REPORT ON GEOLOGY, GEOCHEMISTRY, MAGNETOMETER AND VLF-EM SURVEYS

HILL 60 PROPERTY
(Cow 1-6, 8, Namiko, Namiko 1 and 2 Fr claims)

Victoria Mining Division
NTS 92C/16E and 92B/13W
48°51'N Latitude, 124°01'W Longitude

for
INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.
June 23, 1989

G.M. Lorenzetti, B.Sc.

SUMMARY

An exploration program consisting of geologic mapping, soil and HMC stream sediment sampling, and geophysical surveys (VLF-EM and magnetometer) on the Hill 60 property (Cow 5,6,8 claims and Namiko 1,2 fractions) in the Victoria Mining Division, was carried out by MPH Consulting Limited from May 4 to May 14, 1989.

The Hill 60 property is underlain by rocks of the Paleozoic Sicker Group, Jurassic quartz dioritic intrusives, and Cretaceous Nanaimo Group sediments. Sicker Group rocks comprise a generally northwest-trending sequence of mafic pyroclastics of the Nitinat Formation, and interbedded chert, cherty sediment / tuffs, argillite, tuffaceous sediments and diabasic rocks of the Myra Formation and/or Sediment Sill Unit. Locally, feldspar porphyritic dykes, of Tertiary age, intrude Myra Formation/ Sediment-Sill Unit rocks.

Mineralization on the property is mainly in the form of disseminated and fracture-fill pyrite found in most rock types in variable amounts. Local pods of pyrrhotite were also noted.

A sample collected on the Cow 8 claim from a limonite-altered area in a fine-grained tuff, with trace pyrite, yielded 30 ppb Au, 1760 ppm Zn, 383 ppm Pb, 353 ppm Cu, 1.8 ppm Ag and 18 ppm W. A 5 cm wide shear zone between a mafic dyke and its cherty host yielded 30 ppb Au, 109 ppm Zn and 2061 ppm Mn (sample 1315). A 3 m wide quartz-carbonate zone in a cherty tuff/sediment yielded 198 ppm Cu, 229 ppm Zn, 0.5 ppm Ag, 86 ppm Ni, 4512 ppm Mn and 8 ppm W (sample 1345).

Eleven of the 25 HMC silt samples collected, yielded gold values ranging from 10 to 4350 ppb Au. Eight of these results came from silts collected from streams draining the northeast side of the ridge on the Cow 8 claim. The rocks underlying this area are quartz diorites of the Jurassic Island Intrusions outcropping at

the top of the ridge, and bedded cherts and cherty sediments of the Myra and/or Sediment-Sill Unit.

The rhodonite showing on the neighbouring Myra claim occurs within bedded cherts and cherty sediments of the Myra Formation/ Sediment-Sill Unit. This unit continues across the northeastern corner of the Cow 8 claim, northwest to the Chem property where the Stanley Creek and one other unnamed rhodonite showing also occur within this lithologic unit on the Cow 7 claim.

A soil geochemistry survey conducted on the Chem property (Grid B) in 1986 outlined a southwest trending gold anomaly with values up to 520 ppb. This anomaly projects onto the Cow 8 claim. The grid area is underlain by cherts and cherty tuffs/sediments of the Myra Formation and/or Sediment-Sill Unit, as is the northern part of the Cow 8 claim.

The gold results obtained from the HMC silt samples collected in this region of the property are encouraging and suggest that this gold anomaly may continue onto the Hill 60 property.

Soil geochemistry over the grid on the southwestern Cow 6 claim, outlined a northwest trending, slightly anomalous zone of coincident gold, copper, and zinc. This area of the grid is approximately coincident with the Sicker Group/quartz diorite contact.

The magnetometer survey outlined three magnetic domains, generally corresponding to the three lithologic units mapped in the area: Domain I - quartz diorite, Domain II - transition between the cherts and cherty sediments with the quartz diorite, Domain III - cherts and cherty sediments and pyroclastics. The VLF-EM survey identified several weak to very weak bedrock conductors, the majority of which are likely due to topographic effects. The strongest conductor occurs on the northeast part

of the grid and is coincident with the contact between the two magnetic domains.

Based on the results of this program, combined with previous work on neighbouring properties, the northeast facing slope of the Cow 8 claim appears to hold the most potential for locating a mineralized zone.

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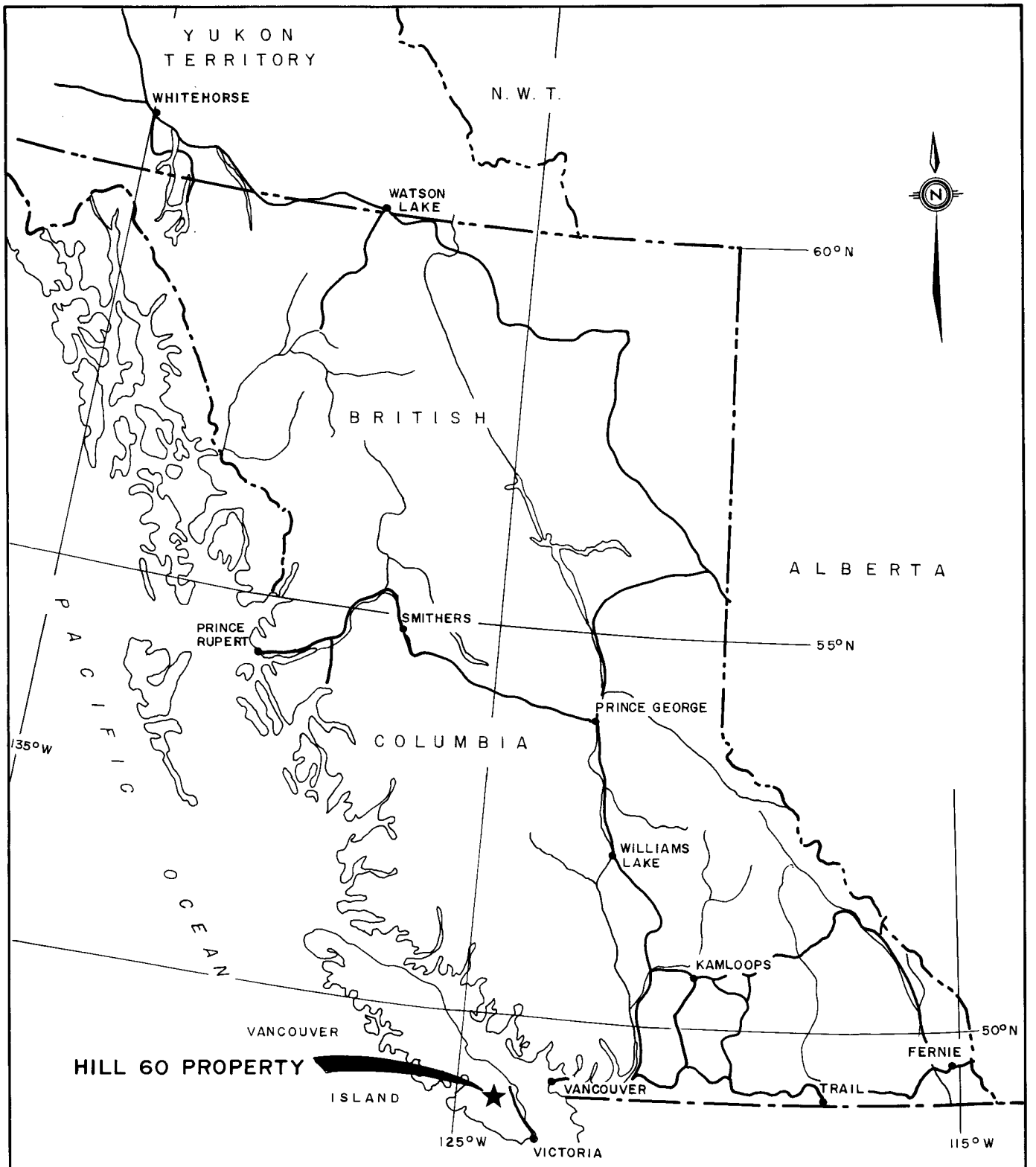


INTERNATIONAL CHEROKEE
DEVELOPMENTS LIMITED

GENERAL LOCATION MAP
HILL 60 PROPERTY

VICTORIA MINING DIVISION

Project No:	V 199	By:	G. A.
Scale:	1 : 8 000 000	Drawn:	J. S.
Drawing No:	1	Date:	JUNE 1989.

MPH Consulting Limited

1.0 INTRODUCTION

Mineral exploration was carried out on the Hill 60 property by MPH Consulting Limited personnel from May 4 to May 14, 1989, at the request of Mr. C. Steele of International Cherokee Developments Ltd.

Work on the property consisted of geological mapping, rock sampling, HMC stream sediment sampling, soil geochemistry, and a mag/VLF survey. A grid was established on the southwest part of the Cow 6 claim to cover previously mapped carbonate-altered Sicker Group (Nitinat Formation) rocks.

2.0 PROPERTY LOCATION, ACCESS, AND TITLE

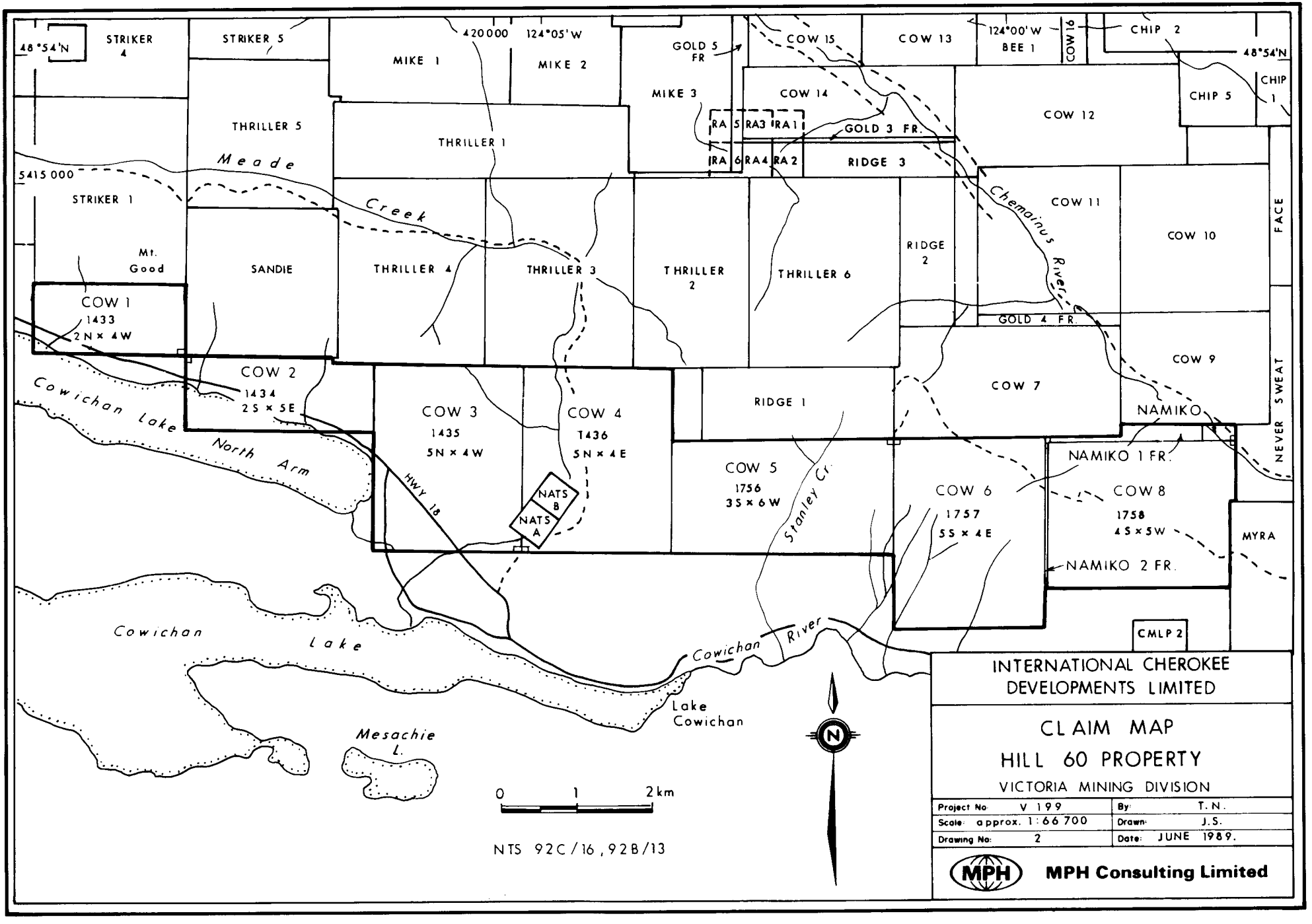
The Hill 60 property is located on Hill 60 Ridge approximately 20 km west-northwest of the city of Duncan, on Vancouver Island, British Columbia (Figure 1). The property is in the Victoria Mining Division, on NTS map sheets 92C/16E and 92B/13W and centred at approximately 48°51'N latitude, 124°01'W longitude (Figure 2).

Access to the property is via the Hill 60 Forest Service Road which intersects the Cowichan Valley Highway (Highway 18) approximately 13 km west of the Island Highway (Highway 1).

The Hill 60 property consists of 10 mineral claims owned by International Cherokee Developments Ltd., as summarized below:

Claim	Record No.	Units	Anniversary Date	Year Registered
Cow 1	1433 (3)	8	March 6, 1991	1985
Cow 2	1434 (3)	10	March 6, 1991	1985
Cow 3	1435 (3)	20	March 6, 1991	1985
Cow 4	1436 (3)	20	March 6, 1991	1985
Cow 5	1756 (7)	18	July 4, 1991	1986
Cow 6	1757 (7)	20	July 4, 1991	1986
	Total Units	96		
Cow 8	1758 (7)	20	July 4, 1991	1986
Namiko	1975 (7)	1	July 3, 1991	1987
Namiko 1 Fr	1976 (7)	1	July 3, 1991	1987
Namiko 2 Fr	1977 (7)	1	July 3, 1991	1987
	Total Units	23		

The anniversary dates shown have been updated to include the work that is recorded in this report. The Cow 1 to 6 claims are to be regrouped as the Stanley Group, while the Cow 8, Namiko, Namiko 1 Fr and Namiko 2 Fr are to be regrouped as the Hill 60 Group, when filing the Statement of Work for this year.


48°54'N
STRIKER 4
STRIKER 5
420000
124°05'W
MIKE 1
MIKE 2
GOLD 5 FR
COW 15
COW 13
124°00'W
BEE 1
COW 16
CHIP 2
48°54'N
MIKE 3
COW 14
CHIP 5
CHIP 1
THRILLER 5
THRILLER 1
RA 5
RA3
RA 1
GOLD 3 FR.
COW 12
RA 6
RA4
RA 2
RIDGE 3
Meade
Creek
5415 000
STRIKER 1
Chemainus River
COW 11
COW 10
FACE
Mt. Good
SANDIE
THRILLER 4
THRILLER 3
THRILLER 2
THRILLER 6
RIDGE 2
COW 1
1433
2N × 4W
GOLD 4 FR.
COW 9
COW 2
1434
2S × 5E
COW 7
NAMIKO
NEVER SWEAT
Cowichan Lake
North Arm
COW 3
1435
5N × 4W
COW 4
1436
5N × 4E
RIDGE 1
NAMIKO 1 FR.
HWY 18
NATS B
NATS A
COW 5
1756
3S × 6W
Stanley Cr.
COW 6
1757
5S × 4E
COW 8
1758
4S × 5W
MYRA
NAMIKO 2 FR.
CMLP 2
Cowichan
Lake
Cowichan River
Lake Cowichan
Mesachie L.
0
1
2km
NTS 92C/16, 92B/13
N
INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED
CLAIM MAP
HILL 60 PROPERTY
VICTORIA MINING DIVISION
Project No: V 199
By: T.N.
Scale: approx. 1:66 700
Drawn: J.S.
Drawing No: 2
Date: JUNE 1989.
MPH
MPH Consulting Limited

3.0 PREVIOUS WORK

Geological mapping in the area north of Cowichan Lake has been carried out by government geologists including J.T. Fyles (1955), J.E. Muller (1977, 1980a, 1980b, 1982), and A. Sutherland Brown (1986). N.W. Massey has recently conducted regional mapping and compiled previous mapping in the Cowichan Lake area (O/F, 1987). A B.Sc. thesis on rhodonite deposits on Vancouver Island (Cowley, 1979) also includes this area.

The Hill 60 Group, comprising the Cow 5, 6, and 8, Namiko, Namiko 1 Fr and Namiko 2 Fr claims, was staked in 1986 and 1987 by International Cherokee Developments Ltd.

Assessment work was conducted on the property in June of 1987 by MPH Consulting Limited. Work included geologic mapping (1:10,000), rock sampling and stream sediment sampling. A rhodonite showing occurs just east of the property boundary, within cherty sediments of the Myra and/or Sediment-Sill Unit of the Sicker Group and within 20 m of the Island Intrusions quartz diorite. The occurrence appears to be in the same stratigraphic position as other rhodonite deposits on Vancouver Island. The 1987 program yielded no anomalous gold values. However, other slightly anomalous results include 72 ppm As, 109 ppm Zn, 2226 ppm Mn and 169 ppm Sr from a carbonate-altered tuff; 30 ppb Au, 4.2 ppm Ag and 31.9% Mn from a rhodonite horizon; 132 ppm As and 24.2% Mn also from a rhodonite horizon; and 70 ppb Au and 4087 ppm Mn from hematitic chert float.

This area of Vancouver Island has several rhodonite, massive sulphide (base metal) and gold occurrences (Figure 4), a few of which have been mined in the past. Details of the economic setting and mineral occurrences in the area are included in section 4.8 of this report.

4.0 REGIONAL GEOLOGY

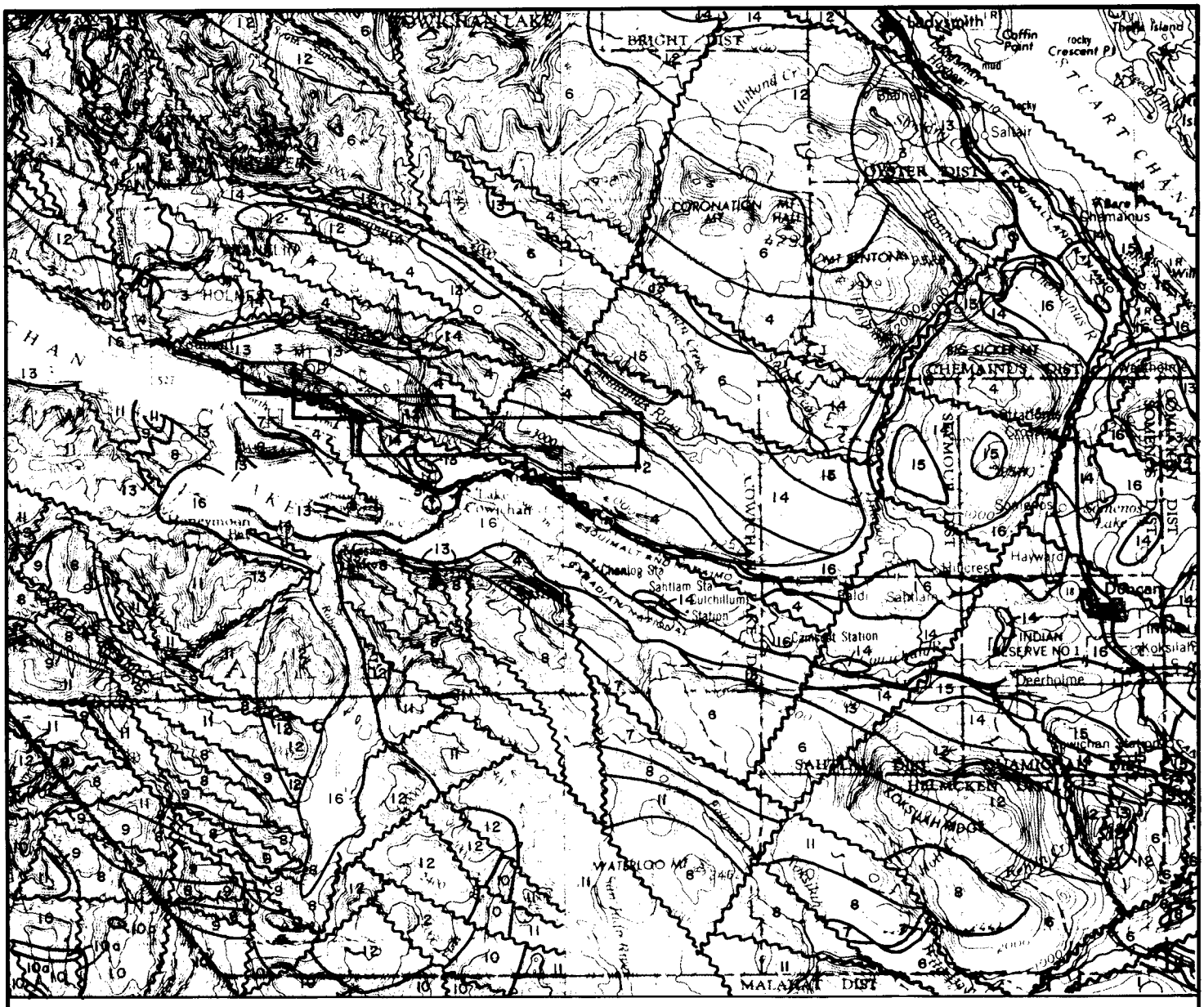
The Duncan-north Cowichan Lake area is underlain by a west-northwest trending belt of Paleozoic Sicker Group rocks, Triassic Karmutsen Formation basalts and Cretaceous Nanaimo Group sediments. The south Cowichan Lake area is underlain by the Karmutsen Formation, the Jurassic Quatsino Formation, and the Bonanza Group volcanics. Jurassic Island Intrusions occur in both areas (Figure 3). Recent government geological mapping has been carried out over the Cowichan Lake area by a number of geologists and compiled with previous work by J.T. Fyles, A. Sutherland Brown and P. Cowley (N.W. Massey, 1987).

4.1 Sicker Group

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

In the Cowichan Lake area, distinctive yet correlative lithologic units within the Sicker Group have been mapped by Massey (1987), who draws on Sutherland Brown's (1986) units. The Nitinat Formation and McLaughlin Ridge Formation are within the Youbou Subgroup, and the Cameron River Formation and Mount Mark Formation are within the Buttle Lake Subgroup. Although Muller's and Massey's formation designations are not interchangeable, an attempt to correlate them follows:

SICKER GROUP	**Upper Silurian to Lower Permian**
Buttle Lake Subgroup	
(after Massey, 1987)	(after Muller)
Mount Mark Formation	Buttle Lake Formation
Cameron River Formation	Sediment-Sill Unit and/or Myra Formation
Youbou Subgroup	
McLaughlin Ridge Formation	Myra Formation and/or Nitinat Formation
Nitinat Formation	



QUATERNARY

16 Glacial and alluvial deposits.

UPPER CRETACEOUS

Nanaimo Group

15 Extension - Protection Fm.: sandstone, conglomerate; minor siltstone, shale, coal.

14 Haslam Fm.: shale, siltstone, minor sandstone.

13 Comox Fm.: sandstone, conglomerate, minor siltstone, shale, coal.

JURASSIC

Lower to Middle Jurassic

12 Island Intrusions: granodiorite, quartz diorite

Lower Jurassic

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

UPPER PALEOZOIC AND ? OR TRIASSIC AND JURASSIC

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

TRIASSIC

Middle ? and Upper Triassic

Vancouver Group

9 Quatsino Fm.: limestone

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

PALEOZOIC

Sicker Group

PENNSYLVANIAN AND PERMIAN

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

PENNSYLVANIAN AND MISSISSIPPIAN

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

REF.: GSC OPEN FILES 701 and 821.

LOWER DEVONIAN AND OLDER

5 Saltspring Intrusions: meta-granodiorite, meta-quartz porphyry, quartz-sericite schist.

4 Myra Fm.: well bedded felsic tuff and breccia, argillite, rhyodacite in flows and sills, minor basic tuff, quartz-sericite schist, phyllite, massive sulphides.

3 Nitinat Fm.: pillow lava and breccia of augite (uralite) porphyry, basic tuff; minor chlorite-actinolite schist.

LOWER PALEOZOIC (OR YOUNGER ?)

2 Colquitz gneiss: quartz-feldspar gneiss

1 Wark gneiss: massive and gneissic metadiorite, metagabbro, amphibolite.

0 5 10km

N

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED

REGIONAL GEOLOGY MAP

HILL 60 PROPERTY

VICTORIA MINING DIVISION

Project No:	V 199	By:	G.A.
Scale:	1:250000	Drawn:	J.S.
Drawing No:	3	Date:	JUNE 1989.

