

# Actual Wellpath Report

Case Unit 1H AWP Proj: 18765

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Carse Unit 1H
Field	Tyler	Wellbore	Carse Unit 1H AWB
Facility	Rush Fork Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 5.1
North Reference	Grid	User	Delaset
Scale	0.999600	Report Generated	5/13/2019 at 2:24:12 PM
Convergence at slot	0.02° East	Database/Source file	WA_MPL_EasternUS_Defn/Carse Unit 1H AWP Proj_18765.xml

WELLPATH LOCATION						
Slot Location	North [ft]	-79.12	East [ft]	-11.90	Easting [US ft]	1648989.08
	Latitude	39°25'00.710"N	Longitude	80°58'10.730"W	Northing [US ft]	14313716.98
Facility Reference Pt						14313796.07
Field Reference Pt						39°25'01.492"N
						80°58'10.578"W
						85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 317 (RKB) to Facility Vertical Datum	1011.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1011.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #09)	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	159.89°

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Slot	Slot #09
Well	Well
Case Unit 1H	Case Unit 1H
Case Unit 1H AWB	Case Unit 1H AWB

## WELLPATH DATA (230 stations) † = interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Incl Rate	Turn Rate	Comments
0.00	147.620	0.00	0.00	0.00	0.00	0.00	14313716.98	39°25'00.710"N	80°58'10.730"W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	147.620	0.00	0.00	0.00	0.00	0.00	14313716.98	39°25'00.710"N	80°58'10.730"W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	147.620	0.00	0.00	0.00	0.00	0.00	14313716.87	39°25'00.709"N	80°58'10.729"W	0.13	147.620	0.20	173.67	173.67	0.20	173.67	Gyrodatta MS Gyro <17-112°>(100-345°)
0.090	115.860	135.50	0.17	-0.15	0.11	1648989.18	14313716.83	39°25'00.709"N	80°58'10.729"W	0.18	144.332	0.42	-127.04	-127.04	0.08	204.96	
160.50	167.100	160.50	0.21	-0.18	0.13	1648989.20	14313716.80	39°25'00.708"N	80°58'10.728"W	0.22	144.313	0.35	-204.96	-204.96	0.04	338.24	
185.50	82.540	185.50	0.24	-0.20	0.16	1648989.23	14313716.78	39°25'00.708"N	80°58'10.728"W	0.25	142.057	0.57	-338.24	-338.24	0.20	162.00	
210.50	123.040	210.50	0.27	-0.21	0.20	1648989.28	14313716.77	39°25'00.708"N	80°58'10.727"W	0.30	136.338	0.39	-162.00	-162.00	0.08	199.44	
235.50	172.900	235.50	0.32	-0.26	0.24	1648989.31	14313716.72	39°25'00.707"N	80°58'10.727"W	0.35	137.870	0.48	-199.44	-199.44	0.08	150.68	
260.50	260.50	260.50	0.36	-0.29	0.24	1648989.32	14313716.69	39°25'00.707"N	80°58'10.727"W	0.38	140.247	0.41	-150.68	-150.68	0.08	82.44	
285.50	98.140	285.50	0.37	-0.30	0.26	1648989.34	14313716.68	39°25'00.707"N	80°58'10.726"W	0.40	138.885	0.15	-82.44	-82.44	0.08	4.00	
310.50	310.50	310.50	0.40	-0.31	0.29	1648989.37	14313716.67	39°25'00.707"N	80°58'10.726"W	0.43	136.845	0.16	4.00	4.00	0.08	81.92	
335.50	335.50	335.50	0.43	-0.34	0.33	1648989.40	14313716.64	39°25'00.707"N	80°58'10.726"W	0.47	136.226	0.16	81.92	81.92	0.08	0.00	
355.50	141.430	355.50	0.48	-0.38	0.36	1648989.44	14313716.60	39°25'00.706"N	80°58'10.725"W	0.52	136.665	0.40	11.00	11.00	0.10	152.54	WFT EM <12-114°>(345°)<432-2571°)
442.50	442.50	442.50	0.61	-0.64	0.61	1648989.68	14313716.34	39°25'00.704"N	80°58'10.722"W	0.88	136.505	0.11	0.00	0.00	0.10	152.54	
535.50	274.630	535.49	0.63	-0.72	-0.13	1648988.94	14313716.26	39°25'00.703"N	80°58'10.732"W	0.73	190.475	1.45	152.54	152.54	0.90	17.82	
602.50	602.46	-0.53	-0.24	-2.21	-2.21	1648988.87	14313716.14	39°25'00.708"N	80°58'10.758"W	2.22	263.710	2.18	17.82	17.82	2.12	17.82	
719.50	285.810	719.14	-5.51	-11.82	4.74	1648987.66	14313719.07	39°25'00.731"N	80°58'10.862"W	10.53	281.446	2.74	-4.40	-4.40	2.74	-0.65	
811.50	810.42	810.42	-11.82	4.74	-21.43	1648986.66	14313721.71	39°25'00.757"N	80°58'11.003"W	21.95	282.458	3.08	-4.40	-4.40	3.03	-4.40	
906.50	904.14	-19.89	-19.89	7.76	-36.66	1648952.44	14313724.74	39°25'00.787"N	80°58'11.197"W	37.46	281.954	1.84	-1.00	-1.00	1.83	-1.00	
1001.50	997.28	-28.72	-28.72	10.41	-55.11	1648933.99	14313727.39	39°25'00.813"N	80°58'11.432"W	56.08	280.699	2.44	-5.07	-5.07	2.23	-5.07	
1096.50	1089.80	-8.15	-8.15	12.60	-76.55	1648912.56	14313729.58	39°25'00.835"N	80°58'11.705"W	77.58	279.348	1.53	-0.32	-0.32	1.53	-0.32	
1191.50	1181.64	-48.44	-48.44	14.70	-100.75	1648888.37	14313731.67	39°25'00.856"N	80°58'12.014"W	101.82	278.300	2.09	-1.46	-1.46	2.05	-1.46	
1285.50	1361.22	-71.15	-71.15	17.39	-159.43	1648829.71	14313734.36	39°25'00.882"N	80°58'12.761"W	160.38	276.225	2.33	0.67	0.67	2.32	0.67	
1380.50	1450.46	-83.34	-83.34	18.46	-192.00	1648797.15	14313735.43	39°25'00.893"N	80°58'13.176"W	192.88	275.491	0.79	-1.48	-1.48	1.26	-0.56	
1475.50	1539.52	-95.19	-95.19	18.97	-225.06	1648764.11	14313735.94	39°25'00.898"N	80°58'13.598"W	225.86	274.817	1.28	-0.59	-0.59	1.26	-0.59	
1570.50	1628.59	-106.74	-106.74	19.17	-256.08	1648731.10	14313736.15	39°25'00.900"N	80°58'14.018"W	258.79	274.249	1.34	-1.33	-1.33	1.26	-0.56	
1665.50	1718.58	-117.94	-117.94	19.97	-288.49	1648700.70	14313736.63	39°25'00.908"N	80°58'14.406"W	289.18	273.959	2.38	-2.16	-2.16	1.26	-0.56	
1760.50	1788.58	-288.49	-288.49	19.97	-316.83	1648672.37	14313736.93	39°25'00.935"N	80°58'14.767"W	317.64	274.091	1.52	-0.4	-0.4	1.26	-0.56	
1854.50	1808.17	-130.21	-130.21	22.66	-346.55	1648642.66	14313743.92	39°25'00.977"N	80°58'15.146"W	347.60	274.446	1.73	0.86	0.86	1.71	0.86	

