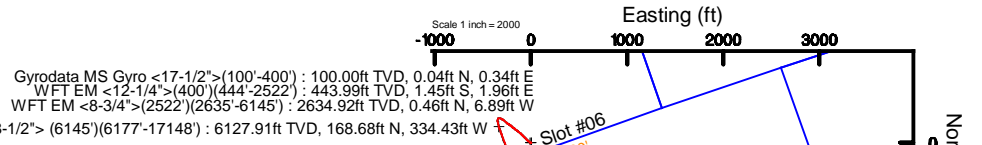


ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Pyle Run Pad

Slot: Slot #06
 Well: Beem Unit 3H
 Wellbore: Beem Unit 3H PWB

API: 47-095-02474-0000
 BHI Job #: 109546995
 Rig: Patterson 342
 Duration: 12/08/2018-12/11/2018



Gyrodatta MS Gyro <17-1/2">(100'-400') : 100.00ft TVD, 0.04ft N, 0.34ft E
 WFT EM <12-1/4">(400')(444'-2522') : 443.99ft TVD, 1.45ft S, 1.96ft E
 WFT EM <8-3/4">(2522')(2635'-6145') : 2634.92ft TVD, 0.46ft N, 6.89ft W

BH AT Curve <8-1/2"> (6145')(6177'-17148') : 6127.91ft TVD, 168.68ft N, 334.43ft W

Marcellus POE: 6825' MD : 6502.33ft TVD, 311.67ft S, 167.42ft W



Plot reference wellpath is Beem Unit 3H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 1140 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #06): -1115 feet	Created by: delaset on 2018-12-11
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn

Gyrodatta MS Gyro <17-1/2">(100'-400') : 0.53° Inc, 100.00ft MD, 100.00ft TVD, 0.08ft VS

WFT EM <12-1/4">(400')(444'-2522') : 0.10° Inc, 444.00ft MD, 443.99ft TVD, 2.02ft VS

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Pyle Run Pad	1667566.130	14307672.036	39°24'00.812"N	80°54'14.016"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #06	-13.38	-26.99	1667539.151	14307658.657
			Latitude	Longitude
			39°24'00.680"N	80°54'14.360"W
Comment	Beem Unit 3H			
Patterson 342 (RKB) to Ground level (At Slot: Slot #06)			25ft	
Mean Sea Level to Ground level (At Slot: Slot #06)			-1115ft	
Patterson 342 (RKB) to Mean Sea Level			1140ft	

WFT EM <8-3/4">(2522')(2635'-6145') : 0.63° Inc, 2635.00ft MD, 2634.92ft TVD, -2.77ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6145.00	27.650	164.770	6099.90	183.56	-338.68	10.36	-287.25
Proj. To Bottom	6205.00	35.100	160.800	6151.10	153.79	-329.34	12.88	-256.07
End of 3D Arc	6714.11	66.512	161.334	6468.81	-214.90	-203.31	6.17	133.52
POE	6783.50	72.672	160.241	6493.00	-276.28	-181.90	9.00	198.52
Landing Pt.	6956.76	90.000	160.241	6519.00	-436.87	-124.22	10.00	369.15
BHL	17201.76	90.000	160.241	6519.00	-10078.70	3339.19	0.00	10614.15

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #06	Beem Unit 3H	Beem Unit 3H AWB	Beem Unit 3H AWP Proj: 17172'
Slot #06	Beem Unit 3H	Beem Unit 3H PWB	Beem Unit 3H PWP Rev-A.0

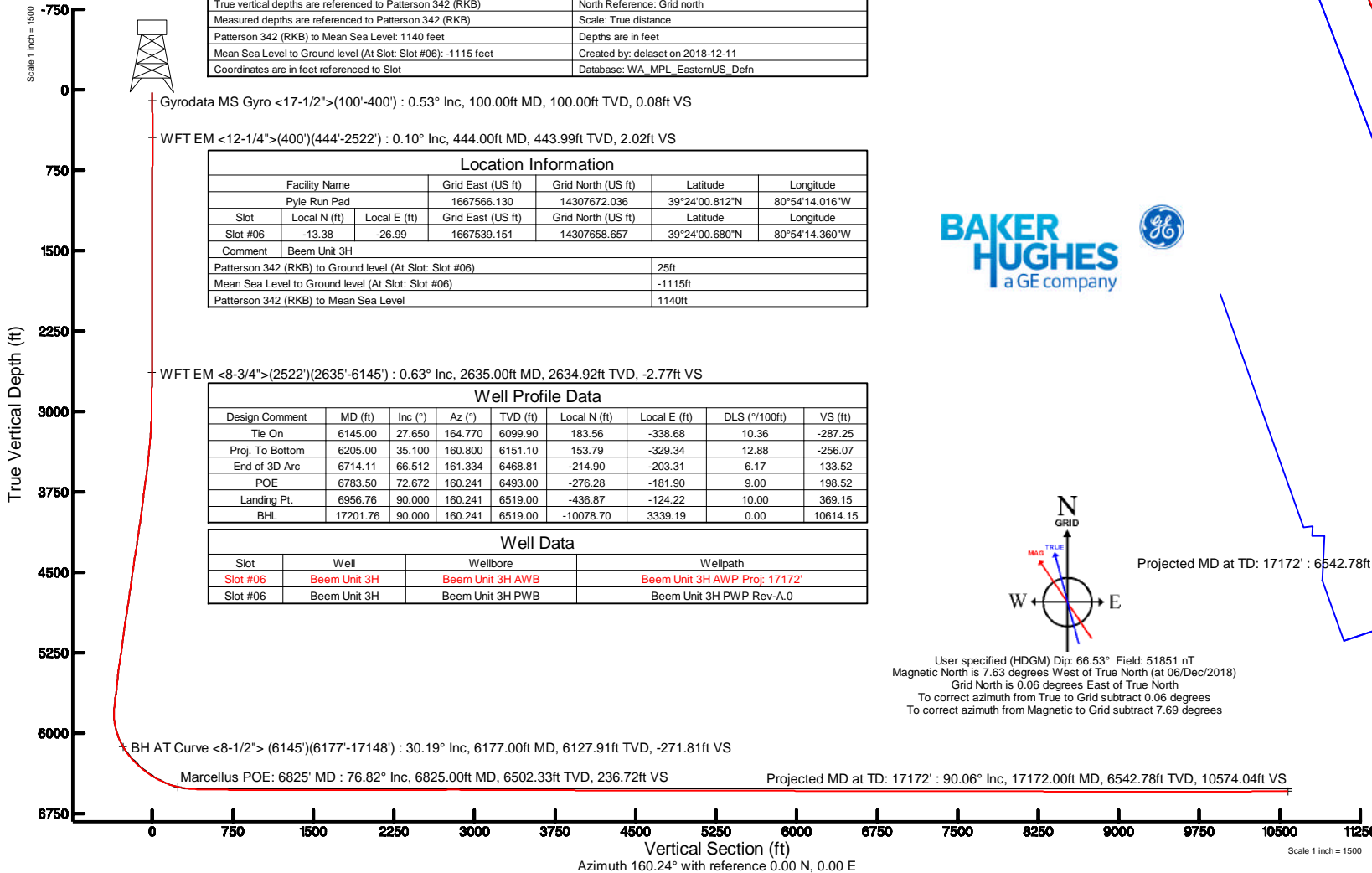
BH AT Curve <8-1/2"> (6145')(6177'-17148') : 30.19° Inc, 6177.00ft MD, 6127.91ft TVD, -271.81ft VS

