



DAILY GEOLOGICAL REPORT

WELL: Shenandoah #1 **REPORT No.:** 38 **DAYS FROM SPUD:** 38 **DATE:** 07/09/07
PEL: EP 98 **00:00 DEPTH:** 1466mKB **LAST 24hr DEPTH:** 1434mKB **24 hr Progress:** 32m
LOCATION: Beetaloo Basin **RIG:** Century Rig 7 **KB:** (Final Survey) 232.55m **13^{3/8}" Csg:** 312m
GEOLOGIST: J Hulse **GL:** (Final Survey) 226.75m **PTD:** 2,900m

NEARBY WELLS: Balmain #1 (Twin)

06:00 Depth/Operation: 1466mKB / Run in hole.

Operations 00:00 to 06:00: Run in hole.

Previous 24 Hours Operations: Drill ahead 12 1/4" hole in Kyalla Shale to 1466mKB, ROP reduced to <1m/h. POOH to change bit.

| Formation Tops | Actual Depths (m) | | | Prognosed Depths (m) | | | Diff to Prog. H/L | Thickness (m) |
|---------------------------|-------------------|-------|--------|----------------------|--------|---------|----------------------|------------------|
| | MDKB | TVD | TVDSS | MDKB | TVD | TVDSS | | |
| Undifferentiated Tertiary | 5.8 | 5.8 | +227 | 5.8 | 5.8 | +227 | - | 45.7 |
| Jinduckin Formation | 51.5 | 51.5 | +181.3 | 54.8 | 54.8 | +178 | 3.3H | 32.7 |
| Tindall Limestone | 84.2 | 84.2 | +148.6 | 83.8 | 83.8 | +149 | 0.4L | 178.8 |
| Antrim Volcanics | 263.0 | 263.0 | -30.5 | 265.3 | 265.3 | -32.5 | 2.0H | 85.0 |
| Bukalara Sandstone | 348.0 | 348.0 | -115.5 | 348.3 | 348.3 | -115.5 | 0.0 | 58.0 |
| Hayfield Mudstone | 406.0 | 406.0 | -173.5 | 406.3 | 406.3 | -173.5 | 0.0 | 375.9 |
| Hayfield Sand | 782.5 | 782.3 | -549.7 | 782.2 | 782.2 | -549.4 | 0.3L | (10.5) |
| Jamison Sandstone | 855.0 | 854.8 | -622.2 | 856.3 | 856.3 | -623.5 | 1.3H | 85.0 |
| Kyalla Formation | 940.0 | 939.8 | -707.2 | 940.8 | 940.8 | -708.0 | 0.8H | |
| Moroak Sandstone | | | | 1551.8 | 1551.8 | -1319 | | |
| Velkerri Formation | | | | 1641.8 | 1641.8 | -1409 | | |
| Bessie Creek Sandstone | | | | 2481.8 | 2481.8 | -2249 | | |
| Total Depth | | | | 2900.0 | 2900.0 | -2667.2 | | |

Remarks: Next marker is Kyalla Sandstone to determine casing point, intersected at 1220mSS in Jamison-1. Current depth is 1233mSS (1466mKB).

| Interval (m) ROP (min/m) | Lithology Description | Gas/B'ground Breakdown C1/C2/C3/C4/C5 |
|-----------------------------|-----------------------|---|
|-----------------------------|-----------------------|---|

Formation: Kyalla Shale

| | | |
|---------------------|---|--|
| 1434-1466mKB | Mudstone (90-100%): Medium – dark grey brown (70-95%), carbonaceous, common mica, weakly laminar, minor – common carbonaceous fragments. Minor black carbonaceous mudstone at base of interval with abundant vitreous coaly fragments. Grey green (5-30%), massive – weakly laminar, minor micromicaceous, trace micaceous layers, minor brown calcite. Siltstone (Trace – 10%): Dark brown grey – medium grey – dark grey, micromicaceous, common – abundant mica flakes, sub blocky – sub fissile, argillaceous in part. Sandstone (Trace): Light grey – grey brown, very fine, siliceous cement, common argillaceous matrix, trace carbonaceous specks, trace loose, coarse, bit fractured, clear quartz, nil visible porosity, no shows. | <u>1459mKB</u> Tg max 6.2 unit Bkg gas 1 unit 79/10/5/3/3 |
| Fluorescence | Nil | |
| Gas Flaring | Nil | |

06:00 AM Summary

Formation: KYALLA SHALE

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| | NO NEW FORMATION | |
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