

**Environmental Impact Classification**  
**Pursuant to Section 98 of the *Petroleum Act 2000***

**Drilling, Completion & Initial Production Testing within PEL 255 – Otway Basin,  
South East, South Australia**

**10 May 2007**

**INTRODUCTION**

Pursuant to section 98 of the *Petroleum Act 2000* (the Act) the Minister must classify the regulated activities covered by a prepared Environmental Impact Report (EIR) as either of low, medium or high environmental impact.

The classification must be made on the basis of:

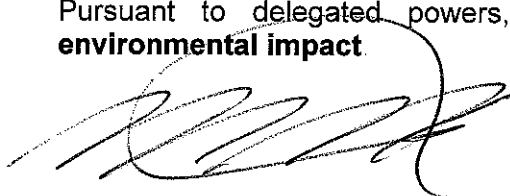
- The prepared EIR;
- Criteria established for classifying the level of environmental impact of regulated activities, a copy of which is found on the PIRSA Petroleum and Geothermal Group (PIRSA) web page:  
[\(<http://www.pir.sa.gov.au/dhtml/ss/section.php?sectID=437&tempID=8>\); and](http://www.pir.sa.gov.au/dhtml/ss/section.php?sectID=437&tempID=8)
- Comment received from relevant Government departments in accordance with established administrative arrangements between these departments and PIRSA.

This document summarises the classification made by PIRSA on the proposed drilling, completion and initial production testing activities within PEL 255. This classification is based on information provided in the EIR dated March 2007, submitted to PIRSA by Adelaide Energy Ltd on 22 March 2007.

**SUMMARY OF CLASSIFICATION**

- 1) From an analysis of the environmental significance of the events and potential impacts associated with the proposed activities against the classification criteria referred to above (assessment provided as Attachment 1), these regulated activities have been classified as **low environmental impact**.
- 2) This classification was made on the basis that many of the events associated with the proposed activities will be of temporary duration, and appropriate management measures will be implemented to avoid or mitigate any potential environmental consequences.
- 3) For a low environmental impact classification, PIRSA is required to consult with the Department for Environment and Heritage (DEH) and the Environment Protection Authority (EPA) in accordance with the administrative arrangements dated 11 November 2005 and 21 November 2003 respectively.
- 4) Comments received from DEH on 9 May 2007 and EPA on 2 May 2007 agreed with the low environmental impact classification.

Pursuant to delegated powers, I hereby classify this regulated activity as **low environmental impact**.



