

PEL 72

Onshore Otway Basin

South Australia

Permit Year 5 (Term 1)

Annual Report

For the Period

26 March 2001 to 25 March 2002

Prepared by:
Origin Energy Resources Ltd

REVISED OCTOBER 2002

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1 Introduction

Petroleum Exploration Licence No. 72 ("PEL 72") is located in the onshore portion of the Otway Basin, South Australia. This report covers the work performed by Origin Energy Resources Ltd as Operator of PEL 72 *in accordance with requirements of Section 33 of the Petroleum Regulations 2000* for the period 26 March 2001 to 25 March 2002, which was the final year of the initial permit term.

2 Administration

The working interests in the permit at the end of the reporting period were as follows:

Origin Energy Resources Ltd	62.5% (Operator)
Essential Petroleum Resources Limited	25%
Lakes Oil NL	7.5%
Victoria Petroleum NL	5%

The original minimum work commitment for permit year 5 (term 1) was for a Data Review at an indicative cost of \$50,000. A variation in licence conditions was granted by PIRSA on 7 March 2001 to enable the work programs for permit years 4 and 5 to be combined. Consequently, the combined work program for permit years 4 and 5 became the drilling of one well and data review at a total estimated cost of \$650,000. This work program was exceeded by work undertaken during permit years 4 and 5, and the permit is in good standing.

At the end of permit year 5, Origin Energy Resources Limited, Lakes Oil NL and Victoria Petroleum NL elected to withdraw from the permit, whilst Essential Petroleum Resources Limited has elected to renew the permit (with relinquishment) and is now permit operator and 100% equity holder. A permit renewal application was lodged by the former operator (Origin), on behalf of the new permit operator (Essential), on 25 March 2002.

3 Regulated Activities

Section 33.(2) (a) a summary of the regulated activities conducted under the licence during the year:

3.1 Drilling

McNamara Park 1 spudded on 25 May 2001, and was plugged and abandoned with no shows on 5 June 2001. A well completion report was submitted to the department on 11 December 2001 (The report was due on 5 December 2001 but was delayed slightly due to other short term priorities of the operator, a one week extension to 11 December 2001 was requested and granted from PIRSA).

3.2 Seismic Data Acquisition

There was no seismic acquired during the report period.

3.3 Seismic Data Processing/Reprocessing

There was no seismic processing or reprocessing conducted on data from PEL 72 during the report period.

3.4 Geological and Geophysical Studies

G&G studies for the permit year included planning, operation and post audit work for McNamara Park 1, and an assessment of the remaining prospectivity in the permit. McNamara Park 1 significantly downgraded the prospectivity of the northern portion of the permit due to the absence of a competent top seal to the Waarre Formation.

4 Compliance Issues

4.1 Regulatory Compliance

Section 33.(2) (b) a report for the year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives.

The Permit is operated as per the requirements of the "Statement of Environmental Objectives for Seismic Operations in the Otway Basin, South Australia"¹, and a report issued by PIRSA entitled "The Environmental Management of Seismic Operations in the South East of South Australia"². Drilling operations are conducted as per the requirements of the "Statement of Environmental Objectives for Drilling Pad and Access Road Construction On Private Land, Otway Basin South Australia"³, and "Statement of Environmental Objectives for Drilling and Well Operations in McNamara Park 1, Otway Basin, South Australia"⁴.

No environmental incidents were reported during the permit year.

The Well Completion Report for the McNamara Park 1 well was submitted 6 days after the due date.

Log data for the McNamara Park 1 well were submitted approximately 4 months after the due date.

4.2 Rectification of Non-Compliance

Section 33.(2) (c) a statement concerning any action to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, and to minimize the likelihood of the recurrence of any such non-compliance.

To ensure future compliance in regard to report and data submission Origin has developed a computer database called the Permits and Lands Management System designed to track critical dates and provide prompts for impending reports and data submissions. This database was implemented in early 2002 and is continually being refined. It is anticipated that this system will significantly assist with the timeliness of future submissions.

4.3 Management System Audits

Section 33.(2) (d) a summary of any management system audits undertaken during the relevant licence year, including information on any failure or deficiency identified by the audit and any corrective action that has, or will be, taken.

