

ASX Release



PETRATHERM LIMITED
ABN 17 106 806 884

South Australian Resources & Energy Investment Conference

Later this morning, Petratherm's Managing Director, Terry Kallis, will present to the inaugural Resources and Energy Investment Conference being held in Broken Hill.

The presentation outlines the Company's plans and progress with its flagship Paralana project and key aspects of other projects, notably the Company's Tenerife conventional volcanic project.

In addition, the presentation highlights those factors that differentiate Petratherm in the Australian geothermal sector – making it a leader in the sector.

The presentation is attached.

24 May 2011

ASX Code: PTR

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Yours faithfully

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Managing Director

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Petratherm

Resources and Energy Symposium Broken Hill

Managing Director Terry Kallis

May 2011

CLEAN ENERGY FOR FUTURE GENERATIONS

Disclaimer and competent persons statement

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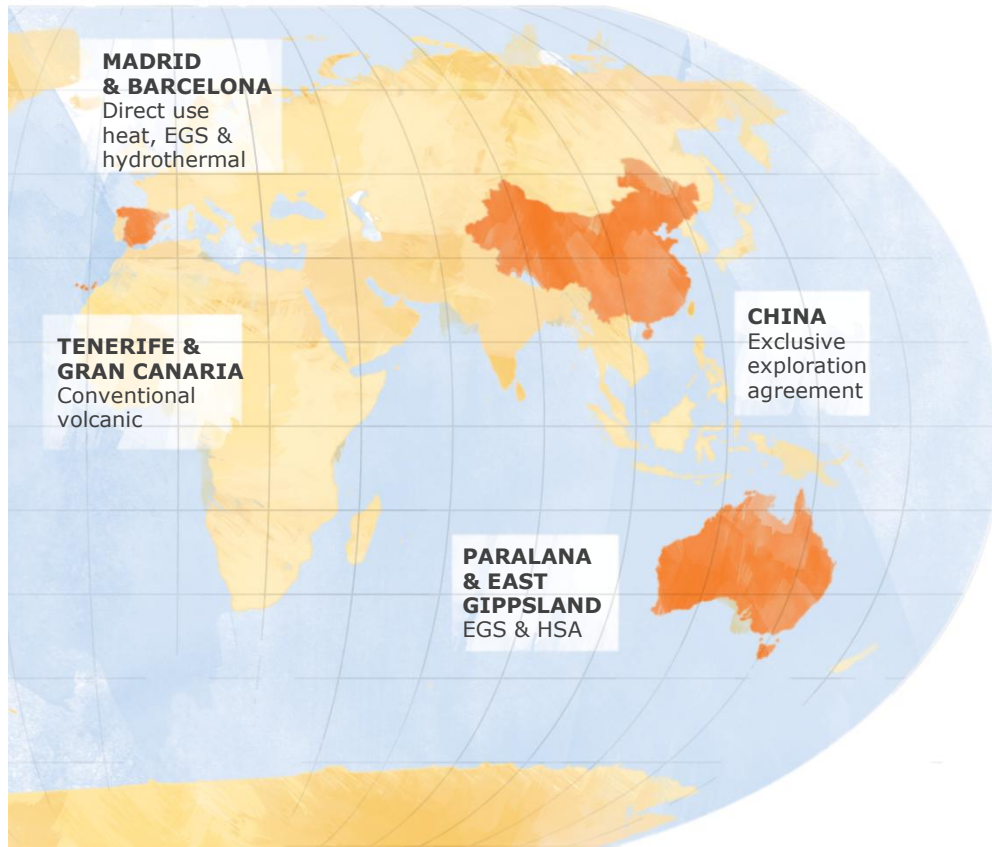
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All amounts in Australian dollars (AUD) unless stated otherwise.

Competent Persons Statement

The information in this report relating to geothermal exploration results and geothermal resources 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.

Petratherm overview and project portfolio



Our company & projects

- > 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: 126.7 million
- > Share Price: \$0.12
- > Market Cap: \$15.21 million
- > Cash Position: \$2.35 million (31 Mar 2011)
- > Shareholders: 3,631 shareholders
 - > Minotaur Exploration 18.54 %
 - > Australian Ethical Investments 8.46 %

