

ASX Announcement

Company Announcements Office
Australian Securities Exchange

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(ASX Code GRK)

AWE Joins Green Rock in Mid West Geothermal Power Project

Highlights

- Intention is to form a joint venture to demonstrate the development potential of the Project in the north Perth Basin, close to the grid and a growing electricity market
- AWE has substantial hydrocarbon exploration and drilling experience in the north Perth Basin
- The first stage of the project is the selection of a drilling area to maximise the probability of success of the geothermal drilling program. The well will also provide AWE with information relevant to hydrocarbon exploration in the area.
- The Project was awarded \$5.4m WA Government funding in June 2012. The focus will now be on securing Commonwealth 'Emerging Renewables Program' funding
- If Commonwealth funding is secured, AWE has the right to farm in to the Geothermal Exploration Permit containing the target drilling area for 50% interest and become Operator
- AWE would fund the cost of drilling the geothermal wells not covered by WA and Commonwealth funding.

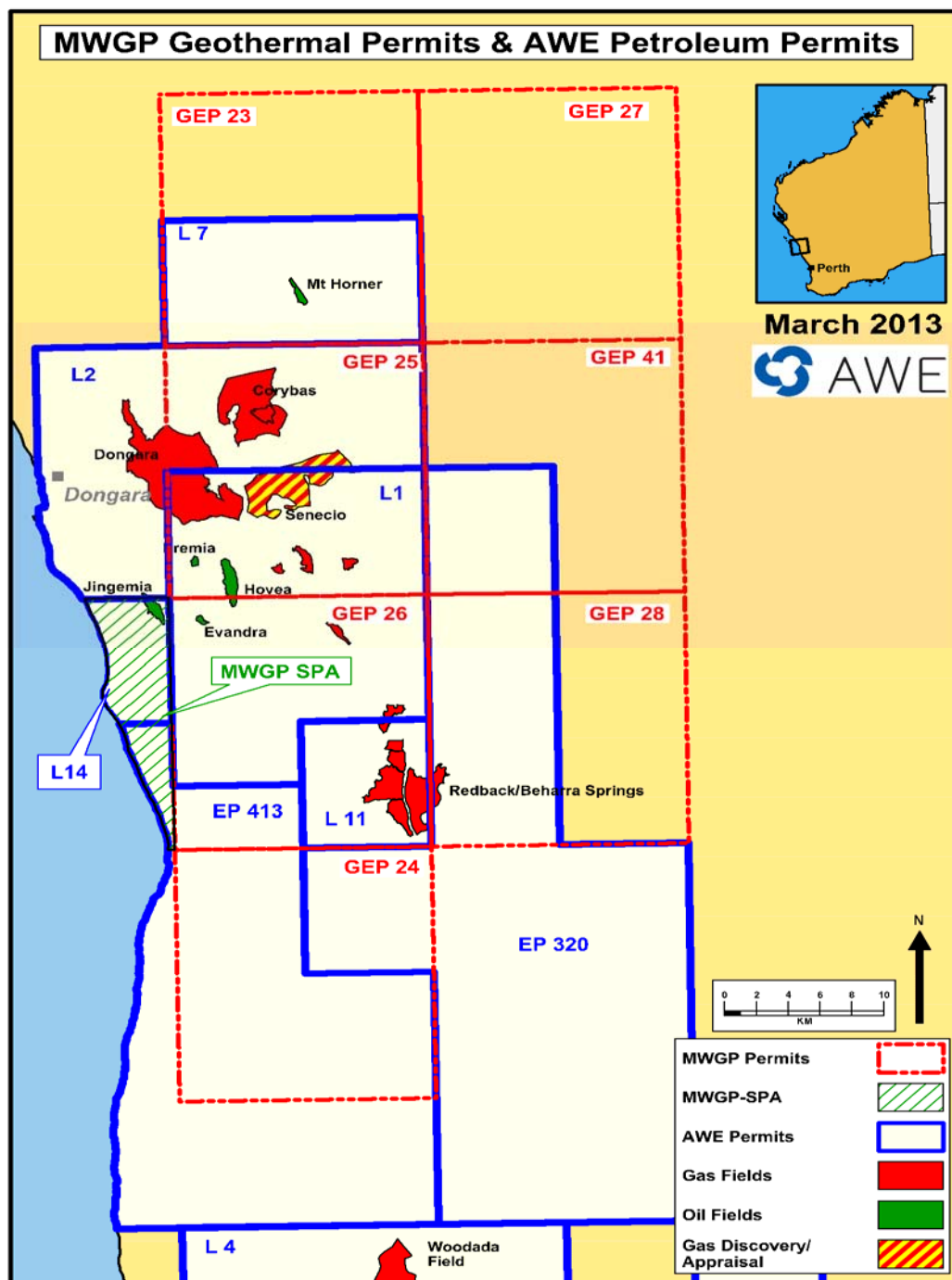
Green Rock is pleased to announce the signing of a Memorandum of Understanding between AWE Australia Pty Ltd (a subsidiary of listed oil and gas exploration company AWE (ASX:AWE)) and Mid West Geothermal Power Pty Ltd ("MWGP"- a subsidiary of Green Rock) with the intention of forming a joint venture ("JV") to demonstrate the development potential of geothermal power generation in hot sedimentary aquifers in the north Perth Basin in the Mid West of WA.

