MPH

GEOLOGICAL MAPPING, ROCK SAMPLING,
AND SOIL SAMPLING

COLUMBIA PROPERTY

Victoria Mining Division
NTS 92F/2, 49°01'N Lat., 124°34.5'W Long.
for

PAYTON VENTURES INC.

January 14, 1988
T. Neale, B.Sc.

SUMMARY

The Payton Ventures Inc. Columbia Property is underlain by mafic Nitinat Formation volcanics of the Sicker Group. A major north northwest striking fault zone up to 700 m wide east of Rift Creek contains fault slivers of Myra Formation felsic volcanics and siliceous sediments mixed with Nitinat rocks. West of Rift Creek a package of mafic and altered mafic volcanis has been previously mapped as part of the Karmutsen Formation, but may actually also belong to the Sicker Group.

Rock sampling provided the most encouraging results west of Rift Creek. A thin (3-4 cm) massive pyrite vein returned an assay of 16.22 g/t Au. Four other samples from within 200 m returned elevated to anomalous values of 22 ppb Au to 2.06 g/t Au. Geochemical soil sampling outlined a gold anomaly approximately following Rift Creek. It is 30-120 m wide by 1200 m long and is open on both ends. Zinc and arsenic anomalies occur near the south end of the gold anomaly.

Further exploration of the Columbia property is recommended, including additional soil sampling, detailed geological mapping and prospecting, and hand trenching at an estimated cost of $38,500. Contingent upon favourable Phase I results, a further program of IP surveying and diamond drilling is recommended at an estimated cost of $115,000.

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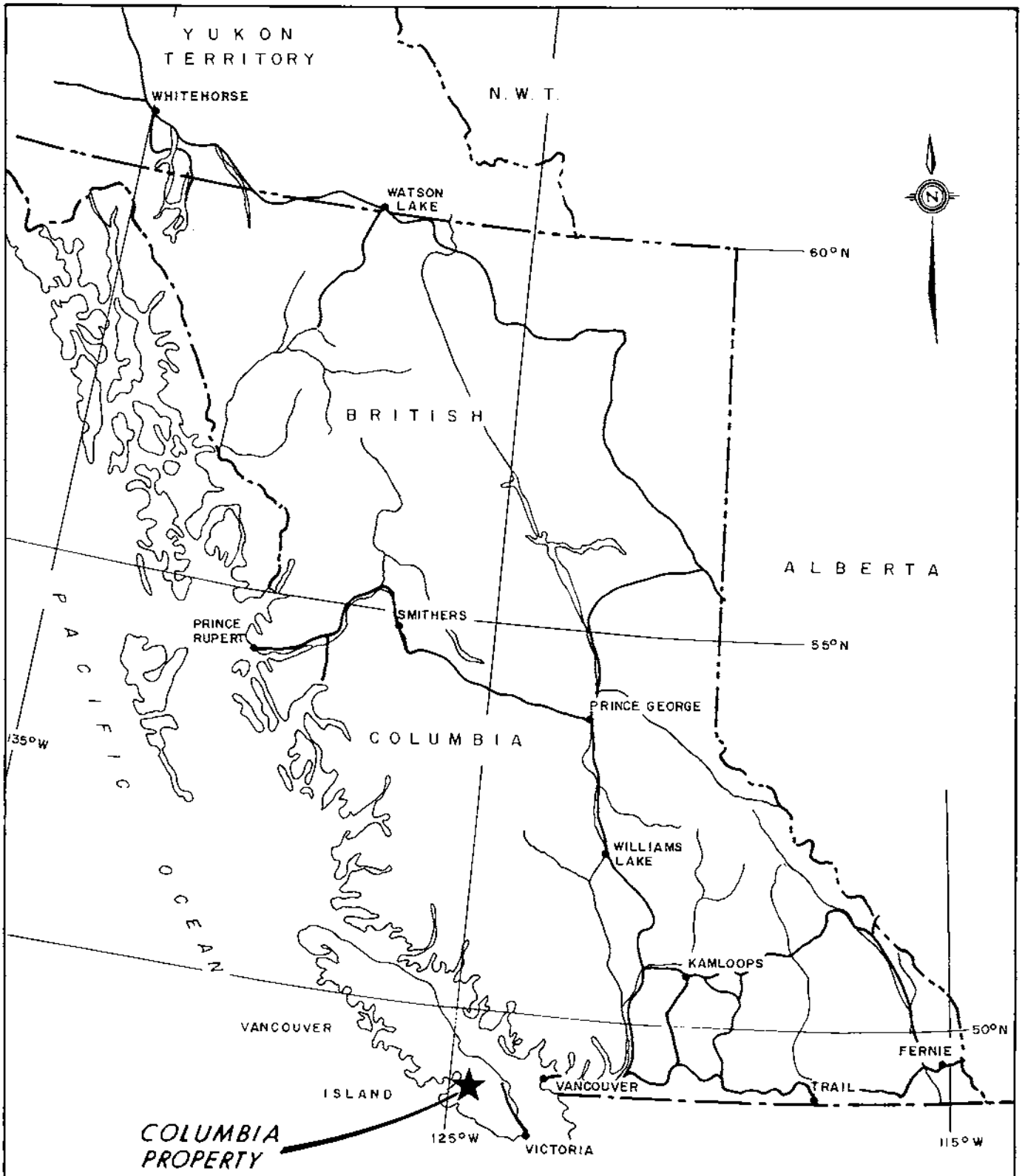

PAYTON VENTURES INC.

GENERAL LOCATION MAP
COLUMBIA PROPERTY
VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
Scale:	1 : 8 000 000	Drawn:	J. S.
Drawing No:	1	Date:	JANUARY 1988.

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1.0 INTRODUCTION

This report represents the compilation of results of fieldwork carried out by MPH Consulting Limited for Payton Ventures Inc. on the Columbia property from November 9 - 23 and December 4 - 8, 1987. The exploration program comprised westerly extensions of the 1986 soil sampling grid to cover the remainder of the property on both sides of Rift Creek; prospecting, rock sampling, and reconnaissance geological mapping of the same area; and one line of VLF-EM and magnetometer surveying across the whole property. The aim of the program was to test for a southerly extension of the mineralization associated with the Rift Creek fault which is currently being explored by Crew Minerals and TP Resources, on their Fitzwater property, 5 km to the north.

2.0 PROPERTY LOCATION, ACCESS, TITLE

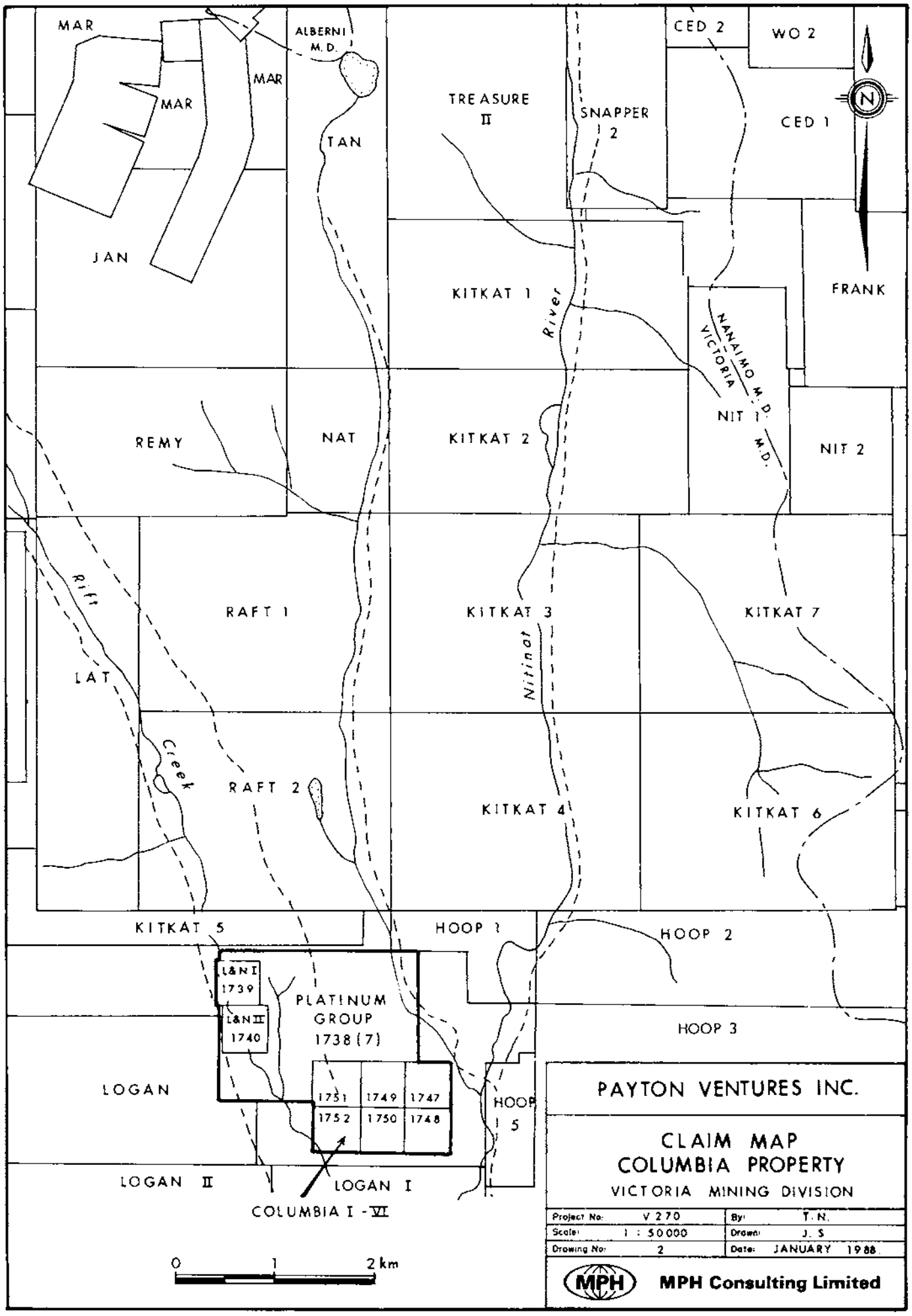
The Payton Ventures Inc. Columbia property is located 30 km southeast of Port Alberni between the Nitinat River and Rift Creek in the Victoria Mining Division of British Columbia. The property is centred at about 49°01'N latitude, 124°34.5'W longitude on NTS mapsheet 92F/2. (Figures 1 and 2).

Access to the property is via logging roads from Port Alberni or Cowichan Lake. From Port Alberni, the Bamfield road is followed to Museum Main, which follows Museum Creek and Rift Creek to the western side of the Columbia property. Branching from Museum Main, the M2 and M2D roads lead eventually onto the central portion of the property, east of Rift Creek. This road is in very poor condition and may be blocked by rock slides from time to time. From Cowichan Lake, Crown Forest's paved Nitinat Main road and branch road BR20 provide access to the northeastern part of the property. Numerous old overgrown and washed out logging roads exist on the property.

The Columbia property comprises 9 claims totalling 20 units, as summarized below:

Claim	Record No.	Units	Anniversary Date	Year Recorded
Platinum Group	1738(7)	12	July 29, 1988	1986
L&N I	1739(7)	1	" " "	"
L&N II	1740(7)	1	" " "	"
Columbia I	1747(9)	1	Sept 23, 1988	"
Columbia II	1748(9)	1	" " "	"
Columbia III	1749(9)	1	" " "	"
Columbia IV	1750(9)	1	" " "	"
Columbia V	1751(9)	1	" " "	"
Columbia VI	1752(9)	1	" " "	"

All of the claims are 100% owned by Payton Ventures Inc. They were grouped as the Columbia Group by Notice to Group dated May 4, 1987.


MAR
MAR
MAR
ALBERNI M.D.
TAN
TREASURE II
SNAPPER 2
CED 2
WO 2
CED 1
N
JAN
KITKAT 1
River
NANAIMO M.D.
VICTORIA
FRANK
REMY
NAT
KITKAT 2
NIT 1
M.D.
NIT 2
Rift
RAFT 1
KITKAT 3
KITKAT 7
Nitinat
LAT
Creek
RAFT 2
KITKAT 4
KITKAT 6
KITKAT 5
HOOP 1
HOOP 2
L&N I 1739
L&N II 1740
PLATINUM GROUP 1738 (7)
HOOP 3
LOGAN
1751
1749
1747
1752
1750
1748
HOOP 5
LOGAN II
LOGAN I
COLUMBIA I - VI
0
1
2 km
PAYTON VENTURES INC.
CLAIM MAP
COLUMBIA PROPERTY
VICTORIA MINING DIVISION
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By: T. N.
Scale: 1 : 50000
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3.0 PREVIOUS WORK

Government geological work in the area includes mapping by C.H. Clapp (1912 and 1914), J.E. Muller and D.J.T. Carson (1969), J.E. Muller (1977 and 1980), and A. Sutherland Brown et. al. (1986).

The first recorded exploration on the Columbia ground was in the early 1960's, when Hunting Survey Corp. Ltd. flew a regional aeromagnetic survey, followed by regional mapping with limited prospecting and silt sampling carried out by Gunnex Ltd. over a large portion of the old E&N Land Grant. A number of small, low-order Total Heavy Metal anomalies were located on the ground now covered by the Columbia property by Gunnex, mainly along the central ridge (Laanela, 1986).

The Platinum Group claim of the Columbia property was previously staked as the Great Northern claim. No work on that claim is recorded. The claims comprising the present Columbia property were staked in July and September 1986. A program of reconnaissance geological mapping and soil sampling was carried out in October 1986 over the central and eastern parts of the property in an effort to locate Pt-Pd mineralization similar to that located on the Kitkat property, to the north (Laanela, 1986). Mapping located mafic Nitinat Formation volcanics with a small amount of later dioritic intrusions in the northeast corner. Most of the rock sampling was carried out over the "Main Zone", a NNW trending, strongly silicified, locally sulphide-bearing shear zone up to 50 m wide which runs along the ridgetop across the entire property. None of the samples were anomalous in Au, Ag, Pt or Pd. Several contained elevated Cu contents, assaying up to 1.23% Cu. Two old drill sites and a pit were discovered on the Main Zone. It is not known when this work was performed, or what the results were. The only other significant result came from a rock sample collected from the eastern slope of Rift Creek valley, of rusty, sheared, carbonatized basalt which ran 5.5 ppm Ag and 5055 ppm Cu.

Soil sampling on a 200 m by 50 m grid located anomalous Au values in 2 areas on the east slope of Rift Creek. Anomalous As values extend to the SE from the western gold anomaly while Cu and Zn anomalies are partially coincident with the Au anomaly. On the eastern end of the property several narrow, elongate Ag anomalies occur.

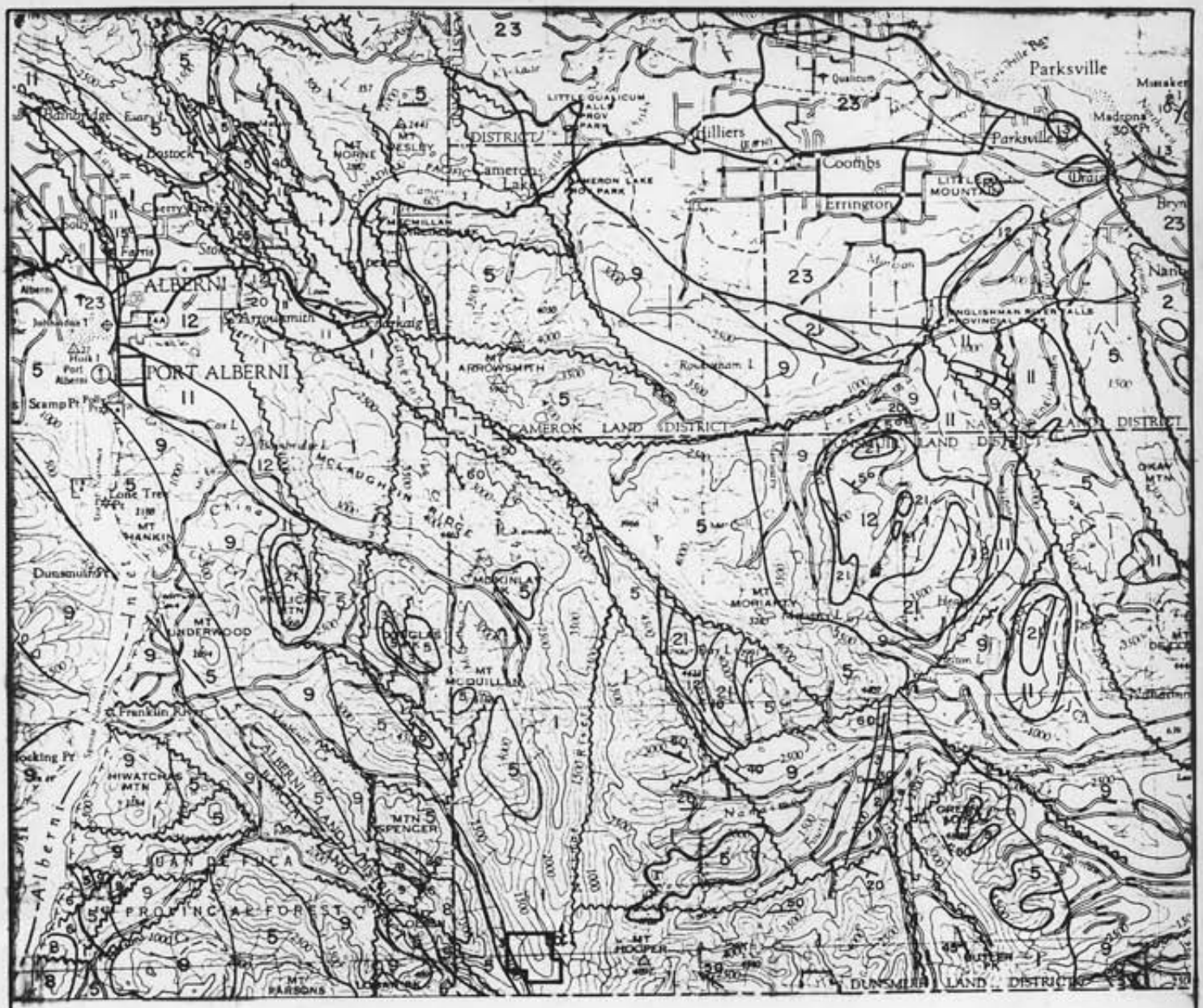
4.0 REGIONAL GEOLOGY

The predominant rock units in the Port Alberni-Nitinat River area are the Upper Paleozoic Sicker Group rocks and the Lower Mesozoic Vancouver Group rocks. Both are eugeosynclinal sequences of volcanic and sedimentary rocks. Lesser amounts of the Upper Cretaceous Nanaimo Group and of intrusive rocks of various ages also occur (Figure 3). Mapping of the area has recently been carried out by Sutherland Brown et. al. (1986), resulting in a new subdivision of the Sicker Group. As this work is not complete yet, Muller's work is used to provide the description of the Sicker Group.

4.1 Sicker Group

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

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



LEGEND

QUATERNARY

23 Glacial and alluvial deposits

TERTIARY

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

UPPER CRETACEOUS
NANAIMO GROUP

13 EXTENSION-PROTECTION FM.: sandstone, conglomerate, shale, coal.

12 HASLAM FM.: shale, siltstone, fine sandstone.

11 COMOX FM.: sandstone, conglomerate, shale, coal.

MIDDLE TO UPPER JURASSIC

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

LOWER JURASSIC

8 BONANZA GROUP: andesitic to latitic breccia, tuff, and lava; minor greywacke, argillite, and siltstone.

UPPER TRIASSIC
VANCOUVER GROUP

6 QUATSINO FM.: massive to thick bedded limestone, minor thin bedded limestone.

5 KARMUTSEN FM.: pillow-basalt and pillow breccia, massive basalt flows; minor tuff, volcanic breccia; Jasperoid tuff, breccia and conglomerate at base.

TRIASSIC OR PERMIAN

4 Gabbro, periodite, diabase.

LOWER PERMIAN TO PENNSYLVANIAN
SICKER GROUP

3 BUTTLE LAKE FM.: limestone, chert.

2 MYRA FM.: lower unit; argillite, greywacke, conglomerate, tuff, minor limestone. Upper unit; rhyodacite to rhyolite tuff, lapilli tuff, breccia lesser siliceous siltstone, argillite, quartz porphyry and mafic flows.

1 NITINAT FM.: basaltic uralite porphyry, agglomerate, pillow lava; greenschist.

0 5 10 km

N

PAYTON VENTURES INC.

REGIONAL GEOLOGY MAP
COLUMBIA PROPERTY

VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
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Drawing No:	3	Date:	JANUARY 1988.

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The Myra Formation (Unit 2) unconformably overlies the Nitinat Formation. In the Nitinat-Cameron River area the Myra Formation is made up of a lower massive to widely banded basaltic tuff and breccia unit, a middle thinly banded pelitic albite-trachyte tuff and argillite unit, and an upper thick bedded, medium-grained albite-trachyte tuff and breccia unit. In the lower unit crudely layered mottled maroon and green volcaniclastic greywacke, grit, and breccia are succeeded by beds of massive, medium-grained dark tuff up to 20 m thick interlayered with thin bands of alternating light and dark fine-grained tuff with local fine to coarse breccias containing fragments of Nitinat Formation volcanics. The middle unit is conprised 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 to coarse crystal tuffs in layers up to 10 m thick with local rip-up clasts and slabs of argillite up to 1 m in length as well as synsedimentary breccias of light coloured volcanic and chert fragments in a matrix of black argillite.

The type locality of the Myra Formation is Myra Creek, at the south end of Buttle Lake, about 100 km northwest of the Columbia property. There, volcaniclastic rocks consisting dominantly of rhyodacitic or rhyolitic tuff, lapilli tuff, breccia, and some quartz porphyry and minor mafic flows and argillite (Upper Myra Formation) are host to Westmin Resources' Myra, Lynx, Price, and H-W massive sulphide (Cu-Zn-Pb-Au-Ag-Cd) deposits.

Muller (1980) estimated the thickness of the Nitinat Formation at about 2000 m and that of the Myra Formation at 750 to 1000 m. Both the Nitinat and Myra Formations were dated as Devonian and/or older by Muller (1980).

The Sediment-Sill Unit contains thinly bedded to massive argillite, siltstone, and chert with interlayered sills of diabase. It is transitional between the Myra and Buttle Lake Formation. It is not mapped within the report map area.

The Buttle Lake Formation (Unit 3) consists of a basal green and maroon tuff and/or breccia overlain by coarse-grained crinoidal and calcarenitic limestone, fine-grained limestone with chert nodules and some dolomitic limestone. Lesser amounts of argillite, siltstone, greywacke, or chert may also be present.

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

4.2 Vancouver Group

The Karmutsen Formation volcanic rocks (Unit 5) overlie the Buttle Lake Formation limestone paraconformably to form the base of the Vancouver Group. They are the thickest and most widespread rocks on Vancouver Island. The formation, which is well exposed southeast of Port Alberni, consists mainly of dark grey to black pillowed basalt, massive basalt, and pillow breccia. Flows are commonly aphanitic and amygdaloidal. Pillowed volcanics generally occur toward the base of the section.

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

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

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

4.3 Bonanza Group

The Bonanza Group (Unit 8) is made up of interbedded lava, breccia, and tuffs ranging in composition from basalt to rhyolite with intercalated beds of marine argillite and greywacke. It is exposed south of Mount Spencer and south of Corrigan Creek and consists of light coloured andesite to latite breccia, tuff, and flows with minor greywacke, argillite, and siltstone. The Bonanza Group is considered to be of Lower Jurassic age.

4.4 Nanaimo Group

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

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

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

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

4.5 Intrusive Rocks

Gabbro, Peridotite, Diabase (Unit 4). Mafic and ultramafic rocks of Triassic or Permian age are scattered throughout the area. A large band is exposed approximately 8 km north of Port Alberni.

Although mapped as intrusive, some of these rocks may be basal flow units of the Karmutsen Formation.

Island Intrusions (Unit 9). Exposures of mainy quartz diorite and lesser biotite-hornblende granodiorite occur throughout the area and are assigned an age of Middle to Upper Jurassic. Intrusive contacts with Sicker and Vancouver Group volcanic rocks are characterized by transitional zones of gneissic rocks and migmatite although contacts with Karmutsen Formation volcanic/sedimentary rocks are sharp and well defined. Skarn zones are reported at the contact of Island Intrusion rocks with Quatsino Formation limestone and less frequently with Buttle Lake Formation limestone.

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

4.6 Structure

The Buttle Lake Arch, Cowichan-Horne Lake Arch and Nanoose Uplift are north-northwesterly trending axial uplifts and are believed to be the oldest structural elements 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 anticlinal structures characterized by sub-vertical southwest limbs and moderately dipping northeast limbs are reported at Buttle Lake and in the Cameron-Nitinat River area. Intense shearing and metamorphism to chlorite-actinolite and chlorite-sericite schist occurs in steep and overturned limbs of folds. Overlying Buttle Lake Formation limestones are relatively undeformed except where they are thin.

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

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

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments. The north trending Alberni Valley fault is traced over 70 km and displaces a section of Karmutsen Formation approximately 1,500 m (Muller and Carson, 1969).

4.7 Economic Setting

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

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

The volcanogenic massive sulphide deposits of Westmin Resources Ltd., first discovered in 1917 although not recognized as volcanogenic until the late 1960's, occur at Buttle Lake, approximately 70 km northwest of the Port Alberni area. Four zones of mineralization consisting of the ore minerals sphalerite, chalcopyrite, galena, tetrahedrite-tennantite plus minor bornite and covellite, are hosted by pyritic rhyolitic to rhyodacitic volcanic and pyroclastic rocks of the Myra Formation.

Proven reserves of the Lynx (open pit), Price and Myra deposits are 926,400 t grading 1% Cu, 0.9% Pb, 7.4% Zn, 2.1 g/t Au, 89 g/t Ag (1983). Published reserves of the H-W zone are 13,815,000 t averaging 2.2% Cu, 5.3% Zn, 0.3% Pb, 2.4 g/t Au and 38 g/t Ag (Walker, 1983). In the 3 years 1980 to 1982, there were 811,809 t of ore milled producing 7,322,272 kg Cu, 43,798,176 kg Zn, 6,468,636 kg Pb, 1,742 kg Au, 78,628 kg Ag and 58,636 kg Cd.

Another volcanogenic massive sulphide deposit in the Sicker Group is the Twin J Mine near Duncan on Mount Sicker, about 60 km east-southeast of the Columbia property. Two parallel orebodies, each

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

Total production from 1898 to 1964 was 277,333 t producing 1,384 kg Au, 29,066 kg Ag, 9,569,708 kg Cu and 20,847,567 kg Zn with at least 164,934 kg Pb and 4.5 kg Cd.

At the Lara property (50 km east-southeast of the Columbia property) Abermin Corp. has traced the polymetallic volcanogenic massive sulphide Coronation and Cornonation Extension Zones over a strike length of over 1500 m and to depths of 245 m. Average grades are 4.5 g/t Au, 111.4 g/t Ag, 0.81% Cu, 1.32% Pb, and 5.79% Zn over an average thickness of 3.9 m. A 162 m long high-grade zone within the Coronation Zone averages 8.2 g/t Au, 230.1 g/t Ag, 1.5% Cu, 3.1% Pb, and 14.9% Zn over an average thickness of 3.4 m. Recent exploration has located other similar horizon(s) up to 2.4 km long parallel to the Coronation Zone in the northern part of the property. The mineralized zones are hosted by felsic volcanics of the Myra Formation. A decline on the Coronation Zone was planned to commence in October 1987 to obtain bulk samples for metallurgical testing as well as to prove continuity and extent of the high-grade zone.

