Trefoil-2

Date : 16 Nov 2009 | **Geology Report Number : 34** | (associated DDR # 47)

Well Details

Depth MDBRT:	3175.0m	Rig:	Kan Tan IV	Date:	16 Nov 2009
Depth TVDBRT:	3175.0m	Progress:	30.0m	Report Start:	0000
Depth TVDSS:	3149.0m	RTE agl:		Report End:	2400
Hole Size:	8.500in	GLE amsl:	0 (m)	Days On Location:	46.38
Hole Size Carbide:		Last Csg Size:	9.625in	Days since Spud:	41.67
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:	Cut Core #2. Pulled out of hole. Laid out core #2. Commenced picking up 216 mm (8 1/2") LWD BHA.
Forward Plan:	RIH with 216 mm (8 1/2") LWD BHA, drill ahead to TD.

General Comments

00:00 TO 24:00 Hrs ON 16 Nov 2009

Operational Comments	Geoservices: 2 Data engineers, 2 mudloggers, 2 sample catchers on board. Gas equipment calibrated 12 Nov 09. Sperry: 3 MWD engineers on board. Schlumberger Wireline: 2 engineers, 4 operators, 1 technician on board.
Operational Comments	FEWD sensor distances from bit from 3175 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:	38000mg/l	Low Gravity Solids:		Viscosity	58sec/qt
Sample From:	2	MWD Circ Temp:		Hard/Ca:	375mg/l	High Gravity Solids:		PV	29cp
Time:	20:00 hrs	Glycol CP Temp:		MBT:	11	Solids (corrected):		YP	29lb/100ft²
Weight:	9.50ppg	Glycol:		PM:	0.3	H2O:	93%	Gels 10s	7
ECD TD:		Nitrates:		PF:	0.25	Oil:		Gels 10m	12
ECD Shoe:		Sulphites:		MF:	2	Sand:	.25 %	Fann 003	8
ECD Cuttings:		API FL:	5.0cc/30min	pH:	9	Barite:		Fann 006	9
KCl Equiv:	8%	API Cake:	1/32nd"	PHPA Excess:				Fann 100	25
								Fann 200	32
								Fann 300	41
								Fann 600	53

Shakers, Volumes and Losses Data

Engineer : Mike Lawrance / Fergus Spencer

Available	**1674.0bbl**	**Losses**	**0.0bbl**
Active	590.0bbl	Downhole	
Mixing	0.0bbl	Surf+ Equip	0.0bbl
Hole	823.0bbl	Dumped	
Slug		De-Gasser	
Reserve	261.0bbl	De-Sander	
Kill		De-Silter	
		Centrifuge	

Equip.	Descr.	Mesh Size	Hours
Shaker 1	Brandt VSM 300	20 top/50 bottom	12
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 16 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	38.70	GR increase, res increase
TL40 Sand	2971.00	2945.00	2976.50	2950.10	-5.10	8.50	GR decrease
TL50 Sand	2981.00	2955.00	2985.00	2958.40	-3.40	9.50	GR decrease
TL60 Sand	2992.00	2966.00	2994.50	2967.90	-1.90	73.50	GR decrease
Cretaceous	3056.00	3030.00	3068.00	3041.70	-11.70	62.50	GR decrease
TF50 Sand	3123.00	3097.00	3130.50	3103.70	-6.70	0.00	GR decrease

Lithology Summary

Interval MDBRT (m) From	To	ROP (m/hr)	Lithology
3153.00	3160.00	Min:5 Avg:9 Max:14	Logged from cuttings while coring: Interbedded ARGILLACEOUS SANDSTONE and SILTSTONE, with thin beds of CLAYSTONE ARGILLACEOUS SANDSTONE (40-60%): white to very light grey, medium dark grey to brownish grey, 50% very fine, 30% fine, 20% medium, 25% clay, trace disaggregated clear quartz grains, soft to firm, moderately sorted, subrounded to rounded, subspherical to spherical, trace carbonaceous material, trace coal pieces, trace lithic fragments, trace mica flakes, poor inferred visual porosity, no hydrocarbon fluorescence. SILTSTONE (30-60%): light grey to medium light grey, medium dark grey to brownish grey, soft to firm, subblocky to blocky, trace carbonaceous material. CLAYSTONE (0-10%): light brownish grey brownish grey, medium grey to olive grey, soft, subblocky to blocky, trace carbonaceous material.

Gas Data

Depth Interval (m)	Gas Type	Total Gas (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	C5 (%)	CO2 (%)
3153.00 - 3161.00	Drilled	1.672	1.0322	0.0580	0.0133	0.0029	0.0023	0.0009	0.000

Printed on 16 Nov 2009

Core Run					
Core Number	2	Start Depth (MD)	3145.0 (m)	Amount Recovered	29.3
Formation	Eastern View Coal Measures	End Depth (MD)	3175.0 (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	Full core description to follow when core cut.		

Core Detail	
Core Chip Depth (m)	Description
3149.28	Top of Barrel 2 SANDSTONE: white to very light grey, yellowish grey, 10% very fine, 90% fine grains, soft to firm, subrounded to subangular, subspherical to spherical, common silica cement, trace greenish grey to dark greenish grey amber, trace mica flakes, poor inferred visual porosity, no hydrocarbon fluorescence.
3155.37	Top of Barrel 3 SANDSTONE: white to very light grey, light grey, trace yellowish grey, trace light greenish grey to greenish grey, very fine to coarse grains, firm to hard, subrounded to subangular, subspherical to spherical, common silica cement, trace coal pieces, trace dark greenish grey amber, trace mica flakes, poor inferred visual porosity, no hydrocarbon fluorescence.
3161.45	Top of Barrel 4 SANDSTONE: white to very light grey, yellowish grey, 10% very fine, 90% fine grains, soft to moderately hard, subrounded to rounded, subspherical to spherical, common silica cement, trace greenish grey to dark greenish grey amber, common mica flakes, poor inferred visual porosity, no hydrocarbon fluorescence.
3167.55	Top of Barrel 5 SANDSTONE: white to very light grey, yellowish grey, 10% very fine, 70% fine, 20% medium grains, soft to firm, subrounded to rounded, subspherical to spherical, common silica cement, trace greenish grey to dark greenish grey amber, common mica flakes, poor inferred visual porosity, no hydrocarbon fluorescence.

06:00 Hrs Update	
Time:	06:00 Hrs on 17 Nov 2009
Depth:	3175 mMDRT/3174.2 mTVDRT
Progress Since Midnight (m):	0
Status @ 0600hrs:	Troubleshoot & attempt to repair D/Works gearing problem.
Formation:	Eastern View Coal Measures
Lithology:	From core chips: SANDSTONE minor interbedded SILTSTONE and CLAYSTONE
ROP:	No drilling
Gas:	No drilling

Wellsite Geologist(s)
(Days) - Dennis Archer (Nights) - Larissa Hansen