MAMMOTH
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CARBONATE POTENTIAL

OF THE

DUMP PROPERTY

Nanaimo Mining Division
Vancouver Island, B.C.

By: R.Tim Henneberry, P.Geo.
March 14, 1996

SUMMARY

The Dump property, consisting of the Dump 1-2 two-post mineral claims, lies in the Nanaimo Mining Division of northern Vancouver Island. The property is road accessible, located 40 kilometres south of Port McNeill.

The Dump claims were staked to cover an occurrence of white-grey limestone/marble within the Centre Band of the Triassic Quatsino Formation limestone. Originally, the target was dimension stone, but subsequent exploration has broadened the scope to a target of filler or industrial limestone.

Chemical and optical analyses completed by potential option partners has shown the limestone exhibits properties suitable for low end fillers and extenders.

A staged program of systematic sampling and diamond drilling, followed by a bulk test is recommended for the Dump property.

The first stage will consist of systematic sampling of the white-grey limestone, followed by a ± 200 metre diamond drilling program. The core will be analyzed at regular intervals for its chemical and optical properties, as will the surface samples. This phase is estimated to cost $40,000.

Upon successful completion of stage one, a ± 5,000 ton bulk sample should be quarried, crushed and transported to a west coast processing plant. The mining cost is estimated at $80,000, while the processing and marketing of the sample is budgeted for a further $25,000.

Sampling, Drilling	$40,000
Bulk Test	$80,000
Processing, Marketing	$25,000

	$145,000

A total of $950.00 was spent on the property in 1995 to obtain the samples for optical and chemical testing and to document the results.

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INTRODUCTION

The Dump property was originally acquired in 1993 as a potential source of white marble for dimension stone. At that time the potential of the property as a source for industrial grade limestone was recognized (Henneberry, 1993), though little exploration was directed in this direction other than a whole rock analysis completed on one of the samples.

In 1995, two groups were approached about the industrial limestone potential of the Dump property. Both groups wanted representative samples of the limestone, with samples collected in July and November 1995. The results of the analyses are given in the text, though copies of analyses from the company laboratories are not, at the explicit request of the companies themselves. Therefore the value of the cost of the analyses are not included for assessment credits, only the time taken to gather the samples and the time taken to write this report are included.

A general background on the carbonate industry follows to explain what the potential uses of the Dump limestone are.

GENERAL BACKGROUND ON THE CARBONATE INDUSTRY

Geology - (Condensed from Carr et al, 1994).

Carbonate rocks form about 15% of the earth's sedimentary crust, predominantly as limestone and dolomite or their metamorphosed equivalents, marble. Most limestones of economic importance were partially or wholly biologically derived from seawater and accumulated in a relatively shallow marine environment. Environment of deposition is important because it determines the economically significant characteristics of the carbonate deposit. Limestones formed in high energy zones generally contain little non-carbonate material and hence may be a source of high purity carbonate material. Micrites (very fine-grained carbonate muds), which accumulate in zones of low energy, are more likely to be diluted by clay and silt size non-carbonate material. Carbonate rocks are highly susceptible to postdepositional alteration and modification.

The principle carbonate rocks used by industry are limestone and dolomite. Limestones are sedimentary rocks composed mostly of the mineral calcite ($CaCO_3$). Dolomites are sedimentary rocks composed mostly of the mineral dolomite [$CaMg(CO_3)_2$].

Impurities in carbonate rock vary considerably in type and amount but are important from an economic standpoint only if they affect the usefulness of the rock. The most common impurity is clay, followed by chert, silica and organic matter. Color, an important property of carbonate rocks, can be a rough guide to purity, but it can also be misleading. Most high purity limestones are shades of light brown to grey to white.

Mining

Limestone and dolomite are high volume, low-value commodities, with production cost control being the critical element in any quarry operation. Mining is predominantly done from open pit quarries, though large scale underground operations due exist.

Carbonate rocks are quarried in 47 of the 50 United States and in all provinces in Canada except Saskatchewan. They are mined from rocks of almost every age in the geological time scale. (Carr et al, 1995).

Carbonate Rock Production in British Columbia for 1986 and 1987 (tonnes * 1000)
(From Fischl, 1992)

Company	Location	1986	1987	Location	1986	1987
	Limestone			Dolomite		
Holnam West Materials Ltd.	Texada Island	1,149.8	1,907.5			
Ashgrove Cement West Inc.	Texada Island	1,046.5	1,046.3			
Imperial Limestone Ltd.	Texada Island	173.8	140.9			
Lafarge Canada Inc.	Texada Island	341.4	0.0			
Lafarge Canada Inc.	Kamloops	126.9	155.3			
Steel Brothers Canada Ltd.	Marble Canyon	146.1	194.6			
Northrock Industries	Dahl Lake	25.4	30.0			
Quesnel Readi-mix Cement Co.	Purden Lake	10.0	0.0			
International Marble & Stone Co Ltd.	Lost Creek	7.1	6.6			
International Marble & Stone Co Ltd.	Benson Lake	9.9	13.2			
International Marble & Stone Co Ltd.				Crawford Creek	27.7	31.9
Mighty White Dolomite Ltd.				Rock Creek	8.0	8.0
Totals		**3,036.8**	**3,494.4**	**Totals**	**35.7**	**39.9**

Limestone and dolomite are currently produced from a few locations throughout the province for a variety of uses. Most of the limestone production originates from Texada Island, while most of the dolomite production comes from Crawford Creek, east of Kootenay Lake. (Fischl, 1992).

Processing - (Condensed from Fischl, 1992).

Carbonate rocks generally do not undergo a milling process. Processing, though dependent on end uses, generally involves some type of crushing and size sorting by screening.

