

### **Annual Report**

# Petroleum Production Licences (PPLs) 204, 205, 210, 212, 220, 224, 239, 245 to 250 and 257

Cooper Basin, South Australia

1 January 2020 to 31 December 2020

Date February 2021

Distribution Department for Energy and Mining

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#### 1. Introduction

This Annual Report details the work conducted by Beach Energy Limited (Beach) in 14 Petroleum Production Licences (PPLs) in the South Australian Cooper Basin for the 12 months from 1 January 2020 to 31 December 2020.

This Annual Report has been prepared in accordance with the requirements of Regulation 33 of the Petroleum and Geothermal Energy Act 2000 (the Act).

The PPLs include:

- PPL 204 (Sellicks Field)
- PPL 205 (Christies and Silver Sands Fields)
- PPL 210 (Aldinga Field)
- PPL 212 (Kiana Field)
- PPL 220 (Callawonga Field)
- PPL 224 (Parsons Field)
- PPL 239 (Middleton and Brownlow Fields)
- PPL 245 (Butlers Field)
- PPL 246 (Germein Field)
- PPL 247 (Perlubie Field)
- PPL 248 (Rincon Field)
- PPL 249 (Elliston Field)
- PPL 250 (Windmill Field)
- PPL 257 (Canunda and Coolawang Fields)

Figure 1 shows the location of the PPLs.

#### 2. Licence Summary

**Table 1: Petroleum Production Licences** 

PPL No.	Field	PPL Grant Date	PPL Holder	
204	Calliaka1	11 Cantambar 2002	Beach Energy Limited	75%
204	Sellicks <sup>1</sup>	11 September 2003	Cooper Energy Limited	25%
205	Christies <sup>1</sup>	12 October 2004	Beach Energy Limited	75%
203	Christies	12 October 2004	Cooper Energy Limited	25%
210	Aldings1	23 December 2004	Beach Energy Limited	50%
210	Aldinga <sup>1</sup>	23 December 2004	Strike Energy Limited	50%
			Beach Energy Limited	40%
212	Kiana <sup>1</sup>	23 January 2006	Great Artesian Oil & Gas Ltd	30%
			Drillsearch Gas Pty Ltd	30%
220	Callawonga <sup>1</sup>	14 September 2007	Beach Energy Limited	75%
	Callawonga	14 September 2007	Cooper Energy Limited	25%
224	Parsons <sup>1</sup>	9 October 2008	Beach Energy Limited	75%
	raisons	9 October 2006	Cooper Energy Limited	25%
239	Middleton & Provinces	17 August 2011	Beach Energy Limited	50%
239	Middleton & Brownlow <sup>2</sup>	17 August 2011	Great Artesian Oil & Gas Ltd	50%
245	D tl a wal	20 Ostala au 2012	Beach Energy Limited	75%
245	Butlers <sup>1</sup>	28 October 2013	Cooper Energy Limited	25%
246	Germein <sup>1</sup>	21 November 2013	Beach Energy Limited	75%
246	Germein'	ZT NOVEMBER 2013	Cooper Energy Limited	25%

247	Perlubie <sup>1</sup>	21 November 2013	Beach Energy Limited	75%
			Cooper Energy Limited	25%
248	Rincon <sup>1</sup>	21 November 2013	Beach Energy Limited	75%
	KINCON	21 November 2015	Cooper Energy Limited	25%
240	Flliston1	21 November 2013	Beach Energy Limited	75%
249	Elliston <sup>1</sup>		Cooper Energy Limited	25%
250	AA7'1 '1111		Beach Energy Limited	75%
250	Windmill <sup>1</sup> 21 November 2013	21 November 2013	Cooper Energy Limited	25%
257	Ca alauran a 0. Canun da?	10 Cantanahan 2014	Beach Energy Limited	50%
257	Coolawang & Canunda <sup>2</sup> 19 September 2014		Great Artesian Oil & Gas L	td 50%

<sup>&</sup>lt;sup>1</sup> Oil fields (ex PEL 92, ex PEL 95 and ex PEL 107) <sup>2</sup> Gas fields (ex PEL 106)

Table 2 : Associated Activity Licences

AAL No.	PPL No. (Primary Licence)	AAL Grant Date	Purpose of AAL
18	205	13 April 2005	Expansion and operation of a dewatering facility at Christies
82	205	30 January 2007	Storage area for materials and equipment
98	220	14 November 2007	Operation and maintenance of the flowline connecting the Callawonga facility to the Tantanna unloading facility via the Christies oil field
128	205	5 February 2008	Construction and operation of the end of line and fiscal metering facilities associated with the Callawonga to Tantanna flowline and the Tantanna unloading terminal
146	224	9 October 2008	Construction and operation of a flowline between PPL 224 (Parsons field) and PPL 220 (Callawonga field)
157	220	16 November 2010	Construction and operation of Butlers Airstrip and the construction and occupancy of a Permanent Accommodation Camp close to the Callawonga Oil field
162	239	17 August 2011	Construction, operation and maintenance of Middleton to Moonanga flowline
214	245	18 December 2014	Operation and maintenance of the Butlers to Parsons flowline
215	247	18 December 2014	Operation and maintenance of the Perlubie to Parsons flowline
216	246	18 December 2014	Operation and maintenance of the Germein to Butlers flowline
217	250	18 December 2014	Operation and maintenance of the Windmill to Callawonga flowline
228	257	26 March 2015	Operation and maintenance of the Canunda to Middleton pipeline
247	210	15 September 2017	Use and maintenance of the Aldinga access track
254	239	23 January 2018	Construction, maintenance and operation of a duplicate gas pipeline from the Middleton field to Moonanga field.
278	220	11 May 2020	Callawonga West Facility and freeform evaporation area

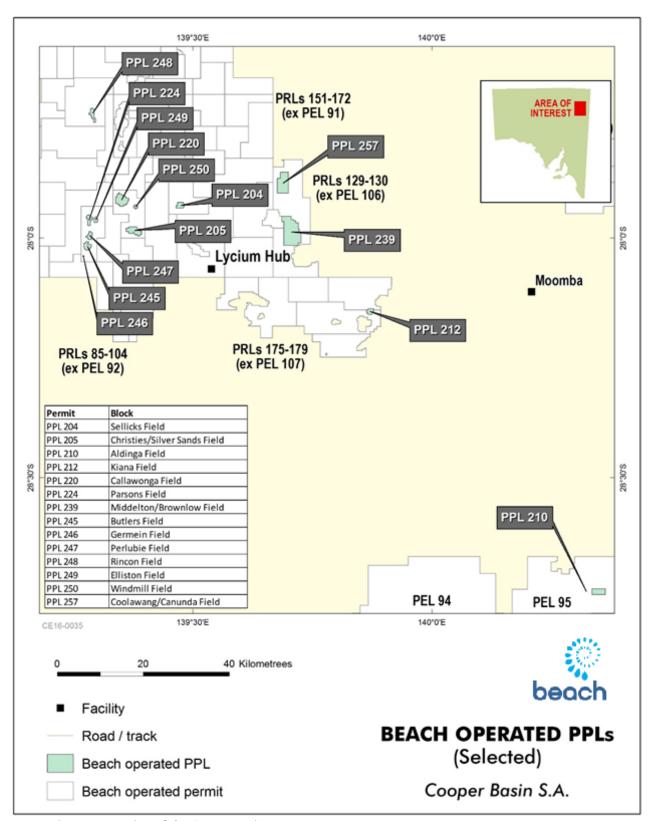


Figure 1: Location of the Cooper Basin PPLs

#### 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"

Table 3: Wells Drilled During the Reporting Period

Well Name	Type of Well	Permit	Contractor	Date Spudded	Rig Released	Status
Rincon-2	Oil Appraisal	PPL 248	SLR 184	4 January 2020	11 January 2020	Plugged and Abandoned
Rincon-3	Oil Appraisal	PPL 248	SLR 184	13 January 2020	19 January 2020	Cased and Suspended

