



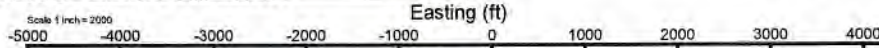
ANTERO RESOURCES CORPORATION



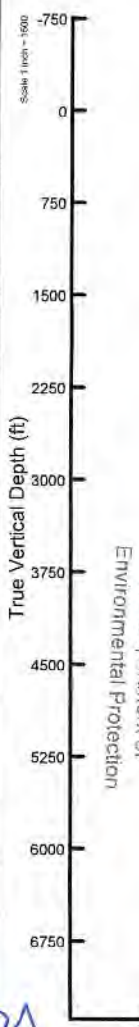
Location: Tyler County, WV
 Field: Tyler
 Facility: Beech Run Pad

Slot: Slot C
 Well: Emmons Unit 1H
 Wellbore: Emmons Unit 1H PWB

Plot reference wellbore is Emmons Unit 1H PWB Rev.C.0	Grid System: NAD83 / UTM Zone 17 North, US Feet
True vertical depth was referenced to H&P 317 (903)	North Reference: Grid north
Reference wellbore measured depths are referenced to H&P 317 (903)	Scale: True vertical
H&P 317 (903) to Mean Sea Level: 1247.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot C): -1222 feet	Depths are in feet
Chart wellbore MDs are referenced to each other's initial MD datum	Created by: atxray on 2022-12-14, Oklahoma, WA, WIP, EASTE/PROD, DWH



Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Beech Run Pad	1701783.750	14354655.970	39°31'42.7528"N	80°46'56.5204"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude
Slot C	-14.66	-3.30	1701790.450	39°31'42.6480"N
Slot C			14354441.320	80°46'56.5630"W
Comment	Emmons Unit 1H			
H&P 317 (903) to Ground level (At Slot: Slot C)	25.5ft			
Mean Sea Level to Ground level (At Slot: Slot C)	-1222ft			
H&P 317 (903) to Mean Sea Level	1247.5ft			



Gyrodatta MS Gyro <17-1/2"> (100°-900') : 0.25° Inc, 100.00ft MD, 100.00ft TVD, -0.16ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot C	Emmons Unit 1H	Emmons Unit 1H AWB	Emmons Unit 1H AWP Proj. 18014'
Slot C	Emmons Unit 1H	Emmons Unit 1H PWB	Emmons Unit 1H PWB Rev.C.0

Gyrodatta MS Gyro <12-1/4"> (900°)(1000'-1093') : 0.52° Inc, 1000.00ft MD, 999.97ft TVD, -6.61ft VS
 APS EM <12-1/4"> (1093°)(1141'-3361') : 0.59° Inc, 1141.00ft MD, 1140.97ft TVD, -7.89ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	3361.00	20.410	87.900	3271.91	-3.97	570.73	0.56
Proj. to Bottom	3440.00	20.410	87.900	3345.95	-2.96	598.26	0.00
Drill Out	3520.00	20.410	87.900	3420.93	-1.94	626.14	0.00
End of 3D Arc	3550.68	20.272	86.180	3449.69	-1.39	636.79	2.00
Curve KOP	6434.19	20.272	86.180	5154.59	65.17	1633.66	0.00
POE	7423.07	72.944	341.091	6883.00	613.84	1654.90	8.00
Landing Pt.	7612.59	90.000	341.091	6911.00	790.49	1554.39	9.00
BHL	18044.59	90.000	341.091	6911.00	10659.52	-1786.29	0.00

APS EM <8-3/4"> (3361°)(3495'-6331') : 19.05° Inc, 3495.00ft MD, 3398.05ft TVD, -199.55ft VS



User specified (HDGM) Dip: 66.38° Field: 51716 nT
 Magnetic North is 7.59 degrees West of True North (at 11/26/2022)
 Grid North is 0.14 degrees East of True North
 To correct azimuth from True to Grid subtract 0.14 degrees
 To correct azimuth from Magnetic to Grid subtract 7.73 degrees

BH AT Curve <8-1/2"> (6331°)(6377'-17989') : 15.36° Inc, 6377.00ft MD, 6084.81ft TVD, -466.25ft VS

Marcellus POE: 7463' MD : 75.65° Inc, 7463.00ft MD, 6881.74ft TVD, 80.91ft VS

API: 47-095-02801-0000
 BH Job #: 111519925
 Rig: H&P 317
 Duration: 11/27/2022-12/1/2022

Marcellus POE: 7463' MD : 6881.74ft TVD, 654.51ft N, 1660.92ft E
 BH AT Curve <8-1/2"> (6331°)(6377'-17989') : 6084.81ft TVD, 56.61ft N, 1603.92ft E
 APS EM <8-3/4"> (3361°)(3495'-6331') : 3398.05ft TVD, 0.00ft N, 615.73ft E
 APS EM <12-1/4"> (1093°)(1141'-3361') : 1140.97ft TVD, 7.35ft S, 2.89ft E
 Gyrodatta MS Gyro <12-1/4"> (900°)(1000'-1093') : 999.97ft TVD, 6.32ft S, 1.97ft E
 Gyrodatta MS Gyro <17-1/2"> (100°-900') : 100.00ft TVD, 0.16ft S, 0.05ft E

Projected MD at TD: 18014' : 89.85° Inc, 18014.00ft MD, 6898.53ft TVD, 10627.21ft VS

Vertical Section (ft)
 Azimuth 341.09° with reference 0.00 N, 0.00 E

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Actual Wellpath Report

Emmons Unit 1H AWP Proj: 18014'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999604	Report Generated	12/14/2022 at 4:09:05 PM
Convergence at slot	0.14° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-14.66	-3.30	1701780.45	14354441.32	39°31'42.6480"N	80°46'56.5630"W
Facility Reference Pt			1701783.75	14354455.97	39°31'42.7928"N	80°46'56.5204"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 317 (RKB) to Facility Vertical Datum	1247.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1247.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot C)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.09°

