



Annual Report

Petroleum Exploration Licence (PEL) 494

Onshore Otway Basin, South Australia

Term 2, Permit Year 4 (24 March 2019 to 22 September 2021)

Date November 2021

Distribution Department for Energy and Mining, South Australia

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1 Introduction

Petroleum Exploration Licence 494 (PEL 494) was granted on 24 March 2009. The Licence is located in the onshore Otway Basin, South Australia over an area of approximately 1,274.81 square km.

The Annual Report for PEL 494 details the work conducted during Term 2 Licence Year 4 which corresponds to the period 24 March 2019 to 22 September 2021. This Annual Report has been prepared in accordance with the requirements of Regulation 33 of the *Petroleum and Geothermal Energy Act 2000* (the Act).

2 Licence Summary

PEL 494 was originally awarded to Adelaide Energy Limited, 100% interest, effective from 24 March 2009 for an initial term of five years. PEL 494 was renewed for a second term effective from 24 March 2015. The current PEL 494 licensees are:

Adelaide Energy Pty Ltd	70%
Somerton Energy Pty Ltd	30%

A suspension of the licence conditions for the period from and including 24 March 2018 to 23 March 2019, and an extension of term of the licence by the corresponding period of suspension, was approved on 22 February 2018.

A suspension of the licence conditions for the period from and including 24 March 2019 to 23 September 2019 and an extension of term of the licence by the corresponding period of suspension, was approved on 27 February 2019.

A variation to shift the Year 4 seismic acquisition commitment into Year 5 was also approved on 27 February 2019.

A suspension of the licence for the period from and including 21 March 2020 to 20 September 2020 was approved on 25 March 2020.

A suspension of the licence for the period from and including 21 September 2020 to 20 September 2021 was approved on 1 September 2020. The current term of PEL 494 will now expire on 25 March 2024.

The PEL 494 minimum work program is summarised in the below table.

Table 1 : Summary of PEL 494 Work Program

Licence Year	Minimum Work Requirements	Work Completed
1	G & G studies	G & G Studies
2	G & G studies; Drill 1 well	G & G Studies; Drilled Jolly 1 ST1
3	G & G studies	G & G Studies

4	G & G studies	G & G Studies; Drilled Dombey 1 and Dombey 1DW1
5	G & G studies; 100km ² 3D seismic acquisition	

3 Regulated Activities

Pursuant to Regulations 33(3)(a) An annual report must include -
 “a summary of the regulated activities conducted under the licence during the Year”

3.1 Drilling Activities

Table 2 : Summary of wells drilled within PEL 494 during the reporting period

Well Name	Dombey 1
Permit	PEL 494
Type of well	Exploration
Contractor / Rig	Ensign / 931
Date Spudded	10/09/2019
Rig release date	27/09/2019
Status (at rig release)	P&A
Well Name	Dombey 1 DW1
Permit	PEL 494
Type of well	Exploration
Contractor / Rig	Ensign / 931
Date Spudded	27/09/2019
Rig release date	3/11/2019
Status (at rig release)	Single zone completion

3.2 In Wellbore Activities

Permit	Well	Date	Details
PEL 494	Dombey 1 DW1	October - November 2019	Single Zone Completion
PEL 494	Dombey 1 DW1	October 2019	Cement Bond Log
PEL 494	Dombey 1 DW1	December 2019 – January 2020	Well Testing

4 Compliance Issues

Pursuant to Regulations 33(3)(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 and Regulatory Compliance

There were no instances of non-compliance with the Act or licence conditions during this reporting period.

The holders of PEL 494 complied with the requirements of Part 6 (Operational Issues) and Part 8 (Payment of fees) of the Petroleum and Geothermal Energy Regulations 2013 (the Regulations).

There were two instances of non-compliance with the Regulations during the reporting period, caused by data submission after its due date. Details of the non-compliances are included in Section 6. The Operator will apply to extend at risk submission deadlines to prevent future non-compliance of this nature.

4.2 Compliance with Statement of Environmental Objectives (SEO)

The licensee complied with the Beach Energy Statement of Environmental Objectives, Drilling, Completion and Well Production Testing in the Otway Basin, South Australia, August 2019, during the current reporting period. A summary of compliance with the SEO is provided in Appendix 1.

