



DAILY GEOLOGICAL REPORT

Date:	05 August 2009	Rig:	Ocean Patriot
Report Number:	13	Bit Diameter:	216 mm
Report Period:	00:00 - 24:00 Hours	Last Casing:	244 mm @ 2910.9 mMDRT
Spud Date:	22-Jul-2009 03:00 Hours	FIT:	1.56 sg EMW @ 2910.9 mMDRT
Days From Spud:	14.9	Mud Weight:	1.14 sg
Depth @ 2400 Hrs:	3921 mMDRT	ECD:	1.24 sg
	3311.4 mTVDR	Mud Type:	KCl-KlaStop-Polymer
	3289.9 mTVDM	Mud Chlorides:	44,000 mg/L
Lag Depth:	3921 mMDRT	Est. Pore Pressure:	
Last Depth:	3798 mMDRT	DXC:	
Progress:	123 m	Last Survey:	3921 mMDRT
Water Depth:	154.2 m	Deviation:	Inc. 25.06°
RT:	21.5 m		Az. 156.25°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 216 mm (8 1/2") hole from 3798 to 3921 mMDRT. Circulated hole clean and pulled out of hole. Rigged up wireline equipment and ran in hole HNGS-PEX-HRLA-MSIP-FMI to 500 m.

NEXT 24 HOURS: Continue wireline logging program

CURRENT OPERATION @ 06:00 HRS (06-Aug-2009): Loading sources prior to running in hole with split tool HNGS-PEX-HRLA. Original toolstring not able to reach TD.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 3798 to 3813 mMDRT (-3179.1 to -3192.5 mTVDM)

ROP (Range): 13 to 71 m/hr

Av. ROP: 30 m/hr

ARGILLACEOUS SILTSTONE (50 to 77%) : medium grey to moderately dark brownish grey, occasional light grey and very dark grey, soft to very firm, occasional crumbly, occasionally slightly hard, sub blocky to blocky, slightly dispersive in part, 25 to 30% siliceous clay, 10 to 20% very fine quartz, trace pyrite, trace to 5% carbonaceous fragments and laminae.

SANDSTONE (10 to 35%) : very light grey, translucent to opaque, loose, medium to coarse, moderately sorted, sub-rounded to occasionally rounded, sub-spherical, rare white weak siliceous matrix, trace pyrite, trace rock flour, poor to moderate inferred porosity, nil to 5% shows, see below.

COAL (1 to 20%) : black, sub-bituminous to bituminous, firm to moderately hard, brittle, blocky to occasional sub-fissile, dull to vitreous lustre, occasional sub-conchoidal fracture.

INTERVAL: 3813 to 3871 mMDRT (-3192.5 to -3244.7 mTVDM)

ROP (Range): 9 to 63 m/hr

Av. ROP: 24 m/hr

ARGILLACEOUS SILTSTONE (40 to 85%) : very light grey to medium grey, greyish brown to patchy light tan, soft, dispersive to crumbly, sub-blocky, 10 to 20% siliceous clay, 15 to 25% very fine quartz, arenaceous in part and locally grades fine silty Sandstone, slightly to moderately carbonaceous with specks / flakes and laminae, trace pyrite.

SANDSTONE (15 to 60%) : light brownish-grey to very light grey, transparent to translucent quartz, friable to loose, dominantly medium to coarse grained, moderately sorted, sub-rounded to rounded, sub-spherical to sub-elongate, 10 to 20% white to light grey siliceous matrix, trace pyrite, poor to moderate inferred porosity, trace to 60% shows, see below.

COAL (Trace to 10%) : black, sub-bituminous to bituminous, firm to moderately hard, brittle, blocky to



occasional sub-fissile, dull to vitreous lustre, occasional sub-conchoidal fracture.

INTERVAL: 3871 to 3885 mMDRT (-3244.7 to -3257.4 mTVDMSL)
ROP (Range): 5 to 31 m/hr
Av. ROP: 17 m/hr

VOLCANICS (10 to 94%) : predominantly weathered to clay, off white to medium grey, bluish grey, dominantly greenish grey to very dusky red, mottled in part, locally abundant green pyroxene, very soft to firm, amorphous to sub-blocky, slightly crumbly, relic flow banded texture and relic crystalline texture.

SANDSTONE (5 to 50%) : light brownish-grey to very light grey, transparent to translucent quartz, friable to loose, dominantly medium to coarse grained, moderately sorted, sub-rounded to rounded, sub-spherical to sub-elongate, 10 to 20% white to light grey siliceous matrix, trace pyrite, poor to moderate inferred porosity, trace to 10% shows, see below.

ARGILLACEOUS SILTSTONE (1 to 40%) : very light grey to medium grey, greyish brown to patchy light tan, soft, dispersive to crumbly, sub-blocky, 10 to 20% siliceous clay, 15 to 25% very fine quartz, arenaceous in part and locally grades fine silty Sandstone, slightly to moderately carbonaceous with specks / flakes and laminae, trace pyrite.

INTERVAL: 3885 to 3912 mMDRT (-3257.4 to -3281.8 mTVDMSL)
ROP (Range): 3 to 44 m/hr
Av. ROP: 15 m/hr

VOLCANICS (20 to 95%) : predominantly weathered to clay, dominantly off white to medium grey, 10 to 20% bluish grey to greenish grey and very dusky red, locally abundant green pyroxene, very soft to firm, amorphous to sub-blocky, slightly crumbly, relic flow banded texture and relic crystalline texture.

