82-830-15389

MPH

1986 ASSESSMENT AND RECOMMENDED WORK PROGRAM

9/87

MNS GROUP

N.T.S. 92B/13W

(Myra and Never Sweat Claims)

48°~~42'~~ 52' N Lat., 123°~~44'~~ 56.6' W Long.
Victoria Mining Division
British Columbia

for

Operator: **INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.**

December 15, 1986

J.S. Getsinger, Ph.D.

Owner(s): M. Swetz
E. Angus

GEOLOGICAL BRANCH ASSESSMENT REPORT

15,389

SUB-RECORDER
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VANCOUVER, B.C.

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SUMMARY

Preliminary assessment work and Phase I geological mapping and sampling, soil sampling, and magnetometer survey have been completed on the MNS Group.

The MNS Group (Myra and Never Sweat claims) is underlain by a northwest-trending sequence of Paleozic volcanic and sedimentary rocks of the Sicker Group, including Myra Formation and Sediment-Sill Units; Jurassic intrusives; and Cretaceous nearshore sedimentary rocks of the Nanaimo Group.

The sequence of cherty sediments within the Sediment-Sill Unit containing layered magnetite/pyrite lenses(?) with up to 4.8 g/t Au and up to 1.84% Zn on the property adjacent to the Never Sweat on the northwest is represented on the Never Sweat claims by a similar sequence with weakly magnetic horizons (banded iron-rich sediments).

Lithogeochemical results (from a total of 73 rock samples) include several elevated gold values up to 170 ppb Au in the package of Sediment-Sill Unit rocks including pyritic argillite, cherty sediments with iron-rich layers and felsic rocks in the northeastern part of the Never Sweat claim. Other lithogeochemical values are up to 0.8 ppm Ag, 577 ppm Cu, 94 ppm Pb, 884 ppm Zn, 36 ppm Mo, 112 ppm Ni, 1680 ppm Ba, 45 ppm As, 3664 ppm Mn, 4200 ppm P, 229 ppm Cr, and 224 ppm V.

Geochemical results from a total of 344 soil samples shows a zone of high background to anomalous gold concentrations (up to 170 ppb Au) in the eastern portion of the grid near the eastern boundary of the Never Sweat claim. Minor elevated silver and

copper values (up to 0.6 ppm and 153 ppm respectively) may be associated with anomalous gold areas. Highly anomalous soil geochemical Pb values (up to 1230 ppm Pb) are unusual considering low Pb in rock samples. Zn values in soils up to 184 ppm are locally associated with areas of high Pb.

A magnetometer survey over the soil grid defined a possible broad, moderate to weakly anomalous 'high' zone in the northeastern portion of the Never Sweat claim which may correspond to mapped iron-rich (locally magnetic) cherty sediments.

Phase II exploration to consist of further detailed geological mapping ansd sampling, a VLF-EM survey on the grid, additional soil sampling, and trenching of selected areas is recommended at an estimated cost of $30,000.

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INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.

GENERAL LOCATION MAP
MNS GROUP
VICTORIA MINING DIVISION

Project No:	V 243	By:	T. N.
Scale:	1 : 8 000 000	Drawn:	J. S.
Drawing No:	1	Date:	DEC. 1986.

MPH Consulting Limited

1.0 INTRODUCTION

This report on the MNS Group has been prepared by MPH Consulting Limited at the request of International Cherokee Developments Ltd. The report summarizes geological assessment work carried out on the MNS property (Myra and Never Sweat claims) by MPH Consulting Limited between September 11 and 16, 1986, consisting of geological mapping at a scale of 1:10,000, prospecting and rock sampling. Soil sampling was also done on a grid in the northern part of the Never Sweat claim.

Further geological mapping (at a scale of 1:2500) and sampling, as well as a magnetometer survey over approximately 10 line kilometres, were carried out by MPH Consulting Limited between September 16 and November 4, 1986.

2.0 PROPERTY LOCATION, ACCESS, TITLE

The MNS Group is located in the Chemainus River valley near the junction with Chipman Creek (also known as Boulder Creek) about 19 km northwest of Duncan, on NTS mapsheet 92B/13 centred at about 48°51'N latitude, 123°56.5'W longitude in the Victoria Mining Division of British Columbia.

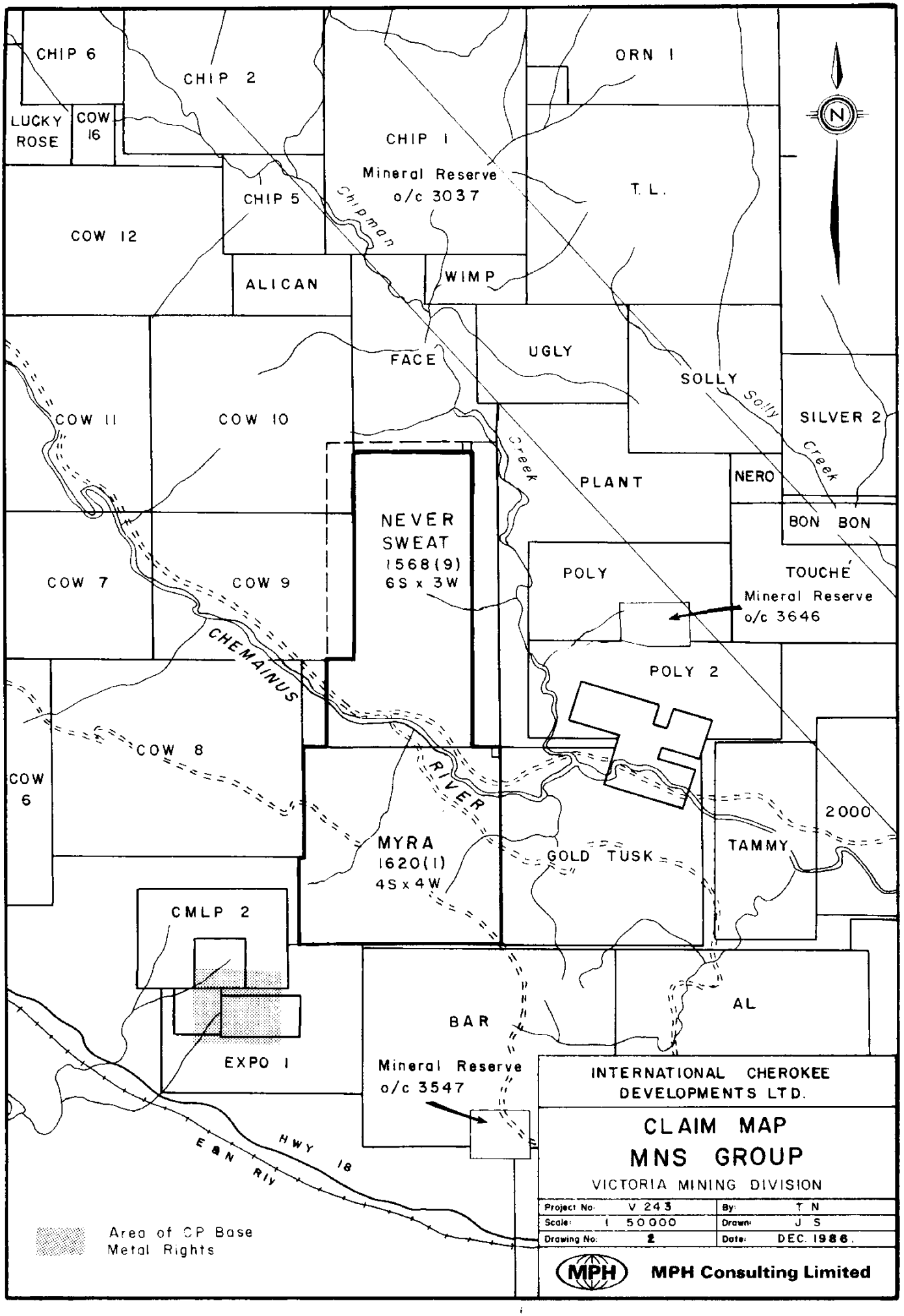
Access to the property is via MacMillan Bloedel's Chemainus River road from Chemainus. Old logging roads suitable for 4WD vehicles provide access to most areas of the Never Sweat claim and the upper (southwest) section of the Myra claim.

The MNS Group comprises two claims totalling 34 units, as summarized below:

Claim	Record No.	Units	Anniversary Date	Year Registered
Myra	1620(1)	16	January 10, 1987	1986
Never Sweat	1568(9)	18	September 16, 1987	1985

Both claims are owned by Murray Swetz (50%) and Ed Angus (50%). They were grouped as the MNS Group by Notice to Group on September 15, 1986.

International Cherokee Developments Ltd. is the operator of the property by virtue of an option agreement.


CHIP 6
CHIP 2
ORN 1
LUCKY ROSE
COW 16
CHIP 1
Mineral Reserve
o/c 3037
T. L.
CHIP 5
Chipman
COW 12
ALICAN
WIMP
FACE
UGLY
SOLLY
Solly
Creek
SILVER 2
COW 11
COW 10
PLANT
NERO
BON BON
NEVER SWEAT
1568(9)
6S x 3W
POLY
TOUCHE
Mineral Reserve
o/c 3646
COW 7
COW 9
CHEMAINUS
POLY 2
COW 8
COW 6
RIVER
2000
TAMMY
MYRA
1620(1)
4S x 4W
GOLD TUSK
CMLP 2
BAR
AL
EXPO 1
Mineral Reserve
o/c 3547
HWY 18
E&N Rly
Area of CP Base Metal Rights
INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.
CLAIM MAP
MNS GROUP
VICTORIA MINING DIVISION
Project No: V 243
By: T N
Scale: 1 50000
Drawn: J S
Drawing No: 2
Date: DEC. 1986.
MPH
MPH Consulting Limited

3.0 HISTORY AND ECONOMIC SETTING

Government geological work in the area includes work by C.H. Fyles (1955) and J.E. Muller (1977, 1980a, 1980b, 1982).

Geological mapping at 1:31,680 scale was carried out along the north shore of Cowichan Lake, immediately to the west of the MNS Group ground, for an M.A.Sc. thesis by J.T. Fyles in 1948 (Fyles, 1949). A B.Sc. thesis by Cowley (1979) includes the area of the MNS Group, although no field work was carried out on the MNS Group ground.

No other exploration work on the MNS Group has been recorded.

The MNS Group is party underlain by rocks of the Upper Paleozoic Sicker Group. Since the announcement in 1979 of the discovery of Westmin Resources Ltd.'s new H-W deposit at Buttle Lake, the Sicker Group has become an extremely active exploration target. Nearly all of the area underlain by the Sicker Group has been staked. Major companies actively exploring the Sicker include Abermin Corporation, Cominco Ltd., Corporation Falconbridge Copper, Esso Minerals Canada, Falconbridge Ltd., Noranda Exploration Ltd., Utah Mines Ltd., and Westmin Exploration Inc.

Westmin Resources Ltd.'s Buttle Lake mines contain total reserves of 14.74 million tonnes grading 5.43% Zn, 2.12% Cu, 2.40 g/t Au, 41.1 g/t Ag, and 0.34% Pb (Walker 1983). Closer to the MNS Group, the Twin J Mine, presently being explored by Corporation Falconbridge Copper, is a volcanogenic massive sulphide deposit hosted by the Sicker Group located 21 km east of the MNS

property. Recorded production from 1898 to 1964 totalled 277,395 tonnes grading 7.5% Zn, 3.4% Cu, 5.14 g/t Au, 105 g/t Ag, and minor Pb. Reserves are reported as 317,520 tonnes grading 1.6% Cu, 0.65% Pb, 6.6% Zn, 4.11 g/t Au, and 140.6 g/t Ag as of 1971.

A significant recent development in the Sicker Group is the delineation of a large polymetallic massive sulphide zone on the Lara property, adjacent to the MNS Group. On the Lara property, Abermin Corporation (formerly Aberford Resources Ltd.) has completed at least 80 diamond drill holes, tracing the Coronation Zone and Coronation Extension over a strike length of 1500 m, to depths averaging 150 m, and over widths averaging 6.2 m. The average grade of 17 of the drill holes is 4.54% Zn, 4.11 g/t Au, 92.6 g/t Ag, 0.79% Cu, and 0.83% Pb. Surface trenching of the Coronation Zone has yielded results of up to 24.58 g/t Au, 513.6g/t Ag, 43.01% Zn, 8.30% Pb, and 3.04% Cu over 3.5 m. The Coronation Zone is open along strike on both ends.

The mineralized zones are stratiform and are hosted by a rhyolite porphyry unit of the Sicker Group. Metal ratios of the Coronation Zone are very close to those of the Buttle Lake mines of Westmin Resources Ltd. The Twin J mine is located 9 km southeast of the Lara property (i.e. on strike) and is geologically similar.

Further to the northwest, Westmin Exploration Inc. is exploring Nexus Resource Corporation's Thistle property, 20 km southeast of Port Alberni. A total of 16 significant Cu and/or Au mineralization occurrences have been located on the property, 15 of which are located within a 225 m thick unit of mainly basaltic flows which are believed to be correlative with Muller's

Sediment-Sill Unit and/or Myra Formation. Surface assays reported range from 7.75 to 41.8 g/t Au, 5.14 to 45.6 g/t Ag, and 2.71 to 10.2% Cu over apparent true thicknesses of 15 cm to 4 m. The best assay from 1984 diamond drilling was 17.6 g/t Au over 20 cm. Westmin has spent approximately $406,000 on the property in 1983 and 1984. A further $400,000 was spent in 1985. The Thistle Mine produced 6278 tonnes of ore yielding 85,844 g Au, 65,938 g Ag, and 309,088 kg Cu in the period from 1938 to 1942.

The southern part of the MNS Group is located on Hill 60 Ridge, and includes part of a belt of Sicker Group rocks which host various manganese showings, such as Hill 60 (1 km south) and Stanley Creek (5 km west).

Rhodonite, other Mn-bearing silicate minerals, and Mn carbonate occur with Mn oxides as lenses in red and white chert, jasper, and interbedded cherty tuff of the Myra Formation. Cowley (1979) states that the Mn deposits may represent distal depositions of Mn-rich volcanogenic exhalations, although he believes that they are more likely proximal deposits around a number of hot springs. If they actually are related to volcanogenic exhalative activity, the environment is highly favourable for a volcanogenic massive sulphide or gold deposit in the area.

In addition, Sicker Group rocks are known to host high grade Tertiary gold-quartz veins, structurally controlled gold-bearing quartz-carbonate alteration zones, and base metal/gold-bearing skarns. Recently, platinum group metals have been located in Sicker Group rocks.

The central part of the MNS property is underlain by basal formations of the Nanaimo Group. Near Nanaimo, significant amounts of coal were mined from the Nanaimo Group in the late 1800's and early 1900's. Most of the production came from the Extension-Protection Formation, one of the Nanaimo Group units present on the MNS Group property.

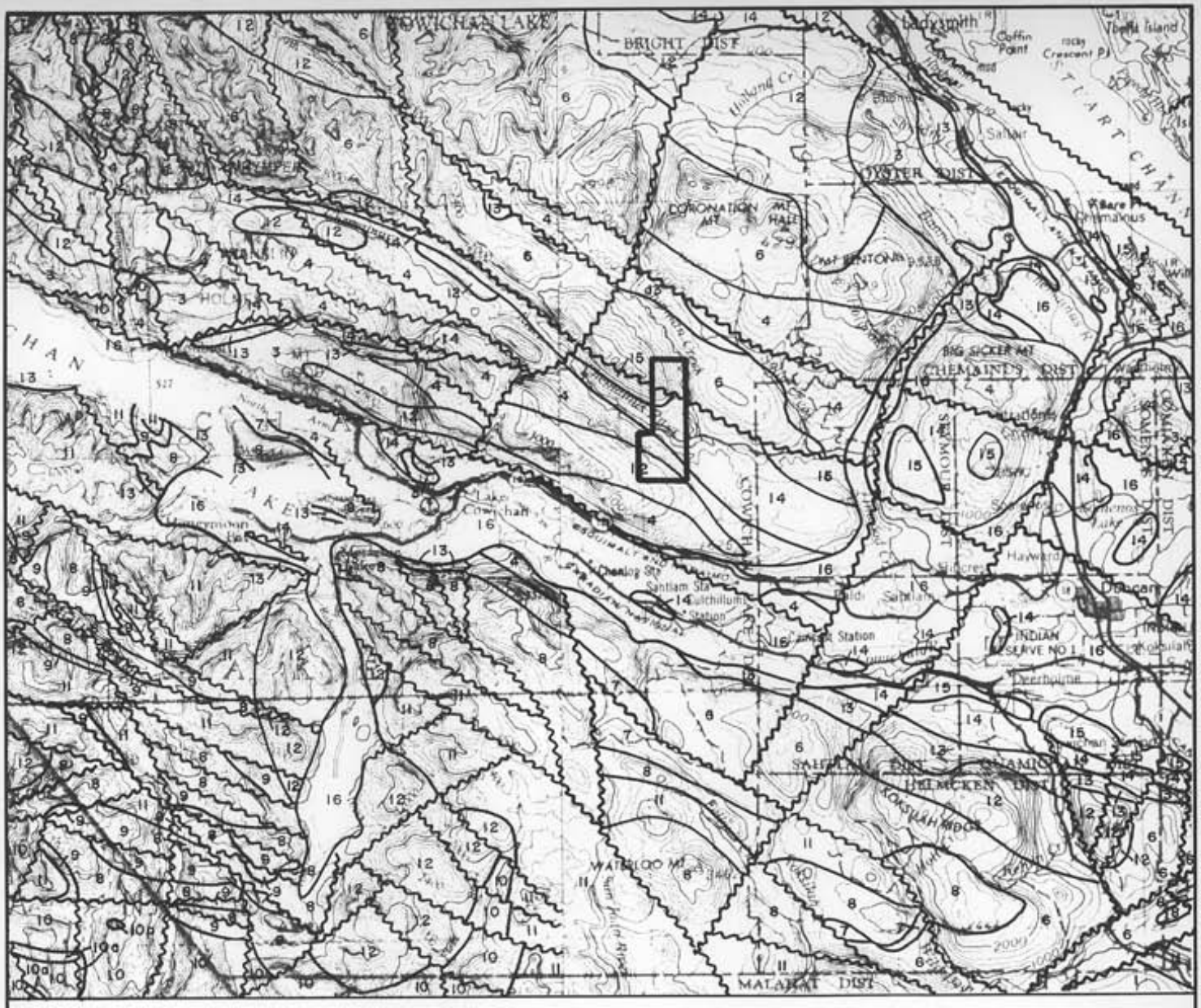
4.0 REGIONAL GEOLOGY

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

4.1 Wark-Colquitz Gneiss Complex

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

The Wark-Colquitz Gneiss Complex is exposed in the vicinity of Victoria, where is forms the basement of the Insular Belt.


COWICHAN LAKE
BRIGHT DIST
Ladysmith
Coffin Point
rocks
Crescent Pt
Thetis Island
DUNCAN DIST
CORONATION MT
HALL
BIG SICKER MT
CHEMAINUS DIST
Cowichan Lake
Duncan
Haywards
Deerholme
INDIAN RESERVE NO 1
Station
Station
Santiam Sta
Chemainus
Station
HELMCKEN DIST
WATERLOO MT
MALAHAT DIST
Sicker Mts
Sicker Group
Sicker Group
Sicker Group

4.2 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.

The **Nitinat Formation** 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. However, in some areas the distinction is still difficult, in which case whole rock analyses may be useful.

The **Myra Formation** 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 Mt. 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 **Saltspring Intrusions** are fine to medium grained, light coloured metamorphosed granite or granodiorite which lacks the speckled appearance of most other intrusive rocks on Vancouver Island. Indistinct gneissic foliation and agmatitic structures occur pervasively. The Saltspring Intrusions have gradational contacts with the Tyee Quartz Porphyry of the Myra Formation and are considered to be comagmatic with it. Dating of the Saltspring Intrusions reveals an initial age of latest Silurian.

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

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

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

In the area southeast of Cowichan Lake, the Buttle Lake Formation consists of laminated, calcareous grey siltstone and black argillite containing lenses of coarse-grained calcarenite, minor massive beds or 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, on the basis of fossil dating, appears to be Middle Pennsylvanian, but could possibly 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 (Atokan) through Early Permian (probably Sakmarian) in age.

4.3 Vancouver Group

The **Karmutsen Formation** 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, which is well exposed in the area of El Capitan Mountain, 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** 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. Most of the economic skarn deposits on Vancouver Island are hosted by Quatsino limestone. Thin bedded limestone also occurs in the formation. Fossils indicate an age of Upper Triassic (Muller and Carson, 1969).

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

4.4 Westcoast Complex

The **Westcoast Complex** 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.

4.5 Bonanza Group

The **Bonanza Group** stratigraphy varies considerably from place to place, as it represents parts of several different eruptive centres of a volcanic arc. Basaltic, rhyolitic, and lesser andesitic and dacitic lava, tuff, and breccia with intercalated beds and sequences of marine argillite and greywacke make up the Bonanza Group. In the area south of Cowichan Lake, the volcanics are described as dark brown, maroon, and yellow grey massive tuff, volcanic breccia, and massive or plagiophyric flows (Muller, 1982). The Bonanza volcanics are considered to be extrusive equivalents of the Island intrusions and to be of Early Jurassic age.

4.6 Island Intrusions

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

4.7 Nanaimo Group

Upper Cretaceous Nanaimo Group sedimentary rocks occurring throughout the area overlie Paleozoic Sicker Group rocks with profound unconformity. Extensive exposures occur in the Chemainus and Cowichan River valleys. The formations present comprise the basal portions of the Nanaimo Group.

The **Comox Formation** 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** 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** are beach and deltaic sands. Minor shale and coal are reported.

4.8 Structure

The Buttle Lake Arch, Cowichan-Horne Lake Arch and Nanoose Uplift are north-northwesterly trending axial uplifts and are believed to be among the oldest structural elements in south central Vancouver Island. Folding and uplift occurred before the late Cretaceous, and possibly before the Mesozoic (Muller and Carson, 1969), and more 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 are reported 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).

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

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments in some areas, such as the north side of the Chemainus River valley, placing Sicker Group rocks above Nanaimo Group rocks. These faults have been traced for up to 100 km. Such structures may represent large scale underthrusting from the southwest, in a regime of long-term semi-continual

northeast-southwest compression. Nanaimo Group sediments are tilted up to at least 60° from paleohorizontal where they are overlying folded Sicker Group rocks with angular unconformity such as on the south side of the Chemainus River Valley. Minor late northeasterly trending tear-faults and block faults offset northwest-trending faults in the Cowichan Valley and Saltspring Island areas.

4.9 Mineral Occurrences and Deposits

4.9.1 Gold Occurrences

1. Amore (Summit Group) Au Ag Zn Mo Pb

Geology:
Fractures and faults in silicified Sicker Group sediments and volcanics often contain quartz veins which carry pyrite, arsenopyrite, and molybdenite. One vein carries visible gold, sphalerite, pyrite, arsenopyrite, pyrrhotite and galena.

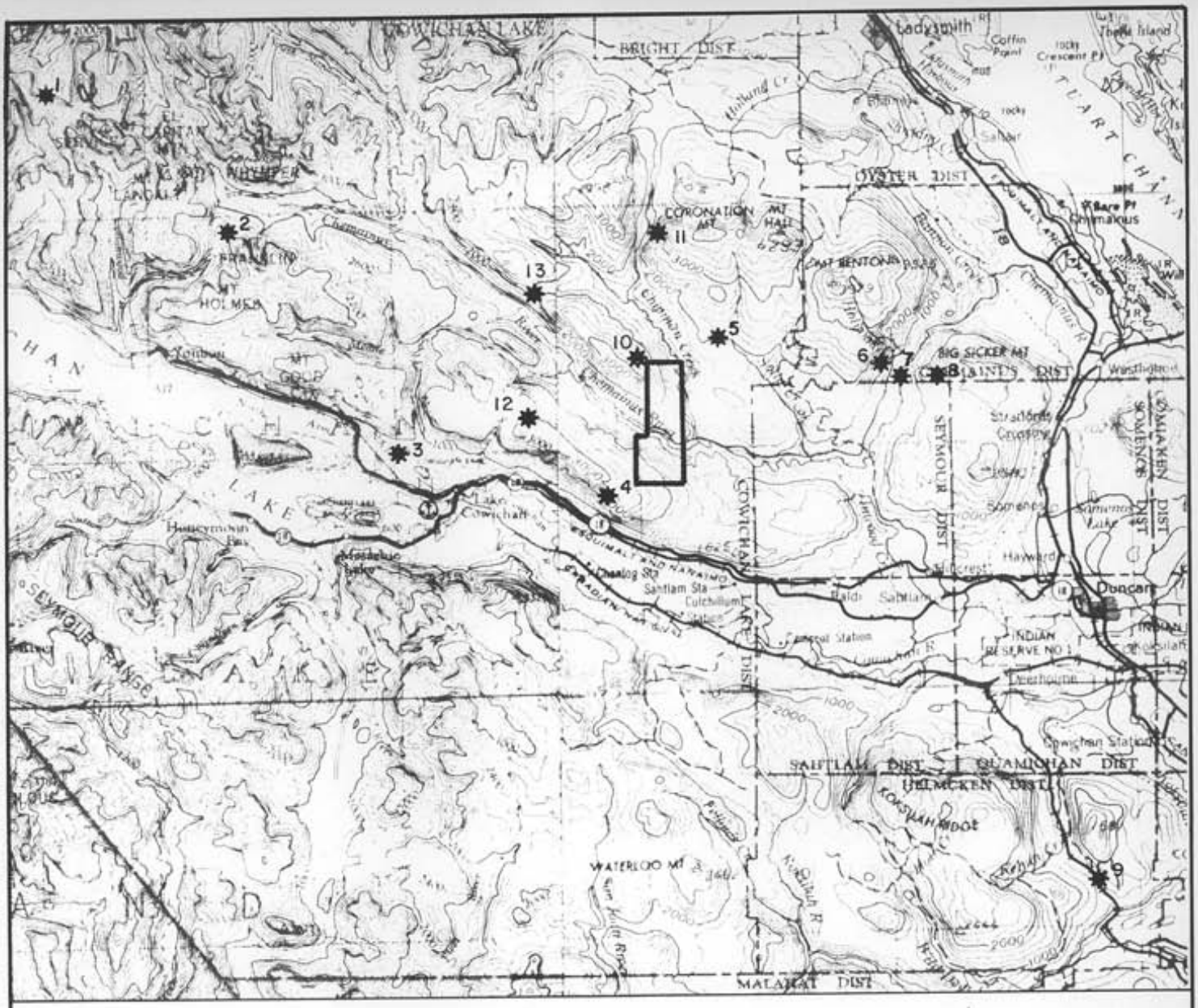
Mineralization Features:
The sphalerite-bearing vein is 3 to 30 cm wide and was exposed for 30 m during the mining of a 2 tonne bulk sample. Results are not reported. Another(?) vein is 15 to 25 cm wide and was traced for about 300 m. The best assays were 19.2 g/t Au, 51.4 g/t Ag over 8.9 cm and 17.8 g/t Au, 8.2 g/t Ag over 31.0 cm. All 36 other assays showed trace or 0.34 g/t Au. Soil sampling has located numerous samples anomalous in one or more of Mo, Cu, Ag, Au.

