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GEL 157 - Callabonna

GEL 179 – Callabonna East

Combined Annual Report Year 1

16 February 2005 – 16 February 2006



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1. Introduction

1.1 Licence Data

On 27 July 2004, Petratherm Ltd listed on the Australian Stock Exchange following the successful completion of a \$4,000,000 dollar public offering. MNGI Pty Ltd, a wholly owned subsidiary of Petratherm Ltd, was granted GEL 157 (Callabonna) on 23 November 2004 and GEL 179 (Callabonna East) on 28 January 2005, each for a period of 5 years. The licence areas are located in the Arrowie Basin north of the Mt Painter and Mt Babbage Inliers in the Northern Flinders Ranges (Figure 1).

In December 2005 Petratherm applied for Variations to the Work Programs of each of the two Callabonna tenements with the view of amalgamating their work programs into a single regional project and streamlining compliance reporting. The proposed variations were approved by PIRSA, and GEL 157 has been suspended from 11th January to 6th April 2006 in order to align the anniversary dates. The revised first anniversary of the combined tenements is now 17th February 2006. In accordance with Section 33 of the Petroleum Regulations 2000, this report details work conducted during the first permit year of the licences, including all activities on the tenements for the 15 month period from November 2004 to 17th February 2006.

1.2 Overview

The Callabonna Hot Rock Project represents a new exploration play for hot rock energy informally known as the Thermally Anomalous Granite (TAG) model. This model focuses on areas where uraniferous granitic rocks, with associated high heat production rates, are covered by thick insulating sequences of sedimentary overburden which maximise the harbouring of heat derived from radiogenic decay.

Known high heat producing granites outcropping in the Mt Painter and Mt Babbage Inliers to the south of the Callabonna Project area are defined by a strong gravity low. Modelling of existing regional gravity and magnetic data suggests that a distinct area of low density within the Callabonna Project area, covering approximately 1200 km² immediately north-northeast of the outcropping Mt Painter and Mt Babbage Inliers, is an intrusive body underlying about 2-3 km of sedimentary overburden (Figure 2). This interpretation has been supported by new gravity data collected by Petratherm during the first permit year. Petratherm's two licenses, GEL157 and GEL179, cover about 1000 square kilometres over the centre of this body.

In May 2005 Petratherm was successful in obtaining a \$140,000 South Australian Government "*Plan for Accelerating Exploration*" (PACE) grant to support the drilling and wireline logging of its geothermal evaluation well at Callabonna. Yerila-1 was spudded in early August 2005 and drilled to 693.5 metres to evaluate the geothermal potential of the Callabonna Gravity Low.



