WR-35
Rev. 8/23/13

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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 017 - 06370 County Doddridge District Central
Quad Oxford 7.5' Pad Name Fritz Pad Field/Pool Name ---
Farm name Horton, Judy A. Well Number Washington Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop St. City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4342782m Easting 513818m
Landing Point of Curve Northing 4343053.06m Easting 513593.04m
Bottom Hole Northing 4345156m Easting 512595m

Elevation (ft) 1053' GL Type of Well ■New □ Existing Type of Report □Interim ■Final

Permit Type □ Deviated □ Horizontal ■ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework ■ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas ■ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion ■ Single □ Multiple Fluids Produced □ Brine ■Gas □ NGL ■ Oil □ Other _____

Drilled with □ Cable ■ Rotary

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Drilling Media Surface hole ■ Air □ Mud □Fresh Water Intermediate hole ■ Air □ Mud □Fresh Water ■ Brine

Production hole □ Air ■ Mud □ Fresh Water □ Brine

Mud Type(s) and Additive(s)
Air- Foam & 4% KCL
Mud- Polymer

Date permit issued 11/21/2013 Date drilling commenced 4/15/2014 Date drilling ceased 9/6/2014
Date completion activities began 9/30/2014 Date completion activities ceased 2/2/2015
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 97' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1143', 1529' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1429' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:
JK 8/21/15
10/23/2015

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API 47- 017 - 06370 Farm name Horton, Judy A. Well number Washington Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	28"	20"	90'	New	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	363'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2513'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	15257'	New	23# P-110	N/A	Y
Tubing		2-3/8"	6709'		4.7# N-80	N/A	
Packer type and depth set		N/A					

Comment Details

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³/sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	300 sx	15.6	1.18	86	0'	8 Hrs.
Surface	Class A	419 sx	15.6	1.18	252	0'	8 Hrs.
Coal							
Intermediate 1	Class A	929 sx	15.6	1.18	787	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	993 sx (Lead) 1343 sx (Tail)	13.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	3044	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15257' MD, 6635' TVD (BHL), 6646' TVD (Deepest Point Drilled) Loggers TD (ft) 15211'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5390'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Washington Unit 2H API #47-017-06371). Please reference the wireline logs submitted with Form WR-35 for Washington Unit 2H. A Cement Bond Log has been run with this submittal.

Check all wireline logs run ☐ caliper ☐ density ☐ deviated/directional ☐ induction ☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

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Well cored ☐ Yes ■ No ☐ Conventional ☐ Sidewall Were cuttings collected ☐ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

Conductor- 0
Surface- 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface
Intermediate- 1 above float joint, 1 above float collar, 1 every 4th joint to surface
Production- 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

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API 47- 017 - 06370 Farm name Horton, Judy A. Well number Washington Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

*PLEASE SEE EXHIBIT 1

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

*PLEASE SEE EXHIBIT 2

Received
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Please insert additional pages as applicable.

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API 47- 017 - 06370 Farm name Horton, Judy A. Well number Washington Unit 1H

PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6567' (TOP)	TVD	6753' (TOP)	MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9067 mcfpd Oil 6 bpd NGL --- bpd Water --- bpd GAS MEASURED BY ☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
	0		0		

*PLEASE SEE EXHIBIT 3

Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company LLC
Address 207 Carolton Dr. City Eighty Four State PA Zip 15330

Logging Company STRC
Address 1560 Good Hope Pike City Clarksburg State WV Zip 26301

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main St. City Bridgeport State WV Zip 26330

Stimulating Company US Well Services
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature [signature] Title Permitting Agent Date 7/13/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API 47-017-06370 **Farm Name** Horton, Judy A. **Well Number** Washington Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	30-Sep-14	14,995	15,164	60	Marcellus
2	28-Oct-14	14,795	14,964	60	Marcellus
3	29-Oct-14	14,595	14,764	60	Marcellus
4	29-Oct-14	14,396	14,564	60	Marcellus
5	30-Oct-14	14,196	14,364	60	Marcellus
6	30-Oct-14	13,996	14,164	60	Marcellus
7	30-Oct-14	13,796	13,964	60	Marcellus
8	31-Oct-14	13,596	13,764	60	Marcellus
9	31-Oct-14	13,396	13,564	60	Marcellus
10	31-Oct-14	13,196	13,364	60	Marcellus
11	31-Oct-14	12,996	13,165	60	Marcellus
12	1-Nov-14	12,796	12,965	60	Marcellus
13	1-Nov-14	12,596	12,765	60	Marcellus
14	1-Nov-14	12,396	12,565	60	Marcellus
15	2-Nov-14	12,196	12,365	60	Marcellus
16	2-Nov-14	11,996	12,165	60	Marcellus
17	2-Nov-14	11,796	11,965	60	Marcellus
18	3-Nov-14	11,596	11,765	60	Marcellus
19	3-Nov-14	11,396	11,565	60	Marcellus
20	3-Nov-14	11,196	11,365	60	Marcellus
21	4-Nov-14	10,996	11,165	60	Marcellus
22	5-Nov-14	10,796	10,965	60	Marcellus
23	5-Nov-14	10,596	10,765	60	Marcellus
24	5-Nov-14	10,397	10,565	60	Marcellus
25	5-Nov-14	10,197	10,365	60	Marcellus
26	5-Nov-14	9,997	10,165	60	Marcellus
27	6-Nov-14	9,797	9,965	60	Marcellus
28	6-Nov-14	9,597	9,765	60	Marcellus
29	6-Nov-14	9,397	9,565	60	Marcellus
30	6-Nov-14	9,197	9,365	60	Marcellus
31	7-Nov-14	8,997	9,165	60	Marcellus
32	7-Nov-14	8,797	8,966	60	Marcellus
33	8-Nov-14	8,597	8,766	60	Marcellus
34	8-Nov-14	8,397	8,566	60	Marcellus
35	8-Nov-14	8,197	8,366	60	Marcellus
36	8-Nov-14	7,997	8,166	60	Marcellus
37	8-Nov-14	7,797	7,966	60	Marcellus
38	9-Nov-14	7,597	7,766	60	Marcellus
39	9-Nov-14	7,397	7,566	60	Marcellus
40	9-Nov-14	7,197	7,366	60	Marcellus
41	9-Nov-14	6,997	7,166	60	Marcellus
42	9-Nov-14	6,797	6,966	60	Marcellus

