DAILY GEOLOGICAL REPORT

WELL:	Shenandoah #1	**REPORT No.:**	34	**DAYS FROM SPUD:**	34	**DATE:**	03/09/07
PEL:	EP 98	**00:00 DEPTH:**	1068mKB	**LAST 24hr DEPTH:**	905mKB	**24 hr Progress:**	163m
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: **1100mKB /** Drill ahead in Kyalla Shale.
Operations 00:00 to 06:00: Drill ahead 12 ¼" hole with survey in Kyalla Shale.
Previous 24 Hours Operations: Drill ahead 12 ¼" hole Jamison Sandstone – Kyalla Shale.

Formation Tops	Actual Depths (m)			Prognosed Depths (m)			Diff to Prog.	Thickness
	MDKB	TVD	TVDSS	MDKB	TVD	TVDSS	H/L	(m)
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: Note changed tops for Jamison and Kyalla.
Top of Jamison Sandstone is transitional and difficult to determine accurately with cuttings, gas and ROP. The top has been placed at a "point of convenience" based on a small increase in sandstone, the preceding tops and the level assigned in Balmain-1.Top Kyalla is a distinct change in lithology from sandstone to mudstone, ROP and gas, however, do not have distinct character change and as such were not used to further define the position. Tops will be refined when wireline logs are run.
Cuttings gas is comparable to Balmain-1. There is a correlation in the Jamison Sandstone in Shenandoah-1 with the better developed sand sections; gas appears to decrease in better sands, interpreted to be a function of water saturation. The Jamison sandstone, in general, has a lot of cementation, predominantly siliceous, it is expected that this would make the sand and associated fluorescence less susceptible to fluid washing during drilling and the retention of these hydrocarbon indicators in cuttings samples.

Interval (m) ROP (min/m)	**Lithology Description**	**Gas/B'ground Breakdown C1/C2/C3/C4/C5**
Formation: JAMISON SANDSTONE		
905-940mKB	**Sandstone (50-80%):** Off white, clear – translucent, very fine – coarse, predominantly medium, trace very coarse – granular loose sub round quartz grains at base, moderately sorted, sub angular – sub round, common – abundant siliceous cement, minor calcareous cement, minor argillaceous matrix, trace calcite, friable – moderately well consolidated, poor visible porosity, poor inferred porosity. **Mudstone (20-50%):** Predominantly med green, minor red brown, trace grey, common micromicaceous, moderately hard – hard, sub blocky, minor sub fissile.	935mKB Tg max 2.7 unit Bkg gas <1 unit 100% C1
Fluorescence	Trace dull yellow fluorescence, no cut.	
Gas Flaring	Nil	

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Formation: KYALLA SHALE

940-990mKB	**Mudstone (80-95%):** Variable ratio of pale green – grey – brown hues, pale – jade – grey green predominates overall, sparsely – moderately dense micromicaceous flecks, moderately hard – hard, sub blocky – sub platy, occasionally sub tabular, massive – moderately laminar. Minor to common dark brown – grey black carbonaceous mudstone throughout, grading to carbonaceous siltstone in part. **Siltstone (5-20%):** Decreasing with depth, dark brown – dark grey, minor medium – light grey, hard, moderately laminar, sub blocky, common – abundant carbonaceous laminae, trace very fine quartz grains, common arenaceous.	944mKB Tg max 6.2 unit Bkg gas 1 unit 99/1/-/-/- 955mKB Tg 6.0 unit Bkg gas 1 unit 75/16/6/3/-
Fluorescence	Trace very dull yellow fluorescence in arenaceous siltstone, no cut.	
Gas Flaring	Nil	
990-1068mKB	**Mudstone (100%):** Pale green – grey – brown, pale – jade – grey predominates overall, sparsely – moderately dense micromicaceous flecks, moderately hard – hard, sub blocky – sub platy, occasionally sub tabular, massive – moderately laminar. Minor to common dark brown – grey black carbonaceous mudstone throughout, grading to carbonaceous siltstone in part.	1011mKB Tg max 7.5 unit Bkg gas 1 unit 79/12/6/3/tr
Fluorescence	Nil – trace very dull yellow, no cut. Hydrocarbon gas >C1 decreases below 1025mKB.	
Gas Flaring	Nil	

06:00 AM Summary

Formation: KYALLA SHALE

1068-1100mKB	**Mudstone (100%):** Pale green – grey green (50-70%), moderately soft – moderately hard, massive – trace weakly laminar, common micromicaceous, minor micaceous laminae, trace grading to siltstone. Grey brown – brown (30-50%), hard, sub blocky – sub platy, massive – moderately laminar, minor – common carbonaceous laminae, common micromicaceous, minor grading to siltstone. **Siltstone (Trace):** Dark brown – black, carbonaceous, common – abundant carbonaceous laminae, trace very fine quartz, hard, moderately – strongly laminar, sub blocky – sub platy, trace arenaceous.	1071mKB Tg max 6.0 unit Bkg gas <1 unit 93/2/2/2/1
Fluorescence	Nil	
Gas Flaring	Nil	