

PM

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

DATE: 10/29/2013
API #: 47-10302827

Farm name: Richard Dallison ET AL Operator Well No.: 513875

LOCATION: Elevation: 1452 Quadrangle: Big Run 7.5'

District: Grant County: Wetzel
Latitude: 5147 Feet South of 39 Deg. 32 Min. 30 Sec.
Longitude 11484 Feet West of 80 Deg. 32 Min. 30 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	20"	40	40	44.84
Agent: Rex C. Ray	13-3/8"	1001	1001	1011.5
Inspector: Derek Haught	9-5/8"	2727	2727	1262.5
Date Permit Issued: 10/29/2012	5-1/2"	16150	16150	2975.95
Date Well Work Commenced: 2/25/2013				
Date Well Work Completed: 10/25/2013				
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): 7680				
Total Measured Depth (ft): 16150				
Fresh Water Depth (ft.): 783				
Salt Water Depth (ft.): 2260, 2373				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 737, 807, 922, 1012, 1244				
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) 7,223.5
 Gas: Initial open flow 251 MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 8,866 MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 107 Hours
 Static rock Pressure 1,715 psig (surface pressure) after 109 Hours

Second producing formation No Second Formation 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

9/8/2014
Date

01/23/2015

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 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

Re-perforated stage 53 (53.1)

Performed additional injection test prior to stage 42

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

Formations Encountered: Surface:	Top Depth	/	Bottom Depth
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Sand/Shale 0737/737			Benson 5633.8/5953.1/319.3
Coal 737/738/1			Alexander 5953.1/6872.2/919.1
Sand/Shale 738/807/69			Rhinestreet 6872.2/6877.7/5.5
Coal 807/ 817/10			Sonyea 6877.7/7001.9/124.2
Sand/Shale 817/922/105			Middlesex 7001.9/7043.7/41.8
Coal 922/927/5			Genessee 7043.7/7113.3/69.6
Sand/Shale 927/1012/85			Geneseo 7113.3/7134.8/21.5
Coal 1012/1022/10			Tully 7134.8/7151.3/16.5
Sand/Shale 1022/1244/222			Hamilton 7151.3/7223.5/72.2
Coal 1244/1,250/ 6			Marcellus 7223.5/7680/456.5
Sand/Shale 1,250 /2481.1/ 1241.1			
Big Lime 2481.1/3958.4/1477.1			
Warren 3958.4/4109.7/151.3			
Speechley 4109.7/4999/889.3			
Riley 4999/5633.8/634.9			

