



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H 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	12/20/2018 at 10:47:26 PM
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Spock_Unit_1H_AWP_Proj_16500_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-8.32	-17.58	1667548.56	14307663.72	39°24'00.730"N	80°54'14.240"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 #07)	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	160.23°



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WELLPATH DATA (206 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	155.890	0.00	0.00	0.00	0.00	1667548.56	14307663.72	39°24'00.730"N	80°54'14.240"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	155.890	25.00	0.00	0.00	0.00	1667548.56	14307663.72	39°24'00.730"N	80°54'14.240"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.240	155.890	100.00	0.16	-0.14	0.06	1667548.63	14307663.58	39°24'00.729"N	80°54'14.239"W	0.16	155.890	0.32	0.32	207.85	Gyrodata MS Gyro <17-1/2">(100'-427')
125.00	0.230	145.720	125.00	0.26	-0.23	0.11	1667548.68	14307663.49	39°24'00.728"N	80°54'14.239"W	0.26	153.929	0.17	-0.04	-40.68	
150.00	0.360	141.330	150.00	0.38	-0.34	0.19	1667548.75	14307663.39	39°24'00.727"N	80°54'14.238"W	0.39	150.321	0.53	0.52	-17.56	
175.00	0.360	140.400	175.00	0.53	-0.46	0.29	1667548.85	14307663.27	39°24'00.725"N	80°54'14.236"W	0.54	147.590	0.02	0.00	-3.72	
200.00	0.410	142.130	200.00	0.69	-0.59	0.40	1667548.96	14307663.14	39°24'00.724"N	80°54'14.235"W	0.71	146.107	0.21	0.20	6.92	
225.00	0.190	144.880	225.00	0.81	-0.69	0.47	1667549.04	14307663.03	39°24'00.723"N	80°54'14.234"W	0.84	145.623	0.88	-0.88	11.00	
250.00	0.220	159.820	250.00	0.90	-0.77	0.51	1667549.08	14307662.95	39°24'00.722"N	80°54'14.233"W	0.93	146.317	0.24	0.12	59.76	
275.00	0.140	134.590	275.00	0.98	-0.84	0.55	1667549.11	14307662.89	39°24'00.722"N	80°54'14.233"W	1.00	146.602	0.44	-0.32	-100.92	
300.00	0.180	133.390	300.00	1.04	-0.89	0.60	1667549.16	14307662.84	39°24'00.721"N	80°54'14.232"W	1.07	145.783	0.16	0.16	-4.80	
325.00	0.170	120.540	325.00	1.10	-0.93	0.66	1667549.23	14307662.79	39°24'00.721"N	80°54'14.232"W	1.14	144.569	0.16	-0.04	-51.40	
350.00	0.100	20.100	350.00	1.11	-0.93	0.70	1667549.26	14307662.79	39°24'00.721"N	80°54'14.231"W	1.17	142.944	0.85	-0.28	-401.76	
375.00	0.120	40.190	375.00	1.08	-0.89	0.73	1667549.29	14307662.83	39°24'00.721"N	80°54'14.231"W	1.15	140.758	0.17	0.08	80.36	
400.00	0.110	31.090	400.00	1.06	-0.85	0.76	1667549.32	14307662.87	39°24'00.722"N	80°54'14.230"W	1.14	138.323	0.08	-0.04	-36.40	
425.00	0.160	14.850	425.00	1.01	-0.80	0.78	1667549.34	14307662.93	39°24'00.722"N	80°54'14.230"W	1.11	135.643	0.25	0.20	-64.96	
427.00	0.150	18.880	427.00	1.01	-0.79	0.78	1667549.34	14307662.93	39°24'00.722"N	80°54'14.230"W	1.11	135.398	0.74	-0.50	201.50	
504.00	0.040	297.630	504.00	0.91	-0.68	0.79	1667549.35	14307663.04	39°24'00.723"N	80°54'14.230"W	1.04	130.889	0.19	-0.14	-105.52	WFT EM <12-1/4">(427')(504'-2547')
595.00	1.130	358.750	594.99	0.03	0.23	0.74	1667549.30	14307663.95	39°24'00.732"N	80°54'14.231"W	0.78	72.800	1.22	1.20	67.16	
686.00	3.440	341.290	685.91	-3.55	3.71	-0.15	1667548.41	14307667.43	39°24'00.767"N	80°54'14.242"W	3.72	357.611	2.62	2.54	-19.19	
776.00	5.330	338.380	775.65	-10.42	10.16	-2.56	1667546.00	14307673.88	39°24'00.830"N	80°54'14.272"W	10.47	345.846	2.11	2.10	-3.23	
871.00	6.000	336.060	870.18	-19.79	18.80	-6.20	1667542.36	14307682.51	39°24'00.916"N	80°54'14.319"W	19.79	341.740	0.75	0.71	-2.44	
965.00	4.580	328.950	963.78	-28.37	26.50	-10.13	1667538.43	14307690.22	39°24'00.992"N	80°54'14.369"W	28.37	339.079	1.66	-1.51	-7.56	
1059.00	2.210	332.690	1057.61	-33.85	31.33	-12.90	1667535.67	14307695.04	39°24'01.040"N	80°54'14.404"W	33.88	337.622	2.53	-2.52	3.98	
1154.00	1.010	77.960	1152.58	-35.55	33.13	-12.92	1667535.65	14307696.84	39°24'01.058"N	80°54'14.404"W	35.56	338.695	2.80	-1.26	110.81	
1250.00	2.000	98.800	1248.55	-34.63	33.05	-10.44	1667538.13	14307696.76	39°24'01.057"N	80°54'14.373"W	34.66	342.474	1.16	1.03	21.71	
1345.00	0.640	95.470	1343.52	-33.62	32.75	-8.27	1667540.29	14307696.46	39°24'01.054"N	80°54'14.345"W	33.78	345.825	1.43	-1.43	-3.51	
1439.00	0.360	240.450	1437.52	-33.34	32.55	-8.01	1667540.56	14307696.26	39°24'01.052"N	80°54'14.342"W	33.52	346.183	1.02	-0.30	154.23	
1534.00	1.380	253.200	1532.51	-33.35	32.07	-9.36	1667539.21	14307695.78	39°24'01.047"N	80°54'14.359"W	33.41	343.731	1.09	1.07	13.42	
1628.00	1.120	247.790	1626.49	-33.37	31.40	-11.29	1667537.27	14307695.11	39°24'01.040"N	80°54'14.383"W	33.37	340.216	0.30	-0.28	-5.76	



