

**Saint John the Baptist  
Log Transfer Facility  
Bark Monitoring Survey  
Survey Date June 3, 2002**

**Longitude 135°33'501"  
Latitude 57°17'190"**

*.08 ac  
←  
.22 recalc*

Submitted to:

United States Department of Agriculture  
United States Forest Service, Region 10  
Tongass National Forest  
Federal Building  
648 Mission Street  
Ketchikan, Alaska 99901

Prepared by:

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**Submitted July 15, 2002**

## Introduction

An underwater reconnaissance was requested to determine the representative condition of an area operating as a Log Transfer Facility (LTF). The survey dive was conducted on June 3, 2002. The site surveyed is located on Baranof Island in Saint John the Baptist Bay<sup>1</sup>. This report was conducted under the authority of USFS contract Number 53-0116-2-00486.

This inspection documented findings according to the stipulations in the United States Forest Service (USFS) Permit Dive Monitoring contract No. 53-0116-2-00486, and the Alaska Department of Environmental Conservation (ADEC), Environmental Protection Agency (EPA) and NPDES requirements. The percentage of bark coverage was determined by using the protocol for operating a bark-monitoring program given in the EPA General Permit. An additional category was inserted into the sample point tables to report the depth and type of material covering the bark. The area calculation used in this report is outlined in the ADEC publication "**Required Method for Bark Monitoring Surveys under the LTF General Permits**".

## Methods

### *Radial Transects:*

The fixed hub reference point for the transects radiating from the log transfer ramp was initially located by assessing maps and diagrams created by Greg Updike in the September 2000 bark monitoring survey.

The reference hub was located as close as possible to the center of the discharge site to facilitate future reconnaissance. Five transects were established, radiating from the reference hub at 30-degree intervals. The transects followed the headings established in previous bark monitoring surveys at the site. Two separate magnetic compasses were compared to determine the bearings. Transducers and transponders were used in conjunction with DGPS to monitoring the diver's progress.

### *Sample Points:*

Samples were taken at intervals of 15 linear feet along each transect. This interval distance was established with the use of a metal ruler 48 inches in length, laid end over end. The sample points began at 15 linear feet from the fixed reference hub and continued along the transect, terminated by the requisite of beyond the area of bark accumulation, or to a water depth of 60 feet at MLLW, whichever is first.

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<sup>1</sup> Please see Appendix A for area and site map.

At each sample point observations were noted on the abundance and type of marine organisms present, the native vegetation, and composition of the substrate. Data including the water depth, current direction, and estimated current velocity also were incorporated into the field notes. Each of the sample points also included relevant observations on operational debris and existing bark debris. Photographic documentation<sup>2</sup> was used at representative sample locations to record algal life, animal life, substrate, and debris present. Sample location depth notations are based on readings from a Cochran Consulting Nemesis IIA dive computer calibrated for saltwater and altitude.

### Findings

#### *Survey Area:*

The total area covered by this survey was 1.31 acres (5332 m<sup>2</sup>).

*cc = 0.22 ac*

#### *Zone of Deposit:*

The ZOD for the Saint John the Baptist LTF is 0.53 acres. Consisting of 0.08 acres (324 m<sup>2</sup>) continuous and, 0.45 acres (1821 m<sup>2</sup>) discontinuous.

#### *Log Transfer Ramp:*

The reference point hub position, located at the seaward end of the beaver slide was recorded using a Raytheon DGPS. The coordinates for this hub are N 57° 17 190 by W 135° 33 501.

Weather conditions during the survey consisted of overcast skies with winds less than fifteen knots. Diving commenced at 9 a.m. during high tide. The tidal station (subordinate station #1763) was used to correct depths to MLLW. The station reported a tide level of 6 ft at 9 a.m. The current conditions remained negligible. Seawater temperature was recorded at 44 degrees F. The horizontal visibility was estimated to be 5 feet.

Five transects radiated out from the reference point on bearings labeled T<sup>1</sup> 140°, T<sup>2</sup> 170°, T<sup>3</sup> 200°, T<sup>4</sup> 230° and, T<sup>5</sup> 260°. A total of 83 sample locations were assessed.

Site conditions remained steady with winds less than ten knots and clear skies. Diving concluded at 1 p.m., during low tide. The tidal station (subordinate station #1763) was used for depth corrections, reporting a 2 ft tide level at 1 p.m.<sup>3</sup>. Current velocity was negligible. The horizontal visibility remained constant and was estimated to be 5 feet.

Each transect terminated by 60 FSW, corrected to MLLW at subordinate station #1763. The slope for these transects averaged a gradient of 3 to 1.

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<sup>2</sup> Please see Appendix E for photographic documentation.

<sup>3</sup> Please see Appendix B for tidal information.

## Observations

### *Log Transfer Ramp:*

Saint John the Baptist was not operational at the time of the survey. The LTF was under a plankton bloom at the time and visibility was reduced to about five feet. The site appeared to be under a natural silt remediation process that had reduced the exposed bark debris considerably from the prior survey dated September 2000.

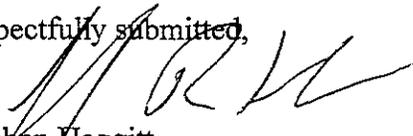
## Conclusions

The General Permit AK-G70-1000 requires the bark monitoring survey to evaluate whether the discharge site has exceeded the zone of deposit. The ADEC has defined the ZOD as the outer boundary of the project area.

