86-903-15452

ASSESSMENT REPORT ON GEOLOGICAL MAPPING, LITHOGEOCHEMICAL AND SOIL GEOCHEMICAL RESULTS

SICKER 1 AND 2 CLAIMS

Nanaimo Mining Division
NTS 92F/1W 49°~~05.5~~ 05.1' N Lat., 124°23~~7~~' W Long.

for

ROAP RESOURCES INC.

January 20, 1987

B.Y. Thomae, B.Sc. & T.G. Hawkins, P.Geol.

Owner: T.F. Schorn
Operator: Ladysmith Minerals Ltd.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,452

SUMMARY

Geological exploration including detailed mapping, prospecting, rock sampling and soil sampling on the Fourth Group (Sicker 1 and 2 claims) in the Nanaimo Mining Division, was carried out by MPH Consulting Limited.

Detailed mapping has provided evidence that the Sicker 1 and Sicker 2 claims are underlain in part by a westward younging, westerly dipping succession that includes from east to west: basaltic and diabasic appearing flows of "sill sediment" unit of the Sicker Group which in many areas overlies or is gradational into the Myra Formation; the Buttle Lake Formation comprising predominantly white, bedded chert with minor thin intervals of crinoidal marble, and at the base, 35 m or more of chert to cherty argillite; and the Karmutsen Formation of thick basaltic flows. The succession is truncated to the west by a major body of granodiorite of the Jurassic Island Intrusions.

Basaltic flows of the "sill sediment" unit commonly contain anomalous concentrations of chalcopyrite, and moderately schistose ankerite?-sericite-pyrite altered basalts in northeast Sicker 2 claim, contain anomalous lead concentrations (up to 212 ppm). An 8 cm wide fracture zone cutting the meta-chert in north central Sicker 1 claim contains 1000 ppm Cu and 110 ppb Au. One sample of a 'grey pyritic quartz vein', located near the intrusive contact, has returned anomalous concentrations for Ag (1.8 ppm), Cu (180 ppm), Bi (570 ppm) and W (340 ppm).

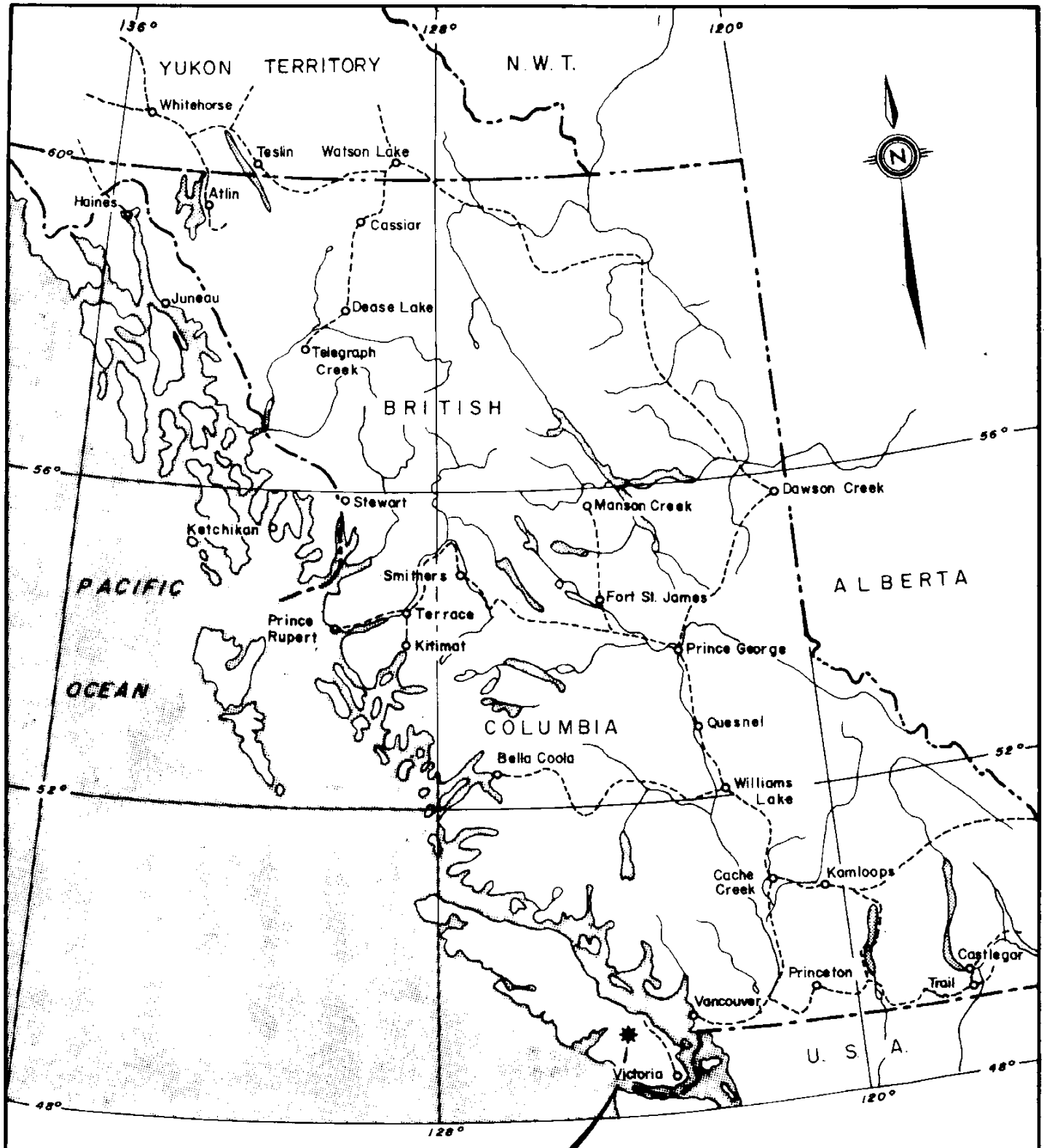
Soil sampling results include four anomalous concentrations of Au up to 80 ppb, as well as up to 0.6 ppm Ag, up to 118 ppm Cu, up to 20 ppm Pb, and up to 292 ppm Zn.

Results from geochemical analyses warrant further work on the claim. A $60,000 budget has been proposed for Sicker 1 and 2 in conjunction with the Rush 1, 2 and 3 claims. This includes detailed geological mapping, rock and soil sampling as well as magnetometer and VLF-EM surveys.

TABLE OF CONTENTS

Appendices

List of Illustrations



ROAP RESOURCES INC.

GENERAL LOCATION MAP
FOURTH GROUP
(SICKER 1,2 CLAIMS)
NANAIMO MINING DIVISION

Project No.	V 153	By:	T. N.
Scale:		Drawn:	J. S.
Drawing No.	1	Date:	JANUARY 1987.

MPH Consulting Limited

1.0 INTRODUCTION

This report represents the compilation of field work carried out in fulfillment of assessment requirements during October 20 to October 22, 1986 at the request of Roap Resources Inc. and a discussion of field work including results from the previous year.

Work carried out in October 1986 includes soil sampling, prospecting and rock sampling for geochemical analysis over the adjacent corners of northeast Sicker 1 and southeast Sicker 2 claims. Field work carried out in 1985 includes detailed geological mapping, prospecting and rock sampling over the northwest Sicker 1 claim and northeast Sicker 2 claim for an evaluation of the potential for massive sulphide mineralization.

2.0 PROPERTY LOCATION, ACCESS, TITLE

The Sicker claims are located 35 km southwest of Nanaimo between Fourth Lake and Green Mountain in the Nanaimo Mining Division of British Columbia. They are centred at approximately 49°04.5'N latitude, 124°23'W longitude on NTS mapsheet 92F/1 (Figures 1, 2).

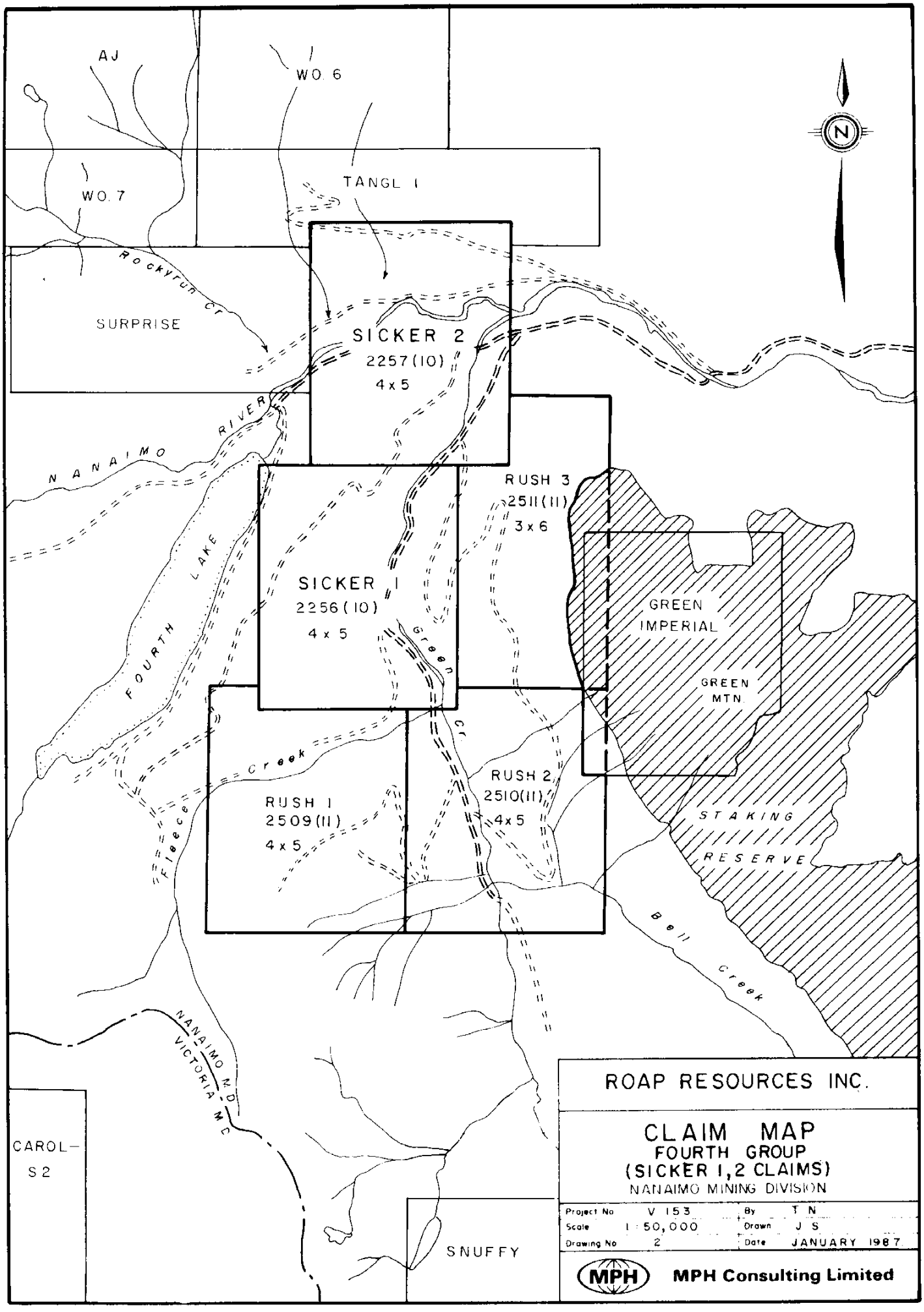
The paved Nanaimo Lakes Road which runs west from Highway 1 from a point near Cassidy, provides access to the claims. A gate at Nanaimo Lakes requires that one ask permission from Crown Forest Industries Ltd. to proceed further. A paved road branching south from the Nanaimo Lakes Road at the junction of Green Creek with the Nanaimo River, runs through Sicker 1 and 2. Numerous logging roads provide access to nearly every part of the claims. Presently, most logging roads are in passable condition for a two wheel drive vehicle.

Claim information is summarized below:

Claim	Record No.	Units	Owner	Anniversary Date	Year Recorded
Sicker 1	2256(10)	20	Bill Hoiles	Oct. 22, 1987	1985
Sicker 2	2257(10)	20	Bill Hoiles	Oct. 22, 1987	1985

A Bill of Sale is being prepared to transfer 100% ownership of the Sicker 1 and 2 claims from Bill Hoiles to Ladysmith Minerals.

The Sicker 1 and 2 claims were optioned to Roap Resources Inc.



ROAP RESOURCES INC.

CLAIM MAP
FOURTH GROUP
(SICKER 1,2 CLAIMS)
NANAIMO MINING DIVISION

Project No	V 153	By	T N
Scale	1 : 50,000	Drawn	J S
Drawing No	2	Date	JANUARY 1987

MPH Consulting Limited

3.0 PREVIOUS WORK

Government geological work in the Port Alberni to Nanaimo 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).

In 1962, Hunting Survey Corp. Ltd. flew a regional aeromagnetic survey over an area including the Sicker claims. Some follow-up geological mapping in the Fourth Lake area was also carried out.

From 1963 to 1965, Gunnex Ltd. carried out a program of geological mapping as well as soil sampling, magnetometer, and EM surveys on a grid which covered portions of the Sicker 1, 2 claims. In addition, an SP survey over the highest magnetic anomaly and regional prospecting and silt and soil sampling were done. Several magnetic highs at or near the contact of diorite with andesitic cherty tuff and chert were believed to be caused by possible skarn mineralization at a depth of at least 300 m. Soil sampling revealed a slightly anomalous area in the northern part of the grid (southern Sicker 2) while the EM survey results were reported to be more encouraging in the southern half of the grid (southwestern Sicker 2, although the EM cross-overs were attributed to shear zones rather than mineralization. Only a few pieces of skarn float were found. A sample of mineralized diorite from the west central area of Sicker 1 assayed 0.3% Cu.

In 1981, an airborne VLF-EM and magnetometer survey was flown over the Sicker 1, 2 claims (then known as the Elk and Horn claims) by Western Geophysical Aero Data Ltd. for Tarbo Resources

Ltd. Two zones of anomalous VLF-EM response were located in the northeast and southeast corners of the property, although flight lines are sub-parallel to local stratigraphy. Three localized magnetic anomalies which occur near mapped geological contacts (Sicker Group/Coast Intrusive) were also located. Prospecting the areas of magnetic anomalies was recommended (AR9140).

In September 1983, a preliminary assessment of the Sicker 1 and 2 claims was carried out by MPH Consulting Limited for Jan International Resources Ltd. (Hawkins and Willoughby, 1983). Numerous exposures of sulphide-rich intermediate to felsic tuff, flows, and cherty tuff were located. Anomalous values of Au (310 ppb) and Zn (324 ppm) from two grab samples of pyritic cherty tuff were reported. The property was considered to have good potential for economic massive sulphide and/or quartz vein deposits and a two-phase exploration program consisting of geological mapping and sampling, soil sampling, line cutting, and ground magnetometer and VLF-EM surveys followed by diamond drilling was recommended.

In June, 1984 MPH Consulting Ltd. conducted a reconnaissance geological mapping and rock sampling program for Sunfield Management Ltd. Lithogeochemical results of up to 20 ppb Au, 0.6 ppm Ag and 372 ppm Cu were returned from 35 grab samples collected from the claims. (Neale and Hawkins, 1984).

In June 1985, Dr. G. Benvenuto (for MPH Consulting Ltd.) conducted detailed geologic mapping, prospecting and sampling along logging roads in the northwestern Sicker 1 claim and northeastern Sicker 2 claim. This report is based on field data, results and conclusions of his work.

Work done on properties adjacent to the Sicker claims includes a 1981 prospecting program carried out by Canamin Resources Ltd. on the Tangl 1 claim, adjoining Sicker 2 to the north. Various Sicker Group lithologies were located, including limestone of the Buttle Lake Formation, intermediate volcanics of the Myra Formation, and argillite and chert of the "Sill-Sediment" Unit. "Economic values" of Au were reported to occur in graphitic sediments and anomalous Ag values in chert (AR 10282).

An airborne EM and magnetometer survey flown for Imperial Metals Corp. in July, 1982 on the Green Imperial claim, adjacent to the Rush claims on the east, located only two very weak EM responses. A fault zone was interpreted from the magnetometer survey (AR 11079).

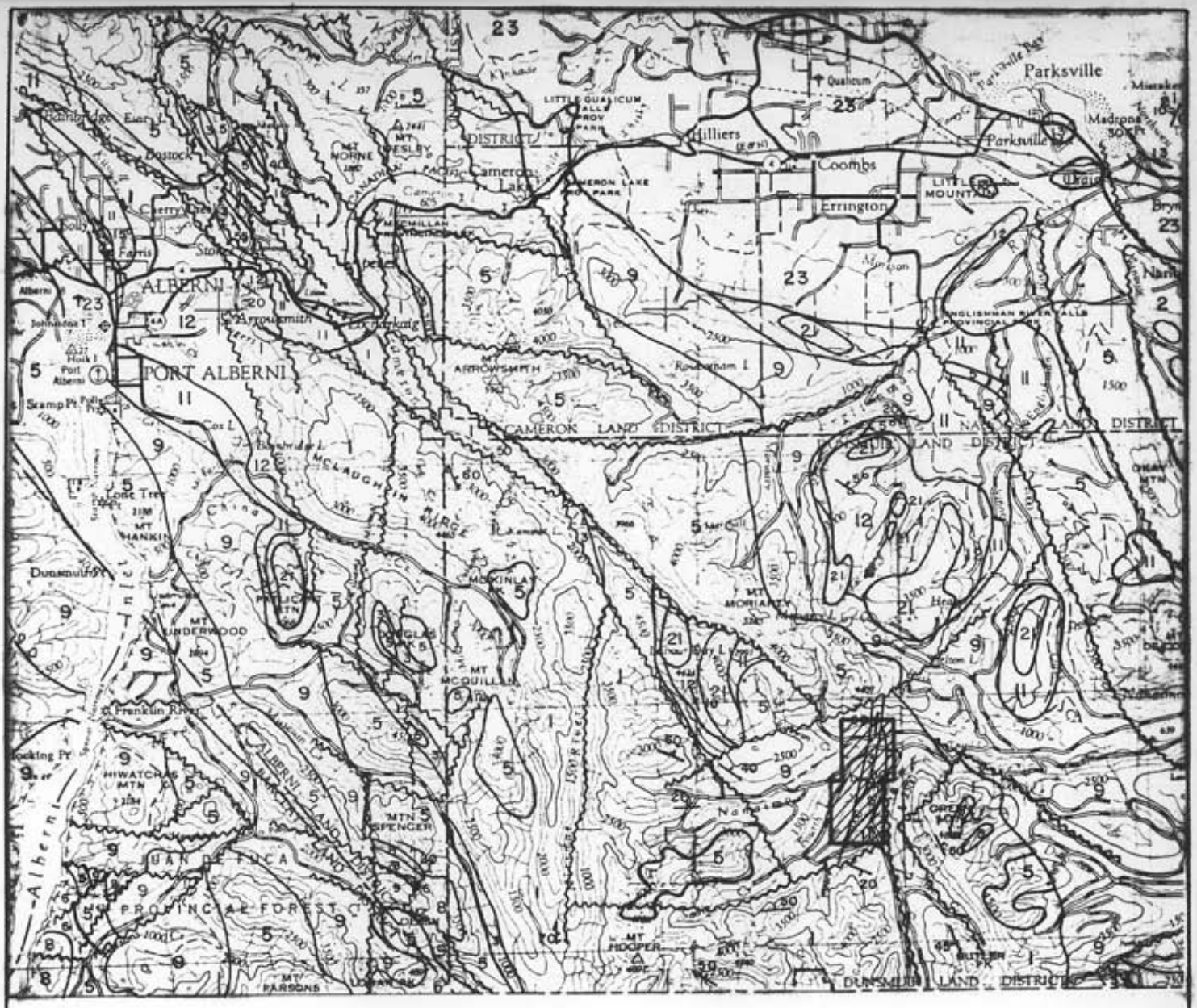
4.0 REGIONAL GEOLOGY

The predominant rock units in the Fourth Lake-Green Mountain area are the eugeosynclinal sequence of the Upper Paleozoic Sicker Group volcanic and sedimentary rocks, and the Middle and Upper Jurassic Island Intrusions. Lesser amounts of the Upper Cretaceous Nanaimo Group and of Tertiary intrusive rocks also occur (Figure 3).

