

ASX Release

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PETRATHERM LIMITED
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Presentation to the Australian Geothermal Energy Conference

Petratherm's Managing Director, Terry Kallis will later today present to the annual Australian Geothermal Energy Conference in Adelaide.

The attached presentation provides a company overview and an update on Petratherm's flagship Paralana geothermal energy project and its Tenerife conventional volcanic geothermal energy project in Spain.

The presentation also outlines the key points that support why Petratherm considers itself to be a standout amongst companies in the Australian Geothermal Sector, as follows:

- Unique approach to exploration to identify hot spots;
- Innovative approach to exploiting heat resources;
- Three major joint venture partners – Australia and Spain;
- Two major federal government grants totaling \$69.8 million;
- Successful drilling of the 4 kilometre Paralana deep well and the confirmation of economic temperatures;
- Nearby off-grid customer enabling economic supply of power at small scale and a staged approach to expansion;
- Portfolio of projects covering the spectrum of geothermal technologies.

Yours faithfully

Terry Kallis
Managing Director

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Petratherm

AGEC 2010 Adelaide

Corporate and Projects Update

Managing Director Terry Kallis
November 2010

CLEAN ENERGY FOR FUTURE GENERATIONS

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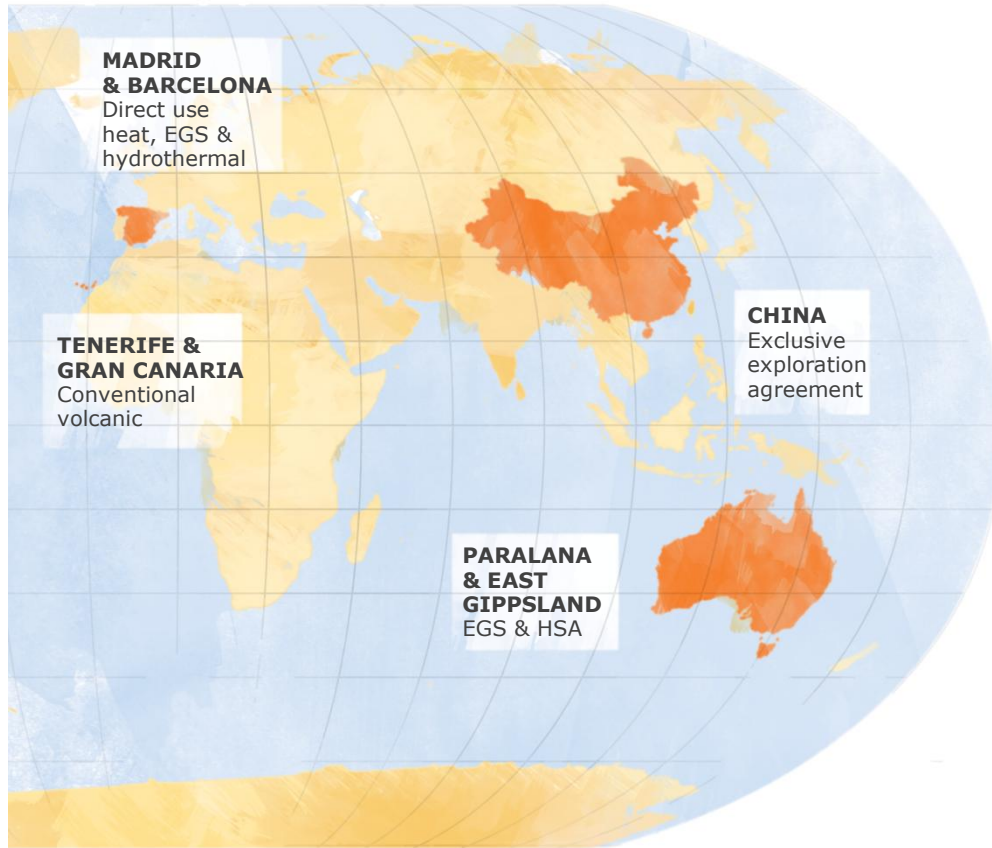
Competent Persons Statement

The information in this report relating to geothermal exploration results is based on information compiled by P.W. Reid, a full-time Petratherm employee. Mr Reid has sufficient experience in the style of geothermal play under consideration to qualify as a Competent Person under the Australian Code for Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 edition). Mr Reid consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Presentation Overview

