



TM

# EARTH

Quarter Ending 30 September 2008

# POWERED



TM

PANAX GEOTHERMAL

#### DIRECTORS

Mr Greg Martyr (Non Executive Chairman)

Dr Bertus de Graaf (Managing Director and Chief Executive Officer)

Mr Kerry Parker (Executive Director, Chief Financial Officer, and Company Secretary)

Mr Stephen Evans (Non Executive Director)

#### REGISTERED OFFICE AND CORPORATE OFFICE

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#### STOCK EXCHANGE LISTING

Australian Stock Exchange

Ordinary Shares – “PAX”

## HIGHLIGHTS

- Acquisition of Osiris Energy Limited (Osiris) substantially enhances success in the Limestone Coast Geothermal Project.
- Merger with Osiris now declared unconditional.
- Panax is in advanced negotiations with several parties to raise additional funds.
- Well site selection and well design for Limestone Coast production well are in advanced preparation.
- Panax has secured a contract drilling slot for mid-2009 for the Limestone Coast Geothermal Project.
- Submissions for a \$5 - \$7 million Government grant for drilling a deep well have been lodged.
- Dr Subir Sanyal appointed as Strategic Advisor to the Board of Panax.
- Panax is cashed-up with \$8 million and no debt.

## OVERVIEW

The focus of our activities in the quarter under review related to the negotiation and finalisation of the acquisition of Osiris Energy Limited ("Osiris"). The benefits of the proposed merger are very compelling, as the superior data base available on Osiris' GEL223 Penola Trough Project, virtually eliminates the exploration risk of the Limestone Coast Geothermal Project.

This means that Panax can now confidently plan commencing the drilling of a production well rather than an appraisal well. As such, we can expect not only steam sometime during mid-2009, but also that the well will produce at the expected flow rates and temperatures.

Following the approval by Panax shareholders of this transaction at the Extraordinary General Meeting (EGM) which is scheduled for 4 December, 2008, the focus of the Limestone Coast Geothermal Project will shift from exploration to development.

Considering the overall status of geothermal exploration and development in Australia, we have good reason to expect that the first 5-10 MWe module of the Limestone Coast Geothermal power plant could become the first commercial geothermal plant in Australia, delivering base-load power to the national grid. Such a development will also be a tangible demonstration of the overall scope of the Limestone Coast Geothermal Project, which has an estimated generating potential\*) of 1,500 MWe, equivalent to two coal fired power stations.



Outline of Osiris' Penola Trough (GEL223), showing distribution of the 20 deep petroleum wells (green diamonds).

## Kyoto and Climate Change

Governments from around the world will commence negotiations regarding a successor to the existing Kyoto Protocol in December, 2008, in Poznan, Poland. The deadline for a final agreement is scheduled to be reached by December, 2009. Considering that global demand for energy is expected to increase by 50% by 2030, investments in and development of clean forms of renewable, base-load energy must start now in order to reduce the threat of global warming.

Until recently there were encouraging signs that Governments (including Australia and USA) and industry were implementing positive steps to tackle this major threat. However, since the emergence of the global financial crisis, this may no longer be the case. It appears that at best we can expect a slowdown in the global uptake of clean energy generation. In contrast to this, the recent confirmation by the Australian Government to commence a carbon reduction scheme by 2010 is encouraging.

\*) Generating potential provides a probabilistic estimate of the ultimate power capacity of a reservoir on the basis of the information that is available when the estimate is made. The use of the word "potential" reflects the relatively higher level of uncertainty before drill and flow testing has taken place.

Despite the above, it is encouraging to note that geothermal base-load power is cheaper to realise than 'clean coal' technologies (including CO<sub>2</sub> sequestration). The latter has received major support from recent Australian Governments, including the current one. By demonstrating the competitiveness of clean, grid connected, base-load geothermal power, this form of energy generation should be expected to receive a major boost in recognition. Panax is well placed to play a pioneering role in this.

## Fundraising

Considerable efforts have gone into our fundraising activities over the last few months. The global market conditions have not made this easy. Despite this we have been able to raise strong interest from a number of institutional investors both in Australia and Internationally. We remain

optimistic that we will meet our goal. In addition, we are also well placed to receive a \$5 to \$7 million grant from the Australian Government. If neither of the above yields a positive result we will have to rethink our situation. In the meantime, Panax is cashed-up with \$8 million in cash and no debt.

