



# September 2012

## QUARTERLY REPORT

### About Hot Rock

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

Strategically, the Company is focussed on exploring and developing its extensive portfolio of volcanic prospects in Chile and Peru complimented with Hot Sedimentary Aquifer prospects in Australia.

The Company moved early and acquired a wholly owned portfolio of projects with good evidence for geothermal reservoirs suitable for electricity generation in countries with attractive infrastructure, markets and government policy.

### Executive Management

Mark Elliott –Executive Chairman  
Peter Barnett – Managing Director

### Hot Rock Limited

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### HIGHLIGHTS

*Energy Development Corporation (EDC) is proceeding with HRL in a joint venture agreement at Quellaapacheta and detailed surface exploration commenced there in September.*

*HRL is in discussions with other significant parties regarding possible joint venture agreements on projects in Chile and Peru.*

#### Joint Venture (EDC/ HRL) – JV progressing on Tier 1 project

- Following a reconnaissance visit in June, EDC confirmed in September that it would proceed with the Quellaapacheta joint venture project in Peru.
- EDC is completing detailed geological and geochemical surveys with its own personnel at this project and has engaged an international contractor to complete a 100 station magneto telluric (MT) resistivity survey before year end.
- A joint-venture company has been incorporated, known as Geotermia Quellaapacheta Peru SAC. The final requirement to commence the joint venture is for the Peru Minister of Energy and Mines (MEM) to approve the transfer of the tenement into the JV Company.

#### Peru (100% HRL) –Anticipated grant of high quality Tier 1 Achumani Project in 4<sup>th</sup> quarter

- Community consultation meetings have been completed covering the Quellaapacheta and Chocopata tenements allowing access for exploration programs to be carried out.
- HRL holds 4 granted exploration authorizations in Peru and has a further 5 applications under process with MEM. It is anticipated that one of these, the Achumani Project, will be granted shortly. This is a high quality geothermal prospect similar to Quellaapacheta and is of considerable interest to prospective JV partners.

#### Chile – Advancing JV discussions with significant global and local companies

- Detailed project descriptions and development plans, including work programs and costings have been prepared for the Longavi and Calerias projects to provide the basis for HRL engagement with potential joint venture partners.
- Project reviews has been undertaken during the past quarter on these two projects by three groups and discussions are ongoing.

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## **EDC JOINT VENTURE**

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Of the four projects initially contemplated by EDC, they have decided only to proceed with the Tier 1 Quellaapacheta Project in Peru. EDC has now completed the following activities leading towards the commencement of the joint venture:

- The incorporation of a joint-venture company between EDC and Hot Rock, known as “Geotermia Quellaapacheta Peru SAC” has been completed.
- Legal work is in progress to transfer the exploration authorization from Hot Rock to the joint venture company. It is expected that this process will be completed next quarter.

The joint venture program at Quellaapacheta is divided into an exploration stage and a resource development stage. The exploration stage of the joint venture program requires EDC to fund 100% of the first US\$12 million expenditure, which includes geological, geochemical, geophysical surveys and at least one production appraisal well. Following the successful completion of the exploration stage, the resource development stage will commence, which involves completing five further production wells and all studies necessary to bring the project to financial close, where project finance documents for a first stage 50MW plant are ready to execute. This program would normally cover definitive feasibility study, environmental impact study, permitting, power contract(s) and negotiating finance. This stage is estimated to cost US\$38 million and take up to a further 2 years to complete.

Under the Quellaapacheta JV agreement, HRL will receive from EDC an initial payment of US\$0.4 million once the exploration tenement has been transferred into the newly incorporated JV Company named Geotermia Quellaapacheta Peru SAC. If EDC withdraws from the project within 6 months of the tenement being transferred into the JV Company, the \$0.4m is refundable. A further payment of US\$0.6 million will be made to HRL providing EDC continues to be involved in the project beyond 15 months from the date of the tenement transfer.

EDC is the world's largest geothermal company with over 35 years' experience in geothermal exploration, development and power generation, and currently supplies the Philippines with 1,130MWe of geothermal power from integrated steam field and power plants at five project locations. EDC is listed on the Philippines Stock Exchange (PH:EDC) and has a market capitalization of US\$2.4 billion.

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## **GEOTHERMAL EXPLORATION ACTIVITIES**

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### **CHILE GEOTHERMAL PROJECTS (100% HRL)**

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Work undertaken on HRL's wholly owned tenements in Chile over the past quarter includes:

- Detailed project descriptions and development plans, including work programs and costings to take these projects through to exploration drilling and to financial closure, have been prepared for both the Longaví and Calerias projects. These have provided the basis for discussion with potential joint venture partners to engage with Hot Rock in these projects.
- Santa Macarena: surface exploration studies including detailed geochemical analyses and interpretation of hot spring chemistries and a geological report for the area have now been completed at this project. Evaluation of these data is currently ongoing and a decision will be made over the next quarter as to whether the project is sufficiently prospective to commission further investigative work with a magneto telluric (MT) resistivity survey in the upcoming summer field program.
- San Antonia, San Guillermo and San Cristobal: Land access approval continues to be sought

from local communities and /or landowners for HRL to enter these three tenements for undertaking pre-drilling geoscientific surveys, including MT surveys.

