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

Farm name: Robinson, Richard G	rm name: Robinson, Richard G.			Operator Well No.: Right Hand Unit 2H				
LOCATION: Elevation: 1,156'		Quadran						
District: New Milton			County:	Doddi	ridge			
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:	esources Corporation	-	Casing &	&	Used in		Left in well	Cement fill
Address: 1023 17th	roucci		Tubing		drilling			up Cu. Ft.
Denver, C	O 80202		20" 5	1#	40'		40'	38 Cu. Ft. Class A
Agent: CT Corporat	tion 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

Agent: Ci Corporation System	13 3/0 40#	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		Тор	Bottom	
Rotary Cable Rig	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'				

Producing formation Pay zone depth (ft) 1992 (1917)	ALL Oil and Gas
OPEN FLOW DATA (If more than two producing formations please include additional data Producing formation Marcellus Pay zone depth (ft) 7032' (TOP) Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d	Office of On Chi
Final open flow 6,468 MCF/d Final open flow Bbl/d	
Time of open flow between initial and final tests — Hours	MAY 2 1 2014
Static rock Pressure 3950psig (surface pressure) after Hours	WV Department of Environmental Protection
Second producing formation Pay zone depth (ft)	ironmental Protection
Gas: Initial open flowBbl/d	Environme
Final open flow MCF/d Final open flow Bbl/d	
rmai open nowwicr/d rmai open nowBbi/d	
Time of open flow between initial and final tests 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.

Signature

Is coal being mined in area (N/Y)? No

Void(s) encountered (N/Y) Depth(s) No

Coal Depths (ft.): 879', 1210'

Date | 2019

Were core samples taken? YesN	No X Were cuttings o	aught during drilling? YesNo_X
Were Electrical, Mechanical or Geophysic	allogs recorded on this well? If was play	ace list Yes, CBL-
This is a subsequent well. Antero only runs wireline logs on the first w	ell on a multi-well pad (Johnson Unit 1H, API# 47-017-06156). Piease	reference the wireline logs submitted with Form WR-35 for Johnson Unit 1H.
FRACTURING OR STIMULATING,	PHYSICAL CHANGE, ETC. 2). THE D OF THE TOPS AND BOTTOMS	AILS OF PERFORATED INTERVALS, WELL LOG WHICH IS A SYSTEMATIC OF ALL FORMATIONS, INCLUDING TAL DEPTH.
Perforated Intervals, Fracturing, or Stimul	ating:	
Perforations: 7,449'- 13,085' (1800	Holes)	
Frac'd w/ 9,250 gals 15% HCL Aci	d, 175,158 bbls Slick Water carry	ing 436,690# 100 mesh,
3,972,170# 40/70 sand and 2,269,	360# 20/40 sand.	
	arv	
		
DI D D 'I I ' D T	15 4()	
Plug Back Details Including Plug Type an	d Depth(s): N/A	
Formations Encountered:	Top Depth /	Bottom Depth
Surface:	rop sopm	Bottom Bepin
Big Lime	est. 2151'	2245'
Big Injun	est. 2246'	2487'
Gantz Sand	est. 2488'	2664'
Fifty Foot Sandstone	est. 2665'	2872'
Gordon	est. 2873'	3197'
Fifth Sandstone	est. 3198'	3263'
Bayard	est. 3264'	3856'
Speechley	est. 3857'	4055'
Balltown	est. 4056'	4697'
Bradford	est. 4698'	5147'
Benson	est. 5148'	5416'DECEIVED
Alexander	est. 5417'	5416 RECEIVED 5615 RECEIVED 66 Oil and Gas
Elk	est. 5616'	Giffue of Oli allo
Rhinestreet	est. 6135'	
Sycamore	est. 6631'	6630' 6785' MAY 21 2014
Middlesex	est. 6786'	COOOL
Burkett	6923'	6987 V Department of
Tully	6958'	E7031 Departmental Protection
Hamilton	7022'	□)031'
Marcellus	7032'	7054' TVD
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lydraulic Fracturing I	Fluid Product Component I	nformation Disclosure
Job Start Date:	1/21/2014	Į Ö
Job End Date:	1/31/2014	000
State:	West Virginia	E &
County:	Doddridge	Eros Esser
API Number:	47-017-06174-00-00	Frac Focus
Operator Name:	Antero Resources Corporation	Chemical Disclosure Registry
Well Name and Number:	Right Hand Unit 2H	
Longitude:	-80.71441670	1
Latitude:	39.18951390	GROUNDWATER
Datum:	NAD27	Oi
Federal/Tribal Well:	NO	PROTECTION COUNCIL
True Vertical Depth:	7,054	
otal Base Water Volume (gal):	7,379,526	
Total Base Non Water Volume:	333,954	







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	S Comments				
			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	
.GC-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	

			Ethoxylated alcohol blend	Proprietary	5.00000	0.00328	to
I-1000	U.S. Well Services, LLC	Scale Inhibitor				5	Pro
			Anionic Copolymer	Proprietary		0.00405	20 JE
			Ethylene Glycol	107-21-1	20.00000	0.00366	一百世
			Water	7732-18-5	30.00000	0.00305	S del
-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				回言	A D C
			2,2-dibromo-3- nitrilopropionamide	10222-01-2	20.00000	0.00574	35
			Deionized Water	7732-18-5	28.00000	0.00328	1
P One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00094	
1-300	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	

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)

^{*} 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%