

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

API 47 - 095 - 02395 County Tyler District Centerville  
Quad Middlebourne 7.5' Pad Name Vera Pad Field/Pool Name ----  
Farm name Vera O. Thomas Well Number Mysis Unit 2H  
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 4364001m Easting 508268m  
Landing Point of Curve Northing 4364072.75m Easting 508014.94m  
Bottom Hole Northing 4366101m Easting 507303m

Elevation (ft) 1148.1' 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

Date permit issued 1/24/2017 Date drilling commenced 3/22/2017 Date drilling ceased 10/3/2017  
Date completion activities began 2/3/2018 Date completion activities ceased 6/18/2018  
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 65', 215', 261', 399' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 620', 1614', 1974' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 620', 879' Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed

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API 47-095 - 02395 Farm name Vera O. Thomas Well number Mysis Unit 2H

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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	740'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2568'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14183'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6739'		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	200 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	630 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	946 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	771 sx (Lead) 1318 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14183' MD, 6541' TVD (BHL), 6592' (Deepest Point Drilled) Loggers TD (ft) 14183' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5963'

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

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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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>								

Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6554' (TOP)</u>	<u>TVD</u>	<u>6827' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 11138 mcfpd Oil 218 bpd NGL --- bpd Water 2558 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)</u>
	<u>DEPTH IN FT</u>	<u>DEPTH IN FT</u>	<u>DEPTH IN FT</u>	<u>DEPTH IN FT</u>	
<u>NAME</u>	<u>TVD</u>	<u>TVD</u>	<u>MD</u>	<u>MD</u>	
<b>*PLEASE SEE ATTACHED EXHIBIT 3</b>					


Please insert additional pages as applicable.

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

Logging Company Schlumberger  
Address 5599 San Felipe Street City Houston State TX Zip 77056

Cementing Company C&J Energy Services  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes  
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223  
Signature  Title Permitting Agent Date 2/8/2019

**API 47-095-02395 Farm Name Vera O. Thomas Well Number Mysis Unit 2H**

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2/3/2018	13914.995	14080.6	60	Marcellus
2	2/4/2018	13718.669	13884.274	60	Marcellus
3	2/4/2018	13522.343	13687.948	60	Marcellus
4	2/5/2018	13326.017	13491.622	60	Marcellus
5	2/5/2018	13129.691	13295.296	60	Marcellus
6	2/6/2018	12933.365	13098.97	60	Marcellus
7	2/7/2018	12737.039	12902.644	60	Marcellus
8	2/7/2018	12540.713	12706.318	60	Marcellus
9	2/9/2018	12344.387	12509.992	60	Marcellus
10	2/10/2018	12148.061	12313.666	60	Marcellus
11	2/12/2018	11951.735	12117.34	60	Marcellus
12	2/12/2018	11755.409	11921.014	60	Marcellus
13	2/13/2018	11559.083	11724.688	60	Marcellus
14	2/13/2018	11362.757	11528.362	60	Marcellus
15	2/14/2018	11166.431	11332.036	60	Marcellus
16	2/14/2018	10970.105	11135.71	60	Marcellus
17	2/15/2018	10773.779	10939.384	60	Marcellus
18	2/15/2018	10577.453	10743.058	60	Marcellus
19	2/16/2018	10381.127	10546.732	60	Marcellus
20	2/17/2018	10184.801	10350.406	60	Marcellus
21	2/18/2018	9988.475	10154.08	60	Marcellus
22	2/18/2018	9792.149	9957.754	60	Marcellus
23	2/20/2018	9595.823	9761.428	60	Marcellus
24	2/20/2018	9399.497	9565.102	60	Marcellus
25	2/21/2018	9203.171	9368.776	60	Marcellus
26	2/21/2018	9006.845	9172.45	60	Marcellus
27	2/22/2018	8810.519	8976.124	60	Marcellus
28	2/23/2018	8614.193	8779.798	60	Marcellus
29	2/23/2018	8417.867	8583.472	60	Marcellus
30	2/24/2018	8221.541	8387.146	60	Marcellus
31	2/24/2018	8025.215	8190.82	60	Marcellus
32	2/25/2018	7828.889	7994.494	60	Marcellus
33	2/25/2018	7632.563	7798.168	60	Marcellus
34	2/26/2018	7436.237	7601.842	60	Marcellus
35	2/26/2018	7239.911	7405.516	60	Marcellus
36	2/26/2018	7043.585	7209.19	60	Marcellus
37	2/26/2018	6847.259	7012.864	60	Marcellus

**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	2/3/2018	13915	14080.6	5875	3188	23143.6	13456.32	N/A
2	2/4/2018	13718.67	13884.27	6227	3110	23221.274	8297.262	N/A
3	2/4/2018	13522.34	13687.95	6110	3439	23236.948	10117.48	N/A
4	2/5/2018	13326.02	13491.62	5719	3629	22839.622	8538.405	N/A
5	2/5/2018	13129.69	13295.3	5447	3384	22126.296	8237.714	N/A
6	2/6/2018	12933.37	13098.97	6232	3422	22752.97	8345.738	N/A
7	2/7/2018	12737.04	12902.64	5749	3335	21986.644	9362.667	N/A
8	2/7/2018	12540.71	12706.32	5498	4053	22257.318	8410.19	N/A
9	2/9/2018	12344.39	12509.99	5106	5038	22653.992	12525	N/A
10	2/10/2018	12148.06	12313.67	5789	3922	22024.666	9777.27	N/A
11	2/12/2018	11951.74	12117.34	5664	3419	21200.34	8108.55	N/A
12	2/12/2018	11755.41	11921.01	5883	3476	21280.014	8330.952	N/A
13	2/13/2018	11559.08	11724.69	5687	3693	21104.688	8322.286	N/A
14	2/13/2018	11362.76	11528.36	4712	3498	19738.362	8636.69	N/A
15	2/14/2018	11166.43	11332.04	6128	3703	21163.036	8296.548	N/A
16	2/14/2018	10970.11	11135.71	5771	3707	20613.71	9156.333	N/A
17	2/15/2018	10773.78	10939.38	5221	3637	19797.384	8287.786	N/A
18	2/15/2018	10577.45	10743.06	5513	3564	19820.058	8374.048	N/A
19	2/16/2018	10381.13	10546.73	5543	3615	19704.732	8017.357	N/A
20	2/17/2018	10184.8	10350.41	6350	3688	20388.406	8041.667	N/A
21	2/18/2018	9988.475	10154.08	6143	3664	19961.08	8124.905	N/A
22	2/18/2018	9792.149	9957.754	6121	3910	19988.754	8346.714	N/A
23	2/20/2018	9595.823	9761.428	6395	3743	19899.428	8071.119	N/A
24	2/20/2018	9399.497	9565.102	6291	3692	19548.102	8287.714	N/A
25	2/21/2018	9203.171	9368.776	5897	4072	19337.776	7802.762	N/A
26	2/21/2018	9006.845	9172.45	6233	4652	20057.45	8593.31	N/A
27	2/22/2018	8810.519	8976.124	5583	4025	18584.124	10858.81	N/A
28	2/23/2018	8614.193	8779.798	6057	3915	18751.798	7898.357	N/A
29	2/23/2018	8417.867	8583.472	5982	4206	18771.472	8124.857	N/A
30	2/24/2018	8221.541	8387.146	6223	4287	18897.146	8279.405	N/A
31	2/24/2018	8025.215	8190.82	6071	4322	18583.82	7991.31	N/A
32	2/25/2018	7828.889	7994.494	6085	4017	18096.494	8317.833	N/A
33	2/25/2018	7632.563	7798.168	6360	4277	18435.168	8377.762	N/A
34	2/26/2018	7436.237	7601.842	6217	4250	18068.842	8289.357	N/A
35	2/26/2018	7239.911	7405.516	6520	3962	17887.516	9039.595	N/A
36	2/26/2018	7043.585	7209.19	7155	3501	17865.19	7817.881	N/A
37	2/26/2018	6847.259	7012.864	4733	2935	14680.864	8013.143	N/A
		<b>10,381.1</b>	<b>10,547</b>	<b>5,900</b>	<b>3,782</b>	<b>748,469</b>	<b>322,875</b>	<b>TOTAL</b>

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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	227'	N/A	227'	N/A
Sandstone	100	N/A	100	N/A
Sandy Siltstone	120	N/A	120	N/A
Sandy Shale	740	N/A	740	N/A
Calcareous Shale	880	N/A	880	N/A
Shaly Sandstone	920	N/A	920	N/A
Shaly Siltstone	1,020	N/A	1,020	N/A
Silty Shale	1,180	N/A	1,180	N/A
Sandstone	1,360	N/A	1,360	N/A
Sandy Shale	1,400	N/A	1,400	N/A
Shaly Sandstone	1,640	N/A	1,640	N/A
Silty Shale	1,700	N/A	1,700	N/A
Sandy Shale	1,780	N/A	1,780	N/A
Sandy Shale/Coal	1,920	N/A	1,920	N/A
Big Lime	2,058	N/A	2,059	N/A
Big Injun	2,199	N/A	2,200	N/A
Gantz Sand	2,660	N/A	2,662	N/A
Fifty Foot Sandstone	2,796	N/A	2,798	N/A
Gordon	2,942	N/A	2,945	N/A
Fifth Sandstone	3,083	N/A	3,088	N/A
Bayard	3,287	N/A	3,294	N/A
Warren	3,662	N/A	3,677	N/A
Speechley	4,057	N/A	4,079	N/A
Balltown	4,531	N/A	4,563	N/A
Bradford	4,713	N/A	4,749	N/A
Benson	4,967	N/A	5,008	N/A
Alexander	5,342	N/A	5,391	N/A
Rhinestreet	5,925	N/A	5,984	N/A
Sycamore	6,245	N/A	6,323	N/A
Middlesex	6,408	N/A	6,530	N/A
Burkett	6,500	N/A	6,691	N/A
Tully	6,526	N/A	6,751	N/A
Marcellus	6,554	N/A	6,827	N/A