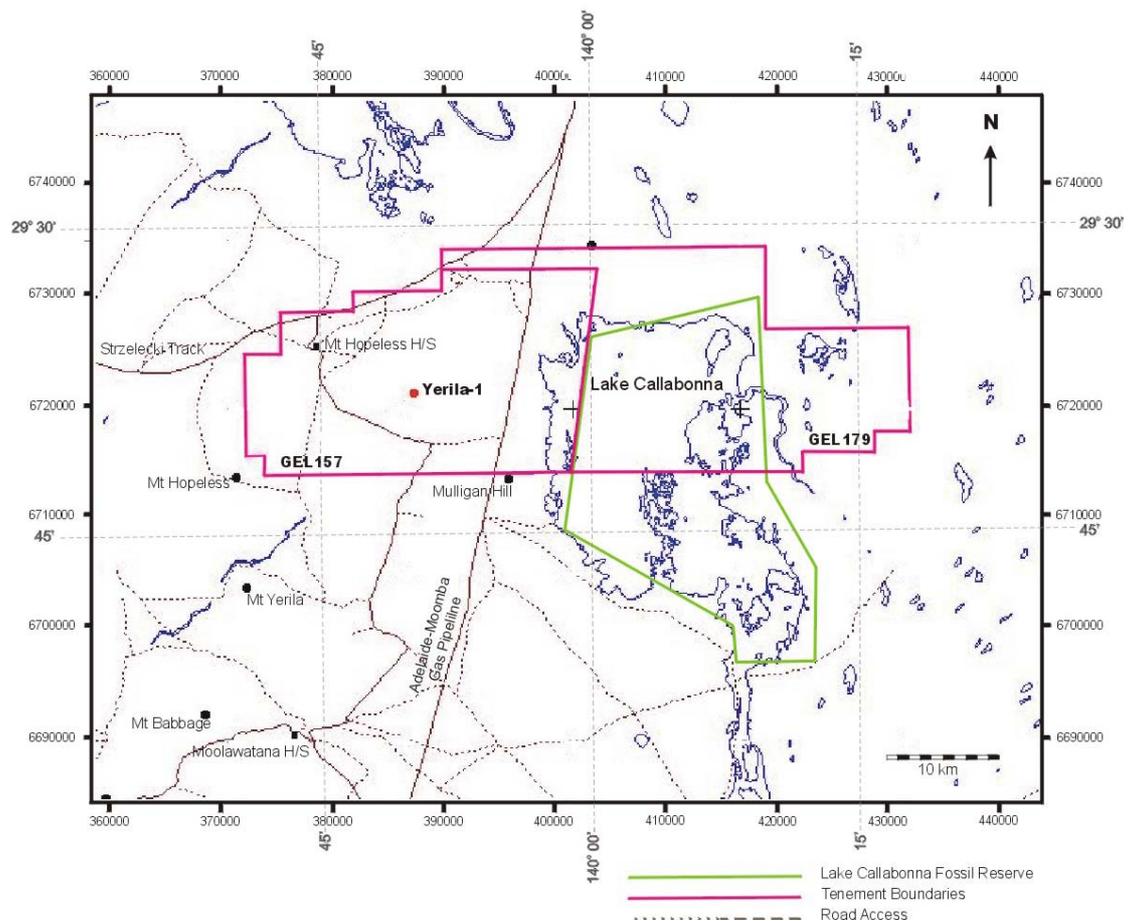


Figure 1. Map indicating the location of GEL157 Callabonna, GEL179 Callabonna East and the Yerila-1 well.

2. Work Requirements

The revised work program negotiated by MNGI Pty Ltd with Primary Industries and Resources South Australia (PIRSA) for the combined Callabonna tenements (GEL 157 and GEL 179) is presented below.

Year of Licence	Work Program for Callabonna: GEL15 & GEL179
1	<ul style="list-style-type: none"> • Geological and geophysical review • Modelling and interpretation of geophysical data (including gravity & seismic data) • Historical bore hole thermal data collection (where possible) and analysis • Shallow geothermal gradient test well (500m depth) • Down hole temperature and wireline logging



