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: 9/26/2013
API #: 47-033-05623

Farm name: Myer, Everette M. Jr. Operator Well No.: Thaddeus Unit 1H

LOCATION: Elevation: 1358' Quadrangle: Big Isaac

District: Union County: Harrison
Latitude: 3,435' Feet South of 39 Deg. 12 Min. 30 Sec.
Longitude 6,954' Feet West of 80 Deg. 30 Min. 00 Sec.

Company: Antero Resources Corporation

Address: 1625 17th Street	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Denver, CO 80202	20" 94#	42'	42'	40 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	333'	333'	462 Cu. Ft. Class A
Inspector: Sam Ward	9 5/8" 36#	2,540'	2,540'	1034 Cu. Ft. Class A
Date Permit Issued: 7/9/2012	5 1/2" 20#	13,105'	13,105'	3184 Cu. Ft. Class H
Date Well Work Commenced: 9/30/2012				
Date Well Work Completed: 5/23/2013	2 3/8" 4.7#	7,394'		
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 7327' TVD (Deepest Point Drilled)				
Total Measured Depth (ft): 13,105' MD, 7281' TVD (BHL)				
Fresh Water Depth (ft.): 70'				
Salt Water Depth (ft.): 500'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 263', 490', 554, 1329'				
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) 7284' (TOP)
Gas: Initial open flow ---- MCF/d Oil: Initial open flow ---- Bbl/d
Final open flow 6197 MCF/d Final open flow ----- Bbl/d
Time of open flow between initial and final tests ---- 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

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.

Kaitlin Buck
Signature

12/6/13
Date

04/04/2014

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Were core samples taken? Yes_____ No X Were cuttings caught during drilling? Yes_____ No X

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 (Thaddeus Unit 2H API#47-033-05622). Please reference the wireline logs submitted with Form WR-35 for Thaddeus Unit 2H.

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: 7,486- 13, 048' MD (1,152 Holes)

Frac'd w/ 8,500 gals 15% HCL Acid, 121,184 Slick Water carrying 496,700# 100 mesh,

1,972,600# 40/70 sand and 1,061,900# 20/40 sand.

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

Formations Encountered: Surface:	Top Depth	/ Bottom Depth
Big Lime	est 1960'	2065'
Big Injun	est 2066'	2314'
Gantz Sand	est 2315'	2429'
Fifty Foot Sandstone	est 2430'	2522'
Gordon	est 2523'	2831'
Fifth Sandstone	est 2832'	2871'
Bayard	est 2872'	3530'
Speechley	est 3531'	3774'
Balltown	est 3775'	4289'
Bradford	est 4290'	4842'
Benson	est 4843'	5041'
Alexander	est 5042'	5190'
Elk	est 5191'	5851'
Rhinestreet	est 5852'	6627'
Sycamore	est 6628'	6881'
Middlesex	6882'	7069'
Burkett	7070'	7093'
Tully	7094'	7209'
Hamilton	7210'	7283'
Marcellus	7284'	7327' TVD

04/04/2014

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ANTERO RESOURCES

Antero Resources
Thaddeus Unit 1H
Harrison County West Virginia
Northing: 14231174.64
Easting: 1778731.85
Original Wellpath

WELL DETAILS: Thaddeus Unit 1H

Ground Level: 1358.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	14231174.64	1778731.85	39° 11' 20.891 N	80° 30' 42.645 W	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL Thaddeus Unit 1H	0.0	0.0	0.0	14231174.64	1778731.85	39° 11' 20.891 N	80° 30' 42.645 W	Point
Actual BHL Thaddeus Unit 1H	7328.0	-5828.4	1678.6	14225346.28	1780410.45	39° 10' 23.173 N	80° 30' 21.722 W	Point
PBHL TGT Thaddeus 1H	7333.0	-5828.4	1678.6	14225346.28	1780410.45	39° 10' 23.173 N	80° 30' 21.722 W	Point

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Thaddeus Unit 1H, Grid North
Vertical (TVD) Reference: Thaddeus 1H 1358.0L + 28 KB @ 1386.0usft
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: Thaddeus 1H 1358.0L + 28 KB @ 1386.0usft
Calculation Method: Minimum Curvature

