

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

API 47 - 017 - 06182 County Doddridge District Greenbrier  
Quad Big Isaac Pad Name Marsden Pad Field/Pool Name \_\_\_\_\_  
Farm name Marsden, Richard E. & Wilma J. Well Number White Unit 1H  
Operator (as registered with the OOG) Antero Resources Corporation  
Address 1615 Wynkoop Street 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 4,344,287.396m Easting 534,628.905m  
Landing Point of Curve Northing 4,344,037.32m Easting 534,489.81m  
Bottom Hole Northing 4,341,519.143m Easting 535,365.629m

Elevation (ft) 975' 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

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  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 3/28/2013 Date drilling commenced 6/28/2014 Date drilling ceased 9/16/2014  
Date completion activities began 9/21/2014 Date completion activities ceased 11/29/2014  
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 JUL 27 2015

Freshwater depth(s) ft 153' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1750' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:

JA 8/21/15  
**10/23/2015**

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API 47-017 - 06182 Farm name Marsden, Richard E. & Wilma J. Well number White 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	24"	20"	90'	New	106.5#/J-55	N/A	Y
Surface	17-1/2"	13-3/8"	370'	New	54.5#/J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2580'	New	36#/J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16,559'	New	23#/P-110	N/A	Y
Tubing		2-3/8"	7114'		4.7#/N-80		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	196 sx	15.6	1.18	38 Cu. Ft.	0'	8 Hrs.
Surface	Class A	428 sx	15.6	1.18	257 Cu. Ft.	0'	8 Hrs.
Coal							
Intermediate 1	Class A	957 sx	15.6	1.18	808 Cu. Ft.	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	958 sx (Lead), 1535 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.80 (Tail)	3317 Cu. Ft.	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16,559' MD, 7062' TVD (BHL); 7117' TVD (Deepest Point Drilled) Loggers TD (ft) 16,569' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6467

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Flossie Unit 2H API# 47-017-06144). Please reference the wireline logs submitted with Form WR-35 for the Flossie Unit 2H. A Cement Bond Log has been included with this submittal.

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

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 N/A

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API 47-017-06182 Farm Name Marsden, Richard E. & Wilma J. Well Number White Unit 1H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	21-Sep-14	17,094	17,282	60	Marcellus
2	26-Oct-14	16,870	17,058	60	Marcellus
3	26-Oct-14	16,646	16,834	60	Marcellus
4	27-Oct-14	16,422	16,611	60	Marcellus
5	27-Oct-14	16,198	16,387	60	Marcellus
6	2-Nov-14	15,306	15,482	60	Marcellus
7	2-Nov-14	15,098	15,273	60	Marcellus
8	3-Nov-14	14,890	15,065	60	Marcellus
9	3-Nov-14	14,457	14,626	60	Marcellus
10	4-Nov-14	14,256	14,425	60	Marcellus
11	4-Nov-14	14,056	14,225	60	Marcellus
12	4-Nov-14	13,855	14,024	60	Marcellus
13	5-Nov-14	13,655	13,824	60	Marcellus
14	5-Nov-14	13,454	13,623	60	Marcellus
15	5-Nov-14	13,253	13,423	60	Marcellus
16	5-Nov-14	13,053	13,222	60	Marcellus
17	6-Nov-14	12,852	13,021	60	Marcellus
18	6-Nov-14	12,652	12,821	60	Marcellus
19	6-Nov-14	12,451	12,620	60	Marcellus
20	7-Nov-14	12,251	12,420	60	Marcellus
21	7-Nov-14	12,050	12,219	60	Marcellus
22	7-Nov-14	11,849	12,019	60	Marcellus
23	7-Nov-14	11,649	11,818	60	Marcellus
24	8-Nov-14	11,448	11,617	60	Marcellus
25	8-Nov-14	11,248	11,417	60	Marcellus
26	8-Nov-14	11,047	11,216	60	Marcellus
27	9-Nov-14	10,665	10,830	60	Marcellus
28	9-Nov-14	10,468	10,364	60	Marcellus
29	9-Nov-14	10,272	10,438	60	Marcellus
30	9-Nov-14	10,076	10,241	60	Marcellus
31	10-Nov-14	9,880	10,045	60	Marcellus
32	10-Nov-14	9,683	9,849	60	Marcellus
33	10-Nov-14	9,683	9,849	60	Marcellus
34	10-Nov-14	9,291	9,457	60	Marcellus
35	11-Nov-14	9,095	9,260	60	Marcellus
36	11-Nov-14	8,899	9,064	60	Marcellus
37	11-Nov-14	8,702	8,868	60	Marcellus
38	11-Nov-14	8,506	8,672	60	Marcellus
39	12-Nov-14	8,310	8,476	60	Marcellus
40	12-Nov-14	8,114	8,279	60	Marcellus
41	12-Nov-14	7,918	8,083	60	Marcellus
42	12-Nov-14	7,721	7,887	60	Marcellus
43	13-Nov-14	7,525	7,691	60	Marcellus

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API 47-017-06182 Farm Name Marsden, Richard E. & Wilma J. Well Number White 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	25-Oct-14	57.7	7,145	6,447	4,965	249,400	7,249	N/A
2	26-Oct-14	61.0	7,446	5,451	5,517	249,400	7,162	N/A
3	26-Oct-14	63.0	7,376	9,509	5,894	247,200	7,144	N/A
4	27-Oct-14	60.4	7,389	6,240	5,655	249,000	7,138	N/A
5	27-Oct-14	61.2	7,223	6,218	5,465	249,100	7,241	N/A
6	2-Nov-14	61.0	7,122	6,315	5,151	245,900	6,693	N/A
7	2-Nov-14	63.7	7,458	6,041	5,395	244,600	6,795	N/A
8	3-Nov-14	63.5	7,337	6,351	5,616	247,700	6,800	N/A
9	3-Nov-14	63.2	7,134	6,248	5,597	249,400	6,678	N/A
10	4-Nov-14	64.2	7,367	6,100	5,017	247,000	6,611	N/A
11	4-Nov-14	61.3	7,165	6,273	5,779	248,800	6,639	N/A
12	4-Nov-14	64.9	7,351	6,189	5,647	194,300	6,963	N/A
13	5-Nov-14	64.8	7,427	6,372	5,466	244,800	6,650	N/A
14	5-Nov-14	59.2	7,344	6,407	5,779	249,700	6,544	N/A
15	5-Nov-14	51.3	7,714	6,229	5,537	67,600	6,514	N/A
16	5-Nov-14	64.7	6,774	5,727	5,735	248,700	6,547	N/A
17	6-Nov-14	63.0	7,048	6,013	5,723	250,800	6,548	N/A
18	6-Nov-14	62.1	6,820	5,926	5,066	247,800	6,535	N/A
19	6-Nov-14	63.0	6,878	5,640	5,179	247,700	6,497	N/A
20	7-Nov-14	64.6	6,740	5,672	5,413	246,700	6,481	N/A
21	7-Nov-14	63.1	6,512	5,933	5,441	247,900	6,464	N/A
22	7-Nov-14	62.2	6,689	5,771	5,407	246,200	6,402	N/A
23	7-Nov-14	64.1	6,968	6,095	5,134	249,200	6,421	N/A
24	8-Nov-14	64.8	6,889	6,333	5,220	247,300	6,391	N/A
25	8-Nov-14	62.9	6,723	6,086	5,685	240,600	6,340	N/A
26	8-Nov-14	66.7	7,204	6,201	5,603	235,200	6,884	N/A
27	8-Nov-14	63.9	6,734	5,874	4,277	248,700	6,323	N/A
28	9-Nov-14	63.0	6,793	6,284	4,872	250,200	6,361	N/A
29	9-Nov-14	62.7	7,020	6,159	4,457	248,000	6,310	N/A
30	9-Nov-14	65.1	6,999	6,712	5,570	249,300	6,308	N/A
31	9-Nov-14	64.6	6,706	5,787	5,608	246,900	6,246	N/A
32	10-Nov-14	63.2	6,929	5,820	4,879	248,500	6,276	N/A
33	10-Nov-14	64.2	6,912	6,070	5,398	249,000	6,318	N/A
34	10-Nov-14	63.7	6,730	6,495	4,860	249,000	6,262	N/A
35	11-Nov-14	61.7	6,780	5,911	4,936	244,900	6,228	N/A
36	11-Nov-14	64.3	6,996	5,875	5,506	237,200	6,163	N/A
37	11-Nov-14	64.7	6,433	5,992	5,444	249,000	6,152	N/A
38	11-Nov-14	64.4	6,501	6,329	5,556	247,500	6,137	N/A
39	12-Nov-14	63.6	6,400	6,308	5,559	250,400	6,202	N/A
40	12-Nov-14	63.9	6,311	5,945	5,249	247,600	6,208	N/A
41	12-Nov-14	63.8	6,567	6,843	5,192	237,800	5,963	N/A
42	12-Nov-14	63.0	6,751	5,868	5,251	248,600	6,100	N/A
43	13-Nov-14	64.7	6,872	6,931	5,354	248,800	6,100	N/A
	AVG=	62.9	6,969	6,209	5,350	10,393,400	280,244	TOTAL

