



# December 2009 QUARTERLY REPORT

## About Hot Rock

Hot Rock Limited is an Australian energy company formed to develop geothermal energy in Australia and overseas.

The company is one of the largest holders of geothermal acreage in Australia with its positions in the Otway Basin Geothermal Province and Queensland. It is also acquiring quality high temperature geothermal concessions in Chile. HRL is planning to drill its first flagship geothermal project at Koroit in the Otway Basin, Victoria in 2010.

## Executive Management

Mark Elliott – Executive Chairman  
Peter Barnett – Managing Director

## Hot Rock Limited

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## Full steam ahead at Koroit and new prospects won in Chile

### Funding

- HRL's application for a \$7 million grant from the Commonwealth Government's "Geothermal Drilling Programme (GDP)" has been successful. These funds will be applied to HRL's two well proof-of-concept drilling, testing and reservoir evaluation program at its flagship Hot Sedimentary Aquifer geothermal project at Koroit in Victoria.

### Otway Basin, Victoria

- Due to a delay in award of the GDP grant, HRL lost access to an earlier arranged deep drilling rig for the Koroit proof-of-concept program. HRL is now in detailed discussion with a number of other drilling contractors and is close to securing an alternative drill rig with an expected drilling commencement date at Koroit of June 2010.
- Work is now advanced on all other pre drilling activities for the Koroit Project including finalisation of well drilling targets and engineering design; completion of tendering for wellheads and casings; and ongoing preparation of an operations plan for state government approval.
- Analysis of seismic and structural geological data and sedimentary basin conductive thermal modelling is continuing at GEP-9, GEP-6 and GEP-23 to assess the geothermal resource capacity of a number of other hot sedimentary basins similar to the Koroit Project in GEP-8. HRL expects to issue a series of further geothermal resource estimates for these areas over the next quarter to complement the resource estimates published to-date for Koroit.

### Chile

- Three concessions filed in 2009 were awarded to Hot Rock Chile SA in mid January 2010. More prospect awards are expected in first quarter 2010.
- Further high temperature volcanic geothermal projects have been filed by Hot Rock in Chile over the past quarter.
- HRL is now commencing detailed resource exploration and assessment studies in Chile.