AWE's interests include holdings in several oil and gas exploration and production permits in the north Perth Basin. MWGP is 100% holder and operator of seven Geothermal Exploration Permits ('GEPs') in the north Perth Basin. A map showing the permit areas is shown below.

Since the GEPs were awarded in 2009, MWGP has made considerable progress in identifying the most prospective geothermal resources within the GEPs, including the use of leading edge interpretation of 3D seismic data, with a total expenditure to date of \$1.4 million. MWGP has also been awarded \$5.4 million on a 1-for-3 basis from the State Government's Low Emissions Energy Development ("LEED") Fund towards the demonstration of commercial production of geothermal energy as the first stage of the Mid West Geothermal Power Project (the "Project") summarised in the attachment.

The JV's main focus will be to secure funding for the Project from the Commonwealth's Emerging Renewables Program ("ERP"). The Project is considered to be a very strong contender for this funding having the advantages of the long history of exploration and drilling in the north Perth Basin and close

proximity to power infrastructure and a growing energy market. ERP funding would complement the LEED funding and JV funding to enable drilling of the Project's first two wells.



The JV will identify and select a drilling target area that will be an optimal geothermal target for temperatures and flow rates sufficient for geothermal power generation. It will also be an appropriate target area to enable the collection of data required by AWE to assess the hydrocarbon potential of formations that the well will intercept before reaching the natural fracture zones which are the target geothermal reservoir at an expected depth of between 3000m and 3500m.

If the ERP funding is secured AWE has the right to farm in for a 50% interest in the geothermal exploration permit containing the selected drilling target area by funding the portion of the cost of drilling the geothermal wells not covered by LEED and ERP funding. AWE would become Operator of the drilling program, with geothermal well design, drilling and testing overseen by Green Rock director Dr. Jörg Baumgärtner and his BESTEC team which is a world leader in development of this type of geothermal resource (http://www.bestec-for-nature.com/j_bestec/). MWGP will also receive a total of \$250,000 from AWE on completion of milestones up to and including the ERP funding being secured.

If commercial production of geothermal energy is successfully demonstrated, AWE will have the right to continue its participation in the Project including the right to farm in to the remaining geothermal exploration permits on terms to be agreed.

