THE INDATA PROPERTY OMINECA MINING DIVISION CENTRAL BRITISH COLUMBIA:
Geology, Exploration History and

1996 Diamond Drilling Programme

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Omineca Mining Division

Prepared For

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## 1. SUMMARY

The indata property, located about 130 kilometres to the northwest of Fort St. James in central British Columbia, is the subject of an option agreement between Clear Creek Resources Limited and the holder of the property, Eastield Resources Ltd. The property is accessible by all-weather forestry roads from Fort St. James and can also be accessed by float plane to a lake, Albert Lake, on the westem side of the property. The property consists of ten mineral claims totalling 139 units and which are in good standing at the date of this report.

The region in which the Indata property occurs is covers the boundary between two major terranes, the Mesozoic Quesnel Terrane to the east, largely underlain by mafic and intermediate volcanic rocks into which mafic to felsic intrusions of Lower Jurassic to Cretaceous age have been emplaced, and the Cache Creek Terrane to the west. The Cache Creek Terrane consists largely of argillaceous metasedimentary rocks, limestone and some mafic to intermediate volcanic strata and chert. Intrusive rocks within this terrane comprise ultramafic - mafic complexes (of which some may be ophiolitic) and intermediate plutons of the Trembleur Intrusive Suite. The contact of the two terranes is marked by a high angle, northwesterly-striking fault, the Pinchi Fault.

The Indata property covers strata thought to be that of the Cache Creek Terrane, consisting of limestone with minor interbedded argillaceous strata, and andesitic volcanic rocks of probable tholeiitic affinity. These latter rocks record a greenschist facies mineral assemblage of regional metamorphism. Much of the Indata property area is covered by glacial and fluvioglacial deposits of Quatemary age. Contacts between carbonate and volcanic rocks are thought to be faults, interpreted as splays of the Pinchi Fault, although nowhere have these contacts been observed because of Quaternary cover. Geological mapping and data from diamond drilling indicates that numerous westerly-striking normal faults cut the property.

Known mineralization of the Indata property consists of arsenopyrite-pyrite-stibnite-chalcopyrite - bearing quartz and quartz-carbonate veins which, adjacent to mafic-ultramafic contacts contain anomalous to high grade quantities of gold and silver, and disseminated and fractured-controlled chalcopyrite-pyite mineralization possibly related to a "porphyry-type" magmatic-hydrothermal system.

Exploration of the property began only in 1984 by Imperial Metals Corporation after staking part of the area during regional exploration of the Pinchi Fault zone. Following initial soil sampling and the staking of additional claims, a four hole diamond drilling programme was completed by Imperial to explore at depth copper mineralization seen in outcrop near the northeast side of Albert Lake. This programme resulted in the discovery of low grade chalcopyrite - pyrite mineralization (about 0.1\% copper) to depths of less than 100 metres from the surface. In 1986 Eastfield Resources Ltd. entered
into a joint venture with Impenial and undertook a programme of grid establishment, soil sampling and hand trenching and geophysical surveying, followed by diamond drilling in 1987, 1988 and 1989 and trenching with a bulldozer-mounted backhoe. The drilling programmes resulted in the discovery of polymetalic quartz and quartz-carbonate veins with elevated precious metal values (up to over 1.5 oz over an intersection of four metres but commonly between several hundred to a few thousand parts per billion gold), generally striking to the north and controlled by a fault dipping shallowly to the east. These polymetallic veins are commonly enveloped by a zone of silicification in volcanic rocks and a thickening-downwards zone of talc-magnesite alteration in ultramafic rocks.

In 1995, after construction of a road through the southern part of the Indata property, built to Ministry of Forestry standards for log haulage, a small trenching programme was completed adjacent to the northeastern part of Albert Lake, over the copper zone defined by soil sampling. Sampling of one of these trenches (Trench 7) returned analyses which averaged $0.36 \%$ copper over a length of 75 metres.

In 1996 Clear Creek Resources Limited carried out a small diamond drilling programme in the area of anomalous copper in soils adjacent to the northeastern part of Albert Lake. Results of this programme confirmed the existence of subsurface copper mineralization indicated by the results of Imperial Metal's previous (1985) drilling but, in this area, of low grade ( $0.1 \%-0.2 \%$ over downhole lengths of up to about 100 metres). However, this programme was preliminary only and tested only a very small part of the area covered by anomalous soil copper geochemistry.

It has not yet been established whether there is a genetic association between the zone of disseminated and fracture-controlled chalcopyrite-pyrite mineralization and the polymetallic veins drilled by Eastfield Resources. However, soil geochemical coverage suggests that there is a metal zonation from a copper-dominated zone in the west to a polymetallic zone dominated by arsenic, antimony and elevated precious metals to the east, in turn suggesting that a single magmatichydrothermal system of "porphyry"-type may be applicable for the Indata area. Only a small part of this possible system has been tested and there is good potential for the discovery of economic coppergold mineralization on the property, not only of "porphyry"-type but also skarn mineralization at contacts of intrusions and Cache Creek limestone. In addition, because of the difficulty of drill-testing the polymetallic veins for their gold contents owing to the gold particle sparcity (nugget) effect, the potential of the vein system for hosting economic gold mineralization has not yet been defined.

## 2. CONCLUSIONS

1. Exploration of the Indata property has defined two contrasting styles of metallic mineralization within the property area; i) arsenopyrite-stibnite-pyrite-chalcopyrite veins with elevated to highly enriched precious metal contents in quartz and quartz-carbonate veins and ii) disseminated and fracturedcontrolled chalcopyrite-pyrite mineralization within propylitized andesitic volcanic rocks.
2. While a genetic relationship between the two types of mineralization has not yet been established, it is possible that the polymetallic veins enriched in gold and silver represent a distal hydrothermal facies to the more central copper zone related, perhaps, to an intermediate to felsic intrusion which is not exposed in the low lying, glaciofluvial and glacial deposits-covered area adjacent to Albert Lake.
3. Exploration to date has allowed an evaluation of only a small part of the Indata property (less than $20 \%$ ) and the potential of the property to host an economic deposit enriched in precious metals has not yet been realised.
4. Only two types of mineral deposits have been considered at Indata to date, that of disseminated ("porphyry") copper mineralization and gold-enriched polymetallic veins. It is concluded that potential for copper-gold skarn deposits also exists within the Indata property area.
5. Although disseminated and fracture-controlled chalcopyrite mineralization intersected in drillholes to date has a low gold content, there is a possibility that gold enriched chalcopyrite mineralization may be discovered if gold-enriched veins are genetically related to the disseminated copper mineralization. In other words, there is a possibility of a metal zonation within which precious metal enrichment with copper mineralization may occur. Only a small part of this hydrothermal system has been drill tested.

