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**1986 GEOLOGICAL ASSESSMENT OF  
MERO 1, 2, 3 CLAIMS  
(Cathedral Property)**

Nanaimo Mining Division  
NTS 92F/7E ~~92F/7E~~  
49°16.5'N Lat., 124°40.8'W Long.

for

Operator: **NEXUS RESOURCE CORPORATION**  
January 14, 1987 10/87

**J.S. Getsinger, Ph.D.**

Owner: *Reward Resources Ltd.*

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,557**

**FILMED**



(i)

## SUMMARY

The Nexus Resource Corporation Cathedral property, consisting of Mero 1-3 and Horne 1-4 claims, is underlain mainly by Paleozoic Sicker Group rocks of the Nitinat, Myra, and Buttle Lake Formations, and lesser amounts of Triassic basaltic rocks of the Karmutsen Formation. A major northwesterly striking fault zone runs through the property, with associated local shear deformation and listwanite alteration in Sicker Group volcanic and volcanoclastic rocks. The Sicker Group is a known host of economic polymetallic volcanogenic massive sulphide deposits.

Mineralization observed on the Mero 1-3 claims includes pyrite associated with listwanite (quartz-carbonate alteration), common disseminated sulphides, and fracture-controlled sulphides. Iron-bearing sedimentary rocks were also noted. Alteration and mineralization are related to shearing.

Rock samples returned encouraging lithogeochemical results up to the following values: 190 ppb Au (check assay 0.007 oz/ton = 0.240 g/t, sample 509); 2.6 ppm Ag (samples 509, 522); 650 ppm As (sample 522); 13.5 ppm Cd, 820 ppm Zn, 338 ppm Ni, 15 ppm Mo, 357 ppm V (sample 516, also containing 20 ppb Au, 2.4 ppm Ag, and 230 ppm As); 327 ppm Cu, 30 ppm Sb (sample 534); 294 ppm Cr (sample 519); 8510 ppm P (sample 510, also containing over 25% Fe).

A silt sample draining altered agglomeratic basalt mapped as Myra Formation on the northern Mero 2 claim returned anomalous results of 11.0 ppm Ag, 819 ppm Cr, 318 ppm Pb, and 220 ppm Zn (sample 1180S).



(ii)

Whole rock analyses confirm field identification of many samples as highly carbonate-altered mafic volcanic and more felsic volcanoclastic rocks.

Further exploration of the Mero 1-3 claims (as part of Phase II exploration of the Cathedral property) is warranted, especially in areas where samples returning anomalous geochemical results were collected, near major fault structures, and in areas of quartz-carbonate alteration in Sicker Group rocks.



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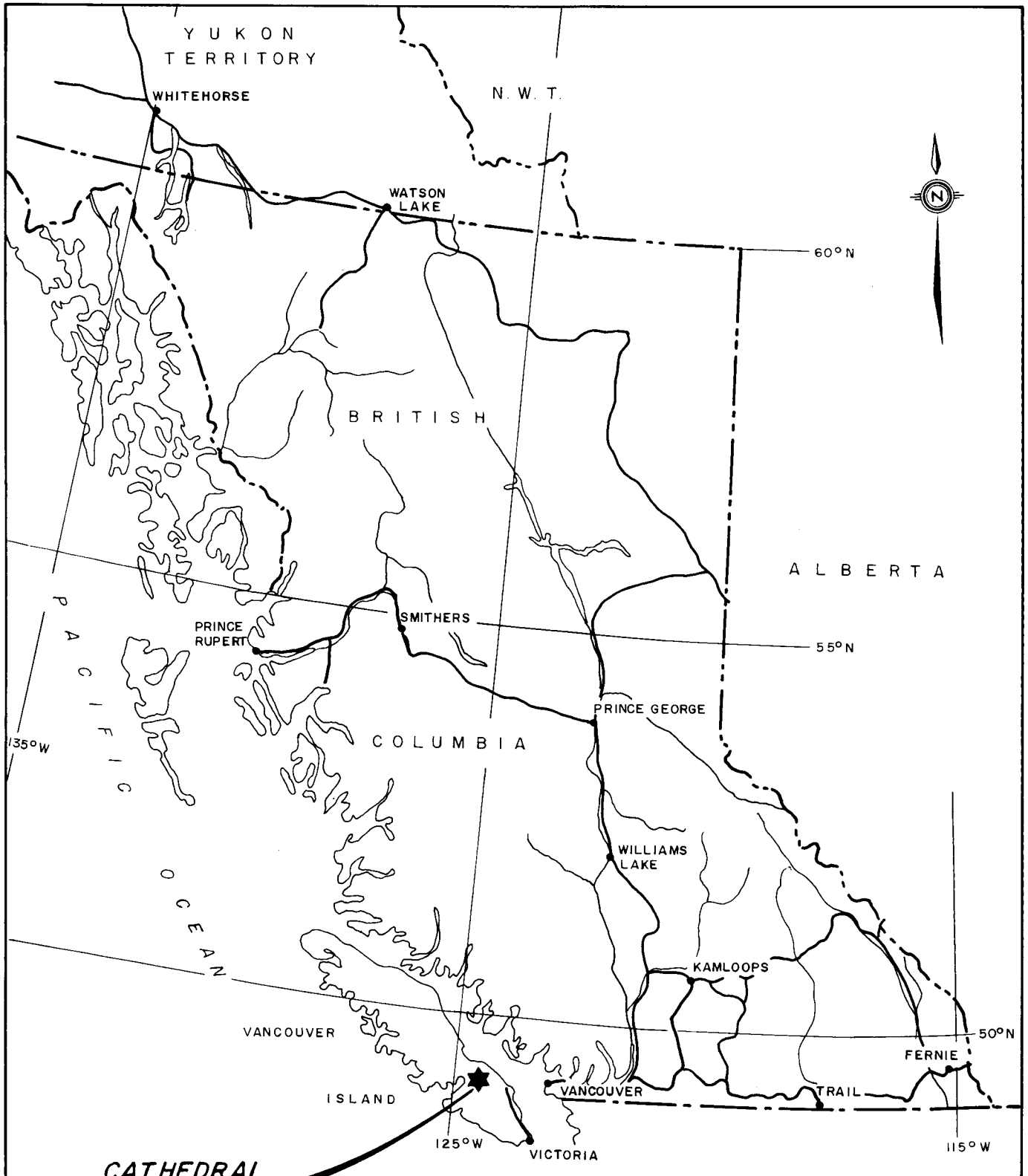
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**CATHEDRAL  
PROPERTY**

<b>NEXUS RESOURCE CORPORATION</b>	
<b>GENERAL LOCATION MAP CATHEDRAL PROPERTY</b>	
NANAIMO MINING DIVISION	
Project No: V 238	By: T. N.
Scale: 1 : 8 000 000	Drawn: J. S.
Drawing No: 1	Date: JAN. 1987.
 <b>MPH Consulting Limited</b>	



## 1.0 INTRODUCTION

This report on the Mero 1-3 claims (Cathedral property) has been prepared by MPH Consulting Limited upon the request of Nexus Resource Corporation. It represents a compilation of field work carried out on the Mero 1-3 claims of the property, in fulfillment of 1986 assessment work requirements for these claims. Work carried out includes reconnaissance geological mapping (1:10,000 scale), rock sampling, silt sampling, and prospecting over all of the claims.

Included in the report is a summary of regional geology and mining exploration activity in the area, a description of property geology, and a discussion of the economic setting of the property. A recommended exploration program designed to explore the economic potential of the property is also included.



## 2.0 PROPERTY LOCATION, ACCESS, TITLE

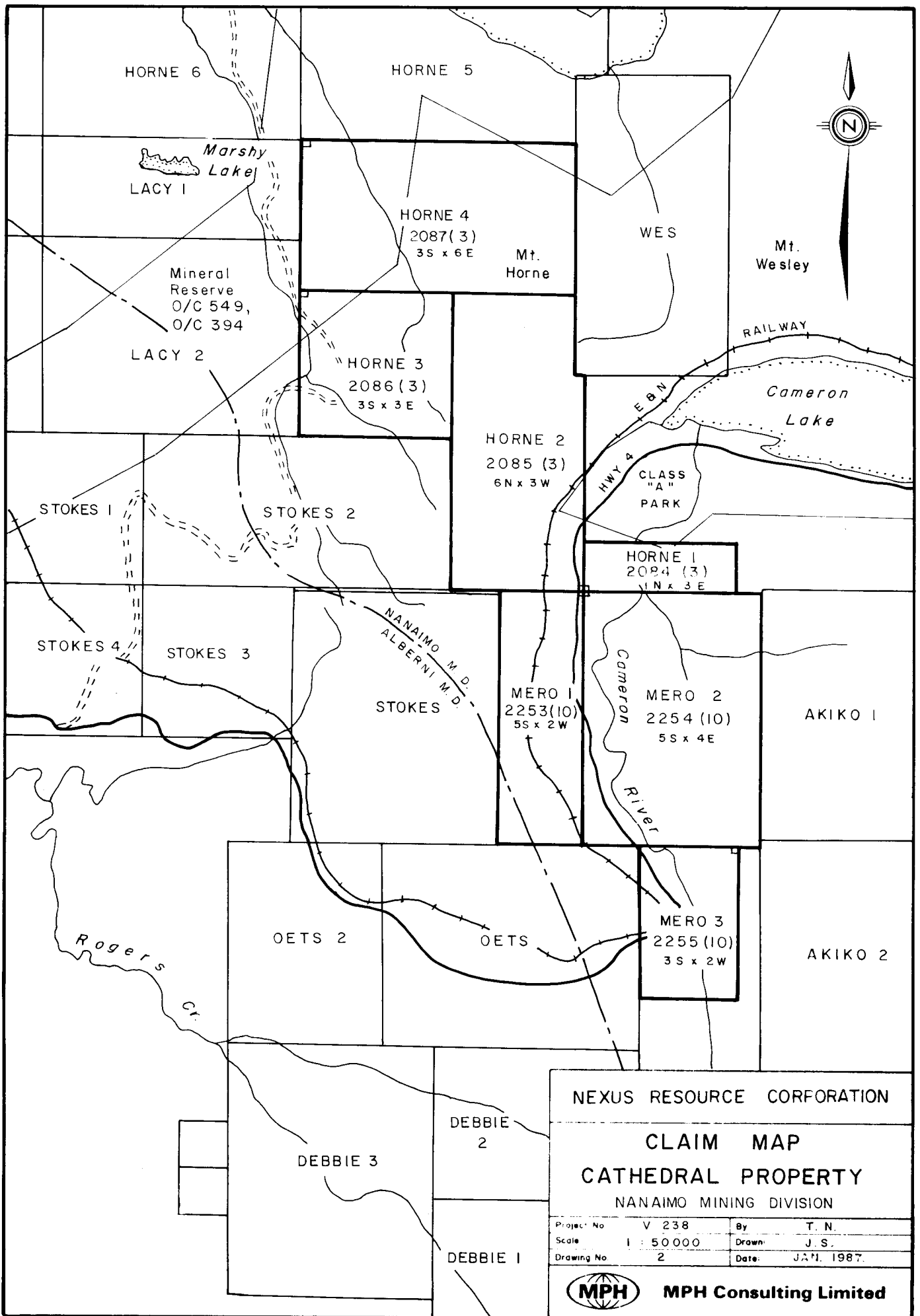
The Mero 1-3 claims (Cathedral property) are located west of Cameron Lake, 11 km northeast of Port Alberni, on NTS mapsheets 92F/7 and 92F/2, centred at about  $49^{\circ}16'N$  latitude,  $124^{\circ}40'W$  longitude in the Nanaimo Mining Division of British Columbia (Figures 1 and 2).

Access to the northwestern part of the property is via MacMillan Bloedel's Horne Lake road which turns north from Highway 4 just east of Port Alberni. Several branches cross the Horne 2, 3, and 4 claims. The northeastern corner of the property is accessible from Dunsmuir, on the east coast of Vancouver Island, by driving around the eastern end of Horne Lake. Highway 4 and the E&N Railway both cross the southern part of the property.

The Cathedral property (grouped as the Cathedral group on March 6, 1986) comprises 7 mineral claims totalling 84 units, as summarized below:

Claim	Record No.	Units	Anniversary Date	Year Registered
Mero 1	2253(10)	10	Oct. 16, 1987	1985
Mero 2	2254(10)	20	Oct. 16, 1987	1985
Mero 3	2255(10)	6	Oct. 16, 1987	1985
Horne 1	2084(3)	3	March 1, 1987	1985
Horne 2	2085(3)	18	March 14, 1987	1985
Horne 3	2086(3)	9	March 14, 1987	1985
Horne 4	2087(3)	18	March 14, 1987	1985





NEXUS RESOURCE CORPORATION

**CLAIM MAP**

**CATHEDRAL PROPERTY**

NANAIMO MINING DIVISION

Project No	V 238	By	T. N.
Scale	1 : 50 000	Drawn	J. S.
Drawing No	2	Date	JAN. 1987.

**MPH** MPH Consulting Limited



The Mero 1-3 claims are owned by Reward Resources Ltd, whereas the Horne 1-4 claims are owned by H.K. Hoiles in trust for Schreiber Resources Ltd. Nexus Resource Corporation is the operator of the Cathedral property by virtue of an option agreement with Reward Resources Ltd. dated June 13, 1986. Reward Resources Ltd. has an option agreement with Schreiber Resources Ltd. dated February 6, 1986.

The right-of-way for the proposed Vancouver Island Gas Pipeline crosses the northwest corner of the Cathedral property, imposing certain conditions on the claim owners, but not disallowing exploration and mining activities. Copies of O/C 549 and O/C 394 are included in Appendix VI. Small portions of the Horne 1 and 2 claims overlap MacMillan Provincial Park (Cathedral Grove). Mining exploration is not allowed within the park boundaries.



### 3.0 PREVIOUS WORK

Government geological work in the area includes mapping by C.H. Clapp (1912 and 1914), J.E. Muller and D.J.T. Carson (1969), J.E. Muller (1977 and 1980), and A. Sutherland Brown (1986).

A regional aeromagnetic survey flown by Hunting Survey Corp. Ltd. in 1962 included the area of the Cathedral property.

From 1963 to 1966, Gunnex Ltd. carried out a regional mapping program over a large portion of the E&N Land Grant, with limited prospecting and silt sampling. They compiled a list of all known mineral occurrences in the area and visited many of them for rock sampling and more detailed mapping. A detailed geological mapping program (1:1320 scale) was carried out in the areas immediately to the west of the Cathedral property over the three iron formation occurrences in that area.

In June 1984, a limited amount of rock sampling on the Mero 1-3 ground (then known as the Comedy Group) was carried out during staking (Neale and Hawkins, 1984). A band of pyritic interbedded tuff, chert, and argillite within unmineralized but strongly carbonatized amygdaloidal basalt (andesite?) was located on the E&N Railway tracks. A sample of argillite returned anomalous values in Ag (1.2 pm) and Zn (540 ppm). The Comedy Group claims lapsed in July 1985 and were re-staked as the Mero 1-3 claims in September 1985.

The Horne 1-4 claims were staked in February 1985.



7.

In 1986, MPH Consulting Limited carried out geological mapping and sampling on the Horne 1-4 claims (Hawkins 1986). Lithochemical values of up to 0.6 ppm Ag, 210 ppm As, 132 ppm Cu, and 100 ppm Zn were obtained in various grab samples, and silt sampling returned an anomalous gold value of 40 ppb and 300 ppm As in a background of less than 10 ppm.

