84-#457 - 12564

MPH

REPORT ON
RECONNAISSANCE GEOLOGICAL MAPPING
AND
ROCK SAMPLING

CAMERON GROUP - NANAIMO MINING DIVISION
FOR
SUNFIELD MANAGEMENT LTD.

MAY 11, 1984

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

92F/2E

49°09', 124° 31.5'

Owner/operator: Ladysmith Minerals Ltd.
Sunfield Management Ltd

SUMMARY

Exploration on the Cameron claim in the Nanaimo and Victoria Mining Divisions consisting of reconnaissance geological mapping and rock sampling for geochemical analysis was carried out during March, 1984.

Geological mapping has confirmed the existence of Myra Formation lithologies on the Cameron Group. A quartz vein mineralized with pyrite, sphalerite, and minor chalcopyrite and galena was located on the Monkey claim of the Cameron Group. Geochemical analysis results of up to 7000 ppb Au, 14.0 ppm Ag, 3400 ppm Cu, 720 ppm Pb, and 31,000 ppm Zn from grab samples of the vein were obtained.

A 35-day Phase I program of geological mapping and sampling, soil sampling, and VLF-EM and magnetometer surveys over a cut grid is recommended. The cost is estimated at $124,000. Contingent upon favourable results from the first phase, a Phase II program consisting of trenching, rock sampling, detailed geological mapping and geophysical surveys, is recommended.

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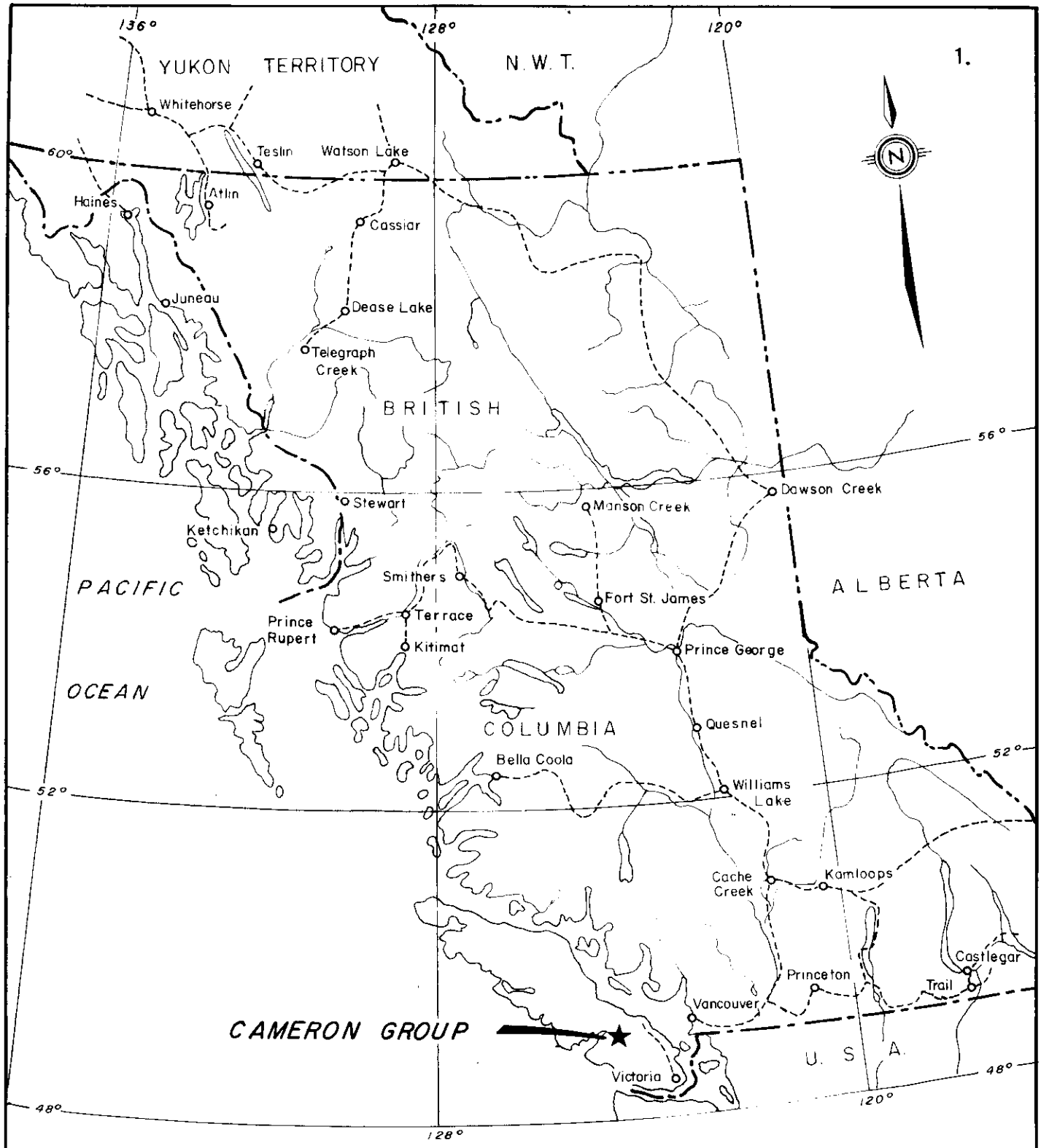

SUNFIELD MANAGEMENT LTD.

LOCATION MAP

CAMERON GROUP

NANAIMO, VICTORIA MINING DIVISIONS

Project No:	V 150	By:	T. N.
Scale:		Drawn:	J. S.
Drawing No:	1	Date:	MAY, 1984.

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1.0 INTRODUCTION

This report represents the compilation of field work carried out by MPH Consulting Limited for Sunfield Management Ltd. on the Cameron Group from March 9, 1984 to March 15, 1984.

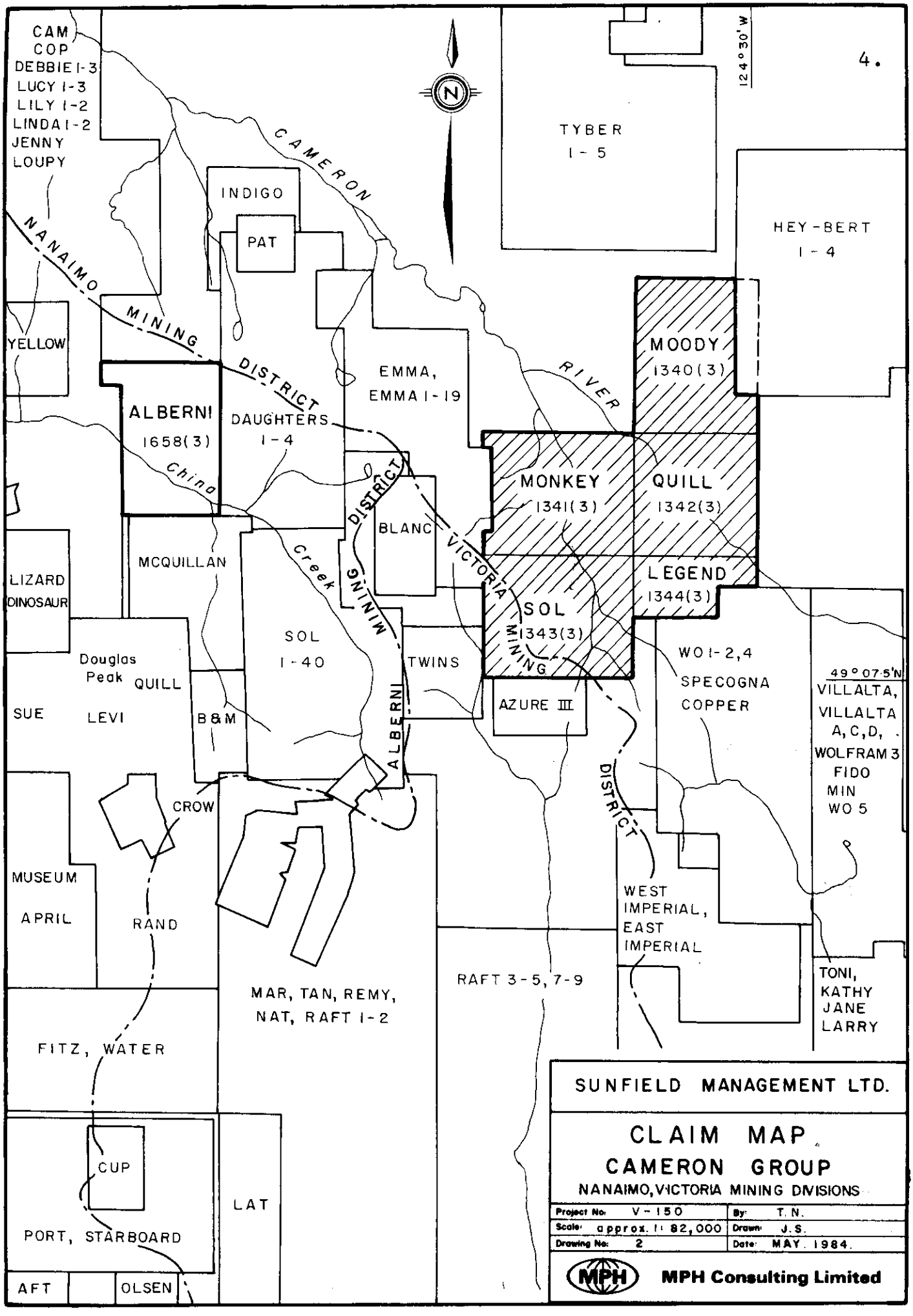
Work included reconnaissance geological mapping over as much of the claims as was readily accessible and rock sampling for litho-geochemical analyses over the same areas.

The report is completed for the purposes of defining a proposed work program and for the purpose of filing assessment work on the Cameron Group.

2.0 PROPERTY LOCATION, ACCESS, TITLE

The Cameron Group is located approximately 27 km east of Port Alberni between the head of the Nitinat River and the Cameron River on NTS mapsheets 92F/2E and 92F/1W, centred at approximately 49°09'N latitude and 124°31.5'W longitude. All of the claims except the Sol are within the Nanaimo Mining Division. The Sol claim lies mainly in the Nanaimo Mining Division with the southwest corner in the Victoria Mining Division (Figures 1 and 2).

Access to the Cameron Group is via MacMillan Bloedel logging roads. The turn-off from Highway 4 is located about 8 km east of Port Alberni. It is signposted as the road to Mt. Arrowsmith ski hill. Some 10 km along this road the ski hill traffic swings uphill to the left. Continuing straight on for approximately 4.7 km, a junction near the boundary of the Cameron Group is reached. At this point, bearing left provides access to the southwest corner of Moody, to Quill, and to the northeast portion of Legend. Continuing straight on at the junction, access to Monkey, Sol and the southwestern corner of Legend is provided. The Monkey and Sol claims have the best access as they are the least rugged of the claims and there are many logging roads, although many of them are overgrown, washed out, or otherwise undriveable. The Legend, Quill, and Moody claims contain extremely steep hillsides and few roads. Access to the northern part of the Moody claim might be possible by taking MacMillan Bloedel's Englishman River road (turns off Highway 19 at Northwest Bay Camp, about 7.4 km south



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CLAIM MAP
CAMERON GROUP
NANAIMO, VICTORIA MINING DIVISIONS

Project No: V-150	By: T.N.
Scale: approx. 1: 82,000	Drawn: J.S.
Drawing No: 2	Date: MAY. 1984.

