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PETRATHERM LIMITED
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4th Annual Queensland Energy Conference

Earlier this morning, Petratherm's Managing Director, Terry Kallis, presented to the 4th Annual Queensland Energy Conference in Brisbane.

The conference is being held at the Park Regis Hotel and the topic of the presentation is "Geothermal Energy – Renewable Power from the Earth".

The presentation is attached.

Yours faithfully

Terry Kallis
Managing Director

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Petratherm

Queensland Energy Conference

***Geothermal Energy – Renewable Power
from the Earth***

Managing Director Terry Kallis

February 2011

CLEAN ENERGY FOR FUTURE GENERATIONS

Disclaimer and competent persons statement

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

Competent Persons Statement

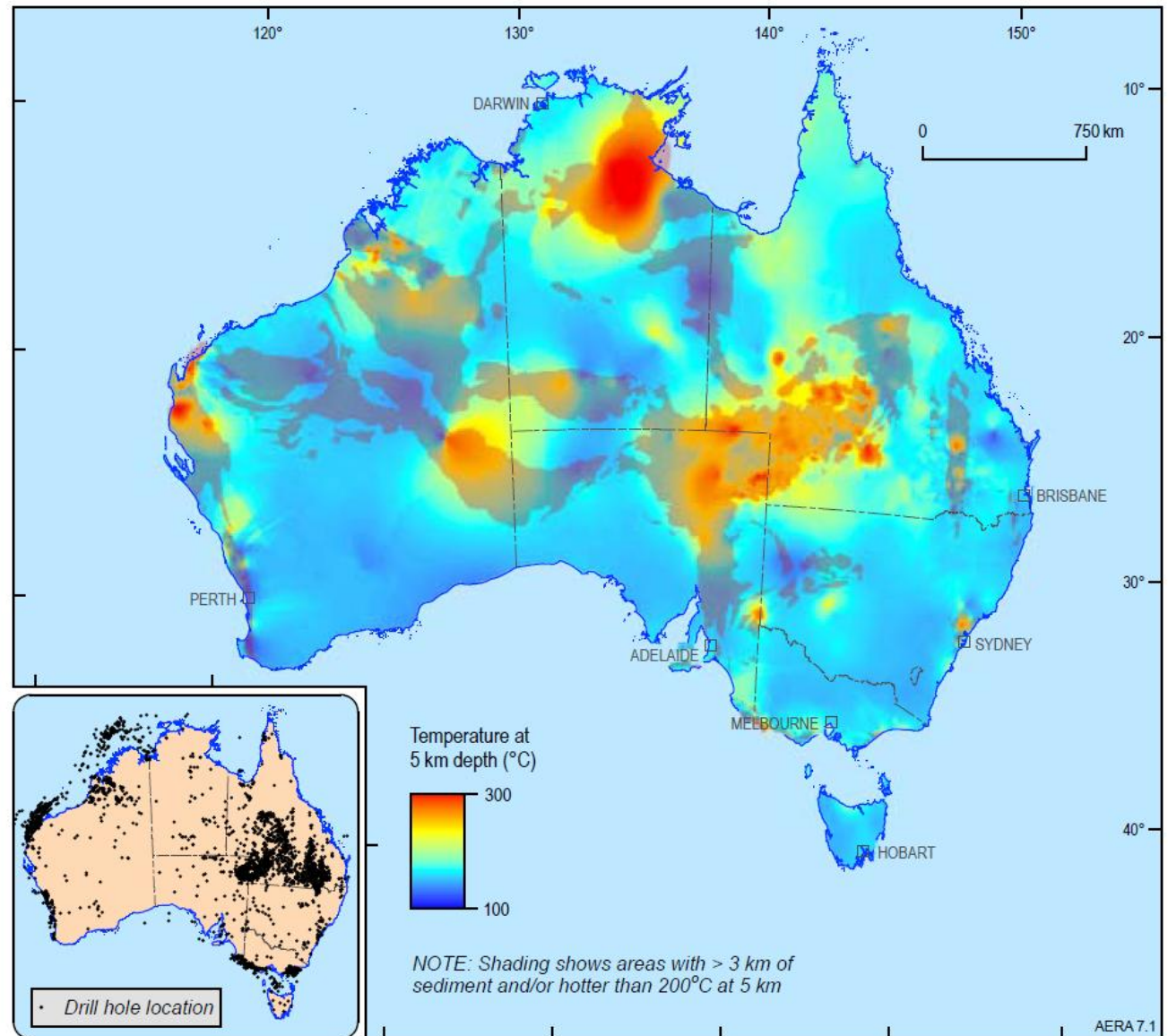
The information in this report relating to geothermal exploration results and geothermal resources is based on information compiled by P.W. Reid, a full-time Petratherm employee. Mr Reid has sufficient experience in the style of geothermal play under consideration to qualify as a Competent Person under 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.