Marcellus POE: 6825' MD : 76.82° Inc, 6825.00ft MD, 6502.33ft TVD, 236.72ft VS

Projected MD at TD: 17172' : 90.06° Inc, 17172.00ft MD, 6542.78ft TVD, 10574.04ft VS



User specified (HDGM) Dip: 66.53° Field: 51851 nT
 Magnetic North is 7.63 degrees West of True North (at 06/Dec/2018)
 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



Vertical Section (ft)
 Azimuth 160.24° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run 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	11/Dec/2018 at 11:40
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Beem_Unit_3H_AWP_Proj_17172_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-13.38	-26.99	1667539.15	14307658.66	39°24'00.680"N	80°54'14.360"W
Facility Reference Pt			1667566.13	14307672.04	39°24'00.812"N	80°54'14.016"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	1140.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #06)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.24°



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 2 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (208 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
0.00†	0.000	83.960	0.00	0.00	0.00	0.00	1667539.15	14307658.66	39°24'00.680"N	80°54'14.360"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	83.960	25.00	0.00	0.00	0.00	1667539.15	14307658.66	39°24'00.680"N	80°54'14.360"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.530	83.960	100.00	0.08	0.04	0.34	1667539.50	14307658.69	39°24'00.680"N	80°54'14.356"W	0.35	83.960	0.71	0.71	111.95	Gyrodata MS Gyro <17-1/2">(100'-400')
125.00	0.640	84.450	125.00	0.14	0.06	0.60	1667539.75	14307658.72	39°24'00.681"N	80°54'14.352"W	0.60	84.074	0.44	0.44	1.96	
150.00	0.420	133.600	150.00	0.26	0.01	0.80	1667539.95	14307658.67	39°24'00.680"N	80°54'14.350"W	0.80	89.111	1.94	-0.88	196.60	
175.00	0.360	137.700	175.00	0.41	-0.11	0.92	1667540.07	14307658.55	39°24'00.679"N	80°54'14.348"W	0.93	96.719	0.26	-0.24	16.40	
200.00	0.400	131.930	200.00	0.56	-0.23	1.04	1667540.19	14307658.43	39°24'00.678"N	80°54'14.347"W	1.07	102.204	0.22	0.16	-23.08	
225.00	0.410	134.110	224.99	0.72	-0.35	1.17	1667540.32	14307658.31	39°24'00.677"N	80°54'14.345"W	1.22	106.459	0.07	0.04	8.72	
250.00	0.380	136.580	249.99	0.88	-0.47	1.29	1667540.44	14307658.19	39°24'00.675"N	80°54'14.344"W	1.37	109.927	0.14	-0.12	9.88	
275.00	0.450	129.670	274.99	1.04	-0.59	1.42	1667540.57	14307658.07	39°24'00.674"N	80°54'14.342"W	1.54	112.542	0.34	0.28	-27.64	
300.00	0.500	136.630	299.99	1.22	-0.73	1.57	1667540.72	14307657.92	39°24'00.673"N	80°54'14.340"W	1.74	114.965	0.31	0.20	27.84	
325.00	0.430	158.500	324.99	1.42	-0.90	1.68	1667540.83	14307657.76	39°24'00.671"N	80°54'14.339"W	1.91	118.115	0.76	-0.28	87.48	
350.00	0.320	154.410	349.99	1.58	-1.05	1.75	1667540.90	14307657.61	39°24'00.670"N	80°54'14.338"W	2.04	120.985	0.45	-0.44	-16.36	
375.00	0.360	152.430	374.99	1.73	-1.18	1.81	1667540.96	14307657.47	39°24'00.668"N	80°54'14.337"W	2.17	123.086	0.17	0.16	-7.92	
400.00	0.380	159.380	399.99	1.89	-1.33	1.88	1667541.03	14307657.33	39°24'00.667"N	80°54'14.336"W	2.30	125.265	0.20	0.08	27.80	
444.00	0.100	57.640	443.99	2.02	-1.45	1.96	1667541.11	14307657.21	39°24'00.666"N	80°54'14.335"W	2.44	126.353	0.94	-0.64	-231.23	WFT EM <12-1/4">(400')(444'-2522')
504.00	0.400	28.620	503.99	1.87	-1.23	2.11	1667541.26	14307657.42	39°24'00.668"N	80°54'14.333"W	2.44	120.331	0.53	0.50	-48.37	
595.00	0.380	20.120	594.99	1.43	-0.67	2.36	1667541.51	14307657.99	39°24'00.673"N	80°54'14.330"W	2.46	105.856	0.07	-0.02	-9.34	
686.00	0.460	3.930	685.99	0.87	-0.02	2.49	1667541.64	14307658.63	39°24'00.680"N	80°54'14.328"W	2.49	90.549	0.16	0.09	-17.79	
776.00	0.500	358.400	775.98	0.16	0.73	2.51	1667541.66	14307659.39	39°24'00.687"N	80°54'14.328"W	2.61	73.787	0.07	0.04	-6.14	
871.00	0.390	339.490	870.98	-0.56	1.45	2.38	1667541.53	14307660.10	39°24'00.694"N	80°54'14.330"W	2.79	58.742	0.19	-0.12	-19.91	
965.00	0.290	332.060	964.98	-1.11	1.96	2.16	1667541.31	14307660.61	39°24'00.699"N	80°54'14.332"W	2.91	47.824	0.12	-0.11	-7.90	
1060.00	0.280	296.060	1059.98	-1.52	2.27	1.84	1667540.99	14307660.93	39°24'00.702"N	80°54'14.337"W	2.92	38.989	0.19	-0.01	-37.89	
1155.00	0.360	272.370	1154.97	-1.79	2.38	1.33	1667540.48	14307661.04	39°24'00.704"N	80°54'14.343"W	2.73	29.170	0.16	0.08	-24.94	
1250.00	0.420	266.400	1249.97	-2.00	2.38	0.69	1667539.84	14307661.03	39°24'00.703"N	80°54'14.351"W	2.47	16.097	0.08	0.06	-6.28	
1345.00	0.510	249.840	1344.97	-2.10	2.21	-0.06	1667539.09	14307660.86	39°24'00.702"N	80°54'14.361"W	2.21	358.470	0.17	0.09	-17.43	
