

GEL 156 – Paralana – Licence year 4
GEL 254 – Paralana North – Licence year 1

Combined Annual Report
23 November 2013 – 22 November 2014

GEL 156 – Paralana
GEL 254 – Paralana North

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Contents

1.	Introduction.....	3
2.	Permit Summary.....	4
3.	Regulated Activities - 2011 Reporting Period.....	5
3.1	Development Plan Amendment and Grant Changes.....	6
4.	Compliance Issues.....	6
4.1	Licence and Regulatory Compliance.....	6
4.2	Management System Audits.....	7
4.3	Report and Data Submissions.....	8
4.4	Incidents.....	8
4.5	Threat Prevention.....	8
5.	Future Work Programme.....	9
6.	Expenditure Statement.....	9

1. Introduction

Neighbouring tenements GEL 156 (Paralana), GEL 178 (Paralana East) and GEL 180 (Paralana South) were granted to MNGI Pty Ltd, a wholly owned subsidiary of Petratherm Ltd, on 23 November 2004 for a period of 5 years each.

In December 2005 Petratherm applied for, and was granted, Variations to the Work Programs of each of the three Paralana tenements with the view of amalgamating their work programs into a single regional project and streamlining compliance reporting.

Subsequently, on 23 November 2006, GEL 254 (Paralana North) was added to the Paralana Project licences followed by GEL 336 (Paralana Extension) on 20 September 2007. As such GELS 156, 178, 180 and 254 share a common anniversary and work program. In March 2008 Petratherm was granted a suspension on Paralana 336 in order to bring the anniversary date in-line with the other 4 Paralana tenements. Petratherm also applied for and was granted in March 2008 a work program variation which merged the Year 4 and 5 work program requirements of the Paralana tenements together.

In October 2009 Petratherm submitted a request to PIRSA to consolidate GELs 156, 178 & 180 into a single licence and to extend that licence for a further 5 year term; also to suspend GEL 254 for the period 23 Nov 2009 through to 22 Nov 2010 in order to align the anniversary date of GEL 336 for future consolidation. Those changes were approved.

In June 2012, Petratherm applied to vary the work programs and form a common work program for the Paralana GEL's 156, 336 and 254. Petratherm also applied to place GEL's 156,254 and 336 into suspension for a period of 12 months. The variation and those changes were approved on the 7th of August 2012.

In September 2013, Petratherm applied for a consolidation of GELs 254 and 336 and the relinquishment of 33% of their combined area. The new GEL 254 was renewed for a period of 5 years.

This report provides a summary of work activities performed on the two tenements over the period 23 November 2013 to 22 November 2014 which represents Year 4 of the GEL 156 work program and Years 1 of the GEL 254 work program. On the 12th November 2014 a submission to surrender GEL 254 was made.

2. Permit Summary

For the duration of the licence year, MNGI (Petratherm) held a 79% and Beach Energy a 21% interest for Geothermal Exploration Licences (GELs) 156 and 254. The work programs of Paralana GEL's 156 and 254 form a common work program. On the 12th November a submission was made to DSD to surrender GEL 254.

The 2014 work commitments associated with the above licences can be seen in Table 1.

Table 1 Current work commitments by licence year

Licence Year	Licence Dates	Work Program for Paralana: GEL 156
Yr 4	23 Nov 2013 - 22 Nov 2014	<ul style="list-style-type: none"> • Drill one well • Geological and geothermal studies <i>(Year 4 work program may be conducted anywhere within the boundaries of GELs 156 and 254)</i>
		Work Program for Paralana: GEL 254
Yr 1	23 Nov 2013 - 22 Nov 2014	<ul style="list-style-type: none"> • Geological and geothermal studies <i>(Year 1 work program may be conducted anywhere within the boundaries of GELs 156 and 254)</i>

The following table, Table 2, displays the minimum work program and the actual work completed up until the end of the reporting period. Discussions were held with DSD staff during the period to vary the work program to delay drilling of Paralana 2 scheduled for the current licence year. The drilling of this well has been postponed due to funding and rig availability constraints. The Company will make a formal variation shortly to DSD to try and remedy this non-compliance issue.

Table 2 Final work program and work completed in the current reporting period

Work Commitment	Actual Work
<ul style="list-style-type: none"> • Drill one well • Geological and geothermal studies 	<ul style="list-style-type: none"> • Data review, processing and interpretation • Updated development plan • Project grant funding agreement amendments

3. Regulated Activities - 2014 Reporting Period

Pursuant to Regulation 33(2)(a) under the Act, the following is a summary of the regulated activities conducted under the licence during the 2011 reporting year.

Table 3 Summary of Activities

Activity	Refer to Section
Seismic Data Acquisition <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Seismic Data Processing and Reprocessing <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Geochemical Surveys <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Drilling and Related Activities <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Preliminary Survey Activities <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Production and Processing <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	
Pipeline/Flowline Construction and Operation <ul style="list-style-type: none"><i>No regulated activities undertaken in the licence reporting period</i>	

3.1 Development Plan Amendment and Grant Changes

In December 2013 major amendments were made to the development plan for the Paralana Project. These changes relate to the Federal Government Renewable Energy Development Program (REDP) Grant initially totalling \$63 million to assist funding (one third of costs) a 30MW geothermal energy pilot plant at Paralana. The Federal Government Grant was reduced significantly to \$24.5 Million to assist development of 7 MW geothermal pilot plant, built as two geothermal well doublets of 3.5MW each. The new development plant included changes to well engineering and subsequent fracture stimulation plan, in order to try and maximise heat extraction.

