RECEIVED
NOV 12 2003
Gold Commissioner's Office
VANCOUVER, B.C.

GEOLOGY AND MINERAL DEPOSITS

CBL CLAIMS GROUP

NANAIMO MINING DIVISION
N.T.S. 92 L/7W
LAT. 50 22' LONG. 126 53'
BRITISH COLUMBIA

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,256

By

K. Warren Geiger, Ph.D., P.Eng.,P.Geol.

September 30, 2003

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 SUMMARY

The property known as the CBL, GM Claims Group is located on Vancouver Island near Nimpkish Lake in the Nanaimo Mining Division, about a one-hour drive south of Port McNeill. It comprises 15 two post mineral claims located in a newly logged area at the headwaters of Storey Creek and a north branch of Kinman Creek. The claims are accessible by 2-wheel drive vehicles from the Island Highway via Canfor's Noomas Creek logging road and recent logging spurs across the claims. Logging and road development are currently active giving improved access to the subject mineralized areas.

There have been over 100 years of geological, prospecting, staking, exploration and mining within the general Nimpkish Lake area although work on the property itself is relatively recent.

The suite of rocks in the map area are a conformable sequence of, from oldest to youngest, Karmutsen Formation marine mafic volcanics, Quatsino Formation limestones, which are largely recrystallized to marble by the extensive intruded plutonic rocks, and Parsons Bay Formation calcareous sediments of Upper Triassic age and Lower Jurassic Bonanza Group rocks, including andesitic to rhyolitic lavas, tuffs and breccias, overlain by Harbledown Formation sediments. The entire package of Late Triassic to Early Jurassic volcanic and sedimentary rocks has been intruded by Middle to Late Jurassic Island Intrusion plutonic rocks called the Nimpkish Batholith.

Major uplift, folding and faulting preceded and accompanied emplacement of the multi-phase granite rocks and related mineralization. Marble development is common in the Quatsino limestone proximal to intrusions.

There are large areas of excellent high quality marble on the property. Further detailed geological mapping, bedrock trenching and laboratory testing of the rock for industrial, landscape development and artistic purposes should be carried out for the purpose of interesting existing producing and marketing companies. Such a partner could fund the cost of large-scale bulk sampling and quarry development that would be required for a mining operation.

There are several types of metallic mineral deposits that occur in the North Island region, and might be present in the Nimpkish area and on the property, as suggested by the presence of various characteristic features. They include:

- Precious metal enriched skarn or manto deposits such as those present within skarn alteration at the old Merry Widow Mine.

1.0 SUMMARY

The property known as the CBL Claims Group is located on Vancouver Island near Nimpkish Lake in the Nanaimo Mining Division, about a one-hour drive south of Port McNeill. It comprises 15 two post mineral claims located in a newly logged area at the headwaters of Storey Creek and a north branch of Kinman Creek. The claims are accessible by 2-wheel drive vehicles from the Island Highway via Canfor's Noomas Creek logging road and recent logging spurs across the claims. Logging and road development are currently active giving improved access to the subject mineralized areas.

There have been over 100 years of geological, prospecting, staking, exploration and mining within the general Nimpkish Lake area although work on the property itself is relatively recent.

The suite of rocks in the map area are a conformable sequence of, from oldest to youngest, Karmutsen Formation marine mafic volcanics, Quatsino Formation limestones, which are largely recrystallized to marble by the extensive intruded plutonic rocks, and Parsons Bay Formation calcareous sediments of Upper Triassic age and Lower Jurassic Bonanza Group rocks, including andesitic to rhyolitic lavas, tuffs and breccias, overlain by Harbledown Formation sediments. The entire package of Late Triassic to Early Jurassic volcanic and sedimentary rocks has been intruded by Middle to Late Jurassic Island Intrusion plutonic rocks called the Nimpkish Batholith.

Major uplift, folding and faulting preceded and accompanied emplacement of the multi-phase granite rocks and related mineralization. Marble development is common in the Quatsino limestone proximal to intrusions.

There are large areas of excellent high quality marble on the property. Further detailed geological mapping, bedrock trenching and laboratory testing of the rock for industrial, landscape development and artistic purposes should be carried out for the purpose of interesting existing producing and marketing companies. Such a partner could fund the cost of large-scale bulk sampling and quarry development that would be required for a mining operation.

There are several types of metallic mineral deposits that occur in the North Island region, and might be present in the Nimpkish area and on the property, as suggested by the presence of various characteristic features. They include:

- Precious metal enriched skarn or manto deposits such as those present within skarn alteration at the old Merry Widow Mine.

- Large tonnage strataform copper, silver and gold deposits in the Quatsino Limestone Formation at or near the boundary with the underlying Karmutsen Formation as occurs at the Coast Copper Mine in the Merry Widow mining camp.
- Island Copper Mine type porphyry copper deposits in the Nimpkish Batholith intrusive rocks

2.0 INTRODUCTION

2.1 Terms of Reference

The writer visited the property during July 22 and 23, 2003 in the company of Jim Laird, prospector and claims owner. All road exposures of marble and skarn deposits on the property were inspected, as well as the Kinman mineralization on Copper Creek, a tributary to Kinman Creek, to the southeast. Historical information from the B.C. Department of Mines and Geological Survey of B.C. and other sources has been reviewed and used where pertinent.

2.2 Location and Access

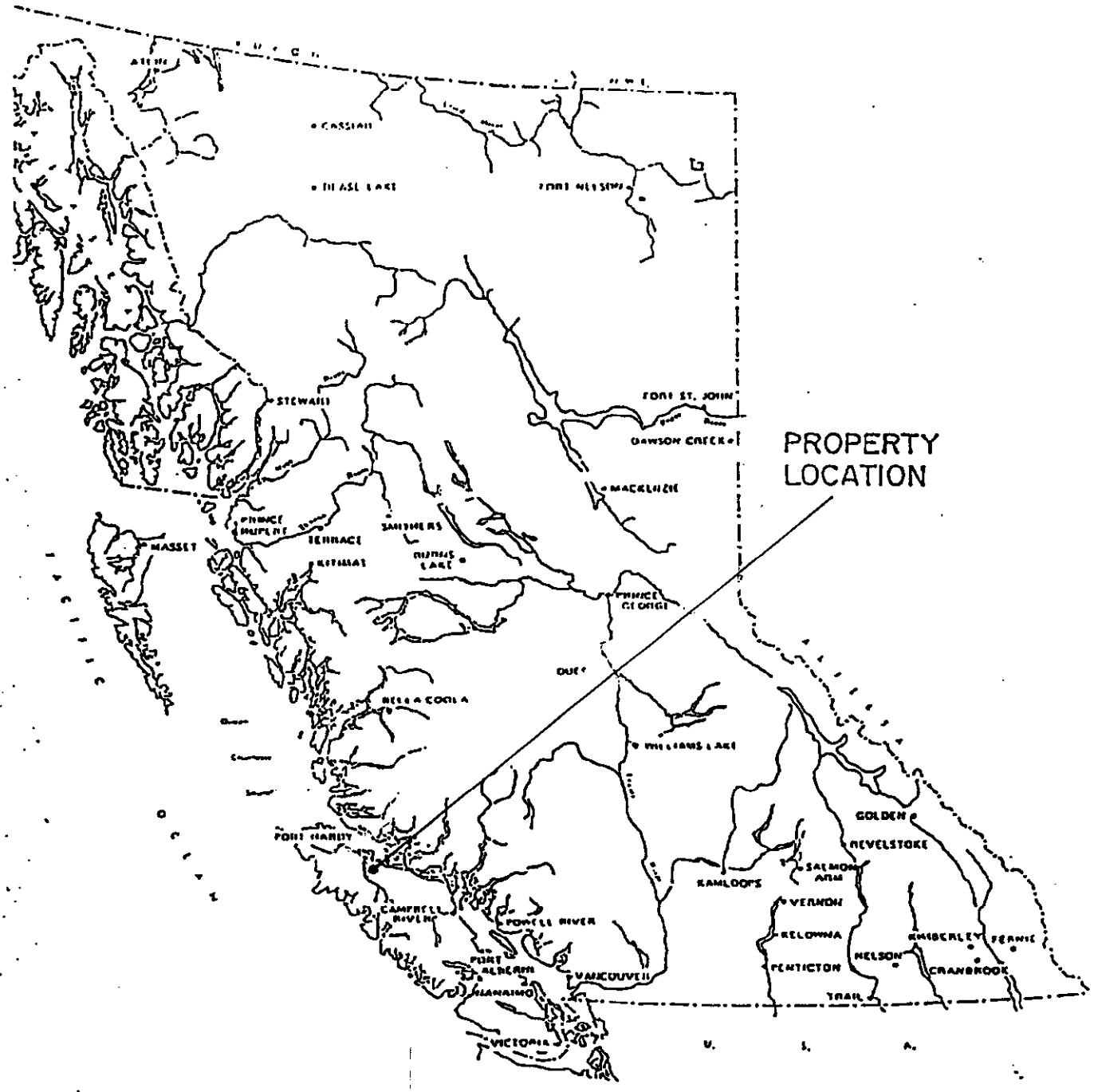
The property known as the CBL Claims Group, is located on Vancouver Island near Nimpkish Lake in the Nanaimo Mining Division, about a one-hour drive south of Port McNeill (Fig. 1). It comprises 15 two post mineral claims (Fig. 2) located in a newly logged area at the headwaters of Storey Creek and a north branch of Kinman Creek. The claims are accessible by 2-wheel drive vehicles from the Island Highway via Canfor's Noomas Creek logging road and recent spurs across the claims. Logging and road development are currently active.

