



**Greenearth  
Energy Ltd.**

A.C.N 120 710 625



**QUARTERLY  
ACTIVITIES REPORT  
FOR THE THREE  
MONTHS ENDED  
31MARCH 2009**

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## CORPORATE DIRECTORY

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### **Directors**

Simon R. Molesworth AM, QC (Chairman)  
Robert J. Annells (Non-executive Director)  
John T. Kopcheff (Non-executive Director)  
Robert L. King (Executive Director)

### **Managing Director**

Mark Miller (Managing Director)

### **Company Secretary**

Vicki M. Kahanoff BBus CPA

### **Registered Office**

Level 14  
500 Collins Street  
Melbourne Victoria 3000

**Telephone:** (03) 9620 7299

**Facsimile:** (03) 9629 1624

### **Securities Exchange**

Australian Securities Exchange Limited  
Level 45, South Tower, Rialto  
525 Collins Street  
Melbourne Victoria 3000  
ASX code: GER

### **Auditors**

Pitcher Partners

### **Bankers**

Westpac Banking Corporation

### **Address for Correspondence**

P.O. Box 24  
Collins Street West  
Victoria 8007

**Email:** [greenearth@greeneearthenergy.com.au](mailto:greenearth@greeneearthenergy.com.au)

**Web site:** [www.greeneearthenergy.com.au](http://www.greeneearthenergy.com.au)

### **Share Registry**

Computershare Investor Services Pty. Ltd.  
Yarra Falls 452 Johnston Street  
Abbotsford Victoria 3067  
(03) 9415 5000

### **Legal Advisors**

Baker & McKenzie

## HIGHLIGHTS

- ❖ *ROADMAP FOR GEELONG HSA GEOTHERMAL PLANT DEVELOPED*
- ❖ *RENEWABLE ENERGY DEMONSTRATION PROGRAM (REDP) APPLICATION SUBMITTED*
- ❖ *ESTABLISHMENT OF INDONESIAN ENTITY*
- ❖ *2 INFERRED RESOURCES CALCULATIONS*

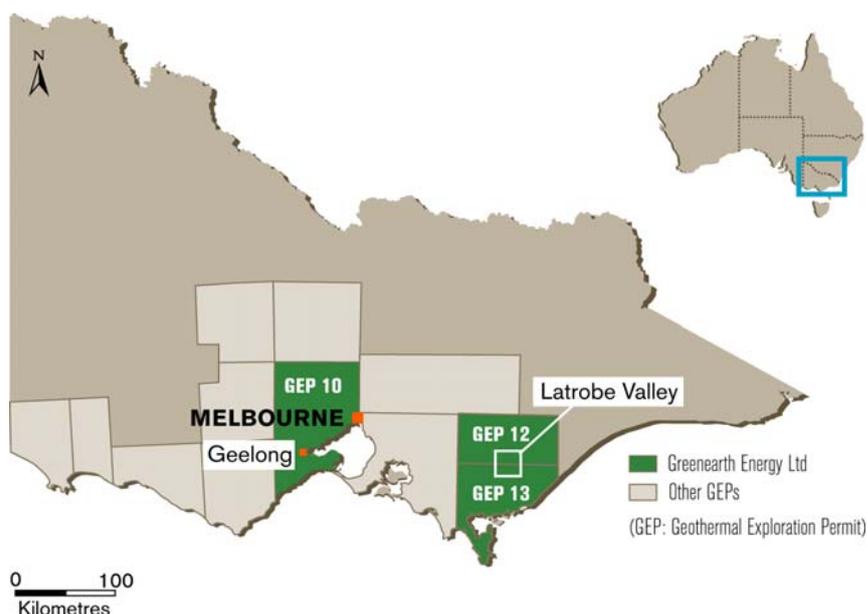
### ABOUT GREENEARTH ENERGY LIMITED

Greenearth Energy Limited (Greenearth Energy) listed on the Australian Stock Exchange (ASX) on 4 February 2008.

