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SUMMARY REPORT MACLEOD LAKE CLAIM GROUP AND EASTMAIN RIVER LICENCES OF EXPLORATION

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SUMMARY REPORT
MACLEOD LAKE CLAIM GROUP
AND
EASTMAIN RIVER LICENCES OF EXPLORATION
FOR
WINDY MOUNTAIN EXPLORATIONS LTD.
AND
COCHISE RESOURCES INC.

Prepared by:

Norwin Geological Ltd.
October 23, 1992

MRN-GÉOINFORMATION 2000

GM 58050

EXECUTIVE SUMMARY

The Macleod Lake - Eastmain River property of Windy Mountain Explorations Ltd. and Cochise Resources Inc. is located approximately 275 kilometres northeast of Chibougamau, immediately adjacent to the Eastmain River at 52° 15'N latitude, 73°W longitude within the Chibougamau Mining Division, Quebec.

The property consists of 263 unpatented mining claims and two (2) surrounding licences of exploration 881 and 882 which collectively cover an area of approximately 495 km².

The property was originally acquired for its copper-molybdenum-precious metal potential as indicated by two (2) small copper-molybdenum showings. Subsequent work has outlined in the Main Zone a mineral inventory amenable to open pit mining of approximately 37,100,000 tonnes grading 0.44% copper, 0.05% molybdenum, 0.04 g/t gold and 3.68 g/t silver. Preliminary drilling in the South Zone has indicated approximately 1,000,000 tonnes of mineralization averaging 0.80% copper, 0.22% molybdenum, 0.74 g/t gold and 24 g/t silver available for open pit mining. Some of the higher grade material in the South Zone could possibly be mined by underground methods.

The initial exploration work indicated that the copper-molybdenum mineralization was associated with the contact between a granodiorite intrusive and the enclosing quartzo-feldspathic-biotite gneisses. The granodiorite has a contact length of approximately 60 kilometres and covers an area of approximately 200 km². It forms a broad, saucer-shaped body with a rippled or corrugated lower contact due to folding. Mineralization has been found along the lower contact and in the overlying granodiorite. It is considered that the lower contact of the granodiorite as well as the adjacent granodiorite over an area of approximately 125 km² is prospective for economically important mineralization within structural traps.

All the lithologic units in the region have been metamorphosed to the amphibolite grade of metamorphism and are of

Archean to Early Proterozoic Age. The quartzo-feldspathic-biotite gneisses which underlie most of the area, the granodiorite and the mafic metavolcanics which overlie the granodiorite to the east, have all been folded into a regional synform, the Lac Lavallette synform, plunging at 10° to 15° to the northeast.

Potassium-argon age determinations indicate that the gneisses have an age of approximately 2.6 Ga, the granodiorite an age of 2.5 Ga and the mineralization an age of 2.0 Ga. The mineralization age is similar to that for the Chibougamau copper-gold deposits (Davies et al, 1992).

Mineralization of economic interest consists of chalcopyrite with lesser amounts of bornite, chalcocite, molybdenite, pyrite and pyrrhotite. Gold and silver values that average 0.04 and 3.68 g/t respectively in the Main Zone are associated with the sulphides. In the South Zone and northeast of the Main Zone, initial sampling indicates gold values could average in the 0.5 to 0.75 g/t range and silver values in the 15-30 g/t range.

Exploration work with expenditures aggregating approximately \$4,000,000 has been carried out on the property since 1988. Expenditures have been for geological mapping, geochemical and geophysical surveys, an airborne electromagnetic and magnetic survey, prospecting and diamond drilling. Seventy-two (72) drill holes aggregating 9,475 metres have been completed evaluating the Main Zone and South Zone areas along approximately 4 kilometres of the granodiorite contact. During 1992 an additional 2,057 metres in 15 widely spaced holes were drilled along the contact in three (3) additional areas.

In addition to the Main Zone and South Zone, work to date has identified three (3) additional areas; southwest of the South Zone (Area B), northeast from the Main Zone (Area A) and 6 km² underlain by granodiorite along the southern contact in the Lac de la Corne area (Areas D and E). Two (2) previously identified areas, F and G which show anomalous molybdenum soil geochemical values have not been evaluated.

When the geological features and areas of known mineralization are projected down-plunge into true section, it is apparent that all areas of known mineralization occur along the lower granodiorite/gneiss contact or in the overlying granodiorite and that the mineralization is associated with folds/flexures within the granodiorite contact.

A mineralization model for the area has been developed based on the work by Windy Mountain, Cochise Resources and regional geological studies. It is considered that mineralization was emplaced during the tensional phase of the development of the failed arm of a triple junction (aulacogen) during Aphebian time, 2.0 Ga to 2.2 Ga (billion) years ago. Copper mineralization was emplaced along one or more northwest trending fault structures (conduits) beneath the impermeable granodiorite. At the granodiorite contact mineralization spread out laterally and upward and was concentrated in structural traps within the gneisses and in permeable (fractured) areas in the granodiorite.

It is considered that the Macleod Lake - Eastmain River area represents a new mining camp with the potential to host 100's of millions of tonnes of copper mineralization such as that currently indicated in the Main Zone. The potential for higher grade zones, probably of somewhat smaller size, is also present. There appears to be a mineralogical zoning in the area with the copper zones being either molybdenum-rich or gold and silver-rich.

Preliminary metallurgical test work carried out on split drill core from the Main Zone by the Centre de Recherches Minerales, Sainte-Foy, Quebec indicates that a copper concentrate grading 33.8% copper could be achieved using flotation techniques. A molybdenite concentrate averaging 40.8% Mo was produced and with further test work a concentrate grading over 50% could be obtained. No work was done on the distribution or recovery of gold and silver values.

Preliminary baseline environmental studies completed by Beak

Environmental have indicated that there are no apparent environmental problems within the area and that if any tailings were produced from the Main Zone, they would probably not be acid producing.

At the present time, there are no roads or infrastructure within the area. A road to the MSV gold-silver deposit, 60 kilometres to the east has been approved but construction has not started as yet. This will bring an all-weather road to within approximately 20 kilometres of the southwest corner of the Windy Mountain-Cochise Resources licences.

The property lies within the area which is in dispute between the government of Quebec and the aboriginal peoples. Although it does not fall into the area specifically in dispute it is affected by the conflict. The companies have been working closely with the Cree community at Mistassini and have received on-going support from them with regard to the possibility of the development of a mining enterprise in the Macleod Lake area. They are supportive of development and have approved the proposed road construction and development for the MSV deposit to the east of the Macleod Lake area.

RECOMMENDATIONS

1. Significant mineralization has been identified by drilling in the Main Zone and the South Zone. Three (3) additional areas of economic potential have also been identified and a programme of exploration is recommended to further evaluate all of these areas.

The objective of the exploration work is to outline as quickly and as efficiently as possible the minimum tonnage of porphyry-copper type mineralization at the appropriate grade that would enable the property to be placed in production. A programme of geological mapping, geophysical work and diamond

drilling is recommended to meet this objective.

2. Five (5) groups of airborne EM anomalies within the Upper - Eastmain River greenstone belt have been shown to be due to massive to disseminated sulphides carrying anomalous values in zinc, copper and silver. Additional work to further assess the potential of these highly attractive volcanogenic massive sulphide targets is recommended.

Windy Mountain and Cochise Resources Inc. carried out an airborne magnetic and electromagnetic survey on licences of exploration 881 and 882 in 1990. In the eastern part of licence 882, a large number of EM conductors were identified of which 45 were ground-checked on a preliminary basis. The five (5) groups of anomalies recommended for further work are associated with mafic to felsic metavolcanics and are indicative of the potential for volcanogenic massive sulphide (VMS) deposits in this region.

3. A total expenditure of \$3,000,000 is recommended in three (3) phases over three (3) years. The 1993 phase 1 programme costing approximately \$1,000,000 is a three (3) stage programme of winter geophysical surveys and summer field work to be followed by a drilling programme in late summer and early fall.

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1. INTRODUCTION

The Macleod Lake claim group and the Eastmain River licences of exploration of Windy Mountain Explorations Ltd. and Cochise Resources Inc. are located approximately 275 kilometres northeast of Chibougamau, immediately adjacent to the Eastmain River at 52° 15'N latitude, 73°W longitude within the Chibougamau Mining Division, Quebec (Figure 1).

The properties consist of 263 unpatented mining claims and two (2) surrounding licences of exploration, 881 and 882 which collectively cover an area of approximately 495 km² (Figure 2).

The property was originally acquired for its copper, molybdenum and precious metal potential as indicated by two (2) small copper-molybdenum showings. They were subsequently explored and drilled and this work resulted in the discovery of two (2) mineralized zones, the Main Zone and the South Zone. Within the Main Zone, a mineral inventory of approximately 37,100,000 tonnes grading 0.44% copper, 0.05% molybdenum, 0.04 g/t gold and 3.68 g/t silver has been identified. The South Zone, which lies approximately 1.7 kilometres south of the Main Zone, is indicated by surface mineralization and four (4) drill holes. A preliminary tonnage of 1,000,000 tonnes, available for open pit mining, has been calculated for this zone.

Initial work indicated that the copper-molybdenum mineralization was associated with the contact between a granodiorite intrusive and the enclosing quartz-feldspar-biotite gneisses. Subsequently, it was established that the granodiorite had a contact length of approximately 60 kilometres and underlay approximately 200 km². Work over the past year has indicated that the granodiorite is also mineralized and shows areas of typical porphyry copper-type alteration and mineralization. Earlier work in the area of the Main Zone demonstrated that IP surveys are very effective in outlining drill targets once potential areas of mineralization have been identified.

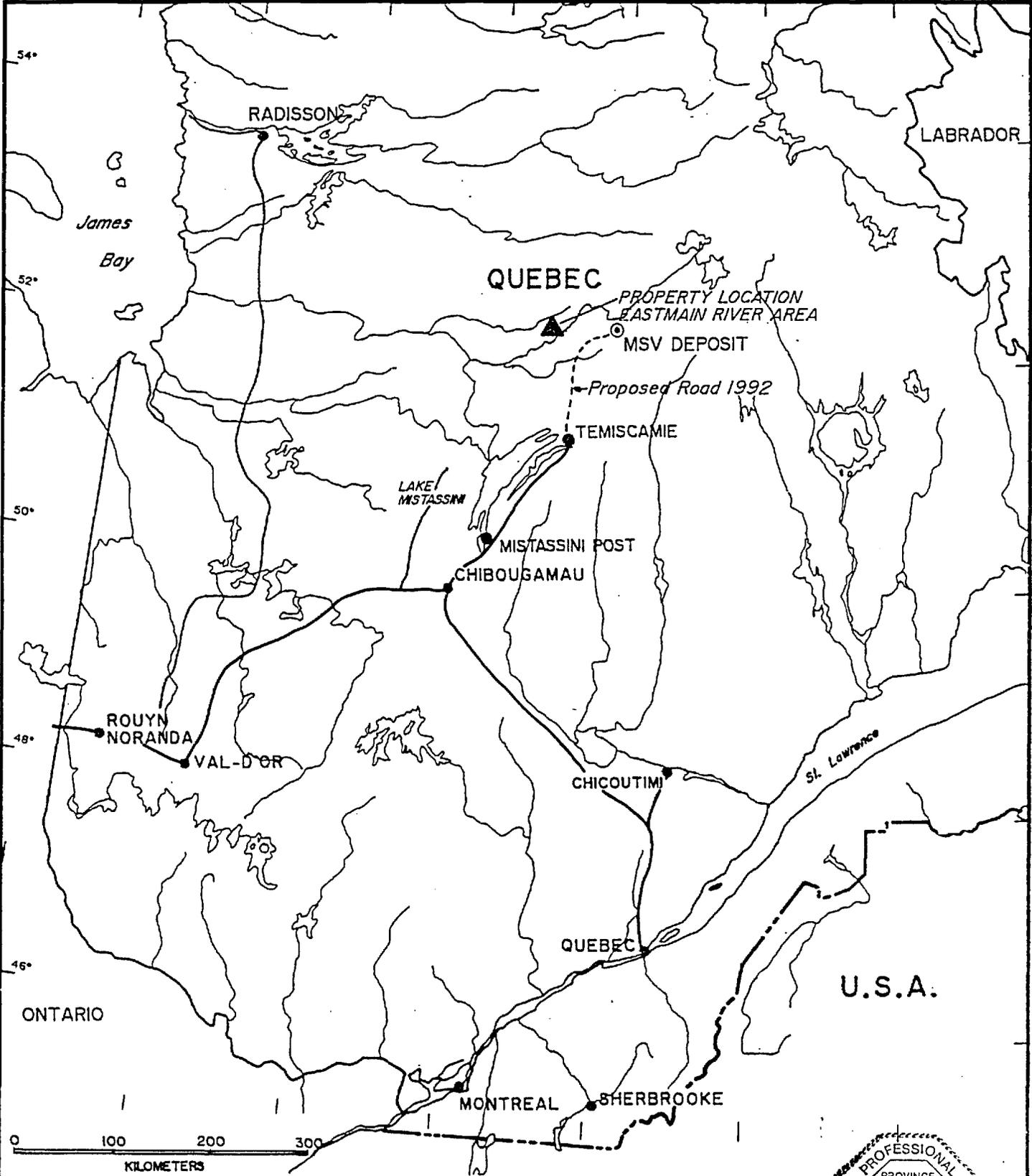
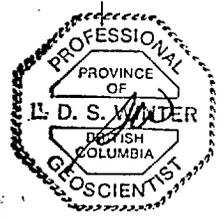


FIGURE 1

PROPERTY LOCATION MAP
 WINDY MOUNTAIN EXPLORATIONS LTD.
 COCHISE RESOURCES INC.



The following report summarizes the results of the work from September, 1988 through September, 1992. Using this information in conjunction with government mapping in the region, a model for the mineralization and recommendations for additional work are presented.

2. PROPERTY

2.1 PROPERTY DESCRIPTION

The property consists of 263 mineral claims and two (2) surrounding licences of exploration 881 and 882 held by Windy Mountain Explorations Ltd. Cochise Resources Inc. has earned a 50% interest in the two (2) licences of explorations except for an 18 x 14 kilometre excluded area adjacent to the Windy Mountain claims (Figure 2). The details of the claim group and the licences of exploration are presented in Section 2.1.1 and 2.1.2 below.

2.1.1 CLAIM GROUP

The Macleod Lake claim group currently consists of 263 claims within township 2330, Chibougamau Mining District, Quebec as shown in Figure 2. A list of the claims is presented in Table 1. The 54 claims of the 4620 series were staked by the vendors of the property in 1988 while those of the 5052 series were added by Windy Mountain Explorations Ltd. in November and December of 1989. An additional 159 claims, the 5046 series, were staked by Windy Mountain Explorations Ltd. in July and early August, 1990.

