

		DAILY GEOLOGICAL REPORT		DATE: 23 Dec 2009 REPORT NO.: 20 (associated DDR # 20)	
WELL: CBM93-004					
RIG COMPLETION TYPE		Wallis Rig D 39 Single Gas Producer		RIG TYPE TARGET	
				Land Test gas potential of Puni Coal Measures	
Depth at Midnight (MD)		744.0 m		SPUD DATE	
DAYS SINCE SPUD		19.39 (Days on well: 22.00)		04 Dec 2009	
PRESENT DEPTH MD		762.0 m		LAST CASING	
24 Hr Progress (Geology)		45.0 m		4.500 in @ 501.0 m MD	
AVERAGE ROP		6.10 m/h		BACKGROUND GAS	
Operations Status @ 0600hrs		Coring		0.02 Unit @ 720.0 m	
PROGNOSSED TD		1,350.0m MD 1,350.0m TVD		MAX GAS	
				5.80 Unit @ 704.5 m	
				MUD WEIGHT	
				1.05 sg (WBM)	
				ECD	
				ESTIMATED PORE PRESSURE	
Well Details					
Latitude:		24.00° 52.00" 10.92' South		UTM(N/S):	
Longitude:		135.00° 50.00" 59.64' East		RT - MSL:	
				186.00 m DF MSL	
				GL Elevation:	
				185.0 m	
Operations Summary and General Remarks					
OPERATION SUMMARY:		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. 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. 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			
NEXT OPERATION:		Core ahead to next DST interval in Unit B - Purni Formation			
Casing Run					
OD		LOT/FIT		Csg Shoe (MD/TVD)	
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		%	
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)
704.50 - 704.50			2 -	-	-
Comment-					
726.50 - 726.50			15 -	2 -	0 -
Comment-					
Prognosis and Preliminary Correlation					
Top	Actual Depth (186.00 m DF MSL)			Prognosis	H/L
	MD	TVD	MDSS	MD	Pick Criteria
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

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