

JK

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: 7/5/2013
API #: 47-017-06128

Farm name: Moore, Dwight E. & Tina M. Operator Well No.: Moore Unit 1H

LOCATION: Elevation: 1,237' Quadrangle: Smithburg 7.5'

District: Grant County: Doddridge
Latitude: 9.423' Feet South of 39 Deg. 20 Min. 00 Sec.
Longitude 5.623' Feet West of 80 Deg. 40 Min. 00 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#	542'	542'	753 Cu Ft Class A
Inspector: Douglas Newlon	9 5/8" 36#	2583'	2583'	1052 Cu Ft Class A
Date Permit Issued: 10/5/2012	5 1/2" 20#	14,267'	14,267'	3491 Cu Ft Class H
Date Well Work Commenced: 12/5/2012				
Date Well Work Completed: 5/15/2013	2 3/8" 4.7#	7297'		
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): 7110' TVD				
Total Measured Depth (ft): 14,267' MD				
Fresh Water Depth (ft.): 192'				
Salt Water Depth (ft.): 1336', 1681'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 274', 444', 1290'				
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) 7040 (TOP)

Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl/d

Final open flow 9,072 MCF/d Final open flow --- Bbl/d

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

Static rock Pressure 3550 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.

Karen Buck
Signature

12/6/13
Date

04/04/2014

17-06128

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:

Perforated: 7,395- 14,212 (1,440 Holes)

Frac'd w/ 10,500 gals 15% HCL Acid, 148,103 bbls Slick Water carrying 651,760# mesh, 2,779,160# 40/70 sand and 1,665,590 20/40 Sand.

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

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			
Big Lime	2049'		2165'
Big Injun	2166'		2596'
Gantz Sand	2597'		2730'
Fifty Foot Sandstone	2731'		2799'
Gordon	2800'		3142'
Fifth Sandstone	3143'		3156'
Bayard	3157'		3885'
Speechley	3886'		4146'
Balltown	4147'		4662'
Bradford	4663'		5165'
Benson	5166'		5434'
Alexander	5435'		6189'
Rhinestreet	6190'		6630'
Sycamore SS	6631'		6777'
Sonyea	6778'		6928'
Burkett Shale	6929'		6955'
Tully LS	6956'		7017'
Hamilton	7018'		7039'
Marcellus	7040'		7110' TVD

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Antero Resources
Moore Unit 1H
Doddridge County WV
Northing: 14277822.16
Easting: 1725272.41
Original Wellpath

WELL DETAILS: Moore Unit 1H

+N/-S	+E/-W	Northing	Ground Level	1237.0	Slot
0.0	0.0	14277822.16	Easting	1725272.41	1237.0
			Latitude	39° 19' 4.20 N	80° 41' 59.895 W
			Longitude		

REFERENCE INFORMATION

Coordinate (NE) Reference: Well Moore Unit 1H, Grid North
 Vertical (TV) Reference: Moore 1H 1237 GL + 23 KB @ 1250 (ustf) (Original Well Elev)
 Section (VS) Reference: Slot - (O.D.N. 6.0E)
 Measured Depth Reference: Moore 1H 1237 GL + 23 KB @ 1250 (ustf) (Original Well Elev)
 Calculation Method: Minimum Curvature

