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15 June 2004

Oyster Bay Investing
8811 Ash Street
Richmond, BC
V6Y 3B4

Attention: **Mike Riesterer**

Re: **Archaeological Impact Assessment of District Lots 25, 26 & 35**

Baseline Archaeological Services is in the process of conducting an archaeological impact assessment (AIA) of District Lots 25, 26 and 35, located in Oyster Bay, east coast of Vancouver Island. The AIA was initiated upon recognition of a culturally modified tree (CMT) within the vicinity of the development areas. The AIA commenced on 10 and 11 June 2004 by Chris Engisch (Baseline), Ted Lewis (Wei Wai Kai First Nation/Hamatla Treaty Society) and Gerald Joseph (Homalco Indian Band). The survey consisted of pedestrian traverses through areas of potential development and areas with cedar forest cover and/or cedar stumps. As well, all roads were subject to either vehicular or pedestrian traverses.

The originally identified CMT is a planked cedar tree, exhibiting three planking episodes, and the non-steel tool markings indicate the feature is of great antiquity. The CMT predates 1846 and therefore protected by the *Heritage Conservation Act* and is being recorded as temporarily numbered archaeological site OB-T1. Adjacent to the CMT a stem round sample was acquired from a stump of a scarred cedar tree (not recently logged) which will be analyzed to determine whether the scar is cultural or natural in origin (ie a remnant of a taper bark-stripped CMT). As well, two other samples of possible remnant bark-stripped CMTs were acquired during the survey. It is anticipated that the samples will be prepared and analyzed shortly to determine the nature of the scars as well as the age of the modifications if cultural in origin. Neither of the samples were acquired from recently harvested trees. No further CMTs were identified during the survey.

The approximately 60 acre development area adjacent to the Island Highway was thoroughly examined and tested for buried archeological remains, with negative results. Recent stumping and ground altering activities provided ample subsurface exposures which were supplemented with auger and shovel tests. No archaeological resources were identified.

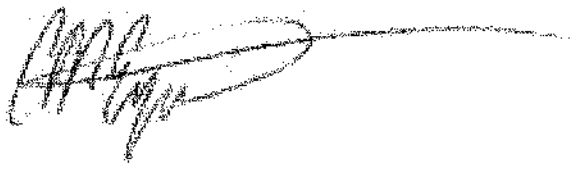
Throughout the property, exposures from development activities such as road cuts were thoroughly examined for archaeological remains. No subsurface archaeological resources were identified.

In regard to recommendations concerning the CMTs, no further development should take place within the remaining forested area in the vicinity of the standing planked tree (approximate 15-20m buffer remains around the feature). Should the stem round samples acquired from commercially logged stumps prove to be cultural in origin, it would be recommended that the remains be avoided by development activities. Should the developer need to alter the archaeological sites, a Section 12, Site Alteration Permit will be required which is issued by the Archaeological Planning and Assessment Branch of the Ministry of Sustainable Resource Management.

Survey will continue in the vicinity of the junction of the Iron River Logging Road and the Island Highway at the location of the previously recorded archaeological site DlSg-4. DlSg-4 is a shell midden site originally recorded in 1974, for which very little information has been collected.

Please feel free to call if you have any questions or concerns.

Yours truly,



Chris Engisch, RPCA
Archaeologist

BaseLine *Archaeological Services Ltd.*
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Archaeological Impact Assessment
Interim Report

Developer: **Contact:**	**Oyster Bay Investments Ltd.** 8811 Ash Street Richmond, B.C. V6Y 3B4 Phone: (604) 275-6244 Fax: (604) 275-6226 Mike Riesterer
Development:	**District Lots 25, 26 & 35**
Development type:	Proposed logging and ancillary developments
Distributed To:	Al Mackie (Archaeological Planning and Assessment), Mike Riesterer (Oyster Bay Investments Ltd.) Chief Aubrey Roberts (Wei Wai Kum First Nation) Chief Ralph Dick (Wei Wai Kai First Nation) Faye Blaney (Xwémalhkwu First Nation) Dee Cullon (Hamatla Treaty Society) Melinda Knox (Kómox First Nation)
Project #:	04014
Heritage Permit #:	2003-390
Report Author:	Chris Engisch, RPCA
Report Date:	23 June 2004
Forest District/Region:	Campbell River Forest District (CRFD) Vancouver Forest Region
Location:	Oyster Bay, east coast of Vancouver Island.
Elevation:	Approximately 0-40m asl
Survey Date:	10, 11 & 16 June 2004
Survey Conditions:	Sunny and hot.
Survey Crew:	Chris Engisch & Shelley Russell (Baseline), Ted Lewis (We Wai Kai First Nation) and Gerald Joseph (Xwémalhkwu First Nation)
NTS Map: **Other Map:**	92 K/12 Oyster River Property maps attached
Archaeological Concerns:	**Yes: Previously recorded archaeological site DlSg-4, and temporarily numbered sites OB-T1, OB-T2 & OB-T3**

