SUMMARY REPORT

CONNORS DRILLING PHASE I

and

BELLAS GATE AREA

EPL'S 234, 235, 236

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SUMMARY AND CONCLUSIONS

Pyrite and localized chalcopyrite mineralization occur in two diverging linear alteration zones; one passing through Connors and Ginger Ridge, and the other passing through Camel Hill and Geo Hill. Previous drilling of geochemical anomalies over the Connors, Camel Hill, Gold Mine and Geo Hill areas has shown Connors to be the most favourable area for economic copper mineralization. Diamond drilling just completed at Connors indicates copper mineralization of about 0.6% Cu and higher to continue to a depth of over 350 feet. Additional drilling is necessary for better estimates of grade and tonnage.

The indication of copper mineralization, alteration and presence of an intrusive in the Point Hill - Watermount Area warrant more work to evaluate the zone. Applications for two exclusive prospecting licences have been made to protect the area until sufficient work has been done to determine if interest should be continued.

The upper sediments and volcanics may have acted as a capping to hydrothermal solutions, producing a concentration of sulfides just below the volcanic and upper sediment and volcanic contact. Drilling at Connors and Camel Hill encountered decrease of sulfide mineralization with depth away from the projected contact. The decrease of alteration in the upper sediments and volcanics above this contact suggests that the volcanics just below the contact may be favourable exploration areas.

RECOMMENDATIONS

It is recommended that:

1. Seven to eight additional holes be drilled at Connors as proposed.

2. A detailed stream sediment sampling survey be made, with analyses for total copper and molybdenum, to cover the two Bellas Gate alteration zones and their projections under apparently unmineralized upper volcanics and sediments.

3. The Point Hill alteration areas be evaluated by geological mapping and geochemical sampling of rock exposures and stream sediments.

4. A magnetometer survey be done over Connors to determine whether it assists in outlining copper mineralization. If it proves useful, magnetometer surveys should be made over other anomalous copper zones with poor rock exposures.

5. A re-examination be made of the small copper showings and geochemical anomalies, as time permits.

INTRODUCTION

Four diamond drill holes with an average depth of 500 feet were drilled at Connors between March and September 1969 to test the grade and tonnage of the primary zone of a disseminated copper deposit indicated by earlier work, including diamond drilling in 1959. The drilling was the first phase of a three phase program to block out tonnage and grade, and was stopped to compile and evaluate results.

Additional prospecting and sampling of the general area was done, notably at Ginger Ridge, Bellas Gate, Point Hill, and along the Connors - Ginger Ridge alteration zone. As a result, applications for two additional exclusive prospecting licences have been made to protect the Watermount - Point Hill area until an evaluation of alteration zones in the vicinity can be made.

Included in this report are maps showing locations of existing and proposed drill holes at Connors, results of geochemical sampling at Ginger Ridge, a compilation of sampling and prospecting in the general licence area, sections of drilling at Connors, and descriptive drill logs of the holes drilled at Connors.

GENERAL GEOLOGY AND MINERALIZATION

The general geology of the Bellas Gate Area and Connors has been adequately described before (see dwg. 1683 : Generalized Geological Map of Bellas Gate Area, SEPL 29).

Two slightly diverging alteration zones of probable late Cretaceous age, trending north - west, affect pre - upper Cretaceous volcanic rocks. One of the zones lies at the south - west edge of a granodiorite body elongated in the same direction and extending for a know distance of over 12,000 feet, and the other zone lies about 5,000 feet to the south - west of it, but has not been observed to be associated with granodiorite. The rocks in both zones are predominantly tuffs and lavas.

The northerly zone has known copper mineralization at Ginger Ridge and Connors. The copper mineralized areas of Geo Hill, MAB, Gold Mine and Camel Hill are included in the southern zone.

The alteration zones are in parts overlain by what were believed to be post alteration and mineralization " upper sediments and volcanics ". Current examination has shown that the upper sediments and volcanics do have alteration for a limited distance above the contact with the tuffs and lavas, but being probably less susceptible to hydrothermal solutions, acted as a capping to the mineralization and alteration. Where the upper sediments and volcanics have been fractured, strong but erratic limonite staining and alteration have affected some beds.

The linear nature of the two alteration zones suggests that they are aligned with pre-mineral faults or zones of weakness. These zones of weakness would also be pre-upper sediment and volcanic for the sediments and volcanics to serve as an efficient capping. The granodiorite appears to be pre mineralization, and may have intruded along one of the zones of weakness rather than caused it.

Extensive disseminated pyrite with localized chalcopyrite mineralization occurs in the two alteration zones, and is probably related to a later (?) stage of intrusion from the grandiorite. Numerous dykes of feldspar porphyry have been mapped in the Geo Hill - Camel Hill alteration zone, and have been found associated with the copper mineralization at Camel Hill. Feldspar porphyry and a granitic intrusive (late stage of the granodiorite?) have been encountered in the drilling at Connors, and appear to be associated with the copper mineralization. Outcrops of possible feldspar porphyry have been found at Ginger Ridge but have not been associated conclusively with mineralization.