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Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (206 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	0.870	148.080	1721.48	-32.62	30.44	-11.77	1667536.79	14307694.15	39°24'01.031"N	80°54'14.390"W	32.63	338.854	1.61	-0.26	-104.96	
1818.00	1.410	120.930	1816.46	-31.01	29.22	-10.39	1667538.18	14307692.94	39°24'01.019"N	80°54'14.372"W	31.02	340.430	0.79	0.57	-28.58	
1912.00	0.270	27.080	1910.45	-30.27	28.83	-9.30	1667539.27	14307692.54	39°24'01.015"N	80°54'14.358"W	30.29	342.127	1.55	-1.21	-99.84	
2007.00	1.400	336.510	2005.44	-31.58	30.09	-9.66	1667538.91	14307693.80	39°24'01.027"N	80°54'14.363"W	31.60	342.208	1.31	1.19	-53.23	
2101.00	1.760	319.830	2099.40	-34.08	32.25	-11.05	1667537.52	14307695.96	39°24'01.049"N	80°54'14.380"W	34.09	341.092	0.62	0.38	-17.74	
2196.00	0.350	19.270	2194.38	-35.67	33.63	-11.89	1667536.68	14307697.35	39°24'01.063"N	80°54'14.391"W	35.67	340.530	1.70	-1.48	62.57	
2290.00	1.370	124.780	2288.38	-34.98	33.26	-10.87	1667537.69	14307696.98	39°24'01.059"N	80°54'14.378"W	35.00	341.900	1.60	1.09	112.24	
2384.00	2.520	138.980	2382.32	-32.14	31.06	-8.59	1667539.97	14307694.78	39°24'01.037"N	80°54'14.349"W	32.23	344.537	1.32	1.22	15.11	
2479.00	1.230	161.480	2477.27	-29.17	28.52	-6.90	1667541.67	14307692.23	39°24'01.012"N	80°54'14.327"W	29.34	346.403	1.54	-1.36	23.68	
2547.00	0.390	246.660	2545.26	-28.43	27.74	-6.88	1667541.69	14307691.45	39°24'01.004"N	80°54'14.327"W	28.58	346.071	1.85	-1.24	125.26	
2637.00	1.740	326.420	2635.25	-29.74	28.76	-7.92	1667540.65	14307692.47	39°24'01.014"N	80°54'14.340"W	29.83	344.607	1.90	1.50	88.62	WFT EM <8-3/4">(2547')(2637'-5767')
2732.00	3.930	30.330	2730.14	-33.23	32.77	-7.07	1667541.49	14307696.48	39°24'01.054"N	80°54'14.330"W	33.52	347.824	3.71	2.31	67.27	
2827.00	3.190	34.150	2824.96	-36.87	37.77	-3.94	1667544.62	14307701.47	39°24'01.103"N	80°54'14.290"W	37.97	354.041	0.82	-0.78	4.02	
2922.00	6.530	19.000	2919.61	-42.64	45.06	-0.70	1667547.86	14307708.77	39°24'01.175"N	80°54'14.248"W	45.07	359.112	3.74	3.52	-15.95	
3017.00	6.690	15.900	3013.98	-51.35	55.49	2.58	1667551.14	14307719.19	39°24'01.278"N	80°54'14.206"W	55.55	2.658	0.41	0.17	-3.26	
3112.00	8.720	17.330	3108.12	-61.59	67.69	6.24	1667554.80	14307731.39	39°24'01.399"N	80°54'14.160"W	67.98	5.265	2.15	2.14	1.51	
3211.00	10.340	23.660	3205.75	-74.03	82.99	12.04	1667560.60	14307746.68	39°24'01.550"N	80°54'14.086"W	83.86	8.254	1.95	1.64	6.39	
3305.00	11.630	28.940	3298.03	-86.41	99.01	20.01	1667568.56	14307762.70	39°24'01.708"N	80°54'13.984"W	101.01	11.425	1.74	1.37	5.62	
3399.00	11.310	41.840	3390.16	-97.05	114.17	30.74	1667579.29	14307777.85	39°24'01.858"N	80°54'13.847"W	118.24	15.071	2.74	-0.34	13.72	
3495.00	9.740	37.490	3484.55	-105.91	127.63	41.97	1667590.51	14307791.30	39°24'01.991"N	80°54'13.704"W	134.35	18.202	1.83	-1.64	-4.53	
3589.00	11.560	30.230	3576.93	-116.27	142.08	51.55	1667600.09	14307805.75	39°24'02.134"N	80°54'13.581"W	151.14	19.942	2.40	1.94	-7.72	
3684.00	12.180	32.150	3669.90	-128.57	158.79	61.68	1667610.21	14307822.45	39°24'02.299"N	80°54'13.452"W	170.35	21.227	0.77	0.65	2.02	
3779.00	12.930	36.290	3762.63	-140.68	175.84	73.30	1667621.83	14307839.50	39°24'02.467"N	80°54'13.304"W	190.51	22.629	1.23	0.79	4.36	
3874.00	12.690	41.630	3855.27	-151.61	192.21	86.52	1667635.05	14307855.86	39°24'02.629"N	80°54'13.135"W	210.79	24.235	1.27	-0.25	5.62	
3968.00	11.380	33.870	3947.20	-162.06	207.63	98.55	1667647.07	14307871.27	39°24'02.781"N	80°54'12.982"W	229.83	25.391	2.21	-1.39	-8.26	
4063.00	11.150	43.360	4040.38	-171.76	222.09	110.08	1667658.60	14307885.72	39°24'02.924"N	80°54'12.835"W	247.88	26.366	1.96	-0.24	9.99	
4158.00	9.980	39.620	4133.77	-180.11	235.11	121.64	1667670.15	14307898.74	39°24'03.052"N	80°54'12.687"W	264.71	27.356	1.43	-1.23	-3.94	
4253.00	10.830	35.520	4227.21	-189.38	248.72	132.07	1667680.58	14307912.34	39°24'03.187"N	80°54'12.554"W	281.61	27.969	1.19	0.89	-4.32	
4348.00	11.250	37.920	4320.45	-199.42	263.29	142.95	1667691.46	14307926.91	39°24'03.331"N	80°54'12.415"W	299.60	28.500	0.66	0.44	2.53	
4443.00	11.750	36.470	4413.54	-209.75	278.38	154.40	1667702.90	14307941.99	39°24'03.480"N	80°54'12.269"W	318.33	29.014	0.61	0.53	-1.53	



