



## DAILY GEOLOGICAL REPORT

**WELL:** Shenandoah #1      **REPORT No.:** 29      **DAYS FROM SPUD:** 29      **DATE:** 29/08/07  
**PEL:** EP 98      **00:00 DEPTH:** 715mKB      **LAST 24hr DEPTH:** 517mKB      **24 hr Progress:** 198m  
**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:** 768mKB / Rotary aerated water drilling in Hayfield Mudstone

**Operations 00:00 to 06:00:** Rotary aerated water drilling Hayfield Mudstone

**Previous 24 Hours Operations:** Drill ahead with aerated water in 12.25" hole with surveys

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	+3.3	32.7
Tindall Limestone	84.2	84.2	+148.6	83.8	83.8	+149	-0.4	178.8
Antrim Volcanics	263.0	263.0	-30.5	265.3	265.3	-32.5	-2.0	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	
Hayfield Sand				782.2	782.2	-549.4		
Jamison Sandstone				856.3	856.3	-623.5		
Kyalla Formation				940.8	940.8	-708		
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:**

Interval (m) ROP (min/m)	Lithology Description	Gas/B'ground Breakdown C1/C2/C3/C4/C5
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**Formation: HAYFIELD MUDSTONE**

530-580mKB (6min/m)	<u>Siltstone (0-95%):</u> Pale green – grey green, moderately hard, sub platy, weakly – moderately laminar, micromicaceous, common biotite mica, trace pyrite, grading to very fine sandstone in part, minor medium green glauconite, trace carbonaceous fragments. <u>Mudstone (5-100%):</u> Orange brown – pale green, moderately hard, sub blocky, common micromicaceous, trace biotite, trace medium green glauconite, minor grading to siltstone.	Nil
<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	
580-591mKB (6min/m)	<u>Mudstone (100%):</u> Variable pale green – reddish brown banded. Moderately hard, trace – common micromicaceous, sub blocky – sub platy, weakly laminar, common arenaceous, grading to very fine sandstone in part.	Nil
<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	
591-593mKB (5min/m)	<u>Mudstone (40%):</u> Pale green/red brown, moderately hard – hard, common micromicaceous, trace sub fissile, massive – weakly laminar, banded, grading to very fine sandstone in part. <u>Sandstone (60%):</u> White – very pale green, very fine – minor fine, well consolidated, abundant calcareous cement, massive, tight, quartzose, sub angular, moderately well sorted, nil visible porosity, no shows, very small gas increase.	100/-/-/-/- Tg 0.7U Bkg 0.2U



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<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	
593-600mKB (5min/m)	<u>Siltstone (75%)</u> : as above <u>Sandstone (25%)</u> : as above, no shows, gas returned to background	100/-/-/-/ Bkg 0.2U
<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	
600-690mKB (6min/m)	<u>Mudstone (100%)</u> : Pale – medium green, dusky red, brown grey, banded. Firm – moderately hard, micromicaceous, common argillaceous / micaceous laminae, common micromicaceous, trace – common biotite leaves at some levels, trace – common arenaceous, trace grading to very fine sandstone.	100/-/-/-/ Bkg 0.2U
<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	
690-715mKB (3min/m)	<u>Siltstone (10-60%)</u> : Light green grey – predominantly m grey, firm – moderately hard, common arenaceous, very weakly laminar, minor micromicaceous, trace carbonaceous specks. <u>Sandstone (10-30%)</u> : Light grey, very fine, trace fine, well consolidated, moderately well sorted, sub angular, abundant silicic cement, massive, trace fine carbonaceous filaments, common mica, trace argillaceous matrix, thinly bedded in siltstone, trace visible porosity. <u>Mudstone (20-80%)</u> : Pale green, minor red brown, firm – moderately hard, sub platy, micromicaceous, weakly laminar, minor sub fissile, trace carbonaceous specks, trace pyrite, grading to siltstone in part.	100/-/-/-/ Bkg 0.4U
<b>Fluorescence</b>	Trace pale green yellow fluorescence, very slow dull yellow bleeding cut.	
<b>Gas Flaring</b>	Nil	

### 06:00 SUMMARY

#### Formation: HAYFIELD MUDSTONE

715-768mKB (5min/m)	<u>Siltstone (0-10%)</u> : Light green grey – predominantly m grey, firm – moderately hard, common arenaceous, very weakly laminar, minor micromicaceous, trace carbonaceous specks. <u>Mudstone (90-100%)</u> : Predominantly pale grey green, grey, hard, blocky – sub tabular – sub platy, micromicaceous, weakly laminar, minor sub fissile, uniform.	100/-/-/-/ Bkg 0.4U
<b>Fluorescence</b>	Nil	
<b>Gas Flaring</b>	Nil	