

## 9 September 2008

### **ASX ANNOUNCEMENT**

# Panax to acquire Osiris Energy and commences fundraising of up to \$30 million

(Increasing likelihood of success of Limestone Coast Geothermal Project)

Panax Geothermal Ltd ("Panax") is pleased to announce that it has reached agreement to acquire 100% of Osiris Energy Limited ("Osiris"), a Melbourne based unlisted geothermal exploration company. Panax has advanced plans to raise up to \$30 million in new equity.

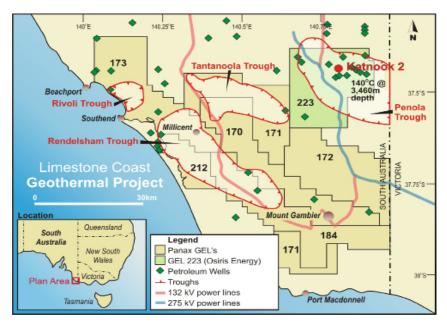
# **Key Transaction Highlights**

- Panax to acquire 100% of Osiris, by means of an all scrip offer to Osiris shareholders, valuing Osiris at \$14.8 million;
- Pre-commitment of major shareholders of Osiris, (approximately 80%);
- Likelihood of success of expanded Limestone Coast Geothermal Project is substantially increased;
- Equity raising of up to \$30 million; and
- Share Purchase Plan to be implemented following completion of the equity raising.

## Osiris' Assets

Osiris' lead asset is its Penola Trough Project (GEL223) located in the Otway Basin, directly adjacent to Panax's Limestone Coast Geothermal Project in South Australia. GEL223 has a superior database by virtue of extensive former petroleum exploration activities. Osiris has collated these extensive data and has completed several years of analysis on this project through its founders, Ian Reid and Ron Palmer.

Osiris also holds three geothermal exploration licences in the Cooper Basin region (GEL's 220, 221 and 281) in South Australia as well as an application for a licence in Northern NSW.



Tenement area of the Limestone Coast Geothermal Project, including Osiris GEL223.

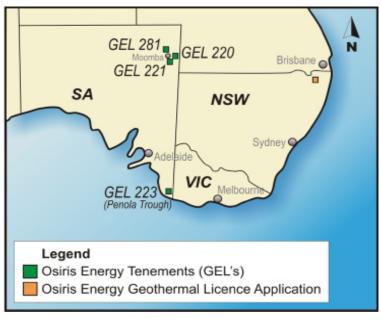
Note excellent infrastructure, with overhead high voltage power lines

## **Consideration Payable**

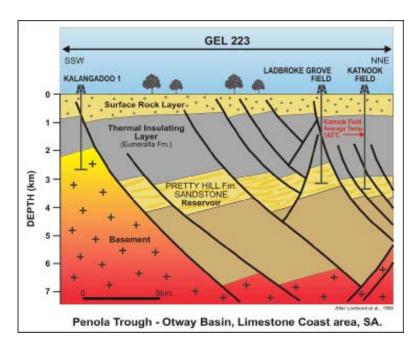
As consideration for the transaction, Panax will issue to the Osiris shareholders approximately 70.1 million fully paid ordinary shares in Panax, in accordance with a pre-agreed formula (see detail in attached Appendix A). The shares to be issued as consideration are based on the 30 day volume weighted average price (VWAP) of Panax shares immediately prior to the announcement (being 21.13 cents per share).

Upon completion of the merger, and prior to the planned equity raising, current Panax shareholders will hold approximately 61.3% of the issued capital of the merged entity, with Osiris shareholders holding approximately 38.7% of the issued capital. The major shareholders of Osiris have agreed to an 18 months escrow of their shares, from the date of completion.

Osiris was advised on the transaction by investment and advisory house, Inteq Limited.



