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# MOUNT DENISON PROJECT EL 24622

Napperby (SF5309) 1:250,000 Sheet Denison (5353) 1:100,000 Sheet

## ANNUAL REPORT

23<sup>rd</sup> December 2005 to 22<sup>nd</sup> December 2006

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Distribution: 1) Department of Industry and Resources 2) Heron Resources Ltd

#### **EXECUTIVE SUMMARY**

#### EL 24622 Mount Denison Project

The Mount Denison Tenement EL 24622 consists of 422 km<sup>2</sup> situated approximately 335km south west of Tenant Creek and 247km northwest of Alice Springs. It can be found on the Denison 1:100,000 and the Napperby 1:250,000 map sheets.

Mount Denison is a pastoral property about 30 km north east of the remote Yuendumu community, 320 km northwest of Alice Springs in Central Australia. Access to the tenement is by rough road travelling northeast off the main Tanami Road, or via tracks running southeast from Mount Denison.

This report outlines exploration on the tenement for the year ending 22<sup>nd</sup> December 2006 .Exploration consisted of data-reviews of previous exploration. The primary target in the area is uranium mineralization.

The tenement shows strong granitic outcrop and blanketed by alluvial and colluvial sediments. Minor metamorphic schists are exposed in the western quartile of the tenement.

At the time of writing it was deemed that this tenement was to be handed to another exploration company as part of a negotiated contractual agreement.

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### **1.0 INTRODUCTION**

This report outlines the mineral exploration in the project for the year ending 22<sup>nd</sup> December 2006. The primary target in the project area is uranium mineralization.

### **1.1 LOCATION AND ACCESS**

The Mount Denison Tenement EL 24622 consists of 422 km<sup>2</sup> situated approximately 335km south west of Tenant Creek, and 247km northwest of Alice Springs. It can be found on the Denison 1:100,000 and the Napperby 1:250,000 map sheets. The Kurrupiri Aboriginal Corporation has charge of an aboriginal living community in the area (Lot 4747)

Access is via rough road travelling northeast from the Tanami Road (north of the Anmatjere Community). It is accessible through tracks running southeast from Mount Denison (Figure 1).

### **1.2 TENEMENT STATUS**

Table 1 shows the current tenement status for EL 24622.

Tenement	Area (km²)	Date Granted	Expiry Date	Registered Holder	Rent (\$)	Required Annual Expenditure
EL 24622	422	23/12/2005	22/12/2011	Ochre Resources Ltd	\$1380 (+GST)	\$21,200 (\$5000 plus \$150 per sub block)

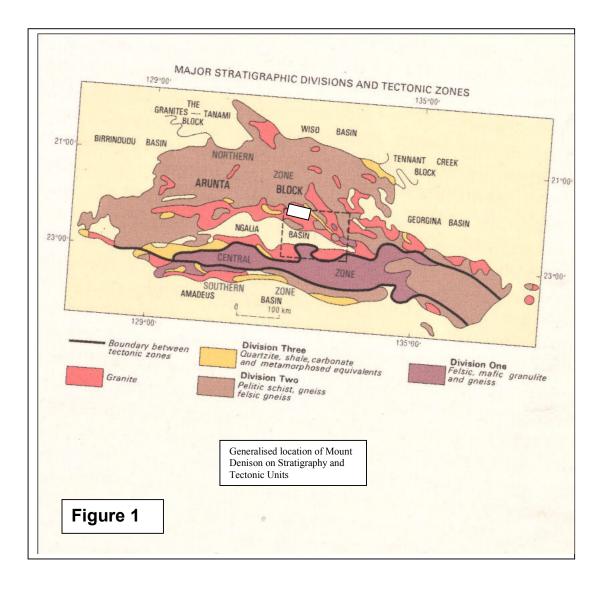
#### 2Table 1 Tenement Status

Ochre Resources is wholly owned by Heron Resources Ltd. EL 24622 consists of 138 sub blocks (rent is \$10 per block).

### 2.0 GEOLOGY

### 2.1 REGIONAL GEOLOGY

The Mount Denison Project is located in the Lower Proterozoic Arunta Block of the Northern territory, on the northern margin of the Ngalia Basin. The project has the potential for occurrences of metamorphic and intrusive related uranium deposits within igneous basement rocks, and sandstone uranium deposits in the overlying sedimentary units.