- > **Company overview**
- > **Paralana engineered geothermal system project**
- > **Tenerife conventional volcanic project**

Petratherm overview



Our company

- > Leading Australian geothermal exploration and development company
- > Projects spanning Australia, Spain and China
- > Projects across the spectrum of geothermal technology
- > Flagship project – Paralana in SA's northern Flinders Ranges

Petratherm - Corporate and financial

Listed ASX:PTR

- > Shares on Issue: 111.7 m
- > Share Price: \$0.14
- > Market Cap: \$ 15.64 m
- > Cash Position: \$ 1.75m (31 Oct. 2010)
- > Shareholders: 3,655 shareholders
 - > Minotaur Exploration 18.4 %
 - > Australian Ethical Investments 5.1 %

Paralana JV Funding and Grants

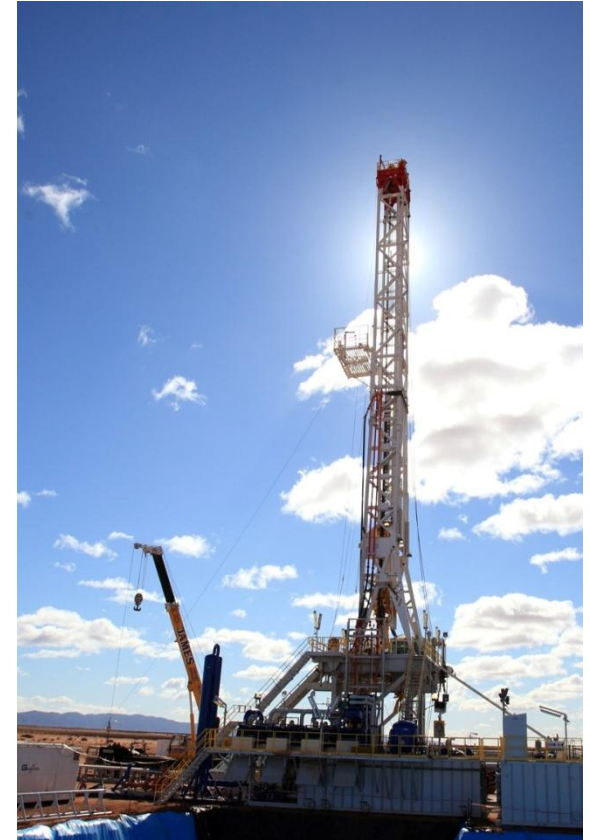
- > JV Funding: up to \$85 million plus equity share of project costs
- > Government grants of \$69.8 million toward drilling and commercial demonstration



Sound business model

"To explore for and develop emission free geothermal energy projects that are commercially sustainable"

- > To develop a portfolio of quality geothermal energy projects
- > Explore both conventional and engineered geothermal systems – for power and heat
- > Find a favorable combination of geology and market conditions - *"shallow hot rocks close to market"*
- > Introduce joint venture partners with common interests, the right skills/knowledge, risk appetite & funding ability



Highly capable array of joint venture partners

> Beach Energy

- > Top four Australian ASX listed oil and gas company located in Adelaide and with interests in Australia, Europe and Africa



> TRUenergy Geothermal

- > Wholly owned subsidiary of CLP group – listed on the Hong Kong stock exchange – and the largest utility in the Asia Pacific region



> Enel Green Power

- > Wholly owned subsidiary of Enel Group – second largest listed electricity utility in Europe and a world leader in geothermal power production