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## EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	153	N/A	153	N/A
Shale	0	287	0	287
Shale w/ Trace Coal	287	307	287	307
Sandstone	307	747	307	747
Unknown	747	787	747	787
Shale	787	1,107	787	1,107
Sandstone	1,107	1,167	1,107	1,167
Siltstone	1,167	1,187	1,167	1,187
Sandstone	1,187	1,307	1,187	1,307
Siltstone/Shale	1,307	1,587	1,307	1,587
Sandstone w/ Trace Coal	1,587	1,607	1,587	1,607
Sandstone	1,607	1,747	1,607	1,747
Shale	1,747	1,787	1,747	1,787
Sandstone	1,787	1,807	1,787	1,807
Shale	1,807	1,998	1,807	2,001
Big Lime	1,998	2,126	2,001	2,129
Big Injun	2,126	2,497	2,129	2,500
Gantz Sand	2,497	2,619	2,500	2,622
Fifty Foot Sandstone	2,619	2,713	2,622	2,716
Gordon	2,713	2,882	2,716	2,885
Fifth Sandstone	2,882	2,926	2,885	2,929
Bayard	2,926	3,408	2,929	3,411
Warren	3,408	3,634	3,411	3,637
Speechley	3,634	3,926	3,637	3,929
Baltown	3,926	4,406	3,929	4,409
Bradford	4,406	5,024	4,409	5,027
Benson	5,024	5,314	5,027	5,317
Alexander	5,314	5,507	5,317	5,510
Elk	5,507	6,074	5,510	6,077
Rhinestreet	6,074	6,520	6,077	6,524
Sycamore	6,520	6,747	6,524	6,784
Middlesex	6,747	6,896	6,784	7,066
Burkett	6,896	6,922	7,066	7,129
Tully	6,922	7,053	7,129	7,482
Marcellus	7,053	NA	7,482	NA
Onondaga**	7,039	NA	10,827	NA

\*\*Antero drilled a small portion of this well less than 5 feet into the Onondaga formation from approximately 10,850'-11,027' and 14,646'-14,870' in the lateral but this section was not perforated or completed.

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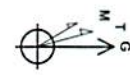
10/23/2015

**White Unit 1H**  
Doddridge County WV  
Northing: 14252167.78  
Easting: 1753980.47  
As Drilled



**WELL DETAIL'S** White Unit 1H  
Ground Level: 971.0  
+N/-S 0.0 +E/-W 0.0  
Northing 14252167.78 Easting 1753980.47  
Latitude 35° 55' 53.3" N Longitude 80° 35' 25.712" W

Genie Lightfoot  
9/02/2014  
Scientific Drilling  
427 South Maple Lane  
Oklahoma City, OK 73128



To convert Magnetic North to Grid, Subtract 13° 55' 15" (13.919444°)  
To convert True North to Grid, Subtract 0° 00' 00" (0.000000°)  
Magnetic Field  
Northing: -0.235  
Easting: -0.835  
Stereographic Field  
Northing: 452207.7517  
Easting: 670419.06317  
Date: 07/02/2014  
Map: BSGM2014

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AZAROVICH to Grid North

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Frontier 3 - White 1H 971 GL - 23 KB @ 994.0 usft  
Gr: 971.0

**PROJECT DETAIL'S** 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

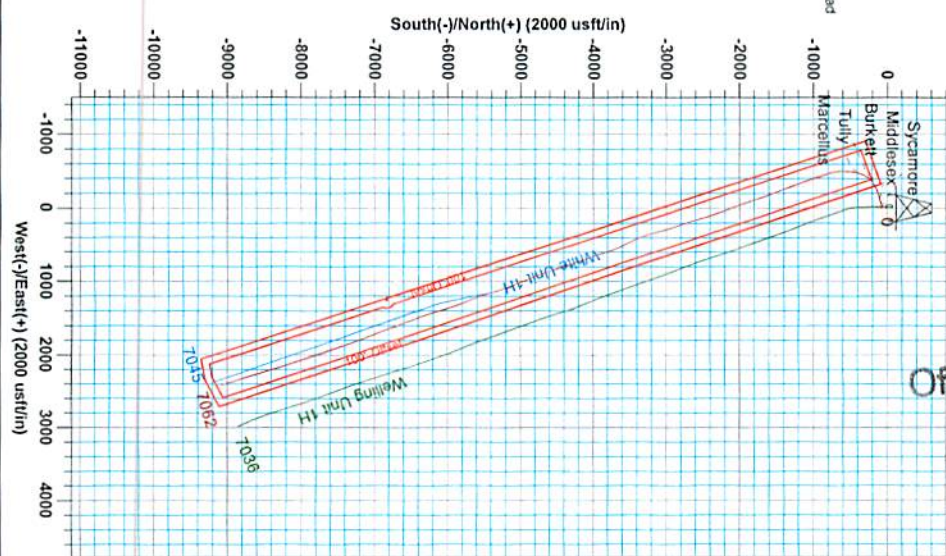
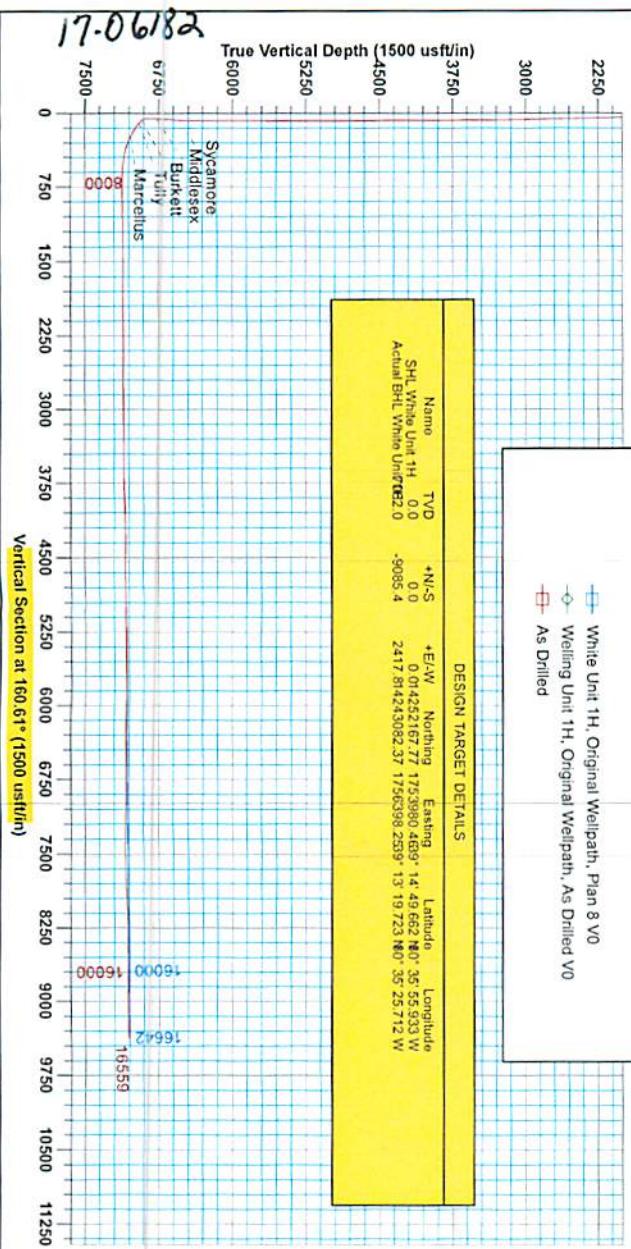
**SITE DETAIL'S** Fossie / Golden / Welling Pad  
Site Centre Northing: 14252125.91  
Easting: 1754023.86  
Positional Uncertainty: 0.0  
Convergence: 0.25  
Local North: Grid

**LEGEND**

- White Unit 1H, Original Wellpath, Plan 8 V0
- Well Unit 1H, Original Wellpath, As Drilled V0
- As Drilled

**DESIGN TARGET DETAIL'S**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL White Unit 1H	0.0	0.0	0.0	14252167.77	1753980.4693	35° 55' 53.3" N	80° 35' 25.712" W
Actual BHL White Unit 1H	982.0	-9085.4	2417.81	423082.37	1756398.2539	13° 19' 72.3" N	80° 35' 25.712" W





17-06182



## Antero Resources

Doddridge County WV  
Flossie / Golden / Welling Pad  
White Unit 1H  
Original Wellpath

Design: As Drilled

## E:OW Completion Report

02 October, 2014



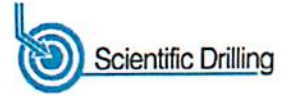
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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

<b>Project</b>	Doddridge County WV, McClellan District		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 17N (84 W to 78 W)		

<b>Site</b>	Flossie / Golden / Welling Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,252,125.91 usft	<b>Latitude:</b>	39° 14' 49.246 N
<b>From:</b>	Map	<b>Easting:</b>	1,754,023.86 usft	<b>Longitude:</b>	80° 35' 55.384 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.25 °

<b>Well</b>	White Unit 1H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,252,167.78 usft	<b>Latitude:</b>	39° 14' 49.662 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,753,980.47 usft	<b>Longitude:</b>	80° 35' 55.933 W
<b>Position Uncertainty</b>		2.8 usft	<b>Wellhead Elevation:</b>	994.0 usft	<b>Ground Level:</b>	971.0 usft