In accordance with the requirements listed above and with regard to the project area that was surveyed according to the methods approved by the EPA and ADEC, it is my opinion that the discharge site has not exceeded the zone of deposit.

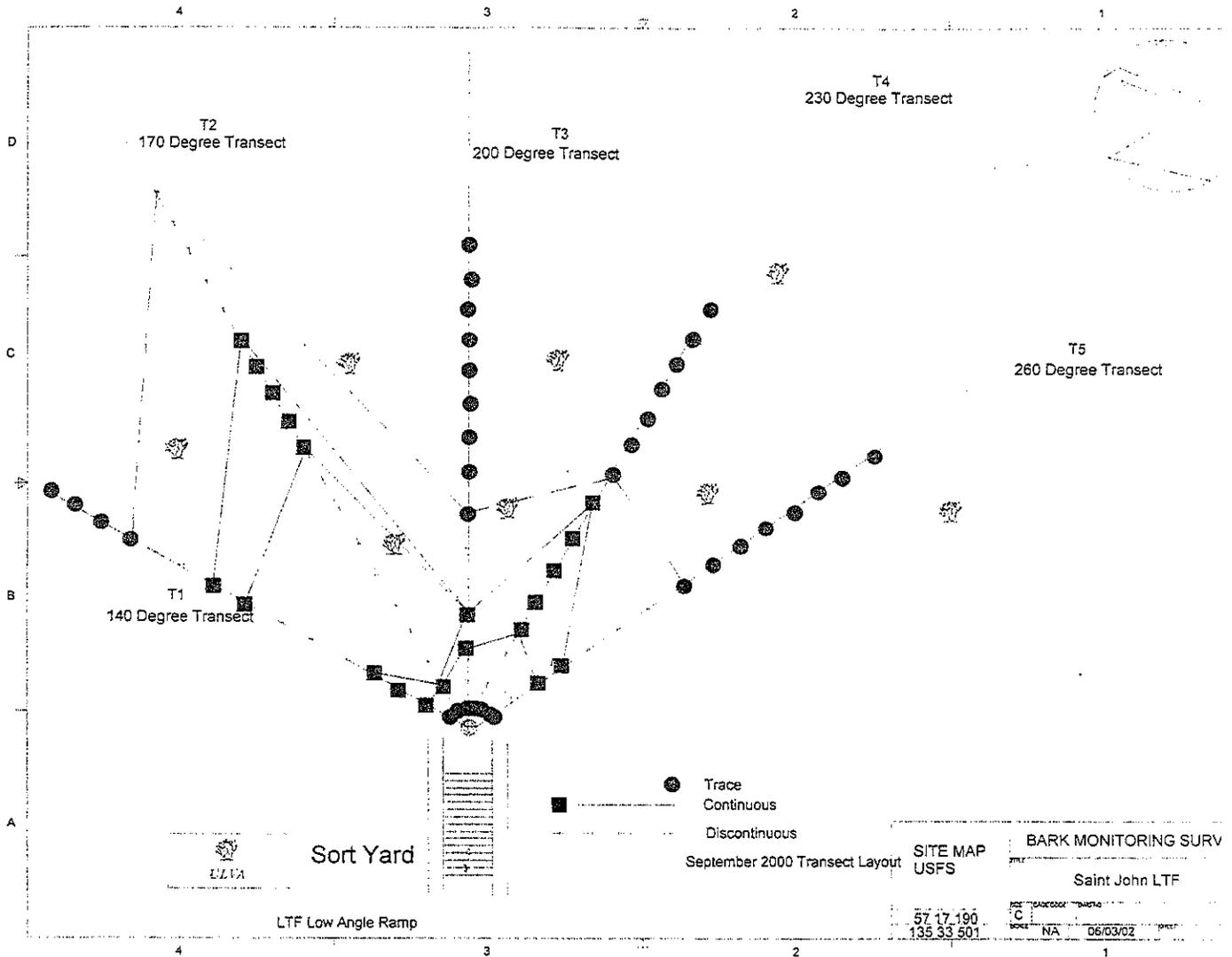
If you have need of further service regarding this report, please contact me directly at (253) 209 9380. E-mail correspondence can be forwarded to [Haggitt1@juno.com](mailto:Haggitt1@juno.com). I appreciate the opportunity to provide you with this report.

Respectfully submitted,



Stephen Haggitt  
July 8, 2002

# Appendix A



# Appendix B

Station: Neva Strait, Whitestone Narrows 6/3/2002



Station: Neva Strait, Whitestone Narrows  
 Station on Sitka, Alaska (NOAA)

