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HAMILTON BAY WB FILE
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United States
Department of
Agriculture

Forest
Service

Alaska Region

Tongass National Forest
Stikine Area
P.O. Box 309
Petersburg, AK 99833

File Code: 5460

Date: May 01, 1995

State of Alaska
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

MAY 3 1995

Dear Sir/Madam:

Enclosed please find the 1994 Bark Monitoring Reports for Rowan Bay Log Transfer Facility (LTF), Chatham Strait 60, Department of the Army (DA) permit No. 2-750228, and Hamilton Bay LTF, Keku Strait 26, DA permit No. 2-810493. If you have any questions or need further information please contact Michele Parker at (907) 772-5850 or (907) 772-3841.

Sincerely,

Abigail H. Kimbell
ABIGAIL H. KIMBELL
Forest Supervisor

Enclosures





United States
Department of
Agriculture

Forest
Service

Alaska Region

Tongass National Forest
Petersburg Ranger District
P.O. Box 1328
Petersburg, AK 99833

File Code: 2639
Route To: Michele Parker

Date: February 28, 1995

Subject: LTF Permit Monitoring

To: Forest Supervisor

The following report summarizes the results of the 1994 Log Transfer Facility (LTF) lost bark monitoring. As required by the LTF permits, lost wood solids accumulations were mapped at Rowan Bay (Chatham Strait 60) and Little Hamilton (Neku Strait 26). Otto Cornthwaite of Sunstar Diving was contracted to map lost wood accumulations. The diving was conducted on March 12, 1994 at Little Hamilton LTF and March 20, 1994 at Rowan Bay LTF.

SITES

Attached are diagrammatic maps for the three sites examined. The results of the monitoring, including inferences have been plotted. Accumulations of wood solids should be interpreted as a probable maximum accumulation estimated from data points.

METHODS

Each LTF was examined by a SCUBA diver for lost wood solids as required by permit stipulation. A white sinking line, marked every 5 and 10 meters, tied to the bulkhead and anchored off shore was used to locate data points. At each data point the diver measured the depth of wood deposits with a graduated rod and recorded the measurements in centimeters on a plexiglass sheet. Transects were measured until bark accumulations ceased, or a depth of 60 feet was reached, whichever came first.

RESULTS

Rowan Bay

As found in past inspections, the soft bottom of Rowan Bay resulted in difficulty obtaining accurate measurements of bark accumulations. Conducting the dive in winter allowed for better visibility in the water. Approximately 95 % of the area inspected had continuous coverage of wood solids greater than 10 centimeters. Otto Cornthwaite did both the 1992 and 1994 dives and found more marine life in 1994 than was present in 1992. A list is enclosed with the transect measurements. The highest concentration of bark was found in a line from the bulkhead northeast toward the shore. This concentration was deeper than in 1992.





Little Hamilton

The Little Hamilton LTF site also has a soft bottom that makes measurement difficult. Conducting the dive in winter allowed for better visibility in the water. Approximately 88% of the area inspected had continuous coverage of wood solids greater than 10 centimeters. A list of the marine life found is included with the transect measurements.

PRECISION AND ACCURACY

The accuracy of the monitoring and methods is subjectively rated fair. Due to irregular material (wood solids) and substrates (mud, boulder, etc.) it is a somewhat subjective process of reporting depth accumulations. Depths may be exaggerated due to the inability of the diver to distinguish at what point the woody material ends and the natural bottom substrate begins. Further, there is a qualitative difference between 10 centimeters of branches or boles as opposed to 10 centimeters of bark chips. In mud bottom situations, it is difficult to establish a base from which to measure wood accumulation, and in reduced visibility estimates must at times be entirely tactile (through gloves).

The precision of the monitoring methods is subjectively rated fair. Due to lateral displacement of the transect line by bottom currents, setting of transects with a compass, irregular bottom currents, and the comments regarding accuracy, it is subjectively judged to be only a generally repeatable procedure.

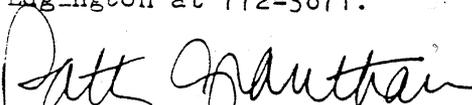
After taking the transect information, Otto video taped portions of the LTF site to get a random sampling of bark depth. This visual record could help those not equipped to dive the site get a better understanding of the accumulations.

RECOMMENDATIONS

I recommend using the same dive contractor as previous dives. Although this does not create better accuracy, it does allow for better comparison between years. If a contractor other than the one used for the past two dives at Rowan Bay and Little Hamilton is used, that contractor should be used for several years in a row to get a good comparison. (I would however suggest staying with our current arrangement for the best comparison.)

Continued use of video equipment is recommended to get a representative sample of conditions at the LTF sites.

If additional information or clarification is needed please contact John Edgington at 772-3871.