## 3. INTRODUCTION

### 3.1 General Statement

In 1996 a nine hole diamond drilling programme totalling 650.8 metres was undertaken to test the northem part of a zone of copper sulphide mineralization underlying the Schnapps claims of the Indata property in central British Columbia. Previous work by had indicated the presence of chalcopyrite in volcanic rocks in this area (see Bailey et al., 1989) and the 1996 driling programme was designed to confirm previous results and to establish the habit of mineralization.

The drilling programme was carried out by Clear Creek Resources Limited under the terms of an option agreement between Clear Creek and Eastfield Resources Ltd., the holder of the claims.

### 3.2 Location, Access and Physiography

The Indata property is located about 130 kilometres to the northwest of Fort St. James, British Columbia (Figure 1), within the Omineca Mining Division. Access to the property is from Fort St. James via the Leo Creek Forestry Road to near Tchentlo Lake and thence on a road built by Eastfield to the northern part of the property. This road was built to Ministry of Forestry logging road standards and provides good access for trucks and heavy machinery such as drill rigs and bulldozers. Away from this road, however, access within the property boundaries is on foot only except for a few areas where helicopter landing sites have been prepared.

Albert Lake on the western side of the property is suitable for float plane use and provides good access to the western copper zone.

The Indata property covers an upland area between Indata Lake to the east and Albert Lake to the west (Figure 2). Whereas the central part of the property is of relatively low relief, the topography slopes steeply down towards Albert and Indata Lakes. The area is covered by thick spruce, balsam and pine, in places of commercial grade, although low lying areas are swampy with a dense cover of alder and poplar.


Figure 1. Location of the Indata property.

### 3.3 Mineral Tenements

The Indata property consists of ten claims, totalling 139 units, listed in Table 1. The disposition of these claims is shown in Figure 2. The writer has not carned out a title search of the Indata claims and has not verified ownership although he has no reason to doubt that the claims are as purported to be by Eastfield. The writer has inspected Legal Corner Posts of all but the Indata 1 claim during exploration activities in 1989.

Table 1
Mineral Claims of the Indata Property
(Expiry Date does not include 1996 exploration expenditure assessments)

| CLAIM NAME | NO. OF UNITS | RECORD NO. | EXPIRY DATE |
| :--- | :---: | :---: | :--- |
| Indata 1 | 20 | 239378 | February 3, 2000 |
| Indata 2 | 15 | 239379 | February 3, 2000 |
| Indata 3 | 20 | 240192 | October 22, 1997 |
| Indata 4 | 16 | 240193 | October 25, 1997 |
| Indata 5 | 6 | 241741 | April 4, 1998 |
| Schnapps 1 | 20 | 238722 | November 14, 1998 |
| Schnapps 2 | 20 | 238723 | November 14, 2000 |
| Schnapps 3 | 8 | 238859 | August 20, 2000 |
| Schnapps 4 | 10 | 238860 | August 20, 2000 |
| Schnapps 5 | 4 | 238893 | Sept. 13, 1998 |



Figure 2. Indata property: claims disposition and topography. Contour interval 50 metres.

### 4.1 Regional Geology and Mineralization

The Indata property lies near the contact of two major terranes of the Canadian Cordillera, the Quesnel Terrane to the east and the Cache Creek Terrane to the west. The contact between these terranes is marked by the Pinchi Fault, a high angle reverse fault of regional extent (Figure 3), and associated splay faults. The Quesnel Terrane consists of mafic to intermediate volcanic rocks of the Upper Triassic - Lower Jurassic Takla Group intruded by a composite batholith, the Hogem Batholith with intrusive phases which range in age from Lower Jurassic to Cretaceous.

The Cache Creek Terrane in the region comprises mainly argillaceous metasedimentary rocks intruded by diorite to granodiorite plutons, the Trembleur Intrusive Suite, and small ultramafic stocks. Some of these latter intrusions may, however, be of ophiolitic origin. A northwest-striking fault bounded block adjacent to the Quesnel Terrane is underlain largely by limestone within which a sliver of mafic and intermediate volcanic rocks is preserved. Both the limestone and volcanic rocks are considered here to be part of the Cache Creek Group but the evidence for this is equivocal as similar strata occur within the Takla Group elsewhere in the region. However, metamorphic grade of the Takla Group volcanic rocks is rarely higher than zeolite facies of regional metamorphism while that of the volcanic rocks underlying the Indata property is of greenschist grade, suggesting that these strata are of Cache Creek affinity, not Takla Group.

The dominant structural style of the Takla Group is that of extensional faulting, mainly to the northwest. In general Takla Group rocks are tilted but not folded except in the eastern part of the Quesnel terrane,adjacent to the Omineca (Wolverine) Terrane. In contrast, strata of the Cache Creek Group have been folded and metamorphosed to lower to middle greenschist facies and, in argillaceous rocks, preserve a penetrative deformational fabric. However, extensional faults are also common within the Cache Creek Group and probably represent the effects of postcollisional uplift. In addition to high angle extensional faults, thrust faults are inferred within the Cache Creek Group and which are thought to have emplaced ophiolitic assemblages on to younger fine grained marine sedimentary strata.

Known mineral occurrences within the region also reflect the environment in which these occurrences are found. Within the Takla Group mineral deposits tend to be associated with intermediate and felsic intrusions and are commonly gold-enriched copper porphyries.


Figure 3. Generalized geological setting of the Indata property.

Porphyry-style mineralization also occurs within the Cache Creek Group but no such deposits are known within the Indata region. Known mineral occurrences within the Cache Creek Group of the region include podiform chromite lenses within peridotite bodies to the west of the Indata property and a carbonate hosted polymetallic occurrence to the north of Indata (Lust Dust). "Homestake"-style gold mineralization is represented by the Snowbird deposit near Fort St. James to the south of the Indata region, at Mt. Sir Sidney Williams to the north of Indata and at Indata itself where arsenopyrite-stibnite-chalcopyrite-pyrite veins with enriched precious metals occur at the contact of mafic and ultramafic rocks. In addition, the Pinchi Fault zone hosts a number of small mercury occurrences of which one, Bralorne, was large enough to support a small mining operation in the 1940's.

