WR-35 Rev (9-11)

Revised

## 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#: | 47-009-00092 |  |  |  |

| CATION: Elevation: 1270'   | Quadrangle: Bethany, WV                |                     |                                       |                                       |  |  |
|--|--|---------------------|---------------------------------------|---------------------------------------|--|--|
| District: Buffalo  | County: Brook                          | (ė                  |                                       |                                       |  |  |
| Latitude: 7580' Feet South of 40 Deg.  |  |                     | · · · · · · · · · · · · · · · · · · · |                                       |  |  |
| Longitude 11600' Feet West of 80 Deg.  | Min_                                   | . 30 Sec            |                                       |                                       |  |  |
| Character A calculia I I I C   |  |                     |                                       |                                       |  |  |
| Company: Chesapeake Appalachia, L.L.C.   | · · · · · ·                            | 1                   | <del>1 </del>                         | T                                     |  |  |
| Address: P.O. Box 18496  | Casing & Tubing                        | Used in drilling    | Left in well                          | Cement fill up Cu. Ft.                |  |  |
| Oklahoma City, OK 73154-0496   | 20"                                    | 82'                 | 82'                                   | Driven                                |  |  |
| Agent: Eric Gillespie  | 13 3/8"                                | 547'                | 547'                                  | 1004 Cu. Ft.                          |  |  |
| Inspector: Bill Hendershot   | 9 5/8"                                 | 1977'               | 1977'                                 | 897 Cu. Ft.                           |  |  |
| Date Permit Issued: 3/30/2011  | 5 1/2"                                 | 13260'              | 13260'                                | 2709 Cu. Ft.                          |  |  |
| Date Well Work Commenced: 4/9/2011   |  |                     |                                       |                                       |  |  |
| Date Well Work Completed: 11/16/2011   | · ·· · · · · · · · · · · · · · · · · · |                     |                                       |                                       |  |  |
| Verbal Plugging:   |  |                     |                                       |                                       |  |  |
| Date Permission granted on:  |  |                     |                                       |                                       |  |  |
| Rotary Cable Rig   |  |                     |                                       |                                       |  |  |
| Total Vertical Depth (ft): 6,240' (cement plug @ 4,745')   | · · · · · · · · · · · · · · · · · · ·  |                     |                                       | <del>_</del>                          |  |  |
| Total Measured Depth (ft): 13,260'   |  | 0110857             |                                       |                                       |  |  |
| Fresh Water Depth (ft.): 175'  |  | Attai               | The same land                         |                                       |  |  |
| Salt Water Depth (ft.): 1271'  | · <del></del>                          |                     | 1012                                  |                                       |  |  |
|  |  | Part of the control |                                       |                                       |  |  |
| Is coal being mined in area (N/Y)? N  Coal Depths (ft.): 500'                                      | Jan 20 mg                              |                     |                                       | <del>-</del>                          |  |  |
|  |  | William Street      | 1 40                                  | · · · · · · · · · · · · · · · · · · · |  |  |
| Void(s) encountered (N/Y) Depth(s) Y 470'  |  | <u> </u>            |                                       |                                       |  |  |
| OPEN FLOW DATA (If more than two producing formation   |  |                     | ita on separate sh                    | eet)                                  |  |  |
|  | one depth $(ft)^{7}$                   |                     |                                       |                                       |  |  |
| Gas: Initial open flow 0 MCF/d Oil: Initial open flow Final open flow 1,957* MCF/d Final open flow |  | ol/d                |                                       |                                       |  |  |
| Time of open flow between initial and final tests 70   |  | *Calculated         |                                       |                                       |  |  |
| Static rock Pressure 3,953* psig (surface pressure) aft  |  |                     |                                       |                                       |  |  |
| psig (surface pressure) are  | ·                                      | .5                  |                                       |                                       |  |  |
| Second producing formation Pay zon   |  | ·······             |                                       |                                       |  |  |
| Gas: Initial open flow MCF/d Oil: Initial open flo   |  | ol/d                |                                       |                                       |  |  |
| Final open flow MCF/d Final open flow  |  |                     |                                       |                                       |  |  |
| Time of open flow between initial and final tests  |  |                     |                                       |                                       |  |  |
| Static rock Pressure psig (surface pressure) aft   | er Hour                                |                     |                                       |                                       |  |  |

