



24 S. Gold Paola, KS 66071

Allen's Holdings & Investments
 Oil & Gas Well Drilling
 Water Wells
 Geo-Loop Installation

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WELL LOG

Petroleum Technologies, Inc.
 Knabe A - #5A
 API #15-091-24504-00-00
 July 11, 2019-July 12, 2019

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
9	soil & clay	9
35	shale	44
5	lime	49
3	shale	52
14	lime	66
9	shale	75
8	lime	83
7	shale	90
21	lime	111
25	shale	136
27	lime	163
9	shale	172
11	lime	183
10	shale	193
30	lime	223
15	shale	238
10	lime	248
18	shale	266
7	lime	273
5	shale	278
7	lime	285
30	shale	315
5	lime	320
9	shale	329
27	lime	356
7	shale	363
24	lime	387
3	shale	390
5	lime	395
3	shale	398
7	lime	405 Base of KC, Hertha
170	shale	575
8	lime	583
2	shale	585
3	lime	588
8	shale	596
6	lime	602
2	broken sand	604 Brown sand & shale, ok bleed

13	shale	617
1	lime	618
15	shale	633
2	lime	635
90	shale	725
1	lime & shells	726
9	shale	735
2	broken sand	737 Brown sand & shale, ok bleed
4	oil sand	741 Brown sand, ok bleed
1	broken sand	742 Brown & grey sand, light bleed
3	silty shale	745
20	shale	765
4	lime	769
26	shale	795
6	sand	801 Hard grey sand, no show
4	shale	805 Few thin lime streaks
5	silty shale	810
45	shale	855
4	limy sand	859
1	broken sand	860
0.5	oil sand	860.5
0.5	limy sand	861
1.5	oil sand	862.5
2	oil sand	864.5
4.5	silty shale	869
3	shale	872
3.5	silty shale	875.5
2.5	shale	878
1	coal	879
91	shale	970
1	lime	971
8	shale	979 TD

Drilled a 9 7/8" hole to 23.1'

Drilled a 5 5/8" hole to 974'

Set 23.1' of new 7" casing threaded and coupled, cemented with 6 sacks cement.

Set 934' of new 2 7/8" 8 round upset tubing with a baffle set at 899' ran 3 centralizers, 1 float shoe, 1 clamp.

Dug 1 pit