

WR-35  
Rev (9-11)

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

DATE: 2-1-2012  
API #: 47-009-00101

Farm name: Mark Owen Operator Well No.: 3H (832801)

LOCATION: Elevation: 1170' Quadrangle: Bethany, WV

District: Buffalo County: Brooke  
Latitude: 1050' Feet South of 40 Deg. 15 Min. 00 Sec.  
Longitude 10730 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

| Address:   | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|--|-----------------|------------------|--------------|------------------------|
| P.O. Box 18496<br>Oklahoma City, OK 73154-0496   | 20"             | 100'             | 100'         | Driven                 |
| Agent: Eric Gillespie  | 13 3/8"         | 382'             | 382'         | 447 cf                 |
| Inspector: Bill Hendershot   | 9 5/8"          | 1770'            | 1770'        | 820 cf                 |
| Date Permit Issued: 4/8/2011   | 5 1/2"          | 13019'           | 13019'       | 2797 cf                |
| Date Well Work Commenced: 8/10/2011  |                 |                  |              |                        |
| Date Well Work Completed: 11/5/2011  |                 |                  |              |                        |
| Verbal Plugging:   |                 |                  |              |                        |
| Date Permission granted on:  |                 |                  |              |                        |
| Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/> |                 |                  |              |                        |
| Total Vertical Depth (ft): 5,973'(Cement plug @12,925')  |                 |                  |              |                        |
| Total Measured Depth (ft): 13,020'   |                 |                  |              |                        |
| Fresh Water Depth (ft.): 175'  |                 |                  |              |                        |
| Salt Water Depth (ft.): 1271'  |                 |                  |              |                        |
| Is coal being mined in area (N/Y)? N   |                 |                  |              |                        |
| Coal Depths (ft.): 309'-320'   |                 |                  |              |                        |
| Void(s) encountered (N/Y) Depth(s) N   |                 |                  |              |                        |

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,309'-12,865'  
Gas: Initial open flow 1,534 MCF/d Oil: Initial open flow 134 Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure 3,882 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

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Office of Oil & Gas  
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Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature

5/8/2012  
Date

10/19/2012

Were core samples taken? Yes \_\_\_\_\_ No

Were cuttings caught during drilling? Yes \_\_\_\_\_ No

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list LWD GR from 5,381'-12,970' MD

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s): Cement @ 12,925'

| <u>Formations Encountered:</u> | <u>Top Depth</u> | <u>/</u> | <u>Bottom Depth</u> |
|--------------------------------|------------------|----------|---------------------|
|--------------------------------|------------------|----------|---------------------|

(See Attached)

**Mark Owen 3H**

MD

| <u>Lithology</u>                    | <u>Top Depth (ft)</u> | <u>Bottom Depth (ft)</u> |
|-------------------------------------|-----------------------|--------------------------|
| SHALE                               | 0                     | 100                      |
| SHALE/LIMESTONE                     | 100                   | 220                      |
| SHALE/SANDSTONE/LIMESTONE           | 220                   | 280                      |
| SHALE/SANDSTONE                     | 280                   | 309                      |
| COAL                                | 309                   | 320                      |
| SHALE/LIMESTONE/SILTSTONE/COAL      | 320                   | 360                      |
| SHALE/LIMESTONE/SILTSTONE/SANDSTONE | 360                   | 385                      |
| SHALE/LIMESTONE                     | 385                   | 450                      |
| SHALE                               | 450                   | 540                      |
| SHALE/LIMESTONE                     | 540                   | 720                      |
| SHALE/LIMESTONE/SANDSTONE           | 720                   | 780                      |
| SHALE/SANDSTONE                     | 780                   | 840                      |
| SHALE/SANDSTONE/LIMESTONE           | 840                   | 900                      |
| SHALE/SANDSTONE                     | 900                   | 990                      |
| SHALE/LIMESTONE/SANDSTONE/SILTSTONE | 990                   | 1050                     |
| SHALE                               | 1050                  | 1075                     |
| SHALE/SILTSTONE/SANDSTONE           | 1075                  | 1130                     |
| SHALE/SANDSTONE                     | 1130                  | 1200                     |
| SHALE/LIMESTONE/SANDSTONE           | 1200                  | 1290                     |
| SHALE/SILTSTONE                     | 1290                  | 1320                     |
| SHALE/LIMESTONE                     | 1320                  | 1410                     |
| SHALE/SANDSTONE                     | 1410                  | 1430                     |
| SHALE/SANDSTONE/LIMESTONE           | 1430                  | 1456                     |
| BIG INJUN                           | 1456                  | 1654                     |
| SHALE                               | 1654                  | 5847                     |
| GENESEO                             | 5847                  | 5869                     |
| TULLY                               | 5869                  | 5940                     |
| HAMILTON                            | 5940                  | 6130                     |
| MARCELLUS                           | 6130                  | 11340                    |

10/19/2012