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Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Rush Fork Pad
Slot	Well	Wellbore	
Slot #09	Carse Unit 1H	Carse Unit 1H AWB	

WELLPATH DATA (230 Stations)												
MD	Inclination	Azimuth	TVD	Vert Sect	North	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2044.50	278.890	1987.64	-160.04	31.86	-378.47	1648610.76	14313748.83	14313752.94	39°25'01.067"N	80°58'15.970"W	412.86	379.81
2050	278.890	1987.64	-160.04	31.86	-378.47	1648610.76	14313748.83	14313752.94	39°25'01.067"N	80°58'15.970"W	412.86	379.81
2139.50	20.270	275.370	2076.69	-175.19	35.97	-411.29	1648577.95	14313752.94	39°25'01.090"N	80°58'16.376"W	444.77	274.937
2234.50	19.000	272.830	2166.17	-188.29	38.27	-443.12	1648546.14	14313755.24	39°25'01.140"N	80°58'16.376"W	444.77	274.937
2328.50	18.940	272.220	2255.06	-200.06	39.62	-473.65	1648515.62	14313756.58	39°25'01.103"N	80°58'16.765"W	475.30	274.782
2423.50	19.800	273.260	2344.68	-212.30	41.13	-505.12	1648484.16	14313758.10	39°25'01.118"N	80°58'17.166"W	506.79	274.655
2518.50	18.770	272.420	2434.35	-224.53	42.69	-536.45	1648452.84	14313759.66	39°25'01.134"N	80°58'17.565"W	538.15	274.550
2581.50	18.430	270.850	2494.06	-231.98	43.27	-556.54	1648432.76	14313760.23	39°25'01.139"N	80°58'17.821"W	558.22	274.446
2691.50	19.390	269.350	2598.12	-244.28	43.32	-592.18	1648397.13	14313760.28	39°25'01.140"N	80°58'18.275"W	593.76	274.184
2780.50	19.650	273.600	2776.19	-268.29	45.71	-655.48	1648333.86	14313762.67	39°25'01.164"N	80°58'19.082"W	657.07	273.989
2880.50	19.650	273.600	2776.19	-268.29	45.71	-655.48	1648333.86	14313762.67	39°25'01.164"N	80°58'19.082"W	657.07	273.989
2975.50	20.970	272.720	2865.28	-281.31	47.52	-688.40	1648300.95	14313764.48	39°25'01.182"N	80°58'19.501"W	690.04	273.949
3070.50	21.170	272.050	2953.93	-294.38	48.94	-722.53	1648266.84	14313765.90	39°25'01.196"N	80°58'19.936"W	724.18	273.875
3170.50	20.990	271.420	3047.23	-307.76	50.03	-758.48	1648230.90	14313766.99	39°25'01.207"N	80°58'20.394"W	760.13	273.774
3264.50	20.960	271.020	3135.01	-320.00	50.75	-792.12	1648197.28	14313767.71	39°25'01.214"N	80°58'20.823"W	793.74	273.666
3359.50	20.770	270.600	3223.78	-332.08	51.22	-825.95	1648163.46	14313768.18	39°25'01.219"N	80°58'21.254"W	827.54	273.549
3454.50	20.550	274.360	3401.62	-358.59	55.01	-892.71	1648096.73	14313771.97	39°25'01.257"N	80°58'22.104"W	894.40	273.526
3549.50	20.250	274.360	3401.62	-358.59	55.01	-892.71	1648096.73	14313771.97	39°25'01.257"N	80°58'22.104"W	894.40	273.526
3644.50	20.250	273.390	3490.67	-372.05	57.25	-925.72	1648063.73	14313774.21	39°25'01.279"N	80°58'22.525"W	927.49	273.539
3739.50	21.010	272.470	3579.57	-385.14	58.96	-959.15	1648030.31	14313775.91	39°25'01.296"N	80°58'22.951"W	960.96	273.517
3834.50	21.000	271.370	3668.26	-397.91	60.10	-993.18	1647996.29	14313777.06	39°25'01.307"N	80°58'23.384"W	995.00	273.463
3929.50	20.840	271.300	3757.00	-410.32	60.89	-1027.09	1647962.40	14313777.85	39°25'01.315"N	80°58'23.817"W	1028.90	273.393
4024.50	20.450	270.720	3845.90	-422.39	61.48	-1060.58	1647928.92	14313778.44	39°25'01.321"N	80°58'24.243"W	1062.36	273.318
4118.50	20.210	272.430	3934.04	-434.45	62.38	-1093.23	1647896.29	14313779.33	39°25'01.330"N	80°58'24.659"W	1095.00	273.266
4213.50	20.890	273.090	4023.00	-447.41	63.98	-1126.53	1647863.00	14313780.94	39°25'01.346"N	80°58'25.084"W	1128.35	273.251
4308.50	20.760	272.950	4111.79	-460.68	65.76	-1160.26	1647829.28	14313782.72	39°25'01.364"N	80°58'25.513"W	1162.12	273.244
4403.50	20.900	273.620	4200.58	-474.09	67.70	-1193.99	1647795.57	14313784.65	39°25'01.383"N	80°58'25.943"W	1195.90	273.245
4498.50	20.740	273.540	4289.38	-487.66	69.81	-1227.69	1647761.88	14313786.76	39°25'01.404"N	80°58'26.372"W	1229.67	273.254
4593.50	20.730	272.490	4378.23	-500.87	71.58	-1261.27	1647728.31	14313788.53	39°25'01.421"N	80°58'26.800"W	1263.30	273.248
4688.50	20.670	271.800	4467.09	-513.59	72.84	-1294.83	1647694.77	14313789.79	39°25'01.434"N	80°58'27.228"W	1296.88	273.220
4782.50	20.630	270.740	4555.05	-525.67	73.57	-1327.97	1647661.64	14313790.52	39°25'01.441"N	80°58'27.650"W	1330.01	273.171

Turn Rate Comments

(°/100ft)

(°/100ft)

(°/100ft)

(°/100ft)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Area	Tyler County, WV
Field	Tyler	Facility	Rush Fork Pad
Slot	Slot #09	Well	Carse Unit 1H
		Wellbore	Carse Unit 1H AWB

