

ASX Release

15 March 2010

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PETRATHERM LIMITED
ABN 17 106 806 884

Shareholder Presentation

Petratherm's Managing Director, Terry Kallis and Exploration Manager, Peter Reid, will later today present to Shareholders at a General Meeting of the Company to be held in Adelaide.

The presentation (attached) provides an update on both corporate and project matters, with a particular focus on the recent successful perforation and injectivity test and the planned main fracture stimulation work to be undertaken in late March/early April 2011.

Yours faithfully

Terry Kallis
Managing Director

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Shareholder Presentation

***Managing Director, Terry Kallis and
Exploration Manager Peter Reid***

15 March 2011

Disclaimer and competent persons statement

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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 - Corporate and financial

Listed ASX : PTR

- > Shares on Issue: 126.7 m
- > Share Price: \$0.11
- > Market Cap: \$ 13.94 m
- > Cash Position: \$ 2.76 million(31 Dec 2010)
- > 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



Project Summary

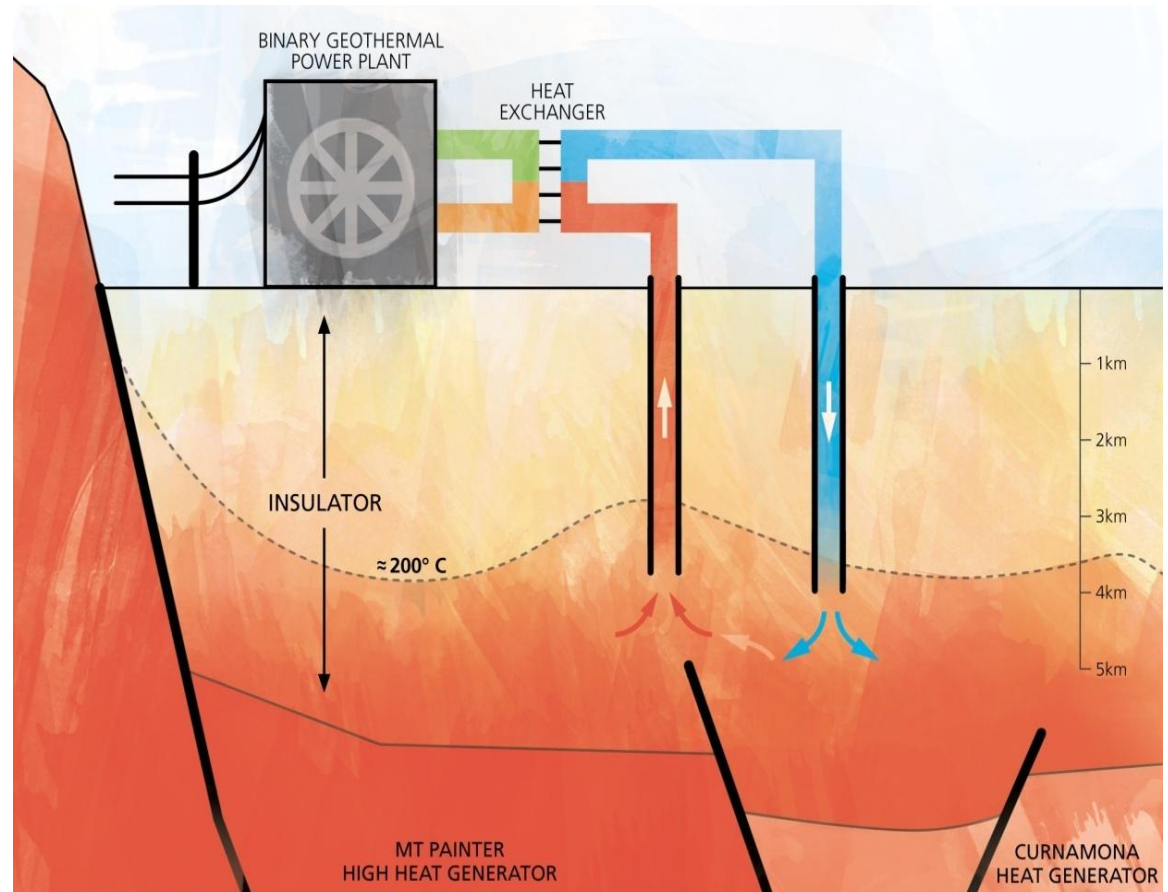
- > Paralana engineered geothermal system project
 - > de-risking project through main fracture stimulation in March 2011
 - > fracc/stim costs largely covered under JV with Beach and TRUenergy
 - > excellent leverage in terms of JV and government grants
 - > “hot rock” geothermal firmly on radar of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

- > Tenerife conventional volcanic project
 - > conventional geothermal – no technology risk
 - > partnered with Enel, experienced incumbent utility
 - > exploration drilling to confirm resource in 2011
 - > Enel to 100% fund \$11m production well to earn their 50% equity

