

Petratherm Ltd

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Report for the Quarter Ending 31 December 2005

SUMMARY

CORPORATE

- The Company has entered into discussions with a number of third parties regarding potential geothermal exploration joint venture opportunities and has commenced assessing the potential for application of its subsurface and business models elsewhere in the world.

EXPLORATION

- Paralana-1B recorded a temperature gradient of 81.5°C per kilometre – believed to be the highest known recorded in geothermal exploration in Australia.
- The measured temperature gradient of 68.5°C per kilometre from Yerila-1 (Callabonna Project) is highly encouraging.
- Both temperature gradients indicate meeting the Company objective of hot rock resources in excess of 200 °C at 3.5 kilometres depth.
- Preparations to deepen the Paralana hole are well advanced with drilling scheduled to begin in March 2006, subject to rig availability.
- The Company has identified the possibility of a new reservoir development strategy, which would significantly lower the technical risk and cost of electricity generation at the Paralana geothermal site.

REVIEW OF OPERATIONS

CORPORATE

Drilling results in the quarter validate the Company's business model and increase the likelihood of commercially viable hot rock reserves at relatively shallow depths, close to infrastructure. The Company commenced discussions with a number of third parties regarding geothermal exploration joint venture opportunities.

Success with the first two geothermal wells gives confidence in the application of the Company's intellectual property and business model to other regions of Australia and overseas and the potential is now being investigated.

As at the 31st December 2005 the Company held \$1,431,000 in cash.