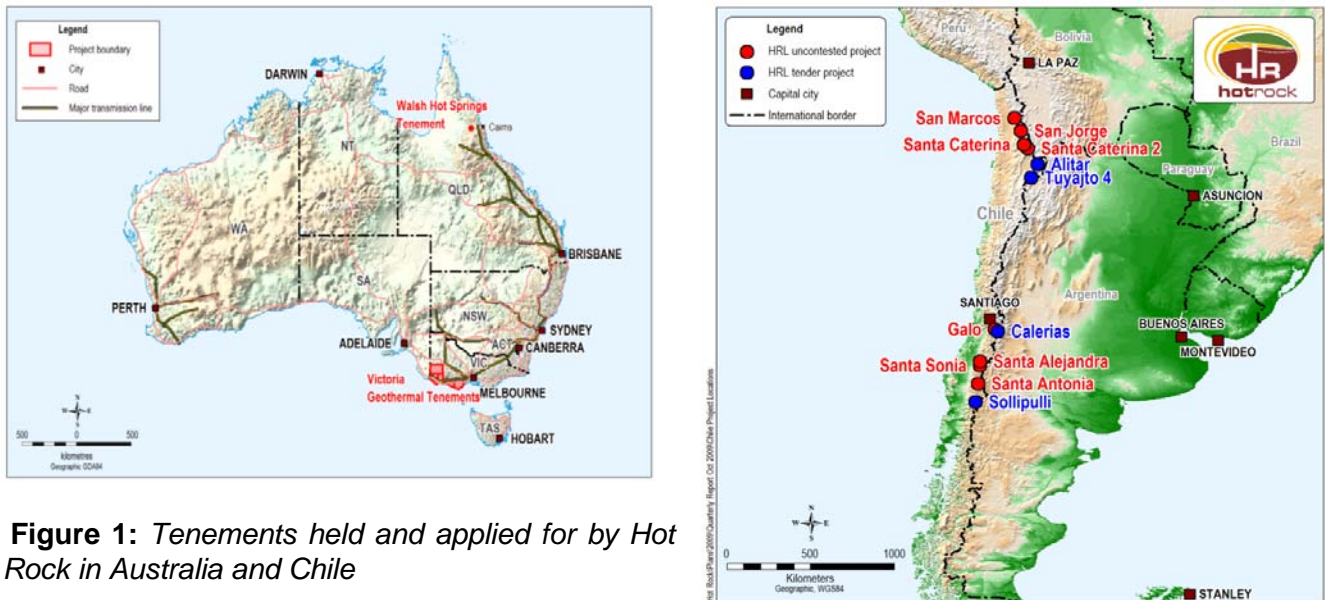
### Corporate

- HRL announced effective 23 December the resignation of Chairman Norm Zillman due to ongoing health issues.
- In response, the Board has appointed Dr Mark Elliott to the position of Executive Chairman and Mr Peter Barnett to the position of Managing Director.

## GEOTHERMAL EXPLORATION ACTIVITIES

Hot Rock Limited (HRL) has five permits granted over the major portion of the prospective geothermal province in the Otway Basin in Victoria, with another permit awaiting grant in the Walsh Creek area west of Cairns in Queensland (Figure 1).

HRL's wholly owned subsidiary Hot Rock Chile SA (HRC) has applied for eight concessions, which have passed the period where other competitive companies can top-file to force a tender process and has moved to an uncontested stage for assessment for grant. Additionally, HRC applied for four geothermal concessions offered by the Chilean government under a competitive tender process. All projects cover high and medium temperature volcanic geothermal prospects in various regions of Chile (Figure 1).



**Figure 1:** Tenements held and applied for by Hot Rock in Australia and Chile

### OTWAY BASIN, VICTORIA (GEP- 6, 7, 8, 9 & 23 - 100% HRL)

#### 1. Koroit Project Funding

On 13 December, HRL was advised by Federal Minister for Resources, Energy & Tourism, the Hon Martin Ferguson, that its application for a \$7 million grant from the Commonwealth Government's "Geothermal Drilling Programme (GDP)" had been successful. The grant was made in support of HRL's proof-of-concept Hot Sedimentary Aquifer (HSA) geothermal power project located at Koroit, within GEP-8, in the Otway Basin, Victoria.

As noted by Minister Ferguson, this investment will help meet the Australian Government's three major energy-related goals of:

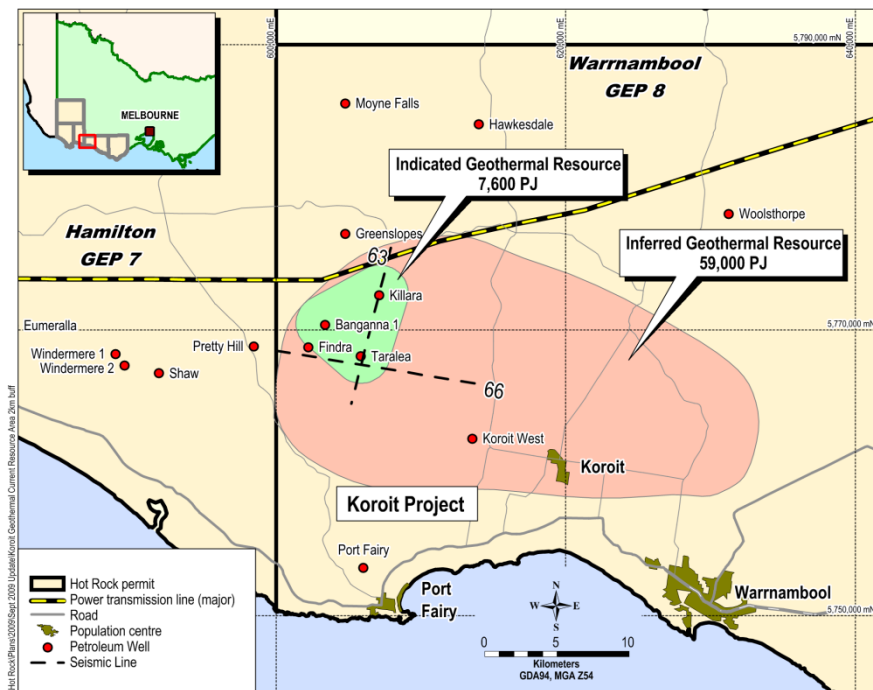
- Increasing energy security by diversifying energy supplies;
- Reducing Australia's CO<sub>2</sub> emissions to 60 per cent below 2000 levels by 2050; and,
- Producing 20 per cent of Australia's electricity from renewable sources by 2020.

