

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) 665' (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) ---
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.

Kaitler Buck
Signature

2/10/2014
Date

Central Station (91) 6-6

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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, AP# 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

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Frac Focus
Chemical Disclosure Registry



Hydraulic Fracturing Fluid Composition:

IS	Supplier	IS	(CAS #)	(% by mass)	IS
Water	Antero Resources	Base Fluid			
Sand	U.S. Well Services, LLC	Proppant			
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid			
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
		Ethoxy/ated alcohol blend	Proprietary	5.00000	0.00262
GC-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

Product	Manufacturer	Function	Chemical Name	MSDS No.	Concentration (%)	MSDS Level	Field Development Product
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent	Surfactant	86436-51-0	3.00000	0.00141	
			2,2-dibromo-3-nitropropanamide	10222-01-2	20.00000	0.00692	
SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Deionized Water	7732-18-5	28.00000	0.00395	
			Anionic Copolymer	Proprietary		0.00328	
			Ethylene Glycol	107-21-1	20.00000	0.00297	
AP One	U.S. Well Services, LLC	Gel Breakers	Water	7732-18-5	30.00000	0.00248	
			Ammonium Persulfate	7727-54-0	100.00000	0.00074	
AL-300	U.S. Well Services, LLC	Acid Corrosion Inhibitor	Ethylene Glycol	107-21-1	40.00000	0.00023	
			N,N-Dimethylformamide	88-12-2	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	0.00006	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-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 Not 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)

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