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4537.00	12.060	39.750	4505.52	-220.05	293.63	166.37	1667714.86	14307957.23	39°24'03.630"N	80°54'12.117"W	337.48	29.536	0.79	0.33	3.49	
4632.00	10.950	30.430	4598.62	-230.86	309.04	177.29	1667725.78	14307972.64	39°24'03.783"N	80°54'11.977"W	356.28	29.841	2.28	-1.17	-9.81	
4727.00	11.960	35.700	4691.73	-242.21	324.81	187.60	1667736.09	14307988.41	39°24'03.938"N	80°54'11.846"W	375.10	30.009	1.53	1.06	5.55	
4821.00	10.850	30.390	4783.87	-253.40	340.35	197.76	1667746.24	14308003.94	39°24'04.092"N	80°54'11.716"W	393.64	30.158	1.62	-1.18	-5.65	
4916.00	12.410	34.490	4876.92	-265.09	356.48	208.06	1667756.54	14308020.06	39°24'04.251"N	80°54'11.585"W	412.76	30.270	1.86	1.64	4.32	
5010.00	11.760	40.840	4968.84	-275.70	372.06	220.05	1667768.52	14308035.63	39°24'04.405"N	80°54'11.432"W	432.26	30.602	1.57	-0.69	6.76	
5105.00	12.420	34.430	5061.74	-286.42	387.81	232.16	1667780.62	14308051.38	39°24'04.560"N	80°54'11.277"W	451.99	30.906	1.57	0.69	-6.75	
5200.00	11.870	29.550	5154.62	-298.77	404.73	242.75	1667791.22	14308068.30	39°24'04.728"N	80°54'11.142"W	471.95	30.954	1.23	-0.58	-5.14	
5295.00	12.350	38.360	5247.51	-310.50	421.20	253.88	1667802.34	14308084.76	39°24'04.890"N	80°54'11.000"W	491.80	31.079	2.01	0.51	9.27	
5389.00	12.040	43.910	5339.39	-320.16	436.15	266.91	1667815.37	14308099.70	39°24'05.038"N	80°54'10.834"W	511.34	31.466	1.29	-0.33	5.90	
5484.00	11.290	38.830	5432.43	-329.40	450.53	279.62	1667828.07	14308114.07	39°24'05.180"N	80°54'10.672"W	530.25	31.825	1.34	-0.79	-5.35	
5578.00	11.250	32.480	5524.62	-339.80	465.43	290.31	1667838.76	14308128.97	39°24'05.327"N	80°54'10.535"W	548.55	31.954	1.32	-0.04	-6.76	
5673.00	9.980	36.520	5618.00	-350.05	479.87	300.19	1667848.63	14308143.40	39°24'05.470"N	80°54'10.409"W	566.03	32.029	1.55	-1.34	4.25	
5767.00	14.430	49.160	5709.86	-358.78	494.08	313.90	1667862.34	14308157.61	39°24'05.610"N	80°54'10.235"W	585.37	32.429	5.50	4.73	13.45	
5799.00	15.430	57.680	5740.79	-361.14	498.97	320.52	1667868.95	14308162.49	39°24'05.658"N	80°54'10.150"W	593.04	32.715	7.53	3.13	26.62	BH AT Curve <8-1/2">(5767')(5799'-16476')
5846.00	15.740	70.180	5786.07	-362.51	504.47	331.80	1667880.23	14308167.99	39°24'05.712"N	80°54'10.006"W	603.81	33.334	7.16	0.66	26.60	
5894.00	14.970	86.780	5832.38	-360.75	507.03	344.12	1667892.55	14308170.55	39°24'05.738"N	80°54'09.849"W	612.78	34.165	9.26	-1.60	34.58	
5941.00	14.640	102.830	5877.84	-355.81	506.05	355.98	1667904.40	14308169.57	39°24'05.728"N	80°54'09.698"W	618.72	35.124	8.73	-0.70	34.15	
5989.00	15.430	118.160	5924.21	-347.80	501.69	367.53	1667915.94	14308165.21	39°24'05.685"N	80°54'09.551"W	621.91	36.226	8.42	1.65	31.94	
6036.00	16.580	129.330	5969.40	-337.40	494.49	378.23	1667926.64	14308158.01	39°24'05.613"N	80°54'09.415"W	622.56	37.412	6.98	2.45	23.77	
6083.00	18.840	137.990	6014.18	-324.62	484.59	388.50	1667936.91	14308148.12	39°24'05.515"N	80°54'09.284"W	621.10	38.719	7.37	4.81	18.43	
6130.00	21.310	144.060	6058.33	-309.39	472.04	398.60	1667947.00	14308135.57	39°24'05.391"N	80°54'09.156"W	617.82	40.178	6.87	5.26	12.91	
6178.00	23.960	150.740	6102.63	-291.40	456.47	408.48	1667956.88	14308120.01	39°24'05.237"N	80°54'09.030"W	612.55	41.825	7.68	5.52	13.92	
6225.00	27.190	153.390	6145.02	-271.32	438.54	417.96	1667966.35	14308102.08	39°24'05.060"N	80°54'08.910"W	605.81	43.624	7.29	6.87	5.64	
6273.00	31.460	154.580	6186.86	-247.95	417.41	428.25	1667976.64	14308080.96	39°24'04.851"N	80°54'08.779"W	598.02	45.735	8.98	8.90	2.48	
6320.00	35.110	155.120	6226.15	-222.27	394.06	439.21	1667987.59	14308057.63	39°24'04.620"N	80°54'08.640"W	590.07	48.101	7.79	7.77	1.15	
6367.00	39.200	156.240	6263.60	-193.98	368.19	450.88	1667999.26	14308031.77	39°24'04.364"N	80°54'08.491"W	582.12	50.765	8.82	8.70	2.38	
6414.00	43.390	156.530	6298.90	-163.04	339.78	463.30	1668011.68	14308003.37	39°24'04.083"N	80°54'08.334"W	574.54	53.744	8.92	8.91	0.62	
6462.00	47.180	157.590	6332.67	-128.99	308.37	476.58	1668024.96	14307971.97	39°24'03.773"N	80°54'08.165"W	567.65	57.095	8.05	7.90	2.21	
6485.00†	49.508	158.153	6347.95	-111.82	292.45	483.06	1668031.42	14307956.06	39°24'03.615"N	80°54'08.083"W	564.69	58.808	10.29	10.12	2.45	Middlesex: 6485' MD



