



ACN 007 090 904

EXPLORATION LICENCE 23409

**MOUNT PEAKE PROJECT**

ANNUAL EXPLORATION REPORT

FOR THE PERIOD

**15 OCTOBER 2005 TO 14 OCTOBER 2006**

BY

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1:500,000, A4, Landscape
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1:500,000, A4, Landscape



## 1 SUMMARY OF EXPLORATION ACTIVITIES

Exploration carried out over the EL23409 during the reporting period was very limited.

## 2 TENEMENT STATUS

Astro Diamond Mines NL applied for EL23409 on 2 October 2001, the tenement was granted on 15 October 2003 covering an area of 731.63 km<sup>2</sup>.

## 3 LOCATION AND ACCESS

[Figure 1](#)

Exploration Licence 23409 lies in the Tanami Desert of south central Northern Territory between Rabbit Flat and Barrow Creek. Access to the area would be through Barrow Creek for the eastern area and Willowra Station and other aboriginal lands for the central and western areas.

## 4 GEOLOGY

[Figure 2](#)

The project area lies along the southern margin of the North Australian Craton (NAC) where remnants of the North Australian Platform Cover (NAPC), the Lander Rock Beds (equivalent to the Hatches Creek Group of the Tennant Creek Inlier, Ahmad 2000), have been intruded by granitic and mafic rocks at about 1820 Ma (Hendrickx et al 2000). This age of intrusion correlates with the intrusions in the Halls Creek Orogen and Vandenberg et al (2001) comments that the Tanami Event (1845-1830 Ma) reflects the collision of the North Australian Craton with the Kimberley Craton. In the King Leopold Orogen, in the West Kimberley, 1800 Ma age granitic and mafic rocks also occur within a zone of steeply dipping thrust faults (Griffin et al 1995). The West Kimberley lamproites occur in a similar structural setting to the Mount Peake Project area.

Previous exploration by Normandy NFM Limited indicates that outcrop of the Proterozoic rocks is very sparse in the area and is dominated by Quaternary aeolian sands and red soils, with minor Tertiary laterites. The Proterozoic bedrock in the region comprises the Lower Proterozoic Bullion Schist, which consists of metamorphosed shelf sediments and minor volcanics. These are overlain by Middle Proterozoic sediments and intruded by granites, and subsequently overlain by Late Proterozoic sediments. The Cenozoic cover can vary from less than one metre, to over 50 m in large Tertiary palaeochannels. Previous workers have noted the occurrence of a number of extremely dense and magnetic circular bulls-eye aeromagnetic features that are probably concealed mafic plugs.



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## **5 EXPLORATION**

### **5.1 DATA REVIEW**

An additional data review was conducted during the reporting year to further consolidate the geological understanding of the area.

### **5.2 TARGET GENERATION**

Further assessment of the potential of the Central Mount Stuart Formation in the southeast of the tenement is necessary now that the price of uranium is high.

### **5.3 PROPOSED EXPLORATION**

As no on ground exploration was conducted during the reporting year the proposed exploration remains the same as last year' report.

Vehicle access to these areas is quite good, with the presence of station tracks in the areas of interest. The next phase of exploration would involve rock chip sampling and limited stream sediment sampling. Ground radiometric traversing will be carried out over the Central Mount Stuart Formation.



