

**Longtom-3**

<b>Date:</b>	21-07-2006	<b>Last Casing:</b>	406 mm (16") @ 995.3 mMDRT
<b>Report Number:</b>	4	<b>Leak Off Test:</b>	1.62 sg EMW @ 1008.0 mMDRT
<b>Report Period:</b>	24hrs to 24:00	<b>Current hole size:</b>	241 mm (9 1/2")
<b>Depth @ 2400 Hrs:</b>	1545.0 mMDRT	<b>Mud Weight:</b>	1.44 sg
<b>Last Depth:</b>	1470.0.0 mMDRT	<b>ECD:</b>	Not Measured
<b>Progress:</b>	75 m	<b>Mud Type:</b>	SBM Petrofree
<b>TD Lithology:</b>	Interbedded Argillaceous Sandstone Silty Claystone and thin coals	<b>V: 6 / 3</b>	14 / 13
<b>Water Depth:</b>	56.7 m	<b>Mud Fluid Loss:</b>	2.8 cc
<b>RT Elevation:</b>	21.5 m	<b>Bit Type:</b>	Hughes H202, 3x24jets

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## OPERATIONS SUMMARY

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### 24 HOUR SUMMARY 00:00 - 24:00:

Drilled from 1470m MDRT to 1545m MDRT with mud motor drilling assembly, slide and rotated as required to obtain required build ratios. Circulate hole clean and commenced trip out for RST BHA/PDC. 1545m MDRT to 1361m MDRT no drag observed, @1361m MDRT 50-60klbs drag observed, work x 4, obstruction not mobile, run back below to 1378m MDRT and back reamed stand clean. Commenced pulling from 1351m MDRT to surface, no hole problems observed. Lay down motor assembly.

### 06:00 Update

Log section 1430m MDRT to 1545m MDRT, prior to drill ahead 9 1/2" pilot hole from 1545m MDRT.

### NEXT 24 HOURS:

Logged 9 1/2" hole with LWD Ecoscope from 1430-1545 mMD. Drilled ahead 9 1/2" hole through the Latrobe, un-named Volcanics and Kipper Shale.

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## GEOLOGICAL SUMMARY

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### LITHOLOGIC DESCRIPTION:

Interval mMDRT	Description
1470 - 1490 ROP 1 -15 m/hr Av 4 m/hr	<p><b>Sandstone and interbedded with Claystone</b></p> <p>SANDSTONE (50- 70%) : clear – translucent, white, loose to soft aggregates, medium to coarse, occasionally fine in aggregates, sub angular – rounded, moderate to high sphericity, 5 – 80% white argillaceous matrix, gradational to ARGILLACEOUS SANDSTONE, fair to good porosity, no shows.</p> <p>CLAYSTONE (30-50%): dark grey, brownish grey, very soft, sub blocky, very silty in part and gradational with depth to SILTY CLAYSTONE, trace carbonaceous specks, trace disseminated pyrite.</p>
1490 - 1520 ROP 3 -27 m/hr Av 7 m/hr	<p><b>Massive Silty Claystone interbedded with minor Sandstone and thin coals.</b></p> <p>SILTY CLAYSTONE (80-95%): brownish grey, very soft, sub blocky, very carbonaceous in part, occasional carbonaceous laminae, trace fine pyrite.</p> <p>SANDSTONE (8-20%): clear – translucent, white, loose to soft aggregates, medium to coarse, occasionally fine in aggregates, sub angular – rounded,</p>