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #07
Area	Tyler County, WV		Well
Field	Tyler		Wellbore
Facility	Pyle Run Pad		Spock Unit 1H AWB

WELLPATH DATA (206 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
6509.00	51.940	158.700	6363.15	-93.26	275.18	489.89	1668038.25	14307938.79	39°24'03.445"N	80°54'07.996"W	561.88	60.676	10.29	10.13	2.28	
6557.00	55.830	159.460	6391.43	-54.50	238.96	503.72	1668052.08	14307902.59	39°24'03.086"N	80°54'07.820"W	557.53	64.621	8.20	8.10	1.58	
6604.00	59.340	159.480	6416.62	-14.83	201.81	517.63	1668065.99	14307865.45	39°24'02.719"N	80°54'07.643"W	555.58	68.701	7.47	7.47	0.04	
6651.00	61.470	158.530	6439.83	26.03	163.66	532.28	1668080.63	14307827.32	39°24'02.342"N	80°54'07.457"W	556.87	72.909	4.86	4.53	-2.02	
6657.00†	61.838	158.556	6442.68	31.31	158.75	534.21	1668082.56	14307822.41	39°24'02.293"N	80°54'07.433"W	557.30	73.450	6.14	6.13	0.44	Burkett: 6657' MD
6698.00	64.350	158.730	6461.24	67.85	124.70	547.52	1668095.87	14307788.37	39°24'01.957"N	80°54'07.264"W	561.54	77.170	6.14	6.13	0.42	
6731.00†	66.846	158.571	6474.87	97.89	96.71	558.46	1668106.80	14307760.39	39°24'01.680"N	80°54'07.125"W	566.78	80.176	7.58	7.56	-0.48	Tully: 6731' MD
6746.00	67.980	158.500	6480.63	111.73	83.82	563.53	1668111.87	14307747.51	39°24'01.552"N	80°54'07.060"W	569.73	81.540	7.58	7.56	-0.47	
6793.00	73.050	158.850	6496.30	156.01	42.56	579.64	1668127.97	14307706.27	39°24'01.144"N	80°54'06.856"W	581.20	85.801	10.81	10.79	0.74	
6815.00†	74.880	159.346	6502.38	177.15	22.81	587.18	1668135.51	14307686.52	39°24'00.949"N	80°54'06.760"W	587.62	87.776	8.59	8.32	2.26	Marcellus POE: 6815' MD
6840.00	76.960	159.900	6508.46	201.39	0.08	595.62	1668143.95	14307663.80	39°24'00.724"N	80°54'06.653"W	595.62	89.993	8.59	8.32	2.21	
6887.00	80.040	161.080	6517.83	247.44	-43.33	611.00	1668159.32	14307620.41	39°24'00.295"N	80°54'06.457"W	612.53	94.056	7.00	6.55	2.51	
6935.00	83.520	161.800	6524.69	294.93	-88.36	626.12	1668174.43	14307575.40	39°23'59.850"N	80°54'06.265"W	632.32	98.033	7.40	7.25	1.50	
6982.00	88.120	162.720	6528.12	341.77	-132.99	640.40	1668188.70	14307530.78	39°23'59.409"N	80°54'06.084"W	654.06	101.732	9.98	9.79	1.96	
7030.00	89.880	162.900	6528.95	389.71	-178.84	654.58	1668202.88	14307484.95	39°23'58.955"N	80°54'05.904"W	678.57	105.281	3.69	3.67	0.38	
7124.00	91.390	161.450	6527.91	483.64	-268.32	683.35	1668231.64	14307395.51	39°23'58.071"N	80°54'05.539"W	734.14	111.437	2.23	1.61	-1.54	
7218.00	91.750	161.850	6525.34	577.58	-357.50	712.93	1668261.21	14307306.36	39°23'57.189"N	80°54'05.163"W	797.55	116.632	0.57	0.38	0.43	
7314.00	89.850	163.260	6524.00	673.48	-449.07	741.71	1668289.97	14307214.83	39°23'56.284"N	80°54'04.798"W	867.06	121.193	2.46	-1.98	1.47	
7408.00	89.480	161.950	6524.55	767.40	-538.77	769.81	1668318.06	14307125.17	39°23'55.397"N	80°54'04.441"W	939.62	124.987	1.45	-0.39	-1.39	
7503.00	89.570	161.070	6525.33	862.37	-628.86	799.93	1668348.17	14307035.11	39°23'54.506"N	80°54'04.059"W	1017.53	128.172	0.93	0.09	-0.93	
7598.00	89.420	161.160	6526.17	957.35	-718.75	830.68	1668378.91	14306945.27	39°23'53.617"N	80°54'03.668"W	1098.47	130.868	0.18	-0.16	0.09	
7693.00	89.540	160.810	6527.03	1052.34	-808.56	861.63	1668409.85	14306855.49	39°23'52.729"N	80°54'03.275"W	1181.60	133.180	0.39	0.13	-0.37	
7788.00	90.030	161.710	6527.39	1147.33	-898.52	892.15	1668440.36	14306765.56	39°23'51.840"N	80°54'02.888"W	1266.20	135.204	1.08	0.52	0.95	
7883.00	89.820	160.320	6527.51	1242.31	-988.35	923.06	1668471.25	14306675.77	39°23'50.952"N	80°54'02.495"W	1352.36	136.956	1.48	-0.22	-1.46	
7978.00	91.290	159.700	6526.59	1337.31	-1077.62	955.53	1668503.71	14306586.54	39°23'50.069"N	80°54'02.083"W	1440.24	138.436	1.68	1.55	-0.65	
8072.00	89.480	158.300	6525.96	1431.28	-1165.37	989.21	1668537.38	14306498.82	39°23'49.201"N	80°54'01.655"W	1528.60	139.674	2.43	-1.93	-1.49	
8167.00	89.480	158.450	6526.82	1526.22	-1253.68	1024.22	1668572.37	14306410.55	39°23'48.328"N	80°54'01.211"W	1618.87	140.752	0.16	0.00	0.16	
8263.00	89.720	159.060	6527.49	1622.19	-1343.15	1059.01	1668607.15	14306321.11	39°23'47.444"N	80°54'00.769"W	1710.42	141.746	0.68	0.25	0.64	
8357.00	89.320	158.610	6528.28	1716.16	-1430.81	1092.95	1668641.07	14306233.49	39°23'46.577"N	80°54'00.338"W	1800.48	142.625	0.64	-0.43	-0.48	
8452.00	89.260	159.400	6529.46	1811.13	-1519.49	1126.98	1668675.09	14306144.84	39°23'45.700"N	80°53'59.905"W	1891.81	143.436	0.83	-0.06	0.83	



