

Earth Heat Resources Limited

Annual Report for combined GEL's

GEL 337 – Mount Grainger

GEL 338 - Paratoo

GEL 339 - Waroonee

Year 1 Summary

GELs Granted 1 September 2008

Submitted 19 December 2011

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1. Introduction

This report has been submitted late, and therefore represents Non-Compliance with obligations and regulations under which title has been granted.

Geothermal Exploration Licences (GELs) 337, 338 and 339 were granted on 1 September 2008 for an initial period of 5 years. Subsequently due to various perilous market circumstances, additional suspensions have been granted for these tenements (1-6-2009 to 31-5-2010, and 21-7-2010 to 20-7-2011), resulting in a current expiry date of 17 December 2015. Subsequent to year end, the GELs have been submitted for consolidation as part of the Company's overall strategy of reducing administrative overheads and focussing exploration efforts.

Project Area	Tenement	Area (approx)	Interest by EH
Mt Grainger	GEL 337	499 km ²	100%
Paratoo	GEL 338	496 km ²	100%
Waroonee	GEL 339	499 km ²	100%

These licence areas, as shown in Figure 1, are located in the southeast corner of the ORROROO and southwest corner of the OLARY 1:250 000 geological map sheets. The technical basis for the licences is to, in effect, investigate the geothermal potential of Adelaide Geosyncline sediments (AGS) adjacent to an interpreted ancient rift. A critical risk in this area is the presence of reservoir and a suitable thermal blanket to contain heat in the sedimentary succession. A work program has been designed to test this new exploration play for geothermal energy.

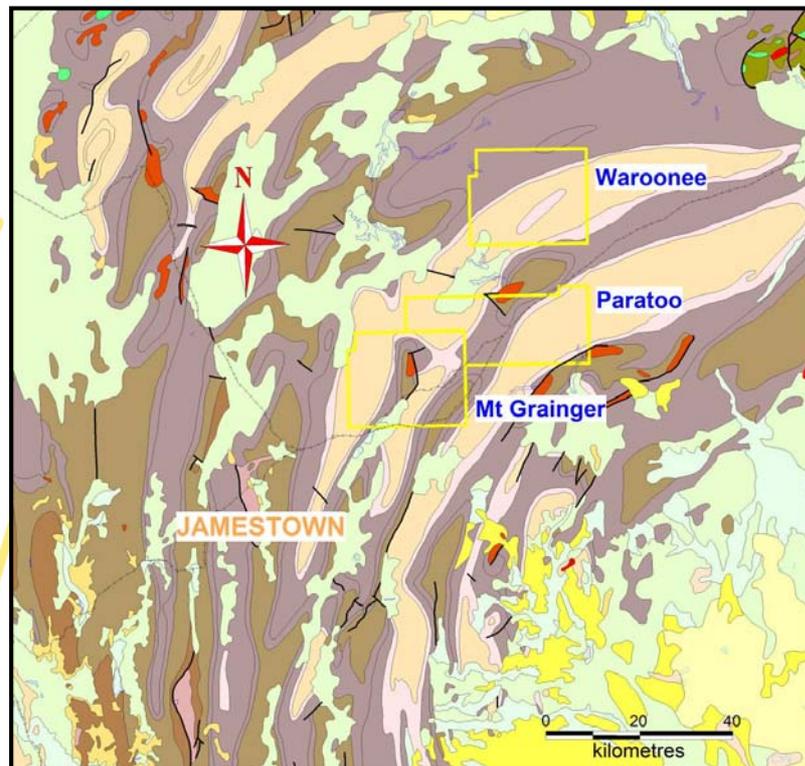


Figure 1. Location of GELs 337, 338 and 339.

2. Work Requirements

The 5-year work program for GELs 337, 338 and 339, as outlined in the original GEL application, is summarised below.

YEAR	ACTIVITY
1 1-9-2008 to 31-8-2011	Geological investigation largely comprising field mapping, interpretation and review
2 1-9-2011 to 31-8-2012	Geological investigation largely comprising field mapping, interpretation and review
3 1-9-2012 to 31-8-2013	Geophysical data acquisition and investigation, conductivity study Geological interpretation
4 1-9-2013 to 31-8-2014	Geological and Geophysical interpretation and planning
5 1-9-2014 to 31-8-2015	Fully cored stratigraphic drillhole to approximately 500m, including logging suite (if appropriate) and direct borehole heat measurements Core analyses Geological review and interpretation

This work program is a cumulative program across all 3 GELs. Each GEL therefore represents 1/3rd of the yearly estimated expenditure.

3. Work Conducted

The mapping program planned for Year 1 was postponed due to extenuating circumstances. The licences were suspended multiple times, the penultimate suspension is due to be lifted on 17 December 2011, and application has been made for these GELs to be consolidated. Subsequently, Earth Heat requested a variation of the work program that included a preliminary desktop study of available public domain data. The datasets included:

- PEPS-SA database
- Regional gravity and magnetic images
- Geoscience Australia XY Geotherm 94 Database
- SARIG

Aspects of this background geological and geophysical study, applicable to GELs 337, 338 and 339, were then compared with selected research areas of the company's geological consultant Dr Ian

Dyson where these areas were outside of GELs currently held by Earth Heat, and form the basis for the proposed work program in 2012 that is to be submitted to PIRSA for approval.

