



Geothermal Exploration Licence 207  
Roxby Downs  
South Australia

First Annual Exploration Report

Year End  
18<sup>th</sup> July 2006

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## 1 INTRODUCTION

### 1.1 Background

Exploration was initiated in the Roxby Downs area to investigate the geothermal potential of basement rocks underlying thick sequences of Late Proterozoic sediments to the south of the northwest-trending Andamooka fault. This geothermal target is located 20 km southwest of the Olympic Dam mine, presenting a local market for any generated power. In addition, Olympic Dam is connected to the Eastern Australian high voltage power lines.

### 1.2 Period

This report covers the first year of tenure from 19<sup>th</sup> July 2005 to 18<sup>th</sup> July 2006

### 1.3 Licence Data

Geothermal Exploration Licence 207 Roxby Downs was granted on the 19<sup>th</sup> July 2005, for a period of five years, to Proactive Energy Developments Ltd (PED) to explore for geothermal energy. On the 19<sup>th</sup> February 2007 PED changed its name to Granite Power Ltd ("Granite Power").

The tenement covers an area of approximately 386 km<sup>2</sup>, commencing at a point of intersection of 30°36'00" S (GDA94) and longitude 136°35'00"E (GDA 94). From there the tenement extends east to longitude 136°41'06"E (GDA94), south to latitude 30°41'30"S (GDA94), east to longitude 136°50'00"E (GDA94) , south to latitude 30°48'00"S (GDA94), west to longitude 136°35'00"E (GDA94) and north to point of commencement.

## 2 WORK REQUIREMENTS

The work requirements for GEL 207 for each year of tenure are detailed in Table 1 below:

Year	Minimum Work Requirements
One	<ul style="list-style-type: none"><li>• Geological and geophysical studies.</li></ul>
Two	<ul style="list-style-type: none"><li>• Geological and geophysical studies.</li><li>• Deepening of existing stratigraphic holes.</li></ul>
Three	<ul style="list-style-type: none"><li>• Conduct down-hole seismic induction probes, cross-well tomography, gamma, resistivity and temperature logging.</li><li>• Drill one deep well to test the temperature gradient within the target granite host rock reservoir.</li></ul>
Four	<ul style="list-style-type: none"><li>• Drill one deep well (within 1000 metres of the year 3 well) and conduct circulation testing between the two wells.</li></ul>
Five	<ul style="list-style-type: none"><li>• Construction of a 25MW pilot power station.</li></ul>

Table 1: Yearly work requirements for GEL 207

### **3 WORK CONDUCTED**

In accordance with the Year One Work Requirement, geological and geophysical studies were undertaken for the GEL 207 area.

#### **3.1 Geological Studies**

Historical deep drill hole data acquired from open file sources was analysed and mapped to aid a geological and geothermal interpretation of GEL 207 to be used in determining a proposed deep drill hole location. These historic holes were drilled by Western Mining Corporation (WMC), Seltrust and more recently, Green Rock Energy, who deepened a prior WMC-Seltrust joint venture well in 2005.

In February 2006, an orientation surface geochemical survey was conducted by Geoplan Services Pty. Ltd and Mr Hamish Paterson (WMC's supervising geologist from 1983-2002) for Uranium Exploration Australia Limited (UXA) over Exploration Licence No 3428 (EL 3428).

GEL 207 overlaps EL 3428. UXA shared the results of that survey with PED and the results were used to help exploration within GEL 207.

During the survey samples were taken close to PED's proposed drill hole site in GEL 207. For comparison, drill cuttings were also collected from a public road side where Green Rock Energy drilled the Blanche-1 hole to 1800m in 2005.

#### **3.2 Geophysical Studies**

Relevant public domain geophysical surveys of the Olympic Dam area were acquired and the data plotted with respect to GEL 207. These are presented in a separate report (see Table 3).

At a meeting in January 2006, with Geoscience Australia geophysicists, geophysical modelling strategies were discussed which could improve the understanding of the geology of GEL 207. In addition, current interpretations of magnetics, gravity and seismics were also discussed.