Location of Osiris' geothermal tenements and applications



Schematic cross section of the Penola Trough

# **Equity Raising**

The merger is subject to the successful completion of raising a minimum of \$20 million in new working capital and is also subject to approval by Panax shareholders. Panax has secured the services of Dundee Securities Corporation ("Dundee") to assist in raising a target amount of \$25 million to \$30 million. Dundee is an international investment bank based in Toronto, Canada and is renowned for its financing and support of global geothermal energy companies. In June 2008, Panax was introduced by Dundee to 18 institutional investors in Toronto and New York.

### **Rationale for the Transactions**

- To substantially enhance the likelihood of success of the expanded Limestone Coast Geothermal Project. This results from Panax now having access to the large and comprehensive data base in GEL223, comprising 20 petroleum wells along with substantial 2D and 3D seismic data. Measurements from the Pretty Hill Sandstone in existing petroleum wells within GEL223 have been used to estimate flow rates of up to 200 litres per second (200 \( \ell / \sigma). The downhole temperature at the Katnook 2 petroleum well is 143°C. Assuming the above parameters of 200 \( \ell / \sigma \) at 143°C, a production well in this area would have an output of 4.8 MWe\*) net zero emission power (excluding production pumps);
- A merger of the assets of Panax and Osiris will result in the creation of a geothermal exploration company with a lower risk profile, demonstrating the viability, lower risk and faster development time for the geothermal model of deep, hot wet rock sedimentary basins that is being pursued by Panax;
- To raise additional working funds to realize our plans to be the first grid-connected commercial geothermal power producer in Australia and to further our aim to become a major participant in the geothermal industry, both nationally and internationally.

<sup>\*) 4.8</sup> MWe net output will generate approximately \$AUD90 million in undiscounted cumulative revenues over a period of 25 years on the basis of an electricity price of \$AUD90 per MWe for zero emission power (i.e. including carbon tariffs). Over the same period, 4.8 MWe of base-load power will cut emmissions by 1.06 million tonnes of CO<sub>2</sub> using an emmissions factor of 1.06

Following the successful completion of the merger with Osiris and the planned capital raising, Panax will have approximately \$35 million in cash. This is sufficient to significantly advance the Limestone Coast Geothermal Project by drilling a deep appraisal/production well and the subsequent reservoir testing, without being overly dependent on Government grants, or diluting our project interests through commercially unattractive joint venture arrangements. Panax has previously announced that it has secured a contract drilling rig for the spudding of its first deep well in the first half of the 2009 calendar year. A firm drilling slot has been secured for April/May 2009.

A successful first deep well in the Penola Trough in GEL223 would also enhance the value of Panax's current geothermal tenements in the Limestone Coast Geothermal Project area by demonstrating 'proof of concept' of the geothermal potential of deeply buried sedimentary basins. The three delineated Troughs in this part of the Otway Basin have a collective generating potential\*) estimated at 1,500 MWe, the equivalent of two coal fired power stations but with zero CO<sub>2</sub> emissions. The acquisition of the Penola Trough Project will further add to this potential.

A detailed analysis and technical workshop is to be conducted following completion of the merger transaction, to ascertain the most logical location for the merged entity's first deep appraisal/production well.

The technical/scientific background and justification of the transaction as well as details of the corporate/commercial aspects are set out in two appendices to this announcement.

#### **Benefits of the Transaction**

The completion of the above Transactions will lift Panax as a geothermal company to a new level. It will accelerate the development of the Limestone Coast Geothermal Project as it is our intention that proof of concept of the Limestone Coast Geothermal Project will be achieved in the 2009 calendar year through drilling a deep appraisal/production well in the Penola Trough. This in turn could quickly lead to the development of the first module of an "off the shelf" commercial power plant (5-10 MWe), the first step in realizing the estimated 1,500 MWe generating potential of the Limestone Coast Geothermal Project.

Panax intends to develop the Limestone Coast Geothermal Project into the first commercial, grid-connected geothermal power plant in Australia. The significant volume of carbon credits generated by producing zero-emission base-load power is the key to the commercial benefits the Limestone Coast Geothermal Project could create. The increased working capital will ensure that we can maintain our momentum, including advancing our international assets and plans.