## Dr Subir Sanyal



**Dr Subir Sanyal, President of Geothermex Inc, California.**

Panax is fortunate to have been able to secure Dr Subir Sanyal as a Strategic Advisor to the Board. As set out elsewhere, Dr Sanyal brings with him a wealth of expertise and experience of geothermal exploration and development.



**The enlarged Limestone Coast Geothermal Project**

## CORPORATE

### Panax to Acquire Osiris Energy

Panax announced on 9 September that it had reached agreement to acquire 100% of Osiris Energy Limited ("Osiris"), a Melbourne based unlisted geothermal exploration company. Osiris' lead asset is its Penola Trough Project (GEL223), which borders Panax's Limestone Coast Geothermal Project in the Otway Basin in South Australia. The superior open file database on GEL223 (for details please refer to the 'Operations' section of this report) virtually eliminates the exploration risk of the enlarged Limestone Coast Geothermal Project. The confidence provided by this superior data base on GEL223, allows the decision to plan for a production well rather than an appraisal well. The merged entity will have the best understood wet geothermal area in Australia. As such, it will also have a superior chance to succeed in obtaining a Government grant.

Osiris' other assets comprise three geothermal exploration licences in the Cooper Basin region in South Australia (GEL's 220,221 and 281), and an application for a geothermal licence in Northern New South Wales.

As consideration, Panax will issue the Osiris shareholders approximately 70.1 million fully paid ordinary shares in Panax. Upon completion of the merger, current Panax shareholders will hold approximately 61.2% of the issued capital, with the incoming Osiris shareholders holding approximately 38.8% of the issued capital. The major shareholders of Osiris have agreed to an 18 months escrow period for their shares.

The merger was initially subject to raising a minimum of \$20 million in new

working capital, but in view of current market conditions this condition has now been waived by both parties (refer ASX announcement 30 October, 2008). The merger remains subject to approval by Panax shareholders, with an EGM scheduled for 4 December, 2008. Upon completion Panax will have access to the expertise and experience of the founding directors of Osiris, Mr Ian Reid and Mr Ron Palmer, who both have entered into two year retainer agreements. Upon approval of the merger by Panax shareholders, it is proposed that Mr Reid will also be appointed as a Non-Executive Director to the Board of Panax.

The completion of the Osiris acquisition will accelerate the development of the expanded Limestone Coast Geothermal Project. Having secured a firm drilling rig slot for mid 2009, we can be confident that our first production well will not only produce steam, but also that the well will produce at the expected rate and temperature, sufficient for economic development.

### Capital Raising

As part of the Osiris Transaction, Panax secured the services of Dundee Securities Corporation ('Dundee') based in Toronto, Canada, to assist in raising a target amount of \$25 to \$30 million. Dundee is an international investment bank renowned for its financing of global geothermal energy companies.

Since the announcement of the Osiris transaction, Panax has made presentations to more than 60 prospective institutional investors in Canada, USA, UK and Australia. Our presentations were well received and the value of the Osiris acquisition was clearly recognised, but unfortunately the

timing of our 'road show' coincided with the global crisis in equity and credit markets. As a consequence, the anticipated quick turnaround of a standard fundraising did not materialise.

Despite the current global financial crisis, a number of major institutional investors with interests and understanding of the 'Clean Tech' sector are currently engaged in detailed due diligence studies of the enlarged Limestone Coast Geothermal Project as

well as of the Company. Negotiations with four parties are in progress and we remain optimistic that this will lead to the raising of sufficient funds to realise our plans, albeit later than anticipated.

Following completion of the above, Panax has made a commitment to implement a Share Purchase Plan, to allow current shareholders to participate on terms similar to those extended to institutional investors.