MPH Consulting Limited

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

The **Myra Formation** (Unit 4, Figure 3) overlies the Nitinat Formation, possibly with minor unconformity. In the Nitinat-Cameron River area the Myra Formation is made up of a lower massive to widely banded basaltic tuff and breccia unit, a middle thinly banded albite-trachyte tuff and argillite unit, and an upper thick-bedded, medium-grained albite-trachyte tuff and breccia unit. In the lower unit, crudely layered, mottled maroon and green volcaniclastic greywacke, grit and breccia are succeeded by beds of massive, medium-grained dark tuff up to 20 m thick, interlayered with thin bands of alternating light and dark, fine-grained tuff with local fine to coarse breccias containing fragments of Nitinat Formation volcanics. The middle unit comprises a sequence of thinly interbedded, light feldspathic tuff (albite-trachyte or keratophyre composition) and dark marine

argillite which has the appearance of a graded greywacke argillite turbidite sequence. In the upper part of the middle unit, sections of thickly bedded to massive black argillite occur. The upper unit contains fine and coarse crystal tuffs in layers up to 10 m thick with local rip-up clasts and slabs of argillite up to 1 m in length as well as synsedimentary breccias of light coloured volcanic and chert fragments in a matrix of black argillite.

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

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

The type locality of the Myra Formation is Myra Creek, at the south end of Buttle Lake, about 160 km northwest of Duncan. 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 Ltd.'s Myra, Lynx, Price, and H-W massive sulphide (Cu-Zn-Pb-Au-Ag-Cd) deposits.

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

The **Sediment-Sill Unit** (Unit 6, Figure 3) is transitional between the Myra and Buttle Lake Formations. The upper and lower contacts are poorly defined. Thin-bedded, turbidite-like, very silicified or cherty, massive argillite and siltstone are interlayered with diabasic sills. The sediments show conspicuous dark and light banding on joint surfaces. The sills consist of a fine-grained, greenish black matrix containing feldspar phenocrysts up to more than 1 cm, commonly clustered in rosettes up to a few centimetres in diameter, producing a very distinctive "flower porphyry" appearance. Subophitic textures may also be visible. The sediments are dated as Mississippian in age, whereas the sills are believed to represent feeders to Triassic Karmutsen volcanics.

The **Buttle Lake Formation** (Unit 7, Figure 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 are present.

In the area southeast of Cowichan Lake, the Buttle Lake Formation consists of laminated, calcareous, grey siltstone and black argillite containing lenses of coarse-grained calcarenite, minor

massive beds of crinoidal limestone (about 1 m thick), and lenses and nodules of chert. The section was described by an earlier worker as mainly interbedded chert and limestone (Yole in Muller, 1980a).

The Buttle Lake Formation is up to 466 m thick (approximately 300 m thick southeast of Cowichan Lake). The age of the formation, based on fossil evidence, appears to be Middle Pennsylvanian, but may be as young as Early Permian (Muller, 1980a). This has been confirmed by recent dating work by Brandon and others (1986), including isotopic as well as conodont ages, which indicates that rocks of the Buttle Lake Formation are early Middle Pennsylvanian through Early Permian in age.

4.2 Vancouver Group

The **Karmutsen Formation** (Unit 8, Figure 3) volcanic rocks unconformably to paraconformably overlie the Buttle Lake Formation limestone to form the base of the Vancouver Group. They are the thickest and most widespread rocks on Vancouver Island. The formation consists mainly of dark grey to black, or dark green, tholeiitic pillow basalt, massive basalt, and pillow breccia. Flows are commonly aphanitic, feldspar porphyritic, and amygdaloidal. Pillow lavas generally occur toward the base of the section.

Conglomerate containing clasts of Sicker Group rocks and jasperoid tuff, forms basal sections in the Nitinat-Horne Lake area to the northwest. Karmutsen Formation rocks are generally relatively undeformed compared to Sicker Group rocks and are dated Upper Triassic and older.

Massive to thick-bedded limestone of the **Quatsino Formation** (Unit 9, Figure 3) is widespread in the area south of Cowichan Lake. The limestone is black to dark grey and fine-grained to microcrystalline.

Coarse-grained marble occurs in the vicinity of intrusive rocks. The majority of known economic skarn deposits on Vancouver Island are hosted by Quatsino limestone. Thin-bedded limestone also occurs within the formation. Fossils indicate an age of Upper Triassic (Muller and Carson, 1969).

4.3 Westcoast Complex

The **Westcoast Complex** (Unit 10, Figure 3) comprises a variety of plutonic and metamorphic mafic crystalline rocks, including amphibolite, diorite, and quartz diorite with homogeneous, agmatitic or gneissic textures. Dioritic or agmatitic bodies underlying or intruding the Nitinat Formation are included. Metamorphosed Karmutsen Formation and/or Sicker Group rocks grade locally into the complex and are believed to be its protolith, having been migmatized in Early Jurassic time. The mobilized granitoid portion of the complex is believed to be the source of the Island Intrusions and, indirectly, the Bonanza Group volcanics (Muller, 1981, 1982). Small bodies of recrystallized limestone found within the complex are believed to be derived mainly from the Quatsino Formation, and to a lesser extent from the Buttle Lake Formation.

4.4 Bonanza Group

Bonanza Group (Unit 11, Figure 3) stratigraphy varies considerably, as it represents parts of several different eruptive centres of a volcanic arc. Basaltic, rhyolitic, and lesser andesitic and dacitic lava, tuff, and breccia with intercalated beds and sequences of marine argillite and greywacke make up the Bonanza Group. In the area south of Cowichan Lake, the volcanics are described as dark brown, maroon, and yellow-grey massive

tuff, volcanic breccia, and massive or plagiophyric flows (Muller, 1982). Bonanza Group volcanics are considered to be Early Jurassic extrusive equivalents of the Island Intrusions.

4.5 Island Intrusions

Exposures of **Island Intrusions** (Unit 12, Figure 3) comprising mainly quartz diorite and lesser biotite-hornblende granodiorite occur throughout the area and are assigned an age of Middle to Upper Jurassic. Intrusive contacts with Sicker and Bonanza Group volcanic rocks, are characterized by transitional zones of gneissic rocks and migmatite, although contacts with Karmutsen Formation volcanic rocks are sharp and well-defined. Skarn zones occur at the contact of Island Intrusion rocks with Quatsino Formation limestone and less abundantly with Buttle Lake Formation limestone.

4.6 Nanaimo Group

Upper Cretaceous Nanaimo Group sedimentary rocks occur throughout the area, unconformably overlying Paleozoic Sicker Group rocks. Extensive exposures occur in the Chemainus and Cowichan River valleys. The formations present comprise the basal portions of the Nanaimo Group.

The **Comox Formation** (Unit 13, Figure 3) consists mainly of quartzofeldspathic, cross-bedded beach facies sandstone and lesser conglomerate. Numerous intercalations of carbonaceous and fossiliferous shale and coal are characteristic.

The **Haslam Formation** (Unit 14, Figure 3) is a nearshore 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 15, Figure 3) are beach and deltaic sands. Minor shale and coal are reported.

4.7 Structure

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

Asymmetric, southwest-verging, northwest trending antiformal fold structures, characterized by subvertical southwest limbs and moderately dipping northeast limbs, occur at Buttle Lake, in the Cameron-Nitinat River area, and north of Cowichan Lake. Well-developed foliation developed during metamorphism to chlorite-actinolite and chlorite-sericite schist, in steep and overturned limbs of folds. Folding may have occurred prior to intrusion of Triassic(?) mafic sills along axial planar surfaces in folded Sediment-Sill Unit rocks. Evidence from K-Ar dating also suggests Jurassic folding. Buttle Lake Formation limestones are relatively undeformed in some places, although in others, as in the Chemainus River Canyon, they are highly deformed, along with other Sicker Group rocks (Brandon and others, 1986). Vancouver Group units are not as intensely folded; gentle monoclinal and domal structures have been mapped. However, Karmutsen Formation volcanic rocks locally conform to the attitude of underlying Myra and Buttle Lake Formations (Muller, 1980a).

4.8 Economic Setting

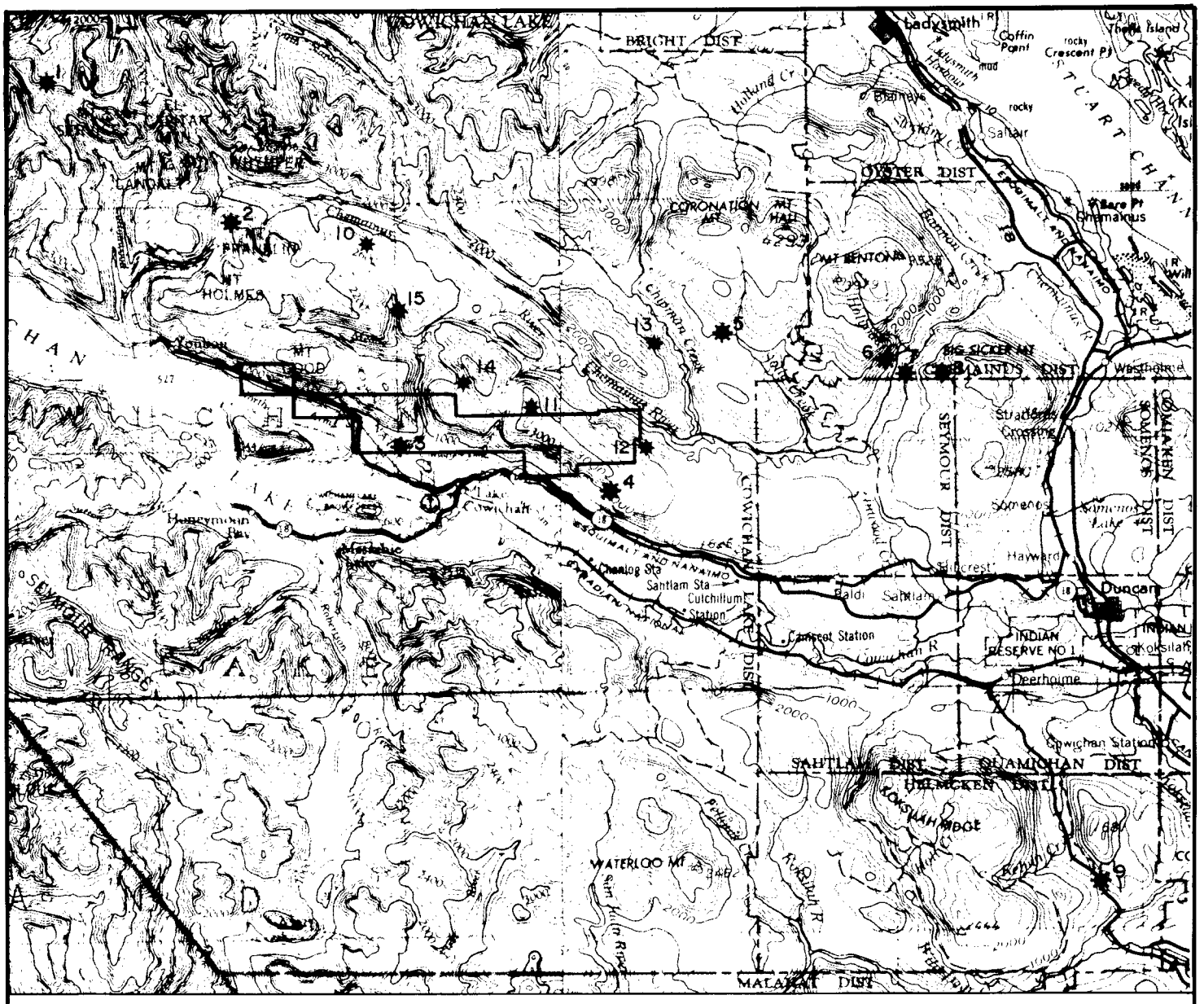
The Sicker Group, and to a lesser extent, the Vancouver Group of volcanics, have been explored intermittently since the 1890's for gold and base metal mineralization.

At Buttle Lake, approximately 140 km northwest of the Hill 60 property, the Myra Formation hosts Westmin Resources' volcanogenic massive sulphide deposits. Initially discovered in 1917, they were not recognized as volcanogenic deposits until the late 1960's. Ore minerals including sphalerite, chalcopyrite, galena, tetrahedrite-tennantite, minor bornite and covellite are hosted in pyritic, rhyolitic to rhyodacitic volcanic and pyroclastic rocks of the Myra Formation.

Reserves of the H-W mine are 13,901,000 t averaging 2.2% Cu, 5.3% Zn, 0.3% Pb, 2.40 g/t (0.07 oz/ton) Au and 37.7 g/t (1.1 oz/ton) Ag (Walker, 1983). From 1980 to 1982, 811,987 t of ore were milled, producing 7,306,880 kg Cu, 43,706,118 kg Zn, 6,455,040 kg Pb, 1,740,000 (56,000 oz) Au, 78,630,000 g (2,528,000 oz) Ag, and 58,500 kg Cd.

Another volcanogenic massive sulphide deposit in the Sicker Group is the Twin J mine near Duncan on Mount Sicker, 16 km east of the Hill 60 property. Two parallel ore bodies, 46 m apart, each containing pyrite, chalcopyrite, sphalerite and minor galena in a barite, quartz-calcite gangue and chalcopyrite in quartz, occur in schists believed to have been derived from acidic volcanics (Myra Formation).

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



GOLD OCCURRENCES

1. Amore
2. Comego
3. Meade Ck.
10. Mike

BASE METAL OCCURRENCES, DEPOSITS

5. Lara
6. Pauper
7. Copper Canyon
8. Twin J
9. King Solomon
15. Candy

OTHER OCCURRENCES

4. Hill 60
11. Stanley Creek (Rhodonite)
12. Myra (Rhodonite)
13. Never Sweat (Rhodonite)
14. Meade (Rhodonite)

0 5 10 km

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED

MINERAL OCCURRENCES LOCATION MAP HILL 60 PROPERTY

VICTORIA MINING DIVISION

Project No:	V 199	By:	G.A.
Scale:	1 : 250 000	Drawn:	J. S.
Drawing No:	4	Date:	JUNE 1989.

MPH Consulting Limited

On the Lara property, approximately 9 km northeast of the Hill 60 property, Abermin Corp. has traced the polymetallic volcanogenic massive sulphide Coronation and Coronation Extension Zones over a strike length of over 1500 m and to depths of 245 m. Average grades are 5.1 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 (0.24 oz/ton) Au, 229.7 g/t (6.69 oz/ton) 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.

Vancouver Island Gold Mine near Port Alberni is located on the Yellow claim adjacent to the Debbie property, a joint venture between Nexus Resource Corporation and Westmin Resources Ltd. who have recently completed driving an exploration adit on the Debbie property. New discoveries have yielded drill intersections of up to 4.25 g/t Au over 11.34 m (0.124 oz/ton Au over 37.2 feet) and 3.50 g/t Au over 18.20 m (0.102 oz/ton Au over 59.7 feet) from the Mineral Creek zone and 139.82 g/t Au over 14.36 m (4.078 oz/ton Au over 47.1 feet) and 38.98 g/t Au over 13.50 m (1.137 oz/ton Au over 44.3 feet) from the 900 Zone. The gold appears to be structurally controlled, at least in part.

Within an approximately 5 km radius of the Hill 60 property are the Hill 60, Stanley Creek, Myra, Never Sweat and Meade rhodonite and manganese occurrences. Manganese deposits may represent distal depositions of manganese-rich volcanogenic exhalation, but more likely represent proximal deposits around a number of hot springs (Cowley, 1979).

Hill 60, discovered in 1918, occurs in cherty tuffs of the Sicker Group with local lenses of red jasper which host rhodonite lenses. The average manganese content is 43.09% over 1.2 m. Significant oxidation has occurred here, which is necessary to transform rhodonite into manganese ore.

At the Stanley Creek occurrence, known since 1939, two lenticular masses of rhodonite several cm to 30 cm wide and about 6 m long lie parallel to bedding in Sicker Group cherty tuff.

The Myra occurrence, discovered in 1987, consists of several lenses of rhodonite and massive black manganese oxide up to 1.5 m wide and exposed for 40 m within a sequence of poorly bedded chert and cherty sediment.

The Never Sweat occurrence, also discovered in 1987, is composed of rhodonite bands up to 2 cm wide interlayered with chert/cherty siltstone and jasper. A sample contained 15.62% Mn and 65 ppm As.

The Meade manganese occurrence, known since 1939, comprises rhodonite lenses and manganese garnets in cherty tuffs of the Sicker Group. The lenses are up to 1 m wide and approximately continuous between the two exposures, in open cuts 60 m apart.

The Meade Creek placer gold occurrence, discovered in 1950, is located approximately 2 km east of the property.

5.0 1989 FIELD PROGRAM

The 1989 field program was completed between May 4 and May 14, 1989 and entailed geologic mapping, rock, soil and HMC silt sampling, and a magnetometer/VLF-EM survey on the Hill 60 property.

Following preliminary examination of previous results (Allen, 1987) a 6 line-km, chained and flagged grid was established over the southwestern Cow 6 claim. The grid includes a 0.7 km north trending baseline oriented along the western claim line of the Cow 6 claim. East-trending crosslines were established at 100 m spacing with 25 m sample station intervals. Lines 0+00N to 2+00N extend to 7+00E and lines 3+00N to 6+00N extend to 8+00E.

Soil geochemistry, magnetometer and VLF-EM surveys were performed over the entire grid. A total of 237, B-horizon soil samples were collected and analysed for Au by AAS and 31 elements by ICP at Rossbacher Laboratory Ltd. in Burnaby.

Reconnaissance geological mapping (1:10,000 scale) was carried out over selected areas of the property, while detailed mapping (1:2500 scale) was performed over the established grid. A total of 54 rock samples was collected and analysed for Au by AAS and 31 elements by ICP at Rossbacher Laboratory Ltd. of Burnaby. Rock sample descriptions are included in Appendix II. The stream sediment survey consisted of collecting 25 heavy metal concentrate samples which were analysed for gold and 31 elements by ICP, also at Rossbacher Laboratory Ltd.

5.1 Property Geology

The major geologic contacts between Paleozoic Sicker Group rocks and Jurassic Island Intrusions quartz diorite and Nanaimo Group sediments are essentially as previously mapped. Figure 5 shows the property geology at 1:10,000 scale, and has been compiled

with geologic information obtained over previous years. Lithologies were coded for simplification. A more detailed (1:2500) geology map of two creeks mapped in the grid area is shown in Figure 7 (outcrop was not observed elsewhere along the grid lines).

Sicker Group rocks comprise a generally northwest-trending sequence of basic pyroclastics, similar to rocks of the Nitinat Formation, and interbedded cherty sediments/tuffs, cherts and pyroclastics of the Myra Formation and/or Sediment-Sill Unit.

Pyroxene and feldspar-rich crystal tuffs are exposed in a 300 to 500 m wide belt along the southwest contact of a large quartz diorite intrusive body, in the southwest corner of the Cow 6 claim and the southern part of the Cow 5 claim. A small area in the northwest part of the Cow 5 claim was previously mapped as pyroxene crystal tuff and breccia.

Myra Formation and/or Sediment-Sill Unit rocks, comprising chert, cherty siltstone/tuff, argillite, tuffaceous sediments and diabasic sills, outcrop in northwest trending belts in the northeast corner of the Cow 8 claim and the southwestern corner of the Cow 6 claim.

The rhodonite showing on the neighbouring Myra claim occurs within bedded cherts and cherty sediments of the Myra Formation/ Sediment-Sill Unit. This unit continues across the northeastern corner of the Cow 8 claim, northwest of the Chem property, where the Stanley Creek and another unnamed rhodonite showing also occur within this unit on the Cow 7 claim.

The majority of the property is underlain by medium-grained quartz diorite of the Jurassic Island Intrusions.

Cretaceous Nanaimo Group sediments unconformably overlie the Sicker Group on the northeast and southwest corners of the property.

5.2 Lithologic Units

5.2.1 Nitinat Formation (Unit 1)

On the Hill 60 property, Nitinat Formation rocks are predominantly pyroxene-rich and feldspar-rich crystal tuffs (Units 1a and 1b). The rocks generally have a medium to dark green, epidote-chlorite rich, fine-grained groundmass with 20% to 30% each of fine-grained, greenish-grey, feldspar crystal fragments, and medium-grained, dark green, pyroxene crystal fragments. This unit ranges from massive to poorly bedded and is fine to coarse-grained.

This unit is predominant along the southwestern part of the property, outcropping in "Boundary", "Log" and Stanley Creeks.

The crystal tuff reportedly grades into lapilli tuff and agglomerate, containing fragments of feldspar-pyroxene porphyry.

Volcanic breccias and agglomerates, previously mapped on the property contain a pyroxene-rich, crystal tuff matrix (Unit 1a) with up to 70% feldspar/pyroxene porphyry fragments. This unit occurs on the western part of the Cow 5 claim.

5.2.2 Myra Formation and/or Sediment-Sill Unit (Unit 2)

The Myra Formation and/or Sediment-Sill Unit was previously mapped as Massey's Cameron River Formation (Allen, 1987). This unit has been divided into six subunits, and is predominantly sedimentary in nature.

Dark grey to black, thinly laminated to massive argillite (Unit 2a) grades into both siltstone and cherty siltstone. The argillite generally contains up to 1% fine-grained, disseminated pyrite. Previous mapping also noted chiastolite porphyroblasts (to 15%) which occur in foliated argillite with slaty cleavage.

Unit 2b is made up of chert, cherty siltstone and cherty tuff. Rocks of this unit are cryptocrystalline to very fine-grained, massive to thinly laminated (to 5 mm), and range from black to brown to light grey to blue-green. The rocks contain trace to 1% very fine-grained, disseminated pyrite. This unit is commonly interbedded with, and grades into, fine-grained tuff or siltstone. Approximately 50 m east of the property boundary, massive rhodonite is interlayered with thinly laminated cherts.

Unit 2c is a dark grey to dark brown, massive to thinly laminated, and generally very hard (silicified? hornfelsed?) siltstone, which is commonly interbedded with, and grades into, sandstone and chert. The sandstone (Unit 2d) is generally very fine to fine-grained. These units were previously mapped on the northeast Cow 8 claim and the northern part of the Cow 5 claim.

The rocks in Unit 2e are crystal tuffs and/or tuffaceous sediments, which are composed of dark greenish-grey to brown, hard, fine-grained sediments, or felsic volcanic fragments. This unit is generally massive to poorly bedded, grades into cherty siltstones or tuffs, and is exposed in a small outcrop in the central Cow 8 claim area.

A medium to dark grey to dark green-black, fine-grained, diabase sill (Unit 2f) was observed and mapped in "Boundary" Creek. The unit is approximately 50 m wide and oriented in a north-northwesterly direction. The pyroxenes appear to have been replaced

by chlorite (up to 5%); although contacts were not observed, they are likely sharp and are roughly parallel to the enclosing sediments.

5.2.3 Jurassic Island Intrusions (Unit 4)

A large body of quartz diorite underlies the majority of the property, flanked to the northeast and southwest by rocks of Units 1 and 2. On the east side of Stanley Creek, Unit 4 is up to 2.5 km wide, while on the west side of Stanley Creek it is up to 400 m wide.

The larger body of intrusive is medium-grained and equigranular with 75%(+) feldspar (mainly plagioclase), 10% quartz, 5% to 8% each of hornblende and biotite, and trace sphene. The intrusive body to the west was previously reported to be a slightly more matic phase than the larger body to the east, with up to 20% hornblende, up to 2% biotite, and similar quartz and feldspar contents.

5.2.4 Cretaceous Nanaimo Group (Unit 5)

Nanaimo Group sediments were observed on the southwest part of the property, and are assumed to occur in the extreme northeast part of the property in the Chemainus River Valley.

In the southwest, the unit is composed of thinly bedded to thinly laminated, dark grey, very fine-grained, soft, slightly calcareous mudstone (Unit 5a).

Topographically above this unit is a light to dark brown, medium to coarse-grained sandstone and conglomerate. A medium-grained sandstone supports subangular to rounded grains, of light to dark grey chert and felsic volcanic material. This unit contains localized carbonaceous lenses (to 1 cm) and wood fragments. The unit is generally massive, with coarsening-up cycles observed as one goes up the creek.

5.2.5 Tertiary(?) Sooke Intrusions (Unit 6)

Feldspar porphyry dykes up to 5 m wide were observed in "Boundary" Creek striking north-northwesterly, cutting Unit 2. They contain 25% white stubby feldspar phenocrysts to 4 mm in diameter, <5% hornblende phenocrysts, and occasional rounded quartz phenocrysts in a fine-grained, medium grey groundmass, with minor fine-grained disseminations and pods of pyrite. On nearby properties, these dykes cut both the Sicker Group and Karmutsen Formation.

5.2.6 Structure

The Sicker Group rocks lie in generally northwest-trending belts along the northeast and southwest sides of a quartz diorite intrusion. Bedding is not common in Nitinat Formation (Unit 1) pyroclastics, but the stratigraphic trend appears to follow the regional trend. The northwestern exposure of Nitinat rocks was previously noted as being in unconformable contact with the overlying Myra Formation/Sediment- Sill Unit (Unit 2) sediments (Allen, 1987).

In the northwest part of the property, the sediments of Unit 2 (previously mapped along the roads) have bedding orientations at approximately 109°/57-83°SW, while in Stanley Creek, the sediments are folded around an approximately east-trending axis. At this location, the sediments strike at about 120°/28-42°NE and 020-049°/29-48°SE.

The sediments exposed in "Boundary" Creek are striking in a southwesterly direction, with dips varying between 51°NW and 80°SE, defining the presence of a synform in the creek area.

Unit 2 rocks in the northeasternmost part of the property, strike south-southeasterly, with moderate to steep dips to the southwest, while in the western part of the belt the sediments strike east-southeast and dip moderately to the northeast. This

information suggests that the area is underlain by an overturned limb of either an antiform or a synform. Therefore, Sicker Group rocks in this area have undergone two phases of folding: regional scale folding about an east-southeast trending fold axis and local folding about a northeast-trending fold axis.

