

Culverin-1

Date:	30-12-2005	Last Casing:	340 mm (13 3/8") @ 1511.14 mMDRT
Report Number:	11	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:	3402.0 mMDRT	Mud Weight:	1.22 sg
Last Depth:	3385.0 mMDRT	ECD:	1.22 sg
Progress:	17 m	Mud Type:	KCl-NaCl-Polymer
TD Lithology:	Sandy Claystone	Mud Chlorides:	82, 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**00:00 - 24:00:**

Drilled ahead from 3385.0 mMDRT to 3402.0 mMDRT. POOH for bit trip. Downloaded LWD memory data. Made up new BHA with new PDC bit (Reed RSX 616M) and new motor. Load sources into LWD and Run into hole.

06:00 Update

RIH at 1900.0 mMDRT.

NEXT 24 HOURS:

Run into hole. Ream and Log sand from 3330m – 3350m. Wash down to 3402m. Drill ahead 311 mm (12 1/4") hole.

GEOLOGICAL SUMMARY

▪ **LITHOLOGIC DESCRIPTION:**

Interval mMDRT	Description
3385 - 3400 ROP 1.0 – 8.5 m/hr Ave 3.9 m/hr	<p>Argillaceous Sandstone with interbedded Sandy Claystone, Claystone and minor Siltstone</p> <p>ARGILLACEOUS SANDSTONE (0-80%): dominantly white to very light grey, minor clear to translucent, dominantly very soft aggregates, minor loose grains, very fine to medium, poorly sorted, sub-angular to sub-rounded, moderate to high sphericity, trace carbonaceous material, abundant white argillaceous matrix, commonly matrix supported, gradational to Sandy Claystone, poor to fair inferred porosity, no fluorescence.</p> <p>CLAYSTONE (0-50%): brownish grey, light brownish grey, light grey, very soft, amorphous, silty in part, trace carbonaceous specks, rare pyrite, gradational to Argillaceous Siltstone.</p> <p>SILTSTONE (10%): light brownish grey to brownish grey, very soft to soft, sub-blocky to amorphous, abundant carbonaceous specks, very argillaceous, disseminated pyrite in part.</p> <p>SANDY CLAYSTONE (0-60%): very light grey to white, very soft, amorphous, trace lithic fragments, 5-30% very fine well rounded quartz sand grains, grading to Argillaceous Sandstone.</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)
3385-3398	0.1	456	73	52	33	50	16

▪ **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		3346.36	3.65	50.41		
2715.15	3.77	40.42		3375.03	3.69	54.03		
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	PROGNOSED 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	8.0	
Near 68.5 Ma Sand	3257.0	3235.0	285.0	3103.0	3078.5	156.5 H	55	
Near 70.3 Ma Sand	3542.0	3520.0	70.0					
Near 74 Ma Sand	Not prog							
TD	3612.0	3590.0						

▪ **COMMENTS:**

Sperry-Sun LWD sensor to bit distances: (same LWD toolstring run following bit trip)

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

Connection Gas recorded (% above background)

3304.0 mMDRT = 0.02%
 3332.0 mMDRT = 0.06%
 3361.0 mMDRT = 0.02%
 3391.0 mMDRT = 0.06%