2.3 Climate Topography and Vegetation

The climate of the Nimpkish area is mild and wet with about 400cm of precipitation falling annually, mostly as rain, but winter snowfalls can occur in the claims area. Topography of the claims area is relatively flat to moderately sloped at an average elevation of 900m, with the exception of Storey Creek canyon, which has cut through bedrock and formed a series of large waterfalls enclosed by steep cliffs. Karst topography and cave systems are commonly developed in the limestone near watercourses. First-growth conifer forest formerly covered all of the claims, but recent clear-cut logging has exposed more than half of the claims area.

2.4 Property Status

The CBL Claims Group consists of 15 claims as follows: (Fig. 2):



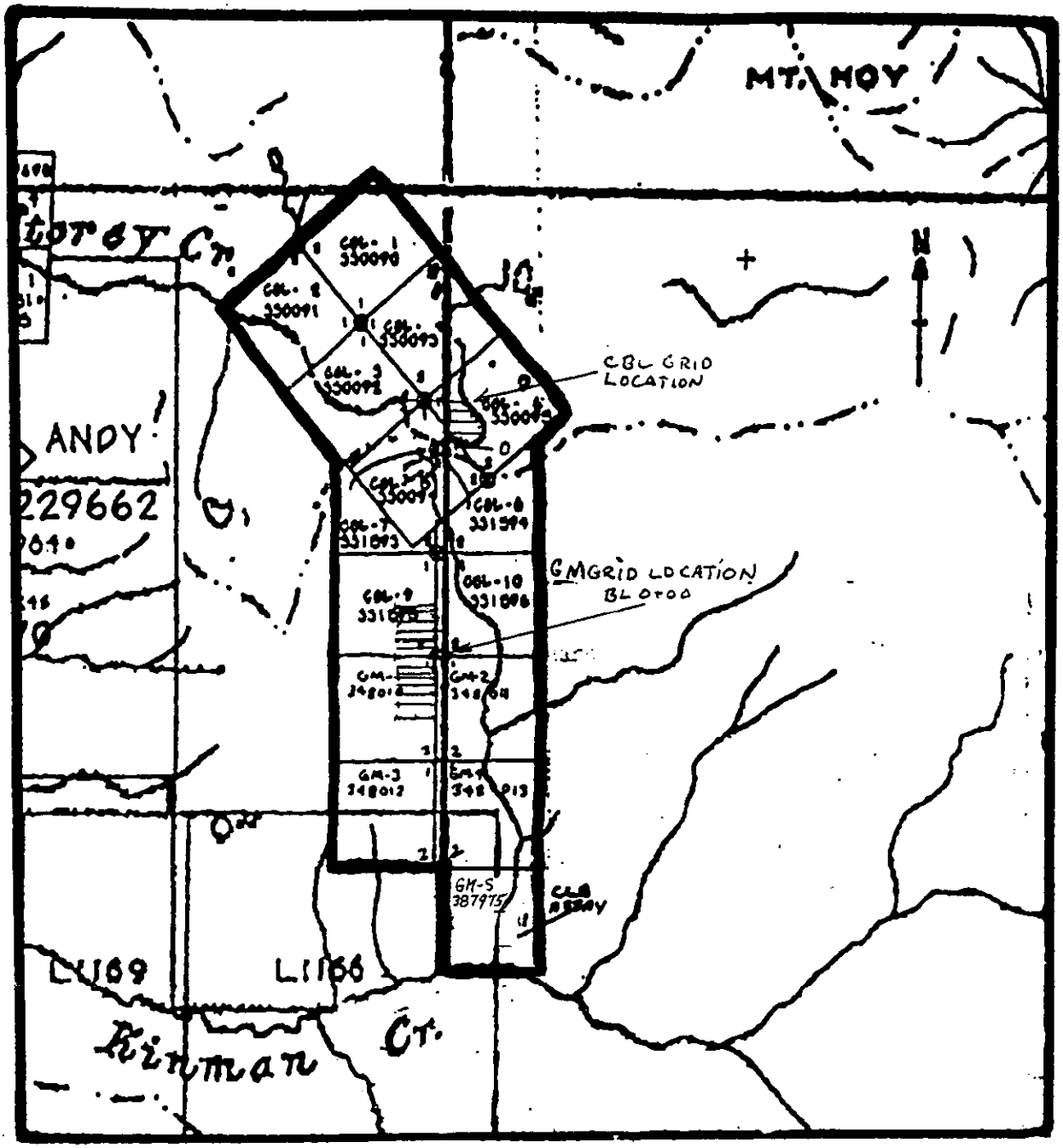
CBL CLAIMS GROUP

LOCATION MAP

N.T.S. 92L 7W Nanaimo M.D., B.C.

0 100 200 400 KM.

Scale 1: 8,000,000	Date :
Drawn by :	Figure No. : 1



CBL CLAIMS GROUP

NANAIMO MINING DIVISION

NTS 92L 7W 1:31,680

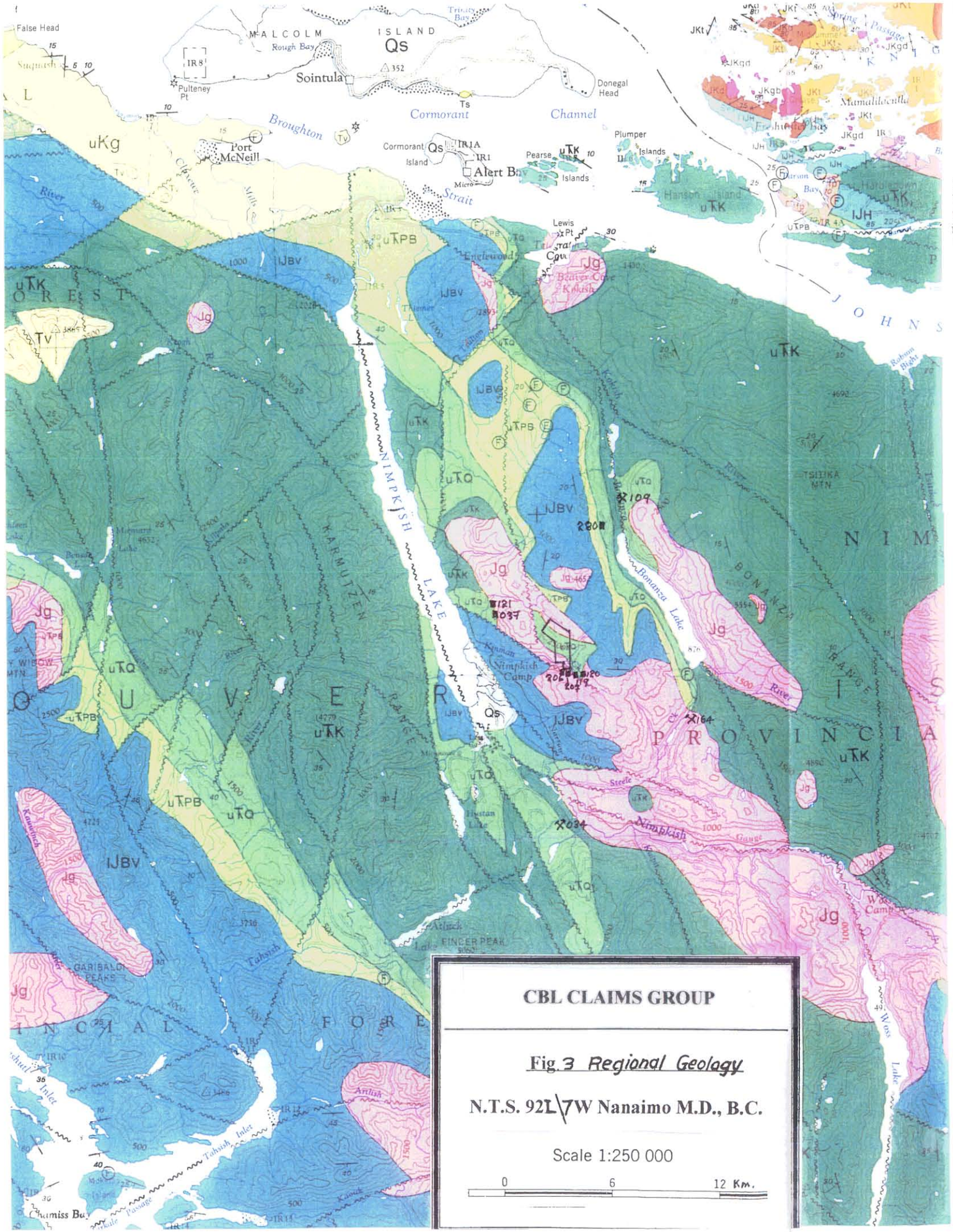
FIGURE 2

Claim Name	Units	Record#	Expiry Date
CBL 1	1	330090	Aug. 14, 2004
CBL 2	1	330091	Aug. 14, 2004
CBL 3	1	330092	Aug. 14, 2004
CBL 4	1	330093	Aug. 14, 2004
CBL 5	1	330094	Aug. 14, 2004
CBL 6	1	330095	Aug. 14, 2004
CBL 7	1	331593	Aug. 14, 2005
CBL 8	1	331594	Aug. 14, 2005
CBL 9	1	331595	Aug. 14, 2005
CBL 10	1	331596	Aug. 14, 2005
GM 1	1	348010	Aug. 14, 2005
GM 2	1	348011	Aug. 14, 2005
GM 3	1	348012	Aug. 14, 2006
GM 4	1	348013	Aug. 14, 2005
GM 5	1	387975	Aug. 14, 2006

2.5 Previous Work (Fig. 3)

According to J. W. Hoadley in G.S.C. Memoir 272 (1953) the earliest geological investigations in the Nimpkish area were carried out by G. M. Dawson (1887), "who made a reconnaissance of the east coast of Vancouver Island, including the shoreline of Nimpkish Lake, in 1885", "The first systematic survey of the geology of northern Vancouver Island was done by H. C. Gunning (1930-33; 1938 a – d). During the years from 1929 to 1932 he mapped the Nimpkish and Woss Lake areas on a scale of 1 inch to 1 mile".

