CORPORATE DIRECTORY

BOARD OF DIRECTORS

Mr Martin Albrecht AC (Chairman)
Mr Bob Flew (Non-Executive Director)
Dr Bertus de Graaf (Managing Director)
Dr Doone Wyborn (Executive Director)
Dr Pramo Chopra (Non-Executive Director)
Mr Neil Galway OAM (Non-Exec. Director)
Dr Jack Hamilton (Non-Executive Director)
Mr Andrew Stock (Non-Executive Director)

COMPANY SECRETARY

Paul M. Fredericks FCPA FCIS

REGISTERED OFFICE

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BANKERS

Westpac Banking Corporation
ANZ Banking Group

AUDITORS

Ernst & Young

SOLICITORS

Phillips Fox
HIGHLIGHTS

- Origin Energy becomes second cornerstone investor, injecting $5M;
- Habanero #1 reaches minimum required depth at 4,421m;
- Habanero #1 is stable and all preparations for stimulation are now completed;
- Staff and crews are on standby in the field for commencement of hydraulic stimulation;
- Agreement reached for acquisition of Kalina Cycle Technology, the world’s best heat to power conversion technology.

OVERVIEW

During the quarter, Geodynamics received significant further support for realising its world-class HDR geothermal resource in the Cooper Basin for electricity generation. It also developed initiatives to combine the world’s largest geothermal resource with the world’s best heat to power conversion technology. Habanero #1, Australia’s first deep geothermal well, reached its minimum required depth and the hydraulic stimulation programme is now ready to proceed.

In August, the Company secured Origin Energy as its second cornerstone investor, thereby gaining an extra $5M in working funds as well as access to expertise on power markets and power transmissions. Origin Energy’s expertise fully complements that of Metasource/Woodside and we are pleased to have the input and support of two top fifty Australian Companies. Federal and State Government interest in HDR was demonstrated by Senator Nick Minchin’s visit to the Habanero #1 drill site, and by the attendance of Hon Paul Holloway, at an information evening in Adelaide. The increasing interest in our plans in Geodynamics has resulted in a 77% increase in the number of shareholders.

Initiatives have been developed to acquire exclusive rights to Kalina Cycle Technology (KCT). This proven technology (4 plants) has the potential to lower the power generation costs from the Cooper Basin HDR geothermal resource by 23% or more, making it potentially fully competitive with fossil fuel generating costs. It provides insurance for the overall success of the Cooper Basin project. KCT also provides the basis for a new division of Geodynamics, generating revenues in the short to medium term from other sources of heat, (conventional geothermal and industrial waste heat), thus providing a cost effective way of reducing CO2 emissions whilst at the same time profitably producing electricity.

The Stage One programme made progress but at increased costs because of over-pressure conditions in the granite. Our pioneering drilling and stimulation team has worked hard to overcome the various challenges and we remain confident that the over-pressures will prove to be highly favourable for the stimulation phase.

Australia’s energy policies remain in focus, with the completion of the review of the Mandated Renewable Energy Target (MRET) being much anticipated by industry. Progress on the creation of a national regulator of the power industry is also awaited.
Further good news of the world’s most advanced HDR geothermal project (Soultz, France) is encouraging for HDR geothermal power generation in general and in particular for our project in the Cooper Basin.

CORPORATE

In August this year, Geodynamics was pleased to announce that it had secured Origin Energy as a second cornerstone investor. Origin Energy has now invested $5M into the Company in return for the issue of 10 million shares. This transaction was unanimously passed at a General Meeting of shareholders held on 19 September 2003. Origin Energy has nominated Mr Andrew Stock (Executive General Manager, Generation) as a non-executive Director to the Board of Geodynamics. It also included negotiation of a power purchase agreement, details of which are set out in Geodynamics’ 2003 Annual Report (pages 59-51).

