



ANTERO RESOURCES CORPORATION



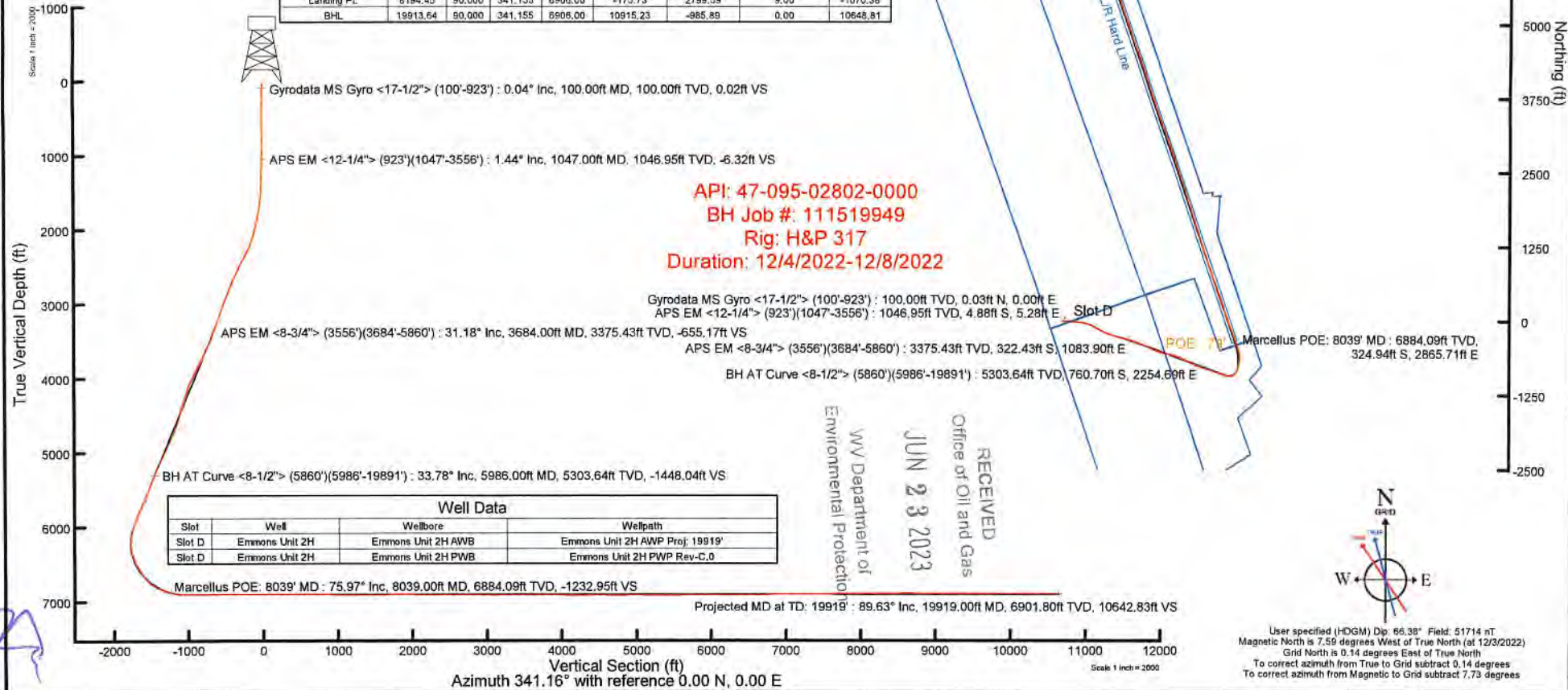
Location: Tyler County, WV
Field: Tyler
Facility: Beech Run Pad

Slot: Slot D
Well: Emmons Unit 2H
Wellbore: Emmons Unit 2H PWB

Plot reference wellpaths is Emmons Unit 2H PWP Rev-C.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1247.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot D): -1222 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: etsaynor on 2022-12-21; Database: WA_MPL_EASTERNUS_Data

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Beech Run Pad	1701783.750	14354455.970	39°31'42.7928"N	80°46'56.5204"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot D	0.02	0.04	1701783.790	14354455.990	39°31'42.7930"N
Comment	Emmons Unit 2H				
H&P 317 (RKB) to Ground level (At Slot: Slot D)					25.5ft
Mean Sea Level to Ground level (At Slot: Slot D)					-1222ft
H&P 317 (RKB) to Mean Sea Level					1247.5ft

Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3556.00	32.670	107.470	3266.79	-303.47	1018.93	1.79	-616.25
Proj. to Bottom	3635.00	32.670	107.470	3333.29	-316.27	1059.61	0.00	-641.50
Drill Out	3715.00	32.670	107.470	3400.63	-329.23	1100.80	0.00	-667.07
End of 3D Arc	3764.66	33.225	110.012	3442.31	-337.91	1126.37	3.00	-683.54
Curve KOP	6820.22	33.225	110.012	5998.37	-910.87	2699.50	0.00	-1733.81
POE	8004.94	72.944	341.155	6878.00	-352.45	2859.91	8.00	-1257.11
Landing Pt.	8194.45	90.000	341.155	6906.00	-175.73	2799.59	9.00	-1070.38
BHL	19913.64	80.000	341.155	6906.00	10915.23	-985.89	0.00	10648.81





Actual Wellpath Report

Emmons Unit 2H AWP Proj: 19919'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

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	12/21/2022 at 9:52:23 AM
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	0.02	0.04	1701783.79	14354455.99	39°31'42.7930"N	80°46'56.5199"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 D)	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	341.16°