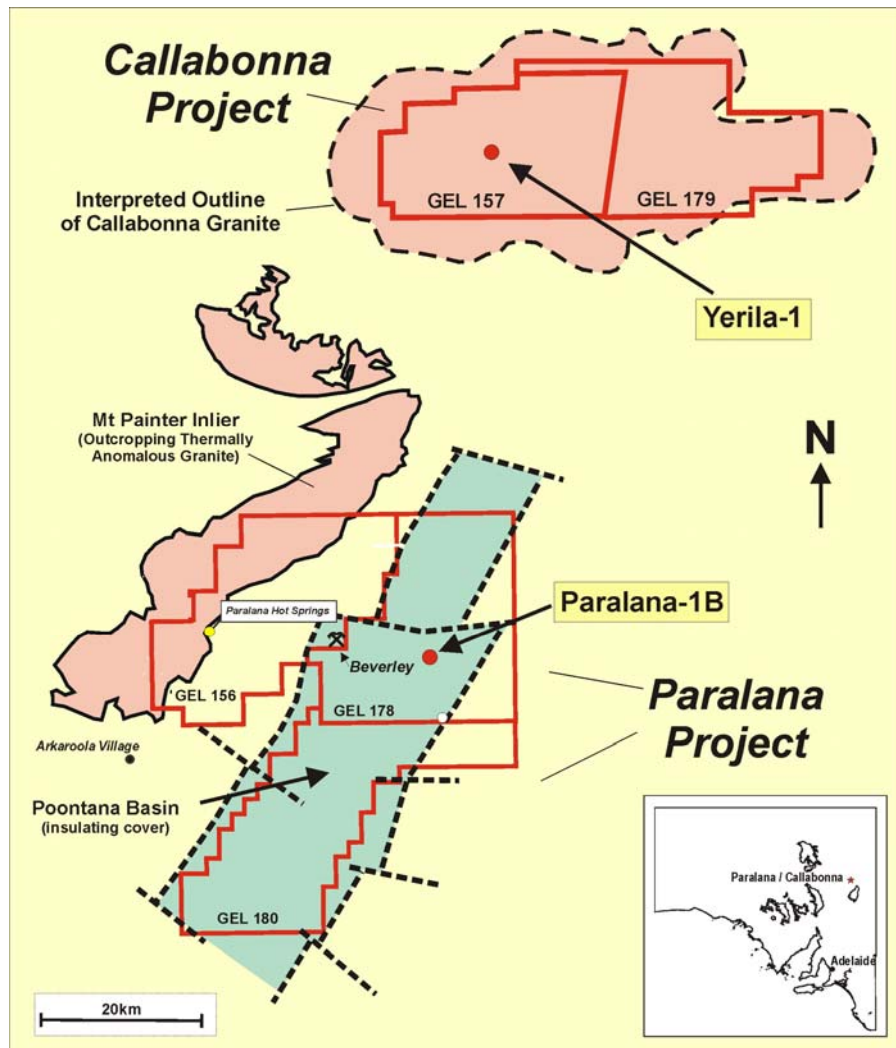


Figure 1 Callabonna and Paralana Project Areas

EXPLORATION

Mt Painter Hot Rock Province Background

Paralana and Callabonna lie adjacent to the Mt Painter and Mt Babbage Inliers which in turn are within the SAHFA, where heat flow measurements from the nearby Parabarana area are amongst the highest recorded in Australia. Estimates from outcropping granites in the Mt Painter Inlier indicate their average heat production is eight times (and locally up to twenty five times) that of average granite, and at least twice that of other radiogenic granites used to successfully generate geothermal power elsewhere in the world.

Petratherm has recognized these granites as having potential to produce geothermal energy under the TAG model and has acquired five geothermal exploration licences covering around 2, 500 square kilometres over two key areas, Paralana and Callabonna (Figure 1).