Table 1
Macleod Lake Property
Windy Mountain Explorations Ltd.
Claim Group Description

Original 54 Claims

<u>Licence No.</u>	<u>Claims</u>	<u>No. of Claims</u>
462043	1 - 5	5
462044	1 - 5	5
462045	1 - 5	5
462046	1 - 5	5
462047	1 - 5	5
462048	1 - 5	5
462037	1 - 5	5
462038	1 - 5	5
462039	1 - 5	5
462040	1 - 5	5
462041	1 - 4	<u>4</u>
	Total	54

The particulars of the 50 mineral claims staked in November and December, 1989 are as follows:

<u>Claims Numbers</u>	<u>No. of Claims</u>
5052101 to 5052150 inclusive	50

The additional 159 claims staked in July and August, 1990 are as follows:

<u>Claims Numbers</u>	<u>No. of Claims</u>
5046359 to 5046517 inclusive	<u>159</u>

TOTAL CLAIMS 263

- A GRANODIORITE
- B QUARTZ-FELDSPAR-BIOTITE GNEISS
- C METAVOLCANICS

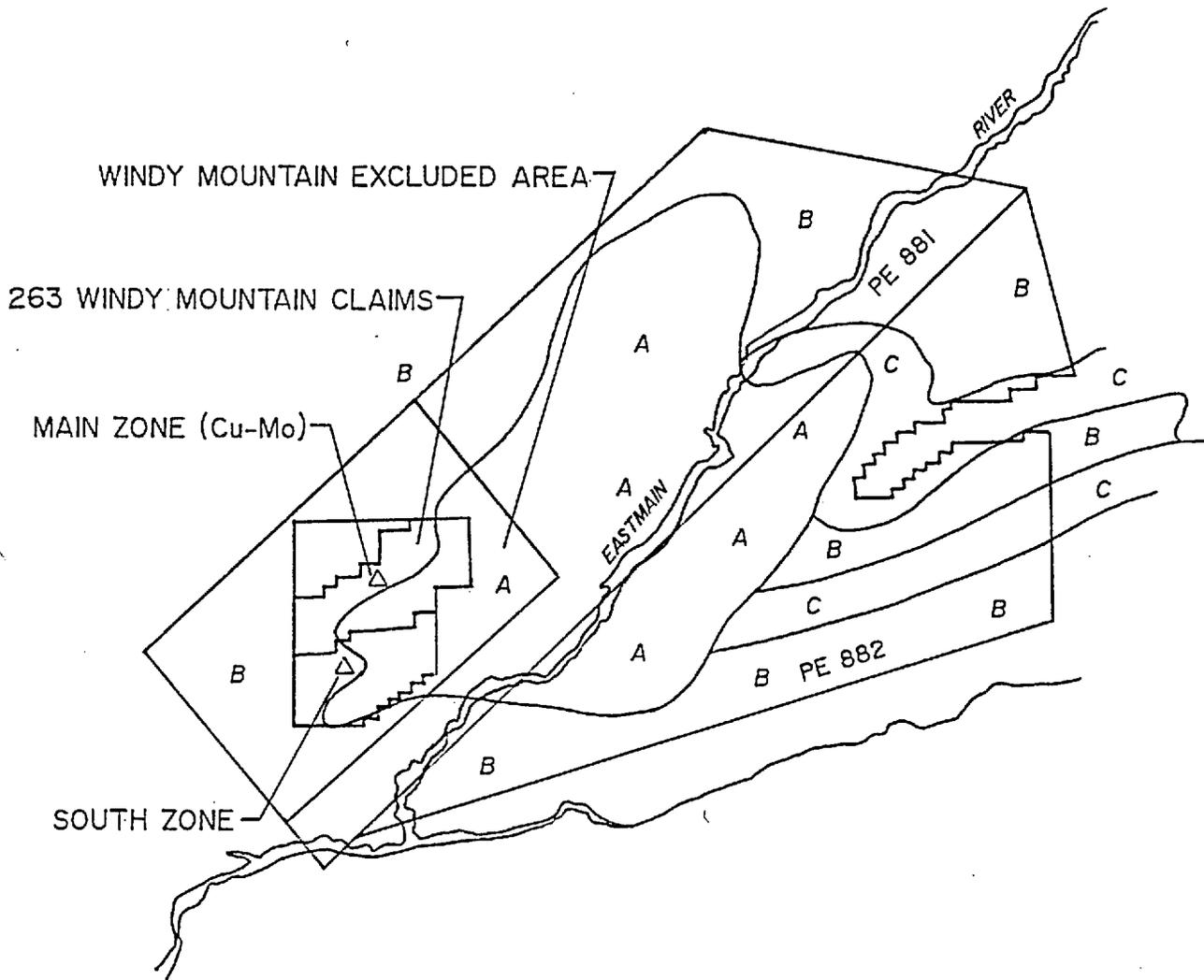


FIGURE 2

WINDY MOUNTAIN EXPLORATIONS LTD.
 COCHISE RESOURCES INC.
 EASTMAIN PROJECT JOINT VENTURE

MACLEOD LAKE PROPERTY AND
 LICENCES OF EXPLORATION

CHIBOUGAMAU MINING DISTRICT QUEBEC
 BY NORWIN GEOLOGICAL LTD.

NTS: 33 A

DATE: OCT., 1992



2.1.2 LICENCES OF EXPLORATION

Surrounding the Macleod Lake claim group are two (2) licences of exploration 881 and 882 covering an area of approximately 452 km². The particulars of the two (2) licences are presented in Table 2 and they are illustrated in Figure 2.

Table 2
Eastmain River Area
Licences of Exploration 881 and 882

<u>Licence</u>	<u>Current Area km²</u>	<u>Recorded Assessment Credits</u>	<u>Anniversary Expiry Date</u>
881	269.34	\$271,670	Oct. 1994 (1)
882	<u>183.11</u>	\$312,839	Oct. 1994 (1)
Total	452.45		

- (1) Require additional credits of approximately \$1,000/km² between October, 1993 and October, 1994 to hold licence beyond that date.

Two other licences, 883 and 893 were originally acquired but following the initial exploration work they were dropped due to the indicated low potential for the areas.

A licence fee of \$100/km² is payable on the anniversary date of each licence.

2.2 LOCATION AND ACCESS

The property is located at 52° 10'N latitude, 73° W longitude approximately 200 kilometres north-northeast of Baie du Poste, Lake Mistassini, Quebec and 275 kilometres north-northeast of Chibougamau, Quebec (Figure 1).

The property can be accessed only by air from either the Propair base at Temiscamie at the northern end of Lake Albanel or by Waasheshkun Airways Reg'd Service from Baie du Poste, Mistassini at the south end of Lake Mistassini. An alternative is by helicopter from Chibougamau approximately 100 km south of Baie du Poste. Macleod Lake in the northwest part of the property, the Eastmain River and Lac de la Corne to the southeast are all accessible to both Beaver and Otter aircraft.

2.3 TOPOGRAPHY AND VEGETATION

The area is generally flat with minor ridges and depressions controlled by the bedrock geology and the surficial glacial deposits. Approximately 30% of the property is covered by lakes and swamps. The major topographic feature is the Eastmain River which cuts through the southeastern part of the licences of exploration.

The property is beyond the limits of commercial timber and for the most part the forest cover consists of small jackpine and spruce.

2.4 SERVICES

There are no services or infrastructure in the immediate area with the closest community being at Baie du Poste, Lake Mistassini approximately 200 kilometres to the south. The closest road is at the northeast end of Lake Albanel at the Temiscamie River. This is approximately 125 kilometres south of

the property. Plans have been announced by MSV Resources to put in a winter road, which will subsequently be upgraded to an all-weather road, to their copper-gold deposit which is approximately 60 kilometres east of the Windy Mountain/Cochise Resources Inc. properties. When this road is completed, it would be within 20 kilometres of the southeast corner of the licences of exploration. A second road leading north from Chapais, west of Chibougamau provides access to the Frotet Lake area which is approximately 150 kilometres southwest of the Macleod Lake property.

3. BACKGROUND AND PREVIOUS WORK IN THE AREA

The initial property of 54 claims was staked in 1988 by W. Holmstead, Kingston, Ontario and E. Canova and W. Brack of Montreal to cover two (2) showings of chalcopyrite-molybdenite mineralization.

The claim group was subsequently acquired by Windy Mountain Explorations Ltd. in the fall of 1988 and at that time a limited exploration programme consisting of line-cutting, ground geophysical surveys, geological mapping and sampling was carried out. This work indicated the property had the potential to host a significant body of base metal mineralization and further work was recommended (Winter, 1988). During the summer of 1989, a programme of geological mapping, prospecting and geochemical sampling as well as a limited diamond drilling programme (930 metres) was carried out. Based on the favourable results of this programme an additional diamond drilling programme of 3,808 metres was completed during the months of January, February and March, 1990. The 35 holes completed by the end of March, 1990 indicated a significant body of disseminated copper and molybdenum mineralization with minor gold and silver values over a strike length of approximately 1,000 metres, to a depth below surface of approximately 160 metres and across widths of up to 80

metres. Based on the drilling results, a preliminary mineral inventory of over 30,000,000 metric tonnes was calculated with an average grade of 0.48% copper, 0.07% Mo, 0.05 g/t gold and 4.31 g/t silver (Norwin Geological Ltd, 1990).

As a result of the positive results obtained during the 1989 field work on the Windy Mountain Explorations Ltd. claim group, Windy Mountain applied for and received from the Quebec government three (3) exclusive exploration permits licences 881, 882 and 883 covering an area of 935 km² surrounding the Windy Mountain claim group. Subsequently, a fourth licence of exploration, 893 consisting of an additional 390 km², was added to the property during the summer of 1990. Licence 883 was abandoned as of the anniversary date in October, 1990 and licence 893 was abandoned in July, 1992 due to poor results from the exploration work.

Windy Mountain Exploration Ltd. entered into a farm-in agreement in early 1990 with Cochise Resources Inc. whereby Cochise Resources Inc. could earn a 50% interest in licences of exploration 881, 882, 883 and 893 (excluding an area 14 km x 8 km in licence of exploration 881) by carrying out certain specified exploration work on the licences by October 31, 1992.

The three (3) licences of exploration 881, 882 and 883 as well as the Windy Mountain claims were covered by an airborne geophysical survey flown by Aerodat Ltd. in early 1990. As a follow-up to the airborne survey, Cochise Resources Inc. funded a ground follow-up programme during September of 1990 to further investigate the three (3) licences. The work consisted of following up airborne anomalies identified by the Aerodat survey and mapping of the licences on a reconnaissance basis using helicopter support. The objective of this work was to define in general terms the outline of the granodiorite body and to prospect as much as possible the area of the contact. This work indicated that the granodiorite body was much larger than previously thought and that it had an area of approximately 200

km² and a contact length of approximately 60 linear kilometres. The airborne follow-up also identified five (5) areas in licences 881 and 882 with the potential to host volcanogenic massive sulphide deposits associated with the Upper Eastmain River greenstone belt immediately east of the granodiorite.

The work completed on the Windy Mountain claim group and the licences of exploration to date is summarized chronologically below.

1988:

- Staking of original 54 claim property by W. Holmstead, E. Canova and W. Brack.
- Line-cutting on original 54 claims.
- VLF and total field magnetometer surveying of entire 54 claim block excluding areas covered by water at 100 m line spacing by Exsics Explorations Limited (Grant, 1989).
- Dipole-dipole IP survey over the area of the known showings at 50 m line spacing by Exsics Exploration Limited (Grant, 1989).
- Sampling and geological mapping of two showings (Winter, 1988).

1989:

- Geologic mapping at 1:5,000 scale of original 54 claims (Brack 1989).
- Prospecting of selected areas outside of property (Brack, 1989).
- Soil geochemical survey of majority of 54 claim property (Pilkey, 1989).
- Diamond drilling of 930 metres in eleven (11) holes, numbers 89-ML-01 to 89-ML-11 (Pilkey, 1990).
- Geological mapping at 1:1,000 scale of area hosting known occurrences (Prior, 1989).

- Staking of an additional 50 claims contiguous to the original 54 claim block.
- Gradient IP survey over original 54 claim block at 200 m line spacing including areas covered by water (ice) (Winter, 1990).

1990:

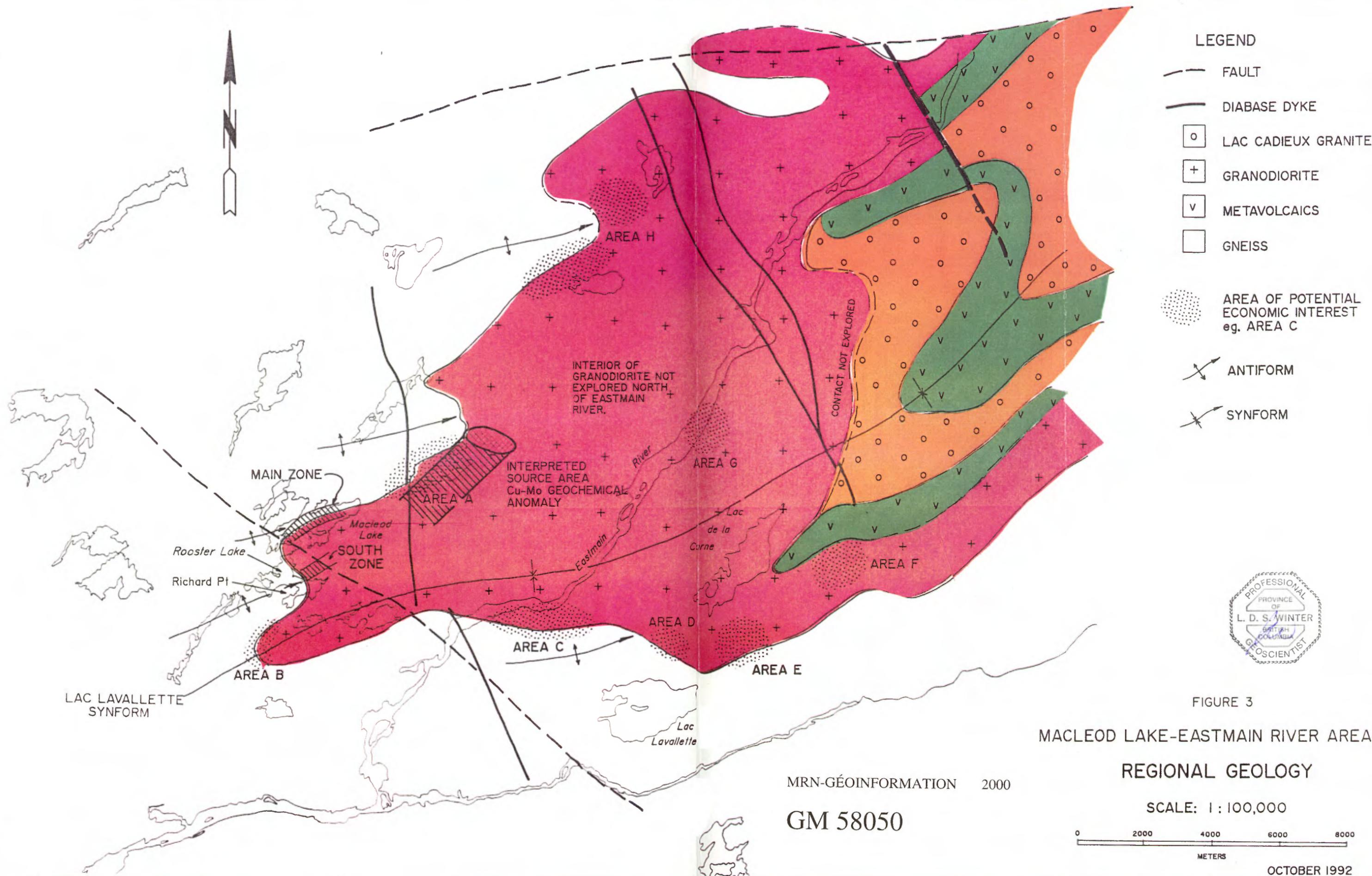
- Air photo lineament study (Brack, 1990).
- VLF, total field magnetometer and gradient magnetometer survey of original 54 claims, including areas covered by water (ice) (Norwin Geological Ltd., 1990).
- Line-cutting.
- Phase 2 diamond drilling - 3,808 metres in 24 holes, numbers 90-ML-12 to 90-ML-35, (Prior, 1990).
- Survey of drill hole collar locations (Clement, 1990).
- Helicopter EM, VLF and magnetometer survey over Licences of Exploration and the Macleod Lake property at 125 m line spacing by Aerodat (Podolsky, 1990).
- Dipole-dipole IP survey, primarily in Rooster Lake (including Richard Point) area (Gaucher and Tshimbalanga, 1990).
- Geological mapping along strike of the Main Zone at a scale of 1:2,500 (McAuley, 1990).
- Geological mapping of property outside of original 54 claim block at scale of 1:5,000 (Pilkey, 1990).
- Total field magnetometer and VLF survey in area of amphibolites and associated pyrrhotite showings near west end of Richard Point (Pilkey, 1990).
- Phase 3 diamond drilling - 2,544.5 metres in 22 holes, 90-ML-36 to 90-ML-57 (McAuley, 1990).
- Helicopter supported reconnaissance exploration within licences of exploration 881, 882 and 883 (Prior, 1990).
- Acquisition of licence of exploration 893 and abandonment of licence of exploration 883.

1991:

- Phase 4 diamond drilling - 2,192.5 metres in 15 holes, 91-ML-58 to 91-ML-72 (Prior, 1991a).
- Reconnaissance mapping and prospecting of licence of exploration 893 with abandonment of 161 km² in July, 1991.
- Reconnaissance geological mapping, prospecting and B-horizon soil geochemical sampling of the granodiorite contact. All of the contact was covered except for approximately 10 km in the eastern part and 5 km in the southwestern part (Prior, 1991b).
- Line-cutting, soil sampling and geological mapping of an area covering two airborne anomalies and copper, molybdenum and tungsten mineralization south of Lac de la Corne in licence 882 (Prior, 1991b).

1992:

- Line-cutting, soil sampling, IP surveys on three (3) grids along 25 km of contact in the southern, southwestern and northeastern part of the granodiorite.
- Phase 5 drilling: 2,057 metres in 15 holes on widely spaced targets in the southern, southwestern and northeastern parts of the granodiorite. Holes 92-ML-73 to 92-ML-79 and 92-EP-01 to 92-EP-08.