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



Our board



Derek Carter
Chairman



Simon O'Loughlin
Director



Richard Hillis
Director



Richard Bonython
Director



Lewis Owens
Director



Terry Kallis
Managing Director

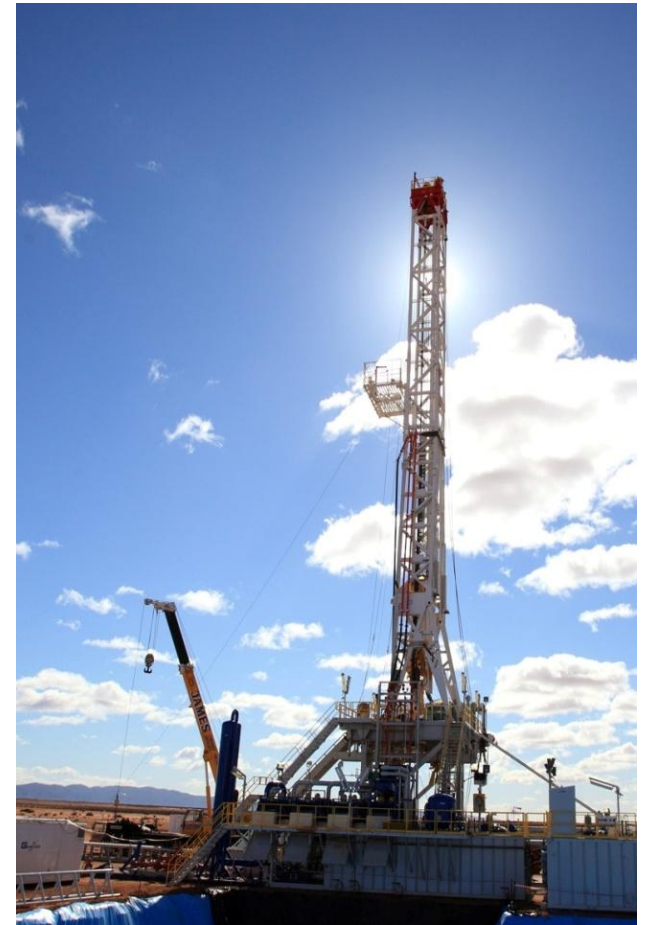
Skills and capabilities

- > Financial Management
- > Legal
- > Marketing
- > Project Management
- > Corporate Governance
- > Exploration and Development
- > Geology and Geophysics
- > Resources and Energy
- > Government and Stakeholder relations

