

# ANTERO RESOURCES CORPORATION

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

Slot: Slot #12  
 Well: Emerger Unit 2H  
 Wellbore: Emerger Unit 2H PWB



API: 47-095-02378-0000  
 BHI Job #: 8696636  
 Rig: Frontier 22  
 Duration: 08/11/2017-08/13/2017

Gyrodata MS Gyro <17-1/2"> (100'-686') : 0.39° Inc, 109.50ft MD, 109.50ft TVD, -0.28ft VS  
 WFT EM <12-1/4"> (686')(709-2437') : 0.12° Inc, 718.50ft MD, 718.50ft TVD, -0.73ft VS

Well Information	
Well Name	Emerger Unit 2H PWB
Well ID	15610.00R
Well Type	Production
Well Status	Active
Well Depth	718.50 ft
Well TVD	718.50 ft
Well Azimuth	160.34°
Well Dip	0.12°
Well Completion	Open Hole
Well Casing	2 1/2" x 11.3 lb/ft
Well Cement	Class G
Well Annulus	Open
Well Isolation	None
Well Completion Date	08/13/2017
Well Completion By	Antero Resources
Well Completion Notes	Wellbore: Emerger Unit 2H PWB

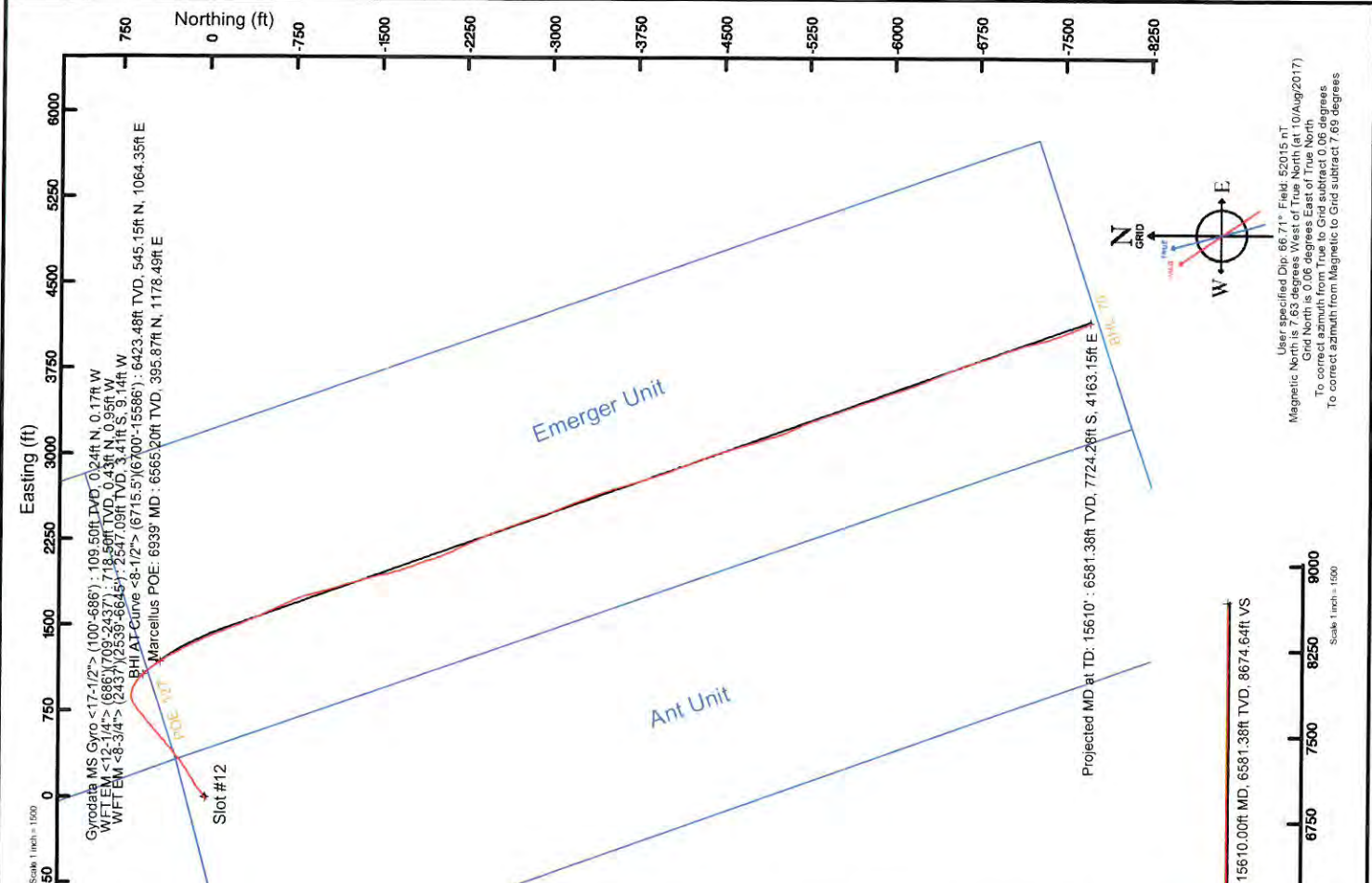
Location Information	
Facility Name	Vera Pad
Grid East (US ft)	1067510.000
Grid North (US ft)	14316799.487
Latitude	39°25'31.000"N
Longitude	80°54'14.600"W
Slot #12	16.63
Local E (ft)	1067527.123
Local N (ft)	14316751.989
Latitude	39°25'30.590"N
Longitude	80°54'14.390"W
Frontier 22 (RKB) to Mud line (At Slot Slot #12)	24.5ft
Mean Sea Level to Mud line (At Slot Slot #12)	-1145ft
Frontier 22 (RKB) to Mean Sea Level	1169.5ft

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tile On	6654.50	36.260	133.750	6387.39	595.16	1045.20	0.00	-180.57
Proj. To Bottom	6719.50	40.100	137.150	6436.48	636.61	1073.34	6.73	-144.12
Landing Pt	7113.65	50.000	148.990	6600.00	255.81	1274.62	12.92	187.93
On Azimuth	7667.99	50.000	160.341	6600.00	-154.17	1468.57	2.90	639.31
BHL	15614.47	90.000	160.341	6600.00	-7731.63	4175.72	0.00	8665.78

Well Data	
Slot	Emerger Unit 2H
Well	Emerger Unit 2H AWB
Wellbore	Emerger Unit 2H PWB
Slot #12	Emerger Unit 2H AWB
Slot #12	Emerger Unit 2H PWB
Well Path	Emerger Unit 2H AWB Proj. 15610
Well Path	Emerger Unit 2H PWB Rev-A-0

