

# McGOWN

**DRILLING, INC.**

**Operator:**

Kansas Resources Exploration & Development, LLC  
Overland Park, KS

**Cartwright #KRI-8**

Miami Co., KS  
23-18S-21E  
API: 121-30803

|                        |                     |                         |            |
|------------------------|---------------------|-------------------------|------------|
| <b>Spud Date:</b>      | 11/18/2014          | <b>Surface Bit:</b>     | 9.875"     |
| <b>Surface Casing:</b> | 7.0"                | <b>Drill Bit:</b>       | 5.875"     |
| <b>Surface Length:</b> | 20.0'               | <b>Longstring:</b>      | 567.70'    |
| <b>Surface Cement:</b> | 4 sx                | <b>Baffle:</b>          | 538.70'    |
| <b>Longstring:</b>     | 2 7/8 EUE - New L/S | <b>Longstring Date:</b> | 11/19/2014 |

**Driller's Log**

| Top | Bottom | Formation   | Comments                      |
|-----|--------|-------------|-------------------------------|
| 0   | 16     | Soil & clay |                               |
| 16  | 37     | Lime        |                               |
| 37  | 54     | Shale       |                               |
| 54  | 61     | Lime        |                               |
| 61  | 67     | Shale       |                               |
| 67  | 69     | Red Bed     |                               |
| 69  | 104    | Shale       |                               |
| 104 | 118    | Lime        |                               |
| 118 | 128    | Shale       |                               |
| 128 | 138    | Lime        |                               |
| 138 | 140    | Shale       |                               |
| 140 | 157    | Lime        |                               |
| 157 | 168    | Shale       |                               |
| 168 | 188    | Lime        |                               |
| 188 | 194    | Shale       |                               |
| 194 | 214    | Lime        |                               |
| 214 | 346    | Shale       |                               |
| 346 | 349    | Lime        |                               |
| 349 | 372    | Shale       |                               |
| 372 | 379    | Lime        |                               |
| 379 | 384    | Shale       |                               |
| 384 | 396    | Sand        | Fair odor, light bleed to pit |
| 396 | 426    | Shale       |                               |

Cartwright #KRI 8  
Miami Co., KS

|            |     |             |                                    |
|------------|-----|-------------|------------------------------------|
| 426        | 430 | Lime        |                                    |
| 430        | 446 | Shale       |                                    |
| 446        | 449 | Lime        |                                    |
| 449        | 486 | Shale       |                                    |
| 486        | 495 | Lime        | Good odor, slight bleed at 490-492 |
| 495        | 498 | Shale       |                                    |
| 498        | 516 | Sand        | See below                          |
| 516        | 522 | Sandy Shale |                                    |
| 522        | 582 | Shale       |                                    |
| <b>582</b> |     | <b>TD</b>   |                                    |

**Coring**

| <b>Run</b> | <b>Footage</b> | <b>Rec.</b> |
|------------|----------------|-------------|
| 1          | 499-519        | 20'         |

**Sand Detail**

|           |                                             |
|-----------|---------------------------------------------|
| 498-501.5 | White sand                                  |
| 501.5-505 | Good sand, good oil saturation and bleed    |
| 505-509   | Laminated sand, fair to good oil saturation |
| 509-516   | Laminated sand, no oil                      |