

85-116-13520



Prospecting

**PRELIMINARY ASSESSMENT
AND
RECOMMENDED WORK PROGRAM
WES CLAIM
NANAIMO MINING DIVISION
BRITISH COLUMBIA
FOR VILLEBON RESOURCES LTD.**

3/86

JULY 25, 1984

T. NEALE, B.Sc. T.G. HAWKINS, P.Geol.

49° 18.5"
124° 39.5'
92F/7E

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,520





SUMMARY

Geological exploration on the WES claim in the Nanaimo Mining Division, consisting of reconnaissance geological mapping and rock sampling for lithogeochemical analysis, was carried out by MPH Consulting Limited in June, 1984.

The copper showing reported by Gunnex Ltd. was not re-located. All rock samples returned low values for Au, Ag, and Zn, while the best Cu value was only 270 ppm. The existence of Myra Formation cherty and andesitic tuffs on the claim was confirmed by mapping.

Six past-producing mines occur in the Port Alberni area, along with many sub-economic precious and base metal occurrences. The potential for locating a volcanogenic massive sulphide deposit and/or a precious/base metal quartz vein deposit on the property is considered good, based on the indicated geological environment. Potential also exists for locating a cherty iron and/or manganese deposit on the property.

A 40-day Phase I program of geological mapping and sampling, soil sampling, and VLF-EM and magnetometer surveys over the entire claim is recommended at an estimated cost of \$52,000. Contingent upon favourable results from Phase I, a Phase II program consisting of trenching, rock sampling, and detailed geological and geophysical surveys is recommended.



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WES CLAIM

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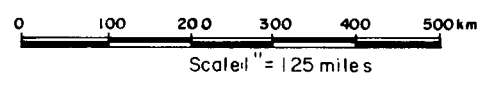
GENERAL LOCATION MAP

WES CLAIM

NANAIMO MINING DIVISION

Project No.	V 165	By:	T. N.
Scale:		Drawn:	J. S.
Drawing No.	1	Date:	JULY, 1984.

 **MPH Consulting Limited**





1.0 INTRODUCTION

This report is prepared at the request of Mr. M.E. Schorn, President, Villebon Resources Ltd. on June 15, 1984. It is a compilation of field work carried out by MPH Consulting Limited on the WES claim on June 17 and 18, 1984. Work included reconnaissance geological mapping and rock sampling for lithogeochemical analysis.

Included in the report are a summary of all known geological and mining exploration work in the area, a description of regional and property geology, and a discussion of the economic setting of the claim. A recommended work program designed to explore the economic massive sulphide and/or quartz vein potential of the claim is provided.

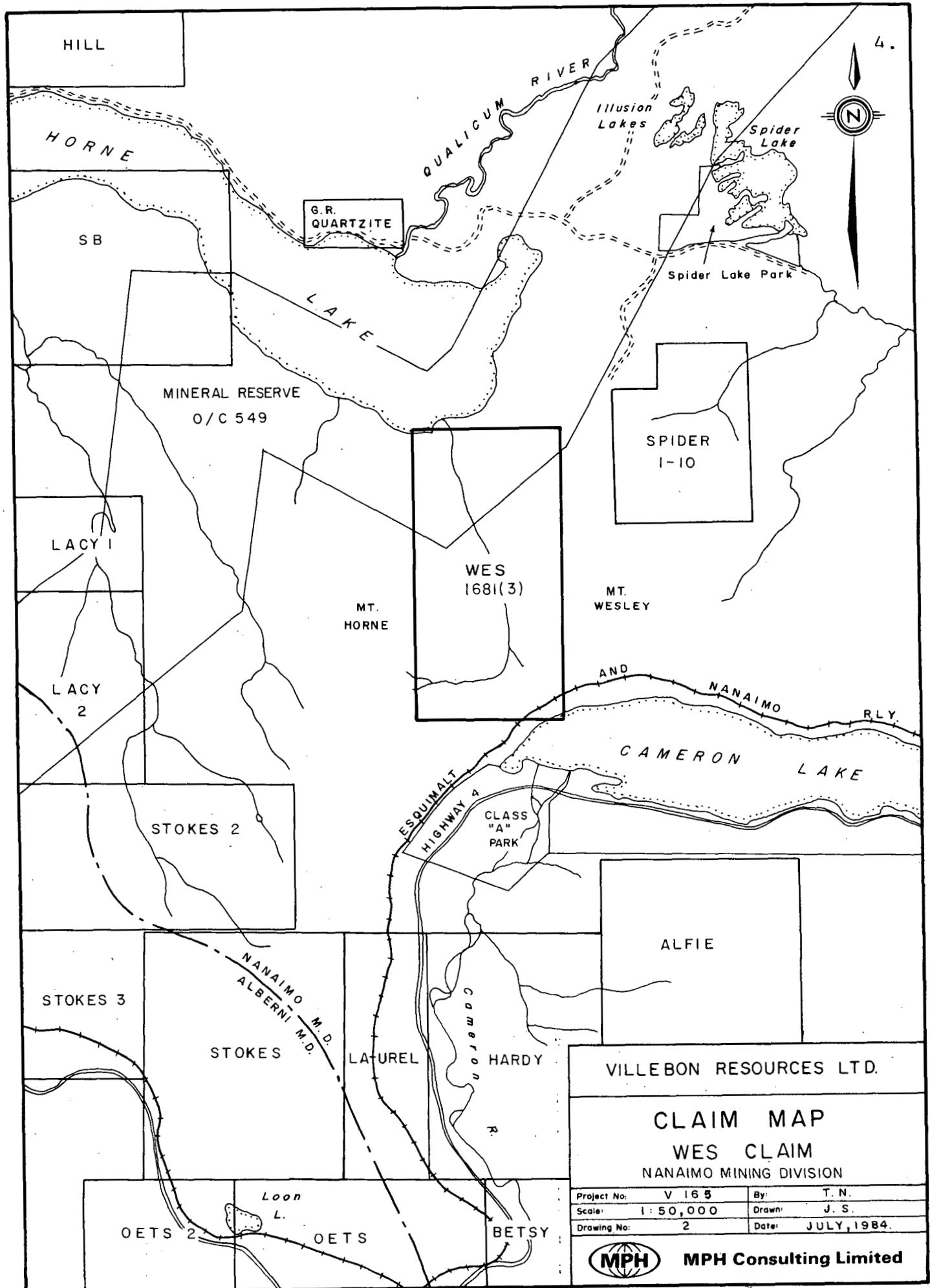


2.0 PROPERTY LOCATION, ACCESS, TITLE

The WES claim is located 14 km northeast of Port Alberni between Cameron and Horne Lakes in the Nanaimo Mining Division of B.C. The claim is centred at approximately 49°18.5'N latitude, 124°39.5'W longitude on NTS mapsheet 92F/7.

Access to the claim is from Dunsmuir on Highway 19. A gravel road runs southwest to Horne Lake, where a series of roads leads around the eastern end of Horne Lake and up the valley between Mount Horne and Mount Wesley onto the claim. Several logging roads in rather bad condition give access to the eastern side of the claim (Figures 1,2).

The WES claim is 18 units in size, is owned by Villebon Resources Ltd., and has a record number of 1681(3). The anniversary date of the claim is March 27, 1985.



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CLAIM MAP
WES CLAIM
 NANAIMO MINING DIVISION

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Scale: 1:50,000	Drawn: J. S.
Drawing No: 2	Date: JULY, 1984.

