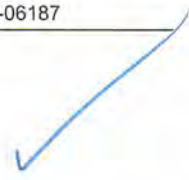
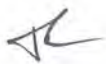


WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 12/7/2013  
API #: 47-017-06187



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

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

District: Central County: Doddridge  
Latitude: 10.566' Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 12.386' 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#	67'	67'	64 Cu Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	460'	460'	639 Cu Ft. Class A
Inspector: <b>Douglas Newlon</b>	9 5/8" 36#	2,622'	2,622'	1068 Cu Ft. Class A
Date Permit Issued: 2/22/2013	5 1/2" 20#	13,521'	13,521'	3273 Cu Ft. Class H
Date Well Work Commenced: 3/5/2013				
Date Well Work Completed: 7/9/2013	2 3/8" 4.7#	6879'		
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): 6813' TVD				
Total Measured Depth (ft): 13,521' 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) 6661' (TOP)

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

Final open flow 6,730 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

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WV Department of  
Environmental Protection

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

06/27/2017



17-06187

# Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	6/30/2013
Job End Date:	7/9/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06187-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Dotson Unit 1H
Longitude:	-80.82900280
Latitude:	39.29932780
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,814
Total Base Water Volume (gal):	7,899,528
Total Base Non Water Volume:	311,488

## 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	91.13810	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.56278	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.10674	
			Hydrogen Chloride	7641-01-1	18.00000	0.02550	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.03419	
			Petroleum Distillates	64742-47-8	60.00000	0.03238	
			Suspending agent (solid)	14808-60-7	3.00000	0.00523	
			Surfactant	68439-51-0	3.00000	0.00205	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Anionic Polyacrylamide	Proprietary	40.00000	0.02366	
			Water	7732-18-5	40.00000	0.02366	
			Petroleum Distillates	64742-47-8	40.00000	0.01905	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00296	

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			Crystalline Salt	12125-02-9	5.00000	0.00296
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00705
			Deionized Water	7732-18-5	28.00000	0.00403
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00318
			Ethylene Glycol	107-21-1	20.00000	0.00287
			Water	7732-18-5	30.00000	0.00239
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitor				
			Ethylene Glycol	107-21-1	40.00000	0.00028
			N,N-Dimethylformamide	68-12-2	20.00000	0.00009
			Cinnamaldehyde	104-55-2	15.00000	0.00008
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	15.00000	0.00007
			2-Butoxyethanol	111-76-2	15.00000	0.00007
			Poly(oxy-1,2-ethanediyl), alpha-(4-nolylphenyl)-omega-hydroxy, branched	127087-87-0	5.00000	0.00003
			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
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00059

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)