FINAL REPORT FOR AREA OUTSIDE MINERAL CLAIMS 4376 - 4390 CORONET HILL AREA, NORTHERN TERRITORY

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RANFORD 5370 1:100,000  
CALLANAN 5370-1 1:50,000  
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Appendix I. Analytical Results
SUMMARY

EL 6391 surrounds the old Coronet Hill polymetallic workings (Cu, As, Sn) in the Moline region of Northern Territory and is part of a contiguous block of tenure along the Coronet mineralised structure concurrently being explored by Aztec Mining Limited. The area is located 50 kms east north east of Pine Creek.

The geology is comprised of sediments and granitic intrusives of the Pine Creek Geosyncline. The oldest sediments exposed are carbonaceous and lesser dolomitic mudstone of the Koolpin Formation which are conformably overlain by mudstone, chert and albite chert of the Gerowie Tuff Formation. Overlying these sediments are mudstones and BIF of the Mt Bonnie Formation and siltstone, mudstone and greywacke of the Burrell Creek Formation. Mt Diamond Granites intrude the sequence. Structurally the sediments are tightly folded and dip steeply south west in an anticline against the north west trending Coronet Hill Fault.

Base metal (Cu, As ± Pb, Bi, Zn), tin and precious metal (Ag ± Au) mineralisation occurs in the Coronet Hill area. It is structurally controlled and occurs in a number of sulphide bearing veins within lodes over a strike length of 4 kms. The area was originally mined for silver then later for Cu and Sn. Historic production is low.

Work conducted by Aztec Mining Limited to date has included literature research, data compilation, gridding, detailed geological mapping, detailed stream sediment sampling, gossan rock chip sampling and an EM geophysical survey. This work was mainly conducted within the areas retained by Aztec Mining Pty Ltd (MCN 4376-90).

Troy Resources carried out exploration prior to Aztec within EL6391. They gridded areas of interest, geologically mapped and rock chipped gossanous areas and conducted a shallow RC percussion drilling programme to test the best targets.

This work has revealed the Coronet Hill area is geochemically highly anomalous and has defined a coincident Pb and Sn stream geochemistry anomaly that requires follow up exploration. There is a metal zonation that can be recognised and areas with high base metals but low arsenic have been recognised. Anomalous areas have been pegged with Mineral Claims in order to carry out further exploration.
1. INTRODUCTION

Exploration Licence 6391 is located 55 kms east north east of Pine Creek in the Coronet Hill area of Northern Territory (Figure 1). It is accessed by the sealed Kakadu Highway from Pine Creek to Mary River Roadhouse thence twenty kms south east along graded station tracks following the Mary River Station Pastoral Lease boundary.

The topography is typically rugged and is dominated by a deeply incised central ridge line along which most of the old Coronet Hill workings occur.

The lease was originally held by private parties and subsequently was sold outright to Aztec Mining Pty Lid in the final year of tenure. It is contiguous with MLN 20, MCN's 4076 - 4079 4088 - 4103 and EL's 7481, 7740 which are being explored concurrently by Aztec Mining Ltd. The licence was purchased in order to explore the mineralised Coronet Hill structure for further base and precious metal mineralisation.

The aim of this report is to discuss the work conducted by Aztec Mining Ltd within the area not covered by Mineral Claims 4376-390 in the final year of tenure and present results. For previous work conducted by Troy Resources within EL6391 the reader is referred to report no. WMS 90/22 Ranford Hill Prospect, Northern Territory Final Report September 1990 prepared by Troy Resources Limited.

2. TENURE

EL 6391 originally comprised 9 graticular blocks and was granted to R J Young and M Woodbridge in 1989 for 3 years who in turn joint ventured it to Troy Resources Limited. Aztec Mining Pty Ltd purchased the lease in 1991 by which time it comprised 4 graticular blocks (see Enclosure 1). It expired on the 8th June 1992.

Subsequently, 15 Mineral Claims (MLN 4376-90) have been pegged by Aztec Mining Ltd within the old boundaries of EL 6391.

3. CONCLUSIONS

(1) The Coronet Hill Mineralisation is polymetallic and there is good potential to locate areas of significant mineralisation with lower penalty metals (As, Bi).

(2) Further exploration is required to explain a significant and coincident Pb and Sn stream geochemistry anomaly located during the work programme.

(3) The mineralisation occurs in dextral (right hand movement) strike slip faults and is best developed in northerly trending shear link structures that cross cut the north west trend.

(4) Geological mapping and airborne magnetics indicate the Mt Diamond granite shallowly underlies most of the mapped area.
4. PREVIOUS WORK

The lode system was discovered in 1885 and was first worked for silver. In 1913 a company was set up to develop copper and arsenic mineralisation in the Coronet Hill area. In the period up to 1918 two adits (No.1 and No.2) were driven into the main area of mineralisation and two shafts were sunk at South Extended Lease. No further ore was produced until 1929-30 when 14 tons of ore were picked from old dumps.

The area was abandoned until 1951-52 when a large sample was collected from the south drive of No.2 adit. Test work indicated the mineral association was complex and no further work was carried out.

United Uranium NL secured options over the area in 1956 but did not carry out any significant exploration until 1969. The work programme included detailed mapping/sampling of the surface and old mine workings followed by percussion and diamond drilling. This programme indicated reserves of 12,000 tons at 3.6% Cu, 10.9 oz/ton Ag, 8.2% As in the No.2 Adit Area, Main Lode and 39,000 tons at 1.0% Cu, 2.1 oz/ton Ag in the South Extended Area. (A.J. Cox 1970).

The area was subsequently explored in 1981 by Geopeko as part of a large regional programme searching for Mt Bonnie stratiform base metal style mineralisation associated with Gerowie Tuff and Mt Bonnie Formation of the South Alligator Group. They concluded a significant tonnage of ore grade material may be present at Coronet Hill and the Gerowie Tuff was prospective for stratiform base metal mineralisation however the target was not considered worthy of exploration at the time. (P. Nicholson 1981).

Following Geopeko, the Coronet Hill structure was initially explored by Australian Coal and Gold Holdings Ltd and then by Troy Resources Limited in a Joint Venture Agreement. Included in the Joint Venture was EL6391. Exploration activities included detailed prospecting, rock chip/stream sediment sampling, and geological mapping culminating in RC drilling to test the most favourable zones. The drilling results were not encouraging and they withdrew from the various Joint Ventures. (J. Doepel, Troy Resources Final Report 1990).

5. GEOLOGY AND MINERALISATION

5.1 STRATIGRAPHY

Sediments and granite intrusions of the Pine Creek Geosyncline crop out in the area.

The oldest unit is comprised of carbonaceous mudstone and dolomitic chert/mudstone which can be correlated with Koolpin Formation of the South Alligator group. Overlying these rocks are interbedded mudstone and chert grading into massive albite chert (hornstone) beds correlatable with Gerowie Tuff of the South Alligator Group. Overlying this formation is mudstone with a distinctive BIF marking the top which is correlated with Mt Bonnie Formation of the South Alligator Group. The BIF grades up into siltstone, mudstone, pebble conglomerate and greywacke of the Burrell Creek Formation, Finnis River Group.

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