PEL 114
Annual Report

Permit Year Five

22 July 2007 to 21 July 2008

This report has been prepared in accordance with the requirements of the Petroleum Act 2000 and Petroleum Regulations 2000 and covers all of the operations conducted in PEL 114 by Santos Ltd for the period 22 July 2007 to 21 July 2008.

PEL 114 Year 5 Annual Report

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2007/2008 ANNUAL REPORT

1. Introduction

This report covers the activities conducted in Year 5 of Petroleum Exploration Licence (**PEL**) 114 between 22nd July 2007 and 21st July 2008. PEL 114 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 22 May 2003 and expired on 21 July 2008. A renewal application was submitted to PIRSA 22 May 208, seeking renewal for a further five year term.

In accordance with the reporting requirements of Regulation 33, this report also provides a performance assessment with regard to the requirements of the *Petroleum Act 2000* (the **Act**), the *Petroleum Regulations 2000* (the **Regulations**), and licences and objectives under the *Statement of Environmental Objectives* (2006) (the **SEO**) (see Appendix 3).

2. Executive Summary

During the Year 5 reporting period activities conducted in PEL 114 included the drilling of five wells (Stimpee-3, Curlington-1, Murteree South-1, Mulga North East-1, Hoek-3). There were no serious or reportable incidents or accidents, according to the definitions of the Act or Regulations, which resulted in injury or illness to any member of the general public associated with any of the activities conducted.

3. Summary of Regulated Activities

The *Regulated Activities* conducted by Santos Ltd while exploring for petroleum within PEL 114 were:

- Access road / track construction to five well locations,
- Well lease and campsite construction at four well locations,
- Borrow pit construction,
- The drilling of five wells.

4. Compliance

The activities covered by this report are administered under the *Petroleum Act (2000)* and the *Petroleum Regulations (2000)* and the *Statement of Environmental Objectives* (2006) covering well operations in the Cooper Basin.

Following the request submitted to PIRSA back on 15 November 2005 and subsequent approval, the work program for the licence was amended as follows:

Permit Year	Minimum Work Requirements
One	320 km^2 3D seismic, Geological and Geophysical Studies
Two	4 wells, Geological and Geophysical Studies
Three, Four, Five	7 wells, 200 km^2 3D seismic, Geological and Geophysical Studies

Work actually undertaken during permit years one to five is shown in the table below:

Permit Year	Actual Activities
One	290.63 km^2 3D seismic (NE Murteree Horst) and included coverage required to tie into the Goyder-Miluna, Murteree Horst and Greater Strezecki 3D surveys and 76.68 km^2 3D seismic in adjacent PPLs
Two	4 wells - Derrilyn-1, Teringie-1, Ren-1, Stimpee-1, Final processing of the NE Murteree Horst 3D survey
Three	4 wells - Stimpee-2, Frostillicus-1, Stimpson Jay-1, Hoek-1
Four	3 wells - Shazlick-1, Hoek-2, Mudlalee West-1, 188 km^2 3D (Bugito-Kobari Seismic Survey and 99 km^2 within adjacent PPLs)
Five	5 wells – Stimpee-3, Curlington-1, Murtee South-1, Mulga North East-1, Hoek-3.

There was good compliance with the requirements of the Petroleum Act and Regulations and the SEO. There were no areas where non-compliance with the relevant legislation or SEO was identified.

The Permit Year 4 Annual Report was submitted on 17 September 2007 and resubmitted on 16 May 2008.

5. Incidents

The Act defines all “Serious Incidents” that are required to be reported promptly to PIRSA. There were no 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 PEL 114.

6. Management System Audits

No audits were conducted during the reportable period.

7. Risk Assessment

As part of the original application to PIRSA to drill four wells, Santos included an *Emergency Response Plan* together with a *Statement of Environmental Objectives* and an *Environmental Impact Report*. These outlined the risks and threats anticipated as a result of the drilling operations and identified measures to prevent their occurrence. Additionally the drilling contractor abides by a site-specific safety and environmental plan that is used in conjunction with the Santos *Emergency Response Plan*.

8. Threats

There were no serious threats identified due to the drilling activities conducted in this Licence area during the reportable period.

9. Emergency Response

An *Emergency Response Plan* and *Environmental Plan* were developed for activities conducted in South Australia, including PEL 114. In the event of an incident, the SACBJV resources would be mobilised to assist.

10. Seismic Exploration Activities

No seismic data were acquired during the reporting period.

10.1 Cultural Heritage Clearance

No cultural heritage activity conducted.

10.2 Future Seismic Activities – Year 1, Term 2

No seismic activity is planned.

11. Drilling and Well Operations

Five wells were drilled during the reporting period: Stimpee-3, Curlington-1, Murteree South-1, Mulga North East-1, Hoek-3. Two of these wells were Cased & Suspended (Stimpee-3, Hoek-3) while the three other wells were Plugged & Abandoned.

Activity dates were:

a) Environmental Clearance of Well Lease:

Stimpee-3: 27/06/07
Curlington-1: 12/11/07
Murteree South-1: 21/11/07
Mulga North East-1: 21/11/07
Hoek-3: 08/04/08

b) Well Lease Preparation:

Stimpee-3: Jun/Jul 07
Curlington-1: Nov/Dec 07
Murteree South-1: Dec 07/Jan 08
Mulga North East-1: Dec 07/Jan 08
Hoek-3: April/May 08

c) Drilling:

Stimpee-3: spudded 2 September 2007; released 9 September 2007;
Curlington-1: spudded 1 January 2008; released 9 January 2008
Murteree South-1: spudded 14 January 2008; released 22 January 2008
Mulga North East-1: spudded 28 April 2008; released 6 May 2008
Hoek-3: spudded 18 May 2008; released 25 May 2008;

Reportable costs for Year 5 on these four drill projects are presented in Appendix 1.