### 4.2 Geology of the Indata Property

### 4.2.1 Lithologies

The Indata property is underlain by two main supracrustal assemblages, i) limestone with minor intercalated shale and ii) andesitic volcanic rocks which were deposited under marine conditions. Limestone crops out as prominent hills and bluffs in the northem, western and southem parts of the area. Although generally massive, in places bedding is defined by thin shaley partings and by intraformational limestone conglomerate. Breccias formed by carbonate dissolution are displayed within a karst topography in the southwestern part of the Indata property area. Fusilinid (Verbeekinidae) foraminifera collected from similar limestone of the Cache Creek Group (Monger, 1977) suggest that the age of the limestone at Indata is Permian.

Volcanic rocks underlying the Indata property are of andesitic composition and can be subdivided into two broad units. In the western part of the property volcanic rocks consist of pillow lava, pillow breccia, coarse tuff breccia and fine grained crystal lithic tuff. The dominant mafic mineral in these rocks is amphibole, now represented by tremolite/actinolite but was probably hornblende prior to alteration. In a few cases minor orthopyroxene phenocrysts have been noted suggesting that the volcanic rocks are of tholeiitic affinity and, thus, probably should be included in the Cache Creek Group and not the Lower Mesozoic Takla Group volcanics. These latter rocks are of alkalic to subalkalic composition and the only pyroxene recognised is clinopyroxene, usually augite or diopsidic augite.


Figure 4. Generalized geological interpretation of the Indata property.

The second volcanic unit consists of massive to poorly bedded volcanic tuff with variable amounts of amphibole phenocrysts. Although commonly poorly bedded, bedding planes and fining upwards sequences can be recognised in places.

Intrusive rocks recognised on the Indata property range in composition from ultramafic to granite and underlie the central part of the property area. Hornblende diorite occurs as a pluton which extends along part of the eastern side of the central part of the property and as dykes. The bulk of this pluton has a fine- to mediumgrained hypidiomorphic granular texture although both marginal phases of the pluton and the dykes are porphyritic. A small part of the pluton is of quartz diorite composition although primary quartz is generally absent. While diorite dykes are common within the volcanic rocks of the property, no diorite intrusions have been observed within the limestone unit, suggesting that the diorite and volcanic rocks are of similar age and are either older than the massive limestone or that the lirnestone is allochthonous with respect to the volcanics and was emplaced adjacent to the volcanic strata after volcanism and plutonism had ceased.

Intruding both volcanic rocks and diorite are ultramafic bodies, serpentinised to varying degrees but which preserve textures suggesting that the original rock was peridotite and pyroxenite. Cross fibre chrysotile veins and veinlets occur throughout these bodies. To the south of Radio Lake (Figure 4) a differentiated ultramafic-mafic intrusion occurs, consisting of a coarse-grained clinopyroxenite core, surrounded by peridotite and, in turn, enclosed by medium- to coarse-grained hornblende $\pm$ clinopyroxene gabbro.

The youngest intrusive rocks of the Indata property consist of medium- to coarse-grained grey and reddish grey biotite quartz monzonite and granite (Figure 4). Whereas all other intrusive rocks in the area have been emplaced only into volcanic strata, this unit also intrudes limestone of the Cache Creek Group.

A large part of the Indata property is covered by glacial and fluvioglacial deposits although driling indicates that this cover is no more than a few metres thick, even in lowlying areas such as adjacent to Albert Lake.

### 4.2.2 Structure and Metamorphism

The area covered by the Indata property can be divided into two structural domains, i) that area underlain by carbonate rocks which is characterised by


Figure 5. Geology of the central part of the Indata property and locations of drillholes and trenches. See Figure 4 for location.
concentric folds and the development of a penetrative fabric in finer grained clastic interbeds and ii) that area underlain by volcanic strata which has undergone brittle deformation only. Contacts between carbonate and volcanic strata are obscured by young cover but are inferred to be northwesterly-striking faults. Drilling and geological mapping in the central part of the Indata property has indicated the presence of a number of westerly-striking faults which show normal displacements of a few metres to a few tens of metres.

Carbonate rocks have generally been recrystallised with the common development of sparty calcite while fine grained clastic interbeds display a greenschist facies mineral assemblage. The assemblage actinoliteAtremolite chlorite - epidote within the matrix of volcanic rocks also suggests the attainment of greenschist grade of regional metamorphism in these strata, in tum indicating, as noted above, that the volcanic assemblage may be included within the Cache Creek Group and not the Takla Group where regional metamorphic grade is mainly that of zeolite facies, subgreenschist grade.

### 4.2.3 Mineralization and Hydrothermal Alteration

The Indata property covers a number of metallic mineral occurrences which may be divided into two main types; i) pyrite-arsenopyrite-stibnite-chalcopyrite mineralization in quartz and quartz-carbonate veins, commonly with elevated precious metal contents and ii) disseminated and fracture controlled chalcopyrite-pyritepyrrhotite mineralization of porphyry-type.

Polymetallic veins have been recognised in the central part of the property (Figure 5) within andesitic volcanic rocks and serpentinised ultramafics. Where drilled, the veins generally occupy a northerly-striking fault zone dipping shallowly to the east and which, in ultramafic rocks, shows intense carbonate and talc alteration ranging in width from a few metres to over 50 metres in deeper and more easterly parts of the fault. Proximal to the veins in volcanic rocks, especially adjacent to ultramafic contacts, alteration is dominated by silicification and the formation of quart-carbonate veinlets but silicification is not common within ultramafic rocks.

Disseminated and fracture controlled pyrite-chalcopyrite-pyrrhotite mineralization occurs in a zone extending along the northeastern side of Albert Lake where it coincides with a well defined induced polarization anomaly. The relationship
between this style of mineralization and the polymetallic veins has yet to be established although it is possible that the polymetallic vein mineralization represents an outer zone to a central, copper-dominated part of the same hydrothermal system. Hydrothermal alteration related to this zone of copper mineralization appears to be that of a propylitic mineral assemblage although, because the volcanic rocks hosting this mineralization appear to have been metamorphosed to greenschist grade of regional metamorphism, it is difficult to distinguish between pervasive propylitization and the metamorphic greenschist mineral assemblage from the limited work to date. Because of poor outcrop and the paucity of drilling within the copper zone and in areas away from the polymetallic veins, a regional hydrothermal zonation which may be related to a magmatic source has not been established within the Indata property. Such a study is clearly required in order to aid in determining the nature of the mineralizing system at Indata.