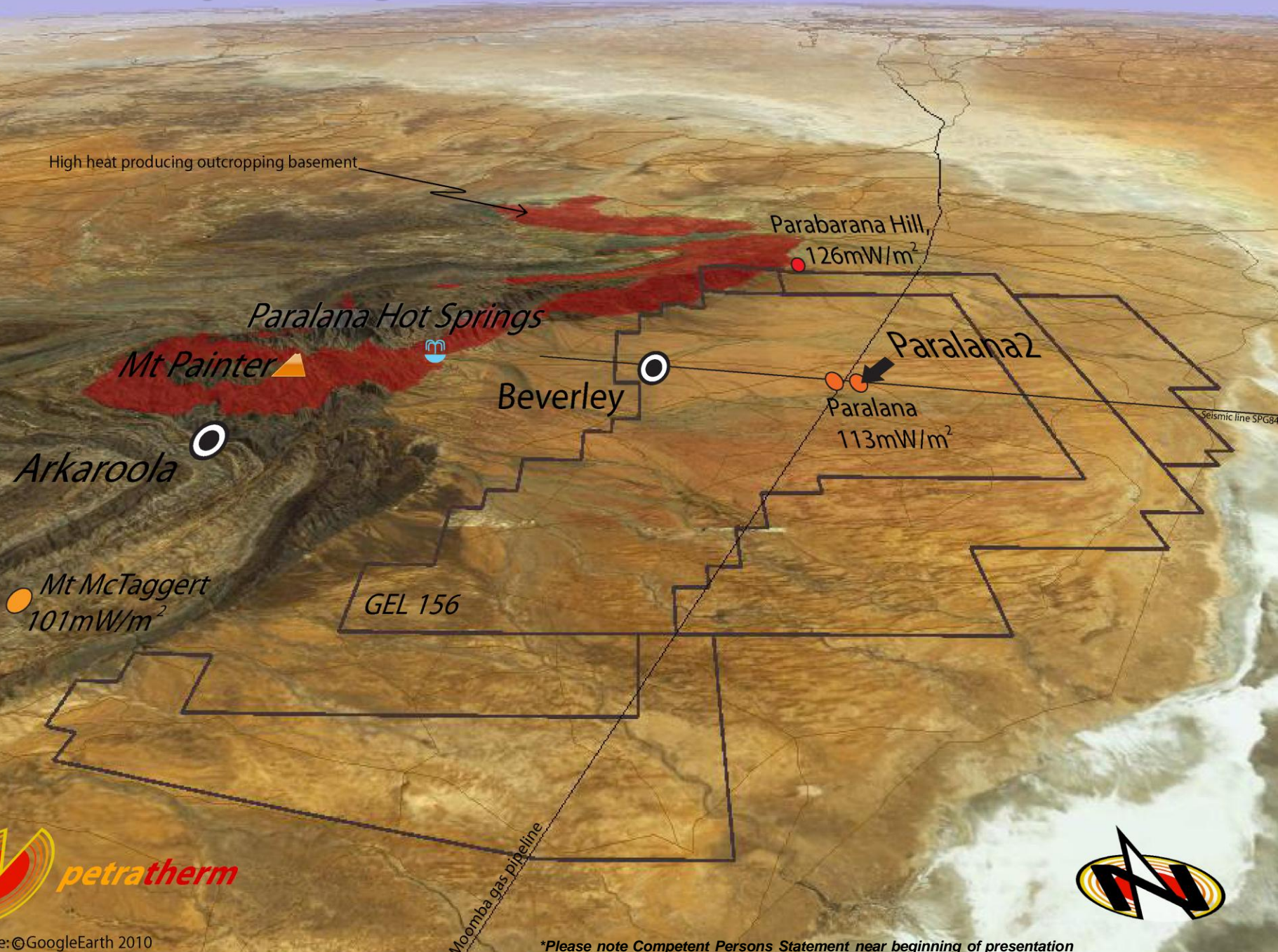
Development Model – Heat Exchanger Within Insulator

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

= Cheaper Power!



