

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

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Office of Oil and Gas  
FEB 25 2015

WV Department of  
Environmental Protection

API 47-087-04745 County ROANE District SMITHFIELD  
Quad LOONEYVILLE 7.5' Pad Name KINKEAD, S.B. Field/Pool Name CLOVER  
Farm name MCCLAIN, JOHN R. & KEATON Well Number 103  
Operator (as registered with the OOG) H.G. ENERGY LLC  
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,285,475 M Easting 475,126 M  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,285,549 M Easting 475,173 M

Elevation (ft) 1,114' 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)  
N/A

Date permit issued 12/17/14 Date drilling commenced 12/18/14 Date drilling ceased 12/20/14  
Date completion activities began 1/8/15 Date completion activities ceased 2/10/15  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

Freshwater depth(s) ft None Open mine(s) (Y/N) depths None  
Salt water depth(s) ft 1700' Void(s) encountered (Y/N) depths None  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths None  
Is coal being mined in area (Y/N) N

Reviewed by:

05/01/2015

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| 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                 | 12 1/4"   | 11 5/8"     | 30'     | Used        | LS          |                 | Sand In<br>Y   |
| Surface                   | 8 3/4"    | 7"          | 558'    | New         | LS          | 64'             |  |
| Coal                      |           |             |         |             |             |                 |  |
| Intermediate 1            |           |             |         |             |             |                 |  |
| Intermediate 2            |           |             |         |             |             |                 |  |
| Intermediate 3            |           |             |         |             |             |                 |  |
| Production                | 6 1/4"    | 4 1/2"      | 2364.7' | New         | J-55        |                 | Y  |
| Tubing                    |           |             |         |             |             |                 |  |
| Packer type and depth set |           |             |         |             |             |                 |  |

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job. Circulated Est. 25 sks to surface on 4 1/2" cement job.

| 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      |                      |                 |                 |                              |                           |                 |           |
| Surface        | Reg Neat             | 140             | 15.6            | 1.18                         | 165.2                     | Surface         | 8         |
| Coal           |                      |                 |                 |                              |                           |                 |           |
| Intermediate 1 |                      |                 |                 |                              |                           |                 |           |
| Intermediate 2 |                      |                 |                 |                              |                           |                 |           |
| Intermediate 3 |                      |                 |                 |                              |                           |                 |           |
| Production     | 50:50 Pozmix         | 90/125          | 13.2/14.2       | 1.64/1.27                    | 147.6/186                 | 40'             | 8         |
| Tubing         |                      |                 |                 |                              |                           |                 |           |

Drillers TD (ft) 2380'      Loggers TD (ft) 2304'  
 Deepest formation penetrated Big Injun      Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 650'

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 \_\_\_\_\_  
20 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string on 7"

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 \_\_\_\_\_



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PRODUCING FORMATION(S)

DEPTHS

Big Injun \_\_\_\_\_ 2178'- 2196' TVD \_\_\_\_\_ 2234'- 2242' MD \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd  
 GAS MEASURED BY  Estimated  Orifice  Pilot

| LITHOLOGY/<br>FORMATION | TOP                     | BOTTOM             | TOP               | BOTTOM            | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND<br>TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC) |
|-------------------------|-------------------------|--------------------|-------------------|-------------------|--|
|                         | DEPTH IN FT<br>NAME TVD | DEPTH IN FT<br>TVD | DEPTH IN FT<br>MD | DEPTH IN FT<br>MD |  |
| Sand/Shale              | 0                       | 1003               | 0                 | 1008              |  |
| Sand                    | 1003                    | 1112               | 1008              | 1118              |  |
| Shale                   | 1112                    | 1200               | 1118              | 1211              |  |
| Sand                    | 1200                    | 1292               | 1211              | 1304              |  |
| Shale                   | 1292                    | 1700               | 1304              | 1730              |  |
| Sand                    | 1700                    | 1990               | 1730              | 2032              |  |
| Little Lime             | 1990                    | 2012               | 2032              | 2054              |  |
| Pencil Cave             | 2012                    | 2026               | 2054              | 2070              |  |
| Big Lime                | 2026                    | 2152               | 2070              | 2200              |  |
| Keener                  | 2152                    | 2178               | 2200              | 2228              |  |
| Big Injun               | 2178                    | 2196               | 2228              | 2246              | Drilled directional N 33° E a distance of 369'   |
| Shale                   | 2196                    | 2326               | 2246              | 2380              |  |
| TD                      | 2326                    |                    | 2380              |                   |  |

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling  
 Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International  
 Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services  
 Address Hall Rd City Buckhannon State WV Zip 26201

Stimulating Company Producers Service Corp.  
 Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107  
 Signature *Roger Heldman* Title Operations Manager Date 2/16/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

05/01/2015