In the grid area, east-southeast and southeast trending shear zones were observed in Sicker Group rocks. The shears are up to 10 cm wide with vertical to steep northeast dips.

On a regional scale, the quartz diorite (Unit 4) is sill-like, but locally it crosscuts the stratigraphy. To the west of Stanley Creek, Unit 4 narrows abruptly to a body about 400 m wide. Previous regional mapping has attributed this narrowing to an offset along a major fault following Stanley Creek. However, upon reconnaissance mapping, evidence for the presence of a major fault was not observed.

Cretaceous Nanaimo Group sediments unconformably overlie Nitinat Formation rocks on the southern part of the property. The sediments strike about east to east-southeast, parallel to regional structural trends, and dip 41-72°S.

5.3 Mineralization and Lithogeochemical Results

Mineralization is primarily pyrite occurring as disseminations and blebs within fractures, quartz and quartz-carbonate veins, and throughout the volcaniclastic, sedimentary and intrusive rocks on the property. Local pods of pyrrhotite were also noted.

The quartz diorite (Unit 4) and the Nitinat Formation pyroclasticks (Unit 1) are mineralized with <2% fine-grained disseminated

pyrite, while the Unit 2 sedimentary rocks generally contain only trace to a maximum of 1% pyrite. Nanaimo Group sediments generally contain up to trace disseminated pyrite.

Samples collected from the quartz diorite (1335 and 1337) during this program, and the previous program, generally did not contain any anomalous elements. However, sample 1336, collected from a 0.8 m wide rusty zone in quartz diorite on the Cow 8 claim, yielded elevated results for copper (100 ppm), zinc (110 ppm) and nickel (50 ppm).

Samples collected from the Nitinat Formation generally contain elevated values in copper (113 to 127 ppm), but otherwise do not contain any anomalous elements. Sample 1305, located in "Boundary" Creek, is from a 0.7 to 1 m wide, silicified and slightly carbonatized shear zone in Unit 2 rocks, containing up to 7% disseminated pyrite, and yielding 92 ppm Cu and 116 ppm Zn. A carbonate-altered shear zone was previously mapped in "Log" Creek and noted to contain "sporadic patches of blue-green mica" and "traces of disseminated arsenopyrite(?)" (Allen, 1987). Sample 1319, collected from this zone of alteration, ran 102 ppm Cu, 93 ppm As and 147 ppm Sr; these figures concur with previous results.

Samples collected from the sediments of Unit 2, on the southwestern Cow 6 claim, yielded background values for the elements examined. Sample 1308, collected from a zone of intense silica and carbonate alteration, striking at approximately 140°, yielded 111 ppm As.

In the northwest corner of the Cow 8 claim, sample 1322 from a 20 cm x 1 m limonitic 'patch' in a fine-grained tuff of Unit 2, with trace disseminated pyrite, yielded 30 ppb Au, 1760 ppm Zn, 383 ppm Pb, 353 ppm Cu, 1.8 ppm Ag, 18 ppm W and 14.33% Fe.

Other samples collected from this unit occassionally contained elevated values in copper (up to 91 ppm), molybdenum (up to 23 ppm) and nickel (up to 60 ppm). Sample 1345, collected from a 3 m wide quartz-carbonate zone, striking at 100°, yielded 198 ppm Cu, 229 ppm Zn, 0.5 ppm Ag, 86 ppm Ni, 4512 ppm Mn and 8 ppm W. Sample 1315 was collected from a 5 cm wide shear zone between a matic dyke and its cherty host; values of 30 ppb Au, 109 ppm Zn and 2061 ppm Mn were returned.

Quartz veins cut the volcaniclastics of Unit 1 and the sediments of Unit 2. The majority of the veins are barren of mineralization, although locally, veins contain trace to 5% fine-grained disseminated pyrite. Sample 1345a, collected from a 10 cm wide quartz vein cutting Unit 2(?) rocks in "Log" Creek, contains $\leq$5% pyrite and ran 101 ppm Mo and 214 ppm Cu.

A rhodonite showing, located approximately 80 m east of the Cow 8 claim, comprises several lenses of rhodonite and massive black manganese oxide (up to 1.5 m wide and 5.2 m long) occurring in two distinct horizons within a sequence of bedded cherty sediments. Samples previously collected from these lenses contained up to 31.90% Mn and 30 ppb Au. An extension of this horizon onto the Cow 8 claim was not observed during this program.

5.4 Stream Sediment Survey

A total of 25 pan concentrated silt samples was collected from various drainages on the Hill 60 property. One to two kilogram samples were collected using a 10-mesh sieve. The heavy mineral fraction was further concentrated using a flotation procedure, then analysed for Au by AAS and 31 elements by ICP. Sample locations and selected results are plotted on Figure 5. Results are presented in Appendix IV.

Eleven of the 25 HMC silt samples collected yielded elevated gold values ranging from 10 to 4350 ppb Au. Eight of these results came from silts collected from streams draining the northeast side of the ridge on the Cow 8 claim. The rocks underlying this area are quartz diorites of the Jurassic Island Intrusions outcropping at the top of the ridge, and bedded cherts and cherty sediments of Unit 2.

A soil geochemistry survey conducted on the adjacent Chem property (Grid B) in 1986 outlined a southwest-trending gold anomaly with values ranging to 520 ppb. This anomaly projects onto the Cow 8 claim. The grid area is also underlain by cherts and cherty tuffs/sediments of Unit 2.

The gold results obtained from the HMC silt samples collected in this region of the property are encouraging and suggest that this gold anomaly may continue onto the Hill 60 property.

Samples 20522, 20523 and 20524 were collected at various elevations from a north-northeast trending creek near the eastern boundary of the Cow 8 claim (and near the Myra Rhodonite Showing). The silt samples yielded anomalous values for Au (90, 120, 880 ppb Au, respectively); all other elements were at background levels.

Sample 20525, collected from an approximately parallel creek immediately west, ran 4350 ppb Au. The remaining samples collected on the Cow 8 claim yielded gold values ranging between 10 and 240 ppb Au. Locally, elevated values for Cu (150 ppm Cu in sample 20511), As (161 ppm As in sample 20509) and Zn (105 ppm Zn in sample 20517) coincide with the anomalous gold values.

The only other silt sample that ran elevated gold was collected from a tributary to Stanley Creek on the Cow 5 claim. Sample 20516 yielded 160 ppb Au, 347 ppm As, 229 ppm Cu, 160 ppm Zn, 14 ppm Mo and 21 ppm Sb. Sample 20514, collected from Stanley Creek

(near the junction with 20516 creek), yielded 151 ppm Cu, 146 ppm Zn, 87 ppm As and 0.6 ppm Ag. This area is underlain by argillites, cherts, and cherty sediments of Unit 2.

More detailed prospecting and geologic mapping should be done in these two areas in order to determine the source of these elevated values.

5.5 Soil Geochemistry Survey

A total of 237 soil samples was collected at 25 m intervals from the B-horizon (at depths of 5 to 30 cm) along approximately 6 km of grid lines. Samples were analysed for Au by AAS and for 30 elements by ICP. Certificates of analyses are presented in Appendix IV.

The grid is located in the southwest Cow 6 claim, consisting of seven east-west trending lines 100 m apart. The grid was established to cover a carbonate-altered zone in "Log Creek", in an attempt to locate indications of mineralization associated with the alteration. Results for Au, Ag, and Cu, Pb, Zn are plotted on Figures 7 and 8 respectively, at 1:2500 scale.

A general geostatistical evaluation of this data set was used in defining the anomalous vs. the background concentrations. In all cases except for Au, this value is defined as the arithmetic mean plus 2 times the standard deviation.

The following table summarizes the background values, above background and anomalous limits.

Geochemical Contour Intervals

	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
Minimum	5	0.1	4	1	29
Maximum	60	1.1	235	265	235
Above Background	>5	≥0.3	≥39		≥81
Anomalous	≥20	≥0.5	≥55		≥100

The majority of the values for the elements plotted in Figures 7 (Au, Ag) and 8 (Cu, Pb, Zn) are at background levels, with a few isolated above background to anomalous results occurring in the north-central to northeastern part of the grid. This region includes: L3N - 4+25E to 7+50E, L4N - 4+00E to 6+50E, and L5N - 3+75E to 5+00E. These values lie within an approximately northwest-trending "zone" which is approximately coincident with the Sicker Group/quartz diorite contact.

Within this "zone", gold values range from above background levels of 10 ppb Au to anomalous levels at 60 ppb Au. Five of eight elevated values occur on L3N between 4+25E and 7+50E. An isolated spot value of 60 ppb Au occurs on the baseline at 1+75N, with a slightly elevated silver value of 0.5 ppm occurring at L2N.

Silver values are generally at background levels in this "zone", with values ranging to 0.6 ppm Ag. The highest silver value (1.1 ppm Ag) occurs at L5N - 6+00E, on the northeast edge of the "zone".

Copper values range from 4 to 235 ppm over the grid area. Three anomalous values occur within the northwest-trending "zone", occurring at: L3N - 5+25E (113 ppm Cu), L4N - 4+50E (235 ppm Cu) and L5N - 3+75E (98 ppm Cu).

Lead concentrations range from 1 to 265 ppm. Elevated lead values generally occur on the southern part of the grid, which is underlain by sediments of the Nanaimo Group. (Rocks collected from this unit contain background levels of lead.) The highest value occurs at L0 - 1+50E (265 ppm Pb).

Zinc values range from 29 to 235 ppm. Elevated values also occur within the northwest-trending "zone" at L4N - 4+50E (235 ppm Zn, coincident with elevated Au, Cu, and Ag), and L5N - 4+00E (147 ppm Zn). Two anomalous concentrations occur on line 1N at 5+50E and 7+00E, with values of 116 ppm and 104 ppm, respectively. This area of the grid is underlain by volcaniclastics of Unit 1.

Areas requiring further prospecting and sampling are the northwest extent of the grid, in order to trace out the northwesterly-trending zone corresponding to the geologic contact. Extensions to the grid should be made toward the north and then west of the present grid.

5.6 Magnetometer and VLF-EM Surveys

The gradiometer and VLF-EM surveys were conducted with an EDA Omni Plus field unit and an EDA Omni Plus Base station. Diurnal variations in the geomagnetic field were monitored and subsequently removed from the data when the field unit was down loaded to the base station. The gradiometer and VLF-EM readings were taken at 12.5 m intervals along east-west trending lines spaced at 100 m. A total of 6.0 line-km of gradiometer and VLF-EM surveys was conducted along the base line and wing lines, by MPH Consulting Limited under the supervision of Mr. Kevin Lund, B.Sc., who is the author of the following section of this report.

The VLF-EM method measures the distortions of the primary field emanating from a network of military radio transmitters. The distortions are caused by local changes in bedrock conductivity. The EDA Omni Plus VLF-EM system is a no orientation system measuring up to 3 VLF-EM frequencies simultaneously. Specifications on the EDA Omni Plus receiver can be found in Appendix V.

The EDA Omni Plus was tuned to two transmitting stations. The 'in-line' station chosen was Jim Creek, Washington, at 24.8 kHz and the ORTHO station used was Cutler, Maine, at 24.0 kHz.

The Jim Creek (24.8 kHz) station was chosen to couple with north-south stratigraphic trends. The 'ortho' VLF-EM is usually plotted parallel to the base line and can be used to reflect major resistivity contrasts. The profiles have only 7 plotting points. Therefore, the results from the Cutler, Maine transmitting station are not plotted and included here with this report.

The results of the gradiometer and VLF-EM survey are plotted on a digitized grid to best reflect actual positions of the geophysical measurements. The grid is registered to the topographic map developed in the field during the geologic mapping portions of the exploration program.

The total field magnetics and vertical gradients results are presented as an isomagnetic contoured plan map at a 1:2500 scale (Figures 9 and 10). A contour interval of 50 nT was utilized to highlight the subtle magnetic relief in the total field data. A contour interval of 5 nT/m was utilized on the vertical gradient data. Values less than zero were not contoured in the vertical gradient data, however, they were posted.

The VLF-EM survey results are presented in profile format (Figure 11). The 'in-line' measurements from the Jim Creek, Washington transmitter are plotted along the lines.

5.6.1 Discussion of Results

Three magnetic Domains are interpreted from the total field magnetics and supported in part by the vertical gradient data.

Domain 1 exhibits the strongest magnetic amplitudes measured within the survey area. Domain I is characterized by total field magnetic measurements ranging from 56150 nT to 56800 nT. Domain I is observed to trend northwest. Domain I appears to be a broad feature in the northeastern portion of the survey area. Several narrow features are observed across the property. Domain I is interpreted to likely reflect the Island Intrusions or Karmutsen Formation. The Island Intrusives have been observed to have a high magnetic susceptibility in the southern portion of Vancouver Island (Arkani-Hamed and Strangway, 1987).

Domain II exhibits magnetic amplitudes ranging between 55,900 nT and 56,150 nT. Domain II is observed as a transition between the sediments mapped as Unit 2 and Unit 5, possibly underlying Domain II.

Domain III exhibits the lowest magnetic amplitudes, typically less than 55900 nT, measured in the survey area. The areas mapped as tuff and cherty tuff consisting of Units 1 and 2 underlie Domain III.

The VLF-EM results measured from the Jim Creek, Washington transmitter identified several weak to very weak bedrock conductors. The VLF-EM responses are interpreted to reflect lithologic contacts or topographic effects. Conductor C-1 located in the northeastern portion of the survey area trends northwest. Conductor C-1 is coincident with the interpreted magnetic contact between Domains I and II. Conductor C-1 is interpreted to reflect the contact between the Island Intrusions and sediments. Several of the weak interpreted conductors are attributed to topographic effects.

6.0 CONCLUSIONS

Based on this and previous work programs conducted on the Hill 60 property the following can be concluded:

1. The property is underlain by a northwest trending sequence of matic volcaniclastics (Nitinat Formation?) and cherty tuffs and sediments of both(?) the Myra Fromation and the Sediment-Sill Unit of the Sicker Group. Medium-grained quartz diorite of the Jurassic Island Intrusions is predominant over most of the property. The Cretaceous Nanaimo Group sediments unconformably overlie the Sicker Group. Local Tertiary(?) feldspar porphyritic dykes or plugs have been observed.

2. Pyrite occurs as disseminations and blebs on fracture surfaces in quartz veins and throughout most of the rock types.

3. In the northwest corner of the Cow 8 claim, a limonitic patch (0.2 x 1.0 m) within fine-grained tuff, contains trace disseminated pyrite. Sample 1322 contained 30 ppb Au, 1760 ppm Zn, 383 ppm Pb, 353 ppm Cu and 1.8 ppm Ag. Sample 1345, from an easterly striking 5 cm wide shear zone at a mafic dyke/chert contact contained 30 ppb Au and 2061 ppm Mn.

4. Quartz veins which cut the Sicker Group rocks sampled during this program did not contain above background concentrations of base or precious metals.

5. Evidence for the extension of the rhodonite showing located 80 m east of the Cow 8 claim was not found during this program. Previous samples of the lenses contained up to 31.9% Mn and 30 ppb Au.

6. Anomalous gold (90 to 4350 ppb) was contained in four heavy metal concentrate (HMC) silt samples in the northeast part of the ridge on the eastern Cow 8 claim.

7. The Grid B gold-in-soil anomaly on the adjacent Chem property projects in a southwest direction onto the Cow 8 claim.

8. The soil survey grid which covers the southwest Cow 6 claim over a carbonate alteration zone, delineated a weak gold anomaly (10 to 60 ppb) at L3N between 4+25E and 7+50E. Local elevated lead concentrations (to 265 ppm) occur over the southern part of the grid which is underlain by Nanaimo Group sediments.

9. A VLF-EM/Mag survey conducted over the soil grid outlined three magnetic domains which probably reflect differences in general geology. Several weak bedrock conductors were attributed to changes in lithologies and/or topographic effects.

7.0 RECOMMENDATIONS

Based on this years' and previous work on the Hill 60 and adjacent properties the following recommendations are made.

1. It is recommended that prospecting, sampling and geologic mapping as well as repeat HMC sampling in the creeks which contained anomalous gold in silts in the northeast Cow 8 claim, be conducted to determine the source and confirm the anomaly.

2. Additional HMC silt sampling, especially in the creeks which drain the areas on the property underlain by Myra Formation cherty sediments and tuffs, is recommended.

3. North and west extensions should be made to the grid in order to trace out the northwest trending soil anomaly which appears to be coincident with the geologic contact. Additional prospecting over the anomalous area is recommended.

4. A small soil grid should be placed over the northeastern Cow 8 claim area underlain by the cherty unit within the Myra Formation which hosts the manganese bearing horizon on the adjacent property.

5. Sampling of structures such as shear zones, especially those which cut the Myra Formation should remain a high priority during further exploration.

Respectfully submitted,
MPH CONSULTING LIMITED

G.M. Lorenzetti, B.Sc.

CERTIFICATE

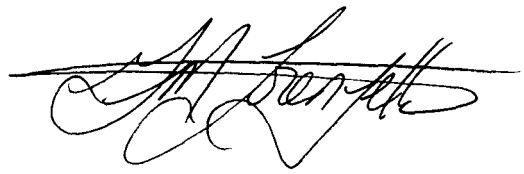
I, Gwenda M. Lorenzetti, do hereby certify that:

1. I am a graduate in geology of the University of British Columbia (B.Sc. 1985).

2. I have practised within the geological profession for two years.

3. The opinions, conclusions, and recommendations contained herein are based on field work carried out by myself and MPH Consulting Limited personnel from May 4 to 14, 1989.

4. I own no direct, indirect, or contingent interest in the subject property or shares or securities of International Cherokee Developments Ltd. or associated companies.



G.M. Lorenzetti, B.Sc.

Vancouver, B.C.
June 23, 1989

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APPENDIX I

List of Personnel
and
Statement of Expenditures

MPH

LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

Cow 8, Namiko Claims, Namiko 1,2 Fractions

FIELD COSTS:

Personnel:

G.M. Lorenzetti, B.Sc., Project Geologist		
3.84 days @ $350	$1,345.00	
T. Hayes, Field Supervisor		
3 days @ 350	1,050.00	
		$2,395.00
Food and Accommodation: 6.83 persondays		451.66
Equipment Rental:		
4WD Truck 6.5 days @ $90	585.00	
Rock Saw 30 samples @ 1	30.00	
		615.00
Disbursements:		
Fuel	111.49	
Miscellaneous Equipment and Supplies	25.80	
Maps, Reproduction	3.54	
Transportation (Ferry, etc.)	55.75	
Communications	2.05	
Shipping	Ø	
Laboratory Analyses:		
9 HMC silts (Au, ICP) @ $37.75	339.75	
30 rocks (Au, ICP) @ 15.25	457.50	
		995.88
Administration @ 15% on disbursements		149.38
		4,606.92
Report Cost (Apportioned)		
0.194 x $5,298.53		1,024.26
		$5,631.18

MPH

LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

Cow 1 to 6 Claims

FIELD COSTS:

Personnel:

G.M. Lorenzetti, B.Sc., Project Geologist			
8.16 days @ $350	$2,855.00		
G.M. Yip, B.Sc., Geologist			
10 days @ 275	2,750.00		
		$ 5,605.00	
Food and Accommodation: 18.17 persondays		1,200.74	
Equipment Rental:			
4WD Truck 7.5 days @ $ 90	675.00		
Magnetometer/VLF-EM 3 days @ 175	525.00		
Computer 3 days @ 50	150.00		
Rock Saw 24 samples @ 1	24.00		
		1,374.00	
Disbursements:			
Fuel	27.01		
Miscellaneous Equipment and Supplies	106.17		
Maps, Reproduction	41.54		
Transportation (Ferry, etc.)	93.00		
Communications	3.91		
Shipping	218.35		
Laboratory Analyses:			
16 HMC silts (Au, ICP) @ $42.75	684.00		
24 rocks (Au, ICP) @ 15.25	366.00		
247 soils (Au, ICP) @ 12.75	3,021.75		
		4,561.73	
Administration @ 15% on disbursements		684.26	
		13,425.73	
Report Cost (Apportioned)			
0.806 x $5,298.53		4,274.27	
		$17,700.00	

Report Costs

Gwenda Lorenzetti, B.Sc. Project Geologist	7.75 days	@ $350	$2,712.50
Barbara Thomae, B.Sc. Research Geologist	3.0 days	@ 350	1,050.00
Kim Shotton, B.Sc. Geologist Assistant	3.25 hrs	@ 35	113.75
Tim Neale, B.Sc. Geologist	1.25 days	@ 350	437.50
Kevin Lund, B.Sc. Geophysicist	2 hrs	@ 50	100.00
Gunther Yip, B.Sc. Geologist	1 hour	@ 35	35.00
	Subtotal		4,448.75
Map Reproduction - blacklines, 7 copies			55.44
Typing	53 pages	@ 7.75/pg	410.75
Drafting	4.6 hours	@ 25.00	115.00
Report Copying	7 copies		135.00
	Subtotal		849.78
Administration @ 15% on disbursements			127.47
	Total		$5,426.00

APPENDIX II

Rock Sample Descriptions
and
Selected Lithogeochemical Results

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number:	1301				
Location:	Cow 6 claim; Boundary Creek, 68 m from station BL 2+25N	35	2	59	29 As
Rock Type:	Conglomerate				2782 Ba
Sample Size:	Grab				14 W

Rusty brown weathered, medium-grained, quartz sandstone with rusty matrix, grades into a very rusty weathered conglomerate with subrounded to subangular clasts to 1.5 cm in length, in a quartz-carbonate matrix. Light to dark grey cherty clasts contain trace disseminated pyrite.

Sample Number:	1302				
Location:	Cow 6 claim; Boundary Creek, 130 m from station BL 2+25N	6	6	83	
Rock Type:	Cherty tuff				
Sample Size:	Grab				

Medium to dark green, buff-weathered, silicified, intensely fractured, massive cherty tuff, locally with black oxidized surfaces and limonitic staining, with trace very fine-grained disseminated pyrite. Chloritic groundmass. Faint crystal outlines. No reaction to HCl.

Sample Number:	1303				
Location:	Cow 6 claim; Boundary Creek, 161 m from station BL 2+25N	127	9	63	
Rock Type:	Tuff				
Sample Size:	Composite grab over 2 m				

Very rusty weathered, medium to dark grey-green, fractured, silicified tuff. Lower contact with unrusty rock at approximately 117/38 (?)SW. Carbonate veinlets, to 2 mm wide, are randomly oriented throughout and carbonate "masses" occur to 5 mm in length; locally, the carbonate-alteration is intense. Fragments of tuff to 4 mm in length occur in the carbonates. Approximately 1% pyrite occurs as blebs in fractures and disseminated throughout.

Sample Number:	1304				
Location:	Cow 6 claim; Boundary Creek, 221 m from station BL 2+25N	113	1	51	
Rock Type:	Feldspar pyroxene crystal tuff				
Sample Size:	Grab				

Buff to dark brown to rust weathered, light to dark green, silicified, fractured, feldspar pyroxene crystal tuff. The feldspar crystals are generally <1mm in size and the pyroxene crystals are to 4 mm in length. Rusty quartz veinlets/lenses (<2 mm wide) are randomly oriented throughout. Mineralization includes masses of fine-grained pyrite to 2 cm and disseminated throughout the rock (approximately 5%). No reaction to HCl.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1305					
Location:	Cow 6 claim; Boundary Creek, 232 m from station BL 2+25N	92	4	116	
Rock Type:	Shear zone in chert/cherty tuff				
Sample Size:	Chip over 0.7 m				

Light grey and white, locally pinkish, silicified shear zone, 0.7 to 1 m wide, oriented at 124/80-90(?)NE. On footwall side of shear is an approximately 3 cm wide band?/lens? of very soft, dark grey, sulphide rich material (gouge?). Rock contains quartz stringers to 2 mm wide. Note that sample 1304 is possibly from the southeastern end of the sheared outcrop. Mineralization includes stringers and pods of pyrite (approximately 5-7%) in the most intensely altered rock. Minor carbonate alteration.

Sample Number: 1306					
Location:	Cow 6 claim; Boundary Creek, 261 m from station BL 2+25N	10	16	22	93 As
Rock Type:	Quartz vein in chert/tuff				
Sample Size:	Composite grab over 2 m				

Rusty silicified zone, approximately 1 m wide and traceable for about 6 m, strikes at about 153. Possible quartz vein, 2 cm wide in a medium to dark green, silicified tuff and medium grey chert. No reaction to HCl. Quartz contains limonitic fractures and trace very fine-grained disseminated pyrite.

Sample Number: 1307					
Location:	Cow 6 claim; Boundary Creek, 74 m up east branch	52	9	44	
Rock Type:	Quartz vein				
Sample Size:	Composite grab over 1 m				

Rusty weathered, massive, medium grey, pyritic chert with an approximately 2 cm wide quartz vein (no orientation possible). Limonitic quartz contains up to 1% pyrite in blebs and is crosscut by rust-stained fractures. No reaction to HCl.

Sample Number: 1308					
Location:	Cow 6 claim; 89 m up west branch of Boundary Creek Rock Type:	18	7	73	111 As
Rock Type:	Intensely altered tuff (?)				
Sample Size:	Composite grab over 2 m				

Rust to black weathered, milky-yellow to light green-grey to grey pink, intensely altered tuff(?). Sample has been silicified and contains randomly oriented, very small (<0.5 mm wide) carbonate veinlets (possibly ankerite). Coarse grained and disseminated pyrite (<1%) occurs in the carbonate lenses.

