

# PETRATHERM QUARTERLY REPORT

Second Quarter

October to December 2009

# Quarter Two highlights

## Paralana

- > Paralana 2 well successfully, drilled, cased and cemented to a depth of 3,725m
- > \$62.8m Renewable Energy Demonstration Program (REDP) grant awarded to the Paralana geothermal energy project

## Spain

- > Magneto-telluric survey in Tenerife and joint venture discussions underway

## Heliotherm

- > Petratherm's new Heliotherm (formerly GeoSolar) solar thermal project offered a \$0.8 million Premier's Science and Research Fund grant

## Corporate

- > Annual General Meeting held in Adelaide
- > Petratherm delivers 2010 outlook to Australian Geothermal Energy Association conference in Brisbane
- > As at 31 December the Company held \$2.22 million in cash

## Review of Operations

Petratherm achieved some important goals during the quarter with the two standouts being our successful drilling at the Paralana geothermal energy project and the project being awarded a significant Federal Government grant.

In December, Petratherm and our joint venture partners Beach Energy (formerly Beach Petroleum) and TRUenergy geothermal, successfully drilled, cased and cemented the Paralana 2 deep injector well to a depth of 3,725m, at our project site in the northern Flinders ranges.

Earlier in November, the joint venture project was recognized by being awarded a \$62.8 million Renewable Energy Demonstration Program grant by the Federal Government. This funding will go toward building a 30MW zero emission, geothermal energy power generation project at Paralana.

To date, the Paralana project has

also received \$4.2 million under the Commonwealth Government's Geothermal Drilling Program (GDP) toward the cost of the Paralana 2 well. A further \$2.8 million in GDP grant monies is available for the Paralana 3 well.

Petratherm has also initiated an innovative solar thermal technology project called Heliotherm (formerly referred to as GeoSolar). In December, this project was offered a \$794,268 grant under the Premier's Science and Research Fund. The Heliotherm project aims to reduce the cost of solar thermal technology by integrating solar thermal, geothermal and combustion technologies.

In Spain, important work has continued in assessing the geothermal energy development prospects of our tenements in Tenerife and joint venture discussions are well underway.

During November, Petratherm held its annual general meeting where Derek Carter (Chairman) and Simon O'Loughlin (Non Executive Director) were re-elected as directors of the company. An employee share option

plan was also approved.

There were major exploration and evaluation expenditures, amounting to \$14.27 million, during the quarter reflecting the significant costs associated with the drilling of the Paralana 2, 4 kilometre deep injector well.

Of that expenditure \$3.41 million, or 24%, was funded by our Joint Venture partners (Beach Energy and TRUenergy) under the Paralana JV, while a further \$4.2 million or 30% was funded under the Federal Government GDP grant.

Under the JV, Beach Energy paid the first \$5 million toward the Paralana 2 well and 21% of costs thereafter and TRUenergy paid the first \$3 million of Petratherm's plus their own 10% of well costs.

Ongoing administration costs of \$0.56 million during the quarter reflect the increased level of activity arising from Paralana and the new geothermal projects across the Company's growing portfolio.

At the end of the quarter the Company held \$2.22 million in cash.

## Corporate, Industry & Regulatory

### \$62.8 million Federal Grant

Petratherm, as mentioned earlier, was awarded a \$62.762 million grant under the Federal Government's \$435 million Renewable Energy Demonstration Program.

Petratherm, on behalf of the Paralana Joint Venture partners Beach Energy and TRUenergy Geothermal, had lodged its application for the funding in mid April. This grant will contribute to the cost of building a 30MW commercial demonstration project at Paralana.

The REDP is a competitive grants program designed to accelerate the commercialization and deployment of renewable energy technologies for power generation across Australia.

The grant monies are to be applied to the development of the geothermal demonstration project, subsequent to the proof of concept stage, that is currently underway at Paralana.

Petratherm's longer-term aim for the Paralana project is to develop Australia's first large-scale (260 plus MW) base load geothermal power station to deliver zero emission electricity to the National Electricity Market.

### Further drilling grant funds

Petratherm on behalf of the Paralana JV Project was also successful with its application under the Commonwealth Government's \$50 million Geothermal Drilling Program (GDP) and has received \$4.2 million from the maximum grant amount of \$7 million. The GDP provides for 60% upfront funding of which Petratherm's share is 69% or \$2,898,000 under the terms of the Paralana JV.

### Petratherm presents at annual geothermal industry meeting

Petratherm Managing Director Terry Kallis and exploration manager Peter Reid provided a company outlook for 2010 at the Australian Geothermal Industry Association conference in Brisbane during November.

Mr Kallis also spoke in his role as chairman of the Australian Geothermal Energy Association (AGEA) and AGEA's representative to the Australia Electricity Market Commission's Stakeholder Committee Review of Australia's Energy Market (in light of Climate Change policies and the renewable energy target).

Mr Reid represented Petratherm at the Geothermal Resources Council 2009 Annual Conference in Reno, Nevada, and Geothermal Energy Conference in Singapore.



## Project Update



### Paralana

Our flagship Paralana project in South Australia is on track to deliver Australia's first commercial geothermal energy plant by 2011.

