

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	1/6/2011
Date Completed	1/7/2011

Well No.	Operator	Lease	A.P.I.#	County	State
1Q-3	Layne Energy Operating	Zook	125-32023-00-00	Montgomery	Kansas

1/4	1/4	1/4	Sec.	Twp.	Rge.
			3	31	14

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	22.9' 8 5/8	1262	6 3/4

Formation Record

0-6	DIRT	1026-1062	SHALE		
6-71	LIME	1062-1063	COAL		
71-300	LMY SHALE	1063-1078	SHALE		
300-340	SAND (DAMP)	1078-1080	LIME		
340-413	SANDY SHALE	1080-1082	SHALE		
413-416	LIME	1082-1083	COAL (CROWBERG)		
416-436	SHALE	1083-1124	SHALE		
436-560	LIME	1124-1125	COAL (MINERAL)		
560-590	SAND	1125-1165	SHALE		
590-658	LIME	1162	GAS TEST-4#, 1/4", MCF-18.5		
658-676	BLACK SHALE	1165-1166	COAL		
676-691	LIME	1166-1168	SHALE		
691-756	SHALE	1168-1174	SANDY SHALE		
756-773	LMY SHALE	1174-1181	SAND		
773-785	SAND	1181-1186	BLK SAND/OIL ODOR		
785-793	SANDY SHALE	1186-1200	SANDY SHALE		
793-876	SHALE	1200-1201	COAL (WEIR)		
876-877	COAL (MULBERRY)	1201-1221	SHALE		
877-883	SHALE	1221-1228	SAND		
883-909	LIME (PAWNEE)	1228-1262	SHALE		
909-911	SHALE	1262	TD		
911-914	LIME				
914-918	BLK SHALE (LEXINGTON)				
918-968	SHALE				
968-995	LIME (OSWEGO)				
995-1002	BLK SHALE (SUMMIT)				
1002-1012	LIME				
1012-1015	BLK SHALE				
1015-1016	COAL (MULKEY)				
1016-1026	LIME				