As can be seen in Figure 5, Mount Denison straddles two described regolithological units of the Arunta Block; The Davidson Regolithe and the Napperby Regolithe. They are described as follows:

DAVIDSON REGOLITHE broadly this is described as moderately weathered bedrock consisting of block laterite at depth below the soil; ironstone gravels, shallow ironstone gravely sands, broad shallow drainage floors with calcrete, some rocky ridges & hills capped by laterite

The soils are red earthy sands, with some yellow earthy sands on gently sloping plains siliceous sands in flood-plain areas. The terrane comprises flat to gently undulating sand plains, poorly developed dune formations, and some stone-covered ridges.

The relief is moderate, major landforms being sand plains. minor landforms consisting of undulating ridge and slope terrain on lateritised sediments. There are some rock outcrops, minor dune fields and minor calcrete areas

To generalize the Davidson Regolithe can be seen as and eosional/depositional environment with moderate to high relief, variably weathered and stoney.

NAPPERBY REGOLITHE Characteristically mountainous with small valley plains, fans and occasional dunes; The Napperby Regolithe is broadly described as unweathered bedrock comprising bare rocks,quartz gravels and stone-covered ridges. The soils are shallow stony sands,red earths mantled with stones and gravels. The terrane presents as steep ranges and ridges. Narrow valleys with sandstone, quartzite and conglomerate . Bare rocks and rugged mountain ranges composed of gneiss and schists. There may be quartzite and sandstone hills with sandy plains and granite with occasional rocky hills and ridges.

It is a depositional environment comprising flood plains, coastal plains, salt lakes, alluvial plains, swamps, dune fields; or bare rock.

### 2.2 PROJECT GEOLOGY

Primary uranium mineralisation is associated with the metamorphic schists and the pegmatite and granite intrusions. Reconnaissance in the mid 1978 indicated several radioactive zones and uranium rich rocks at quartz hill and Crown anomaly. In the Quartz Hill area, uranium mineralisation is associated with apatite bearing schists and with the granites at the crown anomaly, along with promising rock chip sample results ranging from 0.002% U3 O8 to 0.096% U3O8.

The overlying sedimentary units have characteristics favourable for the concentration of uranium by redox processes.

### **3.0 HISTORICAL EXPLORATION**

During the reporting period, a search of the open file mineral exploration reports located a number of reports of interest to future work on this tenement. Collation of these reports is ongoing.

Dates	Company	Commodity	Work Completed	Tenements	Comments
1979	Australia and New Zealand Exploration Company (ANZECO), Central Pacific Minerals NL, Yuendumu Mining Company NL	Uranium, Tungsten (reported separately)	Mapping Geochem sampling	EL 1317	Examination of uraniferous prospects and petrological evaluation of rocks. Uranium is mobile in the secondary environment, accumulated in small quantities in minor calcrete development.
1976	Bureau of Mineral Resources	General Geological Investigation	Reconnaissance radiometric survey	EL 1317	Several areas of anomalous radioactivity in the Th and Ur spectrometer channels.
1968	(on behalf of the) Bureau of Mineral Resources	General Geological Investigation	Geological Mapping	EL 1317	Geological reconnaissance only.

 Table 2 Historical Exploration on EL 24622

### 5.0 WORK COMPLETED - 2005

Exploration activities for the reporting year focussed primarily on project review. The project review consisted of viewing and assessing the following datasets:

Regional digital terrain model (Figure 1.) Regional multi-client aeromagnetic data (Figure 4.)

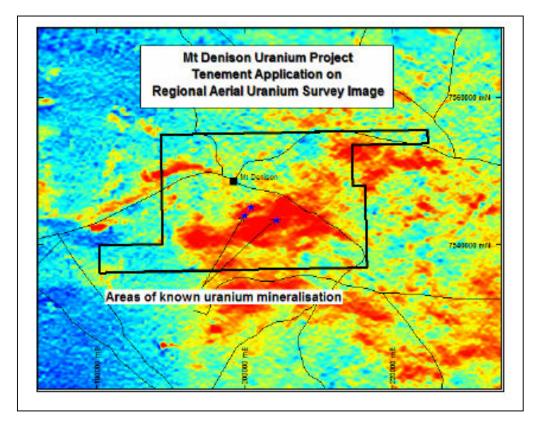
### 5.1 DIGITAL TERRANE MODEL

The terrain model indicates that this tenement lies within an area of relatively high relief. This reflects high quantities of near surface mafic and ultramafic rocks.

### **5.2 GEOPHYSICAL DATA**

Existing multi-client geophysical data shows EL 24622 perched on a large area of strong magnetic anomaly. Clearly seen is the Wangala Granite from which is associated with uranium mineralisation.