SANDSTONE (5 to 80%) : light brownish-grey to very light grey, transparent to translucent, friable to loose, dominantly very fine to fine, moderately well sorted, sub-angular to rounded, sub-spherical to sub-elongate, 10 to 20% white to light grey siliceous matrix, trace pyrite, poor to moderate inferred porosity, trace to 30% shows, see below.

INTERVAL: 3912 to 3921 mMDRT (-3281.8 to -3311.5 mTVDMSL)
ROP (Range): 3 to 47 m/hr
Av. ROP: 17 m/hr

VOLCANICS (80 to 90%) : predominantly weathered to clay, dominantly bluish grey to greenish grey, trace off white to medium grey, locally abundant green pyroxene, very soft to firm, amorphous to sub-blocky, slightly crumbly, relic flow banded texture and relic crystalline texture.

SANDSTONE (10 to 20%) : very light grey to light brownish grey, transparent to translucent, friable to loose, very fine to trace coarse, dominantly fine to medium, poor to moderately sorted, sub-angular to rounded, sub-spherical to sub-elongate, 10 to 20% white to light grey siliceous clay, trace pyrite, poor visible to fair inferred porosity, trace to 2% shows, see below.

HYDROCARBON FLUORESCENCE

3798 to 3813 m (Trace - 5%) Dull yellow direct fluorescence, very weak diffuse milky white cut fluorescence, dull to moderate yellow-white residual fluorescence

3813 to 3852 m (Trace - 60%) Dull yellow to moderately bright white (mineral fluorescence?) direct fluorescence, very dull weak yellow-white residual fluorescence, no natural cut, no natural residue.

3852 to 3871 m (5 - 60%) Dull yellow to moderately bright yellow-white direct fluorescence, possible mineral fluorescence in part, very weak very slow pale milky-white diffuse cut fluorescence, very dull weak yellow-white thin residual ring fluorescence.

3871 to 3885 m (Trace - 10%) Dull yellow to moderately bright yellow-white direct fluorescence, very weak very slow pale milky-white diffuse cut fluorescence, very dull weak yellow-white thin ring residual fluorescence.



3885 to 3912 m (Trace - 30%) Dominantly dull yellow to 5% moderately bright yellow-white fluorescence, very weak diffuse to very slow streaming pale milky-white cut fluorescence, very dull weak yellow-white thin ring to thin film residual fluorescence.

3912 to 3921 m (Trace - 2%) Dominantly dull yellow to trace moderately bright yellow-white fluorescence, very weak diffuse pale milky-white cut fluorescence, very dull weak yellow-white thin ring residual fluorescence.

GAS SUMMARY

Background Gas							
INTERVAL (mMDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
3798 - 3813	0.52	2904	356	147	20	38	23
3813 - 3871	0.5	2114	325	170	27	54	36
3871 - 3885	0.08	146	25	24	5	13	13
3885 - 3912	0.32	1793	177	63	10	19	13
3912 - 3921	0.07	182	23	15	3	7	7

Gas Peak							
INTERVAL (mMDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
3808	0.81	4678	524	208	29	52	31
3822	0.99	3786	555	274	42	81	50
3827	0.86	3609	614	324	51	99	63
3840	1.16	5734	600	262	39	71	42
3861	0.71	2994	461	247	40	80	54
3894	0.95	4975	430	145	20	36	23
3899	0.61	2918	275	98	14	26	17

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 Fm	2094.8	1816.4	(1794.9)	2100	1824.4	(1802.9)	8 L	Subtle change in lithology
Top Latrobe Group	2501.2	2142.3	(2120.8)	2495	2137.4	(2115.9)	4.9 H	Increase in GR & RES
Zone 0	3545.4	2985.4	(2963.9)	3528.4	2970	(2948.5)	15.4-	
K2 Sandstone Marker - Revised	3034	2571	(2549.5)	3054	2588	(2566.5)	17.1 L	GR & RES drop
Zone 2	3658.1	3076.3	(3054.8)	3640.7	3064	(3042.5)	12.3 H	GR & RES
Zone 6	3835.3	3219.1	(3197.6)	3804.1	3206	(3184.5)	13.1 H	GR & RES
Top Volcanics	3901	3272	(3250.5)	3878.6	3273	(3251.5)	1 L	Cuttings & ROP
Total Depth	3951	3312.3	(3290.8)	3921	3311.4	(3289.9)	0.9 H	Top Volcanics plus 50m

**SURVEY DATA**

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/30m)	E/W (m)	N/S (m)
3810	26.69	155.49	3211.3	3189.8	1895.46	1.19	917.95	-1658.36
3837.3	25.88	155.01	3235.8	3214.3	1907.52	0.92	923.02	-1669.35
3866	25.15	155.10	3261.7	3240.2	1919.84	0.76	928.23	-1680.55

SAMPLE QUALITY

Good sample quality and quantity.

MUDLOGGING EQUIPMENT / PERSONNEL

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

2 Flair Engineers on board.

MWD

2 Directional Drillers, 3 LWD Engineers on board.

Sensor distances behind the bit:

Gamma Ray 11.04 m
Resistivity 11.57 m
Direction 17.54 m

WIRELINE

2 Engineers, 5 Operators on board.

WELLSITE GEOLOGISTS

Ian Walker / Joann Cooper / Shane Robbie