The mineral deposits of the Nimpkish area are described by Hoadley (1953) as having "first attracted attention around the turn of the twentieth century, at which time prospectors were mainly interested in the magnetite deposits of the area. In 1897, Messrs Haslow, Mathers and Stark staked several claims on large showings of magnetite on Nimpkish River, 5 miles south of Nimpkish Lake, and in 1902 the Head Bay magnetite deposit was discovered and staked. In both places considerable exploratory work was done and several claims on each deposit were Crown granted before all work ceased, about 1910". "In 1928, activity in Nimpkish area revived when E. L. Kinman and associates discovered evidence of spectacular copper mineralization on Copper Creek, 3 ½ miles east of the south end of Nimpkish Lake. A small stampede followed, and in less than 2 years some two hundred claims were staked. The Consolidated Mining and Smelting Company of Canada, Limited, optioned the original discovery and did some exploratory work before dropping the option. All other claims were likewise abandoned". "In 1951, interest in the magnetite deposits revived, and active development work was done on three



CBL CLAIMS GROUP

Fig. 3 *Regional Geology*

N.T.S. 92L\7W Nanaimo M.D., B.C.

Scale 1:250 000

0 6 12 Km.

VANCOUVER ISLAND AND ADJACENT ISLANDS

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Qs — *Alluvial, marine and glacial deposits*

TERTIARY

Ts — *Cobble-conglomerate (on Malcolm Island)*

MIOCENE

Tv — *Basaltic to dacitic lava, tuff, breccia, conglomerate*

EOCENE

Tg — *Quartz diorite*

CRETACEOUS

LOWER TO ? UPPER CRETACEOUS
QUEEN CHARLOTTE GROUP

lKQc — *Conglomerate, greywacke*

lKQs — *Siltstone, shale, greywacke*

LOWER CRETACEOUS
KYUQUOT GROUP

lKL — *LONGARM FORMATION: greywacke, conglomerate, siltstone*

MESOZOIC

JURASSIC AND CRETACEOUS
PACIFIC RIM COMPLEX

JKP — *Greywacke, siltstone, conglomerate*

JURASSIC

Jg — *ISLAND INTRUSIONS: quartz diorite, granodiorite, quartz monzonite, quartz feldspar porphyry*

JURASSIC AND OLDER
WEST COAST CRYSTALLINE COMPLEX

PMdin — *Quartz diorite, agmatite, gneiss, amphibolite*

LOWER JURASSIC
BONANZA GROUP (lJH, lJBv)

lJH — *HARBLEDOWN FORMATION: argillite, greywacke ribbon chert; minor limestone*

lJBv — *Andesitic to rhyodacitic lava, tuff, breccia*

TRIASSIC
UPPER TRIASSIC
VANCOUVER GROUP (uTPB, uTQ, uTK, TS)

uTPB — *PARSON BAY FORMATION: calcareous siltstone, shale, limestone, greywacke, conglomerate, breccia*

uTQ — *QUATSINO FORMATION: limestone*

uTK — *KARMUTSEN FORMATION: basaltic lava, pillow lava, breccia, aquagene tuff, greenstone; minor limestone*

separate properties, the Head Bay magnetite deposit, the Ford iron property and the Churchill iron property".

There are no Minfile recorded showings or prospects on the claim group although ten surround the property within a ten km radius (Fig. 3). Two of these surrounding properties are described as limestone and dimension stone-marble deposit types. The other eight are metallic prospects generally of the skarn type with some minor reference to porphyry and stockwork type mineralization. Copies of the Capsule Geology and Bibliography from the Minfile database are included in Appendix A.

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 Zn, Cu, Fe skarns and a large area of pure white marble during recent exploration programs, shows that significant surface exploration potential still exists in the Nimpkish area. In the spring of 1998, during prospecting work near the north claim boundary, massive chalcopyrite boulders in float were discovered along a logging road, which are thought to be associated with a nearby intrusive-hosed breccia pipe. The new zone is thought to represent a new style of mineralization in the area, possibly similar to the Island Coppery porphyry deposit.

3.0 GEOLOGY

3.1 Regional Setting (Fig. 3)

Vancouver Island lies within the Insular belt and is built on a thick platform of Paleozoic volcanic-sedimentary rocks known as the Sicker Group. This group hosts the large polymetallic volcanogenic deposits mined at Myra Falls near Buttle Lake, and several other former mines but is not exposed in the Nimpkish area.

Rocks of the Nimpkish area overlie the Sicker Group platform and comprise a conformable sequence of, from oldest to youngest, Karmutsen Formation marine mafic volcanics, Quatsino Formation limestones and Parsons Bay Formation calcareous sediments of Upper Triassic age and Lower Jurassic Bonanza Group rocks including andesitic to rhyolite lavas, tuffs and breccias, overlain by Harbledown Formation sediments. The entire package of Late Triassic to Early Jurassic volcanic and sedimentary rocks has been intruded by Middle to Late Jurassic Island Intrusion plutonic rocks called the Nimpkish Batholith.

Major uplift, folding and faulting preceded and accompanied emplacement of the multi-phase granitic rocks and related mineralization. Marble development is common in the Quatsino limestone proximal to intrusions.

3.2 CBL Claims Group

The detailed geology of the claim group is shown on Figure 4 at a scale of 1/5000. It was developed by the owner, who has prospected the entire property. In checking the readily accessible areas of the claims the writer has found the mapping to be essentially accurate.

The following detailed description of the rock exposures and mineralization are taken from the work done by the owner who is a prospector by profession and a very competent geological mapper with an excellent knowledge of mineralogy. The writer has discussed his findings in detail and believes his descriptions to be accurate. They are included for completeness as follows:

Karmutsen Formation mafic volcanics (Unit 1) are exposed in the bed of Storey Creek near the northwest border of the claims and to the south on the new GM-5 claim. The Karmutsen Formation is locally comprised of dark green basalt flows and tuffs, with some feldspar porphyritic (syn-volcanic intrusive) and amygdaloidal members. Aquagene tuff-breccias and intra-formational limestone lenses were observed within this sequence near Nimpkish Lake. Regionally, amygdaloidal basalt flow tops and exhalative limey sediment layers often host syn-volcanic native copper and copper sulphide mineralization, which is the possible distal source of the copper content of the skarn zones. Enhanced precious metal values can accompany the syn-volcanic mineralization. A stratiform massive sulphide layer composed of massive pyrite up to 30cm thick and several square metres in exposure hosted in basalt flows was discovered on the new GM-5 claim. Assays of this material were negative for base and precious metals, with only slight enhancement in cobalt values (899 ppm). An abundance of vuggy prehnite-pumpellyite occurrences are associated with the barren sulphide layer. This assay location is shown on the claim map, as the property map has not yet been redrafted to include the new claim area.

The overlying Quatsino Formation limestone (Unit 2) is well exposed throughout the claims and is strongly re-crystallized to white, cream, grey, black and rarely green or pink marble due to intrusive activity. The marble varies from fine-grained, homogeneous pure white marble (2a) to coarse crystalline grey calcite marble (2b), with a medium-grained dark grey to black member (2c) found in some areas. Ten large assay samples of the marble have been taken at different locations throughout the claims (Laird 1996). Four additional whole-rock samples were taken in 1998 from the GM claims and confirmed the results of the 1996 samples. Magnesium oxide content varies up to about 4%, averaging less than 2%, indicating a slightly dolomitic limestone as protolith. Silica content is

generally under 1%, and all other oxides are well within industrial standards. Assay results from 1996 are included as Appendix B.

A thick band of cream to white 2a 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 white marble also occurs on the new CLA-1 claim, south of the GM claims. This band of white marble was geologically mapped in order to estimate the potential area of high-grade marble, and to estimate the dilution factor due to contained dikes and related skarns.

On the GM claims, a strong band of 2a marble follows the main road, making bulk sample access and possible future production relatively straightforward. Although the ongoing mapping program has not yet fully determined the internal colour boundaries of the marble, a general outline of the area of specific interest on the GM claims would be 1.5km in length by 500m in width, or about 750,000 square metres in area. Prospecting and mapping the northern extension of this belt along the poorly exposed western marble/granite contact shows that the marble is mainly comprised of unit 2b. Future logging and road building along the western side of Storey Creek will expose more marble and additional resources of unit 2a may be developed. Approximately 500kg of selected loose 2a marble blocks was taken from the GM area in 1998 to test the decorative and landscaping markets in the Lower Mainland. Initial response to the marble has been very favorable, but transportation to market of small quantities of hand-selected marble is unlikely to be economic.

The intrusive plutonic suite regionally known as the Island Intrusions (Unit 3) includes stocks, sills and dikes (d) of granodiorite, with some diorite, quartz diorite, greenstone, hornblende-feldspar porphyry, felsite and quartz-feldspar porphyry. The contact-altered granitic rocks host occurrences of pyrite, chalcopyrite, and molybdenite in endoskarn zones, vein systems, shears and disseminations. The newly discovered mineralized intrusive breccia pipe on the adjoining northern property is similar to the Island Copper porphyry deposit and may host a significant mineral resource.

