

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:	11/11/2013	
API#:	47-033-05731	
		r

m name: Stamm, Jeffrey O.	Operator Well	No.: Huffman	Jnit 1H	V		
CATION: Elevation: 1,240'	Quadrangle: S	Salem				
District: Tenmile	County: Harrison					
Latitude: 631' Feet South of 39 Deg.			c.			
Longitude 15,254' Feet West of 80 Deg.	32Min.	30 Se	c.			
Autoro Deservosa Composition						
Company: Antero Resources Corporation			1	I a mu		
Address: 1625 17th Street	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.		
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft. Class A		
Agent: CT Corporation System	13 3/8" 48#	375'	375'	520 Cu. Ft. Class A		
Inspector: Sam Ward	9 5/8" 36#	2,818'	2,818'	1147 Cu. Ft. Class A		
Date Permit Issued: 3/8/2013	5 1/2" 20#	17,265'	17,265'	4245 Cu. Ft. Class H		
Date Well Work Commenced: 3/12/2013						
Date Well Work Completed: 9/1/2013	2 3/8" 4.7#	7,973'				
Verbal Plugging: N/A						
Date Permission granted on: N/A						
Rotary Cable Rig						
Total Vertical Depth (ft): 7,518' TVD (Deepest Point Drilled)						
Total Measured Depth (ft): 17,265' MD, 7,395' TVD (BHL)						
Fresh Water Depth (ft.): 106'						
Salt Water Depth (ft.): 600', 1575'						
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 formatio			lata on separate s	sheet)		
Producing formation Marcellus Pay z  Gas: Initial open flow MCF/d Oil: Initial open flow		ol/d				
Final open flow 13,654 MCF/d Final open flow						
Time of open flow between initial and final tests	Hours					
Static rock Pressure 3800 psig (surface pressure) aft	ter Hour	'S				
Second producing formation Pay zor	ne depth (ft)					
Gas: Initial open flow MCF/d Oil: Initial open flow	Y 10 YE K	ol/d				
Final open flowMCF/d Final open flow		l/d	RUSE			
Time of open flow between initial and final tests	Hours		Office and	and Com		

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.

Signature

Date

04/04/2014

Were core samples taken? Yes	No_X Were cuttings caugh	nt during drilling? YesNo_X
Were Electrical, Mechanical or Geophysi	ical logs recorded on this well? If yes, please li	st Yes, CBL
This is a subsequent well. Antero only runs wireline logs on the first we	ell on a multi-well pad (Hustead North Unit 1H API# 47-033-05413). Please referen	ce wireline logs submitted with Form WR-35 for Hustead North Unit 1H.
FRACTURING OR STIMULATING DETAILED GEOLOGICAL RECO	PUT THE FOLLOWING: 1). DETAIL, PHYSICAL CHANGE, ETC. 2). THE WE RD OF THE TOPS AND BOTTOMS OF ELLBORE FROM SURFACE TO TOTAL	LL LOG WHICH IS A SYSTEMATION F ALL FORMATIONS, INCLUDING
Perforated Intervals, Fracturing, or Stimu	lating:	
Perforations: 8,028'-17,230' MD (	2,220 Perforations)	
Frac'd w/ 22,500 gals 15% HCL A	cid, 266,207 bbls Slick Water carrying	g 1,016,423 # 100 mesh,
5,256,830 # 40/70 sand and 3,66	67,760 # 20/40 sand.	
Plug Back Details Including Plug Type a	nd Depth(s): N/A	
-		
F	Ton Donth	Rottom Douth
Formations Encountered: Surface:	Top Depth /	Bottom Depth
Big Lime	est. 2,243'	2,292'
Big Injun	est. 2,293'	2,678'
Gantz Sand	est. 2,679'	2,805'
Fifty Foot Sandstone	est. 2,806'	2,902'
Gordon	est. 2,903'	3,234'
Fifth Sandstone	est. 3,235'	3,262'
Bayard	est. 3,263'	3,873'
Speechley	est. 3,874'	4,131'
Baltown	est. 4,132'	4,656'
Bradford	est. 4,657'	5,211'
Benson	est. 4,037	5,478
	est. 5,212 est. 5,479'	5,697'
Alexander	•	
Elk Bhinnetanat	est. 5,698'	6,212' 6,496'
Rhinestreet	est. 6,213'	6,496'
Sycamore	6,497'	6,832'
Middlesex	6,833'	6,981'
Burkett	6,982'	7,014'
Tully	7,015'	7,116 '
Hamilton	7,317'	7,164'
Marcellus	7,365'	7,518' TVD

