

Air Drilling Specialist  
Oil & Gas Wells

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

PO Box 449  
Caney, KS 67333

|                |                  |
|----------------|------------------|
| Date Started   | <b>5/13/2011</b> |
| Date Completed | <b>5/17/2011</b> |

| Well No.      | Operator                      | Lease           | A.P.I #                   | County        | State         |
|---------------|-------------------------------|-----------------|---------------------------|---------------|---------------|
| <b>156-29</b> | <b>Layne Energy Operating</b> | <b>Ratzlaff</b> | <b>15-205-27938-00-00</b> | <b>Wilson</b> | <b>Kansas</b> |

| 1/4 | 1/4 | 1/4 | Sec.      | Twp.      | Rge.      |
|-----|-----|-----|-----------|-----------|-----------|
|     |     |     | <b>29</b> | <b>30</b> | <b>14</b> |

| Driller      | Type/Well  | Cement Used | Casing Used        | Depth       | Size of Hole |
|--------------|------------|-------------|--------------------|-------------|--------------|
| <b>Billy</b> | <b>Oil</b> | <b>8</b>    | <b>42.7' 8 5/8</b> | <b>1584</b> | <b>6 3/4</b> |

**Formation Record**

|         |                           |           |                           |           |                      |
|---------|---------------------------|-----------|---------------------------|-----------|----------------------|
| 0-4     | DIRT                      | 973-996   | LIME (OSWEGO)             | 1282-1283 | COAL                 |
| 4-15    | CLAY                      | 996-1006  | BLK SHALE (SUMMIT)        | 1283-1321 | SHALE                |
| 15-125  | SHALE (WET)               | 1006-1011 | LIME                      | 1308      | PUT TRICONE ON       |
| 125-210 | LIME                      | 1011-1015 | BLACK SHALE               | 1321-1346 | MISS. CHAT / MISS    |
| 210-364 | LMY SHALE                 | 1015-1016 | COAL (MULKEY)             | 1346-1416 | BROWN LIME           |
| 364-446 | SAND                      | 1016-1020 | LIME                      | 1416-1458 | CHIRT                |
| 446-685 | LIME                      | 1020-1059 | SHALE                     | 1428      | PICKED UP SOME WATER |
| 536     | WENT TO WATER             | 1059-1060 | COAL                      | 1458-1552 | GRAY LIME            |
| 685-698 | SHALE                     | 1060-1075 | SHALE                     | 1552-1563 | GRAY SHALE/WOODFORD  |
| 698-708 | LIME                      | 1075-1076 | COAL ?                    | 1563-1578 | GRAY LIME            |
| 708-746 | SHALE                     | 1076-1080 | SHALE                     | 1578-1584 | SHALE                |
| 746-750 | LIME                      | 1080-1082 | LIME (V-LIME)             | 1584      | TD                   |
| 750-762 | SAND                      | 1082-1083 | SHALE                     |           |                      |
| 762-773 | SHALE                     | 1083-1084 | COAL (CROWBERG)           |           |                      |
| 773-796 | LIME                      | 1084-1122 | SHALE                     |           |                      |
| 796-800 | SANDY SHALE               | 1122-1123 | COAL (MINERAL)            |           |                      |
| 800-814 | SAND (WEISER)             | 1123-1147 | SHALE                     |           |                      |
| 814-830 | SANDY SHALE               | 1147-1156 | SANDY SHALE/LITE OIL ODOR |           |                      |
| 830-861 | SHALE                     | 1156-1158 | SHALE                     |           |                      |
| 861-872 | SAND/WET/LITE ODOR        | 1158-1159 | COAL                      |           |                      |
| 872-892 | SANDY SHALE               | 1159-1167 | SHALE                     |           |                      |
| 887     | GAS TEST-5#,1/4",MCF-20.7 | 1167-1173 | SAND / OIL ODOR           |           |                      |
| 892-894 | LIME                      | 1173-1175 | SANDY SHALE               |           |                      |
| 894-902 | SHALE                     | 1175-1177 | BLK SAND/GOOD OIL ODOR    |           |                      |
| 902-903 | COAL (MULBERRY)           | 1177-1183 | SHALE                     |           |                      |
| 903-927 | LIME (PAWNEE)             | 1183-1184 | COAL                      |           |                      |
| 927-930 | BLACK SHALE               | 1184-1234 | SHALE                     |           |                      |
| 930-934 | LIME                      | 1212      | GAS TEST - SAME           |           |                      |
| 934-939 | BLK SHALE (LEXINGTON)     | 1234-1243 | RED SHALE                 |           |                      |
| 939-973 | SANDY SHALE               | 1243-1282 | SHALE                     |           |                      |