

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS
DATE RECEIVED DEC 17 1996

**ASSESSMENT REPORT  
ON THE  
CBL 1 TO 10 AND GM 1 TO 4  
2-POST MINERAL CLAIMS**

**NANAIMO MINING DIVISION**

**NTS 92 L 7W**

**LAT. 50° 22' LONG. 125° 53'**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORTS**

**24,698**

**OWNED AND OPERATED BY**

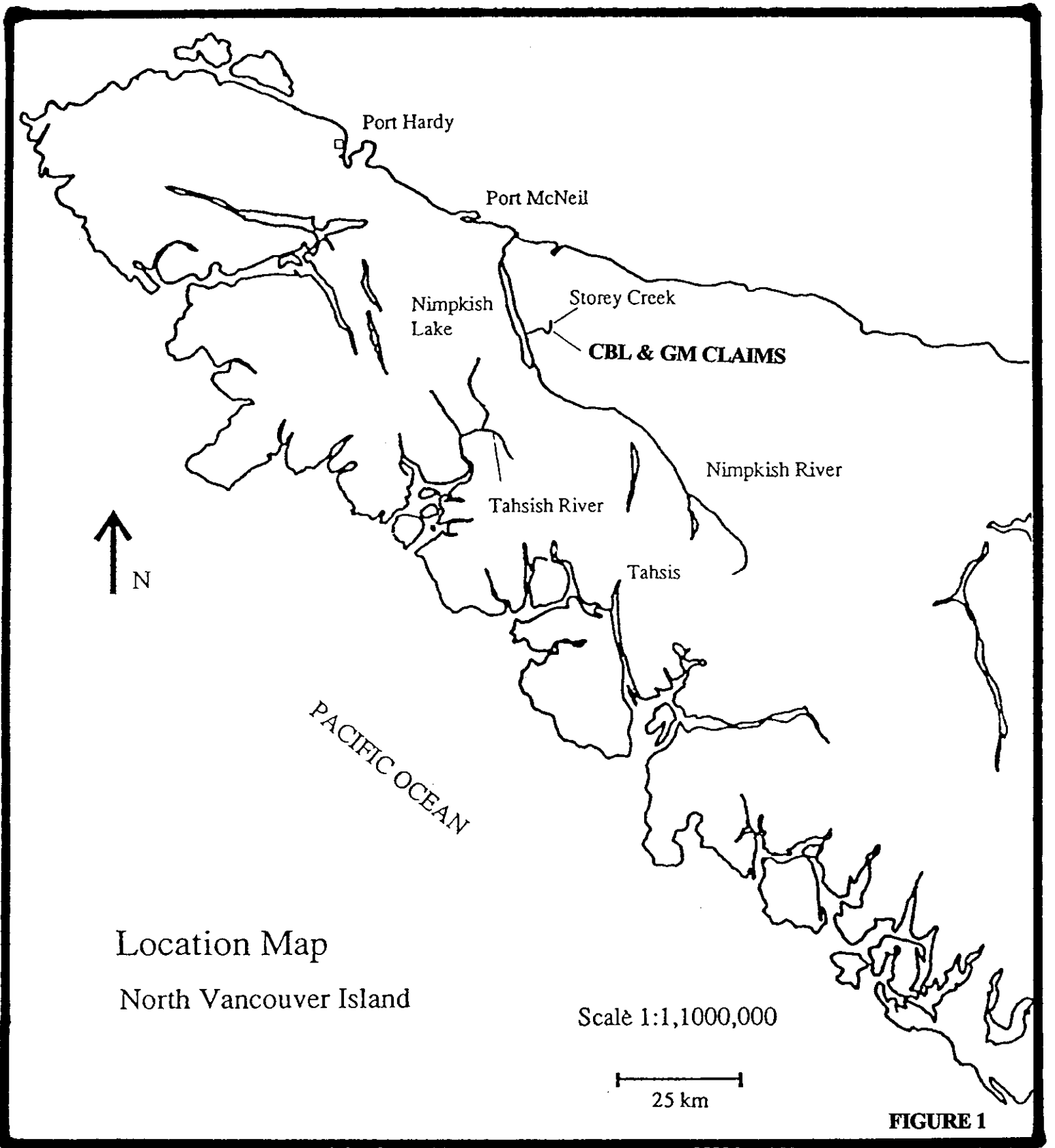
**JAMES W. LAIRD  
PROSPECTOR**

**NOVEMBER 1996**

**FILMED**

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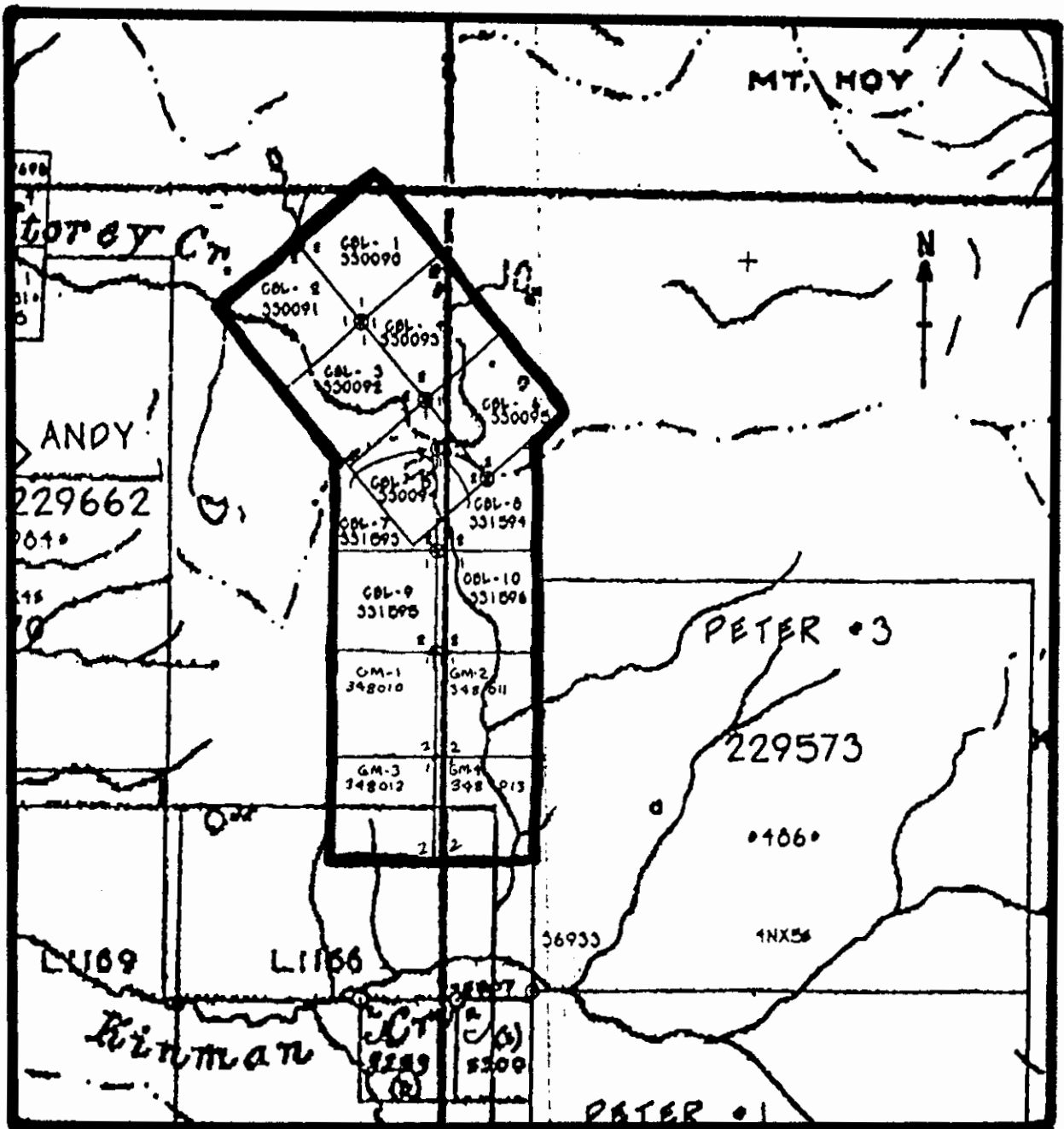


