

## **Petratherm Ltd**

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# **Report for the Quarter Ending 31 March 2006**

## **SUMMARY**

### **CORPORATE**

- An independent economic and engineering feasibility study for the Paralana Geothermal Site is scheduled for completion by July 2006.
- A Managing Director to be appointed to guide progress towards “green” energy.
- \$1.97 Million raised in February.
- Geothermal exploration joint venture opportunities discussed with third parties.

### **OPERATIONS**

- Extension of Paralana-1B to at least 1500 metres depth is to begin in early May 2006.
- Production well design and rig procurement at Paralana is underway.
- A review of geothermal opportunities elsewhere in Australia and overseas commenced.

## **CORPORATE ACTIVITIES**

Following the success of the initial geothermal test well drilled in September 2005 at Paralana, Ultra-Systems Technology has been employed to undertake a pre-feasibility study. The study will look at grid connection, plant design, power size development, and engineering aspects of the underground heat exchanger (i.e. the fluid circulation cell) in order to develop a comprehensive economic assessment.

The Company will employ a managing director with strong experience and understanding of the electricity market. It is anticipated this position will be filled shortly. In the meantime, the Company has continued advanced discussions with a number of third parties regarding potential joint venture opportunities for Paralana.

In February the Company successfully placed 5.25 million ordinary shares at 28 cents per share, raising \$1,470,000 through Taylor Collison Ltd and Lands Kirwan Tong Stockbrokers Pty Ltd. In addition Minotaur Exploration Ltd exercised \$500,000 of its options in Petrathern. The Company is now in a strong cash position with \$3,122,000 in the bank as of 31<sup>st</sup> March 2006.

## **OPERATIONS**

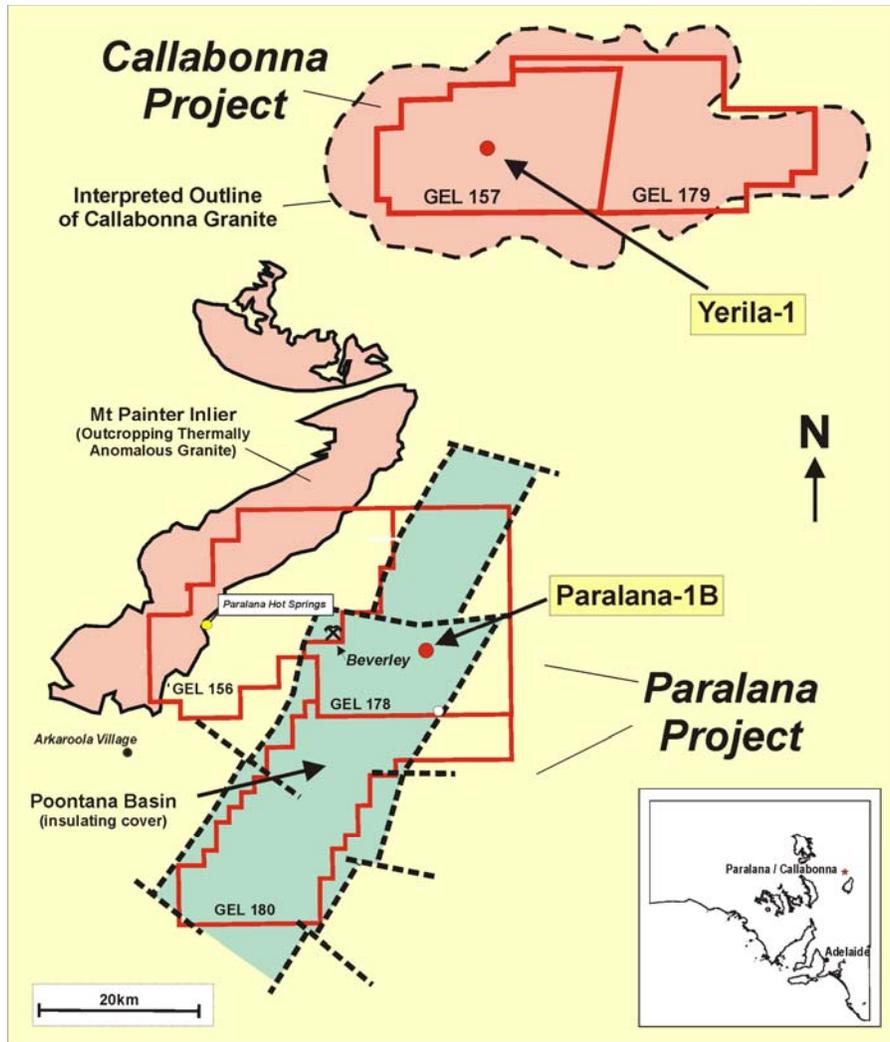
### **Paralana Project (GEL's 156, 178, 180)**