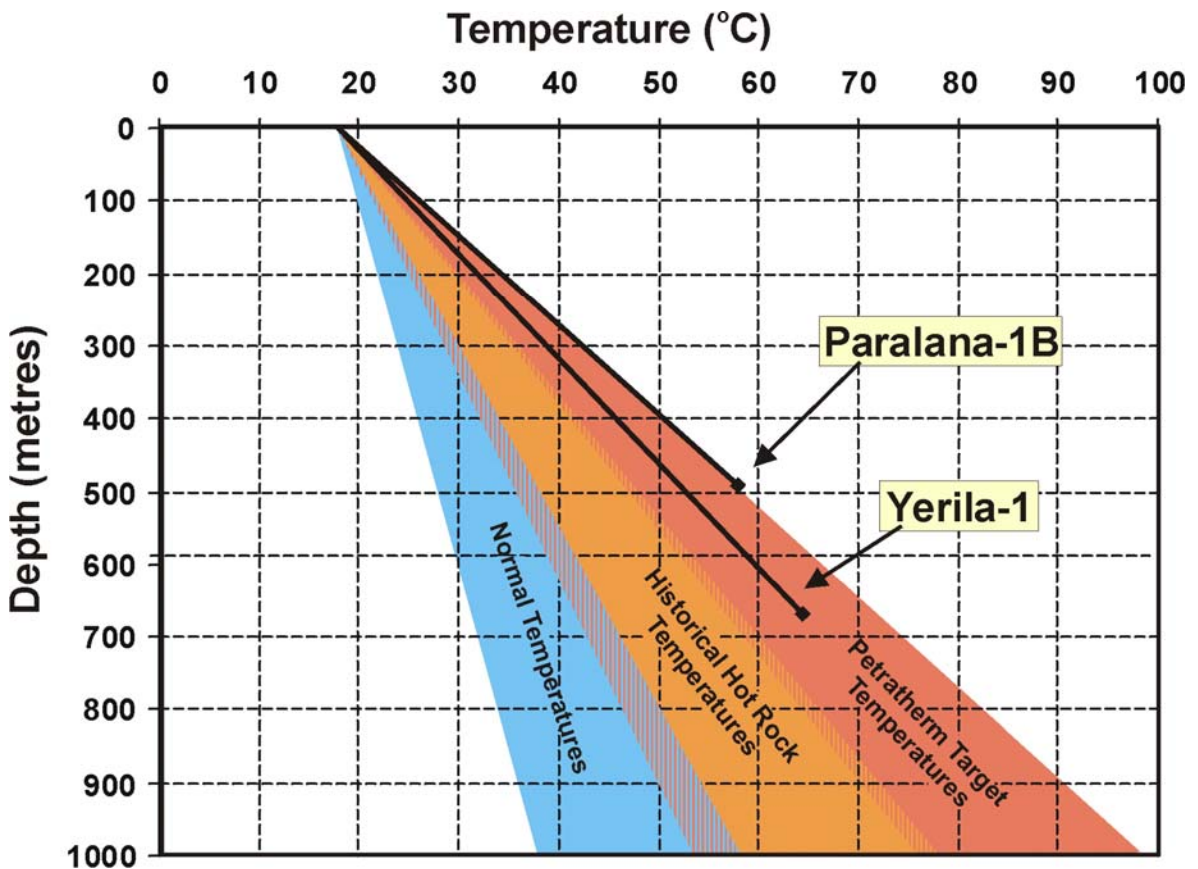


Figure 2 Hot Rock Temperature Gradient Prospectivity Curve

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

Temperature logging of Paralana-1B recorded a bottom hole temperature of 58°C at 485 metres, equating to a gradient of 81.5°C per kilometre.

This result is at the upper level of Company expectations to meet the key Company objective of a hot rock resource in excess of 220°C at a depth of 3.5 kilometres (Figure 2). Such gradients may be the highest recorded in geothermal exploration in Australia.

Preparations to extend the hole are well advanced and scheduled to begin in March 2006. Deepening the well to 1500 metres or more will enable a study of thermal gradients and rock properties at intermediate depths, prior to a decision to take the project to full circulation feasibility study which will involve drilling injection and production wells to about 3.5 kilometres using an oil exploration drilling rig.

Paralana - Low Risk Reservoir Development Strategy

In November the Company announced that, subject to the confirmation by further drilling of favourable geology at the Paralana thermal anomaly, it may be possible to develop a circulating fluid cell and subsurface heat exchanger in the sedimentary strata overlying the thermogenic granite at depth. This approach has the potential to significantly lower the technical risk associated with the development of an underground heat exchanger and reduce overall project capital cost by obviating the need to drill into and fracture stimulate granite.

Subsurface engineering models suggest that the depth to the top of the high heat producing granite is 4.5 kilometres. However target temperatures, in the order of 200°C, required for the economic production of electricity, are modelled to occur within the overlying insulating cover at approximately 3.5 kilometres depth.

Given that the insulating cover consists of sedimentary strata there is a likelihood of higher primary porosity and permeability, providing a natural flow path between fluid injection and extraction wells, in contrast to the situation expected within the underlying granite which is likely to require the development of a flow path, and well communication, by means of fracture stimulation.

Regional stratigraphic and seismic studies indicate the likely presence of several sandstone and or limestone layers within which the reservoir could be formed at approximately 3.5 kilometres depth. These sedimentary sandstone and limestone sequences generally have naturally higher permeability and porosity than basement granites, allowing the flow of water without excessive stimulation. Chemical stimulation, particularly with carbonate-rich (limestone) rocks, is widely used in conventional geothermal operations around the world, and in the oil and gas industry, to generate desired flows, and provides an alternative option in achieving circulation.

The Company believes that the new “Heat Exchanger Within Insulator” (HEWI) model (Figure 3) may significantly lower technical challenges to commercialisation of the Paralana project. The potential to eliminate expensive and uncertain fracture stimulation from the project is a significant positive option, which if realized, would greatly reduce the risk and cost of a major power generation project based on the Paralana heat source. Moreover, this approach is more closely aligned with proven conventional geothermal operations, an established commercial producer of cheap electricity.

