

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: 10/25/2013  
API #: 47-017-06256



Farm name: Powell, Dennis H. & Mellie Operator Well No.: Connie Unit 2H

LOCATION: Elevation: 881' Quadrangle: Smithburh 7.5'

District: Grant County: Doddridge  
Latitude: 6.922' Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude 5.665' Feet West of 80 Deg. 40 Min. 00 Sec.

Company: Antero Resources Corporation

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street Denver, CO 80202	20" 51#	40'	40'	38 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	422'	422'	586 Cu. Ft. Class A
Inspector: <b>Douglas Newlon</b>	9 5/8" 36#	2,625'	2,625'	1069 Cu. Ft. Class A
Date Permit Issued: 5/10/2013	5 1/2" 20#	14,133'	14,133'	3441 Cu. Ft. Class H
Date Well Work Commenced: 5/23/2013				
Date Well Work Completed: 9/10/2013	2 3/8" 4.7#	6,683'		
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6,843' TVD				
Total Measured Depth (ft): 14,133' MD				
Fresh Water Depth (ft.): 103'				
Salt Water Depth (ft.): 1216'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 154', 236', 273'				
Void(s) encountered (N/Y) Depth(s) None				

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

Producing formation Marcellus Pay zone depth (ft) 6,519' (TOP)  
Gas: Initial open flow ---- MCF/d Oil: Initial open flow ---- Bbl/d  
Final open flow 2,892 MCF/d Final open flow ---- Bbl/d  
Time of open flow between initial and final tests ---- Hours  
Static rock Pressure 3550 psig (surface pressure) after ---- 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

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.

Kaitlin Buck  
Signature

2/7/14  
Date

06/27/2017

17-06256

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- CBL**

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Neely Unit 1H API#47-017-06086). Please reference the wireline logs submitted with Form WR-35 for Neely Unit 1H.

**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:

Perforations: 6,850'-13,918' (2,160 Holes)

Frac'd w/ 11,251 gals 15% HCL Acid, 22,500 bbls Slick Water carrying 578,080# 100 mesh, 4,732,445# 40/70 sand and 2,621,170# 20/40 sand.

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

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			
Big Lime	est. 1,571'		2,321'
Fifty Foot Sandstone	est. 2,322'		2,416'
Gordon	est. 2,417'		2,703'
Fifth Sandstone	est. 2,704'		2,714'
Bayard	est. 2,715'		3,361'
Speechley	est. 3,362'		3,621'
Balltown	est. 3,622'		4,174'
Bradford	est. 4,175'		4,640'
Benson	est. 4,641'		4,897'
Alexander	est. 4,898'		5,114'
Elk	est. 5,115'		5,664'
Rhinstreet	est. 5,665'		6,041'
Sycamore	6,042'		6,261'
Sonyea	6,262'		6,267'
Middlesex	6,268'		6,412'
Burkett	6,413'		6,440'
Tully	6,441'		6,501'
Hamilton	6,502'		6,518'
Marcellus	6,519'		6,843' TVD

06/27/2017

17-06256

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/30/2013
Job End Date:	9/10/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06256-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Connie Unit 2H
Longitude:	-80.69111670
Latitude:	39.27611390
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,843
Total Base Water Volume (gal):	8,801,394
Total Base Non Water Volume:	1,207,704



## 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	Antero Resources	Base Fluid					
			Water	7732-18-5	100.00000	91.56413	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.14617	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.09334	
			Hydrogen Chloride	7641-01-1	18.00000	0.02229	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.03927	
			Petroleum Distillates	64742-47-8	60.00000	0.03719	
			Suspending agent (solid)	14808-60-7	3.00000	0.00601	
			Surfactant	68439-51-0	3.00000	0.00236	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Anionic Polyacrylamide	Proprietary		0.02258	
			Water	7732-18-5	40.00000	0.02258	
			Petroleum Distillates	64742-47-8	22.00000	0.01818	
			Crystalline Salt	12125-02-9	5.00000	0.00282	

17-06256

			Ethoxylated alcohol blend	Proprietary	5.00000	0.00282
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00428
			Ethylene Glycol	107-21-1	20.00000	0.00387
			Water	7732-18-5	30.00000	0.00323
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00479
			Deionized Water	7732-18-5	28.00000	0.00274
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00077
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene Glycol	107-21-1	31.00000	0.00024
			N,N-Dimethylformamide	68-12-2	15.00000	0.00008
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00007
			Cinnamaldehyde	104-55-2	5.00000	0.00007
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Water	7732-18-5	20.00000	0.00002
			Ethoxylated Nonylphenol	68412-54-4	5.00000	0.00002
			Triethyl Phosphate	78-40-0	3.00000	0.00001
			Isopropyl Alcohol	67-63-0	3.00000	0.00001

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)