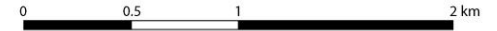
Paralana Project – Regional Picture



SPG84

Paralana 1B

Paralana 2

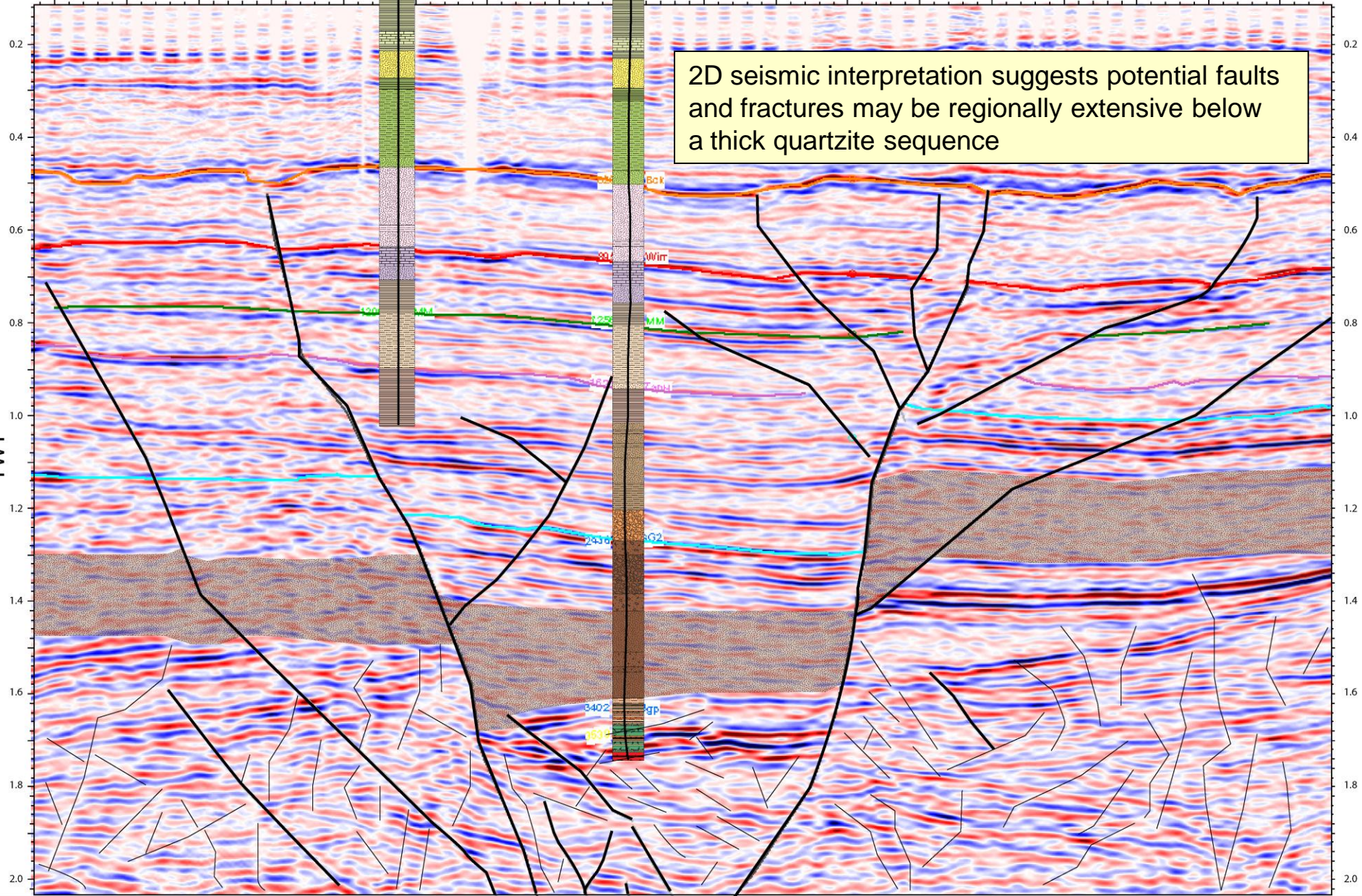


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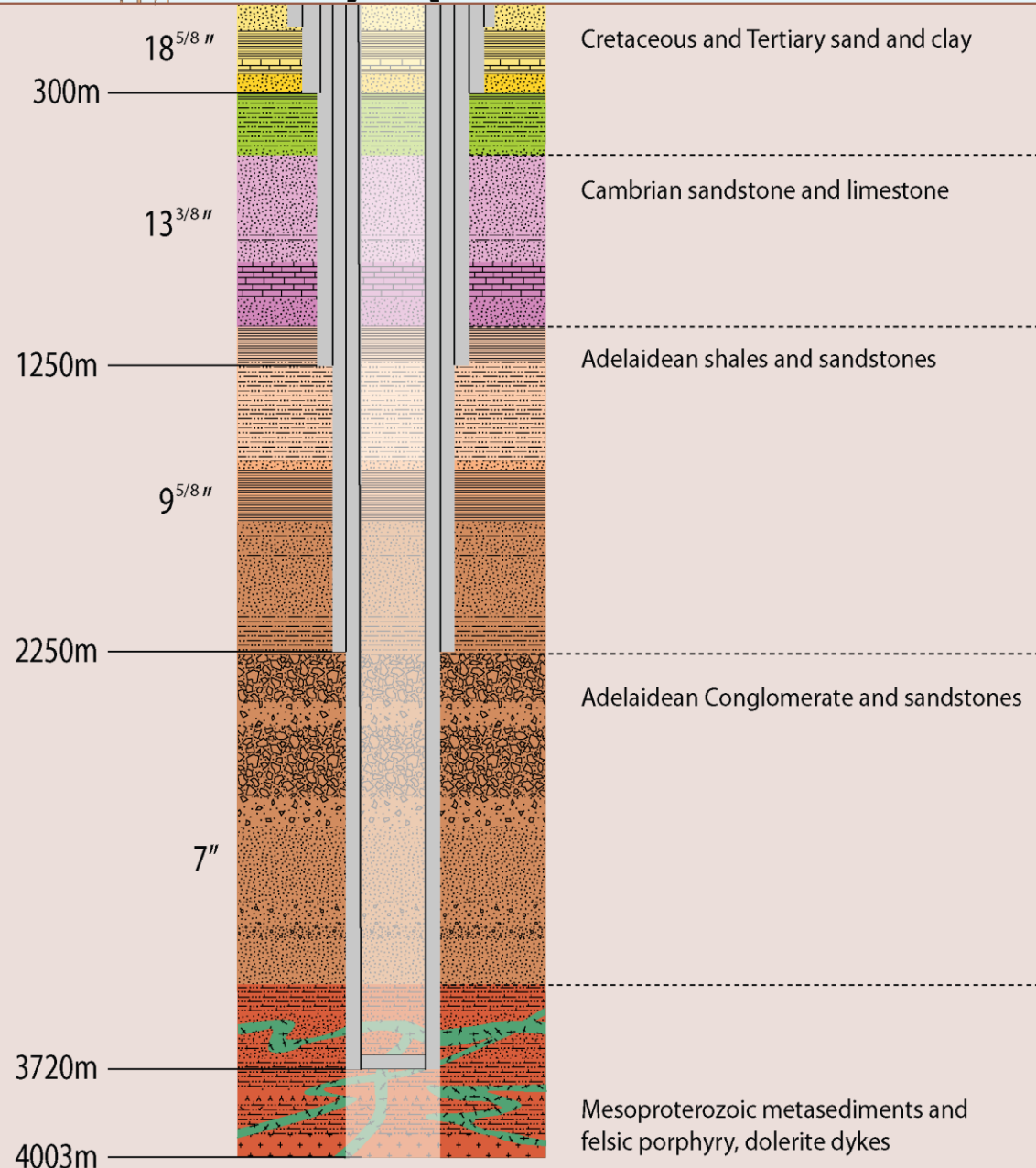


2D seismic interpretation suggests potential faults and fractures may be regionally extensive below a thick quartzite sequence

Paralana 2 Well Summary



- Depth 4003m (G.L. AHD)
- Slow ROP due to hard formations
- Well cased and cemented to 3720m
- Measured Temp. = 176 °C at 3672 m; Extrapolated bottom hole temp. is 190 ± 2 °C at 4000m depth.