Paralana Project located in northern Flinders Ranges

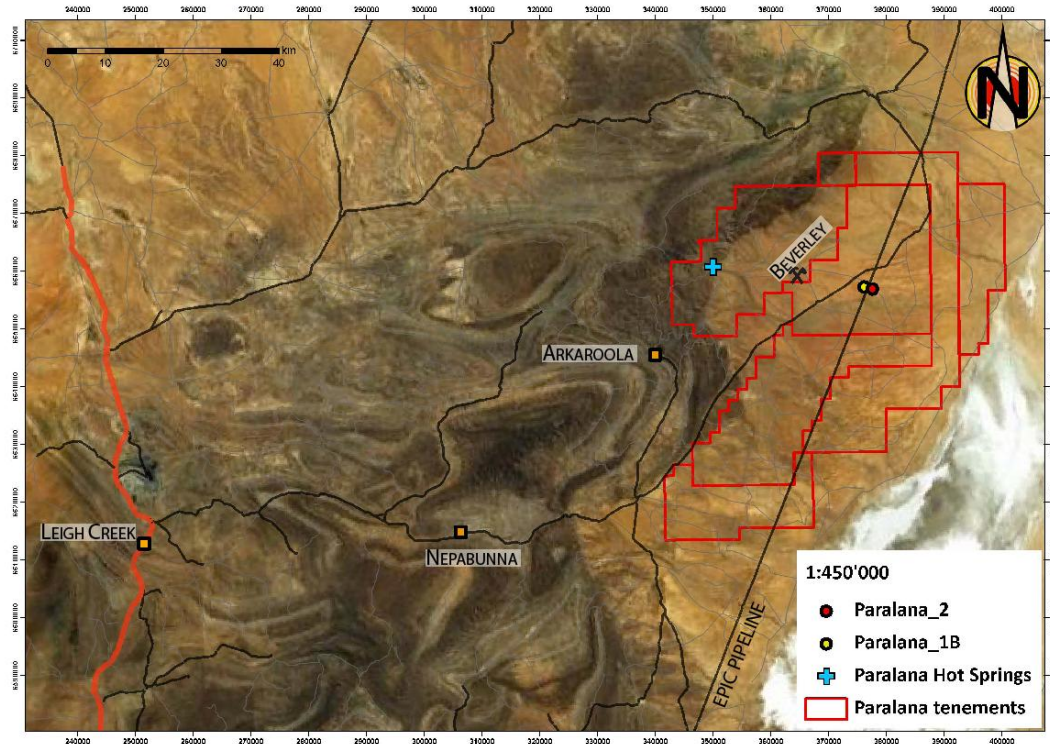
600 kms north of Adelaide in the SA heat flow anomaly: very high heat flow of $\sim 113 \pm 2 \text{ mW/m}^2$

Close to the naturally occurring Paralana Hot Springs – heat from granites

10 kms to the Beverley Uranium Mine (MoU to supply power)

Within one kilometre of the Moomba-Adelaide gas pipeline – existing gas takeoff for temperature top-up

Close to Leigh Creek (NEM) and Aboriginal & Regional communities



Paralana tenements cover estimated heat resource that could potentially support many hundreds of MWs of power generation.

*Inferred geothermal resource estimate $230,000 \pm 40,000 \text{ PJ}$
(original report to the ASX on 5th January 2009)*

The information on this slide which relates to geothermal resources is based on a report compiled by Dr. Graeme Beardsmore an employee of Hot Dry Rocks Pty Ltd. Dr. Beardsmore is a Competent Person as defined by the Australian Code for Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition) and has consented in writing to the public release of this information in the form in which it appears."



Paralana joint venture arrangements

- > Beach Energy Farm-in (Jan 2007) for up to \$28m for 36% plus equity share of project costs at every stage
 - > First \$5m for first well and \$2.7m for stimulation – earns 21%
 - > Contributes at 21% for second well and stimulation
 - > After demonstration of geothermal flows – Option to earn a further 15% for \$20M

- > TRUenergy Farm-in (Aug 2008) for up to \$57m for 30% plus equity share of project costs at every stage
 - > \$3m first well and stimulation
 - > \$3m second well and stimulation – earns 10%
 - > After demonstration of geothermal flows – Option to earn a further 5% for \$7m
 - > After 7.5 MW pilot plant – Option to earn a further 15% for \$44m



Under the Paralana Joint Venture post demonstration of flows and with REDP grant of \$62.8m, for a \$200m, 30 MW demonstration project with JV options taken up, Petratherm would require minimal investment and would retain 34% of resource

Paralana joint venture and government grant arrangements

- > JV Projects stages
 - > Demonstration of flows – two wells and circulation
 - 1st well finished and temperature confirmed ✓
 - > Pilot plant – up to 7.5 MW
 - > Commercial demonstration – up to 30 MW
- > \$7m GDP grant is applied to demonstration of flows
 - \$4.2m used toward 1st well ✓
- > \$62.8m REDP grant is conditional on proof of concept and applied to pilot and commercial demonstration



