



PEL 123

**Arckaringa Basin
South Australia**

**Year 5
Annual Report**

**For the Period
21 October 2011 to 01 October 2013**

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1. Introduction

Petroleum Exploration Licence PEL 123 'Arckaringa Basin', covers an area of 9646 km² and lies within the Arckaringa Basin and east of Coober Pedy, South Australia. This report describes activities conducted during Licence Year 5 (21 October 2011 – 01 October 2013 inclusive), in accordance with Regulation 33 of the Petroleum and Geothermal Act 2000.

2. Licence Summary

PEL 123 was awarded to SAPEX which currently maintains a 100% interest in the licence. The original work commitments associated with the awarding of PEL 123 is outlined in **Table 1**.

Year of Licence	Minimum Work Requirements
One	Geological and Geophysical Studies
Two	Drill one well and Seismic Acquisition
Three	Drill one well
Four	Geological and Geophysical Studies and Seismic Acquisition
Five	Geological and Geophysical Studies

Table 1: Original Work Commitments of PEL 123 by Licence year

- Because of search for JV partner for the potential shale oil project in the Arckaringa Basin an application for a 12 month suspension of the Year 5 work program commitments for PEL 123 and a one year extension of the term of PEL 123 from 1 October 2013 to 1 October 2014 was submitted to DMITRE and it was approved on 28 May 2013. The current Term 1 work commitments of PEL 123 are outlined in **Table 2**.

Year of Licence	Minimum Work Requirements
One 3/10/2006 - 02/10/2007	<ul style="list-style-type: none"> • Geological and Geophysical Studies
Two 3/10/2007 - 02/10/2008	<ul style="list-style-type: none"> • Geological and Geophysical Studies • Seismic Acquisition
Three 3/10/2008 - 02/10/2009	<ul style="list-style-type: none"> • Drill one well
Four 3/10/2009 - 20/10/20011	<ul style="list-style-type: none"> • Geological and Geophysical Studies
Five 21/10/2011 - 01/10/2013	<ul style="list-style-type: none"> • Geological and Geophysical Studies • Seismic Acquisition • Drill one well
Six (Extended Period) 2/10/2013 - 01/10/2014	

Table 2: Current Work Commitments of PEL 123 by Licence year

- SAPEX has commenced a voluntary quarterly to half-yearly groundwater sampling and monitoring of the existing water bores and springs over PELs 117, 121, 122 and 123 in order to establish baseline water quality conditions.

The following table (**Table 3**) displays PEL 123, the minimum work program and the actual work completed during Year 5, to 1 October 2013.

PEL	Minimum Work Program - Year 5	Actual Work Carried Out
PEL 123	<ul style="list-style-type: none"> • Geological and Geophysical Studies • Seismic Acquisition • Drill one well 	<ul style="list-style-type: none"> • Geological and Geophysical Studies

Table 3: Minimum work program and actual work completed - Year 5

3. Regulated Activities

Regulation 33 (2) (a):

Regulated activities conducted

- Environmental Impact Reports (EIR) and Statement of Environmental Objectives (SEO) for Geophysical Operations in the Arckaringa Basin have been reviewed by SAPEX and various government agencies and were gazzeted on 10th October 2013.
- SAPEX Ltd's Environmental Impact Reports (EIR) and Statement of Environmental Objectives (SEO) for Arckaringa Basin Exploration Drilling Activities have been reviewed by SAPEX and various government agencies and were approved by DMITRE on 16th September 2013.
- Notice of Entry letters were sent to landowners and other stake holders for a WAC to be completed for drilling activities proposed in 2014.
- Notice of Entry letters were sent to landowners and other stake holders for the Arckaringa Basin Groundwater Monitoring Program within PELs 117, 121, 122 and 123
- Activity notification for Arckaringa Basin Groundwater Monitoring Program within PELs 117, 121, 122 and 123 was submitted to DMITRE and approval was received on 6 September 2013

4. Compliance Issues

Regulation 33 (2) (b) (c):

Compliance with the Act, Regulations, Licence conditions and relevant statement of environmental objectives, Actions to rectify non compliance

Licence Compliance

- On 28 May 2013 Sapex Ltd has received an approval for a twelve months suspension of the Year 5 work program commitments and extension of the term of PEL 123 by a corresponding period of twelve months.
- Geological and Geophysical studies have been undertaken throughout the term; with the planning of a stratigraphic drilling program and regional 2D seismic survey across PEL 123.
- As part of Linc Energy's environmental management system, documents and site procedures were established in order to achieve the requirements of the Statement of Environmental Objectives (SEO) of the Preliminary Exploration and Survey Activities in SA, July 2013;
 - SAPEX Ltd HSE Management Plan
 - Groundwater and Surface Water Sampling Procedure
 - Arckaringa Basin Field Sampling Induction
 - Emergency Procedures Manual For Field Operations

These documents and procedures were followed throughout the groundwater monitoring and sampling program and regularly checked by the project geologist and company representative. No issues of non-compliance were identified.

