TABLE OF CONTENTS

1.0 SUMMARY .......................... 1
2.0 INTRODUCTION ...................... 1
3.0 TITLE AND ACCESS .................. 2
4.0 PREVIOUS EXPLORATION .............. 2
5.0 PLENTY RIVER GEOLOGY ............. 3
6.0 EXPLORATION RESULTS ............... 3
7.0 REHABILITATION ...................... 4
8.0 CONCLUSIONS AND RECOMMENDATIONS 4
9.0 REFERENCES .......................... 5

LIST OF FIGURES

Figure 1. Plenty River; Location diagram, EL 23570 2

Figure 2. EL 23570; Total Magnetic Intensity Image showing targets Follows 4
1.0 SUMMARY

This is the third 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.

Over the same period, work on isolated exposures to the east of the Harts Range by Maidment and the NTGS has indicated largely Neoproterozoic to Palaeozoic rocks, with some Palaeoproterozoic rocks. No evidence of rocks around Broken Hill age (~1690 Ma) has been found, giving little encouragement for this style of lead-zinc-silver mineralisation.

Whilst the prospectivity for Broken Hill Style lead-zinc-silver mineralisation in this area appears to be downgraded, the first field program exploring for diamonds on an adjoining AusQuest title to the north has yielded encouraging results. This program, conducted by joint venture partner Rio Tinto Exploration Limited (RTE), after the early lifting of a five year veto, found 4 microdiamonds at 3 dipolar anomaly sites (AusQuest Report to the Australian Stock Exchange, 14.3.06).

With the lifting of the veto on the key northern tenements, accessed in late 2005, it is hoped that access along the Plenty River corridor can now be negotiated for EL 23570. Several dipolar anomalies are recognised in EL 23570, for which ground geophysical and loam sampling are planned for 2006.

2.0 INTRODUCTION

EL 23570 was granted to AusQuest Limited on 6th March, 2003, for a term of six years. Whilst this is the third report on that title, it is the first since access for a limited exploration program was granted, via the Plenty River, late last year. This short program, conducted by joint venture partner RTE, was undertaken within and passed through the Atnettye Native Title Freehold area.

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. However, the recent Ph.D. study of Maidment provided no evidence of Broken Hill age rocks in the area east of the Harts Range (Maidment et al., 2004). Whilst the possibility of Palaeozoic lead-zinc-silver mineralisation cannot be discounted, the prospectivity of the poorly exposed apron of metamorphic rocks east of Harts Range for Broken Hill Type mineralisation now seems limited.

The large field of dipolar magnetic anomalies revealed by the NT Government Survey of 2001 (Eromanga Survey) highlighted the potential for a new field of kimberlite/lamproite pipes immediately north of EL 23570. Some subtle anomalies, which may be a peripheral part of the above field, are recognised within EL 23570 and are targeted for ground follow up during the forthcoming field season.
3.0 TITLE AND ACCESS

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

Because of the moratorium placed on AusQuest title applications immediately to the north (now EL’s 22872, 25007, 23792 and ELA 25008), negotiations for access had been stalled until recently. In August, 2005, the moratorium was lifted on parts of the main diamond exploration target area, which is essentially covered by the titles (and application) listed above. Access to the newly granted EL’s, through the sensitive Plenty River Moratorium area (now ELA 25008), were granted to RTE for their initial short work program.

With this recent grant of access, and subsequent completion of (Joint Venture partner) RTE’s first field program covering accessible areas to the north, AusQuest now believes it can seek access to EL 23570 through the ELA 25008 moratorium area.

Figure 1. Plenty River; Location diagram, EL 23570

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, straddle a prominent WNW-ESE structural corridor (the Larapinta corridor) as defined in aeromagnetic and gravity data. The exposed part of this corridor mainly comprises supracrustal Neoproterozoic to 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 and indeed the Broken Hill Mesoproterozoic stratigraphy itself.

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 group of titles. Some mapping of these areas has been conducted in the recent Ph. D. study of Maidment (Maidment et al., 2004), and further work is being undertaken by the NTGS (as yet unpublished).

Further southeast, flat-lying sedimentary cover sequences blanket the metamorphic and igneous rocks of the Arunta Inlier 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, in which shallow erosional windows associated with salina systems expose older, Mesozoic and Tertiary sedimentary rocks (see Hay River and Simpson Desert North 1:250 000 Geology sheets). These are mainly Cretaceous fine grained siliciclastic and carbonate rocks of the Eromanga Basin, with 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 Neoproterozoic to Cambrian age (Buick et al., 2001 Maidment et al., 2002, 2004).

6.0 EXPLORATION RESULTS

No new work has been conducted on EL 23570 during the past 12 months, with the veto on exploration of the highly promising (diamond) titles adjoining to the north (EL’s 22872, 23792 and 25007) having been lifted only in August, 2005. Given that the main swarm of unambiguous dipolar anomalies is encompassed within these titles, they have been the focus of initial exploration.

Because Traditional Owner sensitivities on the Plenty River corridor were apparently the root cause of previous, and for EL 25008, ongoing vetoes, it was decided to await the completion of the first field program on the northern EL’s before seeking access.
to EL 23570. The track down the Plenty River provides the only land access to EL 23570.

As indicated in the 2005 Annual Report for EL 23570, the (2001) Eromanga and (2004) Simpson Surveys of the NTGS provide detailed aeromagnetic coverage across EL 23570. The reprocessed aeromagnetic data highlight possible kimberlite/lamproite pipes which may be a distal part of the main field to the north. These dipolar anomalies, however, are more ambiguous, lying within a backdrop of more magnetic rocks than in the main field of anomalies.

Figure 2 is a total magnetic intensity image (with a northeast shade) which highlights several anomalies which could reflect kimberlitic targets and should be followed up when access is obtained. Whilst these anomalies are subtle in nature, their proximity to the dipolar anomalies (with microdiamonds) 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

Several potential kimberlite/lamproite targets may be indicated by dipolar anomalies recognised in reprocessed data from the NTGS Eromanga (2001) and Simpson Desert (2004) Surveys.

These require ground follow-up involving coverage with ground magnetic and gravity lines (~100m spacing). Loam samples should also be collected at each site for heavy mineral processing, observation and SEM (Scanning Electron Microscopy).

Access through the Plenty River corridor veto area (EL 25008) should be sought to allow the above follow-up to be conducted in the 2006 field season.
9.0 REFERENCES


