

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: 1/24/2013  
API #: 47-033-05591

Farm name: Mountain Lakes Limited Operator Well No.: Kermit Unit 3H

LOCATION: Elevation: 1386' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 3180' Feet South of 39 Deg. 15 Min. 00 Sec.  
Longitude 9628' 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#	41'	41'	38 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	543'	543'	754 Cu. Ft. Class A
Inspector: <u>Tristan Jenkins</u>	9 5/8" 36#	2571'	2571'	1047 Cu. Ft. Class A
Date Permit Issued: <u>1/24/2012</u>	5 1/2" 23#	14172'	14172'	3477 Cu. Ft. Class H
Date Well Work Commenced: <u>6/20/2012</u>				
Date Well Work Completed: <u>11/13/2012</u>				
Verbal Plugging: <u>N/A</u>				
Date Permission granted on: <u>N/A</u>	2 3/8" 4.7#	7161'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>7179' TVD</u>				
Total Measured Depth (ft): <u>14172' MD</u>				
Fresh Water Depth (ft.): <u>est. 50', 90' 111'</u>				
Salt Water Depth (ft.): <u>None available</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>270', 545', 645'</u>				
Void(s) encountered (N/Y) Depth(s) <u>None</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7141' TVD (Top)

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

Final open flow 4811 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

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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

1/24/13  
Date

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,  
Photo Density/ Compensated Neutron/ Gamma Ray and Dual Laterolog Gamma Ray

**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: 7580'-14406' (1368 holes)

Frac'd w/ 9,576 gals 15% HCL Acid, 135,719 bbls Slick Water carrying 699,100# 100 mesh,  
2,712,240# 40/70 and 1,644,440# 20/40 sand.

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

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime	1756'	1863'
Big Injun	1864'	2149'
Gantz Sand	2150'	2251'
Fifty Foot Sandstone	2252'	2369'
Gordon	2370'	2660'
Fifth Sandstone	2661'	2715'
Bayard	2716'	3346'
Speechley	3347'	3587'
Balltown	3588'	4098'
Bradford	4099'	4677'
Benson	4678'	4873'
Alexander	4874'	5225'
Elk	5226'	6748'
Sonyea	6749'	6761'
Middlesex	6762'	6832'
West River Shale	6833'	6882'
Genundewa	6883'	6941'
Burket	6942'	6949'
Tully	6950'	7064'
Hamilton	7065'	7140'
Marcellus	7141'	7179' TVD

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**Hydraulic Fracturing Fluid Product Component Information Disclosure**

Fracture Date:	11/02/12
State:	WV
County:	Harrison
API Number:	47-053-0591
Operator Name:	Aurora Resources
Well Name and Number:	Kemal 8H
Longitude:	-80.465563
Latitude:	39.2270847
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,179
Total Water Volume* (gal):	6,067,430

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**Hydraulic Fracturing Fluid Composition:**

Trade Name	Supplier	Purpose	Compositional or Formulary Components Disclosed	Chemical Abstract Service Number (CAS #) - If applicable	Maximum Component Concentration in Additive (% by mass)**	Maximum Component Concentration in HF Fluid (% by mass)**	Comments	
AL-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors	2-Butoxyethanol	111-76-2	7.00%	0.0002%		
			Cinnamaldehyde	104-69-2	6.00%	0.0002%		
			Ethoxylated Nonylphenol	68412-84-4	6.80%	0.0002%		
			Ethylene Glycol	107-21-1	31.00%	0.0011%		
			Isopropyl Alcohol	67-63-0	3.00%	0.0001%		
			N,N-Dimethylformamide	68-12-3	15.00%	0.0004%		
			Tar bases, quinoline deriva, benzyl chloride quaternized	72480-78-7	13.00%	0.0004%		
			Triethyl Phosphate	78-40-0	3.80%	0.0001%		
			Water	7732-18-5	29.99%	0.0006%		
			10222-01-2	29.99%	0.0047%			
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-dibromo-3-nitropropionamide	7732-18-5	29.99%	0.0047%		
			Deionized Water	7732-18-5	28.99%	0.0027%		
			Guar Gum	9000-30-0	50.00%	0.8649%		
			Petroleum Distillates	64742-47-8	60.00%	0.06867%		
LGC-15	U.S. Well Services, LLC	Gelling Agents	Surfactant	68439-81-0	3.00%	0.06867%		
			Suspending agent (acid)	14898-80-7	3.90%	0.06867%		
			Ammonium Persulfate	7727-84-0	100.00%	0.0012%		
			Proprietary	Proprietary	5.00%	0.86284%		
AP One	U.S. Well Services, LLC	Gel Breakers	Ethoxylated alcohol blend	Proprietary	Proprietary	5.00%	0.86284%	
			Water	7732-18-5	40.00%	0.86272%		
			Ammonium Chloride	12125-82-9	6.90%	0.00284%		
			Petroleum Distillates	64742-47-8	22.99%	0.01006%		
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Ethylene Glycol	107-21-1	28.99%	0.00397%		
			Water	7732-18-5	30.00%	0.00381%		
			Anionic Copolymer	Proprietary	Proprietary	100.00%	9.91255%	
			Crystalline Silica, quartz	14898-80-7	100.00%	0.05786%		
SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Hydrogen Chloride	7641-01-1	18.80%	0.13861%		
			Water	7732-18-5	87.58%	0.13861%		
			Water	7732-18-5	100.00%	98.89443%		
			Water	7732-18-5	100.00%	98.89443%		
Send	U.S. Well Services, LLC	Proppant	Water	7732-18-5	100.00%	98.89443%		
			Water	7732-18-5	100.00%	98.89443%		
HCL Acid (12.5%-16.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	100.00%	98.89443%		
			Water	7732-18-5	100.00%	98.89443%		
Water		Carrier/Base Fluid	Water	7732-18-5	100.00%	98.89443%		
			Water	7732-18-5	100.00%	98.89443%		

\*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%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(f) and Appendix D.