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Emmons Unit 1H AWP Proj: 18014'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (199 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	0.00	163.810	0.00	0.00	0.00	0.00	1701780.45	14354441.32	39°31'42.6480"N	80°46'56.5630"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	163.810	25.50	0.00	0.00	0.00	1701780.45	14354441.32	39°31'42.6480"N	80°46'56.5630"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.250	163.810	100.00	-0.16	-0.16	0.05	1701780.50	14354441.16	39°31'42.6465"N	80°46'56.5625"W	0.16	163.810	0.34	0.34	0.00	Gyrodata MS Gyro <17-1/2"> (100'-900')
200.00	0.180	149.780	200.00	-0.53	-0.50	0.19	1701780.64	14354440.82	39°31'42.6431"N	80°46'56.5607"W	0.53	159.724	0.09	-0.07	-14.03	
300.00	0.560	169.410	300.00	-1.17	-1.12	0.35	1701780.80	14354440.20	39°31'42.6370"N	80°46'56.5585"W	1.17	162.418	0.40	0.38	19.63	
400.00	0.520	160.390	399.99	-2.11	-2.03	0.60	1701781.05	14354439.30	39°31'42.6280"N	80°46'56.5555"W	2.11	163.597	0.09	-0.04	-9.02	
500.00	0.520	163.430	499.99	-3.02	-2.89	0.88	1701781.33	14354438.43	39°31'42.6195"N	80°46'56.5519"W	3.02	163.090	0.03	0.00	3.04	
600.00	0.480	178.300	599.98	-3.87	-3.74	1.02	1701781.47	14354437.58	39°31'42.6110"N	80°46'56.5501"W	3.88	164.754	0.14	-0.04	14.87	
700.00	0.430	152.880	699.98	-4.64	-4.49	1.20	1701781.65	14354436.83	39°31'42.6036"N	80°46'56.5478"W	4.65	165.011	0.21	-0.05	-25.42	
800.00	0.370	161.590	799.98	-5.34	-5.13	1.48	1701781.93	14354436.19	39°31'42.5972"N	80°46'56.5443"W	5.34	163.959	0.09	-0.06	8.71	
900.00	0.310	169.990	899.98	-5.93	-5.71	1.63	1701782.07	14354435.62	39°31'42.5916"N	80°46'56.5425"W	5.93	164.104	0.08	-0.06	8.40	
1000.00	0.520	139.050	999.97	-6.61	-6.32	1.97	1701782.42	14354435.01	39°31'42.5855"N	80°46'56.5381"W	6.62	162.680	0.30	0.21	-30.94	Gyrodata MS Gyro <12-1/4"> (900')(1000'-1093')
1093.00	0.580	138.380	1092.97	-7.44	-6.99	2.56	1701783.01	14354434.34	39°31'42.5789"N	80°46'56.5306"W	7.44	159.885	0.06	0.06	-0.72	
1141.00	0.590	136.940	1140.97	-7.89	-7.35	2.89	1701783.34	14354433.97	39°31'42.5753"N	80°46'56.5264"W	7.90	158.540	0.04	0.02	-3.00	APS EM <12-1/4"> (1093')(1141'-3361')
1236.00	1.490	105.560	1235.95	-9.03	-8.04	4.41	1701784.86	14354433.29	39°31'42.5685"N	80°46'56.5070"W	9.17	151.232	1.09	0.95	-33.03	
1330.00	3.370	90.240	1329.86	-10.63	-8.38	8.35	1701788.80	14354432.95	39°31'42.5650"N	80°46'56.4567"W	11.83	135.081	2.10	2.00	-16.30	
1425.00	4.740	86.900	1424.62	-12.62	-8.18	15.07	1701795.51	14354433.15	39°31'42.5668"N	80°46'56.3710"W	17.14	118.491	1.46	1.44	-3.52	
1520.00	6.040	86.950	1519.20	-15.05	-7.70	23.98	1701804.42	14354433.62	39°31'42.5714"N	80°46'56.2573"W	25.18	107.801	1.37	1.37	0.05	
1614.00	7.820	86.780	1612.51	-18.13	-7.08	35.30	1701815.74	14354434.25	39°31'42.5772"N	80°46'56.1127"W	36.00	101.335	1.89	1.89	-0.18	
1709.00	9.990	83.060	1708.36	-21.59	-5.72	49.93	1701830.36	14354435.61	39°31'42.5903"N	80°46'55.9259"W	50.26	96.531	2.36	2.28	-3.92	
1804.00	11.690	81.260	1799.66	-25.00	-3.26	67.63	1701848.05	14354438.06	39°31'42.6142"N	80°46'55.7001"W	67.71	92.759	1.82	1.79	-1.89	
1898.00	13.880	82.120	1891.33	-28.84	-0.27	88.21	1701868.63	14354441.05	39°31'42.6433"N	80°46'55.4373"W	88.21	90.173	2.34	2.33	0.91	
1993.00	16.830	85.890	1982.93	-34.53	2.28	113.22	1701893.63	14354443.60	39°31'42.6679"N	80°46'55.1180"W	113.25	88.845	3.28	3.11	3.97	
2088.00	19.010	93.360	2073.33	-43.91	2.36	142.39	1701922.79	14354443.68	39°31'42.6680"N	80°46'54.7457"W	142.41	89.050	3.33	2.29	7.86	
2183.00	19.040	93.920	2163.14	-55.79	0.40	173.30	1701953.68	14354441.72	39°31'42.6478"N	80°46'54.3514"W	173.30	89.869	0.19	0.03	0.59	
2277.00	19.790	91.200	2251.79	-67.21	-0.99	204.51	1701984.87	14354440.33	39°31'42.6334"N	80°46'53.9532"W	204.51	90.276	1.25	0.80	-2.89	
2372.00	20.340	89.580	2341.03	-77.98	-1.20	237.09	1702017.45	14354440.12	39°31'42.6305"N	80°46'53.5373"W	237.10	90.290	0.82	0.58	-1.71	
2467.00	20.810	92.190	2429.97	-89.29	-1.73	270.47	1702050.81	14354439.60	39°31'42.6245"N	80°46'53.1114"W	270.47	90.366	1.08	0.49	2.75	
2563.00	20.330	91.560	2519.85	-101.26	-2.83	304.18	1702084.51	14354438.49	39°31'42.6127"N	80°46'52.6812"W	304.19	90.533	0.55	-0.50	-0.66	
2658.00	20.130	88.950	2608.99	-112.04	-2.98	337.02	1702117.34	14354438.34	39°31'42.6105"N	80°46'52.2621"W	337.03	90.507	0.97	-0.21	-2.75	

