



**DAILY GEOLOGICAL REPORT**

DATE: 31 May 2010  
 REPORT NO.: 15  
 ( associated DDR # 15 )

**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)	538.2 m	SPUD DATE	22 May 2010
DAYS SINCE SPUD	9.67 ( Days on well: 14.67)	LAST CASING	4.500 in @ 523.5 m MD
PRESENT DEPTH MD	568.1 m	BACKGROUND GAS	0.50 Unit @ 570.4 m
24 Hr Progress	12.70 m	MAX GAS	4.50 Unit @ 546.0 m
AVERAGE ROP	41,399.97 m/h	ECD	
Operations Status @ 0600hrs	Coring ahead	ESTIMATED PORE PRESSURE	
PROGNOSED 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:	Finalised pressure testing. Made up coring string and RIH. Cored out cement and shoe, ran FIT. Cored ahead to 538.1m
HYDROCARBON SHOWS:	NIL
NEXT OPERATION:	Core ahead with DSTs to TD

**Lithology Summary**

Interval MDBRT (m) From To	Lithology	%	Description
525.50 - 527.32	Sandstone	100	<b>Sandstone</b> 525.5 - 527.32m Sandstone, light grey, medium, quartzose, well sorted, common claystone and carbonaceous laminae, scattered carbonaceous fragments, trace biotite and occasional carbonaceous siltstone bands. Quartz clear, white, light grey and rarely smoky, weak trace very light brown. Base sharp. Friable with up to 15% visual porosity
527.32 - 528.62	Sandstone	100	<b>Sandstone</b> 527.32 - 528.62m Sandstone, light to mid grey, fine, occasional medium grained bands including at base, well sorted, cross bedded and cross laminated, some slumping, occasional bands of silty carbonaceous sandstone
528.62 - 532.30	Coal	100	<b>Coal</b> 528.62 - 532.30m Coal, dull with very fine discontinuous bright laminae
532.30 - 535.10	Sandstone	100	<b>Sandstone</b> 532.30 - 535.1m Sandstone, light to mid grey, fine to very fine, silty, and Siltstone, dark grey, sandy, thinly interbedded. Top 30cm dark grey claystone grading to overlying coal.
535.10 - 538.20	Sandstone	100	<b>Sandstone</b> 535.1 - 538.2m Sandstone, light grey, coarse to very coarse, moderately sorted, friable with weak white clay matrix, quartzose, with rare coal and carbonaceous fragments. Uniform apart from two 15cm bands of carbonaceous laminae.
538.20 - 539.77	Coal	100	<b>Coal</b> 538.2 - 539.77m Coal, dull and bright in thin bands and laminae, plus discontinuous bright laminae in dull bands
539.77 - 542.70	Siltstone	100	<b>Siltstone</b> 539.77 - 542.7m Siltstone, dark grey, micaceous with wisps of dark grey claystone present. Slightly sandy, thin bedded and laminated with 10% very fine sandstone in places
542.70 - 543.75	Siltstone	100	<b>Siltstone</b> 542.7 - 543.75m Siltstone as above, interbedded with bands of fine or coarse - medium sandstone to 5cm, some with weak visual porosity. Very micaceous
543.75 - 552.77	Sandstone	100	<b>Sandstone</b>



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## Lithology Summary

Interval MDBRT (m)		Lithology	%	Description
From	To			
				543.75 - 552.77 Sandstone, light grey, coarse - medium, coarsening up over the top metre where some bands have strong silica cement. Otherwise fairly uniform except near base where occasional bands with ripped up coal and claystone occur. Occasional carbonaceous laminae. Soft white and firmer cream clay matrix, but occasionally with weak visual porosity. Common bronze to dark brown biotite. Quartz as in higher sandstones.
552.77	556.98	Coal	100	<b>Coal</b> 552.77 - 556.98m Coal, dull, occasional bright laminae, well developed vertical fractures.
556.98	557.52	Carbonaceous claystone	100	<b>Carbonaceous claystone</b> 556.98 - 557.52m Carbonaceous claystone grading to coal
557.52	558.71	Coal	100	<b>Coal</b> 557.52 - 558.71m Coal, dull, as above
558.71	561.43	Claystone	100	<b>Claystone</b> 558.71 - 561.43m Claystone, very dark grey, grading to carbonaceous claystone in upper part, and grading down to interbedded siltstone, claystone and minor very fine sandstone, with traces of pink garnet. Thinly and irregularly bedded.

