

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	8/30/2011
Date Completed	9/1/2011

Well No.	Operator	Lease	A.P.I #	County	State
14 G-1	Layne Energy Operating	West Fall	15-125-32105-00-00	Montgomery	Kansas

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

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Gas	4	22.2' 8 5/8	1513	6 3/4

Formation Record

0-4	DIRT	1031-1032	COAL (MULBERRY)	1327-1333	SHALE
4-10	CLAY	1032-1034	SHALE	1333-1338	SAND
10-270	SHALE	1034-1069	LIME (PAWNEE)	1338-1382	SHALE
270-283	LIME	1069-1071	SHALE	1382-1390	RED SHALE
283-466	LMY SHALE	1071-1075	BLK SHALE (LEXINGTON)	1390-1397	SHALE
466-467	COAL	1075-1115	SHALE	1397-1398	COAL (ROWE)
467-479	SANDY SHALE	1115-1136	LIME (OSWEGO)	1398-1439	SHALE
479-500	SAND (DAMP)	1136-1146	BLK SHALE (SUMMIT)	1439-1440	COAL (RIVERTON)
500-540	SANDY SHALE	1146-1154	LIME	1440-1445	SANDY SHALE
540-566	LIME	1154-1161	BLK SHALE (EXCELLO)	1445-1471	SHALE
566-580	LMY SHALE	1161-1162	COAL (MULKY)	1462	G.T.-1/2#,1/4"= 4 MCF
580-694	LIME (DAMP)	1162-1165	LIME	1471-1496	MISS. CHAT (MISS.)
691	WENT TO WATER	1165-1203	SHALE	1481	G.T.-1#, 1/4"= 8.95 MCF
694-700	SAND/ 711-G.T.-NO GAS	1203-1204	COAL (BEVEIR)	1488	GAS TEST- SAME
700-754	SANDY SHALE	1204-1219	SHALE	1496-1513	BROWN LIME
754-789	LIME	1212	GAS TEST - NO GAS	1513	GAS TEST - SAME
789-816	SHALE	1219-1221	LIME (V-LIME)	1513	TD
816-832	LMY SHALE	1221-1223	SHALE		
832-841	LIME	1223-1224	COAL (CROWBERG)		
841-866	SHALE	1224-1262	SHALE		
866-872	LIME	1262-1263	COAL (MINERAL)		
872-891	SAND	1263-1281	SHALE		
891-913	SHALE	1281-1285	SANDY SHALE		
913-930	LIME	1285-1287	SAND /LITE ODOR		
930-934	SAND	1287-1297	SANDY SHALE		
934-966	SANDY SHALE	1288	GAS TEST - NO GAS		
966-972	SHALE	1297-1302	SHALE		
972-980	SAND	1302-1312	SAND / LITE ODOR		
980-995	SANDY SHALE	1312-1320	SHALE		
995-1031	SHALE	1320-1327	SAND		