



Operator:
lantha Resources, LLC
Garnett, KS

Minckley #3 Inj.

Anderson Co., KS
3-23S-19E
API: 003-26541

Spud Date:	10/25/2016	Surface Bit:	9.875"
Surface Casing:	7.0"	Drill Bit:	5.875"
Surface Length:	22.3'	Longstring:	750.3'
Surface Cement:	6 sx	Longstring Date:	10/26/2016
Longstring:	2 7/8 EUE API		

Driller's Log

Top	Bottom	Formation	Comments
0	2	Soil	
2	6	Clay	
6	11	Sandstone	
11	104	Shale	
104	145	Lime	
145	168	Shale	
168	169	Coal	
169	173	Shale	
173	182	Lime	
182	193	Shale	
193	199	Bl. Shale	
199	207	Shale	
207	267	Lime	
267	276	Shale	
276	295	Lime	
295	299	Shale	
299	306	Lime	
306	309	Shale	
309	316	Lime	
316	453	Shale	
453	458	Lime	
458	490.5	Shale	
490.5	498	Lime	
498	513	Shale	

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513	528	Lime	
528	548	Shale	
548	564	Sandy Shale	
564	579	Sand	Hard grey
579	587	Shale	
587	601	Lime	
601	616	Shale	
616	620	Lime	
620	638	Shale	
638	658	Lime	
658	666	Shale	
666	669	Lime	
669	683	Shale	
683	687	Lime	
687	692	Shale	
692	705	Sand	See below
705	762	Shale	
762		TD	

Sand Detail

692-694	Laminated sand & shale, good odor, fair bleed of free oil in samples
694-702	Sand, good clean sand, good oil show, good bleed of free oil
702-704	Sand, lighter oil saturation, some grey sand
704-706	Sand & sandy shale, grey, no odor