**Table 4: Summary of Workovers and Completions** 

Permit	Well	Date	Details
PPL 224	Parsons-2	September 2020	ESP
PPL 224	Parsons-2	October 2020	ESP Recompletion

**Table 5 : Summary of Cased Hole Wireline Activities** 

Permit	Well/Location	Date	Details
PPL 224	Parsons-6	August 2020	FGS/SGS Testing
PPL 239	Middleton-1	June 2020	Extended PBU/SGS
PPL 239	Brownlow-1	June 2020	Extended PBU/SGS

**Table 6: Summary of Facilities and Flowlines** 

Permit	Field/Site	<b>Date Completed</b>	Details
PPL 220	Callawonga	February 2020	Callawonga RO Supply Line
PPL 224	Parsons	January 2020	Parsons Holding Pond Emergency Overflow
PPL 239	Middleton	March 2020	Holding Pond 2
PPL 239	Middleton	April – May 2020	FFE Area Lining
PPL 248	Rincon	November 2020	Rincon-1 Flowline

#### 4. Compliance Issues

Pursuant to Regulations 33(3)(b) & (c) An annual report must include -

#### 4.1. Licence and Regulatory Compliance

There were no instances of non-compliance with the Act or licence conditions during this reporting period. There were 4 instances of non-compliance with the Regulations during the reporting period, caused by data submission after its due date. Details of non-compliance are included in Section 6. The Operator will apply to extend at risk submission deadlines to prevent future non-compliance of this nature.

<sup>&</sup>quot;a report for the Year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives:" and

<sup>&</sup>quot;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."

#### 4.2. Compliance with Statement of Environmental Objectives (SEO)

Drilling and well activities were undertaken in accordance with the Statement of Environmental Objectives: Drilling, Completions and Well Operations (Santos, November 2015) (the Drilling SEO). A statement of compliance against the Drilling SEO is provided in Appendix 1.

Production activities were undertaken in accordance with the Statement of Environmental Objectives Cooper Basin Petroleum Production Operations (Beach, June 2019) (the Production SEO). A statement of compliance against the Production SEO is provided in Appendix 2.

#### 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 the last month of this reporting period.

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 7: Annual Report (Regulation 33)

Description of Report/Data	Date Due	<b>Date Submitted</b>	Compliant
Cooper Basin PPLs 2019 Annual Report	13 March 2020*	13 March 2020	Yes
Cooper Basin PPLs 2019 Annual Report Resubmitted	30 November 2020	30 November 2020	Yes

<sup>\*</sup>Extension granted

Table 8: Quarterly Incident Reports (Regulation 32)

Date Due	Date Submitted	Compliant
31 January 2020	31 January 2020	Yes
30 April 2020	30 April 2020	Yes
4 August 2020*	4 August 2020	Yes
31 October 2020	30 October 2020	Yes
	31 January 2020 30 April 2020 4 August 2020*	31 January 2020 31 January 2020 30 April 2020 30 April 2020 4 August 2020* 4 August 2020

Table 9: Emergency Response Exercise Report (Regulation 31)

Report / Data	Date Due	Date Submitted	Compliant
Emergency Response Exercise Report	3 July 2019	19 March 2020	No

Table 10 : Wireline logs (Regulation 39)

		Compliant
20 December 2019	4 June 2020*	No
7 September 2018	20 July 2020*	No
27 July 2018	20 July 2020*	No
3 January 2020	10 December 2019	Yes
9 January 2020	10 December 2019	Yes
17 January 2020	10 December 2019	Yes
22 January 2020	10 December 2019	Yes
4 March 2020	16 January 2020	Yes
12 March 2020	24 January 2020	Yes
	7 September 2018 27 July 2018 3 January 2020 9 January 2020 17 January 2020 22 January 2020 4 March 2020	7 September 2018 20 July 2020*  27 July 2018 20 July 2020*  3 January 2020 10 December 2019  9 January 2020 10 December 2019  17 January 2020 10 December 2019  22 January 2020 10 December 2019  4 March 2020 16 January 2020

<sup>\*</sup>Resubmitted due to missing waveform data

Table 11: Well Completion Reports (Regulation 40)

Report / Data	Date Due	Date Submitted	Compliant
Callawonga-22	11 May 2020	11 May 2020	Yes
Callawonga-19	17 May 2020	15 May 2020	Yes
Callawonga-20	25 May 2020	25 May 2020	Yes
Callawonga-21	5 June 2020*	3 June 2020	Yes
Rincon-2	11 July 2020	10 July 2020	Yes
Rincon-3	19 July 2020	17 July 2020	Yes

<sup>\*</sup>Extension granted

Table 12: Quarterly Cased Hole Well Activity Report (Regulation 41)

Report / Data	Date Due	Date Submitted	Compliant
Q4 2019	31 January 2020	30 January 2020	Yes
Q1 2020	30 April 2020	29 April 2020	Yes
Q2 2020	31 July 2020	29 July 2020	Yes
Q3 2020	31 October 2020	30 October 2020	Yes

Table 13: Down Hole Diagrams (Regulation 44)

Report / Data	Date Due	Date Submitted	Compliant
Callawonga-19	17 January 2020	22 November 2019	Yes
Callawonga-22	11 January 2020	13 November 2019	Yes
Callawonga-20	25 January 2020	29 November 2019	Yes
Callawonga-21	30 January 2020	6 December 2019	Yes
Rincon-2	11 March 2020	17 January 2020	Yes

Table 14: Production Reports (Regulation 45)

Report / Data	Date Due	Date Submitted	Compliant
October 2019	31 December 2019	19 December 2019	Yes

November 2019	30 January 2020	30 January 2020	Yes
December 2019	29 February 2020	26 February 2020	Yes
January 2020	31 March 2020	25 March 2020	Yes
February 2020	28 April 2020	28 April 2020	Yes
March 2020	31 May 2020	26 May 2020	Yes
April 2020	30 June 2020	25 June 2020	Yes
May 2020	31 July 2020	30 July 2020	Yes
June 2020	30 August 2020	27 August 2020	Yes
July 2020	30 September 2020	24 September 2020	Yes
August 2020	31 October 2020	23 October 2020	Yes
September 2020	30 November 2020	27 November 2020	Yes
October 2020	31 December 2020	16 December 2020	Yes

Table 15: Well Samples (Regulation 48)

Description of Report/Data	Date Due	<b>Date Submitted</b>	Compliant
Calawonga-22	11 May 2020	8 May 2020	Yes
Callawonga-19	17 May 2020	13 May 2020	Yes
Callawonga-20	25 May 2020	22 May 2020	Yes
Callawonga-21	20 May 2020	22 May 2020	Yes
Rincon-2	11 July 2020	9 July 2020	Yes
Rincon-3	19 July 2020	14 July 2020	Yes

#### 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 Permits. A serious incident is defined in section 85(1) of the Act. During the annual reporting period, there were five incidents reported to DEM through quarterly compliance reporting and is summarised in the table below. A reportable incident is defined in section 85(1) and regulation 32 of the Act.

