

Air Drilling Specialist
Oil & Gas Wells

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

PO Box 449
Caney, KS 67333

Date Started	5/5/2011
Date Completed	5/10/2011

Well No.	Operator	Lease	A.P.I #	County	State
2E-12	Layne Energy Operating	West Fall	15-125-32074-00-00	Montgomery	Kansas

	1/4	1/4	1/4	Sec.	Twp.	Rge.
				12	31	13E

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Billy	Oil	4	21.5' 8 5/8	1703	6 3/4

Formation Record

0-4	DIRT	1034-1035	COAL (MULBERRY)	1362	GAS TEST-SLIGHT BLOW
4-16	CLAY	1035-1067	LIME (PAWNEE)	1372-1377	SANDY SHALE
16-17	LIME	1067-1069	SHALE	1377-1381	RED SHALE
17-22	SHALE	1069-1072	LIME	1381-1395	SHALE
22-28	LIME	1072-1077	BLK SHALE (LEXINGTON)	1395-1396	COAL
28-80	SANDY SHALE	1077-1118	SHALE	1396-1436	SHALE
80-286	SHALE	1118-1140	LIME (OSWEGO)	1412	GAS TEST -SAME
286-320	LIME	1140-1149	BLK SHALE (SUMMIT)	1436-1437	COAL
320-500	LMY SHALE	1149-1157	LIME	1437-1448	SHALE
500-508	SANDY SHALE	1157-1160	BLK SHALE (EXCELLO)	1448-1449	COAL
508-549	SAND (DAMP)	1160-1161	COAL (MULKEY)	1449-1457	SHALE
549-550	COAL	1161-1164	LIME	1457-1473	SANDY SHALE
550-576	SANDY SHALE	1164-1209	SHALE	1463	GAS TEST - SAME
576-583	LIME	1209-1210	COAL	1473-1515	MISS. CHAT (MISS)/LITE OIL ODOR
583-587	SHALE	1210-1222	SHALE	1515-1573	BROWN LIME
587-719	LIME	1222-1224	LIME (V-LIME)	1573-1583	GRAY LIME/LITE OIL ODOR
636	WENT TO WATER	1224-1226	SHALE	1583-1623	GRAY LIME
719-756	SHALE/705-PICKED UP SOME WATER	1226-1227	COAL (CROWBERG)	1598	OIL ODOR
756-794	LIME	1227-1270	SHALE	1623-1642	CHERT/PICKED UP SOME WATER
794-834	SHALE	1270-1271	COAL	1642-1648	CHERT /OIL ODOR
834-842	LIME	1271-1300	SHALE	1648-1655	BROWN LIME
842-890	LMY SHALE	1300-1304	BLACK SHALE	1655-1658	GRAY LIME
890-913	SANDY SHALE	1304-1305	COAL	1658-1670	BROWN LIME
913-922	LIME	1305-1306	SHALE	1670-1703	SANDY LIME
922-924	BLACK SHALE	1306-1311	BROWN SAND/OIL ODOR	1703	TD
924-930	LIME	1311-1327	SHALE		
930-950	SAND (WEISER)	1327-1335	SANDY SHALE		
950-970	SANDY SHALE	1335-1348	SHALE		
970-1000	SAND	1348-1358	SANDY SHALE		
1000-1034	SANDY SHALE	1358-1372	SHALE		