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (206 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
8547.00	89.420	158.990	6530.55	1906.10	-1608.29	1160.72	1668708.82	14306056.08	39°23'44.822"N	80°53'59.477"W	1983.40	144.182	0.46	0.17	-0.43	
8641.00	89.420	159.150	6531.51	2000.08	-1696.08	1194.30	1668742.38	14305968.32	39°23'43.954"N	80°53'59.050"W	2074.38	144.849	0.17	0.00	0.17	
8736.00	89.480	159.900	6532.42	2095.07	-1785.08	1227.53	1668775.60	14305879.36	39°23'43.074"N	80°53'58.628"W	2166.41	145.485	0.79	0.06	0.79	
8830.00	89.820	160.080	6532.99	2189.06	-1873.40	1259.69	1668807.75	14305791.07	39°23'42.201"N	80°53'58.220"W	2257.53	146.083	0.41	0.36	0.19	
8925.00	89.910	160.720	6533.22	2284.06	-1962.90	1291.56	1668839.60	14305701.61	39°23'41.316"N	80°53'57.815"W	2349.70	146.656	0.68	0.09	0.67	
9020.00	89.720	162.420	6533.52	2379.03	-2053.02	1321.59	1668869.62	14305611.53	39°23'40.425"N	80°53'57.434"W	2441.62	147.229	1.80	-0.20	1.79	
9114.00	89.820	163.230	6533.90	2472.94	-2142.83	1349.35	1668897.37	14305521.76	39°23'39.537"N	80°53'57.082"W	2532.28	147.801	0.87	0.11	0.86	
9209.00	89.690	163.480	6534.31	2567.79	-2233.85	1376.56	1668924.57	14305430.77	39°23'38.637"N	80°53'56.736"W	2623.93	148.357	0.30	-0.14	0.26	
9304.00	89.910	163.380	6534.64	2662.64	-2324.90	1403.65	1668951.65	14305339.76	39°23'37.737"N	80°53'56.393"W	2715.77	148.879	0.25	0.23	-0.11	
9398.00	89.820	162.120	6534.86	2756.55	-2414.67	1431.53	1668979.52	14305250.02	39°23'36.849"N	80°53'56.039"W	2807.12	149.339	1.34	-0.10	-1.34	
9493.00	89.880	161.850	6535.11	2851.51	-2505.01	1460.91	1669008.88	14305159.72	39°23'35.956"N	80°53'55.666"W	2899.89	149.750	0.29	0.06	-0.28	
9588.00	89.690	162.400	6535.46	2946.45	-2595.42	1490.07	1669038.03	14305069.34	39°23'35.062"N	80°53'55.296"W	2992.75	150.139	0.61	-0.20	0.58	
9683.00	89.820	161.370	6535.87	3041.41	-2685.71	1519.61	1669067.56	14304979.09	39°23'34.169"N	80°53'54.921"W	3085.82	150.498	1.09	0.14	-1.08	
9777.00	89.660	158.820	6536.30	3135.40	-2774.09	1551.61	1669099.54	14304890.75	39°23'33.295"N	80°53'54.515"W	3178.53	150.781	2.72	-0.17	-2.71	
9872.00	89.540	157.560	6536.96	3230.34	-2862.29	1586.90	1669134.82	14304802.59	39°23'32.423"N	80°53'54.066"W	3272.76	150.995	1.33	-0.13	-1.33	
9966.00	89.420	156.400	6537.81	3324.18	-2948.80	1623.66	1669171.57	14304716.11	39°23'31.568"N	80°53'53.599"W	3366.25	151.162	1.24	-0.13	-1.23	
10061.00	89.630	157.130	6538.60	3419.00	-3036.09	1661.13	1669209.03	14304628.85	39°23'30.705"N	80°53'53.123"W	3460.81	151.316	0.80	0.22	0.77	
10156.00	89.780	157.780	6539.09	3513.89	-3123.83	1697.56	1669245.44	14304541.15	39°23'29.837"N	80°53'52.661"W	3555.27	151.479	0.70	0.16	0.68	
10250.00	89.600	157.760	6539.60	3607.80	-3210.84	1733.12	1669280.98	14304454.17	39°23'28.977"N	80°53'52.209"W	3648.72	151.641	0.19	-0.19	-0.02	
10345.00	89.570	158.880	6540.29	3702.75	-3299.11	1768.21	1669316.06	14304365.93	39°23'28.104"N	80°53'51.763"W	3743.09	151.810	1.18	-0.03	1.18	
10440.00	89.540	160.550	6541.02	3797.74	-3388.22	1801.14	1669348.98	14304276.87	39°23'27.223"N	80°53'51.345"W	3837.20	152.005	1.76	-0.03	1.76	
10534.00	89.480	159.010	6541.83	3891.73	-3476.42	1833.63	1669381.46	14304188.70	39°23'26.351"N	80°53'50.933"W	3930.35	152.191	1.64	-0.06	-1.64	
10629.00	89.780	157.440	6542.44	3986.66	-3564.63	1868.87	1669416.68	14304100.52	39°23'25.478"N	80°53'50.485"W	4024.83	152.333	1.68	0.32	-1.65	
10723.00	89.720	156.090	6542.85	4080.49	-3651.01	1905.95	1669453.75	14304014.18	39°23'24.624"N	80°53'50.014"W	4118.56	152.434	1.44	-0.06	-1.44	
10818.00	89.820	155.390	6543.23	4175.20	-3737.62	1944.99	1669492.77	14303927.61	39°23'23.768"N	80°53'49.518"W	4213.40	152.508	0.74	0.11	-0.74	
10913.00	89.720	155.180	6543.61	4269.84	-3823.91	1984.71	1669532.47	14303841.34	39°23'22.915"N	80°53'49.013"W	4308.29	152.570	0.24	-0.11	-0.22	
11007.00	89.750	154.820	6544.05	4363.45	-3909.11	2024.43	1669572.18	14303756.19	39°23'22.072"N	80°53'48.509"W	4402.21	152.621	0.38	0.03	-0.38	
11102.00	89.820	157.140	6544.41	4458.18	-3995.87	2063.10	1669610.83	14303669.45	39°23'21.214"N	80°53'48.017"W	4497.04	152.692	2.44	0.07	2.44	
11196.00	89.850	158.960	6544.68	4552.11	-4083.05	2098.23	1669645.95	14303582.31	39°23'20.352"N	80°53'47.571"W	4590.63	152.802	1.94	0.03	1.94	
11291.00	89.850	160.040	6544.93	4647.10	-4172.04	2131.50	1669679.21	14303493.36	39°23'19.472"N	80°53'47.149"W	4685.00	152.937	1.14	0.00	1.14	