The company holds permits in Victoria where the major energy companies are situated and any potential geothermal resource found will be close to existing infrastructure. Initial geological work is indicating that the company's acreage has the ability to contain hot sedimentary aquifer (HSA) systems as well as Hot Dry Rock (HDR) or Enhanced Geothermal Systems (EGS).

Greenearth Energy is also strategically interested in other areas in Australia, New Zealand and the wider Pacific Rim.

A number of potential end users within its permits have been identified and discussions are continuing with various parties with the aim to establish a number of mutually beneficial working relationships.



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## REVIEW OF OPERATIONS

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### CORPORATE DEVELOPMENTS

Greenearth Energy's latest quarter has seen further activity in both the Corporate and Technical area. During the quarter, work was completed resulting in a Statement of Inferred Resource for the Seaspray area (contained in its Geothermal Exploration Permit GEP13) being released to the ASX on 5 January 2009. This Inferred Resource was calculated on the basis of a Hot Sedimentary Aquifer (HSA) geothermal prospect and despite encompassing a very small area of 29 square kilometres (km<sup>2</sup>) represents a significant inferred resource estimate of 3,600 petajoules (PJ). The area included in the calculation of the GEP13 inferred resource represents less than 1% of the total area of Greenearth Energy's permit area and represents a significant element in establishing the geothermal potential of Onshore Gippsland and Latrobe Valley regions. The Inferred Resource Estimate complies with the Australian Code for Reporting Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition).

Greenearth Energy has now released two significant inferred geothermal resource estimations, the first for a Victorian Geothermal Exploration and Development Company, on December 4 2008 for the Greater Geelong area (GEP 10) and this more recent inferred resource find near Seaspray (GEP 13).

Further details on both Statement of Inferred Resources can be obtained on our website.

Greenearth Energy's Inferred Resource work was a mandatory requirement of the Commonwealth's Geothermal Drilling Program (GDP) application process that closed on 5 January 2009. Greenearth Energy submitted two applications to the GDP, one for the Greater Geelong area (GEP10) and one for the Gippsland Area (GEP13). The two applications included plans for proof-of-concept pair (couplet) of wells with the company seeking the maximum funding allowed of \$7million per application. The company's two applications passed the initial merit criteria assessment and were each subject to a full assessment by the government appointed judging panel. Greenearth Energy was advised in mid-April 2009 that their first round applications were not successful. The company intends to dialogue with government in order to establish the specific reasons for the decision not to support its applications in preparedness for the second round of GDP funding that is anticipated available for application mid 2009.

On March 6 2009 Greenearth Energy announced it had invested in Melbourne based Pacific Heat and Power Pty Ltd (PHP) a high energy/environmental cost solutions provider with access to a suite of innovative electricity generation products based on proven world-class technologies which provide its customers with increased energy productivity, energy reliability, operational savings and lower greenhouse gas emissions.

Greenearth Energy receives a 33.06% shareholding in PHP in exchange for \$300,000 consideration in the form of \$200,000 cash and 666,666 ordinary shares issued at 15 cents per share which are subject to voluntary escrow for 12 months. Mark Miller, Managing Director Greenearth Energy will represent our company on the board of PHP. The company views their investment in PHP as an important strategic link to technologies and capability with potential customers who have substantial energy and emissions needs going forward.

On March 23 2009 Greenearth Energy published its Roadmap for a Geothermal Power Plant development at Geelong in GEP10 based on further work carried out by Hot Dry Rocks Pty Ltd. The roadmap and model arrived at assumes that a portion of the inferred geothermal hot sedimentary aquifer (HSA) resource of 40,000PJ petajoules present in GEP10 (as per the Greenearth Energy ASX release of 4 December 2008) is available to be utilized for power generation. This model is viewed as a pivotal advancement in achieving Greenearth Energy's objectives of providing "clean" energy to carbon-heavy emission centres within its permit areas and further work is being planned to expand and further enhance developmental framework parameters. The full release can be viewed on the company's website.

