

Culverin-1



Date:	28-12-2005	Last Casing:	340 mm (13 3/8") @ 1511.14 mMDRT
Report Number:	9	Leak Off Test:	1.89 sg EMW @ 1528.0 mMDRT
Report Period:	24hrs to 24:00	Current hole size:	311 mm (12 1/4")
Depth @ 2400 Hrs:	3277.0 mMDRT	Mud Weight:	1.22 sg
Last Depth:	3115.0 mMDRT	ECD:	1.22 sg
Progress:	162 m	Mud Type:	KCl-NaCl-Polymer
TD Lithology:	70% Sandstone 30% Siltstone	Mud Chlorides:	75,000 ppm
Water Depth:	585.0 m	Mud Fluid Loss:	4.0 cc
RT Elevation:	21.5 m	Bit Type:	PDC (Reed-Hycalog)

OPERATIONS SUMMARY

24 HOUR SUMMARY	Drilled ahead from 3115.0 mMDRT to 3277.0 mMDRT. ROP decreased below 10 m/hr at approximately 3217.0 mMDRT and maintained this rate.
00:00 - 24:00:	
06:00 Update	Drilling ahead at 3308.0 mMDRT in the Latrobe Group.
NEXT 24 HOURS:	Drill ahead 311 mm (12 1/4") hole.

GEOLOGICAL SUMMARY

▪ LITHOLOGIC DESCRIPTION:

Interval mMDRT	Description
3115 – 3158 ROP 1.7 – 102 m/hr Ave 36 m/hr	<p>Massive Sandstone with minor Argillaceous Siltstone (Sandstone had strong pyritic cement from 3146 – 3149 mMDRT)</p> <p>SANDSTONE (95-100%): clear to light grey, loose to very hard aggregates, medium to very coarse, poorly sorted, occasional very hard pyrite cement, good inferred porosity in loose component, poor visual porosity in aggregates, no fluorescence.</p> <p>ARGILLACEOUS SILTSTONE (0-5%): brownish grey, very soft, amorphous, trace carbonaceous specks, micro mica.</p>
3158 – 3185 ROP 8 – 69 m/hr Ave 31 m/hr	<p>Dominantly Siltstone with Sandstone</p> <p>ARGILLACEOUS SILTSTONE (30-70%): brownish grey to light brownish grey, occasionally light grey, very soft to soft, rarely friable, sub-blocky to amorphous, occasionally sub-fissile, very carbonaceous in part, carbonaceous laminae, micro-mica, trace fine pyrite.</p> <p>SANDSTONE (30-70%): clear to translucent, loose, fine to very coarse, poorly sorted, sub-angular to rounded, common fractured grains, trace pyrite cement, very good inferred porosity.</p>
3185 – 3210 ROP 5.2 – 57.3 m/hr Ave 14.0 m/hr	<p>Dominantly massive Sandstone with minor Argillaceous Siltstone</p> <p>SANDSTONE (40-80%): clear to translucent, medium to granular grained, poorly sorted, sub-angular to sub-rounded, moderate sphericity, occasional fractured grains, commonly pyrite cemented, possible traces of weak carbonate</p>

	<p>cement (calcite/dolomite?), very good inferred porosity, no fluorescence.</p> <p>ARGILLACEOUS SILTSTONE (20-60%): brownish grey to light brownish grey, rarely light grey, very soft to rarely firm, sub blocky to amorphous, common carbonaceous specks and laminae, very argillaceous, trace pyrite, gradational to Argillaceous Siltstone.</p>
<p>3210- 3275 ROP 1 – 19 m/hr Ave 7.8 m/hr</p>	<p>Dominantly Argillaceous Siltstone, Siltstone with Interbedded Silty Claystone and Claystone and minor Sandstone</p> <p>ARGILLACEOUS SILTSTONE (55-95%): brownish grey to light brownish grey, light grey, very soft to rarely firm, sub-blocky to amorphous, common carbonaceous specks and laminae, very argillaceous, trace pyrite, gradational to Siltstone.</p> <p>SILTSTONE (0-30%): brownish grey to light brownish grey, argillaceous to arenaceous, very soft to friable, sub fissile in part, common carbonaceous specks and laminations, occasional very fine pyrite.</p> <p>SILTY CLAYSTONE (5-15%): brownish grey to light brownish grey, occasionally light grey, very soft to rarely firm, sub-blocky to amorphous, common carbonaceous specks and laminae, hard dolomite/calcite fragments, trace pyrite, gradational to Argillaceous Siltstone.</p> <p>CLAYSTONE (0-90%): olive grey, light brownish grey, very soft, amorphous, slightly calcareous, trace carbonaceous grains, rare very fine disseminated pyrite.</p> <p>SANDSTONE (Trace-40%): clear to translucent, very fine grained, poorly sorted, sub-angular to sub-rounded, moderate sphericity, occasional fractured grains, trace pyrite cement, moderate inferred porosity, no fluorescence.</p>