Fischl (1992) has described a chemical composition based classification system for British Columbia carbonate rocks, which needs to be outlined to follow the ensuing discussion on end uses:

Ultra high calcium limestone	+97 percent $CaCO_3$ (54.3% CaO)	
High calcium limestone	+95 percent $CaCO_3$ (53.2% CaO)	<2 percent $MgCO_3$ (0.96% MgO)
Calcium limestone	+95 percent $CaCO_3$	<10 percent $MgCO_3$ (4.79% MgO)
Magnesian limestone		<40 percent $MgCO_3$ (19.15% MgO)
Dolomitic limestone		+40 percent $MgCO_3$

The primary use of carbonate rock is the in British Columbia is in the manufacture of cement. Generally, high-calcium limestone is required for cement manufacture. Higher silica and alumina contents may be useful for manufacturing cement, but excessive amounts of alkalies cannot be tolerated, limited to less than 0.6%. Magnesia content cannot exceed 3 per cent.

Carbonate Rock Consumption in British Columbia for 1986 and 1987 (tonnes * 1000)
(From Fischl, 1992)

	1996	1997
Cement manufacture		
Domestic	1,282.8	1,051.1
Foreign	468.1	724.1
Lime manufacture		
Domestic	290.7	388.1
Foreign	395.9	584.5
Pulp and paper	129.4	165.1
Agriculture	19.1	27.0
Fillers (whiting)	31.7	31.3
Stucco dash	14.4	18.1
Crushed rock	283.1	328.5
Other		
Domestic	8.9	14.7
Foreign	149.7	142.5
Totals	**3,073.7**	**3,475.1**

Lime manufacture is another important use of British Columbia carbonate rock. Limestone used for lime manufacture must be at least high calcium in composition, with less than 2.5 percent MgO.

The pulp and paper industry consumes significant quantities of limestone to recover caustic soda in the pulping process. Limestone for the pulping process must be at least high calcium in composition, with less than 3.0 percent MgO.

Agricultural limestone is generally produced as a byproduct of major quarries, used to neutralize acidic conditions in soil. Limestone for this end use can range from high calcium to dolomitic in composition.

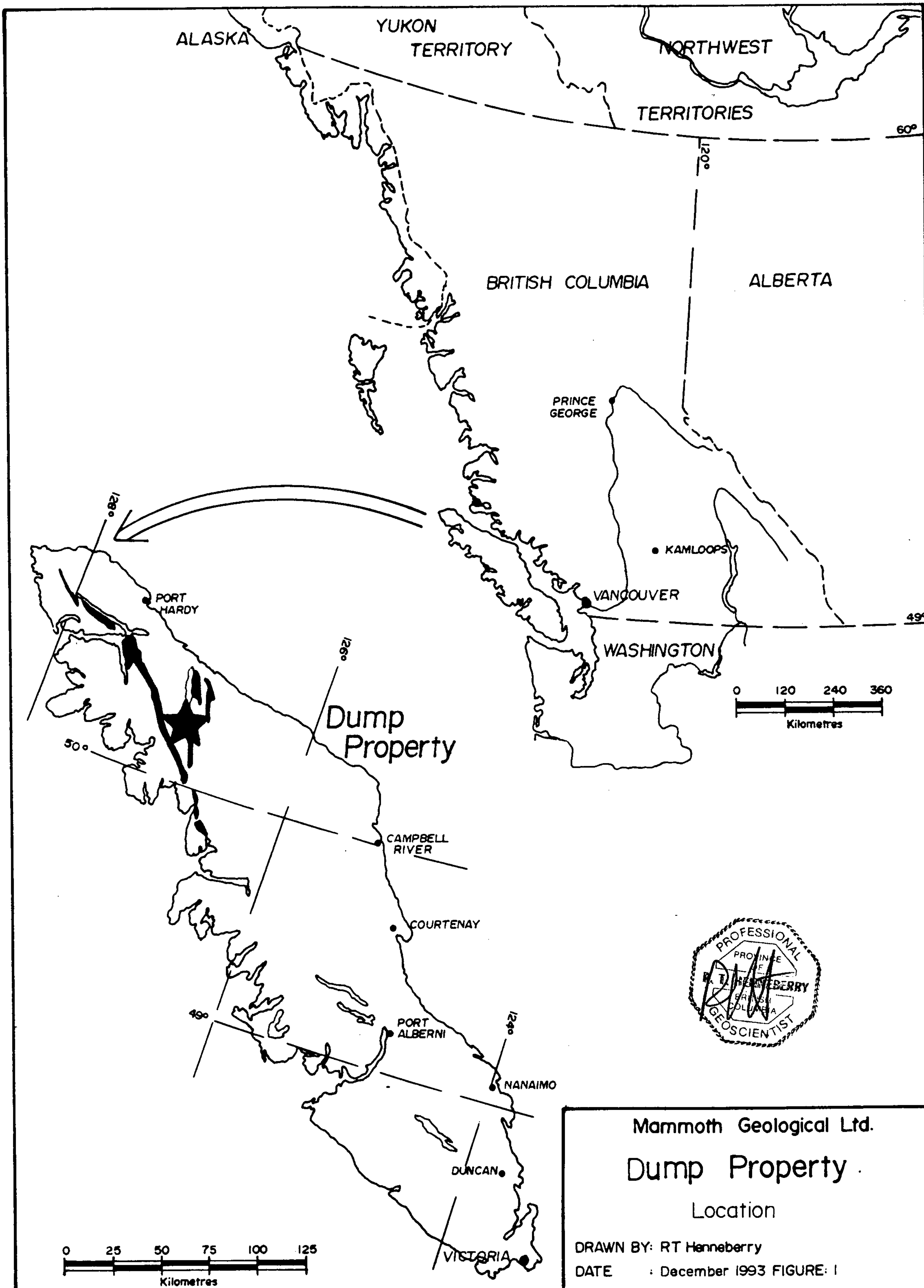
Carbonate rock is also used as fillers and extenders in paints and plastics, as chips and granules for architectural and decorative purposes and in the manufacture of glass. Limestone and dolomite for use in most fillers and extenders must have a brightness in excess of 85 percent (ideally 95 to 96 percent dry brightness in blue light), low iron contents and no silicates. Glass manufacturers require limestone with no more than 0.1 percent Fe_2O_3.