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (206 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
11386.00	89.880	163.760	6545.15	4742.04	-4262.32	2161.01	1669708.71	14303403.11	39°23'18.580"N	80°53'46.774"W	4778.84	153.115	3.92	0.03	3.92	
11480.00	89.750	166.990	6545.45	4835.65	-4353.26	2184.74	1669732.43	14303312.21	39°23'17.680"N	80°53'46.473"W	4870.73	153.350	3.44	-0.14	3.44	
11575.00	89.880	167.960	6545.76	4929.89	-4446.00	2205.34	1669753.02	14303219.51	39°23'16.764"N	80°53'46.212"W	4962.91	153.617	1.03	0.14	1.02	
11670.00	90.000	167.640	6545.86	5024.06	-4538.85	2225.42	1669773.09	14303126.69	39°23'15.846"N	80°53'45.958"W	5055.06	153.881	0.36	0.13	-0.34	
11764.00	90.340	165.320	6545.58	5117.50	-4630.24	2247.39	1669795.05	14303035.34	39°23'14.942"N	80°53'45.679"W	5146.84	154.109	2.49	0.36	-2.47	
11859.00	91.820	161.000	6543.79	5212.33	-4721.13	2274.90	1669822.55	14302944.49	39°23'14.044"N	80°53'45.330"W	5240.63	154.273	4.81	1.56	-4.55	
11953.00	89.880	157.640	6542.39	5306.29	-4809.04	2308.09	1669855.73	14302856.61	39°23'13.174"N	80°53'44.909"W	5334.25	154.361	4.13	-2.06	-3.57	
12048.00	89.910	157.700	6542.57	5401.19	-4896.92	2344.18	1669891.81	14302768.77	39°23'12.305"N	80°53'44.451"W	5429.09	154.419	0.07	0.03	0.06	
12142.00	89.510	158.180	6543.04	5495.12	-4984.04	2379.49	1669927.09	14302681.69	39°23'11.444"N	80°53'44.002"W	5522.91	154.479	0.66	-0.43	0.51	
12237.00	89.380	157.700	6543.96	5590.04	-5072.08	2415.17	1669962.76	14302593.68	39°23'10.573"N	80°53'43.549"W	5617.74	154.538	0.52	-0.14	-0.51	
12331.00	89.540	156.590	6544.85	5683.90	-5158.69	2451.67	1669999.25	14302507.10	39°23'09.717"N	80°53'43.085"W	5711.64	154.581	1.19	0.17	-1.18	
12426.00	89.200	159.100	6545.89	5778.80	-5246.67	2487.49	1670035.06	14302419.16	39°23'08.847"N	80°53'42.631"W	5806.47	154.634	2.67	-0.36	2.64	
12520.00	88.710	159.550	6547.61	5872.77	-5334.60	2520.68	1670068.23	14302331.27	39°23'07.978"N	80°53'42.209"W	5900.15	154.709	0.71	-0.52	0.48	
12614.00	89.450	160.980	6549.12	5966.76	-5423.06	2552.41	1670099.95	14302242.84	39°23'07.103"N	80°53'41.806"W	5993.70	154.796	1.71	0.79	1.52	
12709.00	89.780	161.700	6549.76	6061.74	-5513.06	2582.81	1670130.33	14302152.87	39°23'06.213"N	80°53'41.421"W	6088.08	154.897	0.83	0.35	0.76	
12803.00	89.780	161.920	6550.12	6155.70	-5602.37	2612.15	1670159.66	14302063.60	39°23'05.330"N	80°53'41.048"W	6181.41	155.002	0.23	0.00	0.23	
12898.00	89.850	161.620	6550.42	6250.66	-5692.60	2641.87	1670189.37	14301973.41	39°23'04.438"N	80°53'40.671"W	6275.76	155.105	0.32	0.07	-0.32	
12992.00	89.690	161.860	6550.80	6344.63	-5781.86	2671.32	1670218.81	14301884.18	39°23'03.555"N	80°53'40.297"W	6369.14	155.202	0.31	-0.17	0.26	
13087.00	89.780	162.270	6551.24	6439.58	-5872.25	2700.58	1670248.05	14301793.83	39°23'02.662"N	80°53'39.926"W	6463.46	155.303	0.44	0.09	0.43	
13181.00	89.780	162.630	6551.60	6533.51	-5961.87	2728.92	1670276.39	14301704.25	39°23'01.775"N	80°53'39.566"W	6556.74	155.405	0.38	0.00	0.38	
13275.00	89.850	162.510	6551.91	6627.43	-6051.55	2757.08	1670304.53	14301614.60	39°23'00.889"N	80°53'39.209"W	6650.02	155.506	0.15	0.07	-0.13	
13370.00	89.880	161.860	6552.13	6722.37	-6142.00	2786.14	1670333.59	14301524.19	39°22'59.995"N	80°53'38.840"W	6744.38	155.600	0.68	0.03	-0.68	
13464.00	89.690	161.450	6552.48	6816.34	-6231.22	2815.73	1670363.16	14301435.00	39°22'59.112"N	80°53'38.465"W	6837.87	155.683	0.48	-0.20	-0.44	
13559.00	89.910	159.670	6552.81	6911.34	-6320.80	2847.34	1670394.76	14301345.46	39°22'58.227"N	80°53'38.064"W	6932.52	155.750	1.89	0.23	-1.87	
13653.00	89.720	159.670	6553.12	7005.33	-6408.94	2880.00	1670427.41	14301257.35	39°22'57.355"N	80°53'37.649"W	7026.30	155.802	0.20	-0.20	0.00	
13748.00	89.750	159.490	6553.56	7100.33	-6497.97	2913.15	1670460.54	14301168.36	39°22'56.475"N	80°53'37.228"W	7121.10	155.853	0.19	0.03	-0.19	
13842.00	89.780	158.250	6553.94	7194.30	-6585.65	2947.03	1670494.41	14301080.72	39°22'55.608"N	80°53'36.798"W	7214.97	155.892	1.32	0.03	-1.32	
13938.00	89.690	158.660	6554.39	7290.25	-6674.94	2982.28	1670529.65	14300991.46	39°22'54.725"N	80°53'36.350"W	7310.87	155.925	0.44	-0.09	0.43	
14032.00	89.910	158.300	6554.71	7384.21	-6762.39	3016.77	1670564.12	14300904.05	39°22'53.860"N	80°53'35.913"W	7404.78	155.958	0.45	0.23	-0.38	
14127.00	89.910	158.190	6554.86	7479.15	-6850.62	3051.98	1670599.31	14300815.85	39°22'52.988"N	80°53'35.466"W	7499.70	155.987	0.12	0.00	-0.12	