- LEGEND**
- FAULT
 - DIABASE DYKE
 - LAC CADIEUX GRANITE
 - GRANODIORITE
 - METAVOLCAICS
 - GNEISS
 - AREA OF POTENTIAL ECONOMIC INTEREST eg. AREA C
 - ANTIFORM
 - SYNFORM

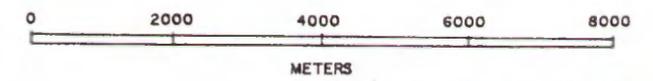


FIGURE 3
 MACLEOD LAKE-EASTMAIN RIVER AREA
 REGIONAL GEOLOGY

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GM 58050

SCALE: 1 : 100,000



OCTOBER 1992

4. GEOLOGY

The Macleod Lake - Eastmain River project area is situated within the Superior Province of the Canadian Shield approximately 100 km northwest of the Grenville Front and 250 km north-northeast of the Abitibi Subprovince. The geology of the region encompassing the project area is dominated by medium to high grade Archean gneisses overlain to the east by the Archean Upper Eastmain River Greenstone Belt. The Upper Eastmain River Greenstone Belt is in turn unconformably overlain to the southeast by Proterozoic clastic sediments of the Otish Basin. Intrusions of Archean age, predominantly felsic to intermediate, occupy large areas within the gneissic terrain (figure 3). The gneisses are also cut by northwesterly to northerly trending Proterozoic diabase dykes. All of the Archean supracrustal lithologies have been subjected to regional amphibolite grade metamorphism (Couture and Guha, 1990; Hocq, 1985; Eade, 1966; Winter, 1990, Prior, 1991b).

The basement gneissic complex is composed predominantly of biotite and hornblende gneisses which may contain hypersthene, cordierite and sillimanite. Within the gneisses small lenses of amphibolite, hornblendite, pyroxenite and peridotite occur locally. Major intrusions within the gneisses, predominantly granites, granodiorites and tonalites, commonly occupy areas of several 10's of square km's. Small bodies of pegmatite also intrude the gneisses. The dominant structural trend within the gneissic terrain near the Eastmain River is east to east-northeast (Couture, 1987; Hocq, 1985; Winter, 1990, Prior, 1991b).

The Upper Eastmain River Greenstone Belt, which rests upon the basement gneissic complex, is composed of three elongate arms which together form a crude "T" shape (Figure 3). The southeast arm, which forms the shaft of the "T", is approximately 40 km long and is discordantly overlain by Proterozoic clastic

sediments of the Otish Basin at its southeastern end. The greenstone belt is composed of two distinct lithologic groups of unknown thicknesses as described by Couture and Guha, 1990.

"The Bohier sequence consists primarily of two aluminous metasedimentary units conformably resting upon a migmatitic biotite paragneiss sequence. The two metasedimentary units consist of a polymictic metaconglomerate and a sequence of fine-grained metapelites. The Rene sequence is composed of three metavolcanic units of ultramafic to felsic composition. The stratigraphic relationship between the two rock groups is not clear, as the Rene metavolcanics have been thrust over the Bohier metasediments".

The Eastmain River gold deposit of MSV Resources occurs within a high strain zone in Rene metavolcanics in the southeastern branch of the greenstone belt. Ore zones, consisting of highly deformed and laminated auriferous quartz-sulphide veins, are hosted by a distinctive package of mixed ultramafic, mafic and felsic volcanic rocks from 10 to 45 m wide known as the "mine series" within a sequence of predominantly mafic metavolcanics (Couture and Guha, 1990). Mineral reserves are estimated to be over 1 million tonnes at a grade of 15.3 g/t Au, 15.1 g/t Ag and 0.27% Cu over an average width of 2 m (Thiboutot and Keech, 1988, cited in Couture and Guha, 1990).

Mapping by Hocq (1985) indicates the presence of a regional synform plunging to the east-northeast at 10°-15°, the synclinorium du Lac Lavallette, trending along the southwestern arm of the Upper Eastmain River Greenstone Belt and extending in a west-southwest direction into the basement gneisses. However, this feature is not indicated on more recent mapping by Couture (1987). Air photo patterns (see frontispiece of Hocq, 1985) and field mapping and diamond drilling for Windy Mountain Explorations Ltd. and Cochise Resources Inc. in the gneisses west of the greenstones, support the interpretation of a synformal structure (Prior, 1991b; Pilkey, 1990). Figure 4 is a down-

plunge true cross-section of this structure.

The granodiorite was initially mapped as granodiorite fels and in this report is informally referred to as the MacLeod granodiorite. This granodiorite, which includes both hornblende dominant granofels and biotite dominant foliate phases, is not shown on government maps of the area (government mapping efforts in the region have generally focused on the greenstones). Helicopter reconnaissance mapping undertaken during the Eastmain River project shows that the MacLeod granodiorite extends over an area approximately 20 km in length in an east-northeast direction by 15 km in width (Prior, 1991b). Due to its potential economic significance the MacLeod granodiorite has been incorporated into the regional geology map (Figure 3).

4.1 LITHOLOGIES

Mapping of the claims and the licences of exploration has identified the lithologies listed below in Table 3 and shown on the geological map of the area (Accompanying Map 1).

Main Lithologies, Macleod Lake - Eastmain River Area

1. Fine Grained Quartz-Feldspar-Biotite Gneiss And Foliate
 - 1a. Quartz-Feldspar-Biotite Gneiss
 - 1b. Quartz-Feldspar-Hornblende-Biotite Gneiss
 - 1c. Quartz-Feldspar-Biotite Foliate
 - 1m. Migmatitic Quartz-Feldspar-Biotite Gneiss
2. Metavolcanics
 - 2a. Amphibolite
 - 2b. Hornblende Gneiss:
 - 2c. Mafic Volcanic
 - 2d. Intermediate Volcanic
 - 2e. Felsic Volcanic
 - 2f. Chemical Sediment
 - 2cr. Mafic Volcanic Breccia/Conglomerate
3. Schist
 - 3a. Amphibole-Biotite-Chlorite Schist
 - 3b. Biotite Schist
 - 3c. Chlorite Schist
 - 3d. Sericite Schist
4. MacLeod Granodiorite (Granodiorite Fels)
 - 4a. Hornblende Granofels
 - 4b. Hornblende-(Biotite) Granofels
 - 4c. Hornblende-Biotite Granofels/Foliate
 - 4d. Biotite-(Hornblende) Foliate
 - 4e. Biotite Foliate
5. Granite
 - 5a. Biotite Granite
 - 5b. Porphyritic Biotite Granite
 - 5c. Magnetic Hornblende Quartz Syenite
 - 5z. Xenolith Bearing Biotite Granite
6. Leucogranite
 - 6a. Pegmatite
 - 6b. Granitoid (Alaskite)
 - 6c. Aplite
7. Migmatite
8. Diabase

4.2 FIELD RELATIONSHIPS

Large scale field relationships between the various lithologies within the Eastmain River project area are illustrated on the geology map (Accompanying Map 1). This map combines the observations made during 1989 and 1990 in the area of the MacLeod Lake property and data from the 1990 and 1991 reconnaissance programmes on Licences 881 and 882 (Prior, 1990, 1991b).

Diabase is the youngest rock type on the legend and has been observed cutting leucogranite, MacLeod granodiorite and gneiss.

Granitoid (alaskite), commonly associated with pegmatite, was observed intruding all rock types except diabase but generally does not form discreet mappable units at 1:20,000 scale.

Several metavolcanic terrains are present within the map area with the largest being the western extremity of the Upper Eastmain River Greenstone Belt. The metavolcanics generally exhibit an easterly to northeasterly trend and are bordered by biotite gneiss, MacLeod granodiorite and biotite granite.

Biotite granite is most prevalent in the eastern part of the map area where it appears to intrude metavolcanics of the Upper Eastmain River Greenstone Belt. Granite in this area, which includes both non-porphyritic and feldspar porphyritic varieties, corresponds with that mapped as Lac Cadieux granite by Hocq (1985). However, non-porphyritic biotite granite also occurs to the west of Hocq's Lac Cadieux granite. Field evidence suggests that biotite granite is intrusive into the MacLeod granodiorite.

MacLeod granodiorite is the dominant unit within the central portion of the map area. Outcrop and drill core observations indicate that it is in sharp contact with the surrounding biotite gneisses, biotite foliates and migmatitic gneisses. Outcrops of granodiorite may be either hornblende dominant, generally lineated, granofels or biotite dominant, foliated, foliates. The

northwestern and central parts of the MacLeod granodiorite are generally hornblende rich whereas the southeastern part of the unit, in the Lac de la Corne area, is biotite dominant.

Biotite gneisses, biotite foliates and migmatitic gneisses are the main lithologies to the north, west and south of the MacLeod granodiorite.

4.3 ALTERATION

Visible alteration at the MacLeod Lake Main Zone, as studied in drill core, is relatively restricted with the exception of the addition of disseminated sulphides (Prior, 1990). Surface observations in the Main Zone area detect little in the way of significant silicate, carbonate or oxide alteration outside of the exposures of the siliceous zone. The addition of disseminated sulphides in trace quantities can be observed in some outcrops of the Main Zone wallrock.

Alteration types encountered during mapping and prospecting outside of the MacLeod Lake area are outlined below:

Chlorite: Generally occurs as an alteration of mafic phases (hornblende and less commonly biotite). Occurs locally in all major lithologic types except diabase. Where present, intensity of chloritization is generally weak to less commonly moderate. Strong chloritization is restricted to the chlorite schists.

Sericite: Sericite is relatively uncommon and generally occurs as a weak pervasive alteration associated with felsic metavolcanics. One outcrop of sericite schist, in which sericite is the major component, is located east of Lac de la Corne

Biotite: Biotite is a fairly ubiquitous phase within most lithologies of the Eastmain River project area (except diabase) and it is therefore difficult to distinguish alteration biotite

from background (metamorphic) biotite. However, the abundant biotite present in biotite-rich schists must be in part metasomatic.

Epidote: Weak epidotization is a relatively common alteration within hornblende-bearing granofels and biotite granite. The epidote occurs along hairline fractures or as a spotty alteration.

Calcite: Calcite is locally a minor constituent of all the major lithologies except diabase. It occurs along hairline fractures, along foliation planes and as a spotty alteration.

Hematite: Hematite is most prevalent within rocks of the MacLeod granodiorite where it occurs in minor amounts along hairline fractures and as a spotty alteration.

Quartz: Unmineralized quartz veins and veinlets occur infrequently in most of the major lithologies except diabase. A small lens of coarse grained quartz with minor feldspar and trace chalcopyrite and molybdenite occurs south of Lac de la Corne.

Resistive Ridges: A small number of outcrops in the MacLeod Lake and Lac de la Corne areas contain subtle ridges up to a few centimetres wide and a centimetre high. The resistive ridges have a northerly trend and some can be observed to contain a central hairline veinlet of quartz and/or epidote. Presumably all of the resistive ridges are the result of silica and/or epidote addition to the immediate wallrock of northerly trending fractures.

4.4 STRUCTURE

The Lac Lavallette synform plunging at -10° at 060° is the main structural feature underlying the Macleod Lake-Eastmain River property. The gneissic and metavolcanic units form the limbs of the structure with the Macleod granodiorite occupying the axial region. Small scale recumbant-type folds plunging northwest at 15° have been observed however, no major structures of this configuration have been identified to date.

An airphoto lineament study (Brack, 1990) has identified four (4) dominant lineament directions; northwest, northeast to east-northeast, east-west and north-south. The northwest trend correlates with observed faulting and the well developed set of diabase dykes. North-south structures have also been observed in outcrop. The northeast and east-west trends appear to offset the granodiorite contact in places although actual faulting has not been observed.

The diabase dykes which occupy the northwest set of structures have been named the Mistassini Set and have been dated by Fahrig et al., (1986). They consider that the Mistassini dyke swarm was emplaced between 2.0 and 2.2 Ga years ago within a tensional feature probably related to the opening of an early Proterozoic ocean in the area of the Grenville Province to the south. Fahrig, et al., (ibid) consider the dykes to represent the failed third arm (aulocogen) of this triple junction point.

Abitibi dykes trend northeasterly through the area and occupy some of the northeast trending structures.

4.5 AGE DETERMINATIONS

As indicated above, Fahrig, et al., (ibid) have dated the Mistassini dyke swarm at 2.0 to 2.2 Ga. Potassium-argon age determinations carried out on hornblende and biotite have indicated ages of 2.6 Ga for the gneisses, 2.5 Ga for the Macleod

granodiorite and 2.0 Ga for the Main Zone mineralization (Davies, Whitehead and Prior, 1992). This would suggest a connection between the formation of the aulocogen, an area of regional tension, and the introduction of the copper mineralization. In this context it is interesting to note that the age generally assigned to the Chibougamau copper-gold mineralization is also 2.0 to 2.2 Ga years (Thorpe et al, 1984).

4.6 PLEISTOCENE AND RECENT GEOLOGY

The Macleod Lake - Eastmain River area properties are covered by deposits of Pleistocene moraine and glacial-fluvial materials. The moraine consists of ground and hummocky moraine which is of a sandy to gravelly nature and contains many large transported boulders. In limited areas, glacial-fluvial and lacustrine deposits are present. They consist of eskers, kames and areas of sandy outwash. To date no areas of clay have been identified.

The major direction of glacial transport is from northeast to southwest (S45°W). Preliminary work by the Geological Survey of Canada southwest of the area has indicated an early ice movement from southeast to northwest. There is evidence of this direction of transport in the distribution of anomalous geochemical soil sample values. The southwest trending glacial dispersion patterns often show values displaced to the northwest which would represent the first stage of transport.

Work to date indicates the moraine and glacial lacustrine material form a relatively thin veneer over the bedrock surface with the maximum depth of overburden encountered being in the order of 10 to 15 metres.

Recent deposits of peat and swamp overlies the glacial deposits.

5. GEOCHEMISTRY

The initial geochemical B-horizon soil sampling indicated the location of the known mineralization very well and subsequent work has confirmed this relationship. Due to the usefulness of soil sampling in defining areas of mineralization the results of the work are presented below in some detail.

5.1 SOIL GEOCHEMISTRY

During the summer of 1989 a B-horizon soil geochemical survey was carried out over part of the original 54 claims in an attempt to determine if soil geochemical methods could be used in evaluating potential areas of mineralization. At that time, a total of 476 B-horizon samples were collected along lines spaced at 100 m with samples being collected at 50 m intervals. All samples were analyzed for copper and molybdenum by Accurassay Laboratories Ltd., Kirkland Lake, Ontario. This work showed that copper values ranged between 1 and 560 ppm with a mean of 12 ppm and that the copper values greater than about 25 ppm defined the area of known mineralization and a glacial dispersion train trending for up to 3 km to the southwest (Accompanying Map 2).

Soil sampling during the 1990 field season showed that a significant zone of anomalous copper and molybdenum values was located approximately 1.6 kilometres south of the Main Zone i.e., the South Zone. These anomalous values were coincident with a train of mineralized boulders whose source was considered to be adjacent to the granodiorite contact but beneath the waters of Rooster Lake. Within this anomalous zone copper values ranged from 1 to 160 ppm across a width of 700 to 800 metres. The zone had abrupt boundaries which were coincident with the boundaries of the mineralized boulder train. Molybdenum values ranged from less than 0.5 ppm to 1,100 ppm.

Work during the 1990 and 1992 field seasons identified a

second major zone of anomalous copper and molybdenum values in soils. This area (Area A) extends from 26+00E to 61+00E, approximately 2.5 kilometres northeast of the Main Zone. Associated with these anomalous soil samples are copper values from bedrock samples ranging up to 2.65% copper. Anomalous soil molybdenum values also occur in this area between 31+00E and 61+00E and are approximately coincident with the granodiorite contact. Values up to 57 ppm Mo in soils are present within this area.

Based on the empirical evidence from the Main Zone, the South Zone and Area A, it was considered that the soil copper-molybdenum values have the ability to indicate areas of potential mineralization. To better define threshold and anomalous values for the soil geochemical samples, log-probability plots as developed by Sinclair, (1974) were used to define threshold and anomalous values for 2% of the total sample population. This data is presented in Table 4.