The outcrop geology of GELs 337, 338 and 339 is dominated by the Neoproterozoic succession of the Adelaide Geosyncline.

Tectonic breccias comprising sediments of the Callanna Group, previously interpreted as diapirs, commonly rim synclines and penetrate anticlines cored with Saddleworth Formation of the Burra Group. Synclines are filled with siltstone, shale and limestone of the Tapley Hill Formation, Tarcowie Siltstone, Ulupa Siltstone, Bunyeroo Formation and Wonoka Formation. Each of these formations is considered to be of low thermal conductivity.

Glacial sediments of the Sturtian Tillite and Elatina Formation are considered good thermal conductors. The diapirs comprising deformed Callanna Group sediments are considered good thermal conductors, especially where they are attached to Mesoproterozoic basement. If these assumptions are shown to be correct during the course of the exploration program, it will confirm that much of the sedimentary cover in these synclines is insulating enough to create high heat flow through glacial sediments of the Umberatana Group.

This cross-section, extracted from the ORROROO 1:250 000 geological map sheet, shows that the style of folding is mainly of the concentric parallel type. Sedimentary units on the limbs of the folds are probably near their original thickness (Figure 20).

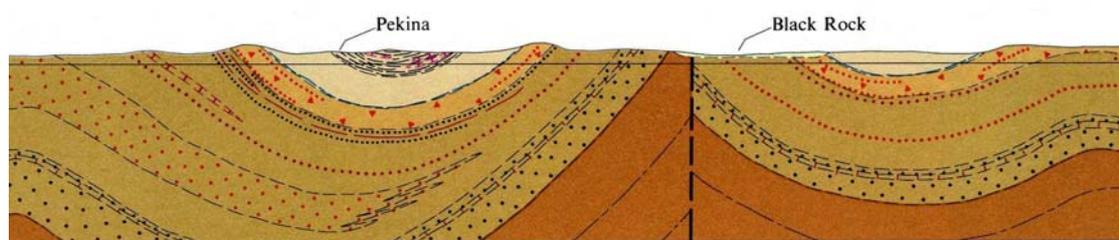


Figure 2. Location of GELs 337, 338 and 339.

Preliminary studies have focused on the nature of faulting that is closely associated with anticlines cored by diapiric sediments of the Callanna Group. Many faults also run along the hinge of anticlines that commonly emanate from diapiric cores. It is anticipated that new mapping will extend the depth to the keel of synclines, thus improving the heat flow potential of the glacial units immediately below the Tapley Hill Formation. Of particular interest will be the degree of deformation in the footwall versus deformation in the hanging wall, and the potential influence on heat flow.

4. Expenditure

The expenditure statement for Year 1 is summarised in Appendix 1.

5. Compliance with the Petroleum and Geothermal Act 2000 (Regulation 33 Section 2)

(a) Summary of regulated activities conducted under the licence during the year.

Earth Heat has not undertaken any regulated activities under the Petroleum and Geothermal Act 2000 in GELs 337, 338 and 339 during the licence period to date.

(b) Report for the year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives.

Earth Heat did not carry out the mapping program as contemplated under the Year 1 minimum work requirement, as tabulated above, and was therefore non-compliant with the licence conditions. This arose because of a major funding deficiency as a consequence of the global financial crisis in 2008.

(c) Actions to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, and to minimise the likelihood of the recurrence of any such non-compliance.

Earth Heat recognises the importance of achieving regulatory compliance. Once it was determined that the company was unable to satisfy the work program as originally planned, Earth Heat lodged a variation request with PIRSA.

(d) Summary of any management system audits undertaken during the relevant licence year, including information on any failure or deficiency identified by the audit and any corrective action that has, or will be, taken.

No management system audits were conducted, but Earth Heat subscribes to Quality Assurance Management based on Deming principles.

(e) List all reports and data relevant to the operation of the Act during the relevant licence year

None, as the work undertaken was primarily involved with desktop studies. Therefore, no operational reports were generated.

(f) Report of incidents reportable to the Minister under the Act and regulations.

None reported.

(g) Report on any reasonably foreseeable threats that reasonably present, or may present, a hazard to facilities or activities under the licence, and a report on any corrective action that has, or will be, taken.

No threats identified.

(h) Operations proposed for the ensuing year.

The work program for Year 2 of those areas formerly covered by GELs 337, 338 and 339 will be discussed with PIRSA once amalgamation has been ratified. Earth Heat intends to be compliant with provisions for the new work program.

5. Expenditure for Year 1

Expenditure for the first year of GELs 337, 338 and 339 is listed in Appendix 1.