513875 - Perforations

Zone/Stage	Date	Top Plug Depth (ftKB)	Bottom Plug Depth (ftKB)	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Shots/ft
Initiation Sleeve	5/25/2014	15,989.00	NA	16,124.00	16,126.00	NA
1	5/25/2014	15,989.00	NA	16,003.00	16,095.00	4
2	5/26/2014	15,839.00	15,989.00	15,853.00	15,975.00	4
3	5/26/2014	15,689.00	15,839.00	15,703.00	15,825.00	4
4	5/27/2014	15,539.00	15,689.00	15,553.00	15,675.00	4
5	5/27/2014	15,389.00	15,539.00	15,403.00	15,525.00	4
6	5/28/2014	15,239.00	15,389.00	15,253.00	15,375.00	4
7	5/28/2014	15,089.00	15,239.00	15,103.00	15,225.00	4
8	5/28/2014	14,939.00	15,089.00	14,953.00	15,075.00	4
9	5/28/2014	14,789.00	14,939.00	14,803.00	14,925.00	4
10	5/29/2014	14,639.00	14,789.00	14,653.00	14,775.00	4
11	5/29/2014	14,489.00	14,639.00	14,503.00	14,625.00	4
12	5/29/2014	14,339.00	14,489.00	14,353.00	14,475.00	4
13	5/29/2014	14,189.00	14,339.00	14,203.00	14,325.00	4
14	6/1/2014	14,039.00	14,189.00	14,053.00	14,175.00	4
15	6/2/2014	13,889.00	14,039.00	13,903.00	14,025.00	4
16	6/2/2014	13,739.00	13,889.00	13,753.00	13,875.00	4
17	6/2/2014	13,589.00	13,739.00	13,603.00	13,725.00	4
18	6/2/2014	13,439.00	13,589.00	13,453.00	13,575.00	4
19	6/2/2014	13,289.00	13,439.00	13,303.00	13,425.00	4
20	6/3/2014	13,139.00	13,289.00	13,153.00	13,275.00	4
21	6/3/2014	12,989.00	13,139.00	13,003.00	13,123.00	4
22	6/3/2014	12,839.00	12,989.00	12,853.00	12,975.00	4
23	6/3/2014	12,689.00	12,839.00	12,703.00	12,825.00	4
24	6/3/2014	12,539.00	12,689.00	12,553.00	12,675.00	4
25	6/4/2014	12,389.00	12,539.00	12,523.00	12,403.00	4
26	6/4/2014	12,239.00	12,389.00	12,253.00	12,375.00	4
27	6/4/2014	12,089.00	12,239.00	12,103.00	12,225.00	4
28	6/4/2014	11,939.00	12,089.00	11,953.00	12,075.00	4
29	6/5/2014	11,789.00	11,939.00	11,803.00	11,923.00	4
30	6/5/2014	11,639.00	11,789.00	11,775.00	11,653.00	4
31	6/5/2014	11,489.00	11,639.00	11,503.00	11,625.00	4
32	6/5/2014	11,339.00	11,489.00	11,355.00	11,475.00	4
33	6/5/2014	11,189.00	11,339.00	11,203.00	11,323.00	4
34	6/6/2014	11,039.00	11,189.00	11,053.00	11,173.00	4
35	6/6/2014	10,889.00	11,039.00	10,903.00	11,025.00	4
36	6/6/2014	10,739.00	10,889.00	10,753.00	10,876.00	4
37	6/6/2014	10,589.00	10,739.00	10,603.00	10,725.00	4
38	6/6/2014	10,439.00	10,589.00	10,453.00	10,575.00	4
39	6/7/2014	10,289.00	10,439.00	10,303.00	10,425.00	4
40	6/7/2014	10,139.00	10,289.00	10,153.00	10,273.00	4
41	6/7/2014	9,989.00	10,139.00	10,003.00	10,125.00	4
42	6/9/2014	9,839.00	9,989.00	9,853.00	9,975.00	4
43	6/9/2014	9,689.00	9,839.00	9,703.00	9,825.00	4
44	6/9/2014	9,539.00	9,689.00	9,553.00	9,675.00	4
45	6/9/2014	9,389.00	9,539.00	9,403.00	9,525.00	4
46	6/10/2014	9,239.00	9,389.00	9,253.00	9,375.00	4
47	6/10/2014	9,089.00	9,239.00	9,103.00	9,225.00	4
48	6/11/2014	8,939.00	9,089.00	8,953.00	9,074.00	4
49	6/11/2014	8,789.00	8,939.00	8,803.00	8,925.00	4
50	6/11/2014	8,642.00	8,789.00	8,653.00	8,775.00	4
51	6/11/2014	8,489.00	8,642.00	8,503.00	8,625.00	4
52	6/11/2014	8,339.00	8,489.00	8,353.00	8,475.00	4
53	6/11/2014	NA	8,339.00	8,203.00	8,325.00	4
53.1	6/12/2014	NA	8,339.00	8,218.00	8,302.00	4

