



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

Petroleum Technologies, Inc.

Sawyer #18

API #15-091-24,321

June 30 - July 1, 2014

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
13	soil & clay	13
30	shale	43
5	lime	48
2	shale	50
17	lime	67
8	shale	75
9	lime	84
10	shale	94
20	lime	114
17	shale	131
22	lime	153
6	shale	159
11	lime	170
2	shale	172
41	lime	213
18	shale	231
9	lime	240
19	shale	259
7	lime	266
7	shale	273
6	lime	279
44	shale	323
24	lime	347
8	shale	355
23	lime	378
4	shale	382
15	lime	397 base of the Kansas City
172	shale	569
7	lime	576
9	shale	585
8	lime	593
14	shale	607
4	lime	611
2	coal	613
10	shale	623
2	lime	625
78	shale	703
2	lime	705
21	shale	726

13	broken sand	739
94	shale	833
2	lime	835
11	shale	846
0.5	broken sand	846.5
1.5	oil sand	848
2	broken sand	850
2.5	broken sand	852.5
3.5	oil sand	856
3.5	broken sand	859.5
68.5	shale	928 TD

Drilled a 9 7/8" hole to 22.6'

Drilled a 5 5/8" hole to 928'

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

Set 898' of 2 7/8" 8 round upset tubing including 3 centralizers, 1 float shoe, and 1 clamp.