Six past producing mines occur in the Port Alberni area (Figure 4). The Thistle Mine produced 85,844 g Au, 65,938 g Ag and 309,739 kg Cu from 6,276 t of ore. It was originally considered to be a skarn deposit (Stevenson, 1944; Carson, 1968). Disseminated and massive sulphide mineralization occurs as lenses and bands within pyritic quartz-sericite schist and at the contact of quartz-sericite schists with chloritized mafic volcanic rocks (Sicker Group). Disseminated sulphide mineralization occurs throughout the host rocks. The deposit is now believed to be of syngenetic-volcanogenic origin. It is located 10 km NNW of the Columbia property.

The Havilah Mine (949 t produced 8,056 g Au, 43,669 g Ag) and the Vancouver Island Gold Mine (438 t produced 11,944 g Au, 1,617 g Ag) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group and are located 10 km and 18 km, respectively, NNW of the Columbia property.

The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and diorite located 8 km north of the Columbia property. Production of 1,715 t of ore yielded 15,831 g Au, 29,641 g Ag, 5,600 kg Pb and at least 2,035 kg Zn and 226 kg Cu.

Other past producers in the area include the 3-W Mine ('limited' production of Au-Ag) and the Corrigan Creek Mine (105 t of ore grading 137 g/t Au, 147 g/t Ag, 0.23% Cu, 1.1% Pb), both quartz vein deposits hosted by diorite and granodiorite (Island Intrusions) and both located 7 km west of the Columbia property.

Recent discoveries in the Port Alberni area, the most significant of which is the Westmin/Nexus/Angle Debbie property, have switched the focus of exploration in the area to structurally controlled high-grade gold deposits.

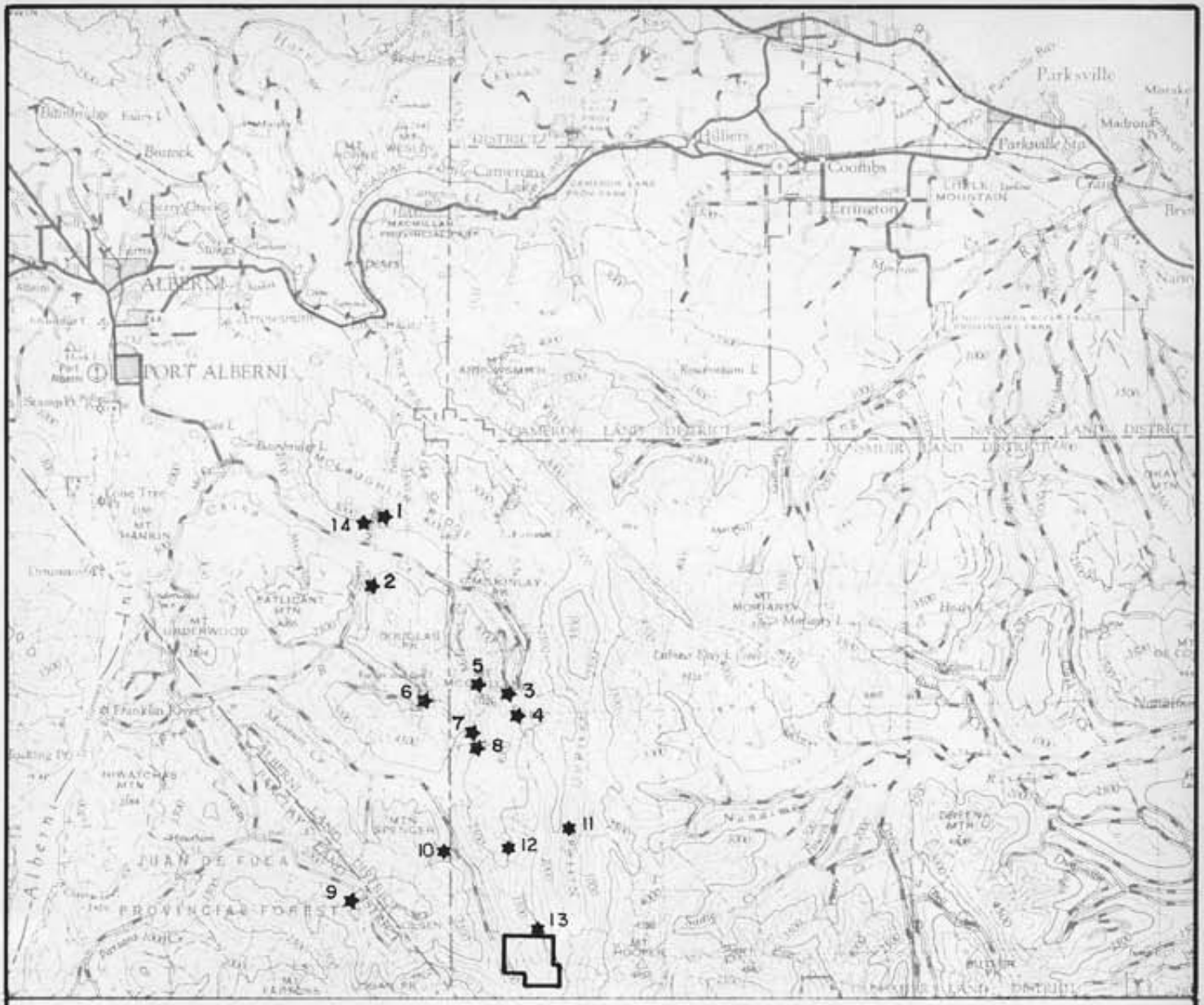
Detailed descriptions of the main showings near the Columbia property are provided in the following section, while their locations are shown on Figure 4.

4.8 Mineral Occurrences (Figure 4)

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

Geology:

The area is underlain by highly altered massive, tuffaceous, slightly porphyritic, and amygdaloidal andesites of the Sicker Group. Three main quartz veins follow well developed shears and



GOLD DEPOSITS AND OCCURRENCES

1. Vancouver Island Gold Mine
2. Regina
3. Golden Eagle
4. B & K
5. Havilah
6. Thistle
7. Black Panther
8. Black Lion
9. 3-W
10. Fitzwater
11. Kitkat
14. Debbie - 900 Zone

OTHER OCCURRENCES

12. Raft
13. Kitkat Platinum

N

0 5 10 km

PAYTON VENTURES INC.

MINERAL OCCURRENCE LOCATION MAP COLUMBIA PROPERTY

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contain a small amount of pyrite and some free gold. As well, a 12 m wide shear zone has been extensively altered by ankerite, quartz stringers, occasional pyrite veinlets and kaolinization.

Exploration Results:

Recorded production in 1896, 1898, 1933-1936 and 1939 totals 438 tonnes of ore yielding 11,944 g Au, 1617 g Ag and 88 kg Cu.

The Mac vein is traced for 75 m and ranges from 8 to 46 cm wide, averaging 13 to 15 cm. Sixty-three samples taken over the 75 m averaged 15 cm in width and 126.5 g/t Au. The highest assay was 686 g/t Au. A 36 t shipment from the Mac vein returned 99 g/t Au and 17 g/t Ag.

The Belcher vein is exposed discontinuously for 290 m and ranges from almost nothing to 1.2 m in width, averaging 15 to 30 cm in the upper adit. Gold content is reported to be low except in the shaft and stope workings. Recent sampling results show from 0.10 to 9.9 g/t Au and from 2.1 to 3.4 g/t Ag over 1.5 m lengths.

The Dunsmuir vein is exposed in trenches for about 120 m and ranges up to 25 cm in width. No assays are reported.

The Waterfall vein is exposed for 33 m and is 8 to 76 cm wide. Gold assays were low in sampling done by Vancouver Island Gold Mines Ltd., except for two samples which ran 48 g/t Au over 8 cm and 405 g/t Au over 15 cm. This illustrates the very spotty nature of free gold distribution.

Seventy-nine chip samples taken from the carbonatized shear zone by the BCDM assayed from nil to 5.5 g/t Au over widths of 1.5 and 3 m.

A 1934 BCDM report stated that there is a possible relationship between bands of sediments and gold mineralization, as the gold

values in the Mac vein are concentrated just above a bed of argillaceous sediments, and are low below that.

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

History:

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

1896: Alberni Consolidated Mining Co.; won dispute, shaft at 12 m and a tunnel being driven, 1.8 t of ore shipped from a smaller vein (Dunsmuir?) uphill from main vein, open cut on 20-76 cm vein on Chicago claim.

1897-1998: An English company built a 10 ton per day 8 stamp mill and only made two clean-ups. Results unknown.

1933-1939: Vancouver Island Gold Mines Ltd. (NPL); R.W. Williams leased the reverted Crown Grants in 1933 and turned them over to Vancouver Island Gold Mines. Numerous open cuts were made, 5 adits totalling 581 m including various raises, etc. on the quartz veins and 2 adits totalling 84 m and 12 strippings were made on the carbonatized shear zone. A total of 366 t of ore was mined. In 1936 a 35 ton pilot mill was built, but only milled a few tons of ore before the operations were ceased due to operating difficulties. In 1939 some rehabilitation work was done in the Mac adits and 43.5 t of ore were shipped.

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

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

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

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

1986-1988: Reward Resources Ltd./Angle Resources Ltd.; mapping, soil and rock sampling, IP, trenching, 20 DDH for 4976.4 m (to Feb/87; over 15,000 m of drilling planned for 1987 season).

2. Regina (L.55G) Au, Ag, Cu

Geology:

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

Exploration Results:

The quartz lenses and silicified zones vary up to 61 cm in width but the mineralized portions appear to be very discontinuous. A grab sample of quartz with considerable pyrite, chalcopyrite, and galena from the dump assayed at 22.6 g/t Au, 480 g/t Ag. A large, highly oxidized bulk sample from the carbonatized zone assayed 21.9 g/t Au, trace Ag. A sample from 18 t of ore on the dump (possibly hand sorted) in 1930 returned 6 g/t Au, 171 g/t Ag, 5.0% Cu. A grab sample from 36 t of high grade hand-picked ore on the dump in 1964 assayed 0.7 g/t Au, 62 g/t Ag, 2.57% Cu, 1.98% Pb, and 9.01% Zn.

History:

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

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

1944: E. Marillia; no recent work. Five adits totalling 88 m, a 9 m incline shaft, 2 open cuts, and a 1.5 m pit at the entrance to one of the adits exist. All probably date back to the late 1890's.

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

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

3. Golden Eagle (L.198G) Au

Geology:

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

Exploration Results:

The vein varies from several centimetres to 2.4 cm, averaging about 1.1 m in width and has been traced in outcrop for 120 m along strike and 100 m vertically. An assay of 93 g/t Au, 103 g/t Ag, and 1% Cu is reported, and assays of up to 171 g/t Au are reported to have been obtained in 1894. A tunnel 150 m below the surface showing never intersected the vein despite being driven 460 m beyond the estimated intersection point of 180 m.

History:

1892: The discovery of 2 quartz veins by prospectors searching for the source of the China Creek placer gold prompted the original claims to be staked.

1893-1902: Various individuals and/or companies; 4 adits totalling 62 m in upper workings, an adit driven at a lower level to avoid snowslides from 1896-1902 reached 640 m without intersecting mineralization, "development work" of an unspecified nature.

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

4. B and K Au, Ag

Geology:

Many widely scattered narrow quartz veins containing pyrite, and minor galena, sphalerite, and chalcopyrite with Au and Ag values occur in andesite tuffs and flows, basalt, and local black chert; often in shear zones. A zone of strongly carbonatized andesite 1.8 to 8 m wide contains minor pyrite, galena, and sphalerite in narrow veinlets. In the southern workings, veins are surrounded by a strong ankeritic carbonate alteration zone.

Exploration Results:

The "high-grade" vein has been exposed in open cuts for 40 m and is 13 to 20 cm wide. A sample assayed at 131.7 g/t Au, 110 g/t Ag, 0.06% Cu over 13 cm. This vein may be on Golden Eagle property.

A vein near the north end of the workings varies from 5 to 15 cm to a 1.8 m stringer zone in width. Assays of 87.8 and 77.5 g/t Au are reported.

A sample from quartz nodules containing galena and pyrite from an open cut on two parallel shears, each 46 cm wide, ran 28.1 g/t Au and 24 g/t Ag.

No assays are reported from the carbonatized zone. Many other quartz veins, from a hairline to 20 cm wide, for which no assays are available, occur within an area about 380 m long.

History:

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

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

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

Geology:

The Gillepsie vein consists of ribbon quartz containing pyrite and minor arsenopyrite, sphalerite, and galena in a shear in Sicker Group andesite. The upper workings are more complex, with andesite intruded by diabase dykes and a Tertiary(?) quartz feldspar porphyry dyke, all intruded to the east by a large body of diorite. The McQuillan vein consists of lenses of quartz in 3 parallel shears at the contact of diabase, quartz feldspar porphyry, and andesite. The Alberni vein consists of ribs, lenses, and veins of quartz containing abundant pyrite, sphalerite, galena and lesser chalcopyrite, arsenopyrite in a shear zone in andesite next to the quartz feldspar porphyry dyke.

Exploration Results:

The Gillespie vein is 8 to 86 cm wide and was traced for 264 m. The average grade of ore was 8.06 g/t Au, 43.9 g/t Ag. Assays from trenches range up to 240 g/t Au, 103 g/t Ag over 30 cm. It was faulted off in 2 of the 3 adits and could not be rediscovered. The McQuillan vein comprises lenses up to 20 cm wide. Assays range up to 34 g/t Au and up to 55 g/t Ag over 20 cm. The Alberni vein is 10 to 60 cm wide and at least 18 m long. Assays include 62 g/t Au, 79 g/t Ag over 51 cm and 125.5 g/t Au, 178 g/t Ag over 10 cm. A fourth vein to the east assayed 5.5 g/t Au, 21 g/t Ag over 61 cm. Assays of up to 50.67 g/t Au; 212.9 g/t Ag; 0.29% Cu over 46 to 61 cm widths are reported to have been obtained from 92 samples in 1983.

Production in 1936, 1939 totals 949 t ore yielding 8056 g Au, 43,669 g Ag, 1929 kg Cu, 5762 kg Pb. 942 t were mined from Gillespie vein in 1939, remainder from McQuillan and/or Alberni veins in 1936. Conflicting reports on Au production - one says 8056 g, the other 7807 g.

History:

1893-95: Minor surface work on upper workings.

1936-44: Havilah Gold Mines Ltd.; mining upper veins in 1936, lower (Gillespie) vein in 1938-39. Little if any work done after 1939.

1947: Nitinat Mines Ltd.; no work reported.

1964: Gunnex Ltd.; silt, rock sampling in McQuillan Creek drainage.

1974-77: Cominco Ltd.; the lower Havilah workings were included in the Sol property but little or no work was done on them.

1981: McQuillan Gold Ltd., Oliver Resources Ltd., Jan Resources Ltd.; airborne VLF-EM and mag survey included the Havilah ground.

1983-85: Goldwest Resources Ltd.; (B&M 1-8, Rita 1-2, MVM #1), rock sampling, mucked out adits for access, chip sampled adits.

6. Thistle Au, Ag, Cu

Geology:

The property is underlain by a belt of upper Sicker Group volcanic rocks folded into a large complex anticline. The mine is located within a package of rocks known as the Flow Complex (probably at or near the top of the Myra Formation) which unconformably(?) underlies the Buttle Lake Formation. The Mine Flow Unit of the Flow Complex hosts the mine and 15 of 16 additional Cu and/or Au showings on the property. At the mine a highly variable succession of basaltic flows, flow breccia, and massive to bedded and graded tuffs and cherty tuffs is mapped. Mineralization is found within relatively thin stratabound to cross-cutting(?) intervals of moderate to very strong chlorite alteration of the basaltic host rocks. Sericite-epidote alteration also occurs, but apparently is not associated with mineralization. The ore consists of Au-bearing pyrite-chalcopyrite (and local

magnetite) in quartz-carbonate gangue occurring in 3 or 4 main stratabound(?) zones of discontinuous anastomosing veins and veinlets to massive to semi-massive beds(?). The Panther Road showing consists of massive pyrite layers up to 17 cm thick within the Mine Flow Unit. Diamond drilling has also located Au values in pyritic bedded cherty tuff away from the Mine Flow Unit.

Exploration Results:

Production totalled 6276 t grading 13.7 g/t Au, 10.5 g/t Ag, 4.92% Cu from 1938 to 1942. The ore at the mine occurs in layers 5 to 45 cm thick. Assays from 1983 sampling of the old workings range from 3.8-11.8% Cu, 4.8-74.1 g/t Au, and 13.4-35.7 g/t Ag. Older reports indicate that ore was found in lenses up to 5.5 by 7.6 m in size. Diamond drilling in 1984 (NW in the mine) yielded assays ranging from 1.58 to 9.74 g/t Au over massive sulphide intersections of 2-27 cm. The best assay was 17.62 g/t Au over 20 cm of chloritic basalt including 2 cm of massive pyrite. Soil geochemistry has outlined a nearly continuous Au anomaly along about 3 km of the Mine Flow Unit, with some coincident IP anomalies. Assays of up to 0.41 g/t au are reported from the cherty tuff. Diamond drilling in 1985 around the minesite and up to 100 m south of the mine, intersected pyritic alteration zones containing up to 740 ppb Au. Only 1 massive sulphide intersection was located, which assayed 0.96 g/t Au, 23.0 g/t Ag, 1.86% Cu over 13 cm.

The Panther Road showing has returned surface assays of up to 16.80 g/t au, 1.7 g/t Ag, 900 ppm Cu over 2.2 m. Diamond drilling (1985) returned assays of up to 8.09 g/t Au, 7.2 g/t Ag over 1.01 m.

A number of potential targets including a coincident IP anomaly and soil geochemical values of 100-820 ppb Au on the Panther Road Grid, an IP anomaly with scattered weakly anomalous Au soil

geochemical values on the TM-70 Grid, and a Au ± As soil geochemical anomaly with 2 associated IP anomalies on the Douglas Grid were located by the 1986 program but were not tested by drilling.

History:

1896: First staked.
1899: A. Watson et al; 500 adit, 300 adit.
1901: Alberni Gold and Copper Ltd.; development work.
1927: A. Watson; 300 A adit.
1938-40: United Prospectors Ltd.; mining.
1940-42: Vancouver Island Diamond Drilling and Exploration Co.; mining (6276 tonnes grading 13.7 g/t Au, 10.5 g/t Ag, 4.92% Cu produced 1938-42).
1964-65: Gunnex Ltd.; regional mapping, soil sampling, prospecting.
1965: Vanada Explorations Ltd.; mag, SP surveys, 314 soils (Cu), 4 BQ DDH for 531.6 m.
1979: Kargen Development; soil sampling (Cu, Pb, Zn).
1981: McQuillan Gold Ltd.; airborne geophysics (VLF-EM, mag), soils (Cu, Ag, As), trenching, ground VLF-EM.
1982: Nexus Resource Corporation; IP/resistivity, Crone PEM, mag, soils (Cu, Pb, Zn), geological mapping, rock sampling.
1983-86: Westmin Resources Ltd.; mapping, prospecting, rock sampling, soils (1336 Cu, Pb, Zn, Au, Ag), IP/resistivity, 48 DDH for 6054 m, airborne EM, mag, trenching.

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

Geology:

Ribbon-quartz lenses containing variable amounts of sulphides, mainly pyrite with minor galena and sphalerite, occur in a shear zone which follows the contact of andesite lava on the west and

diorite breccia on the east. The wall rock of the shear is strongly altered by ankeritic carbonate for widths of several centimetres to 9 m which locally is cut by numerous quartz stringers.

Exploration Results:

The shear zone has been traced for at least 3.2 km but the best mineralization is at the Black Panther workings where quartz lenses are 2 to 90 cm thick and up to 12 m long. Four samples containing "heavy sulphides" from the 2700 and 2790 adits assayed from 78.9 to 98.1 g/t Au. A 1964 assay from the dump is reported as 39.8 g/t Au, 72 g/t Ag, 0.14% Cu and 1.73% Pb.

Production in 1947, 1948 and 1950 totalled 1715 t which yielded 15,831 g Au, 29,641 g Ag, 276 kg Cu and 5599 kg Pb, and at least 2035 kg Zn.

History:

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

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

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

1944-48: Nitinat Golds Ltd. (became Nitinat Mines Ltd. in 1947); built a 25 ton flotation mill, mining, shipped 62.1 t of concentrate.

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

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

1979-82: Jan Resources Ltd.; 5 DDH for 984.5 m, airborne VLF-EM and mag.

1983-85: Lode Resource Corporation.

8. Black Lion Au, Ag

Geology:

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

Exploration Results:

Open cuts exposed the "vein" for 53 m with another exposure located 400 m to the south. The quartz-sulphide stringer zone is 30-46 cm wide. A sample of quartz and sulphides assayed 41 g/t Au. Samples of quartz-sulphide stringers and carbonatized country rock ranged from 9.3 to 14.7 g/t Au. The carbonatized rock itself assayed at trace to 1.0 g/t Au.

History:

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

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

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

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

9. 3-W (WWW, Corrigan Creek Mine) Au, Ag, Pb, Cu

Geology:

Tongues of granodiorite alternate with masses of hybrid diorite; both rock types have been cut by feldspar porphyry dykes. Two quartz veins occupy fissures and contain pockets of pyrite, galena and sphalerite. Another showing consists of a mineralized, locally quartz-rich, gouge zone.

Exploration Results:

No. 1 vein measures 90 m long by 10-25 cm wide and is exposed in one adit, four open cuts. A channel sample near the adit assayed 206 g/t Au, 137 g/t Ag over 10 cm (1935).

No. 2 vein measures 50 m long by 20 cm wide. A channel sample assayed 250 g/t Au, 182 g/t Ag over 25 cm (1935).

No. 3 vein measures 94 m long by 5-36 cm wide. A channel sample assayed 45 g/t Au, 31 g/t Ag over 36 cm (1935). Grab samples assayed 248.6 g/t Au; and 6.2 g/t Au, 7 g/t Ag (1964).

A recently discovered(?) vein measures 300 m long by 5-61 cm wide. The best grab sample assayed 58 g/t Au, 136.8 g/t Ag (1970). A grab sample taken by MPH in 1983 returned 18,000 ppb Au, 3,060 ppm Pb, 12,000 ppm Zn, 11.2 ppm Ag.

Production in 1899-1941 totalled 105 t of ore, yielding 14,650 g Au, 15,552 g Ag, 1102 kg Pb and 245 kg Cu.

History:

1898-99: Various owners; staking, prospecting, one adit driven.
1930-35: Franklin River Gold Mines Ltd.; development, some mining.
1940's: Various; prospecting, sampling.
1963-64: Gunnex Ltd.; prospecting, sampling.
1970: John Cotowick; limited mining operations.
1974: Corrigan Creek Gold Mines Ltd.; geological mapping (surface and underground), geophysics, trenching, stripping, 15 m underground work.

10. Fitzwater Au, Ag, Zn, Pb

Geology:

The property is underlain by NNW striking Sicker Group rocks including Myra Formation tuffs, flows, and cherty rocks and Buttle

Lake Formation limestone. A major NNW trending thrust fault along Rift Creek separates the Myra rocks from the Buttle Lake limestone, which is unconformably overlain by Karmutsen Formation mafic volcanics.

Exploration Results:

Quartz veins hosted by Buttle Lake Formation limestone, siltstone, and argillite occur in a zone which has been indicated by strong soil and rock geochemical anomalies and coincident IP anomalies to be 1600 m long by 100-400 m wide. The veins contain pyrite, sphalerite, arsenopyrite, galena, chalcopyrite, and pyrrhotite and have assayed up to 44.57 g/t Au, up to 347.0 g/t Ag, up to 16.16% Zn, and up to 1.92% Pb from surface grab samples. The veins are up to 30 cm wide. On M6 Creek 6 to 8 veins occur over an 8 m interval. A series of 6 chip samples along a 2 m length of one vein in M6 Creek averaged 21.70 g/t Au over an average width of 6.4 cm. Phase III diamond drilling (of secondary targets) yielded results of up to 0.53 g/t Au over 1.14 m and 10,624 ppm Zn over 1.03 m. Numerous thin (10-90 cm) intersections carrying anomalous Au values (10-1000 ppb Au) were located in the 9 drill holes.

History:

1984: Schreiber Resources Ltd.; geological mapping and rock sampling.

1986: Eystar Holdings Ltd.; geological mapping and rock, soil, and silt sampling.

1986: Crew Minerals Ltd.; geological mapping, rock and soil sampling, magnetometer and VLF-EM surveys.

1987: Crew Minerals/T.P. Resources Ltd.; geological mapping; rock, silt, and soil sampling; IP surveying; diamond drilling.

11. Kitkat Au, Ag, Cu

Geology:

The property is underlain by a sequence of basaltic flows, agglomerates, and tuffs of the Nitinat (and Myra?) Formation intruded by an assemblage of mafic rocks including gabbro, pyroxenite, diorite, and basalt. The intrusive complex may represent the Jurassic Westcoast Complex or may be the basement on which the Sicker rocks were deposited. Gold mineralization occurs in massive sulphide lenses within mafic extrusives west of the Nitinat River, and in quartz-iron carbonate altered shear zones cutting basaltic rocks east of the river.

Exploration Results:

Grab and chip sampling of mineralized outcrops west of the Nitinat River has yielded results of up to 3.57 g/t Au; 1.12% Cu; 300 ppm As; 833 ppm Cr; 1140 ppm Co; 2364 ppm Mo; 360 ppm Pb; 960 ppm Zn; 3.0 ppm Ag. 5 - 1985 diamond drill holes intersected 1.52 m of 110 ppb Au, 1.2 ppm Ag, 314 ppm Ni; 50 cm of 190 ppb Pd, 871 ppm Co, 1106 ppm Cu, 4133 ppm Ni; and 15 cm of 80 ppb Au, 4959 ppm Cu.

Sampling of mineralization east of the river has yielded results of up to 2.81 g/t Au as well as a result of 11.40% Cu, 7.6 ppm Ag, 80 ppb Au.

History:

1963-66: Gunnex Ltd.; regional geological mapping.

1985: JBL Resources Ltd.; geological mapping (1:10,000), rock sampling, soil sampling (853 Cu-Ag-Zn), magnetometer, VLF-EM.

1985-86: Angle Resources Ltd./Nexus Resource Corp.; 6 BQ DDH for 595 m, mapping (1:5,000), soil and rock sampling, IP, mag.

12. Raft Cu, Zn, Ag, Au

Geology:

The Raft claims are underlain predominantly by Nitinat Formation(?) basalt, pillowed basalt tuff and agglomerate with lesser Myra Formation(?) bedded tuff, laminated tuff and chert. The mafic volcanics are host to disseminated pyrite, massive pyrite pods up to 0.5 m thick by 10 m long associated with quartz-epidote-calcite veins and stringers, and minor magnetite in pillow interstices and fracture fillings in pillow lava. Pyritic dacite sills intruding mafic volcanics have returned values in Cu, Zn, Ni, Cr, and Mn.

Exploration Results:

Grab sampling of the massive sulphides yielded results of 1379 ppm Cu, 1.0 ppm Ag. A 1 m (diameter) boulder of massive pyrite sampled by BP-Selco returned 544 ppm Cu, 935 ppm Pb, 667 ppm Zn, 7.0 ppm Ag, 1510 ppb Au. Analyses of up to 2.12% Cu; 1.82% Zn; 4.4 ppm Ag; 110 ppb Au; 2291 ppm Mo; 32.5 ppm Cd; 328 ppm Cr have been obtained from grab sampling of the stringer zone. Dacite sills are up to 500 m long by 1 m wide and have yielded up to 1198 ppm Cu, 760 ppm Zn, 295 ppm Ni, 417 ppm Cr, 2594 ppm Mn. A 3-15 cm wide quartz vein yielded 320 ppb Au, 940 ppm Zn, 67 ppm Cd. A Au soil anomaly 600 m long by up to 200 m wide occurs over the stringer zone. A strong Cu-Zn soil anomaly occurs over a shear zone in the central to northeastern part of Grid A. Two main IP anomalies were located. DDH testing of the IP anomalies intersected significant amounts of disseminated to stringer pyrite with local chalcopyrite as well as zones of epidote alteration, silicification, and shearing. The highest analyses were 12,500 ppm Cu, 3.1 ppm Ag over 95 cm; 18,200 ppm Zn over 31 cm; and 20 ppb Au over 64 cm.

