



**Operator:**  
 S&B Operating, LLC  
 Overland Park, KS

**ABC #SB-4**

Miami Co., KS  
 22-17S-22E  
 API: 121-31337

**Spud Date:** 4/11/2017  
**Surface Casing:** 7.0"  
**Surface Length:** 22.5'  
**Surface Cement:** 4 sx  
**Longstring:** 2 7/8 EUE

**Surface Bit:** 9.875"  
**Drill Bit:** 5.875"  
**Longstring:** 359.7'  
**Longstring Date:** 4/12/2017

**Driller's Log**

Top	Bottom	Formation	Comments
0	10	Lime	
10	26	Shale	
26	32	Sandy Shale	
32	35	Shale	
35	38	Lime	
38	76	Shale	
76	91	Lime	
91	100	Shale	
100	131	Lime	
131	134	Bl. Shale	
134	155	Lime	
155	159	Shale	
159	179	Lime	
179	307	Shale	
307	308	Bl. Shale	
308	312	Red Bed	
312	317	Sandy Shale	w/broken sand
317	343	Sand	318-325 Very laminated, mostly shale
343	344.5	Shale	325-329 Good sand, slight bleed back
344.5	353	Lime	329-332 Lime w/sand streak but no oil
353	382	Shale	332-333.5 Sand w/fair bleed back, gassy
<b>382</b>		<b>TD</b>	333.5-335 Sand with no bleeding oil
			335-338 Good sand, good bleed, gassy
			338-343 Samples - good bleed to pit, good show in the samples
	<b>Core</b>		
<b>Run</b>	<b>Depth</b>	<b>Rec.</b>	
1	318-338	20'	