Presentation Overview

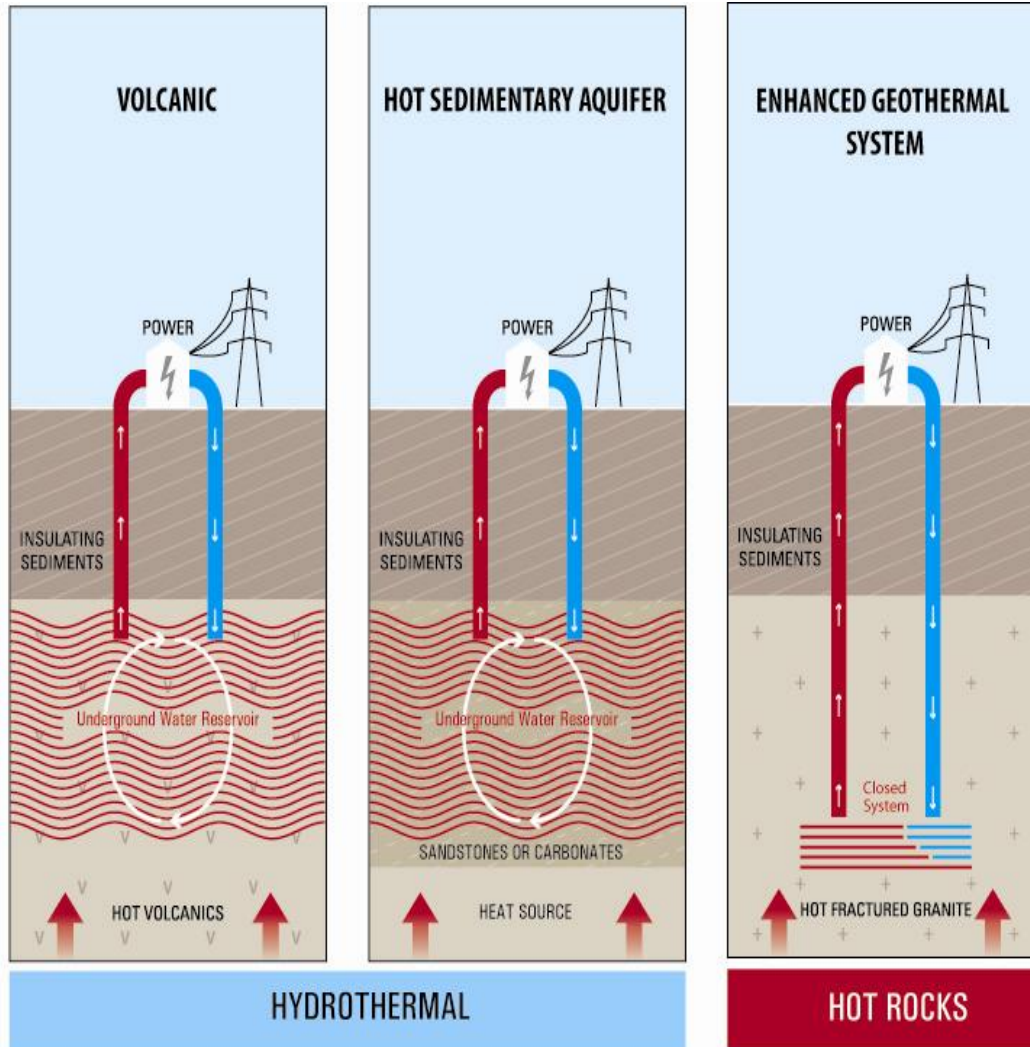
- > Geothermal Energy Technologies and Cost Comparisons
- > Australian geothermal energy developments
- > Queensland developments
- > Petratherm Overview

Geothermal energy overview

Geoscience Australia has estimated that the potential geothermal resource is equivalent to 26,000 times Australia's annual electricity energy consumption