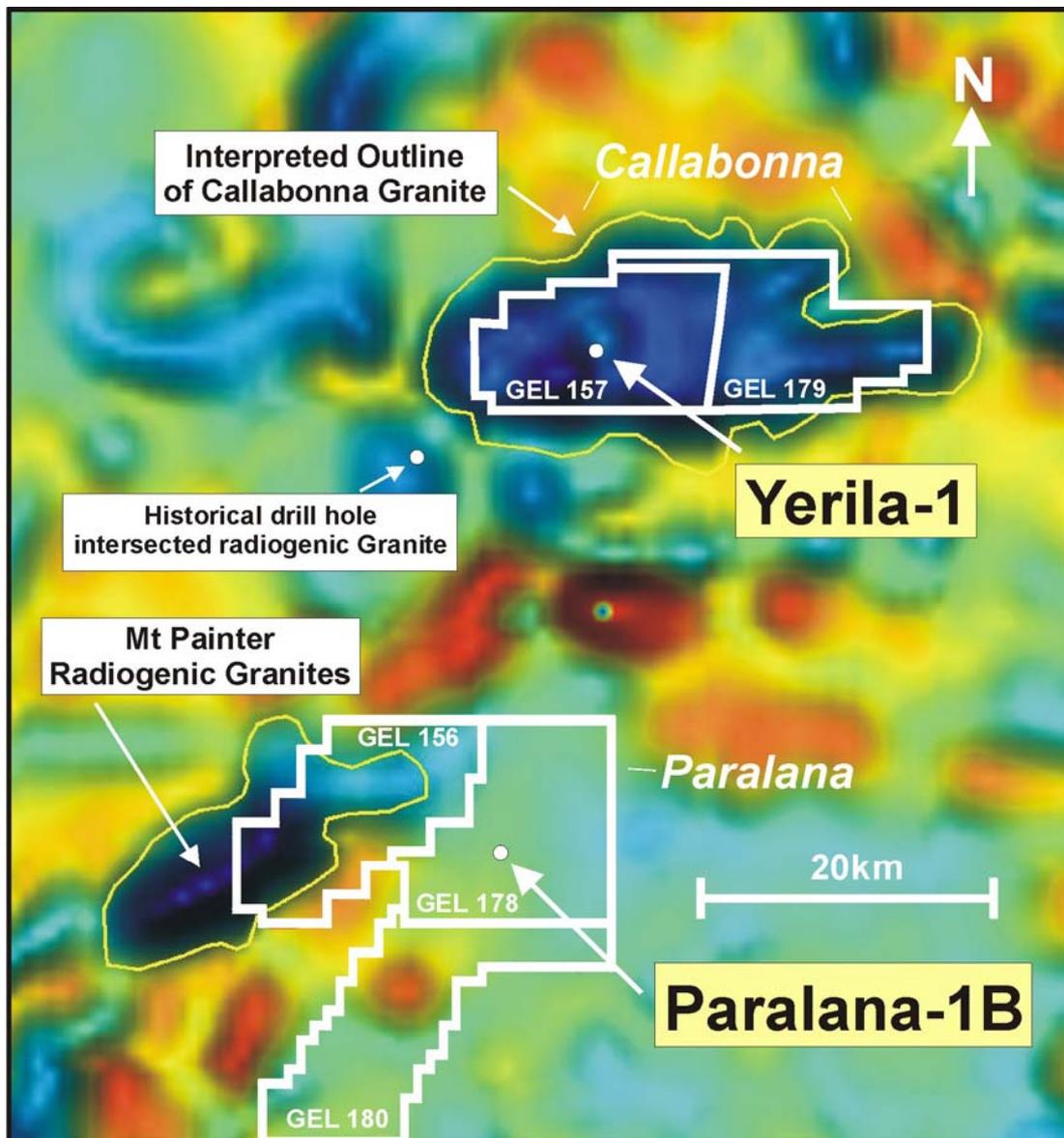


Figure 2. Regional 1VD Gravity Image, highlighting extent of the Callabonna Gravity Low (northern dark blue area) Petratherm’s Licence Areas and the location of Yerila-1.

3. Work Conducted

3.1 Geological and geophysical review

During the first year of the licences, Petratherm has gathered and reviewed available open file data including well logs and well completion reports relating to the Callabonna tenements and surrounding areas. There has also been a review of published literature on the geology of the area and on the topics of heat production



from radiogenic granites, modelling of geothermal gradients using data from shallow wells and the influence of groundwater circulation.

3.2 Modelling and interpretation of geophysical data (including gravity and seismic data).

Compilation of existing seismic, regional aeromagnetic and gravity datasets and preliminary modelling of this data has been completed. A new 1km by 2km detailed regional gravity survey of the GEL157 Callabonna tenement has been acquired using geophysical survey contractors Haines Surveys. A final report on the results and interpretation of this data was prepared and submitted to PIRSA including a report on commissioned density-susceptibility modelling work performed by a contracted geophysicist, and the raw data gathered by Haines Surveys.

3.3 Historical bore hole thermal data collection (where possible) and analysis

Available thermal data from existing exploration holes has been collected and reviewed. In addition significant time has been spent collecting, collating and analysing thermal data from artesian bores in the region. This data was used in aiding in the target selection process.

3.4 Target Selection and Drilling of First Test Hole.

Yerila-1 was spudded on August 2nd, 2005 and drilled to 693 metres in order to evaluate the geothermal potential of the Callabonna Project area. Due to the nature of the local geology, the hole was designed to be drilled in two discreet stages, with the first stage hole comprising a rotary mud pre-collar through soft Mesozoic sediments and the Great Artesian Basin aquifer. The first stage was successfully completed on August 27th, 2005. Stage two drilling may be undertaken at a later date.

3.5 Downhole Temperature and Wireline Logging.

Yerila-1 was logged on 7-8th September & 26th September 2005. Preliminary results from the wireline logging are very encouraging and in line with Company expectations for the Project. Evaluation of the data collected from drilling operations is in progress and will be more thoroughly reported in the pending Yerila-1 Well Completion Report.

4. Year 1 Expenditure

Commercial in Confidence



5. Operations Proposed for Year 2

The work program for Year 2 of the Paralana Project tenements will be aimed at extending our understanding of the depth to basement and the situ temperature and geothermal gradient. These aims will be accomplished by conducting a magneto-telluric trial survey of the area and by completing data collection, analysis and geophysical and thermal modelling studies initiated during the first year.