## 5. EXPLORATION HISTORY

### 5.1 General Statement

Unlike many mineralized areas of British Columbia which have a long history of prospecting and exploration, mineralization of the Indata property was not discovered until 1985 following regional exploration along the Pinchi Fault system. At that time initial work was undertaken to define the zone of copper mineralization adjacent to Albert Lake in the western part of the property. The polymetallic veins remained undetected until a zone of limonitic soil to the east of the copper zone was sampled and found to be extremely anomalous in arsenic. Subsequent trenching and diamond drilling resulted in the recognition of the polymetallic vein system.

Exploration of the Indata property has been concentrated in the central part of the property, in the area of known mineralization (Figure 6). Recent construction of a road through the property will facilitate exploration in those areas which have yet to be intensively explored.

### 5.2 1983-1990 Exploration

In 1983 Imperial Metals Corporation ("Imperial") staked the Schnapps 1 and Schnapps 2 claims during regional exploration of the Pinchi Fault zone, to cover an inferred splay of the Pinchi Fault. In 1984 Imperial staked additional claims following the release of geochemical data by the B.C. Ministry of Mines which indicated anomalous copper, silver and mercury in a stream sediment sample collected from a channel draining Radio Lake (Figure 5). At this time Imperial also conducted a preliminary soil sampling programme of which results indicated the presence of anomalous copper in soils to the north and east of Albert Lake. This programme was followed in 1985 by additional soil sampling, six line kilometres of induced polarisation surveying and the drilling of four diamond drillholes totalling 231 metres. The locations of these drillholes is shown in Figure 5. Holes 1 and 2 intersected copper mineralization in amounts of about $0.1 \%-0.2 \%$ in the area where anomalous copper in soils had been determined previously.

In 1986 Eastfield Resources Ltd. ("Eastield") entered into a joint venture with Imperial and assumed operatorship of the project. Eastfield expanded the soil geochemical and geophysical coverage and carried out limited hand trenching. Soil sampling carried out by Eastiield extended the copper anomaly adjacent to Albert Lake and established several areas


Figure 6. Indata property: extent of ground exploration to date. The entire property has been covered by an aeromagnetic survey.
of anomalous arsenic in soils to the east of the copper anomaly in the central northern part of the property. The grid was also extended to as far as $30+00$ north although limited work has been carried out in this area. The distribution of arsenic and copper in soils over the Indata property is shown in Figure 7, a compilation of all soil sampling programmes undertaken to date.

Geophysical surveying of the Indata property during this period consisted of VLF-EM, magnetometer and induced polarization surveying. Anomalous VLF-EM results generally reflect topography and interpreted bedrock response from this survey is equivocal. Magnetic surveying (total field) defined ultramafic bodies extremely well , especially those serpentinised intrusions as magnetite formation is a product of serpentinisation. Induced polarization surveying (time domain pole - dipole method) carried out by Eastifield also outlined the ultramafic bodies where, in this case, the chargeability response appears to be related to magnetite, not sulphide, content. In addition, a moderate to high chargeability response is evident along the western side of a zone of anomalous copper in soils (see Figure 7) and which subsequent drilling (in 1996 - see below)suggested that it reflects disseminated and fracture controlled sulphide mineralization. Geophysical coverage of the Indata property is shown in Figure 6.

In 1987 Eastield undertook a six hole diamond drilling programme ( $\mathbf{3 0 6}$ metres) in an area in which anomalous arsenic, silver and gold were detected in soils. The locations of these drillholes is shown in Figure 5. This driling programme intersected quartz - sulphide veins with significant gold values in places (up to 0.32 ozftonne over 1.2 metres) and silver in amounts typically between one and three ounces per tonne. Sulphide minerals were mainly pyrite, arsenopyrite, stibnite and chalcopyrite in a gangue of quartz and carbonate.

Additional drilling was conducted on this vein system in 1988 and 1989 and although a high gold value of 1.5 ounces per tonne over an interval of four metres was intersected in drillhole 88-1-12, gold values commonly ranged from several hundred to several thousand parts per billion. Interestingly, silver values obtained from samples collected from the 1988 and 1989 drilling programmes were much lower than those obtained from the 1987 programme, suggesting a metal zonation. Drilling results from the period 1985-1989 are summarised in Table 2.

In 198942 trenches, totalling 2,211 metres, were excavated in areas of anomalous soil geochemistry, using a Caterpillar D3 bulldozer with a backhoe attachment. In most


Figure 7. Indata grid area; arsenic and copper soil geochemistry. For location see Figure 4.
cases the geochemical anomalies were found to be caused by sulphide mineralization with elevated precious metals in quart veins similar to the ones which had been intersected in drillholes.

As well as driling and trenching, geological mapping at a scale of 1:2000 was carried out over the northern two thirds of the property (excluding the Indata 1 claim and most of the Schnapps 2 and 5 claims - see Figure 2) and prospecting was undertaken over the northern part of the property. This latter work indicated the presence of anomalous copper and gold in "grab" samples of rocks collected to the north of Albert Lake but, because sampling was not systematic, no significance can be placed on the analytical values obtained from these samples. Results do, however, indicate the presence of possible gold and copper mineralization on Indata 2 and 3 claims and which, perhaps, is reflected in the arsenic and copper soil geochemistry in this part of the property area (Figure 7).

In 1990 the Indata property was covered by an airborne magnetic survey fiown at 200 metre line spacings in an east-west direction. This survey, although confirming results of earlier ground magnetic surveying, did not provide any new information on which to base furthur exploration.

### 5.3 1995-1996 Exploration

Following the period 1983-1989, no further exploration of the Indata property was undertaken until 1995 when a programme of trenching the copper zone (now referred to as the "Lake Zone") to the north and east of Albert Lake was undertaken. This programme was facilitated by the construction of 17 kilometres of road from the Tchentio Lake forestry road in the south, allowing an excavator to be transported to the northern part of the Indata property. Results of this programme included $0.36 \%$ copper over a length of 75 metres (Trench 7 - see Figure 5).