Green Rock Executive Chairman Richard Beresford said “We are very excited to be working with AWE which brings to the Project its long experience and excellent reputation in the Perth Basin. AWE also has a strong desire to achieve a successful outcome from drilling the geothermal wells in 2013/14 leading to a new business opportunity in geothermal power generation in a fast growing market. We are confident that we now have in place all the ingredients critical for securing Commonwealth funding and then proving the very large geothermal potential¹ in the Mid West. AWE’s participation in drilling complements Pacific Hydro’s participation in power generation once commercial production of geothermal energy is demonstrated”



Nigel Hodder, Company Secretary

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About Green Rock Energy Limited

Listed on the ASX in 2005, Green Rock (GRK) is a geothermal and hydrocarbons explorer and developer with geothermal interests in Western Australia, South Australia and Hungary and hydrocarbons interests in Western Australia. Its key projects are:

- A 15% interest in EP417 in the Canning Basin with a right to earn up to 20% through a farm-in agreement with New Standard Energy (NSE) together with an Area of Mutual Interest Agreement for other potential opportunities including the Seven Lakes Special Prospecting Area awarded to NSE
- The beneficial right to a 20% JV interest in the Backreef Area in the Canning Basin operated by Oil Basins Limited (OBL)
- A 50% interest in SPA 33 (the Coolcalalaya Project) in the southern Carnarvon Basin in WA
- MoU with AWE to demonstrate the development potential of geothermal power generation in hot sedimentary aquifers in the north Perth Basin in the Mid West of WA.
- An alliance with leading Australian renewable power developer Pacific Hydro for conventional geothermal power generation in GRK’s permits in the north Perth Basin in the Mid West of WA and GRK’s and Pacific Hydro’s licences in the Great Artesian Basin in SA
- A joint venture with MOL in Hungary for geothermal power generation (GRK 50%)

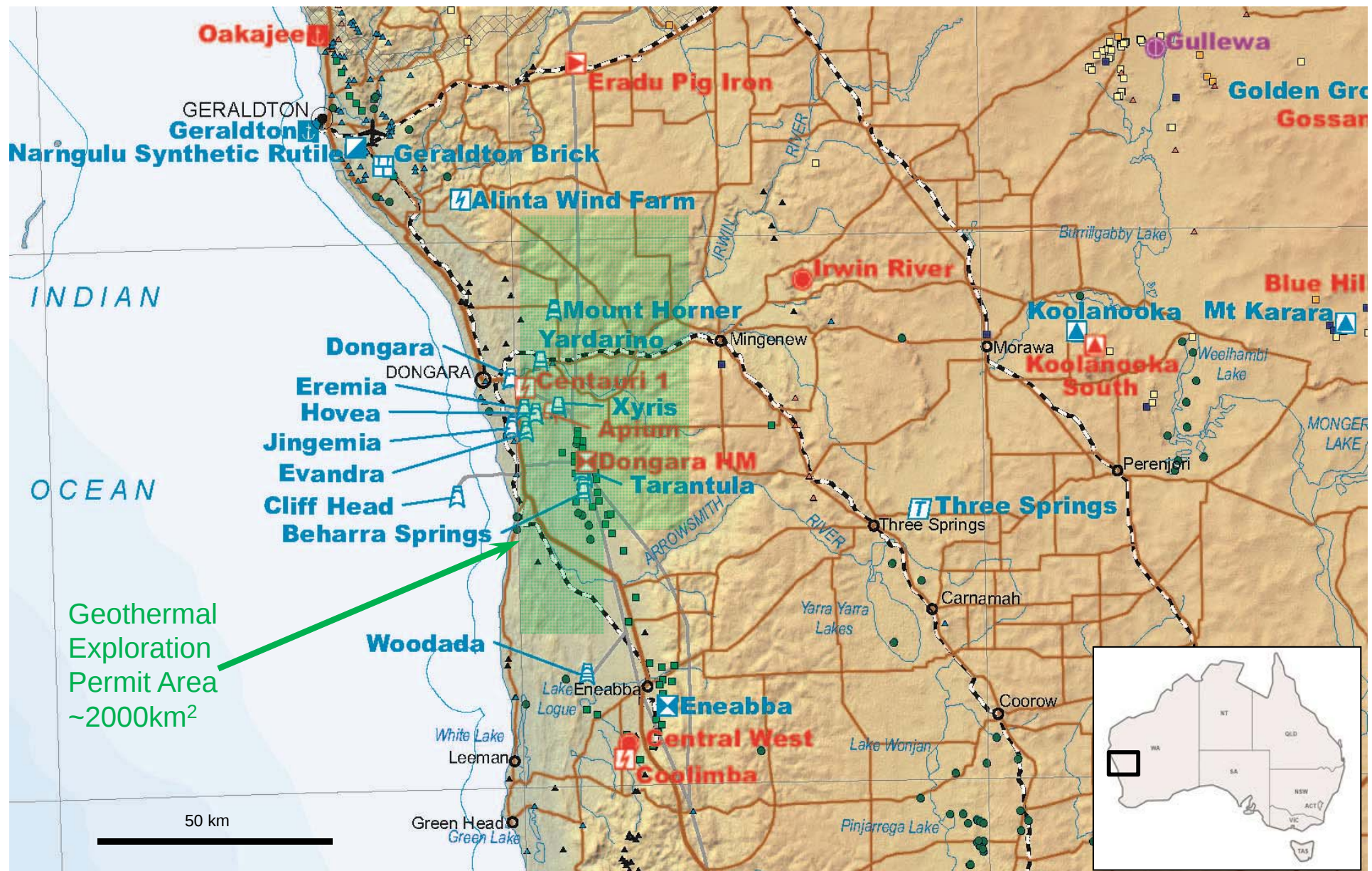
¹ North Perth Basin Geothermal Resource Statement contained in GRK 2011/12 Annual Report released 31/10/2012