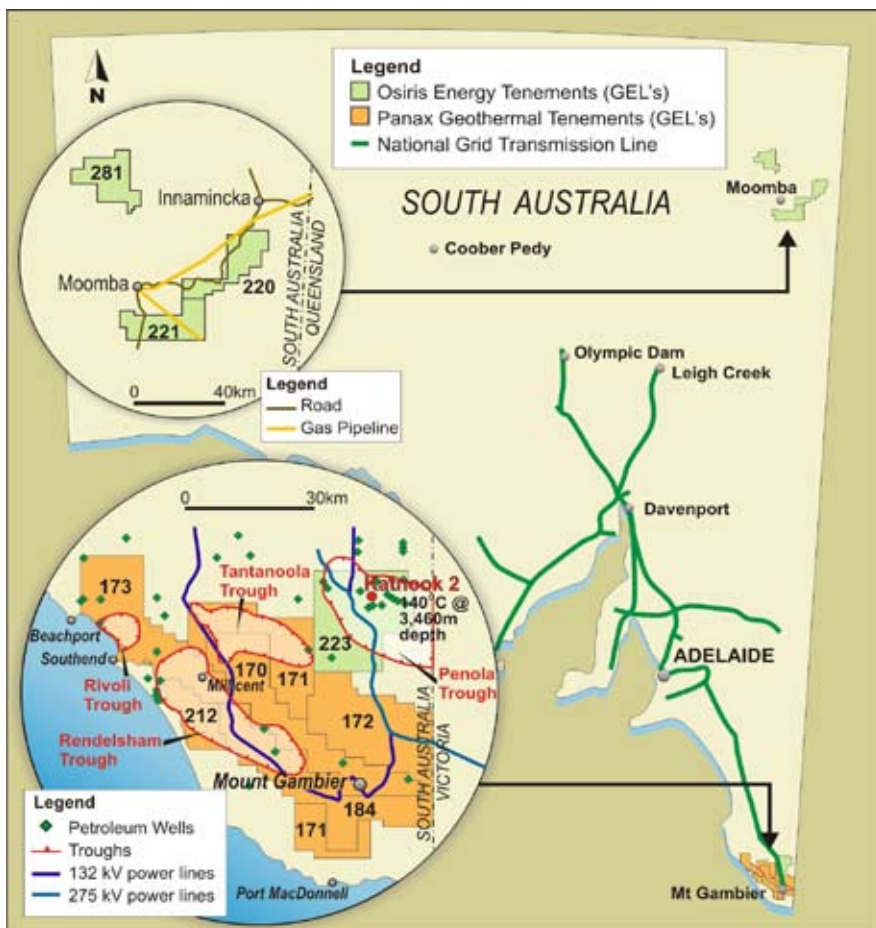


Diagram showing location of GEL's owned by Osiris at the Limestone Coast and near Moomba. The national grid is shown in green. The insets (circles) show details; note the layout of the enlarged Limestone Coast Geothermal Project.

## Climate Ready Grant

On 4 September, 2008, the Company lodged its formal application under the Australian Federal Government's Department of Innovation, Industry, Science and Research "Climate Ready Program" for a grant of \$5 million for the Company's Limestone Coast Geothermal Project.

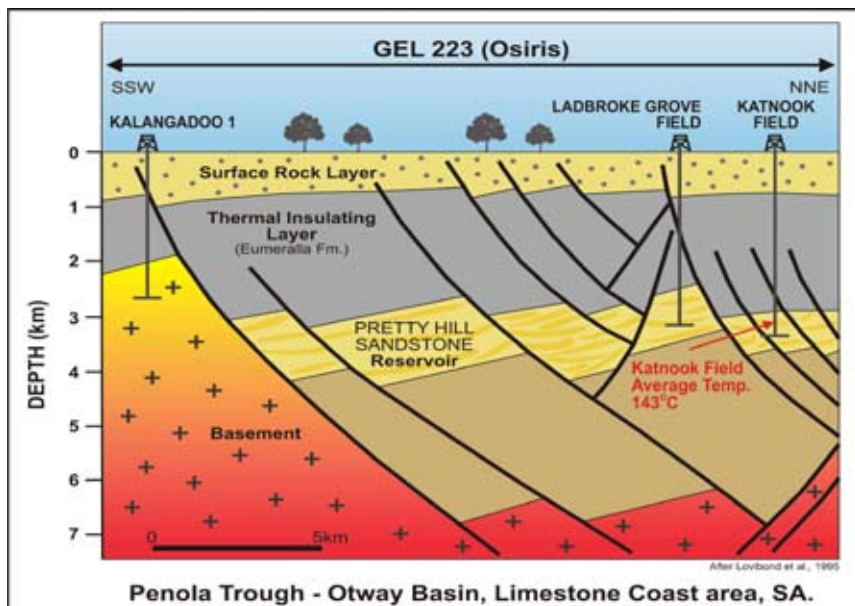
Such application replaces the original REDI grant application which was submitted earlier this year, prior to the Federal Government suspending the REDI initiative in the 2008 Australian Federal Budget. At the time, there were very strong indications that Panax was close to success in securing a \$5 million REDI grant for drilling an appraisal well in the Limestone Coast area.