PROJECT DETAILS: Harrison County West Virginia

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

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

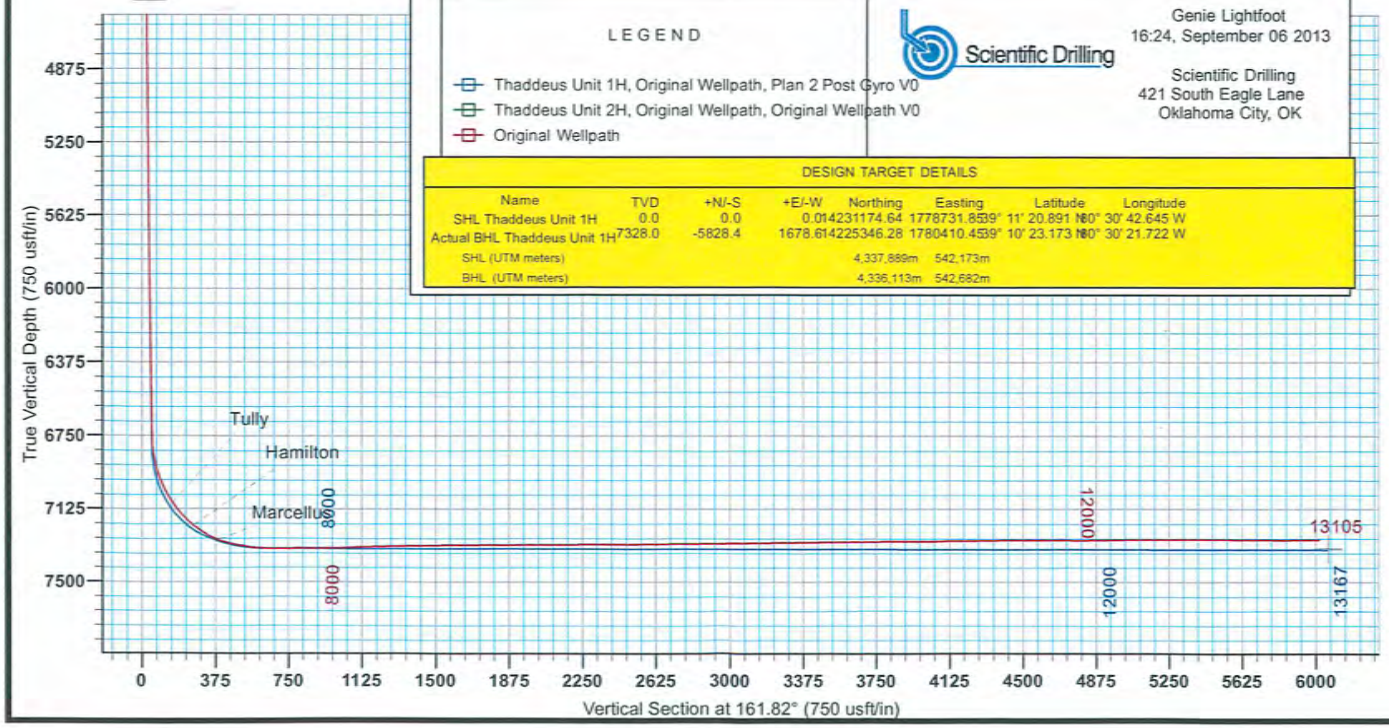
Scientific Drilling

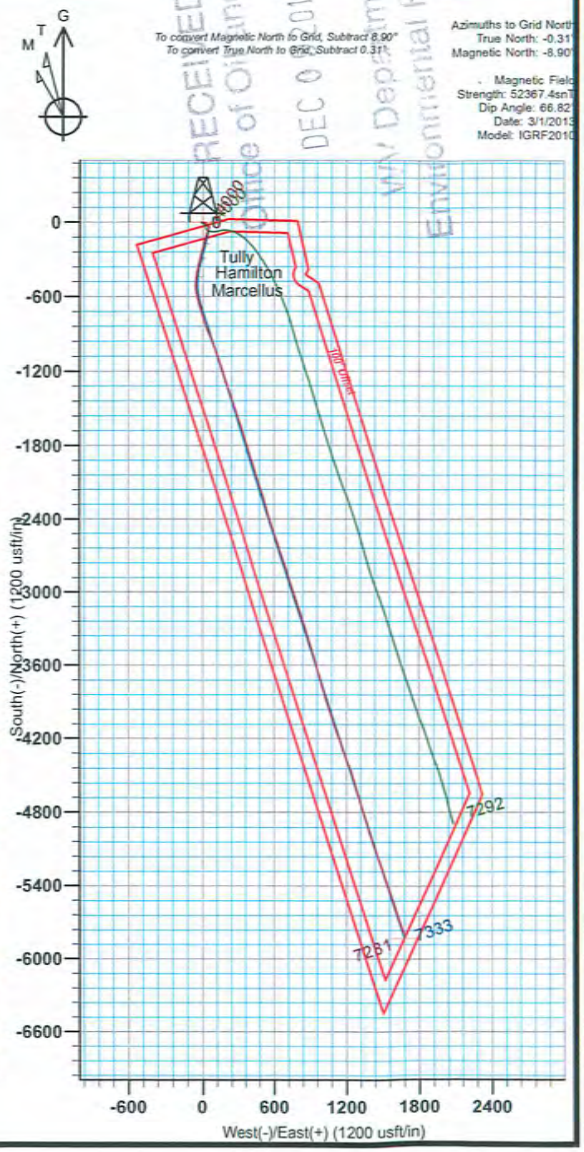
Genie Lightfoot
16:24, September 06 2013

Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Thaddeus Unit 1H	0.0	0.0	0.0	14231174.64	1778731.85	39° 11' 20.891 N	80° 30' 42.645 W
Actual BHL Thaddeus Unit 1H	7328.0	-5828.4	1678.6	14225346.28	1780410.45	39° 10' 23.173 N	80° 30' 21.722 W
SHL (UTM meters)				4,337,889m	542,173m		
BHL (UTM meters)				4,336,113m	542,682m		





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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/18/2013
Job End Date:	5/23/2013
State:	West Virginia
County:	Harrison
API Number:	47-033-05623-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Thaddeus Unit 1H
Longitude:	-80.51184440
Latitude:	39.18913610
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,281
Total Base Water Volume (gal):	5,089,728
Total Base Non Water Volume:	

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas

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	Water					
			Water	7732-18-5	100.00000	91.24647	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	4.75400	
			Aluminum Oxide	1344-28-1	1.10000	0.05235	
			Iron Oxide	1309-37-1	0.10000	0.00476	
			Titanium Oxide	13463-67-7	0.10000	0.00476	
WV Specific 20/40 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	2.50864	
			Aluminum Oxide	1344-28-1	1.10000	0.02762	
			Titanium Oxide	13463-67-7	0.10000	0.00251	
			Iron Oxide	1309-37-1	0.10000	0.00251	
WV Specific 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	1.10550	
			Aluminum Oxide	1344-28-1	1.10000	0.01217	

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			Iron Oxide	1309-37-1	0.10000	0.00111	
			Titanium Oxide	13463-67-7	0.10000	0.00111	
WFR-3B	Nabors Completion and Production Services	Friction Reducer					
			Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	50.00000	0.02942	
			Ethoxylated alcohols	68551-12-2	15.00000	0.00883	
			Ethoxylated oleylamine	26635-93-8	5.00000	0.00294	
HCl Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid					
			Hydrogen Chloride	7647-01-0	18.00000	0.04032	
LSG-100L	Nabors Completion and Production Services	Gelling Agents					
			Petroleum Distillates	64742-47-8	70.00000	0.03379	
Super GREEN SOLV	Nabors Completion and Production Services	Paraffin & Scale Additives					
			BTEX Free Aliphatic Hydrocarbon	64742-96-7	100.00000	0.00966	
OB-2	Nabors Completion and Production Services	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00741	
			Sillica, crystalline quartz	7631-86-9	10.00000	0.00074	
KR-153SL	Nabors Completion and Production Services	Biocides					
			Polyethlyene-Glycol	25322-68-3	50.00000	0.00542	
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00217	
EB-4L	Nabors Completion and Production Services	Gel Breakers					
			Water	7732-18-5	100.00000	0.00059	
			Breaker Component	Proprietary	100.00000	0.00059	
			Cellulase enzyme	Proprietary	100.00000	0.00059	
			Demulsifier Base	Proprietary	100.00000	0.00059	
			Sugar	57-50-1	100.00000	0.00059	
			Ethylene Glycol	107-21-1	40.00000	0.00024	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors					
			Glycol Ethers	111-46-6	40.00000	0.00016	
			Propargyl Alcohol	107-19-7	40.00000	0.00016	
			Isopropyl Alcohol	67-63-0	40.00000	0.00016	
			Ethoxylated Nonylphenol	68412-54-4	13.00000	0.00005	
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004	

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.

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Other Ingredients	Nabors Completion and Production Services	Other Ingredients					
			Water	7732-18-5	87.50000	0.19600	
			guar gum	9000-30-0	50.00000	0.02413	
			Polyacrylamide	57-55-6	40.00000	0.02354	
			Water	7732-18-5	40.00000	0.02354	
			Water	7732-18-5	60.00000	0.01020	
			Propylene glycol	57-55-6	15.00000	0.00883	
			Water	7732-18-5	80.00000	0.00868	
			Proprietary	Proprietary	50.00000	0.00850	
			Proprietary	Proprietary	15.00000	0.00255	
			Proprietary	Proprietary	15.00000	0.00255	
			Proprietary	Proprietary	15.00000	0.00255	
			vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00000	0.00148	
			Surfactant	68439-51-0	2.00000	0.00097	
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00097	
			Microparticle	Proprietary	1.00000	0.00059	
			Water	7732-18-5	48.00000	0.00019	
			2-Butoxyethanol	111-76-2	13.00000	0.00005	
			Dioxane	123-91-1	1.00000	0.00000	
			Organophylic Clay	68953-58-2			

* 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)