## **INTRODUCTION AND SUMMARY**

This report details the results of an exploration program consisting of geological mapping, prospecting, and rock sampling on the CBL 1 to 10 and GM 1 to 4 2-post mineral claims located near Nimpkish Lake on northern Vancouver Island. The exploration program was carried out and funded by James W. Laird, owner of the claims, from July 5 to July 8, 1996. The CBL 1 - 10 claims and the new GM 1 - 4 claims were staked to cover a series of known and recently discovered Zn, Cu, Fe, Au, Ag mineralized skarns and a large area of pure white marble and limestone of excellent industrial mineral potential. The claims area also covers a Fe-Cu-Zn magnetite skarn showing known as the Wolf (B.C. Minfile 92L 121), and is located between two other skarn/manto prospects, the Kinman Copper Property (Cu, Au, Zn, Ag) to the southeast, and the Smith Copper or Storey Creek Property (Zn, Pb, Cu, Au, Ag) to the west. The Nimpkish Lake area has been explored for mineral deposits since the early 1800's, and the tributary Storey Creek area more recently has been the subject of two geological assessment reports (J. Laird 1990, 1995). The present report is focused on the non-metallic mineral potential of the property, specifically, the marble and limestone resources of the CBL claims and the new contiguous GM claims. The results of prospecting, mapping, and a series of whole-rock assays of the marble and limestone indicates that a significant industrial mineral deposit is present on the property. An exploration program to further delineate, expand and test this potential is recommended.

## **LOCATION AND ACCESS**

The CBL and GM claims are located near Nimpkish Lake, B.C., about 45 minutes drive south of the town of Port McNeill on Northern Vancouver Island. The claims were staked in a newly logged area at the headwaters of Storey Creek, which flows into Nimpkish Lake to the west. The claims area is accessible to 2wd vehicles from the Island Highway via Canfor's Noomas Creek logging road and recent spurs cross all claims. Easy access to roads, rail, water transport, and other infrastructure and a mild climate are strong positives for cost-effective development.



CBL / GM CLAIMS MAP  
 NANAIMO MINING DIVISION

NTS 92L 7W 1:31,680

FIGURE 2

## **CLAIMS**

The CBL/GM property is composed of fourteen 2-post mineral claims 100% owned and operated by James W. Laird, and recorded as:

CBL 1 to 4	August 15, 1994	Tenure # 330090 to 330093
CBL 5 and 6	August 16, 1994	Tenure # 330094 and 330095
CBL 7 to 10	September 29, 1994	Tenure # 331593 to 331596
GM 1 to 4	July 6, 1996	Tenure # 348010 to 348013

## **ENVIRONMENT AND TOPOGRAPHY**

The climate of the Nimpkish area is mild and wet, with about 400 cm of precipitation falling annually, mostly as rain. Snowfall covers the higher areas from late November to early April, but seldom persists at lower elevations for more than a few weeks in mid-winter. First-growth conifer forest formerly covered all of the claims, but recent clear-cut logging has exposed more than half the ground covered by the claims. At an average of 900 metres elevation, the terrain is generally flat to moderately sloped with minor underbrush, with the exception of Storey Creek canyon, which has cut down through bedrock and formed a series of large waterfalls with steep cliffs surrounding. Karst topography is commonly developed in the limestone near watercourses.

## **HISTORY**

The Storey Creek area has been explored for mineral deposits since the discovery of the adjoining Kinman Copper and Smith Copper properties in the late 1920's, initially for copper and gold, and later for magnetite in the 1950's and 1960's. The claims also cover the Wolf magnetite showings (B.C. Minfile 92L 121) beside Storey Creek, which a small exploration program in the 1960's concluded were uneconomic to develop at the time. The regional geological mapping base dates mainly from the 1930's but is still remarkably accurate. The

Kinman and Smith properties have some drill-inferred mineral resources containing copper, zinc, lead, silver and gold. On the Kinman property, several small (~5000 tonnes) ore-grade massive sulphide deposits have been found in limestone-hosted skarns and mantos near granitic intrusions. Minor production from the Hazel open-pit on this property amounts to about 3000 tonnes of high-grade copper-zinc ore with some gold and silver credits. The Smith property hosts inferred reserves of nearly 100,000 tonnes of 12.5% zinc with copper, lead, silver and minor gold values, occurring as a stratiform skarn/replacement of a regional volcanic/limestone formational contact proximal to a large granodiorite intrusion. Along the Nimpkish River south of Nimpkish Lake, the Nimpkish Iron Mine magnetite skarn produced several million tonnes of magnetite concentrates in the 1950's and 1960's. Recent exploration efforts in the district have been directed towards the limestone resources, with some production from the Bonanza Lake area to the east. The discovery on the CBL/GM property of several new well-mineralized skarns and a large area of pure white marble and limestone during recent exploration programs shows that significant surface exploration potential still exists in the Nimpkish area.