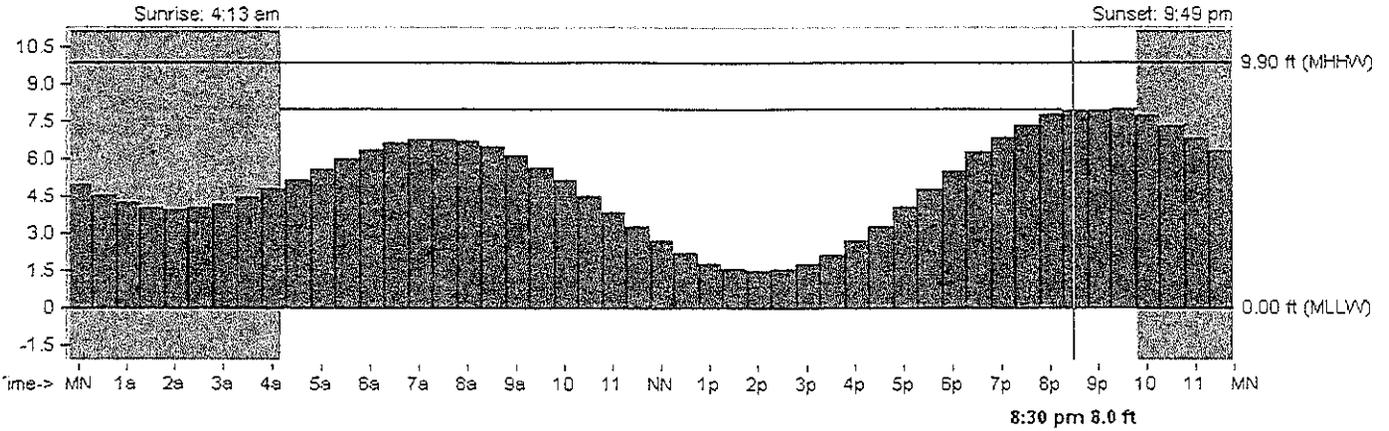
Lat 57°15' N Lon 135°34' W  
 Station ID 1763

Next High: 1:00 pm  
 Next Low: 2:00 am (Tomorrow)  
 Neap Tide  
 3rd Qtr moon yesterday

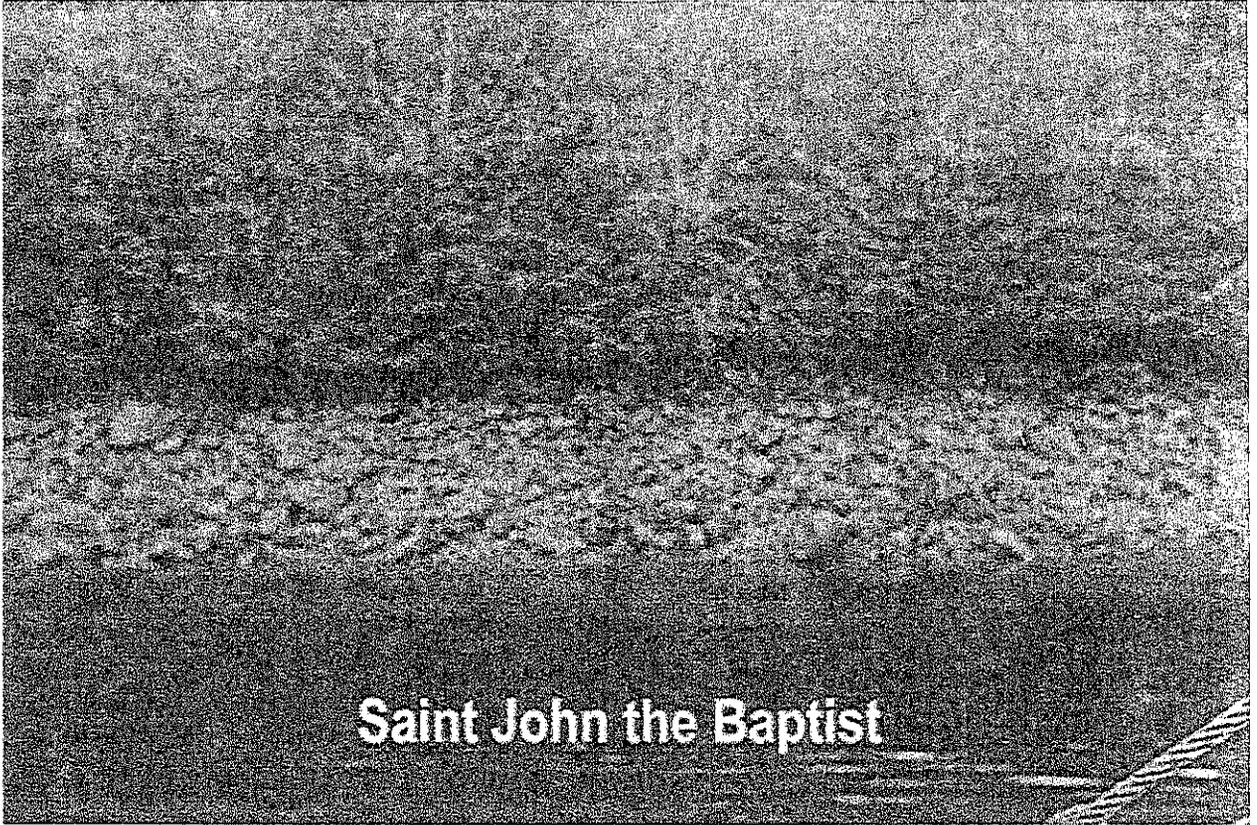
Daily Highs & Lows:  
 Low 2:04 am 4.0 ft  
 High 7:23 am 6.9 ft  
 Low 2:03 pm 1.5 ft  
 High 8:55 pm 8.1 ft

