



**Annual Report**

**Licence Year 8**

**First Renewal Term**

**5 November 2013 to 6 June 2014**

**PEL 92**

**Cooper / Eromanga Basin**

**South Australia**

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## 1 Introduction

Petroleum Exploration Licence (PEL) 92 was originally granted on 5 November 2001. The permit was renewed for a further five year term effective from 5 November 2006. PEL 92 is situated on the southwestern margin of the Cooper/Eromanga Basin, South Australia.

This report details the work completed by the holders of PEL 92 during the period 5 November 2013 to 6 June 2014 which represents Year 8 and the final year of the first renewal term. This Annual Report has been prepared in accordance with the requirements of Regulation 33 of the *Petroleum and Geothermal Energy Act 2013 (the Act)*.

## 2 Permit Summary

### 2.1 Permit Interests

The registered interests in PEL 92 are:

- Beach Energy Limited (Operator) 75%
- Cooper Energy Limited 25%

There were no changes to the interests in PEL 92 during the licence year.

During the current term, the holders of PEL 92 were granted Petroleum Production Licences (PPLs) over the Germein oilfield (PPL 246), Perlubie oilfield (PPL 247), Rincon oilfield (PPL 248), Elliston oilfield (PPL 249) and Windmill oilfield (PPL 250).

The PEL 92 licensees applied for petroleum retention licences (PRLs) over the area of PEL 92. PRLs 85 to 104 were awarded effective on 6 June 2014.

### 2.2 Suspensions / Extensions

As a result of previous suspensions and extensions of work commitments under Licence Condition 1, the first renewal term of PEL 92 was to expire on 4 November 2013. The Licence carried the right to one further renewal subject to the provisions of the Act. An extension of time to apply for renewal of PEL 92 was approved by Department of State Development and an application to renew PEL 92 for a further term was submitted on 1 November 2013. Pursuant to section 65(5) of the Act, the term of PEL 92 was extended until the renewal application for PEL 92 was determined. As a consequence of grant of PRLs 85 to 104, the PEL 92 licence term ended with effect on 6 June 2014.

### 2.3 Work Program

There have been no variations to the work program since the PEL 92 renewal was awarded. The work commitments for the first renewal term of PEL 92 are detailed in Table 1.

Table 1 Work Program Commitments by Licence Year

Licence Year	Licence dates	Minimum Work Program
Year 1	5 Nov 2006 to 4 Nov 2007	Geological and Geophysical Studies
Year 2	5 Nov 2007 to 4 Nov 2008	Acquire 100km <sup>2</sup> 3D seismic; Geological and Geophysical Studies
Year 3	5 Nov 2008 to 4 Nov 2009	Geological and Geophysical Studies
Year 4	5 Nov 2009 to 4 Nov 2012	Drill one well; Geological and Geophysical Studies
Year 5	5 Nov 2010 to 6 Jun 2014	Geological and Geophysical Studies

Table 2 summarises the work completed by the holders of PEL 92 as at 6 June 2014. The minimum work commitments for the first renewal term have been exceeded with the drilling of 38 wells; the acquisition of over 1300 km<sup>2</sup> of 3D seismic data and 500 km of 2D seismic data; and reprocessing of vintage seismic data.

Table 2 Work Program and Work Completed by Licence Year

Licence Year	Minimum Work Program	Actual Work
Year 1	Geological and Geophysical studies	<ul style="list-style-type: none"> <li>Acquisition of 277 km<sup>2</sup> Neritus 3D seismic</li> <li>Drilled Callawonga-2 oil appraisal well and Sheringa-1 exploration well</li> </ul>
Year 2	Acquire 100 km <sup>2</sup> 3D seismic Geological and Geophysical studies	<ul style="list-style-type: none"> <li>Drilled Parsons-1 exploration well (oil discovery) and Parsons-2 appraisal well</li> <li>Acquisition of 195 km<sup>2</sup> Modiolus 3D seismic</li> <li>Acquisition of 119 km Padollus 2D seismic</li> <li>Reprocessed of 80 km<sup>2</sup> Neritus 3D seismic</li> </ul>
Year 3	Geological and Geophysical studies	<ul style="list-style-type: none"> <li>Drilled 8 exploration wells <sup>(1)</sup></li> </ul>
Year 4	Drill one well Geological and Geophysical studies	<ul style="list-style-type: none"> <li>Acquisition of 230 km of Heliacus 2D seismic, 55 km Fusinus 2D seismic; 105 km Porcatus 2D seismic,</li> <li>Acquisition of 210 km<sup>2</sup> Calpurnus 3D seismic; 197 km<sup>2</sup> Rincon 3D; 295 km<sup>2</sup> Irus 3D seismic</li> <li>Reprocessed extra 150 km of archive 2D data with Heliacus survey data, and extra 100 km<sup>2</sup> of archive 3D data with Calpurnus data.</li> <li>Drilled 12 exploration wells <sup>(2)</sup> and 6 appraisal/development wells <sup>(3)</sup></li> </ul>
Year 5	Geological and Geophysical studies	<ul style="list-style-type: none"> <li>Acquisition of Caselous 3D seismic;</li> <li>Drilled 5 exploration wells and 3 appraisal / development wells <sup>(4)</sup></li> </ul>

