

PRL 30 Annual Report

Year One

11 October 2012 to 10 October 2013

This report has been prepared in accordance with the requirements of the *Petroleum and Geothermal Energy Act 2000* and the *Petroleum and Geothermal Energy Regulations 2013* and covers all of the operations conducted in PRL 30 by Santos Ltd for the period 11 October 2012 to 10 October 2013.

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1. Executive Summary

During the Year 1 reporting period, activities conducted in Petroleum Retention Licence (PRL) 30 primarily involved the drilling of two wells, Chivito NFE (1) and Chorizo NFE (1) and connection of Chimmichurri NFE (1) (drilled October 2011). Additionally, geo-technical studies were undertaken using the data obtained from drilling Chivito-1 and Chorizo-1, to update the assessments of any remaining potentially commercial prospects for drilling in the future.

There were no serious or reportable incidents or accidents during the reporting period, according to the definitions of:

- the *Petroleum and Geothermal Energy Act 2000* (the **Act**);
- the *Petroleum and Geothermal Energy Regulations 2013* (the **Regulations**);
- PRL 30; and
- the *SA Cooper Basin Statement of Environmental Objectives: Drilling and Well Operations, Santos, 2009*, and *SA Cooper Basin Statement of Environmental Objectives: Production and Processing, Santos, 2010* (the **SEOs**),

which resulted in injury or illness to any member of the general public associated with any of the activities conducted.

2. Introduction

This report covers the activities conducted in Year 1 of PRL 30 between 11th October 2012 and 10th October 2013. PRL 30 is located in the South Australian section of the Cooper and Eromanga Basins and is held 100% and operated by Santos Ltd. The Licence became effective on 11th October 2012.

In accordance with the reporting requirements of Regulation 33, this report also provides a performance assessment with regard to the requirements of the Act, the Regulation, Licence and objectives under the SEOs.

3. Permit Summary

The committed and completed work program for the licence period to date is summarised in Table 1.

Year commencing	Committed Activity	Other proposed activities	Completed Activity
2012	- Production and stay in business operations	- Production monitoring - Reservoir surveillance	- Production and stay in business operations - Production monitoring - Chivito NFE and Chorizo NFE wells
2013	- Production and stay in business operation - Cartman South Appraisal Well	- Production monitoring - Reservoir surveillance	N/A
2014	- Production and stay in business operation	- Production monitoring - Reservoir surveillance	N/A
2015	- Production and stay in business operation	- Production monitoring - Reservoir surveillance	N/A
2016	- Production and stay in business operation	- Production monitoring - Reservoir surveillance	N/A

Table 1. Original versus Actual Work for Licence Period.

The original work commitment for Year 1 (year commencing 2012) involved 'Production and stay in business operations' only with the drilling of one well not intended to occur until Year 2 (year commencing 2013). The drilling commitment was met during this reporting period with the drilling of Chivito-1 and Chorizo-1, so the committed work for the term of the license has been met.

On application of PRL 30, the work program for the Licence involved 'Production and stay in business operations', which includes 'Production Monitoring' and 'Reservoir Surveillance' activities during each year of the Licence, and the drilling of one well in Year 2 to address any potential commercial prospectivity. Work undertaken during Year 1 included the drilling of two wells, thereby fulfilling the drilling commitment earlier than previously indicated.

4. Regulated Activities

Pursuant to Regulation 33(3)(a) under the Act, an annual report must include:

"a summary of the regulated activities conducted under the licence during the [current reporting] year."

This information is detailed below in designated sections

Drilling and Related Activities

- The drilling of two wells
- Borrow pit construction
- Surface connection (including pipeline construction) of two wells
- Access road / track construction to two well locations
- Well lease and campsite construction at two well locations

Two wells were drilled during the reporting period, namely Chivito-1 (Plugged & Abandoned) and Chorizo-1 (Cased & Suspended, being connected). Details of these two wells will be contained in the respective Well Completion Reports, currently being prepared and will be submitted to DMITRE within the required timeframe of 6 months after rig release (Chivito 1 – 23 November 2013; Chorizo 1 – 9 November 2013).

Relevant activity dates for Chivito-1 were:

- a) Environmental Clearance of Well Lease: 11 February 2013
- b) Well Lease Preparation (completed): 31 March 2013
- c) Drilling: spudded 13 May 2013; released 23 May 2013

Relevant activity dates for Chorizo-1 were:

- a) Environmental Clearance of Well Lease: 11 February 2013
- b) Well Lease Preparation (completed): 25 March 2013
- c) Drilling: spudded 22 April 2013; released 9 May 2013

Pre-clearance of the Chorizo-1 drilling site was conducted from 13-18 December 2012 in conjunction with representatives of the Yandruwandra Yawarrawarrka

Native Title Claimant Group.

Pre-clearance of the Chivito-1 drilling site was conducted from 25 January 2013 in conjunction with representatives of the Yandruwandra Yawarrarrka Native Title Claimant Group.

Seismic Data Acquisition

No seismic data were acquired during the reporting period. No cultural heritage activity was conducted for seismic purposes

Seismic Data Processing and Reprocessing

None

Geochemical, Gravity, Magnetic and other Surveys

None

Production and Processing

Production testing was not conducted at Chivito-1 as the well was plugged and abandoned.

Production testing was not conducted at Chorizo-1 and Chimmichurri-1 as the wells were not yet connected for the duration of the reporting period.

Pipeline Construction and Operation

The Stimpson Jay-1 pipeline, connecting Stimpson Jay-1 (in PPL 287) to Hoek-1 MPV, passes through this License area, and is the only pipeline in operation during the reporting period. There have been no safety or environmental incidents associated with this pipeline.

There were two pipelines in construction during the reporting period, connecting Chimmichurri-1 and Chorizo-1 to production facilities. The pipelines are expected to be in operation in Year 2. There has been no safety or environmental incidents associated with these pipelines.

Preliminary Survey Activities

None

5. Compliance Issues

Licence and Regulatory Compliance

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-compliance.”

Throughout the reporting period, Santos Ltd complied with the requirements of the Act, Regulations and the SEOs. No incidents of non-compliance were identified.

Licence Non-Compliance

No incidents of Licence non-compliance.

Regulatory Non-Compliance

No incidents of regulatory non-compliance.

Compliance with Statement of Environmental Objectives

No incidents of non-compliance with SEOs. Performance against the SEOs are detailed in appendices 3 and 4.

Management System Audits

Pursuant to Regulation 33(3)(d) under the Act, an annual report must include:

“a summary of any management system audits undertaken during the relevant licence year including information on any failure or deficiency identified by the audit and any corrective actions that has, or will be taken”.

No management system audits were conducted during the reportable period.

Report and Data Submissions

Pursuant to Regulation 33(3)(e) under the Act, an annual report must include:

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

The following reports were submitted during the report period within time guidelines and were compliant:

Description of Report/Data	Date Received by DMITRE	Compliant/Non-compliant
Notice of Entry: Chivito-1	16 January 2013	Yes
Notice of Entry: Chorizo-1	14 January 2013	Yes
Well Proposal: Chivito-1	18 March 2013	Yes
Well Proposal: Chorizo-1	05 March 2013	Yes

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”.*

The Act defines all “Serious Incidents” that are required to be reported promptly to DMITRE.

On 28 April 2013, a serious incident occurred on Saxon Rig 188 on the Chorizo 1 well, involving the ST-80 Iron Roughneck. Santos submitted three non-compliant reports resulting in the issuing of a formal letter of non-compliance for a non-compliant report and the incident is under investigation by DMITRE.

There were no other incidents resulting in any injury to any member of the public and no serious or reportable safety or environmental incidents recorded during this reporting period in PRL 30.

Threat Prevention

Pursuant to Regulation 33(3)(g) under the Act, an annual report must include:

“a report on any reasonably foreseeable threats (other than threats previously reported on) that reasonably presents, 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”.

Santos abides by an *Emergency Response Plan* together with a *Statement of Environmental Objectives* and an *Environmental Impact Report*. These outline the risks and threats anticipated as a result of the drilling operations and identify measures to prevent their occurrence. Additionally, drilling contractors abide by a site-specific safety and environmental plan that is used in conjunction with the Santos *Emergency Response Plan*.

There were no threats identified in this Licence area during the reportable period.

An *Emergency Response Plan* and *Environmental Plan* were developed for activities conducted in South Australia, including PRL 30. In the event of an incident, the SACB(FF) JV resources would be mobilised to assist.

Future Work Program

Pursuant to Regulation 33(3)(h) under the Act, 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”.

Production Forecast – Year 2

Based on technical work estimating initial production rate and expected decline profiles:

- Chimmichurri-1 is forecasted to produce 27,100 – 48,000 bbl in Year 2, with a best estimate of 39,600 bbl.
- Chorizo-1 is forecasted to produce 22,900 – 44,500 bbl in Year 2, with a best estimate of 34,200 bbl.

