

ARIS SUMMARY SHEET

District Geologist, Vancouver

Off Confidential: 94.10.21

ASSESSMENT REPORT 23069

MINING DIVISION: Nanaimo

PROPERTY: Nimp
LOCATION: LAT 50 29 30 LONG 126 58 30
UTM 09 5595038 643639
NTS 092L07W
CAMP: 030 Nimpkish Area
CLAIM(S): Nimp 1-2
OPERATOR(S): Henneberry, R.T.
AUTHOR(S): Henneberry, R.T.
REPORT YEAR: 1993, 24 Pages
COMMODITIES
SEARCHED FOR: Dimension Stone
KEYWORDS: Triassic, Quatsino Formation, Limestones, Marble
WORK
DONE: Prospecting
PROS 50.0 ha

**MAMMOTH
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**SUMMARY OF OBSERVATIONS
AND
EXPLORATION RECOMMENDATIONS
FOR THE
NIMP PROPERTY**

Nanaimo Mining Division
Vancouver Island, B.C.

LOG NO:	OCT 27 1993	RD.
ACTION:		
FILE NO:		

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,069

By: R. Tim Henneberry, P. Geo
October 16, 1993

SUMMARY

The Quatsino limestones at the north end of Vancouver Island have received little attention as a source of dimension marble in the past. These limestones have the potential to provide dimension stone marble for use as marble facings (veneer) and marble tiles. A compilation completed by the author in 1991 identified several areas where a concentrated exploration program has an excellent chance of locating quarriable marble reserves.

One of the areas identified was the central section of the **Central Band**. The Nimp Property was staked to cover part this occurrence. The limestone located ranged from a grey-black breccia with white carbonate infilling to a massive grey black. Both types of limestone located are of particular interest.

Based on these preliminary observations, a success contingent four phase exploration program is recommended as outlined below:

Phase I	\$7,101
Phase II	\$18,831
Phase III	\$48,818
Phase IV	\$253,518

TOTAL BUDGET	\$328,268

Phase I will consist of mapping and sampling of the claims. Phase I is estimated to cost \$7,101.

Phase II will consist of excavator trenching and blasting estimated at \$18,831.

Phase III will be the diamond drilling program. A number of shallow 100-200 foot holes (total 1000 feet) will be drilled at an estimated cost of \$48,818.

Phase IV, the pre-production bulk test, will include test quarrying of several rough quarry blocks, approximately 8 ft. X 8 ft. X 6 ft each. This phase will also include permitting and engineering required to put the quarry into production. Phase IV is estimated to cost \$253,518.

The total exploration program is anticipated to cost \$328,268.

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INTRODUCTION

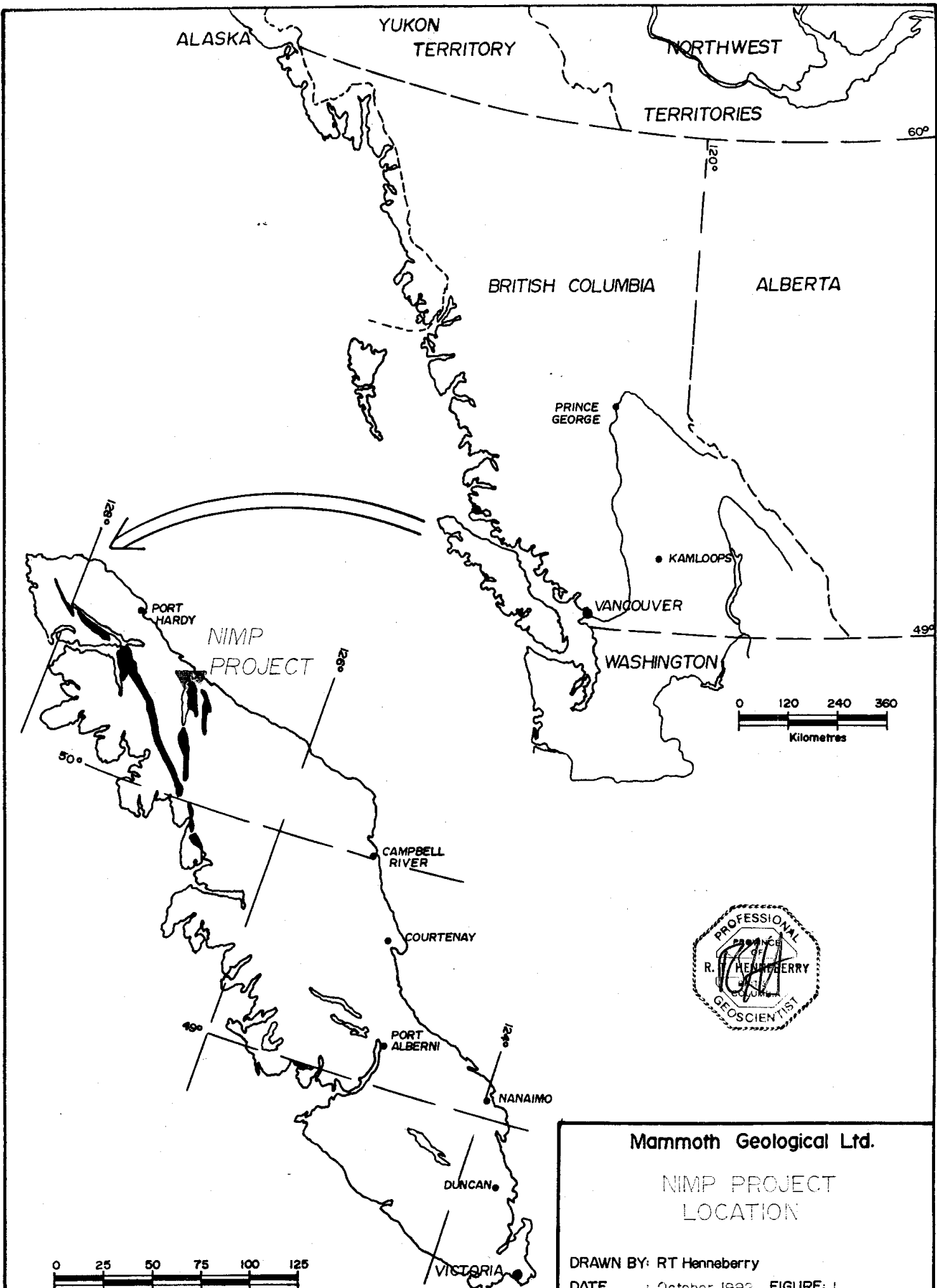
The purpose of this report is to document the observations made of the marble on the Nimp Property. A preliminary examination was made on October 25, 1992. This consisted of mapping along the railway cut on the eastern side of the claim group. Recommendations for further exploration have also been presented.