Table 16 : Summary of Reportable Incidents

Permit	Field	Date	Incident	Cause	Rectification							
PPL 220	Callawonga Facility	08 May 2020	A PSV on the recycle line released and allowed crude to enter the sump that overflowed an upstream globe valve.	Design; Monitoring / Maintenance	Globe Valve closed in; High level alarm tested. High Level Alarm device testing to be consistent with how the High- Level Alarm works going forward.							
PPL 220	Callawonga Facility	13 Jun 2020	Primary and duplicate samples collected during routing quarterly Callawonga PFW testing indicated exceedance of SEO limit (30 mg/L). TRH concentrations of 95.7 & 92.2 mg/L were recorded. Callawonga FFE was sampled on same day returning compliant reading of 0.02 mg/L. Low water levels currently preventing discharge to FFE. Holding pond levels were very low during sampling which may have disturbed sediment at base of pond.	Work Practices	Allowing pond levels to return to normal levels.							
PPL 220	Callawonga Facility	4 July 2020	Callawonga #1 failed CFT - CFT test was conducted on Callawonga#1 ESP and the PIT 2822 failed to stop the VSD	Monitoring / Maintenance Work Practices	Beach are implementing a revised Bypass of Safety Critical Equipment Procedure and also providing training and knowledge-based test to document understanding.							
				Risk Management	2.The incident was discussed during the toolbox meetings, emphasising the importance of applying bypasses as per POP 48 in conjunction HSE Pro 47.							
												3. Beach have established set-points on Callawonga VSD to ensure that maintenance is recorded on the P&ID as a red line mark up
					3. Perform CFT on, Callawonga 1-ESP, Callawonga PSHH - 2823, Callawonga-PIT 2822, Provide documentation to confirm function test.							
PPL 239 Middleton/ Brownlow	,	. 3	Deisolation carried out, before general work permit closed. During Shut down at Middleton facility part of master isolation was de isolated before general	Work Practices Risk Management	Revised PTW & Isolation re-write process has an authorised methodology for Sanction for Test							
			work permit was closed on ULV system to allow instrument testing.  The instrumentation on K002 was unknowingly energised, ULV 24 volt, this was identified by electrical contractor working on the associated system who notified Beach personnel.  No injury and no property damage as a result.		<ol><li>Review of the lock boxes and other tools (Isolation Boards and hasps etc) available for the Middleton Facility site by the Leading hands to ensure suitable tooling is available.</li></ol>							
					3. Shutdown Planning Operations personnel to review the isolation methodology to ensure they understand the isolation Plan is suitable to the schedule/planning of work and isolation/de-isolation sequence.							
					4. Operations personnel have discussed the requirement for the next shutdown							
					5. Review of the Permit to Work and Isolation Procedure to be undertaken by the Permit Authority for the task.							
					6. Resourcing to be discussed at the planning stage							
PPL 239	Middleton/ Brownlow	31 Oct 2020	At approx. 08:00 an Operator completed their daily checks at the Compressors and the facility, all equipment found to be operating as required. At approx. 11:00 another Operator attended site to carry out an inspection for an unrelated upcoming task and identified a leak from the vent on the primary purge gas regulator, the Operator heard the leak whilst walking past. The leak was brought to the attention of the operator who performed the daily checks. Operator verified where the leak was coming from and isolated the affected plant and bled down	Design Monitoring / Maintenance	The damaged regulator diaphragm was replaced and reinstalled. Critical spares for the regulator have been ordered							

			pressure to inspect. During the inspection it was found that the diaphragm within the regulator had split allowing a small amount of gas to escape from the diaphragm and leak from the vent		
AAL 162	Middleton/Bro 10 Nov It has been identified that specific flanges used in the 2018 Middleton Gas Facility Expansion wnlow 2020 may have inadequate mechanical/material properties. Further testing of sample flanges has revealed inconsistent material properties which do not meet the performance criteria of assurance		Construction/QA	Current focus is timely replacement of spools. Integrity Engineering are performing an investigation into the systematic learnings from the incident and how Beach can further mitigate inferior materials being supplied through	
			material group (F51 Duplex).		project modifications
			The finding represents a risk to ongoing Integrity through failure of the material by acid attack and possible full bore rupture if an initiating event occurs such as impact of sudden shock to affected flanges in Heat Batch A0614		project modifications
AAL 98	Callawonga to Tantanna Pipeline	30 April 2020	Leaking 20L plastic drum of transmission oil was found on the side of road between Callawonga and Christies production fields. It was identified that the drum had fallen from a faulty storage cabinet (dog box) on a contractor water tanker. It was estimated 5 L leaked to grade from the drum	Monitoring / Maintenance	Contractor report states that oil, diesel and any other mechanical fluids are not to be transported in dog boxes - shared with drivers at toolbox meeting
AAL 157	Butlers Airstrip	28 May	Waste water overflowed from the septic tank at Butlers Airstrip onto the surrounding ground	Monitoring /	Contractor to use larger portable bunds for this task going
2020	2020 surface N	Maintenance; Work Practices; Risk Management	forward		

#### 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 are no new threats to report.

#### 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".

Table 17: Proposed Work Programs for 2021

PPL	Field	Proposed Work Program
220	Callawonga	Callawonga-13 Horizontal Well
		Callawonga HPS System Commissioning
		Callawonga-9, -18 Jet Pump Commissioning
		Callawonga West Diesel Storage Install
224	Parsons	Parsons-2, -5 Debottlenecking
		Parsons-2 ESP Commissioning
		Parsons-6 Reperforation
205	Christies	Christies-5 Reperforation
250	Windmill	Reinstatement of Windmill Booster Pump
	PEL92 Total	2 Well P&A Activity
239	Middleton	1 Contingent Sidetrack

#### 10. Estimated Production

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

"In the case of production licence - an estimate of the volume of petroleum likely to be produced, wasted, stored or sold under the licence during the ensuing year, or such longer period as the Minister may require";

Table 18: Production Forecast for 2021 Calendar Year

PPL	Field	Oil (kboe) / Gas* (bcf)	Water (bbl)
204	Sellicks	0	0
205	Christies & Silver Sands	35,383	4,477,977
210	Aldinga	0	0
212	Kiana	0	0
220	Callawonga	297,357	14,658,393
224	Parsons	141,816	8,820,761
239	Middleton, Middleton East, Brownlow, Naiko & Largs	2.35*	8225
245	Butlers	79,541	5,058,342

246	Germein	0	0
247	Perlubie	4,980	336,426
248	Rincon	12,844	606,966
249	Elliston	0	0
250	Windmill	28,896	3,784,112
257	Coolawang & Canunda	0	0

#### 11. Expenditure Statement

Pursuant to Regulation 33(4)

Please refer to Appendix 3 for the expenditure statement for the reporting period.