Structurally competent beds of limestone, or more importantly marble, can be used for dimension stone. Waste product from these operations can also be considered for use as landscape stone.

Demand

According to Fischl (1992), the consumption of limestone and dolomite is expected to increase in a number of areas in the near future. The province's mining industry will be relying on limestone to control acid mine drainage and to neutralize waste cyanide. The pulp and paper industry is expected to consume increasing amounts.

Temanex Consulting Inc. (1994) in a report on industrial mineral opportunities in British Columbia pulp and paper forecast an increase from 300,000 to 750,000 tonnes per annum for pigments in the Western North American paper industry. The pigments they describe are kaolin and calcium carbonate. The carbonate is used as a coater and filler in alkali paper processes.



Mammoth Geological Ltd.

Dump Property

Location

DRAWN BY: RT Henneberry

DATE : December 1993 FIGURE: 1

LOCATION, ACCESS

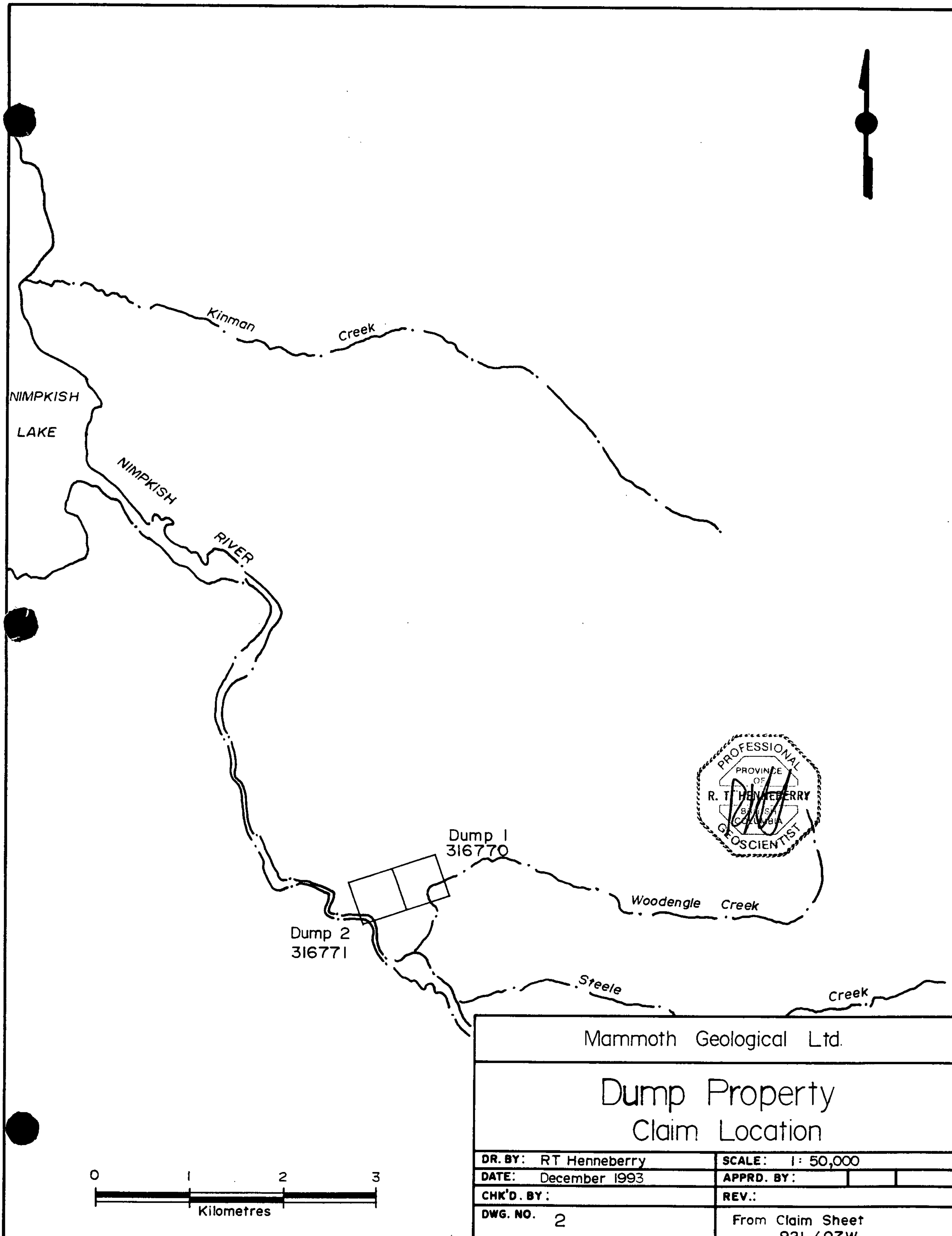
The area of interest is the northern section of Vancouver Island, between latitudes 49° 45' and 50° 45' and longitudes 126° 30' and 127° 55'. Topography ranges from Sea Level to 1050 metres, with valleys generally less than 300 metres. There are numerous lakes, creeks and streams where water for diamond drilling is readily obtainable. Heavy duty equipment for trenching and road-building will be accessible locally, in either Port Hardy or Port McNeill.

The climate on the north island is relatively mild. The summers are warm and generally dry, while the winters are cool and wet. Snow will accumulate on the higher peaks, but generally the valley bottoms and lower hills are clear for year round work.