Table 4
Summary of Statistical Data for B-horizon Soil Geochemical Samples
Macleod Lake - Eastmain River Properties, Quebec

COPPER (PPM)

<u>Zone/Area</u>	<u>No. of Values</u>	<u>Mean</u>	<u>Range</u>	<u>Threshold</u>	<u>% Values >Threshold</u>	<u>No. Values >Threshold</u>	<u>Sampling Density</u>	
							<u>Line Spacing</u>	<u>Interval</u>
Main Zone	478	12.2	1-560	24	13%	54	100 m	50 m
South Zone	869	12.4	1-160	20	10%	81	100 m	25-50 m
Main & South Zone *	289	6.7	1-560	15	9%	20	500 m	100 m
500 m spacing								
Area A	847	11.7	1-220	17	18%	166	100 m	50 m
Area C, D	141	11.0	1-52	16	14%	15	500 m	100 m
Area H	223	9.5	1-54	20	5%	9	500 m	100 m
East Contact	443	5.8	1-32	--	--	--	500 m	100 m

MOLYBDENUM (PPM)

Main Zone	475	1.6	<1-38	4	5%	22	100 m	50 m
South Zone	671	6.5	<1-10,000	8	15%	93	100 m	25 m
Area A	488	2.1	<1-57	4	7%	31	100 m	50 m
Areas E, F, G	474	2.4	<1-24	5	9%	17	500m-1000m	100 m
East Contact	443	2.1	<1-8	--	--	--	500 m	100 m

* Only sample values along lines @ 500 m intervals/samples @ 100 m intervals over Main and South Zone areas were used. Initial line chosen at random.

The log-probability plots indicate that for the Main Zone, the South Zone and northeast of the Main Zone, the threshold values range from 15 to 24 ppm copper and that values above these thresholds are anomalous and lie within a second population that contains 9 to 18% of the total sample population. When comparing the plotted location of the samples that are above threshold, they correspond very closely to the areas of known mineralization and the down-ice dispersion trains.

Also shown in Table 4 are the data for the geochemical soil sampling work carried out during the 1991 summer field season. As part of the 1991 programme, B-horizon soil samples were collected at 100 metre intervals along lines spaced at 500 to 1,000 metres along the granodiorite contact. Analyses were performed by XRAL Laboratories for Co, Ni, Cu, Zn, Mo, Ag, Cd and Pb by direct current plasma (DCP). A total of 1,706 samples were collected from licences of exploration 881 and 882 during this programme. Based on this work and the statistical comparisons anomalous copper and molybdenum values were indicated in the following areas.

1. In the northeastern part of licence 881 in area H. Anomalous values occur along a contact length of approximately 8 kilometres (Figure 3, Map 2).
2. Along the southern contact of the granodiorite anomalous copper values were located in areas C and D associated with mineralized boulders and outcrop.
3. In areas E, F and G the copper values are generally low however, approximately 9% of the molybdenum values in the soil samples appear to be anomalous when compared with those in the Main Zone, South zone and Area A.

In Table 4 statistical data is presented for the Main Zone and South Zone areas using only data along lines spaced at 500 metres and with samples taken at 100 metre intervals. This is the sample density used in surveying the balance of the contact. The results for areas A, C, D and H compare very favourably to this data.

5.2 LITHOGEOCHEMISTRY

The majority of the lithologies encountered within the Macleod Lake area can be divided into five (5) broad classifications being:

- a) quartzo-feldspathic-biotite gneisses (including foliates and migmatites)
- b) amphibolites
- c) granodiorite
- d) pegmatites and granitoids
- e) diabase

Mineralization in the Main Zone is hosted primarily by biotite gneisses and is located just to the north of the biotite gneiss-granodiorite contact. The deposit is characterized by disseminated chalcopyrite and molybdenite mineralization adjacent to and within a biotite-amphibole schist horizon with higher grade sections commonly accompanied by silica flooding. Diamond drill hole 90-ML-10 drilled on section 12+25mE in the Main Zone has been used for multi-element geochemical analyses in an attempt to determine some of the characteristics of the zones of mineralization and the associated wallrocks.

Hole ML-10 encountered hornblende biotite gneiss at the top of the hole adjacent to the granodiorite contact followed by 104 metres of biotite gneiss. The hole also intersected biotite-amphibole schist, pegmatites and siliceous material.

Core from the entire hole was split with half of the core being sent for analysis. Analyses was done by Barringer Laboratories, Mississauga, Ontario using a multi-element package consisting of 29 ICAP analyses and 3 A.A. determinations for Ag, Al, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, K, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Sn, Sr, Ti, Th, U, V, W, Zn and Zr and As, Se and Te (A.A.).

The geochemical characteristics of hole 90-ML-10 as representative of the Main Zone mineralization are as follows:

Ag - Au - Cu - Mo - Se - Sn - W: These elements are enriched in the Main Zone with the most elevated values generally occurring within the siliceous zones. Correlations within this group show a very strong inter-relationship within the group Ag - Au - Bi - Cu with the minimum correlation within this group being 0.79.

Pb - Te - Zn: Weak to moderate enrichment of these elements occurs in the Main Zone with the highest values generally occurring in biotite gneiss near the centre of the Main Zone.

K: Potassium is enriched within the Main Zone with maximum values occurring within biotite gneisses near the centre of the Main Zone similar to Pb - Te and Zn. However unlike the metals, potassium is relatively depleted within the siliceous zones.

Ca - Co - Cr - Mg - Mn - Ni: These elements which are characteristic of mafic to ultramafic lithologies all exhibit very high values within the biotite-amphibole schist. Since chrome tends to be relatively immobile during hydrothermal alteration and the biotite-amphibole schist is strongly mineralized the high values for this suite of elements is considered to be due to the primary lithology of the units.

Al - Ti - Zr: These elements display relatively uniform values within the biotite gneisses with somewhat lower values being present in the biotite-amphibole schist and strong depletion in the siliceous zones.

Ca - Na - Sr: These elements are similar in that they display weak depletion within the biotite gneisses of the Main Zone and strong depletions in the siliceous zones.

Ba - P: Average values for barium and phosphorous within the biotite gneisses are relatively uniform throughout the drill hole and both display relative depletion within the siliceous zones.

Be - Fe - V: Values are relatively consistent throughout drill hole ML-10 except for the pegmatites which are characterized by low iron and vanadium values.

As: Very low values were returned for arsenic in drill hole ML-10 from surface to the bottom of the upper siliceous zone of a depth of 38 metres. Arsenic values then show a rapid general increase reaching 7 ppm 50 metres downhole. Following this, average arsenic contents decrease for the remainder of the hole.

U: Only 9 of the 40 samples contain detectable uranium using a 5 ppm detection limit.

K/Na Ratio: Average K/Na ratios in core from ML-10 are 4.74 for siliceous zones, 4.20 for biotite-amphibole schist, 3.26 in the Main Zone (all lithologies) and 1.46 in the wallrock (all lithologies). These results indicate that the K/Na ratio may serve as a useful lithogeochemical exploration guide.

The lithologic nomenclature used in geologic mapping and core logging on the Macleod Lake property was developed based on field observations. To better define the rock types a geochemical approach was undertaken. Fifty-one (51) rock samples from surface sampling and from drill holes were analyzed for the major oxides by Barringer Laboratories, Mississauga, Ontario using an ICAP procedure. As much as possible, all samples chosen were least altered examples of their respective lithologies. The results were then plotted on the following diagrams so as to arrive at an appropriate name.

Al₂O₃-Na versus Al₂O₃-K diagram

K₂O versus SiO₂/Al₂O₃ diagram

Alkalis/silica plot

AFM diagram

Jensen Cation Plot

Streckeisen diagram

Using these diagrams the geochemical classification of the various rock types from the Macleod Lake properties are presented below in Table 5.

Table 5
Geochemical Classification of Lithologies

<u>Field Name</u>	<u>Geochemical Name</u>
Biotite Gneiss and Biotite Foliate	Metagraywacke (Paragneiss)
Migmatite	Migmatite with Graywacke Protolith
Biotite-Chlorite Actinolite Schist	Magnesia-Rich Tholeiitic Basalt
Amphibolite	Basaltic Komatiite (Ultramafic Komatiite)
Hornblende Gneiss	Magnesia-Rich Tholeiitic Basalt (Basalt, Basaltic Komatiite)
Volcanic (Mafic) Breccia	Magnesia-Rich Tholeiitic Basalt
Granodiorite Fels	Granodiorite and Quartz Monzodiorite
Magnetic Granodiorite	Quartz Syenite (Alkali Quartz Syenite, Quartz Monzonite)
Biotite Granite	Granite
Pegmatite and Granitoid	Granite (Granodiorite, Alkali Granite)

* In the field a full spectrum exists from biotite gneiss to migmatitic gneiss to migmatite. Therefore, migmatite is considered to have the same protolith as biotite gneiss.

6. PORPHYRY COPPER-MOLYBDENUM TYPE MINERALIZATION

The property was originally acquired for its copper-molybdenum-precious metal potential as indicated by two (2) small copper and molybdenum showings in quartzo-feldspathic-biotite gneiss. These showings were subsequently covered by IP surveys, geochemical surveys and geological mapping which resulted in the drilling of the indicated zone. Within this zone a mineral inventory of approximately 37,100,000 grading 0.44% copper, 0.05% molybdenum, 0.04 g/t gold 3.68 g/t silver has been identified. Based on the positive results from this initial work the programme was expanded in an attempt to outline additional mineralization on the property. This resulted in the discovery of the mineralized boulder train and the bedrock mineralization which is now referred to as the South Zone. As work continued it became apparent that there were other areas of mineralization all of which appeared to be spatially associated with the contact between the granodiorite and the quartzo-feldspathic-biotite gneiss. More recently, on-going work has indicated mineralization is also localized within the granodiorite, generally above the contact zone. As a result of the work over the last 3 years it is considered that the following features are characteristic of the mineralization in the Macleod Lake-Eastmain River property area.

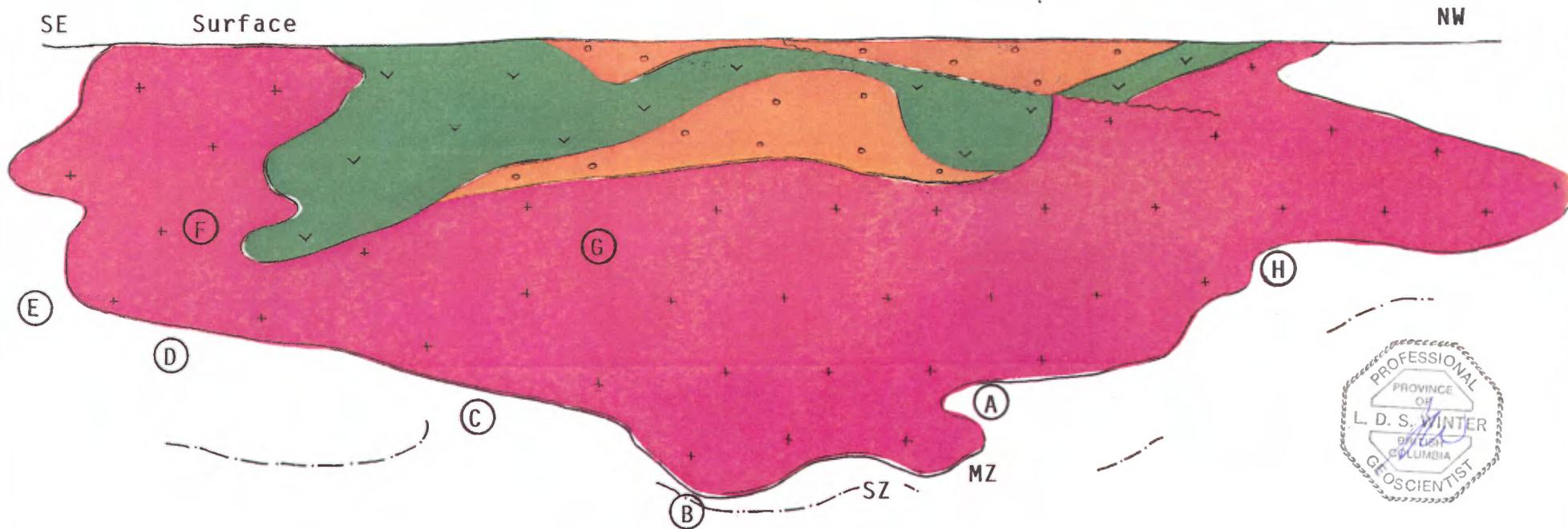
- 1) The copper-molybdenum mineralization occurs adjacent to the granodiorite contact, both in the gneisses and the overlying granodiorite. The best mineralization known to date occurs in the gneisses/migmatites however, mineralization does occur in the granodiorite.
- 2) Known showings and anomalous geochemical values only occur west of the zone of diabase dykes in the eastern part of licences of exploration 881 and 882 (Figure 3

and Accompanying Map 1).

- 3) The mineralization consists dominantly of chalcopyrite, bornite, chalcocite and molybdenite. Pyrite and pyrrhotite occur only in minor amounts and are generally associated with the better grade of mineralization.
- 4) Drilling shows a broad zone of anomalous to sub-economic copper and molybdenum mineralization adjacent to and/or straddling the granodiorite contact. Values occur both in the overlying granodiorite and in the underlying gneisses. Potentially economic zones occur as concentrations within this halo.
- 5) The Main Zone mineralization occurs on the crest of an antiform which trends 070° parallel to the main northeast trending regional fold structure. The South Zone occurs on the north limb of a similar northeast trending antiformal structure. Both structures plunge at approximately 10° (Figure 5).
- 6) Mineralization in both the Main and South Zones is associated with a distinctive biotite-amphibole schist.
- 7) In cross-section, the mineralization is seen to occur only on the lower contact of the granodiorite and particularly in association with fold structures (Figure 4).
- 8) The mineralization is structurally controlled.
- 9) Potassium alteration as evidenced by the presence of microcline and elevated K₂O/Na₂O ratios is associated

UP PLUNGE PROJECTION - LOOKING 240° (S 60°W)

Projection @ + 10°



LEGEND

- + Granodiorite
- o Lac Cadieux Granite
- v Metavolcanics
- Gneisses
- - - Amphibolites

- (A) Areas of economic potential (see Fig. 3)
- MZ Main Zone
- SZ South Zone

0 1.5 3

Kilometres

FIGURE 4

TRUE CROSS SECTION OF GRANODIORITE
MACLEOD LAKE - EASTMAIN RIVER AREA

OCTOBER, 1992

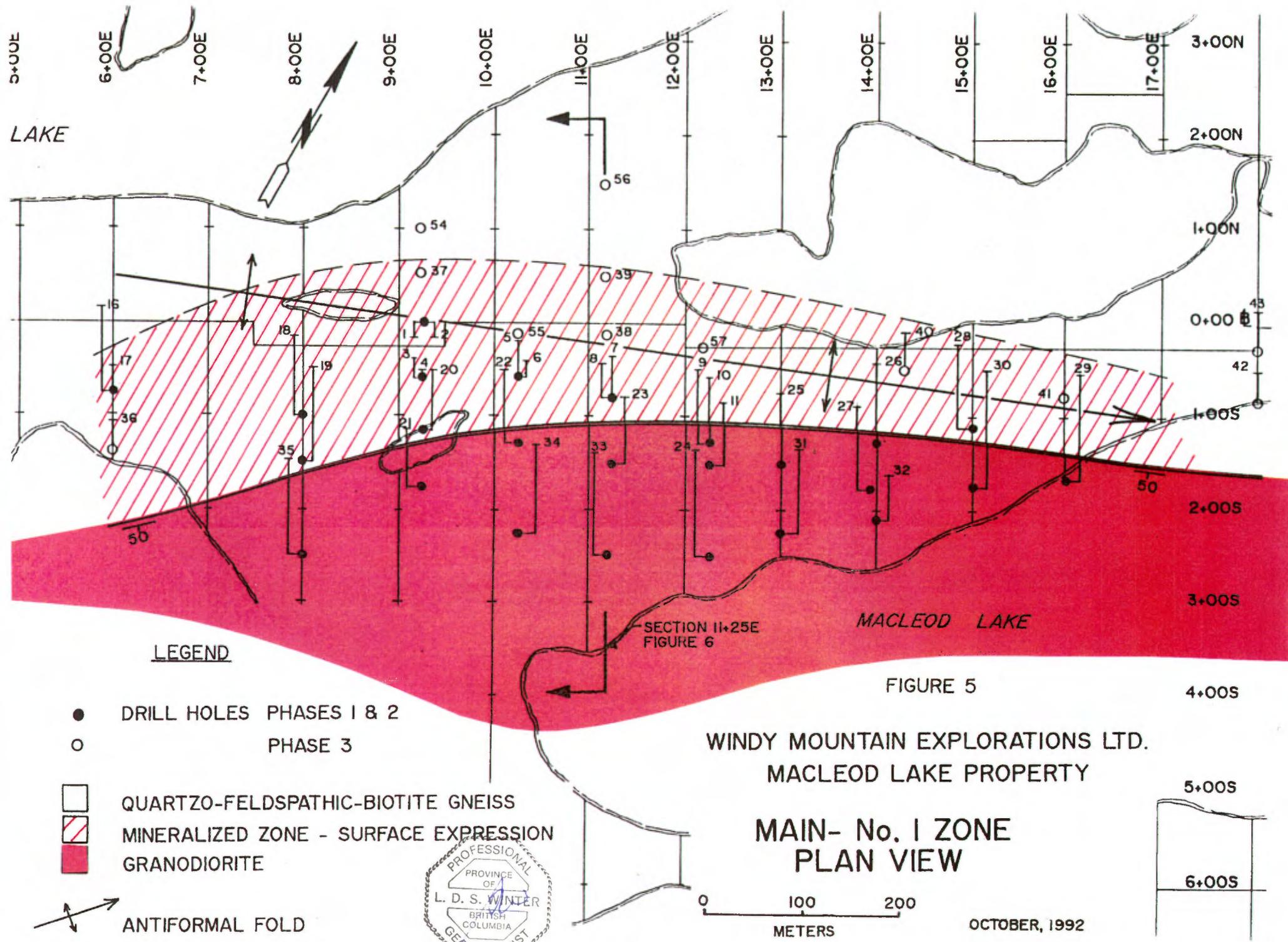
with the mineralization.

