



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	1/2/2019 at 5:09:40 PM
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Spock_Unit_2H_AWP_Proj_17051_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4.26	-8.94	1667557.19	14307667.78	39°24'00.770"N	80°54'14.130"W
Facility Reference Pt			1667566.13	14307672.04	39°24'00.812"N	80°54'14.016"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	1140.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #08)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.24°



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WELLPATH DATA (207 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	128.240	0.00	0.00	0.00	0.00	1667557.19	14307667.78	39°24'00.770"N	80°54'14.130"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	128.240	25.00	0.00	0.00	0.00	1667557.19	14307667.78	39°24'00.770"N	80°54'14.130"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.550	128.240	100.00	0.31	-0.22	0.28	1667557.47	14307667.56	39°24'00.768"N	80°54'14.126"W	0.36	128.240	0.73	0.73	170.99	Gyrodata MS Gyro <17-1/2">(100'-431')
125.00	0.590	136.250	125.00	0.52	-0.39	0.47	1667557.66	14307667.39	39°24'00.766"N	80°54'14.124"W	0.61	129.931	0.36	0.16	32.04	
150.00	0.590	133.280	150.00	0.76	-0.57	0.65	1667557.84	14307667.21	39°24'00.764"N	80°54'14.122"W	0.86	131.369	0.12	0.00	-11.88	
175.00	0.760	141.310	174.99	1.03	-0.79	0.85	1667558.03	14307666.99	39°24'00.762"N	80°54'14.119"W	1.16	132.999	0.78	0.68	32.12	
200.00	0.800	141.020	199.99	1.35	-1.05	1.06	1667558.25	14307666.72	39°24'00.760"N	80°54'14.117"W	1.49	134.852	0.16	0.16	-1.16	
225.00	0.560	146.560	224.99	1.63	-1.29	1.24	1667558.43	14307666.49	39°24'00.757"N	80°54'14.114"W	1.79	136.247	0.99	-0.96	22.16	
250.00	0.490	149.180	249.99	1.86	-1.49	1.36	1667558.55	14307666.29	39°24'00.755"N	80°54'14.113"W	2.01	137.551	0.30	-0.28	10.48	
275.00	0.620	141.680	274.99	2.09	-1.68	1.50	1667558.69	14307666.10	39°24'00.753"N	80°54'14.111"W	2.25	138.347	0.59	0.52	-30.00	
300.00	0.500	150.610	299.99	2.33	-1.88	1.63	1667558.82	14307665.89	39°24'00.751"N	80°54'14.109"W	2.49	139.059	0.59	-0.48	35.72	
325.00	0.520	154.190	324.99	2.55	-2.08	1.74	1667558.93	14307665.70	39°24'00.749"N	80°54'14.108"W	2.71	140.147	0.15	0.08	14.32	
350.00	0.490	138.590	349.99	2.76	-2.26	1.86	1667559.05	14307665.52	39°24'00.748"N	80°54'14.106"W	2.93	140.628	0.56	-0.12	-62.40	
375.00	0.540	132.900	374.98	2.96	-2.42	2.01	1667559.20	14307665.36	39°24'00.746"N	80°54'14.104"W	3.15	140.271	0.29	0.20	-22.76	
400.00	0.490	137.820	399.98	3.17	-2.58	2.17	1667559.36	14307665.20	39°24'00.744"N	80°54'14.102"W	3.38	139.937	0.27	-0.20	19.68	
425.00	0.540	139.080	424.98	3.37	-2.75	2.32	1667559.51	14307665.03	39°24'00.743"N	80°54'14.100"W	3.60	139.846	0.21	0.20	5.04	
431.00	0.560	134.650	430.98	3.43	-2.79	2.36	1667559.55	14307664.99	39°24'00.742"N	80°54'14.100"W	3.66	139.799	0.78	0.33	-73.83	
503.00	0.670	162.920	502.98	4.17	-3.44	2.74	1667559.92	14307664.34	39°24'00.736"N	80°54'14.095"W	4.40	141.541	0.44	0.15	39.26	WFT EM <12-1/4">(431')(503'-2565')
595.00	1.150	161.020	594.97	5.63	-4.83	3.19	1667560.38	14307662.95	39°24'00.722"N	80°54'14.089"W	5.79	146.534	0.52	0.52	-2.07	
680.97	1.340	114.650	680.92	7.19	-6.07	4.39	1667561.58	14307661.71	39°24'00.710"N	80°54'14.074"W	7.49	144.121	1.16	0.22	-53.94	
776.00	2.490	83.490	775.90	8.44	-6.30	7.45	1667564.63	14307661.49	39°24'00.708"N	80°54'14.035"W	9.75	130.203	1.59	1.21	-32.79	
871.00	4.340	68.070	870.72	8.78	-4.72	12.83	1667570.02	14307663.06	39°24'00.723"N	80°54'13.967"W	13.67	110.187	2.16	1.95	-16.23	
965.00	6.820	58.030	964.27	7.46	-0.43	20.87	1667578.05	14307667.34	39°24'00.765"N	80°54'13.864"W	20.87	91.193	2.83	2.64	-10.68	
1060.00	9.540	53.520	1058.30	4.01	7.23	31.99	1667589.16	14307675.01	39°24'00.841"N	80°54'13.722"W	32.79	77.256	2.94	2.86	-4.75	
1155.00	11.420	48.880	1151.71	-1.69	18.10	45.40	1667602.57	14307685.87	39°24'00.948"N	80°54'13.551"W	48.88	68.264	2.17	1.98	-4.88	
1250.00	13.080	48.740	1244.55	-9.05	31.38	60.57	1667617.74	14307699.14	39°24'01.079"N	80°54'13.358"W	68.21	62.615	1.75	1.75	-0.15	
1345.00	14.150	53.550	1336.88	-16.33	45.37	77.99	1667635.15	14307713.13	39°24'01.218"N	80°54'13.136"W	90.23	59.815	1.64	1.13	5.06	
1440.00	14.760	59.540	1428.88	-21.91	58.40	97.77	1667654.92	14307726.15	39°24'01.346"N	80°54'12.884"W	113.88	59.148	1.70	0.64	6.31	
1535.00	15.770	59.460	1520.52	-26.57	71.09	119.32	1667676.46	14307738.84	39°24'01.471"N	80°54'12.609"W	138.89	59.211	1.06	1.06	-0.08	
1629.00	14.260	59.390	1611.31	-31.14	83.48	140.28	1667697.42	14307751.23	39°24'01.594"N	80°54'12.342"W	163.24	59.244	1.61	-1.61	-0.07	