1440.00	0.590	243.210	1439.97	-2.03	1.84	-0.89	1667538.26	14307660.50	39°24'00.698"N	80°54'14.371"W	2.05	334.143	0.11	0.08	-6.98	
1534.00	0.530	238.550	1533.96	-1.89	1.40	-1.70	1667537.46	14307660.05	39°24'00.694"N	80°54'14.382"W	2.20	309.478	0.08	-0.06	-4.96	
1628.00	0.650	223.710	1627.96	-1.56	0.78	-2.43	1667536.72	14307659.44	39°24'00.688"N	80°54'14.391"W	2.56	287.854	0.21	0.13	-15.79	
1723.00	0.650	212.070	1722.95	-0.99	-0.06	-3.09	1667536.06	14307658.59	39°24'00.679"N	80°54'14.399"W	3.09	268.854	0.14	0.00	-12.25	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'
Page 3 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (208 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
1818.00	0.600	221.170	1817.94	-0.41	-0.89	-3.71	1667535.45	14307657.76	39°24'00.671"N	80°54'14.407"W	3.81	256.456	0.12	-0.05	9.58	
1912.00	0.700	227.900	1911.94	0.04	-1.65	-4.46	1667534.70	14307657.01	39°24'00.664"N	80°54'14.417"W	4.75	249.702	0.13	0.11	7.16	
2007.00	0.660	236.790	2006.93	0.39	-2.34	-5.35	1667533.81	14307656.32	39°24'00.657"N	80°54'14.428"W	5.83	246.383	0.12	-0.04	9.36	
2102.00	0.130	281.140	2101.93	0.46	-2.62	-5.91	1667533.24	14307656.04	39°24'00.654"N	80°54'14.435"W	6.46	246.119	0.60	-0.56	46.68	
2196.00	0.250	349.320	2195.93	0.21	-2.39	-6.05	1667533.10	14307656.26	39°24'00.656"N	80°54'14.437"W	6.51	248.417	0.25	0.13	72.53	
2288.00	0.210	316.050	2287.93	-0.14	-2.08	-6.21	1667532.95	14307656.58	39°24'00.660"N	80°54'14.439"W	6.54	251.509	0.15	-0.04	-36.16	
2383.00	0.390	349.520	2382.93	-0.62	-1.63	-6.39	1667532.77	14307657.03	39°24'00.664"N	80°54'14.441"W	6.59	255.663	0.26	0.19	35.23	
2477.00	0.480	353.850	2476.92	-1.32	-0.93	-6.49	1667532.67	14307657.73	39°24'00.671"N	80°54'14.443"W	6.55	261.875	0.10	0.10	4.61	
2522.00	0.470	336.350	2521.92	-1.69	-0.57	-6.58	1667532.57	14307658.09	39°24'00.674"N	80°54'14.444"W	6.60	265.054	0.32	-0.02	-38.89	
2635.00	0.630	348.230	2634.92	-2.77	0.46	-6.89	1667532.26	14307659.12	39°24'00.685"N	80°54'14.448"W	6.91	273.845	0.17	0.14	10.51	WFT EM <8-3/4">(2522')(2635'-6145')
2731.00	0.710	335.050	2730.91	-3.88	1.52	-7.25	1667531.90	14307660.18	39°24'00.695"N	80°54'14.452"W	7.41	281.834	0.18	0.08	-13.73	
2825.00	0.740	331.230	2824.90	-5.06	2.58	-7.79	1667531.37	14307661.24	39°24'00.706"N	80°54'14.459"W	8.20	288.323	0.06	0.03	-4.06	
2920.00	0.720	338.150	2919.90	-6.26	3.67	-8.31	1667530.85	14307662.33	39°24'00.716"N	80°54'14.466"W	9.08	293.844	0.10	-0.02	7.28	
3016.00	0.550	327.110	3015.89	-7.31	4.62	-8.78	1667530.37	14307663.27	39°24'00.726"N	80°54'14.472"W	9.92	297.740	0.22	-0.18	-11.50	
3110.00	4.050	287.950	3109.80	-9.79	6.02	-12.18	1667526.97	14307664.67	39°24'00.740"N	80°54'14.515"W	13.59	296.293	3.87	3.72	-41.66	
3209.00	5.000	316.860	3208.50	-15.88	10.25	-18.46	1667520.70	14307668.90	39°24'00.781"N	80°54'14.595"W	21.11	299.030	2.46	0.96	29.20	
3304.00	6.350	310.170	3303.04	-24.23	16.66	-25.31	1667513.85	14307675.31	39°24'00.845"N	80°54'14.682"W	30.30	303.351	1.58	1.42	-7.04	
3398.00	5.890	304.470	3396.50	-32.64	22.74	-33.26	1667505.91	14307681.39	39°24'00.905"N	80°54'14.783"W	40.29	304.363	0.81	-0.49	-6.06	
3493.00	6.580	317.710	3490.94	-41.63	29.53	-40.94	1667498.23	14307688.17	39°24'00.972"N	80°54'14.881"W	50.47	305.800	1.67	0.73	13.94	
3588.00	9.330	316.270	3585.02	-53.69	39.12	-49.92	1667489.25	14307697.76	39°24'01.067"N	80°54'14.995"W	63.42	308.080	2.90	2.89	-1.52	
3683.00	7.920	319.350	3678.95	-66.85	49.65	-59.51	1667479.66	14307708.29	39°24'01.171"N	80°54'15.117"W	77.50	309.837	1.56	-1.48	3.24	
3777.00	8.610	315.020	3771.97	-79.26	59.54	-68.71	1667470.47	14307718.17	39°24'01.269"N	80°54'15.234"W	90.91	310.912	0.99	0.73	-4.61	
3872.00	7.570	304.810	3866.03	-90.79	68.14	-78.87	1667460.31	14307726.77	39°24'01.354"N	80°54'15.364"W	104.23	310.827	1.86	-1.09	-10.75	
3967.00	9.040	311.030	3960.03	-102.41	76.61	-89.64	1667449.55	14307735.24	39°24'01.438"N	80°54'15.501"W	117.92	310.521	1.81	1.55	6.55	
4062.00	10.010	317.170	4053.72	-116.52	87.57	-100.88	1667438.31	14307746.19	39°24'01.547"N	80°54'15.644"W	133.59	310.959	1.48	1.02	6.46	
4157.00	8.820	310.800	4147.44	-130.46	98.38	-112.01	1667427.19	14307757.00	39°24'01.654"N	80°54'15.786"W	149.08	311.295	1.66	-1.25	-6.71	
4252.00	9.870	311.250	4241.18	-143.92	108.51	-123.64	1667415.56	14307767.13	39°24'01.754"N	80°54'15.934"W	164.51	311.271	1.11	1.11	0.47	
4347.00	11.150	309.380	4334.59	-158.93	119.71	-136.87	1667402.34	14307778.32	39°24'01.865"N	80°54'16.102"W	181.83	311.174	1.39	1.35	-1.97	
4441.00	9.910	301.370	4427.01	-173.03	129.69	-150.80	1667388.41	14307788.29	39°24'01.963"N	80°54'16.279"W	198.90	310.695	2.04	-1.32	-8.52	
