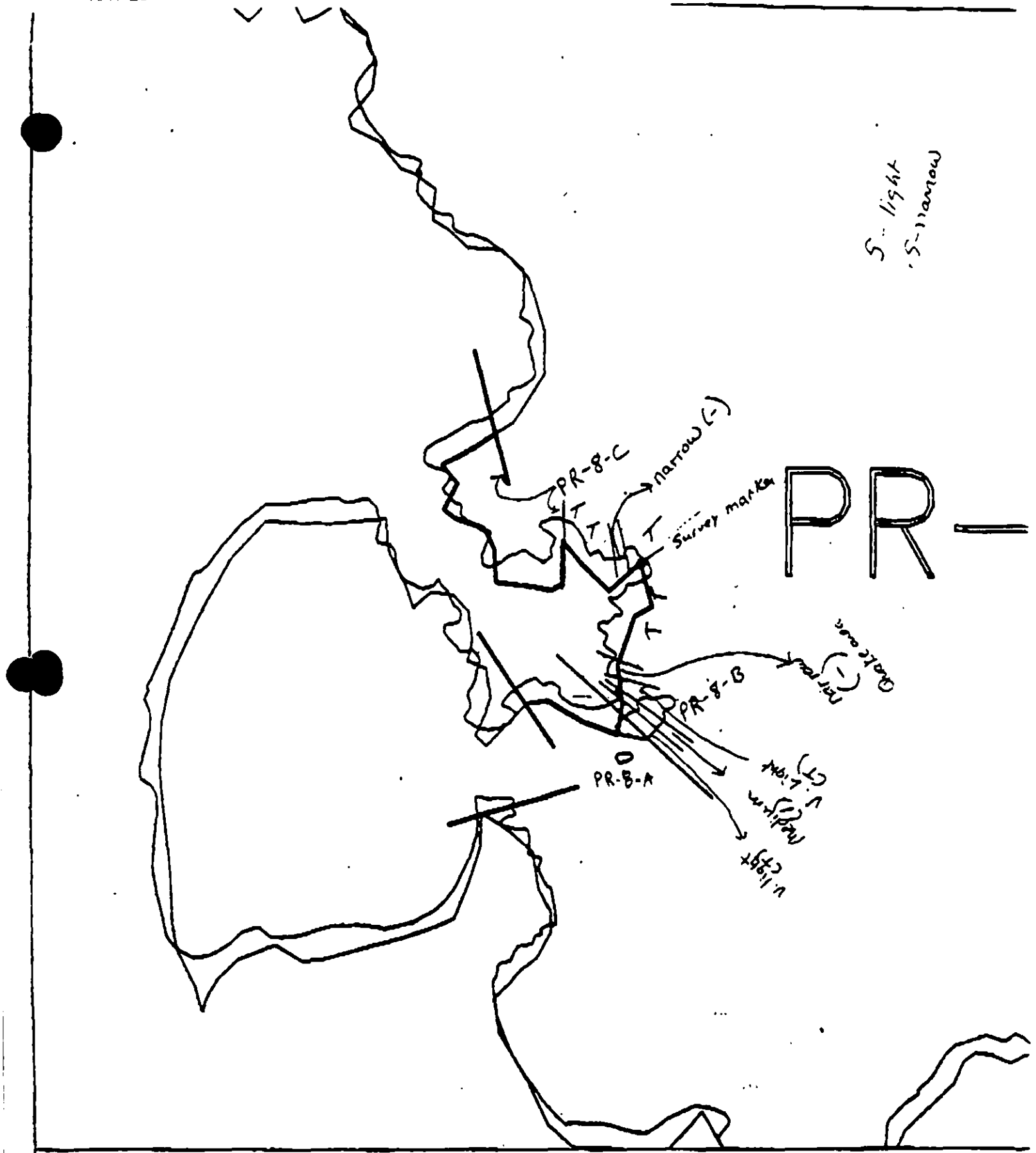
- ✓ N Arrow
- ✓ Approx. Scale
- ✓ Seg/Sub Body
- ✓ Oil Dist.
  - Width
  - Length
  - % Cover
- ✓ Substrate Character
- ✓ Est. HWL/LWL
- ✓ SSL
- Profile Location(s)
- Profile(s)
- ✓ Pit Location(s)
- ✓ Photo Location(s)

LEGEND

- 1 ▲ Pit - No Subsurface Oil
- 2 ▲ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/D Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- 1 Photo location, direction, and number



Oil Character Length (m): AP Ø PO Ø CV 16 CT 179 ST 520 MS 10 PT Ø TB Ø FL Ø NO Ø



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

PR-8B

ABEC Segment Length: 865m

0 100 200 300
METERS

Map Key: PWS-522
Name: K. RAMSEY
Date: 4/22/90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-8 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Spot Washing Other Approved Treatment	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/20/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area.

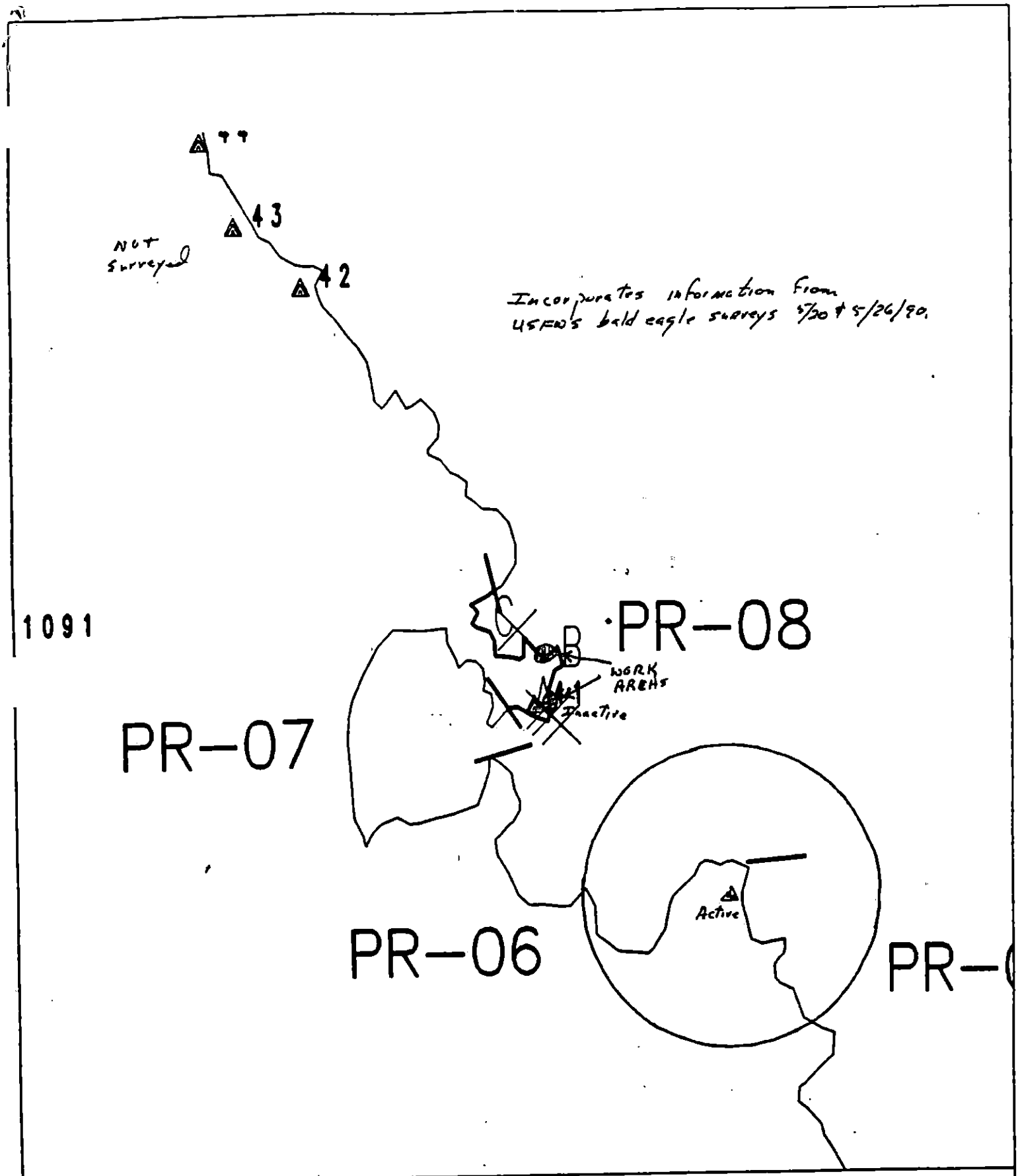
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Andy Kerr
NOAA Joann Talbott
USCG G.A. Peiter

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/2/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-8
May 11, 1990

ECOLOGY MAP 6/1

SEGMENT PR-8

SUBDIVISION 13 (2 of 3)

METERS

0 355 710

★ Seabird Colony

▲ Eagle Nest

1 inch = 1164 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-08 SUBDIVISION C (3 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
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: [signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 23 m: V.Light 321 m: No Oil 51 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 40+cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1)manual pickup of oiled and spill related debris. 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest.

TAG COMMENTS: RAKE + SPOT WASH AREAS OF PIT 1 + 2 IF FEASIBLE PRIOR TO BIO

TAG APPROVAL DATE: 5/4/90.
ADEC ART WEINER Art Weiner
EXXON AMY TEAL [signature]
NOAA Gary Petrac Gary Petrac
USCG G.A. REITER G.A. Reiter
FOSC: [signature] DATE: 5-9-90

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 6/1)**
1E **Main Bay Hatchery release (4/20 to 6/10)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
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 Suzomoto 424-7511

1I **Gill net area (6/7 to 8/31)**
1J **Purse seine area (7/20 to 9/30)**
1K **Purse seine hook-off (7/20 to 9/30)**
1L **Set net sites (6/11 to 7/25)**
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 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 **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**
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 / PR-8 SUBDIVISION: C DATE 4/22/90

USCG
NAME MAURICE SHARPE SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS
ONE OILED SWAMPE BOOM WAS REMOVED AND ONE WAS LEFT ON THE BEACH.

ADEC
NAME STEPHEN FERGUSON SIGNATURE Stephen Ferguson

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS (1, 2, 3, 4)
(1) FROM BEACH WHERE TEST PITS WERE DUG B/CT/ST RECOMMEND SPOT WASH, GIVING ATTENTION TO HITZ
(2) NORTH/SIDE OF ABOVE DESCRIBED BEACH B/CT/ST 25-30 m(L) AND 3-4 m.(W) → LOCATED IN LARGE BOULDERS, SPOT WASH MAY BE POSSIBLE IN SOME SPOTS, BIO REMED AFTER WASH MAY FURTHER INHANCE CLEAN UP

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Ecological considerations for segment listed as recreation (special use). Recommend washing for 2nd + 3rd beach which were oiled followed by bioremediation. Beach areas are nice sites for recreation.

REVISION NO. 08/21/89

SHORELINE OILING SUMMARY

REVISION NO. 04/134

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ PR-8 4/23
BIO G. DENNI LAND REP L. Carlson SUBDIVISION C (3 OF 3)
EXXON S. Reid ADEC S. Ferguson TIME 6:10 to 7:10
TEAM NO. 4 TIDE LEVEL 1' to 1.5' DATE 4 / 22 / 90
EST. SUBDIVISION LENGTH: 465 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 20 % B 65 % C 15 % P Ø % G Ø % S Ø % M Ø % V Ø %
SLOPE: Lang 45 % Hang 35 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W Ø m M Ø m N 30 m VL 419 m NO 16 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	pc	ab	ap	ac						su	ui	mi	li
ASPHALT PAVEMENT													
POOLED													
COVER			X			X					X		
COAT		X	•	X		X		•		X	X	X	
STAIN		X				X				X	X	X	
MOUSSE													
PATTIES													
TARBALLS													
FILM			X			X						X	
NO OIL													X

PAVEMENT H F S Ø sq. m by Ø cm

PATTIES / TARBALLS Ø BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE 1 Spare boom + 1 clean boom from

#BAGS 1

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		op	or	ol	of	no		uo	uc						su	ui	mi	li				
2	35	X					18 · 33		X				X			X			N	Y	33	C, P, G
1	40				X		4 · 40	X		X					X				N	—	—	C, P
3	40				X		25 · 40	X		X							X		N	Y	35	C, P, G
4	30					X	— · —		X								X		N	Y	25	C, P
							·															
							·															

COMMENTS This segment consisted of 3 beach areas separated by Rock cliffs. The 1st beach area appeared clean with the exception of coat + stain bath tub ring. The 2nd beach area had coat splash on boulders which was dull black and a coat splash dark brown on sediments in an area ≈ 13 m wide x 3 m long under boulders. a rainbow sheen is coming off in run off located in mitz (next page)

REVIEWED [illegible] DATE 4/24/90

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/29/90

SEGMENT ST/ PR-8 SUBDIVISION C

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	NO	(CM-CM)	UO	UC						SM	MI	MB	LI		

COMMENTS The 3rd beach (closest to PR-9) had 3 distinct storm berms. The surface sediments in the boulder + cobble area appeared clean. However, under the cobbles was gravel which trapped oil. Pit #1 had brown residual beads in water. Oiling is a CT/BR + FILM/BR. Pits 2+3 had more of a dark brown film on gravel. Pit #4 in mitz was clean. In the bouldered area drawn on map, there was broken coat + stain ≈ 3-4m wide + a patchy cover which was also 3-4m wide 25-30m long. Patchy coat in mitz. A bathtub ring on the bedrock wall at PR-8/PR-9 border. Boulders in the cobble + boulder area had CT + ST/B in mits.

≈25cm of (cobbles)

REVIEWED JW DATE 4/24/90

OG KAMSET

SEGMENT ST/ PR-8

SUBDIVISION C

DATE 4/22/90

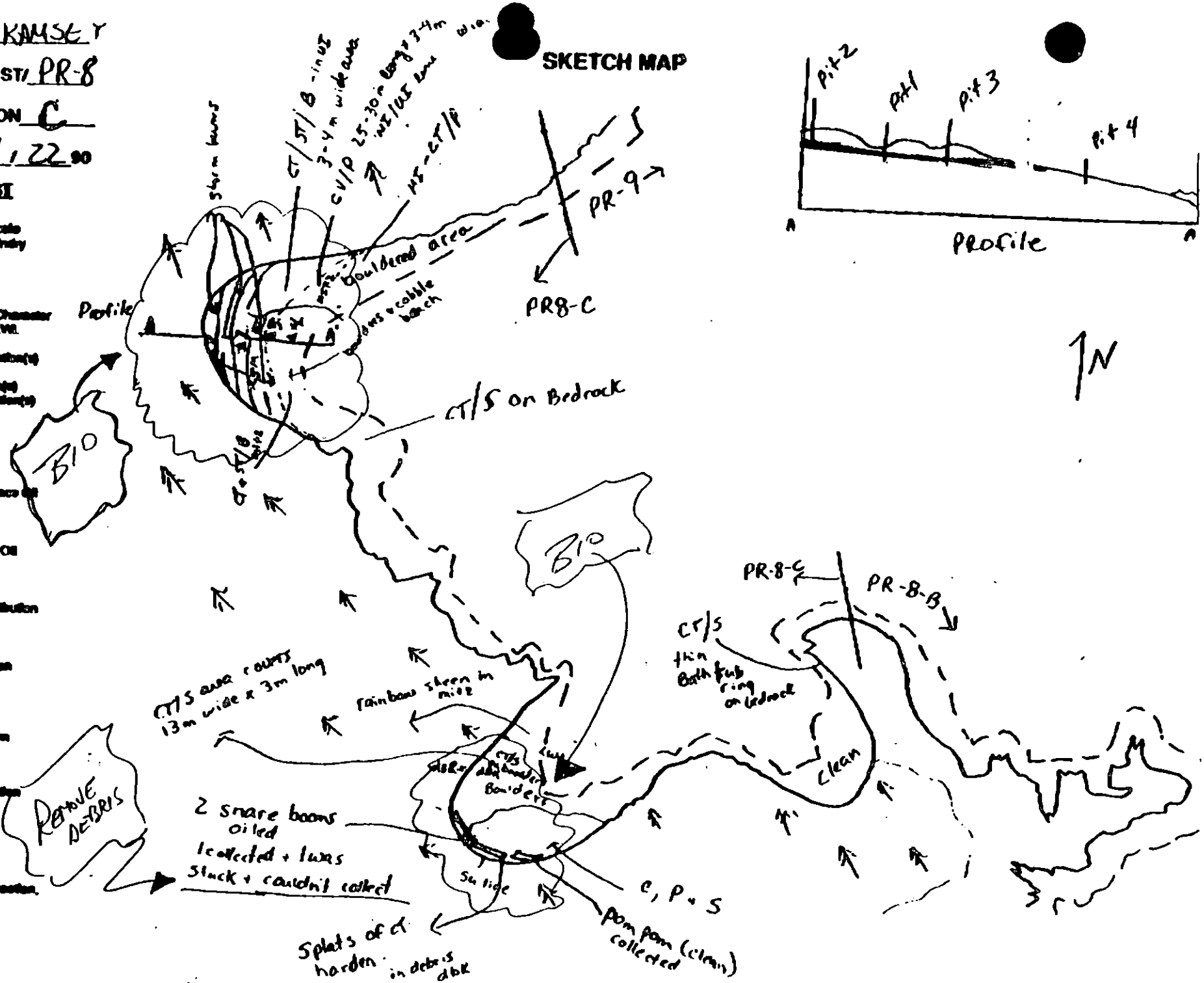
CHECKLIST

- 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

- Pit - No Subsurface Oil
- 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

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 30 CT 449 ST 449 MS 0 PT 0 TB 0 FL 0 NO 16

SHORELINE ECOLOGICAL SUMMARY

REVISED 8/22/90

Segment ST / PR-8 Subdivision C Date (mo / day / yr) 04/22/90

Time (24 hr) 1810 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 65 (3) Cobble 15 (4) Pebble Ø (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 10 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 (⊙)

Photographs: Roll No. ST-4-2 Frames 16

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	X	2	2	⊙	X	X	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	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	X	2	2	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	

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	X	X	
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	