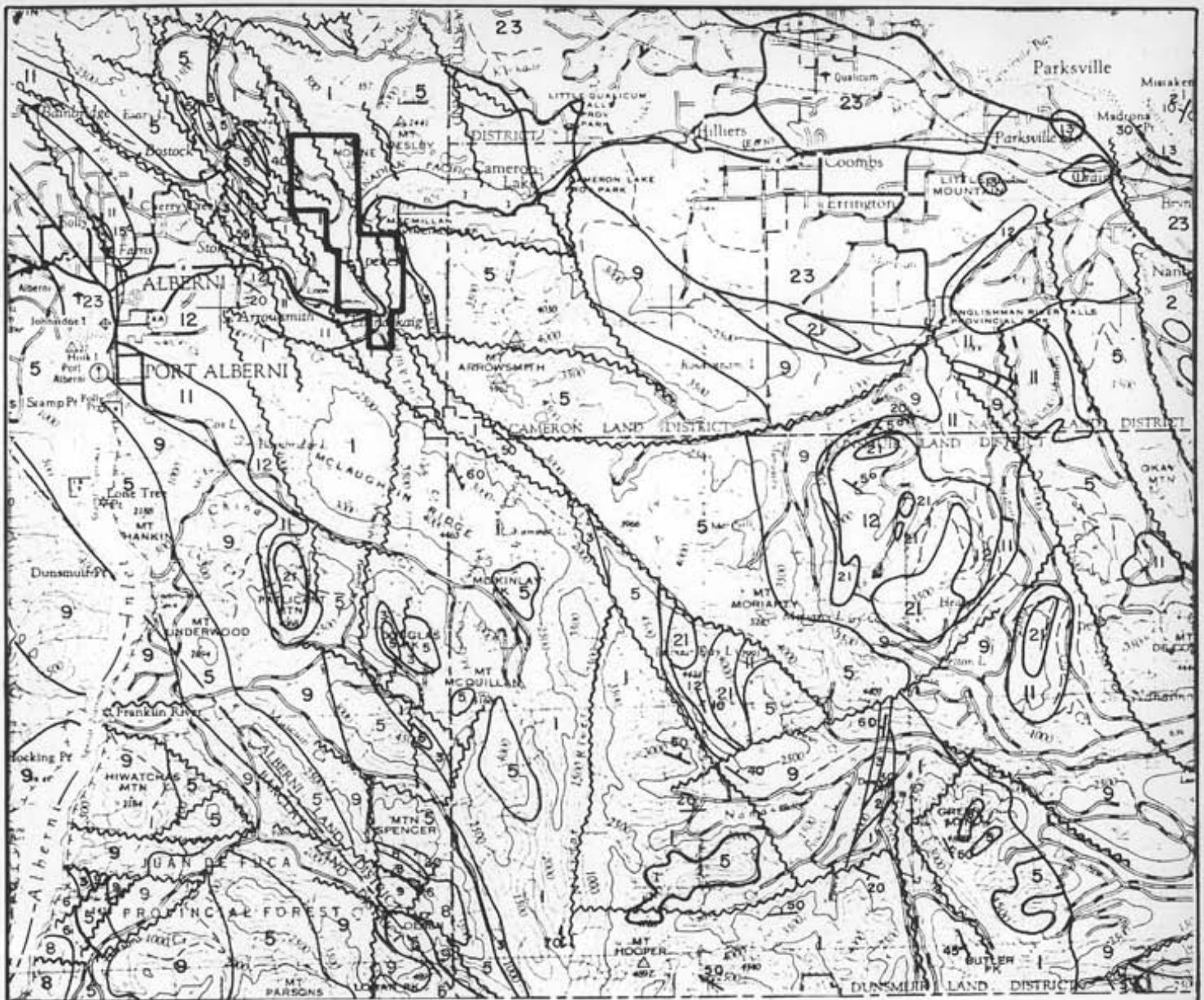
#### 4.0 REGIONAL GEOLOGY

The predominant rock units in the Port Alberni-Nitinat River area are the Upper Paleozoic Sicker Group rocks and the Lower Mesozoic Vancouver Group rocks. Both are eugeosynclinal sequences of volcanic and sedimentary rocks. Jurassic Bonanza Group volcanics are present in moderate amounts in the southern part of the area. Lesser amounts of the Upper Cretaceous Nanaimo Group and of intrusive rocks of various ages also occur (Figure 3).

##### 4.1 Sicker Group

The oldest rocks in the area are those of the Sicker Group. Muller (1980) proposed the following subdivisions of the Group from oldest to youngest: Nitinat Formation, Myra Formation, Sediment-Sill Unit, and Buttle Lake Formation.

The **Nitinat Formation** consists predominantly of mafic volcanic rocks, most commonly flow-breccias or agglomerates, including some massive flows, and rare pillow basalts. Locally, medium grained, generally massive basaltic tuff is interbedded with the flows. The thickness of the Nitinat Formation is estimated at 2000 m (Muller 1980). The flow-breccia is composed of fragments of basalt up to 30 cm in length containing phenocrysts of uralitized pyroxene, as well as amygdules, both from 1 mm to more than 1 cm in size, in a matrix of finer grained, similar basalt(?). Thin sections show pale green amphibole (uralite) replacing clinopyroxene. Uralitized gabbroic to dioritic rocks



### LEGEND

#### QUATERNARY

23 Glacial and alluvial deposits

#### TERTIARY

21 Hornblende quartz diorite, leucoquartz monzonite, porphyritic dacite, breccia.

#### UPPER CRETACEOUS

##### NANAIMO GROUP

13 EXTENSION-PROTECTION FM.: sandstone, conglomerate, shale, coal.

12 HASLAM FM.: shale, siltstone, fine sandstone.

11 COMOX FM.: sandstone, conglomerate, shale, coal.

#### MIDDLE TO UPPER JURASSIC

9 ISLAND INTRUSIONS: biotite-hornblende granodiorite, quartz diorite.

#### LOWER JURASSIC

8 BONANZA GROUP: andesitic to latitic breccia, tuff, and lava; minor greywacke, argillite, and siltstone.

#### UPPER TRIASSIC

##### VANCOUVER GROUP

6 QUATSINO FM.: massive to thick bedded limestone, minor thin bedded limestone.

5 KARMUTSEN FM.: pillow-basalt and pillow breccia, massive basalt flows, minor tuff, volcanic breccia; Jasperoid tuff, breccia and conglomerate at base.

#### TRIASSIC OR PERMIAN

4 Gabbro, peridotite diabase.

#### LOWER PERMIAN TO PENNSYLVANIAN SICKER GROUP

3 BUTTLE LAKE FM.: limestone, chert.

2 MYRA FM.: lower unit; argillite, greywacke, conglomerate, tuff, minor limestone. Upper unit; rhyodacite to rhyolite tuff, lapilli tuff, breccia lesser siliceous siltstone, argillite, quartz porphyry and mafic flows.

1 NITINAT FM.: basaltic uraltite porphyry, agglomerate, pillow lava; greenschist.

0 5 10 km



NEXUS RESOURCE CORPORATION

### REGIONAL GEOLOGY MAP CATHEDRAL PROPERTY

NANAIMO MINING DIVISION

Project No. V 238.

By: T. N.

Scale: 1:250,000

Drawn: J. S.

Drawing No. 3

Date: JAN. 1987.



MPH Consulting Limited

underlie and intrude the volcanics and are believed to represent feeder dykes, sills, and magma chambers to the volcanics. The Nitinat Formation may be distinguished from the similar Karmutsen Formation by the abundance of uralite phenocrysts, a usual lack of pillow basalts, lack of dallasite alteration between pillows (characteristic of the Karmutsen Formation), locally pervasive foliation, and lower greenschist or higher metamorphic grade. Whole rock analyses may be useful in distinguishing these volcanic formations in some areas.

The **Myra Formation** unconformably overlies the Nitinat Formation. In the Nitinat-Cameron River area, the Myra Formation is made up of a lower massive to widely banded basaltic tuff and breccia unit, a middle thinly banded albite-trachyte tuff and argillite unit, and an upper thick bedded, medium grained albite-trachyte tuff and breccia unit. In the lower unit, crudely layered mottled maroon and green volcanoclastic greywacke, grit, and breccia are succeeded by beds of massive, medium grained dark tuff up to 20 m thick interlayered with thin bands of alternating light and dark, fine grained tuff with local fine to coarse breccias containing fragments of Nitinat Formation volcanics. The middle unit comprises a sequence of thinly interbedded, light feldspathic tuff (albite trachyte or keratophyre composition) and dark marine argillite which has the appearance of a graded greywacke-argillite turbidite sequence. In the upper part of the middle unit, sections of thickly bedded to massive black argillite occur. The upper unit contains fine and coarse crystal tuffs in layers up to 10 m thick with local rip-up clasts and slabs of argillite up to 1 m in length as well as synsedimentary breccias of light coloured volcanic and chert fragments in a matrix of black argillite.



The type locality of the Myra Formation is Myra Creek, at the south end of Buttle Lake, about 74 km west-northwest of the Cathedral property. There, volcanoclastic rocks consisting dominantly of rhyodacitic or rhyolitic tuff, lapilli tuff, breccia, and some quartz porphyry and minor mafic flows and argillite (Upper Myra Formation) are host to Westmin Resources' Myra, Lynx, Price, and H-W massive sulphide (Cu-Zn-Pb-Au-Ag-Cd) deposits. The Myra Formation is approximately 750 to 1000 m thick and both the Nitinat and Myra Formations are dated as Devonian and/or older by Muller (1980).

The **Sediment-Sill** Unit contains thinly bedded to massive argillite, siltstone, and chert with interlayered sills of diabase. It is transitional between the Myra and Buttle Lake Formations. It has not been mapped within the area of this report.

The **Buttle Lake Formation** consists of a basal green and maroon tuff and/or breccia, overlain by coarse grained crinoidal and calcarenitic limestone, fine grained limestone with chert nodules, and some dolomitic limestone. Lesser amounts of argillite, siltstone, greywacke, or chert may also be present.

The Buttle Lake Formation is up to 470 m thick. Based on fossil evidence, the Buttle Lake Formation has been dated at Middle Pennsylvanian but is possibly as young as Early Permian (Muller, 1980). Confirmation of this age through recent work done by Brandon and others (1986) includes isotopic and conodont ages indicating that rocks of the Buttle Lake Formation are early Middle Pennsylvanian (Atokan) through Early Permian (probably Sakmarian).



## 4.2 Vancouver Group

The **Karmutsen Formation** volcanic rocks unconformably to paraconformably overlie the Buttle Lake Formation limestone, forming the base of the Vancouver Group. This is the thickest and most widely distributed sequence of rocks on Vancouver Island. The formation, which is well exposed southeast of Port Alberni, consists mainly of dark grey to black, or dark green, tholeiitic pillow basalt, massive basalt, and pillow breccia. Flows are commonly aphanitic, feldspar porphyritic, and amygdaloidal. Pillow lavas generally occur near the base of the section.

Conglomerate containing clasts of Sicker Group rocks and jasperoid tuff form basal sections in the Nitinat-Horne Lake area.

Karmutsen Formation rocks are generally relatively undeformed compared to Sicker Group rocks, and are Upper Triassic and older.

Massive to thick bedded limestone of the **Quatsino Formation** occurs south of Mount Spencer. The limestone is black to dark grey and fine grained to microcrystalline. Coarse-grained marble occurs in the vicinity of intrusive rocks. Thin bedded limestone also occurs within the formation. Fossils indicate an age of Upper Triassic (Muller and Carson, 1969).

Quatsino Formation limestone hosts the majority of known economic skarn deposits on Vancouver Island.

#### **4.3 Westcoast Complex**

The **Westcoast Complex** comprises a variety of plutonic and metamorphic mafic crystalline rocks, including amphibolite, diorite, and quartz diorite with homogeneous, agmatitic or gneissic textures. Dioritic or agmatitic bodies underlying or intruding the Nitinat Formation are included. Metamorphosed Karmutsen Formation and/or Sicker Group rocks grade locally into the complex and are believed to be its protolith, having been migmatized in Early Jurassic time. The mobilized granitoid portion of the complex is believed to be the source of the Island intrusions and, indirectly, the Bonanza Group volcanics (Muller, 1981, 1982). Small bodies of recrystallized limestone found within the complex are believed to be derived mainly from the Quatsino Formation, and to a lesser extent from the Buttle Lake Formation.

#### **4.4 Bonanza Group**

The **Bonanza Group** stratigraphy varies considerably from place to place, as it represents parts of several different eruptive centres of a volcanic arc. Basaltic, rhyolitic, and lesser andesitic and dacitic lava, tuff, and breccia with intercalated beds and sequences of marine argillite and greywacke make up the Bonanza Group. In the area south of Mount Spencer and south of Corrigan Creek, it consists of light coloured andesite to latite breccia, tuff, and flows with minor greywacke, argillite, and siltstone. The Bonanza volcanics are considered to be extrusive equivalents of the Island Intrusions and to be of Early Jurassic age.



#### 4.5 Nanaimo Group

Upper Cretaceous Nanaimo Group sedimentary rocks are scattered throughout the area. Extensive exposures occur near Port Alberni, Patlicant Mountain and south and northwest of Mount Moriarty. The formations present comprise the basal portions of the Nanaimo Group.

The **Comox Formation** consists mainly of quartzofeldspathic, cross-bedded beach facies sandstone and lesser conglomerate. Numerous intercalations of carbonaceous and fossiliferous shale and coal are characteristic.

The **Haslam Formation** is a near shore littoral depositional facies unit characterized by thickly bedded fossiliferous sandy shale, siltstone and shaly sandstone.

Interbedded coarse clastic conglomerate, pebbly sandstone and arkosic sandstone of the **Extension-Protection Formation** are beach and deltaic sands. Minor shale and coal are reported.

#### 4.6 Intrusive Rocks

**Gabbro, Peridotite, Diabase.** Mafic and ultramafic rocks of Triassic or Permian age are scattered throughout the area. A large band is exposed approximately 8 km north of Port Alberni.

Although mapped as intrusive, some of these rocks may be basal flow units of the Karmutsen Formation.

**Island Intrusions.** Exposures consisting mainly of quartz diorite and lesser biotite-hornblende granodiorite occur throughout the area and are assigned an age of Middle to Upper Jurassic. Intrusive contacts with Sicker and Bonanza Group volcanic rocks are characterized by transitional zones of gneissic and migmatitic rocks, whereas contacts with Karmutsen Formation volcanic rocks are sharp and well defined. Skarn zones are reported at the contacts of Island Intrusions with Quatsino Formation limestone, and less commonly with Buttle Lake Formation limestone.

**Tertiary (Catface or Sooke) Intrusions.** Sills and stocks of mainly hornblende-quartz diorite and dacitic hornblende-feldspar porphyry plus lesser leucocratic quartz monzonite may intrude Nanaimo Group sedimentary rocks and Sicker Group rocks.

#### 4.7 Structure

The Buttle Lake Arch, Cowichan-Horne Lake Arch and Nanoose Uplift are north-northwesterly trending axial uplifts and are believed to be among the oldest structural elements in south central Vancouver Island. Folding and uplift occurred before the late Cretaceous, and possibly before the Mesozoic (Muller and Carson, 1969), and more tilting, folding, and uplift occurred after the late Cretaceous. Sicker Group volcanic and sedimentary rocks occur at the cores of these uplifts.

Asymmetric southwest-verging, northwest-trending antiformal fold structures characterized by subvertical southwest limbs and

moderately dipping northeast limbs are reported at Buttle Lake, in the Cameron-Nitinat River area, and north of Cowichan Lake. Well-developed foliation developed during metamorphism to chlorite-actinolite and chlorite-sericite schist in steep and overturned limbs of folds. Folding may have occurred prior to intrusion of Triassic(?) mafic sills along axial planar surfaces in folded Sediment-Sill unit rocks. Evidence from K-Ar dating also suggests Jurassic folding. Buttle Lake Formation limestones are relatively undeformed in some places, although in others, as in the Chemainus River Canyon, they are highly deformed, along with other Sicker Group rocks (Brandon and others, 1986). Vancouver Group units are not as intensely folded; gentle monoclinial and domal structures have been mapped. However, Karmutsen Formation volcanic rocks locally conform to the attitude of underlying Myra and Buttle Lake Formations (Muller, 1980a).

Some early Mesozoic faulting occurred in the area prior to emplacement of Island Intrusions. Middle to Upper Jurassic intrusive activity (Island Intrusions) occurred along north-westerly trends.

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments in some areas, such as the north side of the Chemainus River valley, placing Sicker Group rocks above Nanaimo Group rocks. These faults have been traced for up to 100 km. Such structures may represent large scale underthrusting from the southwest, in a regime of long-term semi-continual northeast-southwest compression. Nanaimo Group sediments are tilted up to at least  $60^{\circ}$  from paleohorizontal where they are

overlying folded Sicker Group rocks with angular unconformity such as on the south side of the Chemainus River Valley.

Minor late north and northeasterly trending tear-faults and block faults offset northwest-trending faults locally. The north trending Alberni Valley fault is traced over 70 km and displaces a section of Karmutsen Formation approximately 1500 m (Muller and Carson, 1969).

#### **4.8 Economic Setting**

The Sicker Group, and to a lesser extent, the Vancouver Group of volcanic rocks, have been explored intermittently since the 1890's for gold and base metal mineralization.

Until recently, deposits of copper and gold-silver in quartz veins and shear zones hosted by mafic to intermediate volcanic rocks and base metal plus gold-silver skarn deposits were the most widely recognized economic and subeconomic metal concentrations in the Port Alberni area. Placer mining for gold was carried out during the 1940's in various localities, especially in the China, Mineral and Corrigan Creeks areas.

At Buttle Lake, approximately 70 km northwest of Port Alberni, the Myra Formation hosts Westmin Resources' volcanogenic massive sulphide deposit. Initially discovered in 1917, it was not recognized as being a volcanogenic deposit until the late 1960's. Ore minerals including sphalerite, chalcopyrite, galena, tetrahedrite-tennantite, minor bornite and covellite are hosted by pyritic, rhyolitic to rhyodacitic volcanic and pyroclastic rocks of the Myra Formation.



Proven reserves of the Lynx (open pit), Price, and Myra deposits are 926,600 t grading 1% Cu, 0.9% Pb, 7.4% Zn, 2.06 g/t Au (0.06 oz/ton), 89.1 g/t Ag (2.6 oz/ton) (1983). Published reserves of the H-W zone are 13,901,000 t averaging 2.2% Cu, 5.3% Zn, 0.3% Pb, 2.40 g/t Au (0.07 oz/ton) and 37.7 g/t Ag (1.1 oz/ton) (Walker, 1983). In the 3 years 1980 to 1982, there were 811,987 t of ore milled producing 7,306,880 kg Cu, 43,706,118 kg Zn, 6,455,040 kg Pb, 1,740,000 g Au (56,000 oz), 78,630,000 g Ag (2,528,000 oz) and 58,500 kg Cd.

