

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 - FINAL

DATE: 10/10/13
API #: 47-017-06058

PM

Farm name: Beth Crowder & David Wentz Operator Well No.: 514136

LOCATION: Elevation: 1,178' Quadrangle: Smithburg

District: Grant County: Doddridge, WV
Latitude: 2.883' Feet South of 39 Deg. 22 Min. 30 Sec.
Longitude 8.673' Feet West of 80 Deg. 40 Min. 00 Sec.

Company: EQT Production Company

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
EQT Plaza, Suite 1700 625 Liberty Avenue, Pittsburgh, PA 15222	20	40	40	45
Agent: Cecil Ray	13 3/8	1,030	1,030	968
Inspector: David Scranage	9 5/8	5,338	5,338	1,605
Date Permit Issued: 6/15/12	5 1/2	16,714	16,714	2,882
Date Well Work Commenced: 5/4/13				
Date Well Work Completed: 8/18/13				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,197'				
Total Measured Depth (ft): 16,720'				
Fresh Water Depth (ft.): 344', 919'				
Salt Water Depth (ft.): 1,187'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s) No				

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

Producing formation Marcellus Pay zone depth (ft) 7.034
Gas: Initial open flow 5.151 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 4.290 MCF/d Final open flow 48 Bbl/d
Time of open flow between initial and final tests 47.2 Hours
Static rock Pressure 3.301 psig (surface pressure) after 47.5 Hours

Second producing formation No second 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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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.


Signature

7/9/2014
Date

09/19/2014

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Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD, Gamma, & CBL logs

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:

Amended Report with Flow Back Data

Plug Back Details Including Plug Type and Depth(s): Pumped solid cement plug from 7,197' to 5,932'.

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
Surface:

