

## Longtom-3



<b>Date:</b>	24-07-2006	<b>Last Casing:</b>	406 mm (16") @ 995.3 mMDRT
<b>Report Number:</b>	7	<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>	2675 mMDRT	<b>Mud Weight:</b>	1.44 sg
<b>Last Depth:</b>	2016.0 mMDRT	<b>ECD:</b>	1.6 sg (calculated)
<b>Progress:</b>	659 m	<b>Mud Type:</b>	SBM Petrofree
<b>TD Lithology:</b>	Sandstone very argillaceous and Siltstone	<b>V: 6 / 3</b>	13 / 12
<b>Water Depth:</b>	56.7 m	<b>Mud Fluid Loss:</b>	3.0 cc
<b>RT Elevation:</b>	21.5 m	<b>Bit Type:</b>	SMITH M716PXC 5x18, 2x16 jets

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**OPERATIONS SUMMARY**


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**24 HOUR SUMMARY****00:00 - 24:00:**

Drill 9 1/2" pilot hole with RST assembly as per directional plan from 2016m MDRT to 2675m MDRT.

**06:00 Update**

Drill ahead at 2800 mMDRT in 100% Siltstone.

**NEXT 24 HOURS:**

Drilled ahead 9 1/2" hole through the Admiral Formation.

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**GEOLOGICAL SUMMARY**


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**LITHOLOGIC DESCRIPTION:**

Interval mMDRT	Description
2016 - 2066 ROP 16-104 m/hr Av 31 m/hr	<p><b>Massive Claystone with minor to trace very fine Sandstone</b></p> <p>CLAYSTONE: (100%) brownish grey, firm, blocky, trace very fine carbonaceous grains, silty in part and gradational to SILTY CLAYSTONE.</p> <p>SANDSTONE: (trace) light olive grey, friable aggregates, very fine grained, well sorted, rounded, carbonaceous grains, poor – fair visual porosity.</p>
2066 – 2083 ROP 58-92 m/hr Av 31 m/hr	<p><b>Siltstone and Sandstone</b></p> <p>SILTSTONE: (70-90%) light greyish brown, soft to firm, crumbly, very argillaceous to arenaceous, common carbonaceous specks and poorly developed carbonaceous laminae, common fine sand.</p> <p>SANDSTONE: (10-30%) clear – translucent, light olive grey, yellowish grey, loose to soft aggregates, very fine to medium, moderately well sorted, sub angular to well rounded, 10 – 40% silty and argillaceous matrix, common carbonaceous grains and laminae, poor to good porosity.</p>
2083 – 2140 ROP 10 -110 m/hr Av 40 m/hr	<p><b>Massive Claystone with trace very fine grained Sandstone</b></p> <p>CLAYSTONE: (100%) brownish grey, soft to firm, sub blocky to blocky, sticky in part, occasionally silty, trace carbonaceous grains, rare carbonaceous laminae, massive uniform.</p> <p>SANDSTONE: (trace%) yellowish grey, light brownish grey, friable aggregates</p>