Heat Exchanger Within Insulator (HEWI) Model

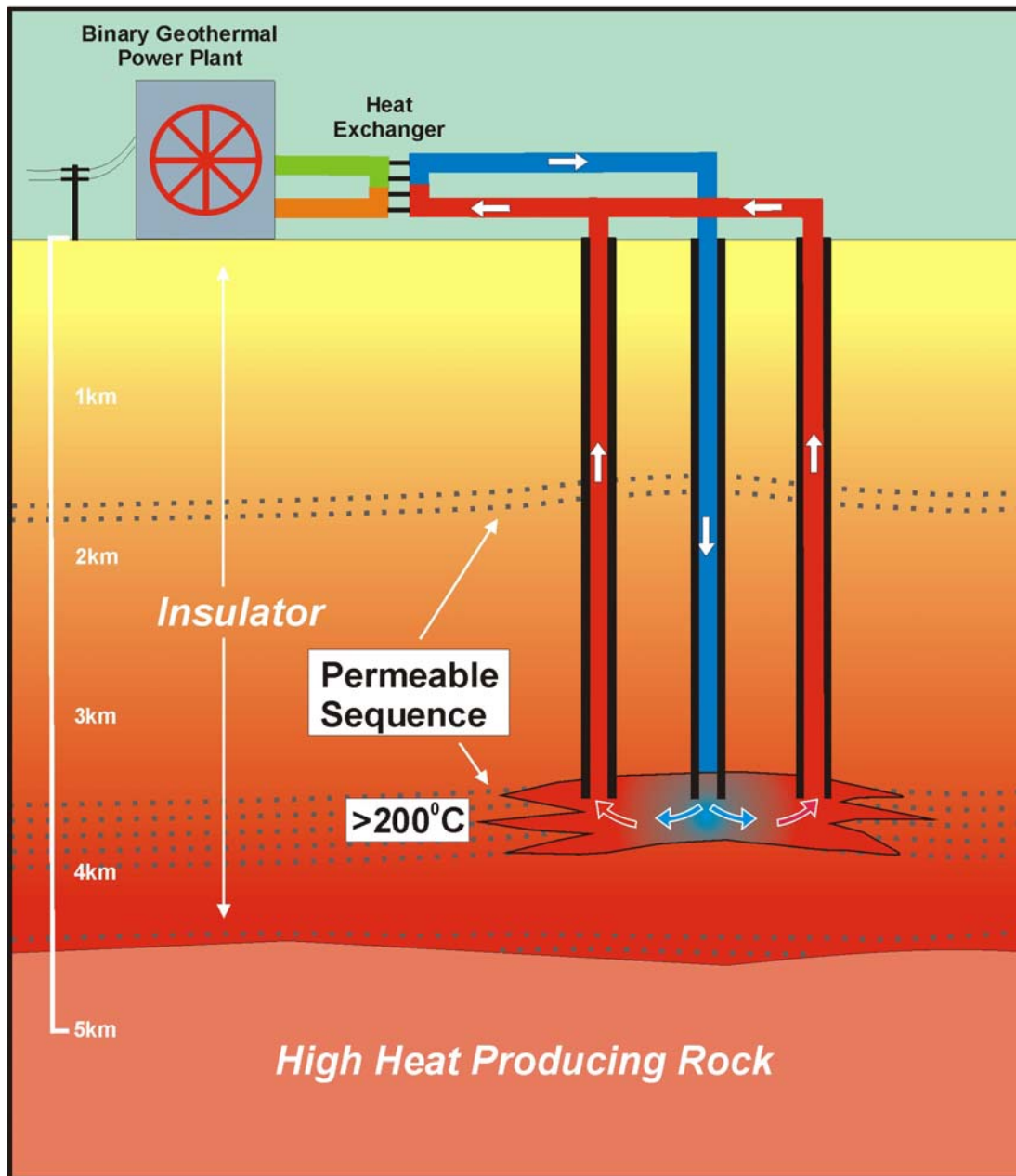


Figure 3

Callabonna Project (GEL's 157,179)

Yerila-1 was spudded in early August 2005 (Figure 1). Phase 1 of Yerila-1 was drilled to 693.5 metres to evaluate the geothermal potential of the Callabonna Gravity Low. Temperature logging of Yerila-1 established a temperature of 64°C at a depth of 675 metres, the overall thermal gradient determined from the data is at least 68°C/kilometre; one of the highest gradients recorded in Australia.