<b>Wellbore</b>	Original Wellpath				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	7/10/2014	-8.59	66.81	52,208

<b>Design</b>	As Drilled				
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<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	160.61	

<b>Survey Program</b>	<b>Date</b>	10/2/2014			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
110.0	6,403.0	Survey #6 Def Gyro to KOP (Original Well)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,403.0	16,559.0	Survey #7 SDI MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	

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
110.0	0.06	216.17	110.0	0.0	0.0	0.0	0.05
135.0	0.04	174.44	135.0	-0.1	0.0	0.0	0.16
160.0	0.15	243.84	160.0	-0.1	-0.1	0.1	0.56
185.0	0.08	216.48	185.0	-0.1	-0.1	0.1	0.35
210.0	0.15	247.91	210.0	-0.1	-0.1	0.1	0.37
235.0	0.17	266.94	235.0	-0.2	-0.2	0.1	0.23
260.0	0.10	237.70	260.0	-0.2	-0.3	0.1	0.38
285.0	0.10	200.67	285.0	-0.2	-0.3	0.1	0.25
310.0	0.12	164.42	310.0	-0.2	-0.3	0.1	0.28
335.0	0.30	173.28	335.0	-0.3	-0.3	0.2	0.73

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17-06182



EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
360.0	0.33	189.56	360.0	-0.5	-0.3	0.4	0.38
385.0	0.33	176.18	385.0	-0.6	-0.3	0.5	0.31
410.0	0.29	176.46	410.0	-0.8	-0.3	0.6	0.16
435.0	0.36	179.85	435.0	-0.9	-0.3	0.8	0.29
460.0	0.35	179.78	460.0	-1.0	-0.3	0.9	0.04
485.0	0.38	187.99	485.0	-1.2	-0.3	1.0	0.24
510.0	0.31	179.06	510.0	-1.4	-0.3	1.2	0.35
535.0	0.39	181.57	535.0	-1.5	-0.3	1.3	0.33
560.0	0.32	182.73	560.0	-1.7	-0.3	1.5	0.28
585.0	0.35	175.25	585.0	-1.8	-0.3	1.6	0.21
610.0	0.38	171.17	610.0	-2.0	-0.3	1.8	0.16
635.0	0.36	190.19	635.0	-2.1	-0.3	1.9	0.50
660.0	0.29	174.46	660.0	-2.3	-0.3	2.0	0.45
685.0	0.36	173.10	685.0	-2.4	-0.3	2.2	0.28
710.0	0.35	178.25	710.0	-2.6	-0.3	2.3	0.13
735.0	0.37	178.92	735.0	-2.7	-0.3	2.5	0.08
760.0	0.38	178.76	760.0	-2.9	-0.3	2.6	0.04
785.0	0.43	175.72	785.0	-3.1	-0.3	2.8	0.22
810.0	0.34	168.12	810.0	-3.2	-0.2	3.0	0.41
835.0	0.38	176.35	835.0	-3.4	-0.2	3.1	0.26
860.0	0.42	174.52	860.0	-3.6	-0.2	3.3	0.17
885.0	0.43	176.37	885.0	-3.7	-0.2	3.5	0.07
910.0	0.40	166.91	910.0	-3.9	-0.2	3.6	0.30
935.0	0.45	165.86	935.0	-4.1	-0.1	3.8	0.20
960.0	0.41	179.05	960.0	-4.3	-0.1	4.0	0.43
985.0	0.43	175.04	985.0	-4.5	-0.1	4.2	0.14
1,010.0	0.46	162.36	1,010.0	-4.7	0.0	4.4	0.41
1,035.0	0.52	163.04	1,035.0	-4.9	0.0	4.6	0.24
1,060.0	0.43	170.95	1,060.0	-5.1	0.1	4.8	0.44
1,085.0	0.55	165.42	1,085.0	-5.3	0.1	5.0	0.52
1,110.0	0.51	164.71	1,110.0	-5.5	0.2	5.2	0.16
1,135.0	0.58	159.59	1,135.0	-5.7	0.2	5.5	0.34
1,160.0	0.54	161.94	1,160.0	-6.0	0.3	5.7	0.18
1,185.0	0.71	163.38	1,185.0	-6.2	0.4	6.0	0.68
1,210.0	0.62	167.61	1,210.0	-6.5	0.5	6.3	0.41
1,235.0	0.79	169.05	1,235.0	-6.8	0.5	6.6	0.68
1,260.0	0.73	186.52	1,260.0	-7.1	0.6	6.9	0.95
1,285.0	0.72	164.11	1,285.0	-7.4	0.6	7.2	1.13
1,310.0	0.78	158.01	1,310.0	-7.7	0.7	7.5	0.40
1,335.0	0.82	167.59	1,335.0	-8.1	0.8	7.9	0.56
1,360.0	0.88	165.43	1,360.0	-8.4	0.9	8.2	0.27
1,385.0	0.86	170.85	1,385.0	-8.8	1.0	8.6	0.34
1,410.0	0.87	167.82	1,410.0	-9.2	1.0	9.0	0.19
1,435.0	0.94	166.15	1,435.0	-9.6	1.1	9.4	0.30

17-06182



EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usft
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usft
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,460.0	1.54	180.46	1,459.9	-10.1	1.2	9.9	2.68
1,485.0	2.24	186.76	1,484.9	-10.9	1.1	10.7	2.92
1,510.0	3.20	189.96	1,509.9	-12.1	0.9	11.7	3.89
1,535.0	4.10	189.52	1,534.9	-13.7	0.7	13.1	3.60
1,560.0	4.80	191.76	1,559.8	-15.6	0.3	14.8	2.88
1,585.0	5.86	195.67	1,584.7	-17.8	-0.3	16.7	4.48
1,610.0	6.38	198.02	1,609.5	-20.4	-1.0	18.9	2.31
1,635.0	6.71	199.01	1,634.4	-23.1	-1.9	21.1	1.39
1,660.0	6.68	203.23	1,659.2	-25.8	-3.0	23.3	1.97
1,685.0	6.86	208.00	1,684.0	-28.4	-4.3	25.4	2.36
1,710.0	6.97	209.61	1,708.8	-31.1	-5.7	27.4	0.89
1,735.0	7.06	209.40	1,733.7	-33.7	-7.2	29.4	0.37
1,760.0	7.03	210.02	1,758.5	-36.4	-8.7	31.4	0.33
1,785.0	7.20	209.44	1,783.3	-39.1	-10.3	33.5	0.74
1,810.0	7.23	209.55	1,808.1	-41.8	-11.8	35.5	0.13
1,835.0	7.14	209.44	1,832.9	-44.5	-13.4	37.6	0.36
1,860.0	5.84	206.40	1,857.7	-47.0	-14.7	39.5	5.38
1,885.0	4.75	204.44	1,882.6	-49.1	-15.7	41.1	4.42
1,910.0	3.64	201.93	1,907.5	-50.8	-16.4	42.5	4.50
1,935.0	2.98	200.66	1,932.5	-52.1	-16.9	43.6	2.66
1,960.0	1.91	196.90	1,957.5	-53.1	-17.3	44.4	4.33
1,985.0	1.77	196.50	1,982.5	-53.9	-17.5	45.0	0.56
2,010.0	1.68	195.43	2,007.5	-54.6	-17.7	45.7	0.38
2,035.0	1.70	194.79	2,032.4	-55.3	-17.9	46.3	0.11
2,060.0	1.69	194.19	2,057.4	-56.1	-18.1	46.9	0.08
2,085.0	1.72	195.60	2,082.4	-56.8	-18.3	47.5	0.21
2,110.0	1.62	195.42	2,107.4	-57.5	-18.5	48.1	0.40
2,135.0	1.65	194.23	2,132.4	-58.2	-18.7	48.7	0.18
2,160.0	1.69	195.01	2,157.4	-58.9	-18.9	49.3	0.18
2,185.0	1.69	195.73	2,182.4	-59.6	-19.0	49.9	0.08
2,210.0	1.73	195.96	2,207.4	-60.3	-19.3	50.5	0.16
2,235.0	1.67	194.26	2,232.4	-61.0	-19.4	51.1	0.31
2,260.0	1.66	193.60	2,257.3	-61.7	-19.6	51.7	0.09
2,285.0	1.66	193.04	2,282.3	-62.4	-19.8	52.3	0.06
2,310.0	1.77	194.08	2,307.3	-63.2	-20.0	52.9	0.46
2,335.0	1.76	193.22	2,332.3	-63.9	-20.1	53.6	0.11
2,360.0	1.74	194.28	2,357.3	-64.6	-20.3	54.2	0.15
2,385.0	1.74	190.54	2,382.3	-65.4	-20.5	54.9	0.45
2,410.0	1.69	193.28	2,407.3	-66.1	-20.6	55.5	0.38
2,435.0	1.78	191.71	2,432.3	-66.9	-20.8	56.2	0.41
2,460.0	1.71	192.64	2,457.3	-67.6	-21.0	56.8	0.30
2,485.0	1.69	192.46	2,482.2	-68.3	-21.1	57.4	0.08
2,510.0	1.76	190.96	2,507.2	-69.1	-21.3	58.0	0.33
2,535.0	1.82	188.60	2,532.2	-69.8	-21.4	58.8	0.38
2,560.0	1.67	191.77	2,557.2	-70.6	-21.5	59.4	0.71