A checklist (Checklist 13) has been developed to demonstrate compliance with the environmental objectives as stated in the relevant SEO's for drilling operations and drilling pad construction. Checklist 13 for McNamara Park 1 is contained in Appendix 1 of this report.

4.4 Data Submissions

Section 33.(3). (e) a list of all reports and data relevant to the operation of the Act generated by the licensee during the relevant licence year.

- McNamara Park 1 Well Completion Report - submitted 11 December 2001 (due 5 December 2001).
- McNamara Park 1 well and drilling proposals were submitted in March 2001.
- As required under the Petroleum Act 2000 an Environmental Impact Report and a Statement of Environmental Objectives Report were prepared for the drilling and well operations at McNamara Park 1, and submitted on 5 March 2001 (previous reporting period).
- Lease preparation for McNamara Park 1 was conducted under a separate Environmental Impact Report and a Statement of Environmental Objectives report for Drilling Pad and Access Road Construction on Private Land. These were submitted in March 2001 (previous reporting period).
- Daily Drilling Reports were provided to PIRSA during operations at McNamara Park 1.
- Digital logs and cuttings samples and other basic well data have been submitted for McNamara Park 1.

4.5 Safety

Section 33.(2) f in relation to any incidents reported to the Minister under the Act and these regulations during the relevant licensing year-

Section 33.(2) f (i) an overall assessment and analysis of the incidents, including the identification and analysis of any trends that have emerged.

Section 33.(2) f (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 minimize the risk of recurrence of any such non-compliance.

No reportable incidents occurred during the reporting period.

4.6 Threat Prevention

Section 33.(2) (g) a report on any reasonably foreseeable threats (other than threats previously reported on) that reasonably present, or may present, a hazard to facilities or activities under the licence, and a report on any corrective action that has, or will be, taken.

There were no perceived threats, and no action taken.

4.7 Licence Conditions and Future Work Program

Section 33.(2) (h) 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.

The original minimum work commitment for permit year 5 (term 1) was for a Data Review at an indicative cost of \$50,000. A variation in licence conditions was granted by PIRSA on 7 March 2001 to enable the work programs for permit years 4 and 5 to be combined. Consequently, the combined work program for permit years 4 and 5 became the drilling of one well and data review at a total estimated cost of \$650,000. This work program was exceeded by work

undertaken during permit years 4 and 5, and therefore the permit is in good standing.

At the end of permit year 5, Origin Energy Resources Limited, Lakes Oil NL and Victoria Petroleum NL elected to withdraw from the permit, whilst Essential Petroleum Resources Limited has elected to renew the permit (with relinquishment) and is now permit operator and 100% equity holder. A permit renewal application was lodged by the former operator (Origin), on behalf of the new permit operator (Essential), on 25 March 2002.

The first year of the renewal (commencing 26 March 2002) has a work program consisting of geological and geophysical studies at an indicative cost of \$40,000.

5 Expenditure Statement

Section 33.(3) An annual report must be accompanied by a statement of expenditure on regulated activities conducted under the licence for the relevant licence year.

An Expenditure Statement for the PEL 72 Joint Venture during the period from 26 March 2001 to 25 March 2002 is attached.

PEL 72 ONSHORE OTWAY BASIN, SOUTH AUSTRALIA

26TH MARCH 2001 TO 25TH MARCH 2002 (PERMIT YEAR 5)

STATEMENT OF EXPENDITURE

CONFIDENTIAL

6 References

1. CD Cockshell and KR Langley, 2001. "Statement of Environmental Objectives for Seismic Operations in the Otway Basin, South Australia". Primary Industries and Resources SA, Report Book 2001/020.
2. "The Environmental Management of Seismic Operations in the South East of South Australia", 4th edition 1996. Issued by the Department of Primary Industries and Resources Petroleum Division (formerly MESA).
3. "Statement of Environmental Objectives for Drilling Pad and Access Road Construction on Private Land, Otway Basin, South Australia". Origin Energy Resources Limited.
4. "Statement of Environmental Objectives for Drilling and Well Operations in McNamara Park 1, Otway Basin, South Australia. Origin Energy Resources Limited.