During Year 2 the proposed work associated with appraisal and delineation in PRL 30 will primarily involve 'production and stay in business operations' which may involve 'production monitoring' and 'reservoir surveillance'.

Connection activities for Chimmichurri-1 and Chorizo-1 will also continue and be completed during Year 2, which will enable production testing to commence.

Proposed technical work is summarised below:

Seismic Exploration

No new seismic acquisition is planned for Year 2.

Drilling and Well Operations

No drilling or well operations activities are planned for Year 2.

6. Expenditure Statement

Pursuant to Regulation 33(4) under the Act, an annual report must contain:

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

Please refer to Appendix 1 for the expenditure statement for the current reporting period.

APPENDIX 1 – Expenditure Statement (to September 2013)

Confidential

APPENDIX 2 - Environmental Objectives & Performance – Production & Processing SEO

(There were no seismic operations conducted during the reporting period)

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance Year 1 Report Period
<p>Objective 1: Minimise any safety risk to public and other third parties.</p>	<p><input type="checkbox"/> Reasonable measures implemented to ensure no injuries to the public or third parties.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> All employees and contractor personnel complete a safety induction prior to commencement of work in the field. <input type="checkbox"/> All employees and contractor personnel undertake a refresher induction every 2 years. <input type="checkbox"/> Signage in place to warn third parties of access restrictions to operational areas, with particular warnings when potentially dangerous operations are being undertaken. <input type="checkbox"/> Necessary measures (e.g. signage/fencing) taken to prevent the public accessing the wellhead equipment or waste relating to a given well. <input type="checkbox"/> Demobilisation inspections undertaken at random to ensure that backfilling and waste removal requirements are met. <input type="checkbox"/> Permit to work systems in place for staff and contractors in dangerous situations. <input type="checkbox"/> All appropriate PPE (personnel protective equipment) is issued and available as required in accordance with company operating requirements and applicable standards. <input type="checkbox"/> Effective Emergency Response Plan (ERP) and procedures are in place in the event of a fire or explosion; Annual exercise of ERP. <input type="checkbox"/> Communication of rig moves and other potential hazards to safety associated with drilling and well operations to potentially affected parties prior to commencement of operations. <input type="checkbox"/> Compliance with relevant speed restrictions on access roads and tracks. <input type="checkbox"/> Reporting systems for recording injuries and accidents in place, and annual (at minimum) review of records to determine injury trends. <input type="checkbox"/> Implementation of appropriate corrective actions. <input type="checkbox"/> Ensuring safety management plans are updated and reviewed. <input type="checkbox"/> Wastewater disposal in accordance with Objective 11. 	<p>There were no injuries to the public or any third parties</p> <p>Induction training is provided to all Santos and contractor Employees Refresher training is provided.</p> <p>Signs are placed to warn the public about the hazards associated with accessing production areas.</p> <p>A Work Permit System, which is regularly audited, is in place.</p> <p>Santos and Contractor personnel are provided the appropriate PPE.</p> <p>Effective emergency response plans exist, which are regularly exercised.</p> <p>Regular emergency exercises are conducted. Communication of potentially hazardous or unusual tasks is made to affected parties prior to being undertaken.</p> <p>Injury and incident recording and reporting systems are maintained.</p> <p>Safety management plans are reviewed and are updated regularly.</p>

<p>Objective 2: Minimise disturbance and avoid contamination to soil.</p>	<p><u>Construction Activities (e.g. pipelines and roads)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No evidence of significant subsoil on surface (colour) on the pipeline ROW following construction. <input type="checkbox"/> No subsidence is evident over pipeline trench. <input type="checkbox"/> At pipeline dune crossings, dune profiles have been restored consistent with surrounding dune profiles. <input type="checkbox"/> No visual evidence of soil compaction following remediation of the pipeline easement (e.g. hard soil, local water pooling). <input type="checkbox"/> The extent of erosion on the ROW is consistent with surrounding land. <input type="checkbox"/> No unauthorised off-road driving or creation of shortcuts. <input type="checkbox"/> No construction activities are carried out on salt lakes or steep tableland slopes (as defined in EIR). <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for goals related to this objective as listed in Appendix 1 and Appendix 4. 	<p><u>Construction Activities (e.g. pipelines and roads)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Santos operational procedures and guidelines are in place and will be followed for construction activities, for example to conserve soil resources: <ul style="list-style-type: none"> <input type="checkbox"/> topsoil is stockpiled separately from subsoil and respread during reinstatement <input type="checkbox"/> no windrows remain after pipeline construction (except on dunes where some windrows are inevitable after reprofiling but will quickly disappear if a crown over the pipeline trench is left to alleviate subsidence, periodic breaches are left to avoid channelling water flows down the ROW <input type="checkbox"/> areas of compacted soil are ripped <input type="checkbox"/> Consider alternate routes during planning phase to minimise environmental impacts. <input type="checkbox"/> Works are restricted to construction ROW. <input type="checkbox"/> The need to traverse sensitive land systems and the method of managing the impacts must be justified in accordance with company procedures, recorded and available for auditing. <input type="checkbox"/> Annual audit of construction practices. <p><u>Spill Response / Contingency Planning</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Results of emergency response procedures carried out in accordance with Regulation 31 show that an oil spill contingency plan in place in the event of a spill is adequate and any necessary remedial action needed to the plan is undertaken promptly. <input type="checkbox"/> Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. <input type="checkbox"/> Spill response equipment is audited annually. <input type="checkbox"/> Annual spill response training exercise is undertaken. <input type="checkbox"/> Refer to Section 3 "Reporting" for clarification of incident reporting requirements 	<p>Soil disturbance is minimised wherever possible. Rootstock is left intact and top soil is stockpiled for respreading. This is respread during site restoration.</p> <p>Off-road driving is actively discouraged. Alternate routes are considered in planning. Work is restricted to ROW.</p> <p>No construction activity is carried out on salt lakes, steep tablelands or wetland systems.</p> <p>Audits of construction activity are undertaken with high level of performance.</p> <p>Borrow pit construction is minimised by reuse of any suitable existing borrow pit/s. Borrow pits are restored on an ongoing basis to ensure the most time efficient restoration</p>
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<p>Objective 2 cont: Minimise disturbance and avoid contamination to soil</p>	<p><u>Fuel and Chemical Storage, Handling and Transportation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No spills/leaks outside of areas designed to contain them. <input type="checkbox"/> Soils remediated to a level as determined by the SHI Decision Framework. <input type="checkbox"/> Also refer to Objective 12. <p><u>Oil/Condensate Spills (Pipeline/Road Transport)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No spills/leaks outside of areas designed to contain them. <input type="checkbox"/> Level of hydrocarbon continually decreasing for in situ remediation of spills. <input type="checkbox"/> Soils remediated to a level as determined by the SHI Decision Framework. <p><u>Produced Formation Water (PFW)</u></p> <ul style="list-style-type: none"> • 0, +1 or +2 GAS criteria are attained for goals related to produced formation water impacts on soil, as listed in Appendix 2. • PFW EMP developed and objectives achieved. 	<p><u>Fuel and Chemical Storage, Handling and Transportation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All fuel, oil and chemicals are stored, handled and transported in accordance with appropriate standards and guidelines e.g. Australian Standard AS 1940, Australian Dangerous Goods (ADG) Code, EPA guidelines <i>080/07 Bunding and Spill Management</i>. <input type="checkbox"/> Fuel and chemical storage, handling and transport procedures are reviewed and monitored in audit process. <input type="checkbox"/> Records of spill events and corrective actions are maintained in accordance with company procedures. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Logged incidents are reviewed annually to determine areas that may require corrective action to reduce spill volumes in subsequent years (and drive continual improvement). <input type="checkbox"/> Audit against EHSMS standards for underground storage tanks and bunds on a four yearly minimum frequency. <p><u>Oil/Condensate Spills (Pipeline/Road Transport)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Pipelines are compliant with AS2885 pipeline standards <input type="checkbox"/> Pipeline Management System is reviewed annually. <input type="checkbox"/> Pipelines are inspected and maintained in accordance with Pipeline Integrity Management System <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Records of spill events and corrective actions are maintained in accordance with company procedures. <p><u>Produced Formation Water (PFW)</u></p> <p>Develop (in consultation with DMITRE and the EPA) and implement Environmental Management Plan (EMP) following the PFW facility status review that has been conducted.</p>	<p>Spills that occurred outside areas designed to contain them are reported at quarterly meetings.</p> <p>Records of spills are maintained.</p> <p>Spills are reported in accordance with legislative and company requirements.</p> <p>Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement.</p> <p>Dual skinned tanks used for majority of diesel storage, with bunding used for remainder of lubricant / smaller volumes.</p>
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<p>Objective 2 cont: Minimise disturbance and avoid contamination to soil</p>	<p><u>Waste Disposal (domestic, sewage and sludges)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All domestic wastes are disposed of in accordance with EPA licensing requirements. <input type="checkbox"/> No evidence of rubbish or litter on ROW or at campsites / facilities. <input type="checkbox"/> No spills or leaks from sludge treatment process and sludge pits. <input type="checkbox"/> No increase in contamination at LTUs designated treatment area. <p>Refer to assessment criteria for Objective 11.</p>	<p><u>Waste Disposal (domestic, sewage and sludges)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Site activities to be audited against EPA licence for Waste Depot on a minimum two years schedule. <input type="checkbox"/> EHS04 Waste Management is adhered to. <input type="checkbox"/> Audit against EHS04 Waste Management – 4 yearly minimum. <input type="checkbox"/> Covered bins are provided for the collection and storage of wastes. <input type="checkbox"/> All loads of rubbish are covered during transport to the central waste facility. <input type="checkbox"/> Disposal areas are not established in locations, which pose an unacceptable hazard to stock or wildlife. <input type="checkbox"/> Sewage treatment facilities to be operated in accordance with design criteria. <p>Refer to Objective 11.Refer to Objective 11.</p>	<p>Domestic wastes are disposed of in accordance with EPA License Requirements. Waste bins and containers are covered during transport.</p> <p>Waste pits are located only at Authorised facilities and are fenced to exclude stock and wildlife.</p> <p>There were no incidents at installed sewage disposal facilities.</p>
<p>Objective 3: Avoid the introduction or spread of pest plants and animals and implement control measures as necessary.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No weeds or feral animals are introduced to, or spread in, operational areas as a consequence of activities. <input type="checkbox"/> Weed management plans are implemented where priority weed species are identified. 	<ul style="list-style-type: none"> <input type="checkbox"/> Where appropriate, weed and feral animal management strategy is in place (avoidance and control strategies). <input type="checkbox"/> Vehicle and equipment wash downs to be initiated in accordance with the management strategy. 	<p>Weed and feral animal strategies are in place. There is no evidence of the introduction of weeds or feral animals.</p> <p>Vehicles and rig equipment is washed in accordance with the management strategy.</p>