11.1 Cultural Heritage Clearance

Pre-clearance of the Stimpee-3, Curlington-1, Murteree South-1, Mulga North East-1 and Hoek-3 drilling sites was conducted by Australian Heritage Services Pty. Ltd. October 2007 in conjunction with representatives of the Yandruwandha & Yawarrawarrka Native Title Claimant Group.

11.2 Future Drilling Activities – Year 1, Term 2

During Year 1 of Term 2, Santos will undertake an in depth review of the data acquired during Term 1 in order to re-appraise the remaining prospectivity prior to selecting any drilling locations.

12. Production and Processing Operations

Nine producing oil wells (Frostillicus 1, Stimpson Jay 1, Hoek 1, Hoek 2, Stimpee 1, Stimpee 2, Stimpee 3, Teringie 1, Shazlick 1) together contributed approximately 110 kbbl during Year 5 under Extended Production Testing licenses. This equates to an average 300 barrels of oil per calendar day, or 33 bpd/well. Average water cut during the period was approximately 90% - 95%. At the end of the period all of these wells, with the exception of Shazlick 1, remained in operation. Shazlick 1 had ceased production after declining to sub-economic production rates.

Wells were produced via progressing cavity pump (PCP) artificial lift systems, powered by electric or hydraulic drivers with dedicated lease-sited crude-fuelled power generation. Stimpee 2 was produced via electric submersible pump (ESP) artificial lift, with dedicated, crude fuelled, lease-sited power generation. Production fluid (oil & water) was transported via a gathering system of buried flowlines, production metering stations and trunklines to the Limestone Creek Oil Satellite for dewatering and export, under a processing agreement with the owners of that facility.

Prior to the end of the Year 5 period, application was made to PIRSA for Petroleum Production Licenses around the reserve areas of each of the producing wells/fields, with the exception of Shazlick 1. These licenses had not been granted by the close of the Year 5 period.

All production in PEL114 during this period was conducted in accordance with the Production and Processing SEO (see Appendix 4).

12.1 Future Production Activities – Year 1, Term 2

Production is intended to continue from the afore-listed producing wells, initially under EPT until such time as the PPLs are granted. One additional well, Hoek 3, is expected to commence production early within the Year 1, Term 2 period.

Additional drilling is planned within Year 1, Term 2, and production is likely to commence within the upcoming year, dependent on commercial success. This new production will be commenced either within a PPL (pending granting), or under a new EPT, depending on the location of the well(s).

It is expected that production from the new wells will be via Beam Pump or ESP artificial lift and will connect with new flowlines into the existing gathering network, for processing at the Limestone Creek oil satellite.

13. Statement of Proposed Work – Year 1, Term 2

During Year 1 of Term 2, the proposed work associated with exploration in PEL 114 is as follows:

13.1 Seismic Exploration

No acquisition is planned. Reprocessing may be undertaken if supported by the detailed data review.

13.2 Drilling and Well Operations

No wells will be drilled during Year 1, but it is planned to drill at least two wells during Term 2.

13.3 Production and Processing Operations

No production or processing operations are planned in PEL 114. Any production from future successful wells in the permit will be carried out following EPT authorisation prior to applications for subsequent PPLs.

14. Performance Measured Against SEO

See Appendix 3.

15. Appendices

1. Financial Summary
2. List of Reports (Reg 33 (2) e)
3. Environmental Objectives and Performance – Drilling and Well Operations
4. Environmental Objectives and Performance - Production and Processing SEO

APPENDIX 1 - Financial Summary

Commercial in Confidence

APPENDIX 2 - List of Reports and Data

#	Report Title	Comment
1	Permit Year 4 Annual Report	Submitted to PIRSA 17 September 2007 (resubmitted 16 May 2008)
2	Well Completion Report – Shazlick-1	Submitted to PIRSA 11 October 2007
3	Well Proposal – Curlington-1	Submitted to PIRSA 30 October 2007
4	Well Proposal – Murteree South 1	Submitted to PIRSA 21 November 2007
5	Well Proposal – Mulga North East 1	Submitted to PIRSA 21 November 2007
6	Well Completion Report – Hoek-2	Submitted to PIRSA 13 December 2007
7	Well Completion Report– Mudlalee West 1	Submitted to PIRSA 19 December 2007
8	Well Proposal – Hoek-3	Submitted to PIRSA 21 April 2008
9	Well Completion Report – Stimpee-3	Submitted to PIRSA 07 March 2008
10	2006 Bugito-Kobari 3D Final Interpretation Report (CD)	Submitted to PIRSA 05 May 2008
11	Well Completion Report – Curlington-1	Submitted to PIRSA 07 July 2008
12	Well Completion Report – Murteree South-1	Submitted to PIRSA 18 July 2008

APPENDIX 3 - Environmental Objectives and Performance - Drilling and Well Operations SEO

