

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: 10/23/2013
API #: 47-1706061

JR #

Final pm

Farm name: Patty J & R Keith Cihfield & David Wentz Operator Well No.: 514209

LOCATION: Elevation: 1179 Quadrangle: Smithburg 7.5

District: Grant County: Doddridge
Latitude: 2797 Feet South of 39 Deg. 22 Min. 30 Sec.
Longitude 8645 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 AVE, PITTSBURGH, PA 15222	20	40	40	45
Agent: CECIL RAY	13-3/8"	1020	1020	1035
Inspector: DAVID SCRANAGE	9-5/8"	5322	5322	2105
Date Permit Issued: 6/18/2012	5-1/2"	15054	15054	2466
Date Well Work Commenced: 5/4/2013				
Date Well Work Completed: 10/22/2013				
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): 7135				
Total Measured Depth (ft): 15056				
Fresh Water Depth (ft.): 344				
Salt Water Depth (ft.): 1187				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				
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) 7.074
Gas: Initial open flow 1,416 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 12,117 MCF/d Final open flow 48 Bbl/d
Time of open flow between initial and final tests 65 Hours
Static rock Pressure 3,265 psig (surface pressure) after 54 Hours

Second producing formation NA Pay zone depth (ft) NA
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.


Signature

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Office of Oil and Gas
JUL 11 2014
WV Department of Environmental Protection
Date

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17-06061

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 MWD, Gyro, GAMMA, CBL

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

Stage 1 Toe Pop required a lot of fluid to establish injection test for P&P pump-down

Amended Report with Flow Back Data

Plug Back Details Including Plug Type and Depth(s): Drilled to 4608' ran gyro, decided to plug back to avoid collision with well # 513165. Pumped 769 cuft of cmt from 4608' to 1530'. Sidetracked off of cement plug. Saw 100% new formation at 1571'.

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

Sand/Shale 0/2482 -- Weir 2482/2671 -- Berea 2671/ 2685 -- Gantz 2685/2752
Fifty Foot 2752/2862 -- Thirty Foot 2862/ 2885 -- Gordon 2885/3039 -- Fourth Sand 3039/ 3179 -- Fifth Sand 3179/3536
Warren 3536/3759 -- Speechly 3759/4096-- Balltown A 4096/4142 -- Balltown B 4142/4485
Bradford 4485/5216 -- Benson 5216/5605-- Alexander 5605/6044 -- Elk 6044/6666-- Rhinestreet 6666/6810
Sonyea 6666/6810 -- Middlesex 6810/6846-- Genesee 6846/6961 -- Geneseo 6961/6994
Tully 6994/7020 -- Hamilton 7020/7074 -- Marcellus 7074/7135