eve

Marino (Velevin)
Signature

| Were core samples taken? Yes   | No IN                              | Were cutting                            | gs caught during drill          | ling? Yes Y     | No            |
|--|------------------------------------|---|---------------------------------|-----------------|---------------|
| Were Electrical, Mechanical or Copen hole logs run from 0-6240' MD; LWD G  | Geophysical logs recorde           | ed on this well? If yes, p              | please list GR, neutr           | on, density, an | d resistivity |
| NOTE: IN THE AREA BIFRACTURING OR STIMULADETAILED GEOLOGICAL COAL ENCOUNTERED BY   | ATING, PHYSICAL C<br>RECORD OF THE | CHANGE, ETC. 2). THE TOPS AND BOTTO     | HE WELL LOG WI<br>MS OF ALL FOR | HICH IS A SY    | STEMATIC      |
| Perforated Intervals, Fracturing,  | or Stimulating:                    |   |                                 |                 |               |
| (See Attached)   |                                    |   |                                 |                 |               |
|  |                                    | <del></del>                             | <del></del>                     |                 |               |
|  |                                    |   |                                 |                 | <del></del>   |
|  |                                    |   |                                 |                 |               |
| Plug Back Details Including Plug   | Type and Depth(s): C               | oment plug @ 4.7                        | 7AE'                            |                 |               |
| The business are used as the business are the business ar | , rype and bepares. Cl             | ement plug @ 4,7                        | 45                              | <del></del>     |               |
|  |                                    |   | <del></del>                     | <del></del>     | ·····         |
| Formations Encountered: Surface:   |                                    | Top Depth                               | 1                               | Bottom De       | epth          |
|  |                                    |   |                                 |                 |               |
| (See Attached)   |                                    | ·                                       |                                 |                 |               |
|  |                                    |   |                                 |                 |               |
|  |                                    |   |                                 |                 |               |
|  |                                    | 100 100 100 100 100 100 100 100 100 100 | •                               |                 |               |
|  |                                    | g \$ 12 th, wheats                      |                                 |                 |               |
|  | ASS                                | <u> </u>                                |                                 | ··              |               |
|  | 1870                               |   |                                 |                 |               |
|  |                                    |   |                                 |                 |               |
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|  |                                    |   |                                 |                 |               |
|  |                                    |   | ·                               |                 |               |
|  |                                    |   |                                 |                 |               |

## PERFORATION RECORD ATTACHMENT

Well Name and Number: John Hupp 1H (833119)