Greenearth Energy announced to the market on 6 April 2009 that it had, by way of its 100% wholly owned subsidiary Greenearth Power Pty Ltd, and in partnership with Melbourne based Geo Energy Pty Ltd, North American based International Investment Resources LLC and Indonesia's Santini Group, established a Jakarta based, Indonesian Geothermal Exploration and Development entity, PT. Geo Power Indonesia. Greenearth Power Pty Ltd will initially hold 40% of PT. Geo Power Indonesia with the balance split equally between the other three partner companies.

Based in Jakarta, PT. Geo Power Indonesia aims to develop a suite of geothermal exploration and development opportunities across Indonesia. The team situated in Indonesia, have already identified a number of potential projects and is working towards bringing at least one to fruition in the near-term. The establishment of and investment in this entity is consistent with Greenearth Energy's long term goal of developing geothermal energy resources in Australia and the wider pacific rim.

On April 15 2009 Greenearth Energy lodged an application to the Federal Government's \$435m Renewable Energy Development Program (REDP). The REDP is designed to accelerate the development and commercialisation of new renewable energy technologies by demonstrating these on a commercial scale. Funding is on a \$2 private to \$1 Government basis and is open to all renewable energy technologies.

Based on the establishment of Greenearth Energy's significant inferred geothermal resource in GEP 10 the company is seeking funding to develop a 10.7 MW HSA geothermal power plant with significant scalability near the industrial city of Geelong, a first for the State of Victoria. It is anticipated that the government will announce successful grant applicants mid 2009.

## **OPERATIONAL ACTIVITIES**

### **Gippsland Basin (GEP 12 and 13) - 100% Equity**

Ongoing activities within the Gippsland Basin have further expanded the geological picture of the potential of our permits.

#### **Heat flow mapping**

The second phase of Heat flow mapping concluded in this permit. The company contracted Hot Dry Rocks Pty Ltd to carry out this program. The temperature measurement and thermal conductivity analysis was designed to validate and build upon the first phase of heat flow mapping carried out in 2007.

In the Latrobe Valley area running east to the Rosedale area measurements from eight wells confirmed high heat flows ranging from 63 to 101 mW/m<sup>2</sup>. The wells ranged in depth from 172 m to 739 m. The Loy Yang 2 well, adjacent to the Loy Yang brown coal fired power station, was logged to 713m and yielded an excellent heat flow estimate of 90 +/- 5 mW/m<sup>2</sup>.

A further two wells were logged for temperature in the southern part of GEP 13. Woranga 12 northeast of Alberton yielded a heat flow estimated at  $70 \pm 6 \text{ mW/m}^2$ .

This work indicates that temperature ranges are consistently strong across the permit acreage area and have the ability to support multiple geothermal projects given the right reservoir characteristics at depth.

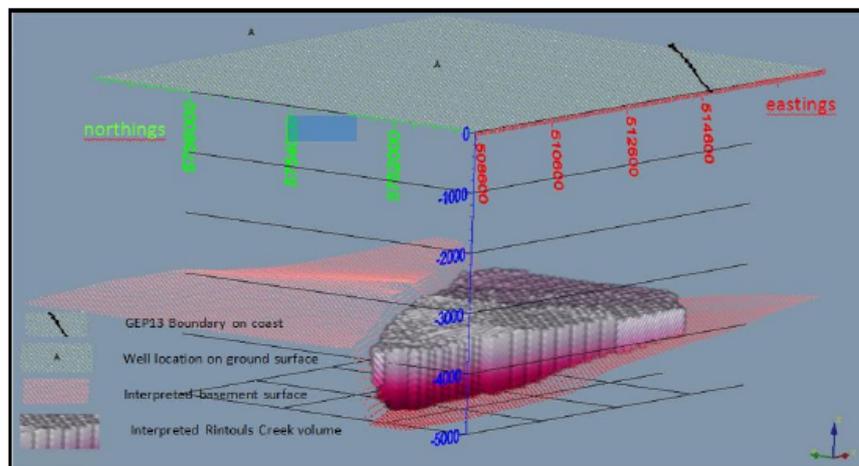
### **Micro Earthquake (MEQ) Monitoring – Pilot Trial**

Greenearth Energy placed a geophone or sonde at 1,350m in the Loy Yang-2 well in November 2008. This well is owned by Lakes Oil N.L. and Greenearth Energy is able to access this well due to an ongoing agreement between the two companies. Another geophone has been placed at the surface. The sonde will continuously monitor the occurrence of natural sub-surface activity which will be collated and interpreted. The initial data download of the first two months data show that the sensors are successfully recording events. The next quarter will see more data becoming available and will enable the company to continue its assessment of this trial.