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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), and J.E. Muller (1977 and 1980).

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

From 1963 to 1966, Gunnex Ltd. carried out a regional mapping program with limited prospecting and silt sampling. They compiled a list of all known mineral occurrences in the area and visited many of them. One of the occurrences described by Gunnex, the "Mount Wesley Copper Showing", is located on the WES claim. Gunnex did not visit the showing, but quoted a brief description of it from a 1962 report by Hunting Survey Corp. Ltd.

More detailed histories of neighbouring prospects and properties are enclosed in Mineral Occurrences section following.



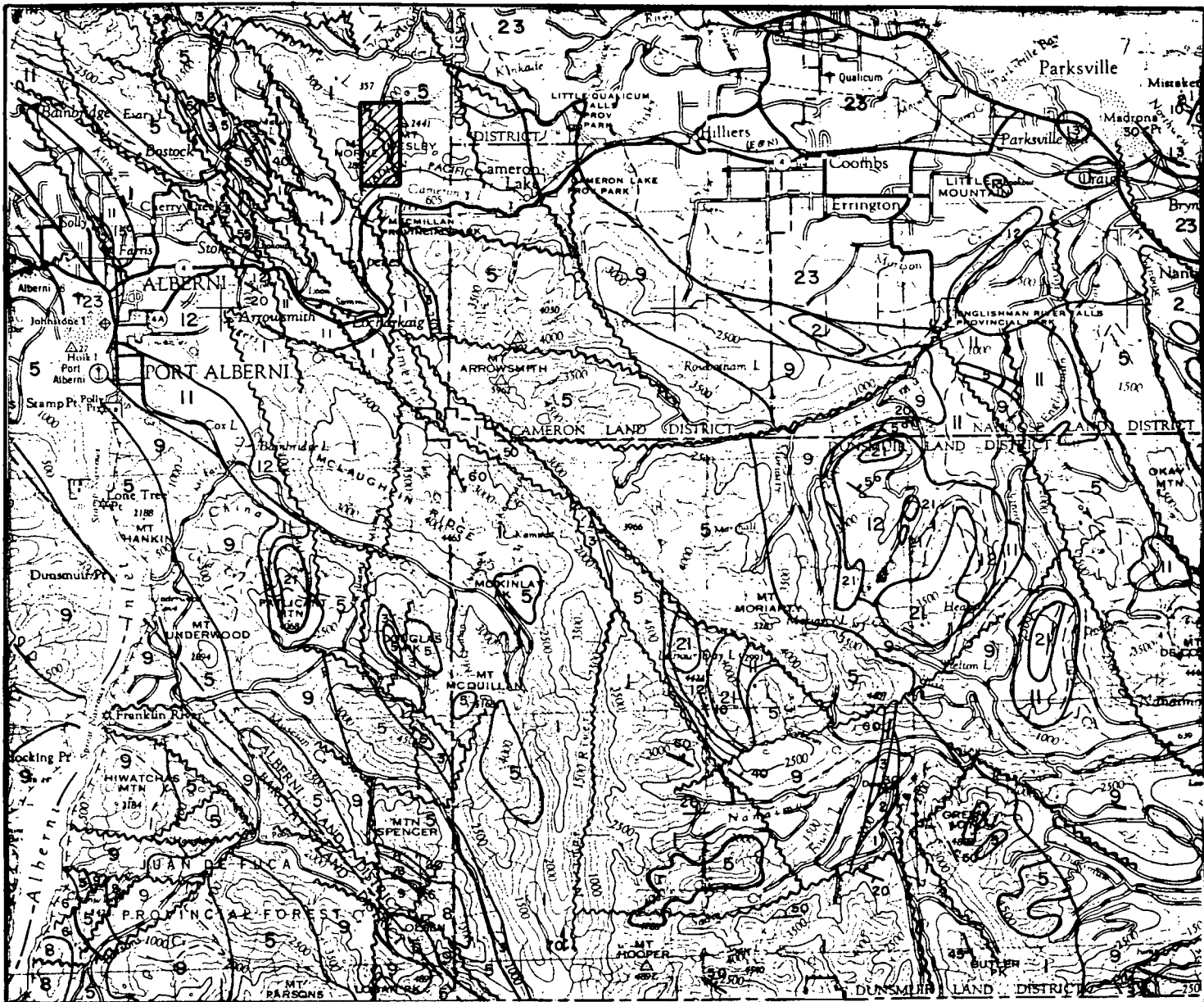
4.0 REGIONAL GEOLOGY

The predominant rock units in the Port Alberni-Cameron 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. 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 subdivision of the Group from youngest to oldest: Buttle Lake Formation, Sediment-Sill Unit, Myra Formation, and Nitinat Formation.

The Nitinat Formation (Unit 1) consists predominantly of basic volcanic rocks, most commonly flow-breccias, including some massive flows, and rare pillow basalts or agglomerates. Locally, medium-grained, generally massive basaltic tuff is interbedded with the flows. The flow-breccia is composed of fragments of basalt up to 30 cm in length containing uralite phenocrysts and black or white amygdules, both from 1 mm to more than 1 cm in size, in a matrix of finer grained, similar basalt(?). Thin sections show that the uralite is replacing diopside. Uralitized gabbroic rocks 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 usual lack of pillow basalts,



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 TO UPPER TRIASSIC

VANCOUVER GROUP

8 BONANZA SUBGROUP, VOLCANIC DIVISION: andesitic to latitic breccia, tuff and lava, minor greywacke, argillite and siltstone.

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



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REGIONAL GEOLOGY MAP

WES CLAIM

NANAIMO MINING DIVISION

Project No:	V 165	By:	T. N.
Scale:	1 : 250,000	Drawn:	J. S.
Drawing No:	3	Date:	JULY, 1984.



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the abundance of uralite phenocrysts, the pervasive shear foliation, and low greenschist or higher metamorphic grade.

The Myra Formation (Unit 2) 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 pelitic 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 is comprised of 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 northwest of the Wes claim. Here, volcanoclastic rocks consisting dominantly of rhyodacitic or rhyolitic tuff, lapilli tuff, breccia, and some quartz prophyry 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.

Muller (1980) estimated the thickness of the Nitinat Formation at about 2000 m and that of the Myra Formation at 750 to 1000 m. Both the Nitinat and Myra Formations were 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 is not mapped within the report map area.

The Buttle Lake Formation (Unit 3) 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 466 m thick. The age of the formation, on the basis of fossil dating, appears to be Middle Pennsylvanian, but could possibly be as young as Early Permian (Muller, 1980).

4.2 Vancouver Group

The Karmutsen Formation volcanic rocks (Unit 5) paraconformably overlie the Buttle Lake Formation limestone to form the base of the Vancouver Group. They are the thickest and most widespread



rocks on Vancouver Island. The formation, which is well exposed southeast of Port Alberni, consists mainly of dark grey to black pillowed basalt, massive basalt and pillow breccia. Flows are commonly aphanitic and amygdaloidal. Pillowed volcanics generally occur toward the base of the section.

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

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

Massive to thick bedded limestone of the Quatsino Formation (Unit 6) occurs south of Mount Spencer. The limestone is black to dark grey and fine grained to micro-crystalline. In the vicinity of intrusive rocks, coarse grained marble is recognized. Thin bedded limestone also occurs in the formation. Fossils indicate an age of Upper Triassic (Muller and Carson, 1969).