Our 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

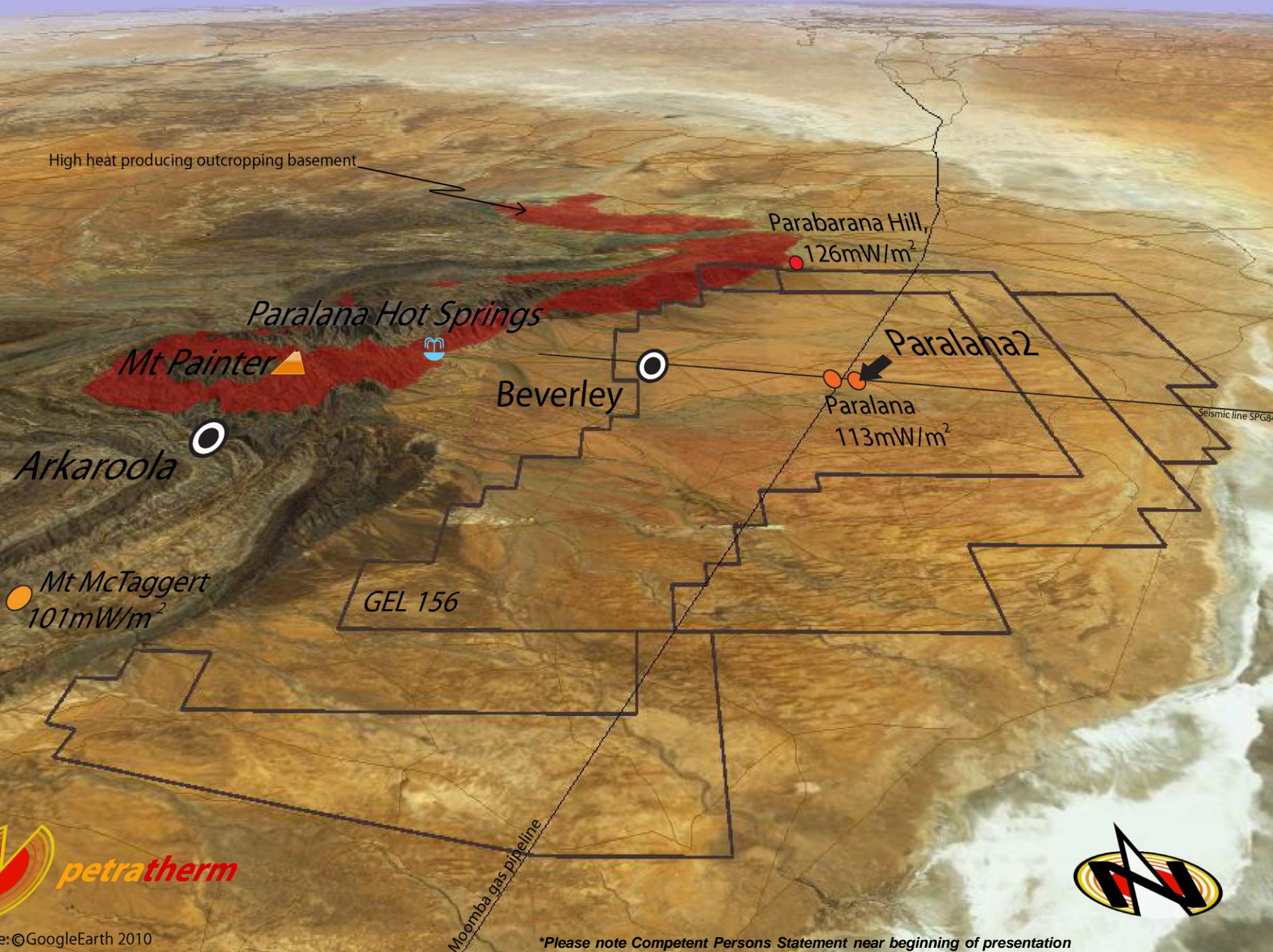


Key Project Summary

- > Paralana engineered geothermal system project
 - > de-risking project through main fracture stimulation in June 2011
 - > fracc/stim costs largely covered under JV with Beach and TRUenergy
 - > excellent leverage in terms of JV and government grants
 - > “hot rock” geothermal firmly on radar of utilities and energy players

- > Tenerife conventional volcanic project
 - > conventional geothermal – no technology risk
 - > partnered with Enel, experienced incumbent utility
 - > attracted further JV interest from three Spanish companies
 - > potential for federal grants and subsidies
 - > exploration drilling to confirm resource in 2011
 - > Enel to 100% fund \$11m production well to earn their 50% equity

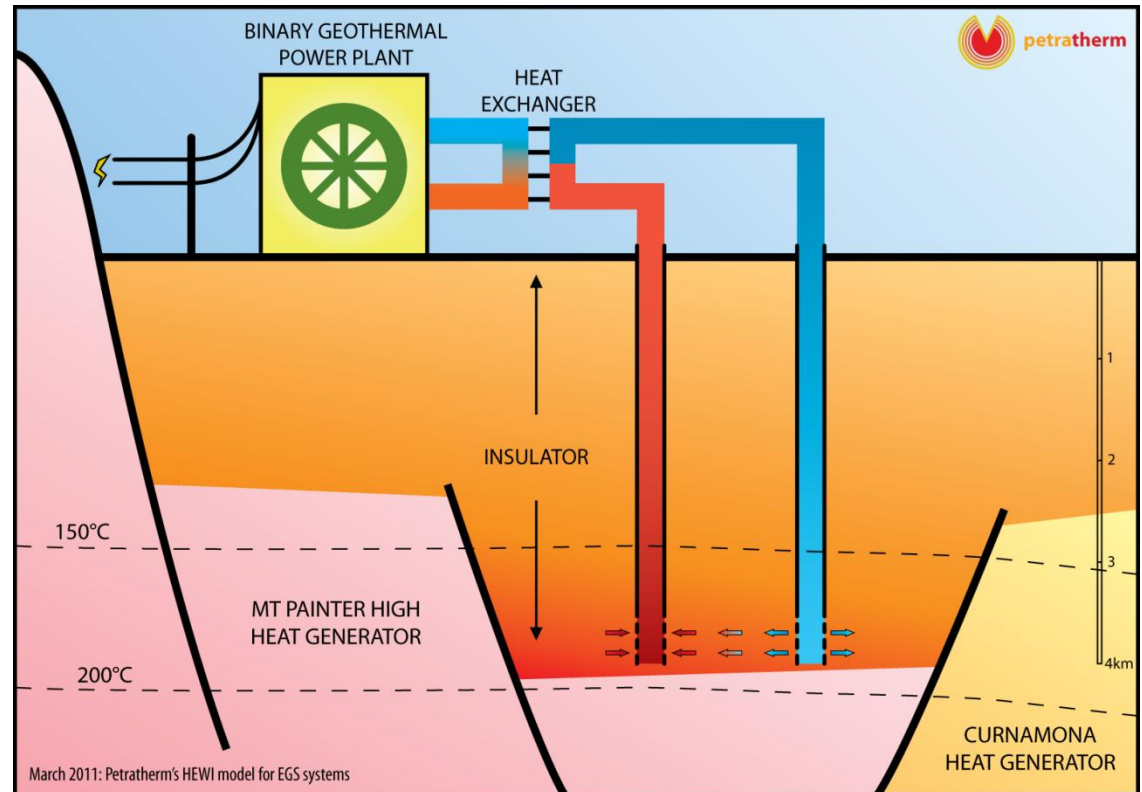
Paralana Project – Regional Picture



Development Model – Heat Exchanger Within Insulator

- > Higher Permeability
- > Chemically Stable
- > Lower Fracc Challenge?
- > Adelaidean – bedding / joint surfaces