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513875 - 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)
Initiation Sleeve	NA	7,605.00	14.5	NA	NA	NA	1,470	5/25/2014 13:27	5/25/2014 16:31	NA
1	6,229.00	8,557.00	75.3	4,463.00	1.01	3,258.00	6,167	5/25/2014 6:14	5/25/2014 7:58	200,140
2	6,387.00	8,721.00	82.7	5,114.00	1.1	3,362.00	5,463	5/26/2014 11:46	5/26/2014 13:12	201,900
3	5,929.00	8,950.00	79.4	6,123.00	1.23	4,377.00	6,101	5/27/2014 1:52	5/27/2014 3:47	163,600
4	6,380.00	8,827.00	83.5	5,869.00	1.2	4,417.00	5,350	5/27/2014 11:15	5/27/2014 12:44	200,300
5	5,761.00	8,831.00	86.3	4,864.00	1.07	3,576.00	5,482	5/27/2014 21:28	5/27/2014 23:02	200,100
6	5,579.00	8,814.00	89.4	4,267.00	0.99	3,508.00	5,344	5/28/2014 2:38	5/27/2014 4:05	200,400
7	6,119.00	8,794.00	91.0	5,057.00	1.09	3,662.00	5,397	5/27/2014 7:33	5/27/2014 8:53	201,320
8	5,790.00	8,974.00	86.7	5,503.00	1.15	3,723.00	5,219	5/27/2014 11:48	5/27/2014 13:10	200,720
9	5,722.00	8,826.00	89.0	5,254.00	1.12	3,555.00	5,172	5/27/2014 19:22	5/27/2014 20:48	200,800
10	5,715.00	8,928.00	86.4	5,661.00	1.17	3,923.00	5,378	5/27/2014 3:11	5/27/2014 4:39	200,420
11	5,904.00	8,812.00	87.6	5,096.00	1.1	3,551.00	5,239	5/29/2014 7:39	5/29/2014 8:59	202,100
12	6,130.00	8,924.00	89.4	5,515.00	1.15	3,855.00	5,174	5/29/2014 12:00	5/29/2014 13:20	200,700
13	5,912.00	8,828.00	92.2	4,892.00	1.07	3,648.00	5,287	5/29/2014 15:51	5/29/2014 17:08	199,520
14	5,518.00	8,839.00	89.5	5,322.00	1.13	3,830.00	5,287	6/1/2014 23:06	6/2/2014 0:32	200,900
15	5,461.00	8,955.00	86.6	6,101.00	1.23	4,377.00	5,287	6/2/2014 3:35	6/2/2014 5:03	200,600
16	5,726.00	8,731.00	90.5	5,164.00	1.11	4,259.00	5,371	6/2/2014 9:37	6/2/2014 11:00	199,020
17	5,826.00	8,979.00	85.4	5,136.00	1.1	4,041.00	5,324	5/30/2014 13:54	5/30/2014 15:17	199,980
18	5,622.00	8,895.00	87.7	5,025.00	1.09	3,895.00	5,197	6/2/2014 18:58	6/2/2014 20:21	200,120
19	5,575.00	8,727.00	84.9	5,586.00	1.16	4,306.00	5,244	6/2/2014 22:58	6/3/2014 0:23	200,940
20	5,704.00	8,913.00	98.8	5,583.00	1.16	4,481.00	5,129	6/3/2014 3:56	6/3/2014 5:12	192,080
21	5,593.00	8,810.00	99.2	5,579.00	1.16	4,557.00	5,271	6/3/2014 9:15	6/3/2014 10:29	201,180
22	5,604.00	8,565.00	98.7	5,533.00	1.15	4,578.00	5,316	6/3/2014 13:46	6/3/2014 15:00	200,400
23	5,561.00	8,759.00	98.2	5,257.00	1.12	4,338.00	5,278	6/3/2014 18:43	6/3/2014 20:05	200,120
24	5,470.00	8,788.00	99.0	4,960.00	1.08	4,081.00	5,288	6/3/2014 22:36	6/3/2014 23:59	199,860
25	5,583.00	8,702.00	100.7	5,329.00	1.13	3,998.00	5,329	6/4/2014 3:21	6/4/2014 4:38	199,840
26	5,654.00	8,336.00	99.7	4,857.00	1.07	3,655.00	5,288	6/4/2014 8:32	6/4/2014 9:48	200,780