<sup>&</sup>quot;An annual report must be accompanied by a statement of expenditure on regulated activities conducted under the licence for the relevant licence Year."

## Appendix 1

## Compliance with SA Cooper Basin Statement of Environmental Objectives Drilling, Completions and Well Operations (Santos 2015) - Drilling of wells in PPL 220

**Note 1:** The Santos SEO for Drilling, Completions and Well Operations has been adopted by Beach for its Drilling and Well Operations in the South Australian sector of the Cooper Basin. References to 'Table A1', 'Table A2', 'Table A3' and Appendix B refer to tables included in Santos' *South Australia Cooper Basin Statement of Environmental Objectives: Drilling, Completions and Well Operations November 2015.* 

Objective	Assessment Criteria	Compliance	Findings/Comments
1. No injuries, deaths or health	All reasonable measures implemented to ensure no injuries or health risks to the public or third parties.	Compliant	Communication of all potential hazards to safety associated with drilling and other well site operations including the rig move to all affected parties, prior to
impact to the public or third	Investigation conducted by a relevant government authority into any injury or death does not result in a	Not Applicable	the commencement of such activities. Beach maintains regular contact with landholders and associated stakeholders during drilling operations.
parties from regulated	prohibition notice pursuant to Section 195 of the <i>Work</i> Health and Safety Act 2012.	Compliant	The design and operation of wells is undertaken in accordance with Beach safety policies, standards and guidelines.
activities that could have been	Compliance with the relevant legislation or approvals regarding noise and air quality.	Compliant	Accident / incident reporting systems are in place. Incidents are reviewed regularly to identify and address trends.
reasonably prevented by the	No unnecessary venting during well operations.		The Beach HSE System, including Safety Management Plans, are updated and
operator	•	Compliant	reviewed on a regular basis.
			Emissions and waste managed as per relevant legislation and approvals.
2. Minimise impacts to native	Any escape of petroleum, processed substance, chemical or fuel is either immediately contained and removed or	Compliant	Accident / incident reporting systems are in place. Incidents are reviewed regularly to identify and address trends.
flora and fauna	assessed in accordance with NEPM guidelines and		Emergency response plans in place for drilling operations.
(terrestrial and aquatic) due to regulated activities or	remediated in accordance with relevant guidelines in a timely manner.		Well Lease & Access Track Construction & Restoration

Objective	Assessment Criteria	Compliance	Findings/Comments
escape of petroleum, processed	No impact to rare, vulnerable or endangered flora and / or fauna, or important vegetation (as defined under Table A1) due to an escape of petroleum, processed substance,	Compliant	Drill leases are not located in or near an area of high biological or wilderness values and hence the drilling operations presented no long-term impacts to any such areas.
substance, chemical or fuel	chemical or fuel.  No overflow, spill or seepage of completions fluids from	Compliant	Environmental Factors Reports prepared for each well site prior to drilling to identify and minimise potential impacts to native vegetation and fauna.
	temporary holding ponds  No native fauna casualties that could have been reasonably	Compliant	Potential impacts on the environment considered prior to constructing tracks and well sites. Existing tracks utilised where feasible.
	prevented.  The attainment of 0, +1 or +2 GAS criteria under well site	Compliant	Minimal clearance of vegetation and avoidance of significant trees required for the construction of access tracks and well sites in accordance with Beach
	construction (Table A1) for:		procedures.
	<ul><li>minimising impact to soil</li><li>minimising impact on native vegetation and native</li></ul>		The well sites and access tracks were constructed in accordance with Beach procedures and conditions identified in site specific assessments.
	fauna The attainment of 0, +1 or +2 GAS criteria under borrow pit construction (Table A3) for:	Compliant	Plugged and abandoned well sites rehabilitated in accordance with Beach procedures, which are based on DSD's Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South
	minimising impacts on soil		Australia.
	minimising impacts on vegetation.		Borrow pit construction and restoration
	The attainment of 0, +1 or +2 GAS criteria under borrow pit management (Table A3) for:	Compliant	Borrow pits are rehabilitated in accordance with Beach HSE procedures and the guidelines set down in DMITRE's Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.
	minimising water retention in the pit minimising impacts to soil		Waste Management
	minimising impacts to soil		Wastes were collected, stored and transported in covered bins or containers.
	Solid wastes and foreign material to remain contained onsite within the well lease / operational area boundaries	Compilant	Bins are covered to prevent access by wildlife and prevent spread of rubbish by wind.
	until disposed of at an EPA licensed facility, with the exception of drilling and completions benign solids to be		Non-putrescible waste material (including hazardous material) is stored safely on site prior to removal to an EPA approved disposal facility.
	disposed of in drilling sump.	Compliant	All rubbish was disposed of at a licensed waste facility.
	No uncontrolled fires resulting from regulated activities.		Post drilling inspection of drill sites undertaken to ensure drill sites and
	The extent of soil erosion is consistent or less than surrounding land	Compliant	associated access tracks are free of waste materials and left in a tidy and safe condition.
	For well site restoration and borrow pit rehabilitation GAS criteria refer to Objective 8		

Objective	Assessment Criteria	Compliance	Findings/Comments
3. Minimise disturbance to drainage patterns and avoid contamination of surface waters	The attainment of 0, +1 or +2 GAS criteria under well site construction for minimising disturbance to drainage patterns (Table A1)	Compliant	Well Lease and Access Track Construction
			Environmental Factors Reports prepared for each well site to identify and minimise disturbance to surface drainage and waters.
	No new water affecting activities as defined under the NRM Act undertaken unless relevant permits have been obtained.	Compliant	Drill leases and access tracks are constructed and located to avoid the possibility of flood waters being diverted from their natural direction of drainage in the event of local inundation.
	No unauthorised discharge of water (or other liquids) or	Compliant	No leases or access tracks were constructed on salt lakes, tablelands or wetlands
	solid wastes to surface waters		<u>Drilling Mud Sumps and Flare Pits</u>
			All drill cuttings, muds, and non-toxic drill fluids are contained within designated mud sumps with adequate freeboard at the completion of operations to allow for a 1m cover of clean fill at remediation.
			Fuel/Chemical Storage and Handling
			There were no spills to water during the drilling operations within the PPLs outside of areas designed to contain them.
			Fuels and chemicals stored in bunded areas.
			Spills reported via Incident Reporting system and subsequently cleaned-up.
			Production Testing/Well Blowdowns
			Spills reported via Incident Reporting system and subsequently cleaned-up.
4: No introduction of	Presence / absence and abundance of pest plants and animals are consistent with pre-existing conditions and / or	Compliant	Rigs and associated equipment washed down prior to entering different regions as per Beach procedures.
new species of weed, plant, pathogen or pests	adjacent land or where pest plants and animals are identified on operational areas, management plan is implemented immediately.		No incidents involving declared plants.
(feral animal) and prevent the	Declared plants / animals are reported and managed in accordance with relevant regulations	Not Applicable	
spread of existing species, as necessary	The attainment of 0, +1 or +2 GAS criteria under management and rehabilitation of borrow pits for minimise impacts on vegetation (Weeds)(Table A3).	Compliant	
5: Avoid damage, disturbance or interference to	Aboriginal heritage surveys undertaken and sites are identified and avoided	Compliant	Beach has an agreement with the Native Title Claimant group which specifies the requirements for scouting proposed well sites and access tracks to identify and avoid areas of heritage value and archaeological significance.