Average Tides:  
 Mean Range: 7.80 ft  
 MHHW: 9.90 ft  
 Mean Tide: 5.30 ft

Monday, June 3, 2002  
 Alaska Daylight Time



Appendix C

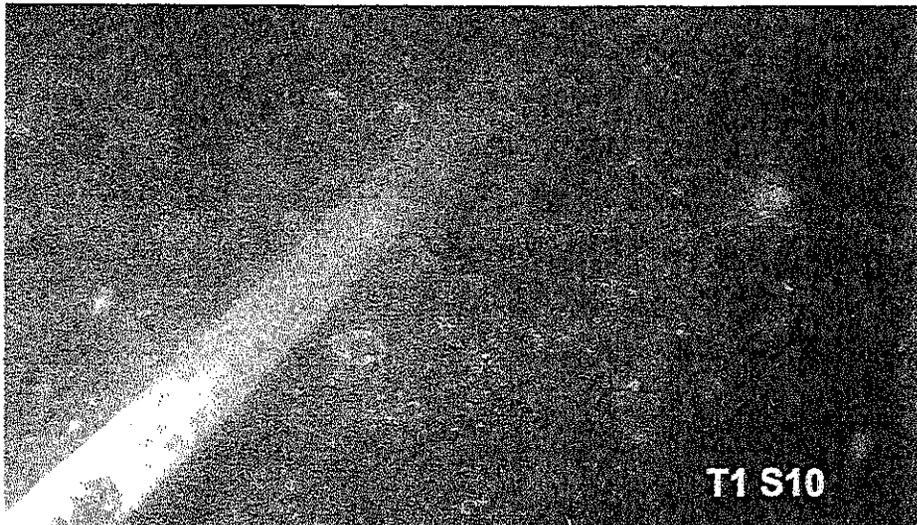




T1 S13

T2 S1

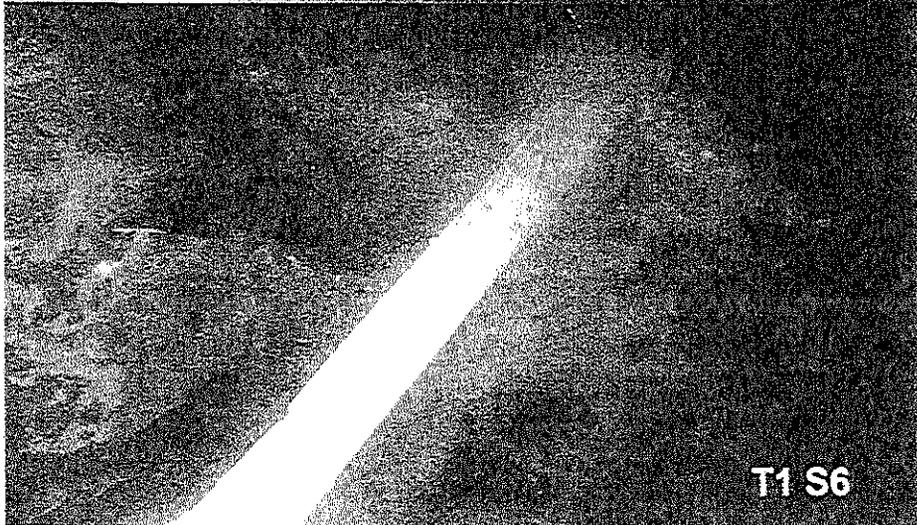
T2 S5



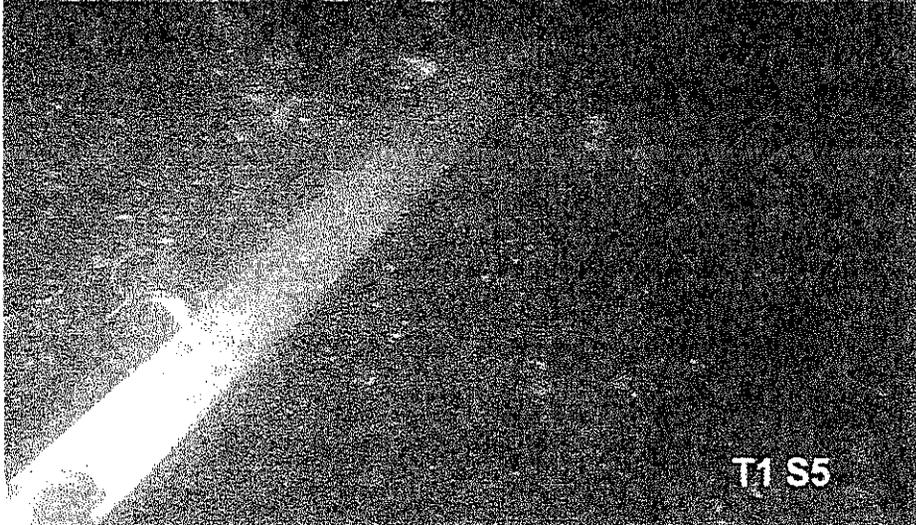
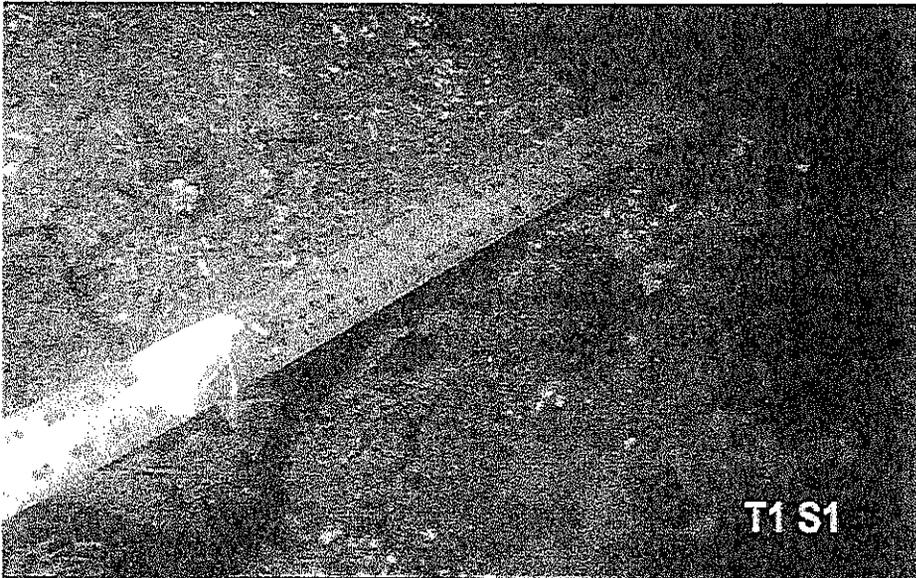
T1 S10

