



# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H 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	1/3/2019 at 11:20:53 AM
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Spock_Unit_3H_AWP_Proj_17699_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.20	-0.31	1667565.82	14307671.83	39°24'00.810"N	80°54'14.020"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 #09)	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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Facility	Pyle Run Pad		

## WELLPATH DATA (213 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]
0.00†	0.000	94.760	0.00	0.00	0.00	0.00	1667565.82	14307671.83	39°24'00.810"N	80°54'14.020"W	0.00	0.000	0.00	0.00	0.00
25.00	0.000	94.760	25.00	0.00	0.00	0.00	1667565.82	14307671.83	39°24'00.810"N	80°54'14.020"W	0.00	0.000	0.00	0.00	0.00
100.00	0.140	94.760	100.00	0.04	-0.01	0.09	1667565.91	14307671.83	39°24'00.810"N	80°54'14.019"W	0.09	94.760	0.19	0.19	126.35
125.00	0.140	81.110	125.00	0.06	-0.01	0.15	1667565.97	14307671.83	39°24'00.810"N	80°54'14.018"W	0.15	92.042	0.13	0.00	-54.60
150.00	0.320	111.680	150.00	0.11	-0.03	0.25	1667566.06	14307671.81	39°24'00.810"N	80°54'14.017"W	0.25	96.122	0.85	0.72	122.28
175.00	0.320	132.820	175.00	0.22	-0.10	0.36	1667566.18	14307671.73	39°24'00.809"N	80°54'14.015"W	0.38	105.360	0.47	0.00	84.56
200.00	0.330	137.510	200.00	0.34	-0.20	0.46	1667566.28	14307671.63	39°24'00.808"N	80°54'14.014"W	0.50	113.396	0.11	0.04	18.76
225.00	0.130	102.470	225.00	0.43	-0.26	0.54	1667566.36	14307671.57	39°24'00.807"N	80°54'14.013"W	0.60	115.698	0.94	-0.80	-140.16
250.00	0.180	108.840	250.00	0.47	-0.28	0.60	1667566.42	14307671.55	39°24'00.807"N	80°54'14.012"W	0.67	114.735	0.21	0.20	25.48
275.00	0.210	113.510	275.00	0.52	-0.31	0.68	1667566.50	14307671.52	39°24'00.807"N	80°54'14.011"W	0.75	114.352	0.14	0.12	18.68
300.00	0.230	106.150	300.00	0.58	-0.34	0.77	1667566.59	14307671.49	39°24'00.807"N	80°54'14.010"W	0.85	113.821	0.14	0.08	-29.44
325.00	0.230	126.380	325.00	0.65	-0.39	0.86	1667566.68	14307671.45	39°24'00.806"N	80°54'14.009"W	0.94	114.077	0.32	0.00	80.92
350.00	0.240	96.040	350.00	0.72	-0.42	0.95	1667566.77	14307671.41	39°24'00.806"N	80°54'14.008"W	1.04	113.774	0.49	0.04	-121.36
375.00	0.310	102.230	375.00	0.78	-0.44	1.07	1667566.89	14307671.39	39°24'00.806"N	80°54'14.006"W	1.16	112.317	0.30	0.28	24.76
400.00	0.380	106.240	400.00	0.86	-0.48	1.22	1667567.03	14307671.36	39°24'00.805"N	80°54'14.004"W	1.31	111.414	0.30	0.28	16.04
425.00	0.390	103.910	425.00	0.96	-0.52	1.38	1667567.20	14307671.31	39°24'00.805"N	80°54'14.002"W	1.48	110.692	0.07	0.04	-9.32
502.00	0.140	163.930	502.00	1.20	-0.67	1.66	1667567.48	14307671.16	39°24'00.803"N	80°54'13.999"W	1.79	112.112	0.44	-0.32	77.95
596.00	1.270	78.680	595.99	1.46	-0.58	2.71	1667568.53	14307671.25	39°24'00.804"N	80°54'13.985"W	2.78	102.077	1.35	1.20	-90.69
691.00	3.600	64.980	690.90	1.35	0.89	6.45	1667572.26	14307672.72	39°24'00.819"N	80°54'13.938"W	6.51	82.165	2.51	2.45	-14.42
785.00	6.750	61.210	784.50	0.21	4.80	13.97	1667579.78	14307676.63	39°24'00.857"N	80°54'13.842"W	14.77	71.045	3.37	3.35	-4.01
869.00	9.530	57.920	867.65	-2.05	10.87	24.19	1667589.99	14307682.70	39°24'00.917"N	80°54'13.712"W	26.52	65.803	3.35	3.31	-3.92
964.00	11.160	53.470	961.10	-6.38	20.52	38.24	1667604.04	14307692.34	39°24'01.012"N	80°54'13.533"W	43.40	61.783	1.91	1.72	-4.68
1059.00	13.990	50.980	1053.81	-12.82	33.22	54.55	1667620.35	14307705.04	39°24'01.138"N	80°54'13.325"W	63.87	58.657	3.03	2.98	-2.62
1153.00	16.250	50.860	1144.55	-20.94	48.68	73.58	1667639.37	14307720.49	39°24'01.290"N	80°54'13.082"W	88.23	56.512	2.40	2.40	-0.13
1247.00	17.080	55.790	1234.61	-28.75	64.75	95.20	1667660.98	14307736.55	39°24'01.449"N	80°54'12.806"W	115.13	55.781	1.74	0.88	5.24
1342.00	18.130	60.460	1325.16	-34.74	79.88	119.60	1667685.37	14307751.68	39°24'01.598"N	80°54'12.495"W	143.82	56.262	1.85	1.11	4.92
1437.00	20.360	65.180	1414.85	-38.71	94.10	147.46	1667713.22	14307765.90	39°24'01.739"N	80°54'12.140"W	174.93	57.456	2.86	2.35	4.97
1532.00	23.260	66.370	1503.05	-41.43	108.56	179.66	1667745.40	14307780.35	39°24'01.881"N	80°54'11.730"W	209.91	58.856	3.09	3.05	1.25