The marble potential of the Quatsino Formation of northern Vancouver Island was examined in considerable detail by the author in 1991/1992 (Henneberry, 1992). The purpose of this research was to identify potential marble resources within the Quatsino Formation on the northern part of Vancouver Island.

As part of the 1991 report, all outcroppings of Quatsino Formation were identified on 1:250,000 geology maps (primarily Muller, 1977). The Minfile Index and Assessment Report Index were scanned for any reports that contained information on the limestones, regardless of the primary focus of the report. This information was then compiled and combined to form descriptions of general locations within the limestone related to Minfile occurrences.

Individual 1:250,000 maps of each of the three prominent bands of Quatsino Limestone were plotted and rough outlines of the location of the block of property associated with each of the Minfile Report Summaries bands were plotted. Potential exploration targets and unstaked marble resources were then identified.

The Nimp property covers part one of the targets identified.



Mammoth Geological Ltd.

NIMP PROJECT
LOCATION

DRAWN BY: RT Henneberry

DATE : October 1992 FIGURE: 1



LOCATION, ACCESS

The area of interest is the northern section of Vancouver Island, between latitudes $49^{\circ} 45'$ and $50^{\circ} 45'$ and longitudes $126^{\circ} 30'$ and $127^{\circ} 55'$. Topography ranges from Sea Level to 1050 metres, with valleys generally less than 300 metres.

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.

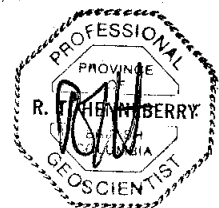
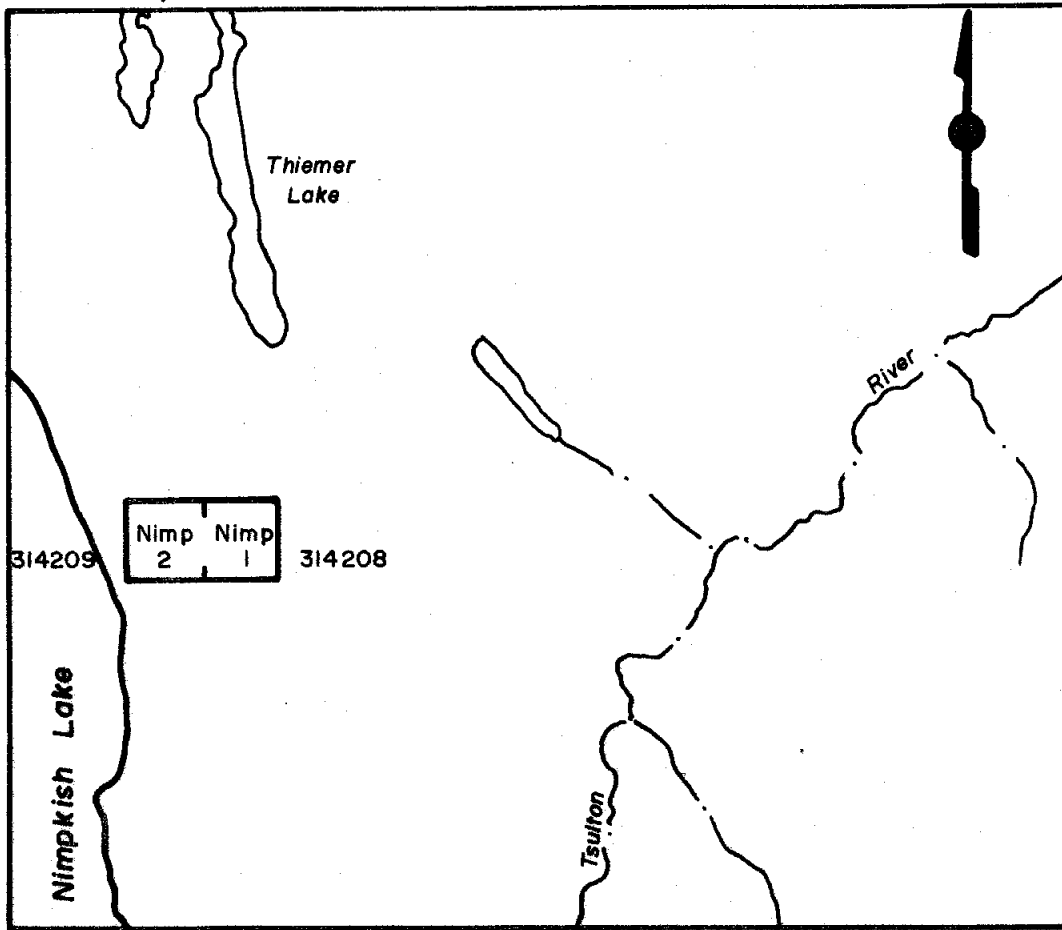
There are several towns and lesser communities in the map area where accommodation and lodging can be readily obtained, including Port Hardy and Port McNeill. The Island Highway cuts through much of the map area. Numerous logging roads will provide access to most of the Quatsino Limestone in each of the three bands, the most notable exception being the Hisnet Inlet area at the extreme south of the West Band.

