

# **ANNUAL REPORT**

## **GEL 206**

**First Renewal – Year 3**

**3 September 2012**

**to**

**2 September 2013**

**ANNUAL REPORT**

**Olympic Dam Geothermal Project**

**GEL 206**

**First Renewal – Year 3**

**3 September 2012 to 2 September 2013**

**CONTENTS**

- 1. INTRODUCTION**
- 2. WORK REQUIREMENTS**
- 3. WORK CONDUCTED DURING REPORTING PERIOD**
- 4. COMPLIANCE WITH PETROLEUM ACT**
- 5. EXPENDITURE (Annexure)**

## 1. INTRODUCTION

### 1.1. Background

Exploration for geothermal energy was focussed on stored heat in buried hot rocks surrounding the Olympic Dam mine and in close proximity to high voltage power lines.

### 1.2. Licence Data & Period

Geothermal Exploration Licence (GEL) 206 was originally granted on the 21<sup>st</sup> April 2005 for a period of five years. The licence was subsequently suspended from the 7<sup>th</sup> June 2006 to 18<sup>th</sup> July 2006 and again from the 30<sup>th</sup> April 2009 to 31<sup>st</sup> July 2009. This pushed the expiry date for the original licence out to the 2<sup>nd</sup> September 2010. The licence was then renewed for a further period of five years at a reduced area. The new expiry date is the 2<sup>nd</sup> September 2015.

This report includes activities on GEL 206 during the period 3<sup>rd</sup> September 2012 to 2<sup>nd</sup> September 2013. This is the third reporting period for the renewed licence period.

### 1.3. Licensees

GEL 206 is held 50% by Green Heat Resources Pty Ltd and 50% by Green Rock Geothermal Pty Ltd, both 100% owned subsidiaries of Green Rock Energy Limited. There was no change in the working interest of the licence during the licence period.

## 2. WORK REQUIREMENTS

A work program over GEL 206 was approved and entered on the public register on the 27th August 2010. As a result the exploratory operations required to be conducted in GEL 206 are:

Year	Minimum Work Requirements
1	Geological and geophysical studies
2	Geological and geophysical studies
3	Geological and geophysical studies
4	Geological and geophysical studies
5	Drill one deep well up to 3,500m; and geological and geophysical studies

## 3. WORK CONDUCTED DURING REPORTING PERIOD

Green Rock Energy continued to participate in a project to develop a rapid, shallow penetration, heat flow tool and new exploration methodology using this tool. This new methodology when finally developed should benefit exploration activities on GEL 206.

This research led to a paper presented at the ‘Thirty-Seventh Workshop on Geothermal Reservoir Engineering’ at Stanford University. Three heat probes were installed at two

locations and recorded temperature data until September 2012. The probes were removed by the contractors Hot Dry Rocks Pty Ltd in September 2012 and the data analysed subsequently to assess the results and to determine the efficacy and effectiveness of the probes. This showed that further development of the probes is required to make them more robust, easier to deploy, handle, transport and recover. It was planned to use the data from the 2011–12 field trials to start developing processing algorithms and protocols with a view to future use to map surface temperature distributions in the licence. This will require recalibration of the sensor boards.

An assessment was made of the very deep MT anomaly underlying the Olympic Dam mineral deposit and its implications for geothermal heat potential in the GEL and adjacent GELs.

#### **4. COMPLIANCE WITH PETROLEUM ACT**

##### **4.1. Regulated Activities**

No regulated activities were carried out during the report period.

##### **4.2. Compliance**

Work carried out during the licence year was geological and geophysical evaluation of the licence including continuation of the analysis and evaluation of temperature surveys carried out in respect of the licence in previous years.

This Annual Report for Licence year 3 was submitted on 14 November 2013, later than the due date of 2 November 2013 and in that respect the Act was not complied with. A resubmission of this report was due by 4 January 2013 and was submitted to DMITRE on 2 January 2013.

##### **4.3. Management Systems**

Green Rock Energy is committed to implementing the highest standards of corporate governance. In determining what those high standards should involve, the Company has been guided by the ASX Corporate Governance Council's Principles of Good Corporate Governance and Best Practice Recommendations. The Company has in place a detailed Health, Safety and Environment Management Plan, Occupation Health and Safety Procedures and Emergency Response Procedures to cover the activities of the Company, its contractors and visitors. No significant change was made to these procedures which were initiated in the first licence year.

##### **4.4. Relevant Reports and Data**

No reports were completed during the licence period. The year 2 annual report for GEL206 was due for submission by 2 November 2012 and was submitted late on 14 November 2012. The report was due to be resubmitted to DMITRE on 4 January 2013 and was actually resubmitted on 2 January 2013.

##### **4.5. Reportable Incidents**

There were no reportable incidents.

##### **4.6. Foreseeable Threats**

No material threats have been identified.