Environmental Objectives and Performance – Drilling and Well Operations SEO

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 1: Minimise the risk to public and other third parties.	▪ Reasonable measures implemented to ensure no injuries to the public or third parties.	▪ All employees and contractor personnel complete a safety induction prior to commencement of work in the field. ▪ All employees and contractor personnel undertake a refresher induction every 2 years. ▪ Signage in place to warn third parties of access restrictions to operational areas, with particular warnings when potentially dangerous operations are being undertaken. ▪ Permit to work systems in place for staff and contractors in dangerous situations. ▪ All appropriate PPE (personnel protective equipment) is issued and available as required in accordance with company operating requirements and applicable standards. ▪ Effective Emergency Response Plan (ERP) and procedures are in place in the event of a fire or explosion. ▪ Annual exercise of ERP. ▪ 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. ▪ Reporting systems for recording injuries and accidents in place, and annual; (at minimum) review of records to determine injury trends. Implementation of appropriate corrective actions. ▪ Ensuring safety management plans are updated and reviewed.	▪ There were no injuries to the public or any third parties arising from Drilling and Well operations 22 July 2007 to 21 July 2008. ▪ All Santos and Santos Contract employees attend a compulsory safety induction prior to commencing work. Refresher training is provided at regular intervals. ▪ 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. ▪ A specific Wellsite Permit-to-Work system is used to manage workplace / worksite safety. ▪ Personnel are provided with the relevant, approved PPE when undertaking potentially hazardous tasks. ▪ Emergency Response Plans and procedures are in place. These procedures are regularly exercised with identified improvements included into the ERPs. ▪ Relevant parties are advised of potentially hazardous operations before they are undertaken. ▪ An electronic accident and incident recording system is used to report and monitor accidents, incidents and trends. ▪ Safety Management Plans, including KPIs, have been developed and introduced by Santos and its contractors. These are regularly reviewed and updated. ▪ Emergency Response procedures for well operations were reviewed and updated during this reporting period.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 2: Minimise disturbance and avoid contamination to soil.	Well Site and Access Track Construction ▪ 0, +1 or +2 GAS criteria are attained for "Minimise visual impacts of abandoned well sites and access tracks" objective. ▪ No unauthorised off-road driving or creation of shortcuts. ▪ No construction activities are carried out on salt lakes, steep tableland land systems or wetlands land systems (as defined in EIR). Borrow pit construction and restoration • 0, +1 or +2 GAS criteria are attained for "Minimise Visual Impacts for constructing borrow pits" objective, and "Minimise visual impacts" and "Minimise impact on soil" objectives. Production Testing/Well Blowdowns ▪ No soil contamination as a result of production testing or well blowdown operations.	Well Site and Access Track Construction ▪ Consider alternate routes during planning phase to minimise environmental impacts ▪ Gibber mantle on access tracks and well sites (excluding sumps) has not been removed, only rolled, during construction and restoration on gibber and tableland land systems. ▪ Topsoil stockpiled (including gibber mantle) from sump construction and respread on abandonment. ▪ The need to traverse sensitive land systems and the methods of managing the impacts should be justified in accordance with company procedures, recorded and available for auditing. Production Testing / Well Blowdowns ▪ If appropriate use: - impermeable flare pit flare tanks.	▪ Soil disturbance is minimised wherever possible. Rootstock is left intact and top soil is stockpiled for respreading. This is respread during site restoration. ▪ Off-road driving is actively discouraged. Alternate routes are considered in planning. Work is restricted to ROW. ▪ No construction activity is carried out on salt lakes, steep tablelands or wetland systems. ▪ Audits of construction activity are undertaken with high level of performance. ▪ 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 ▪ In 2004 a formal Santos policy on greenhouse gas was published and petroleum engineering operations continued investigations to support

