



11 Lewis Drive

Paola, KS 66071

**Oil & Gas Well Drilling
Water Wells
Geo-Loop Installation**

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WELL LOG

Kansas Resource Exploration & Development, LLC

Guetterman #KR-24

API # 15-091-23,945

January 4 - January 8, 2013

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
16	soil & clay	16
8	shale	24
3	lime	27
2	shale	29
16	lime	45
10	shale	55
7	lime	62
9	shale	71
17	lime	88
22	shale	110
20	lime	130
5	shale	135
11	lime	146
2	shale	148
37	lime	185
21	shale	206
10	lime	216
16	shale	232
7	lime	239
9	shale	248
12	lime	260
5	shale	265
2	lime	267
18	shale	285
1	lime	286
12	shale	298
23	lime	321
6	shale	327
24	lime	351
4	shale	355
3	lime	358
5	shale	363
5	lime	368 base of the Kansas City
173	shale	541
4	lime	545 oil show
6	shale	551
2	lime	553
1	coal	554
5	shale	559
7	lime	566
14	shale	580

3	lime	583
5	shale	588
4	lime	592
4	shale	596
1	lime	597
22	shale	619 red
6	lime	625
71	shale	696
2	oil sand	698 brown, light bleeding (gassy)
9	broken sand	707 brown & grey, ok bleeding
17	shale	724
1	coal	725
4	shale	729
2	lime	731
23	shale	754
1	coal	755
3	shale	758
7	grey sand	765
28	shale	793
1	coal	794
8	shale	802
4	silty shale	806
11	shale	817 white & green
3	oil sand	820 brown, good bleeding
4	broken sand	824 brown sand & shale, ok bleeding
11.5	shale	835.5
1.5	coal	837
53	shale	890 TD

Drilled a 9 7/8" hole to 21'
 Drilled a 5 5/8" hole to 890'

Set 21' of 7" surface casing cemented with 6 sacks of cement

Set 880' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe and 1 clamp.