27	5,647.00	8,710.00	98.0	5,175.00	1.11	3,895.00	5,208	6/4/2014 13:23	6/4/2014 14:40	200,540
28	5,697.00	8,715.00	99.8	5,071.00	1.09	4,066.00	5,115	6/4/2014 18:17	6/4/2014 19:33	200,000
29	5,625.00	8,848.00	96.8	4,703.00	1.05	3,941.00	5,088	6/4/2014 11:06	6/5/2014 0:22	200,600
30	5,615.00	8,737.00	100.0	5,525.00	1.15	4,374.00	5,717	6/5/2014 2:42	6/5/2014 4:24	200,560
31	5,647.00	8,883.00	97.2	5,010.00	1.09	3,877.00	5,267	6/5/2014 11:00	6/5/2014 12:18	200,320
32	5,901.00	8,803.00	95.0	4,892.00	1.07	3,748.00	5,273	6/5/2014 17:05	6/5/2014 18:22	199,900
33	5,890.00	8,796.00	99.0	4,753.00	1.05	4,070.00	5,099	6/5/2014 20:37	6/5/2014 21:37	199,800
34	5,883.00	8,827.00	99.0	5,286.00	1.12	4,181.00	5,152	6/6/2014 2:12	6/6/2014 3:29	200,120
35	5,711.00	8,618.00	99.4	5,289.00	1.12	4,170.00	5,268	6/6/2014 7:21	6/6/2014 8:34	200,970
36	5,919.00	8,815.00	99.8	5,665.00	1.17	4,799.00	5,113	6/6/2014 13:32	6/6/2014 14:45	200,640
37	5,661.00	8,531.00	99.5	4,925.00	1.07	3,973.00	5,229	6/6/2014 19:04	6/6/2014 22:00	199,860
38	5,668.00	8,634.00	98.0	4,638.00	1.04	3,748.00	5,032	6/7/2014 0:35	6/7/2014 1:48	199,880
39	5,640.00	8,784.00	100.0	5,336.00	1.13	4,206.00	5,087	6/7/2014 4:29	6/7/2014 5:41	199,880
40	5,815.00	8,831.00	100.5	5,411.00	1.14	4,249.00	5,279	6/7/2014 9:40	6/7/2014 11:22	200,420
41	5,658.00	8,723.00	69.5	7,617.00	1.42	NA	8,253	6/7/2014 15:57	6/8/2014 3:58	194,860
Inj Test	NA	5,550.00	6.8	5,418.00	0	NA	3,402	6/8/2014 21:10	6/9/2014 5:38	NA
42	5,636.00	8,671.00	100.1	5,522.00	1.15	4,295.00	5,128	6/9/2014 10:10	6/9/2014 11:32	200,040
43	5,693.00	8,073.00	100.7	5,490.00	1.15	4,442.00	5,074	6/9/2014 14:13	6/9/2014 15:24	199,740
44	5,615.00	8,499.00	101.0	5,039.00	1.09	4,070.00	4,990	6/9/2014 18:26	6/9/2014 19:39	199,700
45	5,525.00	8,215.00	100.6	5,239.00	1.12	4,141.00	5,072	6/10/2014 17:23	6/10/2014 18:35	200,265
46	5,407.00	8,128.00	100.9	5,400.00	1.14	4,503.00	5,094	6/10/2014 21:12	6/10/2014 22:22	200,160
47	5,461.00	8,012.00	100.5	4,907.00	1.07	4,052.00	5,107	6/11/2014 1:54	6/11/2014 3:04	193,160
48	5,550.00	7,905.00	100.9	5,254.00	1.12	4,209.00	4,952	6/11/2014 5:10	6/11/2014 6:19	200,000
49	5,872.00	8,184.00	100.6	5,057.00	1.09	4,056.00	4,991	6/11/2014 8:14	6/11/2014 9:53	199,940
50	6,087.00	8,486.00	100.3	5,507.00	1.15	4,553.00	5,003	6/11/2014 0:00	6/11/2014 0:00	199,840
51	5,922.00	8,392.00	100.4	5,182.00	1.11	4,181.00	4,991	6/11/2014 15:17	6/11/2014 16:26	200,040
52	5,554.00	8,379.00	97.3	5,314.00	1.12	4,309.00	4,981	6/11/2014 19:22	6/11/2014 20:34	199,700
53	5,590.00	8,366.00	52.9	5,364.00	1.13	4,145.00	2,424	6/12/2014 2:34	6/12/2014 3:32	144,748
53.1	6,552.00	8,520.00	98.8	4,853.00	1.06	3,891.00	5,013	6/12/2014 12:17	6/12/2014 13:33	136,120