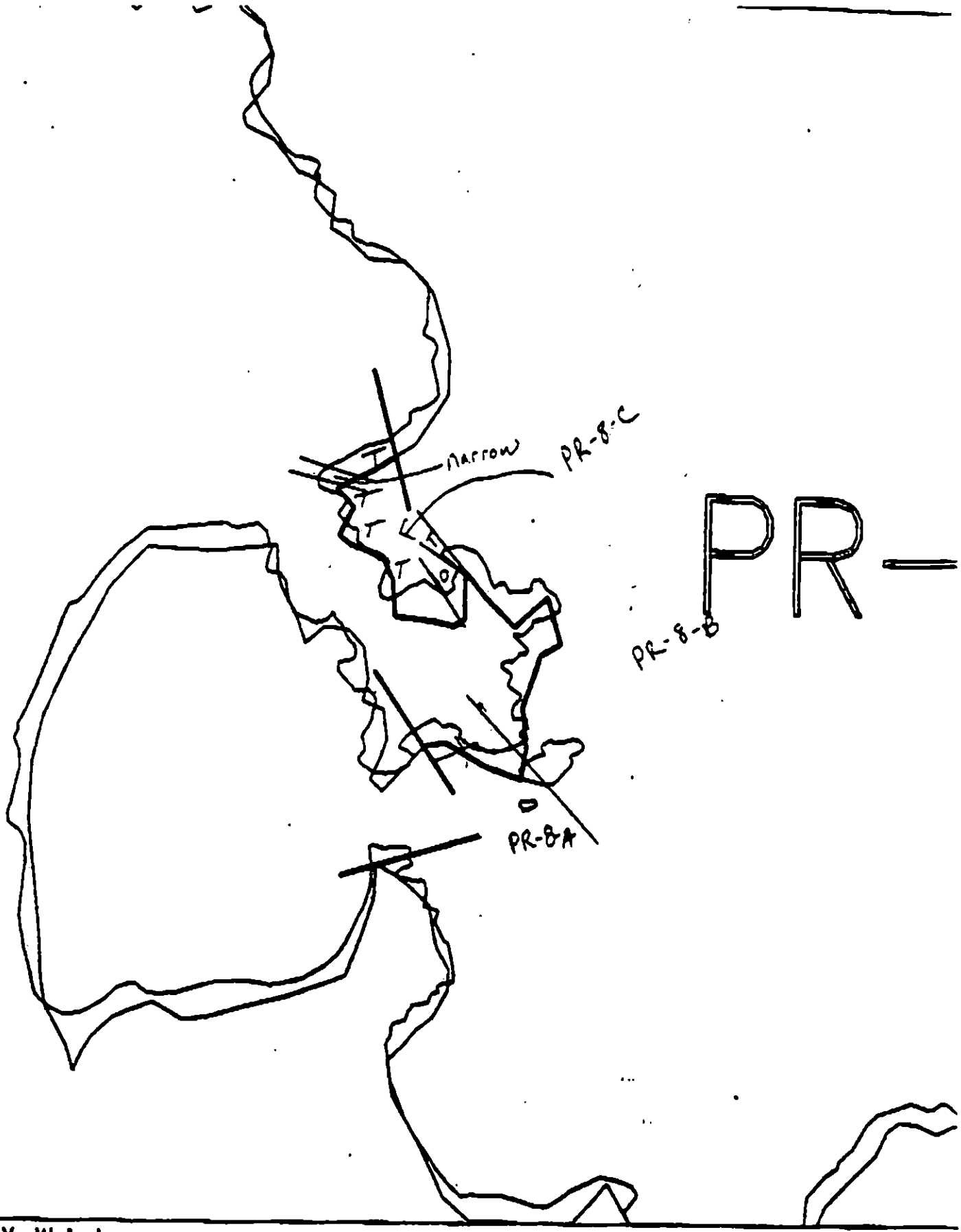
FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	X	X	2	2	2	2	2	2	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	

Wildlife Observations/ General Comments:

5 fur seals 2 sea sparrow
4 crows
1 cormorant

Ecological Considerations:



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

PR-8-C

ADEC Segment Length: 853

0 100 200 300
METERS

N

Map Key: PWS-522
Name: K. RAMSEY
Date: 4/23/90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-8 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking Spot Washing	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

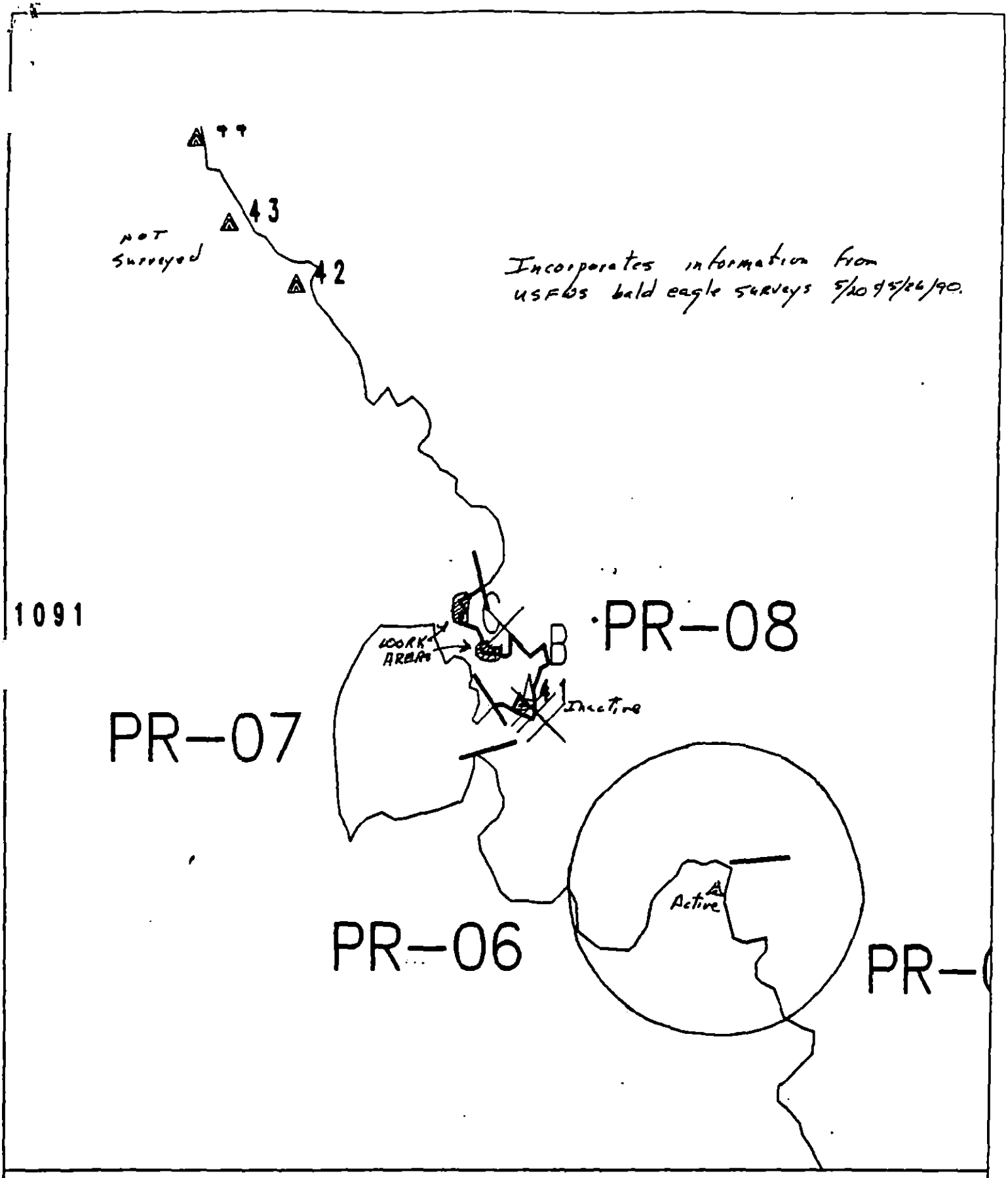
5T	**Bald Eagle Nests**	USFWS bald eagle impact assessments conducted on 5/20/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Andy Teal
NOAA Joseph Talbott
USCG G.A. Reiter
FOSC
DATE 6/4/90

Prepared By: Andrea Meyer
Date 6/2/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-8
May 11, 1990

ECOLOGY MAP
SEGMENT PR-8
SUBDIVISION C (3 of 3)

METERS
0 355 710

★ Seabird Colony
▲ Eagle Nest

1 inch = 1164 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-09 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
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)
5T-9 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Adjacent seabird colony in segment PR-10 to be avoided as per 5R restrictions. 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: Charles E. Holman DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 56 m: No Oil 3323 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/2/90.
ADEC Art Weiner
EXXON Andy Tell
NOAA Gary Petrove
USCG Kenneth Hoag

FOSC: ____ DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled 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.	
[illegible]	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 / PR-009 SUBDIVISION: A DATE 4/22/90

USCG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Segment consists of steep bedrock cliffs and cobble/pebble pocket beaches at low angle. Oil consists of a band of splashed coat occurring intermittently along the vertical bedrock faces at UI. (See OGS sheet). Biota was significantly varied and dense all along LI. (Eggs + nests were numerous.) (See Bio. sheet). No treatment is recommended due to negligible oiling. (Seal haulout is in this segment).

LAND MANAGER
NAME U.S. Forest Service SIGNATURE Leo Kaley

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Very little oil found, does not warrant physical treatment or biological enhancement.

Continue Natural Cleaning

REVISION NO. 09/01/89

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ PR-9
BIO MA. SCOTT LAND REP L. KEELER SUBDIVISION A (1 OF 1)
EXXON T. BUTLER ADEC LORI J. STRATTON TIME 15:40 to 16:40
TEAM NO. 3 TIDE LEVEL +2 to +4 FT DATE 4 / 22 / 90
EST. SUBDIVISION LENGTH: 3380 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 9 % C 1 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 10 % Hang 20 % Vert 70 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 41 m NO 3339 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	rs	rp	rs						sw	u	m	u
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☐ NO ☒
TYPE 0
#BAGS 0

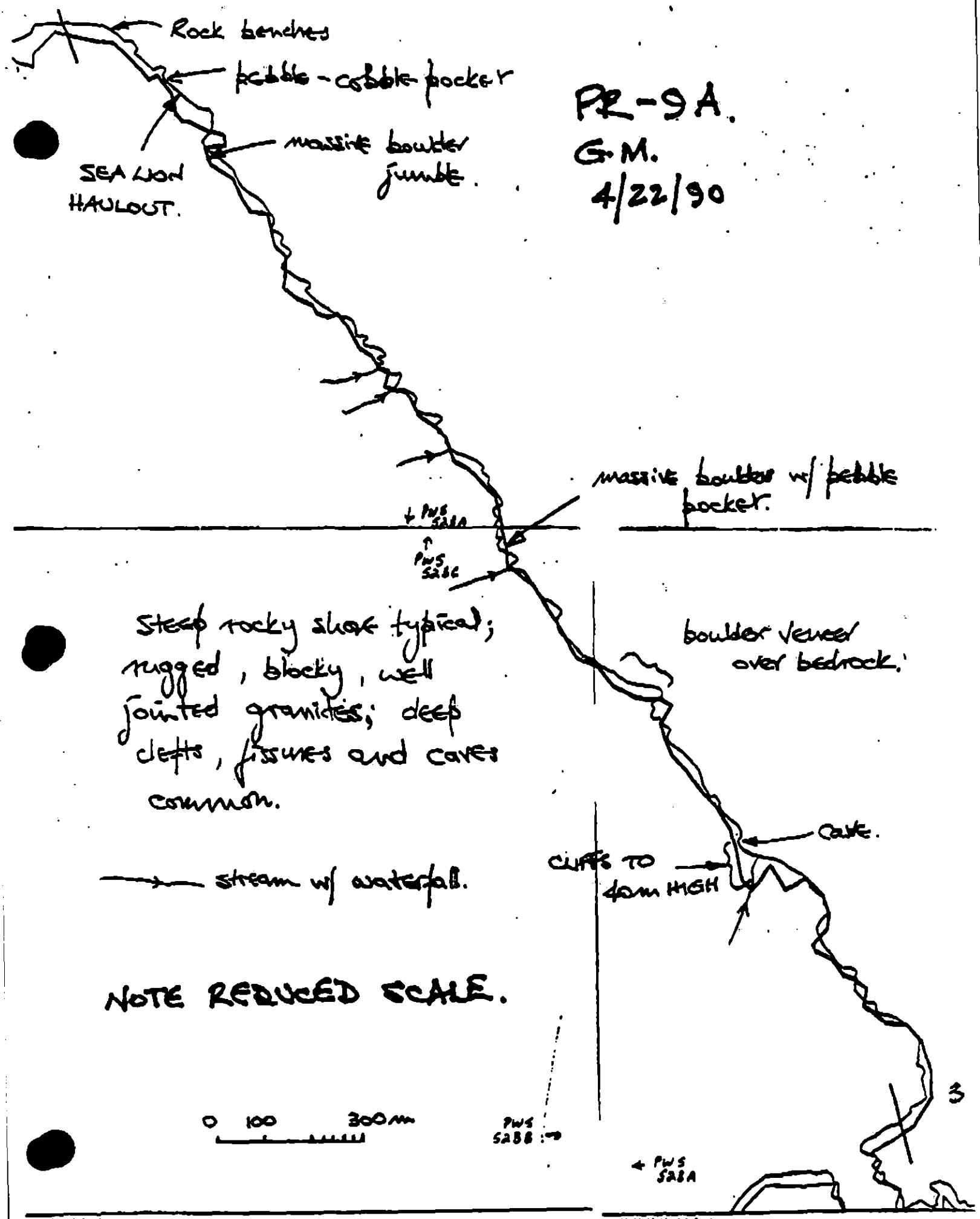
Photographs:
Roll No. ST-3-3
Frames —

SUBSURFACE OIL SUBSTRATE TYPICALLY BEDROCK — NO PITS.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		op	or	ol	op	mo		uo	uc						sw	m	m	u				

COMMENTS Steep rocky shore w/ cliffs up to 40 m high. Well jointed granites w/ chasms and fissures common. Trace of surface oil only as 2-5 cms wide, faint tar lines @ HTZ.

REVIEWED YW DATE 4/23/90 2



XX Wide
// Medium
-- Narrow

PR-9
ABEC Segment Length: 3377m

Map Key: PWS-SABa
Name:

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

PR-9A
ABEC Segment Length: 337

SHORELINE ECOLOGICAL SUMMARY

REVISION 10/2/90

Segment ST / PR-9 Subdivision A Date (mo / day / yr) 4/22/90

Time (24 hr) 1540-1640 Biologist MAScott

(A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 9 (3) Cobble 1 (4) Pebble — (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 15 Low 15

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

Photographs:
Roll No. Ø
Frames Ø

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT
occassional dense patches

GASTROPODS

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

NOT PRESENT

FUCUS

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

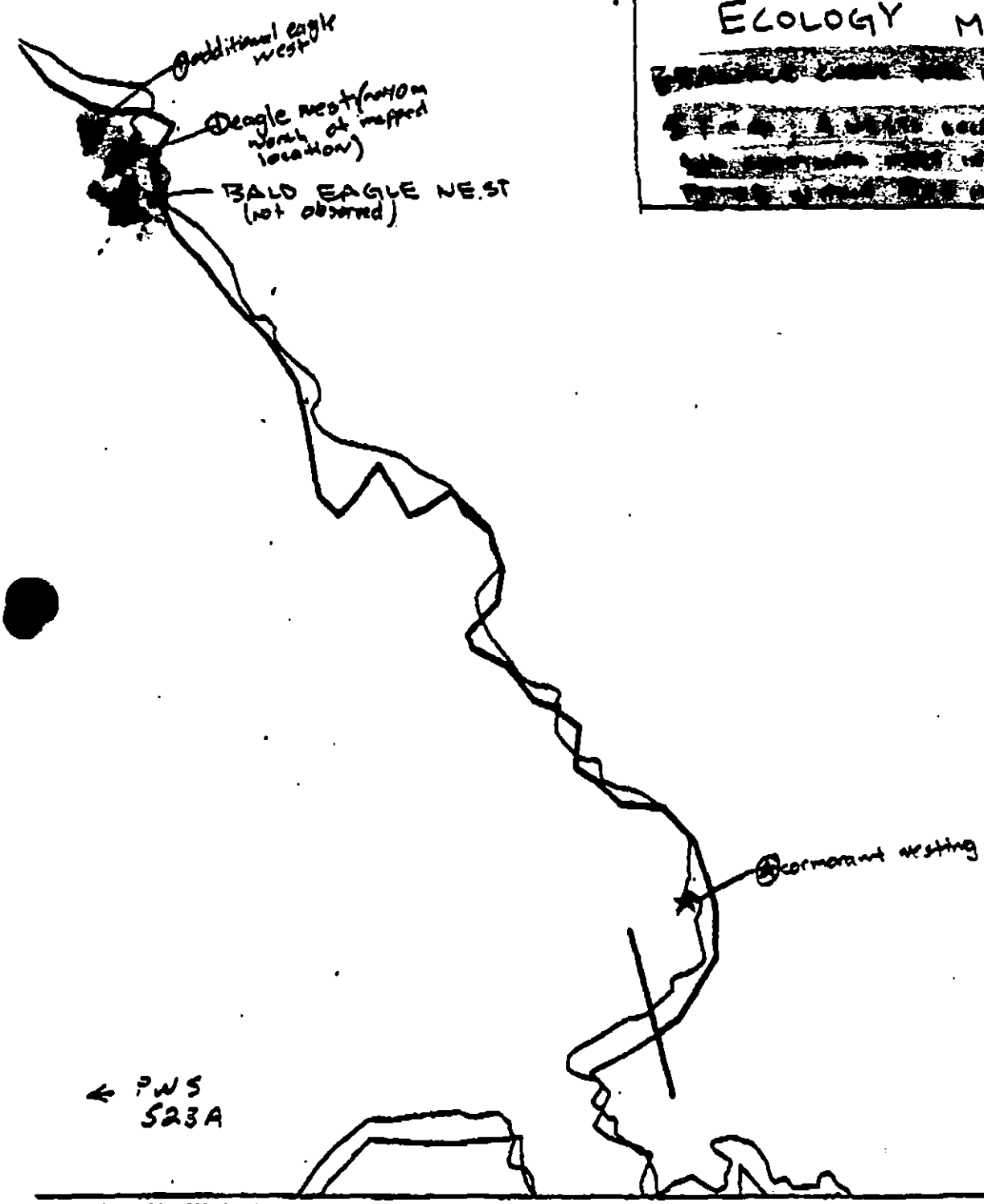
(~20% reproductive)
NOT PRESENT

Wildlife Observations/ General Comments: observations from boat (mortality + recruitment not noted)
9 sea lions
3 seals
3 cormorants
1 river otter
2 sea otter
1 eagle
6 eagle nests observed: 1 as on eco-map, 5 additional (3 on eco-map not confirmed) - see field map; observation of nests difficult due to steep cliffs and dense trees; additional nests are likely

Ecological Considerations:
eagle nests (6 observed)
cormorant nesting area - sea lion haulout
steep rock cliffs; - nesting area on cliff (spp. unknown - no birds observed)
dense and diverse, well established community; patches of dense Mytilus beds; diverse, abundant sea stars in LTZ and subtidal area; M, LTZ and subtidal - dense algae