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.

Access to the Nimp Property is good, with several logging roads cutting through the claims.

The property consists of 2 two-post mineral claims encompassing an area 0.5 kilometres by 1 kilometre.

Claim maps 92L/07W 92L/10W



Mammoth Geological Ltd.

Nimp Group

Claim Location

DRAWN BY: RTHenneberry SCALE: 1:50,000

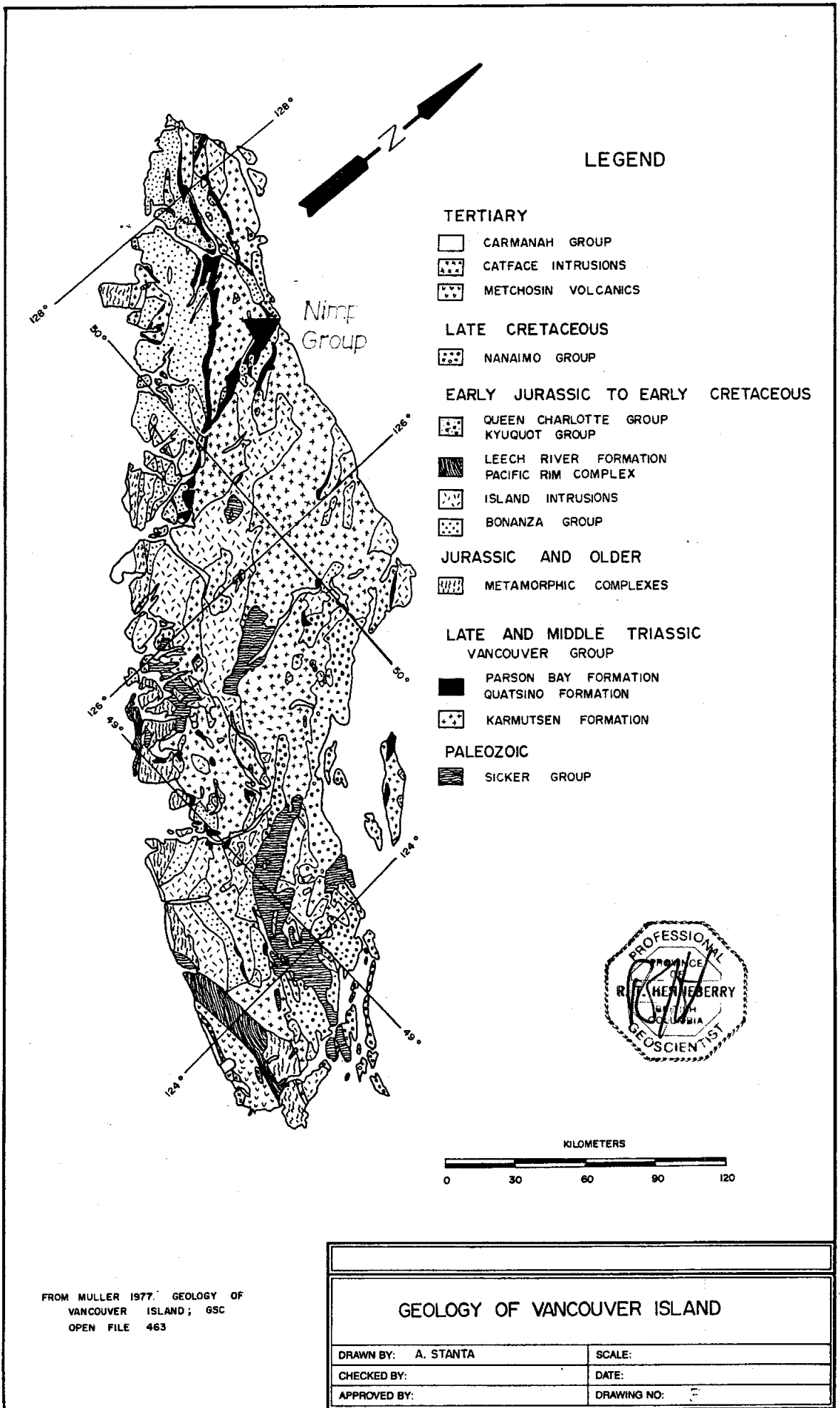
DATE: October 1992 FIGURE: 2

CLAIM OWNERSHIP

The Nimp Property is located on claim sheet 092L/07W.