History:

1963-66: Gunnex Ltd.; silt sampling, regional geological mapping.

1983: Lode Resource Corp.; silt, soil sampling; geological mapping.

1985-87: Vanwin Resource Corp.; geological mapping (1:10,000, 1:5,000), prospecting, rock sampling, VLF-EM, mag, IP, soil sampling, 3 DDH for 517 m.

13. Kitkat Pt Pt, Pd, Ni, Cu

Geology:

The property is underlain by a sequence of basaltic flows, agglomerates, and tuffs of the Nitinat (and Myra?) Formation intruded by an assemblage of mafic rocks including gabbro, pyroxenite, diorite, and basalt. The intrusive complex may represent the Jurassic Westcoast Complex or may be the basement on which the Sicker rocks were deposited. Platinum group metals (PGM) are associated with chloritic shear zones in gabbros of the intrusive complex.

Exploration Results:

Highest values from outcrop are 1.65 g/t Pt, 5.31 g/t Pd, 2012 ppm Ni, 100 ppb Au, 6550 ppm Cu from a grab sample. Values of up to 6702 ppm Cu and up to 5.8 ppm Ag have been returned from other grab samples. A diamond drill hole on the showing failed to intersect any PGM values at depth.

Another area on the property 3.5 km to the northeast has returned values of up to 145 ppb Pd and up to 100 ppb Pt from grab samples and up to 145 ppb Pd over 50 cm in drill core. Anomalous PGM values occur in an area 1.5 km long.

History:

1985: JBL Resources Ltd.; mapping (1:10,000) rock and soil sampling, mag, VLF-EM. Showing discovered.

1985-86: Angle Resources Ltd./Nexus Resource Corp.; mapping (1:5,000), soil and rock sampling, IP, mag, 6 DDH for 595 m (1 DDH for 90 m on the main Pt-Pd showing).

14. Debbie/Yellow Au, Ag

Geology:

The property is underlain by various Sicker Group rocks, including the Nitinat and Myra Formations. The 3 mineralized zones currently being explored occur towards the southern end of the property, where Myra Formation rocks are in fault contact along the west side of Mineral Creek with Nitinat rocks to the east. At the 900 Zone, a silicified quartz stockwork zone in bedded chert, cherty tuff, and jasper within mafic Sicker volcanics is the host to the gold mineralization. The Mineral Creek Zone, together with its extension on the adjacent Yellow property, consists of a pyritic quartz-carbonate altered fault zone. The Linda Zone comprises a series of auriferous quartz veins in barren wallrock and may be an extension of the old Vancouver Island Gold Mine (#1 above).

Exploration Results:

The 900 Zone has yielded results of up to 139.82 g/t Au over 14.36 m and 38.98 g/t Au over 13.50 m from numerous diamond drill holes. The Mineral Creek Zone has been outlined for a length of 400 m and has yielded results of up to 3.53 g/t Au over 21.06 m from diamond drill holes. Intersections from the Linda Zone include 1.40 m of 44.91 g/t Au and 2.99 m of 19.82 g/t Au.

History:

1973-85: Westmin Resources Ltd.; (Debbie property and predecessor claims) mapping, soil sampling, various geophysical surveys over various parts of very large property. Some mapping and rock sampling was carried out at the Mineral Creek site in 1982 but the mineralization was not discovered until 1986.

1979-85: Silver Cloud Mines Ltd.; (Yellow property) rock sampling, bulldozer trenching, soil sampling, silt sampling, geological mapping (1:5,000).

1986-87: Westmin/Nexus Resource Corp./Angle Resources Ltd.; diamond drilling.

1986-87: Reward Resources Ltd./Angle Resources Ltd.; (Yellow property) mapping, soil and rock sampling, IP, 3 trenches for 154 m; road, trail, bridge construction/up-grading; 20 DDH for 4976.4 m (to Feb/87; over 15,000 m of diamond drilling planned for 1987 season).

5.0 1987 EXPLORATION PROGRAM

The 1987 exploration program consisted of reconnaissance geological mapping, prospecting, rock sampling, soil sampling, and test magnetometer and VLF-EM surveys. A total of 74 rock samples and 253 soil samples was collected. Geological mapping was carried out over an area of about 2 km^2 at a scale of 1:5000. The test geophysical surveys were carried out over 1.65 line km (VLF-EM) and 0.4 line km (magnetometer).

5.1 Property Geology

The most recent mapping by government geologists (Sutherland Brown et. al., 1986) shows the Columbia property to be underlain east of Rift Creek by McLaughlin Ridge Formation volcanic sandstone, conglomerate, and tuff (equivalent to Myra Formation?) intruded by Jurassic hornblende diorite, separated from Triassic Karmutsen Formation diabase and microdiorite sills to the west of Rift Creek by a thrust fault running just east of Rift Creek.

Mapping carried out on the property in November and December 1987 located mainly basaltic volcanic rocks with minor amounts of chert, jasper, and felsic volcanics (Drawing No. 5).

Most of the eastern slope of the Rift Creek valley is underlain by a package of fine- to medium-grained basaltic rocks which vary from massive to foliated, often have an agglomeratic appearance with pyroxene phenocrysts, locally are pillowed, and which contain minor amounts of chert, jasper, and felsic volcanics in indeterminate shaped and sized masses. This package is interpreted as a wide zone of mixed fault slices of Nitinat Formation mafic volcanics and Myra Formation (intermediate to) felsic volcanics and siliceous sediments. The upper parts of the east side of Rift Creek valley and the rest of the property to the east are underlain mainly by Nitinat Formation basalts. Agglomerate (Unit 1a) consists of dark to medium green to grey fine- to medium-

grained basalt containing 10-50% indistinct, slightly paler clasts up to 10-15 cm in size of fine-grained basalt with abundant pyroxene phenocrysts up to 1 cm in size. Foliated basalt (Unit 1b) is fine- to very fine-grained, dark to light green, possibly tuffaceous and usually moderately carbonatized. Foliation generally strikes NNW and dips steeply to the west, or less commonly to the east. Diabase (Unit 1c) is medium- to coarse-grained, dark to medium green, and massive. It may represent a shallow intrusive or a thick flow. Porphyritic basalt (Unit 1d) comprises very fine-grained medium grey matrix with 10-15% irregular feldspar phenocrysts. Silicified basalt (Unit 1e) is variable in colour (due mainly to variable associated pyrite content) from grey to green to brown, yellow, and reddish. Pervasive silicification appears to be associated with quartz veining as the strength of wallrock silicification decreases away from the veins. Locally, silicified zones were noted without accompanying quartz veins. Very fine-grained light green cherty basalt (Unit 1f) is present in minor amounts only. Pillowed basalt (Unit 1g) was identified in 2 places. It consists of light green-grey fine-grained basalt, locally containing 5-10% pyroxene phenocrysts to 3 mm across. Pillows are indistinct, but appear to range up to 1 m by 3 m in size. In the outcrop at L1S, 4+00W distinct white-weathering cherty, pyritic material appears to form fillings in interstices between pillows. Hornfels/metabasalt (Unit 1h) was not observed during the 1987 work. It was mapped by Laanela (1986) in the northeastern corner of the property.

Unit 2 rocks occur in minor amounts, apparently randomly scattered over the east side of Rift Creek valley to about 400 m elevation. Felsic volcanics (Unit 2a) include fine-grained massive pale bluish grey to bright green dacite and one outcrop of subvolcanic rhyodacite containing 10-20% quartz eyes. Jasper (2b) is found only in small lenses up to 10 cm wide by up to several metres long. It is light red to purple to black, cryptocrystalline, locally laminated but usually massive, and generally

slightly to moderately magnetic. Chert (2c) is found between pillows of Unit 1g at L1S, 4+00W and interbedded with fine-grained Unit 1 basalt near L10S, 4+00W. At the L10S locality the chert is light green to maroon, weathering white to pink.

Rocks west of Rift Creek include Buttle Lake Formation limestones (Unit 3) and Karmutsen Formation(?) rocks (Unit 4).

The limestone is white, massive, slightly recrystallized and contains abundant white quartz stringers with local quartz veins up to 8 cm wide. None of the quartz contains sulphides.

The "Karmutsen" rocks include mafic volcanics and/or subvolcanic intrusives which are extensively altered near(?) small aplitic intrusions. It is not clear whether these rocks actually belong to the Karmutsen Formation. The presence of pyroxene porphyritic agglomerates very similar in appearance to those of Unit 1a suggest that the rocks west of Rift Creek may be Nitinat Formation rocks, however, all previous workers (Muller 1977, 1980; Sutherland Brown, et. al., 1986) have mapped Karmutsen rocks in this area. Whole rock analyses of several samples from this area tend to support the Nitinat, as the rocks are indicated to be calc-alkaline rather than tholeiitic. Most of the outcrops are of fine- to medium-grained medium to dark green to grey, massive basalt (Unit 4). Locally, epidote $\pm$ quartz stringering is common. Agglomerate (Unit 4a) looks exactly like Unit 1a agglomerate, with indistinct pyroxene porphyritic, somewhat lighter coloured, clasts to at least 10 cm in a fine-grained dark to medium green matrix. Altered basalt (Unit 4b) is pale green-grey, weathering pale creamy brown, fine- to medium-grained, and fairly hard (about hardness 5-6). Thin section study of sample 18444 shows a high content of prehnite which is an alteration product of feldspar. It occurs next to aplite dykes as well as in outcrops with no apparent nearby intrusive. It is most likely

an alteration envelope associated with the aplitic intrusions. Strongly to intensely foliated (locally phyllitic) light green-grey, white weathering siltstone to mudstone (Unit 4c) is interbedded with small amounts of massive dark green fine-grained basalt.

Intrusive rocks have all been included in the Island Intrusions although some (5b, 5c) could belong to the Tertiary Catface Intrusions. Granodiorite to quartz diorite (Unit 5a) was mapped by Laanela (1986) in the northwestern corner of the property. Gabbro (Unit 5b) is massive, medium-grained, with a definite intrusive texture. Aplite (Unit 5c) is white to pale bluish-grey, massive, hard, and contains 15-20% small faint quartz eyes. It lacks the typical sugary texture of aplite, but thin section study and whole rock analysis confirm the rock type as aplite. Aplite is mapped only on the west side of Rift Creek and appears to have caused extensive alteration zones in the host basalts.

As stated above, a major north northwest trending fault zone 500 to 700 m wide has been inferred to be present on the east side of Rift Creek based on previous mapping (Muller 1977, 1980; Sutherland Brown et. al., 1986), the presence of rocks believed to belong to the Myra Formation mixed with those of the Nitinat Formation, and the presence of zones of strong to intense foliation.

5.1.1 Mineralization and Rock Sampling

A total of 74 rock samples was collected during the course of 1987 fieldwork. All rock samples were analyzed for Au and by 30-element ICP. Samples which returned elevated Ni, Cr, Co, Cu, and/or Au values were then analyzed for Au, Pt, and Pd (19 samples total). Rock sample descriptions and selected results are included in Appendix II; full results of rock sample analyses are located in Appendix III; sample locations and selected results are plotted on Drawing No. 5.

Disseminated pyrite is widespread in all of the volcanic rock types on the property. Unit 1 mafic volcanics commonly contain trace to 1% disseminated pyrite with local concentrations of up to 10% pyrite. The only significant analyses from Unit 1 rocks were from samples cut by quartz and/or epidote veins. The best gold value was 170 ppb from sample 17567, a quartz veined silicified basalt. In the north central part of the property several samples returned high copper values from quartz veined basalt (sample 18287 - 2193 ppm Cu with 18 ppb Au); silicified, epidote stringered basalt (sample 18288 - 1757 ppm Cu); and a quartz vein (sample 18451 - 1514 ppm Cu). Two samples of silicified basalt from near L12S (17568, 17570) containing >1%-10% disseminated pyrite returned elevated As levels (38, 64 ppm, respectively) but low Au values. Sample 17553, of epidote $\pm$ quartz veined basalt ran 30 ppb Au. Elevated to anomalous Ni and Cr values were returned from samples 17561, 18295, and 25104 prompting subsequent analysis for Pt and Pd. Results are presented below:

	Ni (ppm)	Cr (ppm)	Pt (ppb)	Other
17561	137	293	10	
18295	147	257	10	10 ppb Au
25104	342	775	20	

All of these samples returned <10 ppb Pd.

Resampling of the "Main Zone" (Laanela, 1986) confirmed the 1986 results with high Cu $\pm$ Ag values and low Au, Pt, and Pd values. The Main Zone consists of a highly silicified $\pm$ epidotized (shear zone?) with local concentrations of up to 30-60% pyrite and <5% chalcopyrite. Samples 18282 and 18283 were collected from the Main Zone, while sample 18284 was collected from a nearby (associated?) quartz vein, with the following results:

	Cu (ppm)	Ag (ppm)	Au (ppb)	Pt (ppb)	Pd (ppb)
18282	1500	0.9	5	N/A	N/A
18283	9596	2.7	62	10	10
18284	2276	1.5	5	N/A	N/A

Unit 2 rocks generally contain at least minor disseminated pyrite. The largest outcrop, south of L10S does not appear to contain any sulphides, however. Samples from this unit are remarkably devoid of anomalous values. Samples 17556, 17557, 17562, and 18442 do not contain any anomalous values, while samples 17563 and 18443 are anomalous only in La (20 and 24 ppm, respectively). Sample 17558 returned the best (albeit low) results, with 8 ppb Au, 51 ppm As, and 104 ppm Ba.

Unit 3 was not sampled as it is not mineralized and is outside the property boundary in any case.

The best results were returned from Unit 4 rocks, which, in general, contain few sulphides. Locally, amounts of disseminated to stringer pyrite up to 2-5% are present. In several places, though, massive pyrite stringers to veins or pods occur, yielding high gold values. Sample 18285, of a 3-4 cm wide pyrite vein returned an assay of 16.22 g/t Au with 3.7 ppm Ag, 521 ppm Co, 43 ppm As, and 772 ppm Cu, while sample 18286, of the basalt host immediately adjacent to the pyrite vein assayed 0.45 g/t Au. Another small pyrite vein (1 cm wide) in weakly silicified basalt from about 1.5 m south of 18285 assayed 2.06 g/t Au with 104 ppm Co (sample 17571). Two more samples from this outcrop also returned anomalous values: sample 17551 - 56 ppb Au, 1654 ppm Cu, 113 ppm Co; sample 18300 - 22 ppb Au. Massive pyrite pods in epidote-altered basalt float (sample 18433) ran 380 ppb Au, 41 ppm Pb, 268 ppm Zn, 160 ppm Co, 42 ppm As, and 10 ppb Pd. Another float sample with massive pyrite (18440) ran 70 ppb Au, 253 ppm Co, 20 ppb Pt, 10 ppb Pd. An elevated platinum analysis (20 ppb) was returned from sample 18445, a weakly pyritic (1%) agglomerate.

The intrusive rocks mapped in the 1987 program (Units 5b, 5c) do not contain any visible sulphide mineralization. A sample (18436) of Unit 5c aplite with no visible sulphide mineralization returned the best platinum value, of 35 ppb.

5.1.2 Whole Rock

Seven of the rock samples were chosen for whole rock analysis to aid in identifying rock type and stratigraphic position. The analyses were then entered in a computer program which normalizes the values, calculates cation percentages and ratios, and classifies the rock type using 4 different classification systems. The analyses are included in Appendix III while the computer rock type classifications are located in Appendix IV.

In general the whole rock analyses are consistent with the field identifications. As mentioned in section 5.1 above, the whole rock analyses of rocks west of Rift Creek indicate that they are calc-alkaline rather than tholeiitic which supports the theory that these rocks belong to the Sicker Group rather than the Karmutsen Formation.

5.1.3 Thin Sections

Thin sections were prepared from five of the rock samples to determine rock type, alteration, and protolith. Detailed descriptions of the thin sections are included in Appendix V.

Extensive prehnite alteration was identified in sample 18444, which was confirmed as an altered basaltic rock. Sample 18449, which was identified in the field as a basalt was identified in thin section as an intermediate to mafic intrusive (diorite). It is likely that this rock represents a shallow intrusive equivalent (feeder) to the basalts found elsewhere on the property. The thin section identifications of the other 3 samples confirm field identifications.

5.2 Soil Sampling

The soil sampling survey was carried out over the western portion of the property. Lines 4N, 2N, 0, 2S, 4S, and 6S were extended from the end of the 1986 grid to the western edge of the property. Lines 1S and 3S were established in an attempt to provide "fill-in" lines to confirm and better delineate Au soil anomalies on lines 0, 2S, and 4S. Samples (a total of 253) were collected at 25 m intervals on all 1987 lines, at depths of 10-30 cm, of the B horizon soil wherever possible. They were subsequently analyzed for Au at Rossbacher Lab, Burnaby, B.C., and by 30-element ICP at Acme Analytical Lab, North Vancouver, B.C. Results for Au, Ag, As and Cu, Pb, Zn are shown on Drawing No.'s 7 and 8, respectively. Sample locations are plotted on Drawing No. 6. Results above threshold (as determined by Laanela, 1986) from the 1986 survey, west of the baseline, are also plotted on Drawing No.'s 7 and 8. Contour intervals were chosen after statistical analysis of the 1987 results, as summarized below.

	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
Threshold	15	0.4	13	92	12	66
Anomalous	20	0.6	19	124	15	84
Moderately Anomalous	32	>0.8	29	187	21	>118
Strongly Anomalous	55	-	>50	>312	>34	-
Very Anomalous	>99	-	-	-	-	-

These anomalous values were also used for the 1986 data, for purposes of outlining geochemical anomalies on Drawing No.'s 7 and 8.

5.2.1 Results

The most significant anomalies occur at or near the bottom of Rift Creek. Elsewhere, the anomalies are small and generally rather weak.

In the northwestern corner of the property on L4N is a strong 6-sample gold anomaly with coincident As, Zn, and Pb anomalous values. Peak values are 380 ppb Au, 23 ppm As, 102 ppm Zn, and 20 ppm Pb. The anomalies are open to the northwest, however, the area to the northwest is off the property.

A long, narrow Au anomaly with a peak value of 1260 ppb Au extends from L4N, 8+75W approximately along the course of Rift Creek to L6S, 7+50W. It is about 1200 m long by 30-120 m wide and is open to both the north and south. On L4N and L2N, weakly anomalous As and Zn values occur within the Au anomaly. The south end of the Au anomaly on lines 4S-8S is coincident with the western edge of a Zn anomaly.

Several other gold anomalies, mainly weak, and mostly single-sample anomalies occur on lines 2N to 4S. Two of the stronger anomalies are at L2N, 4+75W (110 ppb Au) and L0, 1+50W to L1S, 2+50W (65, 60 ppb Au). A gold anomaly at the western end of L0 includes the site of rock sample 18443, which ran 380 ppb Au. Soil sampling was not carried out over the area of rock sample 18285, which assayed 16.22 g/t Au.

Silver anomalies are generally scattered, small, and weak, and have little correlation to other anomalies.

The largest arsenic anomaly is 450 m long (open to the south) by 30-200 m wide on lines 4S to 8S, east of Rift Creek. Values in the anomaly range up to 60 ppm As. It is coincident with the eastern edge of a large Zn anomaly and with a single anomalous Au value of 25 ppb at L4S, 5+00W. Elsewhere, small As anomalies occur on L4N associated with the Au anomalies; at L2N, 10+75W (91 ppm As); and L1S, 5+50W (33 ppm As).

Copper anomalies are mainly small, weak, and scattered. The strongest, at L4N, 0+50W, comprises a single value of 319 ppm Cu. Two rock samples collected from within the Cu anomaly returned 2193 ppm Cu (sample 18287) and 1757 ppm Cu (sample 18288).

Lead anomalies are also generally small, weak, and scattered. The largest anomaly is on lines 6S and 8S, partially coincident with the Zn anomaly, and flanking the As anomaly to the east. The peak value is 18 ppm Pb.

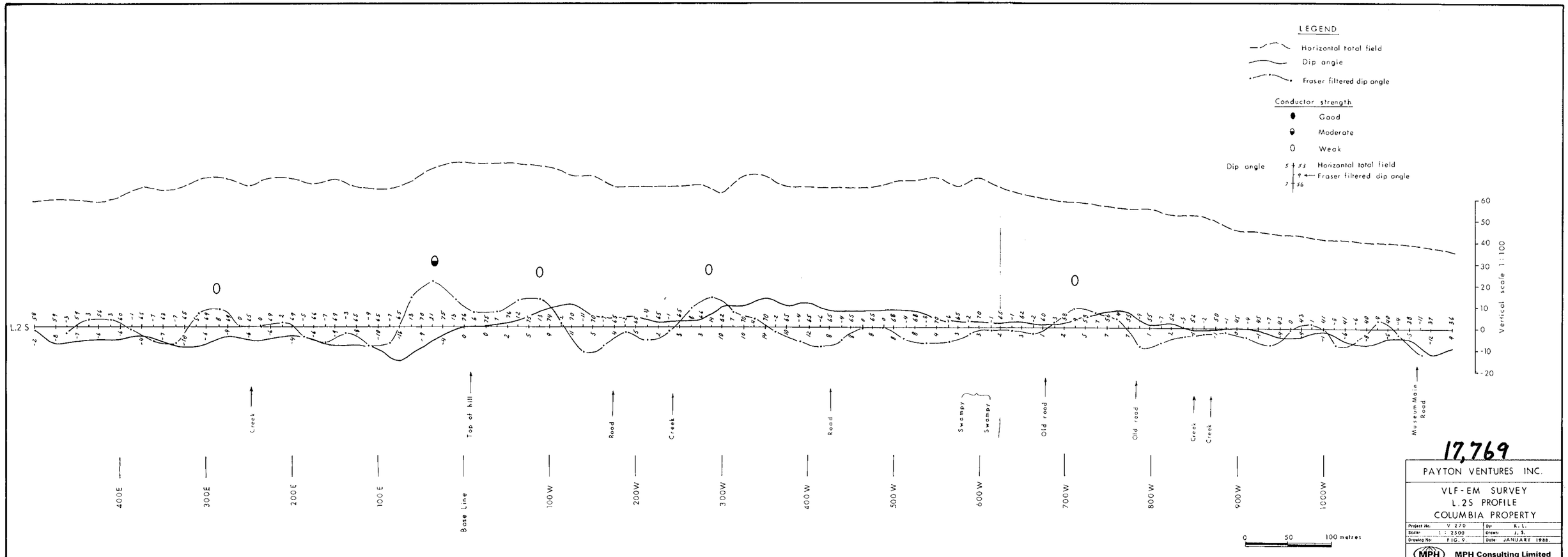
The main zinc anomaly occurs on lines 4S to 6S, east of Rift Creek. It is open to the south and southwest and includes values of up to 134 pm Zn. On its western side it is coincident with the main Au anomaly, while on its eastern side the main As anomaly occurs. The other Zn anomalies include one at the western end of L4N, associated with Au, As, and Pb anomalous values, and a weak anomaly coincident with the northern end of the main Au anomaly.

5.3 Geophysics

Test VLF-EM and magnetometer surveying was carried out over line 2S at 25 m intervals to determine whether complete coverage of the grid is warranted. Due to the extremely wet conditions at the time, the magnetometer malfunctioned after only 400 m and the rest of the line was surveyed only with the VLF-EM.

5.3.1 VLF-EM

The VLF-EM survey was carried out with a Sabre 27 using the Seattle VLF station. The coupling with Seattle was poor, as the line bears approximately 080° and the direction to Seattle is about 110°. Coupling with the Cutler station is slightly better (bearing 095° to Cutler) but the signal is very weak.



17,769

PAYTON VENTURES INC.

VLF-EM SURVEY
L.2S PROFILE
COLUMBIA PROPERTY

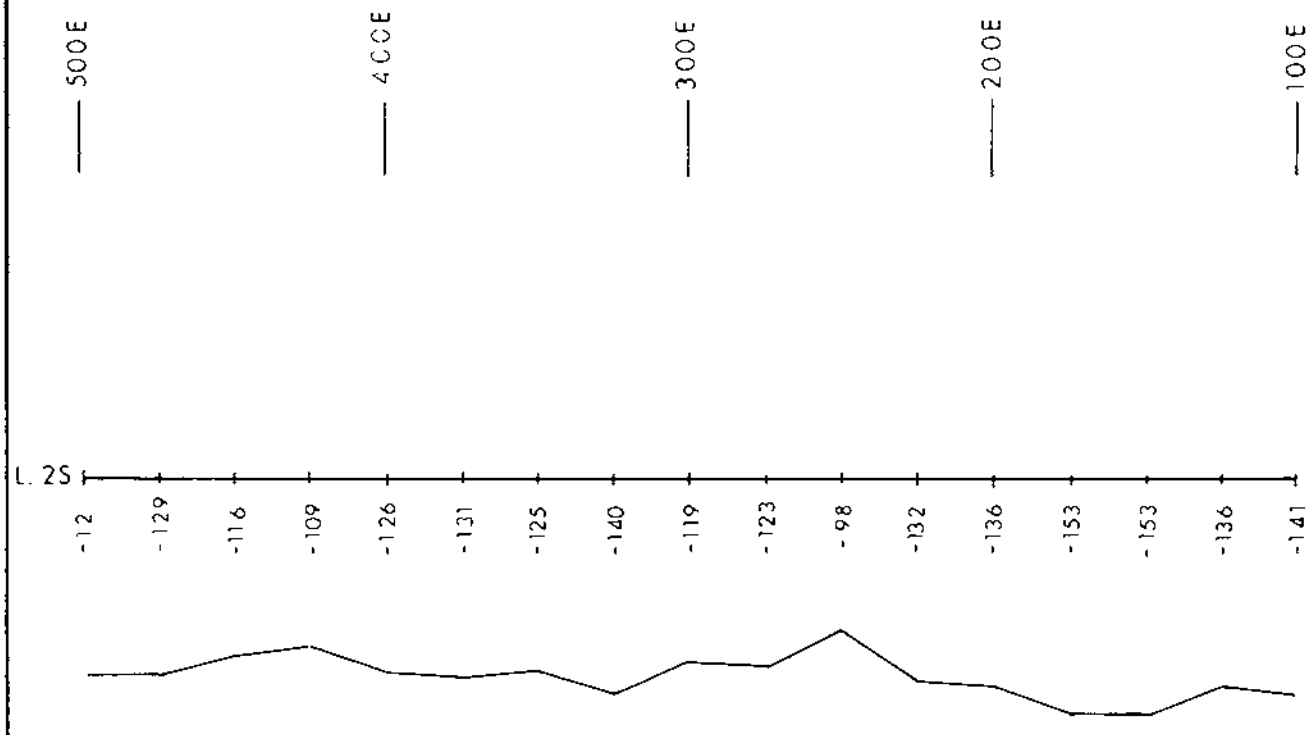
Project No.	V 270	By:	K. L.
Scale:	1 : 2500	Drawn:	J. S.
Drawing No.	FIG. 9	Date:	JANUARY 1988.

MPH Consulting Limited

The VLF-EM profile of L2S is generally flat, with one moderate conductor and 4 weak conductors interpreted from Fraser-filtered data (Figure 9). The moderate conductor occurs near the top of the ridge and may reflect a topographic effect rather than a bedrock conductor. The weak conductors may represent poor bedrock conductors or topographic/cultural "noise". A weak VLF-EM conductor at 2+87E flanks a very weak magnetic high at 2+50E. These anomalies may be an expression of the "Main Zone" mineralized shear zone. The weak conductor at 2+87W is on line with the soil geochemical Au anomaly on lines 0 and 1S, although there are no anomalous Au values over the conductor itself. The results of the test VLF-EM survey do not indicate that full coverage of the grid is warranted.

5.3.2 Magnetometer

The magnetometer survey was carried out with a Geonics G86 proton precession magnetometer. The readings obtained before equipment failure indicate very little variation in the magnetic field (Figure 10). These results do not indicate a need for completion of magnetometer surveying over the whole grid. Completion of L2S, however, would allow a comparison of the VLF-EM and magnetometer data; if VLF-EM anomalies are supported by magnetic anomalies, a full survey of the grid may be warranted.



