

ANNUAL REPORT

GEL 282, 283 and 284

17 August 2008

to

16 August 2009

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Patchawarra Project

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1. INTRODUCTION

1.1 Background

The proposed work within the area of the three Geothermal Exploration Licences granted is designed to ascertain the geothermal energy potential of these areas.

1.2 Period

Geothermal Exploration Licences GEL 282 (496 km²), 283 (497 km²), and 284 (490 km²), were granted on 17 August 2007 for an initial term of 5 years each.

This report covers the activities in respect of the above three GELs for year 2.

1.2 Licence Data

There was no change in the area of the licences during the year.

1.3 Licensee

GEL 282, 283 and 284 are held solely by Green Rock Energy Limited.

There was no change in working interests for any of the licences during the period.

2. WORK REQUIREMENTS

The exploratory operations required to be conducted in GEL 282, 283 and 284, are as follows:

Year	Minimum Work Requirements
1	<ul style="list-style-type: none">Geological and geophysical studies. <p><i>Note: Year 1 work program to be conducted anywhere within the boundaries of GELs 282, 283 and 284</i></p>
2	<ul style="list-style-type: none">Geological and geophysical studies. <p><i>Note: Year 2 work program to be conducted anywhere within the boundaries of GELs 282, 283 and 284</i></p>
3	<ul style="list-style-type: none">Re-enter (if possible) and geophysical log existing drill holes to estimate in-situ rock and water properties, and to measure temperatures.Conduct thermal conductivity measurements on existing core samples.Estimate groundwater temperatures at 2,000 to 5,000 metres depth using geothermal modelling techniques. <p><i>Note: Year 3 work program to be conducted anywhere within the boundaries of GELs 282, 283, and 284</i></p>

4	<ul style="list-style-type: none"> • Re-enter a selected group of existing drill holes to measure water flows and temperatures. <p><i>Note: Year 4 program to be conducted anywhere within the boundaries of GELs 282, 283 and 284</i></p>
5	<ul style="list-style-type: none"> • Drill well to potential reservoir rocks (3 to 3.5 kilometres depth) for the purpose of testing the fracking potential or water flow potential. • Economic evaluation and design of a pilot program. <p><i>Note: Year 5 program to be conducted anywhere within the boundaries of GELs 282, 283 and 284</i></p>

3. WORK CONDUCTED

The following work fulfilled the minimum work requirements for GELs 282, 283 and 284 for both years one and two of the licence period ended 16th August 2009. The work intended for a two year period was completed during the first year of the licence period.

During the first year of licence activities, existing geophysical, drilling, thermal and hydrogeological data was collated and reviewed to assess its significance for geothermal exploration. The following has been reproduced from the first year annual report.

The following datasets were reviewed:

- Temperature data was extracted, corrected and validated from all petroleum well reports within the licence areas. Data was sourced from geophysical logs and Drill Stem Tests (DSTs). Temperature gradients were calculated in each well.
- Lithological descriptions were converted to proportions within zones of different geothermal gradients. Each lithology was assigned a value for thermal conductivity derived from published Cooper Basin data and an average calculated for each gradient zone.
- Heat flows were calculated within the licence areas using a temperature-depth predictive model.
- Seismic data was used to identify depth and thickness of key stratigraphic units.
- Permeability and porosity data was collected from existing wells and reviewed.

Areas within potential permeable units such as the Patchawarra Formation and Tirrawarra Sandstone and with temperatures higher than 140°C were identified. For example, well Vatore East 1 had more than 282 metres thickness and 11 other wells had more than 200m thickness. Maps were prepared showing the variation in thickness as well as the expected depth of the hot areas. Significant areas were found where the top of the zone was close to 3000m depth.

A map of heat flow variation was prepared. Maximum heat flow was 149mW/m².

Five existing petroleum wells were studied in more detail to assess the in-situ permeability of the target geothermal reservoir units. These were Nephrite 1, Tindilpie 4, Cowralli 2,

Cowralli 5 and Vatore East 1. Calculated transmissivities from well log analyses varied up to 2.2 Darcy metres.

During the third year of the licence period Green Rock Energy will source core samples from petroleum wells drilled in the combined licence area. The core will be tested for thermal conductivities. Furthermore, rock stress data will be collected to determine the local stress regime. From this assessment the direction of critically stressed and potential permeable faults will be determined. This will allow Green Rock Energy to target a well that will establish the potential for high flows of hot geothermal water.

4. YEAR'S EXPENDITURE (commercial in confidence)

5. COMPLIANCE WITH PETROLEUM ACT

5.1 Regulated Activities

No field work was carried out within the GELs during the second year of the licence period.

5.2 Compliance

No instances of non-compliance were noted during the reporting period

5.3 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, contractors and site visitors.

No significant changes were made to these procedures during the reporting period.

5.4 Relevant Reports and Data

No reports were submitted to PIRSA during the reporting period.

5.5 Reportable Incidents

There were no reportable incidents during the reporting period.

5.6 Foreseeable Threats

No material threats have been identified.

Date prepared: 10 October 2009