BHI AT Curve <8-1/2"> (6715.5')(6700'-15586') : 38.79° Inc, 6700.00ft MD, 6423.48ft TVD, -155.29ft VS  
 Marcellus POE: 6939' MD : 69.71° Inc, 6939.00ft MD, 6565.20ft TVD, 23.70ft VS

Projected MD at TD: 15610.00ft MD, 6581.38ft TVD, 8674.64ft VS



User specified Dip: 66.71° Field: 52015, NT  
 Magnetic North is 7.63 degrees West of True North (at 10/Aug/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 7.69 degrees

Scale 1 inch = 1000

Vertical Section (ft)  
 Azimuth 160.34° with reference 0.00 N, 0.00 E



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Vera Pad
Slot	Slot #12
Well	Emerger Unit 2H
Wellbore	Emerger Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999601
Convergence at slot	0.06° East
Software System	WellArchitect® 5.0
User	Delaset
Report Generated	08/Sep/2017 at 18:23
Database/Source file	WA_MPL_EasternUS_Defn/Emerger_Unit_2H_AWP_Proj_15610_.xml

WELLPATH LOCATION				
	Local coordinates		Grid coordinates	
	North[ft]	East[ft]	Northing[US ft]	Latitude
Slot Location	-47.54	16.53	14316751.97	39°25'30.590"N
Facility Reference Pt			14316799.49	39°25'31.060"N
Field Reference Pt			0.00	0°00'00.000"
				85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 22 (RKB)
MD Reference Pt	Frontier 22 (RKB)
Field Vertical Reference	Mean Sea Level
	Frontier 22 (RKB) to Facility Vertical Datum
	Frontier 22 (RKB) to Mean Sea Level
	Frontier 22 (RKB) to Mud Line at Slot (Slot #12)
	Section Origin
	Section Azimuth
	24.50ft
	1169.50ft
	24.50ft
	N 0.00, E 0.00 ft
	160.34°



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #12
ANTERO RESOURCES CORPORATION		
Area	Tyler County, WV	Emerger Unit 2H
Field	Tyler	Emerger Unit 2H AWB
Facility	Vera Pad	

## WELLPATH DATA (188 stations) † = interpolated/extrapolated station

MD Inclin	North	East	Vert Sect	TVD	Azimuth	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ffl	ffl	ffl	ffl	ffl	ffl	IUS ffl	IUS ffl			ffl	ffl	ffl/100ffl	ffl/100ffl	ffl/100ffl	
0.00H	0.000	324.400	0.00	0.00	0.00	1667527.12	14316751.97	39°25'30.590"N	80°54'14.390"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.000	324.400	0.00	0.00	0.00	1667527.12	14316751.97	39°25'30.590"N	80°54'14.390"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.390	324.400	109.50	-0.28	0.24	-0.17	1667526.95	14316752.20	39°25'30.592"N	80°54'14.392"W	0.29	324.400	0.46	-41.88	Gyrodata MS Gyro <17-1/2"> (100'-686')
209.50	0.370	278.920	209.50	-0.76	0.56	-0.69	1667526.44	14316752.53	39°25'30.596"N	80°54'14.399"W	0.89	309.347	0.29	-0.02	-45.48
309.50	0.140	320.390	309.50	-1.03	0.71	-1.08	1667526.04	14316752.68	39°25'30.597"N	80°54'14.404"W	1.29	303.123	0.28	-0.23	41.47
409.50	0.150	164.850	409.50	-1.01	0.67	-1.13	1667526.00	14316752.64	39°25'30.597"N	80°54'14.404"W	1.31	300.902	0.28	0.01	-155.54
509.50	0.100	177.710	509.50	-0.80	0.46	-1.09	1667526.04	14316752.43	39°25'30.595"N	80°54'14.404"W	1.18	292.931	0.06	-0.05	12.86
609.50	0.140	123.970	609.50	-0.62	0.30	-0.98	1667526.14	14316752.27	39°25'30.593"N	80°54'14.403"W	1.03	287.227	0.11	0.04	-53.74
695.50	0.220	338.490	695.50	-0.70	0.40	-0.96	1667526.17	14316752.37	39°25'30.594"N	80°54'14.402"W	1.04	294.506	1.35	-0.43	566.26
718.50	0.120	108.730	718.50	-0.73	0.43	-0.95	1667526.17	14316752.40	39°25'30.594"N	80°54'14.402"W	1.04	294.506	1.35	-0.43	566.26
830.50	0.780	255.080	830.49	-0.72	0.20	-1.58	1667525.55	14316752.17	39°25'30.592"N	80°54'14.410"W	1.59	277.207	0.79	0.59	130.67
926.50	1.770	249.020	926.47	-0.74	-0.50	-3.59	1667523.53	14316751.47	39°25'30.585"N	80°54'14.436"W	3.63	262.078	1.04	1.03	-6.31
1021.50	2.440	246.000	1021.40	-0.55	-1.85	-6.81	1667520.32	14316750.12	39°25'30.572"N	80°54'14.477"W	7.06	254.818	0.71	0.71	-3.18
1115.50	2.750	238.980	1115.31	0.04	-3.82	-10.57	1667516.56	14316748.15	39°25'30.552"N	80°54'14.525"W	11.24	250.112	0.47	0.33	-7.47
1210.50	3.240	234.580	1210.18	1.22	-6.55	-14.71	1667512.42	14316745.42	39°25'30.525"N	80°54'14.578"W	16.10	245.985	0.57	0.52	-6.63
1304.50	3.740	228.350	1304.00	3.09	-10.13	-19.17	1667507.96	14316741.84	39°25'30.490"N	80°54'14.634"W	21.68	242.139	0.67	0.53	-6.63
1398.50	3.310	220.280	1397.82	5.60	-14.24	-23.21	1667503.92	14316737.74	39°25'30.450"N	80°54'14.686"W	27.23	238.473	0.70	-0.46	-8.59
1493.50	2.300	222.590	1492.71	7.86	-17.73	-26.27	1667500.86	14316734.24	39°25'30.415"N	80°54'14.725"W	31.70	235.982	1.07	-1.06	2.43
1588.50	0.470	300.100	1587.68	8.45	-18.94	-27.90	1667499.23	14316733.03	39°25'30.403"N	80°54'14.746"W	33.72	235.827	2.36	-1.93	81.59
1683.50	2.060	26.780	1682.66	6.98	-17.22	-27.47	1667499.66	14316734.75	39°25'30.420"N	80°54'14.740"W	32.42	237.913	2.20	1.67	91.24
1777.50	2.430	28.630	1776.59	4.49	-13.97	-25.75	1667501.38	14316738.01	39°25'30.452"N	80°54'14.718"W	29.30	241.530	0.40	0.39	1.97
1872.50	2.770	33.240	1871.49	1.76	-10.28	-23.53	1667503.60	14316741.70	39°25'30.489"N	80°54'14.690"W	25.68	246.405	0.42	0.36	4.85
1969.50	3.420	38.420	1968.35	-1.18	-6.05	-20.45	1667506.68	14316745.92	39°25'30.530"N	80°54'14.651"W	21.32	253.516	0.73	0.67	5.34
2063.50	2.760	43.630	2062.21	-3.68	-2.22	-17.14	1667509.99	14316749.75	39°25'30.568"N	80°54'14.608"W	17.29	262.636	0.76	-0.70	5.34
2159.50	1.110	67.150	2158.15	-4.77	-0.18	-14.69	1667512.44	14316751.79	39°25'30.588"N	80°54'14.577"W	14.69	269.292	1.87	-1.72	24.50
2253.50	0.720	122.440	2252.14	-4.36	-0.14	-13.35	1667513.77	14316751.82	39°25'30.589"N	80°54'14.560"W	13.35	269.379	0.98	-0.41	58.82
2348.50	0.960	126.510	2347.13	-3.22	-0.94	-12.21	1667514.92	14316751.03	39°25'30.581"N	80°54'14.546"W	12.25	265.605	0.26	0.25	4.28
2446.50	1.080	127.440	2445.12	-1.77	-1.99	-10.82	1667516.31	14316749.98	39°25'30.570"N	80°54'14.528"W	11.00	259.585	0.12	0.12	0.95
2548.50	1.390	132.610	2547.09	0.14	-3.41	-9.14	1667517.98	14316748.56	39°25'30.556"N	80°54'14.507"W	9.76	249.546	0.32	0.30	5.07
2643.50	1.110	40.700	2642.08	0.70	-3.49	-7.70	1667519.43	14316748.48	39°25'30.556"N	80°54'14.488"W	8.45	245.588	1.90	-0.29	-96.75