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/25/2014
Job End Date:	6/12/2014
State:	West Virginia
County:	Wetzel
API Number:	47-103-02827-00-00
Operator Name:	EQT Production
Well Name and Number:	BIG192 - 513875
Longitude:	-80.58201200
Latitude:	39.52770300
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,680
Total Base Water Volume (gal):	12,849,757
Total Base Non Water Volume:	540,144



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Weatherford	Carrier	Water	7732-18-5	100.00000	90.57363	
Sand	Weatherford	Proppant	Crystalline Silica	14808-60-7	100.00000	8.93249	
MX-5	Halliburton	Biocide	Sodium Nitrate	7631-99-4	60.00000	0.05902	
Hydrochloric Acid 15%	Weatherford	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03316	
WFR-65LA	Weatherford	Friction Reducer	Distillates, Petroleum, Hydrotreated Light	64742-47-8	40.00000	0.01850	
			Ammonium acetate	631-61-8	5.00000	0.00231	
WPB-584L	Weatherford	Buffer	Potassium Hydroxide	1310-58-3	40.00000	0.00955	
			Potassium Carbonate	584-08-7	40.00000	0.00955	
WFR-61LA	Weatherford	Friction Reducer	Distillates, Petroleum, Hydrotreated Light	64742-47-8	40.00000	0.01478	
WGA-15L	Weatherford	Gelling Agent	Solvent naphtha, petroleum, heavy aliph	64742-96-7	60.00000	0.01414	

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MX-8	Halliburton	Biocide				
			Bacteria Culture	N/A	100.00000	0.01000
WSI-685L	Weatherford	Scale Inhibitor				
			Monoethanolamine Hydrochloride	2002-24-6	15.00000	0.00454
			Ammonium Chloride	12125-02-9	15.00000	0.00454
			Methyl Alcohol	67-56-1	2.50000	0.00076
WIC-641L	Weatherford	Iron Control				
			Citric Acid	77-92-9	60.00000	0.00154
WAI-251LC	Weatherford	Acid Inhibitor				
			Ethylene Glycol	107-21-1	40.00000	0.00017
			N,N-Dimethylformamide	68-12-2	20.00000	0.00009
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	15.00000	0.00006
			Cinnamaldehyde	104-55-2	15.00000	0.00006
			2-Butoxyethanol	111-76-2	15.00000	0.00006
			1-Decanol	112-30-1	5.00000	0.00002
			Poly(oxy-1,2-ethaned iyl), alpha.-(4-nonylphen yl)-. omega -hyd roxy- ,bran ched	127087-87-0	5.00000	0.00002
			Triethyl Phosphate	78-40-0	2.50000	0.00001
			1-Octanol	111-87-5	2.50000	0.00001
			Isopropanol	67-63-0	2.50000	0.00001
WBK-133	Weatherford	Breaker				
			Ammonium Persulfate	7727-54-0	100.00000	0.00049

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)