WELLPATH DATA (230 stations)																
MD	Inclination	azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
487.50	19.980	273.800	464.15	-538.21	74.86	-1360.90	1647628.72	14313791.81	39°25'01.454"N	80°58'28.070"W	1362.96	273.149	1.31	-0.68	3.22	
4972.50	19.880	274.560	4733.46	-551.53	77.22	-1393.20	1647596.44	14313794.17	39°25'01.477"N	80°58'28.481"W	1395.33	273.173	0.29	-0.11	0.80	
5067.50	19.970	274.150	4822.78	-564.93	79.68	-1425.48	1647564.17	14313796.63	39°25'01.502"N	80°58'28.893"W	1427.70	273.199	0.17	0.09	-0.43	
5162.50	20.190	273.390	4912.00	-578.14	81.82	-1458.02	1647531.64	14313798.77	39°25'01.523"N	80°58'29.307"W	1460.32	273.212	0.36	0.23	-0.80	
5266.50	20.270	273.050	5000.20	-591.01	83.65	-1490.48	1647499.20	14313800.60	39°25'01.541"N	80°58'29.721"W	1492.82	273.212	0.16	-0.36	-0.80	
5351.50	19.200	273.100	5089.62	-603.64	85.37	-1522.51	1647467.18	14313802.32	39°25'01.558"N	80°58'30.129"W	1524.90	273.209	1.13	-1.13	0.05	
5446.50	18.930	272.210	5179.41	-619.65	86.81	-1553.50	1647436.20	14313803.75	39°25'01.573"N	80°58'30.524"W	1555.93	273.198	0.42	-0.28	-0.94	
5541.50	19.250	273.960	5269.19	-627.89	88.48	-1584.53	1647405.19	14313805.43	39°25'01.589"N	80°58'30.919"W	1586.99	273.196	0.69	0.34	1.84	
5635.50	19.061	273.930	5357.95	-640.50	90.61	-1615.40	1647374.32	14313807.56	39°25'01.610"N	80°58'31.312"W	1617.94	273.211	0.05	-0.05	-0.03	
5698.50	18.360	267.490	5447.94	-647.72	90.89	-1635.65	1647354.08	14313807.83	39°25'01.613"N	80°58'31.571"W	1638.18	273.181	3.55	-1.33	-10.22	
5730.50	18.740	262.040	5447.94	-650.33	89.66	-1645.78	1647343.96	14313808.90	39°25'01.604"N	80°58'31.700"W	1648.24	273.129	5.54	1.19	-17.03	
5761.50	18.590	255.550	5477.31	-651.87	88.03	-1655.50	1647334.24	14313804.98	39°25'01.565"N	80°58'31.823"W	1657.84	273.044	6.71	-0.48	-20.94	
5825.50	17.870	235.790	5538.24	-650.74	80.29	-1673.99	1647316.36	14313797.23	39°25'01.509"N	80°58'32.051"W	1675.31	272.747	10.85	-2.16	-35.38	
5856.50	17.750	226.050	5567.81	-647.72	74.43	-1680.58	1647309.17	14313791.38	39°25'01.451"N	80°58'32.143"W	1682.22	272.536	9.60	1.87	-31.42	
5888.50	19.190	217.450	5698.17	-642.92	66.87	-1687.29	1647302.47	14313783.82	39°25'01.376"N	80°58'32.228"W	1688.61	272.270	9.62	4.50	-26.88	
5919.50	20.880	211.800	5627.30	-636.78	58.13	-1693.30	1647296.46	14313775.09	39°25'01.290"N	80°58'32.305"W	1694.30	271.966	8.28	5.45	-18.23	
5961.50	22.460	205.870	5667.04	-629.01	47.78	-1698.97	1647290.79	14313764.74	39°25'01.187"N	80°58'32.377"W	1699.64	271.611	8.43	4.94	-18.53	
5983.50	24.170	200.990	5686.43	-619.83	36.16	-1703.99	1647285.77	14313753.13	39°25'01.073"N	80°58'32.441"W	1704.37	271.216	8.06	5.34	-15.25	
6014.50	27.250	197.250	5714.48	-609.61	23.71	-1708.29	1647281.48	14313740.68	39°25'00.949"N	80°58'32.496"W	1708.45	270.795	8.19	6.39	-12.06	
6046.50	27.230	192.660	5743.08	-619.85	9.83	-1711.98	1647277.78	14313726.81	39°25'00.812"N	80°58'32.543"W	1712.01	270.329	7.27	3.38	-14.34	
6094.00	28.390	187.570	5785.10	-618.71	-11.97	-1715.85	1647273.91	14313705.02	39°25'00.597"N	80°58'32.593"W	1715.89	269.600	5.56	2.44	-10.72	EH AT Curve <-1/2> (6046.5)(6094-18724)
6107.00	28.970	187.010	5796.50	-618.17	-18.16	-1716.64	1647273.12	14313698.83	39°25'00.536"N	80°58'32.603"W	1716.74	269.394	4.92	4.46	-4.31	
6154.00	31.480	183.340	5837.11	-611.78	-41.71	-1718.75	1647271.02	14313675.29	39°25'00.303"N	80°58'32.630"W	1719.25	268.610	6.63	5.34	-7.81	
6202.00	34.930	179.400	5877.27	-627.32	-67.98	-1719.34	1647270.43	14313649.03	39°25'00.043"N	80°58'32.637"W	1720.68	267.736	8.47	7.19	-8.21	
6249.00	39.800	176.990	5914.62	-600.24	-96.47	-1718.40	1647271.36	14313620.55	39°24'59.762"N	80°58'32.626"W	1721.11	266.787	10.82	10.36	-5.13	
6297.00	43.360	177.090	5950.52	-628.28	-128.28	-1716.76	1647273.01	14313588.75	39°24'59.447"N	80°58'32.605"W	1721.11	266.787	10.82	10.36	-5.13	
6344.00	47.550	175.220	5983.48	-437.65	-161.69	-1714.49	1647275.27	14313555.36	39°24'59.117"N	80°58'32.576"W	1722.10	264.613	9.35	8.91	-3.98	
6392.00	51.310	172.980	6014.70	-402.31	-197.94	-1710.73	1647279.04	14313519.12	39°24'58.769"N	80°58'32.528"W	1722.14	263.400	8.60	7.83	-4.67	
6439.00	53.810	171.200	6043.27	-365.84	-234.90	-1705.58	1647284.18	14313482.18	39°24'58.393"N	80°58'32.463"W	1721.68	262.158	6.11	5.32	-3.79	

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Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Rush Fork Pad
Slot #09	Well	Wellbore	
	Carse Unit 1H	Carse Unit 1H AWB	

