

**APPROVED**



NAME: *[Handwritten signature]*

DATE: *6/21/2016*

May 25, 2016

Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: John Kearney  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Mr. Kearney:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report) and corresponding logs for the following well:

- Sheep Run Unit 1H (API# 47-017-06657) – Fritz Pad
- Sheep Run Unit 2H (API# 47-017-06658) – Fritz Pad

If you have any questions please feel free to contact me at (303) 357-7233.

Sincerely,

A handwritten signature in black ink, appearing to read "Kara Quackenbush".

Kara Quackenbush  
Permitting Agent  
Antero Resources Corporation

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Enclosures

03/31/2017

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

API 47 - 017 - 06658 County Doddridge District Central  
Quad Oxford 7.5' Pad Name Fritz Pad Field/Pool Name ---  
Farm name Horton, Judy A. Well Number Sheep Run Unit 2H  
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 4342768m Easting 513806m  
Landing Point of Curve Northing 4342894.90m Easting 514380.39m  
Bottom Hole Northing 4341240m Easting 515149m

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

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

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Date permit issued 1/26/2015 Date drilling commenced 3/9/2015 Date drilling ceased 5/4/2015  
Date completion activities began 11/8/2015 Date completion activities ceased 3/2/2016  
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:

03/31/2017

API 47-017 - 06658 Farm name Horton, Judy A. Well number Sheep Run Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	30"	20"	40'	New	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	364'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2573'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	13273'	New	20# P-110	N/A	Y
Tubing		2-3/8"	7021'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	150 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	443 sx	15.3	1.18	253	0'	8 Hrs.
Coal							
Intermediate 1	Class A	946 sx	15.4	1.18	806	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	989 sx (Lead) 1057 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	2566	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 13273' MD, 6485' TVD (BHL), 6564' (Deepest Point Drilled) Loggers TD (ft) 13273'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6732'

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

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 \_\_\_\_\_

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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 \_\_\_\_\_

API 47- 017 - 06658 Farm name Horton, Judy A. Well number Sheep Run Unit 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					

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)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

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API 47- 017 - 06658 Farm name Horton, Judy A. Well number Sheep Run Unit 2H

PRODUCING FORMATION(S)	DEPTHS		
	6517' (TOP)	TVD	7076' (TOP) MD
Marcellus			

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 10240 mcfpd Oil 86 bpd NGL --- bpd Water 0 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME 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 <sub>2</sub> S, ETC)
	0		0		

**\*PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC  
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

Logging Company Rush Wellsite Services  
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

Cementing Company Nabors Completion & Production Services, Co.  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

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 Permit Representative Date 5/24/2016

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

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	8-Nov-15	13,053	13,181	60	Marcellus
2	31-Dec-15	12,900	13,029	60	Marcellus
3	31-Dec-15	12,748	12,877	60	Marcellus
4	31-Dec-15	12,596	12,725	60	Marcellus
5	31-Dec-15	12,444	12,573	60	Marcellus
6	1-Jan-16	12,292	12,421	60	Marcellus
7	1-Jan-16	12,140	12,269	60	Marcellus
8	1-Jan-16	11,988	12,117	60	Marcellus
9	1-Jan-16	11,836	11,965	60	Marcellus
10	2-Jan-16	11,684	11,812	60	Marcellus
11	2-Jan-16	11,532	11,660	60	Marcellus
12	2-Jan-16	11,379	11,508	60	Marcellus
13	2-Jan-16	11,227	11,356	60	Marcellus
14	2-Jan-16	11,075	11,204	60	Marcellus
15	3-Jan-15	10,923	11,052	60	Marcellus
16	3-Jan-16	10,771	10,900	60	Marcellus
17	3-Jan-16	10,619	10,748	60	Marcellus
18	3-Jan-16	10,467	10,596	60	Marcellus
19	4-Jan-16	10,315	10,444	60	Marcellus
20	4-Jan-16	10,163	10,291	60	Marcellus
21	4-Jan-16	10,011	10,139	60	Marcellus
22	4-Jan-16	9,858	9,987	60	Marcellus
23	4-Jan-16	9,706	9,835	60	Marcellus
24	5-Jan-16	9,554	9,683	60	Marcellus
25	5-Jan-16	9,402	9,531	60	Marcellus
26	6-Jan-16	9,250	9,379	60	Marcellus
27	6-Jan-16	9,098	9,227	60	Marcellus
28	6-Jan-16	8,946	9,075	60	Marcellus
29	7-Jan-16	8,794	8,922	60	Marcellus
30	7-Jan-16	8,642	8,770	60	Marcellus
31	7-Jan-16	8,490	8,618	60	Marcellus
32	8-Jan-16	8,337	8,466	60	Marcellus
33	8-Jan-16	8,185	8,314	60	Marcellus
34	8-Jan-16	8,033	8,162	60	Marcellus
35	8-Jan-16	7,881	8,010	60	Marcellus
36	8-Jan-16	7,729	7,858	60	Marcellus
37	8-Jan-16	7,577	7,706	60	Marcellus
38	9-Jan-16	7,425	7,554	60	Marcellus
39	9-Jan-16	7,273	7,401	60	Marcellus
40	9-Jan-16	7,121	7,249	60	Marcellus

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**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	30-Dec-15	72.0	7,097	5,360	3,074	136,950	6,684	N/A
2	31-Dec-15	71.0	6,908	6,523	3,128	212,950	6,303	N/A
3	31-Dec-15	71.0	6,993	6,230	4,315	211,400	5,834	N/A
4	31-Dec-15	74.0	7,015	5,879	5,003	235,000	6,043	N/A
5	31-Dec-15	72.0	6,807	5,708	4,159	222,850	6,395	N/A
6	1-Jan-16	72.0	6,811	5,847	5,096	236,650	6,057	N/A
7	1-Jan-16	73.0	6,822	5,936	4,761	237,800	6,124	N/A
8	1-Jan-16	73.0	6,843	6,348	4,731	235,400	6,037	N/A
9	1-Jan-16	73.0	8,131	5,724	3,394	221,200	6,545	N/A
10	2-Jan-16	72.0	6,962	5,993	3,591	236,350	6,062	N/A
11	2-Jan-16	73.0	6,714	5,617	3,887	237,100	6,025	N/A
12	2-Jan-16	73.0	6,732	5,980	3,729	238,750	6,033	N/A
13	2-Jan-16	72.0	6,679	6,521	3,953	218,500	6,215	N/A
14	2-Jan-16	74.0	6,758	6,034	4,523	236,500	5,973	N/A
15	3-Jan-15	74.0	6,610	5,957	4,538	236,450	5,989	N/A
16	3-Jan-16	73.0	6,692	6,164	5,226	216,400	5,746	N/A
17	3-Jan-16	73.0	6,631	6,257	4,904	235,400	5,913	N/A
18	3-Jan-16	74.0	6,462	5,735	4,097	236,500	5,920	N/A
19	4-Jan-16	74.0	6,641	6,080	4,532	236,250	5,980	N/A
20	4-Jan-16	67.0	6,451	5,700	5,378	188,450	6,468	N/A
21	4-Jan-16	73.0	6,493	5,489	5,008	234,550	5,909	N/A
22	4-Jan-16	73.0	7,013	5,694	3,569	237,080	5,870	N/A
23	4-Jan-16	72.0	6,892	6,842	4,832	218,360	5,743	N/A
24	5-Jan-16	72.0	6,339	6,168	3,971	236,720	5,937	N/A
25	5-Jan-16	70.0	6,641	6,681	4,990	63,350	6,414	N/A
26	6-Jan-16	73.0	6,635	6,167	3,884	237,500	5,833	N/A
27	6-Jan-16	73.0	6,885	6,724	5,377	212,250	6,389	N/A
28	6-Jan-16	72.0	6,908	5,528	4,136	229,490	5,783	N/A
29	7-Jan-16	70.0	7,320	6,614	5,077	219,350	6,163	N/A
30	7-Jan-16	73.0	6,677	5,987	5,781	238,550	5,833	N/A
31	7-Jan-16	73.0	7,155	5,774	5,686	236,150	5,773	N/A
32	8-Jan-16	72.0	6,349	5,652	4,176	237,060	5,777	N/A
33	8-Jan-16	73.0	6,848	6,510	5,614	216,200	6,325	N/A
34	8-Jan-16	73.0	6,427	6,658	4,669	237,400	5,751	N/A
35	8-Jan-16	74.0	6,541	6,606	4,483	187,750	6,007	N/A
36	8-Jan-16	72.0	6,331	6,465	3,454	237,200	5,730	N/A
37	8-Jan-16	72.0	6,775	6,086	4,267	207,650	6,239	N/A
38	9-Jan-16	75.0	6,671	5,638	5,146	224,300	6,264	N/A
39	9-Jan-16	72.0	6,297	5,901	4,723	237,120	5,703	N/A
40	9-Jan-16	73.0	5,986	6,252	3,575	237,200	5,718	N/A
AVG=		72.5	6,749	6,076	4,461	8,852,080	6,038	TOTAL

