



**Manta 2a**

Date : 03 Feb 2006

Geology Report Number : 8

( associated DDR # 12 )

**Well Details**

Depth MDRT:	2,487.0m	Rig:	OCEAN PATRIOT	Date:	03 Feb 2006
Depth TVDBRT:	2,325.8m	RTE amsl:	21.5m	Report Start:	00:00
Depth TVDSS:	2,304.3m	GLE amsl:	133.3m	Report End:	24:00
Progress:	127.0m	Last Csg Size:	13.375in	Days On Location:	11.10
Hole Size:	12.250in	Last Csg Shoe:	948.5m	Days since Spud:	11.19
Hole Size Carbide:		F.I.T. / L.O.T.:	/ 14.50ppg		

**Operations Summary**

24hr Summary:	Completed all Top-Drive repairs, slipped and cut drilling line and made up Dowell Express cement head in derrick. Washed to bottom from top of Latrobe Group. Drilled ahead from 2360.0 mMDRT to 2487.0 mMDRT.  2360.0 mMDRT - 2450.0 mMDRT ROP = 20.0 - 100.0 m/hr (40.0 m/hr) Massive Sandstone with minor thin Argillaceous Siltstone.  2450.0 mMDRT - 2487.0 mMDRT ROP = 1.3 - 23.0 m/hr (5.5 m/hr) Claystone and Siltstone with minor thin Sandstone.
Forward Plan:	Drill 311mm (12 1/4") hole to section TD.

**WBM Data**

Mud Type:	KCL/PHPA	Flowline Temp:		Cl:	43000mg/l	Low Gravity Solids:	Viscosity	67sec/qt
Sample From:	Pits	MWD Circ Temp:		Hard/Ca:	240mg/l	High Gravity Solids:	PV	18cp
Time:	2300	Glycol CP Temp:		MBT:	7.5	Solids (corrected):	YP	38lb/100ft <sup>2</sup>
Weight:	9.70ppg	Glycol:	3.3%vol	PM:	0.25	H2O:	Gels 10s	8
ECD TD:		Nitrates:		PF:	0.05	Oil:	Gels 10m	14
ECD Shoe:		Sulphites:		MF:	0.65	Sand:	Fann 003	7
ECD Cuttings:		API FL:	4.2cc/30min	pH:	9.5	Barite:	Fann 006	10
KCl Equiv:	8%	API Cake:	1/32nd"	PHPA Excess:			Fann 100	34
							Fann 200	46
							Fann 300	56
							Fann 600	74

**Formation Tops**

Formation	Prognosed		Actual		Diff. + / - TVD	Thickness MD	Pick Criteria
	MDRT	TVDSS	MDRT	TVDSS			
Sea Foor Gippsland Limestone	155.80m	134.30m	156.00m	134.50m	0.20m	1,476.00m	
Lakes Entrance Formation	1,625.90m	1,519.00m	1,632.00m	1,522.72m	3.72m	453.00m	LWD logs
Latrobe Group	2,081.40m	1,939.00m	2,085.00m	1,936.60m	-2.40m	90.00m	LWD and Samples
Base Tuna flounder Channel	2,171.40m	2,022.00m	2,175.00m	2,018.00m	-4.00m	0.00m	LWD and Samples
K2 Dolomite Sand Marker	2,578.00m	2,397.00m					
Ma2 Dolomitic Sand Marker	2,710.40m	2,518.00m					
Top Zone 2 Sand	2,784.80m	2,585.00m					
Top Zone 4 Sand	2,834.70m	2,630.00m					
Top Zone 7 Upper Sand	2,923.50m	2,710.00m					
Top Zone 7 Lower Sand	2,940.20m	2,725.00m					
Top Volcanics Unit 1	3,034.60m	2,810.00m					
Total Depth (TD)	3,101.60m	2,870.40m					



Gas														
Depth Range	Gas Type	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)	C1/C2 (ppm)	C1/C3 (ppm)	C1/C5 (ppm)	* (ppm)	F2* (ppm)	F3* (ppm)
2360.00 - 2450.00	Background	0.07	598	51	19	10	5	7	11.73	31.47	85.43	39.87	2	150
Comment:														
2370.00 - 2370.00	Peak	0.20	1168	34	17	11	6	9	34.35	68.71	129.78	68.71	1.83	96.33
Comment:														
2450.00 - 2470.00	Background	0.06	463	37	19	11	12	10	12.51	24.37	46.3	20.13	0.92	128.8
Comment:														
2470.00 - 2487.00	Background	0.16	1050	175	114	40	21	15	6	9.21	70	17.21	1.9	1,175.27
Comment:														

F1\*: C1 / (nC4 + iC4)      F2\*: iC4 + nC4      F3\*: (C2 + C3) / (C5 / (iC4 + nC4))

Survey									
MDRT (m)	Incl. (deg)	Corr. Az (deg)	TVDBRT (m)	'V' Sect (deg)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type	
2359.20	23.8	45.3	2155.89	734.8	0.8	527.5	524.6	MWD	
2387.78	24.2	44.1	2235.05	746.2	0.5	535.9	532.7	MWD	
2416.30	25.0	43.9	2260.98	757.9	0.8	544.4	540.9	MWD	
2444.52	24.2	47.8	2286.65	769.5	1.9	552.6	549.4	MWD	
2472.69	22.7	50.3	2312.49	780.7	1.8	560.0	557.8	MWD	

