

Air Drilling Specialist  
Oil & Gas Wells

**THORNTON AIR ROTARY, LLC**

Office Phone: 620-879-2073

PO Box 449  
Caney, KS 67333

Date Started	12/10/2010
Date Completed	12/14/2010

Well No.	Operator	Lease	A.P.I.#	County	State
15-35	Layne Energy Operating	Fitzpatrick	125-32019-00-00	Montgomery	Kansas

1/4	1/4	1/4	Sec.	Twp.	Rge.
			35	31	14

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Gas	4	20' 8 5/8	1488	6 3/4

**Formation Record**

0-2	DIRT	962	GAS TEST - NO GAS	1285-1286	COAL
2-58	LIME	1006-1031	LIME (OSWEGO)	1286-1335	SANDY SHALE
58-62	SHALE	1031-1039	BLK SHALE (SUMMIT)	1335-1336	BLK SHALE / COAL
62-140	LIME (DAMP)	1037	GAS TEST - NO GAS	1336-1369	SHALE
140-351	SHALE	1039-1058	LIME	1338	GAS TEST - SAME
351-373	SAND	1058-1064	BLACK SHALE	1369-1370	COAL
373-374	COAL	1062	GAS TEST - NO GAS	1370-1420	SHALE
374-418	SANDY SHALE	1064-1065	COAL (MULKEY)	1388	GAS TEST - SAME
418-423	LIME (WET)	1065-1075	LIME	1420-1421	COAL
423-426	SHALE	1075-1091	SHALE	1421-1425	SHALE
426-446	LIME	1091-1092	COAL	1425-1429	MISS. CHATT (MISS.)
446-472	SHALE	1092-1107	SHALE	1429-1436	GRAY SHALE
472-526	LIME	1107-1108	LIME	1436-1458	MISS. CHATT
526-617	SANDY SHALE	1108-1109	COAL (CROWBERG)	1438	GAS TEST - SAME
617-630	LIME	1109-1158	SHALE	1458-1488	GRAY LIME
630-671	SANDY SHALE	1112	GAS TEST - NO GAS	1463	GAS TEST - SAME
671-676	LIME	1158-1159	COAL (MINERAL)	1488	TD
676-724	SHALE	1159-1177	SHALE		
724-746	LIME	1177-1178	COAL		
746-771	SHALE	1178-1181	SHALE		
771-783	LIME	1181-1188	SAND / OIL ODOR		
783-795	SHALE	1188-1204	SANDY SHALE		
795-799	LIME	1204-1210	WHITE SAND		
799-860	SHALE	1210-1228	SANDY SHALE		
837	WENT TO WATER	1228-1229	COAL		
860-906	SANDY SHALE	1229-1234	SANDY SHALE		
906-907	COAL (MULBERRY)	1234-1255	SHALE		
907-932	LIME (PAWNEE)	1255-1256	COAL		
932-937	BLK SHALE (LEXINGTON)	1256-1285	SHALE		
937-1006	SANDY SHALE	1263	GAS TEST-10#, 1/4", MCF-30.8		