	to occasionally loose, very fine to fine grained, sub angular to rounded, moderately well sorted, common carbonaceous grains and laminae, 10 – 30% argillaceous matrix, poor to fair inferred porosity.
2140 – 2160 20 - 112 m/hr Av 40 m/hr	<p><b>Massive Claystone with Coal and trace very fine grained Sandstone</b></p> <p>CLAYSTONE: (100%) brownish grey, olive grey, soft to firm, sub blocky to blocky, sticky in part, trace carbonaceous grains, rare carbonaceous laminae, massive uniform.</p> <p>COAL: (trace-2%) black, vitreous to sub vitreous, blocky, firm, brittle, sub conchoidal fracture, silty in part.</p> <p>SANDSTONE: (trace) yellowish grey, light brownish grey, friable aggregates to occasionally loose, very fine to fine grained, sub angular to rounded, moderately well sorted, common carbonaceous grains and laminae, 10 – 30% argillaceous matrix, fair – good inferred porosity.</p>
2160 – 2275 ROP 10 -136 m/hr Av 39 m/hr	<p><b>Massive Claystone with trace very fine Sandstone</b></p> <p>CLAYSTONE: (100%)dark brownish grey, brownish grey, very soft to sub firm, sub blocky to blocky, occasionally very argillaceous and sticky, occasionally very silty, trace carbonaceous grains, rare carbonaceous laminae, massive uniform.</p> <p>SANDSTONE: (trace) light grey, very soft aggregates, very fine grained grading to silt, well sorted, rounded, abundant argillaceous matrix, poor visual porosity.</p>
2275 – 2300 ROP 19 -112 m/hr Av 58 m/hr	<p><b>Silty Claystone interbedded with fine Sandstone with trace coal</b></p> <p>SILTY CLAYSTONE (60-7%): light grey to light brownish grey, brownish grey, very soft to sub firm, sub blocky to blocky, dominantly blocky, very silty, carbonaceous grains and laminae, massive uniform, non calcareous, gradational to SILTSTONE.</p> <p>SANDSTONE (25-30%): light grey, light olive grey, very soft aggregates to loose, very fine to fine, rare medium, dominantly fine grained, sub rounded, moderate sorted, common fine carbonaceous grains and rare laminae, rare lithic, very argillaceous and gradational to CLAYSTONE, weak siliceous cement, poor visual porosity, no show.</p> <p>COAL (trace): black, sub vitreous to dull, brittle, hackly fracture, silty and argillaceous in part.</p>
2300 – 2355 ROP 26 -110 m/hr Av 35 m/hr	<p><b>Silty Claystone interlaminated with minor fine Sandstone</b></p> <p>SILTY CLAYSTONE (85-90%): light grey, common brownish grey to light brownish grey, rare dark grey, very soft to sub firm, sub blocky to blocky, dominantly blocky, arenaceous, rare carbonaceous specks, rare carbonaceous laminae, non calcareous, gradational to CLAYSTONE in places .</p> <p>SANDSTONE (10-15%): light grey to white, rare yellowish grey, very soft aggregates, trace loose, fine, sub rounded, moderate sorted, trace pyrite, argillaceous, weak siliceous cement, poor visual porosity, no show.</p>
2355 – 2460 ROP 18 -109 m/hr Av 64 m/hr	<p><b>Silty Claystone interlaminated with minor Sandstone at top, soft Claystone interlaminated with Sandstone towards bottom</b></p> <p>SILTY CLAYSTONE (70-90%): light grey, common brownish grey to light brownish grey, rare dark grey, very soft to sub firm, sub blocky to blocky, dominantly blocky, arenaceous, common carbonaceous specks, rare carbonaceous laminae, non calcareous, gradational to SILTSTONE in part.</p> <p>SANDSTONE (15-30%): light grey to white, rare yellowish grey, very soft aggregates, trace loose, fine, sub rounded, moderate sorted, trace pyrite,</p>

