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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: 5/12/2014
API #: 47-017-06211

Farm name: Brown, Mary F. Operator Well No.: Nero Unit 1H

LOCATION: Elevation: 1,164' Quadrangle: West Union 7.5'

District: Central County: Doddridge
Latitude: 4,410' Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude 6,241' 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#	397'	397'	552 Cu. Ft. Class A
Inspector: Douglas Newlon	9 5/8" 40#	2,622'	2,622'	1,068 Cu. Ft. Class A
Date Permit Issued: 3/28/2013	5 1/2" 20#	17,286'	17,286'	4,309 Cu. Ft. Class H
Date Well Work Commenced: 6/11/2013				
Date Well Work Completed: 12/19/2013	2 3/8" 4.7#	6843'		
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"/>	Cement Plug #1	1150'	1300'	982 Cu. Ft. Class A
Total Vertical Depth (ft): 6787' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 17,303' MD, 6751' TVD (BHL)		Top	Bottom	
Fresh Water Depth (ft.): 225'	Cement Plug #2	950'	1400'	491 Cu. Ft. Class A
Salt Water Depth (ft.): 1860', 1865'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 1240', 1300'				
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) 6699' (TOP)
Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl/d
Final open flow 3,874 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.

Laiten Buck
Signature

5/20/2014
Date

06/13/2014

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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,
Photo Density/ Compensated Neutron, 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: 6,924'- 17,100' (3060 Holes)

Frac'd w/ 29,000 gals 15% HCL Acid, 311,172 bbls Slick Water carrying 713,526# 100 mesh, 5,911,310# 40/70 sand and 3,277,820# 20/40 sand.

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

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			
Big Lime	2124'		2229'
Big Injun	2230'		2625'
Gantz Sand	2626'		2777'
Fifty Foot Sandstone	2778'		2866'
Gordon	2867'		3182'
Fifth Sandstone	3183'		3214'
Bayard	3215'		3955'
Speechley	3956'		4240'
Balltown	4241'		4691'
Bradford	4692'		5109'
Benson	5110'		5393'
Alexander	5394'		5542'
Elk	5543'		6038'
Rhinestreet	6039'		6347'
Sycamore	6348'		6516'
Middlesex	6517'		6635'
Burkett	6636'		6664'
Tully	6665'		6691'
Hamilton	6692'		6698'
Marcellus	6699'		6787' TVD

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/3/2013
Job End Date:	12/19/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06211-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Nero Unit 1H
Longitude:	-80.84891110
Latitude:	39.27458890
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,792
Total Base Water Volume (gal):	13,069,224
Total Base Non Water Volume:	503,409



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	91.37663	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	8.30177	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.08862	
			Hydrogen Chloride	7641-01-1	18.00000	0.02117	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.04853	
			Petroleum Distillates	64742-47-8	60.00000	0.04596	
			Suspending agent (solid)	14808-60-7	3.00000	0.00742	
			Surfactant	68439-51-0	3.00000	0.00291	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Water	7732-18-5	40.00000	0.02834	
			Anionic Polyacrylamide	Proprietary		0.02834	
			Petroleum Distillates	64742-47-8	22.00000	0.02282	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00354	

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			Crystalline Salt	12125-02-9	5.00000	0.00354
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00384
			Ethylene Glycol	107-21-1	20.00000	0.00347
			Water	7732-18-5	30.00000	0.00290
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitripropionamide	10222-01-2	20.00000	0.00520
			Deionized Water	7732-18-5	28.00000	0.00297
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00146
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene Glycol	107-21-1	31.00000	0.00024
			N,N-Dimethylformamide	68-12-2	15.00000	0.00007
			Cinnamaldehyde	104-55-2	5.00000	0.00006
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00006
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Ethoxylated Nonylphenol	68412-54-4	5.00000	0.00002
			Water	7732-18-5	20.00000	0.00002
			Isopropyl Alcohol	67-63-0	3.00000	0.00001
			Triethyl Phosphate	78-40-0	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)