1627.00	23.690	63.620	1590.19	-44.90	124.56	213.94	1667779.67	14307796.35	39°24'02.039"N	80°54'11.293"W	247.56	59.791	1.24	0.45	-2.89
1721.00	25.100	65.100	1675.79	-48.86	141.35	248.94	1667814.66	14307813.13	39°24'02.204"N	80°54'10.847"W	286.27	60.412	1.63	1.50	1.57



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Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect	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]
1816.00	26.450	65.890	1761.34	-52.27	158.48	286.53	1667852.24	14307830.25	39°24'02.373"N	80°54'10.368"W	327.44	61.054	1.47	1.42	0.83
1910.00	25.250	61.720	1845.94	-56.83	176.53	323.30	1667888.99	14307848.29	39°24'02.551"N	80°54'09.899"W	368.36	61.365	2.32	-1.28	-4.44
2005.00	23.390	62.550	1932.50	-62.36	194.82	357.88	1667923.56	14307866.58	39°24'02.732"N	80°54'09.458"W	407.47	61.437	1.99	-1.96	0.87
2099.00	23.110	64.620	2018.87	-66.66	211.33	391.11	1667956.77	14307883.08	39°24'02.895"N	80°54'09.035"W	444.55	61.616	0.92	-0.30	2.20
2194.00	25.320	65.140	2105.51	-70.29	227.86	426.39	1667992.03	14307899.61	39°24'03.058"N	80°54'08.585"W	483.46	61.880	2.34	2.33	0.55
2289.00	26.180	64.680	2191.07	-74.13	245.37	463.76	1668029.40	14307917.10	39°24'03.230"N	80°54'08.109"W	524.67	62.118	0.93	0.91	-0.48
2383.00	25.900	63.610	2275.53	-78.51	263.36	500.90	1668066.52	14307935.09	39°24'03.408"N	80°54'07.636"W	565.91	62.266	0.58	-0.30	-1.14
2478.00	22.020	58.550	2362.34	-84.52	281.88	534.69	1668100.30	14307953.60	39°24'03.590"N	80°54'07.205"W	604.45	62.202	4.62	-4.08	-5.33
2572.00	20.180	54.040	2450.04	-92.61	300.60	562.86	1668128.45	14307972.31	39°24'03.775"N	80°54'06.846"W	638.10	61.895	2.61	-1.96	-4.80
2656.00	19.700	56.100	2529.00	-100.11	317.01	586.34	1668151.92	14307988.71	39°24'03.937"N	80°54'06.547"W	666.55	61.602	1.01	-0.57	2.45
2730.00	18.700	59.280	2598.89	-105.41	330.02	606.89	1668172.46	14308001.72	39°24'04.065"N	80°54'06.285"W	690.82	61.463	1.95	-1.35	4.30
2825.00	19.180	59.780	2688.74	-111.14	345.66	633.46	1668199.03	14308017.35	39°24'04.220"N	80°54'05.946"W	721.63	61.380	0.53	0.51	0.53
2920.00	18.350	68.450	2778.71	-114.44	359.01	660.86	1668226.41	14308030.70	39°24'04.351"N	80°54'05.597"W	752.08	61.487	3.06	-0.87	9.13
3015.00	20.360	67.620	2868.34	-115.67	370.79	690.06	1668255.60	14308042.48	39°24'04.467"N	80°54'05.225"W	783.37	61.749	2.14	2.12	-0.87
3110.00	22.490	60.620	2956.78	-119.46	386.01	721.18	1668286.71	14308057.68	39°24'04.617"N	80°54'04.828"W	817.98	61.842	3.50	2.24	-7.37
3204.00	23.310	60.750	3043.37	-125.53	403.91	753.07	1668318.59	14308075.58	39°24'04.794"N	80°54'04.421"W	854.56	61.793	0.87	0.87	0.14
3299.00	22.010	62.390	3131.04	-131.06	421.35	785.25	1668350.75	14308093.01	39°24'04.966"N	80°54'04.011"W	891.15	61.783	1.52	-1.37	1.73
3397.00	22.850	63.850	3221.62	-135.69	438.25	818.60	1668384.09	14308109.90	39°24'05.133"N	80°54'03.586"W	928.53	61.837	1.03	0.86	1.49
3493.00	24.030	61.260	3309.70	-140.81	455.86	852.47	1668417.95	14308127.51	39°24'05.306"N	80°54'03.154"W	966.71	61.864	1.63	1.23	-2.70
3587.00	23.780	59.220	3395.64	-147.42	474.76	885.54	1668451.00	14308146.40	39°24'05.493"N	80°54'02.733"W	1004.78	61.803	0.92	-0.27	-2.17
3683.00	23.250	61.310	3483.67	-154.06	493.76	918.79	1668484.24	14308165.40	39°24'05.680"N	80°54'02.309"W	1043.06	61.746	1.03	-0.55	2.18
3777.00	22.410	60.620	3570.31	-159.94	511.46	950.68	1668516.11	14308183.09	39°24'05.855"N	80°54'01.903"W	1079.53	61.720	0.94	-0.89	-0.73
3872.00	21.970	61.840	3658.27	-165.56	528.73	982.12	1668547.55	14308200.35	39°24'06.025"N	80°54'01.502"W	1115.40	61.704	0.67	-0.46	1.28
3966.00	21.860	63.200	3745.48	-170.27	544.92	1013.25	1668578.66	14308216.53	39°24'06.185"N	80°54'01.105"W	1150.48	61.729	0.55	-0.12	1.45
4061.00	22.030	60.200	3833.60	-175.55	561.75	1044.50	1668609.89	14308233.36	39°24'06.351"N	80°54'00.707"W	1185.97	61.728	1.19	0.18	-3.16
4156.00	21.570	63.120	3921.81	-180.82	578.50	1075.53	1668640.92	14308250.10	39°24'06.516"N	80°54'00.311"W	1221.24	61.725	1.24	-0.48	3.07
4251.00	21.470	65.060	4010.18	-184.55	593.73	1106.87	1668672.25	14308265.32	39°24'06.666"N	80°53'59.912"W	1256.06	61.791	0.76	-0.11	2.04