<sup>(1)</sup> Gunyah-1, Perlubie-1, Tumby-1, Perlubie South-1, Butlers-1, Cheetima-1, Willunga-1 and Murninnie-1

<sup>(2)</sup> Parham-1, Stenhouse-1, Turton-1, Westall-1, Wheatons-1, Rincon-1, Elliston-1, Germein-1, Jaffa-1, Riley-1, Windmill-1, Tinah-1

<sup>(3)</sup> Butlers-2, Butlers-3, Butlers-4, Perlubie-2, Butlers-5, Butlers-6

<sup>(4)</sup> Rincon North-1, Sharples-1, Wyomi-1, Mills-1, Hooper-1, Windmill-2, Butlers-7, Butlers-8

### **3 Regulated Activities**

Pursuant to Regulations 33(2) (a), an Annual Report must include:

*“a summary of the regulated activities conducted during the licence year.”*

#### **3.1 Seismic Data Acquisition**

No new seismic data was acquired in the area of PEL 92 during the reporting period.

#### **3.2 Seismic Data Processing / Reprocessing**

Seismic data processing of both the Caseolus and Irus 3D surveys was completed during late 2013 - early 2014, with processing contracts awarded to GeoKinetics (Houston) and CGGVeritas (Perth), respectively.

The Caseolus data processing programme included an 88 km<sup>2</sup> data swathe from the legacy Aquillus 3D survey to the west and a 39 km<sup>2</sup> swathe from the Caseolus survey, to the east, so as to afford a seamless data tie between adjacent programmes.

Both volumes were fully processed to full-fold PSTM Stack stage and are currently being interpreted by the Operator. Additional data conditioning of the gathers of both datasets is currently ongoing, ahead of planned simultaneous seismic inversion of both the Caseolus and Irus volumes.

#### **3.3 Drilling Activities**

No wells were drilled during the reporting period.

#### **3.4 Well Completions and Extended Production Testing**

During the current term, the holders of PEL 92 were granted Petroleum Production Licences (PPLs) over the Germein oilfield (PPL 246), Perlubie oilfield (PPL 247), Rincon oilfield (PPL 248), Elliston oilfield (PPL 249) and Windmill oilfield (PPL 250). Prior to the grant of PPLs, the following wells were on extended production test (EPT) during the reporting period:

- Perlubie-1
- Perlubie South-1
- Butlers -1, -2, -3, -4, -5, -6, -7 and -8
- Germein-1
- Elliston-1
- Windmill-1 and -2
- Rincon-1

Rincon-1 was perforated, completed as a single string free flow oil producer and connected into the Temporary Rincon EPT facility via a short above ground flowline. Rincon North -1 was perforated, completed as a single string free flow producer and is currently shut in awaiting a permanent facility completion.

Butlers-3 and Germein-1 were reperforated to extend the perforation interval by one metre.

### **3.5 Flowlines/Pipelines**

Four (4) new above ground flowlines were installed during the reporting period.

A flowlines approximately 25 metres long connects Rincon-1 to the Temporary EPT Facility on the well lease. All crude from the Rincon Temporary EPT Facility was trucked directly to either Lycium or Moomba and produced water trucked to a nearby facility.

The Butlers-7 flowline is approximately 485 metres long and the Butlers -8 flowline is approx. 350 metres long and both flowlines connect into the Butlers Facility. Crude is transported by pipeline to the Callawonga Facility via Parsons.