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Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (207 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
1723.00	13.710	58.330	1702.52	-35.62	95.22	159.73	1667716.85	14307762.96	39°24'01.709"N	80°54'12.094"W	185.96	59.198	0.65	-0.59	-1.13	
1818.00	15.000	57.110	1794.56	-40.73	107.81	179.63	1667736.75	14307775.55	39°24'01.834"N	80°54'11.840"W	209.50	59.029	1.39	1.36	-1.28	
1913.00	14.310	51.760	1886.47	-47.25	121.76	199.18	1667756.29	14307789.48	39°24'01.971"N	80°54'11.591"W	233.44	58.563	1.60	-0.73	-5.63	
2007.00	13.950	56.100	1977.63	-53.70	135.27	217.71	1667774.81	14307802.99	39°24'02.105"N	80°54'11.355"W	256.31	58.147	1.19	-0.38	4.62	
2102.00	16.160	63.670	2069.37	-58.01	147.52	239.07	1667796.16	14307815.24	39°24'02.225"N	80°54'11.083"W	280.92	58.323	3.11	2.33	7.97	
2196.00	17.810	65.980	2159.27	-60.57	159.17	263.92	1667821.01	14307826.89	39°24'02.340"N	80°54'10.766"W	308.21	58.906	1.90	1.76	2.46	
2290.00	16.330	63.240	2249.13	-63.25	170.98	288.85	1667845.93	14307838.69	39°24'02.457"N	80°54'10.448"W	335.66	59.378	1.79	-1.57	-2.91	
2385.00	13.020	57.470	2341.02	-67.25	182.75	309.81	1667866.87	14307850.45	39°24'02.573"N	80°54'10.181"W	359.69	59.465	3.80	-3.48	-6.07	
2480.00	12.910	54.460	2433.60	-72.50	194.67	327.47	1667884.53	14307862.37	39°24'02.691"N	80°54'09.956"W	380.96	59.270	0.72	-0.12	-3.17	
2565.00	14.290	57.300	2516.21	-77.43	205.86	344.02	1667901.07	14307873.55	39°24'02.801"N	80°54'09.745"W	400.91	59.104	1.80	1.62	3.34	
2635.00	14.210	60.550	2584.06	-80.81	214.75	358.77	1667915.82	14307882.44	39°24'02.889"N	80°54'09.557"W	418.13	59.097	1.15	-0.11	4.64	WFT EM <8-3/4">(2565')(2635'-6144')
2730.00	11.830	55.080	2676.62	-85.32	226.06	376.92	1667933.95	14307893.75	39°24'03.000"N	80°54'09.326"W	439.51	59.046	2.82	-2.51	-5.76	
2920.00	11.180	57.070	2862.80	-94.61	247.22	408.35	1667965.37	14307914.90	39°24'03.209"N	80°54'08.925"W	477.35	58.808	0.40	-0.34	1.05	
3015.00	12.270	57.260	2955.81	-98.98	257.69	424.57	1667981.59	14307925.36	39°24'03.312"N	80°54'08.718"W	496.65	58.745	1.15	1.15	0.20	
3110.00	12.450	61.980	3048.61	-102.71	267.96	442.10	1667999.11	14307935.63	39°24'03.414"N	80°54'08.495"W	516.96	58.780	1.08	0.19	4.97	
3204.00	13.120	60.790	3140.28	-105.92	277.92	460.36	1668017.36	14307945.59	39°24'03.512"N	80°54'08.262"W	537.74	58.880	0.77	0.71	-1.27	
3304.00	14.410	63.830	3237.41	-109.18	288.95	481.43	1668038.43	14307956.61	39°24'03.621"N	80°54'07.993"W	561.49	59.028	1.48	1.29	3.04	
3398.00	15.030	61.240	3328.33	-112.39	299.97	502.61	1668059.60	14307967.63	39°24'03.729"N	80°54'07.723"W	585.32	59.170	0.96	0.66	-2.76	
3493.00	14.210	58.200	3420.25	-116.75	312.05	523.32	1668080.30	14307979.70	39°24'03.849"N	80°54'07.459"W	609.29	59.193	1.18	-0.86	-3.20	
3587.00	13.630	60.210	3511.49	-121.08	323.63	542.74	1668099.71	14307991.28	39°24'03.963"N	80°54'07.212"W	631.90	59.193	0.80	-0.62	2.14	
3683.00	14.600	63.150	3604.59	-124.55	334.71	563.35	1668120.32	14308002.36	39°24'04.072"N	80°54'06.949"W	655.29	59.283	1.26	1.01	3.06	
3777.00	15.290	63.480	3695.41	-127.47	345.60	585.01	1668141.97	14308013.24	39°24'04.180"N	80°54'06.673"W	679.47	59.427	0.74	0.73	0.35	
3872.00	16.700	67.830	3786.74	-129.52	356.34	608.86	1668165.81	14308023.98	39°24'04.285"N	80°54'06.369"W	705.47	59.661	1.95	1.48	4.58	
3966.00	18.340	66.540	3876.37	-131.04	367.33	634.94	1668191.87	14308034.96	39°24'04.394"N	80°54'06.037"W	733.54	59.950	1.79	1.74	-1.37	
4061.00	20.390	59.110	3966.01	-135.20	381.78	662.86	1668219.78	14308049.40	39°24'04.536"N	80°54'05.681"W	764.94	60.060	3.37	2.16	-7.82	
4156.00	21.350	55.920	4054.78	-142.67	399.97	691.38	1668248.30	14308067.58	39°24'04.716"N	80°54'05.317"W	798.74	59.951	1.57	1.01	-3.36	
4251.00	17.150	55.420	4144.44	-150.53	417.61	717.25	1668274.15	14308085.22	39°24'04.890"N	80°54'04.987"W	829.97	59.790	4.42	-4.42	-0.53	
4346.00	15.550	56.540	4235.60	-157.13	432.59	739.41	1668296.30	14308100.19	39°24'05.038"N	80°54'04.705"W	856.65	59.671	1.72	-1.68	1.18	
4441.00	14.630	59.240	4327.32	-162.44	445.74	760.34	1668317.23	14308113.34	39°24'05.167"N	80°54'04.438"W	881.37	59.620	1.22	-0.97	2.84	
4535.00	14.460	62.120	4418.31	-166.36	457.30	780.92	1668337.79	14308124.90	39°24'05.281"N	80°54'04.176"W	904.96	59.647	0.79	-0.18	3.06	



