origin

Australian Drilling Associates Pty Ltd ADA

Trefoil-2

Date : 12 Nov 2009 | **Geology Report Number : 30** | (associated DDR # 43)

Well Details

Depth MDBRT:	2988.0m	Rig:	Kan Tan IV	Date:	12 Nov 2009
Depth TVDBRT:	2988.0m	Progress:	5.0m	Report Start:	0000
Depth TVDSS:	2962.0m	RTE agl:		Report End:	2400
Hole Size:	8.500in	GLE amsl:	0 (m)	Days On Location:	42.38
Hole Size Carbide:		Last Csg Size:	9.625in	Days since Spud:	37.67
Water Depth (MSL)	69.0m	Last Csg Shoe:	2520.0m		
RT-ASL(MSL)	26.0m	F.I.T. / L.O.T.:	11.00ppg /		

Operations Summary

24hr Summary:	Pulled out of hole. Downloaded LWD data. Picked up core barrel. Ran in hole. Commenced cutting Core #1.
Forward Plan:	Complete cutting Core #1, POOH, retrieve core, pick up 216 mm (8-1/2") LWD and drilling assembly, RIH.

General Comments

00:00 TO 24:00 Hrs ON 12 Nov 2009

Operational Comments	Geoservices: 2 Data engineers, 2 mudloggers, 2 sample catchers on board. Gas equipment calibrated 12 Nov 09. Reserval gas equipment inoperable from 2983 - 2988 mMDRT due to low mud flow in shaker box. Geolograph inoperable - unable to hook to TDS. ROP from drawworks sensor. Sperry: 3 MWD engineers on board.
Operational Comments	FEWD sensor distances from bit from 2633 mMDRT: Vibration 0.00 m Gamma (DGR) 2.83 m Resistivity (EWR-P4) 5.17 m Directional (PCD) 10.07 m Density (ALD) 15.56 m Porosity (CTN) 19.43 m Sonic (BAT) 24.20 m Caliper (ACAL) 31.02 m
Operational Comments	Core Barrel Assembly: Outer barrel: OD x ID 7 1/4" x 5 5/8" Corehead: MCP572, 8 1/2" x 4" Inner tube type: Aluminium, OD x ID 5 x 4 1/2"

WBM Data

Mud Type:	KCl POLYMER	Flowline Temp:		Cl:	40000mg/l	Low Gravity Solids:		Viscosity	52sec/qt
Sample From:	2	MWD Circ Temp:		Hard/Ca:	350mg/l	High Gravity Solids:		PV	14cp
Time:	21:30 hrs	Glycol CP Temp:		MBT:	12	Solids (corrected):		YP	30lb/100ft²
Weight:	9.45ppg	Glycol:		PM:	0.3	H2O:	93%	Gels 10s	9
ECD TD:		Nitrates:		PF:	0.25	Oil:		Gels 10m	12
ECD Shoe:		Sulphites:		MF:	1.9	Sand:	.3 %	Fann 003	9
ECD Cuttings:		API FL:	5.0cc/30min	pH:	9	Barite:		Fann 006	11
KCl Equiv:	8%	API Cake:	1/32nd"	PHPA Excess:				Fann 100	28
								Fann 200	37
								Fann 300	43
								Fann 600	57

Shakers, Volumes and Losses Data

Engineer : Mike Lawrance / Fergus Spencer

Available	**1957.0bbl**	**Losses**	**0.0bbl**
Active	666.0bbl	Downhole	
Mixing	0.0bbl	Surf+ Equip	0.0bbl
Hole	642.0bbl	Dumped	
Slug		De-Gasser	
Reserve	649.0bbl	De-Sander	
Kill		De-Silter	
		Centrifuge	

Equip.	Descr.	Mesh Size	Hours
Shaker 1	Brandt VSM 300	20 top/50 bottom	
Shaker 2	Brandt VSM 300	20 top/50 bottom	12
Shaker 3	Brandt VSM 300	20 top/50 bottom	12
Shaker 4	Brandt VSM 300	20 top/50 bottom	