4.1 Sicker Group

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

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



LEGEND

QUATERNARY

23	Glacial and alluvial deposits

TERTIARY

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

UPPER CRETACEOUS
NANAIMO GROUP

13	EXTENSION-PROTECTION FM.: sandstone, conglomerate, shale, coal.
12	HASLAM FM.: shale, siltstone, fine sandstone.
11	COMOX FM.: sandstone, conglomerate, shale, coal.

MIDDLE TO UPPER JURASSIC

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

LOWER JURASSIC TO UPPER TRIASSIC
VANCOUVER GROUP

8	BONANZA SUBGROUP, VOLCANIC DIVISION: andesitic to latitic breccia, tuff and lava, minor greywacke, argillite and siltstone.
6	QUATSINO FM.: massive to thick bedded limestone, minor thin bedded limestone.
5	KARMUTSEN FM.: pillow-basalt and pillow breccia, massive basalt flows; minor tuff, volcanic breccia; Jasperoid tuff, breccia and conglomerate at base.

TRIASSIC OR PERMIAN

4	Gabbro, peridotite diabase.

LOWER PERMIAN TO PENNSYLVANIAN
SICKER GROUP

3	BUTTLE LAKE FM.: limestone, chert.
2	MYRA FM.: lower unit; argillite, greywacke, conglomerate, tuff, minor limestone. Upper unit; rhyodacite to rhyolite tuff, lapilli tuff, breccia lesser siliceous siltstone, argillite, quartz porphyry and mafic flows.
1	NITINAT FM.: basaltic uralite porphyry, agglomerate, pillow lava; greenschist.

0 5 10 km

N

ROAP RESOURCES INC.

REGIONAL GEOLOGY MAP
FOURTH GROUP
(SICKER 1, 2 CLAIMS)
NANAIMO MINING DIVISION

Project No:	V 153	By:	T. N.
Scale:	1:250,000	Drawn:	J. S.
Drawing No:	3	Date:	JANUARY 1987.

MPH Consulting Limited

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

The **Myra Formation** (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 comprises a sequence of thinly interbedded, light feldspathic tuff (albite trachyte or keratophyre composition) and dark marine argillite which has the appearance of a graded greywacke-argillite turbidite sequence. In the upper part of the middle unit, sections of thickly bedded to massive black argillite occur. The upper unit contains fine and coarse crystal tuffs in layers up to 10 m thick with local rip-up clasts and slabs of argillite up to 1 m in length as well as synsedimentary breccias of light coloured volcanic and chert fragments in a matrix of black argillite.

The type locality of the Myra Formation is Myra Creek, at the south end of Buttle Lake, about 105 km northwest of the Sicker Claims. There, 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. The Myra Formation is approximately 750 to 1000 m thick and both the Nitinat and Myra Formations are dated as Devonian and/or older, Muller (1980).

The **Sediment-Sill** Unit contains thinly bedded to massive argillite, siltstone, and chert with interlayered sills of diabase. It is transitional between the Myra and Buttle Lake Formations. It has been mapped within the area of this report.

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 by present.

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

4.2 Vancouver Group

The **Karmutsen Formation** volcanic rocks (Unit 5) unconformably to paraconformably overlie the Buttle Lake Formation limestone, forming the base of the Vancouver Group. This is the thickest and most widely distributed sequence of rocks on Vancouver Island. The formation, which is well exposed southeast of Port Alberni, consists mainly of dark grey to black pillowed basalt, massive basalt and pillow breccia. Flows are commonly aphanitic and amygdaloidal. Pillow lavas occur locally, generally near the base of the section.

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

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

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

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

4.3 Bonanza Group

The **Bonanza Group** (Unit 8) stratigraphy varies considerably from place to place, as it represents parts of several different eruptive centres of a volcanic arc. Basaltic, rhyolitic, and lesser andesitic and dacitic lava, tuff, and breccia with intercalated beds and sequences of marine argillite and greywacke make up the Bonanza Group. In the area south of Mount Spencer and south of Corrigan Creek, it consists of light coloured andesite to latite breccia, tuff, and flows with minor greywacke, argillite, and siltstone. The Bonanza volcanics are considered to be extrusive equivalents of the Island Intrusions and to be of Early Jurassic age.

4.4 Nanaimo Group

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

The **Comox Formation** (Unit 11) consists mainly of quartzofeldspathic, cross-bedded beach facies sandstone and lesser conglomerate. Numerous intercalations of carbonaceous and fossiliferous shale and coal are characteristic.

The **Haslam Formation** (Unit 12) is a near shore littoral depositional facies unit characterized by thickly 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.

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

Tertiary (Catface or Sooke) Intrusions (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.

4.6 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 of south central Vancouver Island. Folding and uplift occurred before the Late Cretaceous, and possibly before the Mesozoic (Muller and Carson, 1969) and additional tilting, folding and uplift occurred after the Late Cretaceous. Sicker Group volcanic and sedimentary rocks occur at the core of these uplifts.

Asymmetric southwest verging, northwest trending, antiformal structures, characterized by subvertical 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. Folding, as evidenced by K-Ar dating, occurred during the Jurassic. The overlying Buttle Lake Formation limestones are relatively undeformed locally, but are known to be highly deformed in other areas (Brandon and others, 1986).

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 (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 70 km and displaces a section of Karmutsen Formation approximately 1500 m (Muller and Carson, 1969).

4.7 Economic Setting

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

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

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

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

Another volcanogenic massive sulphide deposit in the Sicker Group is the Twin J Mine near Duncan on Mount Sicker, about 66 km southeast of the Fitzwater Group. Two parallel orebodies, 46 m apart, each containing pyrite, chalcopyrite, sphalerite and minor galena in a barite quartz-calcite gangue and chalcopyrite in quartz, occur in schists believed to have been derived from acidic volcanics (Myra Formation).

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

A significant recent development in the Sicker Group is the delineation of a large volcanogenic massive sulphide zone on the Lara property, 35 km southeast of the Sicker claims. On the Lara property, Aberford Resources Ltd. (now Abermin Corp.) has completed at least 69 diamond drill holes on geochemical and geophysical anomalies. In January 1985, an intersection of 8.0 m (true thickness) of mineralization grading 3.4 g/t Au (0.1 oz/ton), 67.5 g/t Ag (1.97 oz/ton), 3.01% Zn, 0.68% Cu and 0.45%

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

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

Five past producing mines occur in the Port Alberni area. The Thistle Mine, located 19 km west of the Sicker claims, produced 85,844 g Au (2,760 oz), 65,938 g Ag (2,120 oz) and 309,090 kg Cu from 6,280 tonnes (6,920 tons) of ore. It was originally considered to be a skarn deposit (Stevenson, 1945; Carson, 1968). Disseminated and massive sulphide mineralization occurs as lenses

and bands within pyritic quartz-sericite schist and at the contact of quartz-sericite schist with chloritized mafic volcanic rocks (Sicker Group). Disseminated sulphide mineralization occurs throughout the host rocks. The deposit is now believed to be of syngenetic-volcanogenic origin. Recent work by Westmin Resources Ltd. (1983, 1984) has located 16 significant Cu and/or Au occurrences over a strike length of 4.6 km grading up to 16.8 g/t Au (0.49 oz/ton) over 2.1 m. Nine diamond drill holes (1984) intersected numerous anomalous concentrations of Au, although no ore grade Au-Cu was intersected over mining widths. A drilling project has recently been completed on the Thistle property.

The Havilah Mine (950 t produced 8,056 g Au (259 oz), 43,670 g Ag (1,404 oz)) (17 km west of the Sicker claims) and the Vancouver Island Gold Mine (438 t produced 11,944 g Au (384 oz), 1,617 g Ag (52 oz)) (22 km west of the Sicker claims) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group.

The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and Island Intrusions diorite located 16 km west of the Sicker claims. Production of 1,715 t yielded 15,830 g Au (509 oz), 29,640 g Ag (953 oz), 5,587 kg Pb and at least 2,030 kg Zn and 226 kg Cu.

The other past producer in the area is the 3-W Mine which consists of gold-bearing quartz veins in Island Intrusions diorite and granodiorite. Production amounts to 105 t of ore grading 137 g/t Au (4.0 oz/ton), 147.4 g/t Ag (4.3 oz/ton), 0.23% Cu, 1.1% Pb. The 3-W Mine is located 24 km southwest of the Sicker claims.

Significant mineral occurrences of the Port Alberni, Fourth Lake and Green Mountain areas are summarized below.

4.8 Mineral Occurrences (Figure 4)

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

Geology:

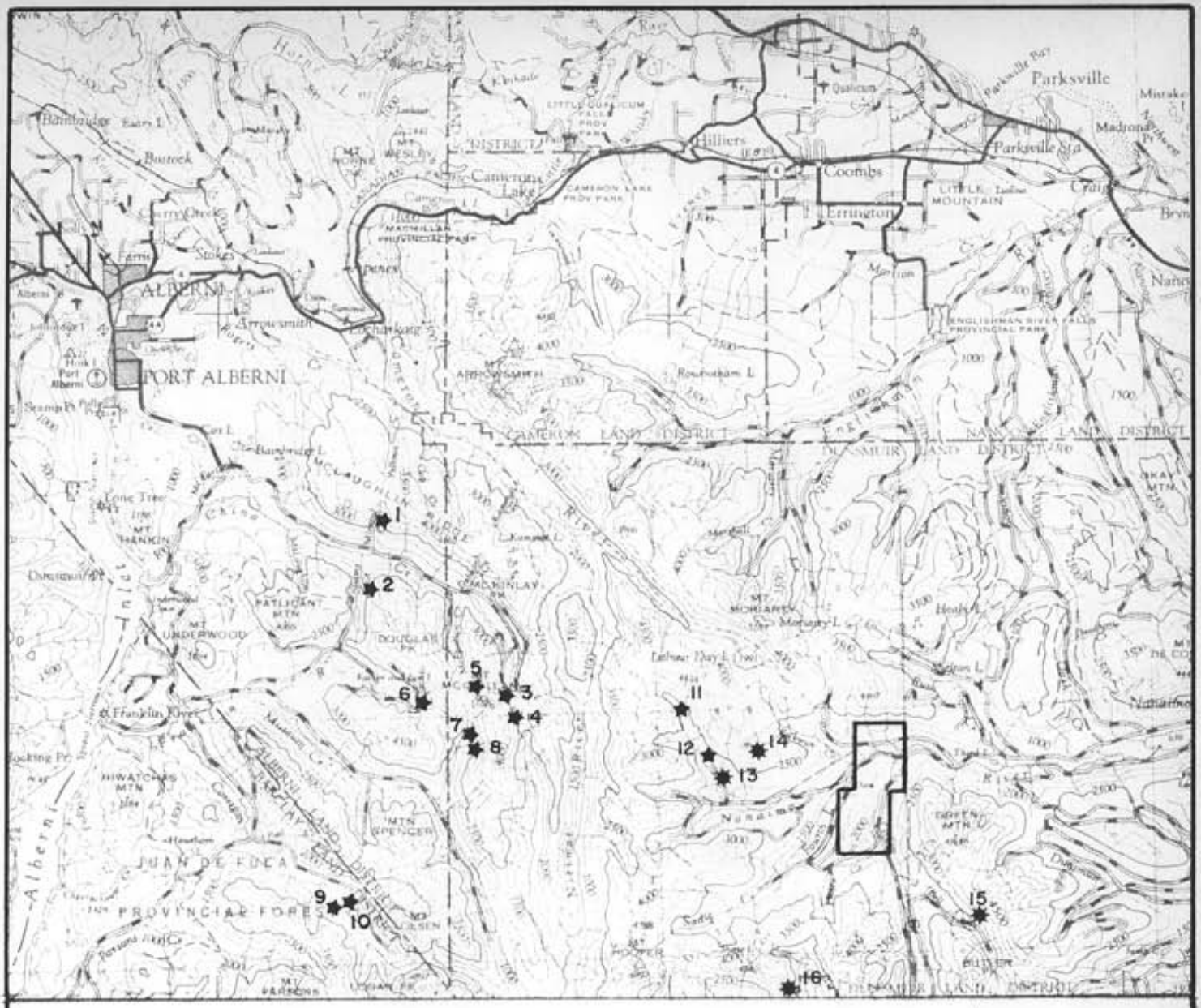
The area is underlain by highly altered massive, tuffaceous, slightly porphyritic, and amygdaloidal andesites of the Sicker Group. Three main quartz veins follow well developed shears and contain a small amount of pyrite and some free gold. As well, a 120 m wide shear zone has been extensively altered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

Economic Features:

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

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

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



GOLD DEPOSITS AND OCCURRENCES

1. Vancouver Island Gold Mine
2. Regina
3. Golden Eagle
4. B & K
5. Havilah
6. Thistle
7. Black Panther
8. Black Lion
9. 3-W
10. Corrigan Creek
11. W 04
12. Villalta

BASE METAL OCCURRENCES

13. Skarn Group
14. Wolfram
15. Mountain
16. Black Prince

N

0 5 10 km

ROAP RESOURCES INC.

MINERAL OCCURRENCE LOCATION MAP

FOURTH GROUP (SICKER 1,2 CLAIMS)

Project No:	V 153	By:	T.N.
Scale:	1 : 250,000	Drawn:	J. S.
Drawing No:	4	Date:	JANUARY 1987.

MPH Consulting Limited

the shaft and stope workings. Recent sampling results show from 0.103 g/t Au to 9.94 g/t Au (0.003 to 0.29 oz/ton) and from 20.6 g/t Ag to 3.43 g/t Ag (0.06 to 0.10 oz/ton) over 1.5 m lengths (Ref. 3).

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

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

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

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

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

History:

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

1896: Alberni Consolidated Mining Co.; won dispute, shaft at 12 m and a tunnel being driven, 1.8 tonnes of ore shipped from a smaller vein (Dunsmuir?) uphill from main vein, open cut on 20 to 75 cm vein on Chicago claim.

1897-1898: An English company built a 9 tonne per day 8 stamp mill and only made two clean-ups. Results unknown.

1933-1939: Vancouver Island Gold Mines Ltd. (NPL); R.W. Williams leased the reverted Crown Grants in 1933 and turned them over to Vancouver Island Gold Mines. Numerous open cuts were made, 5 adits totalled 580 m including various raises, etc., on the quartz veins and 2 adits totalling 84 m and 12 strippings were made on the carbonatized shear zone. A total of 365 t of ore was mined. In 1936 a 32 tonne pilot mill was built, but only milled a few tonnes of ore before the operations were ceased due to operating difficulties. In 1939 some rehabilitation work was done in the Mac adits and 43.5 tonnes of ore were shipped.

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

1973-1974: Keywest Resources Ltd.; (Sam Group) sampling in Belcher adits, prospecting, geological mapping on surface and underground.

1976: Western Mines Ltd. (Tasha-Shannon and Rupert-Dog groups); reconnaissance geological mapping and soil sampling.

1979-1985: Silver Cloud Mines Ltd.; rock, soil, and silt sampling, trenching, geological mapping.

References:

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

2. Regina (L55G) Au Ag Cu

Geology:

Lenses and veinlets of quartz with pyrite, chalcopyrite, some galena, and Au and Ag values occur in shears in silicified and pyritized Sicker Group andesite. Some reports also mention sphalerite in the quartz. Another type of showing occurs in highly silicified and leached pyritic, ankeritic andesite which contains gold values.

Economic Features:

The quartz lenses and silicified zones vary up to 0.6 m in width but the mineralized portions appear to be very discontinuous. A grab sample of quartz with considerable pyrite, chalcopyrite, and galena from the dump assayed at 22.6 g/t Au (0.66 oz/ton), 480 g/t Ag (14.0 oz/ton) (Ref. 1.1944). A large, highly oxidized bulk sample from the carbonatized zone assayed 21.9 g/t Au (0.64 oz/ton), trace Ag (Ref. 1-1944). A sample from 18 t of ore on

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

History:

1898: Alberni Gold Development Syndicate; granted Crown Grants L.54, 55, 57.

1930: E. Maralia; an open cut and an incline shaft a few feet deep. Eighteen tonnes of ore from this work on a dump.

1944: E. Marillia; no recent work. Five adits totalling 87.8 m, a 9 m incline shaft, 2 open cuts, and a 1.5 m pit at the entrance to one of the adits exist. All probably date back to the late 1890's.

1964-65: Gunnex Ltd., visited the workings, sampling, prospecting, in the general area.

1976: Western Mines Ltd.; (Tasha) geological mapping 1:14,400, soil sampling.

References:

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

3. Golden Eagle (L.198G) Au

Geology:

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

Economic Features:

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

History:

1892: The discovery of two quartz veins by prospectors searching for the source of the China Creek placer gold prompted the original claims to be staked.

1893-1902: Various individuals and/or companies; four adits totalling 63 m in upper workings, an adit driven at a lower level to avoid snowslides from 1896-1902 reached 640 m without intersecting mineralization, "development work" of an unspecified nature.

1964-65: Gunnex Ltd.; prospecting and silt sampling in the general area. Also visited the lower adit and a showing near Summit Lake (B and K?) where rock samples were taken.

References:

1) MMAR 1893-1080, 1894,773, 1895-651, 1896-7, 556, 1897-556, 1898-1132, 1899-607, 779, 785, 1902-230, 1944-G150

2) AR 10194

3,4) GSC P68-50 P38
Map 49-1963,17A

5) Gunnex #12

6) Minfile 92F080

4. B and K Au Ag

Geology:

Many widely scattered narrow quartz veins containing pyrite, and minor galena, sphalerite and 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 1.8 m to 7.6 m wide contains minor pyrite, galena and sphalerite in narrow veinlets. In the southern workings, veins are surrounded by a strong ankeritic carbonate alteration zone.

Economic Features:

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

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

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

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

History:

1938-40: Angus Beaton, Ed Keisig; staked claims, prospecting, 17 open cuts and trenches, stripping.

1964-65: Gunnex Ltd.; prospecting and silt sampling in the general area.

References:

1) MMAR 1944-151

2,3) GSC P68-50 p38
Map 49-1963

4) Gunnex #13

5) Minfile 92F081

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

Geology:

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

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

Economic Features

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

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

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

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

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

History:

1893: First mentioned in MMAR (King Solomon).

1895: An open cut on the McQuillan(?) vein.

1936-44: Havilah Gold Mines Ltd.; claims staked in 1934 and 1936 by Walter Harris. In 1936, 6.4 tonnes of ore were mined from the upper showings (Alberni and McQuillan veins). In 1938-39, 630 m of drifting, crosscutting and raising on three levels on the Gillespie vein resulted in production of 943 tonnes of ore. Diamond drilling and prospecting were also carried out. A highline tram was built to transport ore and supplies between the base camp and the mine. Little if any work was done after 1939.

1947: Nitinat Mines Ltd.; owned the ground.

1964: Gunnex Ltd.; silt sampling in McQuillan Creek drainage, rock sampling wherever mineralization was observed.

1974-77: Cominco Ltd.; geological mapping 1:4,800, soil sampling, trenching, several IP and resistivity surveys.

References:

1) MMAR 1893-1080, 1895-652, 1936-F30, 1939-88, 1944-G153

2) GEM 1974-172

3) EBC 1975-E95, 1976-E111, 1977-E110

4-5) AR 5354, 6138, 6643

7-8) GSC P68-50 p38
Map 49-1963, 17A

9) Gunnex #11

10) Minfile 92F082

6. Thistle Au Ag Cu

Geology:

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

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

Mineralization is found within relatively thin stratabound to crosscutting? intervals of moderate to very strong chlorite alteration of the basaltic host rocks. Sericite-epidote alteration also occurs, but apparently is not associated with mineralization.

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

The Thistle Mine had been reported by early workers to be a skarn deposit in altered limestone intruded by fine-grained diorite.

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

Economic Features:

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

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

The current exploration target is reported to be a volcanogenic deposit of at least 2.7 million tonnes of 6.8 g/t Au (0.2 oz/ton) and 2% Cu.

History:

1896: First staked.

1899: A. Watson, et al; lower adit (500 adit) driven 20 m but had not intersected ore that was 1.8 to 2.4 m wide on surface, upper adit (300 adit) driven 27 m but also had not intersected an orebody. A pit on one of the surface showings.

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

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

1927: A. Watson, et al; a 7.6 m tunnel with a 6 m crosscut, all in ore. (300A adit?).