4346.00	22.230	62.330	4098.36	-188.60	609.40	1138.56	1668703.92	14308280.99	39°24'06.821"N	80°53'59.508"W	1291.39	61.842	1.34	0.80	-2.87
4441.00	22.540	65.850	4186.21	-192.46	625.20	1171.09	1668736.43	14308296.78	39°24'06.977"N	80°53'59.093"W	1327.52	61.904	1.45	0.33	3.71
4535.00	22.750	64.880	4272.96	-195.54	640.29	1203.98	1668769.32	14308311.86	39°24'07.125"N	80°53'58.674"W	1363.65	61.996	0.46	0.22	-1.03



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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]
4630.00	23.020	64.660	4360.48	-199.06	656.03	1237.40	1668802.72	14308327.60	39°24'07.281"N	80°53'58.248"W	1400.55	62.069	0.30	0.28	-0.23
4725.00	23.030	62.050	4447.92	-203.52	672.69	1270.61	1668835.91	14308344.26	39°24'07.445"N	80°53'57.825"W	1437.69	62.102	1.07	0.01	-2.75
4819.00	23.620	57.190	4534.24	-210.39	691.52	1302.68	1668867.97	14308363.07	39°24'07.631"N	80°53'57.416"W	1474.85	62.039	2.14	0.63	-5.17
4914.00	22.270	57.460	4621.72	-218.67	711.51	1333.85	1668899.13	14308383.06	39°24'07.828"N	80°53'57.019"W	1511.76	61.923	1.43	-1.42	0.28
5009.00	22.190	60.440	4709.67	-225.70	730.05	1364.63	1668929.90	14308401.59	39°24'08.011"N	80°53'56.626"W	1547.64	61.854	1.19	-0.08	3.14
5103.00	21.910	64.680	4796.80	-230.42	746.31	1395.93	1668961.18	14308417.84	39°24'08.171"N	80°53'56.227"W	1582.90	61.870	1.72	-0.30	4.51
5198.00	21.720	62.790	4884.99	-234.42	761.92	1427.58	1668992.83	14308433.45	39°24'08.325"N	80°53'55.824"W	1618.18	61.910	0.77	-0.20	-1.99
5293.00	21.470	60.480	4973.33	-239.65	778.53	1458.35	1669023.58	14308450.05	39°24'08.489"N	80°53'55.432"W	1653.14	61.905	0.93	-0.26	-2.43
5387.00	22.800	62.410	5060.40	-245.04	795.44	1489.46	1669054.68	14308466.95	39°24'08.656"N	80°53'55.035"W	1688.55	61.896	1.61	1.41	2.05
5482.00	23.220	61.910	5147.84	-250.27	812.78	1522.29	1669087.50	14308484.29	39°24'08.827"N	80°53'54.617"W	1725.69	61.901	0.49	0.44	-0.53
5576.00	21.090	60.850	5234.89	-255.71	829.75	1553.42	1669118.61	14308501.25	39°24'08.994"N	80°53'54.220"W	1761.13	61.891	2.31	-2.27	-1.13
5671.00	21.090	62.490	5323.53	-260.80	845.97	1583.50	1669148.69	14308517.46	39°24'09.154"N	80°53'53.836"W	1795.31	61.887	0.62	0.00	1.73
5766.00	21.700	62.510	5411.98	-265.47	861.97	1614.24	1669179.41	14308533.46	39°24'09.312"N	80°53'53.444"W	1829.97	61.899	0.64	0.64	0.02
5860.00	23.230	62.000	5498.85	-270.47	878.70	1646.03	1669211.19	14308550.18	39°24'09.477"N	80°53'53.039"W	1865.88	61.905	1.64	1.63	-0.54
5955.00	22.840	61.490	5586.27	-275.96	896.29	1678.77	1669243.92	14308567.77	39°24'09.650"N	80°53'52.622"W	1903.06	61.902	0.46	-0.41	-0.54
6049.00	23.150	60.530	5672.80	-281.85	914.09	1710.89	1669276.02	14308585.56	39°24'09.826"N	80°53'52.213"W	1939.77	61.885	0.52	0.33	-1.02
6144.00	21.550	63.990	5760.67	-286.90	930.93	1742.83	1669307.95	14308602.39	39°24'09.992"N	80°53'51.805"W	1975.88	61.891	2.18	-1.68	3.64
6186.00	20.680	62.550	5799.85	-288.73	937.73	1756.35	1669321.46	14308609.19	39°24'10.059"N	80°53'51.633"W	1991.00	61.902	2.41	-2.07	-3.43
6226.00	21.600	61.110	5837.16	-290.84	944.55	1769.06	1669334.17	14308616.00	39°24'10.126"N	80°53'51.471"W	2005.43	61.901	2.64	2.30	-3.60
6272.00	21.830	67.300	5879.90	-292.62	951.94	1784.37	1669349.47	14308623.39	39°24'10.199"N	80°53'51.276"W	2022.41	61.921	5.00	0.50	13.46
6319.00	21.750	80.140	5923.57	-291.58	956.80	1801.02	1669366.11	14308628.25	39°24'10.247"N	80°53'51.064"W	2039.40	62.020	10.12	-0.17	27.32
6367.00	21.510	91.140	5968.20	-286.90	958.15	1818.58	1669383.67	14308629.60	39°24'10.260"N	80°53'50.840"W	2055.56	62.217	8.45	-0.50	22.92
6414.00	22.770	102.060	6011.76	-279.03	956.08	1836.10	1669401.18	14308627.53	39°24'10.239"N	80°53'50.617"W	2070.11	62.493	9.14	2.68	23.23
6461.00	24.140	109.320	6054.88	-268.17	951.00	1854.07	1669419.14	14308622.45	39°24'10.189"N	80°53'50.388"W	2083.74	62.846	6.80	2.91	15.45
6508.00	24.740	113.300	6097.67	-255.40	943.93	1872.17	1669437.24	14308615.38	39°24'10.119"N	80°53'50.158"W	2096.67	63.243	3.73	1.28	8.47
6556.00	27.520	117.360	6140.77	-240.41	934.86	1891.25	1669456.31	14308606.31	39°24'10.029"N	80°53'49.915"W	2109.69	63.697	6.88	5.79	8.46