**Michael Malavazos**  
A/Director Petroleum & Geothermal  
Delegate of the Minister for Mineral Resources Development

Environmental Significance Assessment																
ACTIVITY: Drilling, Completion & Initial Production Testing within PEL255																
PROJECT: ADELAIDE ENERGY LTD.																
ASSESSOR: Deepank Gupta / Belinda Close																
REF	TYPE OF IMPACT	EVENT(S)	POTENTIAL CONSEQUENCES	PREDICTABILITY					MANAGEABILITY					COMMENTS	Environmental Significance	
				SIZE	SCOPE	DURATION	FREQUENCY	STAKEHOLDERS SIGNIFICANCE	AVOIDANCE	PROBABILITY	DURATION	SIZE AND SCOPE	CUMULATIVE EFFECT			STAKEHOLDERS SIGNIFICANCE
Natural Environment Impacts																
Soil Impacts																
SEO Obj No.4 EIR S. 1.4; 3.1; 3.3.1; 4.1; 4.3; 4.3.1 Table 1, 2	Construction of drilling pad, sump and flare pit, access track, camp sites and other earthmoving activities.	Erosion, mixing or inversion of topsoil and subsoil.	M	H	H	H	M	2	No	Low			1	S 2.2/2.3 describes the regional land use, landforms and soil. SEO Obj No. 4: "Minimise impacts to soil". It also refers the guide to achieve this objective and the assessment criteria. S 1.4.1 of EIR states that "It will be necessary to remove some topsoil from the pad area. Any topsoil removed will be stockpiled adjacent to the pad for replacement when the site is rehabilitated" it also refers the construction of drains to collect the runoff from the pad. S1.4.5 refers that it will be necessary to lightly pave the camp area with gravel. Disturbance to the soil surface will be kept to a minimum. S1.4.6 refers that septic tanks will be provided for toilets at camp site and they will be cleaned periodically by licensed contractor. S 3.1 refers the risks due to the well site construction. S 4.1.2 refers that on abandonment of the site, the limestone paving material will be removed and returned to the source stockpile expect agreed or needed by the landholder. Table 1 refers the level (High/Low) of the identified potential risks.	LOW	
SEO Obj 2, 3, 4, 7, 8, 9 EIR Section 1.4.3; 1.5; 3.1.3; 3.1.2; 3.2.2; 4.1.1; 4.1.2; 4.2.2; 4.3.3, Table 1 & 2	Vehicle movement for construction of wellsite and camp site, operation and rehabilitation purposes.	Erosion, Soil compaction	M	H	H	H	M	2	No	Med	Short			2	Access is likely to be via existing wide, well formed, sealed and gravel roads to within reasonably close proximity of the site and then by a constructed paved access track. Warning signs of public roads, notification to local farmers, watering the dusty roads, obtaining the necessary permits for trucking, trucking only at day light hours. Heavy vehicles will be diverted around town centres where possible. Vehicular tracks will be removed by ploughing the wellsite construction. The drilling contractor will be required to comply with all District Council, traffic authority and police permitting requirements. Speed reduction signs to be positioned on unsealed roads in vicinity of wellsite. Obj 8 of SEO refers that Driver behaviour and vehicle speed limits to be included in compulsory induction.	LOW
EIR Section 1.4.1; 3.2.3; 4.2.3; 4.2.4; Table 1 and 2 SEO Obj 2, 3, 4, 7, 8, 10.	Spills - chemical, fuel, produced hydrocarbon, toxic fluids, waste	Soil contamination	H	H	H	H	H	1	No	Low				1	Drilling sump to hold cuttings will be lined with a dam liner, drilling fluids will be non-toxic polymers, toilet facility with septic tank, on completion drilling fluids and cuttings will be tested and disposed accordingly. Removal of human waste and rubbish by licensed waste removalist. All fuel, lubricants, chemicals, radioactive sources will be stored appropriately in safe and clearly identified areas. Produced oil will be transferred from the well to a special storage tank or road tanker via a production line which will be tested for leaks prior to use. Potentially contaminating materials will be stored in bunded areas. Sump protected from flooding by earth berm. Careful briefing of drilling and transport contractors. If required the sump may be pumped and excess fluid disposed at an approved waste facility. Septic tanks will be used at camp and drill rig ablutions. Septic tanks will be pumped out on an "as required basis". All wastewater disposed in accordance with the Public and Environmental Health (Waste Control) Regs 1995. Wellsite will be kept free of litter/rubbish.	LOW
