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# Petroleum Assessment Lease

## Section 9 of the *Petroleum (Onshore) Act 1991*

I, the Minister for Mineral Resources, pursuant to Section 9 of the *Petroleum (Onshore) Act 1991*, determine the Petroleum Assessment Lease Application No 3 by granting the Petroleum Assessment Lease described in Schedule 1 to **EASTERN STAR GAS LIMITED (ACN 094 269 780)** subject to the conditions set out in Schedule 2.

These conditions are imposed pursuant to section 23(1) of the *Petroleum (Onshore) Act 1991* and are required to:

- ensure optimal petroleum resource recovery;
- prevent, minimise, and/or offset adverse environmental impacts;
- provide for the ongoing environmental management of the project;
- ensure the areas disturbed by petroleum operations and exploration activities are appropriately rehabilitated.

The rights and duties of a Lease Holder are those prescribed by the *Petroleum (Onshore) Act 1991*, subject to the terms and conditions of this Lease. This lease does not override any obligation on the Lease Holder to comply with the requirements of other legislation and regulatory instruments unless specifically provided in the *Petroleum (Onshore) Act 1991* or other legislation or regulatory instruments.

**SIGNED**



Under Delegation from the  
**Minister for Mineral Resources**

**30 October 2007**

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**SCHEDULE 1**  
**Description of Lease**

**Lease Number:** PAL 2  
**Land:** See Appendix 1  
**Term:** 6 years  
**Expiry Date:** 30 October 2013

**SCHEDULE 2**  
**Conditions**

**ENVIRONMENTAL MANAGEMENT CONDITIONS**

*Note: Conditions 1-5 of this Lease are imposed pursuant to Part 6 Division 2 of the Petroleum (Onshore) Act 1991 and are conditions related to environmental management.*

**1 Environmental Harm**

The Lease Holder must implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of any exploration activities.

*For the purposes of this condition:*

**environment** means components of the earth, including:

- (a) land, air and water, and
- (b) any layer of the atmosphere, and
- (c) any organic or inorganic matter and any living organism, and
- (d) human-made or modified structures and areas,

*and includes interacting natural ecosystems that include components referred to in paragraphs (a)–(c).*

**harm to the environment** includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution, contributes to the extinction or degradation of any threatened species, populations or ecological communities and their habitats and causes impacts to places, objects and features of significance to aboriginal people.

**2 Petroleum Operations Plan**

- a) Activities must only be carried out in accordance with a Petroleum Operations Plan (POP) which has been approved by the Director-General of the Department of Primary Industries.
- b) The POP must:
  - i) identify areas that will be disturbed by operations;
  - ii) detail the staging of specific operations;
  - iii) identify how operations will be managed to allow closure of the site;
  - iv) identify how operations will be carried out on site in order to prevent and or minimise harm to the environment, including groundwater;
  - v) reflect conditions of approval under:
    - (1) the *Environmental Planning and Assessment Act 1979*;
    - (2) the *Protection of the Environment Operations Act 1997*; and
    - (3) any other approvals relevant to the development including the conditions of this lease; and
  - vi) have regard to any relevant guidelines adopted by the Director-General.
- c) The Lease Holder may apply to the Director-General to amend an approved POP at any time.
- d) It is not a breach of this condition if:
  - i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the *Petroleum (Onshore) Act 1991*, the *Environmental Planning and Assessment Act 1979*, *Protection of the Environment Operations Act 1997* or the *Occupational Health and Safety Act 2000*; and

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- ii) the Director-General had been notified of the terms of the order or direction prior to the operations constituting the breach being carried out.

*Note: The Director-General is deemed to be notified of the terms of an order or direction if the order or direction was issued by the Department.*

- e) A POP ceases to have effect 7 years after the date of approval or other such period as specified by the Director-General. An approved amendment to the POP under part c) of this condition, does not constitute an approval for the purpose of this paragraph unless otherwise specified by the Director-General.