1938-1940: United Prospectors Ltd.; shipments of ore were made from open cuts and glory holes and the old dumps.

1941-1942: Vancouver Island Diamond Drilling and Exploration Co.; 1623 tonnes of ore mined, shut down July 25, 1942.

1944: The workings existing on the property included four adits totalling 160 m, an 5.5 m stope 18 m long, two glory holes totalling about 4,600 m^3 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.

1964-1965: 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 532 m.

1981: McQuillan Gold Ltd.; airborne EM and magnetometer surveys, soil sampling, rock sampling, trenching, EM survey.

1982: Nexus Resources Corporation; IP, PEM, magnetometer surveys; soil sampling, geological mapping and sampling.

1983-85: Westmin Resources Ltd.; geological mapping, rock sampling (for assay, whole rock geochem and thin sections), soil sampling, prospecting, IP, trenching, 22 diamond drill holes.

References:

1) MMAR 1899-788, 1901-1097, 1902-307, 1927-340, 1928-366, 1930-291, 1939-40, 88, 1940-73, 1941-71, 1942-66, 1944-154-157, 1965-238

2-5) AR 8088, 9126, 10237, 11064

6-7) GSC P68-50 p38
Map 49-1963

8) Gunnex #10

9) Minfile 092F083

10) Nexus Resource Corporation; News Release dated November, 1983

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

Geology:

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

Economic Features:

The shear zone has been traced for at least 3.2 km but the best mineralization is at the Black Panther workings where quartz lenses are 2.5 cm to 90 cm thick and up to 12 m long. Four samples containing "heavy sulphides" from the 2700 and 2790 adits assayed from 18.8 g/t to 98.7 g/t Au (2.30 to 2.88 oz/ton) (Ref.

1-1944). A 1964 assay from the dump is reported as 39.8 g/t Au (1.16 oz/ton), 72.0 g/t Ag (2.1 oz/ton), 0.14% Cu, and 1.73% Pb (Ref. 4).

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

History:

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

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

1941: Pioneer Gold Mines of B.C. Ltd.; drove the 2700 (main) adit and the 2450 adit (about 366 m of drifting, crosscutting and raising), 497 m of diamond drilling.

1944-48: Nitinat Golds Ltd. (became Nitinat Mines Ltd. in 1947); built a 23 tonne flotation mill, mining, shipped 62.1 tonnes of concentrate.

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

1964-65: Gunnex Ltd.; visited the workings, took a rock sample.

1979-85: Jan Resources Ltd./Lode Resource Corp.; airborne mag/VLF; soil, silt, rock sampling; 5 DDH for 984.5 cm.

References:

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

8. Black Lion Au Ag

Geology:

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

Economic Features:

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

History:

1941: Bralorne Mines Ltd.; prospecting, open cuts.

1942-64: Some diamond drilling is reported to have done sometime during this period.

1964-65 Gunnex Ltd.; silt sampling and prospecting in the general area.

1979-85: Jan Resources Ltd./Lode Resource Corp.; airborne mag/VLF; soil, silt, rock sampling.

References:

1) MMAR 1944-159

2,3) GSC P68-50 p38
Map 49-1963

4) Gunnex #15

5) Minfile 92F085

9. and

10. 3-W (WWW, Corrigan Creek Mine) Au Ag Pb Cu

Geology:

Tongues of grandiorite alternate with masses of hybrid diorite; both rock types have been cut by feldspar porphyry dykes. Two quartz veins occupy fissures and contain pockets of pyrite, galena and sphalerite. Another quartz vein is a mineralized gouge zone that does not everywhere contain quartz.

Economic Features:

No. 1 vein measures 90 m by 1 cm to 25 cm wide and is exposed in one adit, four open cuts. A channel sample near the adit assayed 205 g/t Au (6 oz/ton), 137 g/t Ag (4 oz/ton) over 10 cm (1935).

No. 2 vein measures 49 m long by 20 cm wide. A channel sample assayed 250 g/t Au (7.3 oz/ton), 182 g/t Ag (5.3 oz/ton) over 25 inches (1935).

No. 3 vein measures 93.8 m long by 5 cm to 35 cm wide. A channel sample assayed 44.6 g/t Au (1.3 oz/ton), 30.8 g/t Ag (0.9 oz/ton) over 35 cm (1935). Grab samples assayed 249 g/t Au (7.25 oz/ton); and 617 g/t Au (0.18 oz/ton), 6.85 g/t Ag (0.2 oz/ton) (1964).

A recently discovered(?) vein measures 300 m long by 5 cm to 0.6 m wide. The best grab samples assayed 58 g/t Au (1.7 oz/ton), 137 g/t Ag (3.99 oz/ton) (1970). A grab sample taken by MPH in 1983 returned 18,000 ppb Au, 3,060 ppm Pb, 12,000 ppm Zn, 11.2 ppm Ag.

Production:

1899-1941: A total of 105 tonnes of ore was mined, yielding 14,650 g Au (471 oz), 15,500 g Ag (500 oz), 1,100 kg Pb and 244 kg Cu.

Reported grades in part of 3-W mine: 137 g/t (4 oz/ton) Au, 147.4 g/t (4.3 oz/ton) Ag, 0.23% Cu, 1.1% Pb.

History:

1898-1899: Various owners; staking, prospecting, one adit driven.

1930-1935: Franklin River Gold Mines Ltd.; development, some mining.

1940's: Various, prospecting, sampling.

1970: John Cotowick; limited mining operations.

1974: Corrigan Creek Gold Mines Ltd.; geological mapping (surface and underground), geophysics, trenching, stripping, 15 m underground work.

References:

1) MMAR 1893-1132, 1899-608, 1906-198, 1921-206, 1922-228, 1926-295, 1927-341, 1930-291, 1932-203, 1933-250, 1935-F49, 1940-27, 1941-27, 1944-59.
2) GEM 1970-289, 1974-172
3) BCDM Bull 1 p132
4) AR 2771
5) GSC P68-50 p38
   Map 1963-49
6) The Miner October 1935
7) Minfile 092F141, 092F085

11. WO 4 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.

Economic Features:

The WO4 showing is exposed in 6 trenches and roadcuts for 45 m. Assays of up to 1.44 g/t (0.042 oz/ton) Au over 1 m and of up to 481.38 g/t (14.04 oz/ton) Ag, 15.8% Cu, and 2.02% Zn, all from grab samples are reported (Ref. 2). The best core assays include 1.07 m of 2.47 g/t (0.072 oz/ton) Au, 0.15 m of 73.37 g/t (2.14 oz/ton) Ag, 015 m of 10.29% Cu and 107 m of 2.71% Cu, and 1.07 m 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 19.75 m (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

12. 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 13.10 g/t (0.382 oz/ton) Au over 1 m and 18.24 g/t (0.532 oz.ton) Au over 0.6 m are recorded from massive hematite (Refs. 2, 3). The best assay was 126.04 g/t (3.676 oz/ton) Au, 19.20 g/t (0.56 oz/ton) Ag, 0.76% Cu, and 7.65% Zn over 0.3 m (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 led to the discovery of mineralization and the staking of the claim. 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, 1979-12B

2-4) AR 7792, 8458, 10789

5) BCDM Geological Fieldwork 1980, pp 112-114

6) Today's Market Line 1984 #066

7) Minfile 92F384

13. 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 548.6 m with an average width of about 152.4 m. The richest copper zones occur near the centre of the skarn while the iron zones occur closer to the granodiorite. Drilling has intersected various skarn zones not exposed on surface.

Gunnex recorded assays of 2.1% Cu over 14.48 m and 0.59% Cu, 0.62% Zn, 216.35 g/t (6.31 oz/ton) Ag, and trace Au over 2.59 m amongst others (Ref. 6). Westmount attempted to redrill the 14.48 m intersection for confirmation but could not locate it in two holes. Skarn mineralization was struck in five of eight holes. Assays include 18.6 m of 0.91% Cu, 0.0034 g/t (0.0001 oz/ton) Au, and 14.06 g/t (0.41 oz.ton) Ag, and 4.6 m of 3.72% Cu, 0.01% Pb, 0.12% Zn, 0.0789 g/t (0.0023 oz.ton) Au, and 53.49 g/t (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 1085.7 m.

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 637.3 m.

References:

1) MMAR 1965-239
2) EBC 1977-E109
3-5) AR 6585, 7834, 8487
6) Cunnex #21
7) Carson, 1968, pp. 111-127
8) Minfile 92F182

14. 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.

References:

1) AR 7953

15. Mountain (Jubilee, Green Mountain Group(?)) Fe

Geology:

Fissured greenstone (Sicker volcanic) hosts a zone heavily impregnated with magnetite, jasper, pyrite, and marcasite.

Economic Features:

Gold and silver values from $2 to over $30/ton were reported from the Green Mountain Group in 1902, but it is not clear whether or not the Green Mountain Group is the same property as the Mountain. Assay values from the best mineralized parts of the zone in 1908 were reported to be "very small". The mineralized zone was intersected by two tunnels over a vertical distance of 48.8 m.

History:

1898-99: Jubilee Partnership Co.; drove a tunnel about 45.7 m in 1898, and a 152.4 m tunnel 79.3 m downhill from the first in 1899.

1902: Nanaimo Jubilee Mining and Development Co. Ltd.; no recent work reported.

1908: Shepherd, Manifold et al; no work reported. The upper adit had caved in at the mouth.

References:

MMAR 1899-807, 1902-236, 1908-149
Minfile 92F184

16. Black Prince (Shaw Creek, Contact) Mn Rhodonite

Geology:

Manganese silicates, mainly rhodonite, occur in the highly folded red and white cherty tuffs of the Sicker Group. Some of the Mn lenses are coated with hard black siliceous oxides to a depth of 0.3 or 0.6 m. The Mn lenses appear to be conformable with the cherty tuffs although older reports indicate that they lie in a shear zone.

Economic Features:

Manganese mineralization is exposed over an area of about 91.4 m by 30.5 m. Assays range from 14 to 40.8% Mn and 30 to 57% Si.

History:

1918: Dickie, Noble, Anderson, and Service; stripping and open cuts at four different points within an area of about 4.1 ha.

References:

MMAR 1918-297
GSC P64-37 p 19
P72-53 pp 34, 56
EGS12 pp 115-119
BCDM Bull 37 p 69
Canadian Munition Res. Comm. Final Report, 1920 pp 90, 92-94
Canadian Rockhound, Feb. 1966 p 7
(Manganese Deposits of Cowichan Lake, H. Sargent, 1939)
(Manganese Occurrences in B.C., H. Sargent, 1956 p 21)
Minfile 92F186

5.0 PROPERTY GEOLOGY

Regional mapping by Muller (1980) shows the Sicker claims to be underlain by a north-northeast trending belt of the Sicker Group. Buttle Lake Formation and "sill-sediment" unit rocks are in fault contact on the east and south with Nitinat Formation volcanics. To the west, a stock of Island Intrusion diorite is in contact with the Buttle Lake limestone.

5.1 Geology and Mineralization on Portions of the Fourth Group

Three days were spent by Dr. G. Benvenuto geologic mapping, prospecting and sampling along logging roads in northwestern Sicker 1 claim and northeastern Sicker 2 claim. The purpose of his work was to conduct detailed geological mapping and further rock sampling in the two areas of mineralization located during reconnaissance geologic mapping and rock sampling in 1983 and 1984 by MPH Consulting Ltd. Appendices IIa and IV include sample descriptions and lithogeochemical results for Cu, Pb, Zn, Ag and Au, and a summary of lithologies at stations 1 through 36 corresponding to the geology map (Figure 5).

5.2 Northwest Sicker 1 Claim

In 1983, MPH Consulting Ltd. collected a grab of "sheared, pyritic cherty tuff with some quartz bands and 2-5% blebs, patches and disseminations of pyrite" with 126 ppm Cu, 20 ppm Pb,

36 ppm Zn, 0.4 ppm and 310 ppb Au (sample 7253) from an outcrop along an old, overgrown logging road in the northwestern Sicker 1 claim. An attempt was made to locate the outcrop or roadcut from which this sample was taken. Although no flagging marking the sample site was located, a roadcut was found in the approximate area of that shown on the 1983 sample map, which might correspond to sample site 7253, in that roadcuts exposing bedrock in that area are sparse. This roadcut is located on Figure 5 at station 1.

The roadcut from which sample 7253 may have been collected, is 28 m long and exposes part of the Buttle Lake Formation of the Sicker Group. It consists of medium bedded, black to very dark grey to very dark brown-grey, meta-argillaceous? or tuffaceous? graphitic? chert. The chert appears very, very fine grained, and scratches with some difficulty. It is weakly (to locally moderately) magnetic, and contains, very approximately 2-5%, very fine to very fine grained, disseminated pyrrhotite(?). In addition, the chert contains about 1-2%, very fine grained, disseminated pyrite and about 1-2% pyrite in fractures 0.5 to 1 mm thick. Abundant rusty fracture surfaces are characteristic of the roadcut. A few percent, opaque to white quartz-filled, irregular to planar fractures, 0.5 to 4 mm thick, cut the black chert. An X.R.F. analysis of a grab sample of the meta-argillaceous chert (from station 1, sample 9851) yielded (in %): 67.0 SiO_2, 14.2 Al_2O_3, 2.8 MgO, 6.8 Fe_2O_3, 3.6 CaO, 1.3 K_2O, 3.2 Na_2O, 0.7 TiO_2, 0.2 MnO and 1.7 L.O.I. These analyses resemble somewhat those for dacitic rocks, but could reflect a mixture of chert and a basaltic tuffaceous component. A chip sample across an approximately true thickness of 1.9 m (exposed, measured perpendicular to bedding which, on the average, strikes 245° and

dips 30° NE), yielded an I.C.P. analysis of (sample 9851) (in ppm): 48 Cu, less than 2 Pb, 80 Zn, 0.1 Ag and 10 ppb Au (geochemical analysis). If this sample was collected from the same roadcut as that sampled in 1983, with 310 ppb Au, then chip sampling in 1985 suggests the anomalous gold is confined to pyritic shear zones cutting the meta-chert. The pyritic fracture zone sampled 800 m to the northeast of this roadcut, at station 2 (described below), contains anomalous gold (110 ppb), which appears to confirm this conclusion.

Seven outcrops along the overgrown logging road in the north central Sicker 1 claim were located. Most of the rock in these outcrops resembles the meta-chert of the Buttle Lake Formation exposed at station 1 described above. These outcrops expose massive-appearing, meta-argillaceous? or tuffaceous, graphitic chert to meta-cherty argillite or tuff, which varies from very dark purple-brown-grey to near black on a fresh surface. The meta-chert is non-magnetic. It contains, generally, 2 to 5% very, very finely disseminated pyrite (locally to 10%) and up to 1 to 2% pyrite along fractures (which weather rusty). The meta-chert is weakly to strongly fractured. Locally, the meta-chert is cut by crisscrossing to subparallel fractures with medium, drab grey-green alteration selvages 0.5 to 10 mm wide, that locally resemble colour-laminated bedding.

One grab sample and two chip samples of the (pyritic) meta-chert (stations 2, 3 and 6; samples 9852, 9854 and 9856) contained (in ppm): 46, 64 and 48 Cu; less than 2 Pb; 140, 100 and 50 Zn; 0.1 Ag, and 10 ppb Au. Thus, all contain background concentrations of Cu, Pb, Zn, Ag and Au, except for sample 9852 which contains high background Zn (140 ppm). At station 2, the meta-chert

contains a poorly exposed 8 x 60 cm interval of very rusty, strongly fractured meta-chert with about 10 to 25% fracture-pyrite. The interval trends about 225°. A grab sample from the interval analyzed (sample 9853) (in ppm): 1000 Cu, 6 Pb, 40 Zn, 0.1 Ag and 110 ppb Au (as well as what appear to be anomalous concentrations of Ni (209 ppm) and Co (144 ppm)). A grab sample from the meta-chert which encloses the pyritic fracture zone, however, contained only 46 ppm Cu and 10 ppb Au. Thus, the highly anomalous concentrations of Cu and weakly anomalous Au contained in the pyritic fracture zone, do not occur in the host rock, even though the meta-chert contains 5-10% disseminated pyrite and abundant fracture-pyrite.

At station 5, massive?, meta-cherty argillite? is moderately to strongly ankerite?-altered. The ankeritic? rock is light buff-lavender-grey to locally, medium (green-) buff-grey on a fresh surface, and medium-dark to dark rusty orange-brown on a weathered surface. The rock generally contains about 1-2%, very fine (locally, medium) grained, disseminated pyrite. One fracture contains a 0.5 mm thick by 7 mm patch to chalcopyrite. Another piece contains a 1x4 mm spot with 25%, very fine grained chalcopyrite. Minor amounts of 0.2 to 5 mm thick, graphitic? fractures and about 2-4%, 0.2 to 1 mm thick, white ankerite?-filled fractures forming an irregular, crisscrossing network, cut the ankeritic? rock. A chip sample across 2.5 m of exposed wide of ankeritic rock analyzed (sample 9855) (in ppm): 60 Cu, less than 2 Pb, 50 Zn, 0.1 Ag and 30 ppb Au. The very high background or weakly anomalous concentration of Au, suggests that ankeritic? alteration may be accompanied by gold enrichment, to a very small degree.

At station 7, meta-chert of the Buttle Lake Formation is in sheared contact with an exposed width of 1.5 m of andesite?, possibly a Tertiary intrusive. The andesite? is sub-translucent medium grey, and contains hornblende and lesser amounts of feldspar phenocrysts and a few percent calcite-filled amygdules, in a meta-vitric or very, very finely crystalline groundmass. The hornblende phenocrysts (about 4-10%) are chlorite?-altered, and up to 1x4 mm. The andesite? is moderately saussurite-altered.

5.3 Northeast Sicker 2 Claim

Two days (June 12, 13, 1985) were spent geologic mapping, prospecting and rock sampling of road cuts along 1.5 km of the M2 road in the extreme north central and northeast parts of the Sicker 2 claim. The purpose of this roadcut traverse was to investigate in further detail the outcrops of pyritic, sericitic schist and "dacite" found by MPH Consulting in 1984 and determine the nature of the lithologic succession in some detail, in this part of the Sicker 2 claim. Although samples of pyritic, sericitic schist (samples 65610-12, 1984) returned background concentrations of Cu, Zn, Ag and Au, a re-examination of the schists to determine if they were derived from a siliceous volcanic rock was warranted. Massive sulphide mineralization at Westmin Resources Ltd. mines near Buttle Lake and at Mount Sicker, both in the Sicker Group, is intimately associated with rhyolite and dacitic volcanic rocks.

5.3 A. Lithologic Succession

In brief, the lithologic succession exposed along the M2 road in northern Sicker 2, from west to east, from youngest to oldest, with apparently a westerly dip, (based on bedding in the Buttle Lake Formation), is as follows:

1. Granodiorite?, 50 m examined, that may form the eastern part of a large intrusive body of the Jurassic Island Intrusives.

2. Karmutsen Formation as an about 200 m wide interval of weakly graded to massive-appearing, basaltic flows(?). The basalt is cut by a few percent, thin dykes and wedge-shaped intrusions of granodiorite? presumably related to bodies of the Island Intrusives on either side of the basalt. The basalt is also cut by two, 7m and 9 m wide dykes? of Tertiary? andesite(?).

3. Granodiorite? to Diorite? of the Island Intrusives that forms an about 50 m wide interval separating the Karmutsen Formation, to the west, from the Buttle Lake Formation of the Sicker Group, to the east.

4. Buttle Lake Formation as a 300 m wide (or about 255 m thick), moderately westerly dipping (55°) succession of predominantly, medium-thin to medium bedded, whitish chert with at least three intervals, 35 to 95 cm thick, of cherty?, crinoidal marble, and one interval at least 80 cm thick of "chert-breccia" with 2-3% disseminated pyrite. The base of the Formation consists of at least 35 m (to

possibly 125 m) of meta-argillaceous?, graphitic chert to cherty, graphitic argillite? that resembles meta-chert exposed in the north central Sicker 1 claim. The chert contains a 20 m or more, wide basaltic sill or flow, and two, 25 cm and 2.5 m thick, sills? of granodiorite? that may be related to the Island Intrusions to the west.

5. Basaltic to Diabasic-Appearing Flows? or Intrusions, in a major unit at least 650 m wide. These basalts resemble those of the "sills" in Muller's "sill-sediment" unit. The basalts are generally strongly magnetic, and very locally weakly to moderately schistose. The basaltic unit contains an 8 m or more wide interval of weakly ankerite?-altered basalt, and two intervals at 4 m and 21 m wide, of (pyritic), ankerite?-altered, sericitic schist derived from the basalt.

