

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	1/27/2011
Date Completed	1/31/2011

Well No.	Operator	Lease	A.P.I #	County	State
16P-34	Layne Energy Operating	Metzger	15-205-27911-00-00	Wilson	Kansas

1/4	1/4	1/4	Sec.	Twp.	Rge.
			34	30	14

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	8	42.7 8 5/8	1287	6 3/4

Formation Record

0-3	DIRT	1061-1062	COAL		
3-80	LIME	1062-1077	SHALE		
80-291	LMY SHALE	1077-1079	LIME		
291-297	SANDY SHALE	1079-1081	SHALE		
297-405	SAND (DAMP)	1081-1082	COAL (CROWBERG)		
361	WENT TO WATER	1082-1095	SANDY SHALE		
405-430	SANDY SHALE	1095-1105	SAND		
430-466	LIME	1105-1123	SHALE		
466-484	LMY SHALE	1123-1125	COAL (MINERAL)		
484-540	LIME	1125-1174	SHALE		
540-548	SHALE	1137	GAS TEST-5#, 1/4", MCF-20.7		
548-655	LIME	1174-1179	SAND/LITE OIL ODOR		
655-686	SHALE	1179-1198	BROWN SAND/OIL ODOR		
686-766	LMY SHALE	1198-1200	COAL (WEIR)		
766-788	SAND /780-LITE OIL ODOR	1200-1230	SANDY SHALE		
788-877	SANDY SHALE	1230-1287	SHALE		
877-878	COAL (MULBERRY)	1287	TD		
878-882	SHALE				
882-909	LIME (PAWNEE)				
909-915	BLK SHALE (LEXINGTON)				
915-940	SHALE				
940-966	SANDY SHALE				
966-990	LIME (OSWEGO)				
990-1000	BLK SHALE (SUMMIT)				
1000-1010	LIME				
1010-1013	BLACK SHALE				
1013-1014	COAL (MULKEY)				
1014-1016	LIME				
1016-1034	SANDY SHALE				
1034-1061	SHALE				