The objective of HRL's proof-of-concept project at Koroit is to define 'proven reserves' through the drilling and testing of two deep standard size production appraisal wells – referred to as proof-of-concept wells. The Koroit Project is currently estimated to have an Indicated and Inferred Geothermal Resource of 7,600PJ and 67,000PJ, respectively of in-place stored heat. The Indicated Resource alone has the potential (at a P50 level of certainty) to generate over 100MWe of

geothermal power, enough electricity to supply around 100,000 homes. The inferred resource, if proven, would, on the same basis, have the potential to generate more than 1,000MWe (Figure 2).

The Koroit Project could result in the commissioning of the first geothermal pilot power plant in Victoria by early 2011 followed by a 10MW demonstration plant by 2012 and subsequent commercial scale plants, via the following project development stages:

- Proof-of-concept well drilling, testing and reservoir evaluation
- Development of a pilot plant up to 1 MWe capacity
- Development of a 10MWe demonstration plant
- Development of a further 4 x 10MWe units to complete an initial 50MWe commercial scale power plant
- Development of further 50MWe geothermal power plant modules as geothermal resource and power plant performance permits



**Figure 2:** Location of the Koroit Project showing Inferred and Indicated geothermal resource areas

## 2. Koroit Proof of Concept Program

### *Drilling Rig:*

HRL announced 31 July 2009 that it had secured a suitable drilling rig and drilling slot for its Koroit program with MB Century Drilling. Unfortunately with the DRET announcement of the GDP grant allocation being made in mid December rather than in early November as originally anticipated, MB Century were unable to maintain the availability of the rig to HRL and had to withdraw its offer.

HRL has since been in detailed discussion with several other Australian based drilling rig contractors and is now close to securing an agreement for engaging a suitably sized and equipped drilling rig to undertake the two well proof of concept drilling program at Koroit with an expected commencement date of June 2010.

### *Drilling Procurement:*

Tenders were called by HRL for the supply of geothermal wellhead assemblies and steel casings for the two well proof-of-concept drilling program at Koroit. This generated considerable market interest with five tenders being received for the supply of casings and four tenders for wellheads. All tenders have now been assessed and evaluated by HRL's drilling consultant and a preferred tenderer

identified for each of the two procurement contracts. HRL will execute these contracts as soon as a replacement drill rig has been secured and final timing confirmed for commencement of the proof of concept drilling program. HRL expects to place the well head assemblies contract sometime in January 2010 in order to ensure delivery of these items in a timely manner as they have a relatively long manufacturing lead time.

*Final Targeting and Design of Proof of Concept Wells:*

A detailed review of subsurface temperatures, reservoir rock facies, porosity and geological structure, was completed within the area of "Indicated" resource at Koroit and in the area of "Inferred" resource further to the east. Collar locations and engineering designs for the two proof-of-concept wells have now been finalised on the basis of this work with the provision that these may be refined pending confirmation of the actual capacity of the replacement drilling rig being obtained.

*Operations Plan:*

A detailed operations plan for the drilling of the two proof-of-concept wells is in preparation by HRL. This is required to be submitted to and approved by the Victoria Department of Primary Industries (DPI) prior to HRL commencing activities associated with the proof-of-concept drilling program.

### **3. Ongoing Assessment of Geothermal Resource at other GEP's**

Analysis of seismic and structural geological data and sedimentary basin conductive thermal modeling was continued at GEP-6, GEP-9 and GEP-23 during the quarter. The objective of this work is to assess the geothermal resource capacity of a number of other sedimentary basins in these GEP's containing thick accumulations of high porosity sandstones of the Pretty Hill Formation with temperature gradients in excess of 40°C/km, similar to that in the Koroit Project in GEP-8. This work is nearly complete and HRL expects to issue a number of geothermal resource estimates in these other areas over the next quarter to complement the resource estimates published to date for Koroit.

## **CHILE GEOTHERMAL PROJECTS**

HRL announced in the September 2009 Quarterly report that it had established a wholly owned subsidiary company in Chile through which to pursue high temperature volcanic geothermal projects within the stable business environment that exists in Chile and within a power market that is critically short of power and places a high value on renewable energy.