APPENDIX 1

CHECKLIST 13 COMPLIANCE WITH STATEMENT OF ENVIRONMENTAL OBJECTIVES

MCNAMARA PARK 1
PEL 72

Checklist 13: Compliance with Statement of Environmental Objectives

Checklist 13 has been developed to provide a method of demonstrating compliance with SEO documentation developed in accord with Part 12 of the Schedule to the Petroleum Act 2000, for drilling operations in South Australia. In SA drilling is managed by OCA on behalf of Origin Energy Resources Limited. Checklist 13 replaces Checklists 1 and 2 in South Australia and covers the generic SEO for Drilling Pad and Access Road Construction on Private Land posted May 2001 as well as site specific SEO developed for Drilling & Well Operations at each drilling location based on an Environmental Impact Report prepared for that site.

Project Name:	McNamara Park 1	General Location:	Otway Basin SA
Permit:	PEL72	Project Manager (Responsible Person):	Ross Naumann
Date Checklist 13 completed:	21-05-02	Signature:	
SEO Reference:	McNamara Park 1	EIR Reference:	McNamara Park 1

Issue	Actions that may resolve the issue		How / was this achieved?
Drilling pad & Access Road Construction on private land			
Avoid disturbance to known sites of Aboriginal and European heritage significance	Proposed well sites and access tracks scouted by appropriate personnel for sites of Aboriginal and European heritage significance		Inspected by Kungari representatives together with Origin representative - Chris Annear. Feb 2001.
	Records for investigation retained		Invoice from Kungari Aboriginal Organisation
	Mechanism in place for response to discovery of sites of Aboriginal and European heritage significance		Yes - refer Objective 1 of SEO and Section 3.2.4 of EIR for McNamara Park 1
	Sites of Aboriginal and European heritage significance clearly identified or avoidance		No significant sites identified at this location
Avoid disturbance to rare and threatened flora and fauna species	Proposed well sites and access tracks scouted by appropriate personnel for rare & threatened species		EPBC check - results referred to HSE Dept - recommended non referral
	Sites of rare & threatened species clearly identified or avoidance		N/A
	Records for investigation retained		Yes
Prevent the introduction and establishment of weed species and pathogens	Vehicles and equipment assessed for risk of weed or pathogens prior to entering the region		No known risk of weeds - all vehicles from within Otway Basin
	Notification of weed risks to landholders		Yes
	Nil detection of exotic weeds as a result of OERL activities		Landholder has been requested to advise of any weeds observed post rehab
	Landholder approval of procedures to manage risks		Yes
Minimise impact to soils	Soil not removed unless requested by landholder		Soil removed as needed to level pad area
	Stockpiled soil returned to original stratigraphic level on restoration of drill site		To be completed in final rehab in May 2002, will be supplemented with treated, import soil/mulch
	Landholder approval attained at completion		TBA after rehab
	Seepage of potential contaminants into soil underlying the drill pad or surrounding site prevented		Drill pad over lies soil - will be removed in rehab

Issue	Actions that may resolve the issue	How / was this achieved?
	Oil and grease spills confined and removed Bioremediation completed to required level per developed criteria, as required	Yes N/A
Avoid initiating erosion on shallow limestone soil substrates and any area of relief such as palaeo-dunes	Topsoil restored to landholder satisfaction Minimised activity on fragile landforms as far as practicable Areas from which pad material removed, reseeded and rehabilitated to landowners satisfaction Original drainage patterns restored or modified in accordance with landholders wishes Landholder approval attained at completion	To be completed in final rehab in May 2002 Traffic restricted to roads and pad To be completed in final rehab in May 2002 To be completed in final rehab in May 2002. No significant impact. TBA after rehab
Minimise impact on surface water and drainage patterns	Oil and grease spills confined and removed Assess track design and location to avoid water diversion that may cause erosion Culverts installed where necessary Where soil removal from drill pads required, soil respread and rolled over the disturbed area during restoration Areas from which pad material removed, reseeded and rehabilitated and original drainage patterns restored in accordance with landowners wishes and the SEO for Drilling and Well Operations	Yes Yes - access designed in consultation with land owner - used existing track were practical Yes To be completed in final rehab in May 2002 To be completed in final rehab in May 2002
Conduct all operations in relation to landholder and access to the land according to the Act	Procedures relating to access to land and notification to landowners of proposed activities conducted in accordance with <i>Petroleum Act 2000</i> and Company Policy	Yes. Notice of Entry signed. Compensation agreement signed pre pad construction.
Minimise risks to the safety of the public, employees and other third parties	Construction conducted without incident from third parties approaching the site Construction personnel aware of their responsibility to their own safety and that of co-workers	Yes Yes - no reported incidents
Minimise impact on the environment of waste handling and disposal	Landholder approval attained at completion Waste generated recycled or disposed of at EPA licensed facility	No complaints / incidents re waste removal All waste disposed by Northcott at approved sites - see dockets
Avoid Adverse impacts on livestock	Fenced off some areas involving moving machinery to avoid incidents with livestock Operators aware of potential for startling stock with equipment and of the potential consequences Waste collected diligently so as to minimise risk of rubbish causing lacerations to stock	Entire pad and camp fenced off Yes No rubbish in stock areas - all waste in designated bins - emptied at approved sites.
In the event of an oil spill, minimise the impacts on	In the event of a spill, contingency plan implemented	No spills

