



Actual Wellpath Report

Tamarind Unit 2H AWP Proj: 14242'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Ritchie Petroleum Pad
Slot	Slot #03
Well	Tamarind Unit 2H
Wellbore	Tamarind Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999600
Convergence at slot	0.02° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	09/Jan/2018 at 10:42
Database/Source file	WA_MPL_EasternUS_Defn/Tamarind_Unit_2H_AWP_Proj_14242_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	22.27	19.63	1647394.39	14292760.80	39°21'33.510"N	80°58'31.130"W
Facility Reference Pt			1647374.77	14292738.54	39°21'33.290"N	80°58'31.380"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 32 (RKB)
MD Reference Pt	Frontier 32 (RKB)
Field Vertical Reference	Mean Sea Level
	Frontier 32 (RKB) to Facility Vertical Datum
	Frontier 32 (RKB) to Mean Sea Level
	Frontier 32 (RKB) to Mud Line at Slot (Slot #03)
	Section Origin
	Section Azimuth
	32.00ft
	1210.00ft
	32.00ft
	N 0.00, E 0.00 ft
	157.92°



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Operator	ANTERO RESOURCES CORPORATION	Slot #03
Area	Tyler County, WV	Tamarind Unit 2H
Field	Tyler	Tamarind Unit 2H AWB
Facility	Ritchie Petroleum Pad	

