

**DAILY GEOLOGICAL REPORT**DATE: 06 Jun 2010  
REPORT NO.: 21  
( associated DDR # 21 )**WELL: CBM 93-002**

RIG	Wallis Rig D 39	RIG TYPE	Land
COMPLETION TYPE		TARGET	Test gas potential of Purni Formation
Depth at Midnight (MD)	1,044.2 m	SPUD DATE	22 May 2010
DAYS SINCE SPUD	15.67 ( Days on well: 20.67)	LAST CASING	4.500 in @ 523.5 m MD
PRESENT DEPTH MD	1,044.2 m	BACKGROUND GAS	25.00 Unit @ 1,038.0 m
24 Hr Progress	86.00 m	MAX GAS	77.00 Unit @ 1,036.7 m
AVERAGE ROP	36,719.97 m/h	ECD	
Operations Status @ 0600hrs	Completing wiper trip	ESTIMATED PORE PRESSURE	
PROGNOSSED TD	1,150.0m MD 1,150.0m TVD		

**Well Details**

Latitude:	25.00° 21.00" 16.10' South	UTM(N/S):	RT - MSL:	159.30 m RT MSL
Longitude:	135.00° 26.00" 5.30' East	UTM(E/W):	GL Elevation:	158.0 m

**Operations Summary and General Remarks**

OPERATION SUMMARY:	Cored from 958 to 1044.2m. Top Tirrawarra at 972.04m, top Crown Point at 1032.9m
HYDROCARBON SHOWS:	Nil. V rare dark brown material in some sections in upper Tirrawarra - no fluorescence.
NEXT OPERATION:	Run wiper trip. Run wireline logs - Super Combo - and Check Shot Survey

**Lithology Summary**

Interval MDBRT (m) From To	Lithology	%	Description
956.85 - 963.20	Fining Up From Sandstone to Siltstone	100	<b>Fining Up From Sandstone to Siltstone</b> 956.85 - 963.2m Upward fining sequence from medium sandstone with contorted siltstone laminae through interbedded siltstone and fine to very fine sandstone, some slump structures, to siltstone and silty very fine sandstone. Topmost 30cm is carbonaceous claystone
963.20 - 972.04	Fining Up From Sandstone to Siltstone	100	<b>Fining Up From Sandstone to Siltstone</b> 963.2 - 972.04m Another upward fining sequence with coarse sandstone over basal 2m, grading up to medium sandstone and then to siltstone and silty sandstone as above
972.04 - 976.71	Sandstone and Siltstone	100	<b>Sandstone and Siltstone</b> 972.04 - 976.71m Interbedded fine - very fine sandstone, light to mid grey, and siltstone, dark grey, with numerous thin bands and laminae, common slump and /or dewatering structures. Poor contrast between siltstone and sandstone layers.
976.71 - 990.49	Sandstone, Porous	100	<b>Sandstone, Porous</b> 976.71 - 990.49m Sandstone, very light grey where unaffected by mud, which penetrates to about 2/3 of the radius, mid grey on surface. Quartzose, grading slightly from medium to fine at base to fine at top. Grains subrounded to subangular, becoming more rounded with depth, well sorted. Very uniform apart from weak cross lamination and rare claystone laminae. Poor to good visual porosity, good permeability shown by mud penetration.
990.49 - 991.00	Sandstone and Siltstone	100	<b>Sandstone and Siltstone</b> 990.49 - 991.0 Fine sandstone as above, containing abundant ripped up siltstone or claystone clasts
991.00 - 994.18	Sandstone	100	<b>Sandstone</b> 991.0 - 994.18m Sandstone as above 990.49m.
994.18 - 997.13	Sandstone	100	<b>Sandstone</b> 994.18 - 997.13m Sandstone, light grey but stained mid grey by mud penetration, quartzose, well sorted but becoming poorer with depth, grains rounded to subrounded. Base is conglomeratic, with rounded pebbles to 3cm, indurated sedimentary and low grade metamorphics. Good visual porosity and very good apparent permeability.



