

**DISORPTION GAS ANALYSIS ONSITE, desorption gas CBM 93-004 sampled and analyzed 18-1-2010 and desorption gas CBM 93-003 sampled and analyzed 26-1-2010**

**1/ General Notes**

CO2 in air has a concentration of 387ppm. CO2 reading by the chromatograph on site was 700 to 800 ppm when the gas trap was out of the mud and recording air on site CBM 93-003. There are concerns with respect to the gas analysis on site during drilling as detailed in notes dated 1-2-2010.

**2/ Onsite gas analysis of desorption gas CBM 93-004 and CBM 93-003.**

**a/ CBM 93-004**

When I left CBM 93-004 all canister samples were still being desorbed. I thought it would be a good idea to test gas desorbed into the monometers after desorption flat lined in CBM 93-004, discussed this with Weatherford personal, but unfortunately I did not convey this idea to Graham MacClung on change out, fairly busy with IDS matters.

On return to commence the drilling of CBM 93-003 I noted that there was still gas in some of the monometers. I confirmed yesterday with the Weatherford desorption personal that the taps to such monometers were closed, presumably before canisters were removed and sent to the lab in Brisbane.

Some of the monometers had fallen out of the racks during rig move, but the middle rack was relatively undisturbed. The reason for my interest is the CO2 issue, per 93-001 results.

The method for sampling gas from the monometers is relatively simple, they have a small hand operated pump that is attached to the flexible tube that connects with the canisters during desorption. After the tap is closed at the top of the monometer and canister removed, the hand pump is attached to the tube and pumps air out of the tube to evacuate it. A small evacuated plastic gas collection bag is then attached to the hand pump, the tap on the monometer is then opened and a gas sampled is pumped into the collection bag. The gas from this can be injected into the chromatograph for analysis.

Although the gas from CBM 93-004 desorption had been sitting in the monometers for a month it was thought worthwhile to attempt analysis of four samples, the results of which are tabulated below.

It is presumed that the samples came from the middle to lower part of the coal sequence.

|   | C1 ppm | C2 ppm | C3 ppm | iC4 ppm | nC4 ppm | CO2 ppm |
|---|--------|--------|--------|---------|---------|---------|
| 1 | 225    | 13     |        |         | 1       | 3206    |
| 2 | 521    | 123    | 40     | 7       | 1       | 11312   |
| 3 | 146    | 0      | 1      | 1       |         | 7511    |
| 4 | 323    | 27     |        |         |         | 15416   |

**b/ CBM 93-003** Gas samples were analysed from three samples of coal two, 0.4m and 0.5m coals, and the deepest a full 1m coal.

The idea was to use desorbed gas from the monometers as described above, however as air is present to a level in the monometer before the desorption canister is hooked up to take measurement, the samples were directly taken from the canisters immediately after the canisters were made ready for dispatch from rig site.

CBM 93-003 Results of desorbed gas analysed.

|          | C1 ppm | C2 ppm | C3 ppm | iC4 ppm | nC4 ppm | iC5 ppm | nC5 ppm | CO2 ppm |
|----------|--------|--------|--------|---------|---------|---------|---------|---------|
| 26/01/10 |        |        |        |         |         |         |         |         |
| D#1      | 16     |        |        |         |         |         |         | 1660    |
| D#2      | 410    | 15     |        |         |         |         |         | 3200    |
| D#3      | 1600   | 130    | 52     | 40      | 20      | 8       | 6       | 12440   |
| 24/01/10 |        |        |        |         |         |         |         |         |
| D#1      | 13     |        |        |         |         |         |         | 1826    |

D#1 Depth Interval: 716.95 – 717.44m

D#2 Depth Interval: 821.33 – 821.83m

D#3 Depth Interval: 828.8 – 829.8m

Only 3 canisters this well