LEGEND

-129 — Magnetometer reading (corrected to a base value of 56 000 gammas)

Mag profile

Vertical scale : 1 cm = 50 gammas

0 50 100 metres

PAYTON VENTURES INC.

MAGNETIC SURVEY
L.2S PROFILE
COLUMBIA PROPERTY

Project No:	V 270	By:	J. L.
Scale:	1 : 2500	Drawn:	J. S.
Drawing No:	FIG.10	Date:	JANUARY 1988.

MPH Consulting Limited

6.0 PROPOSED WORK PROGRAM

The following work program is designed to follow up results of 1987 field work, which indicate that the western portion of the property has better mineral potential than the east.

6.1 Plan

Phase I exploration is planned to explore and further delineate anomalous areas located by 1987 soil and rock sampling. Additional soil sampling lines will be established between existing lines to provide 100 m line spacing over the Rift Creek Au anomaly and to extend grid coverage to the south to cover the area of the auriferous pyrite vein (sample 18285). Over the area of the Au showing, line spacing will be decreased to 50 m in order to provide a better chance of detecting the mineralization which occurs in small narrow veins. Ideally, soil sampling would be carried out during the summer months when water levels in Rift Creek are low.

Detailed geological mapping and prospecting is to be carried out over the area of soil anomalies and the Au showing with the aim of locating a source for the geochemical anomalies and extensions of, or geological controls on, the showing. Hand trenching of soil anomalies will be carried out where overburden depths are not too great to reach bedrock.

Depending on the results of Phase I work, Phase II is planned to comprise IP surveying over geochemically or geologically favourable area(s) followed by diamond drilling of the highest priority IP targets.

Cost estimates for Phase I and Phase II exploraton are summarized below.

6.2 Budget

Phase I

Mob/Demob	$ 500
Personnel	12,450
Equipment Rental	2,335
Support Costs	4,770
Analyses	5,240
Consulting	1,000
Report Preparation	5,509
Administration	1,766
Contingency	4,960
Total, say	$38,500

Phase II

IP surveying (including linecutting)	$15,000
Diamond drilling (including geologist, assays)	70,000
Consulting and Report	15,000
Contingency	15,000
Total, say	$115,000

6.3 Schedule

Phase I work is estimated to require 2 to 3 weeks for completion of field work, while Phase II will take approximately 6 weeks for completion of field work.

7.0 CONCLUSIONS

1. The Columbia property is underlain by Sicker Group rocks east of Rift Creek, and by an enigmatic package of basaltic and altered basaltic rocks west of Rift Creek which have been previously mapped as Karmutsen Formation, but which may actually also belong to the Sicker Group. A major NNW trending fault zone occurs on the east slope of Rift Creek valley.

2. Rock sampling yielded a result of 16.22 g/t Au from a 3-4 cm wide pyrite vein cutting basalt in the southwest corner of the property. Four other samples from the same outcrop also returned elevated to anomalous Au values of 22 ppb, 56 ppb, 0.45 g/t, and 2.06 g/t. Other samples from west of Rift Creek returned values of 380 ppb Au; 70 ppb Au; 35 ppb Pt. Resampling of the Main Zone confirmed 1986 results with anomalous Cu $\pm$ Ag values and little or no Au, Pt, or Pd.

3. Soil sampling outlined a narrow gold anomaly which approximately follows Rift Creek for 1200 m and is open at both ends. A 450 m long arsenic anomaly occurs east of the south end of the gold anomaly, separated from the gold anomaly by a zinc anomaly.

4. Test VLF-EM and magnetometer surveys failed to locate any significant anomalies, indicating that these geophysical methods are probably of little or no use on the Columbia property.

5. The results of 1987 exploration indicate that the western portion of the Columbia property has better mineral potential than the east.

6. Further exploration of the Columbia property including geochemical soil sampling, geological mapping and prospecting, and hand trenching is warranted, to follow up the results of 1987 work. Additional work including IP surveying and diamond drilling may also be warranted.

8.0 RECOMMENDATIONS

1. It is recommended that detailed geological mapping and prospecting be carried out over the area of the Columbia property west of Rift Creek and in the areas of Au soil anomalies east of Rift Creek.

2. Hand trenching of Au soil anomalies is recommended to be carried out, where overburden depths are not too great, in an attempt to find a bedrock source for the Au values.

3. It is recommended that additional grid lines be established and soil sampled to provide 100 m line spacing over the entire western end of the property and 50 m line spacing over the area of the auriferous pyrite vein.

4. The above work is recommended to be carried out as Phase I exploration of the Columbia property at an estimated cost of $38,500.

5. Contingent upon favourable Phase I results, Phase II exploration consisting of target definition by IP surveying followed by diamond drilling of the highest priority targets is recommended at an estimated cost of $115,000.

Respectfully submitted,
MPH CONSULTING LIMITED

T. Neale, B.Sc.

January 14, 1988
Vancouver, B.C.

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 11 years.

3. The the opinions, conclusions, and recommendations contained herein are based on fieldwork carried out and supervised by me on the Columbia property in November and December 1987.

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

T. Neale, B.Sc.

Vancouver, B.C.
January 14, 1988

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APPENDIX I

List of Personnel and Statement of Expenditures

LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

The following expenditures have been incurred as the Columbia property, as defined in this report, for the purposes of mineral exploration during the periods of November 9-23 and December 4-8, 1987.

Personnel:

T. Neale, B.Sc., Geologist		
31.25 days @ $375	$11,718.75	
C. Naas, B.Sc., Geologist		
4 days @ $250	1,000.00	
K. Lund, Geophysicist		
1 day @ $350	350.00	
J. Lang, Geophysical Tech./Soil Sampler		
4 days @ $150	600.00	
R. Soles, Prospector		
4 days @ $250	1,000.00	
T. Styan, Soil Sampler		
4 days @ $150	600.00	
B. Davidson, Soil Sampler		
2 days @ $150	300.00	
J. Coates, Soil Sampler		
2 days @ $150	300.00	
R. Bonnar, Assistant		
3 days @ $150	450.00	
A. McMurdo, Assistant		
1 day @ $150	150.00	
G. Lorenzetti, B.Sc., Assistant		
0.25 days @ $150	37.50	
T.G. Hawkins, P.Geol.		
4 days @ $500	2,000.00	
J.S. Getsinger, Ph.D.		
2 days @ $350	700.00	
		$19,206.25

Disbursements:

Food and Accommodation	$ 2,426.99	
Transportation	2,551.32	
Equipment Rental	310.00	
Miscellaneous (phone, courier, supplies)	111.17	
Analyses:		
74 rocks (Au, ICP) @ $14	1,036.00	
19 rocks (Au, Pt, Pd) @ $12	228.00	
3 rocks (Au assay)	20.25	
253 soils (Au, ICP) @ $11.85	2,998.05	
7 rocks (whole rock) @ $32	224.00	
5 rocks (thin section) @ $9.35	46.75	
Report Costs (typing, drafting, copying)	1,896.21	
Administration	950.21	
		12,798.95
TOTAL		$32,005.20

APPENDIX II

Rock Sample Descriptions and Lithogeochemistry Results

Sample No.	Description	Au (ppb)	Other (ppm)
18433	Massive pyrite in basalt - fine-grained, dark green, massive basalt, strongly fractured, abundant goethitic stain on fracture surfaces; contains pod of massive pyrite in cubes to 1.5 mm about 10 x 15 cm by up to 2 cm thick; basalt cut by locally abundant irregular pale green epidote(?) veinlets to 2 mm; trace disseminated fine pyrite in basalt. Sample about 15% massive pyrite, 85% basalt. Float.	380	41 Pb, 268 Zn, 160 Co, 42 As, 17.74% Fe, 21 La, 134 V, 1420 Mn, 10 ppb Pd
18434	Basalt - medium-grained, medium greenish grey, locally fairly strongly silicified; cut by irregular network of pale green epidote ± quartz veinlets to 1 cm combined width; cut by several irregular pyrite veinlets to 8 mm wide with diffuse edges; pyrite varies from very fine-grained to 1 mm cubes; near pyrite veinlets epidote alteration (of feldspar?) is abundant; minor disseminated pyrite in clumps to 1 mm across. Float.	5	20 Pb
18435	Basalt - fine-grained, light to medium grey-green, trace disseminated pyrite; abundant (20-30% of sample) pale green epidote(?) veining; veins are irregular, larger ones seem to be subparallel but small veinlets in all directions, size varies from hairline to 6-8 mm.	5	9 B
18436	Aplite vein - white to locally buff to very pale bluish grey, massive, hardness 5-6, doesn't fizz with HCl even when scratched, contains abundant subparallel rusty fractures with vuggy cavities to 2 mm x 1 cm; on cut surface 15-20% faint quartz eyes(?) to 1-2 mm show up. Occurs as an irregular dyke up to 30 cm wide in altered basalt.	<2	0.20% K, 35 ppb Pt
18437	Quartz-carbonate flooded basalt? - pale greenish grey, aphanitic, hardness 5-6, locally fizzes with HCl when powdered, locally contains irregular streaks and layers to 5 mm thick of dark green chloritic material; fracture surfaces have abundant rusty dendritic clumps to 3 mm across. No sulphides noted.	5	
18438	Altered basalt - medium-grained, light green grey, 5-15% dark green chloritic blebs to 5 mm (average 1-2 mm); cut by several pyrite stringers 1-2 mm thick and by moderate pale green epidote stringer network; hardness 4.5-5.5.	5	

Sample No.	Description	Au (ppb)	Other (ppm)
18439	Silicified basalt - sample is from both sides of a 1 cm wide quartz vein (no vein in sample); pale grey, medium-grained to aphanitic, hard, no HCl reaction; cut by network of epidote stringers and by irregular and discontinuous pyrite stringers to veinlets up to 3 mm thick comprising mainly very fine-grained grey pyrite with lesser pyrite cubes to 1 mm; also 1-2% disseminated pyrite in cubes to 2 mm; overall pyrite content 2-3%.	5	
18440	Massive pyrite - pyrite cubes to 3 mm in masses to 4 x 3 x 1.5 cm; host rock is medium brown, soft, fine-grained, totally altered (basalt?) with 3-10% disseminated pyrite. Float.	70	253 Co, 25.10% Fe, 10 ppb Pd, 20 ppb Pt
18441	Quartz vein - white, massive, contains abundant irregular thin (1-4 mm) septa and irregular blobs of chlorite (altered basalt?) which are locally highly malachite-stained, 1-2% pyrite and <1% chalcopyrite in irregular pods to 1 cm across, and several blobs of black to red hematite to 0.5 x 1 cm; sulphides tend to occur near chloritic patches. Float.	10	631 Cu, 193 Cr
18442	Siliceous pillow interstice material - light green-grey, weathers white; contains trace to 1% disseminated pyrite; abundant rust on fracture surfaces and in vuggy pockets to 2 cm x 0.8 cm; occasional clumps of epidote to 5 mm across; has a cherty appearance; from a rectangular "pod" 10 x 25 cm. On nearby outcrop surface the cherty material can be seen to be filling the interstices between 30 cm pillows.	5	
18443	Quartz-veined chert - light to medium grey chert with numerous thin (5-10 mm) subparallel veins of white vuggy quartz; trace disseminated pyrite in chert in cubes to 1 mm. Sample is 90% chert, 10% veins. Float.	5	24 La
18444	Altered basalt(?) - pale green-grey, fine- to medium-grained, hardness 5-6; cut by numerous quartz stringers to veinlets to 6 mm; locally contains 1-2% pyrite disseminated in patches to 4 mm; weathers pale whitish brown with rusty coating.	6	2.10% Ca
18445	Agglomerate - light green-grey; clasts contain abundant pyroxene phenocrysts to 5 mm across; minor quartz veinlets to 2 mm; 1% pyrite disseminated in patches to 2 x 3 mm. Very similar to Nitinat Formation.	6	87 Sr, 20 ppb Pt

Sample No.	Description	Au (ppb)	Other (ppm)
18281	Basalt - fine- to medium-grained, medium green; cut by frequent pale green epidote ± quartz veinlets to stringer zones up to 1 cm wide; trace disseminated pyrite in cubes to 1 mm.	5	16 Pb, 90 Sr
18282	Basalt - fine- to medium-grained; medium green; cut by epidote veins (or alteration zones) to 1 cm wide which are crosscut by quartz stringers to veins to at least 5 mm wide with abundant (15-30%) pyrite in cyrstals to 2 mm; heavy, weathers rusty.	5	1500 Cu, 18 Pb, 136 Zn, 0.9 Ag, 10.01% Fe, 132 V
18283	Semi-massive sulphides in altered (basalt?) - 30-60% pyrite in irregular very fine- to medium-grained masses in extremely silicified and strongly epidotized fine-grained chloritic basalt(?). Also 3-5% chalcopyrite mixed with the pyrite; extensive rusty fracture coatings and vuggy cavities.	62	27 Mo, 9596 Cu, 19 Pb, 129 Zn, 2.7 Ag, 184 Ni, 294 Co, 19 As, 18.47% Fe, 10 ppb Pt, 10 ppb Pd
18284	Quartz vein - white; contains abundant fragments of wall rock including thin stringer-like bodies and larger irregularly-shaped fragments to 1 x 1 cm; contains abundant hematitic fractures and 2-5% disseminated pyrite and up to 1% chalcopyrite; contains pods of epidote to 1 x 3 cm. Wall rock is fine-grained, dark green basalt with 1-2% disseminated pyrite. Sample 60% quartz vein, 40% basalt. Vein 15 cm wide.	5	2276 Cu, 415 Zn, 1.5 Ag
18285	Pyrite (vein?) - massive pyrite in coarse semi-crystals to 5 mm across in a 3-4 cm wide vein(?) cutting medium-grained silicified basalt. Sample is 80% pyrite, 20% basalt.	16.22 g/t	772 Cu, 3.7 Ag, e 521 Co, 20.79% F , 43 As, 98 Sr
18286	Basalt (wall rock of 18285) - medium-grained, light grey-green, silicified; contains minor disseminated pyrite close to 18285 pyrite vein and a 1.5-3 cm wide zone of pervasive rusty stain next to the pyrite vein; extremely rusty weathering (probably due to pyrite vein, not the basalt).	0.45 g/t	54 Sr
18287	Quartz veined basalt - fine-grained, medium grey to green; cut by irregular quartz veins to silicified zones with up to 60% pyrite, trace chalcopyrite; up to 1% pyrite disseminated in basalt away from quartz; weathers very rusty. Sample is 50% quartz, 50% basalt. Float.	18	20 Mo, 2193 C , 0.8 Ag, 74 Co

Sample No.	Description	Au (ppb)	Other (ppm)
18296	Fault zone - cuts fine-grained basalt; 10 cm wide, highly sheared and fractured basalt, 1 cm of rusty fault gouge, minor disseminated pyrite (<1%) and occasional rusty cavities to 1.0 x 3 mm in the basalt fragments.	5	72 Ni, 1457 Mn, 18 La, 81 Ba, 0.20% K
18297	Epidote-quartz vein - fine-grained, apple green epidote cut by white to clear to brownish clear quartz veins to 1 cm wide; trace disseminated pyrite in the epidote. Vein is irregular in width up to 20 cm. Sample is 75-80% epidote, 20-25% quartz. No wall rock (basalt) in sample.	5	29 Pb, 176 Sr, 2.41% Ca, 0.26% Ti
18298	Epidote-veined basalt and chert - medium grey-green, fine-grained basalt and black, magnetic chert cut by epidote veinlets to 1 mm and epidote-quartz-pyrite veins or alteration zones to 4 cm. Basalt and chert both contain up to 5% disseminated pyrite in cubes to 1 mm. Epidote alteration zones/ veins contain 10-40% quartz and 3-10% pyrite in masses to 1 x 1 cm of fine to medium crystals.	8	132 Ni, 62 Sr
18299	Basalt - very fine-grained, light green, strongly foliated, moderately to strongly carbonatized, cut by numerous carbonate veinlets parallel foliation; contains rusty seams and pockets to 1 cm wide, locally associated with quartz veinlets; no sulphides noted - the rust may be due to iron carbonate.	5	51 Ba
18300	Dacitic mylonite(?) - light greenish grey, hard; contains 25% irregularly-shaped quartz fragments up to 2 x 8 mm in a very fine-grained matrix; contains 2-5% very fine-grained disseminated pyrite; quartz fragments are brecciated.	22	
17551	Basalt - fine-grained, dark green, pervasively epidotized; cut by numerous epidote stringers to 4 mm and by several pyrite stringers to 2 mm; pyrite appears to follow epidote stringers.	56	1654 Cu, 113 Co, 96 Sr
17552	Basalt - fine-grained, medium bluish green-grey, weakly to moderately carbonatized; contains 1% fine-grained disseminated pyrite, trace malachite; moderately foliated.	5	
17553	Epidote-quartz veined basalt - fine-grained, medium grey-green basalt cut by many thin epidote stringers and by epidote-quartz veinlets or alteration zones to 1 cm with up to 10% pyrite. Overall pyrite content of sample <1%. Very rusty weathering. Float.	30	20 As, 111 Sr

Sample No.	Description	Au (ppb)	Other (ppm)
17554	Basalt - very fine-grained, medium grey-green, hard(ish); minor epidote stringers; 1% disseminated pyrite in cubes 1-2 mm and finer-grained disseminations.	5	127 Zn, 0.28% P
17555	Basalt - fine-grained, medium green-grey, cut by minor quartz - carbonate veining to at least 1 cm wide; basalt contains 3-7% very fine-grained disseminated pyrite.	5	193 Cr
17556	Ironstone - pale purple to maroon to black, cryptocrystalline to very fine-grained, finely laminated, moderately magnetic; cut by occasional quartz veins; contains 1-2% disseminated pyrite in crystals to 1.5 mm.	5	
17557	Jasper - bright red, cryptocrystalline, locally weakly magnetic; contains <1% disseminated pyrite in crystals to 2 mm; cut by a few thin (<1 mm) quartz stringers and linear open cavities; occasional areas to 2.5 x 0.5 cm of black highly magnetic material.	5	
17558	Altered rhyodacite - pale green-grey, hard, weakly foliated; cut by occasional vuggy quartz veins to 1 cm wide; contains 1-2% disseminated to stringer pyrite, and 10-20% quartz eyes to 1 mm.	8	51 As, 104 Ba, 0.24% K
17559	Basalt (tuff?) - light to dark green-grey, strongly carbonatized, strongly foliated; cut by occasional carbonate stringers to 1.5 mm; contains 1-5% pyrite as fine disseminations to masses up to 1 x 5 mm.	5	
17560	Basalt (tuff?) - light to medium grey-green; contains 20-30% spheroidal blebs to 1.5 mm of light grey to dark green material (locally looks like quartz) in fine-grained matrix; contains 5-7% extremely fine-grained disseminated pyrite; moderately foliated; very weakly carbonatized.	16	
17561	Basalt - very fine- to medium-grained, medium grey; (abrupt grain size changes due to contacts of agglomerate fragments??); contains up to 2% pyrite disseminated in cubes <1 mm.	2	137 Ni, 293 Cr, 10 ppb Pt

Sample No.	Description	Au (ppb)	Other (ppm)
17562	Jasper - dull red to pinkish to pale rusty yellow-brown; contains 5% irregular white feldspar(?) blebs to 0.5 mm and 10-15% deformed quartz eyes(?) to 1.5 mm (possibly an altered felsic volcanic); contains 15-25% pyrite crystals to 1 mm and open cavities where pyrite has weathered away. Sample includes 10% dark green fine-grained basalt "wall rock".	5	
17563	Altered felsic volcanic(?) - pale greenish grey, very fine-grained, highly foliated; contains 5-30% rusty specks to streaks; minor quartz stringers; slightly phyllitic; no HCl reaction; varies from hard in less rusty areas to soft where rust is abundant.	5	20 La, 63 Ba
17564	Feldspar porphyritic andesite - medium grey, fine- to very fine-grained grey matrix with 10-15% irregular white feldspar spots up to 2 mm across; weathers moderately rusty; trace disseminated pyrite. Float (from outcrop 10 m away).	5	66 Ba
17565	Pyritic basalt - fine-grained, dark to medium green; contains 5% dark green chloritic(?) blebs to 2 mm; contains 10-30% pyrite in veinlet-like alteration zones(?) to 7 mm wide, in irregular masses to 3 x 12 mm, and disseminated; weathers extremely rusty. Float.	5	153 Zn, 9.04% Fe, 0.24% Ti
17566	Basalt - fine-grained, dark to light green weathering highly rusty; strongly silicified; cut by abundant quartz stringers <1 mm and by occasional quartz veins to 1 cm which contain up to 10% pyrite and abundant red hematitic material; <1% pyrite disseminated in basalt. Float.	5	15 As
17567	Silicified basalt - light brownish-grey, fine-grained, strongly silicified; contains 5-10% fine rusty specks and 15-20% very fine yellowish dits (clay alteration?); cut by several highly vuggy, white quartz veins up to 2 cm thick (vugs contain massive earthy rusty material up to 1 x 2 cm x 5 mm). Sample 30% veins, 70% basalt. Float.	170	

Sample No.	Description	Au (ppb)	Other (ppm)
17568	Silicified basalt - light grey weathering rusty, very fine-grained; cut by numerous quartz stringers to 3 mm wide containing local pockets of massive pyrite; pyrite disseminated in basalt near stringers 1-2%; also minor pyrite stringers to 1.5 mm wide; zones of intense silicification to at least 1 cm wide surround quartz stringers. Overall pyrite content <1%.	5	38 As, 44 Ba
17569	Silicified basalt - medium green to brown to red to white; very fine-grained, contains 3-5% yellow (clay?) dits similar to 17567; cut by irregular, discontinuous white quartz-carbonate veins to 1 cm wide containing 5-10% red hematitic masses to 10 x 3 mm, and by amorphous, diffuse zones of pink to brown silicification; trace disseminated pyrite in basalt.	5	23 As, 46 Ba
17570	Silicified basalt - light grey green with 5-30% dark green chloritic blebs to 3 x 10 mm masses, very fine-grained; contains 3-10% pyrite disseminated in cubes to 1.5 mm and masses of cubes to 1 x 1 cm; contains 5-10% quartz-carbonate blobs to 1 x 2 cm; cut by occasional vuggy quartz veins to 8 mm containing up to 30% pyrite.	5	64 As
17571	Basalt - dark to medium green, fine-grained, weakly silicified in places; cut by several thin (up to 1 mm) pyrite $\pm$ minor quartz stringers and by one pyrite vein up to 1 cm wide; trace disseminated pyrite in basalt. Overall pyrite content of sample 3-5%.	2.06 g/t	104 Co, 8.98% Fe
17572	Aplite - light grey, fine-grained; contains 15% fine (<1 mm) dark green mafic minerals and 2-3% disseminated pyrite in rusty cubes to 2 mm and fine blebs. Possibly a highly silicified basalt. Float.	5	
17573	Basalt - medium green, fine-grained, locally silicified; contains 2-5% mafic phenocrysts and 2-7% pyrite as disseminated cubes to 1.5 mm, irregular masses to 2 x 5 mm associated with quartz, massive pods to 1 x 1.7 cm x at least 2 mm, and fracture coatings (veinlets?). Float.	5	

Sample No.	Description	Au (ppb)	Other (ppm)
25101	Basalt - fine-grained, greyish green. Basalt is epidote-altered in concentrations 5-20 mm. Hairline fractures(?) through sample; 80% are filled with very fine-grained, pale green mineral, probably epidote, 20% of fractures are weathered giving cavities. Plagioclase crystals are slightly larger than others (<1 mm). Mineralization is disseminated pyrite (<1 mm) <3% of sample.	5	
25102	Basalt - greyish green, coarse-grained. Grains are similar in size (<0.5-1 mm); pyroxene (40%) slightly larger than other minerals, epidotized plagioclase (57%) and quartz (3%). Cut by very weathered, parallel quartz veins 1 -3 mm. Mineralization cannot be seen in veins, <1% pyrite disseminated near fractures.	5	0.28% Ti
25103	Basalt - greyish green, with moderate deformation. Pyroxene 35%, epidotized plagioclase 45%, epidote 25%, mineralization 5%. Linear concentrations of pyroxene and others of epidote. Pyrite is disseminated throughout sample but ranges from specks to 2 mm concentrations of specks.	5	0.24% Ti
25104	Basalt/tuff - light green. Pyroxene 35%, epidote 25%, plagioclase 37%, pyrite <3%; foliated. Pyroxene (clasts?) is elongated. Minerals look stretched. Pyrite found mainly in hairline fractures crosscutting foliation.	2	342 Ni, 775 Cr 20 ppb Pt
25105	Basalt/tuff - light/dark green laminations, fine-grained, highly foliated. Percentages of minerals unsure: 60% dark bands, 40% light (epidote-rich) bands. Highly weathered gossanous quartz veins up to 8 mm run parallel to laminations. No visible sulphides.	5	
25106	Basalt - light/dark green laminations, fine-grained, strong foliation. Pyroxene 45%, epidote 40%, plagioclase 15%. Similar looking to sample 25105 but laminations are not as well developed. Weathered, gossanous quartz veins (<1-2 mm wide) run parallel and crosscut laminations. No sulphides seen.	5	74 Ni

Sample No.	Description	Au (ppb)	Other (ppm)
25107	Basalt/tuff - pale green, fine-grained, silicified, epidotized. Pyroxene 30%, plagioclase 40%, epidote 47%, pyrite cubes to 1.5 mm (3%). Epidote occurs in veins <1 mm thick to large areas altering to epidote. Moderate foliation, with abundant fractures. Quartz filled fractures locally gossanous.	5	
25108	Basalt - 80% fine-grained, greenish matrix; 10% plagioclase; 8% pyroxene phenocrysts up to 1 mm; extensive epidotization including epidote stringers to 1 mm; calcite stringers to 1.5 mm locally; contains 2% disseminated pyrite with concentrations to 1 mm.	<2	113 Ni, 227 Cr, 30 ppb Pt
25109	Basalt - light green, siliceous, vesicular, fine-grained, but altered so crystals are hard to define; 60% mafic minerals (pyroxene + epidote), 40% felsic mineral (plagioclase). Vesicles throughout rock <1-2 mm diameter. Some are vein-like, 1.5 cm long x 1 mm wide. 10% of rock is vesicles. Epidote found along edges of vesicles. No pyrite or other mineralization, gossan on surface.	5	

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.
#2406-555 W.HASTINGS ST. (BOX 12093)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 87821.A
INVOICE#: 80251
DATE ENTERED: 87-11-30
FILE NAME: MPH87821.A
PAGE # : 1

PRE FIX	SAMPLE NAME	oz/t Au
A	18285	0.473
A	18286	0.013

CERTIFIED BY : J. Rossbach

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: ASSAY

CERTIFICATE#: 87864.A
INVOICE#: 80305
DATE ENTERED: 87-12-17
FILE NAME: MPH87864.A
PAGE # : 1

PRE FIX	SAMPLE NAME	oz/t Au
A	17571	0.060

CERTIFIED BY : V. Rossbach

RECEIVED DEC 2 1 1987

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 BROOKSBANK AVE., NORTH VANCOUVER,
BRITISH COLUMBIA, CANADA V7J-2C1
PHONE (604) 984-0221

To: ROSSBACHER LABORATORY LIMITED
2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3N1
Project : V270
Comments:

Page No. : 1
Tot. Pages: 1
Date : 21-DEC-87
Invoice # : I-8727825
P.O. # : NONE

CERTIFICATE OF ANALYSIS A8727825

SAMPLE DESCRIPTION	PREP CODE		Au ppb AFS	Pd ppb AFS	Pt ppb AFS
17551	214	--	56	6	5
17558	214	--	8	< 2	< 5
17560	214	--	16	< 2	5
17561	214	--	2	8	10
18283	214	--	62	10	10
18285	214	--	>10000	6	5
18287	214	--	18	2	5
18288	214	--	2	2	10
18295	214	--	10	4	10
18298	214	--	8	4	< 5
18300	214	--	22	< 2	< 5
18433	214	--	380	10	5
18436	214	--	< 2	< 2	35
18440	214	--	70	10	20
18444	214	--	6	< 2	5
18445	214	--	6	< 2	20
18449	214	--	14	2	10
25104	214	--	2	6	20
25108	214	--	< 2	6	30

