

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 #: 47-033-05584

Farm name: Hurst, Clara Mae, et al Operator Well No.: Findley Unit 1H

LOCATION: Elevation: 1172' Quadrangle: West Milford

District: Union County: Hamison
Latitude: 10571' Feet South of 39 Deg. 12 Min. 30 Sec.
Longitude 7815' Feet West of 80 Deg. 27 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#	587'	587'	815 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2692'	2692'	1096 Cu. Ft. Class A
Date Permit Issued: 1/11/2012	5 1/2" 20#	15630'	15630'	3841 Cu. Ft. Class H
Date Well Work Commenced: 3/9/2012				
Date Well Work Completed: 12/2/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7239'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7507' TVD (deepest point drilled)				
Total Measured Depth (ft): 7157' TVD (BHL), 15634' MD				
Fresh Water Depth (ft.): 301'				
Salt Water Depth (ft.): 1053'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 80', 144', 200'				
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) 7002' TVD (Top)

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

Final open flow 6026 MCF/d Final open flow N/A Bbl/d

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

RECEIVED

JAN 25 2013

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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.

Shan...
Signature

1/24/13
Date

Were core samples taken? Yes _____ No **X**

Were cuttings caught during drilling? Yes **X** 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 (Saylor Unit 2H, AP# 47-033-05583). Please reference the wireline logs submitted with Form WR-35 for Saylor 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: 7389'-15565' (1,728 holes)

Frac'd w/ 12,500 gals 15% HCL Acid, 175,971 bbls Slick Water carrying 894,200# 100 mesh, 3,245,300# 40/70 and 1,889,600# 20/40 sand.

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

<u>Formations Encountered:</u> <u>Surface:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
Big Lime	1682'	2149'
Fifty Foot Sandstone	2150'	2246'
Gordon	2247'	2533'
Fifth Sandstone	2534'	2590'
Bayard	2591'	3228'
Speechley	3229'	3482'
Balltown	3483'	4003'
Bradford	4004'	4621'
Benson	4622'	4850'
Alexander	4851'	5002'
Elk	5003'	6389'
Sycamore	6390'	6610'
Middlesex	6611'	6797'
Burket	6798'	6824'
Tully	6825'	6936'
Hamilton	6937'	7001'
Marcellus	7002'	7507' TVD

RECEIVED

JAN 25 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Hydraulic Fracturing Fluid Product Component Information Disclosure

RECEIVED

JAN 25 2013

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Fracture Date:	11/10/2012
State:	West Virginia
County:	Harrison
API Number:	47-033-05584
Operator Name:	Antero Resources
Well Name and Number:	Findley 1H
Longitude:	-80.4953306
Latitude:	39.1888639
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,157
Total Water Volume (gal):	7,398,804

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	Water	Water	7732-18-5	100.00	90.816780289538	
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Hydrogen Chloride	7641-01-1	18.00	0.030043000000	
HCL Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	87.50	0.148040000000	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Ethoxylated Nonylphenol	68412-54-4	13.00	0.000039000000	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Glycol Ethers	11-76-2	20.00	0.000061000000	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Isopropyl Alcohol	67-63-0	15.00	0.000048000000	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Propargyl Alcohol	107-19-7	20.00	0.000061000000	

Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00	0.000030000000	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Water	7732-18-5	40.00	0.000122000000	
KR-153SL	Nabors Completion and Production Services	Biocides	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00	0.002251000000	
KR-153SL	Nabors Completion and Production Services	Biocides	Water	7732-18-5	80.00	0.009003000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated alcohols	68551-12-2	15.00	0.008635000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Ethoxylated oleylamine	26635-93-8	5.00	0.002878000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	50.00	0.028784000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Microparticle	Proprietary	1.00	0.000576000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Polyacrylamide	57-55-6	40.00	0.023028000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Propylene glycol	57-55-6	15.00	0.008635000000	
WFR-3B	Nabors Completion and Production Services	Friction Reducer	Water	7732-18-5	40.00	0.023028000000	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Breaker Component	Proprietary	Proprietary	0.000510000000	
EB-4L	Nabors Completion and Production Services	Gel Breakers	Cellulase enzyme	Proprietary	Proprietary	0.000510000000	

RECEIVED

JAN 25 2013

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

	Services					
EB-4L	Nabors Completion and Production Services	Gel Breakers	Demulsifier Base	Proprietary	Proprietary	0.000510000000
EB-4L	Nabors Completion and Production Services	Gel Breakers	Ethylene Glycol	107-21-1	25.00	0.000128000000
EB-4L	Nabors Completion and Production Services	Gel Breakers	Sugar	57-50-1	Proprietary	0.000510000000
EB-4L	Nabors Completion and Production Services	Gel Breakers	Water	7732-18-5	Proprietary	0.000510000000
OB-2	Nabors Completion and Production Services	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00	0.008777000000
OB-2	Nabors Completion and Production Services	Gel Breakers	Silica, crystalline quartz	7631-86-9	10.00	0.000878000000
OB-2	Nabors Completion and Production Services	Gel Breakers	vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00	0.001755000000
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Crystalline Silica (in the form of quartz)	14808-60-7	2.00	0.000692000000
LSG-100L	Nabors Completion and Production Services	Gelling Agents	guar gum	9000-30-0	50.00	0.024801000000
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Organophylic Clay	68593-58-2	0.00	0.000000000000
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Petroleum Distillates	64742-47-8	70.00	0.034722000000
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Surfactant	68439-51-0	2.00	0.000692000000
Super TSC-LT	Nabors Completion and	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002188000000

RECEIVED

JAN 25 2013

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

	Production Services						
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002188000000	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	15.00	0.002188000000	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Proprietary	Proprietary	50.00	0.007293000000	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Water	7732-18-5	60.00	0.008752000000	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.014480000000	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90	1.315030000000	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.001316000000	
WV Local 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10	0.001316000000	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.030592000000	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90	2.778266000000	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.002781000000	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-67-7	0.10	0.002781000000	
WV Specific 40/70 mesh Sand	Nabors Completion	Sand - Bulk - West Virginia	Aluminum Oxide	1344-28-1	1.10	0.052540000000	

RECEIVED

JAN 25 2011

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

	and Production Services						
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-80-7	99.90	4.771543000000	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Iron Oxide	1309-37-1	0.10	0.004776000000	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Titanium Oxide	13463-87-7	0.10	0.004776000000	

* 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(l) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
JAN 25 2013
WV GEOLOGICAL SURVEY
MORGANTOWN, WV