

Jackman Oilfield Services  
 1 West Mulberry St.  
 Colony, KS 66015  
 620-852-3350

WELL LOG  
 Lakeshore Operating, LLC  
 Sturdivan 3 LO-47

July 13, 2016

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>	
6.00	Soil	6.00	
2.00	Shale	8.00	
5.00	Lime	13.00	
3.00	Shale	16.00	
26.00	Lime	42.00	
3.00	Shale	45.00	
128.00	Lime	173.00	
91.00	Shale	264.00	
27.00	Lime	291.00	
177.00	Shale	468.00	
20.00	Lime	488.00	
180.00	Shale	668.00	
162.00	Lime	830.00	
7.00	Shale	837.00	
3.00	Shale	840.00	
8.00	Lime	848.00	
15.00	Shale	863.00	
79.00	Lime	942.00	
3.00	Shale	945.00	
5.00	Lime	950.00	
8.00	Shale	958.00	
11.00	Lime	969.00	
7.00	Shale	976.00	
24.00	Lime	1,000.00	
1.00	Shale	1,001.00	
7.00	Sandy shale	1,008.00	
7.00	Oil sand	1,015.00	
3.00	Oil sand/shale	1,018.00	
27.00	Sandy shale	1,045.00	
1.00	Lime	1,046.00	
13.00	Oil sand	1,059.00	
33.00	Shale	1,092.00	TD

Drilled a 9 7/8" hole to 39'7"

Drilled a 5 7/8" hole to 1092'

Set 40' of 7" surface casing cemented with 10 sacks of portland cement

Ran 1085' of 2 7/8"

No cores

No seating nipple

Cemented on 7/15/16

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