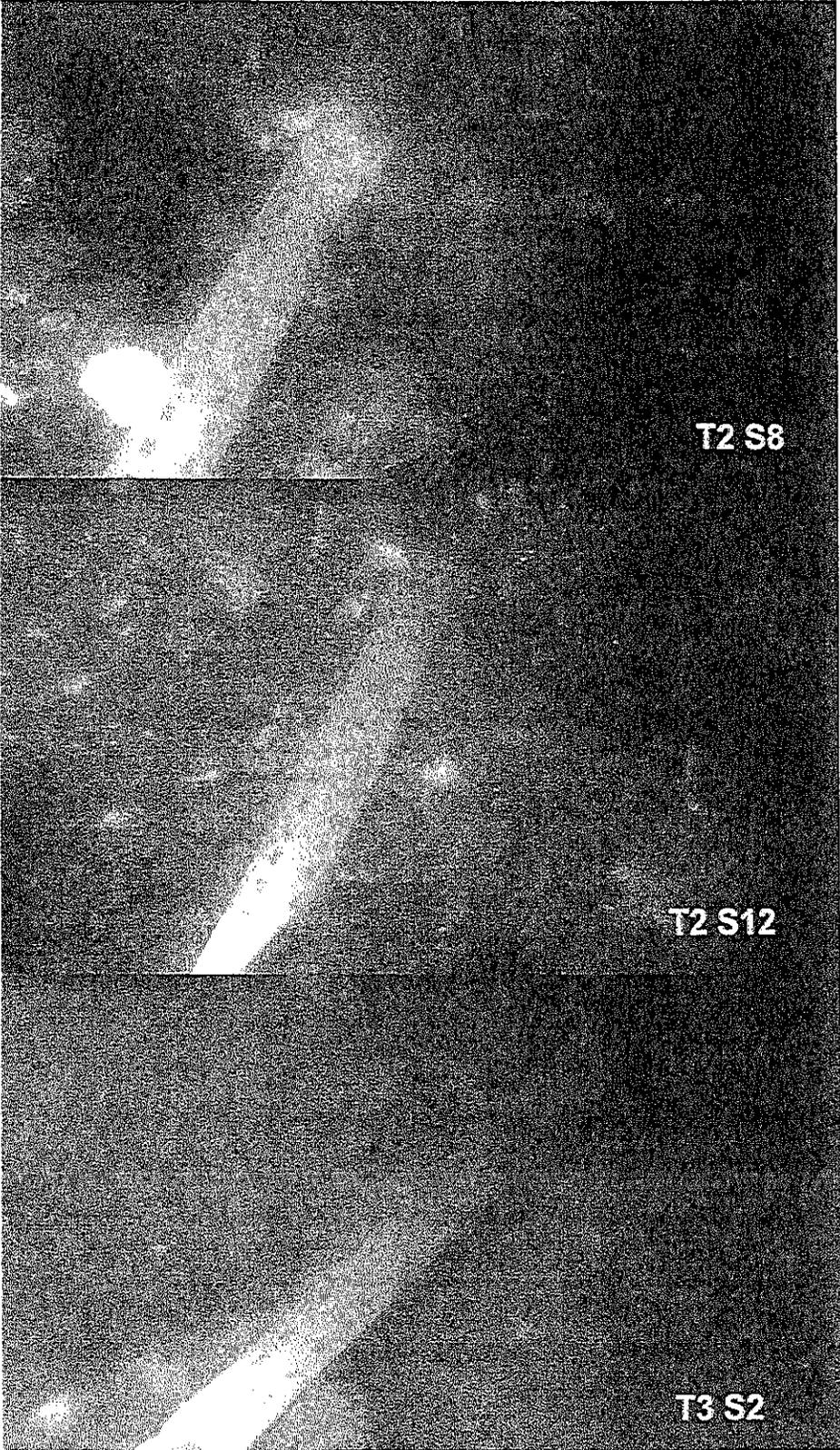


T1 S12



T1 S6

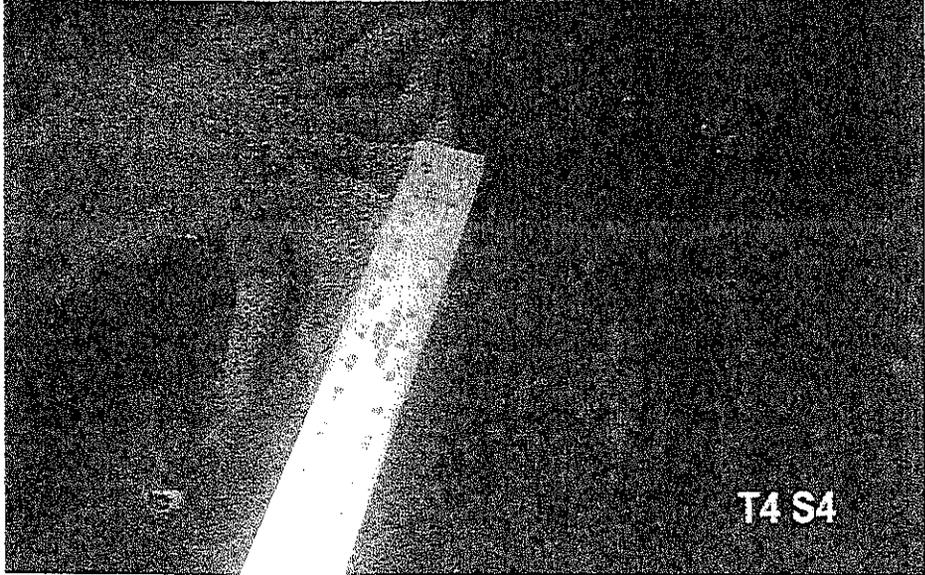