DRILLING

Four holes between 410 and 574 feet deep were drilled to test the depth of primary copper mineralization indicated by the drilling done by Jamaica Copper and Iron Limited in 1959. The current drilling has indicated that marginal grade mineralization extends to a depth of 350 to 400 feet below the enriched zone, and that a tonnage in the order of 10 million tons of 0.6 to 0.7% Cu material may be expected, assuming that the granodiorite limits mineralization to the north and east, and low grade pyritic tuffs to the west. Extension to the south has in no way been tested, and has been placed at the limits of copper anomalies in surface rock exposures and soils. The enriched zone overlying the protore could have 750 thousand tons of 1.4% copper.

Results from the four holes drilled are summarized below, and given in greater detail in the accompanying drill logs.

CON - 1 Depth 497 feet, overall grade 0.12%Cu

34.0 to 100.0 feet 0.07% Cu
100.0 to 200.0 feet 0.29% Cu
200.0 to 380.0 feet 0.07% Cu
380.0 to 497.0 feet 0.11% Cu

34.0 to 130.0 feet Nil Au, trace Ag, 0.01% Mo
* 130.0 to 210.0 feet Nil Au, 0.1 oz/ton Ag, Nil Mo
*210.0 to 380.0 feet Nil Au, 0.1 oz/ton Ag, Nil Mo
380.0 to 497.0 feet trace Au, trace Ag, <0.005% MoS_2
* Semiquantitative analyses.

CON - 2 Depth 573.7 feet, overall grade 0.35% Cu.

70.0 to 90.0 feet 0.12% Cu
90.0 to 270.0 feet 0.57% Cu
270.0 to 530.0 feet 0.26% Cu
530.0 to 573.7 feet 0.12% Cu

70.0 to 270.0 feet 0.02 oz/ton Au, 0.18 oz/ton Ag, <0.01% MoS_2
270.0 to 390.0 feet 0.02 oz/ton Au, trace Ag. <0.01% MoS_2

CON - 2A Depth 110.0 feet
(Redrill of enriched zone of CON - 2)

50.0 to 84.2 feet 0.18% Cu
84.2 to 105.0 feet 1.36% Cu
105.0 to 110.0 feet 0.49% Cu

CON - 3 Depth 505.0 feet, overall grade 0.39% Cu

20.0 to 120.0 feet 0.09% Cu
120.0 to 208.0 feet 0.47% Cu
208.0 to 370.0 feet 0.65% Cu
370.0 to 505.0 feet 0.32% Cu

20.0 to 110.0 feet Trace Au, Trace Ag. <0.01% MoS_2
120.0 to 208.0 feet 0.02 oz/ton Au, trace Ag, <0.01% MoS_2
208.0 to 420.0 feet 0.02 oz/ton Au, trace Ag, <0.01% MoS_2
420.0 to 505.0 feet Trace Au, trace Ag, < 0.01% MoS_2

CON - 4 Depth 410.0 feet, overall grade 0.64% Cu

69.0 to 110.0 feet 0.43% Cu
110.0 to 350.0 feet 0.75% Cu
350.0 to 410.0 feet 0.35% Cu

(Not all composite samples have been analysed for gold, silver, and molybdenum to date)

Hole CON - 2 was the only hole of the four which cored the secondary enriched zone. Because of poor recovery in the secondary enriched zone, the upper portion of the hole was redrilled as CON - 2A. Results of the redrilling agree with results of previous drilling, and indicate an enriched blanket grading about 1.4% Cu. Hole CON-4 probably passed through the enrichment zone, but the rock was too weathered for reliable core drilling.

The copper mineralization at Connors is in the form of chalcopyrite with minor amounts of bornite. The secondary enriched zone has mainly primary and secondary chalcopyrite and possibly some chalcocite, covellite and bornite. Molybdenum mineralization was poor in all holes. The core was also assayed for gold and silver with low results.

All four holes were stopped when alteration and sulfide mineralization decreased. Associated with a decrease of pyrite mineralization with depth was an increase of magnetite mineralization. Chalcopyrite mineralization persisted through the magnetite zone more than pyrite mineralization.

The best primary copper mineralization was usually associated with intense silicification to the point of completely obscurring original rock texture. In weakly altered rock at the bottom of the holes, magnetite and chalcopyrite veinlets were surrounded by narrow zones of silicification. Epidote alteration at the outer fringe of alteration, as occurs in other parts of the Connors - Ginger Ridge alteration zone, was not noted at Connors.