During this reporting year, an agreement was secured with Schlumberger to conduct down hole temperature measurement during the proposed drilling programme using state-of-the-art geophysical down hole probe technology. This data would be used in the geological and geothermal interpretation.

#### **3.3 Proposed Drill Hole**

A proposed drill hole Roxby D-1 was selected at the Bambridge Well site (30°41'07.8" S, 136°36'10.6" E). This site was interpreted to be on the edge of a gravity-high zone. Intended maximum drill hole depth is 1000m. This well, when drilled will be named Bambridge Well - 1.

### 3.4 Environmental Assessment

An environmental assessment report was commissioned by PED to evaluate the proposed drill hole location and environs. This work was commissioned in July 2006 and undertaken by Fatchen Environmental Pty Ltd, but not completed within this reporting period.

## 4 YEAR ONE EXPENDITURE

Activity	Year 1 Cost AUD
Commercial in Confidence	

Table 2: Year One expenditure to 18<sup>th</sup> July 2006

## 5 YEAR TWO WORK PROGRAMME

Geological and geophysical studies are planned for Year 2, in addition to an environmental assessment report of the proposed drilling site at Bambridge Well.

## 6 COMPLIANCE WITH THE PETROLEUM ACT (REGULATION 33)

### 6.1 Regulated Activities

No regulated activities were undertaken by PED in GEL 207 during this first reporting period.

### 6.2 Compliance

Security of \$50,000 was not lodged prior to commencement of Year 2, being the licence year during which drilling activities were to be performed. Granite Power has yet to conduct drilling activities and that security has yet to be lodged. It is likely that Granite Power will submit a variation to its current work program for GEL 207 which, if approved, may postpone drilling activities.

The foregoing matter was raised and discussed in a meeting of representatives of PIRSA and PED on 28 July 2006.

The submission of this report has been delayed due to a shortage of available qualified personnel to complete, in turn due to a necessary diversion of resources towards fund-raising.

Expenditure in the first year of exploration was below requirement. The reasons for this are as with the late reporting and this incident of non-compliance is duly noted.

Granite Power has recently undergone a corporate restructuring and acknowledges these non-compliance matters.

### **6.3 Management of Non-Compliance**

Granite Power Ltd recognises the importance of regulatory observance and is committed to future compliance. Granite Power has recently undertaken a corporate restructuring and is in the process of developing systems that will ensure that future work and reporting requirements for GEL 207 are met.

### **6.4 Management Systems**

Granite Power is committed to ensuring the highest standards of corporate governance. To this end the company has a suite of policies in place or being implemented which substantially comply with ASX 'best practice' guidelines. Audits to date (the last being for the 2005-06 financial year), which, pursuant to the IFR Standards with which the company complies, cover management systems, have not identified any deficiency or failure and have not identified a potential need for corrective actions.

### **6.5 Reports and Data**

Author	Title	Digital file
Granite Power Ltd.	Compilation of geological and geophysical maps for GEL 207	Maps GEL207.pdf

Table 3: Year One Work Programme reports for GEL 207

### **6.6 Reportable Incidents**

No reportable incidents occurred.

### **6.7 Foreseeable Threats**

No threats have been identified.

### **6.8 Proposed Operations for the Ensuing Year**

See Section 5 above.

## 7 REFERENCES

Crawford, M. *et al.* (2006) Geophysics and structures, south of Olympic Dam SA: can they be used as geothermal gradients before drilling? MESA Journal, May 2006, Adelaide.

Green Energy Annual Report for 2004-05.

Hawley, D.L. (2006) Geochemical and Radiometric Survey of Stuart Shelf Part of Gawler Craton ELs, Confidential Company Report for Uranium Exploration Australia.

Marossecky, A. (2006) Geophysical compilation of GA data and airborne geophysical survey for GEL207 and surrounds.

Skirrow M., *et al.* (2005) Seismic survey (AGSO) and graphic projections and interpretation of the Olympic Dam deposit, Geoscience Australia.