

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

DATE: 3/11/2013
API #: 47-091-01216

REVISED

Farm name: Charles H. Cather et al Operator Well No.: 513056

LOCATION: Elevation: 1,191' Quadrangle: Rosemont

District: Flemington County: Taylor, WV
Latitude: 15.120 Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 7.890 Feet West of 80 Deg. 07 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 15222	20	40	40	94.5
Agent: Cecil Ray	13 3/8	1,057	1,057	888
Inspector: Bryan Harris	9 5/8	2,847	2,847	1,077
Date Permit Issued: 3/24/2011	5 1/2	10,368	10,368	1,118
Date Well Work Commenced: 4/15/2011				
Date Well Work Completed: 11/15/2011				
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): 7,722'				
Total Measured Depth (ft): 10,376'				
Fresh Water Depth (ft.): 55', 330'				
Salt Water Depth (ft.): No visible show				
Is coal being mined in area (N/Y)? No.				
Coal Depths (ft.): 330', 525, 603'				
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) 7,502-7,710
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 2,782 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 2,848 psig (surface pressure) after 72 Hours

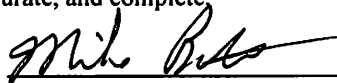
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Second producing formation No second formation. Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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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

3/11/2013
Date

06/21/2013

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 Yes, Gyro and MWD Gamma 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

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

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		

Sand/Shale / 0 / 330 / 330 -- Coal / 330 / 337 / 7 -- Red Rock / 337 / 525 / 188 -- Coal / 525 / 532 / 7
Sand/Shale / 532 / 603 / 71 -- Coal / 603 / 607 / 4 -- Sand/Shale / 607 / 1,120 / 513 -- Sandstone / 1,120 / 1,320 / 200
Big Lime / 1,320 / 1,424 / 104 -- Big Injun / 1,424 / 1,577 / 152 -- Weir Sand / 1,577 / 1,810 / 232
Gantz / 1,810 / 1,879 / 69 -- Fifty Foot / 1,879 / 1,949 / 70 -- -Thirty Foot / 1,949 / 2,008 / 58 --
Gordon / 2,008 / 2,128 / 119 -- -Fourth Sand / 2,128 / 2,343 / 215 -- Fifth Sand / 2,343 / 2,371 / 27
Bayard / 2,371 / 2,783 / 411 -- B-5 / 2,783 / 3,001 / 218 -- Speechley / 3,001 / 3,332 / 331
Bradford / 3,332 / 3,522 / 189 -- Balltown B / 3,522 / 3,717 / 194 -- Riley / 3,717 / 4,346 / 628
Benson / 4,346 / 4,704 / 358 -- Elk / 4,704 / 6,572 / 1,868 -- Sonyea / 6,572 / 6,901 / 328
Middlesex / 6,901 / 7,157 / 255 -- Genesee / 7,157 / 7,296 / 139 -- Geneseo / 7,296 / 7,316 / 20
Tully / 7,316 / 7,369 / 53 -- Hamilton / 7,369 / 7,502 / 132 -- Marcellus / 7,502 / 7,710 / 208
Onondaga / 7,710 / 7,722 / 12

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EQT WR- 35	Completion	Attachment	Well 513056	Treatment	Summary
Stage 1	Formation MARCELLUS	Frac Type Slickwater			
Date 11/10/2011	From / To 10228 - 10350	# of perfs	BD Press 6,482.00	ATP Psi 8,023.00	SIP Detail 5 Min: 5293 10 Min: 4894 15 Min: 4762
Avg Rate 97.00	Max Press PSI 9,128.00	ISIP 6,505.00	Frac Gradient 1.28		
Sand Proppant 197,522.00	Water-bbl 7,079.00	SCF N2	Acid-Gal 2,000.00		
Stage 2	Formation MARCELLUS	Frac Type Slickwater			
Date 11/12/2011	From / To 10078 - 10200	# of perfs	BD Press 6,357.00	ATP Psi 7,704.00	SIP Detail 5 Min: 4102 10 Min: 3802 15 Min: 3661
Avg Rate 99.20	Max Press PSI 8,519.00	ISIP 5,045.00	Frac Gradient 1.09		
Sand Proppant 203,835.00	Water-bbl 5,360.00	SCF N2	Acid-Gal 2,000.00		
Stage 3	Formation MARCELLUS	Frac Type Slickwater			
Date 11/12/2011	From / To 9928 - 10050	# of perfs	BD Press 6,574.00	ATP Psi 7,970.00	SIP Detail 5 Min: 3758 10 Min: 3535 15 Min: 3412
Avg Rate 93.40	Max Press PSI 8,496.00	ISIP 4,892.00	Frac Gradient 1.07		
Sand Proppant 200,941.00	Water-bbl 5,524.00	SCF N2	Acid-Gal 2,000.00		

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Stage 4	Formation MARCELLUS	Frac Type Slickwater				
Date 11/12/2011	From / To 9778 - 9900	# of perfs	BD Press 5,871.00	ATP Psi 7,764.00	SIP Detail 5 Min: 4618 10 Min: 4226 15 Min: 3982	
Avg Rate 98.60	Max Press PSI 8,600.00	ISIP 5,484.00	Frac Gradient 1.15			
Sand Proppant 202,231.00	Water-bbl 5,258.00	SCF N2	Acid-Gal 2,000.00			

Stage 5	Formation MARCELLUS	Frac Type Slickwater				
Date 11/12/2011	From / To 9630 - 9750	# of perfs	BD Press 9,517.00	ATP Psi 7,607.00	SIP Detail 5 Min: 4994 10 Min: 4589 15 Min: 4365	
Avg Rate 94.10	Max Press PSI 8,055.00	ISIP 5,699.00	Frac Gradient 1.17			
Sand Proppant 205,823.00	Water-bbl 5,219.00	SCF N2	Acid-Gal 2,000.00			