API 47-017-06370 Farm Name Horton, Judy A. Well Number Washington Unit 1H

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	28-Oct-14	65.0	7,059	N/A	4,435	230,640	6,632	N/A
2	29-Oct-14	64.0	7,083	5,887	4,599	187,500	5,837	N/A
3	29-Oct-14	70.0	6,943	5,869	5,275	178,580	6,696	N/A
4	29-Oct-14	62.0	7,284	5,822	4,746	120,400	6,730	N/A
5	30-Oct-14	63.0	7,070	5,690	3,787	209,630	5,988	N/A
6	30-Oct-14	60.0	7,231	5,683	5,139	94,370	5,554	N/A
7	30-Oct-14	64.0	7,081	5,733	3,666	205,100	6,954	N/A
8	31-Oct-14	64.0	7,137	5,794	4,646	212,848	6,106	N/A
9	31-Oct-14	63.0	7,112	5,214	4,610	149,132	5,326	N/A
10	31-Oct-14	65.0	6,919	5,547	3,827	236,230	6,268	N/A
11	1-Nov-14	64.0	7,034	5,815	4,674	190,660	6,719	N/A
12	1-Nov-14	62.0	7,109	6,101	4,467	217,090	6,494	N/A
13	1-Nov-14	62.0	7,178	5,740	4,174	113,295	6,140	N/A
14	1-Nov-14	64.0	6,982	5,808	4,599	238,180	6,288	N/A
15	2-Nov-14	64.0	6,775	5,718	5,157	238,400	6,270	N/A
16	2-Nov-14	63.0	6,522	5,254	4,817	189,315	6,222	N/A
17	2-Nov-14	67.0	6,578	5,482	5,203	218,610	6,657	N/A
18	3-Nov-14	63.0	6,643	5,987	3,830	231,312	6,041	N/A
19	3-Nov-14	65.0	6,606	5,586	4,066	224,048	5,927	N/A
20	3-Nov-14	65.0	6,780	5,661	N/A	231,800	6,244	N/A
21	4-Nov-14	64.0	6,867	5,829	4,874	237,880	6,087	N/A
22	5-Nov-14	64.0	6,886	6,112	4,224	168,720	6,086	N/A
23	5-Nov-14	63.2	7,061	5,561	4,063	152,400	6,391	N/A
24	5-Nov-14	64.3	6,600	5,808	3,444	237,690	6,013	N/A
25	5-Nov-14	53.0	6,489	5,572	4,642	103,410	6,841	N/A
26	6-Nov-14	62.0	7,228	5,797	4,406	157,720	6,137	N/A
27	6-Nov-14	63.1	6,638	5,636	4,996	175,160	5,256	N/A
28	6-Nov-14	60.4	6,287	5,475	3,126	238,240	6,014	N/A
29	6-Nov-14	60.4	6,291	5,997	3,394	239,620	5,990	N/A
30	6-Nov-14	60.0	6,630	5,865	5,082	186,440	4,902	N/A
31	8-Nov-14	62.0	7,421	5,736	4,563	129,920	6,585	N/A
32	8-Nov-14	60.0	6,836	5,615	5,035	159,890	6,610	N/A
33	8-Nov-14	62.2	6,502	5,393	5,225	240,310	6,093	N/A
34	8-Nov-14	63.0	6,270	5,382	5,339	235,980	6,084	N/A
35	8-Nov-14	62.0	6,153	5,121	5,146	236,380	6,068	N/A
36	9-Nov-14	62.0	6,183	5,372	5,136	242,140	6,072	N/A
37	9-Nov-14	60.1	6,321	5,361	4,907	229,460	6,086	N/A
38	9-Nov-14	62.2	6,562	6,301	4,914	173,460	6,493	N/A
39	9-Nov-14	61.0	6,469	6,219	4,917	209,600	6,306	N/A
40	9-Nov-14	39.0	8,556	6,180	4,767	1,020	5,915	N/A
41	10-Nov-14	62.0	6,418	5,701	4,252	192,170	6,033	N/A
42	10-Nov-14	59.8	6,497	6,777	3,608	187,360	6,148	N/A
	AVG=	62.1	6,816	5,737	4,531	8,052,110	259,200	TOTAL

API 47-017-06370 Farm Name Horton, Judy A. Well Number Washington Unit 1H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	**TOP DEPTH (TVD) From Surface**	**BOTTOM DEPTH (TVD) From Surface**	**TOP DEPTH (MD) From Surface**	**BOTTOM DEPTH (MD) From Surface**
Fresh Water	97'	N/A	97'	N/A
Siltstone/Sandstone	0	109	0	109
Shale/ Siltstone	est. 109	169	est. 109	169
Siltstone/ Trace Coal	est. 169	329	est. 169	329
Siltsone/ Shale	est. 329	429	est. 329	429
Shale	est. 429	509	est. 429	509
Sandstone	est. 509	549	est. 509	549
Shale/ Siltstone	est. 549	629	est. 549	629
Limestone/ Shale	est. 629	689	est. 629	689
Shale/ Siltstone	est. 689	829	est. 689	829
Shale/ Limestone	est. 829	909	est. 829	909
Sandstone	est. 909	969	est. 909	969
Shale	est. 969	1089	est. 969	1089
Siltstone/ Trace Coal	est. 1089	1429	est. 1089	1429
Coal	est. 1429	1549	est. 1429	1549
Siltstone/ Trace Coal	est. 1549	1689	est. 1549	1689
Shale/ Siltstone	est. 1689	1909	est. 1689	1909
Sandstone	est. 1909	1940	est. 1909	1940
Big Lime	1940	2086	1940	2086
Big Injun	2086	2428	2086	2428
Gantz Sand	2428	2614	2428	2614
Fifty Foot Sandstone	2614	2706	2614	2706
Gordon	2706	3003	2706	3003
Fifth Sandstone	3003	3021	3003	3021
Bayard	3021	3403	3021	3404
Warren	3403	3735	3404	3736
Speechley	3735	4013	3736	4014
Baltown	4013	4515	4014	4516
Bradford	4515	4985	4516	4985
Benson	4985	5269	4985	5270
Alexander	5269	5451	5270	5453
Elk	5451	5906	5453	5912
Rhinestreet	5906	6191	5912	6201
Sycamore	6191	6371	6201	6404
Middlesex	6371	6505	6404	6597
Burkett	6505	6530	6597	6648
Tully	6530	6567	6648	6753
Marcellus	6567	NA	6753	NA