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
2,585.0	1.74	188.67	188.67	2,582.2	-71.3	-21.7	60.1	0.46	
2,610.0	1.20	201.83	201.83	2,607.2	-71.9	-21.8	60.6	2.53	
2,635.0	1.39	190.72	190.72	2,632.2	-72.5	-22.0	61.1	1.26	
2,660.0	1.37	192.90	192.90	2,657.2	-73.1	-22.1	61.6	0.22	
2,685.0	1.39	190.54	190.54	2,682.2	-73.7	-22.2	62.1	0.24	
2,710.0	1.32	190.82	190.82	2,707.2	-74.2	-22.3	62.6	0.28	
2,735.0	1.27	185.94	185.94	2,732.2	-74.8	-22.4	63.1	0.48	
2,760.0	1.18	188.82	188.82	2,757.1	-75.3	-22.5	63.6	0.44	
2,785.0	1.00	188.78	188.78	2,782.1	-75.8	-22.6	64.0	0.72	
2,810.0	0.90	191.42	191.42	2,807.1	-76.2	-22.6	64.4	0.44	
2,835.0	0.91	189.64	189.64	2,832.1	-76.6	-22.7	64.7	0.12	
2,860.0	0.94	183.11	183.11	2,857.1	-77.0	-22.8	65.1	0.44	
2,885.0	0.98	176.89	176.89	2,882.1	-77.4	-22.8	65.5	0.45	
2,910.0	0.97	180.46	180.46	2,907.1	-77.8	-22.7	65.9	0.25	
2,935.0	0.98	179.93	179.93	2,932.1	-78.3	-22.7	66.3	0.05	
2,960.0	0.85	183.46	183.46	2,957.1	-78.7	-22.8	66.6	0.57	
2,985.0	0.82	180.16	180.16	2,982.1	-79.0	-22.8	67.0	0.23	
3,010.0	0.90	174.05	174.05	3,007.1	-79.4	-22.7	67.3	0.49	
3,035.0	0.60	188.97	188.97	3,032.1	-79.7	-22.7	67.6	1.42	
3,060.0	0.77	174.29	174.29	3,057.1	-80.0	-22.7	67.9	0.97	
3,085.0	0.75	177.01	177.01	3,082.1	-80.3	-22.7	68.2	0.16	
3,110.0	0.55	177.14	177.14	3,107.1	-80.6	-22.7	68.5	0.80	
3,135.0	0.61	180.86	180.86	3,132.1	-80.9	-22.7	68.8	0.28	
3,160.0	0.64	176.88	176.88	3,157.1	-81.2	-22.7	69.0	0.21	
3,185.0	0.67	176.66	176.66	3,182.1	-81.4	-22.7	69.3	0.12	
3,210.0	0.60	174.92	174.92	3,207.1	-81.7	-22.7	69.6	0.29	
3,235.0	0.57	179.73	179.73	3,232.1	-82.0	-22.7	69.8	0.23	
3,260.0	0.40	183.02	183.02	3,257.1	-82.2	-22.7	70.0	0.69	
3,285.0	0.49	179.08	179.08	3,282.1	-82.4	-22.7	70.2	0.38	
3,310.0	0.59	174.95	174.95	3,307.1	-82.6	-22.6	70.4	0.43	
3,335.0	0.46	178.54	178.54	3,332.1	-82.8	-22.6	70.6	0.54	
3,360.0	0.35	179.16	179.16	3,357.1	-83.0	-22.6	70.8	0.44	
3,385.0	0.42	167.74	167.74	3,382.1	-83.2	-22.6	71.0	0.41	
3,410.0	0.50	168.15	168.15	3,407.1	-83.4	-22.6	71.2	0.32	
3,435.0	0.30	168.18	168.18	3,432.1	-83.6	-22.5	71.3	0.80	
3,460.0	0.29	183.52	183.52	3,457.1	-83.7	-22.5	71.5	0.32	
3,485.0	0.40	165.93	165.93	3,482.1	-83.8	-22.5	71.6	0.61	
3,510.0	0.43	160.42	160.42	3,507.1	-84.0	-22.5	71.8	0.20	
3,535.0	0.30	164.15	164.15	3,532.1	-84.1	-22.4	71.9	0.53	
3,560.0	0.45	164.81	164.81	3,557.1	-84.3	-22.4	72.1	0.60	
3,585.0	0.47	160.96	160.96	3,582.1	-84.5	-22.3	72.2	0.15	
3,610.0	0.32	166.05	166.05	3,607.1	-84.7	-22.2	72.3	0.62	
3,635.0	0.43	158.83	158.83	3,632.1	-84.8	-22.2	72.6	0.48	
3,660.0	0.55	154.59	154.59	3,657.1	-85.0	-22.1	72.9	0.50	

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<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,685.0	0.28	169.16	3,682.1	-85.2	-22.0	73.0	1.15
3,710.0	0.35	162.79	3,707.1	-85.3	-22.0	73.2	0.31
3,735.0	0.40	152.45	3,732.1	-85.5	-22.0	73.3	0.34
3,760.0	0.31	161.23	3,757.1	-85.6	-21.9	73.5	0.42
3,785.0	0.28	159.46	3,782.1	-85.7	-21.8	73.6	0.13
3,810.0	0.42	154.75	3,807.1	-85.9	-21.8	73.8	0.57
3,835.0	0.38	153.56	3,832.1	-86.0	-21.7	73.9	0.16
3,860.0	0.37	149.70	3,857.1	-86.2	-21.6	74.1	0.11
3,885.0	0.35	153.36	3,882.1	-86.3	-21.6	74.3	0.12
3,910.0	0.37	147.94	3,907.1	-86.4	-21.5	74.4	0.16
3,935.0	0.34	141.09	3,932.1	-86.6	-21.4	74.6	0.21
3,960.0	0.39	137.85	3,957.1	-86.7	-21.3	74.7	0.22
3,985.0	0.39	135.55	3,982.1	-86.8	-21.2	74.9	0.06
4,010.0	0.35	129.03	4,007.1	-86.9	-21.1	75.0	0.23
4,035.0	0.30	129.64	4,032.1	-87.0	-20.9	75.1	0.20
4,060.0	0.44	129.92	4,057.1	-87.1	-20.8	75.3	0.56
4,085.0	0.37	120.21	4,082.1	-87.2	-20.7	75.4	0.39
4,110.0	0.43	114.09	4,107.1	-87.3	-20.5	75.5	0.29
4,135.0	0.41	101.74	4,132.1	-87.4	-20.3	75.6	0.37
4,160.0	0.46	97.65	4,157.1	-87.4	-20.2	75.7	0.24
4,185.0	0.36	82.98	4,182.1	-87.4	-20.0	75.8	0.58
4,210.0	0.44	90.26	4,207.1	-87.4	-19.8	75.8	0.38
4,235.0	0.45	86.81	4,232.1	-87.4	-19.6	75.9	0.11
4,260.0	0.56	85.21	4,257.1	-87.4	-19.4	76.0	0.44
4,285.0	0.55	82.39	4,282.1	-87.3	-19.2	76.0	0.12
4,310.0	0.60	85.41	4,307.1	-87.3	-18.9	76.1	0.23
4,335.0	0.57	79.95	4,332.1	-87.3	-18.7	76.1	0.25
4,360.0	0.65	83.28	4,357.1	-87.2	-18.4	76.2	0.35
4,385.0	0.66	82.76	4,382.1	-87.2	-18.1	76.2	0.05
4,410.0	0.66	83.30	4,407.1	-87.2	-17.8	76.3	0.02
4,435.0	0.68	83.73	4,432.1	-87.1	-17.5	76.4	0.08
4,460.0	0.63	80.34	4,457.1	-87.1	-17.2	76.4	0.25
4,485.0	0.63	86.75	4,482.1	-87.1	-17.0	76.5	0.28
4,510.0	0.64	80.18	4,507.1	-87.0	-16.7	76.6	0.29
4,535.0	0.64	81.12	4,532.1	-87.0	-16.4	76.6	0.04
4,560.0	0.65	78.88	4,557.1	-86.9	-16.1	76.6	0.11
4,585.0	0.65	83.30	4,582.1	-86.9	-15.9	76.7	0.20
4,610.0	0.71	86.94	4,607.1	-86.9	-15.6	76.8	0.30
4,635.0	0.76	88.52	4,632.1	-86.9	-15.2	76.9	0.22
4,660.0	0.89	85.83	4,657.0	-86.8	-14.9	77.0	0.54
4,685.0	0.74	81.15	4,682.0	-86.8	-14.5	77.1	0.66
4,710.0	0.87	78.86	4,707.0	-86.7	-14.2	77.1	0.54
4,735.0	0.83	75.11	4,732.0	-86.7	-13.8	77.1	0.27
4,760.0	0.83	76.50	4,757.0	-86.6	-13.5	77.2	0.08