There are several towns and lesser communities in the map area where accommodation and lodging can be readily obtained, including Port Hardy, Port McNeill and Woss. The Island Highway cuts through much of the map area. The numerous logging roads of Canadian Forest Products, Fletcher Challenge Canada and Canadian Pacific Forest Products provide access to different claim groups.

The Dump property lies on NTS Sheet 092L/07W, 40 kilometres south of Port McNeill. Access is 40 kilometres south along Island Highway to Zeballos Road, then 0.5 kilometres along this road to the property. The status of the property is immature second growth.

Part of the Dump claims cover an old gravel pit / garbage dump at the Anutz Reload.



Mammoth Geological Ltd.

Dump Property
Claim Location

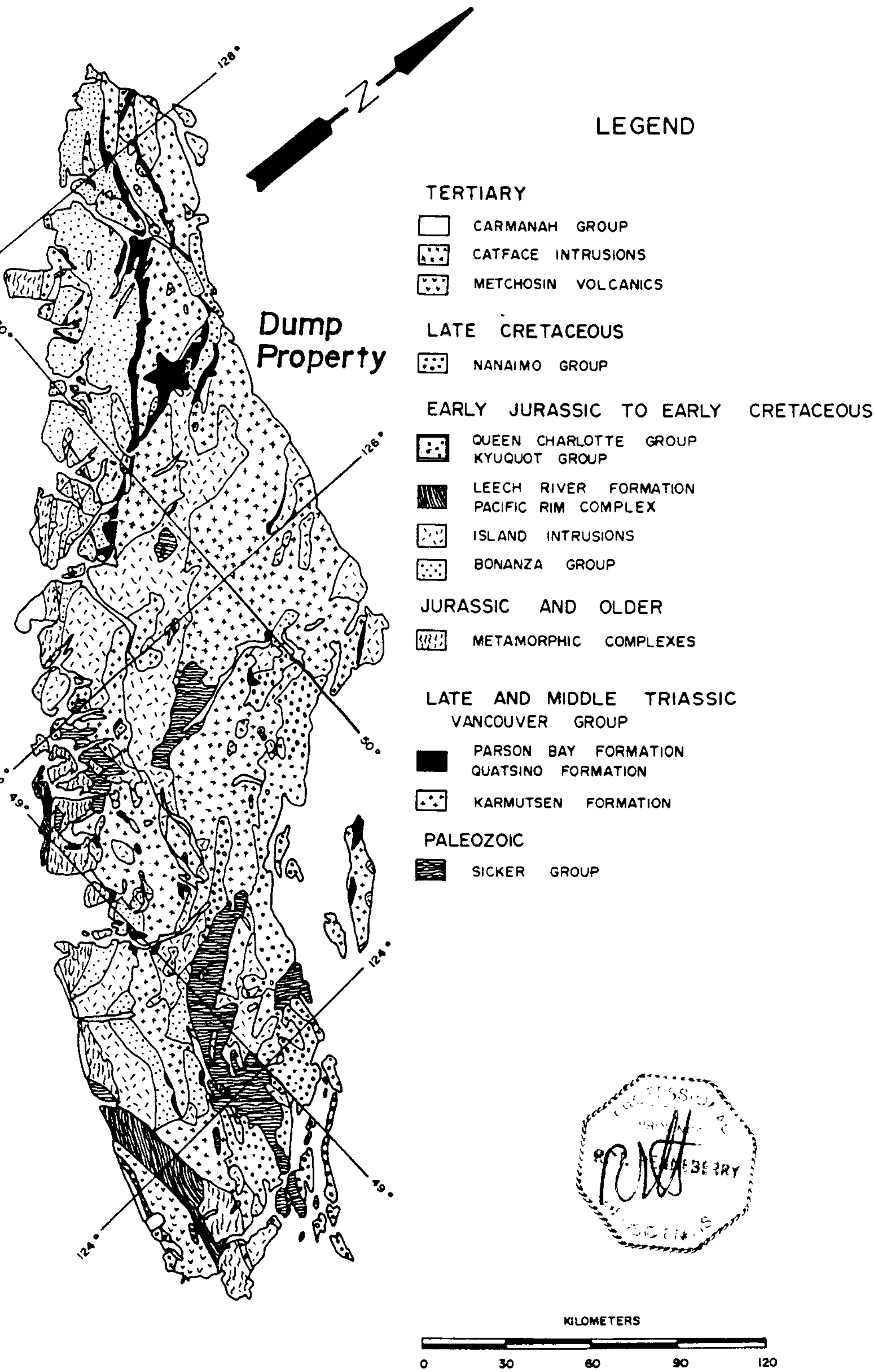
DR. BY: RT Henneberry	SCALE: 1: 50,000
DATE: December 1993	APPRD. BY:
CHK'D. BY:	REV.:
DWG. NO. 2	From Claim Sheet 92L/07W

CLAIM HOLDINGS

The Dump property comprises a total of 2 units, covering a prominent ridge and a semi-continuous outcropping of white limestone. The two units encompass an area 500m by 1000 m at the south end of the Centre Band of the Quatsino Limestone.

Name	Record Numbers	Anniversary Date
Dump 1	316770	March 31, 1996
Dump 2	316771	March 31, 1996

The claims are presently registered to Lou D. Straith.