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Actual Wellpath Report

Emmons Unit 1H AWP Proj: 18014'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (199 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	
2752.00	19.830	89.820	2697.33	-122.12	-2.63	369.14	1702149.44	14354438.69	39°31'42.6131"N	80°46'51.8522"W	369.15	90.409	0.45	-0.32	0.93		
2847.00	19.580	93.560	2786.77	-133.38	-3.57	401.14	1702181.43	14354437.75	39°31'42.6031"N	80°46'51.4438"W	401.16	90.510	1.35	-0.26	3.94		
2942.00	19.080	93.020	2876.42	-145.27	-5.38	432.53	1702212.81	14354435.94	39°31'42.5845"N	80°46'51.0432"W	432.57	90.712	0.56	-0.53	-0.57		
3036.00	18.250	90.990	2965.47	-156.01	-6.44	462.59	1702242.86	14354434.88	39°31'42.5732"N	80°46'50.6596"W	462.64	90.798	1.12	-0.88	-2.16		
3131.00	18.740	88.840	3055.57	-165.73	-6.39	492.72	1702272.98	14354434.93	39°31'42.5730"N	80°46'50.2751"W	492.77	90.743	0.88	0.52	-2.26		
3226.00	19.690	88.260	3145.27	-175.11	-5.60	523.98	1702304.22	14354435.73	39°31'42.5801"N	80°46'49.8762"W	524.01	90.612	1.02	1.00	-0.61		
3320.00	20.640	87.880	3233.51	-184.57	-4.50	556.36	1702336.59	14354436.82	39°31'42.5902"N	80°46'49.4629"W	556.38	90.464	1.02	1.01	-0.40		
3361.00	20.410	87.900	3271.91	-188.72	-3.97	570.73	1702350.95	14354437.35	39°31'42.5951"N	80°46'49.2795"W	570.74	90.399	0.56	-0.56	0.05		
3495.00	19.050	81.810	3398.05	-199.55	0.00	615.73	1702395.94	14354441.32	39°31'42.6332"N	80°46'48.7051"W	615.73	90.000	1.84	-1.01	-4.54	APS EM <8-3/4"> (3361')(3495'-6331')	
3590.00	20.070	72.800	3487.59	-202.92	7.03	646.66	1702426.85	14354448.35	39°31'42.7020"N	80°46'48.3102"W	646.70	89.377	3.35	1.07	-9.48		
3684.00	23.040	69.410	3575.01	-202.86	18.27	679.29	1702459.47	14354459.58	39°31'42.8123"N	80°46'47.8934"W	679.54	88.459	3.42	3.16	-3.61		
3778.00	26.930	70.870	3660.20	-202.24	31.72	716.64	1702496.80	14354473.03	39°31'42.9443"N	80°46'47.4164"W	717.34	87.466	4.19	4.14	1.55		
3873.00	34.130	77.990	3742.00	-205.36	44.34	763.11	1702543.25	14354485.64	39°31'43.0679"N	80°46'46.8229"W	764.39	86.675	8.47	7.58	7.49		
3967.00	36.060	87.600	3818.97	-216.40	50.99	816.59	1702596.71	14354492.29	39°31'43.1323"N	80°46'46.1402"W	818.18	86.427	6.22	2.05	10.22		
4062.00	33.910	93.630	3896.82	-234.52	50.48	870.99	1702651.10	14354491.78	39°31'43.1260"N	80°46'45.4459"W	872.45	86.683	4.28	-2.26	6.35		
4156.00	30.830	102.310	3976.25	-257.07	43.68	920.73	1702700.82	14354484.98	39°31'43.0576"N	80°46'44.8113"W	921.77	87.284	5.92	-3.28	9.23		
4251.00	26.900	105.640	4059.43	-281.89	32.69	965.23	1702745.30	14354474.00	39°31'42.9479"N	80°46'44.2438"W	965.79	88.060	4.47	-4.14	3.51		
4345.00	21.810	93.310	4145.09	-300.57	25.94	1003.19	1702783.24	14354467.25	39°31'42.8803"N	80°46'43.7596"W	1003.53	88.519	7.63	-5.41	-13.12		
4440.00	18.570	89.110	4234.25	-311.93	25.16	1035.95	1702815.98	14354466.47	39°31'42.8717"N	80°46'43.3416"W	1036.25	88.609	3.73	-3.41	-4.42		
4534.00	16.120	91.610	4323.97	-321.14	25.02	1063.96	1702843.99	14354466.33	39°31'42.8697"N	80°46'42.9841"W	1064.25	88.653	2.72	-2.61	2.66		
4629.00	15.620	98.770	4415.36	-331.70	22.70	1089.79	1702869.80	14354464.01	39°31'42.8461"N	80°46'42.6545"W	1090.02	88.807	2.13	-0.53	7.54		
4723.00	16.730	96.660	4505.64	-343.42	19.20	1115.73	1702895.74	14354460.52	39°31'42.8109"N	80°46'42.3235"W	1115.90	89.014	1.34	1.18	-2.24		
4818.00	16.480	93.290	4596.68	-354.41	16.85	1142.77	1702922.76	14354458.16	39°31'42.7869"N	80°46'41.9786"W	1142.89	89.155	1.05	-0.26	-3.55		
4912.00	13.960	91.750	4687.37	-363.45	15.73	1167.42	1702947.40	14354457.05	39°31'42.7754"N	80°46'41.6641"W	1167.52	89.228	2.71	-2.68	-1.64		
5007.00	15.100	83.300	4779.34	-370.12	16.83	1191.16	1702971.14	14354458.14	39°31'42.7856"N	80°46'41.3610"W	1191.28	89.191	2.53	1.20	-8.89		
5102.00	17.640	80.380	4870.49	-375.06	20.68	1217.65	1702997.61	14354461.99	39°31'42.8230"N	80°46'41.0228"W	1217.82	89.027	2.81	2.67	-3.07		
5196.00	18.190	86.020	4959.93	-381.14	24.08	1246.33	1703026.28	14354465.39	39°31'42.8559"N	80°46'40.6567"W	1246.56	88.893	1.94	0.59	6.00		
5290.00	16.930	81.760	5049.56	-387.45	27.06	1274.51	1703054.46	14354468.37	39°31'42.8847"N	80°46'40.2969"W	1274.80	88.784	1.91	-1.34	-4.53		
5385.00	17.250	83.370	5140.36	-393.01	30.67	1302.20	1703082.13	14354471.97	39°31'42.9196"N	80°46'39.9435"W	1302.56	88.651	0.60	0.34	1.69		
5480.00	17.520	88.150	5231.03	-400.20	32.75	1330.48	1703110.40	14354474.06	39°31'42.9396"N	80°46'39.5825"W	1330.88	88.590	1.53	0.28	5.03		



