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MPH

REPORT ON 85-792 —
PHASE I GEOLOGICAL, GEOCHEMICAL
AND GEOPHYSICAL EXPLORATION
OF THE
KING SOLOMON PROPERTY 10/86
VICTORIA MINING DIVISION, B.C.
NTS 92B/12 48°41.5'N LAT. 123°41.8'W LONG.
FOR
REWARD RESOURCES LTD.
OCTOBER 18, 1985

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

SUMMARY

Phase I exploration of the Reward Resources Ltd. King Solomon property has been completed.

The King Solomon property is underlain by a complex, poorly resolved, faulted succession that spans the upper part of the Paleozoic Sicker Group. The succession from oldest to youngest includes:

1) the upper part of the Myra Formation, consisting of bedded cherts and cherty basaltic tuffs;
2) the "Flow-Sediment" Unit, a complexly interlayered and intergradational series of basaltic tuffs, flow breccias, and flows with abundant intervals of bedded basaltic tuff, cherty tuff, and basaltic chert;
3) the Buttle Lake Formation, composed in the western part of the property mainly of bedded chert with lesser cherty tuff interbedded with limestone, and in the east of limestone with some bedded chert;
4) the uppermost part of the Flow-Sediment Unit, a poorly understood package of tholeiitic basaltic flows and minor bedded cherty tuff and chert.

The Sicker Group rocks are intruded by numerous dykes of feldspar-(-hornblende) porphyritic dacite and closely associated pyritic, feldspar porphyritic rhyolite bodies, as well as part of the granodioritic Koksilah stock. The Koksilah stock is of Jurassic age; the dacite and rhyolite may be late-stage offshoots of the stock, or may be entirely unrelated and of Tertiary age.

The Sicker Group rocks appear to be folded into a northerly plunging syncline with at least one repetition of the eastern limb by faulting and/or folding.

Mineralization on the King Solomon property was first discovered in 1886. Since then, at least six separate mineralized zones have been developed to various extents. The King Solomon Mine, Blue Bell Mine, and Viva Mine produced a recorded total of 993 tons of ore yielding 102,510 lb Cu (5.16%) and 352 oz Ag (0.51 oz/ton) between 1903 and 1916. In the late 1950's, at least 5000' of diamond drilling was carried out on the property, intersecting numerous mineralized zones including 11.9 feet of 7.83% Cu, 0.49 oz Ag/ton; 37 feet of 1.44% Cu; 51.5 feet of 0.97% Cu; and 12 feet of 4.1% Zn, 0.3 oz Ag/ton, 0.25% Cu.

Mineralization on the King Solomon property is contained in apparent "skarn" deposits consisting of fracture and fault controlled, massive to semi-massive pyrrhotite, magnetite, pyrite, chalcopyrite, and minor sphalerite in widely varying proportions. At least 8 showings/deposits occur over a strike length of about 3 km. The deposits appear to occur at, or near, the top or base of the Buttle Lake Formation, localized within areas of the formation that contain limestone interbeds and are cut by dykes and bodies of feldspar porphyritic dacite and pyritic rhyolite. It has been suggested that the deposits represent skarnified ± remobilized equivalents of pre-existing volcanogenic massive sulphide deposits.

Work carried out on the King Solomon property by MPH Consulting Limited in 1985 for Reward Resources Ltd., included geological mapping and sampling, soil sampling, and VLF-EM and magnetometer surveys. Rock sampling of the showings on the King Solomon property yielded results of up to 3.66% Cu and 0.7 oz Ag/ton over 2 m, verifying historical grades. Correlation of geophysical and/or soil geochemical anomalies is good with the Finlay shafts, Blue Bell Mine, and Swamp Showing, but poor with the King Solomon Mine, Viva Mine, and 2 Shafts Showing. Areas identified as worthy of further exploration include, amongst others, the Strip Showing, the Blue Bell Mine area, and two spatially associated pairs of VLF-EM conductors and magnetic anomalies.

Due to the complex ownership of mineral rights in the King Solomon area, a detailed study of the land status is recommended to be carried out prior to the initiation of Phase III exploration.

Phase III exploration work on the King Solomon property is recommended at an estimated cost of $140,000. Phase IIIA is to include an additional soil sampling, magnetometer, and VLF-EM grid over the Strip Showing and approximately 16 line km of induced polarization surveying, while Phase IIIB is to consist of 3000 feet of diamond drilling.

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REWARD RESOURCES LTD.

GENERAL LOCATION MAP

KING SOLOMON PROPERTY
VICTORIA MINING DIVISION

Project No:	V 155	By:	T. N.
Scale:	1 : 8 000 000	Drawn:	J. S.
Drawing No:	1	Date:	AUG. 1985

MPH Consulting Limited

1.0 INTRODUCTION

This report represents the compilation of Phase I exploration field work carried out by MPH Consulting Limited at the request of Reward Resources Ltd. on the King Solomon property from June 18 to July 22, 1985.

The Phase I program consisted of geological mapping, rock sampling, and prospecting covering the entire property, and soil sampling, VLF-EM, and magnetometer surveys carried out on a grid placed over the area of the old workings on the property.

The property was mapped at 1:5000 scale by Dr. G. Benvenuto. A total of 39 rock samples was collected, 31 of which were analyzed for Au and ICP and 10 of which were subjected to whole rock analysis. A total of 23.84 line km of grid lines was established with 90 m spacing between lines. A total of 375 soil samples was collected at 30 m intervals along every second grid line and analyzed for Cu, Ag, Zn. Geophysical measurements were taken every 15 m (locally, 30 m) along all grid lines.

Three days of fill-in soil sampling from August 14-16, 1985 yielded 95 soil samples collected at 30 m intervals, mainly from lines not previously sampled, as well as 2 rock samples which were analyzed for Au and ICP.

2.0 PROPERTY LOCATION, ACCESS, TITLE

The Reward Resources Ltd. King Solomon property is located between Humes Creek and Koksilah River, 10 km south of Duncan on NTS mapsheet 92B/12, centred at approximately 48°41.5'N latitude, 123°41.8'W longitude, in the Victoria Mining Division of British Columbia (Figures 1,2).

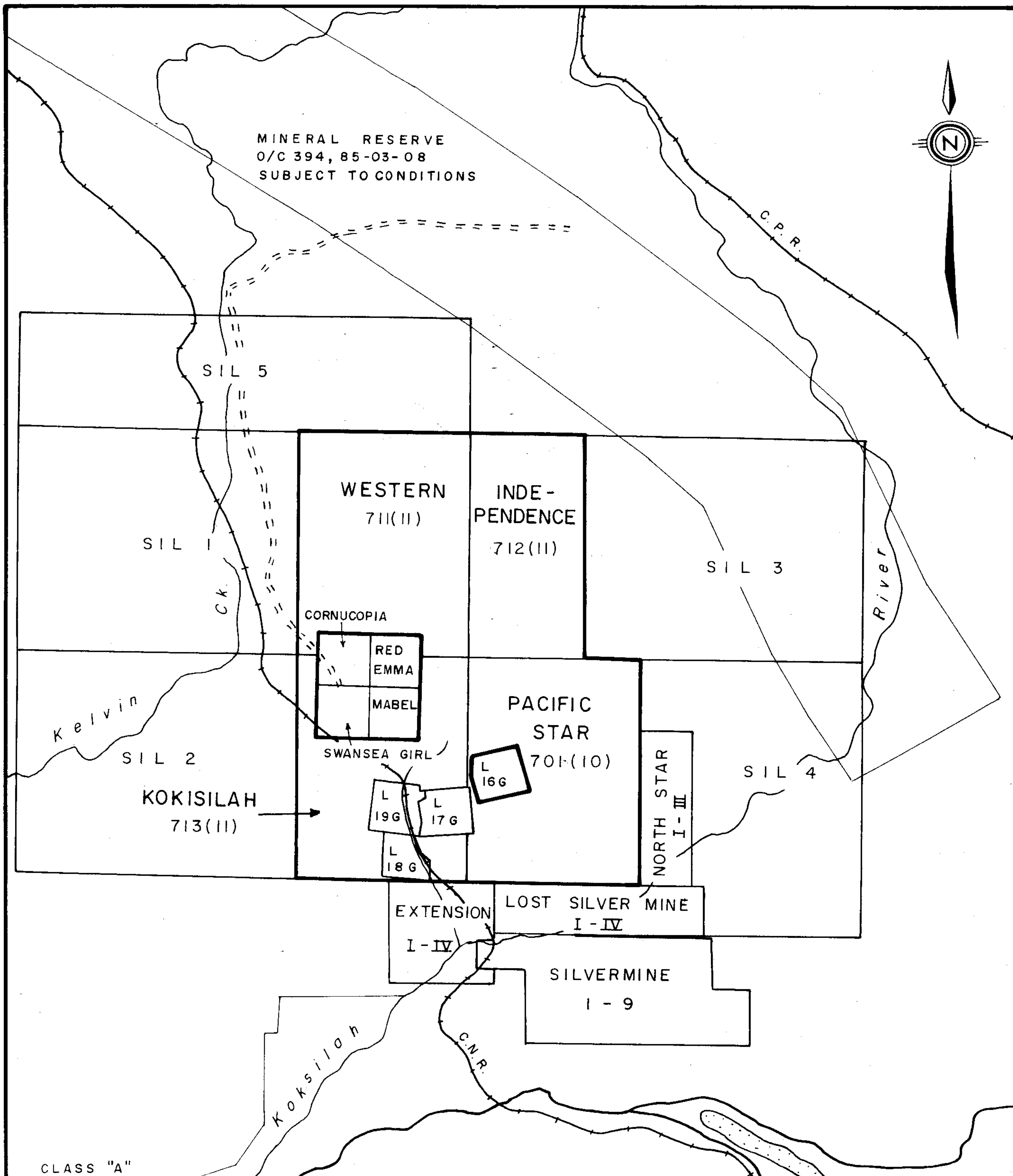
Access to the property is via paved and all-weather gravel roads from Duncan. Numerous gravel roads, most of which are suitable for 2WD vehicles in dry weather, provide access to most parts of the property.

The property is comprised of 4 claims totalling 44 units, as summarized below:

Claim	Record No.	Units	Anniversary Date
Pacific Star	701(10)	12	October 10, 1985
Western	711(11)	12	November 15, 1985
Independence	712(11)	8	November 15, 1985
Koksilah	713(11)	12	November 10, 1985

The claims were all registered in 1982 and are all owned by Reward Resources Ltd. The claims were grouped as the Duncan Group by Notice to Group 528, dated October 19, 1983.

Detailed study of the land status is required to elucidate the ownership of mineral rights in the area, as ownership is very complex and poorly known. The boundaries of the Mabel, Red Emma, Cornucopia, and Swansea Girl two-post claims and the Wallace Crown Grant (L.16G) have not been precisely established; claim(s) purported to be owned by local prospectors are not shown on government claim maps; and Canadian Pacific may own base metal rights to part (or all) of the area, as it was part of the E&N Land Grant, parts of which have not been relinquished.



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CLAIM MAP

KING SOLOMON PROPERTY

VICTORIA MINING DIVISION

Project No:	V 155	By:	T. N.
Scale:	1 : 50 000	Drawn:	J. S.
Drawing No:	2	Date:	AUG. 1985.

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3.0 HISTORY

The present King Solomon property covers many former Crown-granted claims including the following: King Solomon (L.17G), Blue Bell (L.15G), Koksilah (L.19G), Queen of Sheba (L.18G), White Diamond (L.32G), Lily Fraction (L.27G), Spot Cash (L.21G), Spot Fraction (L.25G), Marting Trap (L.22G), Trap Fraction (L.26G), Close Call (L.23G), Ruby Copper (L.24G), Togo (L.30G), Adoshia (L.31G), Black Jack (L.20G), and Avoca (L.30G). The Dora (L.35G), Mabel (L.36G), and Wallace (L.16G) claims are also within the boundaries of the King Solomon property but are owned by others. The W.A.E. (L.184) is located just south of the King Solomon property. The old Finlay property is located in the southern portion of the Pacific Star claim.

The occurrence of copper in the area of the King Solomon property has been known since 1886 when Franz Schmidt located a showing on his homestead property. The King Solomon and Blue Bell claims were staked in 1902 by Maclay and Ryan. From 1903 to 1908, development work and small-scale mining was carried out on both claims, first by Maclay and Ryan and later by Vancouver Island Mining and Development Co. Ltd. (Tyee Copper Co.). Production from the King Solomon Mine in this period amounted to 270 tons of ore yielding 205 oz Ag and 39,626 lb Cu; while the Blue Bell shipped 190 tons of ore yielding 116 oz Ag and 20,294 lb Cu. Surface work was carried out on the W.A.E. claim in about 1903 as well as on the Dora-Mabel property.

During 1912 and 1913, work was recommenced on the King Solomon by the King Solomon Copper Mining Co. The lower adit was driven 550 feet in an attempt to intersect surface showings at depth. A zone of low-grade mineralization assaying 0.5-2.5% Cu was intersected, but not the high-grade ore zone. A total of 303 tons of ore grading 5% Cu was shipped in this period (from the upper, high-grade zones?).

In 1916, Joe Gallo shipped 230 tons of ore yielding 31 oz Ag and 12,290 lb Cu from the Viva, Elsie D, and Comet claims (possibly on the Wallace Crown Grant).

No production has since been recorded from the King Solomon area showings. The total recorded production from 1903 to 1916 amounts to 993 tons of ore yielding 102,510 lb Cu (5.16%) and 352 oz Ag (0.51 oz/ton).

In 1919 three shafts were reported to exist on the Finlay claim.

In the late 1940's some surface work (bulldozer trenches) was carried out on the Fallside property, which included some old workings from either the W.A.E. or Finlay claims.

From 1956 to 1960 Cellardor Mines Ltd. held the property and carried out geological mapping, an SP survey, bulldozer trenching and stripping, and at least 4823 feet of diamond drilling in 34 holes. The old workings were dewatered and the lower adit was enlarged for more than 400 feet. Some of the more important drill intersections are tabulated below:

Hole No.	From	To	Width(ft)	Cu(%)	Zn(%)	Ag(oz/ton)
B2	70	82.5	12.5	0.05	2.3	
B4	51	64.5	13.5	0.33		0.40
B4A	55	68	13	0.21		0.78
B4B	64	71	7	3.2		
B8	30	44.5	14.5	1.3		

cont.

Hole No.	From	To	Width(ft)	Cu(%)	Zn(%)	Ag(oz/ton)
B15	49	67	18	0.33	0.63	
including	49	55	6	0.4	1.9	
B17	73	85	12	0.25	4.1	0.3
B3G	151	170	19	5.61		0.31
including	155.5	167.4	11.9	7.83		0.49
B8G	10.5	26.5	16		2.11	
	88	139.5	51.5	0.97		
including	125	139.5	20.5	1.48		
B9G	80.5	117.5	37	1.44		
including	102	117.5	15.5	2.12		
B12G	53	75.3	22.3	1.45		

Not all of the core sampled was assayed for Zn and/or Ag so there may be additional Zn and/or Ag bearing zones not reflected in the above results. The SP survey located 21 major anomalies in the King Solomon/BlueBell area as well as 2 very large anomalies longer than 3000' and several hundred feet wide in an area about 2000-5000 feet NW of the other 21 anomalies. Reserves of the King Solomon orebodies were estimated at 250,000 tons of 1.4% Cu or 316,000 tons of 0.83% Cu.

The property lay idle until 1978, when UMEX Inc. carried out geological mapping and soil sampling on the Aspen and Birch claims which surrounded the old Crown Granted claims.

The present property was staked in 1982. In 1983 Reward Resources Ltd. carried out a program of geological mapping and sampling, surveying, and magnetometer surveying. A small program of geological mapping and sampling was also carried out in 1984. A tectonic survey and photogeologic/photogeophysical study was carried out from October 1984 to April 1985.

Government geological work in the area includes mapping by C.H. Clapp (1912, 1917) and J.E. Muller (1977, 1980a, 1980b). A 1960 U.B.C. B.Sc. thesis by R.V. Kirkham describes the geology of the King Solomon and BlueBell claims.

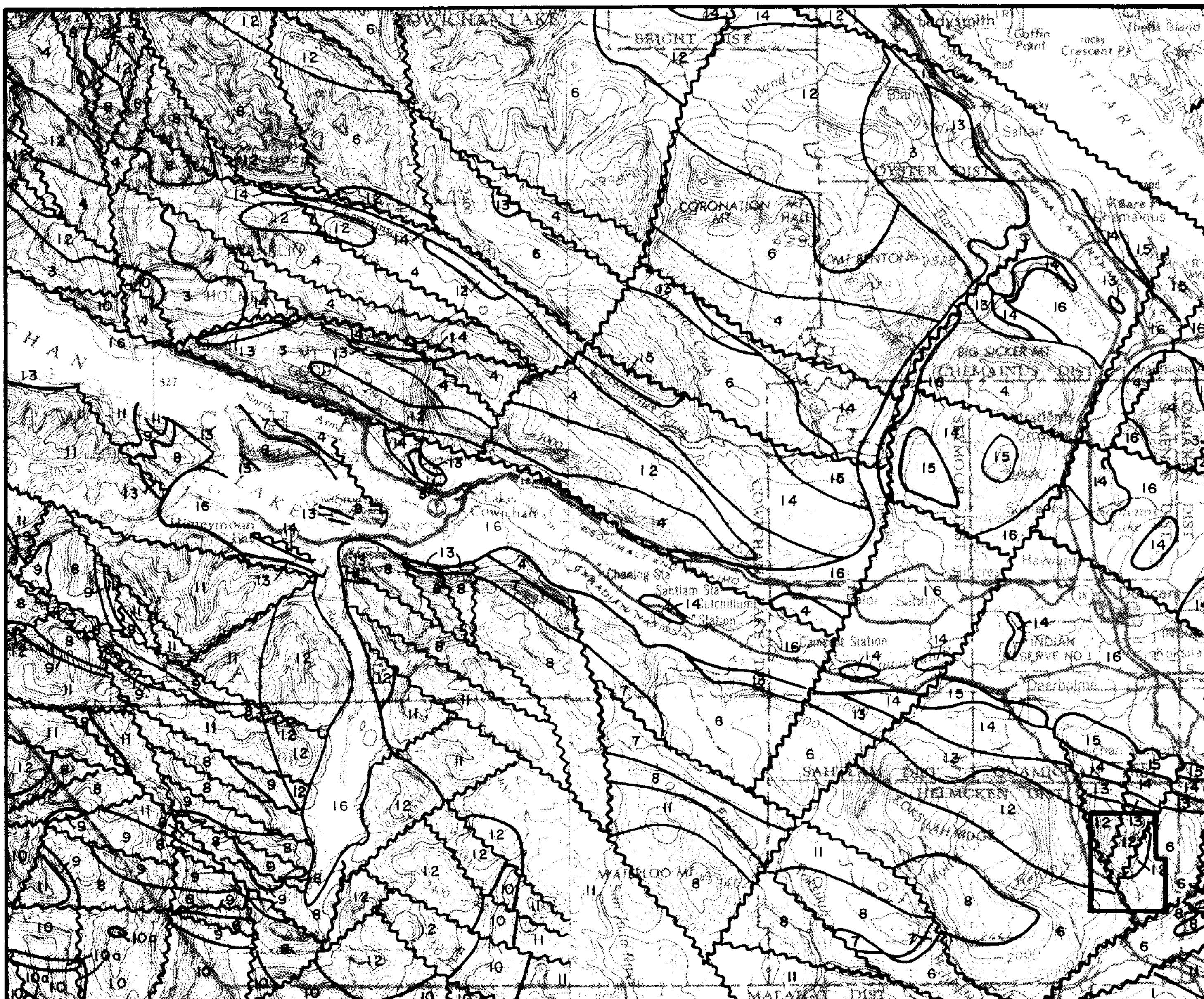
4.0 REGIONAL GEOLOGY

The Duncan to Cowichan Lake area is underlain by a west-northwest trending belt of Paleozoic Sicker Group rocks intruded by various bodies of Jurassic Island Intrusions and overlain by Triassic Karmutsen Formation basalts and Cretaceous Nanaimo group sediments. South of Cowichan Lake, extensive exposures of Bonanza Group volcanics are found, along with Karmutsen Formation, Quatsino Formation, and Island Intrusions rocks (Figure 3).

4.1 Wark-Colquitz Gneiss Complex

Wark Gneiss (Unit 1) consists of irregularly foliated to massive biotite-hornblende diorite and quartz diorite, while Colquitz Gneiss (Unit 2) consists of well foliated biotite-hornblende quartz diorite to granodiorite. The dark, mafic Wark and light, felsic Colquitz gneisses may be intimately interlayered locally. The Colquitz Gneiss was originally thought to intrude the Wark Gneiss, but is now considered to be a paragneiss derived from volcaniclastics. Migmatization of the gneisses has been shown by K-Ar dating to have occurred during the early Jurassic plutonism that produced the Island Intrusions. It therefore seems likely that the Paleozoic Sicker Group is the protolith of the Wark and Colquitz Gneisses, but zircon dating appears to indicate older Paleozoic or even Precambrian material (Muller, 1981).

The Wark-Colquitz Gneiss Complex is exposed in the vicinity of Victoria, where it appears to form the basement of the Insular Belt.



QUATERNARY

16	Glacial and alluvial deposits.

UPPER CRETACEOUS

Nanaimo Group

15	Extension - Protection Fm.: sandstone, conglomerate; minor siltstone, shale, coal.
14	Haslam Fm.: shale, siltstone, minor sandstone.
13	Comox Fm.: sandstone, conglomerate, minor siltstone, shale, coal.

JURASSIC

Lower to Middle Jurassic

12	Island Intrusions: granodiorite, quartz diorite

Lower Jurassic

11	Bonanza Group: basaltic to rhyolitic tuff, breccia, flows, sills, and dykes; minor argillite, greywacke.

UPPER PALEOZOIC AND ? OR TRIASSIC AND JURASSIC

10	Westcoast Complex: quartz diorite, diorite, tonalite, amphibolite, agmatite; minor metavolcanic and metasedimentary rocks (10a: recrystallized limestone, skarn.

TRIASSIC

Middle ? and Upper Triassic

Vancouver Group

9	Quatsino Fm.: limestone
8	Karmutsen Fm.: pillow basalt, breccia, tuff; minor flows.

PALEOZOIC

Sicker Group

PENNSYLVANIAN AND PERMIAN

7	Buttle Lake Fm.: limestone, chert, greywacke, argillite.

PENNSYLVANIAN AND MISSISSIPPIAN

6	Sediment - Sill Unit: argillite, greywacke, chert, diabase sills

LOWER DEVONIAN AND OLDER

5	Saltspring Intrusions: meta-granodiorite, meta-quartz porphyry, quartz-sericite schist
4	Myra Fm.: well bedded felsic tuff and breccia, argillite, rhyodacite in flows and sills, minor basic tuff, quartz-sericite schist, phyllite, massive sulphides
3	Nitinat Fm.: pillow lava and breccia of augite (uralite) porphyry, basic tuff; minor chlorite-actinolite schist

LOWER PALEOZOIC (OR YOUNGER ?)

2	Colquitz gneiss: quartz-feldspar gneiss
1	Work gneiss: massive and gneissic metadiorite, metagabbro, amphibolite.

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REGIONAL GEOLOGY MAP

KING SOLOMON PROPERTY

VICTORIA MINING DIVISION

Project No:	V 155	By	T. N.
Scale:	1 : 250 000	Drawn:	J. S.
Drawing No:	3	Date:	AUG. 1985.

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4.2 Sicker Group

Muller (1980a) proposed the following subdivision of the Sicker Group from youngest to oldest: Buttle Lake Formation, Sediment-Sill Unit, Myra Formation, and Nitinat Formation.

The Nitinat Formation (Unit 3) consists predominantly of basic volcanic rocks, most commonly flow-breccias, including some massive flows, and rare pillow basalts or agglomerates. Locally, medium-grained, generally massive basaltic tuff is interbedded with the flows. The flow-breccia is composed of fragments of basalt up to 30 cm in length containing uralite phenocrysts and black or white amygdules, both from 1 mm to more than 1 cm in size, in a matrix of finer grained, similar basalt(?). Thin sections show that the uralite is replacing diopside. Uralitized gabbroic to dioritic rocks underlie and intrude the volcanics and are believed to represent feeder dykes, sills, and magma chambers to the volcanics. The Nitinat Formation may be distinguished from the similar Karmutsen Formation by the usual lack of pillow basalts, the abundance of uralite phenocrysts, the pervasive shear foliation, and lower greenschist or higher metamorphic grade.

The Myra Formation (Unit 4) overlies the Nitinat Formation, possibly with minor unconformity. In the Nitinat-Cameron River area the Myra Formation is made up of a lower massive to widely banded basaltic tuff and breccia unit, a middle thinly banded pelitic albite-trachyte tuff and argillite unit, and an upper thick bedded, medium-grained albite-trachyte tuff and breccia unit. In the lower unit, crudely layered mottled maroon and green volcaniclastic greywacke, grit, and breccia are succeeded by beds of massive, medium-grained dark tuff up to 20 m thick interlayered with thin bands of alternating light and dark, fine-grained tuff with local fine to coarse breccias containing fragments of Nitinat Formation volcanics. The middle unit is comprised of a sequence of thinly interbedded, light feldspathic tuff (albite trachyte or keratophyre composition) and dark marine argillite which has the appearance of a graded greywacke-argillite turbidite sequence. In the upper part of the middle unit, sections of thickly bedded to massive black argillite occur. The upper unit contains fine and coarse crystal tuffs in layers up to 10 m thick with local rip-up clasts and slabs of argillite up to 1 m in length as well as synsedimentary breccias of light coloured volcanic and chert fragments in a matrix of black argillite.

Mapping by Fyles (1955) in the area north of Cowichan Lake located a thick sequence of mainly massive green volcanics (i.e. Nitinat Formation), overlain by a "marker" unit consisting of a sequence of thin bedded, cherty tuffs with several metres of coarse breccia containing fragments of amygdaloidal volcanics between it and the Nitinat Formation. Overlying(?) the marker unit are grey to black feldspathic tuffs and argillaceous sediments and minor breccias. Muller (1980a) considers the marker unit to correspond to the lower unit of the Myra Formation, while the overlying unit of tuffs and sediments is correlated with the middle unit "and probably contains the upper...unit as well."

In the Sicker Mountain area, the Myra Formation is more strongly deformed and consists of well bedded, mainly felsic tuff and breccia interbedded with black argillite and some greywacke. The rocks have been widely converted to quartz-chlorite-sericite schist in steep and overturned isoclinal folds. Breccia fragments are often epidotized. The "Tyee Quartz Porphyry" is a porphyritic rhyolite containing quartz eyes to 5 mm that occurs partly as cross-cutting sills and partly as flows(?) within the Myra Formation. Tyee Quartz Porphyry is related to the Saltspring Intrusions.

The type locality of the Myra Formation is Myra Creek, at the south end of Buttle Lake, about 160 km northwest of Duncan. Here, volcaniclastic rocks consisting dominantly of rhyodacitic or rhyolitic tuff, lapilli tuff, breccia, and some quartz porphyry and minor mafic flows and argillite (Upper Myra Formation) are host to Westin Resources Ltd.'s Myra, Lynx, Price, and H-W massive sulphide (Cu-Zn-Pb-Au-Ag-Cd) deposits.

Muller (1980a) estimated the thickness of the Nitinat Formation at about 2000 m and that of the Myra Formation at 750 to 1000 m. Fyles' (1955) work indicates a thickness of at least 1500 m for the Nitinat Formation, and at least 1000 m for the Myra Formation in the Cowichan Lake area. Both the Nitinat and Myra Formations were dated as Devonian and/or older by Muller (1980a).

The <u>Saltspring Intrusions</u> (Unit 5) are fine- to medium-grained, light coloured meta-granite or granodiorite which lacks the speckled appearance of most other intrusive rocks on Vancouver Island. Indistinct gneissic foliation and agmatitic structures occur pervasively. The Saltspring Intrusions have gradational contacts with the Tyee Quartz Porphyry of the Myra Formation and are considered to be comagmatic with it. Age dating of the Saltspring Intrusions reveals an initial age of latest Silurian.

The Saltspring Intrusions are exposed mainly on Saltspring Island, and do not extend westward into the regional geology map area.

The Sediment-Sill Unit (Unit 6) is transitional between the Myra and Buttle Lake Formations. The upper and lower contacts are poorly defined. Thin bedded, turbidite-like, much silicified or cherty massive argillite and siltstone are interlayered with diabase and gabbro sills. The sediments show conspicuous dark and light banding on joint surfaces. The sills consist of a fine-grained greenish black matrix containing feldspar phenocrysts up to more than 1 cm, commonly clustered in rosettes several centimetres in diameter, producing a very distinctive "flower gabbro" appearance. The sediments are dated as Mississippian in age while the sills are believed to represent feeders to the Triassic Karmutsen volcanics.

The Buttle Lake Formation (Unit 7) consists of a basal green and maroon tuff and/or breccia overlain by coarse-grained crinoidal and calcarenitic limestone, fine-grained limestone with chert nodules and some dolomitic limestone. Lesser amounts of argillite, siltstone, greywacke, or chert may also be present.

In the area southeast of Lake Cowichan, the Buttle Lake Formation consists of laminated, calcareous grey siltstone and black argillite containing lenses of coarse-grained calcarenite, minor massive beds of crinoidal limestone about 1 m thick, and lenses and nodules of chert. The section was described by an earlier worker as mainly interbedded chert and limestone (Yole in Muller, 1980a).

The Buttle Lake Formation is up to 466 m thick (approximately 300 m thick southeast of Lake Cowichan). The age of the formation on the basis of fossil dating, appears to be Middle Pennsylvanian, but could possibly be as young as Early Permian (Muller, 1980a).

4.3 Vancouver Group

The Karmutsen Formation volcanic rocks (Unit 8) paraconformably overlie the Buttle Lake Formation limestone to form the base of the Vancouver Group. They are the thickest and most widespread rocks on Vancouver Island. The formation, which is well exposed in the area of El Capitan Mountain, consists mainly of dark grey to black, tholeiitic pillowed basalt, massive basalt, and pillow breccia. Flows are commonly aphanitic and amygdaloidal. Pillowed volcanics generally occur toward the base of the section.

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

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

Massive to thick bedded limestone of the Quatsino Formation (Unit 9) is widespread in the area south of Cowichan Lake. The limestone is black to dark grey and fine-grained to micro-crystalline. In the vicinity of intrusive rocks, coarse-grained marble is recognized. Most of the economic skarn deposits on Vancouver

Island are hosted by Quatsino limestone. Thin bedded limestone also occurs in the formation. Fossils indicate an age of Upper Triassic (Muller and Carson, 1969).

The Parsons Bay Formation overlies Quatsino limestone, or locally, Karmutsen volcanics. It is composed of interbedded calcareous black argillite, calcareous greywacke and sandy to shaly limestone. It is included within the Quatsino formation within the report map area. The Quatsino and Parsons Bay Formations are considered to represent near and offshore basin facies, respectively, in the quiescent Karmutsen rift archipelago (Muller, 1981).

4.4 Westcoast Complex

The Westcoast Complex (Unit 10) is comprised of a variety of plutonic and metamorphic basic crystalline rocks, including amphibolite, diorite, and quartz diorite with homogeneous, agmatitic or gneissic textures. Dioritic or agmatitic bodies, underlying or intruding the Nitinat Formation are included. Metamorphosed Karmutsen Formation and/or Sicker Group rocks grade locally into the complex and are believed to be its protolith, having been migmatized in Early Jurassic time. The mobilized granitoid portion of the complex is believed to be the source of the Island Intrusions and, indirectly, the Bonanza Group volcanics (Muller, 1981, 1982). Small bodies of recrystallized limestone (Unit 10a) found within the complex are believed to be derived mainly from the Quatsino Formation, and to a lesser extent from the Buttle Lake Formation.

4.5 Bonanza Group

The Bonanza Group (Unit 11) 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 Cowichan Lake, the volcanics are described as dark brown, maroon, and yellow grey massive tuff, volcanic breccia, and massive or plagiophyric flows (Muller, 1982). The Bonanza volcanics are considered to be extrusive equivalents of the Island Intrusions and to be of Early Jurassic age.

4.6 Island Intrusions

Exposures of Island Intrusions (Unit 12) 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 rocks and migmatite although contacts with Karmutsen Formation volcanic rocks are sharp and well defined. Skarn zones are reported at the contact of Island Intrusion rocks with Quatsino Formation limestone and less frequently with Buttle Lake Formation limestone.

4.7 Nanaimo Group

Upper Cretaceous Nanaimo Group sedimentary rocks are scattered throughout the area. Extensive exposures occur in the Chemainus and Cowichan River valleys. The formations present comprise the basal portions of the Nanaimo Group.

The Comox Formation (Unit 13) 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 14) is a near shore littoral depositional facies unit characterized by massive bedded fossiliferous sandy shale, siltstone and shaly sandstone.

Interbedded coarse clastic conglomerate, pebbly sandstone and arkosic sandstone of the Extensive-Protection Formation (Unit 15) are beach and deltaic sands. Minor shale and coal are reported.

4.8 Structure

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

Asymmetric southwest verging (i.e. northwest trending) anticlinal structures characterized by subvertical southwest limbs and moderately dipping northeast limbs are reported at Buttle Lake, in the Cameron-Nitinat River area, and north of Cowichan Lake. Intense shearing and metamorphism to chlorite-actinolite and chlorite-sericite schist occurs in steep and overturned limbs of folds. Folding is indicated to have occurred in Jurassic time by K-Ar dating, although circumstantial evidence for an earlier orogeny also exists. Overlying Buttle Lake Formation limestones are relatively undeformed except where they are thin.

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

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

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments. These faults have been traced for up to 100 km. Late northeasterly trending tear-faults offset the Tertiary faults in the Cowichan Valley and Saltspring Island area.

