

## Longtom- 3 H



Date:	15-08-2006	Last Casing:	273 mm (10 ¾") at 2374.3 mMDRT
Report Number:	4	Leak Off Test:	1.80 sg EMW at 2484 mMDRT
Report Period:	24hrs to 24:00	Current hole size:	241 mm (9½ ")
Depth @ 2400 Hrs:	3059 m	Mud Weight:	1.44 sg
Last Depth:	2793 m	ECD:	1.57 sg
Progress:	266 m	Mud Type:	SBM Petrofree
TD Lithology:	100% Silty Claystone	V: 6 / 3	11 / 10
Water Depth:	56.0 m	Mud Fluid Loss:	3.0 cc
RT Elevation:	21.5 m	Bit Type:	Smith M716PXC

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**OPERATIONS SUMMARY**


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

Drilled 9 1/2" directional hole from 2793 to 2965mRT dropping inclination from 72 deg to 65 deg. Held 65 deg from 2965m to 2994mRT. Drill ahead from 2994m to 3059mRT, building angle as per revised wellplan "Longtom-3 H Wellsite Rev 3a".

**06:00 Update**

Drill ahead 9 ½" hole at 3136m. Drilling Silty Claystone and Claystone section below 200 sand and above the 100 sand.

**NEXT 24 HOURS:**

Drill ahead 9 1/2" hole in Siltstone Claystone section below 200 sand and drill into 100 sand.

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**GEOLOGICAL SUMMARY**


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**LITHOLOGIC DESCRIPTION:**

Interval mMDRT	Description
2793 – 2802  ROP: 18 – 43 m/hr Av: 29 m/hr	<b>Massive Sandstone</b>  SANDSTONE: off white, light grey, light yellowish grey, grains clear to translucent occasionally pale grey, 50-60% soft aggregates, 50-60% loose grains, very fine to fine, occasionally medium, sub angular to rounded, well sorted, argillaceous matrix to 80%, very common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.
2800 – 2856  ROP:5.5 – 66.0 m/hr Av: 23 m/hr	<b>Massive Sandstone</b>  SANDSTONE: 70% loose, clear translucent, rare pale green and orange/brown grains, fine to dominantly medium, well sorted, sub angular to rounded, good inferred porosity, 30% soft aggregates, off white to very light grey, fine to occasionally medium, well sorted, argillaceous matrix to 10 - 40%, common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.
2856 – 2866  ROP:10.9 – 60.7 m/hr Av: 16.9 m/hr	<b>Siltstone and Sandstone</b>  SILTSTONE (70-80%): medium grey, very soft to soft, sub blocky to occasionally blocky, arenaceous to dominantly argillaceous, carbonaceous specks, occasionally sandy.

	<p>SANDSTONE (20-30%): 60% loose, clear translucent, rare pale green and orange/brown grains, fine to medium rare coarse, well sorted, sub angular to rounded, good inferred porosity, 40% soft aggregates, off white to very light grey, olive grey, fine to occasionally medium, well sorted, argillaceous matrix to 30 - 70%, common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.</p>
<p>2866 – 2891</p> <p>ROP:7.4 – 61.6 m/hr Av: 19.1 m/hr</p>	<p><b>Sandstone interbedded with minor Siltstone</b></p> <p>SANDSTONE (20-100%): 80% loose, clear translucent, rare pale green and orange/brown grains, fine to medium, well sorted, sub angular to rounded, good inferred porosity, 20% soft aggregates, off white to very light grey, olive grey, fine to occasionally medium, well sorted, argillaceous matrix to 30 - 70%, common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.</p> <p>SILTSTONE (Tr-80%): medium grey, very soft to soft, sub blocky to occasionally blocky, arenaceous to dominantly argillaceous, carbonaceous specks, occasionally sandy.</p>
<p>2891 – 2912</p> <p>ROP:6.3 – 100.3 m/hr Av: 19.6 m/hr</p>	<p><b>Massive Sandstone</b></p> <p>SANDSTONE (100%): 85% loose, clear translucent, rare pale green and orange/brown grains, fine to dominantly medium, well sorted, sub angular to rounded, good inferred porosity, 15% soft aggregates, off white to very light grey, olive grey, fine to occasionally medium, well sorted, argillaceous matrix to 30 - 70%, common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.</p>
<p>2912 – 2935</p> <p>ROP:3.3 – 39.6 m/hr Av: 2.7 m/hr</p>	<p><b>Sandstone interbedded with Siltstone</b></p> <p>SANDSTONE (35-80%): 40% loose, clear translucent, rare pale green and orange/brown grains, fine to medium, well sorted, sub angular to rounded, good inferred porosity, 60% soft aggregates, off white to very light grey, olive grey, fine to occasionally medium, well sorted, argillaceous matrix to 40%, occasional firm calcareous cement, common carbonaceous grains and fragments, lithics, poor to fair porosity, no show.</p> <p>SILTSTONE (20-65%): brownish grey, soft to firm, sub blocky, common carbonaceous specks, argillaceous.</p>
<p>2935 – 3020</p> <p>ROP:3.9 – 32.4 m/hr Av: 12.6 m/hr</p>	<p><b>Massive Siltstone interbedded with minor Claystone</b></p> <p>SILTSTONE (20-100%): brownish grey, soft to firm, sub blocky, common carbonaceous specks, argillaceous.</p> <p>CLAYSTONE (Trace-75%): brownish grey, dark greenish grey, soft to firm, blocky, elongate, splintery in part, massive and uniform.</p>
<p>3020 – 3050</p> <p>ROP:1.6 – 34 m/hr Av: 18 m/hr</p>	<p><b>Siltstone interbedded with minor Claystone and Sandstone</b></p> <p>CLAYSTONE: (0-80%) brownish grey to dark greenish grey, trace to common light brown dolomite, firm to moderately hard, blocky, elongate, splintery in part, massive and uniform.</p> <p>SANDSTONE: (10-20%) off white, light greenish grey, very soft aggregates, very fine to fine, grading to silt, rounded to well sorted, moderate light brown dolomite cement, 60% argillaceous matrix, poor inferred porosity, no show.</p> <p>SILTSTONE: (10-85%) brownish grey, soft to firm, sub blocky, common</p>