Year of Licence	Work Program for Paralana: GEL156, GEL178 & GEL180
2	<ul style="list-style-type: none"> • Commercial negotiations for funding • Magneto-telluric trial survey • MT modelling of basement • Revised thermal modelling
<p>6. Compliance with the Petroleum Act 2000 (Reg. 33).</p>	

a) Summary of the regulated activities conducted during the licence year.

Regulated activities undertaken by Petratherm in the Callabonna Project Area during the licence year include;

- Regional ground gravity survey – data collection, interpretation and environmental audit.
- First stage rotary mud drilling and wireline logging of Yerila-1 Geothermal Exploration Hole to 693 metres.

b) Report for the year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives.

A Compliance Register is maintained for the Callabonna Project to ensure legislative compliance is achieved, and to document any breaches of the Petroleum Act, 2000. All infringements of the Petroleum Act and relevant SEOs occurring during the Annual Reporting period with respect to the Callabonna tenements are discussed below. No other breaches of the Act or relevant SEOs occurred.

1) Regional Gravity Survey

An internal environmental audit of the survey operations was conducted by Petratherm staff. A copy of the Audit Report has been provided to PIRSA. During



data collection by the contracted geophysical team, the regional gravity survey encroached over the northern and southern boundaries of the GEL157 Callabonna tenement. The area encroached upon is not held under any other licences, and did not affect other stakeholders. Details of this infringement were provided to PIRSA in correspondence dated 19/10/04. No other breaches of the Petroleum Act, or of the Statement of Environmental Objectives for Geophysical Operations in the Cooper Basin occurred with respect to this activity.

2) Drilling of Yerila-1

An independent consultant was engaged to prepare an Environmental Assessment Report for drilling operations at Yerila-1, and found that the existing EIR and SEO for Drilling Operations in the Cooper Basin were applicable and sufficient to guide operations at the Yerila site, with some minor modifications which were specifically addressed in the EAR.

During drilling of Yerila-1 a number of minor breaches of the SEO occurred. In the main these incidents related to small spills of diesel fuel or oil leaks from heavy machinery and pump equipment generally estimated at less than one litre each. Incident reports were generated for these incidents and information on each was provided to PIRSA in a quarterly report on reportable incidents. A copy of this report is attached as Appendix 1.

In most instances fuel or oil leaks from equipment were able to be repaired or banded to prevent further loss or soil contamination. In accordance with the SEO, soil contaminated by fuel or other chemicals has either been disposed of in the sumps as part of the partial rehabilitation and fencing of the site, or is being allowed to volatilize and will be disposed of in sumps and buried in accordance with the SEO, once complete rehabilitation has been undertaken. Complete rehabilitation will not be undertaken until sumps at the site have dried and second stage drilling of the well is completed. This will avoid additional movement of heavy equipment causing rutting and further disturbance of soils at the site. The site has been fenced and signposted to prevent ingress of stock, wildlife or personnel.

The requirement to report these incidents could have been avoided by the construction of a full drilling pad at the operational site, as this constitutes a surface constructed to contain such spills. However construction of such a pad was felt to inflict greater material impact on the environment (e.g. construction of borrow pits and an increase of earthworks before and after drilling) than the minor spills that did occur. In addition, representatives of the Native Title claimants expressed a preference that pad construction and other major earthworks (e.g. borrow pits and road building) be avoided if possible. No other breaches of the Petroleum Act, or of the Statement of Environmental Objectives occurred.

c) Actions taken to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, and to minimise the likelihood of the recurrence of any such non-compliance; and d) summarise any management system audits undertaken during the relevant licence year including information on any failure



or deficiency identified by the audit and any corrective actions that has, or will be, taken.

Petratherm Ltd recognises the importance of achieving regulatory compliance and is committed to achieving best practice in its management strategies, work practices and procedures, in an environmentally and socially responsible manner. Petratherm undertakes continuing review and improvement in developing its management systems to ensure it meets this commitment. At present documented management systems include an Environmental and Operational Health and Safety Manual, Field Operations Manual, and Standard Operating Procedures Manuals for individual tenements/projects.

