DAILY GEOLOGICAL REPORT

Date:	27 July 2009	**Rig:**	Ocean Patriot
Report Number:	4	**Bit Diameter:**	311 mm
Report Period:	00:00 - 24:00 Hours	**Last Casing:**	340 mm @ 1056.6 mMDRT
Spud Date:	22-Jul-2009 03:00 Hours	**Integrity Test:**	1.56 sg at 1056.6 mMDRT
Days From Spud:	5.9	**Mud Weight:**	1.15 sg
Depth @ 2400 Hrs:	2262 mMDRT	**ECD:**	1.17 sg
	1952.2 m TVDRT	**Mud Type:**	KCl-KlaStop-Polymer
	1930.7 mTVDMSL	**Mud Chlorides:**	49,000 mg/L
Lag Depth:	2260 mMDRT	**Est. Pore Pressure:**	
Last Depth:	1064.7 mMDRT	**DXC:**	
Progress:	1197.3 m	**Last Survey:**	2414.74 mMDRT
Water Depth:	154.2 m	**Deviation:**	Inc. 37.37°
RT:	21.5 m		Az. 152.25°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 311 mm (12 1/4") hole from 1064.7 to 2262 mMDRT.

NEXT 24 HOURS: Drill 311 mm (12 1/4") hole to section TD.

CURRENT OPERATION @ 06:00 HRS (28-Jul-2009): Drilling 311 mm (12 1/4") hole at 2512 mMDRT.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1250 to 2100 mMDRT (-1109.6 to -1802.9 mTVDMSL)
ROP (Range): 16 to 177 m/hr
Av. ROP: 96 m/hr

MARL 100% : dominantly medium grey to light olive grey, medium light grey, occasional olive grey, soft to firm, sub-blocky, 25 to 40% calcareous clay, 5 to 10% calcareous silt, trace to 10% very fine to coarse quartz grains, trace carbonaceous specks, trace pyrite, occasional trace Glauconite, trace black lithic fragments, occasional trace shell fragments.

INTERVAL: 2100 to 2220 mMDRT (-1802.9 to -1897.7 mTVDMSL)
ROP (Range): 53 to 190 m/hr
Av. ROP: 120 m/hr

MARL 100% : dominantly pale yellowish brown, light olive grey to olive grey, occasional dark grey, firm to moderately hard, blocky to sub-blocky, sub-angular, well sorted , slightly spherical, 50% calcareous clay, 5% siliceous clay, 40% siliceous silt, 5% siliceous sand, 100% very fine grained, 100% calcite cement, trace of Forams, trace of pyrite.

INTERVAL: 2220 to 2260 mMDRT (-1897.7 to -1929.11 mTVDMSL)
ROP (Range): 52 to 172 m/hr
Av. ROP: 101 m/hr

CALCAREOUS CLAYSTONE 100% : light grey medium dark grey, medium bluish grey, occasional green grey, soft to moderately hard, sub-blocky to blocky, 30% calcareous clay, 10% calcareous silt, minor siliceous silt, minor very fine quartz, trace of pyrite, trace Glauconite, trace carbonaceous material, trace Foraminifera, trace glauconite.

GAS SUMMARY

Background Gas							
INTERVAL (mMDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
1064.7 - 2100	0.14	816	9	6	1	1	1
2100 - 2260	0 12	890	12	9	2	1	1

SAMPLE QUALITY

Generally good sample quantity and quality. At 2280m started losing samples over shakers. Samples are not necessarily representative of 10m composites from 2280 - 2350 mMDRT. Changed shaker screens to new API 100 mesh, and used API 120 mesh. Attempted to use API 170 mesh, but could not handle mud flow.

MUDLOGGING EQUIPMENT / PERSONNEL

2 Data Engineers, 2 Mudloggers, 2 Sample Catchers on board

MWD

2 Directional Drillers, 3 LWD Engineers on board.

Sensor distances behind the bit:
Resistivity 8.94 m
Gamma Ray 8.99 m
Direction 16.48 m

PROVISIONAL FORMATION TOPS

Formation Name	**Prognosed Depths**			**Actual Depths**			**Diff. TVT (m)**	**Picks Based On**
	MD (m)	**TVDRT (m)**	**TVDMSL (m)**	**MD (m)**	**TVDRT (m)**	**TVDMSL (m)**		
Gippsland Limestone	176.5	176.5	(155)	175.7	175.7	(154.2)	0.8 H	
Lakes Entrance Formation	2094.8	1816.4	(1794.9)	2100	1824.4	(1802.9)	8 L	Subtle change in lithology
Top Latrobe Group	2501.2	2143.9	(2122.4)				-	
K2 Sandstone Marker	2946.1	2502.5	(2481)				-	
Zone 0	3545.3	2985.4	(2963.9)				-	
Zone 2	3658.1	3076.3	(3054.8)				-	
Zone 6	3835.3	3219.1	(3197.6)				-	
Top Volcanics	3901	3272	(3250.5)				-	
Total Depth	3951	3312.3	3290.8					