First Nation(s):	Hamatla Treaty Society 1441 Old Island Hwy Campbell River, B.C., V9W 2E4 Phone: (250) 287-9460 Fax: (250) 287-9469 Dee Cullon Xwémalhkwu First Nation 1218 Bute Crescent Campbell River, BC, V9H 1G5 Phone: (250) 923-4979 Fax: (250) 923-4987 Faye Blaney Wei Wai Kai First Nation PO Box 220, 1 We Wai Road, Quathiaski Cove, BC, V0P 1N0 Phone: (250) 285-3316 Fax: (250) 285-2400 Chief Ralph Dick	We Wai Kum First Nation 1400 Weiwaikum Road Campbell River, BC, V9W 5W8 Phone (250) 286-6949 Fax (250) 287-8838 Chief Aubrey Roberts Kómox First Nation 3320 Comox Road Courtenay, BC, V9N 3P8 Ph: (250) 339-4545 Fax: (250) 339-7053 Contact: Melinda Knox

Background Information

Mike Riesterer (Oyster Bay Investments Ltd.) contacted Baseline Archaeological Services Ltd. to conduct an archaeological impact assessment (AIA) of District Lots 25, 26 and 35 within the Campbell River Forest District. The AIA was requested due to the identification of a standing planked CMT on the property.

The study area has been previously logged in numerous episodes over the past century. The area used to be the location of a large logging camp which included sorting areas, numerous logging roads and a logging rail line. Prior to the purchase of the property by Oyster Bay Investments Ltd., the area had been again harvested of trees by the previous land owners.

Developments on the property include the harvesting of some remaining timber, potential subdivision of the lands for residential purposes, which may include the eventual construction of homes and ancillary developments. Other ancillary developments include the reactivation of the Iron River Logging Road. At the time of survey, the majority of the logging activities, as well as the removal of stumps and piling of slash had taken place, within the southern portion of the development area adjacent to the Island Highway (Figure 3).

One previously recorded archaeological site is located on the property. The site, DlSg-4, was recorded in 1974 as a pre-contact shell midden site located at the site of the old logging camp near the Iron River Logging Road.

Archaeological Planning and Assessment, the Hamatla Treaty Society (representing the Wei Wai Kai, Wei Wai Kum and Kómox First Nations) and the Xwémalhkwu First Nation were notified of the fieldwork. This interim report will be appended to the Campbell River Forest District Final Report (Permit 2003-390) due 1 March 2005.

Methodology

The archaeological survey consisted of multiple pedestrian traverses through the development areas with crew members generally spaced 10-50m apart, depending on visibility. Natural land and water features, fencing, compass bearings and existing roads guided traverses. Development maps were used to identify areas of moderate and high potential for archaeological sites in the field. Surface and subsurface exposures, such as sparsely vegetated areas, tree bases, root wads, creek banks and areas of stump removal were thoroughly inspected for archaeological material or modifications. Shovel and auger testing was employed in areas of potential for subsurface deposits where existing exposures were considered insufficient. Suitable tree stands and commercial logged remnant stumps were examined for cultural modifications. Samples of possible remnant taper bark-stripped stumps were acquired for further analysis. The methodology followed is outlined in the application for Permit 2003-390.

Identified CMTs were recorded in accordance with *Culturally Modified Trees of British Columbia* (Stryd 2000), and assigned sequential numbers. The CMT features were flagged with yellow ribbon marked "Culturally Modified Tree" or "CMT." Stem round samples were acquired from commercially logged stumps with potential to be remnant bark-stripped CMTs.

Description

District Lots 25, 26 & 35 (approximately 225ha) are located on the east side of Vancouver Island at Oyster Bay, south of the town of Campbell River. The study area is located adjacent to the Island Highway 19 and is crossed by numerous built roads, including the Iron River Logging Road. The study area has been heavily impacted by previous development activities over the past century. The area has been the location of a large logging camp, including numerous building, sort areas, roads and a rail line. Recent developments include continuous logging of the area as well as the removal of stumps in some areas and road building and upgrading. Primarily, the development area adjacent to the Island Highway has had the stumps pulled, exposing the underlying sands.

Forest cover within the study area is limited to second or third growth stands which include fir, hemlock, balsam, alder and cedar. Tall, spring-board notched stumps are located throughout the study area, as well as more recently harvested stumps from current logging activities as well as by the previous land owners. A single veteran cedar tree was identified in the study area.

Wetlands are present within the study area as well as small intermittent creeks. Much of the study area is located at low elevations, with a high water table, making the low lying terrain hummocky and water saturated.

Field Potential and Coverage

The in-field potential assessment for the block was low to moderate for CMTs and moderate for other archaeological site types. The low to moderate potential for CMTs was based on the presence of a known CMT on the site coupled with the considerable development and long history of logging which would have removed most evidence of CMTs.

The block was assessed as having moderate potential for other (non-CMT) archaeological site types. This assessment was based on the presence of a previously recorded shell midden site on the property and the generally level terrain. The long history of impacts to the property which include the logging camp, sort, roads and rail lines, as well as continuous upgrading of the Island Highway would have potential to impact and/or remove archaeological material from the study area.

Coverage consisted of pedestrian and vehicular traverses through much of the property. All roads were subject to a vehicular and/or pedestrian traverse, as well as the southern portion of the property for which timber harvesting was still slated for. Areas near the Island Highway slated for development were surveyed completely with subsurface testing. Areas where standing cedar trees and remnant cedar stumps were observed were subject to detailed survey. Based on the coverage of the survey, the potential for unrecorded archaeological resources within the development area is low.

Results

Three CMTs were identified and recorded during the survey of District Lots 25, 26 & 35. The CMTs have been recorded as three archaeological site temporarily numbered **OB-T1, OB-T2** and **OB-T3**. As well, previously recorded archaeological site **DlSg-4** was revisited with testing in and adjacent to the proposed development areas.