<p>Objective 4: Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow ground water resources.</p>	<p><u>Construction Activities (e.g. pipelines and roads)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for goals related to this objective as listed in Appendix 1 and 2. <input type="checkbox"/> Construction activities (e.g. access tracks or pipelines) are located and constructed to maintain pre-existing water flows (i.e. channel contours are maintained on floodplains and at creek crossings). <input type="checkbox"/> No water (surface or groundwater) contamination as a result of construction activities. <p><u>Produced Formation Water (PFW)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for Objective 2. <input type="checkbox"/> No unlicensed discharge of water to a creek, river or lake. <p><u>PFW Waterflood</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No significant change in surface or groundwater contamination as a result of waterflood activities. 	<p><u>Construction Activities (e.g. pipelines and roads)</u></p> <ul style="list-style-type: none"> • Constructed activities undertaken are designed and managed to avoid diversion of water flows. • Sensitive land systems (e.g. wetlands) avoided wherever possible. Where activities are undertaken in or near these areas, appropriate review, assessment and mitigation measures are in place to ensure that surface water flows are maintained and contamination of surface water and groundwater is avoided. <p><u>Produced Formation Water (PFW)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to Objective 2. <input type="checkbox"/> Water disposal ponds are located away from areas which are inundated during floods where possible (preferably above the 100-year flood level). <input type="checkbox"/> Interceptor pits are not located in areas prone to inundation by flooding. <p><u>PFW Waterflood</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Pumps and associated equipment installed within containment device with an adequately sized containment sump (e.g. at least 9m³). <input type="checkbox"/> Refer to Objective 2. 	<p>Drainage channels and patterns are maintained or restored to minimise impeding or changing natural drainage patterns associated with well leases, access tracks and roads and at creek crossings.</p> <p>Work programs are modified to avoid periods of flooding and other seasonal influences and variations.</p> <p>Site ecological assessment conducted to ensure lease location does not impact upon these attributes.</p>
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<p>Objective 4 cont Minimise disturbances to drainage patterns and avoid contamination of surface waters and shallow ground water resources.</p>	<p><u>Fuel and Chemical Storage, Handling and Transportation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Soils remediated to a level as determined by the SHI Decision Framework. Also refer to Objective 12. <input type="checkbox"/> No water (surface or groundwater) contamination as a result of these activities. <p><u>Cooper Creek Water Extraction</u></p> <p>No significant change in flow or contamination as a result of extraction activities.</p>	<p><u>Fuel and Chemical Storage, Handling and Transportation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All fuel, oil and chemicals are stored, handled and transported in accordance with appropriate standards e.g. Australian Standard AS 1940, Australian Dangerous Goods (ADG) Code, EPA guideline <i>080/07 Bunding and Spill Management</i>. <input type="checkbox"/> Fuel and chemical storage, handling and transport procedures are reviewed and monitored in an audit process. <input type="checkbox"/> Records of spill events and corrective actions are maintained in accordance with company procedures. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Logged incidents are reviewed annually to determine areas that may require corrective action to reduce spill volumes in subsequent years (and drive continual improvement). <input type="checkbox"/> Implementation of the SHI Decision Making Framework approved in January 2010. <p><u>Cooper Creek Water Extraction</u></p> <p>Approval to conduct surface water extraction from Cooper Creek is subject to the following conditions:</p> <ul style="list-style-type: none"> <input type="checkbox"/> An approvals request for any proposed extraction is raised internally. This request will include estimated total volume required. <input type="checkbox"/> The above request must demonstrate that PFW and Bore water of an acceptable quality cannot be sourced within an economically viable haulage distance (maximum 2 hour return journey). <input type="checkbox"/> Any approved extraction occurs where water flow at Callamurra is $\geq 2.15\text{m}$ ($\geq 0.1\text{m}$ flow at Innamincka Causeway) and rising, and never at permanent water refuges (e.g. Callamurra). Maps of approved surface water extraction points at Innamincka, Kudrieke and Mitchie Crossings are included in Appendix 2 of the EIR Addendum (Santos, 2010). <input type="checkbox"/> Cumulative extraction volume to be capped at 15 ML per year. <input type="checkbox"/> Cumulative extraction volumes to be recorded in monitoring database and included in annual DMITRE reporting. <input type="checkbox"/> Non-conformance with the above is a reportable incident - see Section 3 "Reporting" for incident definitions. 	<p>Records of spills are maintained</p> <p>Spills are reported in accordance with legislative and company requirements.</p> <p>Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement.</p> <p>No extraction related to PRL 30.</p>
<p>Objective 4 cont</p>	<p><u>Waste Disposal (domestic, sewage and sludges)</u></p>	<p><u>Waste Disposal (domestic, sewage and sludges)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Site activities to be audited against EPA licence for waste 	<p>Soil removed to land farm in some instances to eliminate contamination.</p>

	<ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for Waste Disposal for Objective 2. <input type="checkbox"/> Refer to assessment criteria for Objective 11. <p><u>Oil/Condensate Spills (Pipeline/Road Transport)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No spills/leaks outside of areas designed to contain them. <input type="checkbox"/> Level of hydrocarbon continually decreasing for in situ remediation of spills. <p>Soils remediated to a level as determined by the SHI Decision Framework.</p>	<p>depot on a minimum of every two years.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Audit against EHS04 Waste Management – 4 yearly minimum. <input type="checkbox"/> Covered bins are provided for the collection and storage of wastes. <input type="checkbox"/> All loads of rubbish are covered during transport to the central waste facility. <input type="checkbox"/> Pits are not established in locations which pose an unacceptable hazard to stock or wildlife. <p>Sewage treatment facilities to be operated in accordance with design criteria.</p> <p><u>Oil/Condensate Spills (Pipeline/Road Transport)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Pipelines are compliant with AS2885 pipeline standards. <input type="checkbox"/> Pipeline Management System is reviewed annually. <input type="checkbox"/> Pipelines are inspected and maintained in accordance with Pipeline Integrity Management System. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Records of spill events and corrective actions are maintained in accordance with company procedures. <input type="checkbox"/> Refer to Section 3 “Reporting” for clarification of incident reporting requirements <p><u>Spill Response / Contingency Planning</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Results of emergency response procedures, carried out in accord with Regulation 31, show that the oil spill contingency plan in place in the event of a spill is adequate and any necessary remedial action needed to the plan is undertaken promptly. <input type="checkbox"/> Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. <input type="checkbox"/> Spill response equipment is audited annually. <p>Annual spill response training exercise is undertaken.</p>	<p>Emergency response procedures for spill response are in place and regularly exercised. Learning from exercises and actual events are included in Plans.</p> <p>Oil Spill Plans are up-to-date and regularly drilled. Spill response equipment and procedures are regularly audited. Regular drills are conducted.</p>
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<p>Objective 5: Avoid disturbance to sites of cultural and heritage significance.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Proposed well sites and access tracks have been surveyed and any sites of Aboriginal and non-Aboriginal heritage identified. <input type="checkbox"/> <i>Any identified cultural and heritage sites have been avoided.</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> Consultation with stakeholders (i.e. government agencies, landholders etc) in relation to the possible existence of heritage sites, as necessary. <input type="checkbox"/> Heritage report forms completed for any sites or artefacts identified, and report forms forwarded to the Aboriginal Heritage Branch, Aboriginal Affairs and Reconciliation Division (AARD). <input type="checkbox"/> Survey records are kept and are available for auditing. <input type="checkbox"/> Areas requiring remediation which lie outside previously surveyed sites should be surveyed in accordance with company heritage clearance procedures. <input type="checkbox"/> A procedure is in place for the appropriate response to any sites discovered during drilling activities. <p><u>Note:</u> Where a negotiated agreement or determination for heritage clearance is in place, compliance with the negotiated agreement or determination takes precedence over the above criteria.</p>	<p>Construction sites are inspected for cultural heritage sites. Identified sites are avoided. Significant sites are fenced.</p> <p>Identified sites are avoided.</p>
<p>Objective 6 Minimise loss of aquifer pressure and avoid aquifer contamination.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> There is no uncontrolled flow to the surface (i.e. no free flowing bores). 	<ul style="list-style-type: none"> <input type="checkbox"/> The volume/flow of water used by the Moomba Plant is continuously monitored to ensure appropriate management. <input type="checkbox"/> Water usage is monitored, reviewed and management strategies implemented to minimise wastage. <input type="checkbox"/> Review water licensing requirements and allocation plans. 	<p>There were no well bore failures reported</p>