Issue	Actions that may resolve the issue	How / was this achieved?
	Oil spill contingency plan in place in accordance with Regulation 31	N/A - oil spill absorbents on site. Drains to sump containment area
	Bio-remediation taken out on soil affected by on and off site as required	N/A
	Oil spill assessment criteria specific for the relevant environment developed.	N/A
Control production and dispersal of dust on unsealed roads and drill lease area	Roads lightly sprayed with water when dust problem identified	Generally damp conditions. Dust was not a problem.
	Weather conditions monitored and heavy vehicle operating procedures during periods of extremely still air and negligible wind regulated accordingly	N/A
	Vehicle speed limits established	Yes (refer photos of signs on site)
Control noise from road vehicles and machinery	Vehicle speed limits established	Yes (refer photos of signs on site)
	Personnel aware of requirement for noise control	Yes - onsite Induction with Chris Annear - OERL supervisor
	Loading and unloading conducted with minimal noise	Yes
Plan vehicular movements and schedule activities as best as possible to minimise inconvenience to the local community	Induction on safe driving given to drivers	Yes - at pre-spud meetings
	Schedule deliveries during low periods of rural community activity on roads	Daylight deliveries where possible
	Nil complaints regarding vehicular impacts	No complaints received
Confinement of flammable sources, restrictions on certain procedures and ready access to suitable fire fighting equipment	Eliminated high levels of grass fuel in proximity to the site	Cleared pad with adequate fire break - also wet conditions
	Clearing performed in consultation with landowner	Yes
	Systems in place to highlight increased risk of fire on days of high wind and temperature	Yes - appropriate Fire Danger sign in place - similar sign to that used by Forestry
	In the event of a fire, procedures implemented to protect plant operators in accordance with the Emergency Response plan	No fires
	Procedures in place to minimise risk of initiating and propagating fire during periods of high temperature and winds	Yes - no hot work permits issued on high fire danger days
	Risk of fire clearly defined to supply truck drivers	N/A
	Minimised movement of heavy vehicles on high risk days	N/A
	Contact with local Country Fire Service to keep roads clear during fire and to predict their likely movements	Yes - CFS aware of rigs presence
	Fire fighting equipment maintained in readiness during periods of high fire danger	Yes
Drilling & Well operations		
Avoid disturbance to known sites of Aboriginal and European heritage significance	Activities that were assessed to potentially result in long-term harm in the regions defined in the scope of the SEO carried out with prior specific approval of the respective landowner and, where necessary, local authorities and/or state Government	No long term harm risk assessed