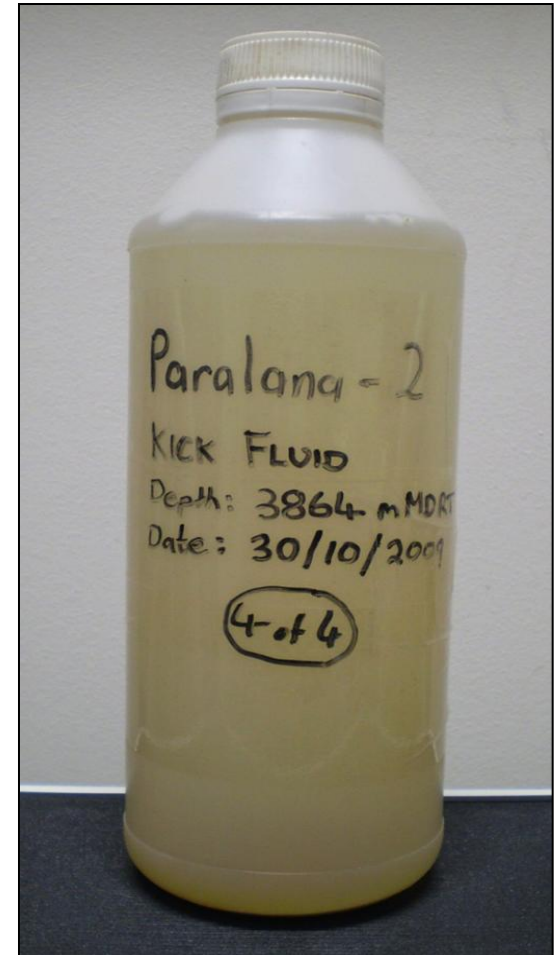


**Please note Competent Persons Statement near beginning of presentation*

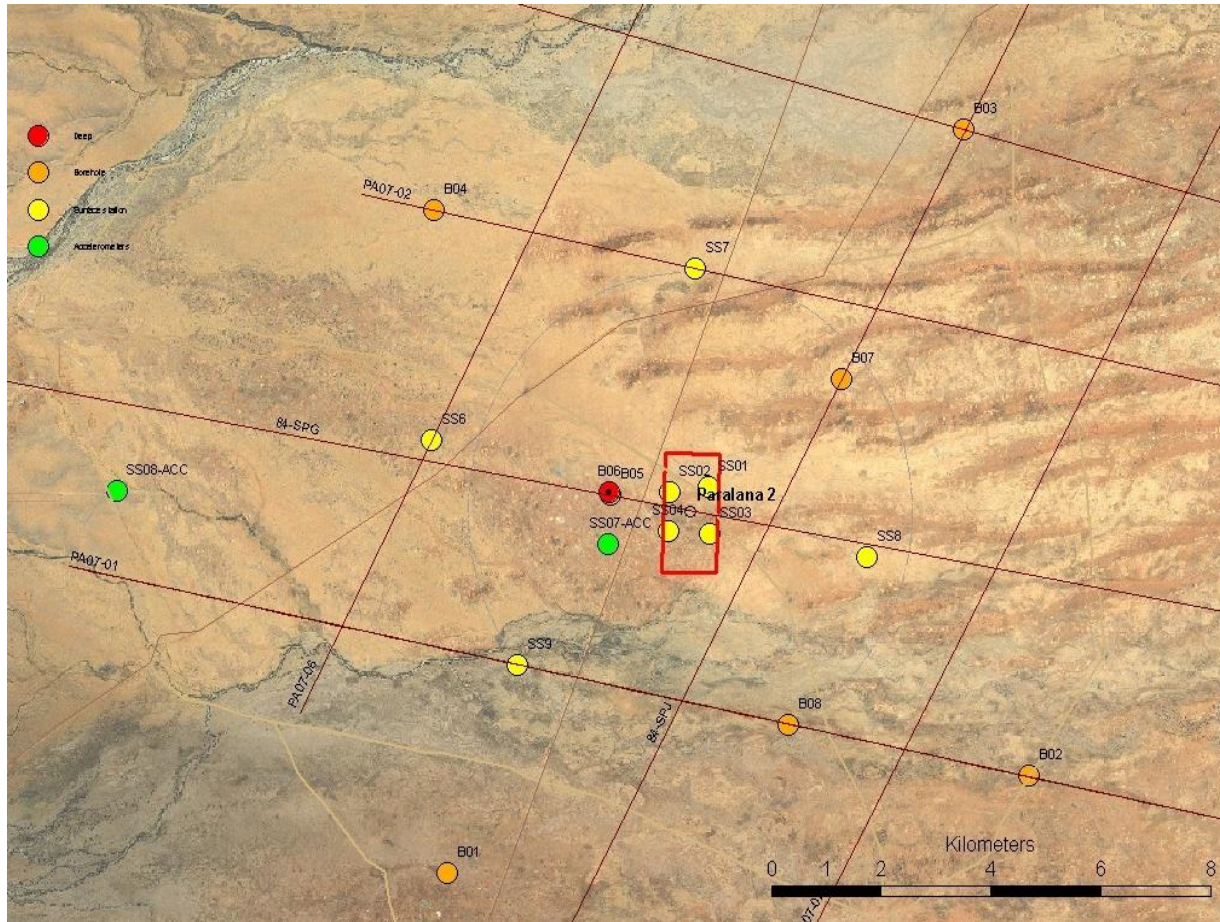
Paralana 2 – Below 3400m Section – Brine Intersected

- ❑ High torque, intervals of high ROP's, drilling breaks and increased in well bore deviation.
- ❑ Evidence of geothermal brines from 3670m with inflows of over-pressured brine at approximately 3750m and 3864m.
- ❑ Shut in pressure indicated approx. 3,300 psi, of overpressure and mud system weighted up to 13.2ppg to stop flow.
- ❑ Well bore stability problems limited wire line logging while drilling measurements to 3725m.

Numerous large Fractures/Faults Intersected!