ECOLOGY MAP

[redacted]



PR-7

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

PR-9A

ADEC Segment Length: 3377m

0 100 200 300
METERS

Map Key: PWS-523b

Name: _____

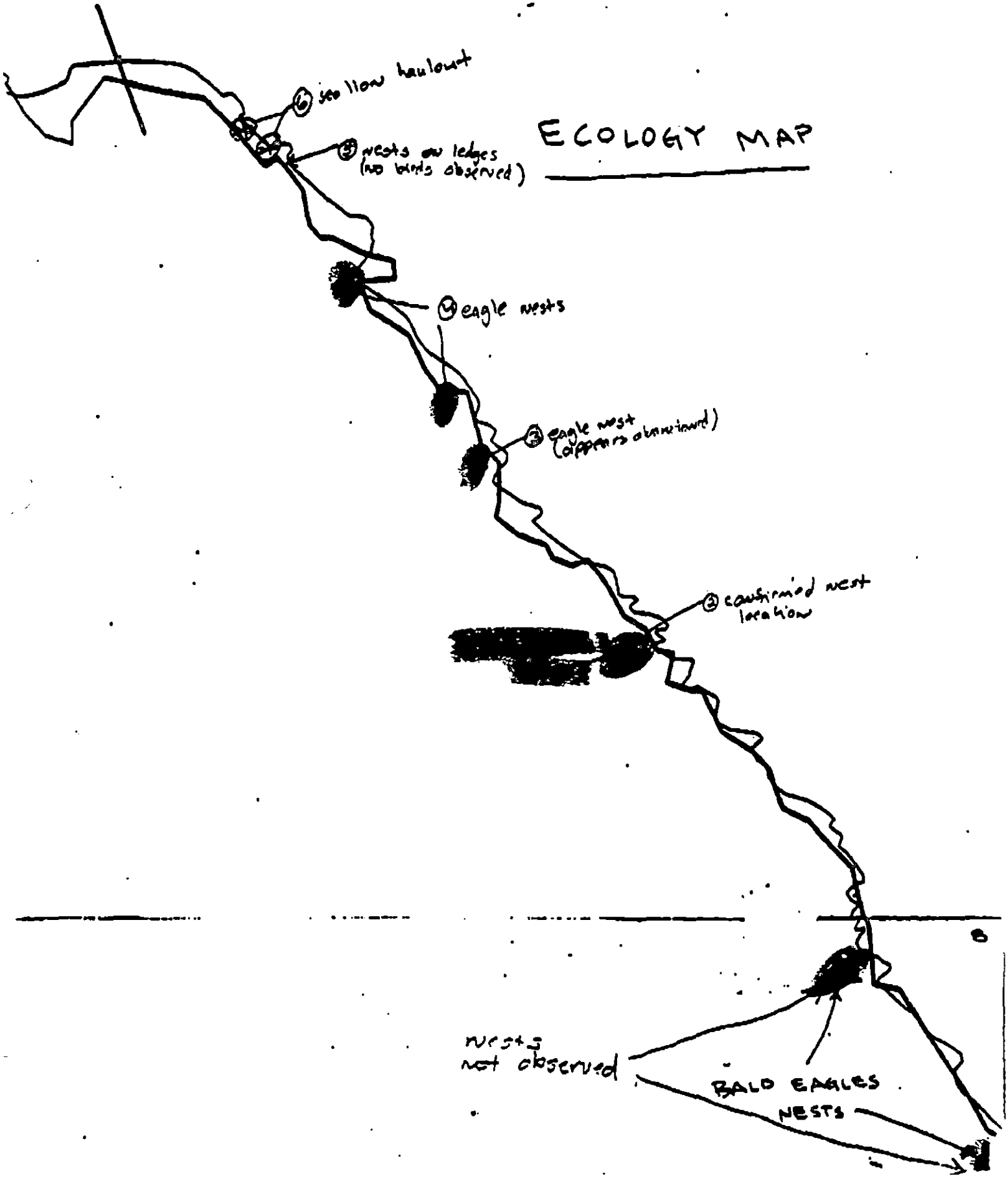
Date: _____

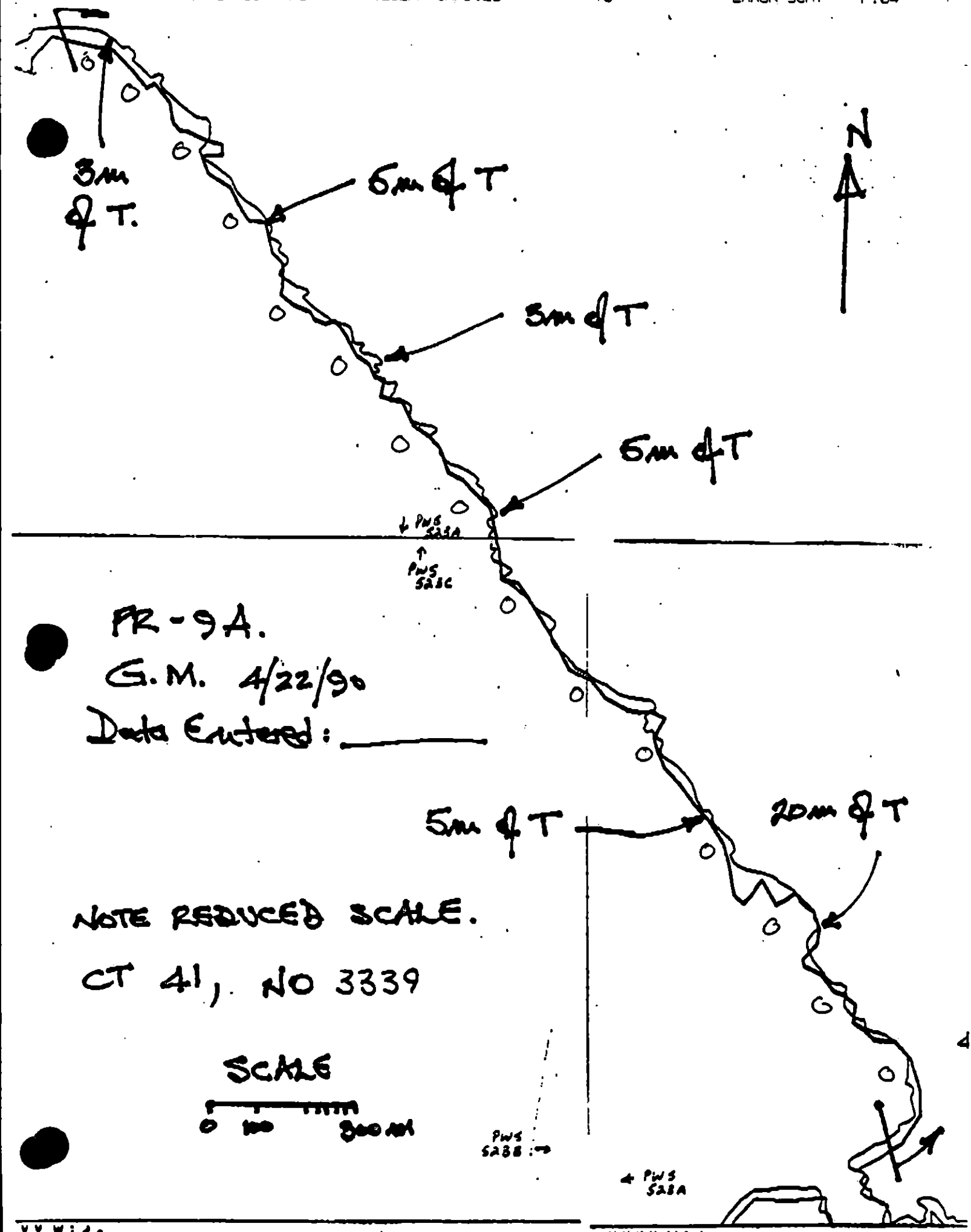
Date Entered:

PR-9

PR-9 (con.

ECOLOGY MAP





XX Wide
// Medium
-- Narrow

PR-9
ABEC Segment Length: 3377m

Map Key: PWS-523a
Name: _____

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

PR-9A
ABEC Segment Length: 3377

SHORELINE EVALUATION

SEGMENT ST/ PR-10 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
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: [signature] DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 333 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/2/90
ADEC Art Weaver [signature]
EXXON Andy Teal [signature]
NOAA Gary Petrose [signature]
USCG Kenneth Keane [signature]

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

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

✓ [redacted] 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 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
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: PR-10 SUBDIVISION: A DATE 4/22/90

USCG

NAME M.J. SHARPE SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC

NAME STEPHAN FERGUSON SIGNATURE [signature]

■ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

(1) POCKET BEACH [BOULDERS (VERY LARGE)] NO OIL OBSERVED

(2) VERTICAL BEDROCK ON EITHER SIDE → NO OIL OBSERVED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG K. RAMSEY USCG R. SHARPE SEGMENT ST/ PR-10
BIO G. PENN LAND REP L. Carlson SUBDIVISION A 191
EXXON S. REID ADEC S. Ferguson TIME 7:30 to 7:40
TEAM NO.: 4 TIDE LEVEL: 2' to 2' DATE 4/22/90
EST. SUBDIVISION LENGTH: 260 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 8 % B 92 % C Ø % P Ø % G Ø % S Ø % M Ø % V Ø %
SLOPE: Lang Ø % Hang 98 % Vert 2 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL Ø m NO 260 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AO	AS	AP	AB						SW	W	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT: H F S Ø sq. m by Ø cm
PATTIES / TARBALLS Ø BAGS
NEAR SHORE SHEEN? NO SR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE Ø
#BAGS Ø

Photographs:
Roll No.
Frames

SUBSURFACE OIL NO PITS DUE TO substrate

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL'	OF	NO		NO	NO						SW	W	M	U		

This segment was a high angle boulder pocket. No oil was observed.

JW 4/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION DATE

Segment ST / PR-10 Subdivision A Date (mo / day / yr) 04/22/90

Time (24 hr) 1930 Biologist Pena

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 240 (3) Cobble Ø (4) Pebble Ø (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 40 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:
Roll No. —
Frames —

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

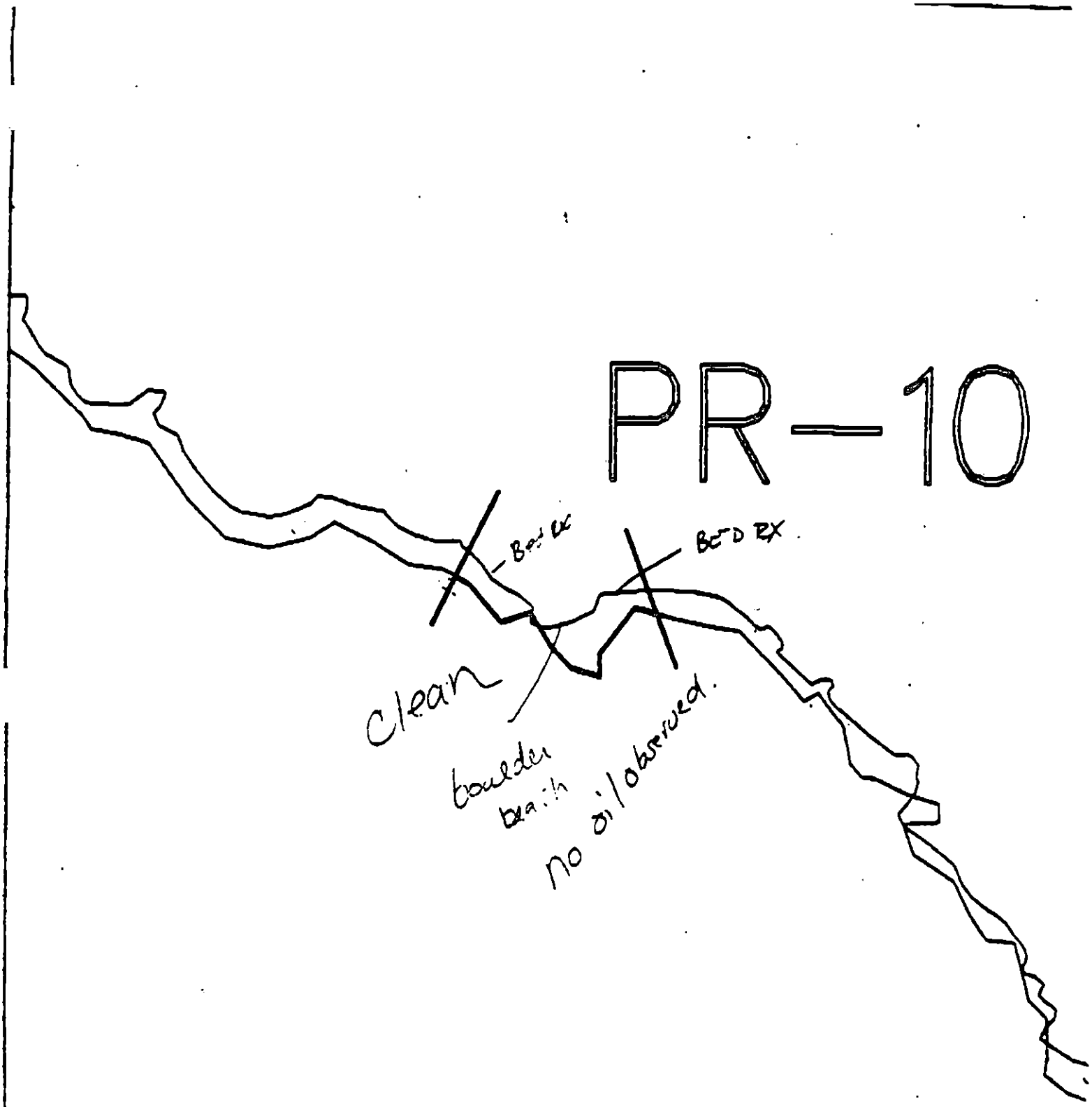
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1 otter (Lu)

Ecological Considerations:



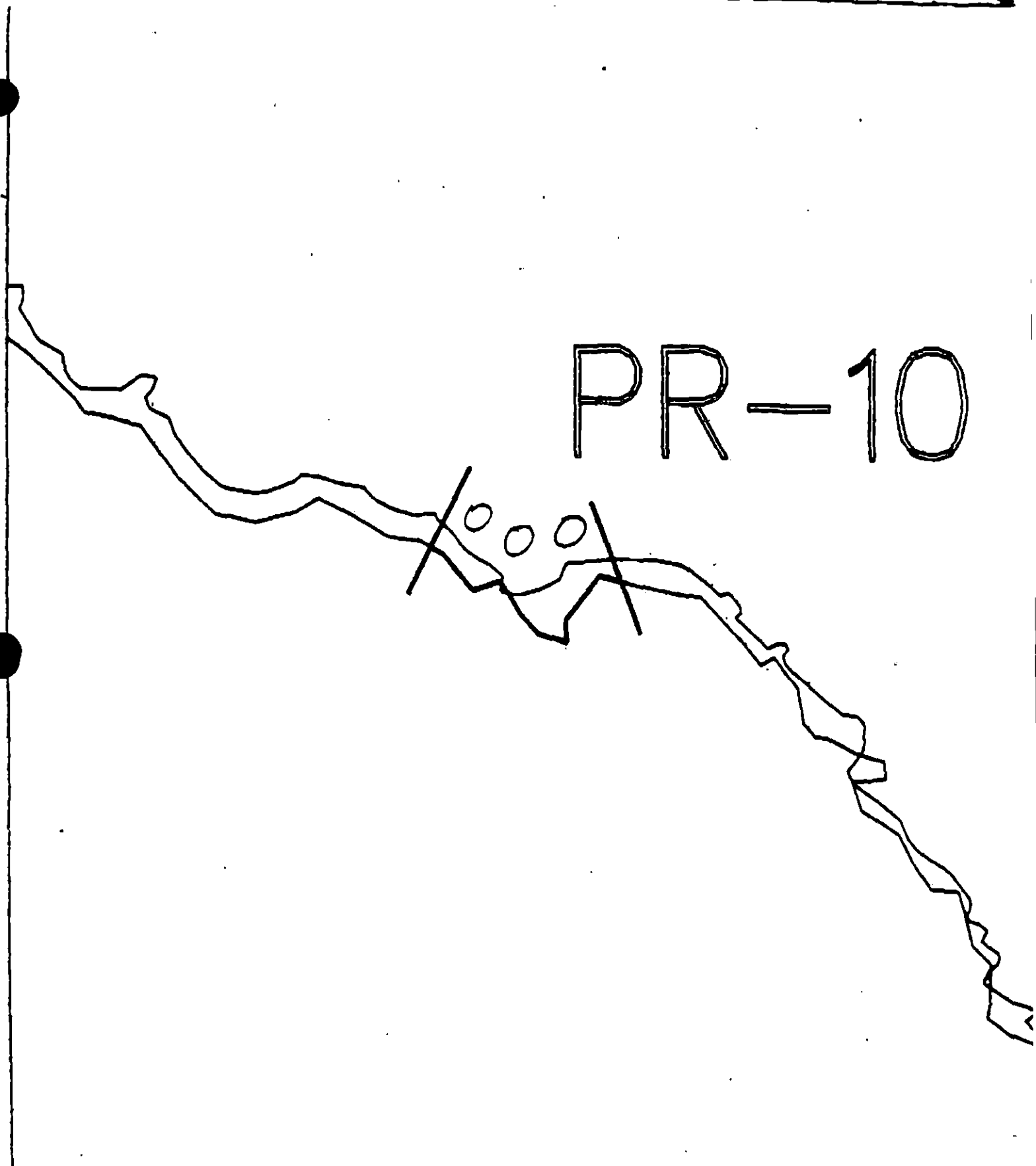
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

PR-10

ADEC Segment Length: 332m

0 100 200 300
METERS

Map Key: PWS-509
Name: K. RAUSET
Date: 4/22/90
Date Entered:



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

PR-10

ADEC Segment Length: 332m

0 100 200 300
METERS

Map Key: PWS-509
Name: K. RAMSEY
Date: 4/22/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PR-11 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5R Seabird colony (5/1 to 9/1) (in adjacent segment PR-10)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1) adjacent bald eagle nest within 400m
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: [illegible] DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 383 m: No Oil 1030 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/2/90
ADEC Art Wenner [signature]
EXXON Andy Tam [signature]
NOAA Gary Petrove [signature]
USCG Kenneth Keane [signature]
FOSC: [signature] DATE: 5-8-90

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

4R 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 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
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 / PR-11 SUBDIVISION: A DATE 4-22-90

USCG NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC NAME Lori J. Stratton SIGNATURE

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Segments consist of steep bedrock and boulder cliffs with low angle boulder beaches. Oiling consists of very light coat and cover splashes along vertical boulders + bedrock and horizontal boulder tops at SU+ UI. Many areas have very faded lives + indicate previous omni-barge hot water treatment. Three small pockets of black soft tar & mousse relatively immobile were observed between boulders about 2 cm thick into pebbles. They emitted strong oil odor with smell of decomposing matter, indicating high biodegradation. Note that old pre-1989 tar splashes were observed occasionally on boulder tops. No treatment is recommended due to insignificant oiling.