Also featured as a high aeromagnetic response in the north west quartile of the block is the Coniston schist, a biotitic-seracitic-quartz orthoschist which is also of exploration interest.

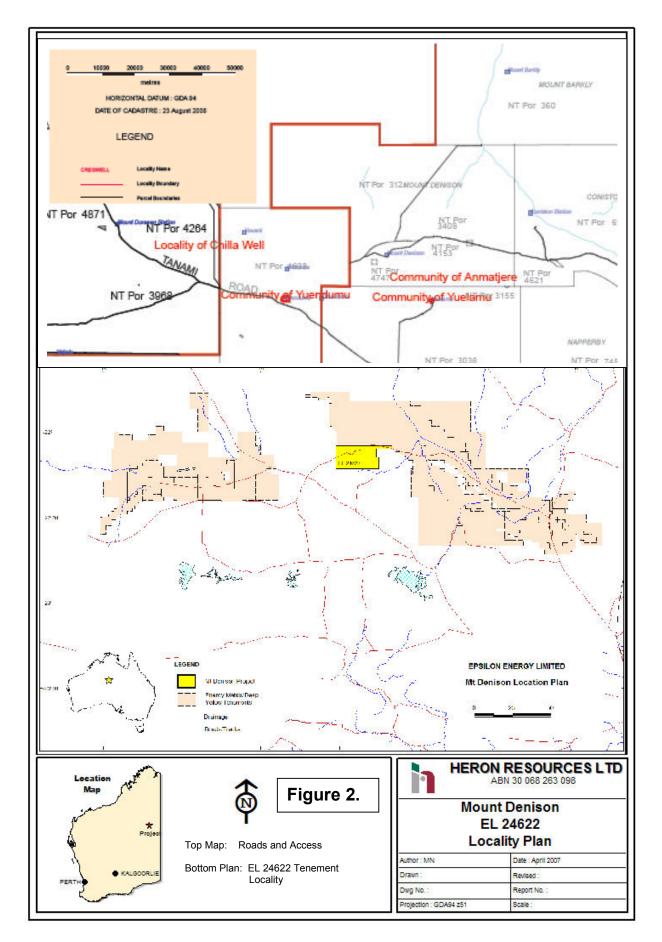


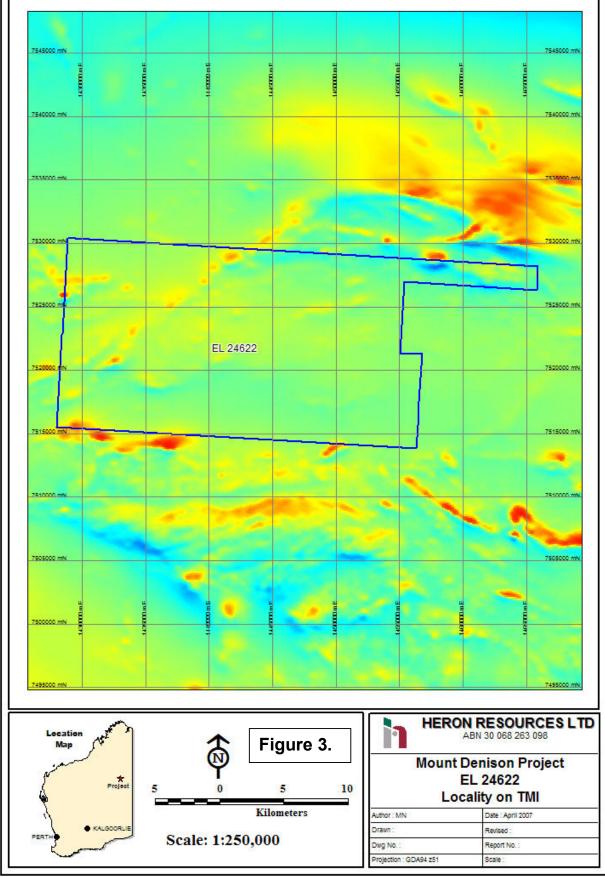
### **5.4 FURTHER EXPLORATION**

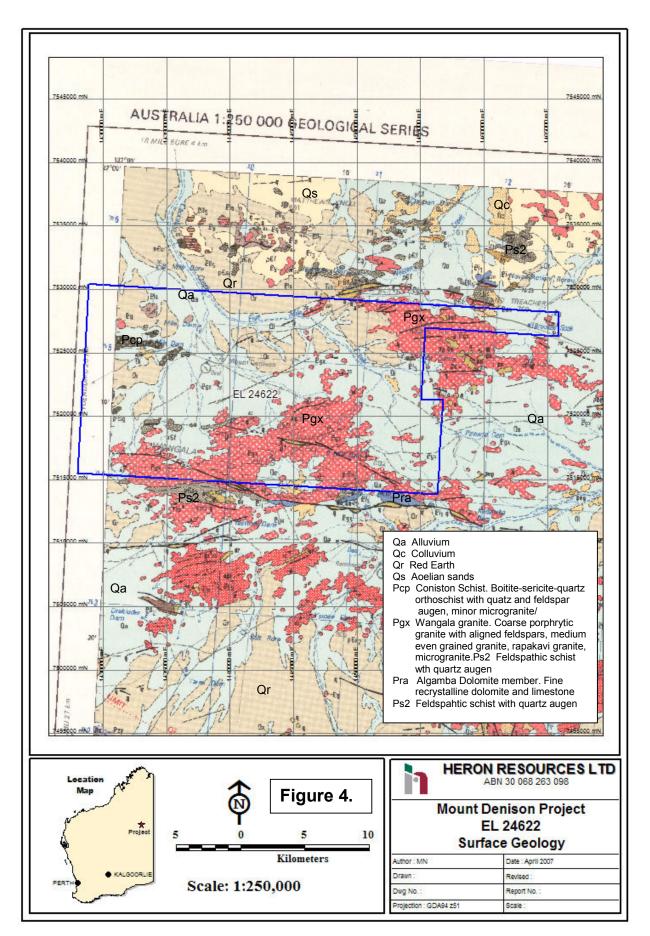