WELLPATH DATA (179 stations) * = interpolated/extrapolated station

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00H	0.000	296.170	0.00	0.00	0.00	0.00	1647394.39	14292760.80	39°21'33.510"N	80°58'31.130"W	0.00	0.00	0.00	0.00	0.00	
32.00	0.000	296.170	32.00	0.00	0.00	0.00	1647394.39	14292760.80	39°21'33.510"N	80°58'31.130"W	0.00	0.00	0.00	0.00	0.00	
117.00	0.290	296.170	117.00	-0.16	0.09	-0.19	1647394.20	14292760.90	39°21'33.511"N	80°58'31.132"W	0.22	296.170	0.34	0.34	-75.09	Gyrodata MS Gyro <17-1/2"> (100'-325')
217.00	0.400	306.280	217.00	-0.65	0.41	-0.70	1647393.69	14292761.21	39°21'33.514"N	80°58'31.139"W	0.81	300.486	0.13	0.11	10.11	
317.00	0.460	175.340	317.00	-0.56	0.22	-0.95	1647393.44	14292761.02	39°21'33.512"N	80°58'31.142"W	0.98	283.005	0.78	0.06	-130.94	
342.00	0.600	177.390	342.00	-0.34	-0.01	-0.94	1647393.46	14292760.79	39°21'33.510"N	80°58'31.142"W	0.94	268.309	0.57	0.56	8.20	
403.00	0.930	172.660	402.99	-0.44	-0.82	-0.86	1647393.53	14292759.98	39°21'33.502"N	80°58'31.141"W	1.19	226.266	0.55	0.54	-7.75	Gyrodata MS Gyro <12-1/4"> (325')(386'-745')
493.00	2.480	158.070	492.95	3.09	-3.35	-0.04	1647394.36	14292757.45	39°21'33.477"N	80°58'31.130"W	3.35	180.647	1.77	1.72	-16.21	
583.00	3.610	155.470	582.82	7.87	-7.74	1.87	1647396.26	14292753.07	39°21'33.434"N	80°58'31.106"W	7.96	166.441	1.26	1.26	-2.89	
672.00	3.900	143.690	671.63	13.60	-12.72	4.82	1647399.21	14292748.08	39°21'33.384"N	80°58'31.069"W	13.61	159.235	0.93	0.33	-13.30	
762.00	4.440	128.420	761.39	19.60	-17.35	9.37	1647403.76	14292743.46	39°21'33.338"N	80°58'31.011"W	19.72	151.635	1.36	0.60	-16.90	
819.00	3.520	121.820	818.26	22.94	-19.65	12.58	1647406.97	14292741.16	39°21'33.316"N	80°58'30.970"W	23.33	147.359	1.80	-1.61	-11.58	Directional ONE MWD <12-1/4"> (745')(802'-251')
895.00	2.230	114.410	894.16	25.89	-21.49	15.91	1647410.30	14292739.32	39°21'33.298"N	80°58'30.927"W	26.74	143.477	1.76	-1.70	-9.75	
983.00	1.260	84.880	982.12	27.42	-22.11	18.44	1647412.82	14292738.70	39°21'33.291"N	80°58'30.895"W	28.79	140.176	1.47	-1.10	-33.55	
1071.00	0.830	358.860	1070.11	27.10	-21.38	19.39	1647413.77	14292739.42	39°21'33.299"N	80°58'30.883"W	28.86	137.806	1.66	-0.49	-97.76	
1159.00	1.160	359.530	1158.09	25.68	-19.86	19.37	1647413.75	14292740.95	39°21'33.314"N	80°58'30.884"W	27.74	135.716	0.38	0.38	0.76	
1248.00	1.180	7.040	1247.08	24.04	-18.05	19.47	1647413.86	14292742.76	39°21'33.332"N	80°58'30.882"W	26.55	132.825	0.17	0.02	8.44	
1336.00	1.110	13.260	1335.06	22.56	-16.32	19.78	1647414.16	14292744.49	39°21'33.349"N	80°58'30.878"W	25.64	129.523	0.16	-0.08	7.07	
1424.00	1.320	64.060	1423.04	21.79	-15.04	20.89	1647415.27	14292745.76	39°21'33.361"N	80°58'30.864"W	25.74	125.767	1.20	0.24	57.73	
1512.00	3.040	79.720	1510.97	22.20	-14.18	24.09	1647418.48	14292746.62	39°21'33.370"N	80°58'30.823"W	27.96	120.487	2.05	1.95	17.80	
1601.00	5.430	83.030	1599.73	23.78	-13.25	30.60	1647424.98	14292747.55	39°21'33.379"N	80°58'30.741"W	33.34	113.419	2.70	2.69	3.72	
1689.00	7.560	88.650	1687.16	26.92	-12.61	40.52	1647434.89	14292748.19	39°21'33.385"N	80°58'30.614"W	42.43	107.288	2.52	2.42	6.39	
1778.00	8.660	88.680	1775.27	31.36	-12.32	53.07	1647447.44	14292748.49	39°21'33.388"N	80°58'30.454"W	54.48	103.069	1.24	1.24	0.04	
1866.00	9.410	79.600	1862.18	35.17	-10.87	66.77	1647461.14	14292749.94	39°21'33.402"N	80°58'30.280"W	67.65	99.246	1.83	0.85	-10.33	
1954.00	11.240	73.380	1948.75	37.44	-7.12	82.07	1647476.43	14292753.69	39°21'33.439"N	80°58'30.085"W	82.37	94.957	2.43	2.08	-7.07	
2043.00	12.630	67.960	2035.83	38.28	-0.98	99.40	1647493.75	14292759.82	39°21'33.500"N	80°58'29.865"W	99.40	90.568	2.00	1.56	-6.09	
2131.00	15.720	62.780	2121.14	37.21	8.08	118.92	1647513.27	14292768.88	39°21'33.500"N	80°58'29.616"W	119.20	86.113	3.79	3.51	-5.89	
2219.00	17.420	61.760	2205.48	34.73	19.77	141.13	1647535.46	14292780.56	39°21'33.705"N	80°58'29.333"W	142.51	82.027	1.96	1.93	-1.16	
2307.00	16.710	60.390	2289.61	31.66	32.25	163.73	1647558.06	14292793.04	39°21'33.828"N	80°58'29.045"W	166.88	78.857	0.93	-0.81	-1.56	
2395.00	14.560	53.270	2374.36	27.20	45.12	183.60	1647577.92	14292805.90	39°21'33.955"N	80°58'28.792"W	189.06	76.193	3.27	-2.44	-8.09	