The completion of the transactions will enhance our profile as a 'player' in the international 'Clean Tech' sector which is now attracting serious financial backing especially in North America and Europe. It will provide the necessary funding to enable Panax to take advantage of the window of opportunity to secure and advance new geothermal projects.

Upon completion Panax will have access to the expertise and experience of the

<sup>\*)</sup> Generating potential provides a probablistic 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.

founding Directors of Osiris, Mr Ian Reid and Mr Ron Palmer. Mr Reid and Mr Palmer have entered into two year retainer agreements, ensuring that their expertise and experience remains accessible.

Mr Reid will also be appointed as Non-Executive Director to the Board of Panax.

The Board of Directors and the Management Team of Panax are looking forward to gaining shareholder support for our plans around the world.

Bertus de Graaf Managing Director

For further information:

Dr Bertus de Graaf Managing Director Chief Executive Officer bdegraaf@panaxgeothermal.com.au +61 7 3512 7000

sales i by

Mr Kerry Parker
Executive Director
Chief Financial Officer
kparker@panaxgeothermal.com.au
+61 7 3512 7000; 0417 731 014

Mr Andrew Crook Crook Publicity 0419 788 431



# **Appendix "A" - Key Commercial Terms Of The Merger**

Under the terms of the Merger Implementation Agreement ("MIA") that has been entered into between Panax Geothermal Limited ("Panax") and Osiris Energy Limited ("Osiris") as dated 5 September 2008:

#### 1. Shares

Panax will acquire 100% of the issued capital of Osiris.

# 2. Consideration

Consideration payable to Osiris shareholders is to be calculated on the following basis:

- A = market capitalisation of Panax to be calculated based on the number of issued shares in Panax that are listed on ASX as at the calculation date (currently being 111,000,100 shares), multiplied by the higher of (i) 20 cents and (ii) VWAP of Panax Shares on ASX in the 30 ASX trading days immediately prior to the announcement to ASX of the transaction;
- B = the total cash balances held by Panax (including operating accounts, term deposits, and cash backed deposits) as evidenced by the balances recorded on its bank statements on the day immediately prior to the announcement of the transaction, on the basis that Panax continues to operate its business in the usual and customary manner;
- C = A B, which equates to the implied market value of Panax's geothermal exploration and development assets, sundry assets, and intellectual property;
- D = the dollar value of shares in Panax to be issued to Osiris shareholders in return for the transfer to Panax of 100% of the issued shares in Osiris;
- D = C;
- Issue Price The issue price of the shares to be used is to be the higher of (1) 20 cents and (2) the VWAP as referred to above;
- Capital Raising Panax will seek to raise additional external equity in the target range of amount of \$AUD 25 million to \$AUD 30 million (with a minimum raising of \$AUD 20 million) to finance the on-going requirements for exploration and appraisal activities of the expanded group post Merger.

#### 3. Conditions Precedent

The following key conditions precedent will apply to completion of the Merger:

- a) Approvals
  - Shareholder Approval at an Extraordinary General Meeting of Panax Shareholders.

# b) Capital Raising

- Completion of the proposed Transaction will occur at the time of the completion
  of the proposed Capital Raising, on terms agreed by Osiris and Panax, in the
  amount of \$AUD 25 million to \$AUD 30 million, with a minimum raising of
  \$AUD 20 million or such lower amount as may be agreed between Panax and
  Osiris, such agreement not to be unreasonably withheld;
- The Capital Raising is to be completed by 10 October 2008, or such later date as may be agreed between Panax and Osiris, such agreement not to be unreasonably withheld.

# c) Board Representation

- Upon completion of the Transactions, Osiris will be entitled to appoint:
- one non-executive director to the board of Panax (Ian Reid); and
- one additional non-executive director to the board of Panax.
- Such proposed appointees are subject to the review and approval of the Panax Board, such approval not to be unreasonably withheld. Such directors will stand for re-election at the next Annual General Meeting of the shareholders of Panax.

