

87-21-15527

1/88

EUREKA PEAK PROJECT  
CARIBOO MINING DIVISION, B.C.  
NTS 93 A/7E 52°~~18'~~ N, 120°~~18'~~ W  
19.1' 37.7'

GEOLOGICAL AND GEOCHEMICAL REPORT  
FOR 1986

by

DARIA DUBA, M.Sc.

FILMED

for

*Owner/Operator:*

UMEX Inc  
1935 Leslie St.  
Don Mills, Ontario

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

15,527

October 1986.

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## SUMMARY

The Eureka Peak property consists of 91 claim units covering an area of about 23 square kilometers on and around the Eureka Peak Mountain in central British Columbia. It has been explored intermittently since 1958 for its porphyry-copper potential and since 1981 for gold mineralization which was first recognized on the property by UMEX Inc during their 1981 field season.

The 1986 exploration program was intended to confirm the gold anomalies recognized by previous geochemical work, to find new areas of gold mineralization and to obtain a good understanding of geological and structural controls on the mineralization associated with porphyry-copper systems.

Detailed geological and structural mapping was undertaken which was accompanied by rock-sampling of altered shear zones, faults, fractures and veins. No economic concentrations of gold were obtained from 98 rock samples. The highest gold values were 135-140 ppb (0.135-0.140 g/t) which were collected from narrow, rusty shear-zones in the intrusive complex and mafic volcanic rocks near the contact with the intrusive (cirques 2 and 7). From the spatial distribution of the anomalies, gold appears to be closely associated with the copper mineralization of the "porphyry-system".

No significant gold mineralization was recognized in this lithochemical sampling program and therefore additional exploration work is not presently recommended.

## INTRODUCTION

The Eureka Peak property consists of 91 claim units covering an area of about 23 square kilometres on and around the Eureka Peak Mountain in the Horsefly River region of central British Columbia. In 1958, porphyry-copper mineralization associated with granitoid intrusive stocks was discovered near Eureka Peak. This discovery initiated extensive exploration activity by various companies including Helicon Exploration, Amax, RioCanex, Noranda and lately UMEX Inc.

Work done by UMEX in 1981 and Dome Exploration in 1983 resulted in the recognition of several areas of anomalous gold concentrations in rock-chip samples.

The 1986 field program was concentrated on geochemical rock-chip sampling and detailed geological and structural examination of areas with strongest gold anomalies recognized from previous work (cirques 2, 3, 5 and 7).

## LOCATION AND ACCESS

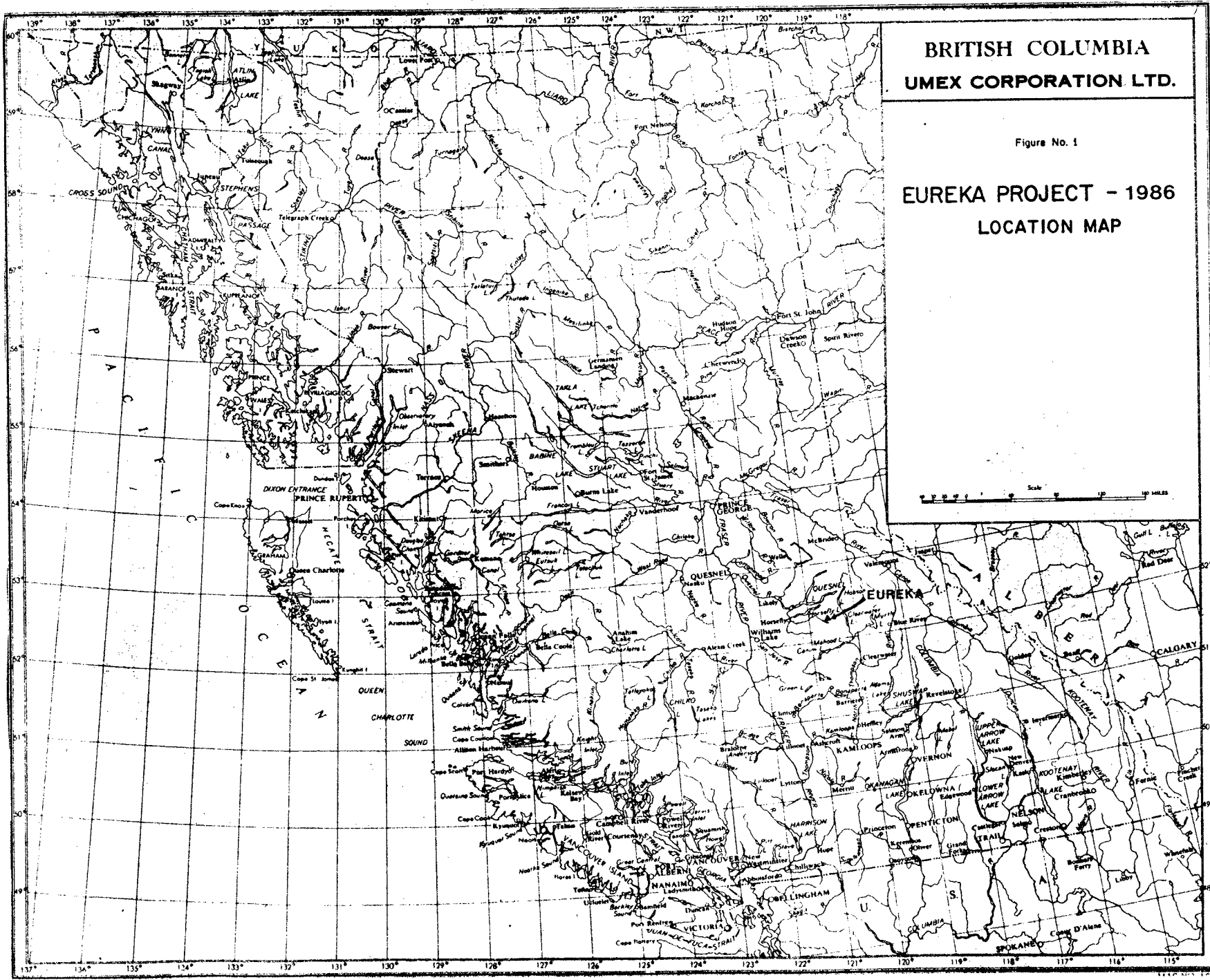
Eureka Peak prospect is located about 112 kilometres east of Williams Lake (Figs. 1 and 2). The approximate coordinates of the centre of the property are 120°38'W and 52°18'N.

Eureka Peak region comprises of a northwesterly trending mountain range between Crooked Lake on the southwest and the MacKay River on the northeast. The highest peak is Eureka Peak at 2388 metres above sea level (7959 feet). The northeastern flank of the range is scalloped to form precipitous rock-cliffs and nine well-defined cirques which are referred to by number (Cirque 1 to Cirque 9, from east to west), whereas on the southwestern flank moderately steep slopes and alpine meadows predominate. The mountain range is covered by snow for much of the year. The snow-free period generally extends from mid-June to late September. However, small areas of permanent snow and ice occur in most cirques.

The access to the property is by a paved road from 150 Mile House via Horsefly to the junction of the MacKay and Horsefly Rivers and then by good gravel road along the MacKay River Valley. Roads leading onto the property from the MacKay River Valley are narrow, steep and winding roads that require 4-wheel vehicle and provide access only to certain portions of the property. Access to the remainder of the property is via helicopter or on foot.

## PREVIOUS WORK

- 1958      The copper showings were discovered on Eureka Peak property by prospector E. Scholtes of Williams Lake.
- 1965      E. Scholtes and J. Carson, prospectors, optioned the property to Helicon Explorations, subsidiary of Chapman, Wood & Griswold Ltd.



**BRITISH COLUMBIA  
UMEX CORPORATION LTD.**

Figure No. 1

**EUREKA PROJECT - 1986  
LOCATION MAP**

Scale 0 10 20 30 40 50 MILES

- 1965-66 Helicon performed following work on the property: X-ray drilling in Cirque 1 and 7, construction of the 72 feet long adit in Cirque 2, drilling of 630 foot horizontal hole from the adit (Cirque 2), compilation of contours at 100 feet interval onto the topographic maps, reconnaissance aeromagnetic, geochemical and geological surveys, ground EM and IP surveys in Cirque 2.
- 1967 Chapman, Wood and Griswold dropped their option after having spent a reported \$155,000.00.
- 1968 H. Trario spent \$20,000 on EM survey in Cirque 2 and diamond drilling (3 holes were drilled).
- 1968 Property was restaked by Scholtes and Carson.
- 1981 UMEX Inc optioned the property. A. Chevalier undertook detailed litho-geochemical sampling program and he concluded that the property had potential for 1) Cu-Au mineralization and 2) Zn, Ag, Pb and Mo mineralization.
- 1983 Dome Exploration optioned the Eureka Peak property from UMEX Inc. Geochemical sampling of silt, soil and rock-chip was undertaken in order to confirm the gold anomalies indicated by UMEX's sampling program in 1981. Only trace amounts of gold were located with the exception of one very narrow shear zone within the augite porphyry breccia (600 meters southeast of Eureka Peak) where samples ran 1.3 to 1.7 g/ton Au.
- 1984 Dome Exploration carried out another litho-geochemical sampling program which was concentrated on cirque 2 and 3 in order to confirm gold anomalies indicated from previous sampling. All of the samples ran well below 1 g/ton Au (1000 ppb). The highest gold value was 550 ppb Au.

#### CLAIMS

The property consists of 31 claims encompassing 91 units covering an area of approximately 23 square kilometres (Fig. 2). All 91 units are grouped, for assessment work purposes, in the Eureka Group.