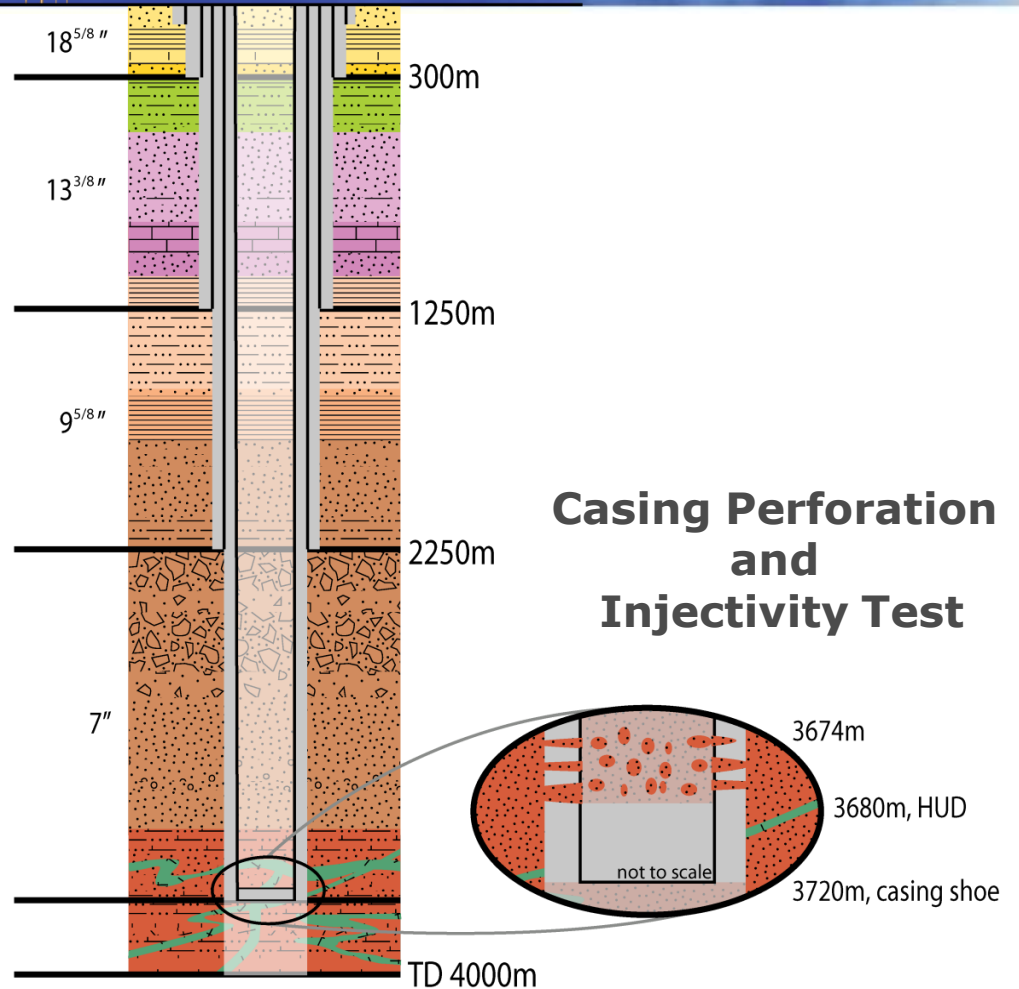
= Cheaper Power!



Paralana 2 well summary



- > Depth 4012m
- > Well cased and cemented to 3725m
- > Extrapolated bottom hole temperature ~ 191°C
- > High pressure geothermal brines intersected from 3680m
- > Zircon dating confirms old 1590Ma Reservoir Sequence
- > Contains numerous fractures and faults
- > 2D Seismic suggests fractured reservoir sequence may be regionally extensive