Claim	Record Number	Anniversary Date
Nimp 1	314208	October 25, 1993
Nimp 2	314209	October 25, 1993

The registered owner is R. Tim Henneberry of Mill Bay, B.C.



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

GEOLOGY OF VANCOUVER ISLAND

DRAWN BY: A. STANTA

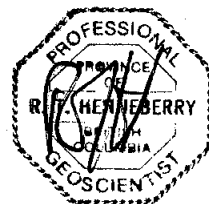
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DATE:

APPROVED BY:

DRAWING NO: 5



KILOMETERS

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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 stylolitic 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.

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.

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 superposition 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 inch and less being common and more than 2 or 3 feet uncommon. The formation as a whole is dominantly a high-calcium limestone (Hoadley, 1953).

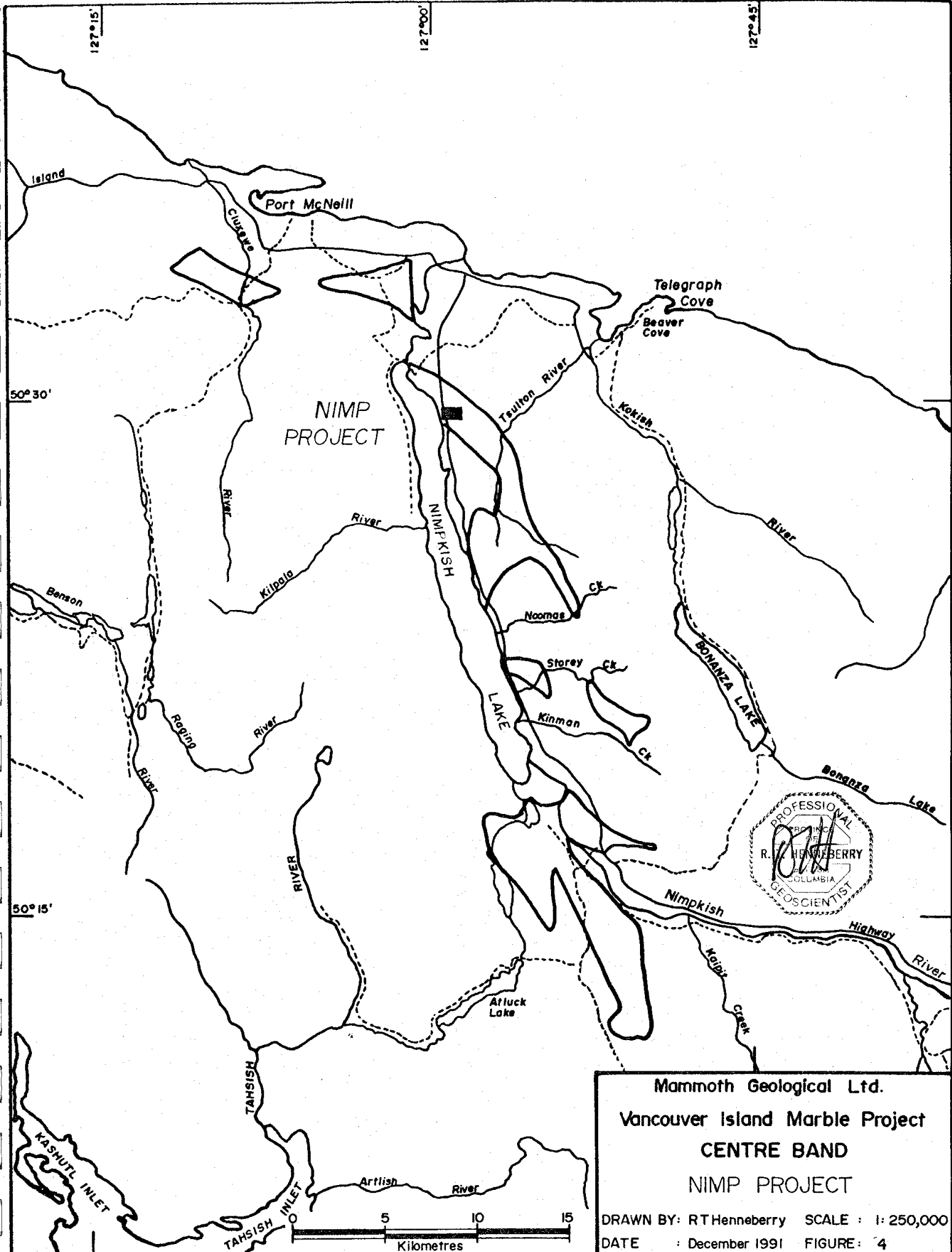
Within a mile or two of bodies of the Coast Intrusions, the limestone may be highly contorted and extremely jointed and fractured, cut by many acidic dykes, and partly to completely skarnified (Hoadley, 1953).

In the vicinity of Kathleen and Alice lakes, the lower portion of the limestone contains small interbeds of lava and above it lies a mixed series of argillites, quartzites and volcanics in which there are small beds of argillaceous limestone. White to dark grey limestones occur at several places on Nimpkish Lake. The limestones are recrystallized and somewhat faulted. (Gunning, 1930), and obtain a thickness of 500 to 1000 feet in the Nimpkish Lake Quadrangle. The limestone becomes darker and argillaceous towards the top of the formation. (Gunning, 1932a).