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #12
ANTERO RESOURCES CORPORATION	Well	Emerger Unit 2H
Tyler County, WV	Wellbore	Emerger Unit 2H AWB
Tyler		
Vera Pad		

## WELLPATH DATA (188 stations)

MD Inclin	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	US ft	US ft			ft	°	°/100ft	°/100ft	°/100ft	
2738.50	1.000	42.840	2737.06	-0.14	-2.19	1667520.59	14316749.78	39°25'30.568"N	80°54'14.473"W	6.89	251.486	0.12	-0.12	2.25	
2833.50	0.880	41.590	2832.05	-0.87	-1.03	1667521.64	14316750.94	39°25'30.580"N	80°54'14.460"W	5.58	259.324	0.13	-0.13	-1.32	
2928.50	1.050	20.320	2927.04	-1.89	0.33	1667522.43	14316752.30	39°25'30.593"N	80°54'14.450"W	4.71	273.995	0.41	0.18	-22.39	
3024.50	3.120	53.910	3022.97	-3.30	2.69	1667524.84	14316754.66	39°25'30.617"N	80°54'14.419"W	3.53	319.732	2.42	2.16	34.99	
3119.50	5.450	55.140	3117.70	-5.22	6.79	1667530.63	14316758.76	39°25'30.657"N	80°54'14.345"W	7.65	27.330	2.45	2.45	1.29	
3213.50	6.740	49.760	3211.17	-8.33	12.91	1667538.50	14316764.87	39°25'30.717"N	80°54'14.245"W	17.21	41.410	1.50	1.37	-5.72	
3308.50	7.560	58.090	3305.43	-11.61	19.81	1667548.06	14316771.78	39°25'30.786"N	80°54'13.982"W	28.83	46.591	1.39	0.86	8.77	
3403.50	8.680	53.190	3399.48	-15.05	27.41	1667559.10	14316779.37	39°25'31.196"N	80°54'13.829"W	42.13	49.407	1.38	1.18	-5.16	
3498.50	9.790	50.320	3493.24	-19.93	36.87	1667571.05	14316788.82	39°25'30.954"N	80°54'13.829"W	57.36	50.008	1.26	1.17	-3.02	
3592.50	11.610	46.950	3585.61	-26.42	48.43	1667584.11	14316800.38	39°25'31.068"N	80°54'13.663"W	74.80	49.655	2.05	1.94	-3.59	
3687.50	12.570	51.750	3678.50	-33.51	61.35	1667599.21	14316813.30	39°25'31.196"N	80°54'13.470"W	94.68	49.610	1.46	1.01	5.05	
3782.50	13.900	57.950	3770.98	-39.26	73.81	1667616.99	14316825.75	39°25'31.319"N	80°54'13.243"W	116.32	50.616	2.05	1.40	6.53	
3876.50	14.530	58.800	3862.10	-44.04	85.91	1667636.64	14316837.84	39°25'31.438"N	80°54'12.993"W	139.23	51.900	0.71	0.67	0.90	
3971.50	16.920	59.980	3953.54	-48.91	99.00	1667658.80	14316850.93	39°25'31.567"N	80°54'12.710"W	164.78	53.074	2.54	2.52	1.24	
4065.50	19.210	59.730	4042.90	-54.22	113.64	1667683.99	14316865.56	39°25'31.712"N	80°54'12.389"W	193.76	54.090	2.44	2.44	-0.27	
4160.50	21.060	57.090	4132.09	-61.01	130.79	1667711.81	14316882.71	39°25'31.881"N	80°54'12.034"W	226.37	54.705	2.17	1.95	-2.78	
4255.50	23.050	57.700	4220.14	-68.99	150.01	1667741.85	14316901.92	39°25'32.070"N	80°54'11.651"W	262.01	55.073	2.11	2.09	0.84	
4350.50	23.760	58.360	4307.32	-77.03	169.99	166773.85	14316921.89	39°25'32.267"N	80°54'11.242"W	299.70	55.446	0.80	0.75	0.69	
4445.50	25.200	56.090	4393.78	-85.99	191.31	1667806.92	14316943.20	39°25'32.478"N	80°54'10.820"W	339.04	55.649	1.81	1.52	-2.39	
4540.50	24.810	53.300	4479.88	-96.80	214.51	1667839.67	14316966.39	39°25'32.707"N	80°54'10.403"W	379.18	55.549	1.31	-0.41	-2.94	
4635.50	24.190	50.710	4566.33	-109.18	238.74	1667870.71	14316990.62	39°25'32.946"N	80°54'10.007"W	418.50	55.217	1.31	-0.65	-2.73	
4730.50	25.260	51.730	4652.62	-122.19	263.62	1667901.67	14317015.49	39°25'33.192"N	80°54'09.612"W	458.15	54.871	1.21	1.13	1.07	
4825.50	25.140	50.500	4738.58	-135.51	289.01	1667933.15	14317040.87	39°25'33.442"N	80°54'09.210"W	498.51	54.567	0.57	-0.13	-1.29	
4920.50	24.880	48.360	4824.67	-149.84	315.13	1667963.64	14317066.97	39°25'33.700"N	80°54'08.821"W	538.52	54.185	0.99	-0.27	-2.25	
5015.50	25.720	51.060	4910.56	-164.13	341.36	1667994.60	14317093.20	39°25'33.959"N	80°54'08.426"W	579.00	53.873	1.50	0.88	2.84	
5110.50	25.130	50.480	4996.36	-177.78	367.16	1668026.18	14317118.98	39°25'34.213"N	80°54'08.023"W	619.73	53.669	0.67	-0.62	-0.61	
5204.50	24.630	47.210	5081.64	-192.26	393.17	1668055.94	14317144.98	39°25'34.470"N	80°54'07.643"W	659.13	53.381	1.56	-0.53	-3.48	
5299.50	24.610	50.780	5168.01	-206.66	419.12	1668085.78	14317170.92	39°25'34.726"N	80°54'07.262"W	698.58	53.133	1.57	-0.02	3.76	
5393.50	24.970	50.330	5253.34	-220.00	444.16	1668116.21	14317195.96	39°25'34.974"N	80°54'06.874"W	737.96	52.995	0.43	0.38	-0.48	
5488.50	24.900	47.710	5339.49	-234.56	470.42	1668146.42	14317222.20	39°25'35.233"N	80°54'06.489"W	777.91	52.791	1.16	-0.07	-2.76	



