

Culverin-1



Date:	26-12-2005	Last Casing:	340 mm (13 3/8") @ 1511.14 mMDRT
Report Number:	7	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:	2641.0 mMDRT	Mud Weight:	1.20 sg
Last Depth:	2131.0 mMDRT	ECD:	1.21 sg
Progress:	510 m	Mud Type:	KCl-NaCl-Polymer
TD Lithology:	Calcareous Claystone	Mud Chlorides:	36,000 ppm
Water Depth:	585.0 m	Mud Fluid Loss:	5.4 cc
RT Elevation:	21.5 m	Bit Type:	PDC (Reed-Hycalog)

OPERATIONS SUMMARY

24 HOUR SUMMARY	Drilled ahead from 2131.0 mMDRT to 2641.0 mMDRT. Top of the Lakes Entrance Formation picked from LWD logs and cuttings at 2508.0 mMDRT.
00:00 - 24:00:	
06:00 Update	Drilling ahead at 2758 mMDRT in the Lakes Entrance Formation.
NEXT 24 HOURS:	Drill ahead 311 mm (12 1/4") hole.

GEOLOGICAL SUMMARY

▪ LITHOLOGIC DESCRIPTION:

Interval mMDRT	Description
2130 – 2190 ROP 14 – 49 m/hr Ave 26 m/hr	Massive Calcilutite becoming more silty with depth CALCLUTITE (100%): light olive grey, occasionally light brownish grey, rare medium grey patches, very soft to rarely firm, sub-blocky to amorphous, common calcareous silt and very fine calcareous sand, trace carbonaceous specks, trace microfossils, trace very fine pyrite associated with organic matter. Gradational in part to CALCISILTITE.
2190 – 2340 ROP 12 – 57m/hr Ave 24 m/hr	Dominantly Calcilutite with minor Calcsiltite CALCLUTITE (80-100%): light olive grey, occasionally light brownish grey, rare medium grey patches, very soft to rarely firm, sub-blocky to amorphous, common calcareous silt and very fine calcareous sand, trace carbonaceous specks, trace microfossils, trace very fine pyrite. CALCISILTITE (Nil-20%): olive grey, brownish grey, soft to firm, friable in part, sub blocky, trace calcareous sand, trace carbonaceous specks.
2340 - 2508 ROP 13 – 62m/hr Ave 29 m/hr	Dominantly Argillaceous Calcilutite with minor Calcsiltite and Calcarenite with rare fine glauconite grains ARGILLACEOUS CALCLUTITE (70-100%): light brownish grey, occasionally light grey, rare medium grey patches, very soft to rarely firm, sub-blocky to amorphous, common calcareous silt and very fine calcareous sand, trace carbonaceous specks, trace microfossils, trace very fine glauconite grains, trace very fine pyrite, 15% clay content. CALCISILTITE (Nil-20%): olive grey, brownish grey, soft to firm, friable in part,

	sub blocky, trace calcareous sand, trace carbonaceous specks. CALCARENITE (Nil-30%): light brownish-grey, firm to moderately hard, sub-blocky, very fine to fine grained, moderately well sorted, angular grains, common to abundant calcareous argillaceous matrix, common fine glauconite grains, poor visual porosity.
2508 - 2640 ROP 16 – 120m/hr Ave 50 m/hr	Massive Calcareous Claystone CALCAREOUS CLAYSTONE (100%): light to medium grey, soft, sub blocky to blocky, trace very fine pyritic patches, occasional medium grey silty patches, rare carbonaceous specks.

▪ **HYDROCARBON FLUORESCENCE:**

INTERVAL (mMDRT)	FLUORESCENCE
	Nil.

▪ **GAS SUMMARY:**

INTERVAL (mMDKB)	Total GAS (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	IC4 (ppm)	NC4 (ppm)	C5 (ppm)
2130 - 2190	0.44	4350	23	18	29	1	-
2190 - 2340	0.37	3500	13	10	5	3	-
2340 - 2508	0.29	2905	10	9	7	3	-
2508 - 2640	0.12	950	12	10	38	5	-

▪ **SURVEYS**

MD	ANGLE	Azi		MD	ANGLE	Azi		
2027.82	3.27	25.23		2629.39	3.86	40.58		
2056.65	3.24	27.04		2658.02	3.89	41.3		
2085.12	3.33	26.59		2686.60	3.77	41.46		
3113.64	3.4	27.83		2715.15	3.77	40.42		
2142.04	3.46	29.61						
2170.63	3.6	30.30						
2199.17	3.77	30.65						
2227.87	3.85	36.05						
2256.54	3.99	35.43						
2285.35	4.14	37.21						
2314.02	4.15	34.69						
2342.60	4.24	35.48						
2371.30	4.20	37.23						
2399.91	4.28	37.06						
2428.46	4.30	38.32						
2457.14	4.30	37.54						
2511.27	4.09	38.40						

2543.24	4.05	40.48						
2572.00	4.01	40.97						
2600.65	3.91	40.54						

▪ **WELLSITE GEOLOGISTS:**

Mike Woodmansee

Rob Blackmore

▪ **FORMATION TOPS**

WD = 585.0 m RTE = 21.5 m								
FORMATION	PROGNOSED DEPTHS (m)			ACTUAL DEPTHS (m)				
	MDKB	SS	THICK	MDKB	SS	HI/LO	THICK	DIFF
Sea Floor/ Gippsland Limestone	607	585	-	606.5	585.0	0.0	1899.9	0.0
Lakes Entrance	2582	2560		2508	2484.9	75.1H		
Latrobe	2907	2885						
Base TF Channel	2937	2915						
Top 67.5 Ma Sand	2947	2925						
Near 68.5 Ma Sand	3257	3235						
Near 70.3 Ma Sand	3542	3520						
TD	3612	3590						

▪ **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