Another volcanogenic massive sulphide deposit in the Sicker Group is the Twin J Mine near Duncan on Mount Sicker, about 80 km southeast of the Cathedral property. Two parallel orebodies, 46 m apart, each containing pyrite, chalcopyrite, sphalerite and minor galena in a barite quartz-calcite gangue and chalcopyrite in quartz, occur in schist believed to have been derived from acidic volcanics (Myra Formation).

Total production from 1898 to 1964 was 277,400 tonnes producing 1,383,803 g Au (44,491 oz), 29,066,440 g Ag (934,522 oz), 9,549,590 kg Cu and 20,803,750 kg Zn with at least 164,590 kg Pb and 4.5 kg Cd.

A significant recent development in the Sicker Group is the delineation of a large volcanogenic massive sulphide zone on the Lara property, 71 km southeast of the Cathedral property. On the Lara property, (now Abermin Corporation) has completed at least 69 diamond drill holes on geochemical and geophysical anomalies. In January 1985, an intersection of 8.0 m (true thickness) of mineralization grading 3.4 g/t Au (0.1 oz/ton), 67.5 g/t Ag (1.97 oz/ton), 3.01% Zn, 0.68% Cu and 0.45% Pb was announced. This was



the discovery hole of the Coronation Zone. By January 1986, the Coronation Zone had been outlined by drilling for a length of 500 m and to depths varying from 75 to 250 m. The width averages 6.15 m. The western 400 m of the zone averages 1.75 g/t Au (0.051 oz/ton), 38.4 g/t Ag (1.12 oz/ton), 1.98% Zn, 0.44% Cu, and 0.36% Pb; while the eastern, high-grade 120 m section averages 2.98 g/t Au (0.087 oz/ton), 69.9 g/t Ag (2.04 oz/ton), 3.8% Zn, 0.67% Cu, and 0.79% Pb. The Coronation Extension is located about 275 m southeast of the Coronation Zone. It has been explored over a strike length of 80 m and to depths of 150 m and averages about 3 m in width. Several rich intersections have been drilled, including 3.7 m of 7.3 g/t Au (0.213 oz/ton), 2.6 g/t Ag (8.6 oz/ton), 9.22% Zn, 1.16% Cu, and 2.53% Pb. Both zones are open at depth and the Coronation Zone is open along strike. A feasibility study on the establishment of a 300-500 tonne per day milling operation is planned for early 1987.

The mineralized zones are stratiform and are hosted by porphyritic rhyolite of the Sicker Group. Metal ratios of the Coronation zone are similar to those of the Buttle Lake mines (Westmin Resources Ltd.). The Twin J Mine is located 9 km southeast of the Lara property (on strike) and is geologically similar.

Five past producing mines occur in the Port Alberni area. The Thistle Mine produced 85,844 g Au (2,760 oz), 65,938 g Ag (2,120 oz) and 309,090 kg Cu from 6,280 tonnes (6,920 tons) of ore. It was originally considered to be a skarn deposit (Stevenson, 1945; Carson, 1968). Disseminated and massive sulphide mineralization occurs as lenses and bands within pyritic quartz-sericite schist and at the contact of quartz-sericite schist with chloritized mafic volcanic rocks (Sicker Group). Disseminated sulphide





mineralization occurs throughout the host rocks. The deposit is now believed to be of syngenetic-volcanogenic origin. Recent work by Westmin Resources Ltd. (1983, 1984) has located 16 significant Cu and/or Au occurrences over a strike length of 4.6 km grading up to 16.8 g/t Au (0.49 oz/ton) over 2.1 m. Nine diamond drill holes (1984) intersected numerous anomalous concentrations of Au, although no ore grade Au-Cu was intersected over mining widths. The Thistle Mine is located 20 km south of the Cathedral property. A drilling project is currently underway on the Thistle property.

The Havilah Mine (950 t produced 8056 g Au (259 oz), 43,670 g Ag (1404 oz)) and the Vancouver Island Gold Mine (438 t produced 11,944 g Au (384 oz), 1,617 g Ag (52 oz)) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group.

The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and Island Intrusions diorite located 23 km south-southeast of the Cathedral property. Production of 1715 t of ore yielded 15,830 g Au (509 oz), 29,640 g Ag (953 oz), 5587 kg Pb and at least 2030 kg Zn and 226 kg Cu.

The other past producer in the area is the 3-W Mine (Corrigan Creek), which consists of gold-bearing quartz veins in Island Intrusions diorite and granodiorite. Production amounted to 105 t of ore grading 137 g/t Au (4.0 oz/ton), 147.4 g/t Ag (4.3 oz/ton), 0.23% Cu, and 1.1% Pb. The 3-W Mine is located 28 km south of the Cathedral property.

Significant mineral occurrences of the Port Alberni area are summarized below.



#### 4.9 Mineral Occurrences (Figure 4)

1. **Vancouver Island Gold; (Victoria, L.205G; Alberni, L.206G; Missing Link, L.214G; Alberni Consolidated) Au Ag Cu.**

##### **Geology:**

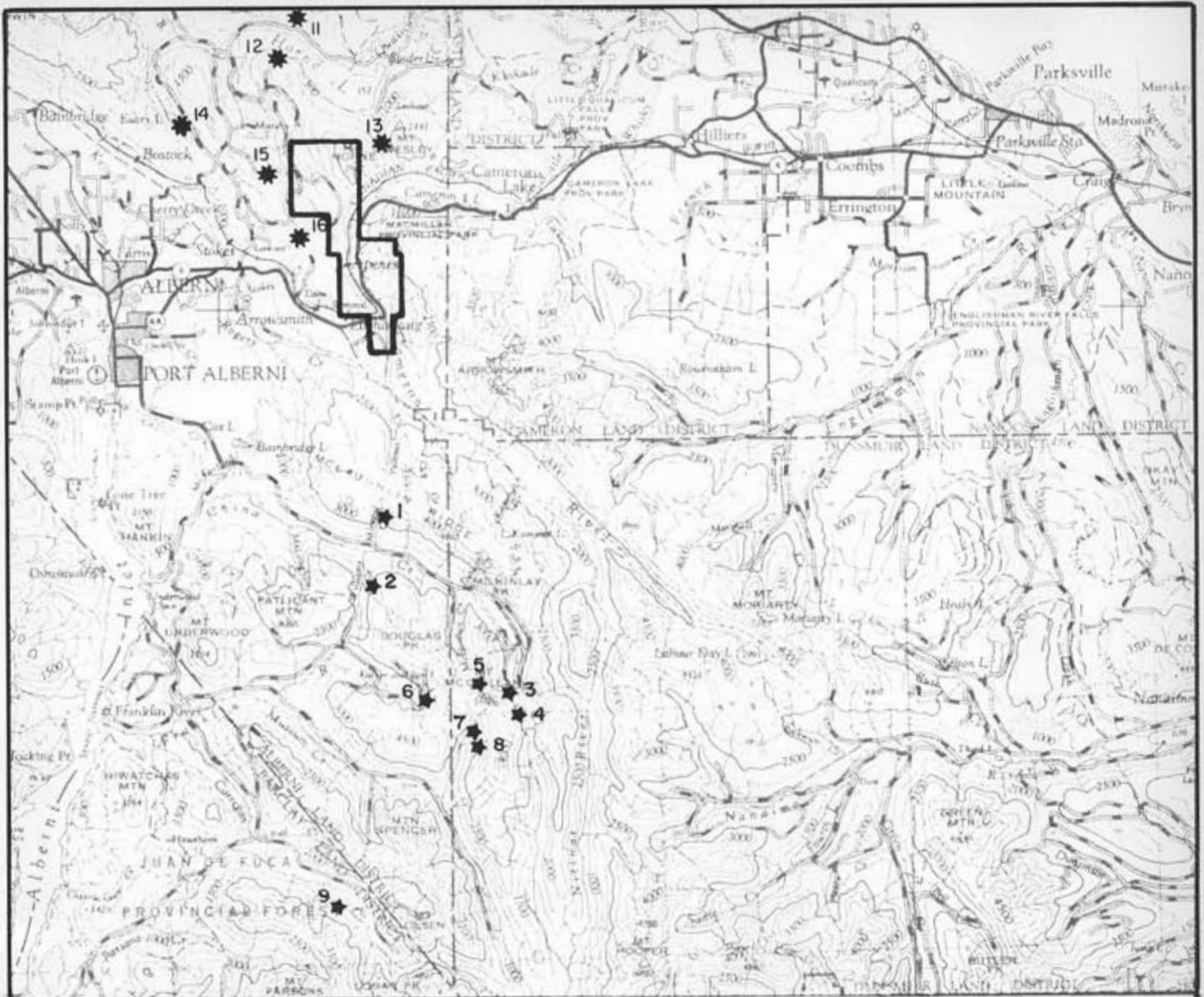
The area is underlain by highly altered massive, tuffaceous, slightly porphyritic, and amygdaloidal andesites of the Sicker Group. Three main quartz veins follow well developed shears and contain a small amount of pyrite and some free gold. As well, a 120 m wide shear zone has been extensively altered by ankerite, quartz stringers, occasional pyrite veinlets and kaolinitization.

##### **Economic Features:**

Recorded production in 1896, 1898, 1933-1936 and 1939 totals 438 t of ore yielding 11,940 g Au (384 oz), 1,620 g Ag (52 oz), and 88 kg Cu.

The Mac vein is traced for 76 m and ranges from 7 cm to 45 cm wide, averaging 12 to 15 cm. Sixty-three samples taken over the 75 m averaged 15 cm in width and 126.5 g/t Au (3.69 oz/ton). The highest assay was 685 g/t Au (20 oz/ton). A 36 t shipment from the Mac vein returned 99.4 g/t Au (2.9 oz/ton) and 17 g/t Ag (0.5 oz/ton) (Ref. 1-1934).

The Belcher vein is exposed discontinuously for 290 m and ranges from almost nothing to 1.2 m in width, averaging 15 cm to 30 cm in the upper adit. Gold content is reported to be low except in the shaft and stope workings. Recent sampling results show from



GOLD DEPOSITS AND OCCURRENCES

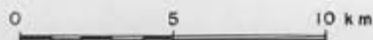
- 1. Vancouver Island Gold Mine
- 2. Regina
- 3. Golden Eagle
- 4. B & K
- 5. Havilah
- 6. Thistle
- 7. Black Panther
- 8. Black Lion
- 9. 3-W \*

OTHER OCCURRENCES

- 11. PD
- 12. Silver Bell
- 13. Mt. Wesley Copper
- 14. Esary Lake
- 15. Lacy Lake
- 16. Cameron Lake



\* not described in Mineral Occurrences Section



NEXUS RESOURCE CORPORATION

MINERAL OCCURRENCE  
LOCATION MAP  
CATHEDRAL PROPERTY

Project No:	V 238	By:	T.N.
Scale:	1 : 250,000	Drawn:	J.S.
Drawing No:	4	Date:	JAN. 1987



MPH Consulting Limited

0.103 g/t Au to 9.94 g/t Au (0.003 to 0.29 oz/ton) and from 20.6 g/t Ag to 3.43 g/t Ag (0.06 to 0.10 oz/ton) over 1.5 m lengths (Ref. 3).

The Dunsmuir vein is exposed in trenches for about 120 m and ranges up to 25 cm in width. No assays are reported (Ref. 1-1936).

The Waterfall vein is exposed for 33 m and is 8 cm to 76 cm wide. Gold assays were low in sampling done by Vancouver Island Gold Mines Ltd., except for two samples which ran 48.0 g/t Au (1.4 oz/ton) over 8 cm, and 404 g/t Au (11.8 oz/ton) over 15 cm (Ref. 1-1934). This illustrates the very spotty nature of free gold distribution.

Seventy-nine chip samples taken from the carbonatized shear zone by the BCDM assayed from nil to 5.49 g/t Au (0.16 oz/ton) over widths of 1.5 and 3.0 m (Ref. 1-1936).

A 1934 BCDM report stated that there is a possible relationship between bands of sediments and gold mineralization, as the gold values in the Mac vein are concentrated just above a bed of argillaceous sediments, and are low below that.

An area of anomalous Au soil geochemistry 425 m long by 300 m wide occurs uphill from the known veins.

**History:**

1895: Alberni, Chicago, Warspite, Victoria claims staked; dispute over ownership.

- 1896: Alberni Consolidated Mining Co.; won dispute, shaft at 12 m and a tunnel being driven, 1.8 tonnes of ore shipped from a smaller vein (Dunsmuir?) uphill from main vein, open cut on 20 to 75 cm vein on Chicago claim.
- 1897-1898: An English company built a 9 tonne per day 8 stamp mill and only made two clean-ups. Results unknown.
- 1933-1939: Vancouver Island Gold Mines Ltd. (NPL); R.W. Williams leased the reverted Crown Grants in 1933 and turned them over to Vancouver Island Gold Mines. Numerous open cuts were made, 5 adits totalled 580 m including various raises, etc., on the quartz veins and 2 adits totalling 84 m and 12 strippings were made on the carbonatized shear zone. A total of 365 t of ore was mined. In 1936 a 32 tonne pilot mill was built, but only milled a few tonnes of ore before the operations were ceased due to operating difficulties. In 1939 some rehabilitation work was done in the Mac adits and 43.5 tonnes of ore were shipped.
- 1964: Gunnex Ltd.; visited property, some sampling. Mapping planned for 1966.
- 1973-1974: Keywest Resources Ltd.; (Sam Group) sampling in Belcher adits, prospecting, geological mapping on surface and underground.
- 1976: Western Mines Ltd. (Tasha-Shannon and Rupert-Dog groups); reconnaissance geological mapping and soil sampling.
- 1979-1985: Silver Cloud Mines Ltd.; rock, soil, and silt sampling, trenching, geological mapping.

**References:**

- 1) MMAR 1895-650, 1896-6, 1897-566, 1898-1132, 1943-F2-4, 1936-F25-30, 1944-148
- 2) GEM 1973-230, 1974-173
- 3,4) AR 4915, 6153
- 5,6) GSC P68-50 p38  
Map 1963-49
- 7) Gunnex #6
- 8) Minfile 92F079

**2. Regina (L55G) Au Ag Cu****Geology:**

Lenses and veinlets of quartz with pyrite, chalcopyrite, some galena, and Au and Ag values occur in shears in silicified and pyritized Sicker

Group andesite. Some reports also mention sphalerite in the quartz. Another type of showing occurs in highly silicified and leached pyritic, ankeritic andesite which contains gold values.

**Economic Features:**

The quartz lenses and silicified zones vary up to 0.6 m in width but the mineralized portions appear to be very discontinuous. A grab sample of quartz with considerable pyrite, chalcopyrite, and galena from the dump assayed at 22.6 g/t Au (0.66 oz/ton), 480 g/t Ag (14.0 oz/ton) (Ref. 1.1944). A large, highly oxidized bulk sample from the carbonatized zone assayed 21.9 g/t Au (0.64

oz/ton), trace Ag (Ref. 1-1944). A sample from 18 t of ore on the dump (possibly hand sorted) in 1930 returned \$3.60 Au/ton, 171 g/t Ag (5 oz/ton), 5.0% Cu (Ref. 1-1930). A grab sample from 36 tonnes of high grade hand-picked ore on the dump in 1964 assayed 0.69 g/t Au (0.02 oz/ton), 61.7 g/t Ag (1.8 oz/ton), 2.57% Cu, 1.98% Pb, and 0.01% Zn (Ref. 7).

**History:**

- 1898: Alberni Gold Development Syndicate; granted Crown Grants L.54, 55, 57.
- 1930: E. Maralia; an open cut and an incline shaft a few feet deep. Eighteen tonnes of ore from this work on a dump.
- 1944: E. Marillia; no recent work. Five adits totalling 87.8 m, a 9 m incline shaft, 2 open cuts, and a 1.5 m pit at the entrance to one of the adits exist. All probably date back to the late 1890's.
- 1964-65: Gunnex Ltd., visited the workings, sampling, prospecting, in the general area.
- 1976: Western Mines Ltd.; (Tasha) geological mapping 1:14,400, soil sampling.

**References:**

- 1) MMAR 1898-1197, 1930-291, 1944-148-150
- 2) EBC 1976-111
- 3) BCDM Bull 1 p132  
(Special Report #5, 1936)
- 4) AR 6153
- 5,6) GSC P68-50 p38  
Map 1963-49
- 7) Gunnex #7
- 8) Minfile 92F078



### 3. Golden Eagle (L.198G) Au

#### **Geology:**

A vein of ribbon-quartz cuts a small intrusion of feldspar porphyritic diorite and contains pyrite, minor sphalerite, galena, chalcopyrite, and arsenopyrite (about 10% total sulphides) and gold values. Sicker Group volcanics and bedded cherts occur in the area.