\*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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# ANTERO RESOURCES CORPORATION

Location: Tyler County, WV  
 Field: Tyler  
 Facility: Vera Pad

Slot: Slot #02  
 Well: Mysis Unit 2H  
 Wellbore: Mysis Unit 2H PWB

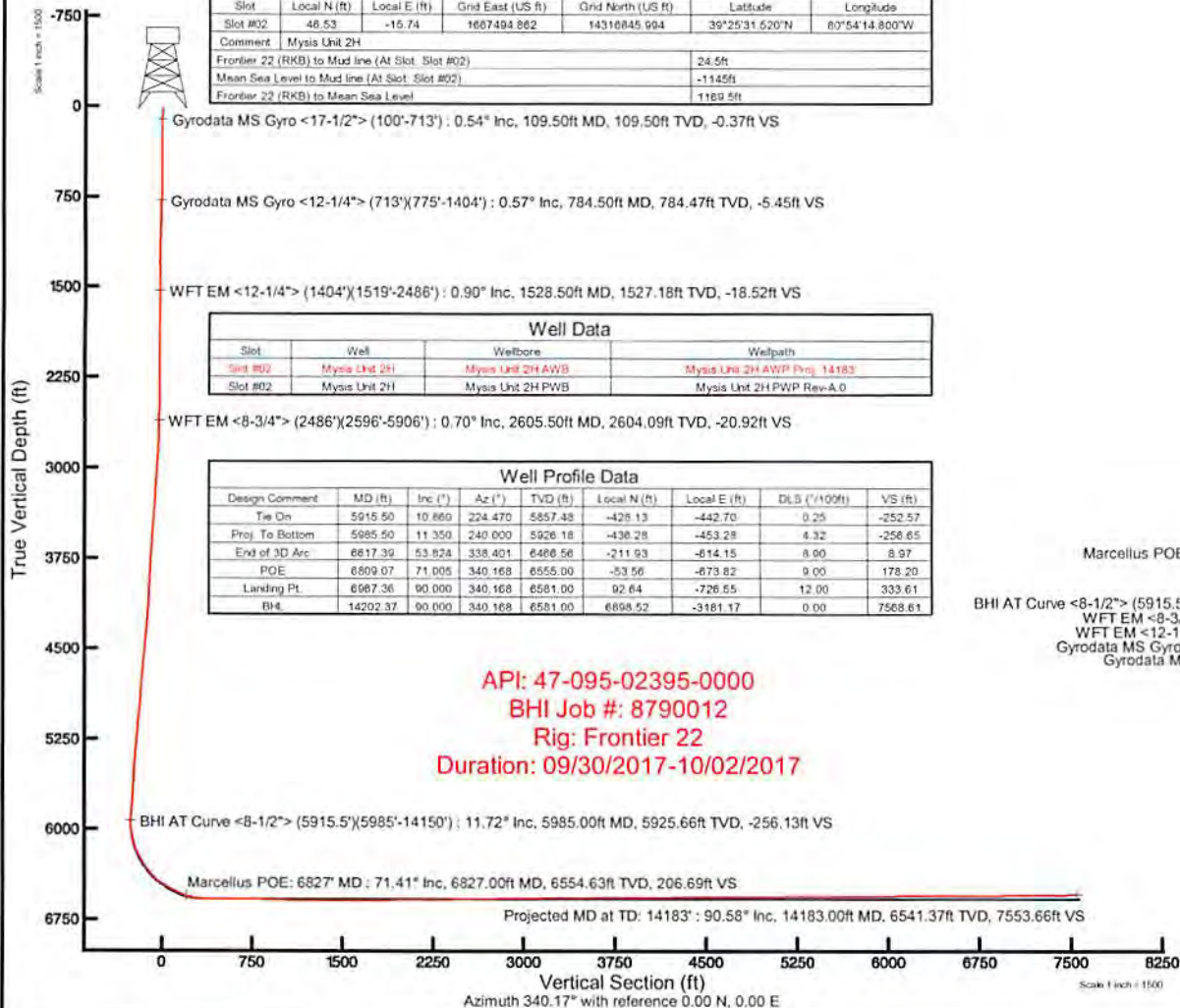


Plot reference wellpath is Mysis Unit 2H PWB Rev-A.0	Grid System: NAD27 / UTM Zone 17 North US feet
True vertical depths are referenced to Frontier 22 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 22 (RKB)	Scale: True distance
Frontier 22 (RKB) to Mean Sea Level: 1169.5 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: Slot #02): -1145 feet	Created by: delaseton 2017-11-01
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn

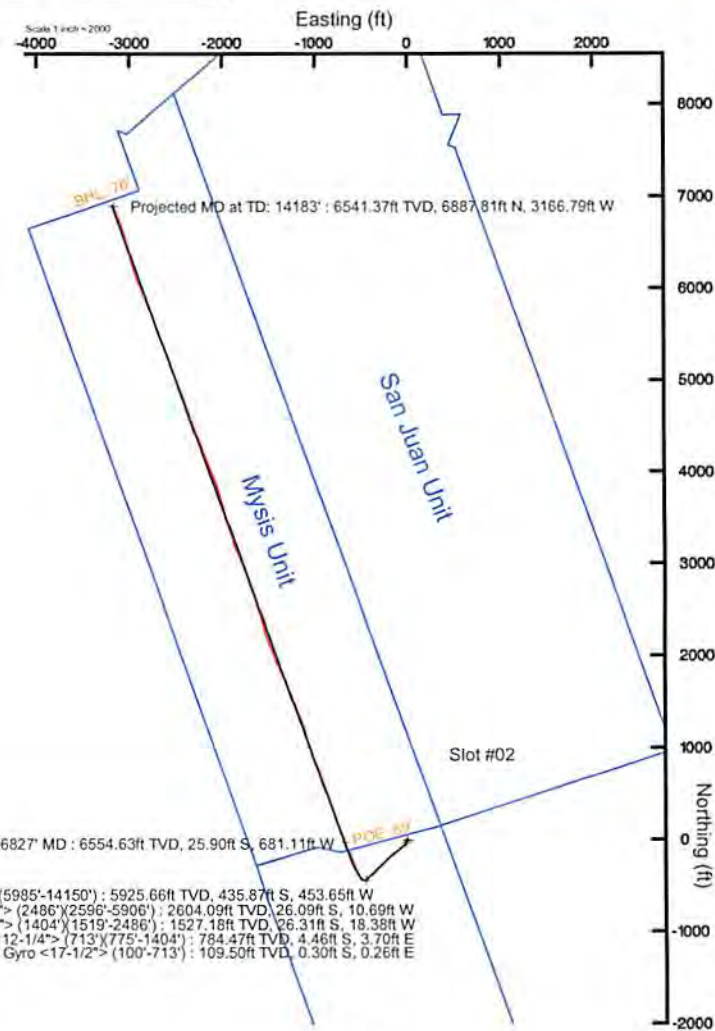
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Vera Pad	1667510.600	14316799.487	39°25'31.060"N	80°54'14.800"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #02	48.53	-15.74	1667494.862	14316845.994	80°54'14.800"W
Comment: Mysis Unit 2H					
Frontier 22 (RKB) to Mud line (At Slot: Slot #02)			24.5ft		
Mean Sea Level to Mud line (At Slot: Slot #02)			-1145ft		
Frontier 22 (RKB) to Mean Sea Level			1169.5ft		

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #02	Mysis Unit 2H	Mysis Unit 2H AWB	Mysis Unit 2H AWP Proj. 14183
Slot #02	Mysis Unit 2H	Mysis Unit 2H PWB	Mysis Unit 2H PWB Rev-A.0

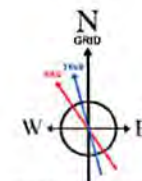
Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS ("/100ft)	VS (ft)
Tie On	5915.50	10.660	224.470	5857.48	-428.13	-442.70	0.25	-252.57
Proj. To Bottom	5885.50	11.350	240.000	5926.18	-436.28	-453.28	4.32	-256.65
End of 3D Arc	6617.39	53.824	338.401	6486.56	-211.93	-614.15	8.90	8.97
POE	6809.07	71.005	340.168	6555.00	-53.56	-673.82	9.00	178.20
Landing Pt.	6967.36	90.000	340.168	6581.00	92.64	-726.55	12.00	333.61
BH4	14202.37	90.000	340.168	6581.00	6898.52	-3181.17	0.00	7568.61



API: 47-095-02395-0000  
 BHI Job #: 8790012  
 Rig: Frontier 22  
 Duration: 09/30/2017-10/02/2017



BHI AT Curve <8-1/2"> (5915.5)(5985-14150) : 5925.66ft TVD, 435.87ft S, 453.65ft W  
 WFT EM <8-3/4"> (2486)(2596-5906) : 2604.09ft TVD, 26.09ft S, 10.69ft W  
 WFT EM <12-1/4"> (1404)(1519-2486) : 1527.18ft TVD, 26.31ft S, 18.38ft W  
 Gyrodata MS Gyro <12-1/4"> (713)(775-1404) : 784.47ft TVD, 4.46ft S, 3.70ft E  
 Gyrodata MS Gyro <17-1/2"> (100-713) : 109.50ft TVD, 0.30ft S, 0.26ft E