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
EM 1	16	3367	April 2, 1987
EM 2	20	3368	April 2, 1987
EM 3	5	3369	April 2, 1987
EM 4	9	3370	April 2, 1987
EM 5	6	3371	April 2, 1987
EM 6	8	3372	April 2, 1987
EM 11	2	4219	January 11, 1987
EM 12	2	4215	January 11, 1987

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
NS 1	1	3373	April 2, 1987
NS 2	1	3374	April 2, 1987
SF 1	1	1688	May 30, 1987
SF 2	1	1689	May 30, 1987
SF 3	1	1690	May 30, 1987
SF 4	1	1691	May 30, 1987
EN 1	1	30398	August 5, 1987
EN 2	1	30399	August 5, 1987
EN 3	1	30400	August 5, 1987
EN 4	1	30401	August 5, 1987
EN 5	1	30402	August 5, 1987
EN 6	1	30403	August 5, 1987
EN 14	1	30477	August 5, 1987
EN 28	1	30646	September 28, 1987
EN 29	1	30647	September 28, 1987
EN 104	1	30618	August 30, 1987
EN 105	1	30619	August 30, 1987
EN 106	1	30620	August 30, 1987
EN 107	1	30621	August 30, 1987
EN 109	1	30623	August 30, 1987
EN 129	1	30611	August 30, 1987
CS 55	1	48017	October 24, 1987 (approval pending)
CS 56	1	48018	October 24, 1987 (approval pending)
91			

1986 EXPLORATION PROGRAM

The 1986 field program, completed between June 29 and August 19, consisted of geological mapping of Cirque 2, 3, 5 and 7 at a scale of 1:5 000 and lithogeochemical sampling (rock-chips and grab samples) with emphasis on sampling the altered shear-zones, veins, faults, and other structures defined by mapping (Fig. 4, in pocket). A total of 98 rock-samples were collected and sent to Acme Analytical Laboratories in Vancouver, B.C., for analysis. Each sample was pulverized to -100 mesh prior to acid digestion and subsequent analysis. The gold content was determined by atomic absorption method and 29 additional elements, including Ag, As, Cu, Mo, Pb and Zn by I.C.P. (Induced Coupled Argon Plasma) method. Complete analytical results are included in the Appendix.

GEOLOGY

General Statement

The Eureka Peak property lies on the eastern flank of the Quesnel Trough, within a belt of Mesozoic volcano-sedimentary strata referred to as Quesnel Belt. Quesnel Belt is surrounded to the east and west by the variably metamorphosed Paleozoic sequence of the Omineca Belt.



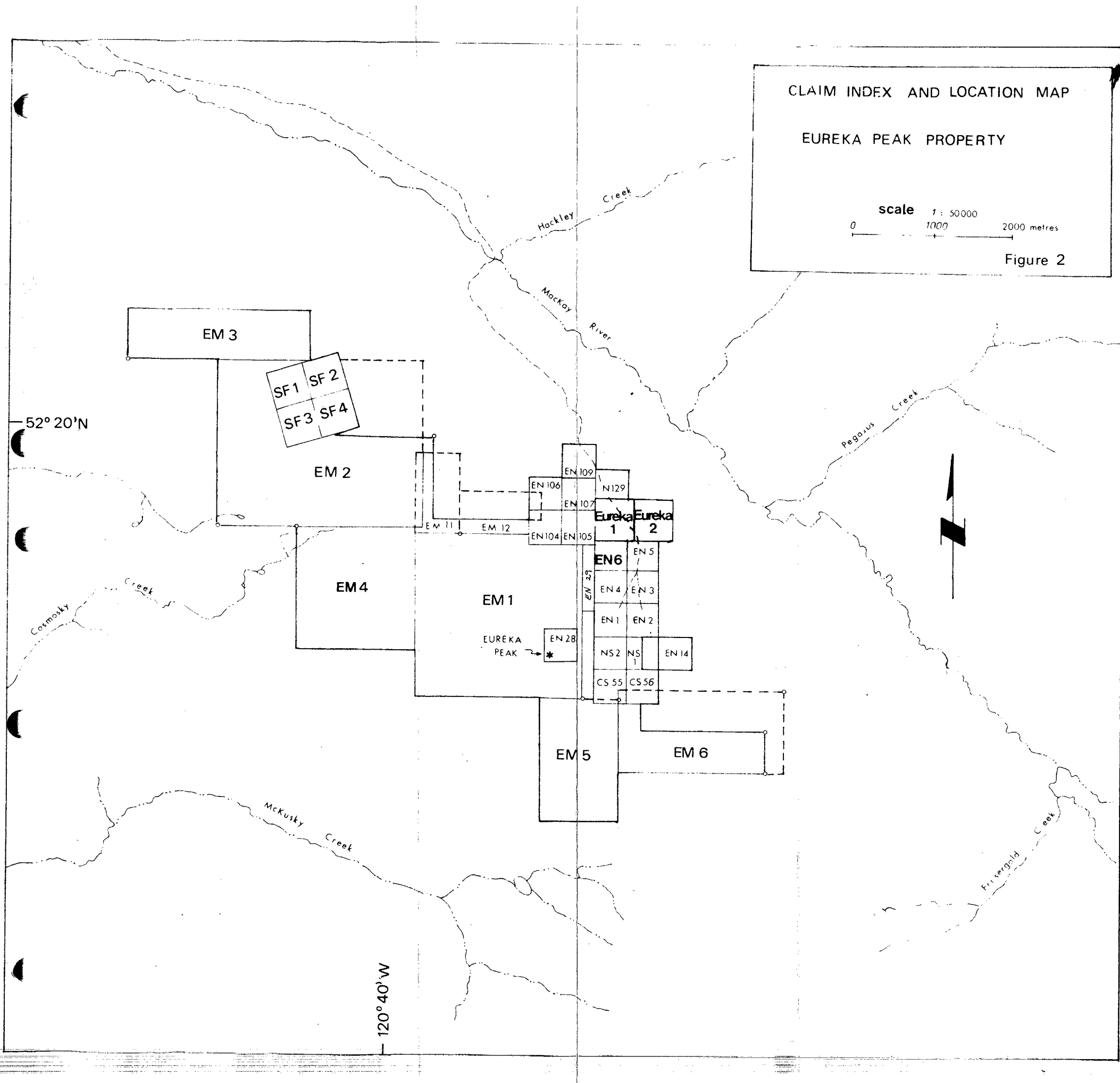
CLAIM INDEX AND LOCATION MAP

EUREKA PEAK PROPERTY

scale 1 : 50000

0 1000 2000 metres

Figure 2



The formations exposed on the property were thought, by the previous workers, to be part of the Triassic-Jurassic Takla Group. However, these rocks are not typical of the Takla Group found in the central and western portions of the Quesnel Trough and may constitute a unique sequence of sedimentary volcanic and co-magmatic, intrusive rocks of unknown age. Volcano-sedimentary strata is invaded by an epizonal intrusive complex of probable Cretaceous age ranging in composition from felsic (quartz-monzonite) to ultramafic (amphibolite, peridotite). However, a large portion of the stock is a granodiorite. Underlying the assemblage of volcano-sedimentary and intrusive rocks are ultramafic, sill-like intrusions and a thick sequence of phyllite. The metamorphic intrusive is likely older than the volcanics since large ultramafic blocks and fragments appear in the augite-porphry breccia of the mafic volcanic sequence. It probably lies beneath a major fault along which ultramafic bodies and later granodiorite stock were intruded. This geological interpretation is illustrated in a diagrammatic "cross-section" (Fig. 3, modified after Oddy, 1984).

The geology of the area has been described in reports by Mustard (1969), Hodgson (1970), Smith (1972) and Chevalier (1982). This section of the report on geology is largely based on observations made during the 1986 field-season and is also supplemented by the previous geological work.

### Lithological description

#### Phyllite (1)

The oldest sedimentary sequence on the Eureka Peak property consists of black phyllite, siltstone, and massive quartzite and limestone. The strata typically trends northwesterly and dips steeply to the southwest. It is thinly bedded, unfossiliferous and exhibits weak phyllitic metamorphism (greenschist facies) in suitable lithologies.

