



SENEX ENERGY LIMITED

Annual Report

Licence Year 4 (Term 2)

13<sup>th</sup> November 2011 – 12<sup>th</sup> November 2012

Petroleum Exploration Licence (PEL) 115

## Table of Contents

1. Introduction .....	3
2. Permit Summary .....	3
3. Regulated Activities .....	4
3.1 Drilling and Related Activities .....	4
3.2 Seismic Data Acquisition .....	4
3.3 Seismic Data Processing and Reprocessing .....	4
3.4 Geochemical, Gravity, Magnetic and other surveys.....	4
3.5 Production and Processing .....	4
3.6 Pipeline/ Flowline Construction and Operation .....	4
3.7 Preliminary Survey Activities.....	5
4. Compliance Issues .....	5
Licence and Regulatory Compliance .....	5
Licence Non-Compliance.....	5
Regulatory Non-Compliance.....	5
Compliance with Statement of Environmental Objectives.....	5
Report and Data Submissions .....	13
Incidents .....	13
Threat Prevention .....	14
Future Work Program .....	14
5. Expenditure Statement .....	15
APPENDIX I EXPENDITURE STATEMENT.....	16

## 1. Introduction

Petroleum Exploration Licence (PEL) 115 was granted on 16<sup>th</sup> May 2003. Renewal of this licence was granted effective 13<sup>th</sup> November 2008. The licence is located in the Cooper and Eromanga Basins, South Australia. This report details the work conducted during Term 2, Licence Year 4 of the licence (13<sup>th</sup> November 2011 to 12<sup>th</sup> November 2012), in accordance with Regulation 33 of the *Petroleum and Geothermal Energy Act 2000*.

## 2. Permit Summary

At the start of the licence year, licensees for Petroleum Exploration Licence (PEL) 115 were:

- Victoria Oil Exploration (1977) Pty Ltd 33%
- Komodo Energy Pty Ltd 42%
- Lion Petroleum Pty Ltd 25%

During the licence year, Victoria Oil Exploration (1977) Pty Ltd acquired part of Komodo Energy's interest so that the interests became:

- Victoria Oil Exploration (1977) Pty Ltd 55%
- Komodo Energy Pty Ltd 20%
- Lion Petroleum Pty Ltd 25%

A further farmin resulted in Stuart Petroleum Pty Ltd acquiring Lion Petroleum's interest so that the licensees are now:

- Victoria Oil Exploration (1977) Pty Ltd 55%
- Komodo Energy Pty Ltd 20%
- Stuart Petroleum Pty Ltd 25%

The current work commitments (including all variations) associated with PEL 115 is listed in Table 1.

**Table 1** Current work commitments by licence year

Licence Year	Licence Date	Minimum Work Program
1	13 Nov '08 – 12 Nov '09	Two wells
2	13 Nov '09 – 12 May '11	
3	13 Nov '10 – 12 May '12	Geological and Geophysical Studies
4	13 Nov '11 – 12 May '13	Geological and Geophysical Studies
5	13 Nov '12 – 12 May '14	Geological and Geophysical Studies

Licence Year 4 concluded on 12 November 2012. The following table displays the minimum work program (after all variations) and the actual work completed up until the end of the current licence period.

**Table 2 Final work program and work completed (as of end of current reporting period) by licence year**

Licence Year	Minimum Work Program	Actual Work
1	Two wells	Prospect reviews to support third party investment in drilling opportunities
2		Two wells; Geological and Geophysical Studies
3	Geological and Geophysical Studies	Geological and Geophysical Studies
4	Geological and Geophysical Studies	One well (Kingston Rule-1) Geological and Geophysical Studies

### **3. Regulated Activities**

Pursuant to Regulation 33(2)(a) of the Regulations, an annual report must include:

*“a summary of the regulated activities conducted under the licence during the [current reporting] year.”*

This information is detailed below in designated sections.

#### **3.1 Drilling and Related Activities**

Kingston Rule-1 spudded on 21 October 2012 and drilling was still underway as at the end of the current licence year.

#### **3.2 Seismic Data Acquisition**

No regulated activities undertaken in the licence reporting period.

#### **3.3 Seismic Data Processing and Reprocessing**

No regulated activities undertaken in the licence reporting period.