Received  
Office of Oil & Gas



17-06182



EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
4,785.0	0.84	80.31	80.31	4,782.0	-86.5	-13.1	77.2	0.23	0.23
4,810.0	0.74	76.25	76.25	4,807.0	-86.4	-12.8	77.3	0.46	0.46
4,835.0	0.79	85.87	85.87	4,832.0	-86.4	-12.5	77.3	0.55	0.55
4,860.0	0.91	89.87	89.87	4,857.0	-86.4	-12.1	77.5	0.54	0.54
4,885.0	0.79	66.84	66.84	4,882.0	-86.3	-11.7	77.5	1.44	1.44
4,910.0	0.88	87.00	87.00	4,907.0	-86.2	-11.4	77.5	1.22	1.22
4,935.0	0.94	85.69	85.69	4,932.0	-86.2	-11.0	77.7	0.25	0.25
4,960.0	1.00	81.52	81.52	4,957.0	-86.1	-10.6	77.7	0.37	0.37
4,985.0	0.98	82.66	82.66	4,982.0	-86.1	-10.1	77.8	0.11	0.11
5,010.0	1.00	86.99	86.99	5,007.0	-86.0	-9.7	77.9	0.31	0.31
5,035.0	0.94	82.81	82.81	5,032.0	-86.0	-9.3	78.0	0.37	0.37
5,060.0	1.00	84.56	84.56	5,057.0	-86.0	-8.9	78.1	0.27	0.27
5,085.0	0.94	78.65	78.65	5,082.0	-85.9	-8.4	78.2	0.47	0.47
5,110.0	0.99	78.80	78.80	5,107.0	-85.8	-8.0	78.3	0.20	0.20
5,135.0	0.96	78.35	78.35	5,132.0	-85.7	-7.6	78.3	0.12	0.12
5,160.0	0.95	76.96	76.96	5,157.0	-85.6	-7.2	78.4	0.10	0.10
5,185.0	0.89	71.10	71.10	5,182.0	-85.5	-6.8	78.4	0.45	0.45
5,210.0	0.86	73.34	73.34	5,207.0	-85.4	-6.5	78.4	0.18	0.18
5,235.0	0.87	68.43	68.43	5,232.0	-85.3	-6.1	78.4	0.30	0.30
5,260.0	0.92	62.34	62.34	5,257.0	-85.1	-5.7	78.4	0.43	0.43
5,285.0	0.80	54.82	54.82	5,282.0	-84.9	-5.4	78.3	0.66	0.66
5,310.0	0.78	54.65	54.65	5,307.0	-84.7	-5.1	78.2	0.08	0.08
5,335.0	0.79	47.55	47.55	5,332.0	-84.5	-4.9	78.1	0.39	0.39
5,360.0	0.78	44.23	44.23	5,357.0	-84.3	-4.6	78.0	0.19	0.19
5,385.0	0.78	51.82	51.82	5,382.0	-84.1	-4.4	77.8	0.41	0.41
5,410.0	0.81	43.39	43.39	5,407.0	-83.8	-4.1	77.7	0.48	0.48
5,435.0	0.75	48.12	48.12	5,432.0	-83.6	-3.9	77.6	0.35	0.35
5,460.0	0.74	44.37	44.37	5,457.0	-83.4	-3.6	77.4	0.20	0.20
5,485.0	0.73	47.46	47.46	5,482.0	-83.1	-3.4	77.3	0.16	0.16
5,510.0	0.73	50.43	50.43	5,507.0	-82.9	-3.2	77.2	0.15	0.15
5,535.0	0.76	51.82	51.82	5,531.9	-82.7	-2.9	77.1	0.14	0.14
5,560.0	0.71	48.25	48.25	5,556.9	-82.5	-2.7	77.0	0.27	0.27
5,585.0	0.72	49.36	49.36	5,581.9	-82.3	-2.4	76.8	0.07	0.07
5,610.0	0.66	51.22	51.22	5,606.9	-82.1	-2.2	76.7	0.26	0.26
5,635.0	0.72	54.95	54.95	5,631.9	-81.9	-2.0	76.6	0.30	0.30
5,660.0	0.72	49.03	49.03	5,656.9	-81.7	-1.7	76.5	0.30	0.30
5,685.0	0.71	49.19	49.19	5,681.9	-81.5	-1.5	76.4	0.04	0.04
5,710.0	0.72	55.33	55.33	5,706.9	-81.4	-1.2	76.3	0.31	0.31
5,735.0	0.70	52.24	52.24	5,731.9	-81.2	-1.0	76.2	0.17	0.17
5,760.0	0.75	52.04	52.04	5,756.9	-81.0	-0.7	76.1	0.20	0.20
5,785.0	0.67	52.66	52.66	5,781.9	-80.8	-0.5	75.9	0.32	0.32
5,810.0	0.72	51.57	51.57	5,806.9	-80.6	-0.3	75.9	0.21	0.21
5,835.0	0.73	58.35	58.35	5,831.9	-80.4	0.0	75.9	0.35	0.35
5,860.0	0.74	59.00	59.00	5,856.9	-80.3	0.3	75.9	0.05	0.05

Received  
Office of Oil & Gas  
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17-06182



EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)		
5,885.0	0.76	54.40	5,881.9	-80.1	0.5	75.7	0.25		
5,910.0	0.73	55.82	5,906.9	-79.9	0.8	75.6	0.14		
5,935.0	0.78	59.85	5,931.9	-79.7	1.1	75.6	0.29		
5,960.0	0.71	64.06	5,956.9	-79.6	1.4	75.5	0.36		
5,985.0	0.64	64.91	5,981.9	-79.4	1.6	75.5	0.28		
6,010.0	0.64	63.95	6,006.9	-79.3	1.9	75.4	0.04		
6,035.0	0.61	57.86	6,031.9	-79.2	2.1	75.4	0.29		
6,060.0	0.61	60.78	6,056.9	-79.0	2.4	75.3	0.12		
6,085.0	0.59	53.33	6,081.9	-78.9	2.6	75.3	0.32		
6,110.0	0.58	65.11	6,106.9	-78.8	2.8	75.2	0.48		
6,135.0	0.39	66.60	6,131.9	-78.7	3.0	75.2	0.76		
6,160.0	0.34	73.95	6,156.9	-78.6	3.1	75.2	0.27		
6,185.0	0.24	75.73	6,181.9	-78.6	3.3	75.2	0.40		
6,210.0	0.23	78.70	6,206.9	-78.6	3.4	75.2	0.06		
6,235.0	0.24	85.54	6,231.9	-78.6	3.5	75.3	0.12		
6,260.0	0.17	77.45	6,256.9	-78.5	3.6	75.3	0.30		
6,285.0	0.09	29.46	6,281.9	-78.5	3.6	75.3	0.51		
6,310.0	0.18	118.52	6,306.9	-78.5	3.6	75.3	0.80		
6,335.0	0.09	79.38	6,331.9	-78.5	3.7	75.3	0.50		
6,360.0	0.27	95.54	6,356.9	-78.5	3.8	75.3	0.74		
6,385.0	0.34	120.79	6,381.9	-78.6	3.9	75.4	0.60		
6,403.0	0.18	120.62	6,399.9	-78.6	4.0	75.5	0.89		
6,436.0	0.17	230.30	6,432.9	-78.7	4.0	75.5	0.87		
6,467.0	2.41	278.36	6,463.9	-78.6	3.3	75.3	7.42		
6,499.0	6.11	273.33	6,495.8	-78.4	0.9	74.3	11.61		
6,530.0	9.88	271.14	6,526.5	-78.3	-3.4	72.7	12.20		
6,547.0	12.26	270.67	6,543.2	-78.2	-6.6	71.6	14.01		
<b>Sycamore</b>									
6,561.0	14.22	270.40	6,556.8	-78.2	-9.8	70.5	14.01		
6,592.0	18.36	266.98	6,586.6	-78.4	-18.5	67.8	13.70		
6,623.0	21.70	263.71	6,615.7	-79.3	-29.1	65.1	11.36		
6,654.0	25.00	261.20	6,644.1	-80.9	-41.3	62.6	11.12		
6,686.0	28.50	257.77	6,672.7	-83.6	-55.4	60.4	11.95		
6,717.0	31.98	255.44	6,699.5	-87.2	-70.6	58.8	11.84		
6,749.0	36.18	253.70	6,726.0	-92.0	-87.9	57.6	13.47		
6,781.0	40.76	253.99	6,751.0	-97.5	-107.0	56.5	14.32		
6,807.0	44.11	254.11	6,770.2	-102.4	-123.9	55.4	12.88		
<b>Middlesex</b>									
6,813.0	44.88	254.13	6,774.5	-103.5	-127.9	55.2	12.88		
6,844.0	48.38	253.07	6,795.8	-109.9	-149.5	54.0	11.56		
6,875.0	52.09	251.85	6,815.6	-117.1	-172.2	53.2	12.34		
6,906.0	55.63	251.56	6,833.9	-124.9	-196.0	52.3	11.44		
6,937.0	59.36	252.49	6,850.5	-133.0	-220.9	52.1	12.30		
6,969.0	62.27	250.28	6,866.1	-141.9	-247.3	51.7	10.91		
7,000.0	63.38	245.31	6,880.3	-152.3	-272.9	53.1	14.70		