*Note: Where the approval of activities covered by the POP require assessment under Part 5 of the Environmental Planning and Assessment Act 1979, a Review of Environmental Factors or Environmental Impact Statement must be submitted with the POP for assessment by the Director-General of the Department of Primary Industries.*

### 3 Environment Management Reporting

- a) The Lease Holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise specified by the Director-General.
- b) The EMR must:
  - i) report against compliance with the POP;
  - ii) report on progress in respect of rehabilitation completion criteria;
  - iii) report on the extent of compliance with regulatory requirements; and
  - iv) have regard to any relevant guidelines adopted by the Director-General.
- c) Additional environmental reports may be required on specific surface disturbing operations or environmental incidents from time to time as directed in writing by the Director-General and must be lodged as instructed.

### 4 Incident reporting

The Lease Holder must, in accordance with Departmental guidelines (if any), report any incidents causing or threatening material harm to the environment.

*For the purposes of this condition, harm to the environment is material if:*

*(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*

*(ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000.*

*Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.*

### 5 Rehabilitation

The Licence Holder must rehabilitate all disturbed land to the satisfaction of the Director-General.

## SAFETY

### 6 Industry Codes and Standards

- a) All operations must be carried out in conformity with the **"Schedule of Onshore Petroleum Exploration and Production Safety Requirements"** published by the Department of Primary

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Industries, as amended from time to time. The Lease Holder must prepare a Safety Management Plan in accordance with the Schedule.

- b) The design, fabrication, installation, inspection, testing, operation and maintenance of all gas gathering pipelines must conform to the appropriate Australian Standards. Technical records, inspection reports and the results of any tests must be made available to an inspector on request.

## **7 Gathering Pipelines**

- a) The gas gathering pipelines shall conform to Australian Standards and International Standards, including as relevant:
- |          |   |
|----------|---|
| AS 2885  | Pipelines – Gas and liquid petroleum  |
| AS 3723  | Installation and maintenance of plastic pipe systems for gas                  |
| AS 4130  | Polyethylene (PE) pipe for pressure applications                              |
| IS 14692 | Petroleum and natural gas industries – Glass reinforced plastics (GRP) piping |
- b) For the purposes of AS 2885 the title holder is deemed to be the licensee. The licensee is required to comply with all requirements in AS 2885 relevant to fibreglass pipeline.
- c) A copy of the construction program must be given to the Director Mine Safety (or nominated representative) at least 14 days before commencement of works unless approved otherwise by the Director Mine Safety (or nominated representative).
- d) A minimum of 14 days notice must be given to the Director Mine Safety (or nominated representative) prior to commencement of the gas gathering pipeline installation program and while trenches are open to allow inspection prior to backfilling.
- e) Safety management plans, technical records, inspection reports and the results of all test reports must be made available to an inspector on request.
- f) Gas gathering pipelines must not be abandoned except in a manner approved by the Director General.
- g) All gas gathering pipelines must be buried with a detectable marker tape or wire or other approved means provided for locating the pipe.
- h) All gas gathering pipelines must be surveyed and prominent markers must be installed at appropriate intervals to show the location of these pipelines.
- i) The gas gathering system must be maintained free of leaks while in operation and a program implemented to confirm this. Records to be maintained and made available to an inspector on request.

## **WELLS**

### **8 Notification of Activities**

The Lease Holder must provide reasonable notice of disturbing activities to potentially affected parties prior to the commencement of activities on each site.

### **9 Well Surveying and Logging**

- a) The location and height (AHD) of the collar of all wells drilled by the Lease Holder within the lease area must be determined to an accuracy of 1 metre, and the position of the hole within any potentially mineable coal seam must also be determined to an accuracy of 1 metre. This information must be supplied to the Director-General.

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- b) All vertical wells must be downhole geophysically logged prior to the installation of production casing with a logging suite which can accurately determine the location and properties of all production zones, and conventional gas reservoirs. In addition a cement bond log must be run to confirm the integrity of the cement annulus between the wall of the well and the entire length of the casing. All other suites must be run for the entire length of the hole.
- c) In the event of horizontal wells being drilled, the Lease Holder must supply 3 dimensional co-ordinates determining the path and track of the hole, to the satisfaction of the Director-General.
- d) The Lease Holder must provide a copy of all geophysical logs to the Director-General within 14 days of completion.