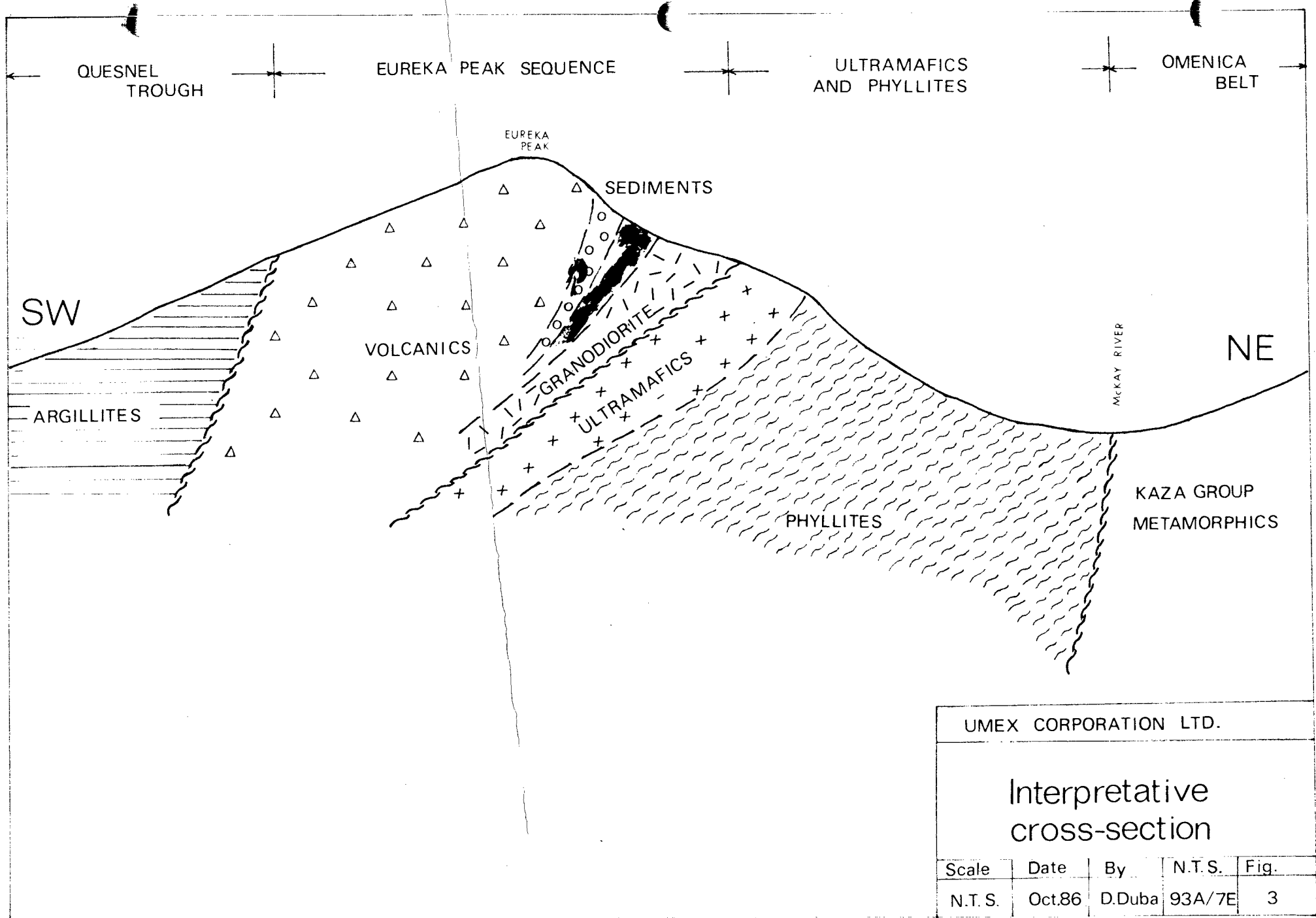
#### Ultramafic intrusive rocks (2)

The ultramafic intrusive body is exposed in the lower portion of the cirques. It occurs stratigraphically above and trends parallel to the black phyllite horizon. It is a fairly thick unit (more than 500 m) and laterally continuous from cirque 1 to cirque 9. The ultramafic unit is typically composed of very coarse grained, pale green actinolite (85%), chlorite (10%) and plagioclase (5%) or dark green to black hornblende (80%) and chlorite (20%). Zones of chlorite schist and serpentinization are locally observed.

#### Mafic volcanic rocks (3)

Mafic volcanic rocks are the most commonly occurring lithotypes on the property. They are exposed over a large portion of the area in cirque 1 to cirque 9 and stratigraphically above the ultramafic intrusive.

Rock types included in this unit are augite-porphry, augite-porphry breccia and tuff. Massive flow is dark green to grey-green, aphanitic mafic volcanic unit typical of the "greenstone". Augite-porphry is a uniformly textured green rock with 5 to 20% chloritized augite laths, up to 7 mm in length, set in a fine grained mafic to intermediate groundmass. In cirques 2 and 3, the



UMEX CORPORATION LTD.				
Interpretative cross-section				
Scale	Date	By	N.T.S.	Fig.
N.T.S.	Oct.86	D.Duba	93A/7E	3

augite-porphyry displays a well developed brecciated texture. Augite-porphyry breccia consists of up to 70% sub-rounded fragments of dominantly augite porphyry, gabbro, pyroxenite and amphibolite, few cm in diameter, in a medium grained augite-porphyry matrix. Thus augite-porphyry may be in part both intrusive and extrusive in origin. In the field, it is impossible to differentiate one from the other since the contacts are largely obliterated by strong rusty weathering and where visible, appear to be generally gradational. Mafic tuff is observed at several localities in cirque 2. It is extremely foliated, rusty lithic tuff unit with fragments of mafic material in an aphanitic groundmass.

The mafic volcanic unit shows pronounced rusty weathering in all the cirques which were examined. It is due to the presence of 1-3% disseminated pyrite.

#### Sedimentary rocks (4)

Mafic volcanic rocks are overlain by a sedimentary sequence consisting of dominantly siliceous siltstone, quartzite, and minor phyllite. These are locally intercalated with intermediate to mafic volcanics. Siliceous siltstone and quartzite are buff to light grey green and weather rusty brown due to the presence of sulfides (up to 2% disseminated pyrite). They are thinly bedded with well developed bedding-plane jointing. This unit of black phyllite is observed at one locality on the ridge between cirque 2 and 3. It is interbedded with siliceous sediments.

#### Intrusive rocks (5a, 5b)

The volcano-sedimentary sequence in cirque 2 to cirque 7 is intruded by a complex of epizonal intrusive bodies ranging in composition from leucocratic possibly quartz-monzonite and granodiorite (5a) to melanocratic, mafic and ultramafic rocks which include diorite, amphibolite and peridotite (5b). Fine grained, east and northeast trending, mafic dykes cross-cut the intrusive complex. They represent the last phase of intrusive activity.

Complex contact relations exist between various intrusive phases and host volcanic rocks, which precludes the determination of stock-geometry with any precision. Contacts appear gradational since very often they are overprinted by strong rusty weathering. However, overall shape of the intrusive body is elliptical with northerly to northeasterly trend of the long axis (cirques 2 and 3). Locally, the intrusive mass forms a stockwork-system which inter-fingers with mafic volcanics.

Central portion of the stock is dominantly granodioritic in composition. It is leucocratic, fine to medium grained, equigranular rock, which consists of 25% quartz, 60% plagioclase, 10% potassium feldspar and 5% mafic materials (chlorite and epidote). Intermediate to mafic phases of this stock may contain up to 30% mafic minerals and less quartz and potassium feldspar. Mafic and ultramafic rocks predominate in the northern portion of the intrusive body. They generally consist of medium grained, "salt-and-pepper" textured gabbro, and dark green amphibolite (85% hornblende, 15% chlorite).

### Quartz veins

Quartz veins cut all rock types but are more abundant in the volcano-sedimentary sequence than in the main intrusive body. Some quartz veins in the intrusive contain minor pyrite and chalcopyrite but most are barren. Quartz veins consist of coarse, milky quartz. They vary from 5 cm to several meters in width and are discontinuous along the strike. None is traceable for more than 10 meters.

### Structure

The volcano-sedimentary sequence on the Eureka Peak property forms a part of a northwesterly trending synform. Geological contacts of this sequence strike approximately parallel to the axis of the synform that is on average 120° azimuth with steep southwesterly dips.

Several phases of deformation have affected the rocks in the area. The second phase has produced a penetrative deformation which is manifested as penetrative cleavage in the sedimentary strata (black phyllite), chlorite schist in the ultramafic intrusive and augite-porphyry and pronounced jointing in the intrusive complex (M. Bloodgood, pers. comm.). This planar feature varies in attitude from 90 to 140° and averages 120° azimuth. Dips are steep, subvertical to northwesterly.

One fault was defined in the area, northeast trending fault along the mafic volcanic-intrusive contact.

Numerous, small scale, shear zones or possible minor faults occur throughout the Eureka Peak property. These are especially numerous within the intrusive body and within the mafic volcanic sequence in areas proximal to the volcanic-intrusive contact. Two shearing directions are dominant in the intrusive complex (cirque 2): E-W and NW to WNW. In the mafic volcanic sequence shear-zones are oriented largely 1) EW, NW and NE, and 2) N-S in areas west (cirque 3) and southeast (cirque 2) of the intrusive complex, respectively. In the northwestern part of the property (cirque 5), system of shear-zones or faults trend E-W to ENE.

### Economic Geology

Significant sulfide occurrences have been found in several areas on the property, notably in cirques 1, 2, 3, 6 and 7. The most important is copper mineralization and zonal alteration associated with the intrusive complex which appears to be typical of the "porphyry-copper" environment (cirque 2 and parts of cirques 1 and 3). Chalcopyrite, pyrite and pyrrhotite occur throughout the intrusive body and peripheral mafic volcanic rocks as veinlets, pods and disseminations.

In the intrusive rocks of the felsic to intermediate composition, sulfides are found to occur in veinlets or as disseminations related to the late hypogene mineralizing event whereas in the ultramafic rocks they occur in the form of exsolution blebs which implies comagmatic precipitation. Copper mineralization extends up to 70 meters into the altered mafic volcanics and beyond that the pyritic halo extends up to about 100 meters. The areas of best mineralization with associated most intense hydrothermal alteration in the stock and peripheral mafic volcanic rocks appear to be localized by strong Ew and NW shearing and faulting (cirque 2). Rocks along some of these shears are silicified and sericitized and may contain up to 10-20% disseminated pyrite (phyllitic alteration).

Gossanization is locally observed in the most sheared and pyritiferous horizons. The largest gossan is situated in the southeastern part of cirque 2, close to the top of the ridge. It is hosted by the mafic volcanics.

It is reported that the drill-hole testing the downward extension of the copper zone in cirque 2 ran 0.10% Cu over 630 feet of drill-hole (Hodgson, 1970). Based on the rock-chip geochemical program conducted by UMEX in 1981, the main mineralized zone (cirques 2 and 3) grades from 0.10 to 3.0% copper (Chevalier, 1982).

Several areas of anomalous gold concentrations were recognized from the litho-geochemical study undertaken by UMEX in 1981 (Chevalier, 1982; Fig. 17). However, the follow-up work in 1983 confirmed only one anomalous gold occurrence in a narrow (few centimeter wide), sheared zone within the augite porphyry breccia, on the ridge 600 meters southeast of Eureka Peak. Values of 1725 and 1350 ppb (1.73 and 1.35 g/t) gold were obtained (Oddy and Cameron, 1984).

