AUSQUEST LIMITED
(ABN 35 091 542 451)

ANNUAL REPORT
For Period 6th March 2004 to 5th March 2005
PLENTY RIVER
EL 23570

Graeme Drew and Sally Lee
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- Figure 1. Plenty River; Location diagram, EL 23570  
- Figure 2. Plenty River; Total Magnetic Intensity Image showing targets
1.0 SUMMARY

This is the second annual report on AusQuest’s Plenty River tenement, EL 23570.

This tenement was acquired as part of a larger project, which was originally targeting Broken Hill Style lead-zinc-silver mineralisation within a major transcurrent fault corridor, extending WNW-ESE through the region. Recent NT Government aeromagnetic surveys, flown in 2001, 2002 and 2004, however, have highlighted the potential for kimberlite pipes in the general region, mainly to the north of EL 23570.

Negotiations for an Exploration Agreement over this tenement had not been completed at the anniversary date of the tenement.

2.0 INTRODUCTION

EL 23570 was granted to AusQuest Limited on 6th March, 2003, for a term of six years. This report is the second report on that title.

Along with the adjacent block of AusQuest titles (Figure 1), application for EL 23570 was originally made on the premise that this area may be prospective for large, high-grade lead-zinc-silver deposits of the Broken Hill Type. The rationale for this interpretation was presented in the first annual report.

More recently the acquisition of detailed aeromagnetic data over this general region by the NT Government has highlighted the potential for a new kimberlite field immediately north of EL 23570. The possibility of some pipes occurring within this tenement cannot be discounted at this stage.

3.0 TITLE AND ACCESS

EL 23570 is situated in a remote area of the Simpson Desert, accessible only by track along Plenty River from the north through the Attnetye Native Title freehold area (Figure 1). As of the grant date, EL 23570 was itself the subject of a Native Title Claim under the 1976 Northern Territory Aboriginal Land Rights Act.

With the moratorium placed on AusQuest title applications immediately to the north (ELAs 22872 and 23792) negotiations for access have been delayed.
4.0 PREVIOUS EXPLORATION

A review of previous exploration over the Plenty River tenements was included in the first annual report.

5.0 PLENTY RIVER GEOLOGY

Regionally, AusQuest’s block of titles and applications at Plenty River, straddles a prominent WNW-ESE structural corridor (the Larapinta corridor of Figure 2) as defined in aeromagnetic and gravity data. The exposed part of this corridor mainly comprises supracrustal Cambrian metamorphic rocks of the Irindina package, structurally emplaced between Palaeoproterozoic basement rocks (Mawby, 2000; Buick et al., 2001; Pietch, 2001). The high temperature - high pressure metamorphic event which affected the Irindina rocks in this region is of Ordovician age (Mawby et al., 1999), and the rocks include pelitic, psammitic and calc-silicate metasediments and mafic lithologies. This rock assemblage is somewhat similar in (compositional) character to the Cambrian rocks to the northeast of Broken Hill.

Stratigraphy of the Irindina package is well exposed in the Harts Range, and extends eastward into areas of poor exposure to the west of AusQuest’s block of titles. Current mapping (Illogwa Creek 1:250 000 sheet), however, does not correlate outcrop in and at the margins of AusQuest’s western titles with recognised Irindina stratigraphy.
Further southeast, flat-lying sedimentary cover sequences blanket the metamorphic and igneous rocks of the Arunta Province to increasing depths. The thickest component of these cover sequences belongs to the Eromanga Basin, spanning an age bracket of Late Jurassic to Cretaceous. Thin remnants of a Tertiary sedimentary stratigraphy are patchily developed (or preserved) and Quaternary fluvio-aeolian unconsolidated sediment forms a veneer of dune-dominated cover in the Simpson Desert.

The local geology of EL 23570 is dominated by Quaternary longitudinal (NNW-SSE) sand dune and alluvial cover, wherein shallow erosional windows associated with salina systems expose older, consolidated sedimentary rocks (Figure 4; Hay River and Simpson Desert North 1:250 000 sheets). These are mainly Cretaceous fine grained siliciclastic and carbonate rocks of the Eromanga Basin, with minor minor Tertiary siliciclastics.

No Proterozoic or early Palaeozoic (basement) rocks are exposed in EL 23570, the nearest exposures of such rocks being about 40 km to the northwest. Here metamorphic rocks which were formerly unassigned to any stratigraphic package are mapped (Illogwa Creek 1:250 000 sheet). Recent interpretations (eg. Pietch, 2001) place these exposures in the Irindina package, apparently of Cambrian age (Buick et al., 2001 Maidment et al., 2002), although confirmation by direct age dating is not yet available.

6.0 EXPLORATION RESULTS

Evaluation of available geological, geophysical and hydrogeological data continued. This brought together the geological mapping (Illogwa Creek, Hay River, Hale River and Simpson Desert North 1:250 000 scale sheets) and airborne magnetics and ground gravity surveys of the Northern Territory Geological Survey (NTGS) and Geoscience Australia (and its predecessors), and geological logs of water bores (from the Database of the Natural Resources Division, NT Department of Infrastructure, Planning and Environment).


The new airborne data were reprocessed to highlight possible pipe like bodies that could be present within the tenement and reflect a possible southerly continuation of the features identified by magnetics immediately to the north.

As reported last year water bore logs indicate the Eromanga Basin (and younger) cover is in excess of 200 m suggesting any targets at shallower depths could be intrusive bodies (ie Kimberlites).

Figure 2 is a total magnetic intensity image with a north east shade which highlights several anomalies which could reflect kimberlitic targets and could
Figure 2
Plenty River
Total Magnetic Intensity Image
North East Shade
EL 23570

Scale: 1:250,000

AMG zone 53 (AGD94)
be followed up when access is available. Whilst these anomalies are subtle in nature, their proximity to the targets immediately to the north makes them viable targets to test if kimberlitic rocks are located in the area.

7.0 REHABILITATION

No rehabilitation was required as no field work was undertaken on EL 23570.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The potential for possible kimberlite/lamproite targets within EL 23570 has not been ruled out.

It is recommended that negotiations for access continue and testing of any potential kimberlite/lamproite targets be undertaken.
9.0 REFERENCES

