



12 July 2012 ASX : EHR

# **Update of Geoscience Results**

Earth Heat Resources Limited ('Earth Heat' or 'the Company') is pleased to provide the following update for its shareholders and stakeholders on the geoscience progress, at the Company's key geothermal project, Copahue in Argentina. As announced to the market previously, an abridged field season was completed by Sinclair Knight Merz ('SKM') in March/April of this year. Completed results for all major facets of geology & geochemistry have now been received and are being integrated into the drilling program

## **HIGHLIGHTS**

- Surface mapping and analysis has revealed considerable new information on the controls of fracture and fault based reservoir productivity, which will be essential in well planning;
- Geologically young, extensional structures, some of which are notably coincident with active thermal manifestations, have been identified as drilling targets for Stage 1;
- The overall distribution of surface thermal manifestations is a little more extensive than historically mapped, and is consistent with other positive indicators of a large geothermal resource;
- Geochemistry data revealed very positive results both in terms of lower non compressible gas contents than previously measured and high-temperature vapor conditions under the thermal areas outside the currently drilled area. This provides increased confidence in the overall likely size and distribution of the vapor resource;
- The results of the geoscience field programme have also been used to develop a refined plan for completing exploration geophysics. This programme of work is expected to commence in late 2012 and will aim to further improve the current understanding of the likely extent and depth of the geothermal resource.

**Earth Heat Managing Director Torey Marshall commented**, "Updating the conceptual model of the Copahue field is an ongoing process, supported by data gathering completed, and to be undertaken over the coming years.

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We are very pleased that the results essentially point to a high grading of the prospective resources within the concession, and the possibilities of additional resources being delineated with further exploration. Ultimately the most important aspect within the Geoscience study at present is to match the input requirements of the Engineering study with the current understanding of reservoir characteristics. This is an active discussion that has had some very positive outcomes and we look forward to keeping the market informed of the final conclusions."

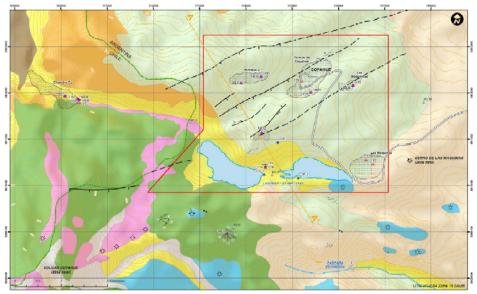


Figure 1- Simplified geological map showing the Copahue concession, of particular interest are the interpreted NE trending faults and their relationship to surface manifestations shown as hatched shapes.



Figure 2- One of the many high quality surface manifestations in the Copahue concession, in this case a Las Maquinas.

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Figure 3- More imagery from the Las Maquinas area, showing the historic relationship between man and geothermal activity.

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# For further information please contact:

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## **About Copahue**

Earth Heat signed a Heads of Agreement to farm-in to the Copahue Geothermal Development Project in Argentina in May 2010, which comprises an identified initial 30 MW geothermal development with the potential for significant expansion. Development of Copahue is anticipated to provide first power production and revenue within four years and Earth Heat has the right to earn up to 87.5% of the Project by funding various stages of development.

The Copahue project area is located in the western part of Neuquén Province, approximately 300 km from the provincial capital and just a few kilometres from the Chilean border. The geothermal resource on which the project is based occurs on the North-East flank of the Copahue volcano a young, historically active stratovolcano whose summit is on the international border. It is also situated within a broad caldera that is inferred to have formed by activity that pre-dates that of the Copahue volcano.

The project area has been the site of geothermal exploration and development activities since the 1970s. This work has included a number of superficial and shallow exploratory surveys (geology, geochemistry, geophysics and temperature gradient drilling).

Four deep wells, reaching depths of as much as 1,414m have also been drilled in the area. These wells have demonstrated the presence of a commercially exploitable, vapor-dominated geothermal reservoir within at least a part of the project area.

Through the Course of 2011, EHR has increased the resources by 150%, completed an EIA, a pre-feasibility study and most recently signed Letters of Intent for offtake of the power to be produced well in excess of stage 1 and 2 development.

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