The Bonanza Subgroup of the Vancouver Group consists of a lower sedimentary unit and an upper volcanic unit. The sedimentary unit is not exposed in the Port Alberni area. The volcanic unit (Unit 8) is exposed south of Mount Spencer and south of Corrigan Creek and consists of light coloured andesite to latite breccia, tuff and flows with minor greywacke, argillite and siltstone. The unit is considered to be possibly of Lower Jurassic age.

4.3 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 (Unit 11) 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 (Unit 12) is a near shore littoral depositional facies unit characterized by massive bedded fossiliferous sandy shale, siltstone and shaly sandstone.

Interbedded coarse clastic conglomerate, pebbly sandstone, and arkosic sandstone of the Extension-Protection Formation (Unit 13) are beach and deltaic sands. Minor shale and coal are reported.

4.4 Intrusive Rocks

Gabbro, Peridotite, Diabase (Unit 4). 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 (Unit 9). Exposures of mainly 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 Vancouver Group volcanic rocks are characterized by transitional zones of gneissic rocks and migmatite although contacts with Karmutsen Formation volcanic/sedimentary rocks are sharp and well defined. Skarn zones are reported at the contact of Island Intrusion rocks with Quatsino Formation limestone and less frequently with Buttle Lake Formation limestone.

Tertiary (Catface or Sooke) Intrusions (Unit 21). Sills and stocks of mainly hornblende-quartz diorite and dacitic hornblende-feldspar porphyry plus lesser leucocratic quartz monzonite intrude Nanaimo Group sedimentary rocks and Sicker Group rocks in the area.

4.5 Structure

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

Asymmetric southwest trending anticlinal structures characterized by sub-vertical southwest limbs and moderately dipping

northeast limbs are reported at Buttle Lake and in the Cameron-Nitinat River area. Intense shearing and metamorphism to chlorite-actinolite and chlorite-sericite schist occurs in steep and overturned limbs of folds. Overlying Buttle Lake Formation limestones are relatively undeformed except where they are thin.

Vancouver Group units are not as intensely folded; gentle monoclinical and domal structures have been mapped. However, Karmutsen Formation volcanic rocks locally conform to the attitude of underlying Myra and Buttle Lake Formations (J.E. Muller, 1980).

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

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments. The north trending Alberni Valley fault is traced over 45 miles and displaces a section of Karmutsen Formation approximately 5,000 feet (Muller and Carson, 1969).

4.6 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 area.

The volcanogenic massive sulphide deposits of Westmin Resources Ltd., first discovered in 1917 although not recognized as volcanogenic until the late 1960's, occur at Buttle Lake, approximately 70 km northwest of the Port Alberni area. Four zones of mineralization consisting of the ore minerals sphalerite, chalcopyrite, galena, tetrahedrite-tennantite plus 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 1,021,400 T grading 1% Cu, 0.9% Pb, 7.4% Zn, 0.06 oz Au/T, 2.6 oz Ag/T (1983). Published reserves of the H-W zone are 15,232,000 T averaging 2.2% Cu, 5.3% Zn, 0.3% Pb, 0.07 oz Au/T and 1.1 oz Ag/T (Walker, 1983). In the 3 years, 1980 to 1982, there were 895,048 T of ore milled producing 16,109,000 lbs Cu, 96,356,000 lbs Zn, 14,231,000 Pb, 56,000 oz Au, 2,528,000 oz Ag and 129,000 lbs 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 Wes claim. Two parallel orebodies, each containing pyrite, chalcopyrite, sphalerite, and minor galena in a



barite-quartz-calcite gangue and chalcopyrite in quartz, occur in schists believed to have been derived from acidic volcanics (Myra Formation).

Total production from 1898 to 1964 was 305,770 tons producing 44,491 oz Au, 934,522 oz Ag, 21,053,360 lb Cu, and 45,864,654 lb Zn with at least 362,854 lb Pb and 10 lb Cd.

Six past producing mines occur in the Port Alberni area. The Thistle Mine produced 2,760 oz Au, 2,120 oz Ag and 681,425 lbs Cu from 6,920 T of ore. It was originally considered to be a skarn deposit (J.S. Stevenson, 1944, D.J.T. 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 may be of syngenetic-volcanogenic origin.

The Havilah Mine (1,046 T produced 259 oz Au, 1,404 oz Ag) and the Vancouver Island Gold Mine (483 T produced 384 oz Au, 52 oz Ag) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group.

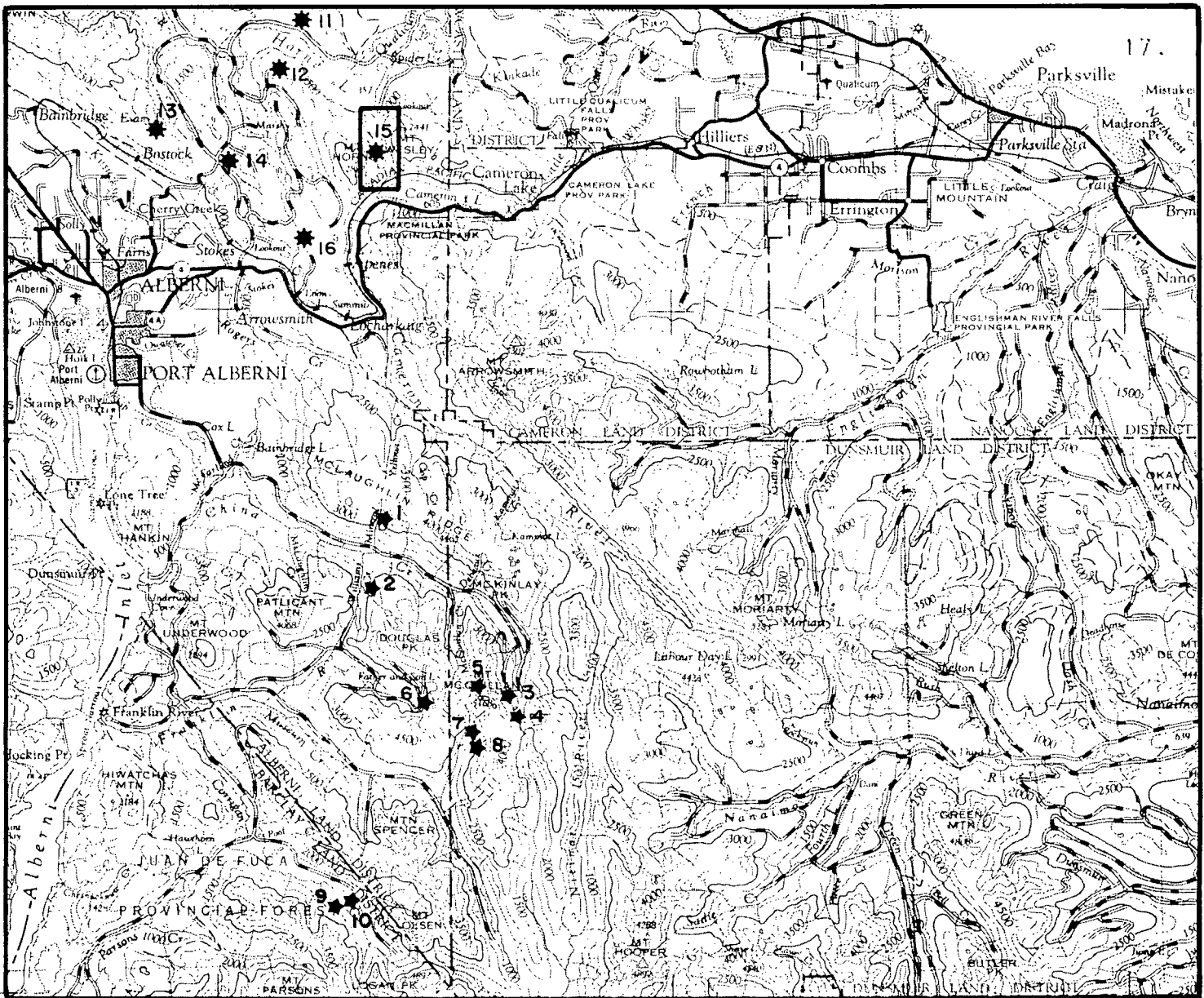
The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and diorite. Production of 1890 T of ore yielded 509 oz Au, 953 oz Ag, 12,319 lbs Pb and at least 4,478 lbs Zn and 498 lbs Cu.