#### **Economic Features:**

The vein varies from a few inches to 2.4 m, averaging about 1.1 m in width and has been traced in outcrop for 120 m along strike and 100 m vertically. An assay of \$56 Au/ton, 103 g/t Ag (3 oz/ton), and 1% Cu is reported, and assays of up to \$103 Au/ton are reported to have been obtained in 1894 (Ref. 1-1899). A tunnel 150 m below the surface showing never intersected the vein despite being driven 450 m beyond the estimated intersection point of 180 m.

#### **History:**

- 1892: The discovery of two quartz veins by prospectors searching for the source of the China Creek placer gold prompted the original claims to be staked.
- 1893-1902: Various individuals and/or companies; four adits totalling 63 m in upper workings, an adit driven at a lower level to avoid snowslides from 1896-1902 reached 640 m without intersecting mineralization, "development work" of an unspecified nature.
- 1964-65: Gunnex Ltd.; prospecting and silt sampling in the general area. Also visited the lower adit and a showing near Summit Lake (B and K?) where rock samples were taken.



**References:**

- 1) MMAR 1893-1080, 1894,773, 1895-651, 1896-7, 556, 1897-556, 1898-1132, 1899-607, 779, 785, 1902-230, 1944-G150
- 2) AR 10194
- 3,4) GSC P68-50 P38  
Map 49-1963,17A
- 5) Gunnex #12
- 6) Minfile 92F080

**4. B and K Au Ag****Geology:**

Many widely scattered narrow quartz veins containing pyrite, and minor galena, sphalerite and chalcopryrite with Au and Ag values occur in andesite tuffs and flows, basalt, and local black chert; often in shear zones. A zone of strongly carbonatized andesite 1.8 m to 7.6 m wide contains minor pyrite, galena and sphalerite in narrow veinlets. In the southern workings, veins are surrounded by a strong ankeritic carbonate alteration zone.

**Economic Features:**

The "high-grade" vein has been exposed in open cuts for 40 m and is 13 to 20 cm wide. A sample assayed at 132 g/t Au (3.84 oz/ton), 108 g/t Ag (3.2 oz/ton), 0.06% Cu over 13 cm. This vein may be on the Golden Eagle property (Ref. 4).

A vein near the north end of the workings varies from 5 cm to 15 cm to a 1.8 m stringer zone in width. Assays of 87.8 g/t Au and 77.5 g/t Au (2.56 and 2.26 oz/ton) are reported (Ref. 1-1944).



A sample from quartz nodules containing galena and pyrite from an open cut on two parallel shears, each 45 cm wide, ran 28.1 g/t Au (0.82 oz/ton) and 24.0 g/t Ag (0.7 oz/ton) (Ref. 4).

No assays are reported from the carbonate zone. Many other quartz veins, from a hairline to 120 cm wide, for which no assays are available, occur over a 380 meter interval.

**History:**

- 1938-40: Angus Beaton, Ed Keisig; staked claims, prospecting, 17 open cuts and trenches, stripping.
- 1964-65: Gunnex Ltd.; prospecting and silt sampling in the general area.

**References:**

- |      |         |                           |
|------|---------|---------------------------|
| 1)   | MMAR    | 1944-151                  |
| 2,3) | GSC     | P68-50 p38<br>Map 49-1963 |
| 4)   | Gunnex  | #13                       |
| 5)   | Minfile | 92F081                    |

5. Havilah (King Solomon, Storm, Red Rose, Spike, Sol 14)  
Au Ag Cu Pb Mo

**Geology:**

Sicker Group andesite is intruded by Jurassic diorite and by Tertiary hornblende-feldspar and quartz-feldspar porphyry stocks,



dykes, and sills. Ribbon-quartz veins and lenses containing abundant pyrite, sphalerite and galena, and arsenopyrite occur in shears in the andesite. Occurs on the same shear zone as **Black Panther** (#7 below) and **Black Lion** (#8 below).

### **Economic Features**

The recorded production in 1936 and 1939 totals 949 tonnes yielding 8,056 g Au (259 oz), 43,669 g Ag (1,404 oz), 1,925 kg Cu, and 5,750 kg Pb. There are three main veins.

The Gillespie vein is 7.6 cm to 86 cm wide and has been traced for 200 m in five trenches. Most of the production came from the Gillespie vein. Assays range up to 13.7 g/t Au (0.4 oz/ton), 75.4 g/t Ag (2.2 oz/ton), 0.4% Pb and 0.30% Zn over widths from 10 cm to 160 cm (Ref. 1-1936, 1944). Some oxidized samples taken over 30 cm assayed as high as 240 g/t Au (7 oz/ton) and 103 g/t Ag (3 oz/ton). Average grade of the ore shipped from the Gillespie vein was 8.06 g/t Au (0.235 oz/ton) and 43.9 g/t Ag (1.28 oz/ton) (Ref. 1-1939). The vein has been faulted in two of the three adits, and was not located beyond the faults.

The Alberni vein consists of a 3 cm wide by about 21 m long zone of intense shearing containing 1 to 3 lenticular quartz veins 10 cm to 60 cm wide. Assays of 12.5 g/t Au (3.66 oz/ton) and 178 g/t Ag (5.2 oz/ton) over 10 cm and 61.7 g/t Ag (1.8 oz/ton) and 78.9 g/t Ag (2.3 oz/ton) over 50 cm are reported (Ref.9).

The McQuillan vein was prospected with a 17 m adit. It ranges up to 20 cm in width. Assays of up to 34.3 g/t Au (1 oz/ton) over 20 cm and 1.6 oz Ag/ton over a different 20 cm, are reported (Ref. 9).



A fourth vein on the easterly side of the cirque 30 to 60 cm wide assayed 5.49 g/t Au (0.16 oz/ton) and 20.6 g/t Ag (0.6 oz/ton) from an oxidized 60 cm sample (Ref. 9).

**History:**

- 1893: First mentioned in MMAR (King Solomon).
- 1895: An open cut on the McQuillan(?) vein.
- 1936-44: Havilah Gold Mines Ltd.; claims staked in 1934 and 1936 by Walter Harris. In 1936, 6.4 tonnes of ore were mined from the upper showings (Alberni and McQuillan veins). In 1938-39, 630 m of drifting, crosscutting and raising on three levels on the Gillespie vein resulted in production of 943 tonnes of ore. Diamond drilling and prospecting were also carried out. A highline tram was built to transport ore and supplies between the base camp and the mine. Little if any work was done after 1939.
- 1947: Nitinat Mines Ltd.; owned the ground.
- 1964: Gunnex Ltd.; silt sampling in McQuillan Creek drainage, rock sampling wherever mineralization was observed.
- 1974-77: Cominco Ltd.; geological mapping 1:4,800, soil sampling, trenching, several IP and resistivity surveys.

**References:**

- 1) MMAR 1893-1080, 1895-652, 1936-F30, 1939-88, 1944-G153
- 2) GEM 1974-172
- 3) EBC 1975-E95, 1976-E111, 1977-E110
- 4-5) AR 5354, 6138, 6643
- 7-8) GSC P68-50 p38  
Map 49-1963, 17A
- 9) Gunnex #11
- 10) Minfile 92F082

**6. Thistle Au Ag Cu****Geology:**

The area is underlain by a belt of upper Sicker Group volcanic rocks folded into a large complex anticline. The mine is located within a package of rocks known as the Mine Flow Complex (Benvenuto, 1984) (probably correlative to Muller's Sediment-Sill Unit and/or upper Myra Formation) which unconformably(?) underlies the Buttle Lake Formation. The Mine Flow Unit of the Flow Complex hosts the mine and 15 to 16 additional Cu and/or Au showings on the property.

At the mine, a highly variable succession of basaltic flows, flow breccias, and massive to bedded and graded tuffs and cherty tuffs is mapped in detail.

Mineralization is found within relatively thin stratabound to crosscutting intervals of moderate to very strong chlorite

alteration of the basaltic host rocks. Sericite-epidote alteration also occurs, but apparently is not associated with mineralization.

The ore consists of gold-bearing pyrite-chalcopyrite (and local magnetite) in quartz-calcite gangue occurring in three or four main stratabound(?) zones of discontinuous anastomosing veins and veinlets to massive to semi-massive layers.

Reports show that early workers identified the Thistle Mine as a skarn deposit in altered limestone intruded by fine grained diorite.

**Economic Features:**

The ore occurs in layers 5 cm to 45 cm thick. Assays from 1983 sampling of the old workings range from 3.8 to 11.8% Cu, 4.8 g/t to 74 g/t Au (0.14 to 2.16 oz/ton), and 13.4 g/t to 35.6 g/t Ag (0.39 to 1.04 oz/ton). Older reports indicate that ore was found in lenses up to 5.5 m by 7.6 m in size. Diamond drilling in 1984 (northwest of the mine) yielded assays ranging from 1.58 g/t Au (0.046 oz/ton) to 9.73 g/t Au (0.284 oz/ton) over massive sulphide intersections of 2 cm to 27 cm. The best assay was 17.62 g/t Au (0.514 oz/ton) over 20 cm of chloritic basalt including 2 cm of massive pyrite. Soil geochemistry has outlined a nearly continuous Au anomaly along about 3 km of the Mine Flow Unit, with some coincident IP anomalies.

Diamond drilling away from the Mine Flow Unit has also located Au values of up to 0.41 g/t Au (0.012 oz/ton) in bedded cherty tuff.



- 1965: Vananda Explorations Ltd.; magnetometer, SP, and geochemical surveys, 4 diamond drill holes totalling 532 m.
- 1981: McQuillan Gold Ltd.; airborne EM and magnetometer surveys, soil sampling, rock sampling, trenching, EM survey.
- 1982: Nexus Resources Corporation; IP, PEM, magnetometer surveys; soil sampling, geological mapping and sampling.
- 1983-85: Westmin Resources Ltd.; geological mapping, rock sampling (for assay, whole rock geochem and thin sections), soil sampling, prospecting, IP, trenching, 22 diamond drill holes.

**References:**

- 1) MMAR 1899-788, 1901-1097, 1902-307, 1927-340, 1928-366, 1930-291, 1939-40, 88, 1940-73, 1941-71, 1942-66, 1944-154-157, 1965-238
- 2-5) AR 8088, 9126, 10237, 11064
- 6-7) GSC P68-50 p38  
Map 49-1963
- 8) Gunnex #10
- 9) Minfile 092F083
- 10) Nexus Resource Corporation; News Release dated November, 1983



## 7. Black Panther (Nitinat) Au Ag Pb Zn Cu

### Geology:

Ribbon-quartz lenses containing variable amounts of sulphides, mainly pyrite with minor galena and sphalerite occur in a shear zone which follows the contact of andesite lava on the west and diorite breccia on the east. The wall-rock of the shear is strongly altered by ankeritic carbonate for widths up to 9 m and is locally cut by numerous quartz stringers.

### Economic Features:

The shear zone has been traced for at least 3.2 km but the best mineralization is at the Black Panther workings where quartz lenses are 2.5 cm to 90 cm thick and up to 12 m long. Four samples containing "heavy sulphides" from the 2700 and 2790 adits assayed from 18.8 g/t to 98.7 g/t Au (2.30 to 2.88 oz/ton) (Ref. 1-1944). A 1964 assay from the dump is reported as 39.8 g/t Au (1.16 oz/ton), 72.0 g/t Ag (2.1 oz/ton), 0.14% Cu, and 1.73% Pb (Ref. 4).

Production in 1947, 1948 and 1950 totalled 1,715 tonnes which yielded 15,831 g Au (509 oz), 29,640 g Ag (953 oz), 226 kg Cu, 5,588 kg Pb, and at least 2,031 kg Zn. Reserves are estimated at 12,520 tonnes grading 6.86 g/t Au (0.2 oz/ton) above the 804 m level of the main workings.



**History:**

- 1936: Claims first staked, upper adits driven shortly thereafter.
- 1939: Walter Harris; prospecting, drifting, crosscutting (presumably those adits referred to above).
- 1941: Pioneer Gold Mines of B.C. Ltd.; drove the 2700 (main) adit and the 2450 adit (about 366 m of drifting, crosscutting and raising), 497 m of diamond drilling.
- 1944-48: Nitinat Golds Ltd. (became Nitinat Mines Ltd. in 1947); built a 23 tonne flotation mill, mining, shipped 62.1 tonnes of concentrate.
- 1962: Hunting Survey Corp.; regional aeromagnetic survey, geological mapping at the workings.
- 1964-65: Gunnex Ltd.; visited the workings, took a rock sample.
- 1979-85: Jan Resources Ltd./Lode Resource Corp.; airborne mag/VLF; soil, silt, rock sampling; 5 DDH for 984.5 cm.

**References:**

- 1) MMAR 1939-88, 1941-71, 1944-157, 1945-114, 1947-182
- 2,3) GSC P68-50 p38  
Map 49-1963
- 4) Gunnex #14
- 5) Minfile 92F084  
AR 7857, 9126, 9639, 10902

## 8. Black Lion Au Ag

### Geology:

Similar to Black Panther (#7 above), as the Black Lion is on the southerly extension of the same shear zone as Black Panther. Zones of quartz-sulphide (pyrite, galena, gold values) stringers are found in a strongly carbonated zone 25 cm to 2.7 m wide with local evidence of strong shearing.

### Economic Features:

Open cuts exposed the "vein" for 53 m with another exposure located 400 m to the south. The quartz-sulphide stringer zone is 30 cm to 46 cm wide. A sample of quartz and sulphides assayed 41.1 g/t Au (1.2 oz/ton). Samples of quartz-sulphide stringers and carbonatized country rock ranged from 9.26 - 14.74 g/t Au (0.27-0.43 oz/ton). The carbonate altered rock itself assayed at trace to 1.02 g/t Au (0.03 oz/ton) (Ref. 1-1944, Ref. 4).

### History:

1941: Bralorne Mines Ltd.; prospecting, open cuts.  
1942-64: Some diamond drilling is reported to have done sometime during this period.  
1964-65 Gunnex Ltd.; silt sampling and prospecting in the general area.  
1979-85: Jan Resources Ltd./Lode Resource Corp.; airborne mag/VLF; soil, silt, rock sampling.

**References:**

- 1) MMAR 1944-159
- 2,3) GSC P68-50 p38  
Map 49-1963
- 4) Gunnex #15
- 5) Minfile 92F085

**11. PD Zn Au Ag****Geology:**

A vein cutting crystalline Buttle Lake Formation limestone carries arsenopyrite and sphalerite. Carson (1968) believed the deposit to be a replacement type deposit (skarn) and not a vein.

**Economic Features:**

The vein is up to 7.47 m wide; about 15.24 m from the shaft it splits into two or three smaller veins within a zone 7.62 m wide. Assays over 3.20 m and 4.27 m ran trace Au; trace Ag; trace and 2% Zn. The zinc content appears to be higher in the split-up section. The owners (1927) claimed up to 20% Zn over 2.44 m in one trench.

**History:**

1927: James Palmer, M.L. Douglas; old workings included surface trenching, a 30.48 m shaft in limestone with a crosscut to the vein at the bottom which yielded a small tonnage of good grade zinc ore stored in a dump. Two newer trenches were dug.

**References:**

MMAR 1927-351  
GSC P68-50 p 38  
Gunnex #44  
Carson 1968 p 158  
Minfile 92F171

**12. Silver Bell Sb****Geology:**

Two stibnite-quartz veins with small amounts of arsenopyrite occur in Sicker Group volcanics, consisting of volcanic breccia, tuff, argillite, and andesite porphyry. A major north-south fault bisects the claim.

**Economic Features:**

Small amounts of Cu, Pb, Zn, As, Au and Ag are reported to show in assays. One of the veins is reported to be 20.3 cm wide and at least 9.14 m long. The second, smaller vein occurs parallel and 45.72 m east of the first vein. An assay over a well-mineralized portion of the vein is reported as 56.6% Sb, trace Cu, trace Pb, trace Zn, 0.1% As, 0.171 g/t (0.005 oz/ton) Au, and 6.86 g/t (0.2 oz/ton) Ag. The highest values obtained in soil samples are: 735 ppb Au, 0.5 ppm Ag, 520 ppb Hg, 29 ppb Sb, 189 ppm As, 250 ppm Zn, and 1157 ppm Ba.

**History:**

- 1939: R.H. Davis, Royston, and associates; drove a 30.48 m adit.
- 1982: Asarco Exploration Co. of Canada Ltd.; soil sampling.

**References:**

MMAR 1939-99  
AR 11024  
GSC P68-50 p38  
Gunnex #43  
Carson 1968 p136  
Minfile 92F243

**13. Mt. Wesley Copper Cu****Geology:**

Cliffs of Buttle Lake Formation limestone are (quartz?) veined and altered (rusty with some malachite specks). The limestone is overlain by Karmutsen Formation volcanics and underlain by volcanic breccia, tuff, cherty tuff, and banded chert of the Myra Formation, all of which are much sheared to sericite schist or broken, with some rusty patches. There is disseminated pyrite in Sicker volcanics further to the west as well.

**Economic Features:**

No assays or other results reported

**History:**

- 1962: Hunting Survey Corp.; regional aeromag survey, geological mapping.
- 1984: Villebon Resources Ltd.; mapping, rock sampling.

**References:**

Gunnex #31

**14. Esary Lake Fe****Geology:**

Iron mineralization occurs in chert in a stratabound chemical sedimentary deposit within Sicker volcanics.