SAND / SHALE / / 2,482 / 2,482 -- FRESH WATER ZONE / 1 / 919 / 918 --

WEIR / 2,482 / 2,671 / 189 -- BEREA / 2,671 / 2,685 / 14 --

GANTZ / 2,685 / 2,752 / 67 -- 50F / 2,752 / 2,862 / 110 --

30F / 2,862 / 2,885 / 23 -- GORDON / 2,885 / 3,039 / 154 --

4TH / 3,039 / 3,179 / 140 -- 5TH / 3,179 / 3,536 / 357 --

WARREN / 3,536 / 3,759 / 223 -- SPEECHLEY / 3,759 / 4,096 / 337 --

BALLTOWN B / 4,096 / 4,142 / 46 -- BALLTOWN A / 4,142 / 4,485 / 343 --

BRADFORD / 4,485 / 5,216 / 731 -- BENSON / 5,216 / 5,468 / 252 --

ALEXANDER / 5,468 / 6,613 / 1,145 -- RHINESTREET / 6,613 / 6,652 / 39 --

SONYEA / 6,652 / 6,792 / 140 -- MIDDLESEX / 6,792 / 6,825 / 33 --

GENESSEE / 6,825 / 6,933 / 108 -- GENESEO / 6,933 / 6,965 / 32 --

TULLY / 6,965 / 6,989 / 24 -- HAMILTON / 6,989 / 7,034 / 45 --

Marcellus blk shale / 7,034 / 7,097 / 63 -- Onondaga / 7,097 / 7,197 / 100

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514136 - Perforations

Zone/Stage	Date	Top Plug Depth (ftKB)	Bottom Plug Depth (ftKB)	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Shots/ft
Toe Pop	12/23/13 15:51	16,555.00	NA	16,687.00	16,690.00	NA
1	12/23/13 20:50	16,555.00	NA	16,569.00	16,661.00	4
1.1 (Re-Perf)	12/26/13 12:15	16,555.00	NA	16,565.00	16,617.00	4
2	12/26/13 17:26	16,401.00	16,551.00	16,415.00	16,537.00	4
3	12/27/13 12:07	16,251.00	16,401.00	16,268.00	16,387.00	4
4	12/27/13 17:30	16,101.00	16,251.00	16,115.00	16,237.00	4
5	12/27/13 21:46	15,951.00	16,101.00	15,965.00	16,087.00	4
6	12/28/13 2:20	15,801.00	15,951.00	15,815.00	15,937.00	4
7	12/28/13 6:31	15,651.00	15,801.00	15,665.00	15,787.00	4
8	12/28/13 13:45	15,501.00	15,651.00	15,517.00	15,637.00	4
9	12/28/13 18:04	15,351.00	15,501.00	15,365.00	15,487.00	4
10	12/28/13 22:27	15,201.00	15,351.00	15,215.00	15,337.00	4
11	12/29/13 12:10	15,051.00	15,201.00	15,065.00	15,187.00	4
12	12/29/13 17:17	14,901.00	15,051.00	14,915.00	15,037.00	4
13	12/29/13 20:48	14,751.00	14,901.00	14,765.00	14,887.00	4
14	12/30/13 2:05	14,601.00	14,751.00	14,615.00	14,737.00	4
15	12/30/13 10:06	14,451.00	14,601.00	14,465.00	14,587.00	4
16	12/30/13 16:45	14,301.00	14,451.00	14,315.00	14,437.00	4
17	12/31/13 0:19	14,151.00	14,301.00	14,165.00	14,281.00	4
18	1/2/14 10:14	14,001.00	14,151.00	14,015.00	14,137.00	4
19	1/2/14 16:17	13,851.00	14,001.00	13,865.00	13,987.00	4