4.9 Mineral Occurrences
4.9.1 Gold Occurrences

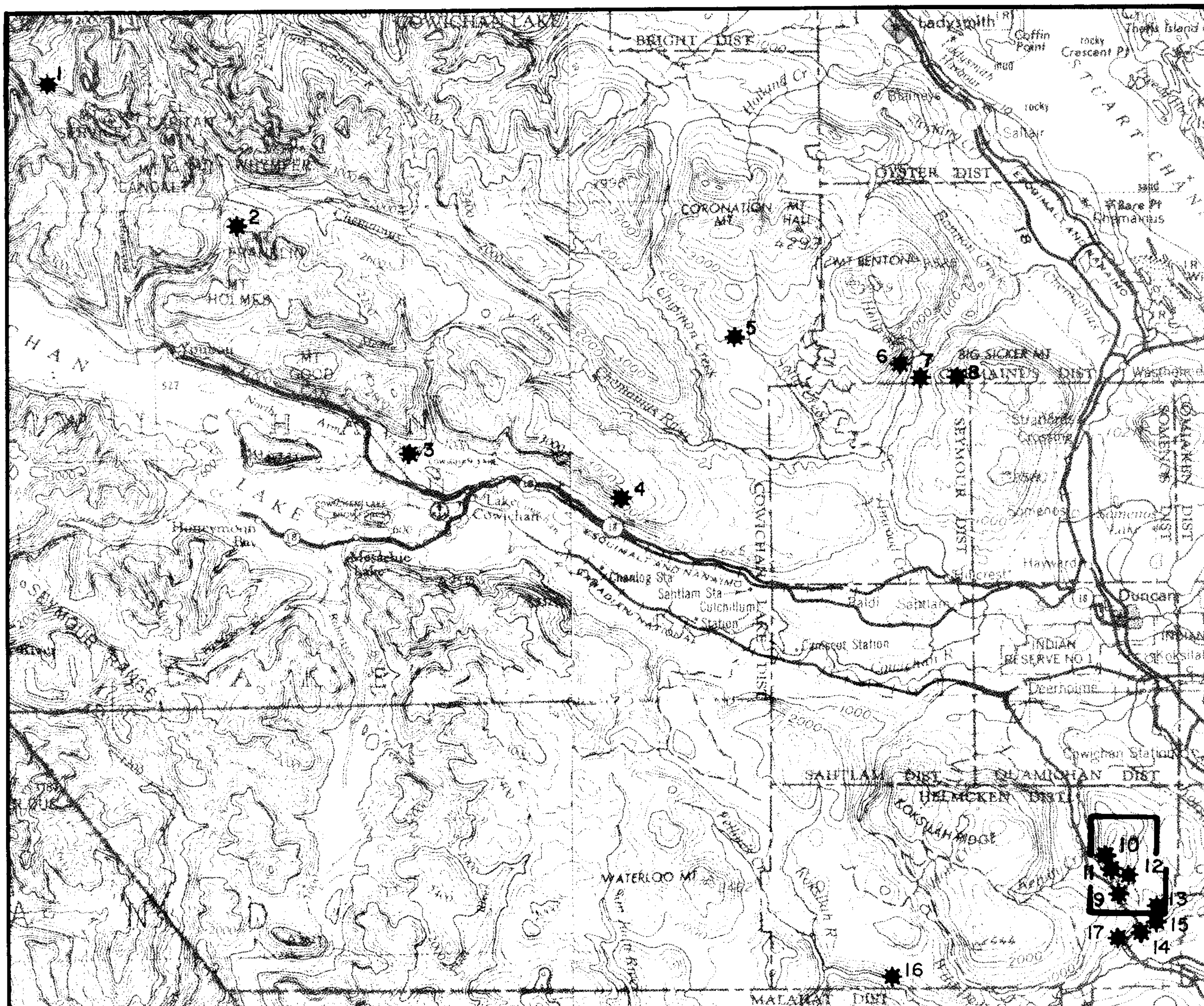
2. Comego (Cascade, Kitchener, Widow Group, Anne)
Au Cu Mo W Ag Zn Fe

Geology:

The area is underlain by Sicker Group bedded cherts, cherty tuffs, agglomerates, and andesites intruded by a gabbro-diorite sill, a quartz diorite stock, and feldspar porphyry dykes. Three types of mineralization are found in the Sicker rocks: 1) garnet-actinolite-quartz-calcite-epidote-chlorite skarn often containing magnetite, chalcopyrite, pyrite, pyrrhotite, local molybdenite, scheelite, sphalerite, tetrahedrite, rare bornite and arsenopyrite occurring in cherty tuff near the contact of the gabbro-diorite sill; 2) rusty weathering quartz-carbonate stringers in a shear zone containing finely disseminated molybdenite, pyrite, chalcopyrite, tennantite, local bornite and magnetite; and 3) quartz veins associated with the skarn zones containing masses of chalcopyrite, pyrite, and molybdenite.

Mineralization Features:

The main skarn zone is 100' wide by 300' high by possibly 1650' long. Best assays are 0.41 oz Au/T over 1 m, 0.8 oz Ag/T over 15', 8.3% Cu over 20', 1.3% Mo over 15', 0.32% WO_3 over 1 m. The best DDH intersection was 0.02 oz Au/T, 0.3 oz Ag/T, 0.5% Cu over 24'. Assays from the quartz-carbonate zones are all very low. The quartz-molybdenite vein(s) are 5' wide, 50' long. Samples over 5' averaged 1.3% Cu, 4.6% Mo, while a 2 m sample assayed 0.035 oz Au/T, 0.62 oz Ag/T, 2.2% Cu, 0.28% Mo, 0.32% WO_3.



GOLD OCCURRENCES

1. Amore *
2. Comego
3. Meade Ck. *

OTHER OCCURRENCES

4. Hill 60 *
17. Humes Arsenic

BASE METAL OCCURRENCES, DEPOSITS

5. Lara
6. Pauper *
7. Copper Canyon *
8. Twin J
9. King Solomon
10. Dora - Mabel
11. Blue Bell
12. Viva
13. Finlay
14. W.A.E.
15. Fallside
16. Robertson

* not described in Section 4.9

N

REWARD RESOURCES LTD.

MINERAL OCCURRENCES LOCATION MAP

KING SOLOMON PROPERTY

Project No.	V 155	By	T. N.
Scale:	1 : 250 000	Drawn:	J. S.
Drawing No.	4	Date:	AUG. 1985.

MPH Consulting Limited

History:

1902-06: G. Lawrence; (Cascade) open cut, stripping, 2 pits.

1919: L.A. Sherk; (Kitchener Group) several open cuts and 4 short adits existed on the property.

1920's: The Consolidated Mining and Smelting Co. of Canada Ltd.; test work, drove a short adit.

1948-55: Duncan Powell and others; unspecified work.

1964: O.G. MacDonald; blasted 5 pits, soil sampling, mag survey.

1969-70: Hibernia Mining Co. Ltd.; (Anne) soil sampling, mapping, JEM survey.

1971: Tagus Syndicate; mapping, 7 DDH for 1641'.

1980-81: DRC Resources Corp.; mapping, soil, and rock sampling.

References:

MMAR	1906-211, 1919-239, 1931-163, 1948-158-161
GEM	1969-223, 1970-290, 1971-230
AR	641, 1949, 2167, 2849, 8283, 10102
BCDM	Bull. 37, p57
Carson	1968, pp128-130
Minfile	92C018

4.9.2 Base Metal Occurrences and Deposits

5. Lara Zn Cu Au Ag Pb

Geology:

The property is mainly underlain by rhyolitic to basaltic, commonly schistose, Sicker Group rocks with minor volcanic sandstone, slate, tuffaceous slate, and chert interbedded. Felsic volcanics predominate. Nanaimo Group sediments are in fault contact with the Sicker Group in the southern part of the property. At least three exhalative stratabound pyritic horizons in felsic and intermediate volcanics are exposed in five different areas on the property. The mineralized zones outlined by drilling is stratiform and is hosted by a rhyolite porphyry unit. Mineralization is generally disseminated or in small pods and bands, but is semimassive to massive in one showing. Barite is associated with some showings. The geology of the mineralized zone is very similar to the Twin J massive sulphide deposits, located 9 km southeast of Lara, along strike.

Mineralization Features:

The pyritic horizons range from 10" to 30' in thickness. The northern horizon has been traced for 6.3 km, while the two southern horizons have each been traced for about 1 km. A showing on the Silver 2 claim assayed up to 0.095 oz Au/T, 0.80 oz Ag/T, 0.2% Cu, 0.85% Pb, 3.25% Zn (grab samples?).

Recent (1984) sampling yielded results of up to 0.005 oz Au/T, 8.93 oz Ag/T, 3.46% Cu, 0.62% Pb, 10.85% Zn, 2% Ba. Several IP anomalies are associated with the pyritic zones, some of which have coincident VLF-EM anomalies. A linear Zn-Cu-Pb soil anomaly was located on the Elk claim near two of the pyritic showings. Most of the 12 DDH's drilled in 1984 intersected weak polymetallic mineralization. An intersection of 8.01 m (true thickness) of polymetallic mineralization grading 3.01% Zn, 0.101 oz Au/T, 1.97 oz Ag/T, 0.68% Cu, 0.45% Pb has been announced from a single drill hole designed to test the southwestern horizon. Included in the 8.01 m intersection is 3.23 m (true thickness) grading 5.18% Zn, 0.135 oz Au/T, 2.66 oz Ag/T, 1.21% Cu, 0.69% Zn.

Subsequent diamond drilling in 1985 has outlined a mineralized zone 1300 feet long by 350 feet deep grading 0.051 oz Au/ton, 1.12 oz Ag/ton, 1.98% Zn, 0.44% Cu, and 0.36% Pb over an average true width of 20.53 feet. The zone is open on both ends and to depth and is richer in the eastern portion. A drill hole 1650 feet east of the zone along strike intersected 12.07 feet (true width) of massive sulphide mineralization grading 0.213 oz Au/ton, 8.60 oz Ag/ton, 9.22% Zn, 1.16% Cu, and 2.53% Pb.

Metal ratios in the mineralized zone are similar to those of Westmin Resources Ltd.'s Buttle Lake mines.

History:

1966-67: Cominco Ltd.; (Tot/Rum property) IP, resistivity, soil sampling

1978: UMEX Inc.; (Elk, Mouse Groups) soil sampling, mapping, mag, EM16, shootback EM

1981-82: Laramide Resources Ltd.; (Silver 2 claim) soil sampling, IP, VLF-EM

1983-85: Aberford Resources Ltd.; (Lara) extensive geophysics, geochemical surveys, trenching, EM survey, 40 DDH

References:

EBC	1978-E124
AR	7384, 10116, 11123
MER	1983, p30
NM	Feb. 7, Aug. 8, 1985

8. Twin J (Lenora, Tyee, Richard III) Zn Cu Au Ag Pb Cd Ba

Geology:

The area is underlain by Sicker Group andesitic flows and cherty tuffs with minor sediments, metamorphosed to quartz-sericite, quartz-chlorite, and chlorite schists which are intruded by sills, dykes, and irregular masses of gabbro-diorite. The two main orebodies occur 150' apart in strongly dragfolded parts of a schist "panel," often close to the contact of a band of graphitic schist and bounded by an intrusive sodic rhyolite porphyry. Within the orebodies, two types of ore are found. Barite ore is a fine-grained mixture of pyrite, chalcopyrite, sphalerite, and minor galena in a barite-quartz-calcite gangue. It is frequently banded, with chalcopyrite-pyrite and sphalerite layers. Quartz ore consists mainly of quartz and chalcopyrite and occurs in long lenticular masses within barite ore and the host schists.

Mineralization Features:

The North orebody is 1700' long by 1 to 10' wide by 120' downdip. The South orebody is 2100' long by 20' or more wide by 150' downdip. Total recorded production from 1898 to 1964 amounts to 305,149 T ore containing 40,014 oz Au, 840,472 oz Ag, 21,344,332 lb Cu, 45,864,654 lb Zn, 418,716 lb Pb, and 2600 lb Cd. Reserves are reported as 350,000 T grading 1.6% Cu, 0.65% Pb, 6.6% Zn, 0.12 oz Au/T, and 4.1 oz Ag/T as of 1971.

History:

1897-1927: Operated as three separate mines: Lenora, (Leonora-Mt. Sicker Mining Co.), Tyee (Tyee Copper Mining Co.), and Richard III (Richard III Development Co. Ltd.). Most of the production came from Tyee with a lesser contribution from Lenora, and only minor production from Richard III. Most of the production came in the period from 1900 to 1907.

1928-29: Pacific Tidewater Mines Ltd.; joined the three mines underground (Lenora, Tyee, Richard III)

1939-40: Sheep Creek Gold Mines Ltd.; DD'g, trenching, underground development

1942-47: Twin J Mines Ltd.; 125 tpd concentrator, mining from 1943 to May 1944 and mid-1946 to September 1947 (mainly from Lenora)

1949-52: Vancouver Island Base Metals Ltd.; mining 1951 to January 1952 (mainly from Lenora)

1964: W. Howden; mined 167 T from Lenora, grade not reported

1967-70: Mt. Sicker Mines Ltd.; 7 DDH for 405', mapping, trenching

1972: Ducanex Resources Ltd.; 5 DDH for 3000', mapping, shootback EM

1973-74: Dresser Industries Inc.; 8 DDH for 5500', IP, soils

1978-80: SEREM Ltd.; 7 DDH for 1236 m, mapping, soils, mag, EM

1983-84: Corporation Falconbridge Copper/Peppa Resources Ltd.; mapping, DDH's, sampling. Peppa planned to put Lenora Mine into production by late 1984

References:

MMAR	1928-365, 1931-164, 1935-G46, 1936-F63, 1939-90, 1940-74, 1942-70, 1943-69, 1944-67, 1946-191, 1947-183, 1949-224, 1950-180, 1951-199, 1952-214, 1964-168, 1967-79, 1968-107
GEM	1969-224, 1970-291, 1972-240, 1974-163
EBC	1978-E119
AR	1104, 1714, 3741, 3950, 3951, 4904, 5164, 6996, 7714, 7875, 8168, 8264
CIM	Trans. Vol. 48, 1945, pp294-308
CIMM	Structural Geology of Canadian Ore Deposits, 1948, p48
CMH	1972/73
TML	1984, #042, 064, 136, 192, 195
Minfile	92B001, 002, 003

9. King Solomon (L.17G, L.152, L.157; Koksilah)
Cu Ag Zn Pb Fe (Au)

Geology:
A skarn deposit with pyrrhotite, magnetite, pyrite, chalcopyrite, minor sphalerite, galena, some tetrahedrite in a garnet-epidote-diopside gangue. It occurs along the contact of a dyke-like mass of quartz-bearing feldspathic gabbro and Sicker Group volcanics. Lentils of limestone and several small stocks of Saanich granodiorite occur nearby. The deposit is covered by a gossanous capping. A second orebody occurs above the minor one. It is known as the limestone orebody. The main orebody is oriented 030/35 SE; the limestone orebody is oriented 135/45-50 NE.

Mineralization Features:

The first 20-30' of the main orebody away from the dyke is richer, averaging 4-5% Cu, while the outer 15-20' of the deposit is lower grade, averaging about 2% Cu. The main orebody is 300' long by 20-70' wide. A 95' crosscut is in ore averaging 5% Cu for the first 40'. The last 55' are heavily mineralized with Fe, Cu. The limestone orebody is separate from and lower grade than the main orebody. A 25' shaft connected to a 70' drift and a 20' open cut on the limestone orebody are all in ore, averaging 5% Cu in the shaft and 4% Cu elsewhere. Au + Ag contents average $1.50/T in both orebodies (1983 prices). The main crosscut tunnel was driven 150' below the main orebody for 680', but never intersected ore. It did intersect a low grade zone from 150-680' which runs 0.5-2.5% Cu, tr Au. A magnetometer survey located some anomalies over, and extending from, showings.

Production:

1904-05,07: 270 T ore; 205 oz Ag, 39,626 lb Cu (0.75 oz Ag/T, 7.34% Cu)

1912: 303 T picked ore averaged over 5% Cu.

History:

1903-07: Maclay, Ryan; mining

1909: James Humes; granted Crown Grant L.17G

1913-14: King Solomon Copper Mining Co.; drove lower adit 550'

1956-60: Cellardor Mines Ltd.; (King Solomon, Blue Bell-#11, and other claims), surface work, SP, dewatered old workings, 13 DDH for 2100, enlarged lower adit for more than 400'

1983-85: Reward Resources Ltd.; geological mapping (1:2000), magnetometer survey, rock sampling.

References:

MMAR 1903-210, 1904-253, 1905-216, 1907-155, 1908-164, 1909-278, 1913-290, 1914-386, 1916-312, 1923-272, 1928-363, 1959-140, 1960-116

GSC Mem. 96, pp.371-377

Minfile 92B015

10. Dora-Mabel (L.35G, L.36G, "4-Adits" Showing) Cu Fe

Geology:

A large showing of limonitic gossan and gossan-cemented gravel beneath which "copper-bearing rock" was found. Limestone occurs nearby and the cupriferous rock is believed to be a skarn at the contact of limestone with Jurassic Saanich granodiorite. Pyrolusite and specular hematite are found in float and in place.

Mineralization Features:

Assays of up to 12.32% Cu are reported.

History:

1903: A small open cut existed on Mabel

1907: Koksilah Mining Co. Ltd. (NPL); granted Crown Grants L35G (Dora) and L.36G (Mabel)

1985: W.J.H. Fleetwood

References:

MMAR 1903-210, 1907-221

Minfile 92B083

11. Blue Bell Cu Ag Fe

Geology:

A lens of limestone within Sicker Group volcanics has been converted to garnet-epidote-diopside skarn with magnetite, pyrite, chalcopyrite, and pyrrhotite. Saanich granodiorite and feldspar porphyry cut the skarn. The skarn lies beneath a strong iron capping (gossan). Rhyolitic to dacitic flows oriented 100/30N with associated massive sulphide and pyrite-quartz pods are reported to occur in the area in a more recent report.

Mineralization Features:

Assays of up to 29% Cu are reported. Ore was proved to 60' below surface by prospect shafts and was apparently indicated to over 100' deep by diamond drilling. The mineralized zone is up to 50' wide by over 200' long. DDH intersections of 20' of ore averaging 9.75% Cu at 128', and 19' of ore averaging 4.5% Cu at 168' are reported from 2 of 4 DDH's. Samples from massive sulphide pods ran up to 646 ppm Cu, 1.4 ppm Ag, 25 ppb Au over 1 m.

Production:

1907: 190 T ore; 116 oz Ag, 20,294 lb Cu (0.61 oz Ag/T, 5.34% Cu)

History:

1903: Maclay, Ryan; 60' tunnel

1905-07: Vancouver Island Mining & Development Co. Ltd.; shipped ore, sunk several prospect shafts, a series of DDH's to about 150' each, 110' incline shaft. Abandoned due to high transportation costs

1957-60: Cellardor Mines Ltd.; (King Solomon property-#9) self potential, dewatering old workings, 13 DDH for 2100' on King Solomon and Blue Bell

1983-85: Reward Resources Ltd.; included in King Solomon property--geological mapping (1:2000), rock sampling, mag survey.

References:

MMAR	1903-210, 1905-216, 1906-207, 1907-155, 1908-164, 1916-312, 1923-272, 1928-363, 1959-140, 1960-116
GSC	Mem 96, p.377
Minfile	92B080

12. Viva (Eva, Elsie, Comet) Cu Ag Fe

Geology:

A probable skarn deposit containing pyrite, pyrrhotite, and chalcopyrite. Occurs in an area mapped as the Sicker Sediment-Sill unit.

Mineralization Features:

No assays reported. Production in 1916 is reported (by Minfile) to have totalled 230 tons of ore yielding 31 oz Ag, 12,290 lb Cu (0.13 oz Ag/T, 2.67% Cu). A 1928 report states that there is "little ore in evidence now," implying that the showing was a lens which was completely mined out.

History:

1916: Joe Gallo; shipped ore but transportation costs too high

1925: James Boal; a 35' shaft with a 48' incline drift at the bottom existed from the 1916 work.

1983-85: Reward Resources Ltd.; included in King Solomon property (?).

References:

MMAR 1916-312,366, 1925-303, 1928-363

Minfile 92B035

Comments:

A 1916 report states that about 250 T of Cu ore was shipped grading about 4% (i.e. 20,000 lb Cu). Another 1916 report states that 239 T of ore was shipped averaging about 2.5% Cu (i.e. 11,950 lb Cu). A 1925 report states that about 500 T of ore was shipped.

13. Finlay Cu Ag (Au)

Geology:

Shear zones in volcanics of the Sicker Group contain pyrite, pyrrhotite, and chalcopyrite with Ag values. Occurs in an area mapped as the Sicker Group Sediment-Sill unit.

Mineralization:

A 3' sample assayed tr Au, 0.2 oz Ag/ton, 2% Cu.

History:

1919: 3 shafts existed on the property, one of which was 16' deep

1985: Reward Resources Ltd.; included in King Solomon property.

References:

MMAR 1919-240, 1928-363

Minfile 92B034

14. W.A.E. Cu Au Zn

Geology:

The #1 cut exposes a quartz vein carrying Zn and Cu along the contact of chert and limestone. The #2 cut, about 600' away, exposes a weathered volcanic dyke parallel and close to a body of garnet-actinolite-epidote skarn containing Cu. Occurs in an area mapped as the Sediment-Sill unit of the Sicker Group.

Mineralization Features:

An assay of the skarn mineralization returned values of 26% Cu and $1 Au/T (about 0.048 oz Au/T) in 1903.

History:

1903: 2 large open cuts existed on the property

1985: C.A. Latter (Silver 1-9 property).

References:

MMAR 1903-209

Minfile 92B082

15. Fallside Zn Cu

Geology:

The western part of the property is underlain by Sicker Group greenstone. Marble underlies most of the rest of the property. Both rock types are cut by Saanich granodiorite and by bodies of feldspar-hornblende porphyry. The greenstone has been irregularly and variably converted to garnet-epidote-diopside skarn containing pyrite and pyrrhotite, while the marble is veined with the skarn minerals and contains skarn masses believed to be altered inter-bedded volcanics. The skarn areas contain NE trending zones weakly mineralized with sphalerite and chalcopyrite along which quartz with manganese stain has been introduced. Magnetite associ-ated with garnet is common in the granodiorite, generally in minor amounts but locally in streaks a few inches thick.

Mineralization Features:

One of the sphalerite/chalcopyrite-bearing zones is 6.5' wide; the others are narrower. Six samples taken across widths of up to "several" feet assayed nil Au, nil Ag, and "small amounts" of Zn, Cu, except one with 1.9% Zn. No scheelite was detected with an ultraviolet lamp.

History:

1946-52: P.R. Horton; an old adit caved at the mouth and several recent bulldozer open cuts exist on the property

References:

MMAR 1952-214

Minfile 92B048

Comments:

The Fallside may cover the old W.A.E. (14) and/or Finlay (13) properties.

16. Robertson (L48G; Stirling, Sterling, Metal Group)
Pb Ag Zn Au Cu

Geology:

Sicker Group andesitic volcanics north of the Koksilah River are in fault contact with Bonanza Group andesitic volcanics south of the river. A shear and breccia zone in Sicker Group volcanics has been partly replaced by garnet and veined with quartz, calcite, and dolomite which in turn contain seams of galena, pyrite, sphalerite, molybdenite, and chalcopyrite.

Mineralization Features:

The mineralized zone is 9' wide and at least 30' long. Quartz veins up to 4' wide occur. An assay from 1880 is $6.20 Au/T, $69.43 Ag/T, 28.3% Pb (about 0.30 oz Au/T, 116.4 oz Ag/T). A sample of best ore from the dump in 1928 ran 0.4 oz Ag/T, 2.6% Pb, 7% Zn, while an earlier grab sample from the dump assayed at 0.02 oz Au/T, 6 oz Ag/T, tr Cu. Soil sampling by UMEX located 7 anomalies. Anomaly E (Zn-Pb) is 1500 m long and occurs about 1 km west of Robertson.

History:

1865-1917: W.A. Robertson; Ag-bearing float discovered 1865, mineralization in place in 1880. Workings in 1917 consisted of 125' adit; 125' adit with 30' open cut and a 20' winze; a large open cut

1928: Robertson Mining Property Ltd.; driving a third adit

1978-79: UMEX Inc.; (Metal Group) 3500 soil samples (Cu Pb Zn), mag, EM, shootback EM, IP, 9 DDH for 770 m.

References:

MMAR 1880-431. 1915-451, 1917-269, 1928-363

EBC 1978-E119, 1979-120

AR 6810

GSC Mem 96, pp.371-377

Minfile 92B036

Comments:

Muller (1980) has mapped the rocks north of Koksilah River as Karmutsen Formation volcanics in fault contact with the Sicker Group Sediment-Sill unit. UMEX's work was done mainly to the west of the Robertson showing.

17. Humes Arsenic As

Geology:

Arsenopyrite and native arsenic are reported to occur in a small deposit "presumably not of the contact (skarn) type." Located in an area mapped as Sicker Group Sediment-Sill unit.

Mineralization Features:

No results reported.

History:

Mentioned in a 1917 GSC report.

References:

GSC Mem 96 p.372

Minfile 92B081

4.10 Economic Setting

The King Solomon property deposits are hosted by the Upper Paleozoic Sicker Group. Since the announcement in 1979 of the discovery of Westmin Resources Ltd.'s new H-W deposit at Buttle Lake, the Sicker Group has become an extremely active exploration target. Nearly all of the area underlain by the Sicker Group has been staked. Major companies actively exploring the Sicker include Aberford Resources Ltd., Chevron Canada Resources Limited, Cominco Ltd., Corporation Falconbridge Copper, Esso Minerals Canada, Falconbridge Ltd., Kidd Creek Mines Ltd., Noranda Exploration Ltd., Utah Mines Ltd., and Westmin Resources Ltd.

Westmin's Buttle Lake mines contain total reserves of 16.25 million tons grading 5.43% Zn, 2.12% Cu, 0.07 oz Au/ton, 1.2 oz Ag/ton, and 0.34% Pb (Walker 1983). Closer to the King Solomon property, the Twin J Mine, presently being explored by Corporation Falconbridge Copper is a volcanogenic massive sulphide deposit hosted by the Sicker Group located 20 km NNW of the King Solomon property. Production from 1898 to 1964 totalled 305,149 tons grading 7.5% Zn, 3.5% Cu, 0.13 oz Au/ton, 2.75 oz Ag/ton, and minor Pb.

A massive sulphide zone 1300 feet long by 20.5 feet wide by 350 feet deep, open at both ends and to depth, has been outlined on Aberford's Lara property, 27 km NW of the King Solomon property. The zone grades 0.051 oz Au/ton, 1.12 oz Ag/ton, 1.98% Zn, 0.44% Cu, and 0.36% Pb with indications that richer grades are present to the east.

Total recorded production from the King Solomon area deposits from 1903 to 1916 is 993 tons grading 5.16% Cu and 0.51 oz Ag/ton.

Although the King Solomon area mineralization has historically been identified as being of the skarn type, the possibility exists that pre-existing (volcanogenic massive sulphide?) deposits have been skarnified remobilized into their present form. On the Skarn property, for instance, exploration since 1964 has been focussed on "skarn" deposits, however, recently the exploration target has been shifted to volcanogenic massive sulphides with some encouraging results. Indeed, the Thistle Mine, currently being explored by Westmin as a syngenetic massive sulphide deposit, was originally thought to be a skarn deposit (Stevenson, 1945; Carson, 1968).

5.0 1985 PHASE I EXPLORATION PROGRAM

5.1 Work Completed

Geological mapping at a scale of 1:5000 was carried out over the entire property. A total of 39 rock samples was collected during the course of mapping. More detailed geological mapping was carried out around old workings present in the south-central area of the property although a separate map was not produced for this work.

A geochemical and geophysical grid was established over the area of the old workings. The grid consists of a 1.95 km cut and picketed baseline with 21.9 line km of flagged grid lines at right angles to the baseline approximately every 90 m.

A total of 375 soil samples was collected at 30 m intervals on every other grid line. A total of 95 soil samples was collected at a later time on parts of the previously un-sampled grid lines in an attempt to better define anomalies. All 470 soil samples were analyzed by atomic absorption for Cu, Ag, and Zn.

VLF-EM and magnetometer readings were taken at 15 m and/or 30 m intervals on all of the grid lines.

5.2 Geological Mapping, Sampling, Prospecting

5.2.1 Introduction

A total of 17 days of geological mapping, prospecting, and rock sampling was spent on the King Solomon property (Western, Independence, Koksilah, Pacific Star and L15, L17, L18 and L19G claims), between June 25 and July 20, 1985. This section summarizes the results of relatively detailed geologic mapping and rock sampling at most of the major old workings on the property, and of reconnaissance-scale mapping within the property.

The results of this preliminary work suggests that the old King Solomon and Blue Bell mines are skarn deposits consisting of fracture and fault controlled, massive and semi-massive mineralization including magnetite, pyrrhotite, pyrite, chalcopyrite and relatively minor sphalerite. The mineralization occurs in strongly fractured, cherty, basaltic tuffs and cherts, and varieties of epidote-garnet-diopside-quartz-calcite-skarn. The skarn, at least locally, is stratabound and appears to be derived from calcareous tuffs and limestone. The eight skarn deposits examined occur along a northwesterly to westerly trending belt at least 3 km long. The deposits appear to occur preferentially at, or near, the top and the base of the northeast to northerly dipping Buttle Lake Formation of the Sicker Group, where the succession of predominantly bedded cherts contains interbeds of limestone and calcareous tuff?. The skarn deposits are also intimately associated with, and probably genetically related to, large and small intrusive bodies of pyritic, (feldspar porphyritic) metavitric rhyolite which may be an early or late phase of the much more abundant, feldspar, hornblende porphyritic (seriate), metavitric dacite intrusives, where they crosscut the base and/or top of the Buttle Lake Formation.

Underground exploration and relatively extensive diamond drilling by Cellardor Mines Ltd. of the King Solomon and Blue Bell mines in

1958-60, indicate that the distribution of massive sulphides-oxides and chalcopyrite mineralization is controlled by fractures and faults that crosscut bedding in the Buttle Lake Formation, and is irregular and discontinuous along these structures. Thus, although the skarn-type mineralization is stratabound overall, its distribution is controlled by discordant structures (and intrusives?), which results in difficulties in delineating exploration targets and establishing ore reserves.

5.2.2 Geology

A. Geology of the Property: Summary

The King Solomon property is underlain by basaltic rocks of the upper part of the Upper Paleozoic Sicker Group, including the upper part of the Myra Formation, the overlying "flow-sediment" unit (Muller's [1980] Sediment-Sill unit), and the Permian to Mississippian? Buttle Lake Formation as well as intrusive rocks of the Jurassic Island Intrusions.

The overall distribution of the various lithological units is poorly constrained, but preliminary interpretation suggests that the property encompasses a portion of the belt of Sicker Group rocks where the regional trend of the rocks changes from northwesterly in the west half of the property, to east to northeasterly, in the east half. However, it appears that various parts of the Buttle Lake Formation and the "flow-sediment" unit are offset and repeated by a complex network of inferred faults. Overall, it appears that the "flow-sediment" unit and Buttle Lake Formation outline a northerly plunging syncline with the succession in the easterly limb repeated by faulting and/or folding. This interpretation is based on the assumption that the three limestone-bearing successions on the property originally formed parts of a continuous single succession rather than occuring at three different levels within the "flow-sediment" unit.

The upper portion of the Sicker Group exposed on the property appears to comprise, from oldest to youngest:

1) The upper part of the Myra Formation consisting of bedded cherts and cherty basaltic tuffs, exposed in the southwestern part of the property, which appears to grade upwards, gradually into:

2) The "flow-sediment" unit, which may be characterized by many facies that vary in nature and proportion from one area to another, consisting of a complexly interlayered succession of basaltic tuffs, lapilli tuffs, flow breccias? and flows with a large number of intervals of bedded, graded, basaltic tuff, cherty tuff and basaltic chert. In the western limb of the faulted syncline?, basaltic tuffs appear to predominate over flows, whereas in the faulted, eastern limb of the syncline?, the unit appears divisible into a major unit of tholeiitic basaltic flows, overlain? by a thinner unit of basaltic clastic rocks. The unit grades upwards, with an increase in the proportion of chert, in the west limb of the syncline?, and with an increase in interbedded limestone in the east limb into:

3) The Buttle Lake Formation which appears to comprise predominantly bedded chert with lesser cherty tuff and interbedded

limestone at the top and base of the Formation in the western limb of the syncline?; and predominantly? limestone with interbeds and intervals of bedded chert in the eastern limb. The Buttle Lake Formation appears to be abruptly overlain by:

4) A poorly resolved unit (the uppermost? part of the "flow-sediment" unit?) of tholeiitic basaltic flows? that generally resemble those of the "flow-sediment" unit underlying the Buttle Lake Formation. Thus, preliminary interpretation suggests the Buttle Lake Formation occurs within, and perhaps near the top of the "flow-sediment" unit.

Intrusive rocks on the property occur throughout the various parts of the Sicker Group, in widely scattered areas. Although the relationship between the various types of intrusive rocks and the nature of their relationship to the rocks they intrude is poorly understood, there is some reason to believe that most, if not all, of the intrusives are various phases of the same intrusive event. Intrusive rocks appear to occur most frequently as dykes, from several metres to several tens of metres wide, perhaps as offshoots from two major intrusive bodies in the northwest part of the property. The westerly of these two bodies forms the eastern part of the Koksilah stock of the Island Intrusions; the stock has been dated as Jurassic (Muller, 1980c), and consists of granodiorite?. The easterly of the two bodies, as well as the most frequently encountered intrusive rock on the property, consists of varieties of seriate, feldspar, hornblende porphyritic and microporphyritic, metavitric dacite. The dacite may also be Jurassic, but strongly resembles porphyritic andesite in the China

Creek area near Port Alberni, where it intrudes Cretaceous argillites of the Nanaimo Group and is thought to be Tertiary in age. The dacite appears intimately associated with (feldspar porphyritic) metavitric rhyolite intrusive rock at, and in the area of, the Blue Bell, King Solomon, and Mabel claim skarn deposits. The rhyolite may represent a siliceous and pyritic phase of the dacite intrusive.

The exact nature of the lithologic succession and the structures involving the rocks on the property is poorly understood for a number of reasons including:

1) Natural cross-sections through portions of the succession are very rare; rather, most outcrop is widely scattered.
2) All outcrops on the property, with the exception of road cuts and those along the Koksilah River, have been smoothed by glaciation and generally have very low relief, which masks the third dimension.
3) All outcrops are nearly completely moss-covered.
4) Nearly all the rocks exposed are strongly fractured to shattered appearing (including the more siliceous intrusive rocks), and generally moderately weathered, which results in great difficulties in obtaining fresh surfaces of the bedrock.
5) A large percentage of outcrops consists of the more competent and generally less fractured intrusive rocks. It is generally difficult to determine the extent of intrusive bodies because of lack of continuous exposure. If the intrusive rocks occur primarily as relatively narrow (few tens of metres or less) dykes and/or sills, as a significant

number of exposures suggest, then the occurrence of widely scattered outcrops of only intrusive rocks within a given area, does not necessarily imply that the area is entirely underlain by intrusives, but rather that the host rock is not exposed.

6) Re-worked glacial till and fluvial? deposits are widespread on the property. Therefore, geologic mapping of the float in areas of extensive overburden is not useful.

5.2.3 Lithology of the Formations and Units

1. Myra Formation

Bedded tuffs and cherts of the Myra Formation are exposed in road cuts and outcrops in the southwestern part of the property, west of Humes Creek and north of the Koksilah River. Bedding measurements from cherty tuffs appear to have a bimodal distribution: one set has strike of 290° and dip of 45°NE; the other set, a strike of 240° and dip of 45°NW. It may be that the northwest-striking bedding reflects the regional trend of the formation, whereas the southwesterly-striking bedding results from folding about a southwesterly trending axis, related to fault? movement along the Koksilah River fault which strikes southwesterly.

The upper, northeasterly contact of the Myra Formation is very poorly defined due to lack of exposure. More than likely it is gradational upwards into the "flow-sediment" unit, and is marked by the appearance of flows and decrease in the proportion of bedded chert and cherty tuffs. These criteria were used to construct the upper contact on the geologic map.

The upper portion of the formation exposed on the property appears to be divisible into two parts: a lower? part of predominantly bedded black cherts and lesser cherty tuffs and tuffs, and an upper? part of bedded, graded, basaltic tuffs, cherty tuffs and chert with intervals of lithic tuff.

