

84-#287-12538



REPORT ON
RECONNAISSANCE GEOLOGICAL MAPPING ⁶
AND
ROCK SAMPLING
McQUILLAN CLAIM

ALBERNI MINING DIVISION
BRITISH COLUMBIA
NTS 92F/2

49°08'N LATITUDE 124°37'W LONGITUDE
FOR

NEXUS RESOURCE CORPORATION

JULY 25, 1984

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

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,538



SUMMARY

Geological exploration was carried out on the McQuillan claim in the Alberni Mining Division in June, 1984 and consisted of reconnaissance geological mapping, rock sampling and litho-geochemical analysis.

Government regional geological mapping showing the claim to be underlain entirely by Nitinat Formation volcanics appears to be correct, although basal units of the Myra Formation may be present in the southeastern area of the claim.

Anomalous results of up to 50 ppb Au and 1.2 ppm Ag were obtained from several of the 28 rock samples collected. A boulder of felsic tuff believed to have come from east of the claim boundary ran 40 ppb Au, 1.8 ppm Ag, 800 ppm Zn, and low Cu.

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 precious/base metal quartz vein deposit and/or a volcanogenic massive sulphide deposit on the property is considered good.

A 14 day Phase I program of reconnaissance geological mapping and soil sampling with an orientation geophysics survey over a flagged grid is recommended. The cost is estimated at \$26,000. Contingent upon favourable results from Phase I, a Phase II program consisting of detailed geological mapping and sampling, soil sampling, geophysics, and trenching over geochemical and/or geophysical anomalies located by Phase I is recommended.



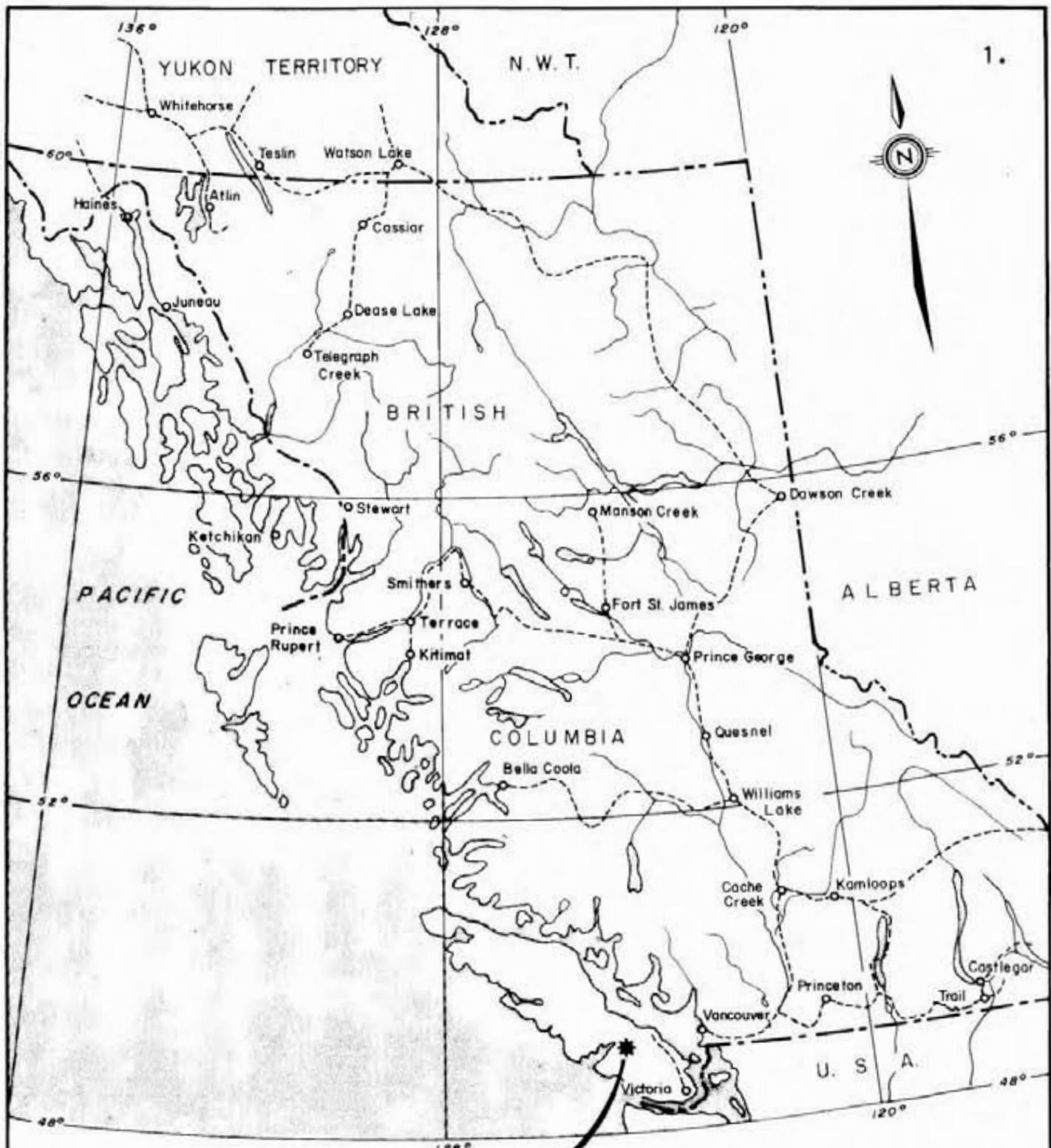
TABLE OF CONTENTS

	page
SUMMARY	i,
1.0 INTRODUCTION	2,
2.0 PROPERTY LOCATION, ACCESS, TITLE	3,
3.0 PREVIOUS WORK	5,
4.0 REGIONAL GEOLOGY	6,
4.1 Sicker Group	6,
4.2 Vancouver Group	10,
4.3 Nanaimo Group	11,
4.4 Intrusive Rocks	12,
4.5 Structure	12,
4.6 Economic Setting	14,
4.7 Mineral Occurrences	17,
5.0 LOCAL GEOLOGY	40,
5.1 Assessment Work Completed 1984	40,
6.0 RECOMMENDED WORK PROGRAM	43,
6.1 Plan	43,
6.2 Budget	45,
6.3 Schedule	46,
7.0 CONCLUSIONS	48,
8.0 RECOMMENDATIONS	50,
Certificate - T. Neale, B.Sc.	52,
- T.G. Hawkins, P.Geol.	53,
Bibliography	54,
Appendix I - Statement of Expenditures ,	
Appendix II - Rock Sample Descriptions and ,	
Geochemistry Results	
Appendix III - Certificate of Analysis ,	
Appendix IV - Abbreviations Used in	
Mineral Occurrences Section	




LIST OF ILLUSTRATIONS

	page
Figure 1	
Location Map	1 /
2	
Claim Map	4 /
3	
Regional Geology Map	7 /
4	
Mineral Occurrences Location Map	18 /
5	
Property Plan, Geology and Rock Sampling - McQuillan Claim	in pocket /
Table I	
Phase I Project Schedule	47 /



McQUILLAN CLAIM

NEXUS RESOURCE CORP.	
GENERAL LOCATION MAP	
McQUILLAN CLAIM	
ALBERNI MINING DIVISION	
Project No. V 155	By T. N.
Scale	Drawn J. S.
Drawing No. 1	Date: JULY, 1984.
 MPH Consulting Limited	



1.0 INTRODUCTION

This report represents the compilation of field work carried out by MPH Consulting Limited at the request of Nexus Resource Corporation on the McQuillan claim from June 21 to 23, 1984. Work included reconnaissance geological mapping and rock sampling for lithogeochemical analysis over the entire claim for the purpose of fulfilling assessment work requirements.

