



# DAILY GEOLOGICAL REPORT

DATE: 20 Dec 2009  
 REPORT NO.: 17  
 ( associated DDR # 17 )

## WELL: CBM93-004

RIG	Wallis Rig D 39	RIG TYPE	Land
COMPLETION TYPE	Single Gas Producer	TARGET	Test gas potential of Puni Coal Measures
Depth at Midnight (MD)	675.0 m	SPUD DATE	04 Dec 2009
DAYS SINCE SPUD	16.39 ( Days on well: 19.00)	LAST CASING	4.500 in @ 501.0 m MD
PRESENT DEPTH MD	675.0 m	BACKGROUND GAS	0.02 Unit @ 647.0 m
24 Hr Progress (Geology)	54.0 m	MAX GAS	0.05 Unit @ 650.0 m
AVERAGE ROP	4.10 m/h	MUD WEIGHT	8.80 sg (WBM)
Operations Status @ 0600hrs	Conjtinuing DST 2, Injectivity Fall Off Test	ECD	
PROGNOSED TD	1,350.0m MD 1,350.0m TVD	ESTIMATED PORE PRESSURE	

### Well Details

Latitude:	24.00° 52.00' 10.92" South	UTM(N/S):	RT - MSL:	186.00 m DF MSL
Longitude:	135.00° 50.00' 59.64" East	UTM(E/W):	GL Elevation:	185.0 m

### Operations Summary and General Remarks

OPERATION SUMMARY:	<p>Cored from 621 to 675m, cored 26.23m of coal including 3 new seams of 18.71m, 6.78m and 0.1m plus at base. Also cored an extra 1.64m at base of 612.9m seam, giving it a total thickness of 9.74m. Cleaned hole, set up for DST 2, Injectivity Fall Off TEST</p> <p>Low background, almost all C1, slightly increasing from 4ppm to 5-7ppm below 645m. Max 9ppm at 650m. High TG below 655m was trap/equipment malfunction</p>
NEXT OPERATION:	Complete DST 2. Core ahead

### Casing Run

OD	LOT/FIT	Csg Shoe (MD/TVD)	Remarks
7"	sg / sg	245.51 m / 245.51 m	
4 1/2"	sg / sg	501.00 m / 501.00 m	4 1/2" 114mm 10.8ppf Range 1 Ozcom Vam

### Lithology Summary

Interval MDBRT (m) From To	Lithology	%	Description
622.64 - 675.00	Interbedded sandstone and coal		<p><b>Sandstone and coal</b>            Cored 26.23m of coal including 3 new seams of 18.71m, 6.78m and 0.1m plus at base. Also cored an extra 1.64m at base of 612.9m seam, giving it a total thickness of 9.74m. Coal is interbedded with medium grained sandstone and minor siltstone, claystone and carbonaceous claystone. See core descriptions for more detail</p>

### Gas Readings

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
650.00 - 650.20			3 - 3	0 - 0	0 -	0 - 0	0 - 0	0 - 0	0 - 0

**Comment-** 400 unit TG below 655.0m, dominated by CO2, resulted from an equipment malfunction

### Prognosis and Preliminary Correlation

Top	Actual Depth (186.00 m DF MSL)			Prognosis MD	H/L	Pick Criteria	Remarks
	MD	TVD	MDSS				
Namba Formation	1.00	1.00	-185.00		N/A		
Eyre Formation	28.00	28.00	-158.00		N/A		
Winton Formation	35.00	35.00	-151.00		N/A	Change to grey claystone	Top placed halfway through 10m sample interval
MacKunda Fm	95.00	95.00	-91.00		N/A	Presence of glauconite fragments in claystone	Top placed halfway through 10m sample interval



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**Prognosis and Preliminary Correlation**

Top	Actual Depth (186.00 m DF MSL)			Prognosis	H/L	Pick Criteria	Remarks
	MD	TVD	MDSS	MD			
Oodnadatta Formation	276.00	276.00	90.00		N/A	First appearance of Inoceramus fragments	
Bulldog Shale	357.00	357.00	171.00		N/A	Non calcareous	
Cadna-owie Fm	406.00	406.00	220.00	435.00	29.0 H	Coarse loose sandstone	
Algebuckina Sandstone	424.00	424.00	238.00		N/A	Coarse friable sandstone	
Purni Formation	498.00	498.00	312.00	550.00	52.0 H	Claystone below m-c sandstone	

<b>Core</b>			
Core #:	32	Start Depth (MD):	621.0 m
Formation:	Purni Formation	End Depth (MD):	627.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	5.8 m
Encapsulation Type:			
Shipping:			
Comments:	24 hr summary; Two upward fining cycles from medium to coarse sandstone at base to carbonaceous claystone and thick coal at top. Base erosive into underlying coal. Coring ended in 10cm of new coal		
Core Description:	621.0 - 622.64; Coal, black-brown, dull, >10% bright, cleat in bright bands 622.64 - 625.5; Siltstone, 50%, light grey, interlaminated with claystone and carb claystone. Claystone, 40%, dark grey, interlaminated, & sandstone, light grey, medium. Fining up into coal 625.5 - 626.54m; Sandstone, light grey, medium grained 626.54 - 626.74; Lost core		

<b>Core</b>			
Core #:	33	Start Depth (MD):	627.0 m
Formation:	Purni Formation	End Depth (MD):	633.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	627 - 633m; Sandstone, light grey, medium grainsize		

<b>Core</b>			
Core #:	34	Start Depth (MD):	633.0 m
Formation:	Purni Formation	End Depth (MD):	639.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.1 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	633.0 - 636.79m; Sandstone as above, light grey, medium grained 636.79 - 639.09; Coal, black, in part very dark brown, dull, >10% bright bands		

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Core #:	35	Start Depth (MD):	639.0 m
Formation:	Purni Formation	End Depth (MD):	645.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 639.0 - 645.0m; Coal, black, in part very dark brown, dull, &gt;10% bright bands

**Core**

Core #:	36	Start Depth (MD):	645.0 m
Formation:	Purni Formation	End Depth (MD):	651.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	5.9 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 645.0 - 651.0; Coal, black, in part very dark brown, dull, &gt;10% bright bands

**Core**

Core #:	37	Start Depth (MD):	651.0 m
Formation:	Purni Formation	End Depth (MD):	657.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 651.0 - 654.5m; Coal, black, in part very dark brown, dull, >10% bright bands  
654.5 - 657.0; Sandstone, 85% light grey, interlaminated with carbonaceous shale, 15%.**Core**

Core #:	38	Start Depth (MD):	657.0 m
Formation:	Purni Formation	End Depth (MD):	663.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 657.00 - 663.0m; Sandstone, 85% light grey, interlaminated with carbonaceous shale, 15%.



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## Core

Core #:	39	Start Depth (MD):	663.0 m
Formation:	Purni Formation	End Depth (MD):	669.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:  
Comments:  
Core Description: 663.00 - 665.33m; Sandstone, 85% light grey, interlaminated with carbonaceous shale, 15%.  
665.33 - 669.0m; Coal, black, occasional dark brown bands, dull, occasional bright bands

## Core

Core #:	40	Start Depth (MD):	669.0 m
Formation:	Purni Formation	End Depth (MD):	675.0 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:  
Comments:  
Core Description: 669.0 - 672.05m; Coal, black, occasional dark brown bands, dull, occasional bright bands  
672.05 - 674.9m; Sandstone, light grey, fine - medium at base, grading up through dark grey siltstone and claystone to 1m carbonaceous claystone at top.  
674.9 - 675.0m; Coal, black, dull with occasional bright bands

## Well Geologist

Graham McClung