



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-13

API # 15-121-30,061

May 21 - May 22, 2014

| <u>Thickness of Strata</u> | <u>Formation</u> | <u>Total</u> |
|----------------------------|------------------|---|
| 1 | soil & clay | 25 |
| 3 | broken lime | 4 |
| 7 | lime | 11 |
| 110 | shale | 121 |
| 21 | lime | 142 |
| 27 | shale | 169 |
| 5 | lime | 174 |
| 26 | shale | 200 |
| 13 | lime | 213 |
| 13 | shale | 226 |
| 4 | lime | 230 |
| 4 | shale | 234 |
| 16 | lime | 250 |
| 7 | shale | 257 |
| 23 | lime | 280 |
| 3 | shale | 283 |
| 3 | lime | 286 |
| 1 | shale | 287 |
| 12 | lime | 299 base of the Kansas City |
| 32 | shale | 331 |
| 3 | sand | 334 green (gassy) |
| 111 | shale | 445 |
| 5 | limey sand | 450 brown & white, few thin shale seams ok bleeding |
| 5 | limey sand | 455 brown good bleeding |
| 17 | oil sand | 472 brown soft very good bleeding |
| 1 | black sand | 473 ok oil show |
| 3 | lime/sand | 476 limey sand/black sand ok oil show |
| 3 | limey sand | 479 white, minimal oil show |
| 14 | shale | 493 |
| 5 | lime | 498 |
| 10 | shale | 508 |
| 2 | lime | 510 |
| 15 | shale | 525 |
| 5 | lime | 530 |
| 18 | shale | 548 |
| 2 | lime | 550 |
| 15 | shale | 565 |
| 1 | lime | 566 |
| 21 | shale | 587 |
| 3 | lime | 590 |

| | | |
|----|-------------|--|
| 32 | shale | 622 |
| 15 | silty shale | 637 |
| 12 | brown sand | 649 light brown & grey sand, no oil |
| 27 | broken sand | 676 light brown & grey, light odor, makes water |
| 6 | sand | 682 light brown, no oil |
| 1 | coal | 683 |
| 10 | shale | 693 |
| 1 | lime | 694 |
| 5 | shale | 699 |
| 1 | coal | 700 |
| 12 | shale | 712 |
| 10 | silty shale | 722 |
| 6 | broken sand | 728 25% sand 75% grey shale laminated, fair bleeding |
| 2 | silty shale | 730 |
| 1 | broken sand | 731 50% sand 50% shale ok bleeding |
| 3 | shale | 734 |
| 1 | coal | 735 |
| 5 | shale | 740 TD |

Drilled a 9 7/8" hole to 20'

Drilled a 5 5/8" hole to 740'

Set 20' of 7" surface casing threaded and coupled cemented with 6 sacks of cement

Set 535.15' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe, 1 clamp and 1 baffle.

Baffle set 31.95' from bottom of tally.