Geothermal technologies



Energy technologies - Australian Resource Assessment - GA

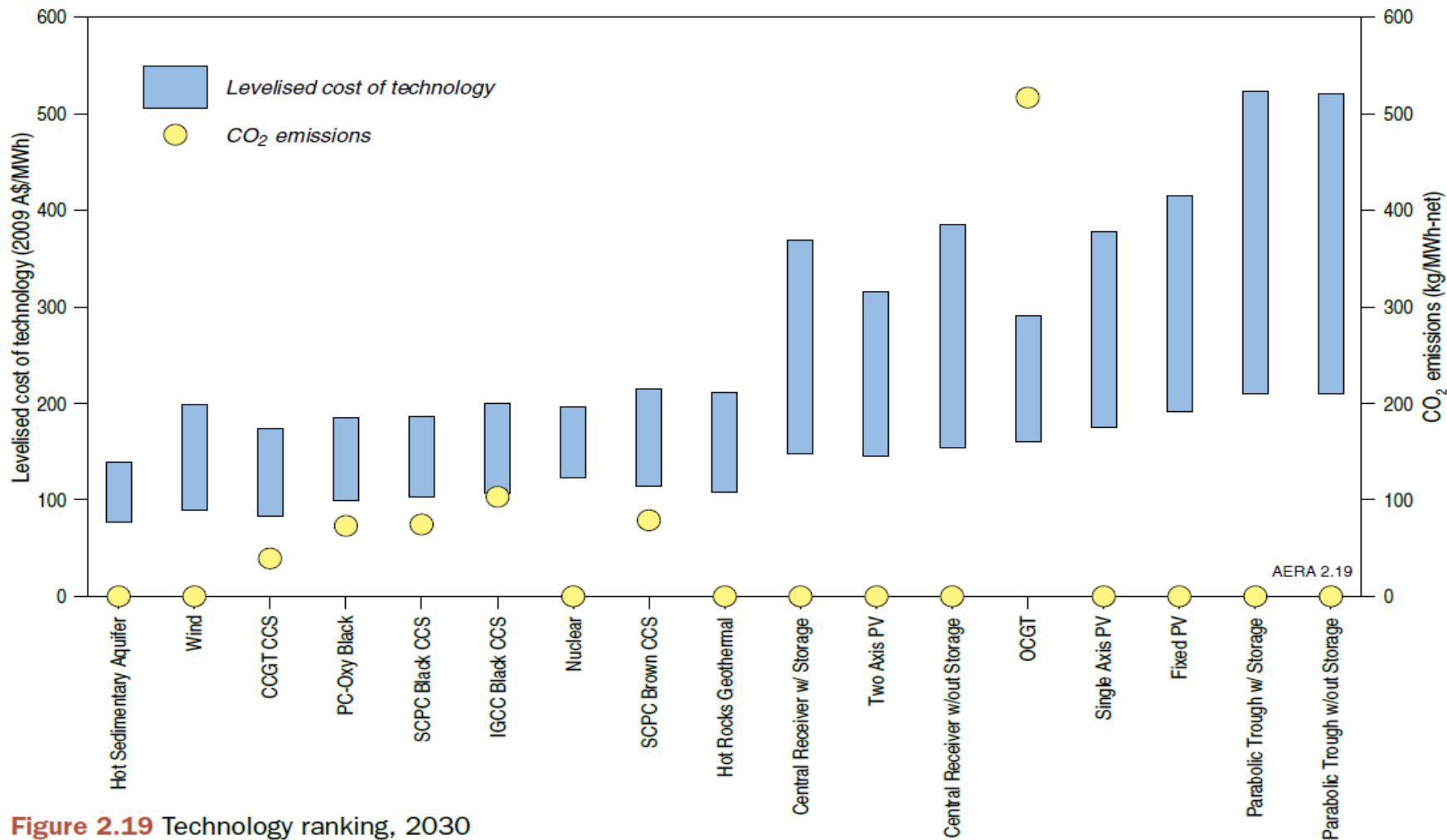


Figure 2.19 Technology ranking, 2030

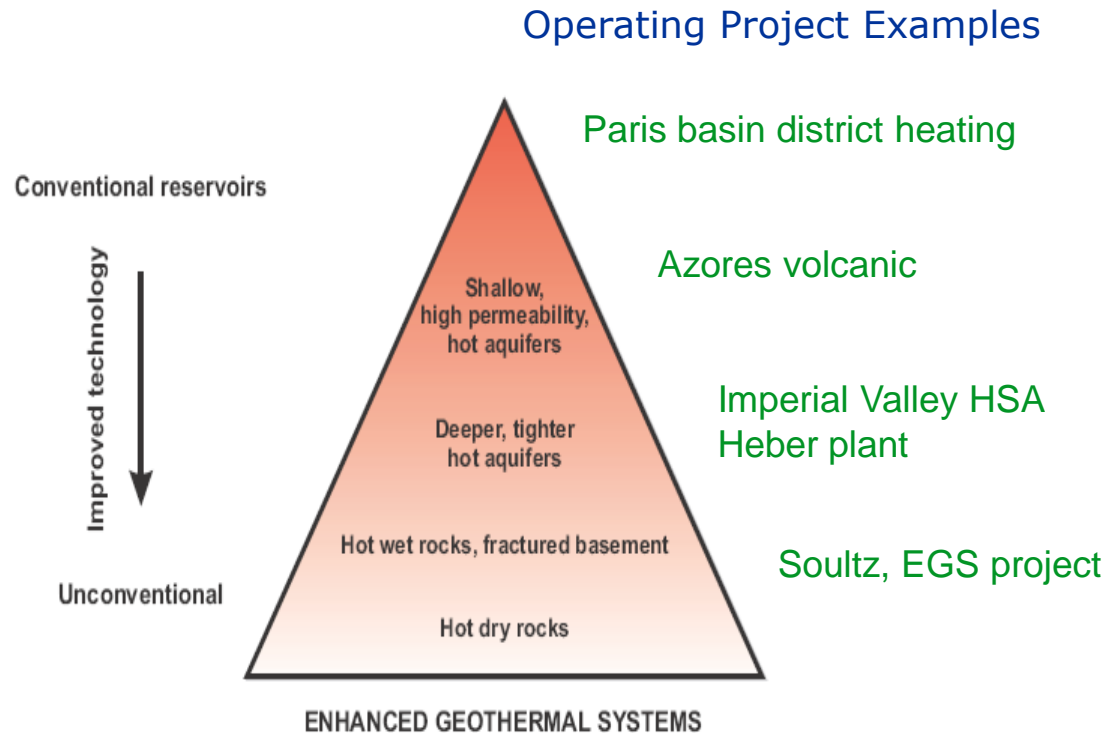
Source: EPRI technology status data, 2010

Note for 2.18 and 2.19: EPRI levelised cost of technology estimates based on simplified pro-forma costs, individual projects may lie outside this. Levelised cost of technologies: includes weighted cost of capital (8.4% real before tax); excludes financial support