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Slot	Slot D		

WELLPATH DATA (218 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	0.670	0.00	0.00	0.00	0.00	1701783.79	14354455.99	39°31'42.7930"N	80°46'56.5199"W	0.00	0.000	0.00	0.00	0.00		
25.50	0.000	0.670	25.50	0.00	0.00	0.00	1701783.79	14354455.99	39°31'42.7930"N	80°46'56.5199"W	0.00	0.000	0.00	0.00	0.00		
100.00	0.040	0.670	100.00	0.02	0.03	0.00	1701783.79	14354456.02	39°31'42.7932"N	80°46'56.5199"W	0.03	0.670	0.05	0.05	0.00	Gyrodata MS Gyro <17-1/2"> (100'-923')	
200.00	0.050	317.810	200.00	0.10	0.09	-0.03	1701783.76	14354456.08	39°31'42.7939"N	80°46'56.5203"W	0.10	342.952	0.03	0.01	-42.86		
300.00	0.290	178.370	300.00	-0.10	-0.13	-0.05	1701783.74	14354455.86	39°31'42.7917"N	80°46'56.5206"W	0.14	201.699	0.33	0.24	-139.44		
400.00	0.450	146.050	400.00	-0.73	-0.71	0.18	1701783.97	14354455.28	39°31'42.7860"N	80°46'56.5177"W	0.73	166.019	0.26	0.16	-32.32		
500.00	0.410	143.630	499.99	-1.45	-1.32	0.61	1701784.40	14354454.67	39°31'42.7799"N	80°46'56.5122"W	1.45	155.294	0.04	-0.04	-2.42		
600.00	0.510	131.650	599.99	-2.17	-1.90	1.15	1701784.94	14354454.09	39°31'42.7741"N	80°46'56.5053"W	2.23	148.822	0.14	0.10	-11.98		
700.00	0.850	140.900	699.98	-3.26	-2.78	1.95	1701785.74	14354453.22	39°31'42.7655"N	80°46'56.4951"W	3.39	144.874	0.36	0.34	9.25		
800.00	0.730	138.770	799.97	-4.54	-3.83	2.84	1701786.63	14354452.16	39°31'42.7551"N	80°46'56.4838"W	4.77	143.442	0.12	-0.12	-2.13		
900.00	0.290	138.900	899.97	-5.37	-4.50	3.43	1701787.21	14354451.49	39°31'42.7484"N	80°46'56.4763"W	5.66	142.713	0.44	-0.44	0.13		
923.00	0.400	149.710	922.97	-5.50	-4.61	3.50	1701787.29	14354451.38	39°31'42.7473"N	80°46'56.4753"W	5.79	142.772	0.55	0.48	47.00		
1047.00	1.440	85.930	1046.95	-6.32	-4.88	5.28	1701789.07	14354451.12	39°31'42.7447"N	80°46'56.4527"W	7.19	132.738	1.06	0.84	-51.44	APS EM <12-1/4"> (923')(1047'-3556')	
1141.00	3.440	79.140	1140.86	-7.01	-4.26	9.23	1701793.01	14354451.73	39°31'42.7506"N	80°46'56.4023"W	10.16	114.790	2.15	2.13	-7.22		
1236.00	5.100	84.440	1235.60	-8.38	-3.31	16.23	1701800.01	14354452.68	39°31'42.7598"N	80°46'56.3129"W	16.56	101.544	1.79	1.75	5.58		
1330.00	7.200	86.600	1329.05	-10.91	-2.56	26.27	1701810.05	14354453.43	39°31'42.7670"N	80°46'56.1848"W	26.39	95.567	2.25	2.23	2.30		
1425.00	9.640	88.550	1423.02	-14.87	-2.01	40.16	1701823.94	14354453.98	39°31'42.7722"N	80°46'56.0074"W	40.21	92.859	2.59	2.57	2.05		
1520.00	11.940	90.330	1516.34	-20.47	-1.86	57.95	1701841.71	14354454.13	39°31'42.7732"N	80°46'55.7805"W	57.98	91.840	2.45	2.42	1.87		
1614.00	15.470	91.650	1607.64	-28.06	-2.28	80.21	1701863.97	14354453.71	39°31'42.7685"N	80°46'55.4964"W	80.24	91.627	3.77	3.76	1.40		
1709.00	18.960	95.800	1698.38	-38.93	-4.20	108.24	1701891.98	14354451.79	39°31'42.7488"N	80°46'55.1388"W	108.32	92.224	3.89	3.67	4.37		
1804.00	21.500	100.200	1787.52	-53.82	-8.85	140.73	1701924.46	14354447.15	39°31'42.7022"N	80°46'54.7242"W	141.01	93.597	3.11	2.67	4.63		
1898.00	25.160	98.510	1873.82	-71.37	-14.86	177.46	1701961.18	14354441.14	39°31'42.6419"N	80°46'54.2557"W	178.08	94.786	3.96	3.89	-1.80		
1993.00	28.440	95.430	1958.61	-89.95	-19.99	219.96	1702003.67	14354436.01	39°31'42.5902"N	80°46'53.7134"W	220.87	95.192	3.75	3.45	-3.24		
2088.00	30.770	98.280	2041.20	-110.33	-25.63	266.54	1702050.22	14354430.37	39°31'42.5333"N	80°46'53.1192"W	267.77	95.492	2.87	2.45	3.00		
2183.00	32.910	100.230	2121.90	-133.95	-33.71	315.99	1702099.66	14354422.29	39°31'42.4522"N	80°46'52.4883"W	317.79	96.090	2.50	2.25	2.05		
2277.00	35.570	103.670	2199.61	-161.06	-44.71	367.70	1702151.35	14354411.30	39°31'42.3423"N	80°46'51.8287"W	370.41	96.933	3.50	2.83	3.66		
2372.00	37.090	110.750	2276.18	-194.18	-61.40	421.36	1702204.99	14354394.62	39°31'42.1761"N	80°46'51.1444"W	425.81	98.291	4.69	1.60	7.45		
2467.00	37.220	118.250	2351.93	-233.50	-85.16	473.49	1702257.09	14354370.86	39°31'41.9400"N	80°46'50.4799"W	481.09	100.196	4.77	0.14	7.89		
2561.00	34.580	120.860	2428.07	-274.68	-112.31	521.44	1702305.02	14354343.73	39°31'41.6705"N	80°46'49.8688"W	533.40	102.154	3.25	-2.81	2.78		
2656.00	32.560	119.090	2507.23	-314.22	-138.57	568.93	1702350.49	14354317.48	39°31'41.4099"N	80°46'49.2891"W	583.62	103.735	2.36	-2.13	-1.86		

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Field	Tyler		API	47-095-02802-0000
Facility	Beech Run Pad		Wellbore	Emmons Unit 2H AWB
Slot	Slot D			

