

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

WELL LOG  
Lakeshore Operating, LLC  
Sturdivan 3 LO-39

May 26, 2016

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
7.00	Soil/clay	7.00
36.00	Lime	43.00
134.00	Shale	177.00
89.00	Lime	266.00
18.00	Shale	284.00
119.00	Lime	403.00
4.00	Shale	407.00
97.00	Lime	504.00
18.00	Shale	522.00
19.00	Lime	541.00
3.00	Shale	544.00
132.00	Lime	676.00
14.00	Sandy Shale	690.00
155.00	Shale	845.00
3.00	Lime	848.00
9.00	Shale	857.00
15.00	Lime	872.00
50.00	Shale	922.00
1.00	Lime	923.00
3.00	Shale	926.00
7.00	Lime	933.00
1.00	Coal	934.00
24.00	Lime	958.00
10.00	Shale	968.00
8.00	Lime	976.00
6.00	Shale	982.00
8.00	Lime	990.00
12.00	Shale	1,002.00
8.00	Lime	1,010.00
5.00	Shale	1,015.00
3.00	Very broken sand	1,018.00
1.00	Oil sand	1,019.00

2.00	Very broken sand	1,021.00	
27.00	Shale	1,048.00	
1.00	Lime	1,049.00	
5.00	Oil sand	1,054.00	
0.50	Sand	1,054.50	
0.50	Oil sand	1,055.00	
0.50	Oil sand	1,055.50	
1.50	Oil sand	1,057.00	
2.50	Sandy Shale	1,059.50	
2.50	Oil sand	1,062.00	
4.50	Sandy Shale	1,066.50	
0.50	Shale	1,067.00	
8.00	Sandy Shale	1,075.00	
32.00	Shale	1,107.00	TD

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

Drilled a 5 7/8" hole to 1107'

Set 40' of 7" surface casing cemented with 9 sacks of portland cement

Ran 1100' of 2 7/8"

2 cores

Cored 1019

No seating nipple

Sturdivan 3 LO-39