About AWE Limited

AWE Limited is an upstream oil and gas company with production, development and exploration assets in Australia, New Zealand, USA and Indonesia. Established in 1997, the Company employs over 115 people and has its head office in Sydney and regional offices in Perth, New Plymouth, Jakarta, and Kuala Lumpur. AWE acquired 100% of the Ande Ande Lumut oil field offshore Indonesia in 2012, with an estimated 76 million barrels of recoverable oil, and is moving forward with plans to sell-down and develop the project. AWE has also expanded its conventional oil and gas business to include unconventional resources. AWE has a 10% working interest in the Sugarloaf acreage in the Eagle Ford shale development in the USA, and is progressing a number of tight sands and shale prospects in the north Perth Basin and Indonesia. With its strong financial and technical base, AWE will continue to pursue conventional and unconventional growth opportunities, primarily in Australasia and South East Asia.

Attachment: About the Mid West Geothermal Power Project

About the Mid West Geothermal Power Project (MWGPP)



About the Mid West Geothermal Power Project (MWGPP)



- Very large geothermal resource in North Perth Basin confirmed by oil & gas exploration and drilling over 40 years
- Close to growing Mid West power market; SWIS grid within geothermal permit area
- Cooperation with other drilling rig users in North Perth Basin – first well ~ 3000 to 3500m planned for 2013/14
- Generation partner Pacific Hydro attracted by potential for large MW capacity
- Project awarded \$5.4 million in LEED funding and is a strong contender for Emerging Renewables funding.
- Key risk is achieving high enough flow rates to be commercial
- Draws on international best practice – Green Rock director Dr. Jörg Baumgärtner and his BESTEC team have successfully developed the Landau and Insheim projects in the Rhine Valley with similar geology to the MWGPP, targeting natural fracture zones to maximise flow rate