History:

1968:	Cominco Ltd.; regional work (no details available)
1978-82:	Aquarius Resources Ltd.; prospecting, bulk sample from Amore 2, trenching, 5 DDH for 122 m. Soil, silt, and rock sampling in 1981-82

References:

EBC	1978-E125, 1979-126
AR	6963, 7187, 7908, 10324, 10970
Minfile	92C117



GOLD OCCURRENCES

1. Amore
2. Comego
3. Meade Ck.
5. Lara
10. Chem*

BASE METAL OCCURRENCES, DEPOSITS

6. Pauper
7. Copper Canyon
8. Twin J
9. King Solomon
13. Pogo

OTHER OCCURRENCES

4. Hill 60
11. Lady A, C
12. Stanley Creek

*not described in Mineral Occurrence Section.

INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.

MINERAL OCCURRENCES LOCATION MAP

MNS GROUP

Project No:	V243	By:	T. N.
Scale:	1 : 250 000	Drawn:	J. S.
Drawing No:	4	Date:	DEC. 1986.

MPH Consulting Limited

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

Geology:

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

Mineralization Features:

The main skarn zone is 30 m wide by 90 m high by possibly 500 m long. Best assays are 14.1 g/t Au over 1 m, 27.4 g/t Ag over 4.6 m, 8.3% Cu over 6 m, 1.3% Mo over 4.6 m, 0.32% WO_3 over 1 m. The best DDH intersection was 0.69 g/t Au, 10.3 g/t Ag, 0.5% Cu over 7.3 m. Assays from the quartz-carbonate zones are all very low. The quartz-molybdenite vein(s) are 1.5 m wide, 15 m long. Samples over 1.5 m averaged 1.3% Cu, 4.6% Mo, while a 2 m sample assayed 1.20 g/t Au, 21.3 g/t Ag, 2.2% Cu, 0.28% Mo, 0.32% WO_3.

History

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

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

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

1948-55: Duncan Powell and others; unspecified work

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

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

1971: Tagus Syndicate; mapping 7 DDH for 500 m

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

References:

MMAR	1906-211, 1919-239, 1931-163, 1948-158-161
GEM	1969-223, 1970-290, 1971-230
AR	641, 1949, 2167, 2869, 8283, 10102
BCDM	Bull 37, p57
Carson	1968, pp128-130
Minfile	92C018

3. Meade Creek Au

Geology:

Placer gold deposit. Fine gold was found from bedrock to 6 m above high water level.

5. Lara Au Zn Ag Cu Pb

Geology:

The property is underlain mainly by Myra Formation intermediate to felsic volcanics and pyroclastics on the south limb of a gently westerly plunging anticline. Argillite units, locally graphitic, are associated with felsic tuffs. Three tuffaceous-sedimentary intervals containing pyrite and lesser amounts of sphalerite, chalcopyrite, and galena have been traced for up to 6.3 km along strike. The two northern horizons contain only minor base metals, but the southern horizon contains the Coronation Zone, Coronation Extension, and Road Showing. The Coronation Zone as outlined by drilling is stratiform and dips 60-65° to the north. The Coronation Extension is believed to occur at a higher stratigraphic level than the Coronation Zone.

Mineralization Features:

The pyritic horizons range from 25 cm to 10 m in thickness and are traceable by IP, VLF-EM, and soil geochemistry. The Coronation Zone and Coronation Extension together have been outlined for a total of about 1500 m along strike and to depths averaging about 150 m. The width varies from about 1.5 to 8.2 m, averaging about 6.2 m. The Coronation Zone is open along strike on both ends. Average grades of 4.54% Zn, 4.11 g/t Au, 92.6 g/t Ag, 0.79% Cu, and 0.83% Pb have been announced from 17 of the 80 or more drill holes on the property. Individual intersections include: 3.6% of 7.30 g/t Au, 275 g/t Ag, 9.22% Zn, 1.16% Cu, 2.53% Pb; 2.99 m of 4.53 g/t Au, 108.7 g/t Ag, 5.87% Zn, 1.26% Cu, 2.48%

Pb. A trench on the Coronation Zone above the discovery drill hole exposed massive sulphides grading 24.58 g/t Au, 513.6 g/t Au, 43.01% Zn, 8.30% Pb, 3.04% Cu over 3.51 m. A feasibility study on the establishment of a 300- 500 ton-per-day milling operation is planned for early 1987. Little information is available on the Road Showing area. Six 1984 diamond drill holes intersected "weak" polymetallic mineralization in the area.

History:

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

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

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

1983-86: Aberford Resources Ltd.; (Lara) extensive geophysics, geological mapping geochemical surveys, trenching, EM survey, at least 80 DDH, prospecting.

References:

EBCR 1978-E124

AR 7384, 10116, 11123

MER 1983, p30

NM Feb 7, Aug 8, 1985; June 2, Aug 18, 1986.

Abermin Corporation - Information Booklet; Dec 30, 1985

VS 1986: Jan 24, Jan 28, May 26, Aug 5, Aug 13.

4.9.2. Base Metal and Other Occurrences

6. Pauper (L.31G, Sharon Copper, Mons 1, Brent 1)
Cu Au Ag Zn

Geology:
The area is underlain by steeply dipping sericite and quartz augen-sericite schists of the Sicker Group cut by Sicker diorite and gabbro sills and dykes. The mineralization consists of pyrite-chalcopyrite disseminations and is apparently stratabound. Carson (1968) stated that this occurrence is very similar to pyritic zones formed near massive sulphide deposits and that it is found in quartz-sericite-chlorite schists similar to those of Twin J and Western Mines.

Mineralization Features:
The pyritic zone is 18 m wide. Assays include 2% Cu over 18 m; trace Au, 34 g/t Ag, 7.5% Cu from ore from the adit; and trace Au, 6.9 g.t Ag, 8% Cu from a showing 90 m south of the adit. A DDH drilled about 800 m west of the adit in 1978 cut 3 m of 0.192% Cu, 0.08% Zn, 3.77 g/t Ag, 0.14 g/t Au.

History:

1903:	Henry Fry; Pauper (L.31G) Crown Granted
1919:	E.J. Palmer, L. Levansaler; open cut, 15 m adit with 15 m crosscut at end
1924:	J.P. Tomlinson; Pauper (L.31G) re-Crown Granted
1927:	E.F. Miller and Associates; no work reported
1977-79:	Imperial Oil Ltd./Esso Minerals Canada Ltd.; (Mons 1/Brent 1) airborne EM survey; EM, mag, SP, soil sampling, mapping, 1 DDH for 93 m.

References:

MMAR	1903-250, 1923-274, 1924-368, 1927-339
EBC	1978-E121
AR	6548, 7323
Carson	1968, p 159
Minfile	92B040

7. Copper Canyon Cu Ag Au (Zn Pb)

Geology:

The area is underlain by schistose Sicker Group volcanics including quartz-sericite schist, chlorite schists, and rhyolite porphyry, intruded by diorite (of the Island Intrusions?). A band 120 to 180 m wide contains five mineralized zones; two on its southern side and three on its northern side. Disseminated to massive pyrite and minor chalcopyrite occur in a quartz vein; in a quartz vein in a shear zone; and in schist with no associated quartz vein. The schists are reported to be more siliceous and less foliated than at the Twin J mine (8). Unlike the Twin J, there is no barite associated with the mineralization.

Mineralization Features:

Assays reported include 10.2% Cu from a grab sample from a minor showing south of the Copper Canyon adit; trace Au, 17.1 g/t Ag, trace Cu over 3 m in the Victoria adit; 1.71 g/t Au, 54.9 g/t Ag, 6.77% Cu, 0.01% Pb, 0.06% Zn (location unreported). The mineralized lenses have a maximum width of 1.8 to 2.1 m. One 1.8 m zone is composed of 0.3 to 0.6 m of massive mineralization and

1.2 to 1.5 m of disseminated and veinlet mineralization. The Copper Canyon adit followed a lens for 41 m before losing it due to faulting or folding. An EM conductor 3 to 4.5 m wide by 335 m long with coincident Cu-Pb-Zn soil geochemical anomalies has been outlined on the Copper Canyon claim.

Production in 1904, 1905, and 1907 came from the Victoria claim and totalled 109 tonnes, yielding 93 g Au, 3421 g Ag, and 4346 kg Cu.

History:

1897: P.J. Pearson (Copper Canyon) 30 m tunnel

1901-02: Mounts Sicker and Brenton Mines Ltd.; tunnel on Copper Canyon lengthened to 94 m,. various crosscuts and a raise/shaft added; 46 m tunnel drive on Victoria; various test pits on all claims, short adits on Klondyke, Susan claims

1971-73: Viva Ventures Ltd.; VLF-EM, LF-EM, shootback EM, mag, seismic, IP, resistivity, SP, gravity, soils, mapping

1977: J.R. Deighton; mapping, soil and silt sampling

1978: UMEX Inc.; mapping, EM, mag, soil sampling, 1 DDH for 145 m on Klondyke

1985: Canamera Explorations Ltd.; soil sampling, IP, trenching, 3 DDH for 306 m

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

Geology:

The area is underlain by Sicker Group andesitic flows and cherty tuffs with minor sediments, metamorphosed to quartz-sericite, quartz-chlorite, and chlorite schists which are intruded by sills, dykes, and irregular masses of gabbro-diorite. The two main orebodies occur 46 m apart in strongly dragfolded parts of a schist "panel", often close to the contact of a band of graphitic schist and bounded by an intrusive sodic rhyolite porphyry. Within the orebodies, two types of ore are found. Barite ore is a fine-grained mixture of pyrite, chalcopyrite, sphalerite, and minor galena in a barite-quartz-calcite gangue. It is frequently banded, with chalcopyrite-pyrite and sphalerite layers. Quartz ore consists mainly of quartz and chalcopyrite and occurs in long lenticular masses within barite ore and the host schists.

Mineralization Features:

The North orebody is 520 m long by 0.3 to 3 m wide by 37 m downdip. The South orebody is 640 m long by 6 m or more wide by 46 m downdip. Total recorded production from 1898 to 1964 amounts to 276,831 tonnes ore containing 1,244,555 g Au, 26,141,200 g Ag, 9,681,576 kg Cu, 20,803,748 kg Zn, 189,925 kg Pb, and 1179 kg Cd. Reserves are reported as 317,520 tonnes grading 1.6% Pb, 6.6% Zn, 4.11 g/t Au, and 140.6 g/t Ag as of 1971.

History:

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

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

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

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

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

1964: W. Howden; mined 151.5 tonnes from **Lenora**, grade not reported

1967-70: Mt. Sicker Mines Ltd.; 7 DDH for 123 m, mapping, trenching

1972: Ducanex Resources Ltd.; 5 DDH for 914 m, mapping, shootback EM

1973-74: Dresser Industries Inc.; 8 DDH for 1676 m, IP, soils

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

1983-86: Corporation Falconbridge Copper/Peppa Resources Ltd.; geological mapping, DDH's, sampling, mag, EM 37, IP

References:

MMAR	1928-365, 1931-164, 1935-G46, 1936-F63, 1939-90, 1940-74, 1942-70, 1943-69, 1944-67, 1946-191, 1947-183, 1949-224, 1950-180, 1951-199, 1952-214, 1964-168, 1967-79, 1968-107
GEM	1969-224, 1970-291, 1972-240, 1974-163
EBC	1978-E119
AR	1104, 1714, 3741, 3950, 3951, 4904, 5164, 6996, 7714, 7814, 7875, 8168, 8264
CIMM	Structural Geology of Canadian Ore Deposits, 1948, p48
CMH	1972/73
TML	1984, #042, 064, 136, 192, 195
Minfile	92B001, 002, 003

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

Geology:

The main deposit consists of a 6.1 m thick body of massive pyrrhotite-pyrite(-chalcopyrite), oriented 030/35° southeast and hosted by intensely shattered, highly epidote-altered cherty tuff to basaltic chert at or near the base of the Buttle Lake Formation. The tuff contains pyrrhotite disseminated, in fracture fillings, and in massive pods or lenses to at least 12 cm by 20 cm. A strongly altered rhyolite dyke(?) intrudes the tuff about 7 m from the massive orebody. An adit was driven approximately along the dyke contact. A second orebody occurs above the main one (King Solomon upper workings; Limestone

orebody). It consists of complexly interlayered chert and epidote skarn with 15% pyrite and chalcopyrite disseminations and fracture fillings, in complex contact with a porphyritic dacite intrusive and trends about 135/45-50° northeast.

Mineralization Features

The first 6.1 m to 9.1 m (20' to 30') of the main orebody away from the dyke is richer, averaging 4% to 5% Cu, while the outer 4.6 to 6.1 m (15' to 20') of the deposit is lower grade, averaging about 2% Cu. The main orebody is 91.4 m long by 6.1 to 21.3 wide (300' long by 20' to 70' wide). A 29.0 m (95') crosscut intersected ore averaging 5% Cu for the first 12.2 m (40') while the last 16.8 m (55') contained heavy Fe, Cu mineralization. A 7.6 m (25') shaft connected to a 21.3 m (70') drift and a 6.1 m (20') open cut on the "limestone orebody" were all in ore, averaging 5% Cu in the shaft and 4% Cu elsewhere. The limestone orebody is generally lower grade than the main orebody. Au + Ag contents averaged $1.50 ton in both deposits (1938) prices.

The main crosscut tunnel was driven 45.7 m (150') below and subparallel to the main orebody, never intersecting ore; a zone from 45.7 m to 207.3 m (150' to 680') runs 0.5-2.5% Cu, trace Au (stringer zone below massive sulphides?). Geophysical surveys located weak, short coincident magnetic and VLF-EM anomalies over the old workings. Reserves were estimated at 226,750 t (250,000 tons) of 1.4% Cu or 286,612 t (316,000 tons) of 0.83% Cu in the late 1950's and early 1960's.

Production

1904-05,07: 245 t (270 T) ore; 6376 g (205 oz) Ag, 17,974 kg (39,626 lb) Cu (25.71 g/t (0.75 oz/T) Ag, 7.34% Cu).

1912: 274.8 t (303 T) picked ore averaged over 5% Cu.

History:

1903-07: Maclay, Ryan; Mining

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

1913-14: King Solomon Copper Mining Co.; drove lower adit 167.6 m (550')

1956-60: Cellardor Mines Ltd.; (King Solomon, Blue Bell-#11, and other claims), surface work, SP, dewatered old workings, 13 DDH for 640 m (2100'), enlarged lower adit for more than 121.9 m (400').

1983-85: Reward Resources Ltd.; geological mapping (1:2000, 1:5000), magnetometer surveys, rock sampling, VLF-EM soil sampling.

1986: Reward Resources Ltd; geological mapping (1:2500), IP surveys, diamond drilling.

References:

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

GEM Mem. 96, pp371-377

Minfile 92B015

13. Pogo Zn Pb Cu (Ag)

Geology:

Pyrrhotite, pyrite, chalcopyrite, sphalerite, and galena occur disseminated and on fracture planes in a fractured, fine-grained diabase sill which intrudes black cherty argillites of the Sicker Group (i.e. Sediment-Sill Unit). The mineralization occurs at a synclinal fold axis where the sill is "pinched" as it crosses from the west limb to the east limb. A second showing 1370 m southeast of the main showing contains Zn-Pb-Cu mineralization in a rusty shear zone in the diabase sill.

Mineralization Features:

The best assays from the main showing are 0.42% Zn over 3 m and 0.48% Pb, 0.09% Cu, trace Ag, each from different 1.5 m samples. A grab sample from the second showing assayed 0.72% Zn, 0.17% Pb, 0.13% Cu.

History:

1964:	E.M. Wilson; mapping, rock sampling
1985:	JBC Resources Ltd., mapping, rock sampling

References:

AR	566
Minfile	92C074

4. Hill 60 (L.12G, L.13G) Mn

Geology:

Thinly banded green, cream, and red cherty Sicker Group tuffs with local lenses of red jasper host lenses of rhodonite. A few thin basic dykes cut the cherty tuffs near the main workings. The rhodonite was heavily oxidized to a depth of about 4.6 m in the main workings. A type of yellow manganese garnet occurs locally in chert. Chalcopyrite and bornite are reported to occur disseminated in rhodonite and jasper.

Mineralization Features:

The main open pit is about 18 m long, 6 to 9 m wide and 4.6 to 6 m deep. A 539 tonne shipment averaged 50% Mn, 19% SiO_2. Assays range from 15.88 to 57.15% Mn with the average of 25 samples being 43.09% Mn over an average of 1.19 m. The average Al_2O_3 content of 17 samples was 1.02%. Other thinner, smaller, less oxidized lenses of rhodonite (presumably including the Striker occurrence reported by Cowley (1979) occur in an area about 335 m long by 105 m wide. This is the only Mn deposit in the Sicker Group known to have been significantly oxidized, a condition which is necessary to make rhodonite into Mn ore. Total production in 1919 and 1920 was 1135 tonnes; Mn content was not reported.

History:

1918: Dickie, Wood, Service, Douglas; discovered showing, stripping and cuts

1919-24: British Columbia Manganese Co. Ltd. (NPL); mining in 1919 and 1920. Constructed an aerial tramway, but no work performed since 1920

1930: Dominion-Provincial Mining Training Projects; cleaned out and extended trenches, trenching and stripping on new occurrences

References:

MMAR 1918-296, 1919-237, 1924-368

BCDM Bull 37, p67

GSC P72-53; P64-37, p19; EGS 12

Canadian Rockhound, February 1966, p7

Canadian Munition Res. Com. Final Report, 1920, pp91, 95

Minfile 92B027

Cowley, P. Correlation of Rhodonite Deposits on Vancouver Island and Saltspring Island, British Columbia; UBC B.Sc. Thesis, 1979

11. Lady A, Lady C Fe

Geology:

The Lady A deposit consists of 2 lenses of taconite in cherty Sicker Group sediments while the Lady C consists of a single lens of taconite. The taconite is composed of bands of extremely fine-grained magnetite and minor specularite and hematite in grey chert and red jasper. Jasper is more common at Lady C.

Mineralization Features:

The A deposit outcrops over a strike length of 105 m and is up to 18 m wide. Drilling revealed an average thickness of less than 9 m.

The C deposit is exposed for 53 m along strike and has an apparent thickness of approximately 15 m. Limited drilling revealed a thickness of 45 m or more (holes were stopped before

reaching the hanging wall) locally and down dip extent of at least 60 m. Average grades of the 4 holes ranged from 9.5 to 30.5% Fe.

The fineness of the magnetite could prove a problem in the magnetic separation process.

Reserves of the Lady A deposit are roughly estimated at 326,600 tonnes grading 25% Fe, based on diamond drilling results. The Lady C deposit is believed to be larger than the Lady A but insufficient drilling has been done to draw definite conclusions.

History:

1953: Ladysmith development Ltd.; 12 DDH for 390 m on Lady A and 4 DDH for 204 m on Lady C

1985: Anna Maria Joyce (Ermelina claim); no work reported

References:

MMAR 1956-135

BCDM Bull 37, p13

Carson 1968, pp101-102

Minfile 92B029, 033

Comments:

Apparently no Au analyses have been carried out on the taconite showings.

12. Stanley Creek (Lookout Locality, Chem A) Mc

Geology:

Two irregular lenticular masses of rhodonite lie parallel to bedding in Sicker Group cherty tuff.

Mineralization Features:

The lenses are several centimeters to 0.3 m wide and about 6 m long. A microprobe analysis by Cowley (1979) revealed 42.25% MnO content.

History:

Known at least as early as 1939. No physical work on the occurrence is reported.

References:

GSC P72-53,p56

BCDM Bull 37, p68

Manganese Deposits of Cowichan Lake, H. Sargent, 1939
Minfield 92C116

Cowley, P. Correlation of Rhodonite Deposits on Vancouver Island and Saltspring Island, British Columbia; B.Sc. Thesis, UBC, 1979

5.0 1986 ASSESSMENT WORK

Assessment work done on the MNS Group (Myra and Never Sweat claims) between the dates of September 11 and 16, 1986 consisted of geological mapping at a scale of 1:10,000, prospecting, and rock sampling; 38 rocks were collected and analyzed for Au and by 30-element ICP ((Figure 5; Appendix II, III). One silt sample was taken.

A soil sampling grid was established in the northern section of the Never Sweat claims; 344 samples were taken and analyzed for Au, and by 30-element ICP.

Preliminary Phase I work carried out on the MNS property between the dates of September 16 and November 4, 1986 consisted of detailed geological mapping at a scale of 1:2500, rock sampling, and a magnetometer survey covering approximately 10 line kilometres on the soil sampling grid in the northern part of the Never Sweat claim. Thirty-five (35) additional rock samples were collected and analyzed for Au and by 30-element ICP.

5.1 Property Geology

The MNS Group is underlain by a northwest-striking sequence of Paleozoic volcanic and sedimentary rocks of the Sicker Group, Jurassic intrusives, and Cretaceous sedimentary rocks of the Nanaimo Group.

The Sicker Group rocks consist of steeply dipping to vertical Sediment-Sill Unit interlayered argillite, chert, cherty tuff, and volcanic/volcaniclastic rocks in the northern part of the Never Sweat claim; and southwest-dipping to vertical Myra Formation interlayered felsic to mafic volcanic, volcaniclastic, and pelagic sedimentary rocks in a 400 to 600 m wide belt across the centre of the Myra claim. The Myra Formation rocks are intruded in the south by a body of Jurassic Island Intrusions granodiorite to quartz diorite, and unconformably overlain in the Chemainus River valley by Nanaimo Group conglomerate.

The Sediment Sill Unit of the Sicker Group in this region has been divided into the following mappable lithologies:

(a) Argillite: Dark grey to black fine-grained meta-pelitic rock, commonly with slaty cleavage and up to 15% tiny chiastolite porphyroblasts and very finely disseminated pyrite to 3%.

(b) Cherty sediment: Black, brown, grey, or bluish-green, thinly laminated to massive, gradational with (a) and (c). Contains minor jasper-bearing, hematitic and/or magnetite-bearing iron formation in layers up to a few metres thick.

(c) Siltstone: Light to dark grey or dark brown, commonly siliceous (may be hornfelsed). Gradational to (b) and (d).

(d) Sandstone: Light to dark grey or dark brown with very fine to coarse sand-sized grains.

(e) Crystal tuff-tuffaceous sediment: Contains white-weathering, subhedral feldspar grains in a fine-grained, silty matrix.

(f) Conglomerate and sedimentary breccia: Contains rounded to angular fragments of fine-grained bedded sediments, massive cherty material and feldspar porphyry up to 3 cm (average 0.5 to 1 cm) in a fine to coarse-grained sandy matrix. This unit may contain up to 2-5% disseminated pyrrhotite ± minor pyrite and chalcopyrite.

(g) Limestone: Medium-grained crystalline marble.

These rock types have all been identified in the Chemainus River area by MPH Consulting geologists, but may not all occur on the MNS property. The most common Sediment-Sill Unit lithologies found on the MNS property are slaty argillite, cherty sediment with local iron-bearing horizons, and hornfelsed siltstone or tuffaceous sediment.

The sequence of cherty sediments (4b) containing layered magnetite/pyrite lenses(?) with up to 4.8 g/t Au and up to 1.84% Zn on the property adjacent to the Never Sweat on the northwest has been traced southeast onto the Never Sweat claim; however, only weakly magnetic horizons (banded iron-rich sediments) have been traced.

The Sediment-Sill Unit is tightly folded, although fold closures are rare in outcrop. Where field relationships have been observed (such as near sample locality 0927), subvertical metamorphic foliation is axial planar to asymmetric minor folds with long limbs dipping steeply NE and shorter limbs dipping more moderately SW. Fold axes are near horizontal to gently NW-plunging. Variations in dip angle of intersection between cleavage and bedding observed in outcrop are due to larger folds of this style, although lack of distinctive marker beds and/or outcrop makes tracing larger folds difficult.

Jurassic Island Intrusives intrude Sicker Group rocks on both claims of the MNS property, and occur as large plutons of medium-grained, equigranular quartz diorite to diorite (25 to 50% mafic constituents, commonly hornblende ± biotite; feldspar mainly plagioclase; common quartz up to 10-15%), and also as hypabyssal dykes and sills of feldspar porphyry. Typical feldspar porphyries of this type contain white, stubby subhedral feldspar phenocrysts up to 1 cm (average 3-4 mm), and rarely quartz phenocrysts, with some phenocrystic hornblende, in a fine-grained, grey to brown groundmass.

Sicker Group rocks on the Never Sweat and adjacent claims have been contact metamorphosed by these intrusions. Common chiastolite (andalusite) porphyroblasts in slate indicate pressures of less than about 4 kb (400 MPa), representing a depth of less than about 12 km, and most likely less than 3-5 km, at the time of metamorphic recrystallization.

The southern part of the Never Sweat claim and northern part of the Myra claim are underlain by Cretaceous Nanaimo Group shale, siltstone, sandstone, and conglomerate dipping moderately to steeply northeast. Sedimentary structures within the Nanaimo Group indicate that it is dominantly facing up, or younging mainly to the east, although deformation may have overturned some parts of the section.

Outliers of Nanaimo Group conglomerate (sample 0919) discovered in outcrop on the Myra claim directly overlying foliated metavolcanic and volcaniclastic rocks of the Sicker Group (sample 0918) demonstrate conclusively that the contact between these two units is a profound angular unconformity at this location. The

Nanaimo Group basal conglomerate contains well-rounded pebbles, cobbles, and less abundant boulders of white granitic(?) and rhyolitic rocks, felsic cherty tuff, and foliated pyritic volcaniclastic rocks similar to the underlying Myra Formation rocks, in a matrix of lithic arkosic arenite. Bedding in sandstone is 116/50 NE, whereas foliation in underlying Myra Formation metavolcaniclastics is 112/84 NE.