Two on-site inspections by PIRSA inspectors were conducted during drilling of Yerila-1. Findings and recommendations of the inspections have been provided to Petratherm are currently being reviewed.

e) List all reports and data relevant to the operation of the Act generated by the licensee during the licence year,

Author	Title	Date	Activity	GEL	Submitted
Petratherm	Activity Application for Callabonna Regional Gravity Survey		Regional Gravity Survey	GEL157	18/08/04
Haines Surveys, Contractor	Callabonna Gravity Survey (report & raw data).	Sept 2004	Regional Gravity Survey	GEL157	11/03/05
Hanneson, J., Consultant	A regional Density-Susceptibility Model for the Callabonna Area, S.A.	Oct 2004	Regional Gravity Survey	GEL157	11/03/05
Hart, J. Petratherm	Results and Interpretation Callabonna Gravity Survey.	Oct 2004	Regional Gravity Survey	GEL157	11/03/05
Bendall, B. Petratherm	Environmental Audit of 2004 Callabonna Regional Gravity Survey.	Dec 2004	Regional Gravity Survey	GEL157	22/11/04
Petratherm	Activity Application for Callabonna Project Drilling Program	Apr 2005	Phase 1 Drilling Operations Yerila-1	GEL157	13/04/05
Fatchen Environmental, Consultant	Environmental Assessment Report Callabonna Hot Rock Project	May 2005	Phase 1 Drilling Operations Yerila-1	GEL157	06/06/05
Petratherm	Callabonna Hot Rock Project Standard Operating Procedures.	Apr 2005	Phase 1 Drilling Operations Yerila-1	GEL157	06/06/05
Geoscience Associates, Contractor	Wireline Logs for Yerila-1.	Oct 2005	Phase 1 Drilling Operations Yerila-1	GEL157	21/11/05

f) Report on any incidents reportable to the Minister under the Act and regulations during the relevant licence year.

Please see comments in section b) above and Appendix 1.

g) Report on any reasonably foreseeable threats that reasonably present , or may present, a hazard to facilities or activities under the licence, and report on any corrective action that has, or will be, taken.

No threats have been identified.



h) Operations proposed for the ensuing year

A discussion on the proposed work programs for Year 2 of GEL 157 is presented in Section 5 above.



Appendix 1

Report on Reportable Incidents Third Quarter 2005



Petratherm Ltd: Reportable Incidents Report

3rd Quarter 2005

Tenement: GEL157: Callabonna

Wells: Yerila -1

Well	Date	Quantity/Area Affected	Incident Description	Actions taken to clean-up / rehabilitate	Actions to Prevent Re-occurrence
Yerila -1	2/7-26/7	1m x 1m 15m SE of well head	Spill of diesel fuel onto ground due to slow dripping valve on diesel tanker	Temporary bund constructed under tanker until tanker could be moved to constructed bunded fuel area. Contaminated soil to be disposed of in sump. Complaint made to contractor to fix or replace tanker.	Bunded fuel storage area constructed. Tanker moved. Longer term: construction of operating pad.
Yerila -1	8/8	20cm x 40cm 20m NE of well head	Spill of fuel onto ground due to leaking hose connection on mud pump fuel tank.	Hose connection repaired. Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	8/8	0.5m x 0.5m 10m NW of well head	Spill of mud materials (bentonite) onto ground around pre-mix tank due to split in containing bag during transport by fork lift.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	10/8	30cm x 30cm 22m NE of well head	Spill of fuel onto ground due to drips from hose when refuelling mud pump fuel tank.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	13/8	2m x 1m 4m W of well head	Spill of grout onto ground east of well head during cementing of casing, while transferring cement from agitator to pumping tank.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	18/8	1m x 1m 10m NW of well head	Spill of mud materials (baryte) onto ground around pre-mix tank due to bags split in transport.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	26/8	1m x 1m 4m W of well head	Spill of grout onto ground east of well head during pressure cementing of casing, while transferring cement from agitator to pumping tank.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.
Yerila -1	9/9	2.5m x 1m 30m NE of well head	Spill of fuel onto ground under fuel bund during removal of fuel tanker – puncture to bund liner.	Contaminated soil to be disposed of in sumps during rehabilitation of site	Longer term: construction of full operating pad.