#### **3.4 Geochemical, Gravity, Magnetic and other surveys**

No regulated activities undertaken in the licence reporting period.

#### **3.5 Production and Processing**

No regulated activities undertaken in the licence reporting period.

#### **3.6 Pipeline/ Flowline Construction and Operation**

No regulated activities undertaken in the licence reporting period.

### 3.7 Preliminary Survey Activities

No regulated activities undertaken in the licence reporting period.

## 4. Compliance Issues

### 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.”*

Detailed information on the individual instances of non-compliance are provided below in designated sections.

#### Licence Non-Compliance

No licence non-compliances identified for PEL 115.

#### Regulatory Non-Compliance

No regulatory non-compliances identified for PEL 115.

#### Compliance with Statement of Environmental Objectives

Drilling activities conducted in PEL 115 have been assessed against the following Statement of Environmental Objectives:

- *Statement of Environmental Objectives: Cooper Basin Drilling and Well Operations* (Santos Ltd. 2009).

**Table 3**      **SEO for Drilling and Well Operations, Cooper Basin, SA**  
**(Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
1.0 To minimise risks to the safety of the public and other third parties.	Reasonable measures implemented to ensure no injuries or health risks to the public or third parties.	Compliant / Achieved	No injuries or health risks to the public or third parties.

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA (Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
<p>2.0 To minimise disturbance and avoid contamination to soil.</p>	<p><u>Well Site and Access Track Construction</u> 0, +1 or +2 GAS criteria are attained for “Minimise impacts on soil” objective as listed in Appendix 1 Table A1 and “To minimise the visual impact” as listed in Appendix 1 Table A2. No unauthorised off-road driving or creation of shortcuts. No construction activities are carried out on salt lakes or steep tableland slopes (as defined in EIR). <u>Borrow pit construction and restoration</u> 0, +1 or +2 GAS criteria are attained for “Minimise visual impacts’, and “Minimise impact on soil” objectives as listed in Appendix 1 Table A3. <u>Production Testing/Well Blowdowns</u> No soil contamination as a result of production testing or well blowdown operations. <u>Fuel and Chemical Storage and Handling</u> No spills/leaks outside of areas designed to contain them. Level of hydrocarbon continually decreasing for in situ remediation of spills. Soils remediated to a level as determined by the SHI process. Also refer to Objective 12. <u>Waste Disposal (domestic, sewage and sludges)</u> All domestic wastes are disposed of in accordance with EPA licensing requirements. 0, +1 or +2 GAS criteria</p>	<p>Compliant / Achieved</p>	<p>No disturbances or contamination to soil.</p> <p>All relevant GAS scores were recorded at ‘0’, ‘+1’ or ‘+2’.</p>

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA  
(Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
	<p>are attained for “Site to be left in a clean and tidy condition” objective listed in Appendix 1 Table A2.</p> <p>No spills or leaks from sewage treatment processing. Refer to Assessment Criteria for Objective 11.</p>		
<p>3.0 To avoid the introduction or spread of pest plants and animals and implement control measures as necessary.</p>	<p>No weeds or feral animals are introduced to, or spread in, operational areas as a consequence of activities</p>	<p>Compliant / Achieved</p>	<p>No weeds or feral animals were introduced to, or spread in operational areas as a consequence of activities.</p>

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA (Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
<p>4.0 To minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow ground water resources.</p>	<p><u>Well Lease and Access Track Construction</u> Well sites and access tracks are located and constructed to maintain pre-existing water flows (i.e. channel contours are maintained on floodplains and at creek crossings).</p> <p><u>Drilling Mud Sumps and Flare Pits</u> No overflow of drill cuttings, muds and other drilling fluids from mud sumps. No waste material disposal to sumps and flare pits. <u>No waste material disposal to sumps and flare pits.</u> No leaks/spills outside of areas designed to contain them.</p> <p><u>Well Blowdown/Production Testing</u> No water (surface or groundwater) contamination as a result of production testing or well blowdown operations.</p> <p><u>Fuel/Chemical Storage and Handling</u> No water (surface or groundwater) contamination as a result of fuel or chemical storage and handling.</p> <p><u>Waste Management</u> Refer to Assessment Criteria for Objective 11.</p>	<p>Compliant / Achieved</p>	<p>Disturbances to drainage patterns were minimised. Contamination of surface and shallow ground water resources was avoided.</p> <p>No overflow of drill cuttings, muds and other drilling fluids from mud sumps.</p> <p>No waste material disposal to sumps and flare pits.</p> <p>No leaks/spills outside of areas designed to contain them.</p> <p>No water (surface or groundwater) contamination as a result of production testing or well blowdown operations.</p> <p>No water (surface or groundwater) contamination as a result of fuel or chemical storage and handling.</p>
<p>5.0 Avoid disturbance to sites of cultural and heritage significance.</p>	<p>Proposed well sites and access tracks have been surveyed and any sites of Aboriginal and non-Aboriginal heritage identified.</p> <p>Any identified cultural and heritage sites have been avoided.</p>	<p>Compliant / Achieved</p>	<p>Disturbances to sites of cultural and heritage significance were avoided.</p>