FROM MULLER 1977. GEOLOGY OF VANCOUVER ISLAND; GSC OPEN FILE 463

Mammoth Geological Ltd.	
GEOLOGY OF VANCOUVER ISLAND	
DRAWN BY: A. STANTA	SCALE:
CHECKED BY:	DATE: December 1993
APPROVED BY:	DRAWING NO: 3

REGIONAL GEOLOGY

The geology of the north end of Vancouver Island has been described by Muller et al (1974) and Muller et al (1980). The area lies in the Insular Belt of the Canadian Cordillera. The map area is chiefly underlain by the middle to upper Triassic Vancouver Group, overlain by the lower Jurassic Bonanza Group. The Vancouver Group is intruded by large and small bodies of middle Jurassic Island Intrusions and the related (?) Westcoast Complex, and overlain unconformably by remnants of a lower Cretaceous clastic wedge on the southwest side and similar upper Cretaceous beds on the northwest side of Vancouver Island. There are some small early Tertiary (Catface) intrusions also mapped. The region may be divided into several great structural blocks, separated mainly by important near-vertical faults and themselves fractured into many small fault segments.

The Vancouver Group is comprised of the lower Karmutsen Formation, middle Quatsino Formation and upper Parson Bay Formation. The Karmutsen Formation, the thickest and most widespread of the Vancouver Group formations, consists of basaltic pillow lavas, pillow breccias and lava flows with minor interbedded limestones, primarily in the upper part of the formation. Karmutsen rocks outcrop throughout the north part of Vancouver Island, primarily on the east side.

The Quatsino Formation overlies the basalts. The lower part of the Quatsino Formation consists of thick bedded to massive, brown-grey to light grey, grey to white weathering, fine to microcrystalline, commonly stylolithic limestone. The upper part is thin to thick bedded, darker brown and grey limestone, with fairly common layers of shell debris. The formation is in gradational contact with the overlying Parson Bay Formation by an increase in layers of calcareous pelites. Quatsino limestone outcrops as three narrow belts on the north part of Vancouver Island.

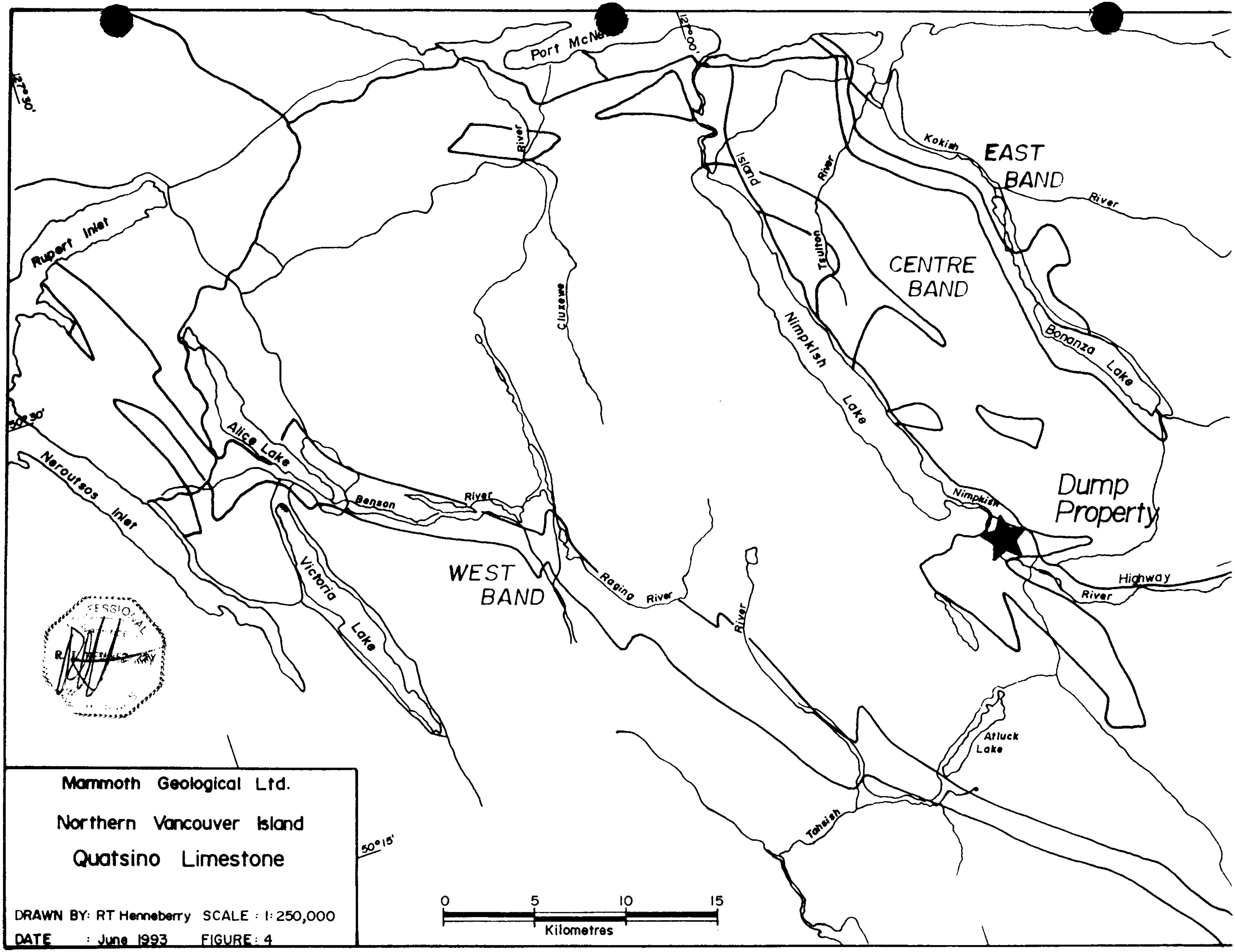
The Parson Bay Formation consists of a series of interbedded silty limestones and calcareous shales and sandstones, and occasional beds of pure limestone. Parson Bay rocks outcrop sporadically overlying the Quatsino limestone.

The Bonanza Group overlies the Vancouver Group. Bonanza Group rocks are primarily a Jurassic assemblage of interbedded lava, breccia and tuff with compositions ranging from basalt through andesite and dacite to rhyolite, deposited in a volcanic island arc environment. The Bonanza Group outcrop primarily on the west side of northern Vancouver Island.