**REFERENCE WELLPATH IDENTIFICATION**

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
6454.00	170.839	6052.04	-353.90	-246.92	-1703.68	1647286.08	14313470.16	39°24'58.27"N	80°58'32.43"W	1721.48	1721.48	261.753	5.72	-2.41	Middlesex: 6454 MD	
6487.00	170.070	6070.67	-327.13	-273.78	-1699.17	1647290.59	14313443.31	39°24'58.00"N	80°58'32.38"W	1721.08	1721.08	260.847	6.05	-2.33		
6534.00	168.460	6095.22	-287.59	-313.14	-1691.69	1647298.07	14313403.97	39°24'57.62"N	80°58'32.26"W	1720.43	1720.43	259.513	8.78	-3.43		
6582.00	166.680	6116.96	-245.19	-354.89	-1682.38	1647307.37	14313362.23	39°24'57.20"N	80°58'32.16"W	1719.40	1719.40	258.088	11.52	-4.21		
6629.00	163.926	6135.43	-202.16	-396.66	-1671.32	1647318.43	14313320.48	39°24'56.79"N	80°58'32.02"W	1717.74	1717.74	256.649	7.05	-5.04		
6650.00	163.640	6133.97	-182.68	-415.39	-1665.83	1647323.92	14313301.76	39°24'56.60"N	80°58'31.95"W	1716.84	1716.84	255.998	3.64	-2.81	Burkett: 6650 MD	
6677.00	162.730	6152.84	-157.51	-439.51	-1658.48	1647331.26	14313277.65	39°24'56.37"N	80°58'31.863"W	1715.73	1715.73	255.157	3.64	-2.47		
6683.00	162.711	6154.94	-151.90	-444.88	-1656.81	1647332.93	14313272.28	39°24'56.318"N	80°58'31.842"W	1715.50	1715.50	254.970	4.75	-4.74	Tully: 6683 MD	
6705.00	162.640	6162.39	-131.22	-464.64	-1650.65	1647339.09	14313252.53	39°24'56.123"N	80°58'31.763"W	1714.80	1714.80	254.279	4.75	-4.74	Marcellus POE: 6705 MD	
6724.00	162.580	6168.52	-113.26	-481.80	-1645.27	1647344.47	14313235.38	39°24'55.953"N	80°58'31.695"W	1714.37	1714.37	253.678	4.75	-4.74		
6772.00	163.630	6182.13	-67.31	-525.83	-1631.90	1647357.83	14313191.36	39°24'55.518"N	80°58'31.361"W	1714.53	1714.53	252.140	8.15	-7.87		
6819.00	163.900	6191.96	-21.47	-569.95	-1619.06	1647370.67	14313147.26	39°24'55.082"N	80°58'31.190"W	1719.55	1719.55	249.025	6.69	-6.54		
6867.00	163.590	6198.62	25.96	-615.53	-1605.61	1647384.12	14313101.70	39°24'54.631"N	80°58'31.190"W	1719.55	1719.55	249.025	6.69	-6.54		
6914.00	162.750	6202.47	72.73	-660.32	-1591.90	1647397.82	14313056.93	39°24'54.189"N	80°58'31.016"W	1723.42	1723.42	247.471	7.34	-7.28		
6962.00	166.290	6204.02	-706.21	-1577.94	1647411.78	14313011.05	14312919.46	39°24'52.829"N	80°58'30.519"W	1728.76	1728.76	245.889	4.94	-4.75		
7057.00	160.090	6204.54	-215.28	-797.84	-1552.91	1647436.79	14312919.46	39°24'52.829"N	80°58'30.519"W	1745.88	1745.88	242.807	2.91	-0.84		
7152.00	167.770	6203.82	309.62	-890.25	-1530.90	1647458.80	14312827.09	39°24'51.916"N	80°58'30.239"W	1770.93	1770.93	239.821	1.36	-0.72		
7246.00	164.620	6202.66	403.09	-981.40	-1507.98	1647481.71	14312735.97	39°24'51.015"N	80°58'29.947"W	1799.20	1799.20	236.944	2.69	-0.13		
7341.00	162.230	6201.76	497.90	-1072.44	-1480.88	1647508.79	14312644.97	39°24'50.115"N	80°58'29.219"W	1828.42	1828.42	234.088	2.53	-0.23		
7436.00	160.740	6200.44	592.85	-1162.51	-1450.71	1647538.95	14312554.93	39°24'49.225"N	80°58'29.219"W	1859.03	1859.03	231.293	1.75	-0.78		
7531.00	159.640	6198.57	687.83	-1251.87	-1418.53	1647571.12	14312465.61	39°24'48.341"N	80°58'28.809"W	1891.93	1891.93	228.571	1.16	-0.09		
7626.00	157.140	6196.68	782.77	-1340.17	-1383.55	1647606.08	14312377.35	39°24'47.469"N	80°58'28.363"W	1926.20	1926.20	225.912	2.63	-0.13		
7720.00	154.330	6194.74	876.49	-1425.84	-1344.93	1647644.69	14312291.71	39°24'46.622"N	80°58'27.872"W	1960.07	1960.07	223.327	2.99	-0.03		
7815.00	151.870	6193.51	970.81	-1510.55	-1301.96	1647687.64	14312207.04	39°24'45.785"N	80°58'27.324"W	1994.20	1994.20	220.758	2.74	-0.91		
7910.00	152.380	6192.87	1064.94	-1594.52	-1257.54	1647732.04	14312123.10	39°24'44.954"N	80°58'26.759"W	2030.74	2030.74	218.262	0.56	-0.16		
8008.00	154.970	6191.98	1159.37	-1679.66	-1215.42	1647774.15	14312038.00	39°24'44.113"N	80°58'26.223"W	2073.28	2073.28	215.890	2.73	-0.17		
8100.00	157.200	6191.01	1254.15	-1766.49	-1176.91	1647812.64	14311951.20	39°24'43.255"N	80°58'25.732"W	2122.64	2122.64	213.673	2.35	-0.07		
8196.00	160.380	6190.60	1349.12	-1855.04	-1142.55	1647846.99	14311862.68	39°24'42.379"N	80°58'25.295"W	2178.67	2178.67	211.629	3.41	-0.64		
8290.00	162.120	6191.16	1444.08	-1945.00	-1112.01	1647877.51	14311772.77	39°24'41.490"N	80°58'24.906"W	2240.44	2240.44	209.758	1.92	-0.59		
8385.00	162.350	6192.22	1539.01	-2035.40	-1082.84	1647906.67	14311682.40	39°24'40.596"N	80°58'24.535"W	2305.52	2305.52	208.013	0.03	-0.03		

WELLPATH DATA (230 stations) † = interpolated/extrapolated station

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Well	Wellbore
Carse Unit 1H	Carse Unit 1H AWB
Slot	Slot #09