mechanisms; excludes grid connection, transmission, and firming (standing reserve requirements); and includes a notional allowance of 7.5% for site-specific costs.

Geothermal energy overview

Key Project Parameters

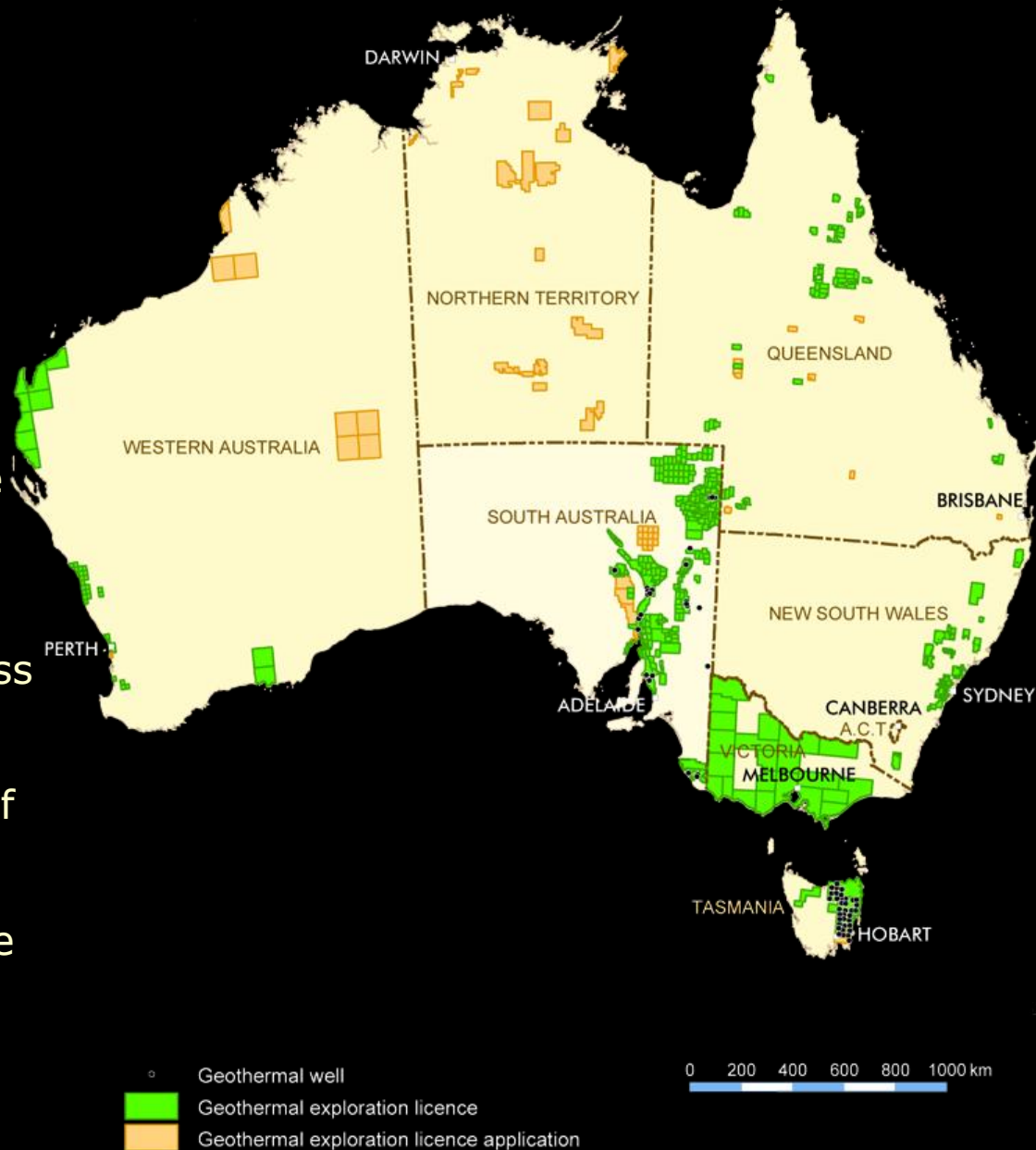
- > Temperature
- > Drilling depth
- > Flow rate
- > Network connection
- > Generation plant type
- > Market/Customer
- > **Optimization of parameters** to achieve commercial return against competitive alternatives in target market (heat or power)



