EL 23499 URAPUNGA NORTH

FINAL & RELINQUISHMENT REPORT FOR PERIOD ENDING

12-05-2004

Submitted to: **NT Dept of Business, Industry & Resource Development**

Submitted by: **Exploration & Resource Development Pty Ltd**

Author: **HJ Roiko**

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1. SUMMARY & CONCLUSIONS

Exploration Licence 23499 was granted to Exploration & Resource Development Pty Ltd (ERD) on the 13th June 2003. ERD Pty Ltd, a Darwin based resource sector company, is the designated Project Manager. The tenement covers approximately 919 sq km covering a portion of Roper Group stratigraphy in the Bauhinia Shelf tectonic element of the western McArthur Basin.

The tenement lies wholly within the Wilton River Plateau uplands region, a part of the Gulf Fall physiographic province. The terrain largely comprises flat-lying Proterozoic sandstone with prominent steep jointing. The tenement is predominantly inaccessible by road and is dissected by the N-S flowing Wilton River and its tributaries.

The geology is dominated by glauconitic sandstone of the Crawford Formation in the north and fine grained sandstone and interbedded siltstone of the Jalboi Formation in the south. Quaternary/Cenozoic alluvium, colluvium and mud-rich floodplain deposits are evidenced in the north largely concealing stratigraphy.

Previous exploration in the EL environs has comprised regional drainage stream sediment and gravel sampling programs targeting stratabound base metals and diamonds. These reconnaissance and subsequent follow-up ground surveys led to the discovery of the low grade Wongalara lead-zinc prospect during the 1980's and 1990's. The deposit is not considered economic.

Interrogation of the recently produced DBIRD diamond and diamond indicator database reveals sparsely scattered positive results and a single macrodiamond within the EL confines. The scattered indicators and diamond are considered to be secondary sourced and hard rock diamond potential is deemed low as follow-up sampling by previous explorers failed to repeat the positive results.

Open file reviews suggest that sufficient work has been undertaken within the EL confines to downgrade the mineralisation potential. No further work is recommended and the EL was surrendered effective 12th May 2004. No field work was undertaken during the term of tenure.

1.1 Environment

All activities were confined to office work and aerial inspections. In consequence, no ground disturbance was undertaken during the term of tenure.

2. INTRODUCTION

Exploration Licence 23499 covers an area of 278 sub-blocks (918.8sqkm) in the northern portion of Urapunga 1:250,000 map sheet SD53-10, centred approximately 270km ENE of Katherine. The tenement application was lodged on 4th February 2002 by Exploration & Resource Development Pty Ltd; a Darwin based mineral resource sector privately listed company. The tenement was granted for a period of six years on 13th June 2003. Tenement acquisition was based on the regions perceived potential for hosting diamondiferous diatreme mineralisation.

Regionally the area lies within the physiographic province of the Gulf Fall, a dissected terrane from which almost all of the old Tertiary land surfaces have been eroded. The tenement itself covers a sub-province of the Gulf Fall, the Wilton River Plateau uplands region. The terrain largely comprises flat-lying Proterozoic sandstone with prominent steep jointing. Most of EL 23499 is predominantly inaccessible by road (limited station tracks) and is dissected by the N-S flowing Wilton River and the lower reaches of the Mainoru River and their associated tributaries.

The principal vegetation regime is open Eucalyptus woodland ranging from sparsely wooded open grassland alluvial and blacksoil plains in the north to densely vegetated lancewood on high ground and steeply sloping areas. The major watercourses are lined with paperbarks and larger Eucalypts. Spinifex grows predominantly on the sandy soils close to outcrop.

This report outlines exploration activities conducted within EL 23499 during the first and final period of tenure ending 12th May 2004.

3. REGIONAL GEOLOGY

The tenement is part a larger Project Area in the central-western shelf (Bauhinia Shelf) of the McArthur Basin. The basin can be viewed as several northerly trending rifts separated by northwest-trending faults and transverse ridges and was subject to repeated cycles of clastic and marine carbonate sedimentation interspersed with volcanic extrusion and sill emplacement (*Tawallah, McArthur and Nathan Groups*) in response to reactivation of older basement structures.