## **GEOLOGY AND MINERALIZATION**

The Nimpkish map area is underlain by a 5-7 km thick sequence of Upper Triassic to Lower Jurassic Vancouver Group rocks composed of Karmutsen Formation marine basic volcanics overlain by Quatsino Formation limestone and Parson's Bay Formation calcareous sediments and tuffs, succeeded by the dominantly andesitic Bonanza Volcanics. All of these rocks have been intruded and metamorphosed by a large Jurassic Island Intrusions granodiorite pluton called the Nimpkish Batholith. Major uplift, folding and faulting accompanied emplacement of the granitic rocks as well as skarn mineralization and marble development in the proximal limestone units.

The Karmutsen Formation volcanics are exposed in the bed of Storey Creek near the northwest corner of the claims and are composed of dark green basalt flows and tuffs, with some feldspar porphyritic members. The overlying Quatsino Formation limestone is well

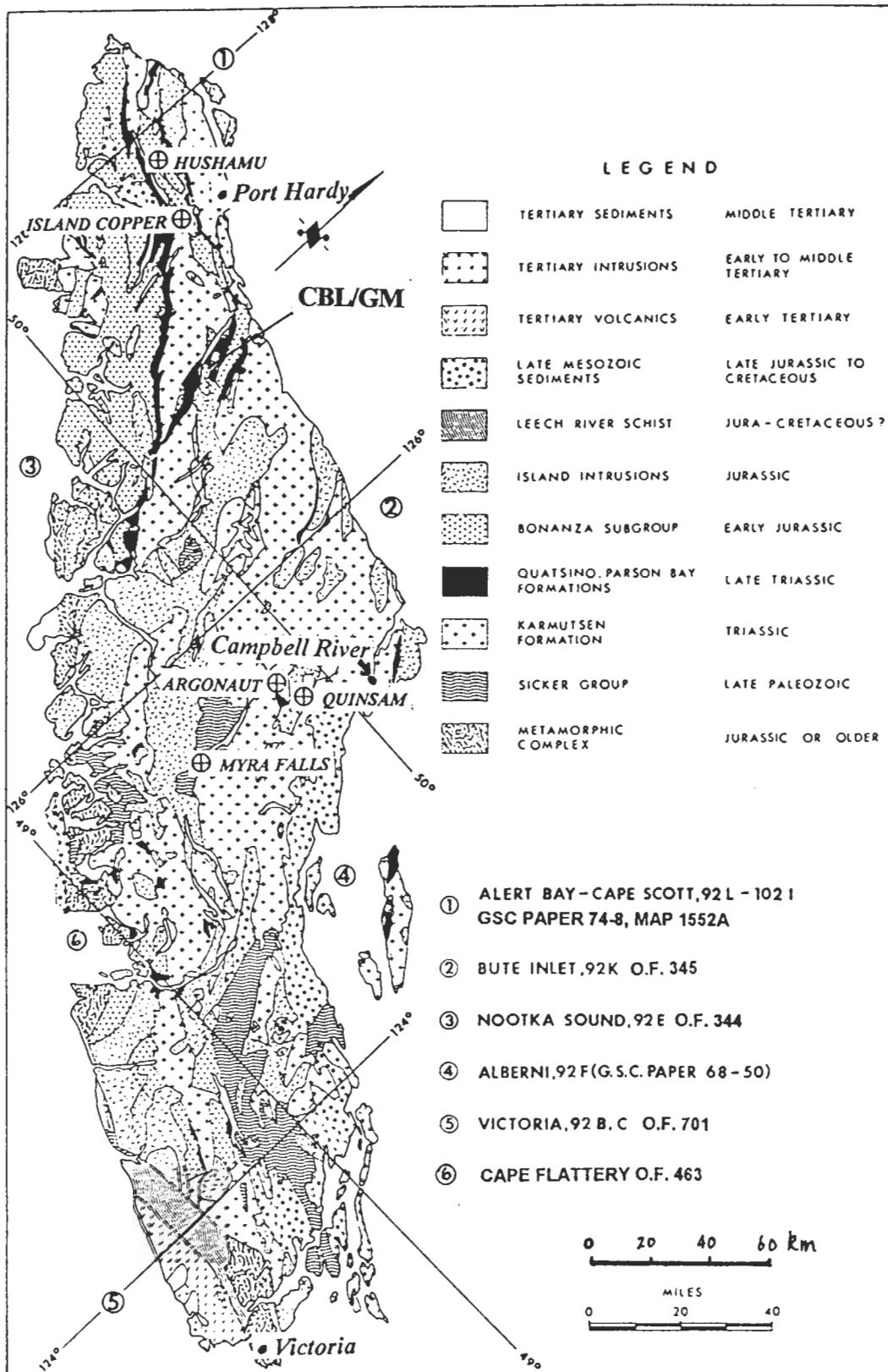


Figure 3 Geological map of Vancouver Island and index of Geological Survey of Canada mapping. After Muller, J.E., Northcote, K.E. and Carlisle, D. (1974): Geology and Mineral Deposits of Alert - Cape Scott Map-area (92L - 102I) Vancouver Island, British Columbia; *Geological Survey of Canada*, Paper 74-8, 77 pages.