## WELLPATH DATA (230 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
8480.00	89.020	161.920	6193.57	1633.93	-2125.75	-1053.52	1647935.98	14311592.08	39°24'39.703"N	80°58'24.162"W	2372.50	206.363	0.41	-0.35	-0.21	
8575.00	87.290	160.460	6196.63	1728.85	-2215.63	-1022.91	1647966.58	14311502.24	39°24'38.815"N	80°58'23.772"W	2440.36	204.782	2.38	-1.82	-1.54	
8670.00	88.340	161.750	6200.25	1823.76	-2305.44	-992.17	1647997.31	14311412.47	39°24'37.927"N	80°58'23.381"W	2509.87	203.285	1.75	1.11	1.36	
8765.00	88.310	163.630	6203.02	1918.60	-2396.10	-963.92	1648025.55	14311321.85	39°24'37.031"N	80°58'23.021"W	2582.71	201.914	1.98	-0.03	1.98	
8859.00	88.370	165.030	6205.75	2012.27	-2486.56	-938.54	1648050.92	14311231.12	39°24'36.137"N	80°58'22.698"W	2657.79	200.679	1.49	0.06	1.49	
8954.00	88.340	166.560	6208.48	2106.73	-2578.62	-915.24	1648074.21	14311139.40	39°24'35.227"N	80°58'22.401"W	2736.22	199.541	1.61	-0.03	1.61	
9049.00	88.400	167.030	6211.18	2201.00	-2671.07	-893.54	1648095.89	14311046.99	39°24'34.313"N	80°58'22.125"W	2816.56	198.496	0.50	0.06	0.49	
9144.00	88.280	169.050	6213.93	2295.00	-2763.96	-873.87	1648115.56	14310954.13	39°24'33.395"N	80°58'21.875"W	2898.81	197.545	2.13	-0.13	2.13	
9239.00	89.200	170.760	6216.02	2388.52	-2857.46	-857.22	1648132.20	14310860.67	39°24'32.471"N	80°58'21.633"W	2983.27	196.699	2.04	0.97	1.80	
9334.00	90.800	171.590	6218.02	2481.68	-2951.33	-842.65	1648146.77	14310766.83	39°24'31.543"N	80°58'21.478"W	3069.27	195.935	1.90	1.68	0.87	
9429.00	91.720	172.230	6219.93	2574.74	-3045.24	-828.46	1648160.95	14310672.96	39°24'30.615"N	80°58'21.298"W	3155.92	195.219	1.04	0.97	-0.38	
9523.00	89.230	166.890	6213.15	2667.51	-3137.50	-810.63	1648178.78	14310580.74	39°24'29.703"N	80°58'21.071"W	3240.53	194.487	5.32	-2.65	-4.62	
9618.00	89.010	162.440	6214.61	2762.15	-3229.09	-785.51	1648203.88	14310489.19	39°24'28.798"N	80°58'20.751"W	3323.26	193.672	4.69	-0.23	-4.68	
9713.00	89.020	160.120	6218.24	2857.10	-3319.04	-755.03	1648234.35	14310399.27	39°24'27.909"N	80°58'20.363"W	3403.84	192.816	2.44	0.01	-2.44	
9808.00	88.490	156.990	6218.31	2952.04	-3407.43	-720.31	1648269.06	14310310.92	39°24'27.035"N	80°58'19.921"W	3482.74	191.936	3.34	-0.56	-3.29	
9903.00	89.690	158.600	6219.82	3046.83	-3494.40	-682.12	1648307.23	14310223.98	39°24'26.175"N	80°58'19.435"W	3560.36	191.045	1.93	-1.26	-1.46	
9998.00	89.010	154.430	6220.89	3141.48	-3580.51	-642.00	1648347.33	14310137.91	39°24'25.324"W	80°58'18.924"W	3637.61	190.165	1.42	-0.72	-1.23	
10093.00	88.610	153.910	6222.87	3235.99	-3665.99	-600.62	1648388.70	14310052.46	39°24'24.479"N	80°58'18.397"W	3714.87	189.304	0.69	-0.42	-0.55	
10188.00	88.580	153.440	6225.20	3330.40	-3751.12	-558.50	1648430.80	14309967.37	39°24'23.638"N	80°58'17.861"W	3792.47	188.469	0.50	-0.03	-0.43	
10282.00	88.860	153.450	6227.30	3423.78	-3835.18	-516.49	1648472.80	14309883.34	39°24'22.807"N	80°58'17.326"W	3869.80	187.670	0.30	0.30	0.01	
10377.00	88.460	153.760	6229.52	3518.18	-3920.23	-474.22	1648515.04	14309798.33	39°24'21.966"N	80°58'16.788"W	3948.81	186.897	0.50	-0.42	0.26	
10472.00	88.520	155.240	6232.02	3612.72	-4005.92	-433.29	1648555.96	14309712.67	39°24'21.119"N	80°58'16.267"W	4029.29	186.173	1.62	0.06	1.62	
10567.00	88.180	156.370	6234.78	3707.44	-4092.54	-394.38	1648594.86	14309626.09	39°24'20.263"N	80°58'15.772"W	4111.50	185.504	1.24	-0.36	1.19	
10662.00	88.000	156.410	6237.92	3802.21	-4179.54	-356.35	1648632.87	14309539.12	39°24'19.403"N	80°58'15.288"W	4194.70	184.873	0.19	-0.19	0.04	
10757.00	89.170	158.170	6240.27	3897.08	-4267.14	-319.69	1648669.52	14309451.55	39°24'18.537"N	80°58'14.821"W	4279.10	184.284	2.22	1.23	1.85	
10851.00	89.260	158.320	6241.56	3991.03	-4354.44	-284.85	1648704.34	14309364.29	39°24'17.674"N	80°58'14.377"W	4363.75	183.743	0.19	0.10	0.16	
10946.00	89.260	159.730	6242.78	4085.99	-4442.78	-249.94	1648739.23	14309275.98	39°24'16.800"N	80°58'13.933"W	4449.81	183.220	0.25	0.00	0.25	
11041.00	89.080	159.760	6244.16	4180.97	-4531.55	-216.13	1648773.04	14309187.25	39°24'15.923"N	80°58'13.503"W	4536.70	182.731	1.25	-0.19	1.23	
11136.00	89.110	158.970	6245.66	4275.95	-4620.43	-182.63	1648806.52	14309098.40	39°24'15.044"N	80°58'13.076"W	4624.04	182.264	0.80	0.03	-0.80	
11231.00	89.380	159.830	6246.91	4370.94	-4709.35	-149.21	1648839.93	14309009.52	39°24'14.166"N	80°58'12.651"W	4711.71	181.815	0.95	0.28	0.91	

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Well	Carse Unit 1H
Wellbore	Carse Unit 1H AWB
Slot	Slot #09