20	1/2/14 20:27	13,701.00	13,851.00	13,715.00	13,835.00	4
21	1/3/14 19:00	13,551.00	13,701.00	13,565.00	13,687.00	4
22	1/3/14 23:00	13,401.00	13,551.00	13,416.00	13,537.00	4
23	1/4/14 5:30	13,251.00	13,401.00	13,265.00	13,387.00	4
24	1/4/14 11:50	13,101.00	13,251.00	13,115.00	13,237.00	4
25	1/4/14 16:35	12,951.00	13,101.00	12,965.00	13,087.00	4
26	1/4/14 20:30	12,801.00	12,951.00	12,815.00	12,937.00	4
27	1/5/14 1:19	12,651.00	12,801.00	12,665.00	12,785.00	4
28	1/5/14 8:50	12,501.00	12,651.00	12,515.00	12,637.00	4
29	1/5/14 12:50	12,351.00	12,501.00	12,367.00	12,487.00	4
30	1/5/14 17:01	12,201.00	12,351.00	12,215.00	12,337.00	4
31	1/6/14 0:00	12,051.00	12,201.00	12,065.00	12,187.00	4
32	1/6/14 18:26	11,901.00	12,051.00	11,915.00	12,037.00	4
33	1/7/14 3:00	11,751.00	11,901.00	11,765.00	11,887.00	4
34	1/8/14 3:15	11,601.00	11,751.00	11,619.00	11,737.00	4
35	1/8/14 11:40	11,451.00	11,601.00	11,465.00	11,587.00	4
36	1/8/14 16:01	11,301.00	11,451.00	11,315.00	11,437.00	4
37	1/8/14 21:30	11,151.00	11,301.00	11,165.00	11,287.00	4
38	1/9/14 2:15	11,001.00	11,151.00	11,015.00	11,139.00	4
39	1/9/14 6:55	10,851.00	11,001.00	10,865.00	10,987.00	4
40	1/9/14 11:26	10,701.00	10,851.00	10,715.00	10,837.00	4
41	1/9/14 15:29	10,551.00	10,701.00	10,569.00	10,687.00	4
42	1/9/14 19:23	10,401.00	10,551.00	10,415.00	10,537.00	4
43	1/9/14 23:30	10,251.00	10,401.00	10,265.00	10,387.00	4
44	1/10/14 4:00	10,101.00	10,251.00	10,115.00	10,237.00	4
45	1/10/14 9:24	9,954.00	10,101.00	9,965.00	10,087.00	4
46	1/10/14 14:00	9,801.00	9,954.00	9,815.00	9,937.00	4
47	1/10/14 17:25	9,651.00	9,801.00	9,665.00	9,787.00	4
48	1/10/14 23:20	9,501.00	9,651.00	9,516.00	9,637.00	4
49	1/11/14 3:15	9,351.00	9,501.00	9,365.00	9,487.00	4
50	1/11/14 7:29	9,201.00	9,351.00	9,215.00	9,337.00	4
51	1/11/14 13:26	9,051.00	9,201.00	9,065.00	9,187.00	4
52	1/11/14 17:05	8,901.00	9,051.00	8,915.00	9,037.00	4
53	1/11/14 23:30	8,751.00	8,901.00	8,768.00	8,887.00	4
54	1/12/14 4:00	8,601.00	8,751.00	8,615.00	8,737.00	4
55	1/12/14 8:00	8,451.00	8,601.00	8,465.00	8,587.00	4
56	1/12/14 12:59	8,301.00	8,451.00	8,315.00	8,437.00	4
57	1/12/14 16:29	8,151.00	8,301.00	8,165.00	8,287.00	4
58	1/12/14 20:34	8,001.00	8,151.00	8,015.00	8,137.00	4
59	1/13/14 2:00	7,851.00	8,001.00	7,865.00	7,987.00	4
60	1/13/14 5:30	NA	7,851.00	7,717.00	7,837.00	4