In July 2014, Petratherm advised that it had been unable to secure the additional \$5 million in equity required to draw down on the \$13 million Emerging Renewables Program (ERP) Grant awarded by the Australian Renewable Energy Agency (ARENA) to fund 50% of the drilling costs of Paralana 2. Accordingly, ARENA advised that no further time extensions will be made to source these funds and the ERP grant will be terminated with no funds having been paid to Petratherm. As a consequence of the ERP grant lapse, the Company’s \$24.5million Renewable Energy Development Program (REDP) grant conditions could not be met and this grant too was terminated.

The loss of the grants and a very difficult investment climate to raise the necessary equity meant that plans to collar Paralana 2 late in the reporting period could not be met. The Company will now look to vary the forward work program and investigate options to re-finance the project such that drilling can commence. The project has a stated aim of demonstrating a commercial rate of energy extraction by completing a working geothermal doublet

4. Compliance Issues

4.1 Licence and Regulatory Compliance

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.”

MNGI (Petratherm) and its JV partner Beach Energy have complied with the relevant conditions under the Petroleum Act 2000 and the Petroleum Regulations 2000. Detailed information on the individual instances of non-compliance is provided below in designated sections.

Licence Non-Compliance

Table 4 List of licence non-compliances for current reporting year

No.	Stated Commitment	Reason for Non-Compliance	Rectification of Non-Compliance

1	Drill one well	Insufficient funds to finance the well	2 geothermal wells have been drilled at Paralana and the Company will make a formal variation application to modify the work program such that Paralana 2 is drilled in a later reporting period.
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Regulatory Non-Compliance

Table 5 List of regulatory non-compliances for current reporting year

No.	Date	Activity	Details of Non-Compliance	Rectification of Non-Compliance
No regulatory non compliances occurred				

Compliance with Statement of Environmental Objectives (SEOs)

The SEOs used to assess compliance are:

Statement of Environmental Objectives for Drilling and Well Operations in the Cooper/Eromanga Basins – South Australia 2009 and; Statement of Environmental Objectives for Ground-Based Geophysical Operations (non-seismic) in South Australia 2007

An updated assessment of performance in achieving the SEO objectives is made when visits are conducted on site for MEQ array maintenance. Operations are continuing on the drilling site so the site remains to be completely rehabilitated. MNGI (Petratherm) and Beach Energy are satisfied that the objectives required by the SEO have been met up to the current stage of operations.

4.2 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”.

No management system audits were carried out during the licence year.

4.3 Report and Data Submissions

Table 6 List of report and data submissions during current licence reporting year

<i>Description of Report/Data</i>	<i>Date Due</i>	<i>Date Submitted</i>	<i>Compliant / Non-Compliant</i>
Annual Report for GELs 156 (Year 3) and 254 (Year 5)	22/01/2014	23/12/2013	Compliant
Annual Report for GELs 156 (Year 4) and 254 (Year 1)	22/01/2015	21/01/2015	Compliant
QUARTERLY CASED HOLE AND REPORTABLE ACTIVITY REPORTS			
<i>Beach Energy, Paralana Quarterly Cased Hole Well Activity Report 4Q 2013</i>	31/01/2014	31/01/2014	Compliant
<i>Beach Energy, Paralana Quarterly Cased Hole Well Activity Report 1Q 2014</i>	30/04/2014	30/04/2014	Compliant
<i>Beach Energy, Paralana Quarterly Cased Hole Well Activity Report 2Q 2014</i>	31/07/2014	30/07/2014	Compliant
<i>Beach Energy, Paralana Quarterly Cased Hole Well Activity Report 3Q 2014</i>	31/10/2014	31/10/2014	Compliant
OTHER REPORTS			
<i>Petratherm, GEL 254 tenement surrender submission</i>	N/A	12/11/2014	N/A

4.4 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 – an overall assessment and analysis of the incidents, including the identification and analysis of any trends that have emerged; and 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”.

Table 7 List of incidents during current licence reporting year

<i>Date</i>	<i>Activity</i>	<i>Incident Description</i>	<i>Type of Loss</i>	<i>Action to Rectify & Effectiveness of Action</i>	<i>Date Reported / Reported to Whom</i>
<i>No reportable incidents occurred</i>					

4.5 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”.

There are no foreseeable threats to the proposed exploration activities for the subject GELs other than the disruptive influence of occasional rain storms and dust storms. Exploration activity schedules are adjusted accordingly.

5 Future Work Programme

The work program for the next Licence Year of the Paralana Project Tenements will be geological and geothermal studies

Table 8 Paralana Project current work program summary

Licence Year	Licence Dates	Work Program for Paralana: GEL 156
Yr 5	23 Nov 2014 - 22 Nov 2015	<ul style="list-style-type: none">• Geological and geothermal studies

6 Expenditure Statement