

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

DATE: 2/13/2013
API #: 47-091-01226
Revised

Farm name: Charles H. Cather et al Operator Well No.: 513054

LOCATION: Elevation: 1,191' Quadrangle: Rosemont

District: Flemington County: Taylor, WV
Latitude: 15.100 Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 7.910 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	134
Agent: Cecil Ray	13 3/8	1,012	1,012	954
Inspector: Bryan Harris	9 5/8	2,823	2,823	1,095
Date Permit Issued: 5/19/2011	5 1/2	12,023	12,023	1,420
Date Well Work Commenced: 6/7/2011				
Date Well Work Completed: 11/7/2011				
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): 7,600'				
Total Measured Depth (ft): 12,037'				
Fresh Water Depth (ft.): 78', 330'				
Salt Water Depth (ft.): No visible show.				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 335', 524', 604'				
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) 7,502-7,600
Gas: Initial open flow _____ MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 3,280 MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure 2,736 psig (surface pressure) after 97 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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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.

Michael Butts
Signature

2/13/2013
Date

06/21/2013

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, 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>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			
<u>Sand & Shale / 0 / 335 / 335 -- Coal / 335 / 338 / 3 -- Red Rock / 338 / 524 / 186 --</u>			
<u>-- Coal / 524 / 530 / 6 -- Sand & Shale / 530 / 604 / 74 -- Coal / 604 / 610 / 6</u>			
<u>Sand & Shale / 610 / 1,120 / 510-- Sandstone / 1,120 / 1,320 / 200 -</u>			
<u>Big Lime / 1,320 / 1,424 / 104 -- Big Injun / 1,424 / 1,577 / 152 -- Weir Sand / 1,577 / 1,810 / 232</u>			
<u>Gantz / 1,810 / 1,879 / 69 -- Fifty Foot / 1,879 / 1,949 / 70 -- -Thirty Foot / 1,949 / 2,008 / 58 --</u>			
<u>Gordon / 2,008 / 2,128 / 119 -- -Fourth Sand / 2,128 / 2,343 / 215 --</u>			
<u>Fifth Sand / 2,343 / 2,371 / 27 -- -Bayard / 2,371 / 2,783 / 411 -- B-5 / 2,783 / 3,001 / 218 --</u>			
<u>Speechley / 3,001 / 3,332 / 331 -- Bradford / 3,332 / 3,522 / 189--Balltown B / 3,522 / 3,717 / 194</u>			
<u>Riley / 3,717 / 4,346 / 628 -- Benson / 4,346 / 4,704 / 358 -- Elk / 4,704 / 6,572 / 1,868</u>			
<u>Sonyea / 6,572 / 6,901 / 328 -- Middlesex / 6,901 / 7,157 / 255 --Genesee / 7,157 / 7,296 / 139</u>			
<u>Geneseo / 7,296 / 7,316 / 20 -- Tully / 7,316 / 7,369 / 53 -- Hamilton / 7,369 / 7,502 / 132</u>			
<u>Marcellus / 7,502 / 7,600 / 98</u>			

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EQT WR-35	Completion	Attachment	Well 513054	Treatment	Summary
Stage 1	Formation MARCELLUS	Frac Type Slickwater			
Date 8/26/2011	From / To 11717 - 11959	# of perfs	BD Press 6,551.00	ATP Psi 7,840.00	SIP Detail 5 Min: 5116 10 Min: 4464
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4431
93.00	8,692.00	6,103.00	1.25		
Sand Proppant 401,200.00	Water-bbl 11,233.00	SCF N2	Acid-Gal 2,000.00		
Stage 2	Formation MARCELLUS	Frac Type Slickwater			
Date 8/27/2011	From / To 11417 - 11659	# of perfs	BD Press 8,313.00	ATP Psi 8,246.00	SIP Detail 5 Min: 4535 10 Min: 4297
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4169
90.51	9,206.00	5,346.00	1.15		
Sand Proppant 399,063.00	Water-bbl 10,649.00	SCF N2	Acid-Gal 2,000.00		
Stage 3	Formation MARCELLUS	Frac Type Slickwater			
Date 8/27/2011	From / To 11117 - 11359	# of perfs	BD Press 8,213.00	ATP Psi 8,012.00	SIP Detail 5 Min: 4424 10 Min: 4142
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 3944
97.15	9,166.00	5,853.00	1.22		
Sand Proppant 398,531.00	Water-bbl 10,193.00	SCF N2	Acid-Gal 2,000.00		

