

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	12/20/2010
Date Completed	12/21/2010

Well No.	Operator	Lease	A.P.I.#	County	State
15Q-34	Layne Energy Operating	Metzger	205-27980-00-00	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	43' 8 5/8	1262	6 3/4

Formation Record

0-4	DIRT	897-898	LIME		
4-66	LIME	898-904	BLACK SHALE		
66-80	LMY SHALE	904-914	SHALE		
80-201	SHALE	914-921	SAND		
201-295	LMY SHALE	921-949	SHALE		
295-306	LIME	949-975	LIME (OSWEGO)		
306-413	SAND (DAMP)	975-986	BLK SHALE (SUMMIT)		
361	WENT TO WATER	986-989	LIME		
413-418	LIME	989-995	BLACK SHALE		
418-426	SHALE	995-996	COAL (MULKEY)		
426-524	LIME	996-1062	SHALE		
524-530	BLACK SHALE	1062-1063	LIME		
530-548	LIME	1063-1066	SHALE		
548-576	SANDY SHALE	1066-1067	COAL (CROWBERG)		
576-635	LIME	1067-1106	SHALE		
586	GAS TEST - NO GAS	1106-1107	COAL (MINERAL)		
635-703	SHALE	1107-1153	SHALE		
703-712	LIME	1153-1158	SANDY SHALE		
712-734	SHALE	1158-1173	SAND / OIL ODOR		
734-746	LIME	1173-1177	SANDY SHALE		
746-749	BLACK SHALE	1177-1180	COAL		
749-758	LIME	1180-1188	SAND / OIL ODOR.		
758-770	SAND/LITE OIL ODOR	1187	GAS TEST-8#, 1/4", MCF-27		
770-785	SANDY SHALE	1188-1203	SANDY SHALE		
785-859	SHALE	1203-1207	GRAY SAND		
859-860	LIME	1207-1262	SHALE		
860-861	COAL (MULBERRY)	1262	TD		
861-863	SHALE				
863-892	LIME (PAWNEE)				
892-897	BLK SHALE (LEXINGTON)				