Passive seismic array



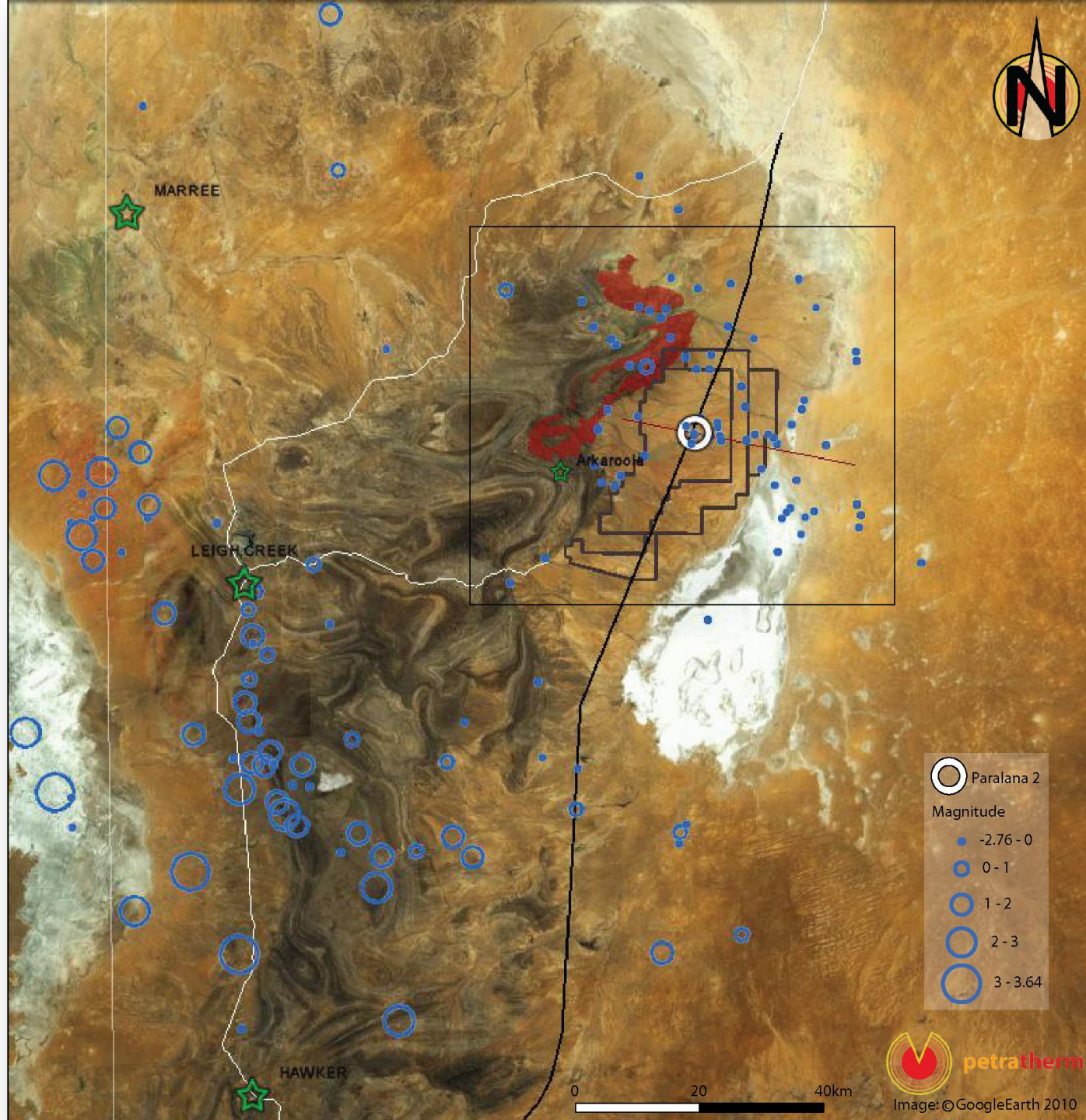
- Monitoring began April 2008
- one deep borehole sonde at 1790m in Paralana 1B
- six borehole sondes at 200m
- eight surface seismometers
- two accelerometers

MEQ - Array Managed by IESE



Regional and Local Seismic Events

Results from
April 2008 to
Sept. 2010



Pre-stimulation Seismic Events

April 2008-Sept.2010



- Relatively small local events detected
- Largest event OML
- Correlates with faults within the Poontana Fracture Zone



Image: © GoogleEarth 2010

Diagnostic Fracture Injection Test - Jan 2011



- *Successful break down (fracturing) of rock*
- *Over 140 micro-seismic events recorded*
- *Seismic events extend ~ 300m from the well bore*
- *Evidence of potential connection to an over-pressured zone*