The lower? succession comprises very thin to medium-thin bedded, laminated, black metachert. Locally, the chert is colour-banded dark to light army green to light grey, or contains a few percent laminations, 0.2 to 2 mm thick, of near white to light grey to very light buff and rarely, pale pink-tan material. Locally, the black chert contains 0.5 of 1% of very finely (to finely) disseminated pyrite along 0.5 mm thick, discontinuous laminations parallel to bedding.

The black chert succession contains two intervals, perhaps 100 m wide, of a distinctive tuff consisting of very strongly saussurite?-altered, weakly calcite-altered, medium seafoam green, basaltic very fine crystal tuff with intervals of medium-thin to very thin bedded and laminated, seafoam green, basaltic very fine tuff, to cherty very fine tuff, to dark army green or near white basaltic chert locally with a few percent black laminations. The coarser tuffs commonly contain a few percent tuff-sized clasts of near white, very strongly saussurite-altered, microamygdaloidal, metavitric basalt. The feldspar crystal fragments in the coarser tuffs appear to have glassy coatings or be separated by a few percent ash matrix.

The upper subdivision of the Myra Formation appears to consist predominantly of medium to very thin bedded, graded and interbedded, locally laminated, dark to medium grey-green, basaltic, fine to very fine crystal tuff to cherty, very fine tuff, to locally, very drab, light to dark army green basaltic chert. The subdivision contains at least one interval of basaltic, lithic tuff consisting of tuff-sized clasts of medium grey-(blue-)green, strongly epidote-altered, feldspar? porphyritic and microporphyritic, amygdaloidal, metavitric basalt.

2 and 3. "Flow-Sediment" Unit

The complex succession of basaltic flows, flow breccias, lithic and crystal tuffs and bedded cherty tuffs that comprise the "flow-sediment" unit (Muller's "Sediment-Sill" Unit) appears to be the most prevalent of the lithologies underlying the property. The exact nature of the unit is poorly understood because of its relatively poor exposure, but individual outcrops suggest the unit is characterized by very complex interlayering of a wide variety of textural types of basalt. Delineation of the unit and division of the unit into sub-units is difficult because, apart from flows, flow? breccias and hyaloclastites, the unit contains rocks that are common in the underlying Myra Formation and the enclosed? Buttle Lake Formation.

In the southwestern part of the property (the Humes-Kelvin Creeks valley), where the unit appears to occur in the northeast-dipping limb of a major syncline?, the unit is at least about 500 m thick and appears to contain lithologies transitional between those of the underlying Myra Formation and those of the Buttle Lake Formation. However, unlike these formations, the unit contains flows, flow? breccias and hyaloclastite, which apparently form a relatively small proportion of the unit. In this area, the Buttle

Lake Formation is overlain? to the northeast by a very poorly exposed succession of tholeiitic basaltic flows, tuffs and chert that resembles rocks of the "flow-sediment" unit that underlie the Buttle Lake Formation to the southwest, except that flows appear to predominate over tuffs and chert. Thus,it appears that the Buttle Lake Formation occurs within the "flow-sediment"unit (or alternatively is overlain by rather atypical rocks of the Karmutsen Formation).

In the eastern part of the property, the "flow-sediment" unit occurs in the easterly limb of the inferred syncline. Here, the unit is divisible into two sub-units:

1) a lower? sub-unit about 1,350 m wide, comprising thick?, tholeiitic, basaltic flows? with rare interflow? intervals of chert;
2) an upper sub-unit, very approximately 400 m wide, consisting of complexly interlayered basaltic flow? breccias, bedded, basaltic tuffs and cherty tuffs, and flows. This sub-unit resembles the portion of the "flow-sediment" unit underlying the Buttle Lake Formation in the western limb of the syncline?, and has a gradational contact with the Buttle Lake Formation.

A) <u>Flows</u>

The flows within the "flow-sediment" unit display a considerable range of textures, over distances that perhaps reflect the thickness of individual flows (flow contacts were not observed). Thinner flows are characterized by basalts that vary from being finely to very, very finely crystalline, to feldspar-hornblende microporphyritic, metavitric, to very locally, feldspar-hornblende porphyritic and microporphyritic, metavitric, and very locally amygdaloidal (to 5%). Thicker? flows are characterized by massive-appearing finely crystalline basalt.

The crystalline basalts, on a fresh surface, vary in colour from dark, drab army green-grey to very dark grey to medium-dark (blue-)grey, whereas metavitric basalts are commonly medium grey-green. Colour varies with alteration of the feldspars, which are commonly moderately to strongly saussurite?-altered to moderately epidote-altered to less commonly pumpellyite?-altered (and dark, translucent blue-grey) or very weakly altered (or completely altered to albite?) and translucent grey. The basalt weathers a medium pastel pink-orange-buff.

The basaltic flows vary from non-magnetic to weakly to strongly magnetic. Texturally, the crystalline basalts comprise mostly feldspar crystals that occur, with varying proportions, as sub-equant crystals (predominantly) and very fine, crisscrossing laths and microlites (commonly 5-20%, very locally to 85%, where apparent). Chlorite?-altered hornblende occurs interstitially to feldspar, forming a few to 8% of the basalt. The feldspar and hornblende are set in a few to 5% groundmass of opaque white metavitric basalt. Within the finely crystalline basalt of thicker? flows, 5 to 10% sub-equant clear pale, olive-green amber pyroxene? crystals are apparent.

The basalts are commonly sub-brittle and cut by abundant, very dark brown, hematitic fractures. Locally, olive-green epidote-filled fractures are common; locally, chlorite-filled fractures are common.

A few percent disseminated pyrite occurs in basaltic flows? at four of the outcrops examined (stations #26, 59, 118A and 118B). There, basalts contain about 1-3% very fine to fine, disseminated, anhedral pyrite (at one outcrop, generally disseminated within altered? hornblende? crystals). These basalts also contain abundant (1-2%) fracture-pyrite. At one large outcrop (#118A) the basalt contains about 0.25-0.5%, very, very fine grained chalcopyrite in 0.5-1 mm diameter patches. Traces of fracture-chalcopyrite are relatively common in the basaltic flows.

X.R.F. analyses of a sample (#109) of basalt from the major unit of basaltic flows? in the southeastern part of the property (station #144), yielded, in dry weight percent: 50.3 SiO_2, 13.6 Al_2O_3, 6.9 MgO, 13.2 Fe_2O_3, 12.0 CaO, 0.2 K_2O, 1.9 Na_2O, 1.7 TiO_2, 0.2 MnO, with 3.2 L.O.I. The Fe, Mg, Na + K and high Ti, suggest the basalt is tholeiitic.

B) <u>Flow? Breccias</u>

Flow? breccias and/or tuffaceous lapilli agglomerates to tuffaceous, agglomeratic lapillistones appear to be a chaotic mixture of fragments that vary considerably in composition within single exposures, and from place to place. Fragments include varying proportions of dark grey-green, very finely to finely crystalline basalt (locally strongly magnetic); feldspar-hornblende microporphyritic, metavitric basalt; (hornblende porphyritic), amygdaloidal, metavitric basalt; "salt and pepper," very finely to finely crystalline basalt with 85%, white, crisscrossing feldspar laths (quenched? texture); dark army green to medium grey-green basaltic chert to chert; and locally, single, brown to white, calcite crystals that may be crinoid columnal fragments.

C) Hyaloclastite

Hyaloclastite is commonly? interlayered with thinner, basaltic flows, and is a distinctive sub-opaque to opaque medium grey on a fresh surface. It consists predominantly of (generally 70 to 95%) very fine to fine glass shards that are opaque white, and filled with either olive-green epidote?, basaltic chert or basaltic ash?. The hyaloclastite contains variable proportions of fine to very fine feldspar (and hornblende) crystal fragments (generally 5-20%), and locally fine lithic fragments of microamygdaloidal or feldspar-hornblende? microporphyritic, metavitric basalt.

D) Bedded Cherty, Basaltic Tuffs

Bedded tuffs appear to form about 10% of the "flow-sediment" unit where it consists of complexly interlayered flow breccias, flows and hyaloclastite. The bedded intervals appear to vary from 15 cm to 1 to 2 m thick, with bedding thicknesses that vary from medium-thick to medium-thin to very thin, to locally laminated. The tuffs comprise bedded, graded to interbedded, medium to very dark grey-(olive-)green to near black, strongly epidote-altered, basaltic very fine crystal tuff; very cherty, very, very fine tuff; basaltic chert; and chert. The cherts are generally near black, but commonly grade into light-grey to white, and are locally laminated. The crystal tuffs commonly? contain 1-2% very fine disseminated pyrite.

E) Basaltic Lithic and Crystal Tuffs

The "flow-sediment" unit on the westerly limb of the syncline? appears to contain a significant number of intervals, tens of metres thick, of lithic and crystal tuffs (with bedded, cherty intervals). These tuffs appear to be generally? strongly sericite-epidote-, weakly calcite-chlorite-altered. The clasts vary in size from fine to coarse tuff-size to very fine to locally coarse lapilli (to agglomerate). They comprise near-white to medium (green-)grey, opaque, highly microamygdaloidal, metavitric basalt; and less abundant light grey-green to buff-grey, opaque, (amygdaloidal), feldspar (hornblende) microporphyritic, metavitric basalt; augite?-feldspar porphyritic and microporphyritic, metavitric basalt; and a few percent, black to very dark army green to light grey-green basaltic chert to chert. The clasts form very approximately 10-15% of the tuffs, which have a matrix of fine, glass?-coated feldspar crystal fragments, locally accompanied by 5-10% opaque white glass shards.

F) Chert

In at least three places, massive to bedded chert forms major intervals within the "flow-sediment" unit, that resembles cherts of the Buttle Lake Formation. The cherts are either light grey, or buff to tan to very dark (reddish) brown. Locally, they grade into very cherty, very fine tuff.

G) Argillite

Two outcrops of bedded argillite occur within? the "flow-sediment" unit on the westerly limb of the syncline?, in road cuts along the new sub-division road west of Humes Creek (at stations #65 and 68). They consist of medium-thin bedded black, cherty?, argillite or shale that is fissile. The argillite is generally highly deformed by faulting and tight folding, and is cut by dykes (locally highly faulted) of porphyritic dacite. If the dykes are Jurassic in age, then the argillite must be part of the "flow-sediment" unit. However, if the dykes are Tertiary, then the argillite could be Cretaceous in age, and form part of the Nanaimo Group (Haslam Formation). The strong deformation affecting the argillite suggests it belongs to the "flow-sediment" unit because the Nanaimo Group is characterized by weak deformation (broad folding and minor faulting) according to Muller. However, the deformation could relate to Tertiary post-dyke emplacement faulting.

4. Buttle Lake Formation

The most continuous exposure across the Buttle Lake Formation is in a series of bluffs located just northwest of the King Solomon and Blue Bell mines, in the westerly limb of the main syncline?. Here, the formation is at least 175 m thick. Elsewhere on the property, the formation is generally poorly exposed (except along the Koksilah River, which for the most part is south of the property). It is unclear whether the three areas where limestone-bearing successions are exposed on the property (King Solomon mine to Finlay shafts area, Koksilah River banks, and the east-central part of the property), were all part of the same lithologic interval prior to deformation, or whether rocks characterizing the formation occur at three different levels within the "flow-sediment" unit. Preliminary interpretation suggests the former to be the case.

To the west, in the King Solomon mine area, the "flow-sediment" unit grades upwards into the Buttle Lake Formation with an increase in the proportion of bedded chert, decrease in tuffs and cherty tuff, and disappearance of basaltic flows and flow breccias?. Relatively minor interbeds of limestone (and/or skarn) appear to occur at the base and the top of the formation. To the east, in the easterly limb of the syncline?, the "flow-sediment" unit grades upwards into the Buttle Lake Formation with an increase in limestone interbeds, and may comprise predominantly limestone although here the formation is very poorly exposed.

The formation in the western limb of the syncline? consists predominantly of chert, but the chert is, at least locally, complexly interlayered with cherty tuffs. In addition, the formation may be marked by a number of facies transitions along its strike. The chert appears massive and locally colour laminated to locally medium-thick to medium bedded. On a fresh surface, the chert is generally medium grey to green-grey-buff, but locally may be light grey to creamy white or very dark grey to black. It is commonly stained? to a medium to dark (reddish) brown, which becomes predominant in the upper part of the formation. Very locally, the chert has very delicate colour laminations. The chert contains abundant, crisscrossing, paper-thin, clear quartz-filled fractures, and is locally to commonly cut by 1-3% chlorite-filled fractures forming a discontinuous, irregular fracture network.

The cherty tuff intervals within the chert are quite variable in appearance. These intervals appear to comprise thin to very thin, bedded to laminated, graded to interbedded, medium to medium-dark grey-green (to locally dark [reddish] brown), very cherty, basaltic? very fine tuff, basaltic chert and chert. The chert in these graded intervals varies from medium grey-green to very light buff to white to locally medium grey to medium pinkish grey-brown. Pyrite commonly forms 1-2% very, very finely disseminated grains within tuffs and chert.

Limestone is generally? thinly interbedded with chert at the top and base of the Buttle Lake Formation, in the area of the King Solomon-Blue Bell workings. However, it appears that in the immediate area of the workings, where proximate to intrusive rocks, the limestone and/or calcareous tuffs? are altered to skarn-type mineral assemblages including epidote, quartz, garnet, diopside? and calcite. The skarns are described under the section on mineralization. In general, the limestones are probably re-crystallized and comprise light grey-buff to creamy very light tan, very fine grained to locally coarsely crystalline calcite, with a few percent, at least locally, single crystal crinoid columnal fragments to 1x1 cm. The limestone, where thicker bedded, commonly contains thin interbeds of chert or calcareous chert that may be buff or near black. At station #8, near the Finlay shafts, marble grades into brown-black, meta-argillite? with 3-6% medium to very coarse, disseminated pyrite crystals (to 8x13 mm). At a railway cut just north of the Koksilah River, coarsely crystalline marble in contact with porphyritic dacite intrusive, grades eastwards into medium-thin to medium bedded, finely crystalline marble (light buff-grey), to near black, calcareous argillite? and interbedded, graphitic? chert.

5. Uppermost? "Flow-Sediment" Unit?

Along the westerly limb of the inferred syncline, the Buttle Lake Formation is succeeded and overlain? to the northeast by basaltic flows? with minor interflow intervals of bedded chert, cherty tuff, hyaloclastite, and lapilli and crystal tuff. These flows and sedimentary rocks strongly resemble those that characterize rocks of part of the "flow-sediment" unit that underlies the Buttle Lake Formation. However, there appears to be a major sub-unit of basaltic flows that immediately? overlies? the Buttle Lake Formation, which contains a few percent disseminated pyrite and abundant fracture-pyrite, which is unusual and serves as a loosely defined "marker unit."

The contact between the basalts of the uppermost? part of the "flow-sediment" unit and chert, presumably at the top of the Buttle Lake Formation, is exposed for 3 m, at 450 m southeast of the Blue Bell Mine (at station #99). The contact trends north-south; its dip could not be determined because of lack of relief. Twenty metres to the west of the contact, bedding within the chert has a strike of 285° and dip of 75°NE. This relationship suggests an unconformity between the basalt and chert, or that the basalt is intrusive. However, the contact on a regional scale (of the property), appears parallel to the trend of the Buttle Lake Formation. Therefore, it appears that contact relationships at the outcrop-scale may not be used with confidence to infer them at a regional scale. However, it is possible that the contact is a parallel unconformity with local angular unconformity.

The basalts of the flows? vary from predominantly very finely crystalline to locally finely crystalline, on the one hand, to varieties of (feldspar-hornblende porphyritic and microporphyritic) metavitric basalt, on the other. At two outcrops (#123 and 126), the basalt commonly contains 2-4% amygdules. The basalts are locally strongly magnetic, but vary from non-, to strongly magnetic within individual outcrops. Texturally the crystalline basalts comprise sub-equant feldspar crystals (predominantly), and crisscrossing feldspar laths and microlites, with interstitial hornblende and a few percent opaque white metavitric groundmass. At several outcrops (#95-97) the crystalline basalt contains up to 7% very fine pyroxene? crystals in addition to hornblende.

The basaltic flow(s)? immediately northeast of the Buttle Lake Formation in the westerly limb of the syncline?, generally? contain 1-4% very finely disseminated pyrite and are cut by abundant (1-2%) rusty, pyritic fractures. X.R.F. analyses of two samples of basalt, one with about 0.5-1% disseminated pyrite (#107), and the other with about 3-5% disseminated pyrite and 1-2% fracture-pyrite (#108), yielded in dry weight %, respectively: 51.4 and 56.6 SiO_2, 13.3 and 13.7 Al_2O_3, 6.7 and 6.3 MgO, 13.7 and 6.3?? Fe_2O_3, 9.1 and 8.2 CaO, 0.6 and 0.6 K_2O, 2.8 and 3.3 Na_2O, 2.2 and 2.3 TiO_2 and 0.2 and 0.2 MnO, with 1.7 and 5.2 L.O.I. (the low Fe_2O_3 of 6.3% and high L.O.I. of 5.2% for sample #108 suggest the X.R.F. analysis of this sample may be partly inaccurate). The chemical composition of #107 suggests that of a tholeiitic basalt, more characteristic of the Karmutsen Formation than that of the generally calc-alkaline Sicker Group basalts. (Note also the high titanium of #107, also characteristic of Karmutsen basalts.)

Sample #107 also resembles #109, chemically; #109 is a basaltic rock collected from the flows? that appear to underlie the Buttle Lake Formation and form part of the "flow-sediment" unit. If these basaltic units represent sills, then their chemical similarity to the Karmutsen Formation basalts is simply explained by ascribing them to sub-volcanic intrusions related to the Karmutsen Formation extrusions. However, sparse but important evidence (the presence of hyaloclastites and interlayered chert sub-units) suggests the basalts are flows. Thus, it may be that the uppermost part of the Sicker Group contains tholeiitic basalt, in contrast to the calc-alkaline basalts that characterize the lower part of the Sicker Group (i.e. the Myra Formation).

5.2.4 Lithology of Intrusive Rocks

The majority of outcrops examined on the property contain some proportion of intrusive rock. However, the greatest proportion of intrusives (areal extent and frequency of occurrence in outcrop) occurs within an approximately 1.5 km wide, northwest-trending belt bounded on the southwest by the Humes-Kelvin Creeks valley. The belt encompases the skarn deposits occurring along the Buttle Lake Formation.

There are three main types of intrusive rocks on the property:

1) Granodiorite that appears to form one major intrusive body in the northwest part of the property, east of Kelvin Creek. This intrusive probably forms the easternmost part of the Koksilah stock of the Jurassic Island Intrusions, and is at least 1.3 km wide to the north, thinning to perhaps 200 m to the south.

2) Feldspar-hornblende (seriate) porphyritic, metavitric dacite which is the most frequently exposed intrusive rock. It appears to occur primarily as dykes, perhaps generally 1 m to a few tens of metres wide (contact relationships with the

host rock are rarely exposed), and one major body (very poorly delineated) in the north-central part of the property, east of the granodiorite intrusions. In addition, a smaller, northerly trending, about 100 m wide, body of dacite forms the ridgecrest 300 to 800 m southeast of the Blue Bell deposit. The relationship between the granodiorite intrusion and the porphyritic dacite intrusions has not been resolved. The evidence relating to the age of the dacite is conflicting. On the one hand, the dacite strongly resembles andesite intrusives in the China Creek area southeast of Port Alberni, where it intrudes the Cretaceous Haslam Formation argillites, and is thought to be of Tertiary age (Muller and Carson, 1969). On the other hand, at two places the porphyritic dacite appears to grade into granodiorite with an increase in the proportion of feldspar and hornblende phenocrysts and decrease in metavitric groundmass. This suggests the dacite occurs as a marginal dyke swarm phase of the granodiorite and is Jurassic in age.

3) Pyritic, (feldspar porphyritic), metavitric rhyolite, which appears to occur relatively rarely, forming relatively narrow bodies (to 10-15 m? wide) in contact with, or proximate to, skarn and mineralized skarn at the Strip showing; in the southern Western claim, the road cut and "Four-adit" showing in the Mabel claim and in the westerly wall of the Blue Bell Mine pit. In addition, it forms a more extensive, poorly delineated body about 150 m east of the Blue Bell Mine, which appears to trend northwesterly?, and have mini mum dimensions of 150x400 m. The rhyolite and the porphyritic dacite intrusions are very intimately associated with

the skarn and accompanying iron and copper mineralization at or near the top (and base?) of the Buttle Lake Formation. It may be that the pyritic rhyolite is a more siliceous and pyritic, early or late phase of the dacite intrusion, or that it formed by alteration (silicification and pyritization) of the dacite intrusion.

6. Jurassic Granodiorite

The granodiorite of the eastern part of the Jurassic Koksilah stock of the Island Intrusions consists of medium (to coarsely) crystalline feldspar, hornblende and quartz. The intrusive is generally moderately magnetic, but non to weakly magnetic where hematite-altered. Feldspar forms about 75 to 85% of the rock, and varies from sub-translucent medium grey and weakly saussurite?-altered, through weakly translucent, very light grey and moderately saussurite?-altered, to sub-opaque white and strongly saussurite?-altered. The feldspar forms crystals up to 2 x 10 mm. In one large outcrop (#125), the feldspar is medium salmon-pink and hematite-altered.

Hornblende forms about 10 to 15% of the intrusive and occurs as irregular patches between feldspar crystals, but locally a few percent occurs as laths to 4x5 mm. The hornblende appears partly? to completely altered to chlorite?, or chlorite? + epidote? + pyrite, or chlorite? + biotite?.

Quartz is locally apparent and forms about 2-5% of the intrusive. It occurs interstitially to feldspar crystals, in irregular to rectangular patches to 1x3 mm.

Locally, the granodiorite contains about 1-2% finely disseminated pyrite.

Xenoliths?, several centimetres in diameter to 1.5 x 1.5 m, occur within the granodiorite at the north end of the property. They consist of very dark green-grey, moderately magnetic, medium crystalline, feldspar-hornblende diorite? with 1% disseminated pyrite and locally 1% very finely disseminated magnetite. They may, alternatively, represent more mafic phases of the granodiorite.

X.R.F. analyses of a sample (#113) of granodiorite from the southeast corner of the Cornucopia claim, just north of the "4-adit" showings (station #37G), yielded, in dry weight %: 67.3 SiO_2, 15.1 Al_2O_3, 2.7 MgO, 4.8 Fe_2O_3, 4.8 CaO, 0.9 K_2O, 3.6 Na_2O, 0.2 TiO_2, and 0.5 MnO, with 3.0 L.O.I. Chemically, this sample resembles an albitized? granodiorite.

7. Porphyritic Dacite

The dacite intrusive is one that shows many faces because of variable alteration and proportions of its constituents. In general, however, the intrusive occurs as variations of a seriate, feldspar-hornblende porphyritic and microporphyritic, metavitric dacite.

The dacite weathers very light buff to near white and forms blocky, angular fragments. On a fresh surface, the dacite shows considerable variation in colour due to variable saussurite? alteration, but is distinctive because of the opaque white spotted appearance caused by saussurite-altered feldspar phenocrysts. The metavitric (to very locally? very, very finely crystalline?) groundmass is generally a sub-translucent medium to light greenish grey to light grey to grey-buff colour. With increased saussurite alteration (from weak to moderate to strong), the groundmass becomes sub-opaque light grey to opaque light buff or white. Locally, but over relatively broad zones?, the dacite is hematite-altered and appears medium-dark pinkish grey to (red-)brown to brown-grey.

Textures of the dacite are commonly indistinct because of the saussurite alteration, so that it is difficult to provide a general description. However, the metavitric groundmass appears to form from 5-10% to 75% of the rock (perhaps about 60% on the average). Commonly, the groundmass contains a few percent extremely fine chloritic? dits, and a few percent opaque buff dits.

Feldspar phenocrysts and microphenocrysts form from 5-7% to 50-75% of the porphyry, but more commonly about 15-20%. The phenocrysts are seriate and vary through a wide range of sizes from 0.1 mm diameter up to 2 x 4 mm (locally to 3 x 7 mm). The feldspars generally have indistinct boundaries. They vary from sub-opaque white and very strongly or completely saussurite-altered, to less commonly sub-translucent light grey to medium (greenish) grey and perhaps re-crystallized? to albite?. Locally, the feldspars show distinct concentric zoning (where strongly saussuritic).

Hornblende commonly forms a few percent to 5-10% of the dacite, as phenocrysts up to 0.5x2 mm to 2x6 mm, locally to 5x5 mm, blocky grains and laths. The hornblende appears partly to be completely altered to chlorite + epidote, but locally to actinolite?. Locally, the dacite contains from 1 to 5% irregular to locally rectangular patches of bright olive-green, very fine grained epidote (locally with a quartz core), up to 1x3 mm, but very locally to 10 x 17 mm. These may be completely altered hornblende (or feldspar) phenocrysts, or possibly amygdules.

At one outcrop (station #16, 130 m southwest of the Blue Bell deposit), the dacite contains 1-2% clear grey quartz phenocrysts. They are sub-equant, euhedral but microbrecciated and up to 2x2 mm in size.

At five localities the dacite intrusive is weakly to moderately magnetic. At two outcrops, the dacite contains about 3-5% very fine to fine, disseminated, anhedral pyrite. At several locations, it contains minor very fine grained chalcopyrite along fractures.

Xenoliths in the dacite were observed at four widely scattered locations. They are up to 2 cm in diameter, sub-angular to rounded, and consist of, a) medium-dark (green-)grey, (hornblende-feldspar porphyritic), feldspar-mafic microporphyritic, metavitric dacite?, b) "salt and pepper" appearing, (feldspar-hornblende porphyritic) very finely and finely crystalline, feldspar-mafic microgranodiorite, and c) finely crystalline, feldspar-hornblende (15-20%) basalt?.

X.R.F. analyses of two samples of the dacite intrusive (#110 and 111) from near the middle adit of the King Solomon Mine (station

#150) and from just southwest of the Blue Bell Mine (station #18), yielded, respectively, in dry weight %: 67.8 and 62.3 SiO_2, 15.0 and 16.0 Al_2O_3, 2.1 and 3.4 MgO, 5.0 and 6.5 Fe_2O_3, 3.5 and 5.5 CaO, 0.4 and 2.0 K_2O, 5.4 and 3.5 Na_2O, 0.5 and 0.6 TiO_2, and 0.2 and 0.2 MnO, with 1.6 and 2.3 L.O.I. Chemically, the first sample (#110) resembles a rhyodacite and the second (#111) a dacite (albitized?). The chemical composition of #110 very strongly resembles that of the sample of the Jurassic granodiorite (#113; see above section). This suggests that the two types of intrusive are related and perhaps the same age.

8. Pyritic, (Feldspar Porphyritic) Rhyolite

This intrusive rock is characterized by abundant rusty fractures and very strong fracturing, which makes obtaining a fresh surface difficult. It is often difficult to distinguish it from chert when it is strongly saussurite-altered and without conspicuous feldspar phenocrysts.

On a fresh surface the rhyolite varies from sub-translucent light-grey (weakly saussuritic) to sub-opaque light tan to sub-opaque creamy white (strongly saussuritic). The groundmass appears to be variably saussurite-altered and cryptocrystalline? or glassy, and contains commonly 2-3% very, very fine, irregular, opaque white dits.

Feldspar phenocrysts and microphenocrysts are locally apparent in the rhyolite. They form from 5% to 10-15% of the intrusive, and range from 0.1 to 2 mm diameter to locally 2x5 mm. The phenocrysts range from clear grey to very light buff to opaque white (and completely? saussurite-altered). In one piece, feldspar forms about 10-15% crisscrossing microlites. In another piece, feldspar? phenocrysts form about 10-15% of the intrusive, and occur as subhedral to anhedral, angular grains up to 2x5 mm, that appear frosty white, with no cleavage and a non-conchoidal fracture surface. These grains may be quartz-altered feldspar phenocrysts. Elsewhere, one clear, dark grey microphenocryst with a hexagonal outline was found. It may be a quartz-altered hornblende? phenocryst. Thus, there is the suggestion that the rhyolite was derived by silicification of a more basic rock, perhaps the dacitic intrusive.

The rhyolite, at least locally, is cut by a few percent ultrathin, discontinuous, clear quartz-filled fractures. Very locally, open fractures to 1-2 mm wide and 6 cm long occur, with quartz crystals projecting into the open fracture from the walls.

Alteration zones, pods and fracture-fillings of very fine grained epidote commonly form about 0.5 to 2% of the rhyolite. The epidote is commonly accompanied by variable percentages of pyrite (described below). It appears that these epidote-pyrite-filled fractures and fracture-alteration zones are related to the formation of skarns and mineralization, where the rhyolite intrudes carbonate-bearing portions of the Buttle Lake Formation.

The rhyolite contains zones of strong epidote alteration, with 5-15% to semi-massive pyrite and magnetite and pyrrhotite? at the skarn occurrences at the Blue Bell deposit, the "Four-adits" on the Mabel claim and the Strip showing in the southern Western claim. These are described under the section on mineralization. There is another occurrence of pyritic rhyolite that is notable. It is located 250 m east of the Blue Bell deposit, just south of a small swamp ("Swamp" showing-station #6). Here the pyritic rhyolite is exposed in four, 0.5 m diameter, low relief outcrops and numerous cobbles and large boulders apparently blasted from outcrop. The pyrite has a highly irregular distribution, from commonly 3-4%, to locally 30-50%. The pyrite varies from very fine to coarse grained, and is generally anhedral but locally subhedral. Most, if not all, of the pyrite appears fracture-controlled, forming grains disseminated along microfractures, commonly associated with epidote. The pyrite also occurs as fine to coarse grains in pods to several centimetres across, locally with a fine-grained epidote matrix. A large boulder, 0.65 x 1.5 x 2.3 m in size, consists of rhyolite with up to about 30-40% pyrite and 20-30% epidote. A chip sample (#9896) across 65 cm of the generally moderately weathered pyritic rhyolite yielded >40,000 ppm Cu, 8 ppm Pb, 86 ppm Zn, and 11.8 ppm Ag. The high Cu content is surprising as no chalcopyrite was noted in the sample.

X.R.F. analyses of two samples of the rhyolitic intrusive, one (#9897) from the Swamp showing, the other from the Strip showing (station #107A, sample #114), yielded, respectively, in dry weight %: 76.5 and 76.6 SiO_2, 10.4 and 12.9 Al_2O_3, 1.3 and 0.6 MgO, 5.2 and 1.6 Fe_2O_3, 2.6 and 1.1 CaO, 0.8 and 2.2 K_2O, 2.8 and 4.8 Na_2O, 0.3 and 0.1 TiO_2, and 0.1 and 0.1 MnO, with 3.0 and 1.2 L.O.I. Chemically, the intrusive resembles a rhyolite (albitized?). Thin-section examination might resolve the question of whether the rhyolite was formed by silicification of the dacitic intrusive rock.

Diabasic-appearing Intrusive

This intrusive-appearing rock is exposed in a few large outcrops in the low, saddle-like area about 80 to 200 m northeast of the Blue Bell deposit. Its relationship to the main types of intrusives discussed above is not known but the diabasic-appearing rock does resemble the Jurassic granodiorite. However, it also resembles a coarser grained version of a finely crystalline, feldspar-hornblende basalt (with 2-4% disseminated pyrite) exposed 180 m to the east of the "diabase." If this basalt is part of a flow (which is in contact with chert), the "diabase" may also form part of a thick flow. The "diabase" resembles that forming the core of thick flows in the "flow-sediment" unit in the Port Alberni area.

The "diabase" consists of medium crystalline feldspar, hornblende and quartz and is moderately to strongly saussurite-altered, weakly chlorite?-altered, moderately magnetic and medium grey-green in colour. The hornblende forms about 10-15% of the rock, and occurs as patches to 4 x 6 mm, that are interstitial to the feldspar. At one outcrop, the hornblende appears to be partly altered to actinolite?. The "diabase" also contains about 2-6% clear grey quartz as irregular patches to 1 x 2 mm, interstitial to feldspar. Pyrite (1-2%) occurs as very irregular, patchy, fine grains.

X.R.F. analysis of a sample of the diabasic-appearing rock (sample #112, from station #19), yielded, in dry weight %: 56.1 SiO_2, 15.5 Al_2O_3, 6.4 MgO, 8.8 Fe_2O_3, 9.8 CaO, 0.4 K_2O, 2.2 Na_2O, 0.6 TiO_2, and 0.2 MnO, with 1.7 L.O.I. The intrusive?

chemically resembles a diorite or andesite. Chemically the intrusive is similar to sample #108 of basalt from the "uppermost" part of the "flow-sediment"? unit (station #118B), except that the intrusive contains 1.8% more Al_2O_3, 2.5% more Fe_2O_3, and 1.7% less TiO_2. The analyses show the intrusive is quite dissimilar to other intrusive rocks sampled (granodiorite, dacite and rhyolite). Thus, X.R.F. analyses, as well as textures, suggest the "diabase," may be a coarse-grained phase of the basalts of the uppermost? part of the "flow-sediment" unit.

5.2.5 Mineralization: Description of the Deposits and Showings

A. Introduction

Skarn deposits have been explored by adits, trenches, shafts, diamond drilling, and stripping on the King Solomon property along a belt that trends northwesterly, and is at least 3 km long (1.1 km lies within claims not part of the property). Cursory to relatively detailed examination of the main workings (no underground mapping was conducted), and reconnaissance-scale geologic mapping suggest that skarn deposits occur at and near the top and base of the Buttle Lake Formation where it contains interbedded limestone (marble) and is cut by pyritic rhyolite and porphyritic dacite dykes?.

Regionally, the mineralization at the skarn deposits appears more or less stratabound, but at the deposits it appears to be predominantly, if not completely, controlled by fractures and faults. The mineralization still in place at the workings consists of fracture fillings, and shear-bounded lenses or pods of massive pyrite or pyrrhotite + magnetite with highly irregularly distributed chalcopyrite, and less? commonly disseminated sulphides and/or oxides in altered intrusive rock and skarns.

The deposits occur within strongly fractured, bedded, cherty, basaltic tuffs, chert and varieties of epidote-garnet-diopside?-quartz-calcite skarn. All of the deposits, with the exception of the Viva, occur within and/or adjacent to skarn. Interbeds of limestone are exposed at three of the deposits (King Solomon: middle and upper deposits, and deposits on the Mabel claim). However, skarn is clearly interlayered with chert at several of the workings, which suggests the skarns resulted from alteration of limestone or calcareous sedimentary rock. Thus, it appears that the occurrence of interbedded limestone and calcareous rocks had a significant control on mineralization.

This section contains descriptions of the mineralization and host rocks, and the results of the chip sampling at the various workings on the property, and on the Mabel claim. The purpose of the cursory examinations of the deposits was to provide sufficient data on the nature of the mineralizaiton and host rocks, on which to base more regional exploration and to determine whether there are any untested areas that warrant diamond drilling.

It is clear that the deposits are structurally and lithologically complex and that much more work is required to determine the structural and stratigraphic controls on mineralization, and its relationship to intrusive rocks. Collecting information from the exposures at the workings is a slow, difficult process because most of the relationships are concealed by very strong fracturing, deep weathering, gossan and alteration. As well, all the shafts are water-filled and the safety of the adits uncertain.