Skarn mineralization (Unit 4) in the Nimpkish area is most often found along the contact of limestone and intrusive rocks (exoskarn), in limestone-hosted sulphide-rich mantos and replacements, and at the "triple point" contact between the Karmutsen and Quatsino formations and intrusives. Numerous dikes and small intrusive stocks are found in the limestone adjacent to the major contact zones, and commonly have a "rind" or contact metasomatic zone of skarn minerals and sulphides.

Several significant skarn deposits with values in zinc, copper, iron, silver and gold occur on the property (Laird 1990, 1995). Historically, skarn deposits on Vancouver Island have been economically important producers of base and precious metals, and several past mines have been in the multi-million tonne class.

The common skarn minerals present include: green grossularite and red-brown andradite garnet, epidote, diopside, manganese alteration, calcite and quarts, 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, and green to black tourmaline.

4.0 CONCLUSIONS

The CBL, GM Claims Group hosts a large area of light coloured marble of superior industrial mineral potential. The marble has excellent possibilities as 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 should be 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 excellent accessibility has been partially delineated on the GM claims and the south end of the CBL claims.

Further detailed geological mapping, bedrock trenching and large-scale bulk sampling are necessary to develop and implement an efficient quarrying plan. Test marketing larger volumes of the marble in the Lower Mainland will require an economic transportation plan. As most of the claims area has been recently logged and no private landowners are present, permitting and site reclamation should be relatively straightforward.

There are several types of metallic mineral deposits that occur in the north Island region and might be present in the Nimpkish area and on the property.

As is clearly shown on Figure 4 the claims host several well-mineralized skarn zones with significant zinc, copper, silver and minor gold values over promising widths. These deposits lie along the contacts of the Nimpkish Batholith intrusive rock with the Quatsino Limestone formation and to date have been found only in the northern part of the Claim Group,

although more may be hidden by overburden and in, as yet un-logged areas. There is the definite possibility of discovering precious metal enriched skarn or manto deposits in these areas.

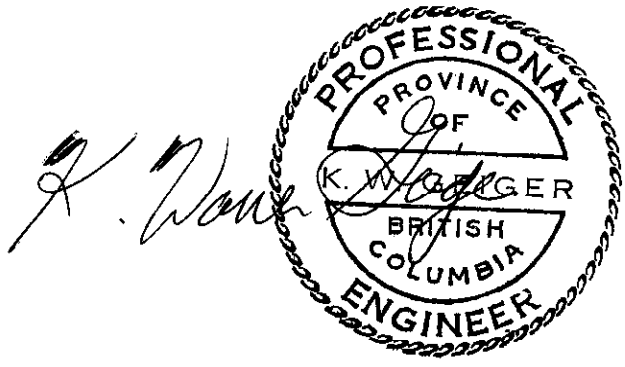
Where the contact of the Karmutsen Formation mafic volcanics and the overlying Quatsino Formation limestones are exposed in the northwest border area near Storey Creek and in the southern-most area on the GM-5 claim, there is potential for discovering possible large tonnage strataform copper, silver and gold deposits in the Quatsino Limestone Formation at or near the boundary with the underlying Karmutsen Formation rocks, as occurs at the Coast Copper Mine in the Merry Widow Mining Camp.

Some of the showings in the surrounding area (Appendix A) give minor reference to porphyry and stock work type mineralization. Discovery by the property owner of an intrusive-hosted breccia pipe containing copper mineralization on the adjoining northwestern property indicates that the Nimpkish Batholith intrusive rocks of the area could host Island Copper Mine-type porphyry deposits.

5.0 RECOMMENDATIONS

There are large areas of excellent, high quality marble on the property. Further detailed geological mapping, bedrock trenching and lab testing of the rock for industrial, landscaping and artistic purposes should be carried out for the purpose of interesting existing producing and marketing companies. Such a partner could fund the cost of large- scale bulk sampling and quarry development that would be required for a mining operation.

An on-going program of prospecting and geological mapping for metallic deposits is warranted since indications of mineral deposit types, that have hosted successful mining operations on the North Island, are present on the property and in the general area. Examples are the Coast Copper stratiform copper, silver and gold mine, the Island Copper porphyry mine, and the Merry Widow iron skarn mine, where excellent massive sulfide precious metal and base metal mineralization was ignored by the operator.



6.0 REFERENCES

Carson, D.J.T. (1973): The plutonic rocks of Vancouver Island; Geological Survey of Canada, Paper 72-44, 70 pages.

Carson, D.J.T. (1969): Tertiary Mineral Deposits of Vancouver Island; CIM Bulletin, Volume 62, Number 685, May, pages 511-519.

Dawson, G.M. (1887): Report on a Geological Examination of the Northern Part of Vancouver Island and Adjacent Coasts; Geol. Surv., Canada, Ann. Report (New Series), Vol 2, 1886, pt. B, pp. 5-129.

Eastwood, G.E.P. (1965): Replacement Magnetite of Vancouver Island; B.C. Economic Geology, volume 60, pages 124-148.

Ettinger, A.D. and Ray, G.E. (1989): Precious Metal Enriched skarns in British Columbia: an Overview and Geological Study; B.C. Ministry of Mines and Petroleum Resources, Paper 1989-3, 128 pages.

Hancock, K.E. (1988): Magnetite Occurrences in British Columbia, B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1988-28, pages 41-44.

Haug, J.L. (1975): Geology of the Merry Widow and Kingfisher contact Metasomatic skarn-magnetite deposits, northern Vancouver Island, British Columbia; Unpublished M.Sc. thesis, University of Calgary, 117 pages.

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

Jeffrey, W.G. (1962): Empire Development Company Limited, British Columbia Department of Mines and Petroleum Resources, Annual Report 1960, pages 90-100.

Meinert, L.D. (1984): Mineralogy and petrology of Iron Skarns in Western British Columbia, Canada; Economic Geology, volume 79, pages 869-882.

Rose, E.R. (1973): Geology of Vanadium and Vanadiferous Occurrences Of Canada; Geological Survey of Canada, Economic Geology Report no. 27, p. 53-56.

Sangster, D.F. (1969): The Contact Metasomatic Deposits of British Columbia; Geological Survey of Canada Bulletin 172, pages 63-67

Gunning, H.C.

(1930): Geology and Mineral Deposits of Quatsino-Nimpkish Area, Vancouver Island; Geol. Surv., Canada, Sum. Rept. 1929, pt. A, pp. 94-107.

(1931): Buttle Lake Map – area, Vancouver Island, British Columbia; Geol. Surv., Canada, Sum. Rept. 1930, pt. A, pp. 56-78.

(1932): Preliminary Report on the Nimpkish Lake Quadrangle, Vancouver Island, British Columbia; Geol. Surv., Canada, Sum. Rept. 1931, pt. A, pp. 22-35.

(1933): Zeballos River area, Vancouver Island, B.C.; Geol. Surv., Canada, Sum. Rept. 1932, pt. A II, pp. 29-50.

(1938a)Preliminary Geological Map, Nimpkish, East Half, British Columbia; Geol. Surv. Canada, Paper 38-2.

(1938b)Preliminary Geological Map, Nimpkish, West Half, British Columbia; Geol. Surv., Canada, Paper 38-3.

(1938c)Preliminary Geological Map, Woss Lake, East Half, British Columbia, Geol. Surv., Canada, Paper 38-4.

(1938d)Preliminary Geological Map, Woss Lake, West Half, British Columbia, Geo. Surv., Canada, Paper 38-5.

7.0 CERTIFICATE AND STATEMENT OF QUALIFICATIONS

I, K. Warren Geiger, P.Eng.,P.Geol., am a Professional Engineer (British Columbia and a Professional Geologist (Alberta)

I am:

A member of the Association of Professional Engineers and Geoscientists of British Columbia, a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

I graduated from the University of Alberta with a B.Sc. degree in mining engineering in 1955 and subsequently obtained a M.Sc. degree in economic geology from Cornell University in 1959 and a Ph.D. degree in economic geology from Cornell University in 1961. I have practiced my profession continuously since 1961.

Since 1967 I have been involved in:

- Mineral exploration for uranium, gold, silver and copper in northern Saskatchewan, Northwest Territories, northern Alberta and British Columbia from June, 1967 to June 1984 during which time I directed exploration programs for uranium in northern Saskatchewan and Northwest Territories from June 1967 to June, 1974 and for gold and copper in British Columbia from June 1974 to June 1984 where I was exploration manager for Aquarius Resources Ltd.
- Mineral exploration for gold in southwestern United States and Mexico from June 1984 to June 1995 where I was exploration manager for Arizona Star Resources Corp. and Nevada Star Resources Corp.
- Mineral exploration for gold, copper, cobalt and gemstones as independent consultant working for companies with properties in Mongolia, Northwest Territories, Ecuador and British Columbia.

As a result of my experience and qualifications I am a Qualified Person as defined in N.P. 43-101.

I am presently a Consulting Geologist and have been so continually since June 1995 and at various times previously from June 1967 to June 1995.

From June 18, 2000 until October 31, 2000 I was employed by Hampton Court Resources Inc. and Anglo Swiss Resources Inc. as Senior Consulting Geologist and Project Manager of the hard rock exploration program on the Slocan Gemstone Property in Nelson and Slocan Mining Divisions near Nelson, B.C.