Sample Number: 1309					
Location:	Cow 6 claim; 89 m up west branch of Boundary Creek	9	1	19	
Rock Type:	Cherty tuff(?)				
Sample Size :	Grab				

Buff to brown weathered, white to light grey-green, silicified cherty tuff, with rust-stained fractures and <1% very fine-grained disseminated and cubic pyrite. Sample contains minor quartz veinlets <4mm wide. No reaction to HCl. Note that sample was taken at top of waterfall above sample 1309.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1310					
Location:	Cow 6 claim; Boundary Creek	13	1	62	
Rock Type:	Chert				
Sample Size:	Chip across 70 cm				

White and light-grey, and pale pink and grey-green laminated, fine-grained, sugary, chert with minor limonitic fractures and trace very fine-grained disseminated pyrite. Jointing in rocks at 052/71SE. No reaction to HCl.

Sample Number: 1311					
Location:	Cow 6 claim; Boundary Creek	32	1	43	
Rock Type:	Mafic dyke				
Sample Size:	Grab				

Buff to rust to dark brown weathered, soft, mafic rock, with <1% fine-grained disseminated pyrite throughout. Chlorite and epidote alteration, with local formation of euhedral crystals. No reaction to HCl.

Sample Number: 1312					
Location:	NW part of Cow 8 claim	11	1	20	
Rock Type:	Chert				
Sample Size:	Composite grab over approximately 10 m				

Buff to light brown and locally rusty weathered, grey-green, fractured chert with trace to 1% very fine-grained disseminated pyrite, predominantly along fractures. No reaction to HCl.

Sample Number: 1313					
Location:	NW part of Cow 8 claim	89	1	47	58 Ni
Rock Type:	Chert				
Sample Size:	Chip over 20 cm				

Small 20 cm x 20 cm deep rusty-red patch in cherty siltstone/tuff with approximately 1% finely disseminated pyrite and MnO2 stain. Rocks are intensely fractured, predominantly at 107/90, and limonite-stained. Sample is light grey and green to medium greenish-grey, banded and locally epidotized.

Sample Number: 1314					
Location:	NW part of Cow 8 claim	55	17	65	59 As
Rock Type:	Cherty siltstone				24 Mo
Sample Size:	Chip over 0.5 m				

Light orange-brown to dark rusty-brown weathered, medium to dark grey-green, cherty siltstone with local lenses of pyrite (to 2 cm x 2 mm) and 2-3% disseminated and cubic pyrite. At sample location, bedding orientation of rocks is 124/52N. Minor quartz stringers (to 5 mm wide) and limonitic fractures randomly cut cherty rock.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1315					
Location:	NW part of Cow 8 claim	36	7	109	30 Au
Rock Type:	Gouge				2061 Mn
Sample Size:	Chip over 15 cm				

Very soft, limonitic gouge material in sheared contact between light grey-green, locally limonitic, cherty host and chloritized, fine-grained mafic dyke. The dyke is approximately 2.5 m wide and oriented at 090/82N. Bedding(?) in the cherts appears to be at 130/68NE. The shear zone at the contact is 5 cm wide. Trace to 1% disseminated pyrite occurs in unsheared rocks.

Sample Number: 1316					
Location:	NW part of Cow 8 claim	55	1	73	
Rock Type:	Quartz vein				
Sample Size:	Chip over 10 cm				

Dark grey-green cherty sediments host a 0.5 to 2 cm wide quartz vein, oriented at 110/34NE. Vein contains inclusions of wall rock to 0.5 cm in diameter. Trace pyrite at contact with wall rock. Sample includes 8 cm of wall rock.

Sample Number: 1317					
Location:	NW part of Cow 8 claim	56	1	45	
Rock Type:	Quartz vein				
Sample Size:	Chip over 15 cm				

Medium to dark-green chert/cherty siltstone hosts a quartz vein, oriented at 123/74-82SW. The vein is 1-3 cm wide, anastomosing, fractured and brittle, with small inclusions (<3 mm) of wall rock. Trace disseminated pyrite is present in host rock.

Sample Number: 1318					
Location:	Cow 6 claim; creek in grid area	113	13	94	
Rock Type:	Altered tuff				
Sample Size:	Grab				

Medium to dark green, fractured, silicified, carbonate-altered tuff with trace disseminated pyrite. Carbonate veinlets to 3 mm wide cross cut and infill fractures. Sample location is 10 m downstream from first occurrence of intensely carbonate-altered rock.

Sample Number: 1319					
Location:	Cow 6 claim; creek in grid area	102	16	65	93 As
Rock Type:	Carbonate altered tuff				19 Sb
Sample Size:	Chip over 1 m				

Limonite stained, light to dark green-grey, sheared, silicified, carbonate-altered tuff with 1-2% disseminated sulphides. Zone is approximately 2 m wide, and can be traced in the creek for about 20 m. Sample is variably altered, from moderate to intense.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1320					
Location:	NW part of Cow 8 claim	7	2	17	
Rock Type:	Intensely altered chert/cherty siltstone				
Sample Size:	Composite grab over 1.5 m				

White to light blue-grey, fractured, intensely altered chert/cherty siltstone unit with limonite stained fractures and trace disseminated pyrite. Minor quartz stringers (to 2 mm wide) cut rock and are in turn offset by fractures. No reaction to HCl. No relict textures. Joints in rocks at sample location at 148/68NE and 360/72E.

Sample Number: 1321					
Location:	NW part of Cow 8 claim	40	1	48	
Rock Type:	Pyroxene crystal tuff				
Sample Size:	Composite grab over 1.5 cm				

Buff weathered, dark grey-green, slightly chloritized and silicified pyroxene crystal tuff with trace to 1% disseminated and blebs of pyrrhotite. Pyroxene crystals are stubby and <1 mm in length. No reaction to HCl.

Sample Number: 1322					
Location:	NW part of Cow 8 claim	353	383	1760	30 Au
Rock Type:	Limonitic tuffs				1.8 Ag
Sample Size:	Chip over 20 cm				14.33% Fe
					18 W

A "patch" of light yellowish-brown to deep red-brown-black weathered rock is approximately 20 cm wide and 1 m long. The "patch" is oriented(?) at 172/50NE. This limonitic area occurs in a fine-grained tuff with minor epidote alteration. Trace disseminated pyrite is visible on least altered surfaces and limonite stains fractures. No reaction to HCl. Sample is over width and along length of area.

Sample Number: 1323					
Location:	Cow 6 claim; creek in grid area	46	3	25	26 Mo
Rock Type:	Quartz vein				
Sample Size:	Chip across 10 cm				

The quartz vein is 1-10 cm wide, averaging 3-4 cm, and is oriented at 104/90(?). The vein material is fractured and sugary, with locally rusty stained fractures. No sulphides were observed.

Sample Number: 1324					
Location:	Cow 6 claim; creek in grid area	25	3	13	
Rock Type:	Altered tuff(?)				
Sample Size:	Grab				

A 2 m wide slightly rusty zone in the centre of the creek is oriented at approximately 174. The altered rock is a light greyish green, silicified, slightly carbonate-altered, and contains trace to 1% disseminated and blebs (to 2 mm) pyrite and minor limonitic fractures. Sample 1323 was taken at the lowermost exposure of the zone.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1325					
Location:	Cow 6 claim; creek in grid area	126	5	48	
Rock Type:	Chert/cherty tuff				
Sample Size:	Composite grab over 1 m				

Very fine-grained, dark grey, silicified, bedded, cherts/cherty tuffs(?) with 1% disseminated pyrrhotite and 1% fine-grained disseminated pyrite. Minor chlorite alteration. Bedding is at 164/80-90SW. Sample was collected perpendicular to bedding.

Sample Number: 1330					
Location:	Cow 6 claim south west corner; Border Creek	42	2	14	
Rock Type:	Vein quartz ?				
Sample Size:	Float; approx. 10cm x 5cm				

Float. Massive, grey-green vein quartz. With numerous hairline fractures. Trace of disseminated pyrite in masses (<2 mm) within fractures. Fractures are also coated with a rusty orange residue.

Sample Number: 1345a					
Location:	Cow 6 claim; creek in grid area	214	1	30	101 Mo
Rock Type:	Quartz vein				
Sample Size:	Chip across 20 cm				

A 10 cm wide, slightly warped, sugary, quartz vein is oriented at 042/75-90NW. The vein cuts a dark grey, silicified tuff. Mineralization occurs mainly along the margins of the quartz vein, including 2-3% disseminated and masses of pyrite and to 1% disseminated sphalerite, while 2% disseminated, blebs and crystals of pyrite occur throughout. The sample includes 5 cm of wall rock from both sides.

Sample Number: 1346a					
Location:	Cow 6 claim; creek in grid area	123	3	65	10 Mo
Rock Type:	Altered tuff(?)				
Sample Size:	Chip across 1 m				

Variably rusty, banded, altered tuffs(?) are light greyish green to dark green, silicified, and epidote altered with trace to 1% disseminated and cubic pyrite. The sample is slightly fractured with pyritic infilling. Bands are oriented at 123/88NE. Sample was collected perpendicular to banding.

The following rocks were collected and described by Ted Hayes

Sample Number: 1331					
Location:	Cow 8 claim; 170 m down Creek north from junction	82	2	71	242 As
Rock Type:					16 Sb
Sample Type:	Grab				

Rusty grey area 2.5 m wide, strikes 330 (NW), fine-grained.

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1332 Location: Cow 8 claim Rock Type: Sample Type: Grab		49	1	53	
Rusty black in colour, fine-grained, 2-5% pyrite.					
Sample Number: 1333 Location: Cow 8 claim; 88 m north of junction in Creek Rock Type: Sample Type: Grab from float		2104	25	63	1.3 Ag 159 Co 16.81% Fe
Rusty, 25-50% pyrite, angular rock 1 ft square.					
Sample Number: 1334 Location: Cow 8 claim Rock Type: Sample Type: Grab		91	2	74	
White, grey, pale green in colour, 2% pyrite in fractures.					
Sample Number: 1335 Location: Cow 8 claim; 370 m south of Silt 117 Rock Type: Intrusive Sample Type: Grab		32	2	39	
Rusty zone striking 40NW in intrusive rocks, 1-2% sulphides, 3 m wide.					
Sample Number: 1336 Location: Cow 8 claim; 340 m south of Silt 117 Rock Type: Intrusive Sample Type: Grab		100	4	110	
Pale green, rusty in colour, 0.8 m wide zone in intrusive rocks.					
Sample Number: 1337 Location: Cow 8 claim; 315 m south of Silt 117 Rock Type: Intrusive Sample Type: Grab		20	2	61	
Rusty, white, green, grey in colour, 2-5% pyrite, 2 m wide altered zone in intrusive.					
Sample Number: 1338 Location: Cow 8 claim; 250 m south of Silt 117 Rock Type: Sample Type: Grab		20	2	87	
Dark green, rusty in colour, 2% pyrite, near contact with intrusive.					

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1339 Location: Cow 8 claim; 135 m south of Silt 117 Rock Type: Argillite Sample Type: Grab		50	7	51	
Black, rusty in colour, 2% pyrite in fractures.					
Sample Number: 1340 Location: Cow 8 claim; 145 m down creek north from junction of Silt 117 Rock Type: Quartz vein, argillite Sample Type: Grab		80	1	45	
White, rusty black in colour, pyrite in fractures, 6 cm wide, strike 25 (NE).					
Sample Number: 1341 Location: Cow 8 claim; 525 m down creek from Road, 25 m west in slide area Rock Type: Quartz vein Sample Type: Grab		7	1	46	
White, pale green, rusty in colour, 16 cm wide.					
Sample Number: 1342 Location: Cow 8 claim; 525 m down creek from Road, 80 m west in slide area Rock Type: Chert Sample Type: Grab		48	2	67	
White-rusty yellow, 2% pyrite in fracture, 1 m wide.					
Sample Number: 1343 Location: Cow 8 claim; 525 m down creek from Road, 75 m west in slide area Rock Type: Chert Sample Type: Grab		14	1	21	
Black, pale green to yellow in colour, 2% pyrite in fractures.					
Sample Number: 1344 Location: Cow 8 claim; 525 m down creek from Road, 70 m west in slide area Rock Type: Mudstone Sample Type: Grab		13	12	34	33 As 14 Mo
Black, rusty yellow in colour, 2% pyrite, 1 m wide, strikes 070 (NE).					
Sample Number: 1345 Location: Cow 8 claim; 775 m down creek from Road Rock Type: Quartz carbonate zone Sample Type: Grab		198	3	229	4512 Mn
White, rusty, dark green in colour, pyrite in fractures, 3 m wide, striking 100 (E).					

		Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1346					
Location:	Cow 8 claim; 805 m down creek from Road	12	2	24	
Rock Type:					
Sample Type:	Grab				

Rusty patches, pale green to white in colour, 5-10% pyrite, 3 m wide. Acid fizzes in fractures.

Sample Number: 1347					
Location:	Cow 8 claim; 815 m down creek from Road	4	3	19	2390 Mn
Rock Type:	Carbonate zone in creek				204 Sn
Sample Type:	Grab 0.8 m wide				

Grey, white, yellow in colour, 2-5% pyrite. Acid fizzes in white area of rocks.

Sample Number: 1348					
Location:	Cow 8 claim; 848 m down creek from Road	13	5	13	
Rock Type:	Quartz vein				
Sample Type:	Grab 20 cm wide				

Pale green, rusty white in colour, 2-5% pyrite in fractures, east side of Creek.

Sample Number: 1349					
Location:	Cow 8 claim; 868 m down creek from Road	7	2	21	
Rock Type:	Quartz altered zone				
Sample Type:	Grab 2 m wide				

White, rusty pale green in colour, 5-10% pyrite, from middle of Creek.

Sample Number: 1350					
Location:	Cow 8 claim; 720 m down creek from Road	16	9	43	23 Mo
Rock Type:	Mudstone				
Sample Type:	Grab 0.5 m wide				

Black, rusty in colour, 5-10% pyrite. White area cuts surface fizz with acid.

Sample Number: 1351a					
Location:	Cow 8 claim; 270 m down creek from Road	33	46	87	
Rock Type:	Chert				
Sample Type:	Float				

Rusty grey, pale green in colour, 1-2% pyrite in fractures.

The following rocks were collected and described by Gunther Yip.

	Cu ppm	Pb ppm	Zn ppm	Other ppm
Sample Number: 1351				
Location: Cow 5 claim-south central; Stanley Creek	33	46	87	
Rock Type: Cherty tuff				
Sample Size: Float, approx. 15cm X 5cm				

Grey-green, fractured cherty tuff. Cut by numerous grey-white quartz stringers (<2 mm). Trace of finely disseminated pyrite within the hairline fractures and the quartz stringers.

Sample Number: 1352				
Location: Cow 5 claim-central; Stanley Creek	14	2	42	
Rock Type: Quartz diorite				
Sample Size Grab				

Dark grey-green, fine grained equigranular quartz diorite, with 60% mafic minerals including hornblende and biotite, 30% feldspar and 10% quartz. Mafic minerals have altered to chlorite.Trace to 1% disseminated pyrite on fracture surfaces.

Sample Number: 1353				
Location: Cow 5 claim-central; Stanley Creek	34	14	51	
Rock Type: Chert				
Sample Size: Chip/grab over 1.5m				

Light grey chert layer within a dark, blue-grey,cherty argillite.Chert layer is approx 5 to 10 cm thick with an attitude of 121/28NE. Chert is cut by massive, white randomly orientated quartz stringers. Mineralization is present in both the argillite and the chert in the form of disseminated pyrite as fracture fill and minor associations within quartz stringers.

Sample Number: 1354				
Location: Cow 5 claim-central; Stanley Creek	92	6	90	96 As
Rock Type: Chert-cherty tuff				96 Ni
Sample Size: Grab				180 V

10 to 20 cm wide light grey chert/cherty tuff layer within argillite. Attitude of the bed is 121/28NE. Outcrop is friable; possible faulted. Hand sample is cut by hairline fracture partially filled with carbonate. Trace to 3% disseminated pyrite in masses of 2 mm and as fracture fill.

Sample Number: 1355				
Location: Cow 5 claim-north central; Stanley Creek	90	8	65	0.5 Ag
Rock Type: Chert				201 Sr
Sample Size: Grab				

Light grey chert cut by several hairline fractures. With finely disseminated pyrite which occurs as fracture fill and as masses (<2 mm) in and adjacent to the fractures.

APPENDIX III

Laboratory Methods

JAN. 1989

ANALYTICAL METHODS CURRENTLY IN USE AT ROSSBACHER LABORATORY LTD.

A. SAMPLE PREPARATION:

1. Geochem Soil and Silt: Samples are dried, and sifted to minus 80 mesh, through stainless steel or nylon screens.

2. Geochem Rock : Samples are dried, crushed to minus 1/4 inch, split, and pulverized to minus 100 mesh.

B. METHODS OF ANALYSIS:

1. Multi-element (Mo, Cu, Ni, Co, Mn, Fe, Ag, Zn, Pb, As, Cd, Cr): 0.50 g sample is digested for four hours with a 15:85 mixture of Nitric-Perchloric acids.
The resulting extract is analyzed by Atomic Absorption Spectroscopy, using Background Correction where appropriate.

2. Tungsten: 0.50 g sample is sintered with a carbonate flux, and dissolved.
The resulting extract is analyzed colorimetrically , after reduction with Stannous Chloride, by use of Potassium Thiocyanate,

3. Tin: 0.50 g sample is sublimated by fusion with Ammonium Ildide, and dissolved.
The resulting solution is extracted by a Trioctylphosphine-Methyl Isobutyl Ketone solution and analyzed by Atomic Absorption Spectroscopy.

4. Fluorine: 0.50 g sample is fused with a carbonate flux and then dissolved.
The resulting solution is analyzed by use of an Ion Selective Electrode.

5. Gold: 10.0 g sample is digested with aqua regia.
The resulting solution is subjected to a Methyl Isobutyl Ketone extraction, which extract is analyzed for gold using Atomic Absorption Spectroscopy.

6. pH: An aqueous suspension of soil, or silt is prepared, and its pH is measured by use of a pH meter.

7. Antimony: 0.50 g sample is fused with Ammonium Chloride and dissolved.
The resulting solution is extracted with a Trioctylphosphine-Methyl Isobutyl Ketone solution and analyzed by Atomic Absorption Spectroscopy.

8. Barium: 0.50 g sample is repeatedly digested with $HClO_4$-HNO_3 and HF.
The solution is analyzed by Atomic Absorption Spectroscopy.

9. Mercury: 0.50 g sample is digested with HNO_3-H_2SO_4.
The solution is analyzed by Atomci Absorption Spectroscopy using a cold vapor generation technique.

10. Rapid Silicate Analysis: 0.100 g sample is fused with Lithium Metaborate and dissolved in HNO_3.
The solution is analyzed by Atomic Absorption for SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, TiO_2 and MnO.

11. Partial extraction and Fe/Mn oxides: 0.50 g sample is extracted using one of the following:
Hot or cold 0.5 N HCl, 2.5% E.D.T.A., Ammonium Citrate, or other selected organic acids.
The solution is analyzed by use of Atomic Absorption Spectroscopy.

12. Biogeochemical: Samples are dried, and ashed at 500°C and the resulting ash analyzed as in No.1 multi-elemental analysis.

13. ICP analysis: 0.50 g sample is digested with aqua regia.
The resulting solution is diluted and analyzed using an ICP instrument manufactured by Jobin Yvon (Model JY 32, 1987).
The following elements are included in the 30-element analysis: Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sr, Ti, U, V, W, Zn.

APPENDIX IV

Certificates of Assay

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89113
INVOICE # : 90277
DATE ENTERED : 89-05-12
FILE NAME : MPH89113.I
PAGE # : 2

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au *
A	1345	1	198	3	229	0.5	86	26	4512	1.74	24	5	ND	ND	65	4	2	2	12	1.68	0.02	9	97	0.40	81	0.01	89	0.42	0.01	0.04	8	1	5
A	1345a	101	214	1	30	0.1	13	23	316	2.94	8	5	ND	ND	10	1	2	2	107	0.74	0.06	5	106	0.53	28	0.31	183	0.78	0.04	0.04	3	2	5
A	1346	4	12	2	24	0.1	9	19	923	2.08	9	5	ND	ND	60	1	2	2	12	1.88	0.02	3	92	0.39	99	0.01	222	0.69	0.02	0.06	3	1	5
A	1346a	10	123	3	65	0.1	12	27	429	2.55	8	5	ND	ND	40	1	2	2	73	1.52	0.11	17	37	0.48	42	0.17	133	1.51	0.08	0.05	1	2	5
A	1347	1	4	3	19	0.1	21	18	2390	2.27	4	5	ND	ND	204	1	2	2	9	6.52	0.03	11	75	0.33	52	0.01	305	0.60	0.01	0.05	1	1	5
A	1348	2	13	5	13	0.1	12	8	286	1.38	2	5	ND	ND	11	1	2	7	8	0.44	0.01	3	118	0.20	16	0.01	150	0.27	0.02	0.04	4	1	5
A	1349	2	7	2	21	0.1	17	17	369	2.17	9	5	ND	ND	17	1	2	2	10	0.80	0.01	3	160	0.30	55	0.01	259	0.35	0.02	0.03	3	1	5
A	1350	23	16	9	43	0.2	60	29	372	4.23	29	5	ND	ND	13	1	2	2	58	1.24	0.08	5	68	1.20	90	0.01	403	1.61	0.01	0.04	1	1	5
A	1351	1	47	2	33	0.1	13	15	608	1.34	2	5	ND	ND	11	1	2	2	12	0.68	0.01	3	110	0.57	79	0.04	5	1.05	0.01	0.08	1	1	5
A	1351a	1	33	46	87	0.3	26	25	604	3.26	31	5	ND	ND	63	1	2	2	45	1.63	0.04	6	105	1.11	129	0.01	47	1.11	0.02	0.08	2	1	5
A	1352	1	14	2	42	0.1	6	23	504	2.38	3	5	ND	ND	45	1	2	2	29	0.52	0.06	22	57	0.86	135	0.05	5	1.40	0.05	0.09	1	1	5
A	1353	8	34	14	51	1.0	18	14	764	2.79	14	5	ND	ND	21	1	2	2	6	5.29	0.02	16	17	0.49	104	0.01	556	0.64	0.01	0.03	3	1	5
A	1354	1	92	6	90	0.3	96	65	1205	5.90	96	5	ND	ND	66	3	2	2	180	3.64	0.06	7	264	3.68	163	0.02	314	3.56	0.01	0.04	1	4	5
A	1355	1	90	8	65	0.5	13	27	762	3.86	50	5	ND	ND	201	1	3	2	46	4.21	0.06	6	37	1.02	150	0.01	314	0.67	0.03	0.02	3	1	5
S	L0+50N 000STN	1	35	3	66	0.1	16	27	1304	2.93	19	5	ND	ND	28	1	2	2	79	0.21	0.07	15	16	0.53	305	0.11	5	2.46	0.01	0.02	1	2	5
S	L5+25N 000STN	1	11	2	61	0.1	7	19	1084	2.42	3	5	ND	ND	18	1	2	2	61	0.16	0.10	7	10	0.24	165	0.04	5	1.32	0.02	0.03	1	1	5
S	L5+50N 000STN	1	9	4	62	0.1	7	21	488	2.33	3	5	ND	ND	17	1	2	2	59	0.16	0.05	7	10	0.22	122	0.05	5	1.43	0.02	0.04	1	1	5
S	L5+75N 000STN	1	6	1	37	0.1	4	13	161	1.83	2	5	ND	ND	14	1	2	2	48	0.14	0.04	5	6	0.14	68	0.04	5	0.96	0.02	0.02	1	1	5
S	L6+00N 000E	1	20	3	40	0.1	10	23	269	2.60	15	5	ND	ND	13	1	2	2	63	0.10	0.06	6	11	0.39	82	0.05	5	1.99	0.01	0.02	1	1	5
S	L6+00N 025E	1	57	2	64	0.1	18	30	1272	3.12	11	5	ND	ND	30	1	2	2	84	0.31	0.04	10	21	0.66	169	0.11	5	2.30	0.01	0.02	1	2	5
S	L6+00N 050E	1	35	1	51	0.1	15	28	567	2.78	26	5	ND	ND	24	1	2	2	75	0.21	0.05	7	17	0.51	175	0.08	5	2.26	0.01	0.02	1	2	5
S	L6+00N 075E	1	15	9	46	0.1	10	23	383	2.20	2	5	ND	ND	20	1	2	2	50	0.18	0.04	7	11	0.47	123	0.06	5	1.73	0.01	0.02	1	1	5
S	L6+00N 100E	1	41	3	66	0.2	14	27	524	2.82	17	5	ND	ND	20	1	2	2	75	0.18	0.04	8	16	0.57	122	0.10	5	1.99	0.01	0.02	1	2	5
S	L6+00N 125E	1	53	2	68	0.2	11	40	515	4.38	9	5	ND	ND	42	1	2	2	145	0.38	0.04	11	5	0.51	146	0.22	5	2.26	0.01	0.01	1	3	5
S	L6+00N 150E	1	32	1	56	0.1	12	31	875	2.91	6	5	ND	ND	30	1	2	2	78	0.21	0.04	8	10	0.50	183	0.09	5	2.10	0.01	0.02	1	2	5
S	L6+00N 175E	1	12	1	45	0.1	8	21	786	1.96	2	5	ND	ND	24	1	2	2	49	0.20	0.02	7	11	0.35	141	0.04	5	1.26	0.02	0.02	1	1	5
S	L6+00N 200E	1	7	3	61	0.1	6	18	1910	1.62	3	5	ND	ND	29	1	2	2	41	0.24	0.03	8	9	0.22	224	0.04	5	0.90	0.02	0.02	1	1	5
S	L6+00N 225E	1	22	3	65	0.2	13	27	1037	2.47	5	5	ND	ND	23	1	2	2	62	0.20	0.07	9	14	0.46	179	0.05	5	1.85	0.02	0.02	1	2	5
S	L6+00N 250E	1	14	3	91	0.1	8	25	2662	1.92	2	5	ND	ND	20	1	2	2	50	0.22	0.10	9	11	0.25	207	0.07	5	1.20	0.02	0.02	1	1	5
S	L6+00N 275E	1	12	7	62	0.1	10	23	545	3.21	2	5	ND	ND	19	1	2	2	79	0.23	0.05	8	10	0.33	130	0.07	5	1.35	0.02	0.02	1	2	5
S	L6+00N 300E	1	14	1	60	0.1	9	22	350	2.07	2	5	ND	ND	17	1	2	2	55	0.18	0.05	7	11	0.25	90	0.09	5	1.21	0.02	0.02	1	1	5
S	L6+00N 325E	1	11	2	48	0.1	8	16	280	2.26	2	5	ND	ND	14	1	2	2	55	0.14	0.05	7	10	0.25	82	0.04	5	0.98	0.02	0.02	1	1	5
S	L6+00N 350E	1	21	9	66	0.1	10	25	737	2.89	6	5	ND	ND	17	1	2	2	64	0.19	0.23	8	11	0.35	145	0.06	5	1.71	0.01	0.03	1	2	5
S	L6+00N 375E	1	12	2	71	0.1	7	21	1075	2.64	4	5	ND	ND	20	1	2	2	57	0.22	0.17	8	9	0.22	200	0.05	5	1.39	0.02	0.03	1	1	5
S	L6+00N 400E	1	16	6	57	0.1	11	25	797	2.88	7	5	ND	ND	27	1	2	2	70	0.25	0.15	7	11	0.32	176	0.07	5	1.70	0.02	0.02	1	2	5
S	L6+00N 425E	1	12	1	80	0.1	8	23	1422	2.64	5	5	ND	ND	22	1	2	2	60	0.23	0.19	8	10	0.22	252	0.07	5	1.53	0.02	0.02	1	2	5
S	L6+00N 450E	1	14	8	75	0.2	8	26	2338	2.88	6	5	ND	ND	28	1	2	2	58	0.30	0.11	10	7	0.32	347	0.08	5	1.96	0.01	0.02	1	2	5
S	L6+00N 475E	1	12	2	91	0.2	8	27	975	3.16	4	5	ND	ND	22	1	2	2	59	0.26	0.23	8	6	0.38	202	0.09	5	2.42	0.01	0.02	1	2	5
S	L6+00N 500E	1	45	5	64	0.2	27	30	594	3.04	6	5	ND	ND	37	1	2	2	76	0.47	0.06	11	24	0.70	77	0.12	5	1.54	0.02	0.02	1	2	5
S	L6+00N 525E	1	15	5	45	0.2	10	27	934	2.79	3	5	ND	ND	42	1	2	2	59	0.54	0.06	15	10	0.49	182	0.09	5	2.13	0.01	0.04	1	2	5