Seven and possibly eight (CON - 5 to 12) holes would be required to test for extensions of the plus 0.6% copper mineralized zone and determine if 10 million tons canbe obtained. If holes 5 and 11 do not give good results, it would not be necessary to drill hole 12. Additional holes might be necessary to determine the limits of the deposit.

SAMPLING AND PROSPECTING

Several areas within and outside the exclusive prospecting licences were sampled, and some prospecting for alteration and possible mineralization was done.

A. Connors Deposit

A geochemical survey of rock exposures over the Connors deposit was made to check the previous soil sampling, and to determine if the area is anomalous in molybdenum. Rock chip samples were analysed for total copper and molybdenum.

The results show a strong and well defined copper anomaly of over 1000 ppm copper, which drops off abruptly at the granodiorite contact, and more gradually in the volcanics. Molybdenum was anomalous in some samples, but was too irregular to be of much use as assistance for locating drill targets.

B. Ginger Ridge

A copper anomaly in soils at Ginger Ridge, outlined by Bergey, was re-sampled for copper and molybdenum using rock exposures to eliminate any " mushrooming " effect that may occur in soils.

The preliminary sampling indicated a strong anomaly of 250 to over 1000 ppm copper with a possible extension to the north - west. Additional sampling outlined a 250 ppm Cu anomaly of approximately 300 feet by 600 feet, elongated north - west to south - east, with the main anomalous zone of over 1000 ppm Cu at the south - east. Molybdenum values were erratic.

The anomaly probably indicates a small copper mineralized zone near the granodiorite.

C. Connors - Ginger Ridge Zone

Geochemical rock chip sampling of a portion of the alteration zone through Connors and Ginger Ridge was done. While values can be considered as anomalous, they were not high enough to encourage follow-up sampling.

Based on one sample taken by ASARCO approximately 2,500 feet north - west of Ginger Ridge, which gave values of 350 ppm Cu and 5 ppm Mo, samples were spaced closer in the area, but other high values were not obtained. One sample taken within a few feet of ASARCO'S sample gave low results.

D. Bellas Gate

Red lateritic weathering at Bellas Gate was sampled. This area is in the upper sediments and volcanics that overlie the sulfide mineralized volcanics of Camel Hill and Gold Mine. It lies along the extension of the Geo Hill - Gold Mine - Camel Hill belt of alteration and mineralization.

Values of geochemical samples were generally low in copper and molybdenum, the highest sample assaying 185 ppm Cu and 2 ppm Mo.

The strongest alteration of the area occurs just to the north of the village of Bellas Gate. The rock is strongly weathered to argillaceous limonite stained products. A variation of jarosite content gives a brick red to yellowish colour to the limonites. Structures observed,and the trend of the limonite zones,are east - west. This is at an angle of approximately 45^{o} to the Geo Hill - Camel Hill mineralized belt.

E. Point Hill - Watermount Area

Two outcrops of granodiorite were located approximately 4,000 feet south - west of Point Hill. Additional prospecting revealed erratic alteration and limonite staining north - east of the granodiorite, and moderately strong alteration and limonite staining in outcrops along the road between Watermount and Point Hill. The intervening area was not prospected. Several samples were taken at easily accessible locations and analysed for copper and molybdenum.

No anomalous zones were outlined due to the wide spacing of samples, but values of up to 350 ppm copper suggest that copper mineralization is associated with the alteration. The presence of the granodiorite close-by is encouraging, and suggests some geological similarity between the Point Hill area and the Ginger River - Connors alteration zone.

Two exclusive prospecting licences have been applied for to protect the area until an evaluation can be made.

F. Miscellaneous Areas

1. Strong lateritic weathering occurs at and near the Juan de Bolas peak in upper sediments and volcanics. A sample was taken from the weathered rock and semi-quantitatively analysed for all metals. With the notable exception of silver, most metals occuring in the mineralized volcanics at Connors occur in the limonitic sediments at Juan de Bolas. Copper analyses gave 0.01% Cu.

2. Minor prospecting along river beds north - east of Ginger Ridge was done. One area of disseminated pyrite mineralization in weakly altered andesite, and some

copper mineralized float carried down by the river were found. Due to the probability that this mineralization may be associated with one of the major east - west faults of the area, follow-up prospecting and sampling as planned was not done.

3. Examination of the upper sediments and volcanics west of Connors, the Bellas Gate area, and the Juan de Bolas area indicates that the upper sediments and volcanics previously considered as post mineralization are probably pre mineralization. Alteration occurs in these rocks, but does not extend too far up in the series - possibly because of poor susceptibility to change by the hydrothermal solutions. Where pre-mineral faulting or fracturing occurs in the upper volcanics and sediments, as at Bellas Gate, alteration may penetrate them and affect some beds.

Respectfully submitted,

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AIB/lc
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