The limestone in the Zeballos area is medium to coarsely crystalline and, owing to extensive recrystallization, has lost all evidence of bedding. On weathered surfaces the limestone is grey, but on freshly broken surfaces it ranges from white to cream (Stevenson, 1950).

The limestone outcropping along Nimpkish Lake (Central Band) is too jointed in many places to serve as a building stone, but where the beds are least deformed and well removed from intrusions, as from Beaver Cove to Bonanza Lake, it could be extracted in blocks sufficiently large for ordinary structural purposes. However, there is an inexhaustible supply of limestone suitable for fluxing purposes in smelting operations, a favourable location for an open-pit operation being on the east side of Tahsis Inlet, 1 mile north of Mozino Point (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.



Mammoth Geological Ltd.
 Vancouver Island Marble Project
 CENTRE BAND
 NIMP PROJECT

DRAWN BY: RTHenneberry SCALE : 1: 250,000
 DATE : December 1991 FIGURE : 4

The Nimp Property lies within the central sections of the Central (Nimpkish) Band of the Quatsino Limestone. The description of the central band from the 1991 report is given below.

Central (Nimpkish) Band

The central band stretches from 5 kilometres southeast of Port McNeill to 15 kilometres southeast of Nimpkish Lake. Except for the extreme northern end, all mineral exploration associated with this band has been for base and precious metals.

Gunning (1932a) described this limestone band as the Quatsino limestone, attaining a thickness of 500 to 1000 feet, consisting of white to grey crystalline limestone.

This band is not continuous, but is broken up into section, loosely defined as south end (south of Nimpkish Lake), the broken central section (along the east side of Nimpkish Lake), and the northern section (north of Nimpkish Lake).

Southern End

Very little documented exploration has taken place over the southern end of the band (ie. south of Nimpkish Lake). The only documented exploration has been concentrated proximal to the old Iron Crown Mine, 8 kilometres south of Nimpkish Lake.

Quatsino limestone in this area is white or light grey and generally coarsely crystalline. Bedding is rare or absent; thin discontinuous dark bands were noted in the main headwall of the pit. The rock appears to be pure calcium carbonate. A stain test on one or two specimens showed no dolomite (Sangster, 1969). The headwall of the main pit exposes massive crystalline limestone with no definite indication of bedding. Fracturing is noticeable in limestone adjacent to magnetite (AR 1960).

The fracture density and jointing patterns have not been documented.

Central Section

Exploration along the central section has been concentrated on base metal and magnetite exploration. These efforts have been concentrated around the Nimpkish (Kinman) Copper, Smith Copper and Magnet showings.

Gunning (1930; 1932a) described a thick bed of grey to white, medium grained marble, underlain conformably by a series of green to greenish black andesite and basalt flows around Nimpkish Copper. The limestone has been thrown into a series of tightly compressed folds (Gunning, 1930). The Quatsino limestone consists predominantly massive, fine grained limestone (AsR 00831), with the limestone underlying much of central part intensely deformed near intrusive contact (AsR 00831).

Gunning (1930; 1932a) described the limestone around Smith Copper as crystalline to dense, and white to light or dark grey in color, striking northwest and dipping southwest. The width of the limestone is about 900 feet and the thickness is at least 500 feet. The limestone has also been described by several groups that have held the key claims over the years.

Blueish grey crystalline limestone containing faint argillaceous banding (NW/SW mod), forms prominent escarpments west of Storey Creek. (AsR 18704). Drilling intersected white recrystallized marble, blue recrystallized marble and calc silicate facies (AsR 11147). Locally the white to light grey limestone is very soft (AsR 10337). In outcrop the limestone varies from a light grey, fine to medium crystalline rock to medium to coarse crystalline, white limestone with small patches of skarn occasionally present (AsR 07227). Some beds consist of coarse fragments of calcite in a matrix of fine grained carbonate (AsR 00417).

Gunning (1930; 1932a) described the limestone around Magnet as fairly thin, flat lying, crystalline limestone. McCammon (1968) took two samples in the general area (samples 26, 27) described as fine grained, massive black limestone. The present Tsulton Claims are underlain by limestone divided into upper and lower members. The upper member is medium to dark grey in color and occasionally contains silica. Interbeds of white weathering, off white to light grey limestone are also present. The lower member is generally fine grained except where recrystallized, and has thin beds of dark grey and cherty material (AsR 17759).