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## 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
Siltstone/ 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	1957	est. 1909	1960
Big Lime	1957	2631	1960	2634
Fifty Foot Sandstone	2631	2680	2634	2684
Gordon	2680	2824	2684	2828
Fifth Sandstone	2824	2979	2828	2984
Bayard	2979	3865	2984	3944
Speechley	3865	4098	3944	4214
Baltown	4098	4542	4214	4718
Bradford	4542	4934	4718	5160
Benson	4934	5192	5160	5454
Alexander	5192	6165	5454	6553
Sycamore	6165	6339	6553	6771
Middlesex	6339	6460	6771	6945
Burkett	6460	6486	6945	6996
Tully	6486	6517	6996	7076
Marcellus	6517	NA	7076	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.

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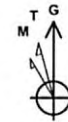
MAY 26 2016 MAY 26 2016

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**Sheep Run Unit 2H  
Doddridge County WV**  
 Northing: 14247186.93  
 Easting: 1685662.04  
 As Drilled



To convert Magnetic North to Grid, Subtract 8.54°  
 To convert True North to Grid, Subtract 0.10°

Azimuths to Grid North  
 True North: -0.10°  
 Magnetic North: -8.54°  
 Magnetic Field  
 Strength: 52133.2nT  
 Dip Angle: 66.76°  
 Date: 4/12/2015  
 Model: BGGM2014

Frontier 22: GL 1063' + KB 25' @ 1078.0usft  
 Gr. 1053.0

		WELL DETAILS		Sheep Run Unit 2H	
		Ground Level:		1053.0	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14247186.93	1685662.04	39° 14' 2.505 N	80° 50' 24.770 W

Genie Lightfoot  
 9:06, May 20 2015  
 Scientific Drilling  
 11220 NW 10th Street  
 Yukon OK 73099

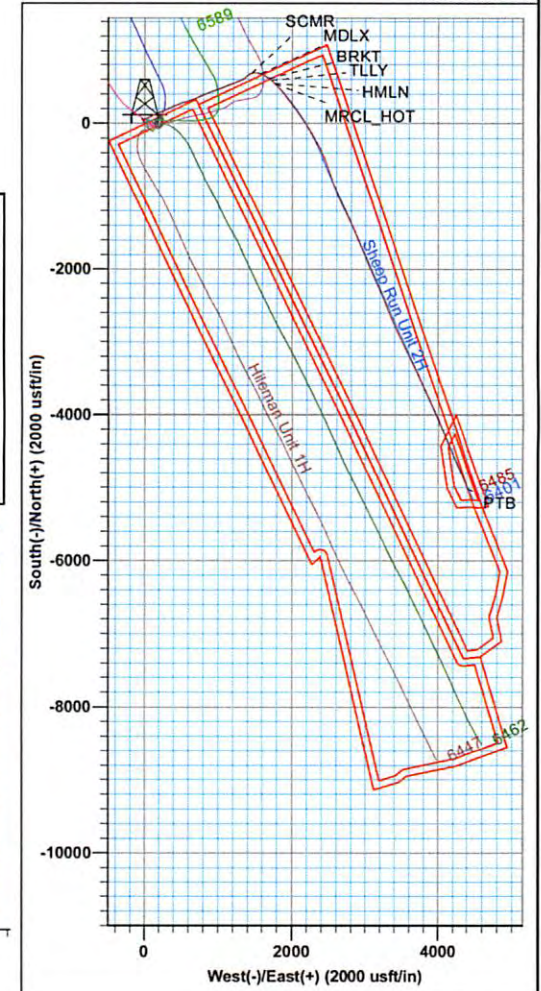
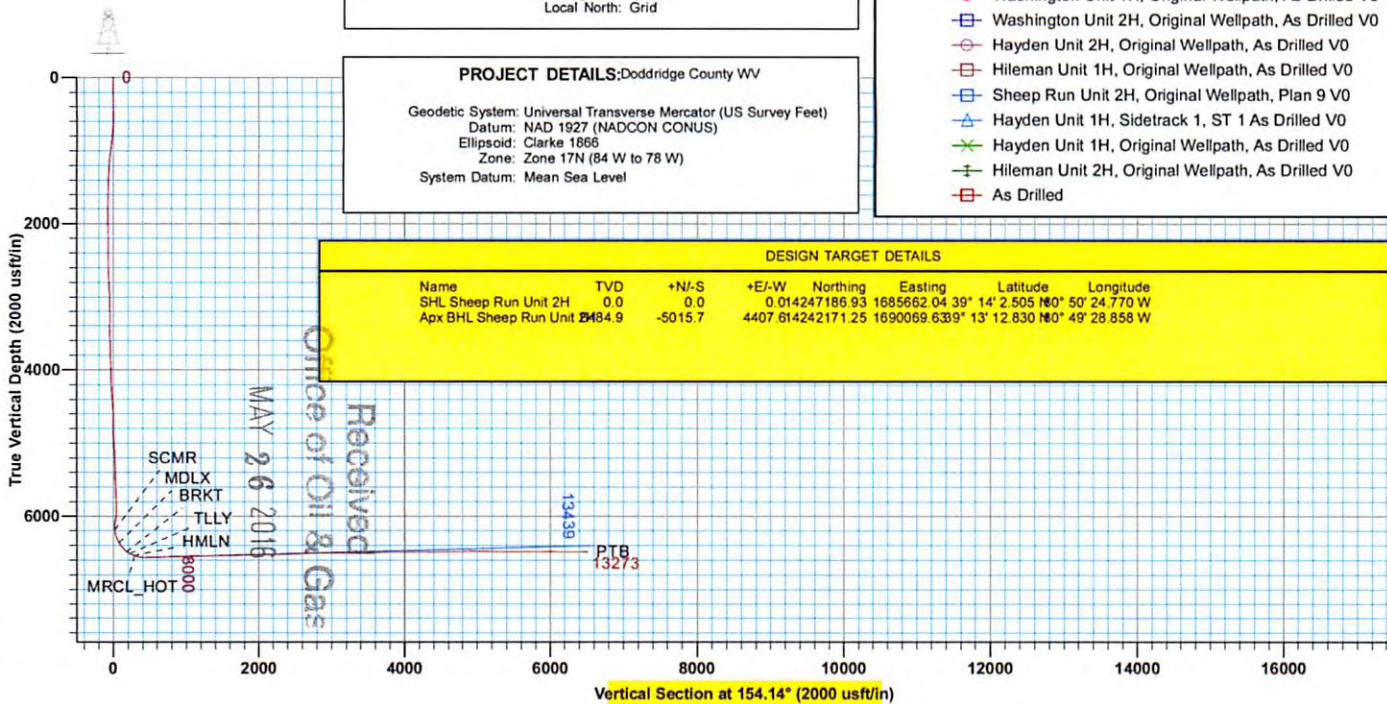
**SITE DETAILS:** Fritz Pad: Hayden/Washington/Sheep/Hileman  
 Site Center Hayden 1H  
 Site Centre Northing: 14247222.50  
 Easting: 1685696.44  
 Positional Uncertainty: 2.0  
 Convergence: 0.10  
 Local North: Grid

**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 1H, Original Wellpath, As Drilled V0
- Washington Unit 2H, Original Wellpath, As Drilled V0
- Hayden Unit 2H, Original Wellpath, As Drilled V0
- Hileman Unit 1H, Original Wellpath, As Drilled V0
- Sheep Run Unit 2H, Original Wellpath, Plan 9 V0
- Hayden Unit 1H, Sidetrack 1, ST 1 As Drilled V0
- Hayden Unit 1H, Original Wellpath, As Drilled V0
- Hileman Unit 2H, Original Wellpath, As Drilled V0
- As Drilled

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Sheep Run Unit 2H	0.0	0.0	0.014247186 93	1685662 04 39'	14' 2.505 N	80° 50' 24.770 W	
ApX BHL Sheep Run Unit 2H	8484.9	-5015.7	4407.614242171.25	1690069.6339'	13' 12.830 N	0° 49' 28.858 W	