Stage 6	Formation MARCELLUS	Frac Type Slickwater				
Date 11/12/2011	From / To 9478 - 9598	# of perfs	BD Press 6,377.00	ATP Psi 7,388.00	SIP Detail 5 Min: 4938 10 Min: 4694 15 Min: 4553	
Avg Rate 99.40	Max Press PSI 8,080.00	ISIP 5,743.00	Frac Gradient 1.18			
Sand Proppant 198,669.00	Water-bbl 5,164.00	SCF N2	Acid-Gal 2,000.00			

Stage 7	Formation MARCELLUS	Frac Type Slickwater				
Date 11/13/2011	From / To 9328 - 9450	# of perfs	BD Press 6,705.00	ATP Psi 7,659.00	SIP Detail 5 Min: 5079 10 Min: 4786 15 Min: 4632	
Avg Rate 98.30	Max Press PSI 8,832.00	ISIP 5,609.00	Frac Gradient 1.16			
Sand Proppant 198,794.00	Water-bbl 5,269.00	SCF N2	Acid-Gal 2,000.00			

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Stage	Formation	Frac Type			
8	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
11/13/2011	9178 - 9300		6,604.00	7,401.00	5 Min: 4930 10 Min: 4506 15 Min: 4292
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
99.80	7,662.00	5,677.00	1.17		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
199,445.00	5,136.00		2,000.00		

Stage	Formation	Frac Type			
9	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
11/13/2011	9028 - 9150		6,984.00	7,538.00	5 Min: 5121 10 Min: 4742 15 Min: 4514
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
99.00	8,039.00	5,886.00	1.2		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
203,935.00	5,463.00		2,000.00		

Stage	Formation	Frac Type			
10	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
11/13/2011	8878 - 9000		6,086.00	7,524.00	5 Min: 4611 10 Min: 4201 15 Min: 3961
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
99.70	7,976.00	5,701.00	1.18		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
203,679.00	5,116.00		2,000.00		

Stage	Formation	Frac Type			
11	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
11/13/2011	8728 - 8848		5,937.00	6,899.00	5 Min: 4869 10 Min: 4602 15 Min: 4421
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
97.80	7,375.00	5,638.00	1.17		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
205,036.00	5,125.00		2,000.00		

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Stage 12	Formation MARCELLUS	Frac Type Slickwater				
Date 11/13/2011	From / To 8578 - 8714	# of perfs	BD Press 6,064.00	ATP Psi 7,077.00	SIP Detail 5 Min: 4988 10 Min: 4750 15 Min: 4578	
Avg Rate 95.10	Max Press PSI 8,468.00	ISIP 5,626.00	Frac Gradient 1.17			
Sand Proppant 198,364.00	Water-bbl 5,081.00	SCF N2	Acid-Gal 2,000.00			

Stage 13	Formation MARCELLUS	Frac Type Slickwater				
Date 11/14/2011	From / To 8428 - 8550	# of perfs	BD Press 5,945.00	ATP Psi 7,235.00	SIP Detail 5 Min: 4779 10 Min: 4441 15 Min: 4248	
Avg Rate 99.96	Max Press PSI 7,953.00	ISIP 5,581.00	Frac Gradient 1.16			
Sand Proppant 200,832.00	Water-bbl 5,113.00	SCF N2	Acid-Gal 2,000.00			

Stage 14	Formation MARCELLUS	Frac Type Slickwater				
Date 11/14/2011	From / To 8278 - 8400	# of perfs	BD Press 5,927.00	ATP Psi 6,876.00	SIP Detail 5 Min: 4957 10 Min: 4695 15 Min: 4503	
Avg Rate 96.40	Max Press PSI 7,249.00	ISIP 5,501.00	Frac Gradient 1.15			
Sand Proppant 205,957.00	Water-bbl 5,164.00	SCF N2	Acid-Gal 2,000.00			

Stage 15	Formation MARCELLUS	Frac Type Slickwater				
Date 11/14/2011	From / To 8128 - 8250	# of perfs	BD Press 6,108.00	ATP Psi 7,468.00	SIP Detail 5 Min: 4113 10 Min: 3793 15 Min: 3614	
Avg Rate 98.00	Max Press PSI 8,862.00	ISIP 5,191.00	Frac Gradient 1.11			
Sand Proppant 205,236.00	Water-bbl 5,075.00	SCF N2	Acid-Gal 2,000.00			

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Stage 16	Formation MARCELLUS	Frac Type Slickwater				
Date 11/14/2011	From / To 7978 - 8100	# of perfs	BD Press 6,765.00	ATP Psi 7,900.00	SIP Detail 5 Min: 0 10 Min: 0 15 Min: 0	
Avg Rate 78.10	Max Press PSI 8,872.00	ISIP 0.00	Frac Gradient 0			
Sand Proppant 172,144.00	Water-bbl 5,871.00	SCF N2	Acid-Gal 2,000.00			
Stage 17	Formation MARCELLUS	Frac Type Slickwater				
Date 11/15/2011	From / To 7828 - 7950	# of perfs	BD Press 6,889.00	ATP Psi 7,219.00	SIP Detail 5 Min: 3837 10 Min: 3632 15 Min: 3523	
Avg Rate 99.60	Max Press PSI 8,190.00	ISIP 5,001.00	Frac Gradient 1.1			
Sand Proppant 202,655.00	Water-bbl 5,274.00	SCF N2	Acid-Gal 2,000.00			

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