Each project has specific project parameters that when optimized enable viable operation

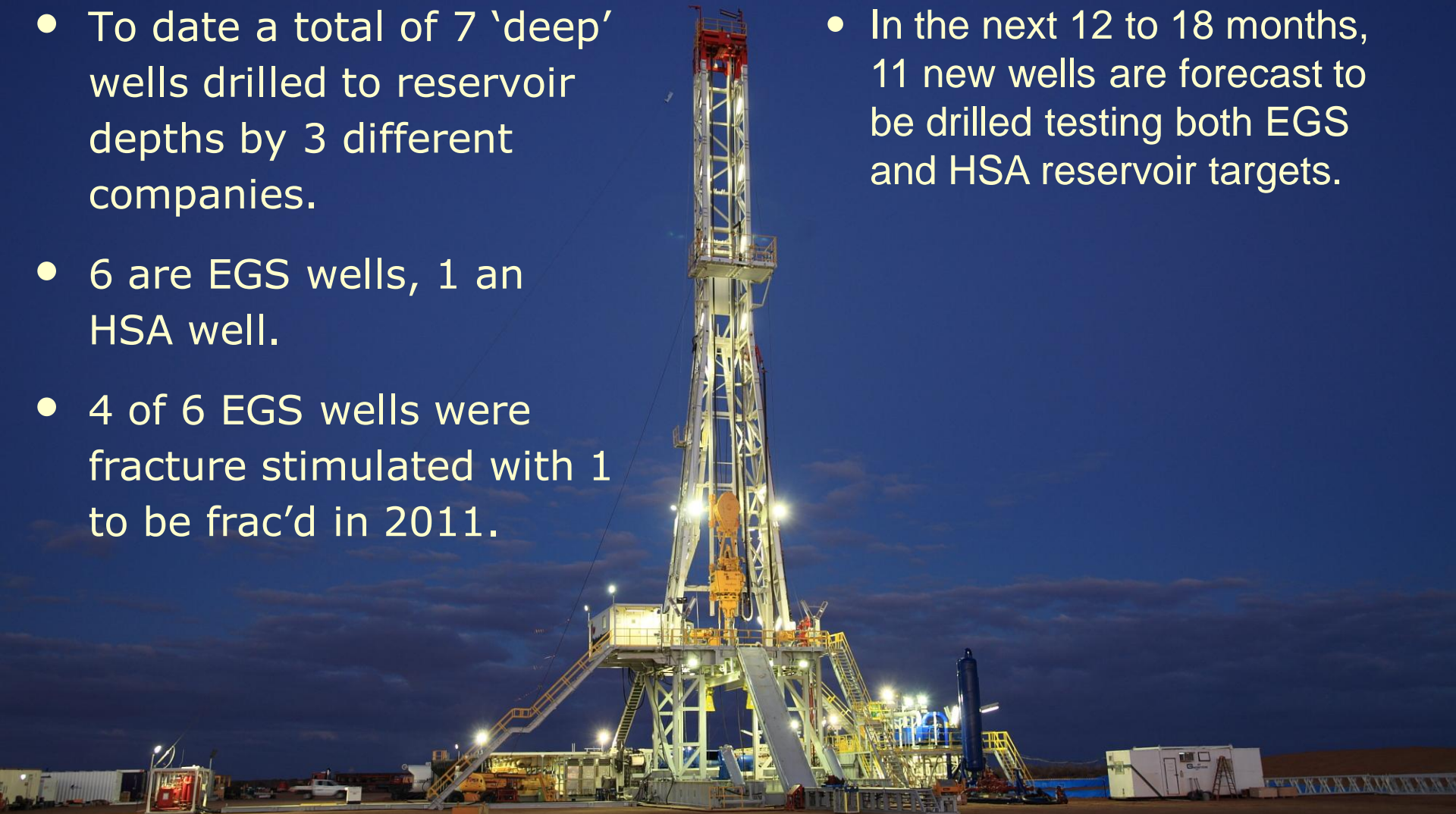
AUSTRALIAN GEOTHERMAL DEVELOPMENTS

- 57 exploration & development companies in the Australian geothermal sector
- 24 companies listed on the Australian Securities Exchange (9 focused on geothermal energy)
- 418 Geothermal Licences across the nation
- Collectively covering an area of >477,522 km²
- Precompetitive – no large scale production



Geothermal in Australia

- To date a total of 7 'deep' wells drilled to reservoir depths by 3 different companies.
- 6 are EGS wells, 1 an HSA well.
- 4 of 6 EGS wells were fracture stimulated with 1 to be frac'd in 2011.
- In the next 12 to 18 months, 11 new wells are forecast to be drilled testing both EGS and HSA reservoir targets.



