

Air Drilling Specialist
Oil & Gas Wells

THORNTON AIR ROTARY, LLC
Office Phone: 620-879-2073

PO Box 449
Caney, KS 67333

Date Started	12/29/2010
Date Completed	1/4/2011

Well No.	Operator	Lease	A.P.I #	County	State
8C-3	Layne Energy Operating	Zook	125-32017-00-00	Montgomery	Kansas

1/4	1/4	1/4	Sec.	Twp.	Rge.
			3	31	14

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	21.5' 8 5/8	1247	6 3/4

Formation Record

0-3	DIRT	1127-1129	COAL (MINERAL)		
3-76	LIME	1129-1171	SHALE		
76-287	LMY SHALE	1162	GAS TEST-2#, 1/4", MCF-12.7		
287-289	LIME	1171-1172	COAL		
289-430	SAND	1172-1175	BLACK SHALE		
430-540	LIME	1175-1178	SANDY SHALE		
540-560	LMY SHALE	1178-1183	SAND/1180-83 OIL ODOR		
560-575	SANDY SHALE	1183-1188	WHITE SAND		
575-650	LIME	1188-1193	SANDY SHALE		
650-753	SHALE	1193-1215	SHALE		
753-770	LIME	1215-1223	SAND		
770-782	SAND	1223-1227	SANDY SHALE		
782-880	SHALE	1227-1233	SHALE		
880-882	COAL (MULBERRY)	1233-1234	COAL		
882-913	LIME (PAWNEE)	1234-1247	SHALE		
913-920	BLK SHALE (LEXINGTON)	1247	TD		
920-969	SHALE				
969-992	LIME (OSWEGO)				
992-1002	BLK SHALE (SUMMIT)				
1002-1007	LIME				
1007-1015	BLACK SHALE				
1015-1016	COAL (MULKEY)				
1016-1034	LIME				
1034-1062	SHALE				
1062-1063	COAL (BEVEIR)				
1063-1075	SHALE				
1075-1077	LIME				
1077-1079	SHALE				
1079-1080	COAL (CROWBERG)				
1080-1127	SHALE				