6. Pyritic, Ankerite?-Altered, Sericitic Schist derived from basalt in an interval at least 50 m wide.

5.3 B. Lithology

(i) Karmutsen Formation

Basalts of the Karmutsen Formation are generally strongly shattered, commonly weakly to deeply weathered and locally cut by shear zones. Where fresh, the basalt is near black on a fresh surface, and strongly magnetic. The basalts appear massive to weakly graded, intergrading between

predominantly finely to very finely crystalline basalt and lesser hornblende, (feldspar) porphyritic, very finely crystalline basalt. The porphyritic basalt contains from 1-4% up to 7-10%, hornblende phenocrysts, and less than 10%, feldspar phenocrysts that commonly appear medium-dark bluish green and may be moderately saussurite (pumpellyite?) altered.

Basalts also contain 2-5%, very, very fine, disseminated magnetite, and minor to 1-3%, very finely disseminated pyrite. Fracture-bound pyrite forms about 1-2% of the basalt.

(ii) **Buttle Lake Formation**

The western, upper part of the Buttle Lake Formation consists of an at least, 150 m wide succession of whitish chert. The chert is generally strongly shattered, but commonly appears medium-thin to medium bedded (5-50 cm) and locally massive. Sericitic? partings are common along bedding planes. The fresh colour of chert is generally very light buff-grey-white to creamy, very light tan. Locally, drab, medium greenish-tan colours form laminations at the top? of individual chert beds.

In the roadcuts of bedded chert, three intervals, 95, 35 and 90 cm thick, of crinoidal marble to limestone are exposed. These consist of moderately hard, creamy light buff-grey, very fine to fine grained, weakly to moderately cherty, limestone with 10-15% to locally 25-30%, crinoid

fragments up to 3x5 mm across. The limestone contains a few, white chert interbeds to 4 cm thick, and in one interval, large, white chert nodules.

The whitish chert also contains one, 60 cm thick interbed of rusty weathering, black chert with 2-3%, very, very fine, disseminated pyrite and a few percent fracture-pyrite.

Within the approximate centre of the Buttle Lake Formation is a 20 m wide exposure of basaltic rock that may be a flow or sill. The western contact of the basalt with the chert, is sheared but parallel to bedding in the chert. The basalt is medium-dark grey-green on a fresh surface, moderately to strongly magnetic, and very finely crystalline. It contains 1-2%, white feldspar phenocrysts, about 1-2%, white calcite filled amygdules to 2x3 mm, about 1-3%, very, very fine, disseminated magnetite, and minor, disseminated pyrite. The basalt appears weakly to moderately saussurite-chlorite-calcite altered.

A thin interval of "chert-breccia" is exposed at about 35 m east of the west end (top) of the Buttle Lake Formation (station 29). The interval is exposed over a width of 80 cm, and is strongly fractured and weathered (crumbly). The interval consists of about 10-15%, sub-rounded to sub-angular fragments to 2.5 x 3 cm, of very light buff-grey, basaltic? chert in a matrix of medium grey-green, chert?, feldspar-chlorite altered hornblende-basaltic fine crystal tuff with about 2-3%, very fine, disseminated pyrite. A chip sample (9867) across the 80 cm wide exposure of

(pyritic) "chert-breccia" yielded (in ppm): 28 Cu, 6 Pb, 130 Zn, 0.1 Ag and 10 ppb Au. The "chert-breccia" is succeeded to the east by a 2.5 m wide interval of fine to medium crystalline, feldspar-hornblende-granodiorite? with about 3-4%, very fine, disseminated pyrite. A sample of two pieces of the granodiorite? analyzed (sample 9866) (in ppm): 39 Cu, 22 Pb, 20 Zn, 0.1 Ag and 10 ppb Au. The "chert-breccia" is succeeded to the east by a 2.5 m wide interval of fine to medium crystalline, feldspar-hornblende-granodiorite? with about 3-4%, very fine, disseminated pyrite. A sample of two pieces of the granodiorite? analyzed (9866) (in ppm): 39 Cu, less than 2 Pb, 20 Zn, 0.1 Ag and 10 ppb Au. The "chert-breccia" is succeeded to the west by a 5.5 m wide covered interval which could also be underlain by more "chert-breccia".

The base of the Buttle Lake Formation is formed by an at least 35 m wide unit (at station 26) of meta-argillaceous? or tuffaceous, graphitic chert to meta-cherty, argillite. On a fresh surface, the chert and argillite is medium-dark to dark reddish-brown grading westwards into near black. The rocks are very strongly fractured and brittle, with abundant rusty fracture surfaces. They contain about 2-4%, very, very fine, disseminated pyrite, and are locally weakly magnetic. Locally, the cherts and argillites contain abundant, quartz?-filled fractures. A chip sample across the whole 35 m width of exposure (sample 9865) yielded an analysis of (in ppm): 50 Cu, less than 2 Pb, 50 Zn, 0.1 Ag and 10 ppb Au.

(iii) Basalt to Diabasic-Appearing Flows?

These basalts show textural variations that suggest they comprise a series of thick flows, though conclusive evidence as to their exact nature (extrusive versus intrusive) is lacking, such as interflow breccias or cherts or tuffs. Slightly over half of the total width of 330 m of the exposures of the 650 m wide unit, consists of basalt, whereas a little less than half consists of diabasic or sub-microgabbroic appearing basalt.

The basalts consist of a broadly intergradational succession of generally strongly fractured, sub-brittle to locally brittle, strongly magnetic, hornblende, feldspar porphyritic to feldspar microporphyritic, metavitric basalt grading to (feldspar porphyritic) very finely crystalline basalt, through finely crystalline to medium crystalline and diabasic-appearing, feldspar-hornblende-basalt.

The fine grained basalts vary from near black to very dark green-grey to dark brown-grey to medium grey-green with increasing epidote-sericite alteration. Where coarser grained, the basalts appear to consist of about 80%, moderately to strongly saussurite- (locally pumpellyite?-) altered feldspar with about 10-15% interstitial, chlorite?-altered hornblende. Locally, up to 1-2%, partly to complete uralite?-altered hornblende is apparent. The uralite? is highly reflective but appear sub-opaque very light tan. Locally, the basalts appear to contain at least a few percent quartz interstitial to the feldspar and hornblende. This quartz and strong saussuritic alteration

of the feldspar may be the cause of the brittleness of the basalts, within the coarser grained basalts, 2-3%, fine to medium grained (very, very fine grained in metavitric basalts), disseminated magnetite, and minor to commonly 1-2%, very fine to very, very fine, disseminated pyrite are apparent. The basalts also commonly contain up to 2%, very fine, opaque white leucoxene? dits. The basalts commonly to generally? contain traces to minor to locally about 0.5% chalcopyrite as very fine to very, very fine disseminated grains. A grab sample of diabasic-appearing basalt with about 0.5-1%, very, very fine, disseminated chalcopyrite from station 12 (sample 9860) analyzed (in ppm): 241 Cu, less than 2 Pb, 60 Zn, 0.1 Ag and 10 ppb Au. The analysis confirms the presence of weakly anomalous concentrations of Cu in the basalt. A chip sample across a 5 m wide outcrop of basalt at station 15 (sample 9862) analyzed (in ppm): 187 Cu, less than 2 Pb, 90 Zn, 0.1 Ag and 10 ppb Au. The high background Cu (187 ppm) indicates chalcopyrite is probably present throughout the basalt.

Two outcrops, 10 and 3 m wide (stations 14 and 16) expose weakly to moderately schistose basalt and diabasic-appearing basalt.

The basalt is ankerite?-altered in at least three intervals, at least 21 m, 2.3 m and 8 m wide. At station 13, 21 m of pyritic, ankerite?-altered, sericitic schist, possibly originally basaltic, is exposed. Schistosity is generally strong but locally grades into moderate to weak schistosity. On a fresh surface, the schist is sub-translucent/sub-opaque speckled, medium-light buff-grey to

medium, to locally, medium-dark grey. It weathers a very rusty medium to very dark orange-brown. The schist contains about 5-10%, very, very fine (locally fine to medium), disseminated pyrite, and a few percent fracture and stringer pyrite. The schist contains traces to minor, patches of apple-green fuchsite? which is a good indicator of iron-carbonate alteration. A 4 m wide interval of weakly schistose, ankeritic? rock suggests it was originally (hornblende, feldspar porphyritic), feldspar microporphyritic, metavitric basalt, though the original texture is poorly distinct. There is also one, 2 cm+ wide interval of ankeritic? schist with about 2-3%, sub-rounded to elliptical, clear grey quartz grains that may be quartz-filled amygdules or quartz phenocrysts. A chip sample across 17 m of the pyritic, ankerite?-altered, sericitic schist (sample 9861) yielded (in ppm): 80 Cu, 212 Pb, 60 Zn, 0.4 Ag and 10 ppb Au. Interestingly, the ankeritic? rock appear to contain highly anomalous Pb, and weakly anomalous Ag, but only background concentrations of Au. An X.R.F. analysis of grab samples of the ankeritic? basalt yielded, in % (weight weight): 57.0 SiO_2, 15.4 Al_2O_3, 2.9 MgO, 6.2 Fe_2O_3, 4.8 CaO, 3.3 K_2O, 0.6 Na_2O, 0.7 TiO_2, 0.1 MnO and 7.9 L.O.I. Relative to "average", calc-alkaline basalts the ankerite?-altered basalt appears silica enriched, calcium enriched (because of the high loss on ignition), potassium enriched (in sericite?) and sodium depleted.

At station 17, 2.3 m of pyritic, ankerite?-altered, sericitic schist resembling that exposed at station 13 described above, is exposed. The schist is deeply

weathered and crumbly, and contains about 3-6% disseminated pyrite. A chip sample across 2.3 m (sample 9863) (in ppm): 58 Cu, 14 Pb, 70 Zn, 0.1 Ag and 10 ppb Au. The Pb concentration (14 ppm) may be weakly anomalous. The ankeritic? schist contains a 0-3.5 cm thick layer of massive, vuggy, black, very fine grained hematite?. The layer is oriented approximately parallel to schistosity, and may have been a massive magnetite veinlet. A collection of grab samples from the hematite? layer (sample 9864) yielded an analysis of (in ppm): 179 Cu, 10 Pb, 70 Zn, 0.1 Ag and 10 ppb Au. In addition to high background Cu and perhaps weakly anomalous Pb, I.C.P., analyses show it contains highly anomalous Co (428 ppm), Ni (94 ppm) and Mn (greater than 9999 ppm).

Weakly ankerite?-altered, finely crystalline, basalt is exposed over 8 m at station 22. The basalt contains about 12%, disseminated pyrite, but locally to 3-5%, very fine, disseminated pyrite in zones to 2 cm wide. The basalt is medium-light green-grey on a fresh surface, and weathers medium rusty orange-brown.

(iv) **Pyritic, Ankerite?-Altered, Sericitic Schist**

Three narrow outcrops (0.5 to 1.5 m wide) expose ankerite?-altered schist at stations 9, 10 and 11 in the extreme northeast corner of the Sicker 2 claim. The outcrops are 43 m and 13 m apart which suggest the ankeritic schist may overlie an area at least 55 m wide. The schists resemble those at stations 13 and 17 to the west, where evidence

indicates the ankeritic? schists were originally basaltic in composition. Thus, the ankerite-altered schists at stations 9, 10 and 11, could also have been originally basaltic.

The schists are very rusty weathering but slightly translucent, medium to medium-light buff-grey on a fresh surface. Schistosity appears very weakly, to weakly developed and resembles a very strongly sheared rock. The schist is very, very fine grained and apparently composed of predominantly ankerite?, sericite and a few percent calcite. A few fuchsite? patches were apparent.

The schist contains from 3-5% to 5-10%, very fine to fine grained, disseminated pyrite, and 1 to 3% fracture and stringer pyrite.

Three samples of the pyritic, ankeritic schist were collected for analyses; one sample (9857) of four pieces, and two chip samples: one across 50 cm (9858) and another across 1.5 m (9859). Analyses of these three samples yielded (in ppm): 19, 56 and 60 Cu; 14, 96 and 20 Pb; 210, 50 and 100 Zn; 0.1, 0.4 and 0.1 Ag, and all with 10 ppb Au. I.C.P. analyses suggest that the ankerite? schists contain weakly to strongly anomalous concentrations of Pb (14 to 96 ppm), and in one case, weakly anomalous Zn (210 ppm). X.R.F. analysis of a grab sample of the ankeritic? schist, yielded (9857), in weight weight %: 62.0 SiO_2, 17.4 Al_2O_3, 1.6 MgO, 6.7 Fe_2O_3, 1.3 CaO, 4.7 K_2O, 0.9 Na_2O, 0.9 TiO_2, 0.1 MnO and 4.9 L.O.I. This analysis suggests the rock may have been derived from a schistose basalt that has been

silica and potassium (in sericite?) enriched. The relatively high loss on ignition may reflect the occurrence of carbonate in the schist.

(v) Intrusive Rocks

a. Island Intrusions

The 50 m wide interval of Island Intrusion that separates the Karmutsen Formation from the Buttle Lake Formation, in the north central Sicker 2 claim (station 30), appears to grade westwards from granodiorite? to diorite?. The whole succession is moderately to deeply weathered and generally moderately to very strongly sheared and fractured. The intrusive rock appears to grade to the west from very strongly saussurite-altered, mafic-poor, fine to medium crystalline, granodiorite with 1-2% hornblende? and the remainder feldspar, into diorite? The diorite is also very strongly saussurite-altered, medium crystalline, but contains 5-10% hornblende crystals. It is strongly magnetic and contains about 0.5%, fine, disseminated pyrite, and about 5-8%, hematite?-dusted feldspar crystals. This diorite? grades westward into diorite? that is dark grey, medium crystalline, and consists of 10-12%, subhedral to anhedral hornblende crystals and the remainder, pale light blue-grey feldspar. The diorite is strongly magnetic, and contains 1-2%, very fine, disseminated pyrite. The diorite contains sheared lenses of more mafic-appearing rock that could be basaltic dykes.

The eastern 35 m of the intrusion that may form a large part of the western part of the Sicker 2 claim (station 36), consists of medium to coarsely crystalline, strongly magnetic, granodiorite? with about 85%, moderately to weakly saussurite-altered feldspar and about 15% hornblende.

b. Tertiary? Andesite? Intrusives

Intrusive rock of possibly andesite composition resembling Tertiary? intrusive andesitic rocks in the Rift Creek area to the west, were identified at two locations along the M2 road in the north central Sicker 2.

At station 32, andesite? forms a dyke? 9 m wide, intruding basalts of the Karmutsen Formation. It consists of medium grey-buff, very strongly saussurite-altered, weakly to moderately magnetic, feldspar, hornblende porphyritic, metavitric or very finely crystalline andesite?. The andesite contains about 10-15%, pale blue-green (pumpellyite?-altered) feldspar phenocrysts to 6x7 mm, and about 5%, chlorite?-altered hornblende phenocrysts, generally as blades to thin laths up to 2x6 mm. In addition, minor, very fine, disseminated chalcopyrite is apparent, generally within the hornblende phenocrysts. The dyke strikes 035° and dips 55° southeast.

A second dyke? of andesite? cuts the Karmutsen Formation basalt (at station 34), 70 m west of the first, described above. It is 7 m wide, and consists of weakly to strongly saussurite-altered, sub-translucent to sub-opaque medium to light buff, (feldspar porphyritic, feldspar microporphyritic), metavitric andesite? with minor, very fine, disseminated pyrite.

5.4 Assessment Work - 1986

A soil sampling and prospecting program conducted by MPH Consulting Ltd. from October 20 to October 22, 1986 covers adjacent corners of the northeast Sicker 1 and southeast Sicker 2 claims. Fourteen rock samples were collected from roadcuts and 108 soil samples were collected along north-south grid lines on both claims. Samples were analyzed for Au and 30-element I.C.P.

5.4. A. Lithogeochemistry

Prospecting and rock sampling over an area underlain by Buttle Lake limestone of the Sicker Group along roadcuts, resulted in the collection of fourteen samples for lithogeochemical analyses. These samples are described in Appendix IIb and certificates of analyses (Au and I.C.P.) are included in Appendix III.

The gold concentrations returned are background values of 5 ppb for the various rock types collected. A "pyritic grey

quartz vein" sampled (3997), returned the most anomalous concentrations for Ag (1.8 ppm), Cu (180 ppm), as well as skarn associated elements W (340 ppm) and Bi (570 ppm), in addition to Fe (14.71%).

Zinc concentrations are generally low with one anomalous? value of 376 ppm returned from sample 3998 comprised of a siliceous pyroclastic with less than 1% pyrite.

A dark green basalt sampled as 3993 returned the highest concentration for Pb (18 ppm). Chromium concentrations of 175 and 171 ppm (samples 3990 and 3998) were returned from siliceous pyroclastics containing trace pyrite.

Arsenic (commonly associated with gold) in general is very low, with the highest concentration at 35 ppm (sample 3999) from a dark green basalt containing trace pyrite. Barium concentrations (commonly associated with epithermal, massive-sulphide and shale-hosted Pb-Zn deposits are low in general with sample 4000 returning the highest value at 220 ppm.

Thus it appears that sample 3997 of the pyritic grey quartz vein returned the best geochemical results for Ag, Cu, Bi, and W. This "pyritic grey quartz zone" should be resampled and the area geologically mapped in detail to determine its extent, nature and structure.

B. Soil Geochemistry

Brown soil taken from the "B" horizon 25cm deep using a hoe.

During the month of October 1986 (October 20-22), 153 soil samples were collected along four north-south lines, spaced approximately 100 m apart and covering a distance of 5.0 line kilometres. Samples from lines 0W and 2W (total of 108) were analyzed for Au and I.C.P. at Rossbacher Labs in Burnaby. A visual estimate of anomalous and high background concentrations for the elements of interest was made, assuming a normal distribution resulting in approximately 2 percentile of the sampling population as anomalous. Certificates of analysis are included in Appendix III. Results for Au, Pb, Cu and Zn concentrations are plotted on Figure 6.

Gold concentrations range from 5 to 80 ppb. The most highly anomalous concentration for gold (80 ppb) occurs at L2W-2+50S followed by a 60 ppb concentration at L0-11+75S. High background to weakly anomalous concentrations of 40 and 30 ppb occur at L0-7+00S and L0-13+50S. The area in which these anomalous gold concentrations occur is underlain by Buttle Lake limestone of the Sicker Group.

Silver concentrations show very little variation with background concentrations ranging from 0.2 to 0.4 ppm. One sample (2W-6+75S) returned a weakly anomalous value of 0.6 ppm which does not appear to be directly associated with the anomalous gold concentrations.

Copper concentrations range from less than 1 to 118 ppm with anomalous and high background values assigned as 110

and 100 ppm respectively. The anomalous copper concentrations (118 ppm) occurs at L0-10+50S and the high background concentration (109 ppm) occurs at L0-5+00S. There is inconclusive evidence to suggest that these high concentrations may be associated with the anomalous gold values as no definite pattern has resulted from the analyses.

Lead concentrations show little variation with values ranging from less than 2 to 20 ppm. The highest results (20 ppm) occur at L0-00+50S and L0-10+50S. At the latter location, the Pb is apparently associated with the 118 ppm Cu concentration as well as a Zn anomaly defined over at least 75 m.

Zinc concentrations are in the range of 8 ppm to 292 ppm. Anomalous concentrations (292, 120 and 112 ppm) occur at L0-10+50, 10+75, and 10+25 respectively. Weakly anomalous to high background Zn concentrations occur at L0-4+75 (106 ppm), L0-2+75 (104 ppm) and L0-1+50 (100 ppm).

The I.C.P. results for arsenic show very little variation and do not appear to occur in association with the anomalous gold values. The highest concentration of As (40 ppm) in soils occurs at L0-5+00S. Barium values are also very close to background concentrations. The highest Ba concentration is 250 ppm and occurs at L2W-00+75S.

The area covered by the soil sampling grid is underlain by the Buttle Lake Formation, and perhaps some of the "sill sediment" unit.

