

### Trefoil-2

Date : 15 Oct 2009

Geology Report Number : 9

( associated DDR # 15 )

#### Well Details

|                    |          |                  |            |                   |             |
|--------------------|----------|------------------|------------|-------------------|-------------|
| Depth MDBRT:       | 938.0m   | Rig:             | Kan Tan IV | Date:             | 15 Oct 2009 |
| Depth TVDBRT:      | 938.0m   | Progress:        | 3.0m       | Report Start:     | 0000        |
| Depth TVDSS:       | 912.0m   | RTE agl:         |            | Report End:       | 2400        |
| Hole Size:         | 17.500in | GLE amsl:        | 0 (m)      | Days On Location: | 14.13       |
| Hole Size Carbide: |          | Last Csg Size:   | 13.375in   | Days since Spud:  | 9.67        |
| Water Depth (MSL)  | 69.0m    | Last Csg Shoe:   | 930.0m     |                   |             |
| RT-ASL(MSL)        | 26.0m    | F.I.T. / L.O.T.: | / 15.15ppg |                   |             |

#### Operations Summary

|               |   |
|---------------|---|
| 24hr Summary: | Laid out 445 mm (17-1/2") BHA. Picked up 311 mm (12-1/4") BHA. Ran in Hole. Conducted FEWD shallow hole test - OK. RIH to top cement at 916 mMDRT. Drilled out shoe track and new formation to 938 mMDRT. Displaced hole to KCl mud. Conducted LOT. Drilled ahead in 311 mm (12-1/4") hole section. |
| Forward Plan: | Drill ahead in 311 mm (12-1/4") hole section.   |

#### General Comments

00:00 TO 24:00 Hrs ON 15 Oct 2009

|                             |   |
|-----------------------------|---|
| <b>Operational Comments</b> | Geoservices: 2 Data engineers, 2 mudloggers, 2 sample catchers on board. Gas equipment calibrated 15 Oct 09.<br>Sperry: 3 MWD engineers, 1 DD on board. Back up tool strings for 311 mm (12-1/4") hole section ready to go. |
| <b>Operational Comments</b> | FEWD sensor distances from bit:<br>Vibration 0.00 m<br>Gamma (DGR) 12.34 m<br>Resistivity (EWR-P4) 14.81 m<br>Directional (PCD) 19.76 m   |

#### WBM Data

|               |             |                 |             |              |           |                      |           |                         |    |
|---------------|-------------|-----------------|-------------|--------------|-----------|----------------------|-----------|-------------------------|----|
| Mud Type:     | KCl POLYMER | Flowline Temp:  |             | Cl:          | 41000mg/l | Low Gravity Solids:  | Viscosity | 46sec/qt                |    |
| Sample From:  | 1           | MWD Circ Temp:  |             | Hard/Ca:     | 280mg/l   | High Gravity Solids: | PV        | 10cp                    |    |
| Time:         | 2135        | Glycol CP Temp: |             | MBT:         | 10        | Solids (corrected):  | YP        | 20lb/100ft <sup>2</sup> |    |
| Weight:       | 9.00ppg     | Glycol:         | 5.0%vol     | PM:          | 2.2       | H2O:                 | 95%       | Gels 10s                | 8  |
| ECD TD:       |             | Nitrates:       |             | PF:          | 1.1       | Oil:                 |           | Gels 10m                | 10 |
| ECD Shoe:     |             | Sulphites:      |             | MF:          | 1.5       | Sand:                | %         | Fann 003                | 9  |
| ECD Cuttings: |             | API FL:         | 5.8cc/30min | pH:          | 9.5       | Barite:              |           | Fann 006                | 11 |
| KCl Equiv:    |             | API Cake:       | 1/32nd"     | PHPA Excess: |           |                      |           | Fann 100                | 18 |
|               |             |                 |             |              |           |                      |           | Fann 200                | 23 |
|               |             |                 |             |              |           |                      |           | Fann 300                | 30 |
|               |             |                 |             |              |           |                      |           | Fann 600                | 40 |