Other past producers in the area include the 3-W Mine ('limited' production of Au-Ag) and the Corrigan Creek Mine (116 T of ore grading 4.0 oz Au/T, 4.3 oz Ag/T, 0.23% Cu, 1.1% Pb), both quartz vein deposits hosted by diorite and granodiorites (Island Intrusions) and both situated 25 km south-southeast of Port Alberni.

In addition, three iron and/or manganese deposits hosted by Myra Formation chert or cherty volcanics occur in the vicinity of the Wes claim. No production has occurred from these deposits, although a similar deposit east of Cowichan Lake (Hill 60) shipped 1251 tons of manganese ore grading approximately 50% Mn in 1919-20.

Significant base metal and gold deposits and occurrences of the Sicker Group in the Port Alberni area are summarized below (Figure 4).

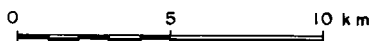


GOLD DEPOSITS AND OCCURRENCES

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

BASE METAL OCCURRENCES

11. P. D.
12. Silver Bell
13. Esary Lake
14. Lacy Lake
15. Mt. Wesley Cu Showing
16. Cameron Lake



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MINERAL OCCURRENCE
LOCATION MAP
WES CLAIM

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4.7 Mineral Occurrences

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 40 foot wide shear zone has been extensively altered by ankerite, quartz stringers, occasional pyrite veinlets, and kaolinitization.

Economic Features:

Recorded production in 1896, 1898, 1933-36, and 1939 totals 483 tons of ore yielding 384 oz Au, 52 oz Ag, and 194 lb Cu.

The Mac vein is traced for 250 feet and ranges from 3 to 18 inches wide, averaging 5 to 6 inches. Sixty-three samples taken over the 250 feet averaged 6 inches in width and 3.69 oz/ton Au. The highest assay was 20 oz/ton Au. A 40 ton shipment from the Mac vein returned 2.9 oz/ton Au and 0.5 oz/ton Ag. (Ref. 1-1934)

The Belcher vein is exposed discontinuously for 950 feet and ranged from almost nothing to 4 feet in width, averaging 6 to 12 inches in the upper adit. Gold content is reported to be low except in the shaft and stope workings. Recent sampling results show from 0.003 to 0.29 oz Au/ton and from 0.06 to 0.10 oz Ag/ton over 5 foot lengths (Ref. 3).



The Dunsmuir vein is exposed in trenches for about 400 feet and ranges up to 10 inches in width. No assays are reported (Ref. 1-1936).

The Waterfall vein is exposed for 108 feet and is 3 inches to 2.5 feet wide. Gold assays were low in sampling done by Vancouver Island Gold Mines Ltd., except for two samples which ran 1.4 oz Au/ton over 3 inches and 11.8 oz Au/ton over 6 inches (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 0.16 oz/ton Au over widths of 5 and 10 feet (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.

History:

- 1895: Alberni, Chicago, Warspite, Victoria claims staked; dispute over ownership.
- 1896: Alberni Consolidated Mining Co.; won dispute, shaft at 40 feet and a tunnel being driven, two tons of ore shipped from a smaller vein (Dunsmuir?) uphill from main vein, open cut on 8-30 inch vein on Chicago claim.
- 1897-98: An English company built a 10 ton per day, 8 stamp mill and only made two clean-ups. Results unknown.
- 1933-39: 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 1905 feet including various raises, etc. on the quartz veins and 2 adits totalling 277 feet and 12 strippings were made on the carbonatized shear zone. A total of 403 tons of ore was mined. In 1936 a 35 ton pilot mill was built, but only milled a few tons of ore before the operations were ceased due to operating difficulties. In 1939 some rehabilitation work was done in the Mac adits and 48 tons of ore were shipped.

1964: Gunnex Ltd.; visited property, some sampling. Mapping planned for 1966.

1973-74: 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 claim groups) reconnaissance geological mapping and soil sampling.

References:

- 1) MMAR 1895-650, 1896-6, 1897-566, 1898-1132, 1934-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 (L.55G) 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 2 feet 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 Au 0.66 oz/ton, Ag 14.0 oz/ton (Ref. 1-1944). A large, highly oxidized bulk sample from the carbonatized zone assayed Au 0.64 oz/ton, Ag trace (Ref. 1-1944). A sample from 20 tons of ore on the dump (possibly hand sorted) in 1930 returned Au \$3.60/ton, Ag 5 oz/ton, Cu 5.0% (Ref. 1-1930). A grab sample from 40 tons of high grade hand-picked ore on the dump in 1964 assayed 0.02 oz/ton Au, 1.8 oz/ton Ag, 2.57% Cu, 1.98% Pb, and 9.01% 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. Twenty tons of ore from this work on a dump.

1944: E. Marillia; no recent work. Five adits totalling 288 feet, a 30 foot incline shaft, 2 open cuts, and a 5 foot 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 8 feet, averaging about 3.5 feet in width and has been traced in outcrop for 400 feet along strike and 325 feet vertically. An assay of \$56/ton Au,



3 oz/ton Ag, and 1% Cu is reported, and assays of up to \$103/ton Au are reported to have been obtained in 1894 (Ref. 1-1899). A tunnel 500 feet below the surface showing never intersected the vein despite being driven 1500 feet beyond the estimated intersection point of 600 feet.

History:

1892: The discovery of 2 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; 4 adits totaling 205 feet in upper workings, an adit driven at a lower level to avoid snowslides from 1896-1902 reached 2100 feet 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,
1897-566, 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 chalcopyrite 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 6 to 25 feet 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 130 feet and is 5 to 8 inches wide. A sample assayed at 3.84 oz/ton Au, 3.2 oz/ton Ag, 0.06% Cu over 5 inches. This vein may be on Golden Eagle property (Ref. 4).

A vein near the north end of the workings varies from 2 to 6 inches to a 6 foot stringer zone in width. Assays of 2.56 and 2.26 oz/ton Au are reported (Ref. 1-1944).

A sample from quartz nodules containing galena and pyrite from an open cut on two parallel shears, each 18 inches wide, ran 0.82 oz/ton Au and 0.7 oz/ton Ag (Ref. 4).

No assays are reported from the carbonatized zone. Many other quartz veins, from a hairline to 8 inches wide, for which no assays are available, occur within an area about 1250 feet long.

**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
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 lesser chalcopyrite 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 1046 tons yielding 259 oz Au, 1404 oz Ag, 4243 lb Cu, and 12,676 lb Pb. There are three main veins.



