



Temperature logging in progress at Frome 9 drillhole

deepening to over 1,000 metres, which is scheduled for early in the New Year. The objective will be to confirm that temperature gradients indicated from the shallower drilling continue to depth in order to provide confidence for drilling a deep test hole into the geothermal reservoir at 3-4 km depth.

This Frome Project drilling is being supported both by a South Australian PACE grant and by a \$2.4 million REDI (Renewable Energy Development Initiative) grant from the Federal Government.

### CROWER PROJECT

Geothermal Resources continues to evaluate available heat flow data for numerous deep boreholes within the Crower project area. After field checking, it is evident that few of the deeper petroleum holes within the project area will be accessible for temperature logging, as most have either been capped or plugged and covered over with soil, making their locations uncertain.

It is likely that to obtain sufficient reliable subsurface temperature data will necessitate drilling new holes that penetrate beneath the water-rich Tertiary limestone formations. This in turn will require casing and isolation of the upper water-bearing formations during the drilling operation.

Geothermal Resources is in process of planning for the drilling of several holes during the first half of 2008.

### FINANCE

As at 30 October 2007 the Company had available funds of \$1.9 million of which the majority is held in a term deposit. Some of the exploration expenditure incurred during the quarter will be eligible for reimbursement under the REDI grant. Exploration expenditure in the forthcoming quarter is expected to be comparable with the current quarter.

The ongoing drilling and logging work for the Frome Project is being supported by a \$2.4 million REDI grant from the Federal Government, which will match the Company's funding until completion of at least one deep hole into the potential hot rock geothermal energy source.

Dr K R Johnson  
CHAIRMAN

Further technical details relating to Geothermal Resources activities will be found on the Company's website:  
[www.geothermal-resources.com.au](http://www.geothermal-resources.com.au)

*The information in this report has been prepared by Dr Bob Johnson who is a member of the Australasian Institute of Mining and Metallurgy and Dr Chris Giles who is a member of The Australian Institute of Geoscientists. Drs Johnson and Giles are employed by the Company on consulting contracts. They have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Persons as defined in the JORC Code 2004. Drs Johnson and Giles consent to the release of the information compiled in this report in the form and context in which it appears.*

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# GEOHERMAL RESOURCES LIMITED

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### HIGHLIGHTS

#### HIGH TEMPERATURES IN FROME PROJECT DRILLHOLES

- *Temperature logging of Frome project drillholes has shown high geothermal gradients above the interpreted locations of buried granite bodies, indicating significant potential for geothermal energy resources at depth within the project area*
- *A drilling programme is planned for the Crower project in 2008 in order to follow up encouragingly high heat flow data compiled for petroleum and deep water bores in the region*

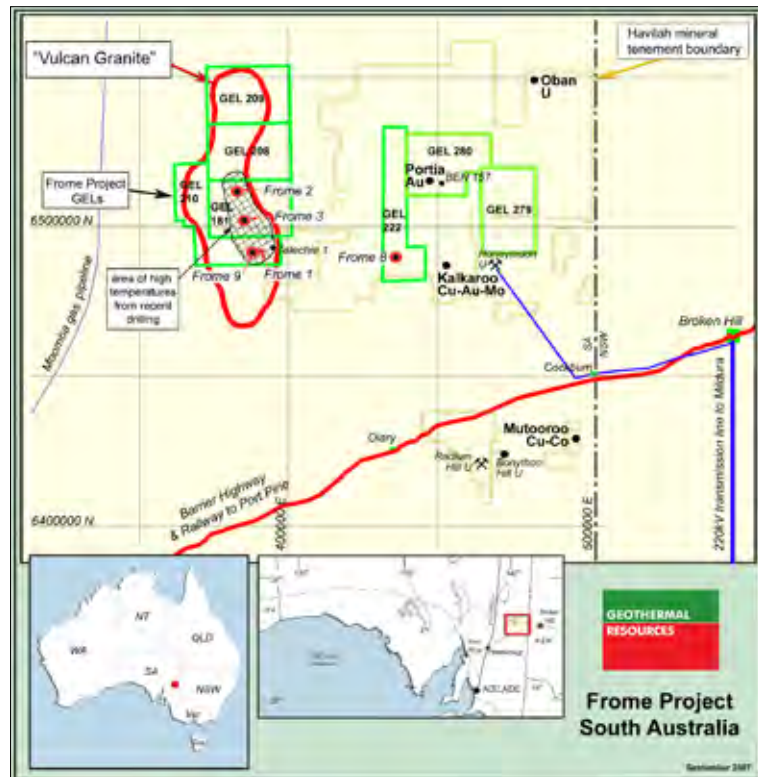
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## REVIEW OF OPERATIONS

### FROME PROJECT

During the quarter Geothermal Resources Limited (Geothermal Resources – ASX : GHT) announced that it had completed temperature logging of its recently completed 500 metre deep Frome Project drillholes. The temperature logging was carried out by the Department for Water, Land and Biodiversity Conservation using extremely accurate and sensitive state-of-the-art logging equipment, which recorded a continuous temperature log for the entire length of the holes.