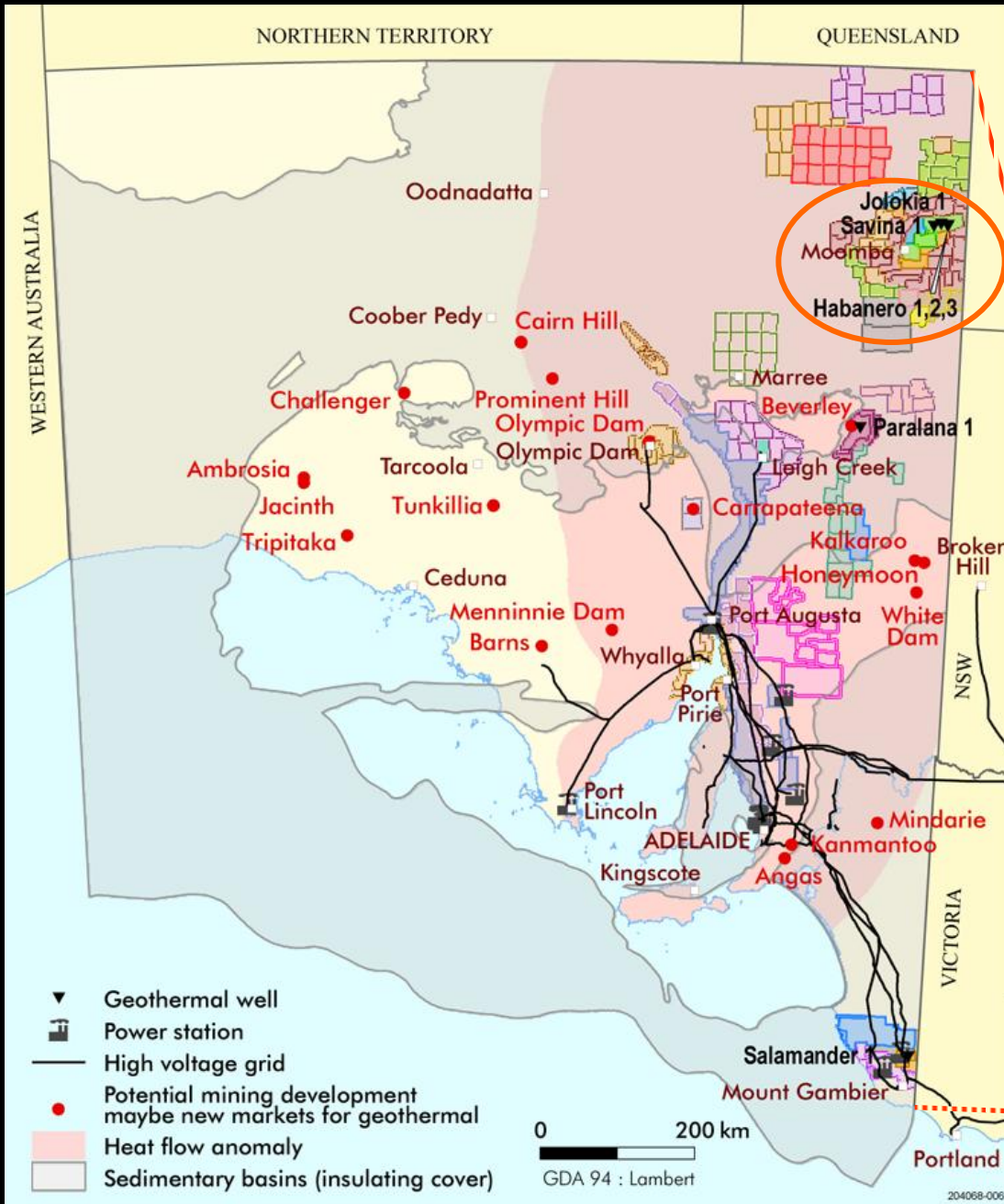
Geothermal in Australia

Supporting Policies and Grant Structures

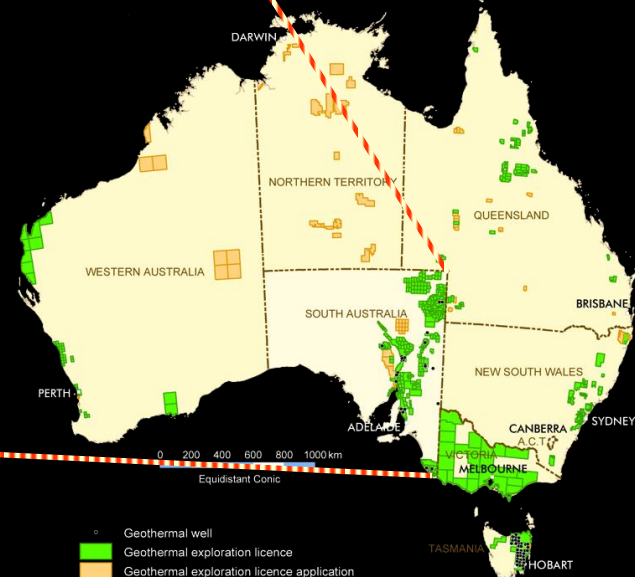
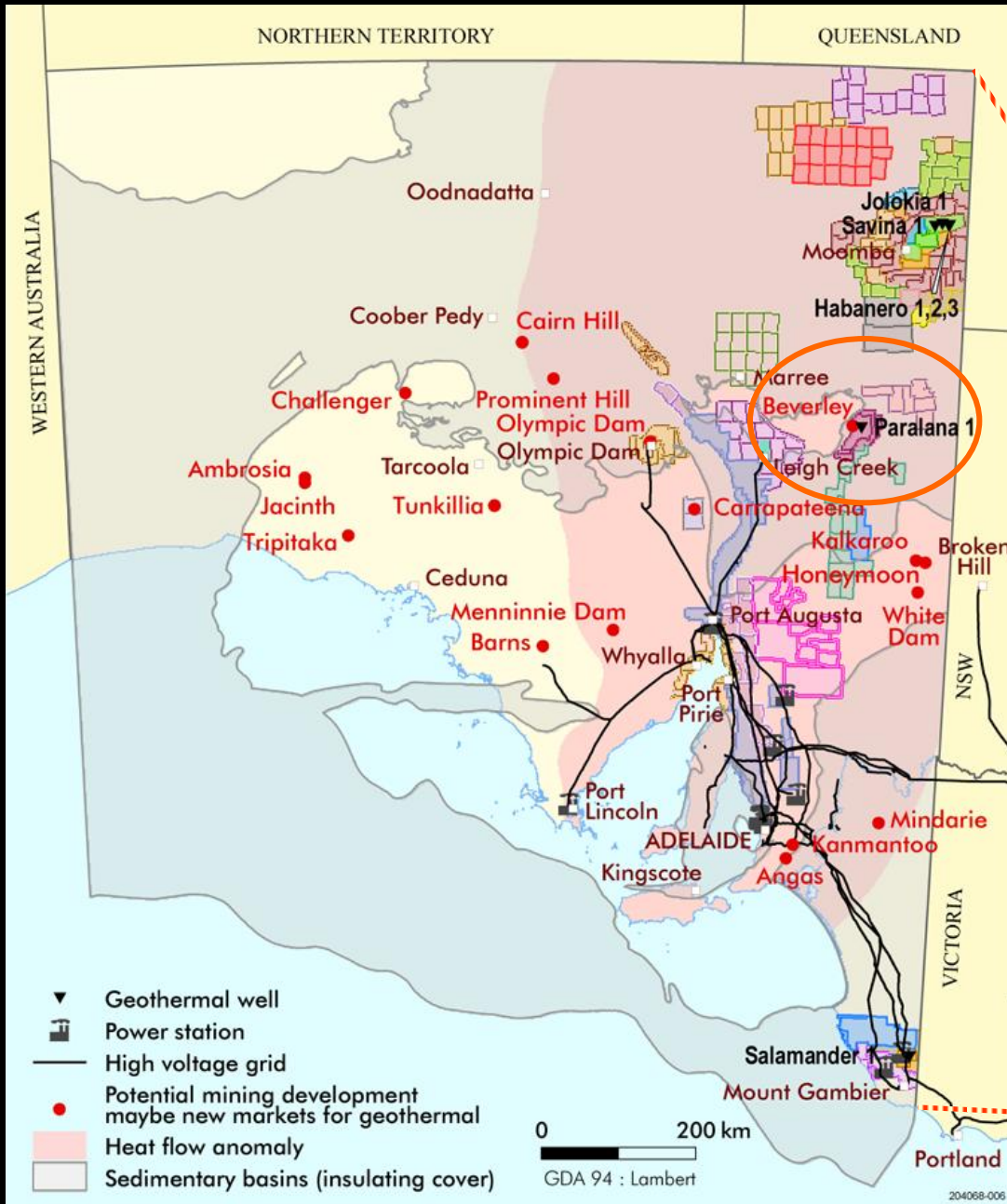
- › National Renewable Energy Target (RET) of 60,000 GWh by 2020 (20% by 2020).
- › Series of national targeted initiatives and grant programs to stimulate R&D in renewables generally and geothermal specifically, including:
 - › Geothermal Industry Development Framework (GIDF) & Technology Roadmap
 - › Renewable Energy Demonstration Program (**\$153m to 2 projects**)
 - › Onshore Energy Security Program – **Au\$58.9m**
 - › Australian Centre for Renewable Energy (ACRE)
 - › Geothermal Drilling Fund (**Au\$50m to 7 projects**)
 - › Various State government schemes
- › **\$296m** in government grants awarded to date

GDY: Au\$90m
PTR: Au\$63m

Geodynamics Ltd Innamincka, Cooper Basin, South Australia



Petratherm Ltd – Paralana Project, N. Flinders Ranges South Australia



Petratherm's Paralana EGS Project Adjacent to the N. Flinders Ranges South Australia



- Very high heat flow
~120mW/m²
- Paralana 2 drilled June 2009, 3672 m TD into 176°C basement.
- Estimated reservoir temperature at 4000m is 190°C
- Stimulation operations on reservoir started in 2011.
- 3.75 MW plant is planned to supply geothermal power to Beverley Mine 10 km west of Paralana.
- ~AU\$70m in grants