Fracture stimulation programme – next stage of work

> Injectivity test at base of well bore

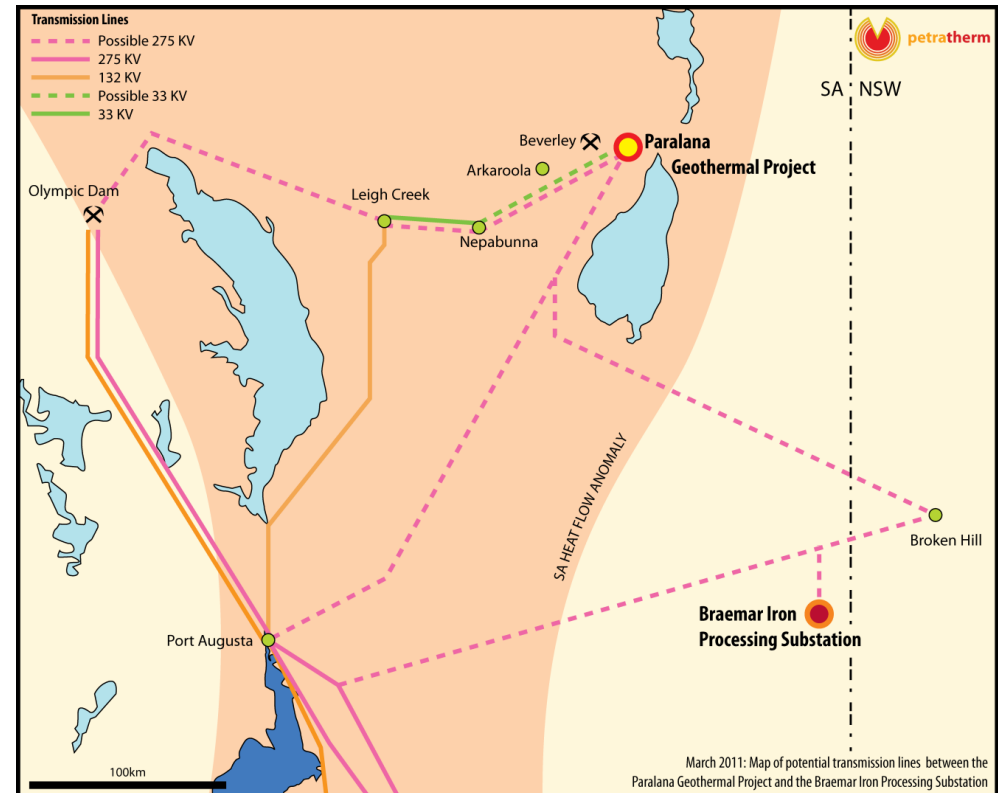
- > Inject small volume of water to confirm fracture initiation and propagation ✓
- > Small volume, minimal induced seismic risk ✓
- > **Target zone successfully broken down in early January 2011 ✓**
- > **Detected micro-seismic events out as far as 300 metres ✓**

> Fracture stimulation - planned for June 2011

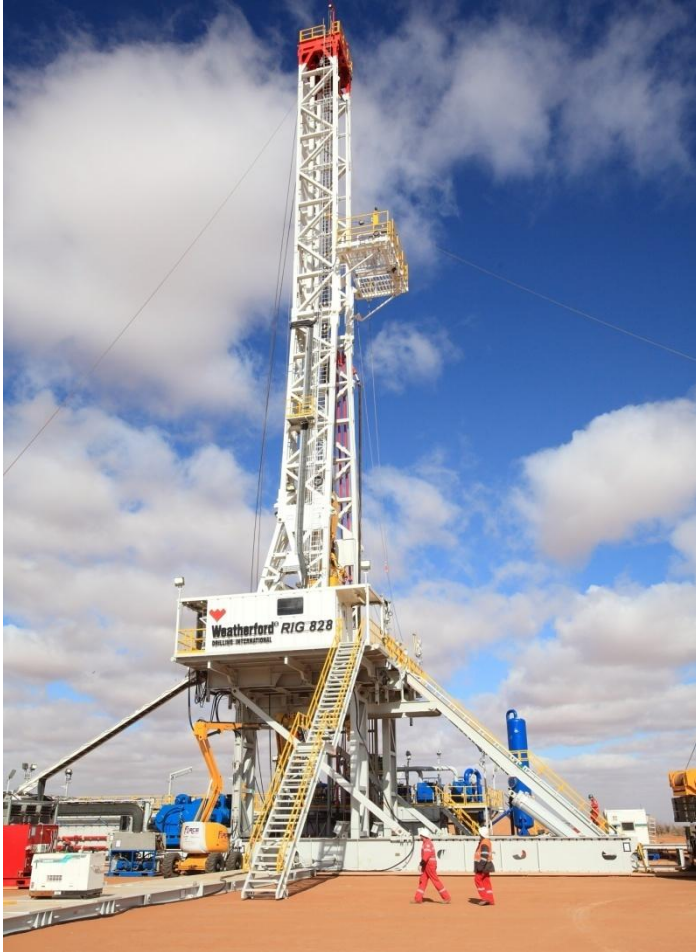
- > Inject larger volume of water at higher rates
- > Volumes and rates dependent on micro-seismic response
- > Aim to activate natural fracture network
- > Target to create micro-seismic events out to at least 500 metres

Paralana Project – commercial / market overview

- > Potentially commercially viable at all stages of development
- > Close (10kms) off grid local customer (5-30MW) – then expand to on grid development (260 MW)
- > Transmission options for connection to market – potential growth areas
- > Long term price to NEM of 260 MW lower cost than with wind – inclusive of transmission cost
- > Independent energy/economic consultants estimate power price at less than \$100/MWh delivered to Olympic Dam