Issue	Actions that may resolve the issue	How / was this achieved?
Proposed well sites and access tracks scouted by appropriate personnel for sites of Aboriginal and European heritage significance before commencement of construction	Proposed well sites and access tracks scouted by appropriate personnel for sites of Aboriginal and European heritage significance before commencement of construction	Yes - Kungari Aboriginal Organisation
	Records for investigation retained	Invoice and report from Kungari Aboriginal Organisation
	Compliance with Aboriginal Heritage Act 1998	Yes
	Personnel trained to identify and respond appropriately to sites discovered during construction and operation activities	Yes - Chris Annear supervised all excavations - contractor aware to look out for items of cultural significance
	Work on freehold land was to the satisfaction of the landowner unless it would have involved impact likely to contravene environmental State legislation	No complaints to date. Final rehabilitation May 2002.
Avoided disturbance to rare, vulnerable and endangered flora and fauna species	Drilling pad and access road scouted for rare, vulnerable & endangered flora & fauna species by appropriately trained and experienced personnel before commencement of construction	EPBC search. Initial scouting of access road area by Origin supervisor. Used mainly existing tracks and pad area has been long used for grazing
	Areas affected by construction of the campsite, sump and flare pit scouted for rare, vulnerable & endangered flora & fauna species by appropriately trained and experienced personnel before commencement of construction	EPBC search. Initial scouting of pad area by Origin supervisor.
	Sites of rare, vulnerable & endangered flora & fauna species clearly identified or avoidance	Non identified
	Records for scouting retained	N/A
	Vehicles and equipment assessed for risk of weeds or plant pathogens prior to entering the region	Assessed as no risk - all vehicles from local (Otway) area
Prevent the introduction and establishment of weed species	Records related to equipment and vehicle inspection retained	N/A
	Nil detection of exotic weeds as a result of OERL activities	Yes
	Landholder aware of the risk and approved of procedures	Yes - landowner to advise Origin of any unusual weed growth post rehab
	Landholder aware of the risk and approved of procedures	Yes - landowner to advise Origin of any unusual weed growth post rehab
Minimised impacts to soil	Soil only removed when required for the building of a sump and flare pit	Yes, stockpiled for re-use
	Soil removed in construction of sump and flare pit stored on site and returned to original stratigraphic level on restoration of drill site	Excavations back filled post drilling. Final rehab and levelling due in May 2002
	Restoration of drill site approved by landowner or in accordance with landowners wishes where retention of specific parts of the pad requested	Due in May 2002
	Landholder approval attained at completion	Due in May 2002
	Nil seepage into soil underlying or surrounding the sumps	Lined sump - pits drained for disposal, liner removed

Issue	Actions that may resolve the issue	How / was this achieved?
	Oil and grease spills at campsite generators confined and removed, as required	Yes
	Hazardous material stored, used and disposed of in accordance with relevant state legislation on dangerous substances	Yes - Northcott docket for sump disposal
	MSDS available on the well site	Yes
	Oil-spill bioremediation, as required meets end point assessment criteria	N/A
	Oil spill end point assessment criteria specific for the relevant environment developed (use Victorian EPA limit until developed)	N/A
Avoid initiating erosion on shallow limestone soil substrates and any area of relief such as palaeo-dunes	Soil not removed from drill pad and access track in accordance with landowner wishes	Only soil removal to level site. Approval from land owner pre earth works
	Soil removed during construction of the sump and flare pit respread and rolled over the disturbed area during restoration	To be completed in final rehab in May 2002
	Area artificially elevated via pad or access track construction lowered by removal of compacted material unless retention requested by landowner	May 2002 - landowner required gravel for use on his farm after removal from drill pad
	Areas from which pad material removed, reseeded and rehabilitated in accordance with landowners wishes	May 2002
	Original drainage patterns restored or modified in accordance with landholders wishes	May 2002
	Landholder approval attained at completion	Due May 2002
Minimise loss of reservoir and aquifer pressures and contamination of freshwater aquifers	<u>Drilling & Completion Activities</u>	
	Casing design (including setting depths) carried out in accordance with the well's Drilling Programme and Company defined procedures which satisfy worst case expected loads and environmental conditions determined for the well	Yes
	Casing set in accordance with design parameters, the Drilling Programme and Company approved procedures and records kept	Yes - refer Casing Reports
	Sufficient isolation between formations listed in the adjacent column - where present -substantiated	Yes - surface casing cemented to surface - see Cementing Report
	Where isolation of formations was not established sufficient evidence available to demonstrate that they are in natural hydrologic communication	N/A
	Where isolation of formations was not established and formations are not in a natural hydrologic communication remediation action taken in accordance with Company procedures to ensure cement squeezed and circulated to achieve sufficient isolation	N/A
	<u>Well Abandonment Activities</u>	

