

Air Drilling Specialist  
Oil & Gas Wells

**THORNTON AIR ROTARY, LLC**  
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Caney, KS 67333

|                |                  |
|----------------|------------------|
| Date Started   | <b>8/26/2011</b> |
| Date Completed | <b>8/30/2011</b> |

| Well No.     | Operator                      | Lease            | A.P.I #                   | County            | State         |
|--------------|-------------------------------|------------------|---------------------------|-------------------|---------------|
| <b>3Q-12</b> | <b>Layne Energy Operating</b> | <b>West Fall</b> | <b>15-125-32106-00-00</b> | <b>Montgomery</b> | <b>Kansas</b> |

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

| Driller      | Type/Well  | Cement Used | Casing Used        | Depth       | Size of Hole |
|--------------|------------|-------------|--------------------|-------------|--------------|
| <b>Billy</b> | <b>Gas</b> | <b>4</b>    | <b>22.2' 8 5/8</b> | <b>1535</b> | <b>6 3/4</b> |

### Formation Record

|         |                   |           |                           |           |                              |
|---------|-------------------|-----------|---------------------------|-----------|------------------------------|
| 0-6     | DIRT              | 873-880   | LIME                      | 1262-1264 | SHALE                        |
| 6-15    | CLAY              | 880-910   | SHALE                     | 1264-1265 | COAL (CROWBERG)              |
| 15-46   | SHALE             | 887       | GAS TEST - NO GAS         | 1265-1303 | SHALE                        |
| 46-50   | LIME              | 912       | GAS TEST - NOGAS          | 1303-1304 | COAL (MINERAL)               |
| 50-76   | SHALE             | 910-924   | LMY SHALE                 | 1304-1341 | SHALE                        |
| 76-90   | SAND (DAMP)       | 924-929   | SAND                      | 1313      | G.T.- SLIGHT BLOW            |
| 90-330  | SHALE             | 929-934   | SANDY SHALE               | 1341-1346 | SAND (CATTLEMAN)/LT OIL ODOR |
| 330-360 | LIME              | 934-952   | SHALE                     | 1346-1353 | SAND / OIL ODOR              |
| 360-379 | SHALE             | 952-972   | LIME                      | 1353-1357 | SANDY SHALE                  |
| 379-380 | COAL              | 972-986   | SAND (WEISER)             | 1357-1373 | SHALE                        |
| 380-432 | SHALE             | 986-1010  | SHALE                     | 1373-1374 | COAL                         |
| 432-545 | LMY SHALE         | 1010-1022 | SANDY SHALE               | 1374-1378 | SHALE                        |
| 545-576 | SAND (DAMP)       | 1022-1033 | SAND                      | 1378-1381 | SANDY SHALE                  |
| 576-577 | COAL              | 1033-1074 | SHALE                     | 1381-1385 | SAND                         |
| 577-595 | SAND              | 1074-1075 | COAL (MULBERRY)           | 1385-1404 | SHALE                        |
| 595-623 | SHALE             | 1075-1111 | LIME (PAWNEE)             | 1404-1405 | COAL                         |
| 623-628 | LIME              | 1111-1113 | SHALE                     | 1405-1418 | SHALE                        |
| 628-631 | SHALE             | 1113-1118 | BLK SHALE (LEXINGTON)     | 1418-1426 | RED SHALE                    |
| 631-663 | LIME              | 1118-1133 | SHALE                     | 1426-1436 | SHALE                        |
| 663-675 | SHALE             | 1133-1158 | SANDY SHALE               | 1436-1437 | COAL                         |
| 675-751 | LIME              | 1158-1180 | LIME (OSWEGO)             | 1437-1486 | SHALE                        |
| 711     | GAS TEST - NO GAS | 1180-1186 | BLK SHALE (SUMMIT)        | 1486-1487 | COAL (RIVERTON)              |
| 751-759 | BLACK SHALE       | 1186-1196 | LIME                      | 1487-1508 | SHALE                        |
| 759-780 | LIME              | 1196-1201 | SHALE (EXCELLO)           | 1508-1524 | MISS. CHAT (MISS.)           |
| 780-792 | SAND              | 1201-1202 | COAL (MULKY)              | 1513      | G.T-32#,1/4"=62 MCF          |
| 792-799 | SHALE             | 1202-1204 | LIME                      | 1520      | G.T.-28#,1/2"= 222 MCF       |
| 799-832 | LIME              | 1204-1249 | SHALE /1237 G.T.-SLT BLOW | 1525      | G.T-35#,1/2"= 260 MCF        |
| 832-852 | BLACK SHALE       | 1249-1250 | BLK SHALE / COAL ?        | 1530      | GAS TEST - SAME              |
| 852-854 | LIME              | 1250-1260 | SHALE                     | 1524-1535 | GRAY CHERTY LIME             |
| 854-873 | SHALE             | 1260-1262 | LIME (V-LIME)             | 1535      | TD/ GAS TEST-SAME            |