



## DAILY GEOLOGICAL REPORT

**WELL:** Shenandoah #1      **REPORT No.:** 7      **DAYS FROM SPUD:** 7      **DATE:** 07/08/07  
**PEL:** EP 98      **00:00 DEPTH:** 106mKB      **LAST 24hr DEPTH:** 78mKB      **PROGRESS:** 28m  
**LOCATION:** Beetaloo Basin      **RIG:** Century Rig 7      **KB:** (Provisional) 232.8m      **9 5/8" Csg:** m  
**GEOLOGIST:** M. D. Berry      **GL:** (Provisional) 227.0m      **PTD:** 2,900m

**NEARBY WELLS:** Balmain #1

**06:00 Depth/Operation:** 106mKB / Making up 17 ½" rotary bit and BHA in preparation to RIH to drill ahead.  
**Operations 00:00 to 06:00:** RIH with hammer. Still malfunctioning so POOH to change to rotary bit.  
**Previous 24 Hours Operations:** Tag top plug and drill to 75m. POOH and lay out rotary bit. Make up hammer and hammer bit and RIH to 41m. Hit an obstruction and use air to ream to 65m. Hole packed off. Unload hole and drill ahead to 87m. Stuck in hole making a connection. Work pipe free and drill ahead to 96m. Reset air compressors. Ream and drill ahead to 106m. POOH to trouble shoot hammer.

Formation Tops	Actual Depths (m)			Prognosed Depths (m)			Diff to Prog. H/L	Diff to Balmain H/L
	MDKB	TVD	TVDSS	MDKB	TVD	TVDSS		
Undifferentiated Tertiary	5.8	5.8	+227	5.8	5.8	+227	-	-
Jinduckin Formation	51.5	51.5	+181.3	54.8	54.8	+178	+3.3	+3.3
Tindall Limestone	84.2	84.2	+148.6	83.8	83.8	+149	-0.4	-0.4
Antrim Volcanics				265.3	265.3	-32.5		
Bukalara Sandstone				348.3	348.3	-115.5		
Hayfield Mudstone				406.3	406.3	-173.5		
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		



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Interval (m) ROP (min/m) Average ROP	Lithology Description	Gas/Background Breakdown C1/C2/C3/C4/C5
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### Formation: Jinduckin Formation

78.3 -83.28m ROP: 0.59 – 3.0 Min/m Ave = 1.6	<p>Siltstone: 30%: Yellow, creamy white, pink to reddish brown, and trace dark red brown, argillaceous, firm to hard, generally firm, generally blocky, slight trace dolomitic, scattered sub-rounded quartz grains throughout, trace ironstone nodules (coarse grain size), grading to reddish brown mudstone.</p> <p>Sandstone; 70%; Both Unconsolidated (60%) and cemented aggregates (40%). Unconsolidated sandstone; loose grains, predominantly clear, very fine to medium, occasionally coarse grains, moderately to poorly sorted, sub-rounded to rounded, no apparent cement, good inferred porosity, no show. Cemented sandstone; clear and milky, extremely fine to fine grained, moderately well sorted, non calcareous or dolomitic, siliceous cement, generally hard, grading to creamy white and pink arenaceous siltstone, no visible porosity, no show.</p> <p>Chert; Trace; White, angular fragments, extremely hard, siliceous, cryptocrystalline.</p>	BG = Nil
<b>Fluorescence</b>	No Fluorescence	
<b>Gas Flaring</b>	No Flare	

### Formation: Jinduckin Formation – Basal Quartzitic Conglomerate

83.28 – 84.23m ROP: 0.86-1.68 Min/m Ave = 1.0	<p>Quartzitic Conglomerate (from cavings from tight hole section): 100%: Quartzitic fragments, white, buff, pale yellow, medium brown, extremely hard, angular and blocky with conchoidal fracture, evidence of weathered/water worn exterior surfaces; also cryptocrystalline chert fragments, angular, extremely hard; also very fine grained sandstone, white, pale yellow, very siliceous, very hard, chert stringers, trace open fractures, possibly represents matrix of the conglomerate.</p>	BG = Nil
<b>Fluorescence</b>	No Fluorescence	
<b>Gas Flaring</b>	No Flare	

### Formation: Tindall Limestone

84.23 – 90m ROP: 0.48-2.34 Min/m Ave = 1.0	<p>Limestone: 60%: White, buff, pale yellow and very pale brown, angular to blocky fragments, hard to very hard, cryptocrystalline, to microcrystalline and sucrosic, variably dolomitic, locally arenaceous grading to calcareous/dolomitic sandstone. No visible porosity, no show.</p> <p>Sandstone: 40%: White, pale yellow, very fine grained, sub-rounded grains, moderately well sorted, pinpoint siliceous cement, moderately to very dolomitic, grading to arenaceous dolomitic limestone. No visible porosity, no show. Also unconsolidated grains A/A as cavings.</p> <p>Chert: Trace: Angular fragments, appear to be cavings. Also as nodular concretionary form, dark grey siliceous nodules with pale yellow coating, extremely hard, interpreted to be from limestone.</p>	BG = Nil
<b>Fluorescence</b>	No Fluorescence	
<b>Gas Flaring</b>	No Flare	



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### Formation: Tindall Limestone

90 – 106.8m ROP: 0.48- 2.34m Min/m Ave = 1.0	<p>Limestone: 100%: White, buff, pale yellow and pale grey, hard, angular and blocky, predominantly granular, sucrosic texture (calciarenite), also microcrystalline and locally sparry, dolomitic in part, locally with intra-crystalline porosity development, no show.</p> <p>Siltstone: Trace: medium red brown, blocky, hard, dolomitic, slightly arenaceous with isolated fine to medium sand grains.</p>	BG = Nil
<b>Fluorescence</b>	No Fluorescence	
<b>Gas Flaring</b>	No Flare	