4536.00	9.590	313.890	4520.64	-186.49	139.43	-163.48	1667375.73	14307798.03	39°24'02.060"N	80°54'16.441"W	214.87	310.460	2.25	-0.34	13.18	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 4 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (208 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
4631.00	8.530	303.620	4614.46	-199.24	148.82	-175.05	1667364.17	14307807.42	39°24'02.153"N	80°54'16.588"W	229.76	310.369	2.03	-1.12	-10.81	
4725.00	10.080	312.120	4707.23	-212.09	158.20	-186.96	1667352.26	14307816.79	39°24'02.245"N	80°54'16.740"W	244.91	310.236	2.20	1.65	9.04	
4820.00	9.620	302.520	4800.83	-225.70	168.04	-199.82	1667339.41	14307826.63	39°24'02.343"N	80°54'16.903"W	261.09	310.062	1.79	-0.48	-10.11	
4915.00	10.970	314.810	4894.31	-240.15	178.68	-212.93	1667326.30	14307837.26	39°24'02.448"N	80°54'17.070"W	277.97	310.001	2.71	1.42	12.94	
5009.00	10.120	306.100	4986.73	-255.06	189.85	-225.95	1667313.29	14307848.43	39°24'02.559"N	80°54'17.236"W	295.12	310.038	1.92	-0.90	-9.27	
5104.00	9.300	297.510	5080.38	-267.61	198.31	-239.50	1667299.74	14307856.89	39°24'02.643"N	80°54'17.408"W	310.95	309.625	1.75	-0.86	-9.04	
5199.00	8.970	304.960	5174.17	-279.29	206.10	-252.38	1667286.87	14307864.68	39°24'02.720"N	80°54'17.572"W	325.85	309.236	1.29	-0.35	7.84	
5293.00	9.800	317.780	5266.92	-292.67	216.23	-263.77	1667275.49	14307874.80	39°24'02.820"N	80°54'17.717"W	341.07	309.344	2.39	0.88	13.64	
5388.00	9.290	311.280	5360.61	-306.85	227.27	-274.96	1667264.30	14307885.84	39°24'02.929"N	80°54'17.860"W	356.73	309.576	1.25	-0.54	-6.84	
5483.00	8.450	302.540	5454.48	-319.08	236.09	-286.61	1667252.66	14307894.65	39°24'03.016"N	80°54'18.008"W	371.32	309.479	1.67	-0.88	-9.20	
5577.00	7.710	293.110	5547.55	-328.84	242.28	-298.23	1667241.04	14307900.84	39°24'03.078"N	80°54'18.156"W	384.24	309.090	1.61	-0.79	-10.03	
5672.00	9.890	303.920	5641.43	-339.75	249.33	-310.86	1667228.41	14307907.89	39°24'03.148"N	80°54'18.317"W	398.50	308.732	2.87	2.29	11.38	
5766.00	8.440	291.200	5734.24	-350.78	256.33	-324.00	1667215.28	14307914.89	39°24'03.217"N	80°54'18.484"W	413.14	308.350	2.64	-1.54	-13.53	
5861.00	6.970	253.800	5828.44	-355.71	257.25	-336.04	1667203.25	14307915.80	39°24'03.226"N	80°54'18.637"W	423.20	307.435	5.39	-1.55	-39.37	
5955.00	13.660	198.130	5921.06	-347.28	245.07	-345.00	1667194.29	14307903.63	39°24'03.106"N	80°54'18.752"W	423.18	305.388	12.00	7.12	-59.22	
6050.00	18.230	172.260	6012.49	-323.85	219.64	-346.49	1667192.80	14307878.21	39°24'02.854"N	80°54'18.771"W	410.24	302.370	8.78	4.81	-27.23	
6145.00	27.650	164.770	6099.90	-287.25	183.56	-338.68	1667200.61	14307842.14	39°24'02.498"N	80°54'18.672"W	385.22	298.457	10.36	9.92	-7.88	
6177.00	30.190	163.380	6127.91	-271.81	168.68	-334.43	1667204.86	14307827.27	39°24'02.351"N	80°54'18.618"W	374.56	296.766	8.21	7.94	-4.34	BH AT Curve <8-1/2"> (6145')(6177'-17148')
6224.00	33.450	160.080	6167.84	-247.05	145.17	-326.63	1667212.65	14307803.77	39°24'02.118"N	80°54'18.519"W	357.44	293.963	7.86	6.94	-7.02	
6271.00	37.130	159.930	6206.20	-219.90	119.66	-317.35	1667221.93	14307778.27	39°24'01.866"N	80°54'18.401"W	339.16	290.659	7.83	7.83	-0.32	
6318.00	41.660	160.180	6242.51	-190.08	91.63	-307.18	1667232.10	14307750.25	39°24'01.589"N	80°54'18.272"W	320.55	286.609	9.64	9.64	0.53	
6366.00	45.120	160.540	6277.39	-157.11	60.57	-296.10	1667243.17	14307719.21	39°24'01.282"N	80°54'18.131"W	302.23	281.561	7.23	7.21	0.75	
6413.00	48.090	160.380	6309.67	-122.96	28.39	-284.68	1667254.59	14307687.04	39°24'00.964"N	80°54'17.986"W	286.09	275.696	6.32	6.32	-0.34	
6460.00	51.640	160.620	6339.96	-87.04	-5.47	-272.69	1667266.57	14307653.18	39°24'00.629"N	80°54'17.834"W	272.74	268.850	7.56	7.55	0.51	
6468.00†	52.133	160.734	6344.90	-80.74	-11.41	-270.60	1667268.66	14307647.25	39°24'00.570"N	80°54'17.807"W	270.84	267.585	6.27	6.17	1.43	Middlesex: 6468' MD
6507.00	54.540	161.270	6368.19	-49.46	-40.99	-260.42	1667278.83	14307617.68	39°24'00.278"N	80°54'17.678"W	263.63	261.055	6.27	6.17	1.37	
6555.00	57.920	160.920	6394.86	-9.57	-78.74	-247.49	1667291.76	14307579.95	39°23'59.904"N	80°54'17.514"W	259.72	252.353	7.07	7.04	-0.73	
6602.00	60.280	160.750	6419.00	30.75	-116.83	-234.26	1667304.99	14307541.88	39°23'59.528"N	80°54'17.346"W	261.77	243.494	5.03	5.02	-0.36	
6647.00†	63.242	160.468	6440.29	70.39	-154.22	-221.09	1667318.15	14307504.50	39°23'59.158"N	80°54'17.178"W	269.56	235.103	6.61	6.58	-0.63	Burkett: 6647' MD
6650.00	63.440	160.450	6441.63	73.07	-156.74	-220.20	1667319.04	14307501.98	39°23'59.133"N	80°54'17.167"W	270.29	234.555	6.61	6.58	-0.61	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 5 of 11