5 Management System Audits

Pursuant to Regulation 33(3)(d) 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”.

As part of Beach Energy’s ongoing commitment to continuous HSE improvement, Beach initiated a project to consolidate and refresh the company’s HSE Management System (HSEMS). The new Management System is called the Operations Excellence Management System (OEMS) and covers the HSE and process safety expectations in all core areas of the business including Operations, Drilling and Completions, Logistics and Project delivery. The change represents a corporate level consolidation and architectural realignment of our existing HSEMS’s and does not remove or change risk controls or materially change any site procedures. The new OEMS went live across the business in December 2020.

Beach continues to utilise three level of assurance and leading and lagging KPI’s to assess and monitor the application of HSE systems in its operations. This includes Contractor HSE system audits undertaken prior to

the commencement of activities for Beach operations, as well as undertaking emergency response exercises that covered various types of possible emergency situations related to Beach's operational activities.

6 Report and Data Submissions

Pursuant to Regulation 33(3)(e)(i) 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 3 : Summary of reports relevant to PEL 494 submitted during the reporting period

Description of Report/Data	Regulation	Date Due	Date Submitted	Compliant
Annual Report – PEL 494 Term 2, Year 3	Reg 33	30 May 2019*	29 May 2019	Yes
Quarterly Reportable Incident Report – Q3 2019	Reg 32	31 Oct 2019	28 Oct 2019	Yes
Daily Drilling Reports – Dombey 1 & Dombey 1 DW1	Reg 38	10 Sept 2019 – 3 Nov 2019	10 Sept 2019 – 3 Nov 2019	Yes
Wireline Logs – Dombey 1	Reg 39	13 Jan 2020*	10 Jan 2020	Yes
Wireline Logs – Dombey 1 DW1 Cement Bond Log	Reg 39	31 Dec 2019*	13 Jan 2020	Yes
Well Completion Report – Dombey 1	Reg 40	3 May 2020	1 May 2020	Yes
Quarterly Cased Hole Well Activity Report – Q4 2019	Reg 41	30 Jan 2020	30 Jan 2020	Yes
Quarterly Cased Hole Well Activity Report – Q1 2020	Reg 41	30 Apr 2020	29 Apr 2020	Yes
Quarterly Cased Hole Well Activity Report – Q2 2020	Reg 41	30 Jul 2020	29 Jul 2020	Yes
Well Test Analysis Report – Dombey 1 DW1	Reg 42	10 Jul 2020	8 Jul 2020	Yes
Petroleum Reservoir Fluid Analysis Report – Dombey 1 DW1	Reg 43	10 Jul 2020	8 Jul 2020	Yes
Down Hole Diagram (Pre Well Test) – Dombey 1 DW1	Reg 44	3 Jan 2020	17 Dec 2019	Yes
Down Hole Diagram (Post Well Test) – Dombey 1 DW1	Reg 44	3 Jan 2020	17 Dec 2019	Yes
Gradient Survey Report – Dombey 1 DW1	Reg 47	12 Mar 2020	11 Mar 2020	Yes
Geotechnical Survey Report (Stage 1) - Dombey 1	Reg 47	15 Mar 2019	14 Aug 2019	No

Geotechnical Survey Report (Stage 2) - Dombey 1	Reg 47	5 May 2019	14 Aug 2019	No
Well Samples – Dombey 1	Reg 48	3 May 2020	13 Mar 2020	Yes
Well Samples – Dombey 1 DW1	Reg 48	3 May 2020	13 Mar 2020	Yes

*Extension granted

7 Incidents

Pursuant to Regulation 33(3)(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 within the permit, in accordance with the definition provided in Section 85(1) and Regulation 32 (1) of the Act. There was one reportable incident during the reporting period, details are provided below.

Permit	Site	Date	Incident Description	Root Cause	Rectification
PEL 494	Jolly	28 Sept 2019	During fluid transfer from Turnkeys Nest into the sump pit using a transfer pump, the discharge hose detached from the pump and the salty mud pumped onto the rear site access road.	Work Practices	Spill contained and mixed with saw dust. Pump and hoses checked.

8 Threat Prevention

Pursuant to Regulation 33(3)(g) 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 were no new threats to report within PEL 494 during the reporting period.