Issue	Actions that may resolve the issue	How / was this achieved?
Isolation of formations behind casing	Plugs set to isolate aquifers through the well bore designed and set in accordance with defined procedures to satisfy worst case expected loads and downhole environmental conditions	Yes - plugs based on calliper log hole diameter - refer Daily Drilling Report
	Plugs set to isolate aquifers which are present and which are not in a natural hydrologic communication nor have been isolated by cement behind casing	Yes - open hole plugs set as per program - refer Daily Drilling Report
	Where isolation of formations behind casing was not established and formations are not in a natural hydrologic communication remediation action taken in accordance with Company procedures to ensure cement squeezed and circulated to achieve sufficient isolation	N/A
	Records of plug depths and interval retained	Drilling records and Cementing Contactor job logs
Avoid contamination of aquifers and minimise impact on surface water and drainage	MSDS relating to mud chemicals readily accessible on the rig	Yes, plus wall chart and CD
	Mud pit fluids pumped out and disposed of at an EPA approved facility on completion of drilling	Yes - refer Northcott dockets
	Sump allowed to dry out then backfilled level with surrounding landscape	Sump was pumped out by contractor, residual fluid absorbed in sawdust and the sump back filled
	Drill solids trucked to an EPA approved facility for disposal	Yes - refer Northcott dockets
	In the unlikely event that soil removed from drill pad or access tracks, soil respread and rolled over the disturbed area during restoration	Topsoil to be respread in final rehab in May 2002. Where necessary, imported, treated mulch will be used to supplement the top soil
	Area artificially elevated via pad or access track construction lowered by removal of compacted material unless retention requested by landowner	To be completed in final rehab in May 2002
	Areas from which pad material removed, reseeded and rehabilitated in accordance with landowners wishes	To be completed in final rehab in May 2002
	Original drainage patterns restored in accordance with landholders wishes	To be completed in final rehab in May 2002
	Fluid loss control maintained in drilling mud according to good industry practice	Yes - refer Drilling Fluid reports
	All procedures related to access to land and notification to the landowner of proposed activities conducted in accordance with the Petroleum Act 2000 and Company policy of best practice	Yes
Minimise risks to the safety of the public, employees and other third parties	<u>Unauthorised Access by Third Parties</u>	
	No Entry signs warning of dangers associated with drilling rigs placed at the entry to the rig access road	Yes - all visitors advised to report to rig office. Must have PPE.
	Drill crew instructed to report to the Drilling Supervisor and Drilling Contractor Rig Manager if third parties approach the rig	Yes

Issue	Actions that may resolve the issue	How / was this achieved?
	Rig Supervisor and Drilling Contractor Rig Manager given authority to request unauthorised parties to leave the rig site	Yes
	<u>Drilling & Completion Activities</u>	
	Casing design (including setting depths) carried out in accordance with Company approved procedures which satisfy worst case expected loads and environmental conditions determined for the specific geology intercepted by the well	Yes
	Casing set in accordance with design parameters and Company approved procedures	Yes - refer Casing Reports
	Maximum cement bond with the formation ensured by the use of centralisers, cement grade and volumes excess to calculated requirements	Yes - cement to surface on 9 5/8" surface casing
	Blow out prevention precautions in place and operational in accordance with defined procedures and appropriate to the expected loads and downhole environmental conditions	Yes - BOP tests conducted
	<u>Well Abandonment Activities</u>	
	Downhole abandonment of well carried out in accordance with Company approved procedures to satisfy worst case expected loads and downhole environmental conditions	Yes
	Effective isolation maintained between aquifers to prevent cross flow between zones and over-pressuring of shallow aquifers	Yes
	<u>Well site Restoration Activities</u>	
	Assessment of the threats to third party safety from well completion or downhole abandonment conducted	Yes
	Necessary measures taken to prevent the public accessing wellhead equipment & waste relating to the well	Yes. No wellhead in place. Well was abandoned and casing cut below GL
	Effective rehabilitation of the rig site to remove potentially dangerous perturbations in ground level	Yes - initial rehabilitation after drilling - final rehabilitation May 2002
Minimise impact on the environment of waste handling and disposal	Landholder approval attained at completion	To be completed in final rehab in May 2002
	Waste generated on well site (excluding grey water) recycled or disposed of at EPA licensed facility	Yes - removal by contractor
	Records show that sewerage at drilling camp stored and disposed of in a manner that posed no risk to human health or hygiene	Yes - covered septic system - regular disposal by Northcott contractors.
	MSDS readily available on well site	Yes
Avoid Adverse impacts on livestock	Mud pits and/or flare pits and moving machinery fenced off to avoid incidents with livestock	Yes - entire drilling pad fenced