- 10) Associated with both the Main and South Zones are areas of silicification and silica flooding.
- 11) The age of the granodiorite is estimated at 2.5 Ga, the gneisses at 2.6 Ga and the mineralization at 2.0 Ga years from potassium - argon age determinations.

The general features of the main areas of mineralization and potential mineralization identified to date are presented in the following sections (Figure 3 and Maps 1 and 2).

6.1 MAIN ZONE

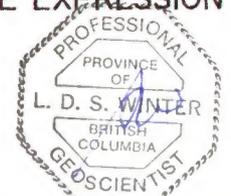
The features of the Main Zone of mineralization are based on surface mapping and the drilling of 43 shallow drill holes. The zone trends approximately 070° and is hosted by an upright open antiform plunging at -10° (Figures 5 and 6). Mineralization, consisting of chalcopyrite, bornite, chalcocite and molybdenite with minor amounts of pyrite and pyrrhotite, is hosted within a sequence of biotite gneiss, diorite fels and biotite-amphibole schist lying immediately adjacent to the northeast contact of Macleod granodiorite. The significant copper and molybdenum values have been intersected over a strike length of approximately 1,200 metres, to a maximum depth of approximately 160 metres and over true widths of up to 80 metres. The copper-molybdenum mineralization is spatially related to the biotite- amphibole schist which may have served as a permeable horizon along which hydrothermal fluids were channelled. The best widths and grades of mineralization are located on the crest of the antiform. It is in this area where the greatest amount of silicification is encountered.



LEGEND

- DRILL HOLES PHASES I & 2
- PHASE 3
- QUARTZO-FELDSPATHIC-BIOTITE GNEISS
- ▨ MINERALIZED ZONE - SURFACE EXPRESSION
- GRANODIORITE

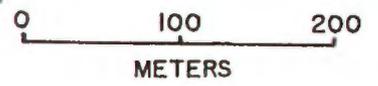
↔ ANTIFORMAL FOLD



SECTION 11-25E
FIGURE 6

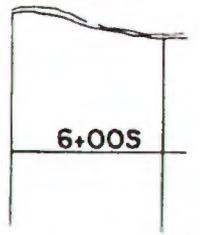
WINDY MOUNTAIN EXPLORATIONS LTD.
MACLEOD LAKE PROPERTY

**MAIN- No. 1 ZONE
PLAN VIEW**



OCTOBER, 1992

FIGURE 5



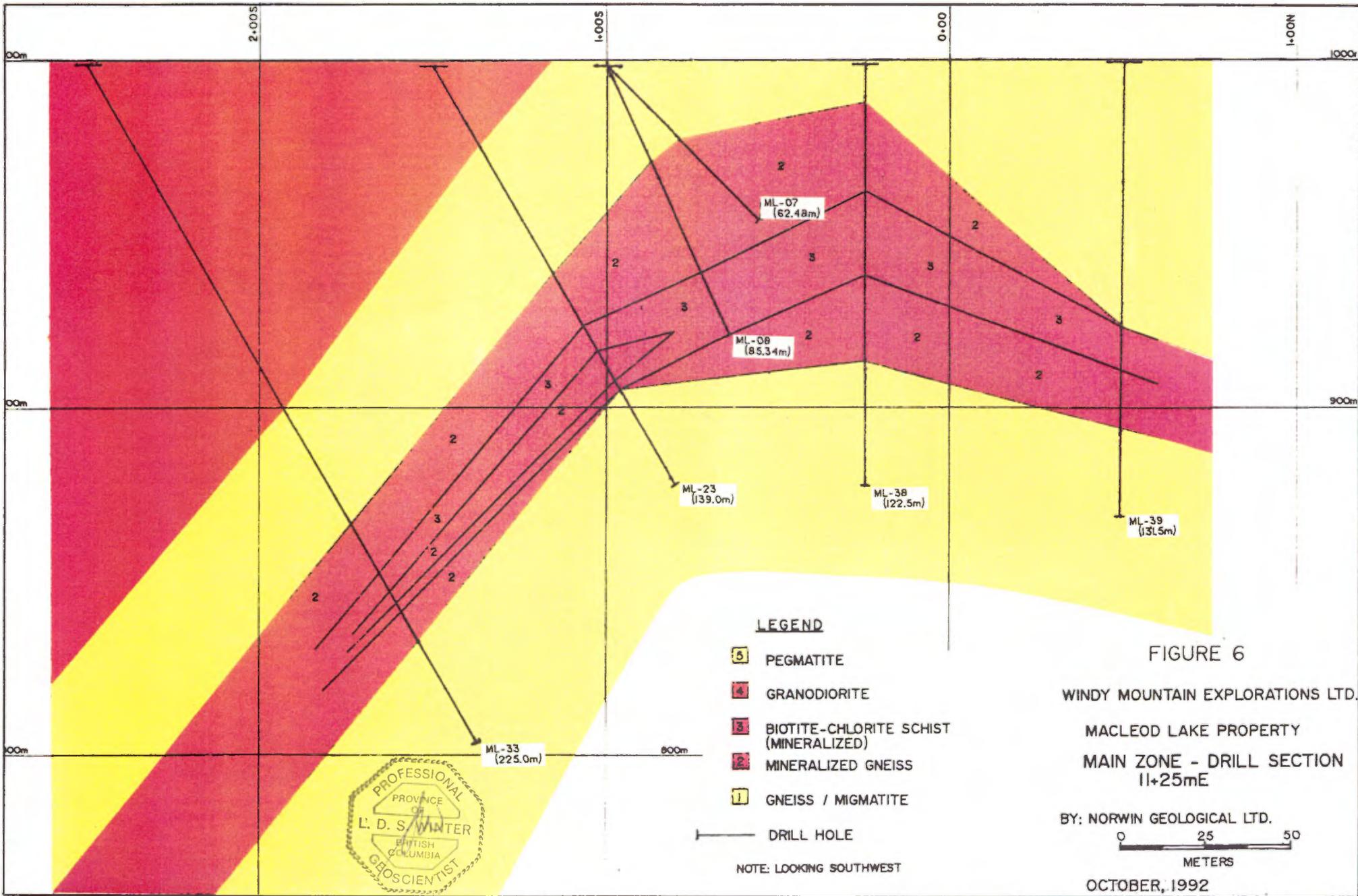


FIGURE 6

WINDY MOUNTAIN EXPLORATIONS LTD.

MACLEOD LAKE PROPERTY

MAIN ZONE - DRILL SECTION
11+25mE

BY: NORWIN GEOLOGICAL LTD.

OCTOBER, 1992

6.2 MINERAL INVENTORY

1. From the results of the Phase 1, 2 and 3 drill programmes, a preliminary drill indicated mineral inventory was prepared. Drill sections were prepared at a scale of 1:1,000 and 1:500 (Figure 7, Back Pocket).

2. A cut-off grade of 0.25% copper equivalent with molybdenum at 3 times the copper values was used however, in effect most volumes have copper values alone $>0.25\%$ Cu.

3. Values were projected half-way to the adjacent section generally a maximum of 50 metres although there are minor exceptions between 8+00E and 9+25E where they were projected 62.5 metres. Between section 6+00E and 8+00E values were projected up to 200 metres along strike and at 16+00E values were projected 75 metres.

4. Within sections, values were projected half-way to the next drill hole or a maximum of 50 metres.

5. A specific gravity of 2.7 was used based on preliminary specific gravity measurements on drill core and comparisons with the mineral specific gravities.

The mineral inventory as calculated lies within a zone outlined by 43 drill holes between 6+00E and 18+00E (Figure 6). The zone extends from surface approximately at the baseline downdip to the northwest and to a maximum depth downdip to the southeast of 160 metres below surface. True thicknesses of mineralization vary from approximately 30 to 80 metres. For each drill hole an average grade was calculated for copper, molybdenum, gold and silver using the 0.25 copper equivalent cutoff. Credits for gold and silver were not included in the

copper equivalent value. Each drill hole was projected halfway to the next hole on the section or a maximum of 50 metres. The area of influence of each drill hole was then outlined on the 1:1,000 sections and the area calculated by the use of a planimeter. All values were checked four (4) times with the average of the values being used. The area represented by each drill hole in the section was multiplied by the distance between sections to determine the volume and tonnage represented by that drill hole. This information is summarized in Table 6. The possible inventory represents the areas in which the projection is based on geological projection rather than discrete drill hole data.

The total mineral inventory is 37,100,000 metric tonnes at an estimated average grade of 0.44% copper, 0.05% molybdenum, 0.04 g/t gold and 3.68 g/t silver. The zone has not been delimited along strike nor downdip to the south. The drilling indicated the mineralization thins out on the north limb of the antiform.

Table 6A
Summary Diamond Drill Data - Main Zone
Macleod Lake Property

<u>Hole</u>	<u>Grid Location</u> (metres)	<u>Azimuth</u>	<u>Dip</u>	<u>Length</u> (metres)
89-ML-01	9+25E, 0+00N	150°	-45°	145
89-ML-02	9+25E, 0+00N	150°	-60°	76
89-ML-03	9+25E, 0+56S	330°	-45°	31
89-ML-04	9+25E, 0+56S	330°	-78.5°	45
89-ML-05	10+25E, 0+80S	330°	-45°	52
89-ML-06	10+25E, 0+80S	330°	-73.5°	58
89-ML-07	11+25E, 1+00S	330°	-45°	63
89-ML-08	11+25E, 1+00S	330°	-65°	85
89-ML-09	12+25E, 1+20S	330°	-45°	95
89-ML-10	12+25E, 1+20S	330°	-60°	152
89-ML-11	12+25E, 1+50S	330°	-60°	130
90-ML-12	3+00W, 5+00S	330°	60°	125
90-ML-13	3+00W, 6+00S	330°	60°	116
90-ML-14	3+00W, 4+35S	---	90°	80
90-ML-15	0+00E, 4+65S	330°	50°	119
90-ML-16	6+00E, 0+75S	330°	45°	125
90-ML-17	6+00E, 0+75S	330°	75°	104
90-ML-18	8+00E, 1+00S	330°	45°	118
90-ML-19	8+00E, 1+50S	330°	45°	145
90-ML-20	9+25E, 1+15S	330°	70°	181
90-ML-21	9+25E, 1+75S	330°	70°	157
90-ML-22	10+25E, 1+25S	330°	60°	141
90-ML-23	11+25E, 1+50S	330°	60°	139
90-ML-24	12+25E, 2+50S	330°	60°	238
90-ML-25	13+00E, 1+50S	330°	60°	150
90-ML-26	14+00E, 1+25S	330°	60°	166
90-ML-27	13+95E, 1+75S	330°	60°	188
90-ML-28	15+00E, 1+25S	330°	50°	140
90-ML-29	16+00E, 1+65S	330°	50°	176

<u>Hole</u>	<u>Grid Location</u> (metres)	<u>Azimuth</u>	<u>Dip</u>	<u>Length</u> (metres)
90-ML-30	15+00E, 1+75S	330°	50°	195
90-ML-31	13+00E, 2+25S	330°	60°	183
90-ML-32	14+00E, 2+10S	330°	70°	213
90-ML-33	11+25E, 2+50S	330°	60°	225
90-ML-34	10+25E, 2+25S	330°	60°	180
90-ML-35	8+00E, 2+50S	330°	60°	204
90-ML-36	6+00E, 1+33S	330°	-70	94
90-ML-37	9+25E, 0+50N	---	-90	135.5
90-ML-38	11+25E, 0+25S	----	-90	122.5
90-ML-39	11+25E, 0+50N	---	-90	131.5
90-ML-40	14+00E, 0+50S	330°	-70	117
90-ML-41	16+00E, 0+75S	330°	-70	100
90-ML-42	18+00E, 0+67S	330°	-70	129
90-ML-43	18+00E, 0+00N	330°	-70	130
90-ML-44	3+00W, 16+00S	---	-90	94
90-ML-45	2+00W, 16+50S	---	-90	104
90-ML-46	2+00W, 17+00S	---	-90	94
90-ML-47	8+00W, 22+00S	330°	-70	139
90-ML-48	8+00W, 21+50S	330°	-75	104
90-ML-49	8+00W, 22+50S	330°	-60	109
90-ML-50	5+00W, 21+00S	330°	-60	112
90-ML-51	15+00W, 15+75S	330°	-60	128
90-ML-52	17+00W, 17+45S	330°	-60	104.5
90-ML-53	0+45W, 15+68S	240°	-50	133
90-ML-54	9+25E, 1+00N	---	-90	124
90-ML-55	10+25E, 0+12S	---	-90	91
90-ML-56	11+25E, 1+25N	---	-90	130
90-ML-57	12+25E, 0+25S	330°	-80	<u>118.5</u>
		TOTAL		2544.5

Table 6B
Summary of Mineralized Intervals

<u>Hole</u>	<u>Interval (metres)</u>			<u>Assay Values</u>			
	<u>From</u>	<u>To</u>	<u>Length</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>
89-ML-1	11.6	93.9	82.3	0.40	0.04	0.06	2.64
89-ML-2	10.7	71.5	60.8	0.44	0.03	0.04	2.30
89-ML-3	1.4	30.5	29.1	1.42	0.08	0.17	8.71
89-ML-4	1.0	44.5	43.5	0.91	0.10	0.09	6.14
with	1.0	22.8	21.8	1.55	0.16	0.15	10.32
and	22.8	44.5	21.7	0.25	0.05	0.03	1.93
89-ML-5	4.3	47.6	43.3	0.79	0.19	0.10	5.11
89-ML-6	4.4	47.0	42.6	0.46	0.07	0.06	3.81
89-ML-7	29.7	62.5	32.8	1.02	0.17	0.11	7.33
89-ML-8	30.5	85.4	54.9	0.56	0.11	0.06	3.85
89-ML-9	21.3	88.4	67.1	0.87	0.27	0.09	7.05
89-ML-10	18.6	99.4	80.8	0.80	0.13	0.08	6.25
with	18.6	70.7	52.1	1.14	0.19	0.11	9.35
and	83.8	99.4	15.6	0.24	0.01	0.02	0.74
89-ML-11	40.4	122.0	81.6	0.78	0.13	0.08	5.63
with	40.4	86.3	45.9	1.18	0.22	0.12	8.02
and	86.3	122.0	35.7	0.27	0.02	0.03	2.56
90-ML-12	6.7	14.85	8.15	0.26	0.01	0.01	7.51
90-ML-13	8.13	10.63	2.5	0.30	Tr	0.02	9.80
90-ML-14	No significant intersections.						