9 Future Work Program

Pursuant to Regulation 33(3)(h) 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”.

Pursuant to Regulation 33(3)(j) An annual report must include -

“in the case of a production licence - an assessment of the development activities proposed to be undertaken under the licence, including the number of completion reports that are expected to occur, during the ensuing licence Year, or such longer period as the Minister may require”.

Routine site checks and well integrity testing will be performed during the year, including annular pressure monitoring and wellhead maintenance.

The Dombey 3D seismic survey is scheduled to be acquired in December 2021 to January 2022. The survey covers an area of ~164 sq.km within PEL 494. The survey is designed to improve imaging of the Dombey gas accumulation discovered by the drilling of Dombey 1 and improve definition of near field exploration opportunities. Seismic processing of the 3D survey will be undertaken in permit year 5, which is expected to be completed ~ October 2022. Seismic interpretation of the Dombey 3D data will be undertaken in permit year 6, which is aimed to feed into an appraisal/development plan for the Dombey Field and an assessment of near field exploration opportunities for potential future drilling.

10 Expenditure Statement

Pursuant to Regulation 33(4)

“An annual report must be accompanied by a statement of expenditure on regulated activities conducted under the licence for the relevant licence Year.”

Please refer to Appendix 2 for the expenditure statement for the current reporting period.

Appendix 1

Compliance with Statement of Environmental Objectives, Drilling, Completion and Well Production Testing in the Otway Basin, South Australia (Beach Energy 2019)

Objective	SEO Assessment Criteria	Compliance	Findings/Comments
1. Avoid disturbance to sites of cultural and heritage significance	<p>In the event the conditions of a cultural heritage clearance are not complied with, the incident is appropriately reported , investigated and remediated in consultation with the relevant Aboriginal heritage group</p> <p>Damage, disturbance or interference to any Aboriginal sites, objects and remains (all as defined under the Aboriginal Heritage Act 1988) is avoided unless authorisation has been obtained under the Aboriginal Heritage Act 1988</p> <p>Any Aboriginal heritage sites, objects and remains discovered during operations have been appropriately reported and responded to, consistent with the Aboriginal Heritage Act 1988</p> <p>Non-Aboriginal heritage sites identified and avoided</p> <p>No impact to non-Aboriginal heritage places and related objects protected under the Heritage Places Act 1993 unless approval has been obtained under the Heritage Places Act 1993</p>	Not applicable	No heritage sites have previously been identified at well sites during pre-drilling site assessments.

Objective	SEO Assessment Criteria	Compliance	Findings/Comments
2. Minimise disturbance to native vegetation and native fauna (including wetland communities)	<p>No unauthorised clearing of native vegetation</p> <p>Any sites of rare, vulnerable or endangered species or threatened communities have been identified, flagged and subsequently avoided</p> <p>No rare, vulnerable or endangered flora removed without appropriate permits</p> <p>High quality or significant remnant vegetation has not been cleared</p> <p>Activities are not carried out in parks or reserves established under the National Parks and Wildlife Act</p> <p>No significant adverse impacts on native fauna through any stage of construction, drilling or well production testing</p> <p>No native fauna casualties that could have reasonably been prevented through the management measures described in the guide to how objectives can be achieved column</p> <p>No uncontrolled fires initiated as a result of drilling, completion and well production testing activities</p>	Compliant	No well lease construction activities or earthworks were conducted during the reporting period.
3. Avoid the introduction and spread of weeds, exotic pest fauna and pathogens	<p>The presence of weeds, pest animals or pathogens is consistent with or better than pre-disturbance conditions and adjacent land or where this is not the case, a management plan is implemented promptly.</p> <p>Declared plants occurring as a result of regulated activities are reported and managed in accordance with the Natural Resources Management (NRM) Act and applicable NRM plans.</p>	Compliant	No reports of weed or pathogen introduction.
4. Minimise disturbance and avoid	No disturbance to soil profiles resulting from activities remains after restoration.	Compliant	No new earthworks activities were conducted during the reporting activity.