Appendix 2

Assessment of SEO Compliance



ASSESSMENT OF PETRATHERM'S PERFORMANCE IN ACHIEVING ENVIRONMENTAL OBJECTIVES DEFINED IN THE COOPER BASIN SEO & CALLABONNA ENVIRONMENTAL ASSESSMENT REPORT

WELL NAME: YERILA-1

GEL No.: 157

SPUD DATE: 02/08/05

Environmental objective	Possible impact	Main sources of risk	Avoidance, management, mitigation as per EAR	Performance Assessment
1. Minimise risk to public and third parties				
Minimise public and third party risks	Creation of new public risks: public using rig road; well blowouts; post-drilling; radiological issues.	Access risks, wellsite risks	<p>Signage on station track/public road intersection, warning against trespassing, and warning of danger associated with truck movements. Liaison with landholders regarding movements. At drilling rig, regular integrity testing.</p> <p>Drilling may intersect uranium deposits: standard radiological monitoring procedures for shallow drilling followed, cuttings and groundwater disposed in drilling sump with eventual soil covering.</p>	<p>The design & operation of Yerila-1 was documented in the Activity Application & approved by PIRSA.</p> <p>All employees undertook safety induction prior to work.</p> <p>Signage was erected as required along access tracks and at site entrance.</p> <p>Scintillometer readings of cuttings routinely taken & monitored.</p> <p>Cuttings disposed of in sumps.</p>
Minimise fire risk; prevent the spread of any fires to wellhead	Loss of resource & OH&S considerations	Drill site, campfires	Prevention of fires. Fire equipment available. Emergency response plan in place. Fire inductions. At present (early summer 2006) fuel loads are too low to support a wildfire.	<p>All employees undertook safety induction prior to work.</p> <p>Fire equipment located at drill site and camp site & in vehicles.</p> <p>Emergency Response Plan in place.</p>
2. Minimise disturbance and soil contamination				
<i>Minimise soil impacts</i>	Accelerated soil erosion, particularly in gibber (potential start-up of long	Access and pad construction	<i>General:</i> Paralana site is close to existing station or other service tracks and reachable by conventional vehicles. Access from tracks to drillpoint alternatives do not require formal track	No necessity to construct new access roads to site or camp, or construct borrow

	term irreversible erosion on gibber slopes >2%) Development of borrow areas.		construction but may require minor levelling. Vehicle movements are relatively light (truck-mounted drilling rigs). <i>Initial drillsite:</i> Site will need minor smoothing. Minor rehabilitation of wheel marks and scraped areas will be required, in particular scarifying of wheelmarks may be necessary on heaving clays. Movement on these heavy clays will not be undertaken under wet conditions, to avoid bogging and deep rutting No borrow areas are proposed. No major pad construction is proposed. Light grading and some watering may be necessary to temporarily eliminate crabholes. Surface scrapings of soil and plant material stockpiled on cleared edge for later re-spreading.	pits. Full rehabilitation of site to be undertaken at completion of diamond drilling stage. Soil stockpiled on site for re-spreading.
<i>Avoid storage and loading facility spills; rapid cleanup and impact minimisation following spills</i>	Pollution through local fuel tank or filling point spills	Vehicle and plant refuelling, drilling operations.	Most refuelling will be from trailers. Non-trailer (overhead tank) refuel areas or fuel/oil drum storage will be HDPE/clay floored and locally bunded (flooring and bunding clay sourced from sumps). Refuel areas' contaminated soil to be disposed in sump, with drilling muds, at end of drilling. In the event of spills on gibber surfaces, spills can be left to self-clean rather than risk disturbance of gibbers. Filling systems and storage tank operation in accordance with AS1940 <i>The Storage and Handling of Flammable and Combustible Liquids</i>	Fuel tanker stored in bunded area. Leakage of some diesel fuel from tanker prior to storage in bund. Incident report submitted to PIRSA. Number of minor spills occurred (generally <1 litre) during refuelling of equipment (see App 1-incident reports submitted to PIRSA). Contaminated soil disposed of in sumps. Review of Induction procedures & Drilling Contractor's procedures instigated.
3. Avoid introduction of pest species				
<i>Prevent introduction of pest plants</i>	Establishment of further alien species in the locality	Importation on vehicles	Requirement for contractor/other vehicles to be clean prior to entering district. Alien introduction due to drilling operation is a very low incremental risk, given the long-term pastoral use of both Paralana and Callabonna areas, and the high percentage of naturalised aliens already present in the Paralana block.	All equipment & vehicles cleaned before brought on to site.
4. Minimise disturbance to drainage patterns; avoid contamination of surface and shallow groundwaters				
<i>Avoid drainage alterations</i>	Downstream shifts; erosion	Access and pad construction	Existing access used. Although existing tracks do alter drainage, the proposed activities will not add any increment to existing track effects. Drilling sites have been selected to avoid drainage, particularly Paralana Ck floodouts.	Yerila-1 was not sited in an area where flooding from local watercourses was likely.