▪ **HYDROCARBON FLUORESCENCE:**

INTERVAL (mMDRT)	FLUORESCENCE
	Nil.

▪ **GAS SUMMARY:**

INTERVAL (mMDKB)	Total GAS (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	IC4 (ppm)	NC4 (ppm)	C5 (ppm)
3115 - 3158	0.031	440	41	27	16	17	-
3158 - 3185	0.063	647	108	50	21	25	-
3185 - 3210	0.052	511	69	42	31	24	-
3210 - 3275	0.069	426	47	33	24	25	20

▪ **SURVEYS**

MD	ANGLE	Azi		MD	ANGLE	Azi		
2285.35	4.14	37.21		2887.70	3.86	45.65		
2314.02	4.15	34.69		2916.43	3.87	45.26		
2342.60	4.24	35.48		2944.96	3.83	45.79		
2371.30	4.20	37.23		2973.53	3.73	46.71		
2399.91	4.28	37.06		3002.19	3.72	46.75		
2428.46	4.30	38.32		3059.49	3.72	46.57		
2457.14	4.30	37.54		3088.21	3.81	46.46		
2511.27	4.09	38.40		3116.08	3.75	45.37		
2543.24	4.05	40.48		3145.07	3.74	48.33		
2572.00	4.01	40.97		3173.79	3.67	49.59		
2600.65	3.91	40.54		3202.65	3.71	48.97		
2629.39	3.86	40.58		3231.77	3.53	48.2		
2658.02	3.89	41.3		3260.37	3.66	49.86		
2686.60	3.77	41.46						
2715.15	3.77	40.42						
2743.83	3.80	42.10						
2772.65	3.83	43.73						
2801.66	3.84	42.76						
2830.44	3.89	43.81						
2859.14	3.95	44.31						

▪ **WELLSITE GEOLOGISTS:**

Mike Woodmansee

Rob Blackmore

▪ **FORMATION TOPS**

WD = 585.0 m RTE = 21.5 m								
FORMATION	PROGNOSSED DEPTHS (m)			ACTUAL DEPTHS (m)				
	MDKB	TVDSS	THICK	MDKB	TVDSS	HI/LO	THICK	DIFF
Sea Floor/ Gippsland Limestone	607	585	-	606.5	585.0	0.0	1899.9	0.0
Lakes Entrance	2582.0	2560.0	325.0	2508.0	2484.9	75.1 H	315.1	-10.0
Latrobe	2907.0	2885.0	30.0	2824.0	2800.0	85.0 H	11.0	-19.0
Base TF Channel	2937.0	2915.0	10.0	2835.0	2811.0	104.0 H	1.0	-8.0
Top 67.5 Ma Sand	2947.0	2925.0	310.0	2836.0	2812.0	113.0 H	186.0	-124.0
Near 68.5 Ma Sand	3257.0	3235.0	285.0	3103	3078.5	156.5 H		
Near 70.3 Ma Sand	3542.0	3520.0	70.0					
TD	3612.0	3590.0						

▪ **COMMENTS:**

Sperry-Sun LWD sensor to bit distances:

Directional = 13.13 m
 Gamma-Ray = 15.73 m
 Resistivity = 18.04 m
 Density = 25.66 m
 Porosity = 30.97 m
 ACAL = 29.93 m