- Six further HRL tenements applications remain in process by the Chilean Ministry of Energy.
- The company has commenced a low cost program search for new quality geothermal projects in Chile.

### **PERU JOINT VENTURE GEOTHERMAL PROJECT (HRL 100%; pending 70% EDC)**

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During the quarter, EDC requested entry onto the project areas in Peru to start exploration programs ahead of the formal commencement date of the joint venture. This was to take advantage of the field season, which commonly closes between November and May each year. Permission was granted when EDC agreed to supply all project data that they would collect during the field work to HRL free of charge, if they withdrew from any of the remaining projects (Chocopata and Quellaapacheta).

On the 3 October, HRL was supplied with a Technical Data Report of the Chocopata Project which covered the reconnaissance geology and geochemical surveys carried out by EDC personnel. No chemical analysis on rock or water samples were carried out or their interpretation of the prospectivity of the project.

Following a joint EDC/ HRL geo-scientific team reconnaissance survey at the Quellaapacheta Project in June, EDC confirmed in September strong interest in proceeding with the EDC / HRL joint venture at this project. Since then progress has been made with the following project activities either completed or in progress:

- EDC mobilized a four person team to Quellaapacheta in September to complete detailed geochemical and geological surveys in the area and these should be completed by end October.
- EDC has engaged an international MT data acquisition contractor to undertake and complete a 100 station MT survey over the greater project area by early December.
- HRL undertook a baseline sampling of all cold water springs in the Quellaapacheta project area in conjunction with local communities in order to clearly establish the quality of community water sources prior to any geothermal development work. This study is building good relationships with local communities.

### **PERU GEOTHERMAL PROJECTS (100% HRL)**

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HRL has continued to work on its two 100% owned projects and granted projects in Southern Peru at Chocopata and Turu.

A program of baseline sampling of all cold water springs was also undertaken over the Chocopata Project area with local communities similar to the Quellaapacheta program. Chemical analyses of these samples will include standard water quality analysis plus deuterium and oxygen-18 stable isotopes.

HRL has a further five exploration authorization applications currently under process by the Peru Ministry of Energy and Mines (MEM). It is anticipated that at least one of these, the Achumani Project in Southern Peru will be granted shortly. This is a high quality Tier 1 prospect with very similar geological and geothermal characteristics to the Quellaapacheta prospect. HRL is confident that with a high level of JV partner interest in this project, it will quickly progress into exploration drilling with high potential for subsequent large-scale commercial field development.

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

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### ***ARENA and partners***

HRL continues to seek funding for proof of concept well drilling and testing at its flagship Hot Sedimentary Aquifer (HSA) project at Koroit in Southwest Victoria, Australia.

HRL is working actively with the Australian Geothermal Energy Association (AGEA) and other geothermal companies in Australia in seeking funding from the newly formed Australian Renewable Energy Agency (ARENA) for advancing drilling at its Koroit Project.

### ***HRL GEP tenements in Victoria***

HRL's strategy for its GEP tenements in Victoria for the next 12 months and beyond is to continue as previously reported, i.e:

- focus on retaining the tenements where HRL has discovered and declared geothermal resources (within GEP's 23, 6, 7 and 8).
- pursue ARENA and JV partner funding over the next 6 to 12 months as the principal means for advancing HRL's Hot Sedimentary Aquifer (HSA) projects in the Otway Basin.

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## **TENEMENTS**

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### ***Granted tenements***

HRL has progressively developed a portfolio of quality volcanic geothermal prospects in Chile and Peru with the objective of diversifying its business into conventional geothermal resource types and commercial environments outside Australia, thus providing enhanced opportunities for adding significant shareholder value.

HRL's portfolio of granted projects includes the following:

- HRL's wholly owned subsidiary Hot Rock Chile SA (HRC) holds thirteen granted geothermal exploration concessions covering 7 projects. Three of these tenements are included in the Calerias project and four in the Longavi JV project, leaving six tenements in five other projects. All remain 100% HRL owned (Figure 1).
- HRL's wholly owned subsidiary Hot Rock Peru SA (HRP) has filed applications for exploration authorizations at ten volcanic geothermal projects in Peru. Four of these have been granted to HRL and the earliest of these were in the first batch of grants awarded in Peru. This early granting of licenses has provided HRL with a pioneering first mover advantage within the nascent geothermal sector in Peru (Figure 1). One of these projects (Quellaapacheta) is the subject of a joint venture with EDC (70%) / HRL (30%).
- HRL has five permits granted over the major portion of the prospective Hot Sedimentary Aquifer (HSA) geothermal province in the Otway Basin in Victoria (Figure 5). As noted above, four of these permits have been extended for an additional year to May 13, 2013.

