



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

Joeckel #KR-50

API # 15-121-30,077

April 15 - April 16, 2014

| <u>Thickness of Strata</u> | <u>Formation</u> | <u>Total</u>  |
|----------------------------|------------------|---|
| 28                         | soil & clay      | 28  |
| 39                         | shale            | 67  |
| 24                         | lime             | 91  |
| 10                         | shale            | 101   |
| 6                          | lime             | 107   |
| 36                         | shale            | 143   |
| 14                         | lime             | 157   |
| 12                         | shale            | 169   |
| 26                         | lime             | 195   |
| 6                          | shale            | 201   |
| 23                         | lime             | 224   |
| 3                          | shale            | 227   |
| 3                          | lime             | 230   |
| 2                          | shale            | 232   |
| 12                         | lime             | 244 base of the Kansas City                             |
| 23                         | shale            | 267   |
| 3                          | sand             | 270 hard green sand, no show or odor                    |
| 116                        | shale            | 386   |
| 7                          | broken sand      | 393 50% soft brown sand 50% shale, ok bleeding          |
| 1                          | limey sand       | 394 ok bleeding   |
| 1                          | lime             | 395 no show   |
| 8                          | limey sand       | 403 brown, good bleeding                                |
| 6                          | broken sand      | 409 70% brown sand 30% shale, good bleeding, gassy      |
| 6                          | oil sand         | 415 brown soft course sand, great bleeding & saturation |
| 8                          | shale            | 423   |
| 5                          | lime             | 428   |
| 2                          | shale            | 430   |
| 8                          | lime             | 438 broken lime with lots of porosity good bleeding     |
| 7                          | lime             | 445 solid minimal oil show                              |
| 29                         | shale            | 474   |
| 7                          | lime             | 481   |
| 14                         | shale            | 495   |
| 3                          | lime             | 498   |
| 18                         | shale            | 516   |
| 2                          | lime             | 518   |
| 17                         | shale            | 535   |
| 1                          | lime             | 536   |
| 4                          | shale            | 540   |



|     |             |   |
|-----|-------------|---|
| 2   | lime        | 542   |
| 9   | shale       | 551   |
| 4   | lime        | 555   |
| 6   | shale       | 561   |
| 2   | lime        | 563   |
| 4   | shale       | 567   |
| 1   | lime        | 568   |
| 7   | shale       | 575   |
| 2   | lime        | 577   |
| 18  | shale       | 595   |
| 3   | silty shale | 598   |
| 28  | broken sand | 626 brown & grey, no oil, makes water                   |
| 13  | shale       | 639   |
| 5   | silty shale | 644   |
| 2   | broken sand | 646 90% brown sand 10% shale, ok bleeding               |
| 10  | silty shale | 656   |
| 1   | broken sand | 657 10% brown sand 90% shale, minimal bleeding          |
| 2   | silty shale | 659   |
| 1   | broken sand | 660 10% brown sand 90% shale                            |
| 10  | silty shale | 670   |
| 2   | oil sand    | 672 dark brown sand, good bleeding                      |
| 1.5 | oil sand    | 673.5 50% limey sand, 50% brown oil sand, good bleeding |
| 5.5 | shale       | 679   |
| 3   | coal        | 682   |
| 68  | shale       | 750 TD  |

Drilled a 9 7/8" hole to 35.1'

Drilled a 5 5/8" hole to 750'

Set 35.1' of 7" surface casing cemented with 6 sacks of cement

Set 743.55' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe, 1 clamp and 1 baffle.

Baffle set 32.8' from bottom of tally.



## Core Times

|     | <u>Minutes</u> | <u>Seconds</u> |
|-----|----------------|----------------|
| 670 |                | 53             |
| 671 | 1              | 14             |
| 672 | 1              | 5              |
| 673 |                | 53             |
| 674 |                | 39             |
| 675 |                | 41             |
| 676 |                | 41             |
| 677 |                | 46             |
| 678 | 1              | 1              |
| 679 |                | 42             |
| 680 |                | 26             |
| 681 |                | 37             |
| 682 |                | 38             |
| 683 |                | 51             |
| 684 |                | 41             |
| 685 | 1              | 22             |
| 686 |                | 45             |
| 687 |                | 42             |
| 688 |                | 41             |