Outlook for 2011 and beyond



Paralana JV project planned milestones

- ❑ 2nd Qtr 2011: Main fracture stimulation
- ❑ 2nd half 2011: drilling of the Paralana 3 deep producer well
- ❑ 1st half 2012: Circulation Test – Demonstration of Flows
- ❑ 2012: Commission first stage 3.75 MW power plant

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 – with additional partners planned
- > awarded **two major Federal government grants** \$7m GDP and \$62.8m REDP for its Paralana project – enabling a forward development path for commercial demonstration
- > **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
- > **successful break down of target zone** during recent perforation and injectivity test
- > a **portfolio of projects covering the spectrum of geothermal technologies**, district heating (Madrid), conventional volcanic (Tenerife), hot sedimentary aquifer (East Gippsland) and EGS (Paralana)

Looking forward

Australia needs clear policy & regulatory framework for geothermal energy

- > **Price on carbon**
- > **Capital funding of projects**
- > **Investment in network connection**

This will drive investment in geothermal companies and projects



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BLUE SKY
FUTURE

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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 demonstrated geothermal flows – Option to earn a further 15% for \$20M

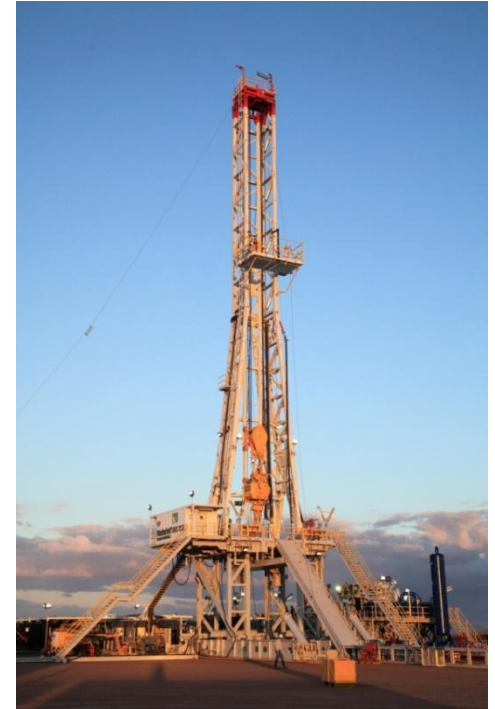
- > TRUenergy Farm-in (Aug 2008) for up to \$57m for 30% plus equity share of project costs at every stage
 - > \$3m first well and stimulation
 - > \$3m second well and stimulation – earns 10%
 - > After demonstrated geothermal flows – Option to earn a further 5% for \$7m
 - > After 7.5 MW pilot plant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

- > Beach Energy Farm-in (Jan 2007) for up to \$28m for 36%, plus equity share of project costs
- > TRUenergy Farm-in (Aug 2008) for up to \$57m for 30%, plus equity share of project costs
- > JV Projects stages
 - > Demonstration of flows – two wells and circulation
 - 1st well finished and temperature confirmed 190°C ✓
 - > 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 demonstration of flows and applied to pilot and commercial demonstration



Project joint venture – cost estimates (assumes JV earn-in options exercised)

	<i>Project JV costs</i>	<i>PTR cost</i>
> Demonstrate flows (stages)		
> Fracture stimulate – Paralana 2	\$1.5 m	\$ 0.4m ¹
> Drill producer well – Paralana 3*	\$15m - \$20m	\$6.4m - \$9.9m ²
> Fracture stimulate/circulate	\$1.5m	\$1.0m ³
	\$18m - \$23m	\$7.8m - \$11.3m
Potential 45% R & D rebate*	\$6.4m - \$8.6m	\$4.4m - \$5.9m
Net Cost (after rebate)	\$11.6m - \$14.4m	\$3.4m - \$5.5m
> Produce power – up to 7.5 MW**	\$45 m	\$0.4m
> 3.75 MW plant		
> Substation & transmission line		
> 2 nd producer well & 3.75 MW plant		
> Upscale to 30 MW demonstration**	\$162m	\$0.0m
> additional wells and generation plant		

(* \$2.8 million in funds available from GDP grant for Paralana 3 well)

(** \$62.8 million REDP grant provides one third payment of capital costs)