Included in the report is a summary of all known geological and mining exploration activity 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.

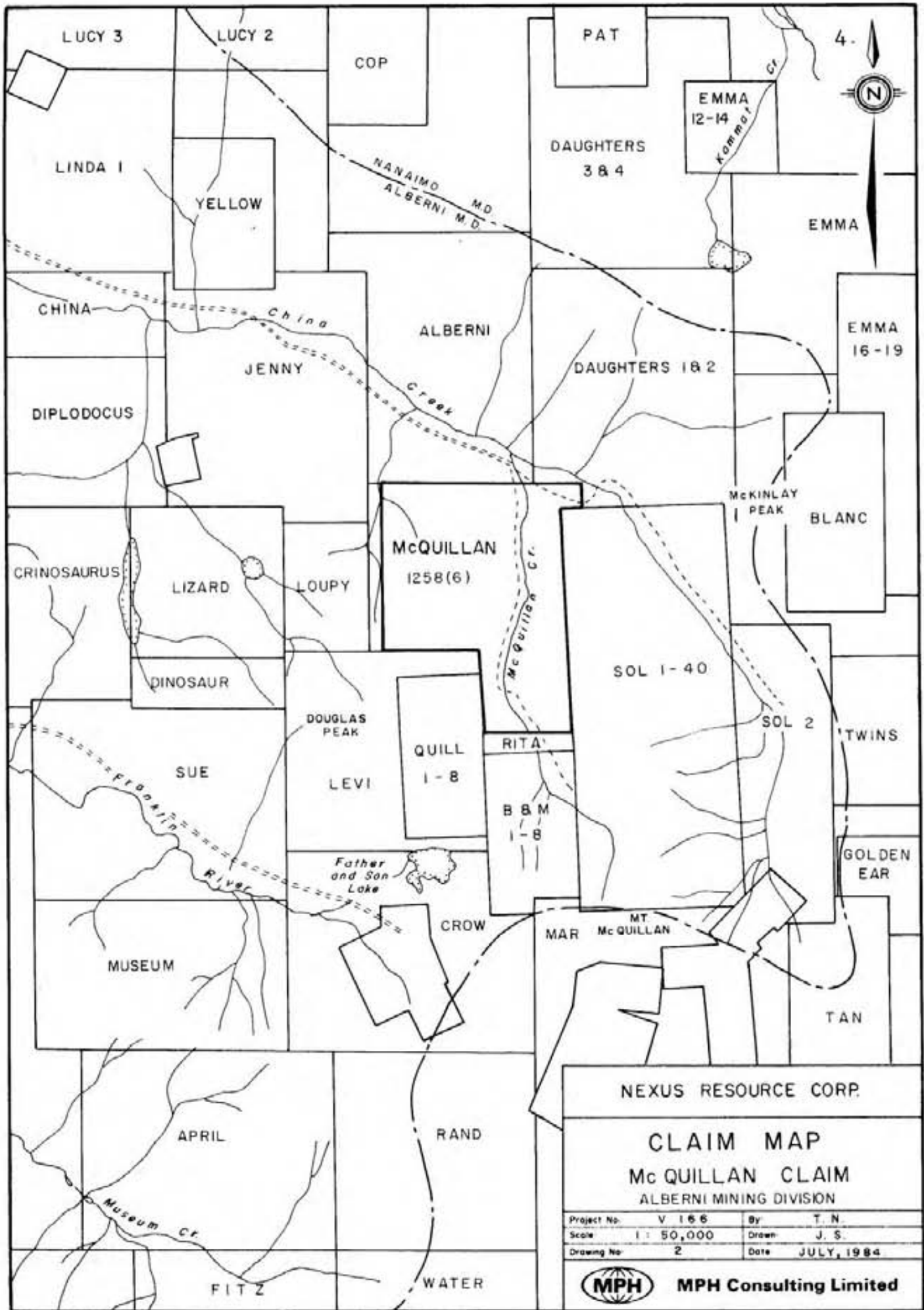


2.0 LOCATION, ACCESS, TITLE

The McQuillan claim is located 17 km southeast of Port Alberni on the northeastern slopes of Douglas Peak, in the Alberni Mining Division of British Columbia. It is centred at approximately 49°08'N latitude, 124°37'W longitude on NTS mapsheet 92F/2 (Figure 1).

Access is provided by the China Creek Road of MacMillan Bloedel Ltd. A network of logging roads crosses the western half of the claim, while a single logging road up McQuillan Creek traverses the eastern portion of the claim. A Health Department permit is necessary to enter the China Creek area as it is the watershed for Port Alberni.

The McQuillan claim is owned by Nexus Resource Corporation. The record number is 1258(6), the claim is 20 units in size and has an anniversary date of June 23, 1985 (Figure 2).



NEXUS RESOURCE CORP.

CLAIM MAP
McQUILLAN CLAIM
 ALBERNI MINING DIVISION

Project No. V 156	By T. N.
Scale 1 : 50,000	Drawn J. S.
Drawing No. 2	Date JULY, 1984

MPH Consulting Limited



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) and a mineral compilation report by J.S. Stevenson (1945).

A regional aeromagnetic survey flown by Hunting Survey Corp. Ltd. in 1962 covered the claim block.

During the period 1963-1966, Gunnex Ltd. carried out a regional mapping program with some prospecting and silt sampling. They compiled a list of all the known mineral occurrences in the area and visited many of them.

In September, 1983, MPH Consulting Limited visited the McQuillan claim and prepared a preliminary assessment report and a recommended work program (Hawkins and Willoughby, 1983). A sample of mineralized felsic tuffaceous rock taken during the visit returned anomalous Au and Ag values and indicated the possibility of Myra Formation lithologies occurring on the property. A two-phase exploration program including surface geochemistry, geological mapping and sampling, ground geophysics, and follow-up diamond drilling estimated to cost \$182,000 was recommended.

