



**Operator:**  
lantha Resources, LLC  
Garnett, KS

**Minckley #2A**

Anderson Co., KS  
3-23S-19E  
API: 003-26537

<b>Spud Date:</b>	9/20/2016	<b>Surface Bit:</b>	9.875"
<b>Surface Casing:</b>	7.0"	<b>Drill Bit:</b>	5.875"
<b>Surface Length:</b>	22.3'	<b>Longstring:</b>	749.0'
<b>Surface Cement:</b>	6 sx	<b>Longstring Date:</b>	9/22/2016
<b>Longstring:</b>	2 7/8 EUE API		

**Driller's Log**

<b>Top</b>	<b>Bottom</b>	<b>Formation</b>	<b>Comments</b>
0	2	Soil	
2	14	Clay	
14	19	Sand	Hard
19	54	Shale	
54	58	Lime	
58	116	Shale	
116	147	Lime	
147	167	Shale	
167	185	Shale	Limey
185	188	Lime	
188	199	Bl. Shale	
199	209	Lime	
209	213	Shale	
213	274	Lime	
274	278	Bl. Shale	
278	301	Lime	
301	308	Shale	
308	324	Lime	
324	366	Shale	
366	370	Sand	
370	460	Shale	
460	465	Lime	
465	486	Shale	
486	496	Shale	Hard

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496	508	Lime	
508	518	Shale	
518	524	Lime	
524	536	Shale	
536	539	Lime	
539	542	Shale	
542	548	Lime	
548	570	Shale	
570	586	Sandy Shale	
586	595	Shale	
595	604	Lime	
604	619	Shale	
619	626	Lime	
626	641	Shale	
641	652	Lime	
652	670	Shale	
670	676	Lime	
676	678	Shale	
678	680	Bl. Shale	
680	684	Shale	
684	689	Lime	
689	692	Bl. Shale	
692	695	Shale	Muddy
695	696	Bl. Shale	
696	703	Sand	Good oil show, see below
703	716	Sandy Shale	
716	762	Shale	
<b>762</b>		<b>TD</b>	

**Sand Detail**

696-703 Good sand, a few shale lenses, well saturated with free oil, good gas saturation.