**FIGURE 3**



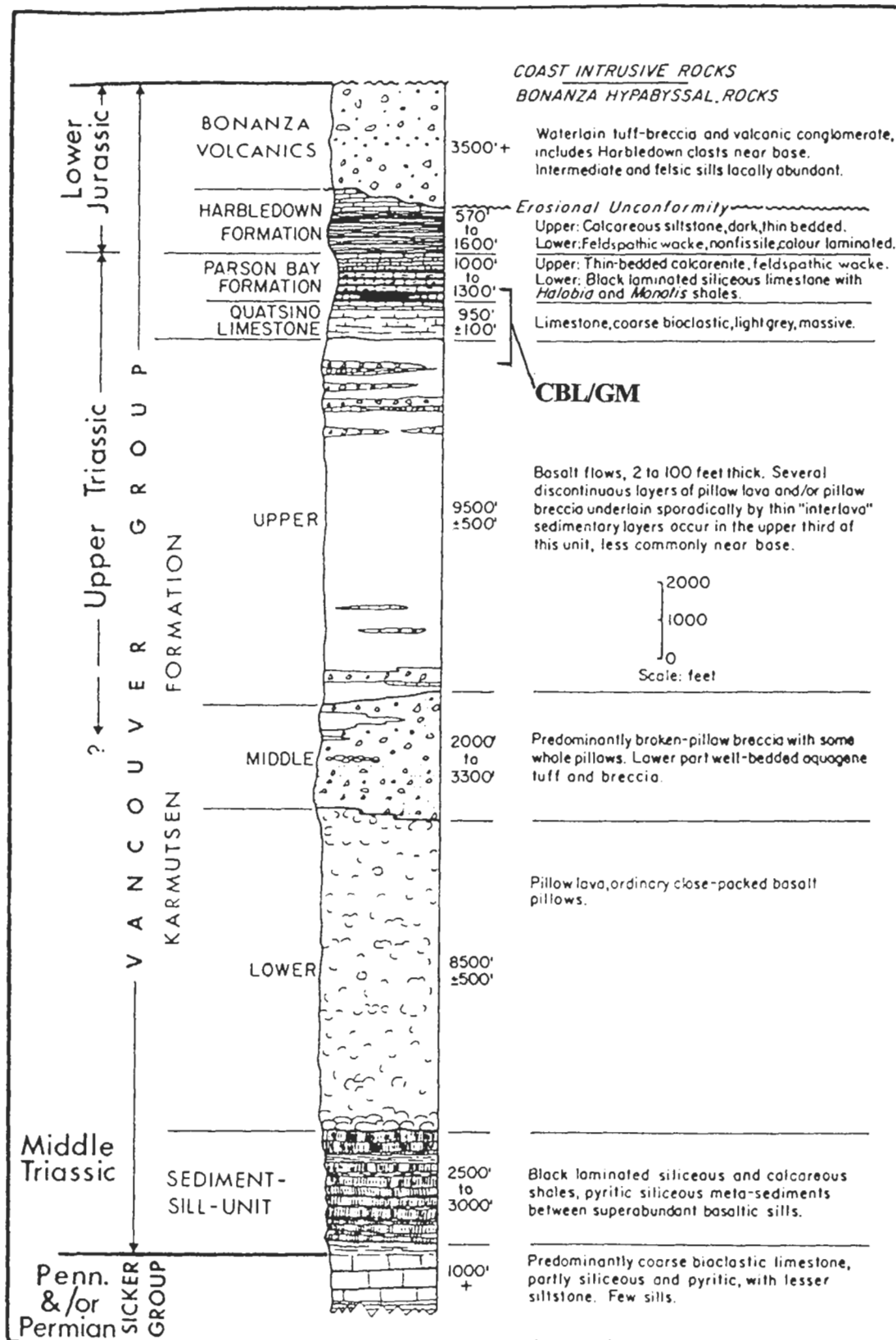


Figure 4 Major Paleozoic and Mesozoic stratigraphic units of northeastern Vancouver Island according to Donald Carlisle, in Muller *et al.* (1974).

FIGURE 4

exposed throughout the claims and is strongly re-crystallized to white, grey, black and rarely green or pink marble due to intrusive activity. The marble varies from fine-grained homogeneous pure white marble to coarse crystalline grey calcite marble, with a medium-grained dark grey to black member found in some areas. Ten large samples of the marble were taken at different locations throughout the claims. Magnesium oxide content varies up to about 4%, averaging under 2%, indicating a slightly dolomitic limestone as a protolith. Silica content is generally under 1%, and all other oxides are well within industrial standards. A thick band of very white marble with minor dark grey areas crosses the GM claims adjacent to the granitic contact, and continues onto the southern parts of the CBL claims.

The intrusive rocks of the Island Intrusions plutonic suite include stocks, sills, and dikes of granodiorite, with some diorite, quartz diorite, greenstone, hornblende-feldspar porphyry, felsite and quartz-feldspar porphyry. The altered granitic rocks also host small occurrences of pyrite, chalcopyrite, and molybdenite in veins, shears, and disseminations.

Skarn mineralization in the Nimpkish area is most often found along the contact of limestone and intrusive rocks, in limestone-hosted mantos and replacements, and at the "triple point" contact between the Karmutsen and Quatsino formations and intrusives. The common skarn minerals present include; green and brown garnet, epidote, diopside, calcite and quartz, with magnetite, chalcopyrite, sphalerite, pyrite, pyrrhotite, limonite and occasionally marcasite, hematite, bornite, covellite, tetrahedrite, galena, molybdenite, malachite, azurite, and greenockite. Other minerals noted in the altered