From December 1, 2002 until April 1, 2003, I was employed by Diamcor Mining Inc. as an independent consulting geologist to provide geological guidance in the acquisition of good exploration properties and, as a result, to manage the geological evaluation of the Merry Widow property and to propose a first phase exploration program for that property.

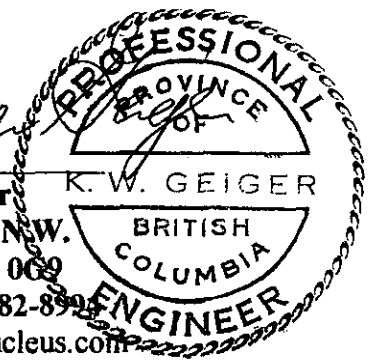
This report was prepared by me.

I am not aware of any material fact or material change with respect to the subject matter of the report, the omission to disclose which would make this report misleading.

I am independent of the owner of CBL Claims Group in accordance with the application of Section 1.5 of National Instrument 43-101.

I have read National Instrument 43-101, Form 43-101F1 and the report has been prepared in essential compliance with N1 43-101 and Form 43-101F1.

Dated at Calgary, Alberta this 30th day of September, 2003.



K. Warren Geiger
29 Capri Avenue, N.W.
Calgary, AB T2L 0G9
Telephone (403) 282-8992
e-mail: jgeiger@nucleus.com

Statement of Expenses
CBL and GM Claims
July 22/23, 2003

August 18, 2003

2 days Geological Field Consulting @ 600.00 per day Dr. K. Warren Geiger Ph.D.	1200.00
2 days Prospecting @ 250.00 per day James Laird, Qualified Prospector	500.00
Room and Board – 2 days X 2 men @ 90.00 per day	360.00
BC Ferries	110.00
Truck Mileage Charge- 1000 km @ .45 per km	450.00
Field Supplies	100.00
Report Cost	750.00
Total	**3470.00**

APPENDIX A

Minfile Information for the Nimpkish Area Showings and Prospects surrounding The CBL Claims Group

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 109 Inventory Report

Name	BONANZA LAKE EAST	Mining Division	Nanaimo
Status	Past Producer	NTS	092L07W NAD 27
Latitude Longitude	50 24 52 N 126 48 20 W	UTM	09 5586794 655911
Commodities	Limestone Marble Building Stone	Deposit Types	R09 : Limestone. R04 : Dimension stone - marble.
Tectonic Belt	Insular	Terranes	Wrangell.

Capsule Geology

A band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group), up to 2.5 kilometres wide, trends northward along the east side of Bonanza River and Bonanza Lake for 6.25 kilometres. To the west, the limestone is in fault contact with basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group). An elongate stock of coarse grained, biotite quartz monzonite of the Early to Middle Jurassic Island Plutonic Suite intrudes the limestone from the southeast.

On the Doro claim, 1 kilometre north of Bonanza Lake, the strata strike north and dip 25 degrees east. Further north, bedding strikes northwest and dips moderately southwest. A west trending fault just north of the Doro claim likely separates the northern and southern portions of the deposit into two fault blocks that have rotated with respect to each other.

The deposit is comprised of an upper medium to dark grey limestone member and a lower light grey to white limestone member. The upper member is occasionally contaminated with chert nodules and minor tremolite. The lower member is fine to coarse grained and stylolitic. Thin beds and lenses of dark grey pyritic chert accompany this limestone near the south end of the deposit. The chert nodules and pyritic chert lenses become more numerous near the basalt contact and the monzonite stock. Numerous sills and dykes of aplite, diorite and amphibolite have intruded the limestone on the Doro claim. Four samples of powdered limestone from a series of percussion holes drilled in the lower member on the Doro claim averaged 53.5 per cent CaO, 0.38 per cent MgO, 2.05 per cent insolubles, 0.58 per cent R2O3, and 86.5 per cent brightness (Assessment

	Report 10193, p. 4). Two chip samples, taken in succession along 305 metres of road cut just east of the north end of Bonanza Lake, averaged 55.08 per cent CaO, 0.11 per cent MgO, 1.02 per cent insolubles, 0.33 per cent R2O3, 0.055 per cent Fe2O3, 0.008 per cent MnO, 0.02 per cent P2O5 and 43.55 per cent ignition loss (Annual Report 1968, p. 318, Samples 30 and 31). The Doro claim is estimated to contain 27 million tonnes of limestone in a 457 metre by 366 metre block (Assessment Report 10193, p. 1) The deposit on the Doro claim was initially quarried for dimension stone sometime before 1982, but no production figures are available. The International Marble and Stone Company drilled the deposit in 1982 and drove a 65-metre long adit on the Doro claim during a search for white limestone. Development work was discontinued after encountering grey limestone extensively contaminated by dykes. Some mapping and diamond drilling was carried out by Industrial Fillers Ltd. over the rest of the deposit in 1988.

Bibliography	EMPR AR *1968-312,317,318 EMPR ASS RPT *10193, *17760 EMPR EXPL 1985-A48 EMPR FIELDWORK *1985, pp. 239,240 EMPR OF 1991-20; 1992-18, pp. 31, 32-33 GSC MAP 4-1974; 255A; 1029A; 1552A GSC OF 7; 170; 463, Sheet 2 GSC P 70-1A; 72-44; 74-8

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

•Top •Copyright •Disclaimer •Privacy •Feedback

MINFILE Inventory Report

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Inventory Report

MINFILE Number: 092L 109 **Name:** BONANZA LAKE EAST **Status:** Past Producer

Ore Zone / Year	Tonnage / Category	Commodity	Grade	Reference / Comments
DORO 1983	27 Mt Inferred	Limestone	55.080 %	Assessment Report 10193. Estimated reserves in a 457 by 366 metre block. Grade given for CaO, from a chip sample across 305 metres from a roadcut.

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search; Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 280

Name	BONANZA LAKE	Mining Division	Nanaimo
Status	Prospect	NTS	092L07W NAD 27
Latitude Longitude	50 24 04 N 126 48 51 W	UTM	09 5585294 655343
Commodities	Limestone Marble Building Stone	Deposit Types	R09 : Limestone. R04 : Dimension stone - marble.
Tectonic Belt	Insular	Terranes	Wrangell.

Capsule Geology	A 24 kilometre long band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) extends northward along the west side of Bonanza River and Bonanza Lake to the Tsulton River, where it is truncated by a northeast trending fault. The limestone is overlain by argillite of the Upper Triassic Parsons Bay Formation (Vancouver Group) and volcanics and sediments of the Lower Jurassic Bonanza Group. Basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group) conformably underlie the unit. The sequence strikes north-northwest and dips gently to the west. The limestone is 300 metres thick in the vicinity of Bonanza Lake. The lower portion of the unit is comprised of white and grey, fine-grained limestone. In the middle, the deposit becomes darker in colour and dolomitic in some beds. The upper portion consists of black limestone with scattered 5 to 15 centimetre thick lenses of black chert. A 61 metre long sample comprised of chips taken at 3.0 metre intervals across mixed layers of black and white limestone just west of the north end of Bonanza Lake analyzed 54.65 per cent CaO, 0.22 per cent MgO, 1.88 per cent insolubles, 0.35 per cent R2O3, 0.09 per cent Fe2O3, 0.006 per cent MnO, 0.03 per cent P2O3, 0.02 per cent sulphur and 42.94 per cent ignition loss (Minister of Mines Annual Report 1968, page 318, Sample 28). A portion of the deposit was staked in 1989 by Industrial Fillers Ltd. during a search for white limestone.

Bibliography	EMPR AR *1968-312,318

EMPR ASS RPT 17760, 19023, 20362
EMPR MAP 65 (1989)
EMPR OF 1991-20; 1992-1; 1992-9; 1992-18, pp. 31, 33
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 9; 170; 463
GSC P 70-1A; 72-44; 74-8

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search;
Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

•Top •Copyright •Disclaimer •Privacy •Feedback

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 164 Production Report

Name	STEELE CREEK	Mining Division	Nanaimo
Status	Past Producer	NTS	092L07W NAD 27
Latitude Longitude	50 18 30 N 126 45 18 W	UTM	09 5575105 659859
Commodities	Copper Magnetite Silver Gold Zinc	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology

The Bonanza deposit is located on the Bob 9 and 10 claims and lies within Upper Triassic Vancouver Group, Karmutsen Formation skarned limestone that occurs as thin layers or lenses within a sequence of pillow lavas, basalt, breccia and minor tuff.

The volcanic rocks have been intruded by the Late Jurassic Nimpkish batholith which is part of the Jurassic Island Plutonic Suite. Mafic and felsic dykes cut all rock types.

Mineralization occurs intermittently over 2.5 kilometres along the northwest striking hornblende quartz diorite contact (see also 092L 255, 092L 134 and 092L 337). At this occurrence, pods of garnet skarn (+/- pyroxene, epidote, actinolite, quartz, chlorite and calcite) contain magnetite, chalcopyrite and pyrite and minor amounts of sphalerite, pyrrhotite, gold and silver.

Diamond drilling (diamond drill hole 2, Section DD in McDougall, 1962) down the dip of the skarn zone intersected 9.8 metres of 3.05 per cent copper. Other nearby holes encountered values up to 60 per cent magnetite and 3.09 grams per tonne gold. McDougall reports that the skarn zone is 150 metres long but that significant copper values occur only over 60 metres. He also reports significant copper values in volcanic rocks adjacent to the skarn zone, and calculated that some 29900 tonnes of 4.0 per cent copper material may be available, including "50 cents per ton" gold and silver, and that 9000 tonnes of magnetite concentrate could be produced (McDougall, 1961,

	page 5). Production in 1968 and 1971 of 4718 tonnes averaged 2.48 per cent copper and 8.7 grams per tonne silver. Drilling in September 1994 intersected garnet and garnet-pyroxene skarn over 80.5 metres in Zone E. Drillhole 94-2 intersected the main copper zone over 16 metres averaging 0.38 per cent copper and 2.8 grams per tonne silver (Assessment Report 24601, page 1).

