

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	10/31/2011
Date Completed	11/2/2011

Well No.	Operator	Lease	A.P.I #	County	State
9-19	Layne Energy Operating	Simmons	15-125-32138-00-00	Montgomery	Kansas

			Sec.	Twp.	Rge.
1/4	1/4	1/4	19	32	14

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Brantley	Gas	4	21' 8" 8 5/8	1488	6 3/4

Formation Record

0-5	DIRT	829-866	GOOD OIL ODOR	1145-1146	COAL ?
5-18	CLAY	846	GOOD OIL SHOW IN PIT	1146-1160	SHALE
18-58	SHALE	866-874	GRAY SAND/ODOR DEMINISHING	1160-1161	COAL
58-100	LIME	874-897	SANDY SHALE	1161-1268	SHALE
100-225	LMY SHALE	897-920	SHALE	1162	GAS TEST - SAME
225-322	SHALE	920-921	BLK SHALE / COAL	1268-1278	SAND
322-398	SAND / DAMP	921-950	LIME (PAWNEE)	1278-1333	SHALE
336	WENT TO WATER	950-955	BLK SHALE (LEXINGTON)	1333-1338	RED SHALE
398-400	COAL	955-959	GRAY SHALE	1338-1384	SHALE
400-446	SHALE	959-972	SAND	1384-1388	SAND
446-461	SAND	962	G.T.- 2#, 1/4"= 12.7 MCF	1388-1396	SHALE
461-469	LIME	972-1011	SANDY SHALE	1396-1397	COAL
469-481	SHALE	1011-1041	LIME (OSWEGO)	1397-1437	SHALE
481-531	LIME	1041-1051	BLK SHALE (SUMMIT)	1437-1442	SANDY LIME
531-546	SHALE	1051-1069	LIME	1442-1473	MISS. CHAT (MISS.)
546-556	SAND	1062	G.T.-5#, 1/4"= 20.7 MCF	1473-1485	CHERT
556-573	SHALE	1069-1075	BLK SHALE (EXCELLO)	1485-1488	BROWN LIME
573-658	SANDY SHALE	1075-1077	COAL (MULKY)	1488	GAS TEST - SAME
658-660	LIME	1077-1090	LIME	1488	TD
660-670	LMY SHALE	1087	G.T.- 2#, 1/4"= 12.7 MCF		
670-676	BLACK SHALE	1090-1096	SHALE		
676-725	SHALE	1096-1097	COAL		
725-751	LIME	1097-1115	SHALE		
751-761	SAND / LIGHT ODOR	1112	GAS TEST - SAME		
761-776	SHALE	1115-1117	LIME (V-LIME)		
776-808	LIME (LENEPAH)	1117-1119	SHALE		
811	GAS TEST - NO GAS	1119-1120	COAL (CROWBERG)		
808-821	SHALE	1120-1140	SANDY SHALE		
821-824	SANDY SHALE/LT ODOR	1140-1145	SHALE		
824-829	BROWN SAND (WEISER)	1137	GAS TEST - SAME		