#### GEOCHEMICAL RESULTS AND INTERPRETATION

Geochemical results of the 1986 rock-sampling program are shown in Fig. 5. All the gold values and only highly anomalous values of Ag, As, Pb, Zn, Mo, Ni and Co of 98 samples were plotted. The threshold levels which were used to separate they highly anomalous population from the background were the levels established by Oddy and Cameron (1984, p.10).

Six areas of anomalous gold concentrations (80-140 ppb) were identified. These are as follows:

1 and 2 Cirque 2, central area

Northwesterly trending, narrow (1-3 m wide), gossanous shear-zones are hosted by a wedge of sheared mafic volcanics within the intrusive complex. Samples run 135 ppb and 90 ppb gold, respectively. The former anomaly is also high in Ag, Cu, As and Mo.

3. Cirque 2, central area

Easterly trending, few meters wide, shear-zone in fractured and rusty diorite. High silver and molybdenum are associated with the gold anomaly (135 ppb).

4. Cirque 2 - southeastern area

Extremely rusty gossan hosted by the sheared mafic volcanics occurs close to the contact with the ultramafic sill. It is observed discontinuously for several tens of meters with a trend roughly northerly. Rock-sample from this zone is anomalous in gold (80 ppb) silver and lead.

5. Cirque 3

Northeasterly trending, fine grained, mafic dyke which intrudes mafic volcanic sequence. Rock-sample is anomalous in gold (120 ppb).

6. Cirque 7

Northeasterly trending, up to 3 m wide, shear zone in fractured and altered (silicified and pyritized) diorite. Sample is anomalous in gold (140 ppb) and silver.

All of the anomalously high silver and arsenic values are associated with the intrusive complex and the peripheral, sheared, pyritiferous and locally gossanized mafic volcanics (cirques 2 and 7). Most important gold anomalies are high in silver and arsenic concentrations and are centered around the "porphyry-copper" mineralization. However, the high values in Zn, Pb, Mo, Ni and Co appear to be sporadically distributed throughout the area without any obvious pattern.

The gold values from the previous rock-chip, soil and silt sampling programs undertaken by Dome in 1983 (Oddy and Cameron, 1984, Fig. 7) and 1984 (Oddy, 1984, Fig. 4) were compiled together with the gold values obtained from the 1986 lithochemical program. Geological and structural information from the previous work was also compiled (Fig. 6).

Number of soil, silt and talus samples exhibit anomalous concentrations of gold. These high gold values are derived from the sub-economic concentration of gold in pyritic shear-zones hosted by intrusive complex and altered mafic volcanics. However, rock-chip samples do not exhibit significantly anomalous concentrations of gold. Only two samples collected 600 metres southeast of Eureka Peak ran 1000 ppb Au (1350 and 1750 ppb Au).

CONCLUSIONS AND RECOMMENDATIONS

1. The Eureka Peak property is underlain by sedimentary, volcanic, and co-magmatic intrusive rocks which are invaded by an epizonal intrusive complex of probable Cretaceous age. The intrusive stock ranges in composition from felsic (granodiorite) to mafic-ultramafic (gabbro, amphibolite).
2. The volcano-sedimentary sequence was subjected to the regional deformation which produced the north westerly trending synclinal structure and associated penetrative foliation (attitude averages  $120^{\circ}$  with subvertical dips).
3. Gold mineralization is derived from the fracture systems developed in the epizonal plutons and the surrounding older volcanic and sedimentary formations. It is an environment typical of the "porphyry-copper" systems where structurally induced permeability focusses hydrothermal fluid flow through fractured rocks and provides sites for ore-deposition. Pyrite, chalcopyrite and pyrrhotite with associated anomalously high concentrations of gold, silver and arsenic are deposited as veinlets and disseminations in the structural traps.

4. The anomalously high gold mineralization is associated with
  - a) northwesterly and easterly structures in the central part of cirque 2;
  - b) north-south structures in the southeast end of cirque 2;
  - c) northeasterly structures in cirques 3 and 7;
5. All of the gold values from the lithogeochemical sampling ran well below 1000 ppb. The highest values were 80-140 ppb (0.08-0.140 g/t). The more significant gold anomalies (>1000 ppb Au) defined from the previous rock-sampling program were not reproduced.
6. No additional exploration work is recommended at this time since no important gold anomalies were recognized in the 1986 rock-sampling program.

DD/tn



Daria Duba



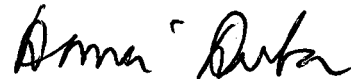
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CERTIFICATE

I, Daria Duba, of #306-769 Winnipeg St., Penticton, British Columbia, do hereby certify that:

- 1) I am a self-employed Consulting Geologist with an office at the above address and was employed by UMAX Inc to supervise the program described within this report.
- 2) I am a graduate of the Concordia University, Montreal, B.C. (Geology) 1978, and the McGill University, Montreal, Quebec, M.Sc. (Economic Geology) 1982. I have been actively involved in mineral exploration since 1977.
- 3) I am the author of this report which was based on an exploration program carried out by myself with the assistance of field technician during the 1986 field season.



D. Duba, M.Sc.  
Geologist

EUREKA PROJECT

STATEMENT OF EXPENDITURES

Orthophoto Map Preparation		2,909.86
Salaries:		
Geologists:		
D. Leishman	6-1/8 days @ \$250/day	1,531.25
D. Duba	17 days @ \$160/day	2,720.00
Field Assistant:		
R. Pollard	20 days @ \$140/day	2,800.00
Supervision:		
F. Felder	2 days @ \$250/day	500.00
Report Preparation		
Report writing, drafting	8.5 days @ \$160/day	1,360.00
Analytical Costs		1,175.85
Expenses:		
Vehicle Rentals		1,286.12
Expenses		341.50
Food and lodging		1,470.00
Communications		75.00
Field Supplies		<u>140.55</u>
	TOTAL	<u><u>\$16,310.13</u></u>



DESCRIPTION OF ROCK SAMPLES

<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-2-1	grab	Chloritic schist, dark green, limonitic from a shear-zone
86-2-2	1 m	Very rusty pyroxenite
86-2-3	grab	Fine grained mafic dyke, attitude 279/VERT. 30 cm wide
86-2-4	grab	Fine grained mafic dyke, 30 cm wide, epidote alteration
86-2-5	grab	Silicified and highly sheared diorite with trace of pyrite
86-2-6	grab	Augite porphyry? strongly sheared and chloritized
86-2-7	grab	Pyroxene-rich diorite? several percent sulphides (pyrite and malachite)
86-2-8	grab	Pyroxene-rich diorite with several percent sulphides (pyrite and trace chalcopyrite)
86-2-9	1 m	Intermediate volcanics, sheared and oxidized
86-2-10	1 m	shear-zone; dark-green mafic volcanics, chloritized with disseminated pyrite
86-2-11	grab	Augite porphyry from a shear-zone
86-2-12	grab	Mafic dyke with milky quartz vein, trend 280 <sup>0</sup>
86-2-13	grab	Shear-zone, 2 meters wide; sericitized, intermediate to ? volcanics
86-2-14	2.5 m	Rusty augite porphyry, sheared with 1% disseminated pyrite
86-2-15	1.5 m	Granodiorite? diorite? foliated, 3-5% pyrite, disseminated and along microfractures
86-2-16	1.0 m	Silicified and pyritized (2-3%) augite porphyry, sheared; 20 cm wide milky quartz vein

<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-2-17	1.0 m	Rusty augite porphyry, sheared, epidote and calcite veining; 5-10% pyrite disseminated and along microfractures
86-2-18	1.5 m	Very rusty augite porphyry with 2-5% disseminated pyrite
86-2-19	1.0 m	Rusty mafic volcanics from 3.0 m wide shear zone; silicification, sericitization and 5-10% disseminated pyrite
86-2-20	grab	Shear-zone (the same as 86-2-19)
86-2-21	1.0 m	Shear-zone, 10 m wide; diorite? rusty and highly sheared, up to 10% disseminated pyrite
86-2-22	grab	Very rusty augite porphyry with 1% disseminated pyrite
86-2-23	1.0 m	Rusty granodiorite; pyrite (2-5%) and malachite staining
86-2-24	grab	Foliated mafic volcanics with trace of pyrite
86-2-25	grab	Augite porphyry, slightly sheared
86-2-26	1.0 m	Shear-zone, 3.0 m wide; sheared and silicified mafic volcanics; fractured, chloritization along microfractures, trace of pyrite
86-2-27	0.3 m	Shear-zone, 0.3 m wide; mafic volcanics, rusty (limonitic staining)
86-2-28	1.0 m	Shear-zone, 3-5 m wide; rusty mafic volcanics with 1% disseminated pyrite
86-2-29	1.0 m	Mafic volcanics, rusty and foliated
86-2-30	grab	Sheared mafic volcanics
86-2-31	grab	Sheared mafic volcanics with 3% disseminated pyrite and trace chalcopyrite
86-2-32	grab	Mafic volcanics; 1-2% disseminated pyrite
86-2-33	grab	Rusty mafic volcanics, foliated
86-2-34	grab	Granodiorite, fractured, 1-3% pyrite

