



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
Joeckel #KR-20
API # 15-121-30,064
April 23 - April 29, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
5	soil & clay	5
5	shale	10
20	lime	30
92	shale	122
36	lime	158
20	shale	178
6	lime	184
33	shale	217
14	lime	231
13	shale	244
12	lime	256
2	shale	258
10	lime	268
13	shale	281
15	lime	296
4	shale	300
3	lime	303
3	shale	306
2	lime	308
3	shale	311
5	lime	316 base of the Kansas City
33	shale	349
4	broken sand	353
111	shale	464
1	lime	465
4	limey sand	469 hard brown, ok bleeding
9	limey sand	478 50% limey, 50% brown sand, very good bleeding
1	lime	479
6	silty shale	485
2	broken sand	487 90% sand 10% shale, good bleeding
5	oil sand	492 brown sand, good saturation and bleeding
2	lime	494
1	limey sand	495 black limey sand, good bleeding
1	lime	496
12	shale	508
7	lime	515 light oil show
9	shale	524
5	lime	529
11	shale	540
4	lime	544

19	shale	563
2	lime	565
14	shale	579
2	lime	581
22	shale	603
3	lime	606
11	shale	617
3	lime	620
35	shale	655
23	broken sand	678 light brown sand & shale, light oil odor, making water
7	broken sand	685 light brown sand & shale, light oil odor, making water
13	sand	698 light brown sand
1	coal	699
14	shale	713
2	broken sand	715 30% sand 70% shale, light bleeding
2.5	silty shale	717.5
3.5	broken sand	721 40% sand 60% shale, ok bleeding
4	oil sand	725 brown, good bleeding
2.5	oil sand	727.5 brown, ok bleeding
1	broken sand	728.5 90% brown sand 10% shale, ok bleeding
5.5	oil sand	734 ok bleeding
3.5	oil sand	737.5 dark sand, good bleeding
7.5	oil sand	745 dark sand, good bleeding
3	oil sand	748 black sand, good bleeding
2	lime/sand	750
3	shale	753
1	coal	754
53	shale	807 TD

Drilled a 9 7/8" hole to 23.6'

Drilled a 5 5/8" hole to 807'

Set 23.6' of 7" surface casing cemented with 6 sacks of cement

Set 796.8' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe, 1 clamp and 1 baffle.

Baffle set 31.65' from bottom of tally.

Core Times

	<u>Minutes</u>	<u>Seconds</u>
717		21
718		18
719		34
720		40
721		33
722		37
723		34
724		36
725		36
726		43
727		49
728		48
729		55
730		42
731		38
732		43
733		42
734		38
735		38
735		40