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
<u>Objective 2 cont</u>: Minimise disturbance and avoid contamination to soil.	<u>Fuel and Chemical Storage and Handling</u> ▪ No spills/leaks outside of areas designed to contain them. ▪ Level of hydrocarbon continually decreasing for in situ remediation of spills. ▪ Soils remediated to a level as determined by the SHI process.	<u>Fuel and Chemical Storage and Handling</u> ▪ All fuel, oil and chemical storages bunded in accordance with the appropriate standards ▪ Records of spill events and corrective actions maintained in accordance with company procedures. ▪ Spills or leaks are immediately reported and clean up actions initiated. ▪ 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). ▪ Chemical and fuel storage procedures, including signage, are reviewed and monitored in audit process. <u>Spill Response / Contingency Planning</u> ▪ 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. ▪ Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. ▪ Spill response equipment is audited annually. ▪ Annual spill response training exercise is undertaken.	▪ No spills occurred outside areas designed to contain them as reported at quarterly meetings. ▪ SACBJV learnings from Incidents were reviewed to enable improvement strategies to be identified and are applied to PEL 114 activity. ▪ No oil spill is likely to have impacted ground water. ▪ Records of spills are maintained. ▪ Spills are reported in accordance with legislative and company requirements. ▪ Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement.
	▪ All domestic wastes are disposed of in accordance with EPA licensing requirements. ▪ 0, +1 or +2 GAS criteria for 'Waste material' objective are attained. ▪ No spills or leaks from sewage treatment process and sludge pits.	<u>Waste Disposal (domestic, sewage and sludges)</u> ▪ Covered bins are provided for the collection and storage of wastes. ▪ All loads of rubbish are covered during transport to the central waste facility. ▪ Pits are not established in locations, which pose an unacceptable hazard to stock or wildlife.	▪ Domestic wastes are disposed of in accordance with EPA License Requirements. Audits identified good performance. ▪ Waste bins and containers are covered during transport. ▪ Waste pits are located only at Authorised facilities and are fenced to exclude stock and wildlife. ▪ A waste management plan was developed and submitted to the EPA for approval. ▪ There were no incidents at installed sewage disposal facilities.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 3: Avoid the introduction or spread of pest plants and animals and implement control measures as necessary.	▪ No weeds or feral animals are introduced to operational areas.	▪ Where appropriate a weed and feral animal management strategy is in place (avoidance and control strategies). ▪ Rig and vehicle wash downs are initiated in accordance with the management strategy.	▪ Weed and feral animal strategies are in place. There is no evidence of the introduction of weeds or feral animals. ▪ Vehicles and rig equipment is washed in accordance with the management strategy.
Objective 4: Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow ground water resources.	Well Lease and Access Track Construction ▪ Well leases 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). Drilling Mud Sumps and Flare Pits ▪ No overflow of drill cuttings, muds and other drilling fluids from mud sumps. ▪ No waste material disposal to sumps and flare pits. Well Heads (Oil and Gas Systems) • No leaks/spills outside of areas designed to contain them.	Drilling Mud Sumps and Flare Pits ▪ 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. Well Heads (Oil and Gas Systems) • Where appropriate, imperviously lined well cellars are installed on oil wells. • Chemical containment devices are installed on gas well skids. • Well heads shut in and chemicals removed prior to flood events. • Jet pumps are installed within containment device with an adequately sized containment sump.	▪ 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. ▪ Work programs are modified to avoid periods of flooding and other seasonal influences and variations. ▪ No overflow of drilling mud sumps occurred. ▪ No waste material is disposed of in drilling mud sumps or flare pits. ▪ Investigated alternatives for impervious lining for well cellars. ▪ Automatic shutdown of wellhead pumps investigated and devices progressively fitted to all beam pumps to shutdown pump if Polished rod packer fails. ▪ Wells are shut-in and wellhead equipment is removed in areas to be impacted by flooding.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 4 cont Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow ground water resources.	Well Blowdown/Production Testing • No water (surface or groundwater) contamination as a result of production testing or well blowdown operations.	Well Blowdown/Production Testing • Activity is conducted in accordance with accepted industry standards / good oilfield practice. • If appropriate use: - impermeable flare pit - flare tanks - separators - supervision	See Objective 2 above.
	Fuel/Chemical Storage and Handling • No leaks/spills outside of areas designed to contain them.	Fuel and Chemical Storage and Handling • All fuel, oil and chemical storages bunded in accordance with the appropriate standards • Records of spill events and corrective actions maintained in accordance with company procedures. • Spills or leaks are immediately reported and clean up actions initiated. • 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). • Chemical and fuel storage procedures, including signage, are reviewed and monitored in audit process. Spill Response / Contingency Planning ▪ 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. ▪ Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. ▪ Spill response equipment is audited annually. ▪ Annual spill response training exercise is undertaken.	▪ Records of spills are maintained ▪ Spills are reported in accordance with legislative and company requirements. ▪ Incident registers are reviewed to determine areas requiring improvement and to ensure ongoing improvement. ▪ Soil removed to land farm in some instances to eliminate contamination. No spill is likely to have impacted ground water. ▪ Emergency response procedures for spill response are in place and regularly exercised. Learning from exercises and actual events are included in Plans. ▪ Oil Spill Plans are up-to-date and regularly drilled. ▪ Spill response equipment and procedures are regularly audited. ▪ Regular drills are conducted.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 5: Avoid disturbance to sites of cultural and heritage significance.	• Proposed well sites and access tracks have been surveyed and any sites of Aboriginal and non-Aboriginal heritage identified. • Any identified cultural and heritage sites have been avoided.	• Consultation with stakeholders (i.e. government agencies, landholders etc) in relation to the possible existence of heritage sites, as necessary. • Heritage report forms completed for any sites or artefacts identified, and report forms forward to the Department of State Aboriginal Affairs (DOSAA). • Survey records are kept and are available for auditing. • Areas requiring remediation which lie outside previously surveyed sites should be surveyed in accordance with company heritage clearance procedures. *Note:* Where a negotiated agreement or determination for heritage clearance is in place, performance with the negotiated agreement or determination takes precedence over the above criteria.	▪ Construction sites are inspected for cultural heritage sites. Identified sites are avoided. Significant sites are fenced. ▪ Identified sites are avoided.
Objective 6: Minimise loss of aquifer pressures and avoid aquifer contamination.	Drilling & Completion Activities ▪ There is no uncontrolled flow to surface (Blow out). ▪ Sufficient barriers exist in casing annulus to prevent cross flow between separate aquifers or hydrocarbon reservoirs. ▪ Relevant government approval obtained for abandonment of any radioactive tool left downhole.	Drilling & Completion Activities ▪ A competent cement bond between aquifer and hydrocarbon reservoirs is demonstrated. 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 & AAWCMB to determine if lack of cement or poor bond will cause or has caused damaging cross flow which needs to be remediated.	▪ There were no well bore failures reported

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 6 Cont: Minimise loss of aquifer pressures and avoid aquifer contamination	Producing, Injection, Inactive and Abandoned Wells • No cross-flow behind casing between aquifers, and between aquifers and hydrocarbon reservoirs unless approved by DWLBC.	Producing, Injection and, Inactive Wells • Monitoring programs implemented (eg. Through well logs pressure measurements, casing integrity measurements and corrosion monitoring programs) to assess condition of casing and cross-flow behind casing. • Casing annulus pressures are monitored every 2 years. • The condition of the primary casing barrier is adequate. • For cases where cross flow is detected, a risk assessment incorporating the use of pressure / permeability / salinity data is undertaken in consultation with DLWBC & AAWCMB to determine if lack of cement or poor bond will cause or has caused damaging cross flow which needs to be remediated. Well Abandonment Activities • Isolation barriers are set in place to ensure that cross flow, contamination or pressure reduction will not occur. ▪ 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. ▪ 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 SACB Operator personnel using relevant available data and the SA Cooper Basin Water Pressure and Salinity Module Report (2002), and in consultation with DWLBC.	▪ Cement bond logs conducted on new wells for baseline indication of cement bond.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 7: Minimise disturbance to native vegetation and native fauna.	Well Lease and Access Track Construction and Restoration ▪ Any sites with rare, vulnerable and endangered flora and fauna have been identified and avoided. ▪ 0, +1 or +2 GAS criteria are attained for "Minimise impacts on vegetation" objective as listed in Appendix , during well lease and access track site selection and construction and for "Re-establish natural vegetation on abandoned well sites and access track" objective in Appendix . Borrow Pits Construction and Restoration ▪ 0, +1 or +2 GAS criteria are attained for "Minimise impacts on vegetation" objective during borrow pit site ▪ selection and construction, and "Minimise Impact on Vegetation" objective in Appendix 5 for borrow pit restoration. Waste Management ▪ Refer to assessment criteria for Objective 11. Fuel and Chemical Storage and Management ▪ Refer to assessment criteria for Objectives 2 and 4.	Well Lease and Access Track Construction and Restoration ▪ 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. ▪ Consider alternate routes during planning phase to minimise environmental impacts ▪ Facilities (e.g. borrow pits, well cellars) are designed and constructed as far as practicable to minimise fauna entrapment. ▪ Sumps and mud pits are fenced as appropriate to minimise wildlife access ▪ Assessment records are kept and are available for auditing. ▪ In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body ▪ Borrow pits are restored to minimise water holding capacity, where agreements are not in place with stakeholders. Waste Management ▪ Covered bins are provided for the collection and storage of wastes. ▪ All loads of rubbish are covered during transport to the central waste facility. ▪ Pits are not established in locations, which pose an unacceptable hazard to stock or wildlife.	▪ Study undertaken to determine habitats for rare, vulnerable and endangered species. Areas identified are avoided. ▪ 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. ▪ 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.