On the Never Sweat claim, tightly folded, steeply-dipping metasedimentary rocks of the Sediment Sill Unit are apparently overlying tilted, NE-dipping Nanaimo Group shale and sandstone exposed in a roadbed up to 600 m elevation. The contact between these units is interpreted as a major fault with significant reverse or thrust movement, having displaced Sicker Group rocks over Nanaimo Group sediments for a strike length of several kilometres along the east side of the Chemainus River valley.

Similar northwest-trending faults throughout this area have caused significant structural repetition in Sicker Group and Nanaimo Group rocks. It is possible through such folding and faulting that sections of the Sicker Group similar to those hosting auriferous polymetallic massive sulphides on the adjacent Lara property may be found also underlying parts of the MNS property.

5.2 Lithogeochemistry and Mineralization

During assessment work in September 1986, 38 rock samples and one silt were collected and analyzed for Au and by 30-element ICP.

Subsequently, during preliminary Phase I work, 35 additional rock samples were collected and analyzed.

Mineralization is generally limited to finely disseminated pyrite in argillitic rocks, small alteration zones near contacts with felsic intrusives, and possible jasper-bearing, hematitic ± magnetitic ± pyritic iron formation layers.

Results for the first set of rocks (all grab samples, mostly from outcrop or near outcrop), include seven with above-background Au values (background is 5 ppb). The highest value is 170 ppb Au, from an altered, rusty-weathering rhyolitic(?) sill (sample 0909); other results from the same sample are 0.8 ppb Ag, 164 ppm Cu, and 30 ppm Mo. A gold value of 110 ppb Au was obtained from a fine-grained silty sedimentary or volcaniclastic rock with finely disseminated pyrite (less than 1%) (sample 0912); other results from the same sample are 0.8 ppm Ag, 114 ppm Cu, 8 ppm Mo, 18 ppm Pb.

Other results obtained from this set of samples were up to 336 ppm Cu, 134 ppm Zn, 229 ppm Cr, 1580 ppm Ba, 45 ppm As, 3664 ppm Mn, and 1980 ppm P.

It is interesting that one of the elevated gold values (40 ppb Au) and the highest arsenic value (45 ppm) came from a sample (0919) of the basal conglomerate of the Nanaimo Group where it is directly overlying Sicker Group rocks. It is possible that Nanaimo Group conglomerates may represent lithified gravels or paleo-placer deposits locally, although no such deposits have yet been demonstrated.

One silt sample (Silt 1) was collected from a small stream draining Sediment Sill Unit and Nanaimo Group rocks near the eastern boundary of the Never Sweat claim; it contains 201 ppm Cr, but otherwise background levels of most elements.

Further mapping and sampling was done in the northern part of the Never Sweat claim, in the area of the soil sampling grid and target lithostratigraphic package of the Sediment Sill Unit. Thirty-five rock samples were collected and analyzed for Au and by 30-element ICP.

One rock (sample 4666) ran 70 ppb Au, but most ran either background or just above background (5 ppb or 10 ppb Au). Sample 4666 also yielded results of 390 ppm Ba, 1466 ppm Mn, 94 ppm Pb, and 158 ppm Zn.

Sample 1956 yielded results of 10 ppb Au, 0.6 ppm Ag, and 176 ppm Zn. This is the highest silver obtained; however, several other samples contain anomalous zinc, such as sample 711 with 884 ppm Zn, 112 ppm Ni, 22 ppm Pb, and 203 ppm V.

The highest copper value from this set of samples is 577 ppm (sample 1957); this sample also ran 10 ppb Au.

Although these results are only weakly anomalous at best, it is worth noting that most of the gold values came from rocks collected in the northeastern part of the Never Sweat claim, from a package of rocks including iron-rich, cherty sediments on strike with similar rocks carrying somewhat higher gold values and other anomalous concentrations of elements on an adjacent property to the northwest.

5.3 Soil Geochemistry

"B" horizon averaging 20 cm deep

Soil sampling during the month of September 1986 resulted in the collection of 344 samples along 8.6 line kilometers, of a grid which consists of 11 NE-SW trending lines covering most of the northern part of the Never Sweat claim. These samples were sent to Rossbacher Labs

Burnaby, B.C. for geochemical Au analysis and multi-element ICP analysis. The resulting concentrations have been examined and values for Au, Ag, Cu and Pb and Zn have been plotted and contoured at various intervals as shown on Figures 6 and 7. A visual examination of concentrations for each element has enabled the assignment of approximately 2% of the sampling population as anomalous (approximately 2 standard deviations of the cumulative frequency plot). High background values have also been indicated. Certificates of analysis are included in Appendix III.

Concentrations for Au range from 5 to 170 ppb, and appear to be anomalous at values greater than 40 ppb, with high background values between 30 and 40 ppb. The most significant gold value (170 ppb) is located on L12+00S at station 3+00E. A rock sample of pyritic float, 5m from this station, returned a 70 ppb Au concentration. On L12S, three anomalous (160, 120, 100 ppb Au) and one high background value (40 ppb Au) are found between station 6+25E and 7+50E, and at the baseline a 130 ppb Au anomaly has resulted. Moderately anomalous values are located on line 10S at 6+25E (90 ppb Au), 6+75E (90 ppb Au) with a high background value of 30 ppb Au at 7+25E.

In general the soil sample survey indicates that high background to anomalous Au concentrations are limited to the eastern portion of the Never Sweat claim. The gold is possibly related to pyritic argillites and/or sediments.

Ag concentrations range from 0.2 to 0.6 ppm, thus high background and anomalous concentrations are greater than 0.3 and greater than 0.4 ppm respectively. The most significant Ag concentration (0.6 ppm Ag) is located on L9+00S at 7+25E and appears to be associated with high background to anomalous Au concentrations in this area. Anomalous

values of 0.4 ppm Ag also occur on L8+00S at 0+25E and 0+50E and L6+00S at the baseline and 0+50E. Generally there appears to be little variation overall, and no consistent association with anomalous gold concentrations was observed.

Copper concentrations range from 9 ppm to 153 ppm. High background and anomalous values have been assigned at greater than 95 ppm and greater than 108 ppm respectively. The most significant Cu concentration (1653 ppm) is located on L9+00S at 2+50E and is within a N-S trending discontinuous anomalous zone. Anomalous Cu concentrations in general appear to be sparse in the westernmost portion of the Never Sweat claim. Anomalous zones are apparently associated with the high gold areas, as shown on the contoured soil map.

Pb and Zn results are plotted on Figure 7. Pb concentrations show a very wide range (less than 2-1230 ppm). Two very highly anomalous values (greater than 460 ppm) define a narrow NW? trending zone between lines 9+00S and 10+00S at 2+25E and 2+00E. Additional anomalous values (greater than 30 ppm) occur locally and do not appear to define any distinctive trends.

Zn concentrations range from 34-134 ppm. High background values are those greater than 140 ppm and anomalous values are greater than 146 ppm. The highest concentrations (182 and 184 ppm) are both located on L9+00 at 5+00E and 6+50E. Investigation of the contour map shows two major, apparently continuous, E-W trending, high background to anomalous zones separated by relatively low Zn concentrations. Another weakly-moderately anomalous approximately E-W trending zone occurs in the western to central part of the claim. This zone is apparently associated with the very highly anomalous Pb values mentioned above.

5.4 Magnetometer Survey

A magnetometer survey was conducted over the existing NE-SW lines of the soil sampling grid. Results show a range from 55,888 gammas to 56,968 gammas. Values have been plotted and contoured at 100 gamma intervals on Figure 8.

The most significant magnetic 'high' is located at 9+75E on line 13+00 in the NE portion of the claim. This 'high' is reinforced by other values which are moderately high and define a westerly trend for at least 200 metres. Other areas appear to be relatively uniform. This broad moderate to weakly anomalous zone may correspond to magnetite and jasper-rich cherty sediments.

Instrument: Scintrex MT-2 proton precession, total field; diurnal correction by closed loop at base station

— by phone, RT.

6.0 RECOMMENDED WORK PROGRAM

6.1 Plan

Preliminary assessment work and Phase I geological mapping, soil sampling, and magnetometer survey have been completed on the MNS Group.

Phase II exploration is to consist of further detailed geological mapping and prospecting over a wider area of Sicker Group rocks, VLF-EM survey over the soil grid, additional soil sampling and trenching of the most promising geochemical/geophysical anomalies.

If warranted by Phase II results, a Phase II program designed to explore anomalies in greater detail may be recommended.

6.2 Budget

Phase I

Fieldwork

Mobilization/Demobilization				$ 1,000
Personnel:				
Geologist/Proj. Mgr.	10 days @	$350	$3,500	
Engineer/Consultant	2 days @	475	950	
Geologist/ Asst. Prospector	10 days @	250	2,500	
Proj. Coordinator	2 days @	250	500	
Geophy. Technician	3 days @	175	525	
Field Technicians (2)	2 days @	150	600	
				8,575
Disbursements:				
Food & Accom.	31 mandays @	45	1,395	
Transportation	15 truckdays @	110	1,650	
Communications			200	
Miscellaneous Supplies			1,500	
				$ 4,745
Equipment Rental:				
VLF-EM	3 days @	100	300	
Rock Saw	3 days @	15	45	
				345
Contract Services:				
Trenching				2,000
Analyses:				
Rocks-geochem (Au, ICP)	100 @	$12.20	1,220	
Assay (Au)	20 @	6.00	120	
(Cu, other)	20 @	5.50	110	
Whole rock	5 @	32.00	160	
Thin section	5 @	50.00	250	
Soils-geochem (Au, ICP)	200 @	10.60	2,120	
				3,980

Report Writing:					
Engineer	1 day	@	475	475	
Geologist	8 days	@	350	2,800	
Drafting	20 hrs	@	20	400	
Supplies, typing, copying				1,000	
					4,675
					25,320
Administration @ 15% (on, say, $5,000)					750
					26,070
Contingency @ 15%					3,910
					29,980
				Total Cost, say	$30,000

6.3 Schedule

The following table is a summary of estimated time requirements for Phase II exploration of the MNS Group.

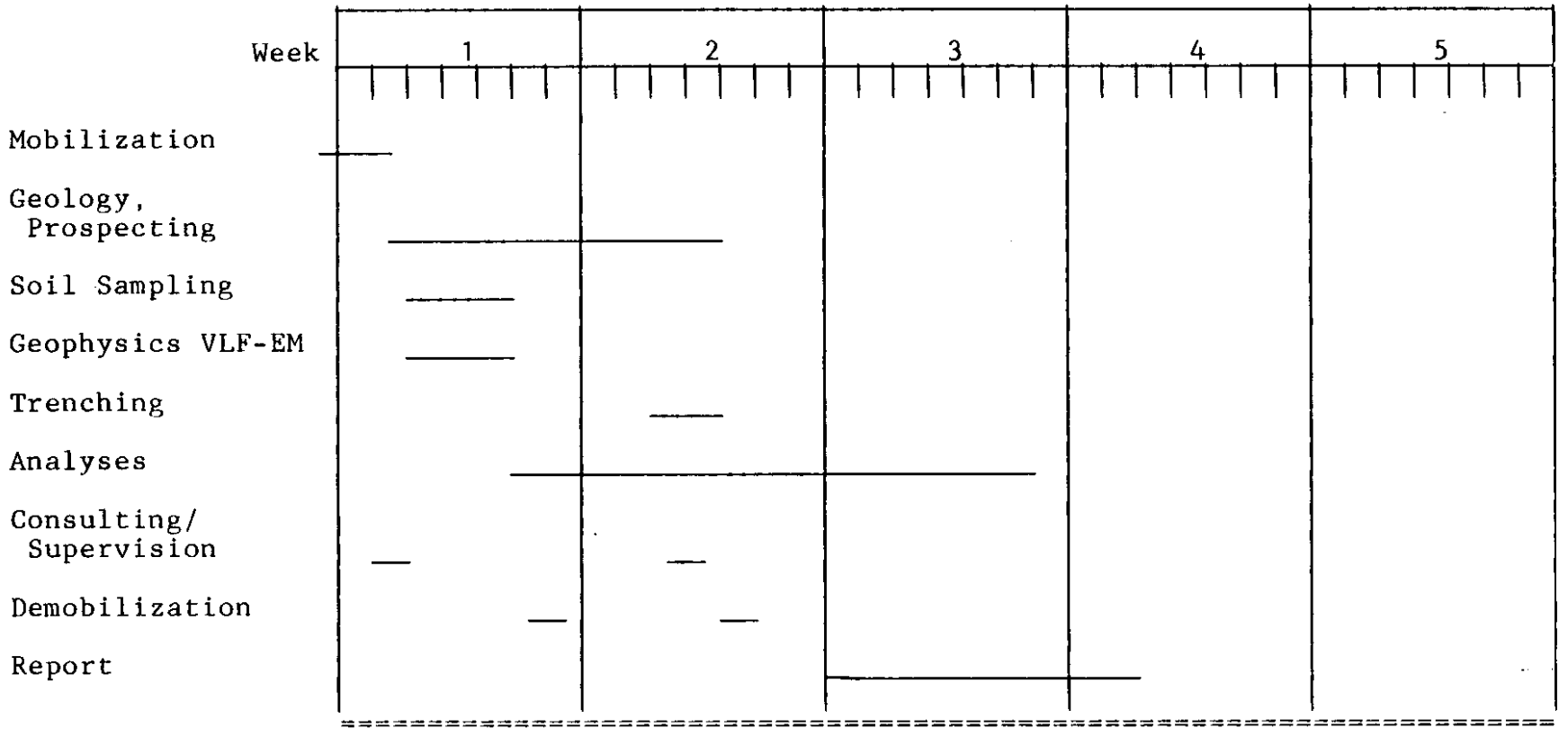


TABLE 2

PHASE II PROJECT SCHEDULE

MNS PROPERTY

7.0 CONCLUSIONS

1. Preliminary assessment work and Phase I geological mapping and sampling, soil sampling, and magnetometer survey have been completed on the MNS Group.

2. The MNS Group (Myra and Never Sweat claims) is underlain by a northwest-trending sequence of Paleozic volcanic and sedimentary rocks of the Sicker Group, including Myra Formation and Sediment-Sill Units; Jurassic intrusives; and Cretaceous nearshore sedimentary rocks of the Nanaimo Group.

3. Nanaimo Group basal conglomerate overlies Sicker Group rocks (Myra Formation) with profound angular unconformity along the southwestern slope of the Chemainus River valley; whereas Nanaimo Group sediments underlie (or are juxtaposed against) folded Sicker Group rocks (Sediment Sill Unit) with a reverse or thrust fault contact trending northwest along the northeastern slope of the Chemainus River valley.

4. The sequence of cherty sediments containing layered magnetite/pyrite lenses(?) with up to 4.8 g/t Au and up to 1.84% Zn on the property adjacent to the Never Sweat on the northwest has been traced southeast onto the Never Sweat claim; however, only weakly magnetic horizons (banded iron-rich sediments) have been traced in outcrop.

5. Lithogeochemical results (from a total of 73 rock samples) include several elevated gold values up to 170 ppb Au in

the package of Sediment-Sill Unit rocks including pyritic argillite, cherty sediments with iron-rich layers and felsic rocks in the northeastern part of the Never Sweat claim.

6. Other lithogeochemical values are up to 0.8 ppm Ag, 577 ppm Cu, 94 ppm Pb, 884 ppm Zn, 36 ppm Mo, 112 ppm Ni, 1680 ppm Ba, 45 ppm As, 3664 ppm Mn, 4200 ppm P, 229 ppm Cr, and 224 ppm V.

7. Geochemical results from a total of 344 soil samples shows a zone of high background to anomalous gold concentrations (up to 170 ppb Au) in the eastern portion of the grid near the eastern boundary of the Never Sweat claim. Minor elevated silver values (up to 0.6 ppm) may be associated with anomalous gold areas, as are highest Cu concentrations (up to 153 ppm).

8. Highly anomalous soil geochemical Pb values (up to 1230 ppm Pb) in a NW trending on lines 9+00S at 2+25E and 10+00S at 2+00E are unusual considering low Pb in rock samples. Zn values in soils up to 184 ppm are locally associated with areas of high Pb.

9. A magnetometer survey over the soil grid defined a possible broad, moderate to weakly anomalous 'high' zone in the northeastern portion of the Never Sweat claim which may correspond to mapped iron-rich (locally magnetic) cherty sediments.

10. Phase II exploration to consist of further detailed geological mapping and sampling, a VLF-EM survey on the grid, additional soil sampling, and trenching of selected areas is recommended at an estimated cost of $30,000.

8.0 RECOMMENDATIONS

1. Phase II exploration consisting of detailed geological mapping, prospecting, and sampling, VLF-EM survey on the grid, additional soil sampling, and trenching of selected areas is recommended at an estimated cost of $30,000.

2. Geological mapping and prospecting covering a larger area of Sicker Group rocks on the property are recommended:

   (a) It is recommended that the extension onto the Never Sweat claim of the auriferous magnetite/pyrite bearing horizon on the property adjacent to the northwest be mapped in more detail, and that the area with elevated gold values be more extensively prospected and sampled in order to delineate mineralized horizons.

   (b) It is recommended that Myra Formation volcanic and volcaniclastic rocks exposed on the Myra claim be investigated in more detail by further prospecting and geological mapping.

3. A VLF-EM survey over the grid is recommended as a follow up to Phase I soil sampling and magnetometer survey.

4. Additional soil sampling is recommended in anomalous areas, such as the high Pb zone, in order to define the extent of anomalies and correlation with underlying rock types.

5. If preliminary Phase II exploration is encouraging, trenching and detailed sampling of the most promising areas is recommended.

6. Contingent on favourable Phase II results, Phase III exploration consisting of IP surveys and diamond drilling may be recommended.

Respectfully submitted,

MPH Consulting Limited

J.S. Getsinger, Ph.D.

December 15, 1986

CERTIFICATE

I, J.S. Getsinger, do hereby certify:

1. That I have studied geology at Harvard University (B.A. 1974), and have graduate degrees in geology from the University of Washington, Seattle (M.S. 1978), and from the University of British Columbia, Vancouver (Ph.D. 1985).

2. That I have practised within the geological profession for the past twelve years.

3. That the opinions, conclusions, and recommendations contained herein are based on geological research, my own observations in the field, and work carried out by other MPH Consulting Ltd. personnel.

4. That I own no direct, indirect, or contingent interest in the subject property or in International Cherokee Developments Ltd.

J. S. Getsinger

J.S. Getsinger, Ph.D.

December 15, 1986
Vancouver, B.C,

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Appendix I

LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

List of Personnel and Statement of Expenditures

Personnel

J.S. Getsinger, PhD.		
11 days @ $350	$3,850	
L. Lindinger, B.Sc.		
3.5 days @ 250	875	
Gordon Allen, B.Sc.		
10 days @ 350	3,500	
B.Y. Thomae, B.Sc.		
3 days @ 250	750	
T. Naciuk, B.Sc.		
5 days @ 150	750	
H. Chaudet, Field Technician		
10 days @ 150	1,500	
T. Hayes, Field Coordinator		
3 days @ 250	750	
G. Roste, B.Sc.		
4 days @ 150	600	
		$12,575

Equipment Rental

4x4 Truck	19.5 truckdays	@	$90	1,755	
Rock Saw	3 days	@	15	45	
Magnetometer	3 days	@	25	75	
					1,875

Disbursements

Accommodation/Food	38 mandays	@	40	1,520	
Analyses-					
38 rocks (Au, ICP)	@	11.95	454.10		
1 silt (Au, ICP)			11.75		
344 soils (Au, ICP)	@	10.60	3,646.40		
35 rocks (Au, ICP)	@	11.95	418.25		
				4,530.50	
Report Costs (type/copy/draft)				2,000	
Miscellaneous				200	
Custom topographic map				1,000	
				9,250.50	
Administration @ 15% (on $9,250)				1,387.58	
					10,638.08
			Total		$25,088.08

Appendix II

ROCK SAMPLE DESCRIPTIONS AND LITHOGEOCHEMICAL RESULTS

ROCK SAMPLE DESCRIPTIONS AND LITHOGEOCHEMICAL RESULTS

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0801	Location: Never Sweat claim, on road B3, 100 m N of sample 0914. Rock type: Slaty argillite. From outcrop, black slate with 10-15% andalusite porphyroblasts (1 mm). Pyrite (much less than 1%).	5	0.2	93	134	
0802	Location: Never Sweat claim, on road B3, 50 m N of sample 0801 Rock type: Feldspar porphyry/rhyodacitic(?) hypabyssal intrusive. Pale grey-yellow massive medium-grained feldspar porphyry. Feldspar phenocrysts are white, subhedral (104 mm) with cloudy margins in a mottled grey-green matrix. Trace finely disseminated pyrite.	5	0.2	18	76	
0803	Location: Never Sweat claim, on road B3, 5 m from sample 0802 Rock type: Magnetic cherty tuff or hornfelsed siltstone. Float. Massive mottled magnetite bearing chert(?) or hornfelsed siltstone (visible grain size). Grey, evenly fine-grained, hard, magnetic throughout, with pyrite on fractures.	5	0.2	14	30	
0804	Location: Never Sweat claim, on road B3, 150 m NW of sample 0803 Rock type: Hornfelsed tuff(?) or volcaniclastic siltstone. From outcrop. Rusty weathering, dark grey to greenish black, very fine-grained, hard, siliceous rock. Very finely disseminated pyrite (1%).	5	0.2	60	110	18 Pb
0805	Location: Never Sweat claim, on road B3, 15 m N of sample 0804 Rock type: Siliceous tuff or siltstone Gossanous-weathering black to greenish tinge, fine-grained massive layered rock with 2-4% disseminated pyrite stringers.	5	0.2	75	98	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0810	Location: Near N boundary Never Sweat claim, on road B3, about 100 m S of sample 0809, at elevation 660 m. Rock type: Intercalated volcaniclastic(?) siltstone and argillite. Brecciated(?) greenish-grey, finely laminated silty tuff(?) in matrix of purplish-grey argillite/silty layers; colour pattern may be due to alteration rather than physical brecciation, although rock is definitely sheared. Purplish-grey layers are magnetic. Described by L.L. as "irregularly banded chert and cherty tuff".	5	0.2	24	62	440 Ba
0901	Location: Never Sweat claim, 2526 m N on Boulder Creek road from gate, at elevation 400 m. Rock type: Interbedded argillite/cherty tuff. Black siltstone to green and white, hard cherty tuff. Vague layering at 130/45NE. Local disseminated pyrite (less than 1%). Conchoidal fracture.	5	0.2	44	72	570 Ba
0902	Location: Never Sweat claim, 2526 m N on Boulder Creek road from gate, at elevation 400 m. Rock type: Pyritic argillite. Dark bluish-grey to black, fine-grained argillite with very finely disseminated pyrite (less than 2%), especially on fracture surfaces. Lichen are also bluish-grey. Dark rusty brown weathering.	5	0.2	42	98	
0903	Location: Never Sweat claim, 2662 m N on Boulder Creek road from gate, at elevation 400 m. Float. Rock type: Pyritic argillite. Black argillite with yellow (sulfur?) to orange rusty fracture coatings on vuggy fractures. Some silty layers show convolute bedding. Pyrite (less than 2%).	5	0.2	38	102	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0904	Location: Never Sweat claim, 2902 m N on Boulder Creek road from gate, at elevation 405 m. Rock type: Cherty tuff or volcaniclastic Fine-grained, medium grey-green volcaniclastic siltstone, with grain size from very fine to about 1 mm. Reddish alteration/weathering products on slickensides and fractures. Minor kink bands are visible on outcrop. Quartz and pyrite occur on fractures, pyrite (less than 2%).	10	0.2	88	90	430 Ba 1273 Mn
0905	Location: Never Sweat claim, 3095 m N up Boulder Creek road from gate, at elevation 420 m, near 1S ID post for Never Sweat. Rock type: Rhyolitic intrusive Intrusive-looking rock with up to 5% pyrrhotite (magnetic), 10% on fractures. Quartz eyes (total quartz 5-20%) and feldspar laths (10-15%) are 1-2 mm. Rock is evenly medium-grained to porphyritic with aphanitic groundmass. Mafic phenocrysts are hornblende altered to chlorite. Non-foliated, with blocky fracturing. Some parts are more evenly medium to coarse grained.	5	0.2	125	44	
0906	Location: Never Sweat claim, at LCP, 80 m east of Boulder Creek road, 3650 m N of gate, at elevation 420m. Rock type: Quartz-feldspar porphyry, probably rhyodacite to dacite. Feldspar porphyry outcrop in abundant float of black slate. Plagioclase(?), 2x3 mm (25%); quartz eyes (1-2 mm) (5%); grey groundmass; weak flow or metamorphic foliation (125/80SW). Finely disseminated pyrite (less than 2%).	5	0.2	22	74	1200 P

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0907	Location: Outcrop under road, 3271 m N of gate, between Never Sweat LCP and 1S I.D. post. Rock type: Hornfelsed siltstone or volcaniclastic. Finely laminated, white and green, fine-grained, very siliceous rock, non-magnetic. Outcrop shows foliation at 128/67NE subparallel to compositional layering, and fractures at 015/52E.	5	0.2	84	114	1170 Ba 2009 Mn 176 V
0908	Location: Same as 0907; float. Rock type: Hornfelsed(?) siltstone or volcaniclastic Greenish-grey, rusty weathering, fine grained, with finely disseminated pyrite (less than 1%). Cut face shows finely mottled light and dark grey laminations.	5	0.2	54	118	
0909	Location: Up creek, about 50 m west of Never Sweat 1S I.D. Post. Rock type: Altered rhyolite(?) Rusty rock with sericitic alteration, with limonite in weathered out holes (up to 20%).	170	0.8	164	14	30 Mo
0910	Location: Same as 0909. Up creek, about 50 m W of Never Sweat IS I.D. Post. Rock type: Rusty-altered rhyolite(?) Limonitically-weathered, quartz-eye rhyolite sill(?) at contact with hornfelsed volcaniclastic siltstone.	5	0.2	77	30	
0911	Location: Up creek, about 128 m west of Never Sweat 1S I.D. post. Rock type: Pyritic slaty argillite. Pyritic slaty argillite with some silty layers has quartz-filled fractures (less than 1 cm) with white/orange/red rusty coatings. Pelitic layers contain tiny incipient andalusite porphyroblasts. Very finely disseminated pyrite (1%?).	5	0.2	107	120	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0912	Location: Up creek, about 240 m west of Never Sweat 1S I.D. post, 60 m E and below old road B3 Rock type: Silty volcaniclastic(?). Float. Rusty volcanic(?) or volcaniclastic is very fine grained with silty and finer layers. Finely disseminated pyrite (less than 1%).	110	0.8	114	64	360 Ba 8 Mo 18 Pb
0913	Location: Up creek, about 273 m west of Never Sweat 1S I.D. post, 20 m E and below old road B3. Rock type: Brecciated cherty tuff. Float. Hard, aphanitic, grey cherty rock has veins of clear grey quartz which are rusty and vuggy, containing pyrite, possible chalcopyrite and/or pyrrhotite.	5	0.2	60	42	480 Ba
0914	Location: Never Sweat claim, on road B3, at creek, 300 m W of Never Sweat 1S I.D. post. Rock type: Magnetic cherty tuff. Float. Cherty layers are intercalated with magnetic silty layers. Veinlets occur on fractures (less than 0.1 mm to 2 mm) and are filled with white and dark, fine-grained quartz $\pm$ sulphides.	5	0.2	12	38	1350 Ba
0915	Location: Never Sweat claim, on road B3, 60 m S of sample 0914. Rock type: Mafic volcanic or volcaniclastic. Dark greenish-grey, fine-grained, mafic volcanic or volcaniclastic contains metamorphic chlorite $\pm$ actinolite. Rusty, vuggy vein with quartz and limonite has chalcopyrite.	50	0.2	336	50	
0916	Location: Never Sweat claim, on road B3, 35 m SE of sample 0915. Rock type: Magnetic 'iron formation'(?) Very hard, siliceous rock with red (1-3 cm) and black (1 cm) laminations. Pyrite cubes less than 1 mm (less than 2%). Anastomosing, irregular grey quartz veinlets. Magnetic.	5	0.2	8	8	2.56%Fe

Sample No		Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0917	Location:	Never Sweat claim, road B3, 284 m SE of sample 0914, or about 576 m N of intersection with B-line (Boulder Creek) road.	5	0.2	63	82	
	Rock type:	Pyritic slaty argillite.					
	From outcrop of folded silty and slaty argillitic rocks. Foliation is at 100/90; bedding at 170/49W may be younging to west. Silty layers have cross laminations and convolute bedding. Fracture coatings are yellow to brown limonitic with bluish-grey.						
0918	Location:	Myra claim, on overgrown logging road, 835 m SE of ford across Chemainus River at MacMillan Bloedel main gate.	5	0.6	49	12	23 Mo
	Rock type:	Pyritic metavolcaniclastic (Myra Formation of Sicker Group)					
	From outcrop of hard, foliated rock (112/84NE) with layering subparallel to foliation. Rock is composed of interlayered, fine-grained, white felsic volcanic(?) with greyer volcaniclastic siltstone; disseminated pyrite throughout (less than 1-3%).						
0919	Location:	Same as for 0918. Myra claim, on overgrown logging road, 835 m SE of ford across Chemainus River at MacMillan Bloedel main gate.	40	0.2	40	60	45 As 220 Ba
	Rock type:	Pebble to cobble conglomerate with lithic arkosic arenite matrix (Nanaimo Group).					
	From same outcrop as 0918, where the angular unconformity between the underlying Sicker Group and overlying Nanaimo Group rocks is exposed. Well-rounded pebbles, cobbles, and less abundant boulders of white granitic(?) and rhyolitic rocks, felsic cherty tuff, and foliated, pyritic volcaniclastic rocks in a matrix of lithic arkosic arenite form the basal conglomerate of the Nanaimo Group. Bedding in adjacent sandstone is 116/50NE, forming a dip slope on the hillside; however, only rare remnant outliers of Nanaimo Group are exposed.					