User specified Dip: 66.68° Field: 51991 nT  
 Magnetic North is 7.62 degrees West of True North (at 28/Sep/2017)  
 Grid North is 0.06 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.06 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.68 degrees





# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Mysis Unit 2H
Field	Tyler	Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	01/Nov/2017 at 16:07
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Mysis_Unit_2H_AWP_Proj_14183_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	46.53	-15.74	1667494.86	14316845.99	39°25'31.520"N	80°54'14.800"W
Facility Reference Pt			1667510.60	14316799.49	39°25'31.060"N	80°54'14.600"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 22 (RKB) to Facility Vertical Datum	24.50ft
Horizontal Reference Pt	Slot	Frontier 22 (RKB) to Mean Sea Level	1169.50ft
Vertical Reference Pt	Frontier 22 (RKB)	Frontier 22 (RKB) to Mud Line at Slot (Slot #02)	24.50ft
MD Reference Pt	Frontier 22 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.17°

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Tyler County, WV		Well	Mysis Unit 2H
Field	Tyler		Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad			

WELLPATH DATA (175 stations) † = interpolated/extrapolated station																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)	
0.00	0.00	139.000	0.00	0.00	0.00	0.00	1667494.86	14316845.99	39°25'31.520"N	80°54'14.800"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.00	139.000	24.50	0.00	0.00	0.00	1667494.86	14316845.99	39°25'31.520"N	80°54'14.800"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.540	139.000	109.50	-0.37	-0.30	0.26	1667495.12	14316845.69	39°25'31.517"N	80°54'14.797"W	0.40	139.000	0.64	0.64	163.53	Gyrodata MS Gyro <17-1/2"> (100'-713')
209.50	0.140	152.700	209.50	-0.93	-0.77	0.63	1667495.49	14316845.23	39°25'31.512"N	80°54'14.792"W	0.99	140.673	0.41	-0.40	13.70	
309.50	0.260	99.440	309.50	-1.17	-0.91	0.91	1667495.77	14316845.08	39°25'31.511"N	80°54'14.788"W	1.29	135.140	0.21	0.12	-53.26	
409.50	0.450	144.370	409.49	-1.65	-1.27	1.36	1667496.22	14316844.73	39°25'31.507"N	80°54'14.783"W	1.86	133.002	0.32	0.19	44.93	
509.50	0.800	139.690	509.49	-2.69	-2.12	2.04	1667496.90	14316843.87	39°25'31.499"N	80°54'14.774"W	2.94	136.093	0.35	0.35	-4.68	
609.50	0.670	139.150	609.48	-3.89	-3.09	2.87	1667497.74	14316842.90	39°25'31.489"N	80°54'14.763"W	4.22	137.110	0.13	-0.13	-0.54	
709.50	0.480	140.990	709.48	-4.83	-3.86	3.52	1667498.38	14316842.13	39°25'31.482"N	80°54'14.755"W	5.23	137.649	0.19	-0.19	1.84	
722.50	0.530	139.270	722.47	-4.94	-3.95	3.59	1667498.45	14316842.04	39°25'31.481"N	80°54'14.754"W	5.34	137.701	0.40	0.38	-13.23	
784.50	0.570	195.790	784.47	-5.45	-4.46	3.70	1667498.56	14316841.53	39°25'31.476"N	80°54'14.753"W	5.80	140.367	0.84	0.06	91.16	Gyrodata MS Gyro <12-1/4"> (713')(775'-1404')
814.50	0.980	194.300	814.47	-5.79	-4.86	3.59	1667498.45	14316841.14	39°25'31.472"N	80°54'14.754"W	6.04	143.501	1.37	1.37	-4.97	
844.50	1.360	193.180	844.46	-6.30	-5.45	3.45	1667498.31	14316840.54	39°25'31.466"N	80°54'14.756"W	6.45	147.681	1.27	1.27	-3.73	
877.50	1.880	200.700	877.45	-7.04	-6.34	3.17	1667498.03	14316839.66	39°25'31.457"N	80°54'14.760"W	7.09	153.444	1.70	1.58	22.79	
909.50	2.510	209.790	909.43	-7.89	-7.44	2.63	1667497.50	14316838.56	39°25'31.446"N	80°54'14.767"W	7.89	160.496	2.24	1.97	28.41	
941.50	3.210	212.090	941.39	-8.90	-8.81	1.81	1667496.67	14316837.19	39°25'31.433"N	80°54'14.777"W	8.99	168.381	2.22	2.19	7.19	
1003.50	4.240	219.580	1003.25	-11.14	-12.04	-0.57	1667494.29	14316833.95	39°25'31.401"N	80°54'14.807"W	12.06	182.716	1.83	1.66	12.05	
1066.50	5.810	226.160	1066.01	-13.62	-16.05	-4.35	1667490.51	14316829.95	39°25'31.361"N	80°54'14.856"W	16.63	195.182	2.65	2.49	10.48	
1161.50	6.010	226.060	1160.51	-17.61	-22.83	-11.40	1667483.46	14316823.17	39°25'31.294"N	80°54'14.946"W	25.52	206.543	0.21	0.21	-0.11	
1256.50	2.470	237.070	1255.23	-20.10	-27.40	-16.71	1667478.16	14316818.61	39°25'31.249"N	80°54'15.013"W	32.09	211.374	3.81	-3.73	11.59	
1287.50	1.680	246.600	1286.21	-20.28	-27.94	-17.68	1667477.19	14316818.07	39°25'31.244"N	80°54'15.026"W	33.06	212.331	2.77	-2.55	30.74	
1317.50	1.190	254.730	1316.20	-20.29	-28.20	-18.39	1667476.48	14316817.81	39°25'31.242"N	80°54'15.035"W	33.66	213.110	1.76	-1.63	27.10	
1413.50	0.790	26.410	1412.20	-19.75	-27.87	-19.05	1667475.81	14316818.14	39°25'31.245"N	80°54'15.043"W	33.76	214.365	1.89	-0.42	137.17	
1528.50	0.900	21.000	1527.18	-18.52	-26.31	-18.38	1667476.49	14316819.69	39°25'31.260"N	80°54'15.035"W	32.09	214.933	0.12	0.10	-4.70	WFT EM <12-1/4"> (1404')(1519'-2486')
1624.50	0.590	344.620	1623.18	-17.45	-25.13	-18.24	1667476.63	14316820.87	39°25'31.272"N	80°54'15.033"W	31.05	215.970	0.57	-0.32	-37.90	
1719.50	0.540	301.950	1718.17	-16.61	-24.42	-18.75	1667476.12	14316821.58	39°25'31.279"N	80°54'15.039"W	30.79	217.512	0.44	-0.05	-44.92	
1814.50	0.440	279.270	1813.17	-16.09	-24.13	-19.49	1667475.38	14316821.88	39°25'31.282"N	80°54'15.049"W	31.01	218.929	0.23	-0.11	-23.87	
1908.50	0.190	227.410	1907.17	-15.97	-24.17	-19.96	1667474.91	14316821.83	39°25'31.281"N	80°54'15.055"W	31.35	219.544	0.38	-0.27	-55.17	
2003.50	0.450	120.560	2002.17	-16.32	-24.47	-19.75	1667475.12	14316821.53	39°25'31.278"N	80°54'15.052"W	31.45	218.912	0.57	0.27	-112.47	
2097.50	0.720	107.980	2096.16	-16.97	-24.84	-18.67	1667475.99	14316821.16	39°25'31.275"N	80°54'15.041"W	31.20	217.228	0.32	0.29	-13.38	

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Mysis Unit 2H
Field	Tyler	Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad		