Environmental Objectives	Assessment Criteria	Guide to Objectives Achievement	Performance 2007/2008 Report Period
Objective 8: Minimise air pollution and greenhouse gas emissions.	▪ Performance to EPA requirements.	Well Testing ▪ Conduct well testing in accordance with appropriate industry accepted standards. ▪ Continually review and improve operations. ▪ Appropriate emergency response procedures are in place for the case of a gas leak. Well Blowdown ▪ Blowdown carried out in accordance with industry accepted standards / good production practice. ▪ 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.	▪ Emergency response procedures are in place, are regularly tested and improvements identified are included in the plans.
Objective 9: Maintain and enhance partnerships with the Cooper Basin community.	▪ No unresolved reasonable complaints from the community.	▪ Relevant affected parties are notified and consulted on proposed activities. ▪ Forward development plans are presented to the local community. ▪ Local community projects and events are sponsored and supported where appropriate. ▪ Industry membership of appropriate regional land management committees and boards i.e. the Lake Eyre Basin Consultative Council, Marree Soil Conservation Board, and Catchment Committees.	▪ 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

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 10: Avoid or minimise disturbance to stakeholders and/or associated infrastructure	▪ No reasonable stakeholder complaints left unresolved.	▪ Induction for all employees and contractors covers pastoral, conservation, legislation and infrastructure issues. ▪ Relevant stakeholders are notified prior to survey and construction of well sites, camp sites and access tracks and undertaking of operations (pursuant to Petroleum Regulations). Borrow pits left open (unrestored) if requested by landholder and upon receipt of letter of transfer of responsibility to landholder. ▪ Gates or cattle grids are installed to a standard, consistent with pastoral infrastructure in fences where crossings are required for access. ▪ All gates left in the condition in which they were found (i.e. Open/closed). ▪ Potential sources of contamination are fenced as appropriate to prevent stock access. ▪ System is in place for logging landholder complaints to ensure that issues are addressed as appropriate. ▪ Requirements of the Cattle Care and Organic Beef accreditation programs are complied with. ▪ In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body.	▪ 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.
Objective 11: Optimise waste reduction and recovery.	▪ With the exception of drilling fluids, drill cuttings and other fluids disposed during well clean-up, and sewage wastes, all wastes to be disposed of at an EPA licensed facility in accordance with EPA Licence conditions. ▪ Attainment of GAS criteria for “Site left in clean, tidy and safe condition after final clean-up” objective during well site restoration. ▪ Attainment of GAS criteria for “Site left in clean, tidy and safe condition” objective during borrow pit restoration.	▪ Bulk chemical and oil purchasing and use of “bulki bins” or other storage tanks in place for large volume items.	▪ Chemicals, cement & inhibitors are purchased in bulk containers. ▪ Waste material is disposed of at EPA Approved facilities.

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 12: Remediate and rehabilitate operational areas to agreed standards.	▪ No unresolved reasonable stakeholder complaints. Contaminated Site Remediation ▪ 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. Well Site and Access Track Restoration ▪ The attainment of 0, +1 or +2 GAS criteria for: - "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" Borrow Pit Restoration ▪ The attainment of 0, +1 or +2 GAS criteria for: - "minimise impact on vegetation" - "minimise impact on soil" - "Minimise visual impacts" ▪ *Note:* Well abandonment issues addressed under objective 6.	▪ Rehabilitation/ abandonment plans for surface activities will be developed in consultation with relevant stakeholders Well Site and Access Track Restoration ▪ Compacted soil areas have been ripped (except on gibber and tablelands) and soil profile and contours are reinstated following completion of operations.	▪ No complaints raised by stakeholders.

APPENDIX 4 - Environmental Objectives and Performance - Production and Processing SEO

Environmental Objectives and Performance - Production and Processing SEO

Environmental Objectives	Assessment Criteria	Guide to How Objectives Can Be Achieved	Performance 2007/2008 Report Period
Objective 1 Minimise the risk to public and other third parties.	▪ Reasonable measures implemented to ensure no injuries to the public or third parties.	▪ All employees and contractor personnel complete a safety induction prior to commencement of work in the field. ▪ All employees and contractor personnel undertake a refresher induction every 2 years. ▪ Signage in place to warn third parties of access restrictions to operational areas, with particular warnings when potentially dangerous operations are being undertaken. ▪ Permit to work systems in place for staff and contractors in dangerous situations. ▪ All appropriate PPE (personal protective equipment) is issued and available as required in accordance with company operating requirements and applicable standards. ▪ Effective Emergency Response Plan (ERP) and procedures are in place in the event of a fire or explosion. ▪ Annual exercise of ERP. ▪ 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. ▪ Reporting systems for recording injuries and accidents in place, and annual; (at minimum) review of records to determine injury trends. Implementation of appropriate corrective actions. ▪ Ensuring safety management plans are updated and reviewed.	▪ There were no injuries to the public or any third parties arising from Production and Processing 22 July 2007 to 21 July 2008. ▪ Induction training is provided to all Santos and contractor Employees ▪ Refresher training is provided. ▪ Signs are placed to warn the public about the hazards associated with accessing production areas. ▪ A Work Permit System, which is regularly audited, is in place. Revision 7 was introduced in late 2005. ▪ Santos and Contractor personnel are provided the appropriate PPE. ▪ Effective emergency response plans exist, which are regularly exercised. ▪ Regular emergency exercises are conducted. ▪ Communication of potentially hazardous or unusual tasks is made to affected parties prior to being undertaken. ▪ Injury and incident recording and reporting systems are maintained. ▪ Safety management plans are reviewed and updated regularly.
Objective 2 Minimise disturbance and avoid contamination to soil.	▪ 0, +1 or +2 GAS criteria are attained for goals related to this objective. ▪ No unauthorised off-road driving or creation of shortcuts.	Construction Activities (eg. Pipelines and roads) ▪ Santos operational procedures and guidelines are in place and will be followed for construction activities, for example to conserve soils resources: ▪ Consider alternate routes during planning phase to minimise environmental impacts ▪ Works are restricted to construction ROW.	▪ Soil disturbance is minimised wherever possible. Rootstock is left intact and top soil is stockpiled for respreading. ▪ Off-road driving is actively discouraged. Alternate routes are considered when planning projects.

