



Petratherm Ltd (ASX:PTR)

Geothermal energy from hot dry rocks: a green alternative

broker@taylorcollison.com.au
+61 8 8217 3900

Capital Summary

Issued Capital	49.9 m ordinary 12.36 m options
Market Capitalisation (dil.)	\$25.5m
Share Price (15/12/06)	\$0.41
52 week low	\$0.25
52 week high	\$0.42

Cash \$3.0 m

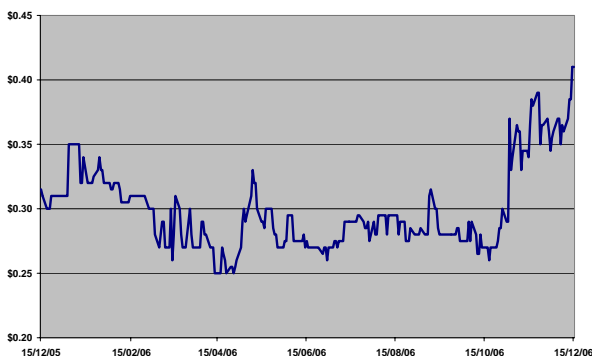
Directors

Mr Derek Carter	Chairman
Mr Terry Kallis	Managing Director
Mr Lloyd Taylor	Non-Exec Director
Mr Richard Hillis	Non-Exec Director
Mr Richard Bonython	Non-Exec Director
Mr Simon O'Loughlin	Non-Exec Director
Mr Donald Stephens	Company Secretary

Major Shareholders

Minotaur Resources Investment Pty Ltd 35.09%

Share Price Graph (A\$)



Summary

Over the past twelve months Petratherm has grown from lows of 25c to current highs of 40c, the growth is based on advancement of the companies Paralana Project and also a move into China. As both of these ventures are far from maturity the potential is for continual growth.

Key Points

- Petratherm (PTR) is currently advancing the Paralana Project, their pilot geothermal program, on the western margin of Curnamona region in South Australia.
- The focus of the company is to establish the viability of producing electricity from naturally occurring geothermal energy. The heat is drawn from the rocks by water circulated underground and extracted by a surface heat exchanger to generate electricity.
- A successful geothermal project involves the optimisation of technical and financial parameters including: the required drill-hole depth, existence of an appropriate temperature differential, suitable geology, access to market through a network connection, price available in the market and size of the available market.
- PTR has completed a test drill hole over two phases at the Paralana project, the first drilled to 491m and the second campaign extended the depth to 1807m.
- Successful temperature recording in the drill hole has allowed for the required temperatures to be modelled at depths of 3.6km.
- The next stage of the project is to drill two new holes to the target depth and establish water flow between the two holes.
- An independent pre-feasibility study has been completed for the Paralana project, highlighting the economic validity of the resource and the provided information needed to plot a path to commercialisation of the project.
- An MOU has been signed with Heathgate for the provision of power provides PTR with a ready market during the testing and development of the project. Heathgate operates the Beverly Uranium Mine situated just 11 kilometres away.
- A small scale commercial plant producing 7.5MW will be established in 2009 & 2010.
- Mr Terry Kallis has recently been appointed to the role of managing director; the appointed brings to the company a wealth of experience in the provision of electricity and an understanding of the electricity sector and also success with projects in the renewable energy sector.
- Outside of the existing projects a review of geothermal opportunities locally and overseas has been undertaken; from this the company has entered into an agreement to assess the geothermal energy potential of China. The project has the support of the Chinese and Australian Governments.

Projects

Project	Project Maturity				
	Early	Target Generation	Drilled	Geothermal resource identified	Drilling 2007
Ferguson Hill					
Callabonna					
Paralana					

Paralana Project (GEL's 156,178,189,254)

The Paralana licences cover approximately 2000km², over the most prospective portion of the informally termed Poontana Basin, but also include an area to the west covering the natural radiogenic hot springs at Paralana, along the eastern margin of the Mt Painter Range. Drilling to 1807 metres has identified a large potential thermal resource at depth, with temperatures expected to be in excess of 200°C at 3.6 kilometres. The Company has stated the Paralana thermal resource has an estimated theoretical resource potential of 13,000 MWe which is approximately eight times South Australia's average daily capacity need.