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of Parksville) for 19 km and Road 143 for a further 6.4 km. From there, Road 50 and Road 63 go onto the Moody claim, but it is not known whether they are in driveable condition or whether a key to open the gate(s) will be made available.

The Cameron Group consists of five staked claims totalling 84 units as summarized below:

Table I

Cameron Group Claims Summary

Claim Name	Record Number	No. of Units
Moody	1340	20
Monkey	1341	20
Quill	1342	16
Sol	1343	20
Legend	1344	8
		84 units

The claims were grouped as the Cameron Group by Notice to Group dated March 14, 1984. The claims are owned by Ladysmith Minerals Ltd. and all have an anniversary date of March 14, 1985. Sunfield Management Ltd. acquired an option on the claims by virtue of an agreement with Ladysmith dated April 18, 1984.

3.0 PREVIOUS WORK

No previous work on the Cameron Group is recorded, however two short adits were found on the Monkey claim. Both were driven on a gold-bearing quartz vein. The upper adit is perhaps 10 feet long and appears to be fairly old, while the lower adit is about 20 feet long and seems to be relatively recent. A claim post was located near the old workings with a tag dated 16 June, 1979, numbered 301718, and named Enargite. A regional aeromagnetic survey flown by Hunting Survey Corp. Ltd. in 1962 located magnetic anomalies in the southern part of Moody and in the southeastern corner of Sol. Another possible anomaly occurs in the north-central area of Sol, fairly close to the old workings on the auriferous quartz vein. During the period 1963-1966 Gunnex Ltd. carried out a regional mapping program with some prospecting and silt sampling and compiled a list of mineral occurrences. The Cameron Group area was mapped but apparently no mineralization was located.

Further historical detail related to mineral occurrence is provided in section 4.7 following.

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).

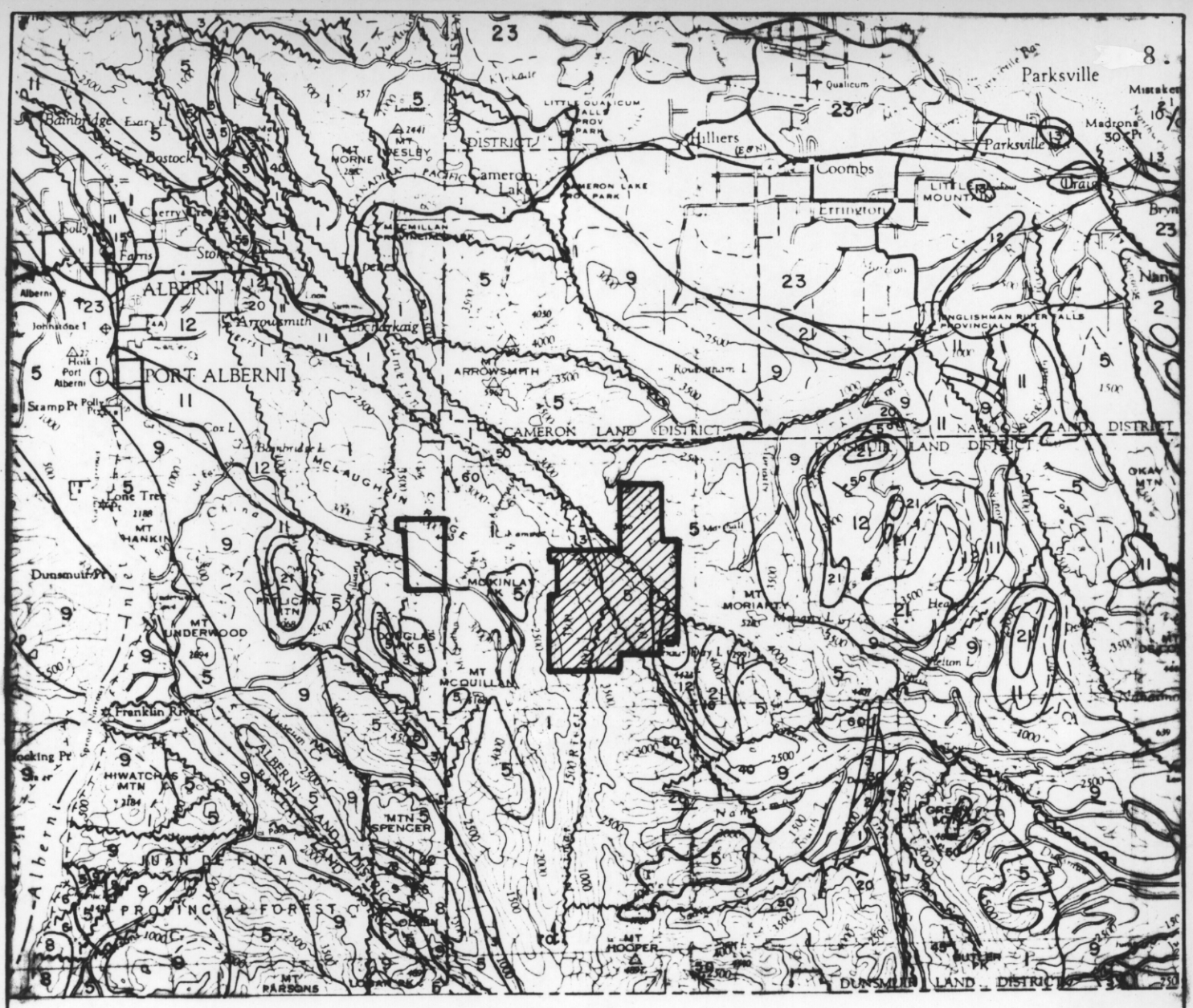
4.0 REGIONAL GEOLOGY

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.

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 flow rocks. 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 material. 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, 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 uralite porphyry, agglomerate, pillow lava; greenschist.

0 5 10 km

N

SUNFIELD MANAGEMENT LTD.

REGIONAL GEOLOGY MAP
CAMERON GROUP
NANAIMO, VICTORIA MINING DIVISIONS

Project No:	V 150	By:	T. N.
Scale:	1:250,000	Drawn:	J. S.
Drawing No:	3	Date:	MAY, 1984.

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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 volcaniclastic 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 95 km northwest of the Cameron Group. Here, volcaniclastic 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 4) 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 4a) 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, 1968).

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 5) 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 quartzo-feldspathic, 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 (J.E. Muller, 1968). 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 monoclinal 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, 1968).

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 (Western Miner, May 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 65 km east of the Port Alberni area. 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 (visit by T.G. Hawkins, September 1983). The deposit may be of syngenetic-volcanogenic origin.

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).

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. All production figures are from Neale (1984) or Hawkins (1983).

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

4.7 Mineral Occurrences

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

Geology:

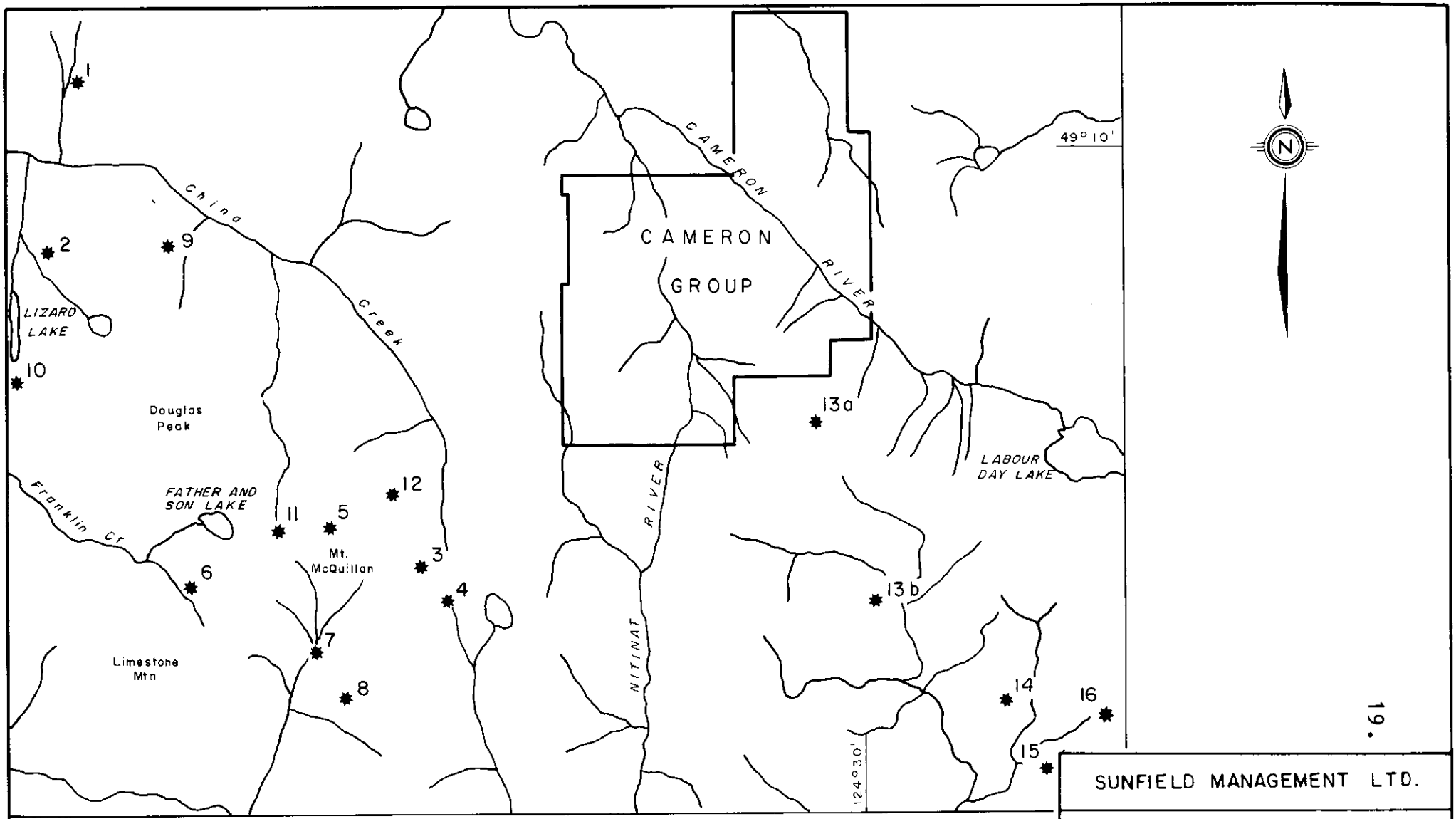
The area is underlain by highly altered massive, tuffaceous, slightly porphyritic, and amygdaloidal andesites of the Sicker Group. Three main quartz veins follow well developed shears and contain a small amount of pyrite and some free gold. As well, a 40 foot wide shear zone has been extensively altered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



MINERAL OCCURRENCES

1 Vancouver Island Golds
2 Regina
3 Golden Eagle
4 B & K
5 Havilah
6 Thistle
7 Black Panther
8 Black Lion
9 Bank Group
10 Ken
11 McQuillan Creek
12 Sol
13 Torchy 2 Group
a) Specogna Copper Claim
b) WO 4 Claim
14 Villalta
15 Skarn Group
16 Wolfram 3

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MINERAL OCCURRENCE LOCATION MAP
CAMERON GROUP
NANAIMO, VICTORIA MINING DIVISIONS

Project No.	V 150	By:	T. N.
Scale:	approx 1:80,000	Drawn:	J. S.
Drawing No:	4	Date:	MAY, 1984

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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 totalling 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, 1,404 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:

Mineralization occurs at contacts between thin black, chloritic, very finely crystalline basaltic flows or between andesitic tuffs and these flows within a complex sequence of basaltic and andesitic flows with lesser andesitic and minor basaltic fine grained tuffs of the uppermost Myra Formation. The strata are folded into a major anticline with the Thistle mine in the northeast dipping limb. Major and minor faults and rapid facies changes complicate the geology.