*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

17-06370

Washington Unit 1H
Doddridge County WV
Northing: 14247229.61
Easting: 1685703.32
As Drilled

Antero Resources

Scientific Drilling

To convert Magnetic North to Grid, Subtract 8.51°
To convert True North to Grid, Subtract 0.10°

Azimuths to Grid North
True North: -0.10°
Magnetic North: -8.51°

Magnetic Field
Strength: 52307.5snT
Dip Angle: 66.80°
Date: 3/5/2014
Model: IGRF2010

WELL DETAILS Washington Unit 1H
Ground Level: 1053.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14247229.61	1685703.32	39° 14' 2.926 N	80° 50' 24.244 W

Patt 325 Washington 1H 1053 GL + 24 KB @ 1077.0usft
Gr: 1053.0

Genie Lightfoot
15:30, September 11 2014

Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK 73128

PROJECT DETAILS: Doddridge County WV

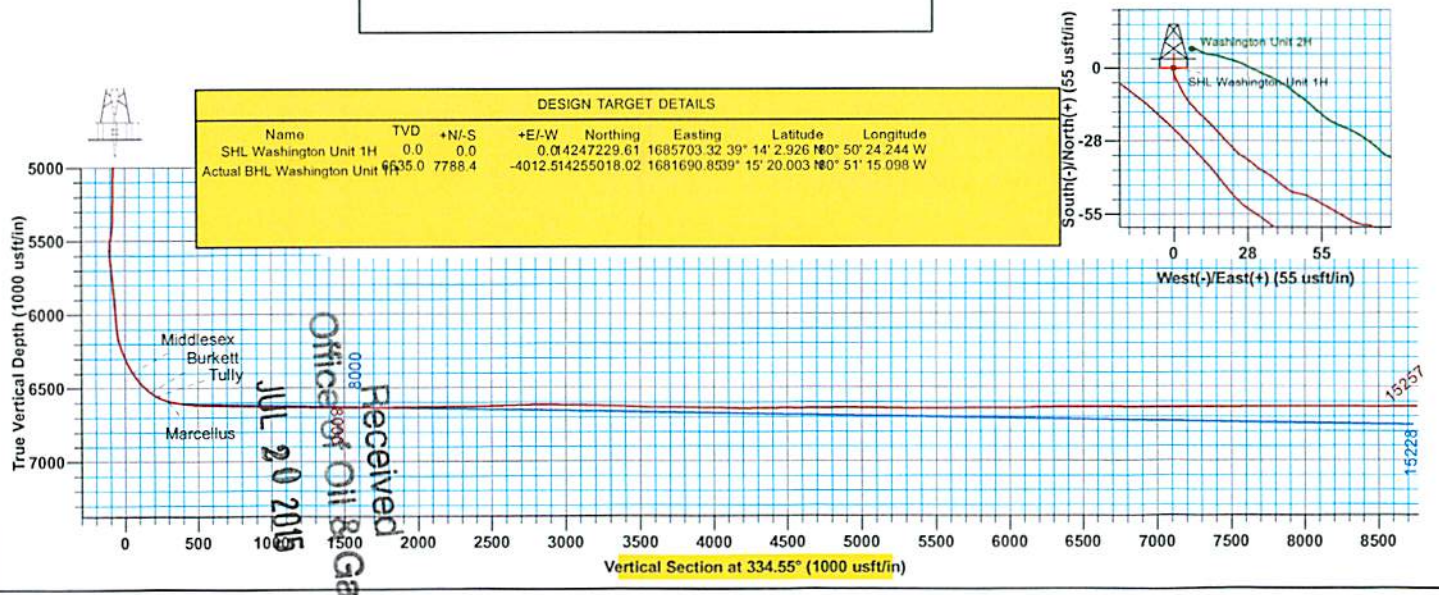
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 17N (84 W to 78 W)
System Datum: Mean Sea Level

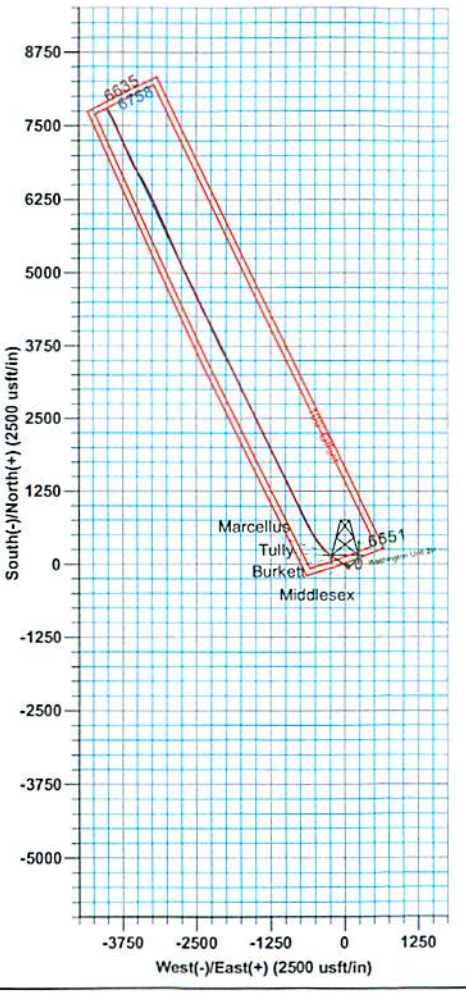
LEGEND

- Washington Unit 2H, Original Wellpath, As Drilled V0
- Washington Unit 1H, Original Wellpath, Plan 7 V0
- As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Washington Unit 1H	0.0	0.0	0.0	14247229.61	1685703.32	39° 14' 2.926 N	80° 50' 24.244 W
Actual BHL Washington Unit 1H	6635.0	7788.4	-4012.51	4255018.02	1681690.85	39° 15' 20.003 N	80° 51' 15.098 W