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514136 - Stimulated Stages

Zone/Stage	P Break (psi)	Avg Treat Pressure (psi)	Avg rate (bbl/min)	ISIP (psi)	Frac Gradient (psi/R)	15 Min. SIP (psi)	Fluid Volume (bbl)	Start Date	End Date	Proppant (lb)
Toe Pop	NA	8,004.00	8.0	NA	NA	NA	1,370	12/23/2013 12:59	12/23/2013 15:50	NA
1	NA	8,802.00	67.6	5,650.00	1.23	4,350.00	4,809	12/26/2013 8:00	12/26/2013 9:29	10,700
1.1 (Re-Pef)	NA	8,871.00	77.6	5,532.00	1.21	4,089.00	8,773	12/26/2013 14:30	12/26/2013 16:46	54,200
2	5,707.00	8,727.00	85.2	4,891.00	1.12	3,307.00	5,478	12/27/2013 8:31	12/27/2013 10:05	202,800
3	5,900.00	8,881.00	92.2	4,902.00	1.12	3,371.00	5,581	12/27/2013 13:55	12/27/2013 15:08	200,700
4	6,086.00	8,928.00	94.5	4,931.00	1.13	3,346.00	5,200	12/27/2013 19:35	12/27/2013 20:54	199,600
5	5,808.00	8,987.00	96.7	5,689.00	1.23	3,678.00	5,231	12/28/2013 0:18	12/28/2013 1:36	203,400
6	5,910.00	8,850.00	99.4	5,442.00	1.2	3,921.00	5,486	12/28/2013 4:49	12/28/2013 6:08	201,800
7	5,920.00	8,793.00	99.8	5,034.00	1.14	3,526.00	5,596	12/28/2013 10:22	12/28/2013 11:48	204,800
8	5,612.00	8,869.00	98.4	5,007.00	1.14	3,338.00	5,315	12/28/2013 15:45	12/28/2013 17:15	204,100
9	6,084.00	8,815.00	97.6	5,655.00	1.23	3,505.00	5,217	12/28/2013 20:35	12/28/2013 21:52	203,200
10	5,902.00	9,007.00	89.1	5,185.00	1.16	3,679.00	7,446	12/29/2013 4:01	12/29/2013 10:12	202,100
11	6,391.00	8,906.00	96.8	5,425.00	1.19	3,504.00	5,307	12/29/2013 13:51	12/29/2013 15:13	203,900
12	5,055.00	8,845.00	91.7	5,127.00	1.15	3,265.00	5,812	12/29/2013 18:44	12/29/2013 20:10	200,900
13	5,671.00	8,712.00	98.2	5,201.00	1.16	3,542.00	5,192	12/30/2013 0:04	12/30/2013 1:24	201,500
14	5,802.00	8,817.00	89.7	5,158.00	1.16	3,684.00	5,416	12/30/2013 6:15	12/30/2013 8:14	199,000
15	5,696.00	8,825.00	99.6	5,112.00	1.15	3,490.00	5,257	12/30/2013 14:49	12/30/2013 16:08	199,800
16	6,011.00	8,434.00	97.3	5,340.00	1.18	3,557.00	6,083	12/30/2013 19:52	12/30/2013 22:15	199,600
17	5,815.00	9,997.00	89.8	5,106.00	1.15	3,816.00	5,502	1/2/2014 6:44	1/2/2014 8:36	192,300
18	5,883.00	8,913.00	89.5	5,106.00	1.15	3,382.00	5,208	1/2/2014 12:59	1/2/2014 14:20	199,500
19	5,771.00	8,690.00	97.9	4,125.00	1.01	3,245.00	5,383	1/2/2014 17:45	1/2/2014 18:30	197,300
20	5,826.00	8,815.00	98.9	3,966.00	0.99	3,156.00	5,422	1/3/2014 14:02	1/3/2014 15:31	200,700
21	5,831.00	8,695.00	99.8	4,046.00	1	2,972.00	5,203	1/3/2014 20:10	1/3/2014 21:33	200,300
22	5,868.00	8,781.00	96.6	4,332.00	1.04	3,128.00	5,199	1/4/2014 2:00	1/4/2014 3:21	201,200
23	5,856.00	8,664.00	100.1	4,389.00	1.05	3,223.00	5,356	1/4/2014 8:31	1/4/2014 9:49	204,900
24	6,053.00	8,632.00	99.8	5,076.00	1.14	3,602.00	5,222	1/4/2014 13:30	1/4/2014 14:45	200,700
25	6,592.00	8,857.00	98.0	4,916.00	1.12	3,256.00	5,393	1/4/2014 18:09	1/4/2014 19:33	198,600
26	5,854.00	8,802.00	94.3	5,045.00	1.14	3,468.00	5,145	1/4/2014 23:07	1/5/2014 0:27	197,200
27	5,819.00	8,524.00	100.1	3,995.00	0.99	3,179.00	5,209	1/5/2014 5:00	1/5/2014 6:13	195,600
28	5,430.00	8,806.00	100.4	5,430.00	1.2	3,520.00	5,326	1/5/2014 9:46	1/5/2014 11:01	199,600