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Objective 2 Continued	▪ No construction activities are carried out on salt lakes, steep tableland land systems or wetlands land systems (as defined in EIR).	▪ The need to traverse sensitive land systems and the method of managing the impacts will be justified in accordance with company procedures. ▪ Annual audit of construction practices.	▪ Work is restricted to pipeline ROWs. ▪ No construction activity is carried out on salt lakes, steep tablelands or wetland systems. ▪ Audit of construction is undertaken, with a high level at performance.
		Spill Response / Contingency Planning ▪ 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. ▪ Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. ▪ Spill response equipment is audited annually. Annual spill response training exercise is undertaken.	▪ Emergency procedures for spill responses are in place and regularly drilled. Learnings from drills and actual events are included in Plans. ▪ Oil Spill Plans are up-to-date and regularly tested. ▪ Spill response equipment and procedures are regularly audited.
	▪ No spills/leaks outside of areas designed to contain them. ▪ Level of hydrocarbon continually decreasing for in situ remediation of spills. ▪ Soils remediated to a level as determined by the SHI process.	Oil/Condensate Spills (Pipeline/Road Transport) ▪ Pipelines are compliant with AS2885 pipeline standards ▪ Pipeline Management System is reviewed annually. ▪ Pipelines are inspected and maintained in accordance with Pipeline Management System ▪ Spills or leaks are immediately reported and clean up actions initiated. ▪ Records of spill events and corrective actions are maintained in accordance with company procedures.	▪ The Pipeline Management System was reviewed, and updated. ▪ Spills and leaks are reported to PIRSA in accordance with requirements and cleanup actions initiated. ▪ Records of spills are maintained.
	▪ 0, +1 or +2 GAS criteria are attained for goals related to produced formation water impacts on soil, ▪ PFW contaminant levels are below disposal criteria. ▪ PFW EMP developed and objectives achieved.	Produced Formation Water (PFW) ▪ A study into development of a Soil Health Index (SHI) for impacted soils and sediments is currently being undertaken. This will ultimately assist in the rehabilitation of water disposal/evaporation ponds to a level consistent with appropriate adjacent land uses. ▪ The study will also enable an assessment of contaminants of concern in PFW in order to determine disposal criteria.	▪ Continued development of SHI.

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Objective 2 Continued	▪ All domestic wastes are disposed of in accordance with EPA licensing requirements. ▪ 0, +1 or +2 GAS criteria for 'Waste material' is attained. ▪ No spills or leaks from sewage treatment process and sludge pits. ▪ For LTU's contamination confined to designated treatment area.	Waste Disposal (domestic, sewage and sludge) ▪ Covered bins are provided for the collection and storage of wastes. ▪ All loads of rubbish are covered during transport to the central waste facility. ▪ Pits are not established in locations, which pose an unacceptable hazard to stock or wildlife.	▪ Domestic wastes are disposed of in accordance with EPA License Requirements. Audits identified full performance. ▪ Waste bins etc are covered during transport. ▪ Waste pits are located only at Licensed facilities and are fenced to exclude stock and wildlife. ▪ There were no incidents at sewerage disposal facilities.
Objective 3 Avoid the introduction or spread of pest plants and animals and implement control measures as necessary.	▪ No weeds or feral animals are introduced to operational areas.	▪ Where appropriate, weed and feral animal management strategy are in place (avoidance and control strategies). ▪ Vehicle and equipment wash downs will be initiated in accordance with the management strategy.	▪ Weed and feral animal strategies are in place. There is no evidence of the introduction of weeds or feral animals. ▪ Vehicle washing facilities are provided in accordance with the management strategy. ▪ Active support is provided for the management at feral animal control in area.
Objective 4 Minimise disturbance to drainage patterns and avoid contamination of surface waters and shallow groundwater resources.	▪ 0, +1 or +2 GAS criteria are attained for goals related to this objective. ▪ Construction activities (i.e. access tracks) are located and constructed to maintain pre-existing water flows (i.e. channel contours are maintained on floodplains and at creek crossings). ▪ No water (surface or groundwater) contamination as a result of production activities.	Construction Activities (eg. Pipelines and roads) ▪ Constructed activities undertaken are designed and managed to avoid diversion of water flows.	▪ Pipeline construction activities rated high in audits using GAS. Some shortfalls identified are being addressed. ▪ Activities are undertaken to ensure no interruption or diversion of water flows. ▪ Natural contours are reinstated. ▪ Known contaminated sites are monitored.