**MEQ Real time monitoring
during hydraulic Stimulation**

**Mimo Software used to detect,
locate, and determine event
magnitudes in near real-time**

Main Stimulation

*Planned for late March/early
April 2011*

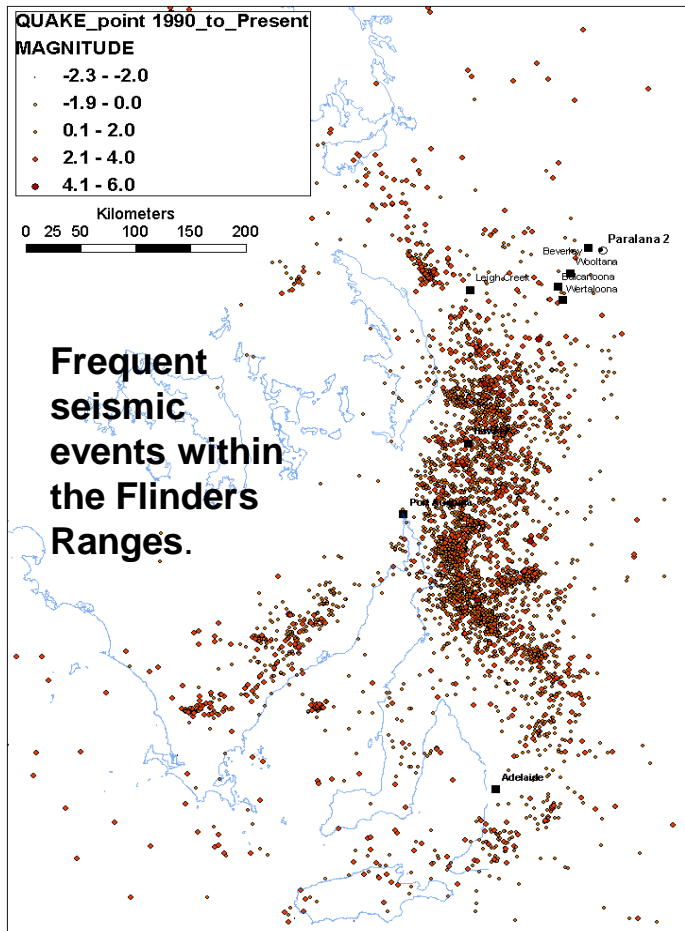


Regional community consultation – May 2010 / March 2011

- ❑ Petratherm /Beach and PIRSA
- ❑ Port Augusta, Leigh Creek, Hawker, Nepabunna, Iga Warta, Arkaroola and Quorn
- ❑ Update on project and outline of next work stage – fracture stimulation
- ❑ First round consultation well received by community
- ❑ Common questions
 - ❑ Employment and economic development opportunities
 - ❑ Access to, and use of water
- ❑ Questions and Answers posted on PTR website

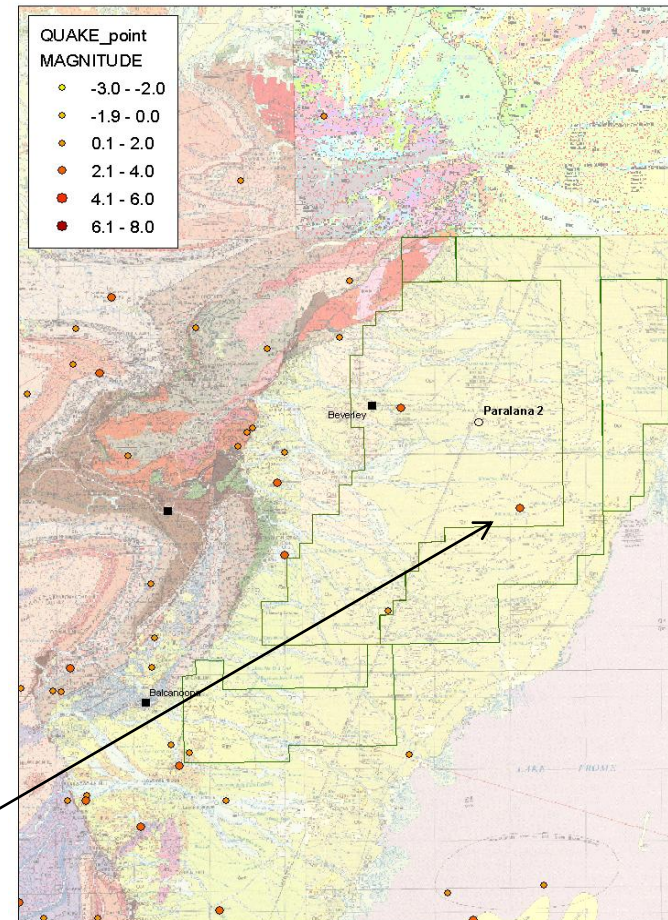


Natural Seismicity



Historical seismic activity at Parolana is low

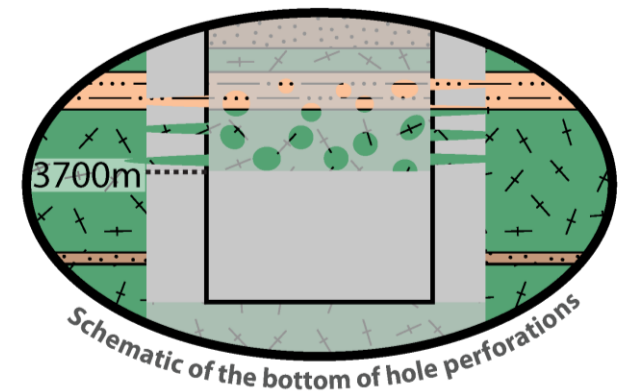
Largest event recorded close to Parolana was a ML3.7 at Christmas Well in 1971



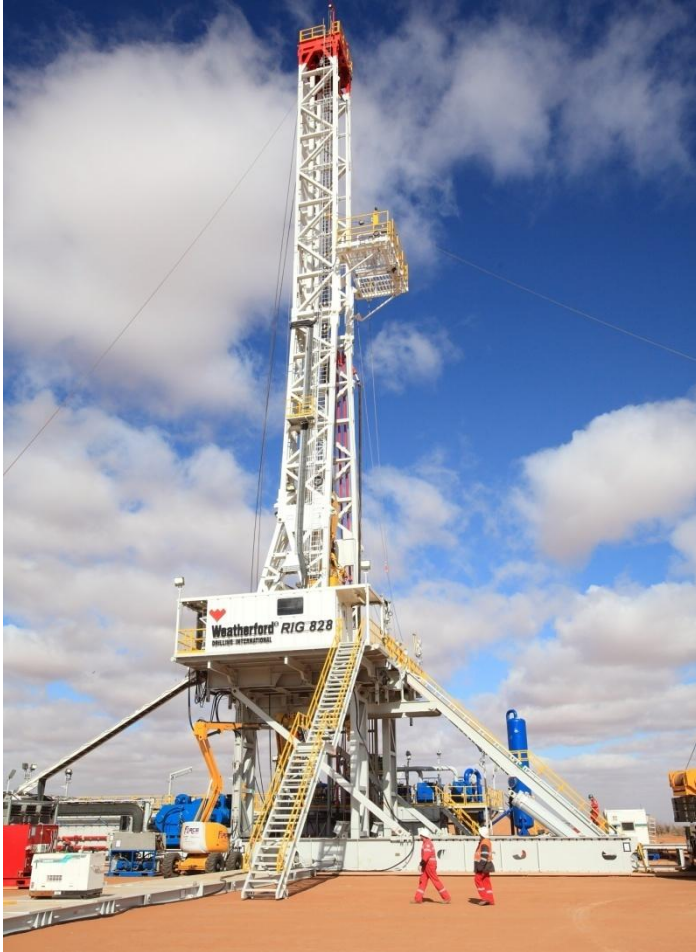
Fracture stimulation programme – next stage of work