zones include; secondary quartz-sericite-biotite-k-spar-chlorite-epidote in the intrusive rocks and occasionally red jasper, jade-green serpentine, blue to lavender dumortierite, lemon-yellow vesuvianite, green to black tourmaline, and massive light green sericite in the re-crystallized limestone. Several significant skarn deposits with values in zinc, copper, iron, silver and gold occur on the property. These deposits were the subject of a 1995 assessment report on the CBL 1 to 10 claims, and no further work has been done on them since that time. One new occurrence of zinc-rich diopside skarn about 1 metre wide was found in a new road-cut near the south end of the GM claims, near a small hornblende-feldspar porphyry intrusion.


## **CONCLUSIONS AND RECOMMENDATIONS**

The CBL/GM claims host several well-mineralized skarn zones with significant zinc, copper, iron, silver and minor gold values over promising widths, and a large area of pure white marble and limestone of superior industrial mineral potential. The marble also has excellent possibilities as a decorative landscaping rock and for sculpture, particularly the fine-grained, homogeneous pure white variety and some of the black, green and pink coloured stone. Additional sample testing is currently being done with regards to brightness for industrial purposes. Although some minor dykes and skarn alteration are present, a large deposit of pure white marble suitable for a large quarrying operation with good accessibility has been partially delineated on the GM claims and the south end of the CBL claims. Further detailed geological mapping, bedrock trenching and bulk sampling are necessary to develop and implement an efficient quarrying plan. The good possibility also remains of finding a significant precious metals enriched skarn or manto suitable as direct shipping ore, or conceivably a large tonnage stratiform copper-gold skarn similar to the nearby Coast Copper Mine in the Merry Widow mining camp.