On 10 October, 2008, the Company was advised that its application under the "Climate Ready Program" had been assessed as being

fully complete and complying in all respects, and that the application will be formally considered by the AusIndustry Board of the Department in the second half of November, 2008. If approved, all costs incurred from 4 September 2008 (the date of lodgment of the application) relating to the Limestone Coast geothermal well would be eligible for claim.

## Geothermal Drilling Fund

Panax has also lodged a formal Expression of Interest ("EOI") for a grant of up to \$7 million with the Australian Federal Government under its \$50 million Geothermal Drilling Program ("GDP"). The maximum possible grant available for a "Proof of Concept" GDP Project is \$7 million. The EOI period closed on 29 September, 2008 and full applications are expected to be sought under the GDP in the final quarter of the 2009 calendar year.



Simplified cross section of the Penola Trough based on detailed analysis of existing 3D and 2D seismic surveys as well as logs from existing deep wells.



One of the key merit criteria for such GDP grant would appear to be that applicants have access to a drilling rig to be able to complete a "Proof of Concept" well in a timely fashion upon approval. Given Panax's access to the 2,000 hp Le Tourneau rig for mid 2009, the Company is of the view that it is well placed to be a strong contender for such a GDP grant. Panax's application for a GDP grant will not be considered in the event Panax is allocated a 'Climate Ready' grant.

### **Strategic Advisor to the Board**

In September, 2008, Panax was fortunate to secure the services of Dr Subir Sanyal as "Strategic Advisor" to the Board of Panax. Dr Sanyal is president of Geothermex, Inc (San Francisco, USA) the largest and most comprehensive consulting firm in the western hemisphere. This leading firm has been directly involved in the development of more than 7,000 MWe of geothermal power generation.

Dr Sanyal has previously been involved in the Limestone Coast Geothermal Project and the Company looks forward to benefitting from his extensive geothermal development experience. Dr Sanyal has entered into a retainer agreement for an initial period of two years.

### **Drilling Rig**

During the quarter under review, the Company announced that it had entered into an arrangement with Weatherford Drilling International, whereby the Company has secured the use of the Weatherford's newly constructed Le Tourneau 2,000 hp "Lightning" Drilling Rig # 828 for use on the Company's Limestone Coast Geothermal Project. The

Company has paid a deposit of approximately \$425,000 to secure a firm drilling slot with Weatherford for mid 2009.

At the time that the arrangement with Weatherford was completed, this firm drilling slot was for April/May, 2009. Subsequent to the completion of the arrangement with Weatherford, the Company has been advised that there will be a delay of approximately 2 months to this schedule, as result of finalization delays to the construction of the rig. Weatherford has advised the Company that the delay is a result of damage caused by the recent Hurricane Ike in Houston that saw Le Tourneau's main yard and some of their suppliers affected.