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CERTIFICATION : BCS

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 37821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPH37821
PAGE # : 0

PRE FIX	SAMPLE NAME	PPB Au
A	18281	5
A	18282	5
A	18283	30
A	18284	5
A	18285	13000
A	18286	400
A	18287	5
A	18288	5
A	18289	5
A	18290	5
A	18291	5
A	18292	5
A	18294	5
A	18295	5
A	18296	5
A	18297	5
A	18441	10
A	18442	5
A	18443	5
A	18444	5
A	18445	5
A	18446	5
A	18447	5
A	18448	5
A	18449	5
A	18450	5
A	18451	5
A	18452	5
A	18453	5
A	18454	5

CERTIFIED BY : J. Rossbach

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PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87812
INVOICE#: 90231
DATE ENTERED: 87-11-23
FILE NAME: MPH87812
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
A	18433	340
A	18434	5
A	18435	5
A	18436	5
A	18437	5
A	18438	5
A	18439	5
A	18440	30

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VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87864
INVOICE#: 80298
DATE ENTERED: 87-12-14
FILE NAME: MPH87864
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
A	17566	5
A	17567	170
A	17568	5
A	17569	5
A	17570	5
A	17571	1740
A	17572	5
A	17573	5

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PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87829
INVOICE#: 80249
DATE ENTERED: 87-11-27
FILE NAME: MPH87829
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
A	17551	30
A	17552	5
A	17553	30
A	17554	5
A	17555	5
A	17556	5
A	17557	5
A	17558	5
A	17559	5
A	17560	5
A	17561	5
A	17562	5
A	17563	5
A	17564	5
A	17565	5
A	18293	5
A	18298	5
A	18299	5
A	18300	5
A	25101	5
A	25102	5
A	25103	5
A	25104	5
A	25105	5
A	25106	5
A	25107	5
A	25108	5
A	25109	5

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VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPH87821
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
S	L4N 025W	5
S	050W	5
S	075W	5
S	100W	5
S	125W	5
S	150W	5
S	175W	5
S	200W	5
S	225W	5
S	L4N 250W	5
S	275W	5
S	300W	5
S	325W	5
S	350W	5
S	375W	5
S	400W	5
S	425W	5
S	450W	5
S	475W	5
S	L4N 500W	5
S	525W	5
S	550W	5
S	575W	5
S	600W	MISSING
S	625W	5
S	650W	5
S	675W	5
S	700W	5
S	725W	5
S	L4N 750W	5
S	775W	5
S	800W	5
S	825W	5
S	850W	5
S	875W	110
S	900W	40
S	925W	5
S	950W	5
S	975W	5
S	L4N 1000W	20

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2225 G. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 5910

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TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPHS7821
PAGE # : 2

PRE FIX	SAMPLE NAME	PPB Au
S	L4N 1000WA	40
S	1000WB	70
S	1000WC	5
S	1000WD	380
S	1025W	30
S	1050W	60
S	1075W	10
S	1100W	5
S	L4N 1125W	5
S	L2N 025W	5
S	050W	5
S	075W	5
S	100W	5
S	125W	5
S	150W	5
S	175W	5
S	200W	5
S	225W	5
S	250W	5
S	L2N 275W	5
S	300W	5
S	325W	20
S	350W	5
S	375W	5
S	400W	5
S	425W	5
S	450W	5
S	475W	110
S	500W	5
S	L2N 525W	5
S	550W	5
S	575W	5
S	600W	5
S	625W	5
S	650W	5
S	675W	5
S	700W	5
S	725W	5
S	750W	5
S	L2N 775W	5

CERTIFIED BY : J. Rossbacher

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TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 97021
INVOICE#: 80241
DATE ENTERED: 97-11-25
FILE NAME: MPH97021
PAGE # : 3

PRE FIX	SAMPLE NAME	PPB Au
S	L2N 800W	5
S	825W	5
S	850W	20
S	875W	30
S	900W	10
S	925W	5
S	950W	5
S	975W	5
S	1000W	5
S	L2N 1025W	5
S	1050W	5
S	1075W	5
S	L2N 1100W	5
S	L0 600W	5
S	625W	5
S	650W	5
S	675W	5
S	700W	5
S	725W	5
S	L0 750W	5
S	775W	10
S	800W	5
S	825W	10
S	850W	120
S	875W	20
S	882W	20
S	975W	40
S	1000W	30
S	1025W	30
S	L0 1050W	5
S	1075W	40
S	L0 1125W	30
S	L1S 000	5
S	025W	5
S	050W	5
S	075W	10
S	100W	5
S	125W	5
S	150W	5
S	L1S 175W	5

CERTIFIED BY : _____

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TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

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VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPH87821
PAGE # : 4

PRE FIX	SAMPLE NAME		PPB Au
S	L1S	200W	5
S		225W	5
S		250W	60
S		275W	5
S		300W	5
S		325W	5
S		350W	5
S		375W	5
S		400W	5
S	L1S	425W	5
S		450W	5
S		475W	5
S		500W	5
S		525W	5
S		550W	5
S		575W	5
S		600W	5
S		625W	5
S		650W	5
S	L1S	675W	5
S		700W	5
S		725W	5
S		775W	5
S		800W	5
S		825W	5
S		850W	5
S		875W	5
S		900W	5
S		900WA	5
S		900WB	10
S		900WC	5
S	L1S	900WD	80
S	L2S	675W	5
S		700W	5
S		725W	5
S		750W	5
S		775W	5
S		800W	5
S		825W	5
S	L2S	850W	5

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.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 30241
DATE ENTERED: 87-11-25
FILE NAME: MPH87821
PAGE # : 5

PRE FIX	SAMPLE NAME		PPB Au
S	L2S	875W	5
S		900W	140
S		925W	10
S		950W	5
S		975W	5
S		1000W	5
S		1025W	5
S		1050W	5
S		1075W	5
S	L2S	1100W	5
S		1125W	5
S		1175W	5
S	L2S	1200W	5
S	L3S	000	5
S		025W	5
S		050W	5
S		075W	5
S		100W	5
S		125W	5
S	L3S	150W	5
S		175W	5
S		200W	5
S		225W	5
S		250W	5
S		275W	5
S		300W	5
S		325W	5
S		350W	5
S		375W	5
S	L3S	400W	5
S		425W	5
S		450W	5
S		475W	5
S		500W	5
S		525W	5
S		550W	5
S		575W	5
S		600W	5
S		625W	5
S	L3S	650W	1260

CERTIFIED BY : _____

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPH87821
PAGE # : 6

PRE FIX	SAMPLE NAME		PPB Au
S	L3S	675W	5
S		700W	5
S		725W	5
S		750W	5
S		775W	30
S		800W	10
S		825W	5
S		850W	5
S		875W	5
S	L3S	900W	20
S		925W	30
S		950W	5
S		1025W	5
S		1050W	5
S		1075W	50
S		1100W	5
S		1125W	5
S		1150W	5
S		1175W	5
S		1200W	5
S		1225W	5
S	L3S	1250W	5
S	L4S	875W	50
S		900W	200
S		925W	5
S		950W	5
S		975W	5
S		1000W	5
S		1025W	5
S	L4S	1050W	5
S		1075W	5
S		1100W	MISSING
S		1125W	5
S		1150W	5
S		1175W	10
S		1200W	5
S	L4S	1250W	5
S	L6S	925W	5
S		950W	5
S	L6S	975W	5

CERTIFIED BY : F. Rossbach

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87821
INVOICE#: 80241
DATE ENTERED: 87-11-25
FILE NAME: MPH87821
PAGE # : 7

PRE FIX	SAMPLE NAME	PPB Au
S	L6S 1000W	5
S	1025W	5
S	1050W	5
S	1075W	5
S	1100W	5
S	1125W	5
S	1150W	5
S	1175W	5
S	1200W	5
S	L6S 1225W	5
S	1250W	5
S	1275W	5
S	L6S 1300W	5
S	L4S 850W	5

CERTIFIED BY : P. Rossbacher

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87849.A
INVOICE#: 80275
DATE ENTERED: 87-12-08
FILE NAME: MPH87849.A
PAGE # : 1

PRE FIX	SAMPLE NAME	PPB Au
S	L1S 750W	5

CERTIFIED BY : J. Rossbach

RECEIVED DEC 9 1987

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87855
INVOICE#: 80288
DATE ENTERED: 87-12-10
FILE NAME: MPH87855
PAGE # : 1

PRE FIX	SAMPLE NAME	% SiO2	% Al2O3	% MgO	% Fe2O3	% CaO	% K2O	% Na2O	% TiO2	% MnO
A	17558	68.0	13.8	0.7	3.7	0.4	3.6	2.2	0.6	0.1
A	17560	53.5	18.4	2.6	9.8	2.0	2.0	4.0	0.9	0.1
A	18300	49.5	17.7	5.4	9.8	7.7	0.9	2.6	0.9	0.1
A	18436	64.5	20.6	0.7	0.9	1.0	3.9	5.3	0.6	0.1
A	18444	54.0	18.1	5.5	2.5	10.4	0.1	3.6	0.7	0.1
A	18445	51.5	17.9	5.4	8.0	7.6	0.8	3.8	0.6	0.1
A	18449	53.0	18.4	4.7	8.9	3.0	3.4	3.1	0.8	0.1

CERTIFIED BY : J. Rossbacher

RECEIVED DEC 1 1 1987

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W.HASTINGS ST. (BOX 12092)
VANCOUVER B.C.

PROJECT: V270
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 87855
INVOICE#: 80288
DATE ENTERED: 87-12-10
FILE NAME: MPH87855
PAGE # : 1

PRE FIX	SAMPLE NAME	% LOI	% TOTAL
A	17558	2.0	95.1
A	17560	3.6	94.8
A	18300	3.1	97.7
A	18436	1.9	99.5
A	18444	3.9	98.9
A	18445	2.0	97.7
A	18449	3.1	98.5

CERTIFIED BY : J. D. Rossbacher

RECEIVED DEC 1 1 1987

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
18281	1	304	16	68	.4	8	20	932	5.29	3	5	ND	3	90	1	2	2	103	1.10	.150	5	13	3.14	7	.18	2	3.24	.04	.04	1
18282	3	1500	18	136	.9	19	58	796	10.01	6	5	ND	2	26	1	2	2	132	.56	.049	2	26	2.40	2	.16	2	2.90	.02	.01	1
18283	27	9596	19	129	2.7	184	294	649	18.47	19	5	ND	2	7	1	2	2	48	.10	.009	2	165	2.14	3	.07	2	2.22	.01	.02	1
18284	2	2276	6	415	1.5	30	30	543	4.29	2	5	ND	1	15	3	2	2	56	.32	.018	2	91	1.80	1	.10	2	1.92	.02	.02	1
18285	4	772	11	24	3.7	47	521	227	20.79	43	6	14	2	98	1	2	2	57	.46	.030	2	44	1.15	5	.12	2	1.69	.03	.08	1
18286	2	146	6	25	.4	8	23	399	4.80	5	5	ND	2	54	1	2	2	82	.80	.114	2	29	2.22	10	.15	2	2.55	.06	.10	1
18287	20	2193	2	64	.8	36	74	256	6.28	4	5	ND	1	32	1	2	2	25	.48	.021	2	149	.81	4	.08	2	.91	.02	.01	1
18288	4	1757	2	27	.8	73	39	228	3.65	4	6	ND	1	56	1	2	2	29	.68	.022	2	183	.84	2	.10	2	1.04	.03	.01	1
18289	1	10	3	12	.1	3	3	113	.63	2	5	ND	5	36	1	2	2	6	.35	.018	4	48	.22	23	.06	2	.49	.04	.06	1
18290	1	35	4	75	.2	38	14	783	7.57	2	5	ND	1	10	1	2	2	106	.13	.041	2	123	3.06	5	.11	2	2.77	.03	.02	1
18291	1	17	22	39	.3	20	15	454	5.82	2	5	ND	1	29	1	2	2	101	.41	.055	2	39	1.58	3	.24	2	1.63	.05	.01	1
18292	1	45	2	14	.1	17	10	373	1.32	3	5	ND	1	2	1	2	2	28	.04	.008	2	148	.53	7	.01	2	.61	.02	.03	1
18294	1	29	2	31	.1	45	12	1018	2.59	2	5	ND	1	4	1	2	2	40	.04	.020	3	182	1.11	45	.01	2	1.12	.01	.02	1
18295	1	5	5	91	.3	147	26	1198	5.29	2	5	ND	2	9	1	2	2	98	.18	.087	10	257	3.32	41	.01	2	3.44	.02	.04	1
18296	2	15	6	59	.5	72	28	1457	6.07	5	5	ND	4	14	1	2	2	67	.38	.137	18	61	1.46	81	.01	3	2.59	.03	.20	1
18297	1	1	29	19	.5	2	4	303	1.84	2	5	ND	1	176	1	2	2	15	2.41	.136	6	65	.20	4	.26	3	1.28	.02	.01	1
18441	1	631	3	10	.3	8	3	189	.73	2	5	ND	1	5	1	2	3	12	.26	.004	2	193	.30	3	.01	2	.32	.02	.02	1
18442	1	20	2	11	.1	11	3	183	1.79	2	5	ND	1	11	1	2	2	67	1.03	.006	2	124	.35	3	.03	2	.96	.02	.01	1
18443	1	2	4	29	.2	2	1	303	1.31	2	5	ND	4	1	1	2	2	3	.03	.016	24	73	.29	39	.01	2	.54	.06	.04	2
18444	1	1	2	18	.2	9	3	283	1.06	3	5	ND	1	6	1	2	2	44	2.10	.047	2	49	2.34	3	.06	4	2.83	.04	.01	1
18445	1	80	6	26	.3	14	13	354	3.08	5	5	ND	1	87	1	2	2	57	.99	.054	2	32	2.22	13	.17	2	2.40	.05	.06	1
18446	2	68	8	30	.4	7	15	518	5.75	8	5	ND	1	23	1	2	2	41	2.69	.103	2	16	2.13	10	.05	2	2.51	.04	.05	1
18447	1	50	5	31	.4	5	7	396	2.63	3	5	ND	1	31	1	2	2	49	3.99	.116	2	14	2.39	12	.07	2	2.71	.03	.07	1
18448	1	161	5	33	.5	14	50	562	5.16	6	5	ND	1	21	1	2	2	45	1.33	.131	2	10	3.08	10	.07	2	2.66	.05	.03	1
18449	1	44	7	46	.4	8	22	529	5.32	7	5	ND	2	25	1	2	2	86	.56	.123	3	7	2.40	22	.10	2	2.52	.04	.15	1
18450	1	37	10	44	.4	18	43	903	5.78	2	5	ND	1	41	1	2	2	83	.69	.048	2	56	3.20	12	.22	2	3.02	.04	.04	1
18451	1	1514	4	47	.8	21	12	561	3.04	2	5	ND	1	9	1	2	2	56	.63	.029	2	75	1.62	8	.01	2	1.75	.03	.03	1
18452	1	179	8	99	.4	26	21	976	6.33	2	5	ND	2	24	1	2	2	160	.87	.093	3	32	3.08	18	.14	2	3.50	.04	.03	1
18453	1	237	9	84	.3	42	18	785	4.82	2	5	ND	1	17	1	2	2	99	1.39	.044	3	100	2.93	10	.01	2	3.33	.04	.03	1
18454	1	73	2	10	.1	5	2	120	.80	2	5	ND	1	1	1	2	2	13	.03	.005	2	131	.33	2	.01	2	.32	.01	.01	1
STD C	18	58	40	133	7.4	68	28	1057	4.08	42	23	7	40	51	18	18	21	58	.48	.088	38	60	.87	183	.08	33	1.92	.08	.13	13

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEC. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOLUTION

DATE RECEIVED: DEC 10 1987 DATE REPORT MAILED: Dec 15/87 ASSAYER.. D. Toye .DEAN TOYE, CERTIFIED B.C. ASSAYER

ROSSBACHER LABORATORY PROJECT-CERT # 87864 File # 87-6114 V270

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
AP 17566	7	150	13	8	.3	39	34	58	4.50	15	5	ND	1	9	1	2	2	27	.15	.027	2	81	.41	4	.06	2	.40	.02	.01	1
AP 17567	1	34	13	20	.6	3	2	135	1.46	5	5	ND	1	3	1	2	2	2	.07	.033	2	75	.02	37	.01	2	.19	.02	.12	1
AP 17568	1	1	8	12	.1	1	2	94	1.98	38	5	ND	2	3	1	2	2	1	.08	.044	2	49	.12	44	.01	2	.32	.03	.11	1
AP 17569	1	1	8	16	.2	4	6	1047	2.03	23	5	ND	1	13	1	2	2	4	.43	.037	5	57	.22	46	.01	2	.41	.05	.07	1
AP 17570	1	18	7	14	.1	1	6	378	2.20	64	5	ND	2	34	1	2	2	3	.97	.039	3	32	.33	33	.01	2	.48	.04	.09	1
AP 17571	1	61	12	29	.4	16	104	456	8.98	10	5	2	1	7	1	2	2	84	.16	.051	2	80	2.92	10	.07	2	2.77	.03	.05	2
AP 17572	1	4	4	30	.1	4	5	138	1.85	4	5	ND	1	6	1	2	2	16	.32	.101	2	20	.91	12	.02	2	.78	.06	.02	1
AP 17573	1	73	4	27	.1	9	22	413	3.44	2	5	ND	1	4	1	2	2	44	.17	.047	2	42	2.01	9	.02	2	1.73	.03	.03	1
LIS 7+50W	1	44	7	97	.1	38	12	295	4.75	3	5	ND	2	21	1	2	2	98	.31	.082	5	147	1.26	15	.25	2	3.14	.03	.03	1

RECEIVED DEC 1 5 1987

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEC. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOLUTION

DATE RECEIVED: NOV 30 1987 DATE REPORT MAILED: Dec 3/87 ASSAYER. D. Toye. DEAN TOYE, CERTIFIED B.C. ASSAYER

ROSSBACHER LABORATORY PROJECT-CERT #87829 File # 87-5956 V.270

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
AP 17551	1	1654	10	42	.5	28	113	407	7.40	6	5	ND	1	96	1	2	2	98	.89	.117	3	74	2.70	5	.14	2	2.79	.06	.02	1
AP 17552	1	51	6	45	.1	15	27	846	7.08	2	5	ND	1	33	1	2	2	80	1.02	.055	2	30	3.05	25	.03	2	3.75	.04	.16	1
AP 17553	4	232	9	37	.5	55	34	325	7.62	20	5	ND	1	111	1	2	2	55	1.21	.031	2	173	1.58	19	.15	2	1.84	.04	.01	1
AP 17554	1	14	11	127	.2	2	9	1032	7.14	2	5	ND	2	31	1	2	2	23	1.26	.280	8	11	2.33	9	.18	2	2.77	.06	.02	1
AP 17555	2	56	2	39	.1	51	20	397	2.91	2	5	ND	1	37	1	2	2	64	.99	.074	4	193	1.65	6	.19	2	1.53	.05	.01	1
AP 17556	1	43	5	9	.1	8	3	233	5.75	2	5	ND	1	10	1	2	3	14	1.61	.004	2	89	.28	3	.02	2	.43	.02	.01	1
AP 17557	1	152	8	25	.1	12	6	719	6.64	4	5	ND	1	6	1	2	2	48	.18	.007	2	158	.78	31	.01	2	.81	.01	.01	2
AP 17558	1	11	2	10	.1	2	3	452	1.77	51	5	ND	4	4	1	2	4	3	.13	.039	13	48	.10	104	.01	2	.41	.02	.24	1
AP 17559	2	58	11	71	.2	42	28	354	6.95	11	5	ND	1	21	1	2	2	38	1.18	.096	2	19	1.16	22	.01	2	2.08	.06	.10	1
AP 17560	1	67	7	50	.1	29	28	734	6.25	6	5	ND	1	14	1	2	2	65	.99	.110	2	9	1.41	26	.03	2	2.37	.05	.07	1
AP 17561	1	67	5	54	.1	137	23	590	3.81	5	5	ND	1	7	1	2	2	74	.59	.063	4	293	3.15	13	.16	2	2.60	.05	.01	1
AP 17562	1	26	6	24	.1	15	4	203	5.89	2	5	ND	1	6	1	2	2	62	.11	.010	2	63	.85	5	.04	2	.85	.01	.01	1
AP 17563	1	1	2	47	.1	5	6	541	2.26	2	5	ND	3	6	1	2	2	6	.10	.043	20	16	.39	63	.01	2	.80	.03	.14	1
AP 17564	1	31	3	59	.1	5	11	642	4.31	7	6	ND	1	47	1	2	2	57	.73	.053	3	20	1.55	66	.21	2	2.39	.07	.06	1
AP 17565	2	282	11	153	.3	57	33	1081	9.04	13	5	ND	1	24	1	2	2	109	.30	.031	2	186	3.48	24	.24	2	3.42	.07	.01	1
AP 18293	1	45	8	117	.1	11	21	885	6.44	4	5	ND	2	31	1	2	2	72	.78	.137	5	22	2.50	6	.24	2	2.75	.04	.01	1
AP 18298	3	239	7	21	.3	132	37	201	5.85	10	5	ND	2	62	1	2	2	28	.67	.023	2	114	.81	6	.12	2	1.06	.03	.01	1
AP 18299	2	112	6	67	.1	24	21	1140	5.67	2	5	ND	1	6	1	2	2	50	.54	.053	3	18	1.51	51	.01	2	2.50	.04	.08	1
AP 18300	1	292	6	32	.2	13	53	400	4.31	8	5	ND	1	45	1	2	2	52	.55	.049	2	23	3.09	7	.14	2	2.64	.04	.02	1
AP 25101	1	16	9	51	.1	6	13	769	4.51	3	5	ND	2	20	1	2	2	46	.38	.095	4	42	1.44	22	.12	2	1.87	.04	.11	1
AP 25102	1	27	6	100	.1	10	18	1004	6.38	8	5	ND	1	43	1	2	2	71	1.00	.185	5	23	2.38	22	.28	2	2.84	.06	.01	1
AP 25103	1	73	5	98	.1	4	17	972	5.96	4	5	ND	1	47	1	2	2	50	1.21	.188	4	12	2.08	15	.24	2	2.63	.05	.02	1
AP 25104	1	84	4	50	.1	342	33	745	4.31	2	5	ND	1	6	1	2	2	84	1.17	.029	2	775	4.78	6	.16	2	3.73	.03	.01	1
AP 25105	1	64	4	86	.1	29	27	1024	6.89	2	5	ND	2	5	1	2	2	123	.15	.056	6	33	3.28	29	.01	2	4.21	.03	.01	1
AP 25106	1	52	7	34	.1	74	17	834	3.26	2	5	ND	1	1	1	2	2	37	.03	.018	2	168	1.49	16	.01	2	1.54	.01	.04	1
AP 25107	1	78	4	49	.1	59	18	486	3.40	2	5	ND	1	37	1	2	2	59	.94	.120	2	182	2.44	8	.18	2	2.20	.04	.01	1
AP 25108	1	74	2	52	.1	113	20	465	3.16	9	5	ND	1	8	1	2	2	55	.49	.057	3	227	2.54	8	.13	2	2.03	.05	.01	1
AP 25109	1	72	7	72	.1	57	21	738	3.65	2	5	ND	1	31	1	2	2	63	.87	.092	4	158	3.80	13	.16	2	2.99	.04	.01	1
STD C	18	58	38	134	7.2	67	27	1043	3.95	42	25	7	38	50	18	16	20	57	.49	.087	37	58	.87	180	.08	31	1.84	.08	.13	13

RECEIVED DEC 2 1987

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEC. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOLUTION

DATE RECEIVED: NOV 19 1987 DATE REPORT MAILED: Nov 24/ ASSAYER. A. Dean TOYE, CERTIFIED B.C. ASSAYER

ROSSBACHER LABORATORY PROJECT- CERT #87812 File # 87-5751 V270

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
AP 18433	2	82	41	268	.3	20	160	1420	17.74	42	5	ND	2	27	3	2	2	134	.29	.094	21	13	3.91	5	.08	3	4.38	.01	.04	1
AP 18434	1	146	20	95	.1	10	41	713	6.41	6	5	ND	1	43	1	2	2	61	1.60	.124	3	18	2.30	3	.04	2	2.09	.02	.02	1
AP 18435	1	46	4	69	.1	23	31	1050	3.93	2	5	ND	1	39	1	2	2	109	.52	.008	2	28	4.02	13	.13	9	3.67	.01	.03	1
AP 18436	1	5	4	7	.1	1	1	321	.09	2	5	ND	1	6	1	2	2	8	.18	.006	2	7	.03	33	.03	2	.46	.03	.20	2
AP 18437	1	20	2	38	.1	5	3	366	1.05	4	5	ND	1	9	1	2	2	62	1.54	.154	2	18	2.71	5	.04	2	2.56	.03	.02	2
AP 18438	1	30	2	24	.1	4	12	341	2.70	2	5	ND	2	27	1	2	2	29	.50	.131	4	12	2.57	24	.04	2	2.24	.02	.10	1
AP 18439	1	86	5	24	.1	7	15	317	2.83	2	5	ND	1	37	1	2	2	28	.63	.129	3	21	2.30	5	.05	2	2.00	.03	.05	1
AP 18440	5	68	13	31	.1	17	253	370	25.10	11	5	ND	1	7	1	2	2	45	.08	.065	2	13	.74	11	.07	2	1.21	.01	.12	1
STD C	19	59	39	125	7.4	69	29	1050	3.99	39	14	7	37	51	18	17	19	57	.45	.091	39	63	.85	169	.07	34	1.93	.06	.14	13

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEC. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOLUTION

DATE RECEIVED: NOV 25 1987 DATE REPORT MAILED: Nov 26/87 ASSAYER. D. Toye ..DEAN TOYE, CERTIFIED B.C. ASSAYER

ROSSBACHER LABORATORY PROJECT-CERT # 87821 File # 87-5888 Page 1 V270

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L4N 0+25W	1	98	2	45	.5	22	9	222	8.71	2	6	ND	3	16	1	2	2	172	.21	.106	3	126	.75	11	.24	2	4.26	.02	.03	1
S L4N 0+50W	4	319	2	58	.4	50	17	448	5.13	16	5	ND	2	15	1	2	2	103	.24	.091	5	149	1.43	16	.14	4	6.71	.03	.02	1
S L4N 0+75W	1	29	6	21	.2	9	5	106	3.78	2	5	ND	2	31	1	2	2	129	.35	.041	5	57	.19	21	.16	2	1.50	.02	.02	1
S L4N 1+00W	1	33	2	50	.3	39	12	291	6.87	3	5	ND	2	45	1	2	2	166	.45	.073	5	161	1.14	23	.33	2	3.52	.04	.03	1
S L4N 1+25W	1	8	2	27	.2	5	5	240	5.32	2	5	ND	3	89	1	2	2	122	.64	.037	9	22	.30	15	.60	2	1.97	.03	.01	1
S L4N 1+50W	1	31	2	33	.4	41	10	210	4.69	6	5	ND	2	29	1	2	2	141	.28	.087	5	181	1.29	19	.29	2	2.65	.03	.03	1
S L4N 1+75W	1	117	2	55	.3	61	17	370	5.06	8	6	ND	2	37	1	2	2	126	.37	.084	5	173	1.81	25	.22	2	3.99	.03	.03	1
S L4N 2+00W	1	21	4	25	.2	23	8	246	3.90	3	5	ND	2	39	1	2	2	117	.41	.052	5	109	.49	31	.25	2	1.71	.03	.01	1
S L4N 2+25W	1	44	6	35	.1	25	18	484	3.12	4	5	ND	1	35	1	2	2	87	.39	.046	5	68	.65	27	.22	2	1.98	.03	.02	1
S L4N 2+50W	1	55	2	39	.4	29	12	225	4.81	4	5	ND	2	37	1	2	2	122	.40	.058	4	119	.83	15	.31	2	3.38	.03	.01	1
S L4N 2+75W	3	171	2	48	.4	46	29	379	3.83	13	5	ND	3	28	1	2	2	95	.33	.075	9	122	.68	23	.21	3	4.75	.03	.01	2
S L4N 3+00W	1	56	2	37	.3	34	13	313	4.05	7	5	ND	2	31	1	2	2	109	.44	.067	4	114	1.06	21	.22	2	2.76	.03	.02	1
S L4N 3+25W	1	114	2	46	.3	46	17	486	3.50	5	5	ND	2	40	1	2	2	90	.66	.080	7	116	1.53	15	.19	3	2.81	.04	.02	1
S L4N 3+50W	1	29	3	34	.1	19	8	258	4.90	2	5	ND	2	31	1	2	2	163	.44	.044	4	89	.53	29	.30	2	2.33	.03	.01	1
S L4N 3+75W	2	141	4	60	.4	68	21	931	4.50	9	5	ND	4	37	1	2	2	107	.62	.042	7	163	1.27	56	.23	3	3.87	.04	.04	1
S L4N 4+00W	3	90	3	48	.1	31	16	473	5.28	11	5	ND	2	20	1	2	2	149	.35	.030	4	125	.84	44	.10	2	2.98	.03	.03	2
S L4N 4+25W	2	24	7	24	.1	20	8	158	4.63	6	5	ND	2	19	1	2	2	157	.28	.021	4	89	.54	20	.22	2	1.73	.02	.02	1
S L4N 4+50W	1	16	5	28	.1	18	8	145	4.80	3	5	ND	1	16	1	2	2	165	.20	.031	3	102	.50	13	.25	2	1.63	.02	.01	1
S L4N 4+75W	1	34	4	50	.2	46	13	244	5.30	2	5	ND	1	13	1	2	2	128	.14	.041	4	160	1.23	32	.18	2	3.06	.02	.01	1
S L4N 5+00W	1	44	2	51	.3	58	13	288	6.41	6	5	ND	2	16	1	2	2	138	.16	.059	4	208	.99	22	.15	2	3.37	.02	.01	1
S L4N 5+25W	1	35	10	31	.1	18	6	157	6.22	2	5	ND	1	11	1	2	2	156	.11	.032	4	47	.23	15	.04	2	1.02	.03	.01	1
S L4N 5+50W	1	8	4	23	.1	30	7	151	3.92	2	5	ND	1	25	1	2	2	146	.31	.019	5	129	.68	8	.15	2	2.17	.03	.01	1
S L4N 5+75W	1	6	7	16	.2	7	3	82	2.21	2	5	ND	2	29	1	2	2	73	.30	.017	6	56	.16	8	.12	2	1.62	.02	.01	1
S L4N 6+25W	1	49	8	75	.1	52	41	3034	4.87	29	5	ND	1	33	1	2	2	131	.54	.099	5	183	.84	55	.19	6	2.49	.03	.01	1
S L4N 6+50W	1	35	2	35	.3	32	11	252	5.36	23	5	ND	3	23	1	2	2	136	.25	.043	6	159	.82	22	.27	2	2.77	.03	.02	1
S L4N 6+75W	1	97	3	56	.2	54	16	1715	4.01	10	5	ND	2	30	1	2	2	106	.43	.080	11	184	.86	35	.19	2	3.60	.03	.01	1
S L4N 7+00W	1	45	6	35	.3	43	12	443	3.81	7	5	ND	2	21	1	2	2	99	.31	.035	6	149	1.13	27	.19	2	2.61	.03	.03	1
S L4N 7+25W	1	76	7	46	.1	75	19	681	3.89	5	5	ND	2	24	1	2	2	99	.42	.057	7	188	1.76	46	.17	2	3.05	.03	.03	1
S L4N 7+50W	1	85	4	69	.3	74	20	961	4.56	9	5	ND	3	24	1	2	2	96	.29	.102	9	181	1.81	62	.13	3	4.16	.03	.08	1
S L4N 7+75W	1	82	2	43	.6	40	12	444	4.69	9	5	ND	3	22	1	2	2	112	.22	.048	8	129	1.19	53	.16	2	3.59	.03	.05	1
S L4N 8+00W	1	63	10	49	.3	53	15	431	5.79	8	5	ND	3	13	1	2	2	152	.16	.056	9	207	1.06	39	.18	2	3.70	.02	.04	1
S L4N 8+25W	2	67	5	83	.3	48	23	3021	6.17	17	5	ND	3	14	1	2	2	136	.55	.136	6	206	1.02	64	.21	3	4.41	.03	.03	1
S L4N 8+50W	1	67	5	53	.2	54	15	877	3.38	4	5	ND	2	34	1	2	2	88	.91	.081	10	134	1.40	61	.17	5	2.55	.04	.04	1
S L4N 8+75W	1	76	7	77	.1	61	19	492	5.67	23	5	ND	1	20	1	2	2	125	.52	.040	7	140	1.75	52	.19	2	3.33	.03	.02	1
S L4N 9+00W	2	99	11	97	.2	64	23	1794	5.06	23	5	ND	1	20	1	2	2	118	.65	.055	8	125	1.83	45	.18	2	3.09	.04	.02	1
S L4N 9+25W	1	43	9	57	.1	51	17	653	5.20	17	5	ND	1	19	1	2	2	132	.29	.028	5	130	1.48	18	.15	2	2.55	.03	.01	1
S L4N 9+50W	1	49	10	51	.1	44	14	508	5.41	20	5	ND	2	16	1	2	2	139	.23	.045	5	124	1.26	14	.15	2	2.53	.03	.02	1
S L4N 9+75W	1	62	10	64	.2	49	19	975	5.51	14	5	ND	2	14	1	2	2	126	.25	.052	5	123	1.45	25	.14	2	2.87	.03	.02	1
STD C	19	60	40	134	7.4	72	30	1077	4.11	42	22	8	41	48	19	16	22	62	.48	.094	41	64	.87	184	.09	33	1.93	.09	.14	11

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L4N 10+00W	1	133	9	77	.4	59	25	1171	5.17	18	5	ND	3	16	1	2	2	107	.43	.062	9	122	1.73	41	.14	3	3.84	.03	.04	1
S L4N 10+00WA	1	92	12	78	.2	57	20	1072	4.08	19	5	ND	2	22	1	2	2	86	.76	.057	7	98	1.73	49	.10	4	2.49	.03	.05	1
S L4N 10+00WB	1	113	17	101	.2	59	22	1179	4.46	22	5	ND	2	24	1	2	2	96	.72	.051	7	99	1.79	57	.13	4	2.66	.03	.03	2
S L4N 10+00WC	1	100	15	86	.3	63	22	1107	4.47	12	6	ND	2	24	1	2	2	101	.71	.051	6	107	1.97	38	.15	4	2.70	.03	.05	1
S L4N 10+00WD	1	94	13	84	.3	68	23	890	4.98	22	5	ND	1	35	1	2	2	111	.94	.053	7	117	2.12	54	.14	6	2.89	.04	.05	1
S L4N 10+25W	1	102	13	96	.2	63	21	1085	4.57	20	5	ND	1	28	1	2	2	99	.88	.054	7	106	1.90	49	.14	5	2.83	.04	.05	1
S L4N 10+50W	1	97	20	102	.3	62	22	1125	4.61	23	5	ND	1	26	1	2	2	101	.78	.049	7	104	1.92	45	.16	4	2.77	.04	.03	2
S L4N 10+75W	1	109	9	91	.1	66	24	1130	5.00	20	5	ND	1	22	1	2	2	110	.61	.052	8	116	2.01	45	.15	3	3.13	.04	.02	1
S L4N 11+00W	1	117	13	87	.3	60	20	1134	4.23	13	5	ND	1	18	1	2	2	88	.65	.057	6	95	1.81	49	.13	4	2.45	.03	.04	1
S L4N 11+25W	1	84	12	93	.2	25	22	3126	5.81	16	5	ND	1	21	1	2	2	128	.73	.088	5	57	1.29	58	.16	3	3.58	.03	.02	1
S L2N 0+25W	1	37	8	38	.1	20	11	914	4.45	2	5	ND	2	37	1	2	2	125	.44	.073	3	62	.80	18	.10	2	2.06	.03	.02	1
S L2N 0+50W	1	80	9	51	.1	25	12	717	6.23	6	5	ND	1	32	1	2	2	131	.38	.121	4	98	.81	21	.15	2	3.32	.03	.02	2
S L2N 0+75W	1	59	7	43	.1	21	11	492	5.71	6	5	ND	1	36	1	2	2	161	.39	.053	5	88	.79	15	.20	2	2.97	.03	.01	1
S L2N 1+00W	1	60	10	59	.2	35	13	451	6.83	10	7	ND	4	36	1	2	2	132	.34	.103	7	150	1.33	31	.15	2	5.08	.03	.04	1
S L2N 1+25W	1	27	5	54	.1	16	10	650	5.35	3	5	ND	4	83	1	2	2	115	.42	.136	10	59	.82	60	.15	2	3.97	.03	.04	1
S L2N 1+50W	1	37	11	52	.1	23	11	626	5.76	5	5	ND	3	72	1	2	2	132	.51	.099	8	73	.92	36	.28	2	3.50	.03	.02	1
S L2N 1+75W	2	47	9	73	.4	42	25	708	6.67	10	5	ND	6	32	1	2	2	111	.30	.199	11	182	.99	50	.25	2	7.74	.03	.03	1
S L2N 2+00W	1	38	18	63	.2	23	20	2805	3.36	4	5	ND	2	61	1	2	2	78	1.35	.098	8	76	.54	196	.16	3	1.77	.03	.04	1
S L2N 2+25W	1	103	6	57	.1	60	21	940	3.51	3	5	ND	3	42	1	2	2	78	.75	.062	9	156	1.43	51	.16	2	3.98	.03	.03	1
S L2N 2+50W	1	52	6	49	.1	44	17	680	5.22	7	5	ND	2	50	1	2	2	133	.58	.044	6	144	1.19	76	.25	2	2.84	.03	.02	1
S L2N 2+75W	2	88	6	45	.3	43	16	513	5.21	10	5	ND	3	29	1	2	2	131	.42	.056	6	172	1.16	52	.22	2	3.69	.03	.02	2
S L2N 3+00W	1	101	4	55	.2	58	22	701	3.66	6	5	ND	2	48	1	2	2	85	.75	.069	5	131	1.74	32	.18	3	2.71	.03	.03	1
S L2N 3+25W	2	67	8	43	.3	45	15	332	5.45	8	5	ND	2	37	1	2	2	129	.47	.039	6	189	1.19	31	.28	2	3.66	.03	.02	1
S L2N 3+50W	2	29	12	39	.2	19	8	160	4.63	12	5	ND	2	43	1	2	2	149	.59	.023	4	108	.41	33	.26	2	2.44	.03	.03	1
S L2N 3+75W	1	21	9	28	.2	17	6	138	3.40	6	5	ND	1	31	1	2	2	105	.48	.042	2	77	.44	39	.22	2	1.55	.03	.02	1
S L2N 4+00W	2	32	11	34	.1	35	10	341	6.20	5	5	ND	2	24	1	2	2	169	.31	.034	5	144	.70	27	.19	2	2.38	.03	.02	1
S L2N 4+25W	1	57	7	43	.2	46	15	340	4.53	5	5	ND	2	38	1	2	2	100	.45	.031	5	145	1.37	17	.29	2	3.72	.03	.01	1
S L2N 4+50W	1	94	6	52	.2	54	21	1163	3.85	6	5	ND	2	53	1	2	2	95	.82	.056	6	125	1.64	33	.21	3	2.97	.03	.02	1
S L2N 4+75W	2	37	12	53	.1	26	14	522	5.35	6	5	ND	2	30	1	2	2	146	.41	.047	5	111	.60	45	.23	2	2.25	.03	.02	1
S L2N 5+00W	1	60	4	54	.3	41	14	264	5.15	7	5	ND	3	32	1	2	2	115	.37	.040	6	142	1.01	27	.26	2	3.88	.03	.01	1
S L2N 5+25W	1	74	8	36	.7	35	11	247	4.12	11	5	ND	5	14	1	2	2	79	.23	.061	6	187	.78	17	.20	3	7.09	.02	.01	1
S L2N 5+50W	1	29	7	44	.4	19	7	159	5.49	9	7	ND	3	13	1	2	2	113	.13	.071	5	146	.40	22	.21	2	5.58	.02	.01	1
S L2N 5+75W	1	44	6	33	.3	34	11	251	3.77	5	5	ND	2	27	1	2	2	90	.37	.041	6	115	1.04	16	.20	2	2.81	.03	.01	1
S L2N 6+00W	1	17	5	24	.4	11	5	123	5.32	7	5	ND	2	16	1	2	2	156	.16	.039	5	121	.24	12	.26	2	2.51	.02	.01	1
S L2N 6+25W	1	53	3	49	.2	50	13	352	4.20	9	5	ND	2	26	1	2	2	87	.32	.065	6	193	1.39	18	.21	2	4.47	.03	.01	2
S L2N 6+50W	1	24	7	35	.1	29	9	327	4.31	4	5	ND	1	25	1	2	2	112	.28	.108	6	133	.74	17	.21	2	2.67	.02	.01	1
S L2N 6+75W	1	49	2	39	.2	40	13	407	3.57	3	5	ND	2	29	1	2	2	86	.40	.086	7	130	1.19	15	.19	2	2.70	.03	.02	2
S L2N 7+00W	1	37	5	36	.3	37	13	529	4.88	7	5	ND	2	25	1	2	2	124	.29	.036	6	174	1.09	18	.25	2	2.67	.03	.01	1
S L2N 7+25W	1	57	6	45	.2	43	14	887	3.68	6	5	ND	2	27	1	2	2	91	.45	.064	6	135	1.18	27	.18	2	2.51	.03	.02	1
STD C	18	59	37	134	7.5	68	28	1045	4.10	41	25	7	39	50	18	17	20	57	.48	.088	38	58	.87	180	.08	31	1.89	.08	.14	11

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L2N 7+50W	1	46	8	47	.1	53	18	1695	3.23	2	5	ND	1	21	1	2	2	83	.36	.059	9	141	1.27	49	.13	3	2.68	.03	.03	2
S L2N 7+75W	1	58	10	48	.2	33	12	782	5.97	3	5	ND	2	18	1	2	2	144	.36	.089	4	103	1.01	27	.17	2	2.28	.03	.04	3
S L2N 8+00W	1	54	10	43	.1	34	12	277	4.94	8	5	ND	1	14	1	2	2	143	.20	.016	6	95	1.02	34	.18	2	2.60	.03	.02	2
S L2N 8+25W	1	73	7	55	.2	60	18	908	3.81	3	5	ND	2	34	1	2	2	89	.74	.066	8	138	1.82	43	.17	3	2.58	.03	.03	1
S L2N 8+50W	1	85	9	65	.2	52	19	594	5.30	13	5	ND	1	16	1	2	2	117	.31	.036	5	114	1.54	31	.16	2	3.20	.03	.02	2
S L2N 8+75W	1	117	10	92	.4	66	23	1045	5.16	19	5	ND	2	17	1	2	2	107	.38	.038	6	128	1.96	39	.15	3	3.64	.03	.02	2
S L2N 9+00W	1	104	12	78	.2	61	23	1231	4.99	13	5	ND	1	17	1	2	2	105	.45	.047	7	116	1.98	42	.14	3	3.04	.03	.02	1
S L2N 9+25W	1	77	10	69	.1	54	19	890	4.82	10	5	ND	1	14	1	2	2	103	.34	.043	4	110	1.69	32	.14	2	2.82	.03	.02	1
S L2N 9+50W	1	126	13	70	.2	59	20	1045	4.68	17	5	ND	1	15	1	2	2	97	.45	.054	6	108	1.81	32	.12	3	2.87	.03	.02	2
S L2N 9+75W	1	70	10	60	.1	55	19	670	4.17	12	5	ND	1	17	1	2	2	87	.57	.038	5	98	1.82	32	.11	4	2.36	.03	.01	1
S L2N 10+00W	1	95	10	59	.3	22	14	523	5.38	4	5	ND	2	30	1	2	2	119	.29	.056	5	48	1.29	28	.20	2	3.90	.03	.02	1
S L2N 10+25W	1	49	10	32	.2	8	7	263	5.80	4	5	ND	2	21	1	2	2	144	.15	.055	3	30	.61	14	.19	2	4.08	.02	.01	2
S L2N 10+50W	1	63	9	36	.6	11	7	218	6.48	8	5	ND	2	10	1	2	2	139	.10	.036	4	54	.63	22	.17	2	4.54	.02	.02	1
S L2N 10+75W	2	45	8	53	.3	13	9	275	6.64	91	5	ND	2	18	1	2	2	152	.52	.026	3	84	.73	39	.14	2	5.43	.03	.02	1
S L2N 11+00W	1	39	6	55	.1	16	12	1308	4.26	11	5	ND	1	29	1	2	2	112	1.34	.044	3	50	.64	45	.14	3	2.09	.03	.02	1
S L0 6+00W	1	27	10	34	.1	26	9	210	4.31	3	5	ND	2	24	1	2	2	109	.26	.063	5	127	.71	14	.25	2	2.73	.02	.01	3
S L0 6+25W	1	28	6	41	.1	26	9	227	5.22	2	5	ND	2	18	1	2	2	110	.20	.100	6	145	.69	14	.23	2	3.94	.03	.01	3
S L0 6+50W	1	26	5	37	.1	28	10	316	4.23	2	5	ND	2	20	1	2	2	100	.24	.060	5	124	.81	15	.22	2	2.44	.02	.02	2
S L0 6+75W	1	43	6	41	.1	30	12	432	3.87	2	5	ND	2	11	1	2	2	87	.17	.067	4	154	.74	12	.18	2	3.94	.02	.01	2
S L0 7+00W	1	93	14	73	.2	93	21	857	4.41	5	5	ND	3	12	1	2	2	89	.17	.052	7	242	2.12	46	.14	3	3.83	.02	.05	1
S L0 7+25W	1	82	7	62	.2	74	26	1041	4.24	4	5	ND	2	15	1	2	2	97	.19	.056	12	222	1.76	58	.12	2	3.84	.02	.05	1
S L0 7+50W	1	64	9	56	.2	35	12	678	4.80	9	5	ND	1	12	1	2	2	130	.30	.047	4	96	.94	20	.17	2	2.40	.03	.02	1
S L0 7+75W	1	77	11	70	.3	54	18	663	5.09	11	5	ND	1	16	1	2	2	111	.40	.034	6	108	1.79	27	.16	2	2.82	.03	.03	1
S L0 8+00W	1	75	11	84	.2	58	23	1087	5.56	10	5	ND	1	20	1	2	2	119	.39	.029	5	120	1.92	31	.17	3	3.10	.03	.02	1
S L0 8+25W	1	124	5	80	.4	58	22	1155	5.03	15	5	ND	1	18	1	2	2	109	.42	.046	8	112	1.82	30	.17	3	3.34	.03	.02	1
S L0 8+50W	1	73	13	81	.3	56	22	709	6.00	16	5	ND	2	18	1	2	2	130	.39	.036	5	123	1.79	30	.21	2	3.33	.03	.03	2
S L0 8+75W	1	89	10	80	.4	58	23	933	5.43	15	5	ND	1	17	1	2	2	115	.41	.042	5	120	1.89	20	.20	2	3.42	.03	.02	1
S L0 8+82W	1	81	8	73	.3	55	22	998	5.04	13	5	ND	1	17	1	2	2	103	.50	.040	4	109	1.77	23	.17	2	3.01	.03	.02	1
S L0 9+75W	1	88	13	73	.2	55	18	965	3.98	14	5	ND	1	17	1	2	2	81	.66	.049	5	98	1.66	44	.10	3	2.37	.03	.02	2
S L0 10+00W	1	92	12	68	.3	59	20	789	4.54	12	5	ND	1	15	1	2	2	96	.52	.038	5	104	1.93	30	.14	2	2.61	.03	.01	1
S L0 10+25W	1	101	6	73	.3	62	22	1074	4.64	12	5	ND	1	18	1	2	2	99	.55	.041	7	112	1.96	30	.13	2	2.81	.03	.03	1
S L0 10+50W	1	48	8	35	.2	33	10	201	5.84	10	5	ND	1	12	1	2	2	149	.21	.027	3	127	.99	10	.24	2	2.95	.03	.01	1
S L0 10+75W	1	31	9	17	.1	4	7	120	5.95	3	5	ND	1	23	1	2	2	223	.20	.031	2	20	.24	18	.18	2	1.58	.02	.05	1
S L0 11+25W	2	198	12	67	.3	27	32	1562	6.30	13	5	ND	1	59	1	2	2	145	.46	.051	5	48	2.26	42	.18	5	4.70	.03	.08	2
S L1S 0+00W	1	21	7	31	.1	8	6	359	4.44	3	5	ND	3	83	1	2	2	110	.61	.047	8	34	.37	23	.12	2	2.71	.03	.03	2
S L1S 0+25W	1	13	3	18	.1	12	5	145	2.98	3	5	ND	2	73	1	2	2	117	.60	.024	9	64	.44	9	.22	2	1.61	.03	.02	2
S L1S 0+50W	1	4	4	12	.1	3	3	106	2.25	2	5	ND	2	46	1	2	2	65	.28	.017	7	9	.21	34	.10	2	1.88	.01	.02	1
S L1S 0+75W	1	8	6	22	.1	20	6	177	4.27	3	5	ND	1	26	1	2	2	92	.20	.039	5	65	.50	18	.12	2	1.76	.02	.02	2
S L1S 1+00W	1	52	37	20	.7	7	3	144	5.04	9	5	ND	5	9	1	2	2	66	.08	.332	7	164	.22	8	.11	3	12.61	.02	.01	1
STD C	19	58	39	131	7.4	69	27	1047	4.10	40	19	7	39	51	18	17	18	58	.48	.087	38	59	.87	181	.08	32	1.91	.08	.14	13

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L1S 1+25W	1	52	7	53	.3	21	14	537	5.31	2	5	ND	3	28	1	2	3	108	.26	.123	6	98	.69	43	.15	2	4.66	.02	.03	1
S L1S 1+50W	1	23	5	31	.1	16	6	219	3.99	2	5	ND	1	27	1	2	3	91	.27	.068	4	58	.63	20	.12	2	2.00	.02	.03	1
S L1S 1+75W	1	19	6	32	.1	22	9	359	4.52	2	5	ND	2	32	1	2	2	120	.29	.032	6	92	.68	30	.14	2	2.34	.02	.02	1
S L1S 2+00W	2	117	7	58	.1	53	21	1438	5.00	6	5	ND	2	29	1	2	2	94	.34	.080	8	122	1.98	38	.14	2	3.71	.02	.03	1
S L1S 2+25W	1	85	7	64	.1	66	20	691	4.62	3	5	ND	1	36	1	2	2	97	.44	.062	4	156	1.96	48	.18	2	3.67	.03	.02	1
S L1S 2+50W	1	44	9	41	.1	29	16	1814	3.29	4	5	ND	1	41	1	2	2	73	.63	.074	5	93	.79	74	.13	2	1.95	.03	.03	1
S L1S 2+75W	1	84	6	44	.1	39	21	2148	4.09	3	5	ND	1	39	1	2	2	86	.43	.125	3	135	.97	63	.16	2	2.52	.03	.04	1
S L1S 3+00W	1	59	5	39	.2	38	16	1202	3.80	4	5	ND	1	35	1	2	2	87	.41	.083	4	120	1.03	45	.17	2	2.39	.03	.02	1
S L1S 3+25W	1	54	10	34	.3	38	14	1034	4.00	2	5	ND	1	21	1	2	2	86	.20	.079	3	131	1.02	28	.16	2	2.56	.02	.01	1
S L1S 3+50W	1	36	5	38	.1	39	12	759	6.64	2	5	ND	1	15	1	2	2	124	.16	.121	2	246	1.14	18	.23	2	4.38	.02	.02	1
S L1S 3+75W	1	86	8	43	.1	51	19	868	4.76	6	5	ND	1	44	1	2	2	109	.58	.092	5	160	1.45	44	.17	2	3.67	.03	.07	2
S L1S 4+00W	3	68	10	67	.2	116	26	1575	5.99	3	5	ND	2	19	1	2	2	120	.46	.053	5	299	2.25	128	.06	2	3.77	.03	.02	1
S L1S 4+25W	1	62	7	45	.3	65	18	1101	4.64	3	5	ND	1	32	1	2	2	106	.56	.071	4	184	1.53	65	.13	2	3.21	.03	.03	1
S L1S 4+50W	1	21	10	41	.1	40	16	1650	4.05	4	5	ND	1	34	1	2	2	118	.83	.092	2	141	.83	83	.23	2	1.73	.03	.02	1
S L1S 4+75W	1	60	8	47	.1	61	18	717	3.65	3	5	ND	1	28	1	2	2	82	.53	.052	3	129	1.69	33	.15	2	2.35	.03	.03	1
S L1S 5+00W	1	73	5	46	.3	65	20	848	4.13	5	5	ND	1	27	1	2	2	88	.52	.053	4	148	1.72	49	.16	2	2.61	.03	.03	1
S L1S 5+25W	2	22	7	38	.3	19	8	252	6.34	11	5	ND	1	25	1	2	2	184	.70	.036	3	121	.49	42	.37	2	2.99	.03	.01	1
S L1S 5+50W	6	44	6	62	.1	43	47	15446	5.65	33	5	ND	1	19	1	2	2	117	.70	.037	2	133	1.27	541	.14	2	2.24	.03	.01	1
S L1S 5+75W	2	44	7	55	.4	26	18	1964	4.63	14	5	ND	1	25	1	2	2	99	1.22	.058	2	92	.83	99	.09	2	2.33	.03	.03	1
S L1S 6+00W	1	25	11	39	.1	53	11	703	4.32	7	5	ND	1	16	1	2	2	125	.42	.034	2	181	.82	52	.28	2	2.23	.03	.01	2
S L1S 6+25W	1	61	7	63	.2	49	14	202	4.63	9	5	ND	1	26	1	2	3	111	.77	.040	5	169	.75	57	.24	2	3.62	.03	.02	1
S L1S 6+50W	1	15	10	18	.2	13	5	93	6.87	3	5	ND	2	13	1	2	2	171	.13	.024	4	122	.36	18	.28	2	2.32	.02	.01	1
S L1S 6+75W	1	31	11	36	.5	20	6	136	5.97	5	5	ND	3	14	1	2	2	130	.14	.060	4	156	.44	15	.26	2	4.31	.02	.01	1
S L1S 7+00W	1	1	4	14	.1	3	1	5	.06	2	5	ND	1	18	1	2	4	1	.21	.037	2	2	.10	21	.01	2	.08	.02	.03	1
S L1S 7+25W	1	21	7	32	.1	28	10	266	4.42	3	5	ND	2	21	1	2	2	106	.23	.082	4	115	.89	12	.21	2	2.14	.02	.03	2
S L1S 7+75W	1	25	8	30	.1	26	9	298	4.11	3	5	ND	1	18	1	2	2	97	.21	.056	5	120	.77	15	.21	2	2.37	.02	.01	2
S L1S 8+00W	1	25	6	28	.3	18	10	451	5.87	4	5	ND	2	11	1	2	2	111	.13	.070	4	188	.40	13	.22	2	4.29	.02	.02	2
S L1S 8+25W	1	49	7	43	.3	40	14	559	4.14	8	5	ND	2	11	1	2	2	97	.16	.054	6	165	.98	23	.16	2	3.06	.02	.02	3
S L1S 8+50W	2	59	10	49	.2	54	19	1100	4.49	2	5	ND	2	7	1	2	2	99	.11	.055	6	189	1.24	43	.15	2	3.28	.02	.02	1
S L1S 8+75W	1	89	10	72	.2	65	20	786	4.56	9	5	ND	1	10	1	2	2	95	.38	.042	4	124	2.06	34	.15	2	2.69	.03	.03	1
S L1S 9+00W	1	86	9	86	.3	61	22	1592	5.09	9	5	ND	2	21	1	2	2	108	.58	.056	7	114	1.99	59	.14	2	3.09	.03	.05	1
S L1S 9+00WA	1	141	9	83	.3	63	23	1164	5.44	14	5	ND	1	17	1	2	2	113	.39	.042	8	120	1.99	44	.17	2	3.58	.03	.02	1
S L1S 9+00WB	1	103	11	84	.3	64	22	1789	4.83	9	5	ND	1	21	1	2	2	104	.63	.054	6	120	1.96	46	.13	3	2.98	.03	.03	1
S L1S 9+00WC	1	48	9	56	.4	45	17	674	5.34	10	5	ND	1	18	1	2	2	119	.50	.044	3	96	1.60	17	.21	3	2.47	.03	.03	1
S L1S 9+00WD	1	49	9	44	.2	34	13	611	6.13	16	5	ND	2	14	1	2	2	149	.29	.058	3	107	.99	18	.20	2	2.05	.03	.01	2
S L2S 6+75W	1	25	6	33	.1	25	8	188	4.64	2	5	ND	1	20	1	2	2	112	.21	.058	5	121	.71	16	.22	2	2.60	.02	.01	2
S L2S 7+00W	1	36	5	37	.2	33	10	219	4.66	6	5	ND	2	19	1	2	2	108	.20	.076	6	145	.87	16	.23	2	3.07	.02	.01	5
S L2S 7+25W	1	46	12	41	.2	37	12	424	3.84	6	5	ND	2	17	1	2	2	91	.27	.063	5	121	1.10	15	.20	2	2.37	.02	.03	1
S L2S 7+50W	1	31	8	46	.1	40	15	1003	3.86	5	5	ND	1	15	1	2	2	88	.21	.057	4	125	1.21	23	.15	2	2.18	.02	.01	2
STD C	18	58	36	131	7.3	68	27	1052	4.13	42	18	7	39	51	18	17	22	58	.49	.088	38	60	.88	182	.08	32	1.93	.08	.13	12

