

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

WELL LOG  
 Kansas Resource Exploration & Development, LLC  
 Cartwright KR-30

May 9, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>	
6	soil/clay	6	
15	lime	21	
19	shale	40	
3	lime	43	
7	red bed	50	
40	shale	90	
10	lime	100	
12	shale	112	
28	lime	140	
10	shale	150	
3	lime	153	
4	shale	157	
18	lime	175	
4	shale	179	
11	lime	190	
140	shale	330	
6	sandy shale	336	
16	shale	352	
16	lime	368	
6	grey sand	374	gas smell
32	shale	406	
3	coal	409	
5	shale	414	
4	lime	418	
17	shale	435	
1	lime	436	
2	coal	438	
14	shale	452	
6	lime	458	
18	shale	476	
1	lime	477	
1	coal	478	

3	lime	481	
1	lime	482	light oil
3	lime	485	
5.50	shale	490.50	
5.50	oil sand	496	medium bleed
10	broken sand	506	light bleed
94	shale	600	TD

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

Drilled a 5 7/8" hole to 600'

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

Set 567' of 2 7/8" round upset tubing. Baffle @ 536'

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