29	5,850.00	8,890.00	98.3	5,331.00	1.18	3,522.00	5,170	1/5/2014 14:25	1/5/2014 15:41	200,800
30	6,721.00	8,773.00	96.7	5,610.00	1.22	3,765.00	6,127	1/5/2014 20:03	1/5/2014 21:43	201,100
31	6,728.00	8,510.00	96.7	4,132.00	1.01	3,105.00	6,104	1/6/2014 2:00	1/6/2014 3:30	200,800
32	6,027.00	8,709.00	92.8	4,713.00	1.21	3,399.00	5,538	1/6/2014 22:51	1/7/2014 0:17	200,400
33	5,682.00	8,743.00	91.2	4,870.00	1.12	3,219.00	6,077	1/7/2014 16:47	1/7/2014 19:17	202,300
34	5,972.00	8,960.00	94.0	5,103.00	1.15	3,721.00	5,203	1/8/2014 5:06	1/8/2014 6:22	202,100
35	5,851.00	8,912.00	92.0	4,715.00	1.1	3,374.00	4,992	1/8/2014 13:01	1/8/2014 14:15	202,100
36	5,807.00	8,848.00	93.0	4,901.00	1.02	3,560.00	5,295	1/8/2014 18:14	1/8/2014 19:40	198,500
37	6,088.00	8,923.00	92.3	5,127.00	1.16	3,254.00	5,137	1/8/2014 23:15	1/9/2014 0:29	200,200
38	6,551.00	8,874.00	96.7	4,607.00	1.08	3,248.00	5,287	1/9/2014 4:00	1/9/2014 5:15	199,400
39	6,712.00	8,846.00	96.4	4,083.00	1.01	3,220.00	5,037	1/9/2014 8:35	1/9/2014 10:10	202,100
40	6,977.00	8,579.00	97.9	4,791.00	1.11	3,421.00	4,967	1/9/2014 12:42	1/9/2014 13:51	202,500
41	6,457.00	8,348.00	99.3	5,123.00	1.16	3,577.00	4,889	1/9/2014 16:37	1/9/2014 17:49	199,900
42	6,305.00	8,331.00	99.2	5,076.00	1.15	3,512.00	5,094	1/9/2014 8:35	1/9/2014 0:00	199,800
43	6,714.00	8,901.00	97.6	5,201.00	1.17	3,591.00	5,136	1/10/2014 1:15	1/10/2014 2:30	200,800
44	6,840.00	8,652.00	96.0	4,767.00	1.11	3,526.00	4,888	1/10/2014 6:59	1/10/2014 8:23	199,300
45	7,077.00	8,856.00	93.7	4,699.00	1.1	3,434.00	4,944	1/10/2014 11:24	1/10/2014 12:35	201,800
46	6,543.00	8,569.00	98.9	5,097.00	1.15	3,557.00	4,890	1/10/2014 15:00	1/10/2014 16:10	199,800
47	6,345.00	8,120.00	98.1	5,185.00	1.17	3,513.00	5,347	1/10/2014 18:43	1/10/2014 21:27	200,500
48	7,062.00	8,414.00	99.7	4,976.00	1.14	3,488.00	5,366	1/11/2014 0:30	1/11/2014 2:00	202,500
49	6,447.00	8,395.00	98.5	5,104.00	1.15	3,556.00	5,152	1/11/2014 5:00	1/11/2014 6:30	199,800
50	8,033.00	8,180.00	100.0	5,400.00	1.2	3,735.00	4,885	1/11/2014 11:00	1/11/2014 12:24	201,300
51	6,577.00	8,087.00	99.9	5,610.00	1.23	3,691.00	4,878	1/11/2014 14:43	1/11/2014 15:54	201,300
52	6,477.00	7,896.00	99.6	4,989.00	1.14	3,511.00	5,140	1/11/2014 21:02	1/11/2014 22:14	200,400
53	6,661.00	7,847.00	99.1	5,132.00	1.16	3,743.00	5,085	1/12/2014 0:45	1/12/2014 2:00	200,800
54	6,655.00	7,750.00	98.5	5,523.00	1.22	4,057.00	5,170	1/12/2014 5:15	1/12/2014 6:44	204,100
55	7,751.00	8,004.00	99.5	5,403.00	1.2	4,075.00	4,810	1/12/2014 10:34	1/12/2014 11:56	200,500
56	7,929.00	7,944.00	99.8	5,326.00	1.19	4,103.00	4,874	1/12/2014 14:10	1/12/2014 15:07	199,800
57	7,020.00	8,118.00	98.3	5,121.00	1.16	3,799.00	5,025	1/12/2014 17:42	1/12/2014 18:52	200,200
58	8,780.00	8,626.00	72.9	4,828.00	1.12	3,686.00	8,310	1/12/2014 21:45	1/13/2014 0:30	201,900
59	6,831.00	7,843.00	99.3	5,283.00	1.18	3,972.00	4,903	1/13/2014 3:05	1/13/2014 4:30	200,300
60	6,503.00	7,921.00	100.5	4,238.00	1.03	3,282.00	4,787	1/13/2014 11:46	1/13/2014 13:12	201,800

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