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #12
Operator	ANTERO RESOURCES CORPORATION	Well	Emerger Unit 2H
Area	Tyler County, WV	Wellbore	Emerger Unit 2H AWB
Field	Tyler		
Facility	Vera Pad		

WELLPATH DATA (188 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
5582.50	24.350	49.350	5424.94	-249.12	496.36	648.89	1668175.75	14317248.13	39°25'35.489"N	80°54'06.114"W	816.97	52.586	0.93	-0.59	1.74	
5677.50	24.180	53.920	5511.56	-261.63	520.58	679.48	1668206.33	14317272.34	39°25'35.728"N	80°54'05.724"W	855.98	52.543	1.98	-0.18	4.81	
5772.50	24.110	52.230	5598.25	-273.16	543.92	710.54	1668237.38	14317295.67	39°25'35.958"N	80°54'05.328"W	894.83	52.566	0.73	-0.07	-1.78	
5866.50	23.480	48.780	5684.26	-286.01	568.02	739.80	1668266.63	14317319.77	39°25'36.196"N	80°54'04.955"W	932.72	52.483	1.63	-0.67	-3.67	
5961.50	23.710	52.020	5771.32	-298.97	592.25	769.10	1668295.91	14317343.98	39°25'36.435"N	80°54'04.581"W	970.70	52.402	1.39	0.24	3.41	
6056.50	24.290	52.870	5858.11	-310.84	615.80	799.73	1668326.53	14317367.52	39°25'36.668"N	80°54'04.190"W	1009.34	52.403	0.71	0.61	0.89	
6087.50	23.220	57.300	5886.49	-314.13	622.95	809.96	1668336.75	14317374.67	39°25'36.738"N	80°54'04.060"W	1021.81	52.436	6.71	-3.45	14.29	
6118.50	22.470	62.150	5915.06	-316.36	629.02	820.34	1668347.13	14317380.74	39°25'36.798"N	80°54'03.928"W	1033.74	52.520	6.54	-2.42	15.65	
6150.50	22.180	67.660	5944.66	-317.51	634.17	831.33	1668358.12	14317385.89	39°25'36.849"N	80°54'03.787"W	1045.60	52.662	6.60	-0.91	17.22	
6182.50	22.050	73.140	5974.31	-317.50	638.21	842.67	1668369.45	14317389.92	39°25'36.889"N	80°54'03.643"W	1057.07	52.861	6.46	-0.41	17.13	
6213.50	22.320	78.570	6003.02	-316.37	641.07	854.01	1668380.79	14317392.78	39°25'36.917"N	80°54'03.498"W	1067.85	53.106	6.67	0.87	17.52	
6245.50	22.760	84.040	6032.58	-314.04	642.91	866.12	1668392.90	14317394.62	39°25'36.935"N	80°54'03.344"W	1078.66	53.414	6.69	1.37	17.09	
6276.50	23.980	88.530	6061.04	-310.65	643.70	878.39	1668405.16	14317395.41	39°25'36.943"N	80°54'03.188"W	1088.99	53.765	6.96	3.94	14.48	
6308.50	25.370	93.040	6090.12	-305.97	643.50	891.73	1668418.50	14317395.21	39°25'36.940"N	80°54'03.018"W	1099.67	54.185	7.31	4.34	14.09	
6340.50	26.560	97.410	6118.89	-300.07	642.21	905.68	1668432.44	14317393.93	39°25'36.928"N	80°54'02.840"W	1110.26	54.660	7.04	3.72	13.66	
6371.50	27.920	101.940	6146.45	-293.11	639.82	919.65	1668446.41	14317391.53	39°25'36.904"N	80°54'02.662"W	1120.32	55.173	8.00	4.39	14.61	
6403.50	29.190	106.500	6174.56	-284.58	636.05	934.47	1668461.21	14317387.77	39°25'36.866"N	80°54'02.473"W	1130.39	55.759	7.88	3.97	14.25	
6434.50	29.160	111.370	6201.63	-275.16	631.15	948.75	1668475.49	14317382.87	39°25'36.818"N	80°54'02.291"W	1139.51	56.366	7.66	-0.10	15.71	
6465.50	29.380	115.710	6228.68	-264.79	625.10	962.64	1668489.37	14317376.82	39°25'36.758"N	80°54'02.114"W	1147.79	57.002	6.88	0.71	14.00	
6497.50	30.520	119.500	6256.41	-253.06	617.69	976.78	1668503.51	14317369.41	39°25'36.684"N	80°54'01.934"W	1155.70	57.692	6.90	3.56	11.84	
6529.50	31.110	126.820	6309.97	-226.55	599.42	1004.42	1668531.14	14317351.14	39°25'36.504"N	80°54'01.582"W	1163.06	58.424	7.81	3.84	13.16	
6560.50	33.880	128.940	6335.82	-212.11	588.91	1017.92	1668544.64	14317329.05	39°25'36.400"N	80°54'01.410"W	1169.69	59.172	6.94	4.39	10.03	
6591.50	35.060	130.710	6362.20	-196.51	577.31	1031.83	1668558.54	14317320.90	39°25'36.285"N	80°54'01.233"W	1176.00	59.949	4.52	2.48	6.84	
6623.50	36.260	133.750	6387.39	-180.57	565.16	1045.20	1668571.91	14317316.90	39°25'36.165"N	80°54'01.063"W	1182.35	60.773	4.84	3.69	5.53	
6654.50	38.047	137.292	6413.30	-162.76	551.15	1058.94	1668585.64	14317302.90	39°25'36.026"N	80°54'00.886"W	1188.21	61.599	6.90	3.87	9.81	
6687.00†	38.790	138.630	6423.48	-155.29	545.15	1064.35	1668591.04	14317296.90	39°25'35.967"N	80°54'00.819"W	1193.78	62.504	8.58	5.50	10.90	Middlesex: 6687 MD
6700.00	43.750	140.690	6474.58	-113.33	510.95	1093.34	1668620.02	14317262.72	39°25'35.628"N	80°54'00.450"W	1195.84	62.879	8.58	5.72	10.29	BHI AT Curve <8-1/2"> (6715.5)\(6700'-15586')
6768.00	51.660	142.420	6506.18	-80.43	483.73	1114.91	1668641.59	14317235.50	39°25'35.359"N	80°54'00.176"W	1206.84	64.952	7.56	7.29	3.03	
6815.00	51.832	142.454	6506.80	-79.68	483.11	1115.39	1668642.07	14317234.88	39°25'35.353"N	80°54'00.170"W	1215.33	66.545	17.05	16.83	3.68	
6816.00†	51.832	142.454	6506.80	-79.68	483.11	1115.39	1668642.07	14317234.88	39°25'35.353"N	80°54'00.170"W	1215.52	66.581	17.39	3.36	3.36	Burket: 6816 MD