#### **Drill Campaign**

Preparations to extend the Paralana geothermal well (Paralana-1B) to a minimum depth of 1500 metres have been finalised with the contracted drill rig now scheduled to begin drilling in early May 2006.

Drilling data will establish thermal gradients and rock properties at intermediate depths, in order to confirm the model of temperatures in excess of 200°C at depths of 3.5 kilometres; a benchmark identified by the Company for economically viable electricity generation under current market conditions.

Heated waters in excess of 100°C may be intersected in the next phase of drilling, requiring the well design and safety aspects of the drill program to be carefully assessed. On completion, the well will be cased and suspended as a potential seismic observation well during fracture stimulation of the deep heat reservoir, should such occur.



**Figure 1** Callabonna and Paralana Project Areas.

The next stage of the Paralana Project would involve the drilling of two deep wells to establish the modelled thermal resource and provide input to a feasibility study for the production of base-load electricity generation. It is anticipated that a decision to proceed to this stage will be taken in the second half of 2006.

Phase-1 of the Paralana drill program recorded a geothermal gradient in the order of  $81.5^{\circ}\text{C}$  per kilometre, which is believed to be amongst the highest reported shallow temperature gradients recorded in Australia. The site is also well located 130 kilometres from the main grid infrastructure, and only 11 kilometres to the existing Beverley Uranium Mine.

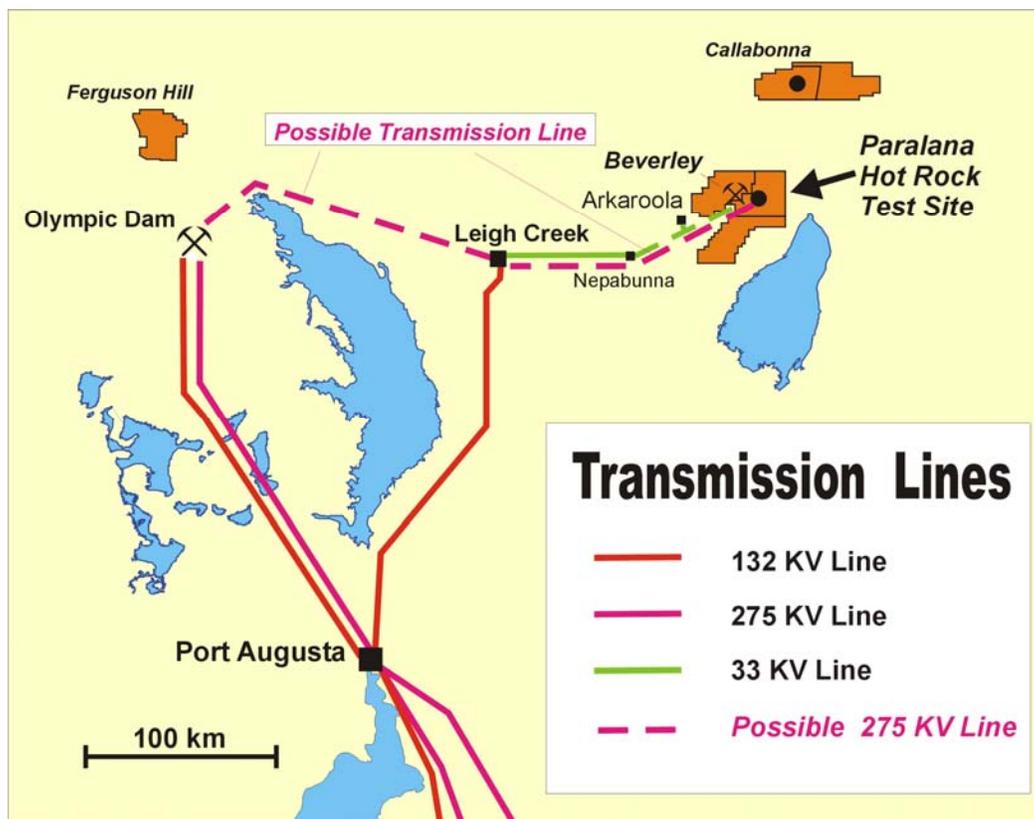
## Paralana Geothermal Production Well - Progress Update