The Gillespie vein is the lowest. It is 3 to 34 inches wide and has been traced for 650 feet in 5 trenches. Most of the production came from the Gillespie vein. Assays range up to 0.4 oz/ton Au, 2.2 oz/ton Ag, 0.4% Pb, and 0.30% Zn over widths from 4 to 63 inches (Ref. 1-1936, 1944). Some oxidized samples taken over 1 foot assayed as high as 7 oz/ton Au and 3 oz/ton Ag. Average grade of the ore shipped from the Gillespie vein was 0.235 oz/ton Au and 1.28 oz/ton Ag (Ref. 1-1939). The vein was faulted off in two of the three adits, and could not be re-discovered.

The Alberni vein consists of a 10 foot wide by about 70 feet long zone of intense shearing containing 1 to 3 lenticular quartz veins 4 to 24 inches wide. Assays of 3.66 oz/ton Au and 5.2 oz/ton Ag over 4 inches and 1.8 oz/ton Au and 2.3 oz/ton Ag over 20 inches are reported (Ref. 9).

The McQuillan vein was prospected with a 57 foot adit. It ranges up to 8 inches in width. Assays of up to 1 oz/ton Au over 8 inches and 1.6 oz/ton Ag over a different 8 inches, are reported (Ref. 9).

A fourth vein on the easterly side of the cirque 1 to 2 feet wide assayed 0.16 oz/ton Au and 0.6 oz/ton Ag from an oxidized 2 foot 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 7 tons of ore were mined from the



upper showings (Alberni and McQuillan veins). In 1938-39, 2072 feet of drifting, crosscutting and raising on three levels on the Gillespie vein resulted in production of 1039 tons of ore. Diamond drilling and prospecting were also carried out. A high-line 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 1:4800, 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
- 4-6) AR 5354, 6138, 6643
- 7,8) GSC P68-50 p38
Map 49-1963, 17A
- 9) Gunnex #11
- 10) Minfile 92F-082

6. Thistle (L.91G) Au Ag Cu

Geology:

The mine area is underlain mainly by mafic volcanic and volcani-clastic rocks of the upper(?) Myra Formation (Ref. 10). The orebodies are reported to occur in two shear zones 130 feet apart within a 200 foot wide band of limestone. The limestone is



extensively altered to "diopside rock", composed of fine-grained diopside, and is partly underlain by and surrounded on three sides (NE, SE, SW) by fine-grained diorite. Strong faults located along the orebodies extend downward beyond the known ore limits (Ref.8).

The ore consists of chalcopyrite and some pyrite in a gangue of dirty grey calcite and a little quartz. Magnetite disseminated through much of the calcite is locally oxidized to hematite. Early workers considered this to be a replacement deposit; Carson (1968) believed it to be a type of skarn deposit; more recently it has been postulated that Thistle is a volcanogenic massive sulphide type of deposit.

Economic Features:

Production from 1938 to 1942 amounted to 6920 tons of ore which contained 2760 oz Au, 2120 oz Ag, and 681,425 lb Cu. The ore apparently occurs in lenses ranging from less than an inch up to at least 18 by 25 feet with much faulting cutting lenses off.

Assays from 2.71 to 10.2% Cu, 0.226 to 1.22 oz/ton Au, and 0.15 to 1.33 oz/ton Ag over apparent true thicknesses of 15 cm to 4 m are reported from chip samples (Ref. 10).



History:

1896: First staked.

1899: A. Watson et al; lower adit (500 adit) driven 65 feet but hadn't intersected ore that was 6 to 8 feet wide on surface, upper adit (300 adit) driven 90 feet but also hadn't intersected an orebody. A pit on one of the surface showings.

1901: Alberni Gold and Copper Co. Ltd.; roadbuilding, development work.

1902: J.M. Watson; granted Crown Grant L.91G.

1927: A. Watson et al; a 25 foot tunnel with a 20 foot crosscut, all in ore (300A adit?).

1938-40: United Prospectors Ltd.; shipments of ore were made from open cuts and glory holes and the old dumps.

1941-42: Vancouver Island Diamond Drilling and Exploration Co.; 1789 tons of ore mined, shut down July 25, 1942.

1944: The workings existing on the property included four adits totalling 527 feet, an 18 by 25 foot stope 60 feet long, two glory holes totalling about 6000 cubic yards, and several open cuts. Owned by United Prospectors Ltd., but no work done since 1942.

1962: Hunting Survey Corp.; regional aeromagnetic survey, geological mapping at the mine area.

1964-65: Gunnex Ltd.; visited the area, but no mapping done,

- silt sampling and prospecting in the general area.
- 1965: Vananda Explorations Ltd.; magnetometer, SP, and geochemical surveys, 4 diamond drill holes totalling 1745 feet.
- 1979: Kargen Development; linecutting, soil sampling.
- 1982: McQuillan Gold; airborne EM and magnetometer surveys, soil sampling, rock sampling, trenching, EM survey.
- 1983-84: Westmin Resources Ltd.; geological mapping, rock sampling (for assay, whole rock geochem, and thin sections), and prospecting.

References:

- 1) MMAR 1899-778, 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 92F083
- 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 of a few inches to 30 feet which locally is cut by numerous quartz stringers.

Economic Features:

The shear zone has been traced for at least two miles but the best mineralization is at the Black Panther workings where quartz lenses are one inch to three feet thick and up to 40 feet long. Four samples containing "heavy sulphides" from the 2700 and 2790 adits assayed from 2.30 to 2.88 oz/ton Au (Ref. 1-1944). A 1964 assay from the dump is reported as 1.16 oz/ton Au, 2.1 oz/ton Ag, 0.14% Cu, and 1.73% Pb (Ref. 4).

Production in 1947, 1948, and 1950 totalled 1890 tons which yielded 509 oz Au, 953 oz Ag, 498 lb Cu, and 12319 lb Pb, and at least 4478 lb Zn.

History:

1936: Claims first staked, upper adits driven shortly thereafter.

1939: Walter Harris; prospecting, drifting, cross-cutting (presumably those adits referred to above).

1941: Pioneer Gold Mines of B.C. Ltd.; drove the 2700 (Main) adit and the 2450 adit (about 1200 feet of drifting, crosscutting, and raising), 1631 feet of diamond drilling.

1944-48: Nitinat Golds Ltd. (became Nitinat Mines Ltd. in 1947); built a 25 ton flotation mill, mining, shipped 68.5 tons 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.

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

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 carbonatized zone 10 inches to 9 feet wide with local evidence of strong shearing.

Economic Features:

Open cuts exposed the "vein" for 175 feet with another exposure located 1300 feet to the south. The quartz-sulphide stringer zone is 12 to 18 inches wide. A sample of quartz and sulphides assayed 1.2 oz/ton Au. Samples of quartz-sulphide stringers and carbonatized country rock ranged from 0.27 to 0.43 oz/ton Au. The carbonatized rock itself assayed at trace to 0.03 oz/ton Au (Ref. 1-1944, Ref. 4).

History:

- 1941: Bralorne Mines Ltd.; prospecting, open cuts.
- 1942-64: Some diamond drilling is reported to have been done sometime during this period.
- 1964-65: Gunnex Ltd.; silt sampling and prospecting in the general area.



References:

- 1) MMAR 1944-159
- 2.3) GSC P68-50 p.38
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 24.5 feet wide; about 50 feet from the shaft it splits into two or three smaller veins within a zone 25 feet wide. Assays over 10.5 and 14 feet 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 8 feet in one trench.