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. Beds(?) of calcite plus iron carbonate with up to 15% sulphides occur in the upper half of the mineralized interval. 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.

In the upper glory hole, basaltic flows occur at three intervals within 20 to 25 m, all of which are associated with massive sulphide mineralization. The mineralized interval in the lower glory hole is believed to be a fold repetition of one of the upper glory hole mineralized intervals (Ref. 10).

A showing on the Panther road is believed to be on the southwest limb of the Thistle anticline, so the possibilities of locating more fold repetitions of mineralization are good (Ref. 10).

The upper two mineralized intervals are reported to be within strongly magnetic basalt flows (Ref. 10).

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 (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: 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) Westmin Resources Ltd.; Progress Reports by G. Benvenuto dated June 29, 1983, August 2, 1983, and September 1, 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

9. 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

10. 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

11. 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

12. 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

13. Torchy 2 Group (WO4, Specogna Copper) Cu Au Ag

Geology:

Chalcopyrite, pyrite, bornite, and sphalerite in irregular streaks, lenses, and disseminations in a quartz and calcite gangue occur in a shear, attitude 175/80E, in deformed and altered volcanics, probably of the Karmutsen Formation, on the WO4 claim. In addition, a Cu-Ag showing is reported to occur on the Specogna Copper claim. A bed of porphyritic rhyolite 10 to 20 m thick extending for at least 500 m along the Cameron River is also reported.

Economic Features:

The WO4 showing is exposed in 6 trenches and rock cuts for 45 m. Assays of up to 0.042 oz/ton Au over 1 m and of up to 14.04 oz/ton Ag, 15.8% Cu, and 2.02% Zn, all from grab samples are reported (Ref. 2). A strong EM conductor was located on the east grid (Specogna Copper showing??) (Ref. 2). The best core assays include 3.5 feet of 0.072 oz/ton Au, 0.5 feet of 2.14 oz/ton Ag, 0.5 feet of 10.29% Cu and 3.5 feet of 2.71% Cu, and 3.5 feet of 0.61% Zn (Ref. 3).

History:

1979-80: Canamin Resources Ltd.; prospecting.

1981: Amhawk Resources Corp.; prospecting.

1982: Canamin Resources Ltd.; 4 EXT DDH totalling 64.8 feet.

1984: "Falconbridge"; airborne geophysics survey, ground follow-up to be done.

References:

1-3) AR 8687, 10302, 10996

4) Today's Market Line 1984 #066

14. Villalta Au W Zn Cu Fe

Geology:

Crinoidal limestone and marble with lenses of grey chert (Buttle Lake Formation?) are underlain by deformed basaltic volcanic and sedimentary rocks and are overlain by remnants of rhyolite tuff. Nanaimo Group sediments unconformably overlie the Sicker Group rocks. On the Villalta D, extensive areas of powdery to massive hematite carrying Au values occur at the top of the limestone in a well-developed paleo-karst topography. Gold showings are also reported to occur in bands of chert and massive sulphide within the limestone, in massive sulphides (sphalerite), at the contact of limestone and argillite, in pyrite stringers within the argillite, and in shears. On the Villalta A, gold is also found in quartz veins.

Economic Features:

Diamond drilling intersected up to 14 m of massive hematite. Hematite is over 30 m wide and extends at least 110 m into the hillside. Assays of up to 0.382 oz/ton Au over 1 m and 0.532 oz/ton Au over 2 feet are recorded from massive hematite (Refs. 2,3). The best assay was 3.676 oz/ton Au, 0.56 oz/ton Ag, 0.76% Cu, and 7.65% Zn over 1 foot (Ref. 3). The hematite is believed to represent a weathered massive sulphide horizon originally comprised of magnetite, marcasite, and minor arsenopyrite.

The W soil anomaly is reported to be at least 6 km wide and 100 m thick (Ref. 2). The best assay in drill core was 0.08% WO_3.

History:

1976-79: E. Specogna; reconnaissance silt sampling and float examination lead to the discovery of mineralization and the staking of the claims. Trenching, rock and soil sampling, stripping, three packsack diamond drill holes totalling 14 m.

1980: Canamin Resources; 6 NQ DDH totalling 398.4 m, geological mapping, trenching, extensive sampling.

1984: Falconbridge; airborne geophysics, ground follow-up to follow.

References:

1) EBC 1977-E109, 1978-E126, 1979-128

2-4) AR 7792, 8458, 10789

5) BCDM Geological Fieldwork 1980, pp112-114

6) Today's Market Line 1984 #066

7) Minfile 92F384

15. Skarn Group (Kar, Toni) Cu Fe Pb Zn Ag Au

Geology:

A sequence of Sicker Group basaltic to andesitic pyroclastic breccias, flows, tuffs and cherty tuffs overlain by chert and cherty tuff, limey sediments, and Buttle Lake Formation limestone

are all intruded by a diorite to granodiorite stock or batholith. The limestone has been converted to marble. The limey sediments, and to a lesser degree, the volcanics, have been skarnified. The skarn is composed of garnet, epidote, actinolite and minor diopside, phlogopite, quartz, calcite, and vesuvianite. It contains lenses, layers, veinlets, and irregular patches of chalcopyrite with minor pyrite, sphalerite, magnetite, and specularite and some pyrrhotite and narrow veins and irregular pods of magnetite with minor chalcopyrite, pyrite, specularite, and sphalerite. By 1979, workers believed that in addition to, or instead of, skarn mineralization, exhalative volcanogenic mineralization might exist.

Economic Features:

The skarn zone outcrops over a distance of 1800 feet with an average width of about 500 feet. The richest copper zones occur near the centre of the skarn while the iron zones occur closer to the granodiorite. Drilling intersects various skarn zones not exposed on surface.

Gunnex recorded assays of 2.1% Cu over 47.5 feet and 0.59% Cu, 0.62% Zn, 6.31 oz/ton Ag, and trace Au over 8.5 feet amongst others (Ref. 6). Westmount attempted to re-drill the 47.5 foot intersection for confirmation but could not locate it in two holes. Skarn mineralization was struck in five of eight holes. Assays include 61 feet of 0.91% Cu, 0.0001 oz/ton Au, and 0.41 oz/ton Ag and 15 feet of 3.72% Cu, 0.01% Pb, 0.12% Zn, 0.0023 oz/ton Au, and 1.56 oz/ton Ag (Ref. 5).

History:

1962: Hunting Survey Corp.; regional aeromagnetic survey, discovered the showing while geologically mapping the area.

1963-65: Gunnex Ltd.; staked 4 claims in 1963 and 11 more in 1964. Preliminary, regional, and detailed geological mapping, 11 trenches and 43 pits dug and blasted, rock sampling, magnetometer, EM, and SP surveys,, soil sampling, silt sampling, prospecting, and 6 diamond drill holes totalling 3562 feet.

1968?: D.J.T. Carson; mapped the showing in great detail.

1977-80: Westmount Resources Ltd.; staked the Kar claim, restaked as Toni claim, vector pulse EM survey, 8 NQ diamond drill holes totalling 2091 feet.

References:

1) MMAR 1965-239

2) EBC 1977-E109

3-5) AR 6585, 7834, 8487

6) Gunnex #21

7) Carson, 1968, pp.111-127

8) Minfile 92F182

16. Wolfram 3 W

Geology:

The claim is underlain by Sicker Group limestone, breccias and conglomerates of the Nanaimo Group, and volcanics (Sicker?

Karmutsen?). A pyrite-chalcopyrite occurrence in steeply dipping shears in volcanics is reported.

Economic Features:

Tungsten values from 0.01 to 0.04% are reported to occur in all rock types except limestone.

History:

1979: E. Specogna; prospecting.

Refererences:

1) AR 7953

5.0 LOCAL GEOLOGY AND WORK DONE

The southwestern area of the Cameron Group is mapped by Muller (1980) as being underlain by Myra Formation, while Karmutsen Formation volcanics are shown occurring on most of the rest of the Group with lesser amounts of Buttle Lake Formation and Nanaimo Group sediments.

Mapping and sampling (see Appendix II) had to be confined mainly to the Monkey and Sol claims, as access to the Moody, Quill, and Legend claims was difficult due to snow, very steep slopes without logging roads, and closure of some roads as a result of a forest industry strike/lockout. Rocks of the Nitinat Formation(?) through the sequence to the Karmutsen Formation were noted on the Cameron Group.

In general, the rocks on the Monkey and Sol claims are basic to intermediate tuffs and flow(?) with lesser amounts of argillite and chert. In the northwestern corner of the Monkey claim, hornblende$^{\pm}$ feldspar porphyritic andesitic flows occur (top of the Nitinat Formation??). South of the flow(?) rocks, tuffaceous to agglomerate andesites occur. In one outcrop, clasts of hornblende porphyritic andesite or dacite(?) up to 8 inches in size and some clasts of amygdaloidal basalt (Nitinat Formation?) occur in a very heavily weathered finer grained matrix. A nearby outcrop contains clasts of dull maroon basalt(?). This indicates that the rocks in this area of the claim are probably from the

lower unit of the Myra Formation. Continuing to the south, andesite tuff was encountered in two widely spaced outcrops.

A sequence of interbedded, probably tuffaceous dacite and argillite with minor chert was then traversed. These rocks probably represent the middle thinly banded unit of the Myra Formation.

A conformable quartz vein with heavy concentrations of pyrite (up to 50%), lesser sphalerite (up to about 10%), and minor chalcopyrite and galena was found in a thicker-than-normal band of argillite in this sequence. The vein is up to 6 inches wide with up to a further 6 inches of extremely silicified and quartz stringered wallrock on the hangingwall and was traced for roughly 120 m.

Geochemical analysis results from 6 grab samples of mineralized quartz vein ranged from 250 to 7000 ppb Au, 3.2 to 14.0 ppm Ag, 98 to 3400 ppm Cu, 24 to 720 ppm Pb, and 1040 to 31,000 ppm (3.1%) Zn. A sample of the highly silicified and quartz stringered hangingwall rock ran 220 ppb Au, 10.6 ppm Ag, 294 ppm Cu, 200 ppm Pb, and 3020 ppm Zn. Four other samples of wallrock taken further away from the vein returned only low values in Au, Cu, and Pb with two samples slightly enriched in Ag (0.4, 0.6 ppm) and one sample with 352 ppm Zn.

Two other very small quartz veins, one an offshoot(?) of the main

vein, and the other a similar-looking but narrower vein on the opposite side of the hill, were located. The offshoot ran 60 ppb Au, 6.6 ppm Ag, 382 ppm Cu, 446 ppm Pb, and 460 ppm Zn while the second vein ran 70 ppb Au, 1.4 ppm Ag, and 42 ppm Cu, with Pb and Zn not analyzed.