17-06061

514209 - Perforations

Zone/Stage	Date	Top Plug Depth (ftKB)	Bottom Plug Depth (ftKB)	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Shots/ft
Toe Pop	2/12/14 20:42	14,893.00	NA	15,028.00	15,031.00	NA
1	2/12/14 21:46	14,893.00	NA	14,907.00	14,999.00	4
2	2/13/14 2:30	14,743.00	14,893.00	14,757.00	14,879.00	4
3	2/13/14 7:57	14,593.00	14,743.00	14,607.00	14,729.00	4
4	2/13/14 18:29	14,443.00	14,593.00	14,457.00	14,579.00	4
5	2/14/14 1:56	14,293.00	14,443.00	14,307.00	14,426.00	4
6	2/14/14 7:07	14,143.00	14,293.00	14,157.00	14,279.00	4
7	2/14/14 12:29	13,993.00	14,143.00	14,007.00	14,129.00	4
8	2/14/14 19:35	13,843.00	13,993.00	13,857.00	13,979.00	4
9	2/15/14 2:30	13,693.00	13,843.00	13,707.00	13,829.00	4
10	2/15/14 7:17	13,543.00	13,693.00	13,557.00	13,679.00	4
11	2/15/14 23:44	13,393.00	13,543.00	13,407.00	13,529.00	4
12	2/16/14 8:19	13,243.00	13,393.00	13,257.00	13,379.00	4
13	2/16/14 12:41	13,093.00	13,243.00	13,107.00	13,229.00	4
14	2/16/14 18:30	12,943.00	13,093.00	12,957.00	13,079.00	4
15	2/17/14 5:20	12,793.00	12,943.00	12,807.00	12,929.00	4
16	2/17/14 9:17	12,643.00	12,793.00	12,657.00	12,779.00	4
17	2/17/14 16:45	12,493.00	12,643.00	12,507.00	12,629.00	4
18	2/17/14 22:41	12,343.00	12,493.00	12,357.00	12,479.00	4
19	2/18/14 1:40	12,193.00	12,343.00	12,207.00	12,329.00	4
20	2/18/14 9:48	12,043.00	12,193.00	12,057.00	12,179.00	4
21	2/18/14 15:09	11,893.00	12,043.00	11,907.00	12,029.00	4
22	2/18/14 20:51	11,743.00	11,893.00	11,757.00	11,879.00	4
23	2/19/14 0:53	11,593.00	11,743.00	11,607.00	11,729.00	4
24	2/19/14 5:56	11,443.00	11,593.00	11,457.00	11,579.00	4
25	2/19/14 11:08	11,293.00	11,443.00	11,307.00	11,429.00	4
26	2/19/14 15:43	11,143.00	11,293.00	11,162.00	11,279.00	4
27	2/19/14 20:08	10,993.00	11,143.00	11,007.00	11,129.00	4
28	2/20/14 0:30	10,843.00	10,993.00	10,857.00	10,979.00	4
29	2/20/14 6:01	10,693.00	10,843.00	10,707.00	10,829.00	4
30	2/20/14 10:11	10,540.00	10,693.00	10,557.00	10,679.00	4
31	2/20/14 12:18	10,393.00	10,540.00	10,407.00	10,526.00	4
32	2/20/14 17:27	10,240.00	10,393.00	10,257.00	10,379.00	4
33	2/20/14 23:04	10,093.00	10,240.00	10,107.00	10,229.00	4
34	2/21/14 5:37	9,943.00	10,093.00	9,957.00	10,079.00	4
35	2/21/14 10:45	9,793.00	9,943.00	9,807.00	9,929.00	4
36	2/21/14 14:00	9,643.00	9,793.00	9,657.00	9,777.00	4
37	2/21/14 21:01	9,493.00	9,643.00	9,507.00	9,629.00	4
38	2/22/14 1:28	9,343.00	9,493.00	9,357.00	9,479.00	4
39	2/22/14 4:15	9,193.00	9,343.00	9,207.00	9,329.00	4
40	2/22/14 10:00	9,043.00	9,193.00	9,057.00	9,179.00	4
41	2/22/14 19:15	8,893.00	9,043.00	8,907.00	9,029.00	4
42	2/22/14 22:44	8,743.00	8,893.00	8,757.00	8,879.00	4
43	2/23/14 2:37	8,593.00	8,743.00	8,607.00	8,729.00	4
44	2/23/14 6:38	8,443.00	8,593.00	8,457.00	8,579.00	4
45	2/23/14 10:49	8,293.00	8,443.00	8,310.00	8,429.00	4
46	2/23/14 15:10	8,143.00	8,293.00	8,157.00	8,279.00	4
47	2/23/14 18:56	NA	8,143.00	8,007.00	8,129.00	4