Actual Wellpath Report

Emmons Unit 1H AWP Proj: 18014'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Emmons Unit 1H
Field	Tyler		API	47-095-02801-0000
Facility	Beech Run Pad		Wellbore	Emmons Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (199 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
5574.00	16.470	83.020	5320.93	-407.11	34.83	1357.85	1703137.76	14354476.14	39°31'42.9594"N	80°46'39.2331"W	1358.30	88.531	1.95	-1.12	-5.46	
5669.00	17.930	79.990	5411.68	-412.15	39.01	1385.62	1703165.52	14354480.31	39°31'43.0001"N	80°46'38.8786"W	1386.17	88.387	1.80	1.54	-3.19	
5763.00	18.630	80.100	5500.93	-416.74	44.10	1414.66	1703194.55	14354485.41	39°31'43.0497"N	80°46'38.5079"W	1415.35	88.214	0.76	0.74	0.12	
5858.00	18.470	84.830	5591.00	-422.69	48.07	1444.60	1703224.47	14354489.37	39°31'43.0882"N	80°46'38.1257"W	1445.40	88.094	1.59	-0.17	4.98	
5953.00	19.140	86.780	5680.93	-430.48	50.30	1475.13	1703255.00	14354491.60	39°31'43.1095"N	80°46'37.7359"W	1475.99	88.047	0.97	0.71	2.05	
6047.00	17.490	85.350	5770.17	-438.13	52.31	1504.60	1703284.45	14354493.61	39°31'43.1286"N	80°46'37.3598"W	1505.51	88.009	1.82	-1.76	-1.52	
6142.00	17.500	88.360	5860.77	-445.88	53.88	1533.11	1703312.95	14354495.18	39°31'43.1434"N	80°46'36.9959"W	1534.05	87.987	0.95	0.01	3.17	
6236.00	18.610	88.000	5950.14	-454.44	54.81	1562.23	1703342.05	14354496.10	39°31'43.1519"N	80°46'36.6243"W	1563.19	87.991	1.19	1.18	-0.38	
6331.00	16.890	87.410	6040.62	-462.73	55.96	1591.16	1703370.98	14354497.28	39°31'43.1626"N	80°46'36.2549"W	1592.15	87.986	1.82	-1.81	-0.62	
6377.00	15.360	86.700	6084.81	-466.25	56.61	1603.92	1703383.73	14354497.91	39°31'43.1687"N	80°46'36.0921"W	1604.92	87.979	3.35	-3.33	-1.54	BH AT Curve <8-1/2"> (6331')(6377'-17989')
6455.00	19.260	79.290	6159.27	-470.86	59.60	1626.89	1703406.69	14354500.89	39°31'43.1977"N	80°46'35.7989"W	1627.98	87.902	5.73	5.00	-9.50	
6550.00	20.200	57.410	6248.81	-469.22	71.36	1656.14	1703435.93	14354512.65	39°31'43.3132"N	80°46'35.4252"W	1657.68	87.533	7.79	0.98	-23.03	
6645.00	22.970	38.750	6337.25	-455.40	94.68	1681.60	1703461.38	14354535.97	39°31'43.5431"N	80°46'35.0996"W	1684.26	86.777	7.75	2.92	-19.64	
6739.00	28.340	21.460	6422.07	-428.54	129.83	1701.28	1703481.06	14354571.10	39°31'43.8899"N	80°46'34.8472"W	1706.23	85.636	9.75	5.71	-18.39	
6834.00	32.900	8.810	6503.89	-388.45	176.38	1713.50	1703493.27	14354617.63	39°31'44.3497"N	80°46'34.6898"W	1722.56	84.123	8.29	4.80	-13.32	
6915.00†	36.654	6.424	6570.41	-347.11	222.17	1719.58	1703499.35	14354663.40	39°31'44.8021"N	80°46'34.6108"W	1733.87	82.638	4.93	4.63	-2.95	Sycamore: 6915' MD
6928.00	37.260	6.080	6580.80	-340.04	229.93	1720.43	1703500.20	14354671.16	39°31'44.8788"N	80°46'34.5997"W	1735.73	82.388	4.93	4.67	-2.64	
7023.00	44.420	0.610	6652.65	-282.54	291.88	1723.84	1703503.60	14354733.08	39°31'45.4909"N	80°46'34.5543"W	1748.37	80.390	8.42	7.54	-5.76	
7077.00†	47.488	357.448	6690.19	-245.62	330.67	1723.15	1703502.92	14354771.86	39°31'45.8744"N	80°46'34.5618"W	1754.59	79.137	7.07	5.68	-5.86	Middlesex: 7077' MD
7118.00	49.870	355.250	6717.26	-215.92	361.39	1721.18	1703500.95	14354802.57	39°31'46.1781"N	80°46'34.5860"W	1758.71	78.142	7.07	5.81	-5.36	
7213.00	55.200	351.450	6775.04	-142.26	436.23	1712.37	1703492.14	14354877.37	39°31'46.9179"N	80°46'34.6961"W	1767.06	75.708	6.44	5.61	-4.00	
7225.00†	55.929	350.991	6781.82	-132.52	446.01	1710.86	1703490.63	14354887.15	39°31'47.0146"N	80°46'34.7151"W	1768.04	75.389	6.84	6.07	-3.82	Burkett: 7225' MD
7288.00†	59.781	348.704	6815.34	-79.81	498.50	1701.43	1703481.21	14354939.62	39°31'47.5336"N	80°46'34.8336"W	1772.96	73.670	6.84	6.11	-3.63	Tully: 7288' MD
7307.00	60.950	348.050	6824.74	-63.43	514.67	1698.11	1703477.88	14354955.79	39°31'47.6935"N	80°46'34.8756"W	1774.39	73.139	6.84	6.15	-3.44	
7402.00	70.320	344.350	6863.90	22.66	598.57	1677.39	1703457.17	14355039.66	39°31'48.5233"N	80°46'35.1373"W	1780.99	70.361	10.48	9.86	-3.89	
7463.00†	75.653	342.852	6881.74	80.91	654.51	1660.92	1703440.71	14355095.57	39°31'49.0765"N	80°46'35.3458"W	1785.23	68.492	9.05	8.74	-2.45	Marcellus POE: 7463' MD
7497.00	78.630	342.050	6889.31	114.04	686.11	1650.92	1703430.72	14355127.15	39°31'49.3890"N	80°46'35.4723"W	1787.82	67.433	9.05	8.76	-2.36	
7592.00	86.150	341.110	6901.88	208.13	775.38	1621.19	1703400.99	14355216.39	39°31'50.2721"N	80°46'35.8490"W	1797.07	64.439	7.98	7.92	-0.99	
7686.00	89.970	341.190	6905.06	302.06	864.27	1590.84	1703370.66	14355305.25	39°31'51.1513"N	80°46'36.2335"W	1810.45	61.486	4.06	4.06	0.09	
