



**DAILY GEOLOGICAL REPORT**

DATE: 17 Dec 2009  
 REPORT NO.: 14  
 ( associated DDR # 14 )

**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)	599.0 m	SPUD DATE	04 Dec 2009
DAYS SINCE SPUD	13.39 ( Days on well: 16.00)	LAST CASING	4.500 in @ 501.0 m MD
PRESENT DEPTH MD	557.6 m	BACKGROUND GAS	Unit
24 Hr Progress (Geology)	47.0 m	MAX GAS	22.00 Unit @ 585.0 m
AVERAGE ROP	3.00 m/h	MUD WEIGHT	8.80 sg (WBM)
Operations Status @ 0600hrs	POOH change corehead	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:	Mudgas readings low but picked up to 20 units maximum while drilling 582.9 - 585.8m
NEXT OPERATION:	Aiming to do falloff test on next significant coal

**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)	Lithology	%	Description
From	To		
			Significant coal intersection see Core descriptions IDS data base.

**Gas Readings**

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
585.00 -			2,015 -	203 -	47 -	0 -	6 -	0 -	2 -

**Comment-** Total Gas reading was 22units. This is a total gas derived from the chromatograph, includes CO2.

**Prognosis and Preliminary Correlation**

Top	Actual Depth (186.00 m DF MSL)			Prognosis	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
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	



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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			
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	

Core			
Core #:	14	Start Depth (MD):	552.0 m
Formation:	Purni Formation	End Depth (MD):	555.1 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	3.1 m
Encapsulation Type:			
Shipping:			
Comments:	First significant Coal intersected 545.5m to 560.4m, 14.9m , this an interpretation as significant lost core occurred to 552m, as a result of wear of bit while milling fish, to give overgauge core, thus jamming. A 3m seam intersected 565.9m to 567.9m in interbedded sequence below main seam above, desorbed well (#10 canister) amount of gas desorbed required resetting of measuring monometer. Sandstone predominates from 569m with one further coal 582.9m to 585.8m.		
Core Description:	552-555m, Coal cannistered #1,#2,#3 555-555.02 Coal chips, dull, mod hard a/a 555.02-555.1 Sample Coal P#1		

Core			
Core #:	15	Start Depth (MD):	555.1 m
Formation:	Purni Formation	End Depth (MD):	558.0 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	2.9 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	Coal Cannisters #4, #5, #6, all run 15 in cannisters		

Core			
Core #:	16	Start Depth (MD):	558.0 m
Formation:	Purni Formation	End Depth (MD):	564.0 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	558m - 558.18m Coal, dark grey to black, dull, moderately hard, grainy looking under microscope 558.18 - 560.13m Coal to Desorption Cannisters #7,#8 560.13 - 561.29m Coal a/a 561.29 - 561.4m light grey Claystone, with laminations of siltstone and fine sandstone 561.29 - 561.4m thin coal 561.4 - 562.27m Sandstone, medium grey, moderately hard, fine grained with siltstone and claystone laminations at the top; becoming fine to medium at base 562.27 - 562.39m argillaceous coal 562.39 - 563.39m Coal dull black a/a to desorption Cannister #9 563.39 - 563.5m Coal 563.5 - 564m dark grey carbonaceous Claystone		

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Core #:	17	Start Depth (MD):	564.0 m
Formation:	Purni Formation	End Depth (MD):	569.9 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments: Total Coal 565.85 - 568.46m; 2.6m. Gas desorption results look good, had to be reset.

Core Description: 564 - 565.85m Claystone, dark grey, laminated, coal laminae and very fine sandstone  
565.85 - 566.85m Coal to desorption #10, coal observed to be bleeding gas  
566.85 - 568.1m Coal with minor thin clayey beds  
568 - 568.46m Coal  
568.46 - 568.76m Laminated carbonaceous Claystone, dark grey coaly towards base  
568.76 - 569.1m Sandstone very fine grained, silty laminations  
569.1 - 569.9m Sandstone, medium to coarse, carbonaceous laminations in part

**Core**

Core #:	18	Start Depth (MD):	569.9 m
Formation:	Purni Formation	End Depth (MD):	575.9 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments: The Sandstone generally firm with abundant kaolin much less porosity compared to sandstones above the first significant coal, top 545.5m Sandstone, medium grained, firm, very rare laminations. Note detail sandstone description following core

Core Description: 570 - 571.23m lost core  
571.23 - 572.23m Sandstone, coarse to very coarse, scattered granules and very occasional pebbles, indurated sediment to 1cm  
572.23 - 575.9m Sandstone medium to very coarse, granules towards base

**Core**

Core #:	19	Start Depth (MD):	575.9 m
Formation:	Purni Formation	End Depth (MD):	580.4 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Sandstone, entire core  
578m sample description:  
Sandstone, light to medium grey, firm, friable in part, very fine to very coarse, poorly sorted, common to abundant kaolin, poor porosity with patchy good porosity with open pore throats, trace coarse mica generally biotite, trace dark lithic grains

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Core #:	20	Start Depth (MD):	580.4 m
Formation:		End Depth (MD):	584.9 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Sandstone minor pebble bands

Coal 582.88 to 585.8m bottom of seam top of next core run #21  
Desorption Samples #11 & 12

**Core**

Core #:	21	Start Depth (MD):	584.2 m
Formation:		End Depth (MD):	588.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Coal at top to 585.8m, see notes on seam core run#20 above.  
Sandstone, coarse, balance of core

**Core**

Core #:	22	Start Depth (MD):	588.2 m
Formation:	Purni Formation	End Depth (MD):	589.6 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Sandstone

**Core**

Core #:	23	Start Depth (MD):	589.6 m
Formation:	Purni Formation	End Depth (MD):	591.0 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	m
Encapsulation Type:			

Shipping:

Comments:

Core Description: zero recovery

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Core #:	24	Start Depth (MD):	591.0 m
Formation:	Purni Formation	End Depth (MD):	593.5 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	2.2 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Sandstone

**Core**

Core #:	25	Start Depth (MD):	593.5 m
Formation:	Purni Formation	End Depth (MD):	597.0 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	1.6 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: Sandstone

**Core**

Core #:	26	Start Depth (MD):	597.0 m
Formation:	Purni Formation	End Depth (MD):	599.8 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	m
Sleeve Type:		Amount Recovered:	1.7 m
Encapsulation Type:			

Shipping:

Comments: Core jamming a problem, excessive clay build up on core surface, firmer sandstones with abundant kaolin. POOH new corehead.

Core Description: Sandstone

**Well Geologist**

Michael Harrison