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #12
Antero	Emerger Unit 2H
Area	Emerger Unit 2H AWB
Field	
Facility	

## WELLPATH DATA (188 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	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	ft/100ft	
6863.00	59.920	143.880	6533.15	-42.54	451.98	1138.68	1668665.34	14317203.77	39°25'35.045"N	80°53'59.873"W	1225.10	68.350	17.39	17.21	3.03	Tully: 6863' MD
6910.00	66.380	144.760	6554.36	-2.25	417.93	1163.11	1668689.77	14317169.73	39°25'34.708"N	80°53'59.562"W	1235.92	70.236	13.85	13.74	1.87	
6939.00†	69.711	145.483	6585.20	23.70	395.87	1178.49	1668705.14	14317147.68	39°25'34.490"N	80°53'59.367"W	1243.21	71.432	11.70	11.49	2.42	Marcellus POE: 6939' MD
6959.00	72.010	145.930	6571.76	41.98	380.26	1189.14	1668715.79	14317132.08	39°25'34.336"N	80°53'59.231"W	1248.46	72.267	11.70	11.49	2.34	
7006.00	77.490	147.710	6584.12	86.05	342.32	1213.94	1668740.57	14317094.15	39°25'33.960"N	80°53'58.916"W	1261.28	74.252	12.22	11.66	3.79	
7054.00	83.020	149.460	6592.24	132.35	301.96	1238.58	1668765.21	14317053.81	39°25'33.561"N	80°53'58.602"W	1274.86	76.299	12.07	11.52	3.65	
7115.00	90.370	152.630	6595.76	192.40	248.72	1268.03	1668794.65	14317000.59	39°25'33.035"N	80°53'58.228"W	1292.20	78.903	13.12	12.05	5.20	
7149.00	90.520	153.490	6596.49	226.12	218.41	1283.44	1668810.05	14316970.29	39°25'32.735"N	80°53'58.032"W	1301.89	80.342	2.57	0.44	2.53	
7244.00	90.370	152.750	6594.75	320.37	133.67	1326.39	1668852.98	14316885.59	39°25'31.897"N	80°53'57.486"W	1333.11	84.245	0.79	-0.16	-0.78	
7340.00	91.140	155.180	6593.49	415.76	47.43	1368.52	1668895.09	14316799.38	39°25'31.044"N	80°53'56.950"W	1369.34	88.015	2.66	0.80	2.53	
7434.00	90.370	157.240	6592.25	509.50	-38.57	1406.43	1668932.99	14316713.42	39°25'30.194"N	80°53'56.488"W	1406.96	91.571	2.34	-0.82	2.19	
7529.00	90.430	158.510	6591.59	604.41	-126.57	1442.21	1668968.75	14316625.45	39°25'29.323"N	80°53'56.014"W	1447.75	95.016	1.34	0.06	1.34	
7623.00	90.460	158.140	6590.86	698.34	-213.92	1476.92	1669003.45	14316538.13	39°25'28.460"N	80°53'55.572"W	1492.34	98.242	0.39	0.03	-0.39	
7719.00	90.400	158.250	6590.14	794.27	-303.05	1512.58	1669039.10	14316449.04	39°25'27.578"N	80°53'55.119"W	1542.64	101.329	0.13	-0.06	0.11	
7813.00	90.250	157.300	6589.60	888.18	-390.06	1548.14	1669074.64	14316362.06	39°25'26.718"N	80°53'54.668"W	1596.52	104.142	1.02	-0.16	-1.01	
7908.00	90.340	154.830	6589.11	982.90	-476.89	1586.67	1669113.16	14316275.27	39°25'25.860"N	80°53'54.178"W	1656.79	106.729	2.60	0.09	-2.60	
8003.00	90.370	155.660	6588.53	1077.53	-563.15	1626.45	1669152.92	14316189.04	39°25'25.006"N	80°53'53.672"W	1721.19	109.098	0.87	0.03	0.87	
8098.00	90.250	154.630	6588.01	1172.13	-649.35	1666.38	1669192.84	14316102.88	39°25'24.154"N	80°53'53.164"W	1788.43	111.290	1.09	-0.13	-1.08	
8193.00	90.310	156.120	6587.55	1266.77	-735.71	1705.97	1669232.40	14316016.56	39°25'23.300"N	80°53'52.661"W	1857.84	113.328	1.57	0.06	1.57	
8287.00	90.550	159.250	6586.84	1360.66	-822.66	1741.65	1669268.08	14315929.64	39°25'22.440"N	80°53'52.208"W	1926.17	115.283	3.34	0.26	3.33	
8382.00	90.400	165.470	6586.05	1455.55	-913.14	1770.43	1669296.84	14315839.19	39°25'21.546"N	80°53'51.843"W	1992.04	117.284	6.55	-0.16	6.55	
8476.00	90.490	165.650	6585.32	1549.16	-1004.17	1793.87	1669320.27	14315748.20	39°25'20.646"N	80°53'51.545"W	2055.80	119.239	0.21	0.10	0.19	
8571.00	90.030	162.760	6584.89	1643.93	-1095.57	1819.72	1669346.11	14315656.84	39°25'19.742"N	80°53'51.217"W	2124.07	121.050	3.08	-0.48	-3.04	
8665.00	89.940	161.920	6584.92	1737.87	-1185.14	1848.24	1669374.62	14315567.30	39°25'18.857"N	80°53'50.855"W	2195.57	122.669	0.90	-0.10	-0.89	
8759.00	90.060	164.300	6584.92	1831.75	-1275.08	1875.55	1669401.92	14315477.40	39°25'17.967"N	80°53'50.508"W	2267.93	124.210	2.54	0.13	2.53	
8854.00	90.030	165.270	6584.84	1926.47	-1366.75	1900.48	1669426.84	14315385.77	39°25'17.061"N	80°53'50.192"W	2340.90	125.722	1.02	-0.03	1.02	
8948.00	90.120	165.290	6584.72	2020.12	-1457.66	1924.36	1669450.71	14315294.89	39°25'16.162"N	80°53'49.889"W	2414.11	127.143	0.10	0.10	0.02	
9042.00	90.060	166.470	6584.57	2113.68	-1548.82	1947.29	1669473.63	14315203.77	39°25'15.261"N	80°53'49.598"W	2488.13	128.498	1.26	-0.06	1.26	
9137.00	90.370	166.010	6584.22	2208.17	-1641.09	1969.89	1669496.22	14315111.53	39°25'14.349"N	80°53'49.311"W	2563.91	129.797	0.58	0.33	-0.48	
9232.00	90.650	161.070	6583.37	2302.99	-1732.17	1996.80	1669523.12	14315020.50	39°25'13.448"N	80°53'48.970"W	2643.41	130.941	5.21	0.29	-5.20	