Fracture stimulation programme – next stage of work

> **Injectivity test at base of well bore**

- > Inject small volume of water to confirm fracture initiation and propagation
- > Small volume, minimal induced seismic risk

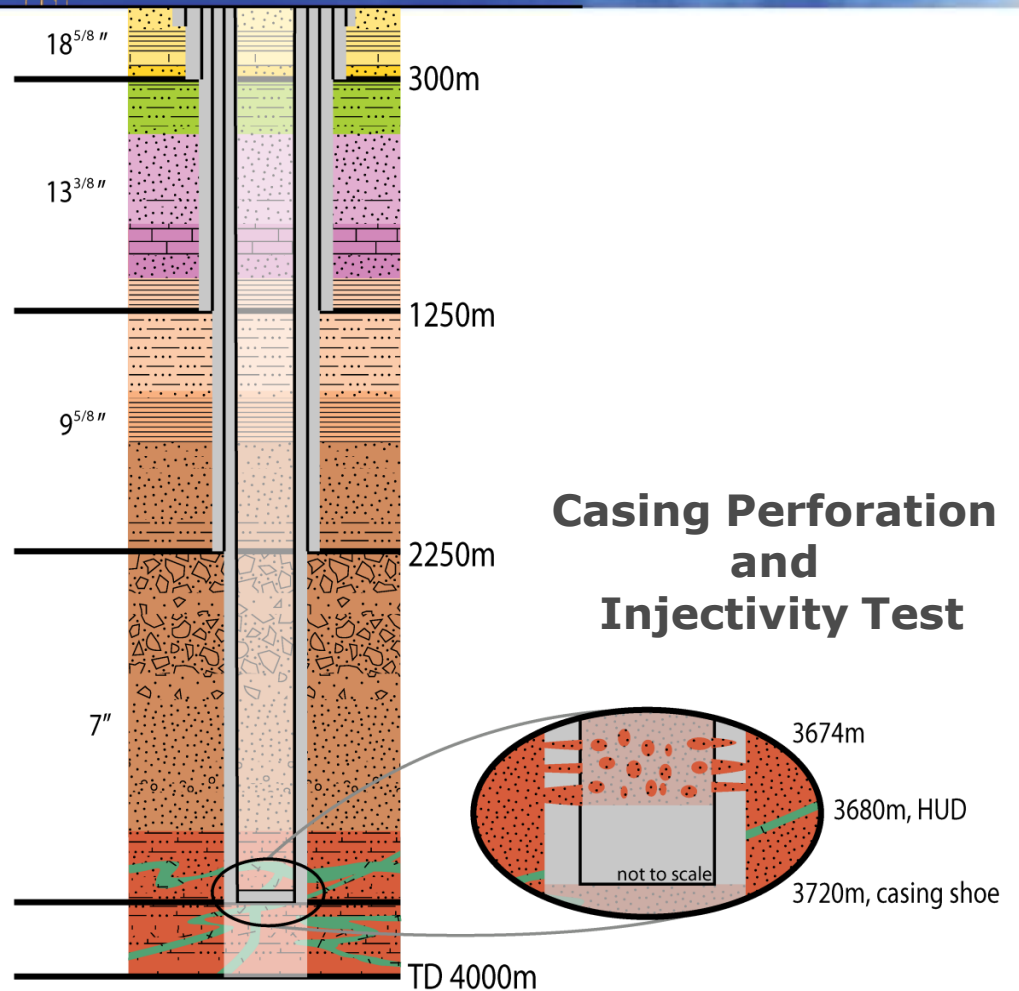
> **Fracture stimulation**

- > Inject larger volume of water at higher rates
- > Volumes and rates dependent on micro-seismic response
- > Aim to activate natural fracture network

Paralana 2 well summary



- > Depth 4003m (relative to ground level)
- > Well cased and cemented to 3720m
- > Extrapolated bottom hole temperature $\sim 190^{\circ}\text{C}$
- > High pressure geothermal brines intersected from 3670m
- > Zircon dating confirms old 1590Ma reservoir sequence
- > Contains numerous fractures and faults
- > 2D Seismic suggests fractured reservoir sequence may be regionally extensive