EIR S1.4; 3.1.1; 3.2; 4.1.1; 4.2; SEO Obj 2, 7, 8	Fire at wellsite & campsite. Secondary fires resulting from transportation.	Soil contamination	M	M	H	H	M	2	No	Low				1	S 1.4 refers:- the 10 m wide ploughed firebreak in presence of dry grass or fire season, ploughed/graded fire break around the flare pit. In Table 1 fire has been ranked as low risk. In the event of any well testing & flaring during the fire season the presence of a CFS unit will be requested. S 3.2.6 refers the risk of fire during initial production testing. S 4.1.1 refers vehicles and equipment with faulty exhaust will not be allowed. No smoking. S 4.2.2 refers the management system to avoid fire. S4.2.5 refers the presence of Emergency Response Plan and other procedures in place. S4.2.7 refers that the fire extinguishers will be present near the tanks during the initial production testing. SEO Obj 2 refers -> • Local CFS will be invited to attend during the initial drilling stage to make themselves familiar with the site, water availability etc; • Current daily Fire Danger sign present on site. This will be changed daily if in the fire danger season.	LOW
EIR S3.1.3, 4.3.2; 3.2.3; Table 2 SEO Objectives	Inadequate site rehabilitation	Soil contamination, inversion of topsoil and subsoil, introduction of weeds.	H	M	M	H	M	2	No	Low				1	Topsoil will be stripped off to enable ease of rehabilitation. The black/grey cracking clays do not freely release all the imported fill during rehabilitation. A very thorough inspection will be carried out at the completion of each stage of rehabilitation to ensure that no rubbish of any kind remains. S3.3 refers the risks by left imported material on site, untreated oil spillage, distribution of subsoil over top soil, left well head structure and casing, rubbish tyre marks. S4.3 refer the systems to control the risks that may arise by improper rehabilitation. Table 2 refers the risk management procedure: -Rehabilitate site to original condition as required by landowner; -Removal of paving materials; -Careful redistribution of any stockpiled topsoil; -Aeration of soil by tyre ripping, ploughing; -Fuel storage and refuelling checks; -Redistribution of any stockpiled topsoil; -Restoration of original topographic profile; -Restoration of original drainage pattern; -Restore original soil profile over sump, septic and flare pit; -Final light ploughing of site to aerate soil; -Sow crop/pasture to stabilise soil.	LOW
Surface Water Impacts																
EIR Section 1.4; 2.4; 3.1.3; 4.1.3; 4.2; 4.3.1; Table 1 & 2 SEO Obj 6	Construction of drilling pad, sump and flare pit, access track, camp sites and other earthmoving activities	Blockage of local runoff and drainage.	M	M	M	H	M	2	No	Low				1	Small drains will be constructed around the pad margins. This pad will be constructed so that any runoff upslope from the pad will be directed away from the pad. S1.4.4 refers that if the new domestic/stock bore will be required then it will be drilled by a local licence water well driller familiar with regional issues like the Dilwyn formation. Risk to natural drainage is expected to be minimal because the area is flat. Culverts will be placed at appropriate points to prevent artificial damming of any surface water. Until the artificial drainage system was constructed there were few outlets to the sea and large areas of the South East were seasonally inundated. This section also identifies the risk of rising water table of "Gambier Limestone" to ground level during rains. Table 1 identifies the water contamination as high risk. S4.1.3 refers that the wellsite will be constructed to minimise interference with natural surface runoff. Table 2 refers the procedures to avoid contamination of surface waters.	LOW
EIR Section 1.4.3; 1.4.7; 1.5; 3.1.3; 3.2.1; 4.1.3; Table 1 and 2 SEO Obj 6	Vehicle movement for construction of wellsite and camp site, operation and rehabilitation purposes.	Blockage of local runoff and drainage, contamination of surface water	M	M	M	H	M	2	No	Low				1	Access is likely to be via existing wide, well formed, sealed and gravel roads to within reasonably close proximity of the site and then by a constructed paved access track. S 3.1.1 describes the risks by vehicle movements. S 4.1.1 refers: obtaining the necessary permits for trucking, trucking only at day light hours, checking of construction vehicles for weeds. S4.3.3 refers that vehicular tracks will be removed by ploughing the wellsite construction which will prevent the development of poorly directed drainage channels. The drilling contractor will be required to comply with all District Council, traffic authority & police permitting requirements. Table 2 refers to choose a site away from swamps and at most levelled place. Speed reduction signs to be positioned on unsealed roads in vicinity of wellsite. Obj 8 refers that Driver behaviour and vehicle speed limits to be included in compulsory induction. S4.1.3 refers that the wellsite will be constructed to minimise interference with natural surface runoff.	LOW