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0920	Location: Up creek on E side of Myra claim, about 183 m SW from old road. Rock type: Pyritic cherty argillite or volcaniclastic. Boulder of dark grey siliceous layered volcaniclastic or cherty argillite weathers rusty and contains 1-3% pyrite cubes (less than 0.5 mm).	5	0.2	16	18	40 As 210 Cr
0921	Location: Up creek on E side of Myra claim about 270 m SW from old road. Rock type: Feldspar porphyry/lithic volcaniclastic. From solid, resistant outcrop (trending 140) of greenish-grey feldspar porphyry or gritty lithic crystal volcaniclastic. Rock hefts somewhat heavy. Grain size is 1-10 mm. Lithic and quartz-feldspar clasts are apparent on cut surface. Finely disseminated pyrite (1-3%).	5	0.2	53	68	1530 P
0922	Location: Up creek on E side of Myra claim about 350 m SW from old road. Rock type: Cherty tuff. From outcrop of sheared cherty tuff with shear zones at 095/80S. Grey cherty tuff is somewhat brecciated with dark-brown coated open-space fractures, and finely disseminated pyrite (less than 1%).	5	0.2	154	62	
0923	Location: Up creek on E side of Myra claim, about 420 m SW from old road, at elevation 450 m. Rock type: Black cherty argillite with pyrite. From outcrop of sheared (098/80S) black to grey layered volcaniclastics. Sample is from pyritic black argillite in interbedded sequence with lighter grey 'tuff' or siltstone. Pyrite cubes (0.5 mm) occur on foliation and fracture surfaces (2-4%).	5	0.2	43	104	0.5 Cd 13 Mo 43 Ni 1980 P 18 Pb

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0924	Location: Up creek on E side of Myra claim, about 510 m SW from old road, at 475 m elevation. Rock type: Granodiorite to diorite. From outcrop of contact of granodiorite (pink K-feldspar (15-20%), total feldspar (50-60%), hornblende (15-20%), quartz (15-20%)) and finer-grained diorite (feldspar (± quartz?) (50%), hornblende (40-50%)).	5	0.2	21	80	1366 Mn 1470 P
0925	Location: Down creek on W side of Myra claim, about 300 m at a bearing of about 060 from where creek crosses road; at bend in creek about elevation 560 m, above cliff. Rock type: Felsite. White weathering, pale grey, hard but extensively fractured aphanitic siliceous felsic volcanic or volcaniclastic(?) with fine laminations on weathered surface. Finely disseminated pyrite (less than 1%). Cliff-former.	5	0.2	12	50	229 Cr
0926	Location: E side of Myra claim, on exposed knob at about 500 m elevation about 150 m to E of creek and samples 0922, 0923. Rock type: Felsite. Hard, very fine-grained, white to green felsic volcanic or volcaniclastic, fractured, with brown open spaces and weathered out pyrite cubes; finely disseminated pyrite (less than 1%). Possibly rhyolite or hornfelsed volcaniclastic. Cliff-former, similar to sample 0925.	5	0.2	4	38	
0927	Location: Never Sweat claim, near old sample 1686, on road B6A, at corner, elevation 790 m. Rock type: Silty argillite and cherty tuff. From outcrop of folded, laminated green cherty tuff. Rusty, silty argillite and cherty tuff with limonitic weathering, with fine pyrite (less than 1-2%).	20	0.2	123	68	370 Ba 3664 Mn 1180 P

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
0928	Location: 50 m NW on road B6A from 0927. Rock type: Laminated volcaniclastic(?) From outcrop. White felsic volcanic(?) layers with black patches are interlayered with volcaniclastic(?) siltstone and argillite, with pyrite concentrated in vuggy quartz veins.	10	0.4	263	60	1580 P
1951	Location: 11+75S, 6+00E Rock type: Argillite. Weathered surface Fe-stain. Fresh surface black homogeneous. Weak foliation on broken surface. Pyrite veneer (trace to 3%) on some joint surfaces.	5	0.2	134	152	1058 Mn
1952	Location: 12+00S, 10+00E Interbedded fine silt and very fine sand tuff. Weathered surface medium seawash green. Fresh surface dark blue-grey. Sandy tuff "bed" 8-14 mm wide. Sand composed of 10-15% hornblende, 15-20% quartz, 15-20% feldspar, plus matrix. Disseminated pyrite 3-4% mainly in coarser unit.	5	0.2	99	94	39 Co 1490 Ba
1953	Location: 10+95S, 4+75E Rock type: Argillite. Weathered surface Fe-stain. Fresh surface black homogeneous. Weak foliation on broken surface. Pyrite veneer (trace to 3%) on some joint surfaces.	5	0.2	105	104	
1954	Location: 11+00S, 9+25E Rock type: Cherty tuff. Weathered surface banded dark grey/black with heavy Fe-stain. Fresh surface banded medium grey/black. Cherty bands (black) slightly magnetic. Tuff bands fine silt (only discernable phenocrysts quartz, less than 0.5 mm, 15-20%). Disseminated pyrite cubes throughout, 2-4%.	5	0.2	40	86	1680 Ba

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
1955	Location: 11+00S, 1+75E Rock type: Felspar porphyry (intrusive). Weathered surface bleached milky tan. Fresh surface mottled dark grey, brown, white. Feldspar 20-25%, quartz 15-20%, dark matrix 40-50%. Fine disseminated pyrite throughout (3-5%).	5	0.2	10	72	
1956	Location: 9+55S, 0+50E Rock type: Banded tuff. Weathered surface heavy Fe-stain but with discernable bands. Fresh surface banded light/dark grey. Bands 1-18 mm wide and show syndepositional compaction microfaults. Lighter bands are slightly coarser grained and siliceous. Fracture fill and fine grain disseminated pyrite, 3-5%.	10	0.6	79	176	1235 Mn
1957	Location: 9+05S, 0+50E Rock type: Lapilli tuff. Weathered surface heavy Fe-stain. Fresh surface mottled light and dark grey-blue (or blue-grey). Clasts, 35-40%, 3-15 mm. Subparallel quartz veinlets, 0.5 mm. Pyrite aggregates 2-6 mm and fracture fill pyrite, 10-15%.	10	0.2	577	56	1033Mn 3180 P
1958	Location: 7+00S, 7+80E Rock type: Banded cherty tuff. Weathered surface medium marine green with Fe-stain. Fresh surface banded light green grey/dark blue-grey. Lightest bands cherty, 2-4 mm. Between light bands are fine sand to silt to fine sand sequences (gradational). Phenocrysts of hornblende (5-8%), quartz (3-5%), rest is indeterminant or matrix. Minor quartz veinlets, 0.5 mm. Trace chalcopyrite. Pyrite cubes (0.5 - 1 mm) less than 3%.	5	0.2	37	70	700 Ba

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
1959	Location: 7+00S, 3+70E Rock type: Tuff. Weathered surface medium grey with Fe-stain. Fresh surface banded dark grey/black. Discontinuous bands of fine sand (tuff) material 3-4 mm wide, 25-30 mm long. Sparse quartz veinlets (0.5 mm). Trace fine disseminated pyrite.	5	0.2	74	112	1049 Mn 36 Mo
1960	Location: 7+00S, 2+55E Rock type: Banded tuff. Weathered surface heavy Fe-stain but with discernable bands. Fresh surface banded light/dark grey. Bands 1-18 mm wide and show syndepositional compaction microfaults. Lighter bands are slightly coarser grained and siliceous. Fracture fill and fine grain disseminated pyrite, 3-5%.	5	0.2	185	158	1061 Mn 30 Ga 1810 P 224 V
1961	Rock type: Feldspar hornblende porphyry (intrusive) Weathered surface mottled grey with slight Fe-oxide stain. Fresh surface mottled dark grey, brown-grey, white. Feldspar 20-25%, hornblende 15-20%, quartz 15-20%, rest matrix. Fracture fill and disseminated pyrite 4-6%.	(Not assayed)				
708	Rock type: Cherty siltstone to chert. Blue-grey to greenish grey cherty siltstone to chert. 2% fine-grained fracture filling pyrite. 1-2 mm vague laminations.	5	0.2	30	90	2103 Mn
709	Location: 10+00S, 3+75E Rock type: Siliceous to cherty siltstone. Dark grey finely laminated siliceous to cherty siltstone. Less than 1% fine-grained disseminated pyrite.	5	0.2	62	194	1018 Mn

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
710	Location: 8+00S, 7+80E Rock type: Siliceous siltstone. Dark blue-grey to greenish-grey, fine-grained siliceous siltstone with approximately 2% total pyrite. Pyrite occurs along crosscutting fractures and in quartz lenses up to 2 mm thick, paralleling bedding.	5	0.4	75	412	172 Cr 730 Ba 67 Ni
711	Location: 8+00S, 6+50E Rock type: Siliceous sandstone (tuff?). Dark greenish-grey siliceous fine-grained sandstone (tuff?). Subangular to subrounded fine-grained cherts of feldspar? (approximately 70%) in a very fine-grained siliceous matrix. Gossanous on fracture surfaces. Minor pyrite along hairline fractures (total less than 1%).	5	0.2	138	884	1780 Mn 10 Mo 112 Ni 1000 P 22 Pb 203 V
712	Location: 7+90S, 1+25E Rock type: Silicified tuff or lapilli tuff. Dark grey, very fine-grained cherty matrix with a few subhedral plagioclase crystals to 4 mm. May be a silicified tuff or lapilli tuff. Irregular mottled dark to light grey texture suggests a coarse-grained clastic nature. Pyrite approximately 2% as disseminated, fine-grained masses up to 1 mm.	5	0.2	383	168	53 Ni 3910 P
3416	Rock type: Siliceous siltstone. Dark grey to bluish-grey siliceous siltstone with approximately 3% fine-grained pyrite along fractures. Weakly magnetic.	5	0.2	90	72	120 Cr
3417	Rock type: Siliceous siltstone. Dark bluish-grey siliceous siltstone. Weakly magnetic.	0.5	0.2	60	74	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
3418	Rock type: Siliceous cherty siltstone. Thinly laminated (less than 1 mm to 1 cm) dark grey to light greenish-grey siliceous, cherty siltstone. 1% medium-grained pyrite in cubes to 1 mm. Weakly magnetic.	5	0.4	79	56	120 Cr 2420 Mn
3419	Rock type: Siliceous siltstone. Dark greenish-grey siliceous siltstone. Less than 1% disseminated pyrite.	5	0.2	90	78	710 Ba
4658	Location: Old road - 11+65S, 8+00E Rock type: Slate. White, vuggy quartz stringers to 3 cm wide in a zone approximately 15 cm wide (69/67SE) hosted in black slate (cleavage 123/90. Trace of pyrite in quartz veins.	5	0.2	80	70	123 Cr
4659	Location: 11+95S, 4+30E Rock type: Quartz veins in siliceous siltstone. Blue grey, vuggy, glassy quartz veins up to 3 cm wide with traces of pyrite. Veins hosted in dark brown to black massive siliceous siltstone.	5	0.2	29	62	
4660	Location: 12+00N, 6+25E Rock type: Black argillite. Float sample. Grab sample of hematitic, limonitic, siliceous, black argillite with less than 1% fine-grained disseminated and fracture filling pyrite. Soil sample from this station contained 160 ppb Au.	5	0.2	50	108	
4661	Location: 12+20N, 6+25E Rock type: Argillite. Composite grab sample of gossanous argillite float uphill from anomalous soil sample site (160 ppb Au). Very fine-grained disseminated and fracture filling pyrite to 1% (+?).	5	0.2	52	94	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
4662	Location: 11+90S, 6+30E Rock type: Sandstone to argillite. Dark grey-black, very fine-grained sandstone to cherty argillite with 1% plus fine-grained disseminated and fracture filling pyrite. Traces of chalcopyrite in hairline calcite stringers.	5	0.2	107	168	0.5 Cd 1335 Mn
4663	Location: 10+32S, 7+54E Rock type: Argillite. Dark grey-black, siliceous argillite with up to 1% pyrite in narrow lenses (to 1 mm) parallel to foliation.	5	0.2	99	134	
4664	Location: 10+20S, 7+20E Rock type: Quartz vein in dyke? Suboutcrop of vuggy, gossanous quartz vein up to 10 cm wide. Traces pyrite vein hosted in fine-grained chill margin(?) of felsic dyke.	5	0.2	135	64	57 Ni
4665	Location: 11+00S, 3+00E Rock type: Cherty siliceous siltstone. Grab sample of dark brown to dark green, cherty, siliceous siltstone with 3-4% fine-grained black magnetite and 2% fine-grained pyrite concentrated in 1-3 mm bands. Float sample.	5	0.2	362	80	
4666	Location: 10+81S, 3+00E Rock type: Siliceous siltstone. Dark brown to purple-grey limonitic, fine-grained siliceous siltstone to chert with 1-2% fine-grained disseminated pyrite.	70	0.2	162	158	390 Ba 94 Pb 3 Mo
4667	Location: 9+97S, 3+80E Rock type: Argillite. Dark grey, very fine-grained, strongly gossanous, massive argillite. Very little (less than 1%) pyrite for the strength of the gossan. Pyrite predominantly on fracture surfaces. Trace of chalcopyrite on fractures.	5	0.2	68	110	

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
4668	Location: 8+90S, 0+50E Rock type: Conglomerate. Conglomerate float. Dark ruddy brown siliceous siltstone groundmass with subangular to rounded clasts to 2 cm (average less than 1 cm) of fine-grained sediment and feldspar porphyry. Disseminated and masses of magnetite pyrite, pyrrhotite and traces of chalcopyrite. Total metallics approximately 5%. Weakly to moderately magnetic.	5	0.2	339	82	330 B 3060 P
4669	Location: 8+82S, 0+50E Rock type: Siliceous siltstone (tuff?) 20 cm subangular boulder. Similar in part to 4668. Predominantly a dark brown cherty banded siliceous siltstone (tuff?) with some subhedral plagioclase crystals up to 2 mm. 5% fine-grained disseminated and fracture filling pyrite. Traces of chalcopyrite. Weakly magnetic.	5	0.2	475	80	2450 P
4670	Location: 8+25S, 0+90E Rock type: Siliceous siltstone. Float. Similar to 4669. 3% fine-grained disseminated and fracture filling pyrrhotite; less than 1% chalcopyrite on fracture surfaces and associated with 2-3 mm, fine-grained masses of pyrite (2-3%).	5	0.2	325	72	1420 P
4671	Location: 8+02S, 1+20E Rock type: Cherty sediment. Float. Composite sample. Moderately siliceous gossanous, dark purplish to greenish-grey cherty sediment with vague clasts up to 0.5 cm. Fine-grained disseminated pyrite and pyrrhotite (at approximately 2%) and traces of chalcopyrite.	5	0.2	464	62	2530 P

Sample No	Description	Au ppb	Ag ppm	Cu ppm	Zn ppm	Other ppm
4672	Location: 7+50S, 1+50E Rock type: Cherty sediment. Composite grab of angular float up to 40 cm in diameter. Dark to light grey (mottled) very fine-grained cherty sediment with rare, subhedral 1-2 mm feldspar crystal fragments. (Cherty crystal tuff?) 5% fine-grained pyrite along fracture and in 1-2 mm fine-grained masses. Weakly magnetic.	5	0.2	318	80	4200 P

MPH

Appendix III

CERTIFICATES OF ANALYSIS

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 243
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86486
INVOICE#: 6821
DATE ENTERED: 86-09-30
FILE NAME: MPH86486
PAGE # : 1

RE FIX	SAMPLE NAME	PPB Au
S	L 13S 000E	5
S	025E	5
S	050E	5
S	075E	5
S	100E	5
S	125E	5
S	150E	5
S	175E	5
S	200E	5
S	L 13S 225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	5
S	350E	30
S	375E	5
S	400E	5
S	425E	5
S	450E	5
S	L 13S 475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	600E	5
S	625E	5
S	650E	5
S	675E	5
S	700E	5
S	L 13S 725E	30
S	750E	5
S	775E	5
S	800E	5
S	825E	5
S	850E	5
S	875E	5
S	900E	5
S	925E	5
S	950E	5
S	L 13S 975E	5

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RE FIX	SAMPLE NAME	PPB Au
S	L 13S 1000E	5
S	L 12S 000E	130
S	025E	5
S	050E	5
S	075E	5
S	100E	5
S	125E	5
S	150E	5
S	175E	5
S	L 12S 200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	20
S	350E	10
S	375E	5
S	400E	10
S	425E	5
S	L 12S 450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	20
S	600E	5
S	625E	160
S	650E	40
S	675E	120
S	L 12S 700E	5
S	725E	5
S	750E	100
S	775E	5
S	800E	5
S	825E	5
S	850E	5
S	875E	5
S	900E	5
S	925E	5
S	L 12S 950E	5

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PREFIX	SAMPLE NAME	PPB Au
S	L 12S 975E	5
S	1000E	5
S	L 11S 000E	5
S	025E	5
S	050E	5
S	075E	60
S	100E	5
S	125E	5
S	150E	5
S	L 11S 175E	5
S	200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	170
S	325E	5
S	350E	5
S	375E	5
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S	425E	5
S	450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	600E	5
S	625E	5
S	650E	5
S	L 11S 675E	5
S	700E	5
S	725E	5
S	750E	5
S	775E	5
S	800E	5
S	825E	5
S	850E	5
S	875E	5
S	900E	5
S	L 11S 925E	5

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RE FIX	SAMPLE NAME	PPB Au
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S	975E	5
S	1000E	5
S	L 10S 000E	5
S	025E	5
S	050E	5
S	075E	5
S	100E	5
S	125E	5
S	L 10S 150E	5
S	175E	5
S	200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	5
S	350E	5
S	375E	5
S	L 10S 400E	5
S	425E	5
S	450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	600E	5
S	625E	90
S	L 10S 650E	5
S	675E	90
S	700E	5
S	725E	30
S	750E	10
S	775E	20
S	800E	10
S	825E	5
S	850E	5
S	875E	5
S	L 10S 900E	5

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FILE NAME: MPH86486
PAGE # : 5

PREFIX	SAMPLE NAME	PPB Au
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S	950E	5
S	975E	5
S	1000E	5
S	L 9S 000E	5
S	025E	5
S	050E	5
S	075E	10
S	100E	5
S	L 9S 125E	5
S	150E	5
S	175E	5
S	200E	10
S	225E	5
S	250E	30
S	275E	5
S	300E	5
S	325E	5
S	350E	10
S	L 9S 375E	5
S	400E	10
S	425E	20
S	450E	5
S	475E	5
S	500E	5
S	525E	30
S	550E	5
S	575E	5
S	600E	5
S	L 9S 625E	5
S	650E	5
S	675E	40
S	700E	5
S	725E	5
S	750E	5
S	775E	5
S	800E	5
S	825E	5
S	850E	5
S	L 9S 875E	5

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DATE ENTERED: 86-09-30
FILE NAME: MPH86486
PAGE # : 6

RE FIX	SAMPLE NAME	PPB Au
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S	925E	5
S	950E	5
S	975E	5
S	1000E	5
S	L 8S 000E	5
S	025E	5
S	050E	5
S	075E	5
S	L 8S 100E	5
S	125E	5
S	150E	10
S	175E	5
S	200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	5
S	L 8S 350E	5
S	375E	5
S	400E	5
S	425E	5
S	450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	L 8S 600E	5
S	625E	5
S	650E	5
S	675E	5
S	700E	5
S	725E	5
S	750E	5
S	775E	5
S	800E	5
S	825E	5
S	L 8S 850E	5

CERTIFIED BY : J. Rossbach

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

PROJECT: V 243
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86486
INVOICE#: 6821
DATE ENTERED: 86-09-30
FILE NAME: MPH86486
PAGE # : 7

PREFIX	SAMPLE NAME	PPB Au
S	L 8S 875E	5
S	900E	5
S	L 7S 000E	5
S	025E	5
S	050E	5
S	075E	5
S	100E	5
S	125E	5
S	150E	5
S	L 7S 175E	5
S	200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	5
S	350E	5
S	375E	5
S	400E	5
S	L 7S 425E	5
S	450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	600E	5
S	625E	5
S	650E	5
S	L 7S 675E	5
S	700E	5
S	725E	5
S	750E	5
S	775E	5
S	800E	5
S	L 6S 000E	5
S	025E	5
S	050E	5
S	075E	5
S	L 6S 100E	5

CERTIFIED BY : _____

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

CERTIFICATE OF ANALYSIS

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

PROJECT: V 243
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86486
INVOICE#: 6821
DATE ENTERED: 86-09-30
FILE NAME: MPH86486
PAGE # : 8

RE FIX	SAMPLE NAME	PPB Au
S	L 6S 125E	5
S	150E	5
S	175E	5
S	200E	5
S	225E	5
S	250E	5
S	275E	5
S	300E	5
S	325E	5
S	L 6S 350E	5
S	375E	5
S	400E	5
S	425E	5
S	450E	5
S	475E	5
S	500E	5
S	525E	5
S	550E	5
S	575E	5
S	L 6S 600E	5
S	625E	5
S	650E	5
S	675E	5
S	700E	5
S	725E	5
S	750E	5
S	775E	5
S	L 6S 800E	5

CERTIFIED BY : F. Rossbacher

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

) : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
ROJECT: V 243
YPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86568
INVOICE#: 7554
DATE ENTERED: 86-10-21
FILE NAME: MPH86568
PAGE # : 1

RE IX	SAMPLE NAME	PPB Au
	L 5S 000E	5
	025E	20
	050E	5
	075E	5
	100E	5
	125E	5
	150E	5
	175E	5
	L 5S 200E	5
	225E	5
	250E	5
	275E	5
	300E	5
	325E	5
	350E	5
	375E	5
	400E	5
	425E	5
	450E	5
	475E	5
	L 5S 500E	5
	525E	5
	550E	5
	575E	5
	600E	5
	625E	5
	650E	5
	675E	5
	700E	5
	725E	5
	L 5S 750E	5

RECEIVED OCT 2 1 1986

CERTIFIED BY : J. Rossbach

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

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

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

3325 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3N1

CERT. # : A8618[illegible]-001-A
INVOICE # : I8618955
DATE : 24-NOV-86
P.O. # : NONE
V243