<p>Objective 7: Minimise disturbance to native vegetation and native fauna.</p>	<p><u>Construction Activities</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Any sites of rare, vulnerable and endangered flora and fauna have been identified, flagged and subsequently avoided. <input type="checkbox"/> No removal of trees / vegetation of priority 1, 2 or 3 in Field Guide¹ in areas where removal could have been avoided. <input type="checkbox"/> No removal of trees at campsites. <input type="checkbox"/> No evidence of tree removal where trimming appropriate. <input type="checkbox"/> The type and density of vegetation on the rehabilitated ROW is consistent with the surrounding landscape, but less mature. Note: assessment will take into account that regrowth is a time and rainfall dependent process. <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for goals related to this objective as listed in Appendix 1 and 2. 	<p><u>Construction Activities</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Proposed construction areas have been assessed for rare, vulnerable and endangered flora and fauna species before the commencement of construction. <input type="checkbox"/> Consider alternate routes during planning phase to minimise environmental impacts. <input type="checkbox"/> Sensitive land systems (e.g. wetlands) avoided wherever possible. Where activities are undertaken in these areas (i.e. no practicable alternative), appropriate review, assessment and mitigation measures are in place. <input type="checkbox"/> Assessment records are kept and are available for auditing. <input type="checkbox"/> Optimised ROW widths are identified and implemented. <input type="checkbox"/> Trees are trimmed rather than cleared where possible. <input type="checkbox"/> Root stock is not removed beyond 3m of trenchline and ROW is either only lightly graded or not graded. <p>Where vegetation is removed, it is respread over the full width of the ROW (excluding the access track).</p>	<p>Study undertaken to determine habitats for rare, vulnerable and endangered species. Areas identified are avoided.</p> <p>Vegetation impacts are minimised during well lease access and construction by scouting surveys prior to the entry of construction machinery. Wherever possible, significant vegetation is avoided.</p>
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¹ Field Guide refers to the *Field Guide to the Common Plants of the Cooper Basin – South Australia and Queensland* (Wiltshire and Schmidt 2003)

<p><u>Objective 7 Cont</u></p>	<p><u>Borrow Pits</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 0, +1 or +2 GAS criteria for goals related to this objective, as listed in Appendix 1 are attained during site selection and construction. <p><u>Fuel and Chemical Storage and Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for objectives 2 and 4. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for Objective 2, 4 and 11. 	<p><u>Borrow Pits</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Pits are not established in locations which pose an unacceptable hazard to stock or wildlife (i.e. not within 50m of any roads or access tracks, well leases or other plant and equipment). <input type="checkbox"/> Sensitive land systems (e.g. wetlands) avoided wherever possible. Where activities are undertaken in these areas (i.e. no practicable alternative), appropriate review, assessment and mitigation measures are in place. <input type="checkbox"/> Borrow pits are restored as soon as practicable after material extraction is complete to a standard consistent with the surrounding land use. <input type="checkbox"/> Borrow pits are restored to minimise water holding capacity, where agreements are not in place with stakeholders <input type="checkbox"/> In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body. <p><u>Fuel and Chemical Storage and Management</u></p> <p>Refer to Objectives 2 & 4.</p> <p><u>Waste Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Covered bins are provided for the collection and storage of putrescible wastes. <input type="checkbox"/> All loads of rubbish are covered during transport to the central waste facility. <input type="checkbox"/> Pits are not established in locations which pose an unacceptable hazard to stock or wildlife. <input type="checkbox"/> Sewage treatment facilities to be operated in accordance with design criteria. <p>PFW pits are fenced as appropriate to minimise wildlife access.</p>	<p>Borrow pit site selection provides for the avoidance of vegetation impacts. Borrow pits are restored on an ongoing basis to allow natural vegetation regrowth to recommence. Where necessary, borrow pits are reopened to minimise vegetation impacts.</p>
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<p><u>Objective 7 Cont</u></p>	<p><u>Native Vegetation Act SEB</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Significant Environmental Benefit (SEB) for native vegetation clearance approved by DMITRE (where delegated authority applies) or Native Vegetation Council (NVC). <input type="checkbox"/> Significant environmental benefit obligation is ultimately satisfied / implemented. <p><u>Fauna Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Native fauna casualties associated with construction activities restricted to as low as reasonably practical (ALARP). 	<p><u>Native Vegetation Act SEB</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Work (or payment to Native Vegetation Fund) undertaken to achieve an SEB for native vegetation clearance. <input type="checkbox"/> SEB requirement either: <ul style="list-style-type: none"> - determined using the Guidelines (DWLBC 2005) or - negotiated with DMITRE or the Native Vegetation Council where SEB calculation differs from the standard methodology in the Guidelines. <p><u>Fauna Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No domestic pets allowed at camps or worksites. <input type="checkbox"/> Feeding of wildlife (e.g. dingoes) is not permitted. <input type="checkbox"/> Where possible, provision of fauna exit ramps every 500m in open trenches, with other mechanisms for fauna exit (branches, mesh etc.) at more regular intervals in between. <input type="checkbox"/> Inspection of trenches and removal of trapped fauna, where appropriate. <input type="checkbox"/> Minimise length of time trench is open where practicable. 	<p>Dot points 1 & 2: Personal made aware of these requirements at induction training and by ongoing bulletins. Standards practices are applied when trenching and these requirements are being met.</p>
<p><u>Objective 8:</u> Minimise air pollution and greenhouse gas emissions.</p>	<p><u>Gathering Systems/Satellite Facilities/Moomba Plant</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Compliance with EPA requirements. 	<p><u>Gathering Systems/Satellite Facilities/Moomba Plant</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Conduct production operations in accordance with appropriate industry accepted standards. <input type="checkbox"/> Continually review and improve operations. <input type="checkbox"/> Appropriate Emergency Response Procedures are in place in case of a gas leak. 	<p>Operations conducted in accordance with established standards</p>

<p>Objective 9: Maintain and enhance partnerships with the Cooper Basin community.</p>	<p><input type="checkbox"/> No reasonable stakeholder complaints left unresolved.</p>	<p><input type="checkbox"/> Relevant affected parties are notified and consulted on proposed activities. <input type="checkbox"/> Forward development plans are presented to the local community. <input type="checkbox"/> Local community projects and events are sponsored and supported where appropriate. <input type="checkbox"/> Industry membership of appropriate regional land management committees and boards</p>	<p>Relevant parties are notified and consulted on proposed activities. There were no complaints, concerns or issues left unresolved. Local community events and activities are actively supported. Membership and active participation is made to regional management committees and Boards. Pastoralists Newsletter produced to update landholders of Santos activities in the area</p>
<p>Objective 10: Avoid or minimise disturbance to stakeholders and/or associated infrastructure</p>	<p><input type="checkbox"/> No reasonable stakeholder complaints left unresolved.</p>	<p><input type="checkbox"/> Induction for all employees and contractors covers pastoral, conservation, tourism, legislation and infrastructure issues. <input type="checkbox"/> Relevant stakeholders are notified prior to survey and construction of well sites, camp sites and access tracks and undertaking of operations (pursuant to the Regulations). Borrow pits left open (unrestored) if requested by stakeholder and upon receipt of letter of transfer of responsibility to stakeholder. <input type="checkbox"/> Gates or cattle grids are installed to a standard, consistent with pastoral infrastructure instead of fences where crossings are required for access. <input type="checkbox"/> All gates left in the condition in which they were found (i.e. open/closed). <input type="checkbox"/> Fences repaired to 'as before' standard following pipeline construction. <input type="checkbox"/> Potential sources of contamination (e.g. formation water ponds) are fenced as appropriate to prevent stock access. <input type="checkbox"/> Written evidence that stakeholder is satisfied with water disposal arrangements. <input type="checkbox"/> System is in place for logging stakeholder complaints to ensure that issues are addressed as appropriate. <input type="checkbox"/> Requirements of the Cattle Care and Organic Beef accreditation programs are complied with. <input type="checkbox"/> In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed</p>	<p>The importance of developing and maintaining good relationships with landholders is stressed to all employees and contractors. Relevant stakeholders are notified of and consulted about projects and are provided with information, maps etc. No Borrow pits were formally transferred to landholders. Grids, fences, gates installed are to a standard acceptable to the landholder. All gates are left "as found". In response to concerns regarding potential for contamination of cattle an extensive fencing of facilities program was completed in 2005 Landholder complaints and requests are logged to ensure closeout. There were no complaints lodged. Cattle management systems (cattle care) are recognised and complied with.</p>