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #12
ANTERO RESOURCES CORPORATION	Well	Emerger Unit 2H
Tyler County, WV	Wellbore	Emerger Unit 2H AWP
Tyler		
Vera Pad		

## WELLPATH DATA (188 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	VertSect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
9327.00	90.060	158.250	6582.78	2397.97	-1821.23	2029.81	1669556.12	14314931.47	39°25'12.568"N	80°53'48.550"W	2727.09	131.900	3.03	-0.62	-2.97	
9422.00	90.150	162.350	6582.61	2492.95	-1910.65	2061.83	1669588.13	14314842.08	39°25'11.684"N	80°53'48.144"W	2811.01	132.821	4.32	0.09	4.32	
9518.00	90.000	162.380	6582.48	2588.89	-2002.14	2090.92	1669617.20	14314750.63	39°25'10.779"N	80°53'47.775"W	2894.91	133.758	0.16	-0.16	0.03	
9612.00	89.660	156.100	6582.76	2682.83	-2090.00	2124.22	1669650.49	14314662.81	39°25'09.910"N	80°53'47.351"W	2980.00	134.535	6.69	-0.36	-6.68	
9706.00	89.720	153.630	6583.27	2776.38	-2175.05	2164.21	1669690.47	14314577.79	39°25'09.069"N	80°53'46.843"W	3068.33	135.143	2.73	0.06	-2.73	
9801.00	89.850	156.040	6583.62	2870.93	-2260.99	2204.68	1669730.92	14314491.88	39°25'08.219"N	80°53'46.329"W	3157.96	135.722	2.65	0.14	2.64	
9896.00	90.000	155.510	6583.75	2965.63	-2347.63	2243.66	1669769.89	14314405.29	39°25'07.363"N	80°53'45.833"W	3247.36	136.297	0.58	0.16	-0.56	
9991.00	90.030	156.300	6583.72	3060.34	-2434.35	2282.45	1669808.65	14314318.60	39°25'06.505"N	80°53'45.340"W	3337.01	136.845	0.83	0.03	0.83	
10086.00	90.090	158.420	6583.62	3155.21	-2522.02	2319.01	1669845.21	14314230.96	39°25'05.638"N	80°53'44.876"W	3426.14	137.401	2.23	0.06	2.23	
10181.00	90.280	160.220	6583.32	3250.19	-2610.90	2352.56	1669878.74	14314142.12	39°25'04.759"N	80°53'44.450"W	3514.44	137.979	1.91	0.20	1.89	
10275.00	90.310	159.340	6582.83	3344.18	-2699.10	2385.05	1669911.21	14314053.95	39°25'03.887"N	80°53'44.037"W	3601.89	138.535	0.94	0.03	-0.94	
10370.00	90.280	160.080	6582.34	3439.17	-2788.21	2417.99	1669944.14	14313964.88	39°25'03.006"N	80°53'43.619"W	3690.63	139.067	0.78	-0.03	0.78	
10465.00	90.090	160.910	6582.04	3534.17	-2877.75	2449.71	1669975.85	14313875.37	39°25'02.121"N	80°53'43.216"W	3779.22	139.594	0.90	-0.20	0.87	
10560.00	90.340	161.400	6581.68	3629.16	-2967.66	2480.40	1670006.52	14313785.50	39°25'01.232"N	80°53'42.826"W	3867.73	140.111	0.58	0.26	0.52	
10655.00	89.280	159.230	6581.17	3724.15	-3057.10	2512.39	1670038.51	14313696.10	39°25'00.348"N	80°53'42.420"W	3957.02	140.586	2.29	-0.06	-2.28	
10750.00	89.850	157.680	6581.06	3819.10	-3145.46	2547.28	1670073.38	14313607.77	39°24'59.474"N	80°53'41.976"W	4047.54	140.998	1.69	-0.45	-1.63	
10845.00	89.910	158.350	6581.26	3914.02	-3233.55	2582.84	1670108.93	14313519.72	39°24'58.603"N	80°53'41.525"W	4138.47	141.383	0.71	0.06	0.71	
10939.00	89.880	159.390	6581.43	4007.99	-3321.23	2616.73	1670142.80	14313432.07	39°24'57.736"N	80°53'41.094"W	4228.22	141.766	1.11	-0.03	1.11	
11034.00	89.850	160.130	6581.66	4102.98	-3410.36	2649.59	1670175.65	14313342.98	39°24'56.854"N	80°53'40.677"W	4318.67	142.155	0.78	-0.03	0.78	
11129.00	89.850	162.010	6581.90	4197.97	-3500.22	2680.41	1670206.46	14313253.15	39°24'55.966"N	80°53'40.285"W	4408.64	142.556	1.98	0.00	1.98	
11224.00	90.000	163.990	6582.03	4292.86	-3591.06	2708.19	1670234.22	14313162.35	39°24'55.068"N	80°53'39.933"W	4497.78	142.978	2.09	0.16	2.08	
11319.00	89.820	163.040	6582.18	4387.71	-3682.16	2735.14	1670261.17	14313071.29	39°24'54.167"N	80°53'39.591"W	4586.86	143.395	1.02	-0.19	-1.00	
11414.00	89.660	162.750	6582.61	4482.62	-3772.95	2763.08	1670289.10	14312980.53	39°24'53.270"N	80°53'39.236"W	4676.52	143.783	0.35	-0.17	-0.31	
11509.00	89.940	161.880	6582.94	4577.56	-3863.46	2791.94	1670317.95	14312890.06	39°24'52.375"N	80°53'38.870"W	4766.69	144.146	0.96	0.29	-0.92	
11604.00	89.720	161.700	6583.22	4672.53	-3953.71	2821.63	1670347.62	14312799.85	39°24'51.482"N	80°53'38.493"W	4857.30	144.486	0.30	-0.23	-0.19	
11699.00	89.880	159.460	6583.55	4767.52	-4043.29	2853.22	1670379.19	14312710.30	39°24'50.597"N	80°53'38.092"W	4948.64	144.791	2.36	0.17	-2.36	
11794.00	89.940	158.960	6583.70	4862.50	-4132.11	2886.94	1670412.90	14312621.52	39°24'49.718"N	80°53'37.664"W	5040.71	145.060	0.53	0.06	-0.53	
11890.00	89.910	157.850	6583.83	4956.45	-4221.37	2922.27	1670448.22	14312532.29	39°24'48.836"N	80°53'37.215"W	5134.16	145.307	1.16	-0.03	-1.16	
11984.00	89.850	159.150	6584.03	5052.40	-4308.83	2956.72	1670482.65	14312444.87	39°24'47.971"N	80°53'36.777"W	5225.72	145.542	1.38	-0.06	1.38	
12080.00	89.850	160.810	6584.28	5148.39	-4399.02	2989.58	1670515.50	14312354.71	39°24'47.079"N	80°53'36.360"W	5318.74	145.800	1.73	0.00	1.73	