LAND MANAGER NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ PR-11
BIO M.A. SCOTT LAND REP L. KEELER SUBDIVISION A (1 OF 1)
EXXON T. BUTLER ADEC LORI J. STRATTON TIME 16:45 to 17:40
TEAM NO. 3 TIDE LEVEL +2 to +1 FT DATE 4 / 22 / 90
EST. SUBDIVISION LENGTH: 1415 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 60 % B 30 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 20 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 350 m NO 1065 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	PC	PS	P	PR						SW	W	M	U
ASPHALT PAVEMENT													
POOLED													
COVER				X		X				X	X		
COAT				X		X				X	X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL												X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-2-3

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	MO	cm	UO	BC						SW	W	M	U				
1	20					X	- · -								X					—	—	PS
2	15					X	- · -									X				—	—	B Pc
							·															
							·															
							·															
							·															

COMMENTS Steep rocky shore w/ low ∠ boulder beach. Surface oil only as disseminated CT/S and trace CV/S @ HI-SUTZ. Oil appears faint as if treated, dull black drips and splashes; rare trace of non-'89 tar, as pitch.

REVIEWED Ya DATE 4/23/90

OG G. DONALD

SEGMENT R-11

SUBDIVISION A

DATE 4 / 22 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

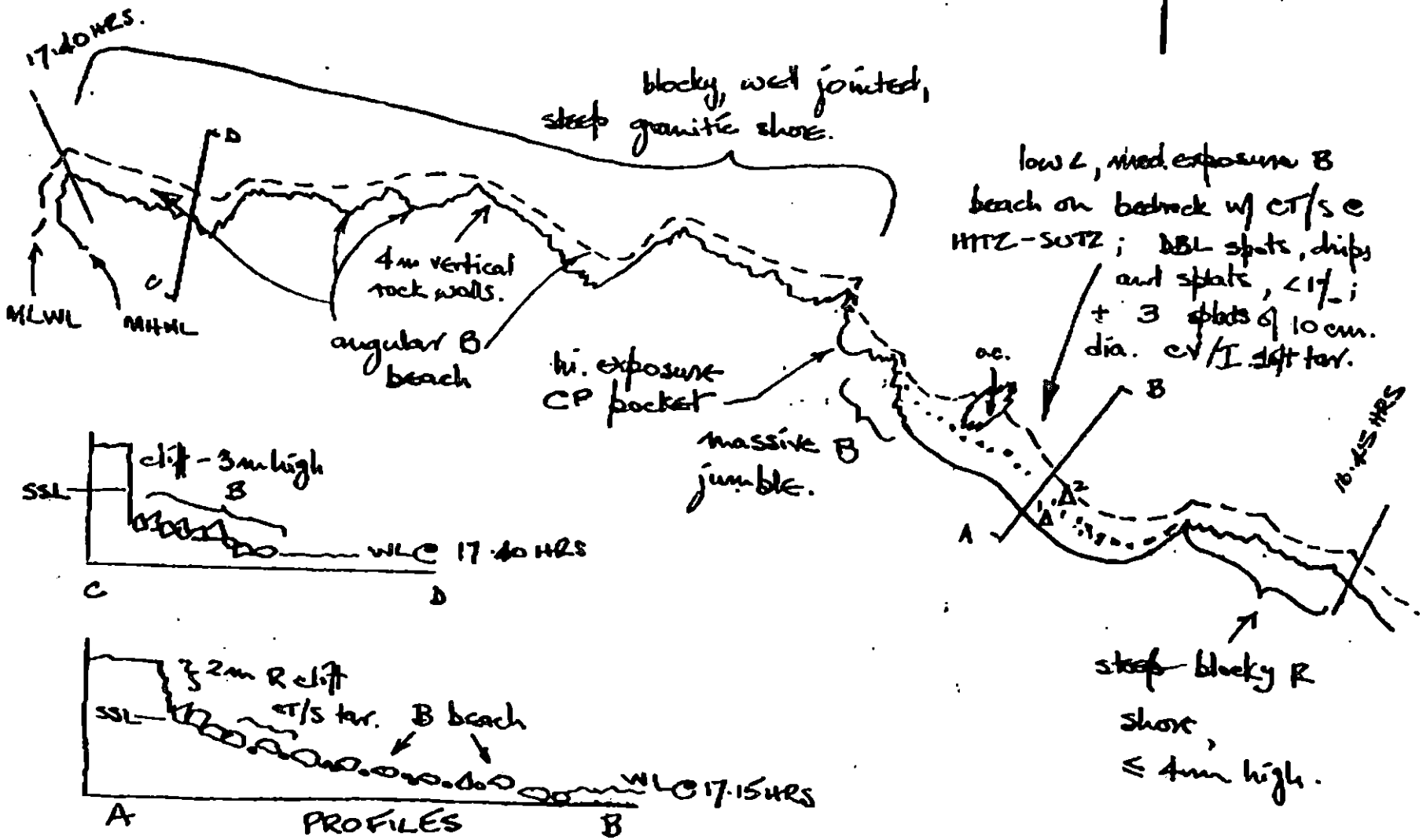
▸4 ·· CT/S

ITCH MAP

SCALE 1" = 143m.

0 100 200 300m

N



† Oil Character Length (m): AP — PO — CV 1 CT 350 ST — MS — PT — TB — FL — NO 1065

REVISION DATE

SHORELINE ECOLOGICAL SUMMARY

REVISION 6/92

Segment ST / PR-111 Subdivision A Date (mo / day / yr) 4/22/90

Time (24 hr) 1645-1740 Biologist MASCOTT

(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 30 (3) Cobble 5 (4) Pebble 5 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 25 Low 25

(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. Ø
Frames Ø

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

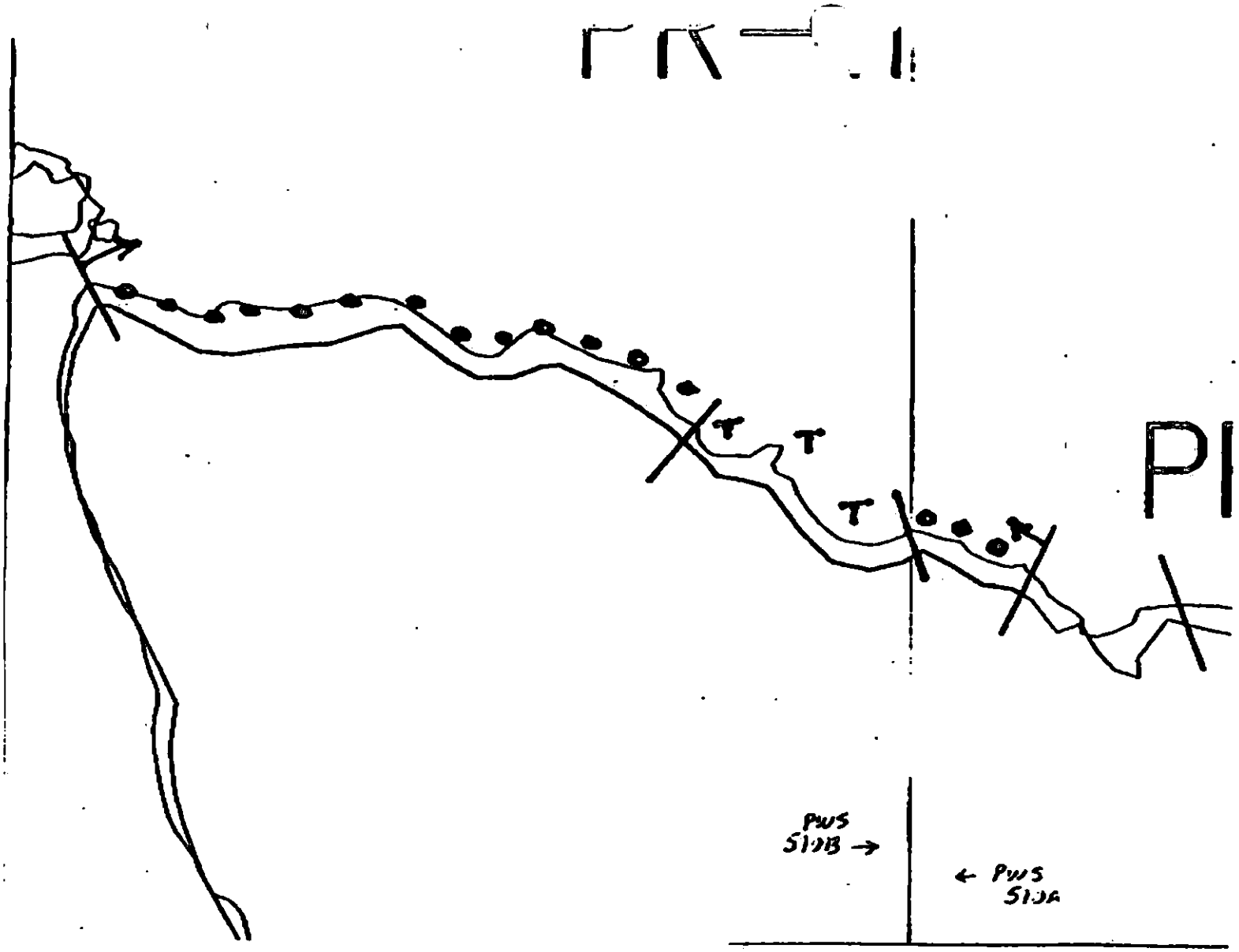
FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: rocky - observed from boat; cobble/boulder beach - land
2 eagles
4 mergansers
scoters
4 golden eyes

Ecological Considerations:
rocky: similar to PR-9 - dense, diverse community, dense patches of Mytilus, sea stars abundant in LTB and subtidal zone, algae dense & diverse
cobble/boulder beach - low diversity and density except abundant Littorina (adults and new settlement) and limpets; no observed oil on biota



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

PR-11A

ABEC Segment Length: 1413m

CONDENSED MAP.

METERS

Map Key: PWS-51Db
Name: G.M.
Date: 1/22/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ PR-12 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 222-30-12940 Rev.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest within 400M in proximal segment.
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. David McMahan DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2447 m: No Oil 7674 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

X No Treatment Recommended
_____Treatment Recommended
_____Manual Pickup
_____Bioremediation
_____Tarmat Removal

_____Snare/Absorbent Booms
_____Oil Snares (pom poms)
_____Absorbents (pads,rolls,etc)
_____Spot Washing:_____Wands
_____Beach Cleaner
_____Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/8/90.
ADEC Art Weinrich Art Weinrich
EXXON Andy Cole
NOAA Gary Petrac Ray Dikan
USCG G.A. Reiter G.A. Reiter

FOSC: [illegible] DATE: 5-12-90
Recheck and ensure sorbent boom left on shoreline over the winter has been removed. If not, do so —

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C **Salmon fry nursery area (4/31 to 7/31)**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/1)**
1E **Main Bay Hatchery release (4/20 to 6/10)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
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 Suzomoto 424-7511

1I **Gill net area (6/7 to 8/31)**
1J **Purse seine area (7/20 to 9/30)**
1K **Purse seine hook-off (7/20 to 9/30)**
1L **Set net sites (6/11 to 7/25)**
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M **Herring spawning (4/1 to 6/15)**
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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 Rothy 267-2206

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)**
7HH **Finfish harvesting**
7II **Deer harvesting (8/15 to 2/28)**
7JJ **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

SEGMENT STATE PR-012 SUBDIVISION: A DATE 4/23/90

USCG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS The segment contains high angle bedrock cliffs with pocket beaches of subangular cobbles and boulders, and pebble/cobble beaches w/some granule/sand ledges. Checked 4 streams in delta area at head of bay (Loc #4). No oil & no fish fry were observed. Oiling is a very light "drip line" of coat splashed along persistent band, up to 3 meter wide on vertical boulder & bedrock, as well as intermittent tarball splashes on boulders and one pavement splotch, 15 cm diameter (Loc #1 + #5)
Absorbent boom buried at SU, under snow, should be collected (Loc #4). No other treatment is necessary due to insignificant oiling and potential for weathering. (Pre-1989 oil splats were observed sporadically over segment).

LAND MANAGER
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Sorbent boom near creek at S.E. fork of head of Bay should be picked up - Buried in snow.

No physical treatment or biological enhancement warranted

Continue Natural Cleaning

10

REVISION NO. 10/01/88

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG G. MACDONALD USCG J. RAINSFORD SEGMENT ST/ PR-12
BIO MA. SCOTT LAND REP L. KEELER NPS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC LORI J. STRATTON TIME 15:55 to 18:45
TEAM NO. 3 TIDE LEVEL 5.5 to 0.5 FT DATE 4 / 23 / 90
EST. SUBDIVISION LENGTH: 10,120 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 30 % B 30 % C 15 % P 15 % G 10 % S 0 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 2,640 m NO 7,480 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	ra	rp	rs						sw	u	m	l
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X		X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS				X		X					X		
FILM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS? YES ☒ NO ☐
TYPE snare boom foreign
#BAGS 2

Photographs:
Roll No. ST-3-3
Frames —

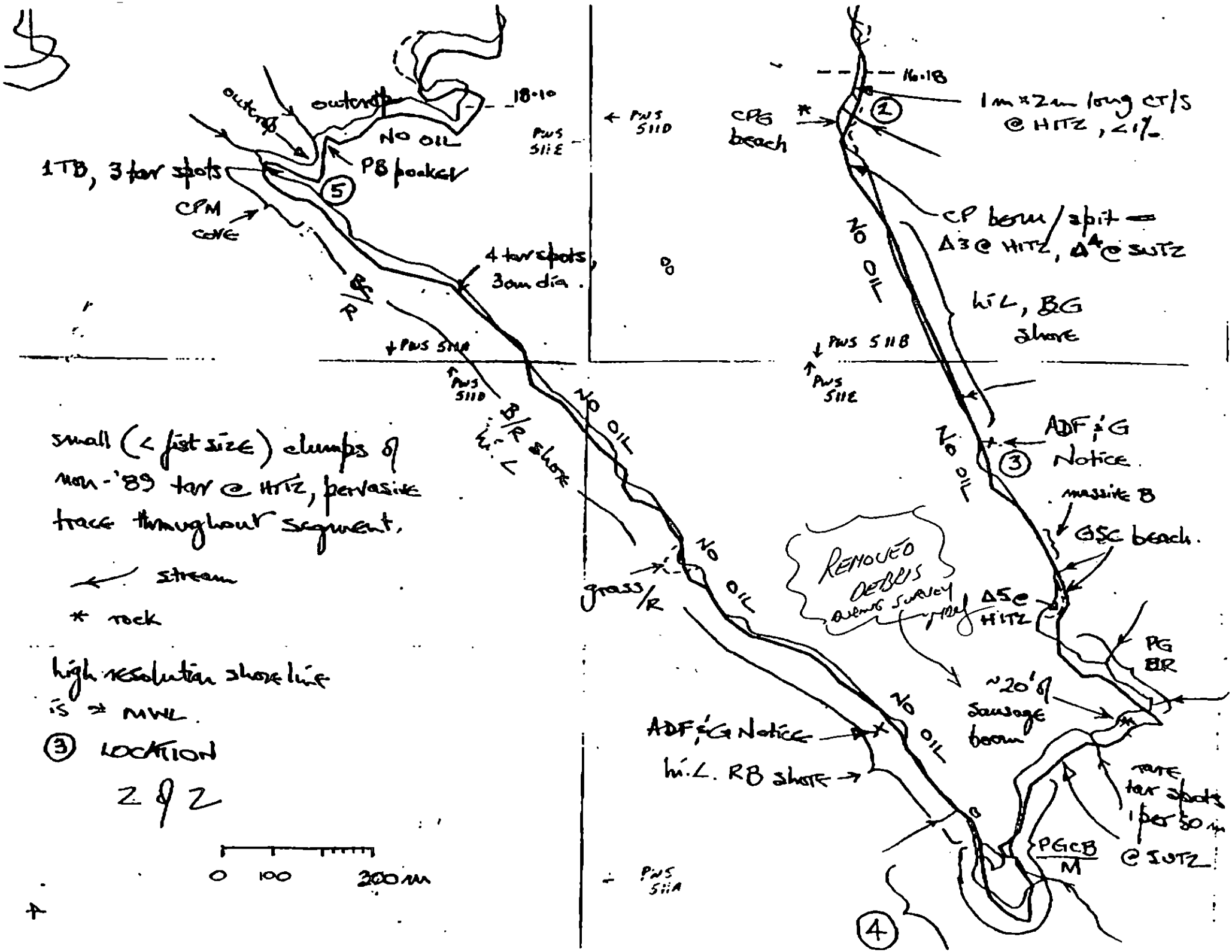
SUBSURFACE OIL

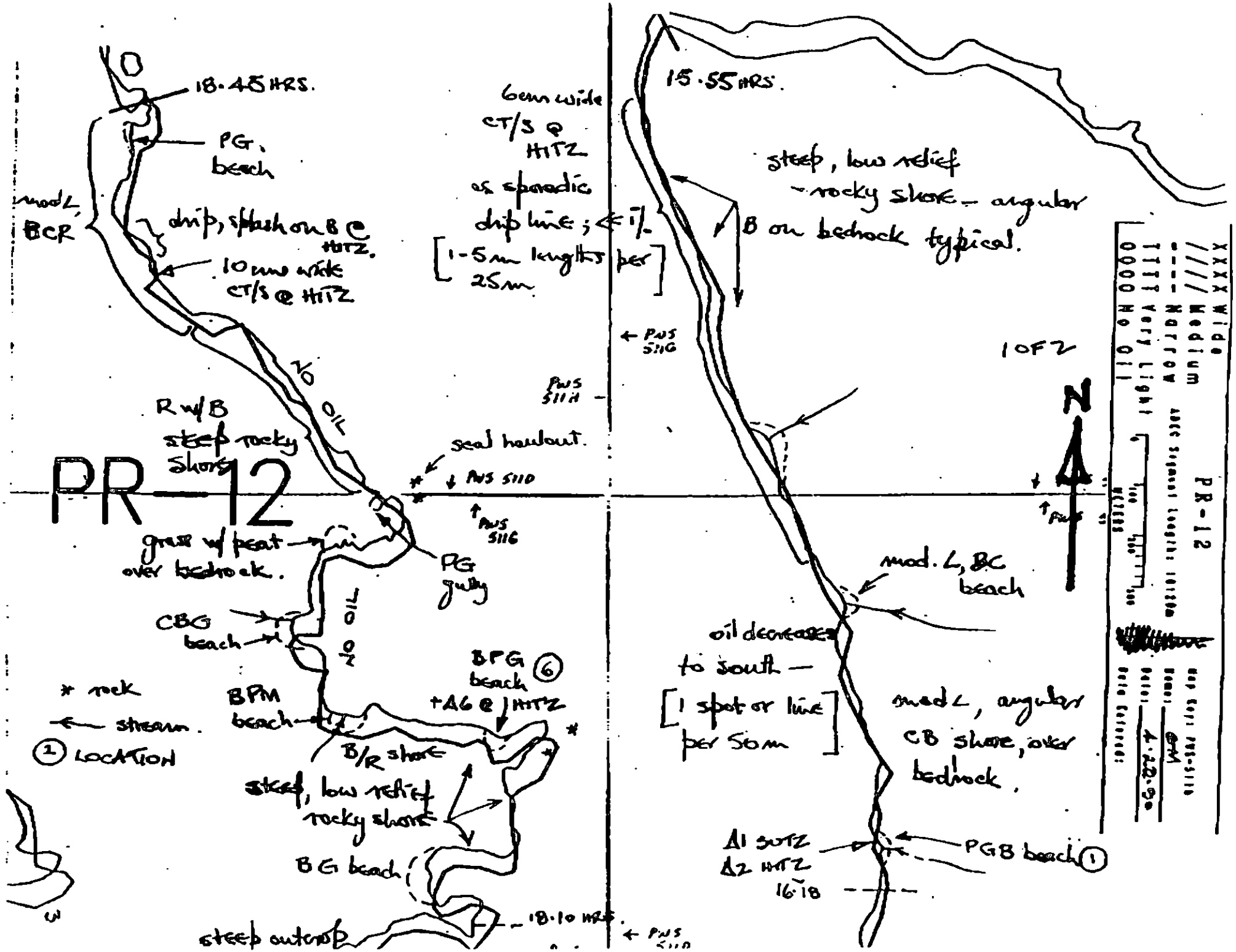
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE · SUBSURFACE SEDIMENTS
		op	or	ol	of	no	cs / ig	bo	uc						sw	u	m	l				
1	28					X	- - -								X					--	-	cPG
2	12					X	- - -									X				·	-	cPG
3	40					X	- - -									X				-	-	PGP
4	30					X	- - -								X						-	G
5	20					X	- - -									X				·	-	GSB
6	20					X	- - -									X					-	SG

COMMENTS Sheltered bay w/ frost riven granitic shores. Surface oil only as spots, splots & thin driplines @ HTZ, particularly on the north half of the bay. Non-'89 tar was observed throughout the segment as sporadic clumps of hard, debris encrusted tar/pitch.