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Stage 4	Formation MARCELLUS	Frac Type Slickwater			
Date 8/27/2011	From / To 10817 - 11059	# of perfs	BD Press 7,383.00	ATP Psi 8,098.00	SIP Detail 5 Min: 4896 10 Min: 4523
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4311
94.00	8,871.00	6,060.00	1.24		
Sand Proppant 393,777.00	Water-bbl 10,132.00	SCF N2	Acid-Gal 2,000.00		

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Stage 5	Formation MARCELLUS	Frac Type Slickwater				
Date 8/27/2011	From / To 10517 - 10759	# of perfs	BD Press 7,385.00	ATP Psi 7,979.00	SIP Detail 5 Min: 5070 10 Min: 4603	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4361	
96.00	8,871.00	5,511.00	1.17			
Sand Proppant 400,670.00	Water-bbl 9,992.00	SCF N2	Acid-Gal 2,000.00			
Stage 6	Formation MARCELLUS	Frac Type Slickwater				
Date 8/28/2011	From / To 10217 - 10459	# of perfs	BD Press 7,930.00	ATP Psi 7,955.00	SIP Detail 5 Min: 4581 10 Min: 4314	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4175	
97.90	9,027.00	5,325.00	1.14			
Sand Proppant 401,730.00	Water-bbl 10,115.00	SCF N2	Acid-Gal 2,000.00			
Stage 7	Formation MARCELLUS	Frac Type Slickwater				
Date 11/5/2011	From / To 9917 - 10159	# of perfs	BD Press 7,841.00	ATP Psi 7,722.00	SIP Detail 5 Min: 5408 10 Min: 5122	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		15 Min: 4906	
99.60	8,323.00	5,808.00	1.2			
Sand Proppant 404,591.00	Water-bbl 10,068.00	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	
11/6/2011	9617 - 9859		7,839.00	7,860.00	5 Min: 5485 10 Min: 5147	
Avg Rate	Max Press PSI	ISIP	Frac Gradient	15 Min: 4884		
100.90	9,335.00	5,938.00	1.22			
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
410,001.00	10,829.00		2,000.00			

Stage	Formation	Frac Type				
9	MARCELLUS	Slickwater				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
11/6/2011	9317 - 9559		6,353.00	7,315.00	5 Min: 5444 10 Min: 4988	
Avg Rate	Max Press PSI	ISIP	Frac Gradient	15 Min: 4719		
104.00	7,689.00	6,088.00	1.24			
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
407,707.00	10,338.00		2,000.00			

Stage	Formation	Frac Type				
10	MARCELLUS	Slickwater				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
11/6/2011	9017 - 9259		7,319.00	7,589.00	5 Min: 10 Min: 15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
101.00	8,880.00	5,862.00	1.21			
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
398,520.00	9,966.00		2,000.00			

Stage	Formation	Frac Type				
11	MARCELLUS	Slickwater				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
11/6/2011	8717 - 8988		6,517.00	7,607.00	5 Min: 3920 10 Min: 3724	
Avg Rate	Max Press PSI	ISIP	Frac Gradient	15 Min: 3572		
100.50	7,998.00	4,390.00	1.01			
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
399,949.00	9,850.00		2,000.00			

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Stage 12	Formation MARCELLUS	Frac Type Slickwater				
Date 11/6/2011	From / To 8419 - 8657	# of perfs	BD Press 6,156.00	ATP Psi 7,898.00	SIP Detail 5 Min: 0 10 Min: 0 15 Min: 0	
Avg Rate 97.80	Max Press PSI 9,744.00	ISIP 7,650.00	Frac Gradient 0			
Sand Proppant 365,608.00	Water-bbl 9,473.00	SCF N2	Acid-Gal 2,000.00			
Stage 13	Formation MARCELLUS	Frac Type Slickwater				
Date 11/7/2011	From / To 8117 - 8359	# of perfs	BD Press 5,980.00	ATP Psi 7,806.00	SIP Detail 5 Min: 3754 10 Min: 3543 15 Min: 3389	
Avg Rate 100.00	Max Press PSI 8,826.00	ISIP 4,675.00	Frac Gradient 1.05			
Sand Proppant 399,450.00	Water-bbl 10,583.00	SCF N2	Acid-Gal 2,000.00			
Stage 14	Formation MARCELLUS	Frac Type Slickwater				
Date 11/7/2011	From / To 7817 - 8059	# of perfs	BD Press 5,868.00	ATP Psi 7,998.00	SIP Detail 5 Min: 3538 10 Min: 3338 15 Min: 3200	
Avg Rate 91.70	Max Press PSI 9,112.00	ISIP 4,316.00	Frac Gradient 1.06			
Sand Proppant 399,535.00	Water-bbl 11,514.00	SCF N2	Acid-Gal 2,000.00			

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