



ACN 109 200 900

## *Second Annual Report*

### *Bollards Lagoon Project*

### *GEL 169*

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# 1 Introduction

## 1.1 Background

GEL169 is located south of Moomba in the Eromanga Basin on features related to the Cooper Basin model developed by Geodynamics Pty Ltd. Although it is outside the Cooper Basin depo-centre there are significant sediment sections in the Tennapera Trough providing good thermal insulation for basement granites. In addition there is some evidence for regional lineaments providing a focus for fracturing and aquifer development in basement sections.

Modelling of data from Open file sources predicts suitable temperature rocks at depths of 3-4km.

## 1.2 Licence Data

Geothermal Exploration Licence 169 (GEL169) was granted on 9<sup>th</sup> May 2005 with an initial term of five years over an area of 498km<sup>2</sup>.

Figure 1 shows the licence location.

## 1.3 Period

In accordance with Section 33 of the Petroleum Regulations 2000, this report details work conducted during the second permit year of GEL 169.

# 2 Work Requirements

The Year 2 work programme negotiated by Eden with PIRSA for GEL 169 comprised:

- Geological and geophysical review;
- Seismic reprocessing; and
- Logging and petrographic investigations.

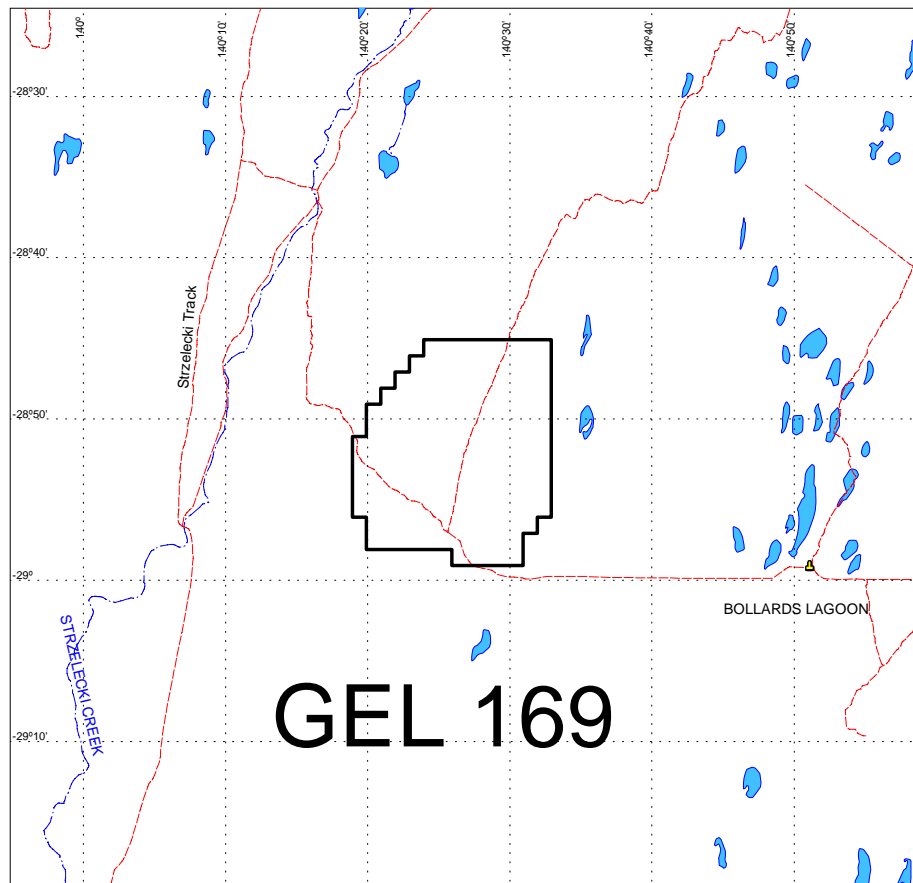


Figure 1: Location of GEL169

### 3 Work Conducted

Work undertaken in Year 2 consisted of acquisition of further public domain data, consolidation of existing data sets and retention of appropriate consultants to assist with the evaluation of the tenement.

Well completion reports for two wells drilled in and near to the GEL, Noarlunga 1 and Aldinga 1 were obtained and modelling of the data completed.

A review of the licence area was completed by Hot Dry Rocks Pty Ltd (HDRPL) and an improved prospectivity was identified compared to previous assessment by Eden Energy Ltd.

HDRPL concluded that the nature of the basement represents the greatest uncertainty, and therefore the greatest risk, with respect to geothermal resource development in GEL 169. Available temperature data suggest that heat flow in the area is high enough to generate attractive temperatures for an EGS geothermal development at depths less than 4000 m. This would require drilling through 2000 m of basement material, but HDRPL understands from discussions with drilling engineers that this would not pose any unusual technical problem. HDRPL will review the well completion reports for Aldinga 1 and Noarlunga 1 to determine the lithology of the basement. It is possible that the reports may not reveal granitic rocks at the base of the wells, and that the heat source may be deeper in the crust.

During the licence year, Eden has sought to arrange a magnetotelluric (MT) survey of the region, given the Eden believes this tool offers the most cost effective means to select test sites for drilling within the tenement. However, suitable contractors with the appropriate equipment, experience and availability were not able to be located. Subsequent to the licence year, a number of new possibilities were identified and Eden are hopeful of conducting an MT survey in 2007.

The inability to conduct MT work at Bollard's Lagoon has meant that Eden were unable to select a site to drill a confirmatory slimline hole to test the geothermal gradient and collect material for thermal conductivity measurement, and this work will therefore need to be postponed to later years of the licence.

### 4 Year 2 Expenditure



## **6 Compliance with the Petroleum Act (Reg. 33)**

### **6.1 Summary of the regulated activities conducted under the licence during the year**

Eden has not undertaken any regulated activities as defined under the Petroleum Act in GEL 169 during the licence year.

### **6.2 Report for the year on compliance with the Act, these Regulations, the licence and any relevant Statement of Environmental Objectives**

Given that no regulated activities were undertaken during the reporting period, many of the regulations are inapplicable at this stage and no non-compliances have been noted, with the exception of late submission of this report.

### **6.3 Statement concerning any action 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**

Eden recognises the importance of achieving regulatory compliance and is committed to achieving appropriate practices in its management strategies, work practices and procedures. Eden is committed to operating in an environmentally and socially responsible manner.

### **6.4 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**

Eden is a new company and is developing appropriate systems and documentation to cover Field Operations, Environmental Management, Health and Safety issues and compliance checklists to ensure the requirements of relevant Acts and Regulations are met.

Eden's activities have been essentially desktop studies at this stage and no management system audits have been undertaken as yet.

### **6.5 List of all reports and data relevant to the operation of the Act generated by the licensee during the relevant licence year**

Most of the work conducted during the first licence year comprised compilation of various public domain data and preparation of a number of memoranda by consultants. The contents of the memoranda have been incorporated into this report.

No new surveys or data relating to the tenement have been acquired.

### **6.6 Report on any Incidents reportable to the Minister under the Act and Regulations during the relevant Licence Year**

No reportable incidents occurred.

### **6.7 Report on any reasonably foreseeable threats (other than threats previously reported on) 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 have been identified.