Semi quantitative multi element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L135 000E	2.42	<0.2	<5	80	<0.5	<2	0.14	<0.5	7	19	37	2.77	<10	0.05	10	0.40	1410	<1	0.01	12	1270	22	<5	7	0.09	<10	<10	63	<5	66	--	--
L135 025E	1.54	<0.2	5	80	<0.5	<2	0.10	<0.5	7	13	19	1.82	<10	0.02	<10	0.27	3817	<1	0.01	7	610	8	<5	5	0.06	<10	<10	42	<5	54	--	--
L135 050E	2.60	<0.2	<5	80	<0.5	<2	0.11	<0.5	11	19	38	2.93	<10	0.03	<10	0.46	893	<1	0.01	15	900	12	<5	6	0.11	<10	<10	67	<5	86	--	--
L135 075E	1.63	<0.2	5	80	<0.5	<2	0.12	<0.5	7	15	29	2.20	<10	0.03	<10	0.39	750	<1	0.01	9	550	10	<5	6	0.09	<10	<10	54	<5	64	--	--
L135 100E	2.17	<0.2	<5	90	<0.5	<2	0.13	<0.5	10	20	28	2.38	<10	0.04	<10	0.39	1120	<1	0.01	10	660	10	<5	6	0.10	<10	<10	53	<5	94	--	--
L135 125E	2.63	<0.2	<5	80	<0.5	<2	0.10	<0.5	9	20	39	2.91	<10	0.04	<10	0.48	406	<1	0.01	11	490	4	<5	6	0.13	<10	<10	70	<5	68	-	--
L135 150E	3.25	0.2	<5	80	<0.5	<2	0.08	<0.5	8	19	42	3.20	<10	0.04	<10	0.38	451	<1	0.01	10	770	6	<5	5	0.13	<10	<10	77	<5	56	--	--
L135 175E	1.56	<0.2	<5	50	<0.5	<2	0.07	<0.5	3	12	20	2.12	10	0.03	<10	0.19	788	<1	0.01	5	330	6	5	4	0.07	10	10	51	<5	42	-	--
L135 200E	2.37	<0.2	<5	60	<0.5	<2	0.09	<0.5	6	15	30	2.55	<10	0.03	<10	0.28	303	<1	0.01	8	440	4	<5	5	0.11	<10	<10	59	<5	52	--	--
L135 225E	3.58	<0.2	<5	170	<0.5	<2	0.07	<0.5	13	24	68	3.26	<10	0.05	<10	0.50	537	<1	0.01	17	440	6	<5	5	0.13	<10	10	79	<5	70	--	--
L135 250E	1.99	<0.2	<5	80	<0.5	<2	0.06	<0.5	7	16	36	2.60	<10	0.03	<10	0.36	500	<1	0.01	12	450	8	<5	4	0.10	<10	<10	64	<5	48	--	--
L135 275E	3.29	<0.2	<5	110	<0.5	<2	0.07	<0.5	10	23	59	3.25	<10	0.04	<10	0.56	381	<1	0.01	16	470	8	<5	6	0.13	<10	10	72	<5	62	-	--
L135 300E	1.73	<0.2	<5	140	<0.5	<2	0.13	<0.5	10	14	26	2.61	<10	0.04	<10	0.24	3570	<1	0.01	11	1510	32	<5	8	0.06	<10	<10	52	<5	78	--	--
L135 325E	3.09	<0.2	10	100	<0.5	<2	0.10	<0.5	11	21	47	3.51	<10	0.05	<10	0.43	738	<1	0.01	14	870	12	<5	6	0.14	<10	<10	80	<5	98	-	--
L135 350E	3.53	<0.2	20	120	<0.5	<2	0.11	<0.5	12	25	65	3.87	<10	0.06	<10	0.62	624	<1	0.01	19	980	14	<5	8	0.15	<10	<10	93	<5	86	--	--
L135 375E	2.02	<0.2	10	100	<0.5	<2	0.29	<0.5	13	19	33	3.48	<10	0.05	<10	0.33	2005	<1	0.01	12	770	12	<5	11	0.10	<10	<10	68	<5	124	-	--
L135 400E	3.05	<0.2	15	110	<0.5	<2	0.13	<0.5	12	24	49	3.94	<10	0.05	<10	0.61	596	<1	0.01	18	630	10	<5	7	0.16	<10	<10	92	5	78	--	--
L135 425E	2.97	<0.2	15	130	<0.5	<2	0.14	<0.5	11	24	46	3.67	<10	0.05	<10	0.57	651	<1	0.01	17	570	14	<5	7	0.15	<10	<10	89	5	76	-	-
L135 450E	3.51	<0.2	15	170	<0.5	<2	0.29	<0.5	15	27	53	3.86	<10	0.06	10	0.68	1020	<1	0.02	20	550	12	<5	14	0.13	<10	<10	88	<5	104	--	--
L135 475E	3.08	<0.2	10	170	<0.5	<2	0.24	<0.5	18	21	42	3.42	<10	0.06	<10	0.51	1429	<1	0.01	16	1030	18	<5	10	0.12	<10	<10	75	<5	102	--	--
L135 500E	3.12	<0.2	15	100	<0.5	<2	0.12	<0.5	15	24	52	4.07	<10	0.04	<10	0.47	577	<1	0.01	17	940	10	<5	6	0.14	<10	<10	88	<5	102	--	--
L135 525E	3.94	<0.2	15	200	<0.5	<2	0.08	<0.5	16	29	79	4.09	<10	0.07	<10	0.83	504	<1	0.01	23	430	8	<5	6	0.17	<10	<10	92	5	70	--	--
L135 550E	3.33	<0.2	10	270	<0.5	<2	0.12	<0.5	16	27	61	3.87	<10	0.06	<10	0.78	1449	<1	0.01	20	470	14	<5	8	0.13	<10	<10	86	5	86	--	--
L135 575E	4.86	<0.2	15	380	<0.5	<2	0.11	<0.5	21	32	109	4.94	<10	0.10	<10	1.05	701	<1	0.01	31	510	8	<5	10	0.19	<10	<10	116	<5	108	-	-
L135 600E	4.03	0.2	15	350	<0.5	<2	0.13	<0.5	19	32	74	4.25	<10	0.08	<10	0.91	961	<1	0.01	26	540	10	5	9	0.16	10	<10	96	5	96	--	--
L135 625E	2.90	<0.2	<5	220	<0.5	<2	0.13	<0.5	13	25	44	3.18	<10	0.06	<10	0.54	800	<1	0.01	19	690	8	<5	8	0.12	10	10	69	5	78	-	-
L135 650E	3.62	<0.2	15	380	<0.5	<2	0.12	<0.5	16	25	76	3.72	10	0.12	<10	0.82	851	<1	0.01	21	680	14	<5	9	0.16	<10	10	88	<5	86	--	--
L135 675E	2.28	<0.2	10	230	<0.5	<2	0.11	<0.5	13	23	52	2.97	<10	0.09	<10	0.68	536	<1	0.01	9	370	10	<5	7	0.14	10	10	79	5	90	-	-
L135 700E	3.29	<0.2	15	260	<0.5	<2	0.13	<0.5	12	21	49	3.10	10	0.07	<10	0.60	798	<1	0.01	17	850	12	<5	8	0.10	<10	<10	67	5	82	--	--
L135 725E	3.68	<0.2	15	210	<0.5	<2	0.22	<0.5	19	29	72	4.33	<10	0.10	<10	0.68	737	<1	0.01	23	750	12	<5	11	0.14	<10	<10	97	5	118	--	--
L135 750E	3.49	0.2	5	150	<0.5	<2	0.12	<0.5	14	27	70	3.98	<10	0.06	<10	0.72	555	<1	0.01	20	690	14	<5	8	0.19	10	<10	92	5	78	--	--
L135 775E	3.61	<0.2	15	220	<0.5	<2	0.14	<0.5	17	27	95	4.13	<10	0.07	<10	0.88	772	<1	0.01	20	710	12	<5	7	0.18	<10	<10	92	<5	82	-	--
L135 800E	3.68	<0.2	10	130	<0.5	<2	0.10	<0.5	11	22	62	3.51	<10	0.05	<10	0.65	448	<1	0.01	17	730	6	5	5	0.14	<10	<10	92	5	70	--	--
L135 825E	2.36	<0.2	10	120	<0.5	<2	0.15	<0.5	7	18	28	2.87	<10	0.03	<10	0.38	475	<1	0.01	9	570	6	<5	9	0.11	<10	10	73	5	62	-	-
L135 850E	1.72	<0.2	5	120	<0.5	<2	0.19	<0.5	5	13	22	2.10	<10	0.02	<10	0.33	556	<1	0.01	8	390	20	<5	7	0.09	<10	<10	53	5	66	--	--
L135 875E	2.52	<0.2	15	100	<0.5	<2	0.16	<0.5	8	19	35	2.65	<10	0.04	<10	0.47	654	<1	0.01	13	380	14	<5	9	0.15	<10	<10	63	5	46	-	-
L135 900E	2.60	0.2	15	100	<0.5	<2	0.16	<0.5	8	20	43	2.95	<10	0.04	<10	0.44	563	<1	0.01	12	870	16	<5	9	0.13	<10	<10	68	5	58	--	--
L135 925E	3.06	<0.2	10	80	<0.5	<2	0.11	<0.5	10	22	53	2.85	<10	0.02	<10	0.48	561	1	0.01	15	910	10	<5	6	0.14	10	<10	61	5	92	--	-
L135 950E	1.98	0.2	10	90	<0.5	<2	0.12	<0.5	14	17	53	2.57	<10	0.03	<10	0.35	683	<1	0.01	12	730	10	<5	8	0.12	<10	10	63	<5	92	--	--
L135 975E	1.47	<0.2	5	90	<0.5	<2	0.14	<0.5	4	15	15	2.34	<10	0.03	<10	0.32	277	<1	0.01	9	530	12	<5	15	0.11	<10	10	57	<5	64	-	-

Certified by : [illegible]

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3H1

CERT. # : A8610955-002-A
INVOICE # : I8610955
DATE : 24-NOV-86
P.O. # : NONE
V243

Semi quantitative multi element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L125 1000E	1.78	<0.2	5	120	<0.5	<2	0.28	<0.5	6	17	16	2.03	<10	0.07	<10	0.28	1103	<1	0.01	7	500	12	<5	17	0.17	<10	<10	58	<5	64	--	--
L125 000E	3.35	<0.2	<5	90	<0.5	<2	0.38	<0.5	11	24	51	3.28	<10	0.08	10	0.53	1648	<1	0.01	12	1180	8	<5	22	0.23	<10	<10	97	<5	88	--	--
L125 025E	2.94	<0.2	<5	80	<0.5	<2	0.33	<0.5	10	22	54	3.11	<10	0.07	10	0.48	1014	<1	0.01	11	1570	8	<5	18	0.19	<10	<10	76	<5	74	--	--
L125 050E	1.92	<0.2	5	80	<0.5	<2	0.38	<0.5	9	14	15	1.91	<10	0.05	10	0.25	1922	<1	0.01	6	710	10	<5	18	0.23	<10	<10	55	<5	92	--	--
L125 075E	2.77	<0.2	15	80	<0.5	<2	0.37	<0.5	10	21	42	2.71	<10	0.07	10	0.46	1323	<1	0.01	11	820	8	<5	18	0.22	<10	<10	72	<5	84	--	--
L125 100E	2.33	<0.2	10	50	<0.5	<2	0.33	<0.5	6	19	28	2.43	<10	0.04	10	0.34	419	<1	0.01	9	620	10	<5	15	0.12	<10	<10	64	<5	66	--	--
L125 125E	3.65	<0.2	20	90	<0.5	<2	0.29	<0.5	11	27	56	3.42	<10	0.06	10	0.61	505	<1	0.01	16	780	4	<5	14	0.23	<10	<10	92	<5	92	--	--
L125 150E	3.01	<0.2	10	100	<0.5	<2	0.28	<0.5	9	21	37	3.05	<10	0.06	10	0.40	493	<1	0.01	14	540	8	<5	15	0.21	<10	<10	84	<5	68	--	--
L125 175E	3.32	<0.2	15	100	<0.5	<2	0.24	<0.5	10	23	33	3.39	<10	0.07	<10	0.50	567	<1	0.01	14	670	6	<5	14	0.21	<10	<10	87	<5	80	--	--
L125 200E	4.33	<0.2	15	220	<0.5	<2	0.26	<0.5	17	31	60	4.42	<10	0.10	10	0.70	706	<1	0.02	27	480	18	<5	14	0.25	<10	<10	122	<5	102	--	--
L125 225E	2.84	<0.2	10	150	<0.5	<2	0.32	<0.5	11	25	29	3.46	<10	0.09	10	0.46	565	<1	0.01	13	360	12	<5	20	0.23	<10	<10	98	<5	78	--	--
L125 250E	3.56	0.2	15	160	<0.5	<2	0.36	<0.5	13	28	50	4.31	<10	0.11	10	0.66	968	<1	0.01	19	430	18	<5	21	0.29	<10	<10	115	5	110	--	--
L125 275E	3.58	0.2	15	300	<0.5	<2	0.76	<0.5	10	33	70	3.89	<10	0.13	20	0.80	2218	<1	0.02	22	390	16	<5	26	0.25	<10	<10	105	<5	90	--	--
L125 300E	3.54	<0.2	15	180	<0.5	<2	0.33	<0.5	14	30	48	4.29	<10	0.11	10	0.57	1051	<1	0.01	18	640	18	<5	20	0.28	<10	<10	149	<5	116	--	--
L125 325E	3.39	<0.2	10	170	<0.5	<2	0.30	<0.5	13	28	44	3.76	<10	0.10	10	0.51	909	<1	0.01	18	1260	12	<5	17	0.22	<10	<10	89	<5	142	--	--
L125 350E	3.01	<0.2	<5	270	<0.5	<2	0.28	<0.5	17	30	68	3.90	<10	0.16	10	0.76	1713	<1	0.01	24	930	8	<5	18	0.25	10	<10	98	5	104	--	--
L125 375E	3.49	<0.2	5	170	<0.5	<2	0.25	<0.5	13	29	54	3.63	<10	0.10	10	0.52	735	<1	0.01	17	670	6	<5	17	0.22	<10	<10	87	<5	118	--	--
L125 400E	4.02	<0.2	5	340	<0.5	<2	0.36	<0.5	19	32	59	4.25	<10	0.14	10	0.78	1721	<1	0.01	24	670	14	<5	22	0.29	10	<10	102	5	124	--	--
L125 425E	3.51	<0.2	10	230	<0.5	<2	0.26	<0.5	15	27	46	3.63	<10	0.11	10	0.54	858	<1	0.02	19	740	10	<5	17	0.21	<10	<10	84	<5	122	--	--
L125 450E	3.58	<0.2	<5	220	<0.5	<2	0.22	<0.5	16	28	53	3.53	<10	0.11	10	0.64	830	<1	0.01	20	490	6	<5	15	0.19	<10	<10	90	<5	96	--	--
L125 475E	4.55	<0.2	15	310	<0.5	<2	0.27	<0.5	18	37	73	4.37	<10	0.17	10	0.75	542	<1	0.01	25	770	12	<5	20	0.21	<10	<10	107	<5	104	--	--
L125 500E	4.96	0.2	<5	290	<0.5	<2	0.26	<0.5	16	37	77	4.34	<10	0.19	10	0.83	608	<1	0.01	24	410	2	<5	19	0.25	10	10	110	<5	90	--	--
L125 525E	3.76	0.2	<5	260	<0.5	<2	0.26	<0.5	16	31	61	3.82	<10	0.14	10	0.60	1568	<1	0.01	21	650	2	<5	17	0.21	<10	<10	93	<5	94	--	--
L125 550E	4.52	<0.2	<5	400	<0.5	<2	0.23	0.5	20	30	87	4.40	<10	0.22	10	0.89	931	<1	0.01	23	700	6	<5	17	0.22	<10	<10	109	<5	94	--	--
L125 575E	4.11	<0.2	15	250	<0.5	<2	0.32	<0.5	16	37	87	4.22	<10	0.12	10	0.78	699	<1	0.01	25	1170	12	<5	19	0.24	<10	<10	107	<5	80	--	--
L125 600E	3.10	<0.2	10	230	<0.5	<2	0.38	<0.5	17	36	69	3.60	<10	0.09	10	0.61	991	<1	0.01	24	1070	18	<5	23	0.19	10	<10	89	5	96	--	--
L125 625E	3.19	<0.2	15	340	<0.5	<2	0.35	<0.5	25	21	80	4.42	<10	0.09	10	0.40	3017	<1	0.01	18	2240	20	<5	18	0.17	<10	10	92	<5	118	--	--
L125 650E	3.84	<0.2	15	280	<0.5	<2	0.78	<0.5	16	23	64	3.98	<10	0.11	<10	0.08	2009	<1	0.01	17	470	12	<5	17	0.12	10	10	101	5	136	--	--
L125 675E	3.01	0.2	15	220	<0.5	<2	0.32	<0.5	15	21	50	3.72	<10	0.08	10	0.52	1712	<1	0.01	14	720	16	<5	16	0.20	<10	<10	92	<5	134	--	--
L125 700E	4.51	<0.2	30	170	<0.5	<2	0.16	<0.5	12	27	87	3.97	<10	0.06	<10	0.20	536	<1	0.01	19	690	12	<5	10	0.21	10	<10	78	<5	72	--	--
L125 725E	4.36	<0.2	15	160	<0.5	<2	0.32	<0.5	13	30	46	4.14	<10	0.09	10	0.63	522	<1	0.01	18	780	12	<5	21	0.24	10	<10	96	5	102	--	--
L125 750E	3.19	0.2	15	120	<0.5	<2	0.39	<0.5	16	27	30	3.54	<10	0.08	10	0.58	609	<1	0.01	17	510	14	<5	21	0.25	10	<10	91	<5	128	--	--
L125 775E	3.26	0.2	5	170	<0.5	<2	0.33	<0.5	10	17	23	2.67	<10	0.06	10	0.42	1545	<1	0.01	9	840	12	<5	17	0.20	<10	<10	69	5	104	--	--
L125 800E	4.00	0.2	20	390	<0.5	<2	0.04	<0.5	27	32	102	4.42	<10	0.12	10	0.82	1377	<1	0.02	26	1990	16	5	17	0.18	<10	10	100	5	112	--	--
L125 825E	3.50	<0.2	5	170	<0.5	<2	0.20	0.5	14	27	44	4.26	<10	0.07	10	0.61	729	<1	0.01	19	500	12	<5	19	0.29	<10	<10	107	<5	94	--	--
L125 850E	3.75	<0.2	20	160	<0.5	<2	0.32	<0.5	12	22	42	3.34	<10	0.07	10	0.57	885	<1	0.01	15	730	12	<5	16	0.23	<10	<10	75	5	96	--	--
L125 875E	2.80	<0.2	20	150	<0.5	<2	0.28	<0.5	12	23	46	3.37	<10	0.06	10	0.53	740	<1	0.01	16	520	14	<5	15	0.21	<10	<10	84	<5	88	--	--
L125 900E	3.15	<0.2	15	170	<0.5	<2	0.31	<0.5	13	27	73	3.76	<10	0.05	<10	0.46	808	<1	0.01	21	110	8	5	11	0.12	10	10	98	5	96	--	--
L125 925E	3.78	<0.2	20	210	<0.5	<2	0.34	<0.5	15	32	86	4.48	<10	0.06	<10	0.79	1011	<1	0.01	26	870	16	5	12	0.25	<10	<10	104	<5	104	--	--
L125 950E	2.52	0.2	10	150	<0.5	<2	0.27	<0.5	12	23	31	3.48	<10	0.05	<10	0.56	493	<1	0.01	15	490	8	<5	11	0.19	<10	10	73	<5	100	--	--

Certified by ...

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2125 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3H1

CERT. # : A8618955-003-A
INVOICE # : I8618955
DATE : 24-NOV-86
P.O. # : NONE
V243

Four acid partial multi element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L12S 975E	3.17	<0.2	10	170	<0.5	<2	0.27	<0.5	13	36	48	4.25	<10	0.04	<10	0.69	820	<1	0.01	17	1920	10	<5	10	0.20	<10	<10	95	<5	56	--	--
L12S 1000E	1.91	0.2	5	190	<0.5	<2	0.26	<0.5	8	17	22	2.79	<10	0.03	<10	0.31	1750	<1	<0.01	10	470	8	<5	11	0.19	<10	<10	71	<5	96	--	--
L11S 000E	3.43	0.2	10	90	<0.5	<2	0.33	<0.5	12	27	49	3.33	<10	0.07	10	0.62	1117	<1	0.01	17	500	16	<5	14	0.22	<10	<10	88	<5	96	--	--
L11S 025E	3.25	0.2	10	90	<0.5	<2	0.35	<0.5	11	30	59	3.77	<10	0.07	10	0.65	1071	<1	0.01	19	700	14	<5	14	0.16	<10	<10	100	<5	102	--	--
L11S 050E	3.06	<0.2	10	100	<0.5	<2	0.36	<0.5	11	27	40	3.37	<10	0.05	10	0.53	2385	<1	0.01	15	1000	20	<5	16	0.24	<10	<10	90	5	90	--	--
L11S 075E	3.98	0.2	20	80	<0.5	<2	0.32	<0.5	12	28	63	3.85	<10	0.05	10	0.49	1250	<1	0.01	14	1110	8	<5	14	0.29	<10	<10	75	5	90	--	--
L11S 100E	1.62	0.2	5	50	<0.5	<2	0.30	<0.5	5	19	14	2.02	<10	0.03	<10	0.25	581	<1	0.01	8	430	8	<5	13	0.30	<10	<10	57	<5	48	--	--
L11S 125E	3.49	0.2	5	110	<0.5	<2	0.23	<0.5	12	24	56	3.41	<10	0.05	10	0.64	794	<1	0.01	16	610	8	<5	12	0.32	<10	<10	96	<5	94	--	--
L11S 150E	2.22	0.2	10	60	<0.5	<2	0.17	<0.5	7	17	43	2.92	<10	0.04	<10	0.27	407	<1	0.01	9	560	12	<5	8	0.21	<10	<10	74	<5	62	--	--
L11S 175E	3.60	0.2	10	140	<0.5	<2	0.34	<0.5	15	25	59	4.16	<10	0.09	10	0.59	1556	<1	0.01	17	1990	14	<5	17	0.30	<10	<10	93	<5	130	--	--
L11S 200E	2.36	<0.2	10	90	<0.5	<2	0.16	<0.5	7	17	29	2.78	<10	0.04	<10	0.28	336	<1	<0.01	11	570	10	<5	8	0.16	<10	<10	67	<5	90	--	--
L11S 225E	3.77	<0.2	15	190	<0.5	<2	0.22	<0.5	17	29	67	3.87	<10	0.09	<10	0.80	670	<1	0.01	25	430	10	<5	11	0.19	<10	<10	91	<5	90	--	--
L11S 250E	2.80	0.2	20	160	<0.5	<2	0.21	<0.5	12	23	50	3.34	<10	0.07	<10	0.57	580	<1	0.01	17	320	10	<5	11	0.16	<10	<10	81	<5	80	--	--
L11S 275E	3.01	0.2	10	230	<0.5	<2	0.19	<0.5	14	25	45	3.54	<10	0.08	<10	0.64	1252	<1	0.01	19	450	16	<5	11	0.17	<10	<10	93	<5	96	--	--
L11S 300E	4.32	0.2	15	260	<0.5	<2	0.17	<0.5	19	34	76	4.50	<10	0.12	10	0.84	823	<1	0.01	27	550	10	<5	12	0.23	<10	<10	111	<5	94	--	--
L11S 325E	4.10	0.2	20	190	<0.5	<2	0.14	<0.5	18	30	66	4.00	<10	0.11	10	0.75	722	<1	0.01	25	440	8	<5	10	0.19	<10	<10	96	5	92	--	--
L11S 350E	3.89	0.2	15	180	<0.5	<2	0.18	<0.5	17	30	67	3.80	<10	0.08	10	0.50	1121	<1	0.01	20	1000	12	<5	11	0.16	<10	<10	99	<5	120	--	--
L11S 375E	4.13	<0.2	20	280	<0.5	<2	0.19	<0.5	18	30	86	4.12	<10	0.13	10	0.72	1419	<1	0.01	22	1240	14	<5	12	0.19	10	<10	102	<5	106	--	--
L11S 400E	3.93	<0.2	15	450	<0.5	<2	0.21	<0.5	20	32	87	4.42	<10	0.19	10	0.94	978	<1	0.01	24	760	12	<5	15	0.20	<10	<10	113	<5	90	--	--
L11S 425E	4.45	<0.2	20	230	<0.5	<2	0.40	<0.5	23	54	123	4.26	<10	0.09	10	0.78	1079	<1	0.01	30	1100	12	<5	20	0.31	<10	<10	115	<5	82	--	--
L11S 450E	3.33	0.2	15	120	<0.5	<2	0.21	<0.5	19	23	69	3.72	<10	0.06	<10	0.43	919	<1	<0.01	17	990	16	<5	10	0.11	<10	<10	82	<5	94	--	--
L11S 475E	4.36	0.2	25	180	<0.5	<2	0.22	<0.5	26	36	72	4.64	<10	0.06	<10	0.46	1471	<1	0.01	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--
L11S 500E	3.69	<0.2	25	160	<0.5	<2	0.20	<0.5	12	22	55	3.97	<10	0.05	<10	0.55	568	<1	<0.01	16	720	14	<5	11	0.15	<10	<10	90	<5	80	--	--
L11S 525E	3.40	0.2	15	120	<0.5	<2	0.21	<0.5	13	21	44	4.10	<10	0.05	<10	0.47	811	1	<0.01	15	540	10	<5	10	0.17	<10	<10	96	<5	90	--	--
L11S 550E	3.39	<0.2	5	80	<0.5	<2	0.16	<0.5	10	23	27	4.11	<10	0.04	<10	0.50	387	<1	<0.01	14	470	10	<5	8	0.21	<10	<10	90	<5	74	--	--
L11S 575E	1.31	<0.2	<5	70	<0.5	<2	0.20	<0.5	5	10	10	1.59	<10	0.03	<10	0.24	760	<1	<0.01	5	170	6	<5	9	0.13	<10	<10	42	<5	56	--	--
L11S 600E	3.67	<0.2	15	110	<0.5	<2	0.19	<0.5	10	19	41	3.21	<10	0.04	<10	0.60	776	<1	<0.01	14	460	10	<5	7	0.18	<10	<10	73	<5	76	--	--
L11S 625E	2.18	0.2	10	120	<0.5	<2	0.26	<0.5	9	16	22	2.45	<10	0.05	<10	0.43	700	<1	<0.01	10	470	12	<5	11	0.16	<10	<10	57	5	122	--	--
L11S 650E	2.22	0.2	10	110	<0.5	<2	0.21	<0.5	9	18	26	2.46	<10	0.04	<10	0.45	465	<1	<0.01	11	300	10	<5	10	0.15	<10	<10	57	<5	80	--	--
L11S 675E	2.76	0.2	15	140	<0.5	<2	0.24	<0.5	11	21	39	3.66	<10	0.06	<10	0.47	842	<1	0.01	14	590	14	<5	13	0.17	<10	<10	85	<5	98	--	--
L11S 700E	2.13	<0.2	5	120	<0.5	<2	0.29	<0.5	11	19	28	2.81	<10	0.04	<10	0.42	747	<1	0.01	14	270	12	<5	10	0.17	<10	<10	65	<5	88	--	--
L11S 725E	3.35	<0.2	20	170	<0.5	<2	0.19	<0.5	15	31	51	4.32	<10	0.05	<10	0.82	432	<1	<0.01	22	390	8	<5	16	[illegible]	10	<10	90	<5	74	--	--
L11S 750E	3.52	<0.2	15	220	<0.5	<2	0.20	<0.5	16	29	46	4.00	<10	0.06	<10	0.73	1027	<1	0.01	21	320	14	<5	11	0.19	10	<10	91	<5	68	--	--
L11S 775E	2.94	<0.2	10	200	<0.5	<2	0.22	<0.5	17	19	53	3.71	<10	0.05	<10	0.46	965	<1	<0.01	19	520	14	<5	[illegible]	[illegible]	<10	<10	36	<5	70	--	--
L11S 800E	2.19	0.2	5	200	<0.5	<2	0.43	<0.5	19	15	30	2.81	<10	0.06	<10	0.35	3129	<1	0.01	14	760	28	<5	14	0.15	<10	<10	59	5	172	--	--
L11S 825E	3.46	0.2	20	140	<0.5	<2	0.32	<0.5	16	20	69	3.85	<10	0.07	<10	0.69	1517	<1	<0.01	16	1520	14	<5	10	0.17	10	<10	79	5	96	--	--
L11S 850E	2.64	0.2	15	260	<0.5	<2	0.29	<0.5	21	21	52	2.87	<10	0.05	<10	0.43	5472	<1	<0.01	15	910	32	<5	14	0.10	<10	<10	59	5	126	--	--
L11S 875E	2.99	0.2	25	240	<0.5	<2	0.38	<0.5	23	26	59	3.28	<10	0.05	10	0.50	6876	<1	0.01	18	1000	30	<5	14	[illegible]	<10	<10	70	<5	140	--	--
L11S 900E	4.32	0.2	20	100	<0.5	<2	0.17	<0.5	12	31	111	3.91	<10	0.05	10	0.68	434	1	0.01	22	610	12	5	8	0.24	<10	<10	89	<5	70	--	--
L11S 925E	4.76	0.2	30	330	<0.5	<2	0.34	<0.5	19	38	110	5.91	10	0.07	10	0.76	526	<1	0.01	36	550	14	<5	15	[illegible]	[illegible]	[illegible]	[illegible]	5	98	--	--

Certified by ...