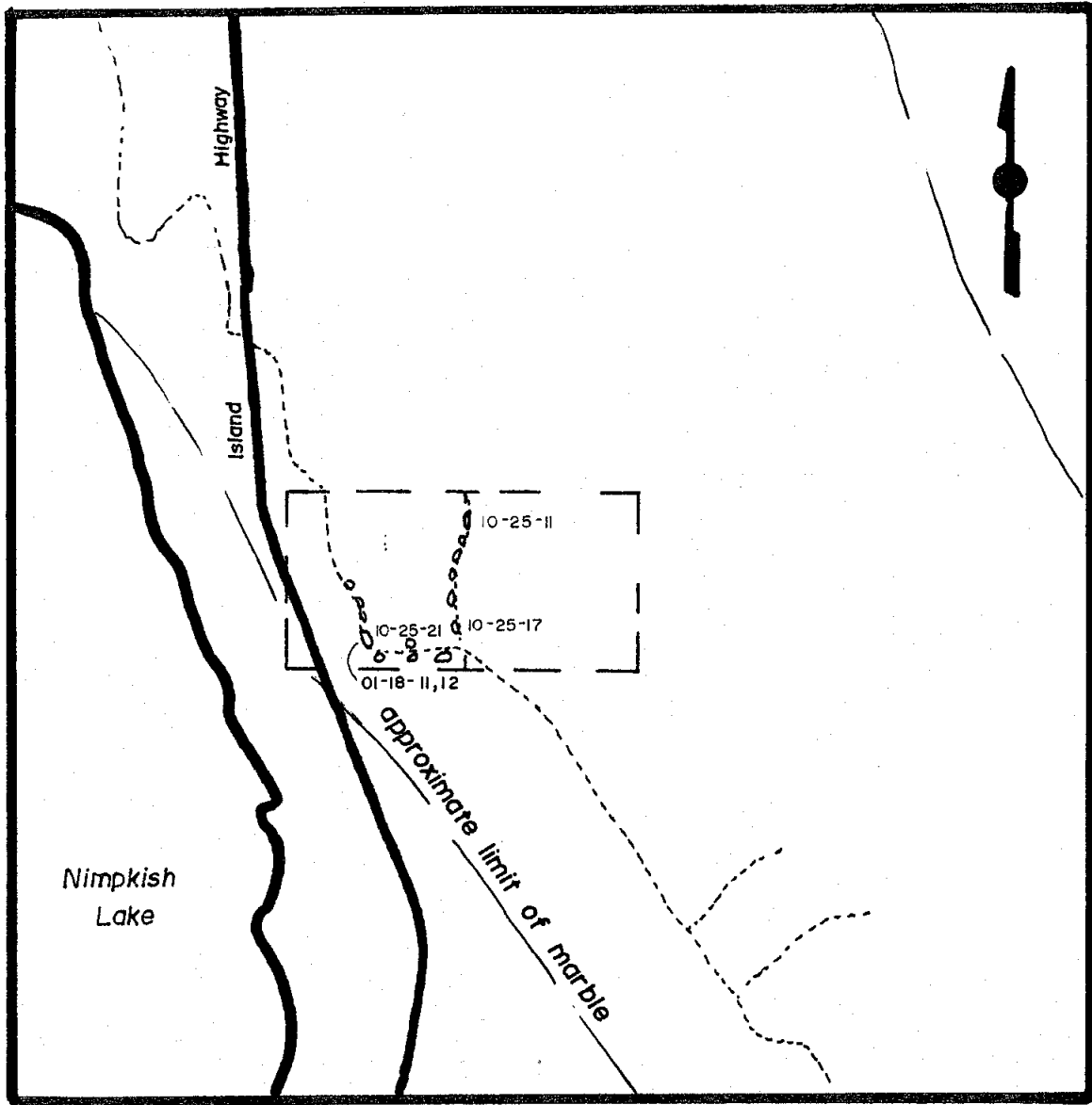
The fracture density and jointing patterns have not been documented.

Northern End

Exploration at the north end has been primarily for limestone. Quarrying of the limestone for industrial use has taken place southeast of Port McNeill. Limestone also outcrops along the Cluxewe River.

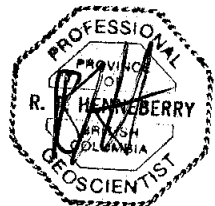
Cliffs of colored marble were reported on McNeill Brook, about 3 miles inland from the mouth of the brook (Gouge, 1944).

The limestone from the quarry is mostly light grey to white with occasional dark patches. It weathers white with a frosted and fluted surface, from which project small scattered siliceous protuberances, probably fossil remnants. In thin sections the grains are seen to vary from less than 0.1 mm to slightly greater than 0.2 mm in diameter and to display multiple twinning. Small rounded quartz grains occur sparsely distributed among the calcite grains. Joints and small slips are abundant and multi-directional, so blocks larger than 2 feet long are not easy to produce in quarrying (McCammon, 1968). Sections of dark grey cherty and pyritic material were also noted (AsR 17761). In drill core, light grey, white and black limestone, in beds 10-15 feet thick, were intersected (AsR 08082).



LEGEND

- Creek
- Road
- Outcrop
- 10-25-11 Sample location



Mammoth Geological Ltd.
 NIMP PROJECT
 PRELIMINARY GEOLOGY

At the Cluxewe River Bridge on the Benson Lake Road, limestone is fine-grained, dark grey and contains fossils and pods of dark chert. 3/4 miles from the bridge, a quarry 500 feet long, by 150 feet wide by 20 feet high was opened (Sample 17). The limestone is mostly fine grained black rock that weathers light grey and displays 1/4 - 1/2 inch striping that appears to be bedding (000/56) (McCammon, 1968). In general the limestone in the area consists of a lower section of thick bedded to massive limestone and an upper section of medium to thin-bedded limestone (AsR 10854).

McCammon (1968) noted joints and small slips are abundant and multi-directional, so blocks larger than 2 feet long are not easy to produce in quarrying. There is no documentation on the jointing patterns and fracture density.

Nimp Property

The Nimp claims lie in the northern half of the central section of the **Central Band**.