# Antero

Doddridge County WV  
Fritz Pad: Hayden/Washington/Sheep/Hileman  
Sheep Run Unit 2H  
Original Wellpath

Design: As Drilled

## EOW Completion Report

20 May, 2015

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EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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>	Fritz Pad: Hayden/Washington/Sheep/Hileman				
<b>Site Position:</b>	<b>Northing:</b>	14,247,222.50 usft	<b>Latitude:</b>	39° 14' 2.856 N	
<b>From:</b> Map	<b>Easting:</b>	1,685,696.44 usft	<b>Longitude:</b>	80° 50' 24.332 W	
<b>Position Uncertainty:</b>	2.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.10 °

<b>Well</b>	Sheep Run Unit 2H, Marcellus				
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,247,186.93 usft	
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,685,662.04 usft	
<b>Position Uncertainty</b>	2.0 usft	<b>Wellhead Elevation:</b>	1,078.0 usft	<b>Ground Level:</b>	1,053.0 usft

<b>Wellbore</b>	Original Wellpath				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2014	4/12/2015	-8.44	66.76	52,133

<b>Design</b>	As Drilled				
<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	154.14	

<b>Survey Program</b>	Date 5/20/2015				
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
25.0	5,451.0	Survey #8 Final KOP Gyro (Original Wellp	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
5,451.0	13,273.0	Survey #9 SDI MWD (Original Wellpath)	MWD SDI	MWD - Standard ver 1.0.1	

<b>Survey</b>									
<b>MD (usft)</b>	<b>Inc (°)</b>	<b>Azi (azimuth) (°)</b>	<b>TVD (usft)</b>	<b>N/S (usft)</b>	<b>E/W (usft)</b>	<b>V. Sec (usft)</b>	<b>DLeg (°/100usft)</b>		
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
25.0	0.02	187.68	25.0	0.0	0.0	0.0	0.08	0.08	
50.0	0.04	187.68	50.0	0.0	0.0	0.0	0.08	0.08	
75.0	0.05	187.68	75.0	0.0	0.0	0.0	0.04	0.04	
100.0	0.07	187.68	100.0	0.0	0.0	0.1	0.08	0.08	
125.0	0.10	100.24	125.0	0.1	0.0	0.1	0.48	0.48	
150.0	0.13	157.49	150.0	-0.1	0.0	0.1	0.45	0.45	
175.0	0.16	179.37	175.0	-0.2	0.1	0.2	0.25	0.25	
200.0	0.13	192.97	200.0	-0.2	0.0	0.2	0.18	0.18	
225.0	0.17	154.03	225.0	-0.3	0.1	0.3	0.43	0.43	
250.0	0.25	159.49	250.0	-0.4	0.1	0.4	0.33	0.33	

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MAY 26 2016



EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)		
275.0	0.20	95.84	275.0	-0.4	0.2	0.5	0.96		
300.0	0.19	126.26	300.0	-0.5	0.2	0.5	0.41		
325.0	0.29	141.76	325.0	-0.5	0.3	0.6	0.47		
350.0	0.40	147.64	350.0	-0.7	0.4	0.8	0.46		
375.0	0.37	136.09	375.0	-0.8	0.5	0.9	0.33		
400.0	0.45	125.73	400.0	-0.9	0.6	1.1	0.44		
425.0	0.15	149.13	425.0	-1.0	0.7	1.2	1.27		
450.0	0.05	161.09	450.0	-1.0	0.7	1.3	0.41		
475.0	0.33	325.42	475.0	-1.0	0.7	1.2	1.51		
500.0	0.84	340.80	500.0	-0.8	0.6	0.9	2.12		
525.0	1.26	336.04	525.0	-0.3	0.4	0.5	1.71		
550.0	1.76	339.85	550.0	0.3	0.2	-0.2	2.04		
575.0	2.67	332.54	575.0	1.2	-0.2	-1.1	3.80		
600.0	3.21	332.17	599.9	2.3	-0.8	-2.4	2.16		
625.0	3.71	328.53	624.9	3.6	-1.6	-3.9	2.18		
650.0	4.25	329.84	649.8	5.1	-2.4	-5.6	2.19		
675.0	4.53	330.31	674.8	6.8	-3.4	-7.6	1.13		
700.0	4.70	330.00	699.7	8.5	-4.4	-9.6	0.69		
725.0	4.75	330.29	724.6	10.3	-5.4	-11.6	0.22		
750.0	4.86	329.44	749.5	12.1	-6.5	-13.7	0.52		
775.0	5.13	329.62	774.4	14.0	-7.6	-15.9	1.08		
800.0	5.34	329.19	799.3	15.9	-8.7	-18.2	0.85		
825.0	5.45	329.46	824.2	18.0	-9.9	-20.5	0.45		
850.0	5.56	330.12	849.1	20.0	-11.1	-22.9	0.51		
875.0	5.95	328.39	873.9	22.2	-12.4	-25.4	1.71		
900.0	6.23	327.64	898.8	24.4	-13.8	-28.0	1.16		
925.0	6.25	328.18	923.7	26.7	-15.3	-30.7	0.25		
950.0	6.30	327.22	948.5	29.0	-16.7	-33.4	0.46		
975.0	6.65	327.28	973.3	31.4	-18.3	-36.2	1.40		
1,000.0	6.63	327.06	998.2	33.8	-19.8	-39.1	0.13		
1,025.0	6.74	326.57	1,023.0	36.3	-21.4	-42.0	0.50		
1,050.0	6.70	326.77	1,047.8	38.7	-23.0	-44.9	0.19		
1,075.0	6.44	325.63	1,072.7	41.1	-24.6	-47.7	1.16		
1,100.0	6.11	324.56	1,097.5	43.3	-26.2	-50.4	1.40		
1,125.0	5.70	324.39	1,122.4	45.4	-27.7	-53.0	1.64		
1,150.0	5.08	323.96	1,147.3	47.3	-29.0	-55.3	2.49		
1,175.0	4.74	326.22	1,172.2	49.1	-30.3	-57.4	1.56		
1,200.0	4.26	328.20	1,197.1	50.7	-31.3	-59.3	2.02		
1,225.0	4.06	327.83	1,222.0	52.3	-32.6	-61.1	0.81		
1,250.0	3.79	328.35	1,247.0	53.7	-33.2	-62.8	1.09		
1,275.0	3.36	331.02	1,271.9	55.1	-34.0	-64.4	1.84		
1,300.0	3.11	329.53	1,296.9	56.3	-34.7	-65.8	1.05		
1,325.0	2.91	328.80	1,321.9	57.4	-35.4	-67.1	0.81		
1,350.0	2.57	332.31	1,346.8	58.5	-36.0	-68.3	1.52		