A fault runs parallel to the main vein about 5 to 10 feet north of it and separates argillite on the south from strongly feldspar porphyritic andesite(?) to the north. This porphyry was not observed elsewhere and is believed to possibly be an intrusive, perhaps of Tertiary age.

In the southwestern corner of the Sol claim a thick layer of argillite overlies andesite tuff in an anticlinal structure. This would appear to represent the upper part of the middle unit of the Myra Formation. Also present in this area are outcrops of pyritic, dacitic to rhyodacitic rocks which strike at right angles to the southwest limb of the above-mentioned anticline. A fault is presumed to separate the acidic rocks from the anticline, although no direct evidence for one was seen. Geochem results from the acid volcanics are low.

In the east-central area of the Sol claim, outcrops include possibly tuffaceous argillite, andesite tuff(?), and interbedded dacite tuff, chert, and argillite. This area is again probably representative of the middle Myra Formation.

Various regional mappers have mapped (inferred?) a large fault more or less along the course of Monkey Creek. This would appear to be correct as strikes on the west side of the creek are generally east-west, whereas they are roughly north-northwest on the east side of the creek.

On the east side of the postulated fault a rather broad band of andesite, probably mainly tuffaceous, occurs. A sample taken from a shear zone in this area separating carbonatized(?) andesite from unaltered andesite was the only sample apart from quartz vein material to run more than 10 ppb Au. It ran 50 ppb Au with low Ag and Cu.

Several exposures of a chert and jasper pebble to cobble conglomerate (or breccia) occur within (??) the andesite. Muller (1980, p.20) describes an outcrop of similar rock as being the basal section of the Buttle Lake Formation. On the Monkey claim it appears to form a lens within andesite near to the contact of the Buttle Lake limestone. White weathering Buttle Lake limestone outcrops in a line of cliffs above the east side of Monkey Creek. Above the limestone is a band of argillite and/or greywacke, and above that are Karmutsen Formation pillow basalts. If this limestone horizon is a continuation of the Villalta limestone (see #14 in Mineral Occurrences section above), the possibility exists that similar mineralization may be present on the Cameron Group.

Muller (1977) has shown a fault separating the Buttle Lake Formation from the Karmutsen Formation, but no evidence to confirm the existence of a fault was seen in the field. More recent work by Muller (1980) does not show a fault. Several small crossfaults were, however, located in the Buttle Lake/Karmutsen contact area which displace the strata up to about 150 m horizontally.

Most or all of the rest of the ridge between Monkey Creek and Cameron River is made up of Karmutsen Formation volcanic rocks. The two best Cu results (excepting quartz veins) came from Karmutsen Formation rocks.

In the valley of the Cameron River, several small outcrops of dacitic rock, some of which contain feldspar and hornblende phenocrysts may belong to the Sicker Group or to the Tertiary Intrusions.

Sediments of the Comox Formation were mapped by Muller (1977) in the area of the southeastern corner of the Legend claim but were not located during this program. Boulders of the Tertiary Sooke intrusives that Muller (1977) mapped in the same area were found, but no outcrop.

The northeastern slope of the Cameron River valley was found to consist of Karmutsen Formation volcanics.

The ICP results show that the Au-Ag-Zn-Cu-Pb quartz vein also carries moderate amounts of Cd and minor Mo. The "offshoot" quartz vein also contains minor Cd and Mo and high (relatively) W.

Silver values from the main quartz vein are up to 4.4 times higher than values obtained by geochemical analysis. As well, two of the Pb results are approximately 10 times higher than geochemical results. The quartz veins are depleted in Co, Ni, V, Ti, and Sr in comparison to the volcanic and sedimentary rocks. High Ba results were obtained from a number of different rock types including dacite, andesite, argillite, chert pebble conglomerate, and chert. The wallrock of the main quartz vein seems to be anomalously high in Ba although the vein itself is quite low in Ba.

A more detailed statistical analysis is necessary to fully utilize the ICP results in classifying rock types, determining anomalous concentrations of the various elements and in defining alteration "signatures."

See Appendix I for a complete list of rock samples and geochem results.

6.0 RECOMMENDED WORK PROGRAM

6.1 Description

Phase I will consist of detailed geological mapping with rock sampling, soil sampling, and VLF-EM and magnetometer surveys on a grid with lines spaced 100 m apart covering that part of the Cameron Group known to be underlain by Sicker Group rocks. A total of 85.8 km of linecutting will therefore be required on the Monkey and Sol claims of the Cameron Group.

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 lithogeochemical 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, and Zn.

Soil sampling on the grid lines is to be done at 100 m spacing. A total of 859 samples will be collected and geochemically analyzed for Au, Ag, Cu, Pb, and Zn.

Geophysical surveys will consist of ground magnetometer and VLF-EM readings taken at 50 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.

The main program will concentrate on the area known to be underlain by Sicker Group rocks. Additional reconnaissance geological mapping and sampling are to be carried out on the Moody, Quill, and Legend claims to attempt to locate additional areas of Sicker Group rocks for further detailed study. If none are found, no further work need be done on these claims. The two aeromag anomalies should be checked and investigated. The known mineralized quartz vein will be systematically sampled and explored for extensions or thicker or higher grade segments.

Phase I is estimated to cost $124,000, to be spent over a period of five weeks. If it is deemed necessary to do any work beyond cursory geological reconnaissance of the ridge between Monkey Creek and Cameron River and the northeast side of the Cameron River valley, a mountaineering geological team will be necessary as these areas are extremely precipitous. The cost of such a team has not been included in the budget estimates.

Phase II work, if warranted by the results of Phase I, will consist of trenching, rock sampling, detailed geological, and IP

and time domain EM surveys in areas of geochemical and/or geophysical anomalies. This work is estimated to cost $95,000 over a period of three weeks. At the conclusion of Phase II, a decision regarding diamond drilling can be made.

6.2 Budget

Phase I

Mobilization/Demobilization			$ 200
Personnel			
Geologist	35 days @ $325	$11,375	
Line Cutters	(25 days @ $175) x 3	13,125	
Soil Samplers	(25 days @ $150) x 2	7,500	
Soil Sampler/Helper	35 days @ $150	5,250	
Geophysical Technicians	(20 days @ $175) x 2	7,000	
			44,250
Equipment			
Magnetometer and base station recorder	20 days @ $130	2,600	
VLF-EM receiver	20 days @ $ 75	1,500	
			4,100
Support Costs			
Accommodation and Meals	225 man days @ $100	22,500	
Vehicles - Geology/Geochem crew	35 days @ $ 75	2,625	
- Linecutting crew	25 days @ $ 75	1,875	
- Geophysics crew	20 days @ $ 75	1,500	
Communications		500	
Miscellaneous Supplies		750	
			29,750
Geochemical Analyses			
859 soil samples (Au Ag Cu Pb Zn) @ $7.70		6,614.30	
40 rock samples (Au Ag Cu Pb Zn) @ $9.35		374.00	
70 rock samples (whole rock) @ $38.65		2,705.50	
			9,693.80

Micro-Computing		
Whole Rock Geochem 70 samples @ $12	$ 840	
Petrographic studies (optional)		
10 thin sections @ $50	500	
(not included in totals)		
		$ 840
Consulting/Supervision		
10 days @ $450	4,500	
Expenses	1,150	
		5,650
Report Writing		
Geologist 15 days @ $325	4,875	
Geophysicist 10 days @ $450	4,500	
Drafting 60 hrs @ $18	1,080	
Materials	800	
		11,255
		105,739
Administration (15% of 47,614)		7,142
		112,881
Contingency @ 10%		11,288
	say	$124,000

6.3 Schedule

The following table is a summary of the projected time requirements for Phase I. Phase II is estimated to take three weeks to complete.

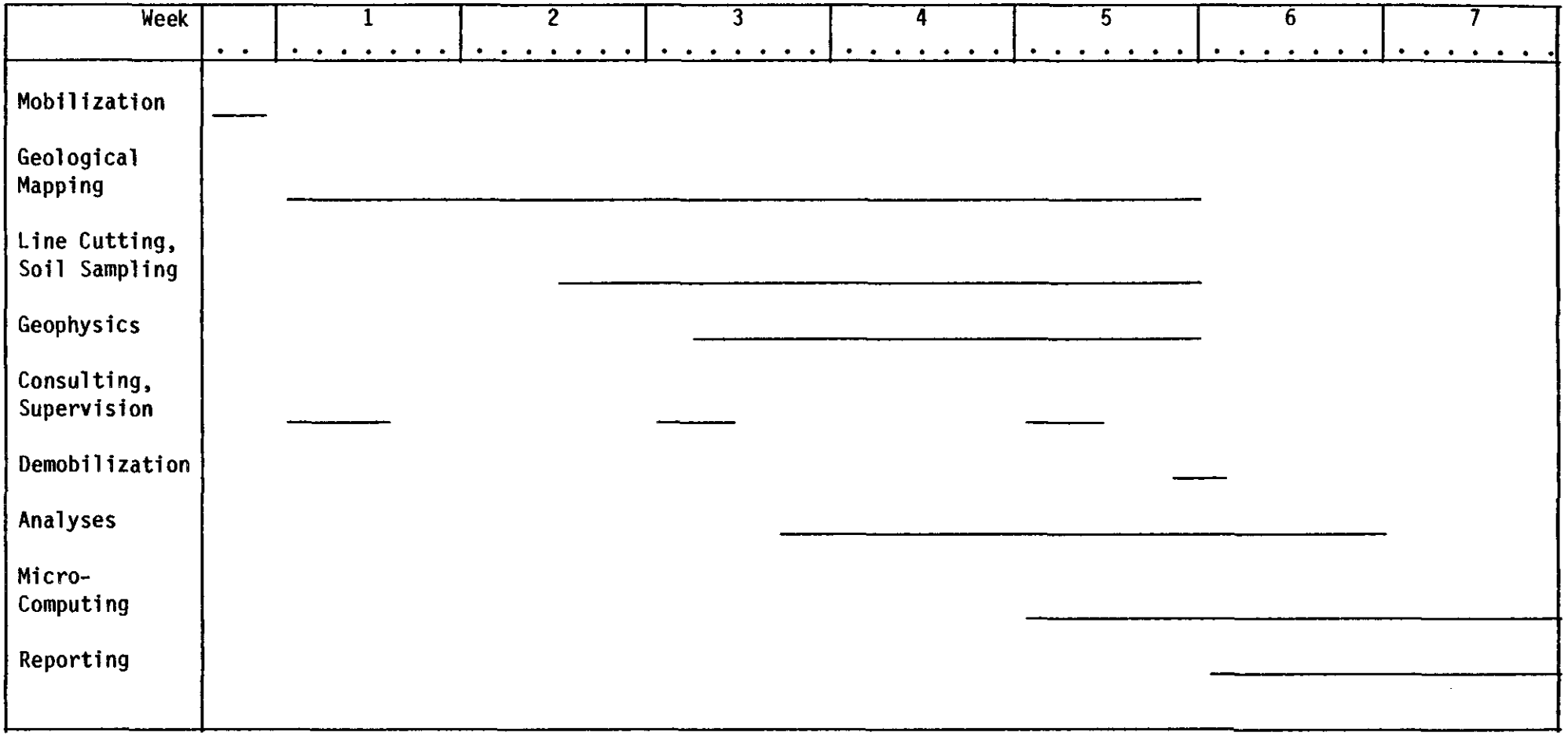


TABLE II

PHASE I PROJECT SCHEDULE

CAMERON GROUP

7.0 CONCLUSIONS

1. The Myra Formation of the Sicker Group is known to host volcanogenic massive sulphide deposits.

   The massive sulphide deposits of Westmin Resources Ltd. at Buttle Lake, 95 km northwest of the Cameron Group, containing reserves totalling 16.25 million tons grading 2.1% Cu, 5.4% Zn, 0.3% Pb, 0.07 oz/ton Au, and 1.2 oz/ton Ag (1983), are hosted by the Myra Formation.