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3H1

CERT. # : A9618955.001 A
INVOICE # : 10618955
DATE : 24-NOV-86
P.O. # : NONE
9243

Semi quantitative multi-el sent ICP analysis is

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L115 350E	3.32	0.2	15	100	<0.5	<2	0.20	<0.5	8	18	26	2.75	<10	0.04	30	0.37	442	<1	<0.01	11	480	10	<5	10	0.13	<10	<10	70	<5	70	--	--
L115 375E	3.61	<0.2	15	120	<0.5	<2	0.16	<0.5	11	26	50	3.53	<10	0.04	20	0.66	501	<1	<0.01	20	490	10	<5	10	0.23	<10	<10	83	<5	74	--	--
L115 400E	3.75	0.2	20	110	<0.5	<2	0.16	<0.5	12	28	54	3.63	<10	0.04	10	0.69	447	<1	<0.01	20	490	14	<5	11	0.22	<10	<10	83	<5	72	--	--
L105 000E	3.38	<0.2	20	220	<0.5	<2	0.32	<0.5	13	27	67	3.44	<10	0.15	10	0.68	1251	<1	0.01	17	1290	16	<5	17	0.16	<10	<10	92	<5	116	-	-
L105 025E	2.26	0.2	10	150	<0.5	<2	0.35	<0.5	10	19	33	2.48	<10	0.11	10	0.37	4319	<1	0.01	10	1270	20	<5	16	0.12	<10	<10	65	5	106	--	--
L105 050E	4.15	<0.2	15	140	<0.5	<2	0.22	<0.5	15	31	66	3.85	<10	0.09	10	0.81	1237	<1	0.01	21	1110	12	<5	13	0.20	<10	<10	98	<5	112	--	--
L105 075E	2.90	0.2	15	90	<0.5	<2	0.20	<0.5	9	23	48	2.96	<10	0.05	<10	0.48	610	<1	0.01	12	660	12	<5	11	0.15	<10	<10	80	<5	64	--	--
L105 100E	2.15	0.2	10	70	<0.5	<2	0.18	<0.5	6	17	35	2.43	<10	0.04	<10	0.35	388	<1	<0.01	9	400	6	<5	10	0.13	<10	<10	66	<5	60	--	--
L105 125E	1.93	0.2	5	70	<0.5	<2	0.16	<0.5	5	16	25	2.49	<10	0.04	<10	0.34	287	<1	<0.01	9	320	8	<5	11	0.15	<10	<10	73	<5	42	--	--
L105 150E	1.80	0.2	15	130	<0.5	<2	0.26	<0.5	8	16	27	2.20	<10	0.05	<10	0.33	717	<1	<0.01	10	440	20	<5	20	0.13	<10	<10	63	<5	50	--	--
L105 175E	2.14	0.2	15	100	<0.5	<2	0.10	<0.5	6	13	40	2.46	<10	0.06	<10	0.30	329	<1	<0.01	10	410	12	<5	7	0.11	<10	<10	66	<5	52	--	--
L105 200E	1.61	0.2	10	100	<0.5	<2	0.17	<0.5	7	14	26	2.39	<10	0.05	<10	0.30	448	<1	<0.01	9	380	460	<5	11	0.10	<10	<10	67	<5	48	--	--
L105 225E	2.76	0.2	15	130	<0.5	<2	0.12	<0.5	16	22	38	3.72	<10	0.05	<10	0.43	628	<1	<0.01	14	860	10	<5	10	0.12	<10	<10	90	<5	80	--	--
L105 250E	4.66	0.2	15	240	<0.5	<2	0.12	<0.5	18	35	79	4.78	<10	0.11	10	0.91	610	<1	0.01	26	550	16	<5	10	0.24	<10	<10	123	<5	96	--	--
L105 275E	2.62	0.2	20	130	<0.5	<2	0.18	<0.5	9	21	38	2.76	<10	0.06	<10	0.30	457	<1	<0.01	12	540	12	<5	12	0.11	<10	<10	73	<5	80	--	--
L105 300E	2.45	0.2	30	260	<0.5	<2	0.24	<0.5	21	18	56	3.79	<10	0.08	10	0.44	8884	<1	<0.01	15	2630	54	<5	11	0.11	<10	<10	91	<5	144	-	-
L105 325E	3.85	<0.2	15	130	<0.5	<2	0.19	<0.5	17	37	83	3.94	<10	0.07	10	0.66	614	<1	0.01	28	780	10	<5	13	0.18	<10	<10	101	<5	90	--	--
L105 350E	4.29	0.4	20	220	<0.5	<2	0.19	<0.5	19	37	91	4.05	<10	0.08	10	0.74	812	<1	0.01	28	620	14	<5	12	0.16	<10	<10	105	<5	88	--	-
L105 375E	4.11	0.2	35	130	<0.5	<2	0.18	<0.5	23	23	107	4.57	10	0.08	10	0.41	2443	1	<0.01	17	2020	14	<5	11	0.14	<10	<10	90	<5	122	--	--
L105 400E	5.27	0.2	20	160	<0.5	<2	0.17	<0.5	10	27	86	4.41	<10	0.06	<10	0.57	735	<1	<0.01	16	1230	12	<5	11	0.17	<10	<10	97	<5	70	--	--
L105 425E	2.87	0.2	15	90	<0.5	<2	0.14	<0.5	7	21	51	3.70	<10	0.04	<10	0.46	619	<1	<0.01	12	630	14	<5	9	0.13	<10	<10	91	5	54	--	--
L105 450E	2.51	<0.2	15	100	<0.5	<2	0.17	<0.5	9	17	24	3.26	<10	0.05	<10	0.47	555	<1	<0.01	11	470	12	<5	10	0.11	<10	<10	79	<5	74	--	--
L105 475E	1.87	0.2	5	60	<0.5	<2	0.14	<0.5	7	14	26	2.68	<10	0.04	<10	0.40	429	<1	<0.01	9	320	10	<5	8	0.11	<10	<10	67	5	54	--	--
L105 500E	2.84	0.2	15	110	<0.5	<2	0.15	<0.5	10	21	29	3.57	<10	0.05	<10	0.45	506	<1	<0.01	14	740	10	<5	9	0.15	<10	<10	94	<5	68	--	--
L105 525E	5.84	0.2	50	160	<0.5	<2	0.16	<0.5	18	33	78	4.78	<10	0.09	<10	0.71	733	1	<0.01	28	570	27	<5	10	0.19	<10	<10	109	<5	108	--	--
L105 550E	3.61	0.2	10	170	<0.5	<2	0.32	<0.5	44	20	47	3.99	10	0.09	10	0.43	3701	<1	0.01	16	1190	22	5	15	0.12	<10	10	91	<5	146	--	-
L105 575E	1.73	0.2	15	120	<0.5	<2	0.23	<0.5	8	13	18	2.21	<10	0.05	<10	0.36	2128	<1	<0.01	8	820	14	<5	11	0.12	<10	<10	56	<5	66	--	--
L105 600E	1.76	0.2	10	180	<0.5	<2	0.27	<0.5	10	12	22	2.36	<10	0.05	<10	0.74	569	<1	<0.01	-	-	-	-	-	-	-	-	-	5	110	-	-
L105 625E	2.48	0.2	10	140	<0.5	<2	0.21	<0.5	10	17	26	2.63	<10	0.05	<10	0.52	1149	<1	<0.01	13	590	8	<5	9	0.14	<10	<10	64	<5	96	--	--
L105 650E	1.97	0.2	10	110	<0.5	<2	0.18	<0.5	11	16	20	2.74	<10	0.05	<10	0.32	1127	<1	<0.01	9	430	14	<5	10	0.13	<10	<10	67	<5	104	--	--
L105 675E	2.23	0.2	15	150	<0.5	<2	0.22	<0.5	13	17	28	3.61	<10	0.06	<10	0.47	811	<1	<0.01	14	600	22	<5	11	0.10	<10	<10	82	<5	112	--	--
L105 700E	1.67	<0.2	10	120	<0.5	<2	0.21	<0.5	7	28	19	2.87	<10	0.04	<10	0.31	736	<1	<0.01	11	540	14	5	-	-	10	8	74	5	60	--	-
L105 725E	3.06	0.2	15	150	<0.5	<2	0.23	<0.5	12	25	50	3.80	<10	0.06	<10	0.57	744	<1	<0.01	18	660	14	<5	10	0.17	<10	<10	86	<5	92	--	--
L105 750E	4.23	0.2	15	320	<0.5	<2	0.20	<0.5	17	21	90	3.99	<10	0.06	<10	0.58	1649	<1	<0.01	18	890	20	<5	10	0.14	<10	<10	83	<5	100	--	--
L105 775E	2.86	0.2	15	210	<0.5	<2	0.19	<0.5	14	15	57	4.02	<10	0.05	10	0.38	712	<1	<0.01	12	630	18	<5	10	0.06	10	<10	87	<5	94	--	--
L105 800E	3.02	0.2	25	260	<0.5	<2	0.26	<0.5	17	20	69	3.93	10	0.07	10	0.38	956	<1	0.01	19	790	26	<5	12	0.09	<10	<10	78	<5	102	--	--
L105 825E	2.91	0.2	15	840	<0.5	<2	0.26	<0.5	17	20	45	4.47	<10	0.06	<10	0.35	575	<1	0.01	16	280	16	<5	17	0.16	<10	<10	124	<5	66	--	--
L105 850E	2.50	0.2	20	270	<0.5	<2	0.39	<0.5	13	25	54	3.66	<10	0.07	10	0.78	793	<1	0.01	19	560	18	<5	15	0.19	<10	<10	87	<5	74	-	-
L105 875E	2.55	<0.2	15	210	<0.5	<2	0.31	0.5	11	23	46	3.70	<10	0.06	10	0.62	542	<1	0.01	15	440	16	<5	16	0.17	<10	<10	95	<5	66	--	--
L105 900E	3.69	0.2	15	250	<0.5	<2	0.65	<0.5	13	27	55	3.18	<10	0.07	10	0.63	539	<1	0.01	19	550	12	<5	23	0.15	10	10	70	5	60		

Certified by ...

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : FOSSPACHER LABORATORY LIMITED

3325 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5C 3N1

CERT. # : A8618955-005-A
INVOICE # : 18618955
DATE : 24-NOV-86
P.O. # : NONE
V243

Semi quantitative multi element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L10S 925E	5.02	0.2	20	150	0.5	<2	0.37	<0.5	35	34	74	4.67	10	0.09	10	0.87	600	<1	0.01	24	900	14	<5	18	0.30	<10	<10	110	<5	104	--	--
L10S 950E	2.35	<0.2	10	90	<0.5	<2	0.31	<0.5	6	18	21	2.65	<10	0.06	10	0.36	497	<1	0.01	9	430	6	<5	14	0.13	<10	<10	68	<5	72	--	--
L10S 975E	3.53	<0.2	15	90	<0.5	<2	0.33	<0.5	10	29	35	3.52	<10	0.06	10	0.56	946	<1	0.01	15	540	14	<5	21	0.22	<10	<10	88	<5	72	--	--
L10S 1000E	3.22	<0.2	10	100	<0.5	<2	0.28	<0.5	7	19	24	2.71	<10	0.05	10	0.33	612	<1	0.01	9	520	16	<5	16	0.14	10	<10	73	<5	58	--	--
L09S 000E	8.51	<0.2	20	130	<0.5	<2	0.37	<0.5	16	34	60	4.00	<10	0.10	10	0.61	1226	<1	0.01	20	970	10	<5	20	0.20	<10	<10	97	<5	122	--	--
L09S 025E	3.21	<0.2	15	90	<0.5	<2	0.39	<0.5	12	26	40	3.12	<10	0.06	10	0.45	2447	<1	0.01	14	1350	16	<5	18	0.21	<10	<10	81	<5	96	--	--
L09S 050E	3.83	<0.2	10	170	<0.5	<2	0.38	<0.5	14	29	67	3.59	<10	0.12	10	0.74	1019	<1	0.01	18	950	10	<5	14	0.22	<10	<10	96	<5	80	--	--
L09S 075E	3.36	<0.2	15	150	<0.5	<2	0.28	<0.5	12	27	61	3.74	<10	0.11	10	0.71	991	<1	0.01	15	920	14	<5	14	0.20	<10	<10	99	<5	80	--	--
L09S 100E	2.57	<0.2	10	90	<0.5	<2	0.19	<0.5	8	19	45	3.06	<10	0.05	<10	0.45	629	<1	0.01	11	620	16	<5	10	0.17	<10	<10	79	<5	64	--	--
L09S 125E	2.85	<0.2	10	100	<0.5	<2	0.18	<0.5	10	22	44	3.35	<10	0.06	<10	0.51	625	<1	<0.01	17	750	12	<5	11	0.17	10	10	92	<5	76	--	--
L09S 150E	5.92	0.2	25	170	<0.5	<2	0.27	<0.5	17	37	82	4.89	<10	0.14	10	0.76	679	<1	0.01	24	1120	12	<5	20	0.20	<10	<10	121	<5	130	--	--
L09S 175E	4.62	<0.2	10	260	<0.5	<2	0.19	<0.5	19	35	85	4.48	<10	0.13	10	0.85	915	<1	0.01	25	490	12	<5	15	0.24	<10	<10	109	<5	106	--	--
L09S 200E	4.00	<0.2	20	260	<0.5	<2	0.15	<0.5	16	27	76	4.14	<10	0.14	<10	0.81	742	<1	0.01	21	630	8	<5	13	0.19	<10	<10	107	<5	84	--	--
L09S 225E	4.21	0.2	30	170	<0.5	<2	0.21	<0.5	15	28	87	3.95	<10	0.09	10	0.61	900	<1	0.01	22	1050	1230	<5	14	0.19	<10	<10	103	<5	112	--	--
L09S 250E	3.22	<0.2	20	310	<0.5	<2	0.74	<0.5	29	24	153	4.27	10	0.06	10	0.60	5482	<1	0.01	22	1350	30	<5	27	0.17	<10	<10	117	<5	158	--	--
L09S 275E	3.07	<0.2	15	100	<0.5	<2	0.22	<0.5	9	21	81	3.73	<10	0.05	<10	0.50	661	<1	<0.01	14	1430	12	<5	11	0.17	<10	<10	96	5	74	--	--
L09S 300E	3.11	0.2	10	100	<0.5	<2	0.17	<0.5	8	19	52	3.88	<10	0.05	<10	0.35	749	<1	0.01	10	840	20	<5	9	0.17	<10	<10	90	<5	88	--	--
L09S 325E	3.63	<0.2	15	80	<0.5	<2	0.14	<0.5	10	23	54	3.69	<10	0.04	<10	0.56	609	<1	<0.01	14	660	8	<5	8	0.19	<10	<10	85	<5	60	--	--
L09S 350E	4.02	<0.2	15	130	<0.5	<2	0.15	<0.5	12	26	63	3.99	<10	0.07	<10	0.58	778	<1	<0.01	18	740	16	<5	9	0.16	<10	<10	89	5	110	--	--
L09S 375E	4.69	<0.2	25	110	<0.5	<2	0.14	<0.5	12	26	41	3.89	<10	0.06	<10	0.55	1821	<1	<0.01	19	930	19	<5	9	0.19	<10	<10	86	<5	96	--	--
L09S 400E	3.84	0.2	25	130	<0.5	<2	0.25	<0.5	12	25	57	3.72	<10	0.08	10	0.62	1777	<1	0.01	17	800	24	<5	12	0.22	<10	<10	71	<5	84	--	--
L09S 425E	1.59	0.2	10	70	<0.5	<2	0.24	<0.5	5	11	20	2.23	<10	0.04	<10	0.36	513	<1	0.01	7	350	12	5	10	0.16	<10	<10	61	5	48	--	--
L09S 450E	5.45	<0.2	10	120	<0.5	<2	0.17	<0.5	13	28	83	4.19	<10	0.06	<10	0.84	717	<1	0.01	18	510	8	<5	12	0.24	<10	<10	102	<5	82	--	--
L09S 475E	4.17	0.2	20	130	<0.5	<2	0.20	<0.5	13	23	69	4.01	<10	0.06	<10	0.59	897	<1	<0.01	17	1170	10	<5	11	0.19	<10	<10	90	5	112	--	--
L09S 500E	5.04	0.2	30	260	<0.5	<2	0.27	<0.5	27	22	96	4.22	<10	0.10	10	0.34	2630	<1	0.01	21	1420	20	<5	12	0.09	<10	<10	72	<5	182	--	--
L09S 525E	3.83	<0.2	25	160	<0.5	<2	0.18	<0.5	18	25	86	4.15	<10	0.08	<10	0.74	1104	<1	<0.01	21	830	18	<5	9	0.15	10	<10	91	5	104	--	--
L09S 550E	2.59	<0.2	25	140	<0.5	<2	0.26	<0.5	10	21	35	3.79	<10	0.05	<10	0.52	1511	<1	<0.01	14	650	20	5	11	0.17	<10	<10	79	5	86	--	--
L09S 575E	2.20	<0.2	25	70	<0.5	<2	0.19	<0.5	8	16	31	3.26	<10	0.05	<10	0.37	535	<1	<0.01	10	430	10	5	8	0.12	10	<10	69	5	72	--	--
L09S 600E	1.58	<0.2	10	90	<0.5	<2	0.14	<0.5	11	9	16	2.16	<10	0.03	<10	0.28	726	<1	<0.01	6	250	14	<5	6	0.07	<10	<10	54	<5	74	--	--
L09S 625E	3.90	<0.2	25	170	<0.5	<2	0.18	<0.5	15	25	57	4.66	<10	0.06	<10	0.53	1234	1	<0.01	9	740	14	<5	9	0.17	10	<10	84	5	110	--	--
L09S 650E	1.08	0.2	20	250	<0.5	<2	0.37	<0.5	10	27	56	4.26	10	0.08	10	0.65	6552	<1	0.01	22	1050	16	<5	16	0.24	<10	<10	95	<5	184	--	--
L09S 675E	1.52	0.2	5	90	<0.5	<2	0.25	<0.5	6	14	15	1.81	<10	0.04	<10	0.37	501	<1	<0.01	7	210	26	<5	10	0.17	<10	10	44	5	60	--	--
L09S 700E	2.20	<0.2	15	100	<0.5	<2	0.62	<0.5	18	44	43	2.74	<10	0.04	10	0.84	2170	<1	0.01	52	620	12	5	24	0.22	<10	10	72	5	112	--	--
L09S 725E	5.45	0.6	30	410	1.5	<2	0.71	<0.5	173	22	111	3.91	10	0.08	30	0.90	5556	3	0.01	25	1990	40	<5	29	0.11	<10	<10	73	<5	120	--	--
L09S 750E	2.09	<0.2	10	150	<0.5	<2	0.23	<0.5	11	18	31	2.85	<10	0.04	<10	0.55	1247	<1	<0.01	13	450	8	<5	9	0.17	<10	<10	66	5	82	--	--
L09S 775E	2.61	<0.2	15	170	<0.5	<2	0.21	<0.5	10	21	35	3.75	<10	0.05	<10	0.46	612	<1	0.01	14	430	10	<5	9	0.18	<10	10	69	5	72	--	--
L09S 800E	4.17	<0.2	30	250	<0.5	<2	0.41	<0.5	17	25	47	3.74	<10	0.07	10	0.52	1287	<1	0.01	17	670	8	<5	17	0.15	<10	<10	83	<5	84	--	--
L09S 825E	3.45	<0.2	25	160	<0.5	<2	0.18	<0.5	12	28	51	4.71	<10	0.04	<10	0.66	432	<1	<0.01	21	580	8	<5	8	0.20	<10	<10	101	<5	80	--	--
L09S 850E	3.17	0.2	15	290	<0.5	<2	0.47	<0.5	15	24	67	3.39	<10	0.04	10	0.57	456	<1	<0.01	18	570	12	<5	15	0.15	<10	<10	85	<5	64	--	--
L09S 875E	2.26	<0.2	10	200	<0.5	<2	0.22	<0.5	11	18	35	3.74	<10	0.03	<10	0.43	354	<1	<0.01	11	290	12	<5	9	0.16	<10	<10	91	5	48	--	--