History:

1927: James Palmer, M.L. Douglas; old workings included surface trenching, a 100 foot 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 dug.

References:

MMAR 1927-351



GSC P68-50 p.38

Gunnex #44

Carson 1968 p158

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 8 inches wide and at least 30 feet long. The second, smaller vein occurs parallel and 150 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, 0.005 oz/ton Au, and 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 100 foot adit.

1982: Asarco Exploration Co. of Canada Ltd.; soil sampling.

References:

MMAR 1939-99
AR 11024
GSC P68-50 p38
Gunnex #43
Carson 1968 p135
Minfile 92F243

13. 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 (#14 below) or Cameron Lake (#16 below).

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

References:

GSC P68-50 p38
Gunnex #32
Minfile 92F244

14. 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 150 feet 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. Mag survey and rock sampling recommended for 1966.

References:

GSC P68-50 p38

Gunnex #32

Minfile 92F245

15. Mount Wesley Copper Showing Cu

Geology:

Cliffs of Buttle Lake Formation limestone are veined and altered (rusty with some malachite specks). The limestone is overlain by Karmutsen volcanics and underlain by volcanic breccia, tuff, cherty tuff, and banded chert of the Sicker Group, 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: Not reported.



History:

1962: Hunting Survey Corp.; regional aeromagnetic survey, geological mapping.

References:

Gunnex #31

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 aeromag anomaly occurs nearby. A subsequent ground magnetometer survey located a strong anomaly 200 to 400 feet wide and at least 2000 feet long in the area of the aeromag 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/mag anomaly area.

Detailed magnetometer and E.M. survey recommended for 1966.



References:

GSC P68-50 p38

Gunnex #27

Minfile 92F246

5.0 LOCAL GEOLOGY AND WORK DONE

The Wes claim covers an area mapped by Muller (1977 and 1980) as being underlain by a large, northwest striking lens of Buttle Lake Formation limestone separating Myra Formation rocks on the west from Karmutsen Formation rocks on the east.

Reconnaissance mapping and sampling carried out by MPH Consulting Limited located lithologies belonging to all three above-mentioned formations. A total of 9 grab samples was collected (Figure 5). Rock sample descriptions and litho-geochemistry results are listed in Appendix I.

At this time the extent of Buttle Lake Formation limestone appears to be much less than indicated by regional mapping, as it was only located along logging road BR200. No outcrops of limestone were noted on either the main road up the valley, or along road BR100.

The copper showing mentioned in Gunnex's report (see #15 in the Mineral Occurrences section) could not be re-located. A sample of slightly rusty, somewhat silicified limestone containing a few greenish specks thought to possibly be malachite was taken, but it ran only 50 ppm Cu (64513).

Uphill (east) from the limestone, Karmutsen Formation basalts occur. Many large gossanous roadcuts were observed, but four samples (64509-64512) all returned low values. An outcrop of basalt on the main road by the bridge (64508) contains chips and fragments of jasper which are indicative of the base of the Karmutsen Formation. It appears therefore that the Karmutsen rocks are not in fault contact with the Sicker Group, as is often the case.



40.

Outcrops of Myra Formation andesitic tuff to cherty tuff occur all along the main road up the valley. Samples taken from Myra Formation rocks (64506, 64507, 64514) contained up to 2% pyrite, however none were anomalous in Au, Ag, Cu, or Zn.



6.0 RECOMMENDED WORK PROGRAM

6.1 Description

Phase IA will consist of detailed geological mapping with rock sampling and soil sampling on a flagged grid with lines spaced 100 m apart covering the entire Wes claim. Phase IB will consist of VLF-EM and magnetometer surveys over the same grid, with further geological mapping.

Detailed geological mapping will serve to define the property geology, and will locate and as far as possible delineate, surface mineralization and structural features. Rock samples taken during mapping will be used for whole rock lithochemical analyses and possibly for thin section study. Whole rock analyses will aid in naming rock types and will locate diagnostic alteration patterns of massive sulphide mineralization such as Na_2O and CaO depletion and K_2O , MgO , and FeO enrichment. Thin section study of representative rocks from the various units located will assist in distinguishing between similar rock types and accurately naming them. Surface showings will be sampled and analyzed for Au, Ag, Cu, Pb, Zn, and Mn.

Soil sampling on the grid lines is to be done at 100 m spacing. A total of 435 samples will be collected and geochemically analyzed for Au, Ag, Cu, Pb, Zn and Mn.

Geophysical surveys will consist of ground magnetometer and VLF-EM readings taken at 25 m intervals along the grid lines, which hopefully will define areas of anomalous conductivity and magnetic activity indicating massive sulphide zones or mineralized



structural features such as faults, shear zones or quartz veins. Geophysics may also assist in geological interpretation.

Phase II work, if warranted by the results of Phase I, will consist of trenching, rock sampling, detailed geological mapping, and IP and time domain EM surveys in areas of geochemical and/or geophysical anomalies. This work is estimated to cost \$62,500 and it is estimated to take 16 days to complete field work. At the conclusion of Phase II, a decision regarding diamond drilling can be made.

6.2 Budget**Phase IA**

Mob/Demob \$ 200

Personnel

Geologist	12 days @ \$325	\$3,900	
Soil Samplers	2 x (12 days @ \$175)	<u>4,200</u>	8,100

Support Costs

Camp costs (incl. rental, food, etc.)			
36 man days @ \$40		1,440	
Vehicle (2WD) 14 days @ \$75		1,050	
Communications 12 days @ \$40		480	
Miscellaneous supplies		<u>120</u>	3,090

Geochemical Analyses

435 soil samples (Au Ag Cu Pb Zn Mn)			
@ \$8.65		3,763	
30 rock samples (Au Ag Cu Pb Zn Mn)			
@ \$10.25		308	
50 rock samples (whole rock)			
@ \$38.75		1,938	
Microcomputer processing of whole rock			
geochem 50 @ \$12		600	
10 thin sections @ \$50		<u>500</u>	7,109

Consulting/Supervision

3 days @ \$450		1,350	
Expenses		<u>300</u>	1,650



44.

Report Writing

Geologist 7 days @ \$325
Drafting 40 hrs @ \$ 18
Materials

\$ 2,275
720
500

\$ 3,495

Administration (15% of \$11,919)

1,788
25,232

Contingency @ 15%

3,785

Total, say

\$29,000
=====



45.

Phase IB

Mob/Demob			\$ 200
Personnel			
Geologist	12 days @ \$325	\$3,900	
Geophysical Technicians	2x(12 days @ \$175)	<u>4,200</u>	8,100
Equipment Rental			
Mag and base station recorder			
12 days @ \$130		1,560	
VLF-EM receiver	12 days @ \$75	<u>900</u>	2,460
Support Costs			
Camp costs (incl. rental, food etc.)			
36 man days @ \$40		1,440	
Vehicle (2WD)	14 days @ \$75	1,050	
Communications	12 days @ \$40	480	
Miscellaneous supplies		<u>120</u>	3,090
Consulting/Supervision			
2 days @ \$450		900	
Expenses		<u>250</u>	1,150
Report Writing			
Geologist	5 days @ \$325	1,625	
Geophysicist	2 days @ \$450	900	
Drafting	40 hrs @ \$ 18	720	
Materials		<u>500</u>	3,745
Administration (15% of \$7,220)			<u>1,083</u>
Contingency @ 15%			<u>19,828</u> <u>2,974</u>
		Total, say	\$23,000 =====



6.3 Schedule

The following table is a summary of the estimated time requirements for Phase I. Phase II is estimated to take 16 days to complete.