Objective	SEO Assessment Criteria	Compliance	Findings/Comments
contamination of soil	<p>Local erosion rates are not significantly accelerated above those of surrounding land.</p> <p>No adverse impact to land use or native vegetation and native fauna outside drilling sites due to an escape of petroleum, processed substance, chemical or fuel.</p> <p>Any escape of petroleum, processed substance, chemical or fuel to land is either immediately contained and removed or assessed in accordance with NEPM guidelines and remediated in a timely manner.</p>		<p>No adverse impact to land, native vegetation and fauna outside drilling sites due to an escape of petroleum, processed substance, chemical or fuel.</p> <p>Spills reported via Incident Reporting system and subsequently cleaned up</p>
5. Minimise loss of reservoir and aquifer pressures and avoid aquifer contamination	<p>No aquifer contamination as a result of drilling, completion or well production testing activities.</p> <p>No uncontrolled flow to surface (e.g. blow out).</p> <p>No impact on other groundwater users due to water extraction activities.</p> <p>Appropriate barriers exist to protect separate aquifer systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other.</p>	Compliant	No incidents involving the loss of reservoir and aquifer pressure or aquifer contamination
6. Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow groundwater resources	<p>Well leases and access tracks are located and constructed to maintain pre-existing water flows as far as practicable.</p> <p>No new 'water affecting activities' (as defined under the NRM Act and regional NRM Plan) are undertaken unless relevant permits have been obtained.</p> <p>No unauthorised discharge or escape of petroleum, processed substance, chemical, fuel or solid wastes to surface water and/or groundwater.</p> <p>No uncontrolled flow to the surface (i.e. no free-flowing bores).</p>	Compliant	<p>No well lease construction activities or earthworks were conducted during the reporting period.</p> <p>No discharges or escape of fluids to surface water or groundwater during the reporting period.</p>

Objective	SEO Assessment Criteria	Compliance	Findings/Comments
	Landholder complaints regarding impact on groundwater users are documented and reasonable steps taken to resolve them can be demonstrated.		
7. Minimise risks to the health and safety of the public	<p>Reasonable measures implemented to ensure no injuries or health risks to the public.</p> <p>No injuries, incidents or adverse health impacts involving the public from drilling, completion or well production testing activities that could have been reasonably prevented by the operator.</p>	Compliant	No incidents involving risks to public health or safety during the reporting period.
8. Minimise the visual impact of operations	<p>Well site maintained in a clean and tidy condition</p> <p>Restored well site contours and colour blend with the surroundings</p>	Compliant	Well leases tidy.
9. Minimise disturbance to the local community and other land users	<p>No adverse impact (outside agreed disturbance / compensation areas) on land use as a result of activities</p> <p>Adverse impacts of accidental or unforeseen disturbance to infrastructure or land use resolved to the reasonable satisfaction of the landholder</p> <p>Timely consultation and notification of proposed activities with relevant landowners and stakeholders can be demonstrated</p> <p>Landholder / stakeholder complaints are documented and reasonable steps taken to resolve them can be demonstrated</p> <p>No uncontrolled fires initiated as a result of drilling, completion and well production testing activities</p>	Compliant	<p>No fires associated with drilling operations.</p> <p>Beach has maintained regular contact with landholders and associated stakeholders during drilling operations.</p>
10. Minimise the impact on the environment of waste storage,	<p>Wastes are segregated and transported to an EPA licensed facility for recycling or disposal</p> <p>Reasonable steps are taken to securely contain waste prior to removal from site.</p>	Compliant	All waste material removed from well leases for recycling or disposal by EPA licenced contractor.

Objective	SEO Assessment Criteria	Compliance	Findings/Comments
handling and disposal	All wastewater disposed of in accordance with the <i>South Australian Public and Environmental Health (Wastewater) Regulations 2013</i>		
11. Minimise atmospheric emissions	Emissions minimised by implementation of reasonable practical measures during design and operation as outlined in the guide to how objectives can be achieved column	Compliant	No excessive emissions
12. Remediate and rehabilitate operational areas	<p>Surface structures are removed and the ground surface re-contoured consistent with pre-existing contours unless alternative agreement is reached with the regulator and stakeholders</p> <p>No reasonable stakeholder complaints left unresolved</p> <p>No rubbish or litter remains on restored sites</p> <p>Refer to Assessment Criteria for Objectives 4, 5 and 8</p>	Not applicable	No remediation or rehabilitation activities were undertaken during the reporting period.