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA (Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
<p>6.0 To minimise loss of aquifer pressure and avoid aquifer contamination.</p> <p><i>Note: This objective is subject to an ongoing review and is currently unchanged from the 2003 SEO. Refer to the addendum to the EIR (Santos 2009a) for details.</i></p>	<p><u>Drilling &amp; Completion Activities</u> There is no uncontrolled flow to surface (blow out). Sufficient barriers exist in casing annulus to prevent crossflow between separate aquifers or hydrocarbon reservoirs. Relevant government approval obtained for abandonment of any radioactive tool left downhole.</p> <p><u>Producing, Injection, Inactive and Abandoned Wells</u> No cross-flow behind casing between aquifers, and between aquifers and hydrocarbon reservoirs unless approved by DWLBC.</p>	<p>Compliant/ Achieved</p>	<p>Aquifer contamination and aquifer pressure loss was minimised.</p>

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA  
(Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
Objective 7: To minimise disturbance to native vegetation and native fauna.	<p><u>Well Lease and Access Track Construction and Restoration</u> Any sites with rare, vulnerable and endangered flora and fauna have been identified and avoided. 0, +1 or +2 GAS criteria are attained for “Minimise impact on vegetation” objective as listed in Appendix 1 Table A1 and “The revegetation of indigenous species” objective as listed in Appendix 1 Table A2, during well lease and access track site selection and construction and restoration.</p> <p><u>Borrow Pit Construction and Restoration</u> 0, +1 or +2 GAS criteria are attained for “Minimise impacts on vegetation” objectives as listed in Appendix 1 Table A3 during borrow pit site selection, construction, and restoration.</p> <p><u>Waste Management</u> Refer to assessment criteria for Objective 11.</p> <p><u>Fuel and Chemical Storage and Handling</u> Refer to assessment criteria for objectives 2 and 4.</p>	Compliant / Achieved	<p>No disturbances to native vegetation and fauna.</p> <p>All relevant GAS scores were recorded at ‘0’, ‘+1’ or ‘+2’.</p>
8.0 To minimise air pollution and greenhouse gas emissions.	Compliance with EPA requirements	Compliant / Achieved	Air pollution and greenhouse gas emissions were minimised.
9.0 To maintain and enhance partnerships with the Cooper Basin community.	No unresolved reasonable complaints from the community.	Compliant / Achieved	No unresolved reasonable complaints from the community.

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA (Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
10.0 To avoid or minimise disturbance to stakeholders and associated infrastructure.	No reasonable stakeholder complaints left unresolved.	Compliant / Achieved	Disturbances to stakeholders and/or associated infrastructure were avoided.
11.0 To optimise (in order of most to least preferable) waste avoidance, reduction, reuse, recycling, treatment and disposal.	All wastes to be disposed of at an EPA licensed facility in accordance with EPA Licence conditions, with the exception of drilling fluids, drill cuttings, other fluids disposed during well clean-up and wastewater (see below). Wastewater (sewage and grey water) disposed of in accordance with the <i>Public and Environmental Health (Waste Control) Regulations 1995</i> or to the Department of Health's satisfaction. Attainment of GAS criteria for "Site to be left in clean, tidy and safe condition" objective during well site restoration (refer Appendix 1 Table A2). Attainment of GAS criteria for "Site left in clean and tidy condition" objective during borrow pit restoration (refer Appendix 1 Table A3).	Compliant / Achieved	Waste was avoided, reduced, reused, recycled and disposed of in the optimal way.  All relevant GAS scores were recorded at '0', '+1' or '+2'.