This tenement is to be handed to another exploration company as part of a negotiated contractual agreement.

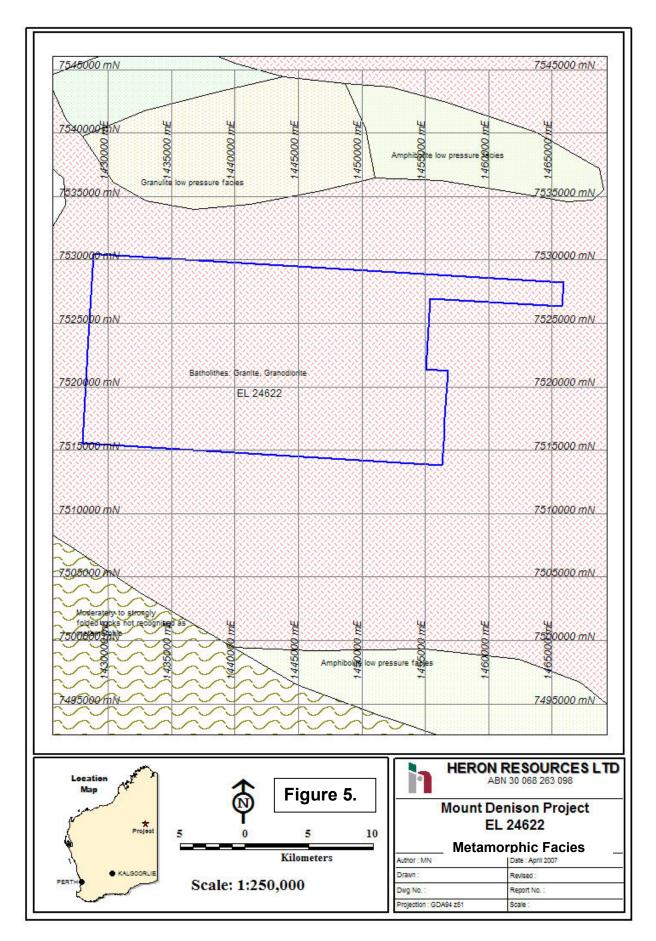
It is recommended that further exploration should begin with a soils programme over this area. It is also necessary to further investigate previous activities in this area. Subject to satisfactory results from this survey reconnaissance RAB drilling may be undertaken.