## REFERENCE WELLPATH IDENTIFICATION

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
11326.00	89.750	159.620	6247.63	4466.94	-4799.46	-116.29	1648872.84	14308820.45	39°24'13.285"N	80°58'12.232"W	4799.87	181.388	0.45	0.39	-0.22	
11421.00	89.570	159.400	6248.20	4560.93	-4887.45	-83.03	1648906.08	14308831.50	39°24'12.405"N	80°58'11.809"W	4888.16	180.973	0.30	-0.19	-0.23	
11515.00	89.260	159.440	6249.16	4654.93	-4975.45	-49.99	1648939.10	14308743.53	39°24'11.535"N	80°58'11.388"W	4975.70	180.576	0.33	-0.33	0.04	
11610.00	89.290	158.830	6250.36	4749.91	-5064.21	-16.16	1648972.92	14308654.81	39°24'10.658"N	80°58'10.958"W	5064.23	180.183	0.64	0.03	-0.64	
11705.00	89.140	160.230	6251.69	4844.89	-5152.91	17.84	1649006.91	14308566.15	39°24'09.781"N	80°58'10.525"W	5152.94	179.802	0.45	-0.19	0.41	
11800.00	89.750	160.230	6252.63	4939.88	-5242.01	50.76	1649039.62	14308477.07	39°24'08.900"N	80°58'10.106"W	5242.26	179.445	1.26	0.67	1.06	
11895.00	89.450	160.150	6253.29	5034.88	-5331.39	82.96	1649072.00	14308387.73	39°24'08.017"N	80°58'09.696"W	5332.03	179.109	0.33	-0.32	-0.08	
11990.00	89.600	160.670	6254.08	5129.87	-5420.89	114.81	1649103.64	14308298.27	39°24'07.132"N	80°58'09.291"W	5422.10	178.787	0.57	0.16	0.55	
12085.00	89.570	161.440	6254.77	5224.85	-5510.74	145.65	1649134.67	14308208.46	39°24'06.244"N	80°58'08.898"W	5512.66	178.486	0.81	-0.03	0.81	
12180.00	89.380	161.440	6255.64	5319.80	-5600.85	175.73	1649164.73	14308118.39	39°24'05.363"N	80°58'08.515"W	5603.60	178.203	0.29	-0.20	0.21	
12275.00	89.320	161.990	6256.72	5414.74	-5691.09	205.37	1649194.37	14308028.17	39°24'04.461"N	80°58'08.138"W	5694.80	177.933	0.37	-0.06	0.37	
12369.00	89.230	161.990	6257.91	5508.67	-5780.48	234.43	1649223.42	14307938.82	39°24'03.578"N	80°58'07.768"W	5785.23	177.678	0.10	0.00	0.00	
12464.00	88.950	162.210	6259.42	5603.59	-5870.87	263.63	1649252.60	14307848.47	39°24'02.684"N	80°58'07.397"W	5876.79	177.429	0.37	-0.29	0.23	
12559.00	89.290	162.380	6260.88	5698.50	-5961.36	292.52	1649281.48	14307758.02	39°24'01.790"N	80°58'07.029"W	5968.53	177.191	0.40	0.36	0.18	
12654.00	89.350	161.750	6262.00	5793.42	-6051.74	321.77	1649310.72	14307667.68	39°24'00.896"N	80°58'06.657"W	6060.29	176.956	0.67	0.06	-0.66	
12749.00	89.230	160.980	6263.18	5888.38	-6141.75	352.12	1649341.06	14307577.70	39°24'00.007"N	80°58'06.271"W	6151.84	176.719	0.82	-0.13	-0.81	
12844.00	89.320	159.440	6264.38	5983.37	-6231.24	383.97	1649372.89	14307488.24	39°23'59.122"N	80°58'05.865"W	6243.06	176.474	1.20	0.09	-1.20	
12939.00	89.290	159.310	6265.53	6078.36	-6320.26	417.12	1649406.03	14307399.26	39°23'58.242"N	80°58'05.444"W	6334.01	176.224	0.56	-0.03	-0.56	
13034.00	88.950	159.160	6266.99	6173.34	-6409.08	450.80	1649439.70	14307310.48	39°23'57.364"N	80°58'05.015"W	6424.92	175.977	0.39	-0.36	-0.16	
13129.00	88.950	158.150	6268.73	6268.30	-6497.55	485.37	1649474.25	14307222.04	39°23'56.490"N	80°58'04.575"W	6515.65	175.728	1.06	0.00	-1.06	
13224.00	89.200	157.170	6270.27	6363.22	-6585.41	521.48	1649510.34	14307134.22	39°23'55.621"N	80°58'04.115"W	6606.02	175.472	1.06	0.26	-1.03	
13318.00	89.510	157.370	6271.33	6457.11	-6672.10	557.79	1649546.65	14307047.56	39°23'54.764"N	80°58'03.653"W	6695.37	175.221	0.39	0.33	-0.21	
13413.00	89.170	157.020	6272.42	6552.00	-6759.67	594.61	1649583.45	14306960.03	39°23'53.899"N	80°58'03.185"W	6785.77	174.973	0.51	-0.36	-0.37	
13508.00	89.260	156.140	6273.72	6646.83	-6846.83	632.37	1649621.19	14306872.90	39°23'53.037"N	80°58'02.704"W	6875.97	174.723	0.93	0.09	-0.93	
13603.00	89.380	155.940	6274.85	6741.61	-6933.64	670.95	1649659.75	14306786.13	39°23'52.179"N	80°58'02.213"W	6966.03	174.473	0.25	0.13	-0.21	
13698.00	89.510	155.800	6275.77	6836.38	-7020.37	709.70	1649698.50	14306699.43	39°23'51.322"N	80°58'01.720"W	7056.15	174.227	0.14	-0.14	-0.04	
13793.00	88.890	155.920	6277.10	6931.14	-7107.08	748.48	1649737.25	14306612.75	39°23'50.464"N	80°58'01.226"W	7146.39	173.988	0.65	-0.65	0.02	
13888.00	89.170	156.920	6278.70	7025.95	-7194.14	786.47	1649775.23	14306525.73	39°23'49.604"N	80°58'00.743"W	7237.00	173.761	1.09	0.29	1.05	
13982.00	89.380	158.310	6279.89	7119.87	-7281.05	822.27	1649811.01	14306438.86	39°23'48.745"N	80°58'00.287"W	7327.33	173.557	1.50	0.22	1.48	
14077.00	89.780	159.830	6280.59	7214.85	-7369.77	856.20	1649844.94	14306350.17	39°23'47.868"N	80°57'59.855"W	7419.34	173.373	1.65	0.42	1.60	

## WELLPATH DATA (230 stations)

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# Actual Wellpath Report

Carse Unit 1H AWP Proj.: 18765

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Slot	Well
Slot #09	Carse Unit 1H AWB