Origin Energy’s cornerstone investment complements Geodynamics’ deliberate strategy to access expertise of major energy companies in the development of the world class HDR geothermal resource in the Cooper Basin. Geodynamics will have access to Origin Energy’s expertise on power markets and power transmission. This expertise complements the expertise of Matesource, the renewable energy arm of Woodside Petroleum.

In August, Geodynamics was honoured by a visit of Senator, the Hon. Nick Minchin, Minister for Finance and Administration, to the Habanero #1 site in the Cooper Basin. Senator Minchin unveiled a plaque at the site, marking Australia’s first deep geothermal well and noted that “HDR is a potentially vast resource that could change the way we look at a national electricity grid”. Also, the Hon. Paul Holloway, South Australia’s Minister for Mineral Resource and Development attended an information meeting in Adelaide. Both the Senator’s and the Minister’s interest in our initiatives was much appreciated.

During the quarter, the Company advanced negotiations on the acquisition of an exclusive technology transfer and sub-licence for Kalina Cycle Technology (KCT) from Recurrent Resources LLC in the USA. This proven and established technology is a patented power cycle which has the potential to lower the total...
power generating costs of the Cooper Basin HDR project by an estimated 25%. It also provides an extra “degree of freedom” in realising the projected economic cost of heat extraction, thereby improving our overall chances of economic success. In addition, but just as important, Kalina Cycle Technology can be scaled up to large generating units (100MWa) using standard steam turbine components. This is in contrast to the more established Organic Rankine Cycle (ORC) which has design restrictions.

Ultimately, KCT will underpin the Cooper Basin HDR electricity generation and future HDR developments by Geodynamics in other locations in Australia or elsewhere.

KCT also has applications in other heat to power conversions such as conventional geothermal, industrial waste heat and cogeneration. As such, it provides Geodynamics with opportunities for licensing, building and equity participation in Kalina Cycle electricity generation in a range of applications, with the twin benefits of reducing both electricity generating costs as well as CO2 emissions. This is expected to generate revenues in the short to medium term and has the potential to grow into a substantial business in its own right. The large power engineering company Siemens AG is providing a performance guarantee for KCT plants engineered by Recurrent Resources and the performance guarantees will also be extended to Geodynamics.

On 22 October, 2003, Geodynamics announced that, subject to a number of conditions (including the raising of $8M), an agreement to acquire the technology had been reached. Subject to completion, Geodynamics has secured the services of Mr Phillip Hutchings, who will head the new Kalina Division and also of Mike Glucina & Associates (Auckland), who will provide engineering expertise and design.

Upon completion, Geodynamics will be able to combine the world’s largest geothermal resource in the Cooper Basin, with the world’s best heat to power conversion technology. It also provides a green economic opportunity for generating revenues by filling a growing demand in the medium to low heat to power conversion market and the consequent lowering of CO2 emissions. Further details on the above are posted on our website at www.geodynamics.com.au.

As a result of our activities and increased market interest, the Company’s share price has approximately doubled, from $0.64 to over $1.00. Shareholder numbers grew, from 1,773 to more than 2,000 at the end of September 2003.

EXPLORATION AND DEVELOPMENT

Cooper Basin HDR Geothermal Project

Habanero #1

Stage One of our plan reached an important point in September when drilling in the Habanero #1 well reached the minimum depth for carrying out the full hydraulic stimulation programme.

At a depth of 4,421m (14,504ft), drilling operations were completed. This was decided as the drilling operations were not designed to cope with the unexpected overpressures and to avoid unnecessary risk. Also, drilling costs had increased because of slower than budgeted progress since the well first intersected the target granites. At the
completion of drilling, Habanero #1 had penetrated 754m into the target heat bearing granites, more than adequate to carry out the two planned hydraulic stimulations.

Following conclusion of drilling operations, the well had to be completed in a stable condition to enable the stimulation programme to proceed. This involved the installation of a deep-set packer at 3,105m to isolate the well above this point from over-pressures originating in the target granites as well as from the pressures to be applied during the hydraulic stimulation programme. The packer was especially designed to cope with the high temperature and pressure conditions. It has a central seal bore that accepts the seals on the bottom of 4 1/2" completion tubing that is run into the well and engaged into the packer (see attached diagram). This configuration has been specially designed to facilitate stimulation in the granite whilst accommodating the significant thermal expansions and contractions that have been predicted in the well.