6603.00	30.650	122.880	6181.84	-222.93	923.36	1910.97	1669476.02	14308594.82	39°24'09.915"N	80°53'49.664"W	2122.35	64.211	8.77	6.66	11.74
6651.00	34.440	130.040	6222.31	-201.45	907.97	1931.65	1669496.69	14308579.44	39°24'09.763"N	80°53'49.400"W	2134.40	64.824	11.25	7.90	14.92
6698.00	38.860	135.400	6260.02	-176.57	888.91	1952.19	1669517.23	14308560.39	39°24'09.574"N	80°53'49.139"W	2145.04	65.518	11.60	9.40	11.40
6745.00	42.950	139.390	6295.54	-148.21	866.24	1972.98	1669538.01	14308537.73	39°24'09.350"N	80°53'48.875"W	2154.77	66.296	10.32	8.70	8.49



# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH DATA (213 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]
6792.00	46.490	142.660	6328.94	-116.98	840.52	1993.75	1669558.77	14308512.02	39°24'09.096"N	80°53'48.610"W	2163.68	67.141	8.98	7.53	6.96
6840.00	50.860	146.780	6360.63	-82.26	811.09	2014.52	1669579.53	14308482.60	39°24'08.804"N	80°53'48.346"W	2171.67	68.069	11.15	9.10	8.58
6887.00	53.860	148.780	6389.33	-45.92	779.60	2034.35	1669599.35	14308451.13	39°24'08.493"N	80°53'48.094"W	2178.61	69.032	7.22	6.38	4.26
6935.00	57.010	149.590	6416.56	-7.14	745.66	2054.59	1669619.58	14308417.19	39°24'08.157"N	80°53'47.837"W	2185.71	70.053	6.71	6.56	1.69
6982.00	61.240	151.530	6440.68	32.62	710.53	2074.40	1669639.38	14308382.08	39°24'07.810"N	80°53'47.585"W	2192.71	71.092	9.67	9.00	4.13
7029.00	64.830	153.230	6461.99	74.11	673.42	2093.81	1669658.78	14308344.98	39°24'07.443"N	80°53'47.338"W	2199.43	72.171	8.29	7.64	3.62
7076.00	68.250	155.000	6480.70	116.97	634.63	2112.62	1669677.59	14308306.21	39°24'07.059"N	80°53'47.099"W	2205.88	73.280	8.05	7.28	3.77
7124.00	71.890	156.890	6497.06	161.96	593.43	2131.00	1669695.96	14308265.03	39°24'06.652"N	80°53'46.866"W	2212.08	74.439	8.44	7.58	3.94
7171.00	75.790	158.550	6510.14	207.05	551.67	2148.10	1669713.06	14308223.28	39°24'06.239"N	80°53'46.648"W	2217.81	75.597	8.96	8.30	3.53
7218.00	79.830	159.970	6520.06	252.97	508.71	2164.36	1669729.31	14308180.34	39°24'05.814"N	80°53'46.442"W	2223.34	76.773	9.09	8.60	3.02
7265.00	83.280	161.130	6526.96	299.45	464.88	2179.84	1669744.78	14308136.53	39°24'05.381"N	80°53'46.245"W	2228.86	77.961	7.74	7.34	2.47
7313.00	86.400	161.910	6531.28	347.24	419.55	2194.99	1669759.93	14308091.21	39°24'04.933"N	80°53'46.053"W	2234.73	79.179	6.70	6.50	1.63
7408.00	90.090	162.310	6534.19	442.13	329.20	2224.15	1669789.08	14308000.90	39°24'04.039"N	80°53'45.683"W	2248.38	81.581	3.91	3.88	0.42
7502.00	90.060	161.930	6534.06	536.08	239.74	2253.01	1669817.93	14307911.48	39°24'03.155"N	80°53'45.316"W	2265.73	83.926	0.41	-0.03	-0.40
7598.00	90.090	161.680	6533.94	632.04	148.54	2282.99	1669847.89	14307820.31	39°24'02.253"N	80°53'44.936"W	2287.82	86.277	0.26	0.03	-0.26
7692.00	90.000	161.790	6533.86	726.01	59.28	2312.45	1669877.34	14307731.09	39°24'01.370"N	80°53'44.562"W	2313.21	88.532	0.15	-0.10	0.12
7788.00	90.060	160.940	6533.81	821.99	-31.69	2343.13	1669908.00	14307640.16	39°24'00.471"N	80°53'44.172"W	2343.34	90.775	0.89	0.06	-0.89
7882.00	90.000	158.240	6533.76	915.98	-119.78	2375.90	1669940.77	14307552.10	39°23'59.600"N	80°53'43.756"W	2378.92	92.886	2.87	-0.06	-2.87
7977.00	90.000	157.540	6533.76	1010.90	-207.79	2411.66	1669976.51	14307464.12	39°23'58.730"N	80°53'43.302"W	2420.60	94.925	0.74	0.00	-0.74
8072.00	90.060	158.890	6533.71	1105.83	-296.01	2446.92	1670011.75	14307375.94	39°23'57.857"N	80°53'42.854"W	2464.76	96.898	1.42	0.06	1.42
8167.00	89.780	161.350	6533.85	1200.83	-385.34	2479.22	1670044.04	14307286.65	39°23'56.974"N	80°53'42.444"W	2508.99	98.835	2.61	-0.29	2.59
8262.00	89.720	164.450	6534.26	1295.71	-476.13	2507.15	1670071.96	14307195.90	39°23'56.077"N	80°53'42.090"W	2551.96	100.753	3.26	-0.06	3.26
8357.00	89.850	165.080	6534.62	1390.41	-567.79	2532.11	1670096.91	14307104.27	39°23'55.170"N	80°53'41.773"W	2594.99	102.639	0.68	0.14	0.66
8451.00	89.850	165.920	6534.86	1484.02	-658.79	2555.65	1670120.44	14307013.31	39°23'54.271"N	80°53'41.475"W	2639.19	104.455	0.89	0.00	0.89
8546.00	89.880	166.220	6535.09	1578.53	-751.00	2578.52	1670143.30	14306921.14	39°23'53.359"N	80°53'41.185"W	2685.66	106.238	0.32	0.03	0.32