Week	1	2	3	4	5	6
Mobilization						
Geological Mapping						
Soil Sampling						
Geophysics						
Consulting, Supervision						
Demobilization						
Analyses						
Microcomputing						
Reporting						

TABLE I
 PHASE I PROJECT SCHEDULE
 WES CLAIM





7.0 CONCLUSIONS

1. Myra Formation cherty tuffs and andesitic tuffs are present on the Wes claim.
2. The Myra Formation of the Sicker Group is known to host base and precious metal volcanogenic massive sulphide deposits and the general geology demonstrated on the Wes claim suggests potential for such deposits within the claim boundary is worth investigating in detail.
3. Numerous precious and base metal bearing quartz vein deposits, mainly hosted by Sicker Group volcanics, are known in the Port Alberni area.
4. The Wes claim also has the potential to host economic grade precious and base metal quartz vein deposits.
5. Three deposits of iron or manganese occur in Myra Formation cherts and cherty volcanics within 9 km of the Wes claim. A similar deposit could be located on the Wes claim.
6. A copper showing in Buttle Lake limestone on the Wes claim is reported. No assays are recorded, and it was not re-located. It represents an otherwise unknown type of mineralization in the Sicker Group. It was also described as being associated with sericite schist in underlying Sicker volcanics which is of great interest in considering the massive sulphide potential.



8. Further exploration including geological mapping and sampling, soil geochemistry, and ground geophysics plus follow-up trenching, detailed geological mapping and sampling, and detailed geophysical surveys, is required to assess the economic potential of the property.



8.0 RECOMMENDATIONS

1. It is recommended that both volcanogenic massive sulphide deposits and precious/base metal quartz vein deposits be considered primary exploration targets. Iron and/or manganese-bearing cherty deposits are low priority targets but may be of importance in interpreting the geological environment.
2. Phase IA work to consist of geological mapping and sampling and soil geochemistry and Phase IB work consisting of ground magnetometer and VLF-EM surveys and follow-up geological mapping on the Wes claim is recommended.
3. Whole rock geochemistry is recommended to aid in classifying rock types and to locate alteration patterns which may indicate the presence of mineralized zones.
4. Petrographic studies on representative rock samples are recommended to assist in accurately differentiating between similar rock types and to aid in identification of rock types.
5. It is recommended that the copper showing reported by Gunnex Ltd. be re-located and mapped and sampled in detail.
6. The Phase I work is recommended at an estimated cost of \$52,000 for the Wes claim. The work is estimated to take 40 days to complete.

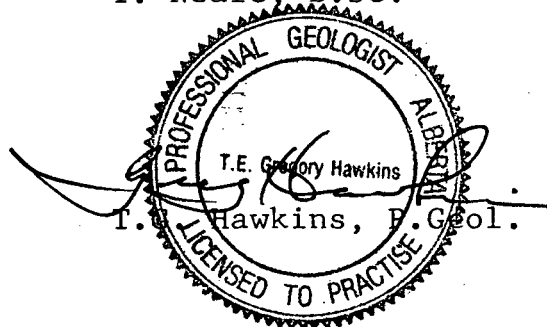


7. It is recommended that tentative plans be made for a Phase II follow-up program to consist of trenching, detailed geological mapping and sampling, and detailed IP and time domain EM surveys, which would be contingent upon favourable results from Phase I. Cost of Phase II is estimated at \$62,500.

Respectfully submitted,
MPH Consulting Limited

Jim Neale

T. Neale, B.Sc.



July 25, 1984



CERTIFICATE

I, T. Neale, do hereby certify:

1. That I am a graduate of The University of British Columbia (B.Sc. 1978).
2. That I have practised as a geologist in mineral exploration for six years.
3. That the opinions, conclusions, and recommendations contained herein are based on field work carried out on the claim in June, 1984 and on library research work.
4. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Villebon Resources Ltd. or associated companies.

A handwritten signature in cursive script, appearing to read 'T. Neale', is positioned above the printed name.

T. Neale, B.Sc.


Vancouver, B.C.

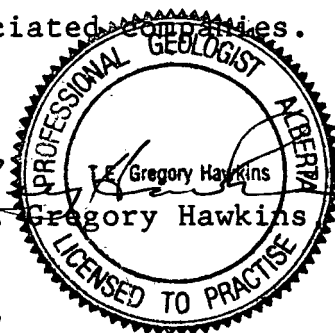
July 25, 1984

CERTIFICATE

I, T.E. Gregory Hawkins, do hereby certify:

- 1) That I am a Consulting Geologist with business offices at 301 - 409 Granville Street, Vancouver, British Columbia, V6C 1T2.
- 2) That I am a graduate in geology of The University of Alberta Edmonton (B.Sc. 1973), and of McGill University, Montreal, (M.Sc. 1979).
- 3) That I have practised within the geological profession for the past twelve years.
- 4) That I am a Fellow of the Geological Association of Canada and a Professional Geologist registered in the Province of Alberta.
- 5) That the opinions, conclusions and recommendations contained herein are based on field work and research work carried out in June, 1984 and supervised by me.
- 6) That I own no direct, indirect, or contingent interests in the area, the subject property, or shares or securities of Villebon Resources Ltd. or associated companies.


T.E. Gregory Hawkins P.Geol.



Dated at Vancouver, British Columbia,
this 25th day of July, 1984

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APPENDIX I



ROCK SAMPLE DESCRIPTIONS AND
LITHOGEOCHEMISTRY RESULTS

Sample No.	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm
64506	Andesite tuff - fine grained, cut by many calcite veinlets to 2 mm and local quartz veins up to 1 cm. Chert bands up to 1 cm thick contained in tuff. Cut by several peridotite(?) dykes from 5 to 40 cm thick. Sample is of <u>highly</u> carbonatized rock, probably from a dyke. Minor rusty stain but no visible mineralization.	10	0.2	90	58
64507	Andesite tuff(?) - local cherty-looking areas, 1-2% disseminated pyrite in cubes to 1 mm. Abundant quartz and calcite veinlets from 1-2 mm. Much dark brown goethitic stain.	10	0.2	92	88
64508	Karmutsen basalt - very sheared/foliated, shot through with calcite veins, veinlets, and stringers from <1 mm to 1 cm and also pervasively carbonatized. In the area sampled, jasper fragments make up 0 to 5% of the rock. Minor pyrite in blebs to 5 mm long noted.	10	0.2	168	72
64509	Karmutsen basalt - heavy limonitic, goethitic coatings although only one area about 8 by 2 mm of pyrite grains noted. Some areas of breccia with clasts up to 10 cm noted. Very extensive carbonate \pm quartz veining	10	0.2	90	42
64510	Karmutsen basalt - a zone about 10 m wide of variably serpentinized rock containing a strongly silicified, quartz stringered zone up to 10 cm wide in a virtually totally serpentinized area. Only minor pyrite noted.	10	0.2	86	52
64511	Karmutsen basalt - virtually totally serpentinized, no pyrite noted. Taken from about 30 cm NW of 64510.	10	0.2	98	138
64512	Karmutsen basalt - soft, weathered, <u>highly</u> limonitic, in or near a strongly limonitic shear zone. No pyrite noted.	10	0.2	270	122
64513	Limestone - in most places limestone is very white; here it has a rusty orange tinge and is somewhat silicified. In one piece of rock <1% very tiny pyrite(?) specks noted; a few greenish blebs about 1 mm across also noted--possibly malachite.	10	0.2	50	110
64514	Cherty tuff to chert - pale green, banded, some patches up to 3 by 3 cm of goethite. Very fractured.	10	0.2	110	76



APPENDIX II

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO: MPH CONSULTING LTD.
303-409 GRANVILLE ST.
VANCOUVER B.C.