This thermal gradient is consistent with Yerila-1 being located above a thermally anomalous, radiogenic granite at a depth of several kilometres. Based on the Yerila-1 temperature gradient, temperatures in the range 220-250°C are possible at a depth of 3.5 kilometres. This is consistent with Petratherm's business model which targets temperatures in excess of 220°C at depths no greater than 3.5 kilometres (Figure 2). Ultimately, the confirmation of such temperatures at this depth will lead to a significant reduction in the cost of drilling high temperature geothermal energy extraction wells, which represent the major capital cost component of a geothermal project.

A Magnetotelluric survey is now planned for the first half of 2006, which will accurately map the top of the interpreted high heat producing granite at depth. Pending the results of this survey, the well will be extended to approximately 1500 metres using a diamond drilling rig, in order to establish thermal and rock properties at intermediate depths, prior to a decision to drill an initial circulation test well to over 3.5 kilometres using an oil exploration drilling rig.

Generative Program

With legislation allowing geothermal exploration tenure in Queensland finally coming to pass in November 2005 the company is undertaking studies to identify potential areas of interest. The Victorian Government is likely to launch geothermal licensing processes in March 2006. The company is undertaking scoping studies in preparation.

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APPENDIX 5B
Mining exploration entity quarterly report

PETRATHERM LTD

ABN 17 106 806 884

Quarter ended

31 December 2005

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (6 months) \$A'000
Cash flows related to operating activities		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(420)	(1,052)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	19	54
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other - PACE Funds Received	54	54
1.7 Other - Rebates	-	-
Net Operating Cash Flows	(496)	(1,225)
Cash flows related to investing activities		
1.8 Payment for purchases of: (a) prospects (b) equity investments (c) other fixed assets	-	-
	-	-
	(5)	(5)
1.9 Proceeds from sale of: (a) prospects (b) equity investments (c) other fixed assets	-	-
	-	-
	-	-
1.10 Loans to other entities	(5)	(9)
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
Net Investing cash flows	(10)	(14)
1.13 Total operating and investing cash flows (carried forward)	(506)	(1,239)

1.13 Total operating and investing cash flows (brought forward)	(506)	(1,239)
Cash flows related to financing activities		
1.14 Proceeds from issues of shares, options, etc		
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)		
Net financing cash flows	0	0
Net increase (decrease) in cash held	(506)	(1,239)
1.20 Cash at beginning of quarter / year to date	1,937	2,670
1.21 Exchange rate adjustments to item 1.20	-	-
1.22 Cash at end of quarter	1,431	1,431
Payments to directors of the entity and associates of the directors		
Payments to related entities of the entity and associates of the related entities	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, superannuation for the Quarter		
Non-cash financing and investing activities		
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

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	220
4.2 Development	-
Total	220

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	427	607
5.2 Deposits at call	1,004	1,330
5.3 Bank overdraft	-	-
5.4 Other (provide details) - 30 and 60 day term deposits	-	-
Total: cash at end of quarter (item 1.22)	1,431	1,937

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			

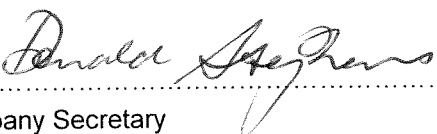
Issued and quoted securities at end of current quarter

	Total number	Number quoted	Issue price per security (cents)	Amount paid up per security (cents)
7.1 Preference securities <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 Ordinary securities	35,000,001	20,000,000	Fully Paid	Fully Paid
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 Convertible debt securities <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 Options <i>(description and conversion factor)</i>	7,500,000 2,600,000 2,000,000 650,000 40,000 50,000		<u>Excise Price</u> 20 cents each 20 cents each 20 cents each 20 cents each 32 cents each 32 cents each	<u>Expiry Date</u> 24/03/2009 4/04/2009 26/07/2009 27/07/2009 23/09/2009 15/12/2009
7.8 Issued during quarter				
7.9 Exercised during quarter				

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

DONALD STEPHENS

Print name:

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.