Queensland Geothermal

Birdsville– 80 kW plant operating

Potential for EGS and HSA

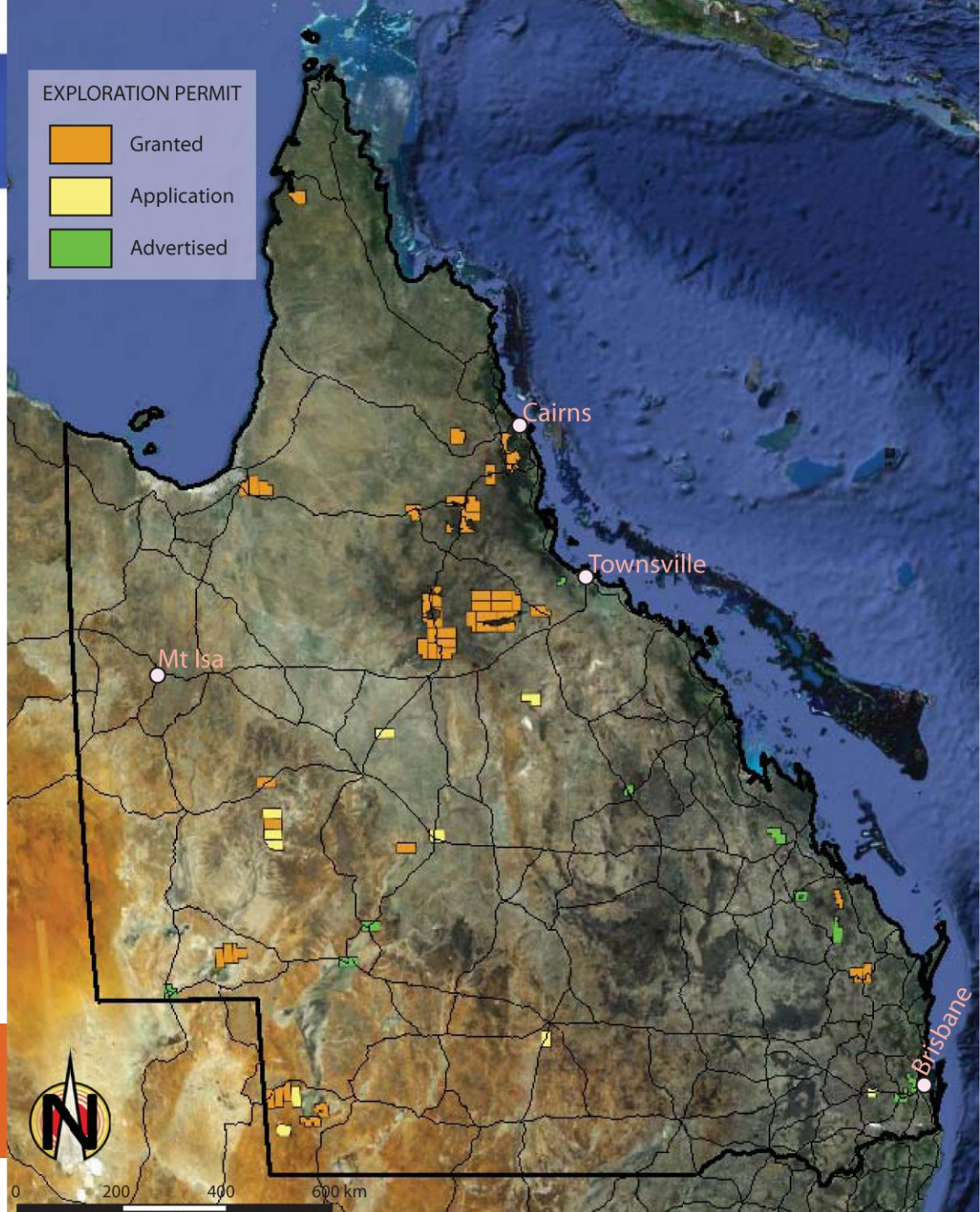
Permits – call for tenders

Native title ??

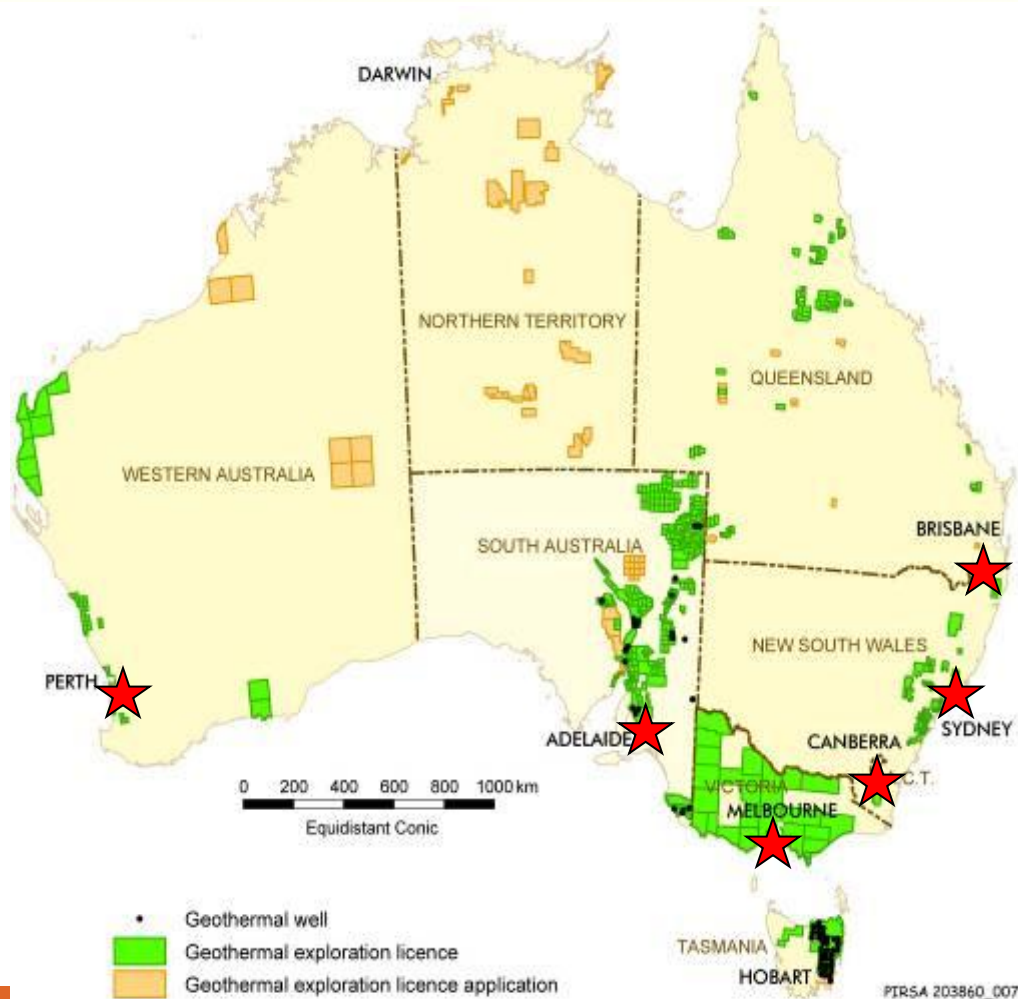
Queensland Geothermal Centre of Excellence - \$15 million in funding