7781.00	89.290	341.250	6905.67	397.06	954.21	1560.26	1703340.09	14355395.15	39°31'52.0410"N	80°46'36.8210"W	1828.91	58.551	0.72	-0.72	0.06	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (199 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
7876.00	89.170	340.040	6906.95	492.05	1043.83	1528.77	1703308.62	14355484.74	39°31'52.9275"N	80°46'37.0199"W	1851.14	55.675	1.28	-0.13	-1.27	
7971.00	89.010	338.470	6908.46	586.98	1132.66	1495.13	1703274.99	14355573.53	39°31'53.8062"N	80°46'37.4465"W	1875.72	52.854	1.66	-0.17	-1.65	
8066.00	90.370	340.940	6908.97	681.94	1221.75	1462.18	1703242.05	14355662.58	39°31'54.6876"N	80°46'37.8642"W	1905.43	50.119	2.97	1.43	2.60	
8160.00	89.420	340.490	6909.14	775.94	1310.47	1431.14	1703211.02	14355751.27	39°31'55.5652"N	80°46'38.2576"W	1940.49	47.520	1.12	-1.01	-0.48	
8255.00	89.420	337.640	6910.11	870.87	1399.19	1397.20	1703177.09	14355839.95	39°31'56.4428"N	80°46'38.6879"W	1977.35	44.959	3.00	0.00	-3.00	
8350.00	88.000	340.940	6912.25	965.78	1488.01	1363.62	1703143.52	14355928.74	39°31'57.3215"N	80°46'39.1137"W	2018.32	42.502	3.78	-1.49	3.47	
8444.00	92.030	341.860	6912.22	1059.76	1577.08	1333.64	1703113.56	14356017.78	39°31'58.2026"N	80°46'39.4935"W	2065.38	40.219	4.40	4.25	0.98	
8539.00	90.430	338.780	6910.18	1154.71	1666.50	1301.66	1703081.59	14356107.16	39°31'59.0871"N	80°46'39.8988"W	2114.60	37.992	3.65	-1.68	-3.24	
8634.00	89.140	341.690	6910.54	1249.69	1755.89	1269.54	1703049.48	14356196.51	39°31'59.9713"N	80°46'40.3060"W	2166.77	35.868	3.35	-1.36	3.06	
8729.00	91.600	341.770	6909.92	1344.67	1846.09	1239.76	1703019.72	14356286.68	39°32'0.8635"N	80°46'40.6832"W	2223.75	33.884	2.59	2.59	0.08	
8824.00	88.370	336.810	6909.95	1439.58	1934.92	1206.18	1702986.15	14356375.47	39°32'1.7422"N	80°46'41.1090"W	2280.08	31.938	6.23	-3.40	-5.22	
8918.00	89.750	339.950	6911.49	1533.45	2022.28	1171.55	1702951.54	14356462.79	39°32'2.6065"N	80°46'41.5481"W	2337.12	30.065	3.65	1.47	3.34	
9013.00	89.660	340.890	6911.98	1628.44	2111.78	1139.72	1702919.72	14356552.26	39°32'3.4919"N	80°46'41.9517"W	2399.70	28.356	0.99	-0.09	0.99	
9108.00	89.420	340.670	6912.74	1723.44	2201.48	1108.45	1702888.46	14356641.93	39°32'4.3792"N	80°46'42.3480"W	2464.79	26.725	0.34	-0.25	-0.23	
9203.00	89.080	340.380	6913.99	1818.43	2291.04	1076.78	1702856.80	14356731.45	39°32'5.2651"N	80°46'42.7494"W	2531.47	25.173	0.47	-0.36	-0.31	
9297.00	88.520	340.320	6915.96	1912.40	2379.55	1045.17	1702825.21	14356819.92	39°32'6.1405"N	80°46'43.1499"W	2598.97	23.713	0.60	-0.60	-0.06	
9392.00	92.250	340.560	6915.32	2007.37	2469.05	1013.37	1702793.42	14356909.38	39°32'7.0259"N	80°46'43.5530"W	2668.92	22.315	3.93	3.93	0.25	
9487.00	90.400	340.970	6913.12	2102.34	2558.72	982.09	1702762.15	14356999.02	39°32'7.9129"N	80°46'43.9495"W	2740.72	20.998	1.99	-1.95	0.43	
9581.00	89.020	339.920	6913.60	2196.33	2647.29	950.63	1702730.70	14357087.56	39°32'8.7890"N	80°46'44.3483"W	2812.80	19.753	1.84	-1.47	-1.12	
9676.00	89.940	339.930	6914.46	2291.31	2736.51	918.02	1702698.10	14357176.74	39°32'9.6716"N	80°46'44.7616"W	2886.39	18.545	0.97	0.97	0.01	
9770.00	89.480	340.280	6914.93	2385.29	2824.90	886.03	1702666.13	14357265.10	39°32'10.5460"N	80°46'45.1671"W	2960.59	17.414	0.61	-0.49	0.37	
9865.00	89.570	340.010	6915.72	2480.27	2914.25	853.77	1702633.88	14357354.41	39°32'11.4298"N	80°46'45.5761"W	3036.74	16.329	0.30	0.09	-0.28	
9960.00	88.920	339.970	6916.97	2575.25	3003.51	821.26	1702601.39	14357443.63	39°32'12.3127"N	80°46'45.9882"W	3113.76	15.293	0.69	-0.68	-0.04	
10054.00	90.680	339.830	6917.30	2669.22	3091.78	788.96	1702569.10	14357531.87	39°32'13.1859"N	80°46'46.3977"W	3190.85	14.315	1.88	1.87	-0.15	
10149.00	90.150	342.580	6916.81	2764.21	3181.70	758.36	1702538.50	14357621.76	39°32'14.0754"N	80°46'46.7855"W	3270.83	13.406	2.95	-0.56	2.89	
10244.00	90.490	337.890	6916.08	2859.17	3271.08	726.24	1702506.40	14357711.10	39°32'14.9595"N	80°46'47.1927"W	3350.73	12.518	4.95	0.36	-4.94	
10339.00	89.010	337.770	6916.50	2954.02	3359.05	690.39	1702470.57	14357799.04	39°32'15.8299"N	80°46'47.6475"W	3429.27	11.614	1.56	-1.56	-0.13	
10433.00	91.600	341.080	6916.00	3047.95	3447.03	657.37	1702437.55	14357886.98	39°32'16.7002"N	80°46'48.0663"W	3509.16	10.797	4.47	2.76	3.52	
10528.00	89.910	340.210	6914.74	3142.94	3536.65	625.89	1702406.09	14357976.57	39°32'17.5867"N	80°46'48.4653"W	3591.61	10.036	2.00	-1.78	-0.92	
10622.00	89.600	339.970	6915.15	3236.92	3625.03	593.87	1702374.09	14358064.91	39°32'18.4610"N	80°46'48.8711"W	3673.36	9.304	0.42	-0.33	-0.26	