**Economic Features:**

Reported to appear to be a larger showing than Lacy Lake (#15 below) or Cameron Lake (#16 below).

**History:** Mentioned in Gunnex Ltd.'s 1965 report.

**References:**

GSC P68-50 p 38

Gunnex #32

Minfile 92F244

### 15. Lacy Lake Mn

#### Geology:

Taconite with minor manganese stain occurs in Sicker Group cherts and cherty volcanics, usually as irregular bands or patches. Intrusions are noticeably absent in the area.

#### Economic Features:

Reported to be larger in size than **Cameron Lake** (#16 below). The band of taconite is up to 45.72 m thick. No sulphides are associated.

#### History:

- 1962: Hunting Survey Corp.; regional aeromagnetic survey, geological mapping at showing.
- 1965: Gunnex Ltd., soil sampling and prospecting in the general area, showings located, regional geological mapping. Magnetometer survey and rock sampling were recommended for 1966.

### 16. Cameron Lake Fe

#### Geology:

Two parallel showings of discontinuous bands of jasperoid chert containing medium-grained hematite and magnetite occur in sheared, often schistose Sicker Group volcanics.

**Economic Features:**

One showing is 100 m long; the other is 150 m long. The showings are 30 m apart and are 2.5 m wide. An aeromagnetic anomaly occurs nearby. A subsequent ground magnetometer survey located a strong anomaly 60.96 to 121.92 m wide and at least 609.60 m long in the area of the aeromagnetic anomaly and parallel with a postulated fault or shear zone west of the showings. A smaller magnetometer anomaly was outlined over the northern of the two iron showings (but at right angles to its strike). A sample assayed at 12.64% Fe.

**History:**

1953: Two showings in the area were reported in newspapers.  
1962: Hunting Survey Corp.; regional aeromagnetic survey.  
1963-65: Gunnex Ltd.; sampling, regional mapping, magnetometer and T.H.M. soil surveys over the showings/magnetometer anomaly area. Detailed magnetometer and E.M. survey recommended for 1966.

**References:**

GSC P68-50 p 38  
Gunnex #27  
Minfile 92F246



## 5.0 1986 ASSESSMENT WORK (MERO 1,2,3 CLAIMS)

### 5.1 GEOLOGY, ROCK SAMPLING AND MINERALIZATION

This section on property geology is based on geological field work by MPH Consulting Limited during August 1986.

Reconnaissance geological mapping was carried out over the Mero 1-3 claims, whereas detailed geological mapping and soil sampling were carried out on the Horne 1-4 claims (results to be included in a subsequent report).

Forty-seven (47) rock samples and two (2) silt samples were collected during assessment of the Mero 1-3 claims and analyzed for Au and by 30-element ICP; eight (8) rock samples were selected for whole rock analyses as well. Descriptions and analyses are in Appendix II and Appendix III; property geology is shown in Figure 5.

The Cathedral property (including the Mero 1-3 claims and Horne 1-4 claims) is mainly underlain by Paleozoic Sicker Group rocks (Figure 5) with lesser amounts of Triassic Karmutsen Formation (Vancouver Group) basaltic volcanic rocks. Sicker Group rocks exposed on the Cathedral property are dominantly Lower Devonian and older Nitinat Formation pillow lavas, tuffs, pyroclastics, and augite-bearing agglomerates, and Myra Formation felsic to intermediate volcanics and volcanoclastic sedimentary rocks and cherty tuff, with minor amounts of Buttle Lake Formation limestone and cherty volcanoclastics.



The Sicker Group section on the Cathedral property strikes generally north-northwest, with the older rocks (Nitinat Formation) to the west, and younger rocks (Buttle Lake Formation limestone overlain by Karmutsen Formation flows) to the east, with the bulk of the property underlain by Myra Formation. The Myra Formation is a known host for economic, polymetallic volcanogenic massive sulphide deposits.

A major regional fault zone runs through the property from northwest to southeast, locally displacing the Nitinat/Myra Formation contact. Cleavages in rocks are subparallel to this fault system.

Geological mapping of the property has revealed that it is predominantly underlain by massive basaltic to andesitic flows which exhibit varying degrees of alteration after structural shearing. A minor amount of intraformational exhalites, pyroclastics and flows were found in one locality.

The green, medium-grained massive hornblende basalt is typical of unaltered basaltic flow rocks found in the Nitinat Formation.

Exposure in the area that has been mapped as Myra Formation includes outcrops of listwanite alteration in possible mafic volcanic host rocks. Listwanite alteration comprises sericite and quartz carbonate alteration along a very strong structural trend. These highly sheared areas are also characterized by fine kink folding and layering that may be parallel to original bedding, although the schistosity may be due locally to northwesterly shearing.



The area where typical Myra stratigraphy is most extensively exposed is along the E&N Railway grade, to the south of Cameron Lake and in the area within the claim group. The bulk of the exposure along the grade is massive hornblende basalt flow rocks with local alteration and shear foliation along a regional northwesterly trend. In the southern area of the claim block including an area covered by the Mero claims, a major intraformational unit comprising chert, cherty exhalite, felsic pyroclastics(?), argillite, and altered pillow basalts, representing a total thickness of about 30 m, is exposed along the trend of a regional shear zone. On the Mero claims, exposures of this kind of banded material also include small lenses of sulphides and weak iron formation(?) with chert along the entire length of the railway grade.

These intraformational units vary from 15 cm and 2 m, with a thickening of the package approaching the major structural displacement and break as mapped by Sutherland Brown. (1986). One such unit was sampled in 1985 and displayed anomalous chemistry in Zn, 540 ppm, and Ag, 1.2 ppm. It is not known whether these individual exposures represent a repeated expression of the same horizon, or separate individual horizons.

Major units within the package comprise an overlying brick-red jasperoidal chert with minor fracture controlled pyrite and pyrite cubes to 2 mm (thickness unknown); black bedded cherty argillite and chert with interstitial pyrite and beds which display minor folding and structural displacement (thickness 1 m) and an underlying, highly carbonatized sericite schist after felsic pyroclastics (thickness 5 m), representing the footwall of what is believed to be an exhalite/flow package. Underlying this



are what appear to be extensively altered pillow basalts with buff coloured quartz carbonate alteration (thickness 10 m(?)). Directly underlying this relatively thinly bedded sequence are massive basaltic flows of the Nitinat Formation.

This particular stratigraphic package is of great exploration interest due to some elevated gold values, high As, Ag and Zn values, and a high degree of alteration.

Rock types of samples collected on the Mero 1-3 claims include basalt and agglomerate, cherty tuff, and black argillite, all somewhat metamorphosed, variably foliated, and altered to some degree by secondary quartz-carbonate alteration. Exposures along the railway grade on the Mero 1 claim were sampled in greatest detail.

Highest lithogeochemical results are from southern Mero 1 and 2 claims, and northern Mero 3 claim.

Elevated gold values range from 10 to 190 ppb Au (check assay 0.007 oz/ton or 0.240 g/t, sample 509, cherty tuff, Mero 3 claim). These are associated with slightly anomalous silver ranging up to 2.6 ppm Ag (samples 509, 522). Arsenic anomalies are common in the same area, with the highest values at 650 ppm As (sample 522) and 330 ppm As (sample 520).

Other rocks in the same area give lithogeochemical results up to 13.5 ppm Cd, 820 ppm Zn, 338 ppm Ni, 15 ppm Mo and 357 ppm V (sample 516, which also contains 20 ppb Au, 2.4 ppm Ag, and 230 ppm As).



Highest copper is from a fault breccia on central Mero 1 claim (327 ppm Cu, also 30 ppm Sb, sample 534).

Chromium up to 294 ppm (sample 519) and phosphorous up to 8510 ppm (sample 510) are also noted in this area. Rocks collected in early 1985 along strike on the Horne claim were shown in thin section to contain phosphate pellets, indicating a partly deep-sea sedimentary environment of deposition for this sequence of rocks (Hawkins, 1986).

Best values are from rocks mapped as altered basalt and cherty tuff with quartz veins and fault breccia.

Mineralization is apparently primarily represented by finely disseminated pyrite along foliation planes, fractures, and as replacement of mafic minerals in altered volcanic and volcanoclastic rocks. Minor chalcopyrite, pyrrhotite and/or magnetite and some hematite, were also noted. Chalcocite and malachite were observed in sample 534, which ran 327 ppm Cu, the highest Cu value for this group of samples.

Some carbonate-altered rocks contain bright green patches which may be fuchsite and/or actinolite. Quartz and calcite veins are also common.

## 5.2 Silt Sampling

Stream sediment samples were collected from two separate streams draining the Mero claims.



Silt sample 1180S, draining altered agglomeratic basalt mapped as Myra Formation on the northern Mero 2 claim, contains anomalous values of 11.0 ppm Ag, 220 ppm Zn, 318 ppm Pb, and 819 ppm Cr.

Silt sample 1176S drains an area of westerly-dipping, bedded cherty-tuff, argillite, and altered basaltic agglomerate exposed along the railway grade near the southern end of the boundary between the Mero 1 and 2 claims. Results are elevated in arsenic (170 ppm As) and chromium (269 ppm Cr). Nearby rocks also contain high As and Cr values.

### 5.3 Whole Rock Geochemistry

Eight samples from the Mero 1-3 claims were selected for whole rock analysis (see Appendix III).

Sample 507 was identified in the field as an altered basalt. Whole rock analysis is consistent with this, showing high calcium, indicating carbonate alteration, but also unusually high sodium (50% Na), indicating some albitization as well. Titanium at 2.3%, is the highest for any samples analyzed. Sample 514, identified as silicified altered basalt, is also exceptionally high in sodium (6.8% Na), and possibly albitized, but less carbonatized than some of the other samples.

Samples 528, 529 and 530 are similar in their whole rock analyses with over 10% volatiles, possibly consistent with their description as carbonate-altered basalt; field descriptions also include significant proportion of hydrous minerals (fuchsite/-actinolite) accounting for some of the volatile content due to hydrothermal alteration.



Sample 534 has an unusual whole rock analysis, with silica content of basalt to ultramafic (42.0%) but low aluminum (6.4%). High magnesium at 6.1% and iron at 8.4% and low titanium (0.2%) suggest a composition toward the ultramafic range, and high calcium (14.1%) and extremely high volatiles at 23.5% suggest carbonate alteration. Field description as carbonate-altered fault breccia indicates a leached rock not resembling any typical igneous composition.

Sample 535 is the highest in aluminum (20.4%) of any in this group, low in magnesium (2.0%) high in iron (9.4%), lower in calcium (4.6%) and volatiles (3.6%)--and therefore probably not carbonate-altered--but highest in potassium 4.7%). It is mapped as basaltic tuff but may be more of an andesitic composition with slight potassic alteration.

Sample 537 is highest in silica of this section of rocks, with 70.0%, typical of a felsic volcanic composition, with elevated iron of 6.9%. This is consistent with a pyritic cherty tuff, as described in hand specimen. None of the rocks selected for whole rock analysis were outstandingly anomalous in other elements, but were selected in order to determine the more typical compositions of the less altered rocks.



## 6.0 RECOMMENDED WORK PROGRAM

Phase I exploration work on the Cathedral property has included geological mapping and sampling on the Mero 1-3 claims as reported in this report, as well as more detailed geological mapping, rock sampling, and soil sampling on the Horne 1-4 claims (to be reported separately).

Phase II exploration of the Cathedral property is to consist of further detailed geological mapping and sampling, soil sampling, and geophysical surveys including magnetometer, VLF-EM, and IP in areas of particular interest.

All rock and soil samples will be analyzed by 30-element ICP as well as for Au by AAS. In addition, whole rock analyses will be carried out on selected rock samples in an effort to identify alteration features typical of haloes surrounding volcanogenic mineralization and thin sections of selected rock samples will be prepared and studied to aid in determining mineralogic composition, metamorphism, and alteration of the rocks.

Areas of interest on the Mero 1-3 claims include the section of rocks exposed along the railway grade from southeastern Mero 1 claim, across southwestern Mero 2 claim, to northwestern Mero 3 claim, where a sequence of altered basalt, cherty tuff, and black argillite hosts elevated lithogeochemical values in gold, silver arsenic, and zinc. Establishment of a soil sampling grid is recommended in this area.

If warranted by Phase II results, Phase III will consist of detailed geophysical surveys in order to provide targets for diamond drilling.





Detailed cost estimates and schedules for Phase II and III exploration are to be provided in a report on completed Phase I exploration of the entire Cathedral Group (Mero 1-3 and Horne 1-4 claims).

## 7.0 CONCLUSIONS

1. The Cathedral property is underlain mainly by Paleozoic Sicker Group rocks of the Nitinat, Myra, and Buttle Lake Formations, and lesser amounts of Triassic Vancouver Group rocks of the Karmutsen Formation.
2. Mineralization observed on the Cathedral property (Mero 1-3 claims and Horne 1-4 claims) includes pyrite associated with listwanite (quartz-carbonate alteration) near a major fault zone, common disseminated sulphides, and fracture-controlled sulphides. Iron-bearing sedimentary rocks were also noted. Alteration and mineralization are related to shearing.
3. Rock samples returned encouraging lithogeochemical results up to the following values: 190 ppb Au (check assay 0.007 oz/ton = 0.240 g/t, sample 509); 2.6 ppm Ag (sample 509, 522); 650 ppm As (sample 522); 13.5 ppm Cd, 820 ppm Zn, 338 ppm Ni, 15 ppm Mo, 357 ppm V (sample 516, also containing 20 ppb Au, 2.4 ppm Ag, and 230 ppm As); 327 ppm Cu, 30 ppm Sb (sample 534); 294 ppm Cr (sample 519); 8510 ppm P (sample 510, also containing over 25% Fe).
4. A silt sample draining altered agglomeratic basalt mapped as Myra Formation on the northern Mero 2 claim returned anomalous results of 11.0 ppm Ag, 819 ppm Cr, 318 ppm Pb, and 220 ppm Zn (sample 1180S).
5. Whole rock analyses confirm field identification of many samples as highly carbonate-altered mafic volcanic and more felsic volcanoclastic rocks.



6. Further exploration of the Mero 1-3 claims (Cathedral property) is warranted, especially near a large fault structure and in areas of listwanite alteration in the Sicker Group.

The area near the railway grade in northern Mero 3 claim and adjacent southern Mero 2 to Mero 1 claims looks the most promising in terms of anomalous gold, arsenic, silver, and zinc values in underlying rocks.

Further silt and rock sampling are also recommended in the northern Mero 2 claim.

7. Detailed geological mapping and rock sampling, establishment of soil sampling grid lines, and geophysical surveys are recommended on the Mero 1-3 claims as part of Phase II exploration of the Cathedral property.



## 8.0 RECOMMENDATIONS

1. It is recommended that further exploration of the Mero 1-3 claims, consisting of detailed geological mapping and rock sampling, soil sampling, and geophysical surveys, be carried out as part of a Phase II exploration program of the Cathedral property.
2. Phase II exploration, consisting of further detailed geological mapping and rock sampling, soil sampling, and geophysical surveys including magnetometer, VLF-EM, and IP in appropriate areas of interest, is recommended for the entire Cathedral property, including the Mero 1-3 claims.
3. It is recommended that exploration on the Mero 1-3 claims be concentrated in two areas:
  - (1) along the railway grade in the southwestern part of the Mero 1-3 claim block, where sequence of altered basalt, tuff, and argillite hosts elevated lithochemical values in gold, silver, arsenic, and zinc;
  - (2) in the northern part of the Mero 2 claim, where a silt sample returned anomalous values in silver, lead, zinc, and chromium.
4. If warranted by Phase II results, Phase III exploration consisting of detailed geophysical surveys in order to provide targets for diamond drilling, is to be recommended.

Respectfully submitted,

**MPH Consulting Limited**

*J. S. Getsinger*

**J.S. Getsinger, Ph.D.**

January 14, 1987  
Vancouver, B.C.

**CERTIFICATE**

I, J.S. Getsinger, do hereby certify:

1. That I have studied geology at Harvard University (B.A., 1974), and have graduate degrees in geology from the University of Washington, Seattle (M.S. 1978), and from the University of British Columbia, Vancouver (Ph.D. 1985).
2. That I have practised within the geological profession for the past twelve years.
3. That the opinions, conclusions, and recommendations contained herein are based on geological research and fieldwork carried out by MPH personnel.
4. That I own no direct, indirect, or contingent interest in the subject property, or shares or securities of Nexus Resource Corporation or associated companies.

*J. S. Getsinger*

J.S. Getsinger, Ph.D.

Vancouver, B.C.