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Tyler County, WV		Well	Beem Unit 3H
Field	Tyler		Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad			

WELLPATH DATA (208 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
6697.00	66.050	161.070	6461.68	115.57	-196.87	-206.19	1667333.04	14307461.86	39°23'58.736"N	80°54'16.989"W	285.09	226.324	5.68	5.55	1.32	
6730.00†	68.738	161.091	6474.37	146.03	-225.69	-196.32	1667342.91	14307433.06	39°23'58.451"N	80°54'16.864"W	299.13	221.018	8.15	8.15	0.06	Tully: 6730' MD
6745.00	69.960	161.100	6479.66	160.06	-238.97	-191.77	1667347.46	14307419.78	39°23'58.320"N	80°54'16.806"W	306.40	218.746	8.15	8.15	0.06	
6792.00	74.260	161.640	6494.09	204.77	-281.34	-177.49	1667361.74	14307377.43	39°23'57.901"N	80°54'16.625"W	332.65	212.246	9.21	9.15	1.15	
6825.00†	76.823	161.640	6502.33	236.72	-311.67	-167.42	1667371.80	14307347.11	39°23'57.601"N	80°54'16.497"W	353.79	208.244	7.77	7.77	0.00	Marcellus POE: 6825' MD
6839.00	77.910	161.640	6505.39	250.37	-324.63	-163.12	1667376.10	14307334.15	39°23'57.473"N	80°54'16.442"W	363.31	206.678	7.77	7.77	0.00	
6886.00	81.740	162.170	6513.69	296.60	-368.60	-148.75	1667390.46	14307290.20	39°23'57.038"N	80°54'16.260"W	397.48	201.977	8.22	8.15	1.13	
6934.00	84.730	162.450	6519.35	344.23	-414.01	-134.27	1667404.93	14307244.82	39°23'56.590"N	80°54'16.076"W	435.24	197.969	6.26	6.23	0.58	
6981.00	85.410	161.760	6523.39	391.03	-458.57	-119.88	1667419.32	14307200.27	39°23'56.149"N	80°54'15.893"W	473.98	194.651	2.06	1.45	-1.47	
7029.00	89.010	161.330	6525.72	438.96	-504.04	-104.71	1667434.48	14307154.82	39°23'55.699"N	80°54'15.701"W	514.80	191.736	7.55	7.50	-0.90	
7123.00	89.170	159.860	6527.22	532.94	-592.68	-73.48	1667465.70	14307066.21	39°23'54.823"N	80°54'15.304"W	597.22	187.068	1.57	0.17	-1.56	
7217.00	89.200	159.250	6528.55	626.92	-680.75	-40.65	1667498.52	14306978.18	39°23'53.952"N	80°54'14.887"W	681.97	183.417	0.65	0.03	-0.65	
7312.00	89.820	159.440	6529.37	721.91	-769.64	-7.14	1667532.01	14306889.32	39°23'53.073"N	80°54'14.461"W	769.68	180.532	0.68	0.65	0.20	
7407.00	89.850	159.900	6529.64	816.90	-858.72	25.86	1667565.00	14306800.28	39°23'52.193"N	80°54'14.042"W	859.11	178.275	0.49	0.03	0.48	
7502.00	89.850	160.210	6529.89	911.90	-948.03	58.27	1667597.40	14306711.01	39°23'51.310"N	80°54'13.631"W	949.81	176.483	0.33	0.00	0.33	
7597.00	89.910	159.950	6530.09	1006.90	-1037.34	90.64	1667629.75	14306621.73	39°23'50.426"N	80°54'13.220"W	1041.29	175.007	0.28	0.06	-0.27	
7692.00	89.660	160.330	6530.44	1101.90	-1126.69	122.91	1667662.01	14306532.42	39°23'49.543"N	80°54'12.810"W	1133.37	173.774	0.48	-0.26	0.40	
7787.00	89.910	162.750	6530.80	1196.87	-1216.79	152.99	1667692.08	14306442.35	39°23'48.652"N	80°54'12.428"W	1226.37	172.834	2.56	0.26	2.55	
7882.00	90.060	162.800	6530.83	1291.78	-1307.53	181.12	1667720.20	14306351.65	39°23'47.755"N	80°54'12.071"W	1320.02	172.114	0.17	0.16	0.05	
7976.00	90.000	161.210	6530.78	1385.73	-1396.93	210.16	1667749.23	14306262.28	39°23'46.871"N	80°54'11.702"W	1412.65	171.444	1.69	-0.06	-1.69	
8071.00	90.120	160.360	6530.68	1480.72	-1486.64	241.42	1667780.48	14306172.61	39°23'45.984"N	80°54'11.305"W	1506.12	170.776	0.90	0.13	-0.89	
8166.00	90.060	160.180	6530.53	1575.72	-1576.06	273.50	1667812.54	14306083.23	39°23'45.100"N	80°54'10.898"W	1599.62	170.155	0.20	-0.06	-0.19	
8261.00	90.000	158.880	6530.48	1670.71	-1665.06	306.72	1667845.75	14305994.26	39°23'44.220"N	80°54'10.476"W	1693.08	169.563	1.37	-0.06	-1.37	
8356.00	90.090	158.690	6530.40	1765.68	-1753.62	341.10	1667880.11	14305905.74	39°23'43.344"N	80°54'10.039"W	1786.49	168.993	0.22	0.09	-0.20	
8450.00	90.120	156.400	6530.23	1859.57	-1840.49	377.00	1667916.00	14305818.90	39°23'42.485"N	80°54'09.583"W	1878.70	168.424	2.44	0.03	-2.44	
8545.00	90.030	154.680	6530.11	1954.25	-1926.96	416.33	1667955.31	14305732.47	39°23'41.630"N	80°54'09.083"W	1971.42	167.808	1.81	-0.09	-1.81	
8640.00	89.630	156.210	6530.39	2048.91	-2013.37	455.81	1667994.78	14305646.10	39°23'40.776"N	80°54'08.581"W	2064.32	167.244	1.66	-0.42	1.61	
8735.00	89.940	160.640	6530.74	2143.84	-2101.69	490.73	1668029.69	14305557.81	39°23'39.903"N	80°54'08.138"W	2158.22	166.857	4.67	0.33	4.66	
8829.00	90.060	162.780	6530.74	2237.80	-2190.93	520.23	1668059.17	14305468.60	39°23'39.020"N	80°54'07.763"W	2251.85	166.643	2.28	0.13	2.28	
8924.00	90.000	162.850	6530.70	2332.71	-2281.69	548.30	1668087.23	14305377.88	39°23'38.123"N	80°54'07.407"W	2346.65	166.488	0.10	-0.06	0.07	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 6 of 11



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Tyler County, WV		Well	Beem Unit 3H
Field	Tyler		Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad			