EIR S 1.4.8; 1.6.2; 2.4; 3.1.3; 3.2; 3.2.1; 4.1.3; 4.2.1; 4.2.6; 4.2.7; Table 1 & 2 SEO Obj 6	Drilling operations including initial production testing	Blockage of local runoff and drainage, contamination of surface water	M	M	H	H	M	2	No	Low				1	Risk to natural drainage is expected to be minimal because the area is flat. Culverts will be placed at appropriate points to divert any surface runoff after heavy rains around the site area and to prevent artificial damming of any surface water. S4.1.3 refers that the wellsite will be constructed to minimise interference with natural surface runoff. Drilling fluids/cuttings will be tested and disposed accordingly at an appropriate location. During initial production testing the produced oil will be stored in a special purpose tank for subsequent transport to a processing facility. Table 1 ranks high risks for surface water pollution and natural drainage. A spill clean-up kit will be located in this area. Transfer/unloading of potential contaminants will be carried out according to industry accepted procedures to minimise risk of spillage. Any run off from high risk contamination areas within the drill pad will be directed into the sump. The storage tank will be positioned to contain any minor spillage from moving away from the area and polluting soil and natural drainage. Table 2 refers the risk management procedures.	LOW
EIR S 1.4.1; 2.4; 3.1.3; 4.1.3; 3.2.3; 4.2.3; 4.2.4; 4.3.2; Table 2 SEO Obj 10	Spills - chemical, fuel, produced hydrocarbon, toxic fluids, waste	Contamination of surface water, blockage of local runoff/ drainage by garbage or other non degradable wastes	M	M	H	H	M	2	No	Low				1	S1.4.1 refers:-drill pad will be paved & levelled, the drilling sump to hold cuttings will be lined with a dam liner, drilling fluids will be non-toxic polymers, toilet facilities with septic tank, on completion drilling fluids & cuttings will be tested & disposed accordingly. Risk to natural drainage is expected to be minimal because the area is flat. Culverts will be placed at appropriate points to divert surface runoff into sumps and to prevent artificial damming of any surface water. The wellsite will be constructed to minimise interference with natural surface runoff. Removal of human waste & rubbish by licensed waste removalist. Table 2 refers the risk management procedures:- Store all fuel, lubricants, chemicals, radioactive sources appropriately in safe areas. Sump protected from flooding by earth berm. Careful briefing of drilling and transport contractors. The sump can handle a significant volume of fluid & runoffs from heavy rainfalls. If required the sump may be pumped and excess fluid disposed at an approved waste facility. Wellsite will be kept free of litter/rubbish. All wastewater disposed in accordance with the Public & Environmental Health (Waste Control) Reg 1995.	LOW
EIR S 1.4; 1.6.2; 2.4; 3.1.3; 3.2.2; 3.2.5; 4.1.1; 4.2.2; 4.2.7; Table 1 & 2 SEO Obj 2, 8	Fire at wellsite & campsite. Secondary fires resulting from transportation.	Contamination of surface water.	M	M	H	H	M	2	No	Low				1	The risk of contamination of surface water & drainage is minimal as the surrounding area is flat. Measures in place to control spills from vehicle movement, construction activities, drilling operations. Table 1 ranks fire as low risk. A spill clean-up kit will be located in this area. Any run off from high risk contamination areas within the drill pad will be directed into the sump. In the event of any well testing & flaring during the fire season the presence of a CFS unit will be requested. The graded fire break around the wellsite & along the perimeter of access, vehicles and equipment with faulty exhaust will not be allowed. No smoking. Management system, Emergency Response Plan & other procedures in place to avoid fire. The fire extinguishers will be present near the tanks during the production testing. Current daily Fire Danger sign present on site. This will be changed daily if in the fire danger season. Use of tested storage tanks during well testing so as to avoid spills & consequent fire from spills. In the event of an oil spill, contingency plan to be implemented.	LOW