The next key milestone in the commercialisation plan is to develop a fluid circulation system at Paralana. Development of the fluid circulation system will involve drilling of two wells, an injector and a producer well, to the target depth and then establishing of a robust heat exchanger (connecting fluid pathway) between the wells. Petratherm has developed a unique strategy to lower risks and costs of both drilling and circulation processes by engineering the underground heat exchanger within the insulating rocks above the high heat producing granites (the HEWI model). Contract negotiations to secure a suitable rig to undertake the drilling of first injector are well advanced.

As part of the Paralana pre-feasibility study work the company has been investigating the optimum development path for the Paralana site. Paralana is located just 11 kilometres from the Beverley Uranium Mine. The electricity needs of the mine are significant and are expected to grow substantially should uranium deposits at the nearby 4-Mile prospect be mined in the future. Petratherm plans to develop an initial small scale plant of around 7.5MW to meet the local supply needs and has examined the potential for meeting growing local electricity demand of potentially, up to 30MW.

In addition, Petratherm has commenced examining the potential for supplying large scale, base load power into the National Electricity Market region of South Australia and is targeting two entry points, namely Port Augusta and Olympic Dam. The large scale options, under examination include developments that range between 260MW and 520MW and potentially two high voltage transmission lines.

Paralana Project time lines

2007 - Undertake drilling of two production holes to depths of 3.5-4.0kms.

2008 – Create and test the underground heat exchanger

2009 & 2010 – Develop and commission a 7.5MW geothermal power plant.

2009 & 2010 – Develop a transmission line the 11kms to Beverly Uranium Mine.

2010 & beyond – Staged local expansion from 7.5 to 30MW, then eventually a 250MW plant connected into the SA power grid.