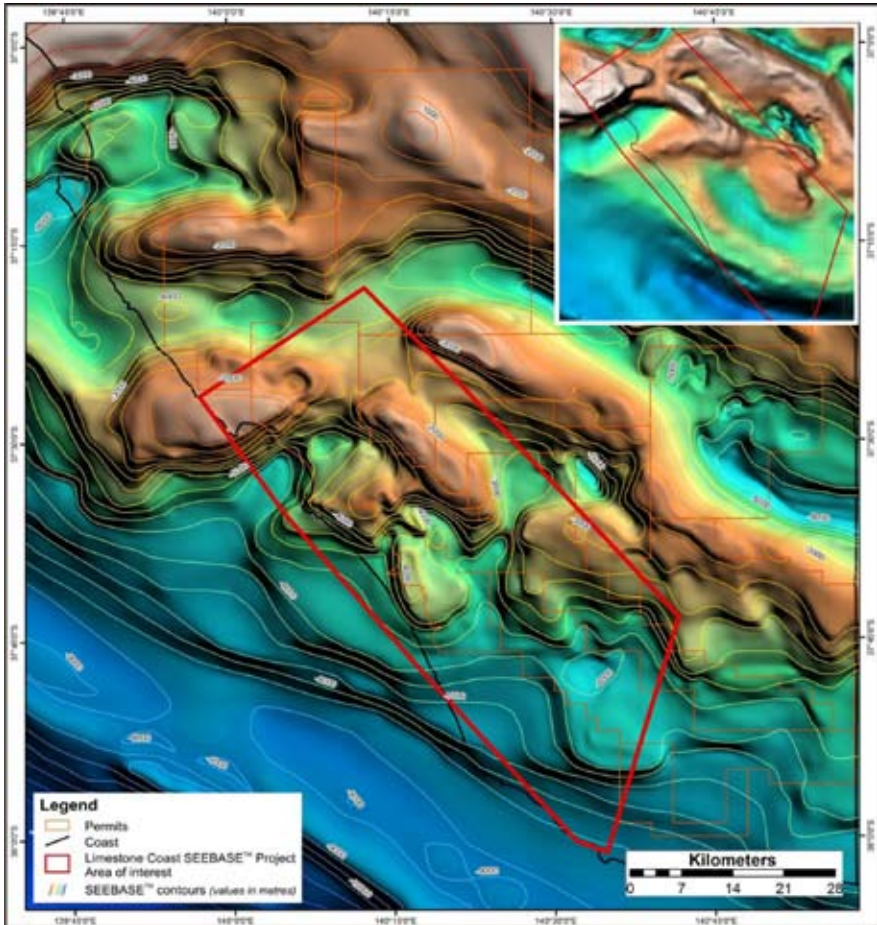
### **Kyrgyz Republic Joint Venture Agreement**

During the quarter under review, all discussions and negotiations relating to the formal Joint Venture Agreement between Panax and Kentor Gold Limited (ASX: KGL) were completed. The final versions of the Joint Venture Agreement are currently being circulated amongst the Joint Venture partners for execution.

### **Annual Report, and Annual General Meeting**

The Company's Annual Report to Shareholders and associated Notice of Meeting for the 2008 Annual General Meeting has been mailed to all Shareholders.

The Annual General Meeting of Shareholders will be held at the Brisbane Polo Club, Earl of Inchcape Room, 1 Eagle Street, Brisbane at 10.00 am (Brisbane time) on Wednesday 26 November, 2008.



Revised SEEBASE model showing sub-basin architecture. Model detail in the area of interest (red outline) has been enhanced by new constraints. The inset in the righthand corner shows the original SEEBASE model for comparison.

## Panax Shareholders Meeting

An EGM of the members of Panax Geothermal Limited will be held at 11.00am (Brisbane time) at the Earl of Inchcape Room, Brisbane Polo Club, 1 Eagle Street, Brisbane on Thursday 4 December, 2008.

## Conference Presentations

Panax has made two formal presentations to the inaugural AGEA Conference held in Melbourne in August. In addition, in early October, 2008, the Company made a formal presentation to the internationally recognized Geothermal Resources Council 2008 Conference in Reno, Nevada, USA.

## OPERATIONS

### Limestone Coast Geothermal Project

The successful completion of the Osiris merger will add GEL223 to the project area, increasing the coverage by 493km<sup>2</sup>, for a total of 3,127km<sup>2</sup>. GEL223 contains a large part of the Penola Trough, which has a superior data base as compared to the three troughs contained in Panax's original project area. This open file data base comprises:

- Detailed information of 20 deep petroleum wells, including well logs, selected core, etc;
- 600m of vertical thickness of the productive reservoir formation ( $\pm$  1,000m in thickness) has been intersected by previous drilling;
- 400km<sup>2</sup> of 3D seismic data;
- 1,000km<sup>2</sup> 2D seismic data.