<p>Objective 11: Optimise (in order of most to least preferable) waste avoidance, reduction, reuse, recycling, treatment and disposal</p>	<ul style="list-style-type: none"> □ Domestic wastes are disposed of in accordance with EPA licensing requirements. □ Wastewater (sewage and grey water) disposed of in accordance with the <i>Public and Environmental Health (Waste Control) Regulations 1995</i> or to the Department of Health's satisfaction. □ No spills or leaks from sludge treatment process and sludge pits. □ No increase in contamination at LTUs designated treatment area 	<ul style="list-style-type: none"> □ Chemicals and oil are purchased in bulk. 'Bulki bins' or other storage tanks are in place for large volume items. □ Fencing around waste disposal facility is regularly inspected and maintained. □ Waste streams are segregated on site to maximise opportunities for waste recovery, reuse and recycling. □ Evidence/records are maintained showing that recyclable material has been returned to Moomba Waste Management Depot. □ Production of waste is minimised by specifying reusable, biodegradable or recyclable materials in procurement, where practical. □ Waste audit conducted at 5 year minimum interval. □ Waste water (sewage) disposal is where possible in accordance with the <i>Public and Environmental Health (Waste Control) Regulations 1995</i> (which require that the waste water disposal system must either comply with the <i>Standard for the Construction, Installation and Operation of Septic Tank Systems in SA</i> or be operated to the satisfaction of the Department of Health) and the <i>Environment Protection (Water Quality) Policy 2003</i>. □ Evidence/records maintained to show that appropriately designed sewage facilities have been constructed. 	<p>Increased recycling of wellsite wastes occurred, with chemicals, cement & inhibitors purchased in bulk containers to reduce packaging.</p> <p>Waste material is disposed of at EPA Approved facilities.</p>
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<p>Objective 12: Remediate and rehabilitate operational areas to agreed standards.</p>	<p><u>Contaminated Site Remediation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Contaminated sites are remediated to a level as determined by the approved SHI Decision Framework. <p><u>Construction Site and Access Track Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for Objectives 2, 4, 7 and 11. <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for 'minimise the visual impact' and 'revegetation of indigenous species' as listed in Appendix 4. <p><u>Borrow Pit Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> The attainment of 0, +1 or +2 GAS criteria as in Appendix 1. 	<ul style="list-style-type: none"> <input type="checkbox"/> Rehabilitation/abandonment plans for regulated activities will be developed in consultation with relevant stakeholders. <p><u>Construction Site and Access Track Restoration</u></p> <p>Compacted soil areas have been ripped (except on gibber and tablelands) and soil profile and contours are reinstated following completion of operations.</p>	<p>No stakeholder complaints are unresolved.</p> <p>No contaminated sites</p> <p>Access tracks are restored in accordance with restoration guidelines.</p> <p>No Activity</p>
<p>Objective 12:</p>	<p><u>Pipeline Abandonment</u></p> <p>Attainment of the following (unless otherwise agreed with stakeholders and approved by the regulatory authority):</p> <ul style="list-style-type: none"> <input type="checkbox"/> No evidence of waste, redundant equipment / infrastructure or signs and markers on abandoned pipelines. <input type="checkbox"/> Refer to criteria for contaminated site remediation under this objective (above). <input type="checkbox"/> Refer to the assessment criteria for Objective 11. 	<p><u>Pipeline Abandonment</u></p> <p>The following steps will typically be undertaken unless otherwise agreed with the regulator and stakeholders:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All aboveground pipes and supports will be assessed for the condition of the pipe for either salvage or for dismantling and re-use. <input type="checkbox"/> all underground pipe work will be cut-off (at a minimum depth of 750mm below the natural surface or at pipeline depth, removed and blinded below the surface. <input type="checkbox"/> all aboveground signs and markers will be removed. <input type="checkbox"/> all pipeline protection systems will be removed to allow the pipeline to degrade in-situ. <input type="checkbox"/> monitoring and auditing of abandoned pipelines will be undertaken. <input type="checkbox"/> all pipelines which are partially or wholly left in-situ will be accurately mapped and recorded. Records will be prepared and submitted to the appropriate authority. 	<p>No Activity</p>

<p>Objective 13: Minimise as far as reasonably practicable interruptions to natural gas supply.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No interruptions to natural gas supply that cause significant social disruption. 	<ul style="list-style-type: none"> <input type="checkbox"/> Adequate contingencies are in place which seeks to address a prudent level of security of supply in the case of short and unforeseen interruption events (e.g. adequate gas storage). <input type="checkbox"/> Pipelines are designed, operated and maintained in accordance with AS 2885. <input type="checkbox"/> Plant and equipment are designed, operated and maintained in accordance with appropriate industry accepted standards. <input type="checkbox"/> Emergency Response Plan (ERP) and associated procedures are in place and exercised. <input type="checkbox"/> Results and recommendations of plant and facility hazard reviews, including the five (5) yearly fitness for purpose assessment, are appropriately addressed. <input type="checkbox"/> Significant operations-specific hazards and risks are summarised in the Significant Hazard Risk Register (SHRR). 	<p>Oil Production only</p>
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APPENDIX 3 - Environmental Objectives and Performance – Drilling & Well Operations SEO

(There was no seismic acquisition during the reporting period)