WELLPATH DATA (175 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
2191.50	0.930	98.840	2190.15	-17.69	-25.14	-17.56	1667477.31	14316820.86	39°25'31.272"N	80°54'15.024"W	30.67	214.932	0.26	0.22	-9.72	
2286.50	1.200	85.750	2285.13	-18.33	-25.19	-15.81	1667479.06	14316820.82	39°25'31.271"N	80°54'15.002"W	29.73	212.111	0.38	0.28	-13.78	
2381.50	1.360	86.680	2380.11	-18.92	-25.05	-13.69	1667481.18	14316820.96	39°25'31.273"N	80°54'14.975"W	28.54	208.656	0.17	0.17	0.98	
2476.50	0.760	119.260	2475.09	-19.71	-25.29	-12.01	1667482.85	14316820.71	39°25'31.270"N	80°54'14.953"W	28.00	205.408	0.87	-0.63	34.29	
2495.50	0.670	116.700	2494.09	-19.89	-25.40	-11.80	1667483.06	14316820.60	39°25'31.269"N	80°54'14.951"W	28.01	204.924	0.50	-0.47	-13.47	
2605.50	0.700	127.020	2604.09	-20.92	-26.09	-10.69	1667484.17	14316819.91	39°25'31.262"N	80°54'14.937"W	28.20	202.282	0.12	0.03	9.38	WFT EM <8-3/4"> (2486')(2596'-5906')
2700.50	2.010	209.540	2699.06	-22.49	-27.89	-11.05	1667483.82	14316818.11	39°25'31.244"N	80°54'14.941"W	30.00	201.612	2.15	1.38	86.86	
2794.50	4.390	218.240	2792.91	-25.47	-32.15	-14.09	1667480.78	14316813.85	39°25'31.202"N	80°54'14.980"W	35.11	203.664	2.58	2.53	9.26	
2889.50	6.740	217.400	2887.46	-30.41	-39.44	-19.73	1667475.14	14316806.57	39°25'31.130"N	80°54'15.052"W	44.10	206.574	2.48	2.47	-0.88	
2983.50	8.760	219.190	2980.59	-37.08	-49.37	-27.60	1667467.27	14316796.64	39°25'31.032"N	80°54'15.152"W	56.56	209.209	2.18	2.15	1.90	
3078.50	9.970	223.780	3074.33	-44.46	-60.91	-37.86	1667457.01	14316785.10	39°25'30.918"N	80°54'15.283"W	71.72	211.864	1.50	1.27	4.83	
3173.50	9.890	233.580	3167.91	-50.44	-71.70	-50.12	1667444.76	14316774.33	39°25'30.812"N	80°54'15.440"W	87.48	214.955	1.78	-0.08	10.32	
3268.50	9.450	232.010	3261.56	-55.20	-81.34	-82.83	1667432.06	14316764.69	39°25'30.717"N	80°54'15.602"W	102.78	217.684	0.54	-0.46	-1.65	
3362.50	9.710	229.520	3354.25	-60.40	-91.24	-74.94	1667419.95	14316754.79	39°25'30.619"N	80°54'15.756"W	118.07	219.400	0.52	0.28	-2.65	
3457.50	12.830	225.470	3447.41	-67.64	-103.84	-88.56	1667406.34	14316742.20	39°25'30.495"N	80°54'15.930"W	136.47	220.459	3.39	3.28	-4.26	
3552.50	12.620	235.490	3540.08	-74.68	-117.12	-104.63	1667390.27	14316728.92	39°25'30.364"N	80°54'16.135"W	157.05	221.778	2.33	-0.22	10.55	
3646.50	11.520	232.950	3632.01	-80.06	-128.59	-120.59	1667374.32	14316717.46	39°25'30.250"N	80°54'16.338"W	176.28	223.160	1.30	-1.17	-2.70	
3740.50	10.650	230.130	3724.25	-85.81	-139.81	-134.74	1667360.17	14316706.24	39°25'30.140"N	80°54'16.519"W	194.17	223.942	1.09	-0.93	-3.00	
3834.50	9.730	228.850	3816.77	-91.68	-150.61	-147.39	1667347.53	14316695.44	39°25'30.033"N	80°54'16.680"W	210.73	224.381	1.01	-0.98	-1.36	
3929.50	10.450	233.130	3910.30	-97.12	-161.06	-160.33	1667334.60	14316685.00	39°25'29.930"N	80°54'16.845"W	227.26	224.870	1.09	0.76	4.51	
4024.50	9.520	232.120	4003.86	-102.08	-171.05	-173.42	1667321.51	14316675.01	39°25'29.831"N	80°54'17.012"W	243.59	225.394	1.00	-0.98	-1.06	
4118.50	10.120	232.180	4096.48	-107.04	-180.89	-186.08	1667308.85	14316665.17	39°25'29.734"N	80°54'17.174"W	259.52	225.810	0.64	0.64	0.06	
4213.50	11.140	228.780	4189.85	-112.97	-192.06	-199.58	1667295.36	14316654.01	39°25'29.624"N	80°54'17.346"W	276.98	226.100	1.26	1.07	-3.58	
4308.50	12.720	224.490	4282.80	-120.85	-205.57	-213.81	1667281.14	14316640.51	39°25'29.491"N	80°54'17.527"W	296.60	226.126	1.91	1.66	-4.52	
4402.50	12.010	222.100	4374.62	-129.93	-220.21	-227.62	1667267.33	14316625.88	39°25'29.346"N	80°54'17.704"W	316.71	226.949	0.93	-0.76	-2.54	
4497.50	12.790	224.490	4467.40	-139.14	-235.04	-241.62	1667253.34	14316611.05	39°25'29.199"N	80°54'17.882"W	337.08	225.790	0.98	0.82	2.52	
4591.50	12.540	229.730	4559.12	-147.21	-249.06	-256.70	1667238.27	14316597.03	39°25'29.061"N	80°54'18.074"W	357.66	225.865	1.25	-0.27	5.57	
4686.50	12.000	225.960	4651.95	-154.86	-262.59	-271.66	1667223.31	14316583.51	39°25'28.928"N	80°54'18.265"W	377.83	225.973	1.02	-0.57	-3.97	
4780.50	11.510	223.980	4743.98	-163.01	-276.13	-285.20	1667209.77	14316569.97	39°25'28.794"N	80°54'18.438"W	396.98	225.925	0.68	-0.52	-2.11	
4875.50	11.390	227.030	4837.09	-170.88	-289.35	-298.65	1667196.33	14316556.76	39°25'28.663"N	80°54'18.610"W	416.83	225.906	0.65	-0.13	3.21	

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #02
Area	Tyler County, WV		Well
Field	Tyler		Wellbore
Facility	Vera Pad		Mysis Unit 2H AWB

WELLPATH DATA (175 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
4969.50	10.910	225.210	4929.31	-178.28	-301.94	-311.75	1667183.23	14316544.17	39°25'28.539"N	80°54'18.777"W	434.00	225.916	0.63	-0.51	-1.94	
5064.50	10.500	222.290	5022.66	-186.12	-314.68	-323.96	1667171.03	14316531.44	39°25'28.413"N	80°54'18.932"W	451.63	225.832	0.72	-0.43	-3.07	
5159.50	11.790	222.730	5115.87	-194.64	-328.21	-336.37	1667158.63	14316517.91	39°25'28.280"N	80°54'19.091"W	469.96	225.703	1.36	1.36	0.46	
5254.50	12.510	229.460	5208.74	-202.76	-342.03	-350.77	1667144.23	14316504.10	39°25'28.143"N	80°54'19.275"W	489.93	225.723	1.67	0.76	7.08	
5348.50	13.080	228.400	5300.41	-210.30	-355.71	-366.46	1667128.54	14316490.43	39°25'28.008"N	80°54'19.475"W	510.71	225.853	0.66	0.61	-1.13	
5443.50	11.970	224.530	5393.15	-218.55	-369.87	-381.41	1667113.60	14316476.27	39°25'27.868"N	80°54'19.665"W	531.30	225.880	1.46	-1.17	-4.07	
5537.50	10.010	224.230	5485.42	-226.34	-382.67	-393.95	1667101.07	14316463.47	39°25'27.742"N	80°54'19.825"W	549.21	225.832	2.09	-2.09	-0.32	
5632.50	9.920	231.170	5578.99	-232.62	-393.72	-406.08	1667088.94	14316452.43	39°25'27.633"N	80°54'19.980"W	565.61	225.885	1.27	-0.09	7.31	
5726.50	9.690	228.070	5671.62	-238.23	-404.09	-418.28	1667076.75	14316442.07	39°25'27.531"N	80°54'20.136"W	581.58	225.989	0.61	-0.24	-3.30	
5821.50	10.630	224.730	5765.13	-245.00	-415.65	-430.39	1667064.64	14316430.51	39°25'27.416"N	80°54'20.290"W	598.33	225.998	1.17	0.99	-3.52	
5915.50	10.860	224.470	5857.48	-252.57	-428.13	-442.70	1667052.34	14316418.03	39°25'27.293"N	80°54'20.447"W	615.85	225.958	0.25	0.24	-0.28	
5985.00	11.720	244.290	5925.66	-256.13	-435.87	-453.65	1667041.40	14316410.30	39°25'27.217"N	80°54'20.587"W	629.11	226.145	5.69	1.24	28.52	BHI AT Curve <8-1/2"> (5915.5')(5985'-14150')
6003.00	12.050	248.570	5943.27	-256.37	-437.35	-457.04	1667038.00	14316408.82	39°25'27.202"N	80°54'20.630"W	632.58	226.261	5.23	1.83	23.78	
6050.00	12.630	267.520	5989.21	-254.98	-439.36	-466.75	1667028.30	14316406.81	39°25'27.182"N	80°54'20.754"W	641.01	226.731	8.67	1.23	40.32	
6098.00	14.560	289.730	6035.89	-249.56	-437.55	-477.68	1667017.38	14316408.62	39°25'27.200"N	80°54'20.893"W	647.79	227.510	11.51	4.02	46.27	
6145.00	17.500	305.880	6081.08	-239.96	-431.41	-488.97	1667006.09	14316414.75	39°25'27.261"N	80°54'21.037"W	652.08	228.579	11.31	6.26	34.36	
6192.00	20.240	316.200	6125.56	-226.68	-421.40	-500.33	1666994.73	14316424.76	39°25'27.360"N	80°54'21.181"W	654.15	229.895	9.17	5.83	21.96	
6239.00	23.520	322.250	6169.18	-210.33	-408.11	-511.70	1666983.36	14316438.05	39°25'27.492"N	80°54'21.326"W	654.52	231.426	8.46	6.98	12.87	
6286.00	25.870	329.190	6211.89	-191.33	-391.88	-522.70	1666972.37	14316454.27	39°25'27.652"N	80°54'21.466"W	653.29	233.140	7.93	5.00	14.77	
6333.00	29.500	334.040	6253.50	-169.75	-372.66	-533.02	1666962.05	14316473.48	39°25'27.842"N	80°54'21.597"W	650.38	235.041	9.08	7.72	10.32	
6381.00	33.770	338.140	6294.37	-144.65	-349.64	-543.17	1666951.91	14316496.49	39°25'28.070"N	80°54'21.726"W	645.97	237.230	9.96	8.90	8.54	
6428.00	37.620	339.870	6332.53	-117.24	-324.04	-552.97	1666942.11	14316522.08	39°25'28.323"N	80°54'21.851"W	640.92	239.630	8.47	8.19	3.68	
6477.00	41.980	339.480	6370.17	-85.88	-294.64	-563.87	1666931.22	14316551.48	39°25'28.614"N	80°54'21.989"W	636.21	242.412	8.91	8.90	-0.80	
6524.00	46.840	337.910	6403.73	-53.02	-264.01	-575.83	1666919.26	14316582.09	39°25'28.917"N	80°54'22.141"W	633.47	245.369	10.60	10.34	-3.34	
6530.00†	47.501	337.777	6407.81	-48.62	-259.94	-577.49	1666917.60	14316586.16	39°25'28.957"N	80°54'22.163"W	633.30	245.767	11.13	11.01	-2.21	Middlesex: 6530' MD
6571.00	52.020	336.940	6434.29	-17.37	-231.06	-589.55	1666905.55	14316615.02	39°25'29.242"N	80°54'22.316"W	633.21	248.598	11.13	11.02	-2.04	
6618.00	55.780	336.700	6461.98	20.53	-196.16	-604.49	1666890.61	14316649.91	39°25'29.588"N	80°54'22.506"W	635.52	252.022	8.01	8.00	-0.51	
6666.00	59.900	335.820	6487.52	61.07	-158.97	-620.85	1666874.26	14316687.08	39°25'29.955"N	80°54'22.714"W	640.88	255.638	8.72	8.58	-1.83	
6691.00†	61.681	335.431	6499.72	82.82	-139.10	-629.86	1666865.25	14316706.95	39°25'30.152"N	80°54'22.828"W	645.04	257.547	7.25	7.13	-1.55	Burkett: 6691' MD
6713.00	63.250	335.100	6509.89	102.25	-121.38	-638.02	1666857.09	14316724.86	39°25'30.327"N	80°54'22.932"W	649.47	259.228	7.25	7.13	-1.51	

