

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	12/21/2010
Date Completed	12/28/2010

Well No.	Operator	Lease	A.P.I.#	County	State
8J-3	Layne Energy Operating	Zook	125-32018-00-00	Montgomery	Kansas

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

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	21' 8 5/8	1262	6 3/4

Formation Record

0-6	DIRT	1028-1029	COAL (MULKEY)		
6-80	LIME	1029-1035	LIME		
80-260	LMY SHALE	1035-1092	SHALE		
260-325	LIME	1092-1094	LIME		
325-416	SAND (DAMP)	1094-1096	SHALE		
411	WENT TO WATER	1096-1097	COAL (CROWBERG)		
416-420	LIME	1097-1115	SAND		
420-439	SHALE	1115-1139	SHALE		
439-456	LIME	1139-1140	COAL (MINERAL)		
456-475	LMY SHALE	1140-1192	SHALE		
475-556	LIME	1187	GAS TEST-9#, 1/4", MCF-29		
556-590	SAND	1192-1199	BLACK SHALE		
590-655	LIME	1199-1205	SAND		
655-718	SHALE	1205-1207	COAL (WEIR)		
718-719	COAL	1207-1218	SHALE		
719-723	SHALE	1218-1222	SANDY SHALE		
723-745	LIME	1222-1232	SAND		
745-758	SHALE	1232-1238	LMY SAND		
758-781	LIME	1238-1239	COAL		
781-795	SAND	1239-1262	SHALE		
795-889	SHALE	1262	TD		
889-890	COAL (MULBERRY)				
890-920	LIME (PAWNEE)				
920-927	BLK SHALE (LEXINGTON)				
927-930	LIME				
930-980	SHALE				
980-1005	LIME (OSWEGO)				
1005-1013	BLK SHALE (SUMMIT)				
1013-1024	LIME				
1024-1028	BLACK SHALE				