



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-59

API # 15-121-30,082

April 16 - April 18, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
25	soil & clay	25
29	shale	54
23	lime	77
11	shale	88
5	lime	93
37	shale	130
15	lime	145
31	shale	176
7	lime	183
6	shale	189
20	lime	209
5	shale	214
16	lime	230
2	shale	232
3	lime	235
19	shale	254
4	sand	258 hard green sand (gassy)
113	shale	371
5	limey sand	376 hard, light bleeding
9	broken sand	385 very soft 60% sand 40% shale, light bleeding
4	limey sand	389 hard, ok bleeding
4	broken sand	393 90% brown sand 10% shale good bleeding
5	limey sand	398 hard brown, ok bleeding
10	shale	408
4	lime	412
2	shale	414
2	lime	416
4	lime	420 lots of porosity great bleeding
6	lime	426
31	shale	457
9	lime	466
13	shale	479
2	lime	481
16	shale	497
3	lime	500
17	shale	517
5	lime	522
28	shale	550

1	coal	551
23	shale	574
10	broken sand	584 light brown sand & shale, no oil
6	sand	590 light brown, light oil odor, makes water
25	broken sand	615 light brown sand & shale
1	coal	616
15	shale	631
4	broken sand	635 70% brown sand 30% shale, ok bleeding
8	silty shale	643
9.5	oil sand	652.5 brown sand, ok bleeding
0.5	shale	653
9	oil sand	662 brown, good bleeding
0.5	broken sand	662.5 30% brown sand 70% shale
4.5	oil sand	667 darker sand, good bleeding
4	limey sand	671 50% sand 50% shale, ok bleeding
1	shale	672
2	coal	674
38	shale	712
1	coal	713
37	shale	750 TD

Drilled a 9 7/8" hole to 30'

Drilled a 5 5/8" hole to 750'

Set 30' of 7" surface casing cemented with 6 sacks of cement

Set 744.7' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe, 1 clamp and 1 baffle.

Baffle set 31.6' from bottom of tally.

Core Times

	<u>Minutes</u>	<u>Seconds</u>
645		40
646		43
647		36
648		36
649		36
650		41
651	1	5
652		41
653		42
654		36
655		38
656		39
657		42
658		37
659		41
660		31
661		39
662		41
663		42
664		40