

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	12/28/2010
Date Completed	12/29/2010

Well No.	Operator	Lease	A.P.I #	County	State
1R-3	Layne Energy Operating	Zook	125-32016-00-00	Montgomery	Kansas

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

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	21' 8 5/8	1287	6 3/4

Formation Record

0-4	DIRT	1017-1021	BLACK SHALE		
4-76	LIME	1021-1022	COAL (MULKEY)		
76-286	LMY SHALE	1022-1028	LIME		
286-291	LIME	1028-1070	SHALE		
291-396	SAND (DAMP)	1070-1071	COAL		
311	WENT TO WATER	1071-1084	SHALE		
396-399	LIME	1084-1086	LIME		
399-430	SHALE	1086-1088	SHALE		
430-463	LIME	1088-1089	COAL (CROWBERG)		
463-512	LMY SHALE	1089-1130	SHALE		
512-532	LIME	1130-1132	COAL (MINERAL)		
532-537	BLACK SHALE	1132-1173	SHALE		
537-560	LIME	1162	GAS TEST - NO GAS		
560-596	SANDY SHALE	1173-1178	BLACK SHALE		
596-617	LIME	1178-1182	SANDY SHALE		
617-625	SHALE	1182-1196	SAND / OIL ODOR		
625-655	LIME	1196-1198	COAL (WEIR)		
655-712	SHALE	1198-1207	SHALE		
712-726	LIME	1207-1219	SANDY SHALE		
726-753	SHALE	1212	GAS TEST - SAME		
753-778	LIME	1219-1228	SAND/SOY SHALE / LT OIL ODOR		
778-791	SAND	1228-1255	SHALE		
791-887	SHALE	1255-1260	SAND		
887-888	COAL (MULBERRY)	1260-1287	SHALE		
888-918	LIME (PAWNEE)	1287	TD		
918-925	BLK SHALE (LEXINGTON)				
925-974	SHALE				
974-997	LIME (OSWEGO)				
997-1005	BLK SHALE (SUMMIT)				
1005-1017	LIME				