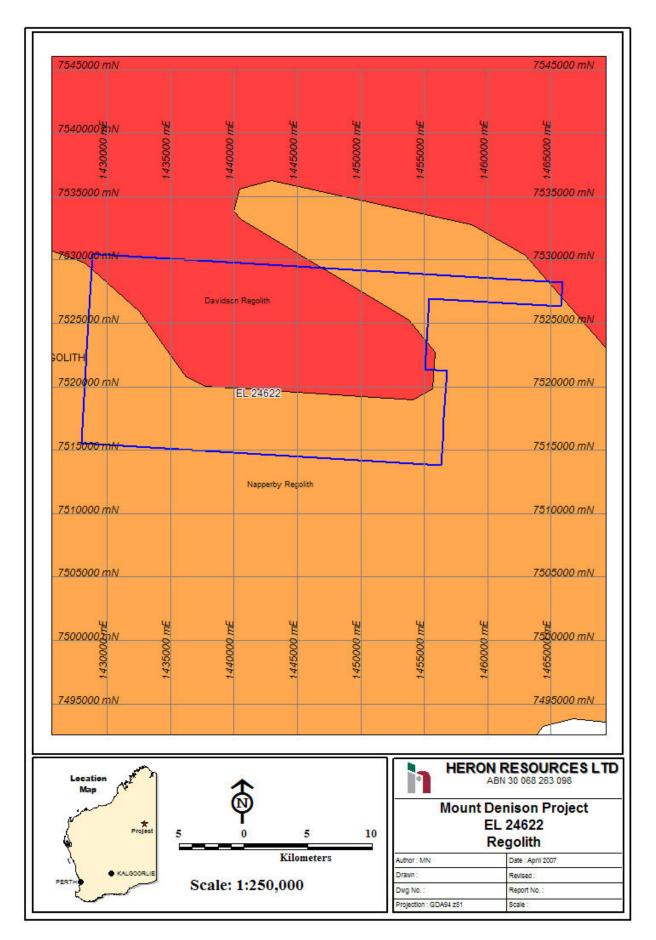
Proposed minimum expenditure should exceed \$5000 for the coming annual reporting Year.











Regolith Code			Ore_Style		ithology of Precursor Rock
AG	Alluvial Gravels	F	Ferruginous	U	Ultramafic Precursor, Undifferentiated
AP	Alluvial Pedogenic Calcrete	Е	Calcrete	UOC	Olivine Cumulate, Undifferentiated
AS	Alluvial/ Colluvial Soil	Р	Pyrolusitic (MnO2)	UOOC	Olivine Orthocumulate
AC	Alluvial Clays (Lake)	Ν	Nontronitic Smectite Clay	UOMC	Olivine Mesocumulate
ZG	Colluvial gravel	S	Siliceous	UOAC	Olivine Adcumulate
ZS	Colluvial soil	М	Magnesitic (MgCO3)	UOPC	Olivine-Pyroxene Cumulate
ZP	Colluvial with pedogenic calcrete	Т	Talcose	USRP	Serpintinite
LT	Laterite Residiuum - insitu	С	Saprolite Clay Alteration	UP	Pyroxenite
LF	Laterite Ferruginous - insitu	G	Serpentinitic - "Garnierite"	UK	Komatiite
LS	Laterite Siliceous - insitu	Т	Saprolite Talc Alteration	UH	Harrisite
LM	Laterite Mottled Zone - insitu	L	Saprolite Chlorite Alteration	USTCH	Schist - talc-chlorite
ΡZ	Pallid Clay Zone	М	Saprolite Magnesitic	USTCB	Schist - talc-carbonate (magnesite)
CZ	Clay Zone	Х	Asbestos - White Chrysotile	USTRCH	Schist - tremolite-chlorite
CU	Clay Upper			UTCB	Talc-carbonate
CL	Clay Lower			Q	Quartz Vein (>75%)
SP	Saprolite			Р	Pegmatite
SU	Saprolite Upper			GR	Granite
SL	Saprolite Lower			GS	Syenite
SR	Saprock			GM	Monzogranite
BR	Bedrock			GP	Porphyry
NS	No Sample			GN	Gneiss
MS	Mixed Sample			S	Sediment
				SH	Shale
				SB	Black Shale (Graphitic)
				SS	Siltstone
				ST	Sandstone
				SG	Conglomerate
				SC	Chert

SI

SV

F

FL

FS

FV

FΡ

I IV

Ш

ID

PD

M MB

MD

MG

MH MA

MS

MI

Iron Formation

Felsic Intrusive

Felsic Volcanic

Felsic Porphyry Intermediate

Intermediate Volcanic

Intermediate Intrusive

Intermediate Diorite

Proterozoic Dolerite

High-Magnesium Basalt (mafic)

Basalt (mafic)

Dolerite (mafic) Gabbro (mafic)

Amphibolite (mafic)

Mafic Schist

Mafic Intrisive

Felsic Schist

Felsic

Mafic

Volcaniclastic Sediments

## APPENDIX 1 – GEOLOGY CODES