

Air Drilling Specialist  
Oil & Gas Wells

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

PO Box 449  
Caney, KS 67333

Date Started	<b>3/1/2011</b>
Date Completed	<b>3/3/2011</b>

Well No.	Operator	Lease	A.P.I.#	County	State
<b>7-5</b>	<b>Layne Energy Operating</b>	<b>Vaughn</b>	<b>15-125-32051-00-00</b>	<b>Montgomery</b>	<b>Kansas</b>

1/4	1/4	1/4	Sec.	Twp.	Rge.
			<b>5</b>	<b>32</b>	<b>14</b>

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
<b>Billy</b>	<b>Gas</b>	<b>4</b>	<b>21.6 8 5/8</b>	<b>1463</b>	<b>6 3/4</b>

### Formation Record

0-13	DIRT	941-947		1307-1319	
13-126	LIME	936	WENT TO WATER	1215-1226	SAND
126-241	SHALE	941-947	SAND	1226-1307	SHALE
241-253	LMY SHALE	947-968	SANDY SHALE	1307-1319	RED SHALE
253-311	SHALE	968-975	SAND	1319-1360	SHALE
311-358	LMY SHALE	975-1005	SANDY SHALE	1360-1368	SAND
358-375	SANDY SHALE	1005-1032	LIME (OSWEGO)	1368-1369	COAL
375-410	SAND	1032-1042	BLK SHALE (SUMMIT)	1369-1410	SHALE
410-531	LIME	1037	GAS TEST-SLIGHT BLOW	1410-1435	MISS. CHATT (MISS.)
411	GAS TEST - NO GAS	1042-1057	LIME	1435-1463	GRAY LIME
531-609	SAND (DAMP)	1057-1066	BLK SHALE (EXCELLO)	1463	GAS TEST - SAME
609-628	LIME	1062	GAS TEST - SAME	1463	TD
628-636	SHALE	1066-1067	COAL (MULKEY)		
636-667	LIME	1067-1072	LIME		
667-673	BLACK SHALE	1072-1089	SHALE		
673-678	SHALE	1087	GAS TEST - SAME		
678-683	BLACK SHALE	1089-1090	COAL (BEVIER)		
683-700	SHALE	1090-1107	SHALE		
686	GAS TEST - NO GAS	1107-1109	LIME (V-LIME)		
700-702	BLACK SHALE	1109-1111	SHALE		
702-724	SHALE	1111-1112	COAL (CROWBERG)		
724-730	LIME	1112-1122	SHALE		
730-774	SANDY SHALE	1112	GAS TEST - SAME		
736	GAS TEST - NO GAS	1122-1157	SANDY SHALE		
774-784	LIME	1157-1158	COAL (MINERAL)		
784-791	SANDY SHALE	1158-1180	SHALE		
791-805	LIME	1180-1185	SAND		
805-906	SANDY SHALE	1185-1214	SANDY SHALE		
906-935	LIME (PAWNEE)	1212	GAS TEST- SLIGHT BLOW		
935-941	BLACK SHALE	1214-1215	COAL		