January 14, 1987

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**Appendix I**

**LIST OF PERSONNEL**

**and**

**STATEMENT OF EXPENDITURES**



LIST OF PERSONNEL AND  
STATEMENT OF EXPENDITURES

Personnel:

G.R. Cope, B.Sc., Geologist		
1.5 days @ \$350	\$ 525	
T. Naciuk, B.Sc., Field Technician		
1 day @ 250	250	
H. Chaudet, Field Assistant		
1 day @ 150	150	
J.S. Getsinger, Ph.D.		
2.5 days @ 350	<u>875</u>	
		\$1,800

Equipment Rental:

4WD Truck	1 day @ \$90	90
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Disbursements:

Food/Accommodation	3 mandays @ 45	135.00
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Analyses-

47 rocks (Au, ICP) @ \$11.95	561.65	
2 silts (Au, ICP) @ 10.60	21.20	
8 whole rock @ 20.00	<u>160.00</u>	
		742.85

Report Costs	850.00
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Miscellaneous	<u>100.00</u>
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Administration @ 15%		1,827.85
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		<u>274.18</u>
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\$3,992.03

Work Required  
To P.A.C.

\$3,600.00

392.03



**Appendix II**

**ROCK SAMPLE DESCRIPTIONS**

**and**

**LITHOGEOCHEMICAL RESULTS**

**MERO CLAIMS  
ROCK SAMPLE DESCRIPTIONS  
AND GEOCHEMICAL RESULTS**

Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
507	Location: Mero 3 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Seafoam green, fine-grained, mildly silicified, massive basalt. Calcite, quartz and epidote occur in veinlets to 0.5 cm wide at random orientations. Pyrite comprises trace to 1% in association with veinlets. Weathered-out calcite amygdules are visible on exposed surfaces.	5	59	0.2	92	Whole Rock
508	Location: Mero 3 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Intensely sheared and chloritized basalt at contact with cherty tuff layer. Pyrite is finely disseminated in the plane of foliation to 50%. Rusty weathered surfaces.	20	75	1.6	88	
509	Location: Mero 3 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Light grey to green, thin-bedded, fine-grained cherty tuff and tuff. Pyrite is finely disseminated to 50%. Weathered surfaces are extremely rusty.	190 0.007 oz/ton = 0.24 g/t	89	2.6	200	106 Pb 109 Ni 12.41% Fe 263 V
510	Location: Mero 3 claim, railway grade Rock type: Black argillite  Grab from outcrop. Dark grey to black, aphanitic to fine-grained cherty argillite. Pyrite comprises 10% and occurs mainly as fracture fillings. Limonite replaces pyrite and weathered surfaces are extremely rusty.	5	72	0.4	110	8510 P 25.33% Fe 1214 Mn



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
511	Location: Mero 3 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Light grey-green, fine-grained, strongly silicified basalt. Abundant quartz veinlets of variable size (0.5 to 1.0 cm) occur at random orientations. Finely disseminated pyrite (1-2%). Sample is highly fractured; weathered surfaces are extremely rusty. Trace pyrrhotite and/or magnetite.	5	50	0.4	104	262 Cr 144 Ni
512	Location: Mero 3 claim, railway grade Rock type: Meta-basaltic agglomerate  Grab from outcrop. Moderately foliated, light grey-green, fine-grained, basaltic agglomerate. Somewhat carbonatized. Trace pyrite as replacements of mafic minerals (chiefly hornblende). Rusty weathered surfaces.	5	72	0.2	84	228 Cr 133 Ni
513	Location: Mero 3 claim, railway grade Rock type: Quartz vein  Grab from outcrop. Vuggy quartz from shear contact. Trace pyrite along vein margins, trace dendritic black staining on fresh surfaces, possibly manganese.	5	31	0.2	32	240 Ba
514	Location: Mero 3 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Silicified, light grey-green, fine-grained basalt. Somewhat sheared, elongate calcite-filled amygdules are weathered out on exposed surfaces. Trace disseminated pyrite.	5	70	0.2	68	140 As 155 Ni Whole Rock



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
515	<p>Location: Mero 3 claim, railway grade                      Rock type: Vein breccia</p> <p>Grab from outcrop. Breccia vein (3 cm wide). Fragments (to 1 cm) comprise 60% and are mainly chert and cherty tuff. Pyrite comprises up to 5% and occurs along fractures and within the quartz matrix. Rusty weathered surfaces.</p>	5	36	1.0	102	110 As 1.0 Cd 5880 P
516	<p>Location: Mero 3 claim, railway grade                      Rock type: Black argillite</p> <p>Grab from outcrop. Dark grey to black, aphanitic to very fine-grained, cherty argillite. 15% pyrite in fractures and along bedding planes. Trace pyrrhotite and magnetite. Rusty weathered surfaces.</p>	20	173	2.4	820	15 Mo 230 As 338 Ni 86 Pb 13.5 Cd 357 V 15.70% Fe
517	<p>Location: Mero 3 claim, railway grade                      Rock type: Black argillite</p> <p>Grab from outcrop. Dark grey to black, very fine-grained cherty argillite. Rounded grains of uncertain affinity (to 2 mm) comprise 30%. Pyrite to 15% is disseminated throughout and occurs along fractures. Rusty weathering.</p>	5	55	0.6	378	5.5 Cd 270 V 14 Mo
518	<p>Location: Mero 1 claim, railway grade                      Rock type: Cherty tuff and/or argillite</p> <p>Grab from outcrop. Dark grey to black, cherty tuff and/or cherty argillite. Pyrite to 20%, very finely disseminated throughout and along fractures. Very rusty weathered surfaces.</p>	30	105	0.4	196	210 As 4230 P 66 Pb 10.66% Fe



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
519	Location: Mero 1 claim, railway grade Rock type: Altered agglomerate  Grab from outcrop. Moderately sheared and chloritized agglomerate. 5-10% pyrite along shear faces. Rusty weathered surfaces.	5	114	0.2	106	294 Cr 164 Ni
520	Location: Mero 1 claim, above railway grade Rock type: Altered basalt  Float from outcrop. Quartz-carbonate alteration of dark green, fine-grained basalt. Outside 4-5 cm are bleached to light green to pale rust possibly due to alteration to epidote. Trace finely disseminated pyrite, rusty weathering.	5	57	0.2	86	330 As 232 Cr 161 Ni 62 Pb
521	Location: Mero 1 claim, above railway grade Rock type: Cherty argillite  Grab from outcrop. Dark grey to black to dark green, aphanitic to very fine-grained cherty argillite. Contains fracture controlled pyrite to 1-2%, minor disseminated pyrite. Rusty weathered surfaces, moderately sheared.	5	59	0.2	70	110 As
522	Location: Mero 1 claim, above railway grade, same as 521 Rock type: Cherty argillite  Grab from outcrop. Dark grey cherty argillite. Disseminated and fracture pyrite (2-3%) with massive hematite. Rusty weathered surfaces with minor boxwork texture after pyrite.	5	68	2.6	56	650 As 14 Mo
523	Location: Mero 1 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Intense silicification and bleaching of fine-grained basalt. Very pale green to pale rust coloured. Minor calcite veinlets. Trace chalcopyrite and pyrite. Light green mineral (actinolite or fuchsite(?)) in 1-2 mm crystals to 3%. Rusty weathered surfaces.	5	101	0.2	78	260 As 41 Co 120 Ni 30 Sb



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
524	Location: Mero 1 claim, railway grade Rock type: Black argillite  Grab from outcrop. Dark grey to black, cherty argillite. Fracture and finely disseminated pyrite to 10%. Rusty weathering.	5	104	0.6	194	4690 P
525	Location: Mero 1 claim, railway grade Rock type: Cherty tuff and argillite  Grab from outcrop. Dark grey to black, thin-bedded to laminated cherty argillite and cherty tuff. 5% fracture and disseminated pyrite. Rusty weathering.	5	57	0.4	94	4660 P
526	Location: Mero 1 claim, railway grade Rock type: Cherty tuff  Grab from outcrop. Light grey to green, thin-bedded tuff and cherty tuff. Grains are somewhat elongate parallel to bedding 5% finely disseminated pyrite. Rusty weathering.	5	33	0.2	114	270 Ba
527	Location: Mero 1 claim, railway grade Rock type: Cherty tuff  Grab from outcrop. Light grey to green, thin-bedded tuff and cherty tuff. Grains are somewhat elongate parallel to bedding 5% finely disseminated pyrite. Rusty weathering.	5	27	0.2	106	
528	Location: Mero 1 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Mottled pale green, grey and pink, fine-grained, intensely silicified basalt with abundant calcite veinlets, less than 1 mm. 5%, 1-3 mm green actinolite and/or fuchsite(?) crystals. Trace sulphide (py(?)). Rusty orange weathering.	5	54	0.2	42	130 As 100 Ni Whole Rock





Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
529	Location: Mero 1 claim, railway grade Rock type: Basaltic tuff  Grab from outcrop. Green, fine-grained basalt. Weak quartz-carbonate alteration. Somewhat foliated and agglomeratic. Trace disseminated pyrite. Gradational with 528.	5	53	0.4	54	Whole Rock
530	Location: Mero 1 claim, railway grade Rock type: Altered metabasalt  Grab from outcrop. Light grey, recrystallized, silicified basalt. Porphyroblasts(?) include actinolite(?) (to 8 mm) comprising 10%; quartz (to 3 mm) comprising 10%; and hornblende (to 2 mm) comprising 1%. Matrix is fine-grained, light grey and quartz-carbonate altered. Carbonatization increases towards the weathered surfaces. Rusty orange weathering, trace disseminated pyrite.	5	93	0.2	62	Whole Rock
531, 532, 533	Location: Mero 1 claim, railway grade Rock type: Altered tuff  Grab from outcrop. Intensely fractured, fine-grained banded tuff from shear zone. Quartz-carbonate alteration is complete, masking original textures. Fresh surfaces are bleached to pale brown to pink to green. Rusty oxide fracture coatings are pervasive. Some fractures are filled by quartz veinlets. Trace pyrite and malachite.					
	Sample 531	5	43	0.2	54	
	Sample 532	5	6	0.2	56	
	Sample 533	5	36	0.2	40	



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
534	<p>Location: Mero 1 claim, railway grade                      Rock type: Fault breccia</p> <p>Grab from outcrop. Chalky fault breccia. White to light grey, intense carbonatization. Trace disseminated, steel blue to grey, massive chalcocite. Possibly some malachite associated with the chalcocite. Rusty weathered surfaces.</p>	5	327	0.4	114	120 As 1034 Mn 30 Sb Whole Rock
535	<p>Location: Mero 1 claim, railway grade                      Rock type: Meta-basaltic tuff</p> <p>Grab from outcrop. Dark green, agglomeratic basalt. Strongly foliated, with 1% rusty, iridescent fracture pyrite. Minor vesicles on rusty weathered surfaces.</p>	10	21	0.2	66	200 Ba 5170 P Whole Rock
536	<p>Location: Mero 1 claim, railway grade                      Rock type: Altered basalt</p> <p>Grab from outcrop. Light grey, fine-grained, silicified and epidotized basalt. 10% fracture and disseminated pyrite associated with epidote veinlets. Rusty weathered surfaces.</p>	30	96	0.4	30	4430 P
537	<p>Location: Mero 1 claim, railway grade                      Rock type: Cherty tuff</p> <p>Grab from outcrop. Light green to grey, thin-bedded cherty tuff and chert. 2-3% disseminated and fracture pyrite. Rusty weathered surfaces.</p>	5	50	0.2	76	Whole Rock



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
538	Location: Mero 1 claim, railway grade Rock type: Tuff  Grab from outcrop. Intense quartz-carbonate alteration of thin-bedded tuff along shear zone. Rusty weathered surfaces. Trace disseminated pyrite.	5	39	0.2	64	
656	Location: Mero 1/Horne 2 claim boundary Rock type: Cherty argillite  Grab from outcrop. Dark grey-blue. Light/dark banding 5-10 mm (probably due to variable quartz content). Massive. Minor hematite alteration (less than 5%). Heavy Fe-stain. Chalcopyrite less than 5%. Pyrite less than 10%.	5	60	0.8	232	6 Mo 16.27% Fe
657	Location: Mero 1/Horne 2 claim boundary Rock type: Agglomerate  Grab from outcrop. Quartz porphyritic (25%). Minor quartz shears (less than 1 mm thick). Dark marine green. Localized hematitic alteration (less than 5%). Minor epidote in shears. Clasts angular to 3 cm. Trace pyrite, pyrrhotite.	5	69	0.2	86	
658	Location: Mero 1/Horne 2 claim boundary Rock type: Agglomerate  Grab from outcrop. Medium olive green. Cherty and tuffaceous clasts, rounded and angular, to 2 cm. Epidote crystals (less than 2 mm, less than 2%). Minor quartz shears (less than 2 mm wide). Fe and Mn oxide stains. Trace disseminated pyrite.	5	93	0.2	72	
659	Location: Mero 1/Horne 2 claim boundary Rock type: Altered agglomeratic tuff  Grab from outcrop. Highly altered agglomerate or tuff. Salmon pink colour. Quartz shears (less than 1 mm). Local hematitic(?) alteration. Fuchsite(?) blebs 5-10%.	5	13	0.4	54	



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
660	Location: Mero 1/Horne 2 claim boundary Rock type: Silicified agglomerate  Grab from outcrop. Medium green. Phenocrysts of quartz and plagioclase. Quartz shears 1-2 mm. Trace hematite. Trace disseminated pyrite.	5	47	0.2	84	
1169	Location: Mero 1 claim, railway grade Rock type: Argillite  Grab from outcrop. Medium to dark grey. Banding 1 to 7 mm. Heavy Fe-stain. Silicified and slightly foliated. Disseminated pyrite 3 to 7%.	5	34	0.2	64	8 Mo
1170	Location: Mero 1 claim, railway grade Rock type: Cherty tuff  Grab from outcrop. Medium green-grey. Heavily calcite sheared (generally parallel to bedding). Trace hematite. Pyrite cubes and disseminated, possibly secondary (less than 2%). Calcite 50-75%.	5	17	0.2	40	40 Ga
1171	Location: Mero 1 claim, railway grade Rock type: Cherty tuff. Similar to sample 1170.  Grab from outcrop. Trace disseminated pyrite and pyrrhotite. Heavy Fe-stain. Calcite 10-15%.	5	55	0.2	72	7 Mo
1172	Location: Mero 1 claim, railway grade Rock type: Cherty tuff  Grab from outcrop. Calcite 5-10%. Trace disseminated pyrite and pyrrhotite.	5	57	0.2	96	



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
1173	Location: Mero 1 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Light to medium green. Highly silicified. Foliated. Chloritized. Calcite shears to 3 cm (up to 80%). No discernable phenocrysts. Trace disseminated pyrite and pyrrhotite.	5	21	0.2	44	4 Bi 50 Ga
1174	Location: Mero 1 claim, railway grade Rock type: Silicified basalt  Grab from outcrop. Medium marine green. No apparent phenocrysts. Minor calcite shears (approximately 1 mm). Trace hematite alteration. Fe-stain on weathered surface. Trace disseminated pyrite.	5	62	0.2	134	1404 Mn
1175	Location: Mero 1 claim, railway grade Rock type: Altered basalt  Grab from outcrop. Medium to dark marine green. Highly silicified. Proximal to quartz vein. Quartz greater than or equal to 3 cm. No apparent phenocrysts. Fracture fill pyrite (less than or equal to 7%) associated with quartz vein and shearing.	80	108	0.2	132	1202 Mn
1176	Location: Mero 1 claim Sample type: Stream sediment (silt) sample	5	59	0.2	64	170 As 269 Cr
1177	Location: Mero 1 claim Rock type: Cherty argillite  Grab from outcrop. Banded medium green-blue and black. Highly silicified. Bands 5 to 10 mm. Fracture filled pyrite, less than 5%.	5	51	0.2	102	
1180S	Location: Mero 2 claim Sample type: Stream sediment (silt sample)	5	116	11.0	220	819 Cr 1103 Mn 318 Pb



Sample Number	Description	Au ppb	Cu ppm	Ag ppm	Zn ppm	Other
1181	Location: Mero 2 claim Rock type: Altered basaltic agglomerate  Grab from outcrop. Calcite sheared silicified basalt. Possibly agglomerate. Medium to dark marine green. Basalt appears as matrix with possible fragment outlines. Calcite shear zone from 4 to 6 cm. Trace disseminated pyrite within sheared area.	5	73	0.2	46	4 Bi
1182	Location: Mero 2 claim Rock type: Altered basalt  Grab from outcrop. Calcite sheared silicified basalt. Similar to sample 1181, but with no apparent clasts. Cubic pyrite (less than 3%) along shear planes.	5	102	0.2	52	





**Appendix III**

**CERTIFICATES OF ANALYSIS**



# Chemex Labs Ltd.

-Analytical Chemists -Geochemists -Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Phone: (604) 984-0221  
Telex: 043-52597

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Hg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

## CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE  
BURNABY, B.C.  
V5B 3N1

CERT. # : A8617466-001-A  
INVOICE # : I8617466  
DATE : 7-SEP-86  
P.O. # : NONE  
V-238

COMMENTS :