17-06370

Antero Resources

Doddridge County WV
Fritz Pad: Hayden/Washington/Sheep/Hileman
Washington Unit 1H
Original Wellpath

Design: As Drilled

EOW Completion Report

11 September, 2014

Scientific Drilling

17.06370

Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Washington Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Site:	Fritz Pad: Hayden/Washington/Sheep/Hileman	**MD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Well:	Washington Unit 1H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Project Doddridge County WV, McClellan District

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site Fritz Pad: Hayden/Washington/Sheep/Hileman

Site Position:		**Northing:**	14,247,222.50 usft	**Latitude:**	39° 14' 2.856 N
From:	Map	**Easting:**	1,685,696.44 usft	**Longitude:**	80° 50' 24.332 W
Position Uncertainty:	2.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.10 °

Well Washington Unit 1H, Marcellus

Well Position	**+N/-S**	0.0 usft	**Northing:**	14,247,229.61 usft	**Latitude:**	39° 14' 2.926 N
	+E/-W	0.0 usft	**Easting:**	1,685,703.32 usft	**Longitude:**	80° 50' 24.244 W
Position Uncertainty		2.0 usft	**Wellhead Elevation:**	1,077.0 usft	**Ground Level:**	1,053.0 usft

Wellbore Original Wellpath

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/5/2014	-8.41	66.80	52,308

Design As Drilled

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	334.55

Survey Program **Date** 9/11/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
113.0	5,288.0	Survey #5 Final Gyro to KOP (Original We	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
5,296.0	15,257.0	Survey #6 MWD (Original Wellpath)	MWD SDI	MWD - Standard ver 1.0.1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
113.0	0.40	210.14	113.0	-0.3	-0.2	-0.2	0.35
213.0	0.36	157.27	213.0	-0.9	-0.3	-0.7	0.34
313.0	0.71	173.50	313.0	-1.8	0.2	-1.6	0.38
413.0	0.61	161.01	413.0	-3.0	0.7	-2.7	0.17
513.0	0.86	148.53	513.0	-4.1	0.7	-4.0	0.30
613.0	1.02	157.22	613.0	-5.6	1.5	-5.7	0.21
713.0	1.03	152.47	712.9	-7.2	2.2	-7.4	0.09
813.0	1.09	149.00	812.9	-8.8	3.1	-9.3	0.09
913.0	1.07	152.79	912.9	-10.4	4.1	-11.2	0.07
1,013.0	0.96	147.85	1,012.9	-12.0	4.9	-12.9	0.14

17-06370

Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Washington Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Site:	Fritz Pad: Hayden/Washington/Sheep/Hileman	**MD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Well:	Washington Unit 1H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,113.0	0.98	133.34	1,112.9	-13.3	6.0	-14.6	0.25
1,213.0	1.13	140.70	1,212.9	-14.6	7.3	-16.3	0.20
1,313.0	1.02	141.66	1,312.8	-16.1	8.4	-18.1	0.11
1,413.0	1.06	134.98	1,412.8	-17.4	9.6	-19.9	0.13
1,513.0	1.21	128.31	1,512.8	-18.7	11.1	-21.7	0.20
1,613.0	1.32	138.38	1,612.8	-20.3	12.7	-23.8	0.25
1,713.0	1.21	134.68	1,712.8	-21.9	14.2	-25.9	0.14
1,813.0	1.55	136.68	1,812.7	-23.6	15.9	-28.1	0.34
1,913.0	1.23	143.05	1,912.7	-25.4	17.5	-30.5	0.35
2,013.0	1.01	136.25	2,012.7	-26.9	18.7	-32.4	0.26
2,113.0	1.09	131.20	2,112.7	-28.2	20.1	-34.1	0.12
2,213.0	0.88	142.71	2,212.7	-29.4	21.2	-35.7	0.29
2,313.0	0.99	132.13	2,312.6	-30.6	22.3	-37.2	0.20
2,413.0	1.01	142.03	2,412.6	-31.9	23.5	-38.9	0.17
2,513.0	0.82	114.45	2,512.6	-32.9	24.7	-40.3	0.47
2,613.0	0.90	123.21	2,612.6	-33.6	26.0	-41.5	0.15
2,713.0	0.93	128.23	2,712.6	-34.5	27.3	-42.9	0.09
2,813.0	0.97	126.95	2,812.6	-35.6	28.6	-44.4	0.05
2,913.0	1.02	131.74	2,912.6	-36.7	30.0	-46.0	0.10
3,013.0	0.88	124.11	3,012.5	-37.7	31.3	-47.5	0.19
3,113.0	0.90	123.41	3,112.5	-38.5	32.6	-48.8	0.02
3,213.0	1.04	119.19	3,212.5	-39.4	34.0	-50.2	0.16
3,313.0	0.98	125.08	3,312.5	-40.3	35.5	-51.7	0.12
3,413.0	0.99	130.95	3,412.5	-41.4	36.9	-53.2	0.10
3,513.0	0.88	125.87	3,512.5	-42.4	38.1	-54.7	0.14
3,613.0	0.89	128.81	3,612.5	-43.4	39.4	-56.1	0.05
3,713.0	0.96	129.77	3,712.5	-44.4	40.6	-57.5	0.07
3,813.0	0.96	125.86	3,812.4	-45.4	41.9	-59.0	0.07
3,913.0	0.89	130.26	3,912.4	-46.4	43.2	-60.5	0.10
4,013.0	0.76	98.30	4,012.4	-47.0	44.5	-61.5	0.47
4,113.0	1.00	103.77	4,112.4	-47.3	46.0	-62.5	0.25
4,213.0	1.07	102.12	4,212.4	-47.7	47.7	-63.6	0.08
4,313.0	1.05	109.06	4,312.4	-48.2	49.5	-64.8	0.13
4,413.0	1.41	121.38	4,412.3	-49.1	51.4	-66.5	0.44
4,513.0	1.57	116.98	4,512.3	-50.4	53.7	-68.6	0.20
4,613.0	1.70	119.44	4,612.3	-51.8	56.2	-70.9	0.15
4,713.0	2.15	119.74	4,712.2	-53.4	59.1	-73.6	0.45
4,813.0	1.99	119.70	4,812.2	-55.2	62.3	-76.6	0.16
4,913.0	1.31	126.09	4,912.1	-56.7	64.7	-79.0	0.70
5,013.0	1.19	116.06	5,012.1	-57.9	66.5	-80.8	0.25
5,113.0	1.16	106.32	5,112.1	-58.6	68.5	-82.3	0.20
5,213.0	1.18	96.80	5,212.0	-59.0	70.4	-83.6	0.20
5,288.0	1.06	92.35	5,287.0	-59.1	71.9	-84.3	0.20
5,296.0	1.31	96.60	5,295.0	-59.1	72.1	-84.4	3.31

