



Essential  
Petroleum  
Resources  
Limited

**PEL 72**

**Onshore Otway Basin**

**South Australia**

**Annual Report**

**For the Period**

**26 July 2005 to 25 July 2006**

**Year 3, Term 2**

Prepared by:

Sandy Menpes, Essential Petroleum Resources Limited

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## 1. Introduction

Petroleum Exploration Licence No. 72 (“PEL 72”) is located in the onshore Otway Basin, South Australia. The licence currently covers approximately 511 km<sup>2</sup> following the relinquishment of 175 km<sup>2</sup> prior to licence renewal.

This report describes the work performed by the PEL 72 Joint Venture in Year 3, Term 2, in accordance with requirements of Section 33 of the Petroleum Regulations 2000.

PEL 72 is in good standing with all required work commitments met.

## 2. Administration

The northeastern portion of the original licence area (175 km<sup>2</sup> of the original 686 km<sup>2</sup>) was relinquished to satisfy the 25% relinquishment requirement at the end of Year 5, Term 1. All parties to the PEL 72 Joint Venture, with the exception of Essential Petroleum, elected to withdraw prior to licence renewal.

The licence was subsequently renewed for a period of five years expiring 25 March 2007 with Essential Petroleum as the sole participant. Beach Petroleum N.L farmed in to the licence during Year 2 and interest holders are now:

Essential Petroleum Resources Ltd	50% (Operator)
Beach Petroleum N.L.	50%

Prior to the end of Year 2 Essential Petroleum, as operator of PEL 72, was granted licence suspensions totaling 16 months such that Year 2 ended 25 July 2005.

In July 2005 Essential Petroleum, as operator of PEL 72, was granted a variation to the work program deferring the drilling commitment of Year 3 to Year 4, and bringing the Year 4 commitment of geological and geophysical review to Year 3. Year 3 commenced July 26 2005 and ended July 25 2006.

In July 2006 Essential Petroleum was granted a further variation to the work program deferring the drilling commitment to Year 5 and bringing the Year 5 commitment of 25km 2D seismic to Year 4. Year 4 commenced July 26 2006.

### 3. Regulated Activities

Section 33.(2) (a) of the Petroleum Regulations 2000 states that the licensee must furnish to the Minister an annual report that includes

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

Part 3, Section 10 (1) (a) of the Petroleum Act 2000 states that ***“exploration for petroleum or another regulated resource”*** is a regulated activity:

Part 3, Section 10 (3) of the Petroleum Act 2000 states that a regulated activity

***“includes all operations and activities reasonably necessary for, or incidental to, that activity such as..***

- (a) physical and geophysical surveys of land;***
- (b) the drilling of wells;***
- (e) the processing of substances recovered from a well”***

#### 3.1 Physical and Geophysical Surveys

No physical or geophysical surveys were conducted during the reporting period.

#### 3.2 Drilling

No exploration drilling was undertaken during the reporting period.

#### 3.3 Geological and Geophysical Studies

Geological and geophysical studies undertaken during Year 3 have included:

- Experimental testing of processing parameters and sequences applied to the 2004 Harris Flat 2D Seismic Survey and development of a processing sequence that significantly reduces noise and improves reflector character and continuity.
- Reprocessing of the Harris Flat Seismic Survey (7 lines, 64 line kilometers) by Velseis using the optimum processing sequence identified by experimental testing.
- Re-interpretation of the reprocessed Harris Flat Seismic Survey.
- Petrological analysis of sixteen samples from six South Australian Otway Basin wells by Sally Phillips (Phillips-Gerrard Petrology Consultants) as part of a regional study of the lower Sherbrook Group reservoirs in the central-western Otway Basin (*note: this work was not charged to the PEL 72 JV*)
- A palynological study of the lower Sherbrook Group section in Breaksea Reef 1 by Alan Partridge (Biostrata Pty Ltd) as part of a regional study of the lower Sherbrook Group reservoirs in the central-western Otway Basin (*note: this work was not charged to the PEL 72 JV*)

## 4. Compliance Issues

### 4.1 Regulatory Compliance

Section 33.(2) (b) of the Petroleum Regulations 2000 states that the 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”***

Essential Petroleum Resources Limited complied with all relevant conditions under the *Petroleum Act 2000*, the *Petroleum Regulations 2000*, the licence and Statement of Environmental Objectives.