8641.00	89.910	164.330	6535.26	1673.15	-842.87	2602.66	1670167.44	14306829.30	39°23'52.451"N	80°53'40.878"W	2735.74	107.945	1.99	0.03	-1.99
8735.00	89.780	162.560	6535.52	1767.00	-932.97	2629.45	1670194.21	14306739.23	39°23'51.560"N	80°53'40.539"W	2790.06	109.536	1.89	-0.14	-1.88
8830.00	89.820	159.650	6535.85	1861.98	-1022.84	2660.21	1670224.96	14306649.40	39°23'50.671"N	80°53'40.148"W	2850.07	111.032	3.06	0.04	-3.06
8924.00	89.780	157.910	6536.18	1955.95	-1110.47	2694.23	1670258.97	14306561.81	39°23'49.805"N	80°53'39.716"W	2914.11	112.400	1.85	-0.04	-1.85
9019.00	89.820	156.350	6536.51	2050.80	-1198.00	2731.15	1670295.87	14306474.32	39°23'48.939"N	80°53'39.247"W	2982.34	113.684	1.64	0.04	-1.64



# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH DATA (213 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]
9114.00	89.820	156.000	6536.81	2145.56	-1284.90	2769.52	1670334.23	14306387.45	39°23'48.080"N	80°53'38.759"W	3053.07	114.889	0.37	0.00	-0.37
9208.00	89.720	156.740	6537.18	2239.35	-1371.02	2807.20	1670371.89	14306301.37	39°23'47.228"N	80°53'38.281"W	3124.11	116.031	0.79	-0.11	0.79
9303.00	89.780	157.800	6537.60	2334.22	-1458.64	2843.91	1670408.58	14306213.78	39°23'46.362"N	80°53'37.815"W	3196.16	117.153	1.12	0.06	1.12
9398.00	89.850	160.300	6537.91	2429.19	-1547.35	2877.87	1670442.53	14306125.11	39°23'45.485"N	80°53'37.383"W	3267.48	118.266	2.63	0.07	2.63
9492.00	89.820	159.500	6538.18	2523.19	-1635.62	2910.18	1670474.83	14306036.87	39°23'44.612"N	80°53'36.973"W	3338.32	119.338	0.85	-0.03	-0.85
9588.00	89.820	158.550	6538.48	2619.16	-1725.26	2944.54	1670509.17	14305947.27	39°23'43.726"N	80°53'36.537"W	3412.75	120.367	0.99	0.00	-0.99
9682.00	89.750	157.270	6538.83	2713.08	-1812.36	2979.89	1670544.51	14305860.20	39°23'42.864"N	80°53'36.088"W	3487.75	121.308	1.36	-0.07	-1.36
9777.00	89.540	157.890	6539.42	2807.98	-1900.17	3016.12	1670580.73	14305772.42	39°23'41.996"N	80°53'35.628"W	3564.78	122.211	0.69	-0.22	0.65
9871.00	89.660	159.940	6540.08	2901.95	-1987.87	3049.93	1670614.53	14305684.76	39°23'41.129"N	80°53'35.198"W	3640.57	123.095	2.18	0.13	2.18
9966.00	89.480	159.060	6540.79	2996.93	-2076.85	3083.20	1670647.78	14305595.81	39°23'40.249"N	80°53'34.776"W	3717.45	123.964	0.95	-0.19	-0.93
10061.00	89.510	157.800	6541.63	3091.88	-2165.20	3118.13	1670682.69	14305507.51	39°23'39.376"N	80°53'34.332"W	3796.15	124.776	1.33	0.03	-1.33
10155.00	89.420	157.780	6542.50	3185.79	-2252.22	3153.66	1670718.21	14305420.52	39°23'38.515"N	80°53'33.881"W	3875.31	125.533	0.10	-0.10	-0.02
10250.00	89.450	156.280	6543.44	3280.64	-2339.68	3190.73	1670755.26	14305333.09	39°23'37.650"N	80°53'33.410"W	3956.62	126.252	1.58	0.03	-1.58
10344.00	88.520	154.250	6545.11	3374.26	-2425.04	3230.05	1670794.57	14305247.77	39°23'36.806"N	80°53'32.911"W	4039.06	126.898	2.38	-0.99	-2.16
10439.00	89.420	157.940	6546.81	3468.98	-2511.86	3268.53	1670833.04	14305160.98	39°23'35.948"N	80°53'32.422"W	4122.22	127.542	4.00	0.95	3.88
10534.00	89.380	161.790	6547.81	3563.95	-2601.03	3301.23	1670865.72	14305071.85	39°23'35.066"N	80°53'32.007"W	4202.79	128.234	4.05	-0.04	4.05
10628.00	89.450	163.720	6548.77	3657.85	-2690.79	3329.09	1670893.57	14304982.12	39°23'34.178"N	80°53'31.653"W	4280.56	128.947	2.05	0.07	2.05
10723.00	89.450	165.810	6549.68	3752.55	-2782.45	3354.05	1670918.52	14304890.50	39°23'33.272"N	80°53'31.337"W	4357.94	129.678	2.20	0.00	2.20
10818.00	89.540	166.490	6550.52	3847.04	-2874.68	3376.79	1670941.25	14304798.31	39°23'32.360"N	80°53'31.048"W	4434.69	130.408	0.72	0.09	0.72
10912.00	89.820	163.590	6551.04	3940.70	-2965.48	3401.06	1670965.51	14304707.54	39°23'31.463"N	80°53'30.741"W	4512.35	131.086	3.10	0.30	-3.09
11007.00	89.510	161.160	6551.60	4035.62	-3056.01	3429.82	1670994.26	14304617.04	39°23'30.567"N	80°53'30.376"W	4593.79	131.701	2.58	-0.33	-2.56
11101.00	89.480	161.370	6552.43	4129.60	-3145.03	3460.01	1671024.44	14304528.06	39°23'29.687"N	80°53'29.993"W	4675.78	132.270	0.23	-0.03	0.22
11196.00	89.420	160.550	6553.34	4224.59	-3234.83	3491.00	1671055.41	14304438.30	39°23'28.799"N	80°53'29.599"W	4759.33	132.819	0.87	-0.06	-0.86
