



DAILY GEOLOGICAL REPORT

WELL: Shenandoah #1 **REPORT No.:** 37 **DAYS FROM SPUD:** 37 **DATE:** 06/09/07
PEL: EP 98 **00:00 DEPTH:** 1434mKB **LAST 24hr DEPTH:** 1299mKB **24 hr Progress:** 135m
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: 1463mKB / Drill ahead in 12 1/4" Kyalla Shale.

Operations 00:00 to 06:00: Drill ahead 12 1/4" hole in Kyalla Shale.

Previous 24 Hours Operations: Drill ahead 12 1/4" hole in Kyalla Shale.

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:

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

1300-1323mKB	Distinct lithological change from overlying samples, dark grey – dark brown shaly mudstone dominates. Mudstone (100%): Dark grey - dark brown, hard – very hard, abundant sub fissile, minor splintery, micromicaceous, weakly – moderately laminar, common – abundant carbonaceous laminae, minor – common silty. Minor light grey green mudstone, soft – firm, massive, trace carbonaceous filaments.	<u>1306mKB</u> Tg max 2.5 unit Bkg gas <1 unit 91/5/3/1/-
Fluorescence	Nil	
Gas Flaring	Nil	
1323-1329mKB	Mudstone (100%): Dark grey - dark brown, hard – very hard, abundant sub fissile, minor splintery, micromicaceous, weakly – moderately laminar, common – abundant carbonaceous laminae, minor – common silty. Minor light grey green mudstone, soft – firm, massive, trace carbonaceous filaments. Siltstone (Trace): Light grey, hard, siliceous, weakly laminar, trace carbonaceous specks, arenaceous in part. Sandstone (Trace): Light grey, very fine, quartzose, well consolidated, abundant siliceous cement, trace carbonaceous specks, grading to siltstone in part, nil visible porosity, no shows.	<u>1327.5mKB</u> Tg max 2.4 unit Bkg gas 1 unit 80/11/7/2
Fluorescence	Nil	
Gas Flaring	Nil	



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1329-1340mKB	Mudstone (100%): Dark grey – dark grey brown, hard, sub blocky, micromicaceous, common sub fissile, common – abundant carbonaceous fragments, minor – common carbonaceous laminae, common silty, trace pyrite, trace grey green mudstone.	<u>1330mKB</u> Tg max 2.0 unit Bkg gas 1 unit 63/23/13/1/-
Fluorescence	Nil	
Gas Flaring	Nil	
1340-1355mKB	Mudstone (100%): Dark – chocolate brown, carbonaceous, weakly laminar, common micromicaceous, trace – common carbonaceous laminae and fragments, trace – minor grey green mudstone. Sandstone: (Trace): Medium grey – medium green grey, fine, argillaceous matrix, moderately well consolidated, massive, nil visible porosity and no shows.	<u>1354mKB</u> Tg max 1.5 unit Bkg gas <1 unit 78/16/6/tr/-
Fluorescence	Nil	
Gas Flaring	Nil	
1355-1434mKB	Mudstone (100%): Dark brown, carbonaceous, hard, sub blocky, common sub fissile – fissile, trace - common micromicaceous, finely laminar, common splintery fracture, trace weakly crenulated surface, trace sub conchoidal fracture. Minor grey green – minor reddish brown mudstone. Sandstone: (Trace): Off white – light brown, very fine – fine, trace medium – coarse loose quartz, moderately well consolidated, abundant siliceous cement, massive, trace mica, trace brown carbonaceous flecks, nil visible porosity and no shows.	<u>1384mKB</u> Tg max 3.5 unit Bkg gas <1 unit 87/9/4/-/-
Fluorescence	Nil	
Gas Flaring	Nil	

06:00 AM Summary

Formation: KYALLA SHALE

1434-1463mKB	Mudstone (90-100%): Medium – dark grey brown (70-95%), carbonaceous, common mica, weakly laminar, minor – common carbonaceous fragments. Grey green (5-30%), massive – weakly laminar, minor micromicaceous, trace micaceous layers. 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, 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	