6.0 RECOMMENDED WORK PROGRAM

6.1 Plan

Phase I will consist of detailed geological mapping (1:5000), rock sampling, soil sampling, VLF-EM and magnetometer surveys at 100 m grid spacings covering the areas underlain by Sicker Group rocks.

Detailed mapping will be concentrated on those areas which were not covered in 1985, and is designed to follow up the anomalous Au, Cu, Ag, Pb and Zn concentrations. Traverses along roadcuts with good exposure, perpendicular to strike whenever possible will be conducted.

Rock sampling and prospecting will be carried out around shear zones, carbonate-sericite alteration zones as well as tuffs of the Myra Formation which grade into the "sill sediment" unit. The contact between Island Intrusives and Buttle Lake limestone will be mapped and prospected for skarn-type mineralization.

The following proposed program and budget for the Sicker 1 and 2 claims includes combined work on the adjacent Rush 1, Rush 2 and Rush 3 claims to the south and east for Roap Resources Inc. (operator).

6.2 Budget

Phase I

Mob/Demob			$ 1,000
Personnel:			
Geologist	14 days @ $350	$4,900	
Field Technician	14 days @ 250	3,500	
Consultant	4 days @ 475	1,900	
Field Supervisor	4 days @ 250	1,000	
Geophy. Operator	6 days @ 250	1,500	
Geophy. Assistant	6 days @ 150	900	
Geophy. Assistant (2)	10 days @ 150	3,000	
			16,700
Support Costs:			
Accommodation/Food	68 mandays @ $55	3,740	
Transportation			
4x4 Trucks (3)	30 truckdays @ 90	2,700	
Communications		300	
Misc. Supplies		1,500	
Custom topo map		5,000	
			13,240
Equipment Rental:			
VLF-EM	6 days @ 25	150	
Magnetometer	6 days @ 150	900	
Computer	6 days @ 25	150	
Rock Saw	3 days @ 15	45	
			1,245

Analyses:

Rocks - geochemical			
100 @ $12.20		$1,220	
- assay			
Au	10 @ $6.00	60	
Cu, or			
other metal	10 @ 5.50	55	
- whole rock	10 @ 20.00	200	
- thin section	5 @ 50.00	250	
Soils - geochemical			
- Au, ICP	820 @ 10.60	8,692	
			$10,477
Report Writing:			6,500
			49,162
Administration @ 15% (on, say, $20,000)			3,000
			52,162
Contingency @ 15%			7,824
			59,986
		Total Cost, say	$60,000

6.3 Schedule

The following table is a summary of the estimated time requirements for Phase I exploration on the Sicker 1, 2 and Rush 1, 2, 3 claims.

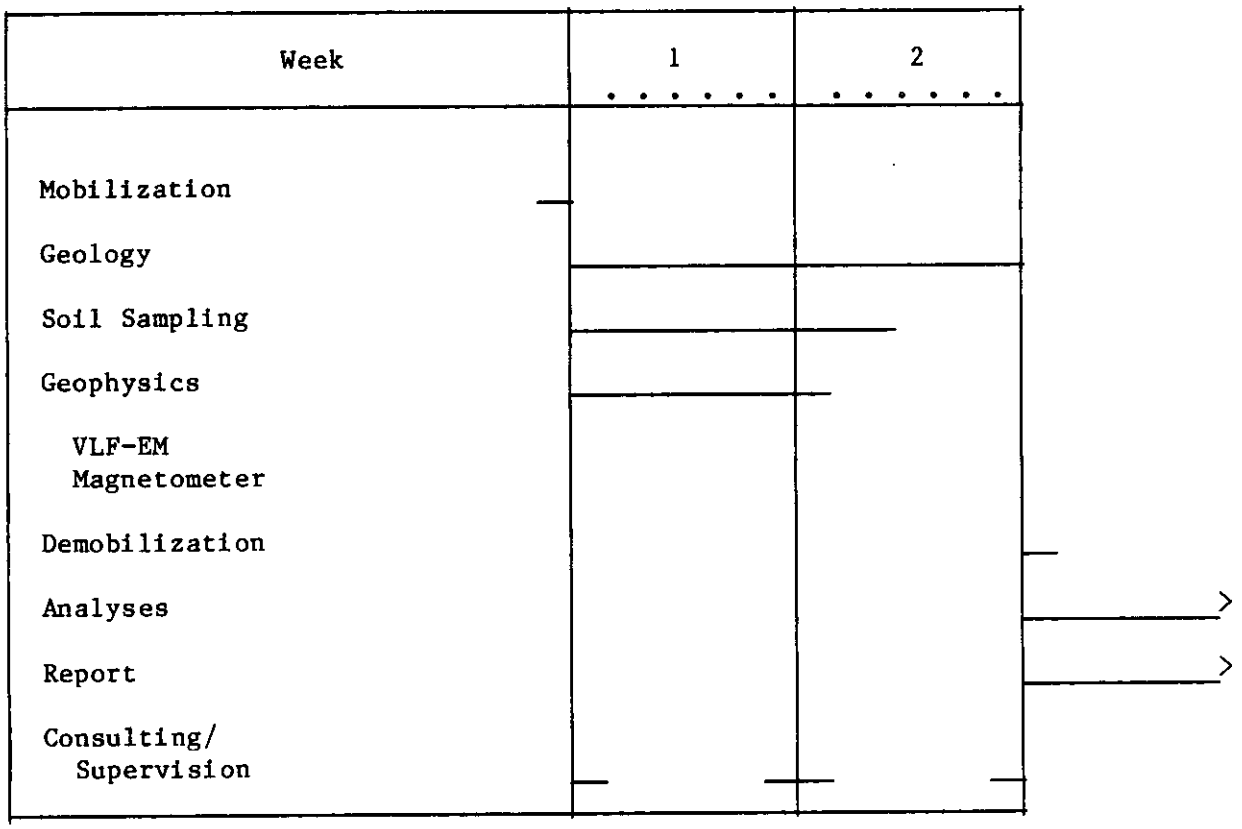


TABLE: PHASE I PROJECT SCHEDULE

SICKER 1,2
RUSH 1,2,3 CLAIMS

7.0 CONCLUSIONS

1. The Sicker 1 and Sicker 2 claims are underlain, at least in part, by a westward younging westerly dipping succession that includes from east to west: basaltic and diabasic appearing basaltic flows of Muller's "sill sediment" unit of the Sicker Group which in many areas overlies or is gradational into the Myra Formation; the Buttle Lake Formation comprising predominantly white, bedded chert with minor thin intervals of crinoidal marble, and at the base, 35 m or more of black, meta-tuffaceous or argillaceous? chert to cherty argillite; and the Karmutsen Formation of thick? basaltic flows. The succession is truncated to the west by a major body of granodiorite of the Island Intrusives (Jurassic).

2. Basaltic flows of the "sill sediment" unit commonly contain anomalous concentrations of chalcopyrite. The basalts are locally moderately schistose and in the northeastern Sicker 2 claim these basalts are partly ankerite?-sericite-pyrite altered and contain anomalous concentrations of lead (14 and 212 ppm in two chip samples).

3. The black meta-argillaceous? cherts in the Buttle Lake Formation commonly contain 2-5% very fine disseminated pyrite and 1-2% fracture-pyrite, with background concentrations of gold.

4. An 8 cm wide pyritic fracture zone cutting the meta-chert in north central Sicker 1 contains 1000 ppm Cu and 110 ppb Au.

5. Geological mapping, prospecting and rock sampling resulted in showing that anomalous copper and gold occurs in a pyritic fracture cutting the Buttle Lake Formation.

6. Anomalous copper concentrations may characterize basalts of the "sill sediment" unit of the Sicker Group.

7. Ankeritic? alteration of basaltic rocks is apparently accompanied by anomalous lead.

8. Anomalous gold concentrations have been returned from four soil geochemical analyses. These samples were collected from an area underlain by the Buttle Lake Formation of the Sicker Group.

9. Anomalous Ag, Cu, associated with W, Bi and Fe provide an additional exploration target for skarn type mineralization near the contacts of Buttle Lake limestone and Island Intrusions.

10. Detailed geological mapping, geophysics, prospecting and sampling is recommended to follow up anomalous Au results in soils and outcrops and high concentrations for Ag, Cu, W, Bi and Cr. Work should be conducted along the numerous logging roads that provide good outcrop exposure.

8.0 RECOMMENDATIONS

1. Anomalous concentrations for Au, Ag, Cu, Pb and Zn as well as skarn associated elements (W and Bi) warrant further detailed geological mapping and soil sampling to follow up and confirm these results.

2. Pyritic fracture zones cutting the Buttle Lake Formation should be sampled as they are associated with anomalous gold and copper.

3. Ankeritic alteration zones within basalts should be sampled as they are apparently associated with anomalous lead.

4. Mapping to determine the extent of the Nanaimo Group sediments should precede the establishment of a grid for soil sampling. However, the Nanaimo Group sediments are thought to be thin enough to allow detection of significant mineralization in the underlying Sicker Group by geophysical methods (VLF-EM and magnetometer surveys).

5. It is recommended that soil sampling be conducted at 25 m spacings along lines running east-west (perpendicular to strike and regional structure).

6. Skarn type, epithermal vein type and volcanogenic massive sulphide deposits should be considered primary exploration targets.

7. Whole rock analyses of volcanics are recommended to assist in classification and determination of the lithological section as well as locating alteration patterns.

8. Phase I work has been outlined for Sicker 1 and Sicker 2 in conjunction with the adjacent Rush 1, Rush 2 and Rush 3 claims with a total budget of $60,000. The work is estimated to require two weeks.

9. It is recommended that tentative plans be made for a Phase II follow-up program to consist of trenching, rock sampling, IP surveys contingent upon favourable Phase I results.

Respectfully submitted,

MPH Consulting Limited

B.Y. Thomae

B.Y. Thomae, B.Sc.

T.G. Hawkins, P.Geol.

January 20, 1987

CERTIFICATE

I, Barbara Thomae do hereby certify:

1. That I am a graduate in geology of the University of British Columbia (B.Sc. 1983).

2. That I have practised as a geologist in exploration for six years.

3. That the opinions, conclusions, and recommendations contained herein are based on field work carried out by MPH Consulting Ltd. staff members over this and previous years.

4. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Roap Resources Inc. or associated companies.

B.Y. Thomae

B.Y. Thomae, B.Sc.

Vancouver, B.C.
January 20, 1987

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, B.C. V6C 1T2.

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

3. That I have practised within the geological profession for the past sixteen years.

4. That I am a Fellow of the Geological Association of Canada and a Professional Geologist registered in the Province of Alberta.

5. That the opinions, conclusions and recommendations contained herein are based on field work carried out on the property in October, 1986 and in previous years, and supervised by me.

6. That I own no direct, indirect, or contingent interests in the subject property or shares or securities of Roap Resources Inc. or associated companies.

T.E. Gregory Hawkins, P.Geol.

January 20, 1987

REFERENCES

Benvenuto, G.L. 1984: Thistle Mine - Summary of 1983, 1984 Exploration; for Westmin Resources Ltd.

1985: Geology and Mineralization on Portions of the Sicker 1 and 2 Claims, Fourth Nanaimo Lake Area, Vancouver Island, B.C. 92F1/W; Unpublished Report for MPH Consulting Ltd.

Brandon, M.T., Orchard, M.J., Parrish, R.R., Sutherland Brown, A., and Yorath, C.J. 1986: Fossil ages and isotopic dates from the Paleozoic Sicker Group and associated intrusive rocks, Vancouver Island, British Columbia; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 683-696.

Carson, D.J.T. 1968: Metallogenic Study of Vancouver Island with Emphasis on the Relationships of Mineral Deposits to Plutonic Rocks; Ph.D. Thesis, Carleton University.

Clapp, C.H. 1912: Southern Vancouver Island; G.S.C. Memoir 13.

1914: Geology of the Nanaimo Map Area; G.S.C. Memoir 51.

Gunnex Ltd. 1966: Mineral Occurrences (Mine, Surface Workings, and Showings), E&N Land Grant, Vancouver Island, B.C.; internal company report.

Hawkins, T.G. and Willoughby, N.O. 1983: Preliminary Assessment and Recommended Work Program; Sicker 1 and 2 Claims; Nanaimo Mining Division, British Columbia; for Jan Interational Resources Ltd., September 22, 1983.

Muller, J.E. and Carson, D.J.T. 1969: Geology and Mineral Deposits of Alberni Map-Area, British Columbia (92F); G.S.C. Paper 68-50.

Muller, J.E. 1977: Geology of Vancouver Island (West Half); G.S.C. Open File 463.

1980: The Paleozoic Sicker Group of Vancouver Island, British Columbia; G.S.C. Paper 79-30.

Neale, T., and Hawkins, T.G., 1984: Report on Reconnaissance Geological Mapping and Rock Sampling Sicker 1, 2 Claims. Preliminary Assessment Sicker 4, 5, 6 Claims, Nanaimo M.D. for Sunfield Management Ltd. July 25, 1984.

Neale, T. 1984: Compilation of Mineral Occurrences of the Sicker Group, Vancouver Island, British Columbia; for MPH Consulting Limited.

Stevenson, J.S. 1945: Geology and Ore Deposits of the China Creek Area, Vancouver Island, British Columbia; Annual Report of the Minister of Mines of the Province of British Columbia, 1944, pp. A143-A161.

Sutherland Brown, A. 1986 (in prep): Sicker Group in the Northwest Cowichan Uplift.

Walker, R.R. 1983; Ore Deposits at the Myra Falls Minesite; Western Miner, May 1983, pp. 22-25.

Appendix I

LIST OF PERSONNEL

and

STATEMENT OF EXPENDITURES

APPENDIX I

LIST OF PERSONNEL AND EXPENDITURES

The following expenses have been incurred on the Sicker 1 and 2 claims for the purpose of fulfillment of assessment requirements for the year ending October 22, 1986.

Personnel

H. Chaudet, Field Technician			
3 days @ $175	$ 525.00		
S. Hawkins, Field Technician			
1 day @ 175	175.00		
		$	700.00

Equipment Rental

4x4 Truck	3 days @ $90	270.00

Disbursements

Food/Accommodation	4 mandays @ 40	160.00	
Fuel Costs		20.00	
Analyses-			
14 rocks	Au, ICP @ $11.95 167.30		
108 soils	Au, ICP @ 10.60 1,144.80	1,312.10	
			1,492.10

Report Costs

B.Y. Thomae, B.Sc.	3 days @ $325.00	975.00	
Typing		350.00	
Drafting	10 hrs @ 20.00	200.00	
Copying - maps		50.00	
- report		50.00	
			1,625.00

Administration (on $2,162.10) @ 15%		324.30
Total		$4,411.40

Appendix IIa

1985 ROCK SAMPLE DESCRIPTIONS

and

GEOCHEMICAL ANALYSES

1985 ROCK SAMPLE DESCRIPTIONS AND GEOCHEMICAL ANALYSES OF SAMPLES COLLECTED FROM THE SICKER 1 AND 2 CLAIMS

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
SICKER 1 CLAIM						
9851	Meta-argillaceous? or tuffaceous, graphitic chert: medium bedded, black to very dark grey to very dark brownish-grey, very weakly to weakly magnetic; about 2-5%, very, very fine, disseminated pyrrhotite? and 1-2%, very, very fine to very fine, disseminated pyrite; about 1-2%, fracture pyrite. Chip sample across 1.9 m (perpendicular to bedding).	48	2	80	0.1	10
9852	Massive?, meta-argillaceous?, graphitic chert or cherty argillite (or tuff): very dark purple-brown-grey; appears very, very fine grained; about 5-10%, very, very fine disseminated pyrite; non-magnetic; abundant rusty fractures; grab sample.	46	2	140	0.1	10
9853	Pyritic fracture zone, 8x60 cm(+) cutting meta-argillaceous? chert of sample #9852; zone trends about 225° and contains about 10-25% fracture-pyrite. Grab sample.	1000	6	40	0.1	110
9854	Meta-argillaceous?, graphitic chert: very dark purle-brown-grey to near black; about 3-5%, very fine to very, very fine, disseminated pyrite; non-magnetic; rusty fracture surfaces common. Chip sample across 4.5 m.	64	2	100	0.1	10
9855	Ankerite? - altered, meta-cherty argillite?; massive; light buff-lavender-grey to locally medium (green-) buff-grey; weathers medium-dark to dark rusty orange-brown; about 1-2% very fine (locally medium) grained, disseminated pyrite; rare disseminated and fracture chalcopyrite; minor graphitic? fractures; 2-4%, 0.2-1 mm thick, ankerite?-filled fractures. Chip sample across 2.5 m exposed width.	60	2	50	0.1	30

MPH

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
9856	Meta-(argillaceous?) chert: medium-dark purple-brown; about 1-2%, very, very fine, disseminated pyrite, locally 2-4%, very fine to fine (to 2 mm), disseminated pyrite; abundant rusty fractures; about 1-2% pyritic fractures with 5-20%, 0.5-1.5 mm grains and larger patches of pyrite on fractures. Chip sample across 1.1 m wide outcrop.	48	2	50	0.1	10
SICKER 2 CLAIM: M2 ROAD						
9857	Pyrite, ankerite?-sericite-altered basalt??: 4-7%, very fine to finely disseminated pyrite; 1% fracture and stringer pyrite; very weak schistosity; minor fuchsite? patches; fresh colour is slightly translucent medium to light buff-grey; few % calcite alteration. Composite of 4 grab samples from 1.5 m wide outcrop.	19	14	210	0.1	10
9858	Pyritic, ankerite?-sericite-altered basalt??: weakly schistose; 5-10%, fine to very fine, disseminated pyrite; 2-3% fracture-pyrite; weathers very rusty; resembles #9857. Chip sample across 50 cm wide outcrop.	56	96	50	0.4	10
9859	Pyritic, ankerite?-sericite-altered basalt??: strongly sheared or weakly schistose; about 3-5% disseminated pyrite and 1-3% fracture and stringer pyrite; poorly exposed; weathered; resembles #9857, 9858. Chip sample across 1-5 m wide outcrop.	60	20	100	0.1	10
9860	Basalt: massive, diabasic-appearing, medium crystalline hornblende (15%), feldspar (80%); minor to 1-2% uralite?-altered hornblende; about 2-3%, fine to medium grained, disseminated magnetite; minor to 0.5%, very, very fine, disseminated pyrite; 0.5-1%, very, very fine, disseminated chalcopyrite (generally trace to 0.5%); grab sample.	241	2	60	0.1	10

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
9861	Pyritic, ankeritic?, sericitic schist: strong (to moderate to weak) schistosity; about 5-10%, very, very fine to very fine (locally to medium) grained, disseminated pyrite; few % fracture and stringer pyrite; trace to minor, patches of fuchsite?; fresh colour medium-light buff-grey to locally medium-dark grey; weathers very rusty; possibly originally (hornblende, feldspar porphyritic), feldspar microporphyritic, metavitric basalt?; 2 cm + interval with 2-3%, subrounded to elliptical, clear grey quartz grains (quartz-filled amygdules? or phenocrysts?); resembles #9857 and 9859 except more strongly schistose. Chip sample across 17 m wide outcrop.	80	212	60	0.4	10
9862	Basalt to diabasic-appearing basalt: trace to minor (to locally 1%?), very, very finely disseminated chalcopyrite: strongly magnetic; moderately sheared. Basalt is (feldspar, hornblende porphyritic), feldspar microporphyritic, metavitric; grades into medium crystalline basalt. Chip sample across 5 m wide outcrop.	187	2	90	0.1	10
9863	(Pyritic), ankerite?, sericitic schist: deeply weathered, very rusty weathering; strong schistosity; about 3-6%, disseminated and fracture pyrite; resembles #9857-59 and 9861. Chip sample across 2.3 m wide outcrop.	58	14	70	0.1	10
9864	Massive hematite? vein?: black, vuggy, very fine grained hematite? in layer 0-3.5 m thick, approximately parallel to schistosity in schist at sample #9863. 40 cm trend-length exposed; trends about 160°. Grab samples of whole vein?	179	10	70	0.1	10
9865	Meta-argillaceous? chert to cherty argillite? of Buttle Lake Formation: fresh colour: dark red-brown grading to near black to west; very strongly fractured; about 2-4%, very, very finely disseminated pyrite; abundant rusty (pyritic) fracture surfaces locally cut by abundant quartz-filled fractures. Chip sample across 35 m wide outcrop.	50	2	50	0.1	10