OB-T1 consists of one standing aboriginally logged triple planked cedar tree (CMT T1). The CMT exhibits non-steel tool marking indicating considerable antiquity (Plate 1). The non-metal tool marks demonstrate this feature predates 1846 and is automatically protected under the *Heritage Conservation Act* (*HCA*).

A stem round sample was acquired from a scarred cedar stump adjacent to CMT T1. The stem round was sanded and analyzed for characteristics of a remnant taper bark-stripped CMT but pinched ring terminations and absence of scar crust indicated the scar was natural in origin.

OB-T2 consists of the lower portion of a taper bark-stripped CMT (CMT T2). The feature is laying on the north side of the Iron River Logging Road and came from an unknown location (Plate 2). The remains of the tree possess a rotted butt end and it has not been logged, however the crown of the tree has been cut and removed. The remaining section of the tree has a height-above-ground for the start of the modification and a tapering scar to the point where the crown of the tree has been cut off and removed. A stem round sample was acquired from the scar. The sample included characteristics of taper bark-stripped CMTs including a scar crust, perpendicular ring terminations on the scar crust and expanded post injury ring growth. The feature was dated to be 226 years old before the unknown date of the death of the tree, which predates 1846 and is thus automatically protected under the *HCA*.

OB-T3 consists of a remnant commercially logged taper bark-stripped CMT stump. The remnant CMT was identified when examining a standing cedar tree exhibiting a scar which was determined to be natural in origin. Other cedar stumps in the vicinity were examined for possible cultural scars with negative results. A stem round sample was acquired from the stump which was sanded and analyzed. The sample included characteristics of taper bark-stripped CMTs including a scar crust, perpendicular ring terminations on the scar crust and expanded post injury ring growth. The feature was dated to be 186 years old before the date the tree was logged, which was most likely approximately five years ago. Using a logging date of 1999, the CMT would have been modified in 1813 and is automatically protected under the *HCA*.

DlSg-4:

Sixteen shovel tests and one auger test were conducted in the vicinity of the Island Highway and Iron River Logging Road junction. One shovel test (#A11) yielded a small lens of disturbed shell midden material (4cm) located between imported construction fill and beach sands and gravel. The shovel test was excavated on a leveled area, likely the location of the old logging camp or sort. At the junction of the Island Highway and the Iron River Logging Road, all shovel tests were negative and consisted of sands underlain by coarse beach sand and gravel. The single positive shovel test is located outside of the proposed development area in a creek/wetland reserve area.

Impact Assessment

Based on the design of the developments within District Lots 25, 26 & 35 at the time of survey, development activities may impact CMT T2 and CMT T3 within the recorded archaeological sites **OB-T2** and **OB-T3** respectively. Impacts to the partial fallen CMT T2 may include the moving of the feature for road upgrades. Impacts to the remnant stump CMT T3 may include the removal of the stump for land clear purposes.

No further development is expected in the vicinity of CMT T1 (**OB-T1**) and no direct impacts are expected to this site.

No impacts to previously recorded archaeological site **DlSg-4** are anticipated from the reactivation of the Iron River Logging Road or development activities in the immediate vicinity. The single positive shovel test for shell midden material is located in an environment reserve area, for which no development is anticipated.

Archaeological Site Significance

Archaeological site significance has been assessed using the criteria established in the *British Columbia Archaeological Impact Assessment Guidelines, Third Revised Edition* (Apland & Kenny 1996). The criteria include the assessment of the scientific, public, ethnic and economic significance of a site. The scientific significance refers to the site's potential to contain information regarding prehistoric cultures in British Columbia. Factors considered when assessing significance of forest utilization CMT sites include: the number, variety, age and uniqueness of CMTs present in a site, the condition of the CMT(s), the number of potentially dateable samples and presence, absence or examples of a variety of tool marks or harvesting methods. Public and economic significance refer to the potential use, and economic benefits resulting from the use of the site for interpretative, educational or recreational purposes. Ethnic significance refers to the site's traditional, social or religious importance to a particular group.

Archaeological site **OB-T1** has been assessed as having a high significance. This assessment is based on the presence of non-steel tool marking, the features considerable antiquity and primarily on the rarity of CMTs, especially multiple planked trees in the area due to the history of logging. As well, the intention of the developer to have trails throughout the District Lots would provide the CMT with a high public significance as it could be used as a point of interest for hikers.

Archaeological site **OB-T2** has been assessed as having a low significance. This assessment is based on the highly deteriorated state and previously impacted nature of the feature.

Archaeological site **OB-T3** has been assessed as having a low significance. This assessment is based on the previously impacted nature of the feature and the fact that all which remains is the remnant stump.

Archaeological site **DlSg-4** as tested during the scope of this study would be assessed as having a low significance. This assessment is based on the absence of midden material through the majority of the area and the minimal lens (~4cm) of disturbed midden identified in shovel test A11. The positive shovel test is located outside of the proposed development area and will not be impacted by current development activities.

Recommendations

This study illustrates that there are archaeological concerns in regard to the proposed developments on District Lots 25, 26 &35. To address these conflicts the following options are provided for managing the CMT archaeological sites.

Option 1: Avoidance of the archaeological sites within the development area.

Archaeological Site OB-T1:

- No further development should take place within the forested area surrounding the CMT (#T1).

Archaeological Sites OB-T2 & OB-T3:

- No further development should take place that impacts the remains of the CMTs (#T2 & T3).