**06:00 Hrs Update**

Time:	06:00 Hrs on 04 Feb 2006
Depth:	2563/2396
Progress Since Midnight:	76
Drilling Status:	Drilling 311mm (12 1/4") hole @2563m MDRT
Formation:	Latrobe Group
Lithology:	Interbedded Sandstone, Siltstone and Claystone.
ROP:	2487.0 - 2563.0 mMDRT ROP = 1.2 - 47.6 m/hr (15.2 m/hr)
Gas:	Average Total Gas = 0.2%  C1 = 961 ppm C2 = 156 ppm C3 = 95 ppm iC4 = 17 ppm nC4 = 20 ppm iC5 = 8 ppm nC5 = 3 ppm

**Wellsite Geologist(s)**

(Days) - Rob Blackmore      (Nights) - Mike Woodmansee

**Lithology Report**

Depth Interval		Main Lithology	Lithology %	Qualifier	Description
Depth (mRT)	Depth Range				
2260.0	2270.0	Clyst	5	slyt	Claystone, lt gy, brnsh gy, Very soft, to Soft, amorphous, to dispersive, 75% siliceous clay, 20% siliceous silt, 5% siliceous sand, 0.1% Pyrite, 0.1% Coal,
2360.0	2370.0	Sst	90		Sandstone, clear, transl, occ wh, occ pk, , Loose, Sub-angular, to Sub-rounded, Poor sorted, Slightly Elongated, to Slightly Spherical, 100% siliceous sand, 15% fine grained, 70% medium grained, 5% coarse grained, 5% very coarse grained, 0.1% Pyrite, 20% porosity, no Hydrocarbon shows.
2360.0	2370.0	Sltst	10	arg	Siltstone, med gy, occ lt gy, Firm, sub-blocky, to blocky, 40% siliceous clay, 60% siliceous silt, 0.1% Mica, 0.1% Glauconite, 0.1% Pyrite,
2450.0	2455.0	Clyst	60		Claystone, brnsh gy, med gy, Very soft, to Firm, amorphous, to sub-blocky, 90% siliceous clay, 10% siliceous silt, 0.1% Pyrite, 0.2% Glauconite,
2455.0	2460.0	Sst	30		Sandstone, clear, transl, rare wh, Loose, Sub-angular, to Sub-rounded, Well sorted, Slightly Elongated, to Slightly Spherical, 1% calcerous clay, 4% siliceous clay, 95% siliceous sand, 40% fine grained, 50% medium grained, 5% coarse grained, 5% very coarse grained, 0.1% Pyrite, 0.1% Glauconite, 0.1% Coal, 0.1% Foram, 18% porosity, no



Lithology Report					
Depth Interval		Main Lithology	Lithology %	Qualifier	Description
Depth (mRT)	Depth Range				
					Hydrocarbon shows.
2455.0	2460.0	Clyst	70		Claystone, brnsh gy, med gy, Very soft, to Firm, amorphous, to sub-blocky, 90% siliceous clay, 10% siliceous silt, 0.1% Pyrite, 0.2% Glauconite,
2465.0	2470.0	Sltst	100		Siltstone, brnsh gy, brnsh gy . grn spkld, Firm, sub-blocky, to blocky, 15% siliceous clay, 75% siliceous silt, 10% siliceous sand, 5% Glauconite, 0.1% Pyrite,
2475.0	2480.0	Sltst	30	glc	Siltstone, brnsh grn, grnsh gy. grn spkld, Soft, to Moderately hard, angular, to sub-blocky, 15% siliceous clay, 75% siliceous silt, 10% siliceous sand, 20% Glauconite, 0.1% Pyrite, 0.1% Coal, 5% porosity, no Hydrocarbon shows.
2475.0	2480.0	Sst	70		Sandstone, clr, transl, Loose, Sub-angular, to Sub-rounded, Very Poor sorted, to Poor sorted, Slightly Elongated, to Slightly Spherical, 100% siliceous sand, 10% very fine grained, 30% fine grained, 50% medium grained, 10% coarse grained, 0.1% Calcite cement, 0.1% Pyrite, 0.1% Coal, 15% porosity, no Hydrocarbon shows.
2480.0	2485.0	Sltst	100	arg	Siltstone, brn-blk, grn-brn, Soft, to Firm, amorphous, to sub-blocky, 20% siliceous clay, 80% siliceous silt, 0.1% Glauconite, 0.1% Pyrite, 5% Coal, 5% porosity, no Hydrocarbon shows.
2485.0	2490.0	Sst	80		Sandstone, clr, transl, Loose, Sub-angular, to Sub-rounded, Poor sorted, Slightly Elongated, to Slightly Spherical, 100% siliceous sand, 5% very fine grained, 30% fine grained, 50% medium grained, 15% coarse grained, 0.1% Glauconite, 0.1% Pyrite, 0.1% Coal, 15% porosity, no Hydrocarbon shows.
2485.0	2490.0	Sltst	20	arg	Siltstone, brn-blk, grn-brn, Soft, to Firm, amorphous, to sub-blocky, 20% siliceous clay, 80% siliceous silt, 0.1% Glauconite, 0.1% Pyrite, 5% Coal, 5% porosity, no Hydrocarbon shows.
2520.0	2525.0	Sst	100		Sandstone, clr, transl, occ wh, Loose, Sub-angular, to Rounded, Very Poor sorted, to Moderately sorted, Slightly Elongated, to Slightly Spherical, 10% siliceous silt, 90% siliceous sand, 30% fine grained, 60% medium grained, 10% coarse grained, 1% Calcite cement, 0.1% Pyrite, 0.1% Coal, 20% porosity, no Hydrocarbon shows.