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,032.0	63.65	239.81	6,894.6	-165.5	-298.3	57.1	15.41
7,063.0	64.33	235.15	6,908.2	-180.5	-321.7	63.4	13.69
7,089.0	65.16	231.80	6,919.3	-194.5	-340.6	70.4	12.09
<b>Burkett</b>							
7,094.0	65.33	231.16	6,921.4	-197.3	-344.2	71.9	12.09
7,126.0	66.42	226.22	6,934.5	-216.6	-366.1	82.8	14.49
7,152.0	66.66	222.75	6,944.8	-233.6	-382.8	93.3	12.28
<b>Tully</b>							
7,158.0	66.73	221.95	6,947.2	-237.7	-386.5	95.9	12.28
7,189.0	66.81	219.11	6,959.4	-259.3	-405.0	110.2	8.42
7,221.0	66.37	214.69	6,972.1	-282.8	-422.7	126.4	12.75
7,252.0	66.60	210.18	6,984.5	-306.8	-437.9	144.0	13.36
7,284.0	66.36	205.53	6,997.3	-332.7	-451.6	163.9	13.34
7,315.0	66.29	200.57	7,009.7	-358.8	-462.7	184.9	14.65
7,346.0	66.87	196.59	7,022.1	-385.8	-471.8	207.3	11.93
7,377.0	68.31	193.73	7,033.9	-413.5	-479.3	230.9	9.71
7,378.0	68.34	193.63	7,034.3	-414.4	-479.5	231.7	9.42
<b>Marcellus</b>							
7,409.0	69.34	190.69	7,045.5	-442.6	-485.6	256.3	9.42
7,440.0	70.59	187.48	7,056.1	-471.4	-490.2	281.9	10.53
7,473.0	72.08	183.88	7,066.6	-502.5	-493.3	310.2	11.28
7,504.0	74.03	182.74	7,075.7	-532.1	-495.0	337.6	7.21
7,536.0	75.72	181.92	7,084.0	-562.9	-496.2	366.3	5.83
7,567.0	77.71	180.26	7,091.1	-593.1	-496.8	394.5	8.27
7,599.0	79.80	178.15	7,097.4	-624.5	-496.4	424.3	9.19
7,630.0	81.70	175.15	7,102.4	-655.0	-494.6	453.7	11.35
7,662.0	83.05	171.67	7,106.6	-686.5	-490.9	484.6	11.57
7,693.0	83.77	168.80	7,110.2	-716.9	-485.7	515.0	9.49
7,725.0	84.35	165.27	7,113.5	-747.9	-478.6	546.6	11.12
7,802.0	90.22	160.91	7,117.1	-821.4	-456.2	623.4	9.49
7,833.0	90.40	161.52	7,117.0	-850.8	-446.2	654.4	2.05
7,929.0	90.48	162.05	7,116.2	-942.0	-416.2	750.3	0.56
8,024.0	91.10	160.21	7,114.9	-1,031.8	-385.5	845.3	2.04
8,118.0	90.40	159.50	7,113.7	-1,120.1	-353.1	939.3	1.06
8,211.0	90.54	159.88	7,112.9	-1,207.3	-320.8	1,032.3	0.44
8,305.0	91.36	160.29	7,111.4	-1,295.7	-288.8	1,126.3	0.98
8,399.0	89.60	158.45	7,110.6	-1,383.6	-255.7	1,220.2	2.71
8,494.0	89.52	158.80	7,111.3	-1,472.1	-221.1	1,315.2	0.38
8,589.0	90.57	160.73	7,111.2	-1,561.2	-188.2	1,410.2	2.31
8,684.0	90.84	159.15	7,110.1	-1,650.4	-155.7	1,505.1	1.69
8,779.0	90.31	162.32	7,109.1	-1,740.1	-124.3	1,600.1	3.38
8,874.0	89.78	163.19	7,109.0	-1,830.8	-96.2	1,695.1	1.07
8,968.0	90.13	161.26	7,109.1	-1,920.3	-67.5	1,789.0	2.09
9,063.0	90.31	160.21	7,108.7	-2,010.0	-36.1	1,884.0	1.12
9,158.0	90.22	157.92	7,108.3	-2,098.7	-2.2	1,979.0	2.41

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
9,253.0	90.31	158.62	7,107.9	-2,187.0	33.0	2,073.9	0.74
9,347.0	90.04	160.91	7,107.6	-2,275.2	65.5	2,167.9	2.45
9,442.0	89.87	160.78	7,107.7	-2,364.9	96.7	2,262.9	0.23
9,537.0	89.78	163.90	7,107.9	-2,455.4	125.5	2,357.8	3.29
9,632.0	89.60	163.99	7,108.5	-2,546.7	151.8	2,452.7	0.21
9,727.0	89.96	165.04	7,108.8	-2,638.3	177.1	2,547.4	1.17
9,823.0	90.04	160.65	7,108.8	-2,730.0	205.4	2,643.3	4.57
9,918.0	89.96	161.35	7,108.8	-2,819.8	236.4	2,738.3	0.74
10,012.0	90.66	163.55	7,108.3	-2,909.4	264.7	2,832.3	2.46
10,107.0	89.96	160.56	7,107.8	-2,999.8	294.0	2,927.2	3.23
10,202.0	91.19	164.43	7,106.9	-3,090.4	322.5	3,022.2	4.27
10,296.0	90.48	164.43	7,105.5	-3,180.9	347.8	3,115.9	0.76
10,387.0	90.92	166.27	7,104.4	-3,268.9	370.8	3,206.6	2.08
10,477.0	90.48	157.31	7,103.3	-3,354.3	398.9	3,296.5	9.97
10,568.0	90.92	154.58	7,102.2	-3,437.4	436.0	3,387.2	3.04
10,659.0	90.22	152.82	7,101.2	-3,519.0	476.3	3,477.5	2.08
10,749.0	90.92	154.23	7,100.4	-3,599.5	516.4	3,566.8	1.75
10,840.0	89.34	156.43	7,100.1	-3,682.2	554.4	3,657.4	2.98
10,930.0	90.40	160.03	7,100.4	-3,765.8	587.8	3,747.3	4.17
11,021.0	91.36	161.61	7,099.0	-3,851.7	617.6	3,838.3	2.03
11,111.0	92.33	160.73	7,096.1	-3,936.9	646.7	3,928.3	1.45
11,202.0	91.19	161.88	7,093.3	-4,023.0	675.8	4,019.2	1.78
11,292.0	91.45	161.52	7,091.2	-4,108.4	704.1	4,109.2	0.49
11,382.0	91.63	160.56	7,088.8	-4,193.5	733.3	4,199.1	1.08
11,477.0	90.84	161.79	7,086.7	-4,283.4	764.0	4,294.1	1.54
11,572.0	88.81	163.02	7,087.0	-4,374.0	792.7	4,389.1	2.50
11,667.0	89.43	162.40	7,088.5	-4,464.7	820.9	4,484.0	0.92
11,763.0	90.84	160.91	7,088.2	-4,555.8	851.1	4,580.0	2.14
11,858.0	90.75	161.17	7,086.9	-4,645.6	882.0	4,674.9	0.29
11,952.0	91.10	159.68	7,085.4	-4,734.2	913.5	4,768.9	1.63
12,047.0	90.04	159.42	7,084.5	-4,823.2	946.7	4,863.9	1.15
12,141.0	90.75	158.45	7,083.8	-4,910.9	980.4	4,957.9	1.28
12,236.0	90.66	157.57	7,082.6	-4,999.0	1,016.0	5,052.8	0.93
12,331.0	90.66	157.92	7,081.6	-5,086.9	1,052.0	5,147.6	0.37
12,426.0	90.75	159.85	7,080.4	-5,175.5	1,086.2	5,242.6	2.03
12,521.0	89.69	162.84	7,080.0	-5,265.5	1,116.6	5,337.6	3.34
12,616.0	89.43	164.16	7,080.7	-5,356.6	1,143.6	5,432.4	1.42
12,710.0	90.31	163.11	7,081.0	-5,446.8	1,170.1	5,526.3	1.46
12,805.0	89.69	160.91	7,081.0	-5,537.1	1,199.4	5,621.3	2.41
12,899.0	89.78	159.59	7,081.4	-5,625.6	1,231.2	5,715.3	1.41
12,994.0	88.99	156.25	7,082.4	-5,713.6	1,266.9	5,810.1	3.61
13,090.0	90.84	158.80	7,082.6	-5,802.3	1,303.6	5,904.0	3.28
13,185.0	89.34	162.84	7,082.4	-5,892.0	1,334.8	6,001.0	4.54
13,279.0	89.87	162.67	7,083.1	-5,981.8	1,362.6	6,094.9	0.59

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## EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

## Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)
13,375.0	90.57	162.32	7,082.7	-6,073.3	1,391.5	6,190.8	0.82
13,469.0	90.22	165.92	7,082.0	-6,163.7	1,417.2	6,284.6	3.85
13,563.0	89.69	161.79	7,082.1	-6,254.0	1,443.3	6,378.5	4.43
13,658.0	90.13	161.09	7,082.3	-6,344.1	1,473.6	6,473.5	0.87
13,753.0	89.25	158.80	7,082.8	-6,433.3	1,506.2	6,568.4	2.58
13,848.0	89.52	160.29	7,083.8	-6,522.3	1,539.4	6,663.4	1.59
13,942.0	89.87	158.10	7,084.3	-6,610.2	1,572.7	6,757.4	2.36
14,037.0	89.78	159.50	7,084.6	-6,698.7	1,607.1	6,852.3	1.48
14,132.0	89.52	160.82	7,085.2	-6,788.1	1,639.3	6,947.3	1.42
14,228.0	89.16	158.62	7,086.3	-6,878.1	1,672.6	7,043.3	2.32
14,322.0	89.43	158.98	7,087.4	-6,965.8	1,706.6	7,137.2	0.48
14,417.0	88.72	157.83	7,089.0	-7,054.1	1,741.6	7,232.2	1.42
14,512.0	88.81	160.03	7,091.0	-7,142.7	1,775.7	7,327.1	2.32
14,606.0	89.25	159.68	7,092.6	-7,230.9	1,808.1	7,421.1	0.60
14,702.0	89.96	161.09	7,093.3	-7,321.4	1,840.3	7,517.1	1.64
14,797.0	92.33	160.82	7,091.4	-7,411.1	1,871.3	7,612.0	2.51
14,892.0	92.77	161.26	7,087.1	-7,500.9	1,902.1	7,706.9	0.65
14,987.0	93.39	160.56	7,082.0	-7,590.5	1,933.1	7,801.8	0.98
15,082.0	91.80	161.17	7,077.7	-7,680.2	1,964.3	7,896.7	1.79
15,177.0	91.80	161.44	7,074.8	-7,770.1	1,994.7	7,991.6	0.28
15,271.0	92.24	160.03	7,071.4	-7,858.8	2,025.7	8,085.6	1.57
15,366.0	90.13	161.52	7,069.5	-7,948.5	2,057.0	8,180.6	2.72
15,460.0	90.57	161.00	7,068.9	-8,037.5	2,087.2	8,274.5	0.72
15,554.0	91.01	160.65	7,067.6	-8,126.3	2,118.0	8,368.5	0.60
15,649.0	90.13	162.67	7,066.7	-8,216.4	2,147.9	8,463.5	2.32
15,744.0	90.31	162.84	7,066.3	-8,307.2	2,176.1	8,558.4	0.26
15,839.0	91.36	162.67	7,064.9	-8,397.9	2,204.2	8,653.4	1.12
15,934.0	89.96	162.93	7,063.8	-8,488.6	2,232.3	8,748.3	1.50
16,029.0	90.40	163.46	7,063.5	-8,579.6	2,259.8	8,843.2	0.73
16,123.0	88.81	163.37	7,064.2	-8,669.7	2,286.6	8,937.1	1.69
16,218.0	89.60	162.32	7,065.5	-8,760.4	2,314.6	9,032.0	1.38
16,313.0	90.66	162.23	7,065.3	-8,850.9	2,343.6	9,126.9	1.12
16,408.0	90.40	161.88	7,064.4	-8,941.3	2,372.8	9,221.9	0.46
16,504.0	90.75	162.93	7,063.4	-9,032.8	2,401.8	9,317.9	1.15
16,559.0	92.15	163.37	7,062.0	-9,085.4	2,417.8	9,372.8	2.67

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well White Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Site:</b>	Flossie / Golden / Welling Pad	<b>MD Reference:</b>	Frontier 3 : White 1H 971 GL + 23 KB @ 994.0usf
<b>Well:</b>	White Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,547.0	6,543.2	-78.2	-6.6	Sycamore
6,807.0	6,770.2	-102.4	-123.9	Middlesex
7,089.0	6,919.3	-194.5	-340.6	Burkett
7,152.0	6,944.8	-233.6	-382.8	Tully
7,378.0	7,034.3	-414.4	-479.5	Marcellus

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/25/2014
Job End Date:	11/13/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06182-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	White Unit 1H
Longitude:	-80.59869200
Latitude:	39.24721700
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,117
Total Base Water Volume (gal):	11,770,248
Total Base Non Water Volume:	0



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## 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	90.07579	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	5.21229	
			Aluminum Oxide	1344-28-1	1.10000	0.05739	
			Titanium Oxide	13463-67-7	0.10000	0.00522	
			Iron Oxide	1309-37-1	0.10000	0.00522	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	3.50377	
			Aluminum Oxide	1344-28-1	1.10000	0.03858	
			Iron Oxide	1309-37-1	0.10000	0.00351	
			Titanium Oxide	13463-67-7	0.10000	0.00351	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.81145	
			Aluminum Oxide	1344-28-1	1.10000	0.00894	

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			Titanium Oxide	13463-67-7	0.10000	0.00081	
			Iron Oxide	1309-37-1	0.10000	0.00081	
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid					
			Water	7732-18-5	87.50000	0.17578	
			Hydrochloric Acid	7647-01-0	18.00000	0.03616	
WFR-6W	Nabors Completion and Production Services	Friction Reducer					
			Anionic Water-Soluble Polymer Emulsion	Proprietary	100.00000	0.06854	
LSG-100L	Nabors Completion and Production Services	Gelling Agents					
			Petroleum Distillates	64742-47-8	70.00000	0.05587	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives					
			100% Non-Hazardous Mixture	Proprietary	100.00000	0.01476	
AQUCAR DB 20	Nabors Completion and Production Services	Biocides					
			Polyethylene glycol	25322-68-3	54.50000	0.00912	
			2,2-Dibromo-3-nitrilo- propionamide (DBNPA)	10222-01-2	20.00000	0.00335	
			Sodium bromide	7647-15-6	4.00000	0.00067	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00050	
Super GREEN SOLV- M	Nabors Completion and Production Services	Paraffin & Scale Additives					
			Aliphatic Hydrocarbons	Proprietary	95.00000	0.00297	
			Dodecane	Proprietary	14.00000	0.00044	
			tetradecane	Proprietary	11.00000	0.00034	
			Tridecane	Proprietary	9.00000	0.00028	
			Undecane	Proprietary	8.00000	0.00025	
OB-2 LT	Nabors Completion and Production Services	Gel Breakers					
			Ammonium Persulfate	7727-54-0	85.00000	0.00090	
			Crystalline Silica (in the form of quartz)	14808-60-7	10.00000	0.00011	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors					
			Propargyl Alcohol	107-19-7	40.00000	0.00015	
			isopropyl Alcohol	67-63-0	40.00000	0.00015	
			Glycol Ethers	111-46-6	40.00000	0.00015	
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004	
EB-4L	Nabors Completion and Production Services	Gel Breakers					

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			Ethylene Glycol	107-21-1	40.00000	0.00016
Super TSC 2 LT	Nabors Completion and Production Services	Paraffin & Scale Additives				
			Bis(hexamethylene triaminepenta(methylenephosphonic acid))	Proprietary	10.00000	0.00015
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.						
Other Ingredients	Nabors Completion and Production Services	Other Ingredients				
			Copolymer	Proprietary	100.00000	0.06854
			guar gum	9000-30-0	50.00000	0.03991
			Water	7732-18-5	40.00000	0.02742
			Isoparaffinic Solvent	64742-47-8	26.00000	0.01782
			Water	7732-18-5	60.00000	0.00885
			Proprietary	Proprietary	50.00000	0.00738
			Water	7732-18-5	32.00000	0.00536
			Ethoxylated alcohols	Proprietary	4.00000	0.00274
			Ethylene Glycol	107-21-1	4.00000	0.00274
			Proprietary	Proprietary	15.00000	0.00221
			Proprietary	Proprietary	15.00000	0.00221
			Proprietary	Proprietary	15.00000	0.00221
			Surfactant Blend	Proprietary	3.00000	0.00206
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00160
			Surfactant	68439-51-0	2.00000	0.00160
			Water	7732-18-5	90.00000	0.00130
			Proprietary	Proprietary	100.00000	0.00041
			Sugar	57-50-1	100.00000	0.00041
			Water	7732-18-5	100.00000	0.00021
			Water	7732-18-5	48.00000	0.00018
			Monobromo-3-nitripropionamide	1113-55-9	1.00000	0.00017
			2,2-Dibromomalonamide	73003-80-2	1.00000	0.00017
			Alkali Chloride salt	Proprietary	15.00000	0.00016
			2-Propenamide as residual	79-06-1	0.10000	0.00007
			2-Butoxyethanol	111-76-2	13.00000	0.00005
			Proprietary	Proprietary	10.00000	0.00004
			Sodium Hydroxide	1310-73-2	1.00000	0.00001
			Proprietary	Proprietary	0.99000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	0.02000	
			Organophylic Clay	68953-58-2		

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- \* 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)