Over the past quarter additional high quality geothermal prospects have been identified by HRL and applications made. These are in addition to 8 prospect areas earlier filed by Hot Rock Chile on an uncontested basis and 4 prospects that Hot Rock bid on in an international, competitive tender process.

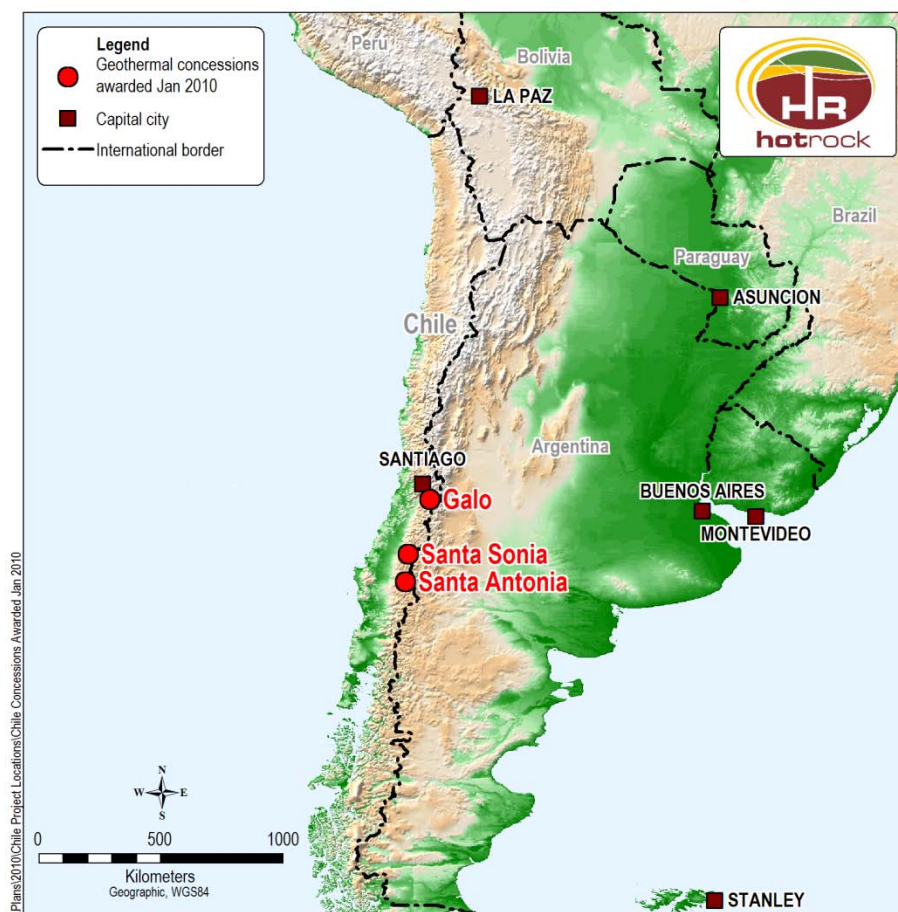
Advice from the Chile Government to 31 December was that processing of a number of Hot Rock's geothermal concession were well advanced and award could be expected in the first quarter of 2010. In mid January 2010, HRL was notified by the Chile Ministry of Mines that Hot Rock has been formally awarded an initial three high temperature volcanic geothermal concessions: Galo, Santa Sonia and Santa Antonia (Figure 3). Covering 1,650 km<sup>2</sup>, these are exciting geothermal prospects, all with hot thermal springs discharging at surface and some with impressive silica sinter forming boiling springs, indicating high temperature geothermal systems exist below the surface.



With these positive developments, HRL is commencing detailed field exploration programs in Chile early in 2010 at the three awarded prospects. This work will include over the first 12 months:

- semi detailed geological mapping work
- geochemical sampling of springs and thermal areas
- detailed Magneto Telluric (MT) resistivity surveys
- multi disciplinary hydro geological modelling.