The Windmill-2 flowline is approximately 300 metres long and connects into the Windmill-1 pipeline manifold. Total fluids are then transported to the Callawonga Facility for dewatering via the Windmill to Callawonga buried flowline. Crude delivered into the Callawonga Facility is then transported via buried pipeline to the Lycium Facility, then into Moomba via the Lycium Moomba Flowline System.

Above ground flowlines are installed in accordance with Beach Design and Construct Procedure 08-EUE Flowlines. Standard procedure is to select routes which minimize disturbance to local vegetation during construction and to facilitate ongoing monitoring and inspections.

Environmental assessments are conducted by appropriately experienced personnel, which take into account the impacts to native vegetation and habitat prior to the construction of all flowlines. From an environmental perspective 'above ground' flowlines are very low impact because depending upon location they require very little, if any, clearing of native vegetation.

### **3.6 Construction of new facilities**

Rincon Temporary EPT Facility was constructed on the Rincon-1 well lease to accelerate production and enable evaluation of the flow rates and economic viability of producing from the Rincon oil accumulation. The temporary facility comprises of a lined and banded production compound with one production tank, a truck loading bay with banded slab and truck loading system, a lined sump and oil skimming recovery system.

### 3.7 Geological and Geophysical Studies

Geophysical studies during the licence year focused on the interpretation of the newly acquired seismic data and reprocessed seismic data. Geological and geophysical studies were centred on assessing and planning the 2014 exploration drilling campaign.

## 4 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.”*

### 4.1 Licence Compliance

The holders of PEL 92 have complied with the licence conditions during the current reporting period.

### 4.2 Regulatory Compliance

There were cases during the current reporting period in which the PEL 92 Operator submitted technical reports later than the required timeframe pursuant to Regulation 36, Regulation 39 and Regulation 40. A summary of the non-compliance is provided in Table 3 and Table 4.

Table 3 - Regulatory non-compliances

Activity	Details of Non-Compliance	Rectification of Non-Compliance
Submission of Seismic Interpretation Reports	Regulation 36 - Interpretation Reports submitted later than the required 12 months after processing	<ul style="list-style-type: none"><li>• Operator to apply for extension of time to avoid non-compliance.</li></ul>
Submission of Wireline logs (logs)	Regulation 39 - Wireline logs submitted later than the required 2 months after acquisition of logs	<ul style="list-style-type: none"><li>• Ongoing discussions with contractors regarding resourcing issues and quality of data.</li><li>• Operator to apply for extension of time to avoid non-compliance.</li><li>• Wireline logs submitted to DSD within 3 months of acquisition.</li></ul>

Submission of well completion report (WCR)	Regulation 40 - WCR submitted later than the 6 months after rig release	<ul style="list-style-type: none"> <li>• Ongoing discussions with contractors regarding resourcing issues.</li> <li>• Operator to apply for extension of time to avoid non-compliance.</li> </ul>
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### 4.3 Compliance with the Statements of Environmental Objectives

The holders of PEL 92 complied with the *Statement of Environmental Objectives for Petroleum Production Operations* (the **Production SEO**). A statement of compliance against the Production SEO is provided in [Appendix 2](#).

### 4.4 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”.*

The following Management System audits and reviews were undertaken during the current reporting period:

#### Contractor Management

- A comprehensive review of Beach Energy’s contractor management processes, policies and governance arrangements was undertaken. As a result of this review there was a comprehensive suite of recommendations that are in the process of being implemented.

#### HSE Systems Audit

- An independent HSE Management Systems audit was conducted to measure the improvements and application of Beach’s HSE Management System over the previous 12 months. The results of this audit will assist in the continuous improvement of Beach’s HSE system. Recommendations assist with the establishment of next year’s HSE objectives.

#### Fit for Work

- The development of a Fit for Work policy and associated procedures has commenced.

## Firefighting Capabilities

- An audit of the current firefighting capabilities and any associated possible fire risks within Beach’s Cooper Basin operations. The recommendations from this audit are being reviewed for implementation.