WELLPATH DATA (218 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
2750.00	32.240	117.080	2586.60	-351.01	-162.28	611.36	1702394.91	14354293.78	39°31'41.1745"N	80°46'48.7229"W	632.53	104.866	1.20	-0.34	-2.14	
2847.00	32.280	114.930	2668.63	-387.51	-184.98	657.89	1702441.41	14354271.09	39°31'40.9490"N	80°46'48.1298"W	683.39	105.704	1.18	0.04	-2.22	
2942.00	31.430	113.240	2749.32	-421.66	-205.44	703.65	1702487.16	14354250.63	39°31'40.7456"N	80°46'47.5464"W	733.03	106.276	1.30	-0.89	-1.78	
3036.00	31.710	110.440	2829.41	-453.73	-223.74	749.32	1702532.81	14354232.34	39°31'40.5637"N	80°46'46.9641"W	782.01	106.625	1.59	0.30	-2.98	
3131.00	32.360	107.510	2909.95	-484.81	-240.11	796.97	1702580.44	14354215.97	39°31'40.4007"N	80°46'46.3566"W	832.35	106.767	1.77	0.68	-3.08	
3226.00	32.920	105.180	2989.95	-514.12	-254.52	846.13	1702629.58	14354201.57	39°31'40.2571"N	80°46'45.7297"W	883.58	106.742	1.45	0.59	-2.45	
3320.00	33.080	105.460	3068.78	-542.87	-268.05	895.50	1702678.94	14354188.05	39°31'40.1222"N	80°46'45.1000"W	934.76	106.664	0.24	0.17	0.30	
3415.00	32.860	105.810	3148.49	-572.13	-281.98	945.29	1702728.70	14354174.12	39°31'39.9833"N	80°46'44.4650"W	986.45	106.610	0.31	-0.23	0.37	
3509.00	33.130	106.170	3227.32	-601.37	-296.08	994.50	1702777.89	14354160.03	39°31'39.8428"N	80°46'43.8375"W	1037.64	106.579	0.35	0.29	0.38	
3556.00	32.670	107.470	3266.79	-616.25	-303.47	1018.93	1702802.32	14354152.64	39°31'39.7692"N	80°46'43.5259"W	1063.17	106.585	1.79	-0.98	2.77	
3684.00	31.180	105.020	3375.43	-655.17	-322.43	1083.90	1702867.26	14354133.69	39°31'39.5802"N	80°46'42.6974"W	1130.84	106.566	1.54	-1.16	-1.91	APS EM <8-3/4"> (3556)(3684-5860)
3778.00	33.200	106.300	3454.98	-683.55	-335.96	1132.11	1702915.45	14354120.17	39°31'39.4453"N	80°46'42.0826"W	1180.90	106.528	2.27	2.15	1.36	
3872.00	35.200	108.340	3532.72	-714.73	-351.71	1182.53	1702965.85	14354104.42	39°31'39.2884"N	80°46'41.4396"W	1233.72	106.564	2.45	2.13	2.17	
3967.00	35.880	111.670	3610.03	-749.37	-370.61	1234.40	1703017.70	14354085.53	39°31'39.1004"N	80°46'40.7783"W	1288.83	106.711	2.16	0.72	3.51	
4061.00	36.180	114.690	3686.05	-786.37	-392.37	1285.21	1703068.49	14354063.78	39°31'38.8841"N	80°46'40.1305"W	1343.77	106.977	1.92	0.32	3.21	
4156.00	35.670	112.750	3762.99	-824.07	-414.79	1336.23	1703119.49	14354041.36	39°31'38.6612"N	80°46'39.4801"W	1399.13	107.245	1.31	-0.54	-2.04	
4250.00	36.260	114.150	3839.07	-861.22	-436.76	1386.87	1703170.11	14354019.40	39°31'38.4428"N	80°46'38.8345"W	1454.02	107.481	1.08	0.63	1.49	
4345.00	36.110	111.510	3915.75	-898.51	-458.52	1438.55	1703221.77	14353997.65	39°31'38.2265"N	80°46'38.1757"W	1509.86	107.679	1.65	-0.16	-2.78	
4439.00	34.760	114.510	3992.34	-934.84	-479.80	1488.71	1703271.91	14353976.38	39°31'38.0150"N	80°46'37.5363"W	1564.12	107.864	2.34	-1.44	3.19	
4534.00	33.130	110.740	4071.16	-969.98	-500.23	1537.64	1703320.82	14353955.96	39°31'37.8119"N	80°46'36.9125"W	1616.96	108.021	2.80	-1.72	-3.97	
4628.00	31.170	105.610	4150.75	-1000.11	-515.88	1585.11	1703368.27	14353940.32	39°31'37.6560"N	80°46'36.3072"W	1666.94	108.028	3.57	-2.09	-5.46	
4723.00	30.490	106.200	4232.33	-1027.86	-529.22	1631.93	1703415.07	14353926.98	39°31'37.5231"N	80°46'35.7101"W	1715.59	107.967	0.78	-0.72	0.62	
4817.00	29.860	108.240	4313.59	-1055.66	-543.20	1677.06	1703460.18	14353913.01	39°31'37.3838"N	80°46'35.1347"W	1762.83	107.947	1.28	-0.67	2.17	
4912.00	28.000	103.040	4396.75	-1081.70	-555.63	1721.25	1703504.36	14353900.58	39°31'37.2598"N	80°46'34.5711"W	1808.71	107.890	3.29	-1.96	-5.47	
5006.00	27.770	102.420	4479.83	-1104.72	-565.32	1764.13	1703547.22	14353890.89	39°31'37.1630"N	80°46'34.0241"W	1852.50	107.768	0.39	-0.24	-0.66	
5101.00	28.190	103.940	4563.73	-1128.35	-575.49	1807.53	1703590.60	14353880.73	39°31'37.0615"N	80°46'33.4707"W	1896.93	107.661	0.87	0.44	1.60	
5195.00	30.610	104.520	4645.62	-1153.54	-586.84	1852.25	1703635.30	14353869.39	39°31'36.9482"N	80°46'32.9003"W	1942.99	107.579	2.59	2.57	0.62	
5290.00	33.360	114.690	4726.25	-1184.86	-603.83	1899.44	1703682.47	14353852.40	39°31'36.7791"N	80°46'32.2986"W	1993.11	107.635	6.36	2.89	10.71	
5384.00	33.240	113.500	4804.81	-1220.01	-624.90	1946.55	1703729.57	14353831.34	39°31'36.5697"N	80°46'31.6981"W	2044.39	107.798	0.71	-0.13	-1.27	
5479.00	34.170	114.180	4883.65	-1255.75	-646.21	1994.77	1703777.76	14353810.04	39°31'36.3579"N	80°46'31.0835"W	2096.82	107.950	1.06	0.98	0.72	