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Vera Pad
Slot #02	Mysis Unit 2H
Well	Mysis Unit 2H AWB
Wellbore	

WELLPATH DATA (175 stations)		r = interpolated/extrapolated station														
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vent Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
6751.00	65.555	335.025	6526.31	136.38	-90.31	-652.47	1666842.65	14316755.72	39°25'30.634"N	80°54'23.116"W	658.69	262.120	6.07	6.07	-0.20	Tully: 6751 MD
6759.00	66.040	335.010	6529.59	143.65	-83.69	-655.55	1666839.57	14316782.33	39°25'30.700"N	80°54'23.155"W	660.87	262.724	6.07	6.07	-0.19	
6806.00	69.070	336.480	6547.53	186.96	-44.09	-673.39	1666821.74	14316801.92	39°25'31.091"N	80°54'23.382"W	674.83	266.254	7.07	6.45	3.13	
6827.00	71.407	337.490	6554.63	206.69	-25.90	-681.11	1666814.02	14316820.10	39°25'31.271"N	80°54'23.480"W	681.61	267.822	12.02	11.13	4.81	Marcellus POE: 6827 MD
6854.00	74.420	338.750	6562.56	232.48	-1.96	-690.73	1666804.41	14316844.04	39°25'31.508"N	80°54'23.602"W	680.73	269.838	12.02	11.16	4.66	
6901.00	80.100	340.380	6572.92	278.30	40.98	-706.72	1666788.42	14316868.96	39°25'31.932"N	80°54'23.805"W	707.91	273.319	12.55	12.09	3.47	
6949.00	85.870	341.190	6578.78	325.91	85.95	-722.39	1666772.76	14316893.91	39°25'32.377"N	80°54'24.004"W	727.49	276.785	12.14	12.02	1.69	
6987.00	89.910	341.500	6580.18	363.87	121.92	-734.54	1666760.62	14316917.93	39°25'32.733"N	80°54'24.159"W	744.59	279.424	10.66	10.93	0.82	
7044.00	89.940	341.750	6580.26	420.85	176.02	-752.50	1666742.66	14317021.94	39°25'33.267"N	80°54'24.387"W	772.82	283.165	0.44	0.05	0.44	
7140.00	90.000	341.010	6580.31	516.83	266.99	-783.16	1666712.02	14317112.88	39°25'34.167"N	80°54'24.776"W	827.42	288.825	0.77	0.06	-0.77	
7235.00	90.310	340.190	6580.05	611.83	356.60	-814.71	1666680.48	14317202.45	39°25'35.053"N	80°54'25.177"W	889.33	293.639	0.92	0.33	-0.86	
7330.00	88.920	340.640	6580.69	706.82	446.10	-846.55	1666648.65	14317291.91	39°25'35.938"N	80°54'25.582"W	956.90	297.787	1.54	-1.46	0.47	
7424.00	89.630	340.320	6581.88	800.81	534.69	-877.96	1666617.25	14317380.47	39°25'36.814"N	80°54'25.981"W	1027.96	301.342	0.83	0.76	-0.34	
7519.00	88.310	339.480	6583.59	895.79	623.88	-910.60	1666584.63	14317469.63	39°25'37.695"N	80°54'26.386"W	1103.82	304.416	1.65	-1.39	-0.88	
7614.00	88.460	339.960	6586.26	990.75	712.96	-943.51	1666551.73	14317558.67	39°25'38.576"N	80°54'26.814"W	1192.59	307.076	0.53	0.16	0.51	
7709.00	88.460	340.050	6588.82	1085.72	802.20	-975.99	1666519.27	14317647.87	39°25'39.459"N	80°54'27.227"W	1263.36	309.418	0.09	0.00	0.09	
7804.00	89.450	340.390	6590.55	1180.70	891.58	-1008.13	1666487.14	14317737.21	39°25'40.342"N	80°54'27.635"W	1345.82	311.489	1.10	1.04	0.36	
7899.00	89.670	339.730	6591.36	1275.70	980.88	-1040.53	1666454.75	14317826.48	39°25'41.225"N	80°54'28.047"W	1429.97	313.310	0.71	0.13	-0.69	
7994.00	90.150	340.240	6591.99	1370.69	1070.14	-1073.04	1666422.25	14317915.71	39°25'42.108"N	80°54'28.460"W	1515.46	314.922	0.81	0.61	0.54	
8088.00	90.680	344.610	6590.93	1462.60	1157.82	-1100.81	1666394.49	14318003.35	39°25'42.975"N	80°54'28.813"W	1597.61	316.446	4.78	0.58	4.75	
8182.00	90.520	342.820	6589.92	1558.40	1249.96	-1127.73	1666367.58	14318095.45	39°25'43.886"N	80°54'29.155"W	1683.50	317.943	1.87	-0.17	-1.86	
8276.00	90.550	335.870	6589.04	1652.33	1337.86	-1160.87	1666334.46	14318183.32	39°25'44.755"N	80°54'29.576"W	1771.30	319.052	7.39	0.03	-7.39	
8371.00	90.400	337.460	6588.26	1747.15	1425.09	-1198.50	1666296.85	14318270.51	39°25'45.617"N	80°54'30.054"W	1862.06	319.936	1.68	-0.16	1.67	
8466.00	90.310	339.520	6587.67	1842.10	1513.46	-1233.33	1666262.03	14318358.85	39°25'46.491"N	80°54'30.497"W	1952.35	320.823	2.17	-0.09	2.17	
8562.00	90.060	340.230	6587.36	1938.10	1603.60	-1266.36	1666229.01	14318448.95	39°25'47.382"N	80°54'30.917"W	2043.33	321.702	0.78	-0.26	0.74	
8657.00	90.830	338.630	6586.62	2033.08	1692.54	-1299.73	1666195.65	14318537.85	39°25'48.261"N	80°54'31.341"W	2134.01	322.479	1.87	0.81	-1.68	
8751.00	90.650	334.170	6585.40	2126.85	1778.65	-1337.35	1666158.05	14318623.93	39°25'49.113"N	80°54'31.819"W	2225.33	323.061	4.75	-0.19	-4.74	
8846.00	90.550	334.220	6584.41	2221.33	1864.17	-1378.70	1666116.71	14318709.41	39°25'49.959"N	80°54'32.345"W	2318.61	323.514	0.12	-0.11	0.05	
8941.00	90.580	340.550	6583.47	2316.16	1951.81	-1415.22	1666080.21	14318797.03	39°25'50.825"N	80°54'32.809"W	2410.90	324.055	6.66	0.03	6.66	
9035.00	90.710	338.340	6582.41	2410.14	2039.82	-1448.21	1666047.23	14318884.89	39°25'51.695"N	80°54'33.229"W	2501.64	324.626	2.35	0.14	-2.35	

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183



Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Vera Pad
Slot	Well	Wellbore	
Slot #02	Mysis Unit 2H	Mysis Unit 2H AWB	

