



11 Lewis Drive Paola, KS 66071

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

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WELL LOG
Ace Energy LLC
Mullen #13
API #15-037-22,343
June 12 - June 13, 2017

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
9	soil & clay	9
6	lime	15
5	shale	20
17	lime	37
7	shale	44
1	lime	45
83	shale	128
1	lime	129
1	coal	130
10	shale	140
1	coal	141
3	shale	144
1	lime	145
16	shale	161
2	coal	163
9	shale	172
1	coal	173
35	shale	208
23	oil sand	231 brown, 100% bleeding
27	shale	258
1	coal	259
30	shale	289
1	coal	290
23	shale	313
1	lime	314
86	shale	400 TD

Drilled a 12 1/4" hole to 21.5'
Drilled a 6 3/4" hole to 400'

Set 21.5' of 8 5/8" surface casing cemented with 8 sacks of cement.

Set 364' of 4 1/2" with 2 centralizers, 1 float shoe, 1 clamp.