

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47 - 15 - 00483 County CLAY District UNION  
Quad ELKHURST Pad Name \_\_\_\_\_ Field/Pool Name \_\_\_\_\_  
Farm name LAWRENCE D. HINKLE Well Number YOUNG 1  
Operator (as registered with the OOG) RAVEN RIDGE ENERGY, LLC  
Address 3230 PENNSYLVANIA AVENUE City CHARLESTON State WV Zip 25302

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing N/A Easting N/A  
Landing Point of Curve Northing N/A Easting N/A  
Bottom Hole Northing N/A Easting N/A

Elevation (ft) 1100' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
SOAP

Date permit issued 10/19/2010 Date drilling commenced 12/6/2010 Date drilling ceased 12/14/2010  
Date completion activities began 1/31/2011 Date completion activities ceased 2/15/2011  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 50' - 100' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft NONE Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 345' - 349' AS PER WELL RECORD Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

RECEIVED  
Office of Oil & Gas  
DEC 23 2013  
Reviewed by:  
WV Department of  
Environmental Protection

API 47-15 - 00483 Farm name LAWRENCE D. HINKLE Well number YOUNG 1

| CASING STRINGS            | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N)<br>* Provide details below* |
|---------------------------|-----------|-------------|-------|-------------|-------------|-----------------|---|
| Conductor                 |           | 10"         | 18'   | UNKNOWN     | UNKNOWN     | UNKNOWN         | UNKNOWN   |
| Surface                   |           | 8 1/4"      | 375'  | UNKNOWN     | UNKNOWN     | UNKNOWN         | UNKNOWN   |
| Coal                      |           |             |       |             |             |                 |   |
| Intermediate 1            |           |             |       |             |             |                 |   |
| Intermediate 2            |           |             |       |             |             |                 |   |
| Intermediate 3            |           |             |       |             |             |                 |   |
| Production                | 6 1/4"    | 4 1/2"      | 2300' | NEW         | J55 - 10.5  |                 | YES   |
| Tubing                    |           | 2"          | 965'  | UNKNOWN     | UNKNOWN     | UNKNOWN         | UNKNOWN   |
| Packer type and depth set |           |             |       |             |             |                 |   |

Comment Details This was a drill deeper permit - the original casing and cement were run on this well in 1947 so additional information is unknown.

| CEMENT DATA    | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield (ft <sup>3</sup> /sks) | Volume (ft <sup>3</sup> ) | Cement Top (MD) | WOC (hrs) |
|----------------|----------------------|-----------------|-----------------|------------------------------|---------------------------|-----------------|-----------|
| Conductor      | UNKNOWN              | UNKNOWN         | ---             | ---                          | ---                       | ---             | ---       |
| Surface        | UNKNOWN              | UNKNOWN         | ---             | ---                          | ---                       | ---             | ---       |
| Coal           |                      |                 |                 |                              |                           |                 |           |
| Intermediate 1 |                      |                 |                 |                              |                           |                 |           |
| Intermediate 2 |                      |                 |                 |                              |                           |                 |           |
| Intermediate 3 |                      |                 |                 |                              |                           |                 |           |
| Production     | CLASS I              | 275             | 14.2            | 1.29                         | 354.75                    | GROUND LEVEL    | 8         |
| Tubing         | UNKNOWN              | UNKNOWN         | ---             | ---                          | ---                       | ---             | ---       |

Drillers TD (ft) 2312' Loggers TD (ft) 2240'  
 Deepest formation penetrated BIG INJUN Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) \_\_\_\_\_

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No  Conventional  Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_



API 47- 15 - 00483 Farm name LAWRENCE D. HINKLE Well number YOUNG 1

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u>                           |
|-------------------------------|---|
| <u>BIG INJUN</u>              | <u>2070' - 2210'</u> TVD _____ MD _____ |
| _____                         | _____                                   |
| _____                         | _____                                   |
| _____                         | _____                                   |