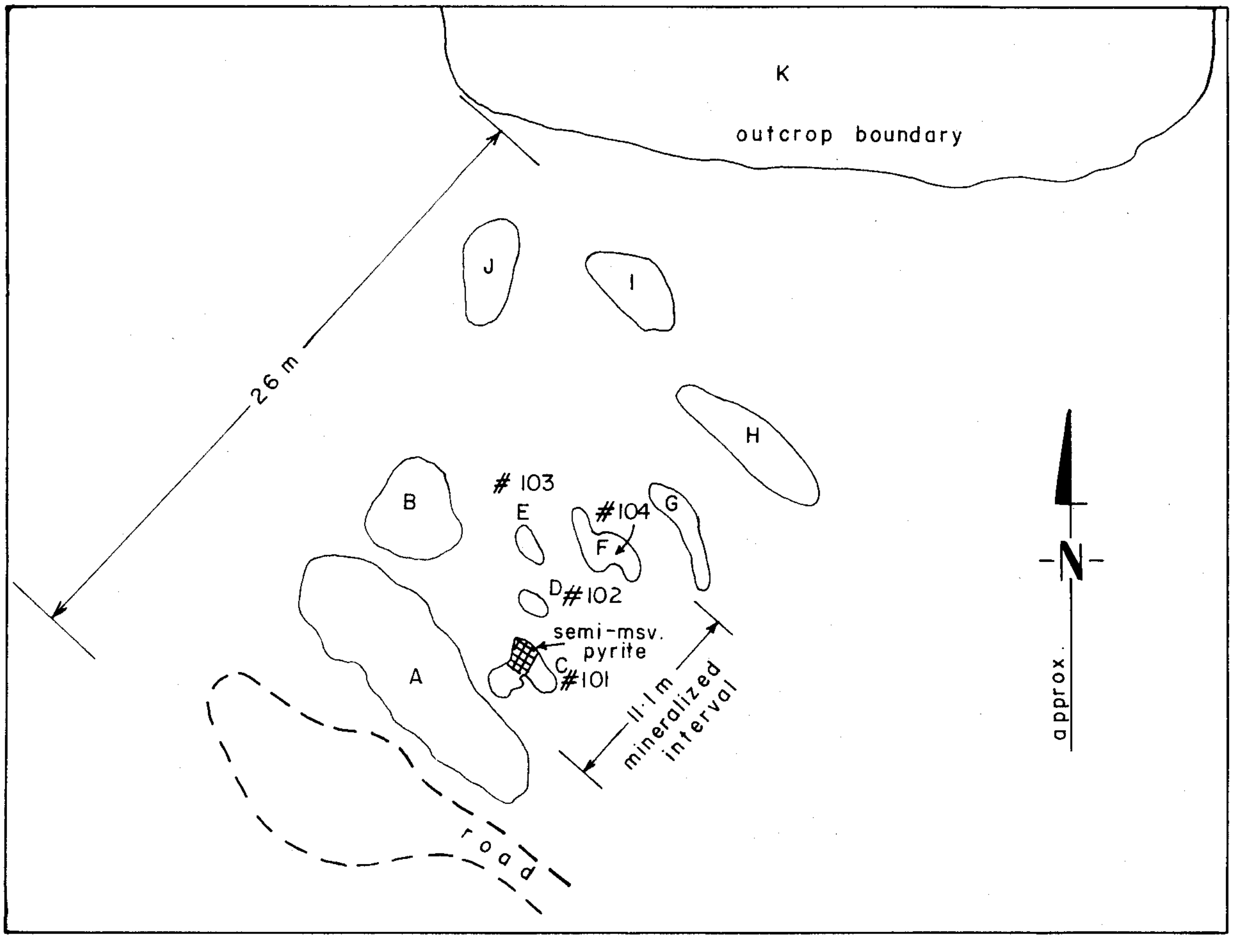
The order in which the skarn deposits are described, is based on their location, beginning in the northwest, and progressing to the southeast. The results of chip sampling of the exposed mineralization may or may not be representative of the mineralized intervals, which appear highly irregular in nature, thickness and distribution.

B) Strip Showing

A stripped showing of mineralized skarn and rhyolite intrusive is located about 1600 m NW of the Blue Bell deposit. It consists of a series of low relief outcrops that partially expose an about 11 m wide zone of mineralization that may occur at the top of the Buttle Lake Formation.

The showing consists of semi-massive to massive pyrite-magnetite-pyrrhotite(?)-chalcopyrite mineralization within a rhyolite intrusion and garnetite skarn occurring at the contact zone between Buttle Lake bedded chert and the overlying? basaltic flows of the uppermost part of the Flow-Sediment Unit.

The rhyolite intrusive is exposed in 6 outcrops (A, C, D, G, H, and J - Figure 5). The rhyolite is very intensely shattered, very strongly saussurite-altered, and contains abundant rusty pyritic fractures and 0.5-15% epidote-filled crisscrossing fractures and fracture-alteration zones. Locally chloritic fractures up to 4% are also present.



Sample No.	Width	Cu (ppm)	Zn (ppm)	Ag (ppm)
101	2·2 m	900	48	1·4
102	0·9 m	14 800	52	4·2
103	0·6 m	520	32	2·2
104	1·1 m	23 400	98	6·2

See text for outcrop descriptions.

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STRIP SHOWING
SKETCH MAP
KING SOLOMON PROPERTY

Project No:	V 155	By:	G. B.
Scale:	not to scale	Drawn:	J. S.
Drawing No:	5	Date:	OCTOBER 1985.

MPH Consulting Limited

The mineralized zone is exposed in outcrops C-F (Figure 5). Outcrop C consists of rhyolite with abundant massive fracture-pyrite and a 1.4 x 1.5 m mass of 25-50% fine-grained disseminated pyrite. Outcrop D consists of rhyolite with 10-20% extremely fine-grained magnetite and 5-10% fine to coarse pyrrhotite (pyrite?) in irregular patches to 1x1 cm. At outcrop E, garnetite composed of 80% garnet in a quartz-chlorite groundmass contains 5-7% fine (to locally coarse) grains of pyrite along fractures. Epidote-chlorite-garnet skarn at outcrop F contains 10% fine to medium-grained disseminated pyrite and 3-8% fine to very coarse grained chalcopyrite. Sample results are listed below:

	Sample#	Width	Cu	Ag	Zn (all in ppm)
Outcrop C	101	2.2 m	900	1.4	48
D	102	0.9	14,800	4.2	52
E	103	0.6	520	2.2	32
F	104	1.1 m	23,400	6.2	98

Buttle Lake Formation limestone is exposed in outcrop B, feldspar-hornblende porphyritic dacite in outcrop I, and basalt of the uppermost part of the Flow-Sediment Unit in outcrop K. The basalt is strongly sheared along the SW margin of the outcrop.

The mineralized section is less than 50% exposed at the Strip Showing. The potential trend length of the mineralized zone is limited to 700 m by intrusion of the Jurassic granodiorite 300 m NW and 400 m SE of the showing. No massive mineralization was observed during brief examinations of several roads cross-cutting the projected trend of the mineralized zone.

C) Four Adits Showing

The mineralized skarn zone exposed on the Mabel claim (i.e. off the Reward property) was examined and sampled as the zone is relatively well exposed in roadcuts. Four adits explore the skarn zone. The roadcuts expose generally very strongly fractured gossanous intrusive rocks including rhyolite, porphyritic dacite, and granodiorite that contain shear-bounded inclusions 2-7 m wide of chert, skarn, and marble. The intrusives are in contact to the south, with chert and interlayered skarn of the Buttle Lake Formation, perhaps at or near the top of the formation. The skarns and intrusives contain abundant fracture-pyrite; the rhyolite commonly contains 3-5% disseminated pyrite and locally, narrow (up to 40 cm) zones of strong epidote alteration with 5-15% pyrite. The only massive mineralization exposed in the roadcuts consists of a lens? of massive magnetite up to 50 cm in width with about 1-2% chalcopyrite.

A chip sample across the magnetite lens (50 cm) returned 9700 ppm Cu, 4.0 ppm Ag, and 80 ppm Zn (9906). A grab sample of chlorite-altered basalt with 10% chalcopyrite from an outcrop of epidote-altered rhyolite yielded values of greater than 40,000 ppm Cu, 3.4 ppm Ag, and 56 ppm Zn (9903).

At 110-120 m northeast of the southeast end of the Four Adits Showing roadcuts, two outcrops expose basalts of the uppermost? part of the "flow-sediment" unit. The basalt resembles that just northeast of the Strip Showing, 725 m to the northwest, and that exposed 250 m northeast of the Blue Bell deposit, 750 m to the southeast. It appears that the Four Adit showing occurs at about the same lithologic level in the succession as the Strip showing and the Blue Bell deposit; that is, near the top of the Buttle Lake Formation and just below its contact with the uppermost? part of the "flow-sediment" unit.

D) Blue Bell Mine

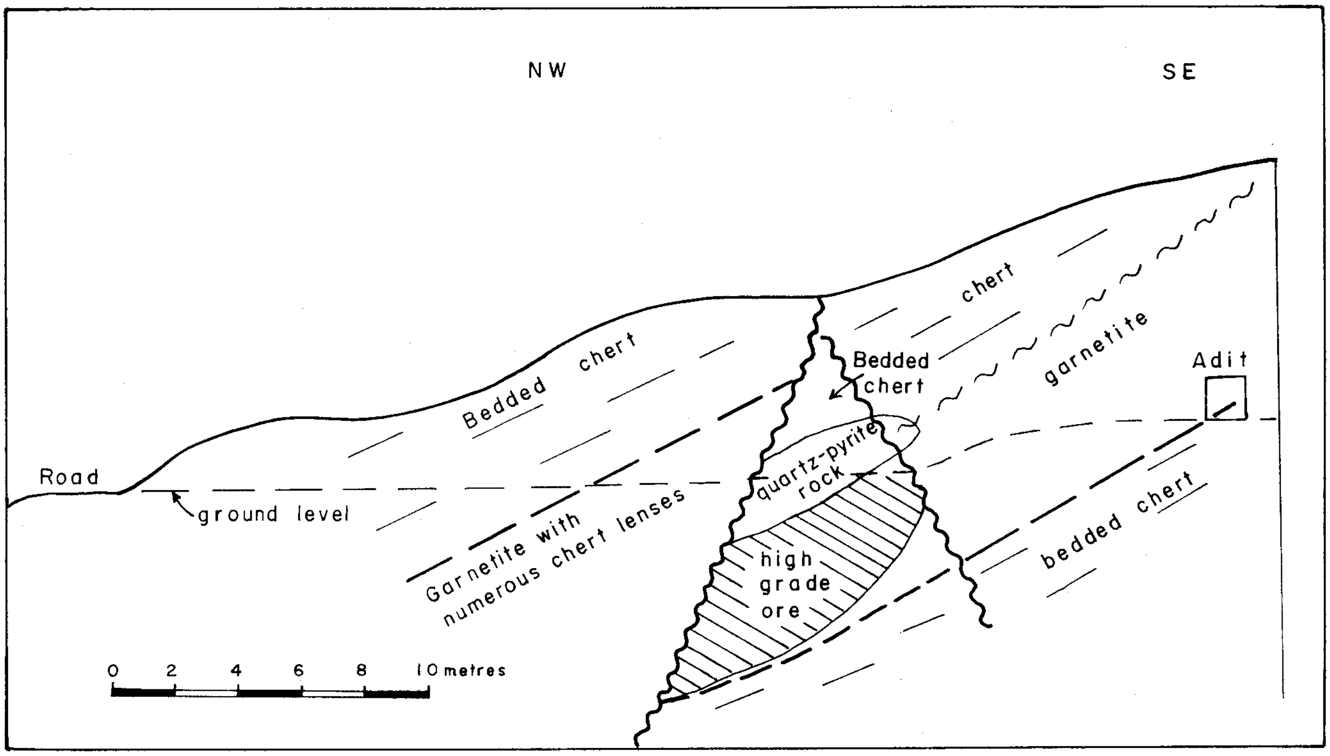
The Blue Bell deposit was explored by driving two declines and an adit between 1905 and 1907. The Blue Bell produced 190 tons of ore grading 5.34% Cu and 0.61 oz Ag/ton in 1907. Kirkham (1960, p.24) states that the deposits at the Blue Bell Mine are irregular and difficult to explore and map. The deposits, he states, consist of "areas of massive sulphides and oxides, known to contain up to 20% copper, controlled, in part, by shears within an interval of garnetite, 2.4 to 4.6 m thick, and limited in lateral extent by the enclosing Saanich granodiorite" (i.e. Jurassic intrusives).

Exposures at the pit suggest that massive magnetite + pyrrhotite? + pyrite + chalcopyrite occurs as fault-bounded wedges? within garnetite, at and near the basal contact of the garnetite with the underlying chert and cherty argillite. The garnetite appears to form a stratabound unit that strikes 240° and dips 17°NW, between underlying bedded, graded, pyritic chert and cherty argillite, and overlying bedded pyritic chert, that in one place strikes 300° and dips 35°NE, at the top? of the Buttle Lake Formation. At the south wall of the pit, a pyritic quartzose rock intrudes? the garnetite, and may be the same type of rhyolitic rock (Unit 8) that intrudes the Buttle Lake Formation at other skarn deposits on the property.

At at other skarn deposits on the property, the rocks at the Blue Bell pit are gossanous to deeply weathered, generally rusty weathering with abundant rusty fractures in the intensely shattered rock.

Chip sampling of massive mineralization exposed in the Blue Bell pit yielded the following results: sample 9883, 0.8 m, 1.00% Cu, 0.03% Zn, 0.28 oz Ag/ton; sample 9884, 2.0 m, 3.66% Cu, 280 ppm Zn, 0.74 oz Ag/ton with 303 ppm Co. A sample across 2.4 m of mixed rhyolite intrusive, garnetite, and epidote skarn with pods of massive pyrite and patches of magnetite and chalcopyrite returned 0.40% Cu, 0.01% Zn, and 0.26 oz Ag/ton (9886).

The potential at the Blue Bell Mine for the occurrence of more high-grade chalcopyrite-magnetite deposits is very difficult to assess because of the apparently complex nature of the controls on mineralization. These appear to include: 1) proximity to the pyritic rhyolite intrusions, 2) presence of calcareous intervals within the chert and cherty tuffs and/or argillites, and 3) the orientation and continuity of structures (faults) which appear to have localized the mineralization. Kirkham's 1960 report provides a reasonable interpretation of the structure and distribution of the lithologic units and massive magnetite at the Blue Bell Mine (Figure 6). The section shows the massive magnetite-chalcopyrite deposit is essentially stratabound within an interval of garnetite between overlying bedded chert and underlying cherty argillite?. However, the deposit occurs between two opposite-dipping faults, and below the rhyolite intrusive. The potential for further deposits thus appears to depend on the persistence, with depth, of these bounding faults, and the lithologic succession, and the presence of the rhyolite intrusive.



REWARD RESOURCES LTD.

BLUE BELL MINE PIT
CROSS-SECTION OF EASTERLY WALL
KING SOLOMON PROPERTY

Project No:	V 155	By: G.B. (after Kirkham (1960))	
Scale:	approx. 1: 2400	Drawn:	J.S.
Drawing No:	6	Date:	OCTOBER 1985.

MPH Consulting Limited

The section also suggests the deposit was tabular with a width of up to 10 m or so, with no evidence for fault-offset extensions of the deposit to the northwest or southwest of the bounding faults. Exploration for extensions of the deposit would be difficult, and require consideration of the plunge of this flattened, cigar-shaped deposit. Its plunge might be parallel to the line of intersection between the contact of the garnet with the underlying cherty argillite?, and the northwesterly bounding fault or about 10° to the northeast (037°), or about 35°NE (024°) if the orientation of bedding in the upper chert unit is used.

E) Viva

This shaft, referred to as part of the workings on the Blue Bell upper showings by Kirkham, 1960, is located about 175 m southeast of the Blue Bell Mine. The shaft is now only 2.9 m deep. It exposes pyrrhotite in fractures cutting chert. The pyrrhotite is highly irregular in concentration and distribution, but appears completely fracture-controlled. It occurs in pods up to 60 x 70 x 80 cm or larger, and is fine grained and "disseminated" within a 10-20% matrix of grey-green chert?, locally with a few percent patches of massive, very fine grained magnetite. The massive pyrrhotite is cut by a few percent fractures to 1 cm wide, filled with very coarse grained pyrrhotite and very fine grained massive magnetite.

The pyrrhotite is hosted by very intensely shattered, rusty weathering, weakly graded, grey-green basaltic? chert to chert. The chert is also cut by abundant epidote-filled fractures 0.05 to 1 mm thick. A chip sample across (east-west) 2.3 m along the north wall of the shaft exposing chert with very approximately 5-10% fracture-pyrrhotite (not including massive pyrrhotite pods; sample #9887), contained 0.34% Cu, 0.01% Zn, and 0.06 oz Ag/T. A chip sample across the 60 x 70 x 80 cm pod of massive pyrrhotite in the northeast corner of the shaft (sample #9888) contained 0.28% Cu, 0.01% Zn and 0.08 oz Ag/T.

The chert with fracture-pyrrhotite exposed in the shaft, appears to be capped to the east by 1 m or more of grey-green basaltic chert with a few percent fracture-pyrrhotite. It appears to be bounded to the west by medium to dark grey chert with epidote-filled fractures and minor pyrrhotite-filled fractures.

F) Upper King Solomon Mine Workings (L17G Claim)

These workings, also known as Lee's upper workings, are located about 450 m south-southeast of the Blue Bell Mine and comprise an inclined shaft (55°NE) which connects to a 24 m long adit driven from the south, and further south, a cut. Kirkham's mapping of the adit indicates mineralization consists of pyrite and chalcopyrite occurring in fractures in interbedded chert and marble and disseminations in the marble, forming 15% of the rock within the mineralized zone. The interbedded chert and marble occurs within the Buttle Lake Formation, perhaps at or near its base. It is complexly folded and faulted, but may dip from 40 to 60° to the northeast overall.

The trench leading to the portal of the adit, examined in 1985, exposes intrusive rock in complex contact with chert to the northeast. The intrusive consists of grey, feldspar-mafic porphyritic dacite. The intrusive appears to become finer grained (i.e. the phenocrysts) and darker (to medium-dark green-grey) at or near its contact with the chert.

The cut exposes complexly? interlayered, shattered, faulted and weathered chert and epidote-skarn. The chert is dark grey to very light grey, with local distinct, very delicate laminations. The darker cherts are cut by 3-10% fractures, forming a complex, crisscrossing array, with bleached selvages. The chert is commonly cut by 1-2% epidote-filled fractures, 0.1 to 4 mm thick.

The epidote-skarn occurs in layers to 1.5 m+ thick, and comprises massive, very finely crystalline? epidote, commonly with copper stains on fractures cutting it. One piece shows a gradation from massive epidote-skarn through 3-4 cm of very strongly epidote-altered rock, (originally cherty, extremely fine tuff?) into (over 3-4 mm) light grey chert. This piece shows that the skarn probably was derived from an original component of the sedimentary succession.

G) Middle King Solomon Mine Workings (L17G Claim)

These workings consist of an adit driven easterly 34 m, and several cuts into a large gossanous outcrop also known as Lee's lower showing, 150 m northwest of the upper King Solomon workings, and 410 m southwest of the Blue Bell Mine. Total recorded production from the King Solomon from 1904 to 1912 was 573 tons of ore grading about 6.2% Cu, 0.75 oz Ag/ton. Presumably, this ore was mined from the middle workings.

According to Kirkham (1960), the adit is driven through a 6.1 m thick body of massive pyrrhotite + pyrite (+ chalcopyrite) that strikes 030° and dips 35° SE. The mineralization occurs at or near the base of the Buttle Lake Formation in a succession of very strongly fractured, faulted and folded, bedded cherty basaltic tuffs, chert, interbedded limestones and interlayered skarn. At the adit portal, or about 7 m west of the body of massive pyrrhotite, rhyolite intrudes the cherty tuff succession. The one attitude of bedding within the adit shown on Kirkham's map (1960), indicates bedding strikes about east-west and dips 5° north. This suggests the adit follows the same lithologic interval of bedded cherty tuffs and limestones along its full length, and that the body of massive pyrrhotite cross-cuts bedding at about 60°, and therefore is not stratabound as at the Blue Bell Mine.

The rocks exposed along the trench leading to the portal of the adit and in the gossanous outcrop extending southwards from the adit were examined in 1985. The south wall of the trench leading to the adit portal consists predominantly of intensely shattered, deeply weathered, gossanous cherty tuff locally grading into basaltic chert, with disseminated and fracture-bound pyrrhotite. The tuffs are weakly graded, locally bedded appearing, and consist of weakly to strongly cherty, basaltic, fine to very fine tuff that very locally grades into basaltic chert. The tuff is very strongly epidote-altered.

Pyrrhotite at the trench to the portal, is very irregularly distributed as sub-equant to very irregular disseminated patches to several centimetres across, as fracture-fillings in fractures 0.5 to 10 mm+ thick, and in massive pods? or lenses greater than

12 x 20 cm across. The pyrrhotite is generally very fine grained, and commonly mixed with a few to 10% very fine grained chalcopyrite. A chip sample (#9889) down the 3 m high south wall of pyrrhotitic cherty tuff assayed 0.44% Cu, 0.01% Zn and 0.22 oz Ag/T.

The north wall of the trench leading to the adit portal cuts through an intrusive rock. It consists of very strongly fractured, weakly sheared, very strongly saussurite-altered, variably chlorite-epidote-altered rhyolite. The contact between the intrusive and the overlying cherty, basaltic tuff strikes 085° and dips 25° south. Thus, it appears that the adit may have been driven through cherty tuffs just south of their contact with the underlying dyke exposed at the portal.

A gossanous outcrop extending about 60 m south of the adit consists of 5.6 m of interbedded limestone and chert (with two layers of epidote skarn 40 and 80 cm thick) underlain by bedded cherty basaltic tuff and chert which is cut by three or more dykes of dacite up to at least 2 m in width. The limestone and chert occur in the NE corner of the outcrop and are folded into a tight antiform with a hinge trending 265° and plunging about 15°W. Sample 9891 taken over 9.7 m at a point about 25 m south of the adit assayed 0.08% Cu, 0.01% Zn, and 0.06 oz Ag/ton.

H) Lower Adit, King Solomon Mine (L17G Claim)

This adit is located 140 m southwest of, and 52 m vertically below, the middle adit of the King Solomon Mine. It was driven between 1907 and 1916, 198 m to the northeast (about 048° azimuth) to intersect the orebody of the middle adit at a point about 135 m down its dip-projection. However, according to Kirkham (1960, p.4), a survey by Cellardor Mines in 1958 indicates that a mistake had been made in the original survey to locate the lower adit, which accounts for its failure to intersect the dip-projection of the orebody in the middle adit. If the orebody in the middle adit indeed strikes 030° and dips 35°SE, as Kirkham indicates, then the location of the lower adit is inexplicable. This is because the lower adit was driven sub-parallel (at 048°) to the strike of the orebody (030°), from a collar located 145 m southwest (220°) of the orebody, which roughly lies on the trend-projection of the orebody, but 52 m below it. In other words, to intersect the dip-projection of the orebody in the middle adit, a cross-cut from the lower adit would have to be driven approximately 75 m or more to the southeast. In 1959, Cellardor Mines drilled a series of holes from within the lower adit at a station 168 m from the portal, and found the results sufficiently encouraging to propose widening the adit and raise up to the orebody. It is not known whether this underground development was completed.

Kirkham's (1960) mapping of the lower adit, shows it was driven through a strongly fractured and brecciated interlayered succession of basaltic flows, basaltic crystal tuffs, and bedded, cherty, basaltic tuff to chert, complexly intruded by six dykes? of feldspar-mafic porphyritic dacite. This succession forms part of the upper unit of the "flow-sediment" unit (Unit 3) that underlies the Buttle Lake Formation.

The potential for further deposits of chalcopyrite-bearing pyrrhotite, in the King Solomon Mine may be more fully evaluated by synthesizing and interpreting the results of the drill program at the King Solomon Mine area by Cellardor Mines Ltd. in 1959 and 1960. It appears, however, that Cellardor Mines was discouraged by the apparently erratic distribution of the locations of higher copper-grade intersections. It appears that Cellardor did not define their drill targets based on a model for the structural controls on ore emplacement, which perhaps could be derived from the results of their drilling.

I) Two Shafts, Southwestern Pacific Star Claim

Two shallow shafts about 15 m apart (along azimuth of 125°), are located (at station #108) 885m SSE of the Blue Bell Mine and about 600 m southeast of the middle adit of the King Solomon Mine. Both shafts are only about 2 m deep; only the northwesterly one was examined, because the other is filled with debris from the vegetation.

The northwesterly shaft exposes porphyritic dacite intrusive overlying basaltic tuff and chert that contains 7-20% patchy pyrrhotite. The intrusive consists of strongly fractured (fracture-cleavage), medium grey-green, feldspar-hornblende porphyritic dacite, which overlies, almost horizontally, basaltic tuff. The tuff is very rusty weathering and strongly brecciated, and consists of dark grey-green, very strongly epidote-chlorite-altered, extremely fine basaltic tuff, and medium-dark grey-green basaltic chert (commonly bleached? to near white). The basaltic tuffs and chert contain about 7-20% very fine, to very locally coarse (to 4 x 6 mm) grained pyrrhotite in very irregular patches to 2 x 4 cm+. The patches are cut by fractures filled with pyrrhotite. A grab sample of the basaltic tuff with about 20% pyrrhotite (sample #106) yielded 1,780 ppm Cu, 42 ppm Zn and 1.2 ppm Ag.

An outcrop, 1 x 2 m, below the waste dump to the south of the shaft, exposes basaltic tuff, cherty tuff, and chert similar to those exposed in the shaft.

Strongly sheared and fractured garnetite was located in a small boulder in the waste dump. The occurrence of garnetite and the presence of a large outcrop of medium grey meta-chert about 35 m west of the shaft, suggests it is collared at or near the base of the Buttle Lake Formation.

From 10 to at least 100 m south of the shafts, feldspar porphyritic dacite intrusive outcrops. The 30 m of dacite closest to the shafts is an unusual phase of the dacite in that it is dark to very dark grey-green and contains about 10% extremely fine black crystals of chlorite?. It may actually be a flow that is somewhat more siliceous than basalt, rather than a dacite intrusive.

J) Finlay Shafts

Two shallow shafts are located about 20 m apart (east-west), about 1,100 m southeast of the Blue Bell Mine (stations #4 and 5).

The easterly shaft (station #4) is a 2 m deep depression surrounded on three sides by waste rock, with no exposures at bedrock in the shaft or in the immediate area. From the waste rock it appears that the shaft was sunk through magnetite-pyrrhotite-(chalcopyrite-)bearing skarn. The skarn comprises predominantly diopside, locally containing or interlayered with epidote, chlorite, and garnet. Manganese? oxide commonly occurs on fractures.

The skarn contains about 5-10% fine to coarse magnetite irregularly distributed in irregular patches, pods, and stringer-like zones and commonly containing minor pyrrhotite. Pyrrhotite forms about 2-4% of the skarn, occurring as pods or fracture-fillings up to 3 cm or more thick, as irregular patches in diopside, and in magnetite. Minor to 1% chalcopyrite occurs in irregular patches of very fine grains.

A composite grab sample of massive (80%+) magnetite with a few percent pyrrhotite and 0.5% chalcopyrite (9892) assayed 0.56% Cu, 0.01% Zn, and 0.12 oz Ag/T. A composite grab sample of massive pyrrhotite (about 75%) and magnetite (about 10%) with an epidote + diopside? + calcite matrix (9893) assayed 0.26% Cu, 0.01% Zn, and 0.20 oz Ag/T.

The <u>westerly shaft</u> (at station #5) was sunk 3 m vertically, then on a decline to the east, and is inaccessible. A small cut into an outcrop a few metres to the west of the shaft exposes a pyrrhotite-magnetite-chalcopyrite-sphalerite-bearing skarn.

The skarn consists predominantly of very fine grained epidote, and lesser fibrous bluish-green actinolite and possibly some fine-grained diopside. The skarn is generally moderately weathered and somewhat sheared appearing. The skarn contains 5-10% pyrrhotite in irregular fine-grained patches (locally in disseminated coarse crystals to 11 x 22 mm), 2-4% magnetite irregularly distributed in irregular patches and pods to 3 cm wide (locally finely disseminated with pyrrhotite), and minor chalcopyrite.

One piece of skarn contains about 15% ultrafine-grained tan material thought to be sphalerite and 50% disseminated pyrrhotite. Analysis of this piece of skarn (9894) returned 24,000 ppm Cu, 32 ppm Zn, and 7.2 ppm Ag, indicating that there was little or no sphalerite present.

A chip sample down the 1.8 m high outcrop of mostly gossan and gossanous skarn, at about 4 m west of the shaft (9895), returned 9,000 ppm Cu, 40 ppm Zn, and 7.0 ppm Ag.

The mineralized skarn through which the Finlay shafts were driven, may have been derived from calcareous sedimentary rocks near the base? of the Buttle Lake Formation. However, there is a lack of bedrock exposures in the area of the shafts, and therefore no data from which to infer the extent of the mineralization or its relationship to the host rocks. There may be a northwest-trending fault that truncates the Buttle Lake Formation about 100 m southeast of the Finlay shafts, and that limits the strike potential for mineralizaiton. The Buttle Lake Formation outcrops again, along the Koksilah River, to the south of the property (in the Silver Mine and Lost Silver Mine claims). This exposure might represent the fault-offset counterpart to the Buttle Lake Formation in the area of the Finlay shafts.

5.2.6 Whole Rock Evaluation

The whole rock (X.R.F.) analyses were subjected to a computer program which is designed to identify alteration features in volcanic rocks which are typical of alteration haloes surrounding known volcanogenic base metal and/or gold deposits, such as K_2O, MgO, and FeO enrichment and Na_2O and CaO depletion. Whole rock analyses are included in Appendix III, while the computer evaluation of the whole rock results is included in Appendix III.

Most of the whole rock samples were collected for the purposes of lithologic identification. Only samples 107, 108, 109, and possibly 112 are of volcanics and therefore suitable for the computer evaluation. Samples 107 and 108, both from the uppermost part of the Flow-Sediment Unit are indicated to be slightly anomalous with respect to alteration patterns typical of volcanogenic base metal deposit haloes while sample 112 of diabase (or coarse-grained basalt) is very weakly anomalous. None of the samples is anomalous in alteration features typical of volcanogenic Au deposit haloes. Thus, based on this very limited data, the geological setting of the King Solomon deposits appears to have little in common with known volcanogenic deposits.

In order to more fully evaluate the possibility that the King Solomon deposits represent skarnified ± remobilized volcanogenic massive sulphide mineralization additional sampling of volcanic rocks is needed.

5.3 Soil Geochemistry

A total of 470 soil samples was collected. Wherever possible, the B soil horizon was sampled. The soil samples were placed in kraft bags and analyzed by atomic absorption for Cu, Ag, Zn at Rossbacher Lab. Copper results range from 10 ppm to 2660 ppm, silver results range from 0.2 ppm (detection limit) to 1.6 ppm, and zinc results range from 10 ppm to 1740 ppm. Statistical analysis of the soil geochemical results indicates the following anomalous levels used for contouring the results on Map 2:

	Cu	Ag	Zn
probably anomalous	141	0.4	341
anomalous	197	0.6	453
very anomalous	309	0.8	677
extremely anomalous	533	1.2	1125
	981		
	1877		

Soil geochemical results are tabulated in Appendix III. Statistical analysis of the results is included in Appendix V.

Four main zones of anomalous soil geochemical results have been outlined. Due to the wide spacing (180 m) between most of the sampled lines, the shape and size of the anomalies must be considered tentative.

Anomaly 1 is 800 m long by 100-135 m wide, trends WNW, and is open on both ends. It is primarily a Cu anomaly, with smaller coincident Zn and Ag anomalies at both ends. The strongest part of the anomaly occurs north of the Blue Bell Mine at L16+20N, 1+20E. Contamination from the mine's waste dump may be a contributing factor to the extremely high Cu values, however, as the anomaly continues beyond the conceivable limits of dump contamination, it is likely that it reflects an underlying mineralized zone. The Swamp showing occurs within the limits of Anomaly 1, indicating that additional mineralized zones may also occur. Anomaly 1 does not appear to correlate with any particular geological feature SE of the Blue Bell Mine as it crosscuts the geological trend. The anomaly is coincident with the trace of a hypothetical fault which the magnetic survey indicates could be present, offsetting a magnetic anomaly about 350 m right-laterally (see Section 5.4.2). No geological evidence for such a fault has been observed. The peak values within Anomaly 1 are 2660 ppm Cu, 0.8 ppm Ag, 720 ppm Zn. To the WNW the anomaly trends onto the Dora-Mabel property, owned by others, but to the ESE the anomaly trends onto an area of the King Solomon property beyond the present grid limits.

The second anomalous zone can be divided into two separate anomalies. Anomaly 2A is 350 m long by 25 to 225 m wide, trends northwesterly, and contains anomalous to extremely anomalous Zn values. An old shaft (Finlay claim?) occurs within the anomaly indicating that the anomaly is probably caused by the mineralization the shaft explores. As in the case of Anomaly 1, contamination from the waste dump may be partly responsible for the anomaly, however it is too large to be entirely due to contamination and extends uphill from the shaft. It should be noted however that the long narrow NW end of the anomaly occurs in a gully indicating a possible upslope source for the anomaly. A small area of probably anomalous Ag values occurs just NE of Anomaly 2A on L5+40N. Lying immediately SW of Anomaly 2A, but not overlapping it, is Anomaly 2B. It is 350 m long by up to 100 m wide, trends northwesterly, and contains extremely anomalous Cu values. The two Finlay shafts occur immediately uphill from the three anomalous sample sites which make up Anomaly 2B indicating that contamination from the waste dump is almost certainly the cause of Anomaly 2B. A larger zone of probably anomalous to anomalous Ag values occurs more-or-less on top of Anomaly 2B, at a slight angle. This zone is about 950 m long by 30 to 100 m wide and is open to the SE. It appears to correspond in part with the contact between the Buttle Lake Formation and the uppermost part of the Flow-Sediment Unit. It may therefore be caused by a mineralized zone at the top of the Buttle Lake Formation. Peak values in Anomalies 2A and 2B are 1440 ppm Cu, 1740 ppm Zn, and 0.4 ppm Ag.

The third anomalous zone is a N-S trending elongate zone about 580 m long by 30-180 m wide of mainly probably anomalous Ag values centred at about L10+80N, 2+70W. Anomaly 3 occurs between the Upper Ore Zone of the King Solomon Mine and Crown Grant L16G (Viva Mine). There are no known old workings directly upslope from the southern end of the anomaly, therefore it appears that Anomaly 3 reflects a bedrock source at least in part. The peak value in Anomaly 3 is 0.4 ppm Ag. In the northern part of the anomaly, near the old Viva workings, a spot high in Cu (322 ppm) and a spot high in Zn (680 ppm) occur within Anomaly 3.

Anomaly 4 is a small Cu-Ag anomaly on lines 18+00N and 18+90N. It trends NNW, measures about 150 m long x 20-70 m wide, and is open to the NNW. Some fill-in soil sampling carried out on lines 17+10N, 18+00N, and 18+90N failed to yield much additional information about the anomaly. Several spot highs in Ag occur SW of Anomaly 4.