The Westcoast Complex is a heterogeneous assemblage of amphibolite and basic migmatite with minor metasedimentary and metavolcanic rocks of greenschist metamorphic grade. The Westcoast Complex outcrops in a loosely defined belt on the west coast of Vancouver Island.

Granitoid batholiths and stocks of the Island Intrusions underlie large parts of Vancouver Island. These intrusions range in composition from quartz diorite and tonalite to granodiorite and granite. Island Intrusions outcrop in a belt through the central section of Vancouver Island.

The Cretaceous clastic wedge includes the Queen Charlotte and Nanaimo Groups. These groups consist of cyclical successions of sandstone, conglomerate and shale, with interbedded coal in the Nanaimo Group. These rocks outcrop around Quatsino Sound.



Mammoth Geological Ltd.

Northern Vancouver Island

Quatsino Limestone

DRAWN BY: RT Henneberry SCALE : 1:250,000

DATE : June 1993 FIGURE : 4

Small intrusive stocks of early Tertiary age and of general quartz dioritic composition are known in many parts of Vancouver Island. These rocks are generally massive, light colored, fine to medium grained equigranular to locally porphyritic granitoid rocks. They are commonly regularly and closely jointed.

The network of faults displayed on the north end of Vancouver Island appears to be the super position of two or more fracture patterns, each with a characteristic directions and of different age and origin.

Quatsino Formation

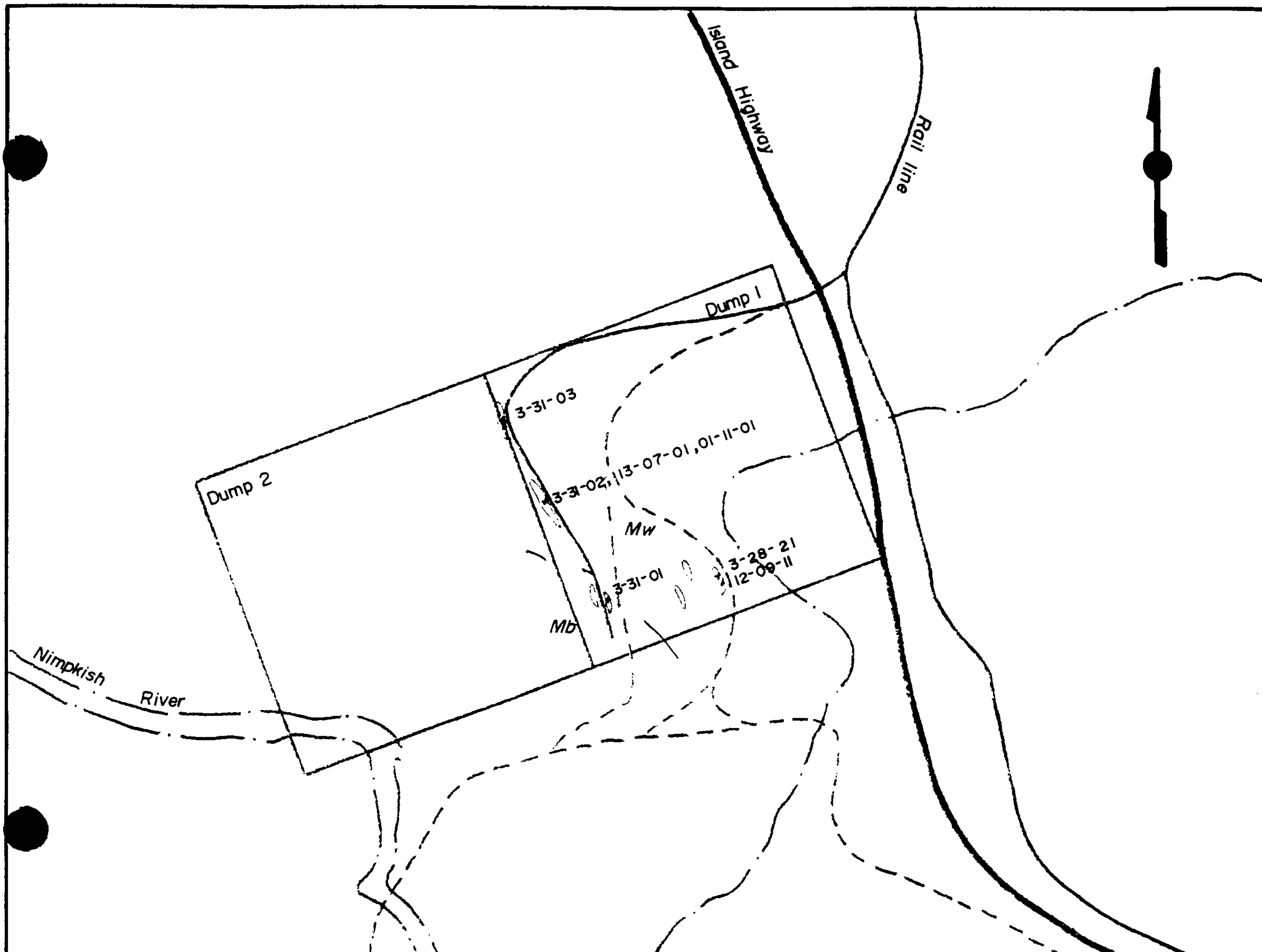
The Quatsino Formation limestones are the main focus of the marble exploration. The larger, massive beds of limestone are white to grey in color and distinctly crystalline. Exceedingly fine-grained beds form a small percentage of the whole and siliceous or cherty varieties are likewise sparingly developed (Gunning, 1930). The Quatsino formation consists almost entirely of limestone, with a few thin flows of andesite or basalt. The limestone is fine to coarsely crystalline, and ranges from white to black, with various intermediate colors. Towards the base, it tends to be exceedingly fine grained, and grey and brownish or buff colors are characteristic. Midway of the formation the colors are predominantly white or grey, but towards the top the limestone becomes dark grey to black, due to a varying quantity of carbonaceous matter, and the formation grades upward into argillites and impure limestones of the overlying Parson Bay Formation. Even at the top, however, light grey or even white beds are interbedded with the darker varieties. The bedding, as represented by colour banding, is generally well preserved in the upper part of the formation but in the lower part, where white to brownish grey and buff colors predominate, it is poorly preserved. In the upper part, too, the beds are generally thin, thicknesses of 1-2 centimetres being common and more than 60-100 centimetres uncommon. The formation as a whole is dominantly a high-calcium limestone (Hoadley, 1953).