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (206 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
14222.00	89.690	157.850	6555.20	7574.08	-6938.72	3087.53	1670634.86	14300727.79	39°22'52.117"N	80°53'35.014"W	7594.64	156.012	0.43	-0.23	-0.36	
14316.00	89.720	157.460	6555.68	7667.98	-7025.66	3123.27	1670670.58	14300640.89	39°22'51.257"N	80°53'34.560"W	7688.60	156.032	0.42	0.03	-0.41	
14411.00	89.850	157.510	6556.04	7762.87	-7113.41	3159.65	1670706.94	14300553.16	39°22'50.389"N	80°53'34.098"W	7783.57	156.050	0.15	0.14	0.05	
14506.00	89.780	158.960	6556.34	7857.81	-7201.64	3194.87	1670742.15	14300464.97	39°22'49.517"N	80°53'33.651"W	7878.50	156.076	1.53	-0.07	1.53	
14600.00	89.630	159.860	6556.83	7951.80	-7289.63	3227.93	1670775.20	14300377.02	39°22'48.647"N	80°53'33.231"W	7972.34	156.116	0.97	-0.16	0.96	
14695.00	89.910	160.010	6557.21	8046.80	-7378.87	3260.52	1670807.78	14300287.82	39°22'47.764"N	80°53'32.818"W	8067.13	156.161	0.33	0.29	0.16	
14790.00	90.030	160.880	6557.26	8141.79	-7468.38	3292.32	1670839.56	14300198.34	39°22'46.879"N	80°53'32.414"W	8161.87	156.210	0.92	0.13	0.92	
14884.00	89.880	160.320	6557.33	8235.79	-7557.05	3323.54	1670870.77	14300109.71	39°22'46.003"N	80°53'32.018"W	8255.60	156.260	0.62	-0.16	-0.60	
14979.00	89.850	161.000	6557.56	8330.79	-7646.69	3355.00	1670902.22	14300020.11	39°22'45.116"N	80°53'31.619"W	8350.32	156.310	0.72	-0.03	0.72	
15073.00	89.780	162.230	6557.86	8424.76	-7735.89	3384.65	1670931.85	14299930.94	39°22'44.234"N	80°53'31.242"W	8443.92	156.369	1.31	-0.07	1.31	
15168.00	90.000	163.350	6558.04	8519.66	-7826.63	3412.76	1670959.95	14299840.23	39°22'43.337"N	80°53'30.886"W	8538.33	156.441	1.20	0.23	1.18	
15263.00	89.820	165.070	6558.19	8614.43	-7918.04	3438.61	1670985.79	14299748.86	39°22'42.433"N	80°53'30.558"W	8632.46	156.526	1.82	-0.19	1.81	
15357.00	89.970	165.260	6558.36	8708.08	-8008.91	3462.67	1671009.85	14299658.03	39°22'41.535"N	80°53'30.253"W	8725.41	156.619	0.26	0.16	0.20	
15452.00	89.720	166.070	6558.62	8802.65	-8100.95	3486.20	1671033.36	14299566.02	39°22'40.625"N	80°53'29.955"W	8819.24	156.716	0.89	-0.26	0.85	
15546.00	90.250	164.580	6558.64	8896.28	-8191.88	3510.01	1671057.16	14299475.13	39°22'39.726"N	80°53'29.653"W	8912.19	156.806	1.68	0.56	-1.59	
15640.00	90.180	163.250	6558.29	8990.08	-8282.20	3536.05	1671083.19	14299384.85	39°22'38.833"N	80°53'29.323"W	9005.47	156.880	1.42	-0.07	-1.41	
15735.00	90.150	161.940	6558.02	9085.00	-8372.85	3564.47	1671111.60	14299294.24	39°22'37.937"N	80°53'28.962"W	9100.00	156.940	1.38	-0.03	-1.38	
15830.00	90.120	160.800	6557.79	9179.98	-8462.87	3594.82	1671141.93	14299204.25	39°22'37.047"N	80°53'28.577"W	9194.72	156.985	1.20	-0.03	-1.20	
15924.00	90.180	159.210	6557.55	9273.97	-8551.20	3626.96	1671174.06	14299115.96	39°22'36.173"N	80°53'28.169"W	9288.58	157.016	1.69	0.06	-1.69	
16019.00	90.030	157.200	6557.37	9368.91	-8639.40	3662.23	1671209.32	14299027.79	39°22'35.301"N	80°53'27.721"W	9383.56	157.028	2.12	-0.16	-2.12	
16114.00	90.030	154.730	6557.32	9463.64	-8726.16	3700.92	1671247.99	14298941.07	39°22'34.443"N	80°53'27.230"W	9478.53	157.017	2.60	0.00	-2.60	
16207.00	90.090	153.530	6557.23	9556.11	-8809.84	3741.49	1671288.56	14298857.42	39°22'33.616"N	80°53'26.715"W	9571.42	156.989	1.29	0.06	-1.29	
16302.00	90.090	154.950	6557.08	9650.59	-8895.39	3782.78	1671329.82	14298771.90	39°22'32.769"N	80°53'26.190"W	9666.30	156.962	1.49	0.00	1.49	
16397.00	89.910	155.210	6557.08	9745.20	-8981.55	3822.81	1671369.84	14298685.78	39°22'31.917"N	80°53'25.682"W	9761.25	156.944	0.33	-0.19	0.27	
16476.00	90.090	155.450	6557.08	9823.92	-9053.34	3855.78	1671402.80	14298614.02	39°22'31.208"N	80°53'25.263"W	9840.22	156.931	0.38	0.23	0.30	
16500.00	90.090	155.450	6557.04	9847.83	-9075.17	3865.75	1671412.77	14298592.20	39°22'30.992"N	80°53'25.136"W	9864.21	156.927	0.00	0.00	0.00	Projected MD at TD: 16500'