PATRICIA A. GRANTHAM
District Ranger

enclosures

022895 0900 FWW 2638 SJ



BARK ACCUMULATION (cm)

STP SITE Rowan Bay

USFS REP. Sue Jennings

CONTRACTOR Otto Cornthwaite

STOPS	Meters	TRANSECTS					
		130°	110°	90°	70°	50°	30°
1	10	45		21	12	14	3
2	20	70	Rock	34	70	31	22
3	30	40		40	112	40	54
4	40	15		30	150	35	52
5	50	101		25	150	47	106
6	60	143		15	35	31	51
7	70	21	6DC	99	46	21	15
8	80	5		92	40	34	41
9	90	53		54	35	93	23
10	100	85	Rock	150	38	51	94
11	110	40		15*	10*	5*	30*
12	120	Rock					150
13	130						114
14	140						150
15	150						150
16	160						150
17	170						150
18	180						150
19	190						150
20	200						141
21	210						136
22	220						143
23	230						95 C
24	240						73
25	250						12 L
26	260						15
							10*

Start	Bulkhead	Bulkhead	Bulkhead	Bulkhead	Bulkhead	Bulkhead
End	120 M	110 M	110 M	110 M	110 M	260 M
Depth (ft)	47	50	60	60	60	50
Orient.	130°	110°	90°	70°	50°	30°
Date	3-20-94	3-20-94	3-20-94	3-20-94	3-20-94	3-20-94

Brnc = Branches
 Rock = Rock at that location so no measurement
 6 DC = Six dungeness crab
 L = Limbs

Depths are in centimeters
 Place an asterisk at end of transect dive

Rowan Bay LTF notes from Otto Cornthwaite

Upon diving at Rowan Bay I found an increase of marine life in comparison to the diving in 1992. Here is a list of some of the marine life I found:

Scypha compress	sponge	
Gersemia rubiformis	soft coral	
Metraidsom senile	sea anemones	
Nucella lamellosa	dogwinkle snail	
Humularia kennecleyi	clam	
	shrimp	
Elassochirus cavimanus	hermit crab	
Cancer magister	Dungeness crab	I found a total of 6 dead Dungeness crab, and around 10-12 live ones.
Pycnopodia halianthordes	sunflower starfish	
Parastichopus californicus	sea cucumber	

and a couple fish as seen in the video.

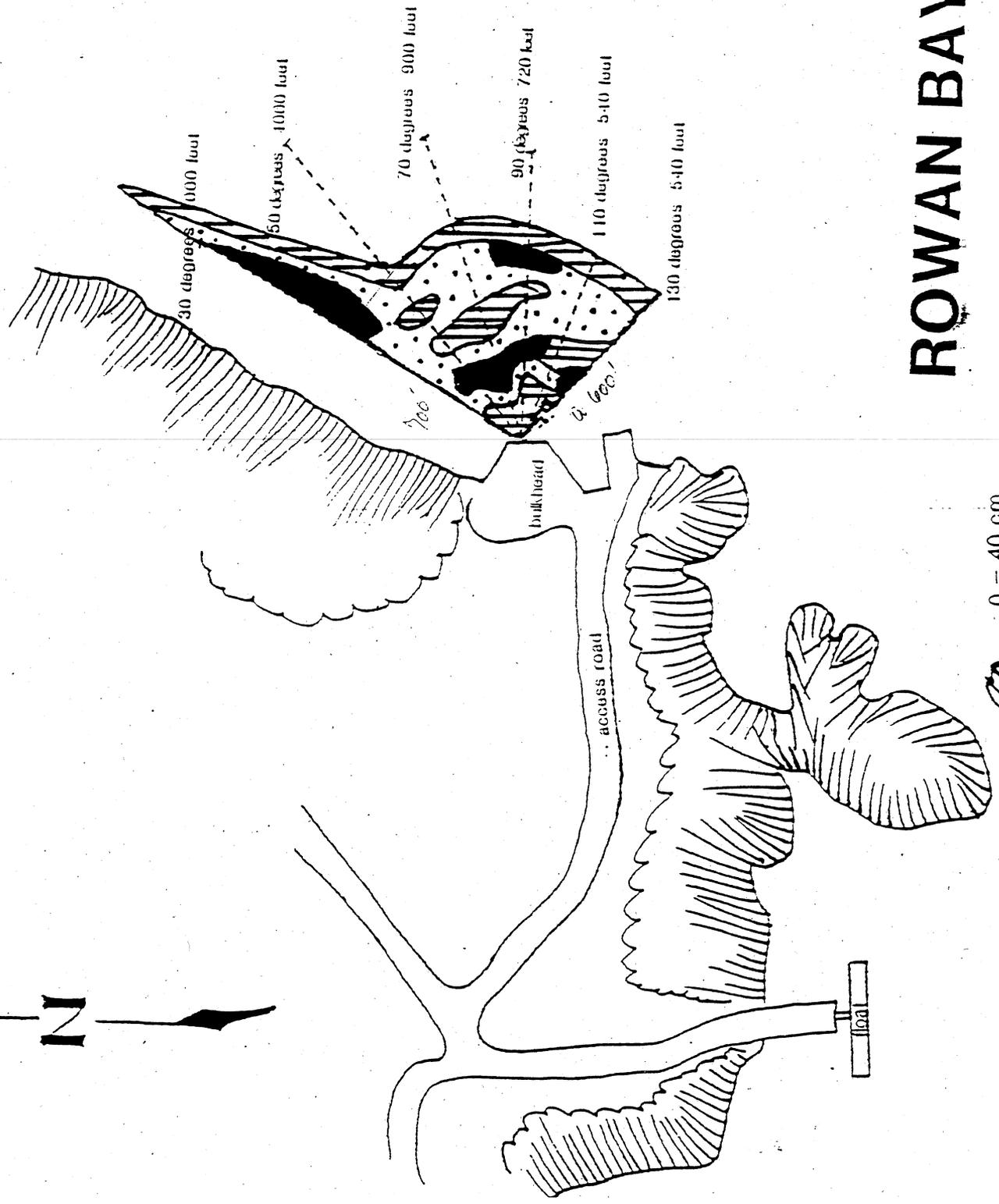
The dive in 1992, I found only dead Dungeness crab and no other marine life in the area of the LTF.