09/19/2014

17-06061

514209 - 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	7,782.00	20.3	NA	NA	NA	2,187	2/12/2014 20:01	2/12/2014 20:09	NA
1	5,963.00	8,353.00	80.7	3,710.00	0.95	2,862.00	5,328	2/12/2014 23:51	2/13/2014 1:24	199,300
2	6,416.00	8,091.00	81.5	4,237.00	1.03	3,038.00	5,469	2/13/2014 5:21	2/13/2014 6:58	203,300
3	6,103.00	8,523.00	90.7	4,288.00	1.03	3,187.00	5,184	2/13/2014 10:29	2/13/2014 11:58	201,300
4	6,283.00	8,528.00	92.3	4,525.00	1.07	3,503.00	5,218	2/13/2014 20:54	2/13/2014 22:13	200,000
5	6,472.00	8,296.00	90.4	4,873.00	1.12	3,570.00	5,462	2/14/2014 4:48	2/14/2014 6:21	197,800
6	5,901.00	8,567.00	86.9	4,346.00	1.04	3,385.00	5,309	2/14/2014 7:05	2/14/2014 9:10	199,900
7	6,415.00	8,771.00	90.8	4,340.00	1.04	3,437.00	5,354	2/14/2014 16:12	2/14/2014 17:41	199,900
8	6,133.00	8,556.00	93.5	5,003.00	1.13	3,510.00	5,232	2/14/2014 23:16	2/15/2014 0:36	200,200
9	6,316.00	8,623.00	95.0	4,535.00	1.07	3,374.00	5,108	2/15/2014 5:11	2/15/2014 6:32	199,500
10	6,167.00	8,647.00	98.6	4,470.00	1.06	3,410.00	5,297	2/15/2014 20:36	2/15/2014 21:56	198,300
11	6,574.00	8,502.00	98.9	4,640.00	1.08	3,604.00	5,155	2/16/2014 6:12	2/16/2014 7:34	200,800
12	5,848.00	8,441.00	99.8	4,244.00	1.03	3,326.00	5,220	2/16/2014 8:19	2/16/2014 10:14	200,100
13	5,840.00	8,621.00	97.1	3,939.00	0.99	3,205.00	5,240	2/16/2014 15:18	2/16/2014 16:43	199,300
14	6,206.00	8,306.00	98.4	4,297.00	1.04	3,224.00	4,955	2/17/2014 2:10	2/17/2014 3:32	200,800
15	5,778.00	8,314.00	97.2	4,602.00	1.08	3,574.00	5,280	2/17/2014 7:50	2/17/2014 8:24	199,700
16	6,160.00	8,730.00	96.6	4,538.00	1.07	3,313.00	5,042	2/17/2014 13:41	2/17/2014 14:59	202,700
17	6,162.00	8,666.00	95.6	5,316.00	1.18	3,596.00	5,114	2/17/2014 18:07	2/17/2014 19:22	199,900
18	6,402.00	8,504.00	97.7	5,146.00	1.16	3,465.00	5,000	2/17/2014 22:41	2/17/2014 23:55	196,900
19	6,504.00	8,411.00	97.7	5,331.00	1.18	3,846.00	5,012	2/18/2014 7:42	2/18/2014 8:57	200,200
20	6,000.00	8,343.00	99.8	5,137.00	1.15	3,701.00	4,990	2/18/2014 13:18	2/19/2014 14:31	201,400
21	5,982.00	8,587.00	98.9	4,761.00	1.1	3,297.00	5,132	2/18/2014 18:50	2/18/2014 20:02	202,600
22	6,124.00	8,385.00	100.4	4,888.00	1.12	3,372.00	4,979	2/18/2014 23:00	2/19/2014 0:08	200,700
23	7,021.00	8,296.00	100.1	5,154.00	1.16	3,509.00	4,975	2/19/2014 3:05	2/19/2014 4:14	197,700
24	6,382.00	8,206.00	100.4	5,114.00	1.15	3,517.00	5,080	2/19/2014 8:26	2/19/2014 9:38	199,600
25	6,198.00	8,186.00	100.2	5,195.00	1.16	3,670.00	5,155	2/19/2014 12:57	2/19/2014 14:10	199,400
26	6,429.00	8,285.00	101.4	4,919.00	1.12	3,594.00	5,067	2/19/2014 18:11	2/19/2014 19:21	200,200
27	6,816.00	8,183.00	100.4	5,327.00	1.18	3,652.00	5,063	2/19/2014 22:29	2/19/2014 23:40	200,300
28	6,091.00	8,357.00	98.0	5,258.00	1.17	3,581.00	5,164	2/20/2014 3:17	2/20/2014 4:28	201,300
29	5,848.00	7,877.00	99.5	5,094.00	1.15	3,692.00	5,072	2/20/2014 7:37	2/20/2014 8:49	199,300
30	6,402.00	8,171.00	98.3	5,188.00	1.16	3,675.00	5,131	2/20/2014 11:42	2/20/2014 12:54	202,600
31	6,023.00	8,254.00	94.7	5,199.00	1.16	3,585.00	5,131	2/20/2014 15:35	2/20/2014 16:49	199,900
32	7,378.00	8,498.00	92.6	5,245.00	1.17	3,476.00	6,107	2/20/2014 20:48	2/20/2014 22:18	200,900
33	6,188.00	8,163.00	100.4	5,262.00	1.17	3,524.00	4,570	2/21/2014 1:08	2/21/2014 2:11	200,600
34	6,180.00	7,971.00	100.1	5,297.00	1.18	3,758.00	5,050	2/21/2014 7:03	2/21/2014 8:12	200,100
35	6,317.00	7,983.00	99.8	5,269.00	1.17	3,808.00	5,014	2/21/2014 11:13	2/21/2014 12:22	200,100
36	6,804.00	8,041.00	100.2	5,239.00	1.17	3,671.00	4,746	2/21/2014 19:12	2/21/2014 20:18	202,200
37	6,214.00	7,841.00	100.5	5,313.00	1.18	3,699.00	4,553	2/21/2014 22:51	2/21/2014 23:53	200,300
38	6,509.00	7,748.00	100.6	4,886.00	1.12	3,260.00	4,649	2/22/2014 2:25	2/22/2014 3:28	200,800
39	6,264.00	8,229.00	74.4	5,392.00	1.19	3,787.00	5,930	2/22/2014 7:04	2/22/2014 10:12	200,700
40	6,368.00	7,896.00	100.1	5,347.00	1.19	3,847.00	5,061	2/22/2014 16:23	2/22/2014 17:32	201,300
41	7,906.00	7,892.00	99.4	5,217.00	1.17	3,821.00	4,911	2/22/2014 20:53	2/22/2014 22:00	199,800
42	6,953.00	7,773.00	100.5	5,073.00	1.15	3,636.00	4,679	2/23/2014 0:17	2/23/2014 1:19	202,000
43	7,169.00	7,852.00	100.8	5,132.00	1.16	3,203.00	4,688	2/23/2014 4:18	2/23/2014 5:21	200,300
44	6,552.00	8,196.00	100.0	5,656.00	1.23	3,781.00	5,018	2/23/2014 8:19	2/23/2014 9:28	198,400
45	5,492.00	7,987.00	100.2	4,026.00	1	2,932.00	5,019	2/23/2014 12:51	2/23/2014 15:59	199,400
46	6,915.00	7,512.00	99.7	4,356.00	1.05	2,946.00	4,662	2/23/2014 17:03	2/23/2014 18:08	199,600
47	7,212.00	7,636.00	99.8	3,208.00	0.89	2,692.00	4,485	2/23/2014 20:47	2/23/2014 21:56	201,400

09/19/2014