

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 #: 47-017-06189

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

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

District: Central County: Doddridge  
Latitude: 10.575° Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 12.390° Feet West of 80 Deg. 47 Min. 30 Sec.

RECEIVED

FEB 11 2014

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV

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'	60 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	461'	461'	640 Cu. Ft. Class A
Inspector: Douglas Newlon	9 5/8" 36#	2,602'	2,602'	1059 Cu. Ft. Class A
Date Permit Issued: 2/27/2013	5 1/2" 20#	13,635'	13,635'	1796 Cu. Ft. Class H
Date Well Work Commenced: 4/9/2013				
Date Well Work Completed: 7/19/2013	2 3/8" 4.7#	6723'		
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>		Top	Bottom	
Total Vertical Depth (ft): 6644' TVD	Cement Plug	6,050'	6,350'	177 Cu. Ft. Class H
Total Measured Depth (ft): 13,635' MD				
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) 6628' (TOP)  
Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl/d  
Final open flow 8.053 MCF/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests --- Hours  
Static rock Pressure 3800 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

2/10/2014  
Date

Central Station (91) 6-6

RECEIVED

FEB 11 2014

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

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: 6890'-13,581' (2,160 Holes)

Frac'd w/ 18,648 gals 15% HCL Acid, 192,317 bbls Slick Water carrying 840,220# 100 mesh,  
2,933,993# 40/70 sand and 1,666,590# 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. 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'
Benson	est. 5064'		5324'
Alexander	est. 5325'		5507'
Elk	est. 5508'		5998'
Rhinestreet	est. 5999'		6305'
Sycamore	6305'		6475'
Middlesex	6473'		6597'
Burkett	6598'		6627'
Tully	6627'		6654'
Hamilton	6655'		6665'
Marcellus	6666'		6799' TVD

# Hydraulic Fracturing Fluid Product Component Information Disclosure

RECEIVED

FEB 11 2014

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV



## Hydraulic Fracturing Fluid Composition:

Component	Supplier	Product Name	Chemical Name	Chemical ID	Quantity	Concentration
Water	Antero Resources	Base Fluid	Water	7732-18-5	100.00000	92.23662
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	7.49314
HCl Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.09307
			Hydrogen Chloride	7641-01-1	18.00000	0.02223
WFR-405	U.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.02463
			Water	7732-18-5	40.00000	0.02463
			Petroleum Distillates	64742-47-8	40.00000	0.01983
			Crystalline Salt	12125-02-9	5.00000	0.00308
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00308
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.02776
			Petroleum Distillates	64742-47-8	60.00000	0.02629
			Suspending agent (solid)	14808-60-7	3.00000	0.00425

Product	Supplier	Function	Surfactant	Surfactant ID	Volume	Concentration
K-BAC 1020	J.S. Well Services, LLC	Anti-Bacterial Agent		88439-51-0	3.00000	0.00167
			2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00664
SI-1000	J.S. Well Services, LLC	Scale Inhibitor	Deionized Water	7732-18-5	28.00000	0.00380
			Anionic Copolymer	Proprietary		0.00298
			Ethylene Glycol	107-21-1	20.00000	0.00271
AP One	J.S. Well Services, LLC	Gel Breakers	Water	7732-18-5	30.00000	0.00228
			Ammonium Persulfate	7727-54-0	100.00000	0.00057
AI-300	J.S. Well Services, LLC	Acid Corrosion Inhibitor				
			Ethylene Glycol	107-21-1	40.00000	0.00024
			N,N-Dimethylformamide	38-12-2	20.00000	0.00007
			Cinnamaldehyde	104-55-2	15.00000	0.00007
			2-Butoxyethanol	111-76-2	15.00000	0.00008
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	15.00000	0.00008
			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)

RECEIVED

FEB 11 2014

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV