

# DAILY GEOLOGICAL REPORT

| Date:             | 13 November 2008        | Rig:           | Ocean Patriot                |
|-------------------|-------------------------|----------------|------------------------------|
| Report Number:    | 15                      | Bit Diameter:  | 216 mm                       |
| Report Period:    | 06:00 - 06:00 Hours     | Last Casing:   | 340 mm Casing @ 1532.1 mMDRT |
| Spud Date:        | 05-Nov-2008 03:30 Hours | LOT:           | 1.34 sg EMW @ 1532.1 mMDRT   |
| Days From Spud:   | 8.1                     | Mud Weight:    | 1.15 sg                      |
| Depth @ 0600 Hrs: | 2804.0 mMDRT            | ECD:           | 1.18 sg                      |
| •                 | -2781.4 mTVDAHD         | Mud Type:      | KCL / Polymer                |
| Lag Depth:        | 2720.0 mMDRT            | Mud Chlorides: | 550000.00 mg/L               |
| Last Depth:       | 1651.0 mMDRT            |                | 5                            |
| Progress:         | 1153.0 m                | Last Survey:   | 2794.00 mMDRT                |
| Water Depth:      | 517.3 m                 | Deviation:     | Inc. 1.49°                   |
| RT:               | 21.5 m                  |                | Az. 54.96°                   |

## **OPERATIONS SUMMARY**

24 HOUR SUMMARY:

Drilled ahead 216mm hole to 2719.0 mMDRT. Performed 2 stand wiper trip. Drilled ahead to 2804.0 mMDRT.

NEXT 24 HOURS:

Drill ahead 8 1/2" hole to TD.

CURRENT OPERATION @ 06:00 HRS (13-Nov-2008

@ 06:00 HRS (13-Nov-2008): Drilling ahead 8 1/2" hole in the Gurnard Formation.

### **GEOLOGICAL SUMMARY**

#### LITHOLOGY

| INTERVAL:    | 1620.0 to 2396.0 mMDRT | (-1598.4 to -2373.6 mTVDAHD) |
|--------------|------------------------|------------------------------|
| ROP (Range): | 16.0 to 201.0 m/h      |                              |
| Av. ROP:     | 87.0 m/h               |                              |

Massive CALCILUTITE and CALCISILTITE with minor CALCARENTITE and thin DOLOMITE stringers. CALCILUTITE (5 to 100%): Light grey to medium light grey, light olive grey to greenish grey, minor fine quartz grains, common dark lithics and glauconitic material, minor fossils, trace carbonaceous material, grades to CALCISILTITE in part, minor dispersive, soft to moderately hard, dominantly firm, common soft, minor moderately hard, sub-blocky to blocky, minor amorphous, nil visible porosity.

CALCISILTITE (15 to 90%): Light grey to medium light grey, light olive grey to greenish grey, abundant matrix and grading to CALCILUTITE in part, common quartz grains, minor to common dark lithics and glauconitic material, minor fossils, trace carbonaceous material, soft to moderately hard, dominantly firm, common soft, minor moderately hard, sub-blocky to blocky, nil visible porosity.

CALCARENITE (Trace to 40%): Medium light grey to medium grey, very fine, well sorted, angular to subangular, abundant argillaceous and micritic matrix, rarely microcrystalline, trace lithics, minor fossils, brittle to moderately hard, dominantly nil to very poor visible porosity, trace moldic porosity, no show.

DOLOMITE (Trace to 5%): Medium dark grey to dark grey, microcrystalline, trace glauconitic material, very hard, angular.

| INTERVAL:    | 2396.0 to 2613.0 mMDRT | (-2373.6 to -2590.5 mTVDAHD) |
|--------------|------------------------|------------------------------|
| ROP (Range): | 29.0 to 160.0 m/h      |                              |
| Av. ROP:     | 99.0 m/h               |                              |

Massive interbedded CALICILUTITE and CALCISILTITE.

CALCISILTITE (10 to 40%): olive grey, light greenish grey, light grey to off white, common argillaceous matrix and locally grades to CALCILUTITE in part, locally arenaceous, minor very fine dark lithics, minor very fine floating quartz grains, trace very fine glauconite, hard to very hard, sub-blocky, nil visible porosity, no show.

CALCILUTITE (60 to 90%): Olive grey, greenish grey, light olive grey, occasional very fine dark lithics, occasional glauconitic material, trace very fine floating quartz grains, minor microcrystalline fragments,



moderately hard to hard, sub-blocky to blocky, nil visible porosity, no show.

| INTERVAL:    | 2613.0 to 2720.0 mMDRT | (-2590.5 to -2697.5 mTVDAHD) |
|--------------|------------------------|------------------------------|
| ROP (Range): | 45.0 to 149.0 m/h      |                              |
| Av. ROP:     | 92.0 m/h               |                              |

Massive CALICILUTITE with minor interbedded CALCISILTITE.

CALCILUTITE (90 to 100% : Very light olive grey, light greenish grey, light grey to off white, occasional glauconitic material, rare ooids, rare carbonaceous material, minor very fine to fine floating quartz grains, minor nodular and disseminated pyrite, moderately hard to hard, very hard in part, sub-blocky to blocky, nil visible porosity, no show.

CALCISILTITE (5 to 10%): olive grey, light greenish grey, light grey to off white, common argillaceous matrix and locally grades to CALCILUTITE in part, locally arenaceous, minor very fine dark lithics, minor very fine floating quartz grains, trace very fine glauconite, hard to very hard, sub-blocky, nil visible porosity, no show.

#### **GAS SUMMARY**

| Background Gas      |                  |             |             |             |              |              |             |
|---------------------|------------------|-------------|-------------|-------------|--------------|--------------|-------------|
| INTERVAL<br>(mMDRT) | Total Gas<br>(%) | C1<br>(ppm) | C2<br>(ppm) | C3<br>(ppm) | iC4<br>(ppm) | nC4<br>(ppm) | C5<br>(ppm) |
| 1620.0 - 2396.0     | 0.05             | 438         | 1           | 1           | 0            | 0            | 0           |
| 2396.0 - 2613.0     | 0.03             | 340         | 1           | 2           | 0            | 0            | 0           |
| 2613.0 - 2720.0     | 0.03             | 336         | 2           | 1           | 0            | 0            | 0           |

#### SAMPLE QUALITY

Collected 10.0 m sample intervals from 1620.0 to 1780.0 mMDRT. Collected 20.0 m sample intervals from 1780.0 to 2720.0 mMDRT.

#### MUDLOGGING EQUIPMENT / PERSONNEL

Currently using backup depth system whilst repairs made to geolograph. Chromatograph calibration file has become corrupted. Gas windows require constant resetting. Recalibration required at next available opportunity. Ran carbide at 2658.0 mMDRT.

#### MWD

Run #4, Bit Run #3: 216 mm LWD Tool offsets to bit:

| Tool                      | Serial # | Distance to bit (m) |  |  |
|---------------------------|----------|---------------------|--|--|
| Direction and Inclination | PCDC MWD | 7.40                |  |  |
| Azimuthal Focused Res     | AFR LWD  | 11.10               |  |  |
| Gamma Ray                 | DGR LWD  | 13.86               |  |  |
| Resistivity               | EWR LWD  | 16.18               |  |  |
| Pressure w/- Drilling     | PWD LWD  | 21.05               |  |  |
| Neutron Density           | ALD LWD  | 26.20               |  |  |
| Neutron Porosity          | CNP LWD  | 28.81               |  |  |
| BAT Sonic                 | BAT LWD  | 39.95               |  |  |
| Acoustic Caliper          | ACAL LWD | 43.72               |  |  |
|                           |          |                     |  |  |

Continue to troubleshoot pump stroke sensor and geolograph.

AFR tool Real Time signal lost while drilling at 2272.0 mMDRT.

#### REMARKS

Drilled ahead 216mm (8-1/2") hole from 1651.0 m 1765.0 mMDRT. Conducted third LOT to 1.39 sg EMW and drilled ahead from 1765.0 m to 2719.0 mMDRT. Flow checked well and performed 2 stand wiper trip prior to entering primary target. Drilled ahead to 2804.0 mMDRT.



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