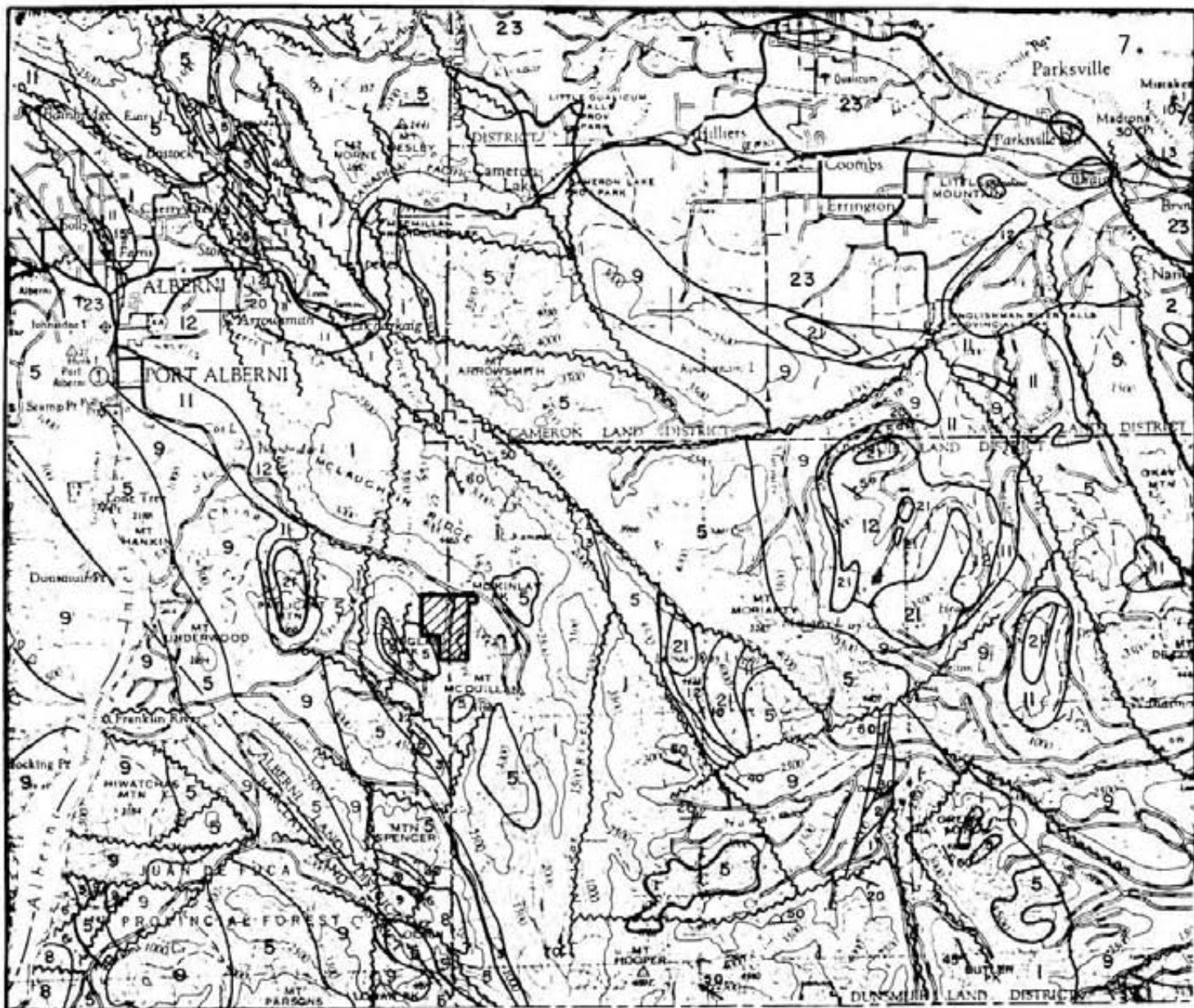
4.0 REGIONAL GEOLOGY

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



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, periodite, 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 urolite porphyry, agglomerate, pillow lava; greenschist.

0 5 10 km



NEXUS RESOURCE CORP.

REGIONAL GEOLOGY MAP

McQUILLAN CLAIM

ALBERNI MINING DIVISION

Project No.	V 166	By	T N
Scale	1:250,000	Drawn	J S
Drawing No.	3	Date	JULY, 1984



MPH Consulting Limited

similar Karmutsen Formation by the usual lack of pillow basalts, the abundance of uralite phenocrysts, the pervasive shear foliation, and lower 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 85 km northwest of the McQuillan claim. Here, 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.

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) overlie the Buttle Lake Formation limestone paraconformably 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 form 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 monoclinial 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 north-westerly 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 lbs 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 70 km southeast of the McQuillan 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 (Hawkins and Willoughby, 1983). 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), quartz vein deposits hosted by diorite and granodiorites (Island Intrusions). All production figures are from Neale (1984) or Hawkins and Willoughby (1983).

Significant base metal and gold deposits and occurrences of the Sicker Group in the Port Alberni area are summarized below. Included also are three occurrences not hosted by the Sicker Group which are located within 10 km of the McQuillan claim. (Figure 4)

4.7 Mineral Occurrences

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

Geology:

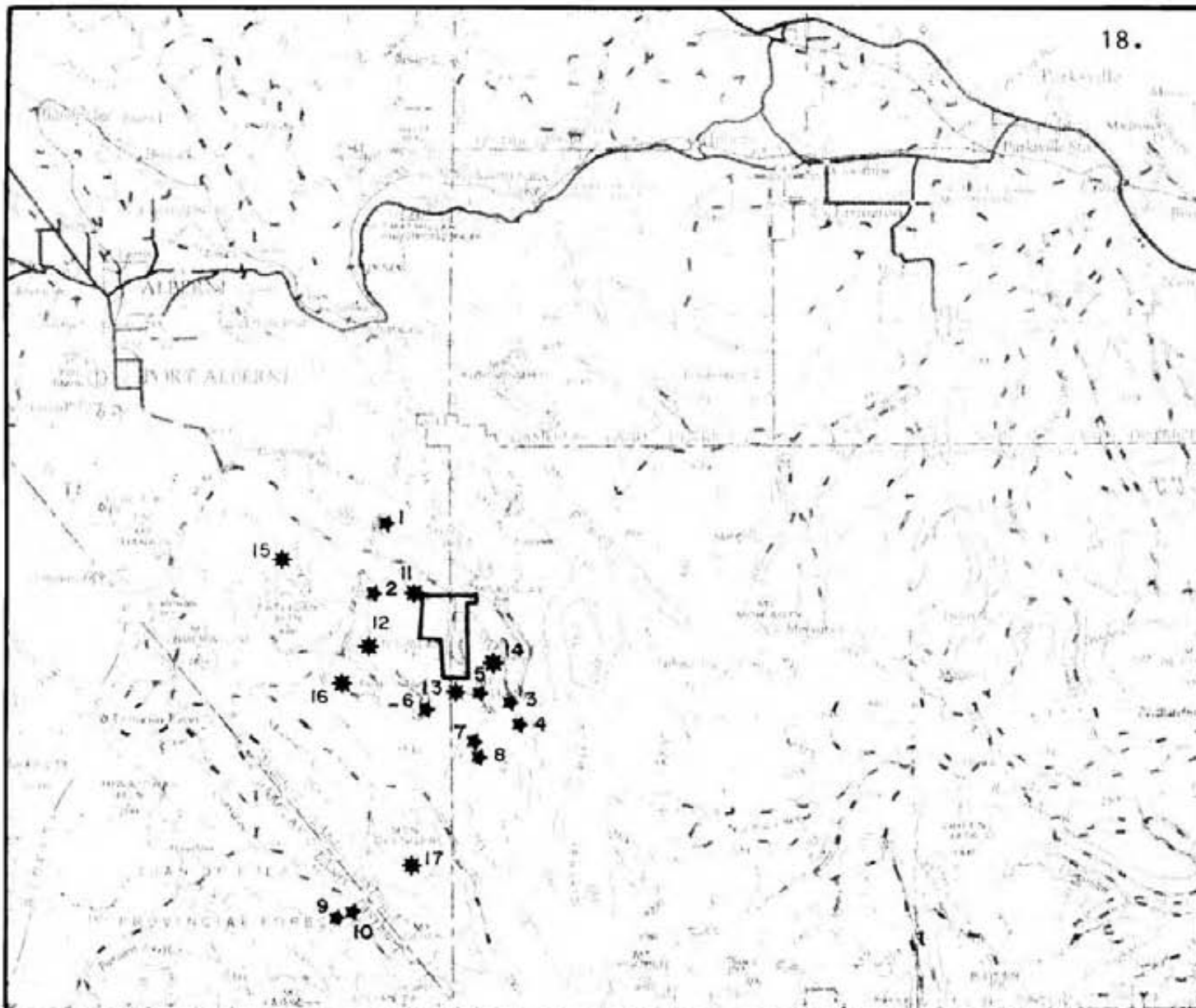
The area is underlain by highly altered massive, tuffaceous, slightly porphyritic, and amygdaloidal andesites of the Sicker Group. Three main quartz veins follow well developed shears and contain a small amount of pyrite and some free gold. As well, a 40 foot wide shear zone has been extensively altered 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).