Objective	Assessment Criteria	Compliance	Findings/Comments
sites objects or remains of	Avoid damage, disturbance or interference to Aboriginal sites, objects or remains ("Aboriginal heritage") as required	Compliant	Joint site visits were carried out with Native Title Claimant group. Areas of significance were recorded and marked as exclusion zones.
Aboriginal and / or non-Aboriginal heritage	by the Aboriginal Heritage Act 1988 (SA) ("AHA").  Where damage, disturbance or interference to Aboriginal heritage is unavoidable then application for authorisation in accordance with section 23 of the AHA will be sought and appropriate consultation with Aboriginal parties as required by section 13 of the AHA¹.  Avoid damage/ disturbance to non-aboriginal sites where practicable  0, +1 or +2 GAS criteria are attained under construction of borrow pits to protect sites of natural scientific or heritage significance.	Not Applicable  Compliant	No cultural heritage incidents occurred during the reporting period.
6: Minimise loss	No uncontrolled flow to surface (e.g. blow out).	Compliant	The Drilling Programs for wells are designed to ensure minimal loss of reservoir
of aquifer	Effective barriers exist to prevent crossflow between	Compliant	and aquifer pressures and minimal contamination of freshwater aquifers.
pressure and avoid aquifer	separate aquifer systems or hydrocarbon reservoirs as listed in Appendix B.		Wells have been either been cased from total depth to surface or plugged and abandoned.
contamination	No change in the capacity of third-party groundwater users to undertake their respective activities	Compliant	No radioactive tools were left in any wells.
	No unauthorised discharge or escape of any liquids		In the event of a spill, fluid has been contained, affected area remediated and reporting and investigation procedures followed.
	(including water, petroleum, processed substance, chemical or fuel), or solid wastes to groundwater	Compliant	Causes of incidents were identified and where appropriate informed the revisior of, or implementation of new systems, procedures, and design modifications, to
	Any escape of petroleum, processed substance, chemical or fuel is either immediately contained and removed or assessed in accordance with NEPM guidelines and remediated in accordance with relevant guidelines in a timely manner.	Compliant	reduce the chance of reoccurrence.

<sup>&</sup>lt;sup>1</sup> in appropriate circumstances, a 'risk management' approach may be undertaken (see DSD-AAR Risk Management Guidelines) in which case a section 23 application is not necessary.

Objective	Assessment Criteria	Compliance	Findings/Comments
	Relevant government approval obtained for abandonment of radioactive tools if left downhole.	Not Applicable	
	No impact on groundwater dependant ecosystems as a result of groundwater extraction or contamination (i.e. aquifers that may provide base flow to nearby waterholes).	Compliant	
7: Maintain stakeholder relationships and minimise disturbance to landowners and / or associated infrastructure	No unresolved reasonable stakeholder complaints.  No disturbance to landholder activities as a result of regulated activities unless by prior arrangement.  Where disturbance is unavoidable or accidental, infrastructure or land use is restored to the satisfaction of the landholder.	Not Applicable Compliant Compliant	Beach maintained regular contact with the landholder and associated stakeholders prior to, and while undertaking well drilling operations.  No complaints received.
	For well site restoration and borrow pit rehabilitation GAS criteria refer to Objective 8		
8: Rehabilitate land affected by regulated activities to agreed standards	<ul> <li>The attainment of 0, +1 or +2 GAS criteria under well site and access track restoration (Table A2) for:</li> <li>minimising visual impact</li> <li>revegetation of indigenous species</li> <li>site left in a clean tidy condition.</li> <li>The attainment of 0, +1 or +2 GAS criteria under rehabilitation of borrow pits (Table A3) for</li> <li>minimising water retention in pit</li> <li>minimise impacts to soil</li> <li>minimise impacts on vegetation</li> <li>minimise visual impacts</li> <li>site to be left in a clean and tidy condition.</li> <li>No unresolved reasonable stakeholder complaints</li> <li>Note: Contaminated sites rehabilitated in accordance with Objective 2. Well decommissioning in accordance with Objective 6</li> </ul>	Compliant  Compliant  Not Applicable	Well Lease & Access Track Construction & Restoration  Plugged and abandoned well sites rehabilitated in accordance with Beach procedures, which are based on DEM Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.  Borrow pit construction and restoration  Borrow pits will be rehabilitated and restored in accordance with Beach HSI procedures, which are based on DEM Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.  Contaminated Site Remediation  There are no contaminated sites associated with drilling activities.

## Appendix 2

## Compliance with Beach Statement of Environmental Objectives - Cooper Basin Petroleum Production Operations, June 2019 – Production activities

Objective	Assessment Criteria	Compliance	Findings / Comments
1. To avoid unnecessary d	isturbance to 3rd party infrastructure, landholders or land	d use	
1.1 To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to the reasonable satisfaction of the landholder / owner or as near as practicable to undisturbed condition	Compliant	Landholders notified of construction activities and formal notifications provided as required under the Petroleum and Geothermal Energy Act. Roads and fences are maintained where required.
1.2 To minimise disturbance to landholders	Landholder complaints are documented and reasonable steps taken to resolve them can be demonstrated	Not Applicable	No complaints received during the reporting period.
2. To maintain soil stabilit	y / integrity		
2.1 To minimise erosion as a result of production	The extent of soil erosion as a result of production operations is consistent with or less than surrounding	Compliant	Disturbance has been minimised where practical. Production activities are restricted to approved facilities and designated operational areas and roads.
operations and remediate in a timely manner	land		Inspections undertaken following significant rainfall and remedial action undertaken where required.
2.2 To prevent soil inversion	No evidence of significant subsoil on surface (colour)	Compliant	Inspections carried out during construction activities and inversion rectified where appropriate.
2.3 To minimise and remediate soil	No production activities undertaken on salt lakes or steep tableland land systems	Compliant	No activities have been undertaken on salt lakes, steep tableland land systems or wetlands land systems.
disturbance	Terrain profiles at pipeline dune crossings have been restored consistent with surrounding profiles	Compliant	Disturbance has been minimised where practical. Production activities are restricted to approved facilities and designated operational areas.