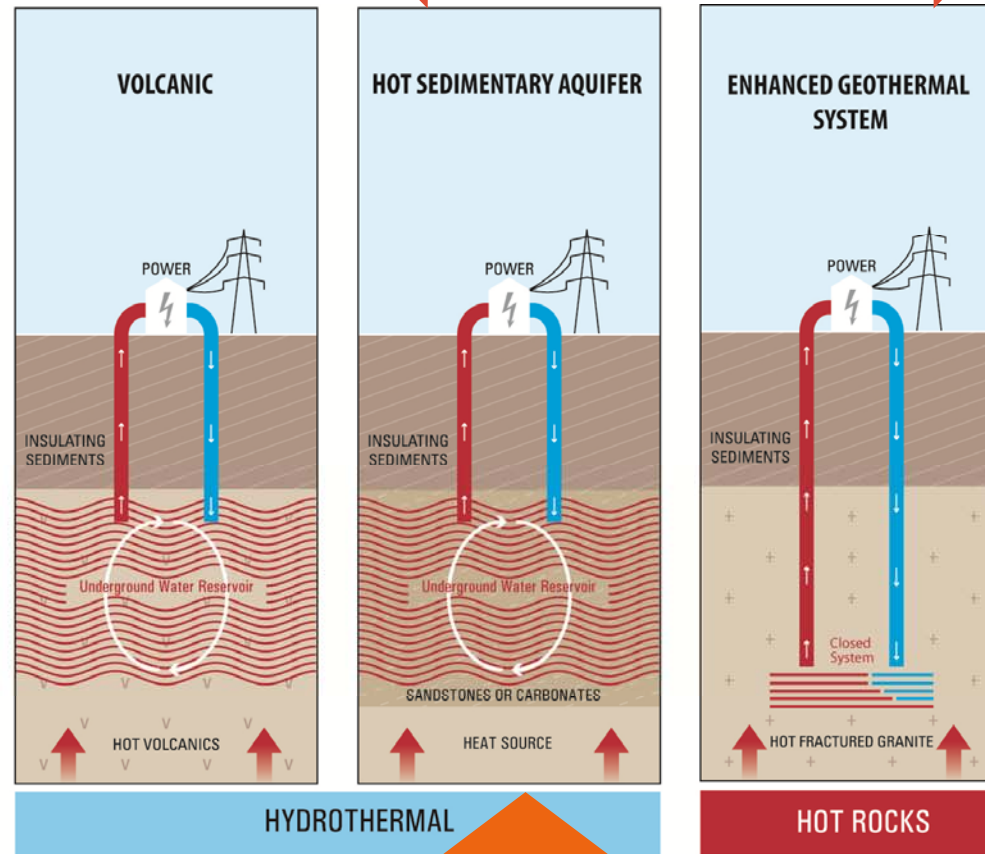
Landau -
producing
since 2007



Insheim -
producing
since 2012

Geothermal Resource Types

Available resources in Australia



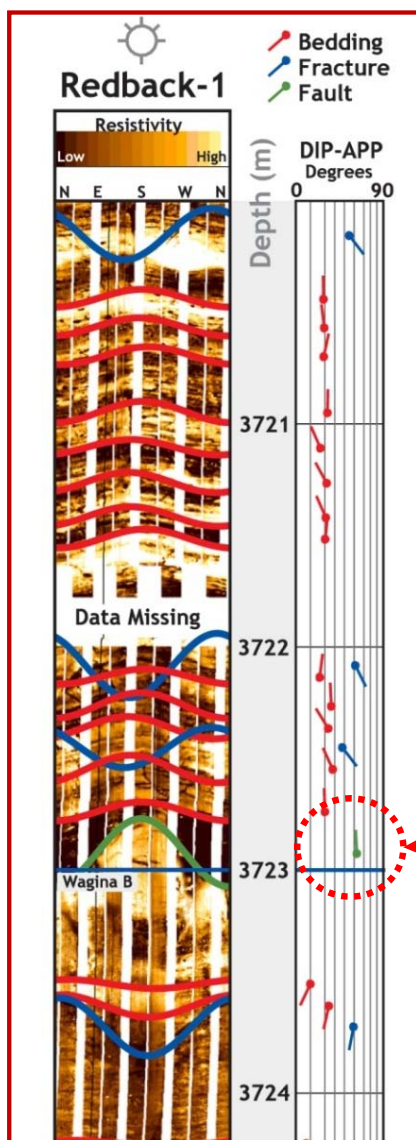
~95% of
11.2GW
global
installed
geothermal
power
capacity is
from volcanic
resources