A later, more passive series of sedimentation cycles in response to western basin subsidence occurred with the deposition of suites of blanket quartz sandstones, micaceous siltstones, black shales and glauconitic sandstones (*Roper Group*). Ironstones are prominent on a local stratigraphic level (Roper and Hodgson Iron Deposits). 'A variety of marginal, shallow and deeper marine shelf environments reflect alternating basin-wide sea level rises and falls. Tholeiitic dolerite and gabbro sills were emplaced throughout the Roper group soon after deposition ceased and before regional deformation.' (NTGS).

3.1 Tenement Geology

The geology is dominated by fine grained thickly bedded glauconitic sandstone of the Crawford Formation in the north and thinly bedded fine grained sandstone and interbedded siltstone of the Jalboi Formation. An abundant cover of Quaternary/Cenozoic alluvium, colluvium and mud-rich floodplain deposits is evidenced in the north largely associated with the confluence regions of the Mainoru River with the Wilton River. Small exposures of rubbly dolerite sills are mapped on plateau margins where exposed by drainage erosion.

The absence of Cambrian flood basalts and only remnant outliers of Cretaceous sandstones, both of which are extensive to the west and north of the EL, suggest a significant exposure to uplift and erosion within the area permitting exposure of the underlying Proterozoic sediments and dolerite sills.

4.0 PREVIOUS EXPLORATION

The tenement environs have attracted various exploration campaigns including:

A number of companies have sporadically explored for base metals (Pb/Zn & Cu) culminating in the discovery of a number of small low grade deposits of sandstone-hosted (disseminated sulphides in Roper Group arenites at Galena Cliffs and Wongalara Prospects) and carbonate-hosted (veins, disseminations and replacement sulphides in brecciated dolomitic rocks of the Nathan Group) styles.

Intensive diamond exploration was evidenced in the 1980's and 1990's with large scale stream sediment, loam, magnetics and drilling programs conducted by Stockdale Prospecting, Ashton Mining and CRA Exploration. While a few kimberlitic indicator minerals including micro and macro diamonds were reported, most could not be source traced with the exception of two thin (<2m) steeply dipping kimberlitic dykes (Packsaddle

and Blackjack 1) located by Stockdale south of the tenement near the Roper Highway. The very low grade and small dimensions of the dykes has precluded any further work on them.

A comprehensive summary of all past exploration is published in the 2nd edition of 1:250 000 Geological Map Series Explanatory Notes for the Roper Region Urapunga and Roper River Special.

5. EXPLORATION ACTIVITIES

EL 23499 was selected for exploration targeting diamondiferous diatremes. While no major diamond occurrences are mapped within the Roper environs, it is believed that the major structural corridors including the Walker-Batten Fault Zones and the Urapunga Tectonic Ridge and their associated parasitic fault splays have provided deep-seated conduits for mineralisation focus, notably diamondiferous diatreme emplacement (ie. Merlin and Emu diamond fields near the Emu Fault to the SE and the Packsaddle and Blackjack kimberlite dykes to the west).

Open file reviews has shown previous exploration in the EL environs having comprised regional drainage stream sediment and gravel sampling programs targeting stratabound base metals and diamonds. These reconnaissance and subsequent follow-up ground surveys led to the discovery of the low grade Wongalara lead-zinc prospect, in the central northern EL immediately east of the Wilton River, during the 1980's and 1990's. Rock chip assays up to 1.7% Pb and 2.3% Zn reported from gossanous outcrop and an associated soil/rock geochemical anomaly. Mineralisation occurs as fine-grained galena and sphalerite in ferruginous sandstone of the Crawford Formation. Drilling encountered low tenor (0.4-0.6% Pb and 0.2-0.5% Zn) in 6-9m intercepts. A gradient array IP geophysical survey failed to enhance target definition. The deposit is not considered economic.

Interrogation of the recently produced DBIRD diamond and diamond indicator database reveals sparsely scattered positive results (indicator minerals) and a single macro-diamond within the EL confines. Follow-up sampling failed to repeat the positive results and the scattered indicators and diamond are considered to be secondary sourced. Hard rock diamond potential is deemed to be low.

The completed open file reviews suggest that sufficient work has been undertaken within the EL confines to downgrade the mineralisation potential. No further work was recommended and the EL was surrendered effective 12th May 2004. No field work was undertaken during the term of tenure.