<p>Objective 1: Minimise the risk to public and other third parties.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Reasonable measures implemented to ensure no injuries to the public or third parties. 	<ul style="list-style-type: none"> <input type="checkbox"/> All employees and contractor personnel complete a safety induction prior to commencement of work in the field. <input type="checkbox"/> All employees and contractor personnel undertake a refresher induction every 2 years. <input type="checkbox"/> Signage in place to warn third parties of access restrictions to operational areas, with particular warnings when potentially dangerous operations are being undertaken. <input type="checkbox"/> Necessary measures (e.g. signage/fencing) taken to prevent the public accessing the wellhead equipment or waste relating to a given well. <input type="checkbox"/> Demobilisation inspections undertaken at random to ensure that backfilling and waste removal requirements are met. <input type="checkbox"/> Permit to work systems in place for staff and contractors in dangerous situations. <input type="checkbox"/> All appropriate PPE (personnel protective equipment) is issued and available as required in accordance with company operating requirements and applicable standards. <input type="checkbox"/> Effective Emergency Response Plan (ERP) and procedures are in place in the event of a fire or explosion; Annual exercise of ERP. <input type="checkbox"/> Communication of rig moves and other potential hazards to safety associated with drilling and well operations to potentially affected parties prior to commencement of operations. <input type="checkbox"/> Compliance with relevant speed restrictions on access roads and tracks. <input type="checkbox"/> Reporting systems for recording injuries and accidents in place, and annual (at minimum) review of records to determine injury trends. <input type="checkbox"/> Implementation of appropriate corrective actions. <input type="checkbox"/> Ensuring safety management plans are updated and reviewed. <input type="checkbox"/> Wastewater disposal in accordance with Objective 11. 	<ul style="list-style-type: none"> <input type="checkbox"/> A serious incident occurred on Saxon Rig 188 on the Chorizo 1 well, involving the ST-90 Iron Roughneck. There were no other injuries to the public or any third parties arising from Drilling and Well operations during the reporting period. <input type="checkbox"/> All Santos and Santos Contract employees attend a compulsory safety induction prior to commencing work. Refresher training is provided at regular intervals. <input type="checkbox"/> Signs are installed at strategic locations in the operating area to deter the public from accessing drilling and production areas and when potentially hazardous tasks are undertaken. <input type="checkbox"/> A specific Wellsite Permit-to-Work system is used to manage workplace / worksite safety. <input type="checkbox"/> Personnel are provided with the relevant, approved PPE when undertaking potentially hazardous tasks. <input type="checkbox"/> Emergency Response Plans and procedures are in place. These procedures are regularly exercised with identified improvements included into the ERPs. <input type="checkbox"/> Relevant parties are advised of potentially hazardous operations before they are undertaken. <input type="checkbox"/> An electronic accident and incident recording system is used to report and monitor accidents, incidents and trends. <input type="checkbox"/> Safety Management Plans, including KPIs, have been developed and introduced by Santos and its contractors. These are regularly reviewed and updated. <input type="checkbox"/> Emergency Response procedures for well operations were reviewed and updated during this reporting period.
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<p>Objective 2: Minimise disturbance and avoid contamination to soil.</p>	<p><u>Well Site and Access Track Construction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for “Minimise impacts on soil” objective as listed in Appendix 1 Table A1 and “To minimise the visual impact” as listed in Appendix 1 Table A2. <input type="checkbox"/> No unauthorised off-road driving or creation of shortcuts. <input type="checkbox"/> No construction activities are carried out on salt lakes or steep tableland slopes (as defined in EIR). <p><u>Borrow pit construction and restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for “Minimise visual impacts’, and “Minimise impact on soil” objectives as listed in Appendix 1 Table A3. <p><u>Production Testing/Well Blowdowns</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No soil contamination as a result of production testing or well blowdown operations. 	<p><u>Well Site and Access Track Construction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Consider alternate routes during planning phase to minimise environmental impacts. <input type="checkbox"/> Use existing routes / disturbed ground where practicable. <input type="checkbox"/> Gibber mantle on access tracks and well sites (excluding sumps) is not removed where possible, only rolled, in gibber and tableland land systems. Gibber mantle reinstated where appropriate during restoration. <input type="checkbox"/> Topsoil stockpiled (including gibber mantle) from sump construction and respread (and gibber recompacted) on abandonment. <input type="checkbox"/> The need to traverse sensitive land systems and the methods of managing the impacts must be justified in accordance with company procedures, recorded and available for auditing. <p><u>Borrow pit construction and restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Existing borrow pits to be re-used where practicable. <input type="checkbox"/> Siting of new borrow pits to avoid sloped areas and gibber as far as practicable. <input type="checkbox"/> Topsoil stockpiled (including gibber mantle) and respread on abandonment (gibber to be recompacted). <p><u>Production Testing / Well Blowdowns</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> If appropriate use: <ul style="list-style-type: none"> - Impermeable or clay lined flare pit to flare / contain hydrocarbons. - Flare tanks. 	<ul style="list-style-type: none"> <input type="checkbox"/> Soil disturbance is minimised wherever possible. Rootstock is left intact and top soil is stockpiled for respreading. This is respread during site restoration. <input type="checkbox"/> Off-road driving is actively discouraged. Alternate routes are considered in planning. Work is restricted to ROW. <input type="checkbox"/> No construction activity is carried out on salt lakes, steep tablelands or wetland systems. <input type="checkbox"/> Audits of construction activity are undertaken with high level of performance. <input type="checkbox"/> Borrow pit construction is minimised by reuse of any suitable existing borrow pit/s. Borrow pits are restored on an ongoing basis to ensure the most time efficient restoration <input type="checkbox"/> In 2009, following 2008 trials, Petroleum Engineering bedded down its gas well venting and flaring process following fracture stimulations. All gas wells were routinely “cleaned up” of remaining fracture stimulation fluids in line to the production system once gas flow breakthrough was established to a vent pit. The construction of lease and flow-line pipe-work before development drilling was a key enabler of this process. It has become routine and enabled reduction of well gas emissions by reducing each well’s venting or flaring time from a typical 14 to 30 day process in 2008 to 4 or 5 days at most in 2009 <input type="checkbox"/> In addition, in 2009 there were no planned liquid hydrocarbon (oil) emissions to open pits. Separators and/or test tanks were provided at cost to recover liquid hydrocarbons at each well-site and any produced oil was subsequently recovered in suction trucks and transported to production facilities for offloading and sales to line.
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<p><u>Objective 2 cont:</u> Minimise disturbance and avoid contamination to soil.</p>	<p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No spills/leaks outside of areas designed to contain them. <input type="checkbox"/> Level of hydrocarbon continually decreasing for in situ remediation of spills. <input type="checkbox"/> Soils remediated to a level as determined by the SHI process. <input type="checkbox"/> Also refer to Objective 12. <p><u>Waste Disposal (domestic, sewage and sludges)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All domestic wastes are disposed of in accordance with EPA licensing requirements. <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for "Site to be left in a clean and tidy condition" objective listed in Appendix 1 Table A2. <input type="checkbox"/> No spills or leaks from sewage treatment processing. <input type="checkbox"/> Refer to Assessment Criteria for Objective 11. 	<p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All fuel, oil and chemical storages banded in accordance with the appropriate standards and guidelines e.g. EPA guideline <i>080/07 Bunding and Spill Management</i>. <input type="checkbox"/> Records of spill events and corrective actions maintained in accordance with company procedures. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Logged incidents are reviewed annually to determine areas that may require corrective action in order to reduce spill volumes in subsequent years to drive continual improvement). <input type="checkbox"/> Chemical and fuel storage procedures, including signage, are reviewed and monitored in audit process. <p><u>Spill Response / Contingency Planning</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Results of emergency response procedures carried out in accordance with Regulation 31. Oil spill contingency plan in place in the event of a spill is adequate and any necessary remedial action needed to the plan is undertaken promptly. <input type="checkbox"/> Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. <input type="checkbox"/> Spill response equipment is audited annually. <input type="checkbox"/> Annual spill response training exercise / rehearsal is undertaken. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <p><u>Waste Disposal (domestic, sewage and sludges)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Covered bins are provided for the collection and storage of wastes. <input type="checkbox"/> All loads of rubbish are covered during transport to the central waste facility. <input type="checkbox"/> Approved transportable Aerated Wastewater Treatment Plants (AWTPs) used for rigs/camps (once approved AWTPs are available from a supplier suitable to Santos¹). Interim controls for management of sewage effluent (developed in consultation with the Department of Health) implemented¹. <input type="checkbox"/> Use of permanent septic systems with camps where possible <input type="checkbox"/> Refer to Objective 11. 	<ul style="list-style-type: none"> <input type="checkbox"/> No spills occurred outside areas designed to contain them as reported at quarterly meetings. <input type="checkbox"/> SACBJV learnings from Incidents were reviewed to enable improvement strategies to be identified and are applied to PRL 30 activity. <input type="checkbox"/> No oil spill is likely to have impacted ground water. <input type="checkbox"/> Records of spills are maintained. <input type="checkbox"/> Spills are reported in accordance with legislative and company requirements. <input type="checkbox"/> Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement. <p>Emergency Spill exercises are conducted as part of Santos Emergency Response Plan</p> <ul style="list-style-type: none"> <input type="checkbox"/> Domestic wastes are disposed of in accordance with EPA License Requirements. Audits identified good performance. <input type="checkbox"/> Waste bins and containers are covered during transport. <input type="checkbox"/> Waste pits are located only at Authorised facilities and are fenced to exclude stock and wildlife. <input type="checkbox"/> A waste management plan was developed and submitted to the EPA for approval. <input type="checkbox"/> There were no incidents at installed sewage disposal facilities.
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<p><u>Objective 3:</u> Avoid the introduction or spread of pest plants and animals and implement control measures as necessary.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No weeds or feral animals are introduced to, or spread in, operational areas as a consequence of activities. 	<ul style="list-style-type: none"> <input type="checkbox"/> Where appropriate a weed and feral animal management strategy is in place (avoidance and control strategies). <input type="checkbox"/> Rig and vehicle wash downs are initiated in accordance with the management strategy. 	<ul style="list-style-type: none"> <input type="checkbox"/> Weed and feral animal strategies are in place. There is no evidence of the introduction of weeds or feral animals. <input type="checkbox"/> Vehicles and rig equipment is washed in accordance with the management strategy.
<p><u>Objective 4:</u> Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow ground water resources.</p>	<p><u>Well Lease and Access Track Construction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Well sites and access tracks are located and constructed to maintain pre-existing water flows (i.e. channel contours are maintained on floodplains and at creek crossings). <p><u>Drilling Mud Sumps and Flare Pits</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No overflow of drill cuttings, muds and other drilling fluids from mud sumps. <input type="checkbox"/> No waste material disposal to sumps and flare pits. <p><u>Well Heads (Oil and Gas Systems)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No leaks/spills outside of areas designed to contain them. 	<p><u>Well Lease and Access Track Construction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Sensitive land systems (e.g. wetlands) avoided wherever possible. Where activities are undertaken in or near these areas, appropriate review, assessment and mitigation measures are in place to ensure that surface water flows are maintained and contamination of surface water and groundwater is avoided. <p><u>Drilling Mud Sumps and Flare Pits</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All drill cuttings, muds and non-toxic drill fluids are contained within the designated mud sumps with adequate freeboard at the completion of operations to allow for a 1m cover of clean fill at remediation. <p><u>Well Heads (Oil and Gas Systems)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Where appropriate, imperviously lined well cellars are installed on oil wells. <input type="checkbox"/> Bunds / containment devices are installed on gas well skids. <input type="checkbox"/> Well heads shut in and chemicals removed prior to flood events. <input type="checkbox"/> Jet pumps are installed within containment device with an adequately sized containment sump. 	<ul style="list-style-type: none"> <input type="checkbox"/> Drainage channels and patterns are maintained or restored to minimise impeding or changing natural drainage patterns associated with well leases, access tracks and roads and at creek crossings. <input type="checkbox"/> Work programs are modified to avoid periods of flooding and other seasonal influences and variations. <input type="checkbox"/> No overflow of drilling mud sumps occurred. <input type="checkbox"/> No waste material is disposed of in drilling mud sumps or flare pits. <input type="checkbox"/> Investigated alternatives for impervious lining for well cellars. <input type="checkbox"/> Automatic shutdown of wellhead pumps investigated and devices progressively fitted to all beam pumps to shutdown pump if polished rod packer fails. <input type="checkbox"/> Wells are shut-in and wellhead equipment is removed in areas to be impacted by flooding.