<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-2-35	grab	Sheared metasediment, siliceous
86-2-36	grab	Rusty mafic volcanics, sheared
86-2-37	grab	Chlorite schist, rusty and sheared
86-2-38	1.5 m	Rusty mafic volcanics with 2-3% pyrite and trace of pyrrhotite
86-2-39	1.0 m	gossan; from 1.0-1.5 m wide shear-zone
86-2-40	1.0 m	Shear-zone; 1.0-2.0 m wide; sheared, chloritized mafic volcanics, locally gossanous
86-2-41	7.0 m	Shear-zone, 7.0 m wide; gossan
86-2-42	3.0 m	Gossan
86-2-43	grab	Quartz-monzonite dyke, trace of pyrite
86-2-44	1.5 m	Rusty mafic volcanics; chloritized and gossanous, trace pyrite
86-2-45	grab	Milky quartz-carbonate vein in sheared mafic volcanics
86-2-46	grab	Sheared mafic volcanics, 1% disseminated pyrite
86-2-47	grab	Intermediate ? volcanics, rusty
86-2-48	grab	Mafic, pyroxene-rich dyke? augite-porphyry? sheared
86-2-49	grab	Granodiorite, rusty, 2-3% disseminated pyrite
86-2-50	grab	Sheared mafic volcanics, chloritized
86-2-51	1.0 m	Felsic intrusive from 1.0 m wide shear-zone; rusty, 3% disseminated pyrite
86-2-52	1.0 m	Shear-zone, 1.0 m wide; pyritiferous (5-10%) mafic volcanics, sheared and silicified
86-2-53	grab	Rusty augite porphyry, trace pyrite
86-2-54	2.0 m	Shear-zone, 2.0 m wide; siliceous and pyritiferous (8-10%) mafic volcanics
86-2-55	0.5 m	Shear-zone in mafic volcanics; silicified and sericitized, 1-3% pyrite

<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-2-56	grab	Shear-zone, 0.5 m wide; very rusty, gossanous mafic volcanics; silicified, 10-15% pyrite
86-2-57	grab	Augite-porphyry, rusty, trace pyrite
86-2-58	0.5 m	Sheared augite-porphyry
86-2-59	1.0 m	Granodiorite? Diorite?, rusty, sheared, 5% pyrite
86-2-60	1.0 m	Pyroxene-rich diorite, rusty, trace pyrite
86-3-1	1.0 m	Shear-zone, 1.0 m wide; silicified mafic volcanics, limonitic
86-3-2	grab	Pyroxenite float with minor quartz veinlets
86-3-3	1.0 m	Shear-zone, 3.0-5.0 m wide; gossanized mafic volcanics, silicified and sericitized, 10-15% pyrite
86-3-4	2.5 m	Shear zone, 5.0 m wide; foliated mafic volcanics trace pyrite
86-3-5	1.5 m	Sheared mafic volcanics
86-3-6	2.0 m	Augite porphyry, <1% pyrite
86-3-7	1.0 m	Augite porphyry, gossannized, 5-15% pyrite, minor quartz veining
86-3-8	1.0 m	Sheared intermediate volcanics, disseminated pyrite (2-3%)
86-3-9	grab	Sheared intermediate volcanics
86-3-10	grab	Ultramafic intrusive, slightly magnetic, trace pyrite
86-3-11	grab	Siliceous siltstone or quartzite, chloritic veinlets
86-3-12	grab	Augite porphyry, rusty, <1% pyrite
86-3-13	grab	Mafic dyke, fine grained, trace pyrite
86-3-14	2.0 m	Foliated mafic volcanics, rusty, 1% disseminated pyrite



<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-3-15	grab	Mafic lithic tuff, foliated
86-3-16	grab	Mafic lithic tuff, rusty (limonite staining), foliated
86-3-17	grab	Quartzite, rusty, trace of pyrite
86-1-1	grab	Sheared mafic volcanics, rusty, 1-2% pyrite
86-1-2	grab	Ultramafic intrusive (amphibolite), magnetic, trace pyrite and pyrrhotite
86-5-1	grab	Silicified mafic volcanics, very rusty, quartz-carbonate vein with pyrite and pyrrhotite
86-5-2	grab	Intermediate volcanics, <1% pyrite and trace chalcopyrite disseminated and along fractures
86-5-3	1.0 m	Augite-porphyry
86-5-5	grab	Mafic volcanics foliated, trace pyrite
86-5-6	grab	Foliated mafic volcanics
86-5-7	1.0 m	Siliceous siltstone, rusty
86-5-8	grab	Mafic volcanics, trace pyrite
86-5-9	grab	Rusty mafic volcanics, 1% disseminated pyrite
86-5-10	1.5 m	Sheared mafic volcanics
86-7-1	grab	Mafic volcanics, trace pyrite
86-7-2	grab	Rusty augite porphyry, 2-3% disseminated pyrite
86-7-3	grab	Milky quartz vein in brecciated intermediate volcanics
86-7-4	grab	Siliceous sediments-quartzite
86-7-5	grab	Quartzite, foliated
86-7-6	grab	Milky quartz vein in sheared mafic volcanics

<u>Sample No.</u>	<u>Width of Sample</u>	<u>Description</u>
86-7-7	2.5 m	Rusty siliceous sediment? or felsic intrusive? cross-cutting rusty quartz veinlets and pods
86-7-8	grab	Diorite
86-7-11	1.0 m	Quartz-monzonite, rusty, fractured, 2% pyrite and < 1% pyrrhotite
86-7-12	grab	Sheared mafic volcanic, rusty, traces of pyrite and pyrrhotite



ALME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS, VANCOUVER B.C.  
PH: (604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED AUG 28 1986

DATE REPORTS MAILED

*Sept 2/86*

### GEOCHEMICAL ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.  
Au\* - 10 GM.IGNITED, HOT AQUA REGIA LEACHED, NIBK EXTRACTION. AA ANALYSIS.

ASSAYER: *D. Toye* DEAN TOYE . CERTIFIED B.C. ASSAYER

UMEX INC. FILE# 86-2325

PAGE# 1

SAMPLE	Au* ppb
86-1-1	3
86-1-2	1
86-2-35	1
86-2-36	6
86-2-37	1
86-2-38	2
86-2-39	29
86-2-40	22
86-2-41	54
86-2-42	80
86-2-43	3
86-2-44	13
86-2-45	9
86-2-46	3
86-2-47	1
86-2-48	1
86-2-49	1
86-2-50	35
86-2-51	22
86-2-52	28
86-2-53	3
86-2-54	90
86-2-55	45
86-2-56	135
86-2-57	2
86-2-58	4
86-2-59	16
86-2-60	22
86-3-10	1
86-3-11	1
86-3-12	4
86-3-13	120
86-3-14	1
86-3-15	1
86-3-16	1
86-3-17	1

SAMPLE	Aux oob
86-7-1	2
86-7-2	1
86-7-3	1
86-7-4	1
86-7-5	1
86-7-6	1
86-7-7	1
86-7-8	1
86-7-11	140
86-7-12	1
86-5-5	8
86-5-6	5
86-5-7	8
86-5-8	3
86-5-9	3
86-5-10	2

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS, VANCOUVER B.C.  
PH: (604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED AUG 11 1986

DATE REPORTS MAILED *Aug 14/86*

## GEOCHEMICAL ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.  
Au# - 10 GM. IGNITED. HOT AQUA REGIA LEACHED, MIBK EXTRACTION, AA ANALYSIS.

ASSAYER *D. Toye* DEAN TOYE . CERTIFIED B.C. ASSAYER

UMEX INC. FILE# 86-1972

PAGE# 13

SAMPLE	Au# oob
86-2-1	17
86-2-2	15
86-2-3	15
86-2-4	5
86-2-5	35
86-2-6	38
86-2-7	50
86-2-8	135
86-2-9	30
86-2-10	3
86-2-11	3
86-2-12	5
86-2-13	35
86-2-14	35
86-2-15	12
86-2-16	4
86-2-17	10
86-2-18	3
86-2-19	25
86-2-20	1
86-2-21	30
86-2-22	18
86-2-23	14
86-2-24	1
86-2-25	1
86-2-26	3
86-2-27	5
86-2-28	9
86-2-29	10
86-2-30	5
86-2-31	3
86-2-32	10
86-2-33	4
86-2-34	1

SAMPLE	Aut oob
86-3-1	6
86-3-2	2
86-3-3	8
86-3-4	2
86-3-5	11
86-3-6	1
86-3-7	2
86-3-8	1
86-3-9	1
86-5-1	1
86-5-2	2
86-5-3	1

## GEOCHEMICAL ICF ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, W, SI, ZR, CE, SN, Y, NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK CHIPS AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: AUG 23 1986 DATE REPORT MAILED: *Aug 25/86* ASSAYER: *D. Lopez* DEAN TOYE, CERTIFIED B.C. ASSAYER.