Fracture stimulation

- Inject larger volume of water at higher rates
- Volumes and stepped injection rates dependent on micro-seismic response
- Aims to create and activate natural fracture network intersected in the well.
- Targeting MEQ activity >500m radius from the well
- Injectivity flow rates, and production testing if well allows
- Provision for a second stimulation interval dependent on results



Outlook for 2011 and beyond

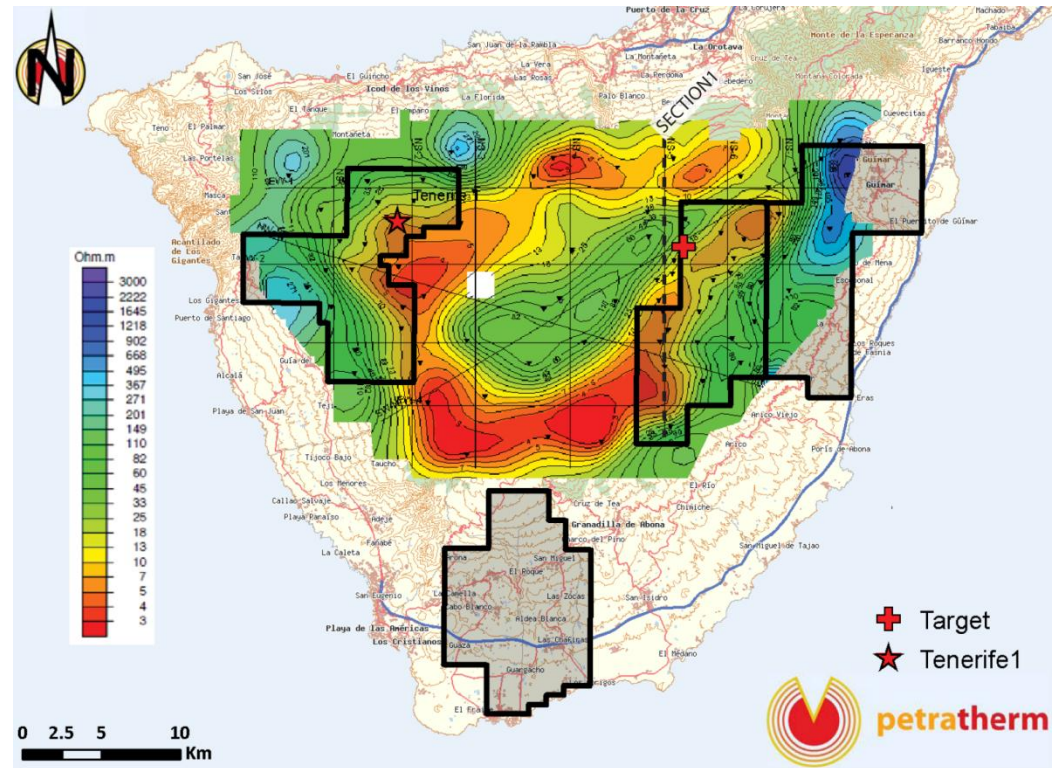


Paralana JV project planned milestones

- ❑ 1st 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

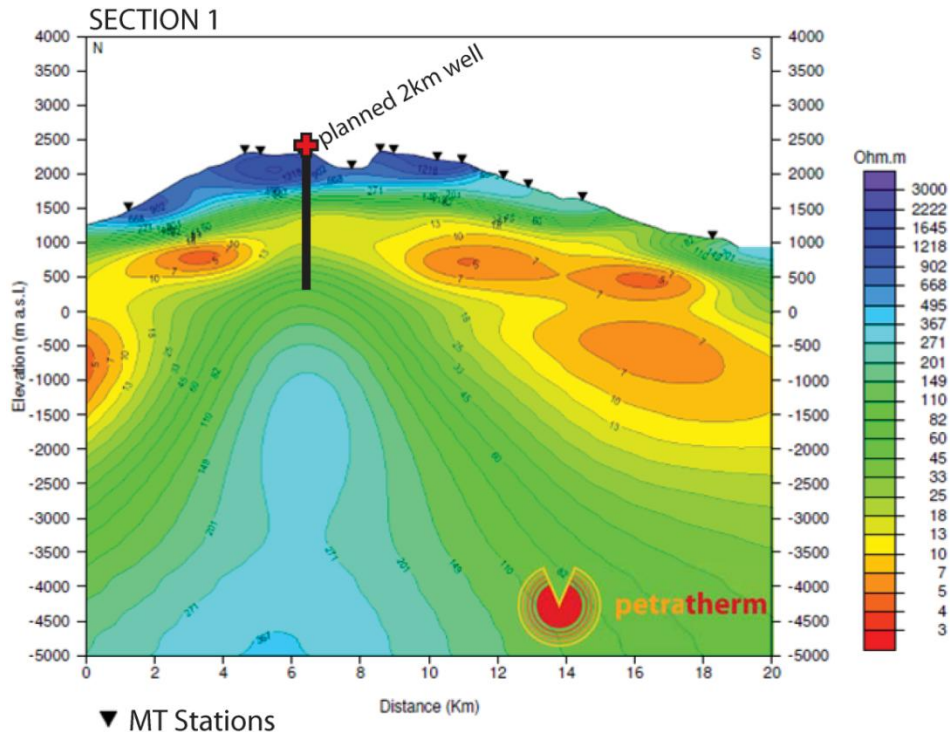
Spain – Enel Green Power deal and Tenerife volcanic project