Regional community consultation – May 10-13, 2010

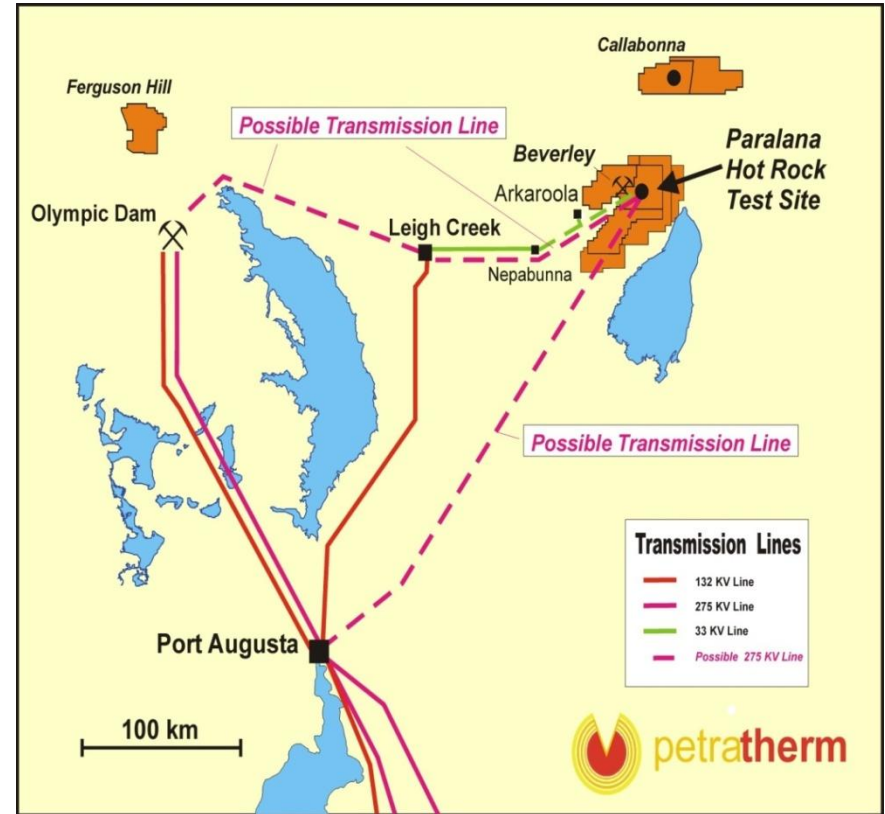
- > Petratherm and PIRSA
- > Port Augusta, Leigh Creek, Hawker, Nepabunna, Arkaroola and Quorn
- > Update on project and outline of next work stage – fracture stimulation
- > Consultation well received by community
- > Common questions
 - > Employment and economic development opportunities
 - > Access to, and use of water
- > Question and Answer posted on PTR website



Paralana Project – commercial overview

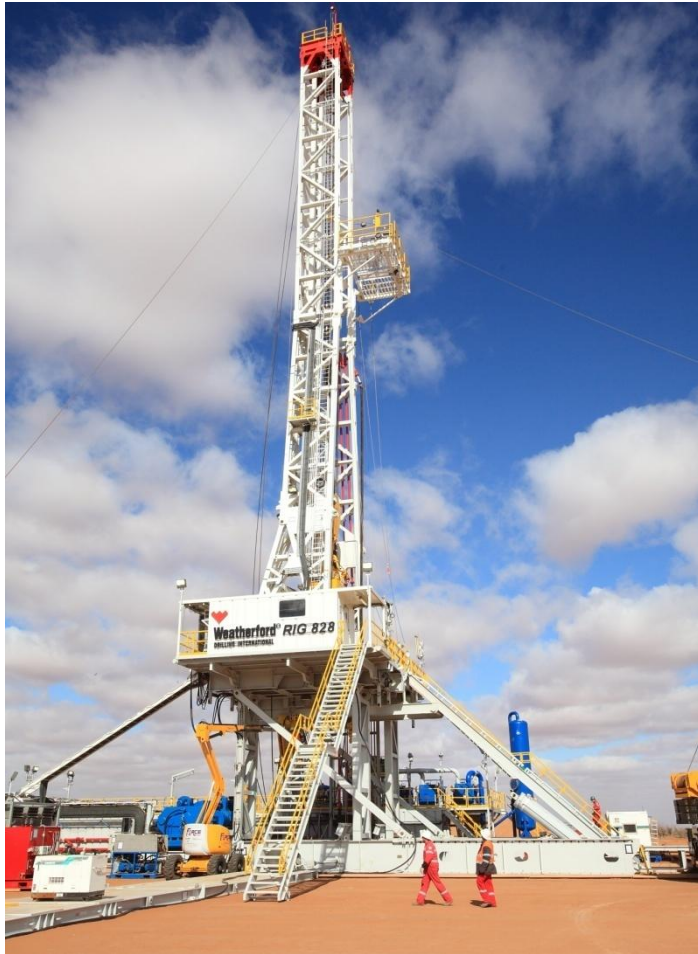
- > Potentially commercially viable at all stages of development
- > Close (10kms) off grid local customer (5-30MWe) followed by large on grid development (260 MWe+)
- > Transmission rule changes to support low cost connection to market
- > Long term price to NEM of 260 MW lower cost than with wind – including transmission cost
- > MMA estimate power price at less than \$100/MWh delivered to Olympic Dam