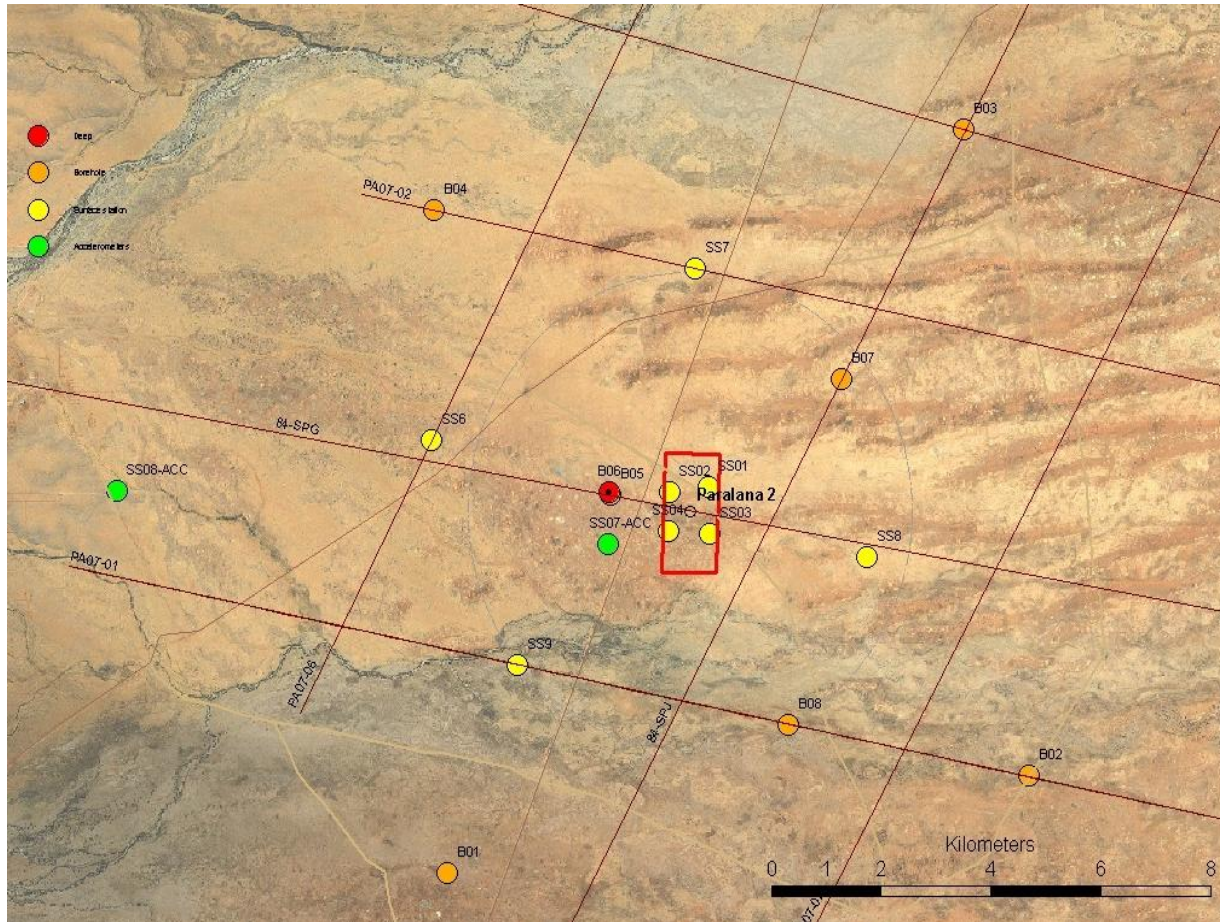
(* potential for 45% R & D rebate of expenditures in 2011/12, excludes grant)

(1 – Q1 2010)

(2 – Second half 2011)

(3 – Second half 2011)

Passive seismic array



- IESE (Institute of Earth Science and Engineering NZ)
- one deep borehole sonde at 1790m in Paralana 1b
- six borehole sondes at 200m
- eight surface seismometers
- two accelerometers