## Gas Readings

Depth (m)	Total Gas (ppm)	BGG (ppm)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
535.00 - 560.00	300.000	50.00	0 - 12	0 - 2	0 -	0 - 0	0 - 0	0 - 0	0 - 0
<b>Comment-</b> As above									
535.00 - 560.00	200.000	50.00	0 - 5	0 - 1	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
<b>Comment-</b> CO2 2 units. Samples from Possum belly									
535.00 - 560.00	400.000	50.00	0 - 5	0 - 1	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
<b>Comment-</b> As above									

## 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	

**DAILY GEOLOGICAL REPORT**DATE: 31 May 2010  
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Core #:	1	Start Depth (MD):	525.5 m
Formation:	Purni Formation	End Depth (MD):	526.2 m
Contractor:	Wallis Drilling	Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:	Others	Amount Recovered:	0.3 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 525.5 - 526.2m Sandstone, light grey, medium, quartzose, well sorted, common claystone and carbonaceous laminae, scattered carbonaceous fragments, trace biotite and occasional carbonaceous siltstone bands. Quartz clear, white, light grey and rarely smoky, weak trace very light brown. Base sharp. Friable with up to 15% visual porosity

**Core**

Core #:	2	Start Depth (MD):	526.2 m
Formation:	Purni Formation	End Depth (MD):	528.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	2.1 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 526.2 - 527.32m Sandstone, light grey, medium, quartzose, well sorted, common claystone and carbonaceous laminae, scattered carbonaceous fragments, trace biotite and occasional carbonaceous siltstone bands. Quartz clear, white, light grey and rarely smoky, weak trace very light brown. Base sharp. Friable with up to 15% visual porosity  
527.32 - 528.2m Sandstone, light to mid grey, fine, occasional medium grained bands including at base, well sorted, cross bedded and cross laminated, some slumping, occasional bands of silty carbonaceous sandstone

**Core**

Core #:	3	Start Depth (MD):	528.2 m
Formation:	Purni Formation	End Depth (MD):	532.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	3.7 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 528.2 - 528.62m Sandstone, light to mid grey, fine, occasional medium grained bands including at base, well sorted, cross bedded and cross laminated, some slumping, occasional bands of silty carbonaceous sandstone  
528.62 - 532.20m Coal, dull with very fine discontinuous bright laminae

**Core**

Core #:	4	Start Depth (MD):	532.2 m
Formation:	Purni Formation	End Depth (MD):	538.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	5.9 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 532.2 - 532.30m Coal, dull with very fine discontinuous bright laminae  
532.30 - 535.1m Sandstone, light to mid grey, fine to very fine, silty, and Siltstone, dark grey, sandy, thinly interbedded. Top 30cm dark grey claystone grading to overlying coal.  
535.1 - 538.2m Sandstone, light grey, coarse to very coarse, moderately sorted, friable with weak white clay matrix, quartzose, with rare coal and carbonaceous fragments. Uniform apart from two 15cm bands of carbonaceous laminae.

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Core #:	5	Start Depth (MD):	538.2 m
Formation:	Purni Formation	End Depth (MD):	544.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 538.2 - 539.77m Coal, dull and bright in thin bands and laminae, plus discontinuous bright laminae in dull bands  
539.77 - 542.7m Siltstone, dark grey, micaceous with wisps of dark grey claystone present. Slightly sandy, thin bedded and laminated with 10% very fine sandstone in places  
542.7 - 543.75m Siltstone as above, interbedded with bands of fine or coarse - medium sandstone to 5cm, some with weak visual porosity. Very micaceous  
543.75 - 552.77 Sandstone, light grey, coarse - medium, coarsening up over the top metre where some bands have strong silica cement. Otherwise fairly uniform except near base where occasional bands with ripped up coal and claystone occur. Occasional carbonaceous laminae. Soft white and firmer cream clay matrix, but occasionally with weak visual porosity. Common bronze to dark brown biotite. Quartz as in higher sandstones.

**Core**

Core #:	6	Start Depth (MD):	544.2 m
Formation:	Purni Formation	End Depth (MD):	550.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 544.2 - 552.77 Sandstone, light grey, coarse - medium, coarsening up over the top metre where some bands have strong silica cement. Otherwise fairly uniform except near base where occasional bands with ripped up coal and claystone occur. Occasional carbonaceous laminae. Soft white and firmer cream clay matrix, but occasionally with weak visual porosity. Common bronze to dark brown biotite. Quartz as in higher sandstones.

**Core**

Core #:	7	Start Depth (MD):	550.2 m
Formation:	Purni Formation	End Depth (MD):	556.2 m
Contractor:		Core Diameter:	61 mm
Equipment:		Barrel Length:	6.0 m
Sleeve Type:		Amount Recovered:	6.0 m
Encapsulation Type:			

## Shipping:

## Comments:

Core Description: 543.75 - 552.77 Sandstone, light grey, coarse - medium, coarsening up over the top metre where some bands have strong silica cement. Otherwise fairly uniform except near base where occasional bands with ripped up coal and claystone occur. Occasional carbonaceous laminae. Soft white and firmer cream clay matrix, but occasionally with weak visual porosity. Common bronze to dark brown biotite. Quartz as in higher sandstones.  
552.77 - 556.20m Coal, dull, occasional bright laminae, well developed vertical fractures.

**Well Geologist**

Graham McClung