WELLPATH DATA (175 stations)													
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	
ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	
9129.00	337.410	6580.97	2504.06	2126.89	-1483.61	1666011.84	14318972.03	39.2552.556N	80°54'33.679"W	2593.21	325.102	1.05	
9223.00	340.710	6579.60	2598.01	2214.66	-1517.20	1665978.27	14319059.76	39.2553.424N	80°54'34.106"W	2684.51	325.586	3.54	
9317.00	343.600	6578.51	2591.94	2304.12	-1546.00	1665949.48	14319149.19	39.2554.308N	80°54'34.471"W	2774.72	326.139	3.08	
9413.00	346.130	6577.29	2787.67	2396.56	-1571.87	1665923.62	14319241.59	39.2555.222N	80°54'34.800"W	2866.05	326.740	1.59	
9508.00	343.390	6576.07	2882.42	2487.98	-1597.64	1665897.86	14319332.98	39.2556.126N	80°54'35.127"W	2956.77	327.294	1.83	
9603.00	340.880	6574.89	2977.35	2578.39	-1626.78	1665868.74	14319423.35	39.2557.020N	80°54'35.497"W	3048.69	327.751	2.64	
9698.00	339.500	6573.71	3072.34	2667.76	-1658.97	1665836.56	14319512.68	39.2557.904N	80°54'35.907"W	3141.51	328.124	1.45	
9793.00	340.990	6572.39	3167.33	2757.15	-1691.08	1665804.46	14319602.04	39.2558.787N	80°54'36.315"W	3234.45	328.476	1.57	
9888.00	340.300	6571.01	3262.31	2846.78	-1722.56	1665773.00	14319691.63	39.2559.674N	80°54'36.715"W	3327.36	328.822	0.73	
9983.00	339.180	6569.87	3357.30	2935.89	-1755.45	1665740.12	14319780.71	39.2600.565N	80°54'37.133"W	3420.68	329.124	1.20	
10078.00	337.190	6568.70	3452.23	3024.08	-1790.75	1665704.83	14319868.86	39.2601.427N	80°54'37.582"W	3514.52	329.368	2.11	
10173.00	336.890	6567.49	3547.09	3111.54	-1827.80	1665667.79	14319956.29	39.2602.291N	80°54'38.053"W	3608.68	329.569	0.39	
10267.00	341.070	6566.38	3641.04	3199.26	-1861.51	1665634.10	14320043.97	39.2603.159N	80°54'38.481"W	3701.42	329.807	4.45	
10362.00	342.820	6565.38	3735.98	3289.58	-1890.95	1665604.67	14320134.25	39.2604.052N	80°54'38.855"W	3794.34	330.108	1.87	
10456.00	340.900	6564.73	3829.94	3378.90	-1920.22	1665575.42	14320223.54	39.2604.935N	80°54'39.227"W	3886.41	330.391	2.05	
10551.00	341.960	6564.21	3924.91	3468.95	-1950.47	1665545.17	14320313.55	39.2605.825N	80°54'39.611"W	3979.69	330.652	1.12	
10645.00	345.430	6563.75	4018.72	3559.15	-1976.86	1665518.80	14320403.72	39.2606.717N	80°54'39.947"W	4071.31	330.951	3.69	
10740.00	347.190	6563.14	4113.17	3651.45	-1999.34	1665496.33	14320495.98	39.2607.629N	80°54'40.232"W	4162.98	331.297	1.86	
10834.00	343.720	6562.43	4206.75	3742.42	-2022.94	1665472.73	14320586.91	39.2608.529N	80°54'40.532"W	4254.17	331.607	3.69	
10929.00	340.910	6561.85	4301.67	3832.92	-2051.80	1665443.89	14320677.37	39.2609.423N	80°54'40.898"W	4347.54	331.839	2.96	
11024.00	339.290	6561.33	4396.67	3922.24	-2084.13	1665411.57	14320766.66	39.2610.306N	80°54'41.309"W	4441.57	332.016	1.71	
11119.00	338.390	6560.79	4491.64	4010.83	-2118.42	1665377.29	14320855.22	39.2611.182N	80°54'41.745"W	4535.91	332.158	0.95	
11213.00	338.370	6560.26	4585.59	4098.22	-2153.06	1665342.67	14320942.57	39.2612.046N	80°54'42.186"W	4629.37	332.284	0.04	
11308.00	338.840	6559.75	4680.55	4186.67	-2187.71	1665308.03	14321030.99	39.2612.921N	80°54'42.626"W	4723.80	332.411	0.49	
11403.00	339.310	6559.23	4775.53	4275.40	-2221.64	1665274.11	14321119.68	39.2613.798N	80°54'43.057"W	4818.17	332.542	0.49	
11498.00	339.110	6558.74	4870.52	4364.22	-2255.36	1665240.41	14321208.46	39.2614.676N	80°54'43.486"W	4912.54	332.671	0.21	
11593.00	337.570	6558.23	4965.47	4452.51	-2290.42	1665205.36	14321296.71	39.2615.549N	80°54'43.932"W	5007.08	332.778	1.62	
11688.00	339.240	6557.74	5080.42	4540.83	-2325.38	1665170.41	14321385.01	39.2616.423N	80°54'44.376"W	5101.62	332.883	1.76	
11784.00	340.640	6557.29	5156.41	4631.01	-2358.31	1665137.50	14321475.14	39.2617.314N	80°54'44.795"W	5196.91	333.013	1.46	
11878.00	340.470	6556.76	5250.41	4719.64	-2389.60	1665106.22	14321563.74	39.2618.190N	80°54'45.193"W	5290.11	333.146	0.20	
0.10												0.10	
-0.18													-0.18

Turn Rate	Comments
ft/100ft	

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Vera Pad
Well	Mysis Unit 2H
Wellbore	Mysis Unit 2H AWB
Slot	Slot #02

## WELLPATH DATA (175 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
11973.00	90.370	340.320	6556.15	5345.41	4809.13	-2421.48	1665074.35	14321653.20	39°26'19.075"N	80°54'45.598"W	5384.36	333.274	0.00	0.00	-0.16	
12068.00	90.310	340.090	6555.58	5440.41	4898.52	-2453.65	1665042.20	14321742.55	39°26'19.959"N	80°54'46.007"W	5478.68	333.394	0.25	-0.06	-0.24	
12163.00	90.310	338.930	6555.07	5535.40	4987.51	-2486.90	1665008.96	14321831.50	39°26'20.839"N	80°54'46.430"W	5573.14	333.498	0.00	0.00	-1.22	
12257.00	90.250	338.230	6554.61	5629.36	5075.01	-2521.23	1664974.64	14321918.97	39°26'21.704"N	80°54'46.866"W	5666.78	333.582	0.75	-0.06	-0.74	
12352.00	90.220	340.300	6554.22	5724.34	5163.85	-2554.86	1664941.02	14322007.77	39°26'22.582"N	80°54'47.294"W	5761.31	333.676	2.18	-0.03	2.18	
12446.00	90.310	341.320	6553.79	5818.33	5252.63	-2585.76	1664910.14	14322096.51	39°26'23.460"N	80°54'47.686"W	5854.59	333.790	1.09	0.10	1.09	
12541.00	90.400	340.210	6553.20	5913.32	5342.32	-2617.06	1664878.86	14322186.17	39°26'24.347"N	80°54'48.084"W	5948.90	333.901	1.17	0.09	-1.17	
12635.00	90.280	339.570	6552.64	6007.32	5430.59	-2649.38	1664846.55	14322274.40	39°26'25.220"N	80°54'48.495"W	6042.39	333.994	0.69	-0.13	-0.68	
12730.00	90.340	339.310	6552.13	6102.31	5519.54	-2682.74	1664813.20	14322363.31	39°26'26.099"N	80°54'48.919"W	6136.97	334.078	0.28	0.06	-0.27	
12825.00	90.280	339.720	6551.61	6197.30	5608.53	-2716.98	1664779.97	14322452.27	39°26'26.979"N	80°54'49.342"W	6231.54	334.161	0.44	-0.06	0.43	
12920.00	90.310	339.080	6551.12	6292.29	5697.45	-2749.41	1664746.56	14322541.16	39°26'27.858"N	80°54'49.767"W	6326.15	334.240	0.67	0.03	-0.67	
13014.00	90.340	338.830	6550.59	6388.27	5785.18	-2783.16	1664712.81	14322628.85	39°26'28.725"N	80°54'50.196"W	6419.84	334.308	0.27	0.00	-0.27	
13109.00	90.340	337.600	6550.03	6481.21	5873.39	-2818.42	1664677.57	14322717.03	39°26'29.598"N	80°54'50.644"W	6514.61	334.365	1.29	0.00	-1.29	
13204.00	90.280	337.640	6549.51	6576.12	5961.23	-2854.59	1664641.42	14322804.84	39°26'30.466"N	80°54'51.104"W	6609.46	334.412	0.08	-0.06	0.04	
13299.00	90.160	337.970	6549.16	6671.03	6049.19	-2890.48	1664605.54	14322892.76	39°26'31.336"N	80°54'51.561"W	6704.30	334.460	0.37	-0.14	0.35	
13394.00	90.310	340.190	6548.77	6766.01	6137.93	-2924.39	1664571.64	14322981.46	39°26'32.213"N	80°54'51.992"W	6798.99	334.525	2.34	0.17	2.34	
13489.00	90.370	343.070	6548.21	6860.97	6228.07	-2954.33	1664541.72	14323071.57	39°26'33.104"N	80°54'52.372"W	6893.26	334.622	3.03	0.06	3.03	
13583.00	90.950	344.310	6547.13	6954.78	6318.28	-2980.73	1664515.33	14323161.74	39°26'33.996"N	80°54'52.708"W	6986.09	334.744	1.46	0.62	1.32	
13678.00	90.430	345.610	6545.98	7049.44	6410.02	-3005.38	1664490.69	14323253.44	39°26'34.903"N	80°54'53.021"W	7079.59	334.880	1.47	-0.55	1.37	
13773.00	90.430	343.650	6544.52	7144.15	6501.61	-3030.55	1664465.52	14323345.00	39°26'35.809"N	80°54'53.341"W	7173.23	335.009	2.06	0.00	-2.06	
13867.00	90.490	343.290	6544.52	7237.99	6591.73	-3057.30	1664438.79	14323435.08	39°26'36.699"N	80°54'53.680"W	7266.22	335.118	0.39	0.06	-0.38	
13961.00	90.620	342.190	6543.61	7331.89	6681.49	-3085.19	1664410.91	14323524.80	39°26'37.587"N	80°54'54.035"W	7359.39	335.215	1.18	0.14	-1.17	
14056.00	90.550	338.430	6542.65	7425.86	6769.97	-3116.85	1664379.26	14323613.25	39°26'38.462"N	80°54'54.437"W	7453.00	335.279	4.00	-0.07	-4.00	
14150.00	90.580	336.210	6541.71	7520.74	6857.62	-3153.48	1664342.65	14323700.86	39°26'39.328"N	80°54'54.903"W	7547.93	335.305	2.34	0.03	-2.34	
14183.00	90.580	336.210	6541.37	7553.66	6887.91	-3166.79	1664329.34	14323731.04	39°26'39.627"N	80°54'55.072"W	7580.93	335.309	0.00	0.00	0.00	Projected MD at TD: 14183'