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MAY 26 2015



EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)	
1,375.0	2.34	332.40	1,371.8	59.4	-36.4	-69.4	0.92	
1,400.0	2.26	330.00	1,396.8	60.3	-36.9	-70.4	0.50	
1,425.0	2.02	330.20	1,421.8	61.1	-37.4	-71.3	0.96	
1,450.0	1.80	332.42	1,446.8	61.8	-37.8	-72.1	0.93	
1,475.0	1.69	331.65	1,471.7	62.5	-38.2	-72.9	0.45	
1,500.0	1.50	331.16	1,496.7	63.1	-38.5	-73.6	0.76	
1,525.0	1.26	333.62	1,521.7	63.7	-38.8	-74.2	0.99	
1,550.0	1.21	329.68	1,546.7	64.1	-39.0	-74.7	0.39	
1,575.0	1.07	335.91	1,571.7	64.6	-39.3	-75.2	0.75	
1,600.0	0.97	331.18	1,596.7	65.0	-39.4	-75.7	0.52	
1,625.0	0.86	337.65	1,621.7	65.3	-39.6	-76.1	0.60	
1,650.0	0.73	341.41	1,646.7	65.6	-39.7	-76.4	0.56	
1,675.0	0.58	355.14	1,671.7	65.9	-39.8	-76.7	0.86	
1,700.0	0.49	352.94	1,696.7	66.2	-39.8	-76.9	0.37	
1,725.0	0.32	15.50	1,721.7	66.3	-39.8	-77.1	0.92	
1,750.0	0.26	47.84	1,746.7	66.4	-39.8	-77.1	0.69	
1,775.0	0.28	36.64	1,771.7	66.5	-39.7	-77.2	0.23	
1,800.0	0.27	32.80	1,796.7	66.6	-39.6	-77.2	0.08	
1,825.0	0.34	27.22	1,821.7	66.7	-39.6	-77.3	0.30	
1,850.0	0.21	41.72	1,846.7	66.8	-39.5	-77.4	0.59	
1,875.0	0.21	79.23	1,871.7	66.9	-39.4	-77.4	0.54	
1,900.0	0.15	80.50	1,896.7	66.9	-39.3	-77.4	0.24	
1,925.0	0.22	63.75	1,921.7	66.9	-39.3	-77.3	0.35	
1,950.0	0.29	82.33	1,946.7	67.0	-39.2	-77.3	0.43	
1,975.0	0.13	74.93	1,971.7	67.0	-39.1	-77.3	0.65	
2,000.0	0.27	76.39	1,996.7	67.0	-39.0	-77.3	0.56	
2,025.0	0.41	93.61	2,021.7	67.0	-38.8	-77.2	0.69	
2,050.0	0.42	79.91	2,046.7	67.0	-38.7	-77.2	0.40	
2,075.0	0.25	104.32	2,071.7	67.0	-38.5	-77.1	0.87	
2,100.0	0.24	91.57	2,096.7	67.0	-38.4	-77.0	0.22	
2,125.0	0.30	121.88	2,121.7	67.0	-38.3	-77.0	0.61	
2,150.0	0.33	108.66	2,146.7	66.9	-38.2	-76.9	0.31	
2,175.0	0.24	90.97	2,171.7	66.9	-38.1	-76.8	0.50	
2,200.0	0.32	89.55	2,196.7	66.9	-37.9	-76.7	0.32	
2,225.0	0.39	103.15	2,221.7	66.9	-37.8	-76.6	0.44	
2,250.0	0.36	82.75	2,246.7	66.8	-37.6	-76.6	0.54	
2,275.0	0.25	93.38	2,271.7	66.9	-37.5	-76.5	0.49	
2,300.0	0.29	113.85	2,296.7	66.8	-37.4	-76.4	0.41	
2,325.0	0.37	117.47	2,321.7	66.8	-37.2	-76.3	0.33	
2,350.0	0.34	87.63	2,346.7	66.7	-37.1	-76.2	0.74	
2,375.0	0.41	102.28	2,371.7	66.7	-36.9	-76.1	0.47	
2,400.0	0.31	106.63	2,396.7	66.7	-36.8	-76.0	0.41	
2,425.0	0.34	103.26	2,421.7	66.6	-36.6	-75.9	0.14	
2,450.0	0.28	123.74	2,446.7	66.6	-36.5	-75.9	0.50	
2,475.0	0.48	125.68	2,471.7	66.5	-36.4	-75.7	0.80	

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MAY 26 2016



EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)
2,500.0	0.55	112.58	2,496.7	66.4	-36.2	-75.5	0.55
2,525.0	0.63	107.07	2,521.7	66.3	-35.9	-75.3	0.39
2,550.0	0.47	117.84	2,546.7	66.2	-35.7	-75.2	0.76
2,575.0	0.58	135.75	2,571.7	66.1	-35.5	-75.0	0.79
2,600.0	0.94	137.08	2,596.7	65.8	-35.3	-74.6	1.44
2,625.0	2.27	158.78	2,621.7	65.2	-35.0	-74.0	5.76
2,650.0	2.79	158.02	2,646.7	64.2	-34.6	-72.9	2.08
2,675.0	3.13	141.75	2,671.6	63.1	-33.9	-71.6	3.61
2,700.0	4.12	123.21	2,696.6	62.1	-32.8	-70.1	6.09
2,725.0	4.29	120.40	2,721.5	61.1	-31.2	-68.6	1.07
2,750.0	4.47	115.85	2,746.4	60.2	-29.5	-67.1	1.56
2,775.0	4.50	104.09	2,771.4	59.5	-27.7	-65.7	3.67
2,800.0	4.74	95.96	2,796.3	59.2	-25.7	-64.5	2.79
2,825.0	4.78	93.28	2,821.2	59.0	-23.7	-63.4	0.90
2,850.0	4.85	92.64	2,846.1	58.9	-21.6	-62.4	0.35
2,875.0	5.29	91.73	2,871.0	58.8	-19.4	-61.4	1.79
2,900.0	6.32	91.95	2,895.9	58.8	-16.8	-60.2	4.12
2,925.0	6.59	92.48	2,920.7	58.6	-14.0	-58.9	1.11
2,950.0	6.90	91.56	2,945.5	58.5	-11.1	-57.5	1.31
2,975.0	7.72	88.39	2,970.3	58.5	-7.9	-56.1	3.65
3,000.0	9.26	83.05	2,995.1	58.8	-4.2	-54.8	6.91
3,025.0	11.16	78.21	3,019.7	59.6	0.1	-53.5	8.33
3,050.0	12.98	75.56	3,044.1	60.8	5.2	-52.4	7.61
3,075.0	15.08	70.57	3,068.4	62.6	11.0	-51.5	9.69
3,100.0	16.75	67.94	3,092.4	65.0	17.4	-50.9	7.27
3,125.0	18.29	65.39	3,116.3	68.0	24.3	-50.6	6.88
3,150.0	19.75	63.55	3,139.9	71.5	31.7	-50.5	6.31
3,175.0	20.42	65.45	3,163.4	75.2	39.4	-50.5	3.74
3,200.0	20.29	67.15	3,186.8	78.7	47.4	-50.1	2.42
3,225.0	19.59	67.20	3,210.3	82.0	55.2	-49.7	2.80
3,250.0	19.12	65.93	3,233.9	85.3	62.8	-49.3	2.52
3,275.0	18.85	64.27	3,257.5	88.7	70.2	-49.2	2.41
3,300.0	18.27	63.09	3,281.2	92.2	77.4	-49.3	2.76
3,325.0	17.07	61.88	3,305.1	95.7	84.1	-49.5	5.02
3,350.0	17.19	61.12	3,328.9	99.2	90.6	-49.8	1.02
3,375.0	18.09	60.73	3,352.8	102.9	97.2	-50.2	3.63
3,400.0	19.66	61.05	3,376.4	106.9	104.2	-50.7	6.29
3,425.0	21.37	61.47	3,399.8	111.9	111.9	-51.1	6.87
3,450.0	22.11	61.70	3,423.1	115.5	120.1	-51.5	2.98
3,475.0	23.26	63.22	3,446.1	119.9	128.6	-51.8	5.16
3,500.0	23.96	63.64	3,469.0	124.4	137.6	-51.9	2.88
3,525.0	24.73	64.76	3,491.8	128.9	146.9	-51.9	3.59
3,550.0	25.97	66.56	3,514.4	133.3	156.6	-51.6	5.84
3,575.0	27.08	69.19	3,536.8	137.5	166.9	-50.9	6.46