Option 2: In cases where development activities will impact the CMTs:

- Alterations to archaeological sites **OB-T1, OB-T2** and **OB-T3** are to be conducted under the authorization of the *Heritage Conservation Act,* Section 12, Site Alteration Permit, issued by the Archaeological Planning and Assessment Branch of the Ministry of Sustainable Resource Management, for which the developer must apply.

- The alteration permit should include the removal of a stem round sample from CMT #1 within archaeological site **OB-T1** and be provided to a qualified archaeologist for dating purposes. CMTs #2 & 3 have had stem round samples acquired and have been dated. No further archaeological work would be required if altering archaeological sites **OB-T2** and **OB-T3.**

Archaeological Site DlSg-4:

Due to the absence of archaeological material at the junction of the Iron River Logging Road and the Island Highway, no further archaeological work is recommended for developments in this area.

The single sub-surface test with positive results for archaeological remains is located in a reserve zone and is not currently threatened by development activities. Should development be redesigned to include this area further archaeological work in the form of continued archaeological impact assessments is recommended.

It is also recommended that developers inform their personnel and all contractors that archaeological remains are protected by the *Heritage Conservation Act* (1996) and may not be altered, damaged, moved, excavated in, or desecrated in any way without a permit issued under Section 12 or 14 of the *Heritage Conservation Act*. If any unexpected archaeological remains are encountered during development activities, all development which may threaten those remains must be halted and the Archaeological Planning and Assessment Branch of the Ministry of Sustainable Resources be contacted. Directly notifying the Hamatla Treaty Society, the Kómox, Xwémalhkwu, We Wai Kum and We Wai Kai First Nations would also be recommended.

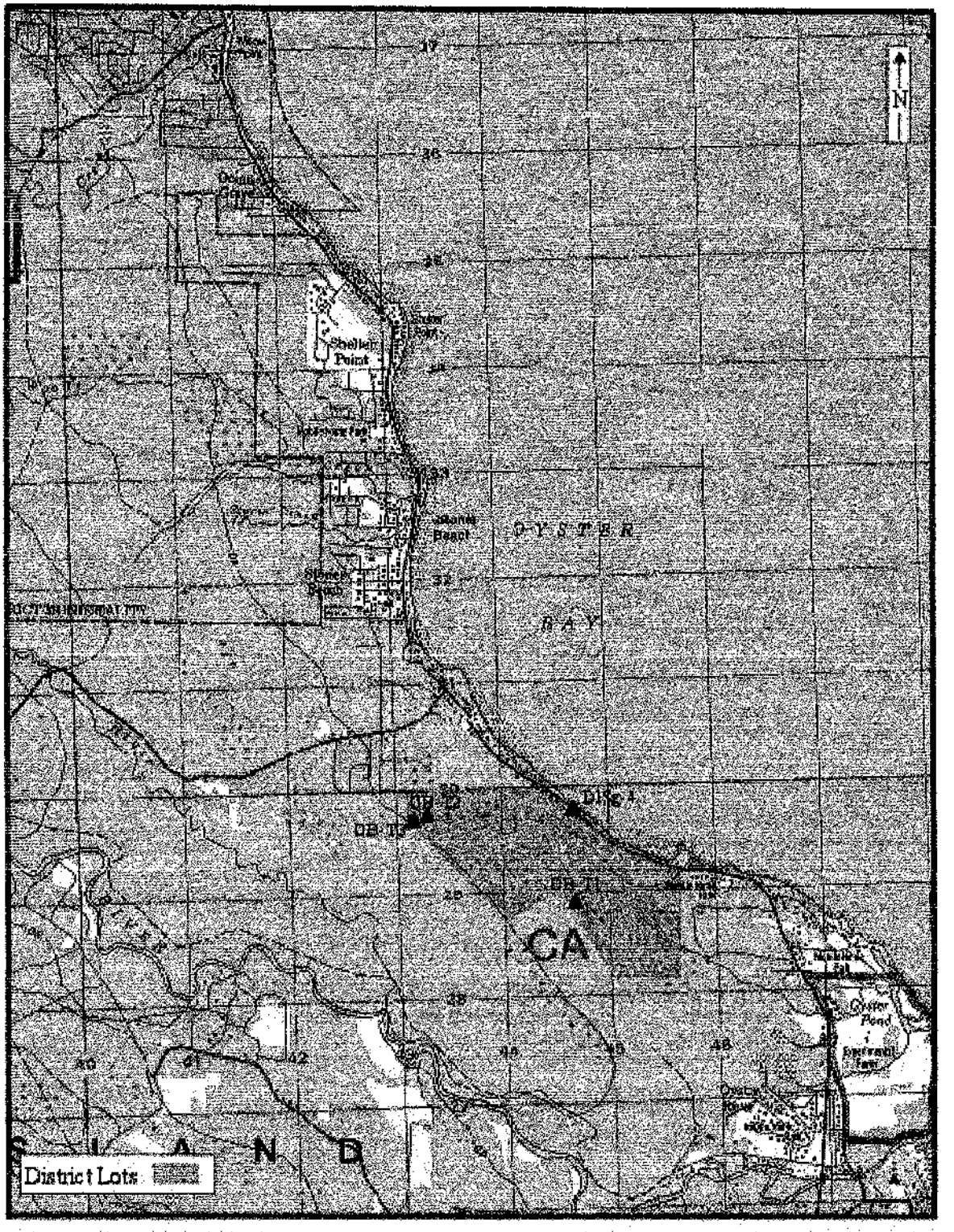

Figure 1. Location of Study Area.