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #12
ANTERO RESOURCES CORPORATION	Well	Emerger Unit 2H
Tyler County, WV	Wellbore	Emerger Unit 2H AWP
Tyler		
Vera Pad		

## WELLPATH DATA (188 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
12175.00	89.910	162.840	6584.48	5243.35	-4489.28	3019.21	1670545.12	14312284.49	39°24'46.187"N	80°53'35.984"W	5410.11	148.078	2.14	0.06	2.14	
12270.00	89.850	163.240	6584.67	5338.25	-4580.14	3046.92	1670572.82	14312173.66	39°24'45.288"N	80°53'35.632"W	5501.04	146.366	0.43	-0.06	0.42	
12364.00	89.850	163.210	6584.92	5432.13	-4670.14	3074.05	1670599.94	14312083.70	39°24'44.399"N	80°53'35.288"W	5591.07	146.646	0.03	0.00	-0.03	
12459.00	89.880	163.170	6585.14	5527.01	-4761.08	3101.53	1670627.41	14311992.80	39°24'43.499"N	80°53'34.939"W	5682.20	146.918	0.05	0.03	-0.04	
12554.00	89.880	163.440	6585.34	5621.88	-4852.08	3128.82	1670654.69	14311901.84	39°24'42.600"N	80°53'34.593"W	5773.40	147.184	0.28	0.00	0.28	
12649.00	90.090	163.500	6585.37	5716.74	-4943.15	3155.85	1670681.70	14311810.80	39°24'41.699"N	80°53'34.250"W	5864.65	147.445	0.23	0.22	0.06	
12743.00	90.460	160.100	6584.92	5810.70	-5032.44	3185.20	1670711.05	14311721.55	39°24'40.816"N	80°53'33.877"W	5955.75	147.669	3.64	0.39	-3.62	
12838.00	90.090	154.680	6584.46	5905.53	-5120.10	3221.71	1670747.54	14311633.92	39°24'39.950"N	80°53'33.413"W	6049.37	147.821	5.72	-0.39	-5.71	
12934.00	90.030	155.740	6584.36	6001.15	-5207.25	3261.96	1670787.78	14311546.81	39°24'39.088"N	80°53'32.902"W	6144.58	147.936	1.11	-0.06	1.10	
13029.00	90.060	159.670	6584.29	6096.03	-5295.13	3298.00	1670823.80	14311458.96	39°24'38.219"N	80°53'32.444"W	6238.21	148.084	4.14	0.03	4.14	
13124.00	90.090	160.660	6584.16	6191.03	-5384.50	3330.23	1670856.02	14311369.63	39°24'37.335"N	80°53'32.035"W	6331.13	148.264	1.04	0.03	1.04	
13218.00	90.280	162.060	6583.86	6285.01	-5473.56	3360.27	1670886.05	14311280.60	39°24'36.455"N	80°53'31.653"W	6422.72	148.454	1.50	0.20	1.49	
13313.00	90.060	159.930	6583.58	6380.00	-5563.38	3391.21	1670916.97	14311190.82	39°24'35.566"N	80°53'31.260"W	6515.48	148.635	2.25	-0.23	-2.24	
13407.00	90.060	160.520	6583.48	6474.00	-5651.84	3423.01	1670948.76	14311102.40	39°24'34.692"N	80°53'30.857"W	6607.59	148.799	0.63	0.00	0.63	
13502.00	90.120	161.760	6583.38	6568.99	-5741.73	3453.72	1670979.46	14311012.54	39°24'33.803"N	80°53'30.467"W	6700.42	148.973	1.31	0.00	1.31	
13597.00	89.970	160.410	6583.35	6663.97	-5831.60	3484.52	1671010.24	14310922.71	39°24'32.914"N	80°53'30.076"W	6793.34	149.141	1.42	-0.09	-1.42	
13692.00	90.090	160.020	6583.30	6758.97	-5920.99	3516.67	1671042.38	14310833.35	39°24'32.031"N	80°53'29.667"W	6886.59	149.293	0.43	0.13	-0.41	
13787.00	89.880	162.550	6583.33	6853.95	-6010.96	3547.15	1671072.85	14310743.42	39°24'31.141"N	80°53'29.280"W	6979.54	149.455	2.67	-0.22	2.66	
13881.00	90.120	161.400	6583.33	6947.91	-6100.35	3576.24	1671101.93	14310654.07	39°24'30.257"N	80°53'28.911"W	7071.33	149.620	1.25	0.26	-1.22	
13975.00	90.030	158.010	6583.21	7041.89	-6188.50	3608.84	1671134.51	14310565.95	39°24'29.386"N	80°53'28.497"W	7163.88	149.751	3.61	-0.10	-3.61	
14070.00	90.060	159.660	6583.13	7136.86	-6277.09	3643.14	1671168.80	14310477.40	39°24'28.510"N	80°53'28.062"W	7257.70	149.870	1.74	0.03	1.74	
14166.00	90.120	157.460	6582.98	7232.81	-6366.44	3678.22	1671203.87	14310388.08	39°24'27.626"N	80°53'27.616"W	7352.61	149.983	2.29	0.06	-2.29	
14261.00	90.060	155.510	6582.83	7327.59	-6453.55	3716.13	1671241.76	14310301.01	39°24'26.765"N	80°53'27.135"W	7447.00	150.065	2.05	-0.06	-2.05	
14356.00	90.090	158.250	6582.71	7422.40	-6540.91	3753.43	1671279.04	14310213.69	39°24'25.901"N	80°53'26.661"W	7541.33	150.151	2.88	0.03	2.88	
14451.00	90.120	161.740	6582.53	7517.39	-6630.16	3785.92	1671311.52	14310124.47	39°24'25.018"N	80°53'26.248"W	7634.93	150.273	3.67	0.03	3.67	
14545.00	90.060	163.960	6582.38	7611.29	-6719.98	3813.64	1671339.23	14310034.69	39°24'24.130"N	80°53'25.896"W	7726.70	150.425	2.36	-0.06	2.36	
14640.00	90.120	161.690	6582.23	7706.20	-6810.73	3841.69	1671367.27	14309943.97	39°24'23.233"N	80°53'25.540"W	7819.50	150.574	2.39	0.06	-2.39	
14735.00	90.000	159.580	6582.14	7801.19	-6900.35	3873.19	1671398.76	14309854.38	39°24'22.347"N	80°53'25.141"W	7913.06	150.694	2.22	-0.13	-2.22	
14830.00	89.970	159.250	6582.16	7896.18	-6989.29	3906.59	1671432.14	14309765.49	39°24'21.467"N	80°53'24.716"W	8006.97	150.797	0.35	-0.03	-0.35	
14925.00	90.120	161.840	6582.09	7991.17	-7078.80	3938.38	1671463.93	14309676.01	39°24'20.582"N	80°53'24.313"W	8100.64	150.910	2.52	0.16	2.52	





# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #12
Area	Tyler County, WV	Emerger Unit 2H
Field	Tyler	Emerger Unit 2H AWB
Facility	Vera Pad	

## WELLPATH DATA (188 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
15019.00	90.150	164.800	6581.86	8085.04	-7168.79	3965.52	1671491.05	14309586.06	39°24'19.693"N	80°53'23.968"W	8192.49	151.050	3.36	0.03	3.36	
15114.00	90.030	166.010	6581.71	8179.67	-7260.72	3989.46	1671514.98	14309494.16	39°24'18.784"N	80°53'23.665"W	8284.55	151.213	1.28	-0.13	1.27	
15209.00	90.060	164.270	6581.64	8274.33	-7352.54	4013.82	1671539.33	14309402.38	39°24'17.876"N	80°53'23.356"W	8376.79	151.369	1.83	0.03	-1.83	
15304.00	90.030	158.640	6581.57	8369.27	-7442.57	4044.02	1671569.52	14309312.38	39°24'16.986"N	80°53'22.973"W	8470.30	151.482	5.93	-0.03	-5.93	
15399.00	89.940	158.170	6581.59	8464.22	-7530.90	4078.98	1671604.47	14309224.09	39°24'16.112"N	80°53'22.529"W	8564.61	151.559	0.50	-0.09	-0.49	
15493.00	90.090	157.910	6581.57	8558.14	-7618.08	4114.14	1671639.61	14309136.94	39°24'15.250"N	80°53'22.082"W	8658.02	151.629	0.32	0.16	-0.28	
15586.00	90.090	153.450	6581.42	8650.81	-7702.81	4152.43	1671677.88	14309052.25	39°24'14.412"N	80°53'21.596"W	8750.77	151.672	4.80	0.00	-4.80	
15610.00	90.090	153.450	6581.38	8674.64	-7724.28	4163.15	1671688.61	14309030.79	39°24'14.200"N	80°53'21.459"W	8774.75	151.677	0.00	0.00	0.00	Projected MD at TD: 15610'

## HOLE & CASING SECTIONS - Ref Wellbore: Emerger Unit 2H AWP Proj: 15610'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
20in Conductor	24.50	104.50	80.00	24.50	104.50	0.00	0.21	0.00	-0.15
17.5in Open Hole	104.50	722.10	617.60	104.50	722.10	0.21	0.43	-0.15	-0.94
13.375in Casing Surface	24.50	722.10	697.60	24.50	722.10	0.00	0.43	0.00	-0.94
12.25in Open Hole	722.10	2488.10	1766.00	722.10	2488.10	0.43	-2.51	-0.94	-10.17
9.625in Casing Intermediate	24.50	2488.10	2463.60	24.50	2488.10	0.00	-2.51	0.00	-10.17

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Emerger Unit 2H BHL - Rev-3	6600.00	-7731.63	4175.72	1671701.17	14309023.44	39°24'14.127"N	80°53'21.299"W	point
Emerger Unit 2H LP - Rev-1	6600.00	255.81	1274.62	1668801.23	14317007.68	39°25'33.105"N	80°53'58.144"W	point



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Emerger Unit 2H
Field	Tyler	Wellbore	Emerger Unit 2H AWB
Facility	Vera Pad		

## WELLPATH COMPOSITION - Ref Wellbore: Emerger Unit 2H AWB

Start MD (ft) End MD (ft) Positional Uncertainty Model

Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Ref Wellpath: Emerger Unit 2H AWP Proj: 15610'	Log Name/Comment	Wellbore
24.50	695.50	Gyrodata standard - Drop gyro or Multi-shot		01 Gyrodata MS Gyro <17-1/2">(100-886)	Emerger Unit 2H AWB
695.50	2446.50	ISCWSA MWD, Rev. 4 (Standard)		02 WFT EM <12-1/4">(686)(709-2437)	Emerger Unit 2H AWB
2446.50	6654.50	ISCWSA MWD, Rev. 4 (Standard)		03 WFT EM <8-3/4">(2437)(2539-6645)	Emerger Unit 2H AWB
6654.50	15586.00	BHI AutoTrak Curve (Short)		04 BHI AT Curve <8-1/2">(6654-5)(6700'-15586)	Emerger Unit 2H AWB
15586.00	15610.00	Blind Drilling (std)		Projection to bit	Emerger Unit 2H AWB



# Actual Wellpath Report

Emerger Unit 2H AWP Proj: 15610'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #12
ANTERO RESOURCES CORPORATION	Well	Emerger Unit 2H
Tyler County, WV	Wellbore	Emerger Unit 2H AWB
Tyler		
Vera Pad		

## COMMENTS

**Wellpath general comments**  
 API: 47-095-02378-0000  
 BHI Job #: 8696636  
 Rig: Frontier 22  
 Duration: 08/11/2017-08/13/2017  
 Gyrodata MS Gyro <17-1/2"> (100'-686')  
 WFT EM <12-1/4"> (686')(709'-2437')  
 WFT EM <8-3/4"> (2437')(2539'-6645')  
 BHI AT Curve <8-1/2"> (6715.5')(6700'-15586')  
 Middlesex: 6687' MD  
 Burket: 6816' MD  
 Tully: 6863' MD  
 Marcellus POE: 6939' MD  
 Projected MD at TD: 15610'