## 6 BIBLIOGRAPHY

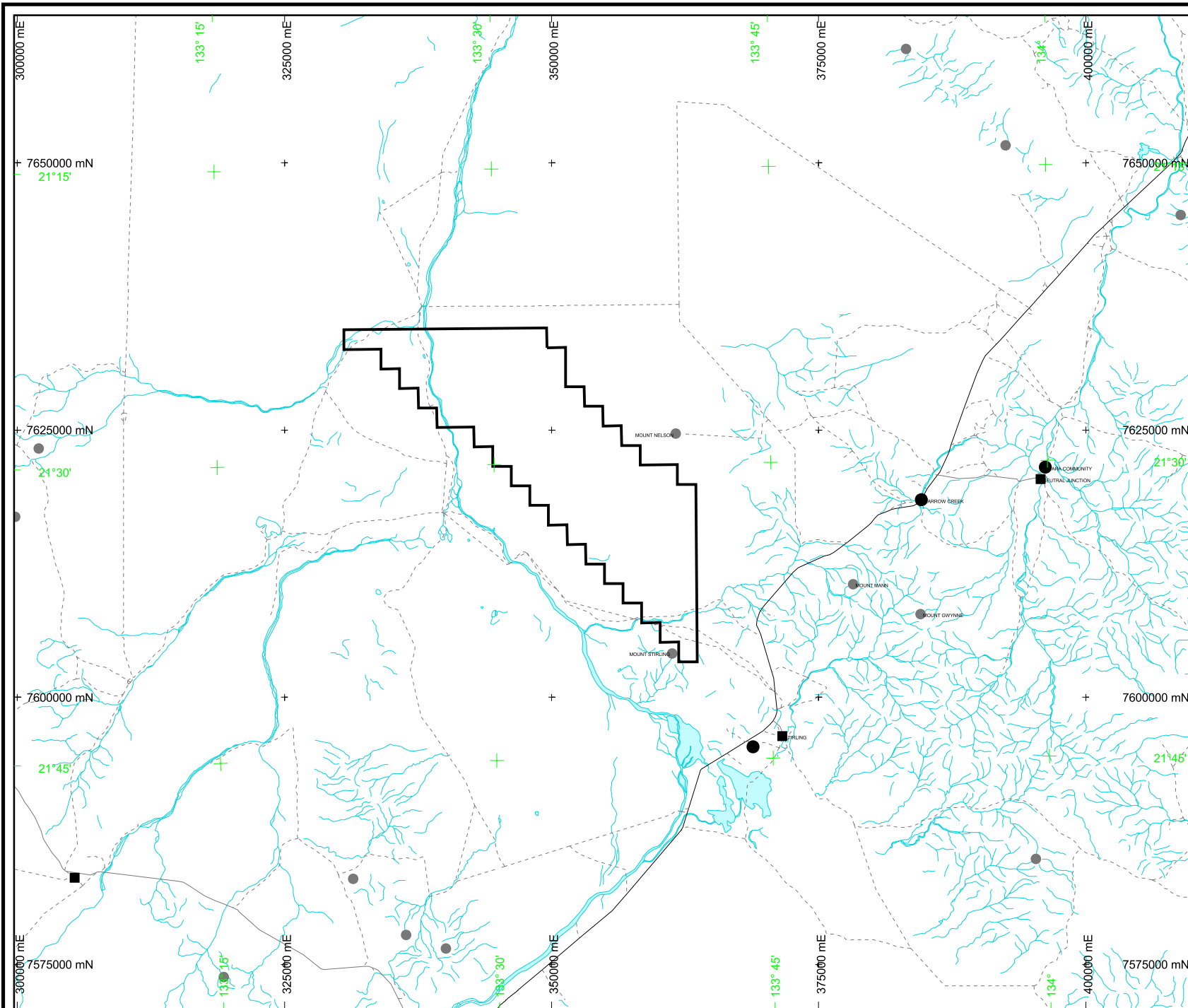
Ahmad M. 2000. *Geological Map of the Northern Territory*, 1:2,500,000. Northern Territory Geological Survey.

Griffin T J and Tyler I M. 1995. *Geological map of the King Leopold Orogen, West Kimberley Region*. Western Australia Geological Survey, Bulletin 143, plate 1.

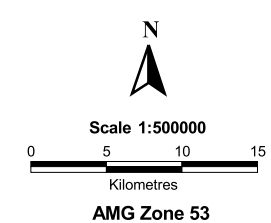
Hendrickx M A, Slater K R, Crispe A J, Dean A A, Vandenberg L C and Smith J B. 2000. *Palaeoproterozoic stratigraphy of the Tanami Region: regional correlations and relation to mineralisation – preliminary results*. Northern Territory Geological Survey, Geological Survey Record GS2000-13.

Vandenberg L C, Hendrickx M A and Crispe A J. 2001. *Structural geology of the Tanami Region*. Northern Territory Geological Survey, Geological Survey Record 2001-004 – electronic pre-release.

Wright J H. 2000. *Kimberlite Diamond Prospectivity in Australia Based on Compilations and Interpretations*. Astro Mining NL, unpublished report, March 2000.