Licence Non-Compliance

There is no Licence Non-Compliance for the current reporting year.

Regulatory Compliance

- Activity notification for the Arckaringa Basin Groundwater Monitoring Program within PELs 117, 121, 122 and 123 was submitted to DMITRE and approval was received on 6 September 2013.

Regulatory Non-Compliance

There is no Regulatory Non-Compliance for the current reporting year.

Well	Title	Regulation	Due Date	Completed Date	Compliant
PEL 123 – William Creek 1	Wireline Logs	Reg 39	16/10/2011	16/10/2011	Yes
PEL 123 – William Creek 1	Downhole Diagram	Reg 44	18/02/2012	18/02/2012	Yes
PEL 123 – William Creek 1	Well Completion Report	Reg 40	18/02/2012	18/02/2012	Yes

General Reporting	Regulation	Due Date	Completed Date	Compliant
Year 4 – Annual Report PEL 123 (Resubmitted)	Reg 33	02/12/2012	23/11/2012	Yes
Quarterly Cased Hole Activity Report Oct - Dec 11	Reg 41	31/01/2012	27/01/2011	Yes
Quarterly Cased Hole Activity Report Jan - Mar 12	Reg 41	30/04/2012	27/04/2012	Yes
Quarterly Cased Hole Activity Report Apr - Jun 12	Reg 41	31/07/2012	30/07/2012	Yes
Quarterly Cased Hole Activity Report July - September 12	Reg 41	31/10/2012	31/10/2012	Yes
Quarterly Cased Hole Activity Report October – December 12	Reg 41	31/01/2013	18/01/2013	Yes
Quarterly Cased Hole Activity Report January - March 13	Reg 41	30/04/2013	27/04/2013	Yes
Quarterly Cased Hole Activity Report April – June 13	Reg 41	31/07/2013	01/07/2013	Yes
Quarterly Cased Hole Activity Report July - September 13	Reg 41	31/10/2013	02/10/2013	Yes

Table 4: Compliance with Petroleum and Geothermal Energy Regulations

The groundwater monitoring and sampling program during this reporting period and all field assessments undertaken for the notification and activities approval process were carried out in accordance to the objectives of the Statement of Environmental Objectives (SEO) for Preliminary Exploration and Survey Activities in SA, July 2013, as detailed in **Table 5** below.

Environmental Objectives	Assessment Criteria	Compliant/Non-Compliant	Comment
1. Avoid or minimise disturbance to stakeholders and / or associated infrastructure.	All reasonable stakeholder complaints are addressed and resolved. Upon completion of survey activities and after any rehabilitation or reparation (if determined prior to survey), the level to which the impacts on other land users is determined by the absence of existing stakeholder complaints.	Compliant / Achieved	Induction for all employees and contractors to cover pastoral, conservation, cultural heritage, infrastructure and legislative issues before entering the area. All gates to be left in the condition they were found. System for logging land holder complaints. Necessary authorizations obtained for Woomera Prohibited area. Implement contingency plan for any spill or incident. No impacts to aboriginal cultural heritage.
2. Avoid or minimise disturbance to native vegetation and native fauna.	No unauthorised clearing of vegetation. Activities confined to existing cleared areas, access tracks or existing seismic lines (except where they have been rehabilitated) where possible. Fauna casualties reduced to as low as reasonably practicable. Waste Management Refer to assessment criteria for Objective 10. Fuel and Chemical Storage and Handling (Refer to assessment criteria for Objective 8).	Compliant / Achieved	Drive only on roads and tracks, not across country. Walk into sites where there is no road or track access. Cause minimal impact when walking through vegetation. No naked flames on fire ban days. Implement contingency plan for any spill.
3. Avoid disturbance to sites of cultural and heritage significance.	No impact to sites of Aboriginal or non-indigenous heritage significance without prior approval under the <i>Aboriginal Heritage Act 1988</i> or <i>Heritage Places Act 1993</i> .	Compliant / Achieved	Report any newly discovered sites or artifacts whilst working in the area.
4. Avoid the introduction or spread of exotic species and other biosecurity threats.	No weeds, feral animals or plant and animal diseases are introduced to, or spread within operational areas as a result of activities.	Compliant / Achieved	Induction for all employees and contractors to cover pastoral, conservation, cultural heritage, infrastructure and legislative issues before entering the area. System for logging land holder complaints. Vehicles to be appropriately cleaned and checked before entry into Arckaringa Basin. Cleaning to be done as per best practice guidelines.
5. Minimise the risk of initiation and / or propagation of wildfire.	Appropriate plans in place and equipment available to identify hazards, initiate hazard mitigation and response training; fire-fighting equipment available and maintained accordingly, and fire bans adhered to.	Compliant / Achieved	Induction for all employees and contractors to cover pastoral, conservation, cultural heritage, infrastructure and legislative issues before entering the area. No naked flames on declared no fire days.