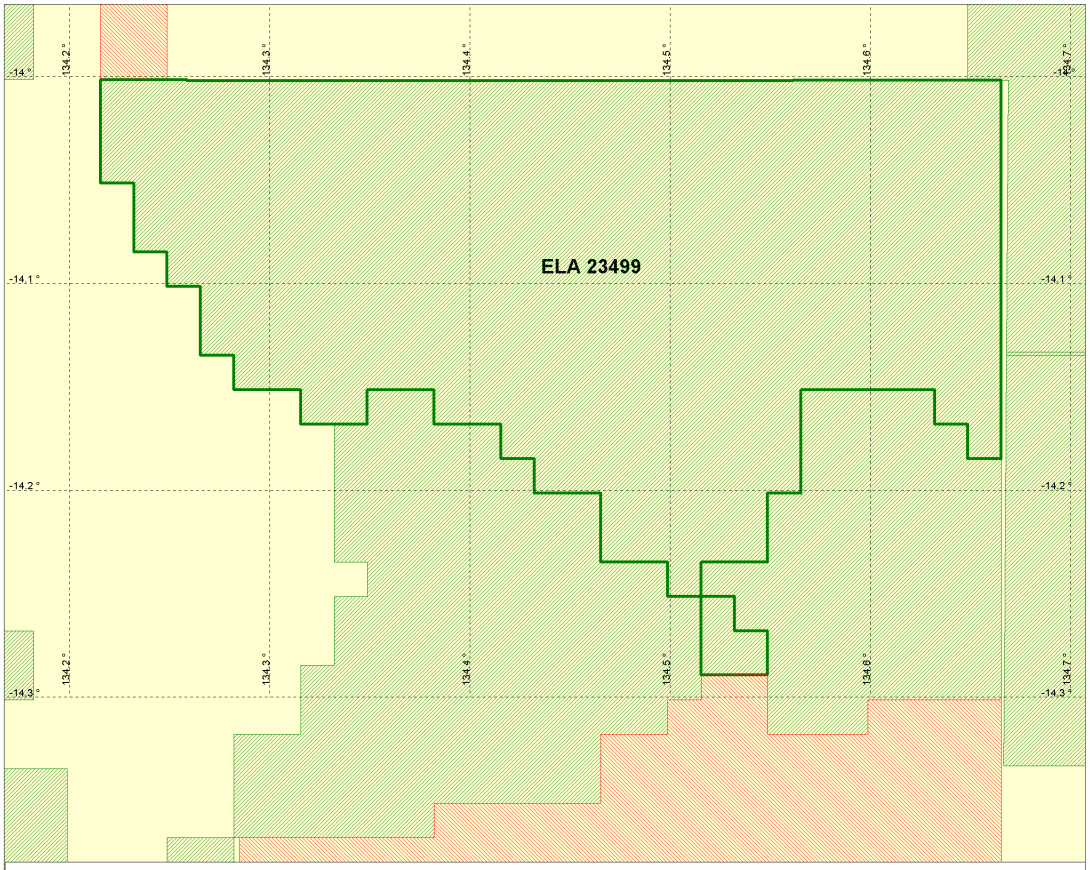
6. REFERENCES

Abbott ST, Sweet IP, Plumb KA, Young DN, Cutovinos A, Ferenzi PA, Brakel A & Pietsch BA, 2001. Roper Region: Urapunga and Roper River Special, Northern Territory (Second Edition), 1:250 000 Geological Map Series Explanatory Notes, SD 53-10 & SD 53-11. Northern Territory Geological Survey.

(Poseidon Exploration, 1994; Final Report on Exploration Activities EL 6289 Wongalara 01-12-1988 to 08-11-1993).

List of Figures

Figure 1: EL223499 Location Plan



Legend

- EL 23499
- ELA's
- EL's

EXPLORATION & RESOURCE DEVELOPMENT PTY LTD
Final Relinquishment Report EL23499
Figure 1: Tenement Location Plan
August 2004
Drawn ERD P/L

Datum: GDA94
Projection: Geographics

0 5 10
kilometers

Figure 2: EL 23499 Diamond Indicator Results