In addition to the four main zones are a number of isolated one- or two-sample spot highs. The most significant(?) of these is at L3+60N, 0+90W, where values of 346 ppm Cu, 0.4 ppm Ag, and 600 ppm Zn occur. As the known mineralized zones tend to be small and discontinuous spot highs could easily be indicative of a small mineralized zone. However, unless geophysical anomalies are also present, they do not warrant any follow-up other than prospecting at this time.

5.4 Geophysical Surveys

Very low frequency electromagnetic (VLF-EM) and magnetic geophysical surveys were conducted on the property. The VLF-EM survey was conducted with a Geonics EM-16 receiver tuned to the transmitter station designated NLK, located at Seattle, Washington. The southeast direction of the transmitter from the property is ideally suited to the northwest/southeast trend of the geology in the area.

The magnetic survey was conducted with a Geometrics G-816 magnetometer and an EDA PPM 350 magnetometer. When the Geometrics magnetometer was used, diurnal variations in the geomagnetic field were monitored (and subsequently removed from the survey results) by closed-loops between base stations established along the base line of the grid. When the EDA magnetometer was used, diurnal variations were monitored by an EDA PPM 400 recording base station magnetometer set up on the property. The data from the Geometrics magnetometer were recorded and corrected manually. The EDA magnetometers store the data in solid state memory and the results were processed and compiled with an HP-85 computer using software developed by MPH. All of the magnetometers used record total magnetic field.

Readings for both of the geophysical surveys were acquired at 15 m and/or 30 m intervals.

The results of the VLF-EM survey are presented in plan profile format on Map 3. Scale of the profiles is 1 cm=10%. The profiles are plotted with the operator facing toward the west. Valid anomalies, therefore, are indicated by positive to negative in-phase inflection points or cross-overs considered in an east to west sense.

The results of the magnetic surveys are presented in plan contoured format on Map 4. Contour interval is 100 gammas.

5.4.1 VLF-EM Survey

The VLF-EM survey recorded a number of anomalies. The in-phase amplitudes of the anomalies vary from a few percent to a maximum of 40%. Peak to peak widths of the anomalies range from 30 m to up to 100 m.

Most of the anomalies correlate with gross features of the topography (indicated by the generalized topography) and/or local topographic features noted during the course of the survey.

Topographic anomalies arise in VLF-EM surveys because the primary field conforms to the topography. When traversing a ridge, for example, positive dip angles would be recorded on one flank and negative dip angles on the other flank, thereby producing a cross-over anomaly at the crest of the ridge.

Topographic anomalies are usually wide, with wave lengths similar to the terrain which they reflect.

In a number of instances, some of the topographic anomalies appear to be too narrow relative to the topography with which they correlate. It is possible, therefore, that bedrock features are coincidentally present as well. These features and other conductors that cannot be categorically attributed to topography are labelled alphabetically on Map 3 and are discussed individually below. Some of the single station and short conductors present are not cited for individual attention. Some of these features may be important if substantiated by other geophysical/ geochemical/geological information.

Conductor A

Conductor A trends obliquely across lines 18+00N and 18+90N at about 9+00E. It is open to the northwest and southeast.

In-phase dip angle amplitudes of up to 23% were recorded. Anomaly asymmetry indicates that the conductor dips to the northeast.

Conductor B

Conductor B extends from line 16+20N to line 11+70N at about 2+00E. Amplitudes of its in-phase dip angles vary from about 5% to 15%. Narrow widths of the anomalies indicate that the conductor is shallow.

Anomaly asymmetry indicates an easterly dip.

A short, weak conductor adjacent and parallel to conductor B on lines 13+50N and 14+40N may also be grouped with the conductor.

Conductor C

Conductor C extends between lines 17+10N and 12+60N at about 0+00. This feature may be due to topography. It is mentioned because a well defined 20% in-phase anomaly was obtained on line 15+30N. This anomaly occurs in the vicinity of the Blue Bell Ore Shaft and may be a cultural effect and/or reflect the mineralization present. Note that anomalies on lines adjacent to line 15+30N are quite poor.

Conductor D

Conductor D extends between lines 11+70N and 7+20N at about 0+00. Although this feature correlates with a ridge, the shape and amplitudes of its anomalies suggest responses of a bedrock conductor which can be seen superimposed on the broad topographic responses. On line 7+20N, the axis of the conductor shifts from the crest of the ridge as if a valid conductor is present.

5.4.2 Magnetic Survey

The total magnetic field varies from about 56,000 gammas to about 59,000 gammas.

The survey detected a number of linear to circular highs which vary in amplitude up to 2500 gammas. The largest of these anomalies (Anomaly 1) spans lines 16+20N to 13+50N just east of the base line in the vicinity of the Bluebell Ore Shaft. In detail, this feature consists of a series of narrow, linear highs. The anomaly is probably caused by magnetite known to be associated with the mineralization.

Other similar anomalies are present on the property. These are located at:

lines 16+20N-14+40N, 3+00E-4+50E (Anomaly 2)
lines 18+90N-17+10N, 6+00E-7+50E (Anomaly 3)
lines 12+60N-11+70N, 0+00 -1+50E (Anomaly 4)

Magnetic anomalies 1 and 2 have the appearance of possibly being fault offset extensions of one another, although no geological evidence for such a fault was located. Two circular anomalies were detected at L5+40N, 0+00 and L6+30N, 2+10W-3+00W.

None of the larger magnetic anomalies appear to correlate directly with the VLF-EM conductors. Conductor C flanks the more intense portions of the "Blue Bell" anomaly. The two circular magnetic anomalies seem to be spatially related to conductors. On line 5+40N the VLF response is probably caused by topography and on line 6+30N the magnetic feature occurs off the end of a poor conductor which was not singled out for detailed appraisal. In most instances the magnetic anomalies are shorter than the conductors.

Small magnetic anomalies are located coincident with single line VLF-EM conductors at L5+40N, 0+00 and L12+60N, 3+90W.

5.5 Correlation of Geophysics, Geochemistry, and Geology

Both VLF-EM Conductor A and Conductor B are east-dipping and have magnetic anomalies located to their east. The Blue Bell and Viva Mines are both located on VLF-EM Conductor C, which also has a magnetic anomaly present to its east (Anomaly 1). Thus, a similar geophysical response to that of known mineralized zones appears to be present in two locations on the property with no previously known mineralization. In that the geological sequence dips to the east, (discontinuous?) stratabound bodies of mineralization may be causing the (associated?) geophysical anomalies in these areas. It should be noted however, that the magnetic anomaly associated with Conductor C is much closer than those associated with Conductors A and B.

Magnetic anomaly 4 corresponds with the northern end of VLF-EM Conductor D and with the north end of a body of rhyolite intrusive. As mineralization may be related to these intrusions, the magnetic response may be indicative of a mineralized zone adjacent to the intrusion in the Buttle Lake Formation or the uppermost part of the Flow-Sediment Unit.

A small magnetic high and low pair occurs over the upper and middle King Solomon workings. A VLF-EM conductor is associated with the magnetic high, but unlike Conductors A, B, and C, this conductor occurs within the magnetic anomaly and the conductor is weak and questionable.

There does not appear to be any correlation between soil geochemical anomalies and geophysical anomalies, but the Blue Bell Mine is located at the southern edge of soil anomaly Zone 1, where VLF-EM Conductor C intersects the soil anomaly. Further to the southeast, VLF-EM Conductor B intersects Zone 1 in a similar fashion, approximately at the location of the Swamp showing.

Correlation between soil geochemical anomalies and geology is generally good. Overall there appears to be a vague relationship with the Buttle Lake Formation as Zones 2A, 2B, and 3 lie mainly over areas underlain by Buttle Lake rocks. Zone 1 corresponds roughly with the lower contact of the uppermost part of the Flow-Sediment Unit (i.e upper contact of Buttle Lake Formation) in the NW, but in the SE it swings away from the contact and apparently cross-cuts geology. Zone 1 roughly corresponds to the location of a theoretical fault which may offset magnetic anomalies 1 and 2. It also includes the Swamp showing and occurs downslope from the Blue Bell Mine.

The area on lines 18+00N and 18+90N from 6+00E-9+60E contains two magnetic anomalies, a soil geochemical anomaly, and a VLF-EM conductor. Although none of the features overlap, the area warrants further work.

6.0 RECOMMENDED WORK PROGRAM

Phase IIIA work, consisting of induced polarization (IP) surveys carried out over target areas outlined during Phase I and II exploration of the King Solomon property, is designed to provide targets for Phase IIIB diamond drilling. Grid coverage of the Strip Showing area will be incorporated into Phase IIIA.

6.1 Plan

A small grid consisting of five cut lines at 200 m spacing is to be established over the Strip Showing. The lines will each be 600 m long and will be designated lines 42+30N to 50+30N. Soil sampling, VLF-EM, and magnetometer surveys will be carried out on the grid, followed by IP surveying of anomalous areas. Phase I surface sampling of the Strip Showing has yielded values of up to 23,400 ppm Cu, 98 ppm Zn, and 6.2 ppm Ag over 1.1 m.

IP surveys are to be carried out over the southern and central portions of the grid used for Phase II geochemical and geophysical work. The grid lines are presently only flagged, and will therefore have to be cut prior to IP surveying.

A total of about 4.2 line km of IP is to be carried out over lines 2+70N to 6+30N. A strong Zn soil geochemical anomaly and several VLF-EM conductors are present in this area, in addition to at least three old shafts (Finlay) which returned values of up to 24,000 ppm Cu and 15.2 ppm Ag from Phase I sampling.

Approximately 0.5 line km of IP will be carried out over each of lines 8+10N and 9+90N, in the vicinity of the Two Shafts showing. The areas of the King Solomon middle and upper workings, Viva Mine, Blue Bell Mine and Swamp showing will be covered by a total of 3.8 line km of IP on lines 11+70N to 15+30N. Rock sampling in Phase I returned values of up to greater than 40,000 ppm Cu, 23.0 ppm Ag. In addition, strong geophysical and soil geochemical anomalies occur in the area.

On the northeast ends of lines 18+00N and 18+90N, about 0.9 line km of IP will be carried out to investigate the magnetic, VLF-EM, and soil geochemical anomalies present.

Contingent upon favourable results from Phase IIIA exploration, Phase IIIB is to consist of approximately 3000 feet of diamond drilling on the highest priority anomalies.

The following cost estimates are provided for Phase IIIA grid addition and IP surveys and Phase IIIB diamond drilling.

6.2 Budget

Phase IIIA

Mobilization/Demobilization		$ 750	
Line Cutting and Grid Installation			
	3 men @ $150 for 10 days	4,500	
Soil Sampling			
	2 men @ 150 for 1 day	300	
VLF and Magnetometer			
	2 days @ 500	1,000	
I.P. Surveys- Men and Equipment			
	16 days @ $1000	16,000	
Support Costs			
	102 man days @ 40	4,080	
	4WD Truck 2 x 21 days @ 90	3,780	
Analyses			
	50 soils @ 4.05 (Cu Zn Ag)	202	
	25 rocks @ 12.20 (Au ICP)	305	
	Sub Total Phase IIIA		$30,917

Phase IIIB

Mobilization/Demobilization		1,500	
Drilling Preparation			
	Cat 5 hrs @ 50	250	
	Waterline 3000' plus pumps	3,000	
Diamond Drilling			
	3000 ft @ 20.00	60,000	
Analyses			
	120 @ 12.20 (Au ICP)	1,464	
	25 @ 40.00 (Assay)	1,000	
	20 @ 20.00 (Whole Rock)	400	
	Sub Total Phase IIIB		67,614

Supervision - Phases IIIA and IIIB

Geologist	37 days @ $275	$10,175	
Expenses			
Field Costs	37 days @ 40	1,480	
4WD Truck	37 days @ 90	3,330	
Consulting	10 days @ 450	4,500	
Expenses		1,000	
		20,485	
Report Preparation	12 days @ 275	3,300	
Costs		2,500	
		5,800	
			$124,816
Administration @ 15% on Phases IIIA, IIIB (22,791)			3,419
			128,235
Contingency @ 10% on Phases IIIA, IIIB			12,824
TOTAL - PHASES IIIA and IIIB		say	$140,000

6.3 Schedule

Estimated time requirements for Phase IIIA grid additions and IP surveying and Phase IIIB diamond drilling are summarized in the following table.

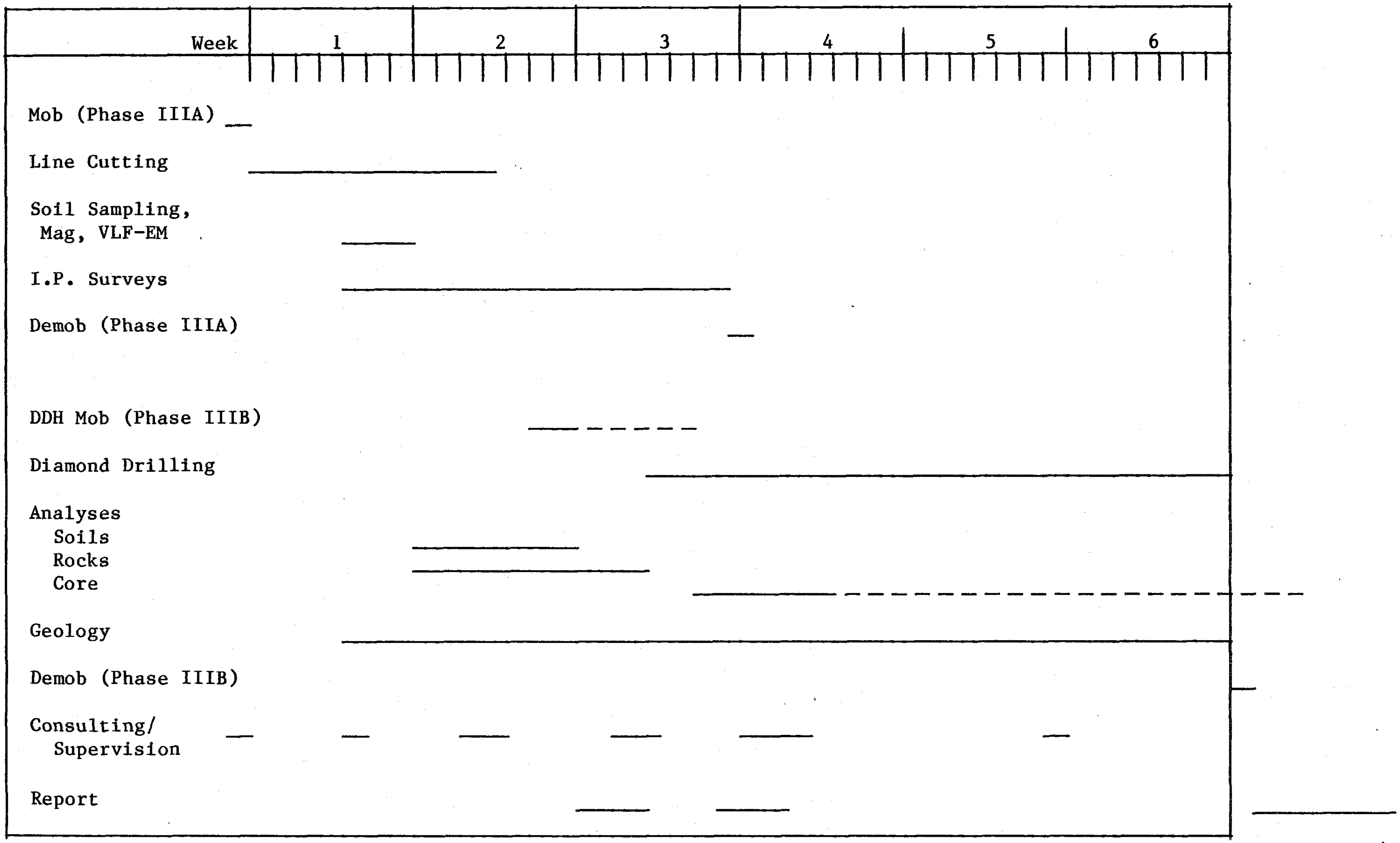


TABLE 1
PHASE III PROJECT SCHEDULE
KING SOLOMON PROPERTY

7.0 CONCLUSIONS

1. The King Solomon property is underlain by a complex, poorly resolved, faulted succession that includes the upper part of the Upper Paleozoic Sicker Group. The succession from oldest to youngest includes:
   - i) the upper part of the Myra Formation,
   - ii) the "Flow-Sediment" Unit,
   - iii) the Buttle Lake Formation, and
   - iv) the uppermost part of the "Flow-Sediment" Unit.

   The Sicker Group rocks are intruded by widely scattered bodies of various intrusive rocks including granodiorite of the Jurassic Koksilah stock and related(?) dacite and pyritic rhyolite dykes.

2. The Sicker Group rocks appear to be folded into a northerly plunging syncline with at least one repetition of the eastern limb by faulting and/or folding.

3. Recorded production from the Blue Bell, Viva, and King Solomon Mines from 1903-1916 totals 993 tons of ore grading 5.16% Cu and 0.51 oz Ag/ton. The King Solomon and Blue Bell Mines are located on the King Solomon property; the Viva Mine may be located on the Wallace Crown Grant, not part of the King Solomon property.

4. Eight deposits/showings occur at, or near, the top and base of the Buttle Lake Formation along a belt at least 3 km long. Mineralization consists of stratabound zones of massive to

semi-massive pyrrhotite, magnetite, pyrite, chalcopyrite, and minor sphalerite in widely varying proportions. Mineralization appears to have fracture/fault control and a possible spatial relationship to intrusive rocks.

5. At least 5000' of diamond drilling in the late 1950's by Cellardor Mines Ltd. in the area of the King Solomon Mine intersected numerous mineralized zones. Some of the zones include: 11.9' of 7.83% Cu, 0.49 oz Ag/ton; 37' of 1.44% Cu; 51.5' of 0.97% Cu; and 12' of 4.1%, 0.3 oz Ag/ton, 0.25% Cu.

6. Rock sampling of showings on the King Solomon property by MPH Consulting Limited in 1985 included the following results:

Location	Width(m)	Cu	Ag
Strip Showing	0.9	14,800 ppm	5.2 ppm
Strip Showing	1.1	23,400 ppm	7.8 ppm
Swamp Showing	0.65	>40,000 ppm	23.0 ppm
Finlay Shafts	1.8	9,000 ppm	8.2 ppm
Blue Bell	0.8	1.00%	0.3 oz/T
Blue Bell	2.0	3.66%	0.7 oz/T

All 1985 Au analyses returned 10 ppb Au (detection limit), however previous sampling has yielded results of up to 25 ppb Au over 1 m (Sookochoff, 1984) and values of $1.50/ton in Au and Ag were reported in the 1930's.

7. Soil sampling on the King Solomon property has outlined a number of zones anomalous in some or all of Cu, Ag, and Zn. The correlation between anomalous soil geochemistry and known mineralized zones such as the King Solomon Mine, Viva

Mine and 2 Shafts showing is poor. However, correlation with the Finlay shafts, Blue Bell Mine, and Swamp showing is good.

8. The VLF-EM survey detected a number of weak to moderate conductors, most of which are attributed to topography. Four of the conductors appear to reflect bedrock features. One of these (Conductor C) occurs in the vicinity of the Blue Bell Ore Shaft, while Conductor B extends directly over the Swamp showing.

9. The magnetic survey detected several intense linear to circular anomalies. The linear anomalies tend to be short with strike lengths less than 300 m. The most intense magnetic anomaly occurs in the vicinity of the Blue Bell Ore Shaft (Anomaly 1). It is probably caused by magnetite related to the known mineralization. Two of the other magnetic anomalies (Anomalies 2 and 3) are similar in character to Anomaly 1. Magnetic Anomaly 2 may be spatially related to the Swamp showing. Prospects for locating additional mineralization in the vicinity of the magnetic anomalies are considered good.

10. There is only limited correlation between the VLF-EM conductors and the magnetic anomalies, although a spatial relationship between magnetic anomalies and Conductors A, B, and C is present, and could be indicative of as yet undiscovered mineralized zones in the cases of Conductors A and B. Conductor C and its associated magnetic anomaly appear to be caused by the Blue Bell and Viva Mines mineralized zones. Magnetic Anomaly 4 coincides with a topographic(?) VLF-EM conductor, and a short VLF-EM conductor coincides with a

a magnetic anomaly near the upper workings of the King Solomon Mine.

11. A number of targets for follow-up exploration including additions to the grid, IP surveys, and follow-up diamond drilling have been identified by Phase I and II work on the King Solomon property.

8.0 RECOMMENDATIONS

1. A detailed study of the land status of the King Solomon area is recommended in order to elucidate the ownership of mineral rights. It is also recommended that the Wallace Crown Grant (L.16G) be acquired from its owner and incorporated into the King Solomon property.

2. It is recommended that a grid be established over the Strip Showing and that soil sampling, magnetometer, and VLF-EM surveys be carried out over the grid as part of Phase IIIA. The grid is to consist of five lines, each 600 m long at 200 m intervals.

3. It is recommended that Phase IIIA exploration of the King Solomon property consist of induced polarization (IP) surveys to be carried out over the following lines, as well as over anomalous areas of the new Strip Showing grid:

   L18+90N, 6+00E to 10+20E
   L18+00N, 6+00E to 10+50E
   L15+30N, 3+30W to 1+70E
   L14+40N, 3+00W to 1+20E
   L13+50N, 5+10W to 3+70E
   L12+60N, 5+00W to 5+10E
   L11+70N, 4+90W to 5+10E
   L 9+90N, 2+90W to 2+10E
   L 8+10N, 3+90W to 1+10E
   L 6+30N, 6+00W to 4+00E
   L 5+40N, 4+60W to 4+00E
   L 4+50N, 4+50W to 4+00E
   L 3+60N, 4+45W to 4+00E
   L 2+70N, 3+60W to 4+00E

4. It is recommended that additional sampling of volcanic rocks from near the King Solomon property deposits/showings and

from the rest of the property be carried out and the samples be subjected to whole rock analysis in order that they can be computer evaluated for the presence of volcanogenic-type alteration patterns.

5. It is recommended that the Cellardor Mines Ltd. diamond drilling (1958) results be carefully studied and integrated with the results of 1985 geological, geochemical, and geophysical surveys in order to choose targets for diamond drilling.

6. Contingent upon favourable Phase IIIA results, it is recommended that Phase IIIB consist of 3000 feet of diamond drilling on the most favourable targets identified. Total cost of Phase IIIA and Phase IIIB work is estimated at $140,000.

Respectfully submitted
MPH CONSULTING LIMITED

T. Neale, B.Sc.

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

T.G. Hawkins, P.Geol.

Vancouver, B.C.
October 18, 1985

CERTIFICATE

I, T. Neale, do hereby certify:

1. That I am a graduate in geology of The University of British Columbia (B.Sc. 1978).

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

3. That the opinions, conclusions, and recommendations contained herein are based on field work carried out by MPH personnel on the claims in June to August, 1985, library research work, and my experience in the area.

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

T. Neale, B.Sc.

Vancouver, B.C.
October 18, 1985

CERTIFICATE

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

1. That I am a Consulting Geologist with business offices at 301-409 Granville St., Vancouver, British Columbia V6C 1T2.

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

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

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

5. That the opinions, conclusions, and recommendations contained herein are based on field work and research work carried out in June to August, 1985 and supervised by me.

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

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

T.E. Gregory Hawkins, P.Geol.

Vancouver, B.C.
October 18, 1985

REFERENCES

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APPENDIX I

LIST OF PERSONNEL
AND
STATEMENT OF EXPENDITURES

MPH

LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

The following expenses have been incurred on the King Solomon property as defined in this report for the purposes of mineral exploration between the dates of June 18 and August 16, 1985.

G. Benvenuto, Ph.D.			
28 days	@ $325	$ 9,100	
T. Neale, B.Sc.			
10.25 days	@ 325	3,331.25	
N.O. Willougby, B.Sc.			
3 days	@ 325	975	
K. Morrison, B.Sc.			
3 days	@ 250	750	
H. Northfield, B.Sc.			
4 days	@ 250	1,000	
R. Nickson, B.Sc.			
5 days	@ 200	1,000	
C. Bishop, B.Sc.			
11.5 days	@ 175	2,012.50	
K. Barron, B.Sc.			
6 days	@ 175	1,050	
G. Cope, B.Sc.			
3 days	@ 175	525	
T. Naciuk			
10 days	@ 150	1,500	
J.L. LeBel, P.Eng.			
1 day	@ 450	450	
14 hrs	@ 65	910	
T.G. Hawkins, P.Geol.			
5 days	@ 450	2,250	
W.G. Hoiles			
10 days	@ 300	3,000	
			$27,853.75

Truck and Camp Rental		$ 2,870.00
Magnetometer and VLF-EM Rental		450.00
Expediting: 10 days @ $110		1,100.00
Expenditures:		
Meals and Accommodation	2,357.49	
Transportation	1,116.51	
Miscellaneous Supplies & Services	554.65	
Analyses	2,650.25	
Drafting, Copying	1,768.99	
	8,477.72	
Administration @ 15%	1,271.66	
		9,749.38
Report: 6 copies @ $125		750.00
	Total	$42,773.13

APPENDIX II

ROCK SAMPLE DESCRIPTIONS
AND
Cu, Ag, Zn RESULTS

King Solomon Property
Rock Sample Descriptions

Sample No.	Lithology	Cu	Zn	Ag
	Blue Bell Pit			
9881	Pyritic epidote vein?: approx 10-15% (locally to 85% over 4 cm) fine, disseminated pyrite in matrix of olive-green epidote mixed with creamy buff, very, very fine sphalerite? (approx. 3-5%; highly irregular in concentration), and very fine patches of quartz. Vein 4 to 14 cm thick; appears to occur along fracture cutting bedding in chert at low angle. Grab sample of whole vein? where 14 cm thick. Vein strikes 290°, dips 35°NE; occurs in northeast wall of pit.	63 ppm	10 ppm	0.2 ppm
9882	Garnet-diopside?-skarn: approx. 80% (varies 5-95%) pale, clear almond brown, fine grained (1 mm or less) garnet; approx. 5% (locally to 80-90%) pale, drab, blue-green-tan diopside; locally patches of Cu-stain; 3 grab samples from 60 cm thick exposure at north corner of northerly decline; upper contact of skarn appears to parallel bedding in overlying chert.	for X.R.F.		
9883	Massive magnetite-pyrite-(chalcopyrite): predominantly very fine (to fine to locally coarse) grained magnetite, with approx. 7-8% overall medium to coarse grained pyrite (or pyrrhotite?) in irregular patches or pods mixed with epidote, quartz, garnet (up to 50%; fine grained, medium yellow-brown), and calcite. Magnetite with approx. 1-2% fine disseminated chalcopyrite; one pod of massive chalcopyrite greater than 2.5 x 7 cm. Approx. 15 lb chip sample across 80 cm wide (horizontal, NW-SE) by 2 m high exposure in NW wall of northerly decline.	1.00% with 102 ppm Co	0.03%	0.28 oz/T
9884	Massive magnetite-chalcopyrite: approx. 90% massive (to semi-massive), very fine grained (very locally coarsely crystalline) magnetite with irregular, patchy distribution of fine grained chalcopyrite forming 40-90% with magnetite in patches. Magnetite locally with 10-90% matrix of epidote and/or garnet. Chip sample across 2 m wide (NW-SE) by 1.9 m high exposure in SW wall of northerly decline. Appears continuous with #9883 across NE wall of decline (inaccessible).	3.66% with 303 ppm Co	280 ppm	0.74 oz/T

* All samples returned values of 10 ppb Au (detection limit).

MPH

Sample No.	Lithology	Cu	Zn	Ag
9886	Skarn: poorly accessible and generally deeply weathered, strongly fractured, poorly resolved mixture of quartzose rock (sub-translucent to translucent very light grey to sub-opaque milky white, locally with 10-15% fine, opaque orange-tan dits; rhyolitic?); massive fine grained garnet (very irregular distribution; may predominate); minor massive epidote; and approx. 5-10% overall, fine to very coarse grained massive pyrite in irregular pods?; locally patches to 7 mm diameter of chalcopyrite rimmed by magnetite. Magnetite occurs as irregular patches and in fractures. Chip sample across 2.4 m high exposure in SW wall of pit.	0.26%	0.01%	0.26 oz/T

Viva

Sample No.	Lithology	Cu	Zn	Ag
9887	Chert with fracture-controlled pyrrhotite: pyrrhotite highly irregularly distributed; mostly appears fracture-controlled; forms massive pods? up to 60x70x80 cm (not in sample); where massive, fine grained and disseminated with approx. 10-20% grey-green chert? matrix; locally with few percent patches of massive magnetite; massive pyrrhotite cut by few percent fractures filled with very coarse grained pyrrhotite and very, very fine massive magnetite; overall percentage of pyrrhotite very difficult to estimate but approx. 5-10%. Chert: very strongly shattered, rusty, weakly graded, possibly colour-banded, medium to medium-dark grey-green basaltic? chert to medium grey to light green-grey to very light grey-tan to locally near black chert, cut by abundant, 0.05 to 1 mm thick, olive green epidote-filled fractures and pyrrhotite-filled fractures. Chip sample across 2.3 m (E-W) along top of north wall of shaft (2.9 m deep) at station #2	0.34%	0.01%	0.06
9888	Massive pyrrhotite: chip sample across 60x70x80 cm, massive pyrrhotite pod? in northeast corner of shaft; occurs in basaltic? chert described above (#9887).	0.28%	0.01%	0.08 oz/T

King Solomon Mine

Sample No.	Lithology	Cu	Zn	Ag
9889	Pyrrhotite-(chalcopyrite) in cherty, basaltic tuff: pyrrhotite appears very irregularly distributed, from disseminated to fracture-fillings to massive	0.44%	0.01%	0.22 oz/T

Sample No.	Lithology	Cu	Zn	Ag
	pods?; overall, very approx. 5-7% of tuff; occurs in fractures 0.5-10 mm+ thick, as disseminated patches (sub-equant to very irregular in outline) to several cms across; locally massive in pods? or fracture-filling at least 12x20 cm; generally very fine grained, locally medium to coarse grained; commonly mixed with few to 10% very very fine to very fine chalcopyrite. Tuff: strongly shattered and deeply weathered with areas of fresh rock: weakly graded, locally bedded, weakly to strongly cherty, basaltic? fine to very fine tuff; generally dark grey-olive green (to medium drab olive green), very strongly epidote-altered, locally grades into dark grey-green basaltic? chert (locally bleached? to creamy very light tan-grey). Chip sample down 3 m (vertical) of south wall of trench leading to portal of upper adit; mostly gossan and gossanous tuff (at station #3).			
9890	Pyrrhotite in cherty, basaltic tuff. Composite of grab samples with approx. 20-50% pyrrhotite and few percent very fine grained chalcopyrite; one piece with approx. 60-80% very fine chalcopyrite. Grabs from walls of trench leading to adit; same location as #9889.	1.75% with 242 ppm Co and 3.5 ppm Cd	560 ppm	7.6 ppm
9891	Gossanous cherty tuff and rhyolitic? intrusive?: bedded graded cherty, basaltic? tuff to basaltic? chert intruded? by series of 1 m+ thick dykes? or sills? of (feldspar porphyritic, feldspar micro-porphyritic) metavitric dacite. Chip sample down 13.7 m high (slope distance) gossanous outcrop (sloping 45° to west) at point 25 m south of portal of adit at sample #9889 (vertical height of sample is 9.7 m; station #150).	0.08%	0.01%	0.06 oz/T
	Finlay Shaft			
9892	Massive magnetite: composite of grab samples of massive (80%+), fine to coarsely crystalline magnetite with few percent pyrrhotite and approx. 0.5% chalcopyrite, overall. Grab samples from waste rock from shaft (now 2 m deep). Host rock (from waste rock; no exposures of bedrock) is diopside?-epidote-(garnet-calcite-) skarn with 5-10% overall, magnetite, and 2-4% pyrrhotite, overall. (Station #4)	0.56%	0.01%	0.12 oz/T

Sample No.	Lithology	Cu	Zn	Ag
9893	Massive pyrrhotite: composite of grab samples from waste rock around same shaft as #9892. Grabs of massive (approx. 75%), medium to coarsely crystalline pyrrhotite and about 10% magnetite; remainder as matrix of diopside, epidote and calcite.	0.26%	0.01%	0.20 oz/T
9894	Skarn with pyrrhotite and sphalerite?: grab sample, 6x7x10 cm, of very fine to fine grained epidote and actinolite? with about 50% very fine (to medium) grained disseminated pyrrhotite; approximately 15% opaque medium-light tan, very, very fine grained sphalerite? with irregular, patchy distribution; and a few patches of massive, very fine grained magnetite. Grab sample from waste rock from westerly of two Finlay shafts (station #5).	24,000	32	7.2
9895	Pyrrhotitic, epidote-actinolite?-diopside??-(magnetite-chalcopyrite-[sphalerite?-]) skarn: pyrrhotite: overall approx. 5-10%, generally appears disseminated as very irregular patches of very fine to fine grains and less commonly as disseminated very coarse crystals to 11x22 mm. Magnetite: very irregular distribution, overall approx. 2-4%, as irregular patches and pods of massive, fine to coarsely crystalline magnetite to greater than 3 cm wide, and locally disseminated as very fine grains (to 10-15% of skarn) with very fine to medium grained pyrrhotite (or pyrite?). Chalcopyrite: one piece contains a 3x6 cm pod of coarsely crystalline calcite (+epidote) with 2-3% disseminated and fracture-bound chalcopyrite; also minor Cu-stains on fractures cutting skarn. Skarn: predominantly very fine grained olive-green epidote; secondarily, finely crystalline, matted to locally medium to coarsely crystalline and fibrous, pale medium bluish green actinolite?; possibly also fine grained diopside?; skarn generally moderately weathered and somewhat sheared appearing. Chip sample down 1.8 m high cut into outcrop 4 m west of westerly of two Finlay shafts (at station #5). Sample is of mostly gossan and gossanous skarn.	9,000	40	7.0
	Swamp Showing			
9896	Pyritic, (feldspar porphyritic) rhyolite? intrusive?: Pyrite: most, of not all fracture-controlled; highly irregular in size, distribution and	>40,000	86	11.8