	argillaceous, weak siliceous cement, poor visual porosity, no show.
2460 – 2526 ROP 15 -92 m/hr Av 44 m/hr	<p><b>Claystone interbedded with Silty Claystone</b></p> <p>CLAYSTONE (90-100%): dark grey, medium to hard, sub blocky to blocky, dominantly blocky, common fine sand, rare carbonaceous specks, non calcareous.</p> <p>SILTY CLAYSTONE (10-Tr): light grey, moderate hard to hard, sub blocky to blocky, dominantly blocky, silty, rare carbonaceous specks and carbonaceous laminae.</p>
2526 – 2578 ROP 30 -128 m/hr Av 54 m/hr	<p><b>Claystone interlaminated with Silty Claystone towards top, grades to Silty Claystone interlaminated with Claystone and minor Sandstone towards the base.</b></p> <p>SILTY CLAYSTONE (20-95%): light grey to white, occasional light greenish grey, soft, sub blocky to blocky, dominantly sub blocky, arenaceous, occasional carbonaceous specks, non calcareous.</p> <p>CLAYSTONE (5-80%): dark grey, occasional light grey, medium to hard, blocky, massive, carbonaceous specks, non calcareous.</p> <p>SANDSTONE: light grey to while, yellowish grey, soft aggregates to loose, fine, occasionally medium, sub rounded, moderate sorted, common carbonaceous specks and carbonaceous laminae, argillaceous, weak siliceous cement, poor visual porosity, no show.</p>
2578 – 2634 ROP 18 –118m/hr Av 45 m/hr	<p><b>Top Admiral Formation 2578 mMDRT (2093.5 mTVD/2072 mSS)</b></p> <p><b>Sandstone and Siltstone</b></p> <p>SANDSTONE (10-50%): clear to translucent, light grey to while, yellowish grey in aggregates, dominantly loose to occasional soft aggregates, very fine to dominantly medium, sub rounded, moderate sorted, carbonaceous specks, argillaceous, weak siliceous cement, poor visual porosity in aggregates, good inferred porosity in loose fraction, no hydrocarbon shows.</p> <p>SILTSTONE (50-90%): brownish grey, medium grey, soft, blocky - sub blocky, friable, carbonaceous specks and laminae, very argillaceous in part, occasionally inter laminated with very fine sand.</p>
2634 – 2675 ROP 20 -138 m/hr Av 28 m/hr	<p><b>Sandstone and Siltstone.</b> Sandstone in this section has poor porosity and occurs dominantly as soft aggregates with 40-90%argillaceous matrix.</p> <p>SANDSTONE: off white, light yellowish grey, 80% soft aggregate, 20% loose, very fine to medium, moderately well sorted, sub angular to rounded, 40 – 90% argillaceous matrix, common lithic and carbonaceous grains, feldspathic grains occasional inter laminations of silt, poor visual porosity, no hydrocarbon shows.</p> <p>SILTSTONE: brownish grey, brownish black, very soft to sub firm, sub blocky to blocky, sub fissile in part, carbonaceous specks, occasionally very carbonaceous and gradational to Carbonaceous Siltstone, inter-laminated with very fine sand 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)
2106 - 2066	0.14	1007	11	4	3	5	3	0
2066 - 2083	0.48	3821	43	5	6	5	2	0
2081m sandstone	1.05	9866	98	8	2	2	2	0
2083 – 2140	0.1	605	5	2	2	2	0	0
2083.5 peak	1.1	9798	101	8	2	2	1	0
2140 - 2160	0.1	471	7	1	2	1	1	0
2160 -2275	0.06	313	2	3	2	2	1	2
2275 – 2300	0.04	200	3	2	0	0	0	0
2300 – 2460	0.05	256	2	0	0	0	0	0
2460 – 2526	0.05	266	3	1	1	1	1	1
2526 – 2634	0.05	351	3	1	1	1	1	0
2634 - 2675	0.04	217	4	2	1	2	1	0

**SURVEYS**

MD	ANGLE	Azi	TVD	MD	ANGLE	Azi	TVD
2018.10	54.09	197.64	1788.1	2420.59	54.10	190.34	2003.8
2078.07	57.93	198.55	1821.6	2450.15	55.91	190.75	2020.7
2107.67	60.12	198.19	1836.9	2478.72	55.94	190.68	2036.7
2136.29	61.08	197.34	1850.9	2507.91	55.65	190.44	2053.1
2165.33	61.30	194.55	1864.9	2536.55	55.06	190.65	2069.4
2191.83	61.20	192.77	1877.7	2564.10	54.34	191.06	2085.3
2231.09	59.28	191.55	1892.2	2593.11	53.58	191.13	2102.4
2250.0	57.06	191.03	1907.4	2621.99	56.08	189.87	2119.0
2279.12	56.53	189.97	1923.4	2650.38	56.50	189.65	2134.8
2305.79	55.95	190.81	1938.2	2564.1	54.34	191.06	2085.3
2335.02	55.68	190.51	1954.6	2593.11	53.58	191.13	2102.4
2363.38	55.31	190.15	1970.7	2621.99	56.08	189.87	2134.8
2392.13	54.69	190.43	1987.2	2650.38	56.50	189.65	2134.8

**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	262	+21.0
K/T Boundary	1505	1455	30	1500.5	1460.44	5.4 LO		
Un-named Volcanics	1544	1485	37	1569.0	1514.9	30.0 LO	21	n/a
Kipper Shale	1595	1522	508	1651	1566.4	44.4 LO	505.6	
Admiral Formation	2474	2030	124	2578	2072	42 LO		
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:****Anadril LWD sensor to bit distances:**

Vibration = 11.47m

Directional = 12.12m m

Ecoscope LWD tool not run.

**WELLSITE GEOLOGISTS:****Mike Woodmansee****Achintya Basu**