## WELLPATH DATA (230 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
14172.00	89.260	160.260	6281.39	7309.85	-7459.07	888.82	1649877.34	14306280.91	39°23'46.985"N	80°57'59.443"W	7511.81	173.206	0.71	-0.55	0.45	
14267.00	89.510	159.980	6282.41	7404.84	-7548.40	920.93	1649909.63	14306171.62	39°23'46.102"N	80°57'59.032"W	7604.37	173.044	0.40	-0.26	-0.29	
14362.00	89.570	161.670	6283.17	7499.82	-7638.12	952.13	1649940.82	14306081.93	39°23'45.215"N	80°57'58.635"W	7697.24	172.894	1.78	0.06	1.78	
14456.00	89.720	162.330	6283.75	7593.76	-7727.52	981.17	1649969.86	14305992.57	39°23'44.331"N	80°57'58.265"W	7789.56	172.764	0.72	0.16	0.70	
14561.00	89.850	162.010	6284.14	7688.68	-7817.96	1010.26	1649998.93	14305902.17	39°23'43.438"N	80°57'57.895"W	7882.96	172.637	0.36	0.14	-0.34	
14646.00	89.820	161.340	6284.38	7783.63	-7908.14	1040.13	1650028.79	14305812.02	39°23'42.546"N	80°57'57.515"W	7976.25	172.507	0.71	-0.03	-0.71	
14741.00	89.750	161.150	6284.74	7878.61	-7998.09	1070.67	1650059.32	14305722.10	39°23'41.657"N	80°57'57.126"W	8069.44	172.375	0.21	-0.07	-0.20	
14836.00	89.970	161.030	6284.97	7973.58	-8087.96	1101.46	1650090.10	14305632.27	39°23'40.769"N	80°57'56.735"W	8162.62	172.245	0.26	-0.13	-0.13	
14931.00	89.850	160.400	6285.12	8068.57	-8177.81	1132.34	1650120.96	14305542.46	39°23'39.880"N	80°57'56.342"W	8255.83	172.117	0.13	-0.13	0.01	
15026.00	89.820	162.280	6285.39	8163.52	-8267.98	1162.23	1650150.84	14305452.33	39°23'38.989"N	80°57'55.962"W	8349.27	171.998	1.31	-0.03	1.31	
15121.00	89.750	161.180	6285.75	8258.47	-8358.19	1192.01	1650180.61	14305362.15	39°23'38.097"N	80°57'55.583"W	8442.76	171.883	1.16	-0.07	-1.16	
15216.00	89.660	160.230	6286.24	8353.45	-8447.85	1223.40	1650211.98	14305272.53	39°23'37.211"N	80°57'55.183"W	8535.98	171.760	1.00	-0.09	-1.00	
15310.00	89.910	160.610	6286.59	8447.45	-8536.41	1254.90	1650243.47	14305184.00	39°23'36.336"N	80°57'54.782"W	8628.16	171.637	0.48	0.27	0.40	
15405.00	89.880	160.920	6286.77	8542.44	-8626.11	1286.20	1650274.76	14305094.34	39°23'35.449"N	80°57'54.384"W	8721.47	171.519	0.33	-0.03	0.33	
15500.00	89.750	160.780	6287.07	8637.42	-8715.85	1317.36	1650305.91	14305004.63	39°23'34.562"N	80°57'53.988"W	8814.85	171.405	0.20	-0.14	-0.15	
15595.00	89.630	159.750	6287.51	8732.42	-8808.39	1349.27	1650337.80	14304915.19	39°23'33.677"N	80°57'53.582"W	8908.11	171.288	0.85	-0.03	-0.85	
15690.00	89.630	159.750	6288.05	8827.42	-8894.52	1381.98	1650370.50	14304826.03	39°23'32.796"N	80°57'53.166"W	9001.24	171.168	0.25	-0.03	-0.23	
15784.00	90.000	160.480	6288.35	8921.42	-8982.92	1413.95	1650402.46	14304737.67	39°23'31.922"N	80°57'52.759"W	9093.52	171.055	0.87	0.39	0.78	
15879.00	89.850	161.300	6288.48	9016.40	-9072.68	1445.05	1650433.55	14304647.95	39°23'31.035"N	80°57'52.363"W	9187.04	170.950	0.88	-0.16	0.86	
15974.00	89.690	161.300	6288.86	9111.37	-9162.66	1475.51	1650463.99	14304558.00	39°23'30.145"N	80°57'51.976"W	9280.71	170.852	0.17	-0.17	0.00	
16069.00	89.970	162.060	6289.14	9206.32	-9252.85	1505.37	1650493.84	14304467.85	39°23'29.254"N	80°57'51.596"W	9374.51	170.759	0.85	0.29	0.80	
16164.00	89.820	162.440	6289.32	9301.24	-9343.33	1534.33	1650522.79	14304377.41	39°23'28.359"N	80°57'51.227"W	9468.47	170.674	0.43	-0.16	0.40	
16259.00	90.120	162.470	6289.15	9396.15	-9433.91	1562.97	1650551.42	14304286.87	39°23'27.464"N	80°57'50.863"W	9562.50	170.593	0.32	0.32	0.03	
16354.00	89.820	163.060	6289.42	9491.03	-9524.64	1591.12	1650579.55	14304196.17	39°23'26.567"N	80°57'50.505"W	9656.63	170.516	0.70	-0.32	0.62	
16449.00	90.030	161.760	6289.54	9585.93	-9615.20	1619.83	1650608.25	14304105.65	39°23'25.672"N	80°57'50.140"W	9750.68	170.437	1.39	0.22	-1.37	
16544.00	90.090	160.170	6289.44	9680.91	-9705.00	1650.81	1650639.22	14304015.88	39°23'24.784"N	80°57'49.746"W	9844.40	170.346	1.67	0.06	-1.67	
16638.00	90.120	160.690	6289.27	9774.91	-9793.29	1683.07	1650671.47	14303927.63	39°23'23.912"N	80°57'49.335"W	9938.86	170.248	0.51	0.03	-0.51	
16733.00	90.280	160.810	6288.94	9869.91	-9882.70	1715.17	1650703.55	14303838.25	39°23'23.028"N	80°57'48.927"W	10030.43	170.154	1.19	0.17	1.18	
16828.00	89.720	160.500	6288.94	9964.90	-9972.34	1746.64	1650735.01	14303748.65	39°23'22.142"N	80°57'48.526"W	10124.14	170.066	0.67	-0.59	-0.33	
16923.00	89.880	159.670	6289.27	10059.90	-10061.55	1779.00	1650767.36	14303659.37	39°23'21.259"N	80°57'48.115"W	10217.71	169.973	0.89	0.17	-0.87	

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Slot	Wellbore
Slot #09	Carse Unit 1H
	Carse Unit 1H AWB