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4630.00	14.550	61.580	4510.28	-169.83	468.53	801.90	1668358.76	14308136.12	39°24'05.392"N	80°54'03.908"W	928.74	59.703	0.17	0.09	-0.57	
4725.00	14.280	61.730	4602.29	-173.36	479.76	822.71	1668379.57	14308147.34	39°24'05.503"N	80°54'03.643"W	952.38	59.752	0.29	-0.28	0.16	
4819.00	13.240	55.380	4693.60	-177.84	491.36	841.78	1668398.63	14308158.94	39°24'05.617"N	80°54'03.400"W	974.70	59.727	1.95	-1.11	-6.76	
4914.00	13.780	55.370	4785.97	-183.53	503.97	860.04	1668416.89	14308171.55	39°24'05.742"N	80°54'03.167"W	996.83	59.630	0.57	0.57	-0.01	
5009.00	14.010	58.260	4878.19	-188.82	516.45	879.13	1668435.97	14308184.02	39°24'05.865"N	80°54'02.924"W	1019.61	59.568	0.77	0.24	3.04	
5103.00	12.570	57.770	4969.67	-193.40	527.89	897.46	1668454.29	14308195.46	39°24'05.978"N	80°54'02.690"W	1041.21	59.536	1.54	-1.53	-0.52	
5198.00	12.310	54.080	5062.44	-198.45	539.35	914.41	1668471.23	14308206.91	39°24'06.091"N	80°54'02.474"W	1061.62	59.466	0.88	-0.27	-3.88	
5293.00	13.060	58.100	5155.13	-203.52	550.96	931.72	1668488.54	14308218.52	39°24'06.205"N	80°54'02.253"W	1082.44	59.403	1.22	0.79	4.23	
5387.00	12.310	61.890	5246.83	-207.21	561.30	949.58	1668506.39	14308228.85	39°24'06.307"N	80°54'02.026"W	1103.07	59.413	1.19	-0.80	4.03	
5482.00	15.560	58.650	5339.03	-211.24	572.70	969.40	1668526.20	14308240.25	39°24'06.420"N	80°54'01.773"W	1125.93	59.426	3.52	3.42	-3.41	
5576.00	14.260	58.400	5429.86	-216.15	585.33	990.03	1668546.82	14308252.87	39°24'06.544"N	80°54'01.510"W	1150.11	59.407	1.38	-1.38	-0.27	
5671.00	12.470	58.420	5522.28	-220.65	596.83	1008.73	1668565.52	14308264.37	39°24'06.658"N	80°54'01.272"W	1172.07	59.389	1.88	-1.88	0.02	
5766.00	11.330	61.040	5615.24	-224.25	606.72	1025.64	1668582.41	14308274.25	39°24'06.756"N	80°54'01.056"W	1191.65	59.393	1.33	-1.20	2.76	
5860.00	14.490	59.030	5706.85	-228.01	617.24	1043.80	1668600.57	14308284.78	39°24'06.859"N	80°54'00.825"W	1212.65	59.402	3.39	3.36	-2.14	
5955.00	16.910	60.870	5798.30	-232.57	630.09	1066.07	1668622.83	14308297.61	39°24'06.986"N	80°54'00.541"W	1238.35	59.415	2.60	2.55	1.94	
6049.00	18.220	66.700	5887.92	-235.70	642.56	1091.51	1668648.26	14308310.08	39°24'07.109"N	80°54'00.217"W	1266.60	59.515	2.33	1.39	6.20	
6144.00	17.990	86.050	5978.30	-232.62	649.45	1119.81	1668676.55	14308316.97	39°24'07.177"N	80°53'59.856"W	1294.51	59.888	6.31	-0.24	20.37	
6178.00	18.340	91.660	6010.61	-229.24	649.66	1130.40	1668687.13	14308317.17	39°24'07.179"N	80°53'59.721"W	1303.78	60.113	5.24	1.03	16.50	BH AT Curve <8-1/2">(6144')(6178'-17027')
6225.00	18.550	101.040	6055.21	-222.71	648.01	1145.13	1668701.86	14308315.53	39°24'07.162"N	80°53'59.534"W	1315.76	60.495	6.32	0.45	19.96	
6273.00	19.790	117.300	6100.58	-212.84	642.82	1159.85	1668716.58	14308310.34	39°24'07.111"N	80°53'59.346"W	1326.07	61.004	11.38	2.58	33.87	
6320.00	22.010	129.890	6144.50	-199.41	633.51	1173.69	1668730.41	14308301.04	39°24'07.019"N	80°53'59.170"W	1333.75	61.642	10.63	4.72	26.79	
6367.00	25.220	137.980	6187.57	-182.53	620.42	1187.16	1668743.87	14308287.95	39°24'06.889"N	80°53'58.999"W	1339.50	62.408	9.69	6.83	17.21	
6414.00	29.060	141.780	6229.39	-162.43	604.01	1200.93	1668757.64	14308271.54	39°24'06.727"N	80°53'58.823"W	1344.27	63.300	8.96	8.17	8.09	
6462.00	33.550	144.170	6270.40	-138.61	584.08	1215.91	1668772.61	14308251.63	39°24'06.530"N	80°53'58.633"W	1348.92	64.342	9.70	9.35	4.98	
6465.00†	33.840	144.285	6272.89	-137.01	582.73	1216.89	1668773.59	14308250.28	39°24'06.516"N	80°53'58.620"W	1349.22	64.412	9.89	9.66	3.85	Middlesex: 6465' MD
6509.00	38.100	145.800	6308.50	-112.08	561.55	1231.67	1668788.37	14308229.10	39°24'06.307"N	80°53'58.432"W	1353.65	65.491	9.89	9.68	3.44	
6557.00	42.850	148.680	6345.00	-81.72	535.34	1248.49	1668805.18	14308202.90	39°24'06.048"N	80°53'58.218"W	1358.43	66.791	10.63	9.90	6.00	
6604.00	45.980	150.720	6378.57	-49.39	506.94	1265.07	1668821.75	14308174.51	39°24'05.767"N	80°53'58.008"W	1362.86	68.163	7.32	6.66	4.34	
6651.00	51.460	153.150	6409.57	-14.45	475.77	1281.65	1668838.33	14308143.36	39°24'05.458"N	80°53'57.797"W	1367.11	69.634	12.29	11.66	5.17	
6698.00	57.080	155.620	6437.01	23.48	441.37	1298.11	1668854.78	14308108.97	39°24'05.118"N	80°53'57.588"W	1371.10	71.221	12.69	11.96	5.26	