Drillholes Frome 2, 3 and 9 on Geothermal Exploration Licences (GELs) 181 and 210 all recorded abnormally high temperature gradients, with Frome 3, lying roughly midway between Frome 2 and Frome 9, having the highest bottom of hole temperature of 45 deg C at 440 metres (see attached map and temperature logs). Notably, the temperature gradient in Frome 3 is comparable with temperature gradients found by Geodynamics in the Cooper Basin, some 500 km to the north.



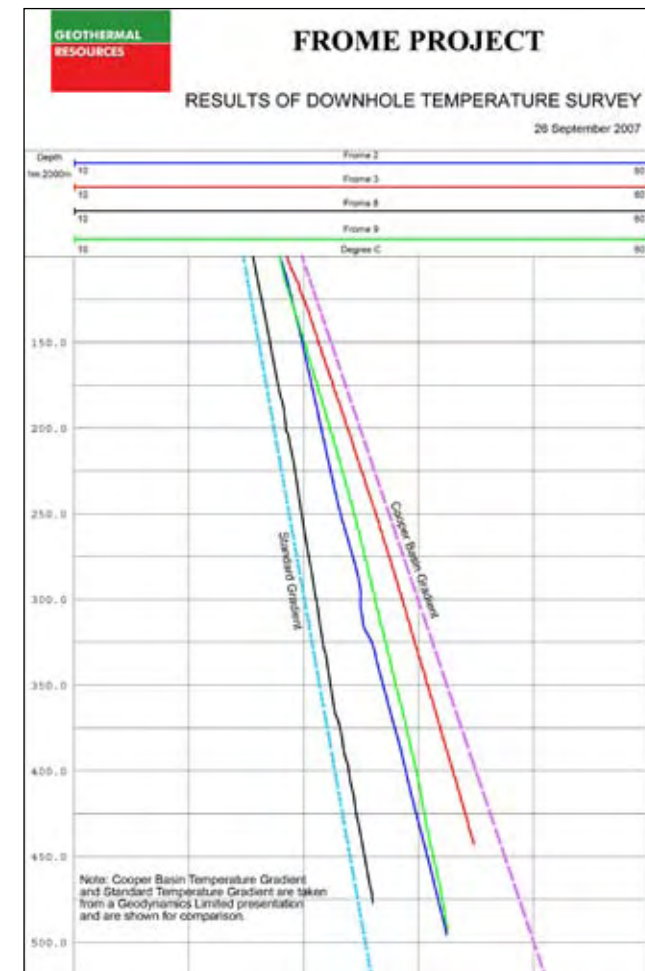
The relatively high geothermal gradients suggest that suitably high temperatures (over 200 deg C) are likely to be present at around 4,000 metres and within economic drilling depths. Together, the three holes define an area of at least 400 square kilometres where temperatures over 40 deg C exist at 500m depth indicating a potentially large subsurface geothermal heat reservoir. This roughly coincides with the centre of an interpreted large buried granite body (based on gravity and seismic data) here informally referred to as the "Vulcan granite" after the Roman god of energy and fire.

By contrast, Frome 8 located on GEL 222 some 30 kilometres to the east, had a temperature gradient comparable with the standard crustal gradient, suggesting that no abnormally radiogenic granite exists at depth beneath the graben, contrary to the original hypothesis.

Some old deep mineral exploration holes in the region were also logged at the same time to gain additional regional heat flow information. In general, the data shows a marked temperature variation across the region with the highest subsurface temperatures located where predicted above granite bodies. For example, former Pasmenco drillhole BEN157 within GEL 280 lies above a large granite body in the core of the Benagerie Dome, and has downhole temperatures comparable to Frome 3. This indicates a second major potential granite geothermal reservoir in the region.

The temperature log for mineral exploration hole Telechie 1, located in the east of GEL 181, and at the interpreted margin of the Vulcan granite Hill body, had a temperature gradient only slightly above the standard crustal gradient, presumably because it is just off the main granitic heat source.

The correlation between the highest downhole temperatures and the interpreted locations of buried granite bodies is clearly demonstrated by the temperature logging carried out to date and confirms the geological model used by Geothermal Resources for the Frome project area. Moreover, the temperatures encountered in the shallow Frome drillholes are comparable with the highest obtained elsewhere in Australia, such as the Cooper Basin. The large size of the buried granite bodies highlights the magnitude of the



geothermal resource that could potentially be tapped in this region.

The Frome project lies some 120 kms to the west of Broken Hill where there is a National Electricity Grid Connector. Between Broken Hill and the Frome Project area are several potential mining projects including the large Havilah Resources-Glencore Kalkaroo copper-gold-molybdenum project, which is currently in feasibility stage.

Subject to drilling rig availability, Geothermal Resources plans to drill a further three shallow holes in the vicinity of earlier holes Frome 2, 3 and 9 on GELs 181 and 210 during the next quarter. The drillhole with the highest logged temperature gradient will then be selected for