## d) Escrow

• The shares in Panax that are to be issued to the major shareholders in Osiris (defined as those individual shareholders in Osiris holding more than 15% of the Osiris shares as at the date of completion of the Merger) will be (to the extent permitted by law and subject to some agreed exceptions) subject to Escrow arrangements where the shares issued in Panax will be subject to Escrow for a minimum period of 18 months, subject to ASX not requiring a longer Escrow period.

## e) Staffing

• Ian Reid and Ron Palmer to be retained as key Consultants to Panax for a period of 2 years following completion of the Merger, on the basis of an agreed number of days per calendar quarter, at commercial rates.

# f) Non Compete

• Ian Reid and Ron Palmer to agree to a standard non-compete clauses for a period of 2 years after the Completion of the merger, and for an additional six month period following the completion of their initial consultancy arrangements referred to in 'e' above.



## Appendix "B"

# **Technical Summary**

Osiris Energy Limited ("Osiris") has assembled four geothermal exploration tenements and one application for an exploration licence, all in Australia. Subject to the completion of the merger, these permits will be added to the current acreage portfolio of Panax Geothermal Limited ("Panax"). This will expand Panax's exposure to a wider range of geothermal exploration targets. In particular, access to the Penola Trough in the Otway Basin will assist in substantially reducing the risk of the Limestone Coast Geothermal Project, as porous and permeable reservoirs of the Pretty Hill Sandstone have already been delineated. External studies have shown that long term flow rates up to 200 \( \extit{ } / \) s can be sustained.

The additional licenses will also provide Panax with opportunities to follow up on successful geothermal exploration activities by other geothermal explorers in and around the Nappamerri Trough in the Cooper Basin area of South Australia. The GEL220 tenement is approximately 6 km south of the Geodynamics Habanero tenement

The following new project areas will be added to the Panax acreage portfolio (Figure 1).

	Area	Basin	State	Km <sup>2</sup>	Start	First Renewal
GEL223	Penola Trough	Otway	SA	493	24-Jul-07	23-Jul-12
GEL220	Della Flank	Cooper	SA	466	24-Jul-06	23-Jul-11
GEL221	Big Lake	Cooper	SA	483	24-Jul-06	23-Jul-11
GEL281	Tirrawarra	Cooper	SA	482	12-Nov-07	11-Nov-13
GELA 3326		Clarence-Moreton	NSW		Under Application	

# Penola Trough, Otway Basin, South Australia

The Geothermal Exploration License 223 covers the Penola Trough of the onshore Otway Basin in the south-east of South Australia (Figure 2). This licence adds 493 km² to the six existing Panax licences in the Limestone Coast and gives a total GEL coverage of 3,127 km² over all of the deep troughs in the onshore Otway Basin, South Australia.

The target geothermal reservoir in GEL 223 is the Pretty Hill Sandstone reservoir is the same target as Panax is exploring in its Limestone Coast Project. This licence area has an extensive technical database of over 20 deep-drilled petroleum wells, cores, 2D and 3D seismic data on which the target temperature has been measured and the quality of the target reservoir has been observed. This provides a higher level of confidence in the assessment of the geothermal potential.

The depth to drill to the Pretty Hill Sandstone in the GEL is shallower than the current Panax licence area and the porosity and permeability is measured in the nearby petroleum wells (Figure 3 and 4). In effect, by locating a geothermal appraisal/production well in this permit, Panax has sound reasons to expect to intersect a productive geothermal reservoir.

Published technical studies of reservoir porosity and permeability using data from nearby petroleum wells, have been used by GeothermEx (2005) to estimate a water flow rate up to 200ℓ /s. The average temperature of wells in the Katnook gas field is estimated at 143°C. Assuming these and other engineering parameters, GeothermEx calculate potential power output per production well up to 4.8 MWe net zero emission power (excluding production pumps).

Work is well advanced by Osiris to identify the optimal geothermal drilling location in their tenement area based on 3D seismic integrated with their extensive technical database. Panax is considering a plan to drill a Limestone Coast appraisal/production well, Salamander 1. A rig contract has been secured with Weatherford International Drilling for drilling in April/May 2009. This well may well be the forerunner of the first commercial, grid connected geothermal power plant in Australia.