WELLPATH DATA (208 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
9019.00	90.030	163.700	6530.67	2427.57	-2372.67	575.64	1668114.56	14305286.94	39°23'37.223"N	80°54'07.060"W	2441.50	166.363	0.90	0.03	0.89	
9113.00	90.220	163.570	6530.47	2521.41	-2462.86	602.12	1668141.03	14305196.78	39°23'36.332"N	80°54'06.724"W	2535.40	166.262	0.24	0.20	-0.14	
9208.00	90.150	164.100	6530.16	2616.22	-2554.11	628.57	1668167.47	14305105.57	39°23'35.430"N	80°54'06.388"W	2630.32	166.174	0.56	-0.07	0.56	
9302.00	90.580	162.970	6529.56	2710.06	-2644.25	655.21	1668194.10	14305015.47	39°23'34.539"N	80°54'06.050"W	2724.22	166.083	1.29	0.46	-1.20	
9397.00	89.850	161.250	6529.20	2805.01	-2734.65	684.39	1668223.27	14304925.10	39°23'33.645"N	80°54'05.680"W	2818.99	165.949	1.97	-0.77	-1.81	
9492.00	89.850	158.640	6529.45	2900.00	-2823.88	716.97	1668255.83	14304835.91	39°23'32.762"N	80°54'05.266"W	2913.48	165.754	2.75	0.00	-2.75	
9587.00	89.510	156.570	6529.98	2994.89	-2911.71	753.16	1668292.01	14304748.11	39°23'31.894"N	80°54'04.806"W	3007.54	165.497	2.21	-0.36	-2.18	
9681.00	89.420	155.560	6530.86	3088.64	-2997.62	791.29	1668330.13	14304662.24	39°23'31.044"N	80°54'04.322"W	3100.30	165.213	1.08	-0.10	-1.07	
9776.00	90.710	156.360	6530.75	3183.37	-3084.38	829.99	1668368.81	14304575.51	39°23'30.187"N	80°54'03.830"W	3194.10	164.939	1.60	1.36	0.84	
9870.00	89.290	156.140	6530.75	3277.14	-3170.42	867.85	1668406.65	14304489.51	39°23'29.336"N	80°54'03.349"W	3287.05	164.691	1.53	-1.51	-0.23	
9965.00	90.030	157.910	6531.32	3371.98	-3257.88	904.93	1668443.72	14304402.09	39°23'28.471"N	80°54'02.878"W	3381.22	164.476	2.02	0.78	1.86	
10060.00	89.660	160.030	6531.57	3466.95	-3346.54	939.02	1668477.79	14304313.46	39°23'27.594"N	80°54'02.445"W	3475.79	164.326	2.27	-0.39	2.23	
10154.00	89.540	160.360	6532.23	3560.95	-3434.98	970.87	1668509.63	14304225.05	39°23'26.720"N	80°54'02.041"W	3569.55	164.218	0.37	-0.13	0.35	
10249.00	89.780	161.450	6532.79	3655.94	-3524.75	1001.94	1668540.69	14304135.32	39°23'25.832"N	80°54'01.646"W	3664.39	164.132	1.17	0.25	1.15	
10344.00	89.750	161.880	6533.18	3750.91	-3614.93	1031.83	1668570.56	14304045.18	39°23'24.941"N	80°54'01.267"W	3759.30	164.069	0.45	-0.03	0.45	
10438.00	89.570	161.390	6533.74	3844.88	-3704.14	1061.44	1668600.17	14303956.01	39°23'24.059"N	80°54'00.891"W	3853.22	164.010	0.56	-0.19	-0.52	
10533.00	89.660	160.720	6534.38	3939.87	-3793.99	1092.29	1668631.00	14303866.19	39°23'23.170"N	80°54'00.499"W	3948.09	163.939	0.71	0.09	-0.71	
10627.00	89.510	158.920	6535.06	4033.86	-3882.21	1124.71	1668663.41	14303778.00	39°23'22.298"N	80°54'00.088"W	4041.85	163.843	1.92	-0.16	-1.91	
10722.00	89.570	157.870	6535.82	4128.81	-3970.53	1159.69	1668698.37	14303689.72	39°23'21.425"N	80°53'59.643"W	4136.43	163.718	1.11	0.06	-1.11	
10817.00	89.850	159.230	6536.30	4223.76	-4058.95	1194.43	1668733.10	14303601.33	39°23'20.550"N	80°53'59.202"W	4231.04	163.602	1.46	0.29	1.43	
10911.00	89.820	159.400	6536.57	4317.75	-4146.89	1227.63	1668766.29	14303513.43	39°23'19.681"N	80°53'58.780"W	4324.79	163.509	0.18	-0.03	0.18	
11006.00	89.850	160.950	6536.85	4412.74	-4236.26	1259.85	1668798.49	14303424.10	39°23'18.797"N	80°53'58.371"W	4419.63	163.438	1.63	0.03	1.63	
11100.00	89.820	162.240	6537.12	4506.72	-4325.45	1289.53	1668828.16	14303334.95	39°23'17.915"N	80°53'57.995"W	4513.58	163.399	1.37	-0.03	1.37	
11195.00	89.940	162.520	6537.32	4601.65	-4415.99	1318.28	1668856.91	14303244.44	39°23'17.020"N	80°53'57.630"W	4608.56	163.378	0.32	0.13	0.29	
11290.00	89.850	162.680	6537.49	4696.57	-4506.64	1346.69	1668885.30	14303153.82	39°23'16.124"N	80°53'57.269"W	4703.55	163.363	0.19	-0.09	0.17	
11384.00	89.880	162.420	6537.71	4790.49	-4596.32	1374.88	1668913.48	14303064.19	39°23'15.237"N	80°53'56.911"W	4797.54	163.347	0.28	0.03	-0.28	
11479.00	89.910	161.800	6537.89	4885.44	-4686.72	1404.06	1668942.65	14302973.82	39°23'14.343"N	80°53'56.541"W	4892.52	163.323	0.65	0.03	-0.65	
11574.00	89.910	161.040	6538.04	4980.42	-4776.77	1434.33	1668972.91	14302883.80	39°23'13.453"N	80°53'56.157"W	4987.47	163.286	0.80	0.00	-0.80	
11668.00	89.940	159.650	6538.16	5074.42	-4865.29	1465.95	1669004.51	14302795.32	39°23'12.578"N	80°53'55.755"W	5081.34	163.232	1.48	0.03	-1.48	
11763.00	89.940	159.200	6538.26	5169.41	-4954.23	1499.34	1669037.88	14302706.41	39°23'11.698"N	80°53'55.331"W	5176.14	163.162	0.47	0.00	-0.47	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Tyler County, WV		Well	Beem Unit 3H
Field	Tyler		Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad			