17-06370

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Well:	Washington Unit 1H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,327.0	1.10	100.87	5,326.0	-59.2	72.7	-84.7	0.74
5,359.0	1.28	104.25	5,358.0	-59.4	73.4	-85.2	0.60
5,390.0	2.56	162.27	5,389.0	-60.1	73.9	-86.1	7.01
5,422.0	7.19	182.77	5,420.9	-62.8	74.0	-88.5	15.23
5,453.0	11.82	187.43	5,451.4	-67.9	73.5	-92.9	15.13
5,484.0	13.92	190.70	5,481.7	-74.7	72.4	-98.6	7.17
5,516.0	11.50	209.81	5,512.9	-81.3	70.1	-103.5	15.06
5,547.0	8.90	230.83	5,543.4	-85.5	66.7	-105.9	14.51
5,578.0	7.03	256.35	5,574.1	-87.4	63.0	-106.0	12.75
5,609.0	6.37	288.26	5,604.9	-87.3	59.5	-104.5	12.03
5,641.0	6.39	306.00	5,636.7	-85.7	56.4	-101.7	6.14
5,672.0	5.98	324.19	5,667.5	-83.4	54.1	-98.6	6.43
5,704.0	6.05	327.59	5,699.4	-80.6	52.2	-95.2	1.13
5,735.0	6.01	326.32	5,730.2	-77.9	50.4	-92.0	0.45
5,766.0	6.10	324.43	5,761.0	-75.2	48.6	-88.8	0.71
5,798.0	5.62	325.48	5,792.9	-72.5	46.7	-85.6	1.54
5,829.0	5.19	329.13	5,823.7	-70.1	45.1	-82.7	1.78
5,860.0	5.20	328.66	5,854.6	-67.7	43.7	-79.9	0.14
5,892.0	6.12	324.18	5,886.4	-65.1	41.9	-76.8	3.19
5,923.0	6.54	315.27	5,917.2	-62.5	39.7	-73.5	3.44
5,955.0	6.08	312.02	5,949.1	-60.0	37.2	-70.2	1.82
5,986.0	5.71	307.60	5,979.9	-58.0	34.7	-67.3	1.89
6,018.0	5.18	305.08	6,011.7	-56.2	32.3	-64.6	1.82
6,049.0	4.05	305.19	6,042.6	-54.8	30.2	-62.4	3.65
6,080.0	4.70	300.96	6,073.6	-53.5	28.2	-60.4	2.34
6,112.0	6.62	309.01	6,105.4	-51.6	25.7	-57.7	6.48
6,143.0	10.16	317.77	6,136.1	-48.5	22.5	-53.4	12.11
6,173.0	13.60	322.60	6,165.4	-43.7	18.5	-47.5	11.93
6,204.0	16.47	320.16	6,195.3	-37.5	13.5	-39.6	9.48
6,235.0	19.66	316.16	6,224.8	-30.3	7.1	-30.4	11.04
6,267.0	22.71	315.10	6,254.7	-22.1	-1.0	-19.5	9.61
6,298.0	24.97	310.66	6,283.0	-13.6	-10.2	-7.9	9.30
6,329.0	27.37	306.37	6,310.8	-5.1	-20.9	4.4	9.85
6,361.0	29.51	304.50	6,339.0	3.8	-33.3	17.7	7.24
6,392.0	32.74	305.01	6,365.5	12.9	-46.5	31.6	10.45
6,423.0	35.58	305.74	6,391.2	23.0	-60.7	46.8	9.26
6,428.0	36.02	305.79	6,395.2	24.7	-63.1	49.4	8.77
Middlesex							
6,455.0	38.38	306.04	6,416.7	34.3	-76.3	63.7	8.77
6,486.0	41.81	306.03	6,440.4	46.0	-92.4	81.2	11.06
6,518.0	44.92	305.44	6,463.7	58.8	-110.2	100.5	9.80
6,549.0	48.21	304.48	6,485.0	71.7	-128.7	120.1	10.85
6,580.0	51.77	304.64	6,504.9	85.2	-148.2	140.6	11.49
6,612.0	55.24	304.59	6,524.0	99.8	-169.4	162.9	10.84

