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Rev (9-11)

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

DATE: 4/9/2014
API #: 47-017-06174

Farm name: Robinson, Richard G. Operator Well No.: Right Hand Unit 2H

LOCATION: Elevation: 1,156' Quadrangle: New Milton 7.5'

District: New Milton County: Doddridge
Latitude: 1,725' Feet South of 39 Deg. 12 Min. 30 Sec.
Longitude 6,854' Feet West of 80 Deg. 42 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" 51#	40'	40'	38 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	397'	397'	552 Cu. Ft. Class A
Inspector: Douglas Newlon	9 5/8" 36#	2,504'	2,504'	1,020 Cu. Ft. Class A
Date Permit Issued: 1/31/2013	5 1/2" 20#	13,206'	13,206'	3,223 Cu. Ft. Class H
Date Well Work Commenced: 4/10/2013				
Date Well Work Completed: 1/31/2014	2 3/8" 4.7#	7,175'		
Verbal Plugging: N/A				
Date Permission granted on: N/A		Top	Bottom	
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>	Sidetrack	6,398'	7,352'	377 Cu. Ft. Class A
Total Vertical Depth (ft): 7054' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 7017' TVD (BHL), 13,206' MD				
Fresh Water Depth (ft.): 210', 220'				
Salt Water Depth (ft.): 940', 1341'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 879', 1210'				
Void(s) encountered (N/Y) Depth(s) No				

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

Producing formation Marcellus Pay zone depth (ft) 7032' (TOP)
Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl/d
Final open flow 6,468 MCF/d Final open flow --- Bbl/d
Time of open flow between initial and final tests --- Hours
Static rock Pressure 3950 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.

Kaitlin Buck
Signature

5/20/2014
Date

06/13/2014

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/21/2014
Job End Date:	1/31/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06174-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Right Hand Unit 2H
Longitude:	-80.71441670
Latitude:	39.18951390
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,054
Total Base Water Volume (gal):	7,379,526
Total Base Non Water Volume:	333,954



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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	89.92846	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	9.75806	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.10386	
			Hydrogen Chloride	7641-01-1	18.00000	0.02481	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03853	
			Petroleum Distillates	64742-47-8	60.00000	0.03649	
			Suspending agent (solid)	14808-60-7	3.00000	0.00589	
			Surfactant	68439-51-0	3.00000	0.00231	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary		0.02626	
			Water	7732-18-5	40.00000	0.02626	
			Petroleum Distillates	64742-47-8	22.00000	0.02114	
			Crystalline Salt	12125-02-9	5.00000	0.00328	

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			Ethoxylated alcohol blend	Proprietary	5.00000	0.00328
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00405
			Ethylene Glycol	107-21-1	20.00000	0.00366
			Water	7732-18-5	30.00000	0.00305
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00574
			Deionized Water	7732-18-5	28.00000	0.00328
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00094
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitor				
			Ethylene Glycol	107-21-1	31.00000	0.00027
			N,N-Dimethylformamide	68-12-2	15.00000	0.00008
			Cinnamaldehyde	104-55-2	5.00000	0.00007
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00007
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Poly(oxy-1,2-ethanediyl), alpha-(4-nolylphenyl)-omega-hydroxy, branched	7732-18-5	20.00000	0.00002
			1-Decanol	68412-54-4	5.00000	0.00002
			1-Octanol	78-40-0	3.00000	0.00001
			Isopropyl Alcohol	67-63-0	3.00000	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)

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