



Operator:
lantha Resources, LLC
Garnett, KS

Minckley #2 Inj.

Anderson Co., KS
3-23S-19E
API: 003-26543

Spud Date:	10/21/2016	Surface Bit:	9.875"
Surface Casing:	7.0"	Drill Bit:	5.875"
Surface Length:	22.3'	Longstring:	749.20'
Surface Cement:	6 sx	Longstring Date:	10/25/2016
Longstring:	2 7/8 EUE API		

Driller's Log

Top	Bottom	Formation	Comments
0	2	Soil	
2	13	Clay	
13	112	Shale	
112	145	Lime	
145	171	Shale	
171	172	Coal	
172	175	Shale	
175	180	Lime	Shaley
180	185	Lime	
185	211	Bl. Shale	
211	220	Lime	
220	221	Shale	
221	270	Lime	
270	277	Shale	
277	296	Lime	
296	301	Bl. Shale	
301	320	Lime	
320	330	Shale	Limey
330	493	Shale	
493	526	Lime	
526	530	Shale	
530	538	Lime	
538	554	Shale	
554	578	Sand	Hard, grey

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578	584	Sandy shale	
584	592	Shale	
592	612	Lime	
612	617	Shale	
617	620	Lime	
620	639	Shale	
639	644	Lime	
644	666	Shale	
666	676	Lime	
676	682	Shale	
682	685	Lime	
685	693	Shale	Muddy
693	703	Sand	See below
703	762	Shale	Muddy
762		TD	

Sand Detail

693-696	Sand w/ shale, fair odor, sand has good free oil
696-698	Sand, good odor, good oil saturation
698-700	Sand, better odor and saturation
700-702	Sand, better saturation, very good odor, good free oil to pit 696-702
702-703	Sand, w/some shale, fair odor and saturation
703-706	Sandy shale w/muddy shale, no oil