Two attempts were required to successfully install the completion tubing in the well. In the first attempt the seals failed to hold the required pressure due to damage in the packer bore, necessitating the sourcing and installation of a second packer above the first. The completion tubing was subsequently installed and successfully pressure tested to a level sufficient for the stimulation programme. Subsequently, the wellhead was installed and pressure tested to 10,000psi and the drilling rig was released on the following day. The well is now fully stable and holding formation pressure.
Subsequent to this, preparations for stimulation have included the installation and commissioning of a dedicated pumping manifest and pressure relief and venting systems that have been designed to ensure the safety of personnel and integrity of the infrastructure during the extended high pressure pumping campaign. Through rigorous testing of the seismic network a fault in one of the deep seismic sondes was detected. This has been fixed and redeployed and the function of the entire system confirmed.

Significant work is required on the well itself prior to the commencement of pumping. Initially the removal of a temporary plug at the bottom of the packer caused delays due to the presence of debris in the well. At the time of writing this problem has been overcome. Temperature and caliper logging of the well, and real time calibration of the seismic network using downhole explosive charges are outstanding. These are to be followed by the circulation of the well below the packer to water.

Hydraulic Stimulation

At the time of writing, the hydraulic stimulation part of our Stage One program is ready to commence. The conditions encountered in the granites are more favourable than anticipated. Additional modelling studies by the CSIRO have provided further knowledge regarding the effects of the high hydraulic pressures on the jointed target granite. The first hydraulic stimulation will take place in the open hole section (from 4.115m to 4.421m) and the second stimulation will be carried out through the casing after perforating this to gain access to the granite.

The crews and service contractors required are on standby, including microseismic monitoring experts from Japan (Tohoku University, Japex and CREEPI) as well as a hydraulic stimulation expert from Europe who has been involved in several HDR projects including that at Soultz in France. All personnel have been extensively briefed in safety aspects of the dangers of operating with pressures exceeding 9000psi.

**Hunter Valley – NSW**

Bulga EL 5886 - Muswellbrook EL 5560

An application for renewal of EL5886 was submitted to the NSW Department of Mineral Resources on 20 July. The main activity for the year will be the drilling of two shallow wells (300m) in the centre of the gravity low and measurement of temperature gradients in the intersected coal measures.

**Frome Range - Queensland**

Nockatunga EPM 13583

Notice was received that our application for the Nockatunga exploration licence could not be processed until new legislation was enacted.

**Cooper Basin - SA**

Bulyeroo GEL 97

A gravity survey was completed over the area consistent with the guaranteed work program for this year. The survey collected more than 300 stations, compared to the existing 12 stations. The results have fully confirmed the extent of hot granite buried beneath the
Cooper Basin at 3.5-4 km estimated from the earlier data.

INTERNATIONAL DEVELOPMENTS

The largest hydraulic stimulation ever achieved in a hot dry rock project was completed in the second 5000m well at Sourzac in France, when over 30,000 cubic metres of water was injected into the well. Analysis of the acoustic monitoring data indicates that the stimulation reached over 1km from the well. The third well now being drilled to 5000m in preparation for the installation of a small power plant, scheduled for 2004.

The Bad Urach project near Stuttgart in Germany completed a successful stimulation at 4400m depth where the rock permeability was significantly enhanced.

HEALTH, SAFETY & ENVIRONMENT

Since commencement of drilling Habanero #1 was completed without a single lost time incident, a real achievement by all involved.

The Company had to address some issues relating to the gravity survey on GEL 97 and these were resolved to the satisfaction of the regulator.

FINANCE AND ADMINISTRATION

Total project expenditure paid during the quarter was $3,669k.

Bertus de Graaf
Managing Director

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

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