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5574.00	34.300	114.800	4962.39	-1292.42	-668.36	2043.40	1703826.38	14353787.89	39°31'36.1377"N	80°46'30.4635"W	2149.93	108.112	0.39	0.14	0.65	
5668.00	35.450	117.560	5039.51	-1330.45	-692.09	2091.62	1703874.57	14353764.18	39°31'35.9021"N	80°46'29.8489"W	2203.14	108.309	2.08	1.22	2.94	
5765.00	33.430	114.140	5119.51	-1369.04	-716.03	2140.95	1703923.89	14353740.24	39°31'35.6642"N	80°46'29.2202"W	2257.51	108.492	2.88	-2.08	-3.53	
5860.00	33.530	110.470	5198.75	-1403.51	-735.91	2189.41	1703972.33	14353720.37	39°31'35.4665"N	80°46'28.6023"W	2309.78	108.579	2.13	0.11	-3.86	
5986.00	33.780	111.110	5303.64	-1448.04	-760.70	2254.69	1704037.59	14353695.59	39°31'35.2199"N	80°46'27.7700"W	2379.56	108.644	0.34	0.20	0.51	BH AT Curve <8-1/2"> (5860')(5986'-19891')
6080.00	34.400	107.720	5381.49	-1480.65	-778.20	2304.37	1704087.24	14353678.10	39°31'35.0458"N	80°46'27.1366"W	2432.22	108.660	2.13	0.66	-3.61	
6175.00	34.200	107.990	5459.97	-1512.63	-794.61	2355.33	1704138.18	14353661.70	39°31'34.8823"N	80°46'26.4869"W	2485.75	108.643	0.26	-0.21	0.28	
6269.00	34.310	109.060	5537.66	-1544.75	-811.42	2405.49	1704188.33	14353644.89	39°31'34.7149"N	80°46'25.8472"W	2538.66	108.640	0.65	0.12	1.14	
6364.00	34.370	109.290	5616.11	-1577.75	-829.02	2456.11	1704238.92	14353627.30	39°31'34.5397"N	80°46'25.2018"W	2592.25	108.651	0.15	0.06	0.24	
6459.00	34.300	109.240	5694.55	-1610.82	-846.70	2506.69	1704289.49	14353609.63	39°31'34.3637"N	80°46'24.5569"W	2645.83	108.664	0.08	-0.07	-0.05	
6554.00	34.070	109.120	5773.14	-1643.69	-864.24	2557.11	1704339.88	14353592.10	39°31'34.1891"N	80°46'23.9141"W	2699.20	108.674	0.25	-0.24	-0.13	
6648.00	34.210	109.430	5850.94	-1676.26	-881.65	2606.90	1704389.66	14353574.69	39°31'34.0158"N	80°46'23.2792"W	2751.96	108.685	0.24	0.15	0.33	
6740.00	33.790	109.130	5927.21	-1708.01	-898.64	2655.46	1704438.20	14353557.71	39°31'33.8467"N	80°46'22.6600"W	2803.40	108.696	0.49	-0.46	-0.33	
6835.00	31.850	104.880	6007.05	-1738.19	-913.74	2704.66	1704487.37	14353542.62	39°31'33.6962"N	80°46'22.0327"W	2854.84	108.667	3.17	-2.04	-4.47	
6929.00	27.900	92.040	6088.63	-1759.83	-920.90	2750.67	1704538.37	14353535.46	39°31'33.6243"N	80°46'21.4457"W	2900.73	108.510	7.98	-4.20	-13.66	
7024.00	25.220	79.200	6173.67	-1770.59	-917.89	2792.81	1704575.49	14353538.46	39°31'33.6529"N	80°46'20.9079"W	2939.78	108.194	6.65	-2.82	-13.52	
7118.00	25.930	66.350	6258.52	-1771.67	-905.89	2831.34	1704614.00	14353550.46	39°31'33.7706"N	80°46'20.4158"W	2972.73	107.742	5.94	0.76	-13.67	
7213.00	25.860	46.770	6344.14	-1761.35	-883.32	2865.52	1704648.17	14353573.02	39°31'33.9928"N	80°46'19.9789"W	2998.58	107.132	8.97	-0.07	-20.61	
7307.00	30.650	28.020	6427.08	-1736.44	-848.04	2891.78	1704674.42	14353608.29	39°31'34.3408"N	80°46'19.6426"W	3013.57	106.344	10.67	5.10	-19.95	
7402.00	34.950	16.870	6506.99	-1697.73	-800.56	2911.08	1704693.71	14353655.75	39°31'34.8096"N	80°46'19.3948"W	3019.15	105.376	7.79	4.53	-11.74	
7477.00†	36.298	13.852	6567.96	-1661.60	-758.44	2922.63	1704705.26	14353697.85	39°31'35.2256"N	80°46'19.2460"W	3019.44	104.548	2.95	1.80	-4.02	Sycamore: 7477' MD
7497.00	36.670	13.080	6584.04	-1651.55	-746.88	2925.40	1704708.03	14353709.41	39°31'35.3398"N	80°46'19.2103"W	3019.24	104.322	2.95	1.86	-3.86	
7591.00	38.620	9.760	6658.47	-1601.96	-690.61	2936.73	1704719.35	14353765.65	39°31'35.8956"N	80°46'19.0639"W	3016.84	103.233	2.99	2.07	-3.53	
7625.00†	41.634	6.070	6684.47	-1582.39	-668.92	2939.72	1704722.34	14353787.34	39°31'36.1100"N	80°46'19.0250"W	3014.87	102.819	11.29	8.87	-10.85	Middlesex: 7625' MD
7686.00	47.290	0.450	6728.01	-1542.82	-626.31	2942.04	1704724.66	14353829.93	39°31'36.5310"N	80°46'18.9940"W	3007.97	102.018	11.29	9.27	-9.21	
7774.00†	57.030	350.681	6782.01	-1475.63	-557.28	2936.30	1704718.92	14353898.93	39°31'37.2134"N	80°46'19.0651"W	2988.71	100.746	14.10	11.07	-11.10	Burkett: 7774' MD
7780.00	57.720	350.100	6785.24	-1470.64	-552.30	2935.45	1704718.08	14353903.91	39°31'37.2627"N	80°46'19.0757"W	2986.96	100.655	14.10	11.50	-9.68	
7847.00†	63.453	346.158	6818.14	-1412.75	-495.23	2923.40	1704706.03	14353960.95	39°31'37.8269"N	80°46'19.2277"W	2965.05	99.615	9.97	8.56	-5.88	Tully: 7847' MD
7875.00	65.880	344.630	6830.12	-1387.51	-470.75	2917.02	1704699.65	14353985.43	39°31'38.0691"N	80°46'19.3084"W	2954.76	99.167	9.97	8.67	-5.46	
7970.00	71.420	338.960	6864.72	-1299.11	-386.80	2889.32	1704671.96	14354069.35	39°31'38.8995"N	80°46'19.6591"W	2915.10	97.625	8.05	5.83	-5.97	

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Actual Wellpath Report

Emmons Unit 2H AWP Proj: 19919'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