REVIEWED TW DATE 4/24/90

2


outcrop
outcrop
18·10
NO OIL
PB pocket
1TB, 3 tar spots
CPM cove
5
4 tar spots, 3cm dia.
B/R
PWS 511E
PWS 511D
PWS 511A
PWS 511D
B/R shore
NO OIL
grass/R
NO OIL
small (< fist size) clumps of non-'89 tar @ HITZ, pervasive trace throughout segment.
stream
* rock
high resolution shoreline is ≠ MWL.
③ LOCATION
2 of 2
0 100 200m
16·18
1m × 2m long CT/S @ HITZ, <1%
CPG beach
2
CP boom/spit
Δ3 @ HITZ, Δ4 @ SUTZ
NO OIL
hi L, BG shore
PWS 511B
PWS 511E
ADF&G Notice
3
massive B
GSC beach.
REMOVED DEBRIS during survey
Δ5 @ HITZ
PG BR
~20' of sausage boom
NO OIL
ADF&G Notice
hi L. RB shore
tar spots 1 per 50 m @ SUTZ
PGCB/M
4


PR-12
18.45 HRS.
PG. beach
mod L, BCR
drip, splash on B @ HITZ.
10 mm wide CT/S @ HITZ
NO OIL
R w/B steep rocky shore
grass w/ peat over bedrock.
PG gully
CBG beach
OIL
BPM beach
B/R shore
BPG beach
+A6 @ HITZ
steep, low relief rocky shore
BG beach
steep outcrop
18.10 HRS.
* rock
stream.
LOCATION
6cm wide CT/S @ HITZ
as sporadic drip line; <1%
[1-5m lengths per 25m]
PWS 511A
seal haulout.
PWS 511D
PWS 511G
15.55 HRS.
steep, low relief rocky shore - angular
B on bedrock typical.
1 OF 2
N
mod. L, BC beach
oil decreases to south —
[1 spot or line per 50m]
mod L, angular CB shore, over bedrock.
A1 SUTZ
A2 HITZ
16.18
PGB beach
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil
ARCS Shoreline Assessment Form
PR-12
Date: 4.22.90

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PR-12 Subdivision A Date (mo / day / yr) 4/23/90

Time (24 hr) 1555-1845 Biologist M A Scott

(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 25 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 25 Low 60

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

Photographs:
Roll No. Ø
Frames Ø

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	X	X	2	2	2
3	3	3	3	3	3	3	3	3	X	X	X
4	4	4	4	4	4	4	4	4	X	X	X
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	X	2
3	3	3	3	3	3	3	3	3	3	X	3
4	4	4	4	4	4	4	4	4	4	X	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 → (occasional dense in outer (eastern) part bay)

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	X	X	X	2	2	2
3	3	3	3	X	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	X	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	X	X	X	2	2
3	3	3	3	3	3	3	3	3	3	X	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: (observations by boat except cobble beach at stream mouth)

14 golden eyes
2 river otters
1 cormorant
2 sea otters
5 scoters
1 raven
1 seal

- density & diversity higher in outer (eastern) part of bay relative to inner (western), cobble/pebble beach - very low density and diversity

Ecological Considerations:

anadromous stream at back (west end) of bay (numerous other small streams feeding into bay may be used for spawning to a lesser extent)

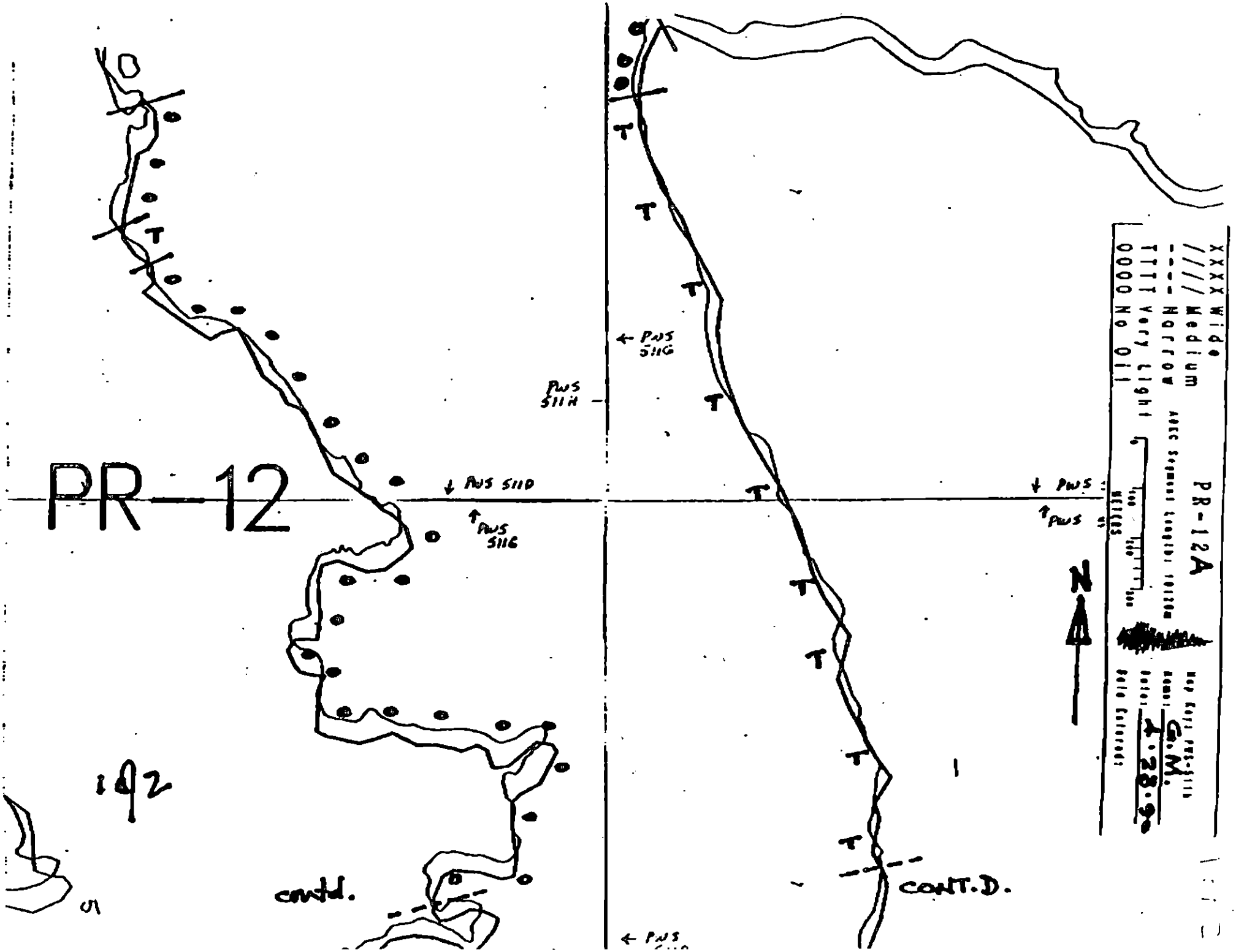
Zostera beds (patchy) throughout inner bay

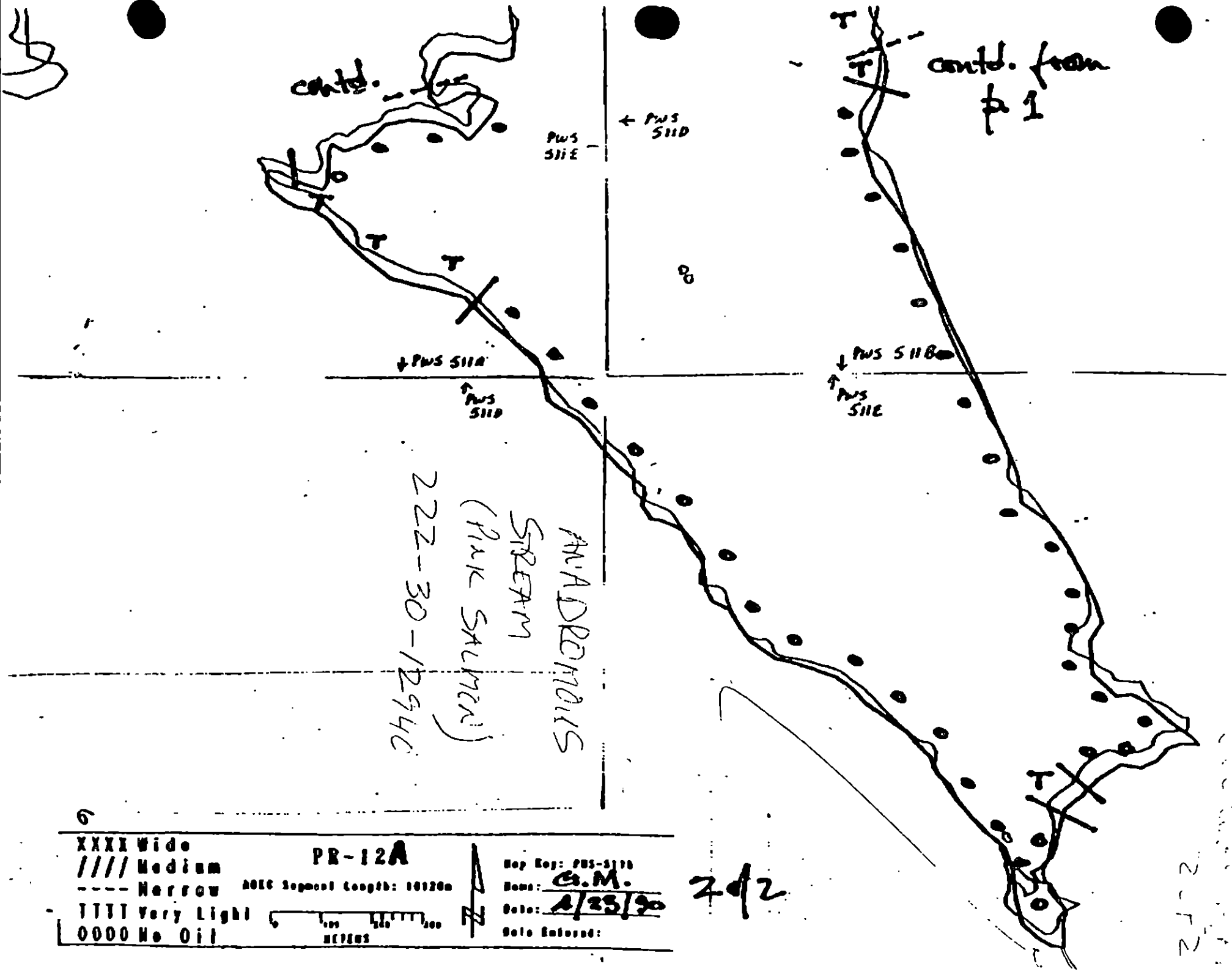
seal on small island (200m from and off segment, north side) - possible haulout area

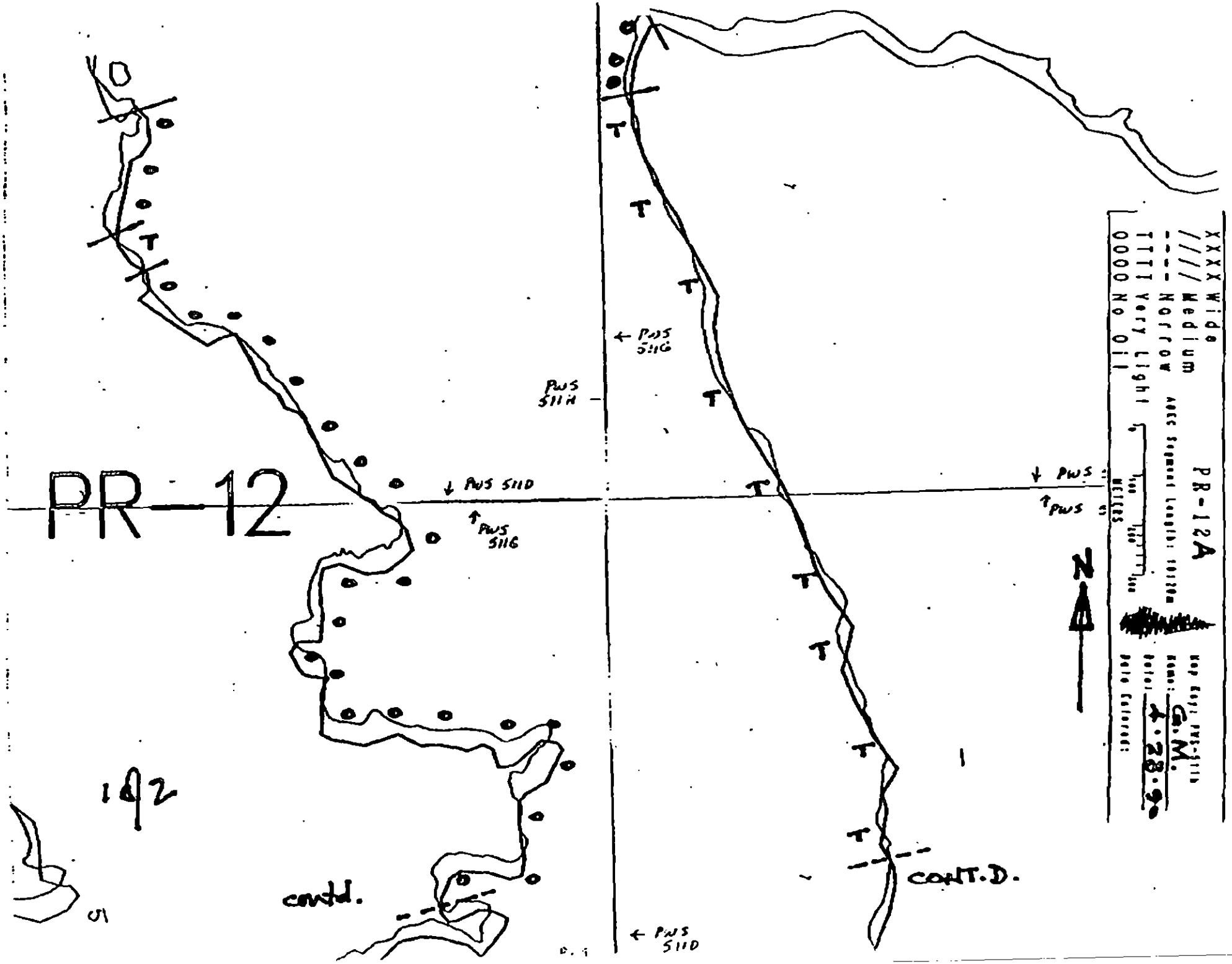
Mytilus - on rock & boulder in outer (eastern) part of bay; in cobble/pebble matrix in inner bay