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Objective 4 Continued	▪ No spills/leaks outside of areas designed to contain them. ▪ Soils remediated to a level as determined by the SHI process. ▪ No water (surface or groundwater) contamination as a result of production activities.	Fuel and Chemical Storage, Handling and Transportation ▪ All fuel, oil and chemicals are stored, handled and transported in accordance with appropriate standards. ▪ Fuel and chemical storage, handling and transport procedures are reviewed and monitored in audit process. ▪ Records of spill events and corrective actions are maintained in accordance with company procedures. ▪ Spills or leaks are immediately reported and clean up actions initiated. ▪ Logged incidents are reviewed annually to determine areas that may require corrective action to reduce spill volumes in subsequent years (and drive continual improvement). ▪ SHI project currently being undertaken will assist in the rehabilitation of spill sites to a level consistent with appropriate adjacent land uses.	▪ Spills that occur outside areas designed to contain them are reported at quarterly meetings. ▪ Soil would be removed to land farm in some instances to eliminate contamination. No spill is likely to have impacted ground water. ▪ Records of spills are maintained. ▪ Spills are reported in accordance with legislative and company requirements. ▪ Incident registers are reviewed to ensure ongoing improvement.
	▪	Spill Response / Contingency Planning ▪ 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. ▪ Oil spill contingency plan (reviewed annually) is up to date with specific scenarios relating to spills to creeks and floodplain areas. ▪ Spill response equipment is audited annually. ▪ Annual spill response training exercise is undertaken.	▪ Oil/chemical spill plans and equipment are in place. ▪ Plans are up to date. ▪ Refer Objective 2.
	▪ No spills/leaks outside of areas designed to contain them. ▪ Level of hydrocarbon continually decreasing for in situ remediation of spills. ▪ Soils remediated to a level as determined by the SHI process	Oil/Condensate Spills (Pipeline/Road Transport) ▪ Pipelines are compliant with AS2885 pipeline standards ▪ Pipeline Management System is reviewed annually. ▪ Pipelines are inspected and maintained in accordance with Pipeline Management System ▪ Spills or leaks are immediately reported and clean up actions initiated. ▪ Records of spill events and corrective actions are maintained in accordance with company procedures.	▪ Significant improvement actions undertaken in accordance with AS2885 Action Plan. ▪ Leaks from pipeline and facilities are reported. ▪ Refer Objective 2 above.
	▪ 0, +1 or +2 GAS criteria are attained for goals related to produced formation water impacts on soil. ▪ PFW contaminant levels are below disposal criteria.	Produced Formation Water (PFW) ▪ A study into development of a Soil Health Index (SHI) for impacted soils and sediments is currently being undertaken. This will ultimately assist in the rehabilitation of water disposal/evaporation ponds to a level consistent with appropriate adjacent land uses. ▪ The study will also enable an assessment of contaminants of concern in PFW in order to determine disposal criteria.	▪ In 2007 the Soil Health Index (SHI) project was further progressed.

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Objective 4 Continued	▪ PFW EMP developed and objectives achieved.	Produced Formation Water (PFW) ▪ Review status of PFW facilities and develop an Environmental Management Plan (EMP) to achieve the objectives of the SA EPA Environment Protection (Water Quality) Policy, 2003, as appropriate.	▪ Requirements for facility management, including PFW, captured under EHSMS and Engineering Standards.
	▪ All domestic wastes are disposed of in accordance with EPA licensing requirements. ▪ 0, +1 or +2 GAS criteria for 'Waste material' objective is attained. ▪ No spills or leaks from sewage treatment process and sludge pits. ▪ Land Treatment Unit contamination confined to designated treatment area	Waste Disposal (domestic, sewage and sludge) ▪ Covered bins are provided for the collection and storage of wastes. ▪ All loads of rubbish are covered during transport to the central waste facility. ▪ Pits are not established in locations, which pose an unacceptable hazard to stock or wildlife. ▪	▪ All domestic waste disposed of in accordance with EPA License requirements. ▪ No spills or leaks from sewage treatment facilities or sludge pits. ▪ Monitoring demonstrated no contamination beyond treatment area.
Objective 5 Avoid disturbance to sites of known cultural and heritage significance.	• Proposed construction sites and access tracks have been surveyed and any sites of Aboriginal and non-Aboriginal heritage identified. • Any identified cultural and heritage sites have been avoided. • 0, +1 or +2 GAS criteria are attained for 'Aboriginal Heritage',	▪ Consultation with stakeholders (i.e. government agencies, stakeholders etc) in relation to the possible existence of heritage sites, as necessary. ▪ Heritage report forms completed for any sites or artefacts identified, and report forms forward to the Department of State Aboriginal Affairs (DOSAA). ▪ Survey records are kept and are available for auditing. ▪ Areas requiring remediation which lie outside previously surveyed sites should be surveyed in accordance with company heritage clearance procedures. *Note:* Where a negotiated agreement or determination for heritage clearance is in place, performance with the negotiated agreement or determination takes precedence over the above criteria.	▪ Construction sites are surveyed and inspected for cultural heritage sites. ▪ Identified sites are flagged and avoided. ▪ Significant sites identified are fenced. ▪ Identified sites are avoided.
Objective 6 Minimise loss of aquifer pressures and avoid aquifer contamination.	▪ There is no uncontrolled flow to the surface (i.e. no free flowing bores). *Note:* The Drilling and Well Operations EIR and SEO provide detailed discussion on aquifer issues.	• The volume/flow of water used by the Moomba Plant is continuously monitored to ensure appropriate management. • Water usage is continuously monitored, reviewed and management strategies implemented to minimise wastage. ▪ Review water licensing requirements and allocation plans.	▪ There are no uncontrolled flows from water bores. ▪ Water from bores is metered and monitored. Water use is reviewed to minimise usage where possible. ▪ Applications were submitted during the period for water licenses.