### **Inferred Resource defined near Seaspray**

Greenearth Energy released an estimated Inferred Geothermal Resource during the quarter in the southern part of GEP 13. The Inferred Resource is confined to approximately  $28 \text{ km}^2$  area which corresponds with the Wombat 3D seismic survey conducted early in 2008, by Lakes Oil N.L. The Inferred Resource calculation of 3,600 petajoules (PJ) is based on a Hot Sedimentary Aquifer (HSA) geothermal system.

A 3D view of the HSA reservoir geological model is provided below:



Example of output from the reservoir 3D geological model, looking north-east, showing as solid the Rintouls Creek formation

The assessment indicated the heat-flow in the Wombat Geothermal Play is  $70 \pm 7 \text{ mW/m}^2$ . The average reservoir temperature is estimated to be  $157^\circ\text{C}$  at around 4,100m depth. No estimate has been made of extractable or recoverable energy. However, by way of illustration only 2.8% of the stored heat would have to be recovered over a 30 year project life to generate a constant flow of 10 MWe.

The Inferred Resource estimation area covers less than 1% of the permit area. Greenearth Energy and its consultants considers the Rintouls Creek Formation to be regionally extensive, including in the Latrobe Valley area and to be prospective for permeability and porosity parameters sufficient to support geothermal development.

## Otway Basin- Geelong Area (GEP 10) - 100% Equity

In addition to the production of the Geelong Region Roadmap for a Geothermal Power Plant the following activities also occurred in this permit:

### Heat flow mapping

The second phase of heat flow mapping was concluded in this permit. The company contracted Hot Dry Rocks Pty Ltd to carry out this program. The temperature measurement and thermal conductivity analysis was designed to validate and build upon the first phase of heat flow mapping carried out in 2007. Results of the work confirmed the high heat flows in the region southwest of Geelong, and were used in the calculation of the Inferred Resource for the Anglesea area, announced in the last Quarter.

### Magnetotelluric survey

The data from the 53km line magnetotelluric survey carried out in November 2008, running from the Lake Modewarre area eastwards along the Bellarine Peninsula to St Leonards has been interpreted during the last quarter with the result having just been received. Greenearth Energy is currently reviewing this information and completing a further analysis.

**Signed on behalf of Greenearth Energy Ltd.**



Mark Miller  
Managing Director  
Greenearth Energy Limited

The information in this Statement that relates to Geothermal Resources has been compiled by Dr Graeme Beardsmore, an employee of Hot Dry Rocks Pty Ltd. Dr Beardsmore has over 15 years experience in the determination of crustal temperatures relevant to the style of geothermal play under consideration, is a member of the Australian Society of Exploration Geophysicists and abides by the Code of Ethics of that organization.

Dr Beardsmore qualifies as a Competent Person as defined in the *Australian Code for Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition)*. Dr Beardsmore consents to the public release of this Statement in the form and context in which it appears.



**Appendix 5B – Greenerth Energy Limited (GER)**  
**Mining exploration entity quarterly report – 31 MARCH 2009**

	Current quarter \$A'000	Year to date (9 months) \$A'000
1.13 Total operating & investing cash flows (brought forward)	<b>(711)</b>	<b>(2,765)</b>
<b>Cash flows related to financing activities</b>		
1.14 Proceeds from issues of shares options, etc.	<b>2</b>	<b>4</b>
1.15 Proceeds from sale of forfeited shares	-	-
1.16 Proceeds from borrowings	-	-
1.17 Repayment of borrowings	-	-
1.18 Dividends paid	-	-
1.19 Farm-in/Joint Venture contributions	-	-
<b>Net financing cash flows</b>	<b>2</b>	<b>4</b>
<b>Net increase (decrease) in cash held</b>	<b>(709)</b>	<b>(2,761)</b>
1.20 Cash at beginning of quarter/year to date	<b>6,252</b>	<b>8,304</b>
1.21 Exchange rate adjustments to item 1.20	-	-
1.22 Cash at end of quarter	<b>5,543</b>	<b>5,543</b>