UMEX INC. FILE # 86-1972R

PAGE 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au# PPB
86-2-1	17	1039	8	35	.2	55	15	469	5.44	8	5	ND	1	71	1	2	2	101	.59	.187	2	156	2.18	22	.29	2	2.24	.02	.04	1	17
86-2-2	12	461	7	6	.4	11	24	96	3.31	4	5	ND	1	83	1	2	2	45	.33	.128	2	24	.24	44	.24	5	.74	.01	.14	1	15
86-2-3	<del>146</del> 592	4	1	.2	2	6	42	5.22	2	5	ND	2	26	1	2	2	29	.09	.063	2	3	.05	53	.12	3	.44	.02	.15	1	15	
86-2-4	1	637	2	16	.2	19	26	340	2.03	3	5	ND	1	200	1	2	2	38	.89	.141	2	22	.61	48	.11	4	1.05	.01	.24	1	5
86-2-5	20	3384	2	18	1.1	20	15	271	5.95	2	5	ND	1	32	1	2	2	96	.30	.197	5	22	.95	48	.30	5	1.26	.02	.20	1	35
86-2-6	1	360	6	17	.8	3	16	72	2.87	3	5	ND	1	98	1	2	2	39	.23	.098	5	5	.44	255	.21	5	.98	.02	.62	1	38
86-2-7	7	3083	2	19	1.6	14	21	549	2.55	3	5	ND	2	26	1	2	6	50	.57	.166	7	4	.80	84	.15	5	1.20	.02	.33	1	50
86-2-8	<del>41</del> 405	2	14	<del>2.0</del>	7	20	73	2.65	3	5	ND	3	36	1	2	4	30	.13	.038	6	4	.24	67	.13	4	.59	.02	.18	1	135	
86-2-9	2	493	5	13	.3	22	39	270	5.05	3	5	ND	1	63	1	2	3	65	1.20	.180	2	47	.94	104	.17	2	1.18	.03	.71	1	30
86-2-10	1	112	8	23	.1	13	19	375	3.34	3	5	ND	1	72	1	2	4	80	1.83	.162	3	20	1.09	105	.19	7	1.43	.03	.70	1	3
86-2-11	1	462	8	11	.2	18	38	157	4.14	3	5	ND	1	35	1	2	2	42	.67	.194	3	18	.45	55	.18	6	.82	.02	.46	1	3
86-2-12	1	135	4	58	.1	41	30	803	3.99	8	5	ND	1	79	1	2	3	44	2.53	.143	2	99	1.15	71	.16	2	1.38	.02	.81	1	5
86-2-13	5	220	6	6	.4	2	11	67	4.90	2	5	ND	4	19	1	2	2	34	.16	.075	2	6	.08	87	.18	2	.25	.01	.19	1	35
86-2-14	3	1560	7	38	.8	26	24	620	5.25	8	5	ND	1	65	1	2	2	52	1.68	.174	2	48	1.32	26	.16	2	1.33	.03	.11	1	35
86-2-15	7	485	9	8	.7	4	25	151	2.77	2	5	ND	1	56	1	2	2	17	.25	.136	7	3	.05	104	.11	4	.40	.03	.25	1	12
86-2-16	1	183	2	4	.1	3	14	164	.77	2	5	ND	1	298	1	2	2	12	.47	.028	2	5	.04	34	.02	4	.46	.01	.10	1	4
86-2-17	12	386	2	4	.1	12	28	88	2.35	2	5	ND	1	98	1	2	2	37	.90	.161	4	16	.27	57	.22	4	.61	.03	.32	1	10
86-2-18	1	220	4	4	.1	9	15	84	1.63	2	5	ND	2	44	1	2	3	14	.32	.088	6	3	.07	44	.09	3	.33	.04	.18	1	3
86-2-19	<del>29</del> 284	10	<del>98</del>	.7	12	22	424	6.10	17	5	ND	1	51	1	2	2	66	.38	.144	2	53	.88	63	.21	2	.91	.02	.21	1	25	
86-2-20	4	83	2	5	.2	1	5	78	1.69	2	5	ND	1	53	1	3	2	49	.42	.055	2	2	.17	48	.28	4	.45	.03	.20	1	1
86-2-21	5	624	5	8	.7	6	4	103	2.21	7	5	ND	3	9	1	3	2	21	.16	.083	5	8	.07	22	.15	2	.41	.04	.08	1	30
86-2-22	7	273	2	11	.4	8	18	126	3.06	4	5	ND	1	102	1	2	2	39	.54	.180	2	17	.35	58	.24	5	.58	.02	.18	1	18
86-2-23	5	345	5	5	.6	2	16	58	2.25	2	5	ND	3	11	1	2	2	19	.09	.043	9	3	.11	71	.11	4	.38	.03	.15	1	14
86-2-24	1	192	6	11	.2	34	22	183	3.49	3	5	ND	1	40	1	3	2	31	.58	.120	2	57	.52	111	.20	5	.73	.03	.24	1	1
86-2-25	1	152	2	16	.2	29	19	287	2.95	2	5	ND	1	38	1	2	2	41	.63	.147	2	65	.84	99	.22	4	1.06	.02	.25	1	1
86-2-26	1	185	8	2	.1	14	13	77	3.78	2	5	ND	1	77	1	3	2	48	.56	.126	2	12	.17	126	.29	3	.58	.03	.25	1	3
86-2-27	1	121	9	3	.1	10	9	81	3.49	2	5	ND	1	36	1	3	6	29	.38	.082	2	47	.30	40	.24	3	.51	.02	.15	1	5
86-2-28	20	250	2	15	.7	13	13	111	2.62	2	5	ND	1	36	1	2	2	30	.36	.122	6	10	.18	64	.18	2	.53	.02	.21	1	9
86-2-29	1	561	4	21	.2	4	7	375	6.41	3	5	ND	1	123	1	2	2	88	.79	.102	3	14	1.50	8	.20	3	1.58	.02	.03	1	10
86-2-30	2	254	4	46	.1	14	14	1008	1.66	4	9	ND	1	477	1	2	8	25	26.58	.022	2	32	.98	6	.02	2	.95	.01	.02	1	5
86-7	1	160	5	4	.1	8	16	219	3.45	6	5	ND	1	152	2	2	40	1.15	.171	4	8	.12	22	.24	2	.55	.03	.04	1		
86-2	1	1248	5	27	.3	29	31	391	4.50	17	5	ND	1	89	2	2	39	1.66	.147	4	67	1.23	32	.14	7	1.36	.03	.10	1		
86-2-33	10	455	8	20	.3	18	33	469	3.91	14	5	ND	1	80	1	2	2	47	.75	.176	5	46	1.05	41	.15	2	1.28	.02	.09	1	4



UMEX INC FILE # 86-2325

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
86-7-1	1	393	2	15	.2	41	20	235	2.76	2	5	ND	2	49	1	2	2	52	1.45	.144	3	48	.54	67	.17	5	.69	.07	.22	1
86-7-2	5	1605	8	45	.9	125	19	335	5.35	3	5	ND	1	47	1	2	4	48	.54	.066	2	237	2.40	23	.13	3	1.59	.07	.86	1
86-7-3	2	43	2	141	.1	12	4	74	.80	2	5	ND	2	10	3	2	2	9	.10	.019	3	8	.10	24	.03	9	.16	.04	.07	1
86-7-4	14	97	2	3	.1	7	2	27	1.13	2	5	ND	6	35	1	2	2	16	.28	.041	4	8	.07	79	.30	4	.30	.03	.20	1
86-7-5	83	94	4	8	.2	24	5	40	1.70	4	5	ND	7	35	1	2	2	25	.29	.051	7	12	.05	72	.24	6	.26	.04	.17	1
86-7-6	1	8	2	1	.1	4	1	56	.33	2	5	ND	1	1	1	2	2	1	.01	.001	2	2	.01	3	.01	2	.01	.01	.01	1
86-7-7	1	45	4	3	.2	4	2	67	1.36	8	5	ND	2	152	1	2	2	19	.38	.078	2	6	.11	75	.08	9	.39	.05	.17	1
86-7-8	1	156	2	3	.1	5	2	42	1.18	2	5	ND	5	64	1	2	4	14	.30	.081	7	2	.03	31	.06	5	.20	.06	.09	1
86-7-11	1	95	2	3	1.6	16	7	78	.82	2	5	ND	6	48	1	2	2	16	.98	.065	8	8	.06	10	.06	3	.11	.12	.01	1
86-7-12	2	387	2	13	.3	123	25	164	2.54	2	5	ND	1	75	1	2	2	29	.69	.104	2	50	.31	97	.17	8	.52	.07	.28	1
86-5-5	4	358	5	35	.3	25	23	319	3.44	2	5	ND	1	33	1	2	2	49	.65	.161	2	14	.63	93	.20	7	.91	.06	.24	1
86-5-6	2	150	4	15	.1	27	18	229	2.18	7	5	ND	1	52	1	2	2	42	.79	.128	2	22	.38	74	.21	6	.78	.07	.17	1
86-5-7	3	142	3	6	.1	21	12	105	2.39	3	5	ND	1	43	1	2	2	30	.49	.095	2	25	.24	41	.27	5	.52	.05	.25	1
86-5-8	7	119	4	2	.1	27	11	86	2.08	4	5	ND	5	48	1	2	2	38	.64	.074	4	11	.06	57	.21	4	.25	.06	.11	1
86-5-9	2	163	2	12	.1	58	16	186	2.88	2	5	ND	1	41	1	2	2	37	.58	.121	2	70	.58	57	.18	5	.65	.06	.15	1
86-5-10	3	166	2	25	.1	39	18	372	5.90	2	5	ND	1	66	1	2	6	76	.55	.136	4	126	1.46	29	.22	2	1.43	.06	.14	1
STD C	22	59	36	137	7.1	71	29	1100	3.78	43	18	7	35	49	18	15	21	68	.46	.103	36	56	.85	182	.08	36	1.65	.09	.13	13

## GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, W, SI, ZR, CE, SN, Y, NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: SEPT 2 1986 DATE REPORT MAILED: *Sept 5/86* ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER.