A successful test of the Pretty Hill Sandstone in the Penola Trough would further reduce the risk of the Limestone Coast Geothermal Project in the Tantanoola, Rivoli and Rendelsham Troughs to realise up to 1,500 MWe of potential geothermal energy.

## Cooper and Warburton Basins, South Australia

The three geothermal exploration licenses in northeastern South Australia (GELs 220, 221 and 281) covering 1431 km² provide Panax with exposure to geothermal opportunities in the Warburton and Cooper Basins (Figure 5). There is an extensive public database of petroleum well information as well as 2D and 3D seismic coverage. The licenses provide Panax with the opportunity to build on the success of the Geodynamics Hot Dry Rock granite project ("Habanero") in the Warburton Basin below the Nappamerri Trough, located approximately 6 km from GEL220. Osiris has also been looking at other geothermal targets within faulted granitic basement as well as potentially in conventional sandstone reservoirs of the Cooper Basin.

## **Clarence-Moreton Basin, New South Wales**

The Clarence-Moreton area (Application ELA3326) is located in the northeast of New South Wales and covers the deeper parts of the Clarence-Moreton sub-basin. The area was selected by Osiris on available petroleum exploration data and the nearby occurrence of high heat producing granites, potential for geothermal resources, proximity to market and opportunities for application of direct heat. The permit was applied for on 5th October 2007 and is pending a decision of the NSW government.

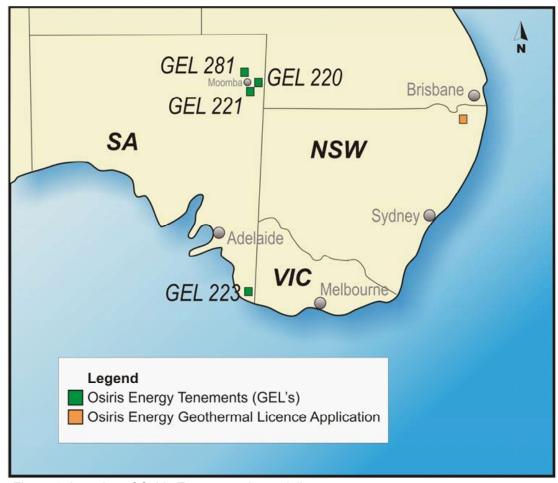


Figure 1- Location of Osiris Energy geothermal licences

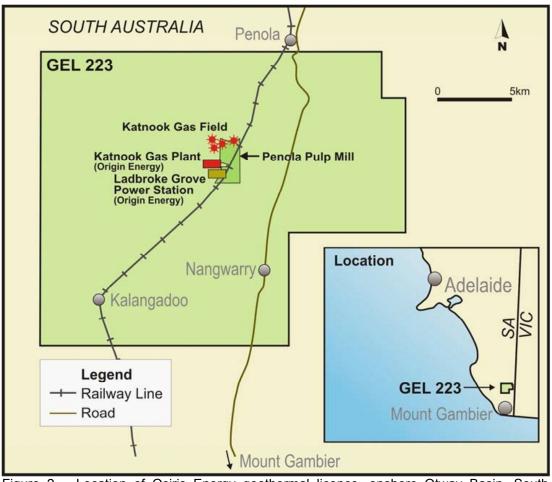


Figure 2 – Location of Osiris Energy geothermal licence, onshore Otway Basin, South Australia

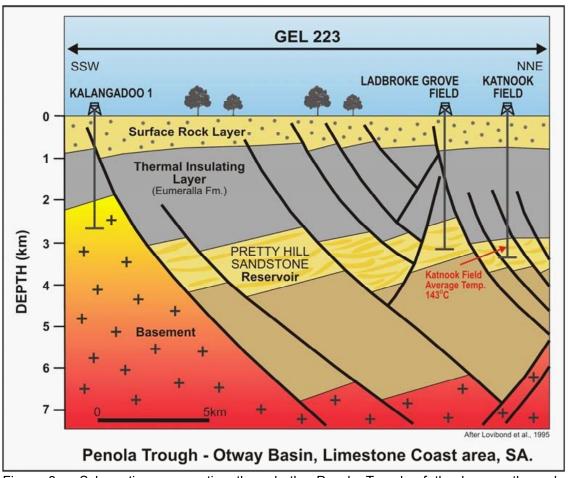


Figure 3 – Schematic cross-section through the Penola Trough of the key geothermal elements.