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Tamarind Unit 2H AWP Proj: 14242'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #03
Area	Tyler County, WV	Tamarind Unit 2H
Field	Tyler	Tamarind Unit 2H AWB
Facility	Ritchie Petroleum Pad	

WELLPATH DATA (179 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure (ft)	Dist (ft)	Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
2484.00	14.390	54.820	2260.53	21.87	58.18	201.61	1647595.92	14292818.96	39°21'34.084"N	80°58'28.563"W	209.83	73.902	0.48	-0.19	1.74		
2528.00	15.120	57.770	2503.08	19.62	64.39	210.93	1647605.24	14292825.17	39°21'34.146"N	80°58'28.444"W	220.54	73.024	2.38	1.66	6.70		
2626.00	15.140	59.300	2597.68	15.45	77.74	232.75	1647627.05	14292838.51	39°21'34.278"N	80°58'28.167"W	245.39	71.529	0.41	0.02	1.56		Directional ONE MWD <-8-3/4"> (2511')(2609'-6715)
2714.00	15.880	55.750	2682.48	11.19	90.39	252.58	1647646.87	14292851.15	39°21'34.403"N	80°58'27.914"W	268.27	70.310	1.37	0.84	-4.03		
2802.00	17.090	51.960	2766.86	5.09	105.13	272.72	1647667.00	14292865.89	39°21'34.548"N	80°58'27.656"W	292.28	68.918	1.84	1.37	-4.31		
2890.00	18.780	52.660	2850.59	-2.19	121.69	294.16	1647688.44	14292882.44	39°21'34.712"N	80°58'27.385"W	318.34	67.526	1.94	1.92	0.80		
2979.00	19.870	56.950	2934.57	-8.84	138.63	318.23	1647712.50	14292899.38	39°21'34.879"N	80°58'26.728"W	347.42	66.461	2.01	1.22	4.82		
3067.00	22.080	64.630	3016.75	-12.64	153.88	345.72	1647739.98	14292914.62	39°21'35.030"N	80°58'26.319"W	378.42	66.008	2.89	2.84	3.00		
3156.00	24.430	67.300	3098.52	-13.80	168.15	377.82	1647772.06	14292928.88	39°21'35.171"N	80°58'25.877"W	413.55	66.008	4.00	2.51	8.73		
3244.00	26.330	66.860	3178.02	-14.36	182.85	412.56	1647806.78	14292943.57	39°21'35.316"N	80°58'25.408"W	451.26	66.097	2.17	2.16	-0.51		
3332.00	28.020	66.130	3256.31	-15.37	198.89	449.41	1647843.62	14292959.61	39°21'35.474"N	80°58'24.943"W	491.45	66.128	1.96	1.92	-0.82		
3421.00	26.870	59.980	3335.30	-18.80	217.41	485.95	1647880.14	14292978.12	39°21'35.657"N	80°58'24.510"W	532.36	65.896	3.44	-1.29	-6.91		
3509.00	26.990	57.130	3413.76	-25.29	238.20	519.94	1647914.12	14292998.90	39°21'35.863"N	80°58'24.090"W	571.90	65.386	1.47	0.14	-3.24		