<p>Objective 4 cont Minimise disturbances to drainage patterns and avoid contamination of surface waters and shallow ground water resources.</p>	<p><u>Well Blowdown/Production Testing</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No water (surface or groundwater) contamination as a result of production testing or well blowdown operations. <p><u>Fuel/Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No water (surface or groundwater) contamination as a result of fuel or chemical storage and handling. 	<p><u>Well Blowdown/Production Testing</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Activity is conducted in accordance with accepted industry standards / good oilfield practice. <input type="checkbox"/> If appropriate use: <ul style="list-style-type: none"> - impermeable / clay lined flare pit - flare tanks - separators - supervision. <p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> All fuel, oil and chemical storages banded in accordance with the appropriate standards (e.g. AS 1940 and EPA guideline <i>080/07 Bunding and Spill Management</i>). <input type="checkbox"/> Records of spill events and corrective actions maintained in accordance with company procedures. <input type="checkbox"/> Spills or leaks are immediately reported and clean up actions initiated. <input type="checkbox"/> Logged incidents are reviewed annually to determine areas that may require corrective action in order to reduce spill volumes in subsequent years (and drive continual improvement). <input type="checkbox"/> Chemical and fuel storage procedures, including signage, are reviewed and monitored in audit process. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to Objective 11. <p><u>Spill Response / Contingency Planning</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Results of emergency response procedures carried out in accord with Regulation 31 show that oil spill contingency plan in place in the event of a spill is adequate and any necessary remedial action needed to the plan is undertaken promptly. <input type="checkbox"/> Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. <input type="checkbox"/> Spill response equipment is audited annually. <input type="checkbox"/> Annual spill response training exercise / rehearsal is undertaken. 	<p><u>See Objective 2 above.</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Records of spills are maintained <input type="checkbox"/> Spills are reported in accordance with legislative and company requirements. <input type="checkbox"/> Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement. <input type="checkbox"/> Soil removed to land farm in some instances to eliminate contamination. No spill is likely to have impacted ground water. <ul style="list-style-type: none"> <input type="checkbox"/> Emergency response procedures for spill response are in place and regularly exercised. Learning from exercises and actual events are included in Plans. <input type="checkbox"/> Oil Spill Plans are up-to-date and regularly drilled. <input type="checkbox"/> Spill response equipment and procedures are regularly audited. <input type="checkbox"/> Regular drills are conducted.
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<p>Objective 5: Avoid disturbance to sites of cultural and heritage significance.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Proposed well sites and access tracks have been surveyed and any sites of Aboriginal and non-Aboriginal heritage identified. <input type="checkbox"/> Any identified cultural and heritage sites have been avoided. 	<ul style="list-style-type: none"> <input type="checkbox"/> Consultation with stakeholders (i.e. government agencies, landholders etc) in relation to the possible existence of heritage sites, as necessary. <input type="checkbox"/> Heritage report forms completed for any sites or artefacts identified, and report forms forwarded to the Aboriginal Heritage Branch, Aboriginal Affairs and Reconciliation Division (AARD). <input type="checkbox"/> Survey records are kept and are available for auditing. <input type="checkbox"/> Areas requiring remediation which lie outside previously surveyed sites should be surveyed in accordance with company heritage clearance procedures. <input type="checkbox"/> A procedure is in place for the appropriate response to any sites discovered during drilling activities. <p><u>Note:</u> Where a negotiated agreement or determination for heritage clearance is in place, compliance with the negotiated agreement or determination takes precedence over the above criteria.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Construction sites are inspected for cultural heritage sites. Identified sites are avoided. Significant sites are fenced. <input type="checkbox"/> Identified sites are avoided.
<p>6. Minimise loss of aquifer pressure and avoid aquifer contamination.</p> <p><i>Note: This objective is subject to an ongoing review and is currently unchanged from the 2003 SEO. Refer to the addendum to the EIR (Santos 2009a) for details.</i></p>	<p><u>Drilling & Completion Activities</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> There is no uncontrolled flow to surface (blow out). <input type="checkbox"/> Sufficient barriers exist in casing annulus to prevent crossflow between separate aquifers or hydrocarbon reservoirs. <input type="checkbox"/> Relevant government approval obtained for abandonment of any radioactive tool left downhole. 	<p><u>Drilling & Completion Activities</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> A competent cement bond between aquifer and hydrocarbon reservoirs is demonstrated. <input type="checkbox"/> For cases where isolation of these formations is not established, a risk assessment incorporating the use of pressure / permeability / salinity data is undertaken in consultation with DLWBC & SAALNRM Board to determine if lack of cement or poor bond will cause or has caused damaging crossflow which needs to be remediated. 	<ul style="list-style-type: none"> <input type="checkbox"/> There were no well bore failures reported