## Ongoing Projects

- Updating of Incident Reporting and Management.
- Audits of the extent to which the Beach HSE standards are being “lived” to the levels expected of and required at Beach

## 4.5 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”.*

Table 4 - List of Reports, Data and Sample Submissions

### *Annual Report (Regulation 33)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
PEL 92 Annual Report for Year 7	4 January 2014	3 January 2014	Compliant

### *Quarterly Compliance Reports (Regulation 32) and Quarterly Cased Hole Reports (Regulation 41)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
4th Quarter 2013	31 January 2014	31 January 2014	Compliant
1st Quarter 2014	30 April 2014	30 April 2014	Compliant

### *Geophysical Reports (Regulation 35, 36, 37)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
Fusinus 2D Interpretation Report	8 November 2013	1 April 2014	Non-Compliant
Rincon 3D Interpretation Report	9 November 2013	tba	Non-Compliant
Porcatus 2D Interpretation Report	7 March 2014	tba	Non-Compliant
Irus 3D Geophysical Operations Report	31 January 2014 <sup>(1)</sup>	30 January 2014	Compliant
Irus 3D Data	31 January 2014 <sup>(1)</sup>	30 January 2014	Compliant

**Note** – Interpretation Reports in preparation and to be submitted.

*Wireline logs (Regulation 39)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
Windmill-2	24 November 2013	10 December 2013	Non-Compliant
Butlers-7	6 December 2013	10 December 2013	Non-Compliant
Butlers-8	17 December 2013	12 December 2013	Compliant

*Well samples (Regulation 48)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
Mills-1	14 December 2013	2 January 2014	Compliant
Hooper-1	13 January 2014	30 January 2014	Compliant
Windmill-2	29 March 2014	1 April 2014	Compliant
Butlers-7	11 April 2014	8 April 2014	Compliant
Butlers-8	22 April 2014	19 June 2014	Complaint

**Note** - Well Samples (cuttings) at Challenger within 6 months but delivered late to core library. DSD advise that if samples are at Challenger, it is considered compliant under Regulation 48.

*Well Completion Reports (Regulation 40)*

Description of Report / Data	Date Due	Date Submitted	Compliant / Non-Compliant
Rincon North-1	20 October 2013	10 January 2014	Non-compliant
Sharples-1	22 October 2013	28 February 2014	Non-compliant
Wyomi-1	3 November 2013	28 February 2014	Non-compliant
Mills-1	14 December 2013	18 March 2014	Non-compliant
Hooper-1	13 January 2014	28 February 2014	Non-compliant
Windmill-2	29 March 2014	3 April 2014	Non-compliant
Butlers-7	11 April 2014	7 April 2014	Compliant
Butlers-8	22 April 2014	7 April 2014	Compliant

#### 4.6 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”.*

There were no serious incidents during the reporting period. A serious incident is defined in section 85(1) of the Act.

There were no reportable incidents during the reporting period. A reportable incident is defined in section 85(1) and Regulation 32 of the Act.

#### 4.7 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 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”.*

There are no foreseeable threats to the proposed exploration activities for PEL 92, other than the disruptive influence of occasional flooding of the Cooper Creek. Flooding events in the headwaters of the Cooper Creek are closely monitored by satellite surveillance to predict well in advance the time of their arrival in the PEL 92 area. Drilling and seismic schedules are amended accordingly. The construction of the Kudnarri Bridge provided access to PEL 92 for some periods during floods.

## 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)”.*

An Expenditure Summary for PEL 92 for the period 5 November 2013 to 6 June 2014 is presented in Appendix 1.

**Appendix 1 – Commercial In Confidence**

**PEL 92**

**Annual Report**

**Licence Year 8**

**First Renewal Term**

- 5 November 2013 to 6 June 2014 -

**Statement of Expenditure**

\$

Drilling Activities

Geological & Geophysical Studies

General & Administration Activities

Property Plant & Equipment

Seismic Activities

**Total**

## Appendix 2

### Compliance with the Cooper Basin Production and Processing Operations Statement of Environmental Objectives October 2003 (Revised 2008)

Objectives/ Goals	Assessment Criteria	Compliant / Non-compliant	Comments
<i>1. To avoid unnecessary disturbance to 3<sup>rd</sup> party infrastructure, landholders or land use.</i>			
<b>1.1</b> <i>To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided.</i>	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to as is reasonably appropriate to the original undisturbed condition or as agreed with the landholder	<b>Compliant</b>	Rehabilitation of the 'production' site will be undertaken in consultation with the landowner when production ceases.
<b>1.2</b> <i>To minimise disturbance to landholders</i>	No unresolved reasonable landholder/3 <sup>rd</sup> party complaints  Landholder activities not restricted or disturbed as a result of activities unless by prior arrangement.	<b>Compliant</b>	All facilities are at least 30 kms from the nearest dwelling, which is inhabited only periodically.  Regular liaison with landowner provides advance warning of any significant developments or activities.