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10/23/2015



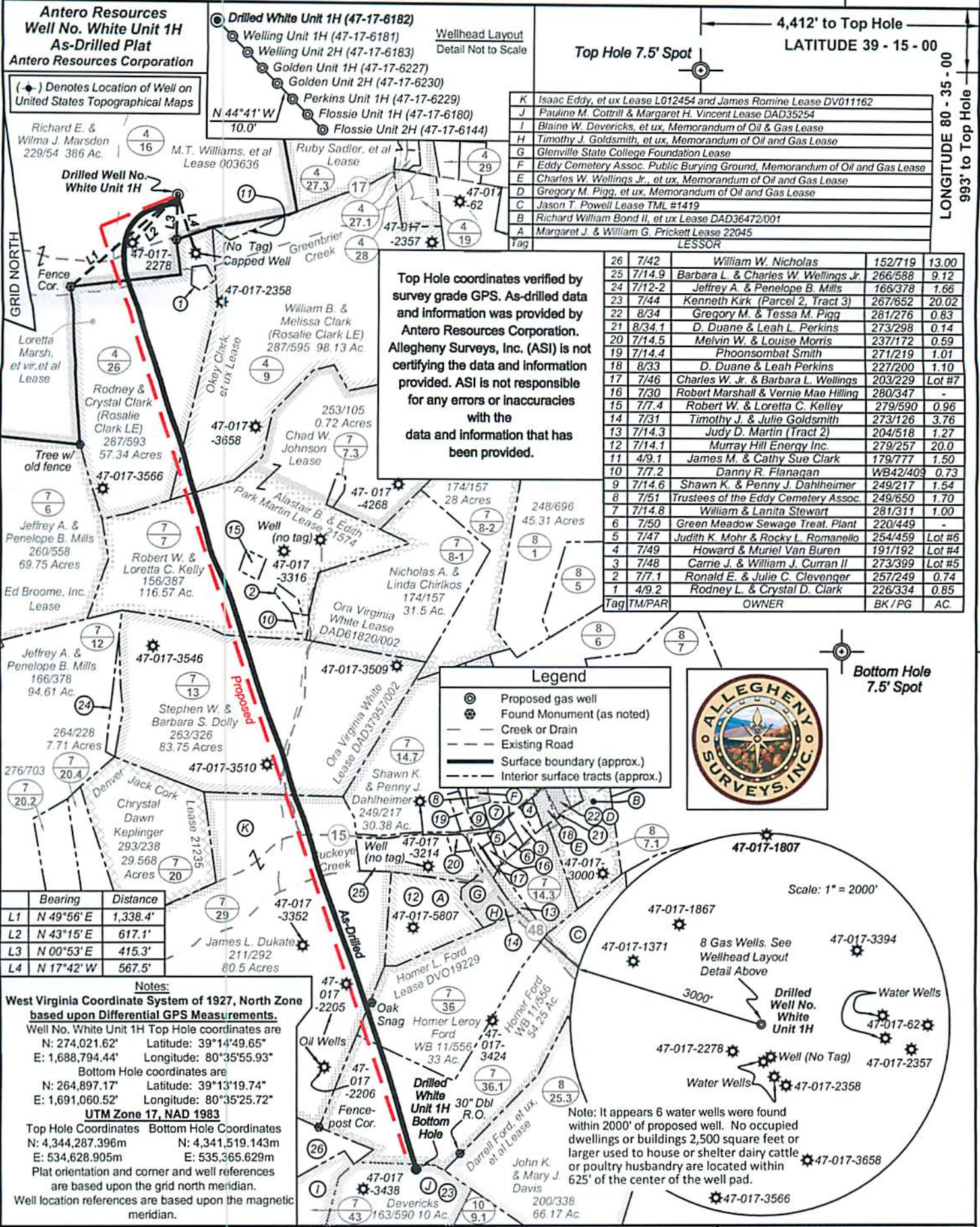
2,146' to Bottom Hole

4,412' to Top Hole

LATITUDE 39 - 15 - 00

LONGITUDE 80 - 35 - 00

10,118' to Bottom Hole



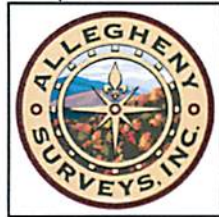
K	Isaac Eddy, et ux Lease L012454 and James Romine Lease DV011162
J	Pauline M. Cottrill & Margaret H. Vincent Lease DAD35254
I	Blaine W. Devericks, et ux. Memorandum of Oil & Gas Lease
H	Timothy J. Goldsmith, et ux. Memorandum of Oil and Gas Lease
G	Glenville State College Foundation Lease
F	Eddy Cemetery Assoc. Public Burying Ground, Memorandum of Oil and Gas Lease
E	Charles W. Wellings Jr., et ux. Memorandum of Oil and Gas Lease
D	Gregory M. Pigg, et ux. Memorandum of Oil and Gas Lease
C	Jason T. Powell Lease TML #1419
B	Richard William Bond II, et ux Lease DAD36472/001
A	Margaret J. & William G. Prickett Lease 22045
Tag	LESSOR

26	7/42	William W. Nicholas	152/719	13.00
25	7/14.9	Barbara L. & Charles W. Wellings Jr.	266/588	9.12
24	7/12-2	Jeffrey A. & Penelope B. Mills	166/378	1.66
23	7/44	Kenneth Kirk (Parcel 2, Tract 3)	267/652	20.02
22	8/34	Gregory M. & Tessa M. Pigg	281/276	0.83
21	8/34.1	D. Duane & Leah L. Perkins	273/298	0.14
20	7/14.5	Melvin W. & Louise Morris	237/172	0.59
19	7/14.4	Phoonsombat Smith	271/219	1.01
18	8/33	D. Duane & Leah Perkins	227/200	1.10
17	7/46	Charles W. Jr. & Barbara L. Wellings	203/229	Lot #7
16	7/30	Robert Marshall & Vernie Mao Hilling	280/347	-
15	7/7.4	Robert W. & Loretta C. Kelley	279/590	0.96
14	7/31	Timothy J. & Julie Goldsmith	273/126	3.76
13	7/14.3	Judy D. Martin (Tract 2)	204/518	1.27
12	7/14.1	Murray Hill Energy Inc.	279/257	20.0
11	4/9.1	James M. & Cathy Sue Clark	179/777	1.50
10	7/7.2	Danny R. Flanagan	WB42/409	0.73
9	7/14.6	Shawn K. & Penny J. Dahlheimer	249/217	1.54
8	7/51	Trustees of the Eddy Cemetery Assoc.	249/650	1.70
7	7/14.8	William & Lanita Stewart	281/311	1.00
6	7/50	Green Meadow Sewage Treat. Plant	220/449	-
5	7/47	Judith K. Mohr & Rocky L. Romanello	254/459	Lot #6
4	7/49	Howard & Muriel Van Buren	191/192	Lot #4
3	7/48	Carrie J. & William J. Curran II	273/399	Lot #5
2	7/7.1	Ronald E. & Julie C. Clevenger	257/249	0.74
1	4/9.2	Rodney L. & Crystal D. Clark	226/334	0.85
Tag	TM/PAR	OWNER	BK / PG	AC.

Top Hole coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys, Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

**Legend**

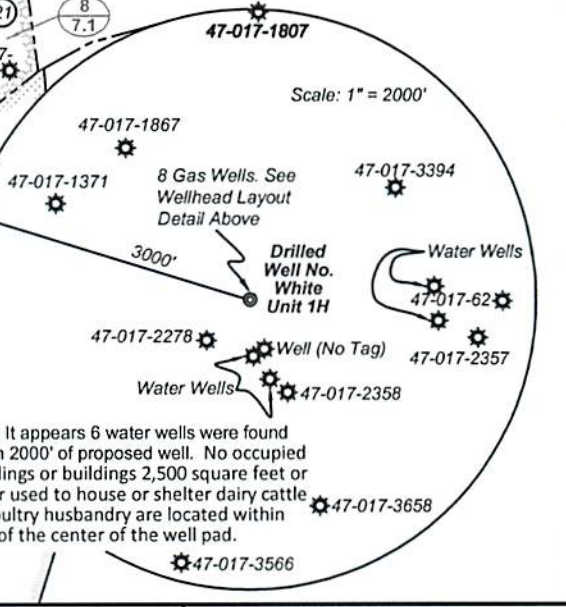
- Proposed gas well
- Found Monument (as noted)
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



Bottom Hole 7.5' Spot

Bearing	Distance
L1 N 49°56' E	1,338.4'
L2 N 43°15' E	617.1'
L3 N 00°53' E	415.3'
L4 N 17°42' W	567.5'

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. White Unit 1H Top Hole coordinates are  
 N: 274,021.62' Latitude: 39°14'49.65"  
 E: 1,688,794.44' Longitude: 80°35'55.93"  
 Bottom Hole coordinates are  
 N: 264,897.17' Latitude: 39°13'19.74"  
 E: 1,691,060.52' Longitude: 80°35'25.72"  
**UTM Zone 17, NAD 1983**  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,344,287.396m N: 4,341,519.143m  
 E: 534,628.905m E: 535,365.629m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.



FILE NO: 236-30-G-12  
 DRAWING NO: As-Drilled White 1H Well  
 SCALE: 1" = 1200'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: March 30 2015  
 OPERATOR'S WELL NO. White Unit 1H  
 API WELL NO  
 47 - 017 - 06182  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: Existing Grade - 975' Original Grade - 975' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: Big Isaac  
 DISTRICT: Greenbrier SURFACE OWNER: Richard E. & Wilma J. Marsden COUNTY: Boone  
 ROYALTY OWNER: M.T. Williams, et al; Okey Clark, et ux; Homer L. Ford; Ora Virginia White LEASE NO: 003636; DAD37957/002 ACREAGE: 386.92-67.85; 850.57-100.221  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG-OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale  
 JUL 27 2015 7,062' TVD DEPTH: 16,559' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313