Actual Wellpath Report

Emmons Unit 1H AWP Proj: 18014'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Emmons Unit 1H
Field	Tyler		API	47-095-02801-0000
Facility	Beech Run Pad		Wellbore	Emmons Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (199 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
10717.00	90.090	339.760	6915.40	3331.90	3714.23	561.17	1702341.40	14358154.07	39°32'19.3433"N	80°46'49.2857"W	3756.38	8.592	0.56	0.52	-0.22	
10812.00	90.400	342.910	6915.00	3426.89	3804.22	530.77	1702311.01	14358244.03	39°32'20.2334"N	80°46'49.6709"W	3841.07	7.943	3.33	0.33	3.32	
10906.00	89.690	340.530	6914.92	3520.87	3893.47	501.29	1702281.54	14358333.24	39°32'21.1162"N	80°46'50.0445"W	3925.61	7.337	2.64	-0.76	-2.53	
11001.00	91.230	342.590	6914.16	3615.86	3983.58	471.25	1702251.51	14358423.32	39°32'22.0075"N	80°46'50.4252"W	4011.36	6.747	2.71	1.62	2.17	
11096.00	90.150	344.500	6913.02	3710.76	4074.68	444.34	1702224.81	14358514.38	39°32'22.9085"N	80°46'50.7658"W	4098.83	6.223	2.31	-1.14	2.01	
11190.00	90.150	340.210	6912.77	3804.71	4164.23	415.85	1702196.14	14358603.90	39°32'23.7943"N	80°46'51.1266"W	4184.95	5.703	4.56	0.00	-4.56	
11284.00	90.120	343.420	6912.55	3898.69	4253.53	386.52	1702166.82	14358693.15	39°32'24.6775"N	80°46'51.4982"W	4271.05	5.192	3.42	-0.03	3.41	
11379.00	90.220	338.480	6912.27	3993.66	4343.29	355.52	1702135.83	14358782.89	39°32'25.5655"N	80°46'51.8911"W	4357.82	4.680	5.20	0.11	-5.20	
11474.00	89.780	340.280	6912.27	4088.62	4432.20	322.07	1702102.39	14358871.76	39°32'26.4450"N	80°46'52.3153"W	4443.89	4.156	1.95	-0.46	1.89	
11568.00	90.400	339.520	6912.12	4182.60	4520.48	289.76	1702070.10	14358960.00	39°32'27.3182"N	80°46'52.7249"W	4529.76	3.668	1.04	0.66	-0.81	
11663.00	90.400	343.090	6911.46	4277.58	4610.45	259.32	1702039.67	14359049.94	39°32'28.2081"N	80°46'53.1107"W	4617.74	3.219	3.76	0.00	3.76	
11757.00	89.880	341.380	6911.23	4371.55	4699.96	230.64	1702011.00	14359139.41	39°32'29.0935"N	80°46'53.4740"W	4705.62	2.809	1.90	-0.55	-1.82	
11852.00	90.310	343.120	6911.07	4466.53	4790.44	201.68	1701982.05	14359229.85	39°32'29.9884"N	80°46'53.8409"W	4794.68	2.411	1.89	0.45	1.83	
11946.00	90.580	340.340	6910.34	4560.51	4879.69	172.21	1701952.60	14359319.07	39°32'30.8712"N	80°46'54.2142"W	4882.72	2.021	2.97	0.29	-2.96	
12041.00	89.720	338.870	6910.09	4655.48	4988.73	139.11	1701919.50	14359408.07	39°32'31.7520"N	80°46'54.6340"W	4970.68	1.604	1.79	-0.91	-1.55	
12136.00	90.620	342.700	6909.81	4750.46	5058.42	107.85	1701888.26	14359497.73	39°32'32.6391"N	80°46'55.0303"W	5059.57	1.221	4.14	0.95	4.03	
12230.00	91.170	340.610	6908.34	4844.43	5147.62	78.27	1701858.69	14359586.90	39°32'33.5215"N	80°46'55.4051"W	5148.22	0.871	2.30	0.59	-2.22	
12325.00	89.630	339.370	6907.68	4939.41	5236.88	45.77	1701826.20	14359676.12	39°32'34.4044"N	80°46'55.8172"W	5237.08	0.501	2.08	-1.62	-1.31	
12420.00	90.800	340.430	6907.32	5034.39	5326.09	13.12	1701793.56	14359765.30	39°32'35.2869"N	80°46'56.2312"W	5326.11	0.141	1.66	1.23	1.12	
12514.00	90.120	341.460	6906.56	5128.38	5414.94	-17.57	1701762.89	14359854.10	39°32'36.1657"N	80°46'56.6202"W	5414.97	359.814	1.31	-0.72	1.10	
12609.00	89.780	341.760	6906.65	5223.38	5505.09	-47.54	1701732.93	14359944.22	39°32'37.0574"N	80°46'57.0000"W	5505.29	359.505	0.48	-0.36	0.32	
12703.00	90.000	340.150	6906.83	5317.37	5593.94	-78.21	1701702.27	14360033.03	39°32'37.9363"N	80°46'57.3887"W	5594.48	359.199	1.73	0.23	-1.71	
12798.00	90.890	341.910	6906.09	5412.37	5683.77	-109.09	1701671.40	14360122.83	39°32'38.8249"N	80°46'57.7801"W	5684.82	358.900	2.08	0.94	1.89	
12892.00	89.690	338.800	6905.61	5506.34	5772.29	-140.69	1701639.82	14360211.31	39°32'39.7004"N	80°46'58.1807"W	5774.00	358.604	3.55	-1.28	-3.31	
12987.00	91.660	341.070	6904.50	5601.31	5861.50	-173.28	1701607.24	14360300.49	39°32'40.5830"N	80°46'58.5940"W	5864.06	358.307	3.16	2.07	2.39	
13081.00	89.600	343.440	6903.46	5695.27	5951.01	-201.92	1701578.61	14360389.97	39°32'41.4683"N	80°46'58.9568"W	5954.44	358.057	3.34	-2.19	2.52	
13176.00	89.940	339.770	6903.84	5790.25	6041.14	-231.89	1701548.65	14360480.06	39°32'42.3598"N	80°46'59.3367"W	6045.59	357.802	3.88	0.36	-3.86	
13271.00	90.520	343.400	6903.46	5885.23	6131.26	-261.90	1701518.66	14360570.14	39°32'43.2512"N	80°46'59.7169"W	6136.85	357.554	3.87	0.61	3.82	
13365.00	89.480	340.990	6903.46	5979.20	6220.75	-290.64	1701489.93	14360659.60	39°32'44.1363"N	80°47'0.0810"W	6227.54	357.325	2.79	-1.11	-2.56	
13460.00	91.080	342.570	6903.00	6074.19	6310.98	-320.34	1701460.24	14360749.79	39°32'45.0288"N	80°47'0.4574"W	6319.11	357.094	2.37	1.68	1.66	