Objectives/ Goals	Assessment Criteria	Compliant / Non-compliant	Comments
<b>2. To maintain soil stability / integrity</b>			
<b>2.1 To remediate erosion as a result of production operations in a timely manner</b>	The extent of soil erosion is consistent or less than surrounding land.	<b>Compliant</b>	<p>No significant erosion has been reported at any of the facilities nor along the access roads to them.</p> <p>Topsoil was stockpiled when the sites were originally cleared for the drilling operations of each well.</p> <p>Rehabilitation of the production site will be undertaken when production ceases.</p>



**3. To minimise disturbance to native vegetation and native fauna.**

**3.1 To maintain regrowth of native vegetation on reinstated areas to be consistent with surrounding area**

Species abundance and distribution on the reinstated areas was consistent with the surrounding area

Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process

0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B).

**Compliant**

Rehabilitation of the production site will be undertaken in consultation with the landowner when production ceases.

On-ground assessments of vegetation variety were conducted along pipeline corridors by experienced personnel before operations were undertaken,

Recent rains have resulted in the emergence of seedlings along sections of the flowline corridors, consistent with surrounding area.

**3.2 To minimise additional clearing of native vegetation as part of production activities**

Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity

No rare, vulnerable or endangered flora removed without appropriate permits

No production activities undertaken on salt lakes, steep tableland land systems or wetlands land systems (as defined in the EIR)

0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained.

**Compliant**

Minor vegetation clearing was undertaken during the reporting period for installing the flow lines to facilities.

Where possible, areas with low vegetation density were chosen for the routes of flowlines. Some flow line routes were reconsidered to avoid/minimise the removal of established trees. All efforts were made to preserve established / significant trees.

<p><b>3.3 To achieve a significant environmental benefit for native vegetation clearance</b></p>	<p>Significant environmental benefit for native vegetation clearance approved by PIRSA (where delegated authority applies ) or Native Vegetation Council.</p> <p>Significant environmental benefit obligations satisfied / implemented.</p>	<p><b>Compliant</b></p>	<p>As with its other production operations in the Cooper Basin, Beach Energy will assess its SEB obligations arising from disturbance of land associated with the facilities at PEL 92 fields and make SEB proposals to DSD for their approval, in terms of the proposals meeting the required criteria.</p>
<p><b>3.4 To ensure production activities are planned and conducted in a manner that minimises impacts on native fauna</b></p>	<p>Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity</p> <p>No rare, vulnerable or endangered fauna removed without appropriate permits</p> <p>0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained .</p>	<p><b>Compliant</b></p>	<p>No record of rare, vulnerable or endangered fauna near any of the production areas or flow line corridors.</p> <p>Fauna escape ramps and branches were provided during the construction of flow line trenches</p>

<p><b>3.5 To minimise disturbance of aquatic habitats (specifically wetlands, permanent waterholes and flowing water courses)</b></p>	<p>Works in aquatic habitats (e.g. flowing watercourses) has been approved by DSD</p>	<p><b>Compliant</b></p>	<p>Each of the EPT facilities are located several kilometres from the nearest significant watercourse (Cooper Creek), which flows only during large flood events.</p>
<p><b>4. To prevent the introduction or spread of weeds, pathogens and pest fauna.</b></p>			
<p><b>4.1 To ensure that weeds, pathogens and pest fauna are controlled at a level that is at least consistent with adjacent land.</b></p>	<p>The presence of weeds and pathogens is consistent with or better than adjacent land</p> <p>No new outbreak or spread of weeds reported</p>	<p><b>Compliant</b></p>	<p>No new outbreak or spread of weeds reported.</p> <p>Operations personnel regularly undertake inspections of operational areas including flowline corridors. There have been no reports of weed outbreaks</p>