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## Lithology Summary

Interval MDBRT (m) From To	Lithology	%	Description
997.13 - 1,032.90	Sandstone	100	<b>Sandstone</b> 997.13 - 1032.9m Sandstone, generally medium as above but with occasional beds of fine sandstone as below 976.71m. Occasional sequences suggest upward fining, and rare pebbles are present. Becomes coarser towards base, with occasional bands of grit to pebble conglomerate with clasts less than 1cm. Basal 1.5m includes beds of boulder conglomerate, with one quartzite boulder to 0.5m.
1,032.90 - 1,044.20	Diamictite	100	<b>Diamictite</b> 1032.9 - 1044.2m Diamictite, mid - dark grey, sandstone matrix, poorly sorted with scattered pebbles, mostly less than 2cm in diameter, but a few to 12cm. Hard and uniform.

## Gas Readings

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
982.20 - 988.20	5,700.000	700.00	1 - 10	0 - 1	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0

**Comment-** From Tirrawarra Sandstone. CO2 229.9ppm, background

## Prognosis and Preliminary Correlation

Top	Actual Depth (159.30 m RT MSL)			Prognosis	H/L	Pick Criteria	Remarks
	MD	TVD	TVDSS	MD			
Eyre Formation	4.00	4.00	-155.30	4.00	N/A		
Winton Formation	20.00	20.00	-139.30	60.00	40.0 H	Top grey claystones	Top may be unweathered Eyre Fmn
MacKunda Fm	198.00	198.00	38.70		N/A	First glauconitic sandstones, slightly calcareous	Top boundary clear, but could contain equivalents of Oodnadatta and Bulldog Formations
Cadna-owie Fm	291.00	291.00	131.70	484.00	193.0 H	Top first quartz sandstone	Very thin, indistinguishable from Algebuckina while drilling. Better defined on wireline logs
Algebuckina Sandstone	314.00	314.00	154.70	490.00	176.0 H	Second fast drilling break - no change in cuttings	May include Poolowanna Formation and/or other early Mesozoic units
Purni Formation	512.00	512.00	352.70	700.00	188.0 H	Reverse drilling break above 5.5m coal	
Crown Point Formation	1,032.90	1,032.90	873.60		N/A	Top of diamictite	From core

## Core

Core #:	74	Start Depth (MD):	952.2 m
Formation:	Purni Formation	End Depth (MD):	958.2 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:	Others	Amount Recovered:	6.1 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

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Core #:	75	Start Depth (MD):	958.2 m
Formation:		End Depth (MD):	964.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	5.9 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	76	Start Depth (MD):	964.2 m
Formation:		End Depth (MD):	970.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	77	Start Depth (MD):	970.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	976.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	78	Start Depth (MD):	976.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	982.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description:

**Core**

Core #:	79	Start Depth (MD):	982.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	988.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

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Core #:	80	Start Depth (MD):	988.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	994.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

**Core**

Core #:	81	Start Depth (MD):	994.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,000.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

**Core**

Core #:	82	Start Depth (MD):	1,000.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,006.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

**Core**

Core #:	83	Start Depth (MD):	1,006.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,012.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

**Core**

Core #:	84	Start Depth (MD):	1,012.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,018.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			
Shipping:			
Comments:			
Core Description:	See Lithology Section		

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Core #:	85	Start Depth (MD):	1,018.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,024.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	86	Start Depth (MD):	1,024.2 m
Formation:	Tirrawarra Sandstone Eq	End Depth (MD):	1,030.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	87	Start Depth (MD):	1,030.2 m
Formation:	Crown Point Formation	End Depth (MD):	1,036.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.1 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	88	Start Depth (MD):	1,036.2 m
Formation:	Crown Point Formation	End Depth (MD):	1,042.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section

**Core**

Core #:	89	Start Depth (MD):	1,042.2 m
Formation:	Crown Point Formation	End Depth (MD):	1,044.2 m
Contractor:		Core Diameter:	mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	2.0 m
Encapsulation Type:			

Shipping:

Comments:

Core Description: See Lithology Section



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**Well Geologist**

Graham McClung