Actual Wellpath Report

Spock Unit 1H AWP Proj: 16500'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Spock Unit 1H AWB Ref Wellpath: Spock Unit 1H AWP Proj: 16500'

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	-0.16	0.07
17.5in Open Hole	105.00	453.00	348.00	105.00	453.00	-0.16	0.07	-0.74	0.80
13.375in Casing Surface	25.00	453.00	428.00	25.00	453.00	0.00	0.00	-0.74	0.80
12.25in Open Hole	453.00	2569.74	2116.74	453.00	2568.00	-0.74	0.80	27.76	-7.05
9.625in Casing Intermediate	25.00	2569.74	2544.74	25.00	2568.00	0.00	0.00	27.76	-7.05
8.75in Open Hole	2569.74	5826.00	3256.26	2568.00	5766.81	27.76	-7.05	502.42	326.83
8.5in Open Hole	5826.00	16500.00	10674.00	5766.81	6557.04	502.42	326.83	-9075.17	3865.75
5.5in Casing Production	25.00	16500.00	16475.00	25.00	6557.04	0.00	0.00	-9075.17	3865.75

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Spock Unit 1H - POE - Rev-1	6503.00	29.29	579.67	1668128.00	14307693.00	39°24'01.013"N	80°54'06.855"W	point
Spock Unit 1H - BHL - Rev-1	6529.00	-9091.37	3857.99	1671405.00	14298576.00	39°22'30.832"N	80°53'25.235"W	point
Spock Unit 1H - LP - Rev-1	6529.00	-149.53	643.94	1668192.24	14307514.25	39°23'59.245"N	80°54'06.039"W	point



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Spock Unit 1H AWP Proj: 16500'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

WELLPATH COMPOSITION - Ref Wellbore: Spock Unit 1H AWB Ref Wellpath: Spock Unit 1H AWP Proj: 16500'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	427.00	Gyrodata standard - Drop gyro or Multi-shot	01_Gyrodata MS Gyro <17-1/2">(100'-427')	Spock Unit 1H AWB
427.00	2547.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(427')(504'-2547')	Spock Unit 1H AWB
2547.00	5767.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2547')(2637'-5767')	Spock Unit 1H AWB
5767.00	16476.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2">(5767')(5799'-16476')	Spock Unit 1H AWB
16476.00	16500.00	Blind Drilling (std)	Projection to bit	Spock Unit 1H AWB



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Spock Unit 1H AWP Proj: 16500'

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Area	Tyler County, WV	Well	Spock Unit 1H
Field	Tyler	Wellbore	Spock Unit 1H AWB
Facility	Pyle Run Pad		

COMMENTS

Wellpath general comments

API: 47-095-02478-0000

BHI Job #: 109555249

Rig: Patterson 342

Duration: 12/13/2018-12/17/2018

Gyrodata MS Gyro <17-1/2">(100'-427')

WFT EM <12-1/4">(427')(504'-2547')

WFT EM <8-3/4">(2547')(2637'-5767')

BH AT Curve <8-1/2">(5767')(5799'-16476')

Middlesex: 6485' MD

Burkett: 6657' MD

Tully: 6731' MD

Marcellus POE: 6815' MD

Projected MD at TD: 16500'