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
9866	(Pyrite) granodiorite?: may be dyke or sill related to Island Intrusions to west. Fine to medium crystalline feldspar and hornblende; about 3-4%, very fine, disseminated pyrite. In contact with and to east of #9867. Intrudes Buttle Lake Formation. Two grab samples from 2.5 m wide interval.	39	2	20	0.1	10
9867	(Pyritic) "chert-breccia": strongly fractured and deeply weathered; 10-15% fragments to 2.5x3 cm of very light buff-grey, basaltic? chert in a matrix of medium grey-green, cherty?, feldspar-chlorite altered hornblende-basaltic fine crystal tuff with about 2-3%, very fine, disseminated pyrite. In contact with #9867 to east; interval within Buttle Lake Formation; to west, 5.5 m wide, covered interval. Chip sample across 80 cm wide exposure.	28	6	130	0.1	10

Appendix IIb

1986 ROCK SAMPLE DESCRIPTIONS

and

GEOCHEMICAL ANALYSES

1986 ROCK SAMPLE DESCRIPTIONS AND GEOCHEMICAL ANALYSES OF SAMPLES COLLECTED FROM THE SICKER 1 AND 2 CLAIMS

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Other ppm	
3989	Dark green cherty basalt, weathering green and rusty brown; minor purplish staining, approximately 1% disseminated pyrite and as 0.5 mm fracture fillings	6	2	68	0.2	5	3530	P
3990	Red/purple weathering pyroclastic, cavities on fresh and weathered surface, trace pyrite, some blebs of grey sulphide (specular hematite likely).	21	2	16	0.2	5	175	Cr
3991	Very weathered pyroclastic volcanic rock, boxwork cavities on rusty weathered surface; 1% pyrite, trace of chalcopyrite and grey sulphide (likely hematite).	1	2	6	0.2	5		
3992	Red/purple weathering volcanic rock, likely pyroclastic; rusty boxwork cavities on weathered surface, some purple staining, 1% pyrite as disseminations and 0.5 mm fracture fillings.	19	8	42	0.2	5		
3993	Purple/brown weathering basalt, dark green on fresh surface, trace of disseminated pyrite.	86	18	46	0.2	5	18 2270	Pb P
3994	Rusty brown weathering basalt, dark green on fresh surface, disseminated pyrite and small trace of sulphide (possibly chalcopyrite) in less than 0.5 mm fracture.	82	2	108	0.2	5		
3995	Green/grey weathering siliceous pyroclastic, grey on fresh surface 1-2% disseminated cubic pyrite with trace of chalcopyrite.	57	8	90	0.2	5		
3996	Brown weathering basalt, dark green on fresh surface; some pyrite on fracture surfaces.	164	2	140	0.4	5	273	V
3997	2-3 cm grey quartz vein, 5% cubic pyrite (5x10 mm diameter)	180	8	22	1.8	5	570 14.71 340	Bi Fe As

Sample Number	Description	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Other ppm	
3998	Brown and green weathering siliceous pyroclastic, some cavities present on both fresh and weathered surfaces; less than 1% disseminated pyrite.	93	4	376	0.2	5	1758 4.28% 376	Mn Ca Zn
3999	Brown weathering basalt, dark green on fresh surface; trace of disseminated pyrite.	69	4	96	0.2	5	35	As
4000	Basalt; dark green on fresh surface, 1% pyrite, on fracture surfaces and as fracture fillings.	107	4	112	0.2	5	220	Ba
14501	Basalt, dark green on fresh surface, very weak trace of pyrite, moderately magnetic.	72	2	90	0.2	5		
14502	Basalt, medium green on fresh surface; pyrite and possibly pyrrhotite along one fracture surface, sulphides are very weakly magnetic.	51	16	106	0.2	5		

MPH

Appendix III

CERTIFICATES OF ANALYSIS

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 153
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86618
INVOICE#: 7128
DATE ENTERED: 86-11-03
FILE NAME: MPH86618
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
A	3989	5
A	3990	5
A	3991	5
A	3992	5
A	3993	5
A	3994	5
A	3995	5
A	3996	5
A	3997	5
A	3998	5
A	3999	5
A	4000	5
A	14501	5
A	14502	5

RECEIVED NOV 6 1986

CERTIFIED BY : _____

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 153
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86618.0
INVOICE#: G
DATE ENTERED: 86-11-05
FILE NAME: MPH86618.A
PAGE # : 1

PRE FIX	SAMPLE NAME		PPB Au
S	L 0	0+00	5
S		0+25S	5
S		0+50S	5
S		0+75S	5
S		1+00S	5
S		1+25S	5
S		1+50S	5
S		1+75S	5
S		2+00S	5
S		2+25S	5
S		2+50S	5
S		2+75S	5
S		3+00S	5
S		3+25S	5
S		3+50S	10
S		3+75S	5
S		4+00S	5
S		4+25S	5
S		4+50S	5
S	L 0	4+75S	5
S		5+00S	5
S		5+25S	5
S		5+50S	5
S		5+75S	5
S		6+00S	5
S		6+25S	5
S		6+50S	5
S		6+75S	5
S		7+00S	40
S		7+25S	5
S		7+50S	5
S		7+75S	5
S		8+00S	5
S		8+25S	5
S		8+50S	5
S		8+75S	5
S		9+00S	5
S		9+25S	5
S		9+50S	5
S	L 0	9+75S	5

RECEIVED NOV 6 1986

CERTIFIED BY : Rossbacher

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 153
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86618.A
INVOICE#: 0
DATE ENTERED: 86-11-05
FILE NAME: MPH86618.A
PAGE # : 2

PRE FIX	SAMPLE NAME		PPB Au
S	L 0	10+00S	5
S		10+25S	5
S		10+50S	5
S		10+75S	5
S		11+00S	5
S		11+25S	5
S		11+50S	5
S		11+75S	60
S		12+25S	5
S		12+50S	5
S		12+75S	5
S		13+00S	5
S		13+25S	5
S		13+50S	30
S		13+75S	5
S		14+00S	5
S		14+25S	5
S		14+50S	5
S	L 0	14+25S	5
S	L 2W	0+00	5
S		0+25S	5
S		0+50S	5
S		0+75S	5
S		1+00S	5
S		1+25S	5
S		1+50S	5
S		1+75S	5
S		2+00S	5
S		2+25S	5
S		2+50S	80
S		2+75S	5
S		3+00S	5
S		3+25S	5
S		3+50S	5
S		3+75S	5
S		4+00S	5
S		4+25S	5
S		4+50S	5
S		4+75S	5
S	L 2W	5+00S	5

CERTIFIED BY : J. Rossbach

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 153
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86618.A
INVOICE#: G
DATE ENTERED: 86-11-05
FILE NAME: MPH86618.A
PAGE # : 3

PRE FIX	SAMPLE NAME	PPB Au
S	L 2W 5+25S	5
S	5+50S	5
S	5+75S	5
S	6+00S	5
S	6+25S	5
S	6+50S	5
S	6+75S	5
S	7+00S	5
S	7+25S	5
S	7+50S	5
S	7+75S	5
S	8+00S	5
S	8+25S	5
S	8+50S	5
S	8+75S	5
S	9+00S	5
S	9+25S	5
S	9+50S	5
S	9+75S	5
S	10+00S	10
S	10+25S	5
S	10+50S	5
S	10+75S	5
S	11+00S	5
S	11+25S	5
S	11+50S	5
S	11+75S	5
S	L 2W 12+00S	5

CERTIFIED BY : J. Rossbach

Sw #7215

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

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

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

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

CERT. # : A8620477-001-A
INVOICE # : I8620477
DATE : 20-NOV-86
P.O. # : NONE
V153

Semi quantitative multi element ICP analysis

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

COMMENTS :
ATTN: P. ROSSBACHER

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
3989	1.73	0.2	5	40	<0.5	<2	1.45	<0.5	13	48	6	6.26	10	0.15	20	1.24	1555	<1	0.05	31	2530	<2	<5	67	0.22	<10	<10	164	<5	68	--	--
3990	0.21	0.2	<5	<10	<0.5	<2	0.08	0.5	<1	175	21	6.48	<10	<0.01	<10	0.19	583	<1	<0.01	18	230	<2	<5	8	<0.01	<10	<10	71	<5	16	--	--
3991	0.06	0.2	<5	<10	<0.5	2	0.02	0.5	<1	137	1	5.86	<10	<0.01	<10	0.01	134	<1	<0.01	7	130	<2	<5	2	<0.01	<10	<10	58	<5	6	--	--
3992	0.68	0.2	<5	40	<0.5	<2	2.05	<0.5	1	116	19	4.60	<10	0.05	<10	0.52	1031	<1	<0.01	33	170	8	<5	<1	0.01	<10	<10	104	<5	42	--	--
3993	1.71	0.2	<5	100	0.5	<2	0.95	0.5	40	23	86	4.25	<10	0.54	10	1.06	476	2	0.01	39	2270	18	<5	17	0.10	<10	<10	41	<5	46	--	--
3994	2.57	0.2	5	40	<0.5	<2	0.77	0.5	16	39	82	4.84	10	0.15	10	1.44	699	<1	0.09	21	610	2	<5	27	0.26	<10	<10	74	<5	108	--	--
3995	2.52	0.2	<5	40	<0.5	<2	2.63	0.5	25	86	57	5.59	<10	0.07	<10	2.44	888	<1	0.04	38	1080	8	<5	44	<0.01	<10	<10	77	<5	90	--	--
3996	3.41	0.4	<5	30	<0.5	<2	1.20	1.0	44	119	164	6.53	20	0.05	<10	3.19	256	<1	0.19	86	700	<2	<5	30	0.53	<10	<10	273	<5	140	--	--
3997	0.22	1.8	<5	<10	<0.5	570	0.17	1.5	14	128	180	14.71	<10	0.02	<10	0.23	177	3	<0.01	21	160	8	<5	6	0.04	<10	<10	33	340	22	--	--
3998	5.59	0.2	5	40	<0.5	<2	4.28	1.0	23	171	93	6.81	<10	0.09	<10	3.96	1758	<1	0.03	43	1140	4	<5	18	<0.01	<10	<10	183	<5	376	--	--
3999	3.09	0.2	35	80	<0.5	<2	0.87	<0.5	18	30	69	4.89	10	0.11	<10	2.24	1391	2	0.05	10	810	4	<5	17	0.28	<10	<10	112	<5	96	--	--
4000	2.71	0.2	5	220	<0.5	<2	1.06	0.5	13	70	107	3.25	<10	0.68	<10	1.08	736	<1	0.25	12	540	4	<5	125	0.12	<10	<10	93	<5	112	--	--
14501	2.26	0.2	5	80	<0.5	<2	0.84	<0.5	17	23	72	4.75	20	0.24	<10	1.47	1154	<1	0.08	14	720	2	5	58	0.38	<10	<10	111	<5	90	--	--
14502	2.58	0.2	<5	60	<0.5	<2	0.57	<0.5	15	39	51	4.93	10	0.12	<10	1.54	754	<1	0.05	14	270	16	<5	24	0.19	<10	<10	128	<5	106	--	--

RECEIVED NOV 2 4 1986

Certified by ...

Inv #7216

Chemex Labs Ltd.

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Telex: 043-52597

•Analytical Chemists •Geochemists •Registered Assayers

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

3225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3N1

CERT. # : A8620589-001-A
INVOICE # : I8620589
DATE : 25-NOV-86
P.O. # : NONE
V153

Semi quantitative multi element ICP analysis

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

COMMENTS :
ATTN: P. ROSSBACHER

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L0 00+00	3.49	0.4	10	40	<0.5	2	0.25	<0.5	9	30	24	3.89	<10	0.05	10	0.58	292	<1	0.01	14	880	8	<5	27	0.22	<10	<10	112	<5	78	--	--
L0 00+25S	2.71	0.2	<5	50	<0.5	<2	0.37	<0.5	7	26	19	3.58	10	0.03	10	0.37	548	<1	0.01	8	680	12	<5	34	0.26	<10	<10	115	<5	68	--	--
L0 00+50S	2.37	0.4	5	40	<0.5	<2	0.39	<0.5	5	23	18	3.66	<10	0.03	10	0.25	393	1	0.01	7	760	20	<5	22	0.18	<10	<10	114	<5	42	--	--
L0 00+75S	2.34	0.2	5	20	<0.5	<2	0.35	<0.5	5	28	12	2.98	<10	0.02	<10	0.22	274	<1	0.01	8	710	18	<5	34	0.18	<10	<10	107	<5	38	--	--
L0 01+00S	4.14	0.4	<5	40	<0.5	<2	0.27	<0.5	6	37	18	5.22	10	0.03	10	0.24	225	1	0.01	8	1170	14	<5	40	0.20	<10	<10	152	<5	68	--	--
L0 01+25S	4.18	0.2	5	40	<0.5	<2	0.34	<0.5	8	32	40	3.62	<10	0.04	10	0.48	313	<1	0.01	10	830	12	<5	37	0.22	<10	<10	106	<5	46	--	--
L0 01+50S	5.05	0.2	5	80	<0.5	2	0.40	<0.5	9	33	31	3.97	<10	0.05	10	0.43	722	1	0.01	9	1270	14	<5	44	0.22	<10	<10	109	<5	100	--	--
L0 01+75S	1.86	0.2	5	30	<0.5	<2	0.32	<0.5	3	15	5	2.52	<10	0.02	10	0.21	277	<1	0.01	4	330	6	<5	28	0.19	<10	<10	91	<5	48	--	--
L0 02+00S	2.09	0.2	10	30	<0.5	<2	0.25	<0.5	6	25	2	3.90	10	0.03	10	0.29	268	<1	0.01	7	720	8	<5	32	0.24	<10	<10	131	<5	54	--	--
L0 02+25S	2.14	0.2	5	80	<0.5	<2	0.64	<0.5	13	13	8	3.05	<10	0.04	30	0.31	810	1	0.01	5	400	10	<5	42	0.17	<10	<10	84	<5	46	--	--
L0 02+50S	1.92	0.2	5	70	<0.5	<2	0.24	<0.5	4	16	5	3.60	10	0.03	10	0.28	745	<1	0.01	4	600	10	<5	31	0.25	<10	<10	126	<5	40	--	--
L0 02+75S	5.08	0.2	20	50	<0.5	2	0.23	<0.5	12	22	60	4.79	<10	0.06	10	0.59	579	3	<0.01	16	1410	12	<5	36	0.17	<10	<10	112	<5	104	--	--
L0 03+00S	1.19	0.2	<5	40	<0.5	<2	0.43	<0.5	2	12	<1	2.51	<10	0.02	10	0.13	204	<1	<0.01	3	170	4	<5	43	0.19	<10	<10	102	<5	22	--	--
L0 03+25S	3.37	0.2	10	40	<0.5	2	0.36	<0.5	7	27	21	3.52	<10	0.04	10	0.49	354	1	0.01	10	690	10	<5	38	0.20	<10	<10	99	<5	58	--	--
L0 03+50S	3.55	0.2	10	40	<0.5	<2	0.35	<0.5	8	31	30	3.77	<10	0.04	10	0.60	277	1	0.01	12	600	10	<5	36	0.26	<10	<10	103	<5	70	--	--
L0 03+75S	3.45	0.2	10	60	<0.5	2	0.48	<0.5	8	28	17	3.84	<10	0.04	10	0.55	817	<1	0.01	10	1090	16	<5	48	0.20	<10	<10	107	<5	46	--	--
L0 04+00S	3.91	0.2	10	70	<0.5	2	0.63	<0.5	9	49	16	4.55	<10	0.06	10	0.66	512	1	<0.01	15	600	18	<5	87	0.24	<10	<10	149	<5	52	--	--
L0 04+25S	3.26	0.2	5	60	<0.5	<2	0.65	<0.5	5	25	8	3.39	10	0.05	10	0.53	328	<1	<0.01	8	480	8	<5	65	0.29	<10	<10	117	<5	54	--	--
L0 04+50S	4.45	0.2	5	70	<0.5	4	0.61	<0.5	11	61	33	5.44	10	0.06	10	0.94	430	1	0.01	18	1890	12	<5	53	0.31	<10	<10	131	<5	82	--	--
L0 04+75S	4.27	0.2	5	90	<0.5	2	0.64	0.5	16	48	38	5.75	10	0.08	20	1.01	876	1	0.01	19	1260	16	<5	78	0.31	<10	<10	148	<5	106	--	--
L0 05+00S	2.75	0.2	10	70	<0.5	2	0.58	<0.5	19	28	109	4.27	10	0.11	20	1.11	829	1	0.01	20	1220	18	<5	72	0.23	<10	10	109	<5	90	--	--
L0 05+25S	3.80	0.2	5	50	<0.5	<2	0.49	<0.5	10	44	25	4.92	<10	0.06	10	0.74	520	1	0.01	13	2970	10	<5	67	0.25	<10	<10	121	<5	56	--	--
L0 05+50S	2.75	0.2	5	60	<0.5	2	0.46	<0.5	5	17	4	3.36	10	0.03	10	0.48	965	<1	0.01	6	590	14	<5	53	0.25	<10	<10	106	<5	44	--	--
L0 05+75S	3.92	0.2	5	80	<0.5	2	0.35	<0.5	10	30	4	4.65	10	0.08	10	0.74	96[illegible]		[illegible]	12	550	12	<5	44	0.25	<10	<10	132	<5	60	--	--
L0 06+00S	3.06	0.2	15	70	<0.5	<2	0.42	<0.5	8	33	30	4.09	<10	0.05	10	0.71	563	<1	0.01	10	820	18	<5	33	0.20	<10	<10	118	<5	66	--	--
L0 06+25S	1.85	0.2	<5	100	<0.5	<2	0.82	<0.5	9	16	5	2.54	<10	0.05	10	0.46	2037	<1	0.01	7	560	10	<5	40	0.13	<10	<10	75	<5	66	--	--
L0 06+50S	3.14	0.2	5	100	<0.5	<2	0.37	<0.5	15	24	29	4.14	<10	0.06	10	0.88	1597	<1	0.01	10	960	20	<5	49	0.19	<10	<10	115	<5	78	--	--
L0 06+75S	3.33	0.2	<5	80	<0.5	<2	0.45	<0.5	12	34	28	4.33	<10	0.05	10	0.79	1799	<1	0.01	14	930	10	<5	54	0.22	<10	<10	105	<5	78	--	--
L0 07+00S	3.03	0.2	5	40	<0.5	<2	0.40	<0.5	11	22	10	3.86	<10	0.03	10	0.44	1292	<1	0.01	7	1150	6	<5	51	0.15	<10	<10	84	<5	46	--	--
L0 07+25S	1.86	0.2	<5	20	<0.5	<2	0.43	<0.5	4	18	3	2.39	<10	0.02	10	0.23	299	<1	<0.01	5	510	8	<5	41	0.21	<10	<10	91	<5	26	--	--
L0 07+50S	3.11	0.2	5	50	<0.5	<2	0.40	<0.5	16	31	46	3.12	<10	0.07	10	0.57	1008	<1	0.01	15	1020	12	<5	36	0.16	<10	<10	79	<5	62	--	--
L0 07+75S	4.24	0.2	<5	50	<0.5	<2	0.52	<0.5	15	37	48	4.29	<10	0.05	10	0.82	774	<1	0.01	17	1540	10	<5	44	0.21	<10	<10	99	<5	62	--	--
L0 08+00S	3.41	0.2	<5	60	<0.5	<2	0.43	<0.5	13	21	58	4.22	<10	0.05	10	0.65	942	<1	0.01	14	1010	8	<5	54	0.22	<10	<10	125	<5	54	--	--
L0 08+25S	3.07	0.2	<5	40	<0.5	<2	0.33	<0.5	9	19	11	4.22	<10	0.04	10	0.44	838	<1	0.01	6	880	12	<5	87	0.23	<10	10	108	<5	56	--	--
L0 08+50S	4.23	0.2	<5	50	<0.5	<2	0.67	<0.5	15	29	28	4.80	<10	0.06	10	0.71	708	<1	0.01	12	1210	12	<5	65	0.22	<10	10	110	<5	36	--	--
L0 08+75S	2.62	0.2	<5	60	<0.5	<2	0.53	<0.5	7	25	12	3.31	<10	0.04	10	0.53	365	<1	0.01	8	600	8	<5	57	0.22	<10	<10	98	<5	54	--	--
L0 09+00S	2.76	0.2	5	60	<0.5	<2	0.61	<0.5	5	25	12	3.28	<10	0.04	10	0.42	224	<1	0.01	8	680	10	<5	56	0.21	<10	<10	90	<5	56	--	--
L0 09+25S	5.16	0.2	<5	70	<0.5	<2	0.55	<0.5	15	48	58	4.21	<10	0.09	10	0.92	525	<1	0.01	21	1060	4	<5	60	0.25	<10	<10	106	<5	84	--	--
L0 09+50S	1.47	0.2	<5	70	<0.5	<2	0.86	<0.5	12	45	31	4.28	<10	0.08	10	0.59	542	<1	0.01	22	1260	2	<5	44	0.22	<10	<10	120	<5	38	--	--
L0 09+75S	2.21	0.2	<5	60	<0.5	<2	0.61	<0.5	6	22	2	3.20	10	0.04	10	0.22	247	<1	0.01	8	620	6	<5	55	0.19	<10	<10	96	<5	34	--	--

Certified by ... Heath Rossbacher

RECEIVED NOV 2 6 1986

Chemex Labs Ltd.

