



DAILY GEOLOGICAL REPORT

WELL: Shenandoah #1 **REPORT No.:** 16 **DAYS FROM SPUD:** 16 **DATE:** 16/08/07
PEL: EP 98 **00:00 DEPTH:** 243mKB **LAST 24hr DEPTH:** 217mKB **24 hr Progress:** 26m
LOCATION: Beetaloo Basin **RIG:** Century Rig 7 **KB: (Final Survey)** 232.55m **9 5/8" Csg:** - m
GEOLOGIST: J Hulse **GL: (Final Survey)** 226.75m **PTD:** 2,900m

NEARBY WELLS: Balmain #1 (Twin)

06:00 Depth/Operation: 244mKB / Drilling ahead 17 1/2" hole in Tindall Limestone.
Operations 00:00 to 06:00: RIH, drill ahead 17 1/2" hole at 05:30hrs.
Previous 24 Hours Operations: RIH, drill ahead 17 1/2" hole, total losses at 242.5mKB, POOH to shoe, build water volume, wait on water, second water bore online, RIH.

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		

Remarks: The calcareous siltstone observed between 224 and 239mKB, based on cuttings and ROP, correlates to a similar section on logs in Balmain-1. The total losses at 242.5mKB coincided with the base of this silty section and a return to a moderately hard to hard micritic limestone and corresponding negative drill break (5 min/m → 10min/m). This suggests that the losses were due to fractures rather than a void at this level unless the mud was lost at a shallower depth.

Interval (m) ROP (min/m)	Lithology Description	Gas/Background Breakdown C1/C2/C3/C4/C5
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Formation: Tindall Limestone

216.5 – 224m 10min/m	Limestone (100%): White, buff, yellow, grey, soft – moderately hard, blocky, micritic. Very poor sample, almost 100% LCM.	Nil
224 – 239m 7min/m	Limestone (10 – 20%): As above Calcareous Siltstone (80-90%): Predominantly light grey, soft – firm, minor - common carbonaceous fragments, trace fossil fragments, massive – weakly laminar, calcareous cemented, sub blocky, trace calcite grains. Correlates with approximately 230mKB on Balmain-1 logs. Very high LCM content in sample. Minor Tertiary quartz.	
239 – 242.5m 20+min/m	Limestone (45%): White, minor cream – buff, moderately hard - hard, sub angular, micritic, trace calcite. Calcareous Siltstone (55%): As above.	
Fluorescence	Nil	
Gas Flaring	Nil	



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06:00 SUMMARY

Formation: Tindall Limestone

242.5–244mKB 14min/m	Limestone (55%): As above, common orange yellow weathered fragments Calcareous Siltstone (45%): As above Note average chip size of the limestone is about ¼ the size of the siltstone as a result of being harder lithology.	Nil
Fluorescence	Nil	
Gas Flaring	Nil	