

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

DATE: 9-7-2012
API #: 47-061-01623

Farm name: Esther Clark 3H Operator Well No.: 833083

RECEIVED

LOCATION: Elevation: 1424' Quadrangle: Hundred 7.5'

SEP 12 2012

District: Battelle County: Monongalia
Latitude: 5484' Feet South of 39 Deg. 40 Min. 00 Sec.
Longitude 5973' Feet West of 80 Deg. 22 Min. 30 Sec.

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Company: Chesapeake Appalachia, L.L.C.

| Address: | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|--|-----------------|------------------|--------------|------------------------|
| P.O. Box 18496 Oklahoma City, OK 73154-0496 | 20" | 110' | 110' | 101 Cu. Ft. |
| Agent: <u>Eric Gillespie</u> | 13 3/8" | 580' | 580' | 684 Cu. Ft. |
| Inspector: <u>Sam Ward</u> | 9 5/8" | 3672' | 3672' | 1667 Cu. Ft. |
| Date Permit Issued: <u>6/3/2011</u> | 5 1/2" | 15136' | 15136' | 3317 Cu. Ft. |
| Date Well Work Commenced: <u>10/18/2011</u> | | | | |
| Date Well Work Completed: <u>3/25/2012</u> | | | | |
| Verbal Plugging: | | | | |
| Date Permission granted on: | | | | |
| Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/> | | | | |
| Total Vertical Depth (ft): <u>8183'(cement plug 6,992 - 8183')</u> | | | | |
| Total Measured Depth (ft): <u>15139'</u> | | | | |
| Fresh Water Depth (ft.): <u>400'</u> | | | | |
| Salt Water Depth (ft.): <u>None</u> | | | | |
| Is coal being mined in area (N/Y)? <u>Y</u> | | | | |
| Coal Depths (ft.): <u>221', 1200'</u> | | | | |
| Void(s) encountered (N/Y) Depth(s) <u>N</u> | | | | |

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

Producing formation Marcellus Pay zone depth (ft) 8,300' - 15,004'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 5010* MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 47 Hours * Calculated
Static rock Pressure 5153* 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

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

9-11-2012
Date

VERTICAL PILOT HOLE

| Formation/Lithology | Top Depth, MD (ft) | Top Depth, TVD (ft) | Bottom Depth, MD (ft) | Bottom Depth, TVD (ft) |
|----------------------|--------------------|---------------------|-----------------------|------------------------|
| SHALE | 0 | | 250 | |
| SANDSTONE/SHALE | 250 | | 500 | |
| SHALE | 500 | | 930 | |
| SANDSTONE | 930 | | 990 | |
| LIMESTONE/SHALE | 990 | | 1140 | |
| COAL | 1140 | | 1156 | |
| COAL/LIMESTONE/SHALE | 1156 | | 1240 | |
| COAL | 1240 | | 1260 | |
| COAL/LIMESTONE/SHALE | 1260 | | 1320 | |
| SHALE | 1320 | | 1600 | |
| SANDSTONE/SHALE | 1600 | | 2640 | |
| BIG LIME | 2640 | | 2550 | |
| BIG INJUN SANDSTONE | 2550 | | 2750 | |
| SANDSTONE/SHALE | 2750 | | 3210 | |
| BEREA SANDSTONE | 3210 | | 3550 | |
| SHALE | 3550 | | 4100 | |
| SHALE/SANDSTONE | 4100 | | 4580 | |
| SHALE | 4580 | | 7744 | |
| GENESEO | 7744 | | 7782 | |
| TULLY | 7782 | | 7820 | |
| HAMILTON | 7820 | | 7924 | |
| MARCELLUS | 7924 | | 7994 | |
| ONONDAGA | 7994 | | | |
| PILOT TD | 8183 | | | |
| PLUG BACK DEPTH | 7107 | | | |

LATERAL WELLBORE

Maximum TVD of wellbore: 7972 ft TVD @ 13289 ft MD

| Formation/Lithology | Top Depth, MD (ft) | Top Depth, TVD (ft) | Bottom Depth, MD (ft) | Bottom Depth, TVD (ft) |
|---------------------|--------------------|---------------------|-----------------------|------------------------|
| SHALE | 0 | 0 | 250 | 250 |

| | | | | |
|----------------------|-------|------|-------|------|
| SANDSTONE/SHALE | 250 | 250 | 500 | 500 |
| SHALE | 500 | 500 | 930 | 930 |
| SANDSTONE | 930 | 930 | 990 | 990 |
| LIMESTONE/SHALE | 990 | 990 | 1140 | 1140 |
| COAL | 1140 | 1140 | 1156 | 1156 |
| COAL/LIMESTONE/SHALE | 1156 | 1156 | 1240 | 1240 |
| COAL | 1240 | 1240 | 1260 | 1260 |
| COAL/LIMESTONE/SHALE | 1260 | 1260 | 1320 | 1320 |
| SHALE | 1320 | 1320 | 1600 | 1600 |
| SANDSTONE/SHALE | 1600 | 1600 | 2460 | 2460 |
| BIG LIME | 2640 | 2640 | 2550 | 2550 |
| BIG INJUN SANDSTONE | 2550 | 2550 | 2750 | 2750 |
| SANDSTONE/SHALE | 2750 | 2750 | 3210 | 3210 |
| BEREA SANDSTONE | 3210 | 3210 | 3550 | 3550 |
| SHALE | 3550 | 3550 | 4100 | 4100 |
| SHALE/SANDSTONE | 4100 | 4100 | 4580 | 4580 |
| SHALE | 4580 | 4580 | 7764 | 7730 |
| GENESEO | 7764 | 7730 | 7821 | 7774 |
| TULLY | 7821 | 7774 | 7854 | 7798 |
| HAMILTON | 7854 | 7798 | 8074 | 7910 |
| MARCELLUS | 8074 | 7910 | 15139 | 7905 |
| LATERAL TD | 15139 | 7905 | | 0 |