Sample description	Al	Hg	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K	La	Hg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Ti	Tl	U	V	W	Zn		
	Z	ppm	ppm	ppm	ppm	ppm	Z	ppm	ppm	ppm	ppm	Z	ppm	Z	ppm	Z	ppm	ppm	Z	ppm	ppm	ppm	ppm	ppm	Z	ppm	ppm	ppm	ppm	ppm		
507	1.91	0.2	30	10	<0.5	<2	7.11	<0.5	32	136	59	3.91	10	<0.01	<10	1.58	883	<1	<0.01	87	1500	32	<10	33	0.55	<10	<10	82	<10	92	--	--
508	2.25	1.6	20	10	<0.5	<2	0.68	<0.5	9	139	75	9.06	<10	<0.01	10	2.37	472	<1	<0.01	41	3060	30	<10	11	0.09	<10	<10	188	<10	88	--	--
509	3.59	2.6	50	40	<0.5	<2	0.58	0.5	23	174	89	12.41	<10	<0.01	10	3.71	654	<3	<0.01	109	1570	106	10	16	0.22	<10	<10	263	<10	206	--	--
510	2.26	0.4	10	20	<0.5	<2	2.10	<0.5	<1	152	72	25.33	20	0.45	30	1.38	1214	<1	<0.01	18	8510	8	<10	75	0.08	<10	<10	167	<10	110	--	--
511	3.64	0.4	20	40	<0.5	<2	1.04	<0.5	25	262	50	7.04	<10	0.01	10	3.10	773	<1	<0.02	144	2020	14	<10	6	0.52	<10	<10	182	<10	104	--	--
512	3.76	0.2	40	160	<0.5	<2	4.06	<0.5	31	228	72	5.67	10	0.06	<10	3.24	648	<1	<0.01	133	1316	8	<10	11	0.40	<10	<10	100	<10	84	--	--
513	0.67	0.2	30	240	<0.5	<2	2.18	<0.5	12	112	31	1.84	10	0.01	<10	0.47	308	1	<0.01	62	220	12	<10	33	0.06	<10	<10	33	<10	32	--	--
514	1.32	0.2	140	80	<0.5	2	3.62	<0.5	39	141	70	2.49	10	0.05	<10	1.00	434	4	0.02	155	1230	16	<10	7	0.19	<10	<10	71	<10	68	--	--
515	0.47	1.0	110	120	<0.5	<2	9.85	1.0	5	88	36	3.32	30	0.02	<10	0.26	288	1	<0.01	58	5880	20	10	27	0.02	<10	<10	70	<10	102	--	--
516	2.10	2.4	230	40	<0.5	<2	2.12	13.5	22	124	173	15.70	20	0.08	20	1.90	437	15	<0.01	338	2590	86	20	15	0.12	<10	<10	357	<10	820	--	--
517	1.67	0.6	40	70	<0.5	<2	0.73	5.5	8	71	55	6.63	<10	0.04	10	1.54	280	14	<0.01	91	430	26	<10	8	0.12	<10	<10	270	<10	378	--	--
518	4.02	0.4	210	60	<0.5	<2	0.97	<0.5	13	99	105	10.66	20	0.01	20	3.15	691	<1	<0.01	25	4220	66	10	14	<0.01	<10	<10	142	<10	196	--	--
519	3.44	0.2	10	40	<0.5	<2	0.86	<0.5	38	294	114	6.20	<10	<0.01	<10	3.21	796	<1	<0.01	164	1050	10	<10	13	0.30	<10	<10	92	<10	106	--	--
520	2.12	0.2	330	120	<0.5	<2	4.15	<0.5	37	232	57	5.02	30	0.13	<10	3.61	972	<1	<0.01	161	1390	62	10	122	<0.01	<10	<10	92	<10	86	--	--
521	1.79	0.2	110	30	<0.5	<2	1.14	<0.5	6	126	59	6.10	10	<0.01	10	1.10	457	<1	<0.01	17	250	24	<10	5	0.08	<10	<10	62	<10	70	--	--
522	0.54	2.6	650	90	<0.5	<2	2.26	<0.5	33	104	68	3.35	10	0.05	20	0.25	212	14	<0.01	36	2520	42	10	19	<0.01	<10	<10	55	<10	56	--	--
523	0.48	0.2	260	60	<0.5	2	3.94	<0.5	41	113	101	5.99	20	0.04	10	1.30	934	<1	<0.01	120	630	18	20	96	<0.01	<10	<10	110	<10	78	--	--
524	2.23	0.6	60	150	<0.5	<2	1.32	<0.5	15	114	104	8.09	10	0.21	30	1.49	525	<1	<0.01	57	4690	44	<10	18	0.03	<10	<10	109	<10	194	--	--
525	2.32	0.4	10	80	<0.5	<2	1.24	<0.5	9	55	57	5.16	10	0.07	10	1.36	803	<1	<0.01	11	4660	18	<10	20	0.14	<10	<10	71	<10	94	--	--
526	2.61	0.2	10	270	<0.5	<2	0.91	<0.5	11	13	33	6.13	<10	0.39	10	1.22	805	<1	<0.01	3	1130	12	<10	15	0.50	<10	<10	42	<10	114	--	--
527	2.45	0.2	10	120	<0.5	<2	0.69	<0.5	8	19	27	5.46	<10	0.22	10	1.26	819	<1	<0.01	10	940	20	<10	13	0.27	<10	<10	40	<10	106	--	--
528	0.41	0.2	130	110	<0.5	2	6.25	<0.5	29	53	54	2.94	20	0.15	10	1.61	656	<1	<0.01	100	2540	14	<10	109	<0.01	<10	<10	90	<10	42	--	--
529	1.53	3.4	20	150	<0.5	<3	5.26	<0.5	29	129	53	4.24	30	0.16	20	2.60	769	<1	<0.01	72	2120	18	10	168	<0.01	<10	<10	116	<10	54	--	--
530	0.44	0.2	40	120	<0.5	2	7.46	<0.5	39	63	92	3.20	20	0.22	<10	1.79	660	<1	<0.01	94	2700	18	10	155	<0.01	<10	<10	65	<10	62	--	--
531	1.14	0.2	50	90	<0.5	<2	0.25	<0.5	23	150	43	4.27	<10	0.46	10	0.08	796	<1	<0.01	72	1140	8	<10	8	<0.01	<10	<10	97	<10	54	--	--
532	0.49	0.2	10	50	<0.5	<2	0.18	<0.5	12	111	6	4.34	<10	0.20	10	0.05	879	1	<0.01	38	620	16	<10	5	<0.01	<10	<10	79	<10	56	--	--
533	0.92	3.2	20	90	<0.5	<2	5.02	0.5	21	118	36	3.21	20	0.25	10	1.86	705	<1	<0.01	62	950	16	<10	130	<0.01	<10	<10	76	<10	40	--	--
534	0.25	0.4	120	20	<0.5	<2	9.25	<0.5	17	93	227	5.14	30	0.14	<10	3.13	1034	<1	<0.01	43	390	12	20	123	<0.01	<10	<10	66	<10	114	--	--
535	1.28	3.2	20	200	<0.5	2	2.13	<0.5	14	36	21	4.24	10	0.70	30	1.70	255	<1	<0.01	20	5170	12	<10	58	0.23	<10	<10	36	<10	66	--	--
536	1.13	0.4	90	80	<0.5	<2	1.59	<0.5	16	33	96	4.24	<10	0.24	20	0.22	102	<1	<0.01	29	4430	22	<10	78	1.27	<10	<10	72	<10	30	--	--
537	1.88	0.2	40	70	<0.5	<2	1.76	<0.5	10	61	50	3.92	10	0.16	10	1.15	432	1	0.01	17	2120	16	<10	9	0.21	<10	<10	71	<10	76	--	--
538	0.45	0.2	20	100	<0.5	2	2.46	<0.5	10	15	39	3.86	10	0.26	<10	1.07	634	<1	<0.01	5	1180	12	<10	60	<0.01	<10	<10	25	<10	64	--	--

*Handwritten signature: Hart Bickler*





# Chemex Labs Ltd.

-Analytical Chemists    -Geochemists    \*Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada    V7J2C1

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Telex: 043-52597

## CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE  
BURNABY, B.C.  
V5B 3N1

CERT. # : AB617466-002-A  
INVOICE # : I8617466  
DATE : 7-SEP-86  
P.O. # : NONE  
V-238

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
656	4.88	0.8	30	50	<0.5	<2	0.25	<0.5	13	59	60	16.27	10	0.03	<10	1.39	330	6	<0.01	28	1100	30	10	4	<0.01	<10	<10	163	<10	232	--	--
657	3.44	0.2	10	90	<0.5	<2	2.69	<0.5	17	47	69	4.58	10	0.15	<10	1.23	651	<1	0.02	11	1830	8	<10	59	0.35	<10	<10	136	<10	86	--	--
658	4.03	0.2	10	50	<0.5	<2	2.16	<0.5	29	57	93	4.57	<10	<0.01	<10	3.29	868	<1	0.01	68	940	8	<10	13	0.29	<10	<10	149	<10	72	--	--
659	0.67	0.4	20	40	<0.5	2	4.33	<0.5	19	126	13	5.36	20	0.14	<10	1.48	407	<1	0.01	70	2850	12	<10	70	<0.01	<10	<10	100	<10	54	--	--
660	3.61	0.2	<10	40	<0.5	<2	1.99	<0.5	23	43	47	5.24	<10	0.03	10	2.38	715	<1	0.02	13	1070	12	<10	23	0.41	<10	<10	156	<10	84	--	--

*Handwritten signature*



# Chemex Labs Ltd.

-Analytical Chemists -Geochemists -Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Phone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE  
BURNABY, B.C.  
V5E 3H1

CERT. # : A8617466-003-A  
INVOICE # : I8617466  
DATE : 7-SEP-86  
P.O. # : NONE  
V-238

Semi quantitative multi element ICF analysis.

Nitric-Aqua-regia digestion of 0.5 gm of material followed by ICF analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Ti, Tl, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample description	Al %	Ag ppa	As ppe	Ba ppa	Be ppa	Bi ppa	Ca %	Cd ppa	Co ppe	Cr ppa	Cu ppe	Fe %	Ga ppa	K %	La ppa	Mg %	Mn ppa	Mo ppa	Na %	Ni ppa	P ppa	Pb ppa	Sb ppa	Sr ppa	Ti %	Tl ppa	U ppa	V ppa	W ppe	Zn ppa		
1169	0.73	0.2	40	80	<0.5	<2	0.04	<0.5	3	70	34	4.58	<10	0.11	<10	0.43	248	8	<0.01	11	350	18	<10	2	<0.01	<10	<10	22	<10	64	--	--
1170	0.69	0.2	30	40	<0.5	2	11.95	<0.5	4	140	17	1.60	40	0.09	<10	0.35	607	2	<0.01	8	780	18	<10	281	0.04	<10	<10	12	<10	40	--	--
1171	0.60	0.2	20	30	<0.5	<2	9.03	<0.5	6	125	55	2.63	30	0.06	<10	0.33	711	7	<0.01	22	470	36	<10	172	0.01	<10	<10	16	<10	72	--	--
1172	1.43	0.2	10	40	<0.5	2	2.71	<0.5	11	103	57	3.89	10	0.07	<10	0.98	542	4	<0.01	25	1070	20	<10	22	0.07	<10	<10	38	<10	96	--	--
1173	0.63	0.2	30	40	<0.5	4	17.99	<0.5	4	82	21	1.35	50	0.05	<10	0.35	982	1	<0.01	3	230	22	10	405	0.04	<10	<10	8	<10	44	--	--
1174	2.87	0.2	10	30	<0.5	<2	1.61	<0.5	20	30	62	6.15	10	0.03	10	1.90	1404	1	0.02	1	1970	12	<10	27	0.37	<10	<10	150	<10	134	--	--
1175	2.81	0.2	20	50	<0.5	<2	0.72	0.5	13	128	108	7.14	10	0.01	10	1.57	1202	2	0.02	32	1960	16	<10	14	0.09	<10	<10	100	<10	132	--	--
1176	1.72	0.2	170	130	<0.5	<2	1.12	<0.5	21	269	59	3.60	<10	0.02	10	1.03	741	<1	0.02	54	740	20	<10	21	0.17	<10	<10	101	<10	64	--	--
1177	1.84	0.2	10	30	<0.5	2	1.23	<0.5	7	138	51	5.32	10	0.01	10	1.09	224	2	<0.01	22	2980	24	<10	12	<0.01	<10	<10	89	<10	102	--	--
1180	3.19	11.0	70	130	<0.5	<2	2.27	<0.5	32	819	116	5.42	10	0.16	10	1.95	1105	3	0.04	66	660	318	10	41	0.24	<10	<10	169	<10	220	--	--
1181	1.73	0.2	20	10	<0.5	4	8.13	<0.5	20	110	73	2.25	20	0.03	<10	1.22	691	<1	<0.01	25	780	10	<10	38	0.16	<10	<10	78	<10	46	--	--
1182	1.73	0.2	20	40	<0.5	<2	9.51	<0.5	22	69	102	3.61	30	0.19	<10	1.03	737	1	<0.01	28	1210	12	<10	1	0.12	<10	<10	32	<10	52	--	--

Certified by *H. A. Bickler*

**F O S S B A C H E R   L A B O R A T O R Y   L T D .**

2225 S. SPRINGER AVENUE  
 BURNABY, B.C. V5B 3N1  
 TEL : (604) 299 - 6910

**C E R T I F I C A T E   O F   A N A L Y S I S**

**T L :** MPH CONSULTING LTD.  
 301-409 GRANVILLE STREET  
 VANCOUVER B.C.

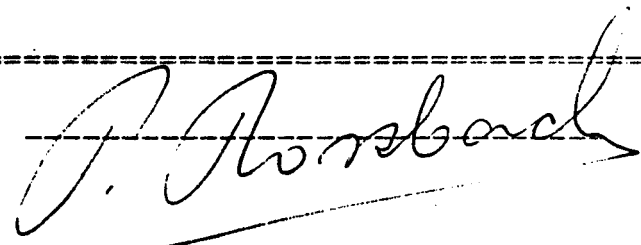
**CERTIFICATE#:** 86387  
**INVOICE#:** 6671  
**DATE ENTERED:** 86 09 02  
**FILE NAME:** HPH86387  
**PAGE # :** 1

**P O J E C T :** V 238  
**T Y P E   O F   A N A L Y S I S :** GEOCHEMICAL

P E F.X	SAMPLE NAME	PPB Au	oz/t Au
T	507	5	
	508	20	
	509	190	0.007 <--- ASSAY
T	510	5	
	511	5	
	512	5	
T	513	5	
T	514	5	
	515	5	
I	516	20	
T	517	5	
	518	30	
	519	5	
T	520	5	
	521	5	
	522	5	
T	523	5	
T	524	5	
	525	5	
I	526	5	
T	527	5	
	528	5	
	529	5	
T	530	5	
	531	5	
	532	5	
T	533	5	
T	534	5	
	535	10	
	536	30	
T	537	5	
	538	5	

**RECEIVED SEP 8 1986**

**CERTIFIED BY :**



**R SSBACHER LABORATORY LTD.**

2225 S. SPRINGER AVENUE  
BURNABY, B.C. V5B 3M1  
TEL : (604) 299 - 5710

**CERTIFICATE OF ANALYSIS**

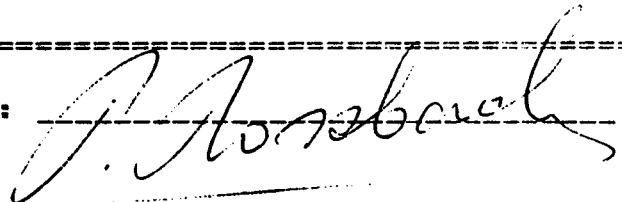
TO : MPH CONSULTING LTD.  
301-409 GRANVILLE STREET  
VANCOUVER B.C.  
PROJECT: V 238  
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 04307  
INVOICE#: 6491  
DATE ENTERED: 86-07-02  
FILE NAME: HPH06307  
PAGE # : 2

FrE FIX	SAMPLE NAME	PPB Au	oz/t Au
	656	5	
T	657	5	
-	658	5	
	659	5	
T	660	5	

RECEIVED SEP 8 1986

CERTIFIED BY :



**R. ROSSBACHER LABORATORY LTD.**

2225 S. SPRINGER AVENUE  
BURNABY, B.C. V5B 3M1  
TEL : (604) 299 - 6210

**CERTIFICATE OF ANALYSIS**

TO : MPH CONSULTING LTD.  
301-409 GRANVILLE STREET  
VANCOUVER B.C.  
PROJECT: V 238  
TYPE OF ANALYSIS: GEOCHEMICAL

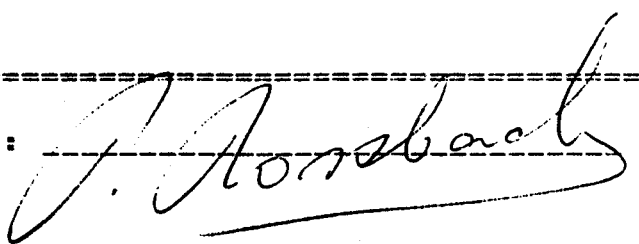
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INVOICE#: 6491  
DATE ENTERED: 86-09-03  
FILE NAME: H1192307  
PAGE # : 3

PPB	oz/t
Au	Au

T	1169	5
T	1170	5
T	1171	5
T	1172	5
T	1173	5
T	1174	5
T	1175	80
T	1176	5
T	1177	5
T	1180	5
T	1181	5
T	1182	5

RECEIVED SEP 8 1986

CERTIFIED BY :



**F OSSBACHER LABORATORY LTD.**

2225 S. SPRINGER AVENUE  
 BURNABY, B.C. V5B 3N1  
 TEL : (604) 299 - 6910

**CERTIFICATE OF ANALYSIS**

**T :** MPH CONSULTING LTD.  
 301-409 GRANVILLE STREET  
 VANCOUVER B.C.

**CERTIFICATE#:** 86387.0  
**INVOICE#:** 6677  
**DATE ENTERED:** 86-08-28  
**FILE NAME:** NPH86387.A  
**PAGE # :** 1 0

**P OJECT:** V 238  
**T YPE OF ANALYSIS:** GEOCHEMICAL

P E F X	SAMPLE NAME	% SiO2	% Al2O3	% MgO	% Fe2O3	% CaO	% K2O	% Na2O	% TiO2	% MnO
	507	45.5	16.2	3.0	7.7	13.8	0.1	5.0	2.3	0.2
	514	56.0	18.2	2.2	4.2	6.5	1.1	6.8	1.2	0.1
A	528	44.0	16.7	3.5	5.5	10.4	1.9	2.6	0.6	0.1
A	529	44.0	16.5	5.7	8.0	8.5	2.0	1.6	0.8	0.2
	530	41.5	16.4	4.0	6.0	11.0	2.7	2.7	0.6	0.1
..	534	42.0	6.4	6.1	8.4	14.1	0.9	0.2	0.2	0.2
A	535	51.0	20.4	2.0	9.4	4.6	4.7	2.7	1.4	0.1
	537	70.0	12.0	2.7	6.9	2.9	1.5	2.0	0.5	0.1

RECEIVED SEP 3 1986

CERTIFIED BY :

*J. Rossbach*

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 S. SPRINGER AVENUE  
BURNABY, B.C. V5B 3N1  
TEL : (604) 292 - 6910

TO : MPH CONSULTING LTD.  
301-409 GRANVILLE STREET  
VANCOUVER B.C.