	carbonaceous specks, argillaceous.
3050 – 3059 Av: 22.5 m/hr	<b>Massive Silty Claystone</b>  SILTY CLAYSTONE: medium grey, medium dark grey, very soft to soft, sub blocky, commonly deformed by the bit, very rare carbonaceous specks, rare very fine sand, uniform.

**HYDROCARBON FLUORESCENCE:**

INTERVAL (mMDRT)	FLUORESCENCE
	No fluorescence.

**GAS SUMMARY:**

INTERVAL (mMDKB)	Total GAS (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	IC4 (ppm)	NC4 (ppm)	IC5 (ppm)	NC5 (ppm)
2793 – 2802	8.7	75404	2039	457	65	61	10	4
2802 - 2856	7.8	79219	2168	518	75	75	12	6
2808 peak	16	133226	3546	798	105	109	15	8
2856 - 2866	1.5	24410	839	253	47	44	11	5
2857 peak	3.7	54086	1554	388	59	59	9	4
2866 - 2891	1.3	27268	898	263	48	45	10	5
2870 peak	6.8	111437	2747	614	89	89	13	8
2891 - 2912	0.9	20029	493	139	33	27	7	3
2905 peak	6.1	133279	3181	684	94	95	16	8
2912 - 2935	1.5	38423	1068	280	49	44	9	9
2913 peak	3.3	86309	2418	561	77	76	12	7
2935 – 3020	0.4	3242	102	26	22	8	17	1
2993 peak	0.8	7744	211	54	23	13	4	2
3020 – 3050	0.5	4568	135	32	21	7	5	2
3050 - 3059	0.1	1011	28	6	4	3	2	1

**SURVEYS**

Tie in point to Longtom -3 ST1 is 2400.00m

MD	ANGLE	Azi	TVD	MD	ANGLE	Azi	TVD
2771.42	72.34	188.76	2359.5	3000.89	62.71	191.12	2448.2
2799.85	71.8	188.78	2368.2	3029.76	64.69	192.66	2461.0
2828.80	72.42	188.43	2377.1	3058.53	67.97	193.57	2472.5
2857.45	70.32	187.79	2386.3				
2885.89	67.10	188.02	2396.6				
2914.91	63.93	186.09	2408.6				
2943.77	62.42	186.87	2421.6				
2971.86	62.12	187.69	2434.7				

**FORMATION TOPS**

WD = 56.7 m RTE = 21.5 m								
FORMATION	PROGNOSED DEPTHS (m)			ACTUAL DEPTHS (m)				
	MDKB	TVDSS	THICK	MDKB	TVDSS	HI/LO	THICK	DIFF
200 sand	2405.0	2182.0	199.5	2406.0	2182.1	0.1 LO		
Base 200 sand at vertical section 800.4m				2649	2289.3			
Base 200 sand at vertical section 882.4m				2740	2327.9			
Base 200 sand at vertical section 1044.1m				2912	2385.9			
Sand 1 target	2852.36	2381.5						
Sand 2 target	3006.9	2450.0						
Sand 3 target	3431.5	2549.5						
Sand Drain target	3957.1	2539.5						
Sand 4 target	4481.2	2463.5						
TD	5833.0	2489.3						

**COMMENTS:**

Sensor Distances: Xceed D&I 4.2m, GR 9.8m, APWD 9.96m, Density 11m, Ultrasonic Caliper 11.42m, Resistivity 12.84m, Neutron Porosity 13.09, TeleScope D&I 20.16m

**WELLSITE GEOLOGISTS:**

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