11290.00	89.480	159.630	6554.24	4318.59	-3323.20	3523.01	1671087.41	14304349.96	39°23'27.926"N	80°53'29.193"W	4843.06	133.328	0.98	0.06	-0.98
11385.00	89.570	159.370	6555.03	4413.57	-3412.19	3556.28	1671120.67	14304261.02	39°23'27.046"N	80°53'28.771"W	4928.50	133.815	0.29	0.09	-0.27
11480.00	89.510	157.910	6555.79	4508.53	-3500.65	3590.88	1671155.25	14304172.58	39°23'26.171"N	80°53'28.331"W	5014.87	134.271	1.54	-0.06	-1.54
11574.00	89.380	158.290	6556.70	4602.46	-3587.87	3625.93	1671190.30	14304085.41	39°23'25.309"N	80°53'27.886"W	5101.00	134.698	0.43	-0.14	0.40
11669.00	89.450	158.060	6557.67	4697.40	-3676.05	3661.25	1671225.60	14303997.25	39°23'24.436"N	80°53'27.438"W	5188.27	135.116	0.25	0.07	-0.24
11764.00	89.350	156.710	6558.67	4792.27	-3763.74	3697.78	1671262.11	14303909.60	39°23'23.569"N	80°53'26.974"W	5276.30	135.507	1.42	-0.11	-1.42
11858.00	90.030	158.930	6559.18	4886.18	-3850.78	3733.26	1671297.58	14303822.60	39°23'22.709"N	80°53'26.523"W	5363.37	135.888	2.47	0.72	2.36





# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH DATA (213 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]
11953.00	89.970	159.780	6559.18	4981.17	-3939.68	3766.76	1671331.06	14303733.74	39°23'21.830"N	80°53'26.098"W	5450.64	136.285	0.90	-0.06	0.89
12047.00	90.030	159.660	6559.18	5075.16	-4027.85	3799.34	1671363.63	14303645.60	39°23'20.958"N	80°53'25.684"W	5537.02	136.672	0.14	0.06	-0.13
12142.00	89.880	159.200	6559.25	5170.15	-4116.79	3832.72	1671397.00	14303556.69	39°23'20.078"N	80°53'25.260"W	5624.74	137.047	0.51	-0.16	-0.48
12236.00	89.880	158.270	6559.45	5264.12	-4204.39	3866.81	1671431.07	14303469.13	39°23'19.212"N	80°53'24.828"W	5712.19	137.395	0.99	0.00	-0.99
12331.00	89.970	157.960	6559.57	5359.05	-4292.55	3902.22	1671466.47	14303381.01	39°23'18.340"N	80°53'24.378"W	5801.14	137.727	0.34	0.09	-0.33
12425.00	89.880	161.090	6559.70	5453.03	-4380.60	3935.10	1671499.33	14303292.99	39°23'17.470"N	80°53'23.961"W	5888.51	138.067	3.33	-0.10	3.33
12520.00	89.880	162.740	6559.89	5547.99	-4470.90	3964.59	1671528.81	14303202.73	39°23'16.577"N	80°53'23.586"W	5975.52	138.435	1.74	0.00	1.74
12614.00	89.820	162.730	6560.14	5641.90	-4560.66	3992.48	1671556.70	14303113.00	39°23'15.689"N	80°53'23.232"W	6061.32	138.801	0.06	-0.06	-0.01
12708.00	89.910	162.230	6560.36	5735.83	-4650.30	4020.78	1671584.99	14303023.40	39°23'14.803"N	80°53'22.873"W	6147.52	139.152	0.54	0.10	-0.53
12803.00	90.000	162.250	6560.44	5830.77	-4740.77	4049.76	1671613.95	14302932.96	39°23'13.909"N	80°53'22.506"W	6235.02	139.495	0.10	0.09	0.02
12898.00	89.820	161.190	6560.59	5925.74	-4830.98	4079.56	1671643.74	14302842.79	39°23'13.017"N	80°53'22.128"W	6323.06	139.820	1.13	-0.19	-1.12
12992.00	89.970	160.270	6560.76	6019.73	-4919.71	4110.58	1671674.75	14302754.10	39°23'12.139"N	80°53'21.734"W	6410.96	140.120	0.99	0.16	-0.98
13087.00	89.970	159.170	6560.81	6114.73	-5008.82	4143.51	1671707.66	14302665.02	39°23'11.258"N	80°53'21.316"W	6500.53	140.401	1.16	0.00	-1.16
13181.00	90.000	157.360	6560.83	6208.67	-5096.13	4178.31	1671742.45	14302577.74	39°23'10.395"N	80°53'20.874"W	6590.06	140.652	1.93	0.03	-1.93
13275.00	90.030	156.260	6560.81	6302.50	-5182.54	4215.33	1671779.45	14302491.37	39°23'09.540"N	80°53'20.404"W	6680.40	140.876	1.17	0.03	-1.17
13369.00	90.060	158.800	6560.73	6396.38	-5269.39	4251.25	1671815.36	14302404.55	39°23'08.682"N	80°53'19.948"W	6770.50	141.104	2.70	0.03	2.70
13463.00	89.880	160.790	6560.78	6490.38	-5357.61	4283.72	1671847.81	14302316.38	39°23'07.809"N	80°53'19.536"W	6859.60	141.356	2.13	-0.19	2.12
13558.00	89.910	162.200	6560.96	6585.35	-5447.69	4313.87	1671877.95	14302226.33	39°23'06.919"N	80°53'19.153"W	6948.87	141.625	1.48	0.03	1.48
13653.00	89.970	163.340	6561.06	6680.26	-5538.43	4342.01	1671906.08	14302135.63	39°23'06.021"N	80°53'18.796"W	7037.56	141.904	1.20	0.06	1.20
13747.00	89.940	164.960	6561.13	6774.04	-5628.85	4367.68	1671931.74	14302045.24	39°23'05.127"N	80°53'18.471"W	7124.65	142.190	1.72	-0.03	1.72
13842.00	89.940	166.920	6561.23	6868.56	-5721.00	4390.76	1671954.81	14301953.13	39°23'04.216"N	80°53'18.178"W	7211.70	142.494	2.06	0.00	2.06