WELLPATH DATA (208 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
11857.00	90.030	159.380	6538.28	5263.39	-5042.16	1532.58	1669071.11	14302618.52	39°23'10.829"N	80°53'54.909"W	5269.93	163.093	0.21	0.10	0.19	
11952.00	89.910	158.820	6538.33	5358.37	-5130.91	1566.47	1669104.99	14302529.81	39°23'09.952"N	80°53'54.479"W	5364.70	163.023	0.60	-0.13	-0.59	
12047.00	89.880	158.680	6538.51	5453.34	-5219.45	1600.90	1669139.41	14302441.30	39°23'09.076"N	80°53'54.042"W	5459.44	162.948	0.15	-0.03	-0.15	
12141.00	89.880	160.000	6538.70	5547.33	-5307.40	1634.06	1669172.56	14302353.39	39°23'08.206"N	80°53'53.621"W	5553.25	162.887	1.40	0.00	1.40	
12236.00	90.000	161.000	6538.80	5642.33	-5396.95	1665.77	1669204.26	14302263.87	39°23'07.321"N	80°53'53.218"W	5648.17	162.847	1.06	0.13	1.05	
12330.00	89.940	161.250	6538.85	5736.32	-5485.89	1696.18	1669234.65	14302174.96	39°23'06.442"N	80°53'52.832"W	5742.13	162.819	0.27	-0.06	0.27	
12425.00	89.880	161.750	6539.00	5831.29	-5575.98	1726.33	1669264.79	14302084.91	39°23'05.551"N	80°53'52.449"W	5837.11	162.797	0.53	-0.06	0.53	
12519.00	89.880	163.240	6539.20	5925.22	-5665.63	1754.60	1669293.05	14301995.30	39°23'04.665"N	80°53'52.091"W	5931.10	162.793	1.59	0.00	1.59	
12613.00	89.880	163.640	6539.40	6019.07	-5755.73	1781.39	1669319.83	14301905.24	39°23'03.774"N	80°53'51.751"W	6025.10	162.803	0.43	0.00	0.43	
12708.00	89.850	164.480	6539.62	6113.86	-5847.07	1807.48	1669345.91	14301813.93	39°23'02.871"N	80°53'51.420"W	6120.07	162.822	0.88	-0.03	0.88	
12802.00	89.910	164.070	6539.82	6207.62	-5937.56	1832.96	1669371.37	14301723.48	39°23'01.976"N	80°53'51.097"W	6214.04	162.844	0.44	0.06	-0.44	
12897.00	90.030	161.670	6539.87	6302.52	-6028.34	1860.94	1669399.34	14301632.74	39°23'01.078"N	80°53'50.742"W	6309.03	162.845	2.53	0.13	-2.53	
12991.00	89.880	160.300	6539.94	6396.51	-6117.20	1891.56	1669429.96	14301543.91	39°23'00.200"N	80°53'50.353"W	6402.98	162.817	1.47	-0.16	-1.46	
13086.00	90.060	160.950	6539.99	6491.50	-6206.82	1923.08	1669461.46	14301454.32	39°22'59.314"N	80°53'49.953"W	6497.91	162.785	0.71	0.19	0.68	
13180.00	89.940	160.680	6539.99	6585.50	-6295.60	1953.97	1669492.34	14301365.58	39°22'58.436"N	80°53'49.561"W	6591.86	162.757	0.31	-0.13	-0.29	
13274.00	89.880	159.970	6540.14	6679.50	-6384.11	1985.62	1669523.97	14301277.10	39°22'57.561"N	80°53'49.159"W	6685.78	162.723	0.76	-0.06	-0.76	
13368.00	89.880	158.720	6540.33	6773.48	-6472.07	2018.77	1669557.12	14301189.18	39°22'56.691"N	80°53'48.738"W	6779.61	162.676	1.33	0.00	-1.33	
13462.00	89.940	157.270	6540.48	6867.41	-6559.22	2053.99	1669592.32	14301102.07	39°22'55.829"N	80°53'48.291"W	6873.30	162.612	1.54	0.06	-1.54	
13558.00	89.910	156.230	6540.61	6963.23	-6647.42	2091.89	1669630.20	14301013.90	39°22'54.957"N	80°53'47.809"W	6968.80	162.532	1.08	-0.03	-1.08	
13652.00	89.780	156.830	6540.86	7057.03	-6733.64	2129.33	1669667.62	14300927.71	39°22'54.104"N	80°53'47.334"W	7062.29	162.452	0.65	-0.14	0.64	
13746.00	89.850	156.160	6541.17	7150.83	-6819.84	2166.82	1669705.10	14300841.55	39°22'53.252"N	80°53'46.858"W	7155.79	162.374	0.72	0.07	-0.71	
13841.00	90.030	157.030	6541.27	7245.64	-6907.03	2204.55	1669742.82	14300754.40	39°22'52.390"N	80°53'46.378"W	7250.31	162.298	0.94	0.19	0.92	
13936.00	90.000	159.580	6541.24	7340.58	-6995.29	2239.67	1669777.92	14300666.17	39°22'51.517"N	80°53'45.932"W	7345.08	162.247	2.68	-0.03	2.68	
14031.00	90.060	161.340	6541.19	7435.57	-7084.82	2271.44	1669809.68	14300576.68	39°22'50.632"N	80°53'45.529"W	7440.03	162.224	1.85	0.06	1.85	
14126.00	89.970	160.400	6541.17	7530.56	-7174.57	2302.57	1669840.80	14300486.97	39°22'49.745"N	80°53'45.134"W	7535.00	162.207	0.99	-0.09	-0.99	
14220.00	89.570	159.180	6541.54	7624.56	-7262.78	2335.04	1669873.26	14300398.79	39°22'48.872"N	80°53'44.722"W	7628.92	162.177	1.37	-0.43	-1.30	
14315.00	89.660	160.670	6542.18	7719.55	-7352.00	2367.65	1669905.85	14300309.60	39°22'47.990"N	80°53'44.308"W	7723.84	162.149	1.57	0.09	1.57	
14410.00	89.780	161.030	6542.65	7814.55	-7441.74	2398.82	1669937.00	14300219.90	39°22'47.103"N	80°53'43.912"W	7818.81	162.133	0.40	0.13	0.38	
14504.00	89.850	161.100	6542.95	7908.54	-7530.66	2429.32	1669967.49	14300131.02	39°22'46.224"N	80°53'43.525"W	7912.80	162.121	0.11	0.07	0.07	
14599.00	89.750	161.190	6543.28	8003.52	-7620.56	2460.02	1669998.18	14300041.16	39°22'45.335"N	80°53'43.136"W	8007.78	162.109	0.14	-0.11	0.09	



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Tyler County, WV		Well	Beem Unit 3H
Field	Tyler		Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad			

