



DAILY GEOLOGICAL REPORT

DATE: 23 Dec 2009
 REPORT NO.: 20
 (associated DDR # 20)

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)	744.0 m	SPUD DATE	04 Dec 2009
DAYS SINCE SPUD	19.39 (Days on well: 22.00)	LAST CASING	4.500 in @ 501.0 m MD
PRESENT DEPTH MD	762.0 m	BACKGROUND GAS	0.02 Unit @ 720.0 m
24 Hr Progress (Geology)	45.0 m	MAX GAS	5.80 Unit @ 704.5 m
AVERAGE ROP	6.10 m/h	MUD WEIGHT	1.05 sg (WBM)
Operations Status @ 0600hrs	Coring	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>Cored from 699 to 714m, pulled back to shoe for crew change. Cored ahead to 744m. See below for lithology. Drilling gas still low, desorption gas poor to fair, occasionally good.</p> <p>Sequence continued through five seams - 694.75 - 706.66m (11.91m), 712.2 - 715m (2.8m), 721 - 726m (5m, about 50% carb shale), 739.3 - 752.75m (13.45m) and 760.5 - 762m (1.5+)m Total coal to 06:00 = 34.66m. Intervening lithology about half and half medium quartz lithic sandstone and siltstone/claystone/carbonaceous claystone in upward fining cycles, minor tuff.</p> <p>Background gas low, little response when drilling coals. Suspect gas trap is inefficient when coring. Peak fo 5.81 units total gas at 704.5m, C1 1.8ppm. 4.9 units TG at 726.5m, C1 14.7ppm, C2 1.97, C3 Tr</p>
NEXT OPERATION:	Core ahead to next DST interval in Unit B - Purni Formation

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
699.00 - 744.00	Interbedded coal, sstn, sltstn & clystn	100	Coal Upward fining sequences grading from medium sandstone through siltstone to claystone, carb claystone and coal. Sandstone much less dominant than higher in the hole, much more claystone and coarbonaceous claystone. One 2m tuff bed, and some reworked tuff in coals.

Gas Readings

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
704.50 - 704.50			2 -	-	-	-	-	-	-

Comment-

726.50 - 726.50			15 -	2 -	0 -	-	-	-	-
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Comment-

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		Top placed halfway through 10m sample interval



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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	
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 #:	47	Start Depth (MD):	699.0 m
Formation:	Purni Formation	End Depth (MD):	705.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	5.9 m
Encapsulation Type:			

Shipping:
 Comments:
 Core Description: 699.0 - 705.0; Coal, black, dull, occasional bright bands and laminae, small wood fragments

Core

Core #:	48	Start Depth (MD):	705.0 m
Formation:	Purni Formation	End Depth (MD):	711.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.1 m
Encapsulation Type:			

Shipping:
 Comments:
 Core Description: 705.0 - 706.66m; Coal, black, dull, occasional bright bands and laminae, small wood fragments
 706.66 - 711.0m; Sandstone, light grey, medium, fairly abrupt transition through 1m of siltstone and claystone to coal.

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Core #:	49	Start Depth (MD):	711.0 m
Formation:	Purni Formation	End Depth (MD):	714.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	3.2 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 711.0 - 712.2m; Sandstone, light grey, medium
712.2 - 714.0m: Coal, black dull, occasional bright bands and laminae.

Core

Core #:	50	Start Depth (MD):	714.0 m
Formation:	Purni Formation	End Depth (MD):	720.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 714.0 - 715.0m; Coal, black dull, occasional bright bands and laminae.
715.0 - 715.35m; Carbonaceous shale, black, dull
715.35 - 718.25m; Siltstone, light grey, hard
718.25 - 720.5m; Siltstone, 50%, interlaminated with claystone, 50%, dark grey

Core

Core #:	51	Start Depth (MD):	720.0 m
Formation:	Purni Formation	End Depth (MD):	726.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 720.0 - 720.5m; Siltstone, 50%, interlaminated with claystone, 50%, dark grey
720.5 - 721.0m; Carbonaceous shale, black, vertical fractures
721.0 - 721.95m; Coal, black, dull, rare bright laminae, vertical fractures
721.95 - 723.25m; Carbonaceous shale, black, with rounded inclusions of orange brown claystone, ?tuff
723.25 - 724.9m; Coal as above
724.9 - 725.76m; Carbonaceous shale, black, vertical fractures
725.76 - 726m; Coal, as above

Core

Core #:	52	Start Depth (MD):	726.0 m
Formation:	Purni Formation	End Depth (MD):	732.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 726.0 - 727.4m; Siltstone, 60%, light grey, interlaminated with Claystone, 40%, dark grey to black
727.4 - 731.5m; Siltstone, 90%, light grey, in part interlaminated with fine sandstone. !0%, light grey
731.5 - 732.0m; Sandstone, light grey, medium

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Core #:	53	Start Depth (MD):	732.0 m
Formation:	Purni Formation	End Depth (MD):	738.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 732.0 - 733.2m; Sandstone, light grey, medium
733.2 - 735.1m; Sandstone, 50%, light grey, medium, interlaminated with Claystone, 50%, dark grey
735.1 - 738.0m; Sandstone, light grey, medium

Core

Core #:	54	Start Depth (MD):	738.0 m
Formation:	Purni Formation	End Depth (MD):	744.0 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: 738.0 - 739.3m; Sandstone, light grey, medium
739.3 - 744m; Coal, black, dull, soft, fractured. Occasional bright bands and laminae, small woody fragments visible on bedding planes.

Well Geologist

Graham McClung