

## **Kalahari GeoEnergy Ltd**

**(“Kalahari” or the “Company”)**

### **Kalahari GeoEnergy announces positive update on their ongoing resource assessment of the Bwengwa River geothermal energy target**

Kalahari GeoEnergy Ltd, the Zambian based geothermal exploration company, is pleased to provide an update on the ongoing exploration of their Bwengwa River geothermal target.

#### Bwengwa River

The Bwengwa River geothermal energy target which is inclusive of the Bwanda, Gwisho and Namulula thermal springs, lies within the Kafue Trough, a 14,000km<sup>2</sup>, Karoo-era extensional sedimentary basin, over part of which the Company holds geothermal energy exploration rights and within which the Company has identified a number of geothermal targets, including Bwengwa River, and also those at Kalomo Hills, Mwako Hills, and Nkala River.

#### Drilling – Selective Results

Well LOCH-02 north west of Bwanda hot springs, intersected two hot aquifers: 67°C at 150m and 101°C at 400m in the unconformity of the Basement/Karoo sediments; the geothermal gradient between the aquifers is greater than 10°C/100m. Geothermometers derived from the fluids flowing in the lower aquifer are 150°C and greater. The complex geometry of the basement close to Bwengwa River suggests up-flow from a deep basement system within 4km of this Well. However, similarities between the chemistry of fluids at both Bwanda and Gwisho suggest a significant single reservoir source within the basement, in which case it may be further into the basin.

#### The Geothermal System Model

The assessment of geology, geophysics, hydrology, fluid chemistry, well temperature and lithology logs, support a model of a moderate-high geothermal reservoir of 150°C or greater, within the basement under the basin, with the Karoo sediments forming a cap insulating underlying thermal fluids from heat loss. This model would provide a shallow, lateral reservoir which is desirable for commercial development; the geothermal gradient and the reservoir geothermometers are in the temperature range suitable for geothermal power production.

#### Power Production Capacity

Initial mathematical simulations using various reservoir models suggest an electrical production capacity of at least 10MW; this increases in the case of a model with the reservoir in the basement formations, which currently appears probable. The power production capacity will now be refined by further exploration.

#### Resource Extensions

Shallow soil temperature survey identifies heat anomalies in the Bwengwa River target 15km north of well LOCH-02 and contiguous to a buried regional thrust fault; this may indicate separate up-flow from the basement on the fault, or a more extensive Bwengwa River system.

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### Work Programme

Based upon the current assessment, the Company continues exploration and in Q2 2015 following the end of the current wet season; will drill further temperature gradient wells with the objective of clearly identifying the structure and / or formation that hosts the hydrothermal system(s) at Bwengwa River, and if the results are positive, drill 2-3 slim wells. Data from drilling and testing of these wells will provide an evaluation of key resource parameters needed for a feasibility study.

Concurrently work continues at the Company's other identified targets within the Kafue Trough using the exploration methods and model developed at Bwengwa River.

Peter Vivian-Neal, the CEO comments that *"Results provide further confidence that Bwengwa River has the characteristics for a commercially viable geothermal resource for power production. The Company will continue exploration with objective of defining the resource within the next year"*.

### Geothermal Energy in Zambia

Zambia hosts a number of geological structures including non-volcanic extensional basins, hot granites and in the north, part of the East African Rift System, which are recognised as being prospective for geothermal energy. Historic work identified a number of prospective targets and a Zambian-Italian joint venture built a geothermal pilot plant on the Lake Tanganyika Rift structure in the 1980's.

Zambia, while reliant on large scale hydro, does not have the current capacity to meet the demands of increasing investment in the agricultural, industrial and mining sectors, nor the domestic growth and rural electrification programmes; nationally, domestic access to power is currently less than 25%.

If geothermal energy is proved viable for the production of power in Zambia, it will increase overall capacity and reduce supply constraints. Geothermal power is sustainable, operates at a high capacity and is environmentally benign. In addition, the direct application of heat for agro-industrial processes could have a significant impact in strengthening food security at a time of uncertainty as to the effects of climate change. The regulatory frame-work is in place and there is precedent, for the private sector production, transmission and sale of electrical power in Zambia.

### **About Kalahari Energy Ltd:**

*Formed in 2010, Kalahari Energy is a privately owned, Zambian-registered, exploration company whose objective is to be an Independent Renewable Energy Power Producer. The management and its' consultants have wide-ranging experience in exploration, development and power production. The Company is also actively researching direct applications of geothermal energy that may have a positive impact on local communities.*

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