In 1996 Clear Creek assumed operatorship of the Indata project and nine diamond drillholes were attempted in, and adjacent to, the Lake Zone but three holes were not completed owing to difficult drilling conditions. Three holes were completed in the area of Trench 7 (holes $96+1,2$ and 3) while three were collared from a drill pad constructed about 300 metres to the southeast (holes $96-1-4,5$ and 9). Holes $96-1-6,7$ and 8 were not completed. Locations of these drillholes are shown in Figure 5. Table 2 lists the significant results of this programme. Drill logs are shown in Appendix 1 while analytical results are given in Appendix 2. From this limited drilling programme low grade copper mineralization was confirmed in the Lake Zone but by no means was the programme sufficient to fully

Table 2
Summary of Drilling Results, Indata Property. (all lengths and intercept depths in metres)



| Year | DDH | Depth(m) | Dip | Azimuth | Coordinate | From | To | Length | Au(ppb) | Ag(ppm) | Cu(\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 89-1-4 | 152.7 | -90 |  | 404N/553E |  | No | Intercept |  |  |  |
|  | 89-1-5 | 154.2 | -90 |  | 468N/580E |  | No | Intercept |  |  |  |
|  | 89-1-6 | 140.5 | -60 | 270 | 468N580E | 19.6 | 22.8 | 3.2 | 10 | 354.1 | 0.12 |
|  | 89-1-7 | 183.2 | -90 |  | 417N/350E | 110.4 | 112.4 | 2.0 | 1335 | 1.7 | 0.12 |
|  |  |  |  |  |  | 138.8 | 139.4 | 0.6 | 988 | 7.5 | 0.98 |
|  | 89-1-8 | 138.6 | -60 | 270 | 417N/349E | 106.1 | 107.0 | 0.9 | 653 | 1.1 | 0.07 |
|  |  |  |  |  |  | 125.1 | 126.1 | 1.0 | 872 | 0.2 |  |
|  | 89-1-9 | 209.1 | -90 |  | 290N/550E | 133.9 | 134.2 | 0.3 | 429 | 1.3 | 0.11 |
|  |  |  |  |  |  | 159.4 | 160.1 | 0.7 | 1903 | 7.2 | 0.11 |
|  |  |  |  |  |  | 161.6 | 162.4 | 0.8 | 4837 | 3.1 | 0.23 |
|  |  |  |  |  |  | 172.2 | 172.7 | 0.5 | 7209 | 6.7 | 0.67 |
|  | 89-1-10 | 283.2 | -60 | 295 | 505S1322E | 188.0 | 200.8 | 12.8 | 269 | 0.2 | $<0.05$ |
|  | 89-1-11 | 91.7 | -90 |  | 505S/322E | 48.8 | 49.8 | 1.0 | 138 | 10.5 | <0,05 |
|  | 89-1-12 | 175.6 | -60 | 270 | 402N/503E | 98.0 | 99.0 | 1.0 | 331 | 28.4 | $<0.05$ |
|  |  |  |  |  |  | 102.7 | 104.4 | 1.7 | 1825 | 23.3 | $<0.05$ |
|  | 89-\|-13 | 152.7 | -62 | 230 | 398N/505E | 92.7 | 93.7 | 1.0 | 261 | 0.5 | 0.06 |
|  |  |  |  |  |  | 108.2 | 109.3 | 1.1 | 5162 | 1.3 | <0.05 |
| 1996 | 96-1-1 | 108.8 | -60 | 048 | 255N/420W | 11.3 | 108.8 | 97.5 | <100 | $<0.2$ | 0.12 |
|  |  |  |  |  |  | 11.3 | 57.3 | 46.0 | $<100$ | $<0.2$ | 0.17 |
|  |  |  |  |  |  | 87.3 | 108.8 | 21.5 | $<100$ | $<0.2$ | 0.15 |
|  | 96-1-2 | 151.5 | -60 | 045 | 350N/380W | 3.0 | 151.5 | 148.5 | <100 | $<0.2$ | 0.09 |
|  |  |  |  |  |  | 17.0 | 38.0 | 21.0 | <100 | $<0.2$ | 0.13 |
|  | 96-1-3 | 73.2 | -50 | 315 | 350N/450W | 5.2 | 73.2 | 68 | <100 | $<0.2$ | 0.10 |
|  |  |  |  |  |  | 17.0 | 38.0 | 21.0 | <100 | $<0.2$ | 0.23 |
|  | 96-1-4 | 78.6 | -45 | 060 | 100N/025W | 8.2 | 78.6 | 70.4 | <100 | $<0.2$ | 0.09 |
|  |  |  |  |  |  | 14.0 | 43.6 | 29.6 | <100 | $<0.2$ | 0:15 |
|  | 96-1-5 | 84.2 | -75 | 060 | 100N/025W | 6.1 | 54.0 | 47.9 | <100 | $<0.2$ | 0.10 |
|  | 96-1-6 | 26.5 | -47 | 090 | 015N/100E |  | No | Intercept |  |  |  |
|  | 96-1-7 | 26.5 | -50 | 120 | 015N/100E |  | No | Intercept |  |  |  |
|  | 96-1-8 | 17.7 | -50 | 060 | 015N/100E |  | No | intercept | , |  |  |
|  | 96-1-9 | 83.8 | -60 | 120 | 100N/025W | 11.2 | 48.0 | 36.8 | <100 | <0.2 | 0.09 |

evaluate this zone. Drillholes $96-4,5$ and 9 intersected altered dykes of dioritic composition cutting andesitic volcanic rocks in which chalcopyrite and possibly chalcocite suggesting that a high level magmatic system may be defined in the poorly exposed area adjacent to the eastern side of Albert Lake.

## 6. DISCUSSION

### 6.1 Summary of Exploration Results to Date

Results of exploration of the Indata property may be summarized as follows.

1. A discontinuous zone of anomalous arsenic in soils, accompanied by some elevated gold, silver and copper values occurs mainly to the east of the baseline between lines 15 S and about 7 N where it continues to the northwest, west of the baseline. A broad zone of anomalous copper in soils occurs between about $13 S$ and 7 N ; east of the baseline this zone has associated anomalous arsenic but to the west of the baseline anomalous copper in soils is not normally accompanied by arsenic, suggesting a geochemical or mineral zonation in bedrock.
2. Induced polarization surveying indicates a zone of possible sulphide mineralization in bedrock coinciding more or less with the zone of anomalous copper in soils west of the baseline. Anomalous induced polanization response over ultramafic bodies is thought to reflect high magnetite content.
3. Driling results indicate that arsenic in soils to some extent reflects arsenopyrite-rich polymetallic quartz and quartz-carbonate veins with elevated gold and silver contents while a broad zone of anomalous copper in soils west of the baseline possibly reflects disseminated and fracturecontrolled chalcopyrite-pyrite mineralization of magmatic-hydrothermal origin.
4. Metal dispersion related to glacial transport does not appear to be a significant factor in the interpretation of soil geochemical survey results in that drilling has shown that high geochemical values in soils are generally reflected by sulphide mineralization in underlying bedrock. To some extent downslope metal dispersion may have occurred in areas of high topographic relief but insufficient drilling has been undertaken to prove this to be the case. There is the possibility that in low lying areas, especially adjacent to the eastern side of Albert Lake, that elevated metal content in soils may be of either hydromorphic origin or related to the scavenging effect of organic compounds in the soil. However, if this were the case, one would expect concentration of several metals, not just copper, for example, as shown in Figure 7.