<u>Hole</u>	<u>Interval (metres)</u>			<u>Assay Values</u>			
	<u>From</u>	<u>To</u>	<u>Length</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>
90-ML-15	53.85	68.48	14.63	0.19	0.00	0.01	1.44
90-ML-16	36.0	51.2	15.2	0.38	0.02	0.03	2.26
with	36.0	40.4	4.4	1.20	0.05	0.09	6.46
90-ML-17	26.1	34.0	7.9	0.44	0.01	0.05	2.10
90-ML-18	6.0	71.0	65.0	0.22	0.02	0.02	1.35
with	58.5	71.0	12.5	0.80	0.03	0.06	3.51
90-ML-19	26.1	105.8	79.7	0.23	0.02	0.02	1.65
with	26.1	69.4	43.3	0.27	0.04	0.03	1.93
and	98.8	105.8	7.0	0.75	0.02	0.05	4.14
90-ML-20	18.7	84.0	65.3	0.20	0.02	0.02	1.37
90-ML-21	65.0	120.1	55.1	0.31	0.03	0.03	3.14
90-ML-22	28.0	87.0	59.0	0.19	0.03	0.02	1.82
90-ML-23	69.0	107.0	38.0	0.44	0.06	0.02	3.67
with	80.5	91.0	10.5	1.11	0.17	0.03	7.81
90-ML-24	130.67	179.0	48.33	0.31	0.03	0.02	3.24
90-ML-25	58.5	124.0	65.5	0.63	0.10	0.06	5.23
with	58.5	107.0	48.5	0.81	0.14	0.08	6.59
and	79.0	90.75	11.75	1.97	0.29	0.17	12.21
90-ML-26	21.0	103.0	82.0	0.44	0.08	0.06	4.86
with	21.0	46.7	25.7	0.63	0.01	0.07	6.60
and	60.8	103.0	42.2	0.46	0.14	0.08	5.05

<u>Hole</u>	<u>Interval (metres)</u>			<u>Assay Values</u>			
	<u>From</u>	<u>To</u>	<u>Length</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>
90-ML-27	73.03	146.45	73.42	0.20	0.06	0.03	2.37
90-ML-28	22.0	114.0	92.0	0.29	0.09	0.03	2.61
90-ML-29	74.0	129.0	55.0	0.35	0.01	0.03	3.29
90-ML-30	79.0	140.0	61.0	0.26	0.06	0.04	3.68
90-ML-31	105.0	173.0	68.0	0.57	0.09	0.05	4.88
90-ML-32	133.0	183.0	50.0	0.43	0.02	0.02	3.76
90-ML-33	153.0	191.2	38.2	0.86	0.02	0.10	11.10
with	180.1	188.0	7.9	2.81	0.03	0.37	37.84
90-ML-34	118.0	163.0	45.0	0.64	0.01	0.06	8.17
90-ML-35	116.0	132.8	16.8	0.70	0.04	0.07	5.13
90-ML-36	20.0	67.7	47.7	0.23	0.01	0.02	1.29
90-ML-37	39.55	58.36	18.8	0.36	0.04	0.01	2.21
90-ML-38	10.0	85.0	75.0	0.40	0.08	0.06	2.85
90-ML-39	77.7	105.95	28.25	0.17	0.03	0.02	1.87
90-ML-40	17.6	57.4	39.8	0.34	0.02	0.04	2.40
90-ML-41	40.0	48.0	8.0	0.28	0.00	0.01	3.20
and	71.0	81.0	10.0	0.41	0.00	0.01	5.60
90-ML-42	100.9	113.0	12.1	0.69	0.08	0.05	3.02
90-ML-43	No significant mineralization.						
90-ML-54	No significant mineralization.						
90-ML-55	4.0	59.0	55.0	0.53	0.07	0.08	2.58
90-ML-56	No significant mineralization.						
90-ML-57	54.0	107.0	53.0	0.41	0.05	0.04	3.45

TABLE 6C
MINERAL INVENTORY
MAIN (NO. 1) ZONE - MACLEOD LAKE PROPERTY
WINDY MOUNTAIN EXPLORATIONS LTD.

<u>Section</u>	<u>Block</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Area (m²)</u>	<u>Length (m)</u>	<u>Volume m³</u>	<u>Tonnes (Vol x 2.75)</u>
6+00E	6A	0.40	0.014	0.035	2.21	1304	200	260,800	717,200
	6B	0.23	0.012	0.015	1.29	3355	200	671,000	1,845,250
8+00E	8A	0.22	0.022	0.023	1.35	3748	162.5	609,050	1,674,888
	8B	0.23	0.024	0.022	1.65	4298	162.5	698,425	1,920,669
	8C	0.7	0.036	0.072	5.13	2571	162.5	417,788	1,148,916
9+25E	9A	0.44	0.032	0.044	2.3	1110	112.5	124,875	343,406
	9B	1.11	0.09	0.12	7.17	2789	112.5	313,763	862,847
	9C	0.20	0.016	0.02	1.37	3567	112.5	401,288	1,103,541
	9D	0.31	0.028	0.032	3.14	4213	112.5	473,963	1,303,397
	9F	0.44	0.032	0.044	2.3	1323	112.5	148,838	409,303
	9G	0.36	0.043	0.011	2.21	1040	112.5	117,000	321,750
	9E	POSSIBLE				2419	112.5	272,138	748,378
10+25E	10A	0.79	0.19	0.1	5.11	1395	100	139,500	383,625
	10B	0.46	0.07	0.06	3.81	977	100	97,700	268,675
	10C	0.19	0.027	0.019	1.82	3131	100	313,100	861,025
	10D	0.64	0.01	0.061	8.17	4231	100	423,100	1,163,525
	10E	0.53	0.072	0.076	2.58	5046	100	504,600	1,387,650
11+25E	11A	0.4	0.084	0.062	2.85	4517	100	451,700	1,242,175
	11B	1.02	0.17	0.11	7.33	1096	100	109,600	301,400
	11C	0.56	0.11	0.06	3.85	1531	100	153,100	421,025
	11D	0.44	0.062	0.017	3.67	2438	100	243,800	670,450
	11E	0.86	0.021	0.095	11.1	3510	100	351,000	965,250
	11F	0.17	0.034	0.017	1.87	1531	100	153,100	421,025

<u>Section</u>	<u>Block</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Area (m²)</u>	<u>Length (m)</u>	<u>Volume m³</u>	<u>Tonnes (Vol x 2.75)</u>
12+25E	12A	0.87	0.27	0.09	7.05	1493	87.5	130,638	359,253
	12B	0.8	0.126	0.077	6.25	1641	87.5	143,588	394,866
	12C	0.78	0.13	0.08	5.63	4307	87.5	376,863	1,036,372
	12D	0.31	0.03	0.022	3.24	4829	87.5	422,538	1,161,978
	12E	0.41	0.052	0.037	3.45	4640	87.5	406,000	1,116,500
13+00E	13A	POSSIBLE				4715	87.5	412,563	1,134,547
	13B	0.63	0.1	0.061	5.23	5069	87.5	443,538	1,219,728
	13C	0.57	0.093	0.052	4.88	5726	87.5	501,025	1,377,819
14+00E	14A	0.44	0.078	0.061	4.86	3823	100	382,300	1,051,325
	14B	0.2	0.055	0.026	2.37	3639	100	363,900	1,000,725
	14C	0.43	0.022	0.017	3.76	2914	100	291,400	801,350
	14D	0.34	0.02	0.037	2.4	2523	100	252,300	693,825
15+00E	15A	POSSIBLE				1708	100	170,800	469,700
	15B	0.29	0.09	0.027	2.61	4326	100	432,600	1,189,650
	15C	0.26	0.061	0.039	3.68	3814	100	381,400	1,048,850
16+00E	16A	POSSIBLE				2230	125	278,750	766,563
	16B	0.35	0.007	0.027	3.29	5218	125	652,250	1,793,688

SUMMARY

<u>Section</u>	<u>Section Tonnes</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>
6+00E	2,562,450	0.28	0.01	0.02	1.55
8+00E	4,744,472	0.34	0.03	0.03	2.39
9+25E	5,092,622	0.47	0.04	0.05	3.28
10+25E	4,064,500	0.51	0.06	0.06	4.34
11+25E	4,021,325	0.43	0.04	0.04	4.42
12+25E	4,068,969	0.55	0.09	0.05	4.53
13+00E	3,732,094	0.60	0.10	0.06	5.04
14+00E	3,547,225	0.35	0.05	0.04	3.43
15+00E	2,708,200	0.28	0.08	0.03	3.11
16+00E	<u>2,560,251</u>	<u>0.35</u>	<u>0.01</u>	<u>0.03</u>	<u>3.29</u>
TOTAL	37,102,106	0.44	0.05	0.04	3.68

Possible: 3,119,188 tonnes

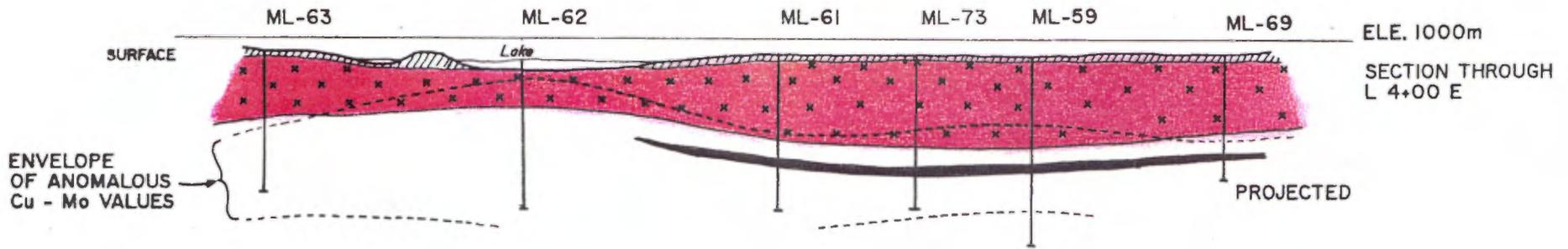
Probable: 33,982,918 tonnes

PLAN VIEW - SOUTH ZONE DRILLING

69



63 62 61 73 59 L 4+00 E



LEGEND

-  HIGHER GRADE MINERALIZATION SOUTH ZONE
-  QUARTZ - FELDSPATHIC GNEISS
-  GRANODIORITE

0 100 200 METERS



FIGURE 7

WINDY MOUNTAIN EXPLORATIONS LTD
MACLEOD LAKE PROPERTY

SECTION: SOUTH - No. 2 ZONE
LOOKING 240°

OCTOBER, 1992

6.3 SOUTH ZONE

The South Zone was originally indicated by a number of boulders well mineralized with chalcopyrite and molybdenite. Many of the boulders carry over 10% chalcopyrite and 1% molybdenite. These boulders occur in a boulder train stretching from the granodiorite/gneiss contact S45°W for a distance of at least 3 kilometres and over widths of 700 to 800 metres. The sub-outcrop of the South Zone is considered to lie under the waters of Rooster Lake with the lower part of the zone outcropping on the western shore of the lake on Richard Point. Here areas of gneiss are well mineralized with chalcopyrite in a zone dipping at approximately 10° to the northeast.

Two (2) holes of the Phase 4 drilling programme and two (2) holes of the Phase 5 programme, 600 to 800 metres east of the surface showings and approximately 1.7 kilometres south of the Main Zone yielded the intersections listed in Table 7.

Table 7
Drill Intersections South Zone Mineralization

<u>Hole</u>	<u>Intersection metres</u>	<u>From metres</u>	<u>To metres</u>	<u>Cu %</u>	<u>Mo %</u>	<u>Au g/t</u>	<u>Ag g/t</u>
ML-59	5.0	86.9	91.9	0.276	0.493	1.63	14.7
ML-61	5.0	88.0	93.0	0.72	0.009	0.206	28.3
or	2.3	88.0	90.3	1.37	0.008	0.388	55.4
or	0.52	89.8	90.3	5.41	0.029	1.542	230.0
and	0.60	82.5	83.1	2.44	0.22	0.963	54.0
ML-73	4.89	87.1	92.0	1.40	0.15	0.385	29.0
ML-74	0.80	111.2	112.0	2.78	0.13	0.927	66.0

The South Zone is associated with a narrow biotite-amphibole schist which has been silicified and which lies on the northwest limb of a broad open antiform plunging at 10° at 060°. This mineralization occurs in hole ML-59 within a broad halo from 53 to 124 metres thick (71 metres) averaging 0.05% copper, 0.055% Mo, 0.137 g/t gold and 2.0 g/t silver. The base of the granodiorite in this hole occurs at approximately 70 metres. In hole ML-61 there is also a broad interval of 0.149% copper from 61 to 103 metres (42 metres). No biotite-amphibole schist was intersected in this hole. A similar situation exists for holes ML-73 and ML-74.

Based on the limited drilling on the South Zone, it is estimated that there is approximately 1,000,000 tonnes of mineralization at a grade of 0.80% Cu, 0.22% Mo, 0.74 g/t Au and 24 g/t Ag available in the zone that could be mined by open pit methods. Some of the higher grade mineralization could possibly be mined by underground methods.

6.4 AREA A

Mineralized gneiss and granodiorite outcropping along the gneiss/granodiorite contact approximately 2 kilometres northeast of the Main Zone were identified during the 1990 mapping season. The assay results from four (4) samples collected from this area during the course of the mapping are listed in Table 8. It is of interest to note that the gold values are significantly higher than those for similar grade mineralization in the Main Zone.

Table 8Sample Analyses - Area A; 1990 Field Work

<u>Location</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Cu %</u>	<u>Mo %</u>
40+80E: 3+95S	0.113	3	0.60	0.005
43+50E: 3+75S	1.608	24	2.65	0.002
43+75E: 4+00S	0.272	19	0.62	0.008
43+90E: 3+80S	0.577	20	0.73	0.001

Three holes were drilled in this area during the 1992 reconnaissance programme. Hole ML-77 was drilled at -60°S to a depth of 121 metres across the granodiorite/gneiss contact. This hole showed that in this area the granodiorite/gneiss contact is overturned and dips at about 50° to the north. The hole passed from mineralized gneiss from 2.25 to 29.65 metres (27.4 m @ 0.20% Cu) into granodiorite to the bottom of the hole at 121 metres. The granodiorite is mineralized in sub-economic amounts with copper and molybdenum mineralization. Two holes, ML-78 and ML-79 were drilled south of ML-77 and vertically in an attempt to pass through the granodiorite but were stopped at 151 and 169 metres respectively in altered and sparsely mineralized granodiorite.

A zone of anomalous copper B-horizon soil values also occurs adjacent to the granodiorite contact from 26+00E to 61+00E, (4 kilometres northeast of the Main Zone). The western boundary of this zone ends abruptly while the northern boundary exhibits an erratic interfingering character adjacent to the granodiorite contacts probably reflecting initial northwest glacial transport. This area shows a range of copper values from 1 to 220 ppm and with a mean value of 11.7 ppm.

The B-horizon soil molybdenum values also are anomalous in this area, from 26+00E to 61+00E and immediately adjacent to

the granodiorite contact. Molybdenum values range from 1 to 57 ppm with a mean of 2.1 ppm.

When the values are plotted, the values greater than 20 ppm copper and 4 ppm molybdenum lie within the area of known mineralization in outcrop and within an interpreted glacial dispersion train whose source appears to be approximately 1.5 km south of the granodiorite/gneiss contact and approximately 5 km northeast of the Main Zone. This area is covered by a number of small lakes and swamps and on the magnetic map shows as a distinct low occupying an area of approximately 1 km² (Figure 3, Map 2).

6.5 AREA B

Area B is located at the extreme southwestern end of the granodiorite along the axial trace of the Lac Lavellette synformal axis (Figure 3 and Accompanying Map 1). A small outcrop bearing chalcopyrite mineralization was located in this area as well as a number of large angular boulders mineralized with chalcopyrite and molybdenite. Four (4) lines of IP work during the winter of 1991 indicated an IP anomaly adjacent to and along the northwestern contact of the granodiorite in the area of the mineralized boulders (Map 1).

Two holes were drilled in this area during the 1992 programme. Hole ML-75 was drilled on an IP anomaly and intersected a small section of granodiorite followed by gneiss. An eleven (11) metre section gave highly anomalous copper values. Approximately 220 metres to the south hole ML-76 (drilled vertically) intersected approximately 72 metres of granodiorite followed by 20 metres of gneiss to the bottom of the hole. The upper 85 metres of this hole is anomalous in copper with molybdenum, chalcopyrite and molybdenite occurring as disseminations throughout the core and in association with small siliceous stringers.

6.6 AREAS C, D AND E

These areas were identified during the course of the 1991 reconnaissance geological, prospecting and geochemical survey work along the southern contact (6 kilometres) of the granodiorite immediately east of the Eastmain River.

The geological mapping in this area indicates a broad antiformal structure plunging at a low angle at 060°. Along the northwestern limb of this structure and adjacent to the granodiorite contact boulders mineralized with chalcopyrite, bornite and molybdenite have been located. Chalcopyrite has also been located in outcrop along the Eastmain River.

The geochemical soil sampling in this area has indicated three (3) areas, C, D and E that show anomalous soil copper values. In this area, the statistical work has indicated that the threshold value is 16 ppm. The range of copper values is from 1 to 52 ppm with a mean of 11.0. There are 15 values, 14% of the population, greater than 16 ppm copper. Taking into account the sample density these values are very similar to those indicating mineralization in the Main Zone, South Zone and Area A.

Area E shows six (6) anomalous molybdenum values in the soils greater than the threshold. Two (2) small showings that show copper and molybdenum mineralization have also been located in this area.

It is also of interest to note that south of Area E and along the granodiorite contact, but within the gneisses, areas that appear to be pervasively silicified are present. Resistive ridges similar to those seen in the area of the Main Zone and indicating silicification are also present in this area.