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

Page 8 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Mysis Unit 2H
Field	Tyler	Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad		

## HOLE & CASING SECTIONS - Ref Wellbore: Mysis Unit 2H AWB Ref Wellpath: Mysis Unit 2H AWP Proj: 14183'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	24.50	104.50	80.00	24.50	104.50	0.00	0.00	-0.27	0.23
17.5in Open Hole	104.50	749.70	645.20	104.50	749.67	-0.27	0.23	-4.16	3.71
13.375in Casing Surface	24.50	749.70	725.20	24.50	749.67	0.00	0.00	-4.16	3.71
12.25in Open Hole	749.70	2577.30	1827.60	749.67	2575.89	-4.16	3.71	-25.89	-10.97
9.625in Casing Intermediate	24.50	2577.30	2552.80	24.50	2575.89	0.00	0.00	-25.89	-10.97
8.75in Open Hole	2577.30	5985.50	3408.20	2575.89	5926.15	-25.89	-10.97	-435.91	-453.74
8.5in Open Hole	5985.50	14183.00	8197.50	5926.15	6541.37	-435.91	-453.74	6887.81	-3166.79
5.5in Casing Production	24.50	14183.00	14158.50	24.50	6541.37	0.00	0.00	6887.81	-3166.79

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Mysis Unit 2H POE Rev-2	6555.00	-53.56	-673.82	1666821.31	14316792.46	39°25'30.996"N	80°54'23.387"W	point
Mysis Unit 2H BHL Rev-2	6581.00	6898.52	-3181.17	1664314.97	14323741.75	39°26'39.733"N	80°54'55.256"W	point
Mysis Unit 2H LP Rev-1	6581.00	92.64	-726.55	1666768.61	14316938.59	39°25'32.443"N	80°54'24.057"W	point

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Mysis Unit 2H
Field	Tyler	Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad		

WELLPATH COMPOSITION - Ref Wellbore: Mysis Unit 2H AWB Ref Wellpath: Mysis Unit 2H AWP Proj: 14183'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	722.50	Gyrodatta standard - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <17-1/2">(100'-713')	Mysis Unit 2H AWB
722.50	1413.50	Gyrodatta standard - Drop gyro or Multi-shot	02 Gyrodatta MS Gyro <12-1/4">(713')(775'-1404')	Mysis Unit 2H AWB
1413.50	2495.50	ISCWSA MWD, Rev. 4 (Standard)	03 WFT EM <12-1/4">(1404')(1519'-2486')	Mysis Unit 2H AWB
2495.50	5915.50	ISCWSA MWD, Rev. 4 (Standard)	04 WFT EM <8-3/4">(2486')(2596'-5906')	Mysis Unit 2H AWB
5915.50	14150.00	BHI AutoTrak Curve (Short)	05 BHI AT Curve <8-1/2">(5915.5')(5985'-14150')	Mysis Unit 2H AWB
14150.00	14183.00	Blind Drilling (std)	Projection to bit	Mysis Unit 2H AWB

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# Actual Wellpath Report

Mysis Unit 2H AWP Proj: 14183'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Mysis Unit 2H
Field	Tyler	Wellbore	Mysis Unit 2H AWB
Facility	Vera Pad		

## COMMENTS

### Wellpath general comments

API: 47-095-02395-0000  
BHI Job #: 8790012  
Rig: Frontier 22  
Duration: 09/30/2017-10/02/2017  
Gyrodata MS Gyro <17-1/2"> (100'-713')  
Gyrodata MS Gyro <12-1/4"> (713')(775'-1404')  
WFT EM <12-1/4"> (1404')(1519'-2486')  
WFT EM <8-3/4"> (2486')(2596'-5906')  
BHI AT Curve <8-1/2"> (5915.5')(5985'-14150')  
Middlesex: 6530' MD  
Burkett: 6691' MD  
Tully: 6751' MD  
Marcellus POE: 6827' MD  
Projected MD at TD: 14183'

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/29/2018
Job End Date:	2/27/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02395-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Mysis 2H
Latitude:	39.42168600
Longitude:	-80.39009880
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,591
Total Base Water Volume (gal):	13,823,475
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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	90.90830	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.34589	

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SAND- PREMIUM WHITE-40/70	Halliburton	Proppant					
				Listed Below			
FR-76	Halliburton	Friction Reducer					
				Listed Below			
SCALECHEK LP-70	Halliburton	Scale Inhibitor					
				Listed Below			
HYDROCHLORI C ACID	Halliburton	Solvent					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
SAND- PREMIUM WHITE 30/50	Halliburton	Proppant					
				Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
BREAKER	Halliburton	Breaker					

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				Listed Below			
SAND-COMMON WHITE-100 MESH	Halliburton	Proppant					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	8.69158	
			Hydrochloric acid	7647-01-0	15.00000	0.04361	
			Guar gum	9000-30-0	100.00000	0.02018	
			Acrylamide acrylate copolymer	Proprietary	30.00000	0.01964	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01964	
			Inorganic salt	Proprietary	30.00000	0.01964	
			Ethylene glycol	107-21-1	60.00000	0.00843	
			Glutaraldehyde	111-30-8	30.00000	0.00269	
			Telmer	Proprietary	10.00000	0.00140	
			Sodium persulfate	7775-27-1	100.00000	0.00050	
			Quaternary ammonium compounds, benzyl-C12- 16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00045	
			Methanol	67-56-1	60.00000	0.00015	
			Sodium polyacrylate	9003-04-7	1.00000	0.00014	
			Ethanol	64-17-5	1.00000	0.00009	
			Fatty acids, tall oil	Proprietary	30.00000	0.00007	
			Modified thiourea polymer	Proprietary	30.00000	0.00007	
			Ethoxylated alcohols	Proprietary	30.00000	0.00007	
			Olefins	Proprietary	5.00000	0.00003	
			Propargyl alcohol	107-19-7	10.00000	0.00002	

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			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Acrylic acid	79-10-7	0.01000	0.00000	
			Sodium sulfate	7757-82-6	0.10000	0.00000	

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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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February 12, 2019

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  
601 57<sup>th</sup> Street  
Charleston, WV 25304

To Whom It May Concern:

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 wells:

- Emerger Unit 2H (API # 47-095-02376)—Vera Pad
- Emerger Unit 3H (API # 47-095-02379)—Vera Pad
- Emerger Unit 4H (API # 47-095-02356)—Vera Pad
- Mysis Unit 2H (API # 47-095-02395)—Vera Pad
- San Juan Unit 1H (API # 47-095-02380)—Vera Pad

If you have any questions please feel free to contact me at (303) 357-7223.

Sincerely,

A handwritten signature in black ink, appearing to read "Megan Griffith", with a long horizontal stroke extending to the right.

Megan Griffith  
Permitting Agent  
Antero Resources Corporation

Enclosures

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LATITUDE 39°27'30"

8,224'

LATITUDE 39°27'30"

11,382' TO BOTTOM HOLE

LONGITUDE 80°52'30"

5,093' TO BOTTOM HOLE

11,987'

LONGITUDE 80°52'30"

COUNTY NAME

PERMIT

### Antero Resources Corporation Well No. Mysis Unit 2H

- 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 PROVIDED 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.

**AS DRILLED DATA:**  
**WELL 2H TOP HOLE INFORMATION:**  
 N: 340,158ft E: 1,603,370ft  
 LAT: 39°25'31.53" LON: 80°54'14.80"  
**BOTTOM HOLE INFORMATION:**  
 N: 347,100ft E: 1,600,317ft  
 LAT: 39°26'39.66" LON: 80°54'55.09"  
 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: 4,364,001m E: 508,268m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,366,101m E: 507,303m

47 - 095 - 02395  
 STATE COUNTY PERMIT

#### PAD LAYOUT

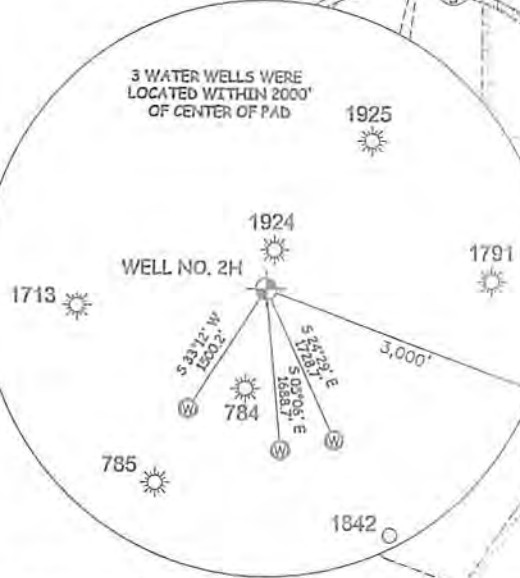
NOT TO SCALE

- MYSIS UNIT 1H 10'
- MYSIS UNIT 2H 10'
- MYSIS UNIT 3H 10'
- ANT UNIT 1H 10'
- ANT UNIT 2H 10'
- ANT UNIT 3H 10'
- SAN JUAN UNIT 1H 10'
- SAN JUAN UNIT 2H 10'
- SAN JUAN UNIT 3H 10'
- EMERGER UNIT 1H 10'
- EMERGER UNIT 2H 10'
- EMERGER UNIT 3H 10'
- EMERGER UNIT 4H 10'