13937.00	90.090	167.590	6561.20	6962.85	-5813.66	4411.71	1671975.76	14301860.51	39°23'03.300"N	80°53'17.913"W	7298.07	142.807	0.72	0.16	0.71
14032.00	89.940	165.180	6561.18	7057.30	-5905.98	4434.08	1671998.11	14301768.22	39°23'02.388"N	80°53'17.629"W	7385.23	143.102	2.54	-0.16	-2.54
14127.00	89.850	164.410	6561.35	7152.00	-5997.66	4458.99	1672023.02	14301676.58	39°23'01.481"N	80°53'17.314"W	7473.59	143.371	0.82	-0.09	-0.81
14221.00	90.580	162.410	6561.00	7245.85	-6087.74	4485.83	1672049.85	14301586.54	39°23'00.591"N	80°53'16.973"W	7561.96	143.615	2.26	0.78	-2.13
14316.00	90.370	160.910	6560.21	7340.81	-6177.91	4515.72	1672079.72	14301496.41	39°22'59.699"N	80°53'16.594"W	7652.34	143.835	1.59	-0.22	-1.58
14410.00	89.880	158.400	6560.01	7434.80	-6266.03	4548.40	1672112.39	14301408.31	39°22'58.828"N	80°53'16.179"W	7742.81	144.025	2.72	-0.52	-2.67
14505.00	90.030	157.010	6560.08	7529.70	-6353.93	4584.44	1672148.41	14301320.45	39°22'57.958"N	80°53'15.722"W	7835.14	144.189	1.47	0.16	-1.46
14600.00	89.690	156.890	6560.32	7624.55	-6441.34	4621.63	1672185.60	14301233.07	39°22'57.094"N	80°53'15.249"W	7927.83	144.341	0.38	-0.36	-0.13
14694.00	90.120	156.170	6560.47	7718.35	-6527.57	4659.07	1672223.02	14301146.88	39°22'56.241"N	80°53'14.774"W	8019.73	144.483	0.89	0.46	-0.77



# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #09
Area	Tyler County, WV		Well Spock Unit 3H
Field	Tyler		Wellbore Spock Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (213 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]
14789.00	89.780	153.900	6560.55	7812.95	-6613.69	4699.16	1672263.09	14301060.80	39°22'55.390"N	80°53'14.265"W	8113.14	144.605	2.42	-0.36	-2.39
14884.00	89.690	151.200	6560.99	7907.09	-6697.98	4742.95	1672306.87	14300976.54	39°22'54.556"N	80°53'13.708"W	8207.22	144.697	2.84	-0.09	-2.84
14978.00	90.000	153.960	6561.25	8000.24	-6781.41	4786.23	1672350.13	14300893.14	39°22'53.731"N	80°53'13.158"W	8300.34	144.786	2.95	0.33	2.94
15073.00	89.110	154.930	6561.99	8094.75	-6867.11	4827.21	1672391.09	14300807.47	39°22'52.883"N	80°53'12.638"W	8394.00	144.895	1.39	-0.94	1.02
15168.00	89.600	157.210	6563.06	8189.48	-6953.94	4865.74	1672429.61	14300720.69	39°22'52.025"N	80°53'12.149"W	8487.21	145.019	2.45	0.52	2.40
15262.00	90.310	159.400	6563.13	8283.42	-7041.27	4900.49	1672464.34	14300633.39	39°22'51.161"N	80°53'11.708"W	8578.71	145.163	2.45	0.76	2.33
15357.00	90.310	160.950	6562.62	8378.42	-7130.64	4932.71	1672496.54	14300544.06	39°22'50.277"N	80°53'11.299"W	8670.50	145.326	1.63	0.00	1.63
15452.00	90.400	161.490	6562.03	8473.40	-7220.58	4963.29	1672527.11	14300454.15	39°22'49.388"N	80°53'10.911"W	8761.91	145.496	0.58	0.09	0.57
15546.00	90.830	164.090	6561.02	8567.30	-7310.36	4991.10	1672554.91	14300364.41	39°22'48.500"N	80°53'10.558"W	8851.69	145.677	2.80	0.46	2.77
15640.00	90.800	164.700	6559.68	8661.04	-7400.88	5016.38	1672580.19	14300273.92	39°22'47.605"N	80°53'10.237"W	8940.76	145.870	0.65	-0.03	0.65
15734.00	90.860	164.260	6558.32	8754.77	-7491.44	5041.53	1672605.32	14300183.39	39°22'46.710"N	80°53'09.919"W	9029.88	146.061	0.47	0.06	-0.47
15829.00	90.890	163.380	6556.87	8849.57	-7582.67	5068.00	1672631.78	14300092.21	39°22'45.808"N	80°53'09.583"W	9120.39	146.243	0.93	0.03	-0.93
15924.00	90.830	162.270	6555.44	8944.46	-7673.42	5096.05	1672659.82	14300001.49	39°22'44.911"N	80°53'09.227"W	9211.47	146.411	1.17	-0.06	-1.17
16018.00	90.830	161.780	6554.08	9038.41	-7762.82	5125.05	1672688.81	14299912.12	39°22'44.027"N	80°53'08.859"W	9302.02	146.567	0.52	0.00	-0.52
16113.00	90.920	161.280	6552.63	9133.37	-7852.92	5155.15	1672718.90	14299822.06	39°22'43.136"N	80°53'08.478"W	9393.82	146.717	0.53	0.09	-0.53
16207.00	90.860	160.020	6551.17	9227.36	-7941.60	5186.29	1672750.02	14299733.42	39°22'42.259"N	80°53'08.082"W	9485.07	146.853	1.34	-0.06	-1.34
16301.00	91.140	160.450	6549.53	9321.34	-8030.05	5218.07	1672781.79	14299645.01	39°22'41.385"N	80°53'07.679"W	9576.53	146.983	0.55	0.30	0.46
16396.00	90.370	158.290	6548.28	9416.32	-8118.94	5251.54	1672815.25	14299556.15	39°22'40.506"N	80°53'07.254"W	9669.32	147.104	2.41	-0.81	-2.27