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L2S 7+75W	1	38	10	40	.2	41	14	661	4.07	5	5	ND	2	24	1	2	2	100	.28	.044	5	140	1.21	19	.19	2	2.33	.03	.02	1
S L2S 8+00W	1	53	17	40	.3	30	11	557	5.86	12	5	ND	2	15	1	2	2	160	.24	.045	5	115	.84	17	.19	2	2.94	.03	.03	1
S L2S 8+25W	1	89	15	69	.5	55	21	1011	5.11	17	5	ND	2	19	1	2	2	117	.36	.048	6	121	1.68	29	.16	2	3.18	.03	.04	1
S L2S 8+50W	2	86	11	73	.8	59	21	1039	5.01	15	5	ND	2	20	1	2	2	110	.38	.037	6	125	1.82	30	.16	3	3.15	.03	.02	1
S L2S 8+75W	1	87	8	75	.4	68	22	795	4.86	8	5	ND	2	28	1	2	2	114	.78	.041	6	116	2.27	25	.19	4	2.88	.04	.04	1
S L2S 9+00W	1	97	16	82	.6	64	22	1049	4.67	14	5	ND	2	29	1	2	2	105	.77	.055	7	115	2.01	45	.16	4	2.89	.04	.05	1
S L2S 9+25W	1	91	13	84	.1	57	19	958	4.22	15	5	ND	2	30	1	2	2	91	.90	.060	8	99	1.86	44	.13	3	2.67	.04	.05	1
S L2S 9+50W	1	92	16	87	.4	60	20	993	4.40	19	5	ND	2	29	1	2	2	95	.88	.061	8	105	1.93	45	.13	4	2.78	.04	.06	1
S L2S 9+75W	2	58	15	54	.5	16	18	1894	4.60	16	5	ND	2	32	1	2	2	106	.42	.068	5	41	1.24	47	.12	2	2.77	.03	.05	1
S L2S 10+00W	2	171	11	56	1.0	31	17	900	4.38	18	5	ND	2	25	1	2	2	103	.36	.078	5	82	1.36	26	.17	3	3.04	.03	.04	1
S L2S 10+25W	2	69	8	47	.3	9	14	1172	5.99	14	5	ND	2	28	1	2	2	123	.21	.073	4	31	1.11	25	.14	2	3.17	.03	.05	1
S L2S 10+50W	2	57	10	43	.2	10	11	618	5.72	16	5	ND	2	32	1	2	2	140	.26	.048	4	35	.95	35	.17	2	3.26	.03	.04	1
S L2S 10+75W	2	51	14	37	.4	8	10	360	4.31	18	5	ND	2	36	1	2	2	122	.38	.046	4	21	.92	44	.13	2	2.65	.03	.05	2
S L2S 11+00W	1	101	11	47	.2	14	16	787	4.03	5	5	ND	2	42	1	2	2	89	.44	.058	4	23	1.61	21	.14	2	2.66	.03	.05	1
S L2S 11+25W	1	119	11	49	.7	16	19	697	5.21	14	5	ND	3	23	1	2	2	104	.34	.088	6	35	1.29	28	.18	3	5.92	.03	.04	2
S L2S 11+75W	1	67	16	30	.6	5	7	215	7.42	8	5	ND	3	18	1	2	2	169	.13	.061	3	24	.67	15	.20	2	4.78	.02	.02	2
S L2S 12+00W	1	42	9	32	.2	6	9	219	6.94	11	5	ND	2	13	1	2	2	179	.09	.043	4	27	.75	47	.11	2	4.40	.02	.03	1
S L3S 0+00W	1	18	3	33	.4	17	7	152	4.20	4	5	ND	4	20	1	2	2	85	.17	.035	17	65	.68	33	.03	2	2.89	.02	.04	2
S L3S 0+25W	2	40	11	52	.1	15	6	243	6.95	3	5	ND	3	30	1	2	2	155	.23	.121	6	110	.49	38	.13	2	4.69	.02	.02	1
S L3S 0+50W	1	27	5	38	.4	20	9	197	5.84	3	5	ND	3	28	1	2	2	130	.26	.042	9	70	.85	23	.11	2	2.88	.02	.03	1
S L3S 0+75W	1	71	11	68	.3	66	17	405	5.61	2	5	ND	3	32	1	2	2	125	.26	.051	5	207	2.06	27	.22	2	4.80	.03	.02	1
S L3S 1+00W	4	138	12	56	.4	54	17	347	5.55	7	5	ND	5	19	1	2	2	109	.19	.093	7	204	1.52	24	.18	2	8.84	.03	.02	1
S L3S 1+25W	2	77	9	65	.5	33	13	241	4.45	2	5	ND	3	33	1	2	2	114	.33	.072	9	103	.85	30	.16	2	4.57	.03	.03	1
S L3S 1+50W	1	18	7	27	.1	16	7	154	5.32	3	5	ND	2	49	1	2	2	160	.33	.064	6	77	.62	12	.24	2	2.29	.03	.01	1
S L3S 1+75W	2	71	6	137	.4	73	39	1321	4.14	2	5	ND	3	50	1	2	2	95	.60	.044	11	114	1.45	54	.16	3	3.63	.03	.03	1
S L3S 2+00W	1	48	6	68	.3	40	18	622	4.73	3	5	ND	2	45	1	2	2	107	.43	.056	7	108	1.18	31	.19	2	3.32	.03	.02	1
S L3S 2+25W	1	29	7	49	.3	30	12	413	4.27	2	5	ND	2	61	1	2	2	106	.61	.040	8	93	.76	44	.22	2	2.69	.03	.02	1
S L3S 2+50W	1	38	12	49	.1	82	21	570	6.14	3	5	ND	2	24	1	2	2	184	.25	.074	5	232	2.90	13	.26	2	3.90	.02	.02	2
S L3S 2+75W	1	13	10	31	.2	67	13	245	4.60	4	5	ND	1	37	1	2	2	167	.27	.023	3	236	1.53	9	.22	2	2.31	.03	.02	1
S L3S 3+00W	2	64	12	52	.2	78	18	393	5.38	2	5	ND	2	47	1	2	2	127	.43	.038	4	253	2.02	18	.23	2	4.48	.03	.03	2
S L3S 3+25W	1	23	9	35	.1	47	13	480	3.83	3	5	ND	1	30	1	2	2	106	.53	.041	3	165	.98	14	.27	2	2.09	.03	.01	1
S L3S 3+50W	1	61	5	49	.4	61	17	364	5.46	2	5	ND	2	30	1	2	2	122	.28	.054	4	203	1.53	20	.24	2	4.14	.03	.02	1
S L3S 3+75W	1	42	7	41	.1	45	13	388	4.79	3	5	ND	1	34	1	2	2	131	.31	.051	4	152	1.11	23	.25	2	3.17	.03	.01	1
S L3S 4+00W	1	75	8	49	.3	42	27	3597	5.27	8	5	ND	1	37	1	2	2	130	.42	.142	3	140	1.01	40	.20	3	2.86	.03	.03	1
S L3S 4+25W	1	65	12	48	.3	39	22	1232	5.31	6	5	ND	2	30	1	2	2	120	.32	.106	4	164	.89	30	.23	5	4.08	.03	.01	2
S L3S 4+50W	1	63	10	63	.5	47	23	829	4.77	13	5	ND	2	25	1	2	2	106	.44	.142	4	145	1.04	46	.21	2	4.49	.03	.01	1
S L3S 4+75W	2	53	6	53	.3	48	22	1358	5.26	7	5	ND	2	24	1	2	2	120	.40	.090	4	162	1.15	53	.21	2	3.74	.03	.02	1
S L3S 5+00W	2	37	8	43	.3	35	14	545	4.79	5	5	ND	1	21	1	2	2	126	.35	.085	4	127	.96	37	.19	2	3.22	.03	.01	1
S L3S 5+25W	1	51	15	59	.1	48	23	753	6.02	7	5	ND	1	24	1	2	2	121	.51	.137	5	166	1.01	57	.16	2	5.72	.03	.01	1
STD C	19	57	40	132	7.5	69	28	1047	4.04	45	22	8	39	52	18	16	22	58	.48	.089	39	61	.87	178	.08	33	1.90	.08	.15	12

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L3S 5+50W	1	88	6	72	.4	62	22	1098	5.29	7	5	ND	2	30	1	2	2	119	.64	.082	6	164	1.56	63	.20	2	3.95	.03	.02	4
S L3S 5+75W	1	33	14	56	.3	37	13	809	6.39	8	5	ND	2	34	1	2	2	187	.62	.050	4	160	.82	80	.33	2	2.67	.03	.02	1
S L3S 6+00W	1	31	6	47	.2	39	11	278	5.97	7	5	ND	2	23	1	2	2	170	.32	.044	4	155	.81	40	.25	2	2.83	.03	.02	2
S L3S 6+25W	1	29	9	30	.6	25	8	171	5.30	5	5	ND	2	27	1	2	2	129	.30	.064	6	110	.74	12	.26	2	2.91	.03	.02	3
S L3S 6+50W	1	136	13	66	.4	63	21	1135	4.71	13	5	ND	2	28	1	2	2	108	.66	.058	8	136	1.81	50	.18	3	3.15	.03	.02	3
S L3S 6+75W	1	62	4	40	.3	40	26	2054	4.03	5	5	ND	2	32	1	2	2	105	.85	.058	6	113	.99	49	.17	2	2.55	.03	.01	3
S L3S 7+00W	1	39	5	39	.3	36	11	237	5.37	4	5	ND	2	21	1	2	2	118	.23	.044	4	152	.99	16	.28	2	3.35	.03	.01	2
S L3S 7+25W	1	23	9	18	.5	14	5	94	3.85	4	5	ND	1	17	1	2	3	123	.18	.055	6	76	.34	20	.20	2	1.70	.02	.01	1
S L3S 7+50W	1	39	5	33	.3	32	10	279	4.46	6	5	ND	2	22	1	2	2	113	.29	.068	5	124	.89	15	.21	2	2.63	.02	.01	3
S L3S 7+75W	1	105	2	53	.3	61	15	385	4.07	9	5	ND	2	21	1	2	2	89	.29	.062	8	179	1.46	30	.17	2	4.35	.03	.02	2
S L3S 8+00W	1	117	12	64	.5	50	18	840	5.40	10	5	ND	1	19	1	2	2	118	.33	.063	5	139	1.42	22	.20	2	3.96	.03	.02	2
S L3S 8+25W	1	99	9	51	.4	39	17	788	5.80	13	5	ND	2	15	1	2	2	140	.28	.054	5	114	1.14	19	.19	2	3.71	.03	.02	2
S L3S 8+50W	1	94	13	62	.6	45	17	756	5.37	15	5	ND	1	16	1	2	2	123	.25	.044	5	112	1.35	21	.17	2	3.08	.03	.01	2
S L3S 8+75W	1	83	9	70	.4	62	21	605	5.23	11	5	ND	1	25	1	2	2	134	.76	.034	4	102	2.10	24	.18	3	2.56	.03	.01	1
S L3S 9+00W	1	95	14	74	.4	59	20	1074	4.40	13	5	ND	2	21	1	2	2	96	.59	.046	6	102	1.84	32	.14	3	2.58	.03	.02	3
S L3S 9+25W	1	120	8	76	.4	61	22	1061	4.75	13	5	ND	1	23	1	2	2	104	.62	.047	7	109	1.92	42	.15	3	2.97	.03	.02	2
S L3S 9+50W	1	107	9	57	.3	21	19	985	4.42	5	5	ND	2	45	1	2	2	96	.76	.071	5	38	1.67	34	.16	2	3.37	.03	.04	1
S L3S 10+25W	2	31	10	25	.5	5	10	256	5.36	8	5	ND	2	28	1	2	2	115	.20	.064	5	16	.44	22	.20	2	3.49	.02	.03	4
S L3S 10+50W	1	39	4	20	.3	5	8	265	5.55	2	5	ND	1	26	1	2	2	102	.16	.077	3	19	.42	17	.18	2	3.79	.02	.02	2
S L3S 10+75W	1	32	9	22	.3	5	11	653	5.48	4	5	ND	1	38	1	2	2	157	.24	.048	4	17	.47	21	.22	2	2.66	.02	.01	2
S L3S 11+00W	1	83	2	35	.5	15	12	557	4.55	8	5	ND	2	30	1	2	2	96	.26	.108	4	38	1.07	17	.15	2	5.58	.03	.02	2
S L3S 11+25W	1	119	7	58	.3	26	18	866	4.18	5	5	ND	1	40	1	2	2	89	.58	.057	4	43	1.85	27	.15	2	2.66	.03	.03	3
S L3S 11+50W	1	62	7	36	.6	6	12	590	7.97	5	5	ND	3	32	1	2	2	197	.21	.085	3	19	.73	14	.25	2	3.19	.03	.03	2
S L3S 11+75W	1	54	6	37	.1	6	12	580	6.57	6	5	ND	1	34	1	2	2	174	.19	.065	3	21	.77	21	.22	2	3.20	.02	.01	4
S L3S 12+00W	1	75	6	40	.2	8	8	464	5.91	8	5	ND	2	8	1	2	2	103	.05	.252	3	62	.58	23	.15	2	7.24	.02	.02	5
S L3S 12+25W	1	24	9	26	.4	5	5	140	5.66	4	5	ND	1	7	1	2	3	150	.04	.051	3	28	.33	28	.07	2	2.94	.01	.02	3
S L3S 12+50W	1	30	13	29	.2	3	5	253	5.60	6	5	ND	1	8	1	2	4	129	.06	.052	3	21	.16	22	.14	2	2.88	.01	.02	1
S L4S 8+75W	1	95	11	75	.3	59	19	919	4.32	8	5	ND	2	21	1	2	2	93	.63	.044	6	100	1.83	41	.14	3	2.59	.03	.01	1
S L4S 9+00W	1	111	17	79	.5	58	20	939	4.48	17	5	ND	2	21	1	2	2	96	.67	.046	6	97	1.80	43	.15	3	2.58	.03	.02	2
S L4S 9+25W	1	64	10	44	.4	11	8	227	6.49	12	5	ND	2	13	1	2	2	142	.10	.057	3	40	.71	33	.21	2	5.41	.02	.01	5
S L4S 9+50W	1	13	6	15	.3	3	6	112	6.66	4	5	ND	2	22	1	2	2	177	.14	.041	3	21	.29	14	.15	2	2.48	.02	.02	1
S L4S 9+75W	1	39	9	27	.2	5	5	116	3.59	7	5	ND	1	14	1	2	3	93	.13	.060	3	27	.17	11	.13	2	4.29	.01	.01	2
S L4S 10+00W	1	29	8	21	.4	6	6	195	5.81	4	5	ND	1	17	1	2	3	149	.13	.058	3	34	.35	14	.16	2	3.32	.02	.01	4
S L4S 10+25W	1	54	9	46	.3	16	14	729	6.21	6	5	ND	1	30	1	2	2	146	.61	.046	3	45	1.00	35	.30	2	3.23	.03	.03	2
S L4S 10+50W	1	41	10	25	.4	7	7	391	4.88	7	5	ND	2	22	1	2	2	162	.54	.050	3	30	.97	13	.23	2	4.32	.03	.02	3
S L4S 10+75W	1	50	11	26	.5	7	6	243	9.26	11	5	ND	2	21	1	2	2	191	.59	.051	3	51	.38	22	.25	2	3.24	.03	.01	2
S L4S 11+25W	1	186	12	52	.5	14	14	461	5.46	9	5	ND	2	32	1	2	2	118	.27	.088	5	33	1.16	23	.20	2	5.41	.03	.01	2
S L4S 11+50W	1	142	8	41	.3	11	9	251	8.00	7	5	ND	2	27	1	2	2	146	.19	.112	5	36	.78	15	.24	2	4.79	.02	.01	3
STD C	18	59	38	132	7.0	67	27	1037	4.09	41	23	6	38	49	17	17	21	56	.48	.085	37	57	.86	176	.08	31	1.89	.08	.13	13

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM
S L4S 11+75W	1	60	8	31	.5	15	8	221	6.13	5	5	ND	2	26	1	2	2	148	.18	.061	3	107	.74	17	.26	2	3.67	.02	.02	1
S L4S 12+00W	1	32	5	26	.3	8	6	169	6.79	2	5	ND	2	13	1	2	2	139	.11	.059	3	61	.43	18	.18	2	3.72	.01	.01	1
S L4S 12+50W	1	91	5	50	.7	27	12	352	7.73	25	5	ND	3	8	1	2	2	156	.10	.059	4	110	.92	22	.29	2	6.36	.02	.01	1
S L6S 9+25W	1	96	6	70	.6	71	22	1168	5.04	13	5	ND	2	15	1	2	2	105	.43	.048	6	117	1.88	31	.13	2	2.90	.02	.03	1
S L6S 9+50W	1	104	3	65	.4	61	20	599	5.03	10	6	ND	2	14	1	2	2	107	.31	.026	5	127	1.90	20	.17	2	3.29	.02	.02	1
S L6S 9+75W	1	64	8	52	.4	40	15	654	4.87	5	5	ND	1	21	1	2	2	118	.53	.045	3	102	1.31	24	.20	2	3.20	.02	.01	1
S L6S 10+00W	1	67	3	33	.7	21	9	438	6.12	2	5	ND	2	5	1	2	2	140	.11	.058	3	104	.38	14	.26	2	4.46	.01	.01	1
S L6S 10+25W	1	29	6	38	.5	8	8	341	4.51	2	5	ND	1	12	1	2	2	102	.15	.055	3	30	.66	23	.18	2	3.00	.02	.01	1
S L6S 10+50W	1	28	5	25	.5	8	12	701	4.00	2	5	ND	2	14	1	2	2	82	.27	.048	3	24	.75	27	.12	2	2.98	.02	.02	1
S L6S 10+75W	1	47	6	39	.3	36	13	352	6.11	2	5	ND	2	7	1	2	2	110	.05	.034	2	97	1.47	24	.24	2	4.46	.02	.01	1
S L6S 11+00W	1	23	6	25	.3	6	9	217	5.53	2	5	ND	2	21	1	2	2	95	.18	.092	2	24	.81	8	.20	2	5.39	.02	.02	1
S L6S 11+25W	1	15	4	19	.5	6	6	185	4.73	2	5	ND	2	14	1	2	2	109	.14	.057	3	31	.42	9	.20	2	4.63	.01	.01	1
S L6S 11+50W	1	21	7	19	.1	5	9	233	5.49	2	5	ND	2	14	1	2	2	137	.13	.053	2	20	.54	19	.21	2	3.09	.01	.01	1
S L6S 11+75W	1	30	5	29	.3	6	7	220	5.58	2	5	ND	2	12	1	2	2	107	.14	.063	4	22	.57	21	.16	2	3.11	.02	.02	1
S L6S 12+00W	1	75	7	41	.2	14	13	826	3.83	2	5	ND	2	19	1	2	2	75	.37	.095	3	24	1.38	44	.10	2	2.72	.02	.04	1
S L6S 12+25W	1	164	5	53	.4	24	25	1335	5.29	2	5	ND	2	25	1	2	2	93	.47	.122	4	36	2.35	50	.14	2	3.42	.02	.04	1
S L6S 12+50W	1	25	9	19	.2	7	7	188	5.33	3	5	ND	2	13	1	2	2	99	.08	.352	2	26	.58	11	.13	2	2.95	.02	.03	1
S L6S 12+75W	1	25	6	19	.1	4	8	293	4.53	2	5	ND	1	11	1	2	2	101	.09	.059	2	12	.60	26	.09	2	2.42	.02	.02	1
S L6S 13+00W	1	37	6	34	.5	9	32	4761	4.25	2	5	ND	2	11	1	2	2	88	.16	.050	4	23	.59	77	.08	2	2.53	.02	.02	1
L4S 8+50W ~~NO NAME~~	1	87	10	67	.3	52	20	970	4.51	10	5	ND	1	5	1	2	2	88	.18	.048	4	102	1.68	21	.08	2	2.40	.02	.02	1
STD C	18	57	37	130	7.2	67	27	1025	4.01	42	16	7	38	50	18	17	19	56	.48	.086	37	57	.86	177	.08	31	1.87	.08	.13	11

APPENDIX IV

Whole Rock Classifications

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

17558

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
THOLEIITIC RHYOLITE

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE RHYOLITE SUB-ALKALINE

SILICA CLASSIFICATION:
RHYOLITE (73.17 %)

TITANIA CLASSIFICATION:
DACITE (.65 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

17560

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
THOLEIITIC DACITE

IRVINE-BARAGAR CLASSIFICATION:
THOLEIITIC ANDESITE SUB-ALKALINE

SILICA CLASSIFICATION:
ANDESITE (57.8 %)

TITANIA CLASSIFICATION:
DACITE (.97 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

18300

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
CALC-ALKALINE BASALT

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE BASALT SUB-ALKALINE

SILICA CLASSIFICATION:
BASALT (52.74 %)

TITANIA CLASSIFICATION:
DACITE (.96 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

18436

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
CALC-ALKALINE RHYOLITE

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE RHYOLITE SUB-ALKALINE

SILICA CLASSIFICATION:
DACITE (66.13 %)

TITANIA CLASSIFICATION:
DACITE (.62 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

18444

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
CALC-ALKALINE ANDESITE

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE BASALT SUB-ALKALINE

SILICA CLASSIFICATION:
ANDESITE (56.86 %)

TITANIA CLASSIFICATION:
DACITE (.74 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

18445

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
CALC-ALKALINE BASALT

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE BASALT SUB-ALKALINE

SILICA CLASSIFICATION:
ANDESITE (54.15 %)

TITANIA CLASSIFICATION:
DACITE (.63 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

LITHOGEOCHEMICAL APPLICATIONS PROGRAM

18449

ROCK CLASSIFICATIONS

JENSEN CLASSIFICATION:
CALC-ALKALINE ANDESITE

IRVINE-BARAGAR CLASSIFICATION:
CALC-ALKALINE ANDESITE SUB-ALKALINE

SILICA CLASSIFICATION:
ANDESITE (58.27 %)

TITANIA CLASSIFICATION:
DACITE (.88 %)

ID:

PRESS ANY KEY TO CONTINUE OUTPUT

APPENDIX V

Petrographic Report

PETROGRAPHIC REPORT **by J.S. Getsinger, PhD** J. S. Getsinger

For Payton Ventures Inc. **Date** 87-12-16

Project V270 - Columbia Property **Collector** Tim Neale

Sample V270-17558 **Date Collected** 87-11

Location: Columbia Property, Rift Creek, Vancouver Island.

Rock Type: Altered felsic porphyry with quartz veinlets

Hand Specimen: Light green rock with vuggy quartz veins. Rock is very weakly foliated, as defined by pale yellowish-brown wisps (alteration of micaceous mineral?) and stringers of pyrite cubes (0.2 mm). Pyrite is in stringers and disseminated (1-3%), as well as localized along quartz stringers. Dirty white quartz veinlets (up to 1 cm) are vuggy with dark brown staining and associated pyrite. Very weak, local reaction to HCl in vugs. Trace amounts of black minerals are not magnetic. Rounded, clear grains (1 mm, <5%) may be quartz; whiter patches are interpreted as altered feldspar.

THIN SECTION (Polished No):

% (Approx.) MINERALS

(Percentages in host rock, not counting veins)

5%	Quartz - A few megacrysts, and in groundmass; uniaxial(+) (also in quartz veins)
35-40%	Feldspar (plagioclase ± K-feldspar?) - Subhedral, porphyritic, common Carlsbad twinning, some albite twins, relatively fresh; somewhat glomeroporphyritic
40-45%	Sericite - Colourless, medium relief, biref.; flaky habit, occurs throughout groundmass
<5%	Chlorite - In radiating clusters, late, in fractures and vugs; pleochroic in green, with rusty brown patches, locally rutilated(?); commonly with anomalous blue biref. (similar to pumpellyite).
2- 4%	Pyrite - With rusty rims, subhedral, up to 1.0 mm, mainly ≤0.5 mm, larger near and in quartz veinlets (± other opaques)

(10-20% of sample)
Quartz veins - Vuggy, up to 1 cm; large grains with mortar of smaller grains interstitially; strained, undulose, overlapping grains with irregular boundaries. Elongate quartz veins are perpendicular to pyrite faces.

Rock Textures/Structures: Porphyritic texture; weak foliation and textures in quartz veins indicate some postcrystalline deformation.

Protolith: Volcanic of intermediate to felsic composition.

Alteration/Mineralization: Extensive sericite alteration; pyrite mineralization.

Conditions of Formation: Volcanic eruption followed by hydrothermal alteration, silicification, increase of potassium (sericitic alteration); syn- to postcrystalline deformation has caused weak foliation throughout and strain features in quartz veins.

PETROGRAPHIC REPORT **by J.S. Getsinger, PhD** J. S. Getsinger

For Payton Ventures Inc. **Date** 87-12-16

Project V270 - Columbia Property **Collector** Tim Neale

Sample V270-18300 **Date Collected** 87-11

Location: Columbia Property, Rift Creek, Vancouver Island.

Rock Type: Sheared, pyritic, epidote-altered intermediate to mafic volcanic or intrusive rock (protomylonite)

Hand Specimen: Medium to dark green, foliated rock with subangular lithic clasts of fine-grained, light to dark green volcanics(?) or cherty tuff(?). Foliation is defined by elongate, overlapping, imbricated clasts up to 7 mm, lensoidal shapes and light greenish stringers. Rock is hard and coherent, and does not break easily along foliation. It is apparently intensely cataclastically deformed, with lensoidal foliation resembling phacoidal or flaser structure, although it is possibly volcaniclastic flow structure. Fine-grained pyrite is disseminated throughout (3-4%).