PROJECT: V 238  
TYPE OF ANALYSIS: GEOCHEMICAL

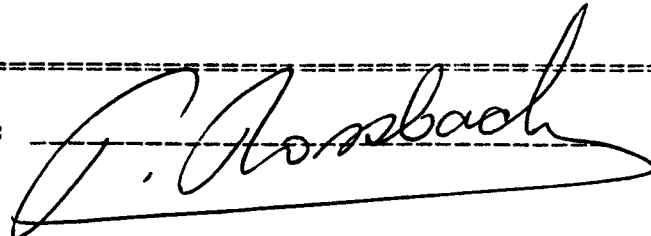
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INVOICE#: 6679  
DATE ENTERED: 06-08-29  
FILE NAME: MFH066307.0  
PAGE # : 1 R

RE FIX	SAMPLE NAME	% LOI	% TOTAL
A	507	8.7	102.5
A	514	5.3	101.7
A	528	12.4	97.7
A	529	14.7	102.0
A	530	16.3	101.2
A	534	23.5	102.0
A	535	3.6	100.1
A	537	3.6	102.2

RECEIVED SEP 3

1986

CERTIFIED BY :





**Appendix IV**

**ABBREVIATIONS USED IN**

**MINERAL OCCURRENCES REFERENCES**





## ABBREVIATIONS USED IN MINERAL OCCURRENCES REFERENCES

AR	B.C. Ministry of Energy, Mines, and Petroleum Resources Assessment Report
BCDM	British Columbia Department of Mines
Bull	Bulletin
Carson	Metallogenic Study of Vancouver Island with Emphasis on the Relationships of Mineral Deposits to Plutonic Rocks; D.J.T. Carson, Carleton University Ph.D. Thesis, May, 1968.
EBC	Exploration in British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources
GEM	Geology, Exploration and Mining in British Columbia; B.C. Department of Mines and Petroleum Resources
GSC	Geological Survey of Canada
Gunnex	Mineral Occurrences, E&N Land Grant, Vancouver Island, B.C.; Gunnex Ltd., 1966
Minfile	B.C. Ministry of Energy, Mines and Petroleum Resources Minfile, Feb. 2, 1984
MMAR	B.C. Ministry of Mines Annual Report
P	Paper
TML	Today's Market Line
VS	Vancouver Stockwatch



**Appendix V**

**CONVERSION FACTORS FOR METRIC UNITS**



### Conversion Factors for Metric Units

1 inch	=	25.4 millimetres	(mm)
		or 2.54 centimetres	(cm)
1 cm	=	0.394 inch	
1 foot	=	0.3048 metre	(m)
1 m	=	3.281 feet	
1 mile	=	1.609 kilometres	(km)
1 km	=	0.621 mile	
1 acre	=	0.4047 hectares	(ha)
1 ha	=	2.471 acres	
1 ha	=	100 m x 100 m = 10,000 m <sup>2</sup>	
1 km <sup>2</sup>	=	100 ha	
1 troy ounce	=	31.103 grams	(g)
1 g	=	0.032 troy oz	
1 pound (lb)	=	0.454 kilogram	(kg)
1 kg	=	2.20 lb	
1 ton (2000 lb)	=	0.907 tonne	(t)
1 tonne	=	1.102 ton = 2205 lb	
1 troy ounce/ton	=	34.286 g/t	
1 g/tonne	=	0.0292 troy oz/ton	
1 g/t	=	1 part per million	(ppm)
1 ppm	=	1000 parts per billion	(ppb)
10,000 g/t	=	1%	



**Appendix VI**

**COPIES OF O/C 549 AND O/C 394**



549

APPROVED AND ORDERED FEB. 26. 1981

*[Signature]*  
 Administrator  
 Lieutenant-Governor

EXECUTIVE COUNCIL CHAMBERS, VICTORIA FEB. 26. 1981

On the recommendation of the undersigned, the <sup>Administrator</sup>~~Lieutenant-Governor~~, by and with the advice and consent of the Executive Council, orders that

1. The following described land in the Victoria and Nanaimo Mining Divisions, Esquimalt, Goldstream, Malahat, Shawnigan, Saltspring Island, Comiaken, Somenos, Chemainus, Oyster, Bright, Cedar, Cranberry, Mountain, Dunsmuir, Nanoose, Cameron, Alberni, Newcastle, Nelson, Comox and Sayward Land Districts, is established as a mineral reserve and as a placer mining reserve until March 1, 1983. RE: O/C # 266 - FEB 21/83  
1985.

An area 1 500 m wide, being 750 m on each side of the center line of the right-of-way of the proposed British Columbia Hydro and Power Authority Vancouver Island Gas Pipeline as shown on Maps 1-15, File 113(529), in the office of the Chief Gold Commissioner, Ministry of Energy, Mines and Petroleum Resources, Victoria, British Columbia.

2. No free miner shall obstruct, endanger or interfere with or allow any other person to obstruct, endanger or interfere with the construction, operation or maintenance of British Columbia Hydro and Power Authority's Vancouver Island Gas Pipeline in the reserve created by section 1.

*[Signature]*

Minister of Energy, Mines and Petroleum Resources

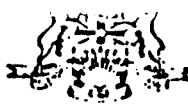
*[Signature]*

Presiding Member of the Executive Council

FILED

MAR - 2 1981

10710



394

APPROVED AND ORDERED MAR - 7 1985

Administrator  
Lieutenant - Governor

EXECUTIVE COUNCIL CHAMBERS, VICTORIA MAR - 6 1985

Lieutenant - Governor

On the recommendation of the undersigned, the Administrator, by and with the advice and consent of the Executive Council, orders that

1. Section 1 of B.C. Reg. 103/81 and Section 1 of B.C. Reg. 181/81 be amended by striking out "March 1, 1985" and substituting "March 1, 1990".
2. The following described lands in the Nanaimo and Victoria Mining Divisions; Shawnigan, Helmcken, Quamichan, Somenos, Cranberry, Bright and Oyster Land Districts are established as a Mineral Reserve and, as a Placer Mining Reserve until March 1, 1990:

An area 1 500 metres wide being 750 metres on each side of each centre line of the right-of-way of the proposed British Columbia Hydro and Power Authority's Vancouver Island Natural Gas Pipeline as shown in red on the accompanying maps.

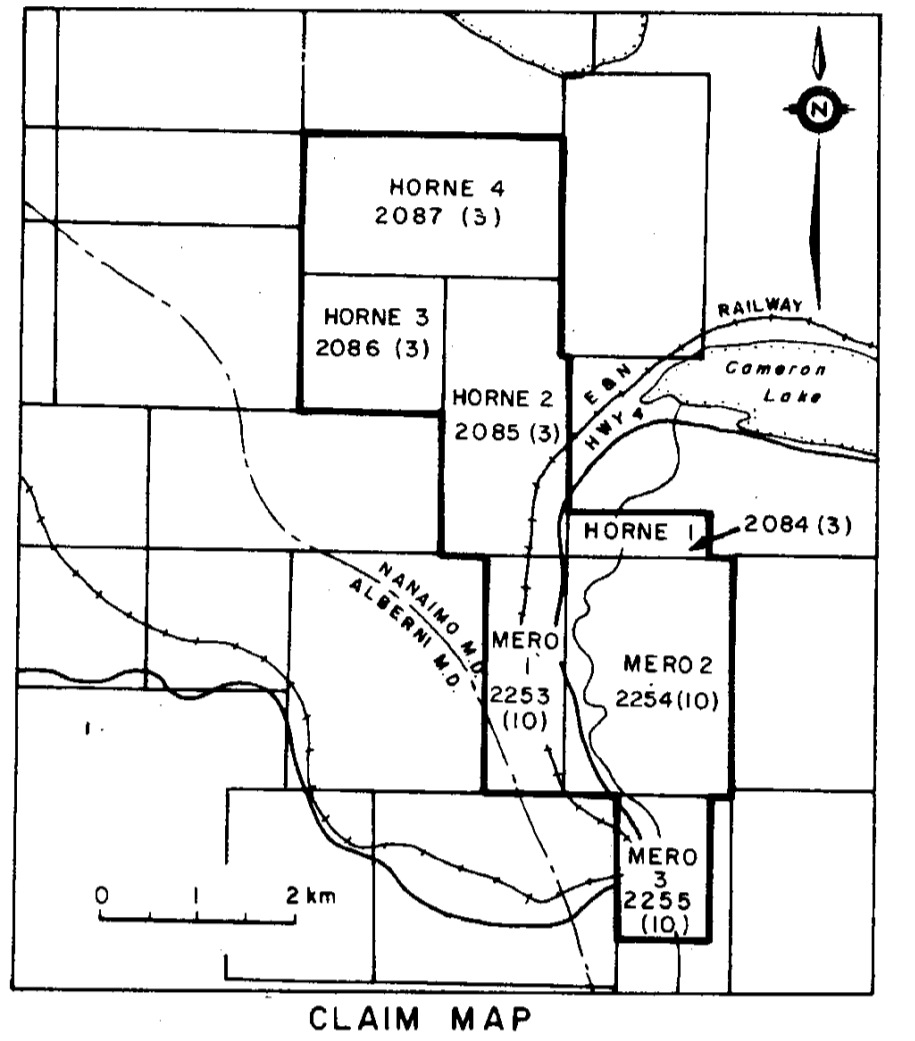
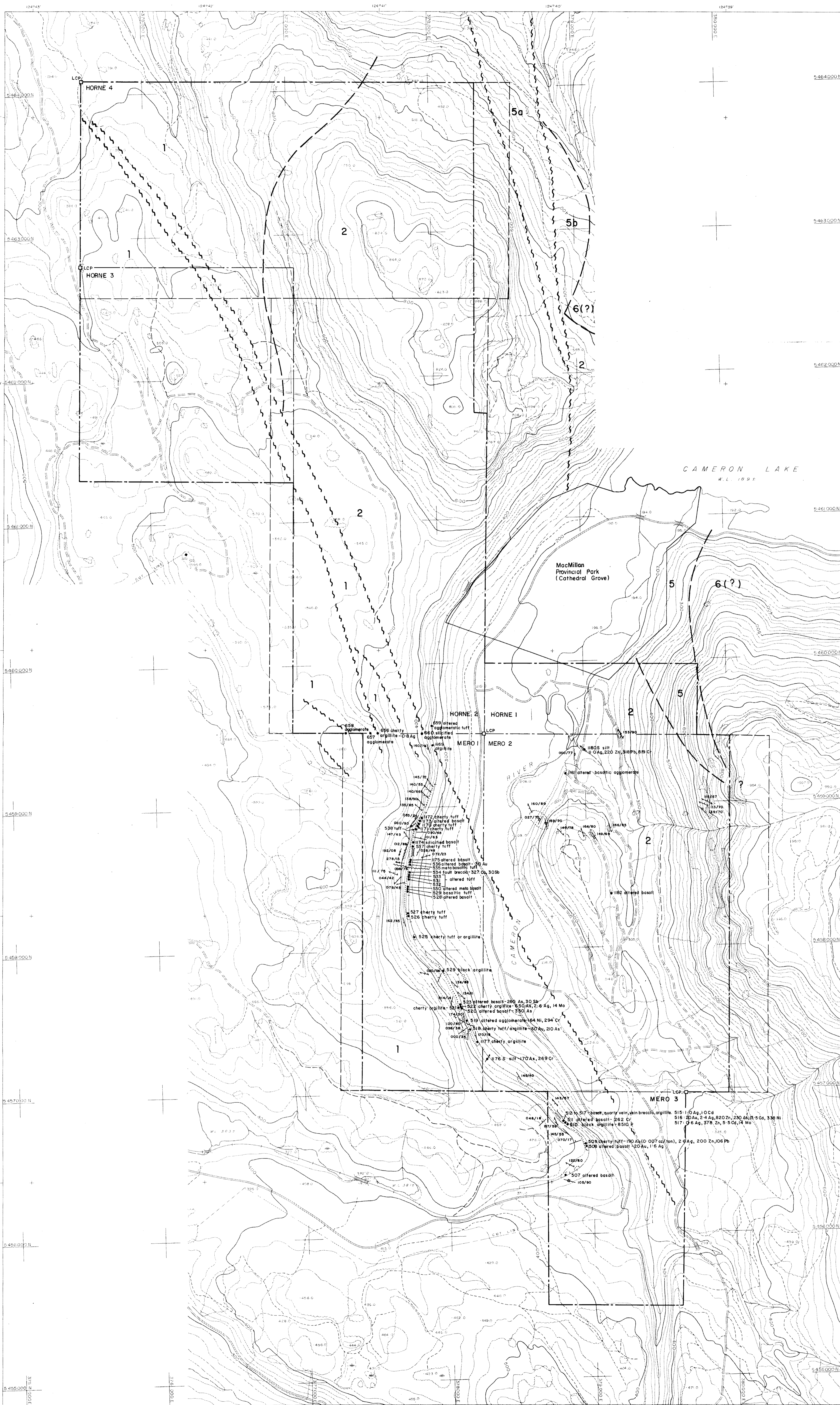
3. A Free Miner may locate or record a mineral claim or stake or acquire a location on all or part of the land in the Mineral Reserve and Placer Mining Reserve subject to the following conditions:

No Free Miner shall obstruct, endanger or interfere with the construction, operation or maintenance of a transmission line, pipeline or other work, structure or activity on all or part of the land in the Mineral Reserve and Placer Mining Reserve.

Minister of Energy, Mines and Petroleum Resources

Presiding Member of the Executive Council





**LEGEND**

- MESOZOIC**  
MIDDLE AND UPPER TRIASSIC  
VANCOUVER GROUP
- 6 Karmutsen Formation  
pillow basalt, breccia, tuff; minor flows
- PALEOZOIC**  
SICKER GROUP  
PENNSYLVANIAN / PERMIAN
- 5 Buttle Lake Formation  
limestone, chert, greywacke, argillite
- LOWER DEVONIAN AND OLDER
- 2 Myra Formation  
2a, quartz-carbonate-sericitic schist, with listwanitic alteration.  
2b, felsic to intermediate interbedded tuff and agglomerate.  
2c, interbedded ribbon chert, cherty tuff and cherty argillite with discontinuous iron formation.
- 1 Nitinat Formation  
1a, augite-bearing agglomerate.  
1b, vesicular, amygdaloidal, massive, pillowed basalt.  
1c, mafic tuff and cherty argillite.

**SYMBOLS**

- Geological contact
- Fault trace
- Rock sample
- Silt sample
- Bedding
- Foliation
- Joint
- Slickensides
- Quartz vein
- Area of outcrop
- Legal corner post as located by G.R.C.
- Property boundary
- Claim boundary
- Park boundary
- Railway trestle
- Lithochemical results, Au in ppb, others in ppm except as noted.

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**15,557**

NEXUS RESOURCE CORPORATION

**PROPERTY PLAN AND GEOLOGY**  
CATHEDRAL GROUP  
MERO 1-3 AND HORNE 1-4 CLAIMS  
NANAIMO MINING DIVISION, B.C.

Project No: V 238 By: T.N., G.R.C., H.E.  
Scale: 1:10 000 Drawn: J.S.  
Drawing No: 5 Date: JANUARY 1987.