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Emmons Unit 1H AWP Proj: 18014'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (199 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
13554.00	89.940	343.630	6902.16	6168.12	6400.92	-347.66	1701432.92	14360839.69	39°32'45.9183"N	80°47'0.8034"W	6410.35	356.891	1.66	-1.21	1.13	
13649.00	90.060	340.050	6902.16	6263.10	6491.17	-377.27	1701403.33	14360929.91	39°32'46.8110"N	80°47'1.1786"W	6502.12	356.674	3.77	0.13	-3.77	
13743.00	90.220	343.590	6901.93	6357.08	6580.46	-406.59	1701374.02	14361019.17	39°32'47.6942"N	80°47'1.5502"W	6593.01	356.464	3.77	0.17	3.77	
13838.00	89.940	339.610	6901.80	6452.05	6670.59	-436.57	1701344.05	14361109.26	39°32'48.5856"N	80°47'1.9301"W	6684.86	356.255	4.20	-0.29	-4.19	
13932.00	91.260	343.240	6900.81	6546.03	6759.67	-466.51	1701314.13	14361198.30	39°32'49.4667"N	80°47'2.3095"W	6775.75	356.052	4.11	1.40	3.86	
14027.00	89.290	339.980	6900.36	6641.01	6849.80	-496.47	1701284.17	14361288.40	39°32'50.3582"N	80°47'2.6893"W	6867.77	355.854	4.01	-2.07	-3.43	
14122.00	91.690	342.380	6899.54	6735.99	6939.71	-527.11	1701253.54	14361378.27	39°32'51.2475"N	80°47'3.0777"W	6959.70	355.656	3.57	2.53	2.53	
14216.00	89.820	340.090	6898.31	6829.97	7028.69	-557.35	1701223.32	14361467.22	39°32'52.1277"N	80°47'3.4609"W	7050.75	355.466	3.14	-1.99	-2.44	
14311.00	90.950	342.470	6897.67	6924.96	7118.66	-587.83	1701192.85	14361557.14	39°32'53.0176"N	80°47'3.8473"W	7142.88	355.279	2.77	1.19	2.51	
14405.00	89.290	342.090	6897.47	7018.94	7208.19	-616.44	1701164.25	14361646.65	39°32'53.9032"N	80°47'4.2098"W	7234.50	355.112	1.81	-1.77	-0.40	
14499.00	89.660	340.510	6898.33	7112.93	7297.22	-646.58	1701134.13	14361735.64	39°32'54.7838"N	80°47'4.5918"W	7325.81	354.936	1.73	0.39	-1.68	
14594.00	91.080	342.430	6897.72	7207.92	7387.29	-676.77	1701103.95	14361825.67	39°32'55.6747"N	80°47'4.9744"W	7418.22	354.766	2.51	1.49	2.02	
14689.00	89.350	339.450	6897.36	7302.90	7477.07	-707.79	1701072.95	14361915.41	39°32'56.5627"N	80°47'5.3676"W	7510.49	354.592	3.63	-1.82	-3.14	
14783.00	91.110	343.330	6896.98	7396.88	7566.13	-737.78	1701042.97	14362004.44	39°32'57.4436"N	80°47'5.7477"W	7602.02	354.431	4.53	1.87	4.13	
14878.00	89.110	341.980	6896.80	7491.84	7656.80	-766.10	1701014.66	14362095.08	39°32'58.3404"N	80°47'6.1065"W	7695.03	354.286	2.54	-2.11	-1.42	
14973.00	90.800	341.350	6896.88	7586.83	7746.98	-795.98	1700984.79	14362185.22	39°32'59.2324"N	80°47'6.4852"W	7787.76	354.134	1.90	1.78	-0.66	
15067.00	89.020	340.690	6897.02	7680.82	7835.86	-826.55	1700954.23	14362274.07	39°33'0.1115"N	80°47'6.8728"W	7879.34	353.979	2.02	-1.89	-0.70	
15162.00	90.920	341.550	6897.07	7775.82	7925.75	-857.29	1700923.50	14362363.91	39°33'1.0006"N	80°47'7.2625"W	7971.98	353.827	2.20	2.00	0.91	
15257.00	88.920	341.310	6897.21	7870.81	8015.80	-887.54	1700893.26	14362453.93	39°33'1.8913"N	80°47'7.6459"W	8064.78	353.682	2.12	-2.11	-0.25	
15351.00	91.020	342.010	6897.26	7964.80	8105.02	-917.12	1700863.70	14362543.11	39°33'2.7738"N	80°47'8.0208"W	8156.74	353.544	2.35	2.23	0.74	
15446.00	89.910	337.120	6896.48	8059.73	8194.01	-950.27	1700830.55	14362632.07	39°33'3.6541"N	80°47'8.4413"W	8248.92	353.385	5.28	-1.17	-5.15	
15540.00	90.060	343.110	6896.51	8153.68	8282.36	-982.23	1700798.61	14362720.39	39°33'4.5281"N	80°47'8.8466"W	8340.40	353.237	6.37	0.16	6.37	
15635.00	89.380	340.940	6896.97	8248.66	8372.72	-1011.55	1700769.30	14362810.71	39°33'5.4218"N	80°47'9.2181"W	8433.60	353.111	2.39	-0.72	-2.28	
15730.00	90.650	341.560	6896.95	8343.65	8462.67	-1042.08	1700738.78	14362900.63	39°33'6.3115"N	80°47'9.6052"W	8526.59	352.980	1.49	1.34	0.65	
15824.00	89.720	342.510	6896.65	8437.64	8552.09	-1071.08	1700709.80	14362990.01	39°33'7.1959"N	80°47'9.9726"W	8618.90	352.861	1.41	-0.99	1.01	
15918.00	89.510	341.070	6897.28	8531.63	8641.38	-1100.45	1700680.44	14363079.26	39°33'8.0791"N	80°47'10.3449"W	8711.16	352.743	1.55	-0.22	-1.53	
16013.00	90.710	343.150	6897.09	8626.60	8731.78	-1129.63	1700651.27	14363169.62	39°33'8.9732"N	80°47'10.7147"W	8804.54	352.629	2.53	1.26	2.19	
16107.00	89.350	339.840	6897.05	8720.59	8820.90	-1159.46	1700621.45	14363258.71	39°33'9.8548"N	80°47'11.0928"W	8896.78	352.512	3.81	-1.45	-3.52	
16202.00	90.860	341.980	6896.87	8815.68	8910.67	-1190.53	1700590.40	14363348.44	39°33'10.7427"N	80°47'11.4867"W	8989.85	352.390	2.76	1.59	2.25	
16297.00	89.290	341.010	6896.75	8910.57	9000.75	-1220.68	1700560.26	14363438.49	39°33'11.6337"N	80°47'11.8689"W	9083.15	352.277	1.94	-1.65	-1.02	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (199 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
16391.00	90.490	340.900	6896.93	9004.57	9089.61	-1251.35	1700529.60	14363527.31	39°33'12.5126"N	80°47'12.2578"W	9175.34	352.161	1.28	1.28	-0.12	
16486.00	89.630	342.590	6896.83	9099.56	9179.82	-1281.11	1700499.85	14363617.49	39°33'13.4049"N	80°47'12.6350"W	9268.78	352.055	2.00	-0.91	1.78	
16581.00	89.420	342.090	6897.62	9194.53	9270.34	-1309.93	1700471.04	14363707.97	39°33'14.3002"N	80°47'13.0001"W	9362.43	351.957	0.57	-0.22	-0.53	
16675.00	89.480	341.510	6898.52	9288.52	9359.63	-1339.28	1700441.70	14363797.23	39°33'15.1834"N	80°47'13.3722"W	9454.97	351.857	0.62	0.06	-0.62	
16770.00	90.000	341.360	6898.95	9383.52	9449.69	-1369.53	1700411.46	14363887.25	39°33'16.0741"N	80°47'13.7557"W	9548.41	351.754	0.57	0.55	-0.16	
16865.00	90.250	342.480	6898.74	9478.51	9540.00	-1399.01	1700381.99	14363977.52	39°33'16.9673"N	80°47'14.1293"W	9642.03	351.657	1.21	0.26	1.18	
16959.00	89.140	341.630	6899.24	9572.49	9629.42	-1427.97	1700353.05	14364066.91	39°33'17.8518"N	80°47'14.4964"W	9734.72	351.565	1.49	-1.18	-0.90	
17053.00	90.740	341.170	6899.34	9666.48	9718.51	-1457.95	1700323.08	14364155.96	39°33'18.7330"N	80°47'14.8764"W	9827.26	351.468	1.77	1.70	-0.49	
17148.00	89.600	341.060	6899.06	9761.48	9808.39	-1488.70	1700292.34	14364245.81	39°33'19.6221"N	80°47'15.2663"W	9920.72	351.370	1.21	-1.20	-0.12	
17242.00	90.120	341.270	6899.29	9855.48	9897.36	-1519.05	1700262.01	14364334.74	39°33'20.5020"N	80°47'15.6510"W	10013.25	351.274	0.60	0.55	0.22	
17337.00	90.400	342.920	6898.86	9950.46	9987.75	-1548.25	1700232.81	14364425.10	39°33'21.3961"N	80°47'16.0212"W	10107.04	351.188	1.76	0.29	1.74	
17431.00	89.910	343.470	6898.60	10044.40	10077.74	-1575.43	1700205.65	14364515.05	39°33'22.2861"N	80°47'16.3654"W	10200.13	351.115	0.78	-0.52	0.59	
17526.00	89.510	341.220	6899.08	10139.37	10168.25	-1604.24	1700176.85	14364605.53	39°33'23.1814"N	80°47'16.7305"W	10294.03	351.034	2.41	-0.42	-2.37	
17620.00	90.150	342.360	6899.36	10233.36	10257.54	-1633.61	1700147.48	14364694.78	39°33'24.0645"N	80°47'17.1029"W	10386.81	350.951	1.39	0.68	1.21	
17715.00	89.750	342.110	6899.45	10328.34	10348.01	-1662.60	1700118.51	14364785.22	39°33'24.9593"N	80°47'17.4702"W	10480.73	350.872	0.50	-0.42	-0.26	
17809.00	90.620	342.610	6899.14	10422.31	10437.59	-1691.09	1700090.04	14364874.76	39°33'25.8453"N	80°47'17.8312"W	10573.70	350.797	1.07	0.93	0.53	
17903.00	90.180	343.110	6898.49	10516.27	10527.41	-1718.79	1700062.35	14364964.55	39°33'26.7337"N	80°47'18.1822"W	10666.80	350.727	0.71	-0.47	0.53	
17989.00	89.850	342.670	6898.46	10602.22	10609.61	-1744.09	1700037.05	14365046.71	39°33'27.5466"N	80°47'18.5027"W	10752.01	350.665	0.64	-0.38	-0.51	
18014.00‡	89.850	342.670	6898.53	10627.21	10633.47	-1751.54	1700029.61	14365070.56	39°33'27.7827"N	80°47'18.5971"W	10776.76	350.646	0.00	0.00	0.00	Projected MD at TD: 18014'