2. The Thistle mine, located about 7.5 km southwest of the Cameron Group is believed to be a volcanogenic massive sulphide deposit. The mine produced 2760 oz Au, 2120 oz Ag, and 681,425 lb Cu from 6920 tons of ore from 1938 to 1942.

3. Myra Formation lithologies have been mapped on the Monkey and Sol claims of the Cameron Group.

4. The Cameron Group has the potential to host a volcanogenic massive sulphide deposit.

5. The Moody, Quill, and Legend claims are mapped as being underlain by Karmutsen Formation basic volcanic rocks. Sicker Group rocks may also be present as many instances where previous mapping indicated Karmutsen rocks when detailed mapping revealed them to belong to the Sicker Group are known.

6. A quartz vein mineralized with pyrite, sphalerite, and some chalcopyrite and galena has been located on the Monkey claim of the Cameron Group. Geochemical analysis results of up to 7000 ppb Au, 14.0 ppm Ag, 3400 ppm Cu, 720 ppm Pb, and 31,000 ppm (3.1%) Zn from grab samples were obtained. The vein is 6 to 12 inches wide and was traced for approximately 200 m.

7. Numerous other 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 totalled 3419 tons yielding 1152 oz Au, 2409 oz Ag, 4933 lb Cu, and 24,995 lb Pb.

8. The Cameron Group has the potential to host economic grade precious and base metal quartz vein deposits.

9. Two aeromagnetic anomalies are located on the Cameron Group in areas as yet unexplored.

10. The Villalta claim, located 8.5 km southeast of the Cameron Group, hosts a gold-bearing massive hematite body at the top of a limestone horizon believed to be the Buttle Lake Formation. Assays of up to 3.67 oz/ton Au have been reported from this zone. The Cameron Group has the potential to host a similar occurrence.

11. 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.

2. Phase I work to consist of linecutting, geological mapping and sampling, soil geochemistry, and ground magnetometer and VLF-EM surveys on the Monkey and Sol claims of the Cameron Group 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. A fast, thorough check of the Moody, Quill, and Legend claims for the existence of any Sicker Group rocks in areas shown on regional maps to be underlain only by Karmutsen volcanics is recommended. If Sicker rocks or showings in the Karmutsen are located, Phase I may have to be expanded to provide exploration in the additional area(s). Provision for this eventuality has not been made in the budget estimate.

6. It is recommended that the areas of the aeromagnetic anomalies be explored in an attempt to locate the cause of the anomalous readings.

7. It is recommended that the upper contact of the Buttle Lake Formation be carefully prospected to determine whether gold-bearing massive hematite such as that found on the Villalta property to the southeast occurs on the Cameron Group.

8. The Phase I work is recommended at an estimated cost of $124,000 for the Cameron Group. The work is estimated to take 35 days to complete.

9. 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 IP and time domain EM surveys which would be contingent upon favourable results from Phase I. Cost of Phase II is estimated at $95,000.

Respectfully submitted,
MPH Consulting Limited

T. Neale, B.Sc.

T.G. Hawkins, P.Geol.

May 11, 1984

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 library research and on field examinations made on the properties in March, 1984.

4. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Sunfield Management Ltd. or associated companies.

Tim Neale

T. Neale, B.Sc.

Vancouver, B.C.

May 11, 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.

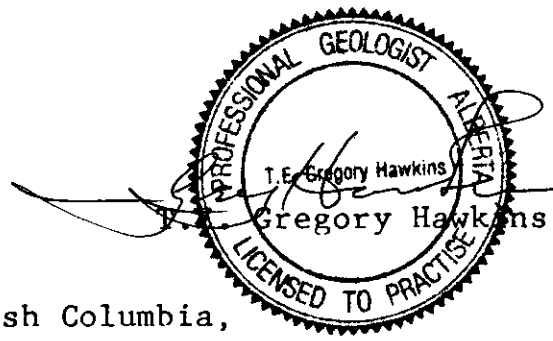
2) That I am a graduate in geology of The University of Alberta Edmonton (B.Sc. 1973), and of McGill University, Montreal, (M.Sc. 1979).

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 carried out in the area in March, 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 Sunfield Management Ltd. or associated companies.



T.E. Gregory Hawkins, P.Geol.

Dated at Vancouver, British Columbia,
this 11th day of May, 1984

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APPENDIX I

MPH

LIST OF PERSONNEL
&
STATEMENT OF EXPENDITURES

The following expenses have been incurred on the Cameron Group of claims for the purposes of mineral exploration between the dates of March 9, 1984 and March 15, 1984.

Personnel

T.G. Hawkins, P.Geol.		
Consulting Geologist		
1 1/2 days @ $450	$ 675.00	
T. Neale, B.Sc.		
Geologist		
5 1/2 days @ $325	1,787.50	
+ 58 hrs @ $40	2,320.00	
S. Angus		
Assistant/Prospector		
5 1/2 days @ $200	1,100.00	
		$ 5,882.50

Expenditures

Meals & Accommodation	445.06	
Transportation (gas, parking, ferries)	121.95	
Supplies	23.54	
Analyses 56 @ $7.90	442.40	
12 @ $8.85	106.20	
68 ICP @ $13.00	884.00	
Expenses - T.G. Hawkins	53.56	
Report Costs		
Drafting	322.75	
Typing	360.00	
Miscellaneous (phone, maps)	5.50	
		2,764.96
Administration @ 15%		414.74
		$9,062.20

APPENDIX II

ROCK SAMPLE DESCRIPTIONS
AND
ROCK GEOCHEM RESULTS

Sample No.	Description	Claim	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
64259	Andesite. Some thin (<2 inches) contorted bands of chert. 2 to 3% pyrite on calcite fractures.	Monkey	10	0.2	136		
64260	Banded chert with minor pyrite. 140/?NE	Sol	10	0.2	60		
64261	Shear Zone - pale green, soft, carbonatized andesite to south, andesite (unaltered) to north.	Sol	50	0.2	98		
64262	Andesite tuff - fragments up to 25 mm, some argillite fragments. Minor band of thinly (6-25 mm) bedded cherty rock. Small areas of tuff have fine rusty specks up to about 5% of rock.	Monkey	10	0.2	70		
64263	Dacite - rusty, minor pyrite. Interbedded with siliceous, weakly pyritic black argillite (sample 64422).	Monkey	10	0.2	24		
64264	Argillite - fine grained, dark green-grey to grey; possibly tuffaceous(?); some portions of outcrop somewhat cherty. Minor quartz veining in a heavily fractured zone with abundant boxwork and occasional pyrite grains. Minor tiny (<1 mm) pyrite cubes disseminated in argillite.	Sol	10	0.2	30		
64265	Dacite tuff-medium grained, fragments up to 1 cm long average about 1 mm. Larger fragments all appear to be lithic. Very fine disseminated pyrite up to 1%, and pyrite on fracture surfaces. Interbedded	Sol	10	0.2	54		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
	with hard, black, very fine grained argillite and banded grey green chert.						
64266	Dacite - medium grained, bright light green, possibly tuffaceous, occasional quartz blebs. Pyrite is disseminated in small amounts in several areas. Seems to be crudely layered in bands about 6 feet thick.	Quill	10	0.2	154		
64267	Dacite as above cut by a set of quartz-carbonate veins up to 2 cm wide.	Quill/ Legend	10	0.2	50		
64268	Dacite - fine grained, very siliceous. Abundant hairline bright green epidote(?) coated fractures/veinlets. Brownish-black stain common on fracture surfaces.	Legend	10	0.2	52		
64269	Karmutsen Formation volcanic. Some pyrite.	Legend	10	0.2	144		
64270	Rhyodacite - very fine grained, pale grey. Pyrite disseminated in small ($\leq$1 mm) cubes up to 5-7%. Also some blebs of bright green material - mariposite(??). Minor carbonate veinlets and pods. Rusty brown on surface but fresh within 5 mm of surface.	Sol	10	0.2	82		
64271	Argillite - black; often has much rusty stain but only small amounts of disseminated pyrite noted ($<$1%). Beds of pale green grey sandstone (tuffaceous?) up to 1 foot not uncommon. Minor quartz veinlets up to 2 mm.	Sol	10	0.2	46		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64272	Andesite tuff - varies from quite coarse grained (fragments 1-2 mm up to 5 mm) to fine grained. Rusty blotches up to 3 cm across an outcrop surface due to weathering of patches(?), large grains(?) of pyrite. Some thin (< 1 cm) beds of argillite and green grey cherty material in a 3 foot wide zone.	Sol	10	0.2	94		
64273	Andesite tuff - medium grained, weathers bright green to dull greenish brown. Very minor tiny specks of disseminated pyrite. Heavily fractured in at least 3 directions.	Sol	10	0.2	94		
64274	Cherty sediment - perhaps a water-lain ash tuff?? Green grey very fine grained, variably cherty. Pyrite disseminated in tiny specks up to 1% locally. 172/40E	Sol	10	0.2	72		
64275	Argillite - grey green, disseminated pyrite in specks up to 0.5 mm < 1%. Three foot wide shear zone with high amount dark brown rusty stain and very minor quartz veining was sampled. 145/45NE - bedding	Sol	10	0.2	40		
64276	Argillite - black and grey green varieties; cherty. Moderate amount of quartz and carbonate veining. Near a 3 inch zone of quartz stringers up to 10% disseminated fine grained pyrite (only a small area) and pyrite also disseminated in the quartz about 1-2% maximum. 135/90 bedding.	Sol	10	0.2	26		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64277	Argillite and sandstone(?) - quite finely interbedded black argillite and coarser grained grey green sandstone (andesite tuff??). A 1.5 by 1 cm patch of at least 50% pyrite occurs and lesser (2-3%) disseminated pyrite occurs throughout.	Sol	10	0.2	92		
64278	Dacite-fine grained, light to medium grey, with as much as 5-10% fine grained pyrite near quartz-carbonate veinlets up to 5 mm wide. Away from veins only minor pyrite occurs (this sample). See also 64431.	Sol	10	0.2	100		
64279	Chert with bands of argillite. Minor pyrite.	Monkey	10	0.2	60		
64280	Quartz vein about 4 inches wide with pyrite up to 15% in patches up to 1 cm across and black, highly weathered sphalerite(?) up to 10% intergrown with pyrite.	Monkey	6400	13.8	2860	170	31000
64281	Mainly wallrock material beside quartz vein (strongly silicified and quartz stringered argillite) 15% sulphides.	Monkey	220	10.6	294	200	3020
64282	Quartz vein - about 5 inches wide. 20% sulphides, including some galena. Taken next to 64281.	Monkey	1040	10.8	1280	720	10800
64283	Quartz vein - 12 inches wide. Pyrite concentrations up to about 5% here with some weathered, black sphalerite(?) in blotches up to 1 cm across. Chalcopyrite(?) also noted. A short tunnel (15 or 20 feet) has been driven here.	Monkey	2500	14.0	1460	84	19000