Objective	<b>Assessment Criteria</b>	Compliance	Findings / Comments
	Abandoned areas are remediated and rehabilitated to be reasonably consistent with the surrounding area (refer to Objective 10)	Compliant	Where applicable, abandoned areas will be rehabilitated in accordance with Beach procedures.  Borrow pits are constructed and rehabilitated in accordance with Beach HSE
	0, +1 or +2 GAS criteria for borrow pit construction, management and rehabilitation are attained (Appendix B) or where 0, +1 or +2 GAS criteria are not attained, plans for remediation are documented and implemented in a timely manner. (Note: see Objective 10 for final borrow pit rehabilitation (i.e. at relinquishment))	Compliant	procedures, which are based on DEM Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.
3. To minimise disturbanc	e to native vegetation and native fauna		
3.1 To minimise clearing of native vegetation as	No unauthorised clearing of native vegetation  Vegetation clearing is limited to previously disturbed	Compliant Compliant	Environmental Factors Reports prepared to identify and minimise disturbance to vegetation prior to construction.
part of production activities	areas or areas assessed to be of lowest sensitivity  No clearance of plants of Priority 1 or 2 in areas	Compliant	Where possible, areas with low vegetation density are utilised to minimise the clearing of Priority 1 or 2 vegetation.
	where could have been avoided1	Compliant	No removal of rare, vulnerable or endangered flora.
	No rare, vulnerable or endangered flora removed without appropriate permits	Not Applicable	Borrow pits are constructed and rehabilitated in accordance with Beach HSE procedures, which are based on DEM <i>Field Guide for the Environmental</i>
	0, +1 or +2 GAS criteria for borrow pit construction and management and rehabilitation are attained (Appendix B) or where 0, +1 or +2 GAS criteria are not attained, plans for remediation are documented and implemented in a timely manner. (Note: see Objective 10 for final borrow pit rehabilitation (i.e. at relinquishment))	Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.	
3.2 To achieve a significant environmental benefit for native vegetation	Significant environmental benefit for native vegetation clearance approved by DSD (where delegated authority applies) or Native Vegetation Council	Compliant	Earthworks pertaining to production activity are incorporated into Beach Energy's ongoing commitments for SEB.
clearance	Significant environmental benefit obligation satisfied / implemented		
3.3 To ensure production activities are planned and conducted	Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity	Compliant	Vegetation clearing minimised.  Regular inspections of facilities include checking for trapped fauna.

Objective	Assessment Criteria	Compliance	Findings / Comments
minimises impacts on native fauna	No rare, vulnerable or endangered fauna removed without appropriate permits	Not Applicable	Borrow pits are constructed and rehabilitated in accordance with Beach HSE procedures, which are based on DSD's Field Guide for the Environmental
	0, +1 or +2 GAS criteria for borrow pit construction, management and rehabilitation are attained (Appendix B) or where 0, +1 or +2 GAS criteria are not attained, plans for remediation are documented and implemented in a timely manner. (Note: see Objective 10 for final borrow pit rehabilitation (i.e. at relinquishment))	Compliant	Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.
	No native fauna casualties that could have reasonably been prevented through management measures described in the guide	Compliant	
3.4 To facilitate regrowth of native	Species abundance and distribution on the reinstated areas is reasonably consistent with the surrounding	Compliant	Disused sites will be rehabilitated according to industry standards and Beach procedures and in consultation with the relevant landholder.
vegetation on reinstated areas to be consistent with surrounding area	area  Note: Assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process		Borrow pits are constructed and rehabilitated restored in accordance with Beach HSE procedures, which are based on DSD's Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.
	0, +1 or +2 GAS criteria for borrow pit rehabilitation are attained (Appendix B) or where 0, +1 or +2 GAS criteria are not attained, plans for remediation are documented and implemented in a timely manner. (Note: see Objective 10 for final borrow pit rehabilitation (i.e. at relinquishment))		
4. To avoid the introduction	on or spread of weeds, pest animals and pathogens as a	consequence of regi	ılated activities
4.1 To ensure that the presence of weeds, pest animals or pathogens is	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	Compliant	Any machinery or equipment bought into the Cooper Basin or from an area of known weed infestation required to provide weed hygiene certification prior to it being bought to the construction site.
consistent with or better	case, a management plan is implemented		No new outbreak or spread of weeds reported during the reporting period.
than pre-disturbance conditions and adjacent land	immediately  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	Not Applicable	Operations personnel regularly undertake inspections of operational areas including flowline corridors.

Objective	Assessment Criteria	Compliance	Findings / Comments
	0, +1 or +2 GAS criteria related to weeds for borrow pit management and rehabilitation are attained (Appendix B) or where 0, +1 or +2 GAS criteria are not attained, plans for remediation are documented and implemented in a timely manner. (Note: see Objective 10 for final borrow pit rehabilitation (i.e. at relinquishment))	Complaint	
5. To minimise the impac	t of production activities on water resources		
5.1 To maintain current surface drainage patterns	For pipeline easements and other reinstated excavations, surface drainage profiles restored to a state that is reasonably consistent with pre-existing conditions and the surrounding area	Compliant	Current operations do not significantly impact surface drainage patterns.  No 'water affecting activities' associated with current operations.
	All regulated activities are located and constructed to maintain pre-existing water flows as far as practicable (e.g. channel contours are maintained on floodplains and at creek crossings and overland flows diverted around site if required)	Compliant	
	No new 'water affecting activities' (as defined under the NRM Act and regional NRM Plan) are undertaken unless relevant permits have been obtained	Compliant	
5.2 To minimise impact to aquifers /	No uncontrolled flow to the surface (i.e. no free flowing bores)	Compliant	No free-flowing bores associated with Beach production activities  The volume of water extracted during production operations is monitored
groundwater volumes and flow patterns	Compliance with the industry-wide allocation for produced formation water (administered by DSD)	Compliant	and recorded.  No recorded complaints from landholders in regards to groundwater use.
	Landholder complaints regarding impact on groundwater users are documented and reasonable steps taken to resolve them can be demonstrated	Not applicable	·
6. To minimise land conta	amination and avoid water contamination		
6.1 To prevent spills occurring, and if they occur minimise their impact	No adverse impact to rare or threatened plant species or Priority <sup>2</sup> 1 or 2 plant species outside predisturbed / operational areas due to an escape of petroleum, processed substance, chemical or fuel	Compliant	In the event of a spill, fluids are contained, affected areas remediated and reporting and investigation procedures followed.

<sup>&</sup>lt;sup>2</sup> Priority vegetation is defined in the EIR (Beach 2016).