Issue	Actions that may resolve the issue	How / was this achieved?
	Drill crews aware that sudden starting of machinery or vehicular motion may promote panic in stock and consequent collision with other animals, fences or other solid objects	Yes
	Rubbish collected diligently so that stock do not come into contact with waste material or objects likely to cause lacerations	Yes - dedicated rubbish bins on site - emptied regularly
	For producing well, well cellar, rat hole and mouse hole made safe for livestock through appropriate covering or fencing	N/A - well plugged and abandoned
	For an abandoned restored well site, the cellar was backfilled to a level with the surrounding landscape	To be completed in final rehab in May 2002
Avoid spills of oil or hazardous material outside of impermeable sumps or other areas designed to contain such spills	No spills that pose a significant threat to aquifers and immediate drainage system outside containment areas	No spills
	MSDS available for all chemicals likely to be in a spill	Yes
	Vehicle mishaps on tracks and access roads minimised by driver induction and education program	All vehicle access restricted to pad area and designated access road
In the event of an oil spill, minimise the impacts on fauna, flora, soil, livestock and surface and ground water	In the event of a spill, contingency plan implemented	No spills
	Results of emergency response procedures carried out in accordance with Regulation 31 show that oil spill contingency plan in place in the event of an oil spill is adequate and necessary remedial action to the plan taken promptly by the licensee as required	Drains were constructed to direct any potential spills to the containment area of the sump
	Bio-remediation undertaken on affected soil, on or off site as required	N/A
	Oil spill bioremediation meets end point assessment criteria developed specifically for the relevant environment	N/A
	Oil spill end point assessment criteria specific for the relevant environment developed (use Victorian EPA limit until this developed)	N/A
Control production and dispersal of dust on unsealed roads and drill lease area	Roads lightly sprayed with water when dust problem identified	Damp conditions throughout the program - no dust problem
	Weather conditions monitored and heavy vehicle operating procedures during periods of extremely still air and negligible wind regulated accordingly	N/A
	Vehicle speed limits established	Yes
Control noise from road vehicles and machinery	Drill crews aware of requirement for noise control, especially while 'tripping-out', laying out drill pipe or running casing	Yes
	Rig service necessary if brake noise excessive	Yes
	Supply truck drivers aware of need to control noise when approaching and leaving drill site	Yes

Issue	Actions that may resolve the issue	How / was this achieved?
	Loading and unloading conducted with minimal noise	Daylight deliveries programmed
	Vehicle speed limits established	Yes
Plan vehicular movements and schedule activities as best as possible to minimise inconvenience to the local community	Drivers aware of risks of intersections	Yes - additional Caution signs placed on road adjacent to access track
	Schedule deliveries during low periods of rural community activity on roads	Yes - all drivers advised to give way to school bus
Minimise chance of fire by clearing of dry pasture around facilities	Eliminated high levels of grass fuel in proximity to the rig and flare pit	Yes - fire break area around rig pad - also damp ground conditions
	Clearing activities performed in consultation with landowner	Yes
	In the event of a fire approaching or being initiated on the drilling rig, implemented procedures for protection of drill crew in accordance with Emergency Response Plan	Evacuation plan was in place
Confinement of flammable sources, restrictions on certain procedures and ready access to suitable fire fighting equipment	Systems in place to highlight increased risk of fire on days of high wind and temperature	Yes - High Fire danger sign on site
	In the event of a fire approaching or being initiated on the drilling rig, planning for the safety of the rig personnel in place	Yes - Fire drill - crews to muster at the assembly point
	Procedures in place to minimise risk of initiating and propagating fire during periods of high temperature and winds	Yes- no Hot Work permits to be issued on High Fire danger days.
	Risk of fire clearly defined to supply truck drivers	Yes
	Minimised movement of heavy vehicles on defined high risk days	There were no high fire danger days on the well
	Contact with local Country Fire Service to keep roads clear during fire and to predict their likely movements	Yes - CFS contacted
	During periods of high fire danger, maintained pumps and water supply in readiness	N/A but abundant water supply on site
	Informed the Country Fire Service that a volume of water in the "Turkeys Nest" suitable for high extraction rates should it be required	Yes
Other		

Accepted by Drilling Manager: R.A. Naumann

Signature: _____

Date: 21st May, 2002

