

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

WELL LOG
Kansas Resource Exploration & Development, LLC
Cartwright KR-18

August 15, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>	
17	soil/clay	17	
19	lime	36	
21	shale	57	
5	lime	62	
40	shale	102	
14	lime	116	
11	shale	127	
7	lime	134	
8	shale	142	
13	lime	155	
17	shale	172	
17	lime	189	
5	shale	194	
12	lime	206	
159	shale	365	
12	lime	377	
4	sandy lime	381	
1	lime	382	
10	grey sand	392	slight odor
1	lime	393	
1	sand	394	very light bleed
3	grey sand	397	
12	sandy shale	409	
9	shale	418	
4	coal	422	
11	lime	433	
8	shale	441	
4	lime	445	
16	shale	461	
11	lime	472	
11	shale	483	
1	lime	484	

2	coal	486		
3	lime	489		
2	sand/lime	491	medium bleed	
1	lime	492		
1	sandy shale	493		
3	shale	496		
2	broken sand	498	light bleed	
1.50	oil sand	499.50	light bleed	
1.50	broken sand	501	light bleed	
1	oil sand	502	light bleed	
9	broken sand	511	light-med.bleed	80% sand
19	grey sand/sandy shale	530		
50	shale	580	TD	

Drilled a 9 7/8" hole to 19'7"

Drilled a 5 7/8" hole to 580'

Set 20' of 7" surface casing cemented with 5 sacks of portland cement

Set 572.80' of 2 7/8" round upset tubing. Baffle @ 541.45'

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