CERTIFICATE NO. :84179- 1

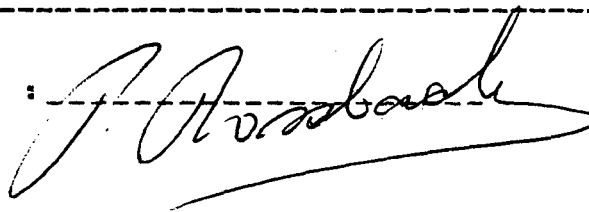
INVOICE NO. :4166

PROJECT: V137 (B)

DATE ANALYSED : JUNE 27 1984

	SAMPLE#	PPM Cu	PPM Ag	PPM Zn	PPB Au
A	64506	90	0.2	58	10
A	64507	92	0.2	88	10
A	64508	168	0.2	72	10
A	64509	90	0.2	42	10
A	64510	86	0.2	52	10
A	64511	98	0.2	138	10
A	64512	270	0.2	122	10
A	64513	50	0.2	110	10
A	64514	110	0.2	76	10

CERTIFIED BY :



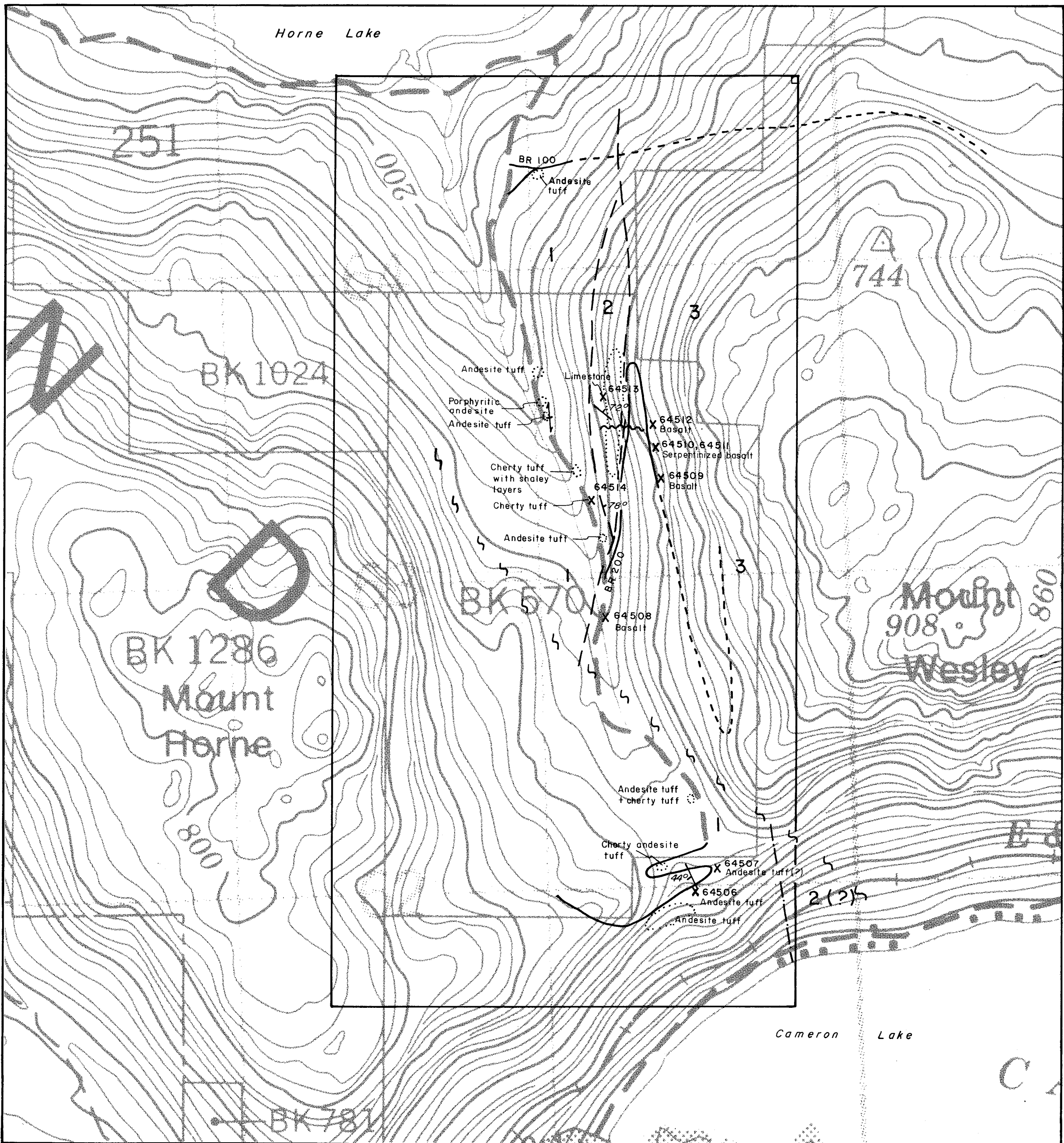


APPENDIX III



ABBREVIATIONS USED IN MINERAL OCCURRENCES SECTION

- 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



LEGEND

LITHOGEOCHEMISTRY RESULTS

Sample No.	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppm)
64506	10	0.2	90	58
64507	10	0.2	92	88
64508	10	0.2	168	72
64509	10	0.2	90	42
64510	10	0.2	86	52
64511	10	0.2	98	138
64512	10	0.2	270	122
64513	10	0.2	50	110
64514	10	0.2	110	76

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,520

GEOLOGY

VANCOUVER GROUP

3 KARMUTSEN FORMATION - massive basalt, generally heavily fractured commonly very limonitic, minor breccia.

SICKER GROUP

2 BUTTLE LAKE FORMATION - thick bedded, white weathering limestone; locally somewhat silicified and rusty orange weathering.

1

MYRA FORMATION - andesite tuff, cherty tuff; minor chert, argillite.

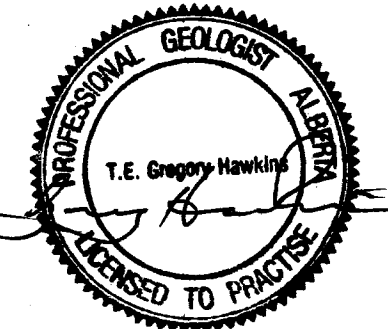
SYMBOLS

- BR 200** --- Logging road with road number (position approximate, position very approximate).
- F** --- Claim line with legal corner post.
- Geological contact (approximate, inferred).
- ~~~~~ Fault (approximate, assumed).
- / /** Bedding, foliation.
- x** Rock sample location and number.
- Outcrop

The accompanying Plan filed by
T.E. Gregory Hawkins, P.Eng.
and
25/7/89

25/7/89

0 100 200 300 400 500 1000 metres



VILLEBON RESOURCES LTD.

PROPERTY PLAN, GEOLOGY AND ROCK SAMPLING WES CLAIM

NANAIMO MINING DIVISION

Project No: V 165	By: T. N.
Scale: 1 : 10,000	Drawn: J. S.
Drawing No: 5	Date: JULY, 1984.



MPH Consulting Limited