#### Shakers, Volumes and Losses Data

Engineer : MikeLawrance / Kosta Georgiou

| Available | 1762.5bbl | Losses      | 431.8bbl | Equip.   | Descr.         | Mesh Size       | Hours |
|-----------|-----------|-------------|----------|----------|----------------|-----------------|-------|
| Active    | 168.0bbl  | Downhole    |          | Shaker 1 | Brandt VSM 300 | 20 top/50bottom | 12    |
| Mixing    |           | Surf+ Equip | 0.0bbl   | Shaker 2 | Brandt VSM 300 | 20 top/50bottom | 12    |
| Hole      | 471.5bbl  | Dumped      | 431.8bbl | Shaker 3 | Brandt VSM 300 | 20 top/50bottom | 12    |
| Slug      |           | De-Gasser   |          | Shaker 4 | Brandt VSM 300 | 20 top/50bottom | 12    |
| Reserve   | 1123.0bbl | De-Sander   |          |          |                |                 |       |
| Kill      |           | De-Silter   |          |          |                |                 |       |
|           |           | Centrifuge  |          |          |                |                 |       |

Comment

#### Formation Tops

| Formation                    | Prognosed |           | Actual    |           | Diff.         | Thickness MD (m) | Pick Criteria |
|------------------------------|-----------|-----------|-----------|-----------|---------------|------------------|---------------|
|                              | MDBRT (m) | TVDSS (m) | MDBRT (m) | TVDSS (m) | + / - TVD (m) |                  |               |
| Torquay Group                | 95.00     | 69.00     | 95.00     | 69.00     | 0.00          | 823.00           | Sea floor     |
| Lower Miocene Seismic Marker | 904.00    | 878.00    | 918.00    | 892.00    | -14.00        | 0.00             | GR increase   |

**Lithology Summary**

| Interval MDBRT (m)<br>From To | ROP<br>(m/hr)              | Lithology  |
|-------------------------------|----------------------------|--|
| 935.00 - 938.00               | Min:15<br>Avg:36<br>Max:61 | CALCAREOUS CLAYSTONE<br>CALCAREOUS CLAYSTONE: medium dark grey, very soft to soft, sticky, traces bryozoa, traces fine grained pyrite aggregates, 35% calcareous clay. |

**Gas Data**

| Depth<br>Interval (m) | Gas<br>Type | Total<br>Gas (%) | C1<br>(%) | C2<br>(%) | C3<br>(%) | iC4<br>(%) | nC4<br>(%) | C5<br>(%) | CO2<br>(%) |
|-----------------------|-------------|------------------|-----------|-----------|-----------|------------|------------|-----------|------------|
| 935.00 - 938.00       | Drilled     | 0.000            | 0.0000    | 0.0000    | 0.0000    | 0.0000     | 0.0000     | 0.0000    | 0.000      |

**Survey**

| MDBRT<br>(m) | Incl.<br>(deg) | Corr. Az<br>(deg) | TVDBRT<br>(m) | 'V' Sect<br>(deg) | Dogleg<br>(deg/30m) | N/S<br>(m) | E/W<br>(m) | Tool Type |
|--------------|----------------|-------------------|---------------|-------------------|---------------------|------------|------------|-----------|
| 981.35       | 0.7            |                   | 981.31        | 8.3               | 0.3                 | 8.3        | 0.0        | MWD       |

**06:00 Hrs Update**

|                              |   |
|------------------------------|---|
| Time:                        | 06:00 Hrs on 16 Oct 2009                                      |
| Depth:                       | 1062 mMDRT/1062 mTVDBRT                                       |
| Progress Since Midnight (m): | 124   |
| Status @ 0600hrs:            | Drilling ahead with 12.25" hole.<br>Depth at 06:00 hrs 1062m. |
| Formation:                   | Torquay Group   |
| Lithology:                   | CALCAREOUS CLAYSTONE  |
| ROP:                         | Average ROP: 104m/h   |
| Gas:                         | Ave Background gas - 0.13%, C1 0.06%.                         |

**Wellsite Geologist(s)**

(Days) - Dennis Archer      (Nights) - Brenton Richards