

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: 2/10/2014
API #: 47-017-06160

JR

Farm name: Trent, Clarence Jr. et al Operator Well No.: Cox Unit 2H

LOCATION: Elevation: 1,410' Quadrangle: New Milton 7.5'

District: Greenbrier County: Doddridge
Latitude: 1.230' Feet South of 39 Deg. 15 Min. 00 Sec.
Longitude 14.852' Feet West of 80 Deg. 37 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#	42'	42'	40 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	354'	354'	492 Cu. Ft. Class A
Inspector: Douglas Newlon	9 5/8" 36#	2,571'	2,571'	1,047 Cu. Ft. Class A
Date Permit Issued: 1/16/2013	5 1/2" 20#	14,532'	14,532'	3,567 Cu. Ft. Class H
Date Well Work Commenced: 6/28/2012				
Date Well Work Completed: 11/30/2013	2 3/8" 4.7#	7,788'		
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): 7428' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 14,532' MD, 7396' TVD (BHL)				
Fresh Water Depth (ft.): 100', 135'				
Salt Water Depth (ft.): 2126'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): None Available				
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) 7404' (TOP)

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

Final open flow 6,090 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

RECEIVED
Office of Oil and Gas
FEB 18 2014
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

2/14/2014
Date

05/30/2014

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. Antero only runs wireline logs on the first well on a multi-well pad (Bowen Unit 2H API#47-017-47-017-06167). Please reference the wireline logs submitted with Form WR-35 for Bowen Unit 2H.

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: 7954' -14,445' (1740 Holes)

Frac'd w/ 9,500 gals 15% HCL Acid, 198,047 bbls Slick Water carrying 589,840# 100 mesh, 4,092,160# 40/70 sand and 1,994,660# 20/40 sand.

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

Formations Encountered:	Top Depth	/	Bottom Depth
<u>Surface:</u>			
Big Lime	est. 2416'		2530'
Big Injun	est. 2531'		2761'
Gantz Sand	est. 2762'		2972'
Fifty Foot Sandstone	est. 2973'		3138'
Gordon	est. 3139'		3503'
Fifth Sandstone	est. 3504'		3568'
Bayard	est. 3569'		4089'
Speechley	est. 4090'		4292'
Baltown	est. 4293'		4795'
Bradford	4796'		5353'
Benson	5354'		5614'
Alexander	5615'		5836'
Elk	5837'		6405'
Rhinestreet	6406'		6930'
Sycamore	6931'		7101'
Middlesex	7102'		7249'
Burkett	7250'		7278'
Tully	7279'		7362'
Hamilton	7363'		7403'
Marcellus	7404'		7428' TVD

17-06160

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/20/2013
Job End Date:	11/30/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06160-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Cox Unit 2H
Longitude:	-80.62933890
Latitude:	39.20922220
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,428
Total Base Water Volume (gal):	8,317,974
Total Base Non Water Volume:	334,720



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	90.95605	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.75401	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.09319	
			Hydrogen Chloride	7641-01-1	18.00000	0.02226	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.03603	
			Petroleum Distillates	64742-47-8	60.00000	0.03412	
			Suspending agent (solid)	14808-60-7	3.00000	0.00551	
			Surfactant	68439-51-0	3.00000	0.00216	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Water	7732-18-5	40.00000	0.02481	
			Anionic Polyacrylamide	Proprietary		0.02481	
			Petroleum Distillates	64742-47-8	22.00000	0.01997	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00310	

17-06160

			Crystalline Salt	12125-02-9	5.00000	0.00310
SI-1000	U.S. Well Services, LLC	Scale Inhibitor				
			Anionic Copolymer	Proprietary		0.00432
			Ethylene Glycol	107-21-1	20.00000	0.00390
			Water	7732-18-5	30.00000	0.00325
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitripropionamide	10222-01-2	20.00000	0.00474
			Deionized Water	7732-18-5	28.00000	0.00271
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00137
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	0.00008
			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
			Ethoxylated Nonylphenol	68412-54-4	5.00000	0.00002
			Water	7732-18-5	20.00000	0.00002
			Triethyl Phosphate	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)