

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: 1/24/2013
API #: 47-017-06083

Farm name: Davis, Jonathan Operator Well No.: Valentine Unit 1H

LOCATION: Elevation: 1159' Quadrangle: West Union 7.5'

District: Central County: Doddridge
Latitude: 10.556° Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 12.382° Feet West of 80 Deg. 47 Min. 30 Sec.

Company: Antero Resources Appalachian Corp.

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#	670'	670'	931 Cu. Ft Class A
Inspector: Sam Ward	9-5/8" 36#	2626'	2626'	1450 Cu. Ft Class A
Date Permit Issued: 5/23/2012	5-1/2" 20#	14210'	14210'	3471 Cu. Ft Class H
Date Well Work Commenced: 6/29/2012				
Date Well Work Completed: 10/17/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2-3/8" 4.7#	6665'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6817' TVD				
Total Measured Depth (ft): 14210' MD				
Fresh Water Depth (ft.): est. 161', 286'				
Salt Water Depth (ft.): est. 780', 837'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): est. 824', 828'				
Void(s) encountered (N/Y) Depth(s) No, N/A				

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

Producing formation Marcellus Pay zone depth (ft) 6673' TVD (Top)

Gas: Initial open flow _____ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow WOPL MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A 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

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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.

Sam Ward
Signature

1/24/13
Date

Were core samples taken? Yes _____ No **X**

Were cuttings caught during drilling? Yes **X** No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL, Photo Density/
Compensated Neutron/ Gamma Ray and Dual Laterolog Gamma Ray

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: 7078'-14,143' MD (1428 holes)

Frac'd w/ 11,500 gals 15% HCL Acid, 154,976 bbls Slick Water carrying 778,200# 100 mesh, 2,603,300# 40/70 and 1,470,000# 20/40 sand.

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

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Surface:		
Big Lime	2,066'	2,176'
Big Injun	2,177'	2,574'
Gantz Sand	2,575'	2,717'
Fifty Foot Sandstone	2,718'	2,808'
Gordon	2,809'	3,122'
Fifth Sandstone	3,123'	3,147'
Bayard	3,148'	3,911'
Speechley	3,912'	4,176'
Balltown	4,177'	4,621'
Bradford	4,622'	5,063'
Benson	5,064'	5,324'
Alexander	5,325'	5,507'
Elk	5,508'	5,998'
Rhinestreet	5,999'	6,306'
Sycamore	6,307'	6,479'
Middlesex	6,480'	6,601'
Burket	6,602'	6,632'
Tully	6,633'	6,672'
Marcellus	6,673'	6,817' TVD

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Hydraulic Fracturing Fluid Product Component Information Disclosure

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Fracture Date:	10/10/2012
State:	West Virginia
County:	Doddridge
API Number:	47-017-00063
Operator Name:	Antero Resources
Well Name and Number:	Valentine 1H
Longitude:	-80.3289722
Latitude:	39.2983333
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	6,817
Total Water Volume (gal):	6,508,992

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
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Hydrogen Chloride	7641-01-1	18.00	0.031653	
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	87.50	0.153869	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Ethoxylated Nonylphenol	68412-54-4	13.00	0.000042	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Glycol Ethers	11-76-2	20.00	0.000065	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Isopropyl Alcohol	67-63-0	15.00	0.000048	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Propargyl Alcohol	107-19-7	20.00	0.000065	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Tertiary amines, quinoline deriva. benzyl chloride-quaternized	72480-70-7	10.00	0.000033	

	Services						
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Water	7732-18-5	40.00	0.000130	
KR-153SL	Nabors Completion and Production Services	Biocides	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00	0.002396	
KR-153SL	Nabors Completion and Production Services	Biocides	Water	7732-18-5	80.00	0.009586	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated alcohols	68551-12-2	15.00	0.008388	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated oleylamine	26635-93-8	5.00	0.002796	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	60.00	0.027982	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Microparticle	Proprietary	1.00	0.000559	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Polyacrylamide	57-55-6	40.00	0.022369	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Propylene glycol	57-55-6	15.00	0.008388	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Water	7732-18-5	40.00	0.022369	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Breaker Component	Proprietary	Proprietary	Proprietary	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Cellulase enzyme	Proprietary	Proprietary	Proprietary	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Demulsifier Base	Proprietary	Proprietary	Proprietary	

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	Production Services						
EB-4L	Nabors Completion and Production Services	Gel Breakers	Ethylene Glycol	107-21-1	25.00	0.000166	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Sugar	57-50-1	Proprietary	Proprietary	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Water	7732-18-5	Proprietary	Proprietary	
OB-2	Nabors Completion and Production Services	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00	0.000767	
OB-2	Nabors Completion and Production Services	Gel Breakers	Silica, crystalline quartz	7631-86-9	10.00	0.000077	
OB-2	Nabors Completion and Production Services	Gel Breakers	vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00	0.000153	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	guar gum	9000-30-0	50.00	0.032236	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Petroleum Distillates	64742-47-8	60.00	0.038683	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Surfactant	68439-51-0	2.00	0.001289	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Suspending agent (solid)	14808-60-7	2.00	0.001289	
PH-15L	Nabors Completion and Production Services	pH Control Additives	Sodium Chloride	7647-14-5	5.00	0.000016	
PH-15L	Nabors Completion and Production Services	pH Control Additives	Sodium Hydroxide	1310-73-2	30.00	0.000098	
PH-15L	Nabors Completion	pH Control Additives	Water	7732-18-5	65.00	0.000213	

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	and Production Services						
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002249	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002249	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002249	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	50.00	0.007495	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Water	7732-18-5	60.00	0.008994	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.014428	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90	1.310346	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.001312	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10	0.001312	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.028245	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90	2.565127	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.002568	
WV Specific 20/40	Nabors	Sand - Bulk - West	Titanium Oxide	13463-67-7	0.10	0.002568	

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mesh Sand	Completion and Production Services	Virginia					
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.047276	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90	4.293565	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.004298	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10	0.004298	

* 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%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(f) and Appendix D.

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