

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: 9/5/2013  
API #: 47-103-02620

Farm name: Richard Underwood Operator Well No.: 513134

LOCATION: Elevation: 941' Quadrangle: Big Run

District: Grant County: Wetzel, WV  
Latitude: 10,090' Feet South of 80 Deg. 30 Min. 00 Sec.  
Longitude 6,090' Feet West of 39 Deg. 35 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	30	65	65	165
Agent: Cecil Ray	13 3/8	765	765	1,015
Inspector: David Scranage	9 5/8	3,133	3,133	1,303
Date Permit Issued: 1/26/2011	5 1/2	9,293	9,293	1,240
Date Well Work Commenced: 1/21/2013				
Date Well Work Completed: 5/7/2013				
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): 7,247'				
Total Measured Depth (ft): 9,316'				
Fresh Water Depth (ft.): 80', 657'				
Salt Water Depth (ft.): 1,543'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 200', 457', 542', 630'				
Void(s) encountered (N/Y) Depth(s) No				

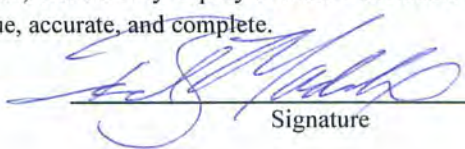
OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,041  
Gas: Initial open flow NA MCF/d Oil: Initial open flow NA Bbl/d  
Final open flow NA MCF/d Final open flow NA Bbl/d  
Time of open flow between initial and final tests NA Hours  
Static rock Pressure NA psig (surface pressure) after NA 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

JAN 28 2014  
WV Department of 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

9/5/2013  
Date

03/07/2014

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 Yes, MWD Gamma, Gyro, & 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:

## See Attachment

No FB data at this time - will send amended report once well is flowed back

Re-perforated stage 4 due to high pressures; high pressures remained so perforated stage 5 - did not set plug in between 4 and 5 - fractured as one big stage

Plug Back Details Including Plug Type and Depth(s): N/A

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth \_\_\_\_\_  
Surface: \_\_\_\_\_

SAND / SHALE / / 200 / 200 -- COAL / 200 / 203 / 3 --

SAND / SHALE / 203 / 457 / 254 -- COAL / 457 / 460 / 3 -- SAND / SHALE / 460 / 542 / 82 --

COAL / 542 / 546 / 4 -- SAND / SHALE / 546 / 630 / 84 -- COAL / 630 / 636 / 6 --

SAND / SHALE / 636 / 1,732 / 1,096 -- MAXTON / 1,732 / 1,853 / 121 -- BIG LIME / 1,853 / 2,220 / 367 --

WEIR / 2,220 / 2,425 / 205 -- GANTZ / 2,425 / 2,540 / 115 -- 50F / 2,540 / 2,618 / 78 --

30F / 2,618 / 2,668 / 50 -- GORDON / 2,668 / 2,735 / 67 -- 4TH / 2,735 / 2,841 / 106 --

BAYARD / 2,841 / 3,327 / 486 -- WARREN / 3,327 / 3,469 / 142 -- SPEECHLEY / 3,469 / 3,855 / 386 --

BALLTOWN A / 3,855 / 4,314 / 459 -- RILEY / 4,314 / 4,938 / 624 -- BENSON / 4,938 / 5,356 / 418 --

ALEXANDER / 5,356 / 6,600 / 1,244 / -- SONYEA / 6,600 / 6,787 / 187 -- MIDDLESEX / 6,787 / 6,844 / 57 --

GENESSEE / 6,844 / 6,941 / 97 -- GENESEO / 6,941 / 6,990 / 49 -- TULLY / 6,990 / 6,997 / 7 --

HAMILTON / 6,997 / 7,041 / 44 -- MARCELLUS / 7,041 / 7,247 / 206 --

03/07/2014

0037  
02 13

513134 - Perforations

Zone/Stage	Date	Top Plug Depth (ftKB)	Bottom Plug Depth (ftKB)	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Shots/ft
Toe Pop	11/9/13 20:29	9,114.00	NA	9,266.00	9,269.00	NA
1	11/10/13 2:54	9,114.00	NA	9,128.00	9,220.00	4
2	11/10/13 6:45	8,964.00	9,114.00	8,978.00	9,100.00	4
3	11/10/13 11:07	8,814.00	8,964.00	8,828.00	8,950.00	4
4	11/10/13 17:09	8,664.00	8,814.00	8,678.00	8,800.00	4
4A	11/10/13 20:59	8,664.00	8,814.00	8,628.00	8,672.00	4
5	11/11/13 1:16	8,464.00	8,814.00	8,478.00	8,600.00	4
6	11/11/13 5:49	8,314.00	8,464.00	8,328.00	8,450.00	4
7	11/11/13 11:12	8,163.00	8,314.00	8,178.00	8,300.00	4
8	11/11/13 15:25	8,014.00	8,163.00	8,028.00	8,149.00	4
9	11/11/13 18:50	7,864.00	8,014.00	7,878.00	8,000.00	4
10	11/11/13 22:09	7,714.00	7,864.00	7,730.00	7,850.00	4
11	11/12/13 2:48	NA	7,714.00	7,578.00	7,700.00	4

03/07/2014

001100  
11/10

00

513134 - Stimulated Stages

Zone/Stage	P Break (psi)	Avg Treat Pressure (psi)	Avg rate (bbl/min)	ISIP (psi)	Frac Gradient (psi/ft)	15 Min. SIP (psi)	Fluid Volume (bbl)	Start Date	End Date	Proppant (lb)
Toe Pop	NA	7,920.0	12.0	NA	NA	NA	89,562	11/9/2013 21:33	11/10/2013 1:14	NA
1	4,352.00	8,469.0	94.6	6,335.00	1.31	5,515.00	207,503	11/10/2013 4:19	11/10/2013 5:30	199,870
2	7,830.00	8,525.0	88.8	6,491.00	1.33	5,643.00	199,972	11/10/2013 8:39	11/10/2013 9:52	189,140
3	8,456.00	8,367.0	91.4	6,455.00	1.33	5,513.00	205,988	11/10/2013 14:43	11/10/2013 15:56	200,062
4	9,343.00	8,022.0	32.8	6,573.00	1.35	5,990.00	78,898	11/10/2013 18:01	11/10/2013 18:59	2,500
4A	NA	8,740.0	66.7	6,571.00	1.35	5,600.00	106,285	11/10/2013 21:44	11/10/2013 22:37	13,595
5	NA	8,123.0	100.0	5,974.00	1.27	5,459.00	406,735	11/11/2013 2:26	11/11/2013 4:22	401,624
6	7,875.00	8,228.0	96.9	6,158.00	1.29	5,231.00	202,694	11/11/2013 8:51	11/11/2013 10:00	201,157
7	7,783.00	8,149.0	92.6	6,359.00	1.32	5,593.00	210,438	11/11/2013 12:39	11/11/2013 13:57	200,685
8	8,335.00	8,169.0	98.1	6,115.00	1.29	5,374.00	198,735	11/11/2013 16:31	11/11/2013 17:39	203,205
9	8,098.00	8,189.0	98.0	6,355.00	1.32	5,680.00	206,173	11/11/2013 19:36	11/11/2013 20:46	200,207
10	7,669.00	8,228.0	99.6	6,423.00	1.33	5,488.00	207,876	11/12/2013 0:24	11/12/2013 1:30	200,327
11	7,833.00	8,037.0	100.1	5,574.00	1.21	4,450.00	208,535	11/12/2013 4:03	11/12/2013 5:10	200,011

03/07/2014