### 6.2 Possible Mineral Deposit Models

Two possible models of ore deposits may be interpreted from results of work to date over the Indata property, that of a magmatic-hydrothermal porpyhry system and that of polymetallic mineralization related to a mafic - ultramafic "listwanite"-type model. The spatial relationships of i) arsenic and copper in soils and ii) polymetallic vein mineralization with elevated precious metals and disseminated copper mineralization with low precious metal content suggests that vein mineralization of relatively low temperature deposition is distal to the more centrally disposed, higher temperature, copper mineralization and the two types of mineral occurrences reflect a common genesis related to a high level intermediate to felsic intrusive body. This intrusion may in part be represented by the quartz monzonite body mapped in the south central part of the Indata property and interpreted to extend to the northwest under cover adjacent to Albert Lake (Figure 4). On the other hand, diorite dykes intersected in drillholes $96-1-4,5$ and 9 may suggest a dioritic pluton at depth in the Albert Lake area.

It is also possible, however, that the polymetallic vein mineralization is genetically unrelated to the disseminated and fracture-controlled chalcopyrite-pyrite mineralization. Chalcopyrite-pyrite mineralization may be related to intermediate and felsic intrusions of Topley intrusive Suite age (Upper Triassic to Lower Jurassic) or Francois Lake-age intrusions (Cretaceous) of which both intrusive suites are represented elsewhere in the region. The polymetallic vein mineralization seems to be spatially related to mafic - ultramafic contacts and veins and associated envelopes of silification and talcmagnesite alteration and, at least in some cases, are hosted by low angle, easterly-dipping structures which may possibly be thrust faults. This setting is similar to that of the Erickson camp in the Cassiar region, the Atlin deposits of nothern British Columbia, the Snowbird deposit near Fort St. James and to the Mother Lode veins of Califomia. Initially described by Buisson and Leblanc (1986) and extended to include the "listwanite model" deposits of British Columbia by Ash and Arksey (1990), this type of mineralization has been tectonically and genetically linked to ophiolite emplacement (Nixon and Hammack, 1991). However, in almost all regions where listwanite-type deposits occur, tonalite and dionite intrusions are also present, sometimes with elevated base and precious metal contents and it is conceiveable that magmatic-hydrothermal "porphyry-style" mineralization related to diorite bodies may be genetically related to listwanite-type mineralization in an evolving hydrothermal system developed during terrane collision.

At this stage there are insufficient data to link the two types of mineralization at Indata but spatially there is strong support for a common origin and that the distribution of metals may be explained by zonation within a single magmatic-hydrothermal system.

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## 8. CERTIFICATE

I, David Gerard Bailey of 4759 Mapleridge Drive, North Vancouver, British Columbia, hereby certify that:

1. I am a consultant geologist and principal of Bailey Geological Consultants (Canada) Ltd. with offices at the above address;
2. I am a graduate of Victoria University of Wellington, New Zealand (B.Sc. Hons. in geology, 1973) and of Queen's University, Kingston, Ontario (Ph.D. in geology, 1978);
3. I have practised the profession of geologist continuously since graduation;
4. I am a registered Professional Geoscientist of the Association of Professional Engineers and Geoscientists of British Columbia;
5. I hold memberships in the Society of Economic Geologists, the Association of Exploration Geochemists, the Canadian Institute of Mining and Metallurgy, the Australasian Institute of Mining and Metallurgy, the Geological Association of Canada and the Geological Society of America;
6. I supervised the 1996 diamond drilling programme described in this report

Signed at North Vancouver, British Columbia this twentith day of August, 1996.


## APPENDIX 1 <br> STATEMENT OF EXPENDITURES <br> 1996 DIAMOND DRILLNG PROGRAMME

## A1. EXPENDTTURE STATEMENT

1. Contract Fees and Salaries
Bailey Geological Consultants (Canada) Ltd; project supervision and report preparation; 15 days @ \$500.00/day ..... 7500.00
R.Yorston; core logging; 11 days @ \$300/day ..... 3300.00
V.Guinet; project preparation, expiditing and logistics;
21 days @ \$250/day ..... 5200.00
Eastfield Resources Ltd. (J.W. Morton); 4 days + expenses ..... 1587.34
Contract drilling 650.8 metres (Britten Brothers) ..... 44317.49
Core analyses; 181 samples and preparation ..... 4241.50
Hat Lake Logging Ltd. (drill pad preparation, snow removal and drillig moves) ..... 16157.50
2. Disbursements
Air travel (R.Yorston) ..... 391.11
Accomodation and meals ..... 5813.25
Materials and supplies ..... 2849.37
Truck rental (1 month @ \$1800.00/month) ..... 1800.00
Skidoo, camp and tools rentals (1 month @ \$500.00/month) ..... 500.00
3. Management Fee
Guinet Management Inc. (10\%) ..... 9365.76
4. GST
$7 \%$ on salaries and management fees ..... 1444.60
Total ..... 104467.92

## APPENDIX 2

## DIAMOND DRILL LOGS

1996 DIAMOND DRILLING PROGRAMME








|  |  |  |  |  | Collar | Inclination Bearing |  | PROPERTY Location |  | Length |  |  |  |  |  | $\text { Hole No. I } 96-5$ |  |  |  |  |  |  |  |  |
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## APPENDIX 3