6. Minimise visual impact of survey activities.	No reasonable stakeholder complaints left unresolved. Activities appropriately located to minimise visual impacts.	Compliant / Achieved	Drive only on roads and tracks, not across country. Walk into sites where there is no road or track access. Cause minimal impact when walking through vegetation. Remove all rubbish
7. Minimise generation of dust.	No reasonable stakeholder complaints received.	Compliant / Achieved	Drive only on roads and tracks, not across country. Drive to conditions, slowly if bull dusty.
8. Minimise soil disturbance and contamination.	No evidence of significant soil disturbance (e.g. wheel ruts, heavily compacted areas). No evidence of soil inversion. No soil contamination as a result of survey activities. No reasonable stakeholder complaints left unresolved. Fuel and Chemical Storage and Handling - No spills / leaks outside of areas designed to contain them.	Compliant / Achieved	No evidence of driving off road or creation of tracks. Spills and leaks of fuel and oil are to be reported and rectified. Any contaminated soil will be treated in-situ or removed.
9. Avoid or minimise impact to surface water, groundwater and drainage patterns.	No water (surface or groundwater) contamination as a result of survey activities. No disturbance to drainage patterns as a result of activities. Fuel and Chemical Storage and Handling - Refer to Objective 8.	Compliant / Achieved	Drive only on roads and tracks, not across country. Spills and leaks of fuel and oil are to be reported and rectified. Sampling capturing equipment to be cleaned before use at proposed sample point.
10. Optimise (in order of most to least preferable) waste avoidance, reduction, reuse, recycling, treatment and disposal.	No waste to be left at the survey site upon completion of the survey activity.	Compliant / Achieved	Take all non-bio degradable waste away from sites. System for logging land holder complaints. Dispose of liquids as per EPA regulations.
11. Remediate and rehabilitate operational areas where required.	No reasonable stakeholder complaints left unresolved.	Compliant / Achieved	System for logging land holder complaints.

Table 5: Compliance with Statement of Environmental Objectives – Preliminary Exploration and Survey Activities in SA, July 2013

Regulation 33 (2) (d):

Management System Audits

No management system audits were undertaken during the licence year.

Regulation 33 (2) (e):

Reports generated during the Licence year

PEL 118, 119, 121 & 123 – Geochemical Analyses on Core and Cutting samples from the Stuart Range Formation, Arckaringa Basin.					
Due Date	15 May 2012	Date Submitted	14 May 2012	Compliant	Yes

Table 6: Reports generated during the Licence year

Regulation 33 (2) (f):

Incidents reported to the Minister under the Act

No incidents occurred during this reporting period.

Regulation 33 (2) (g):

Foreseeable threats that present a hazard to facilities or activities

- Woomera Prohibited Area
 - PEL 123 lies within the Woomera Prohibited Area. SAPEX signed a new 5 year Deed of Access agreement with the Department of Defence to enter the area to undertake activities.
- No threats to activities which are not already covered in the relevant EIR's for drilling and seismic programs.

Regulation 33 (2) (h):

Operations proposed for Term 1 Year 6 (Extended Period)

SAPEX will continue undertaking Geological and Geophysical studies as part of a full review of acquired data with the objective to advance exploration in areas most prospective. The drilling program of 2 exploration wells is proposed to be conducted during the licence year. In addition Work Area Clearance for the 2D seismic acquisition of approximately 300 km will be completed in PEL 123.

5. Expenditure Statement

Regulation 33 (3):

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.*

Commercial In Confidence