				<p>No new tracks created for drilling program.</p> <p>Site and access will be lightly scarified during rehabilitation of site. No pad construction required.</p>
<i>Avoid storage and loading facility spills; rapid cleanup and impact minimisation following spills</i>	Pollution through local fuel tank or filling point spills	Vehicle and plant refuelling, drilling operations.	See (2) above	See (2) above
<i>Avoid other sources of surface and groundwater contamination</i>	Mud or chippings contamination of surface and surface waters	Escape of drilling muds from sumps	No formation water released beyond area of drilling activity. Production water, either formation water or drilling brines, will be returned to the drilling sump for infiltrative disposal. No water will be released to evaporation or surrounding land. Drilling sites and sumps out of surface drainage, locally bunded	All formation water, drilling mud, chips etc contained or disposed of within sumps.
5. Avoid disturbance to sites of cultural and heritage significance				
<i>Avoid disturbance to sites of Aboriginal and European heritage significance</i>	Intrusion or physical site damage to areas of Aboriginal and European heritage significance	Access and pad construction, vehicle and people movement	<p>Existing and proposed access and all potential drilling sites and supporting infrastructure including borrow areas have been inspected, modified for impact minimisation and cleared for indigenous heritage.</p> <p>Control of vehicle and personnel movement off pad and defined access. No sites of significant non-indigenous heritage near drilling sites.</p>	<p>All employees undertake safety & site induction prior to operations.</p> <p>No new access tracks or land clearance required for operations.</p> <p>Heritage clearance survey conducted & approval given.</p>
<i>Minimise visual impacts</i>	Visual impacts through obtrusive access and pad development and/or visible long-term persistence of pad and access.	Access and pad construction	Minimal construction of drilling pad. Drilling areas selected and placed to minimise clearing of tall shrubs. Wheeltrack access from existing roads with minimal or no grading. No borrow requirements. Active rehabilitation of pad and local access on abandonment.	No new access tracks or land clearance required for operations. No borrow pits constructed.
6. Minimise loss of aquifer pressures and avoid aquifer contamination				
<i>Minimise formation damage in drilling</i>	Physical damage to formation beyond the drillhole.	Drilling	Low risk given rotary and diamond drilling: wells in area self-seal if not cased. Use of controlled water loss/low solids drilling muds. Casings applied and cemented at end of rotary drilling. Procedures and requirements given in Petratherm's Drilling Plan	The design & operation of Yerila-1 was documented in the Activity Application &

				approved by PIRSA. Yerila 1 was completely cased and cemented to surface as per Activity Application.
<i>Prevent cross-connection between aquifers, and between aquifers and reservoirs</i>	Contamination of higher-quality groundwater with lower-quality waters (salinity, trace elements).	Missing or inadequate casing or plugging post-drilling.	Casing design and cementing engineered to isolate GAB (Cadna-Owie, Eyre Formations) aquifers. Surface casing adequate to prevent blowout and for aquifer protection for subsequent diamond drilling of tails. Surface casing also isolates shallow aquifers in surficial formations. In case of abandonment, hole concrete-plugged. The drilling contractor required to run regular integrity tests. Procedures and requirements given via Petratherm's SOP	As above
7. Minimise disturbance to native vegetation and fauna				
<i>Avoid impacts on high biological value or wilderness value areas</i>	Direct physical impact on high biological or wilderness value areas; fires started at pad	Access and pad construction; fires	Not in high value area. Procedures/inductions and equipment to limit fire risks (under 1 above). Currently (early summer 2004) fuel loads will not carry wildfires.	Yerila 1 is not located in or near areas of high biological significance or wilderness values, hence drilling ops presented no long term impact to any such area.
<i>Minimise disturbance to vegetation and habitat</i>	Physical damage to soils, vegetation and habitat; wildfire	Access and pad construction or upgrade; Fires at drilling site	Maximised use of existing station and other roads. Drilling pad and local access placement has been selected to avoid clearing of mid-height (<2m) shrubs, and most of area is grassland or shortlived perennial dwarf shrubs. Stockpiling of surface soil and debris from scraped areas (drill pad, sumps, pits) for later use in rehabilitation. Post-operations rehabilitation works at wellsite. See procedures to limit risks of fires, under "Minimise fire risks" in 1 above.	No new access tracks or land clearance were required for the drilling operations. No borrow pits or drilling pad were constructed. Soil has been stockpiled for later rehabilitation of site.
<i>Avoid disturbance to rare, endangered, vulnerable species and communities</i>	Physical removal of rare, endangered, vulnerable species	Access and pad construction	Species not encountered at possible drilling sites or immediate access. Such species if present at wellsite can be expected to be found widely in the immediate district, as no specific habitat peculiarities exist at drilling sites. There are possibilities of such species being present along major watercourse areas but drilling will not impinge on these. Mound springs are far enough distant from the Paralana drilling sites not to be affected by the proposed drilling.	Yerila 1 is not located in or near areas of high biological significance or wilderness values, hence drilling ops presented no long term impact to any such area.
8. Minimise air pollution and greenhouse gas emissions				