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (207 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
6714.00†	58.843	156.287	6445.49	37.01	428.99	1303.64	1668860.30	14308096.59	39°24'04.996"N	80°53'57.517"W	1372.41	71.785	11.57	11.02	4.17	Burkett: 6714' MD
6746.00	62.380	157.550	6461.20	64.84	403.34	1314.56	1668871.22	14308070.96	39°24'04.742"N	80°53'57.379"W	1375.05	72.943	11.57	11.05	3.95	
6787.00†	67.177	158.804	6478.66	101.89	368.91	1328.34	1668884.99	14308036.54	39°24'04.402"N	80°53'57.204"W	1378.62	74.479	12.02	11.70	3.06	Tully: 6787' MD
6793.00	67.880	158.980	6480.96	107.44	363.74	1330.33	1668886.99	14308031.37	39°24'04.351"N	80°53'57.178"W	1379.17	74.708	12.02	11.71	2.93	
6840.00	72.690	159.630	6496.81	151.66	322.36	1345.96	1668902.61	14307990.01	39°24'03.942"N	80°53'56.980"W	1384.03	76.531	10.32	10.23	1.38	
6877.00†	75.060	159.662	6507.08	187.20	289.04	1358.32	1668914.97	14307956.70	39°24'03.612"N	80°53'56.823"W	1388.74	77.987	6.40	6.40	0.09	Marcellus POE: 6877' MD
6887.00	75.700	159.670	6509.61	196.88	279.97	1361.69	1668918.33	14307947.63	39°24'03.522"N	80°53'56.780"W	1390.17	78.382	6.40	6.40	0.08	
6935.00	79.350	160.710	6519.97	243.74	235.88	1377.56	1668934.20	14307903.57	39°24'03.086"N	80°53'56.578"W	1397.61	80.283	7.89	7.60	2.17	
6982.00	83.150	161.630	6527.12	290.17	191.92	1392.55	1668949.18	14307859.62	39°24'02.652"N	80°53'56.388"W	1405.72	82.153	8.31	8.09	1.96	
7030.00	87.450	162.320	6531.05	337.98	146.44	1407.35	1668963.98	14307814.16	39°24'02.202"N	80°53'56.200"W	1414.95	84.059	9.07	8.96	1.44	
7124.00	89.780	161.890	6533.33	431.90	57.02	1436.22	1668992.84	14307724.78	39°24'01.318"N	80°53'55.834"W	1437.36	87.726	2.52	2.48	-0.46	
7218.00	89.820	162.060	6533.65	525.85	-32.36	1465.31	1669021.91	14307635.43	39°24'00.434"N	80°53'55.465"W	1465.67	91.265	0.19	0.04	0.18	
7314.00	90.370	160.400	6533.49	621.83	-123.25	1496.20	1669052.79	14307544.57	39°23'59.536"N	80°53'55.072"W	1501.27	94.709	1.82	0.57	-1.73	
7408.00	89.630	159.940	6533.49	715.83	-211.68	1528.09	1669084.66	14307456.18	39°23'58.661"N	80°53'54.667"W	1542.68	97.887	0.93	-0.79	-0.49	
7503.00	89.780	160.670	6533.98	810.83	-301.12	1560.10	1669116.67	14307366.78	39°23'57.777"N	80°53'54.261"W	1588.90	100.925	0.78	0.16	0.77	
7598.00	89.780	161.170	6534.35	905.82	-390.90	1591.16	1669147.71	14307277.03	39°23'56.889"N	80°53'53.867"W	1638.47	103.803	0.53	0.00	0.53	
7693.00	89.780	162.020	6534.71	1000.79	-481.04	1621.15	1669177.69	14307186.93	39°23'55.998"N	80°53'53.486"W	1691.01	106.527	0.89	0.00	0.89	
7788.00	89.820	162.680	6535.04	1095.73	-571.57	1649.95	1669206.48	14307096.44	39°23'55.103"N	80°53'53.120"W	1746.15	109.107	0.70	0.04	0.69	
7883.00	89.820	163.900	6535.34	1190.59	-662.55	1677.27	1669233.79	14307005.49	39°23'54.203"N	80°53'52.774"W	1803.39	111.555	1.28	0.00	1.28	
7978.00	90.280	162.150	6535.26	1285.48	-753.41	1705.00	1669261.51	14306914.67	39°23'53.305"N	80°53'52.422"W	1864.05	113.840	1.90	0.48	-1.84	
8072.00	90.620	158.300	6534.52	1379.46	-841.85	1736.80	1669293.29	14306826.27	39°23'52.431"N	80°53'52.018"W	1930.07	115.860	4.11	0.36	-4.10	
8167.00	89.750	152.320	6534.21	1474.06	-928.12	1776.46	1669332.94	14306740.03	39°23'51.578"N	80°53'51.514"W	2004.30	117.585	6.36	-0.92	-6.29	
8263.00	89.750	150.500	6534.63	1568.92	-1012.41	1822.40	1669378.86	14306655.77	39°23'50.744"N	80°53'50.930"W	2084.74	119.054	1.90	0.00	-1.90	
8357.00	89.780	152.270	6535.02	1661.79	-1094.93	1867.42	1669423.86	14306573.29	39°23'49.928"N	80°53'50.358"W	2164.74	120.384	1.88	0.03	1.88	
8452.00	89.750	157.120	6535.41	1756.32	-1180.78	1908.01	1669464.43	14306487.47	39°23'49.079"N	80°53'49.842"W	2243.83	121.752	5.11	-0.03	5.11	
8547.00	89.720	160.560	6535.85	1851.27	-1269.36	1942.30	1669498.71	14306398.92	39°23'48.203"N	80°53'49.406"W	2320.30	123.166	3.62	-0.03	3.62	
8641.00	89.720	162.490	6536.31	1945.25	-1358.52	1972.08	1669528.48	14306309.81	39°23'47.322"N	80°53'49.028"W	2394.72	124.562	2.05	0.00	2.05	
8736.00	89.690	163.150	6536.80	2040.15	-1449.27	2000.14	1669556.53	14306219.09	39°23'46.424"N	80°53'48.672"W	2470.01	125.927	0.70	-0.03	0.69	
8830.00	89.720	163.600	6537.28	2134.01	-1539.34	2027.04	1669583.41	14306129.05	39°23'45.534"N	80°53'48.331"W	2545.28	127.213	0.48	0.03	0.48	
8925.00	89.630	163.700	6537.82	2228.84	-1630.50	2053.78	1669610.15	14306037.93	39°23'44.632"N	80°53'47.992"W	2622.32	128.446	0.14	-0.09	0.11	



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #08
Area	Tyler County, WV		Well Spock Unit 2H
Field	Tyler		Wellbore Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (207 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
9020.00	89.720	164.120	6538.36	2323.64	-1721.78	2080.11	1669636.46	14305946.69	39°23'43.730"N	80°53'47.658"W	2700.25	129.616	0.45	0.09	0.44	
9114.00	89.850	166.410	6538.71	2417.27	-1812.68	2104.02	1669660.36	14305855.83	39°23'42.831"N	80°53'47.354"W	2777.17	130.746	2.44	0.14	2.44	
9209.00	89.820	166.990	6538.99	2511.67	-1905.13	2125.87	1669682.21	14305763.41	39°23'41.917"N	80°53'47.077"W	2854.62	131.866	0.61	-0.03	0.61	
9304.00	89.820	164.040	6539.28	2606.25	-1997.10	2149.63	1669705.96	14305671.48	39°23'41.008"N	80°53'46.776"W	2934.16	132.893	3.11	0.00	-3.11	
9399.00	89.940	162.210	6539.48	2701.13	-2088.01	2177.21	1669733.52	14305580.61	39°23'40.109"N	80°53'46.426"W	3016.62	133.802	1.93	0.13	-1.93	
9493.00	89.750	162.640	6539.74	2795.06	-2177.62	2205.59	1669761.89	14305491.03	39°23'39.223"N	80°53'46.066"W	3099.46	134.634	0.50	-0.20	0.46	
9588.00	89.750	161.490	6540.15	2890.01	-2268.00	2234.84	1669791.13	14305400.69	39°23'38.330"N	80°53'45.695"W	3184.08	135.422	1.21	0.00	-1.21	
9683.00	89.850	158.900	6540.48	2985.00	-2357.37	2267.03	1669823.31	14305311.35	39°23'37.446"N	80°53'45.286"W	3270.57	136.119	2.73	0.11	-2.73	
9777.00	89.820	155.700	6540.75	3078.86	-2444.08	2303.30	1669859.56	14305224.68	39°23'36.589"N	80°53'44.825"W	3358.38	136.699	3.40	-0.03	-3.40	
9872.00	89.750	154.620	6541.11	3173.49	-2530.29	2343.20	1669899.45	14305138.51	39°23'35.736"N	80°53'44.318"W	3448.62	137.198	1.14	-0.07	-1.14	
9966.00	89.780	156.900	6541.50	3267.20	-2615.99	2381.79	1669938.03	14305052.83	39°23'34.889"N	80°53'43.828"W	3537.85	137.683	2.43	0.03	2.43	
10061.00	89.750	158.850	6541.89	3362.11	-2703.99	2417.57	1669973.79	14304964.87	39°23'34.018"N	80°53'43.374"W	3627.15	138.201	2.05	-0.03	2.05	
10156.00	89.720	159.210	6542.33	3457.09	-2792.70	2451.57	1670007.78	14304876.20	39°23'33.141"N	80°53'42.942"W	3716.10	138.722	0.38	-0.03	0.38	
10250.00	89.660	158.390	6542.83	3551.05	-2880.34	2485.56	1670041.75	14304788.60	39°23'32.275"N	80°53'42.510"W	3804.52	139.208	0.87	-0.06	-0.87	
10345.00	89.140	158.420	6543.83	3646.00	-2968.66	2520.52	1670076.70	14304700.31	39°23'31.401"N	80°53'42.066"W	3894.35	139.667	0.55	-0.55	0.03	
10440.00	89.350	158.390	6545.08	3740.94	-3056.99	2555.49	1670111.65	14304612.02	39°23'30.528"N	80°53'41.622"W	3984.43	140.106	0.22	0.22	-0.03	
10534.00	89.450	159.050	6546.06	3834.90	-3144.57	2589.60	1670145.75	14304524.47	39°23'29.662"N	80°53'41.189"W	4073.62	140.528	0.71	0.11	0.70	
10629.00	89.200	160.760	6547.18	3929.89	-3233.78	2622.23	1670178.37	14304435.30	39°23'28.780"N	80°53'40.775"W	4163.35	140.962	1.82	-0.26	1.80	
10723.00	89.420	161.610	6548.32	4023.87	-3322.75	2652.55	1670208.67	14304346.36	39°23'27.900"N	80°53'40.390"W	4251.67	141.400	0.93	0.23	0.90	
10818.00	89.350	161.670	6549.34	4118.84	-3412.91	2682.47	1670238.58	14304256.24	39°23'27.009"N	80°53'40.010"W	4340.92	141.833	0.10	-0.07	0.06	
10913.00	89.320	162.390	6550.44	4213.78	-3503.27	2711.78	1670267.88	14304165.92	39°23'26.115"N	80°53'39.638"W	4430.19	142.258	0.76	-0.03	0.76	
11007.00	89.510	163.160	6551.40	4307.69	-3593.05	2739.61	1670295.70	14304076.17	39°23'25.228"N	80°53'39.285"W	4518.35	142.675	0.84	0.20	0.82	
11102.00	89.480	158.380	6552.24	4402.65	-3682.72	2770.89	1670326.97	14303986.54	39°23'24.341"N	80°53'38.888"W	4608.71	143.042	5.03	-0.03	-5.03	
11196.00	89.290	155.260	6553.25	4496.47	-3769.11	2807.88	1670363.95	14303900.18	39°23'23.487"N	80°53'38.418"W	4700.04	143.315	3.33	-0.20	-3.32	
11291.00	89.780	155.650	6554.02	4591.13	-3855.52	2847.35	1670403.39	14303813.80	39°23'22.632"N	80°53'37.917"W	4792.96	143.554	0.66	0.52	0.41	
11386.00	89.750	156.430	6554.41	4685.88	-3942.34	2885.93	1670441.96	14303727.02	39°23'21.774"N	80°53'37.427"W	4885.75	143.795	0.82	-0.03	0.82	
11480.00	89.720	156.010	6554.84	4779.64	-4028.35	2923.83	1670479.84	14303641.04	39°23'20.923"N	80°53'36.945"W	4977.59	144.027	0.45	-0.03	-0.45	
11575.00	89.720	156.420	6555.30	4874.41	-4115.28	2962.14	1670518.14	14303554.14	39°23'20.064"N	80°53'36.458"W	5070.49	144.254	0.43	0.00	0.43	
11670.00	89.660	157.370	6555.82	4969.24	-4202.66	2999.42	1670555.41	14303466.80	39°23'19.200"N	80°53'35.985"W	5163.22	144.485	1.00	-0.06	1.00	
11764.00	89.750	158.960	6556.30	5063.18	-4289.91	3034.38	1670590.35	14303379.58	39°23'18.337"N	80°53'35.541"W	5254.60	144.727	1.69	0.10	1.69	



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (207 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	
11859.00	89.570	160.150	6556.87	5158.17	-4378.93	3067.56	1670623.52	14303290.61	39°23'17.457"N	80°53'35.120"W	5346.49	144.988	1.27	-0.19	1.25		
11953.00	89.660	162.040	6557.50	5252.15	-4467.85	3098.02	1670653.96	14303201.72	39°23'16.577"N	80°53'34.733"W	5436.86	145.262	2.01	0.10	2.01		
12048.00	89.750	164.090	6557.99	5347.03	-4558.72	3125.69	1670681.62	14303110.88	39°23'15.679"N	80°53'34.382"W	5527.38	145.564	2.16	0.09	2.16		
12143.00	89.660	165.010	6558.48	5441.76	-4650.29	3150.99	1670706.92	14303019.35	39°23'14.774"N	80°53'34.061"W	5617.29	145.879	0.97	-0.09	0.97		
12237.00	89.850	164.240	6558.88	5535.48	-4740.92	3175.92	1670731.83	14302928.76	39°23'13.878"N	80°53'33.745"W	5706.38	146.182	0.84	0.20	-0.82		
12331.00	89.820	163.210	6559.15	5629.31	-4831.16	3202.26	1670758.16	14302838.56	39°23'12.985"N	80°53'33.411"W	5796.08	146.462	1.10	-0.03	-1.10		
12426.00	89.750	162.460	6559.51	5724.21	-4921.92	3230.30	1670786.19	14302747.83	39°23'12.088"N	80°53'33.055"W	5887.29	146.723	0.79	-0.07	-0.79		
12520.00	89.850	160.530	6559.83	5818.18	-5011.06	3260.13	1670816.01	14302658.73	39°23'11.207"N	80°53'32.677"W	5978.22	146.952	2.06	0.11	-2.05		
12614.00	89.780	158.320	6560.14	5912.16	-5099.06	3293.16	1670849.03	14302570.77	39°23'10.337"N	80°53'32.257"W	6070.03	147.144	2.35	-0.07	-2.35		
12709.00	90.060	160.120	6560.27	6007.14	-5187.87	3326.86	1670882.72	14302481.99	39°23'09.458"N	80°53'31.830"W	6162.96	147.329	1.92	0.29	1.89		
12804.00	89.780	163.560	6560.40	6102.09	-5278.13	3356.47	1670912.31	14302391.77	39°23'08.566"N	80°53'31.454"W	6254.96	147.547	3.63	-0.29	3.62		
12898.00	89.690	165.550	6560.84	6195.82	-5368.73	3381.50	1670937.33	14302301.21	39°23'07.670"N	80°53'31.136"W	6344.90	147.795	2.12	-0.10	2.12		
12992.00	90.030	163.410	6561.07	6289.56	-5459.29	3406.65	1670962.47	14302210.68	39°23'06.775"N	80°53'30.818"W	6434.99	148.035	2.31	0.36	-2.28		
13087.00	90.180	160.480	6560.89	6384.51	-5549.61	3436.09	1670991.90	14302120.40	39°23'05.882"N	80°53'30.444"W	6527.24	148.236	3.09	0.16	-3.08		
13181.00	90.030	158.650	6560.72	6478.49	-5637.69	3468.91	1671024.71	14302032.35	39°23'05.011"N	80°53'30.027"W	6619.43	148.396	1.95	-0.16	-1.95		
13276.00	90.060	157.720	6560.65	6573.43	-5725.88	3504.21	1671060.00	14301944.19	39°23'04.139"N	80°53'29.579"W	6713.06	148.534	0.98	0.03	-0.98		
13370.00	90.000	156.980	6560.60	6667.31	-5812.63	3540.41	1671096.18	14301857.48	39°23'03.281"N	80°53'29.119"W	6805.97	148.655	0.79	-0.06	-0.79		
13464.00	90.120	158.870	6560.50	6761.23	-5899.74	3575.74	1671131.49	14301770.41	39°23'02.420"N	80°53'28.671"W	6898.75	148.781	2.01	0.13	2.01		
13559.00	90.030	158.720	6560.37	6856.20	-5988.30	3610.10	1671165.84	14301681.88	39°23'01.544"N	80°53'28.235"W	6992.32	148.916	0.18	-0.09	-0.16		
13653.00	90.030	155.040	6560.32	6950.02	-6074.74	3647.00	1671202.73	14301595.48	39°23'00.689"N	80°53'27.766"W	7085.41	149.021	3.91	0.00	-3.91		
13748.00	89.970	154.330	6560.32	7044.58	-6160.62	3687.62	1671243.33	14301509.63	39°22'59.840"N	80°53'27.250"W	7179.96	149.096	0.75	-0.06	-0.75		
13842.00	89.910	155.280	6560.42	7138.15	-6245.67	3727.64	1671283.33	14301424.61	39°22'58.999"N	80°53'26.742"W	7273.49	149.170	1.01	-0.06	1.01		
13938.00	89.940	155.840	6560.55	7233.83	-6333.07	3767.36	1671323.04	14301337.25	39°22'58.134"N	80°53'26.237"W	7368.90	149.253	0.58	0.03	0.58		
14032.00	89.940	159.300	6560.65	7327.72	-6419.95	3803.22	1671358.88	14301250.41	39°22'57.275"N	80°53'25.782"W	7461.91	149.357	3.68	0.00	3.68		
14127.00	89.940	163.620	6560.75	7422.67	-6509.99	3833.42	1671389.07	14301160.40	39°22'56.385"N	80°53'25.399"W	7554.81	149.508	4.55	0.00	4.55		
14222.00	90.060	165.260	6560.75	7517.41	-6601.51	3858.90	1671414.54	14301068.92	39°22'55.480"N	80°53'25.075"W	7646.64	149.692	1.73	0.13	1.73		
14316.00	90.000	163.010	6560.70	7611.19	-6691.92	3884.60	1671440.23	14300978.54	39°22'54.586"N	80°53'24.750"W	7737.69	149.865	2.39	-0.06	-2.39		
14411.00	89.970	160.900	6560.72	7706.14	-6782.24	3914.02	1671469.64	14300888.25	39°22'53.693"N	80°53'24.376"W	7830.61	150.011	2.22	-0.03	-2.22		
14506.00	90.000	162.250	6560.75	7801.11	-6872.37	3944.05	1671499.65	14300798.16	39°22'52.802"N	80°53'23.995"W	7923.70	150.149	1.42	0.03	1.42		
14600.00	90.060	165.640	6560.70	7894.90	-6962.69	3970.04	1671525.64	14300707.88	39°22'51.909"N	80°53'23.666"W	8015.01	150.309	3.61	0.06	3.61		