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MAY 26 2016

<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)
3,600.0	27.64	69.90	3,559.0	141.5	177.7	-49.8	2.59
3,625.0	28.54	70.76	3,581.0	145.5	188.8	-48.6	3.95
3,650.0	29.29	70.61	3,602.9	149.5	200.2	-47.2	3.01
3,675.0	29.41	70.47	3,624.7	153.6	211.8	-45.8	0.55
3,700.0	28.59	68.92	3,646.6	157.8	223.1	-44.6	4.45
3,725.0	27.68	67.68	3,668.6	162.1	234.1	-43.8	4.33
3,750.0	26.95	66.63	3,690.8	166.6	244.7	-43.2	3.50
3,775.0	26.23	65.92	3,713.2	171.1	254.9	-42.8	3.15
3,800.0	25.63	65.19	3,735.7	175.6	264.8	-42.5	2.72
3,825.0	25.33	64.79	3,758.2	180.1	274.6	-42.3	1.38
3,850.0	25.85	65.22	3,780.8	184.7	284.4	-42.2	2.21
3,875.0	26.64	65.24	3,803.2	189.3	294.4	-42.0	3.16
3,900.0	27.06	65.41	3,825.5	194.1	304.7	-41.7	1.71
3,925.0	27.85	65.39	3,847.7	198.8	315.2	-41.5	3.16
3,950.0	28.83	65.74	3,869.7	203.8	326.0	-41.2	3.98
3,975.0	29.04	65.77	3,891.6	208.7	337.0	-40.8	0.84
4,000.0	29.03	65.57	3,913.4	213.7	348.0	-40.5	0.39
4,025.0	29.04	65.81	3,935.3	218.7	359.1	-40.2	0.47
4,050.0	30.09	67.22	3,957.0	223.6	370.4	-39.7	5.04
4,075.0	30.50	67.44	3,978.6	228.5	382.1	-39.0	1.70
4,100.0	30.29	67.33	4,000.2	233.4	393.7	-38.3	0.87
4,125.0	30.49	67.42	4,021.8	238.2	405.4	-37.5	0.82
4,150.0	31.00	68.30	4,043.2	243.0	417.2	-36.7	2.72
4,175.0	30.68	68.06	4,064.7	247.8	429.1	-35.8	1.37
4,200.0	29.98	67.35	4,086.3	252.6	440.8	-35.0	3.15
4,225.0	29.33	66.64	4,108.0	257.4	452.2	-34.4	2.96
4,250.0	28.68	66.07	4,129.9	262.3	463.3	-33.9	2.83
4,275.0	27.54	65.70	4,151.9	267.1	474.1	-33.6	4.61
4,300.0	26.90	65.83	4,174.2	271.8	484.5	-33.3	2.57
4,325.0	27.15	69.02	4,196.4	276.1	495.0	-32.6	5.88
4,350.0	27.45	72.09	4,218.6	280.0	505.8	-31.3	5.76
4,375.0	27.31	73.09	4,240.8	283.4	516.8	-29.6	1.92
4,400.0	27.09	72.97	4,263.1	286.7	527.7	-27.9	0.91
4,425.0	27.63	73.32	4,285.3	290.1	538.7	-26.1	2.25
4,450.0	28.17	73.00	4,307.4	293.5	549.9	-24.2	2.24
4,475.0	28.12	72.90	4,329.4	296.9	561.2	-22.4	0.27
4,500.0	27.99	72.61	4,351.5	300.4	572.4	-20.7	0.75
4,525.0	28.74	72.75	4,373.5	303.9	583.7	-18.9	3.01
4,550.0	28.93	72.77	4,395.4	307.5	595.2	-17.1	0.76
4,575.0	28.60	72.32	4,417.3	311.1	606.7	-15.3	1.58
4,600.0	28.41	71.50	4,439.3	314.8	618.1	-13.7	1.74
4,625.0	28.81	71.58	4,461.2	318.6	629.4	-12.2	1.61
4,650.0	29.05	71.18	4,483.1	322.5	640.9	-10.7	1.23
4,675.0	29.00	70.25	4,505.0	326.5	652.3	-9.3	1.82

<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)
4,700.0	29.25	69.30	4,526.8	330.7	663.7	-8.1	2.10
4,725.0	30.38	68.99	4,548.5	335.1	675.4	-7.0	4.56
4,750.0	30.94	68.71	4,570.0	339.7	687.2	-5.9	2.31
4,775.0	30.53	68.22	4,591.5	344.4	699.1	-5.0	1.92
4,800.0	29.87	67.78	4,613.1	349.1	710.8	-4.1	2.78
4,825.0	28.92	67.16	4,634.9	353.8	722.1	-3.4	3.99
4,850.0	28.02	66.34	4,656.8	358.5	733.1	-2.9	3.92
4,875.0	26.94	65.78	4,679.0	363.2	743.6	-2.5	4.44
4,900.0	26.16	65.30	4,701.4	367.8	753.8	-2.2	3.24
4,925.0	25.51	64.41	4,723.9	372.5	763.6	-2.1	3.03
4,950.0	24.78	63.37	4,746.5	377.1	773.2	-2.1	3.41
4,975.0	24.51	63.16	4,769.2	381.8	782.5	-2.3	1.14
5,000.0	24.94	64.52	4,791.9	386.4	791.9	-2.3	2.85
5,025.0	25.67	66.44	4,814.5	390.9	801.6	-2.1	4.39
5,050.0	26.33	67.06	4,837.0	395.2	811.7	-1.6	2.86
5,075.0	26.67	67.70	4,859.4	399.5	822.0	-0.9	1.78
5,100.0	27.45	68.26	4,881.7	403.7	832.5	-0.2	3.28
5,125.0	28.17	69.14	4,903.8	408.0	843.4	0.7	3.32
5,150.0	28.79	69.94	4,925.7	412.1	854.6	1.9	2.91
5,175.0	29.14	70.34	4,947.6	416.2	865.9	3.1	1.60
5,200.0	30.20	71.03	4,969.3	420.3	877.6	4.5	4.45
5,225.0	31.38	71.66	4,990.8	424.4	889.7	6.1	4.89
5,250.0	31.73	72.12	5,012.1	428.5	902.2	7.9	1.70
5,275.0	31.03	71.81	5,033.5	432.5	914.6	9.7	2.87
5,300.0	29.84	71.45	5,055.0	436.5	926.6	11.3	4.82
5,325.0	28.58	70.96	5,076.8	440.5	938.1	12.8	5.13
5,350.0	27.51	69.91	5,098.9	444.4	949.2	14.1	4.71
5,375.0	26.40	68.90	5,121.2	448.4	959.8	15.2	4.80
5,400.0	25.87	68.14	5,143.6	452.4	970.1	16.0	2.51
5,425.0	26.49	68.19	5,166.1	456.5	980.3	16.8	2.48
5,450.0	26.81	68.09	5,188.4	460.7	990.7	17.6	1.29
5,451.0	26.82	68.09	5,189.3	460.8	991.1	17.6	1.01
5,610.0	25.15	66.70	5,332.2	487.6	1,055.4	21.6	1.12
5,642.0	24.22	65.70	5,361.3	493.0	1,067.7	22.1	3.19
5,674.0	24.36	65.98	5,390.5	498.4	1,079.7	22.5	0.57
5,706.0	24.66	66.80	5,419.6	503.7	1,091.8	23.0	1.42
5,738.0	25.06	67.46	5,448.6	508.9	1,104.2	23.7	1.52
5,770.0	25.91	69.12	5,477.5	514.0	1,117.0	24.7	3.47
5,802.0	26.82	69.93	5,506.2	519.0	1,130.3	26.0	3.06
5,834.0	25.95	70.11	5,534.8	523.8	1,143.7	27.5	2.73
5,866.0	25.14	70.32	5,563.7	528.5	1,156.7	28.9	2.55
5,898.0	24.90	70.61	5,592.7	533.0	1,169.4	30.4	0.84
5,930.0	24.74	69.76	5,621.8	537.6	1,182.1	31.8	1.22
5,963.0	25.03	69.05	5,651.7	542.5	1,195.1	33.1	1.26