3597.00	25.240	59.520	3492.78	-31.77	258.56	552.88	1647947.05	14293019.25	39°21'36.067"N	80°58'23.673"W	610.35	64.937	2.32	-1.99	2.72		
3685.00	25.720	60.580	3572.22	-36.95	277.45	585.68	1647979.84	14293038.14	39°21'36.251"N	80°58'23.243"W	648.08	64.652	0.75	0.55	1.20		
3774.00	25.370	62.360	3652.52	-41.26	295.78	619.40	1648013.54	14293056.47	39°21'36.432"N	80°58'22.817"W	686.40	64.474	0.95	-0.39	2.00		
3862.00	25.690	61.790	3731.93	-45.12	313.55	652.91	1648047.04	14293074.22	39°21'36.607"N	80°58'22.400"W	724.29	64.348	0.46	-0.36	-0.65		
3950.00	24.530	60.330	3811.61	-49.57	331.61	685.59	1648079.71	14293092.27	39°21'36.786"N	80°58'21.995"W	761.57	64.000	0.79	-1.32	-1.66		
4038.00	23.880	59.720	3891.88	-54.53	349.63	716.84	1648110.95	14293110.29	39°21'37.144"N	80°58'21.602"W	803.79	63.820	0.48	0.46	0.34		
4127.00	24.290	60.020	3973.13	-59.61	367.86	748.26	1648142.35	14293128.51	39°21'37.444"N	80°58'20.775"W	833.79	63.705	1.13	0.53	2.39		
4215.00	24.760	62.120	4053.19	-63.96	385.52	780.22	1648174.30	14293146.17	39°21'37.818"N	80°58'20.334"W	870.28	63.675	0.89	0.41	1.89		
4303.00	25.120	63.780	4132.98	-67.17	402.39	813.27	1648207.34	14293163.03	39°21'37.485"N	80°58'19.875"W	907.38	63.707	1.14	0.93	1.54		
4392.00	25.950	65.150	4213.29	-69.48	418.92	847.89	1648241.94	14293179.56	39°21'37.648"N	80°58'19.399"W	945.73	63.769	2.00	2.00	0.23		
4480.00	27.710	65.350	4291.81	-71.33	435.55	883.96	1648278.00	14293196.18	39°21'37.991"N	80°58'18.911"W	985.44	63.784	1.59	0.94	-2.72		
4568.00	28.540	62.960	4369.43	-74.06	453.64	921.28	1648315.30	14293214.26	39°21'38.189"N	80°58'18.412"W	1026.91	63.729	1.34	1.21	-1.18		
4657.00	29.620	61.910	4447.21	-78.20	473.66	959.62	1648353.63	14293234.27	39°21'38.399"N	80°58'17.900"W	1070.15	63.640	1.92	1.86	-0.90		
4745.00	31.260	61.120	4523.07	-83.18	494.93	998.80	1648392.79	14293255.53	39°21'38.625"N	80°58'17.417"W	1114.70	63.509	1.43	1.11	-1.72		
4833.00	32.240	59.610	4597.90	-89.28	517.83	1039.04	1648433.02	14293278.43	39°21'38.857"N	80°58'16.964"W	1160.93	63.316	4.38	-4.07	-3.18		
4921.00	28.660	56.810	4673.76	-96.74	541.27	1076.97	1648470.93	14293301.85	39°21'39.083"N	80°58'16.964"W	1205.33	63.110	0.80	-0.69	0.89		
5010.00	28.050	57.600	4752.08	-104.60	564.17	1112.50	1648506.44	14293324.74	39°21'39.083"N	80°58'16.964"W	1247.37	63.110	0.80	-0.69	0.89		