WELLPATH DATA (218 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
8039.00†	75.974	339.260	6884.09	-1232.95	-324.94	2865.71	1704648.36	14354131.18	39°31'39.5114"N	80°46'19.9584"W	2884.08	96.469	6.61	6.60	0.44	Marcellus POE: 8039' MD
8065.00	77.690	339.370	6890.01	-1207.65	-301.26	2856.77	1704639.43	14354154.85	39°31'39.7457"N	80°46'20.0717"W	2872.61	96.020	6.61	6.60	0.42	
8159.00	85.590	339.790	6903.66	-1114.75	-214.17	2824.35	1704607.02	14354241.91	39°31'40.6072"N	80°46'20.4827"W	2832.46	94.336	8.42	8.40	0.45	
8254.00	89.850	339.040	6907.44	-1019.90	-125.33	2790.98	1704573.66	14354330.71	39°31'41.4861"N	80°46'20.9056"W	2793.80	92.571	4.55	4.48	-0.79	
8349.00	89.750	339.240	6907.77	-924.95	-36.55	2757.16	1704539.85	14354419.45	39°31'42.3643"N	80°46'21.3345"W	2757.40	90.760	0.24	-0.11	0.21	
8444.00	89.690	338.860	6908.24	-830.02	52.16	2723.19	1704505.90	14354508.13	39°31'43.2420"N	80°46'21.7651"W	2723.69	88.903	0.40	-0.06	-0.40	
8538.00	89.660	339.830	6908.77	-736.07	140.12	2690.03	1704472.75	14354596.05	39°31'44.1121"N	80°46'22.1854"W	2693.68	87.018	1.03	-0.03	1.03	
8633.00	90.460	338.840	6908.67	-641.12	229.01	2656.51	1704439.24	14354684.90	39°31'44.9915"N	80°46'22.6104"W	2666.36	85.073	1.34	0.84	-1.04	
8728.00	90.310	340.160	6908.03	-546.16	317.99	2623.24	1704405.99	14354773.85	39°31'45.8717"N	80°46'23.0321"W	2642.44	83.088	1.40	-0.16	1.39	
8823.00	89.880	342.710	6907.88	-451.17	408.03	2593.00	1704375.75	14354863.86	39°31'46.7624"N	80°46'23.4152"W	2624.90	81.057	2.72	-0.45	2.68	
8918.00	89.570	342.020	6908.33	-356.20	498.57	2564.22	1704346.99	14354954.36	39°31'47.6579"N	80°46'23.7796"W	2612.24	78.997	0.80	-0.33	-0.73	
9012.00	90.370	341.710	6908.38	-262.20	587.90	2534.96	1704317.74	14355043.65	39°31'48.5415"N	80°46'24.1501"W	2602.24	76.943	0.91	0.85	-0.33	
9107.00	90.120	342.270	6907.98	-167.22	678.24	2505.59	1704288.38	14355133.96	39°31'49.4351"N	80°46'24.5220"W	2595.76	74.853	0.65	-0.26	0.59	
9202.00	90.180	341.390	6907.73	-72.22	768.50	2475.96	1704258.77	14355224.19	39°31'50.3280"N	80°46'24.8972"W	2592.49	72.756	0.93	0.06	-0.93	
9297.00	90.180	341.750	6907.43	22.77	858.63	2445.93	1704228.75	14355314.28	39°31'51.2195"N	80°46'25.2776"W	2592.26	70.657	0.38	0.00	0.38	
9391.00	89.880	341.200	6907.38	116.77	947.76	2416.06	1704198.89	14355403.37	39°31'52.1011"N	80°46'25.6559"W	2595.30	68.581	0.67	-0.32	-0.59	
9486.00	89.570	341.640	6907.83	211.77	1037.81	2385.79	1704168.63	14355493.38	39°31'52.9918"N	80°46'26.0393"W	2601.74	66.491	0.57	-0.33	0.46	
9581.00	89.880	341.840	6908.29	306.76	1128.02	2356.03	1704138.88	14355583.56	39°31'53.8842"N	80°46'26.4163"W	2612.14	64.416	0.39	0.33	0.21	
9676.00	90.250	341.330	6908.18	401.76	1218.16	2326.02	1704108.88	14355673.66	39°31'54.7757"N	80°46'26.7964"W	2625.69	62.359	0.66	0.39	-0.54	
9770.00	90.490	342.750	6907.58	495.74	1307.57	2297.03	1704079.91	14355763.04	39°31'55.6602"N	80°46'27.1635"W	2643.12	60.350	1.53	0.26	1.51	
9865.00	89.880	342.590	6907.27	590.71	1398.26	2268.74	1704051.62	14355853.69	39°31'56.5571"N	80°46'27.5217"W	2665.01	58.354	0.66	-0.64	-0.17	
9960.00	89.230	341.860	6908.01	685.69	1488.72	2239.74	1704022.64	14355944.12	39°31'57.4519"N	80°46'27.8890"W	2689.37	56.389	1.03	-0.68	-0.77	
10055.00	89.450	341.820	6909.10	780.68	1578.98	2210.13	1703993.04	14356034.34	39°31'58.3447"N	80°46'28.2639"W	2716.22	54.457	0.24	0.23	-0.04	
10149.00	89.720	341.670	6909.78	874.67	1668.25	2180.68	1703963.61	14356123.57	39°31'59.2277"N	80°46'28.6369"W	2745.62	52.584	0.33	0.29	-0.16	
10244.00	87.380	342.430	6912.19	969.62	1758.59	2151.42	1703934.35	14356213.88	39°32'0.1213"N	80°46'29.0075"W	2778.71	50.737	2.59	-2.46	0.80	
10338.00	90.400	343.710	6914.01	1063.54	1848.48	2124.05	1703907.00	14356303.74	39°32'1.0104"N	80°46'29.3539"W	2815.76	48.968	3.49	3.21	1.36	
10433.00	89.010	340.020	6914.50	1158.51	1938.75	2094.49	1703877.45	14356393.97	39°32'1.9032"N	80°46'29.7283"W	2854.06	47.211	4.15	-1.46	-3.88	
10528.00	91.290	344.070	6914.25	1253.47	2029.10	2065.21	1703848.18	14356484.28	39°32'2.7969"N	80°46'30.0991"W	2895.23	45.505	4.89	2.40	4.26	
10622.00	91.020	342.210	6912.35	1347.39	2119.03	2037.96	1703820.94	14356574.18	39°32'3.6865"N	80°46'30.4441"W	2939.99	43.883	2.00	-0.29	-1.98	
10717.00	90.370	342.210	6911.20	1442.37	2209.48	2008.93	1703791.93	14356664.59	39°32'4.5811"N	80°46'30.8116"W	2986.24	42.278	0.68	-0.68	0.00	

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Actual Wellpath Report

Emmons Unit 2H AWP Proj: 19919'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

WELLPATH DATA (218 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
10812.00	90.250	342.440	6910.69	1537.35	2300.00	1980.09	1703763.09	14356755.07	39°32'5.4764"N	80°46'31.1769"W	3034.92	40.728	0.27	-0.13	0.24	
10906.00	89.820	339.100	6910.63	1631.33	2388.74	1949.14	1703732.15	14356843.78	39°32'6.3542"N	80°46'31.5692"W	3083.05	39.213	3.58	-0.46	-3.55	
11001.00	90.400	340.800	6910.45	1726.31	2477.98	1916.57	1703699.59	14356932.98	39°32'7.2370"N	80°46'31.9820"W	3132.67	37.720	1.89	0.61	1.79	
11096.00	89.970	341.330	6910.14	1821.31	2567.84	1885.74	1703668.78	14357022.80	39°32'8.1259"N	80°46'32.3726"W	3185.87	36.292	0.72	-0.45	0.56	
11191.00	89.940	341.010	6910.21	1916.31	2657.75	1855.08	1703638.13	14357112.68	39°32'9.0153"N	80°46'32.7611"W	3241.14	34.915	0.34	-0.03	-0.34	
11285.00	89.720	341.030	6910.49	2010.31	2746.64	1824.51	1703607.57	14357201.54	39°32'9.8945"N	80°46'33.1484"W	3297.40	33.595	0.24	-0.23	0.02	
11380.00	89.600	340.840	6911.06	2105.30	2836.43	1793.48	1703576.55	14357291.29	39°32'10.7827"N	80°46'33.5416"W	3355.87	32.305	0.24	-0.13	-0.20	
11475.00	90.180	340.940	6911.24	2200.30	2926.19	1762.37	1703545.46	14357381.02	39°32'11.6706"N	80°46'33.9357"W	3415.93	31.060	0.62	0.61	0.11	
11569.00	89.850	341.060	6911.21	2294.30	3015.07	1731.77	1703514.87	14357469.86	39°32'12.5498"N	80°46'34.3235"W	3477.02	29.872	0.37	-0.35	0.13	
11664.00	89.910	341.000	6911.41	2389.30	3104.91	1700.89	1703484.00	14357559.67	39°32'13.4385"N	80°46'34.7148"W	3540.27	28.714	0.09	0.06	-0.06	
11759.00	89.320	341.270	6912.05	2484.30	3194.81	1670.17	1703453.30	14357649.52	39°32'14.3277"N	80°46'35.1040"W	3605.03	27.600	0.68	-0.62	0.28	
11853.00	88.740	340.030	6913.64	2578.28	3283.48	1639.03	1703422.17	14357738.16	39°32'15.2048"N	80°46'35.4987"W	3669.83	26.527	1.46	-0.62	-1.32	
11948.00	90.710	342.070	6914.10	2673.27	3373.32	1608.19	1703391.34	14357827.97	39°32'16.0935"N	80°46'35.8896"W	3737.05	25.489	2.99	2.07	2.15	
12042.00	89.170	341.620	6914.20	2767.26	3462.64	1578.90	1703362.06	14357917.25	39°32'16.9770"N	80°46'36.2606"W	3805.63	24.512	1.71	-1.64	-0.48	
12137.00	90.150	340.500	6914.76	2862.25	3552.49	1548.06	1703331.24	14358007.07	39°32'17.8658"N	80°46'36.6513"W	3875.14	23.546	1.57	1.03	-1.18	
12231.00	89.230	341.220	6915.27	2956.25	3641.29	1517.24	1703300.43	14358095.83	39°32'18.7442"N	80°46'37.0418"W	3944.75	22.620	1.24	-0.98	0.77	
12326.00	88.740	341.130	6916.95	3051.23	3731.20	1486.59	1703269.79	14358185.70	39°32'19.6335"N	80°46'37.4302"W	4016.44	21.723	0.52	-0.52	-0.09	
12420.00	91.140	341.800	6917.05	3145.22	3820.31	1456.72	1703239.93	14358274.78	39°32'20.5150"N	80°46'37.8087"W	4088.62	20.872	2.65	2.55	0.71	
12515.00	90.120	342.400	6916.01	3240.20	3910.71	1427.52	1703210.74	14358365.14	39°32'21.4091"N	80°46'38.1785"W	4163.11	20.054	1.25	-1.07	0.63	
12609.00	90.310	340.420	6915.65	3334.20	3999.80	1397.55	1703180.79	14358454.20	39°32'22.2903"N	80°46'38.5582"W	4236.93	19.260	2.12	0.20	-2.11	
12704.00	90.250	340.710	6915.19	3429.19	4089.38	1365.94	1703149.19	14358543.75	39°32'23.1765"N	80°46'38.9588"W	4311.48	18.470	0.31	-0.06	0.31	
12798.00	90.370	340.690	6914.68	3523.19	4178.10	1334.88	1703118.14	14358632.43	39°32'24.0540"N	80°46'39.3526"W	4386.16	17.718	0.13	0.13	-0.02	
12893.00	90.060	340.270	6914.32	3618.18	4267.64	1303.13	1703086.41	14358721.93	39°32'24.9397"N	80°46'39.7549"W	4462.16	16.980	0.55	-0.33	-0.44	
12988.00	89.780	341.310	6914.46	3713.18	4357.35	1271.88	1703055.16	14358811.60	39°32'25.8271"N	80°46'40.1511"W	4539.18	16.272	1.13	-0.29	1.09	
13082.00	89.450	340.780	6915.09	3807.17	4446.24	1241.33	1703024.62	14358900.46	39°32'26.7064"N	80°46'40.5382"W	4616.27	15.599	0.68	-0.35	-0.59	
13177.00	89.200	340.550	6916.21	3902.16	4535.87	1209.86	1702993.17	14358990.06	39°32'27.5930"N	80°46'40.9370"W	4694.45	14.935	0.34	-0.26	-0.22	
13272.00	89.780	340.450	6917.05	3997.15	4625.42	1178.15	1702961.47	14359079.57	39°32'28.4788"N	80°46'41.3390"W	4773.11	14.290	0.62	0.61	-0.11	
13366.00	89.850	341.320	6917.36	4091.15	4714.24	1147.37	1702930.70	14359168.35	39°32'29.3574"N	80°46'41.7291"W	4851.85	13.679	0.93	0.07	0.93	
13461.00	89.540	341.260	6917.86	4186.15	4804.21	1116.90	1702900.24	14359258.29	39°32'30.2474"N	80°46'42.1152"W	4932.33	13.088	0.33	-0.33	-0.06	
13556.00	90.520	341.000	6917.81	4281.15	4894.11	1086.17	1702869.53	14359348.15	39°32'31.1366"N	80°46'42.5046"W	5013.19	12.513	1.07	1.03	-0.27	