UMEX INC FILE # 86-2325

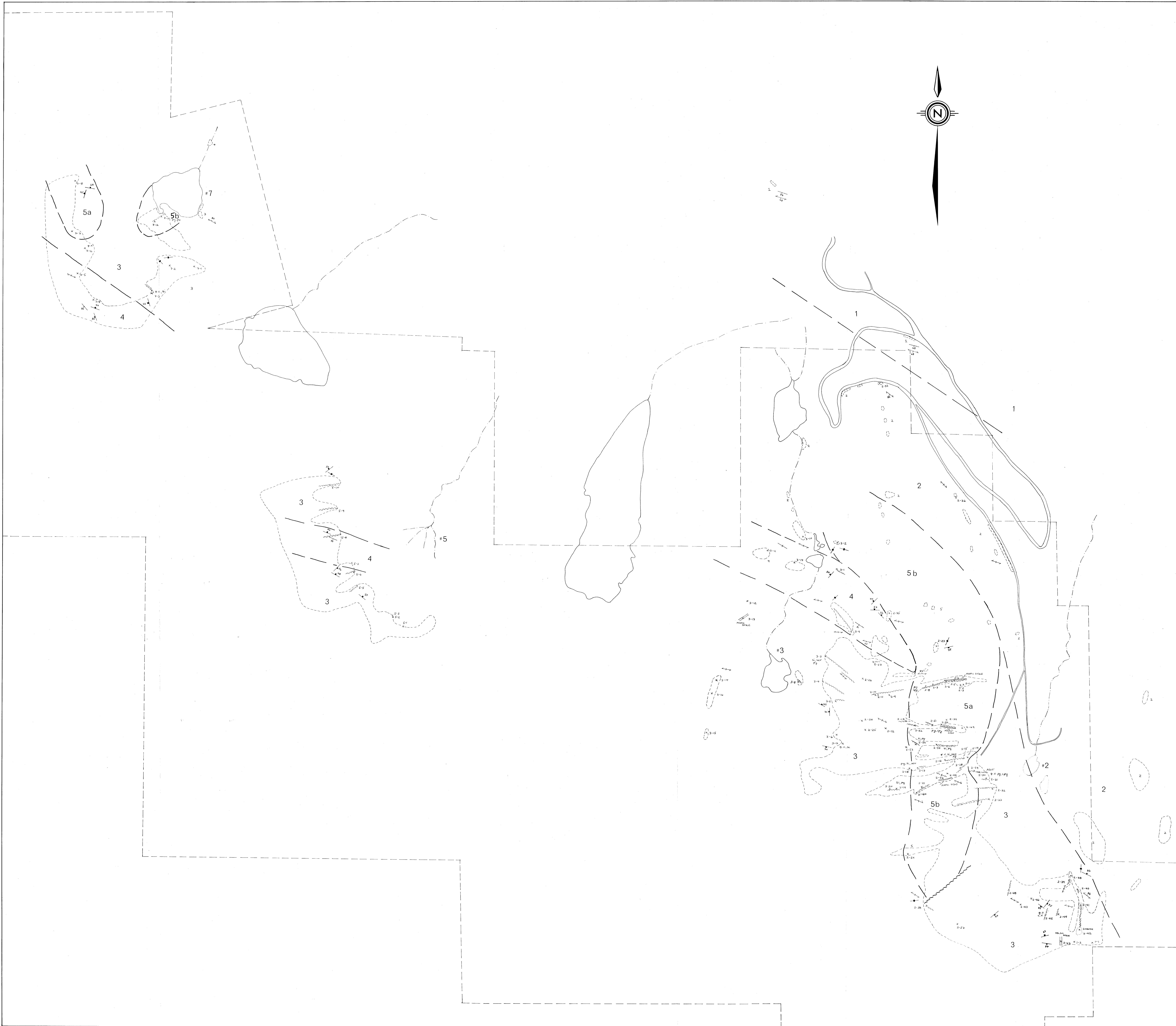
PAGE # 3

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM
86-1-1	2	157	5	3	.3	1	1	35	5.10	2	5	ND	3	44	1	2	3	32	.08	.111	6	3	.09	128	.06	6	.38	.04	.18	1
86-1-2	1	90	3	13	.1	76	20	208	3.02	2	5	ND	1	8	1	2	2	43	.76	.019	2	203	1.48	6	.10	2	1.00	.06	.02	1
86-2-35	2	26	2	1	.1	18	1	26	.33	2	5	ND	1	31	1	2	2	24	.55	.118	4	27	.12	63	.16	2	.33	.03	.18	1
86-2-36	2	38	5	35	.1	30	18	404	7.32	2	5	ND	1	10	1	2	2	305	.69	.011	2	60	1.51	31	.33	2	1.71	.09	.08	1
86-2-37	2	88	2	9	.1	53	25	124	2.24	2	5	ND	1	39	1	2	2	26	.57	.080	2	194	1.02	24	.08	3	.72	.04	.24	1
86-2-38	2	143	2	22	.1	63	23	267	5.05	2	5	ND	1	22	1	3	2	141	.81	.012	2	106	1.03	10	.17	5	.93	.07	.02	1
86-2-39	2	661	18	38	2.2	7	9	397	11.48	2	5	ND	1	3	1	2	4	188	.16	.012	2	227	1.45	58	.39	2	1.31	.04	.64	1
86-2-40	3	1984	11	24	1.3	66	70	201	14.27	108	5	ND	2	22	1	5	4	36	.19	.066	2	514	1.20	6	.08	2	1.13	.06	.16	1
86-2-41	2	676	90	81	1.0	19	11	299	14.15	170	5	ND	2	12	1	14	2	130	.25	.101	2	136	1.18	45	.15	2	1.09	.06	.14	22
86-2-42	2	465	98	16	7.3	4	3	75	11.96	21	5	ND	2	6	1	2	27	81	.16	.027	2	19	.32	37	.31	2	.22	.05	.17	1
86-2-43	2	334	8	6	.4	1	4	84	5.46	2	5	ND	3	16	1	2	2	46	.19	.143	4	3	.28	60	.16	6	.44	.06	.13	1
86-2-44	2	250	7	8	.2	15	15	137	6.86	15	5	ND	1	13	1	2	2	92	.45	.026	2	8	.71	42	.21	4	.66	.06	.40	1
86-2-45	2	323	7	34	.1	48	43	551	2.94	2	5	ND	1	159	1	2	2	51	6.65	.010	2	12	.65	12	.02	4	.71	.11	.02	1
86-2-46	3	427	5	22	.2	4	10	522	8.63	2	5	ND	2	18	1	2	2	71	.34	.174	2	19	2.15	100	.14	2	2.02	.05	.32	1
86-2-47	1	262	2	4	.1	18	17	105	1.82	7	5	ND	1	51	1	2	2	31	.71	.146	3	24	.30	34	.18	2	.51	.05	.09	1
86-2-48	1	259	2	3	.1	33	15	98	2.41	4	5	ND	1	43	1	2	2	31	.66	.144	2	39	.36	14	.14	3	.49	.05	.04	1
86-2-49	2	842	2	15	.2	3	10	62	2.25	2	5	ND	3	52	1	2	2	14	.51	.088	3	2	.05	68	.05	4	.30	.04	.20	1
86-2-50	2	1487	5	65	.1	67	25	537	2.53	2	5	ND	1	55	1	5	2	59	.77	.236	5	190	1.86	42	.13	3	1.58	.05	.55	1
86-2-51	10	489	5	19	1.1	7	5	78	3.70	2	5	ND	2	72	1	2	2	35	.31	.198	4	4	.14	66	.17	5	.47	.03	.19	1
86-2-52	13	670	2	32	1.4	16	16	198	3.39	7	5	ND	1	25	1	2	2	34	.49	.126	3	22	.47	72	.14	6	.71	.03	.52	3
86-2-53	13	595	3	15	.4	17	17	164	3.59	2	5	ND	1	43	1	2	2	23	.93	.142	3	4	.10	86	.10	5	.29	.05	.21	1
86-2-54	9	365	3	15	.5	10	23	221	5.34	2	5	ND	1	18	1	2	2	50	.44	.148	2	13	.83	43	.16	6	1.00	.05	.18	1
86-2-55	7	420	10	6	.8	10	6	71	7.80	11	5	ND	1	21	1	2	2	54	.09	.111	2	20	.16	54	.33	8	.27	.04	.23	1
86-2-56	42	1321	18	61	6.3	7	15	213	6.00	70	5	ND	1	30	1	7	2	16	.09	.020	2	1	.45	20	.09	7	.73	.02	.26	1
86-2-57	5	290	4	5	.1	9	6	107	3.09	2	5	ND	1	30	1	2	2	29	.44	.100	2	23	.30	49	.18	3	.50	.05	.17	1
86-2-58	6	28	2	6	.2	12	3	114	1.81	3	5	ND	1	63	1	3	2	40	.64	.093	2	21	.55	40	.20	2	.72	.04	.43	1
86-2-59	12	826	2	27	.5	11	11	153	2.03	5	5	ND	2	63	1	2	2	29	.46	.081	4	5	.07	32	.12	2	.26	.05	.12	1
86-2-60	11	141	2	3	.4	5	4	65	2.57	2	5	ND	1	81	1	2	2	36	.41	.118	2	20	.22	49	.21	3	.50	.04	.25	1
86-3-10	3	70	2	8	.1	11	7	194	2.59	2	5	ND	2	48	1	2	2	46	.61	.064	2	16	.25	72	.17	3	.41	.05	.12	1
86-3-11	2	63	2	1	.1	1	1	47	1.52	2	5	ND	2	55	1	2	2	34	.71	.224	4	4	.08	40	.10	2	.38	.07	.11	1
86-3-12	3	372	2	43	.1	23	21	580	4.67	2	5	ND	1	28	1	2	2	64	.56	.105	2	51	1.27	75	.18	5	1.51	.07	.92	1
86-3-13	14	507	4	17	.1	58	29	253	5.48	2	5	ND	2	105	1	4	2	68	1.09	.269	4	39	1.63	87	.15	6	1.83	.07	1.58	1
86-3-14	4	314	2	44	.2	150	33	758	6.25	23	5	ND	1	34	1	2	2	86	.89	.124	2	416	2.25	28	.10	8	2.11	.06	.12	1
86-3-15	2	88	3	34	.1	12	12	593	4.97	2	5	ND	1	71	1	2	2	46	.50	.156	2	18	1.08	69	.23	6	1.25	.04	.14	1
86-3-16	5	197	27	61	.3	8	10	691	6.53	2	5	ND	1	24	1	2	2	69	.22	.141	2	28	2.39	58	.35	9	2.24	.04	.13	1
17	21	177	2	4	.1	29	5	69	1.54	2	5	ND	4	38	2	2	2	25	.47	.094	10	12	.04	55	.11	2	.21	.05	.06	1
22	59	37	138	7.1	71	29	1109	3.94	40	18	8	35	49	16	18	69	.48	.104	36	61	.88	182	.08	37	1.73	.09	.14	13		