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (207 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
14695.00	90.000	167.020	6560.65	7989.37	-7055.00	3992.49	1671548.08	14300615.61	39°22'50.997"N	80°53'23.381"W	8106.36	150.494	1.45	-0.06	1.45	
14790.00	90.030	165.450	6560.62	8083.84	-7147.27	4015.09	1671570.67	14300523.38	39°22'50.084"N	80°53'23.095"W	8197.83	150.674	1.65	0.03	-1.65	
14884.00	90.060	164.690	6560.55	8177.51	-7238.09	4039.31	1671594.88	14300432.59	39°22'49.186"N	80°53'22.788"W	8288.91	150.836	0.81	0.03	-0.81	
14979.00	90.220	164.340	6560.32	8272.24	-7329.65	4064.68	1671620.23	14300341.07	39°22'48.281"N	80°53'22.466"W	8381.25	150.989	0.41	0.17	-0.37	
15073.00	90.220	160.170	6559.96	8366.16	-7419.15	4093.32	1671648.87	14300251.60	39°22'47.396"N	80°53'22.103"W	8473.43	151.113	4.44	0.00	-4.44	
15168.00	90.060	158.350	6559.72	8461.15	-7507.99	4126.96	1671682.49	14300162.80	39°22'46.518"N	80°53'21.676"W	8567.48	151.203	1.92	-0.17	-1.92	
15263.00	90.030	158.360	6559.65	8556.09	-7596.29	4162.00	1671717.52	14300074.53	39°22'45.645"N	80°53'21.231"W	8661.75	151.282	0.03	-0.03	0.01	
15357.00	90.060	156.790	6559.58	8649.99	-7683.18	4197.86	1671753.36	14299987.68	39°22'44.785"N	80°53'20.776"W	8755.19	151.349	1.67	0.03	-1.67	
15452.00	90.060	157.210	6559.48	8744.84	-7770.63	4234.98	1671790.47	14299900.27	39°22'43.921"N	80°53'20.304"W	8849.73	151.410	0.44	0.00	0.44	
15546.00	90.030	157.970	6559.40	8838.74	-7857.53	4270.81	1671826.29	14299813.40	39°22'43.061"N	80°53'19.849"W	8943.19	151.475	0.81	-0.03	0.81	
15640.00	90.090	159.300	6559.30	8932.70	-7945.07	4305.06	1671860.52	14299725.90	39°22'42.196"N	80°53'19.415"W	9036.46	151.549	1.42	0.06	1.41	
15735.00	90.060	159.540	6559.18	9027.69	-8034.01	4338.45	1671893.90	14299637.00	39°22'41.316"N	80°53'18.991"W	9130.58	151.630	0.25	-0.03	0.25	
15830.00	90.030	159.210	6559.11	9122.68	-8122.92	4371.91	1671927.35	14299548.12	39°22'40.437"N	80°53'18.566"W	9224.72	151.710	0.35	-0.03	-0.35	
15924.00	89.970	156.870	6559.11	9216.60	-8210.09	4407.06	1671962.49	14299460.98	39°22'39.575"N	80°53'18.120"W	9318.14	151.774	2.49	-0.06	-2.49	
16019.00	90.090	156.460	6559.06	9311.42	-8297.32	4444.69	1672000.10	14299373.79	39°22'38.713"N	80°53'17.642"W	9412.80	151.823	0.45	0.13	-0.43	
16114.00	90.120	158.300	6558.88	9406.29	-8385.01	4481.23	1672036.62	14299286.13	39°22'37.845"N	80°53'17.178"W	9507.35	151.878	1.94	0.03	1.94	
16207.00	90.490	157.750	6558.39	9499.22	-8471.25	4516.03	1672071.41	14299199.93	39°22'36.993"N	80°53'16.736"W	9599.82	151.938	0.71	0.40	-0.59	
16302.00	90.580	158.580	6557.50	9594.15	-8559.43	4551.36	1672106.73	14299111.78	39°22'36.121"N	80°53'16.288"W	9694.26	151.999	0.88	0.09	0.87	
16397.00	90.550	160.690	6556.56	9689.14	-8648.48	4584.42	1672139.77	14299022.77	39°22'35.240"N	80°53'15.868"W	9788.42	152.073	2.22	-0.03	2.22	
16492.00	90.430	161.200	6555.75	9784.13	-8738.27	4615.43	1672170.77	14298933.01	39°22'34.352"N	80°53'15.475"W	9882.29	152.158	0.55	-0.13	0.54	
16586.00	90.890	165.440	6554.67	9877.96	-8828.29	4642.41	1672197.73	14298843.03	39°22'33.462"N	80°53'15.133"W	9974.50	152.262	4.54	0.49	4.51	
16681.00	91.420	164.500	6552.75	9972.62	-8920.02	4667.04	1672222.35	14298751.34	39°22'32.555"N	80°53'14.820"W	10067.17	152.381	1.14	0.56	-0.99	
16776.00	91.350	160.150	6550.45	10067.51	-9010.49	4695.86	1672251.17	14298660.90	39°22'31.661"N	80°53'14.455"W	10160.71	152.473	4.58	-0.07	-4.58	
16871.00	91.450	163.490	6548.13	10162.43	-9100.71	4725.49	1672280.79	14298570.72	39°22'30.769"N	80°53'14.079"W	10254.42	152.560	3.52	0.11	3.52	
16965.00	91.480	160.510	6545.73	10256.34	-9190.07	4754.53	1672309.81	14298481.40	39°22'29.885"N	80°53'13.711"W	10347.12	152.645	3.17	0.03	-3.17	
17027.00	91.420	158.390	6544.16	10318.31	-9248.10	4776.28	1672331.56	14298423.39	39°22'29.311"N	80°53'13.434"W	10408.66	152.685	3.42	-0.10	-3.42	
17051.00	91.420	158.390	6543.57	10342.29	-9270.41	4785.12	1672340.39	14298401.09	39°22'29.091"N	80°53'13.322"W	10432.53	152.699	0.00	0.00	0.00	Projected MD at TD: 17051'