Within 1-3 kilometres of bodies of the Coast Intrusions, the limestone may be highly contorted and extremely jointed and fractured, cut by many acidic dykes, and partly to completely skarnified (Hoadley, 1953).

Limestone outcrops in three relatively narrow discontinuous bands of varying lengths on the north end of Vancouver Island (McCammon, 1968). The East Band reaches from the hill just west of Beaver Cove southeast across Tsulton River to Bonanza Lake and down the west side of the lake to its west end. The Centre Band extends from 5 kilometres south of Port McNeill southeast to 15 kilometres past the south end of Nimpkish Lake. The West Band extends from west of Nahwitti Lake southeast to Tlupana Inlet. A additional limestone occurrence extends along the south shore of Holberg Inlet.

The limestone from the Centre Band is generally medium grey to black or dark brown to black. The limestone becomes darker and argillaceous towards the top of the formation (Gunning, 1932a). White to dark grey limestones occur at several places on Nimpkish Lake where they are recrystallized and somewhat faulted and obtain a thickness of 150 to 300 metres (Gunning, 1930). Along the east side of Nimpkish Lake a section of "dirty" sugary grey white limestone was observed. Both Gunning (1930) and Hoadley (1953) consider the outcroppings along Nimpkish Lake too jointed in many places to serve as a building stone.

McMillan Bloedel continues to hold the old IM4 quarry at the north end of the Centre Band. The grey-white limestone was used for rip-rap at the McMillan Bloedel facility in Port McNeill. Ecowaste Management is exploring the band on the northeast shore of Nimpkish Lake for chemical lime. Industrial Fillers continues to hold the ground contiguous to the south of the Ecowaste ground for industrial fillers.



LEGEND

Ad Andesite dyke

Mw White marble

Mb Black marble

Creek

Outcrop

Road

3-31-01 Sample location

0 100 200 300 400 500
Metres

Mammoth Geological Ltd.

Dump Property

Geology

DR. BY: R T Henneberry	SCALE: 1 : 10,000
DATE: January 1994	APPRD. BY:
CHK'D. BY:	REV.: March 1996
DWG. NO. 5	

PROPERTY GEOLOGY

The Dump property, lying in the Centre Band of the Quatsino Limestone, is completely underlain the limestone. Three limestones have been mapped, a fine-grained grey-white, a fine-grained white and a coarse-grained grey black, with the grey-white and white being the stones of interest. The property is marked largely by river deposits of gravel from the Nimpkish River, with small knobs of grey-white and white limestone protruding through the gravel. Bedding has been measured at 124/30-50SW. There is little documentation on thicknesses in this area.

The grey-white limestone is exposed in the large gravel pit on the eastern side of the claim group. The main exposure is 40 metres long by 15 metres high by 10 metres wide. A second exposure is behind the first on the far side of a second gravel pit. In this location the marble is intruded by a 2 metre thick andesite dyke, intruded along a bedding plane. The outcrop is grey-white in color and shows numerous zones of limonite, confined primarily to weathered surfaces and fractures.

The marble is dense and coarsely crystalline (1-2mm). The color is almost a "dirty" white grey. The "dirty" look to the stone is likely due to impurities. There is 1/2% disseminated sulfides throughout the sample as 1-3mm crystals. There is also traces of limonite on some of the bedding planes (?). This marble was tested as sample 12-09-11 (Henneberry, 1993).

The white marble, ranging from semi-massive to well-fractured, is exposed along the rail cut. Limonite is common on fractures, though little clay or carbonate has been noted.

This marble is dense and medium-grained. Though the color of this stone is a grey-white it is quite a bit lighter in color than the grey-white. The sample is massive, though it is not homogeneous. There is 1/2% disseminated sulfide throughout the sample, ranging from 1-3mm. (This marble was analyzed as samples 13-07-01 and 01-11-01).

Chemical and Optical Analyses

Samples of the grey-white limestone were submitted to two different industrial limestone companies in the United States. Analyses were completed on the samples in their own internal labs. The first sample (12-09-11) was analyzed by Chemex Labs in North Vancouver and reported an earlier assessment report (Henneberry, 1993). A brightness test was not done (nd) on this sample. The results are as follows:

Sample	Limestone	Brightness	$CaCO_3$	$MgCO_3$	Acid Insolubles
12-09-11	Grey-white	nd	95.72%	2.80%	3.71%
13-07-01	White-grey	96.0%	98.10%	0.32%	0.80%
01-11-01	White-grey	95.2%	96.20%	4.46%	0.97%

These chemical and optical tests indicate the Dump limestone lies within the acceptable range for low end industrial filler applications. Further systematic testing is required to obtain representative values of the limestone of the property as a whole.

The large discrepancy in $MgCO_3$ between the two samples from the white-grey limestone will also need further addressing.

DISCUSSION

While the preliminary exploration did show the Dump property to have some potential for polished dimension stone (Henneberry, 1993), subsequent exploration and marketing surveys showed this potential to be considerably less favourable than originally thought.