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
10. Corrigan Creek

BASE METAL OCCURRENCES

11. Bank Group
12. Ken
13. Mc Quillan Creek
14. Sol
15. Grizzly As Showing
16. Upper Franklin R
17. Mary Group



0 5 10 km

NEXUS RESOURCE CORP.

MINERAL OCCURRENCE
LOCATION MAP
McQUILLAN CLAIM

Project No.	V 166	By:	T. N.
Scale:	1 : 250,000	Drawn:	J. S.
Drawing No.	4	Date:	JULY, 1984



MPH Consulting Limited



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, chalcopryrite, 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,
194-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 Albernai 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 p38
Map 49-1963
- 4) Gunnex #15
- 5) Minfile 92F085

11. Bank Group Au Ag Cu

Geology:

Pyrite, chalcopyrite and galena with Ag and trace Au occur in quartz veins in sheared and fractured metamorphic rock. Occurs in an area mapped as Sicker Group volcanics.

Economic Features:

The width of mineralization is reported to be up to 10 feet or more and it was traced for several hundred feet along strike. A grab sample from the dump assayed at trace Au, 1 oz/ton Ag, and 3.2% Cu (Ref. 1).

History:

1917: James Dryden and I.B. Atkinson; a series of open cuts with a 25 foot shaft in the largest of the cuts, caved adit.

References:

- 1) MMAR 1917-247
- 2) Minfile 92F167

12. Ken Cu

Geology:

Chalcopyrite and some malachite occur in quartz stringers in epidotized shears in fractured, silicified, altered andesite.

Economic Features: Not known.

History:

1964-65: Gunnex Ltd.; sampling and prospecting in the general area, visited a rusty showing south of Lizard Lake.

1971: Nippon Mining of Canada Ltd.; geological mapping 1:14,400, soil sampling.

References:

- 1) GEM 1971-233
- 2) Gunnex #35(?)
- 3) Minfile 92F285

13. McQuillan Creek Fe

Geology:

An outcrop of jasper between a large bed of argillaceous schist and crystalline rock is locally heavily charged with hematite.

Economic Features: Not known.

History:

1895: First reported.

1964: Gunnex Ltd.; relocated the showing while working around Havilah (#5 above).

References:

- 1) MMAR 1895-652
- 2) Gunnex #11
- 3) Minfile 92F429

14. Sol Cu Mo

Geology:

A widespread area of low-grade copper mineralization occurs in an area of Sicker Group volcanics intruded by Jurassic diorite and by narrow rhyolite or quartz feldspar porphyry dykes or sills of Tertiary age. The mineralization consists of pyrite and pyrrhotite disseminations and fracture fillings and minor chalcopyrite and molybdenite occurring mainly in northeast trending fractures and quartz veinlets within the iron sulphide zones. Most of the mineralization occurs either in andesite near to the diorite, or adjacent to and within the Tertiary dykes or sills.

Economic Features:

Soil sampling located three anomalous zones up to 1200 by 1200 by 1000 feet vertical in size. Mineralization was subsequently located in all three areas (Ref. 3). A large IP anomaly was also located (Ref. 4). Covers the old Havilah property (#5 above).

History:

1962: Hunting Surveys; regional aeromag survey over the area.

1962-65: Gunnex Ltd.; examined the old Havilah workings and covered the area with silt sampling and prospecting.

1974-77: Cominco Ltd.; geological mapping 1:4800, soil sampling, trenching, several IP and resistivity surveys.

References:

- 1) GEM 1974-172
- 2) EBC 1975-E95, 1976-E111, 1977-E110
- 3-5) AR 5354, 6138, 6643
- 6) Minfile 92F385

15. Grizzly Arsenic Showing As Ag, minor Au

Geology:

Stringers of arsenopyrite and pyrite plus native arsenic nodules occur in sheared Nanaimo Group argillite. Disseminated pyrite and carbonate stringers occur in the host rock.

Economic Features:

The mineralized zone measures 30 feet long by 2 feet wide and to a depth of 15 feet. A grab sample of mineralized carbonate vein assayed 4.7% As (1927). The best channel samples assayed 5.97% As, 0.01 oz Au/T over 2 feet and 22.72% As, 0.5 oz Ag/T over 9 inches (1964). Estimated reserves are 150 T of ore grading 90% As (1942).

History:

1927: Unknown; 40 foot shaft sunk, 50 feet of drifting.

1942: Cominco Ltd.; prospectus report noted that a previous worker exposed the zone for 150 feet by trench, adit and shaft. An ore reserve estimate was made.

1963-1964: Gunnex Ltd.; channel sampling.

References:

Hawkins & Willoughby, 1983.



16. Upper Franklin River Occurrences Cu

Geology:

Chalcopyrite and malachite occur within quartz stringers and epidotized shears in andesite (Vancouver Group).

Economic Features:

One zone measures a few feet long by 2 feet wide; a grab sample assayed 1.74% Cu. Another zone is 5 to 6 feet wide. Grab samples assayed 2.75% Cu and 1.42% Cu.

History:

1963-1965: Gunnex Ltd.; ground magnetometer survey, soil sampling, prospecting.

References:

Hawkins and Willoughby, 1983.

17. Mary Group Occurrences (Cup 1-6) Cu Zn Pb Ag Au

Geology:

Chalcopyrite, bornite, malachite, pyrrhotite plus sphalerite mineralization occurs in quartz veins, sheared andesite (Vancouver Group) and feldspar porphyry plus skarn in Vancouver Group limestone (Quatsino Formation).

Economic Features:

Five main zones of mineralization. Showing 1 is 200 feet long by 50 feet wide; best channel sample assayed 0.33% Cu over 3 feet.

Showing 2 is 1 foot wide; a grab sample assayed 1.2% Cu, 0.58 oz Ag/T.