Combustion by-products, particulates, vented hydrocarbon or CO2 release	Well testing, drilling	Any testing carried out in accordance with industry-accepted standards		No DSTs were conducted.
9. Maintain/enhance partnerships in community				
Liaison with local pastoral and mineral operations	Affected parties notified and consulted on proposed activities			<p>Petratherm maintains regular contact with local landholders & stakeholders. Siting of Yerila-1& access to water approved by landholder. NOIEs were distributed to affected parties within 21 day timeframe.</p> <p>Wherever possible Petratherm employs local contractors & personnel in support service roles</p>
10. Avoid or minimise disturbance to stakeholders and associated infrastructure				
<i>Minimise adverse impact on livestock</i>	Interference with stock	Disturbance to stock grazing	Drill site is temporary: activity will be sufficient to deter stock from pad and camp area but unlikely to otherwise affect stock. No alternative drilling site is close to stock water. Daily movement (water truck, crew) can be organised to minimise impact on stock waters. Liaison maintained with Station management	<p>Petratherm maintains regular contact with local landholders & stakeholders.</p> <p>Organic beef certification held at this location. MSDS of drilling fluid materials provided to Landholder for review.</p> <p>Drillhole location, site access & water access were approved by landholder.</p> <p>Site fenced to exclude stock after ops.</p>
<i>Avoid contamination of</i>	Interference with stock;	No	No formation water or brines released beyond actual drilling pad	All drilling fluids,

<i>stockwaters with hydrocarbons</i>	pollution of stock water	hydrocarbons expected		cuttings etc contained within sumps. No hydrocarbons intersected. Site, sumps & fuel bund fenced to exclude stock.
<i>Minimise adverse impact on Regional Reserve operations</i>	Not applicable in this area			Not applicable in this area
11. Optimise waste reduction and recovery				
<i>Minimise waste handling and disposal impact</i>	Creation of wastes: sewerage, litter, overflow and spillage	Disposal of wastes while drilling	Sewage disposed locally via short-term septic pits. Wastes on site confined by bins/skips. Disposal eventually to EPA-licenced waste disposal facility at Beverley. Minor non-toxic wastes, chippings and muds disposed in drill sump. Litter cleanup during and post-drilling.	All drilling fluids, cuttings etc contained within sumps. Waste was collected, stored & removed from site in covered bins/containers. Sewerage collected in chemical toilet/tanks and removed off site. Greywater disposed of locally in short-term septic pits.
12. Remediate and rehabilitate operational areas to agreed standards.				
<i>Rehabilitate unsuccessful or suspended wellsite and access</i>	wellsite and access permanently left in place if successful with visual impact, changed soil surfaces, colour contrasts	Post-drilling	Cleanup, sump and pits filled, facilities removed. Some scarification may be used to roughen pad surfaces. Topsoil stockpiled from levelled or cut areas respread over pad. Wheel-mark access lightly scarified.	Waste was collected, stored & removed from site. All equipment & materials removed from site. Contaminated soil removed & disposed of in sumps. Site, sumps & fuel bund temporarily fenced to exclude stock. Complete rehabilitation of site to take place after 2 nd

				stage diamond drilling.
<i>Undertake long-term planning for rehabilitation for potential producing wellsite</i>	Not applicable in this case	Development of rehabilitation plans included in production management		Not applicable in this case
13. Minimise as far as reasonably practicable interruptions to natural gas supply.				
Not applicable in this case				Not applicable in this case