No fully
commercial
EGS
projects
(Saultz
1.5MW)

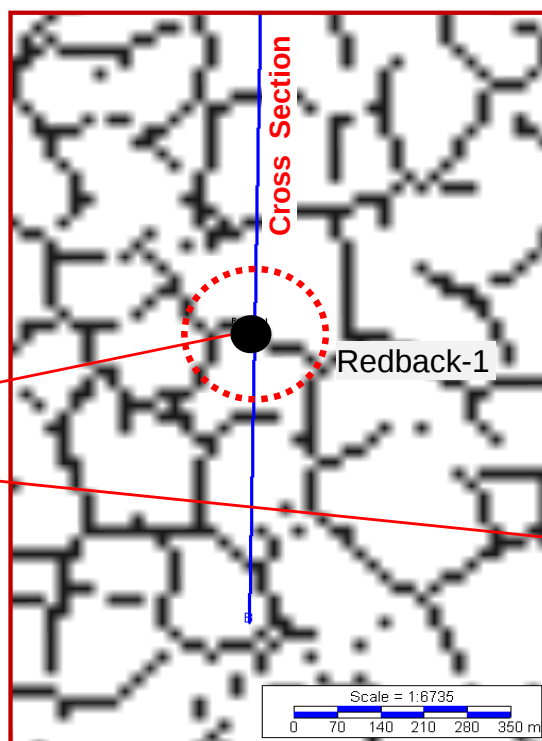
~250MW installed
HSA
(US, Europe).
Focus for MWGPP

MWGPP Targets Natural Fractures to Maximise Flow Rates

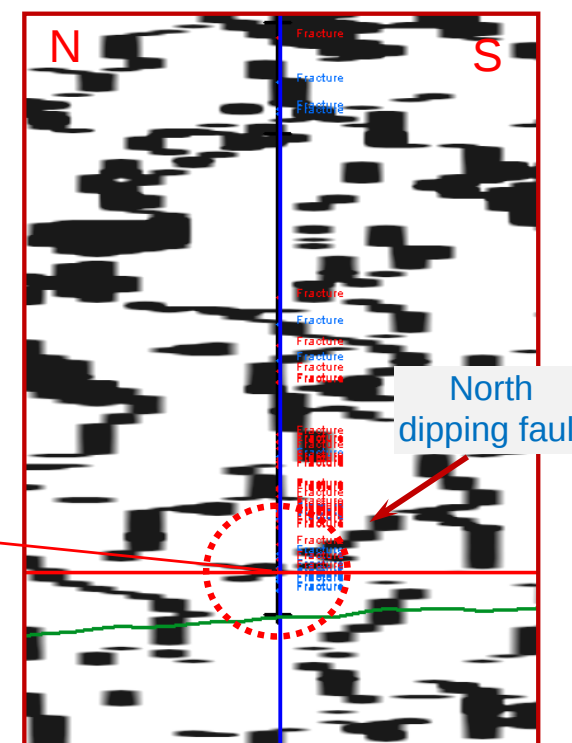
- Green Rock has pioneered the use of an innovative technology developed in WA by Opptimal to identify potentially productive fractures from existing 3-D seismic data
- Technology also successfully applied to many projects globally, including unconventional plays (shale gas, tight gas, basement)
- Correlations with image logs from petroleum wells confirms the value of this technique in well targeting and design for the MWGPP



Well Image Log



Optimal Output - Plan View



Optimal Output - Cross Section