The value of this unique data base is in excess of A\$100 million. The founding directors of Osiris, the geoscientists Mr Ian Reid and Mr Ron Palmer, have collated these extensive data and completed several years of analysis on this project.

The data base includes porosity/permeability data as measured in drill cores available from selected intervals within the productive reservoir formation – the Pretty Hill Sandstone. This shows that the prevailing porosity/permeability within the Pretty Hill Sandstone in the Penola Trough exceed the minimum required for sustaining large flow rates as required for a commercial geothermal operation. The above information combined with the 400km<sup>2</sup> of 3D seismic

data has enabled Osiris to construct a “CAT Scan” like image of the productive reservoir. Previous temperature measurements in the productive reservoir formation show that we can expect geothermal brines with a minimum temperature of 140°C. Such temperatures require high flow rates for attaining commercial power production. At a production rate of 200 litres/second, a production well will deliver 4.8 MWe net, excluding power required for the production pumps. The existing data confirm that these rates can be achieved.

We can now expect that the first deep production well in the Penola Trough would not only produce steam but can also be expected to produce at the required high flow rate. This in turn would be the basis for planning the development of the first commercial 5-10 MWe module of a commercial, grid connected geothermal power plant. The above initiative would at the same time enhance the value of Panax's other troughs in the Limestone Coast area, which have a collective generating potential<sup>(\*)</sup> previously estimated at 1,500 MWe, the equivalent of two coal fired power stations.

### Activities for the Quarter

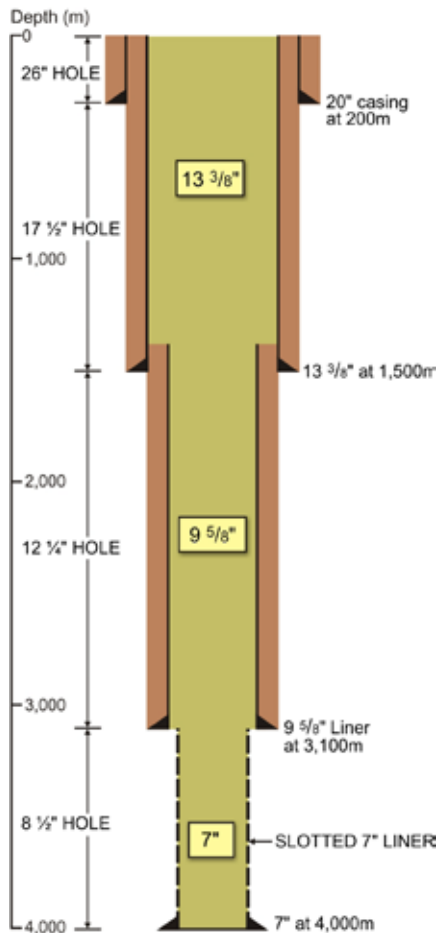
Exploration activities during the quarter focussed on the completion of the reinterpretation of existing seismic data as well as the completion of the MT survey covering the St Clair, Rivoli, Tantanoola and Rendelsham Troughs. The seismic reinterpretation led to the generation of a new SEEBASE model, providing further detailed understanding of the topography of the basement.

The workshop for determining the optimal

<sup>(\*)</sup> see footnote page 4

location for drilling the first deep well took place in late September, 2008, with input of several external consultants and advisors. However, the drill site selection re-focused on Osiris' Penola Trough because of its superior data base. The Ladbroke Grove area has been selected as the potential location for the first production well, with the exact location subject to site inspection planned for next month.

## SALAMANDER-1



Production well to 4,000m, designed for high flow rates.

## Well Design – Salamander 1

Panax received expert advice from SKM concerning the well design as well as of the programme to test the water flow rate, temperature and pressure of the productive reservoir following the completion of the Salamander 1 well. This in turn has enabled us to plan the engineering of the well and commence ordering long-lead items. As illustrated, the well is designed to reach a depth of 4,000m and will have a large diameter to accommodate the required high flow rates, i.e. 13 3/8 inch casing to 1,500m, 9 5/8 inch casing to 3,100m, with an open section of 8 1/2 inch to 4,000m, lined with a slotted 7 inch liner.