Showing 3, mineralized skarn, is approximately 10 feet wide; the best grab sample assayed 0.45% Cu, 3.3% Zn, 0.34 oz Ag/T. The best channel samples assayed 2.61% Zn, 0.29% Cu over 5 feet, 2.23% Zn, 0.33 oz Au/T over 2 feet, and 6.03% Zn, 0.59% Cu over 2.5 feet.

Showing 4 is 16 feet long by 15 feet vertical; Cu, Zn assays were low.

Showing 5, massive pyrrhotite, minor chalcopyrite is 60 feet long by 4 to 6 feet wide; a grab sample from a 1 foot wide quartz vein assayed 2.72% Cu, 6.22% Pb, 0.65% Zn, 28.9 oz Ag/T; a grab sample of massive pyrite in quartz assayed 0.20 oz Au/T, 25.3 oz Ag/T.

Gold Valley Resources Ltd. reports surface assays of up to 5.57% Cu over 23 feet.

The Summit Pass Mining Corp. report of 1979, apparently based largely on Cominco's work, mentions the following mineralization. A zone 200-400 feet wide by 1200 feet long with disseminated to massive pyrrhotite, pyrite, and chalcopyrite up to 2 feet thick along fracture and joint surfaces; pods and disseminations of chalcopyrite and pyrrhotite in discontinuous lenses in a zone 50 feet by 1000 feet; and massive sulphides (Cu-Ag-Mo) in narrow veins in volcanics; plus five other lesser mineralized zones. As well, Gunnex's DDH 66-7 is reported as having cut 81 feet averaging 1.22% Cu and 0.066% MoS₂ from 151 to 232 feet.

**History:**

1964-66: Gunnex Ltd.; prospecting, detailed mapping, trenching and pitting, soil sampling, magnetometer, EM, SP, IP surveys, 8 AX DDH totalling 3064 feet.

1967: Cominco Ltd.; geological mapping, horizontal loop EM, magnetometer, 4 AX DDH totalling 1503 feet, 5 Winkie DH totalling 411 feet.

1976: Gold Valley Resources Ltd.; 3 DDH totalling 852 feet.

1979-81: Summit Pass Mining Corp.; prospecting, summary of previous work.

Reference:

Hawkins and Willoughby, 1983.

AR 6134, 8177, 9292

5.0 LOCAL GEOLOGY

Regional mapping by Muller (1980) indicates that the entire McQuillan claim is underlain by Nitinat Formation basic volcanics. Myra Formation rocks are mapped just east of the claim boundary (Figure 5).

5.1 Assessment Work Completed 1984

Work carried out by MPH Consulting Limited in June, 1984 tends to confirm Muller's mapping, although basal units of the Myra Formation may be present in the southeastern area of the claim. All of the outcrops examined on the property were andesitic to basaltic in composition. A possible general gradation from more basaltic rocks to andesitic rocks was observed when moving in a southwest to northeasterly direction. Both tuffs and flows are common; agglomerate, pillowed lava, and pillow-breccia were also observed. Pervasive carbonatization is very common, as is carbonate (mainly calcite) veining. A total of 27 grab samples and 1 chip sample over 7.2 m was collected. Lithogeochemical results were generally low. Most of the samples with anomalous Au and/or Ag were taken from carbonatized outcrops in or near shear zones.

Andesitic pillow lavas were found in both the northwest and southeast corners of the property. Some or all of the rocks mapped as agglomerates could well be pillow lavas or pillow-breccias, as the "clasts" are only faintly visible in natural outcrops (as opposed to roadcuts), and could represent the amygdaloidal cores of pillows or pillow fragments rather than volcanic "bombs." The

pillows in the southeast corner are brecciated to varying degrees, and are commonly rimmed with a thin hematite-rich zone. Purplish red hematitic tuffs(?) are quite widespread in the southeastern area of the claim whereas only one outcrop containing hematized volcanics was located in the northwest.

The felsic tuff horizon reported by Hawkins and Willoughby (1983) to occur in the northwestern area of the claim was not relocated. A sample collected from this horizon in 1983 returned 220 ppb Au, 11.2 ppm Ag, 176 ppm Cu. Several very heavily altered, carbonated, schistose, light-coloured roadcuts were observed in this area. It is possible that they represent altered felsic tuffs, but it is believed that they are actually bleached andesitic rocks. Lithogeochemical results were low from three of the four samples (64531 to 64533). The fourth sample (64530), which was taken from a shear zone about 10 cm wide, ran 50 ppb Au and 1.2 ppm Ag with low Cu, Zn. This would seem to indicate that the mineralization is related to the shear, and not the host rock.

A boulder of felsic tuff found in the southeastern area (sample 64107) ran 40 ppb Au, 1.8 ppm Ag, and 800 ppm Zn with low Cu. The source of this boulder is not known, but as Myra Formation lithologies are mapped by Muller (1980) on the ridge east of the McQuillan claim, it may have rolled down the hill into the valley. In several outcrops on the eastern slope of the McQuillan Creek valley (samples 64538 to 64540), boulders and/or layers of chert occur within the andesite, indicating a stratigraphic level somewhere near the base of the Myra Formation as does the presence of hematitic tuffs in this area. Muller (1980) states "maroon and

green volcanoclastic greywacke, grit, and breccia with crude general layering, commonly form the basal part (of the Myra Formation)."

Tertiary(?) feldspar porphyritic dacite dykes from 5 cm to at least 3 m wide cut the volcanics in the southeastern area. The feldspar phenocrysts are up to 1 cm across and are generally somewhat epidotized, giving them a pale green colour. The gold-quartz vein deposits of the China Creek area are spatially, and possibly genetically, related to these feldspar porphyry intrusions (Carson, 1968).

6.0 RECOMMENDED WORK PROGRAM

6.1 Plan

Phase I is to be a reconnaissance program only. Results from the preliminary examination of the property are not sufficiently encouraging to justify a full-scale program of exploration, but the property is too promising to abandon without further work aimed at locating target(s) to do detailed work on.

Therefore, Phase I will consist of reconnaissance geological mapping and rock sampling, soil sampling, and VLF-EM and magnetometer surveys, on a grid with lines spaced 250 m apart. The grid will be flagged only at this stage, and will total 17.7 line km.

Geological mapping will outline the property geology and structure and locate and define any areas of surface mineralization. Surface showings located during mapping will be sampled and lithochemically analyzed for Au, Ag, Cu, Pb, and Zn.

Soil sampling is to be done at 50 m intervals along the grid lines. A total of 319 samples will be collected and analyzed for Au, Ag, Cu, and Zn.

Orientation geophysical surveys will consist of ground magnetometer and VLF-EM readings taken at 25 m intervals along every second grid line, and along every grid line in areas with little or no outcrop. Any anomalous readings will serve to define area(s) of interest for further follow-up work. Geophysics may also assist in geological interpretation.



Phase I is estimated to cost \$26,000 to be spent over a period of 21 days.

Phase II work, if warranted by results of Phase I, will consist of detailed geological mapping and sampling, soil sampling, geophysics, and trenching over geochemical and/or geophysical anomalies. This work is roughly estimated to cost \$50,000 and is estimated to take 30 days to complete. If warranted by Phase II results, Phase III will consist of diamond drilling.



45.