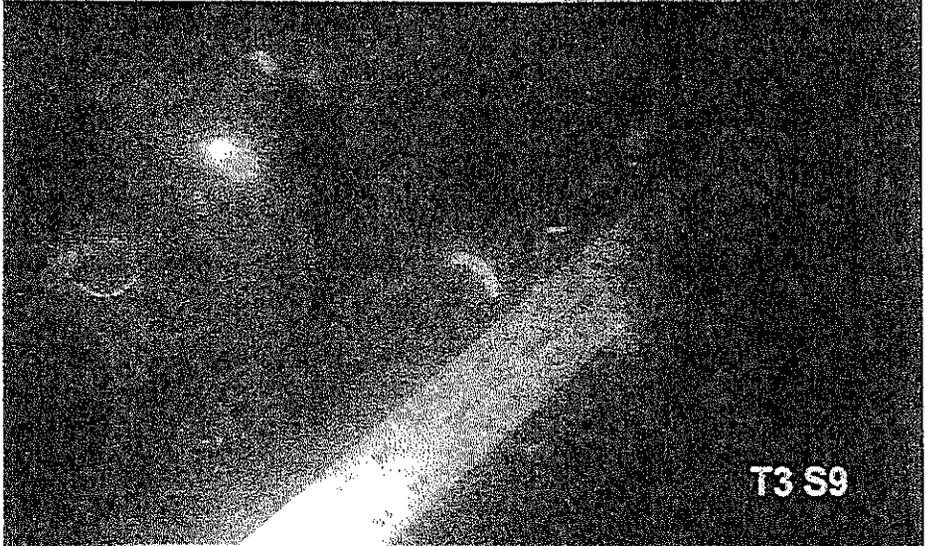
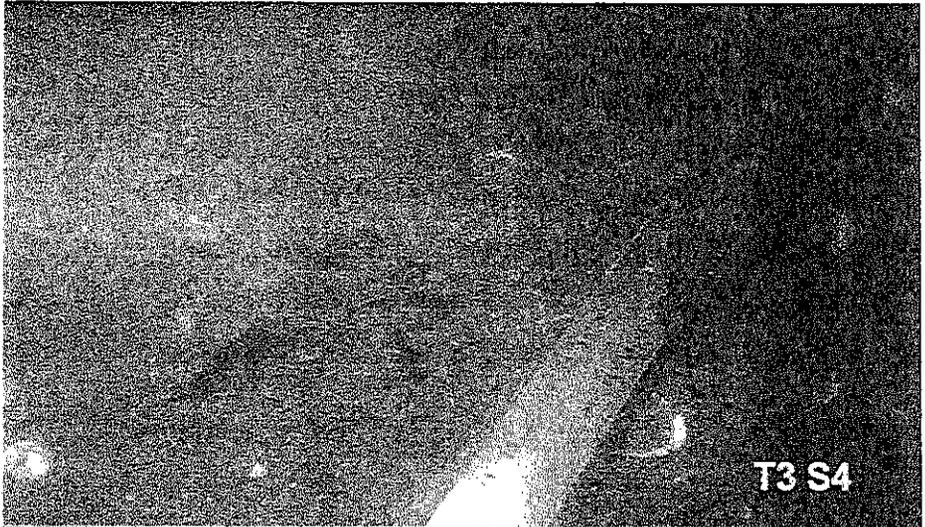