Comment

Printed on 12 Nov 2009

Formation Tops

Formation	Prognosed		Actual		Diff.	Thickness MD (m)	Pick Criteria
	MDBRT (m)	TVDSS (m)	MDBRT (m)	TVDSS (m)	+ / - TVD (m)		
Torquay Group	95.00	69.00	95.00	69.00	0.00	823.00	Sea floor
Lower Miocene Seismic Marker	904.00	878.00	918.00	892.00	-14.00	244.00	GR increase
Upper Angahook	1168.00	1142.00	1162.00	1136.00	6.00	169.00	GR decrease, res increase
Angahook Volcanics Equiv	1323.00	1297.00	1331.00	1305.00	-8.00	238.00	GR decrease, res increase
Lower Angahook	1564.00	1538.00	1569.00	1543.00	-5.00	281.00	GR decrease, res increase
Demons Bluff	1839.00	1813.00	1850.00	1824.00	-11.00	255.00	Res increase
Eastern View Coal Measures	2092.00	2066.00	2105.00	2079.00	-13.00	596.50	Res decrease
Eocene Unconformity	2691.00	2665.00	2701.50	2675.10	-10.10	157.30	GR decrease
2973 Seismic Marker	2841.00	2815.00	2858.80	2832.40	-17.40	79.00	GR decrease, res decrease
Base Low A1 Zone	2922.00	2896.00	2937.80	2911.40	-15.40	39.20	GR increase, res increase
TL40 Sand	2971.00	2945.00	2977.00	2950.60	-5.60	0.00	GR decrease

Lithology Summary

Interval MDBRT (m) From	To	ROP (m/hr)	Lithology
2983.00 - 2988.00		Min:1 Avg:3 Max:5	From cuttings logged during core run 1: SILTSTONE interbedded with SANDSTONE and CLAYSTONE SILTSTONE (75-90%): medium light grey to medium dark grey, brownish grey to brownish black, olive black, trace light grey, soft to firm, subblocky to blocky, trace carbonaceous material, trace lithic fragments, 1% mica flakes, traces of coal pieces. SANDSTONE (5-15%): white to very light grey, mottled, light grey, clear, opaque, 5% very fine, 5% fine, 10% medium, 40% coarse, 40% very coarse grains, loose to moderately hard, poorly to moderately sorted, subrounded to subangular, subspherical to spherical, trace carbonaceous material, trace micromica, fair inferred visual porosity, no hydrocarbon fluorescence. CLAYSTONE (5-10%): brownish grey to dark yellowish brown, brownish black, olive black, soft to firm, subblocky, trace carbonaceous material, very smooth surfaces.

Gas Data

Depth Interval (m)	Gas Type	Total Gas (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	C5 (%)	CO2 (%)
2983.00 - 2988.00	Drilled	0.074	0.0108	0.0010	0.0000	0.0000	0.0000	0.0000	0.000

Comment - Standard gas trap data only.

Core Run

Core Number	1	Start Depth (MD)	2983.0 (m)	Amount Recovered	
Formation	Eastern View Coal Measures	End Depth (MD)	2913.0 (m)	Sleeve Type	Aluminium
Contractor	CorePro	Core Diameter	102.0 (mm)	Encapsulation Type	Nil
Equipment	5x6 m barrels	Barrel Length	30.0 (m)		
Shipping		Comments			

Core Detail

Core Chip Depth (m)	Description

06:00 Hrs Update

Time:	06:00 Hrs on 13 Nov 2009
Depth:	2988 mMDRT/2988 mTVDRT
Progress Since Midnight (m):	25
Status @ 0600hrs:	Cont to POOH at controlled rate, 3min per stand.
Formation:	Eastern View Coal Measures
Lithology:	Logged during coring: SILSTONE interbedded with SANDSTONE and CLAYSTONE
ROP:	Average ROP: 2.5 m/hr (1.2 - 43 m/hr)
Gas:	From 2988 - 2993.5 mMDRT: Average background gas - 0.3005%, C1: 0.1630%, C2: 0.0072%, C3: 0.0022%, iC4: 0.0009%, nC4: 0.0006%, C5: 0.0007%, CO2: 0.0000%.

Wellsite Geologist(s)

(Days) - Dennis Archer (Nights) - Larissa Hansen

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