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6,621.0	56.57	304.80	6,529.0	104.0	-175.5	169.4	14.86
Burkett							
6,643.0	59.81	305.28	6,540.6	114.8	-190.8	185.6	14.86
6,672.0	63.68	306.14	6,554.3	129.7	-211.6	208.0	13.60
Tully							
6,675.0	64.08	306.23	6,555.6	131.3	-213.8	210.4	13.60
6,706.0	67.41	306.68	6,568.4	148.1	-236.5	235.3	10.82
6,737.0	71.15	308.68	6,579.3	165.8	-259.4	261.2	13.49
6,769.0	75.00	310.62	6,588.7	185.3	-283.0	288.9	13.36
6,777.0	75.92	311.16	6,590.7	190.4	-288.8	296.0	13.17
Marcellus							
6,799.0	78.44	312.62	6,595.5	204.7	-304.8	315.8	13.17
6,830.0	81.34	314.85	6,601.0	225.8	-326.9	344.4	11.73
6,861.0	82.66	316.84	6,605.3	247.8	-348.2	373.4	7.65
6,893.0	83.10	319.57	6,609.3	271.5	-369.4	403.9	8.58
6,924.0	83.80	321.15	6,612.8	295.2	-389.0	433.8	5.54
6,956.0	85.12	322.73	6,615.9	320.3	-408.7	464.8	6.42
7,050.0	89.08	326.16	6,620.6	396.7	-463.2	557.2	5.57
7,144.0	88.11	325.72	6,623.0	474.5	-515.9	650.1	1.13
7,238.0	88.20	329.06	6,626.0	553.6	-566.5	743.3	3.55
7,333.0	88.81	333.10	6,628.5	636.7	-612.4	838.1	4.30
7,427.0	88.02	333.28	6,631.1	720.6	-654.8	932.1	0.86
7,521.0	88.55	333.54	6,633.9	804.6	-696.8	1,026.0	0.63
7,615.0	91.10	335.12	6,634.2	889.3	-737.6	1,120.0	3.19
7,709.0	89.52	335.91	6,633.7	974.9	-776.5	1,214.0	1.88
7,803.0	89.34	335.91	6,634.6	1,060.7	-814.9	1,307.9	0.19
7,897.0	89.60	335.56	6,635.5	1,146.4	-853.5	1,401.9	0.46
7,992.0	90.04	335.03	6,635.8	1,232.7	-893.2	1,496.9	0.73
8,086.0	90.40	334.60	6,635.4	1,317.7	-933.2	1,590.9	0.60
8,180.0	87.76	334.16	6,636.9	1,402.5	-973.9	1,684.9	2.85
8,274.0	90.31	334.51	6,638.5	1,487.2	-1,014.6	1,778.9	2.74
8,369.0	92.68	333.98	6,636.0	1,572.7	-1,055.8	1,873.8	2.56
8,463.0	89.96	334.68	6,633.8	1,657.4	-1,096.5	1,967.8	2.99
8,557.0	91.36	333.72	6,632.8	1,742.0	-1,137.4	2,061.8	1.81
8,651.0	90.66	332.49	6,631.1	1,825.8	-1,179.9	2,155.7	1.51
8,745.0	90.75	334.95	6,629.9	1,910.1	-1,221.6	2,249.7	2.62
8,840.0	90.04	335.65	6,629.3	1,996.4	-1,261.3	2,344.7	1.05
8,934.0	90.57	334.33	6,628.8	2,081.6	-1,301.0	2,438.7	1.51
9,027.0	91.63	334.42	6,627.0	2,165.4	-1,341.2	2,531.7	1.14
9,122.0	91.54	334.07	6,624.4	2,251.0	-1,382.5	2,626.6	0.38
9,216.0	91.98	334.86	6,621.5	2,335.8	-1,423.0	2,720.6	0.96
9,310.0	90.48	335.56	6,619.5	2,421.1	-1,462.4	2,814.5	1.76
9,404.0	89.25	335.74	6,619.7	2,506.7	-1,501.1	2,908.5	1.32
9,498.0	88.25	335.74	6,621.7	2,592.4	-1,539.7	3,002.5	1.06
9,592.0	89.87	335.65	6,623.3	2,678.0	-1,578.4	3,096.4	1.73