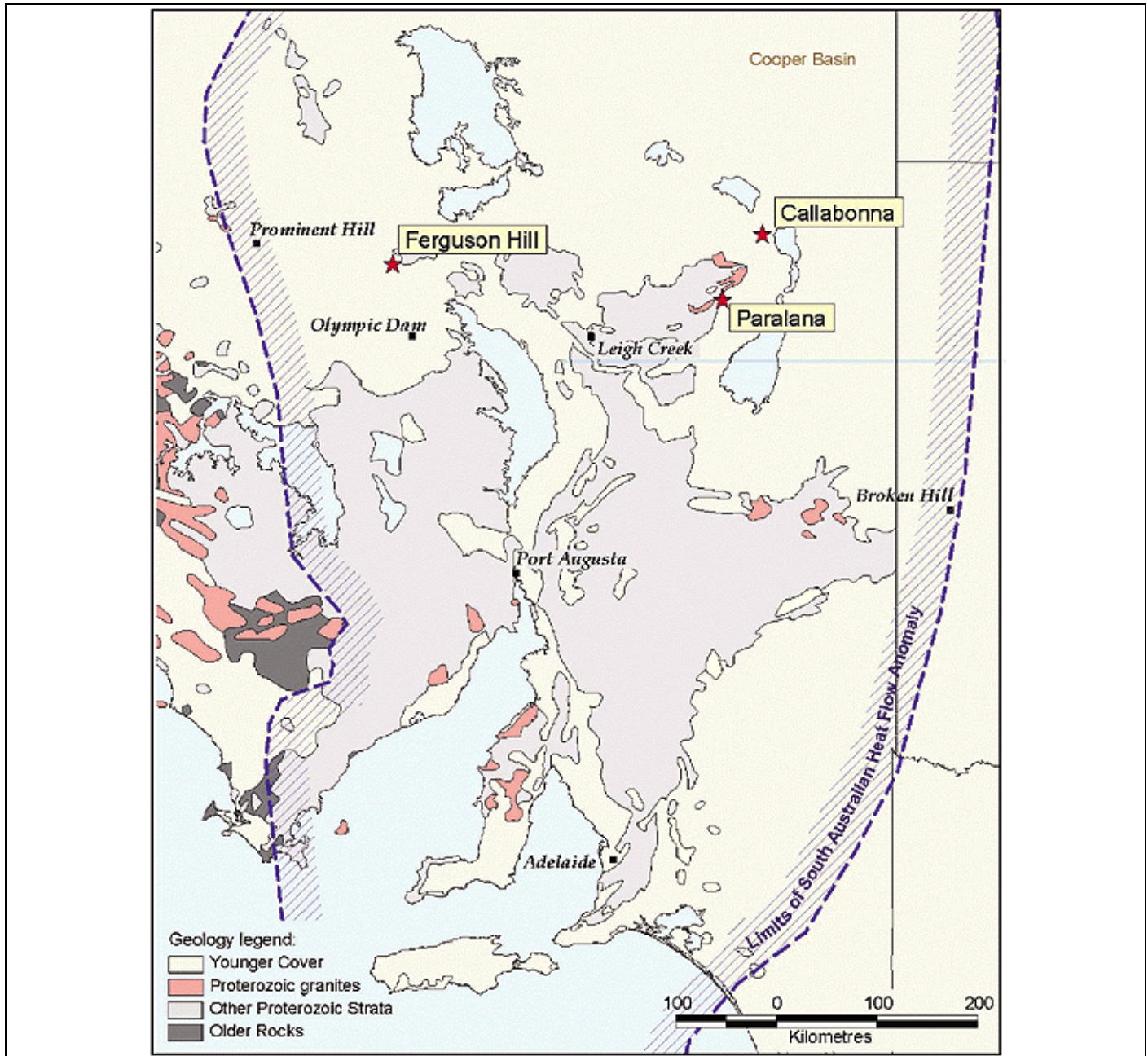
Callabonna

The Callabonna geothermal body, defined by a regional geophysical anomaly, spans an area of approximately 1200km² immediately north-northeast of the outcropping Mt Painter and Mt Babbage Inliers. Petratherm holds two licenses covering 1000km² over the centre of this body.

Geothermal test well, Yerila-1, was drilled in June 2005 to 693.5 metres and a temperature of 64°C was measured at a depth of 675 metres. The overall thermal gradient determined from the data is at least 68°C per kilometre. Based on this gradient, temperatures in excess of 200°C are possible at a depth of 3.5 - 4 kilometres, consistent with Petratherm's business model. In June 2006 the Company undertook a trial magneto-telluric ground survey over the centre of the Callabonna body. The test work was designed to map the surface of the potential granite heat source at depth. Results from the survey defined the top of the granite body. This data along with the temperature gradient data are now being used to better constrain the thermal model for Callabonna.

Ferguson Hill

Ferguson Hill represents the informally termed Radiogenic Iron Oxide (RIO) model for hot rock geothermal energy. This exploration model targets the heat produced by naturally occurring low-level radiogenic decay commonly associated with Iron Oxide Copper Gold bodies. The measured heat production rates associated with these bodies can be as much as 50 times greater than those from average granite. Under favourable conditions, temperatures as high as 200°C may be generated at depths of around 3km. At this stage the Ferguson Hill area remains an exploration target as the company is yet to drill this target.



Disclaimer

Taylor Collison Limited (“Taylor Collison”) may from time to time provide corporate advice or other services for, or solicit business from, any company mentioned in this report. For the securities discussed in this report, Taylor Collison may make a market, may sell or buy on a principal basis and may have acted as a manager or underwriter of a public offering. Taylor Collison Limited, its directors and staff own shares in Petratherm Limited and have earned commissions and fees from placing shares, underwriting and corporate services.

This report is a private communication to clients and intending clients and is not intended for public circulation or publication or for the use of any third party, without the approval of Taylor Collison. While the report is based on information from sources that Taylor Collison considers reliable, its accuracy and completeness cannot be guaranteed. This report does not take into account specific investment needs or other considerations, which may be pertinent to individual investors, and for this reason clients should contact Taylor Collison to discuss their individual needs before acting on this report. Those acting upon such information and recommendations without contacting one of our advisors do so entirely at their own risk.

Taylor Collison Limited
Sharebrokers and Investment Advisers

A.B.N. 53 008 172 450
AFSL No. 247083

Participant of the Australian Stock Exchange Group

Level 2, 12 Pirie Street
Adelaide, South Australia, 5000
G.P.O. Box 2046, Adelaide, South Australia, 5001
Telephone: 08 8217 3900 Facsimile: 08 8231 3506
Email: broker@taylorcollison.com.au

Level 2, 55 Hunter Street
Sydney, New South Wales, 2000
G.P.O. Box 4261, Sydney, New South Wales, 2001
Telephone: 02 9232 1688 Facsimile: 02 9232 1677
Email: sydney1@taylorcollison.com.au

www.taylorcollison.com.au

ESTABLISHED 1928