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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #03
Operator	ANTERO RESOURCES CORPORATION	Well	Tamarind Unit 2H
Area	Tyler County, WV	Wellbore	Tamarind Unit 2H AWB
Field	Tyler		
Facility	Ritchie Petroleum Pad		

WELLPATH DATA (179 stations) * = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
5098.00	25.670	58.420	4830.58	-111.46	585.24	1146.21	1648540.14	14293345.80	39°21'39.29"N	80°58'16.535"W	1286.97	62.952	2.74	-2.70	0.93	
5186.00	24.870	61.560	4910.16	-116.65	604.03	1178.72	1648572.64	14293364.59	39°21'39.47"N	80°58'16.121"W	1324.47	62.867	1.77	-0.91	3.57	
5275.00	27.080	62.280	4990.17	-120.72	622.37	1213.11	1648607.02	14293382.92	39°21'39.65"N	80°58'15.683"W	1363.45	62.841	2.51	2.48	0.81	
5363.00	28.280	59.740	5068.10	-125.65	642.19	1248.85	1648642.74	14293402.74	39°21'39.854"N	80°58'15.228"W	1404.30	62.787	1.91	1.38	-2.89	
5451.00	29.280	58.520	5145.23	-132.13	663.94	1285.21	1648679.09	14293424.47	39°21'40.068"N	80°58'14.311"W	1446.58	62.679	1.32	1.14	-1.39	
5539.00	27.790	57.680	5222.54	-139.29	686.14	1320.90	1648714.76	14293446.67	39°21'40.288"N	80°58'13.881"W	1488.48	62.550	1.75	-1.69	-0.95	
5628.00	26.510	54.790	5301.73	-147.50	708.69	1354.67	1648748.52	14293469.18	39°21'40.510"N	80°58'13.467"W	1528.84	62.384	2.06	-1.44	-3.25	
5716.00	24.980	62.260	5381.01	-153.79	728.67	1387.17	1648781.00	14293491.71	39°21'40.708"N	80°58'13.050"W	1566.91	62.287	4.07	-1.74	8.49	
5804.00	23.990	66.240	5461.14	-156.15	744.50	1419.93	1648813.75	14293505.00	39°21'40.864"N	80°58'12.619"W	1603.27	62.331	2.24	-1.24	4.52	
5893.00	25.120	66.760	5542.12	-157.06	759.22	1453.78	1648847.59	14293519.71	39°21'41.009"N	80°58'12.189"W	1640.09	62.425	1.40	1.38	0.58	
5981.00	25.610	72.170	5621.65	-156.03	772.41	1489.05	1648882.85	14293532.90	39°21'41.140"N	80°58'11.937"W	1677.47	62.583	2.69	0.56	6.15	
6025.00	25.540	75.550	5661.34	-154.06	777.69	1507.29	1648901.08	14293543.11	39°21'41.192"N	80°58'11.707"W	1696.09	62.708	3.32	-0.16	7.68	
6099.00	24.980	73.960	5701.13	-151.82	782.62	1525.41	1648919.19	14293554.75	39°21'41.241"N	80°58'11.474"W	1714.46	62.839	2.00	-1.27	-3.61	
6157.00	27.830	72.270	5779.88	-148.73	794.46	1562.83	1648937.46	14293568.75	39°21'41.296"N	80°58'11.230"W	1733.30	62.950	4.21	3.64	-4.86	
6202.00	26.360	80.810	5819.96	-145.70	799.26	1582.70	1648976.46	14293559.74	39°21'41.405"N	80°58'10.977"W	1753.17	63.053	2.88	2.84	1.02	
6246.00	27.320	88.030	5859.23	-140.05	801.17	1602.44	1648996.16	14293561.65	39°21'41.424"N	80°58'10.726"W	1773.07	63.206	9.23	-3.27	18.98	
6290.00	27.780	97.470	5898.26	-131.52	800.18	1622.71	1649016.45	14293560.66	39°21'41.414"N	80°58'10.468"W	1791.56	63.436	7.72	2.18	16.41	
6334.00	28.730	105.810	5937.03	-119.96	795.96	1643.06	1649036.79	14293556.44	39°21'41.372"N	80°58'10.209"W	1809.27	63.751	9.97	1.05	21.45	
6378.00	31.710	110.820	5975.05	-105.59	788.97	1664.05	1649057.78	14293549.45	39°21'41.303"N	80°58'09.941"W	1825.71	64.153	9.22	2.16	18.95	
6422.00	34.360	114.330	6011.94	-88.72	779.74	1686.18	1649079.90	14293540.23	39°21'41.212"N	80°58'09.660"W	1841.61	64.633	8.87	6.77	11.39	
6467.00	33.960	121.510	6049.19	-69.40	767.94	1708.48	1649102.18	14293528.43	39°21'41.095"N	80°58'09.376"W	1857.74	65.183	7.43	6.02	7.98	
6511.00	36.640	125.390	6085.10	-48.43	753.91	1729.66	1649123.36	14293514.40	39°21'40.956"N	80°58'09.106"W	1873.13	65.797	9.00	-0.89	15.96	
6555.00	38.560	128.540	6119.96	-25.41	737.75	1751.10	1649144.79	14293498.26	39°21'40.796"N	80°58'08.833"W	1886.82	66.449	7.94	6.09	8.82	
6599.00	40.730	131.910	6153.85	-0.55	719.62	1772.51	1649166.19	14293480.13	39°21'40.617"N	80°58'08.561"W	1900.16	67.154	6.17	4.36	7.16	
6643.00	42.800	133.500	6186.66	25.96	699.74	1794.04	1649187.71	14293460.26	39°21'40.420"N	80°58'08.287"W	1913.02	67.903	6.94	4.93	7.66	
6688.00	44.080	135.130	6219.34	54.32	678.12	1816.17	1649209.84	14293438.65	39°21'40.207"N	80°58'08.005"W	1925.67	68.693	5.28	4.70	3.61	
6732.00	45.150	140.200	6250.67	83.29	655.28	1836.96	1649230.82	14293415.82	39°21'39.981"N	80°58'07.741"W	1938.64	69.525	3.78	2.84	3.62	
6786.00	48.640	145.610	6287.58	121.35	623.83	1860.68	1649254.32	14293384.38	39°21'39.670"N	80°58'07.439"W	1950.34	70.368	8.45	2.43	11.52	
6811.00*	49.878	147.383	6303.90	139.92	608.04	1871.13	1649264.77	14293368.59	39°21'39.514"N	80°58'07.306"W	1962.47	71.465	9.76	6.46	10.02	BHI AT Curve -8-1/2"- (6732)(6786)-142(18)
											1967.44	71.998	7.31	4.95	7.09	Middlesex. 6811. MD



