

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	5/11/2011
Date Completed	5/12/2011

Well No.	Operator	Lease	A.P.I #	County	State
14Q-1	Layne Energy Operating	West Fall	15-125-32073-00-00	Montgomery	Kansas

1/4	1/4	1/4	Sec.	Twp.	Rge.
			1	31	13E

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	21.6' 8 5/8	1598	6 3/4

Formation Record

0-3	DIRT	1159-1161	LIME	1573-1580	BROWN LIME
3-15	CLAY	1161-1203	SHALE	1580-1598	CHATT /CHERT
15-276	SHALE	1203-1204	COAL (BEVEIR)	1598	WATERED OUT
276-301	LIME	1204-1218	SHALE	1598	TD
301-550	LMY SHALE	1218-1220	LIME (V-LIME)		
550-555	SAND (WET)	1220-1222	SHALE		
555-574	LIME	1222-1223	COAL (CROWBERG)		
574-588	SHALE	1223-1261	SHALE		
588-641	LIME	1261-1262	COAL (MINERAL)		
611	WENT TO WATER	1262-1280	SHALE		
641-730	LMY SHALE	1262	GAS TEST-SLIGHT BLOW		
730-748	SAND	1280-1303	SANDY SHALE		
748-785	LIME	1303-1310	SAND (CATTLEMEN)/OIL ODOR		
785-911	SHALE	1310-1320	SHALE		
911-930	LIME	1320-1356	SANDY SHALE		
930-946	SAND (WEISER)	1356-1368	SAND		
946-980	SHALE	1368-1377	RED SHALE		
980-1000	SAND	1377-1397	SHALE		
1000-1030	SHALE	1387	GAS TEST - SAME		
1030-1031	COAL (MULBERRY)	1397-1398	COAL/BLK SHALE (ROWE)		
1031-1068	LIME (PAWNEE)	1398-1414	SHALE		
1068-1070	BLACK SHALE	1414-1415	COAL		
1070-1071	LIME	1415-1432	SHALE		
1071-1076	BLK SHALE (LEXINGTON)	1432-1433	COAL (RIVERTON)		
1076-1114	SHALE	1433-1473	SHALE		
1114-1136	LIME (OSWEGO)	1473-1492	MISS. CHATT (MISS.)		
1136-1144	BLK SHALE (SUMMIT)	1492-1530	BROWN LIME		
1144-1153	LIME	1530-1545	CHERTY LIME		
1153-1158	BLK SHALE (EXCELLO)	1545-1557	BROWN SANDY LIME		
1158-1159	COAL (MULKEY)	1557-1573	GRAY CHERTY LIME		