T2 S8

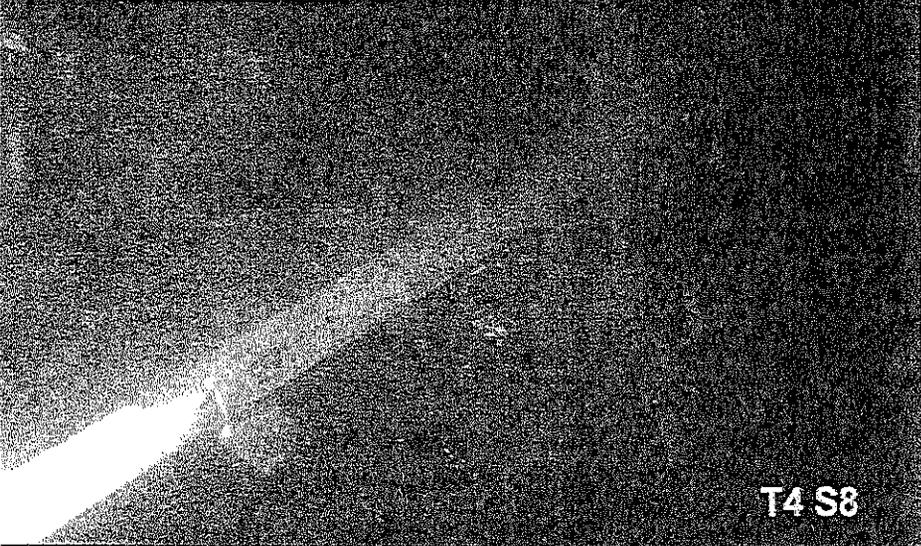
T2 S12

T3 S2

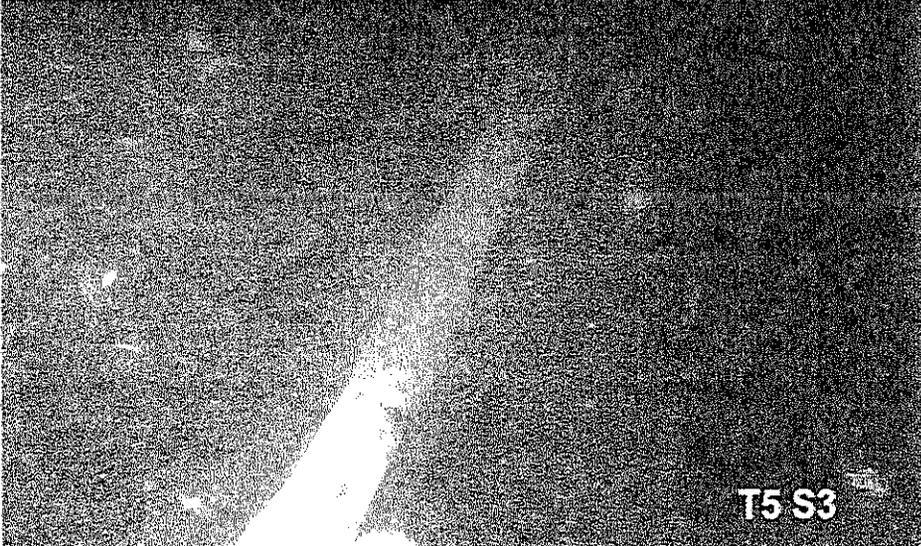




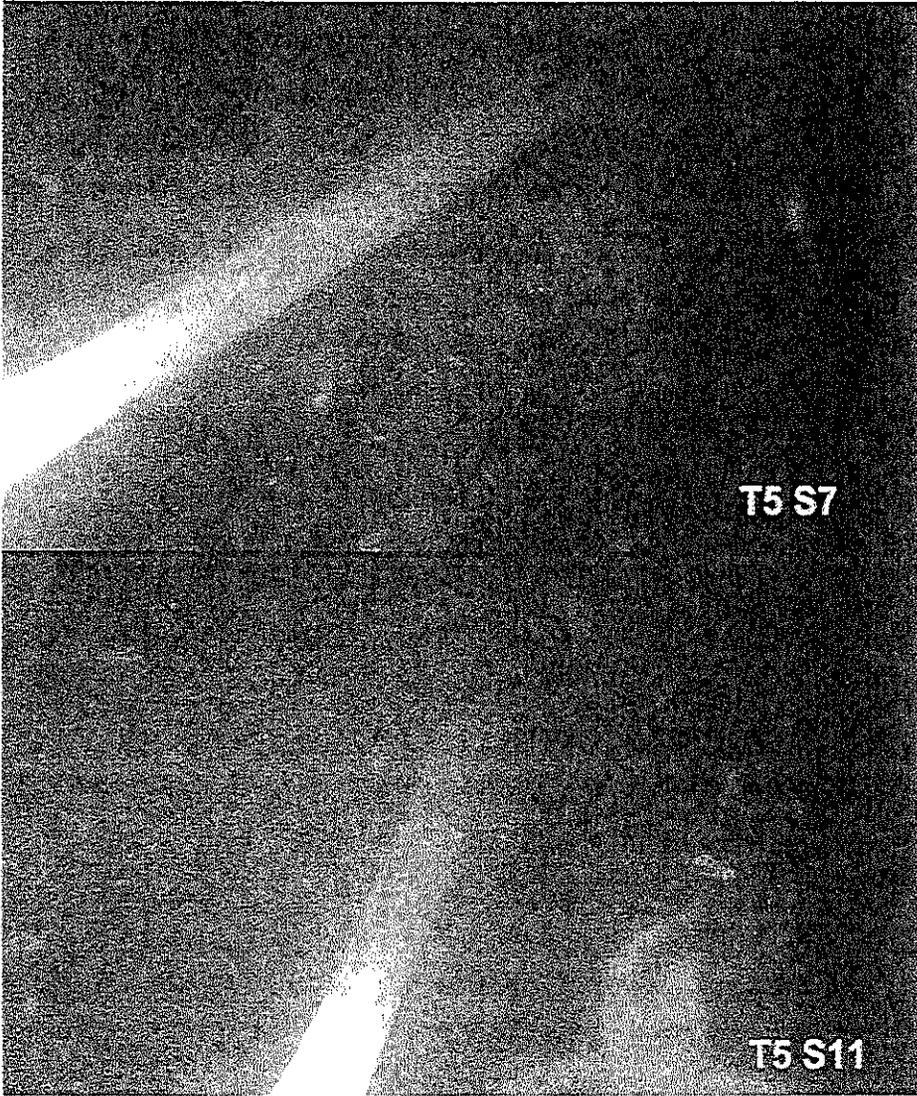
T4 S5



T4 S8



T5 S3



Key:  
 Substrate Type; S=Sand, M=Mud, SL=Silt, R=Rock, C=Cobble, G=Gravel  
 Bark Depth recorded in inches

Log Transfer Ramp Transect 1: 140° Bearing

Sample Point	Depth at MLLW	Bark Depth	% of Cover	Substrate type	Depth of sedimentation	Marine Life
1	8			G		<i>Ulva</i>
2	10	1	100 30	G	Cable	<i>Ulva</i>
3	12	1	100	G		Seacucumber
4	15	1	100	G		<i>Ulva</i>
5	18	1	80	G		Seacucumber
6	19	1	80	S-M		<i>Ulva</i>
7	22	1	70	S-M		<i>Ulva</i>
8	25	1	100	SL		<i>Ulva</i>
9	31	2	100 135	SL-SHELL		
10	38	>1	20	SL-SHELL		<i>Ulva</i>
11	35	>1	>10	SL-SHELL		<i>Ulva</i>
12	37			SL-M		
13	39			SL-M		
14	42			M		Sea star
15	42			M		
16	44			M		<i>Ulva</i>
17	47			M		

Log Transfer Ramp Transect 2: 170° Bearing

Sample Point	Depth at MLLW	Bark Depth	% of Cover	Substrate type	Depth of sedimentation	Marine Life
1	9	1		G		<i>Ulva</i>
2	10	1	100	G		<i>Ulva</i>
3	12	1	10	G	3	<i>Ulva</i>
4	14	1	20	G	1	<i>Ulva</i>
5	19	1	80	S-M	>1	<i>Ulva</i>
6	19	2	50	S-M	2	
7	23	2	20	S-M	2	
8	25	3	10	SL-SHELL	3	<i>Ulva</i>
9	29	5	50	SL-M	1	
10	33	7	100 150	SL-M	1	
11	37	9	100	M-SHELL		
12	40	6	100	M-SHELL		
13	43	6	100	M-SHELL		
14	45	9	100 210	M		
15	47	6	80	M		
16	47	4	70	M	>1	
17	49	3	20	M	1	
18	51	3	20	M	1	
19	52	1	>10	M	1	
20	52			M		

Log Transfer Ramp Transect 3: 200° Bearing