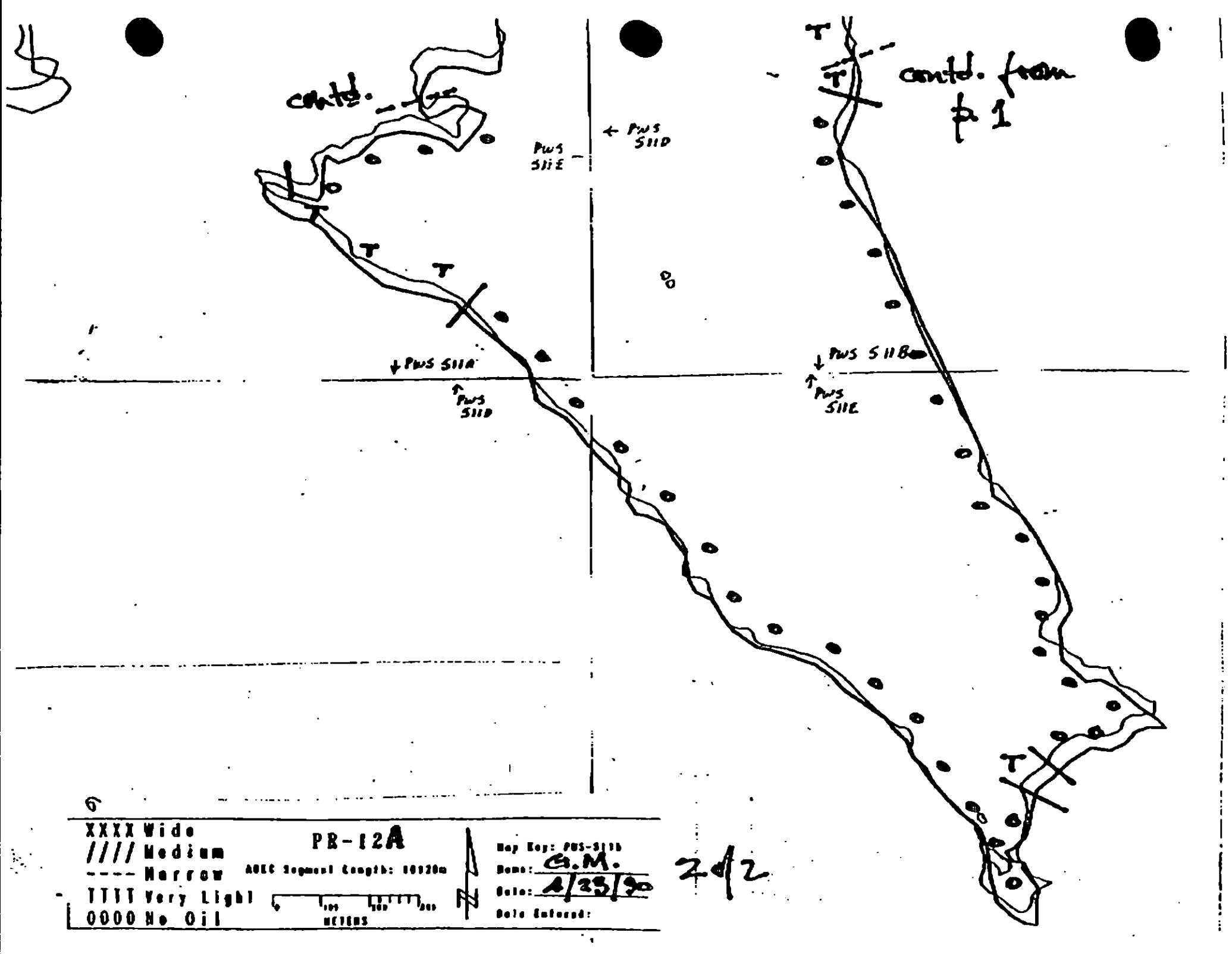
Recruitment - no barnacle recruitment noted; rare Mytilus (outer/eastern bay only); moderate littorina recruitment on cobble beaches; Fucus reproductive

marginal - Mytilus shells in tide way on cobble/pebble beaches (no mussels)


PR-12
PR-12A
XXXX Wide
//// Medium
---- Horrow
TTTT Very Light
0000 No Oil
N
PWS 511D
PWS 511G
PWS 511H
PWS 511G
PWS
PWS
CONT.D.
cont'd.
192


contd.
PWS 511E
← PWS 511D
contd. from p 1
PWS 511A
PWS 511D
PWS 511B
PWS 511E
ANADROMOUS STREAM (PINK SALMON)
222-30-1254C
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil
PR-12A
AOEC Segment Length: 10120m
METERS
Map Key: PRS-511B
Name: G.M.
Date: 8/23/90
Date Entered:
2 of 2


PR-12
1 of 2
contd.
PWS 5110
PWS 5116
PWS 5114
PWS 5116
PWS 5110
PWS
PWS
CONT.D.
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil
PR-12A
N


cont'd.
PWS 511E
PWS 511D
PWS 511A
PWS 511D
T
T
T
T
T
cont'd. from p 1
PWS 511B
PWS 511E
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil
PR-12A
AOEC Segment Length: 10120m
METERS
Map Key: PWS-511b
Done: G.M.
Date: 8/25/90
Date Entered:
2 of 2

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-12 SUBDIVISION A (1 of 1)

WORK WINDOW	
Boom Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If treatment beyond boom removal is planned, a cultural resource evaluation is required prior to shoreline treatment

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	NO CONSTRAINT. ADF&G anadromous Stream (222-30-12940) is in Subdivision A. Work area is more than 100m from stream.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS 6/1/90 map indicates no active eagle nests within 400m of work area.
5R	**Seabird Colony**	Closed to boom pickup. Work area is less than 800m from nearest seabird colony.

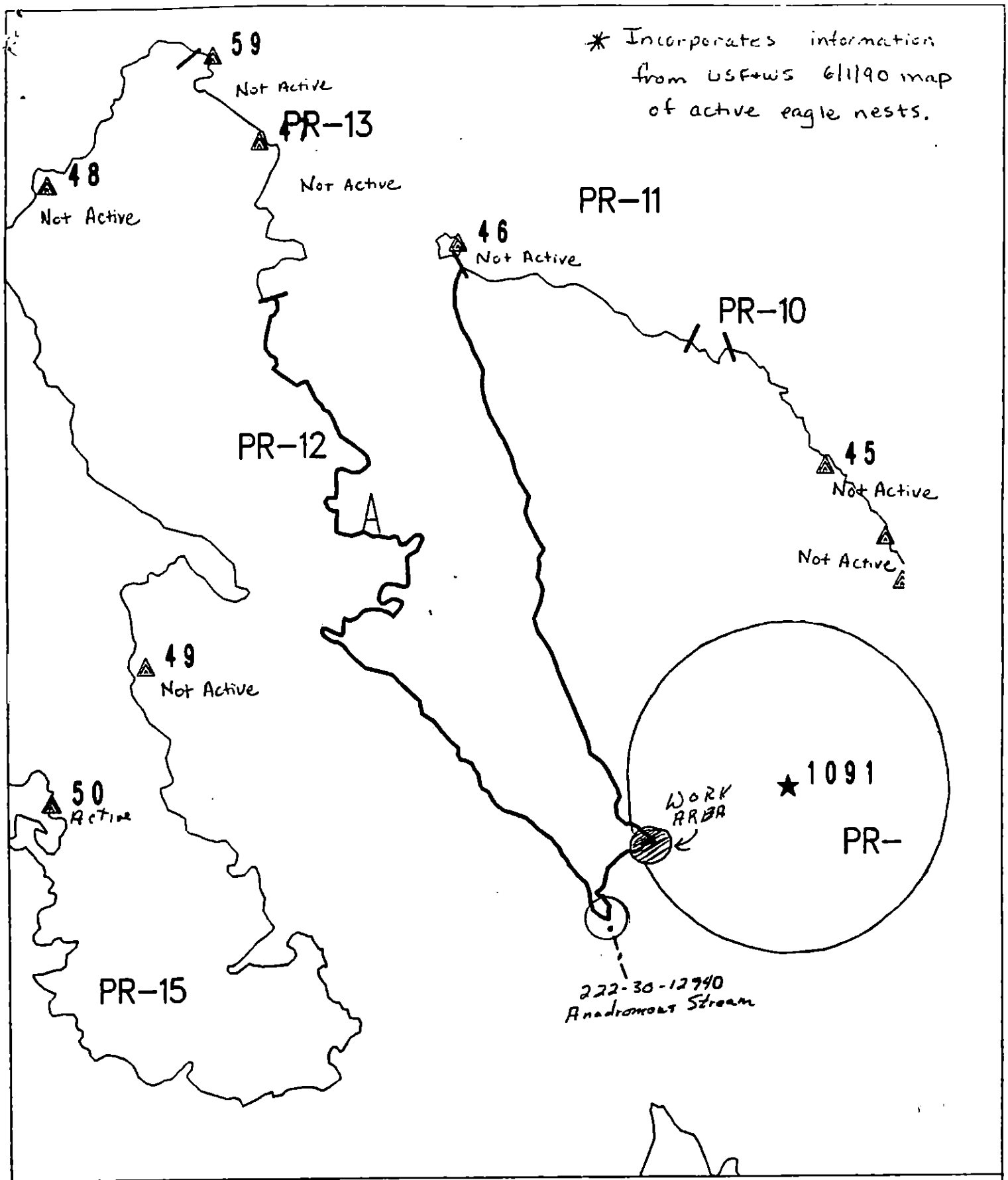
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Menaces
EXXON Amy Tear
NOAA Joan Talbott
USCG G.A. Reiter G.A. Martin

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/3/90



EXXON

Exxon Company, USA
Map Key: PWS-PR-12
May 11, 1990

ECOLOGY MAP 6/2/90
SEGMENT PR-12
SUBDIVISION A (1 of 1)

METERS
0 634 1268

★ Seabird Colony
▲ Eagle Nest

1 inch = 2080 feet

SHORELINE EVALUATION

SEGMENT ST/ PR-13 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-2 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: Charles Hohlmann DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 860 m: No Oil 1469 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: Manually remove oiled debris and pooled oil. Bioremediate in areas indicated on sketch map. Work should be conducted after 6/1 with USFWS approval regarding eagle nest constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90.
ADEC Art Weiner
EXXON Andy Teal
NOAA Gary Petrou
USCG Kenneth Keane

FOSC: [illegible] DATE: 5-8-90

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 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

✓ 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)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ 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 / PR-013 SUBDIVISION: A DATE 4/23/90

USCG NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

ADEC NAME Lori Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED (Oiled not, see Loc. #4)

COMMENTS Segment consists of rocky steep/high angle bedrock covered with dense [illegible], algae, moss, etc., and pocket beaches of rounded cobbles + pebbles; high energy. Oil appears as splashed coat "drip line" along a thin band (very light) on vertical bedrock and boulders, and splashes on boulder & cobbles. Sporadic pooled and covered areas occur very occassionally in pockets and interstices between boulders.

Loc. #1 has an entrapment area w/ pooled oil up to 3 cm thick; rainbow sheen in pool of water. Oiled area covers appr. 2 meters x ½ meter. A strong odor of decomposition in the oil is significant, indicating rapid natural biodegradation. Loc. #2 & #3 have occassional splashes of coat in "drip line" band. < See next page for Loc. #4 cont comments →>

LAND MANAGER NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Oil occurs as drip line on vertical faces except for location 4. There oil is into sediments and under rocks. - Surface area appears clean and stable. Sheens in pool indicate minor movement of oil.

Area is small and isolated, outside recreation area and no sensitive resources observed. Due to size and distance from other treatment areas I suggest to continue natural cleaning.

(ADEC comments continued:)

Location #4 has coat splashed on "dripline" (about 5m wide band) as well as splashes of partially pooled cover areas (to 15 cm diameter) between and under boulders, over an area approx. 70 meters long at U.I. Sheen in water pools were observed (silver). Patches have a strong oil odor.

An oiled net needs to be collected (see map).

There is almost enough oil to warrant hot water flush in Loc. #4, but it is a low priority to other segments where it is recommended. See sketch for Loc. #4.

Lori J. Stratton

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ PR-13
BIO M.A. SCOTT LAND REP L. KEELER NPS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC LORI J. STRAPTON TIME 19:00 to 20:20
TEAM NO. 3 TIDE LEVEL +1 to +3 FT DATE 4 / 23 / 90
EST. SUBDIVISION LENGTH: 2320 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 5 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 840 m NO 1490 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	rc	ra	rp	rs						sw	u	m	u
ASPHALT PAVEMENT													
POOLED				X				X			X		
COVER				X				X			X		
COAT				X		X		X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-3-3

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		op	on	ol	of	no		uo	uc						sw	u	m	u				
1	48					X	- . -								X						30	PG
2	30					X	- . -									X					28	PG
3	10					X	- . -									X					5	BGC
4	19					X	- . -										X				-	GP
							.															
							.															

COMMENTS Exposed, steep rocky shore w/ boulder-cobble beaches. Surface oil only, mainly as sporadic CT/S as splashes and thin tip lines. Local traces of PO & CV between crevices & B interstices → 3 cms deep: Cobble & pebbles are highly spherical and polish the granitic bedrock.

REVIEWED JW DATE 4/24/90

OG C MACDONALD

SEGM ST PR-13

SUBDIVISION A

DATE 4 / 23 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

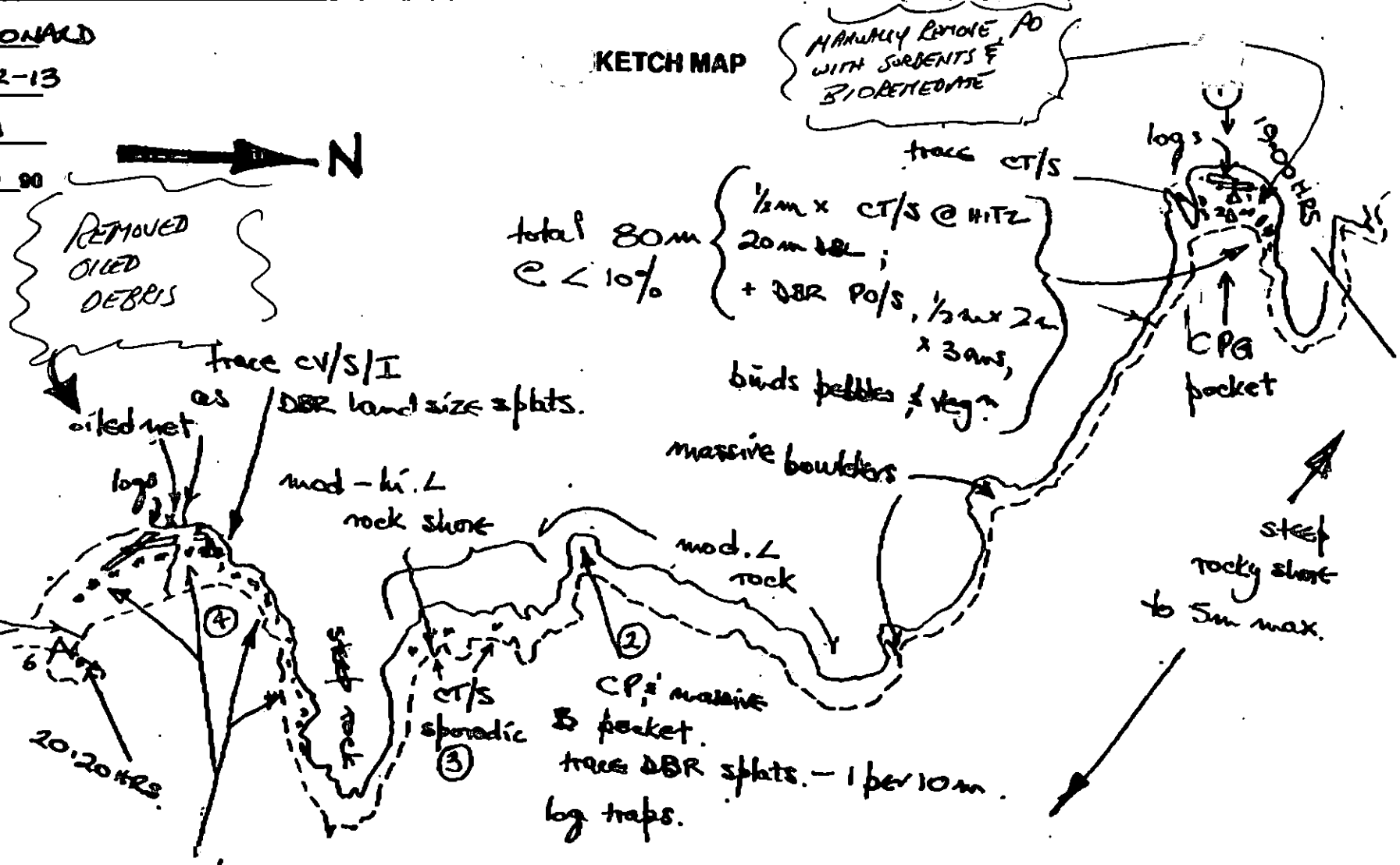
Oiled Vegetation

Photo location, direction, and number

stream

① LOCATION

SKETCH MAP



Oil Character Length (m): AP — PO 2 CV 40 CT 840 ST — MS — PT — TB — FL — NO 1490

REVISION: 03/90

OG ___

SEGMENT PR-013 (Location #4)

SUBDIVISION A

DATE 4/23/90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Photo 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

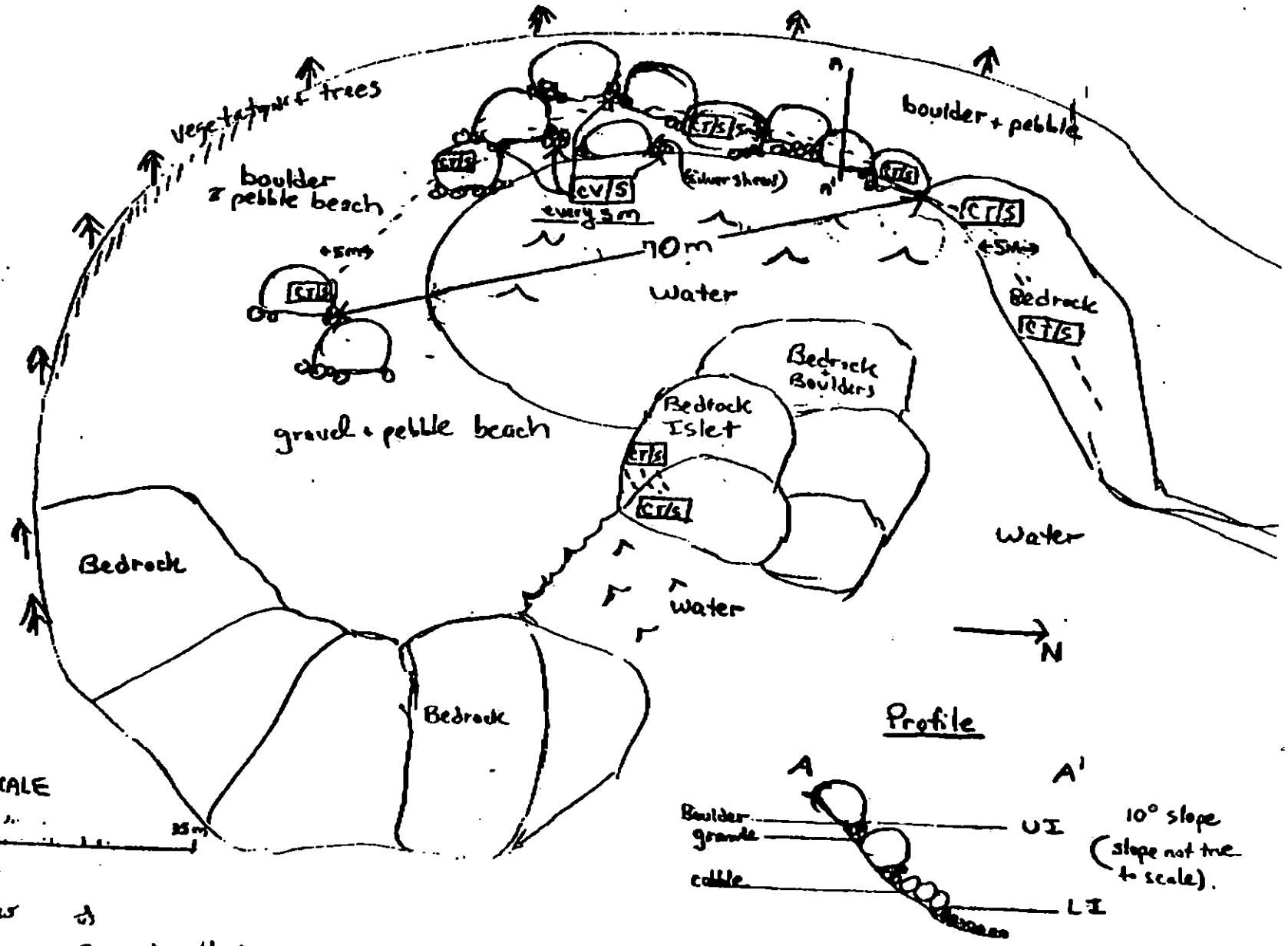
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