6.2 Budget

Mobilization/Demobilization			\$ 200
Personnel			
Geologist	14 days @ \$325	\$4,550	
Soil Sampler/ Geophysics Technician	14 days @ 200	<u>2,800</u>	7,350
Equipment Rental			
VLF-EM receiver	14 days @ \$ 75	1,050	
Mag & base station receiver	14 days @ 130	<u>1,820</u>	2,870
Support Costs			
Food & Accommodation			
28 man days @ \$40		1,120	
2WD Truck			
16 days @ 75		1,200	
Miscellaneous supplies		<u>200</u>	2,520
Geochemical Analyses			
319 soil samples (Au Ag Cu Zn)			
@ \$7.80		2,488	
40 rock samples (Au Ag Cu Pb Zn)			
@ \$9.65		<u>386</u>	2,874
Consulting/Supervision			
3 days @ \$450		1,350	
Expenses		<u>300</u>	1,650
Report Writing			
Geologist	7 days @ \$325	2,275	
Geophysicist	1 day @ 450	450	
Drafting	30 hours @ \$18	540	
Materials		<u>500</u>	3,765
Administration (15% of \$9,804)			<u>1,471</u>
Contingency (15%)			<u>22,700</u>
			<u>3,405</u>
	Total, say		<u>\$26,000</u>
			=====



6.3 Schedule

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

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

TABLE I
 PHASE I PROJECT SCHEDULE
 McQUILLAN CLAIM



7.0 CONCLUSIONS

1. The McQuillan claim is mapped as being underlain by Sicker Group Nitinat Formation basic volcanics. The work carried out by MPH Consulting Limited in June, 1984 confirms the regional mapping although basal units of the Myra Formation appear to be present in the southeast corner of the claim. The felsic tuffaceous rocks located in 1983 (Hawkins and Willoughby) could not be relocated. The only felsic rock found on the property was a boulder believed to have come from outside the claim boundary.

2. Geological mapping of the McQuillan claim is incomplete, and there is still a possibility that Myra Formation felsic volcanics occur on the property. The potential exists for a volcanogenic massive sulphide deposit to occur on the McQuillan claim.

3. Numerous precious and base metal bearing quartz vein deposits, mainly hosted by Sicker Group volcanics are known in the Port Alberni area. Production from the Vancouver Island Gold Mine, Havilah Mine, and Black Panther Mine, all of which occur within 4 km of the McQuillan claim, totalled 3419 tons yielding 1152 oz Au, 2409 oz Ag, 4933 lb Cu, and 24,995 lb Pb.

Gold-quartz veins in the China Creek area are spatially related to feldspar porphyry intrusions. Feldspar porphyritic dykes occur in the southeastern part of the McQuillan claim.



4. The McQuillan claim has the potential to host economic grade precious and base metal quartz vein deposits.

5. Further exploration, including reconnaissance geological mapping and sampling, soil sampling, and orientation 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.
2. Phase I work to consist of reconnaissance geological mapping and sampling, soil geochemistry, and orientation magnetometer and VLF-EM surveys on the McQuillan claim is recommended.
3. It is recommended that particular attention be paid to determining whether or not the rocks in the southeastern area belong to the Myra Formation and to delineating and sampling them if they do. Some attempt should be made to find the source of the felsic tuff boulder (sample 64107) which ran 40 ppb Au, 1.8 ppm Ag, and 800 ppm Zn as well.
4. The Phase I work is recommended at an estimated cost of \$26,000 for the McQuillan claim. The work is estimated to take 14 days to complete.
5. It is recommended that tentative plans be made for a Phase II follow-up program to consist of detailed geological mapping, soil sampling, geophysics and trenching over any



surface showings or geochemical or geophysical anomalies located during Phase I. Phase II work is contingent upon favourable results from Phase I and is estimated to cost \$50,000.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Tim Neale', is positioned above the typed name.

T. Neale, B.Sc.

A handwritten signature in cursive script, appearing to read 'T. G. Hawkins', is positioned above the typed name.

T. G. Hawkins, P.Geol.

July 25, 1984



CERTIFICATE

I, T. Neale, do hereby certify:

1. That I am a graduate in geology 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 library research and on field examinations made on the property in June, 1984.
4. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Nexus Resource Corporation 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 St., Vancouver, B.C. 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 carried out on the property in June, 1984 and research work supervised by me during the same period.
6. That I own no direct, indirect, or contingent interests in the area, the subject property, or shares or securities of Nexus Resource Corporation or its associated companies.

A handwritten signature in dark ink, appearing to read 'T.E. Gregory Hawkins', written in a cursive style.

T.E. Gregory Hawkins, P.Geol.

Dated at Vancouver, B.C.

this 25th day of July, 1984.

BIBLIOGRAPHY

- Carson, D.J.T. 1968: Metallogenic Study of Vancouver Island with Emphasis on the Relationships of Mineral Deposits to Plutonic Rocks; Ph.D. Thesis, Carleton University.
- Clapp, C.H. 1912: Southern Vancouver Island; G.S.C. Memoir 13.
- 1914: Geology of the Nanaimo Map Area; G.S.C. Memoir 51
- Gunnex Ltd. 1966: Mineral Occurrences (Mines, Surface Workings, and Showings), E&N Land Grant, Vancouver Island, B.C.; internal company report.
- Hawkins, T.G. and Willoughby, N.O. 1983: Preliminary Assessment and Recommended Work Program; Grizzly, China, McQuillan, Canon, Olsen Claims; Alberni Mining Division, British Columbia; for Nexus Resource Corporation. September 22, 1983.
- Muller, J.E. and Carson, D.J.T. 1969: Geology and Mineral Deposits of Alberni Map-Area, British Columbia (92F); G.S.C. Paper 68-50.
- Muller, J.E. 1977: Geology of Vancouver Island (West Half); G.S.C. Open File 463.
- 1980: The Paleozoic Sicker Group of Vancouver Island, British Columbia; G.S.C. Paper 79-30.
- Neale, T. 1984: Compilation of Mineral Occurrences of the Sicker Group, Vancouver Island, British Columbia; for MPH Consulting Limited.
- Stevenson, J.S. 1945: Geology and Ore Deposits of the China Creek Area, Vancouver Island, British Columbia; Annual Report of the Minister of Mines of the Province of British Columbia, 1944, pp.A143-A161.
- Walker, R.R. 1983; Ore Deposits at the Myra Falls Minesite; Western Miner, May 1983, pp.22-25.