10/23/2015

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9,687.0	88.99	333.72	6,624.2	2,763.9	-1,619.0	3,191.4	2.23
9,781.0	88.72	333.98	6,626.1	2,848.3	-1,660.5	3,285.4	0.40
9,875.0	87.85	334.33	6,628.9	2,932.8	-1,701.4	3,379.4	1.00
9,970.0	87.76	334.24	6,632.6	3,018.4	-1,742.6	3,474.3	0.13
10,064.0	87.93	333.98	6,636.1	3,102.9	-1,783.6	3,568.2	0.33
10,158.0	89.78	334.24	6,638.0	3,187.4	-1,824.7	3,662.2	1.99
10,251.0	89.16	334.68	6,638.8	3,271.3	-1,864.8	3,755.2	0.82
10,343.0	89.34	334.42	6,640.0	3,354.4	-1,904.3	3,847.2	0.34
10,435.0	88.90	334.51	6,641.5	3,437.4	-1,943.9	3,939.2	0.49
10,526.0	89.87	333.80	6,642.4	3,519.3	-1,983.6	4,030.2	1.32
10,618.0	88.99	331.87	6,643.3	3,601.1	-2,025.6	4,122.1	2.31
10,709.0	88.90	333.19	6,645.0	3,681.8	-2,067.6	4,213.0	1.45
10,801.0	91.19	335.47	6,644.9	3,764.7	-2,107.4	4,305.0	3.51
10,892.0	90.92	335.47	6,643.3	3,847.5	-2,145.2	4,396.0	0.30
10,983.0	90.13	335.47	6,642.4	3,930.3	-2,183.0	4,487.0	0.87
11,074.0	89.16	334.95	6,643.0	4,012.9	-2,221.1	4,578.0	1.21
11,164.0	90.92	335.30	6,642.9	4,094.6	-2,259.0	4,668.0	1.99
11,257.0	90.75	335.03	6,641.6	4,179.0	-2,298.0	4,761.0	0.34
11,351.0	90.48	334.60	6,640.6	4,264.0	-2,338.0	4,854.9	0.54
11,446.0	89.52	334.51	6,640.6	4,349.8	-2,378.9	4,949.9	1.01
11,541.0	88.64	333.89	6,642.1	4,435.3	-2,420.2	5,044.9	1.13
11,635.0	90.04	334.42	6,643.2	4,519.9	-2,461.2	5,138.9	1.59
11,730.0	89.60	333.98	6,643.5	4,605.4	-2,502.5	5,233.9	0.66
11,824.0	88.90	333.45	6,644.7	4,689.7	-2,544.1	5,327.9	0.93
11,919.0	89.87	334.60	6,645.7	4,775.1	-2,585.7	5,422.9	1.58
12,014.0	89.60	335.12	6,646.2	4,861.1	-2,626.1	5,517.9	0.62
12,107.0	90.22	336.35	6,646.3	4,945.9	-2,664.3	5,610.9	1.48
12,203.0	90.66	337.06	6,645.6	5,034.1	-2,702.3	5,706.8	0.87
12,297.0	90.31	335.56	6,644.8	5,120.1	-2,740.0	5,800.7	1.64
12,391.0	89.60	334.42	6,644.9	5,205.3	-2,779.8	5,894.7	1.43
12,486.0	90.48	335.39	6,644.8	5,291.3	-2,820.1	5,989.7	1.38
12,580.0	91.54	336.97	6,643.1	5,377.3	-2,858.0	6,083.7	2.02
12,674.0	91.63	336.70	6,640.5	5,463.7	-2,895.0	6,177.6	0.30
12,768.0	91.10	336.97	6,638.3	5,550.1	-2,932.0	6,271.5	0.63
12,862.0	89.78	337.41	6,637.6	5,636.7	-2,968.4	6,365.4	1.48
12,956.0	89.87	336.09	6,637.9	5,723.1	-3,005.5	6,459.3	1.41
13,050.0	89.78	336.79	6,638.1	5,809.3	-3,043.1	6,553.2	0.75
13,144.0	89.78	335.21	6,638.5	5,895.1	-3,081.3	6,647.2	1.68
13,238.0	90.22	335.65	6,638.5	5,980.6	-3,120.4	6,741.2	0.66
13,332.0	88.99	336.09	6,639.2	6,066.4	-3,158.8	6,835.2	1.39
13,426.0	88.20	334.51	6,641.5	6,151.8	-3,198.1	6,929.1	1.88
13,520.0	91.63	336.27	6,641.6	6,237.2	-3,237.2	7,023.1	4.10
13,615.0	91.36	336.35	6,639.1	6,324.2	-3,275.4	7,118.0	0.30
13,709.0	90.84	333.36	6,637.3	6,409.3	-3,315.3	7,212.0	3.23
13,803.0	90.48	329.67	6,636.2	6,491.9	-3,360.1	7,305.8	3.94

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Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Washington Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Site:	Fritz Pad: Hayden/Washington/Sheep/Hileman	**MD Reference:**	Patt 325 Washington 1H 1053 GL + 24 KB @ 107
Well:	Washington Unit 1H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
13,897.0	89.87	328.88	6,635.9	6,572.7	-3,408.2	7,399.4	1.06
13,991.0	90.04	329.32	6,636.0	6,653.3	-3,456.4	7,493.0	0.50
14,085.0	89.25	327.04	6,636.6	6,733.2	-3,506.0	7,586.4	2.57
14,179.0	88.37	329.41	6,638.6	6,813.1	-3,555.5	7,679.8	2.69
14,273.0	92.33	335.83	6,638.0	6,896.5	-3,598.7	7,773.7	8.02
14,367.0	90.66	336.27	6,635.5	6,982.4	-3,636.8	7,867.6	1.84
14,461.0	90.13	336.44	6,634.9	7,068.5	-3,674.5	7,961.6	0.59
14,555.0	89.96	335.47	6,634.8	7,154.3	-3,712.8	8,055.5	1.05
14,650.0	89.60	335.56	6,635.2	7,240.8	-3,752.2	8,150.5	0.39
14,744.0	90.31	336.97	6,635.2	7,326.8	-3,790.0	8,244.5	1.68
14,838.0	89.52	336.97	6,635.4	7,413.3	-3,826.8	8,338.4	0.84
14,933.0	89.43	336.02	6,636.3	7,500.4	-3,864.7	8,433.3	1.00
15,027.0	90.57	335.47	6,636.3	7,586.1	-3,903.3	8,527.3	1.35
15,121.0	90.48	332.05	6,635.4	7,670.4	-3,944.9	8,621.3	3.64
15,207.0	90.04	329.32	6,635.0	7,745.4	-3,987.0	8,707.1	3.22
15,257.0	90.04	329.32	6,635.0	7,788.4	-4,012.5	8,756.9	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
6,428.0	6,395.2	24.7	-63.1	Middlesex
6,621.0	6,529.0	104.0	-175.5	Burkett
6,672.0	6,554.3	129.7	-211.6	Tully
6,777.0	6,590.7	190.4	-288.8	Marcellus

Checked By: _____ Approved By: _____ Date: _____

10/23/2015

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/28/2014
Job End Date:	11/10/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06370-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Washington Unit 1H
Longitude:	-80.83989400
Latitude:	39.23423100
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,646
Total Base Water Volume (gal):	10,886,400
Total Base Non Water Volume:	422,736

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas Compact Commission

17-06370

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					
			Water	7732-18-5	100.00000	91.46285	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	8.11155	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.07932	
			Petroleum Distillates	64742-47-8	60.00000	0.07512	
			Suspending agent (solid)	14808-60-7	3.00000	0.01213	
			Surfactant	68439-51-0	3.00000	0.00476	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.08996	
			Hydrogen Chloride	7647-01-1	18.00000	0.02149	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			Anionic Polyacrylamide	Proprietary	40.00000	0.03432	
			Water	7732-18-5	40.00000	0.03432	
			Petroleum Distillates	64742-47-8	40.00000	0.02763	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00429	

