

# The Heat Exchanger:

## An Update On Developments In The Australian And International Geothermal Scene

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**W**ell, after all the excitement of the federal election results I had to have a little lie down, a cup of tea and a bex. But I couldn't rest on my laurels too long as there was too much going on, particularly in the international geothermal scene.

The Geothermal Resource Council (GRC) meeting in Sacramento USA was the focal point for much of the activity where there was much discussion and analysis relating to spending of stimulus monies on renewable energy projects as well as risk mitigation methods. The GRC was also the venue for the official launch of Global Protocol for estimating and reporting Engineered Geothermal System (EGS) potential. This protocol is probably one of the most significant documents to come from the world geothermal community in many years and describes an integrated approach to mapping and defining global potential and has been endorsed by the International Geothermal Association (IGA).

The protocol is authored by international geothermal heavy weights, Dr Graeme Beardsmore (HDR), Professor Ladislaus Rybach (Past President IGA), Professor David Blackwell (SMU) and Charles Baron (Google.org). An outcome of the protocol is the building of a global EGS potential map including temperature slices down to 10 km depth and estimated theoretical and technical potential in MW by state, with metadata converted to KML (keyhole markup language) format for visualisation in Google Earth. The geothermal map of Australia has now been completed by HDR as sponsored by Google.org. Keep an eye out at <http://www.google.org/egs> to view the geothermal potential map of Australia.

Selected highlights from geothermland, in no particular order, from the recent period include:

- Earth Heat Resources (EHR) disclosed a strategy to focus on east Africa—specifically Kenya and Djibouti—as a region with great opportunities for geothermal resource development. EHR has engaged Mr David Anderson to manage the African projects.
- Green Rock Energy (GRK) released a Geothermal Resource Statement for its Alkimos Geothermal Play about 40 km north of Perth. Work completed estimated a stored heat resource of 61,000 PJth that GRK could theoretically extract for use in absorption air chillers.
- Dr. Graeme Beardsmore was confirmed as the Australian member of the Board of the International Geothermal Association for a second three-year term (2010–2013), following the recent international election.
- Panax Geothermal (PAX) announced the signing of a 'binding terms sheet agreement' with PT Bakrie Power. Projects relate to the development of a 30 MWe plant on the island of Flores, and a 25 MWe plant at a mine site in Northern Sumatra. PAX also reported on a field trip conducted to Flores.
- The Geothermal Energy Bill (2010) passed through the Queensland Parliament.
- Petratherm Ltd was poised to re-commence work at Paralana, concentrating on a two-stage hydro-fracturing programme and perforation, and injectivity test to make hydraulic connection to the rocks around the borehole and to collect key hydro-geo-mechanical data. Stage-2 is a fracture stimulation program to develop an underground heat exchanger.
- Coretrack Ltd announced that it had completed 'construction of the world's most powerful small footprint mobile exploration and production energy drill rig.' The 'GT3000' is designed to rapidly and efficiently drill five inch to eight inch exploration holes to greater than 3,000 m. The rig is to drill a test geothermal well at Merredin WA.
- Geodynamics Ltd provided an update on the Innamincka 'Deeps' joint venture. In a world's first at those pressures and temperatures, a tool has imaged fractures in the granite in Jolokia-1. Logging has also confirmed a temperature of 278°C at 4,900 m, making Jolokia the hottest drilled EGS well in the world (3D temperature modelling of the area in 2004 predicted 282°C at that location and depth).
- Greearth Energy Ltd announced that it had signed its \$7 MM Geothermal Drilling Program (GDP) funding agreement with the Federal Government for its Geelong geothermal power project.
- The geothermal community was shocked and saddened to learn of the passing of Sharif Oussa on Friday 17 September. Sharif was a driving force behind a number of Australian geothermal companies over the years, including Hot Rock Ltd, Planet Gas and Earth Heat Resources.
- Green Rock Energy signed its \$7 MM GDP funding agreement with the Federal Government.
- New MT and gravity results for eastern Tasmania were released by KUTH Energy Ltd.
- Torrens Energy Ltd became the fourth company to sign its funding agreement with the Federal Government for \$7 MM under Round Two of the Geothermal Drilling Program.
- Green Rock Energy announced that the WA Government offered \$5.4 MM from its Low Emissions Energy Development Fund towards GRK's geothermal powered air conditioning project in metropolitan Perth.
- Torrens Energy Ltd announced on Thursday 30 September that it has acquired a new geothermal exploration licence. GEL 559 covers 500 km<sup>2</sup> around Mulgaria to the northwest of TEY's Parachilna Project in SA. ■