Commitment to EGS pilot project by 2014 – QLD Renewable Energy Plan

Coastal geothermal initiative



Australian Research Centres

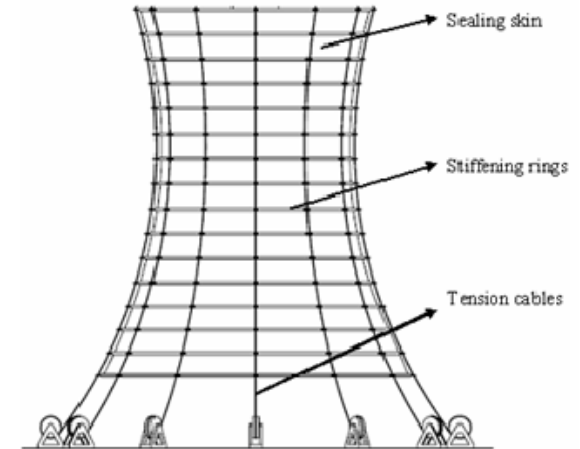


Capabilities map

	CSIRO	GA	WAGCoE	SACGER	QGECE	MEI	PRCfE	IESE
Exploration Technology	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓		✓✓✓
Drilling	✓✓✓			✓✓				
Reservoir Characterisation	✓✓✓	✓	✓✓✓	✓✓✓		✓✓		✓✓✓
Reservoir Engineering	✓✓✓		✓✓	✓✓✓				✓✓✓
Power Conversion			✓✓	✓✓✓	✓✓✓		✓✓✓	
Community Engagement	✓✓✓	✓						✓✓

Queensland Geothermal Energy Centre of Excellence

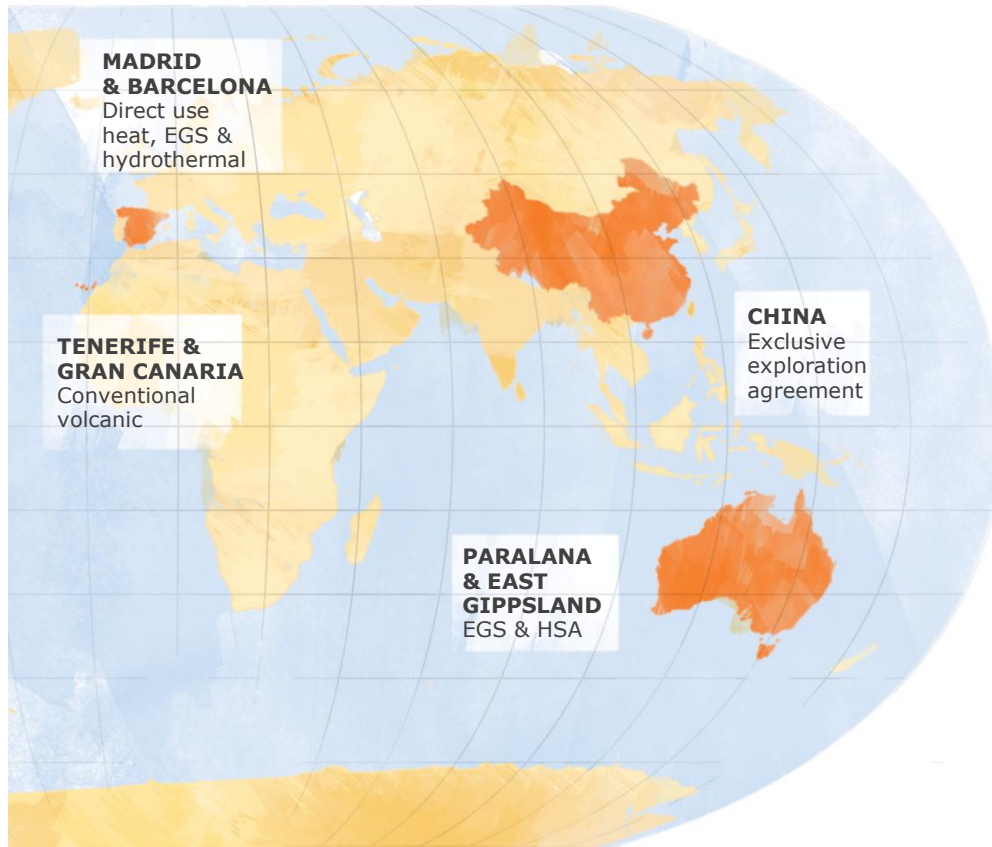
- > Hosted by the University of Queensland
- > Focus: technologies that will quicken the pace of large-scale utilisation of hot rock geothermal energy in Australia
- > Four research programs
 - > Power Conversion
 - > Heat Exchangers
 - > Generation & Transmission
 - > Resource Identification



Geothermal Industry Challenges and Opportunities

- > Geothermal energy has the potential to provide large scale, base load and low-cost renewable energy - \$120/MWh (50MW) and \$80/MWh (>300 MW) (MMA study 2009)
- > Australia has the key ingredients for developing successful engineered geothermal systems (EGS) and hot sedimentary aquifer (HSA) projects
- > While northern South Australia has the best known EGS (hot rock) geothermal resources, there is significant EGS resource potential in Queensland
- > Geothermal projects face a number of challenges, including but not limited to – drilling, achieving adequate flow rates, power conversion efficiency, cost of access to, and delivery to market, induced seismicity and usage of water
- > There is strong government support – federal and state - for geothermal and renewable energy with capital funding, price of carbon (soon?) and regulatory changes proposed to the NEM

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: 126.7 m
- > Share Price: \$0.115
- > Market Cap: \$ 14.58 m
- > Cash Position: \$ 2.76 m (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



Petratherm 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



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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FUTURE

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