CERTIFIED BY : J. Rossbach

RECEIVED MAY 2 3 1989

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3H1
Ph: (604)299-6910 Fax: 299-6252

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89113
INVOICE # : 90277
DATE ENTERED : 89-05-12
FILE NAME : MPH89113.I
PAGE # : 3

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au ft
S	L6+00N 550E	1	13	8	64	0.2	11	28	2053	2.91	3	5	ND	ND	31	1	2	2	62	0.33	0.11	9	9	0.30	188	0.08	5	2.59	0.01	0.03	1	2	5
S	L6+00N 575E	1	24	6	60	0.2	14	32	374	3.46	4	5	ND	ND	20	1	2	2	80	0.18	0.09	10	14	0.47	87	0.12	5	3.28	0.01	0.02	1	2	5
S	L6+00N 600E	1	14	7	58	0.1	12	26	939	2.94	2	5	ND	ND	24	1	2	2	68	0.20	0.13	9	11	0.29	181	0.08	5	2.13	0.01	0.03	1	2	5
S	L6+00N 625E	1	13	2	39	0.1	9	25	415	2.78	2	5	ND	ND	22	1	2	2	65	0.15	0.06	8	9	0.30	100	0.08	5	2.44	0.01	0.02	1	2	5
S	L6+00N 650E	1	11	1	48	0.2	11	27	523	2.94	2	5	ND	ND	26	1	2	2	69	0.16	0.06	11	12	0.36	133	0.09	5	2.71	0.01	0.02	1	2	5
S	L6+00N 675E	1	10	2	51	0.1	9	24	783	2.66	2	5	ND	ND	23	1	2	2	63	0.16	0.10	7	10	0.24	131	0.08	5	1.93	0.01	0.02	1	2	5
S	L6+00N 700E	1	13	1	60	0.1	12	26	520	3.06	2	5	ND	ND	27	1	2	2	71	0.19	0.08	12	11	0.35	148	0.11	5	2.62	0.01	0.02	1	2	5
S	L6+00N 725E	1	10	2	52	0.1	14	25	948	2.67	2	5	ND	ND	30	1	2	2	60	0.21	0.07	11	12	0.33	156	0.09	5	2.18	0.01	0.02	1	2	5
S	L6+00N 750E	1	7	2	41	0.1	8	20	615	2.53	2	5	ND	ND	30	1	2	2	60	0.20	0.08	10	10	0.22	179	0.06	5	1.47	0.01	0.02	1	1	5
S	L6+00N 775E	1	7	3	35	0.1	6	17	1630	2.25	2	5	ND	ND	35	1	2	2	52	0.23	0.08	12	8	0.19	211	0.04	5	1.13	0.02	0.02	1	1	5
S	L6+00N 800E	1	6	1	36	0.1	7	17	541	2.19	2	5	ND	ND	27	1	2	2	55	0.19	0.05	9	10	0.17	109	0.06	5	1.21	0.02	0.03	1	1	5

CERTIFIED BY : J. Rossbach

RECEIVED MAY 2 3 1989

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

CERTIFICATE OF ANALYSIS

D : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
ROJECT : V199
YPE OF ANALYSIS : GEOCHEMICAL

CERTIFICATE # : 89113.A
INVOICE # : 90298
DATE ENTERED : 89-05-30
FILE NAME : MPH89113.A
PAGE # : 1

LE X	SAMPLE NAME	PPB Au 1	PPB Au 2	PPB Au 3	PPB AVG.Au	TOTAL Wt.gm
	20501 HM	5	5		5	43.0
	20502 HM	5	80		40	60.0
L	20503 HM	5			5	14.0
	20504 HM	5	10		5	49.0
	20505 HM	5	5		5	51.0
L	20506 HM	5	5	5	5	77.0
L	20507 HM	5	20	5	5	76.0
	20508 HM	5			5	32.0
	20509 HM	40			40	27.0
L	20510 HM	5			5	4.0
	20511 HM	130			130	7.0
	20512 HM	10			10	27.0
L	20513 HM	5			5	21.0
L	20514 HM	5			5	18.0
	20515 HM	5			5	16.0
L	20516 HM	170	140		160	40.0
L	20517 HM	240			240	5.0
	20518 HM	5			5	9.0
	20519 HM	5			5	27.0
L	20520 HM	40			40	30.0
	20521 HM	70			70	11.0
	20522 HM	90			90	16.0
L	20523 HM	120			120	12.0
L	20524 HM	880			880	12.0
	20525 HM	4350			4350	16.0

CERTIFIED BY : Rossbach

RECEIVED JUN 9 - 1989

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.

PROJECT : V199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 8911G.AI
INVOICE # : 90298
DATE ENTERED : 89-05-30
FILE NAME : MPH8911G.AI
PAGE # : 1

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE
L	20501 LF	1	18	1	51	0.1	12	9	350	2.00	6	5	ND	ND	23	1	2	2	48	0.30	na	4	70	0.60	87	0.07	5	1.10	0.02	0.01	1	1
L	20502 LF	1	18	3	45	0.1	13	10	368	2.06	10	5	ND	ND	27	1	2	2	53	0.34	na	5	78	0.67	89	0.10	5	1.21	0.02	0.02	1	1
L	20503 LF	1	15	1	61	0.1	12	8	348	1.83	6	5	ND	ND	23	1	2	2	43	0.27	na	4	95	0.55	90	0.07	5	1.07	0.02	0.01	1	1
L	20504 LF	1	16	1	35	0.1	13	10	441	2.07	2	5	ND	ND	24	1	2	2	45	0.30	na	6	75	0.72	206	0.05	5	1.35	0.01	0.01	1	1
L	20505 LF	1	15	1	39	0.2	13	11	472	2.09	2	5	ND	ND	26	1	2	2	47	0.29	na	6	67	0.73	178	0.05	5	1.29	0.01	0.01	1	1
L	20506 LF	1	19	1	47	0.1	18	14	517	2.72	2	5	ND	ND	28	1	2	2	72	0.36	na	4	85	1.05	230	0.11	5	1.66	0.02	0.02	1	2
L	20507 LF	1	22	6	46	0.3	16	13	510	2.56	8	5	ND	ND	28	1	2	2	71	0.29	na	5	76	0.86	140	0.09	5	1.71	0.01	0.02	1	2
L	20508 LF	1	12	4	41	0.2	11	9	347	1.76	2	5	ND	ND	18	1	2	2	39	0.20	na	5	79	0.52	131	0.05	5	1.36	0.01	0.01	1	1
L	20509 LF	1	17	4	47	0.1	15	12	873	2.57	2	5	ND	ND	19	1	2	2	61	0.21	na	7	61	0.67	128	0.08	5	1.84	0.01	0.02	1	2
L	20510 LF	1	14	3	52	0.1	14	9	706	2.13	2	5	ND	ND	24	1	2	2	44	0.23	na	6	156	0.49	147	0.04	5	1.57	0.02	0.01	1	1
L	20511 LF	1	31	7	63	0.2	20	14	717	2.99	2	5	ND	ND	23	1	3	2	65	0.27	na	10	95	0.92	183	0.05	5	2.00	0.01	0.02	1	2
L	20511 LF	1	35	4	63	0.1	19	13	706	3.04	2	5	ND	ND	18	1	2	2	70	0.17	na	7	75	0.94	137	0.07	5	1.88	0.01	0.01	1	2
L	20513 LF	1	16	5	47	0.2	12	12	829	2.10	2	5	ND	ND	34	1	2	2	46	0.35	na	8	73	0.59	153	0.07	5	1.85	0.01	0.02	1	2
L	20514 LF	1	43	5	92	0.2	26	15	1224	3.15	21	5	ND	ND	22	1	3	2	79	0.30	na	9	63	0.81	277	0.06	5	2.02	0.01	0.02	1	2
L	20515 LF	1	18	4	44	0.1	11	10	407	1.96	2	5	ND	ND	30	1	2	2	42	0.40	na	5	84	0.54	101	0.08	5	1.23	0.02	0.02	1	1
L	20516 LF	1	54	8	75	0.1	28	15	978	4.26	17	5	ND	ND	16	1	3	2	107	0.20	na	10	62	1.34	256	0.03	5	2.22	0.01	0.01	1	3
L	20517 LF	1	17	5	58	0.1	18	13	1269	2.83	2	5	ND	ND	22	1	3	2	65	0.22	na	6	116	0.71	141	0.07	5	1.83	0.01	0.01	1	2
L	20518 LF	1	12	3	48	0.1	10	9	755	1.87	2	5	ND	ND	25	1	2	2	37	0.20	na	5	70	0.47	117	0.04	5	1.40	0.01	0.02	1	1
L	20519 LF	1	42	4	77	0.1	25	15	851	3.68	15	5	ND	ND	27	1	2	2	87	0.37	na	9	63	1.26	233	0.06	5	2.09	0.01	0.02	1	2
L	20520 LF	1	31	4	62	0.1	19	14	659	3.02	2	5	ND	ND	20	1	3	2	73	0.21	na	8	85	0.94	130	0.08	5	1.79	0.01	0.01	1	2
L	20521 LF	1	39	10	71	0.1	23	12	782	3.83	2	5	ND	ND	23	1	2	2	94	0.34	na	7	61	1.18	160	0.12	5	2.35	0.01	0.02	1	2
L	20522 LF	1	29	4	59	0.1	18	15	711	3.03	2	5	ND	ND	21	1	3	2	65	0.29	na	9	58	0.87	175	0.07	5	1.74	0.01	0.02	1	2
L	20523 LF	1	27	4	56	0.1	22	14	612	2.92	2	5	ND	ND	16	1	2	2	65	0.19	na	7	59	0.98	128	0.06	5	1.83	0.01	0.01	1	2
L	20524 LF	1	29	4	58	0.1	19	14	668	2.99	2	5	ND	ND	19	1	2	2	64	0.25	na	8	55	0.92	146	0.06	5	1.75	0.01	0.01	1	2
L	20525 LF	1	35	4	66	0.1	21	13	733	3.46	2	5	ND	ND	19	1	2	2	83	0.21	na	6	53	1.12	126	0.09	5	2.14	0.01	0.01	1	2

CERTIFIED BY : J. Rossbach

RECEIVED JUN 9 - 1989

ROSSBACHER LABORATORY LTD.

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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89119.I
INVOICE # : 90283
DATE ENTERED : 89-05-24
FILE NAME : MPH89119.I
PAGE # : 1

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au ft
S	L0+00N 0+00E	1	23	1	70	0.1	12	11	1137	2.92	10	5	ND	ND	27	1	3	2	74	0.27	0.12	12	17	0.41	210	0.06	14	1.75	0.01	0.02	9	2	5
S	L0+00N 0+25E	1	8	1	58	0.1	5	7	1596	1.96	2	5	ND	ND	24	1	2	2	54	0.28	0.09	6	11	0.17	166	0.05	12	1.07	0.01	0.03	4	1	5
S	L0+00N 0+50E	1	4	2	31	0.1	4	5	225	1.85	2	5	ND	ND	20	1	2	2	53	0.20	0.03	6	10	0.12	73	0.05	9	0.87	0.01	0.02	1	1	5
S	L0+00N 0+75E	1	6	2	44	0.1	3	5	515	1.73	2	5	ND	ND	18	1	2	2	49	0.18	0.05	6	9	0.12	97	0.06	10	0.97	0.01	0.03	1	1	5
S	L0+00N 1+00E	1	6	3	64	0.1	5	9	4266	1.77	2	5	ND	ND	24	1	2	2	46	0.28	0.09	6	11	0.17	234	0.05	12	1.02	0.01	0.02	1	1	5
S	L0+00N 1+25E	1	13	265	50	0.4	8	7	326	2.45	2	5	ND	ND	19	1	2	2	62	0.22	0.09	5	18	0.25	108	0.06	11	1.30	0.01	0.02	1	1	5
S	L0+00N 1+50E	1	54	6	60	0.1	29	13	723	3.74	17	5	ND	ND	32	1	2	2	91	0.29	0.14	18	25	0.70	175	0.19	10	4.17	0.01	0.03	1	3	5
S	L0+00N 1+75E	1	23	1	68	0.1	10	10	1433	3.72	12	5	ND	ND	31	1	2	2	77	0.37	0.10	11	15	0.52	222	0.09	14	2.27	0.01	0.02	1	2	5
S	L0+00N 2+00E	1	13	3	82	0.1	7	10	577	3.19	4	5	ND	ND	28	1	2	2	64	0.29	0.17	8	9	0.41	212	0.08	11	2.32	0.01	0.03	1	2	5
S	L0+00N 2+25E	1	8	1	60	0.1	5	8	1080	2.01	2	5	ND	ND	18	1	2	2	49	0.22	0.12	5	11	0.22	132	0.06	11	1.20	0.01	0.02	1	1	5
S	L0+00N 2+50E	1	16	1	48	0.1	8	9	1082	2.25	2	5	ND	ND	20	1	2	2	57	0.23	0.08	7	13	0.29	103	0.08	10	1.37	0.01	0.02	1	1	5
S	L0+00N 2+75E	1	7	6	33	0.2	5	6	404	1.57	2	5	ND	ND	16	1	2	2	46	0.18	0.03	6	10	0.16	60	0.08	9	0.89	0.01	0.02	1	1	5
S	L0+00N 3+00E	1	9	10	42	0.1	5	7	548	1.81	2	5	ND	ND	17	1	2	2	46	0.18	0.07	6	10	0.19	77	0.07	10	1.00	0.01	0.03	1	1	5
S	L0+00N 3+25E	1	27	1	47	0.1	12	10	596	3.14	4	5	ND	ND	24	1	2	2	79	0.23	0.10	8	17	0.45	103	0.09	10	2.11	0.01	0.03	1	2	5
S	L0+00N 3+50E	1	9	2	31	0.1	5	6	1050	2.07	2	5	ND	ND	18	1	2	2	52	0.16	0.06	5	11	0.20	73	0.05	11	1.17	0.01	0.02	1	1	5
S	L0+00N 3+75E	1	10	2	32	0.1	6	7	300	2.29	2	5	ND	ND	19	1	2	2	61	0.17	0.03	7	12	0.22	82	0.05	9	1.36	0.01	0.03	1	1	5
S	L0+00N 4+00E	1	17	1	48	0.1	8	8	661	3.10	3	5	ND	ND	20	1	2	2	75	0.17	0.10	7	15	0.19	130	0.05	11	1.77	0.01	0.03	1	2	5
S	L0+00N 4+25E	1	8	2	31	0.1	5	5	483	1.88	2	5	ND	ND	13	1	2	2	45	0.12	0.09	4	9	0.16	66	0.04	9	1.16	0.01	0.02	1	1	5
S	L0+00N 4+50E	1	21	3	49	0.1	10	10	804	2.72	2	5	ND	ND	23	1	2	2	67	0.21	0.07	7	15	0.37	159	0.06	9	1.59	0.01	0.03	1	2	5
S	L0+00N 4+75E	1	18	1	36	0.1	9	9	759	2.31	3	5	ND	ND	32	1	2	2	55	0.26	0.06	6	15	0.33	181	0.04	10	1.33	0.01	0.02	1	1	5
S	L0+00N 5+00E	1	15	3	45	0.1	9	10	802	3.50	2	5	ND	ND	24	1	2	2	87	0.22	0.03	8	14	0.36	156	0.07	10	1.54	0.01	0.02	1	2	5
S	L0+00N 5+25E	1	23	2	66	0.1	8	11	1619	3.25	3	5	ND	ND	31	1	2	2	74	0.34	0.09	11	12	0.35	212	0.12	12	1.98	0.01	0.03	1	2	5
S	L0+00N 5+50E	1	27	6	58	0.3	13	12	475	3.05	5	5	ND	ND	24	1	2	2	74	0.25	0.09	9	16	0.45	116	0.09	12	2.16	0.01	0.02	1	2	5
S	L0+00N 5+75E	1	14	6	53	0.1	10	9	1036	2.23	2	5	ND	ND	26	1	2	2	52	0.28	0.11	8	14	0.35	159	0.07	11	1.69	0.02	0.02	1	1	5
S	L0+00N 6+00E	1	30	4	41	0.4	13	9	551	2.92	6	5	ND	ND	27	1	2	2	75	0.24	0.07	13	18	0.53	161	0.11	12	2.50	0.01	0.01	1	2	5
S	L0+00N 6+25E	1	11	1	76	0.1	10	11	1313	2.56	2	5	ND	ND	34	1	2	2	57	0.35	0.15	9	14	0.36	239	0.07	12	1.95	0.02	0.02	1	2	5
S	L0+00N 6+50E	1	16	2	63	0.2	10	11	560	2.55	2	5	ND	ND	22	1	2	2	59	0.19	0.08	8	13	0.36	142	0.08	9	1.83	0.01	0.02	1	2	5
S	L0+00N 6+75E	1	22	7	48	0.2	13	9	464	3.16	2	5	ND	ND	26	1	2	2	79	0.25	0.04	21	17	0.57	120	0.11	11	2.33	0.01	0.02	1	2	5
S	L0+00N 7+00E	1	8	9	80	0.2	6	10	1610	2.50	2	5	ND	ND	22	1	2	4	56	0.26	0.14	9	12	0.21	231	0.06	12	1.28	0.02	0.02	1	1	5
S	L1+00N 0+00E	1	23	6	48	0.1	13	11	594	2.47	9	5	ND	ND	24	1	2	2	65	0.23	0.06	7	19	0.48	136	0.06	11	1.87	0.02	0.02	1	2	5
S	L1+00N 0+25E	1	21	5	40	0.2	15	11	291	2.77	7	5	ND	ND	26	1	2	2	73	0.21	0.03	9	19	0.46	125	0.07	10	2.24	0.01	0.02	1	2	5
S	L1+00N 0+50E	1	8	2	34	0.2	6	7	868	1.86	2	5	ND	ND	20	1	2	7	51	0.23	0.06	7	11	0.15	112	0.05	9	0.80	0.02	0.02	1	1	5
S	L1+00N 0+75E	1	6	54	29	0.2	6	6	453	1.55	2	5	ND	ND	19	1	2	5	45	0.19	0.02	6	10	0.18	72	0.06	11	0.81	0.02	0.02	1	1	5
S	L1+00N 1+00E	1	11	2	63	0.1	8	8	423	2.46	2	5	ND	ND	20	1	2	2	62	0.20	0.10	7	14	0.27	115	0.06	9	1.49	0.02	0.03	1	1	5
S	L1+00N 1+25E	1	9	6	46	0.1	7	8	1607	2.32	2	5	ND	ND	22	1	2	2	60	0.24	0.11	8	13	0.21	169	0.05	9	1.13	0.02	0.02	1	1	5
S	L1+00N 1+50E	1	18	7	66	0.1	8	7	880	3.33	8	5	ND	ND	33	1	2	2	67	0.29	0.11	9	11	0.55	212	0.10	7	3.00	0.01	0.02	1	2	5
S	L1+00N 1+75E	1	36	5	47	0.1	16	10	649	3.32	13	5	ND	ND	21	1	2	2	84	0.21	0.05	12	20	0.55	124	0.10	9	2.46	0.01	0.02	1	2	5
S	L1+00N 2+00E	1	17	5	74	0.1	8	9	1068	3.17	4	5	ND	ND	25	1	2	2	62	0.22	0.09	9	11	0.52	236	0.08	9	2.65	0.01	0.02	1	2	5
S	L1+00N 2+25E	1	14	14	64	0.1	12	11	613	3.07	2	5	ND	ND	28	1	2	2	76	0.29	0.11	10	15	0.33	195	0.07	9	1.68	0.02	0.03	1	2	5
S	L1+00N 2+50E	1	17	7	57	0.2	9	10	909	2.35	4	5	ND	ND	21	1	2	2	56	0.27	0.13	9	14	0.29	232	0.06	10	1.29	0.02	0.02	1	1	5

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ROSSBACHER LABORATORY LTD.