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/30m)	E/W (m)	N/S (m)
1118.8	38.76	150.48	1026	1004.5	-292.36	0.91	156.47	-292.36
1148.1	38.35	150 7	1048.9	1027.4	-308.21	0.49	165.52	-308.21
1176.1	36.43	148.80	1071.2	1049.7	-322.88	2.21	174.18	-322.88
1205.7	35.45	148 6	1095.2	1073.7	-337.69	1 9	183.28	-337.69
1234.2	35.74	147.30	1118.3	1096.8	-351.70	0.56	192.14	-351.70
1292.4	35.16	148 1	1165.7	1144.2	-380.20	0.37	210.19	-380.20
1321	34.65	148.19	1189.2	1167.7	-394 9	0.55	218.84	-394 9
1350.2	35.16	147.62	1213.1	1191.6	-408.23	0.62	227.71	-408.23
1379.3	34.46	147.45	1237	1215.5	-422.26	0.73	236.64	-422.26
1407.1	32.86	146.85	1260.1	1238.6	-435.21	1.76	244.99	-435.21
1436.3	32 4	146.56	1284.8	1263.3	-448.32	0.86	253.60	-448.32
1465.2	31.37	147.89	1309.4	1287.9	-461 9	1 1	261.82	-461 9
1493.9	32.99	152.10	1333.6	1312.1	-474.29	2.90	269.44	-474.29
1522.6	33.53	156 5	1357.6	1336.1	-488.45	2.33	276.31	-488.45
1551.1	33.73	156.30	1381.4	1359.9	-502.89	0.26	282.69	-502.89
1579.7	33.84	153.27	1405.2	1383.7	-517.31	1.77	289.48	-517.31
1608.5	35.27	150.47	1428.9	1407.4	-531.67	2.23	297.17	-531.67
1637.5	36.72	150.18	1452.3	1430.8	-546.47	1.51	305.60	-546.47
1666.3	36.12	150.25	1475.5	1454	-561.31	0.63	314.10	-561.31
1694.9	36 6	149.72	1498.6	1477.1	-575.92	0.33	322.53	-575.92
1723.9	36 7	149.77	1522.1	1500.6	-590.65	0 3	331.13	-590.65
1753.2	36.60	149.91	1545.7	1524.2	-605.66	0.55	339.85	-605.66
1781.3	36.45	149.35	1568.2	1546.7	-620 8	0.39	348.30	-620 8
1810.1	36.88	150.13	1591.4	1569.9	-634.96	0.66	356.98	-634.96
1839.3	36.41	151.48	1614.8	1593.3	-650.15	0.96	365.47	-650.15
1868.2	36.44	153.16	1638	1616.5	-665.35	1 4	373.44	-665.35
1896.8	36.54	153 7	1661.1	1639.6	-680.55	0.12	381.15	-680.55
1926.1	36.62	152.97	1684.6	1663.1	-696 9	0.10	389 6	-696 9
1954.9	36.48	152 4	1707.7	1686.2	-711.29	0.60	396.97	-711.29
1983.7	36.20	151.44	1730.9	1709.4	-726.33	0.47	405 6	-726.33
2012.9	36.92	150.95	1754.4	1732.9	-741.59	0.80	413.45	-741.59
2041.3	36.11	150.52	1777.2	1755.7	-756.32	0.90	421.70	-756.32
2070.3	36.28	150.15	1800.6	1779.1	-771.18	0.29	430.17	-771.18
2099.3	36.98	149.86	1823.9	1802.4	-786.19	0.74	438.83	-786.19
2127.6	37.51	149.66	1846.4	1824.9	-800.99	0.58	447.46	-800.99
2156.6	37.88	149.51	1869.4	1847.9	-816.29	0.39	456.44	-816.29
2184.7	38.11	149.41	1891.4	1869.9	-831.16	0.25	465.21	-831.16
2213.8	38.43	149.62	1914.4	1892.9	-846.73	0.36	474.38	-846.73
2242.4	38.29	150.80	1936.8	1915.3	-862.12	0.78	483.19	-862.12
2270.2	37.73	151.99	1958.6	1937.1	-877.12	1 0	491.37	-877.12
2299.3	37.92	152.77	1981.7	1960.2	-892.97	0.53	499.66	-892.97
2328.3	37.50	152.72	2004.6	1983.1	-908.73	0.44	507.78	-908.73
2356.9	37.14	152.63	2027.3	2005.8	-924.11	0.38	515.73	-924.11
2385.3	36.95	152.51	2050	2028.5	-939.33	0.21	523.63	-939.33
2414.7	37.37	152.25	2073.5	2052	-955 7	0.46	531.86	-955 7
2443.4	37.46	152 7	2096.2	2074.7	-970.47	0.15	540 0	-970.47
2472.4	37.14	152.42	2119.3	2097.8	-986 1	0.40	548.18	-986 1
2501.3	37.25	152.68	2142.3	2120.8	-1001.52	0.20	556.23	-1001.52

WELLSITE GEOLOGISTS

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