Sample No.	Lithology	Cu ppm	Zn ppm	Ag ppm
9896 cont.	concentration; commonly 3-4% of rock, locally 30-50%; varies from very fine to coarse grained; forms very fine to fine grains disseminated along microfractures commonly highlighted by epidote; also as pods up to several cm or more across of massive fine to coarse grained pyrite; some pods of pyrite contain olive-green epidote (fine-grained) matrix. Rhyolite?: strongly fractured with abundant rusty fracture surfaces; crumbly weathering where more abundant pyrite + epidote. Fresh colour is sub-translucent light grey to sub-opaque, near white, saussurite?-altered; cryptocrystalline or glassy; few pieces with 4-6% feldspar phenocrysts from 0.5x1 to 1x4 to 2x5 mm apparent; generally 2-3% very, very fine opaque white dits; cut by few percent ultrathin, discontinuous, clear quartz-filled fractures; locally with open, discontinuous fractures to 6 cm long by 1-2 mm wide, with quartz crystals projecting into open fracture. Epidote (bright olive green) occurs discontinuously along microfractures and in irregular patches, is very fine grained, and occurs with or without disseminated pyrite; overall, epidote forms approx. 1-2% of rhyolite?. Chip sample down 65 cm of 0.65x1.5x2.3 m boulder about 3 m from outcrop; part of boulder sampled with very approx. 30-40% pyrite, 20-30% epidote and the remainder rhyolite?; most of sample is moderately weathered. Boulder within 10 m diameter area of outcrop and blasted? boulders; area contains a 4 m diameter area with four, 0.5 m diameter, very low relief (to 3 cm) outcrops (at station #6).			
9897	(Pyritic) rhyolite? intrusive? - grab sample composite of rhyolite? as described for #9896, but with about 3-5% fracture-pyrite and 1-2% fracture-epidote (sampling of rhyolite? with least percentage of pyrite).	80	20 (X.R.F.)	0.8
	Station #8			
9898	Pyritic meta-argillite? of Buttle Lake Fm.: about 3-6% medium to very coarsely crystalline disseminated pyrite (to 8x13 mm crystals) in very, very dark brown-grey or near black, very fine grained, meta-argillite? (soft; no reacton to HCl). Composite of 4 grab samples from road cut containing about 30 cm wide exposure of pyritic meta-argillite?, which grades to east into coarsely crystalline, very light tan marble (at station #8).	68	1600	1.0

Sample No.	Lithology	Cu	Zn	Ag
	<u>"4-Adits" Showings, NW corner, Mabel Claim</u>			
9899	Interlayered?, meta-chert and skarn?: very deeply weathered, gossanous, strongly fractured rock with abundant hematitic and rusty fracture and shear surfaces. Appears to be medium-thin bedded?, interbedded medium grey meta-chert? and olive green, fine grained epidote (± quartz) skarn. Hematite locally massive, very, very fine grained, over 3 cm+. Chip sample across 8 m width of roadcut. Unit occurs between very strongly brecciated, grey-green chert, to south, and 14 m covered interval to north, succeeded to the north by metavitric? andesite??.	446	94	1.0
9900	Massive to semi-massive pyrite: grab sample from 6x15x15 cm cobble weathered out of roadcut. Very strongly fractured, coarse grained pyrite with approx. 10 to 30% white (stained rusty) fine grained matrix. Pyrite cobble from same part of roadcut as #9899.	128 (with 6000 ppm Mn)	16	1.2
9901	Metavitric dacite? grading? to porphyritic andesite? intrusive: 15 m wide interval of very strongly fractured, sub-brittle, very weakly translucent to sub-translucent, light grey meta-vitric andesite?, locally with few percent feldspar microphenocrysts distinct, and 2-3% fracture-pyrite; abundant rusty fracture surfaces; possibly grades northward into 30 m wide interval of moderately fractured, weakly weathered, light grey to light green-grey, opaque white spotted, pyritic, seriate, feldspar (mafic) porphyritic, metavitric dacite, approx. 3-5%, very fine to fine grained, anhedral, disseminated pyrite; abundant rusty fracture surfaces; northernmost 11 m moderately to deeply weathered and strongly sheared. Succeeded to north by #9902. Chip sample across 45 m wide roadcut.	112	38	0.8
9902	Interlayered? skarn? and meta-chert?: deeply weathered, very strongly shattered, abundant hematitic and rusty shear surfaces. Epidote-skarn? interlayered with grey meta-chert? with some gradation between. Adit driven 18 m along 070° approx. at contact of this unit and #9901. Chip sample across 7 m width.	1,280	150	1.6

Sample No.	Lithology	Cu	Zn	Ag
9903	Pyrite-chalcopyrite-basalt?: grab sample from pod? 3 cm or more thick, of near black, very fine grained, strongly chlorite-altered basalt? with 10-15% irregular patchy pyrite and approx. 10% very irregular patches of massive, very, very fine grained chalcopyrite. Basalt? pod occurs in variably epidote-altered, metavitric? dacite (resembling southern 15 m of #9901), from 10 m wide exposure 82 m north of #9902. Sample contains about 30% dacite intrusive.	> 40,000	56	3.4
9904	Gossanous rock: very fine grained, opaque white rock with very abundant hematitic and limonitic? shears, and with several pods to 1x2 cm of massive, coarsely crystalline magnetite; patches of Cu-stain common on shears. Rock occurs below several metres (+) of marble. Adit driven along 052° into this unit. Chip sample across 1.4 m (accessible; approx. 3 m wide unit). Unit in sheared contact, to north, with #9905.	6,500	348	2.4
9905	Pyritic, (feldspar porphyritic), feldspar microporphyritic, metavitric dacite?, generally very deeply weathered, gossanous (limonitic and hematitic), strongly fractured; fresh colour: sub-translucent light grey; approx. 3-5% very, very fine to fine disseminated, anhedral pyrite commonly mixed with very, very fine grained olive green epidote. Adit driven along 060° into this rock. Chip sample across 16 m wide interval.	890	108	1.4
9906	Massive magnetite (chalcopyrite, pyrrhotite?): very fine to coarse grained, generally moderately weathered and soft magnetite, with approx. 1-2%, overall, chalcopyrite very irregularly distributed as fine disseminations and along fractures. One 1.5 cm diameter blob of medium grained pyrrhotite?. Magnetite forms 0 to 50 cm thick wedge with 75 cm dip length exposed. In fault contact to north (strike of 225°, dip of 80° NW); occurs with unit of #9905, 1 m north of adit into #9905. Chip sample across 50 cm.	9,700	80	4.0

Sample No.	Lithology	Cu	Zn	Ag
	Strip Showing			
101	Pyritic rhyolite? intrusive: abundant massive pyrite along fractures (fine to medium grained); partly exposed area, 1.4 x 1.5 m, of semi-massive pyrite with very approx. 50% (to 75% locally) fine to very fine grained olive green epidote matrix, mixed with approx. 70% sub-opaque white interstitial material (andesite??), and 1-2% (locally to 5%) irregular, purple-black sulphide or oxide disseminated in grains to 2x3 mm. Rhyolite?: very strongly shattered, sub-opaque, very light tan, metavitric. Outcrop of low relief, 1.2 to 1.9 m long by 2.2 m wide, gossanous. Chip sample across 2.2 m width (exposed; north-south).	900	48	1.4
102	Magnetite and pyrrhotite in rhyolite?: approx. 10-20% very, very fine grained magnetite and 5-10% very fine (to very locally coarse) grained pyrrhotite? (or pyrite), in very irregular patches up to 1x1 cm, with a few percent olive green, very fine grained epidote. Occurs in very rusty, gossanous, very strongly shattered, very light buff, metavitric rhyolite? intrusive. Outcrop 90 x 130 cm. Chip sample across 90 cm.	14,800	52	4.2
103	Pyritic garnetite: approx. 5-7%, overall, fine to medium (to coarse) grained pyrite, appearing to occur mostly along fractures or fracture zones. Garnetite: approx. 80% fine grained, (euhedral?), yellow-amber to reddish brown garnet with 1-6% clear quartz groundmass and 1-2% interstitial patches of microcrystalline chlorite. Outcrop 60 x 120 cm. Chip sample across 60 cm.	520	32	2.2
104	Pyrite-chalcopyrite-epidote-chlorite?-garnet skarn: predominantly very fine to fine grained epidote with a few to 15% chlorite? groundmass, a few to 10% fine euhedral disseminated crystals of amber garnet, very approx. 10% fine to medium grained disseminated pyrite, and very approx. 3-8% very fine to very coarse grained chalcopyrite and iridescent purple tarnished chalcopyrite as irregular, disseminated patches and blobs generally associated with increased % of chlorite. Outcrop 1.1 m by 2 m (SE-NW), very dark brown rusty weathering, moderately weathered. Chip sample across 1.1 m.	23,400	98	6.2

Sample No.	Lithology	Cu	Zn	Ag
	South of Southwest Koksilah Claim			
105	(Pyritic), black meta-argillaceous? chert: locally 0.5-1% very fine to fine disseminated pyrite apparent, minor fracture-pyrite. Very thin to medium thin bedded, laminated. 1-2% paper-thin crisscrossing quartz-filled fractures. Roadcut. Chip sample across 2.1 m true thickness. Chert probably in Myra Formation (station #86).	158	96	1.2
106	Pyrrhotitic, basaltic tuff?: approx. 20% very fine (to very locally coarse [to 4x6 mm]) grained pyrrhotite in very irregular patches to 2x4 cm (cut by fractures filled with pyrrhotite); occurs in strongly brecciated, very dark to medium-dark grey-green, very strongly epidote-chlorite-altered, ((hornblende? porphyritic)) very, very fine grained basalt (tuff?). Grab sample from old 2 m deep shaft, 600 m southeast of King Solomon Mine (at station #108).	1,780	42	1.2
107	((Pyritic, chalcopyritic)) basalt: dark to very dark (green-)grey, weakly to moderately magnetic, very fine to finely crystalline, feldspar-hornblende?-basalt. Approx. 75-85% feldspar as crisscrossing laths with interstitial hornblende?; feldspar variably altered (very weak to weakly pumpellyitic? to strongly sausseritic?); 0.5-1% very fine to fine, disseminated pyrite, very approx. 0.25-0.5%, very, very fine grained chalcopyrite in fine patches. May be from Karmutsen Formation or uppermost? part of "Flow-Sediment" unit (station #118A).	140	418 (with 212 ppm Pb) (X.R.F.)	0.6
108	(Pyritic) basalt: approx. 3-5% very fine to fine disseminated, anhedral pyrite and 1-2% fracture-pyrite. Very rusty weathering, sub-brittle, moderately saussurite?-altered feldspar-hornblende? microporphyritic, metavitric basalt. May be variation of #107 from Karmutsen Fm. or uppermost? part of "Flow-Sediment" unit. Grabs from 6 small boulders weathered from outcrop at station #118B.		X.R.F.	
109	Basalt: moderately to strongly magnetic, dark (bluish green-)grey, finely crystalline, feldspar + pyroxene? + hornblende? with about 5-10% fine and very fine, clear olive-green-amber, equant crystals of pyroxene?. Fairly typical of basalts comprising flows within the lower? part of the "Flow-Sediment" unit underlying?		X.R.F.	

Sample No.	Lithology	Cu	Zn	Ag
109 cont.	the Buttle Lake Formation. Grab sample from station #144.			
110	Dacite intrusive: sub-translucent, light (green-) grey, seriate, feldspar-(hornblende?) porphyritic, feldspar microporphyritic, metavitric. 1-2% pale yellow-olive green spots of completely epidote-altered mineral. Hornblende? may be completely diopside?-altered. Grab sample, from gossanous outcrop just south of middle adit of the King Solomon Mine (station #150).		X.R.F.	
111	Dacite intrusive: medium green-grey, very strongly saussurite-altered, seriate, feldspar-(hornblende) porphyritic, feldspar microporphyritic, metavitric dacite. Sub-opaque white, very strongly saussurite-altered feldspar phenocrysts, 0.5x0.5 to 2x4 mm. Few % hornblende phenocrysts, completely chlorite? + epidote-altered, 2-3% bright olive-green patches of very fine grained epidote, with irregular outline, 1x3 to 10x17 mm, locally with quartz core. Grab sample from station #18.		X.R.F.	
112	Diabase? or diabasic-appearing basalt flow? or intrusive?: medium crystalline, medium grey-green (overall), moderately to strongly saussurite-altered, weakly chlorite?-altered, moderately magnetic, feldspar + hornblende (+ quartz). About 10-15% hornblende grains to 4x6 mm, interstitial to feldspar crystals. About 2-6% clear grey quartz in irregular patches to 1x2 mm interstitial. About 1-2% fine disseminated pyrite as very irregular, patchy grains. Grab sample from station #19.		X.R.F.	
113	Granodiorite: bluff-forming, moderately saussurite-altered, medium crystalline, sub-translucent, medium grey feldspar crystals with about 6-10% interstitial chlorite?-epidote?-pyrite-altered hornblende? up to 3x4 mm. Approx. 1-2% fine to coarse? disseminated pyrite. Resembles granodiorite? of east end of Jurassic Koksilah stock of the Island Intrusions. Grab sample from station #37G.		X.R.F.	
114	Rhyolite intrusive: creamy white (to sub-translucent grey to sub-opaque tan), very strongly saussurite-altered, metavitric. Locally, 5-10% very fine clear grey feldspar microphenocrysts apparent. 0.5-1% discontinuous chloritic? fractures. Rusty fractures relatively common. Resembles #9897 at station #6. Grab sample from station #107A at "Strip-Showing."		X.R.F.	

Sample No.	Lithology	Cu ppm	Zn ppm	Ag ppm
9910	Light grey-green, fine grained dacite with 1-3% stringers, disseminations of pyrite pyrrhotite in a zone 1.5 m wide; small trench here, bearing 116°. Location: L18+00N, 8+25E.	162 with 286 ppm Cr, 50 ppm U	70	0.2
9911	Same as #9910, with 3% disseminated pyrite in a possible trench. Location: L18+90N, 5+30E.	135 with 384 ppm Cr	80	0.2

APPENDIX III

CERTIFICATES
OF
ANALYSIS/ASSAY

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 ST.
VANCOUVER, B.C.
PROJECT: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85178
INVOICE#: 5314
DATE ENTERED: JULY 11,1985
FILE NAME: MPH85178
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
T	9881	10
T	9883	10
T	9884	10
T	9886	10
T	9887	10
T	9888	10
T	9889	10
T	9890	10
T	9891	10
T	9892	10
T	9893	10

RECEIVED JUL 1 2 1985

CERTIFIED BY : [signature]

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 ST.
VANCOUVER, B.C.

PROJECT: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85204
INVOICE#: 5344
DATE ENTERED: JULY 23, 1985
FILE NAME: MPH85204
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
T	9894	10
T	9895	10
T	9896	10
T	9897	10
T	9898	10
T	101	10
T	102	10
T	103	10
T	104	10
T	105	10
T	106	10

RECEIVED JUL 25 1985

CERTIFIED BY : [signature]

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: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85235
INVOICE#: 5391
DATE ENTERED: AUGUST 7,1985
FILE NAME: MPH85235
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
A	9899	10
A	9900	10
A	9901	10
A	9902	10
A	9903	10
A	9904	10
A	9905	10
A	9906	10
A	9907	10
A	9908	10
A	9909	10

CERTIFIED BY : J. 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: V155
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 85178.C
INVOICE#: 5388
DATE ENTERED: AUGUST 6,1985
FILE NAME: MPH85178.C
PAGE # : 1

PRE FIX	SAMPLE NAME	oz/t Ag	% Cu	% Zn
A	9883	0.28	1.00	0.03
A	9886	0.26	0.40	0.01
A	9887	0.06	0.34	0.01
A	9888	0.08	0.28	0.01
A	9889	0.22	0.44	0.01
A	9891	0.06	0.08	0.01
A	9892	0.12	0.56	0.01
A	9893	0.20	0.26	0.01

CERTIFIED BY : F. 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: V155
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 85178.B
INVOICE#: 5359
DATE ENTERED: JULY 26,1985
FILE NAME: MPH85178.B
PAGE # : 1

PRE FIX	SAMPLE NAME	oz/t Ag	% Cu
A	9884	0.74	3.66
A	9890		1.75

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CERTIFIED BY : P. Rossbacher

MPH

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: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85218
INVOICE#: 5377
DATE ENTERED: AUGUST 1,1985
FILE NAME: MPH85218
PAGE # : 1

PRE FIX	SAMPLE NAME	PPM Cu	PPM Ni	PPM Co	PPM Ag	PPM Zn	PPM Pb	PPB Au
	107	140			0.6	418	212	10

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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: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85235.A
INVOICE#: N.C.
DATE ENTERED: AUGUST 16,1985
FILE NAME: MPH85235.A
PAGE # : 1

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ni	PPM Co	PPM Mn	% Fe	PPM Ag	PPM Zn	PPM Pb
	9894	1	24000	4	64	280	>10.0	7.2	32	2
	9895	1	9000	4	16	700	>10.0	7.0	40	2
	9896	4	>40000	58	40	260	>10.0	11.8	86	8
	9897	2	80	18	8	340	1.9	0.8	20	2
	9898	1	68	20	38	3880	3.8	1.0	1600	4
	9899	2	446	24	14	3640	7.7	1.0	94	2
	9900	1	128	16	18	6000	8.3	1.2	16	2
	9901	2	112	10	8	440	3.2	0.8	38	2
	9902	1	1280	42	12	3760	6.6	1.6	150	2
	9903	1	>40000	28	26	800	1.8	3.4	56	4
	9904	2	6500	20	16	3380	8.8	2.4	348	2
	9905	2	890	30	8	2140	5.4	1.4	108	2
	9906	3	9700	16	10	3140	>10.0	4.0	80	2
	101	1	900	20	74	300	>10.0	1.4	48	2
	102	1	14800	34	30	680	7.6	4.2	52	2
	103	1	520	8	4	3180	>10.0	2.2	32	2
	104	1	23400	20	20	1700	7.9	6.2	98	2
	105	1	158	26	8	440	3.6	1.2	96	12
	106	12	1780	48	40	920	1.9	1.2	42	2

CERTIFIED BY : G. Rossbacher

Chemex Labs Ltd.

•Analytical Chemists •Geochemists •Registered Assayers

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

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED .

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

CERT. # : A8513553-001-A
INVOICE # : I8513553
DATE : 16-JUL-85
P.O. # : NONE
V155

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 :
CERTIFICATE 85178

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		
9881	0.48	0.2	60	10	<0.5	<2	0.63	<0.5	58	54	63	14.16	<10	<0.01	<10	0.24	309	<1	<0.01	38	430	<2	<10	56	0.05	<10	<10	18	<10	10	--	--
9883	0.68	4.6	10	10	<0.5	<2	3.61	<0.5	102	11	8596	28.03	<10	<0.01	<10	0.57	1227	4	<0.01	10	200	<2	10	<1	0.01	<10	<10	33	<10	230	--	--
9884	1.12	17.6	20	10	<0.5	<2	3.33	0.5	303	32	>9999	25.51	<10	<0.01	<10	0.90	1425	4	<0.01	16	270	<2	10	<1	0.02	<10	<10	44	<10	290	--	--
9886	0.96	4.0	10	10	<0.5	<2	5.48	<0.5	11	23	3611	16.18	<10	<0.01	<10	0.46	2628	<1	<0.01	6	320	<2	<10	<1	0.05	<10	<10	28	<10	70	--	--
9887	1.56	1.6	10	10	<0.5	14	0.23	<0.5	17	37	3051	16.92	<10	<0.01	<10	0.76	512	<1	0.01	16	410	<2	<10	16	0.04	<10	<10	46	<10	40	--	--
9888	0.73	0.8	<10	10	<0.5	16	0.23	<0.5	33	6	2396	37.54	<10	<0.01	<10	0.64	329	<1	<0.01	21	220	<2	10	5	0.02	<10	<10	21	<10	20	--	--
9889	0.71	4.4	<10	20	<0.5	4	0.38	<0.5	11	32	3559	11.55	<10	<0.01	<10	0.49	293	3	<0.01	8	460	<2	<10	27	0.10	<10	<10	30	<10	120	--	--
9890	0.64	7.6	10	10	<0.5	<2	0.29	3.5	242	27	>9999	19.62	<10	<0.01	<10	0.51	404	3	<0.01	30	330	<2	10	10	0.02	<10	<10	12	<10	560	--	--
9891	1.42	1.4	<10	190	<0.5	<2	0.65	<0.5	13	34	641	4.78	<10	0.01	<10	0.76	1351	<1	0.04	25	460	<2	<10	57	0.11	<10	<10	42	<10	140	--	--
9892	0.52	1.8	10	10	<0.5	4	4.47	<0.5	13	6	4979	23.58	<10	<0.01	<10	0.55	1849	<1	<0.01	4	150	<2	10	19	0.01	<10	<10	20	30	40	--	--
9893	0.12	4.8	10	10	<0.5	24	0.46	<0.5	71	4	2120	27.18	<10	<0.01	<10	0.15	298	<1	<0.01	3	40	<2	10	12	0.02	<10	<10	22	50	10	--	--

Certified by ....

Chemex Labs Ltd.

•Analytical Chemists •Geochemists •Registered Assayers

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North Vancouver, B.C.
Canada V7J 2C1
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Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

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

CERT. # : A8514[illegible]-001-A
INVOICE # : I8514[illegible]
DATE : [illegible]-AUG-85
P.O. # : NONE
9155

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 :
CERTIF # 05204

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		
9894	0.17	15.2	50	10	<0.5	20	0.61	0.5	[illegible]	18	9999	25.10	10	<0.01	<10	0.44	337	<1	0.01	<1	810	26	<10	12	0.02	<10	<10	20	10	60	--	--
9895	0.56	8.2	40	20	<0.5	10	0.63	<0.5	21	8	8749	30.15	10	<0.01	<10	0.38	567	1	0.01	<1	810	14	<10	46	0.10	<10	10	50	<10	40	--	--
9896	0.36	23.0	60	<10	<0.5	<2	0.45	2.0	54	35	>9999	29.20	10	<0.01	<10	0.08	122	4	<0.01	50	1560	42	20	59	0.03	<10	<10	24	10	140	--	--
9897	0.80	0.2	<10	170	<0.5	<2	0.47	<0.5	12	64	141	3.17	10	0.02	<10	0.54	273	3	0.07	14	690	6	<10	44	0.05	<10	10	20	<10	20	--	--
9898	0.85	0.8	50	10	<0.5	<2	8.00	79.5	34	12	85	9.61	20	<0.01	<10	1.33	5690	5	<0.01	15	330	20	30	15	0.01	12	20	17	<10	>9999	--	--
9101	0.72	0.4	40	10	<0.5	<2	0.33	<0.5	92	122	1961	21.99	10	<0.01	<10	0.55	315	<1	<0.01	13	410	14	<10	30	0.06	10	<10	29	<10	40	--	--
9102	0.80	5.2	40	10	<0.5	<2	0.65	<0.5	40	15	9999	19.78	10	<0.01	<10	0.66	461	1	<0.01	29	810	18	<10	37	0.08	<10	<10	43	<10	60	--	--
9103	0.44	2.0	60	10	<0.5	<2	11.50	<0.5	7	48	622	14.55	40	<0.01	<10	0.23	2536	1	<0.01	1	290	12	<10	<1	<0.01	<10	20	20	<10	10	--	--
9104	0.38	7.8	60	10	<0.5	2	7.69	1.0	27	35	>9999	17.16	20	<0.01	<10	0.83	1324	2	<0.01	15	1120	24	10	<1	0.04	<10	10	38	<10	110	--	--
9105	1.71	0.2	10	340	<0.5	<2	0.20	<0.5	12	79	150	3.93	10	0.03	10	1.14	476	<1	0.03	23	920	16	<10	9	<0.01	<10	<10	94	<10	95	--	--
9106	0.60	0.6	50	10	<0.5	30	0.76	<0.5	44	9	1045	26.12	10	<0.01	<10	0.35	1115	35	<0.01	36	670	16	<10	17	0.02	10	10	15	10	30	--	--

Certified by: Hart Bichler

MPH

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CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

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

CERT. # : A8514??9-001-A
INVOICE # : I8514??9
DATE : 23-AUG-85
P.O. # : NONE
V155

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 :
CERTIF # 85235

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		
9899	1.06	0.2	30	30	<0.5	<2	3.05	0.5	19	68	559	7.22	20	0.02	<10	0.77	3907	1	0.02	32	940	20	<10	53	0.13	<10	10	44	<10	90	--	--
9900	0.56	0.2	60	<10	<0.5	<2	10.79	0.5	35	49	138	23.46	60	<0.01	<10	0.09	5483	<1	<0.01	5	320	28	10	<1	<0.01	<10	20	23	10	<10	--	--
9901	1.53	0.2	10	230	<0.5	<2	0.59	<0.5	15	43	107	4.17	10	0.09	<10	1.12	435	2	0.11	6	810	14	<10	149	0.12	<10	<10	69	<10	30	--	--
9902	1.93	0.6	30	30	<0.5	<2	2.98	1.0	21	77	1529	5.31	10	<0.01	<10	1.51	3745	1	<0.01	46	790	18	<10	111	0.19	<10	15	61	<10	170	--	--
9903	1.18	2.9	30	<10	<0.5	4	0.81	2.0	39	60	9999	11.93	15	<0.01	<10	1.10	738	6	<0.01	30	2110	58	30	26	0.03	10	<10	27	<10	150	--	--
9904	0.98	1.6	40	50	<0.5	2	2.94	2.0	29	41	8189	10.94	20	<0.01	<10	0.88	3806	3	<0.01	20	930	26	<10	20	0.05	<10	15	34	10	430	--	--
9905	1.77	0.2	20	30	<0.5	<2	1.49	0.5	19	72	1159	6.17	10	0.03	10	1.51	2484	2	0.01	32	790	20	<10	61	0.10	<10	<10	58	10	130	--	--
9906	1.24	4.2	60	<10	<0.5	2	4.54	0.5	30	32	9999	16.16	30	<0.01	<10	0.99	3412	2	<0.01	10	770	23	10	<1	0.03	<10	10	49	120	90	--	--
~~9907~~	~~1.65~~	~~2.0~~	~~20~~	~~<10~~	~~<0.5~~	~~2~~	~~2.01~~	~~89.0~~	~~19~~	~~55~~	~~7157~~	~~3.53~~	~~10~~	~~0.01~~	~~<10~~	~~0.79~~	~~1524~~	~~8~~	~~<0.01~~	~~9~~	~~1370~~	~~20~~	~~40~~	~~162~~	~~0.13~~	~~<10~~	~~<10~~	~~51~~	~~<10~~	~~>9999~~	~~--~~	~~--~~
~~9908~~	~~0.64~~	~~0.8~~	~~30~~	~~40~~	~~<0.5~~	~~<2~~	~~1.41~~	~~5.5~~	~~13~~	~~27~~	~~994~~	~~10.37~~	~~10~~	~~0.06~~	~~<10~~	~~0.11~~	~~2599~~	~~<1~~	~~<0.01~~	~~3~~	~~870~~	~~24~~	~~<10~~	~~63~~	~~0.02~~	~~<10~~	~~10~~	~~19~~	~~<10~~	~~910~~	~~--~~	~~--~~
~~9909~~	~~0.59~~	~~1.4~~	~~110~~	~~20~~	~~<0.5~~	~~2~~	~~4.77~~	~~1.0~~	~~54~~	~~30~~	~~850~~	~~26.10~~	~~20~~	~~<0.01~~	~~<10~~	~~0.09~~	~~1599~~	~~<1~~	~~<0.01~~	~~<1~~	~~500~~	~~34~~	~~<10~~	~~1~~	~~0.04~~	~~<10~~	~~30~~	~~22~~	~~10~~	~~90~~	~~--~~	~~--~~
9910	2.04	0.2	40	40	<0.5	<2	0.79	<0.5	30	336	162	5.92	10	0.06	<10	3.31	774	<1	0.06	71	640	38	20	49	0.36	10	50	142	<10	70	--	--
9911	2.73	0.2	20	40	<0.5	<2	0.68	<0.5	25	274	135	6.11	10	0.04	<10	2.83	775	<1	0.04	71	790	28	10	35	0.21	<10	20	183	<10	80	--	--

Hart Bichler

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
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TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE ST.
VANCOUVER, B.C.
PROJECT: V155
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 85178.A
INVOICE#: 5320
DATE ENTERED: JULY 15,1985
FILE NAME: MPH85178.A
PAGE # : 1

PRE FIX	SAMPLE NAME	% SiO_2	% Al_2O_3	% MgO	% Fe_2O_3	% CaO	% K_2O	% Na_2O	% TiO_2	% MnO
A	9882XRF	44.0	2.6	2.9	23.6	26.0	0.1	0.2	0.1	0.9

PRE FIX	SAMPLE NAME	% L.O.I
A	9882XRF	0.9

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
PROJECT: V155
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 85235.B
INVOICE#: 5441
DATE ENTERED: AUGUST 19,1985
FILE NAME: MPH85235.B
PAGE # : 1

PRE FIX	SAMPLE NAME	% SiO2	% Al2O3	% MgO	% Fe2O3	% CaO	% K2O	% Na2O	% TiO2	% MnO
A	9897	75.0	10.2	1.3	5.1	2.5	0.8	2.7	0.3	0.1

SAMPLE NAME	% L.O.I
9897	3.0

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
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VANCOUVER B.C.
PROJECT: V155
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 85218.A
INVOICE#: 5393
DATE ENTERED: AUGUST 7,1985
FILE NAME: MPH85218.A
PAGE # : 1

PRE FIX	SAMPLE NAME	% SiO2	% Al2O3	% MgO	% Fe2O3	% CaO	% K2O	% Na2O	% TiO2	% MnO
A	107	52.0	13.4	6.8	13.8	9.2	0.6	2.8	2.2	0.2
A	108	54.0	13.1	6.0	8.4	7.8	0.6	3.1	2.2	0.2
A	109	51.0	13.8	7.0	13.4	12.2	0.2	1.9	1.7	0.2
A	110	70.0	15.5	2.2	5.2	3.6	0.4	5.6	0.5	0.2
A	111	63.0	16.2	3.4	6.6	5.6	2.0	3.5	0.6	0.2
A	112	55.0	15.2	6.3	8.6	9.6	0.4	2.2	0.6	0.2
A	113	67.0	15.0	2.7	4.8	4.8	0.9	3.6	0.2	0.5
A	114	77.0	13.0	0.6	1.6	1.1	2.2	4.8	0.1	0.1

PRE FIX	SAMPLE NAME	% L.O.I.
A	107	1.7
A	108	5.2
A	109	3.2
A	110	1.6
A	111	2.3
A	112	1.7
A	113	3.0
A	114	1.2

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 1

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L1+80N	1+20W	22	0.2	78
S		0+90W	30	0.2	58
S		0+60W	18	0.2	160
S		0+30W	18	0.2	184
S		0+00W	36	0.2	138
S		0+30E	22	0.2	230
S		0+60E	102	0.2	146
S		0+90E	104	0.6	262
S		1+20E	36	0.4	200
S	L1+80N	1+50E	68	0.4	156
S		1+80E	NOT	RECEIVED	
S		2+10E	142	0.2	94
S		2+40E	32	0.2	136
S		2+70E	52	0.2	162
S		3+00E	52	0.2	160
S		3+30E	82	0.2	246
S		3+60E	38	0.2	106
S		3+90E	30	0.2	98
S	L3+60N	4+20W	44	0.2	100
S		3+90W	38	0.2	86
S		3+60W	26	0.2	70
S		3+30W	50	0.2	54
S		3+00W	22	0.2	104
S		2+70W	28	0.2	82
S		2+40W	360	0.2	118
S		2+10W	24	0.2	70
S		1+80W	14	0.2	112
S		1+50W	28	0.2	64
S		1+20W	56	0.2	74
S	L3+60N	0+90W	346	0.4	600
S		0+60W	24	0.2	80
S		0+30W	48	0.2	46
S		0+00W	44	0.4	90
S		0+30E	270	0.4	146
S		0+60E	536	0.2	126
S		0+90E	1440	0.4	140
S		1+20E	86	0.2	266
S		1+50E	60	0.2	940
S		1+80E	66	0.2	396
S	L3+60N	2+10E	50	0.2	810

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 2

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L3+60N	2+40E	10	0.2	600
S		2+70E	18	0.2	1740
S		3+00E	16	0.2	1000
S		3+30E	36	0.2	680
S		3+60E	24	0.2	190
S		3+90E	72	0.2	178
S	L5+40N	5+70W	92	0.2	58
S		5+40W	34	0.2	70
S		5+10W	26	0.2	90
S		4+80W	58	0.2	146
S		4+50W	56	0.2	62
S		4+20W	40	0.2	78
S		3+90W	52	0.4	114
S		3+60W	28	0.2	126
S		3+30W	20	0.2	100
S		3+00W	44	0.2	48
S		2+70W	20	0.2	92
S	L10+80N	0+00W	62	0.2	88
S		2+10W	22	0.2	40
S	L5+40N	1+80W	18	0.2	60
S		1+50W	20	0.2	82
S		1+20W	20	0.2	82
S		0+90W	20	0.2	90
S		0+60W	22	0.2	106
S		0+30W	28	0.2	66
S		0+00W	54	0.2	112
S		0+30E	18	0.2	220
S		0+60E	76	0.6	242
S		0+90E	46	0.2	84
S	L5+40N	1+20E	14	0.2	114
S		1+50E	20	0.2	152
S		1+80E	38	0.2	92
S		2+10E	48	0.2	162
S		2+40E	32	0.2	220
S		2+70E	26	0.2	1720
S		3+00E	68	0.4	242
S		3+30E	38	0.4	220
S		3+60E	26	0.4	230
S		3+90E	30	0.2	128
S	L7+20N	7+50W	14	0.2	156

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CERTIFICATE OF ANALYSIS

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

PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 3

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L7+20N	7+20W	32	0.2	76
S		6+90W	48	0.4	28
S		6+60W	52	0.2	36
S		6+30W	28	0.2	68
S		6+00W	34	0.2	44
S		5+70W	12	0.2	52
S		5+40W	10	0.2	46
S		5+10W	10	0.2	48
S		4+80W	24	0.2	86
S	L7+20N	4+50W	12	0.2	242
S		4+20W	18	0.2	226
S		3+90W	24	0.2	162
S		3+60W	10	0.2	182
S		3+30W	20	0.2	126
S		3+00W	20	0.2	148
S		2+70W	14	0.2	132
S		2+40W	24	0.2	80
S		2+10W	48	0.2	64
S		1+80W	30	0.2	48
S	L7+00N	1+50W	26	0.2	60
S	L7+20N	1+20W	20	0.2	68
S		0+90W	20	0.2	60
S		0+60W	18	0.2	66
S		0+30W	10	0.2	50
S		0+00W	20	0.2	120
S		0+30E	18	0.2	122
S		0+60E	12	0.2	148
S		0+90E	22	0.2	138
S		1+20E	22	0.4	172
S	L7+20N	1+50E	10	0.2	190
S		1+80E	26	0.2	104
S		2+10E	12	0.2	116
S		2+40E	44	0.2	102
S		2+70E	14	0.2	372
S		3+00E	30	0.2	204
S		3+30E	22	0.2	288
S	L7+20N	3+60E	48	0.2	290
S	L9+00N	8+10W	38	0.2	238
S		7+80W	40	0.2	68
S	L9+00N	7+50W	28	0.2	72

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CERTIFICATE OF ANALYSIS

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

PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 4

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L9+00N	7+20W	44	0.2	104
S		6+90W	60	0.2	46
S		6+60W	52	0.2	34
S		6+30W	20	0.2	60
S		6+00W	24	0.2	56
S		5+70W	22	0.2	44
S		5+40W	28	0.2	44
S		5+10W	16	0.2	76
S		4+80W	26	0.2	86
S	L9+00N	4+50W	26	0.2	60
S		4+20W	22	0.2	72
S		3+90W	32	0.2	48
S		3+60W	34	0.2	76
S		3+30W	30	0.4	96
S		3+00W	38	0.2	90
S		2+70W	44	0.2	52
S		2+40W	44	0.2	288
S		2+10W	30	0.2	302
S		1+80W	52	0.2	244
S	L9+00N	1+50W	362	0.2	172
S	L9+00N	1+20W	36	0.2	82
S		0+90W	54	0.2	74
S		0+60W	30	0.2	122
S		0+30W	40	0.2	74
S		0+00W	24	0.2	110
S		0+30E	40	0.2	68
S		0+60E	42	0.2	244
S		0+90E	32	0.4	158
S		1+20E	68	0.2	116
S	L9+00N	1+50E	64	0.2	196
S		1+80E	36	0.2	106
S		2+10E	50	0.2	96
S		2+40E	56	0.2	82
S		2+70E	38	0.2	114
S		3+00E	40	0.2	116
S		3+30E	30	0.2	178
S		3+60E	38	0.4	190
S	L10+80N	6+60W	56	0.2	92
S		6+30W	34	0.4	80
S		6+00W	18	0.2	46