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<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)	
5,995.0	25.16	67.95	5,680.7	547.4	1,207.7	34.1	1.51	
6,027.0	25.27	67.71	5,709.6	552.6	1,220.3	35.0	0.47	
6,059.0	25.45	68.58	5,738.5	557.7	1,233.0	36.0	1.29	
6,091.0	25.94	68.24	5,767.4	562.8	1,245.9	37.0	1.60	
6,123.0	26.58	67.79	5,796.1	568.1	1,259.1	38.0	2.09	
6,156.0	26.77	67.01	5,825.6	573.8	1,272.8	38.8	1.21	
6,188.0	27.24	65.84	5,854.1	579.6	1,286.1	39.4	2.22	
6,220.0	28.26	65.00	5,882.4	585.8	1,299.6	39.7	3.41	
6,252.0	29.41	64.82	5,910.4	592.3	1,313.6	39.9	3.60	
6,284.0	30.05	62.86	5,938.2	599.3	1,327.8	39.8	3.64	
6,316.0	30.01	58.65	5,965.9	607.2	1,341.8	38.9	6.58	
6,348.0	29.66	54.29	5,993.7	616.0	1,355.1	36.8	6.86	
6,380.0	29.86	48.25	6,021.5	625.9	1,367.4	33.2	9.39	
6,412.0	30.66	46.04	6,049.1	636.8	1,379.3	28.5	4.28	
6,444.0	30.89	48.03	6,076.6	648.0	1,391.2	23.7	3.26	
6,476.0	30.93	51.86	6,104.1	658.6	1,403.8	19.7	6.15	
6,508.0	31.83	57.18	6,131.4	668.2	1,417.4	16.9	9.10	
6,540.0	32.83	64.30	6,158.4	676.6	1,432.3	15.9	12.30	
6,572.0	33.48	71.10	6,185.2	683.2	1,448.5	17.0	11.79	
6,578.0	33.72	72.17	6,190.2	684.2	1,451.6	17.4	10.62	
<b>SCMR</b>								
6,604.0	34.85	76.64	6,211.7	688.2	1,465.7	20.0	10.62	
6,636.0	36.80	81.12	6,237.7	691.8	1,484.1	24.8	10.21	
6,668.0	37.40	87.39	6,263.2	693.7	1,503.3	31.5	11.96	
6,700.0	37.66	94.04	6,288.6	693.4	1,522.7	40.2	12.68	
6,732.0	37.38	101.48	6,314.0	690.8	1,542.0	50.9	14.18	
6,764.0	38.39	107.44	6,339.2	685.9	1,561.0	63.7	11.86	
6,796.0	38.66	113.14	6,364.3	679.0	1,579.7	78.0	11.12	
<b>MDLX</b>								
6,828.0	40.42	117.69	6,389.0	670.2	1,598.1	93.9	10.59	
6,861.0	43.42	120.34	6,413.5	659.5	1,617.3	111.9	10.55	
6,893.0	46.47	122.44	6,436.2	647.8	1,636.6	131.0	10.60	
6,925.0	49.87	125.42	6,457.5	634.4	1,656.4	151.6	12.69	
6,956.0	53.66	127.29	6,476.7	620.0	1,676.0	173.1	13.11	
6,970.0	55.37	127.61	6,484.8	613.1	1,685.1	183.3	12.36	
<b>BRKT</b>								
6,988.0	57.57	128.01	6,494.8	603.9	1,696.9	196.7	12.36	
7,020.0	62.10	128.99	6,510.8	586.6	1,718.5	221.7	14.40	
7,021.0	62.25	129.01	6,511.3	586.1	1,719.2	222.5	14.66	
<b>TLLY</b>								
7,052.0	66.75	129.67	6,524.6	568.4	1,740.9	247.9	14.66	
7,084.0	70.89	131.75	6,536.2	548.9	1,763.5	275.3	14.29	
7,086.0	71.09	131.89	6,536.9	547.6	1,764.9	277.0	12.16	
<b>HMLN</b>								



EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Sheep Run Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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)
7,101.0	72.63	132.92	6,541.5	538.0	1,775.4	290.2	12.16
<b>MRCL_HOT</b>							
7,117.0	74.28	134.00	6,546.1	527.5	1,786.5	304.6	12.16
7,149.0	77.86	136.87	6,553.8	505.3	1,808.3	334.0	14.17
7,181.0	81.50	138.78	6,559.5	482.0	1,829.5	364.2	12.80
7,204.0	84.90	139.85	6,562.2	464.7	1,844.3	386.3	15.49
7,271.0	91.48	141.31	6,564.4	413.0	1,886.8	451.3	10.06
7,367.0	91.07	143.29	6,562.2	337.1	1,945.5	545.3	2.11
7,463.0	91.08	143.80	6,560.4	259.9	2,002.6	639.6	0.53
7,559.0	91.85	145.06	6,558.0	181.8	2,058.4	734.2	1.54
7,656.0	93.05	145.24	6,553.8	102.3	2,113.8	829.9	1.25
7,749.0	92.39	146.32	6,549.4	25.5	2,166.0	921.8	1.36
7,844.0	92.42	146.94	6,545.4	-53.8	2,218.2	1,015.9	0.65
7,939.0	91.01	149.41	6,542.6	-134.5	2,268.3	1,110.4	2.99
8,035.0	90.03	151.10	6,541.7	-217.8	2,315.9	1,206.1	2.03
8,131.0	91.34	153.71	6,540.6	-302.9	2,360.4	1,302.1	3.04
8,227.0	90.84	154.79	6,538.7	-389.3	2,402.1	1,398.1	1.24
8,323.0	90.57	157.30	6,537.5	-477.1	2,441.0	1,494.0	2.63
8,419.0	91.21	161.20	6,536.1	-566.8	2,475.0	1,589.6	4.12
8,514.0	90.91	161.09	6,534.3	-656.7	2,505.7	1,683.9	0.34
8,610.0	90.94	161.69	6,532.7	-747.7	2,536.4	1,779.1	0.63
8,706.0	90.81	162.16	6,531.3	-838.9	2,566.1	1,874.2	0.51
8,802.0	91.34	159.05	6,529.5	-929.4	2,598.0	1,969.5	3.29
8,899.0	90.84	156.52	6,527.6	-1,019.2	2,634.7	2,066.3	2.66
8,995.0	91.78	154.32	6,525.4	-1,106.5	2,674.6	2,162.3	2.49
9,091.0	91.04	152.98	6,523.1	-1,192.5	2,717.2	2,258.2	1.59
9,187.0	92.08	153.78	6,520.5	-1,278.3	2,760.2	2,354.2	1.37
9,283.0	92.62	155.61	6,516.5	-1,365.0	2,801.2	2,450.1	1.99
9,380.0	92.15	156.39	6,512.5	-1,453.5	2,840.6	2,547.0	0.94
9,475.0	92.22	157.40	6,508.9	-1,540.8	2,877.9	2,641.8	1.06
9,572.0	90.07	158.24	6,506.9	-1,630.6	2,914.5	2,738.6	2.38
9,668.0	91.88	158.18	6,505.3	-1,719.8	2,950.1	2,834.3	1.89
9,764.0	91.74	157.59	6,502.3	-1,808.6	2,986.2	2,930.0	0.63
9,860.0	90.10	156.34	6,500.7	-1,897.0	3,023.8	3,025.9	2.15
9,956.0	89.50	156.82	6,501.1	-1,985.1	3,061.9	3,121.8	0.80
10,052.0	89.80	155.62	6,501.6	-2,072.9	3,100.6	3,217.8	1.29
10,148.0	90.87	156.01	6,501.1	-2,160.5	3,140.0	3,313.7	1.19
10,244.0	90.44	155.94	6,500.0	-2,248.2	3,179.0	3,409.7	0.45
10,339.0	89.76	156.81	6,499.8	-2,335.2	3,217.1	3,504.6	1.16
10,435.0	92.66	158.17	6,497.8	-2,423.8	3,253.9	3,600.4	3.34
10,531.0	92.52	158.13	6,493.5	-2,512.9	3,289.6	3,696.0	0.15
10,628.0	90.37	157.07	6,491.0	-2,602.5	3,326.5	3,792.8	2.47
10,724.0	90.30	156.20	6,490.4	-2,690.6	3,364.6	3,888.7	0.91
10,820.0	89.66	156.76	6,490.5	-2,778.7	3,402.9	3,984.7	0.89
10,917.0	89.63	156.11	6,491.1	-2,867.6	3,441.7	4,081.6	0.67



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Sheep Run Unit 2H
<b>Project:</b> Doddridge County WV	<b>TVD Reference:</b> Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b> Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b> Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b> Sheep Run Unit 2H	<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)
11,013.0	90.77	154.78	6,490.7	-2,954.9	3,481.6	4,177.5	1.82
11,108.0	90.50	153.90	6,489.7	-3,040.5	3,522.7	4,272.5	0.97
11,204.0	90.03	153.18	6,489.2	-3,126.4	3,565.5	4,368.5	0.90
11,300.0	90.60	153.59	6,488.7	-3,212.3	3,608.5	4,464.5	0.73
11,397.0	90.03	154.16	6,488.2	-3,299.4	3,651.2	4,561.5	0.83
11,493.0	92.05	155.07	6,486.4	-3,386.1	3,692.3	4,657.5	2.31
11,589.0	91.78	155.46	6,483.2	-3,473.2	3,732.5	4,753.4	0.49
11,685.0	90.80	155.12	6,481.1	-3,560.4	3,772.6	4,849.4	1.08
11,781.0	90.00	155.62	6,480.4	-3,647.7	3,812.6	4,945.4	0.98
11,877.0	89.36	154.53	6,480.9	-3,734.7	3,853.1	5,041.3	1.32
11,973.0	89.43	155.60	6,482.0	-3,821.8	3,893.5	5,137.3	1.12
12,069.0	90.07	157.22	6,482.4	-3,909.7	3,931.9	5,233.2	1.81
12,165.0	89.30	157.77	6,482.9	-3,998.4	3,968.7	5,329.1	0.99
12,261.0	89.26	157.54	6,484.1	-4,087.2	4,005.2	5,424.9	0.24
12,357.0	89.63	156.55	6,485.0	-4,175.6	4,042.6	5,520.8	1.10
12,452.0	90.64	156.50	6,484.8	-4,262.7	4,080.5	5,615.7	1.06
12,548.0	90.17	156.44	6,484.1	-4,350.8	4,118.8	5,711.6	0.49
12,643.0	90.27	156.71	6,483.8	-4,437.9	4,156.6	5,806.5	0.30
12,740.0	90.03	157.59	6,483.5	-4,527.3	4,194.2	5,903.4	0.94
12,835.0	89.83	157.06	6,483.6	-4,615.0	4,230.8	5,998.2	0.60
12,892.0	89.83	156.77	6,483.8	-4,667.4	4,253.2	6,055.1	0.51
12,932.0	89.46	156.16	6,484.0	-4,704.1	4,269.2	6,095.1	1.78
13,027.0	89.36	155.31	6,485.0	-4,790.7	4,308.2	6,190.1	0.90
13,124.0	90.80	155.88	6,484.9	-4,879.0	4,348.3	6,287.0	1.60
13,216.0	89.66	156.84	6,484.5	-4,963.3	4,385.2	6,379.0	1.62
13,273.0	89.66	156.84	6,484.9	-5,015.7	4,407.6	6,435.9	0.00
PTB							

