

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: 8/5/2013  
API #: 47-017-06121

Farm name: David Thompson, et al Operator Well No.: Kemper Unit 2H

LOCATION: Elevation: 1,269' Quadrangle: Folsom 7.5'

District: McClellan County: Doddridge  
Latitude: 4.855 Feet South of 39 Deg. 25 Min. 00 Sec.  
Longitude 11.725 Feet West of 80 Deg. 32 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#	400'	400'	555 Cu Ft Class A
Inspector: <b>Douglas Newlon</b>	9-5/8" 36#	2,628'	2,628'	1,070 Cu Ft Class A
Date Permit Issued: 9/26/2012	5-1/2" 20#	13,409'	13,409'	3,238 Cu Ft Class H
Date Well Work Commenced: 11/27/2012				
Date Well Work Completed: 4/9/2013	2 3/8" 4.7#	7576'		
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): 7496' TVD				
Total Measured Depth (ft): 13,409' MD				
Fresh Water Depth (ft.): 349'				
Salt Water Depth (ft.): None Available				
Is coal being mined in area (N/Y)? N				
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 10,133 MCF/d Final open flow --- Bbl/d

Time of open flow between initial and final tests --- Hours

Static rock Pressure 3800 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

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WV Dept. 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.

Kaiti Buck  
Signature

9/12/13  
Date

11/08/2013

17.06/21

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 (Kemper Unit 1H AP# 4701706117). Please reference the wire line logs submitted with Form WR-35 for Kemper Unit 1H.

**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: 7,591-13,354' MD ( 1,224 holes)

Frac'd w/ 9,000 gals 15% HCL Acid, 120,367 bbls Slick Water carrying 623,220 # 100 mesh,  
2,385,800 # 40/70 sand and 1,420,280 # 20/40 sand.

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

Formations Encountered: Surface:	Top Depth	/	Bottom Depth
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Big Lime	2214'		2332'
Big Injun	2333'		2651'
Gantz Sand	2652'		2767'
Fifty Foot Sandstone	2768'		2973'
Gordon	2974'		3285'
Fifth Sandstone	3286'		3346'
Bayard	3347'		3974'
Speechley	3975'		4291'
Balltown	4292'		4643'
Bradford	4644'		5326'
Benson	5327'		5591'
Alexander	5592'		5781'
Elk	5782'		6409'
Rhinestreet	6410'		7087'
Middlesex Shale	7088'		7244'
Burkett Shale	7245'		7271'
Tully LS	7272'		7353'
Hamilton Shale	7354'		7403'
Marcellus	7404'		7496'

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	4/4/2013
State:	WV
County:	Doddridge
API Number:	47-017-06121
Operator Name:	Antero Resources
Well Name and Number:	Kemper 2H
Longitude:	-80.5588444
Latitude:	39.3844778
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,496
Total Water Volume (gal)**:	5,051,214

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
AL-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors	2-Butoxyethanol	111-76-2	7.00%	0.00002%	
			Cinnamaldehyde	104-55-2	5.00%	0.00002%	
			Ethoxylated Nonylphenol	68412-54-4	5.00%	0.00002%	
			Ethylene Glycol	107-21-1	31.00%	0.00011%	
			Isopropyl Alcohol	67-63-0	3.00%	0.00001%	
			N,N-Dimethylformamide	68-12-2	15.00%	0.00004%	
			Tar bases, quinoline derivs, benzyl chloride-quatlenized	72480-70-7	13.00%	0.00004%	
			Triethyl Phosphate	78-40-0	3.00%	0.00001%	
			Water	7732-18-5	20.00%	0.00006%	
Biodclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-dibromo-3-nitriopropionamide	10222-01-2	20.00%	0.00491%	
			Deionized Water	7732-18-5	28.00%	0.00281%	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00%	0.00473%	
			Petroleum Distillates	64742-47-8	60.00%	0.06887%	
			Surfactant	68439-51-0	3.00%	0.06887%	
			Suspending agent (solid)	14808-60-7	3.00%	0.06887%	
AP One	U.S. Well Services, LLC	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00%	0.00126%	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Antionic Polyacrylamide	Proprietary	Proprietary		
			Ethoxylated alcohol blend	Proprietary	5.00%	0.00265%	
			Water	7732-18-5	40.00%	0.02119%	

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