## WELLPATH DATA (230 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
1718.00	90.060	159.770	6289.32	10154.89	-10150.47	1812.70	1650801.05	14303570.59	39°23'20.381"N	80°57'47.686"W	10311.06	169.875	0.97	0.19	-0.95	
1713.00	90.030	157.950	6289.24	-10238.78	1847.73	1650836.07	14303482.32	39°23'18.508"N	80°57'47.240"W	10404.17	169.770	0.86	-0.03	-0.86		
1720.00	90.180	158.340	6289.07	-10343.81	10343.81	1650871.04	14303395.11	39°23'18.646"N	80°57'46.795"W	10496.25	169.667	0.44	0.16	0.41		
17302.00	90.120	158.510	6288.82	-10438.78	-10414.36	1917.66	1650905.96	14303306.80	39°23'17.772"N	80°57'46.351"W	10589.45	169.567	0.19	-0.06	0.18	
17397.00	90.120	158.650	6288.62	-10502.80	1952.35	1650940.64	14303218.40	39°23'16.898"N	80°57'45.909"W	10682.72	169.470	0.15	0.00	0.15		
17492.00	90.090	159.020	6288.45	-10591.39	1986.65	1650974.93	14303129.84	39°23'16.022"N	80°57'45.473"W	10776.10	169.376	0.39	-0.03	0.39		
17587.00	90.030	158.840	6288.35	-10680.04	2020.81	1651009.07	14303041.23	39°23'15.146"N	80°57'45.038"W	10869.54	169.286	0.20	-0.06	-0.19		
17682.00	90.120	158.660	6288.22	-10768.58	2055.24	1651043.49	14302952.73	39°23'14.271"N	80°57'44.600"W	10962.95	169.195	0.21	0.09	-0.19		
17776.00	90.120	158.800	6288.03	-10856.18	2089.34	1651077.57	14302865.17	39°23'13.405"N	80°57'44.166"W	11055.40	169.106	0.15	0.00	0.15		
17871.00	89.820	158.900	6288.08	-10944.78	2123.61	1651111.84	14302776.60	39°23'12.529"N	80°57'43.730"W	11148.90	169.019	0.33	-0.32	0.13		
17966.00	90.180	159.540	6288.08	-11033.60	2157.32	1651145.53	14302687.82	39°23'11.651"N	80°57'43.302"W	11242.52	168.937	0.77	0.38	0.67		
18061.00	90.000	159.310	6287.93	-11122.54	2190.70	1651178.90	14302598.91	39°23'10.772"N	80°57'42.877"W	11336.23	168.858	0.31	-0.19	-0.24		
18156.00	90.030	158.910	6287.90	-11211.29	2224.58	1651212.76	14302510.19	39°23'09.894"N	80°57'42.446"W	11429.87	168.777	0.42	0.03	-0.42		
18250.00	90.060	159.250	6287.83	-11299.10	2258.14	1651246.31	14302422.42	39°23'09.027"N	80°57'42.019"W	11522.53	168.698	0.36	0.03	0.36		
18345.00	89.910	159.060	6287.85	-11387.88	2291.95	1651280.10	14302333.68	39°23'08.149"N	80°57'41.589"W	11616.23	168.621	0.25	-0.16	-0.20		
18440.00	90.150	159.770	6287.80	-11476.81	2325.35	1651313.49	14302244.78	39°23'07.270"N	80°57'41.164"W	11710.02	168.546	0.79	0.25	0.75		
18535.00	90.000	159.220	6287.68	-11565.79	2358.63	1651346.75	14302155.84	39°23'06.390"N	80°57'40.741"W	11803.84	168.474	0.60	-0.16	-0.58		
18630.00	90.120	158.940	6287.58	-11654.53	2392.55	1651380.66	14302067.13	39°23'05.513"N	80°57'40.309"W	11897.58	168.399	0.32	0.13	-0.29		
18724.00	90.060	159.610	6287.43	-11742.45	2425.81	1651413.91	14301979.25	39°23'04.644"N	80°57'39.886"W	11990.40	168.328	0.72	-0.06	0.71		
18765.00	90.060	159.610	6287.39	-11780.88	2440.10	1651428.19	14301940.84	39°23'04.264"N	80°57'39.704"W	12030.93	168.298	0.00	0.00	0.00	Projected MD at TD: 18765	

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Rush Fork Pad
Well	Wellbore
Slot	Carse Unit 1H AWP
Slot #09	Carse Unit 1H AWP

## HOLE & CASING SECTIONS - Ref Wellbore: Carse Unit 1H AWB Ref Wellpath: Carse Unit 1H AWP Proj: 18765

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start EW [ft]	End N/S [ft]	End EW [ft]
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.09	0.06
17.5in Open Hole	105.50	390.90	285.40	105.50	390.90	-0.09	0.06	-0.48	0.44
13.375in Casing Surface	25.50	390.90	365.40	25.50	390.90	0.00	0.00	-0.48	0.44
12.25in Open Hole	390.90	2626.60	2235.70	390.90	2536.80	-0.48	0.44	43.40	-570.94
9.625in Casing Intermediate	25.50	2626.60	2601.10	25.50	2536.80	0.00	0.00	43.40	-570.94
8.75in Open Hole	2626.60	6118.50	3491.90	2536.80	5806.53	43.40	-570.94	-23.74	-1717.28
8.5in Open Hole	6118.50	18765.00	12646.50	5806.53	6287.39	-23.74	-1717.28	-11780.88	2440.10
5.5in Casing Production	25.50	18765.00	18739.50	25.50	6287.39	0.00	0.00	-11780.88	2440.10

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Carse Unit 1H - POE - Rev-1	6150.00	-436.16	-1664.75	1647325.00	14313281.00	39°24'56.404"N	80°58'31.943"W	point
Carse Unit 1H - BHL - Rev-3	6190.00	-11810.67	2432.58	1651420.68	14301911.06	39°23'03.970"N	80°57'39.800"W	point
Carse Unit 1H - IP #1 - Rev-1	6190.00	-1704.67	-1264.59	1647725.00	14312013.00	39°24'43.866"N	80°58'26.849"W	point
Carse Unit 1H - LP - Rev-1	6190.00	-657.69	-1594.86	1647394.85	14313059.55	39°24'54.215"N	80°58'31.053"W	point

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Slot #09
Area	Tyler County, WV	Wellbore	Carse Unit 1H AWP
Field	Tyler		
Facility	Rush Fork Pad		

WELLPATH COMPOSITION - Ref Wellbore: Carse Unit 1H AWP				Ref Wellpath: Carse Unit 1H AWP Proj: 18765	
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment		Wellbore
25.50	355.50	Gyrodatta standard - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <17-1/2">(100-345)		Carse Unit 1H AWP
355.50	2581.50	OWSG MWD rev2 + HRGM	02 WFT EM <12-1/4">(345)(432-2571)		Carse Unit 1H AWP
2581.50	6046.50	OWSG MWD rev2 + HRGM	03 WFT EM <8-3/4">(2571)(2681-6036)		Carse Unit 1H AWP
6046.50	18724.00	BH1 AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(6046.5)(6094-18724)		Carse Unit 1H AWP
18724.00	18765.00	Blind Drilling (std)	Projection to bit		Carse Unit 1H AWP

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# Actual Wellpath Report

Carse Unit 1H AWP Proj: 18765



REFERENCE WELLPATH IDENTIFICATION		
Operator	ANTERO RESOURCES CORPORATION	
Area	Tyler County, WV	
Field	Tyler	
Facility	Rush Fork Pad	
	Well	Carse Unit 1H
	Wellbore	Carse Unit 1H AWB
	Slot	Slot #09

COMMENTS
Wellpath general comments API: 47-095-02536-0000 BHI Job #: 109791468 Rig: H&P 317 Duration: 05/03/2019-05/07/2019 Gyrodatta MS Gyro <17-1/2">(100-345) WFT EM <12-1/4">(345)(432-2571) WFT EM <8-3/4">(2571)(2681-6036) BH AT Curve <8-1/2">(6046.5)(6094'-18724') Middlesex: 6454' MD Burkett: 6650' MD Tully: 6683' MD Marcellus POE: 6705' MD Projected MD at TD: 18765

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