ACTIVITY: Drilling, Completion & Initial Production Testing within PEL255																									
PROJECT: ADELAIDE ENERGY LTD.																									
ASSESSOR: Deepank Gupta / Belinda Close																									
REF	TYPE OF IMPACT	EVENT(S)	POTENTIAL CONSEQUENCES	PREDICTABILITY						MANAGEABILITY						COMMENTS	Environmental Significance								
				SIZE	SCOPE	DURATION	FREQUENCY	STAKEHOLDERS SIGNIFICANCE	AVOIDANCE	PROBABILITY	DURATION	SIZE AND SCOPE	CUMULATIVE EFFECT	STAKEHOLDERS SIGNIFICANCE											
EIR Section 3.1.1; 2.5; 3.1.4; 3.2.2; 4.1.1; 4.2.2; 4.3.3; Table 1 & 2; SEO Obj 2, 7, 8		Vehicle movement for construction of well/camp site, operation and rehabilitation purposes.	Disturbance and loss of stock, native fauna and natural habitat.	H	H	H	H	M	2	No	Low						1	Table 1 of EIR mentions that there is low risk to fauna & livestock. Table 2 refers the risk management procedures-->Where possible, locate wellsite where natural habitat is already cleared. At the time of this documents compilation there were no stock in the vicinity of the wellsite but still there is the possibility of sheep or cattle disturbance. Access is likely to be via existing wide, well formed, sealed & gravel roads to within reasonably close proximity and then by a constructed paved access track. S 4.1.1 refers: warning signs on public roads, notification to local farmers, watering the dusty roads, obtaining the necessary permits for trucking, trucking only at day light hours, a specially constructed perimeter fence to prevent vehicles driving out side the lease and also to protect sheep or cattle from disturbances. Heavy vehicles will be diverted around town centres where possible. Vehicular tracks will be removed by ploughing the wellsite construction. Drilling contractor will be required to comply with all District Council, traffic authority & police permitting requirements. Driving rules and regulations in place. Rehabilitation of vehicle track marks.	LOW						
EIR Section 3.1.1; 1.4; 3.2.2; 3.2.6; 4.1.1; 4.2.2; 4.2.5; 4.2.7; Table 1 & 2; SEO Obj 2		Fire at wellsite & campsite. Secondary fires resulting from transportation.	Disturbance and loss of stock, native fauna and natural habitat.	H	H	H	H	M	2	No	Low						1	Table 1 of EIR mentions that there is low risk to fauna & livestock. Table 2 refers the risk management procedures-where possible, locate wellsite where natural habitat is already cleared. At the time of this document compilation there were no stock in the vicinity of the wellsite but still there is the possibility of sheep/cattle disturbance. Endangered/vulnerable species under EPBC Act have been identified through the website of Dept of Env & Water Resources. Ploughed/graded fire break around the flare pit, fence on the perimeter of the wells. In the event of any well testing & flaring during the fire season the presence of a CFS unit will be requested. Vehicles & equipment with faulty exhaust will not be allowed. No smoking. Management systems, Emergency Response Plan and other procedures in place. Fire extinguishers near the tanks during the initial production testing. Driving rules in place to control collisions and fires. Local CFS will be invited to attend during the initial drilling stage to make themselves familiar with the site, water availability etc. Current daily Fire Danger sign present on site. This will be changed daily if in the fire danger season.	LOW						
	<b>Social Environment</b>																								
	<b>Community Resource Impacts</b>																								
EIR Section 3.4; 4.4; Table 2; SEO Objective 9, 10, 3		Change in visual appearance of the area.	Reduction in aesthetic value.	H	H	H	H	M	2	No	Low						1	The permit area is located between 4 & 6 kms west of the town of Panola. The people of Panola are very farm was gas exploration industry. There have been numerous wild cat wells drilled in the area. Dwellings are present throughout the permit and due consideration will be given to site selection to minimize the associated impact. Water Management and Rehabilitation Program in place to minimise any impact of drilling and associated activities.	LOW						
EIR Section 1.4.3; 1.5; 4.1.1; SEO Obj: 7, 8		Vehicular use of the public road.	Degradation of public road through heavy vehicle use.	H	H	H	H	M	2	No	Low						1	S 1.5 refers that access is likely to be via existing wide, well formed, sealed and gravel roads to within reasonable close proximity of the site and then by a constructed paved access track. S 4.1.1 refers that all necessary permits will be obtained for trucks transporting construction equipment and paving materials. Vehicle driving rules in place. Detouring from the town's road if necessary.	LOW						