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Objective 7: Minimise disturbance to native vegetation and native fauna.	• Any sites of rare, vulnerable and endangered flora and fauna have been identified, flagged and subsequently avoided. • 0, +1 or +2 GAS criteria for 'Minimise impacts on vegetation' objective are attained during site selection and construction. • 0, +1 or +2 GAS criteria for 'Minimise impacts on vegetation' objective, are attained during site selection and construction. ▪ Refer to assessment criteria for objectives 2 and 4.	Construction Activities • Proposed construction areas have been assessed for rare, vulnerable and endangered flora and fauna species before the commencement of construction. • Consider alternate routes during planning phase to minimise environmental impacts • Assessment records are kept and are available for auditing. Borrow Pits • 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). • Borrow pits are restored as soon as practicable after material extraction is complete to a standard consistent with the surrounding land use. • Borrow pits are restored to minimise water holding capacity, where agreements are not in place with stakeholders • In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body. Fuel and Chemical Storage and Management	▪ Study undertaken to review implications of exploration and production activities on rare, vulnerable and endangered species and habitat. Habitat areas are avoided. ▪ Where necessary, alternative access routes are used to minimise environmental impact. Routes are weaved to avoid vegetation. ▪ Borrow pits are located to minimise impact on stock, wildlife and vegetation. ▪ Borrow pits are restored as soon as is practicable after use. ▪ Where appropriate, borrow pits are restored to minimise water holding capacity ▪ In Conservation reserves, excavations are restored in agreement with the responsible Agency. ▪ See Objective 2 and 4. ▪ All refuelling is undertaken away from water courses.
	▪ Refer to assessment criteria for objectives 2, 4 and 11.	Waste Management ▪ Covered bins are provided for the collection and storage of wastes. ▪ All loads of rubbish are covered during transport to the central waste facility. ▪ Pits are not established in locations, which pose an unacceptable hazard to stock or wildlife. ▪ PFW pits are fenced as appropriate to minimise wildlife access.	▪ Waste is covered during storage and transport. ▪ Disposal pits are constructed only at Licensed facilities. ▪ Where appropriate, PFW pits are fenced to minimise wildlife access.
Objective 8: Minimise air pollution and greenhouse gas emissions.	Gathering Systems/Satellite Facilities/Moomba Plant ▪ Compliance with EPA requirements.	▪ Conduct production operations in accordance with appropriate industry accepted standards. ▪ Continually review and improve operations. ▪ Appropriate emergency response procedures are in place for the case of a gas leak.	▪ Emergency response procedures are maintained.

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Objective 9: Maintain and enhance partnerships with the Cooper Basin community.	▪ No reasonable stakeholder complaints left unresolved.	▪ Relevant affected parties are notified and consulted on proposed activities. ▪ Forward development plans are presented to the local community. ▪ Local community projects and events are sponsored and supported where appropriate. ▪ Industry membership of appropriate regional land management committees and boards i.e. the Lake Eyre Basin Consultative Council, Marree Soil Conservation Board, and Catchment Committees.	▪ Relevant parties are notified of proposed activities and future development plans. ▪ Local community events and projects are actively supported. ▪ Santos maintains active representation on relevant local committees and boards. ▪ Emergency assistance is provided to landholders, tourists and third parties.
Objective 10: Avoid or minimise disturbance to stakeholders and/or associated infrastructure.	▪ No unresolved reasonable stakeholder complaints.	▪ Induction for all employees and contractors covers pastoral, conservation, legislation and infrastructure issues. ▪ Relevant stakeholder is notified prior to survey and construction of well sites, camp sites and access tracks and undertaking of operations (pursuant to Petroleum Regulations). Borrow pits left open (unrestored) if requested by stakeholder and upon receipt of letter of transfer of responsibility to stakeholder. ▪ Gates or cattle grids are installed to a standard, consistent with pastoral infrastructure in fences where crossings are required for access. ▪ All gates left in the condition in which they were found (i.e. open/closed). ▪ Potential sources of contamination are fenced as appropriate to prevent stock access. ▪ System is in place for logging stakeholder complaints to ensure that issues are addressed as appropriate. ▪ Requirements of the Cattle Care and Organic Beef accreditation programs are complied with. ▪ In recognised conservation reserves (i.e. Innamincka Regional Reserve) excavations are left in a state as agreed with the responsible statutory body.	▪ Company and contractor employees are advised of the requirements in respect of pastoral interests. ▪ Relevant stakeholders are advised of construction activities prior to commencement. ▪ Borrow pits are left unrestored where agreements are established. ▪ Gates are left “as found”. ▪ Where necessary, areas of potential contamination are fenced to prevent stock access. ▪ A system is in place to record stakeholder complaints. No such complaints were recorded in 2005. ▪ Cattle management systems (cattle care) are recognised and complied with.

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Objective 11: Optimise waste reduction and recovery.	▪ All domestic wastes are disposed of in accordance with EPA licensing requirements. ▪ 0, +1 or +2 GAS criteria for 'Waste material' objective is attained. ▪ No spills or leaks from sewage treatment process and sludge pits. ▪ For LTU's contamination confined to designated treatment area.	▪ Chemical and oil is 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.	▪ Refer Objective 4 above. ▪ Integrated Waste Management contract put in place covering the collection, transport, segregation and disposal of waste, including recycling. ▪ Septic tank systems are regularly emptied and cleaned.
Objective 12: Remediate and rehabilitate operational areas to agreed standards.	▪ No unresolved reasonable stakeholder complaints. Contaminated Site Remediation ▪ 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. Construction Site and Access Track Restoration ▪ The attainment of 0, +1 or +2 GAS criteria for: - "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" - Borrow Pit Restoration - The attainment of 0, +1 or +2 GAS criteria for: - "minimise impact on vegetation" - "minimise impact on soil" - "minimise visual impacts"	▪ Rehabilitation/ abandonment plans for surface activities will be developed in consultation with relevant stakeholders Construction Site and Access Track Restoration ▪ Compacted soil areas have been ripped (except on gibber and tablelands) and soil profile and contours are reinstated following completion of operations.	▪ No stakeholder complaints are unresolved. ▪ Spill sites are monitored as reported under Objective 2. ▪ Access tracks are restored in accordance with restoration guidelines. ▪ 34 borrow pits were constructed. ▪ None were restored or assigned to landholders during this period. ▪ The restoration of these will be progressed as part of a planned late 2008 restoration program in this area in conjunction with SACBJV activity.