



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.

North Kempnich #16-IWU

API #15-003-26,240

August 15 - August 18, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
11	soil & clay	11
4	clay & gravel	15
96	shale	111
36	lime	147
61	shale	208
10	lime	218
8	shale	226
33	lime	259
7	shale	266
19	lime	285
3	shale	288
23	lime	311 base of the Kansas City
46	shale	357
20	sand	377 grey, no oil
105	shale	482
2	lime	484
2	shale	486
5	lime	491
6	shale	497
7	lime	504 oil show
22	shale	526
1	coal	527
1	shale	528
17	oil sand	545 green good bleeding
3	shale	548 green, good bleeding
1	coal	549
9	shale	558
3	lime	561
18	shale	579
3	lime	582
18	shale	600
10	lime	610
22	shale	632
4	lime	636
21	shale	657
3	limey sand	660 grey & white no oil
2	broken sand	662 brown & grey 40% bleeding
0.5	broken sand	662.5 brown & grey no bleeding
24.5	shale	687 TD

Drilled a 9 7/8" hole to 21.7'

Drilled a 5 5/8" hole to 687'

Set 21.7' of 7" surface casing threaded and coupled cemented with 5 sacks of cement.

Set 682.4' of 2 7/8" 8 round upset tubing with 3 centralizers, 1 float shoe and 1 clamp.

Core Times

	<u>Minutes</u>	<u>Seconds</u>
661		45
662		35
663		28
664		39
665		39
666		38
667		36
668		38
669		35
670		31
671		28
672		29
673		29
674		27
675		32
676		34
677		38
678		30