

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: 12/6/2013
API #: 47-017-06188

Farm name: Davis, Jonathan Operator Well No.: Central Unit 2H

LOCATION: Elevation: 1,146' Quadrangle: West Union 7.5'

District: Central County: Doddridge
Latitude: 10,584' Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 12,393' Feet West of 80 Deg. 47 Min. 30 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'	38 Cu Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	474'	474'	658 Cu Ft. Class A
Inspector: Douglas Newlon	9 5/8" 36#	2,747'	2,747'	1118 Cu Ft. Class A
Date Permit Issued: 2/27/2013	5 1/2" 20#	12,561'	12,561'	2972 Cu Ft. Class H
Date Well Work Commenced: 4/10/2013				
Date Well Work Completed: 6/30/2013	2 3/8" 4.7#	7593'		
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): 6782' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 12,562' MD, 6780' TVD (BHL)				
Fresh Water Depth (ft.): 200'				
Salt Water Depth (ft.): 700'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 824'				
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) 6651' (TOP)

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

Final open flow 9.446 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) Enr...

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

2/10/2014
Date

05/30/2014

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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 (Valentine Unit 1H, API# 47-017-06083). Please reference the wireline logs submitted with Form WR-35 for Valentine 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: 7,048'- 12,512' (1,740 Holes)

Frac'd w/ 15,620 gals 15% HCL Acid, 161,318 bbls Slick Water carrying 741,050# 100 mesh, 2,730,390# 40/70 sand and 1,687,540# 20/40 sand.

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

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth
Surface:

Big Lime	est. 2066'	2176'
Big Injun	est. 2177'	2574'
Gantz Sand	est. 2575'	2717'
Fifty Foot Sandstone	est. 2718'	2808'
Gordon	est. 2809'	3122'
Fifth Sandstone	est. 3123'	3147'
Bayard	est. 3148'	3911'
Speechley	est. 3912'	4176'
Baltown	est. 4177'	4632'
Bradford	est. 4633'	5063'
Bensonest.	est. 5064'	5354'
Alexander	est. 5325'	5507'
Elk	est. 5508'	5998'
Rhinestreet	est. 5999'	6295'
Sycamore	6296'	6459'
Middlesex	6460'	6586'
Burkett	6587'	6613'
Tully	6614'	6642'
Hamilton	6643'	6651'
Marcellus	6651'	6782' TVD

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Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	6/23/2013
Job End Date:	6/30/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06188-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Central Unit 2H
Longitude:	-80.82906670
Latitude:	39.29930830
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,782
Total Base Water Volume (gal):	6,775,356
Total Base Non Water Volume:	0

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	91.40520	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.34515	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.09208	
			Hydrogen Chloride	7641-01-1	18.00000	0.02199	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Water	7732-18-5	40.00000	0.02096	
			Anionic Polyacrylamide	Proprietary	40.00000	0.02096	
			Petroleum Distillates	64742-47-8	40.00000	0.01687	
			Crystalline Salt	12125-02-9	5.00000	0.00262	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00262	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.02346	
			Petroleum Distillates	64742-47-8	60.00000	0.02221	
			Suspending agent (solid)	14808-60-7	3.00000	0.00359	

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			Surfactant	68439-51-0	3.00000	0.00141
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitripropionamide	10222-01-2	20.00000	0.00692
			Deionized Water	7732-18-5	28.00000	0.00395
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00329
			Ethylene Glycol	107-21-1	20.00000	0.00297
			Water	7732-18-5	30.00000	0.00248
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00074
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitor				
			Ethylene Glycol	107-21-1	40.00000	0.00023
			N,N-Dimethylformamide	68-12-2	20.00000	0.00007
			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	0.00005
			Poly(oxy-1,2-ethanediyl), alpha-(4-nolylphenyl)-omega-hydroxy, branched	127087-87-0	5.00000	0.00002
			1-Decanol	112-30-1	5.00000	0.00002
			1-Octanol	111-87-5	3.00000	0.00001
			Isopropyl Alcohol	67-63-0	2.50000	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)