	<p>moderate to high sphericity, 5 – 80% white argillaceous matrix, gradational to ARGILLACEOUS SANDSTONE, fair to good porosity, no shows.</p> <p>COAL (trace): black, sub vitreous to dull, brittle, hackly fracture, silty and argillaceous in part.</p>
<p>1520 – 1535 ROP 7 -29 m/hr Av 9 m/hr</p>	<p><b>Interbedded Sandstone, Argillaceous Sandstone, Silty Claystone with minor Coal. Top of the section is dominated by Sandstone which grades to Argillaceous Sandstone with depth.</b></p> <p>SANDSTONE (0-55%) clear, translucent, white, rare light grey, loose to soft aggregates, fine to coarse, sub angular to rounded, poorly sorted, trace lithics and coaly fragments, trace very fine pyrite, fair to good inferred porosity, no shows.</p> <p>ARGILLACEOUS SANDSTONE (0-58%): clear, translucent, white, light grey, soft to medium aggregates, rare loose, fine to medium, occasional coarse, sub angular to rounded, dominant sub rounded, moderate sorted, coaly fragments, rare carbonaceous laminae, trace lithics and very fine pyrite, 5-70% white to very light grey argillaceous matrix, poor inferred porosity, no shows.</p> <p>SILTY CLAYSTONE (40-70%): medium to dark brownish grey, dark grey, sub firm to firm, rare soft, carbonaceous, occasional carbonaceous laminae, micromica, rare very fine disseminated pyrite.</p> <p>COAL (trace): black, sub vitreous to dull, brittle, hackly fracture, silty and argillaceous in part.</p>
<p>1535 – 1545 ROP 2 -18 m/hr Av 6 m/hr</p>	<p><b>Argillaceous Sandstone with minor interbedded Silty Claystone and trace coal. Section becomes sandier with depth.</b></p> <p>ARGILLACEOUS SANDSTONE (75-90%): clear, translucent, white to very light grey, soft to medium hard aggregates, loose in part, fine to coarse, dominantly fine - medium, sub angular to rounded, dominant sub rounded, poor sorted, rare carbonaceous laminae, common lithics, argillaceous matrix, weak siliceous cement, fair to poor inferred porosity, no shows.</p> <p>SILTY CLAYSTONE (10-25%): medium to dark brownish grey, dark grey, soft to sub firm, rare firm, carbonaceous, rare carbonaceous laminae, micromica, rare very fine disseminated pyrite.</p> <p>COAL (Trace): black, sub vitreous to dull, brittle, hackly fracture, silty and argillaceous in part.</p>

**HYDROCARBON FLUORESCENCE:**

INTERVAL (mMDRT)	FLUORESCENCE
	No fluorescence observed

**GAS SUMMARY:**

INTERVAL (mMDKB)	Total GAS (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	IC4 (ppm)	NC4 (ppm)	IC5 (ppm)	NC5 (ppm)
1470 - 1490	0.56	565	24	9	5	5	7	3
1490 - 1520	0.19	865	41	9	5	1	6	1
1506 Peak coal	0.95	8004	362	57	9	10	5	1
1515 Peak coal	0.5	4250	185	35	11	6	4	2

1525 - 1535	0.23	1672	88	17	5	7	6	2
1535 - 1545	0.15	1155	59	14	8	3	6	3

No connection gas observed

**SURVEYS**

MD	ANGLE	Azi	TVD	MD	ANGLE	Azi	TVD
1449.9	23.6	192.64	1437.72				
1476.93	30.14	190.26	1461.81				
1507.95	32.61	185.04	1488.3				
1528.90	34.89	180.69	1505.72				

**FORMATION TOPS**

<i>WD = 56.7 m</i>								
<i>RTE = 21.5 m</i>								
FORMATION	PROGNOSED DEPTHS (m)			ACTUAL DEPTHS (m)				
	MDKB	TVDSS	THICK	MDKB	TVDSS	HI/LO	THICK	DIFF
Sea Floor/ Gippsland Limestone	56	78	n/a	78.2	56	No depth	1077.5	
Lakes Entrance	1172	1150	64	1156.0	1133.5	16.5 HI	64.3	-0.3
Latrobe	1237	1214	241	1221.0	1197.8	16.2 HI		
K/T Boundary	1505	1455	30					
Un-named Volcanics	1544	1485	37					
Kipper Shale	1595	1522	508					
Admiral Formation	2474	2030	124					
%500 Sands	2692	2154	59					
400 Sands	2794	2213	134					
300 Sands	3028	2347	41					
200 Sands	3100	2388	59					
100 Sands	3203	2447	53					
Emperor Volcanics	3296	2500	18+					
TD	3327	2518						

**COMMENTS:**

Sperry-Sun LWD sensor to bit distances:

Gamma = 9.7m

Porosity = 13.0m

Density = 10.9m

Spectro = 13.3m

Sonic Caliper = 11.3m

Mud pressure = 9.9m

Vibration = 19.4m

Directional = 20.1m

**WELLSITE GEOLOGISTS:**

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