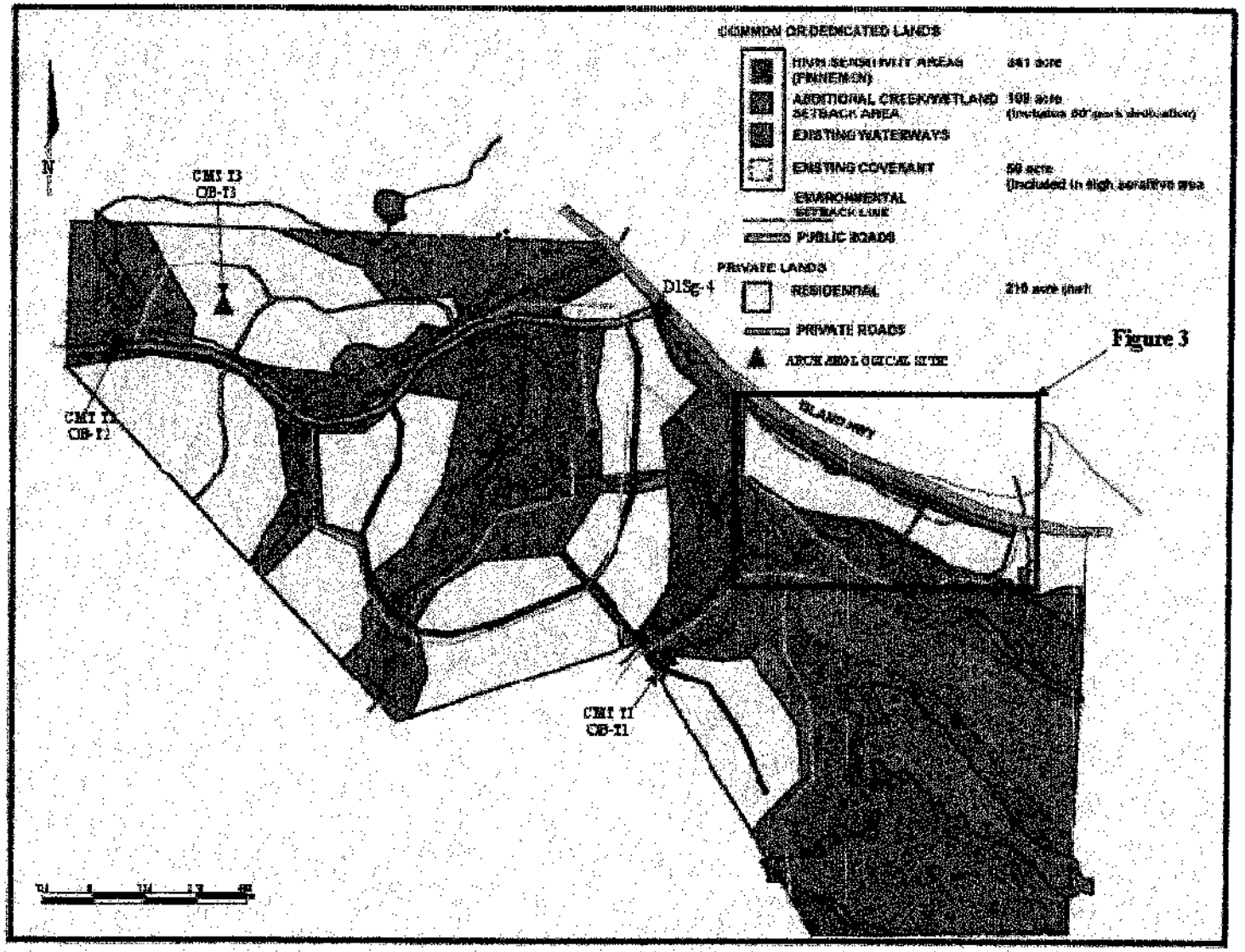

Figure 2. Draft Plan of Development Area.