## Pending Tenement Grants

HRL has submitted to the appropriate authorities the following tenement applications and is optimistic that most of these will be granted during the course of 2013:

- Chile – 12 tenement applications covering a further 9 projects which are currently under technical evaluation by the Chile Ministry of Energy.
- Peru – 5 tenement applications covering a further 5 projects which are currently under technical evaluation by the Peru MEM.
- Australia – nil pending.

## Tenement Extensions

Two exploration concessions in Chile have been extended for a further two years - Galo (at the Calerias project) and Sta Sonia (at the Longavi project). Applications to extend a further two concessions for a further two years each were submitted 1 August 2012 for the Sta Edita and Sta Alejandra concessions (at the Longavi project).

In Australia HRL's tenements in the Otway Basin, GEP- 6, 7, 8 and 9, will reach the end of a 5 year exploration term on 13 May 2012. With the depressed state of the geothermal industry in Australia at the present time, the Department of Primary Industries in Victoria has agreed for HRL to extend these 4 tenements for a further 12 months.

## Tenement Expirations / Relinquishments

HRL's EPG-19 permit in Queensland was surrendered on the 25 August due to the difficulty in funding geothermal projects in Australia.



Figure 1: HRL's geothermal tenements applied for and/or granted in South America

## CORPORATE

### ***Capital Raise***

Due to the non receipt of anticipated cash inflows, (that had been anticipated from the EDC joint ventures) following EDC's withdrawal from two joint venture projects in Chile, HRL announced on 10 August 2012 a non-renounceable Rights Offer on the basis of 1 new share at 1.5 cents per share for every 2 shares held. This raised a total of \$1.46 million through the issue of 97.6 million shares.

### ***Joint Venture Partner Search***

HRL has commenced a global search for partners for its projects in Chile, Peru and Australia. At this stage a number of parties are undertaking project reviews and more are expected after HRL widened the search by engaging the services of a financial communications group. This group has been engaged on a non-exclusive, success fee basis to locate potential joint venture partners for our projects.

### ***Reducing costs***

Given HRL has moved past the initial phase of project acquisition to now realising value through joint ventures and other opportunities, the board has recognised the importance of preserving capital to ensure the business is also funded through the negotiation processes we are currently involved in.

Directors and some senior personnel have reduced their salaries and agreed to be paid half in cash and half in shares (subject to obtaining required shareholder approval at the AGM on 29 November) – which can also be seen as a strong vote of confidence in the company's potential. Head office costs in Australia and operational costs in Chile have been reduced along with expenses across the business as a whole that have been cut back.

HRL is now focused on driving value from its advanced projects in Chile and Peru and negotiations are ongoing in this regard.

### ***Annual Financial Report***

Full year statutory accounts to 30 June 2012 were released to the market on 26 September 2012

### ***HRL Annual General Meeting***

The annual general meeting for Hot Rock Limited has been set for 29 November at Hot Rock Limited, Level 5, 10 Market Street, Brisbane, Queensland at 3.00pm (Brisbane time).

### ***New Country Manager for Chile***



HRL has appointed Mr. Gonzalo Salgado as Country Manager of Hot Rock Chile S.A. (HRC) to head its Chile operations, effective 02 July 2012. His main focus will be to seek potential partners to develop the substantial portfolio of projects the Company has assembled.

Gonzalo has 13 years' experience in commercial law including company formations, mergers, project finance and has a specialist interest in renewable energy legislation in Chile. His entry to the geothermal power industry was with the Chilean National Petroleum Company (ENAP) in 2000 where he worked with an international team of geothermal experts in establishing a geothermal exploration and development capability to establish a government led geothermal energy sector.

He has subsequently served in a variety of public and private organizations, including most recently the Chile Ministry of Energy, where he was Chief of Staff to the Minister of Energy. Gonzalo holds a Bachelor of Law (LL B from the University of Chile; a Master of Law LL M from the, Northwestern University, USA and a Master of Public Administration degree (MPA) awarded by the Columbia University, USA.

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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 329.6 million ordinary shares currently on issue and 20.8 million options.

**Quarterly Share Price Activity**

	High	Low	Last
Sept2012	\$0.031	\$0.013	\$0.013

**Registered and Head Office**

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Please direct shareholding enquiries to the share registry

**Compliance Statement**

*The information in this Statement that relates to Geothermal Resources has been compiled by Peter Barnett, an employee of Hot Rock Limited. Mr. Barnett qualifies as a Competent Person as defined by the Australian Code of Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2<sup>nd</sup> Edition, 2010). He 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 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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