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Actual Wellpath Report

Emmons Unit 2H AWP Proj: 19919'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

WELLPATH DATA (218 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
13650.00	90.030	341.250	6917.36	4375.15	4983.05	1055.76	1702839.13	14359437.06	39°32'32.0164"N	80°46'42.8899"W	5093.67	11.962	0.59	-0.52	0.27	
13745.00	90.310	340.800	6917.08	4470.14	5072.89	1024.87	1702808.26	14359526.86	39°32'32.9050"N	80°46'43.2814"W	5175.38	11.422	0.56	0.29	-0.47	
13839.00	89.780	342.430	6917.01	4564.14	5162.09	995.23	1702778.62	14359616.02	39°32'33.7873"N	80°46'43.6570"W	5257.15	10.912	1.82	-0.56	1.73	
13933.00	88.710	339.210	6918.25	4658.11	5250.85	964.35	1702747.76	14359704.75	39°32'34.6653"N	80°46'44.0483"W	5338.67	10.407	3.61	-1.14	-3.43	
14028.00	90.340	343.060	6919.03	4753.09	5340.72	933.64	1702717.06	14359794.59	39°32'35.5543"N	80°46'44.4375"W	5421.72	9.916	4.40	1.72	4.05	
14123.00	91.050	339.510	6917.88	4848.07	5430.68	903.17	1702686.60	14359884.51	39°32'36.4441"N	80°46'44.8237"W	5505.27	9.442	3.81	0.75	-3.74	
14217.00	90.120	341.220	6916.92	4942.05	5519.20	871.59	1702655.03	14359973.00	39°32'37.3198"N	80°46'45.2241"W	5587.60	8.974	2.07	-0.99	1.82	
14312.00	89.780	341.690	6917.00	5037.05	5609.27	841.37	1702624.83	14360063.03	39°32'38.2107"N	80°46'45.6069"W	5672.02	8.531	0.61	-0.36	0.49	
14406.00	89.080	340.870	6917.94	5131.04	5698.29	811.20	1702594.67	14360152.01	39°32'39.0912"N	80°46'45.9892"W	5755.74	8.102	1.15	-0.74	-0.87	
14501.00	89.880	340.690	6918.80	5226.03	5787.99	779.93	1702563.41	14360241.68	39°32'39.9785"N	80°46'46.3856"W	5840.30	7.674	0.86	0.84	-0.19	
14595.00	90.650	342.720	6918.37	5320.02	5877.23	750.43	1702533.92	14360330.89	39°32'40.8612"N	80°46'46.7594"W	5924.95	7.276	2.31	0.82	2.16	
14690.00	89.230	340.330	6918.47	5415.01	5967.33	720.32	1702503.83	14360420.95	39°32'41.7524"N	80°46'47.1409"W	6010.65	6.883	2.93	-1.49	-2.52	
14784.00	90.000	341.030	6919.10	5509.00	6056.03	689.23	1702472.74	14360509.61	39°32'42.6298"N	80°46'47.5350"W	6095.13	6.493	1.11	0.82	0.74	
14879.00	92.250	342.870	6917.23	5603.97	6146.33	659.80	1702443.33	14360599.88	39°32'43.5229"N	80°46'47.9079"W	6181.64	6.127	3.06	2.37	1.94	
14974.00	89.450	341.090	6915.82	5698.93	6236.65	630.42	1702413.96	14360690.16	39°32'44.4163"N	80°46'48.2801"W	6268.43	5.772	3.49	-2.95	-1.87	
15069.00	89.690	341.540	6916.54	5793.93	6326.64	599.98	1702383.54	14360780.11	39°32'45.3064"N	80°46'48.6658"W	6355.02	5.417	0.54	0.25	0.47	
15163.00	90.990	341.750	6915.98	5887.92	6415.85	570.38	1702353.95	14360869.29	39°32'46.1889"N	80°46'49.0409"W	6441.16	5.080	1.40	1.38	0.22	
15258.00	89.630	341.090	6915.46	5982.92	6505.90	540.12	1702323.69	14360959.30	39°32'47.0795"N	80°46'49.4244"W	6528.28	4.746	1.59	-1.43	-0.69	
15351.00	89.660	340.050	6916.04	6075.91	6593.60	509.18	1702292.77	14361046.96	39°32'47.9470"N	80°46'49.8166"W	6613.23	4.418	1.12	0.03	-1.12	
15446.00	91.290	339.970	6915.25	6170.88	6682.87	476.71	1702260.31	14361136.20	39°32'48.8301"N	80°46'50.2284"W	6699.85	4.080	1.72	1.72	-0.08	
15541.00	89.880	341.190	6914.28	6265.87	6772.45	445.12	1702228.74	14361225.75	39°32'49.7163"N	80°46'50.6287"W	6787.07	3.760	1.96	-1.48	1.28	
15635.00	90.920	338.790	6913.63	6359.84	6860.77	412.96	1702196.59	14361314.03	39°32'50.5899"N	80°46'51.0366"W	6873.19	3.445	2.78	1.11	-2.55	
15730.00	91.050	340.060	6911.99	6454.78	6949.69	379.58	1702163.22	14361402.92	39°32'51.4696"N	80°46'51.4599"W	6960.05	3.126	1.34	0.14	1.34	
15825.00	90.090	340.600	6911.05	6549.76	7039.14	347.61	1702131.26	14361492.34	39°32'52.3544"N	80°46'51.8653"W	7047.72	2.827	1.16	-1.01	0.57	
15920.00	89.820	340.490	6911.12	6644.76	7128.72	315.96	1702099.63	14361581.88	39°32'53.2404"N	80°46'52.2664"W	7135.72	2.538	0.31	-0.28	-0.12	
16014.00	90.340	339.630	6910.99	6738.74	7217.08	283.91	1702067.58	14361670.20	39°32'54.1145"N	80°46'52.6729"W	7222.67	2.253	1.07	0.55	-0.91	
16109.00	90.710	339.820	6910.12	6833.71	7306.19	250.99	1702034.68	14361759.28	39°32'54.9960"N	80°46'53.0904"W	7310.50	1.968	0.44	0.39	0.20	
16204.00	90.740	341.510	6908.92	6928.69	7395.83	219.54	1702003.24	14361848.87	39°32'55.8826"N	80°46'53.4891"W	7399.08	1.700	1.78	0.03	1.78	
16298.00	88.770	338.960	6909.32	7022.67	7484.28	187.76	1701971.47	14361937.29	39°32'56.7576"N	80°46'53.8921"W	7486.63	1.437	3.43	-2.10	-2.71	
16393.00	91.320	339.190	6909.25	7117.60	7573.00	153.83	1701937.56	14362025.98	39°32'57.6353"N	80°46'54.3224"W	7574.56	1.164	2.70	2.68	0.24	