**Table 3 (Continued) SEO for Drilling and Well Operations, Cooper Basin, SA  
(Santos Ltd. 2009)**

Objective / Goals	Assessment Criteria	Compliant/ Non-Compliant	Comments
<p>12.0 To remediate and rehabilitate operational areas to agreed standards.</p>	<p>No unresolved reasonable stakeholder complaints.</p> <p><u>Contaminated Site Remediation</u> Contaminated sites are remediated to a level as determined by the approved SHI process. Prior to the finalisation and approval of the SHI process, contaminated sites are remediated in accordance with criteria developed with the principles of the National Environment Protection Measure for contaminated sites, and in consultation with the EPA.</p> <p><u>Well Site and Access Track Restoration</u> The attainment of 0, +1 or +2 GAS criteria for the objectives (refer Appendix 1 Table A2): - “To minimise the visual impact and the revegetation of indigenous species”</p> <p><u>Borrow Pit Restoration</u> The attainment of 0, +1 or +2 GAS criteria for (refer Appendix 1 Table A3): - “Revegetation of indigenous species”, “minimise impact on soil”, “minimise visual impacts” and “Site to be left in a clean and tidy condition”</p> <p><u>Note:</u> Well abandonment issues are addressed under Objective 6.</p>	<p>Compliant / Achieved</p>	<p>No unresolved reasonable stakeholder complaints.</p> <p>All relevant GAS scores were recorded at ‘0’, ‘+1’ or ‘+2’.</p>

### **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 undertaken.

### **Report and Data Submissions**

Pursuant to Regulation 33(2) (e) under the Act, an annual report must include:

*“a list of all report and data relevant to the operation of the Act generated by the licensee during the licence year”.*

**Table 4 List of report and data submissions during current licence reporting year**

<b>Description of Report/Data</b>	<b>Date Due</b>	<b>Date Submitted</b>	<b>Compliant / Non-Compliant</b>
Year 3 Annual Report – PEL 115	12 Jan 2012	21 Dec 2011	Compliant
Resubmission of Year 3 Annual Report	20 July 2012	16 July 2012	Compliant
Kingston Rule-1 Drilling Activity Notification	-	28 Aug 2012	Compliant
Kingston Rule-1 Waiver from DEWNR (addendum to Drilling Activity Notification)	-	24 Sept 2012	Compliant
Notification to DMITRE re: intention to use Toolache water bore with Santos consent	-	3 Oct 2012	Compliant
Daily Drilling Reports for Kingston Rule-1	12 hrs after end of daily reporting period	Daily	Compliant

### **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 licence 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”.*

Operations within PEL 115 are vulnerable to heavy rain events and major flooding of the Cooper Creek system.

A major flood in the Cooper Creek is the only foreseeable threat to drilling operations.

The progress of any flood events in the Queensland headwaters of the Cooper Creek is closely monitored by satellite surveillance to predict the time of their arrival in the area.

### **Future Work Program**

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”.*

**Table 5 Future work program by licence year for renewed term**

<b>Area of Activity</b>	<b>Minimum Work Program</b>	<b>Actual Work</b>	<b>Commencement Date</b>
Drilling and related activities	-	Hornet-1 lease maintenance and fracture stimulation – Kingston Rule-1 fracture stimulation	4 February 2013 24 February 2013
Seismic data and acquisitions	-	-	-
Seismic data processing and reprocessing	-	-	-
Production and Processing	-	-	-
Geochemical, Gravity, Magnetics and other surveys	-	-	-
Pipeline Construction and Operation	-	-	-
Geological and Geophysical studies	Geological and Geophysical studies	Geological and Geophysical studies	13 November 2012

## 5. **Expenditure Statement**

Pursuant to Regulation 33(3) under the Act, an annual report must contain:

*“An annual report must be accompanied by a statement of expenditure on regulated activities conducted under the licence for the relevant licence year, showing expenditure under each of the following headings:*

- a) drilling activities;*
- b) seismic activities;*
- c) technical evaluation and analysis;*
- d) other surveys;*
- e) facility construction and modification;*
- f) operating and administration expenses (not already covered under another heading)”.*

Please refer to Appendix 1 for the expenditure statement for the current reporting period.