	<b>Cultural &amp; Heritage Impacts</b>																								
EIR S 1.3; 3.4; 4.4; Table 1 & 2; SEO Obj 1		Construction and operation activities.	Intrusion or physical site damage to areas of Aboriginal and non-indigenous heritage significance.	H	H	H	H	M	2	Yes							1	The proposed well site and access tracks will be traversed prior to commencement of any activity to ensure any sites of Aboriginal and European heritage are identified. S 4.4 states that Representatives of the Kungari people will be invited to carry out a site inspection prior to any site preparation. No features of traditional significance will be interfered with. The relevant government department and Aboriginal Group will be immediately notified and any indications of possible items of traditional significance be discovered during operations. The Department of State Aboriginal Affairs and Department for Environment and Heritage will be consulted if cultural aspects at the site are in doubt. Table 1 ranks cultural heritage at low risk. SEO Obj 1 refers to the compliance with the Aboriginal Heritage Act 1988.	LOW						
	<b>Community Health &amp; Safety</b>																								
EIR Section 1.1; 1.4.3; 1.5; 3.1.1; 3.2.2; 4.1.1; 4.2.2; Table 1 & 2; SEO Obj 8		Vehicular use of the public road.	Increased traffic, vehicle accidents and inconvenience to the public commuters	M	H	H	H	M	2	No	Med	Short					2	S 1.5 refers that access is likely to be via existing wide, well formed, sealed and gravel roads to within reasonable close proximity of the site and then by a constructed paved access track. Vehicle noise will be monitored and movements restricted to daylight hours as far as practicable. Table 1 identifies and ranks "vehicle movement" high risk. S 3.2.2 identifies that most vehicle movement will take place during mobilising and demobilising the rig. S 4.1.1 refers that all necessary permits will be obtained, Wattle Range District Council request regarding signage will be followed, local resident farmers will be individually notified in advance about truck movements, Vehicle driving rules in place. Detouring from the town's road if necessary. Advise to local CFS, Police, ambulance and hospital.	LOW						
EIR Section 1.1; 1.4.3; 1.5; 3.1.1; 3.2.2; 4.1.1; 4.2.2; Table 1 & 2; SEO Obj 8		Vehicle movement	Dust / noise generation	H	H	H	H	M	2	No	Med	Short					2	Table 1 ranks Vehicle Movement as high risk, Dust and Noise as low risk. S 1.5 refers that access is likely to be via existing wide, well formed, sealed and gravel roads to within reasonably close proximity of the site and then by a constructed paved access track. Vehicle noise will be monitored and movements restricted to daylight hours as far as practicable. S 4.1.1 refers the watering of roads to reduce road dust. S 3.2.2 identifies that most vehicle movement will take place during mobilising and demobilising the rig. S 4.1.1 refers that all necessary permits will be obtained, Wattle Range District Council request regarding signage will be followed, local resident farmers will be individually notified in advance about truck movements, Vehicle driving rules in place. Detouring from the town's road if necessary. Advise to local CFS, Police, ambulance and hospital. Noise limitation to be included as part of induction procedures (e.g. noisy tubular/pipe handling, unnecessary use of horns).	LOW						
	<b>Economic Environment</b>																								
	<b>Existing Land Use Impacts</b>																								
EIR Section 1.3; 3.1.3; 3.4.1; 1.4.3; 1.4.3.3; Table 1; Table 2; SEO Obj 8		Presence of wellsite, chemicals and waste	Disturbance of stock/cattle activity	H	H	H	H	M	2	No	Med	Short					2	The wellsite perimeter fence will protect sheep and cattle from serious disturbance. All pits will be backfilled so that normal cropping/grazing practices can resume after abandonment of the site. A very thorough inspection will be carried out at the completion of each stage of rehabilitation to ensure that no rubbish of any kind remains. Any casing cap or wellhead left on the well above ground level will be in accordance with the Regulations and be so constructed as to present no safety hazard to farming machinery, livestock, or to unauthorised persons interfering with the well. Rapid settlement of compensation for losses will be undertaken.	LOW						