Certified by J. Wardle

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

[illegible] SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3G1

CERT. # : A8618955 006 A
INVOICE # : I8618955
DATE : 24-NOV-86
P.O. # : NONE
V243

Semi quantitative multi-element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L00S 900E	1.87	0.2	10	30	<0.5	<2	0.22	<0.5	6	129	18	2.17	<10	0.03	<10	0.30	406	1	<0.01	64	600	14	<5	12	0.17	<10	<10	61	<5	64	--	--
L00S 925E	2.15	0.4	15	130	<0.5	<2	0.24	<0.5	8	20	24	2.84	<10	0.04	<10	0.44	449	<1	<0.01	11	410	8	<5	12	0.19	<10	10	72	<5	62	--	--
L00S 950E	5.24	<0.2	30	320	<0.5	<2	0.19	<0.5	21	44	90	4.81	<10	0.10	<10	1.05	733	<1	0.01	32	270	14	<5	13	0.28	<10	10	107	<5	100	--	--
L00S 975E	3.30	0.2	20	160	<0.5	<2	0.26	<0.5	13	32	46	3.63	<10	0.06	<10	0.71	645	<1	0.01	20	370	10	<5	15	0.22	<10	10	76	<5	86	--	--
L00S 1000E	2.39	0.2	15	130	<0.5	<2	0.20	<0.5	7	17	35	3.01	<10	0.05	<10	0.47	370	<1	0.01	12	740	14	<5	9	0.13	<10	<10	72	<5	74	--	--
L00S 000E	3.46	<0.2	5	70	<0.5	<2	0.21	<0.5	11	22	36	2.93	<10	0.06	<10	0.48	1059	<1	<0.01	14	990	12	<5	13	0.15	10	<10	71	<5	100	--	--
L00S 025E	2.18	0.4	10	70	<0.5	<2	0.27	<0.5	9	18	25	2.26	<10	0.06	<10	0.33	2775	<1	0.01	10	1560	18	<5	12	0.09	<10	<10	55	<5	70	--	--
L00S 050E	4.26	0.4	20	230	<0.5	<2	0.16	<0.5	17	30	81	4.33	<10	0.11	10	0.81	865	<1	0.02	23	610	18	<5	11	0.21	10	10	107	5	112	--	--
L00S 075E	3.89	<0.2	20	260	<0.5	<2	0.16	<0.5	18	27	82	4.01	<10	0.11	<10	0.83	1225	<1	0.01	21	660	18	<5	10	0.18	<10	<10	99	<5	96	--	--
L00S 100E	3.43	<0.2	15	410	<0.5	<2	0.12	<0.5	15	30	69	4.15	<10	0.09	<10	0.81	805	<1	0.01	21	610	8	<5	13	0.16	<10	<10	92	<5	94	--	--
L00S 125E	4.44	<0.2	15	200	<0.5	<2	0.17	<0.5	22	33	85	4.49	<10	0.16	10	0.97	961	<1	0.01	27	700	10	<5	14	0.23	<10	<10	113	<5	114	--	--
L00S 150E	4.09	<0.2	15	310	<0.5	<2	0.18	<0.5	20	34	87	4.69	<10	0.16	10	1.02	991	<1	0.01	25	720	8	<5	19	0.23	<10	<10	116	<5	100	--	--
L00S 175E	3.73	<0.2	<5	170	<0.5	<2	0.17	<0.5	18	26	57	3.95	<10	0.10	10	0.77	859	<1	0.01	22	620	8	<5	12	0.20	<10	<10	95	<5	140	--	--
L00S 200E	4.55	<0.2	10	250	<0.5	<2	0.16	<0.5	18	30	84	4.48	<10	0.13	10	0.89	891	<1	0.01	26	750	8	<5	11	0.19	<10	<10	106	<5	126	--	--
L00S 225E	2.63	<0.2	20	170	<0.5	<2	0.28	<0.5	12	25	33	3.52	<10	0.08	<10	0.49	707	<1	<0.01	15	710	22	<5	12	0.16	<10	<10	88	<5	104	--	--
L00S 250E	3.85	0.2	15	160	<0.5	<2	0.19	<0.5	14	29	62	4.27	<10	0.09	<10	0.74	779	<1	0.01	23	570	28	<5	12	0.15	10	<10	102	5	102	--	--
L00S 275E	1.76	<0.2	10	100	<0.5	<2	0.17	<0.5	6	14	24	2.34	<10	0.04	<10	0.27	318	<1	<0.01	10	370	22	<5	11	0.10	<10	<10	63	5	50	--	--
L00S 300E	3.80	<0.2	10	120	<0.5	<2	0.15	<0.5	15	28	69	4.32	<10	0.07	<10	0.72	663	<1	0.01	21	740	10	<5	9	0.19	<10	<10	100	5	92	--	--
L00S 325E	2.15	<0.2	10	70	<0.5	<2	0.11	<0.5	6	16	27	2.84	<10	0.04	<10	0.28	349	<1	<0.01	10	670	10	<5	7	0.09	<10	<10	65	<5	54	--	--
L00S 350E	1.43	<0.2	5	120	<0.5	<2	0.15	<0.5	3	12	32	2.39	<10	0.03	<10	0.16	287	<1	0.01	5	360	12	<5	10	0.06	10	10	61	5	38	--	--
L00S 375E	3.31	<0.2	15	100	<0.5	<2	0.12	<0.5	9	17	40	2.90	<10	0.05	<10	0.35	539	<1	<0.01	14	770	16	<5	8	0.12	<10	<10	63	5	70	--	--
L00S 400E	3.54	<0.2	10	110	<0.5	<2	0.12	<0.5	11	23	43	3.00	<10	0.05	<10	0.45	501	<1	<0.01	14	760	12	<5	8	0.13	<10	<10	95	<5	86	--	--
L00S 425E	4.40	<0.2	15	120	<0.5	<2	0.15	<0.5	15	31	84	4.38	10	0.06	<10	0.61	923	<1	0.01	20	970	12	<5	11	0.22	<10	<10	109	5	102	--	--
L00S 450E	1.80	<0.2	5	60	<0.5	<2	0.13	<0.5	5	15	18	3.16	<10	0.04	<10	0.26	411	<1	<0.01	8	850	16	<5	8	0.14	10	10	83	5	58	--	--
L00S 475E	3.92	<0.2	15	110	<0.5	<2	0.16	<0.5	12	24	60	4.27	<10	0.06	<10	0.63	816	<1	0.01	17	570	12	<5	10	0.17	<10	<10	104	<5	84	--	--
L00S 500E	2.57	<0.2	10	110	<0.5	<2	0.17	<0.5	13	22	59	3.67	<10	0.04	<10	0.67	736	<1	<0.01	18	510	14	<5	8	0.18	<10	<10	84	<5	78	--	--
L00S 525E	2.56	<0.2	15	170	<0.5	<2	0.22	0.5	13	20	39	2.96	<10	0.05	10	0.49	1736	2	0.01	14	460	24	<5	27	0.11	<10	<10	75	<5	88	--	--
L00S 550E	2.08	<0.2	10	100	<0.5	<2	0.17	<0.5	7	17	25	4.41	<10	0.03	<10	0.36	392	2	0.01	9	340	14	<5	16	0.16	10	<10	113	5	58	--	--
L00S 575E	2.13	<0.2	5	70	<0.5	<2	0.13	<0.5	8	18	29	3.80	<10	0.03	<10	0.15	368	<1	<0.01	12	240	12	<5	6	0.15	<10	<10	97	<5	52	--	--
L00S 600E	1.92	<0.2	10	170	<0.5	<2	0.15	<0.5	14	15	26	3.73	<10	0.03	10	0.36	2079	1	<0.01	12	550	18	5	10	0.12	10	10	76	5	74	--	--
L00S 625E	3.14	<0.2	5	190	<0.5	<2	0.36	<0.5	18	25	53	4.33	<10	0.08	10	0.85	1985	<1	0.01	25	460	12	<5	16	0.20	<10	10	95	<5	86	--	--
L00S 650E	3.57	<0.2	5	180	<0.5	<2	0.23	<0.5	21	28	56	4.30	<10	0.07	10	0.66	1184	<1	0.01	34	790	16	5	17	0.19	10	10	91	5	100	--	--
L00S 675E	3.62	<0.2	5	160	<0.5	<2	0.21	<0.5	17	24	64	4.01	10	0.07	<10	0.59	1151	<1	0.01	17	1570	14	<5	11	0.15	<10	<10	105	<5	142	--	--
L00S 700E	2.27	<0.2	5	210	<0.5	<2	0.28	<0.5	16	18	41	3.71	10	0.04	<5	0.26	148	1	0.01	12	940	20	5	15	0.17	10	10	72	5	176	--	--
L00S 725E	1.41	<0.2	5	80	<0.5	<2	0.19	<0.5	5	10	12	2.40	<10	0.03	10	0.20	263	1	<0.01	5	220	10	<5	9	0.12	<10	<10	93	<5	34	--	--
L00S 750E	1.26	<0.2	<5	160	<0.5	<2	0.30	<0.5	5	14	11	2.67	<10	0.06	<10	0.36	1249	<1	<0.01	8	350	22	<5	15	0.17	10	<10	69	5	58	--	--
L00S 775E	1.57	<0.2	<5	180	<0.5	<2	0.28	<0.5	5	14	17	2.15	<10	0.04	<10	0.41	672	<1	<0.01	9	430	18	<5	11	0.12	<10	<10	75	<5	48	--	--
L00S 800E	2.36	<0.2	5	250	<0.5	<2	0.25	<0.5	12	23	25	4.42	<10	0.05	<10	0.61	2273	<1	<0.01	14	570	14	5	11	0.10	10	<10	90	5	92	--	--
L00S 825E	3.06	<0.2	10	200	<0.5	<2	0.24	<0.5	8	18	45	3.80	<10	0.04	<10	0.45	2337	<1	<0.01	12	2010	22	5	11	0.09	10	<10	71	5	106	--	--
L00S 850E	2.16	<0.2	<5	290	0.5	<2	0.20	<0.5	9	16	32	3.20	<10	0.04	<10	0.43	1546	<1	0.01	10	850	22	5	10	0.10	<10	<10	67	<5	70	--	--

Certified by .....

Chemex Labs Ltd.

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

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Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3H1

CERT. # : A8618955-007-A
INVOICE # : IN618955
DATE : 24-NOV-86
P.O. # : NONE
V243

Semi quantitative multi element ICP analysis

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L60S 875E	1.42	<0.2	<5	150	<0.5	<2	0.30	<0.5	5	12	10	2.14	<10	0.04	<10	0.23	557	<1	<0.01	6	280	12	<5	17	0.11	<10	<10	60	<5	54	--	--
L60S 900E	2.67	<0.2	5	160	<0.5	<2	0.34	<0.5	11	22	45	3.85	<10	0.04	<10	0.66	737	<1	0.01	15	790	16	<5	13	0.17	<10	<10	85	<5	78	--	--
L60S 925E	3.69	<0.2	5	150	<0.5	<2	0.23	<0.5	14	30	58	3.72	<10	0.07	10	0.72	1297	<1	0.01	19	850	10	<5	12	0.18	<10	<10	91	<5	86	--	--
L60S 950E	3.60	<0.2	<5	120	<0.5	<2	0.19	<0.5	14	26	53	3.13	<10	0.06	<10	0.58	1719	<1	<0.01	16	1150	6	<5	10	0.14	<10	<10	75	<5	104	--	--
L60S 975E	2.79	<0.2	5	120	<0.5	<2	0.17	<0.5	12	22	41	3.12	<10	0.06	<10	0.49	1716	<1	<0.01	13	1310	12	<5	10	0.13	<10	<10	73	<5	122	--	--
L60S 1000E	3.46	<0.2	10	140	<0.5	<2	0.14	<0.5	16	25	51	3.76	<10	0.08	<10	0.58	1063	<1	<0.01	17	940	10	<5	10	0.18	<10	<10	85	<5	122	--	--
L60S 1025E	3.06	<0.2	5	120	<0.5	<2	0.11	<0.5	16	22	62	3.43	<10	0.07	<10	0.50	1144	<1	<0.01	17	690	6	<5	8	0.19	<10	<10	77	<5	130	--	--
L60S 1050E	2.70	<0.2	10	170	<0.5	<2	0.12	<0.5	12	16	41	2.89	<10	0.05	<10	0.32	812	<1	<0.01	11	610	4	<5	8	0.12	<10	<10	66	<5	84	--	--
L60S 1075E	2.14	<0.2	<5	70	<0.5	<2	0.11	<0.5	9	15	29	2.32	<10	0.04	<10	0.36	518	<1	<0.01	9	650	8	<5	7	0.11	<10	<10	67	<5	66	--	--
L60S 1100E	4.77	0.2	10	260	<0.5	<2	0.12	<0.5	17	35	90	4.35	<10	0.10	<10	0.92	606	<1	<0.01	27	470	8	<5	9	0.19	<10	<10	102	<5	110	--	--
L60S 1125E	2.48	<0.2	10	90	<0.5	<2	0.16	<0.5	8	19	30	3.20	<10	0.05	<10	0.38	357	<1	<0.01	12	740	10	<5	10	0.14	<10	<10	77	<5	74	--	--
L60S 1150E	2.94	<0.2	5	100	<0.5	<2	0.14	<0.5	11	19	45	3.40	<10	0.06	<10	0.39	605	<1	<0.01	12	810	12	<5	8	0.14	10	<10	71	<5	94	-	-
L60S 1175E	3.29	<0.2	<5	110	<0.5	<2	0.14	<0.5	11	22	52	3.95	<10	0.05	<10	0.47	526	<1	<0.01	14	1060	18	<5	10	0.14	<10	<10	87	<5	78	--	--
L60S 1200E	4.33	<0.2	5	130	<0.5	<2	0.16	<0.5	13	28	78	4.46	<10	0.07	10	0.74	611	<1	<0.01	20	510	10	<5	10	0.20	10	<10	104	<5	90	-	-
L60S 1225E	2.45	<0.2	<5	70	<0.5	<2	0.16	<0.5	9	19	24	3.55	<10	0.05	<10	0.38	433	<1	<0.01	10	500	14	<5	9	0.15	<10	<10	84	<5	72	--	--
L60S 1250E	4.07	<0.2	10	120	<0.5	<2	0.17	<0.5	14	27	56	4.59	<10	0.07	<10	0.75	530	1	<0.01	21	610	10	<5	11	0.21	<10	<10	101	<5	78	-	-
L60S 1275E	2.87	<0.2	10	130	<0.5	<2	0.20	<0.5	13	21	36	4.12	<10	0.05	<10	0.43	1347	<1	<0.01	14	1700	12	<5	10	0.15	<10	<10	90	<5	132	--	--
L60S 1300E	2.99	<0.2	5	110	<0.5	<2	0.19	<0.5	16	20	43	4.28	<10	0.05	<10	0.44	1176	5	0.01	13	1190	14	<5	9	0.17	<10	<10	80	<5	128	--	--
L60S 1400E	2.20	<0.2	5	80	<0.5	<2	0.13	<0.5	7	14	30	3.38	<10	0.04	<10	0.28	442	<1	<0.01	9	930	12	<5	7	0.10	<10	<10	66	<5	70	--	--
L60S 1425E	3.59	<0.2	15	130	<0.5	<2	0.14	<0.5	14	25	60	4.16	<10	0.07	<10	0.61	788	1	<0.01	19	1650	14	<5	8	0.14	<10	<10	91	<5	108	--	--
L60S 1450E	2.04	<0.2	<5	80	<0.5	<2	0.18	0.5	9	17	25	3.11	10	0.06	<10	0.40	455	<1	<0.01	8	760	<2	<5	9	0.14	<10	<10	69	<5	74	--	--
L60S 1475E	2.99	<0.2	5	80	<0.5	<2	0.15	<0.5	10	23	39	4.67	<10	0.03	<10	0.61	401	3	<0.01	14	280	8	<5	8	0.19	<10	<10	119	<5	64	--	-
L60S 1500E	3.81	<0.2	15	220	<0.5	<2	0.41	0.5	22	28	42	4.51	<10	0.06	20	0.55	2125	8	0.01	17	500	12	<5	23	0.14	<10	<10	119	<5	82	--	--
L60S 1525E	3.68	<0.2	5	170	<0.5	<2	0.16	<0.5	23	25	54	5.59	<10	0.06	<10	0.49	986	3	0.01	20	470	20	<5	11	0.17	<10	<10	137	<5	98	-	-
L60S 1550E	2.35	<0.2	5	120	<0.5	<2	0.24	<0.5	13	20	30	4.53	<10	0.05	<10	0.33	930	3	<0.01	13	600	18	<5	12	0.16	<10	<10	115	<5	86	--	--
L60S 1575E	3.20	<0.2	<5	150	<0.5	<2	0.16	<0.5	18	24	49	4.57	<10	0.05	10	0.48	1370	1	0.01	17	850	12	<5	11	0.17	<10	<10	104	<5	78	-	-
L60S 1600E	2.53	<0.2	10	150	<0.5	<2	0.28	<0.5	14	18	39	3.33	<10	0.06	<10	0.64	1174	<1	0.01	16	520	18	<5	12	0.15	<10	<10	74	<5	110	--	--
L60S 1625E	3.42	<0.2	<5	220	<0.5	<2	0.30	0.5	26	22	54	3.91	<10	0.07	10	0.68	2103	1	0.01	20	1110	24	<5	16	0.13	10	10	73	<5	164	--	--
L60S 1650E	2.25	<0.2	<5	240	<0.5	<2	0.32	<0.5	24	14	31	3.38	<10	0.05	<10	0.34	5050	<1	<0.01	10	1640	20	<5	15	0.07	<10	<10	57	<5	114	--	--
L60S 1675E	3.37	<0.2	5	220	<0.5	<2	0.24	<0.5	20	25	68	4.65	<10	0.09	<10	0.69	1720	<1	0.01	19	1540	20	<5	13	0.15	<10	<10	91	<5	152	-	-
L60S 1700E	2.63	<0.2	<5	200	<0.5	<2	0.36	0.5	17	20	50	3.68	<10	0.07	<10	0.45	2284	<1	<0.01	15	830	12	<5	16	0.10	<10	<10	74	<5	96	--	--
L60S 1725E	2.82	<0.2	5	240	<0.5	<2	0.42	<0.5	17	20	78	3.91	10	0.07	10	0.57	1755	1	0.01	15	630	16	<5	15	0.11	<10	<10	73	<5	96	-	-
L60S 1750E	1.26	<0.2	<5	130	<0.5	<2	0.20	<0.5	7	11	18	2.07	<10	0.03	<10	0.27	550	<1	<0.01	6	440	22	<5	9	0.07	<10	<10	48	<5	50	--	--
L60S 1775E	1.34	<0.2	<5	130	<0.5	<2	0.20	<0.5	7	12	18	2.21	10	0.03	10	0.28	579	1	0.01	7	370	8	<5	9	0.08	10	10	58	<5	52	-	-
L60S 1800E	2.73	<0.2	<5	140	<0.5	<2	0.17	<0.5	9	27	35	4.58	<10	0.04	<10	0.53	441	<1	<0.01	15	800	14	<5	9	0.17	<10	<10	94	<5	90	--	--
L60S 1825E	4.03	0.4	<5	110	<0.5	<2	0.18	<0.5	13	30	54	3.60	<10	0.05	<10	0.67	1375	<1	<0.01	16	970	17	<5	10	0.20	10	<10	97	5	74	-	-
L60S 1850E	2.79	<0.2	10	80	<0.5	<2	0.16	<0.5	11	23	40	3.26	<10	0.05	<10	0.56	1011	<1	<0.01	15	1380	6	<5	8	0.10	<10	<10	73	<5	112	--	--
L60S 1875E	3.71	0.4	10	120	<0.5	<2	0.11	<0.5	16	36	60	3.69	<10	0.06	<10	0.71	1419	<1	<0.01	17	770	10	<5	7	0.08	<10	<10	63	<5	111	-	-
L60S 1900E	1.79	0.2	5	80	<0.5	<2	0.14	<0.5	6	13	29	2.20	<10	0.05	<10	0.27	1015	<1	<0.01	8	1470	14	<5	7	0.08	<10	<10	63	<5	66	--	--
L60S 1925E	2.40	0.2	10	90	<0.5	<2	0.10	<0.5	9	15	38	3.35	<10	0.05	<10	0.45	692	<1	<0.01	9	1960	6	<5	5	0.10	<10	<10	73	5	78		

Certified by ..... Dec. 2.6 1986

Chemex Labs Ltd.

212 Brooksbank Ave
North Vancouver B C
Canada V7J2C1

•Analytical Chemists •Geochemists •Registered Assayers

Phone (604) 984-0221
Telex 043-52597

CERTIFICATE OF ANALYSIS

TO : ROSSBACHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3J1

CCRT. # : A8618955-008-A
INVOICE # : I8618955
DATE : 24-NOV-86
P.O. # : NONE
W343

Semi quantitative multi element ICP analysis is

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

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
L865 125E	2.65	0.2	5	90	<0.5	<2	0.11	<0.5	8	17	20	3.05	<10	0.05	<10	0.37	472	<1	<0.01	10	530	8	<5	8	0.14	<10	<10	73	<5	66	--	--
L865 150E	1.73	0.2	<5	60	<0.5	<2	0.09	<0.5	4	11	21	2.22	<10	0.04	<10	0.24	350	<1	<0.01	6	490	10	<5	7	0.13	<10	10	59	5	40	--	--
L865 175E	3.51	0.2	10	90	<0.5	<2	0.14	<0.5	8	21	41	3.41	<10	0.06	<10	0.44	433	<1	<0.01	12	610	12	<5	10	0.16	<10	<10	78	5	76	--	--
L865 200E	3.35	<0.2	<5	150	<0.5	<2	0.16	<0.5	12	25	52	3.54	<10	0.07	10	0.57	718	<1	<0.01	18	530	6	<5	13	0.19	10	10	82	5	80	--	--
L865 225E	3.47	<0.2	5	100	<0.5	<2	0.18	<0.5	10	24	47	3.87	<10	0.06	<10	0.53	477	<1	<0.01	14	510	12	<5	13	0.20	<10	<10	88	5	84	--	--
L865 250E	3.06	<0.2	<5	140	<0.5	<2	0.27	0.5	9	23	44	3.81	<10	0.07	<10	0.47	2160	<1	<0.01	15	1320	22	<5	14	0.14	<10	<10	89	5	100	--	--
L865 275E	2.73	<0.2	<5	100	<0.5	<2	0.18	<0.5	9	22	39	3.18	<10	0.07	<10	0.48	442	1	<0.01	17	480	16	<5	12	0.15	<10	<10	77	<5	62	--	--
L865 300E	4.23	<0.2	10	250	<0.5	<2	0.20	<0.5	16	32	76	4.42	<10	0.12	10	0.70	841	<1	0.01	24	640	14	<5	15	0.23	10	10	174	5	94	--	--
L865 325E	4.42	<0.2	15	320	<0.5	<2	0.16	<0.5	17	26	124	5.01	<10	0.22	10	1.00	1107	<1	0.01	26	730	10	<5	10	0.20	<10	<10	121	<5	118	--	--
L865 350E	3.89	0.2	<5	250	<0.5	<2	0.20	<0.5	20	20	84	4.77	<10	0.16	10	0.90	1580	1	0.01	22	900	18	<5	20	0.17	10	10	102	<5	92	--	--
L865 375E	5.16	<0.2	15	170	<0.5	<2	0.13	<0.5	17	29	84	5.23	<10	0.05	10	0.66	644	<1	0.01	19	520	12	<5	10	0.24	<10	<10	135	<5	98	--	--
L865 400E	3.69	<0.2	<5	160	<0.5	<2	0.15	<0.5	13	25	58	5.31	<10	0.08	<10	0.62	571	1	<0.01	18	590	12	<5	9	0.26	<10	<10	137	<5	86	--	--
L865 425E	4.30	0.2	10	470	3.5	<2	0.61	2.5	67	20	58	3.07	<10	0.06	80	0.33	>9999	33	0.01	16	730	12	<5	30	0.11	<10	<10	106	<5	74	--	--
L865 450E	2.94	<0.2	<5	110	<0.5	<2	0.15	<0.5	10	22	36	3.81	<10	0.03	<10	0.51	528	2	<0.01	17	210	4	<5	10	0.19	<10	<10	70	<5	72	--	--
L865 475E	1.79	<0.2	<5	100	<0.5	<2	0.13	<0.5	11	14	22	2.39	<10	0.04	<10	0.22	3032	<1	<0.01	8	410	8	<5	8	0.13	<10	<10	58	<5	74	--	--
L865 500E	2.63	<0.2	5	110	<0.5	<2	0.16	<0.5	10	23	41	3.65	<10	0.05	10	0.51	915	<1	<0.01	13	670	10	<5	9	0.16	<10	<10	79	<5	74	--	--
L865 525E	2.99	<0.2	5	140	<0.5	<2	0.20	<0.5	9	22	40	3.60	<10	0.05	<10	0.43	1140	1	<0.01	14	740	20	<5	10	0.16	<10	<10	90	<5	76	--	--
L865 550E	1.23	<0.2	<5	60	<0.5	<2	0.15	<0.5	3	11	12	2.13	<10	0.02	<10	0.19	263	<1	<0.01	4	300	12	<5	8	0.14	<10	<10	64	<5	28	--	--
L865 575E	4.25	<0.2	5	130	<0.5	<2	0.16	<0.5	19	31	63	4.50	<10	0.07	10	0.59	742	<1	0.01	21	920	16	<5	11	0.21	<10	<10	91	<5	122	--	--
L865 600E	3.44	0.2	<5	120	<0.5	<2	0.16	<0.5	12	25	57	4.01	<10	0.05	<10	0.63	1090	<1	<0.01	18	790	8	<5	10	0.17	<10	<10	88	<5	86	--	--
L865 625E	2.40	<0.2	<5	130	<0.5	<2	0.18	<0.5	11	20	43	3.45	<10	0.05	<10	0.47	1375	<1	<0.01	12	830	12	<5	9	0.13	<10	<10	75	<5	78	--	--
L865 650E	2.78	<0.2	5	100	<0.5	<2	0.13	<0.5	10	22	46	3.30	<10	0.04	<10	0.50	494	<1	<0.01	14	550	10	<5	7	0.15	10	10	73	<5	86	--	--
L865 675E	3.32	<0.2	5	110	<0.5	<2	0.12	<0.5	10	25	41	3.80	<10	0.05	<10	0.41	510	<1	<0.01	15	530	12	<5	8	0.15	<10	<10	89	<5	74	--	--
L865 700E	3.11	<0.2	5	160	<0.5	<2	0.16	<0.5	11	25	52	3.75	<10	0.05	10	0.51	56	1	0.01	17	570	14	<5	10	0.17	15	10	74	5	66	--	--
L865 725E	1.70	<0.2	<5	140	<0.5	<2	0.18	<0.5	9	16	21	2.31	<10	0.04	<10	0.32	1475	<1	<0.01	9	430	10	<5	10	0.12	<10	<10	53	<5	66	--	--
L865 750E	4.34	<0.2	5	130	<0.5	<2	0.13	<0.5	12	30	70	4.82	<10	0.06	<10	0.72	472	<1	<0.01	18	1160	2	<5	9	0.21	10	10	109	5	114	--	--
L865 775E	3.11	<0.2	<5	220	<0.5	<2	0.22	<0.5	10	18	45	3.70	<10	0.06	<10	0.52	1031	1	0.01	11	820	16	<5	11	0.15	<10	<10	93	<5	78	--	--
L865 800E	5.58	<0.2	10	260	<0.5	<2	0.13	<0.5	17	34	71	5.55	<10	0.06	<10	0.88	701	<1	0.01	25	1170	18	<5	11	0.28	<10	<10	122	<5	120	--	--

Certified by .....

Chemex Labs Ltd.

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

•Analytical Chemists •Geochemists •Registered Assayers

CERTIFICATE OF ANALYSIS

[illegible] LABORATORY LIMITED

[illegible] PRINCE GEORGE AVENUE
[illegible], B.C.