APPENDIX I



STATEMENT OF EXPENDITURES

Personnel

T. Neale, B.Sc.		
4.5 days @ \$325	\$1,462.50	
T. Kraft, Geologist		
2.43 days @ \$200	486.00	
G. Shields, Geologist		
2.43 days @ \$200	486.00	
T.G. Hawkins, P.Geol.		
2 hrs @ \$ 80	<u>160.00</u>	
		\$2,594.50

Truck Rental	2.43 days @ \$81	196.83
--------------	------------------	--------

Disbursements

Analyses		
28 samples @ \$9.95 (Au Ag Cu Zn)	278.60	
Drafting	177.94	
Expenses	<u>291.06</u>	
	747.60	

Administration @ 15%	<u>112.14</u>	
----------------------	---------------	--

859.74

3,651.07

Report - 6 copies @ \$70	<u>420.00</u>	
--------------------------	---------------	--

Total		\$4,071.07
-------	--	------------



APPENDIX II



ROCK SAMPLE DESCRIPTIONS AND
LITHOGEOCHEMISTRY RESULTS

Sample No.	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm
7167	Andesite(?) - highly altered, very soft, goethite on fracture surfaces, minor specularite also noted.	10	0.2	162	60
7168	Basalt/andesite - interlayered reddish purple hematitic rock and dull green vesicular rock. Both are heavily weathered, strongly foliated. Chip sample taken over 7.2 m perpendicular to strike.	10	0.2	54	90
7169	Basalt/andesite - mafic volcanics with quartz veining and minor associated pyrite, mild carbonatization.	20	0.2	18	54
7170	Andesite - altered, contains minor pyrite.	20	0.2	70	136
7171	Basalt - aphanitic, minor quartz veining and a small patch of pyrite.	10	0.2	44	78
7172	Basalt/andesite - hematitic, reddish purple mafic volcanic.	10	0.2	40	66
7173	Basalt/andesite - reddish purple hematized mafic volcanic with greenish calcite. Possible flow structures visible.	10	0.2	8	92
7174	Andesite - feldspar phenocrysts somewhat epidotized, minor pyrite, matrix carbonatized.	10	0.2	42	50
7175	Andesite - microcrystalline, sheared/foliated mafic volcanic with finely disseminated sulphides.	10	0.2	102	84
64101	Andesite - fine grained, dark green, heavily fractured, quartz-carbonate coatings and minor epidote occur on fracture surfaces. Minor pyrite (<1%).	10	0.2	62	64



Sample No.	Description	Au	Ag	Cu	Zn
64102	Andesite Dyke - 1.5 m wide, pyroxene and plagioclase phenocrysts occur in a dark green matrix. Up to 3% pyrite. Pyrite often occurs as rim around pyroxene.	10	0.2	46	72
64103	Shear Zone - along contact of andesite flow and porphyritic andesite dyke about 0.5 m wide. Minor quartz-carbonate veining and abundant limonite stain. Minor pyrite noted (< 1%).	10	0.2	30	98
64104	Andesite - thin (2.5 m wide) carbonatized zone with abundant limonite and minor pyrite (< 1%) within andesitic flow.	10	0.2	36	108
64105	Andesite tuff, pillow breccia - hematized pillows, pillow breccia occurs in tuff. About 8 m wide, pinches out. Minor pyrite (< 1%) and very minor Cu stain.	10	0.2	110	44
64106	Iron Formation - bands of jasper/hematite up to 2 cm wide, no walls exposed, approximately 2-3 m wide and 10-15 m long, euhedral-subhedral pyrite crystals (1-2%).	10	0.2	14	30
64107	Felsic tuff(?) - possibly a sheared, carbonatized andesite. Contains abundant limonite, 30-40% feldspar and quartz crystals, <1% pyrite. Float.	40	1.8	32	800
64108	Andesite - carbonatized, abundant limonite, < 0.5% pyrite. Possibly in a shear zone.	20	0.2	28	82
64530	Shear zone - rusty weathering chips from clay size to 1-2 cm of andesite tuff(?). From one of many small (up to 10 cm wide) shear zones in this outcrop.	50	1.2	86	66
64531	Andesite tuff - carbonatized, bleached, cut by many small shears (up to 10 cm wide). Contains minor pyrite apparently associated with calcite veinlets/fracture fillings. Minor quartz veining appears to be unmineralized.	10	0.2	54	76



Sample No.	Description	Au	Ag	Cu	Zn
64532	Andesite - pale green, highly altered, cut by a network of calcite veins to 5 mm wide which contain minor pyrite. Very heavy rusty weathered zones to 2 cm wide.	10	0.2	58	70
64533	Andesitic tuff(?) - very heavily altered, pale whitish green, schistose, carbonatized, soft, rusty weathering. Believed to be a bleached andesitic volcanic but could be a heavily weathered felsic volcanic. Minor disseminated pyrite noted and one tiny lens of pyrite 1 cm long by 1-2 mm wide.	10	0.2	24	82
64534	Andesite - greyish white, hard and dense to break although soft to scratch, somewhat carbonatized. Contains abundant pale green epidotized blebs (feldspar?) up to 3 mm and some blebs to 1 mm of quartz. Pyrite disseminated in very fine grains (0.1 mm or less) about 1%. Taken from next to a rusty shear.	10	1.2	68	32
64535	Andesite - strongly carbonatized, greyish brown weathering, medium greenish grey fresh. Goethitic boxwork zones occur throughout. Pyrite disseminated about 1%, may be associated with carbonate stringers/fracture coatings.	10	0.2	166	78
64536	Mafic agglomerate - rounded clasts of vesicular rock to about 8 cm (possibly small pillows) occur in a matrix of fine grained dark green tuff. Highly fractured, sheared. Some layers(?) of goethitic boxwork up to 5 mm thick occur.	10	0.2	122	94
64537	Andesite tuff - somewhat foliated (possibly a weakly welded tuff) with pyrite in ovoid patches up to 2 mm long and in tiny grains and streaks (possibly some arsenopyrite as well).	10	0.2	46	102



Sample No.	Description	Au	Ag	Cu	Zn
64538	Andesite - the outcrop is extremely heavily weathered, altered and is cut by at least 4 faults/shears. It contains 2 or more boulders (possibly a faulted-up layer) of chert and some argillite. The sample is of heavily goethitic rock from the lowest shear.	10	0.6	66	142
64539	Andesitic breccia - very fractured and altered, contains chips to boulders (5 mm to at least 30 cm) of green chert. Cut by 2 or more thin (7-8 cm) rhyodacitic dykes. Contains abundant goethitic, limonitic boxwork zones up to 10 cm long by 3 cm wide as well as "disseminated" boxwork throughout.	10	0.2	60	94
64540	Andesite - 20-30% black mafic phenocrysts <1 mm in a very fine grained medium green matrix with occasional pinkish-white calcite amygdules. Pyrite <1% disseminated in patches up to 1.5 mm across and in tiny crystals on calcite-coated fractures.	10	0.2	44	92



APPENDIX III



ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO: MPH CONSULTING LTD.
301-409 Granville St.
Vancouver B.C.

