

**DAILY GEOLOGICAL REPORT**DATE: 22 Dec 2009
REPORT NO.: 19
(associated DDR # 19)**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)	699.0 m	SPUD DATE	04 Dec 2009
DAYS SINCE SPUD	18.39 (Days on well: 21.00)	LAST CASING	4.500 in @ 501.0 m MD
PRESENT DEPTH MD	714.0 m	BACKGROUND GAS	0.02 Unit @ 695.0 m
24 Hr Progress (Geology)	24.0 m	MAX GAS	0.03 Unit @ 704.5 m
AVERAGE ROP	8.70 m/h	MUD WEIGHT	8.70 sg (WBM)
Operations Status @ 0600hrs	Pulled back to shoe prior to crew changeout.	ECD	
PROGNOSSED 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>Completed DST 2 Injectivity Fall Off Test (664.5 - 675.0m) Fall off similar to DST 1 on field indications. POOH, Test BOP. RIH, core from 675 - 699m through interbedded coals and sandstones grading up through siltstone and claystone to coal. Coals generally as above from below 585m, mostly dull, light, low drilling and desorption gas.</p> <p>Background gas very low, average around 5ppm, with brief CH4 peaks to 9ppm at 696m 4ppm at 705m, and 6ppm at 711m.</p> <p>Desorption results continued low to 687m but are slightly improved between 694 and 707m</p> <p>Expect top Unit B 760 - 770m, but correlation with CBM 93001 still ambiguous</p>
NEXT OPERATION:	Pull back to shoe for crew change. Continue coring

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
675.00 - 699.00	Interbedded coal, clystn, siltstn & sndstn	100	Coal Several upward fining sequences from medium sandstone to coal. Main coals at Coals at 677.81 - 687.07m (9.26m), 694.25 - 706.66m (12.42m) and 712.7 - 714mTD (1.3m+) - total 22.98m. See core descriptions for more information.

Gas Readings

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
696.00 - 696.00			8 -	1 -	0 -	0 -	0 -	0 -	0 -

Comment-

711.50 - 711.50			6 -	2 -	0 -	0 -	0 -	0 -	0 -
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Comment-**Prognosis and Preliminary Correlation**

Top	Actual Depth (186.00 m DF MSL)			Prognosis	H/L	Pick Criteria	Remarks
	MD	TVD	MDSS	MD			
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		

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Top	Actual Depth (186.00 m DF MSL)			Prognosis	H/L	Pick Criteria	Remarks
	MD	TVD	MDSS	MD			
MacKunda Fm	95.00	95.00	-91.00		N/A	Change to grey claystone	Top placed halfway through 10m sample interval
Oodnadatta Formation	276.00	276.00	90.00		N/A	Presence of glauconite fragments in claystone	Top placed halfway through 10m sample interval
Bulldog Shale	357.00	357.00	171.00		N/A	First appearance of Inoceramus fragments	
Cadna-owie Fm	406.00	406.00	220.00	435.00	29.0 H	Non calcareous	
Algebuckina Sandstone	424.00	424.00	238.00		N/A	Coarse loose sandstone	
Purni Formation	498.00	498.00	312.00	550.00	52.0 H	Coarse friable sandstone	
						Claystone below m-c sandstone	

Core

Core #:	41	Start Depth (MD):	675.0 m
Formation:	Purni Formation	End Depth (MD):	677.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	2.0 m
Encapsulation Type:			

Shipping:

Comments: 24hr summary;
Coals at 677.81 - 687.07m (9.26m), 694.25 - 706.66m (12.42m) and 712.7 - 714mTD (1.3m+), forming the tops of upward fining sequences from thin medium to fine sandstones grading up through siltstone, claystone and carb claystone.

Core Description: 675.0 - 675.05m; Coal, black, dull, fractured
675.05 - 675.25m; Carbonaceous claystone, black, fractured
675.25 - 677.0m; Siltstone, 60%, light grey, grading to vf sandstone and interlaminated with sandstone and claystone.
Claystone, 40%, dark grey

Core

Core #:	42	Start Depth (MD):	677.0 m
Formation:	Purni Formation	End Depth (MD):	681.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	4.0 m
Encapsulation Type:			

Shipping:

Comments: Cleat not easily visible in coal, but fractures which develop when it dries suggests it is present at 2-5mm intervals, particularly in bright bands

Core Description: 677.0 - 677.81m; Siltstone, 60%, light grey, grading to vf sandstone and interlaminated with sandstone and claystone.
Claystone, 40%, dark grey
677.81 - 681.0m; Coal, black, dull with common bright laminae, irregular vertical fractures.

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Core #:	43	Start Depth (MD):	681.0 m
Formation:	Purni Formation	End Depth (MD):	687.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 681.0 - 687.0m; Coal, black, dull with common bright laminae, irregular vertical fractures.

Core

Core #:	44	Start Depth (MD):	687.0 m
Formation:	Purni Formation	End Depth (MD):	687.3 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	0.1 m
Encapsulation Type:			

Shipping:

Comments: Blocked jets

Core Description: 687.0 - 687.3m; Coal, black, dull with common bright laminae, irregular vertical fractures.

Core

Core #:	45	Start Depth (MD):	687.3 m
Formation:	Purni Formation	End Depth (MD):	693.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	5.7 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 687.3 - 690.76m; Sandstone, 50%, light grey, fine, grading medium to very fine, thinly interbedded with Siltstone, 50%, light grey, with minor interlaminated claystone.
690.76 - 693.0m; Sandstone, light grey, medium, friable, soft, clay matrix, rare carbonaceous laminae**Core**

Core #:	46	Start Depth (MD):	693.0 m
Formation:	Purni Formation	End Depth (MD):	699.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	5.6 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 693.0 - 693.1m; Sandstone, light grey, medium, friable, soft, clay matrix, rare carbonaceous laminae
693.1 - 694.25m; Sandstone, light grey, medium, hard, quartzose, white clay matrix
694.25 - 699.0m; Coal, black, dull, light, occasional bright bands, vertical fractures**Well Geologist**

Graham McClung