Minimum Year 3 work program requirements (geological and geophysical studies budgeted at \$40,000) to satisfy licence conditions have been met.

The licence is operated as per the requirements of the “Statement of environmental objectives for seismic operations in the Otway Basin, South Australia” (Cockshell and Langley, 2001) and a report issued by PIRSA entitled “The Environmental Management of Seismic Operations in the South East of South Australia” (Langley, 1996).

No environmental incidents were reported during Year 3.

### 4.2 Rectification of Non-compliance

Section 33.(2) (c) of the Petroleum Regulations 2000 states that the annual report must include:

***“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 the recurrence of any such non-compliance”***

There was no issue of non-compliance.

### 4.3. Management System Audits

Section 33.(2) (d) of the Petroleum Regulations 2000 states that the 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 action that has, or will be, taken”***

No management system audits were undertaken during the reporting period.

#### 4.4. Data Submissions

Section 33.(2) (e) of the Petroleum Regulations 2000 states that the annual report must include:

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

The list of reports as per the Petroleum Act 2000 and Petroleum Regulations 2000 are:

1. *South Australian Petroleum Regulations 2000, Section 33 - Annual Report (this report)*
2. *South Australian Petroleum Regulations 2000, Section 36(1) Geophysical interpretation reports – “Harris Flat Seismic Survey Interpretation Report, PEL 72” submitted November 2005*
3. *Section 37(1) Geophysical Data – PEL 72 Harris Flat Seismic Survey re-processed digital data (received June 2006, submitted July 2006). Includes*
  - a. PSTM true amplitude gathers
  - b. Filtered and unfiltered PSTM true amplitude stacks
  - c. Data processing report by Velseis
4. *Section 49(3) Report on analysis of core or cuttings*
  - a. “Interpretative Data. Reconnaissance palynological analysis of interval 3008 to 4440m in Breaksea Reef-1, offshore Otway Basin, South Australia” by Alan D. Partridge, Biostrata Pty Ltd. Biostrata Report 2006/02A (received March 2006, submitted May 2006)
  - b. “Basic Data. Reconnaissance palynological analysis of interval 3008 to 4440m in Breaksea Reef-1, offshore Otway Basin, South Australia” by Alan D. Partridge, Biostrata Pty Ltd. Biostrata Report 2006/02B (received March 2006, submitted May 2006)
  - c. “Petrology Report, Sherbrook Group, Otway Basin”. Report 0119 Otway Basin by Dr S E Phillips, PGPC (final report received December 2005, submitted January 2006).

#### 4.5. Safety

Section 33.(2) (f) of the Petroleum Regulations 2000 states that the annual report must include:

***“in relation to any incidents reported to the Minister under the Act and these regulations during the relevant licensing 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 incident occurred during the reporting period.

## 4.6 Threat Prevention

Section 33.(2) (g) of the Petroleum Regulations 2000 states that the 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 were no perceived threats and no action taken.

## 4.7 Future Work Program

Section 33.(2) (h) of the Petroleum Regulations 2000 states that the 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 the operations proposed for the ensuing year”***

The work commitment for Year 4, Term 2 is 25km 2D seismic budgeted at \$150,000.

The work planned for Year 4 includes:

- Review of Harris Flat Prospect including detailed fault seal analysis.
- Plan and execute seismic survey to mature Harris Flat Prospect for drilling

## 5. Expenditure Statement

Section 33.(3) of the Petroleum Regulations 2000 states that the annual report must include:

***“a statement of expenditure on regulated activities conducted under the licence for the relevant licence year”***

*Commercial in Confidence*

## 6. References

Cockshell, C.D and Langley, K. R., 2001 *“Statement of environmental objectives for seismic operations in the Otway Basin, South Australia”*, Report Book 2001/020, PIRSA

Langley, K.R., 1996 *“Environmental management of seismic operations in the south-east of South Australia”*, 4<sup>th</sup> Edition May 1996