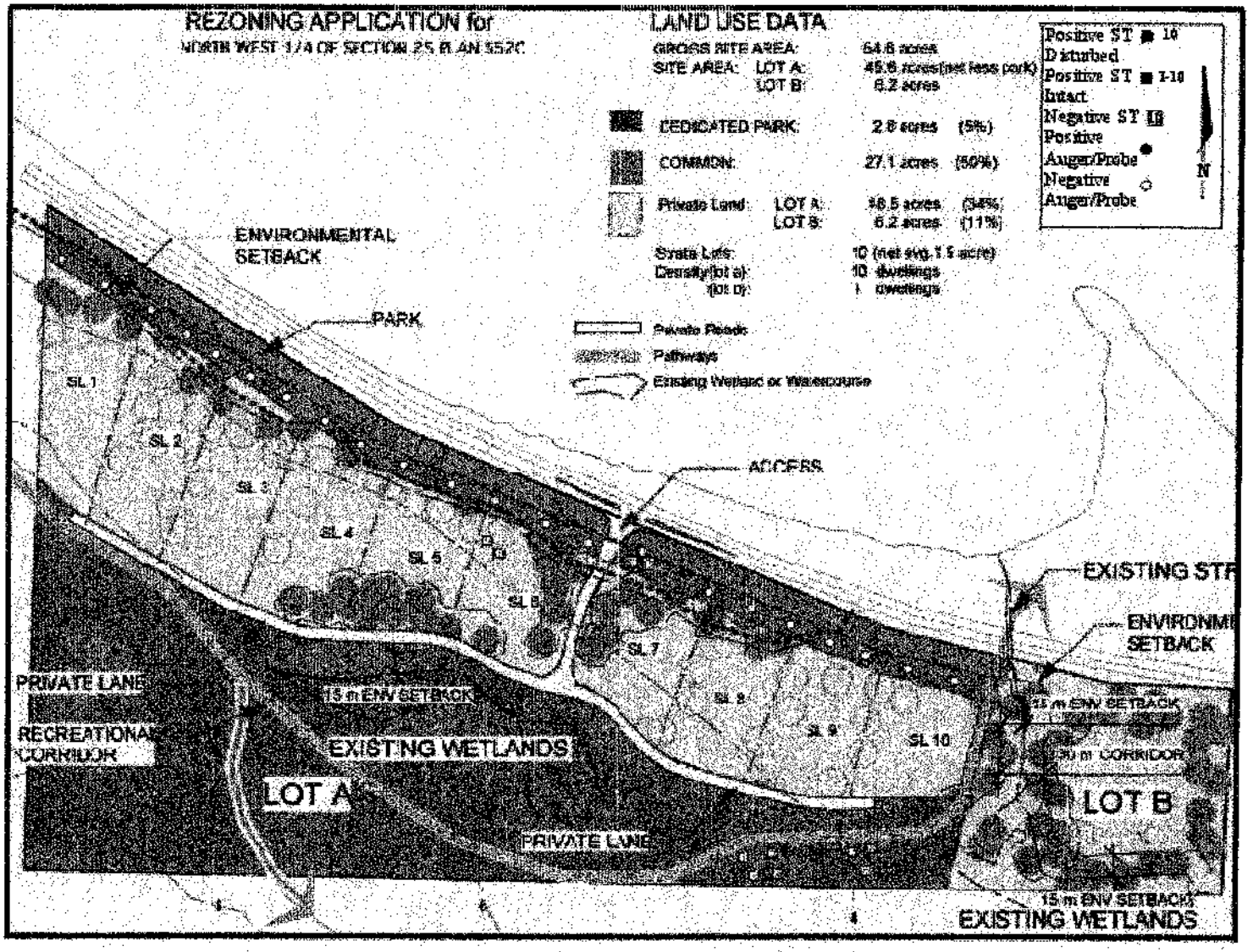

Figure 3. Frontage Development Area.