## CERTIFICATES OF ANALYSES

1996 DIAMOND DRILLNG PROGRAMME
INDATA PROPERTY


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| SAMPLE\# | $\begin{array}{r} \text { Mo } \\ \text { pppn } \end{array}$ | $\begin{gathered} \mathrm{Cu} \\ \mathrm{ppm} \end{gathered}$ | $\begin{array}{r} \mathrm{Pb} \\ \mathrm{ppm} \end{array}$ | $\begin{array}{r} 2 n \\ \text { ppm } \end{array}$ | $\begin{array}{r} \mathrm{Ag} \\ \mathrm{ppm} \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Ni} \\ \mathrm{ppm} \end{array}$ | $\begin{array}{r} \text { Co } \\ \text { ppm } \end{array}$ | Mn ppm | $\begin{gathered} \mathrm{Fe} \\ \mathrm{Z} \\ \hline \end{gathered}$ | As ppm | $\underset{\text { ppm }}{\text { U }}$ | Au ppm | Th pprn | Sr ppm | $\begin{gathered} \mathrm{Cd} \\ \mathrm{ppm} \end{gathered}$ | Sb <br> ppm | $\begin{array}{r} \mathrm{Bi} \\ \text { ppm } \end{array}$ | $\begin{array}{r} v \\ \mathrm{ppm} \end{array}$ | $\begin{gathered} \mathrm{Ca} \\ \% \end{gathered}$ | $\begin{aligned} & P \\ & \% \end{aligned}$ | La ppm | $\begin{array}{r} \mathrm{Cr} \\ \mathrm{ppm} \\ \hline \end{array}$ |  | Ba ppm | $\begin{gathered} \mathrm{Ti} \\ \% \end{gathered}$ | $\begin{array}{r} \text { B } \\ \text { ppm } \end{array}$ | $\begin{gathered} \mathrm{Al} \\ \% \end{gathered}$ | $\begin{gathered} \mathrm{Na} \\ \boldsymbol{\%} \end{gathered}$ | $\begin{aligned} & K \\ & \% \end{aligned}$ | $\begin{array}{r} \mathrm{H} \\ \text { ppil } \end{array}$ | $\begin{aligned} & \text { Au** } \\ & \text { Ppb } \end{aligned}$ |
| 196-09-159 | , | 423 | 13 | 48 | <. 3 | 50 | 49 | 657 | 7.75 | 3 | $<5$ | $<2$ | $<2$ | 4 | . 8 | <2 | 3 | 206 | . 23 | . 013 | $<1$ |  | 5.60 | 71 | . 06 | $<3$ | 5.03 | . 02 | . 15 | $<2$ | <2 |
| 196-09-160 | 1 | 2052 | 8 | 38 | <. 3 | 40 | 42 | 647 | 6.81 | 2 | < 5 | $<2$ | $<2$ | 6 | . 8 | <2 | $<2$ | 188 | . 40 | . 013 | $<1$ |  | 5.54 | 32 | . 06 | $<3$ | 4.81 | . 02 | . 10 | $<2$ | 15 |
| 196-09-161 | 2 | 388 | 3 | 24 | <. 3 | 32 | 34 | 756 | 6.90 | 2 | $<5$ | $<2$ | $<2$ | 4 | . 9 | 3 | $<2$ | 230 | . 49 | . 013 | $<1$ |  | 4.85 | 37 | . 07 | <3 | 4.54 | . 04 | . 32 | $<2$ | 2 |
| 196-09-162 | $<1$ | 990 | $<3$ | 21 | <. 3 | 42 | 62 | 466 | 8.01 | 2 | $<5$ | <2 | $<2$ | 3 | . 8 | $<2$ | $<2$ | 222 | . 27 | . 013 | <1 |  | 5.65 | 37 | . 06 | $<3$ | 4.89 | . 03 | . 29 | <2 | 3 |
| 196-09-163 | 4 | 398 | 5 | 15 | <. 3 | 44 | 41 | 419 | 6.78 | $<2$ | $<5$ | $<2$ | $<2$ | 5 | . 2 | $<2$ | 3 | 199 | . 54 | . 015 | <1 |  | 4.66 | 30 | . 06 | $<3$ | 4.23 | . 04 | . 23 | $<2$ | 4 |
| 196-09-164 | $<1$ | 180 | 5 | 22 | < 3 | 40 | 24 | 455 | 4.13 | 6 | $<5$ | $<2$ | $<2$ | 9 | . 3 | 6 | <2 | 136 | 1.05 | . 025 | $<1$ |  | 2.33 | 21 | . 16 | $<3$ | 2.32 | . 09 | . 13 | <2 | 7 |
| 196-09-165 | 9 | 1030 | <3 | 19 | <. 3 | 51 | 43 | 378 | 7.45 | $<2$ | $<5$ | $<2$ | <2 | 5 | . 3 | $<2$ | $<2$ | 188 | . 39 | . 014 | $<1$ | 114 | 4.97 | 25 | . 06 | $<3$ | 4.44 | . 04 | . 17 | $<2$ | 10 |
| 196-09-166 | 4 | 220 | $<3$ | 23 | <. 3 | 59 | 38 | 519 | 5.78 | $<2$ | <5 | <2 | <2 | 6 | . 3 | 3 | $<2$ | 147 | . 51 | . 017 | $<1$ | 162 | 4.33 | 29 | . 10 | $<3$ | 3.94 | . 06 | . 21 | $<2$ | 3 |
| 196-09-167 | 43 | 1626 | <3 | 27 | <. 3 | 55 | 62 | 623 | 8.59 | 3 | < | $<2$ | $<2$ | 4 | 1.1 | 4 | $<2$ | 202. | . 23 | . 014 | 1 | 185 | 5.67 | 16 | . 06 |  | 5.02 | . 03 | . 09 | $<2$ | 14 |
| 196-09-168 | <1 | 1192 | $<3$ | 26 | . 7 | 44 | 38 | 376 | 6.04 | 3 | $<5$ | $<2$ | <2 | 6 | . 9 | 4 | $<2$ | 182 | . 48 | . 016 | 1 |  | 3.94 | 31 | . 04 | <3 | 3.33 | . 05 | . 25 | $<2$ | 19 |
| 196-09-169 | 1 | 677 | 4 | 26 | <. 3 | 35 | 35 | 369 | 5.62 | $<2$ | $<5$ | $<2$ | $<2$ | 7 | . 8 | $<2$ | $<2$ | 172 | . 55 | . 014 | $<1$ |  | 4.13 | 30 | . 05 |  | 3.75 | . 08 | . 17 | $<2$ | 7 |
| RE 196-09-169 | $<1$ | 689 | 3 | 26 | <. 3 | 37 | 38 | 372 | 5.90 | 2 | $<5$ | $<2$ | $<2$ | 7 | . 3 | 2 | $<2$ | 178 | . 58 | . 014 | $<1$ |  | 4.35 | 28 | . 06 | $<3$ | 4.02 | . 08 | . 18 | $<2$ | 12 |
| RRE 196-09-169 | <1 | 746 | $<3$ | 28 | . 3 | 37 | 41 | 415 | 6.37 | $<2$ | $<5$ | <2 | $<2$ | 7 | . 4 | $<2$ | $<2$ | 191 | : 62 | . 015 | <1 |  | 4.69 | 32 | . 06 | $<3$ | 4.32 | . 08 | . 19 | $<2$ | 15 |
| 196-09-170 | 2 | 1572 | $<3$ | 14 | <. 3 | 68 | 47 | 341 | 7.20 | 3 | $<5$ | $<2$ | $<2$ | 8 | . 7 | 6 | $<2$ | 184 | . 49 | . 015 | <1 |  | 4.39 | 47 | . 08 |  | 4.17 | . 06 | . 36 | 2 | 9 |
| 196-09-171 | $<1$ | 50 | <3 | 31 | <. 3 | 73 | 31 | 354 | 6.02 | $<2$ | $<5$ | $<2$ | $<2$ | 10 | $<.2$ | $<2$ | $<2$ | 165 | . 54 | . 015 | $<1$ |  | 4.59 | 50 | . 07 | $<3$ | 4.13 | . 07 | . 27 | $<2$ | 2 |
| 196-09-172 | $<1$ | 55 | $<3$ | 14 | $<.3$ | 77 | 30 | 311 | 4.99 | 3 | $<5$ | $<2$ | $<2$ | 30 | . 2 | $<2$ | $<2$ | 136 | 1.06 | . 016 | $<1$ |  | 4.01 | 61 | . 05 |  | 4.17 | . 20 | . 50 | $<2$ | 4 |
| 196-09-173 | $<1$ | 80 | $<3$ | 16 | <. 3 | 85 | 36 | 270 | 6.80 | 5 | 5 | $<2$ | $<2$ | 28 | . 3 | 2 | 2 | 170 | 1.16 | . 012 | <1 |  | 3.86 | 64 | . 06 | <3 | 4.45 | . 19 | . 36 | $<2$ | $<2$ |
| 196-09-174 | <1 | 95 | $<3$ | 16 | <.3 | 96 | 36 | 313 | 6.34 | 4 | $<5$ | $<2$ | $<2$ | 13 | . 3 | 4 | $<2$ | 140 | . 81 | . 011 | <1 | 258 | 4.14 | 17 | . 04 | <3 | 3.66 | . 09 | . 09 | $<2$ | $<2$ |
| 196-09-175 | <1 | 49 | $<3$ | 14 | <. 3 | 92 | 21 | 268 | 3.91 | 3 | $<5$ | <2 | $<2$ | 12 | <. 2 | 3 | $<2$ | 107 | . 79 | . 013 | <1 |  | 2.93 | 30 | . 04 | $<3$ | 2.64 | . 08 | . 18 | $<2$ | 4 |
| 196-09-176 | $<1$ | 51 | 4 | 9 | <. 3 | 37 | 17 | 263 | 3.99 | 4 | $<5$ | <2 | $<2$ | 14 | . 2 | $<2$ | $<2$ | 112 | 1.43 | . 012 | <1 |  | 1.98 | 34 | . 03 | $<3$ | 2.26 | . 10 | . 19 | $<2$ |  |
| 196-09-177 | $<1$ | 13 | $<3$ | 12 | <. 3 | 55 | 20 | 319 | 3.67 | 3 | $<5$ | $<2$ | $<2$ | 12 | . 2 | 3 | $<2$ | 93 | 1.04 | . 008 | $<1$ | 225 | 2.70 | 15 | . 03 | $<3$ | 2.48 | . 07 | . 08 | $<2$ | $<2$ |
| 196-09-178 | <1 | 8 | <3 | 8 | <. 3 | 32 | 15 | 214 | 3.16 | 2 | $<5$ | <2 | $<2$ | 10 | <. 2 | 3 | $<2$ | 112 | . 68 | . 014 | <1 | 70 | 1.84 | 30 | . 04 | <3 | 2.03 | . 11 | . 18 | $<2$ | $<2$ |
| 196-09-179 | $<1$ | 17 | $<3$ | 8 | <. 3 | 29 | 14 | 196 | 3.18 | 2 | $<5$ | <2 | $<2$ | 16 | <. 2 | 2 | $<2$ | 120 | 1.01 | . 015 | <1 |  | 1.58 | 53 | . 06 | <3 | 2.28 | . 18 | . 32 | $<2$ | $<2$ |
| 196-09-180 | 1 | 162 | 8 | 36 | <. 3 | 58 | 24 | 298 | 4.12 | 2 | < | <2 | $<2$ | 12 | <. 2 | 5 | $<2$ | 126 | . 74 | . 014 | <1 |  | 2.50 | 34 | . 05 | $<3$ | 2.54 | . 11 | . 16 | <2 | 2 |
| 196-09-181 | 1 | 22 | $<3$ | 13 | <. 3 | 30 | 22 | 317 | 4.67 | 3 | $<5$ | $<2$ | $<2$ | 8 | . 2 | 3 | <2 | 162 | . 68 | . 012 | <1 |  | 2.18 | 22 | . 05 | $<3$ | 2.21 | . 09 | . 11 | 2 | $<2$ |
| STANDARD C2/AU-R | 22 | 57 | 40 | 123 | 6.3 | 68 | 37 | 1191 | 3.92 | 42 | 20 | 8 | 37 | 53 | 21.6 | 16 | 21 | 74 | . 58 | . 102 | 43 | 65 | . 90 | 183 | . 08 | 24 | 1.90 | . 06 | . 15 | 12 | 498 |