ETCH MAP



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____ ← not applicable →

ADEC, Lori Stratton

SHORELINE ECOLOGICAL SUMMARY

Segment ST / PR-13 Subdivision A Date (mo / day / yr) 4/23/90

Time (24 hr) 1900-2020 Biologist MA Scott

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

(B) Overall % cover of biota (% of segment): Dense 60 Moderate 15 Low 25

(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. Ø
Frames Ø

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~~	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	patches-dense beds
2	2	2	2	2	2	2	2	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	

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	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	
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	

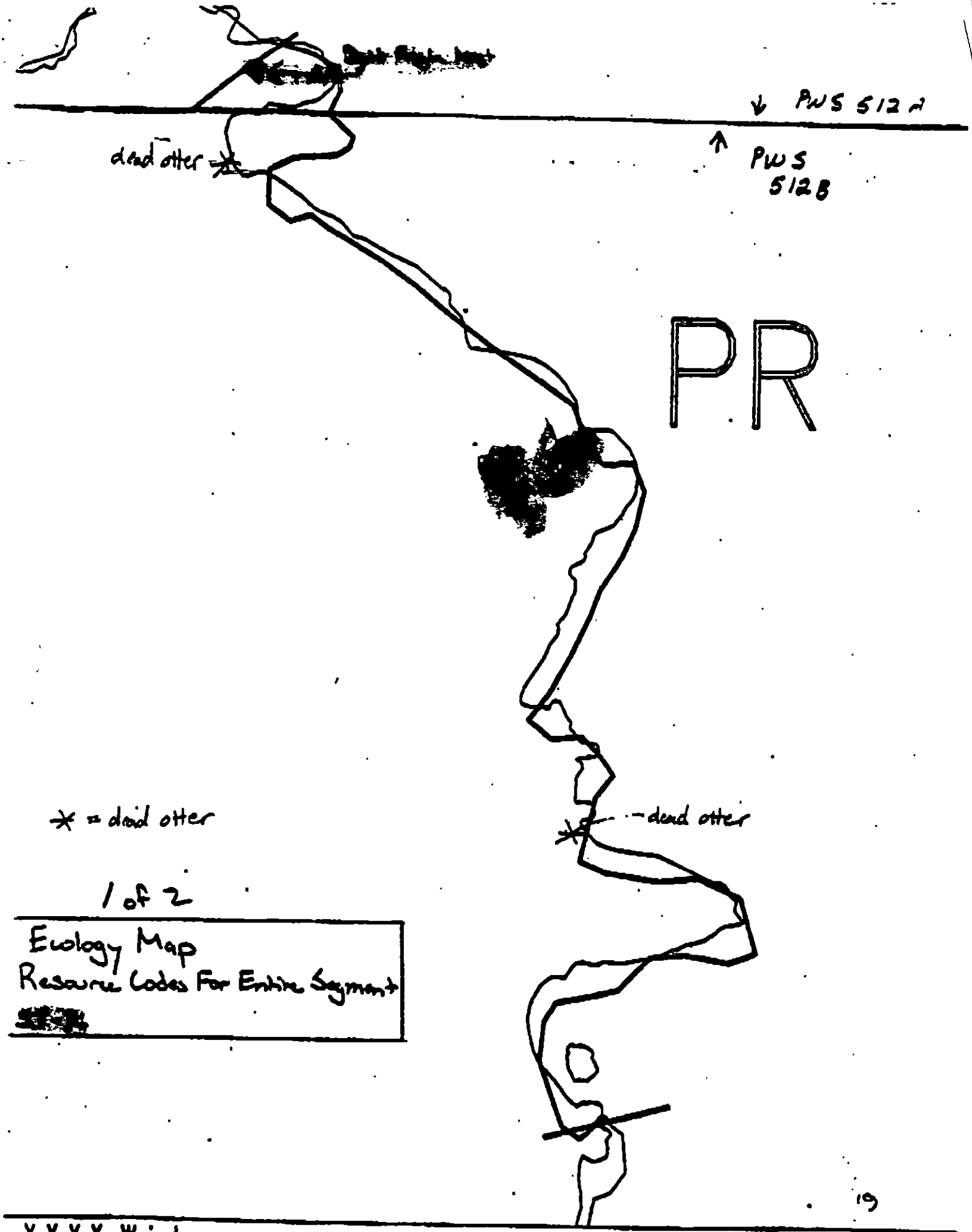
Wildlife Observations/ General Comments (observations from boat)

2 golden eyes
2 dead otters
2 gulls

- northern eagle nest - located ~75 m west of location shown on "eco-map".
- community similar to PR-11A

Ecological Considerations:

2 eagle nests
cobble/pebble beach - low diversity + density (littorines, limpets, barnacles, Fucus)
rock/boul - high density + diversity; M + LTZ - dense algal covering; sea stars abundant
Fucus - reproductive
Recruitment - Mytilus - crevices + edges of bed in MTZ (rare/sp); Littorina sp. sp/med on cobbles
Mortality - Saxidomus shells in L+ tidal on cobble beach, so. end of segment

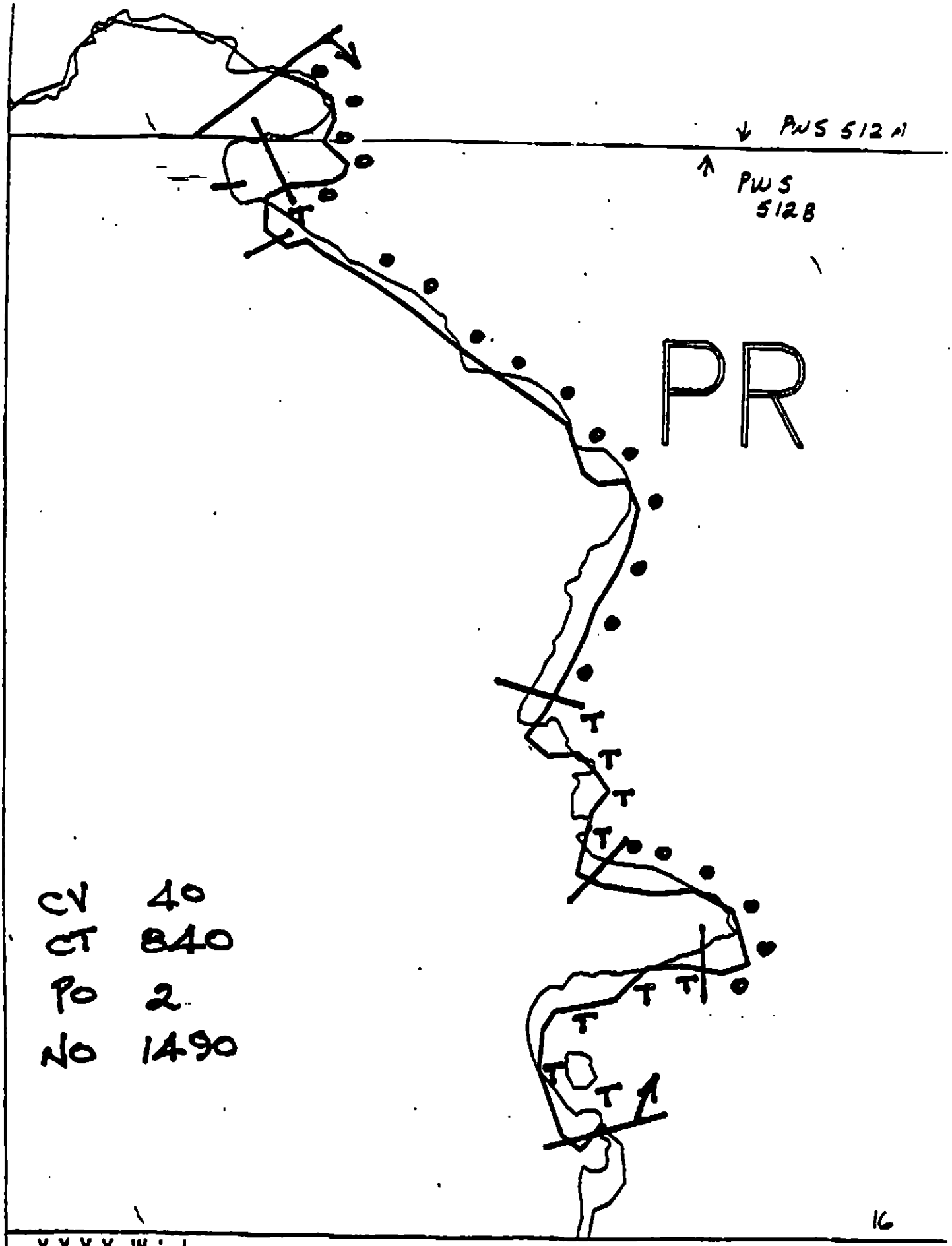


XXXX Wide
//// Medium
---- Narrow

PR-13

ABEC Segment Length: 2320m

Map Key: PWS-512a
Name:



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

PR-13A

ABEC Segment Length: 2329m

0 100 200 300

Map Key: PWS-512a
Name: G.M.
Date: 4.28.90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT PR-13 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	**OPEN**
Bioremediation Other Approved Treatment	**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.

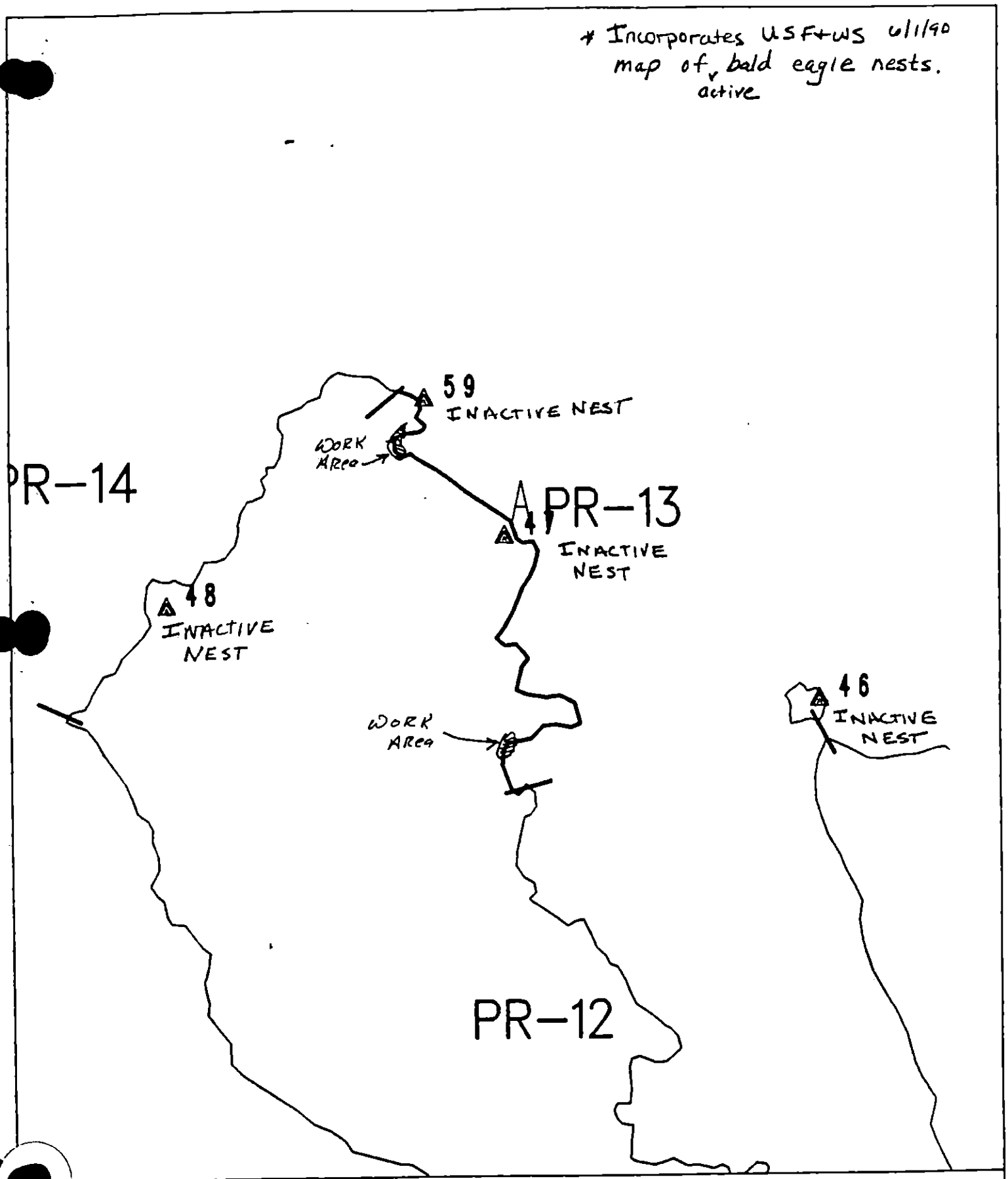
OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC for G.A. Reiter DATE 6/10/90

Prepared By: W. Kelly Date 6/8/90

* Incorporates USF+WS 6/1/90 map of active bald eagle nests.



EXXON

Exxon Company, USA

Map Key: PWS-PR-13

ECOLOGY MAP

SEGMENT PR-13

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

△ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ PR-16 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
5T-8 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination

Contact ADF&G for exact dates and locations. Restrict air and boat traffic to essential minimum. Air approach and takeoff from and to seaward only. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. In particular avoid dense areas of mussels and barnacles.

SHPO SIGNATURE: J. Daniel McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 151 m: Medium 131 m: Narrow 235 m: V.Light 413 m: No Oil 778 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas indicated on sketch maps *Use small mechanical equipment to move storm berm to MITZ and spot hot water wash as berm is moved; use pom-pom boom at shoreline to protect from sheen during work; spot wash upon fringe cobble/boulder rock face sections. Contact USFWS prior to treatment due to eagle nesting constraint and contact ADF&G regarding gill netting and seining openings and closures.

TAG COMMENTS: USE SPOT WASH WITH SORBENTS DURING RISING TIDE FOLLOWING RELOCATION.

TAG APPROVAL DATE: 5/1/90
ADEC JOHN BAUER
EXXON ANDY TEA
NOAA GARY PETROSE
USCG KENNETH KEANE

FOSC: ____ DATE: 6-19-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)	
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.	
1C	Salmon fry nursery area (4/31 to 7/31)	
1D	Esther Hatchery release (4/15 to 6/1)	
1E	Main Bay Hatchery release (4/20 to 5/10)	
1F	Sawmill Bay Hatchery release (4/15 to 6/1)	
1G	Cannery Creek Hatchery release (4/21 to 6/1)	
1H	Remote release site	
1I	Gill net area (6/7 to 8/31)	
1J	Purse seine area (7/20 to 9/30)	
1K	Purse seine hook-off (7/20 to 9/30)	
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.	
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled 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

ST/ PR-16 SUBDIVISION: A, 1 of 1 DATE 4/1/90

NAME David S. Thomas SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

AREC

NAME CLARA Crosby SIGNATURE Clara S. Crosby.

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

SITE Treatment Suggested for high energy C/P Beach;
Mechanical — GENERAL EXCAVATION & Replacement or Dredge
WASH - oiling concentrated in UI, SB/ oiling concentrated in B/
SITE Treatment Suggested: (RE: Sketch) required Omni or Max
Mechanical Treatment Required - Large B/C w/ Bedrock Base -
Area w/ coating on Bedrock Rockface/Cliff - require steaming - if A
treatment —

LAND MANAGER

NAME MARSHA MARTIN / DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

AREA MARKED NO oil WAS observed
skiff, (on computer generated MAP.)