(refer background slides for more detail)



Refer detailed background slides for further economic and technical information at end of presentation

Paralana project outlook for 2011 and beyond

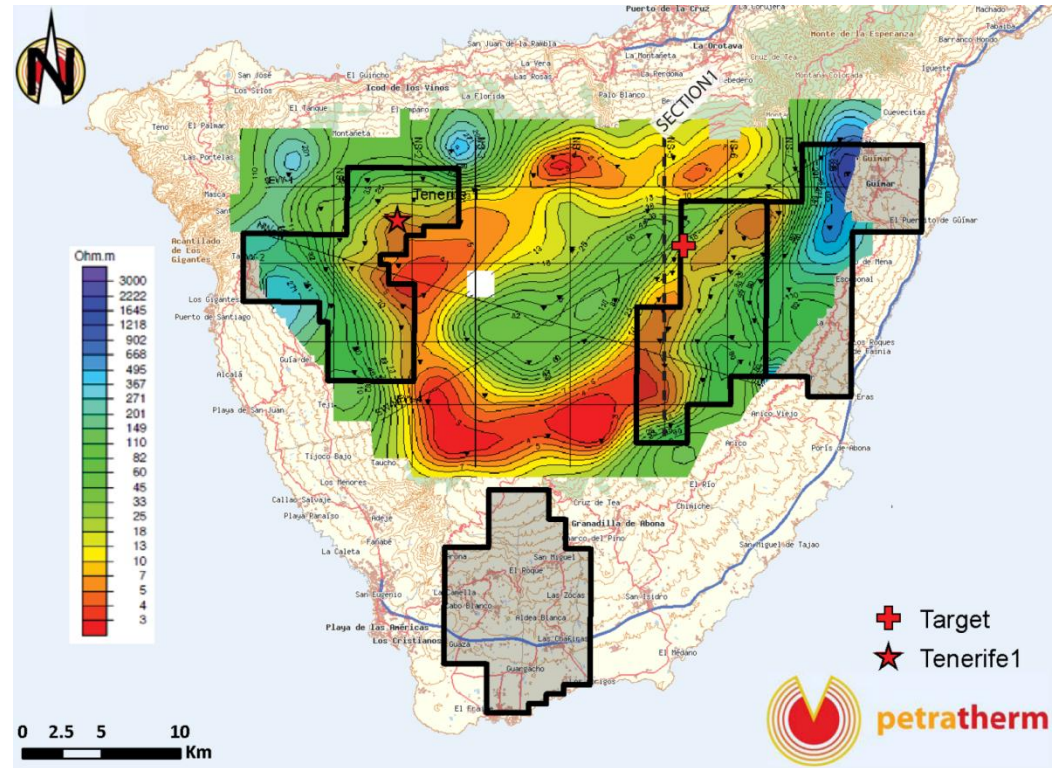


Paralana JV project milestones

- > 4th Qtr 2010: Mini fracture program/fracture stimulation design
- > 1st Qtr 2011: Multi-zone fracture stimulation
- > 2nd half 2011: drilling of the Paralana 3 deep producer well
- > 2nd half 2011: Circulation Test – Proof of Concept
- > 2012: Commission first stage 3.75 MW power plant