WV NORTH ZONE  
GRID NORTH



3 WATER WELLS WERE LOCATED WITHIN 2000' OF CENTER OF PAD



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

WILLOW LAND SURVEYING PLLC  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 16-046WA  
 DRAWING # MYSIS2HAD  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

**LEGEND**  
 - - - - - Surface Owner Boundary Lines +/-  
 - - - - - Interior Surface Tracts +/-  
 ○ Proposed Well Path  
 ⊗ As Drilled Well Path

*Thomas Summers*  
 THOMAS SUMMERS P.S. 2109  
 DATE 10/12/18  
 OPERATOR'S WELL # MYSIS UNIT #2H

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION  STORAGE \_\_\_ DEEP \_\_\_ SHALLOW   
 LOCATION: ELEVATION 1,148.1' - AS BUILT \_\_\_ WATERSHED \_\_\_ OUTLET MIDDLE ISLAND CREEK  
 QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT CENTERVILLE COUNTY TYLER  
 SURFACE OWNER VERA O. THOMAS ACREAGE 51.11 ACRES +/-  
 OIL & GAS ROYALTY OWNER NORMAN H. THOMAS ET UX; KATHLEEN L. LOUGH; KATHLEEN L. LOUGH; EDWIN K. LIVINGSTON; LARRY D. MCMULLEN; CHARLES O. CONAWAY; ROBERT GOODE; GARY L. STEVENS ET UX; GLENNA R. MCMULLEN; PATSY J. FLETCHER LEASE ACREAGE 125 AC.±; 40.27 AC.±; 25.68 AC.±; 24.41 AC.±; 118.14 AC.±; 77.66 AC.±; 53.13 AC.±; 2.87 AC.±; 70 AC.±; 69 AC.±  
 PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_  
 PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG  
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,541' TVD 14,183' MD  
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD  
 DENVER, CO 80202 CHARLESTON, WV 25313





STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
 WILLOW LAND SURVEYING P.L.C.  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415



**NOTE**

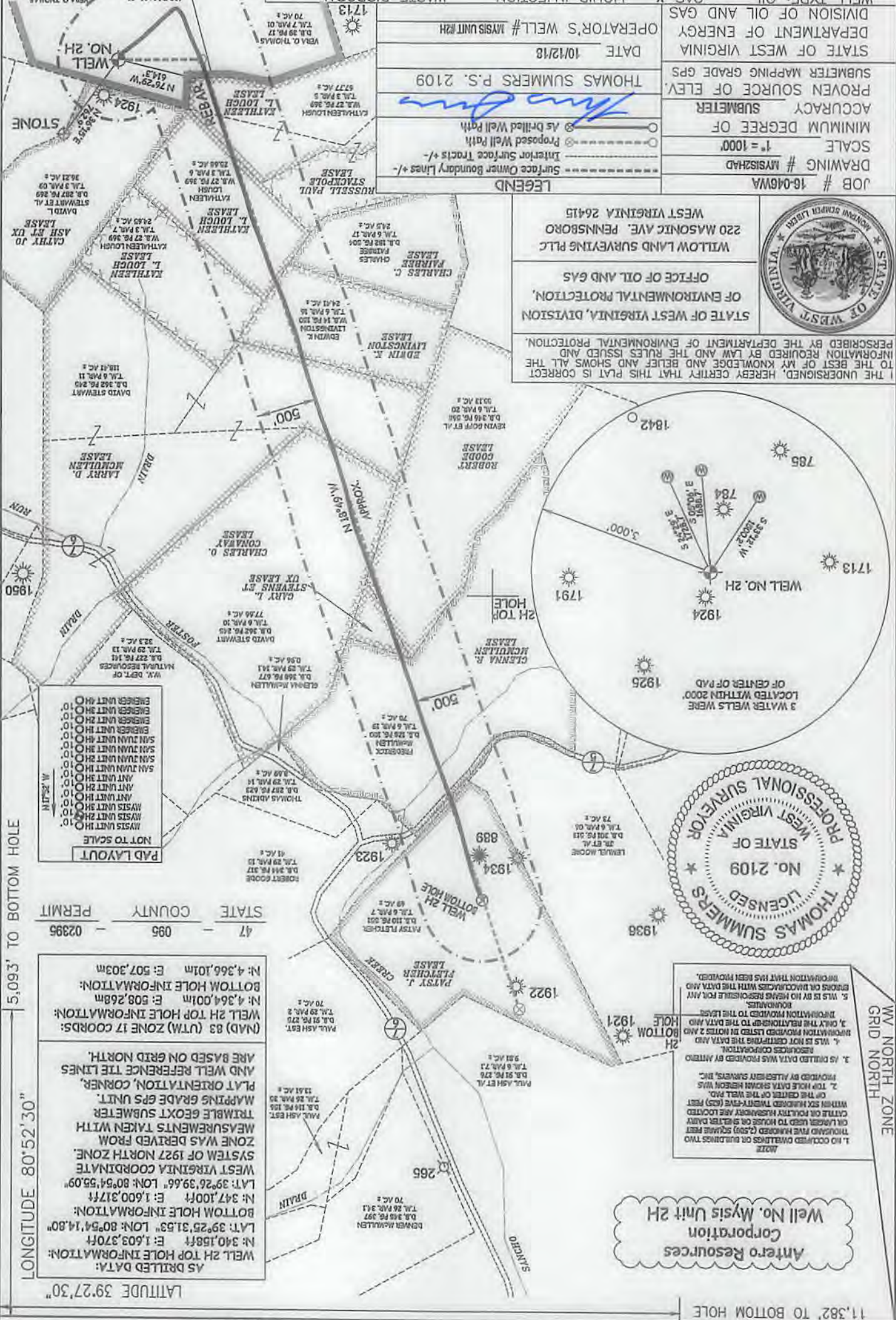
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALSTERMAN SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. THIS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3. ONLY THE RELIABILITY OF THE DATA AND INFORMATION PROVIDED TO THE LESSEE IS GUARANTEED.
5. THIS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR DISCREPANCIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

Antero Resources Corporation  
 Well No. Mysis Unit 2H

JOB # 16-046WA	DRAWING # MYSIS2HAD	SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY	PROVEN SOURCE OF ELEVATION	SUBMITTER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY	OPERATOR'S WELL # MYSIS UNIT #2H	DATE 10/12/18
DIVISION OF OIL AND GAS		

LEGEND  
 --- Surface Owner Boundary Lines +/-  
 - - - - Interior Surface Tracts +/-  
 ○ Proposed Well Path  
 ⊙ As Drilled Well Path

FORM W-6  
 ADDRESS 1615 WYNNKOP ST. DENVER, CO 80202  
 WELL OPERATOR ANTERO RESOURCES CORP.  
 TARGET FORMATION MARCELLUS  
 (SPECIFY) AS DRILLED  
 PLUG OFF OLD FORMATION  
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL  
 KATHLEEN L. LOUGH; EDWIN K. LIVINGSTON; LARRY D. MCMULLEN; CHARLES O. CONAWAY;  
 ROBERT GOODE; GARY L. STEVENS ET UX; GLENNA R. MCMULLEN; PATSY J. FLETCHER  
 OIL & GAS ROYALTY OWNER NORMAN H. THOMAS ET UX; KATHLEEN L. LOUGH;  
 SURFACE OWNER VERA O. THOMAS  
 QUADRANGLE MIDDLEBOURNE 7.5 DISTRICT CENTERVILLE COUNTY TYLER  
 ACREAGE 51.11 ACRES +/-  
 LEASE ACREAGE 125 AC +/- 40.27 AC +/-  
 25.68 AC +/- 24.41 AC +/- 116.14 AC +/- 17.66 AC +/-  
 53.13 AC +/- 2.87 AC +/- 70 AC +/- 69 AC +/-  
 PERMIT COUNTY NAME  
 PERMITTED CLEAN OUT & REPLUG  
 ESTIMATED DEPTH 6,541' TVD 14,183' MD  
 DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313



PAD LAYOUT

10	EMERGENCY UNIT #10
10	EMERGENCY UNIT #11
10	EMERGENCY UNIT #12
10	EMERGENCY UNIT #13
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10	EMERGENCY UNIT #96
10	EMERGENCY UNIT #97
10	EMERGENCY UNIT #98
10	EMERGENCY UNIT #99
10	EMERGENCY UNIT #100

STATE 47 COUNTY 095 PERMIT 02395

DRILLED DATA:  
 WELL 2H TOP HOLE INFORMATION:  
 N: 340,158ft E: 1,603,370ft  
 LAT: 39°25'31.53" LON: 80°54'14.80"  
 BOTTOM HOLE INFORMATION:  
 N: 347,100ft E: 1,600,317ft  
 LAT: 39°26'39.66" LON: 80°54'55.09"  
 (NAD) 83 (UTM) ZONE 17 COORDS:  
 WELL 2H TOP HOLE INFORMATION:  
 N: 4,364,001m E: 508,268m  
 BOTTOM HOLE INFORMATION:  
 N: 4,366,101m E: 507,303m

ARE BASED ON GRID NORTH.  
 AND WELL REFERENCE THE LINES  
 PLAT ORIENTATION, CORNER,  
 MAPPING GRADE GPS UNIT.  
 TRIMBLE GEOXT SUBMETER  
 MEASUREMENTS TAKEN WITH  
 ZONE WAS DERIVED FROM  
 WEST VIRGINIA COORDINATE  
 SYSTEM OF 1927 NORTH ZONE.

LONGITUDE 80°52'30" LONGITUDE 80°52'30" LONGITUDE 80°52'30"

LATITUDE 39°27'30" LATITUDE 39°27'30" LATITUDE 39°27'30"