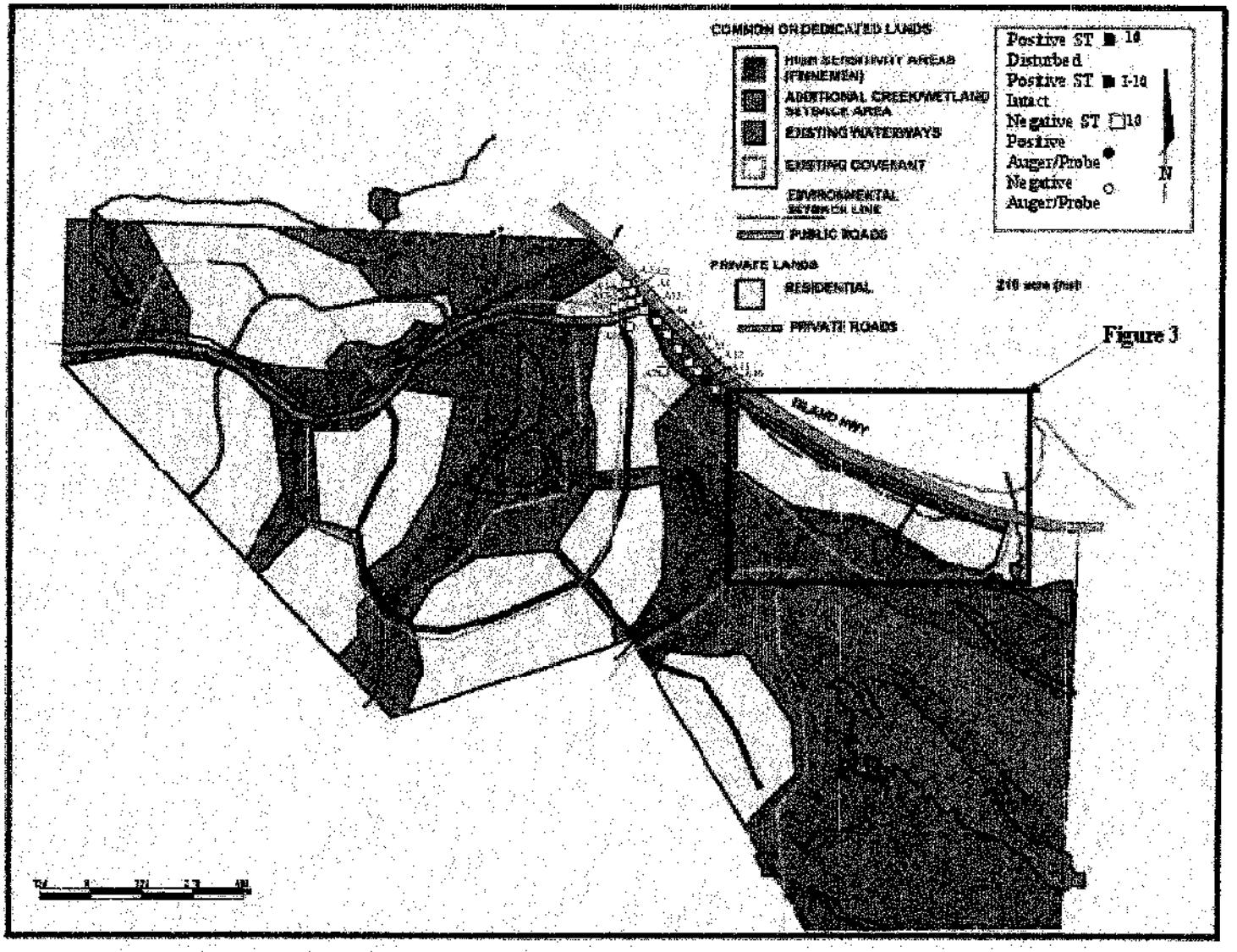

Figure 4. DlSg-4 Shovel Test Map.

Table 1. CMT Attributes.

CMT	SP	CLASS	TYPE	FEAT	DBH	SLOPE %	LENGTH	WIDTH	HLT/ THICK	HAG	SCAR CRUST/NT	SIDE	TOOL MARK
1	C	AL	PLANK	1.P	208	0	500	55	NA/14	133		SE	
				2.P			450	70	NA/38	N/A		SW	
				3.P			250	53	NA/22	N/A		N	
NON-STEEL TOOL MARKS													
2	C	BS	T	1.T							R/L		
ROTTED PARTIAL REMNANT CMT													
3	C	BS	T	1.T							R/L		
COMMERCIALLY LOGGED REMNANT BARK-STRIPPED STUMP													

Key to Bark-Stripped and Aboriginally Logged CMT Database		
CMT	Culturally Modified Tree	Refers to each separate CMT and is assigned in the field
TYPE		Refers to the CMT as a whole, not separate features. BS= Bark-stripped.
Sp	Species	Trees species of CMT
FT #	Feature Number	Refers to separate features of each CMT T=Taper, R=Rectangular
Tool Marks	Tool Marks	Describes the type of tool marks i.e. chisel, blade, axe, adze
DBH	Diameter	Diameter of the feature, either at breast height
HAG	Height Above Ground	Lowest point of the feature expressed in centimetres
LEN	Length	Length of a feature along the long axis of the tree expressed in centimetres
SIDE	Side	Refers to the side of the feature in reference to a tree or log. W/U=west side of tree on the upslope.
WID	Width	Maximum width of a feature perpendicular to the long axis of the tree
HLT	Healing Lobe Thickness	The vertical ridges of wood tissue formed on both sides of a scar face.
Slope	Slope	Slope of terrain expressed in percentage
SC	Scar Crust	Indicative of a cultural origin

C	Cedar	BS	Bark-strip
AL	Aboriginally logged	T	Taper bark-strip
P	Planked		

Table 2. Shovel Test Log.

Test #	CM DBS	Cultural	Disturbed	Matrix Description	Comments
Shovel Test Log					
ST 1	0-10	No		Duff	
	10-45	No		Course sands	
	45-60 Auger	No		Gravel and sands	
ST 2	0-15	No		Duff	
	15-50	No		Sands and gravel	
ST 3	0-10	No		Duff	
	10-45	No		Course sands	
	45-55+ Auger	No		Sands and gravel	
ST 4	0-10	No		Duff	
	10-45	No		Course sands	
	45-55+ Auger	No		Gravel	
ST 5	0-5	No		Duff	
	5-55	No		Course sands	
	55+ Auger	No		Gravel and sand	
ST 6	0-5	No		Duff	
	5-50	No		Course sands	
	50-65	No		Gravel	
ST 7	0-10	No		Duff	
	10-45	No		Course sands	
	45-50+ Auger	No		Terminated at gravel	
ST 8	0-5	No		Duff	
	5-50	No		Course sands	
	50-55+ Auger	No		Gravel	
ST 9	0-7	No		Duff	
	0-50	No		Sandy soil	
	50-55	No		Terminated at gravel	
ST 10	0-10	No		Duff	
	10-55	No		Sandy soil	

Test #	CM DBS	Cultural	Disturbed	Matrix Description	Comments
Shovel Test Log					
	55-65	No		Beach sands and gravel	
ST 11	0-10	No		Duff	
	10-60	No		Course glacial sands	
	60-70	No		Beach sands and gravel	
ST 12	0-10	No		Duff	
	10-55	No		Course sands	
	55-60	No		Beach sands and gravel	
ST 13	0-10	No		Duff	
	10-55	No		Sandy soil	
	55-65	No		Beach sands and gravel	
ST A1	0-10	No		Duff	
	10-40	No		Sandy soil	
	40-50	No		Course glacial sands/gravel	
ST A2	0-10	No		Duff, scatter of decomposed shell	10m N of old road
	10-60	No		Sandy soil	
	60+ Auger	No		Glacial sands	
ST A3	0-20	No		Sandy soil	10m N of ST A2
	20-60	No		Course sand	
	60-70 Auger	No		Gravel	
ST A4	0-10	No		Duff	10m S of old road
	10-50	No		Fill sands	
	50-75	No		Course glacial sands	
	75+ Auger	No		Beach sand and gravel	
ST A5	0-55	No		Fill sands	22m S of road
	55-70	No		Course glacial sands	
ST A6	0-50	No		Fill sands	15m SW of ST A5
	50-65	No		Course glacial sands	
ST A7	0-10	No		Duff	SW of ST A6
	10-40	No		Organic soil	
	40-60	No		Course sand	
ST A8	0-10	No		Duff	40m S of road
	10-60	No		Organic soil	
	60-70	No		Course glacial sands	