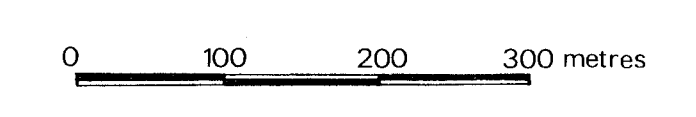
UMEX INC. FILE # 86-1972R

PAGE 4

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au4 PPB
86-3-1	1	190	2	5	.1	2	12	133	3.93	2	5	ND	1	21	1	2	2	37	.34	.193	2	44	.48	132	.12	4	.71	.01	.34	1	6
86-3-2	1	283	8	14	.1	29	19	261	1.03	3	5	ND	1	49	1	2	2	29	1.05	.042	2	91	.66	43	.13	2	.66	.06	.26	1	2
86-3-3	1	961	14	13	.2	135	122	120	12.66	8	5	ND	1	5	1	2	8	41	.22	.072	2	96	.44	15	.11	7	.47	.03	.37	1	8
86-3-4	1	161	2	23	.1	14	14	289	2.76	2	5	ND	1	45	1	2	2	30	.48	.128	2	39	.92	95	.14	2	1.06	.01	.25	1	2
86-3-5	2	506	8	19	.1	45	28	306	4.64	7	5	ND	1	35	1	2	2	55	1.45	.135	2	77	1.20	109	.14	16	1.30	.02	.76	1	11
86-3-6	1	136	4	19	.1	14	12	367	2.95	2	5	ND	1	32	1	2	2	36	.55	.135	2	91	.88	95	.21	4	1.16	.02	.35	1	1
86-3-7	1	390	3	40	.2	35	32	652	5.12	6	5	ND	1	56	1	2	2	42	1.49	.136	3	65	1.03	42	.21	4	1.13	.02	.14	2	2
86-3-8	1	276	7	20	.2	7	26	460	5.65	5	5	ND	1	27	1	2	2	78	.55	.187	4	30	1.33	74	.22	2	1.48	.02	.31	1	1
86-3-9	1	101	6	6	.1	17	6	22	1.51	2	5	ND	3	14	1	3	2	61	.28	.089	3	11	.06	66	.20	3	.22	.01	.14	1	1
86-5-1	1	84	2	42	.1	16	16	504	3.26	9	5	ND	1	49	1	2	2	45	2.50	.130	2	32	1.22	49	.17	3	1.42	.02	.24	1	1
86-5-2	1	95	8	20	.3	28	20	256	2.74	4	5	ND	1	114	1	2	2	38	.86	.152	2	25	.66	47	.16	5	1.03	.03	.13	1	2
86-5-3	1	124	7	22	.1	15	12	425	3.14	4	5	ND	1	21	1	2	2	44	.80	.141	4	14	.82	53	.16	6	1.10	.02	.18	1	1
STD C/AU 0.5	21	58	36	136	6.9	68	30	1099	3.92	40	19	8	32	47	17	17	18	62	.48	.108	36	60	.88	173	.08	38	1.73	.06	.13	14	490



- Legend**
- 5 5a Granodiorite, quartz-monzonite  
5b Diorite, augite-porphyr, and minor gabbro amphibolite
  - 4 Sedimentary rocks: siliceous siltstone, quartzite, phyllite, minor mafic volcanics
  - 3 Mafic volcanic rocks: massive flow, augite-porphyr, augite-porphyr breccia, tuff
  - 2 Ultramafic intrusive rocks: amphibolite, pyroxenite, peridotite
  - 1 Black phyllite
- Strike and dip of bedding
    - #1 inclined by vertical
    - #2 inclined by vertical
  - Foliation (schistosity)
    - #1 inclined by vertical
    - #2 inclined by vertical
  - Jointing
    - #1 inclined by vertical
    - #2 inclined by vertical
  - Approximate geological contact
  - Fault or shear-zone
  - Outcrop area
  - Sample location
  - Gossanous zone
  - Quartz vein
  - Carbonate vein
  - Silicification
  - Sericitization
  - Pyrite
  - Chalcopyrite
  - Pyrrhotite
  - Road
  - Claim boundary line
  - Lake
  - River/stream
  - Circle number



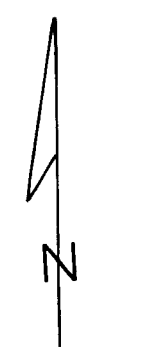
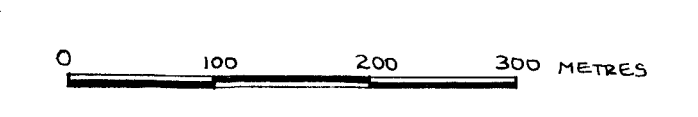
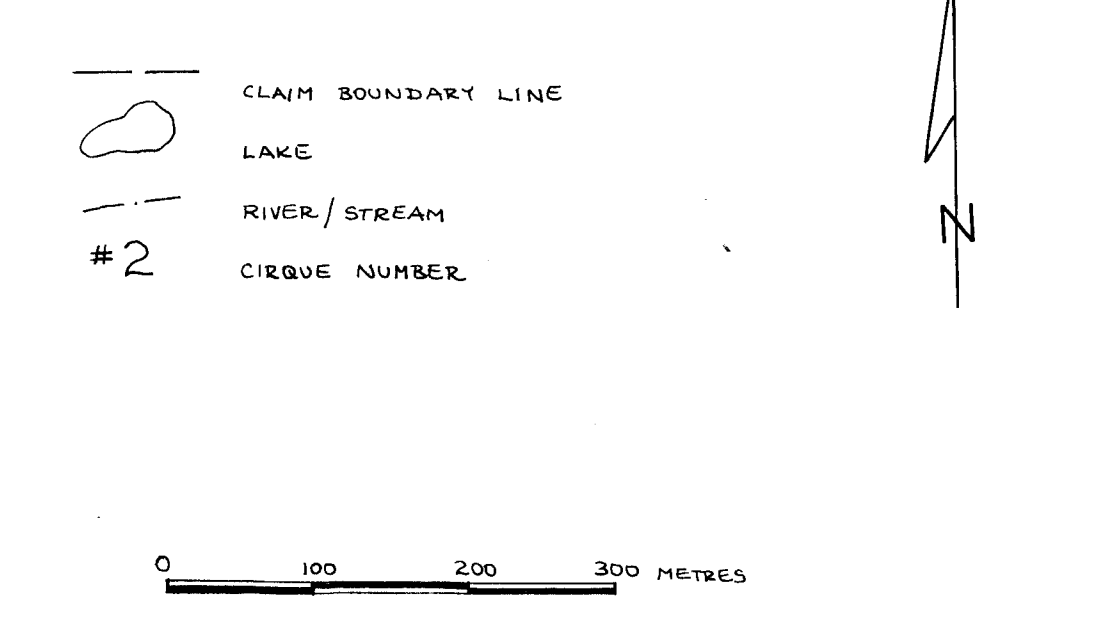
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,527**

UNEX CORPORATION LTD.				
GEOLOGY SAMPLE LOCATION MAP				
SCALE	DATE	BY	NTS. NO.	FIG. NO.
1:5000	Oct '86	D. Duba	93A/7E	4



- LEGEND
- 5 Ss. GRANODIORITE, QUARTZ-MONZONITE  
5b DIORITE, ANDITE-PORPHYRY AND PHASE GABBRO, ANTHILITE
  - 4 SEMIPRIMARY TEXAS SILICIOUS SILTSTONE, QUARTZITE,  
PHYLLITE, MUDROCK, MUDSHALE, SLTST.
  - 3 MAFIC VOLCANIC ROCKS: BASALTIC DIKE, ANDITE-PORPHYRY,  
ANDITE-BURNING BECCIA, TUFF
  - 2 ULTRAMAFIC INTRUSIVE ROCKS: ANTHILITE,  
PYROCLASTIC, PERLITE
  - 1 BLANK. PHYLLITE
- APPROXIMATE GEOLOGICAL CONTACT
  - FAULT OR SHEAR ZONE
  - Q.V. QUARTZ VEIN
  - C.V. CARBONATE VEIN
  - Pt. PYRITE
  - Ch. CHALCOPYRITE
  - Pt. PYRRHOTITE
  - GZ. GROSSULAR ZONE
  - S. SAMPLE LOCATION
  - 80 PPM GOLD
  - 35 PPM ARSENIC
  - 12 PPM MANGANESE
  - 21 PPM ZINC
  - 7.1 PPM SILVER
  - 90 PPM LEAD
  - 123 PPM NICKEL
  - 150 PPM COBALT



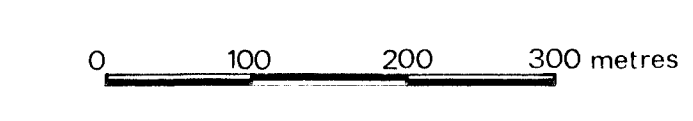
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

15,527

UMEX CORPORATION LTD.				
ROCK GEOCHEMISTRY GOLD (ppb)				
SCALE	DATE	BY	N.T.S. NO.	FIG. NO.
1:5000	Oct. 86	D. DUBA	93A/7E	5

Legend

- 5 Sa Granodiorite, quartz-monzonite
  - 5b Diorite, agite-porphry, minor gabbro, amphibolite
  - 4 Sedimentary rocks: siliceous siltstone, quartzite, phyllite, minor mafic volcanics
  - 3 Mafic volcanic rocks: massive flow, agite-porphry, agite-porphry breccia, tuff
  - 2 Ultramafic intrusive rocks: amphibolite, peridotite, peridotite
  - 1 Black phyllite
- 
- Claim line
  - Lake
  - River/stream
  - #2 Cirque number
  - - - - - Approximate geological contact
  - - - - - Fault or shear-zone
  - 45 Gold assay (ppb)
  - Rock-chip sample
  - △ Soil sample
  - Silt sample
  - F Float



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

15.527

UMEX CORPORATION LTD				
GEOLOGICAL - GEOCHEMICAL COMPILATION GOLD (ppb)				
SCALE	DATE	BY	N.T.S. NO.	FIG. NO.
1:5000	Oct '86	D. Dobb	53A/7E	6