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (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. # : A8620589-002-A
INVOICE # : I8620589
DATE : 25-NOV-86
P.O. # : NONE
V153

Semi quantitative multi element ICP analysis

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

COMMENTS :
ATTN: P. ROSSBACHER

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L0 10+00S	3.52	0.2	10	60	<0.5	<2	0.94	<0.5	19	57	66	4.13	<10	0.13	50	1.45	1011	<1	0.02	26	1390	10	<5	63	0.21	<10	<10	104	<5	92	--	--
L0 10+25S	3.91	0.2	10	80	<0.5	<2	1.02	<0.5	22	59	76	4.59	<10	0.15	30	1.55	1156	<1	0.02	27	1560	12	<5	70	0.24	<10	<10	116	<5	112	--	--
L0 10+50S	4.92	0.2	25	70	<0.5	<2	0.41	<0.5	38	71	118	6.47	<10	0.09	30	1.20	1977	<1	0.01	43	1310	20	<5	30	0.12	<10	<10	111	<5	292	--	--
L0 10+75S	3.56	0.2	5	70	<0.5	<2	0.96	<0.5	23	56	67	4.75	<10	0.10	40	1.50	1344	<1	0.02	27	1390	14	<5	65	0.23	<10	<10	113	<5	120	--	--
L0 11+00S	3.12	0.2	10	70	<0.5	<2	0.88	<0.5	19	50	59	4.00	<10	0.08	50	1.38	1214	<1	0.02	23	1280	14	<5	58	0.23	<10	<10	101	<5	90	--	--
L0 11+25S	3.03	0.2	20	60	<0.5	<2	0.90	<0.5	21	48	60	4.17	<10	0.11	10	1.41	1001	<1	0.02	24	1200	10	<5	61	0.24	<10	<10	105	<5	80	--	--
L0 11+50S	4.37	0.2	5	70	<0.5	<2	0.79	<0.5	22	53	50	5.26	<10	0.09	10	1.23	784	<1	0.01	25	530	12	<5	43	0.21	<10	<10	114	<5	78	--	--
L0 11+75S	3.75	0.2	<5	40	<0.5	<2	0.56	<0.5	19	33	67	3.87	<10	0.07	10	0.87	827	<1	0.01	17	1010	6	<5	33	0.15	<10	<10	79	<5	56	--	--
L0 12+25S	3.27	0.2	<5	40	<0.5	<2	0.42	<0.5	11	33	22	3.96	<10	0.04	10	0.67	320	<1	<0.01	13	580	8	<5	30	0.13	<10	<10	87	<5	56	--	--
L0 12+50S	3.30	0.2	10	50	<0.5	<2	0.49	<0.5	17	35	43	3.89	<10	0.04	10	0.85	894	<1	<0.01	19	730	8	<5	22	0.13	<10	<10	80	<5	64	--	--
L0 12+75S	3.24	0.2	5	40	<0.5	<2	0.50	<0.5	13	35	27	3.89	<10	0.05	10	0.64	592	<1	0.01	14	720	6	<5	43	0.17	<10	<10	95	<5	66	--	--
L0 13+00S	1.99	0.2	<5	50	<0.5	<2	0.44	<0.5	9	31	7	3.00	<10	0.03	<10	0.63	943	<1	0.01	11	420	8	<5	27	0.17	<10	<10	91	<5	62	--	--
L0 13+25S	3.44	0.2	<5	60	<0.5	<2	0.41	<0.5	14	43	39	3.77	<10	0.04	<10	0.90	818	<1	0.01	18	1140	8	<5	30	0.18	<10	<10	97	<5	74	--	--
L0 13+50S	3.03	0.2	<5	70	<0.5	<2	0.34	<0.5	25	52	37	4.69	<10	0.05	10	0.88	1781	<1	0.01	16	2010	12	<5	25	0.15	<10	<10	112	<5	92	--	--
L0 13+75S	3.71	0.2	5	50	<0.5	<2	0.28	<0.5	15	40	13	4.44	<10	0.05	10	0.97	606	<1	0.01	14	420	8	<5	27	0.20	<10	<10	130	<5	74	--	--
L0 14+00S	4.62	0.2	5	50	<0.5	<2	0.48	<0.5	21	62	55	4.75	<10	0.08	10	1.15	648	<1	0.01	21	630	4	<5	28	0.21	<10	<10	112	<5	70	--	--
L0 14+25S	4.79	0.2	<5	70	<0.5	<2	0.75	<0.5	27	95	56	5.57	<10	0.09	10	1.48	1449	<1	0.02	28	550	2	<5	36	0.26	<10	<10	142	<5	34	--	--
L0 14+50S	2.96	0.2	<5	60	<0.5	<2	0.56	<0.5	22	66	19	4.63	<10	0.06	10	1.44	1382	<1	0.01	18	710	6	<5	34	0.28	<10	<10	119	<5	78	--	--
L0 14+75S	3.22	0.2	5	60	<0.5	<2	0.61	<0.5	22	56	32	4.53	<10	0.08	10	1.11	2111	<1	0.01	19	950	8	<5	30	0.24	<10	<10	108	<5	74	--	--
12W 00+00	3.47	0.2	10	40	<0.5	<2	0.36	<0.5	11	24	29	2.97	<10	0.03	10	0.75	641	<1	<0.01	16	980	4	<5	10	0.08	<10	<10	64	<5	54	--	--
12W 00+25S	1.70	0.4	<5	10	<0.5	<2	0.36	0.5	4	16	18	1.97	<10	0.03	<10	0.23	645	<1	<0.01	7	360	6	<5	21	0.16	<10	<10	61	<5	50	--	--
12W 00+50S	1.08	0.2	<5	20	<0.5	<2	0.22	<0.5	3	10	4	1.54	<10	0.02	<10	0.14	238	<1	<0.01	5	280	2	<5	14	0.07	<10	<10	46	<5	42	--	--
12W 00+75S	1.37	0.2	15	250	<0.5	<2	0.51	0.5	1	2	7	0.47	<10	0.04	<10	0.05	147	<1	<0.01	3	770	16	<5	20	0.02	<10	<10	12	<5	54	--	--
12W 01+00S	0.43	0.2	<5	20	<0.5	<2	0.44	<0.5	<1	8	<1	1.24	<10	0.01	<10	0.04	160	<1	<0.01	2	150	<2	<5	14	0.10	<10	<10	52	<5	16	--	--
12W 01+25S	3.65	0.2	5	80	<0.5	<2	0.33	<0.5	9	25	26	3.36	<10	0.03	10	0.54	702	<1	<0.01	12	760	10	<5	26	0.15	<10	<10	80	<5	52	--	--
12W 01+50S	2.07	0.2	<5	50	<0.5	<2	0.30	<0.5	5	16	19	2.45	<10	0.02	<10	0.20	431	<1	<0.01	5	450	6	<5	28	0.11	<10	<10	67	<5	62	--	--
12W 01+75S	5.34	0.2	5	50	1.0	<2	1.16	<0.5	3	15	17	3.60	<10	0.02	60	0.16	99	<1	<0.01	5	2230	4	<5	15	0.22	<10	<10	17	<5	32	--	--
12W 02+00S	3.73	0.2	<5	40	<0.5	<2	0.40	0.5	5	21	13	2.70	<10	0.02	<10	0.26	326	<1	<0.01	8	370	6	<5	19	0.12	<10	<10	70	<5	44	--	--
12W 02+25S	2.54	0.2	<5	30	<0.5	<2	0.27	<0.5	7	20	25	2.66	<10	0.02	10	0.41	519	<1	<0.01	10	270	8	<5	15	0.11	<10	<10	55	<5	42	--	--
12W 02+50S	0.77	0.2	<5	10	<0.5	<2	0.12	<0.5	<1	6	<1	1.27	<10	0.01	<10	0.05	41		<1		130	2	<5	3	0.06	<10	<10	53	<5	8	--	--
12W 02+75S	2.26	0.4	<5	50	<0.5	<2	0.28	<0.5	5	9	21	1.65	<10	0.04	10	0.10	299	<1	<0.01	6	1110	10	<5	29	0.05	<10	<10	22	<5	44	--	--
12W 03+00S	2.65	0.2	10	70	<0.5	<2	0.42	<0.5	10	24	28	2.97	<10	0.05	10	0.56	1124	<1	0.01	16	620	8	<5	27	0.14	<10	<10	75	<5	72	--	--
12W 03+25S	3.10	0.2	5	70	<0.5	<2	0.38	<0.5	7	21	17	3.28	<10	0.04	10	0.37	670	<1	0.01	12	1240	8	<5	27	0.14	<10	<10	78	<5	72	--	--
12W 03+50S	3.07	0.2	10	70	<0.5	<2	0.30	<0.5	7	22	17	3.45	<10	0.05	10	0.33	371	<1	0.01	10	350	8	<5	26	0.14	<10	<10	95	<5	58	--	--
12W 03+75S	1.48	0.2	<5	30	<0.5	<2	0.28	<0.5	4	12	9	2.84	<10	0.01	10	0.20	155	<1	0.01	7	260	8	<5	16	0.15	<10	<10	59	<5	58	--	--
12W 04+00S	1.03	0.2	<5	20	<0.5	<2	0.21	<0.5	2	12	<1	2.09	<10	0.01	<10	0.16	101	<1	<0.01	4	180	2	<5	9	0.15	<10	<10	71	<5	30	--	--
12W 04+25S	2.78	0.2	5	30	<0.5	<2	0.31	<0.5	5	25	12	3.66	<10	0.02	10	0.50	244	<1	<0.01	10	480	4	<5	12	0.17	<10	<10	64	<5	58	--	--
12W 04+50S	1.15	0.2	<5	20	<0.5	<2	0.22	<0.5	2	14	3	2.49	<10	0.01	<10	0.15	85	<1	<0.01	5	260	10	<5	13	0.12	<10	<10	76	<5	24	--	--
12W 04+75S	2.11	0.2	<5	30	<0.5	<2	0.33	<0.5	4	21	20	2.84	<10	0.01	10	0.47	222	<1	<0.01	13	390	10	<5	12	0.14	<10	<10	89	<5	46	--	--
12W 05+00S	2.24	0.2	<5	30	<0.5	<2	0.34	<0.5	5	17	19	3.07	<10	0.01	10	0.65	228	<1	<0.01	10	560	10	<5	6	0.11	<10	<10	75	<5	22	--	--

Certified By: Hans Bachler

RECEIVED NOV 2 6 1986

V03 rev: 11/85

Chemex Labs Ltd.

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

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

*Analytical Chemists *Geochemists *Registered Assayers

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2025 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3N1

CERT. # : A8620589-003-A
INVOICE # : I8620589
DATE : 25-NOV-86
P.O. # : NONE
V153

Semi quantitative multi element ICP analysis

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

COMMENTS :
ATTN: P. ROSSBACHER

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L2W 05+25S	1.11	0.2	<5	10	<0.5	<2	0.22	<0.5	2	11	2	1.91	<10	0.01	<10	0.18	119	<1	<0.01	4	250	2	<5	17	0.11	<10	<10	63	<5	28	--	--
L2W 05+50S	3.25	0.2	5	30	<0.5	<2	0.25	<0.5	11	20	16	2.83	<10	0.01	10	0.38	386	<1	<0.01	17	450	6	<5	15	0.15	<10	<10	58	<5	80	--	--
L2W 05+75S	2.52	0.2	10	40	<0.5	<2	0.32	<0.5	7	22	15	2.90	<10	0.02	<10	0.47	321	<1	<0.01	11	570	8	<5	26	0.16	<10	<10	73	<5	52	--	--
L2W 06+00S	2.12	0.2	<5	30	<0.5	<2	0.28	<0.5	5	19	11	3.02	<10	0.02	<10	0.35	295	<1	<0.01	7	510	8	<5	20	0.18	<10	<10	76	<5	50	--	--
L2W 06+25S	3.68	0.2	<5	40	<0.5	<2	0.40	<0.5	13	60	22	4.95	<10	0.02	10	0.80	334	<1	<0.01	18	590	6	<5	45	0.30	<10	<10	129	<5	50	--	--
L2W 06+50S	2.42	0.2	5	60	<0.5	<2	0.87	<0.5	21	47	47	4.26	<10	0.09	10	1.50	833	<1	0.02	26	1100	4	<5	59	0.21	<10	<10	93	<5	84	--	--
L2W 06+75S	0.21	0.6	<5	50	<0.5	<2	0.39	<0.5	1	5	11	0.23	<10	0.03	<10	0.11	67	<1	<0.01	4	650	10	<5	26	0.01	<10	<10	7	<5	36	--	--
L2W 07+00S	2.70	0.2	<5	80	<0.5	<2	0.72	<0.5	23	50	63	4.11	<10	0.06	10	1.33	907	<1	0.01	24	950	4	<5	40	0.17	<10	<10	82	<5	64	--	--
L2W 07+25S	3.71	0.2	5	50	<0.5	<2	0.48	<0.5	17	35	66	3.99	<10	0.07	10	1.03	704	<1	0.01	16	1420	14	<5	36	0.19	<10	<10	87	<5	32	--	--
L2W 07+50S	3.70	0.2	<5	30	<0.5	<2	0.32	<0.5	18	45	68	4.13	<10	0.04	10	1.28	519	<1	<0.01	23	670	8	<5	35	0.26	<10	<10	93	<5	72	--	--
L2W 07+75S	1.17	0.2	<5	60	<0.5	<2	0.28	<0.5	3	13	12	2.30	<10	0.02	<10	0.22	194	<1	<0.01	4	1150	6	<5	41	0.11	<10	<10	50	<5	66	--	--
L2W 08+00S	2.80	0.2	<5	40	<0.5	<2	0.23	<0.5	9	21	26	3.45	<10	0.03	<10	0.46	622	<1	<0.01	9	970	10	<5	27	0.19	<10	<10	82	<5	48	--	--
L2W 08+25S	5.53	0.2	<5	30	<0.5	<2	0.14	<0.5	7	23	39	3.12	<10	0.02	<10	0.33	248	<1	<0.01	9	1190	2	<5	13	0.13	<10	<10	63	<5	48	--	--
L2W 08+50S	0.46	0.2	<5	160	<0.5	<2	0.37	<0.5	1	6	6	0.71	<10	0.02	<10	0.07	443	<1	0.01	4	340	12	<5	30	0.06	<10	<10	27	<5	36	--	--
L2W 08+75S	2.26	0.2	<5	30	<0.5	<2	0.25	<0.5	5	17	7	2.90	<10	0.02	<10	0.27	204	<1	<0.01	7	660	8	<5	21	0.19	<10	<10	76	<5	48	--	--
L2W 09+00S	2.68	0.4	<5	50	<0.5	<2	0.26	<0.5	8	23	19	3.25	<10	0.02	<10	0.49	412	<1	0.01	9	640	10	<5	20	0.15	<10	<10	82	<5	56	--	--
L2W 09+25S	2.75	0.2	<5	40	<0.5	<2	0.33	<0.5	9	27	29	3.27	<10	0.03	<10	0.59	558	<1	<0.01	12	1000	10	<5	20	0.16	<10	<10	70	<5	48	--	--
L2W 09+50S	2.39	0.2	5	50	<0.5	<2	0.27	<0.5	9	25	36	2.68	<10	0.04	<10	0.68	434	<1	<0.01	13	1180	10	<5	17	0.11	<10	<10	58	<5	44	--	--
L2W 09+75S	1.99	0.2	5	40	<0.5	<2	0.24	<0.5	7	22	20	2.84	<10	0.03	<10	0.48	507	<1	<0.01	9	1010	10	<5	17	0.11	<10	<10	65	<5	42	--	--
L2W 10+00S	1.68	0.2	<5	20	<0.5	<2	0.20	<0.5	4	17	12	2.57	<10	0.01	<10	0.27	252	<1	<0.01	6	690	4	<5	18	0.15	<10	<10	71	<5	32	--	--
L2W 10+25S	1.65	0.2	<5	20	<0.5	<2	0.27	<0.5	4	17	3	2.72	<10	0.03	<10	0.28	406	<1	<0.01	5	450	10	<5	29	0.21	<10	<10	96	<5	38	--	--
L2W 10+50S	0.94	0.2	<5	20	<0.5	<2	0.29	<0.5	2	10	2	2.15	<10	0.01	<10	0.14	182	<1	<0.01	2	190	4	<5	30	0.17	<10	<10	77	<5	30	--	--
L2W 10+75S	1.28	0.2	<5	20	<0.5	<2	0.25	<0.5	3	18	3	3.28	<10	0.01	<10	0.22	218	<1	<0.01	4	250	4	<5	24	0.19	<10	<10	107	<5	26	--	--
L2W 11+00S	0.56	0.2	<5	60	<0.5	<2	0.35	<0.5	2	10	1	1.65	<10	0.01	<10	0.08	298	<1	<0.01	4	180	6	<5	27	0.10	<10	<10	61	<5	20	--	--
L2W 11+25S	1.42	0.2	<5	30	<0.5	<2	0.22	<0.5	4	15	2	3.30	<10	0.02	<10	0.23	277	<1	<0.01	6	580	10	<5	28	0.29	<10	<10	111	<5	38	--	--
L2W 11+50S	5.05	0.2	5	40	<0.5	<2	0.25	<0.5	15	27	46	4.45	<10	0.02	<10	0.74	735	1	<0.01	15	980	6	<5	24	0.25	<10	<10	100	<5	74	--	--
L2W 11+75S	1.72	0.2	<5	50	<0.5	<2	0.42	<0.5	4	16	10	2.60	<10	0.04	<10	0.26	486	<1	<0.01	5	380	12	<5	23	0.13	<10	<10	82	<5	44	--	--
L2W 12+00S	1.89	0.2	<5	60	<0.5	<2	0.34	<0.5	5	16	10	2.50	<10	0.04	<10	0.29	457	<1	<0.01	7	600	10	<5	29	0.12	<10	<10	64	<5	42	--	--

Certified by ... David Bickler

V02 rev 11 85

RECEIVED NOV 2 6 1986

Appendix IV

SUMMARY LIST OF LITHOLOGIES

AT STATIONS 1-36

SUMMARY LIST OF LITHOLOGIES AT STATIONS 1-36

SICKER 1 CLAIM

Station No.	Description
1.	Medium-bedded, meta-argillaceous? or tuffaceous?, graphitic chert: weakly magnetic; 2-5%, disseminated pyrrhotite?; 1-2% disseminated pyrite. Sample 9851.
2.	Meta-graphitic, argillaceous? chert or cherty argillite: 5-10% disseminated pyrite; sample 9852. 8x60 cm(+) fracture zone with 10-25% fracture-pyrite; sample 9853.
3.	Meta-argillaceous?, graphitic chert: 3-5%, disseminated pyrite. Sample 9854.
4.	Meta-graphitic, cherty argillite or argillaceous chert: 2-4% disseminated pyrite.
5.	Ankerite?-altered, meta-cherty? argillite?: 1-2% disseminated pyrite; trace disseminated and fracture-chalcopyrite; minor graphitic? fractures. Sample 9855.
6.	Meta-(argillaceous?) chert: approximately 1-2% disseminated pyrite; abundant fracture-pyrite. Sample 9856.
7.	Hornblende, (feldspar) porphyritic, (amygdaloidal), metavitric and/or very finely crystalline andesite: 1%, disseminated pyrite; weakly magnetic; Tertiary? intrusive; in sheared contact with meta-chert similar to #6.
8.	Meta-chert: very dark purple-red-brown-grey; 3-5%, disseminated pyrite.