- LEGEND**
- Tenement Boundary
  - Waterbody
  - Drainage
  - Minor Road
  - Principal Road
  - Track
  - Homestead
  - Mountain-peak-hill
  - Populated place



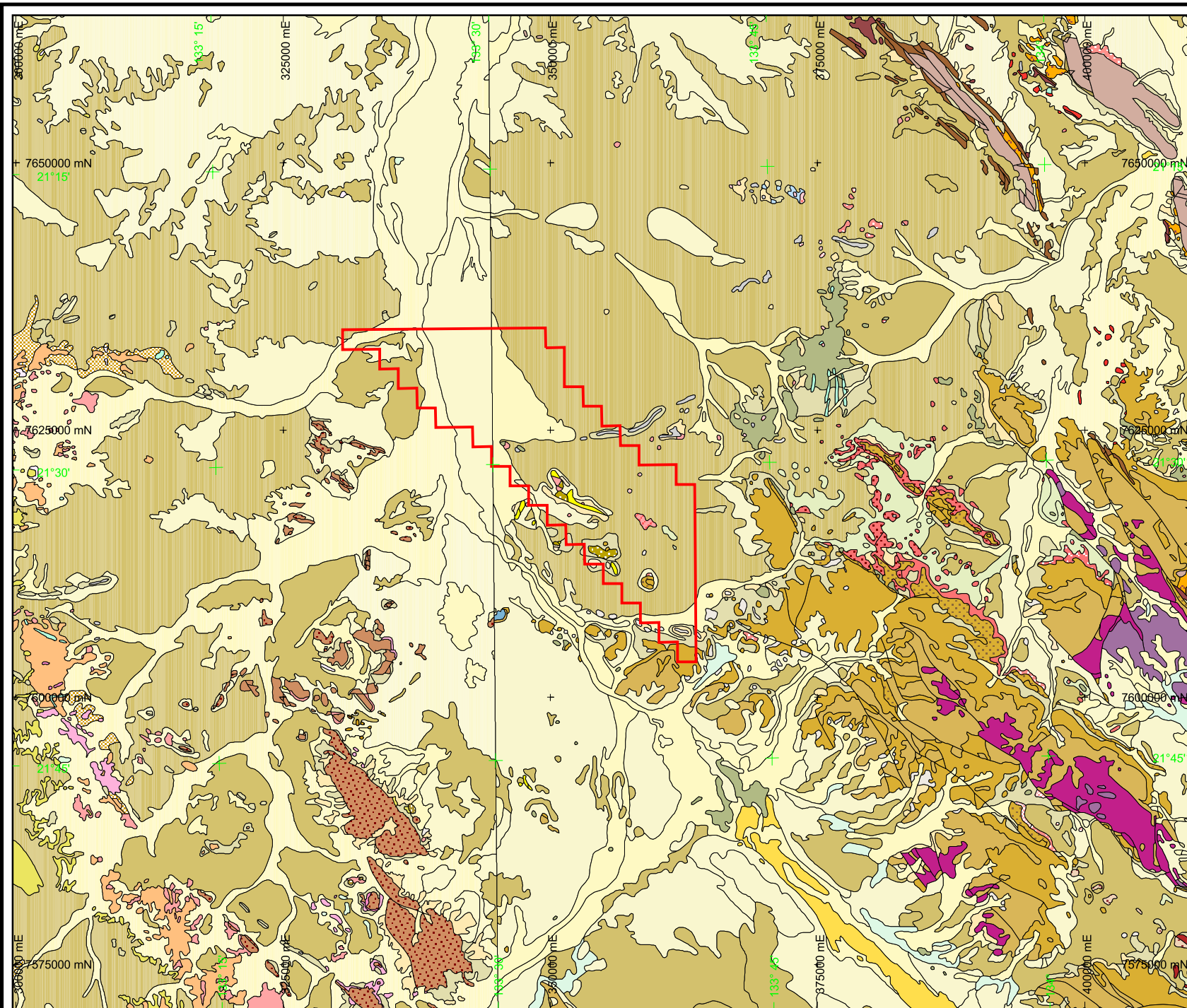
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**NORTHERN TERRITORY**

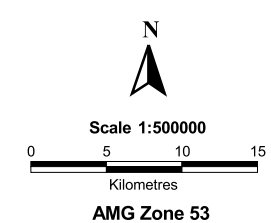
**EL23409**

**Location Plan**

Comp. :	<b>L Bowyer</b>	Date :	<b>14/03/07</b>
APR :	<b>ei23409.a06</b>	Loc. :	<b>Melbourne</b>
Plot :	<b>Plotname</b>	Figure :	<b>1</b>



**LEGEND**  
 Tenement Boundary



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**NORTHERN TERRITORY**  
**EL23409**  
**Geology Plan**

Comp. :	<b>L Bowyer</b>	Date :	<b>14/03/07</b>
APR :	<b>eI23409.a06</b>	Loc. :	<b>Melbourne</b>
Plot :	<b>Plotname</b>	Figure :	<b>2</b>