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64284	Quartz vein - about 4 inches wide. Coarse pyrite in crystals, aggregates up to 1 cm long - 10%. Sphalerite(?) in masses up to 8 mm about 10%. Wallrock argillite is moderately mineralized with very fine grained pyrite specks.	Monkey	7000	12.8	3400	24	25000
64285	Quartz vein - 4 to 5 inches wide, about 15% sulphides.	Monkey	5200	13.0	500	416	3520
64286	Argillite - highly silicified, pyrite throughout. Possibly float. Near the quartz vein.	Monkey	10	0.2	10	10	70
64287	Argillite - highly silicified, many tiny quartz stringers which often have vugs, some of which are rusty. Rock is very heavy. Appears to be a small amount of extremely fine-grained pyrite(?) disseminated.	Monkey	10	0.2	10	20	86
64288	Quartz vein - about 1 foot wide. Very heavy concentrations of pyrite in masses up to 3 cm make up as much as 55-60% of the vein. Little or no sphalerite here. A tunnel about 8 or 10 feet driven here.	Monkey	250	3.2	98	72	1040
64289	Chert and jasper pebble to cobble conglomerate - dull maroon hematitic matrix (andesite tuff??). Clasts average 2 to 3 inches, range up to 8 inches, are sub-rounded to sub-angular with some tabular clasts. Clasts about 10-60% of rock. Too rounded for a breccia, but pretty angular for a conglomerate.	Monkey	10	0.2	22		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64290	Andesite - slightly porphyritic. Small feldspar and hornblende(?) phenocrysts. Some carbonate veining.	Monkey	10	0.2	104		
64410	Andesite - hard, dense, hornblende phenocrysts. Minor calcite veins nearby. No sulphides noted.	Monkey	10	0.2	102		
64411	Fault Zone - separates andesite tuff to north and cherty tuff and tuff to the south. Quartz veining occurs but no sulphide noted.	Monkey	10	0.2	44		
64412	Interbedded green cherty tuff and andesite tuff(?). Bedding 120/90. Same location as 64411.	Monkey	10	0.2	106		
64413	Andesite tuff - fragments up to about 2mm. Calcite occurs in a shear nearby.	Monkey	10	0.2	82		
64414	Dacite - fine grained, minor boxwork.	Monkey/ Sol	10	0.2	86		
64415	Dacite - fine grained, light greenish grey, with minor disseminated pyrite. Interbedded with bands of black and grey chert which are highly contorted.	Monkey	10	0.4	26		
64416	Chert pebble conglomerate - green, grey, red chert clasts; sub-angular and heavily fractured in a heavily weathered, soft, light grey matrix. Clasts range up to 6 inches and make up 35-45% of the rock. Some clasts of andesite.	Monkey	10	0.4	32		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64417	Dacite - fine grained, extremely hard and dense, minor disseminated pyrite. Across creek from 64260.	Sol	10	0.2	64		
64418	Andesite tuff - fine grained, interbedded with layers of hematitic andesite tuff. Calcite veins crosscut both rock types. Occasional lensoid pieces of jasper occur roughly parallel bedding. Above the tuffs is a layer of bedded chert about 8 feet thick and above that is the chert and jasper cobble conglomerate described at 64289.	Monkey	10	0.2	26		
64419	Limestone - brownish grey to white weathering, light to medium grey to black on fresh surfaces. Minor irregular small chunks of argillite occur within the limestone.	Monkey	10	0.4	8		
64420	Sandstone - medium grained, medium grey, about 10% limonitic blebs. Contains thin (about 1 inch) interbeds and rip-up clasts(?) of black shale.	Monkey	10	0.4	86		
64421	Dacite - very fine grained, pale bluey-green, a few specks of disseminated pyrite.	Monkey	10	0.4	72		
64422	Argillite - fine grained, black, moderately siliceous. Dacite as above interbedded. 1% or less pyrite disseminated in argillite. Same location as 64263.	Monkey	10	0.2	40		
64423	Fault zone in above rocks. Very rusty, pyrite about 2-3% with abundant rusty boxwork.	Monkey	10	0.8	96		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
64424	Dacite - fine grained, grey-green, extremely fractured, tuffaceous(??), occasional patches of disseminated pyrite. Some calcite veinlets and/or pods up to several cm long. Some bands and fragments (rip-up clasts?) of argillite present.	Sol	10	0.4	68		
64425	Andesite - fine grained, greeny grey - looks like possibly a slightly coarser equivalent to 64424. Minor interbedded chert. Many quartz stringers, small amount disseminated pyrite, slightly rusty.	Sol	10	0.4	70		
64426	Dacite tuff - same location, same description as 64265.	Sol	10	0.2	36		
64427	No sample						
64428	Karmutsen(?) - bright green, fairly coarse grained rock with black-stained(?) areas or clasts up to 1 inch. Sample is from a boulder about 80x80x50 feet which presumably came from NE slope of valley.	Quill	10	0.4	158		
64429	Karmutsen - fairly bright green, soft, medium grained, and some-what tuffaceous looking. A 4 mm quartz vein has some associated limonite.	Quill	10	0.4	116		
64430	Sandstone - possibly tuffaceous but doesn't look very andesitic or dacitic. Medium grey, medium grained, rusty blotches up to 2 inches in diameter, but no pyrite noted. Found within	Sol	10	0.2	60		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
	predominantly black argillite which has some interbedded andesite tuff.						
64431	Dacite - same location and description as for 64278. This sample taken in pyrite-rich area near the quartz-carbonate veins.	Sol	10	0.6	54		
64432	Cherty rock - perhaps a cherty tuff, maybe cherty shale. Pyrite up to 15 to 20% is associated with quartz veins up to 1 cm wide.	Sol	10	0.4	36		
64433	Argillite - black, moderate amount of rusty stain, but no sulphides noted.	Monkey	10	0.2	58		
64434	Chert pebble conglomerate - clasts of green, red chert up to 1 1/2 inches make up varying proportions of rock (0 to 60-70%). Matrix is dull maroon to andesitic-looking green, medium grained. Clasts are angular to sub-rounded.	Monkey	10	0.2	66		
64435	Andesite tuff - medium to coarse grained, moderate amount of carbonate veining (1-2 mm up to 1 cm). No sulphides noted. Occasional areas where a few cherty green and/or red pebbles up to about 2 inches occur.	Monkey	10	0.2	82		
64436	Dacite to andesite agglomerate-clasts up to 8 inches of medium green grey hornblende porphyritic dacite to andesite.	Monkey	10	0.2	62		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
	Quartz eyes are common, but must be highly altered if it is actually rhyolite (too green). Some clasts of amygdaloidal basalt(?). Matrix is very soft, heavily weathered, pale green with patches of yellowy brown to rusty. No sulphides noted.						
64437	Andesite tuff - coarse grained, clasts up to 4 or 5 inches of amygdaloidal dull maroon basalt(??) and smaller sub-angular to sub-rounded clasts of pale greenish-white rhyolite(?) occur in the tuff. Amygdaloidal and non-tuffaceous in some parts of the outcrop. Pyrite occurs on fracture surfaces, and disseminated up to 2% in some zones. Poor outcrop.	Monkey	10	0.2	74		
64438	Andesite tuff - fault brecciated. Abundant carbonate (calcite?) veins, pods, stringers make up as much as 2-5% of rock.	Monkey	10	0.2	80		
64439	Andesite - pale green, hornblende phenocrysts up to about 4 mm. No sulphides noted.	Monkey	10	0.4	114		
64440	Andesite - fairly fine grained, rusty weathering penetrates about 1 cm, grey green on fresh surface, minor disseminated pyrite.	Monkey	10	0.4	116		
64441	Quartz vein - about 2 inches wide cuts above andesite. Similar appearance to quartz vein at	Monkey	70	1.4	42		

Sample No.	Description	Claim	Au	Ag	Cu	Pb	Zn
	64280-64288 but total pyrite, weathered sphalerite(?), rusty boxwork only about 5-10%.						
64442	Andesite tuff - medium grained, fairly bright green-grey, with a heavy concentration of rusty specks (up to 20-30%) although no fresh sulphides noted.	Monkey	10	0.2	90		
64443	Chert - hangingwall of quartz vein at sample 64283 site. Black to grey green chert (silicified argillite??) with minor disseminated pyrite. Sample taken about 2 feet from the vein at sample 64283 site.	Monkey	10	0.4	56	6	72
64444	Argillite-footwall of the quartz vein at sample 64283 site. Very rusty, very heavily fractured, but no sulphides noted. The rusty zone in the footwall is at least 5 feet wide; the sample was taken about 3 feet from the vein.	Monkey	10	0.6	46	4	352
64445	Quartz vein - a 1 inch vein probably related to the larger quartz vein. Pyrite content about 2 to 5%, highly rusty.	Monkey	60	6.6	382	446	460
64446	Andesite - near sample 64290. Here the porphyritic (feldspar and hornblende[?]) andesite is brecciated and shot through with quartz. A lot of rusty boxwork is present and a small amount of pyrite.	Monkey	10	0.2	82		

APPENDIX III

CERTIFICATE OF ANALYSIS

ROSSBACHER LABORATORY LTD.

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

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

CERTIFICATE NO. :84050- 1

INVOICE NO. :4074

PROJECT: V 150

DATE ANALYSED :MARCH 20 1984

SAMPLE#	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
64251	126	0.2			10
64252	68	0.2			10
64253	94	0.2			10
64254	12	0.2			10
64255	14	0.4			900
64256	62	0.4			10
64257	18	0.2			70
64258	58	0.2			10
64259	136	0.2			10
64260	60	0.2			10
64261	98	0.2			50
64262	70	0.2			10
64263	24	0.2			10
64264	30	0.2			10
64265	54	0.2			10
64266	154	0.2			10
64267	50	0.2			10
64268	52	0.2			10
64269	144	0.2			10
64270	82	0.2			10
64271	46	0.2			10
64272	94	0.2			10
64273	94	0.2			10
64274	72	0.2			10
64275	40	0.2			10
64276	26	0.2			10
64277	92	0.2			10
64278	100	0.2			10
64279	60	0.2			10
64280	2860	13.8	31000	170	6400
64281	294	10.6	3020	200	220
64282	1280	10.8	10800	720	1040.

CERTIFIED BY : F. Rossbacher

CERTIFICATE OF ANALYSIS

ROSSBACHER LABORATORY LTD.

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

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

CERTIFICATE NO. :84050- 2

INVOICE NO. :4074

PROJECT: V 150

DATE ANALYSED :MARCH 20 1984

SAMPLE#	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
64283	1460	14.0	19000	84	2500
64284	3400	12.8	25000	24	7000
64285	500	13.0	3520	416	5200
64286	10	0.2	70	10	10
64287	10	0.2	86	20	10
64288	98	3.2	1040	72	250
64289	22	0.2			10
64290	104	0.2			10
64401	6	0.4			10
64402	80	0.2			10
64403	80	0.4			10
64404	6	0.4			10
64405	96	0.2			10
64406	28	0.2			10
64407	30	0.4			10
64408	32	0.2			10
64409	20	0.2			10
64410	102	0.2			10
64411	44	0.2			10
64412	106	0.2			10
64413	82	0.2			10
64414	86	0.2			10
64415	26	0.4			10
64417	64	0.2			10
64418	26	0.2			10
64419	8	0.4			10
64420	86	0.4			10
64421	72	0.4			10
64422	40	0.2			10
64423	96	0.8			10
64424	68	0.4			10
64425	70	0.4			10

CERTIFIED BY : F. Rossbach

CERTIFICATE OF ANALYSIS

ROSSBACHER LABORATORY LTD.