The Company has begun well engineering studies to drill its first production well at Paralana. Several large rigs in the region are capable of drilling the planned well of approximately 3.5 kilometres depth and negotiations are underway to secure one of these rigs.

Historical seismic and drill data along with rock stress analysis captured from the first phase of drilling indicate the well should not present any unusual technical challenges. The chances of an over pressured sequence and/or the presence of hydrocarbons is deemed extremely un-likely and assessment of likely formation stability is excellent. For this reason drilling costs should be at a minimum, directly comparable to standard oil well costs of around \$3,000,000 to \$4,000,000 for a well of 3.5 kilometres depth.

## Paralana Power Plant Development – Update

As part of the Paralana economic feasibility study the Company has been investigating the optimum development path. Paralana is favourably located just 11 kilometres from the Beverley Uranium Mine, 40 kilometres from the off-grid Arkaroola Tourist Village and 80 kilometres from 33 KV grid connection at Nepabunna. Studies to see how to best service these local markets are being undertaken.



**Figure 2** A possible power development plan for Paralana and transmission grid nodes.

The Paralana resource is potentially very large. Simple energy calculations based on thermal models indicate the resource could support up to 13,000 MWe of power output over a twenty year period if fully utilized. The Olympic Dam expansion is scheduled to require over 400 MWe of power. To supply this demand a high voltage line to Olympic Dam from Paralana via the Leigh Creek power node could be constructed (see fig 2).

## **Callabonna Project (GEL's 157,179)**

A highly encouraging temperature gradient of 68°C per kilometre was returned from the Phase-1 geothermal drill program at Callabonna in September 2005. This result also falls within the Company's target expectations to produce economically viable base-load electricity. A Magneto-telluric test survey across the potential resource is planned mid-year. The survey will accurately map the top of the granite heat engine below the subsurface insulator as an aid for later potential drill testing.

## **Queensland**

Petratherm has placed a tender to undertake a review of the electricity demand and network infrastructure for Queensland. This report will also investigate the economics behind small scale, off-grid conventional geothermal opportunities.

## **Victoria**

The State of Victoria has been divided up into 10,000km<sup>2</sup> blocks, with licence tenders opening on the 14<sup>th</sup> April. Tenders close 11 October 2006 and prospectivity assessment is currently underway.

## **Europe**

Petratherm was invited to participate in talks with BRGM in France. The meetings included a visit to the Soutlz Hot Rock test site. Talks were also held with representatives from the Swiss Deep Heat mining project in Basel, Switzerland.