Test #	CM DBS	Cultural	Disturbed	Matrix Description	Comments
Shovel Test Log					
	70+ Auger	No		Beach sands and gravel	
ST A9	0-55	No		Course sand	N side of old road
	55-65 Auger	No		Beach gravel	
ST A10	0-10	No		Duff	30m in along S side of road
	10-40	No		Sands	
	40-55 Auger	No		Course glacial sands	
ST A11	0-33	No		Sand and gravel fill	35 N of new road
	33-37	Yes	Yes	Lens of shell midden, salmon vertebrae	
	38-55 Auger	No		Beach sands	
ST A12	0-55	No		Fill sands	12 m N of ST A11
	55-65 Auger	No		Beach sands	
ST A13	0-15	No		Duff	SW of ST A2
	15-55	No		Sands	
	55-65	No		Gravel and sand	
ST A14	0-10	No		Duff	S of ST A13
	10-60	No		Sands, terminated on gravel	
ST A15	0-60	No		Water saturated organic soil	Cross ditch pit on old road
	60+	No		Water saturated beach sands	
ST A16	0-55	No		Gravel Fill	
				Terminates in rock	
Auger Test Log					
Test #	**CM DBS**	**Cultural**	**Disturbed**	**Matrix Description**	**Comments**
1-20	0-5	No		Duff	
	5-45	No		Sands	
	45+	No		Course glacial sands	
#A1	0-45	No		Course sands, water logged	Test conducted in a low wetland
	45+	No		Gravel	

Plate 1. CMT T1, OB-T1.

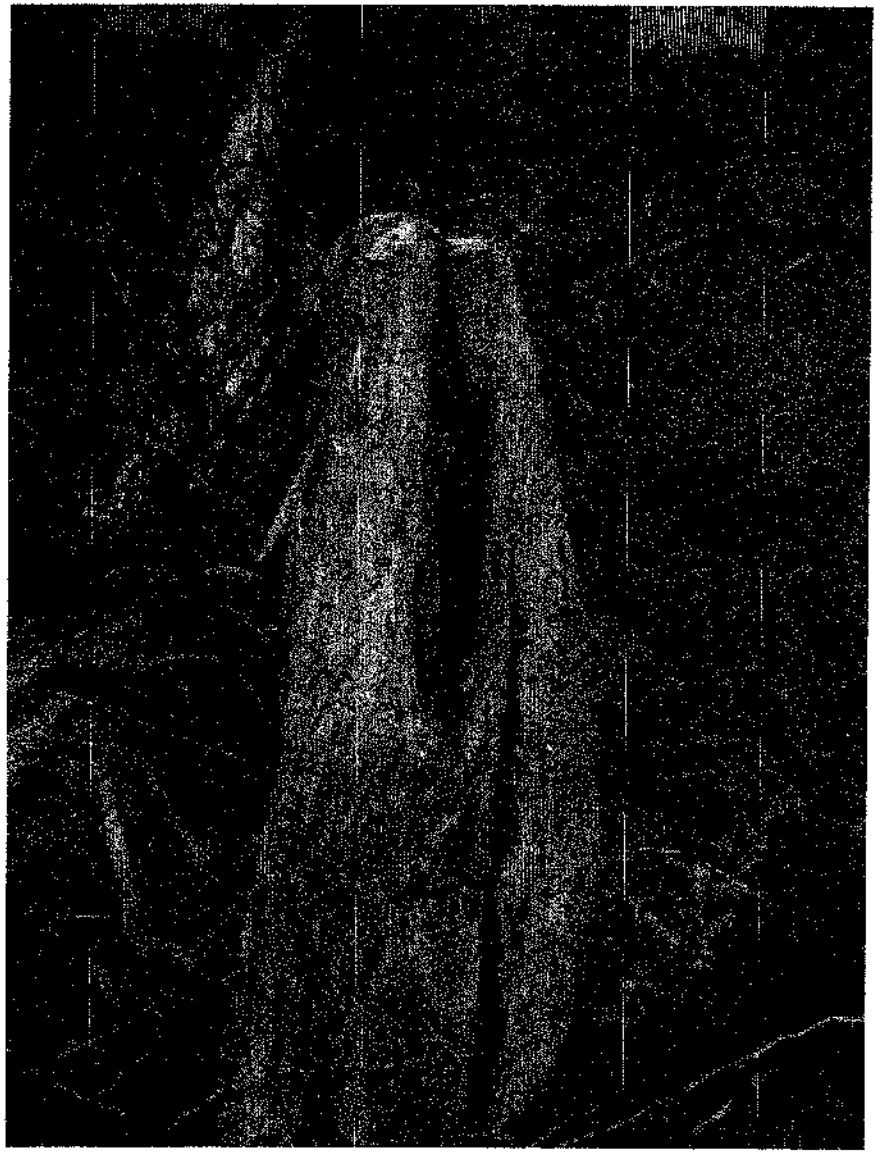

Plate 2. CMT T2, OB-T2.