Each prospect will then be assessed and ranked with regard to geothermal resource potential, location and market parameters. This will lead to resource evaluation and assessment at each prospect and probable exploration drilling. In the second year



**Figure 3:** Locations of the HRL's first 3 awarded geothermal prospects in Chile (in January, 2010)

With the high quality of the geothermal prospects in Chile, the very attractive power prices that prevail there within a well formulated and efficient power market, the excellent business environment, and strong incentives provided by the Chilean government for geothermal power development, HRL is confident of achieving considerable success in Chile in parallel with its substantial forward geothermal development program in Australia and that both will add significantly to shareholder value.

## **GEOTHERMAL INDUSTRY**

HRL senior management participated in two significant geothermal conferences during the quarter:

- Geothermal Resources Council Annual Meeting, Reno, USA, Oct 4 – 7, 2009, where HRL was a member of the Team Australia geothermal industry booth which won first place amongst 100 exhibitors.
- 2009 Australian Geothermal Energy Conference, Brisbane, 10 - 13 November, 2009, where HRL gave a detailed presentation on its current geothermal development activities, particularly the Koroit Project.

These were both major conferences with more than 2,000 attendees at the GRC meeting and 430 at the AGECE meeting – the largest attendances ever at each conference. These numbers confirm the strongly growing global interest in geothermal energy and that utilities and power producers are finally recognizing that geothermal energy's base-load capacity forms an important component in the power generation mix.

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## FUNDING

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HRL is waiting for DRET to supply the Commonwealth government's Funding Agreement for the GDP grant to be able to start drawing down on the \$7 million grant for the Koroit drilling and testing program.

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## CORPORATE

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### AGM

HRL held its Annual General Meeting on 30 November 2009. In the Chairman's report it was noted that: "Hot Rock Limited is in a strong corporate and project portfolio position moving into 2010. The next 12 months will be predominantly characterized by drilling at Koroit, the estimation of geothermal resources for other HSA targets in the Otway Basin in Victoria and the acquisition of high quality, high temperature Volcanic geothermal projects in South America. This work will hopefully see the transformation of your company from geothermal explorer to producer in the near to medium term".

### Resignation of Norm Zillman from Role of Board Chairman

HRL announced effective 23 December the resignation of Chairman Norm Zillman due to ongoing health issues and the internal appointment of Dr Mark Elliott to the position of Executive Chairman and Mr Peter Barnett to the position of Managing Director. The Board of HRL now consists of

- Dr Mark Elliott, Executive Chairman
- Mr Peter Barnett, Managing Director
- Mr Mike Sandy, Non-Executive Director
- Mr Stephen Bizzell, Non-Executive Director

Dr Elliott as the incoming Executive Chairman noted that "Norm was a founding director of HRL and has made a significant contribution to HRL's development. He has been Chairman of the company since prior to its ASX listing and has been instrumental in guiding the company from a start-up stage into a major proof-of-concept geothermal drilling and development stage. His dedication, enthusiasm and wisdom are greatly appreciated and will be sadly missed".

### Cash Position

At the end of the December 2009 Quarter, the company had approximately \$2.4 million cash at bank. The net cash operating and exploration expenditure for the quarter was \$1.2 million.

### Compliance Statement

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*The information in this Statement that relates to Geothermal Resources has been compiled by Peter Barnett, an employee of Hot Rock Limited. Mr Barnett has over 30 years' experience in the determination of crustal temperatures and stored heat for the style relevant to the style of geothermal play outlined in this release. He is a member of the Geothermal Resources Council and the International Geothermal Association, a current board member of the New Zealand Geothermal Association, a past board member of the Auckland University Geothermal Institute Board of Studies and a current member of the Economics Sub Committee of the Australian Geothermal Association. Mr Barnett qualifies as a Competent Person as defined by the Australian Code of Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition). Mr Barnett consents to the public release of this report in the form and context in which it appears. Neither Mr Barnett nor Hot Rock Limited takes any responsibility for selective quotation of this Statement or if quotations are made out of context.*

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## CORPORATE DIRECTORY

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### Board of Directors - HRL

Mark Elliott     Executive Chairman  
Peter Barnett    Managing Director  
Mike Sandy      Non-Executive Director  
Stephen Bizzell Non-Executive Director

### Company Secretary & CFO

Paul Marshall

### Issued Share Capital

Hot Rock has 92.45 million ordinary shares currently on issue and 24.75 million options.

### Quarterly Share Price Activity

	High	Low	Last
Dec 2009	\$0.175	\$0.125	\$0.14

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Please direct shareholding enquiries to the share registry.