

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: 12/9/2013
API #: 47-033-05673

JZ

Farm name: Antero Resources Corporation Operator Well No.: Utter Unit 1H

LOCATION: Elevation: 1358' Quadrangle: Big Isaac

District: Union County: Harrison
Latitude: 1.968' Feet South of 39 Deg. 12 Min. 30 Sec.
Longitude 4.009' Feet West of 80 Deg. 30 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" 94#	40'	40'	30 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	505'	505'	702 Cu. Ft. Class A
Inspector: Sam Ward	9 5/8" 36#	2,535'	2,535'	1032 Cu. Ft. Class A
Date Permit Issued: 9/25/2013	5 1/2" 20#	16,163'	16,163'	4027 Cu. Ft. Class H
Date Well Work Commenced: 5/29/2013				
Date Well Work Completed: 9/19/2013	2 3/8" 4.7#	7,469'		
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): 7348' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 16,163' MD, 7276' TVD (BHL)				
Fresh Water Depth (ft.): 140'				
Salt Water Depth (ft.): 1936'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 178', 422', 458'				
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) 7,304' (TOP)

Gas: Initial open flow ---- MCF/d Oil: Initial open flow ---- Bbl/d

Final open flow 10,954 MCF/d Final open flow ---- Bbl/d

Time of open flow between initial and final tests ---- Hours

Static rock Pressure 3600 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.

Kaitlen Buck
Signature

2/7/14
Date

05/30/2014

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 (Rodney Unit 2H API#47-033-05676). Please reference the wireline logs submitted with Form WR-35 for Rodney Unit 2H.

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: 7,525'- 16,102' (2,100 Holes)

Frac'd w/ 10,500 gals 15% HCL Acid, 258,907 bbls Slick Water carrying 928,832# 100 mesh,
5,500,925# 40/70 sand and 2,302,105# 20/40 sand.

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

Formations Encountered:	Top Depth	/	Bottom Depth
<u>Surface:</u>			
Big Lime	est 1933'		2042'
Big Injun	est 2043'		2297'
Gantz Sand	est 2298'		2415'
Fifty Foot Sandstone	est 2416'		2512'
Gordon	est 2513'		2819'
Fifth Sandstone	est 2820'		2861'
Bayard	est 2862'		3512'
Speechley	est 3513'		3756'
Balltown	est 3757'		4278'
Bradford	est 4279'		4833'
Benson	est 4834'		5036'
Alexander	est 5037'		5193'
Elk	est 5194'		5936'
Rhinestreet	est 5937'		6633'
Sycamore	6634'		6936'
Middlesex	6937'		7108'
Burkett	7109'		7125'
Tully	7126'		7242'
Hamilton	7243'		7303'
Marcellus	7304'		7348' TVD

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/6/2013
Job End Date:	9/19/2013
State:	West Virginia
County:	Harrison
API Number:	47-033-05673-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Utter Unit 1H
Longitude:	-80.50678610
Latitude:	39.19726670
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,348
Total Base Water Volume (gal):	10,874,094
Total Base Non Water Volume:	436,796



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	90.96177	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.75803	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.07678	
			Hydrogen Chloride	7641-01-1	18.00000	0.01834	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.04030	
			Petroleum Distillates	64742-47-8	60.00000	0.03816	
			Suspending agent (solid)	14808-60-7	3.00000	0.00616	
			Surfactant	68439-51-0	3.00000	0.00242	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Water	7732-18-5	40.00000	0.02590	
			Anionic Polyacrylamide	Proprietary		0.02590	
			Petroleum Distillates	64742-47-8	22.00000	0.02085	
			Crystalline Salt	12125-02-9	5.00000	0.00324	

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			Ethoxylated alcohol blend	Proprietary	5.00000	0.00324
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00422
			Ethylene Glycol	107-21-1	20.00000	0.00381
			Water	7732-18-5	30.00000	0.00318
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitripropionamide	10222-01-2	20.00000	0.00401
			Deionized Water	7732-18-5	28.00000	0.00229
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00092
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene Glycol	107-21-1	31.00000	0.00020
			N,N-Dimethylformamide	68-12-2	15.00000	0.00006
			Cinnamaldehyde	104-55-2	5.00000	0.00005
			2-Butoxyethanol	111-76-2	7.00000	0.00005
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00005
			Water	7732-18-5	20.00000	0.00002
			Triethyl Phosphate	78-40-0	3.00000	0.00001
			Ethoxylated Nonylphenol	68412-54-4	5.00000	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)