Some major milestones were reached during the quarter with drilling of the first deep injection well Paralana 2 completed during December to a depth of 3,725m.

The forward plan is to take temperature measurements in the first quarter of 2010. This will be followed by a multi-zone fracturing program to create an underground heat exchange reservoir.

Drilling of a second deep geothermal well, Paralana 3, is planned in the final quarter of 2010 followed by circulation testing to achieve proof of concept. In 2011, Petratherm aims to build a pilot power plant on site.



### Heliotherm

Petratherm has added an innovative solar thermal technology project to its portfolio called Heliotherm, Helio being the Greek word for Sun. In December, this 100 per cent Petratherm-owned project, under its earlier name GeoSolar, was offered a \$794,268 grant under the South Australian Premier's Science and Research Fund.

The Heliotherm project's focus is to reduce solar thermal technology costs by up to 40% by integrating solar thermal, geothermal and combustion technologies.

Petratherm has an exclusive agreement with the University of Adelaide's highly regarded Centre for Energy Technology involving a team led by Professor Graham Nathan to develop the project.

The Company plans to secure, in the coming months, further grant monies, available through both State and Federal programs, to assist in the funding of the technology development.

### China

Petratherm hosted a high-level Chinese delegation during October as the group pursued further research into developing geothermal energy in China.

The group, including the Vice Director of the China Institute of GeoEnvironment Monitoring, the Chairman of the Geothermal China Energy Society and the Director of the Fujian Southern Institute of Geothermal and Mineral Spring, have been working with Petratherm through a cooperative agreement.

During the visit to Australia, the group discussed the next steps in progressing Engineered Geothermal Systems and Petratherm's involvement in future projects.

Petratherm has completed its Engineered Geothermal Project Prospectivity assessment for China, which formed the basis of an Asia Pacific partnership grant awarded by the Australian Federal Government. This work identified several new prospective geothermal sites for electricity generation.

## Spain

### Tenerife

Sinclair Knight Merz has been assisting Petratherm in the search for a hot fluid reservoir on the volcanic island of Tenerife. The scientific data, including data from a recent extensive magneto-telluric survey, is being analyzed to locate a prospective site for a deep production well.

Petratherm España has three Geothermal Exploration Licenses (GELs) on Tenerife, the largest of the Canary Islands in this Spanish archipelago off the west coast of North Africa. The Company is currently in discussion with interested potential joint venture parties.

### Geo Madrid District Heating Project

Work is continuing with the Madrid Regional and Spanish governments to progress the 8MW Madrid Geothermal District Heating (GDH) project and talks are underway with a potential joint venture partner.

Petratherm's Madrid GDH project has been highlighted as one of six renewable energy projects of interest within the Madrid Regional Government's Renewable Energy Cluster, which is seeking to advance renewable energy projects in the Madrid region.

### Safety, Environment & Community

The Paralana 2 drilling campaign achieved its planned safety and environmental targets with no reportable lost time injury accidents and no reportable environmental incidents – thus bettering industry benchmarks.

Petratherm is continuing to upgrade and enhance its overall Safety, Health, Environment and Quality Management system to meet the needs of the Company's growing business operations.

### We have moved...

Petratherm has moved into new offices to accommodate our growing company.

We are now at Level 1, 129 Greenhill Rd, Unley, South Australia, 5061



## Corporate information

### Corporate office

Level 1, 129 Greenhill Road  
Unley, South Australia 5061  
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f. +61 8 8272 8141  
e. admin@petratherm.com.au  
www.petratherm.com.au  
ACN 106 806 884

### Board of directors

Derek Carter – Chair  
Terry Kallis – Managing director  
Richard Hillis – Non executive director  
Richard Bonython – Non executive director  
Simon O’Loughlin – Non executive director

### Company secretary

Donald Stephens  
HLB Mann Judd (SA) Pty Ltd

### Stock exchange listing

Australian Stock Exchange  
(ASX code PTR)

### Share registry

Computershare Investor Services Pty Ltd  
Level 5, 115 Grenfell Street  
Adelaide, South Australia 5000

### Legal advisors

O’Loughlins Lawyers  
Level 2, 99 Frome Street  
Adelaide, South Australia 5000

### Auditors

Grant Thornton  
South Australian Partnership  
67 Greenhill Road  
Wayville, South Australia 5034

## Inside the Petratherm team

### Managing director

Terry Kallis

### Exploration manager

Peter Reid

### Business development manager

Jonathan Teubner

### Project manager – Paralana

Paul Jepsen

### Geophysicist

Louise McAllister

### Project geologist

Mathieu Messeiller

### Business accountant

Paul Smith

### Public & investor relations

Belinda Willis

### Office manager

Elena McRae

## Spanish team

### Manager – Spain

Raul Hidalgo

### Project geologist

Victor Guerrero

## Upcoming events

### Industry events

For further information on forthcoming events in the geothermal sector visit the PIRSA website at <http://geothermal.pir.sa.gov.au/news/events>

## Website

Petratherm’s website continually updated with new information to shareholders and stakeholders.

[www.petratherm.com.au](http://www.petratherm.com.au)