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Emmons Unit 1H AWP Proj: 18014'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

HOLE & CASING SECTIONS - Ref Wellbore: Emmons Unit 1H AWB Ref Wellpath: Emmons Unit 1H AWP Proj: 18014'

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	25.50	126.00	100.50	25.50	126.00	0.00	0.00	-0.26	0.08
17.5in Open Hole	126.00	985.00	859.00	126.00	984.98	-0.26	0.08	-6.22	1.89
13.375in Casing Surface	25.50	965.00	939.50	25.50	964.98	0.00	0.00	-6.09	1.79
12.25in Open Hole	985.00	3440.00	2455.00	984.98	3346.15	-6.22	1.89	-2.18	597.67
9.625in Casing Intermediate	25.50	3420.00	3394.50	25.50	3327.32	0.00	0.00	-2.78	590.96
8.75in Open Hole	3440.00	6401.00	2961.00	3346.15	6107.88	-2.18	597.67	57.15	1610.49
8.5in Open Hole	6401.00	18014.00	11613.00	6107.88	6898.53	57.15	1610.49	10633.47	-1751.54
5.5in Casing Production	25.50	17994.00	17968.50	25.50	6898.48	0.00	0.00	10614.38	-1745.58

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Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 1H
Field	Tyler	API	47-095-02801-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 1H AWB
Slot	Slot C		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Emmons Unit 1H POE Rev-3	6883.00	613.84	1654.90	1703434.69	14355054.92	39°31'48.6747"N	80°46'35.4239"W	point
Emmons Unit 1H BHL Rev-3	6911.00	10659.52	-1786.29	1699994.87	14365096.60	39°33'28.0409"N	80°47'19.0401"W	point
Emmons Unit 1H LP Rev-3	6911.00	790.49	1594.39	1703374.20	14355231.50	39°31'50.4221"N	80°46'36.1906"W	point
Emmons Unit 1H BHL Rev-2	6925.00	10669.55	-1789.73	1699991.43	14365106.63	39°33'28.1401"N	80°47'19.0837"W	point
Emmons Unit 1H 50' L/R Hard Line	7250.00	5641.70	-67.42	1701713.06	14360080.78	39°32'38.4081"N	80°46'57.2495"W	rectangle
2D Rectangle 10629.3 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Emmons Unit 1H AWB Ref Wellpath: Emmons Unit 1H AWP Proj: 18014'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	900.00	Gyrodata 2015 - GC+WR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-900')	Emmons Unit 1H AWB	11/2/2022
900.00	1093.00	Gyrodata 2015 - GC+WR+DPIPE	02 Gyrodata MS Gyro <12-1/4"> (900')(1000'-1093')	Emmons Unit 1H AWB	11/5/2022
1093.00	3361.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <12-1/4"> (1093')(1141'-3361)	Emmons Unit 1H AWB	11/2/2022
3361.00	6331.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04 APS EM <8-3/4"> (3361')(3495'-6331')	Emmons Unit 1H AWB	11/25/2022
6331.00	18014.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05 BH AT Curve <8-1/2"> (6331')(6377'-17989')	Emmons Unit 1H AWB	11/25/2022

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Slot	Slot C		

COMMENTS
<p>Wellpath general comments API: 47-095-02801-0000 BH Job #: 111519925 Rig: H&P 317 Duration: 11/27/2022-12/1/2022 Gyrodatta MS Gyro <17-1/2"> (100'-900') Gyrodatta MS Gyro <12-1/4"> (900')(1000'-1093') APS EM <12-1/4"> (1093')(1141'-3361') APS EM <8-3/4"> (3361')(3495'-6331') BH AT Curve <8-1/2"> (6331')(6377'-17989') Sycamore: 6915' MD Middlesex: 7077' MD Burkett: 7225' MD Tully: 7288' MD Marcellus POE: 7463' MD Projected MD at TD: 18014'</p>

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