<p><u>Objective 6 Cont:</u> Minimise loss of aquifer pressures and avoid aquifer contamination</p>	<p><u>Producing, Injection, Inactive and Abandoned Wells</u></p> <p>No cross-flow behind casing between aquifers, and between aquifers and hydrocarbon reservoirs unless approved by DWLBC.</p>	<p><u>Producing, Injection and Inactive Wells</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Monitoring programs implemented (e.g. through well logs, pressure measurements, casing integrity measurements and corrosion monitoring programs) to assess condition of casing and cross-flow behind casing. <input type="checkbox"/> Casing annulus pressures are monitored every 2 years. <input type="checkbox"/> The condition of the primary casing barrier is adequate. <input type="checkbox"/> For cases where crossflow is detected, a risk assessment incorporating the use of pressure / permeability / salinity data is undertaken in consultation with DLWBC & SAALNRM Board to determine if lack of cement or poor bond will cause or has caused damaging crossflow which needs to be remediated. <p><u>Well Abandonment Activities</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Isolation barriers are set in place to ensure that crossflow, contamination or pressure reduction will not occur. <input type="checkbox"/> Barriers will be set to meet or exceed the requirements of applicable standards for the decommissioning and abandonment of water bores and abandonment of petroleum wells. <p>The placement of isolation barriers will in general be to isolate the groups of formations as listed under comments. The number and placement of barriers may be varied from this standard approach on a case-by-case basis by Santos personnel using relevant available data and the SA Cooper Basin Water Pressure and Salinity Module Report (2002), and in consultation with DWLBC.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Cement bond logs conducted on new wells for baseline indication of cement bond.
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<p>Objective 7: Minimise disturbance to native vegetation and native fauna.</p>	<p><u>Well Lease and Access Track Construction and Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Any sites with rare, vulnerable and endangered flora and fauna have been identified and avoided. <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for “Minimise impact on vegetation” objective as listed in Appendix 1 Table A1 and “The revegetation of indigenous species” objective as listed in Appendix 1 Table A2, during well lease and access track site selection and construction and restoration. <p><u>Borrow Pit Construction and Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 0, +1 or +2 GAS criteria are attained for “Minimise impacts on vegetation” objectives as listed in Appendix 1 Table A3 during borrow pit site selection, construction, and restoration. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to assessment criteria for Objective 11. <p><u>Fuel and Chemical Storage and Handling</u></p> <p>Refer to assessment criteria for Objectives 2 and 4.</p>	<p><u>Well Lease and Access Track Construction and Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Proposed well sites, camp sites, access tracks and borrow pit sites have been assessed for rare, vulnerable and endangered flora and fauna species before the commencement of construction. <input type="checkbox"/> Consider alternate routes during planning phase to minimise environmental impacts <input type="checkbox"/> Sensitive land systems (e.g. wetlands) avoided wherever possible. Where activities are undertaken in these areas (i.e. no practicable alternative), appropriate review, assessment and mitigation measures are in place. <input type="checkbox"/> Facilities (e.g. borrow pits, well cellars) are designed and constructed as far as practicable to minimise fauna entrapment. <input type="checkbox"/> Sumps and mud pits are fenced as appropriate to minimise wildlife access <input type="checkbox"/> Assessment records are kept and are available for auditing. <input type="checkbox"/> In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body <input type="checkbox"/> Borrow pits are restored to minimise water holding capacity, where agreements are not in place with stakeholders. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Covered bins are provided for the collection and storage of putrescible wastes. <input type="checkbox"/> All loads of rubbish are covered during transport to the central waste facility. <input type="checkbox"/> Refer to Objective 11. <p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to Objectives 2 & 4. <p><u>Fauna Management</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> No domestic pets allowed at camps or worksites. <p>Feeding of wildlife (e.g. dingoes) is not permitted.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Study undertaken to determine habitats for rare, vulnerable and endangered species. Areas identified are avoided. <input type="checkbox"/> Vegetation impacts are minimised during well lease access and construction by scouting surveys prior to the entry of construction machinery. Wherever possible, significant vegetation is avoided. <input type="checkbox"/> Borrow pit site selection provides for the avoidance of vegetation impacts. Borrow pits are restored on an ongoing basis to allow natural vegetation regrowth to recommence. Where necessary, borrow pits are reopened to minimise vegetation impacts.
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<p>Objective 8: Minimise air pollution and greenhouse gas emissions.</p>	<p><input type="checkbox"/> Performance to EPA requirements.</p>	<p><u>Well Testing</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Conduct well testing in accordance with appropriate industry accepted standards. <input type="checkbox"/> Continually review and improve operations. <input type="checkbox"/> Appropriate emergency response procedures are in place for the case of a gas leak. <p><u>Well Blowdown</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Blowdown carried out in accordance with industry accepted standards / good production practice. <input type="checkbox"/> Any well that is consistently blown down is identified for a small ID tubing or plunger lift installation to minimise blow downs on that well. 	<p><input type="checkbox"/> Emergency response procedures are in place, are regularly tested and improvements identified are included in the plans.</p>
<p>Objective 9: Maintain and enhance partnerships with the Cooper Basin community.</p>	<p><input type="checkbox"/> No unresolved reasonable complaints from the community.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Relevant affected parties are notified and consulted on proposed activities. <input type="checkbox"/> Forward development plans are presented to the local community. <input type="checkbox"/> Local community projects and events are sponsored and supported where appropriate. <input type="checkbox"/> Industry membership of appropriate regional land management committees and boards 	<ul style="list-style-type: none"> <input type="checkbox"/> Relevant parties are notified and consulted on proposed activities. There were no complaints, concerns or issues left unresolved. <input type="checkbox"/> Local community events and activities are actively supported. <input type="checkbox"/> Membership and active participation is made to regional management committees and Boards. <input type="checkbox"/> Pastoralists Newsletter produced to update landholders of Santos activities in the area
<p>Objective 10: Avoid or minimise disturbance to stakeholders and/or associated infrastructure</p>	<p><input type="checkbox"/> No reasonable stakeholder complaints left unresolved.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Induction for all employees and contractors covers pastoral, conservation, tourism, legislation and infrastructure issues. <input type="checkbox"/> Relevant stakeholders are notified prior to survey and construction of well sites, camp sites and access tracks and undertaking of operations (pursuant to Regulations). Borrow pits left open (unrestored) if requested by landholder and upon receipt of letter of transfer of responsibility to landholder. <input type="checkbox"/> Gates or cattle grids are installed to a standard, consistent with pastoral infrastructure in fences where crossings are required for access. <input type="checkbox"/> All gates left in the condition in which they were found (ie. open/closed). <input type="checkbox"/> Potential sources of contamination are fenced as appropriate to prevent stock access. <input type="checkbox"/> Excavations are located and managed so as not to pose an unacceptable hazard to stock or wildlife. <input type="checkbox"/> System is in place for logging landholder complaints to ensure 	<ul style="list-style-type: none"> <input type="checkbox"/> The importance of developing and maintaining good relationships with landholders is stressed to all employees and contractors. <input type="checkbox"/> Relevant stakeholders are notified of and consulted about projects and are provided with information, maps etc. <input type="checkbox"/> No Borrow pits were formally transferred to landholders. <input type="checkbox"/> Grids, fences, gates installed are to a standard acceptable to the landholder. <input type="checkbox"/> All gates are left "as found". <input type="checkbox"/> In response to concerns regarding potential for contamination of cattle an extensive fencing of facilities program was completed in 2005 <input type="checkbox"/> Landholder complaints and requests are logged

		<p>that issues are addressed as appropriate.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Requirements of the Cattle Care and Organic Beef accreditation programs are complied with. <input type="checkbox"/> In recognised conservation reserves (e.g. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body (e.g. DEH). 	<p>to ensure closeout. There were no complaints lodged.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cattle management systems (cattle care) are recognised and complied with.
<p>Objective 11: Optimise waste reduction and recovery.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> All wastes to be disposed of at an EPA licensed facility in accordance with EPA Licence conditions, with the exception of drilling fluids, drill cuttings, other fluids disposed during well clean-up and wastewater (see below). <input type="checkbox"/> Wastewater (sewage and grey water) disposed of in accordance with the <i>Public and Environmental Health (Waste Control) Regulations 1995</i> or to the Department of Health's satisfaction. <input type="checkbox"/> Attainment of GAS criteria for "Site to be left in clean, tidy and safe condition" objective during well site restoration (refer Appendix 1 Table A2). <input type="checkbox"/> Attainment of GAS criteria for "Site left in clean and tidy condition" objective during borrow pit restoration (refer Appendix 1 Table A3). 	<ul style="list-style-type: none"> <input type="checkbox"/> Chemicals and oil are purchased in bulk. "Bulki bins" or other storage tanks are in place for large volume items. <input type="checkbox"/> Covered bins are provided for the collection and storage of putrescible wastes. All loads of rubbish are covered during transport to a licensed waste facility. <input type="checkbox"/> Waste streams are segregated on site to maximise opportunities for waste recovery, reuse and recycling. <input type="checkbox"/> Coordinate covered waste transportation on backload. <input type="checkbox"/> Production of waste is minimised by purchasing specifying reusable, biodegradable or recyclable materials in procurement, where practical. <input type="checkbox"/> Drilling fluids, drill cuttings and other fluids are disposed of to sump on the Act licence area. <input type="checkbox"/> Waste water (sewage) disposal is where possible in accordance with the <i>Public and Environmental Health (Waste Control) Regulations 1995</i> (which require that the waste water disposal system must either comply with the <i>Standard for the Construction, Installation and Operation of Septic Tank Systems in SA</i> or be operated to the satisfaction of the Department of Health) and the <i>Environment Protection (Water Quality) Policy 2003</i>. <input type="checkbox"/> Grey water is disposed of to the sewage treatment system. <input type="checkbox"/> Secondary treated sewage wastewater is disposed of onto land well away from any place from which it is reasonably likely to enter any waters, and to minimise spray drift and ponding, in accordance with clause 11 of the <i>Environment Protection (Water Quality) Policy 2003</i>. 	<ul style="list-style-type: none"> <input type="checkbox"/> Chemicals, cement & inhibitors are purchased in bulk containers. <input type="checkbox"/> Waste material is disposed of at EPA Approved facilities.

<p>Objective 12: Remediate and rehabilitate operational areas to agreed standards.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No unresolved reasonable stakeholder complaints. <p><u>Contaminated Site Remediation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Contaminated sites are remediated in accordance with criteria developed with the principles of the National Environment Protection Measure for Contaminated sites and in consultation with the EPA. <p><u>Well Site and Access Track Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> The attainment of 0, +1 or +2 GAS criteria for: <ul style="list-style-type: none"> - “minimise visual impact of abandoned well sites” - “minimise visual impact of abandoned access tracks” - “re-establish natural vegetation on abandoned well sites and access tracks” <p><u>Borrow Pit Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> The attainment of 0, +1 or +2 GAS criteria for: <ul style="list-style-type: none"> - “minimise impact on vegetation” - “minimise impact on soil” - “Minimise visual impacts” <input type="checkbox"/> <u>Note:</u> Well abandonment issues addressed under objective 6. 	<ul style="list-style-type: none"> <input type="checkbox"/> Rehabilitation/ abandonment plans for surface activities will be developed in consultation with relevant stakeholders <p><u>Well Site and Access Track Restoration</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Compacted soil areas have been ripped (except on gibber and tablelands) and soil profile and contours are reinstated following completion of operations. 	<ul style="list-style-type: none"> <input type="checkbox"/> No complaints raised by stakeholders.
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