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

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

CERTIFICATE NO. :84050- 3

INVOICE NO. :4074

PROJECT: V 150

DATE ANALYSED :MARCH 20 1984

SAMPLE#	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
64426	36	0.2			10
64428	158	0.4			10
64429	116	0.4			10
64430	60	0.2			10
64431	54	0.6			10
64431A	32	0.4			10
64432	36	0.4			10
64433	58	0.2			10
64434	66	0.2			10
64435	82	0.2			10
64436	62	0.2			10
64437	74	0.2			10
64438	80	0.2			10
64439	114	0.4			10
64440	116	0.4			10
64441	42	1.4			70
64442	90	0.2			10
64443	56	0.4	72	6	10
64444	46	0.6	352	4	10
64445	382	6.6	460	446	60
64446	82	0.2			10

CERTIFIED BY : F. Rossbacher

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

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

CERT. # : A8412136-001-A
INVOICE # : I8412136
DATE : 8-JUN-84
P.O. # : NONE
#V150

CORRECTED COPY

Sample description	Mo ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)	Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)
64259	<1	<10	57	935	2	<2	<0.5	31	29	330	6.12	1570	76	3.68	290	9.10	<0.5	6.76	138	<0.2	0.524	345	2.30	1.70
64260	<1	<10	45	525	2	<2	<0.5	9	9	1070	3.04	560	140	0.91	88	5.67	<0.5	0.78	52	<0.2	0.216	78	2.52	0.77
64261	<1	<10	32	950	4	<2	<0.5	12	19	800	3.91	840	79	2.88	157	7.01	<0.5	7.16	95	<0.2	0.376	198	0.24	3.23
64262	<1	<10	53	1350	2	<2	<0.5	25	62	63	5.45	785	250	3.74	200	8.17	<0.5	5.25	76	<0.2	0.420	169	2.42	0.35
64263	<1	<10	87	440	2	<2	<0.5	3	5	265	2.10	755	130	0.77	51	3.49	<0.5	4.31	15	<0.2	0.124	63	0.84	1.56
64264	<1	<10	55	585	2	<2	<0.5	6	15	985	3.18	795	129	0.97	80	4.97	<0.5	0.28	26	<0.2	0.142	78	2.12	0.56
64265	<1	<10	84	1430	4	<2	<0.5	13	13	1140	5.74	1080	68	2.07	146	9.21	<0.5	1.38	50	<0.2	0.392	185	3.93	2.11
64266	<1	<10	68	650	2	<2	<0.5	32	79	220	6.62	1130	245	4.38	255	8.93	<0.5	5.36	149	<0.2	0.900	370	2.51	0.84
64267	<1	<10	55	550	2	<2	<0.5	22	59	58	4.30	655	260	2.42	193	6.83	<0.5	4.91	46	<0.2	0.704	130	1.48	0.13
64268	<1	<10	46	710	2	3	<0.5	29	74	36	6.42	2140	315	3.60	250	5.91	<0.5	11.60	55	<0.2	0.954	375	1.39	0.13
64269	<1	<10	69	660	2	<2	<0.5	32	84	173	6.55	1060	300	4.38	255	9.61	<0.5	7.37	150	<0.2	0.866	215	2.51	0.70
64270	<1	<10	139	1140	64	<2	0.5	20	42	990	4.84	1100	125	2.52	230	9.44	<0.5	5.78	87	<0.2	0.492	106	0.69	3.67
64271	<1	<10	63	2450	2	<2	<0.5	6	24	265	3.70	275	123	1.21	128	4.90	<0.5	0.45	38	<0.2	0.261	56	1.79	0.76
64272	<1	<10	48	1050	2	<2	<0.5	17	25	705	4.10	750	116	2.61	179	8.60	<0.5	3.84	79	<0.2	0.443	255	2.68	2.02
64273	<1	<10	67	1290	2	<2	<0.5	23	34	111	5.48	885	156	3.96	200	10.50	<0.5	3.07	92	<0.2	0.511	158	3.43	0.25
64274	<1	<10	37	620	2	<2	<0.5	14	20	96	3.42	610	161	1.83	133	5.77	<0.5	2.92	61	<0.2	0.291	61	1.82	0.13
64275	<1	<10	125	835	2	<2	<0.5	39	61	315	7.42	1830	525	5.60	265	8.97	<0.5	0.26	34	<0.2	0.517	250	2.22	0.41
64276	<1	<10	52	215	6	<2	<0.5	3	12	2210	1.72	580	260	0.39	39	2.98	<0.5	0.65	23	<0.2	0.093	35	0.52	0.97
64277	<1	<10	59	2610	6	<2	<0.5	9	12	775	3.72	690	122	1.35	130	6.04	<0.5	2.36	80	<0.2	0.279	75	2.23	0.82
64278	<1	<10	114	1060	4	<2	<0.5	27	70	455	4.89	970	235	2.94	210	8.16	<0.5	2.71	87	<0.2	0.478	153	2.13	2.27
64279	<1	<10	58	785	8	<2	<0.5	12	17	520	3.08	700	196	1.45	109	5.84	<0.5	2.27	56	<0.2	0.301	107	1.97	1.14
64280	<1	<10	>10000	<10	166	<2	635.0	<1	2	101	3.82	45	360	<0.01	<1	0.26	<0.5	<0.01	3090	48.0	0.003	<1	<0.01	0.12
64281	10	<10	3620	905	2500	10	55.5	6	23	1480	7.17	77	255	0.24	165	3.96	<0.5	0.08	260	20.4	0.185	7	0.03	1.81
64282	2	<10	>10000	117	6000	<2	196.0	<1	5	230	4.34	56	365	0.05	78	1.17	<0.5	0.02	1210	24.4	0.040	1	<0.01	0.45
64283	2	<10	>10000	<10	78	<2	386.0	<1	4	94	3.29	215	395	<0.01	<1	0.22	<0.5	0.27	1430	20.6	0.003	4	<0.01	0.13
64284	2	<10	>10000	<10	28	<2	502.0	<1	5	128	7.47	65	380	0.03	1	0.46	<0.5	<0.01	3420	56.0	0.013	<1	<0.01	0.19
64285	4	<10	3990	90	400	<2	68.0	<1	3	196	3.07	33	385	0.02	15	0.44	<0.5	<0.01	465	36.0	0.012	<1	<0.01	0.18
64286	<1	<10	70	1060	10	<2	<0.5	5	46	460	2.95	335	335	1.29	72	2.19	<0.5	0.29	7	<0.2	0.112	10	<0.01	0.25
64287	<1	<10	89	1080	24	<2	<0.5	7	38	635	3.86	425	245	1.54	97	3.20	<0.5	0.21	5	<0.2	0.144	10	0.11	0.54
64288	<1	<10	1290	89	70	<2	16.0	26	42	93	11.60	58	305	0.13	4	0.43	<0.5	0.03	88	5.2	0.023	<1	<0.01	0.17
64289	<1	<10	44	2610	4	<2	<0.5	6	13	250	2.77	245	215	1.01	87	3.83	<0.5	0.97	16	<0.2	0.189	91	1.31	0.92
64290	<1	<10	54	1920	4	<2	<0.5	30	69	185	4.95	1110	335	4.16	300	8.91	1.0	6.18	99	<0.2	0.445	295	2.71	0.96
64410	<1	<10	64	1590	4	<2	<0.5	31	60	245	5.74	995	350	5.76	245	7.76	0.5	5.97	97	<0.2	0.389	305	2.21	1.04
64411	<1	<10	19	535	4	<2	<0.5	12	25	610	3.32	535	165	1.90	178	6.46	<0.5	3.88	37	<0.2	0.261	79	0.27	2.09
64412	<1	<10	46	950	8	<2	<0.5	22	35	485	4.82	835	162	3.80	191	8.37	<0.5	5.70	99	<0.2	0.433	170	1.91	2.37
64413	<1	<10	52	1030	2	<2	<0.5	25	66	108	4.56	970	290	4.55	215	7.16	<0.5	2.42	69	<0.2	0.405	154	2.52	0.75
64414	<1	<10	68	1250	8	<2	<0.5	25	51	475	5.88	830	157	4.53	225	9.14	<0.5	0.37	88	<0.2	0.453	67	2.24	1.75
64415	<1	<10	69	1630	10	<2	<0.5	16	8	1310	5.18	985	30	2.51	225	9.58	<0.5	2.38	107	<0.2	0.564	205	2.01	3.09
64416	<1	<10	46	1210	8	<2	<0.5	10	11	2970	3.45	590	98	1.78	161	8.42	<0.5	1.47	27	<0.2	0.362	470	2.61	3.07
64417	<1	<10	76	1060	6	<2	<0.5	13	5	3050	4.77	1220	37	1.81	121	8.45	<0.5	1.03	51	<0.2	0.395	128	2.85	2.51

Certified by .....