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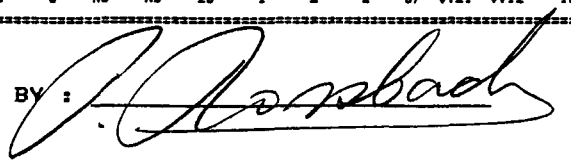
CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89119.I
INVOICE # : 90283
DATE ENTERED : 89-05-24
FILE NAME : MPH89119.I
PAGE # : 2

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au ft
S	L1+00N 2+75E	1	25	9	63	0.1	13	11	596	2.93	5	5	ND	ND	15	1	2	2	68	0.18	0.14	8	16	0.47	123	0.08	9	2.13	0.01	0.02	1	2	5
S	L1+00N 3+00E	1	9	4	70	0.2	7	10	1262	2.61	3	5	ND	ND	20	1	2	3	54	0.21	0.12	10	10	0.23	212	0.08	9	1.56	0.02	0.02	1	2	5
S	L1+00N 3+25E	1	8	1	70	0.1	6	8	2243	2.65	2	5	ND	ND	27	1	2	2	53	0.30	0.13	7	9	0.28	224	0.06	8	1.61	0.01	0.02	1	1	5
S	L1+00N 3+50E	1	7	6	48	0.2	5	7	692	2.10	2	5	ND	ND	23	1	2	4	46	0.22	0.10	7	8	0.17	126	0.05	8	1.22	0.02	0.02	1	1	5
S	L1+00N 3+75E	1	8	4	56	0.1	6	8	1872	2.25	2	5	ND	ND	24	1	2	2	48	0.24	0.08	7	10	0.26	159	0.05	9	1.47	0.02	0.02	1	1	5
S	L1+00N 4+00E	1	9	4	52	0.4	7	7	984	1.87	2	5	ND	ND	15	1	2	2	47	0.15	0.09	7	12	0.20	91	0.05	10	1.35	0.02	0.02	1	1	5
S	L1+00N 4+25E	1	5	3	45	0.3	6	6	1448	1.74	2	5	ND	ND	17	1	2	7	49	0.22	0.05	8	11	0.13	117	0.05	9	0.87	0.02	0.02	1	1	5
S	L1+00N 4+50E	1	11	49	62	0.1	8	9	901	2.35	2	5	ND	ND	17	1	2	2	55	0.21	0.17	8	14	0.23	145	0.04	10	1.51	0.02	0.02	1	1	5
S	L1+00N 4+75E	1	24	2	36	0.1	14	13	459	2.49	5	5	ND	ND	49	1	2	2	69	0.36	0.04	8	25	0.55	102	0.08	10	1.76	0.02	0.02	1	2	5
S	L1+00N 5+00E	1	33	7	50	0.1	13	11	725	2.85	8	5	ND	ND	26	1	2	2	71	0.24	0.07	11	18	0.49	137	0.10	11	2.28	0.02	0.02	1	2	5
S	L1+00N 5+25E	2	25	7	46	0.3	12	13	980	2.94	5	5	ND	ND	28	1	2	4	75	0.26	0.03	12	18	0.40	117	0.11	11	1.93	0.02	0.02	1	2	5
S	L1+00N 5+50E	1	16	7	116	0.3	9	12	3503	3.22	3	5	ND	ND	34	1	2	2	62	0.35	0.26	14	13	0.25	383	0.10	11	1.88	0.02	0.02	1	2	5
S	L1+00N 5+75E	1	22	4	48	0.1	11	12	1155	3.22	6	5	ND	ND	36	1	2	2	88	0.43	0.04	16	16	0.57	153	0.14	11	1.99	0.02	0.01	1	2	5
S	L1+00N 6+00E	1	29	5	66	0.1	12	10	929	3.40	6	5	ND	ND	32	1	2	2	89	0.28	0.05	15	15	0.57	156	0.17	10	2.47	0.02	0.02	1	2	5
S	L1+00N 6+25E	1	21	6	57	0.2	11	11	1425	2.92	4	5	ND	ND	32	1	2	4	69	0.27	0.09	9	14	0.49	240	0.10	9	2.21	0.02	0.01	1	2	5
S	L1+00N 6+50E	1	16	4	94	0.1	9	11	1596	3.03	2	5	ND	ND	21	1	2	2	66	0.24	0.14	13	13	0.37	193	0.11	8	2.02	0.02	0.02	1	2	5
S	L1+00N 6+75E	2	19	8	69	0.1	10	13	595	2.46	2	5	ND	ND	15	1	2	2	57	0.17	0.12	8	12	0.39	120	0.12	9	1.88	0.02	0.01	1	2	5
S	L1+00N 7+00E	2	13	12	104	0.2	7	14	2957	2.74	4	5	ND	ND	25	1	2	2	57	0.34	0.17	12	10	0.24	304	0.10	13	1.44	0.02	0.02	2	2	5
S	L2+00N 0+00E	1	17	10	46	0.5	13	12	859	2.89	8	5	ND	ND	24	1	3	7	74	0.18	0.03	10	18	0.43	174	0.07	10	1.89	0.02	0.02	1	2	5
S	L2+00N 0+25E	1	19	7	75	0.2	12	12	1974	2.49	13	5	ND	ND	35	1	2	3	60	0.39	0.16	10	15	0.38	360	0.06	10	1.74	0.02	0.02	2	2	5
S	L2+00N 0+50E	1	8	2	59	0.1	5	8	450	1.92	2	5	ND	ND	17	1	2	2	51	0.19	0.04	9	11	0.16	119	0.08	9	1.11	0.02	0.02	1	1	5
S	L2+00N 0+75E	1	6	5	38	0.1	7	7	542	1.64	2	5	ND	ND	18	1	2	2	44	0.17	0.03	7	12	0.22	83	0.04	8	1.01	0.02	0.02	1	1	5
S	L2+00N 1+00E	1	11	3	40	0.1	9	9	369	2.20	2	5	ND	ND	18	1	2	2	57	0.20	0.03	7	14	0.29	82	0.06	8	1.18	0.02	0.02	1	1	5
S	L2+00N 1+25E	1	5	18	44	0.3	6	8	429	1.81	2	5	ND	ND	15	1	4	2	48	0.15	0.07	7	11	0.12	74	0.03	8	0.94	0.02	0.02	1	1	5
S	L2+00N 1+50E	1	20	7	44	0.1	7	7	945	2.74	3	5	ND	ND	21	1	2	6	68	0.24	0.05	9	13	0.22	153	0.05	8	1.19	0.02	0.02	1	2	5
S	L2+00N 1+75E	1	8	4	63	0.1	9	9	434	2.30	2	5	ND	ND	18	1	2	2	57	0.18	0.08	8	14	0.26	123	0.05	8	1.45	0.02	0.02	1	1	5
S	L2+00N 2+00E	1	9	8	68	0.1	8	8	1130	2.50	4	5	ND	ND	18	1	2	2	61	0.20	0.11	8	14	0.26	151	0.05	9	1.31	0.02	0.02	1	1	5
S	L2+00N 2+25E	1	13	5	55	0.1	10	10	1006	2.47	2	5	ND	ND	22	1	2	5	60	0.24	0.09	9	15	0.36	188	0.05	8	1.39	0.02	0.02	1	2	5
S	L2+00N 2+50E	1	13	10	40	0.1	9	10	1016	2.42	4	5	ND	ND	37	1	2	3	62	0.28	0.03	11	15	0.35	217	0.07	11	1.43	0.02	0.01	1	2	5
S	L2+00N 2+75E	1	23	3	48	0.1	12	10	715	2.55	8	5	ND	ND	22	1	2	2	66	0.19	0.06	8	18	0.49	134	0.08	11	1.89	0.02	0.01	1	2	5
S	L2+00N 3+00E	1	17	3	38	0.1	9	10	426	2.51	3	5	ND	ND	22	1	2	2	67	0.16	0.04	10	15	0.29	122	0.07	8	1.78	0.02	0.02	1	2	5
S	L2+00N 3+25E	1	23	4	53	0.3	14	11	934	3.12	8	5	ND	ND	23	1	2	4	75	0.23	0.07	10	18	0.50	202	0.07	9	1.87	0.02	0.01	1	2	5
S	L2+00N 3+50E	1	28	4	71	0.1	12	9	1752	3.19	6	5	ND	ND	37	1	2	2	69	0.33	0.16	13	15	0.39	320	0.07	9	2.51	0.02	0.02	1	2	5
S	L2+00N 3+75E	1	9	6	55	0.1	7	8	832	2.90	2	5	ND	ND	26	1	3	4	58	0.30	0.11	10	10	0.28	214	0.06	8	1.81	0.02	0.02	1	2	5
S	L2+00N 4+00E	1	8	6	86	0.1	7	9	2720	2.48	2	5	ND	ND	23	1	2	2	51	0.25	0.15	10	10	0.25	289	0.06	7	1.62	0.02	0.02	1	1	5
S	L2+00N 4+25E	1	10	4	75	0.1	6	8	931	2.47	2	5	ND	ND	23	1	2	2	47	0.21	0.11	8	9	0.34	135	0.04	8	2.15	0.02	0.02	1	1	5
S	L2+00N 4+50E	1	28	4	46	0.3	14	10	477	2.90	5	5	ND	ND	14	1	2	3	70	0.12	0.10	8	16	0.47	131	0.06	9	2.03	0.02	0.01	1	2	5
S	L2+00N 4+75E	1	44	2	74	0.1	13	12	1127	2.80	7	5	ND	ND	24	1	2	2	67	0.23	0.12	10	17	0.39	124	0.08	9	2.15	0.02	0.02	1	2	5
S	L2+00N 5+00E	2	16	5	39	0.1	8	8	769	2.33	3	5	ND	ND	26	1	2	2	58	0.18	0.06	12	14	0.20	127	0.07	8	1.21	0.02	0.02	1	1	5
S	L2+00N 5+25E	1	14	8	61	0.1	11	12	1562	2.65	2	5	ND	ND	26	1	2	2	57	0.21	0.12	16	14	0.33	225	0.07	9	2.03	0.02	0.02	1	2	5

CERTIFIED BY : 

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

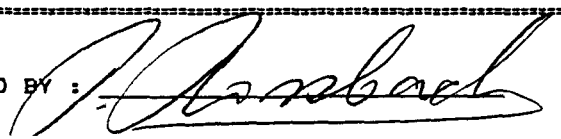
CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.

PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89119.I
INVOICE # : 90283
DATE ENTERED : 89-05-24
FILE NAME : MPH89119.I
PAGE # : 3

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au*
S	L2+00N 5+50E	1	12	5	85	0.1	10	9	1874	2.61	2	5	ND	ND	28	1	2	2	56	0.24	0.17	12	15	0.32	318	0.05	8	1.66	0.02	0.02	1	2	5
S	L2+00N 5+75E	1	16	8	81	0.1	12	10	1304	2.76	2	5	ND	ND	30	1	2	2	58	0.26	0.17	13	15	0.35	258	0.07	8	2.12	0.02	0.03	1	2	5
S	L2+00N 6+00E	1	16	6	80	0.1	12	9	1543	3.02	4	5	ND	ND	26	1	2	2	61	0.21	0.15	16	16	0.46	251	0.07	8	2.29	0.02	0.02	1	2	5
S	L2+00N 6+25E	3	17	6	64	0.2	8	10	1576	2.80	3	5	ND	ND	37	1	2	2	75	0.29	0.03	11	11	0.31	151	0.15	10	1.69	0.02	0.02	1	2	5
S	L2+00N 6+50E	2	38	1	54	0.1	12	9	423	3.41	4	5	ND	ND	26	1	2	2	93	0.21	0.03	10	16	0.60	103	0.18	8	2.41	0.02	0.02	1	2	5
S	L2+00N 6+75E	1	17	3	53	0.1	10	11	1594	3.94	4	5	ND	ND	28	1	2	2	114	0.24	0.03	11	12	0.51	122	0.26	8	1.98	0.02	0.01	1	3	5
S	L2+00N 7+00E	1	20	1	78	0.1	9	13	1593	4.92	4	5	ND	ND	32	1	2	2	123	0.26	0.05	11	7	0.74	292	0.39	9	2.33	0.02	0.01	1	3	5
S	L3+00N 0+00E	1	20	6	55	0.1	11	9	770	2.70	11	5	ND	ND	23	1	2	2	65	0.24	0.07	10	15	0.41	179	0.05	9	1.61	0.02	0.02	1	2	5
S	L3+00N 0+25E	1	31	13	59	0.1	18	10	1096	3.04	23	5	ND	ND	24	1	3	2	73	0.24	0.11	11	21	0.59	250	0.06	10	2.43	0.02	0.01	1	2	5
S	L3+00N 0+50E	1	54	7	68	0.3	18	12	588	4.49	22	5	ND	ND	17	1	12	5	98	0.17	0.07	10	22	0.43	193	0.02	11	2.03	0.02	0.02	1	2	5
S	L3+00N 0+75E	1	21	7	43	0.1	13	10	610	2.50	4	5	ND	ND	25	1	2	2	63	0.22	0.03	8	18	0.52	156	0.07	9	1.65	0.02	0.02	1	2	5
S	L3+00N 1+00E	1	6	4	49	0.1	6	6	937	2.34	3	5	ND	ND	23	1	2	2	54	0.28	0.12	6	12	0.18	166	0.04	8	0.86	0.02	0.02	1	1	5
S	L3+00N 1+25E	1	6	8	56	0.1	6	8	1310	1.95	2	5	ND	ND	19	1	2	7	50	0.21	0.06	7	11	0.20	134	0.05	8	0.92	0.02	0.02	1	1	5
S	L3+00N 1+50E	1	11	8	58	0.3	10	8	950	2.21	2	5	ND	ND	16	1	3	4	55	0.17	0.08	9	15	0.29	133	0.06	8	1.44	0.02	0.02	1	1	5
S	L3+00N 1+75E	1	6	1	36	0.3	6	6	519	2.09	2	5	ND	ND	16	1	2	2	55	0.17	0.05	7	12	0.16	100	0.05	7	0.79	0.03	0.02	1	1	5
S	L3+00N 2+00E	1	14	3	35	0.1	9	7	440	2.11	2	5	ND	ND	12	1	2	2	49	0.13	0.04	7	13	0.27	109	0.04	8	1.40	0.03	0.01	1	1	5
S	L3+00N 2+25E	1	8	3	44	0.1	8	7	561	2.34	2	5	ND	ND	19	1	2	3	56	0.22	0.10	8	13	0.23	105	0.04	8	1.25	0.02	0.02	1	1	5
S	L3+00N 2+50E	1	13	1	56	0.1	9	7	473	2.64	3	5	ND	ND	16	1	2	2	64	0.19	0.10	7	14	0.32	117	0.05	7	1.49	0.02	0.02	1	2	5
S	L3+00N 2+75E	1	29	4	36	0.1	12	8	296	3.25	9	5	ND	ND	17	1	2	2	82	0.17	0.04	11	16	0.40	65	0.07	9	1.84	0.02	0.02	1	2	5
S	L3+00N 3+00E	1	13	5	81	0.1	9	8	2092	3.37	4	5	ND	ND	25	1	2	2	72	0.30	0.18	11	13	0.32	268	0.09	8	1.90	0.02	0.02	1	2	5
S	L3+00N 3+25E	1	10	7	77	0.1	6	8	1359	2.99	6	5	ND	ND	24	1	2	2	57	0.28	0.22	9	11	0.20	254	0.07	8	1.62	0.02	0.02	1	2	5
S	L3+00N 3+50E	1	16	5	72	0.3	10	6	1743	3.37	8	5	ND	ND	25	1	2	2	71	0.25	0.17	10	14	0.41	249	0.09	8	2.45	0.02	0.02	1	2	5
S	L3+00N 3+75E	1	27	3	50	0.1	13	8	328	3.54	7	5	ND	ND	17	1	2	2	86	0.16	0.03	10	17	0.42	96	0.09	8	2.14	0.02	0.01	1	2	5
S	L3+00N 4+00E	1	18	11	62	0.1	8	6	1175	3.07	2	5	ND	ND	31	1	2	2	55	0.32	0.10	10	10	0.55	212	0.04	9	2.68	0.02	0.01	1	2	5
S	L3+00N 4+25E	1	6	2	60	0.1	5	6	1227	2.33	2	5	ND	ND	20	1	2	2	52	0.22	0.10	7	10	0.19	152	0.04	8	1.20	0.03	0.02	1	1	20
S	L3+00N 4+50E	1	10	7	69	0.1	7	8	1448	3.06	3	5	ND	ND	28	1	2	2	55	0.33	0.15	10	10	0.35	277	0.05	7	1.86	0.02	0.02	1	2	5
S	L3+00N 4+75E	1	13	3	66	0.1	8	8	1201	2.78	2	5	ND	ND	20	1	2	2	56	0.21	0.13	9	10	0.35	199	0.04	7	1.92	0.02	0.02	1	2	5
S	L3+00N 5+00E	1	37	4	49	0.1	8	8	1449	2.32	2	5	ND	ND	18	1	3	2	52	0.11	0.10	10	12	0.23	151	0.06	8	1.54	0.02	0.02	1	1	5
S	L3+00N 5+25E	3	113	7	62	0.2	15	7	398	3.05	9	5	ND	ND	19	1	2	2	82	0.16	0.06	11	19	0.60	144	0.12	7	2.64	0.02	0.02	1	2	60
S	L3+00N 5+50E	1	14	2	60	0.1	9	7	1096	2.25	2	5	ND	ND	29	1	2	2	53	0.22	0.09	10	14	0.31	180	0.04	7	1.15	0.02	0.02	1	1	5
S	L3+00N 5+75E	1	11	4	59	0.1	9	10	2109	2.41	2	5	ND	ND	29	1	2	2	55	0.25	0.09	13	12	0.26	263	0.07	7	1.58	0.02	0.02	1	2	10
S	L3+00N 6+00E	1	17	7	54	0.3	12	9	884	2.76	3	5	ND	ND	27	1	2	2	65	0.25	0.06	10	15	0.49	148	0.08	7	2.02	0.02	0.02	1	2	5
S	L3+00N 6+25E	1	15	2	73	0.1	10	9	1569	3.30	3	5	ND	ND	28	1	2	2	70	0.21	0.15	15	12	0.32	238	0.10	8	2.19	0.02	0.03	1	2	30
S	L3+00N 6+50E	1	21	8	67	0.1	12	8	601	3.31	2	5	ND	ND	23	1	2	2	77	0.21	0.09	13	13	0.48	117	0.11	7	2.35	0.02	0.02	1	2	5
S	L3+00N 6+75E	1	6	5	85	0.1	7	5	1819	3.17	2	5	ND	ND	28	1	2	2	60	0.24	0.23	13	8	0.42	207	0.10	8	2.58	0.02	0.02	1	2	5
S	L3+00N 7+00E	1	7	6	67	0.1	8	4	1010	3.45	2	5	ND	ND	32	1	2	2	73	0.33	0.19	12	9	0.45	181	0.13	9	2.60	0.02	0.02	1	2	5
S	L3+00N 7+25E	1	7	1	62	0.1	7	5	937	2.91	2	5	ND	ND	33	1	2	2	62	0.31	0.09	11	8	0.41	199	0.09	5	2.42	0.02	0.02	1	2	5
S	L300N 750E	1	12	6	93	0.1	7	1	1166	2.90	5	5	ND	ND	49	1	8	2	61	0.30	0.17	27	9	0.37	195	0.14	5	2.83	0.01	0.01	13	2	10
S	L300N 775E	1	8	3	66	0.1	6	1	851	2.99	5	5	ND	ND	44	1	2	2	67	0.30	0.09	11	8	0.42	156	0.13	5	3.10	0.01	0.01	3	2	5
S	L300N 800E	1	9	7	94	0.1	7	1	1940	3.05	4	5	ND	ND	42	1	2	2	60	0.34	0.25	20	9	0.43	275	0.15	5	3.05	0.01	0.01	4	2	5

CERTIFIED BY : 

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
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CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89119.I
INVOICE # : 90283
DATE ENTERED : 89-05-24
FILE NAME : MPH89119.I
PAGE # : 4

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au *
S	L400N 000E	1	15	7	64	0.1	8	4	1135	2.85	9	5	ND	ND	27	1	2	2	72	0.26	0.09	6	14	0.41	170	0.07	5	1.80	0.01	0.01	3	2	5
S	L400N 025E	1	23	5	71	0.1	13	3	1704	2.80	14	5	ND	ND	31	1	2	2	72	0.27	0.07	7	18	0.49	194	0.09	5	2.51	0.01	0.01	1	2	5
S	L400N 050E	1	32	7	54	0.1	11	5	972	2.62	22	5	ND	ND	46	1	2	2	63	0.35	0.04	19	15	0.55	159	0.07	5	1.98	0.01	0.01	1	2	5
S	L400N 075E	1	38	4	48	0.1	11	1	697	2.94	17	5	ND	ND	33	1	2	2	77	0.21	0.03	16	16	0.56	169	0.11	5	2.72	0.01	0.01	1	2	5
S	L400N 100E	1	19	2	55	0.1	9	4	1559	2.64	11	5	ND	ND	26	1	2	2	65	0.22	0.10	7	13	0.40	169	0.07	5	1.98	0.01	0.01	1	2	5
S	L400N 125E	1	14	6	52	0.1	9	6	585	2.23	5	5	ND	ND	25	1	2	2	59	0.21	0.03	7	14	0.42	166	0.07	5	1.77	0.01	0.01	1	1	5
S	L400N 150E	1	5	4	81	0.1	5	5	369	2.09	6	5	ND	ND	18	1	2	2	56	0.17	0.04	5	10	0.19	99	0.06	5	1.28	0.01	0.01	1	1	5
S	L400N 175E	1	12	4	58	0.1	9	5	749	2.38	4	5	ND	ND	25	1	2	2	63	0.20	0.04	6	15	0.32	118	0.09	5	1.61	0.01	0.01	1	1	5
S	L400N 200E	1	33	1	50	0.1	14	1	364	2.97	7	5	ND	ND	26	1	2	2	81	0.18	0.04	5	17	0.55	192	0.10	5	3.30	0.01	0.01	1	2	5
S	L400N 225E	1	13	6	39	0.1	7	4	502	2.33	8	5	ND	ND	25	1	2	2	64	0.23	0.02	7	13	0.35	57	0.09	5	1.67	0.01	0.01	1	2	5
S	L400N 250E	1	9	3	51	0.1	6	4	354	2.17	5	5	ND	ND	25	1	2	2	58	0.23	0.07	6	15	0.20	83	0.06	5	1.29	0.01	0.01	1	1	5
S	L400N 275E	1	11	1	64	0.1	8	3	410	2.67	5	5	ND	ND	22	1	2	2	67	0.19	0.12	5	15	0.30	116	0.07	5	1.72	0.01	0.01	1	1	5
S	L400N 300E	1	11	7	68	0.2	7	5	828	2.51	8	5	ND	ND	24	1	2	2	61	0.22	0.14	6	15	0.28	164	0.07	5	1.69	0.01	0.01	1	1	5
S	L400N 325E	1	10	5	74	0.1	5	7	1781	2.34	6	5	ND	ND	27	1	2	2	54	0.26	0.08	8	11	0.17	202	0.09	5	1.40	0.01	0.01	1	1	5
S	L400N 350E	1	17	7	99	0.1	8	6	3241	2.89	11	5	ND	ND	27	1	2	2	67	0.27	0.17	7	14	0.32	291	0.09	5	1.87	0.01	0.01	2	2	5
S	L400N 375E	4	42	4	74	0.4	13	6	425	3.43	9	5	ND	ND	17	1	2	2	108	0.17	0.03	8	18	0.49	105	0.20	5	2.14	0.01	0.01	1	2	5
S	L400N 400E	1	24	6	50	0.1	11	5	472	2.62	11	5	ND	ND	23	1	3	2	67	0.23	0.04	6	15	0.50	134	0.07	5	2.13	0.01	0.01	1	2	5
S	L400N 425E	1	17	7	80	0.5	11	5	758	3.59	6	5	ND	ND	27	1	2	2	87	0.24	0.16	8	14	0.41	172	0.08	5	2.16	0.01	0.01	1	2	5
S	L400N 450E	9	235	8	235	0.5	15	15	1553	3.59	25	5	ND	ND	27	1	3	2	79	0.21	0.12	22	13	0.59	162	0.12	5	3.75	0.01	0.01	3	3	60
S	L400N 475E	1	37	6	58	0.4	14	7	858	2.95	10	5	ND	ND	22	1	2	2	85	0.17	0.06	9	24	0.48	121	0.16	5	2.53	0.01	0.01	1	2	5
S	L400N 500E	1	49	6	53	0.2	14	5	372	2.93	15	5	ND	ND	26	1	2	2	91	0.23	0.04	8	20	0.54	124	0.18	5	2.68	0.01	0.01	1	2	5
S	L400N 525E	1	61	9	53	0.3	16	5	321	2.96	15	5	ND	ND	19	1	2	2	96	0.14	0.03	8	22	0.63	107	0.21	5	2.76	0.01	0.01	2	2	5
S	L400N 550E	1	15	7	78	0.2	11	1	664	3.33	2	5	ND	ND	28	1	4	2	76	0.22	0.09	11	12	0.47	185	0.14	5	3.69	0.01	0.02	1	2	5
S	L400N 575E	1	25	4	55	0.1	10	1	431	3.31	6	5	ND	ND	23	1	2	2	90	0.17	0.03	14	11	0.68	85	0.19	5	3.77	0.01	0.01	1	2	5
S	L400N 600E	1	16	8	63	0.4	9	1	664	3.25	2	5	ND	ND	31	1	2	2	80	0.23	0.06	14	11	0.46	117	0.13	5	3.25	0.01	0.01	1	2	5
S	L400N 625E	1	8	10	63	0.2	8	1	515	3.54	2	5	ND	ND	24	1	2	2	84	0.18	0.05	8	9	0.43	122	0.16	5	3.81	0.01	0.01	1	2	5
S	L400N 650E	1	11	7	60	0.6	8	1	419	3.35	2	5	ND	ND	28	1	2	2	79	0.19	0.04	15	8	0.43	97	0.14	5	4.22	0.01	0.01	1	3	5
S	L400N 675E	1	7	3	66	0.1	6	1	769	3.27	2	5	ND	ND	30	1	2	2	74	0.21	0.05	14	7	0.39	152	0.14	5	3.15	0.01	0.02	1	2	5
S	L400N 700E	1	8	2	65	0.1	7	2	1041	2.80	2	5	ND	ND	35	1	2	2	64	0.23	0.07	14	7	0.37	159	0.13	5	2.98	0.01	0.01	1	2	5
S	L400N 725E	1	9	8	82	0.1	10	2	678	3.37	4	5	ND	ND	33	1	2	2	76	0.25	0.07	19	10	0.45	132	0.18	5	2.98	0.01	0.02	2	2	5
S	L400N 750E	1	11	7	74	0.1	18	3	1245	3.02	2	5	ND	ND	50	1	2	2	68	0.27	0.12	13	18	0.50	154	0.13	5	2.88	0.01	0.01	1	2	5
S	L400N 775E	1	9	3	75	0.1	7	1	1853	3.37	2	5	ND	ND	26	1	2	2	74	0.19	0.13	18	7	0.36	202	0.14	5	3.20	0.01	0.02	1	2	5
S	L400N 800E	1	11	4	69	0.3	9	1	1181	3.24	2	5	ND	ND	35	1	2	2	73	0.23	0.09	12	10	0.36	154	0.11	5	3.20	0.01	0.02	1	2	5
S	L500N 000E	1	10	8	78	0.4	7	6	1147	2.25	6	5	ND	ND	22	1	2	2	60	0.22	0.10	5	12	0.25	157	0.04	5	1.36	0.01	0.01	2	1	5
S	L500N 025E	1	17	5	80	0.1	10	6	638	3.00	18	5	ND	ND	31	1	2	2	79	0.27	0.03	9	14	0.35	125	0.08	5	2.19	0.01	0.01	1	2	5
S	L500N 050E	1	26	2	42	0.1	10	6	411	2.90	6	5	ND	ND	25	1	2	2	76	0.23	0.03	8	14	0.57	130	0.09	5	2.07	0.01	0.01	1	2	5
S	L500N 075E	1	38	4	49	0.2	12	4	507	3.12	12	5	ND	ND	25	1	2	2	83	0.18	0.05	12	16	0.62	155	0.11	5	2.80	0.01	0.01	1	2	5
S	L500N 100E	1	14	5	53	0.2	9	4	249	3.02	8	5	ND	ND	20	1	2	2	78	0.15	0.04	6	13	0.33	109	0.08	5	2.32	0.01	0.01	1	2	5
S	L500N 125E	1	6	6	56	0.5	5	7	761	2.23	3	5	ND	ND	21	1	2	2	61	0.20	0.05	7	11	0.18	121	0.05	5	1.01	0.01	0.01	1	1	5
S	L500N 150E	1	10	4	72	0.3	8	7	707	3.01	2	5	ND	ND	22	1	3	2	78	0.19	0.10	7	12	0.32	125	0.06	5	1.52	0.01	0.01	1	2	5