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,578.0	6,190.2	684.2	1,451.6	SCMR
6,796.0	6,364.3	679.0	1,579.7	MDLX
6,970.0	6,484.8	613.1	1,685.1	BRKT
7,021.0	6,511.3	586.1	1,719.2	TLLY
7,086.0	6,536.9	547.6	1,764.9	HMLN
7,101.0	6,541.5	538.0	1,775.4	MRCL_HOT
13,273.0	6,484.9	-5,015.7	4,407.6	PTB

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

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/30/2015
Job End Date:	1/9/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06658-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Sheep Run 2H
Longitude:	-80.84003300
Latitude:	39.23410300
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,563
Total Base Water Volume (gal):	10,651,338
Total Base Non Water Volume:	0



## 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	90.58613	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	9.02686	
LGC-15	U.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.08248	
			Petroleum Distillates	64742-47-8	60.00000	0.07811	
			Suspending agent (solid)	14808-60-7	3.00000	0.01261	
			Surfactant	68439-51-0	3.00000	0.00495	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.08735	
			Hydrogen Chloride	7647-01-0	18.00000	0.02087	
WFRA-405	U.S. Well Services	Friction Reducer	Water	7732-18-5	60.00000	0.03756	
			2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.01878	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01512	
			Ethoxylated alcohol blend	68002-97-1	4.00000	0.00250	

SI-1100	U.S. Well Services	Scale Inhibitor				
			Water	7732-18-5	80.00000	0.00993
			Ethylene Glycol	107-21-1	25.00000	0.00351
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00146
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00126
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00081
			Hexamethylene triamine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00081
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00032
K-BAC 1020	U.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00388
			Deionized Water	7732-18-5	28.00000	0.00221
AP One	U.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00207
AI-302	U.S. Well Services	Acid Corrosion Inhibitors				
			Water	7732-18-5	95.00000	0.00038
			2-Propyn-1-olcompound with methyloxirane	38172-91-7	15.00000	0.00006
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.						

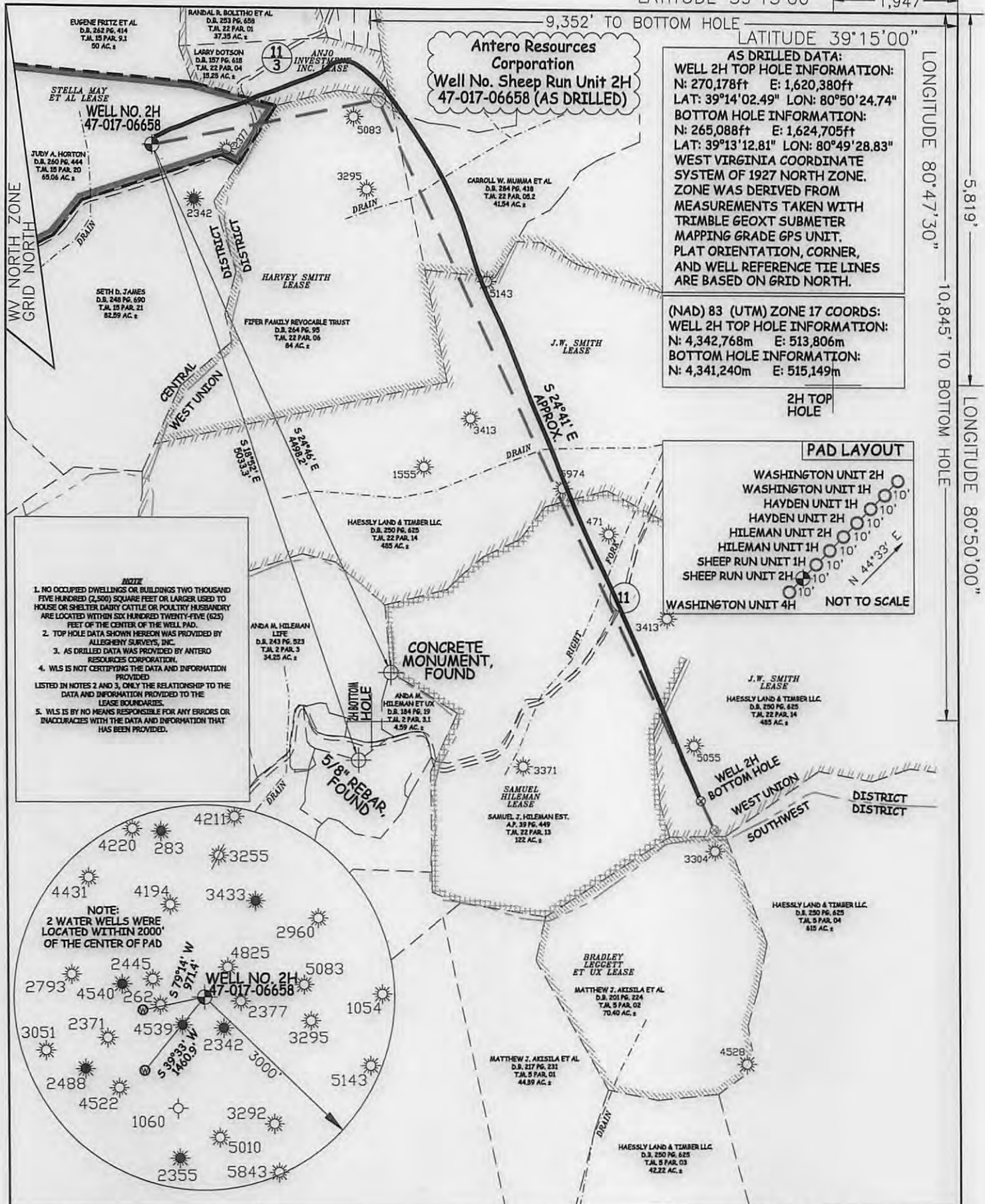
\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* 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)

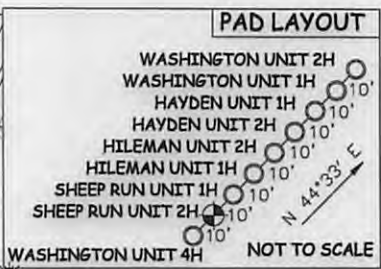
LATITUDE 39°15'00" 1,947'



**AS DRILLED DATA:**  
**WELL 2H TOP HOLE INFORMATION:**  
 N: 270,178ft E: 1,620,380ft  
**BOTTOM HOLE INFORMATION:**  
 N: 265,088ft E: 1,624,705ft  
 LAT: 39°14'02.49" LON: 80°50'24.74"  
 LAT: 39°13'12.81" LON: 80°49'28.83"  
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

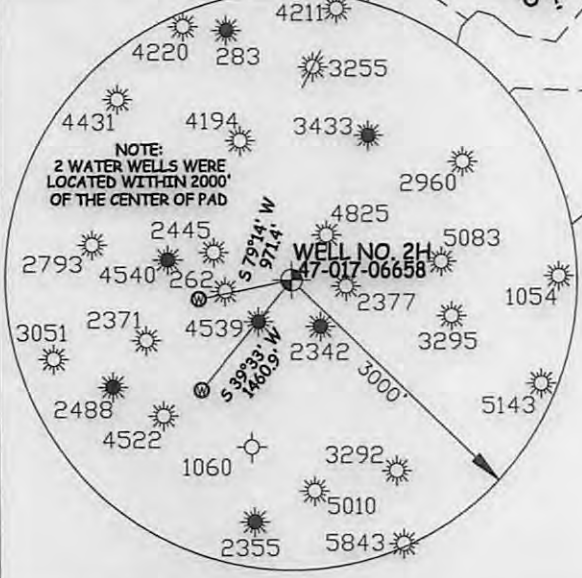
**(NAD) 83 (UTM) ZONE 17 COORDS:**  
**WELL 2H TOP HOLE INFORMATION:**  
 N: 4,342,768m E: 513,806m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,341,240m E: 515,149m