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 5

PRE FIX		SAMPLE NAME	PPM Cu	PPM Ag	PPM Zn
S		5+70W	36	0.2	44
S		5+40W	30	0.4	44
S		5+10W	18	0.2	42
S		4+80W	16	0.2	68
S		4+50W	30	0.2	68
S		4+20W	28	0.2	46
S		3+90W	30	0.4	58
S		3+60W	53	0.4	60
S		3+30W	22	0.4	64
S	L10+80N	3+00W	28	0.2	90
S		2+70W	32	0.4	76
S		2+40W	20	0.2	108
S		2+10W	20	0.2	82
S		1+80W	32	0.4	80
S		1+50W	48	0.4	132
S		1+20W	60	0.4	96
S		0+90W	34	0.2	164
S		0+60W	40	0.2	132
S		0+30W	78	0.2	70
S	L10+80N	0+00W	62	0.2	88
S	L10+80N	0+30E	46	0.4	66
S		0+60E	36	0.4	94
S		0+90E	36	0.2	106
S		1+20E	68	0.2	116
S		1+50E	44	0.4	100
S		1+80E	34	0.2	82
S		2+10E	60	0.2	74
S		2+40E	62	0.2	70
S		2+70E	56	0.2	106
S		3+00E	54	0.2	156
S		3+30E	36	0.2	116
S		3+60E	18	0.2	84
S		3+90E	22	0.2	102
S		4+20E	30	0.2	94
S		4+50E	46	0.2	102

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 6

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L12+60N	5+40W	28	0.2	80
S		5+10W	18	0.2	104
S		4+80W	44	0.2	64
S		4+50W	20	0.2	94
S		4+20W	36	0.2	168
S		3+90W	46	0.2	116
S		3+60W	162	0.2	398
S		3+30W	60	0.4	284
S		3+00W	30	0.4	342
S	L12+60N	2+70W	28	0.2	136
S		2+40W	22	0.4	236
S		2+10W	52	0.2	210
S		1+80W	60	0.4	164
S		1+50W	48	0.4	270
S		1+20W	34	0.2	158
S		0+90W	56	0.4	680
S		0+60W	126	0.4	100
S		0+30W	38	0.2	100
S		0+00	34	0.2	106
S	L12+60N	0+30E	60	0.2	88
S		0+60E	48	0.2	74
S		0+90E	68	0.2	84
S		1+20E	34	0.2	114
S		1+50E	34	0.2	134
S		1+80E	46	0.2	62
S		2+10E	26	0.2	134
S		2+40E	34	0.4	180
S		2+70E	46	0.2	140
S		3+00E	80	0.2	130
S	L12+60N	3+30E	50	0.2	114
S		3+60E	144	0.2	162
S		3+90E	80	0.2	114
S		4+20E	32	0.2	186
S		4+50E	272	0.4	368
S		4+80E	40	0.2	132
S	L12+60N	5+10E	240	0.2	720
S	L14+40N	9+90W	28	0.2	68
S		9+60W	20	0.2	62
S	L14+40N	9+30W	38	0.2	56
S		9+00W	20	0.2	82

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 7

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L14+40N	8+70W	20	0.2	40
S		8+40W	22	0.2	38
S		8+10W	14	0.2	44
S		7+80W	24	0.2	68
S		7+50W	12	0.2	52
S		7+20W	18	0.4	50
S		6+90W	20	0.2	60
S		6+60W	20	0.2	118
S	L14+40N	6+30W	38	0.2	66
S		6+00W	NOT	RECEIVED	
S		5+10W	204	0.2	104
S		4+80W	88	0.2	62
S		4+50W	56	0.2	78
S		4+20W	102	0.2	80
S		3+90W	78	0.2	114
S		3+60W	66	0.2	84
S		3+30W	48	0.2	128
S		3+00W	218	0.2	76
S	L14+40N	2+70W	38	0.2	60
S		2+40W	58	0.2	48
S		2+10W	48	0.2	66
S		1+80W	68	0.2	70
S		1+50W	42	0.2	130
S		1+20W	62	0.2	214
S		0+90W	54	0.2	132
S		0+60W	28	0.2	90
S		0+30W	50	0.2	154
S		0+00	54	0.2	140
S	L14+40N	0+30E	38	0.2	100
S		0+60E	58	0.2	100
S		0+90E	58	0.2	148
S		1+20E	186	0.2	162
S		1+50E	136	0.2	184
S		1+80E	82	0.2	144
S		2+10E	38	0.2	178
S		2+40E	222	0.2	10
S		2+70E	242	0.2	226
S	L14+40N	3+00E	86	0.2	262
S		3+30E	96	0.2	140
S		3+60E	56	0.2	152

CERTIFIED BY : P. Rossbacher

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

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

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER, B.C.
PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 8

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L14+40N	3+90E	64	0.2	178
S		4+20E	76	0.2	146
S		4+50E	22	0.2	212
S		4+80E	200	0.2	112
S		5+10E	130	0.2	146
S		5+40E	22	0.2	140
S		5+70E	44	0.2	100
S	L14+40N	6+00E	34	0.2	124
S		6+30E	40	0.2	108
S		6+60E	20	0.2	102
S		6+90E	48	0.4	162
S		7+20E	66	0.2	44
S		7+50E	44	0.2	42
S		7+80E	18	0.2	72
S		8+10E	20	0.2	130
S		8+40E	30	0.2	100
S		8+70E	30	0.2	66
S	L14+40N	9+00E	34	0.2	86
S		9+30E	28	0.2	86
S		9+60E	22	0.2	98
S	L14+40N	9+90E	40	0.2	86
S	L16+20N	3+60W	62	0.2	68
S		3+30W	52	0.2	132
S		3+00W	26	0.2	254
S		2+70W	34	0.2	104
S		2+40W	32	0.2	76
S		2+10W	38	0.2	68
S	L16+20N	1+80W	80	0.2	98
S		1+50W	52	0.2	94
S		1+20W	60	0.2	102
S		0+90W	278	0.2	112
S		0+60W	38	0.2	96
S		0+30W	40	0.2	96
S		0+00	82	0.2	228
S		0+00B	54	0.2	262
S		0+30E	830	0.2	152
S	L16+20N	0+60E	1140	0.4	352
S		0+90E	2660	0.8	620
S		1+20E	132	0.2	84
S		1+50E	76	0.2	74

CERTIFIED BY : P. Rossbach

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CERTIFICATE OF ANALYSIS

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

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

PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 9

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L16+20N	1+80E	40	0.2	130
S		2+10E	60	0.2	106
S		2+40E	48	0.2	76
S		2+70E	72	0.2	80
S		3+30E	NOT	RECEIVED	
S		3+60E	18	0.2	76
S	L16+20N	3+90E	20	0.2	82
S		4+20E	26	0.2	92
S		4+50E	14	0.2	80
S		4+80E	18	0.2	122
S		5+10E	38	0.2	102
S		5+40E	26	0.2	102
S		6+00E	70	0.2	126
S		6+30E	28	0.2	82
S		6+60E	26	0.2	148
S		6+90E	NOT	RECEIVED	
S		7+20E	18	0.2	102
S	L16+20N	7+50E	20	0.2	122
S	L18+00N	3+00W	32	0.2	50
S		2+70W	56	0.2	48
S		2+40W	32	0.2	104
S		2+10W	28	0.2	94
S		1+80W	18	0.2	50
S		1+50W	28	0.2	74
S		1+20W	56	0.2	64
S		0+90W	86	0.2	192
S	L18+00N	0+60W	102	0.2	372
S		0+30W	222	0.2	152
S		0+00	42	0.2	102
S		0+30E	180	0.2	368
S		0+60E	50	0.2	130
S		0+90E	52	0.2	100
S		1+20E	72	0.2	100
S		1+50E	70	0.2	144
S		1+80E	40	0.2	232
S	L18+00N	2+10E	76	0.2	124
S		2+40E	42	0.2	104
S		2+70E	60	0.2	106
S		3+00E	80	0.2	102
S		3+30E	40	0.2	94

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CERTIFICATE OF ANALYSIS

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

PROJECT: V 155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85179
INVOICE#: 5305
DATE ENTERED: JULY 8, 1985
FILE NAME: MPH85179
PAGE # : 10

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L18+00N	3+60E	26	0.2	126
S		3+90E	68	0.2	102
S		4+20E	46	0.2	140
S		4+50E	82	0.2	106
S		4+80E	34	0.2	132
S	L18+00N	5+10E	104	0.2	160
S		5+40E	22	0.2	188
S		5+70E	68	0.2	78
S		6+00E	26	0.6	140
S		6+30E	72	0.4	92
S		6+60E	16	0.2	60
S		6+90E	42	0.4	112
S		7+20E	68	0.2	52
S		7+50E	212	1.6	244
S		7+80E	128	0.4	96
S	L18+00N	8+10E	52	0.2	110
S		8+40E	10	0.2	56
S		8+70E	28	0.2	62
S		9+00E	18	0.2	14
S		9+60E	40	0.4	52
S		9+90E	22	0.2	74
S		10+20E	36	0.2	80
S		10+50E	36	0.2	92
S	L18+00N	10+80E	78	0.2	52

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
PROJECT: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85293
INVOICE#: 5482
DATE ENTERED: AUGUST 27,1985
FILE NAME: MPH85293
PAGE # : 1

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	L6+30N	BL	58	0.2	50
S		0+30E	38	0.2	108
S		0+60E	56	0.2	426
S		0+90E	32	0.4	260
S		1+20E	30	0.4	448
S		1+50E	26	0.2	294
S		1+80E	50	0.2	82
S		2+10E	40	0.2	84
S		2+40E	62	0.2	70
S		2+70E	50	0.2	104
S		3+00E	58	0.2	196
S		3+30E	28	0.2	142
S		3+60E	46	0.2	142
S		3+90E	52	0.2	126
S		4+20E	60	0.2	80
S		4+50E	136	0.2	58
S		4+80E	56	0.2	56
S		5+10E	66	0.2	176
S		5+40E	34	0.2	138
S		5+70E	38	0.2	182
S		6+00E	30	0.2	108
S	L11+70N	BL	54	0.2	156
S		0+30E	44	0.2	90
S		0+60E	48	0.2	102
S		1+20E	62	0.2	84
S		1+30E	64	0.2	162
S		2+10E	26	0.2	86
S		2+40E	26	0.4	184
S		2+70E	88	0.2	118
S		3+00E	32	0.4	386
S		3+30E	34	0.2	216
S		3+60E	82	0.2	252
S		3+90E	74	0.2	180
S		4+20E	24	0.2	170
S		4+50E	50	0.2	104
S		4+80E	58	0.2	170
S		5+10W	30	0.2	58
S		5+40W	28	0.2	68
S		5+70W	18	0.2	100
S		6+00W	16	0.2	102

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TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
PROJECT: V155
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85293
INVOICE#: 5482
DATE ENTERED: AUGUST 27,1985
FILE NAME: MPH85293
PAGE # : 2

PRE FIX	SAMPLE NAME		PPM Cu	PPM Ag	PPM Zn
S	13+50N	BL	80	0.2	88
S		0+30W	322	0.4	112
S		0+60W	228	0.4	86
S		0+90W	54	0.4	116
S		1+20W	70	0.2	104
S		1+50W	54	0.4	126
S		1+80W	34	0.2	98
S		2+10W	38	0.2	120
S		2+40W	52	0.2	180
S		2+70W	30	0.2	92
S	11+70N	0+60W	56	0.2	100
S		1+20W	34	0.2	216
S		1+50W	32	0.2	108
S		1+80W	34	0.2	88
S		2+10W	30	0.4	94
S		2+40W	32	0.2	92
S		2+70W	38	0.2	82
S		3+00W	22	0.2	88
S		3+30W	20	0.2	268
S		3+60W	32	0.2	114
S		3+90W	20	0.2	130
S		4+20W	28	0.2	92
S	L13+50N	3+00W	44	0.2	106

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

PROJECT: V155

TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 85283
INVOICE#: 5449
DATE ENTERED: AUGUST 21,1985
FILE NAME: MPH85283
PAGE # : 1

PRE FIX	SAMPLE NAME		PPM Cu	PPM Zn	PPM Ag	PPB Au
S	L17+10N	5+25E	52	122	0.2	
S		5+55E	104	150	0.2	
S		5+85E	56	102	0.2	
S		6+15E	70	128	0.2	
S		6+45E	52	90	0.2	
S		6+75E	42	112	0.2	
S		7+05E	56	92	0.2	
S		7+35E	42	80	0.2	
S		7+65E	72	98	0.2	
S		7+95E	54	74	0.2	
S	L18+00N	5+25E	80	138	0.2	
S		5+55E	66	208	0.2	
S		5+85E	48	118	0.2	
S		6+15E	44	146	0.2	
S		6+45E	114	172	0.2	
S		6+75E	40	80	0.2	
S		7+05E	56	128	0.2	
S		7+35E	68	68	0.2	
S		7+65E	116	78	0.2	
S		7+95E	194	114	0.2	
S		8+25E	52	130	0.2	
S	L18+90N	5+25E	54	400	0.2	
S		5+55E	60	170	0.2	
S		5+85E	72	282	0.2	
S		6+15E	44	158	0.2	
S		6+45E	26	156	0.2	
S		6+75E	110	82	0.2	
S		7+05E	50	238	0.2	
S		7+35E	28	182	0.2	
S		7+65E	34	126	0.2	
S		7+95E	178	122	0.4	
S	L18+90N	8+25E	74	84	0.2	
A		9910				10
A		9911				10

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APPENDIX IV

COMPUTER EVALUATION OF WHOLE ROCK ANALYSES

EVALUATION SUMMARY

SAMPLE	Base Metals EVALUATION	Gold EVALUATION
107	— *** - -	—
108	— ** - -	—
109	—	—
110	+	—
111	+	— ** - -
112	— * - -	—
113	+	— ** - -
114	+	— ** - -
9882	— ** - -	+

— "less favourable geologic environment"

+ "favourable geologic environment"

* anomalous geochemical factors present (10% of factors per symbol)

$$
>>>>>>>>>>>>>>>>>>>9882 <<<<<<<<<<<<<<<<<<
$$

JENSEN CLASSIFICATION: Komatiitic Basaltic Komatiite

IRVINE/BARAGAR CLASSIFICATION: Tholeiitic Basalt Subalkaline

SiO2 CLASSIFICATION: Ultramaf (43.44% SiO2)

TiO2 CLASSIFICATION: Ultramaf

****

------------------------- Volcanogenic base metals Evaluation -------------------------

WARNING SiO2 content TOO LOW for accepted volcanogenic studies ***

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
-5.26	-.07	14.39	-2.20	8.65	13.04	10.27

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-8.07	0.00	0.00	7.10	-.68
	N/A	N/A		

***************************** VOLCANOGENIC Au EVALUATION *****************************

*** Favourable wall rock is present ***

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
-2.20	.10	0.00	0.00	.11	.01
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
43.44	2.57	23.30	0.00	25.67	2.86	.20	.10
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
.10	.89	0.00	.89	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$ $
> 108   < < < < < < < < < < < < < < < < < < <
$ $

JENSEN CLASSIFICATION: Tholeiitic Basalt

IRVINE/BARAGAR CLASSIFICATION: Calc-Alkaline Basalt Subalkaline

SiO2 CLASSIFICATION: Andesite (53.68% SiO2)

TiO2 CLASSIFICATION: Basalt

****

------------------------- Volcanogenic base metals Evaluation -------------------------

WARNING SiO2 content TOO LOW for accepted volcanogenic studies ***

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
1.13	.01	.19	-.50	-2.02	2.33	37.71
*******						

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
1.57	0.00	0.00	-1.76	-.78
	N/A	N/A		

------------------------------ Volcanogenic Au Evaluation ------------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
-.50	.60	0.00	0.00	1.02	.22
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
53.68	13.02	8.35	0.00	7.75	5.96	3.08	.60
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
2.19	.20	0.00	5.17	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$ $
>>>>>>>>>>>>>>>>>>>109 <<<<<<<<<<<<<<<<<<<<<<
$ $

JENSEN CLASSIFICATION: Tholeiitic Basalt

IRVINE/BARAGAR CLASSIFICATION: Tholeiitic Basalt Alkaline

SiO2 CLASSIFICATION: Basalt (48.76% SiO2)

TiO2 CLASSIFICATION: Basalt

------------------------ Volcanogenic base metals Evaluation ------------------------

WARNING SiO2 content TOO LOW for accepted volcanogenic studies ***

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
.40	-.20	2.44	-1.30	.46	2.33	33.80

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-.12	0.00	0.00	.52	-.07
	N/A	N/A		

---------------------------- Volcanogenic Au Evaluation ----------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
-1.30	.19	0.00	0.00	.96	.09
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
48.76	13.19	12.81	0.00	11.66	6.69	1.82	.19
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
1.63	.19	0.00	3.06	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$ $
>>>>>>>>>>>>>>>>>>>110 <<<<<<<<<<<<<<<<<<
$ $

JENSEN CLASSIFICATION: Calc-Alkaline Dacite

IRVINE/BARAGAR CLASSIFICATION: Calc-Alkaline Rhyolite Subalkaline

SiO2 CLASSIFICATION: Dacite (66.79% SiO2)

TiO2 CLASSIFICATION: Dacite

Rock is soda-rich vis-a-vis potash

************************ VOLCANOGENIC Base Metals EVALUATION ************************

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
.06	-.75	-.77	1.46	-.83	-.33	22.03

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-1.61	0.00	0.00	.05	-.51
	N/A	N/A		

------------------------------ Volcanogenic Au Evaluation ------------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
1.46	.38	0.00	0.00	1.20	.15
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
66.79	14.79	4.96	0.00	3.44	2.10	5.34	.38
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
.48	.19	0.00	1.53	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$ $
>>>>>>>>>>>>>>>>>>>111 <<<<<<<<<<<<<<<<<<
$ $

JENSEN CLASSIFICATION: Calc-Alkaline Andesite

IRVINE/BARAGAR CLASSIFICATION: Calc-Alkaline Dacite Subalkaline

SiO2 CLASSIFICATION: Dacite (60.93% SiO2)

TiO2 CLASSIFICATION: Dacite

****

************************ VOLCANOGENIC Base Metals EVALUATION ************************

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
.19	1.05	-.09	-.53	-1.33	-.73	37.24

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-.75	0.00	0.00	-1.06	-.98
	N/A	N/A		

------------------------------ Volcanogenic Au Evaluation ------------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
-.53	1.93	0.00	0.00	1.24	.14
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
60.93	15.67	6.38	0.00	5.42	3.29	3.38	1.93
TiO2	**MnO**	**P2O5**	**LOI**	**CO2**	**Cr2O3**	**Zr**	**Sr**
.58	.19	0.00	2.22	0.00	0.00	0.00	0.00
Rb	**Ba**	**W**	**U**	**Th**	**Cu**	**Zn**	**Pb**
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	**Au**	**Ag**	**S**	**As**	**Sb**	**X**	**Y**
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$$
>>>>>>>>>>>>>>>>>>112 <<<<<<<<<<<<<<<<<<
$$

JENSEN CLASSIFICATION: Calc-Alkaline Basalt

IRVINE/BARAGAR CLASSIFICATION: Tholeiitic Andesite Alkaline

SiO2 CLASSIFICATION: Andesite (55.11% SiO2)

TiO2 CLASSIFICATION: Dacite

****

------------------------ Volcanogenic base metals Evaluation ------------------------

WARNING SiO2 content TOO LOW for accepted volcanogenic studies ***

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
1.86 *******	-.25	2.50	-1.48	-1.20	.05	36.22

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-.64	0.00 N/A	0.00 N/A	-1.26	.63

------------------------------ Volcanogenic Au Evaluation ------------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
-1.48	.40	0.00 N/A	0.00 N/A	1.19	.06 EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
55.11	15.23	8.62	0.00	9.62	6.31	2.20	.40
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
.60	.20	0.00	1.70	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$$

>>>>>>>>>>>>>>>>>>> 113 <<<<<<<<<<<<<<<<<<

$$

JENSEN CLASSIFICATION: Calc-Alkaline Andesite

IRVINE/BARAGAR CLASSIFICATION: Calc-Alkaline Dacite Subalkaline

SiO_2 CLASSIFICATION: Dacite (65.37% SiO_2)

TiO_2 CLASSIFICATION: Rhyolite

****

Rock is slightly soda enriched vis-a-vis potash

************************ VOLCANOGENIC Base Metals EVALUATION ************************

Residuals:

MgO	K_2O	CaO	Na_2O	Fe_2O_3	SiO_2	TAAS
.36	-.19	.19	-.40	-1.55	-.04	30.00

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-1.08	0.00	0.00	-1.32	-.75
	N/A	N/A		

------------------------------ Volcanogenic Au Evaluation ------------------------------

Na_2O(R)	K_2O(%)	Au	As	Per. Index	CO_2/CaO
-.40	.88	0.00	0.00	1.33	.21
		N/A	N/A		EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO_2	Al_2O_3	Fe_2O_3	FeO	CaO	MgO	Na_2O	K_2O
65.37	14.63	4.68	0.00	4.68	2.63	3.51	.88
TiO_2	MnO	P_2O_5	LOI	CO_2	Cr_2O_3	Zr	Sr
.20	.49	0.00	2.93	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated

$$$
>>>>>>>>>>>>>>>>>>>114 <<<<<<<<<<<<<<<<<<
$$$

JENSEN CLASSIFICATION: Calc-Alkaline Rhyolite

IRVINE/BARAGAR CLASSIFICATION: Calc-Alkaline Rhyolite Subalkaline

SiO2 CLASSIFICATION: Rhyolite (75.71% SiO2)

TiO2 CLASSIFICATION: Rhyolite

************************ VOLCANOGENIC Base Metals EVALUATION ************************

Residuals:

MgO	K2O	CaO	Na2O	Fe2O3	SiO2	TAAS
-.46	.67	-1.74	1.42	-1.67	.72	32.18

Discriminant Functions:

DF1	DF2	DF3	DF4	DF5
-1.03	0.00 N/A	0.00 N/A	-.89	-1.24

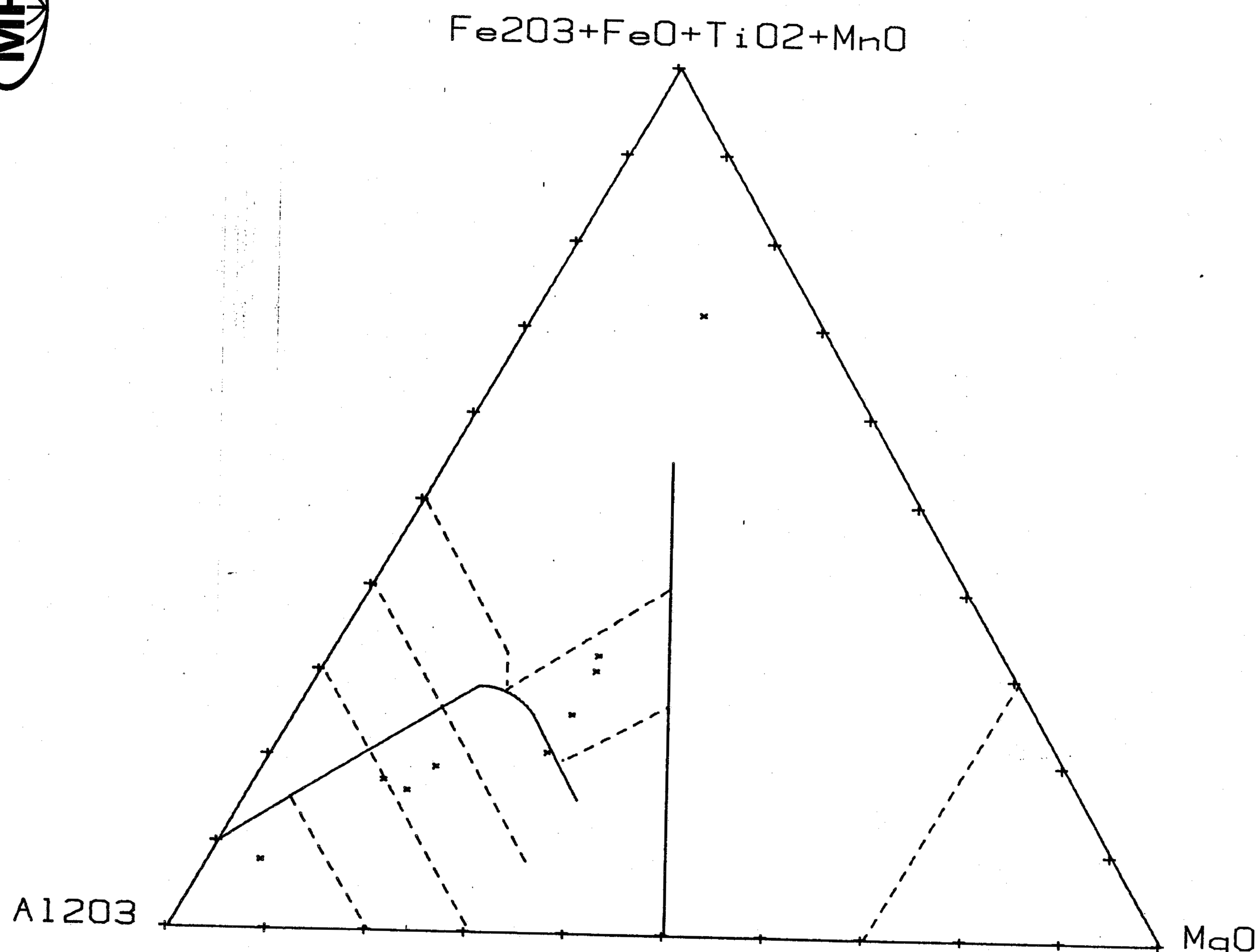
----------------------------- Volcanogenic Au Evaluation -----------------------------

Na2O(R)	K2O(%)	Au	As	Per. Index	CO2/CaO
1.42	2.16	0.00 N/A	0.00 N/A	1.15	.36 EST

SS	RT	LATITUDE	DEPARTURE	COMMENTS
0.	0.	0.00	0.00	

SiO2	Al2O3	Fe2O3	FeO	CaO	MgO	Na2O	K2O
75.71	12.78	1.57	0.00	1.08	.59	4.72	2.16
TiO2	MnO	P2O5	LOI	CO2	Cr2O3	Zr	Sr
.10	.10	0.00	1.18	0.00	0.00	0.00	0.00
Rb	Ba	W	U	Th	Cu	Zn	Pb
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	Au	Ag	S	As	Sb	X	Y
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N.B.: ******* anomalous factor
N/A not available
EST estimated



JENSEN CATION PLOT

APPENDIX V

SOIL GEOCHEMISTRY STATISTICS

Values used for contouring soil geochemical data were derived by the following means:

1. Values that are above a certain limit are excluded for the purposes of computing mean and standard deviation in order that a few very high (i.e very anomalous) values do not cause the mean or standard deviation to be erroneously high. All Cu values over 200 ppm were excluded, all Zn values over 300 ppm were excluded, all Ag values were included.

2. The mean and standard deviation are computed for each element and a cumulative frequency histogram is proposed.

3. From the cumulative frequency histogram, the 95th percentile value is graphically derived for each element. This value is considered to be the threshold of anomalous values.

4. Values used to contour the data are computed by adding the threshold value to two times the standard deviation, to four times the standard deviation, to eight times the standard deviation, and so on.

	Cu	Ag	Zn
Threshold (T)	85	0.34	229
Standard Deviation (SD)	28	0.05	56
T + 2SD	141	0.4	341
T + 4SD	197	0.6	453
T + 8SD	309	0.8	677
T + 16SD	533	1.2	1125
T + 32SD	981		
T + 64SD	1877		

ROSSBACHER LABORATORY LTD.

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

STATISTICAL REPORT

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

ELEMENT & UNIT: Cu PPM

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179
SAMPLE TYPE: SOIL

CLASS INTERVAL	CLASS FREQUENCY	RELATIVE FREQUENCY%	CUMULATIVE FREQUENCY%	CLASS MEAN
0 - 8	0	0.00	0.00	0.00
9 - 16	23	6.44	6.44	12.70
17 - 24	71	19.89	26.33	20.51
25 - 32	60	16.81	43.14	28.77
33 - 40	58	16.25	59.39	37.03
41 - 48	35	9.80	69.19	45.49
49 - 56	34	9.52	78.71	53.21
57 - 64	21	5.88	84.59	60.48
65 - 72	18	5.04	89.63	68.78
73 - 80	11	3.08	92.71	78.00
81 - 88	8	2.24	94.95	84.25
89 - 96	2	0.56	95.51	94.00
97 - 104	5	1.40	96.91	102.80
105 - 112	0	0.00	96.91	0.00
113 - 120	0	0.00	96.91	0.00
121 - 128	2	0.56	97.47	127.00
129 - 136	3	0.84	98.31	132.67
137 - 144	2	0.56	98.87	143.00
145 - 152	0	0.00	98.87	0.00
153 - 160	0	0.00	98.87	0.00
161 - 168	1	0.28	99.15	162.00
169 - 176	0	0.00	99.15	0.00
177 - 184	1	0.28	99.43	180.00
185 - 192	1	0.28	99.71	186.00
193 - 200	1	0.28	100.00	200.00

NUMBER OF SAMPLES: 357

ARITHMETIC MEAN : 43.22

STANDARD DEVIATION : 28.12

MINIMUM VALUE : 0.00

MAXIMUM VALUE : 200.00

DETECTION LIMIT : 1.00 PPM

ROSSBACHER LABORATORY LTD.

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

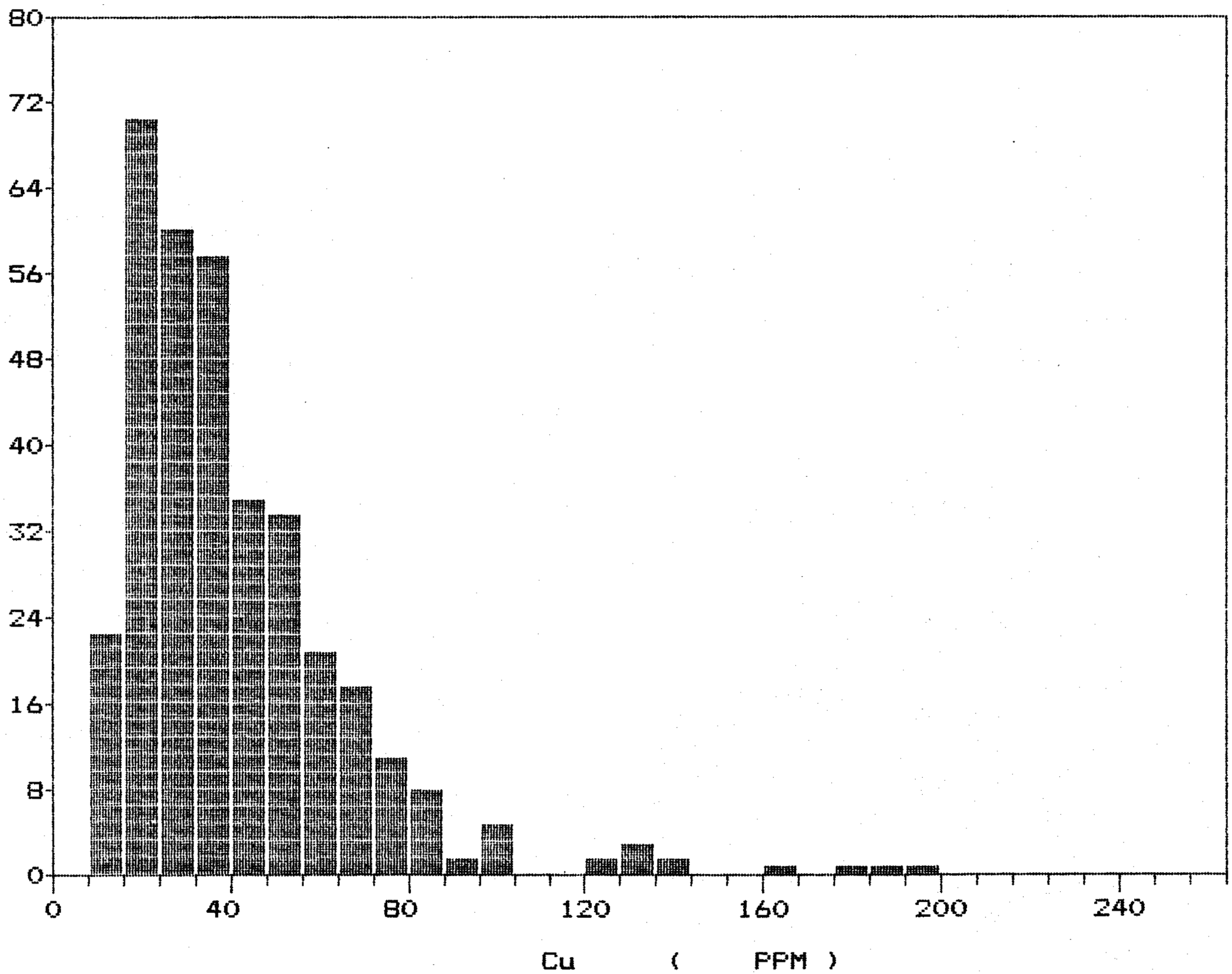
STATISTICAL REPORT

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

ELEMENT & UNIT: Cu PPM

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179
SAMPLE TYPE: SOIL

Cu FREQUENCY HISTOGRAM



ROSSBACHER LABORATORY LTD.