CERTIFIED BY :

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

CERTIFICATE OF ANALYSIS

TO : MPH CONSULTING LTD.
#2406-555 W. HASTINGS ST.
VANCOUVER, B.C.
PROJECT : V 199
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 89119.I
INVOICE # : 90283
DATE ENTERED : 89-05-24
FILE NAME : MPH89119.I
PAGE # : 5

PRE FIX	SAMPLE NAME	PPM MO	PPM CU	PPM PB	PPM ZN	PPM AG	PPM NI	PPM CO	PPM MN	% FE	PPM AS	PPM U	PPM AU	PPM HG	PPM SR	PPM CD	PPM SB	PPM BI	PPM V	% CA	% P	PPM LA	PPM CR	% MG	PPM BA	% TI	PPM B	% AL	% NA	% SI	PPM W	PPM BE	PPB Au t
S	L500N 175E	1	11	2	71	0.3	8	8	574	2.80	2	5	ND	ND	22	1	2	2	74	0.18	0.07	8	13	0.32	130	0.06	5	1.52	0.01	0.01	1	2	5
S	L500N 200E	1	12	6	79	0.3	9	9	1464	2.21	3	5	ND	ND	30	1	3	2	57	0.25	0.09	9	13	0.32	183	0.07	5	1.52	0.01	0.01	1	1	5
S	L500N 225E	2	24	6	75	0.2	10	13	802	2.56	2	5	ND	ND	23	1	3	2	70	0.22	0.05	8	14	0.27	135	0.16	5	1.73	0.01	0.01	1	2	50
S	L500N 250E	1	11	5	62	0.2	9	9	894	2.37	4	5	ND	ND	22	1	4	2	61	0.18	0.06	7	13	0.32	126	0.07	5	1.62	0.01	0.01	1	1	5
S	L500N 275E	1	12	2	68	0.1	9	7	578	3.27	3	5	ND	ND	27	1	2	2	83	0.24	0.11	8	12	0.34	168	0.08	5	1.67	0.01	0.01	1	2	5
S	L500N 300E	1	17	8	52	0.2	12	6	888	3.25	5	5	ND	ND	27	1	3	2	80	0.25	0.14	8	16	0.40	181	0.07	5	1.72	0.01	0.01	1	2	5
S	L500N 325E	2	11	7	61	0.3	10	7	742	2.58	5	5	ND	ND	23	1	2	2	69	0.20	0.07	7	15	0.28	120	0.06	5	1.46	0.01	0.01	1	2	5
S	L500N 350E	1	13	8	88	0.3	10	9	1425	3.43	4	5	ND	ND	29	1	2	2	83	0.26	0.17	10	14	0.34	340	0.07	5	1.73	0.01	0.01	1	2	5
S	L500N 375E	11	98	9	97	0.3	15	18	1110	3.97	9	5	ND	ND	23	1	2	4	112	0.27	0.13	9	17	0.48	162	0.18	5	2.18	0.01	0.01	2	3	5
S	L500N 400E	3	53	9	147	0.1	15	12	2578	3.42	8	5	ND	ND	31	1	2	2	89	0.36	0.10	11	20	0.53	226	0.18	5	2.42	0.01	0.01	3	2	5
S	L500N 425E	3	22	8	65	0.1	15	9	466	3.34	7	5	ND	ND	21	1	2	2	81	0.19	0.03	6	14	0.44	97	0.12	5	2.38	0.01	0.01	2	2	5
S	L500N 450E	2	59	9	62	0.4	29	10	381	3.18	11	5	ND	ND	34	1	3	2	99	0.31	0.02	11	41	0.84	84	0.15	5	2.64	0.01	0.01	3	3	5
S	L500N 475E	1	29	11	61	0.5	25	12	913	3.13	6	5	ND	ND	34	1	3	3	92	0.30	0.02	9	32	0.61	130	0.08	5	2.32	0.01	0.01	2	2	5
S	L500N 500E	1	15	40	64	0.1	16	3	1374	2.90	3	5	ND	ND	26	1	2	2	70	0.21	0.10	10	17	0.37	140	0.13	5	3.07	0.01	0.01	2	2	5
S	L500N 525E	2	27	10	59	0.1	20	4	832	3.11	6	5	ND	ND	32	1	2	2	81	0.22	0.05	15	22	0.46	135	0.16	5	3.29	0.01	0.02	3	2	5
S	L500N 550E	2	26	13	59	0.1	16	1	745	3.31	7	5	ND	ND	35	1	3	2	83	0.23	0.06	15	16	0.47	159	0.16	5	3.75	0.01	0.02	3	2	5
S	L500N 575E	1	15	10	45	0.3	12	5	259	2.96	3	5	ND	ND	25	1	4	3	70	0.14	0.04	11	12	0.26	134	0.13	5	2.96	0.01	0.01	3	2	5
S	L500N 600E	2	9	13	65	1.1	10	9	1745	2.75	6	5	ND	ND	32	1	2	5	64	0.23	0.08	11	10	0.26	185	0.08	5	2.20	0.01	0.01	3	2	5
S	L500N 625E	1	9	11	63	0.1	9	4	713	3.20	5	5	ND	ND	33	1	3	4	74	0.22	0.06	19	10	0.28	163	0.12	5	2.79	0.01	0.02	3	2	5
S	L500N 650E	1	8	4	55	0.1	7	5	817	2.73	4	5	ND	ND	26	1	3	2	65	0.20	0.06	10	7	0.35	132	0.10	5	2.77	0.01	0.01	1	2	5
S	L500N 675E	1	9	6	71	0.1	10	4	1114	3.28	4	5	ND	ND	33	1	3	2	78	0.24	0.09	14	9	0.33	188	0.13	5	2.90	0.01	0.01	1	2	5
S	L500N 700E	1	12	6	62	0.1	15	2	943	3.31	6	5	ND	ND	28	1	3	2	81	0.19	0.10	9	22	0.32	138	0.12	5	3.10	0.01	0.01	3	2	5
S	L500N 725E	1	18	7	65	0.1	13	7	1157	2.97	3	5	ND	ND	33	1	2	2	77	0.22	0.07	11	15	0.40	146	0.14	5	2.51	0.01	0.01	2	2	5
S	L500N 750E	1	10	7	88	0.1	10	5	1634	3.13	2	5	ND	ND	33	1	2	2	67	0.23	0.17	18	11	0.30	256	0.14	5	2.63	0.01	0.02	2	2	5
S	L500N 775E	1	8	9	83	0.1	13	7	1548	3.31	6	5	ND	ND	42	1	2	2	73	0.32	0.16	18	15	0.35	277	0.16	5	2.59	0.01	0.02	3	2	5
S	L500N 800E	1	9	8	81	0.1	8	10	4108	3.18	3	5	ND	ND	44	1	2	2	68	0.36	0.13	21	10	0.26	418	0.13	5	1.94	0.01	0.01	2	2	5
S	025N 000BL	1	16	10	58	0.3	11	10	1089	2.21	6	5	ND	ND	34	1	3	3	59	0.27	0.06	9	15	0.23	216	0.07	5	1.43	0.02	0.01	3	2	5
S	075N 000BL	2	13	9	50	0.4	12	11	1365	2.45	8	5	ND	ND	39	1	4	4	69	0.33	0.03	9	17	0.40	201	0.07	5	1.56	0.01	0.01	3	2	5
S	125N 000BL	2	10	5	62	0.4	8	10	1446	2.10	5	5	ND	ND	23	1	2	4	58	0.22	0.06	8	12	0.23	146	0.06	5	1.37	0.02	0.01	2	1	5
S	150N 000BL	2	8	4	61	0.1	7	8	922	2.00	6	5	ND	ND	25	1	3	2	52	0.25	0.09	7	12	0.24	129	0.05	5	1.38	0.02	0.01	2	1	5
S	175N 000BL	1	23	4	50	0.1	11	9	344	2.57	12	5	ND	ND	24	1	2	2	68	0.20	0.04	7	14	0.44	128	0.07	5	1.89	0.01	0.01	2	2	60
S	225N 000BL	2	26	7	69	0.4	16	10	479	3.08	16	5	ND	ND	22	1	3	2	84	0.19	0.03	11	18	0.52	155	0.09	5	2.35	0.01	0.01	2	2	5
S	250N 000BL	2	16	9	56	0.1	13	11	1214	2.80	15	5	ND	ND	49	1	2	4	76	0.43	0.04	9	16	0.46	232	0.07	5	2.01	0.01	0.01	2	2	5
S	275N 000BL	1	16	3	50	0.1	13	10	819	2.64	14	5	ND	ND	36	1	2	2	71	0.30	0.03	7	17	0.48	168	0.07	5	1.87	0.02	0.01	1	2	5
S	325N 000BL	2	15	4	84	0.1	11	11	984	2.97	15	5	ND	ND	25	1	2	2	76	0.25	0.16	9	16	0.35	192	0.08	5	1.81	0.02	0.01	1	2	5
S	350N 000BL	1	11	9	90	0.1	8	9	764	2.43	7	5	ND	ND	25	1	2	2	66	0.26	0.13	9	15	0.27	149	0.09	5	1.56	0.01	0.02	2	2	5
S	375N 000BL	1	19	4	64	0.1	10	8	882	3.02	8	5	ND	ND	24	1	3	2	77	0.22	0.15	9	14	0.38	119	0.07	5	1.90	0.01	0.01	1	2	5
S	425N 000BL	2	26	5	62	0.1	13	10	861	3.27	11	5	ND	ND	32	1	2	2	87	0.30	0.08	8	19	0.58	149	0.10	5	2.01	0.01	0.01	2	2	5
S	450N 000BL	2	20	8	68	0.3	12	10	1315	3.09	9	5	ND	ND	33	1	2	2	79	0.31	0.09	8	16	0.38	216	0.06	5	1.82	0.01	0.01	3	2	5
S	475N 000BL	2	25	6	71	0.3	16	11	1907	3.03	12	5	ND	ND	29	1	2	2	79	0.21	0.06	11	19	0.54	188	0.08	5	2.13	0.01	0.01	2	2	5

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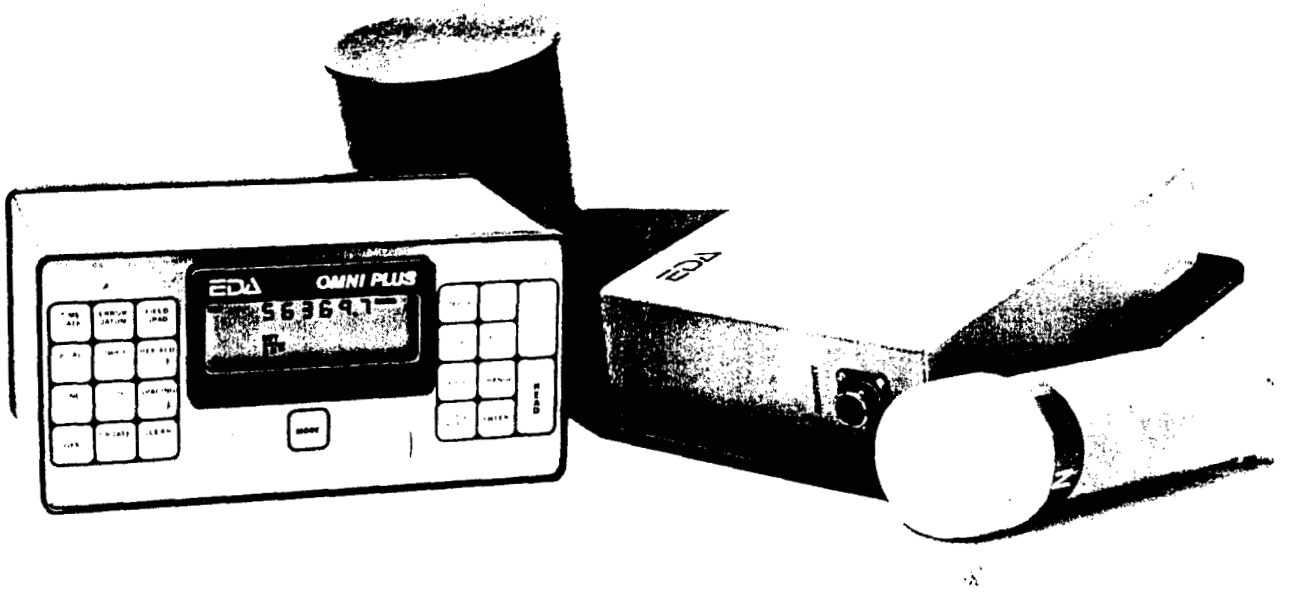
APPENDIX V

Geophysical Equipment Specifications

OMNI PLUS "Tie-Line" VLF/Magnetometer System

EDA



Major Benefits

- Combined VLF/Magnetometer/Gradiometer System
- No Orientation Required
- Four VLF Magnetic Parameters Recorded
- Automatic Calculation of Fraser Filter
- Automatic Correction of Primary Field Variations
- Calculation of Ellipticity
- Measurement of VLF Electric Field

Specifications

Frequency Tuning Range	15 to 30 kHz, in 100 Hz increments, with bandwidth of 150 Hz; tuning range accommodates new Puerto Rico station at 28.5 kHz.
Transmitting Stations Measured	Up to 3 stations can be automatically measured at any given grid location within frequency tuning range.
Recorded VLF Magnetic Parameters	Vertical in-phase, vertical quadrature (out-of-phase), total field strength (or optional horizontal amplitude), dip angle.
Standard Memory Capacity	1300 combined VLF magnetic and VLF electric measurements as well as gradiometer and magnetometer readings.
Display	Custom designed, ruggedized liquid crystal display with built-in heater and an operating temperature range from −40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal strength status monitor and function descriptors.
RS232C Serial I/O Interface	Variable baud rate from 300 to 9600 baud, 8 data bits, 2 stop bits, no parity.
Test Mode	A. Diagnostic Testing (data and programmable memory). B. Self Test (hardware).
Sensor Head	Contains 3 orthogonally mounted coils with automatic tilt compensation.
Operating Environmental Range	−40°C to +55°C; 0 – 100% relative humidity; Weatherproof.
Power Supply	Non-magnetic rechargeable sealed lead-acid 18V DC battery cartridge or belt; 18V DC disposable battery belt; 12V DC external power source for base station operation only.
Weights and Dimensions	
Instrument Console	3.8 kg, 122 x 246 x 210 mm.
Sensor Head	0.9 kg, 140 dia. x 130 mm.
VLF Electronics Module	1.7 kg, 280 x 190 x 60 mm.
Lead Acid Battery Cartridge	1.8 kg, 138 x 95 x 75 mm.
Lead Acid Battery Belt	1.8 kg, 540 x 100 x 40 mm.
Disposable Battery Belt	1.2 kg, 540 x 100 x 40 mm.

EDA Instruments Inc.
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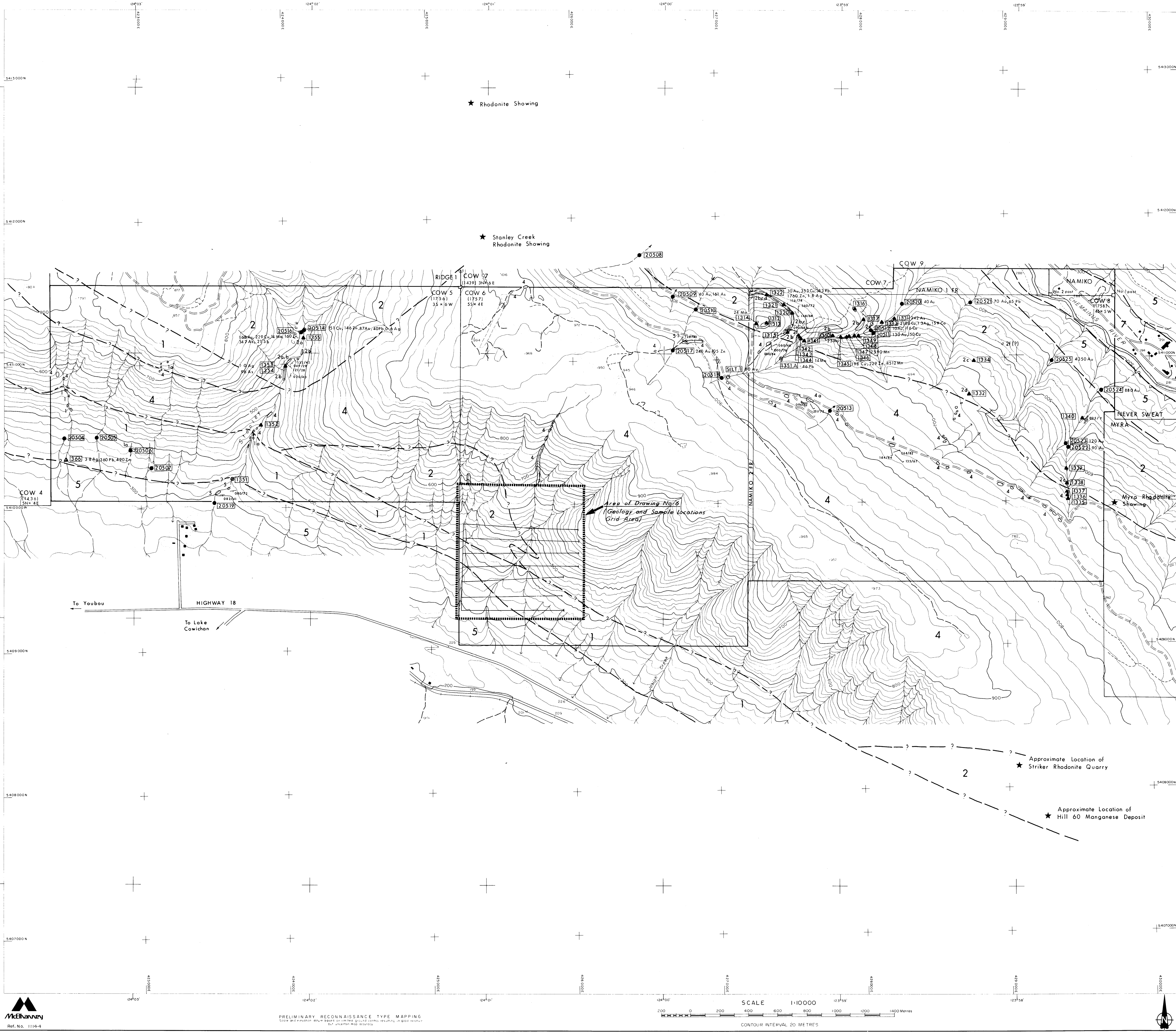
Printed in Canada

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 mile	
1 acre	=	0.4047 hectares	(ha)
1 ha	=	2.471 acres	
1 ha	=	100 m x 100 m = 10,000 m^2	
1 km^2	=	100 ha	
1 troy ounce	=	31.103 grams	(g)
1 pennyweight/ton (dwt/ton)	=	1.7143 grams/tonne	
1 g	=	0.032 troy oz	
1 pound (lb)	=	0.454 kilogram	(kg)
1 kg	=	2.20 lb	
1 ton (2000 lb)	=	0.907 tonne (0.9072)	(t)
1 tonne	=	1.102 ton = 2205 lb	
1 troy ounce/ton (oz/T)	=	34.286 grams/tonne	(g/t)
1 pennyweight	=	1.555 grams	
1 g/tonne	=	0.0292 troy oz/ton	
1 g/t	=	1 part per million	(ppm)
1 ppm	=	1000 parts per billion	(ppb)
10,000 g/t	=	1%	



LEGEND

Geology

CENOZOIC
QUATERNARY

7 — Unconsolidated sediments: glacial outwash, till and alluvium

MESOZOIC
CRETACEOUS

5 — NANAIMO GROUP - sediments
5a - mudstone, shale
5b - sandstone to conglomerate

JURASSIC

4 — ISLAND INTRUSIONS
- quartz diorite

PALEOZOIC
UPPER SILURIAN TO LOWER PERMIAN

SICKER GROUP

2 — MYRA FORMATION/SEDIMENT SILL UNIT
2a - argillite
2b - chert, cherty siltstone, cherty tuff; locally ferruginous
2c - siltstone, locally hornfelsed
2d - sandstone, locally hornfelsed
2e - crystal tuff, tuffaceous sediment
2f - diabase sills and dykes

1 — NITINAT FORMATION
1a - pyroxene crystal tuff
1b - feldspar crystal tuff
1c - massive tuff

Symbols

▲, △ 1989, 1987 Rock Sample Location with selected results (from outcrop)
⊗ 1989 Rock Sample Location with selected results (from float)
● 1989 HMC Silt Sample Location with selected results
○ 1987 Silt Sample Location with selected results
(Au in ppb, all others in ppm)

1989 Grid Lines
Road (gravel, 4WD)
Paved Road
Trail
Legal Corner Post with claim name and claim boundaries
Property Outline
Outcrop
Dyke
Quartz vein
Joint
Bedding
Foliation
Fault (defined, approximate)
Geological Contact (approximate, assumed)
Creek/Gully

0 200 400 600 800 1000 m

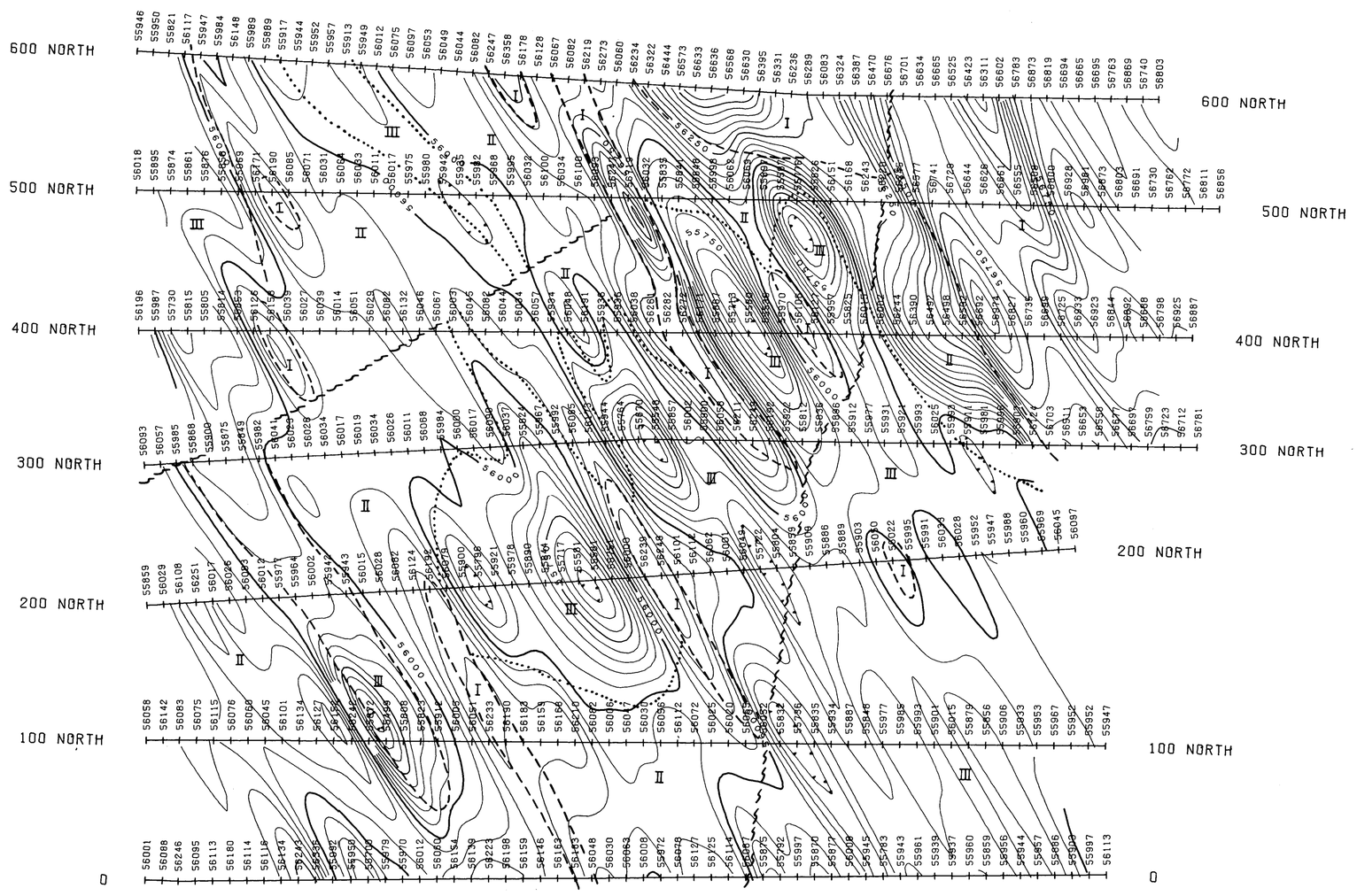
NTS 92B/13, 92C/16

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED

PROPERTY GEOLOGY AND SAMPLE LOCATIONS
HILL 60 PROPERTY
VICTORIA MINING DIVISION, B.C.