Objective	Assessment Criteria	Compliance	Findings / Comments
	No unauthorised discharge or escape of petroleum, processed substance, chemical, fuel or solid wastes to surface water and/or groundwater.	Compliant	Causes of incidents are identified and where appropriate inform the revision of, or implementation of new systems, procedures, and design modifications, to reduce the chance of reoccurrence.
	Any escape of petroleum, processed substance, chemical or fuel to land is either immediately contained and removed or assessed in accordance with NEPM <sup>3</sup> guidelines and remediated in a timely manner.	Compliant	
6.2 To remediate and monitor areas of known contamination arising from production activities (salinisation, hydrocarbons, other production chemicals)	Contaminated sites are assessed and rehabilitated (where required) using a risk-based approach, consistent with the principles of the NEPM In situ remediation of spills is monitored and decrease in hydrocarbons over time can be demonstrated	Not Applicable	There are no known contaminated sites associated with the PPLs.
6.3 To ensure that rubbish and waste	Wastes are segregated and transported to an EPA licensed facility for recycling or disposal	Compliant	All waste materials collected, segregated and disposed of via appropriately licenced carriers and recycling and waste disposal facilities.
material is disposed of in an appropriate	Reasonable steps are taken to securely contain waste prior to removal from site		Waste recycling systems are in operation at major facility yards and camps.
manner.	No waste material disposal to sumps and flare pits (with the exception of drilling fluids, drill cuttings and other benign fluids produced during well clean-up)	Compliant	
6.4 To prevent impacts as a result of hydrotest water and washdown	No evidence of significant impacts to soil, water and vegetation as a result of water disposal (i.e. soil erosion, dead vegetation, water discolouration)	Compliant	Hydrotest water disposed of in accordance with Beach approved procedures.
water disposal	No unauthorised discharge of hydrotest water and washdown water to a waterway or an area reasonably likely to enter a water way	Compliant	
6.5 To ensure the safe and appropriate disposal of waste water (sewage)	All wastewater is disposed in accordance with the South Australian Public Health (Wastewater) Regulations 2013 or to the satisfaction of the Department of Health	Compliant	Waste water is disposed of in accordance with State Government regulations.

<sup>&</sup>lt;sup>3</sup> National Environment Protection (Assessment of Site Contamination) Measure (1999) amended in 2013

6.6 To minimise impacts as a result of producer for formation water treatment and disposal and restrict to defined areas and restrict to defined as a result of producer formation and supposal (Purposation produced formation and as and restrict to defined areas and restrict to defined as a result of produced water is restricted to defined areas in accordance with activity approval conditions. No observed adverse impact to vegetation outside of gas well deliquification of surface water and / or shallow groundwater resources (Part on the proposal acquired resources) and including the pressure and provided flow to surface (e.g. blow out). As a proportion of surface water and / or shallow groundwater resources (Part on the world compromise off-site land use or post-activity) and use.  6.8 To maintain well integrity to minimise adverse acquirer contamination of the designated disposal area. Compliant and minimise adverse impact from water injection for water flows of adjuster pressure impacts from water injection for water flows of adjuster pressure impacts from water injection for water flows of adjuster pressure impacts as a result of land treatment units and safety.  6.9 To minimise the risk to public health and safety.	Objective	Assessment Criteria	Compliance	Findings / Comments
treatment and disposal and restrict to defined areas in accordance with activity approval conditions where from PPW ponds Disposal of produced water is restricted to defined areas in accordance with activity approval conditions where from PPW ponds Disposal of produced water is restricted to defined areas in accordance with activity approval conditions where from PPW ponds Disposal of produced water is restricted to defined areas in accordance with activity approval conditions where from PPW ponds Disposal of produced water is restricted to defined areas in accordance with activity approval conditions where from PPW ponds Disposal of produced water is restricted to defined areas in accordance with activity approval conditions on the designated disposal area.  6.7 To minimise impacts or a swell deliquification does not result in contamination of surface water and / or shallow groundwater resources No soil contamination of surface water and / or shallow groundwater resources No soil contamination of surface water and / or shallow groundwater resources No soil contamination of surface water and use or post-activity land use  6.8 To maintain well integrity to minimise loss of aquifer pressure and from the volt of water from pouts are listed in the relevant Drilling SEO out of sporasi and from water injection for waterflood or disposal and in the relevant Drilling SEO of the produced for material produced is obtained and treatment units and restrict to defined areas  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise activities  6.10 To minimise impacts as a result of water reinjection activities  6.10 To minimise impacts as a result of	as a result of produced	Recoverable Hydrocarbons (TRH) below 30mg/L in	Compliant	monitored.
And read maintain well integrity to minimise aquifer controls exist to protect separate aquifer sont minimise aquifer contamination of water form person injection for water injection for water injection for water form activities injection for water form water injection for water form person in a contamination of surface water and / or shallow groundwater resources and minimise aquifer contamination of surface water and / or shallow groundwater resources and minimise aquifer contamination and in the relevant Drilling SEO  6.8 To maintain well integrity to minimise aquifer controls exist to protect separate aquifer contamination of the controls exist to protect separate aquifer systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other Note: Geological aquifer formation groups are listed in the relevant Drilling SEO  6.9 To minimise adverse impacts from water injection for water reinjection activities  6.10 To minimise and reatment units and result of land treatment units and results of land trea	treatment and disposal		Carallant	Ground water monitoring bores installed at facilities and routinely monitored.
areas in accordance with activity approval conditions areas in accordance with activity approval conditions areas in accordance with activity approval conditions. No observed adverse impact to vegetation outside of the designated disposal area.  6.7 To minimise impacts of gas well deliquification does not result in contamination of surface water and / or shallow groundwater resources. No soil contamination due to gas well deliquification that would compromise off-site land use or post-activity land use  6.8 To maintain well integrity to minimise loss of aquifer pressure and minimise aquifer contamination. Provided in the relevant Drilling SEO  6.9 To minimise adverse impacts from water injection for waterflood or disposal  6.10 To minimise and verse impacts as a result of launch are reinjection for water reinjection for water reinjection for water reinjection for water flood or disposal  6.10 To minimise and verse impacts as a result of launch are reinjection for water reinjection for water reinjection activities impacts as a result of launch teachers. Refer to Objectives 6.1 and 6.2  6.20 To minimise and verse impacts as a result of launch teachers. Refer to Objectives 6.1 and 6.2  6.30 To minimise impacts as a result of launch teachers. Provided in the relevant Drilling SEO  6.40 To minimise and verse impacts as a result of launch teachers. Provided in the relevant Drilling SEO  6.51 To minimise and verse impacts as a result of launch teachers. Provided in the relevant Drilling SEO  6.52 To minimise and verse impacts from water reinjection activities in a verse of the provided in the relevant Drilling SEO  6.53 To minimise and verse impacts from water reinjection activities in a verse of the provided in the relevant Drilling SEO  6.54 To minimise and verse impacts and the provided in the relevant Drilling SEO  6.55 To minimise and verse impacts and v		•	Compliant	
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that would compromise off-site land use or post-activity land use  6.8 To maintain well integrity to minimise loss of aquifer pressure and minimise aquifer contamination  Appropriate controls exist to protect separate aquifer systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other Note: Geological aquifer formation groups are listed in the relevant Drilling SEO  6.9 To minimise adverse impacts from water flood or disposal  6.10 To minimise impacts as a result of land treatment units and restrict to defined areas  Refer to Objectives 6.1 and 6.2  Compliant  Compliant  Compliant  Not Applicable  Not Applicable  Compliant	of gas well	contamination of surface water and / or shallow	Not applicable	
integrity to minimise loss of aquifer pressure and minimise aquifer contamination  Appropriate controls exist to protect separate aquifer systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other Note: Geological aquifer formation groups are listed in the relevant Drilling SEO  6.9 To minimise adverse impacts from water injection for waterflood or disposal  6.10 To minimise impacts as a result of land treatment units and restrict to defined areas  Out)  Appropriate controls exist to protect separate aquifer separate aquifer systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other Note: Geological aquifer formation groups are listed in the relevant Drilling SEO  No significant change in aquifer water quality as a result of water reinjection activities  Compliant  Compliant		that would compromise off-site land use or post-		
and minimise aquifer contamination systems and / or hydrocarbon reservoirs that are typically in natural hydraulic isolation from each other Note: Geological aquifer formation groups are listed in the relevant Drilling SEO  6.9 To minimise adverse impacts from water injection for waterflood or disposal  6.10 To minimise material mater	integrity to minimise		Compliant	
6.9 To minimise adverse impacts from water injection for waterflood or disposal  6.10 To minimise impacts as a result of land treatment units and restrict to defined areas  in the relevant Drilling SEO  No significant change in aquifer water quality as a result of water reinjection activities  Not Applicable  Compliant  Compliant	and minimise aquifer	systems and / or hydrocarbon reservoirs that are	Compliant	
impacts from water injection for waterflood or disposal  6.10 To minimise impacts as a result of land treatment units and restrict to defined areas  result of water reinjection activities  Compliant  Compliant				
impacts as a result of land treatment units and restrict to defined areas	impacts from water injection for waterflood		Not Applicable	
7. To minimise the risk to public health and safety	impacts as a result of land treatment units and	Refer to Objectives 6.1 and 6.2	Compliant	
	7. To minimise the risk to	public health and safety		