WELLPATH DATA (208 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
14694.00	89.850	161.380	6543.61	8098.51	-7710.53	2490.50	1670028.65	14299951.22	39°22'44.445"N	80°53'42.749"W	8102.77	162.100	0.23	0.11	0.20	
14788.00	89.850	160.730	6543.86	8192.50	-7799.44	2521.02	1670059.16	14299862.34	39°22'43.566"N	80°53'42.361"W	8196.76	162.088	0.69	0.00	-0.69	
14883.00	89.690	161.030	6544.24	8287.49	-7889.20	2552.14	1670090.26	14299772.62	39°22'42.679"N	80°53'41.966"W	8291.74	162.074	0.36	-0.17	0.32	
14978.00	89.720	160.710	6544.73	8382.48	-7978.95	2583.27	1670121.38	14299682.90	39°22'41.791"N	80°53'41.571"W	8386.71	162.060	0.34	0.03	-0.34	
15072.00	89.780	161.370	6545.14	8476.47	-8067.85	2613.81	1670151.91	14299594.04	39°22'40.912"N	80°53'41.184"W	8480.70	162.049	0.71	0.06	0.70	
15167.00	89.820	160.400	6545.47	8571.46	-8157.61	2644.92	1670183.01	14299504.32	39°22'40.025"N	80°53'40.789"W	8575.68	162.036	1.02	0.04	-1.02	
15261.00	90.000	158.350	6545.62	8665.45	-8245.58	2678.03	1670216.10	14299416.38	39°22'39.155"N	80°53'40.369"W	8669.57	162.007	2.19	0.19	-2.18	
15356.00	89.940	156.810	6545.67	8760.34	-8333.40	2714.26	1670252.32	14299328.60	39°22'38.287"N	80°53'39.908"W	8764.29	161.959	1.62	-0.06	-1.62	
15451.00	89.850	156.220	6545.84	8855.14	-8420.53	2752.12	1670290.16	14299241.51	39°22'37.425"N	80°53'39.428"W	8858.86	161.901	0.63	-0.09	-0.62	
15545.00	89.880	156.230	6546.06	8948.91	-8506.55	2790.01	1670328.04	14299155.52	39°22'36.574"N	80°53'38.946"W	8952.41	161.841	0.03	0.03	0.01	
15639.00	89.820	156.810	6546.31	9042.71	-8592.77	2827.46	1670365.48	14299069.34	39°22'35.722"N	80°53'38.471"W	9046.01	161.786	0.62	-0.06	0.62	
15734.00	89.880	157.840	6546.56	9137.59	-8680.42	2864.09	1670402.09	14298981.72	39°22'34.855"N	80°53'38.006"W	9140.72	161.740	1.09	0.06	1.08	
15828.00	89.850	158.860	6546.78	9231.53	-8767.79	2898.77	1670436.75	14298894.38	39°22'33.991"N	80°53'37.565"W	9234.55	161.705	1.09	-0.03	1.09	
15923.00	89.910	160.140	6546.98	9326.52	-8856.77	2932.03	1670470.01	14298805.44	39°22'33.111"N	80°53'37.143"W	9329.48	161.683	1.35	0.06	1.35	
16018.00	89.570	161.250	6547.41	9421.52	-8946.43	2963.44	1670501.40	14298715.82	39°22'32.225"N	80°53'36.744"W	9424.47	161.673	1.22	-0.36	1.17	
16112.00	89.940	164.600	6547.81	9515.40	-9036.27	2991.04	1670528.99	14298626.01	39°22'31.336"N	80°53'36.394"W	9518.43	161.685	3.59	0.39	3.56	
16206.00	90.370	165.880	6547.56	9609.04	-9127.17	3014.98	1670552.93	14298535.15	39°22'30.438"N	80°53'36.091"W	9612.25	161.720	1.44	0.46	1.36	
16300.00	90.340	164.640	6546.98	9702.68	-9218.07	3038.90	1670576.83	14298444.28	39°22'29.539"N	80°53'35.788"W	9706.07	161.754	1.32	-0.03	-1.32	
16396.00	90.280	163.560	6546.46	9798.46	-9310.39	3065.20	1670603.12	14298352.00	39°22'28.626"N	80°53'35.454"W	9801.98	161.777	1.13	-0.06	-1.12	
16490.00	90.280	162.620	6546.00	9892.34	-9400.33	3092.54	1670630.45	14298262.10	39°22'27.737"N	80°53'35.107"W	9895.96	161.790	1.00	0.00	-1.00	
16585.00	90.280	161.420	6545.53	9987.29	-9490.69	3121.86	1670659.76	14298171.78	39°22'26.844"N	80°53'34.735"W	9990.95	161.792	1.26	0.00	-1.26	
16679.00	90.280	161.580	6545.07	10081.27	-9579.83	3151.69	1670689.58	14298082.67	39°22'25.962"N	80°53'34.357"W	10084.95	161.789	0.17	0.00	0.17	
16774.00	90.280	162.040	6544.61	10176.23	-9670.08	3181.35	1670719.22	14297992.46	39°22'25.070"N	80°53'33.981"W	10179.95	161.789	0.48	0.00	0.48	
16869.00	90.370	161.830	6544.07	10271.18	-9760.39	3210.81	1670748.67	14297902.18	39°22'24.177"N	80°53'33.607"W	10274.95	161.791	0.24	0.09	-0.22	
16964.00	90.340	162.450	6543.48	10366.13	-9850.81	3239.94	1670777.79	14297811.79	39°22'23.283"N	80°53'33.237"W	10369.94	161.794	0.65	-0.03	0.65	
17058.00	90.220	161.910	6543.02	10460.08	-9940.30	3268.71	1670806.55	14297722.34	39°22'22.398"N	80°53'32.872"W	10463.94	161.797	0.59	-0.13	-0.57	
17148.00	90.060	161.400	6542.80	10550.05	-10025.73	3297.03	1670834.86	14297636.95	39°22'21.553"N	80°53'32.513"W	10553.94	161.796	0.59	-0.18	-0.57	
17172.00	90.060	161.400	6542.78	10574.04	-10048.47	3304.69	1670842.51	14297614.21	39°22'21.329"N	80°53'32.416"W	10577.94	161.795	0.00	0.00	0.00	Projected MD at TD: 17172'



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 9 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Beem Unit 3H AWB Ref Wellpath: Beem Unit 3H AWP Proj: 17172'

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	25.00	105.00	80.00	25.00	105.00	0.00	0.00	0.04	0.39
17.5in Open Hole	105.00	453.01	348.01	105.00	453.00	0.04	0.39	-1.43	1.98
13.375in Casing Surface	25.00	453.01	428.01	25.00	453.00	0.00	0.00	-1.43	1.98
12.25in Open Hole	453.01	2568.08	2115.07	453.00	2568.00	-1.43	1.98	-0.19	-6.72
9.625in Casing Intermediate	25.00	2568.08	2543.08	25.00	2568.00	0.00	0.00	-0.19	-6.72
8.75in Open Hole	2568.08	6205.00	3636.92	2568.00	6151.87	-0.19	-6.72	154.88	-330.03
8.5in Open Hole	6205.00	17172.00	10967.00	6151.87	6542.78	154.88	-330.03	-10048.47	3304.69
5.5in Casing Production	25.00	17172.00	17147.00	25.00	6542.78	0.00	0.00	-10048.47	3304.69

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Beem Unit 3H POE Rev-2	6493.00	-276.28	-181.90	1667357.32	14307382.48	39°23'57.951"N	80°54'16.681"W	point
Beem Unit 3H BHL Rev-2	6519.00	-10078.70	3339.19	1670877.00	14297584.00	39°22'21.029"N	80°53'31.977"W	point
Beem Unit 3H LP Rev-2	6519.00	-436.87	-124.22	1667414.98	14307221.96	39°23'56.363"N	80°54'15.948"W	point



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 10 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH COMPOSITION - Ref Wellbore: Beem Unit 3H AWB Ref Wellpath: Beem Unit 3H AWP Proj: 17172'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	400.00	Gyrodata standard - Drop gyro or Multi-shot	01_Gyrodata MS Gyro <17-1/2">(100'-400')	Beem Unit 3H AWB
400.00	2522.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(400')(444'-2522')	Beem Unit 3H AWB
2522.00	6145.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2522')(2635'-6145')	Beem Unit 3H AWB
6145.00	17148.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (6145')(6177'-17148')	Beem Unit 3H AWB
17148.00	17172.00	Blind Drilling (std)	Projection to bit	Beem Unit 3H AWB



Actual Wellpath Report

Beem Unit 3H AWP Proj: 17172'

Page 11 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Beem Unit 3H
Field	Tyler	Wellbore	Beem Unit 3H AWB
Facility	Pyle Run Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02474-0000 BHI Job #: 109546995 Rig: Patterson 342 Duration: 12/08/2018-12/11/2018 Gyrodata MS Gyro <17-1/2">(100'-400') WFT EM <12-1/4">(400')(444'-2522') WFT EM <8-3/4">(2522')(2635'-6145') BH AT Curve <8-1/2"> (6145')(6177'-17148') Middlesex: 6468' MD Burkett: 6647' MD Tully: 6730' MD Marcellus POE: 6825' MD Projected MD at TD: 17172'</p>