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Emmons Unit 2H AWP Proj: 19919'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

WELLPATH DATA (218 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
16487.00	90.920	340.330	6907.41	7211.55	7661.18	121.32	1701905.06	14362114.12	39°32'58.5075"N	80°46'54.7347"W	7662.14	0.907	1.29	-0.43	1.21	
16582.00	90.310	341.100	6906.39	7306.54	7750.84	89.94	1701873.70	14362203.75	39°32'59.3945"N	80°46'55.1325"W	7751.36	0.665	1.03	-0.64	0.81	
16676.00	90.280	340.770	6905.90	7400.54	7839.69	59.24	1701843.01	14362292.56	39°33'0.2732"N	80°46'55.5217"W	7839.91	0.433	0.35	-0.03	-0.35	
16771.00	90.340	340.220	6905.39	7495.53	7929.23	27.52	1701811.30	14362382.07	39°33'1.1590"N	80°46'55.9238"W	7929.28	0.199	0.58	0.06	-0.58	
16865.00	91.020	341.520	6904.28	7589.52	8018.03	-3.28	1701780.51	14362470.83	39°33'2.0374"N	80°46'56.3143"W	8018.03	359.977	1.56	0.72	1.38	
16960.00	90.150	340.330	6903.31	7684.51	8107.81	-34.32	1701749.48	14362560.57	39°33'2.9254"N	80°46'56.7078"W	8107.88	359.757	1.55	-0.92	-1.25	
17054.00	90.000	339.930	6903.18	7778.49	8196.21	-66.27	1701717.54	14362648.94	39°33'3.7999"N	80°46'57.1130"W	8196.48	359.537	0.45	-0.16	-0.43	
17149.00	90.650	340.440	6902.64	7873.48	8285.59	-98.48	1701685.35	14362738.28	39°33'4.6840"N	80°46'57.5213"W	8286.17	359.319	0.87	0.68	0.54	
17243.00	90.180	338.490	6901.96	7967.43	8373.61	-131.45	1701652.39	14362826.27	39°33'5.5547"N	80°46'57.9395"W	8374.64	359.101	2.13	-0.50	-2.07	
17338.00	90.650	340.140	6901.27	8062.37	8462.48	-165.00	1701618.85	14362915.10	39°33'6.4338"N	80°46'58.3651"W	8464.08	358.883	1.81	0.49	1.74	
17433.00	90.460	340.640	6900.35	8157.36	8551.96	-196.88	1701586.98	14363004.55	39°33'7.3190"N	80°46'58.7694"W	8554.23	358.681	0.56	-0.20	0.53	
17527.00	90.580	340.830	6899.50	8251.35	8640.69	-227.90	1701555.98	14363093.25	39°33'8.1967"N	80°46'59.1626"W	8643.70	358.489	0.24	0.13	0.20	
17622.00	90.280	340.310	6898.79	8346.35	8730.28	-259.50	1701524.39	14363182.80	39°33'9.0828"N	80°46'59.5633"W	8734.14	358.297	0.63	-0.32	-0.55	
17717.00	90.710	340.550	6897.97	8441.33	8819.79	-291.32	1701492.59	14363272.27	39°33'9.9682"N	80°46'59.9667"W	8824.60	358.108	0.52	0.45	0.25	
17811.00	90.180	340.000	6897.24	8535.32	8908.27	-323.04	1701460.88	14363360.72	39°33'10.8434"N	80°47'0.3690"W	8914.13	357.923	0.81	-0.56	-0.59	
17906.00	90.310	340.820	6896.83	8630.31	8997.77	-354.89	1701429.04	14363450.18	39°33'11.7288"N	80°47'0.7729"W	9004.77	357.741	0.87	0.14	0.86	
18000.00	88.980	340.530	6897.41	8724.30	9086.47	-386.00	1701397.94	14363538.85	39°33'12.6061"N	80°47'1.1673"W	9094.66	357.567	1.45	-1.41	-0.31	
18094.00	89.540	339.390	6898.63	8818.27	9174.77	-418.21	1701365.75	14363627.11	39°33'13.4796"N	80°47'1.5758"W	9184.30	357.390	1.35	0.60	-1.21	
18189.00	89.940	342.390	6899.06	8913.26	9264.52	-449.31	1701334.66	14363716.83	39°33'14.3674"N	80°47'1.9700"W	9275.41	357.223	3.19	0.42	3.16	
18283.00	89.910	342.000	6899.18	9007.24	9354.02	-478.05	1701305.93	14363806.29	39°33'15.2526"N	80°47'2.3342"W	9366.23	357.074	0.42	-0.03	-0.41	
18378.00	90.000	342.380	6899.26	9102.23	9444.47	-507.11	1701276.89	14363896.70	39°33'16.1472"N	80°47'2.7024"W	9458.07	356.927	0.41	0.09	0.40	
18472.00	89.260	341.910	6899.86	9196.21	9533.94	-535.93	1701248.08	14363986.13	39°33'17.0321"N	80°47'3.0676"W	9548.99	356.783	0.93	-0.79	-0.50	
18567.00	89.570	342.420	6900.83	9291.19	9624.37	-565.02	1701218.99	14364076.53	39°33'17.9265"N	80°47'3.4363"W	9640.94	356.640	0.63	0.33	0.54	
18662.00	89.450	342.110	6901.65	9386.17	9714.85	-593.96	1701190.07	14364166.97	39°33'18.8215"N	80°47'3.8030"W	9732.99	356.501	0.35	-0.13	-0.33	
18756.00	89.420	342.400	6902.57	9480.15	9804.37	-622.61	1701161.43	14364256.46	39°33'19.7069"N	80°47'4.1660"W	9824.12	356.366	0.31	-0.03	0.31	
18850.00	90.620	342.340	6902.54	9574.13	9893.95	-651.07	1701132.97	14364346.01	39°33'20.5930"N	80°47'4.5267"W	9915.35	356.235	1.28	1.28	-0.06	
18944.00	91.140	343.380	6901.10	9668.07	9983.77	-678.77	1701105.29	14364435.79	39°33'21.4813"N	80°47'4.8776"W	10006.81	356.111	1.24	0.55	1.11	
19039.00	90.250	342.140	6899.94	9763.02	10074.49	-706.93	1701077.14	14364526.47	39°33'22.3786"N	80°47'5.2342"W	10099.26	355.986	1.61	-0.94	-1.31	
19134.00	90.280	342.210	6899.50	9858.01	10164.93	-736.01	1701048.08	14364616.88	39°33'23.2731"N	80°47'5.6027"W	10191.54	355.859	0.08	0.03	0.07	
19229.00	90.220	342.300	6899.09	9952.99	10255.41	-764.96	1701019.13	14364707.32	39°33'24.1680"N	80°47'5.9696"W	10283.90	355.734	0.11	-0.06	0.09	