**Payments to Directors of the entity and associates of the Directors;  
Payments to related entities and associates of the related entities.**

	Current quarter \$A'000
1.23 Aggregate amount of payments to the parties included in item 1.2	<b>83</b>
1.24 Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Directors Fees: \$50,415

Consulting and professional fees paid to Director-related entities: \$32,290

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

None

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

None

**Appendix 5B – Greenearth Energy Limited (GER)**  
**Mining exploration entity quarterly report – 31 MARCH 2009**

**Financing facilities available**

*Add notes as necessary for an understanding of the position.*

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements – Bank overdraft	-	-

**Estimated cash outflows for next quarter**

	\$ A'000
4.1 Exploration and evaluation	<b>250</b>
4.2 Development	-
<b>Total</b>	<b>250</b>

**Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$ A'000
5.1 Cash on hand and at bank (item 1.22)	<b>5,543</b>	<b>6,252</b>
5.2 Deposits at call	<b>45</b>	<b>45</b>
5.3 Bank overdraft	-	-
5.4 Investments in listed companies (market value)	<b>78</b>	<b>94</b>
<b>Total: cash at end of quarter</b>	<b>5,666</b>	<b>6,391</b>

**Changes in interests in mining tenements**

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements acquired or increased			

**Appendix 5B – Greenerth Energy Limited (GER)**  
**Mining exploration entity quarterly report – 31 MARCH 2009**

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**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

	Number issued	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference securities</b> <i>(description)</i>	-	-		
7.2 Changes during quarter	-	-		
(a) Increases through issues				
(b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	67,455,433	50,332,099		
7.4 Changes during quarter				
(a) Increases through issues	7,999 666,666	7,999 666,666	0.30 cents 0.15 cents	0.30 cents 0.15 cents
(b) Decrease through returns of capital, buy-backs	-	-		
7.5 <b>+Convertible debt securities</b> <i>(description)</i>	-	-		
7.6 Changes during quarter				
(a) Increases through issues	-	-		
(b) Decreases through securities matured, converted	-	-		

**Appendix 5B – Greenearth Energy Limited (GER)**  
**Mining exploration entity quarterly report – 31 MARCH 2009**

7.7	<b>Options</b>			<i>Exercise price</i>	<i>Expiry date</i>
	<i>Directors</i>	4,500,000	-	45 cents	30 September 2012
	<i>Staff</i>	1,500,000	-	45 cents	30 September 2012
	<i>Man. Director</i>	1,000,000	-	20 cents	30 September 2010
	<i>Man. Director</i>	2,000,000	-	20 cents	30 September 2012
	<i>Third parties</i>	33,333,333	-	45 cents	30 September 2012
	<i>Third parties</i>	2,000,000	-	45 cents	30 September 2012
	<i>Third parties</i>	22,260,118	16,541,002	30 cents	15 April 2009
	<b>TOTAL</b>	<u>66,593,451</u>	<u>16,541,002</u>		
7.8	Issued during the quarter	-			
7.9	Exercised during the quarter	-			
7.10	Expired during the quarter	-	-	-	-
7.11	<b>Debentures</b> <i>(totals only)</i>	-	-		
7.12	<b>Unsecured notes</b> <i>(totals only)</i>	-	-		

**Compliance statement**

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Law or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here: ..... Date: 30 April 2009  
*Company Secretary*

Print name: **Vicki Kahanoff**

**Notes**

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.

**Appendix 5B – Greenearth Energy Limited (GER)**  
**Mining exploration entity quarterly report – 31 MARCH 2009**

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- 2 The “Nature of interest” (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, AASB 1022; *Accounting for Extractive Industries* and AASB 1026: *Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complies with.

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