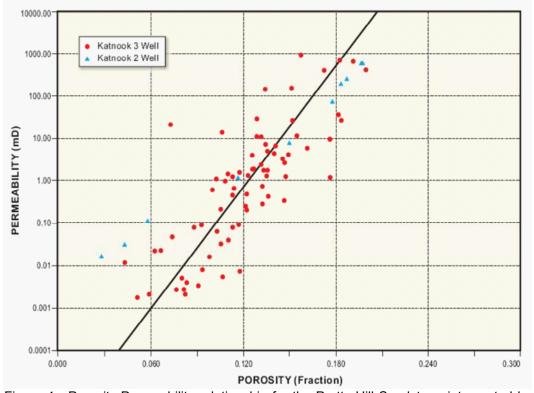


Figure 4 - Porosity-Permeability relationship for the Pretty Hill Sandstone intersected by the Katnook Wells, Penola Trough, Otway Basin (after Schofield, 1996)

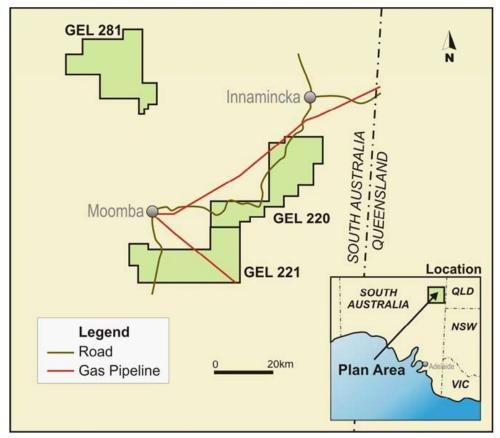


Figure 5 - Location of Osiris Energy licences, Warburton & Cooper Basins, South Australia

#### ABOUT PANAX GEOTHERMAL LTD

The long term vision of Panax is to become a major participant in the geothermal industry, both nationally and internationally. The scope of our geothermal interests will be broad, including both conventional geothermal resources (volcanic related) as well as enhanced geothermal systems (EGS) such as hot fractured rock (HFR) geothermal systems. Panax's key asset is the advanced and ready to drill-test Limestone Coast Geothermal Project in South Australia, which has an estimated generating potential of approximately 1,500 MWe, (i.e. the equivalent of two coal fired power stations or enough power for more than one million homes).

The nature of our business is the identification and exploration of prospective geothermal resources and to convert these into geothermal reserves for the production of commercial geothermal energy. Geothermal power generation is not dependent on new technology (i.e. no new technology risk). The risks of our endeavours are directly related to the conversion of geothermal resources to economic geothermal reserves, i.e. the economic extraction and utilisation of geothermal energy. In that sense it is very similar to risks associated with mineral or oil/gas exploration.

The Company will not only focus on clean power generation but will also embrace direct use of geothermal heat for use in e.g. industry, district heating (or cooling), and desalination.

The rationale for focusing on geothermal energy is directly linked to the threat of global warming as caused by  $CO_2$  emissions from the continued use of fossil fuels. National and international momentum is building for a 'climate change pact' and this foreshadows that clean energy generation is the key to our future.

Geothermal energy is one of the very few sustainable sources of energy which can replace base load power from fossil fuelled power stations. Compared to other sustainable energy options, geothermal resources are still not valued according to their commercial potential for the long term generation of clean base-load power. This is the opportunity which Panax aims to turn to good account.