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Emmons Unit 2H AWP Proj: 19919'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

WELLPATH DATA (218 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
19323.00	90.150	342.170	6898.79	10046.97	10344.92	-793.64	1700990.46	14364796.80	39°33'25.0534"N	80°47'6.3331"W	10375.32	355.613	0.16	-0.07	-0.14	
19418.00	89.320	342.030	6899.23	10141.96	10435.32	-822.84	1700961.28	14364887.16	39°33'25.9475"N	80°47'6.7031"W	10467.72	355.491	0.89	-0.87	-0.15	
19513.00	89.720	342.640	6900.02	10236.93	10525.84	-851.67	1700932.46	14364977.65	39°33'26.8428"N	80°47'7.0684"W	10560.24	355.374	0.77	0.42	0.64	
19607.00	89.450	341.790	6900.70	10330.92	10615.35	-880.38	1700903.76	14365067.11	39°33'27.7281"N	80°47'7.4322"W	10651.79	355.259	0.95	-0.29	-0.90	
19702.00	89.540	341.710	6901.54	10425.91	10705.56	-910.13	1700874.03	14365157.30	39°33'28.6204"N	80°47'7.8093"W	10744.18	355.141	0.13	0.09	-0.08	
19797.00	90.370	342.400	6901.61	10520.89	10795.94	-939.40	1700844.77	14365247.64	39°33'29.5143"N	80°47'8.1802"W	10836.73	355.027	1.14	0.87	0.73	
19891.00	89.630	343.410	6901.61	10614.85	10885.79	-967.03	1700817.15	14365337.45	39°33'30.4029"N	80°47'8.5303"W	10928.65	354.924	1.33	-0.79	1.07	
19919.00‡	89.630	343.410	6901.80	10642.83	10912.62	-975.02	1700809.16	14365364.27	39°33'30.6683"N	80°47'8.6315"W	10956.09	354.894	0.00	0.00	0.00	Projected MD at TD: 19919'

HOLE & CASING SECTIONS - Ref Wellbore: Emmons Unit 2H AWB Ref Wellpath: Emmons Unit 2H AWP Proj: 19919'

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	0.04	0.00
17.5in Open Hole	126.00	996.00	870.00	126.00	995.97	0.04	0.00	-4.89	4.23
13.375in Casing Surface	25.50	976.00	950.50	25.50	975.97	0.00	0.00	-4.84	3.94
12.25in Open Hole	996.00	3635.00	2639.00	995.97	3333.63	-4.89	4.23	-315.59	1059.25
9.625in Casing Intermediate	25.50	3615.00	3589.50	25.50	3316.65	0.00	0.00	-312.65	1049.11
8.75in Open Hole	3635.00	6000.00	2365.00	3333.63	5315.27	-315.59	1059.25	-763.47	2261.98
8.5in Open Hole	6000.00	19919.00	13919.00	5315.27	6901.80	-763.47	2261.98	10912.62	-975.02
5.5in Casing Production	25.50	19899.00	19873.50	25.50	6901.67	0.00	0.00	10893.45	-969.31

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Actual Wellpath Report

Emmons Unit 2H AWP Proj: 19919'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Emmons Unit 2H POE Rev-3	6878.00	-352.45	2859.91	1704642.56	14354103.68	39°31'39.2397"N	80°46'20.0334"W	point
Emmons Unit 2H BHL Rev-3	6906.00	10915.23	-985.89	1700798.29	14365366.88	39°33'30.6944"N	80°47'8.7702"W	point
Emmons Unit 2H LP Rev-3	6906.00	-175.73	2799.59	1704582.27	14354280.33	39°31'40.9877"N	80°46'20.7974"W	point
Emmons Unit 2H 50' L/R Hard Line	7250.00	5281.39	937.01	1702720.43	14359735.28	39°32'34.9678"N	80°46'44.3964"W	rectangle
2D Rectangle 11905.9 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Emmons Unit 2H AWB Ref Wellpath: Emmons Unit 2H AWP Proj: 19919'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	923.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-923')	Emmons Unit 2H AWB	10/31/2022
923.00	3556.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (923')(1047'-3556')	Emmons Unit 2H AWB	10/31/2022
3556.00	5860.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3556')(3684'-5860')	Emmons Unit 2H AWB	11/30/2022
5860.00	19919.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (5860')(5986'-19891')	Emmons Unit 2H AWB	11/30/2022

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Emmons Unit 2H AWP Proj: 19919'

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Operator	ANTERO RESOURCES CORPORATION	Well	Emmons Unit 2H
Field	Tyler	API	47-095-02802-0000
Facility	Beech Run Pad	Wellbore	Emmons Unit 2H AWB
Slot	Slot D		

COMMENTS

Wellpath general comments

API: 47-095-02802-0000
 BH Job #: 111519949
 Rig: H&P 317
 Duration: 12/4/2022-12/8/2022
 Gyrodata MS Gyro <17-1/2"> (100'-923')
 APS EM <12-1/4"> (923')(1047'-3556')
 APS EM <8-3/4"> (3556')(3684'-5860')
 BH AT Curve <8-1/2"> (5860')(5986'-19891')
 Sycamore: 7477' MD
 Middlesex: 7625' MD
 Burkett: 7774' MD
 Tully: 7847' MD
 Marcellus POE: 8039' MD
 Projected MD at TD: 19919'

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