

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: 1/11/2013  
API #: 47-017-06027

Farm name: Dotson, Rendal J. & Sandra Operator Well No.: Trout Unit 1H

LOCATION: Elevation: 880' Quadrangle: Folsom 7.5'

District: McClellan County: Doddridge  
Latitude: 10388' Feet South of 39 Deg. 25 Min. 00 Sec.  
Longitude 11025' Feet West of 80 Deg. 32 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.
Agent: CT Corporation System	13 3/8" 48#	887'	887'	1232 Cu. Ft. Class A
Inspector: Sam Ward	9 5/8" 36#	2790'	2790'	1136 Cu. Ft. Class A
Date Permit Issued: 7/12/2011	5 1/2" 20#	16243'	16243'	3980 Cu. Ft. Class H
Date Well Work Commenced: 7/12/2012				
Date Well Work Completed: 11/19/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7179'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7070' TVD				
Total Measured Depth (ft): 16243' MD				
Fresh Water Depth (ft.): 132'				
Salt Water Depth (ft.): 1160'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 53', 110', 225', 383', 454', 492'				
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) 6929' TVD (Top)

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

Final open flow 9137 MCF/d Final open flow N/A Bbl/d

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

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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.

Shawn [Signature]  
Signature

1/24/13  
Date

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. Enter only run wireline logs on the first well on a multi-well pad (R. Swiger South Unit 1H, AP# 47-017-05892). Please reference the wireline logs submitted with Form WR-35 for R. Swiger South 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: 7285'-16182' (1872 holes)

Frac'd w/ 13,500 gals 15% HCL Acid, 190,877 bbls Slick Water carrying 964,300# 100 mesh, 3,607,300# 40/70 and 1,935,900# 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>
<u>Surface:</u>		
Big Lime est	1763'	1845'
Big Injun est	1846'	2294'
Gantz Sand est	2295'	2415'
Fifty Foot Sandstone est	2416'	2501'
Gordon est	2502'	2808'
Fifth Sandstone est	2809'	2846'
Bayard est	2847'	3604'
Speechley est	3605'	4056'
Balltown est	4057'	4314'
Bradford est	4315'	4789'
Benson est	4790'	5142'
Alexander est	5143'	5948'
Elk est	5949'	5954'
Rhinestreet	5955'	6405'
Sycamore	6406'	6623'
Middlesex	6624'	6729'
Genudewa	6730'	6778'
Burket	6779'	6805'
Tully	6806'	6879'
Hamilton	6880'	6928'
Marcellus	6929'	7070' TVD

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

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Fracture Date:	11/8/2012
State:	West Virginia
County:	Doddridge
API Number:	47-017-00270
Operator Name:	Antero Resources
Well Name and Number:	Trout 1H
Longitude:	-80.5704194
Latitude:	39.3663973
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,870
Total Water Volume (gal):	8,023,880

## 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 RESOURCE S	Water	Water	7732-18-5	100.00%	80.84250%	
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Hydrogen Chloride	7641-011	18.00%	0.02990%	
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	87.50%	0.14650%	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Ethoxylated Nonylphenol	68412-54-4	13.00%	0.00004%	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Glycol Ethers	11-78-2	20.00%	0.00006%	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Isopropyl Alcohol	67-83-0	15.00%	0.00005%	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Propargyl Alcohol	107-19-7	20.00%	0.00006%	

Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion inhibitors	Tar bases, quinoline derive, benzyl chloride-quaternized	72480-70-7	10.00%	0.00003%	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion inhibitors	Water	7732-18-5	40.00%	0.00012%	
KR-153SL	Nabors Completion and Production Services	Biocides	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00%	0.00242%	
KR-153SL	Nabors Completion and Production Services	Biocides	Water	7732-18-5	80.00%	0.00967%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated alcohols	88551-12-2	15.00%	0.00685%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated oleylamine	26635-93-9	5.00%	0.00288%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	50.00%	0.02880%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Microparticle	Proprietary	1.00%	0.00058%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Polyacrylamide	57-55-6	40.00%	0.02310%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Propylene glycol	57-55-6	15.00%	0.00685%	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Water	7732-18-5	40.00%	0.02310%	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Breaker Component	Proprietary	Proprietary	0.00066%	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Cellulase enzyme	Proprietary	Proprietary	0.00066%	

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EB-4L	Services Nabors Completion and Production Services	Gel Breakers	Demulsifier Base	Proprietary	Proprietary	0.00066%	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Ethylene Glycol	107-21-1	25.00%	0.00017%	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Sugar	57-50-1	Proprietary	0.00066%	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Water	7732-18-5	Proprietary	0.00066%	
OB-2	Nabors Completion and Production Services	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00%	0.01000%	
OB-2	Nabors Completion and Production Services	Gel Breakers	Silica, crystalline quartz	7631-86-9	10.00%	0.00100%	
OB-2	Nabors Completion and Production Services	Gel Breakers	vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00%	0.00200%	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Crystalline Silica (in the form of quartz)	14808-60-7	2.00%	0.00122%	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	guar gum	9000-30-0	50.00%	0.03050%	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Organophilic Clay	68593-58-2	0.00%	0.00000%	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Petroleum Distillates	64742-47-8	70.00%	0.04270%	
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Surfactant	68439-51-0	2.00%	0.00122%	
Super TSC-LT	Nabors Completion and	Paraffin & Scale Additives	Proprietary	Proprietary	15.00%	0.00231%	

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	Production Services						
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00%	0.00231%	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00%	0.00231%	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	50.00%	0.00770%	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Water	7732--18-5	60.00%	0.00924%	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10%	0.01440%	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90%	1.30780%	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10%	0.00131%	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10%	0.00131%	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10%	0.02890%	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90%	2.62540%	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10%	0.00263%	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10%	0.00263%	
WV Specific 40/70 mesh Sand	Nabors Completion	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10%	0.05390%	

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	and Production Services						
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90%	4.89210%	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10%	0.00490%	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10%	0.00490%	

\* 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%

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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