Recent initiatives by the Geological Survey Branch of the British Columbia Ministry of Energy, Mines and Petroleum Resources has focussed squarely on the industrial filler and chemical potential of British Columbia limestone (for example: Fischl, 1992 and Temanex Consulting Inc., 1994).

Finally, the results from the recent test quarrying of the Leo D'or marble property on Bonanza Lake (in the East Band of the Quatsino Limestone) were disappointing. According to Matrix Marble Corp. of Duncan (personal communication, 1995), the blocks Matrix processed from the Leo D'or property were subject to cracks and differential hardness within the individual quarry blocks. This made cutting and especially polishing extremely difficult, time consuming and costly.

These three events shifted the focus of exploration more toward filler and chemical applications. The initial analyses from the Dump property are encouraging, meeting the criteria for fillers and extenders.

While this property is a significant distance from tidewater (+30 kilometres), it does lie on the Nimpkish Valley Railway Line of Canadian Forest Products. This line connects to tidewater at Beaver Cove, meaning transportation should not be a major concern.

Further exploration is warranted at this property. The first stage should be a systematic sampling program of the semi-continuous outcrop exposure along the railway spur. As part of this phase, mapping should be extended to the west in an attempt to define the limit of this white-grey limestone exposure.

A small drilling program should also be undertaken to test the vertical extent of this white-grey limestone to $\pm$ 50 metres, with a total program of $\pm$ 200 metres.

Favourable results and analyses of the core samples would necessitate a small bulk sample program of $\pm$ 5,000 tons. This material would be quarried, crushed and shipped to a processing plant for a large scale bulk test.

A successful conclusion would require a feasibility study and production decision.

CONCLUSIONS AND RECOMMENDATIONS

The Dump property, lying within the Centre Band of the Quatsino Formation limestone, hosts a white-grey limestone/marble of economic potential. The property was originally staked as a dimension stone target. Exploration to date has shown the property to have a greater merit as a potential source of filler or industrial grade limestone.

A staged, two phase exploration program of systematic sampling and diamond drilling, followed by a bulk sampling program is recommended.

The first stage will consist of systematic sampling of the white-grey limestone, followed by a ± 200 metre diamond drilling program. The core will be analyzed at regular intervals for its chemical and optical properties, as will the surface samples. This phase is estimated to cost $40,000.

Upon successful completion of stage one, a ± 5,000 ton bulk sample should be quarried, crushed and transported to a west coast processing plant. The mining cost is estimated at $80,000, while the processing and marketing of the sample is budgeted for a further $25,000.

Sampling, Drilling	$40,000
Bulk Test	$80,000
Processing, Marketing	$25,000

	$145,000

A total of $950.00 was spent on the property in 1995 to obtain the samples for optical and chemical testing and to document the results.

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STATEMENT OF QUALIFICATIONS

I, R.Tim Henneberry, am the principle of Mammoth Geological Ltd., a geological consulting firm with offices at 9250 Carnarvon Road, Port Hardy, B.C. The mailing address is Box 5250, Port Hardy, B.C. V0N 2P0

I earned a Bachelor of Science Degree majoring in geology from Dalhousie University, graduating in May 1980.

I have practiced my profession continuously since graduation.

I am registered with the Association of Professional Engineers and Geoscientists in the Province of British Columbia as a Professional Geoscientist. I am also a Fellow of the Geological Association of Canada.

The Dump 1-2 claims (316770-316771) are registered to Lou Straith, an associate. I have a direct interest in these claims of 50%.

I undertook the sampling program on the Dump claims on the following 1995 dates: July 13 and November 1.

This report may be used for any purpose normal to the business of Mammoth Geological Ltd., provided no part is used in such a manner to convey a meaning different than that set out in the whole.

Dated this 14th day of March in the Town of Port Hardy, British Columbia.

PROFESSIONAL PROVINCE OF R. T. HENNEBERRY BRITISH GEOSCIENTIST

R.Tim Henneberry, P.Geo

STATEMENT OF COST

Dump Property

Project Manager	1 days	@	300.00 /day	$300.00
Vehicles	1 days	@	50.00 /day	$50.00
Analysis (Cost of analyses not included)	2 samp	@	00.00 /sample	$0.00
Documentation	2 days	@	300.00 /day	$600.00
Dump Property Costs				**$950.00**

The cost of analyses is not included, since the results cannot be included.

COST ESTIMATES

Dump Property - Recommended Budget

Drilling and analysis costs	$40,000
Bulk test cost	$80,000
Processing/Marketing Analysis	$25,000

Dump Property Total	$145,000

SAMPLE DESCRIPTIONS

Sample 12-09-11 - Dense, medium-grained (1-2mm) grey white marble. Almost a faint remnant banding through stone. Fractured with white carbonate healing. 15mm stylolite through centre of sample. Traces of limonite on 10% of fractures. Traces of sulfides.

Outcrop - The outcrop is covered for the most part by river gravels. It is accessible only in a small location, where it is hard to ascertain fracture information. Limonite was present on the exterior of the sample.

Sample 13-07-01 - Dense, medium-grained white-grey limestone/marble, with individual 1mm calcite crystals. The stone appears very clean with little noted impurities except for limonite staining on fracture surfaces. Traces of sulfides were noted.

Sample 01-11-01 - Dense, medium-grained white-grey limestone/marble, with individual 1mm calcite crystals. The stone appears very clean with little noted impurities except for limonite staining on fracture surfaces. Traces of sulfides were noted.

Outcrop - Semi-massive white marble in a semi-continuous exposure in excess of 200 metres. Horizontal fractures 20-50cm in length at 100-200cm spacings. Vertical fractures 20-40cm in length, 100-200cm spacings. Minor limonite noted.