**5. To minimise the impact of the production operations on water resources**

<p><b>5.1 To maintain current surface drainage patterns.</b></p>	<p>For excavations, surface drainage profiles area restored to as is reasonably consistent with surrounding area</p> <p>For existing easements, drainage is maintained similar to pre-existing conditions.</p>	<p><b>Compliant</b></p>	<p>Refer to comments for Section 3.5 above regarding the locations of the EPT facilities in regard to their potential for inundation from flood waters.</p> <p>An inspection of the flowline corridors has revealed that surface drainage profiles had been restored to be consistent with adjoining land.</p>
<p><b>5.2 To minimise impact to aquifers / groundwater volumes and flow patterns.</b></p>	<p>Volume of water produced is recorded.</p> <p>No uncontrolled flow to the surface (i.e. no free flowing bores)</p> <p>Note: the “Cooper Basin Drilling and well Operations” SEO provides detail on aquifer issues</p>	<p><b>Compliant</b></p>	<p>The volume of water extracted in the production operations at each of the facilities is monitored and recorded.</p> <p>There has been no uncontrolled flow of fluids to the surface from the producing formations in these wells.</p> <p>There are no water separation facilities at any of the EPT sites, and hence no evaporation ponds which could potentially cause interference with shallow groundwater, through seepage.</p>

**6. To avoid land or water contamination**

**6.1 To prevent spills occurring and if they occur minimise their impact.**

No evidence of any spills or leaks to areas not designated to contain spills  
In the event of a spill, the spill was:

- Contained
- Reported
- Cleaned-up
- Cause investigated and corrective and/or preventative action implemented

Compliance with the Environment Protection Act, Australian Standard 1940 and the Australian Dangerous Goods Code.

**Compliant**

There have been no spills or leaks at any of the production sites, or along the flow-line corridors, other than in areas designed to contain spills.

<p><b>6.2 To remediate and monitor areas of known contamination arising from production activities (salinisation, hydrocarbons, other production chemicals ).</b></p>	<p>Contamination restricted to known areas and remediation strategies investigated and implemented where practical.</p> <p>Level of hydrocarbon contamination continually decreasing, ultimately to meet Environment Protection Authority (EPA) guidelines<sup>1</sup>.</p>	<p><b>Compliant</b></p>	<p>Contaminated soil would be remediated in situ or stock piled to be treated in the Soil Remediation Area.</p>
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<sup>1</sup> Soil Health Index (SHI) study is currently being undertaken by Santos, in consultation with PIRSA and EPA. The results of this study will provide a proforma for establishing site-specific bench marks for soil remediation.

<p><b>6.3 To ensure that rubbish and waste material is disposed of in an appropriate manner</b></p>	<p>No evidence of rubbish or litter on easements or at facilities.</p> <p>No evidence that waste material is not contained and disposed of in accordance with Beach approved procedures.</p> <p>Evidence of waste tracking certificates for prescribed wastes.</p> <p>Evidence of compliance with any waste disposal licence conditions (e.g. EPA permits )</p>	<p><b>Compliant</b></p>	<p>All waste material has been and continues to be disposed of in accordance with Beach approved procedures.</p>
<p><b>6.4 To prevent impacts as a result of hydrotest water and waste water (e.g. washdown water) disposal.</b></p>	<p>No evidence of impacts to soil, water and vegetation as a result of water disposal (i.e. soil erosion, dead vegetation, water discoloration)</p>	<p><b>Compliant</b></p>	
<p><b>6.5 To ensure the safe and appropriate disposal of grey water ( sullage, sewage ).</b></p>	<p>Wastewater disposed of in a manner that minimises risk to the environment and public health</p> <p>Compliance with Environment Protection Ac</p>	<p><b>Compliant</b></p>	<p>Grey water is disposed of in accordance with State Government regulations</p>

