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GEL 293

ANNUAL TECHNICAL REPORT

PORT ADELAIDE PROJECT, SA

YEAR 5 PERIOD 07/02/2012 – 17/05/2012



John Canaris

October 2012

Friday 12 October 2012

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Dear Lee

FINAL REPORT FOR GEL 293 – FEBRUARY 2012-MAY 2012
PORT ADELAIDE PROJECT, SA

In May 2012 Torrens Energy sought to surrender a number of geothermal exploration licences (GELs 226, 230, 278, 285, 293, 407 and 425) and effectively substitute with GELs 571 thru 574 for substantially the same area - approved 17 May 2012.

In accordance with Regulations 47 of the Petroleum and Geothermal Energy Act 2000, please find attached Torrens Energy Year 5 and Final Annual Report for the GEL 293, Port Adelaide Project for the period from the commencement of Year 5 Anniversary (February 2012) to the Surrender of the GELs (May 2012).

The GEL293 Year 5 and Final Report was due by July 2012 and therefore subject to Regulation 33 & 47 of the Petroleum and Geothermal Energy Regulations 2000, which respectively requires submission of a Final Annual Report no later than 2 months after surrender, and [requiring] non-compliance to be listed in the report for the late lodgement stating the reasoning for the late report.

By way of explanation Torrens Energy was for much of the licence period strategically planning its expenditures, and in discussions with the Department for the reduction of licence conditions. In addition the Company was making plans to take advantage of recent changes in the Petroleum and Geothermal Energy Act 2000 which include an increase in the maximum allowed size of a Geothermal Exploration Licence (GEL), and the combining of equivalent work programs for reporting.

To that end the area covered by this report was subsequently surrendered and replaced by GEL 574 effective May 2012..

Yours sincerely



John Canaris
Consulting Geologist

Torrens Energy Limited

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INTRODUCTION

Torrens Energy Ltd ("Torrens Energy") is an Australian public company formed specifically to develop geothermal opportunities in Australia. In addition to the GELs reported here Torrens Energy holds other geothermal exploration licences (GELs) in South Australia, Victoria and an application in the Northern Territory. The Company's activities in SA centre on a geological domain known as the Torrens Hinge Zone (THZ), a highly prospective geothermal terrain known for high heat flows coinciding with insulating sedimentary cover.

Port Adelaide Geothermal Exploration Licence (GEL) 293 was granted on 7 February 2008, for an initial period of 5 years. The license covers approximately 80 square kilometres and is located in the Port Adelaide, Wingfield and Bolivar areas covering the Torrens Island Power Stations and associated infrastructure (below). This report details the work conducted for GEL 293 during Year 4 work program.

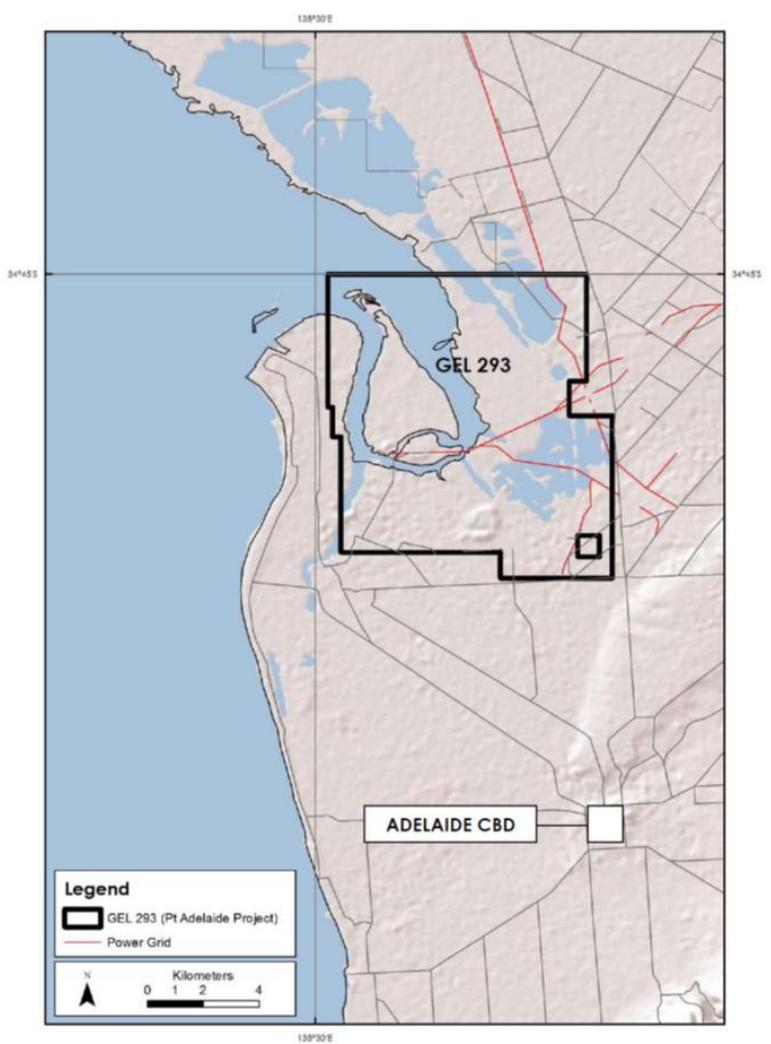


Figure 1: Location map GEL 293

PERMIT SUMMARY

- Tenement Holder: Torrens Energy (100%)
- On 7 January 2010 Torrens Energy's Year 2 work program was varied.
- On 5 November 2010 Torrens Energy was granted a further variation to the work program.
- A third variation to the work program was granted on 18 April 2011 (Table 2).