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ PR-16
BIO DAVE Lohse LAND REP Marsha Martin SUBDIVISION A- 1 of 1
EXXON FRANK Doy ADEC Clara Crosby TIME 09 : 10 to 12 : 00
TEAM NO.: 13 TIDE LEVEL: +7 to 0 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 1,600 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SNOW
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 20 % B 30 % C 40 % P 10 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 150 m M 100 m N 50 m VL 500 m NO 800 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SBR/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI
ASPHALT PAVEMENT													
POOLED													
COVER			X					X		X	X		
COAT	X							X		X	X	X	
STAIN		X						X		X	X	X	
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													X

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

PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE T

#BAGS 1

Photographs:

Roll No. ST-13-1

Frames 26 - 32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBR/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI		
1	30	X					5-30	X					X			X				C, P
2	40	X					5-40	X					X			X				C, P
3	30				X		5-30	X				X				X				P, Debris Veg
4	40		X				5-40	X					X			X				C
5	30					X	-		X						X					P
6	20		X				5-20		X				X		X					B, G

COMMENTS

REVIEWED TW DATE 4-4-90

SHORELINE OILING SUMMARY (PAGE 2 of ___)

REVISION 03/23/90

SEGMENT ST/ PR-14 SUBDIVISION A, 1 of 1

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	BSL/BR	DBL/RM	GY/SL	DBR/TL	LBR	SU	UI	MI	LI		
7	40					X	-		X							X				C, S
8	20	X					5-20	X			X					X				C, P, S
9	30					X	-									X				C
10	20					X	-										X			P, G
11	40					X	-									X				P, S
12	40					X	-									X				P
13	15		X				5-15	X					X				X			P
							-													
							-													
							-													
							-													
							-													
							-													
							-													

COMMENTS

REVIEWED JW DATE 4-4-90

OG Rick Gillie

SEGMENT ST/ PR-16

SUBDIVISION A, 1 of 1

DATE 4, 1 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Pit - No Subsurface Oil

2 Pit - Subsurface Oil

CT/C Continuous Distribution

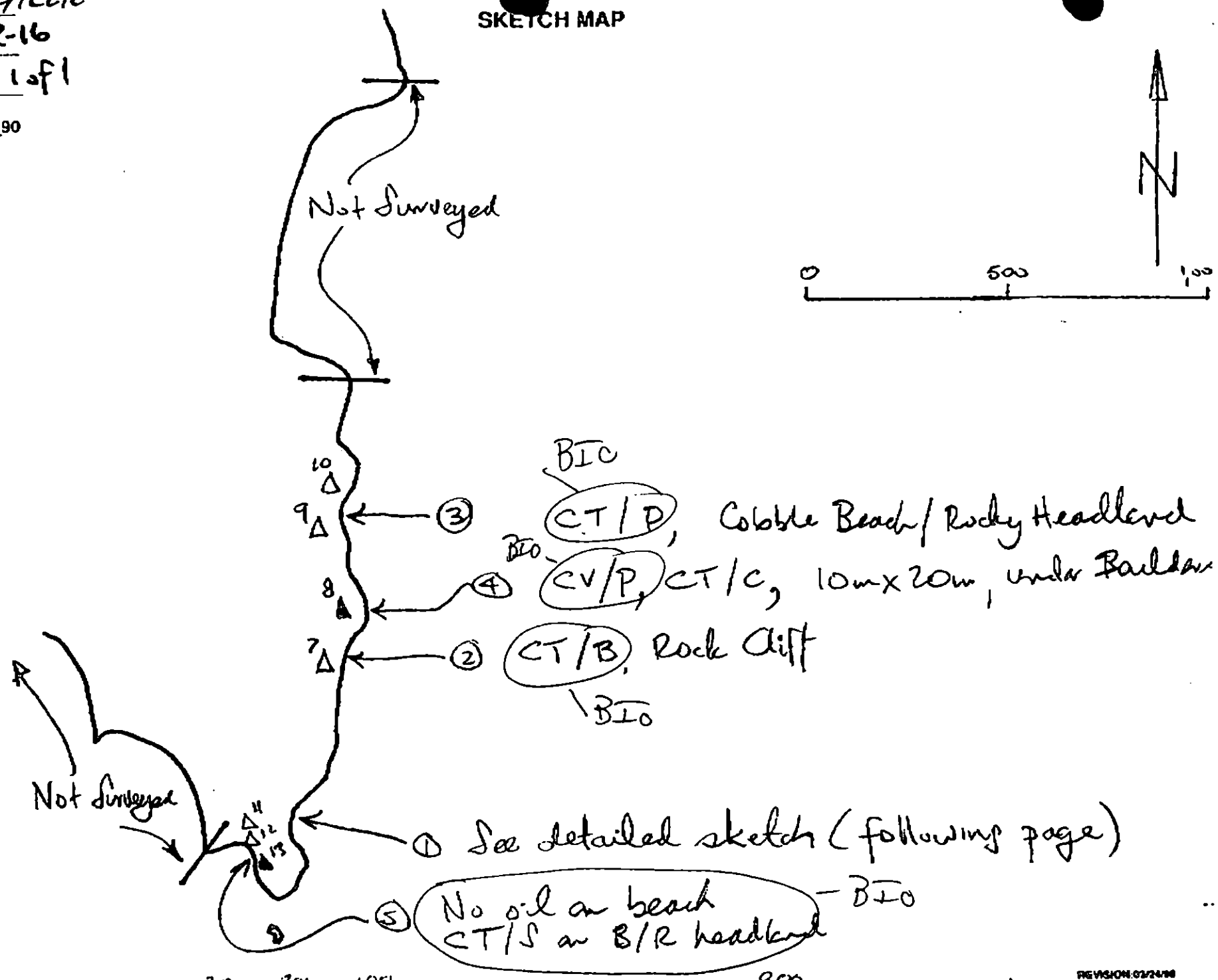
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP____ PO____ CV 20 CT 200 ST 100 MS____ PT____ TB____ FL____ NO 800

REVISION:03/24/98

APR-02-1990 07:10 FROM SEH TRADER TO 18----001507543:18 P.04

[redacted]

SEGMENT ST/ PR-16

[redacted]

DATE 4 / 1 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

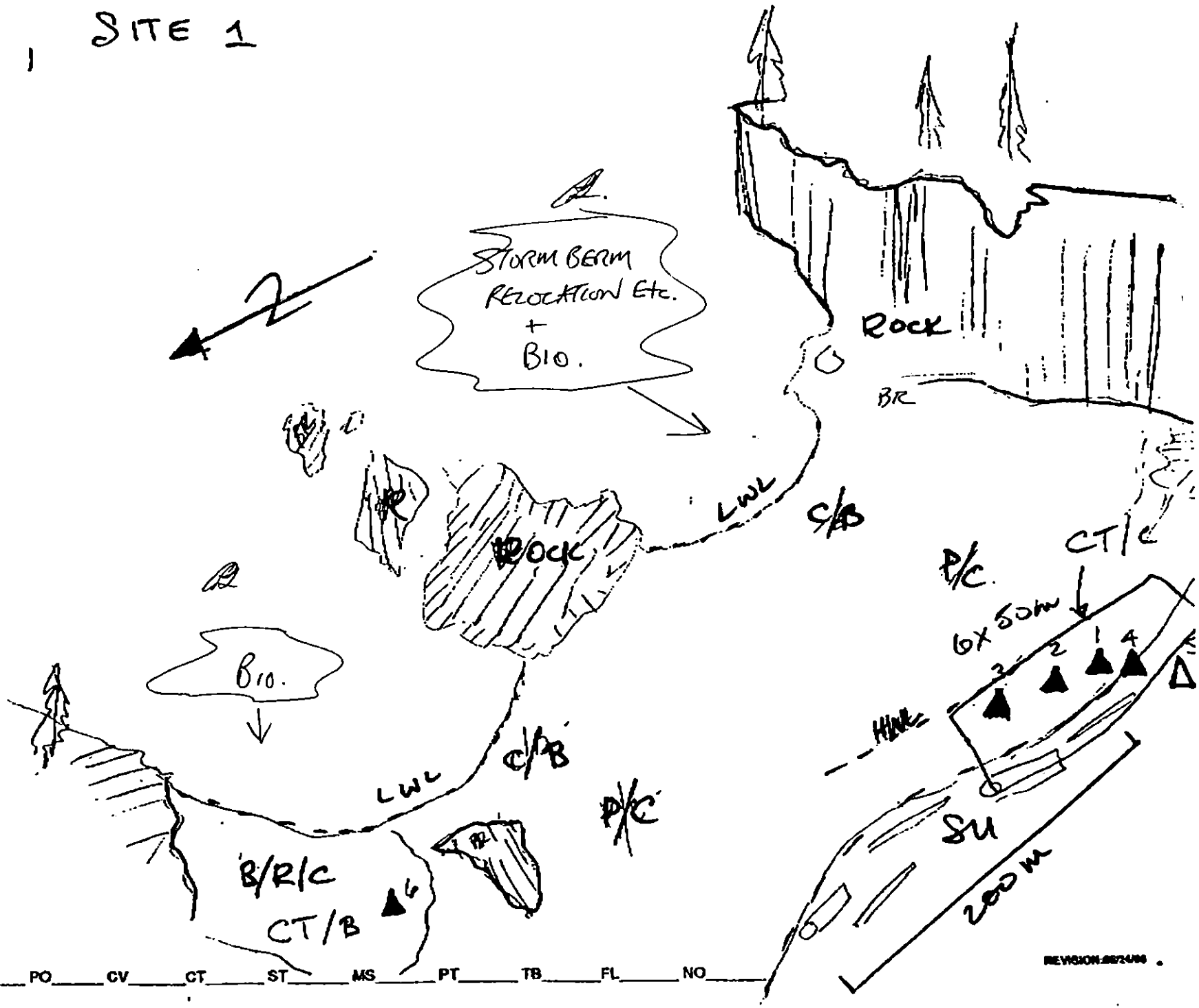
CT/S Splashed Distribution

Oiled Vegetation

1 ●▸ Photo location, direction, and number

SKETCH MAP

SITE 1



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISION 08/24/88

1 of 2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

[illegible] 016 Subdivision A Date (mo / day / yr) 4-1-90

[illegible] 00 Biologist David Cohen

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 40 (4) Pebble 10 (5) Sand ___ (6) Silt ___

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

(C) Dominant 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-13-1

Frames 26-32

BARNACLES

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

LIMPETS

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

See page 2

Ecological Considerations:

11, 15, 6 - no comment

- 8 mature and 2 immature Bald Eagles observed either flying or sitting in trees. No nests were observed. Although it is possible some were counted more than once, I am sure that at least 6 different mature eagles were observed.

. If clean-up is decided upon for sites 2 and 3, caution should be used to not disturb the large beds of barnacles and mussels present lower on the shore

Shoreline Ecological Summary Lot 2

[redacted]-PR016 Subdivision A 4-1-90

[redacted] David Lohse

[redacted] observations / General comments

1. present in low intertidal - Ulva, Halosaccion, Cladophora, coralline algae, Ceramium ([redacted]), Anthopleura, Enteromorpha, Ralfsia, Scytosiphon, Pisaster ochraceus.

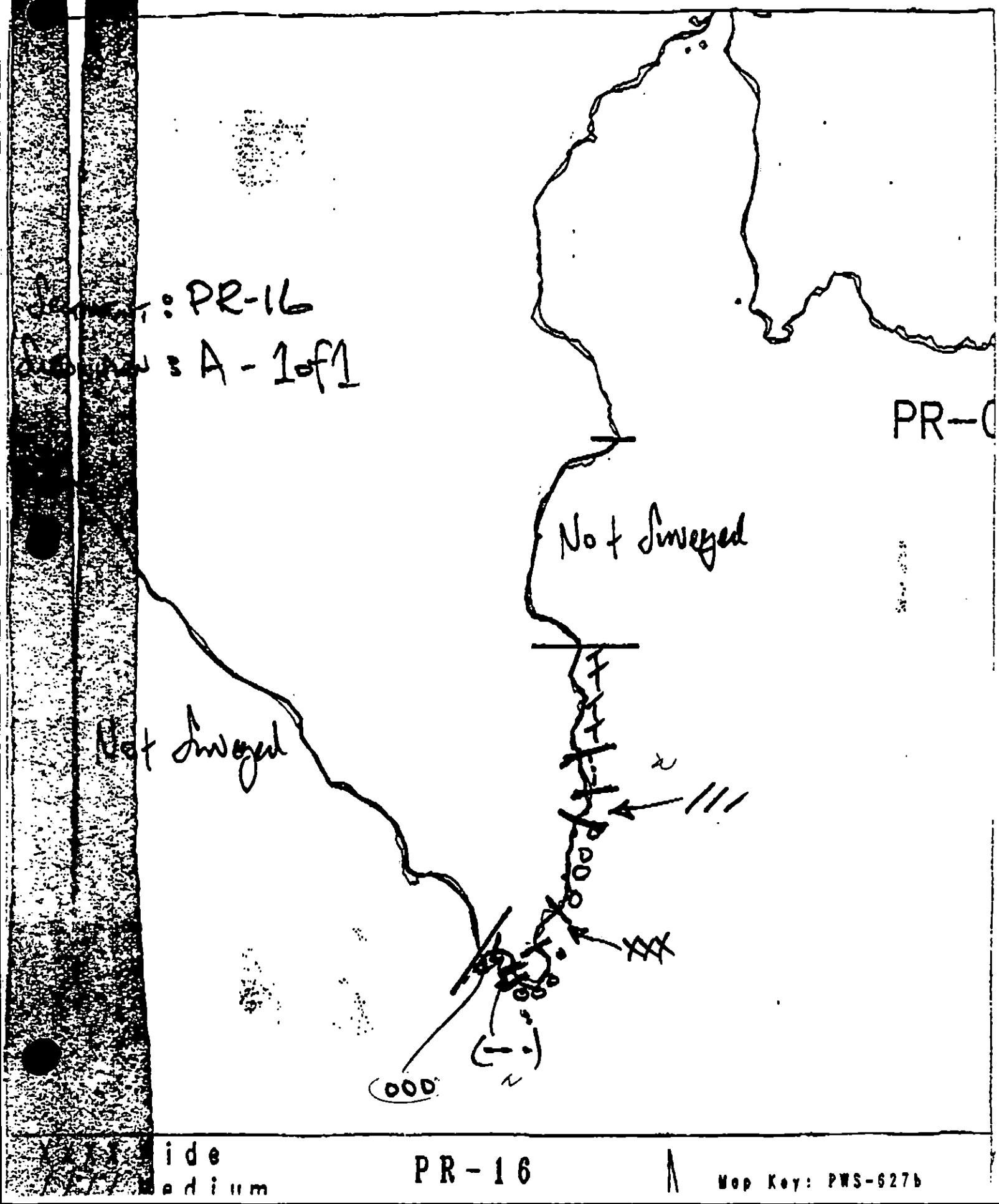
mid intertidal - Anthopleura, Nucella, Scytosiphon, Ulva, Cladophora, Ralfsia, coralline algae, and Enteromorpha (dense in some areas).

high intertidal - Enteromorpha

2. [redacted] seals, mallard ducks, ravens observed in area of site 1 (see 06 map), barnacle mortality on boulders was approximately 45% for adults, 80% for juveniles in mid intertidal. On bedrock adult mortality was approximately 75% in mid-intertidal, and 80% in high intertidal. Dense cover of Enteromorpha present in these areas.

3. Some oil covered barnacles found in high intertidal.

5. At sites 2 and 3 (see 06 map) there was dense mussel bed in mid-intertidal and a dense, but narrow, band of barnacles in high intertidal. Above this was a strip of oil, some of which covered the barnacles at the upper limit of their distribution.


Segment: PR-16
Subsegment: A - 1of1
PR-0
Not Surveyed
Not Surveyed
XXX
OOO
ide
edium
PR-16
Map Key: PWS-627b

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PR-16 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation
Spot Washing
Mechanical Relocation
Other Approved Treatment **CLOSED**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1I	**Gill Net Area**	Closed to bioremediation, spot washing, mechanical relocation and other approved treatment after 6/7.
1J	**Purse Seine Area**	Closed to bioremediation, spot washing, mechanical relocation and other approved treatment after 7/20.
5T	**Bald Eagle Nest**	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to bioremediation, spot washing, mechanical relocation, and other approved treatment within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC [signature] Date 7/3/90

Prepared by [signature] Date 6/14/90

WORK PLAN ADDENDUM

Segment PR 16 Subdivision A Dated 6/27/90.

MODIFICATION

1. REASON FOR MODIFICATION

· CHANGE IN EQUIPMENT TYPING FROM "SMALL" TO LARGER TRACKED BACKHOE

2. ADJUSTMENT TO WORK PLAN

LARGER TRACKED VEHICLE APPROVED FOR BERM RELOCATION

SHPO APPROVAL NEEDED YES _____ SHPO SIGNATURE _____

NO X

TAG APPROVAL DATE _____

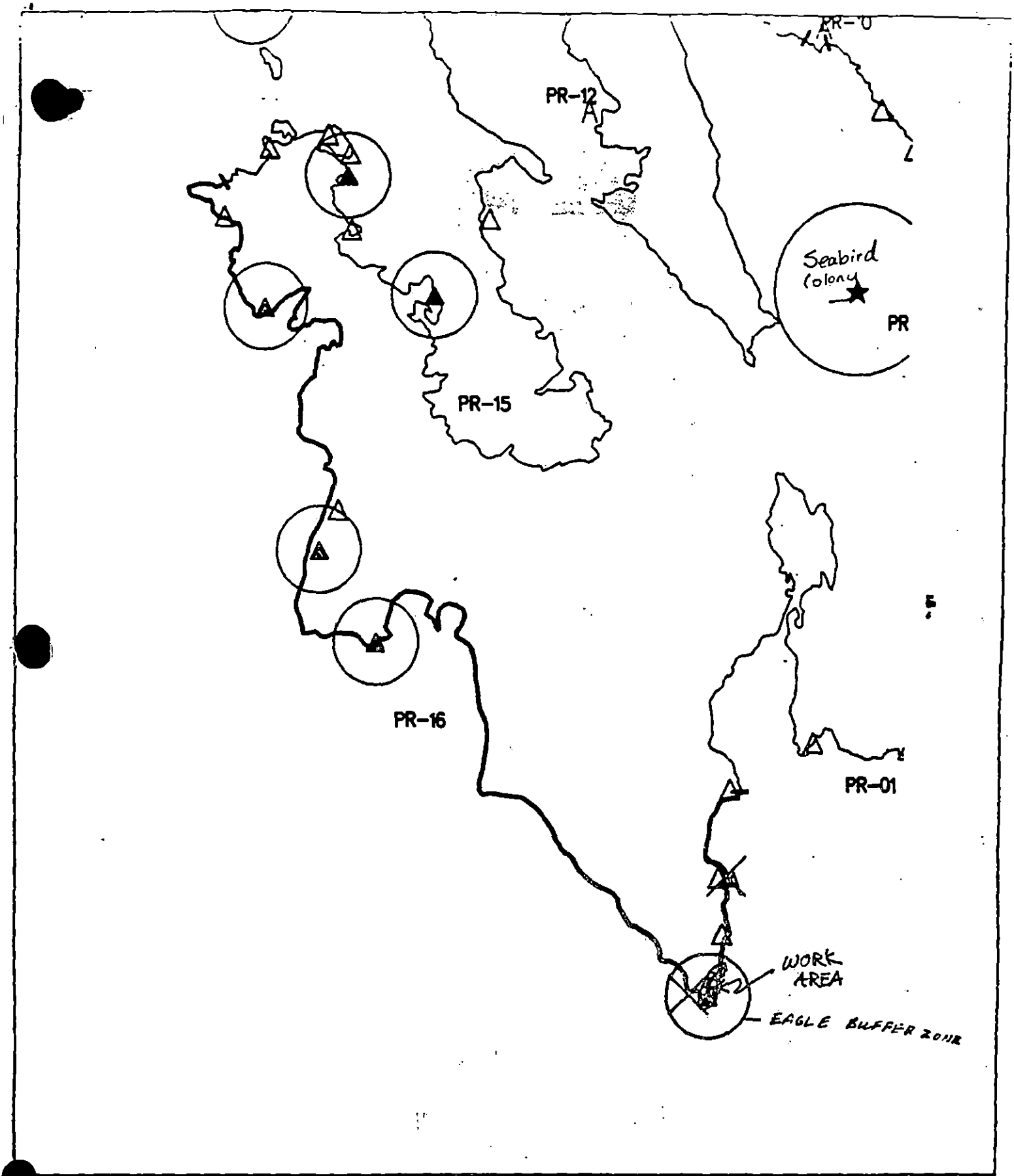
ADEC Ray Morris

EXXON Andy Teal

NOAA Scott Tukoff

USCG G.A. Reiter

FOSC _____ DATE 7-10-90



EXXON

Exxon Company, USA
Map Key: PWS-PR-16

ECOLOGY MAP
SEGMENT PR-16
SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 4022 feet

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