



11 Lewis Drive

Paola, KS 66071

Oil & Gas Well Drilling
Water Wells
Geo-Loop Installation

Phone: 913-557-9083

Fax: 913-557-9084

WELL LOG

Kansas Resource Exploration & Development, LLC

Guetterman #KR-4

API # 15-091-23,929

November 13 - November 15, 2012

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
14	soil & clay	14
4	shale	18
5	lime	23
4	shale	27
16	lime	43
9	shale	52
8	lime	60
9	shale	69
18	lime	87
19	shale	106
17	lime	123
8	shale	131
49	lime	180
24	shale	204
10	lime	214
17	shale	231
5	lime	236
5	shale	241
17	lime	258
3	shale	261
2	lime	263
19	shale	282
3	lime	285
9	shale	294
6	lime	300
3	shale	303
13	lime	316
11	shale	327
21	lime	348
3	shale	351
4	lime	355
5	shale	360
6	lime	366 base of the Kansas City
172	shale	538
5	lime	543 oil show
5	shale	548
1	lime	549
2	shale	551
1	coal	552

6	shale	558
7	lime	565
15	shale	580
4	lime	584
7	shale	591
3	lime	594
4	shale	598
2	lime	600
28	shale	628 red
1	lime	629
18	shale	647
2	lime	649
5	silty shale	654
48	shale	702
2	broken sand	704 brown & grey, ok bleeding
4	oil sand	708 brown, ok bleeding
1	broken sand	709 brown & grey, light bleeding
19	shale	728
1	coal	729
5	shale	734
2	lime	736
39	shale	775
1	coal	776
43	shale	819
3	silty shale	822 white & grey, limey
2	broken sand	824 brown & white, ok bleeding
1.5	oil sand	825.5 brown, good bleeding
3.5	broken sand	829 brown & grey, ok bleeding
2	silty shale	831
20	shale	851
1	coal	852
29	shale	881 TD

Drilled a 9 7/8" hole to 23.4' _____

Drilled a 5 5/8" hole to 881' _____

Set 23.4' of 7" surface casing cemented with 6 sacks of cement

Set 871' of 2 7/8" 8 round upset tubing, with 3 centralizers, 1 float shoe, & 1 clamp.