The preliminary mapping identified grey breccia to grey black marble. The grey breccia (sample 10-25-11, -21) is strongly fractured and rehealed with carbonate veinlets (to 1mm). Large 2-15mm white carbonate clots form up to 5% of the rock. Sample -11 shows weak mottling around the rehealed microfractures.

The massive grey black marble (10-25-17) is fine-grained (<1mm) and microfractured, with the microfractures rehealed with carbonate.

The exposures examined were along a logging road dissecting the claims. The outcrops were broken, likely due to blasting, as the fractures did not have carbonate, clay or limonite on them, indicating they may be man-made.

The property is overlain by 2nd generation forest. Nimpkish Lake borders the western boundary of the claims, a ready source of water for diamond drilling.

DISCUSSION

The marble noted in the brief examination of the Nimp Property is interesting. The massive grey black polishes to a nice finish, while the grey black breccia also looks interesting. The structural competency of the marble appears to be reasonable at this early stage, as clay, limonite or carbonate were not noted on the fractures, indicating they were likely man-made.

A staged four phase exploration program is recommended for the Nimp claims. A the conclusion of each stage, a report will be presented and the project will be evaluated before continuing.

The first stage is an initial program of detailed mapping. The purpose of the mapping is to assess the structural potential of the marble, including fracture patterns and joint densities as well as lithologic descriptions. Several polished sections should be made to judge the suitability of the marble for facings and tiles. Some thin section work should also be completed.

A second phase program of trenching and blasting is required, especially if there are no road cuts in the marble. The purpose is to obtain some "fresh" blocks for polished sections and thin sections, again to judge the suitability of the marble for its intended use.

At this point a preliminary assessment of potential quarry sites would identify sites for further exploration. A program of diamond drilling would assess the sites and narrow the choices for the final quarry site(s). From the drill core, data on fracture patterns and joint densities would be obtained, as well as data on color and impurity variations. The entire length of the core should be cut and polished giving a third dimensional view of the suitability of the marble for facings and tiles.

The final phase will consist of pre-production stripping to clear the quarry site of overburden and quarrying of 10-20 rough blocks at least 8 ft. X 8 ft. X 6 ft (2.4m X 2.4m X 1.8m). These rough blocks will be processed into facings and tiles to ensure output from the quarry will meet the specifications required for marble facings and/or marble tiles. Once the actual quarry site(s) has been designated, an engineering study, a calculation of reserves and a permitting program is required to get the quarry set up for initial production.

CONCLUSIONS AND RECOMMENDATIONS

The marble located on the Nimp Property has potential use as both tiles and face finished slab. The massive grey black and grey black breccia varieties are of particular interest. A staged four phase exploration program is recommended for the Nimp Property.

Phase I will consist of property mapping, and sampling for polished and thin sections. Mapping will concentrate on locating outcrops, on lithologic descriptions and on fracture patterns and joint densities. Sample specimens will be cut and polished to evaluate the potential of the marble. Estimated cost of Phase I is \$7,101.

Phase II will consist of excavator trenching. The "fresh" marble obtained will be cut and polished for further evaluation of the marble potential of the claims. Cost of Phase II is estimated at \$18,831.

Phase III will be the 1000 foot diamond drilling program. A number of shallow 100-200 foot holes will be drilled on possible quarry sites to evaluate color, impurities, consistency, width and depth of the marble. Fracture patterns and joint densities will also be recorded. The entire length of core should be sawn in half and polished. Phase III cost is estimated at \$48,818.

Phase IV is basically the pre-production test. This phase includes the stripping and clearing of the quarry site. It also includes the test mining of several rough quarry blocks. The test blocks should be roughly 8 ft. X 8 ft. X 6 ft. (2.4m X 2.4m X 1.8m). The purpose of the test mining is first to ensure blocks of this size can be successfully quarried and secondly to ensure these blocks can be successfully processed into marble facings and/or tiles, and third to ensure the facings and tiles produced meet the product specifications. Phase IV also includes the necessary permitting and engineering of the final quarry site(s) as well as the outlining of reserves. Phase IV cost is estimated at \$253,518.

Phase I	\$7,101
Phase II	\$18,831
Phase III	\$48,818
Phase IV	\$253,518

TOTAL BUDGET	\$328,268

REFERENCES

British Columbia Department of Mines Annual Reports: AR 1960 pp.147.

British Columbia Ministry of Energy Mines and Petroleum Resources Assessment Reports:
(Referenced in text as AsR 00000).

00417	00831	07227	08082	10337	10854	11147	17759
17761	18704						

Goudge, M.F. (1944). Limestones in Canada. Part V, British Columbia. Canada Department of Mines and Resources. Mines Branch Publication No. 811. pp.124-142.

Gunning, H.C. (1930). Geology and Mineral Deposits of Quatsino-Nimkish Area, Vancouver Island, British Columbia. Geological Survey of Canada Summary Report 1929A. pp.94A-143A

Gunning, H.C. (1932a). Preliminary Report of the Nimkish Lake Quadrangle, Vancouver Island, British Columbia. Geological Survey of Canada Summary Report 1931A. pp.22A-35A.

Henneberry, R.T. (1992). Marble Potential of the North End of Vancouver Island. Private Report 42p.

Hoadley, J.W. (1953). Geology and Mineral Deposits of the Zeballos-Nimkish Area, Vancouver Island, British Columbia. Geological Survey of Canada Memoir 272. 82p.