**STATEMENT OF QUALIFICATIONS**

I, James William Laird, do state that:

1. I reside at 10975 Wilson Road, Mission B.C. and receive mail at P.O. Box 3512 Mission, B.C. V2V 4L1
2. I am a mineral exploration contractor and prospector and have been for 17 years.
3. I have completed the B.C. Energy, Mines, and Petroleum Resources course "Advanced Mineral Exploration for Prospectors, 1980"
4. I have extensively researched and explored British Columbia and am very familiar with the geology and mines thereof.

A handwritten signature in cursive script that reads "James W. Laird". The signature is written in black ink and is positioned above the printed name and title.

**JAMES W. LAIRD**

**PROSPECTOR**

**NOVEMBER, 1996**

**STATEMENT OF EXPENSES**

Wages - James Laird - July 5 to 8, 1996

4 days @ \$200.00 per day 800.00

Room and Board

4 days @ \$60.00 per day 240.00

Vehicle Rental

4 days @ \$50.00 per day 200.00

Fuel and Mileage

1500 Km @ 20 cents per km 300.00

B.C. Ferries

114.00

Field Supplies

50.00

Rock Assays

10 samples @ \$25.00 per sample 250.00

Report Preparation

400.00

**TOTAL EXPENSES**

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2554.00

**SAMPLE DESCRIPTIONS**

- M-1 white marble
- M-2 white marble
- M-3 white marble
- M-4 white marble
- M-5 white marble
- M-6 grey marble
- M-7 coarse grey-white marble
- M-8 coarse grey-white marble
- M-9 coarse grey-white marble
- M-10 grey-white marble

# XRF - Whole Rock Analysis

From : Cominco Lab.

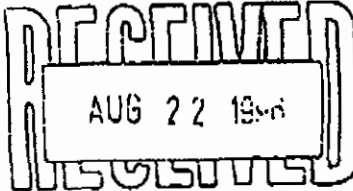
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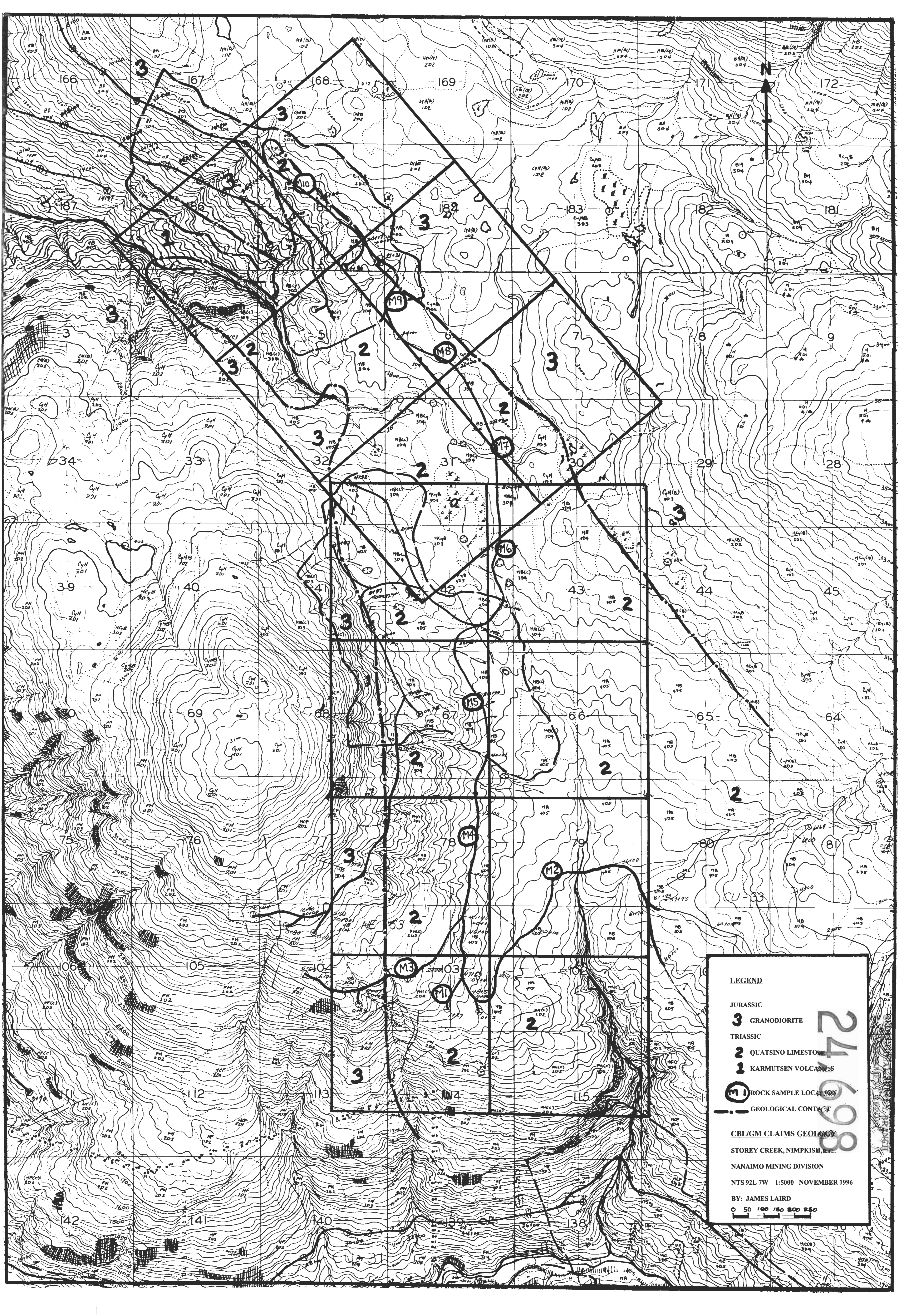
Reported 08-16-1996