## Kyrgyz Republic

During the quarter, the following exploration activities were conducted:

- Our activities in Kyrgyzstan comprised:
  - The completion of the first round of shallow temperature measurements around the Inylchek hot granite in the Tien Shan Mountains of eastern Kyrgyzstan;
  - A second round of measurements will be conducted in October, 2008 to infill data gaps;
  - Continuing the review and assessment of data sources from the Former Soviet Union era, to build a database of existing drill holes within our permit areas that we could enter to take temperature measurements to enable a more formal ranking and assessment process to be implemented for the identified prospects and leads;

- Assessing access into old mining adits to undertake temperature gradient survey within the granites in the Kyzylompul Permit;
- A visit to Tajikistan, to the southwest of Kyrgyzstan, as well as to Kazakhstan by Mr Orozbai Tohtonazarov, General Director of CJSC Kentor, to reconnoiter for geothermal opportunities. A number of hot springs with attributes worthy of follow up investigation were identified.
- Dr Kevin Brown completed his interpretation of the hot spring water samples collected in the second quarter. The results will be used to rank the geothermal prospectivity of each permit and to guide the next phase of exploration work programs.
- Local Kyrgyz personnel are led by Mr. Vasily Toropchin who is assigned from Kentor Gold, to co-ordinate the exploratory activities in Kyrgyzstan. He is scheduled to visit Australia in the fourth quarter for technical training.
- During October, 2008, our new General Manager Exploration, Dr Rob Heath, visited Kyrgyzstan:
  - to establish effective relationships with the Bishkek-based team;
  - to review progress on current work programs;
  - To provide direction for ongoing project-based work activities by Kentor Gold personnel on behalf of Panax.



**Creating hole for probe for shallow temperature measurements, Inylchek area, Kyrgyz Republic.**

## India

### Puga Project – (Himalayan Geothermal Province)

Our joint venture partner Geosyndicate Power Private Ltd (GPP), has advised that a decision to issue a permit for the exploration and development of this project is now under active consideration by the local government, with a decision expected shortly. The Puga Project has strong support from the local population based in Leh, which currently relies essentially on diesel-generated power. This project is known to be associated with extremely high geothermal gradients and, because of previous work carried out, is now ready for drill testing.

## Krishna-Godavari

The hot spring water samples collected in the previous quarter were analysed, with results being inconclusive at this stage. Our joint venture partner GPP has advised that data from deep petroleum wells in the vicinity of

the coast indicate encouraging geothermal gradients. This information remains to be obtained by Panax.

## Advanced Geothermal Opportunities

No further activities were undertaken during the period under review.

## HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY

The Company has engaged Mr Ian Cook, a well known consultant in the area of HSEC policy formulation and review to assist the Company in finalizing all of its HSEC policies and procedures well in advance of drilling our Salamander 1 well in the Limestone Coast area in mid 2009.

During the quarter under review, there were no reported incidents relating to health, safety, environment or community related matters.

Scheduled community information and consultation meetings in the Limestone Coast area will be scheduled shortly.

## FINANCE AND ADMINISTRATION

At the end of the quarter, the Company's cash position stood at approximately \$8.0 million, a decrease of approximately \$1.1 million over the previous quarter.

The decrease is largely attributable to:

- The payment of a deposit of approximately \$425,000 to Weatherford Drilling International to secure the 2,000

hp Le Tourneau rig slot for the second quarter of calendar 2009; and

- Costs incurred during the quarter of approximately \$80,000 relating to the completion of the Magneto-Telluric survey over the Limestone Coast Area to assist with final site selection for the Salamander 1 well. At the end of the quarter, the remaining costs of the MT survey amounting to approximately \$170,000 have been paid.

Payment of both of these items ensures that the Company remains on track to drill and complete its Salamander 1 well on the Limestone Coast Project during mid 2009.

The Company's Financial Statements for the financial year ended 30 June, 2008 were lodged with ASX on 4 September, 2008.



Dr Bertus de Graaf  
Managing Director/ Chief Executive Officer

If you have any questions, I would be pleased to assist.

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Panax has secured a firm drilling slot for mid 2009 for use of a Le Tourneau 2000 hp "Lightning" contract drilling rig, operated by Weatherford Drilling International.