MEQ - Array Managed by IESE

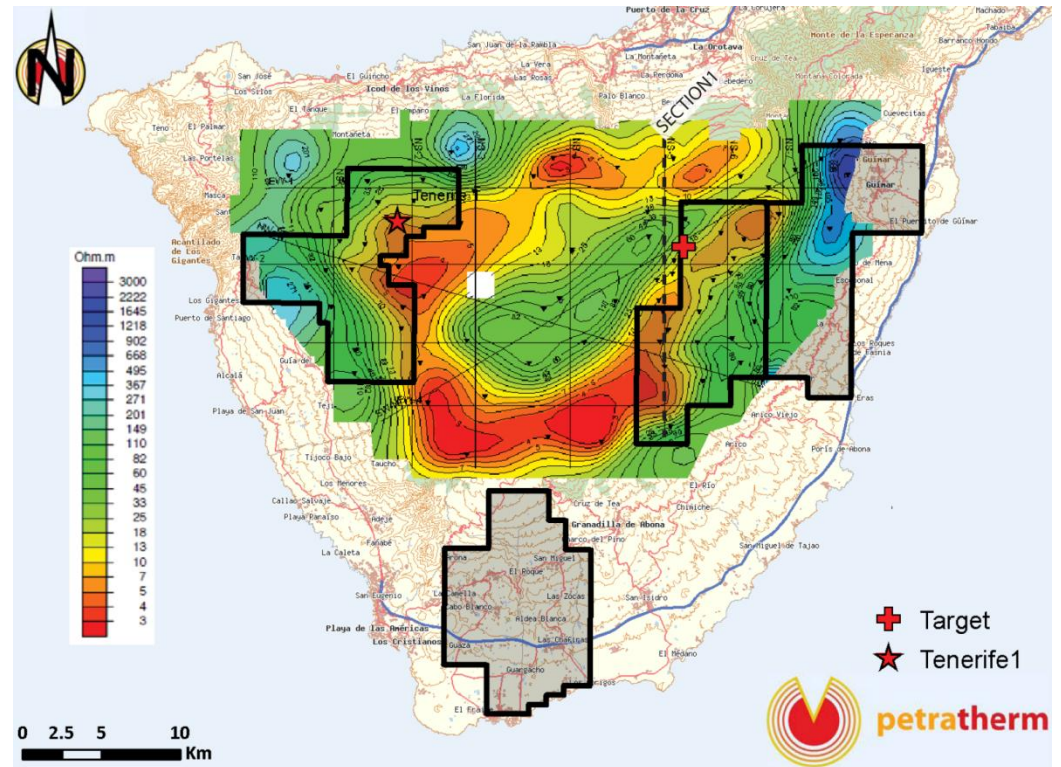


Perforation and injectivity test



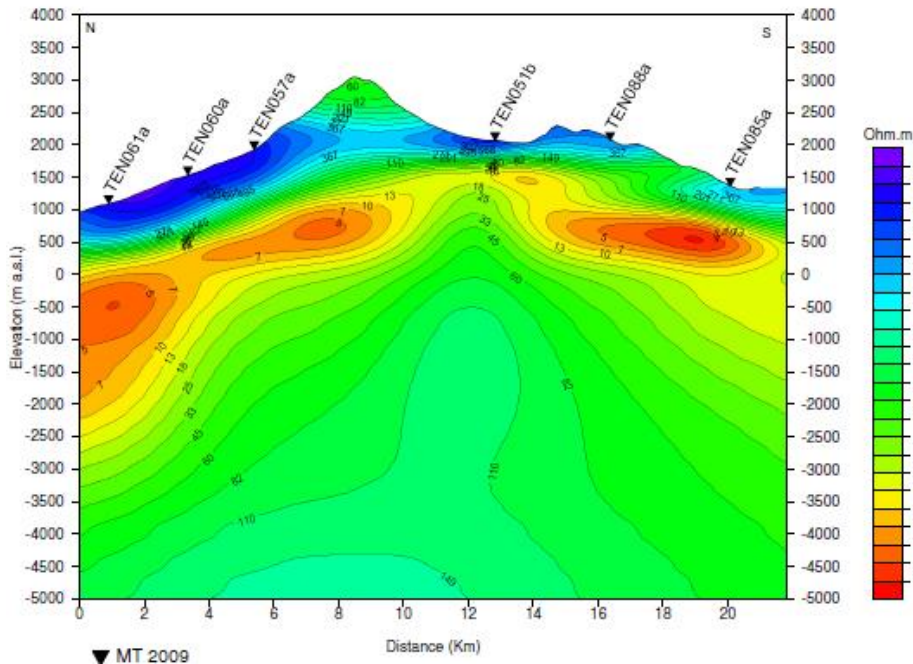
Spain – Enel Green Power deal and Tenerife volcanic project

- 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 survey indicates magma chamber 3 to 4 kms below surface
- Population approx. 1 million and power demand of > 800 MW (diesel and wind)
- Enel owns the incumbent utility – Endesa - on the island that services the power market



Tenerife MT results and potential target exploration well

Tenerife – conventional volcanic project



Tenerife cross section – 3 potential targets

- Slim line 2km well (refer map) to confirm resource
- 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
- 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)

Tenerife – project economics (assumptions are estimates only)

Project Assumptions

- > Bottom hole temp. 250°C, re-injection temp. 105°C
- > Flow rate 100 litres/sec.
- > Output per producer well – 12.7 MW
- > 25 MW power plant and total capital cost (wells, plant and transmission) - € 77m
- > Power sale price – excluding green credits - € 90/MWh (minimum price)
- > Effective tax - 10% based on Special Zone



Sale Price €90/MWh	Sale Price € 120/MWh
NPV € 44.4m	NPV € 87.2m
IRR on Equity – 18.7%	IRR on Equity – 24.4%