Bibliography	EMPR AR 1967-71; 1968-100 EMPR ASS RPT 953, 3698, 4350, 4351, 4353, 4898, 5394, 5868, 6267, 6769, *24601 EMPR GEM 1970-274; 1972-290; 1973-258; *1976-E128; 1977-E173 EMPR PF (McDougall, J.J. (1961): Report on Bonanza Lake Copper, Falconbridge Ltd.; McDougall, J.J. (1962): Summary Report on Bob Claims, Falconbridge Ltd.; Various maps from Assessment Reports 4350,4898; Drill logs from Assessment Report 5394; 1977 drill log, Diamond drill hole Bob 11; 1977 Report on Bob-Hab) EMR MP CORPFILE (Imperial Oil Ltd.) GSC ANN RPT 1886 GSC BULL 47; 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM 272 GSC OF 9; 170; 463 GSC P 38-2; 38-3; 72-44; *74-8 GSC SUM RPT 1929 Part A; 1931 Part A CJES 18, p. 1; 20, p. 2, 1983 WWW http://www.infomine.com/index/properties/STEELE_CREEK.html Alsen, J.B. (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl., B.Sc. Thesis, University of British Columbia Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University Falconbridge File

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search; Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

•Top •Copyright •Disclaimer •Privacy •Feedback

MINFILE Production Report

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Production Report

MINFILE Number: 092L 164 **Name:** STEELE CREEK **Status:** Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1971	2,722	2,163	Copper		44,083
1968	1,996		Silver Copper	41,149	 73,161

Summary Totals

		Metric		Imperial	
	Mined:	4,718	tonnes	5,199	tons
	Milled:	2,163	tonnes	2,384	tons
Recovery:	Silver :	41,149	grams	1,323	ounces
	Copper :	117,244	kilograms	258,476	pounds

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search;
Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 034 Production Report

Name	IRON CROWN (L.126)	Mining Division	Nanaimo
Status	Past Producer	NTS	092L07W NAD 27
Latitude Longitude	50 15 30 N 126 51 30 W	UTM	09 5569329 652661
Commodities	Iron Magnetite Copper Zinc Gold	Deposit Types	K03 : Fe skarn.
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology

In the area of the Iron Crown occurrence, north striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Early-Middle Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The occurrence is at the contact between coarsely crystalline Quatsino Formation limestone and fine-grained massive amygdaloidal andesite exhibiting sericite, calcite and actinolite alteration with amygdules filled with epidote, calcite or actinolite. Pyrite and pyrrhotite are disseminated through the andesite. Laumontite and calcite veins are present.

Leucocratic quartz monzonite and diorite intrude the volcanics and limestone. Contacts with the volcanics are diffuse, and recrystallized andesite cannot readily be distinguished from intrusive rocks. Feldspar porphyry dykes, an aplite dyke and a felsite dyke are also recognized. The magnetite contact with the limestone is sharp. The andesite is diffuse and evidenced by skarn. The magnetite is relatively pure, but contains up to 50 per cent calcite lenses with chalcopyrite, pyrite and sphalerite. Calcite and sulphides are considered to be post-ore (Geological Survey of Canada Bulletin 172, page 73).

A 55 metre long, 8 to 9 metre wide magnetite exposure occurs along the Nimpkish River. Some

	200 metres west of the river, several outcrops of magnetite occur along a ridge and are estimated to represent a lens at least 116 metres long and 18 metres wide. A third magnetite body, indicated by magnetometer surveys only, measures 146 by 18 metres and lies between the river and ridge deposits. These 3 occurrences are believed to represent the 3 fault-separated orebodies of Sangster (Geological Survey of Canada Bulletin 172, page 73). The faults are marked by breccia zones up to 1.5 metres wide, gouge, chlorite, hematite-coated slip surfaces and slickensided magnetite ore and country rock. Ore samples taken in 1942 assayed 59.6 to 63.9 per cent iron, averaging 62.1 per cent iron (Cameron, 1942). Phosphorous and sulphur contents are reported to be very low. Between 1959 and 1963, 2,175,683 tonnes of ore were mined. Indicated (probable) reserves at Iron Crown are 1,632,924 tonnes grading 3.5 grams per tonne gold, 46.2 per cent iron and 1.33 per cent sulphur (Minister of Mines Annual Report 1956). The reserve figures are pre-production; the deposit is mined out.

Bibliography	EMPR AR 1902-236; 1916-300; 1955-76; 1956-133; 1959-133; 1960-101; 1961-93; 1962-96; 1963-99 EMPR MAP 65 (1989) EMPR OF 1992-1; 1992-9 EMPR PF (Cameron, D.W. (1942): Report on Klaanch River Iron Deposits; Mineralogy of the Iron Crown Report by Gail Bloomer, Wash. Statell.; Airborne Magnetometer Survey, Nimpkish River Area, 1:15,840, 1957) EMR MP CORPFILE (Nimpkish Iron Mines Ltd.) GSC ANN RPT 1886 GSC BULL 47; *172; 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM *272, p. 75 GSC P 38-2; 38-3; 71-36; 72-44; *74-8 GSC OF 9; 170; 463 GSC SUM RPT *1929 Part A, p. 131; 1931 Part A CJES 18, p. 1; 20, p. 1, 1983 Alsen, J.B. (1975): A Magnetite Skarn Deposit near Bonanza Lake, Unpub. B.Sc. Thesis, University of British Columbia Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia Falconbridge File

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

MINFILE Production Report

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Production Report

MINFILE Number: 092L 034 **Name:** IRON CROWN (L.126) **Status:** Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1963	509,540	509,540	Iron		279,120,235
1962	609,632	609,632	Iron		328,645,006
1961	604,509	604,509	Iron		384,486,471
1960	434,766	434,766	Iron		275,495,144
1959	17,236	11,612	Iron		7,438,876

Summary Totals

		Metric		Imperial	
	Mined:	2,175,683	tonnes	2,397,603	tons
	Milled:	2,170,059	tonnes	2,391,405	tons
Recovery:	Iron :	1,275,185,732	kilograms	2,811,274,465	pounds

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search; Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 119

Name	ALPHA 4 (NIMPKISH COPPER)	Mining Division	Nanaimo
Status	Showing	NTS	092L07W NAD 27
Latitude Longitude	50 20 05 N 126 50 00 W	UTM	09 5577873 654196
Commodities	Zinc Copper	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology	North striking Upper Triassic Vancouver Group carbonates of the Quatsino Formation overlie Karmutsen Formation tholeiitic basalts. Lower Jurassic Bonanza Group volcanics are coeval with, or genetically related to granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area. The Alpha 4 occurrence consists of a 9 by 3.6 metre long massive pyrrhotite lens lying along a northeast trending steep mafic porphyry dyke in granodiorite, 60 metres from its contact with Quatsino lime- stone. The lens contains pyrrhotite, considerable zine and minor copper. Four samples assayed from 4.3 to 9.6 per cent zinc and up to 0.38 per cent copper, with only a trace of silver and gold (Geological Survey of Canada Summary Report 1931A, page 27).

Bibliography	EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68 EMPR ASS RPT 456, *831, 832, 3749 EMPR GEM 1970-273 GSC ANN RPT 1886 GSC BULL 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM 272

GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT *1929A; 1931A, p. 27
CJES 18, p. 1; 20, p. 1 (1983)
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, *unpubl. B.Sc. Thesis, University of British Columbia*
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search;
Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

•Top •Copyright •Disclaimer •Privacy •Feedback

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 120

Name	ALPHA 5 (NIMPKISH COPPER)	Mining Division	Nanaimo
Status	Showing	NTS	092L07W NAD 27
Latitude Longitude	50 19 55 N 126 49 58 W	UTM	09 5577566 654244
Commodities	Magnetite Iron	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology	North striking Upper Triassic Vancouver Group carbonates of the Quatsino Formation overlie Karmutsen Formation tholeiitic basalts. Lower Jurassic Bonanza Group volcanics are coeval with, or genetically related to granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area. Assessment Report 831 describes the Alpha 5 occurrence as a small outcropping of massive magnetite with little or no sulphides, lying within granodiorite. A 1965 dipneedle survey outlined 3 small anomalies in the vicinity, suggesting additional similar minera- lization.

Bibliography	EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68 EMPR ASS RPT 456, *831, 832, 3749 EMPR GEM 1970-273 GSC ANN RPT 1886 GSC BULL 47; 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM 272 GSC OF 9; 170; 463 GSC P 38-2; 38-3; 71-36; 72-44; *74-8 GSC SUM RPT 1929A; 1931A CJES 18, p. 1, Jan. 1983

Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 206

Name	EAST HAZEL (NIMPKISH COPPER)	Mining Division	Nanaimo
Status	Showing	NTS	092L07W NAD 27
Latitude Longitude	50 19 50 N 126 51 05 W	UTM	09 5577373 652924
Commodities	Gold Copper Zinc Molybdenum Cadmium	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology

The area is underlain by north striking Upper Triassic Vancouver Group, Karmutsen Formation tholeiitic basalts and overlying carbonates of the Quatsino Formation. Late Jurassic granodiorite of the Nimpkish batholith (which is part of Jurassic Island Plutonic Suite) intrudes the Vancouver Group rocks. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The East Hazel occurrence is located within the east-central portion of Hazel 3 claim (Assessment Report 456). This showing corresponds with showings 7 to 15 in the Geological Survey of Canada Summary Report of 1929.