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/20/2013
Job End Date:	9/1/2013
State:	
County:	
API Number:	47-033-05731-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Huffman Unit 1H
Longitude:	-80.54327220
Latitude:	39.29143330
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,399
Total Base Water Volume (gal):	11,179,812
Total Base Non Water Volume:	52,714







## 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
reshwater	Antero Resources	Water					
			Water	7732-18-5	100.00000	90.70898	
0/70 White	US Silica	Propppant					
			Sand	14808-60-7	100.00000	4.91440	
0/40 White	US Silica	Propppant			F- 1		
			Sand	14808-60-7	100.00000	2.92370	
00 Mesh	US Silica	Propppant					
			Sand	14808-60-7	100.00000	1.26770	
FS40	PQS	Guar Gel					
			Petroleum Distillate	64742-47-8	55.00000	0.04677	
			Guar Gum	9000-30-0	50.00000	0.04252	
			Clay	1302-78-9	5.00000	0.00425	
			Surfactant	154518-36-2	1.00000	0.00085	
lexslick 953	Chemplex	Friction Reducer					
			Water	7732-18-5	35.00000	0.02152	
			Polyacrylamide-co-acrylic acid	9003-06-9	32.00000	0.01967	
			Hydrotreated Petroleum Distillate	64742-47-8	30.00000	0.01844	
			Alcohol Ethoxylate Surfactants	Proprietary	8.00000	0.00492	

ydrochloric Acid 10- 5%	Reagent	Acid					
			Hydrchloric Acid	7647-01-0	15.00000	0.03424	
excide 15G	Chemplex	Biocide					
			Water	7732-18-5	90.00000	0.02285	
			Glutaraldehyde	111-30-8	14.00000	0.00355	
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00076	
			Alkyl Dimethyl Benzyl Ammonium Chloride	68424-85-1	3.00000	0.00076	
			Ethanol	64-17-5	3.00000	0.00076	
exaid 673	Chemplex	Scale Inhibitor	mal Marie and the second				
			Water	7732-18-5	85.00000	0.01335	
			Methyl Alcohol	67-56-1	25.00000	0.00393	
			Sodium Salt of Phosphonodimethylated Diamine	Proprietary	5.00000	0.00079	
odium Persulfate	Chemplex	Breaker					
			Sodium Persulfate	7775-27-1	100.00000	0.00123	
exhib 256	Chemplex	Corrosion					
			Methyl Alcohol	67-56-1	70.00000	0.00049	
			thiourea-formaldehyde copolymer	68527-49-1	30.00000	0.00021	
			Alcohol Ethoxylate Surfactants	Proprietary	30.00000	0.00021	
The second			n-olefins	Proprietary	10.00000	0.00007	
			Propargyl Alcohol	107-19-7	8.00000	0.00006	
exbreak 145	Chemplex	Non-emulsifier		(			
			Water	732-18-5	66.00000	0.00052	
			Methyl Alcohol	67-56-1	15.00000	0.00012	
			Ethylene Glycol Monobutyl Ethe	111-76-2	15.00000	0.00012	
			Cocamide Diethanolamine Salt	68603-42-9	10.00000	0.00008	
			Diethanolamine	111-42-2	5.00000	0.00004	
erriplex 66	Chemplex	Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00022	
			Water	7732-18-5	35.00000	0.00016	
			Citric Acid	77-92-9	30.00000	0.00013	

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)

<sup>\*</sup> 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%