ICP - . 500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH HATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B $U$ AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB $Z N$ AS $>1 \%$, AG $>30$ PPM \& AU $>1000$ PPB

- SAMPLE TYPE: CORE AU** ANALYSIS BY FA/ICP FROM 30 GM SAMPLE.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.
dant recerved: fete 221998 date report maitred: کeb $28 / 96$
SIGNED BY............toye, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS


ICP - . 500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA Ṕ LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS $>1 \%$, AG > $30 \mathrm{PPM} \& \mathrm{AU}>1000$ PPB
SAMPLE TYPE: CORE AU** ANALYSIS BY FA/ICP FROM 30 GM SAMPLE.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.
date received: feb 271996 date report mailed: Mauch $4 / 96$ signed by........ip.toye, c.leong, j.hang; certified b.c. assayers




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Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.


1 CP - . 500 GRAM SAMPLE IS DIGESTED HITH 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 SR CA P LA CR MG BA TI B $W$ AND LIMITED FOR NA $K$ AND AL
ASSAY RECOHMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS $>1 \%$, AG $>30 \mathrm{PPM} \& \mathrm{AU}>100 \mathrm{p}$ PPB
SAMPLE TYPE: CORE AU** ANALYSIS BY FA/ICP FROM 30 GM SAMPLE.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.


Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.


Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.


[^0]:    Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