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Spock Unit 2H AWB Ref Wellpath: Spock Unit 2H AWP Proj: 17051'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.00	105.00	80.00	25.00	105.00	0.00	0.00	-0.25	0.32
17.5in Open Hole	105.00	471.60	366.60	105.00	471.58	-0.25	0.32	-3.12	2.60
13.375in Casing Surface	25.00	471.60	446.60	25.00	471.58	0.00	0.00	-3.12	2.60
12.25in Open Hole	471.60	2618.00	2146.40	471.58	2567.58	-3.12	2.60	212.67	355.15
9.625in Casing Intermediate	25.00	2618.00	2593.00	25.00	2567.58	0.00	0.00	212.67	355.15
8.75in Open Hole	2618.00	6203.00	3585.00	2567.58	6034.34	212.67	355.15	649.08	1138.24
8.5in Open Hole	6203.00	17051.00	10848.00	6034.34	6543.57	649.08	1138.24	-9270.41	4785.12
5.5in Casing Production	25.00	17051.00	17026.00	25.00	6543.57	0.00	0.00	-9270.41	4785.12

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Spock Unit 2H - POE - Rev-1	6507.00	303.34	1351.35	1668908.00	14307971.00	39°24'03.754"N	80°53'56.911"W	point
Spock Unit 2H - BHL - Rev-1	6533.00	-9270.50	4789.73	1672345.00	14298401.00	39°22'29.090"N	80°53'13.264"W	point
Spock Unit 2H - LP - Rev-1	6533.00	144.76	1408.31	1668964.93	14307812.48	39°24'02.186"N	80°53'56.188"W	point



Actual Wellpath Report

Spock Unit 2H AWP Proj: 17051'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

WELLPATH COMPOSITION - Ref Wellbore: Spock Unit 2H AWB Ref Wellpath: Spock Unit 2H AWP Proj: 17051'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	431.00	Gyrodata standard - Drop gyro or Multi-shot	01_Gyrodata MS Gyro <17-1/2">(100'-431')	Spock Unit 2H AWB
431.00	2565.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(431')(503'-2565')	Spock Unit 2H AWB
2565.00	6144.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2565')(2635'-6144')	Spock Unit 2H AWB
6144.00	17027.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2">(6144')(6178'-17027')	Spock Unit 2H AWB
17027.00	17051.00	Blind Drilling (std)	Projection to bit	Spock Unit 2H AWB



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Spock Unit 2H AWP Proj: 17051'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Spock Unit 2H
Field	Tyler	Wellbore	Spock Unit 2H AWB
Facility	Pyle Run Pad		

COMMENTS

Wellpath general comments

API: 47-095-02427-0000

BHI Job #: 109563196

Rig: Patterson 342

Duration: 12/20/2018-12/23/2018

Gyrodata MS Gyro <17-1/2">(100'-431')

WFT EM <12-1/4">(431')(503'-2565')

WFT EM <8-3/4">(2565')(2635'-6144')

BH AT Curve <8-1/2">(6144')(6178'-17027')

Middlesex: 6465' MD

Burkett: 6714' MD

Tully: 6787' MD

Marcellus POE: 6877' MD

Projected MD at TD: 17051'