- 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 hydrothermal system may be reached 1.5 to 3km below surface
- 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 results and target exploration well location

Tenerife – conventional volcanic project



Tenerife MT cross-section and slim line exploration well potential target

- > Slim line 2km well (refer map) to confirm geothermal source
- > 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)

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
- > 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)

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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

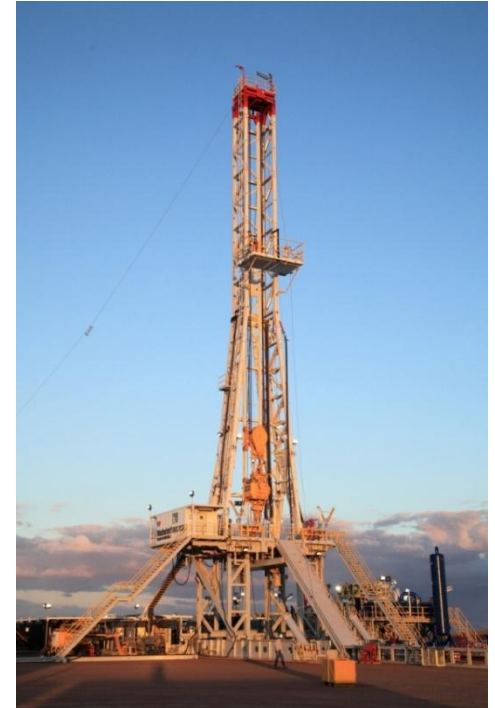
- > TRUenergy Farm-in (Aug 2008) for up to \$57m for 30% plus equity share of project costs at every stage
 - > \$3m first well and stimulation
 - > \$3m second well and stimulation – earns 10%
 - > After demonstrated geothermal flows – Option to earn a further 5% for \$7m
 - > After 7.5 MW pilot plant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

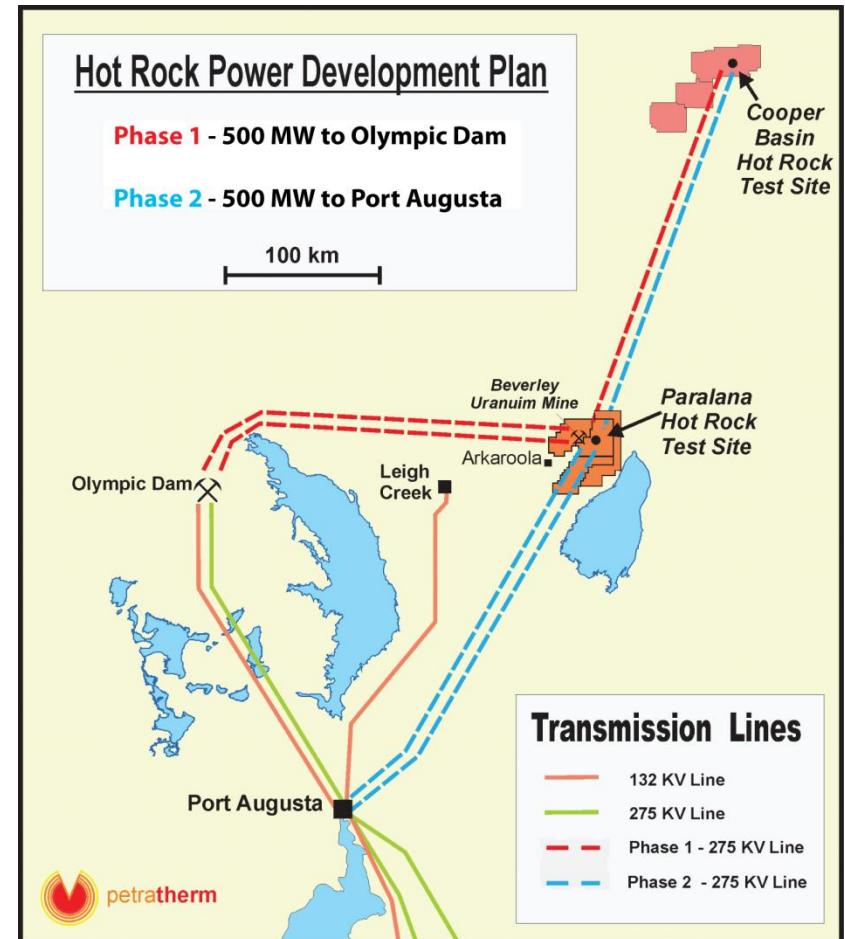


Project joint venture – cost estimates (assumes JV earn-in options exercised)

	<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)		(1 – Q1 2010)
(** \$62.8 million REDP grant provides one third payment of capital costs)		(2 – Second half 2011)
(* potential for 45% R & D rebate of expenditures in 2011/12, excludes grant)		(3 – Second half 2011)

Paralana Project – Commercial Plan

- Small off grid market (5-30MWe) (Heathgate) followed by potential large on grid development (260 MWe+)
- Expenditure well leveraged for proof of concept, then potentially fully funded to initial commercial demonstration scale 30MWe plant
- Funding and expertise from JV Partners, Beach Energy (up to 36 per cent for \$30m) and TRUenergy (up to 30 per cent for \$57m)
- Strong Federal Government grant support - \$7 million geothermal drilling fund and \$62.8 million REDP grant



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%