CERTIFICATE NO. :84200 - 1

INVOICE NO. :4184

PROJECT: V166

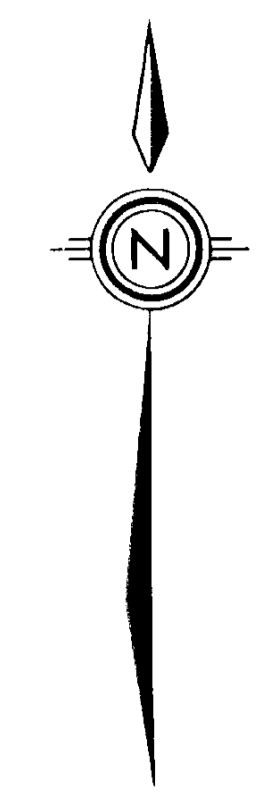
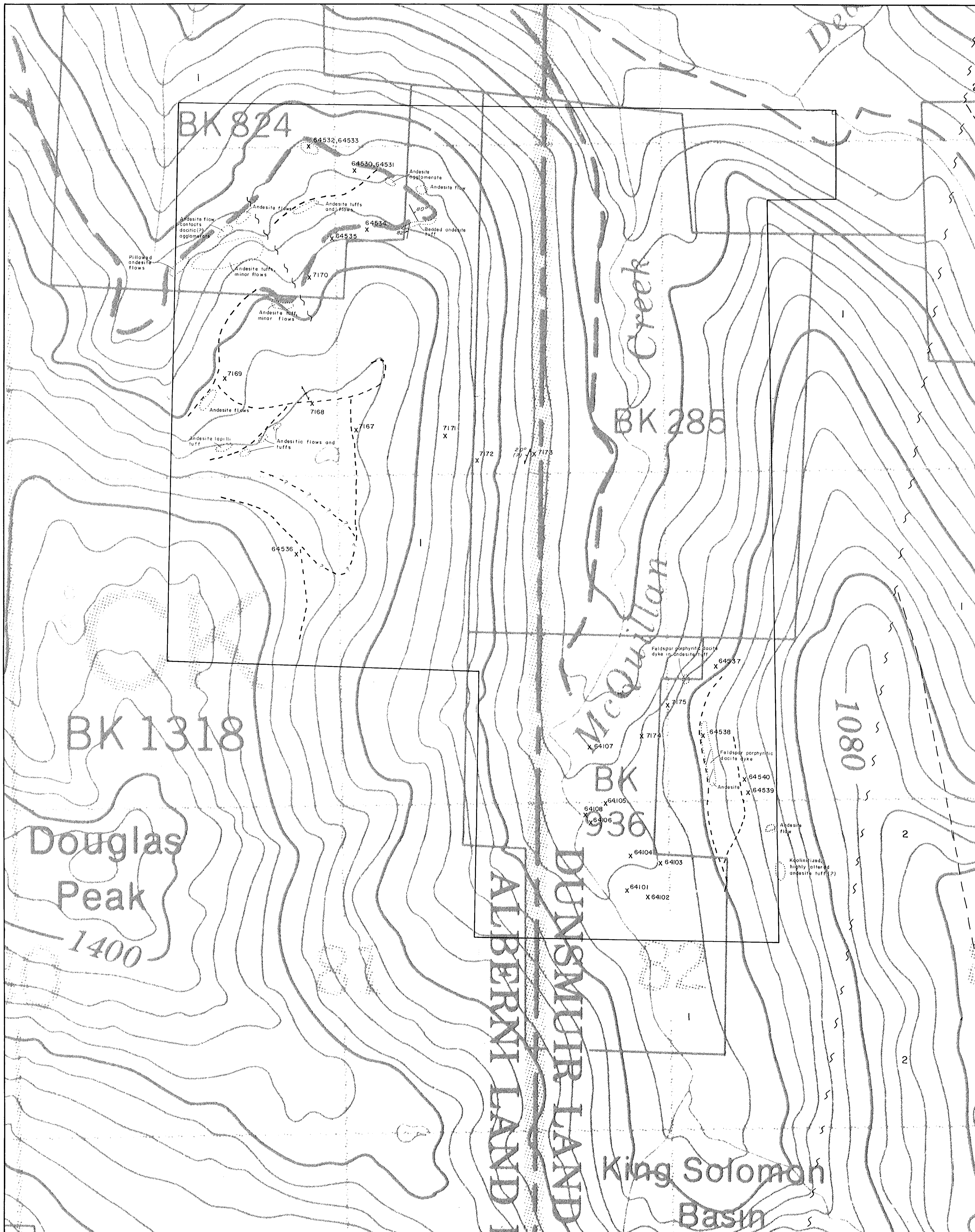
DATE ANALYSED :JULY 5 1984

SAMPLE#	PPM		PPM	PPB
	Cu	Ag	Zn	Au
A 7167	162	0.2	60	10
A 7168	54	0.2	90	10
A 7169	18	0.2	54	20
A 7170	70	0.2	136	20
A 7171	44	0.2	78	10
A 7172	40	0.2	66	10
A 7173	8	0.2	92	10
A 7174	42	0.2	50	10
A 7175	102	0.2	84	10
A 64101	62	0.2	64	10
A 64102	46	0.2	72	10
A 64103	30	0.2	98	10
A 64104	36	0.2	108	10
A 64105	110	0.2	44	10
A 64106	14	0.2	30	10
A 64107	32	1.8	800	40
A 64108	28	0.2	82	20
A 64530	86	1.2	66	50
A 64531	54	0.2	76	10
A 64532	58	0.2	70	10
A 64533	24	0.2	82	10
A 64534	68	1.2	32	10
A 64535	166	0.2	78	10
A 64536	122	0.2	94	10
A 64537	46	0.2	102	10
A 64538	66	0.6	142	10
A 64539	60	0.2	94	10
A 64540	44	0.2	92	10
X LAB. STD B	140	0.8	128	

CERTIFIED BY :



APPENDIX IV



LEGEND

GEOLOGY (Ref. Muller, 1980)

- SICKER GROUP**
- 2 MYRA FORMATION - basic to rhyodacitic banded tuff, breccia, and (?) lava, thinly bedded to massive argillite, siltstone, chert.
 - 1 NITINAT FORMATION - basaltic to andesitic lavas, pillowed, massive, agglomeratic, commonly with large urtite phenocrysts, amygdaloidal.

SYMBOLS

- Claim line with Légal Corner Post.
- Logging roads (position approximate, position estimated).
- Outcrops not sampled.
- Rock sample location and number.
- Bedding, foliation.
- Geological contact (position approximate).
- Fault (position approximate).

LITHOGEOCHEMISTRY RESULTS

Sample No.	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppm)
7157	10	0.2	16.2	60
7158	10	0.2	9.4	90
7159	20	0.2	1.8	54
7170	20	0.2	70	136
7171	10	0.2	44	78
7172	10	0.2	40	66
7173	10	0.2	8	92
7174	10	0.2	42	50
7175	10	0.2	102	84
64101	10	0.2	52	64
64102	10	0.2	46	72
64103	10	0.2	30	98
64104	10	0.2	26	108
64105	10	0.2	110	44
64106	10	0.2	14	30
64107	40	1.8	32	800
64108	20	0.2	28	82
64530	50	1.2	86	96
64531	10	0.2	54	70
64532	10	0.2	58	76
64533	10	0.2	24	82
64534	10	1.2	68	32
64535	10	0.2	168	78
64536	10	0.2	122	94
64537	10	0.2	46	102
64538	10	0.6	66	142
64539	10	0.2	60	94
64540	10	0.2	44	92

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,538

NEXUS RESOURCE CORPORATION

PROPERTY PLAN, GEOLOGY AND ROCK SAMPLING
McQUILLAN CLAIM
ALBERNI MINING DIVISION

Project No:	V 166	By:	T.N.
Scale:	1: 5,000	Drawn:	J.S.
Drawing No:	5	Date:	JULY, 1984.

MPH Consulting Limited