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump  
 SHUT-IN PRESSURE Surface 1400 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST 12 hrs  
 OPEN FLOW Gas 20 mcfpd Oil 2 bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd GAS MEASURED BY  
 Estimated  Orifice  Pilot

| LITHOLOGY/<br>FORMATION | TOP<br>DEPTH IN FT<br>NAME TVD | BOTTOM<br>DEPTH IN FT<br>TVD | TOP<br>DEPTH IN FT<br>MD | BOTTOM<br>DEPTH IN FT<br>MD | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND<br>TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC) |
|-------------------------|--------------------------------|------------------------------|--------------------------|-----------------------------|--|
| CLAY                    | 0                              | 16'                          | 0                        |                             |  |
| SAND                    | 16'                            | 81'                          |                          |                             |  |
| WHITE SLATE             | 81'                            | 116'                         |                          |                             |  |
| SAND                    | 116'                           | 136'                         |                          |                             |  |
| SLATE                   | 136'                           | 196'                         |                          |                             |  |
| SAND                    | 196'                           | 238'                         |                          |                             |  |
| SLATE                   | 238'                           | 257'                         |                          |                             |  |
| SAND                    | 257'                           | 345'                         |                          |                             |  |
| COAL                    | 345'                           | 349'                         |                          |                             |  |
| SAND                    | 349'                           | 375'                         |                          |                             |  |
| SLATE                   | 375'                           | 380'                         |                          |                             |  |
| SAND                    | 380'                           | 403'                         |                          |                             |  |
| SLATE                   | 403'                           | 453'                         |                          |                             |  |
| SAND                    | 453'                           | 600'                         |                          |                             |  |

Please insert additional pages as applicable.

Drilling Contractor R & R WELL SERVICE  
 Address AMBLER RIDGE City WALTON State WV Zip 25286

Logging Company J-W WIRELINE COMPANY  
 Address 376 COUNTY ROAD 33/22 City WESTON State WV Zip 26452

Cementing Company UNIVERSAL WELL SERVICE  
 Address 5 HALL RUN ROAD City BUCKHANNON State WV Zip 26201

Stimulating Company BAKER HUGHES (BJ SERVICES)  
 Address 1681 E MAIN STREET City BRIDGEPORT State WV Zip 26330

Please insert additional pages as applicable.

Completed by DANIELLE N. BOGGS Telephone 304-344-9291  
 Signature *Danielle N. Boggs* Title OPERATIONS MANAGER Date 12/18/2013

API: 47-1500483Farm Name: LAWRENCE D. HINKLEWell Number: YOUNG #1

| Lithology/<br>Formation | Top Depth<br>Depth in Ft<br>TVD | Bottom<br>Depth in Ft<br>TVD | Describe Rock Type<br>Fluid Type |
|-------------------------|---------------------------------|------------------------------|----------------------------------|
| SLATE & SHELLS          | 600'                            | 610'                         |                                  |
| SAND                    | 610'                            | 630'                         |                                  |
| SLATE & SHELLS          | 630'                            | 731'                         |                                  |
| SAND                    | 731'                            | 741'                         |                                  |
| BLACK SLATE             | 741'                            | 820'                         |                                  |
| WHITE SLATE             | 820'                            | 828'                         |                                  |
| SAND                    | 828'                            | 856'                         |                                  |
| SLATE                   | 856'                            | 859'                         |                                  |
| SAND                    | 859'                            | 874'                         |                                  |
| SAND                    | 874'                            | 912'                         |                                  |
| SALT SAND               | 912'                            | 1805'                        |                                  |
| SHALE                   | 1805'                           | 1955'                        |                                  |
| MAXTON                  | 1955'                           | 1995'                        |                                  |
| LITTLE LIME             | 1995'                           | 2015'                        |                                  |
| BIG LIME                | 2015'                           | 2070'                        |                                  |
| BIG INJUN               | 2070'                           | 2210'                        |                                  |
| SHALE                   | 2210'                           | 2312'                        |                                  |