During the 1992 summer exploration programme, grids were cut over Areas C, D and E and subsequently covered by IP surveys along lines spaced at 400 metres. The purpose of this work was to locate potential mineralization close to surface and

associated with the granodiorite/gneiss contact. Ten (10) areas of anomalous chargeability were located and five (5) diamond drill holes, EP-01 to EP-05, were completed in this area. Hole EP-02 was drilled in the gneisses south of the granodiorite contact and intersected disseminated pyrite within gneisses. The remaining four (4) holes were drilled within the granodiorite along the northeast plunging regional fold structure and the continuation of the granodiorite contact to the east. The three (3) holes, EP-01, -03 and -05 in the area of the regional fold structure all show porphyry copper-type alteration patterns, anomalous to sub-economic copper-molybdenum values and fracture controlled tourmaline mineralization within the granodiorite and the region of the gneiss contact. In association with two (2) known surface showings and the area of interpreted silicification these holes suggest an area covering approximately 6 km² which has the potential to host porphyry copper-type mineralization associated with the granodiorite/gneiss contact and/or within the overlying granodiorite.

6.7 AREAS F AND G

Area F and G all lie within the area underlain by granodiorite in the southeastern part of the Macleod granodiorite complex.

Area F is located in the extreme southeastern part of the granodiorite in an area where mafic metavolcanics are infolded on the upper contact of the granodiorite. Within this area two (2) airborne EM anomalies show pyrite-pyrrhotite mineralization cross-cut by chalcopyrite in small fractures. Molybdenum and tungsten mineralization is also associated with the sulphide minerals. Within the metavolcanics a chlorite-hematite schist and a sericite schist are weakly mineralized with copper-bearing minerals.

The soil samples are moderately anomalous in molybdenum

compared to the Main Zone mineralization. Five (5) values are greater than 5 ppm molybdenum.

In area G, which is also underlain by granodiorite, soil geochemical samples on two (2) lines spaced at 1,000 metres showed anomalous molybdenum values. The highest molybdenum value encountered in the survey (24 ppm) was obtained in this area. Also down-ice to the southwest boulders/outcrop(?) mineralized with molybdenite and running over 0.05% molybdenum were located.

It is considered that areas F and G may represent areas of granodiorite overlying copper and/or molybdenum mineralization situated at or above the underlying granodiorite/gneiss contact. It is considered that the situation may be analogous to that observed in the area of the Main Zone and the South Zone where a broad halo of anomalous copper and molybdenum values is present above the mineralized areas. The anomalous molybdenum values appear to better reflect more deeply buried mineralization than do the copper values. In the area of the South Zone, careful prospecting of bedrock and associated boulders overlying the South Zone showed flakes of molybdenite within the granodiorite. The original Main Zone discovery at L14+25E which consists of a small fracture containing copper minerals is located in gneisses overlying the south limb of the Main Zone mineralization. Here the gneisses contain anomalous molybdenum values between 0.01% and 0.33% Mo. This mineralization lies approximately 25 metres above the upper contact of the Main Zone mineralization (Winter, 1988).

In summary, it is considered that there are potentially two (2) areas, F and G, where copper-molybdenum mineralization, lying in the granodiorite or at the granodiorite/gneiss contact, may occur. It is considered that deeper drilling would be required to evaluate targets F and G.

6.8 AREA H

Area H lies along the granodiorite/gneiss contact northeast of the Main Zone and area A. Here reconnaissance mapping, geochemical sampling and prospecting showed that the granodiorite contact changes from a northeast to a north-northwest trend suggesting the presence of antiforms plunging to the northeast in this area.

The geochemical soil sampling in this area showed copper values ranging from 1 to 54 ppm with a mean of 9.5 ppm. Log-probability plots show a threshold value of 20 ppm copper with nine (9) values considered to be anomalous. These values occur along a contact length of approximately 8 kilometres.

The IP survey completed in this area during the 1992 summer field season identified ten (10) areas of increased chargeability both associated with the granodiorite/gneiss contact and within the granodiorite itself. During the drilling phase of the programme, three (3) holes were drilled in this area, EP-06, EP-07 and EP-08.

Hole EP-06 was drilled in gneisses showing a chargeability anomaly. Disseminated and stringer pyrite was intersected throughout the hole. In hole EP-07 a combined magnetic and IP chargeability anomaly was drilled. Minor copper and molybdenum mineralization associated with the granodiorite contact was encountered. Four (4) kilometres to the west EP-08 was drilled on an IP chargeability anomaly within the granodiorite. Disseminated specular hematite up to 5% in some areas was present throughout the hole. No sulphides of economic significance were intersected.

In summary, porphyry copper-type mineralization has now been identified along approximately 10 km of strike length of the granodiorite contact in the northwestern part of the intrusive. At the southwestern end of this area, hole ML-76 has indicated approximately 72 metres of granodiorite showing sub-economic copper and molybdenum mineralization. The main concentration of mineralization is in the Main Zone with a smaller body being present in the South Zone approximately 1.7 km to the south. Northeast of the Main Zone it is considered that the Main Zone mineralization plunges northeasterly beneath the granodiorite contact. Hole ML-77 showed mineralization along this contact but, additional drilling failed to penetrate through the granodiorite into the projected location of the underlying mineralization. At the northeastern end of this zone of mineralization is the interpreted head of a soil glacial dispersion train. Here, highly anomalous copper and molybdenum values are associated with a magnetic low within the granodiorite.

In addition, an area of approximately 6 km² of granodiorite is considered to be prospective for the location of porphyry copper-molybdenum-type mineralization along the southern contact south and east of the Eastmain River. Two (2) areas, F and G which may represent more deeply buried zones of mineralization in the southeastern part of the area, still remain to be evaluated.

When a true section (Figure 4) is drawn across the granodiorite from northwest to southeast using methods of down-plunge projection, all of the known areas of mineralization and areas of anomalous geochemical results are seen to be located along the lower or bottom contact of the Macleod granodiorite. The upper contact of the granodiorite which occurs east of the diabase dykes and where the infolded greenstones occur, shows no anomalous areas either in bedrock or in the soils. On this basis, the area underlain by the granodiorite that is potentially

favourable for mineralization is considered to lie west of the dykes and to be in the order of 125 km².

6.9 MINERALIZATION MODEL

All of the facts presently known about the lithologies, structure and mineralization in the Macleod Lake - Eastmain River area can be combined to produce a preliminary model for the mineralization processes as discussed below and as illustrated in Figures 8 and 9.

Fahrig, et al, (1986) suggested that the Mistassini dyke swarm which is present in the Windy Mountain area represents the presence of a failed arm of a triple junction (aulacogen) produced at the opening of an ocean in the early Proterozoic, 2.0 to 2.2 Ga ago (2.0 to 2.2 billion years ago). This trend of northwest trending dykes and structures is well developed in the Macleod Lake - Eastmain River property area. It is considered that the mineralization was emplaced in an area of crustal tension represented by the failed arm approximately 2.0 Ga years ago. The older massive granodiorite which had been tilted onto its side within the surrounding gneisses, acted as an impermeable barrier to the mineralizing solutions which were emplaced beneath the granodiorite from one or more locations along northwestern trending structures. The solutions spread out beneath the granodiorite and may have moved laterally and upward along fold axes adjacent to the lower granodiorite contact. The evidence suggests that all of the lower granodiorite contact was available for mineralization whereas the eastern part of the granodiorite contact, which is the upper contact, was not mineralized.

The model envisages that the mineralization was concentrated within favourable structures adjacent to the lower contact of the impermeable granodiorite. It is considered that there may also be mineralization within the granodiorite emplaced within favourable structures.

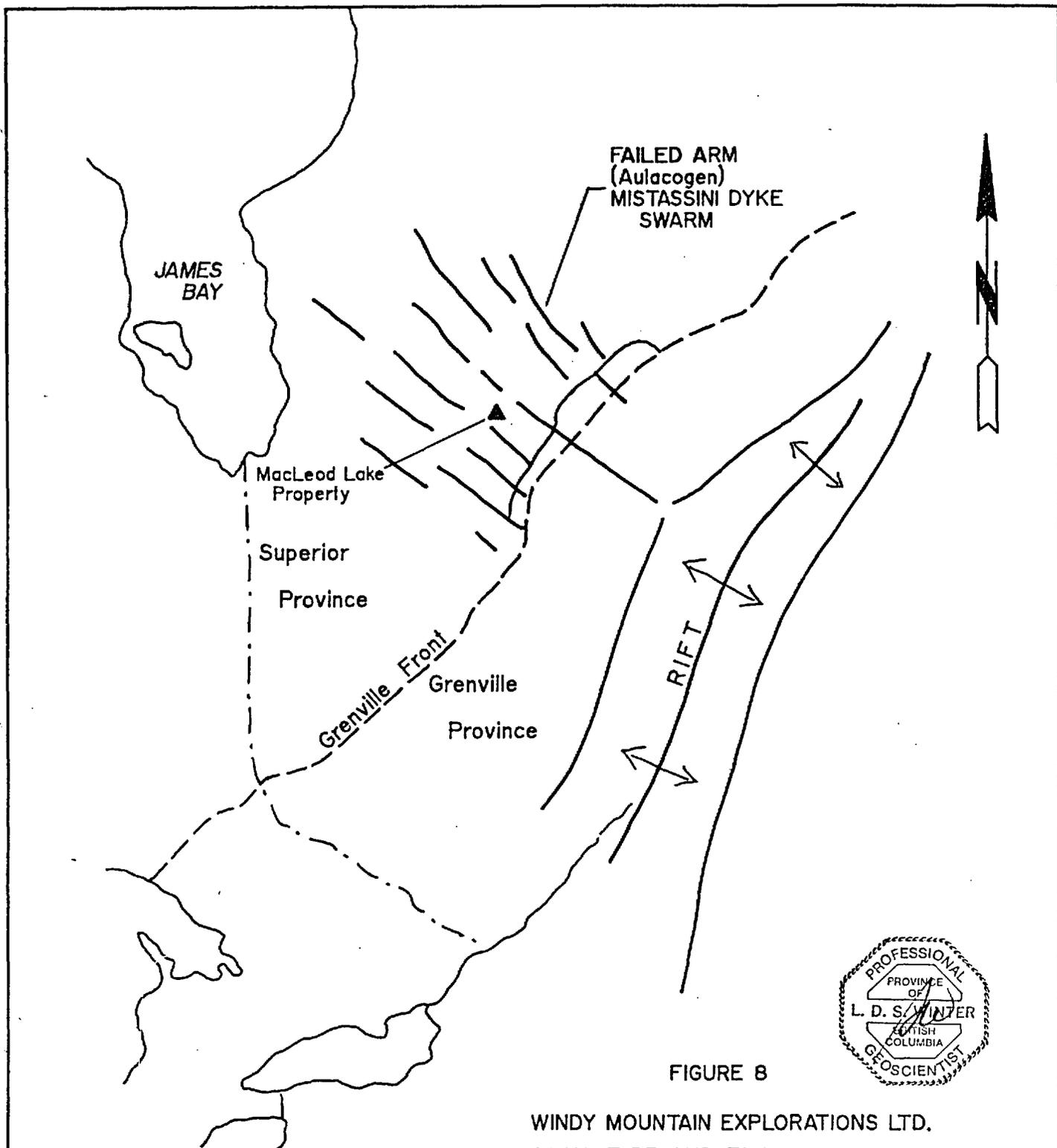


FIGURE 8



WINDY MOUNTAIN EXPLORATIONS LTD.
 COCHISE RESOURCES INC.

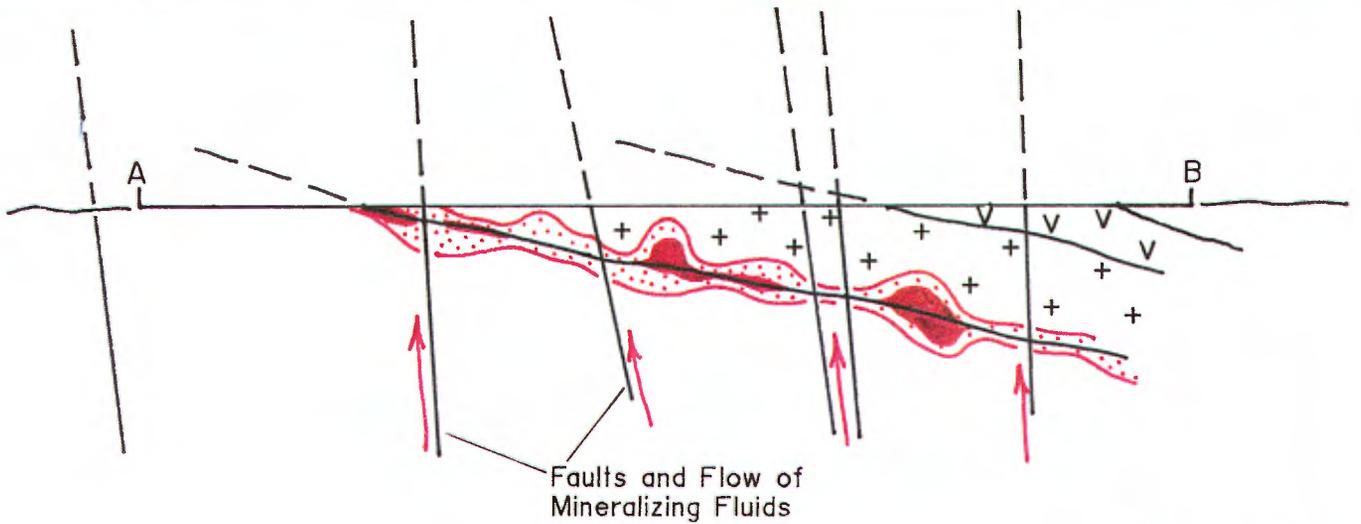
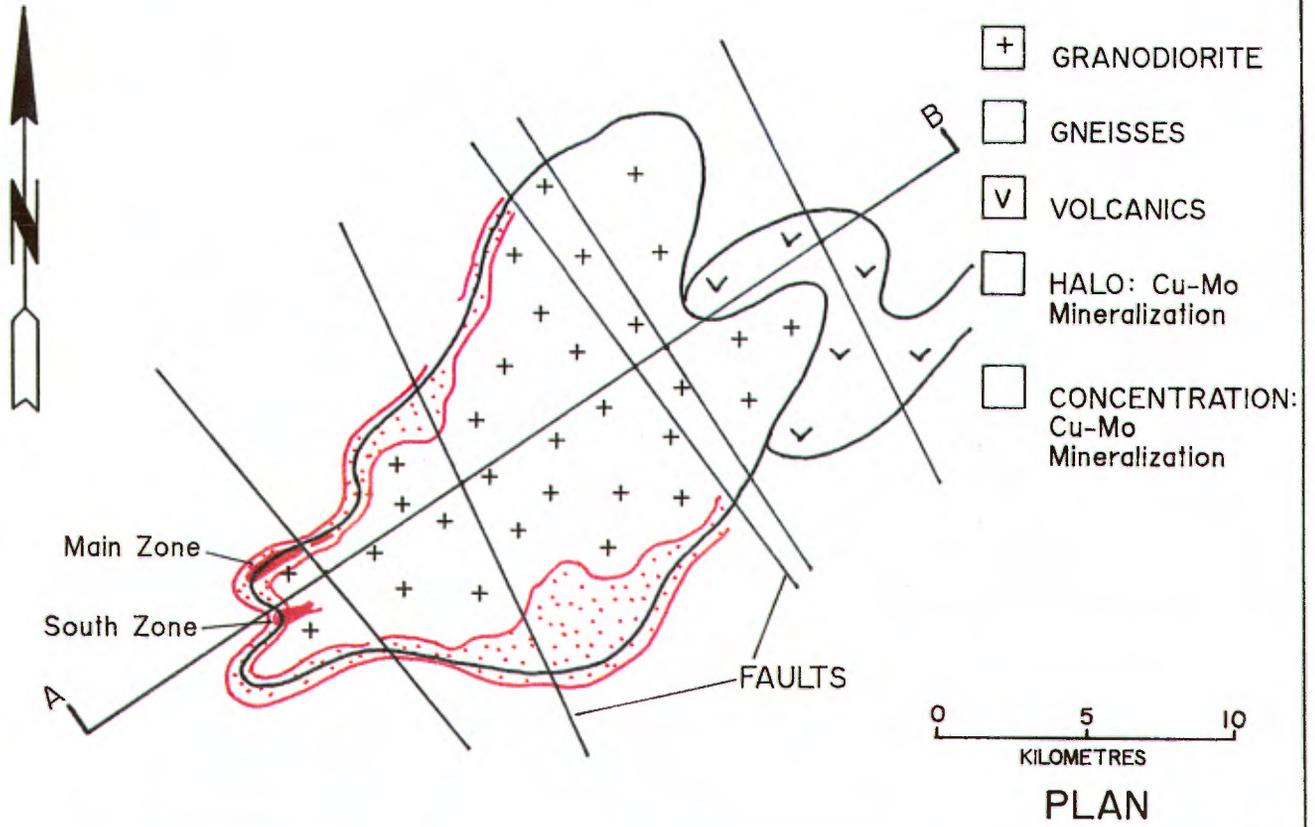
EASTMAIN PROJECT JOINT VENTURE

**DIAGRAMMATIC REPRESENTATION
 TRIPLE JUNCTION AND
 MISTASSINI AULACOGEN**

CHIBOUGAMAU MINING DISTRICT QUEBEC

BY: NORWIN GEOLOGICAL LTD.