<p><b>6.6 To minimise impacts as a result of produced formation water treatment and disposal and restrict to defined areas.</b></p>	<p>Water monitoring results indicated levels of Total Petroleum Hydrocarbons (TPH) below 30mg/L in bunded holding ponds and 10mg/L in bunded and / or freeform evaporation ponds</p> <p>No evidence of overflow of product from interceptor pit.</p> <p>No evidence of hydrocarbon contamination immediately adjacent to bunded ponds.</p>	<p><b>Compliant</b></p>	<p>The fluid produced from each of the wells is pumped to the Parsons facility through flow lines for dewatering.</p> <p>Produced formation water is separated from the oil before final disposal into evaporation ponds.</p> <p>Hydrocarbon levels in the disposed water at Parsons are routinely monitored. If found to be above acceptable limits, investigations are carried out to determine and rectify the cause and monitoring frequency increases to monthly whilst the cause is being determined and rectified.</p>
<p><b>6.7 To minimise impacts as a result of land treatment units and restrict to defined areas</b></p>	<p>Periodic reports as required detail quantity, level of contamination and proposed ongoing operation of the Land Treatment Unit</p>		<p>In the event that soil becomes contaminated, it is currently either treated in situ, or stock piled in a lined / bunded area to await treatment at the SRA.</p>

**7. To minimise the risk to public health and safety**

<p><b>7.1 To adequately protect public safety during normal production operations</b></p>	<p>No injuries or incidents involving the public.                  Demonstrated compliance with relevant standards                   Emergency procedures implemented and personnel trained.</p>	<p><b>Compliant</b></p>	<p>No incidents of risk to public health and safety during the reporting period.                   The access roads to the EPT fields are not available for use by the public.</p>
<p><b>7.2 To avoid fires associated with production activities.</b></p>	<p>No uncontrolled operations related <b>fires</b>.                   Emergency procedures implemented and personnel trained.</p>	<p><b>Compliant</b></p>	<p>No fires occurred at any facility during the reporting period.                   Landowner (and government) have given approval that, in the event of a fire at any facility, if the first attack on the fire fails, it can be left to burn itself out.</p>
<p><b>7.3 To prevent unauthorised access to production facilities</b></p>	<p>No unauthorised activity.</p>	<p><b>Compliant</b></p>	<p>There were no incidents of unauthorised entry to any of the EPT sites.</p>

**8. To Minimise impact of emergency situations**

<p><b>8.1 To minimise the impact as a result of an emergency situation or incident</b></p>	<p>Emergency response procedures are effectively implemented in the event of an emergency.</p> <p>Emergency response exercises are aligned with credible threats and consequences identified in the risk assessment.</p>	<p><b>Compliant</b></p>	<p>No emergency situations arose at any of the EPT production sites during the reporting period.</p> <p>Beach Petroleum HSE system includes periodic simulation of Emergency situations at production facilities.</p>
<p><b>8.2 To restore any damage that may occur as a result of an emergency situation.</b></p>	<p>Refer to previous criteria ( Objective 1, 2, 3 &amp; 6 )</p>	<p><b>Compliant</b></p>	

**9. To minimise noise due to operations.**

<p><b>9.1 To take reasonable practical measures to comply with noise standards</b></p>	<p>Operational activities have taken reasonable practical measures to comply with noise regulations, under the Environment Protection Act 1993</p> <p>No unresolved reasonable complaints.</p>	<p><b>Compliant</b></p>	<p>Each of the EPT sites are at least 10 kms from the nearest dwelling.</p>
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**10. To minimise atmospheric emissions.**

<p><b>10.1 To minimise uncontrolled atmospheric emissions</b></p>	<p>Reasonable practical measures implemented in design and operation to minimise emissions.</p>	<p><b>Compliant</b></p>	<p>Fluid produced from each of the EPT wells is transported to the Parsons facility via flow lines, rather than in road tankers.</p>
<p><b>10.2 To minimise controlled atmospheric emissions</b></p>	<p>Reasonable practical measures implemented in design and operation to minimise emissions</p>	<p><b>Compliant</b></p>	
<p><b>10.3 To minimise the generation of dust</b></p>	<p>No reasonable complaints received</p> <p>No dust related injuries recorded</p>	<p><b>Compliant</b></p>	<p>Access roads are continually watered and maintained to minimise dust.</p>

**11. To adequately protect cultural heritage sites and values during operations and maintenance**

<p><b>11.1</b> <b>To ensure that identified cultural sites are not disturbed.</b></p>	<p>Proposed construction areas and access tracks surveyed by relevant cultural heritage group</p> <p>Any new sites identified are recorded and reported to appropriate authority</p> <p>No impact to identified sites</p>	<p><b>Compliant</b></p>	<p>Work Area Clearance teams, comprising representatives from the Dieri people, conducted cultural heritage surveys to give clearance for earthworks associated with installing infrastructure associated with production testing from wells in PEL 92.</p>
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