SICKER 2 CLAIM

9.	Pyritic, ankerite?-sericite-altered basalt?: 4-7%, disseminated and 1% fracture and stringer pyrite; very weakly schistose. Sample 9857.
10.	Pyritic, ankerite?-sericite-altered basalt?: 5-10%, disseminated pyrite and 2-3%, fracture-pyrite; weak schistosity. Sample 9858.
11.	Pyritic, ankerite?-sericite-altered, (feldspar? porphyritic) basalt?: 3-5%, disseminated pyrite; 1-3% fracture and stringer pyrite; strongly sheared or weakly schistose. Sample 9859.

12. Diabasic-appearing basalt: strongly magnetic; 2-3%, disseminated magnetite; minor to 1-2%, uralite?-altered hornblende; trace to 0.5%, disseminated chalcopyrite; minor to 0.5%, disseminated pyrite. Sample 9860.

13. Pyritic, ankeritic?, sericitic schist: strong (to weak) schistosity; 5-10%, disseminated pyrite; few percent fracture and stringer pyrite; possibly originally (hornblende, feldspar porphyritic), feldspar microporphyritic, metavitric basalt?; 2 cm(+) with 2-3%, quartz grains to 2 mm diameter. Sample 9861. At east end, 3 m of diabasic-appearing basalt.

14. (Feldspar porphyritic), very finely crystalline basalt to (feldspar porphyritic), feldspar microporphyritic, metavitric basalt: weakly to moderately schistose; locally moderately magnetic.

15. Diabasic-appearing basalt to (feldspar, hornblende porphyritic), feldspar microporphyritic, metavitric basalt: strongly magnetic; trace to minor (to 1%?) disseminated chalcopyrite. Sample 9862.

16. Diabasic-appearing basalt: weakly to moderately schistose; moderately magnetic.

17. (Pyritic), ankeritic?, sericitic schist: 3-6%, disseminated and fracture pyrite; strong schistosity; resembles weathered version of #13. Sample 9863. 0-3.5 cm thick, veinlet of massive, vuggy, hematite? (weathered magnetite?). Sample 9864.

18. Diabasic-appearing basalt: massive; moderately to strongly magnetic; minor to 0.5% disseminated chalcopyrite; 2-4%, disseminated magnetite; 0.5-2%, crisscrossing, ankerite? + calcite (+ quartz) veinlets.

19. Hornblende, (feldspar) porphyritic to (feldspar, hornblende porphyritic), feldspar, hornblende microporphyritic), metavitric basalt: very strongly saussurite-altered.

20. Basalt: weakly (to moderately) magnetic; finely crystalline; very strongly epidote-(sericite-chlorite-) altered; 2-3%, disseminated pyrite; trace disseminated chalcopyrite; abundant calcite-filled fractures.

21. Basalt: strongly saussurite-altered, strongly magnetic, finely crystalline; 2-3%, disseminated magnetite; few percent disseminated pyrite; trace, disseminated chalcopyrite.

22. Weakly ankerite?-altered, finely crystalline, ((feldspar, hornblende porphyritic)) basalt: 1% (locally to 3-5%), disseminated pyrite, weakly sheared.

23. Basalt: finely crystalline, strongly magnetic; feldspars pumpellyite?-altered; sub-brittle; 2-3%, disseminated magnetite; 1-2%, disseminated pyrite.

24. Diabasic-appearing basalt: moderately to strongly magnetic.

25. Basalt: moderately to strongly magnetic, strongly fractured, (feldspar porphyritic), feldspar microporphyritic, quartz-(magnetite) bearing, basalt; 3- 10%, disseminated magnetite; no hornblende apparent.

26. Meta-argillaceous? or tuffaceous? chert to cherty argillite: Buttle Lake Formation; 2-4%, disseminated pyrite, locally weakly magnetic; appears massive. Sample 9865.

27. Massive? Chert: very light, creamy tan.

28. Basalt: moderately to strongly magnetic; ((feldspar porphyritic)), (amygdaloidal), very finely crystalline; no mafics apparent; 1-3%, very, very fine, disseminated magnetite; minor disseminated pyrite; western contact parallel to bedding in chert.

29. Medium-thin to medium bedded chert: creamy, very light buff-grey to very light tan. One 60 cm thick bed of black, graphitic? chert or cherty argillite with 2-3%, disseminated pyrite and few percent, fracture pyrite. One 25 cm thick, sill? of feldspar-hornblende granodiorite? with 2-4%, disseminated pyrite and 7%, hornblende blades. 95 cm thick interval of cherty?; crinoidal limestone with few white chert interbeds to 4 cm thick. 4 m and 7 m to west of first limestone, 35 and 95 cm thick intervals of cherty, crinoidal limestone with to 25-30%, crinoid fragments. One 2.5 m wide, interval of granodiorite? with 3-4%, disseminated pyrite: sample 9866; succeeded to west by 80 cm(+) of "chert-breccia" or chert lapilli basaltic crystal tuff with about 2-3%, disseminated pyrite: sample 9867. At 35 m and 37 m west of first limestone, 40 cm and 1.4 m thick intervals of limestone to marble. At 50 to 54 m west of first limestone, complex, interbedded succession of bedded, white chert, marble and cherty? marble with thin interbeds and large nodules of white chert. Contact with #30: 3 m of very strongly fractured chert and 3 m of deeply weathered, "sandy" intrusive.

30. Granodiorite? to diorite?: Island Intrusion; moderately to strongly sheared and fractured; grades from east to west from mafic-poor, very strongly saussuritic granodiorite? into medium crystalline, very strongly saussuritic, strongly magnetic, feldspar-hornblende-diorite? with 0.5% disseminated pyrite and 5-8%, hematite-stained feldspar crystals, into dark grey, medium crystalline, strongly magnetic, diorite or diabase with 1-2%, disseminated pyrite and 10-12% hornblende. Diorite? with strongly sheared, lenses to 1 m+ wide of more mafic rock that could be basaltic dykes or very large xenoliths. Contact with #31 sharp but irregular.

31. Basalt of Karmutsen Formation: strongly shattered and generally deeply weathered, near black, strongly magnetic, hornblende, (feldspar) porphyritic, very finely crystalline; few percent disseminated magnetite; minor disseminated pyrite; 1% fracture-pyrite; grades westward into basalt with 2% disseminated, and 1-2% fracture pyrite. Contact with #32 at 30-40 cm thick shear zone.

32. Tertiary? andesite? intrusive: 9 m wide; very strongly saussuritic, weakly to moderately magnetic, feldspar, hornblende porphyritic, metavitric or very finely crystalline; medium grey-buff, minor disseminated chalcopyrite.

33. Basalt of Karmutsen Formation: near black, strongly magnetic, very finely to finely crystalline with intervals of (hornblende, feldspar porphyritic), very finely crystalline basalt; 3-5% disseminated magnetite; 1-3%, disseminated pyrite; 1-2% fracture-pyrite; cut by few percent dykes and wedge-shaped intrusions of strongly magnetic, granodiorite? of Island Intrusions.

34. Tertiary? andesite? dyke: (feldspar porphyritic, feldspar microporphyritic), metavitric andesite?: sub-translucent to sub-opaque, medium to light buff, weakly to strongly saussuritic; minor disseminated pyrite.

35. Basalt of Karmutsen Formation: resembles #31 and 33.

36. Granodiorite? of Island Intrusions: strongly magnetic, medium to coarsely crystalline.

Appendix V

ABBREVIATIONS USED IN

MINERAL OCCURRENCES REFERENCES

ABBREVIATIONS USED IN MINERAL OCCURRENCES REFERENCES

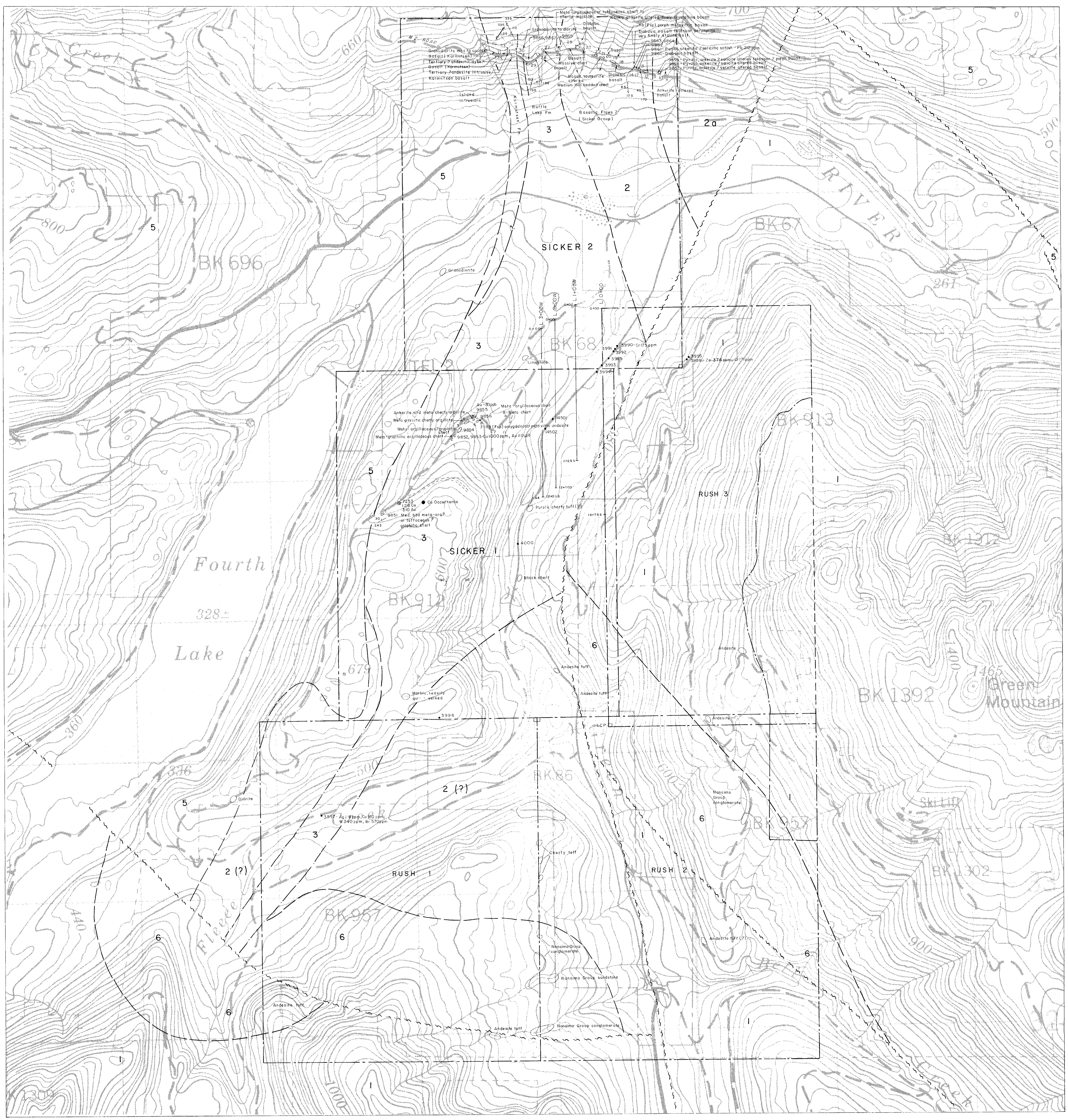
AR	B.C. Ministry of Energy, Mines, and Petroleum Resources Assessment Report
BCDM	British Columbia Department of Mines
Bull	Bulletin
EBC	Exploration in British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources
GEM	Geology, Exploration and Mining in British Columbia; B.C. Department of Mines and Petroleum Resources
GSC	Geological Survey of Canada
Gunnex	Mineral Occurrences, E&N Land Grant, Vancouver Island, B.C.; Gunnex Ltd., 1966
Minfile	B.C. Ministry of Energy, Mines and Petroleum Resources Minfile, Feb. 2, 1984
MMAR	B.C. Ministry of Mines Annual Report
P	Paper
TML	Today's Market Line
VS	Vancouver Stockwatch

Appendix VI

METRIC CONVERSION UNITS

Conversion Factors for Metric Units

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



LOCATION MAP

LEGEND

GEOLOGY (Benvenuto, 1985).

TERTIARY

7	Andesitic Intrusives : strongly saussurite altered, moderately magnetic, feldspar hornblende porphyritic, metavitric, finely crystalline.

UPPER CRETACEOUS

6	NANAIMO GROUP Undifferentiated conglomerate, sandstone, siltstone, shale.

JURASSIC

5	ISLAND INTRUSIONS Diorite, Quartz Diorite, Granodiorite.

MIDDLE AND UPPER TRIASSIC

4	VANCOUVER GROUP KARMUTSEN FORMATION Massive basaltic flows, tuff, breccia; some pillowed flows. (Basalts integrade between predominantly fine to very finely crystalline basalt and lesser hornblende,(feldspar) porphyritic very finely crystalline basalt).

UPPER PALEOZOIC

SICKER GROUP

PENNSYLVANIAN AND PERMIAN

3	BUTTLE LAKE FORMATION Limestone, marble, interbedded chert, argillite. (Up to 255 m thick) Westerly dipping succession of predominantly medium - thin to medium bedded whitish chert with lesser intervals of cherty ? crinoidal marble, and one interval of "chert breccia" with 2 - 3 % disseminated pyrite. Base of formation consists of meta - argillaceous graphitic chert to cherty, graphitic argillite that resembles metachert exposed on North - central Sicker 1 claim.

PENNSYLVANIAN AND MISSISSIPPIAN

2	Basaltic to Diabasic Flows or Intrusions (>650 m width). Basalts resembling "sills" in "sill sediment unit" (Muller). Strongly magnetic locally weak to moderate schistosity. Contains interval of weakly ankerite ? altered basalt and intervals of (pyritic) ankerite ? - altered, sericitic schist derived from basalt.
2a	Pyritic, ankerite - altered sericite schist derived from basalt.

LOWER DEVONIAN AND OLDER

1	NITINAT FORMATION Pillow lava and breccia of augite (uralite) porphyry, basic tuff; minor chlorite actinolite schist.

SYMBOLS

Claim line with Legal Corner Post.

Geologic contact (position approximate, assumed).

Fault (position approximate).

• 3996 Rock sample location and number. 9851 - 9867 (G.B. 1985) 3989 - 4000, 14501, 14502 (1986 NDRK).

22 Station locations (1985) see appendix for complete descriptions.

Outcrop

Bedding, foliation

30 Dyke contact orientation

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,452

PROFESSIONAL GEOLOGIST ALBERTA
T.E. Gregory Hawkins
LICENSED TO PRACTICE

To accompany Report by T.E. Gregory Hawkins, P.Geol, dated JAN. 20 1987

0 500 1000 metres

ROAP RESOURCES INC.

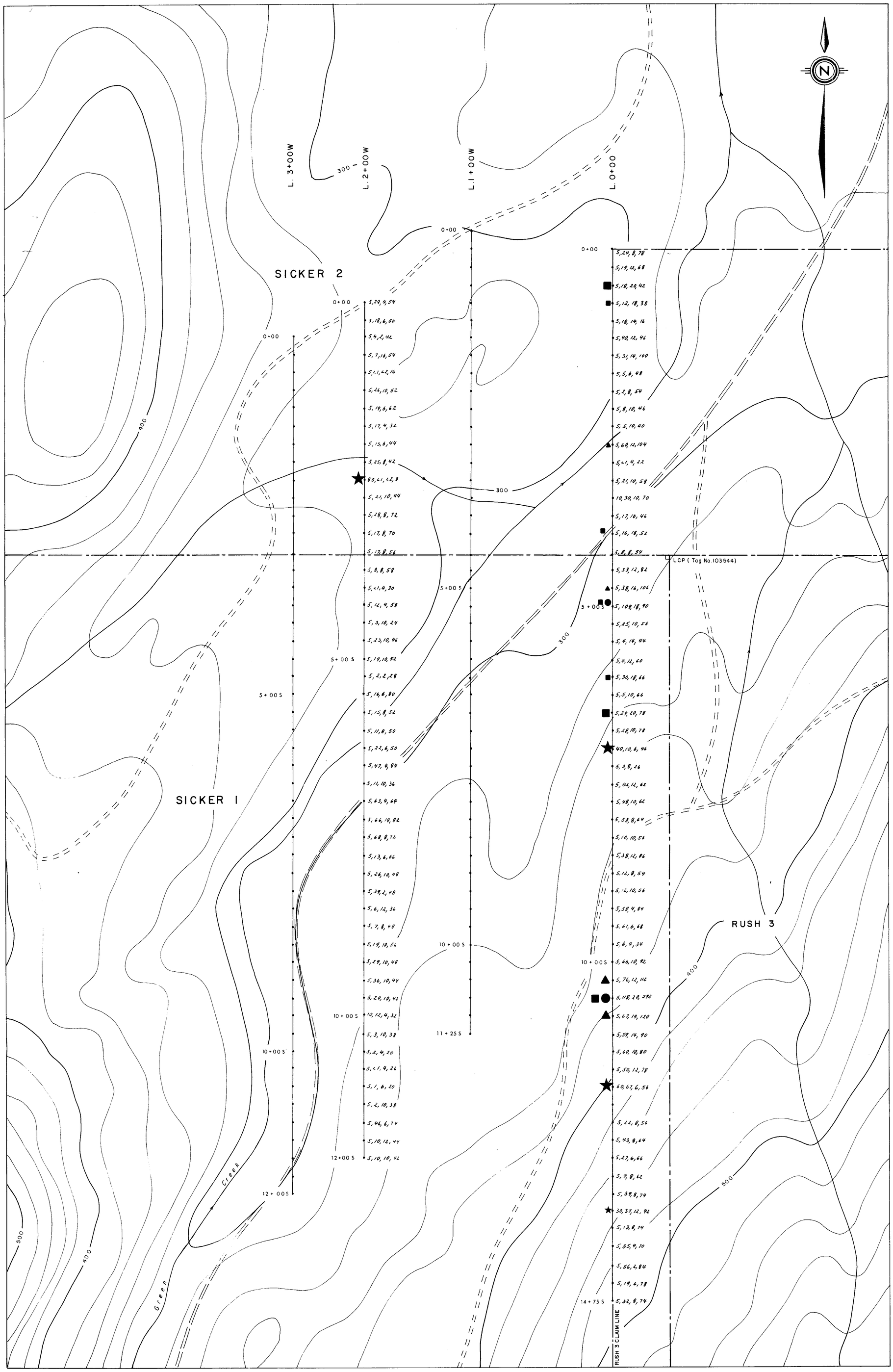
PROPERTY PLAN, GEOLOGY AND ROCK SAMPLING

FOURTH GROUP (SICKER 1,2 CLAIMS)

NANAIMO MINING DIVISION

Project No:	V 254	By:	B.T., G.B.
Scale:	1 : 10000	Drawn:	J.S.
Drawing No:	5	Date:	JANUARY 1987.

MPH Consulting Limited



LEGEND

Au,Cu,Pb,Zn
5,59,14,90 — Soil sample grid, location and results, Au ppb, Cu ppm, Pb ppm, Zn ppm.

□ LCP — Legal Corner Post

Claim line

Road

Stream, creek

	Au	Cu	Pb	Zn
Range	5 - 80 ppb	1 - 118 ppm	< 2 - 20 ppm	8 - 292 ppm
Anomalous	★ > 30 ppb	● > 110 ppm	■ 20 ppm	▲ ≥ 112 ppm
High background	★ > 20 ppb	● > 100 ppm	■ 18 ppm	▲ > 102 ppm

PROFESSIONAL GEOLOGIST ALBERTA
T.E. Gregory Hawkins
LICENSED TO PRACTISE

0 100 200 metres

To accompany Report by T.E. Gregory Hawkins, P.Geol. dated JAN. 20 1987

Topographical contour interval 20m.

ROAP RESOURCES INC.

SOIL GEOCHEMICAL CONCENTRATIONS (Au, Cu, Pb, Zn)
FOURTH GROUP (SICKER 1,2 CLAIMS)

NANAIMO MINING DIVISION

Project No:	V 254	By:	H.E., B.T.
Scale:	1 : 2500	Drawn:	J. S.
Drawing No:	6	Date:	JANUARY 1987.

MPH Consulting Limited