Objective	Assessment Criteria	Compliance	Findings / Comments
7.1 To protect public safety during production	Emergency procedures implemented and personnel trained	Compliant	Beach Petroleum HSE system includes periodic simulation of Emergency situations at production facilities.
operations	Reasonable measures implemented to ensure no injuries or health risks to the public	Compliant	Emergency response procedures are implemented in the event of an emergency.
	No injuries, incidents or adverse health impacts involving the public from regulated activities that could have been reasonably prevented by the operator	Compliant	No incidents of risk to public health and safety during the reporting period.
7.2 To avoid	No uncontrolled operations related fires	Compliant	No fires have occurred in the PPLs during the reporting period.
uncontrolled fires associated with production activities	Emergency procedures implemented and personnel trained		
8. Air pollution and green	house gas emissions reduced to as low as reasonably pra	actical	
8.1 To minimise atmospheric emissions	Reasonable practical measures implemented in design and operation to minimise emissions	Compliant	Atmospheric emissions are being reported on a financial year basis as part of Beach's obligations under the National Greenhouse and Energy Reporting Act (NGER) and National Pollutant Inventory (NPI).
8.2 To minimise the generation of dust.	Any stakeholder complaints related to dust nuisance are documented and reasonable steps taken to resolve them can be demonstrated	Compliant	Road watering and dust control carried out where appropriate to minimise dust emissions.
9. To adequately protect a	areas of cultural and heritage significance and values dur	ing operations and r	maintenance
9.1 No damage, disturbance or interference to Aboriginal and non-	In the event the conditions of a Work Area Clearance(s) are not complied with, the incident is appropriately reported, investigated and remediated in consultation with the relevant Native Title holders	Not Applicable	Beach has an agreement with the Native Title Claimant group which specifies the requirements for scouting proposed well and facility sites and access tracks to identify and avoid areas of heritage value and archaeological significance.
Aboriginal heritage sites, objects, remains and	and in accordance with any applicable NT Agreement Damage, disturbance or interference to any		Site visits have been carried out with the Native Title Claimant group. Areas of significance were recorded and identified as exclusion zones.
places unless prior approval under relevant	Aboriginal sites, objects and remains (all as defined under the <i>Aboriginal Heritage Act 1988</i> ) is avoided	Compliant	Any sites discovered during construction will be appropriately protected, recorded and reported.
legislation obtained	unless authorisation has been obtained under the Aboriginal Heritage Act 1988		No impacts to culturally sensitive areas have been identified during the reporting period.
	Non-Aboriginal heritage sites identified and avoided	Compliant	reporting period.
	No impact to non-Aboriginal heritage places and related objects protected under the <i>Heritage Places</i>	Compliant	

Objective	Assessment Criteria	Compliance	Findings / Comments
	Act 1993 unless approval has been obtained under the Heritage Places Act 1993		
	Any Aboriginal and non-Aboriginal heritage sites, objects and remains discovered during operations have been appropriately reported and responded to, consistent with the applicable NT Agreement and the <i>Aboriginal Heritage Act 1988</i>	Not Applicable	
10. Rehabilitate operation	onal areas to agreed standards		
10.1 Rehabilitate	Contaminated Site Remediation		Rehabilitation of production sites and access tracks will be undertaken in
operational areas to	Refer to Objective 6.2		compliance with Beach procedures and in consultation with the landowner
agreed standards	Redundant Areas		when production ceases.
	Refer to assessment criteria for Objectives 1, 2, 3 and 6	Compliant	No operational areas became redundant or were rehabilitated in the PPLs during the reporting period.
	The attainment of 0, +1 or+2 GAS criteria for final borrow pit rehabilitation (i.e. at relinquishment) as listed in Appendix B unless alternative agreement is reached with the regulator and stakeholders		Borrow pits will be rehabilitated and restored in accordance with Beach HSE procedures, which are based on DEM Field Guide for the Environmental Assessment of Abandoned Petroleum Wellsites in the Cooper Basin, South Australia.
	Production Facility Abandonment		
	Site rehabilitation undertaken in accordance with site-specific decommissioning and reinstatement plan as agreed with relevant stakeholders and regulators	Not Applicable	
	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		
	0, +1 or +2 GAS criteria are attained for production facility abandonment as listed in Appendix C, unless alternative agreement is reached with the regulator and stakeholders		
	Refer to assessment criteria for Objectives 1, 2, 3 and 6		
	Pipeline Abandonment		

Objective	Assessment Criteria	Compliance	Findings / Comments
	Attainment of the following (unless otherwise agreed with stakeholders and approved by the regulatory authority):	Not Applicable	
	No evidence of waste, redundant equipment / infrastructure or signs and markers on abandoned pipelines		
	Refer to assessment criteria for Objectives 1, 2, 3 and 6		
	Well Abandonment Following Production		
	Refer to Objective 6.8	Not Applicable	
	Note: Surface restoration of well sites is covered by the Cooper Basin Drilling SEO.		