

## Culverin-1



<b>Date:</b>	25-12-2005	<b>Last Casing:</b>	340 mm (13 3/8") @ 1511.14 mMDRT
<b>Report Number:</b>	6	<b>Leak Off Test:</b>	1.89 sg EMW @ 1528.0 mMDRT
<b>Report Period:</b>	24hrs to 24:00	<b>Current hole size:</b>	311 mm (12 1/4")
<b>Depth @ 2400 Hrs:</b>	2131.0 mMDRT	<b>Mud Weight:</b>	1.14 sg
<b>Last Depth:</b>	1544.0 mMDRT	<b>ECD:</b>	1.17 sg
<b>Progress:</b>	587 m	<b>Mud Type:</b>	KCl-NaCl Polymer
<b>TD Lithology:</b>	Calcilutite	<b>Mud Chlorides:</b>	36,000 ppm
<b>Water Depth:</b>	585.0 m	<b>Mud Fluid Loss:</b>	6.6 cc
<b>RT Elevation:</b>	21.5 m	<b>Bit Type:</b>	PDC (Reed-Hycalog)

## OPERATIONS SUMMARY

<b>24 HOUR SUMMARY</b>	Drilled ahead from 1544.0 – 2131.0 mMDRT.
<b>00:00 - 24:00:</b>	
<b>06:00 Update</b>	Drilling ahead at 2257.0 mMDRT in the Gippsland Limestone.
<b>NEXT 24 HOURS:</b>	Drill ahead 311 mm (12 1/4") hole.

## GEOLOGICAL SUMMARY

### LITHOLOGIC DESCRIPTION:

Interval mMDRT	Description
1530 – 1620 ROP 3 – 46 m/hr Ave 24 m/hr	<p><b>Massive Argillaceous Calcilutite</b></p> <p>ARGILLACEOUS CALCILUTITE (100%): light olive grey, light grey, rare medium light grey, very soft to soft, trace calcareous sand grains, sub blocky to amorphous, trace carbonaceous specks, trace very fine pyrite patches, trace micro fossils (forams, echinoids), gradational to very fine to fine Calcarenite.</p>
1620 – 1770 ROP 16 – 67 m/hr Ave 44 m/hr	<p><b>Dominantly Argillaceous Calcilutite with minor Calcarenite</b></p> <p>ARGILLACEOUS CALCILUTITE (60-100%): light olive grey to light grey, rare medium light grey, very soft to soft, trace calcareous sand grains, sub-blocky to amorphous, trace carbonaceous specks, trace very fine pyrite patches, trace micro-fossils (forams, echinoids).</p> <p>CALCARENITE (nil-40%): light olive grey, soft to firm, sub-blocky, very fine to fine grained, moderately well sorted, rounded, common to abundant calcareous argillaceous matrix, poor visual porosity.</p>
1770 - 1980 ROP 10 – 65 m/hr Ave 30 m/hr	<p><b>Massive Calcilutite with trace Dolomite</b></p> <p>CALCILUTITE (100%): light olive-grey to light grey, occasionally pale yellowish-grey, soft to very soft, rarely firm, amorphous to sub-blocky, common very fine to fine calcareous silt and sand grains, trace carbonaceous specks, trace very fine pyrite, trace microfossils, gradational in part to very fine-grained Calcarenite and Calcisiltite.</p> <p>DOLOMITE (Nil-Trace): light brown to yellowish-brown, hard to very hard, conchoidal fracture, reacts weakly to acid when crushed.</p>

1980 - 2010 ROP 15 – 56 m/hr Ave 27 m/hr	<b>Dominantly Calcilutite with minor Calcarenite</b>  CALCILUTITE (70-100%): light olive grey, light grey, rare medium light grey, very soft to soft, trace calcareous sand grains, sub blocky to amorphous, trace carbonaceous specks, trace very fine pyrite patches, trace micro fossils (forams, echinoids).  CALCARENITE (Nil-30%): light olive grey, soft to firm, sub blocky, very fine to fine grained, moderately well sorted, rounded, common to abundant calcareous argillaceous matrix, poor visible porosity.
2010 - 2130 ROP 15 – 60 m/hr Ave 31 m/hr	<b>Massive Calcilutite</b>  CALCILUTITE (100%): light to medium greenish-grey, commonly olive grey, occasionally pale yellowish-grey, soft to very soft, rarely firm, amorphous to sub-blocky, common very fine to fine calcareous silt grains, trace carbonaceous specks, trace very fine pyrite, trace microfossils, gradational in part to very fine Calcisiltite, trace splintery light brown dolomite (?) fragments.

▪ **HYDROCARBON FLUORESCENCE:**

INTERVAL (mMDRT)	FLUORESCENCE
	Nil.

▪ **GAS SUMMARY:**

INTERVAL (mMDKB)	Total GAS (%)	C1 (%)	C2 (%)	C3 (%)	IC4 (%)	NC4 (%)	C5 (%)
1530 - 1620	0.36	0.359	0.001	-	-	-	-
1620-1710	0.33	0.336	0.001	-	-	-	-
1710-1980	0.36	0.356	0.002	0.001	-	-	-
1980-2010	0.33	0.31	0.003	0.001	-	-	-
2010- 2130	0.60	0.579	0.002	0.001	-	-	-

▪ **SURVEYS**

MD	ANGLE	Azi		MD	ANGLE	Azi		
681.95	1.26	227.0		1655.17	0.86	9.39		
767.68	0.81	263.55		1683.81	1.15	21.63		
825.04	0.93	254.57		1712.56	1.54	24.62		
911.19	1.09	257.49		1741.12	1.85	23.41		
1027.78	0.85	252.60		1769.90	2.12	24.21		
1056.46	0.79	254.04		1798.49	2.39	23.17		
1085.16	0.77	260.55		1827.17	2.73	24.42		
1113.81	0.62	255.11		1855.78	2.98	24.43		
1142.54	0.51	257.73		1913.08	3.07	24.58		
1171.11	0.43	257.64		1941.89	3.12	23.61		
1228.35	0.22	250.90		1970.98	3.18	24.11		
1257.08	0.17	244.39		1999.06	3.22	24.85		

1342.79	0.06	257.65		2027.82	3.27	25.23		
1371.46	0.03	247.14		2056.65	3.24	27.04		
1428.75	0.11	336.43		2085.12	3.33	26.59		
1486.03	0.16	21.18		3113.64	3.4	27.83		
1509.77	0.09	0.70		2142.04	3.46	29.61		
1525.00	0.09	0.70		2170.63	3.6	30.30		
1540.46	0.33	354.58		2199.17	3.77	30.65		
1569.11	0.36	350.12						
1597.73	0.50	2.93						
1626.44	0.63	1.96						

▪ **WELLSITE GEOLOGISTS:**

Mike Woodmansee

Rob Blackmore

▪ **FORMATION TOPS**

WD = 585.0 m RTE = 21.5 m								
FORMATION	PROGNOSSED DEPTHS (m)			ACTUAL DEPTHS (m)				
	MDKB	SS	THICK	MDKB	SS	HI/LO	THICK	DIFF
Sea Floor	607	585	-	606.5	585.0	0.0	-	0.0
Lakes Entrance	2582	2560						
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