

Geothermal Exploration License 98 Annual Report for 2006

Summary of Years Activities (Year 5)

GEL 98 was granted to Geodynamics Limited on 2nd October 2001.

During the 2004-2005 year (year 4) the main activities were:

- (i) Habanero 2 was completed including a side track (ST1) around a section of lost drill pipe.
- (ii) Flow testing from Habanero 2ST1 including production in excess of 20 l/ sec with a maximum surface flowing temperature of 210°C, and temperature logging down hole confirming flow from the fracture system at 250°C.
- (iii) Stimulation of the upper fracture system from Habanero 2 and further stimulation of the main fracture system from Habanero 1 resulting in a 50% enlargement.
- (iv) Analysis of flow testing indicated that a dropped bridge plug was responsible for packing off of access to the main reservoir in the Habanero 2 well bore. This necessitated drilling a second side track around the obstruction.

This report (year 5) is for the period 2 October 2005 to 1 October 2006. In this period a major operation took place on Habanero 2 where a side track was attempted around the bridge plug known to be at some depth below 14,000 ft in Side Track 1. The operation was carried out using a snubbing unit in a fully underbalanced mode with water as the drilling fluid.

Field operations relating to the rigging up of the snubbing unit commenced in 30 January 2006, and Habanero 2 was first entered on 10 March 2006. The drilling operation continued with difficult drilling conditions caused by (i) borehole breakout exacerbated by low down-hole pressure associated with the underbalanced drilling technique (ii) slow tripping times causing heating and premature wear of tricone bit seals, and (iii) high temperatures related to influx of hot formation fluids from behind the whipstock exit point of sidetrack one. Finally on 30 June 2006 drilling was suspended after leaving 1,422 ft of stuck drilling assembly in the new hole, with the sidetrack drilled to 13,866 ft.

Reporting Against Requirements of the Petroleum Act 2000

(a) Summary of the regulated activities conducted under the licence during the year

The regulated activities for the year are set out below:

Activity	Site	Timing
Drilling and casing logging	Habanero 2 ST2-4	January 2006 to July 2006, and Sep 2006
Cooper's Creek Water Pumping	Cooper's Creek to Habanero 2	April 2006 to September 2006
Microseismic monitoring	Surrounding network	Whole of year

(b) Report for the year on compliance with the Act, these regulations, the licence and any relevant statement of environmental objectives

Approval to carry out the drilling of Habanero 2 ST2 was submitted to PIRSA on 16 December 2005, and an approval letter was received dated 23 February 2006.

A request to pump water from Cooper's Creek whilst it was in flood was submitted to PIRSA in 2005. This approval was continued in 2006 as part of the drilling activity application submitted on 16 December 2005. The rate of abstraction over the period 6 April 2006 to 29 September 2006 was approximately 5 l/sec or 0.432 mega liters per day. Excluding days when the pump was not running a total of approximately 65 mega liters was pumped over the period.

Following completion of the side track drilling a PIRSA inspection pointed to a number of small diesel spills at site and at the Cooper's Creek pumping station. These were immediately remediated to PIRSA's satisfaction.

(c) Actions to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, and to minimise the likelihood of the recurrence of any such non-compliance; and (d) a summary of any management system audits undertaken during the relevant licence year, including information on any failure or deficiency identified by the audit and any corrective action that has, or will be, taken.

Manager, Logistics and Compliance continued to track activities under the Act and ensure that we comply with all Regulations. Computer based tracking systems are in operation. Small diesel spills at Habanero site and at the Cooper's Creek pumping station were immediately remediated.

(e) List all reports and data relevant to the operation of the Act during the relevant licence year.

Report	Date submitted
Activity Notification for the sidetrack #2 drilling of Habanero 2	16 December 2005
Cuttings samples for Habanero 2 ST2 10ft intervals from 12,710ft to 13,320 ft	1 October 2006
Cuttings samples for Habanero 2 ST3 10ft intervals from 13,190ft to 13,270 ft	1 October 2006
Cuttings samples for Habanero 2 ST4 10ft intervals from 13,250ft to 13,860 ft	1 October 2006
Daily drilling reports	Daily as required

(f) Report of incidents reportable to the Minister under the Act and regulations

The small diesel spills at site and at the Cooper's Creek pumping station mentioned in (b) above were reportable incidents during the period and have been reported to PIRSA and acted upon. During the drilling of Habanero 2 ST2-4 there were 5 first aid cases and 3 near misses reported as documented in the well completion report.

(g) Report on any reasonably foreseeable threats that reasonably present, or may present, a hazard to facilities or activities under the licence, and a report on any corrective action that has, or will be, taken.

Nil

(h) Operations proposed for the ensuing year

The failed drilling operation on Habanero 2 required a re-assessment of our drilling strategy. It is now proposed that a new production well, Habanero 3 be drilled with 8 ½ inch open hole in the granite to intersect the main stimulated reservoir rather than persisting with drilling in Habanero 2. At the time of writing a drilling rig has not been secured, but we are confident of a spud date around 1 July 2007.

Several activities are being considered for Habanero 1 and 2 to investigate further the nature of the upper and main fracture systems. These will take place in the first half of the 2007 year.

Further work will be carried out on the design, location and preparation of scale-up wells and on power generation facilities.

An application to transfer the GEL into Geothermal Retention Licenses (high and supervision) was made on 21 September 2006.

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Expenditure for year 5

Commercial in Confidence



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20-12-2006