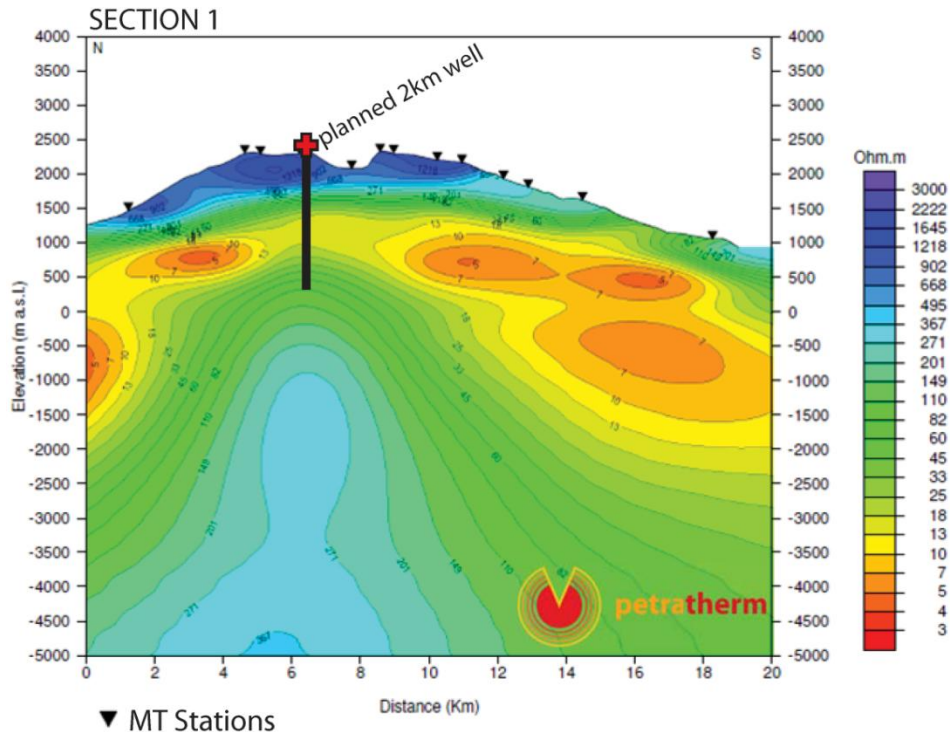
Spain – Enel Green Power deal and Tenerife volcanic project

- Joint development of all electricity producing projects in Spain and Portugal
- Direct and external exploration costs shared 50:50
- Tenerife is an active volcanic island, MT indicates a possible hydrothermal system may be present
- Population approx. 1 million and power demand of > 800 MW (diesel and wind)
- Enel owns the incumbent utility on the island that services the power market



Tenerife - MT resistivity contours at 500m above sea level and target exploration well location

Tenerife – conventional volcanic project



Section 1 MT cross-section and slim-line exploration well target

- > Slim line 2km well (refer map) to test for a hydrothermal system, 50% PTR cost ~ \$1.3m
- > Geochemistry indicates presence of a hydrothermal system of at least 240°C
- > 50 MW development– targeting between 7 MW and 15 MW per production well with high prices, over €90/MWh (AUD \$125/MWh) – more than double the price in Australia
- > Deep production well 100% funded by Enel for second half 2011, estimated cost of €8m (AUD \$11m)

Petratherm - a standout in the Australian geothermal sector

The Company is considered a standout amongst its peer companies in the ASX listed Australia geothermal sector because it has;

- > a **unique exploration approach** for identifying shallow “hot spots” that does not rely on information from previously drilled wells
- > an **innovative approach for exploiting heat** from engineered geothermal systems (EGS) that seeks to lower cost and risk
- > **three major joint venture partners** involved in its projects in Australia and Spain
- > Been awarded **two major Federal government grants** \$7m GDP and \$62.8m REDP for its Paralana project
- > **successfully drilled/cased a 4 kilometre deep well** at the Paralana geothermal site
- > **confirmed economic temperatures** for geothermal energy power production to supply nearby off-grid customer
- > **a portfolio of projects covering the spectrum of geothermal technologies**, district heating (Madrid), conventional volcanic (Tenerife), hot sedimentary aquifer (East Gippsland) and EGS (Paralana)

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