



11 Lewis Drive

Paola, KS 66071

**Oil & Gas Well Drilling
Water Wells
Geo-Loop Installation**

Phone: 913-557-9083

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WELL LOG

Tailwater, Inc.

South Kempnich # 1-IWU

API #15-003-26,365

October 20 - October 21, 2014

| <u>Thickness of Strata</u> | <u>Formation</u> | <u>Total</u> |
|----------------------------|------------------|--|
| 9 | soil & clay | 9 |
| 4 | clay & gravel | 13 |
| 96 | shale | 109 |
| 30 | lime | 139 |
| 68 | shale | 207 |
| 10 | lime | 217 |
| 6 | shale | 223 |
| 34 | lime | 257 |
| 7 | shale | 264 |
| 20 | lime | 284 |
| 3 | shale | 287 |
| 21 | lime | 308 base of the Kansas City |
| 172 | shale | 480 |
| 2 | lime | 482 |
| 3 | shale | 485 |
| 2 | lime | 487 |
| 6 | shale | 493 |
| 7 | lime | 500 oil show |
| 9 | shale | 509 |
| 11 | oil sand | 520 green, light bleeding |
| 5 | shale | 525 |
| 1 | coal | 526 |
| 2 | shale | 528 |
| 17 | oil sand | 545 green, good bleeding |
| 4 | shale | 549 |
| 2 | coal | 551 |
| 3 | shale | 554 |
| 3 | lime | 557 |
| 19 | shale | 576 |
| 4 | lime | 580 |
| 20 | shale | 600 |
| 8 | lime | 608 |
| 49 | shale | 657 |
| 1 | limy sand | 658 |
| 0.5 | broken oil sand | 658.5 brown & green thin bleeding seams |
| 1.5 | sand | 660 green, no oil |
| 2 | broken sand | 662 brown & green 50% bleeding |
| 1 | shale | 663 |
| 1.5 | broken sand | 664.5 brown & green, couple thin bleeding seams 90% shale |

| | | |
|------|---------------|---------------------------------|
| 30.5 | shale | 695 |
| 1 | lime & shells | 696 |
| 6 | oil sand | 702 brown light bleeding |
| 2 | broken sand | 704 brown & grey light bleeding |
| 86 | shale | 790 |
| 15 | sand | 805 brown, no oil |
| 45 | sand | 850 grey, no oil |
| 8 | shale | 858 |
| 5 | sand | 863 white, no oil |
| 37 | shale | 900 TD |

Drilled a 9 7/8" hole to 22.6'

Drilled a 5 5/8" hole to 900'

Set 22.6' of 7" surface casing with 5 sacks of cement.

Set 856.4' of 2 7/8" 8 round upset tubing including 3 centralizers, 1 float shoe, and 1 clamp.