THIN SECTION (Polished No):

% (Approx.) MINERALS

10%	Epidote - Rounded grain clusters of varying sizes. Yellow pleochroism, med.-high biref.
30-40%	Feldspar (plagioclase) - Rectangular, subhedral, and rounded grains; in clusters of grains and lithic volcanic fragments; relict albite twinning; somewhat saussuritized; associated with some quartz
10%	Quartz - Interstitial to feldspar in some lithic fragments
<1%	Sphene - Rare grains
2- 3%	Opaques - Probably pyrite
35-45%	Matrix - Dark brown, semi-opaque, very fine-grained to cryptocrystalline, streaked-out; positive relief; isotropic; resembles pseudotachylite, but is made up of finely-ground crystalline material

Rock Textures/Structures: Brecciated, cataclastic texture; lenticular to rounded particles retain primary mineral textures. Rounded, broken, and rotated grains of epidote and feldspar are surrounded by extremely fine-grained, foliated matrix. Rock fragments show intergrown feldspar, epidote. Matrix is ground very fine in places, like pseudotachylite. Rock has crushed, foliated matrix (<50%) so could be called "protomylonite".

Protolith: Feldspar-rich volcanic or intrusive rock, epidote-altered. (Probably similar to sample 18449).

Alteration/Mineralization: Epidote alteration (prior to cataclasis); some saussuritization of feldspar; pyrite mineralization is minor.

Conditions of Formation: Igneous rock has been crushed in shear zone in conditions transitional from brittle to ductile deformation, say 250-350°C.

PETROGRAPHIC REPORT **by J.S. Getsinger, PhD** J.S. Getsinger

For Payton Ventures Inc. **Date** 87-12-16

Project V270 - Columbia Property **Collector** Tim Neale

Sample V270-18436 **Date Collected** 87-11

Location: Columbia Property, Rift Creek, Vancouver Island.

Rock Type: Aplite dyke (sodic alkali granite)

Lithogeochemistry: Whole rock analysis: 64.5% SiO_2, 20.6% Al_2O_3, 0.7% MgO, 0.9% Fe_2O_3, 1.0% CaO, 3.9% K_2O, 5.3% Na_2O, 0.6% TiO_2, 0.1% MnO. Other: 35 ppb Pt

Hand Specimen: White, hard rock breaks in angular pieces. Texture appears granoblastic, with subequant grains about 1 mm. Rock weathers slightly to clay minerals. Only very minor local reaction to HCl. Minerals appear to be quartz and feldspar (all white). Finely disseminated, brown vitreous mineral is common (2-4%), may be sphene. A grain of pyrrhotite(?) was also noted. Colour Index is less than 5.

THIN SECTION (Polished No):

% (Approx.) MINERALS

60%	Feldspar - Euhedral to anhedral, grain size about 1 mm; relict albite twinning, zoning (inner zones are saussuritized); X' to c' = 13-15°; relief close to balsam. Probably **albite ± alkali feldspar.**
10%	Quartz - (1) Some in isolated grains up to 1 mm; (2) Occurs in veinlets, crosscutting epidote veinlets
25-30%	Sericite - Fine-grained white mica, from alteration of feldspar
<2%	Chlorite - Low biref., greenish
2%	Clinozoisite - In fine veinlets; anom. blue-yellow biref., med.-high relief Epidote - Surrounding opaque grains
2- 4%	Sphene - Euhedral to anhedral; some altered to leucoxene(?)
<1%	Opaques - Rounded grains
tr	Zircon(?)
	Rusty fractures

Rock Textures/Structures: Somewhat porphyritic, to granoblastic intrusive. Some feldspars show altered zones in cores; some are euhedral.

Protolith: Felsic intrusive such as sodic alkali granite or alaskite.

Alteration/Mineralization: Feldspar has altered primarily to sericite, with minor saussuritization.

Conditions of Formation: Shallow intrusive environment indicated by somewhat porphyritic texture. Composition is unusually sodic for a granite, and low in quartz; may have been albitized.

PETROGRAPHIC REPORT **by J.S. Getsinger, PhD** J.S. Getsinger

For Payton Ventures Inc. **Date** 87-12-16

Project V270 - Columbia Property **Collector** Tim Neale

Sample V270-18444 **Date Collected** 87-11

Location: Columbia Property, Rift Creek, Vancouver Island.

Rock Type: Altered intermediate to mafic volcanic with quartz veinlets

Hand Specimen: Medium to light green rock has white stripes (quartz veins in 2 main directions, at right angles to each other, veins 1 to 15 mm) and white spots and splotches. There are also minor limonitic stains, and tiny reddish-brown minerals in clusters. White spots are mainly <1 mm, and some are vaguely rectangular, like altered feldspar phenocrysts. White veins are somewhat banded, with vuggy areas near the selvages, greener areas in the interior. Dark brown stains in some of the vugs (<0.5 mm) may indicate weathered metallic minerals. The same areas react weakly in HCl, indicating minor calcite; however, the rock in general does not react to HCl.

THIN SECTION (Polished No):

% (Approx.)	MINERALS
30-40%	Prehnite - Rectangular, with parallel extinction; in radiating clusters and subparallel along veins. Biref. = 0.023. (+)2V > 80, r $\geq$ v
<5%	Feldspar (plagioclase) - Relict grains with albite twinning
30-35%	Quartz - Mainly in central vein
2- 4%	Amphibole(?) - Colourless needles overgrowing quartz and prehnite, fine-grained, late.
1- 3%	Sphene - Subhedral, high relief wedge and diamond-shapes, characteristically brownish, in isolated clusters.
15-20%	Groundmass - Very fine-grained, rectangular crystals of low biref., possibly fine-grained prehnite (or altered feldspar), with fine-grained brown to black interstitial material; has rectangular ghosts of feldspar phenocrysts
<5%	Pyroxene(?) - Relict grain, embayed, biref. 0.023, higher relief than prehnite; Z' to c = 41°
<<1%	Opaques - Very fine-grained; occur locally
1 grain	Epidote - Yellowish-green biref.

Rock Textures/Structures: Veins up to 1.5 cm crosscut slide diagonally. Primary textures are completely obscured by prehnite overgrowth. Relict plagioclase and pyroxene indicate possibly intermediate to mafic volcanics.

Protolith: Calcium-feldspar-rich volcanic(?) rock with pyroxene phenocrysts.

Alteration/Mineralization: Prehnite alteration, along with quartz veining, is intense.

Conditions of Formation: Volcanic rock has been altered/metamorphosed under prehnite-forming conditions (T < 400°C).

PETROGRAPHIC REPORT **by J.S. Getsinger, PhD** J.S. Getsinger

For Payton Ventures Inc. **Date** 87-12-16

Project V270 - Platinum Group **Collector** Tim Neale

Sample V270-18449 **Date Collected** 87-11

Location: Platinum Group, Rift Creek, Vancouver Island.

Rock Type: Altered intermediate to mafic intrusive with pyrite (diorite?)

Hand Specimen: Greyish-brown to rusty orange-brown weathering rock with irregular but somewhat rounded weathering surface. Tiny quartz crystals project into vuggy area on weathered surface, and milky white veinlets crosscut limonitic stain. No reaction to HCl on weathered surface. Rock is light and dark green, evenly granular (grain size about 1 mm). Pyrite cubes (av. 0.2 mm) are disseminated as well as clumped near light green veinlets (pyrite 2-4%); locally brassier yellow. No reaction to HCl. Pale green mineral, equant to subhedral grains (40-50%) are visibly zoned, probably altered plagioclase. Buff to light green stringers are rust-stained quartz with some red (hematitic?) staining and possible epidote. Pyrite tends to be rimmed with reddish-brown oxide.

THIN SECTION (Polished No):

% (Approx.) MINERALS

50-60% Altered feldspar - Subhedral, saussuritized plagioclase (relict albite twinning); relict zoning apparent in alteration patterns

5-10% Epidote - Mainly in vein, elongate, prismatic grains, randomly intergrown with quartz, possibly feldspar

5-10% Quartz - Mainly associated with epidote vein, and in granular groundmass with feldspar

10-15% Relict mafics - Rectangular shapes (hornblende?), pseudomorphed by:
1-3% Sphene - Brownish, high relief, subhedral
10% Chlorite - Pale green, low biref., replacing hornblende(?)

2- 5% Pyrite - Occurs on veinlets and disseminated throughout; in stringer-like clumps

Rock Textures/Structures: Porphyritic to granoblastic intrusive texture, zoned plagioclase, relict mafic grains all indicate igneous intrusive origin.

Protolith: Medium grained diorite.

Alteration/Mineralization: (1) Alteration of mafics to chlorite + sphene; saussuritization of plagioclase.
(2) Epidote veining, pyrite mineralization crosscut original textures.

Conditions of Formation: Intrusive to hypabyssal igneous crystallization, followed by hydrothermal alteration, epidote veining.

APPENDIX VI

Conversion Factors for Metric Units

CONVERSION FACTORS FOR METRIC UNITS

1 inch	=	25.4 millimetres	(mm)
		or 2.54 centimetres	(cm)
1 cm	=	0.394 inch	
1 foot	=	0.3048 metre	(m)
1 m	=	3.281 feet	
1 mile	=	1.609 kilometres	(km)
1 km	=	0.621 miles	
1 acre	=	0.4047 hectares	(ha)
1 ha	=	2.471 acres	
1 ha	=	100 m x 100 m = 10,000 m^2	
1 km^2	=	100 ha	
1 troy ounce (oz)	=	31.103 grams	(g)
1 g	=	0.032 troy oz	
1 pound (lb)	=	0.4536 kilogram	(kg)
1 kg	=	2.2046 lb	
1 ton (2000 lb) (T)	=	0.9072 tonne	(t)
1 tonne (t)	=	1.1023 ton = 2205 lb	
1 troy ounce/ton (oz/T)	=	34.286 grams/tonne	(g/t)
1 g/t	=	0.0292 oz/ton	
1 g/t	=	1 part per million	(ppm)
1 ppm	=	1000 parts per billion	(ppb)
10,000 g/t	=	1%	

LEGEND

GEOLOGY

LOWER TO MIDDLE JURASSIC

5 Island Intrusions
- a) granodiorite to quartz diorite
- b) gabbro
- c) aplite

MIDDLE AND UPPER TRIASSIC

4 Karmutsen Formation (?)
- a) basalt ± agglomeratic
- b) altered basalt
- c) siltstone, minor basalt

Sicker Group

PENNSYLVANIAN AND PERMIAN

3 Buttle Lake Formation - limestone

LOWER DEVONIAN AND OLDER

2 Myra Formation (?)
- a) felsic volcanics
- b) jasper
- c) chert

1 Nitinat Formation - basaltic volcanics
- a) agglomerate
- b) foliated
- c) diabase
- d) porphyritic
- e) silicified
- f) cherty
- g) pillowed
- h) hornfels/metabasalt

SYMBOLS

- Claim post located in field
- Outcrop
- L4N — Soil sampling line
- Claim line
- Property boundary
- Foliation
- Quartz veining
- Bedding
- Road
- Stream
- ● 18283 Rock sample location and number with anomalous results (in ppb for Au, Pt, Pd; ppm for others, unless otherwise specified)
- Geological contact (approximate)
- Fault zone boundary (approximate)

Topography: contour interval 40 m

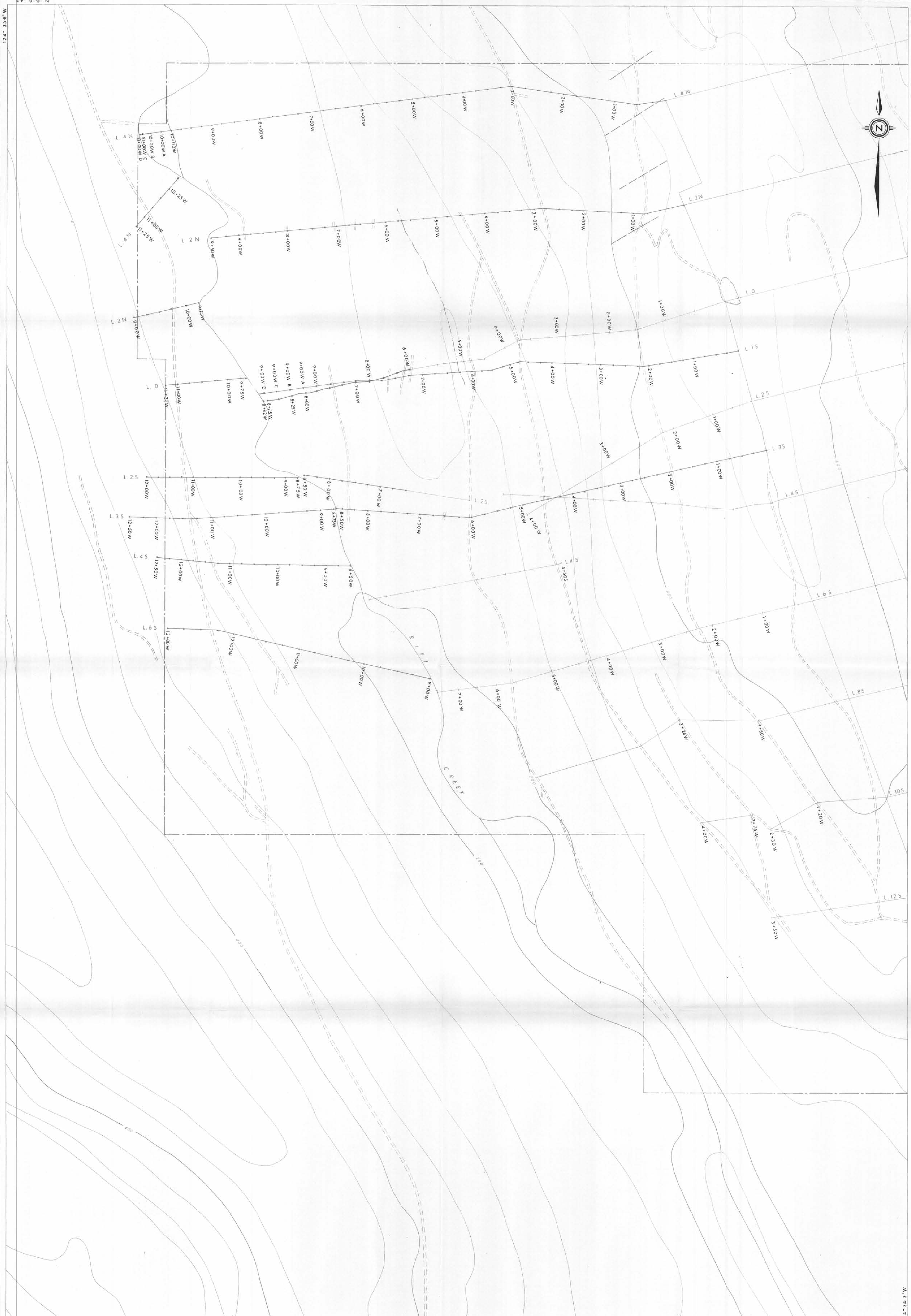
0 100 200 300 400 500 metres

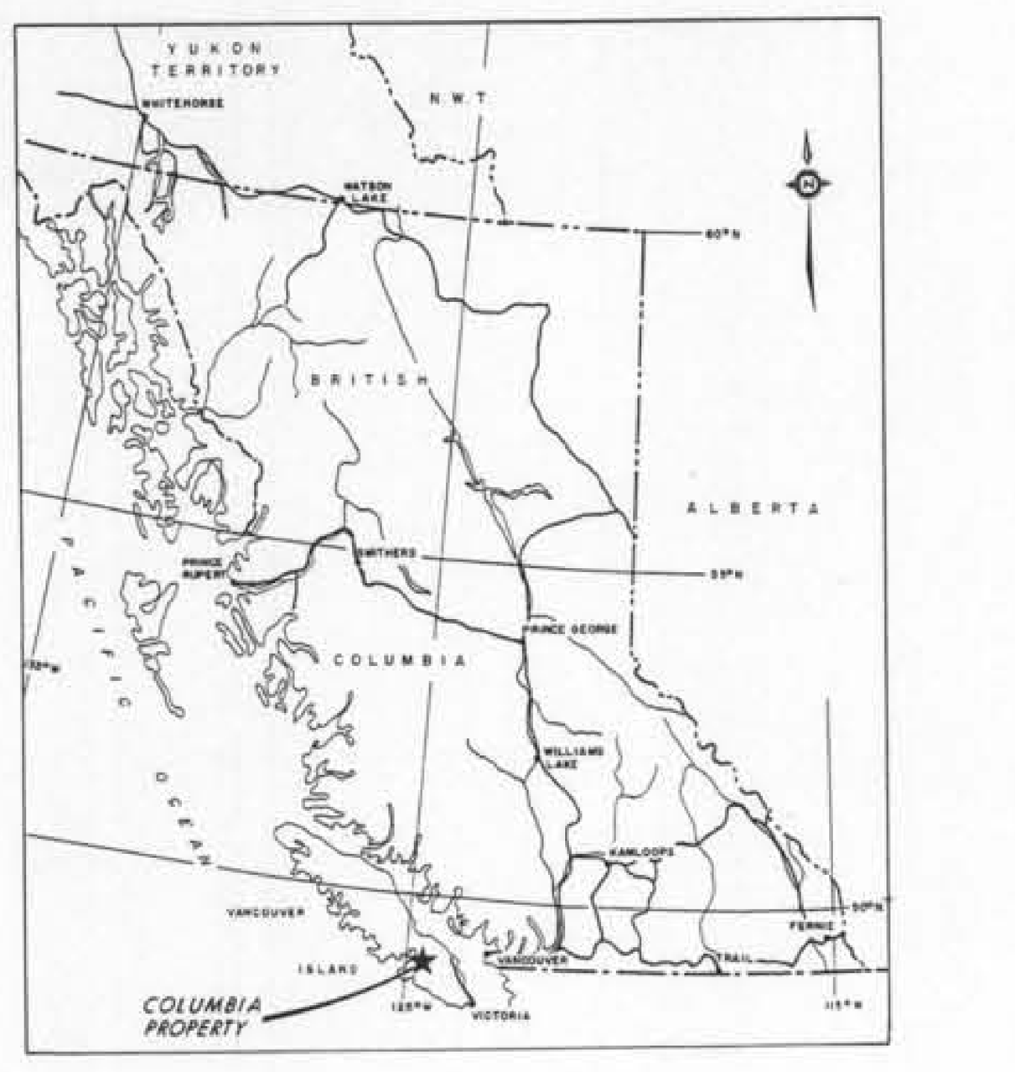
PAYTON VENTURES INC.

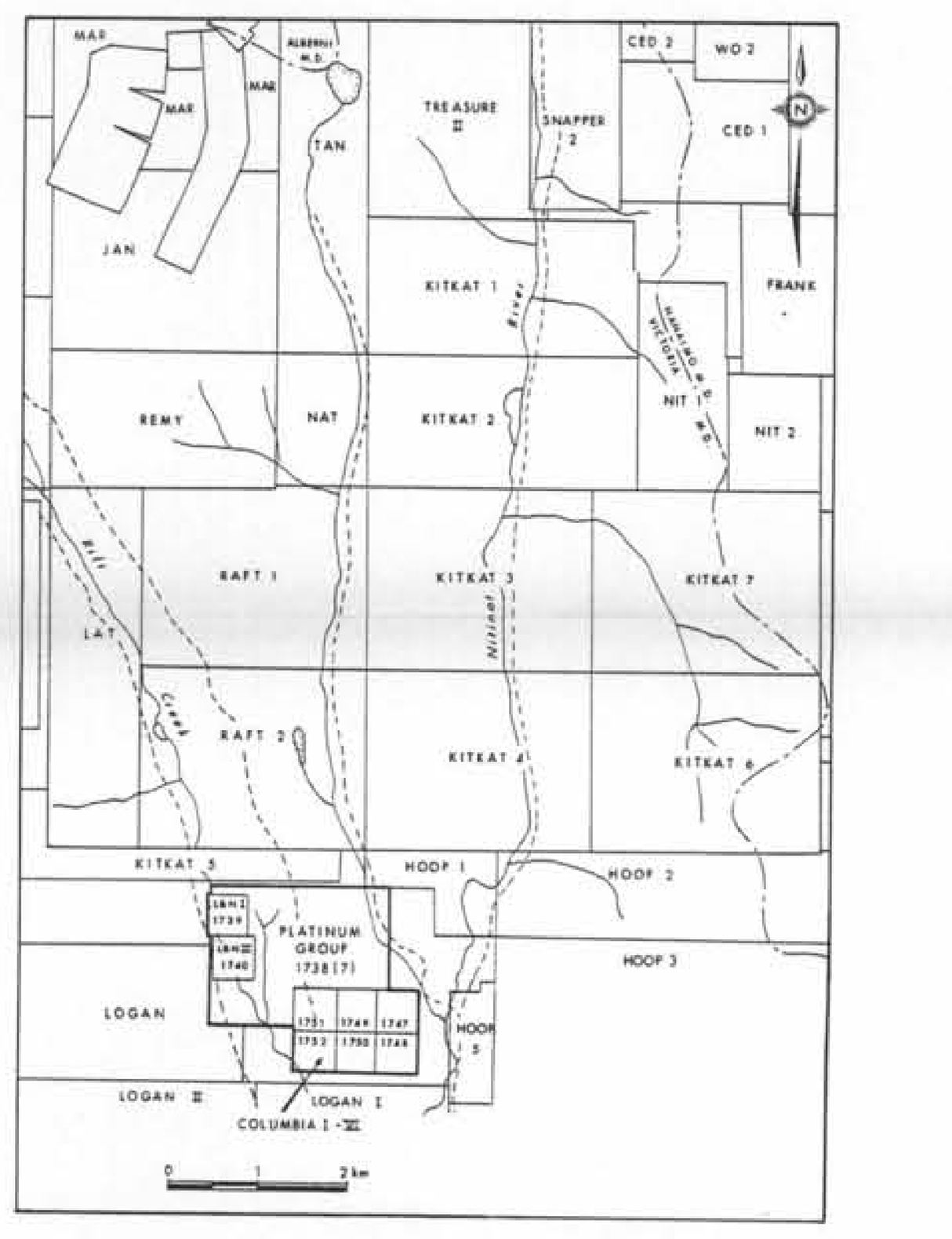
PROPERTY PLAN, GEOLOGY AND ROCK SAMPLING
COLUMBIA PROPERTY
VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
Scale:	1 : 5000	Drawn:	J. S.
Drawing No:	5	Date:	JANUARY 1988.

MPH Consulting Limited







LEGEND

─┼─┼─	1986 soil sampling line
─●─●─	1987 soil sampling line
— — —	Cut line (Kitkat grid B)
┌─·─	Columbia property boundary
═══	Road
─·─	Creek

0 50 100 150 200 250 metres

PAYTON VENTURES INC.

SOIL SAMPLE LOCATION MAP

COLUMBIA PROPERTY

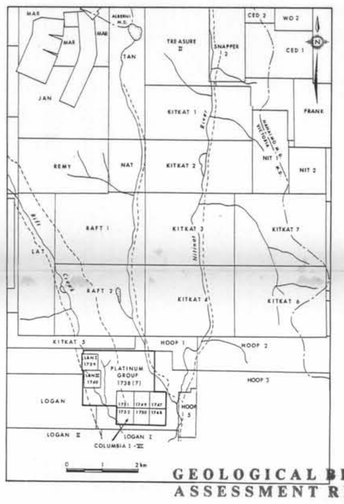
VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
Scale:	1 : 2 500	Drawn:	J. S.
Drawing No:	6	Date:	JANUARY 1988.

MPH Consulting Limited

49°01·5'N

124° 35·8'W



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,769

L 4N
L 2N
L 0
L 1S
L 2S
L 3S
L 4S
L 6S
L 2S
L 3S
L 4S
L 6S
L 8S
L 10S
L 12S
L 4S

18287 - 18 ppb Au, 2193 ppm Cu
18288 - 17 57 ppm Cu
18441 - 10 ppb Au
18295 - 10 ppb Au
17567 - 170 ppb Au
18443 - 380 ppb Au, 41 ppm Pb, 268 ppm Zn, 42 ppm As
18449 - 14 ppb Au
25108 - 72 ppb Au
18440 - 70 ppb Au
17571 - 2·06 g/t Au
18285 - 16·22 g/t Au, 3·7 ppm Ag, 43 ppm As
17561 - 56 ppb Au, 1654 ppm Cu
17560 - 16 ppb Au
17558 - 51 ppm As
17553 - 30 ppb Au
17568 - 38 ppm As
17570 - 64 ppm As

RIFT
CREEK

400

124°34·3'W

49°00'N

CONTOUR INTERVALS

	—— Au (ppb)	····· Ag (ppm)	— — As (ppm)
Threshold (not contoured)	15	0·4	13
Anomalous	20	0·6	19
Moderately anomalous	32	>0·8	29
Strongly anomalous	55	-	>50
	>99	-	-

LEGEND

- 1986 soil sampling line
- 1987 soil sampling line
- Cut line (Kitkat grid B)
- Columbia property boundary
- Road
- Creek
- ● 17571 Anomalous rock sample with selected results
- 5 Au - results in ppb
- 0·5 Ag
- 10 As - results in ppm

1986 results from Laanela (1986)
Only those values above Laanela's threshold are plotted.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,769

0 50 100 150 200 250 metres

PAYTON VENTURES INC.

Au, Ag, As SOIL GEOCHEMICAL RESULTS
COLUMBIA PROPERTY
VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
Scale:	1 : 2 500	Drawn:	J. S.
Drawing No:	7	Date:	JANUARY 1988.

MPH Consulting Limited

49°01'5"N

124°35'8"W

L 4N

L 2N

L 0

L 2S

L 3S

L 4S

L 6S

L 1S

L 2S

L 3S

L 4S

L 6S

L 8S

L 10S

L 12S

18287 - 18 ppb Au, 2193 ppm Cu

18288 - 1757 ppm Cu

18441 - 10 ppb Au

18295 - 10 ppb Au

17567 - 170 ppb Au

18443 - 380 ppb Au, 41 ppm Pb, 268 ppm Zn, 42 ppm As

18449 - 14 ppb Au

25108 - 72 ppb Au

18440 - 70 ppb Au

17571 - 2·06 g/t Au

18285 - 16·22 g/t Au, 3·7 ppm Ag, 43 ppm As

17561 - 56 ppb Au, 1654 ppm Cu

17560 - 16 ppb Au

17558 - 51 ppm As

17553 - 30 ppb Au

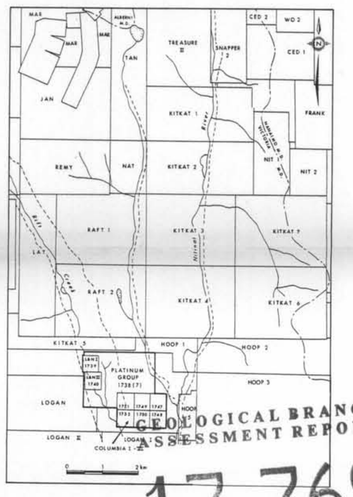
17568 - 38 ppm As

17570 - 64 ppm As

CREEK

400

700



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,769

CONTOUR INTERVALS

	Cu (ppm)	Pb (ppm)	Zn (ppm)
Threshold (not contoured)	92	12	66
Anomalous	124	15	84
Moderately anomalous	187	21	>118
Strongly anomalous	>312	>34	-

LEGEND

- 1986 soil sampling line
- 1987 soil sampling line
- Cut line (Kitkat grid B)
- Columbia property boundary
- Road
- Creek
- ● 17571 — Anomalous rock sample with selected results
  - 87 Cu
  - 10 Pb
  - 67 Zn
  - results in ppm

1986 results from Laanela (1986)
Only those values above Laanela's threshold are plotted.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,769

0 50 100 150 200 250 metres

PAYTON VENTURES INC.

Cu, Pb, Zn SOIL GEOCHEMICAL RESULTS
COLUMBIA PROPERTY
VICTORIA MINING DIVISION

Project No:	V 270	By:	T. N.
Scale:	1 : 2500	Drawn:	J. S.
Drawing No:	8	Date:	JANUARY 1988.

MPH Consulting Limited