16491.00	90.000	157.930	6547.97	9511.25	-8207.09	5286.96	1672850.65	14299468.04	39°22'39.634"N	80°53'06.805"W	9762.59	147.211	0.54	-0.39	-0.38
16585.00	89.940	158.430	6548.02	9605.19	-8294.36	5321.89	1672885.58	14299380.81	39°22'38.771"N	80°53'06.361"W	9854.89	147.315	0.54	-0.06	0.53
16680.00	89.230	157.060	6548.71	9700.09	-8382.27	5357.87	1672921.54	14299292.92	39°22'37.902"N	80°53'05.905"W	9948.33	147.414	1.62	-0.75	-1.44
16775.00	88.680	157.690	6550.44	9794.96	-8469.95	5394.41	1672958.06	14299205.28	39°22'37.035"N	80°53'05.441"W	10041.90	147.507	0.88	-0.58	0.66
16870.00	87.910	159.560	6553.27	9889.87	-8558.37	5429.02	1672992.66	14299116.90	39°22'36.160"N	80°53'05.001"W	10135.08	147.611	2.13	-0.81	1.97
16964.00	87.630	161.640	6556.92	9983.80	-8646.96	5460.22	1673023.84	14299028.34	39°22'35.284"N	80°53'04.606"W	10226.63	147.729	2.23	-0.30	2.21
17059.00	88.000	160.390	6560.55	10078.72	-8736.72	5491.10	1673054.71	14298938.61	39°22'34.397"N	80°53'04.214"W	10319.04	147.850	1.37	0.39	-1.32
17154.00	88.580	160.050	6563.38	10173.67	-8826.08	5523.23	1673086.84	14298849.29	39°22'33.513"N	80°53'03.806"W	10411.81	147.962	0.71	0.61	-0.36
17248.00	89.380	160.490	6565.06	10267.66	-8914.55	5554.96	1673118.55	14298760.86	39°22'32.638"N	80°53'03.403"W	10503.65	148.072	0.97	0.85	0.47
17343.00	89.380	162.650	6566.08	10362.62	-9004.66	5584.99	1673148.57	14298670.78	39°22'31.747"N	80°53'03.022"W	10596.04	148.191	2.27	0.00	2.27
17438.00	89.510	163.990	6567.00	10457.48	-9095.66	5612.26	1673175.82	14298579.82	39°22'30.848"N	80°53'02.677"W	10687.77	148.324	1.42	0.14	1.41
17532.00	89.880	164.070	6567.50	10551.27	-9186.03	5638.12	1673201.68	14298489.49	39°22'29.954"N	80°53'02.349"W	10778.29	148.460	0.40	0.39	0.09





# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH DATA (213 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]
17627.00	89.970	161.740	6567.63	10646.16	-9276.83	5666.04	1673229.59	14298398.73	39°22'29.056"N	80°53'01.995"W	10870.31	148.584	2.45	0.09	-2.45
17675.00	90.030	160.190	6567.63	10694.16	-9322.20	5681.70	1673245.24	14298353.37	39°22'28.608"N	80°53'01.796"W	10917.19	148.639	3.23	0.13	-3.23
17699.00	90.030	160.190	6567.62	10718.16	-9344.78	5689.83	1673253.37	14298330.80	39°22'28.384"N	80°53'01.693"W	10940.71	148.664	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: Spock Unit 3H AWB Ref Wellpath: Spock Unit 3H AWP Proj: 17699'

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	-0.01	0.10
17.5in Open Hole	105.00	453.00	348.00	105.00	453.00	-0.01	0.10	-0.57	1.54
13.375in Casing Surface	25.00	453.00	428.00	25.00	453.00	0.00	0.00	-0.57	1.54
12.25in Open Hole	453.00	2697.35	2244.35	453.00	2568.00	-0.57	1.54	324.50	597.86
9.625in Casing Intermediate	25.00	2697.35	2672.35	25.00	2568.00	0.00	0.00	324.50	597.86
8.75in Open Hole	2697.35	6245.00	3547.65	2568.00	5854.82	324.50	597.86	947.79	1775.27
8.5in Open Hole	6245.00	17699.00	11454.00	5854.82	6567.62	947.79	1775.27	-9344.78	5689.83
5.5in Casing Production	25.00	17699.00	17674.00	25.00	6567.62	0.00	0.00	-9344.78	5689.83

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Spock Unit 3H - POE - Plat	6515.00	564.39	2132.04	1669697.00	14308236.00	39°24'06.365"N	80°53'46.853"W	point
Spock Unit 3H - BHL - Plat	6541.00	-9345.58	5691.47	1673255.00	14298330.00	39°22'28.376"N	80°53'01.672"W	point



# Actual Wellpath Report

Spock Unit 3H AWP Proj: 17699'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Spock Unit 3H
Field	Tyler	Wellbore	Spock Unit 3H AWB
Facility	Pyle Run Pad		

## WELLPATH COMPOSITION - Ref Wellbore: Spock Unit 3H AWB Ref Wellpath: Spock Unit 3H AWP Proj: 17699'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	425.00	Gyrodata standard - Drop gyro or Multi-shot	01_Gyrodata MS Gyro <17-1/2">(100'-425')	Spock Unit 3H AWB
425.00	2656.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(425')(502'-2656')	Spock Unit 3H AWB
2656.00	6186.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2656')(2730'-6186')	Spock Unit 3H AWB
6186.00	17675.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (6186')(6226'-17675')	Spock Unit 3H AWB
17675.00	17699.00	Blind Drilling (std)	Projection to bit	Spock Unit 3H AWB