Sample Point	Depth at MLLW	Bark Depth	% of Cover	Substrate type	Depth of sedimentation	Marine Life
1	8			C		
2	15	1	50	S-M		
3	23	2	100 <sup>45</sup>	M-S		
4	34	2	100 <sup>60</sup>	M-S		
5	35	>1	80	M-G		
6	30	>1	50	R	ROCK REEF	<i>Ulva</i>
7	30	>1	10	R	ROCK REEF	<i>Ulva</i>
8	37			M		<i>Ulva</i>
9	37			M		
10	39			M		
11	42			M		
12	42			M		<i>Ulva</i>
13	45			M		<i>Ulva</i>
14	47			M		
15	47			M		<i>Ulva</i>
16	51			M		

Log Transfer Ramp Transect 4: 230° Bearing

Sample Point	Depth at MLLW	Bark Depth	% of Cover	Substrate type	Depth of sedimentation	Marine Life
1	7			R		
2	14	1	20	G		
3	17	1	50	G		<i>Ulva</i>
4	18	3	100 <sup>60</sup>	M		
5	20	6	100	M		<i>Ulva</i>
6	21	7	100	M-G		<i>Ulva</i>
7	25	7	100	G		<i>Ulva</i>
8	28	4	100 <sup>120</sup>	R	ROCK REEF	<i>Ulva</i>
9	33			R	ROCK REEF	
10	40			M		
11	42			M		<i>Ulva</i>
12	45			M		
13	47			M		
14	49			M		<i>Ulva</i>
15	49			M		

Log Transfer Ramp Transect 5: 260° Bearing

Sample Point	Depth at MLLW	Bark Depth	% of Cover	Substrate type	Depth of sedimentation	Marine Life
1	6			S-G		<i>Ulva</i>
2	15	1	20	S-G		<i>Ulva</i>
3	18	5	100 <sup>45</sup>	M		<i>Ulva</i>
4	22	2	100 <sup>60</sup>	M		<i>Ulva</i>
5	25	2	80	M		<i>Ulva</i>
6	25	1	50	M-G		<i>Ulva</i>
7	30	1	50	R	ROCK REEF	Sea star
8	35					
9	37					<i>Ulva</i>
10	39					<i>Ulva</i>
11	42					

12	42					Seacucumber
13	43					<i>Ulva</i>
14	44					<i>Ulva</i>
15	47					<i>Ulva</i>