McCammon, J.W. (1968). Limestone Deposits at the North End of Vancouver Island. British Columbia Ministry of Mines Annual Report for 1968. pp.312-318.

Muller, J.E. (1977). Geology of Vancouver Island. Geological Survey of Canada Open File 463.

Muller, J.E., K.E. Northcote and D. Carlisle (1974). Geology and Mineral Deposits of Alert - Cape Scott Map-Area (92L-102I) Vancouver Island, British Columbia. Geological Survey of Canada Paper 74-8. 77p.

Muller, J.E., B.E.B. Cameron and K.E. Northcote (1981). Geology and Mineral Deposits of Nootka Sound Map-Area, Vancouver Island, British Columbia. Geological Survey of Canada Paper 80-16. 53p.

Sangster, D.F. (1969). Contact Metasomatic Magnetite Deposits of Southwestern British Columbia. Geological Survey of Canada Bulletin 172. 81p.

Stevenson, J.S. (1950). Geology and Mineral Deposits of the Zeballos Mining Camp, British Columbia. British Columbia Department of Mines Bulletin 27. 145p.

STATEMENT OF QUALIFICATIONS

I, R. Tim Henneberry, am the principle of Mammoth Geological Ltd., a geological consulting firm with offices at #1, 5745 Hardy Bay Road, Port Hardy, B.C. The mailing address is Box 14, Coal Harbour, B.C. V0N 1K0.

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.

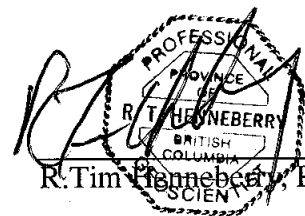
I am registered with the Association of Professional Engineers and Geoscientists in the Province of British Columbia as a Professional Geoscientist. I am also a Fellow of the Geological Association of Canada.

I staked and examined the Nimp Property on October 25, 1992. I did some additional sampling on January 18, 1993. I am presently the owner of the Nimp 1-2 mineral claims.

I am the principle of Mammoth Geological Ltd.

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 20th day of October in the Town of Port Hardy, British Columbia.


R. Tim Henneberry, P. Geo

STATEMENT OF COSTS

Staking Day (October 25, 1993 - P.M.)	
Geologist 1/2 day	\$225.00
Vehicle 1/2 day	\$25.00
Sampling - 5 samples @ \$50.00	\$250.00
Report - 2 days @ \$450.00	\$900.00
Total Costs	\$1,400.00

COST ESTIMATES

Phase I - Mapping and Sampling (3 days)	
Field Costs (Geological and Supervision)	\$2,400
Support Costs (Room and Board, Vehicles)	\$600
Analysis Costs (Polished/Thin Sections)	\$1,375
Documentation (Reports)	\$1,800
Contingency (15%)	\$926

Phase I Budget **\$7,101**

Assuming successful completion of Phase I then:

Phase II - Trenching (5 days)	
Contractor Cost (Excavator)	\$6,100
Field Costs (Geological and Supervision)	\$4,000
Support Costs (Room and Board, Vehicles)	\$1,000
Analysis Costs (Polished/Thin Sections)	\$2,125
Documentation (Reports)	\$3,150
Contingency (15%)	\$2,456

Phase II Budget **\$18,831**

Assuming successful completion of Phase II then:

Phase III - Daimond Drilling (15 days)	
Contractor Cost (Excavator)	\$2,800
Contractor Cost (Diamond Driller)	\$16,500
Field Costs (Geological and Supervision)	\$12,000
Support Costs (Room and Board, Vehicles)	\$3,000
Analysis Costs (Polished/Thin Sections)	\$1,400
Documentation (Reports)	\$6,750
Contingency (15%)	\$6,368

Phase III Budget **\$48,818**

Assuming successful completion of Phase III then:

Phase IV - Pre-production Bulk Test (30 days)	
Contractor Cost (Excavator)	\$56,000
Contractor Cost (Quarry Crew)	\$77,700
Field Costs (Geological and Supervision)	\$24,000
Support Costs (Room and Board, Vehicles)	\$12,750
Permitting Costs	\$15,000
Sample Preparation	\$20,000
Documentation (Reports)	\$15,000
Contingency (15%)	\$33,068

Phase IV Budget **\$253,518**

TOTAL BUDGET **\$328,268**

SAMPLE DESCRIPTIONS

Sample 10-25-11

Grey marble breccia. Strongly microfractured and healed with carbonate microveinlets and veinlets to 2mm. Weak mottling (alteration envelopes around microfractures?). Strong surface fracturing likely due to road blasting.

Sample 10-25-17

Massive grey black marble. Microfractured with carbonate microveinlet healing. <1/2% (1-5mm) white carbonate clots.

Sample 10-25-21

Grey marble breccia. Strongly microfractured and healed with carbonate microveinlets and veinlets to 2mm. Large (2-15mm) white carbonate clots to 5% of rock. Strong surface fracturing likely due to road blasting.

Sample 01-18-11

Fine grained, grey mottled marble. Cut by numerous white carbonate veinlets and stringers to 5 mm. This specimen is well brecciated.

Sample 01-18-12

Fine grained, grey mottled marble. Cut by numerous white carbonate veinlets and stringers to 5 mm. This specimen is well brecciated.