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

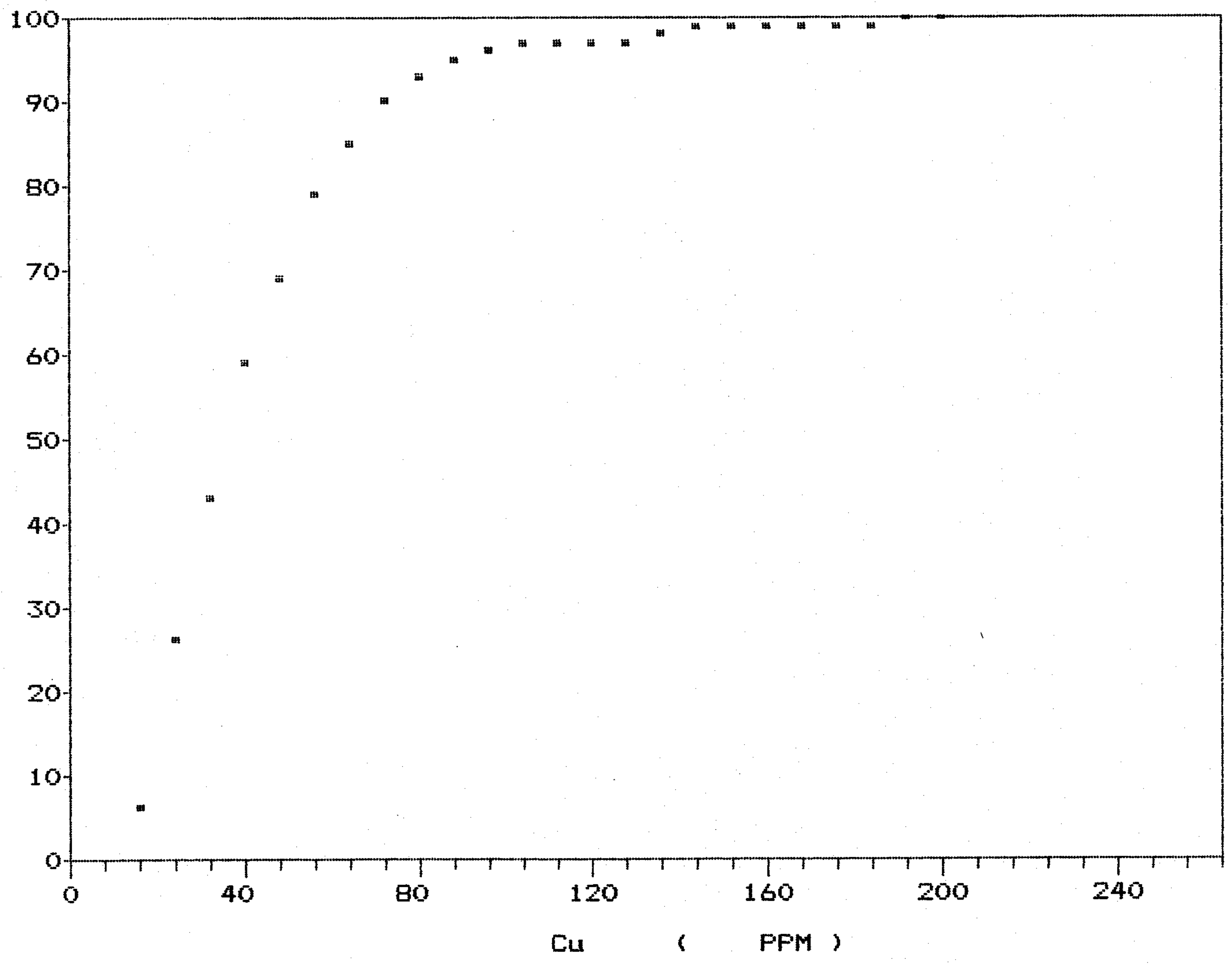
STATISTICAL REPORT

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

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179
SAMPLE TYPE: SOIL

ELEMENT & UNIT: Cu PPM

Cu CUMULATIVE FREQUENCY HISTOGRAM



ROSSBACHER LABORATORY LTD.

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

STATISTICAL REPORT

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

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179
SAMPLE TYPE: SOIL

ELEMENT & UNIT: Zn PPM

CLASS INTERVAL	CLASS FREQUENCY	RELATIVE FREQUENCY%	CUMULATIVE FREQUENCY%	CLASS MEAN
0 - 11	1	0.28	0.28	10.00
12 - 22	1	0.28	0.56	14.00
23 - 33	1	0.28	0.84	28.00
34 - 44	14	3.94	4.78	41.43
45 - 55	22	6.20	10.98	49.27
56 - 66	31	8.73	19.71	61.55
67 - 77	35	9.86	29.57	71.89
78 - 88	37	10.42	39.99	82.49
89 - 99	28	7.89	47.88	93.57
100 - 110	43	12.11	59.99	103.35
111 - 121	21	5.92	65.91	114.76
122 - 132	25	7.04	72.95	127.84
133 - 143	13	3.66	76.61	138.15
144 - 154	16	4.51	81.12	148.25
155 - 165	16	4.51	85.63	160.25
166 - 176	3	0.85	86.48	170.67
177 - 187	9	2.54	89.02	180.89
188 - 198	6	1.69	90.71	191.00
199 - 209	2	0.56	91.27	202.00
210 - 220	6	1.69	92.96	216.00
221 - 231	5	1.41	94.37	228.00
232 - 242	6	1.69	96.06	238.67
243 - 253	4	1.13	97.19	244.50
254 - 264	4	1.13	98.32	260.00
265 - 275	2	0.56	98.88	268.00
276 - 286	1	0.28	99.16	284.00
287 - 297	3	0.85	100.00	288.67

NUMBER OF SAMPLES: 355

ARITHMETIC MEAN : 112.27

STANDARD DEVIATION : 55.87

MINIMUM VALUE : 0.00

MAXIMUM VALUE : 290.00

DETECTION LIMIT : 1.00 PPM

ROSSBACHER LABORATORY LTD.

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

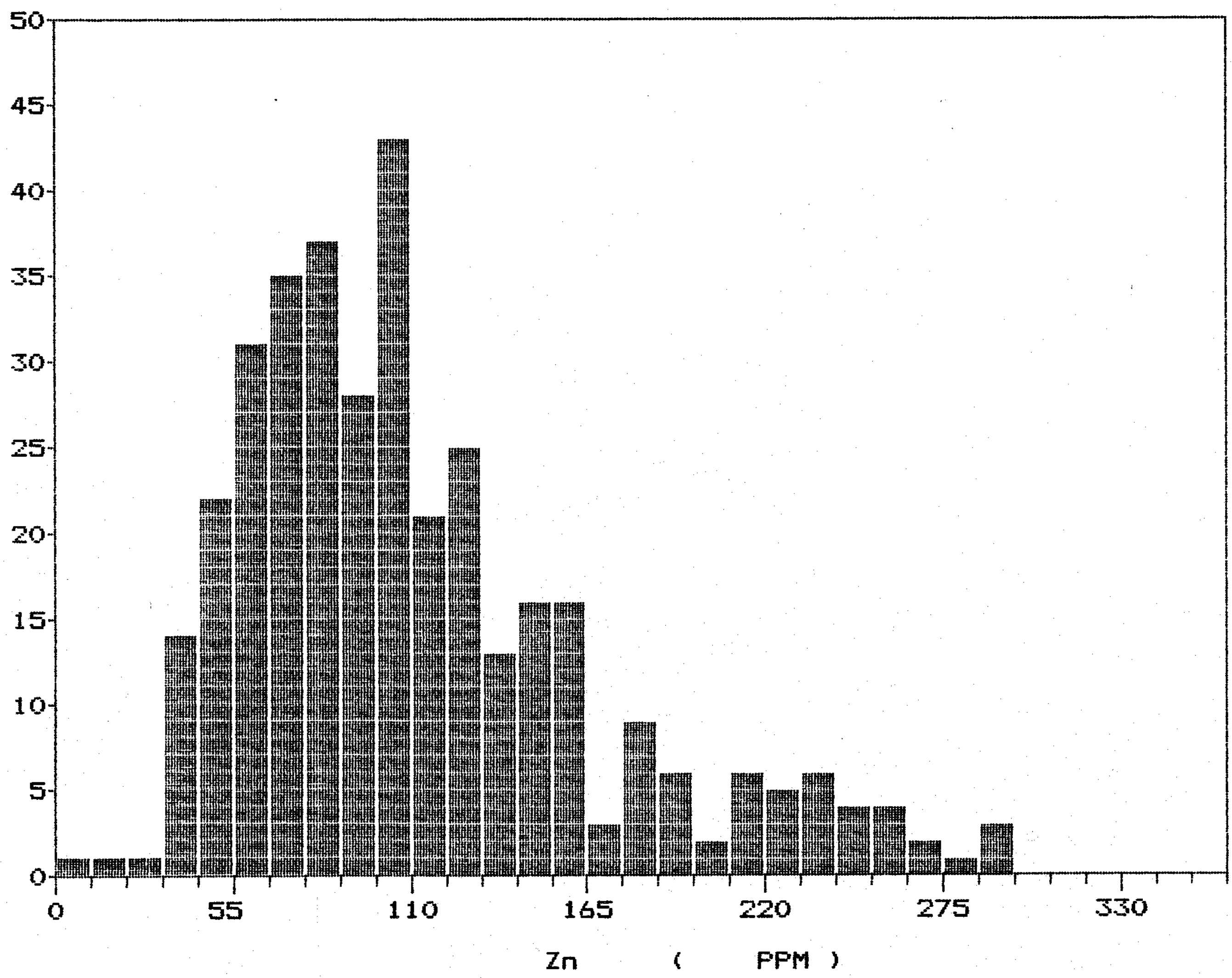
STATISTICAL REPORT

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

ELEMENT & UNIT: Zn PPM

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179
SAMPLE TYPE: SOIL

Zn FREQUENCY HISTOGRAM



ROSSBACHER LABORATORY LTD.

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

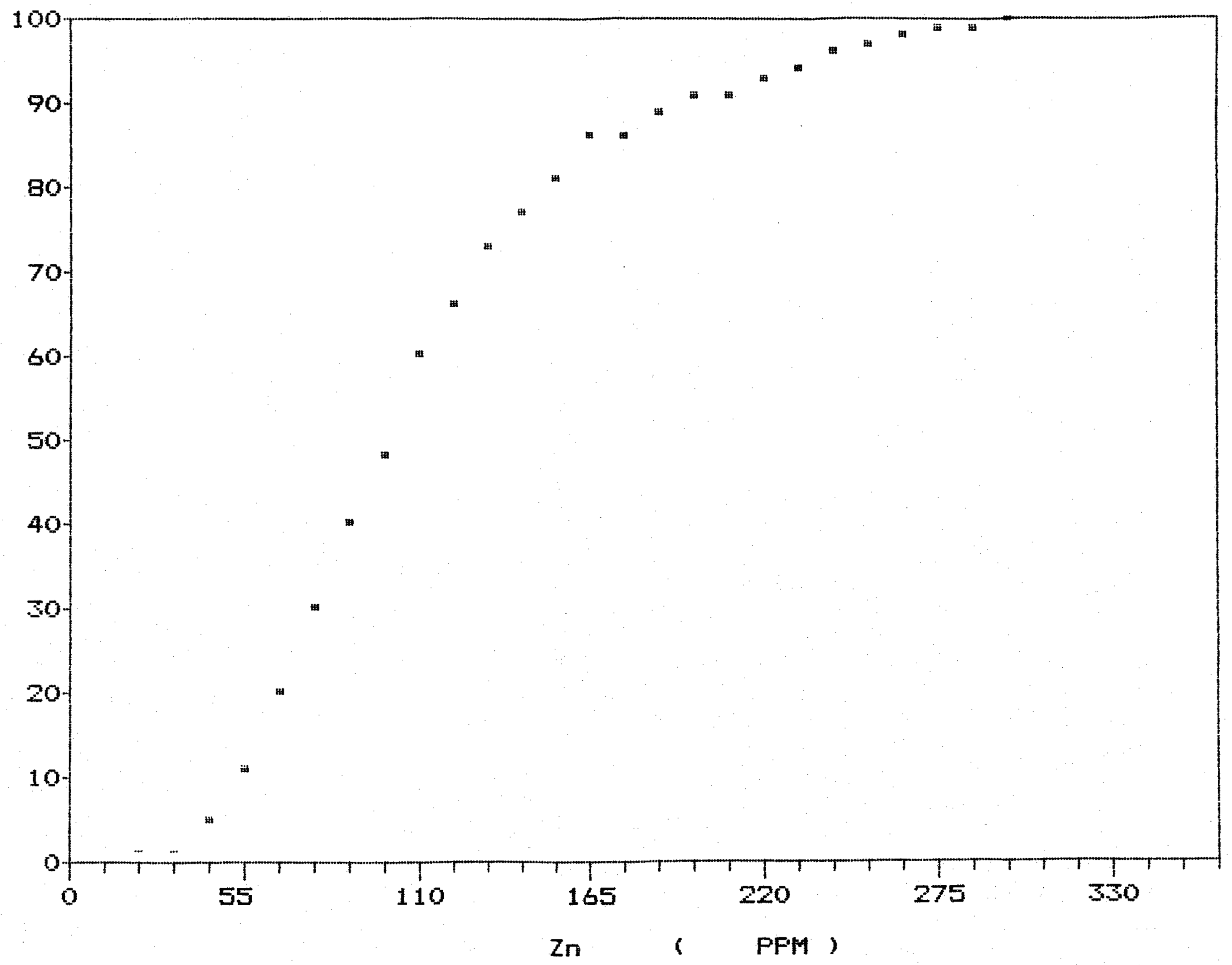
STATISTICAL REPORT

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

PROJECT: V 155
DATE: JULY 31, 1985
FILE: 85179

ELEMENT & UNIT: Zn PPM
SAMPLE TYPE: SOIL

Zn CUMULATIVE FREQUENCY HISTOGRAM

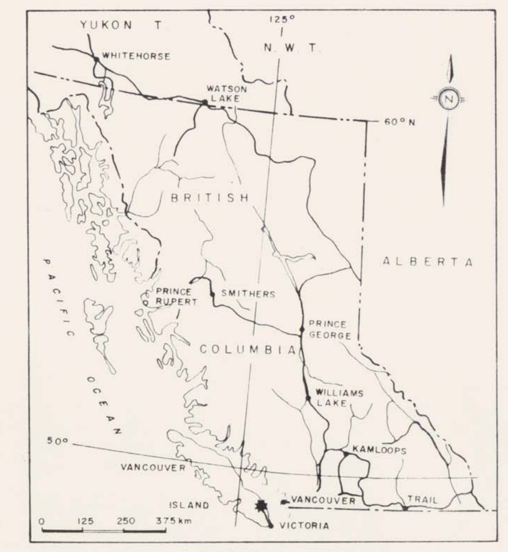


APPENDIX VI

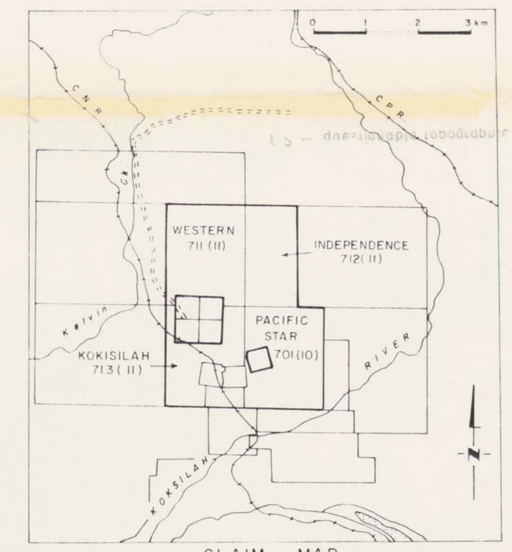
ABBREVIATIONS USED
IN
MINERAL OCCURRENCES REFERENCES

Abbreviations Used in Mineral Occurrences References

AR	B.C. Ministry of Energy, Mines, and Petroleum Resources Assessment Report
BCDM	British Columbia Department of Mines
Bull	Bulletin
Carson	Metallogenic Study of Vancouver Island with Emphasis on the Relationships of Mineral Deposits to Plutonic Rocks; D.J.T. Carson, Carleton University Ph.D Thesis, May, 1968.
CMH	Canadian Mines Handbook
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
Mem	Memoir
MER	British Columbia Mineral Exploration Review; B.C. Ministry of Energy, Mines and Petroleum Resources
Minfile	B.C. Ministry of Energy, Mines and Petroleum Resources Minfile, Feb. 2, 1984
MMAR	B.C. Ministry of Mines Annual Report
NM	Northern Miner
TML	Today's Market Line

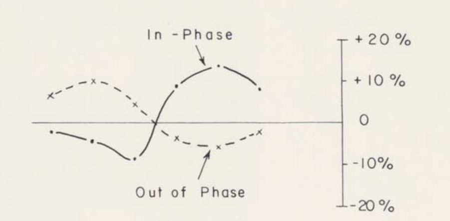


LOCATION MAP



CLAIM MAP

LEGEND



Transmitter : Seattle, Wa. (NLK)

Instrument : Geonics EM-16

O Anomaly location : ? – questionable
S – surficial
T – topographic
T ? – questionable topographic

A Conductor Axis

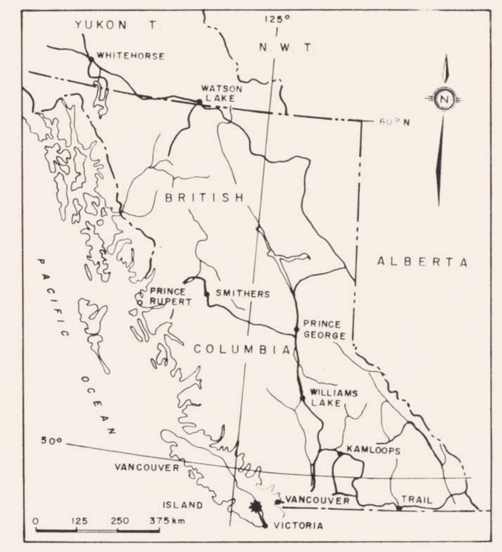
GEOLOGICAL BRANCH ASSESSMENT REPORT

13,997

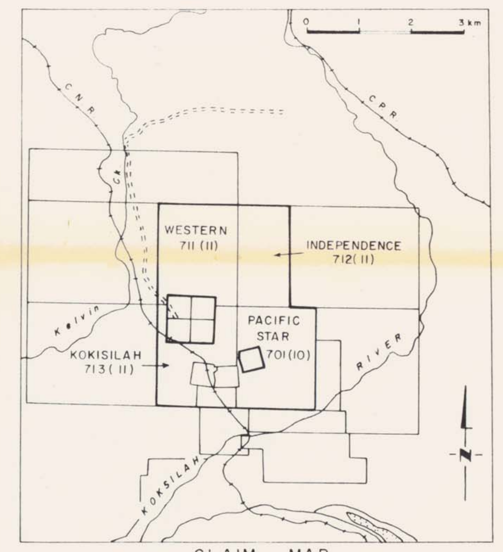
To accompany Report by T.E. Gregory Hawkins, P.Geol, dated 10/18/85

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

REWARD RESOURCES LTD.	
VLF - EM SURVEY	
KING SOLOMON PROPERTY VICTORIA MINING DIVISION	
Project No: V 155	By: L. L.
Scale: 1 : 2 500	Drawn: J. S.
Drawing No: MAP 3	Date: AUGUST, 1985
MPH Consulting Limited	



LOCATION MAP



CLAIM MAP

LEGEND

400 / 500 — Isomagnetic contours

Magnetic low

Base level 56 000 gammas

Instruments : Geometrics G-816
EDA PPM - 350
EDA PPM - 400

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,997

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

10/18/85

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

REWARD RESOURCES LTD.

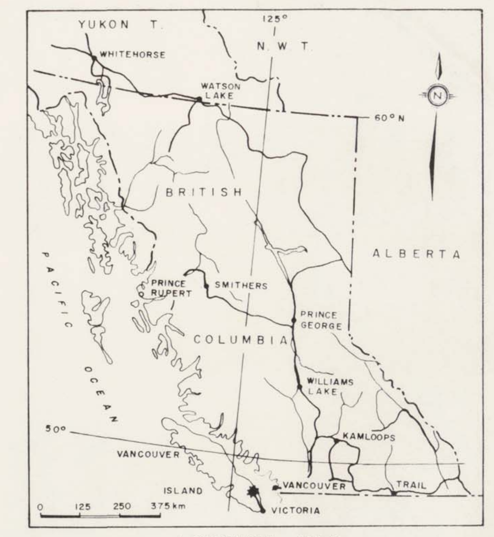
MAGNETIC SURVEY

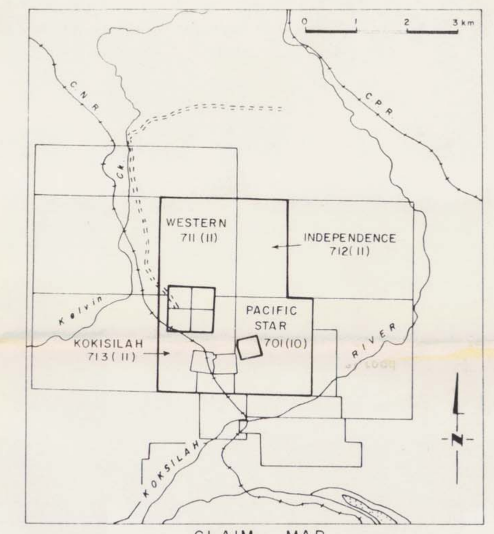
KING SOLOMON PROPERTY

VICTORIA MINING DIVISION

Project No:	V 155	By:	R.N., L.L.
Scale:	1 : 2 500	Drawn:	J.S.
Drawing No:	MAP 4	Date:	AUG. 1985.

MPH Consulting Limited





LEGEND

LITHOLOGIC UNITS

INTRUSIVE ROCKS

8	PYRITIC RHYOLITE ? : (feldspar porphyritic) metavitric. Pyritic epidote alteration zones common. Siliceous phase ? of andesite ? porphyry.
7	DACITE PORPHYRY : feldspar, hornblende, sericite–porphyritic and microporpyritic, metavitric. Jurassic ? or Tertiary ?
6	GRANODIORITE : medium crystalline feldspar, hornblende and quartz; probably part of Jurassic, Koksilah stock and Island Intrusions.

UPPER PALEOZOIC SICKER GROUP

5	UPPERMOST ? "FLOW-SEDIMENT" UNIT ?: tholeiitic basaltic flows ? with minor intervals of bedded chert, cherty tuff and hyaloclastite, basaltic lapilli and crystal tuff.
4	BUTTLE LAKE FORMATION: to the west, chert with intervals of bedded, cherty tuff. Limestone (locally altered to skarn) interbeds at least at top and base. To the east, predominantly ? limestone, with intervals of chert; poorly exposed.
3	UPPER MEMBER OF "FLOW-SEDIMENT" UNIT : complexly interlayered, basaltic flows, flow breccias?, lithic and crystal tuffs, bedded cherty, basaltic tuffs and basaltic chert, and hyaloclastite.
2	LOWER ? MEMBER OF "FLOW-SEDIMENT" UNIT : basaltic flows ? with rare intervals of chert.
1	MYRA FORMATION : uppermost ? part of bedded, graded, basaltic tuff, cherty tuff, and chert; intervals of basaltic lithic tuff. Lower part of bedded, black metachert with intervals of bedded, basaltic tuff, cherty tuff and chert.

MAP SYMBOLS

Inferred fault

Lithologic unit contact : approximate, inferred.

55° (5) 280° Orientation of bedding (strike and dip); tops unknown; average of (5) measurements.

65° 70° Lithologic unit contact orientation : strike and dip

30° 80° Dyke : strike and dip

8 Outcrop limits; station number (see appendix).

Adit

Shaft

Cut

Claim post (not located).

L.C.P. Legal corner post; located.

Creek or river.

Old, impassible logging road.

Logging road or main, gravel road.

Mountain or hill peak, approximate.

Diamond drill hole collar

Sample 9897 → Rock sample location and number

Geochemical, geophysical grid

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,997

To accompany Report by T.E. Gregory Hawkins, P.Geol, dated 10/18/85

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

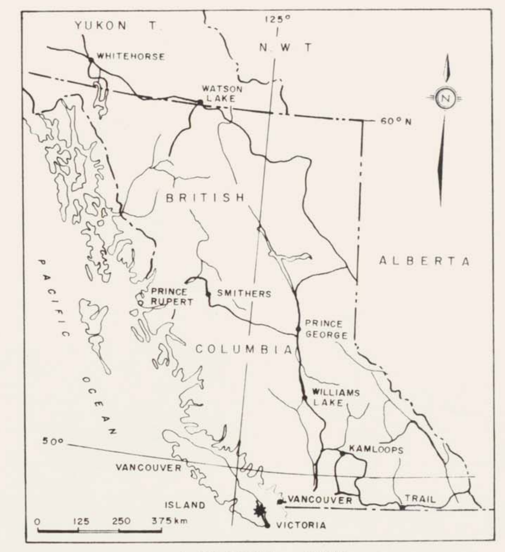
REWARD RESOURCES LTD.

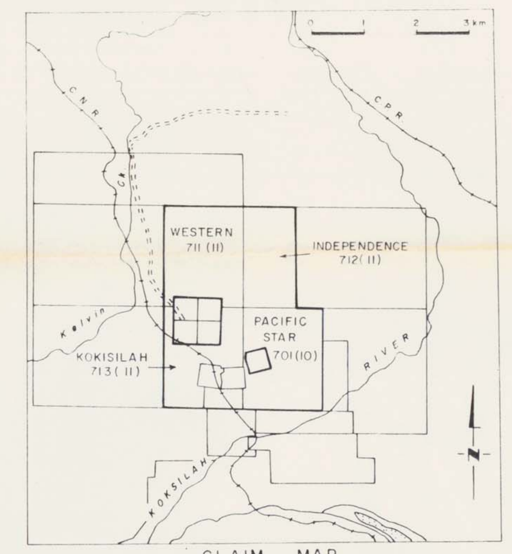
PROPERTY PLAN, GEOLOGY AND ROCK SAMPLING

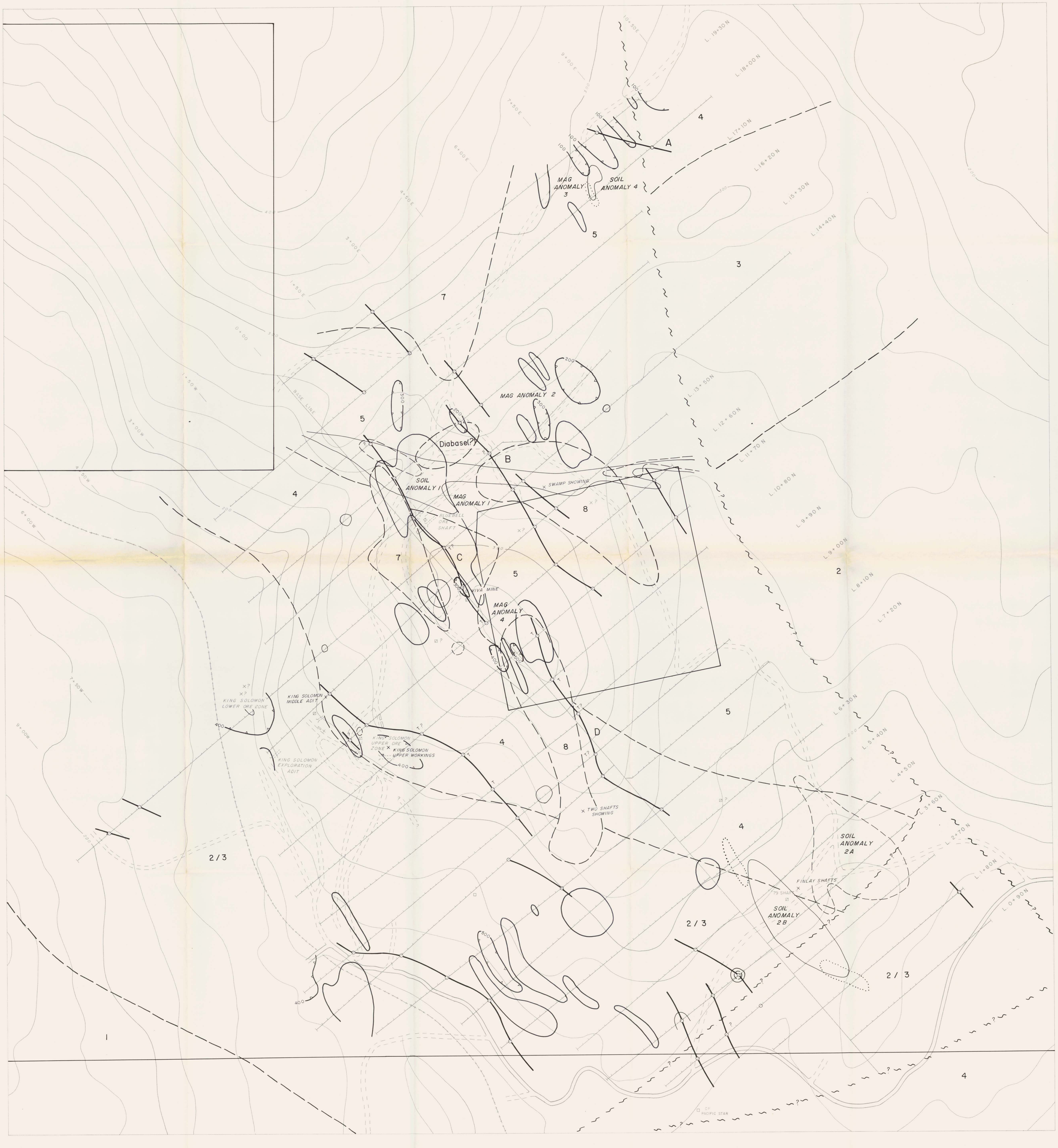
KING SOLOMON PROPERTY
VICTORIA MINING DIVISION

Project No:	V 155	By:	G. B.
Scale:	1 : 5000	Drawn:	J. S.
Drawing No:	MAP 1	Date:	AUGUST, 1985.

MPH Consulting Limited







LEGEND

— — —	Geological contact
~ ~ ~ ~	Fault (inferred)
	Magnetic anomalies > 700 gammas, < 400 gammas (or as marked.)
	VLF-EM conductor
O T	Topographic VLF-EM conductor
O ?	Questionable VLF-EM conductor
	Cu, Ag, Zn soil geochemical anomalies (>196 ppm Cu, > 0·4 ppm Ag, >452 ppm Zn)
×	Approximate location of workings and showings
	Approximate property boundary

LITHOLOGIES

8	Pyritic Rhyolite
7	Feldspar Porphyry Dacite
5	Uppermost part of Flow-Sediment Unit
4	Buttle Lake Formation
3	Upper part of Flow-Sediment Unit
2	Lower part of Flow-Sediment Unit
1	Myra Formation

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,997

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

10/18/85

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

REWARD RESOURCES LTD.

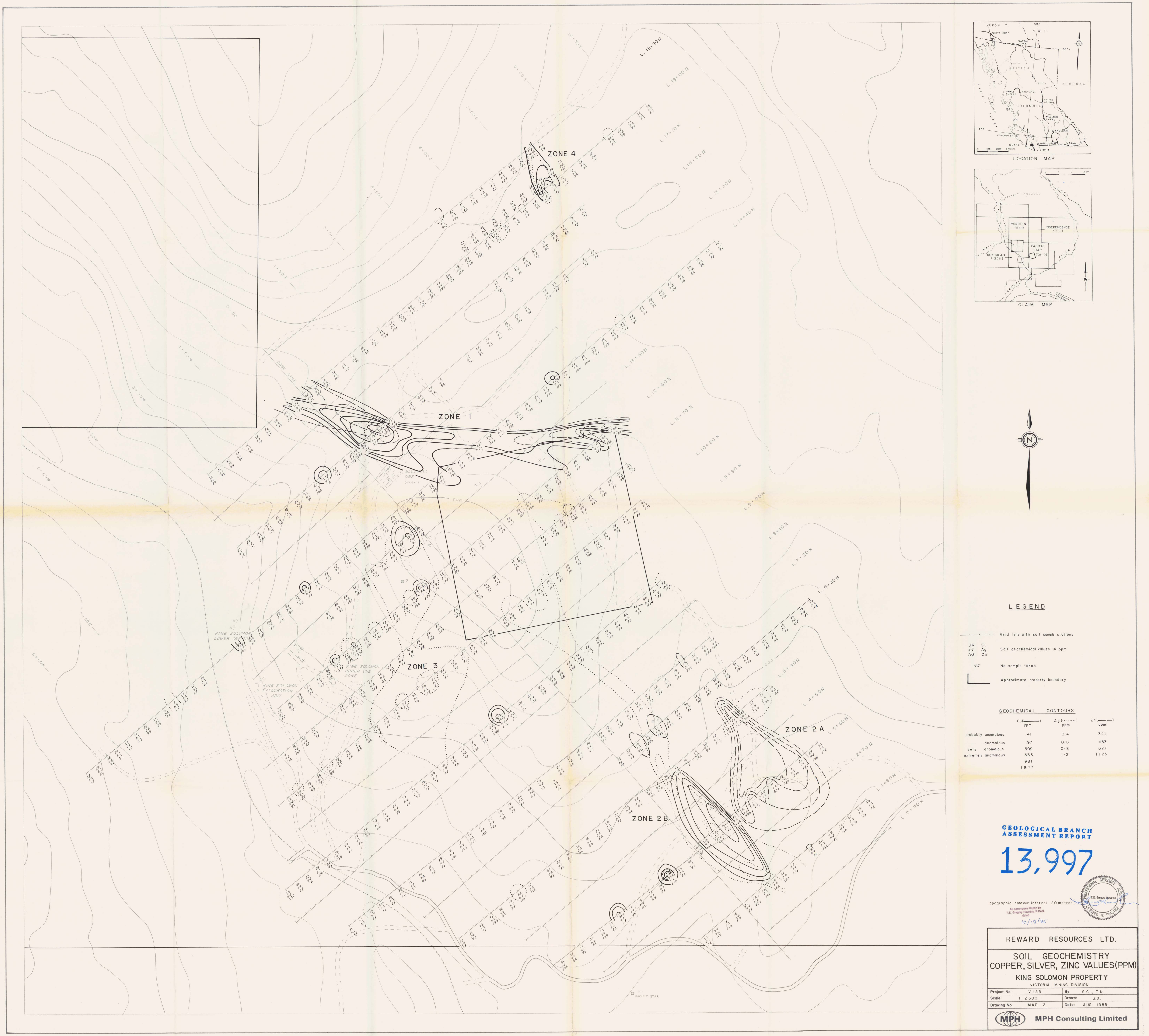
ANOMALY MAP

KING SOLOMON PROPERTY

VICTORIA MINING DIVISION

Project No:	V 155	By:	T. N.
Scale:	1: 2 500	Drawn:	J. S.
Drawing No:	MAP 5	Date:	OCTOBER, 1985.

MPH Consulting Limited


LOCATION MAP
CLAIM MAP
ZONE 4
ZONE 1
ZONE 3
ZONE 2 A
ZONE 2 B
KING SOLOMON LOWER ORE
KING SOLOMON UPPER ORE ZONE
KING SOLOMON EXPLORATION ADIT
L 18+90 N
L 18+00 N
L 17+10 N
L 16+20 N
L 15+30 N
L 14+40 N
L 13+50 N
L 12+60 N
L 11+70 N
L 10+80 N
L 9+90 N
L 9+00 N
L 8+10 N
L 7+20 N
L 6+30 N
L 5+40 N
L 4+50 N
L 3+60 N
L 2+70 N
L 1+80 N
L 0+90 N
N
LEGEND
Grid line with soil sample stations
30 Cu
0.2 Ag
108 Zn
Soil geochemical values in ppm
NS No sample taken
Approximate property boundary
GEOCHEMICAL CONTOURS
Cu ppm / Ag ppm / Zn ppm
probably anomalous 141 0·4 341
anomalous 197 0·6 453
very anomalous 309 0·8 677
extremely anomalous 533 1·2 1125
981
1877
GEOLOGICAL BRANCH ASSESSMENT REPORT
13,997
Topographic contour interval 20 metres.
To accompany Report by T.E. Gregory Hawkins, P.Geol, dated 10/18/85
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Scale: 1:2 500
Drawn: J.S.
Drawing No: MAP 2
Date: AUG. 1985.
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