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

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

CERT. # : A8412136-002-A
INVOICE # : I8412136
DATE : 8-JUN-84
P.O. # : NONE
#V150

CORRECTED COPY

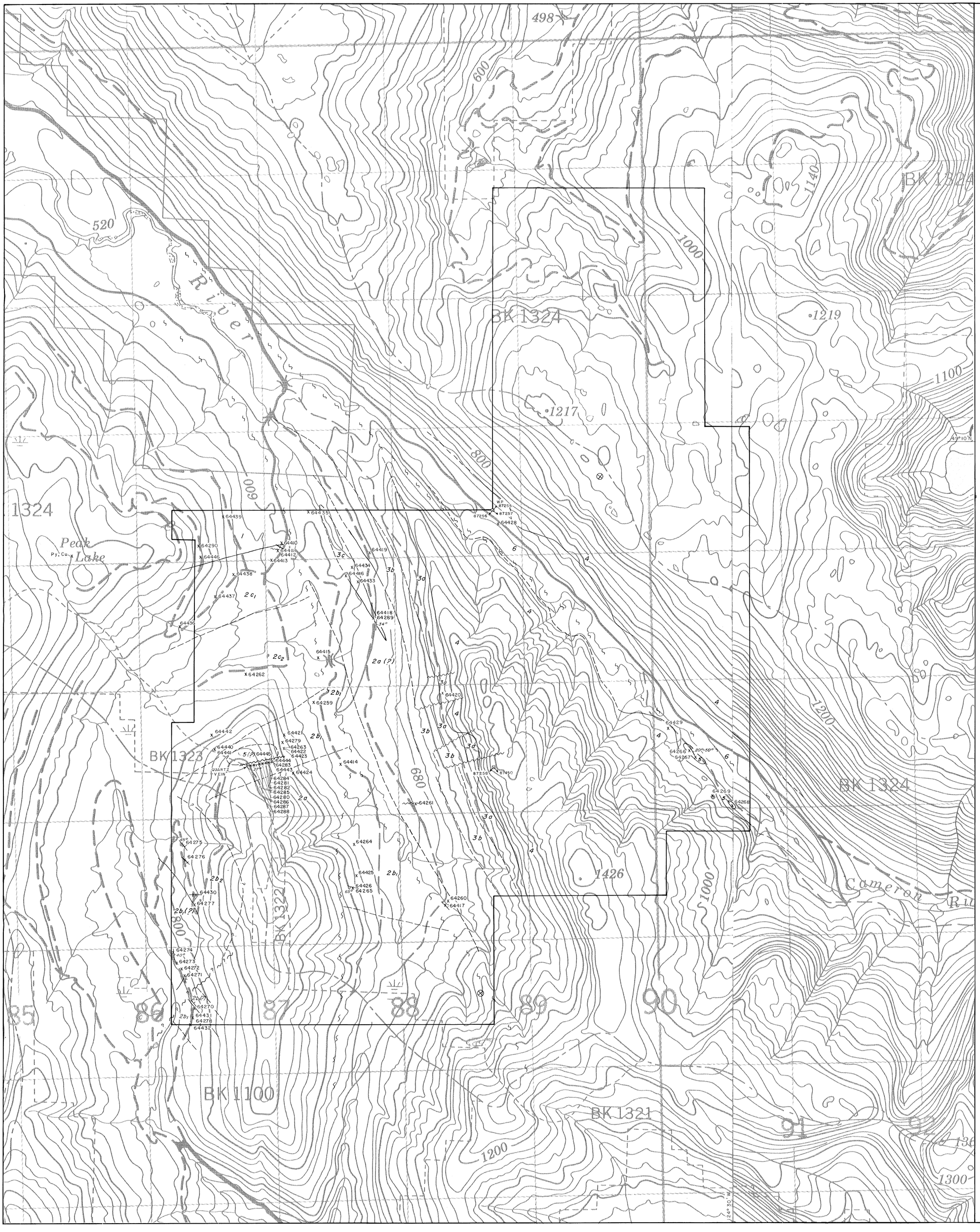
Sample description	Mo ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)	Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)
64418	<1	<10	60	1190	6	<2	<0.5	14	12	465	4.59	480	24	2.30	198	9.63	<0.5	2.12	30	<0.2	0.421	305	2.94	2.44
64419	<1	<10	18	380	4	<2	<0.5	<1	11	109	0.56	380	18	1.61	15	1.08	<0.5	28.60	14	<0.2	0.058	570	0.12	0.17
64420	<1	<10	92	1520	2	<2	<0.5	16	12	220	5.51	555	48	1.96	205	9.40	<0.5	4.32	78	<0.2	0.518	58	1.38	2.87
64421	<1	<10	48	1590	6	<2	<0.5	19	24	255	4.04	810	105	3.61	194	8.43	<0.5	3.60	77	<0.2	0.392	199	2.22	0.64
64422	<1	<10	59	1050	4	<2	<0.5	14	16	1110	3.58	1120	70	1.78	128	7.70	<0.5	1.75	44	<0.2	0.314	126	2.79	1.93
64423	2	<10	84	2720	12	<2	<0.5	34	65	755	8.71	1300	111	0.31	285	9.89	<0.5	0.39	93	0.6	0.453	24	0.90	3.78
64424	<1	<10	66	1310	6	<2	<0.5	24	27	1300	5.41	1370	107	3.62	235	10.50	0.5	4.06	99	<0.2	0.515	210	2.78	2.56
64425	<1	<10	55	1420	2	<2	<0.5	13	12	1330	3.81	855	81	1.44	177	8.08	<0.5	3.29	58	<0.2	0.334	168	2.36	2.43
64426	<1	<10	52	1160	2	<2	<0.5	11	10	345	3.77	700	71	1.49	113	7.48	<0.5	2.56	25	<0.2	0.291	132	2.94	0.84
64428	<1	<10	75	700	2	<2	<0.5	33	61	69	7.27	1200	136	4.56	275	7.41	<0.5	3.72	160	<0.2	0.988	245	2.26	0.37
64429	<1	<10	50	540	2	<2	<0.5	31	72	51	5.55	885	235	2.92	225	8.39	<0.5	7.37	114	<0.2	0.707	167	1.84	0.16
64430	<1	<10	71	1820	2	<2	<0.5	13	10	220	4.86	880	74	2.02	215	10.40	<0.5	4.87	61	<0.2	0.442	123	3.06	0.43
64431	<1	<10	36	1230	16	<2	<0.5	16	27	410	4.75	1990	75	1.49	182	8.89	<0.5	3.30	42	<0.2	0.440	64	0.37	3.59
64431A	<1	<10	19	1000	12	<2	<0.5	10	12	700	3.59	3080	78	1.65	159	7.21	<0.5	3.73	27	<0.2	0.369	72	0.30	3.19
64432	<1	<10	59	1030	4	<2	<0.5	12	7	510	3.68	2700	67	1.70	122	6.42	<0.5	6.92	30	<0.2	0.272	126	0.27	2.98
64433	<1	<10	68	790	2	<2	<0.5	11	12	420	3.84	480	57	2.47	147	6.76	<0.5	1.03	53	<0.2	0.359	260	2.08	1.10
64434	<1	<10	83	925	2	<2	<0.5	18	11	695	5.14	580	91	2.50	200	8.40	<0.5	1.54	69	<0.2	0.516	450	2.96	1.68
64435	<1	<10	65	1540	2	<2	<0.5	19	21	285	4.75	840	91	3.41	230	9.24	<0.5	4.07	75	<0.2	0.418	235	3.57	0.38
64436	<1	<10	65	1710	2	<2	<0.5	18	22	264	4.66	1060	128	2.73	235	9.37	<0.5	3.30	58	<0.2	0.509	720	2.55	1.24
64437	<1	<10	61	1910	2	<2	<0.5	20	39	169	4.68	665	205	3.40	191	8.75	0.5	3.43	69	<0.2	0.382	325	3.26	0.59
64438	<1	<10	54	1510	2	<2	<0.5	30	71	177	4.71	1200	340	4.08	250	8.14	1.0	7.22	82	<0.2	0.390	200	2.13	1.07
64439	<1	<10	62	1660	2	<2	<0.5	33	71	300	5.90	1180	345	5.73	240	8.08	<0.5	5.64	110	<0.2	0.475	435	2.66	1.45
64440	<1	<10	103	1580	2	<2	<0.5	27	45	550	5.33	1310	147	3.47	230	8.98	<0.5	2.86	100	<0.2	0.388	61	0.30	2.98
64441	<1	<10	19	73	2	<2	<0.5	3	5	42	0.95	183	365	0.09	13	0.44	<0.5	0.02	33	1.2	0.027	<1	<0.01	0.20
64442	<1	<10	53	1150	2	<2	<0.5	32	104	635	5.16	1710	290	4.93	230	8.51	<0.5	3.98	78	<0.2	0.473	285	2.13	1.92
64443	<1	<10	67	285	2	<2	<0.5	7	39	1550	2.58	475	305	0.98	73	2.73	<0.5	0.24	49	<0.2	0.125	41	0.96	0.29
64444	<1	<10	315	695	2	<2	<0.5	10	26	2960	1.96	425	161	0.28	109	4.38	<0.5	0.08	38	<0.2	0.155	18	0.65	1.73
64445	2	15	445	119	424	2	4.5	8	27	360	3.64	560	220	0.20	45	2.11	<0.5	0.05	330	7.6	0.060	3	<0.01	0.89
64446	<1	<10	63	1850	2	<2	<0.5	36	73	79	4.91	1080	320	3.89	250	8.17	0.5	5.10	143	<0.2	0.477	200	2.53	0.35

Certified by .Hart Bichler...

APPENDIX IV

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
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

GEOLOGY

- 6 — Valley bottom fill.
- 5 — Tertiary intrusive - porphyrytic dacitic (and andesitic ?) rocks.
- 4 — Karmutsen Formation - basaltic rocks commonly pillowed.
- 3 — Buttle Lake Formation
  - a) argillite, greywacke.
  - b) limestone.
  - c) chert - jasper pebble to cobble conglomerate or breccia.
- 2 — Myra Formation
  - Upper Unit
  - a) dacitic tuff with argillite rip-up clasts (and andesite tuff ?).
  - Middle Unit
  - b_2) argillite
  - b_1) dacite tuff ± andesite tuff, interbedded with argillite and/or chert.
  - Lower Unit
  - c_2) andesite tuff.
  - c_1) agglomeratic to tuffaceous andesitic rocks or breccia.
- 1 — Nitinat Formation (?) - porphyritic andesite flows (?) with hornblende ± feldspar phenocrysts.

SYMBOLS

- Geological contacts (approximate, inferred)
- Faults (approximate, inferred)
- Faults from regional mapping
- Strike and dip of bedding
- Aeromagnetic Anomaly (Hunting Survey Corp., 1962.)

LITHOGEOCHEMISTRY RESULTS

Sample No.	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
64259	10	0·2	136		
64260	10	0·2	60		
64261	50	0·2	98		
64262	10	0·2	70		
64263	10	0·2	24		
64264	10	0·2	30		
64265	10	0·2	54		
64266	10	0·2	154		
64267	10	0·2	50		
64268	10	0·2	52		
64269	10	0·2	144		
64270	10	0·2	82		
64271	10	0·2	46		
64272	10	0·2	94		
64273	10	0·2	94		
64274	10	0·2	72		
64275	10	0·2	40		
64276	10	0·2	26		
64277	10	0·2	92		
64278	10	0·2	100		
64279	10	0·2	60		
64280	6400	13·8	2860	170	31000
64281	220	10·6	294	200	3020
64282	1040	10·8	1280	720	10800
64283	2500	14·0	1460	84	19000
64284	7000	12·8	3400	24	25000
64285	5200	13·0	500	416	3520
64286	10	0·2	10	10	70
64287	10	0·2	10	20	86
64288	250	3·2	98	72	1040
64289	10	0·2	22		
64290	10	0·2	104		
64410	10	0·2	102		
64411	10	0·2	44		
64412	10	0·2	106		
64413	10	0·2	82		
64414	10	0·2	86		
64415	10	0·4	26		
64416	10	0·4	32		
64417	10	0·2	64		
64418	10	0·2	26		
64419	10	0·4	8		
64420	10	0·4	86		
64421	10	0·4	72		
64422	10	0·2	40		
64423	10	0·8	96		
64424	10	0·4	68		
64425	10	0·4	70		
64426	10	0·2	36		
64427	NO SAMPLE				
64428	10	0·4	158		
64429	10	0·4	116		
64430	10	0·2	60		
64431	10	0·6	54		
64432	10	0·4	36		
64433	10	0·2	58		
64434	10	0·2	66		
64435	10	0·2	82		
64436	10	0·2	62		
64437	10	0·2	74		
64438	10	0·2	80		
64439	10	0·4	114		
64440	10	0·4	116		
64441	70	1·4	42		
64442	10	0·2	90		
64443	10	0·4	56	6	72
64444	10	0·6	46	4	352
64445	60	6·6	382	446	460
64446	10	0·2	82		

SUNFIELD MANAGEMENT LTD.

PROPERTY GEOLOGY AND ROCK SAMPLING

CAMERON GROUP

NANAIMO MINING DIVISION

Project No: V 150	By: T. N.
Scale: 1 10,000	Drawn: J. S.
Drawing No: 7	Date: MAY , 1984

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