DATE: OCT., 1992



SECTION A-B

FIGURE 9

WINDY MOUNTAIN EXPLORATIONS LTD.
COCHISE RESOURCES INC.

EASTMAIN PROJECT JOINT VENTURE
MINERALIZATION MODEL
DIAGRAMMATIC REPRESENTATION
PLAN & CROSS-SECTION

CHIBOUGAMAU MINING DISTRICT QUEBEC
BY: NORWIN GEOLOGICAL LTD.
DATE: OCT., 1992



6.10 METALLURGICAL TEST WORK

Windy Mountain Explorations Ltd. had some preliminary metallurgical test work carried out by the Centre de Recherches Minerales, Sainte-Foy, Quebec on split drill core from the area of the Main Zone. This work was able to produce a copper concentrate grading 33.8% copper with a recovery of 92.1% using flotation techniques. A molybdenum concentrate grading 40.8% Mo with a recovery of 85.8% was also produced. The molybdenum concentrate contained less than 2% copper and it was considered that the final molybdenum concentrate grade could be increased to greater than 50% with one or two cleaning steps. It was estimated that this would probably decrease the molybdenum recovery somewhat (Cotnoir and Tremblay, 1990).

No work was done determining the recovery of gold and silver during these preliminary tests.

Statistical work indicates that there is a high correlation between the copper, gold and silver values suggesting that the gold and silver should report with the copper concentrate.

6.11 ENVIRONMENTAL CONSIDERATIONS

Preliminary baseline environmental studies were carried out by Beak Environmental during the summer of 1990. This work showed that there were no foreseeable environmental problems within the area and that any tailings from the Main Zone mineralization would probably not be acid producing.

7. VOLCANOGENIC MASSIVE SULPHIDE (VMS DEPOSITS)

The Upper Eastmain River greenstone belt (UERGB) overlies and lies immediately to the east of the Macleod Lake granodiorite. This narrow arcuate greenstone belt consists of medium-grained volcanic and sedimentary rocks enclosed within a sequence of medium to high grade gneisses. The belt in turn is discordantly overlain on the southeast by Proterozoic clastic rocks of the Mistassini-Otish basin. The volcanic and sedimentary strata have been divided into two (2) distinct rock groups of unknown thicknesses. The Bohier sequence consists primarily of two (2) aluminous metasedimentary units conformably resting upon a migmatitic biotite paragneiss sequence. The two (2) metasedimentary units consist of polymictic metaconglomerate and a sequence of fine grained metapelites. The metavolcanic Rene sequence is composed of three (3) units of ultramafic to felsic composition. The stratigraphic relationship between the two (2) rock groups is not clear since the Rene metavolcanics have been thrust over the Boyer metasediments.

The Rene metavolcanics overlie the Macleod granodiorite along its eastern (upper) contact and during the regional airborne survey were covered by magnetometer and EM surveys. This work identified a number of conductive zones of which 45 were spot checked during the helicopter supported airborne follow-up programme in 1990.

(Prior, 1991b) has evaluated the results of this programme and has indicated that there are five (5) areas within the metavolcanics hosting ten (10) targets of moderate to high potential for the localization of volcanogenic massive sulphide deposits. The mineralization within these ten (10) areas consists of massive to stringer to disseminated sulphides associated with felsic to intermediate to mafic metavolcanics. The dominant sulphides are pyrite and pyrrhotite with lesser amounts of sphalerite and chalcopyrite (Figure 10).

The ground follow-up of the airborne anomalies was on a preliminary first-pass basis at which time the conductor was located on the ground and the area was prospected for favourable rock types and mineralization. The results obtained from the ten (10) most favourable sites evaluated during the airborne survey are presented in Table 9. Since this work was done, the eastern part of licence 882 has been dropped resulting in five (5) sites now being in open ground outside the current area of licence 882.

Table 9
Results of Preliminary Evaluation
Volcanogenic Massive Sulphide Deposits
Eastmain River Area, Quebec

<u>Target Area</u>	<u>Conductor</u>	<u>Rock Types</u>	<u>Analyses</u>
2-3	Group of weak EM anomalies	amphibolites, rusty, gossaneous siliceous material with up to 30% sulphides py, po, ccp	Cu (.02-.33%) Zn (.03-.53%) Ag (3.6-6.8 ppm).
2-4	Cluster of EM anomalies	amphibolite, granite gneiss, sulphides	Cu (.02-.13%) Zn (.03-.24%)
2-8	Cluster of EM anomalies	amphibolites hornblende gneiss, rusty, sulphide-bearing horizons	Cu (.04-.11%) Zn (.07-.32%)
2-9	Cluster of EM anomalies	amphibolites, feldspar-rich amphibolites with sulphides; copper values occur in felsic volcanics	Cu (.03-.15%) Zn (.14-.19%) Au 92 ppb
5-1	7 line AEM anomaly	fine-grained felsic volcanics with quartz eyes. Hornblende-biotite gneiss, chert, py, po, ccp	Zn (.04-.34%) Ag (3.4-4.1 ppm)
5-3	3 line AEM anomaly	magnetic amphibolite, siliceous, felsic volcanics py, po, ccp, sph	Cu (.03-.06%) Zn (.07-.21%) Ag (4.5-5.3 ppm)
5-4	2 line AEM anomaly	amphibolite, felsic tuffs? or metasediments siliceous volcanics? py, po, ccp	Cu (.04-.05%) Zn (.03-.06%) Ag (3.2-4.2 ppm)
5-6	10 line AEM anomaly	felsic tuffs containing sulphides over widths of 30 m. py, po, ccp	Pb (.04%) Cu (.03-.12%) Zn (.03-.37%) Ag (3.1-5.7 ppm) Au 124 ppb
5-8	3 line AEM anomaly	amphibolite, tuffs and/or metasediments py, po, ccp	Cu (.03-.12%) Zn (.03-.26%)
5-10	4 line AEM anomaly	fine-grained siliceous material, amphibolite, biotite-gneiss	Cu (.04-.08%) Zn (.03-.65%) Pb (.27%) Ag 5.9 ppm

It is considered that in addition to the potential for porphyry copper-molybdenum-type mineralization associated with the Macleod granodiorite there is also considerable potential for the localization of VMS deposits within the Upper Eastmain River greenstone belt.

Volcanogenic massive sulphide deposits of the Noranda, Kidd Creek, Matagami-type tend to occur in spatial groups or clusters. They are normally associated with submarine volcanic activity and are concentrated usually within a single stratigraphic interval. Within any typical cluster, there are on average 12 deposits containing 94,000,000 tons of ore. The typical mineralization is pyrite and pyrrhotite with lesser amounts of chalcopyrite, sphalerite and galena.

Recent work with regard to VMS deposits has shown that the felsic volcanics associated with productive volcanic centres show typical rare earth element patterns. These patterns show a relatively flat graph with a decided negative europium anomaly. Due to the large area involved in the Eastmain River area, it is considered that the samples collected during the reconnaissance follow-up programme should be analyzed for the rare earth elements to determine if they show the appropriate rare earth element patterns. If so, that would substantially upgrade the potential of the known mineralization and would provide a sound basis for on-going ground evaluation of the appropriate areas.

8. ADDITIONAL CONSIDERATIONS

8.1 INFRASTRUCTURE

At the present time, there is no infrastructure in the area however, plans have been laid out for the construction, of a winter road to be followed by an all-weather road to the MSV gold deposit which lies approximately 60 kilometres to the east of the area of the Windy Mountain/Cochise properties. When this road is completed from Temiscamie, northeast of Baie du Poste, Lake Mistassini, it would provide road access to within approximately 20 kilometres of the southeastern corner of the Windy Mountain/Cochise property. A road from Quebec Provincial Hwy. 113, just east of the village of Chapais leads north to the Lac Frotet - Lac Troilus area. This is an all-weather road and the end of it is approximately 200 kilometres southwest of the Windy Mountain/Cochise property (Figure 1).

There is no electrical power within the area and electrical power would have to be brought in from the area of Mistassini approximately 200 kilometres to the south. A number of rivers in the area could be used to produce electrical power.

8.2 ABORIGINAL LAND CLAIMS

The Windy Mountain/Cochise Resources claims and licences of exploration lie within the general area being disputed by the aboriginal (Cree) people and the Quebec government as part of the James Bay project. This area is not directly affected by the hydro developments on the Broadback, Rupert and Nottaway Rivers or the Great Whale project however, it is part of the overall area being disputed.

Windy Mountain Explorations Ltd. and Cochise Resources Inc. have been assured by the Quebec government that they are working with the utmost diligence to have the matter resolved and

there will be no long-term problems as far as land ownership in this area is concerned.

Norwin Geological Ltd. as operator of the field work for Windy Mountain Explorations Ltd. and Cochise Resources Inc. has been working closely with the Cree community at Baie du Poste, Lake Mistassini, Quebec. At this point, we consider that there is a good working relationship between the parties concerned. We have been informed by members of the Mistassini Lake band that they are very interested in having economic development take place in the area and they are supportive of any efforts along those lines provided they meet their environmental concerns. In this context they have approved the proposed work programme on the MSV project.

9. CONCLUSIONS AND OBJECTIVES

It is considered that the work completed by Windy Mountain Explorations Ltd. and Cochise Resources Inc. to date has identified a potential new mining camp covering an area up to 125 km² hosting copper-molybdenum-gold-silver mineralization. The mineralization which has an Early Proterozoic age of 2.0 Ga has many characteristics of younger age porphyry copper-type deposits. In this context, Minnova Inc. is actively evaluating in the Lac Frotet area, 150 km southwest of Macleod Lake, a deposit hosting a geological reserve of over 50,000,000 tonnes averaging 0.2% Cu and 2.0 g/t gold amenable to open pit mining. This deposit is being described as an Early Precambrian subalkalin porphyry copper-gold deposit.

Within the most prospective 125 km² of area underlain by the Macleod granodiorite, ten (10) kilometres along the northwestern contact show copper-molybdenum-gold mineralization. Within this strike length four (4) areas of concentration have been identified; the Main Zone, the South Zone, Area A to the northeast and Area B to the southwest. One area of granodiorite

at the northeast end of this mineralized sector appears to be the source area of a copper and molybdenum-rich, well developed glacial dispersion train identified in B-horizon soil samples.

Along the southern granodiorite contact an area of approximately 6 km² has been identified showing porphyry copper-molybdenum type alteration, tourmaline veining and anomalous copper and molybdenum values. Two (2) areas, F and G within the granodiorite show anomalous soil geochemical values but have not been evaluated.

The aggregate mineral inventory for the Main Zone is approximately 37,000,000 tonnes at 0.44% Cu. Within this volume there are significant areas of higher grade material such as along the southern limb of the zone where three drill holes (33, 34 and 35), over a strike length of 300 metres, show an average grade of 2.5% Cu, 0.04% Mo, 0.31 g/t Au and 31.0 g/t Ag across an average width of 4.9 metres. Higher grade mineralization of 5.4% Cu across 0.5 metres was intersected in hole 61 in the South Zone and is indicated by a number of boulders in the glacial boulder train assaying over 2% Cu. One mineralized boulder found by prospecting in Area C, south of the Eastmain River, assays on average 1.45% Cu (this mineralization is present as disseminated bornite). This evidence suggests that the potential exists for the localization of zones of higher grade mineralization either as discrete zones or as units within larger zones of lower grade material.

The first objective of any on-going work and any future work is to identify as quickly and as efficiently as possible the required tonnage of porphyry copper-type mineralization at the appropriate grade, preferably available to open pit mining methods, that would make the property economically viable. The recently completed programme (1992) has indicated that the area of highest potential, and where work should be concentrated is along the northeastern to southwestern contact, and within the adjacent granodiorite. An area of approximately 6 km² along the

southern contact is also considered to have high potential and two (2) areas F and G that show anomalous soil geochemical value have not been evaluated. Most of the interior of the granodiorite has not been evaluated for porphyry-type mineralization.

A second objective of the programme should be the evaluation of the VMS targets within the Upper Eastmain River greenstone Belt identified during the regional airborne survey.

10. RECOMMENDED EXPLORATION PROGRAMME AND BUDGET

To achieve the stated objectives, a three year exploration programme in a series of stages is presented.

Following the completion of each stage the results would be evaluated and a decision made as to the continuation of the next stage and, if warranted, the most appropriate type of work.

1993

Stage 1 February, March, April

Porphyry Copper-Type Mineralization

The proposed programme consists of line-cutting and IP surveys over areas identified as having the highest economic potential during the 1992 programme.

Volcanogenic Massive Sulphide (VMS) Mineralization

The work in this programme consists of retrieval of the samples from the Macleod Lake camp during the winter field work to be followed by rare earth element analyses and compilation of all available data on the five (5) areas of highest potential.

Proposed Programme (February, March, April, 1993)

1.	Line-cutting: 60 line-km @ \$250/km	\$	15,000
	NE of Main Zone		
	SW of South Zone		
	Lac de la Corne Area		
	Area G		
2.	IP surveys: 50 days @ \$1,500/day		75,000
	NE of Main Zone		
	SW of South Zone		
	Lac de la Corne Area		
	Area G		
3.	Logistics, camp operation, supplies, etc.		18,000
	for 2 month period		
4.	Transportation - fixed wing, for mob,		36,000
	demob and camp service		
	24 flights @ \$1,500/flight		
5.	Reports, compilation data, etc.		14,000
6.	VMS sample analyses		9,000
7.	Compilation VMS data, reports, etc.		<u>23,000</u>
	Sub-Total	\$	190,000
	Contingency (approx. 10%)		<u>20,000</u>
	TOTAL	\$	210,000

Stage 2 June through August
Porphyry Copper-Type Mineralization

The proposed programme consists of ground follow-up; mapping and prospecting in areas covered by winter IP surveys, lithogeochemical sampling and analysis of the Macleod granodiorite to identify areas of alteration to be followed by preliminary drilling of specific targets of interest.

VMS Mineralization

Ground work consisting of mapping, sampling and geophysics to be followed by preliminary drilling of the best targets is proposed.

1.	Geological mapping, prospecting, sampling (wages, fees, meals, etc.)	\$	90,000
2.	Camp operation, logistics, supplies, etc.		27,000
3.	Transportation - fixed wing, for mob, demob, and camp service 20 flights @ \$1,500/flight		30,000
4.	Analyses		22,000
5.	Line-cutting for VMS targets		12,000
6.	Geophysics - VMS targets		38,000
7.	Helicopter support - 10 days @ \$4,000/day		40,000
8.	Reports, maps, compilation of data		<u>22,000</u>
	Sub-Total	\$	281,000
	Contingency		<u>29,000</u>
	TOTAL	\$	310,000

Stage 3 Preliminary Drilling Programme, September, 1993

1.	3,300 metres @ \$145/m all inclusive	\$	478,500
	includes - direct drilling costs		
	- mob & demob		
	- supervision, logging, sampling		
	- assaying		
	- fixed wing aircraft service		
	- helicopter support for moves, etc.		
	- reports, maps, etc.		
			<hr/>
	TOTAL	\$	478,500

TOTAL RECOMMENDED EXPLORATION EXPENDITURE FOR 1993

Stage 1: February, March, April	\$	210,000
Stage 2: June - August		310,000
Stage 3: Drilling		<hr/> 478,500
TOTAL	\$	998,500

1994

Depending on the results of the 1993 programme, a 1994 programme as outlined below in general terms is proposed.

Stage 1 - Additional ground follow-up as required	\$	200,000
Stage 2 - Diamond drilling		400,000
- evaluation of highest priority targets		
- 2,500 metres		
Stage 3 - Diamond drilling		400,000
- evaluation of highest priority targets		
- 2,500 metres		
		<hr/>
TOTAL	\$	1,000,000

1995

Based on positive results during the 1994 drilling programme, then additional drilling of a development nature is proposed for the 1995 season.

Stage 1 - Development drilling	\$ 1,000,000
- outlining reserves plus associated costs	<hr/>
TOTAL	\$ 1,000,000

Respectfully submitted,

L.D.S. Winter 

The seal is a circular emblem with a scalloped border. The text inside the seal reads: "PROFESSIONAL PROVINCE OF BRITISH COLUMBIA GEOSCIENTIST" around the perimeter, and "L. D. S. WINTER" in the center.

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