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EXPLORATION LICENCE 7028

MOLINE PROJECT

Moline Management Pty Ltd
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1 INTRODUCTION

This report was prepared for the N.T. Department of Mines & Energy under Section 34 of the Mining Act by Moline Management Pty Ltd. It documents the results of exploration carried out by Moline Management Pty Ltd on behalf of Zinnanda Pty Ltd and Arimco Mining Pty Ltd on EL 7028 in the Moline area approximately 50 kms north-east of Pine Creek. This work was undertaken during the first year of the licence.

EL 7028 is part of an exploration area surrounding the Moline Gold Mine; a 500,000 t.p.a. C.I.P. open pit gold mining operation. The tenement was explored for its gold resource potential, with the view of mining any resources outlined and processing them through the Moline Plant.

2 LOCATION, TOPOGRAPHY, ACCESS AND VEGETATION

The four graticular block tenement area is located immediately north of the Kakadu Highway, on the all weather road from Pine Creek to Mary River (Figure 1). A dirt road, accessible most of the year gives access to the north west portion of the tenement area. The broad steep sided O'Neil Creek bisects EL 7028 and combined with a fence along the Kakadu Highway makes access to the eastern half of the licence difficult.

The flood plain of O'Neil Creek dominates the topography of the region. In the north west and south east, the area is flat with minor ridges of outcrop. In the central south there are some substantial ridges rising strongly from the surrounding flats. Vegetation on the uplands is sparse and the flats are covered with spear grass.

3 TENEMENT DETAILS

EL 7028 was granted to Zinnanda Pty Ltd (50%) and Hudspeth & Co Pty Ltd (later Arimco Mining Pty Ltd) 50% on the 10th November 1991.

Moline Management Pty Ltd on behalf of the tenement owners was responsible for the planning and implementation of exploration programmes on EL 7028. Exploration Licence 7028 is one of a large number of mineral exploration and mining tenements held by Zinnanda and Arimco in the Moline area. Together these tenements
form the Moline Project Area, which is centred on the Moline Gold Processing Plant.

4 GEOLOGY

The outcrop in Exploration Licence 7028 is probably the Lower Proterozoic Burrell Creek Formation.

In the north west of the licence outcrop is sparse and restricted to a number of quartz veined ridges and resistant chert ridges. The bulk of the area is covered by the alluvial flats surrounding Bowerbird Creek.

Similarly there is little outcrop in the central position of the tenement area. Again there are several NW striking quartz dominated ridges in red brown shales and grey and brown siltstones.

In the south - central portion of the tenement area there are a number of moderate to steep ridges of grey brown silts and red brown shales, with minor ferruginous cherts. The strata strikes northwest and dips to the south west. It would be expected that these sediments are isoclinaliy folded. The south west of EL 7028 is dominated by broad alluvium covered flats, elevated gravel terrace and sparse outcrops of milky white quartz veins, minor shales and siltstone and massive hard dark grey hornfels/greywacke.

5 PREVIOUS EXPLORATION

There is evidence of shallow prospecting/mining in several places on the tenement area. For example Figure 12 in the south central portion of EL 7028 has a number of shallow pits in a gossan which carries anomalous zinc mineralisation.

Along the northern boundary there are shallow workings in gossanous material with copper carbonate mineralisation (Figure 8). In the early 1980's AMOCO carried out an aeromagnetic survey of the region including EL 7028. This work shows a number of northwest trending low level magnetic anomalies, which conform with the strike direction of the stratigraphy.

In the mid 1980's Driffield Mining Pty Ltd carried out a rock chip geochemical survey over the northern two blocks of the tenement area.
During 1990 - 1991 Moline Management Pty Ltd carried out a reconnaissance geological mapping and rock chip geochemical survey of the tenement area. The objective of this work was to locate limonitic quartz veined or gossanous outcrop for sampling, and analysis for gold, arsenic, zinc and occasionally lead and silver. The geological features of the exposures were recorded on base sheets. Figure 2 is a key to the base sheet location and Figures 3 - 18 show the sample locations and geological features. With the exception of Sheet E11 (Figure 14) and portions of Sheets B13; A12; B12; B13; C10 and D11 outcrop was very poor.

A total of 94 rock chip samples were collected during this geochemical programme. All samples were analysed by A.A.L. in Pine Creek.

Of 94 samples collected approximately 5% of samples had grades exceeding 0.05g/t Au and only one sample exceeded 0.5 g/t Au (sample GC1179 0.53 g/t Au). In view of previous experience with the size and intensity of gold rock chip geochemical anomalies in the vicinity of known gold ore deposits in this area, the rock chip geochemical data indicates there is little potential for hardrock gold resources in EL 7028.

Arsenic levels in the rock chip samples range from less than 100 to 2,700 ppm As. Generally the arsenic geochemical highs correlate with either gold or zinc anomalies but not always.

Zinc levels range from less than 2 ppm to 3,160 ppm. The mean of 336 ppm applies to all samples collected in the tenement area. However all twelve samples exceeding 1,000 ppm Zn are located on base sheets D10, D11 and E11 on the central south portion of the licence area. The mean of samples collected from these sheets was 632 ppm. The anomalous zinc values are associated with gossans, Banded Iron Formation outcrops, or siliceous boxworked ferruginous cherts and shales, over a strike length of 1,600m and width of 300m. The anomalous zone disappears under alluvial flats in the north (Figure 12) and abuts the southern boundary in the south (Figure 14).

Only three samples were analysed for lead. Two samples came from the south central zinc anomaly, one assaying 247 ppm Pb (Zn 1,420 ppm) and the other 2,320ppm Pb (Zn 105 ppm).
7 ESTIMATED EXPLORATION EXPENDITURE

The following is the estimated expenditure on the exploration of EL 7028.

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Site Administration 1,450
General Administration 725

TOTAL 16,675

8 CONCLUSIONS AND RECOMMENDATIONS

Exploration has outlined a significant anomalous zinc mineralised zone in the south central portion of EL 7028.

The next step in exploration will involve soil sampling for base metals over the anomalous area and a more detailed geological mapping programme. This will require the establishment of a 100 x 50m grid over this zone. Any geochemical anomalies established will require follow up excavator trenching to expose the bedrock for mapping and further sampling and possibly reverse circulation drilling.

The estimated minimum expenditure on the area for 1991/92 is $10,000.