Project No:	V 199	By:	G.M.L., G.Y.
Scale:	1 : 10000	Drawn:	J. S.
Drawing No:	5	Date:	JUNE 1989.

MPH Consulting Limited



LEGEND

56781 — Total magnetic field (nanoteslas)

INTERPRETATION

II — Magnetic domain

---- Inferred geological contact

~~~~ Inferred fault

Instrument : EDA Omniplus

25 0 25 50 75 m

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED	
HILL 60 PROPERTY TOTAL FIELD MAGNETICS CONTOUR INTERVAL 50 NANOTESLA 92B/13 92C/16 VICTORIA MINING DIVISION, B.C.	
PROJECT NO. V199	BY: KDL
SCALE 1:2500	DRAWN:
DRAWING NO. 9	DATE: MAY 1989
MPH CONSULTING LIMITED	
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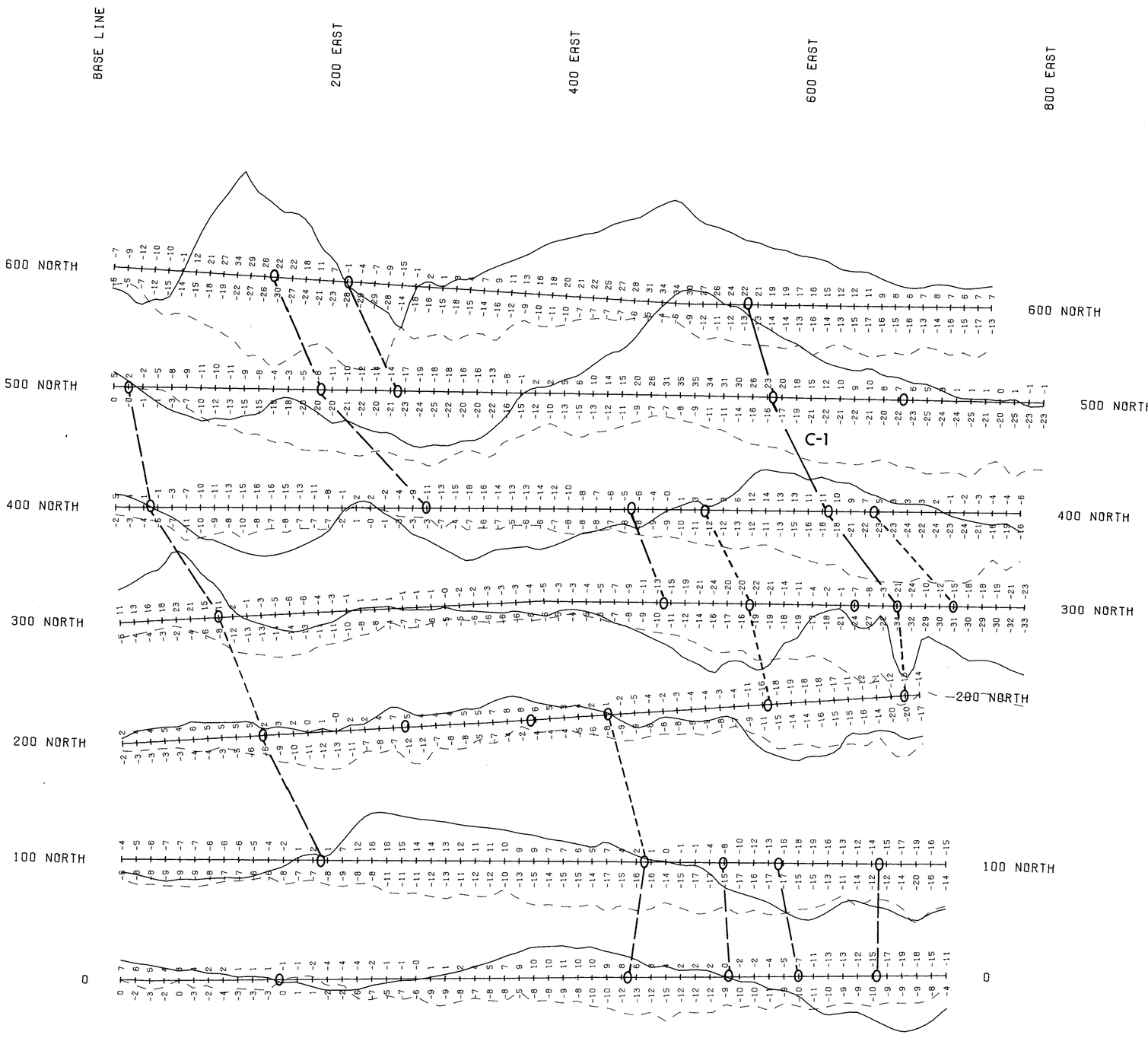


LEGEND

- In Phase profile (1cm = 10%)
- Quadrature profile (1cm = 10%)
- 0 Conductor (weak)

CONDUCTOR CONTINUITY

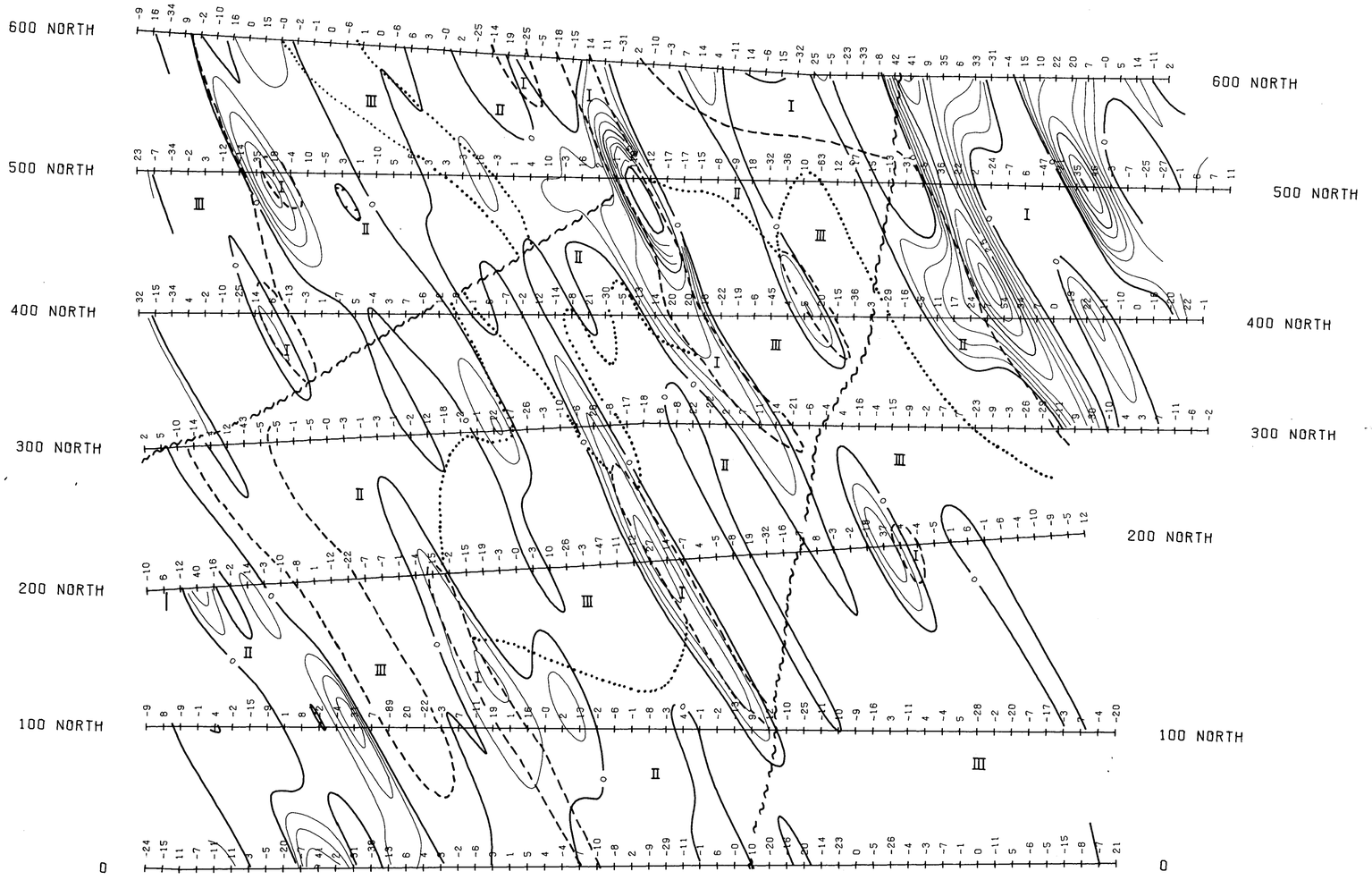
- Strong
- Moderate
- Weak

Instrument : EDA Omniplus

VLF-EM STATION:
JIM CREEK, WASHINGTON
24.8 KILOHERTZ

25 0 25 50 75 m

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED	
HILL 60 PROPERTY VLF-EM PROFILES 92B/13 92C/16 VICTORIA MINING DIVISION, B.C.	
PROJECT NO. V199	BY: KDL
SCALE 1:2500	DRAWN:
DRAWING NO. 11	DATE: MAY 1989
MPH CONSULTING LIMITED	



LEGEND

4 3 7 — Magnetic vertical gradient (nanoteslas/metre)

INTERPRETATION

II — Magnetic domain

– – – Inferred geological contact

~~~~ Inferred fault

Instrument : EDA Omniplus

25 0 25 50 75 m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,871

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED	
HILL 60 PROPERTY VERTICAL GRADIENT MAGNETICS CONTOUR INTERVAL 5 NANOTESLA/METRE 92B/13 92C/16 VICTORIA MINING DIVISION, B.C.	
PROJECT NO. V199	BY: KDL
SCALE 1:2500	DRAWN:
DRAWING NO. 10	DATE: MAY 1989
MPH CONSULTING LIMITED	
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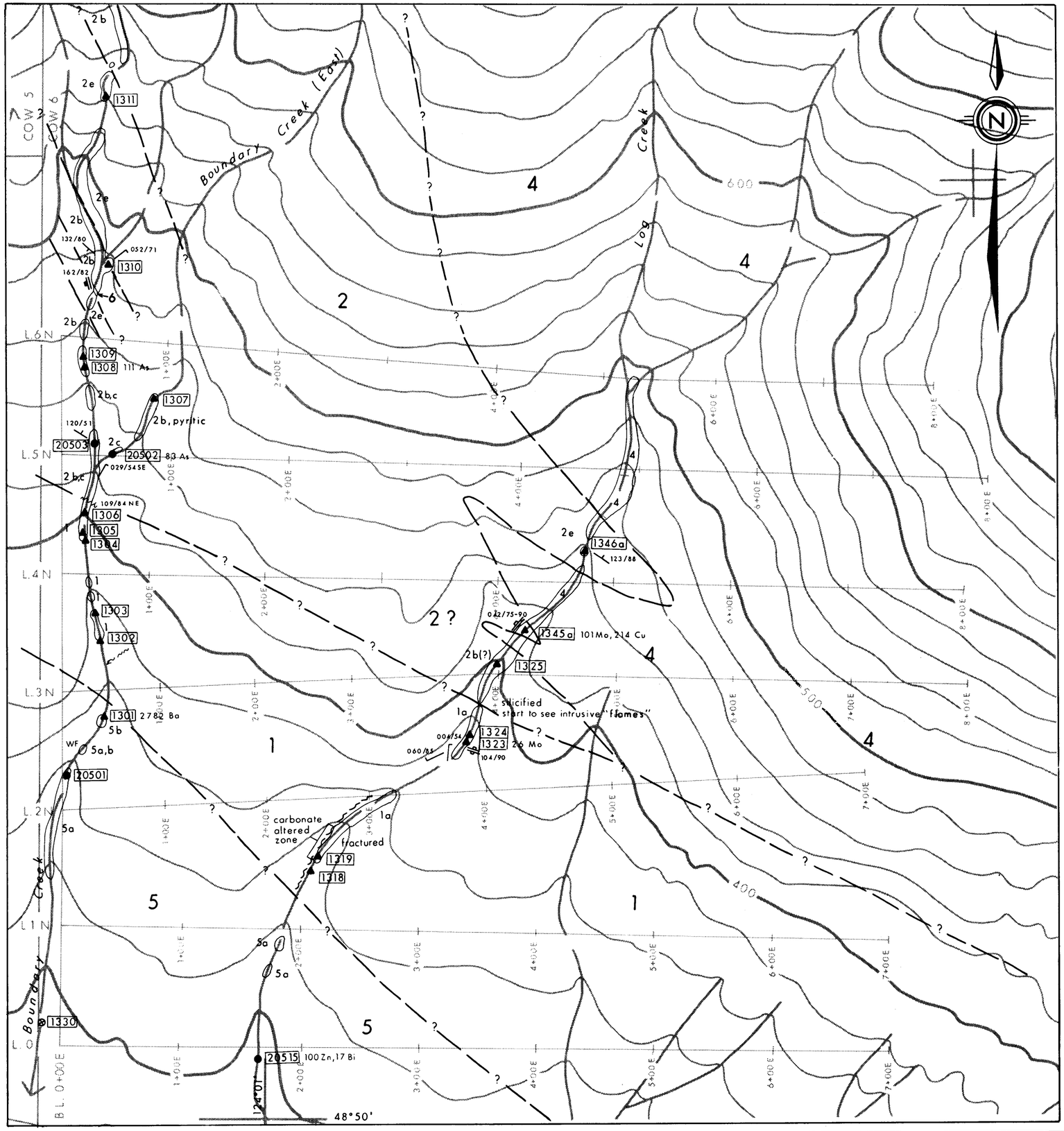


LEGEND

Geology

CENOZOIC
QUATERNARY

6 SOOKE INTRUSIONS (?)
- feldspar quartz porphyry dyke

MESOZOIC
CRETACEOUS

5 NANAIMO GROUP
5a - mudstone
5b - sandstone to conglomerate

JURASSIC

4 ISLAND INTRUSIONS
- quartz diorite

UPPER SILURIAN TO LOWER PERMIAN
SICKER GROUP

2 MYRA FORMATION/SEDIMENT SILL UNIT
2a - argillite
2b - chert, cherty siltstone, cherty tuff; locally ferruginous
2c - siltstone, locally hornfelsed
2d - sandstone, locally hornfelsed
2e - crystal tuff, tuffaceous sediment
2f - diabase sills and dykes

1 NITINAT FORMATION
- pyroxene crystal tuff

Symbols

- 1989 Rock Sample Location with selected results (from outcrop)
- 1989 Rock Sample Location with selected results (from float)
- 1989 IMC Silt Sample Location with selected results

Au in ppb, all others in ppm

- 1989 Grid Lines
- Claim boundary
- Outcrop
- Dyke
- Quartz vein
- Joint
- Bedding
- Foliation
- Fault (defined, approximate)
- Geological Contact (approximate, assumed)
- Creek/Gutty

0 50 100 150 200 m

NTS 92B /13, 92C/16

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,871

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED

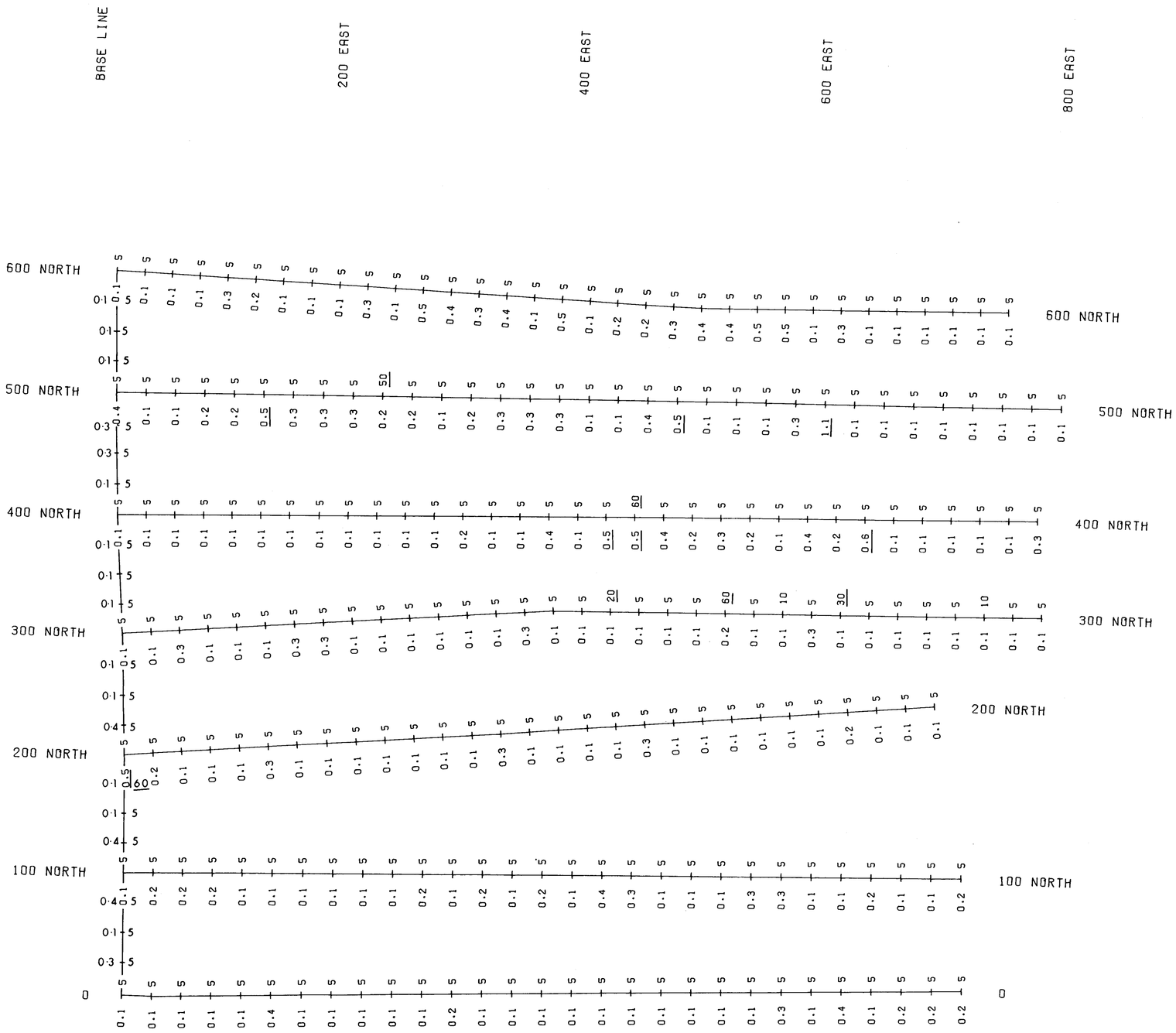
GEOLOGY AND SAMPLE LOCATIONS GRID AREA

HILL 60 PROPERTY

VICTORIA MINING DIVISION, B.C.

Project No:	V 199	**By:**	G. M. L.
Scale:	1 : 2500	**Drawn:**	J. S.
Drawing No:	6	**Date:**	JUNE 1989.

MPH Consulting Limited



N

LEGEND

Ag (ppm) | Au (ppb)

Ag, Au values

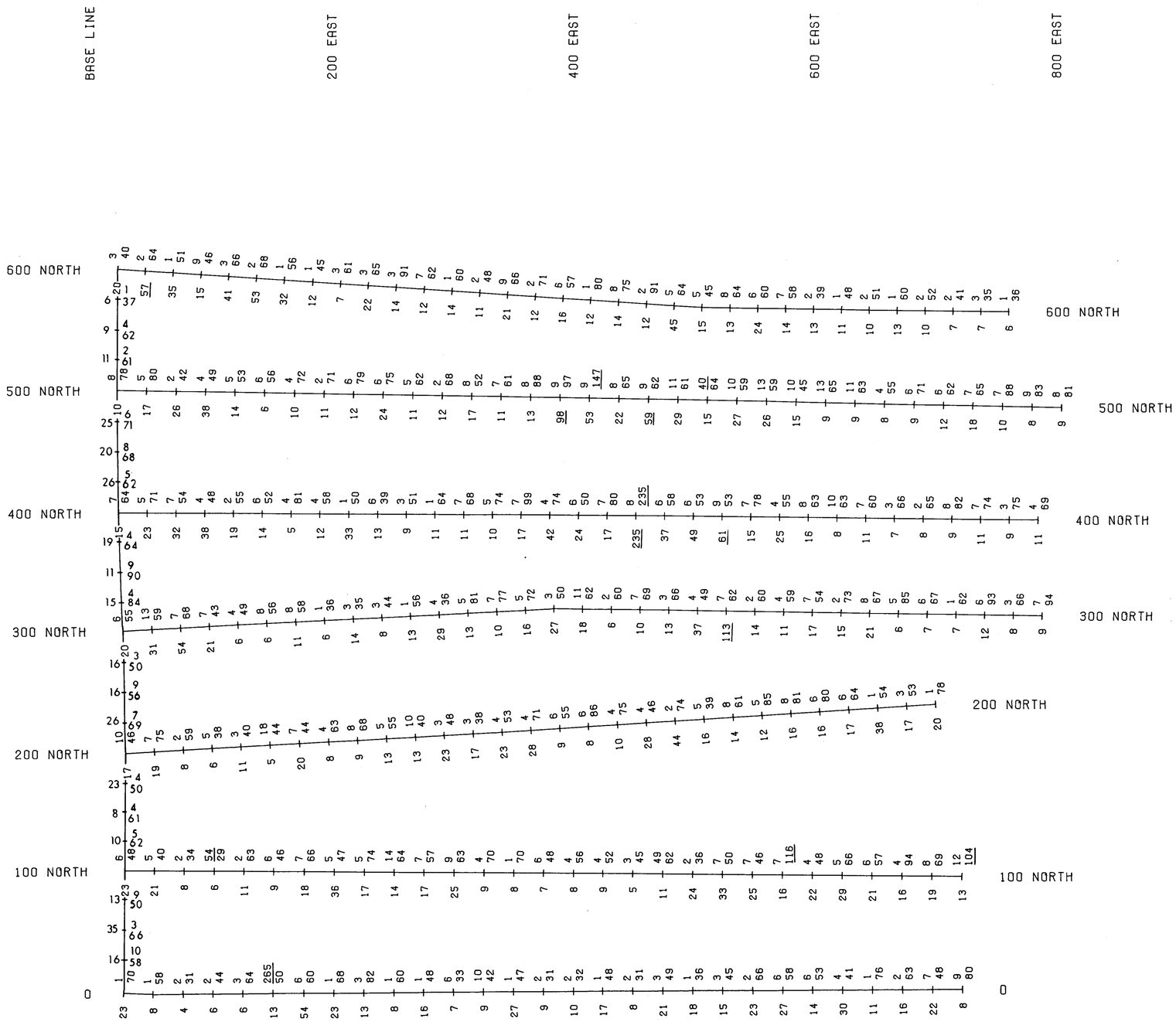
Anomalous values underlined

Ag ≥ 0·5 ppm

Au ≥ 20 ppb

25 0 25 50 75 m

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED	
HILL 60 PROPERTY AU,AG SOIL GEOCHEMISTRY 92B/13 92C/16 VICTORIA MINING DIVISION, B.C.	
PROJECT NO. V199	BY: KDL
SCALE 1:2500	DRAWN:
DRAWING NO. 7	DATE: MAY 1989
MPH CONSULTING LIMITED	



LEGEND

Cu / Pb / Zn

Cu, Pb, Zn values (ppm)

Anomalous values underlined

Cu ≥ 55 ppm

Pb ≥ 25 ppm

Zn ≥ 100 ppm

25 0 25 50 75m

INTERNATIONAL CHEROKEE DEVELOPMENTS LIMITED	
HILL 60 PROPERTY Cu,Pb, Zn SOIL GEOCHEMISTRY 92B/13 92C/16 VICTORIA MINING DIVISION, B.C.	
PROJECT NO. V199	BY: KDL
SCALE 1:2500	DRAWN:
DRAWING NO. 8	DATE: MAY 1989
MPH CONSULTING LIMITED	