PROJECT DETAILS: Doddridge County WV

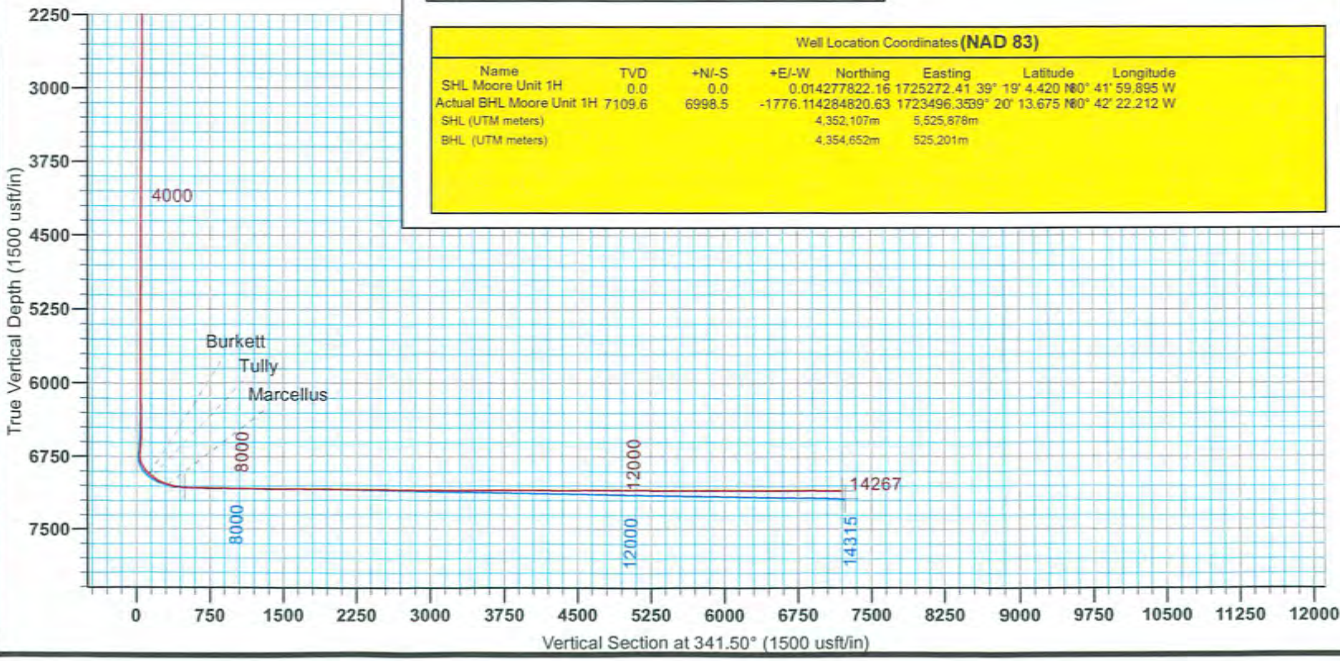
Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 17N (84 W to 78 W)
 System Datum: Mean Sea Level

LEGEND

- Moore Unit 2H, Original Wellpath, Original Wellpath V0
- Moore Unit 1H, Original Wellpath, Plan 3 Post Gyro V0
- Original Wellpath

Well Location Coordinates (NAD 83)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Moore Unit 1H	0.0	0.0	0.014277822 16	1725272.41	39° 19' 4.420 N	80° 41' 59.895 W	
Actual BHL Moore Unit 1H	7109.6	6998.5	-1776.114284820 63	1723496.3539	20° 13.675 N	80° 42' 22.212 W	
SHL (UTM meters)				4,352,107m	5,525,876m		
BHL (UTM meters)				4,354,652m	525,201m		



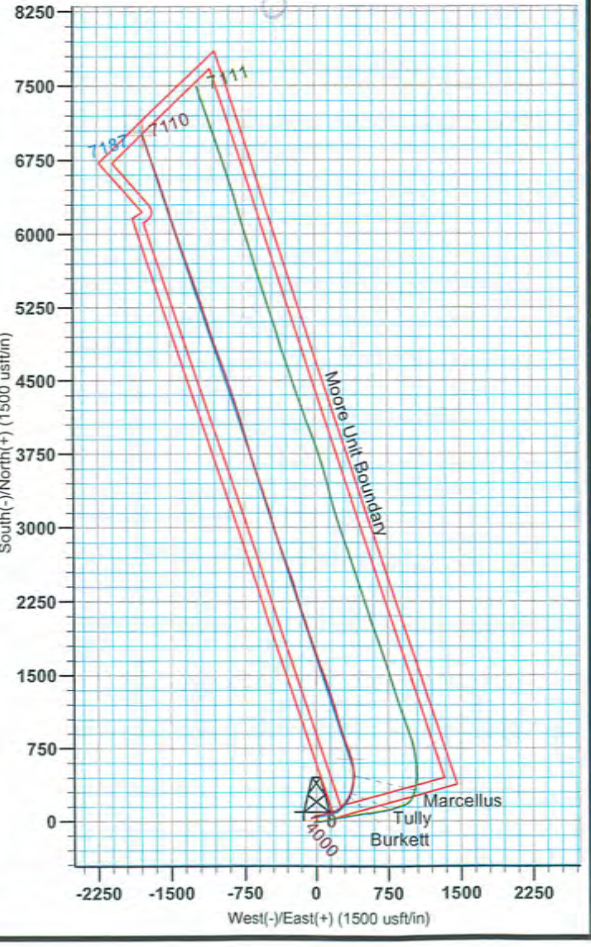
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Genie Lightfoot
 15:04, July 18 2013

Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK

North
 True North: -0.19°
 Magnetic North: -8.67°

Magnetic Field
 Strength: 52468.5nT
 Dip Angle: 66.96°
 Date: 1/24/2013
 Model: IGRF2010



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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/11/2013
Job End Date:	5/15/2013
State:	West Virginia
County:	Doddridge
API Number:	47-017-06128-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Moore Unit 1H
Longitude:	-80.66664400
Latitude:	39.19144200
Datum:	NAD27
Federal/Tribal Well:	NO
Total Base Water Volume (gal):	6,220,326
Total Base Non Water Volume:	23,607



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
Freshwater	Antero Resources	Water	Water	7732-18-5	100.00000	89.97619	
40/70 White	US Silica	Proppant	Sand	14808-60-7	100.00000	5.35395	
20/40 White	US Silica	Proppant	Sand	14808-60-7	100.00000	3.20870	
100 Mesh	US Silica	Proppant	Sand	14808-60-7	100.00000	1.25559	
Beta M-4.0	PIP	Guar Gel	Petroleum Distillate	64742-47-8	55.00000	0.06264	
			Guar Gum	9000-30-0	50.00000	0.05695	
			Clay	1302-78-9	5.00000	0.00569	
			Surfactant	154518-36-2	1.00000	0.00114	
Plexslick 953	Chemplex	Friction Reducer	Water	7732-18-5	35.00000	0.01901	
			Polyacrylamide-co-acrylic acid	9003-06-9	32.00000	0.01738	
			Hydrotreated Petroleum Distillate	64742-47-8	30.00000	0.01630	
			Alcohol Ethoxylate Surfactants	Proprietary	8.00000	0.00435	
Hydrochloric Acid 10-15%	Reagent	Acid					

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			Hydrchloric Acid	7647-01-0	15.00000	0.02848
Plexcide 15G	Chemplex	Biocide				
			Water	7732-18-5	90.00000	0.02261
			Glutaraldehyde	111-30-8	14.00000	0.00352
			Ethanol	64-17-5	3.00000	0.00075
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00075
			Alkyl Dimethyl Benzyl Ammonium Chloride	68424-85-1	3.00000	0.00075
Plexaid 673	Chemplex	Scale Inhibitor				
			Water	7732-18-5	85.00000	0.01131
			Methyl Alcohol	67-56-1	25.00000	0.00333
			Sodium Salt of Phosphonodimethylated Diamine	Proprietary	5.00000	0.00067
Sodium Persulfate	Chemplex	Breaker				
			Sodium Persulfate	7775-27-1	100.00000	0.00140
Plexhib 256	Chemplex	Corrosion				
			Methyl Alcohol	67-56-1	70.00000	0.00041
			thiourea-formaldehyde copolymer	68527-49-1	30.00000	0.00018
			Alcohol Ethoxylate Surfactants	Proprietary	30.00000	0.00018
			n-olefins	Proprietary	10.00000	0.00006
			Propargyl Alcohol	107-19-7	8.00000	0.00005
Plexbreak 145	Chemplex	Non-emulsifier				
			Water	732-18-5	66.00000	0.00044
			Ethylene Glycol Monobutyl Ether	111-76-2	15.00000	0.00010
			Methyl Alcohol	67-56-1	15.00000	0.00010
			Cocamide Diethanolamine Salt	68603-42-9	10.00000	0.00007
			Diethanolamine	111-42-2	5.00000	0.00003
Ferriplex 66	Chemplex	Iron Control				
			Acetic Acid	64-19-7	50.00000	0.00019
			Water	7732-18-5	35.00000	0.00014
			Citric Acid	77-92-9	30.00000	0.00012

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-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%

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)