The occurrence consists of a number of replacement pyrrhotite- chalcopyrite-sphalerite-garnet lenses or stringers with minor amounts of magnetite, marcasite, covellite, bornite, molybdenite, greenockite, epidote, calcite, quartz, actinolite, chlorite and sericite. The lenses are 0.5 metres thick and range up to 6 metres in length. They lie south of a 200 metre long tongue of granodiorite that projects northwestward into Quatsino limestone as a 50 degree south dipping sheet. Lamprophyre dykes are present. The lenses lie within the limestone and are within 60 metres of the contact zone.

Diamond-drill hole 18 (Figure A, Assessment Report 456) includes a 0.7 metre section of 85.04

	grams per tonne gold and 0.29 per cent copper. A sample from a nearby trench assayed 17.6 per cent zinc and 0.73 per cent copper over 0.5 metres. The occurrence lies 500 metres west of Nimpkish Copper (092L 036) and 600 metres east of Hazel 7 (092L 118), with several small occurrences in between (see Geological Survey of Canada Summary Report 1929, Figure 6).

Bibliography	EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68 EMPR ASS RPT *456, *831, 832 EMPR GEM 1970-273 EMPR PF (Various Maps in 092L 036-Nimpkish Copper) GSC ANN RPT 1886 GSC BULL 47, 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM 272 GSC OF 9; 170; 463 GSC P 38-2; 38-3; 71-36; 72-44; *74-8 GSC SUM RPT *1929A, pp. 128,129,Fig.6; 1931A CJES 18, p. 1; 20, p. 2, 1983 Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search; Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 207

Name	COPPER CREEK 18	Mining Division	Nanaimo
Status	Showing	NTS	092L07W NAD 27
Latitude Longitude	50 19 40 N 126 50 30 W	UTM	09 5577084 653625
Commodities	Copper Zinc Molybdenum	Deposit Types	L04 : Porphyry Cu ± Mo ± Au.
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology	The area is underlain by granodiorite of the Nimpkish batholith which is part of the Jurassic Island Plutonic Suite. The batholith intrudes Upper Triassic Vancouver Group rocks comprised of Karmutsen Formation volcanics and Quatsino Formation carbonates as well as the overlying Lower Jurassic Bonanza Group. The Copper Creek 18 occurrence comprises 23 metres of quartz- pyrite-chalcopyrite-molybdenite mineralization in a narrow shear zone cutting sericite-kaolinite altered granodiorite. Pyrite and chalco- pyrite also occur in a quartz vein stockwork and are disseminated through the intrusive (Geological Survey of Canada Summary Report 1929, page A129 and Showing number 17 on Figure 6). About 30 metres downstream from the occurrence is a large rusty outcrop of coarse pyrite in the creek bed, measuring 3 by 10 metres which hosts chalcopyrite and molybdenite in a quartz-sericite gangue. There are other small showings of copper, zinc and molybdenite along the creek.

Bibliography	EMPR AR 1965-230; 1966-68 EMPR ASS RPT *831, 832 EMPR GEM 1970-273

GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT *1929A, p. 127; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Falconbridge File

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 037

Name	SMITH COPPER	Mining Division	Nanaimo
Status	Prospect	NTS	092L07W NAD 27
Latitude Longitude	50 21 47 N 126 54 37 W	UTM	09 5580867 648632
Commodities	Magnetite Iron Copper Zinc Lead Silver	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology

The area is underlain by volcanics and sediments of the Middle to Upper Triassic Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and by volcanics of the Lower Jurassic Bonanza Group. These rocks have been intruded by the Jurassic Island Plutonic Suite which are cogenetic with the Bonanza Group.

Locally, Karmutsen andesitic and basaltic flows are overlain by Quatsino limestone, in turn overlain by Bonanza argillites, tuffs and quartzites. These are intruded by medium-grained quartz diorite to granodiorite. The volcanic and sedimentary rocks are cut by numerous dykes varying in composition from diabase and andesite to feldspar porphyries.

The original Smith occurrence consists of mainly massive pyrr- hotite and magnetite with lesser pyrite, chalcopyrite and sphalerite irregularly distributed in skarn. The skarns consist of garnet, epidote, diopside, actinolite and chlorite. Calcite may also be present. The skarns occur as isolated bodies in limestone and the underlying volcanics at or close to the contact with quartz diorite. They are best developed at two embayments in the quartz diorite south- east of Storey Creek.

A 5.5 metre long adit has been excavated in a 6.3 metre wide vertical skarn zone trending 351 degrees along the Quatsino/quartz diorite contact. A 1.0 metre chip sample contained 1.60 per cent copper, 0.145 per cent zinc and 12.0 grams per tonne silver. Similar skarn located 600 metres to

	the north along the Karmutsen/quartz diorite contact contained 0.163 per cent copper and 1.650 grams per tonne gold (Awmack, 1988). Several other occurrences are in the immediate area (refer to 092L 208-Smith Copper Main zone). Doublestar Resources Ltd. staked the property in 1998.

Bibliography	EMPR AR 1921-348; 1929-382; 1930-299; 1931-172 EMPR ASS RPT *417, 765, 972, 2854, 3009, 3401, 3749, 4352, 7277, *10337, 11147 EMPR EXPL 1979-190; 1982-228 EMPR GEM 1971-319; 1972-291; 1973-259 EMPR OF 1988-28, p. 153 EMPR PF (*Awmack, (1988): 1988 Summary Report on the Nimpkish Project in Prospectus for Hercules Ventures Inc., July 12, 1988) EMR MP RESFILE (Zip) Res GSC ANN RPT 1886 GSC BULL 172; 242 GSC MAP *4-1974; 255A; *1029A; 1552A GSC MEM *272, p. 73 GSC OF 9; 170; 463 GSC P 38-2; 38-3; 71-36; 72-44; *74-8 GSC SUM RPT 1929A, p. 130; *1931A, p. 30 CJES 18, p. 1; 20, p. 1 (Jan. 1983) GCNL #159,#180,#200,#211,#219,#231, 1981; #2,#124,#167,#172,#178, #202, 1982; #3,#40, 1983; #57,#101,#121, 1985; #229, 1988; #1,#8, 1989 MINING REVIEW MAG Jul./Aug., 1983 N MINER Oct.29,Dec.10, 1981; Jun.20, 1985 Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search;
Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILEHome page

This page last updated: June 11, 2001

MINFILE Capsule Geology and Bibliography

MINFILE Home page
Main Search Menu
Back to Search Results
ARIS Home page

Capsule Geology and Bibliography

092L 121

Name	WOLF	Mining Division	Nanaimo
Status	Showing	NTS	092L07W NAD 27
Latitude Longitude	50 22 10 N 126 53 25 W	UTM	09 5581617 650034
Commodities	Magnetite Iron	Deposit Types	
Tectonic Belt	Insular	Terranes	Wrangell. Plutonic Rocks.

Capsule Geology	North striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area. At the Wolf occurrence, massive lenses of magnetite, up to 1.5 by 7 metres, occur along a Quatsino limestone-Karmutsen greenstone contact, 450 metres from the granodiorite intrusion. Felsic dykes are common. Mineralization appears to have been localized by 85 and 330 degree faults on an anticlinal axis. Doublestar Resources Ltd. held the property in 1998.

Bibliography	EMPR AR 1929-382 EMPR ASS RPT *417 GSC ANN RPT 1886 GSC BULL 172; 242 GSC MAP 4-1974; 255A; 1029A; 1552A GSC MEM 272 GSC OF 9; 170; 463

GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

Database last posted: June 30, 2003

Go to: Main Search Menu; MINFILE Name/No. Search; Commodity/Status/NTS Search; Deposit Type Search; Tectonic Belt/Terrane/Latitude/Longitude Search; Mineralogy Search; Deposit Character/Classification Search; Formal/Informal Host Search; Rock Type/Lithology Search; Stratigraphic Age Search;

MINFILE Home page

This page last updated: June 11, 2001

APPENDIX B

Assay results of the Quatsino Limestone
Samples on the CBL Claims Group
in 1996 by Imasco Minerals Inc.

IMASCO MINERALS INC.

Ken Lysohirka
Mine Manager
P.O. Box 194
#8-2170 Chelan Cres.
Port McNeill, B.C. V0N 2R0

Telephone 1-250-956-3883
Fax 1-250-956-3883

October 30, 1996
1:05 PM

FACSIMILE LEAD SHEET

To: James Laird
Company:
Fax No.: 1-604-640-5382

From: Ken Lysohirka
Pages Sent: 2 (including coversheet)

Attached is a sketch of your claims and where we had obtained the samples for testing. This was done quite vague, as by the time we located the corner posts we were limited to the time we had available for sample collecting.

The samples collected in GM1, GM2, GM3 & CBL9 consisted of numerous small chip samples taken along the road cut running through the claim where ever the rock whiteness looked acceptable.

The remaining samples were single large rocks that looked representative of the material in the area, which was done wherever the limestone whiteness looked to be of poor quality.