#### 10 Well Abandonment

- a) At the completion of production, steel casing must be removed from the vertical interval of any potentially mineable coal seam as determined by the Director Coal & Petroleum Development. Downhole geophysical surveys and/or cameras must be used to confirm the removal of all casing throughout the prescribed interval.
- b) A well must not be plugged and abandoned except in accordance with the *Schedule of Onshore Exploration and Production Safety Requirements*, and any other guidelines in force from time to time.
- c) All wells must be fully sealed in accordance with the Department's guidelines.
- d) The Lease Holder must, within 2 weeks of the abandonment of any well, submit to the Director-General a report providing details on the following items:
  - i) Location of abandoned well.
  - ii) Termination depth of drillhole and depth to worked seam.
  - iii) Details of drillhole diameter and casing used.
  - iv) Gas and water makes and composition during the drilling and production test phases. The commencement and completion dates of each phase of the operation and the dates of any other significant events.
  - v) The estimated and actual quantities of grout used to seal the drillhole.
  - vi) Evidence of removal of steel casing from the interval encompassing any potentially mineable coal seam.

#### IMPACT ON COAL SEAMS

#### 11 Operations not to affect mineability of coal seams

- a) The Lease Holder must undertake all activities with due regard to identifying, managing and minimising the impact of the activities on the potential mineability of coal seams at the expiration of the lease.
- b) The Director-General may request the Lease Holder to provide to the Department all geological information pertinent to the drilling of any well in the lease area. The Director-General may request additional tests and data if required. The Lease Holder must comply with any such requests.

#### 12 Well Casing

No steel casing is to remain in any coal seam identified by the Department of Primary Industries as a mineable coal seam. As an alternative to steel casing, glass reinforced epoxy liners may be used subject to separate approval of the Director-General.

#### OPERATIONS GENERALLY

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**13 Disruption to utilities**

- a) If the activities carried out pursuant to this Lease will in any way impact on any utility, the Lease Holder must inform the authority in control of the utility and provide sufficient information for the authority to assess the proposal or its impacts.
- b) The Lease Holder must pay costs for remediation or repair of damage to utilities caused by the Lease Holder's operations and associated activities.

**GEOLOGICAL & PRODUCTION REPORTING**

**14 Well Drilling**

- a) While a drilling activity is taking place, the Lease Holder must submit a daily drilling report to the Director-General.
- b) The Lease Holder must submit a weekly progress report containing a summary of any test results and problems encountered. The weekly progress report must be submitted to the Director-General.

*Note: These reports are in addition to the reporting requirements under s.131 of the Petroleum (Onshore) Act and the Petroleum (Onshore) Regulation, 2007.*

**15 Well Assessment**

The lease holder must submit the following reports to the Director-General within seven (7) days of the completion of each month's activity:-

- i) Gas flow rates and compositions for each well connected to the gas gathering system; and
- ii) Total gas flow into the treatment facility.

**16 General**

The lease holder must submit to the Director-General, a copy of all reports undertaken relating to the interpretation of the results of work carried out in the area, including geological and geophysical reports as well as engineering reports. These reports must be submitted within six (6) months of the completion of the assessment.

**SECURITY**

**17 Security**

- a) The Lease Holder must lodge a security with the Minister in the sum set out in Appendix 2 for the purpose of ensuring the fulfilment of the Lease Holder's obligations under this licence.
- b) The security may be lodged in one of the following forms:
  - i) cash;
  - ii) a security certificate in a form approved by the Minister and issued by an authorised deposit-taking institution.
- c) The Lease Holder must not carry out any activities under the authority conferred by this Lease unless the Security required by this condition has been lodged with the Director-General and the Lease Holder has received receipt of the lodgement.

*Note: This condition is imposed pursuant to section 16 of the Petroleum (Onshore) Act 1991. The amount of the security required by this condition can be varied by written notice served on the Lease Holder.*

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**APPENDIX 1**  
**DESCRIPTION OF LAND COVERED BY LEASE**

All land described in the attached lease plan titled **P10041** and dated **2 August 2007**.



**APPENDIX 2  
SECURITY**

**Sum of security required to be lodged with Director-General: \$10,000.**