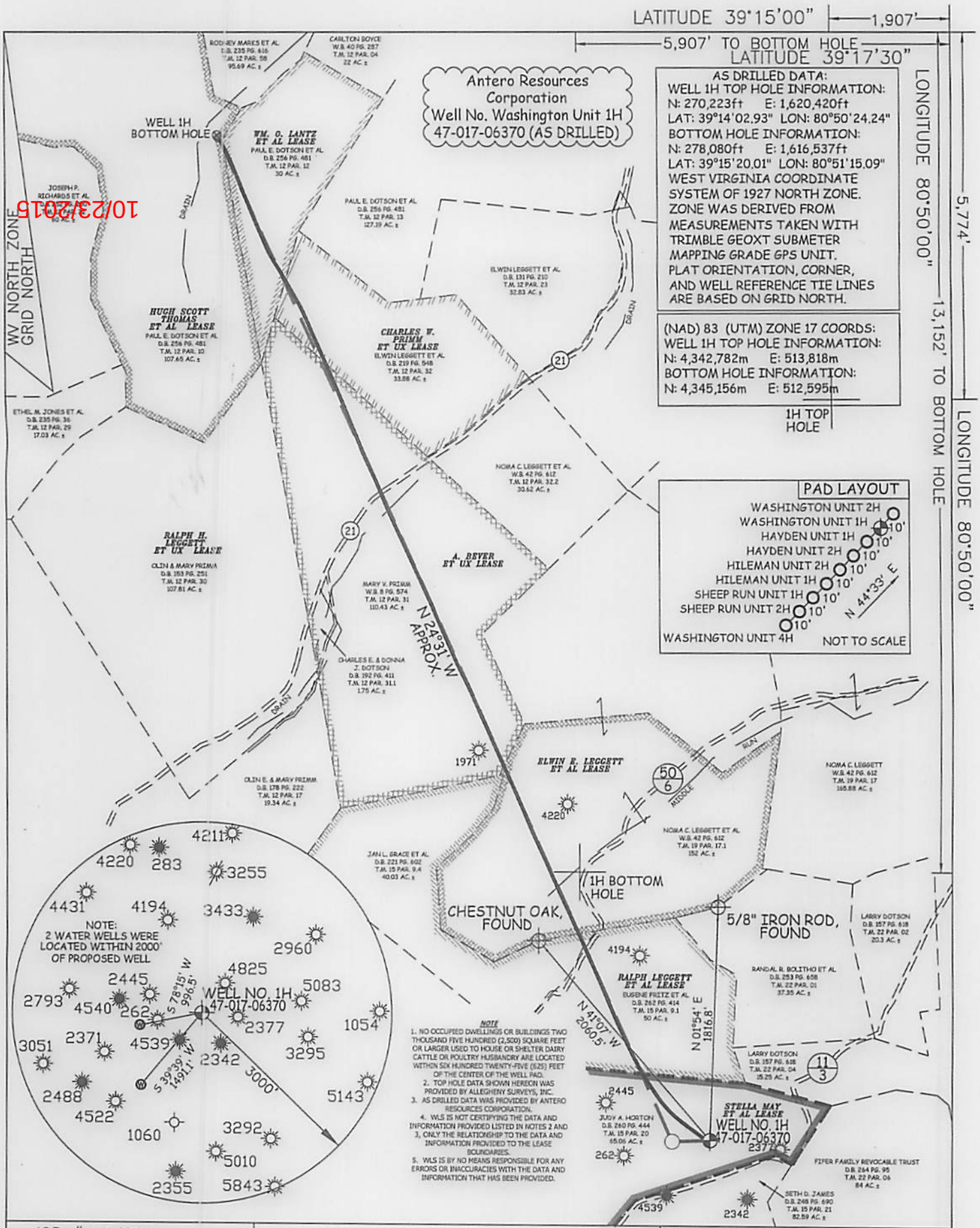
			Crystalline Salt	12125-02-9	5.00000	0.00429	
SI-1100	U.S. Well Services	Scale Inhibitor					
			Di Water	7732-18-5	80.00000	0.01139	
			Ethylene Glycol	107-21-1	40.00000	0.00643	
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	10.00000	0.00192	
			2-Phosphonobutane 1,2,4 tricarboxylic salt	37971-36-1	10.00000	0.00184	
			hexamethylenediamine tetra (methylene phosphonic acid)	38820-59-6	10.00000	0.00178	
			Copolymer of Maleic and Acrylic acid	26677-99-6	10.00000	0.00168	
			bis (hexamethylene) tramine penta (methylene phosphonic acid) - phosphate acid	40623-75-4	10.00000	0.00164	
			Acrylic polymer	52255-49-9	5.00000	0.00071	
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00487	
			Deionized Water	7732-18-5	28.00000	0.00278	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00258	
AI-301	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Diethylene Glycol	111-46-6	30.00000	0.00014	
			Methenamine	100-97-0	20.00000	0.00011	
			Hydrogen Chloride	7647-01-0	10.00000	0.00005	
			Polyethylene polyamine	68603-67-8	10.00000	0.00004	
			Coco amine	61791-14-8	5.00000	0.00002	

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)

17-06370



JOB # 13-065WA
DRAWING # WASHINGTON 1HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
P.O. BOX 17
PENNSBORO, WV 26415

DATE 07/09/15
OPERATOR'S WELL# WASHINGTON UNIT #1H
API WELL # 47 – 017 – 06370
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,066' ORIGINAL - 1,053' AS-DRILLED WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE OXFORD 7.5' (TOP HOLE) WEST UNION 7.5' (BOTTOM HOLE) DISTRICT CENTRAL COUNTY DODDRIDGE
SURFACE OWNER JUDY A. HORTON ACREAGE 65.06 ACRES +/-
OIL & GAS ROYALTY OWNER STELLA MAY ET AL; RALPH LEGGETT ET AL; ELWIN E. LEGGETT ET AL; A. BEVER ET UX; CHARLES W. PRIMM ET UX; WM O. LANTZ ET AL; HUGH SCOTT THOMAS ET AL LEASE ACREAGE 65 ACRES±; 187 ACRES±; 79 ACRES±; 113 ACRES±; 34 ACRES±; 30 ACRES±; 107 ACRES±
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,635' TVD 15,257' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS CT CORPORATION SYSTEM
DENVER, CO 80202 5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

COUNTY NAME PERMIT

FORM WW-6