Licence Year	Licence dates	Minimum Work Program
Year 1	05/02/08 – 6/02/09	<ul style="list-style-type: none"> • Geological and geophysical studies
Year 2	7/02/09 – 6/02/10	<ul style="list-style-type: none"> • Geological and geophysical review
Year 3	7/02/10 – 6/02/11	<ul style="list-style-type: none"> • Geological and geophysical review
Year 4	7/02/11 – 6/02/12	<ul style="list-style-type: none"> • Drill between 1 and 4 fully cored shallow wells. Geological and geophysical studies.
Year 5	7/02/12– 6/02/13	<ul style="list-style-type: none"> • Geological and geophysical review

Table 1: Revised Licence Work Program

Term	Minimum Work Program
Year 1	Geological and Geophysical Review
Year 2	Geological and Geophysical Studies
Year 3	Geological and geophysical review.
Year 4	Geological and Geophysical Studies.
Year 5	Geological and geophysical review

Table 2: Licence Work Program after Variations.

NOTE: Licence Suspensions – GEL 293 was surrendered effective 17/05/2012.

Regulated Activities

Pursuant to Regulation 33(2) (a) under the Act, an annual report must include“A summary of the regulated activities conducted under the licence during the [current reporting] year.”

a. Drilling and related activities

No drilling and related activities were undertaken during the reporting period.

b. Seismic data acquisition

None undertaken

c. Seismic Data Processing and Reprocessing

None undertaken

d. Geochemical, gravity, Magnetic and other surveys

None undertaken

e. Preliminary survey activities

None undertaken

Compliance Issues

Pursuant to Regulations 33(2) (b) & (c), an annual report must include:.....“A report for the year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives;” and; “A 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 recurrence of any such non-compliances.”

With the exception of the lateness of this report Torrens Energy has complied with the Act and the license agreement during the reporting period. Torrens Energy has people and systems in place to prevent non-compliance issues from reoccurring.

Management System Audits

Pursuant to Regulation 33(2) (d) under the Act, an annual report must include:.....“A 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 actions that has, or will be taken”.

There were no management systems audits undertaken during the reporting period.

Report and Data Submissions

Pursuant to Regulation 33(2) (e) under the Act, an annual report must include:....“A list of all reports and data relevant to the operation of the Act generated by the licensee during the licence year”.

No reports were submitted during the reporting period.

Incidents

Pursuant to Regulation 33(2) (f), an annual report must include:....“In relation to any incidents reported to the Minister under the Act and these Regulations during the relevant licence year:

- I. an overall assessment and analysis of the incidents, including the identification and analysis of any trends that have emerged; and
- II. an overall assessment of the effectiveness of any action taken to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, or to minimise the risk of recurrence of any such non-compliance”.

No reportable incidents occurred during the reporting period.

Threat Prevention

Pursuant to Regulation 33(2) (g) under the Act, an annual report must include:....“A report on any reasonably foreseeable threats (other than threats previously reported on) that reasonably presents, 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 new threats were identified during the reporting period.

Future Work Programs

Pursuant to Regulation 33(2) (h) under the Act, an annual report must include:....“Unless the relevant licence year is the last year in which the licence is to remain in force – a statement outlining operations proposed for the ensuing year”.

Please refer to Table 2. (above) for future work programs.

Interpretation and Summary

The GEL 293 covers a large section of the thermally anomalous South Australian Heat Flow Anomaly (SAHFA) – a “corridor” of known heat producing basement geology. The interpretation of the surrounding geology has confirmed the continuation of target basement rocks overlain by thick sub-horizontal insulating Tertiary, Cambrian and Pre-Cambrian sediments, forming an effective insulator over the geothermal prospect, effectively de-risking this highly prospective geothermal ground.

Uniquely, network access can be made to various National Electricity Market substations for Torrens Energy's project areas. Cost estimates from pilot generating plants through to small-scale plants range from around \$10m and the cost for supporting larger scale geothermal power production is understandably higher, and must be made via a 275 kV or higher line. Estimates range from an additional \$20-30m.

By comparison an independent investigation into the early development of a transmission system, designed to connect off-grid Cooper Basin geothermal developments [further north] via Olympic Dam and the Davenport Substation, would have a total capital cost around \$900m, with around eighty percent of the cost borne by the geothermal companies (source: MMA/AGEA Connection Report 2009).

Marginal loss factors when combined with the cost benefits for projects that can use existing electricity infrastructure, places the advantages of Torrens Energy business model in perspective, and highlights the relative advantages of the on-grid geothermal developments pursued by Torrens Energy.

These factors continue to make the Port Adelaide Project a priority exploration area for Torrens Energy's future development.

EXPENDITURE STATEMENT (February 2012 to May 2012)