ROWAN BAY

DIVING TRANSECTS

ROWAN BAY LTF

1" = 400 feet



- 0 - 40 cm
- 41 - 100 cm
- 100+ cm

BARK ACCUMULATION (cm)

ETF SITE Nicola Hamilton

USFS REP. Karri Johnson

CONTRACTOR Otto Gornhwaite

STOPS	TRANSECTS								
	Meters	Center	1	2	3	4	5	6	7
1	5	10	20	30	40	50	60	70	80
2	10	101	41	59	30	21	11	11	21
3	15	140	59	51	56	39	29	42	10
4	20	120	40	40	30	40	30	39	29
5	25	100	70	100	41	59	22	31	23
6	30	110	71	30	62	100	41	92	22
7	35	30	32	71	120	141	32	33	40
8	40	71	39	62	100 C	140	30	39	51
9	45	52	31	61	100	140	10	39	59
10	50	62	30 C	70	31	110	91	31	73
11	55	60	21	31	72	140	42	31	59
12	60	31	11	72	40	121	32	30	30
13	65	10	10	72	40	100	22	34	50
14	70			51	21	40	22	33	59
15	75			50	10	20	39	10	32
16	80					11	31	11	30 DC
17	85						79		21
18	90						33		13
19	95						41		10
20	100						11		
21	105						10		

Start: All transects start from the south. The center is the bulkhead. Transects are measured out from the bulkhead to the west they are numbered increasing the further west traveled. To the east letters with the B being further east than A. B and 5 are the same distance from the center but in opposite directions.

Depth (ft)	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
Orient.	<u>South to North</u>						
Date	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>

- DC = Dungeness Crab
- L = Limbs
- C = Cable

Depths are in centimeters
Place an asterisk at end of transect dive

*AI - Hamilton ETF
is located on N.W.
Kupreanof Island,
<10 miles SE of
Kate.
JZ*

BARK ACCUMULATION (cm)

(continuation sheet)

TRF SITE Little Hamilton

CONTRACTOR Cornthwaite

STOPS	TRANSECTS					
	Meters	A	B	C	D	E
1	5	21	10	9	0	0
2	10	22	21	21	22	10
3	15	43	33	13	31	12
4	20	50	35	33	29	14
5	25	79	41	41	33	20
6	30	28	52	40	37	23
7	35	43	41	30	50	30
8	40	65	50	44	42	32
9	45	63	29	51	43	43
10	50	31	30	50	40	19
11	55	45	22	33	33	31
12	60	30	20	45	33	32
13	65	21	11	21	21	3
14	70	0		43	20	26
15	75			20 *	9	10
16	80			7 *		14
17	85					9
18	90					0 *
19	95					

Start	<u>Explained above</u>				
End					
Depth	<u>20</u>	<u>20</u>	<u>20</u>	<u>17</u>	<u>16</u>
Orient.					
Date	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>	<u>3-12-94</u>