2H TOP HOLE



**NOTE**

1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 14-086WA  
 DRAWING # SHEEPRUN2HAD  
 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  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

**LEGEND**

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- X Existing Fence
- ⊕ Found monument, as noted
- Proposed Well Path
- ⊗ As Drilled Well Path

DATE 07/16/15

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' DISTRICT CENTRAL (TH) WEST UNION (LP) SOUTHWEST (BH) COUNTY DODD

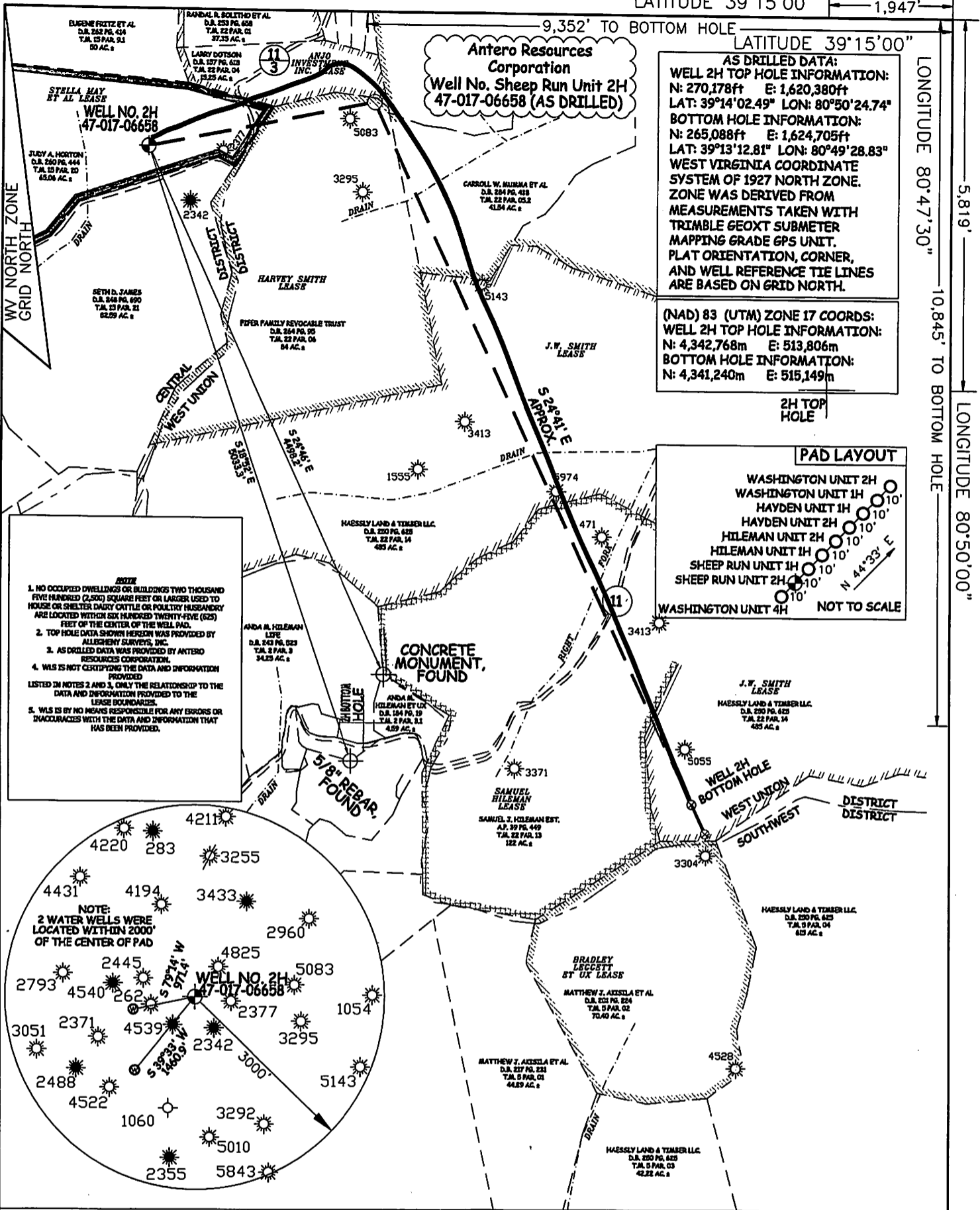
SURFACE OWNER JUDY A. HORTON ACREAGE 65.06 ACRES +/-  
 OIL & GAS ROYALTY OWNER STELLA MAY ET AL; ANJO INVESTMENTS INC.; HARVEY SMITH; J.W. SMITH; SAMUEL HILEMAN LEASE ACREAGE 125.5 ACRES±; 50 ACRES±; 450 ACRES±; 486 ACRES±; 122 ACRES±

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 6,485' TVD 13,273' MD

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

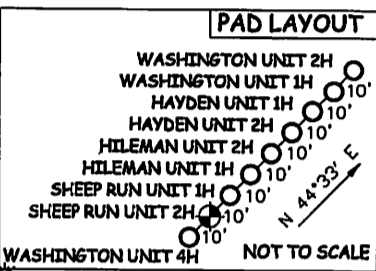
LATITUDE 39°15'00"  
 LONGITUDE 80°47'30"  
 5,819'  
 10,845' TO BOTTOM HOLE  
 LONGITUDE 80°50'00"

LATITUDE 39°15'00" 1,947'



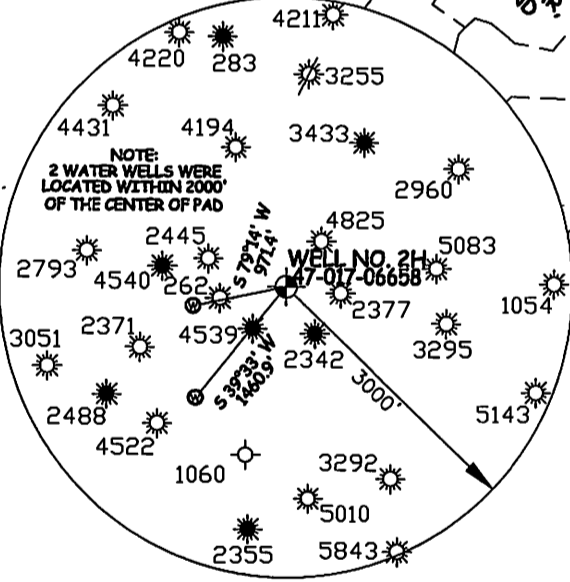
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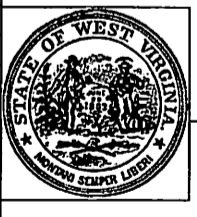


**NOTE**

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JOB # 14-086WA  
 DRAWING # SHEEPRUN2HAD  
 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  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

**LEGEND**

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- X Existing Fence
- ⊕ Found monument, as noted
- Proposed Well Path
- ⊙ As Drilled Well Path

DATE 07/16/15  
 OPERATOR'S WELL# SHEEP RUN UNIT #2H  
 API WELL # 47 - 017 - 08658  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS  
 WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1,066' ORIGINAL - 1,053' AS DRILLED WATERSHED NORTH FORK HUGHES RIVER  
 QUADRANGLE OXFORD 7.5' DISTRICT CENTRAL (TH) WEST UNION (LP) SOUTHWEST (BH) COUNTY DODDRIDGE  
 SURFACE OWNER JUDY A. HORTON ACREAGE 65.06 ACRES +/-  
 OIL & GAS ROYALTY OWNER STELLA MAY ET AL; ANJO INVESTMENTS INC.; HARVEY SMITH; J.W. SMITH; SAMUEL HILEMAN LEASE ACREAGE 125.5 ACRES+; 50 ACRES+; 450 ACRES+; 486 ACRES+; 122 ACRES+  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
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LONGITUDE 80°47'30" 10,845' TO BOTTOM HOLE  
 LONGITUDE 80°50'00" 5,819'

02/31/2017