

Air Drilling Specialist  
Oil & Gas Wells

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

PO Box 449  
Cancy, KS 67333

Date Started	<b>5/2/2011</b>
Date Completed	<b>5/4/2011</b>

Well No.	Operator	Lease	A.P.I.#	County	State
<b>3E-12</b>	<b>Layne Energy Operating</b>	<b>West Fall</b>	<b>15-1250-32071-00-00</b>	<b>Montgomery</b>	<b>Kansas</b>

1/4	1/4	1/4	Sec.	Twp.	Rge.
			<b>12</b>	<b>31</b>	<b>13 E</b>

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
<b>Billy, Sean</b>	<b>Oil</b>	<b>8</b>	<b>43.5' 8 5/8</b>	<b>1513</b>	<b>6 3/4</b>

### Formation Record

0-6	DIRT	1086-1092	BLK SHALE (LEXINGTON)	1462-1484	SHALE
6-18	CLAY	1092-1133	SHALE	1484-1509	MISS. CHAT (MISS)
18-24	LIME	1133-1155	LIME (OSWEGO)	1509-1513	GRAY LIME
24-300	SHALE	1155-1163	BLK SHALE (SUMMIT)	1512	GAS TEST-SLIGHT BLOW
300-334	LIME	1163-1171	LIME	1513	TD
334-520	SHALE	1171-1174	BLK SHALE (EXCELLO)		
520-550	SAND (DAMP)	1174-1175	COAL (MULKEY)		
550-580	SANDY SHALE	1175-1179	LIME		
580-596	SHALE	1179-1222	SHALE		
596-722	LIME/LOTS OF WATER @ 700	1222-1223	COAL		
710	WENT TO WATER	1223-1237	SHALE		
722-728	SHALE	1237-1239	LIME (V-LIME)		
728-739	LIME	1239-1241	SHALE		
739-767	SAND	1241-1242	COAL (CROWBERG)		
767-803	LIME	1242-1260	SAND SHALE		
803-844	SHALE	1260-1279	SHALE		
844-855	LIME	1279-1280	COAL (MINERAL)		
855-889	SHALE	1280-1300	SHALE		
889-891	LIME	1300-1305	SANDY SHALE		
891-900	SAND	1305-1307	SAND / LITE OIL ODOR		
900-926	SANDY SHALE	1307-1310	SANDY SHALE		
926-946	LIME	1310-1320	BLACK SHALE		
946-959	SAND (WISER)	1320-1330	SAND / LITE ODOR		
959-975	SANDY SHALE	1330-1337	SANDY SHALE		
975-981	SAND	1337-1350	SHALE		
981-1046	SANDY SHALE	1350-1390	SANDY SHALE		
1046-1047	COAL (MULBERRY)	1390-1410	RED SHALE		
1047-1081	LIME (PAWNEE)	1410-1411	COAL (ROWE)		
1081-1083	SHALE	1411-1461	SHALE		
1083-1086	LIME	1461-1462	COAL (RIVERTON)		