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**APPENDIX 5B**  
**Mining exploration entity quarterly report**

**PETRATHERM LTD**

**ABN 17 106 806 884**

Quarter ended

31 March 2006

**Consolidated statement of cash flows**

	Current quarter	Year to date (9 months)
	\$A'000	\$A'000
<b>Cash flows related to operating activities</b>		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(44)	(1,096)
1.3 Dividends received	(162)	(443)
1.4 Interest and other items of a similar nature received	21	75
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other - PACE Funds Received	-	54
1.7 Other - Rebates	-	-
<b>Net Operating Cash Flows</b>	<b>(185)</b>	<b>(1,410)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects (b) equity investments (c) other fixed assets	-	-
	-	-
	(17)	(22)
1.9 Proceeds from sale of: (a) prospects (b) equity investments (c) other fixed assets	-	-
	-	-
	1	1
1.10 Loans to other entities	-	(9)
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
<b>Net Investing cash flows</b>	<b>(16)</b>	<b>(30)</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(201)</b>	<b>(1,440)</b>

1.13	Total operating and investing cash flows (brought forward)	(201)	(1,440)
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options, etc	1,970	1,970
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (Share issue costs)	(78)	(78)
<b>Net financing cash flows</b>		1,892	1,892
<b>Net increase (decrease) in cash held</b>		1,691	452
1.20	Cash at beginning of quarter / year to date	1,431	2,670
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	3,122	3,122
<b>Payments to directors of the entity and associates of the directors</b>			
<b>Payments to related entities of the entity and associates of the related entities</b>		Current quarter \$A'000	
1.23	Aggregate amount of payments to the parties included in item 1.2	35	
1.24	Aggregate amount of loans to the parties included in item 1.10	-	
1.25	Explanation necessary for an understanding of the transactions		
	Directors' fees and superannuation for the Quarter		
<b>Non-cash financing and investing activities</b>			
2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows		
	Nil		

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Nil
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**Financing facilities available**

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements	-	-

**Estimated cash outflows for next quarter**

	\$A'000
4.1 Exploration and evaluation	490
4.2 Development	-
<b>Total</b>	490

**Reconciliation of cash**

	Current quarter \$A'000	Previous quarter \$A'000
Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.		
5.1 Cash on hand and at bank	909	427
5.2 Deposits at call	2,213	1,004
5.3 Bank overdraft	-	-
5.4 Other (provide details) - 30 and 60 day term deposits	-	-
<b>Total: cash at end of quarter (item 1.22)</b>	3,122	1,431

**Changes in interests in mining tenements**

	Tenement reference	Nature of interest (note 2)	Interest at beginning of quarter	Interest at end of quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed				
6.2 Interests in mining tenements acquired or increased				

**Issued and quoted securities at end of current quarter**

	Total number	Number quoted	Issue price per security (cents)	Amount paid up per security (cents)
7.1 <b>Preference securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>Ordinary securities</b>	43,375,001	25,250,000	Fully Paid	Fully Paid
7.4 Changes during quarter (a) Increases through issues  (b) Decreases through returns of capital, buy-backs	8,375,000	5,250,000	Fully Paid	Fully Paid
7.5 <b>Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	5,000,000 2,600,000 2,000,000 650,000 40,000 50,000 30,000 40,000		<u>Excise Price</u> 20 cents each 20 cents each 20 cents each 20 cents each 32 cents each 32 cents each 40 cents each 40 cents each	<u>Expiry Date</u> 24/03/2009 4/04/2009 26/07/2009 27/07/2009 23/09/2009 15/12/2009 31/12/2010 5/02/2011
7.8 Issued during quarter	30,000 40,000		40 cents each 40 cents each	31/12/2010 5/02/2011
7.9 Exercised during quarter	2,500,000		20 cents each	24/03/2009

7.10 Cancelled during quarter				
7.11 <b>Debentures</b> <i>(totals only)</i>				
7.12 <b>Unsecured notes</b> <i>(totals only)</i>				

## Compliance statement

- 1.0 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2.0 This statement does give a true and fair view of the matters disclosed.

Sign here:..... Date:  
Company Secretary

Print name: DONALD STEPHENS  
.....

## Notes

- 1.0 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2.0 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3.0 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4.0 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5.0 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.