| PERFO      | RATION RE  | CORD       | STIMULATION RECORD |          |         |         |                |      |         |           |
|------------|------------|------------|--------------------|----------|---------|---------|----------------|------|---------|-----------|
|            | Interval F | Perforated |                    |          | Fluid   |         | Propping Agent |      | Average |           |
| Date       | From       | To         | Date               | Interval | Treated | Туре    | Amount         | Туре | Amount  | Injection |
| 11/9/2011  | 12,724     | 13,106     | 11/9/2011          | 12,724   | 13,106  | Slk Wtr | 9,166          | Sand | 572,800 | 83        |
| 11/9/2011  | 12,249     | 12,631     | 11/9/2011          | 12,249   | 12,631  | Sik Wtr | 10,327         | Sand | 573,340 | 75        |
| 11/9/2011  | 11,774     | 12,156     | 11/9/2011          | 11,774   | 12,156  | Slk Wtr | 9,108          | Sand | 572,140 | 84        |
| 11/10/2011 | 11,299     | 11,681     | 11/10/2011         | 11,299   | 11,681  | Slk Wtr | 12,518         | Sand | 570,100 | 79        |
| 11/10/2011 | 10,824     | 11,206     | 11/10/2011         | 10,824   | 11,206  | Slk Wtr | 9,654          | Sand | 573,500 | 85        |
| 11/10/2011 | 10,349     | 10,731     | 11/10/2011         | 10,349   | 10,731  | Slk Wtr | 9,693          | Sand | 568,940 | 85        |
| 11/13/2011 | 9,874      | 10,270     | 11/13/2011         | 9,874    | 10,270  | Slk Wtr | 7,005          | Sand | 327,580 | 75        |
| 11/15/2011 | 9,399      | 9,781      | 11/15/2011         | 9,399    | 9,781   | Slk Wtr | 11,074         | Sand | 574,300 | 79        |
| 11/15/2011 | 8,924      | 9,306      | 11/15/2011         | 8,924    | 9,306   | Slk Wtr | 9,455          | Sand | 569,260 | 85        |
| 11/15/2011 | 8,449      | 8,831      | 11/15/2011         | 8,449    | 8,831   | Slk Wtr | 9,445          | Sand | 569,500 | 85        |
| 11/16/2011 | 7,974      | 8,356      | 11/16/2011         | 7,974    | 8,356   | Slk Wtr | 9,457          | Sand | 583,840 | 86        |
| 11/16/2011 | 7,499      | 7,881      | 11/16/2011         | 7,499    | 7,881   | Slk Wtr | 9,166          | Sand | 582,020 | 85        |
| 11/16/2011 | 7,024      | 7,406      | 11/16/2011         | 7,024    | 7,406   | Slk Wtr | 9,467          | Sand | 597,260 | 88        |
|            |            |            |                    |          |         |         |                |      |         |           |
|            |            |            |                    |          |         |         |                |      |         |           |
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|            |            |            |                    |          |         |         |                |      |         |           |
|            |            |            |                    |          |         |         |                |      |         |           |

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## **VERTICAL PILOT HOLE**

| Formation/Lithology | Top Depth,<br>TVD/MD (ft) |      |
|---------------------|---------------------------|------|
| LS/SH               | 0                         | 500  |
| PITTSBURG COAL      | 500                       | 510  |
| LS/SH               | 510                       | 750  |
| SHALE               | 750                       | 1050 |
| SS/SH               | 1050                      | 1150 |
| SS                  | 1150                      | 1400 |
| SHALE               | 1400                      | 1515 |
| BIG LIME (LS)       | 1515                      | 1537 |
| BIG INJUN (SS)      | 1537                      | 1807 |
| SHALE               | 1807                      | 5987 |
| GENESEO (SH)        | 5987                      | 6007 |
| TULLY (LS)          | 6007                      | 6057 |
| HAMILTON (SH)       | 6057                      | 6164 |
| MARCELLUS (SH)      | 6164                      | 6222 |
| ONONDAGA (LS)       | 6222                      |      |
| TD OF PILOT HOLE    |                           | 6240 |

## LATERAL SIDETRACK WELLBORE

| Formation/Lithology | Top Depth, ME | Top Depth, TVD (ft) | Bottom Depth,<br>MD (ft) | Bottom Depth,<br>TVD (ft) |
|---------------------|---------------|---------------------|--------------------------|---------------------------|
| LS/SH               | 0             | 0                   | 500                      | 500                       |
| PITTSBURG COAL      | 500           | 500                 | 510                      | 510                       |
| LS/SH               | 510           | 510                 | 750                      | 750                       |
| SHALE               | 750           | 750                 | 1050                     | 1050                      |
| SS/SH               | 1050          | 1050                | 1150                     | 1150                      |
| SS                  | 1150          | 1150                | 1400                     | 1400                      |
| SHALE               | 1400          | 1400                | 1515                     | 1515                      |
| BIG LIME (LS)       | 1515          | 1515                | 1537                     | 1537                      |
| BIG INJUN (SS)      | 1537          | 1537                | 1807                     | 1807                      |
| SHALE               | 1807          | 1807                | 6304                     | 5990                      |
| GENESEO (SH)        | 6304          | 5990                | 6330                     | 6007                      |
| TULLY (LS)          | 6330          | 6007                | 6381                     | 6056                      |
| HAMILTON (SH)       | 6381          | 6056                | 6663                     | 6157                      |
| MARCELLUS (SH)      | 6663          | 6157                |                          |                           |
| TD OF LATERAL       |               |                     | 13260                    | 6081                      |