Depths are in centimeters
Place an asterisk at end of transect dive

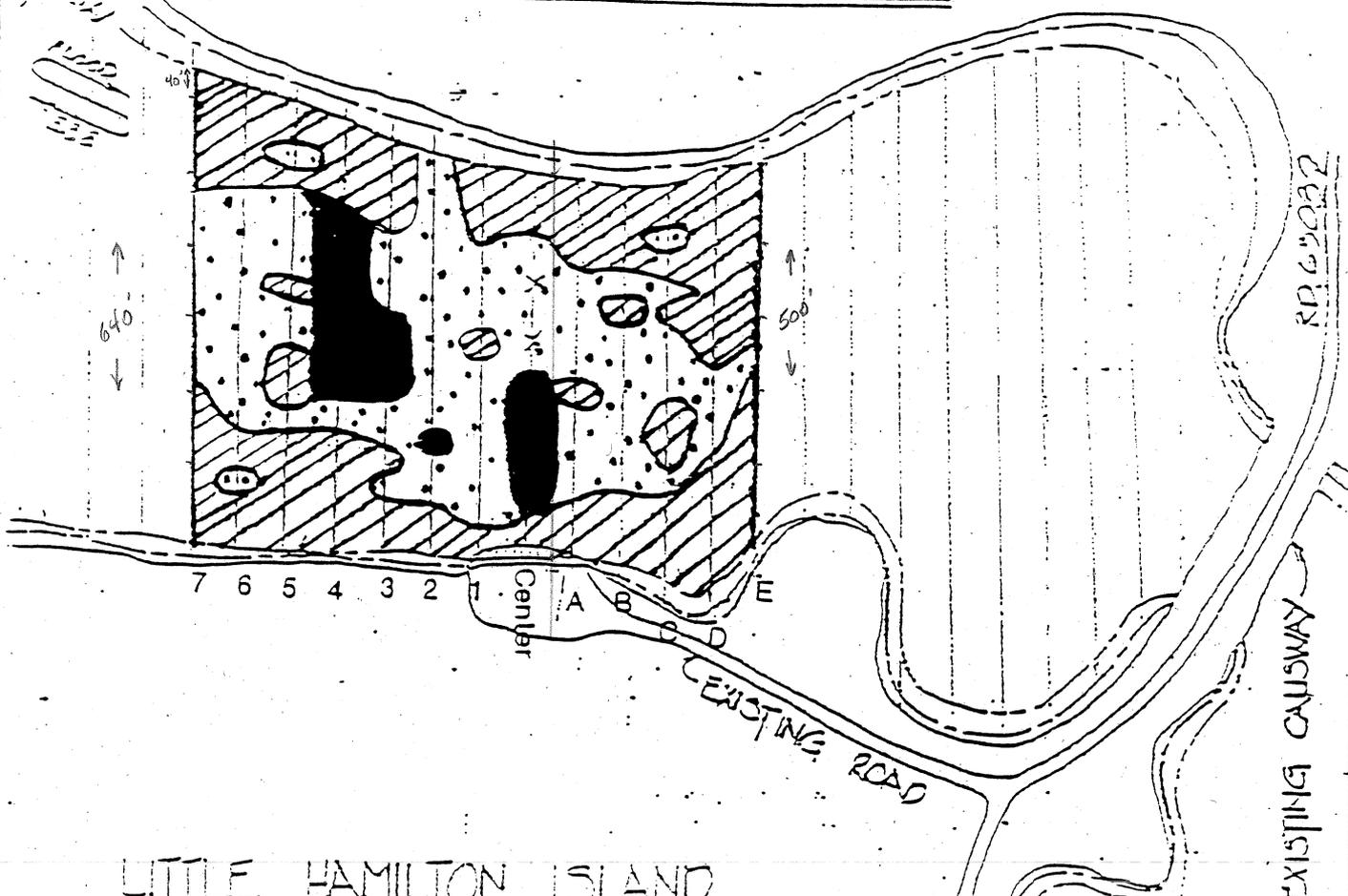
Notes from Otto Cornthwaite on the Little Hamilton LTF

Upon diving at the Little Hamilton log transfer facility (LTF) I found the same marine life as found in 1992 with the exception to the *Melibe leonina* a nudibranch gastropod. You'll see this in the video. This is the first time I've seen this nudibranch in 10 years of diving and over 3000 dives. I also found:

Cancer magister	Dungeness crab	15-20 crabs
Metridium senile	sea anemones	
Hemissuda crassicornis	nudibranch	
Saxidomus giganteus	butter clam	
Pycnopodia helianthoides	sunflower starfish	

and other types of starfish, seen in the video.

KUPREANOF ISLAND



LITTLE HAMILTON ISLAND

PLAN VIEW

0 100 200 300 400 FEET

Transsects

Center Transect

-  0 - 40 cm
-  41 - 100 cm
-  100+ cm

62,500 ft²
100' = 625 ft²

$698 \text{ DOTS} \times 625 \text{ ft}^2 = 436,250 \text{ ft}^2 = 43,560 \text{ ft}^2/\text{AC} = 10.01 \text{ ACRES}$

WEST STRAIT 25

HAMILTON BAY ON LITTLE HAMILTON ISLAND
ALASKA, APPROX. 0. NAUTICAL MILES
SOUTHEAST OF KAKE, ALASKA