To :

Client's I.D. no. : #JL-M series

Field number	SiO2 %	Al2O3 %	MgO %	Na2O %	MnO %	Fe2O3 %	TiO2 %	P2O5 %	CaO %	K2O %	LOI %	Total %	Ba ppm
1 M1	0.56	0.11	2.02	0.01	0.01	0.10	0.01	0.01	53.23	0.01	43.97	100.04	3
2 M2	0.45	0.02	1.87	0.01	0.01	0.07	0.01	0.01	53.21	0.01	43.99	99.66	3
3 M3	0.67	0.07	1.40	0.01	0.01	0.06	0.01	0.01	53.66	0.01	43.87	99.78	3
4 M4	1.13	0.02	3.28	0.02	0.01	0.17	0.01	0.01	51.53	0.01	43.50	99.69	3
5 M5	0.45	0.01	3.06	0.01	0.01	0.02	0.01	0.01	52.24	0.01	44.18	100.01	3
6 M6	0.67	0.06	2.02	0.01	0.01	0.07	0.01	0.01	53.32	0.01	43.76	99.95	3
7 M7	0.89	0.02	4.23	0.01	0.01	0.06	0.01	0.01	50.36	0.01	44.29	99.90	3
8 M8	0.79	0.02	1.13	0.01	0.01	0.05	0.01	0.01	54.04	0.01	43.71	99.79	3
9 M9	0.56	0.11	2.81	0.01	0.01	0.07	0.01	0.01	52.21	0.01	43.86	99.67	3
10 M10	1.84	0.23	1.61	0.01	0.01	0.23	0.01	0.01	53.48	0.01	42.49	99.93	3


  
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**LEGEND**

**JURASSIC**

**3** GRANODIORITE

**TRIASSIC**

**2** QUATSINO LIMESTONE

**1** KARMUTSEN VOLCANICS

**(M)** ROCK SAMPLE LOCATION

**- - -** GEOLOGICAL CONTACT

**CBL/GM CLAIMS GEOLOGY**

STOREY CREEK, NIMPKISM, B.C.

NANAIMO MINING DIVISION

NTS 92L 7W 1:5000 NOVEMBER 1996

BY: JAMES LAIRD

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