CERT. [illegible]
INV. NO. [illegible]
DATE [illegible]
P.O. [illegible]
45

[illegible] qualitative multi element ICP [illegible]

[illegible] Aqua Regia digestion of [illegible] g sample
material followed by ICP analysis [illegible]
[illegible] is to be taken as the [illegible]
[illegible] are reported for Al, Ca, Fe, K, Mg,
Na, P, S, Ti, B, Ba, W, Hg, Sc, Tl, Te, U and V may
not be considered [illegible]

ATTN: [illegible]

[illegible]	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm
[illegible]	1.22	0.2	15	70	0.5	2	0.11	0.5	1	17	20	2.05	11	0.11	15	0.21	574	1	0.01	2	172	1	3	6	0.11	12	1	17	2	44
[illegible]	1.02	0.2	10	117	0.5	2	0.12	0.5	11	25	62	3.71	10	0.05	7	0.07	1054	1	0.01	17	1217	11	5	3	0.15	12	11	17	2	72
[illegible]	1.77	0.2	11	170	0.5	2	0.12	0.5	13	23	53	2.21	11	0.22	12	0.12	1716	1	0.01	14	711	12	3	3	0.15	12	1	17	2	111
[illegible]	1.22	0.2	15	93	0.5	2	0.10	0.5	7	18	38	2.17	10	0.07	10	0.10	777	1	0.01	11	640	7	3	5	0.17	11	11	17	2	61
[illegible]	1.20	0.2	10	99	0.5	2	0.26	0.5	5	17	24	2.01	10	0.24	11	0.07	873	1	0.01	7	1128	7	5	5	0.19	11	11	17	2	41
[illegible]	1.28	0.2	15	78	0.5	2	0.09	0.5	5	17	28	2.55	11	0.08	11	0.08	897	1	0.01	9	1796	6	3	6	0.11	11	11	17	2	42
[illegible]	1.29	0.2	15	99	0.5	2	0.09	0.5	7	19	28	2.50	11	0.11	11	0.12	712	1	0.01	7	722	7	5	5	0.17	11	11	17	2	44
[illegible]	1.27	0.2	15	99	0.5	2	0.09	0.5	7	19	28	2.50	11	0.11	11	0.09	712	1	0.01	11	1124	8	5	5	0.16

Appendix IV

ABBREVIATIONS USED IN MINERAL OCCURRENCES REFERENCES

ABBREVIATIONS USED IN MINERAL OCCURRENCES REFERENCES

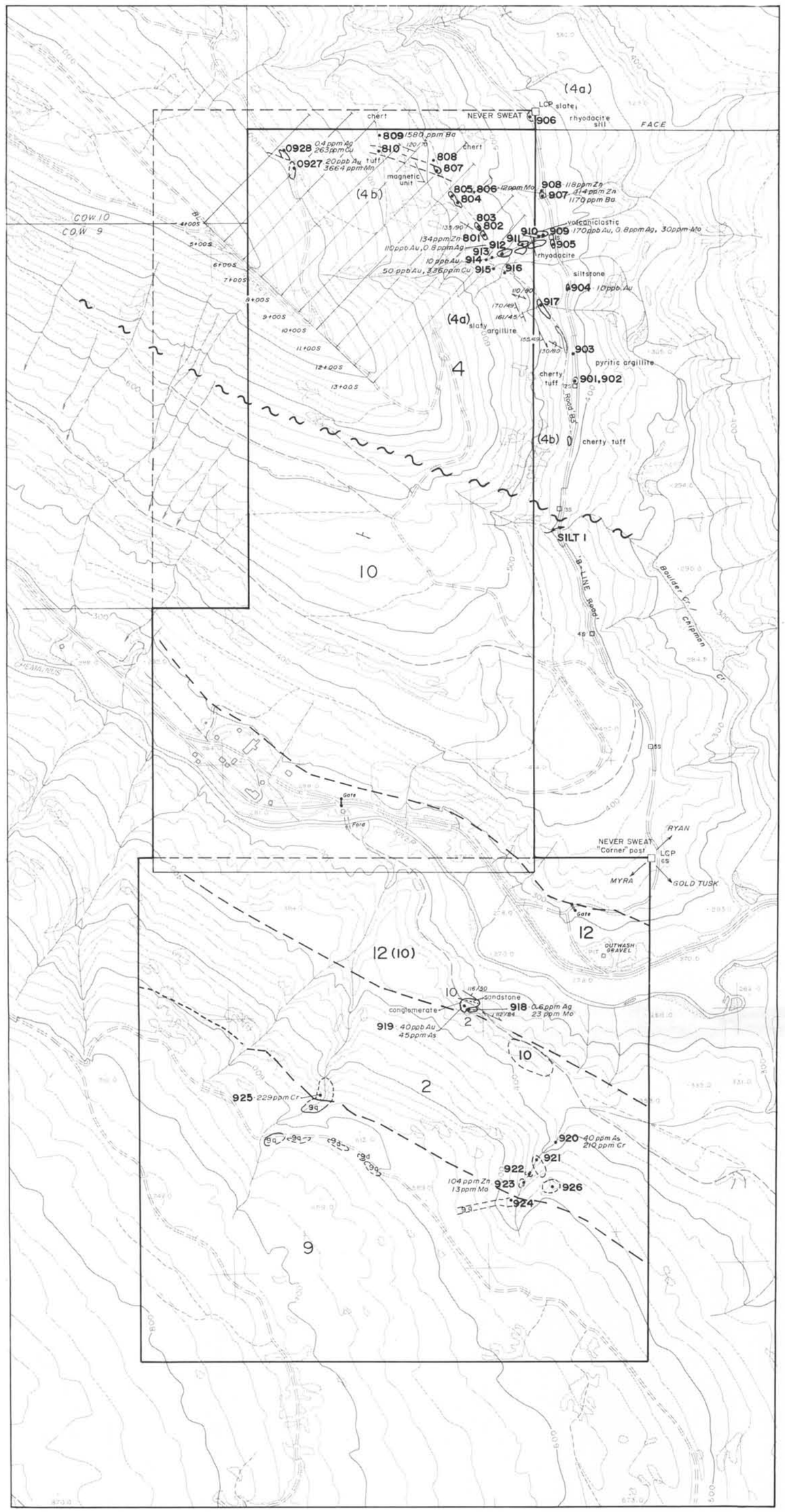
AR	B.C. Ministry of Energy, Mines, and Petroleum Resources Assessment Report
BCDM	British Columbia Department of Mines
Bull	Bulletin
EBC	Exploration in British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources
GEM	Geology, Exploration and Mining in British Columbia; B.C. Department of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

Appendix V

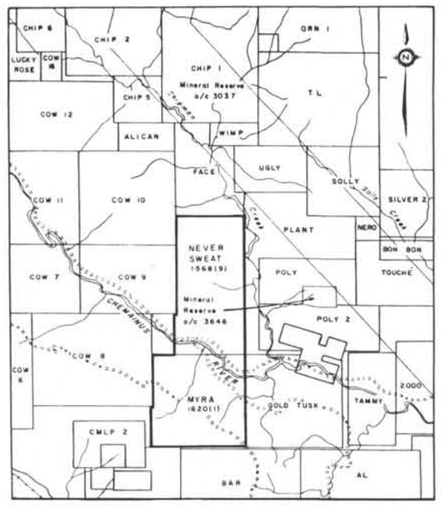
CONVERSION FACTORS FOR METRIC UNITS

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 g	=	0.032 troy oz	
1 pound (lb)	=	0.454 kilogram	(kg)
1 kg	=	2.20 lb	
1 ton (2000 lb)	=	0.907 tonne	(t)
1 tonne	=	1.102 ton = 2205 lb	
1 troy ounce/ton	=	34.286 g/t	
1 g/tonne	=	0.0292 troy oz/ton	
1 g/t	=	1 part per million	(ppm)
1 ppm	=	1000 parts per billion	(ppb)
10,000 g/t	=	1%	



LOCATION MAP



CLAIM MAP

LEGEND

CENOZOIC

QUARTERNARY

12 Unconsolidated sediments: glacial outwash, till, and alluvium

MESOZOIC

CRETACEOUS

10 NANAIMO GROUP: conglomerate, sandstone, siltstone, shale, minor coal (undifferentiated)

JURASSIC

9 ISLAND INTRUSIONS:
- 9f Feldspar porphyry
- 9d Diorite
- 9q Granodiorite to quartz diorite

PALEOZOIC

SICKER GROUP

4 Sediment - Sill Unit: argillite, greywacke, chert; diabase sills
- 4a Argillite, slate with chiastolite porphyroblasts
- 4b Cherty sediments with jasper-bearing, hematitic to magnetite-bearing iron formation layers.
- 4c Siltstone, locally hornfelsed.
- 4d Sandstone
- 4e Crystal tuff - tuffaceous sediment
- 4f Conglomerate and sedimentary breccia
- 4g Limestone, local marble

2 Myra Formation: felsic to mafic volcanic, volcaniclastic, and pelagic sedimentary rocks.

KEY

- Geological contact
- Fault contact
- Property boundary
- Claim boundary
- LCP Legal Corner post, as located by JSG
- 2s ID posts, 'NEVER SWEAT' claim
- 901 Rock sample location (801-810, 901-928)
- SILT 1 Silt sample location
- Outcrop
- 110/70N Bedding
- 122/88N Foliation, slaty cleavage
- 3+00S Grid lines. Note: See figure 9 for detail of grid area and additional sample locations.

Lithogeochemical values are in ppm except as noted (Au in ppb).

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,389

INTERNATIONAL CHEROKEE DEVELOPMENTS LTD

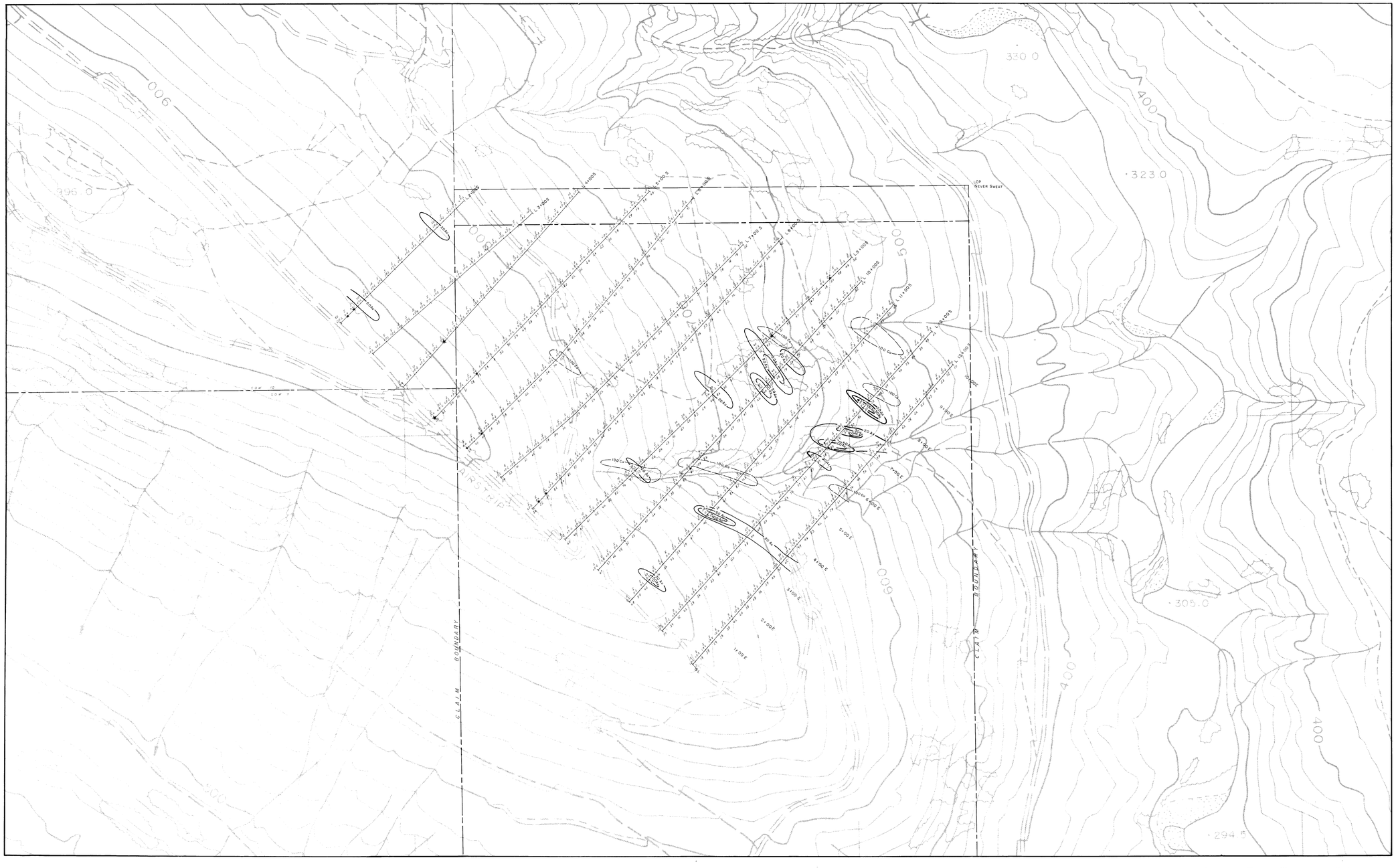
PROPERTY PLAN and GEOLOGY MAP

MNS GROUP (MYRA, NEVER SWEAT CLAIMS)

VICTORIA MINING DIVISION, BC.

Project No: V 243	By: J S G
Scale: 1 : 10,000	Drawn: V H
Drawing No: 5	Date: December 1986

MPH Consulting Limited


LCP
NEVER SWEAT
CLAIM BOUNDARY
CLAIM BOUNDARY
300.0
305.0
323.0
330.0
400
294.5
L 4+00S
L 3+00S
L 2+00S
L 1+00S
L 0+00
L 1+00N
L 2+00N
L 3+00N
L 4+00N
L 5+00N
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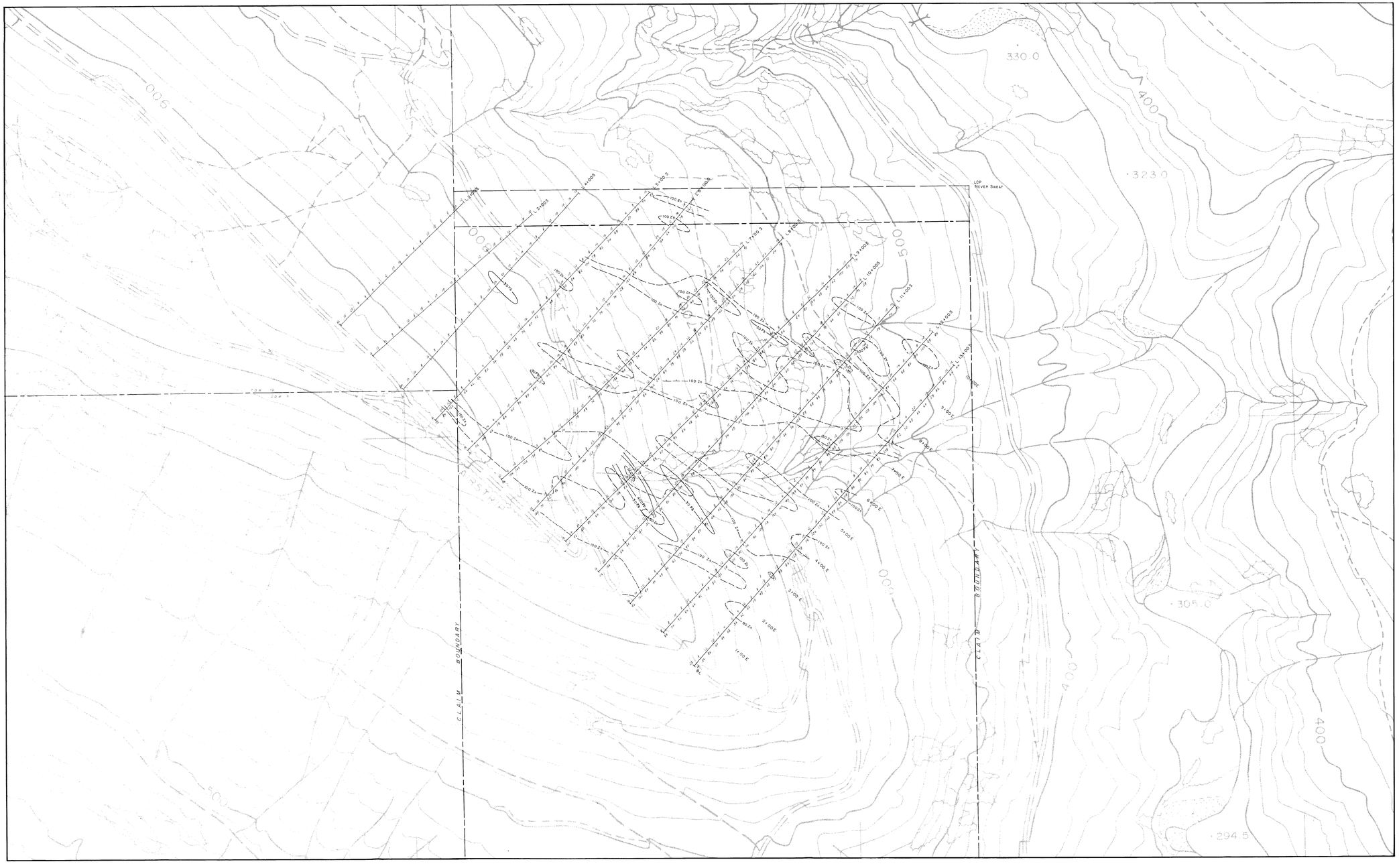


LEGEND

Pb ppm
Zn ppm
Grid line, soil sample location and results.

	Pb(ppm)	Zn(ppm)
Highly anomalous	≥460	
Anomalous	230	≥146
High background	≥24	≥140
Range	<2 - 1230	34 - 184

Contour interval Pb (——) 30, 400, 1000 ppm
Zn (— —) 50, 100 ppm

GEOLOGICAL BRANCH
ASSESSMENT REPORT

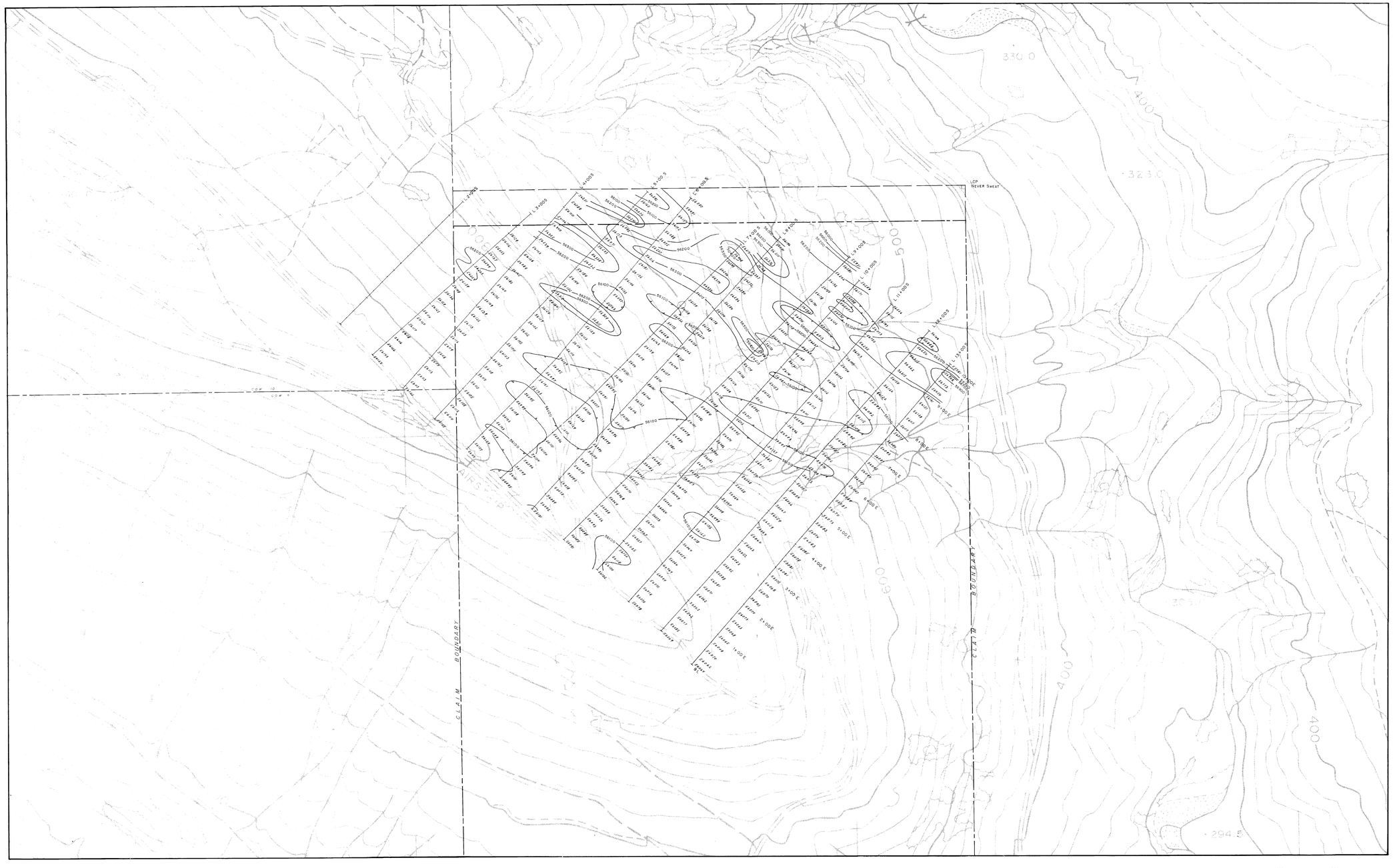
15,389

INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.

SOIL GEOCHEMISTRY
LEAD, ZINC CONCENTRATIONS (PPM)
MNS GROUP
VICTORIA MINING DIVISION B.C.

Project No.	V 243	By:	G.A.
Scale:	1:2500	Drawn:	
Drawing No:	7	Date:	DECEMBER, 1986

MPH Consulting Limited



Readings in gammas. Contour interval 100 gammas.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,389

INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.

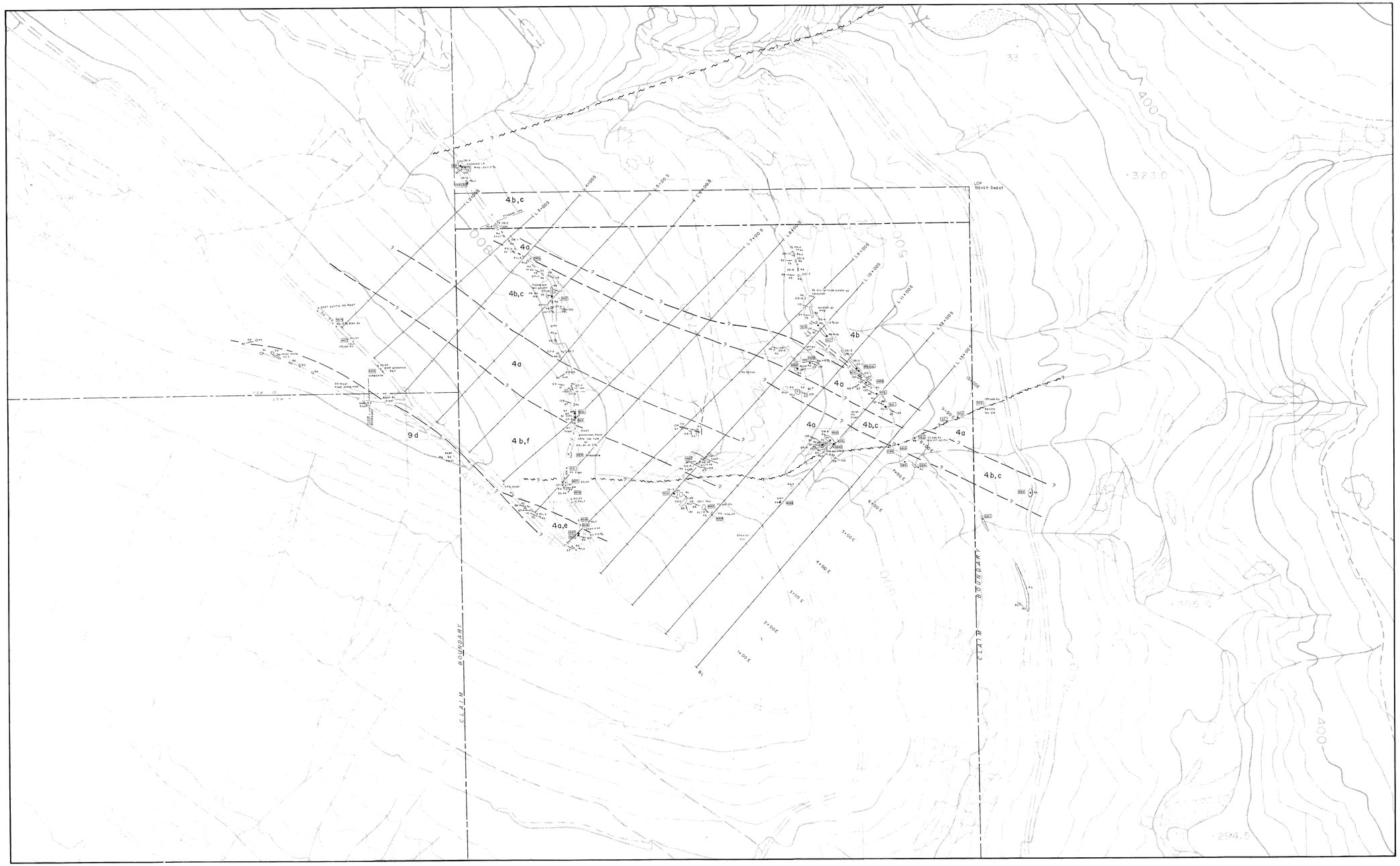
MAGNETOMETER SURVEY

MNS GROUP

VICTORIA MINING DIVISION, B.C.

Project No.	V 243	By:	G.A.
Scale:	1:2500	Drawn:	
Drawing No:	6	Date:	DECEMBER, 1986

MPH Consulting Limited



LEGEND

CENOZOIC

QUATERNARY

12 — Unconsolidated sediments : glacial outwash, till, and alluvium

MESOZOIC

CRETACEOUS

10 — NANAIMO GROUP : conglomerate, sandstone, siltstone, shale, minor coal (undifferentiated)

JURASSIC

9 — ISLAND INTRUSIONS :
- 9f, Feldspar porphyry
- 9d, Diorite
- 9g, Granodiorite to quartz diorite

TRIASSIC

6 — Karmutsen Formation (?) : basaltic rocks
- 6b, diabase
- 6d, gabbro and flower porphyry

PALEOZOIC

SICKER GROUP

4 — Sediment - Sill Unit : argillite, greywacke, chert, diabase sills
- 4a, Argillite, slate with chiastolite porphyroblasts
- 4b, Cherty sediments with jasper - bearing, hematitic to magnetite - bearing iron formation layers.
- 4c, Siltstone, locally hornfelsed
- 4d, Sandstone
- 4e, Crystal tuff - tuffaceous sediment
- 4f, Conglomerate and sedimentary breccia
- 4g, Limestone, local marble

2 — Myra Formation : felsic to mafic volcanic, volcaniclastic, and pelagic sedimentary rocks

KEY

- Soil grid
- Rock sample location
- Outcrop with station location
- Small outcrop
- Geologic contact
- Bedding
- Foliation
- Dyke
- Fault

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,389

INTERNATIONAL CHEROKEE DEVELOPMENTS LTD.

DETAILED GEOLOGY AND SAMPLE LOCATIONS, MNS GROUP

VICTORIA MINING DIVISION, B.C.

Project No:	V 243	By:	GORDON ALLEN
Scale:	1: 2 500	Drawn:	
Drawing No:	9	Date:	DECEMBER, 1986.

MPH Consulting Limited