Results:

		SiO2	Al2O3	MgO	Na2O	MnO	Fe2O3	TiO2	P2O5	CaO	K2O	LOI
M3	ROCK	0.11	0.11	0.34	0.01	0.01	0.02	0.01	0.01	55.38	0.01	43.83
M4	ROCK	0.45	0.02	2.22	0.01	0.02	0.17	0.01	0.01	52.72	0.01	43.92
M7	ROCK	0.45	0.02	2.53	0.01	0.02	0.07	0.01	0.01	52.78	0.02	43.97
M7a	ROCK	0.45	0.02	3.41	0.01	0.01	0.07	0.01	0.01	51.42	0.02	44.23
M8	ROCK	0.11	0.02	2.03	0.01	0.01	0.09	0.01	0.01	53.19	0.01	44.13
M8a	ROCK	0.34	0.02	2.16	0.01	0.01	0.03	0.01	0.01	53.19	0.01	44.01
M9	ROCK	0.56	0.02	2.85	0.01	0.01	0.09	0.01	0.01	52.49	0.01	43.92
CBL10	ROCK	0.11	0.23	0.23	0.01	0.01	0.07	0.01	0.01	55.29	0.02	43.70
GM2	ROCK	0.11	0.01	4.09	0.01	0.01	0.12	0.01	0.01	51.09	0.01	44.53
CBL9	CHIPS	0.33	0.01	3.55	0.01	0.01	0.06	0.01	0.01	51.54	0.01	44.22
GM1	CHIPS	0.45	0.01	3.43	0.01	0.01	0.11	0.01	0.01	51.53	0.01	43.99
GM3	CHIPS	0.22	0.02	2.08	0.01	0.01	0.04	0.01	0.01	53.11	0.01	43.98
GM2	CHIPS	0.22	0.02	1.46	0.01	0.02	0.03	0.01	0.01	54.06	0.01	43.92

IMASCO MINERALS INC.

Ken Lysohirka
Mine Manager
P.O. Box 194
#8-2170 Chelan Cres.
Port McNeill, B.C. V0N 2R0

Telephone 1-604-956-3883
Fax 1-604-956-3883

July 23, 1996
9:26 AM

FACSIMILE LEAD SHEET

To: David Sacks
Company: IMASCO
Fax No.: 1-800-251-0851

From: Ken Lysohirka
Pages Sent: 1 (including coversheet)

After some extensive searching from some vague maps, Dan & I located the claims that James Laird staked. From time constraints, we did minimal sampling from the bush on these claims and stayed pretty much to the road cuts.

With the exception of CBL-10, all of the CBL claims seem to have a grey tone to the rock, therefore we just took some large surface samples from the area that James had marked with red flagging (M-1, M-2, M-3, etc.). We could not find M-10, which is probably up in the CBL-1 area, which is quite grey. We did not take a sample from M2, as it is represented by our bag marked GM-3. We walked along the road taking routine small samples to represent the claim for GM-1, GM-2, GM-3 and CBL-9. We also walked through the clearcut in CBL-10 and took some surface samples.

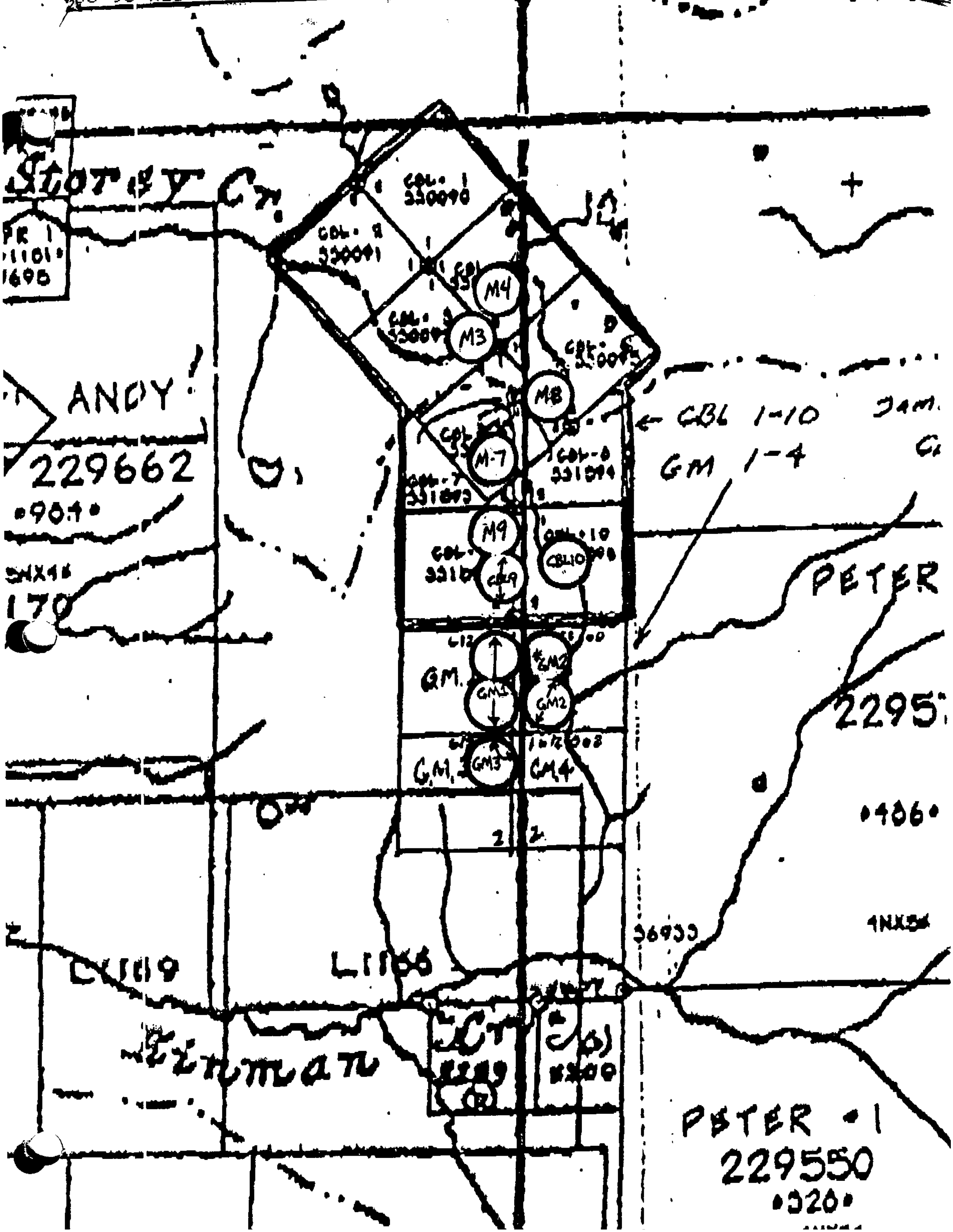
Summarized; If there is going to be acceptable rock in this area, it will be in the GM claims and possibly running into CBL-10. The highest grade, judging by whiteness, will be in the GM-1 claim, which has a considerable band on some nice white rock running through it. It starts to dissipate as it gets closer to CBL-9 and into GM-3. It shows up in GM-2, but so does the bad rock from CBL-9. I would assume that it also runs at an angle down into GM-4, but this would have to be researched, as the road cut does not run through this claim and neither did we. These samples will be sent via Greyhound.

We talked to loggers/road builders in the area, who informed us that the area has a very limited work season, due t the altitude and weather. At the end of this past May the area received a dump of 14" of snow. There is a 11.3 km drive from the claims to the CANFOR mainline. This stretch is very steep, but the trucks would be empty going up the whole way and loaded coming down. This hill would test the nerves of the best truck drivers. Once on the mainline, the off-road drive to Beaver Harbour is 29 km.

Samples:

Chip Samples	GM-1	GM-2	GM-3	CBL-9	CBL-10				NIMPKISK1
Rock Samples	*GM2	M-3	M-4	M-6	M-7 (2)	M-8 (2)	M-9	NOMASS	NIMPKISK2

-96 WED 01:05 PM IMASCO/Lysohirka?s 1 604 956 6885



M01

CBL "A" ZONE
Fe,Cu,Zn

CBL "B" ZONE
Fe,Cu,Zn

Zn,Fe,Cu
WOLF ZONE

Fe,Cu,Zn

QUARRY

Fe,Cu,Zn

FALLS ZONE

GREEN GARNET ZONE
Fe
Cu

CAVE ZONE

Fe,Cu,Zn

CEDAR LAKE ZONE

Fe,Cu,Zn

J-98-1
QUARRY
J-98-2
J-98-3
GM ZONE
J-98-4

0 100 200 300 400 500
1 : 5,000

LEGEND

LOWER JURASSIC

4 — *skarn alteration and mineralization*

4X — *skarn subcrop*

3 — *ISLAND INTRUSIONS*
granodiorite, quartz–feldspar porphyry, diorite, felsite, endoskarn

d — *dike, skarn alteration*

UPPER TRIASSIC

2 — *QUATSINO LIMESTONE*
calcite marble

2a — *light grey to white*

2b — *grey to light grey*

2c — *grey to black*

not shown – pink and green marble, red jasperoid, skarn

1 — *KARMUTSEN VOLCANICS*
marine basalt FLOWS
amygdaloidal basalt, feldspar porphyry, mafic tuff and volcanic breccia, limestone, skarn

geological contact

road

bridge

sinkhole *marsh*

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
27,256

LAIRD EXPLORATION LTD.

GEOLOGY AND MINERALIZATION OF THE CBL AND GM CLAIMS

STOREY CREEK, NIMPKISH, VANCOUVER ISLAND

DATE:	OCTOBER 15, 2003	SCALE:	1 : 5,000
DRAWN:	DD, J.L.		NTS 92L7W
BY:	JIM LAIRD, K.W. GEIGER		NANAIMO MINING DIVISION