Actual Wellpath Report

Tamarind Unit 2H AWP Proj: 14242'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #03
Area	Tyler County, WV	Tamarind Unit 2H
Field	Tyler	Tamarind Unit 2H AWB
Facility	Ritchie Petroleum Pad	

WELLPATH DATA (179 stations) + = interpolated/extrapolated station

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	VertSect (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
6833.00	50.990	148.890	6317.91	156.63	583.63	1880.08	1649273.72	14293354.19	39°21'39.371"N	80°58'07.192"W	1971.57	72.477	7.31	5.05	6.85	
6881.00	55.760	152.090	6346.54	194.81	560.11	1899.02	1649292.65	14293320.68	39°21'39.040"N	80°58'06.951"W	1979.90	73.567	11.28	9.94	6.67	
6928.00	60.530	154.930	6371.34	234.60	524.38	1916.79	1649310.42	14293284.97	39°21'38.687"N	80°58'06.725"W	1987.23	74.700	11.37	10.15	6.04	
6976.00	65.710	156.400	6393.04	277.37	485.38	1934.42	1649328.03	14293245.99	39°21'38.301"N	80°58'06.501"W	1994.38	75.914	11.13	10.79	3.08	
6990.00†	66.957	156.090	6398.66	290.18	473.65	1939.58	1649333.20	14293234.26	39°21'38.185"N	80°58'06.435"W	1996.58	76.277	9.14	8.91	-2.22	Burkett 6990' MD
7023.00	69.900	155.380	6410.79	320.85	445.67	1952.19	1649345.80	14293206.29	39°21'37.903"N	80°58'06.274"W	2002.42	77.140	9.14	8.92	-2.15	
7059.00†	72.876	154.023	6422.28	354.90	414.83	1966.78	1649360.38	14293175.47	39°21'37.604"N	80°58'06.099"W	2010.05	78.090	9.01	8.27	-3.77	Tully 7059' MD
7071.00	73.870	153.580	6425.71	366.37	404.52	1971.85	1649365.45	14293165.15	39°21'37.502"N	80°58'06.024"W	2012.92	78.407	9.01	8.28	-3.69	
7084.00†	74.932	153.376	6429.21	378.86	393.31	1977.44	1649371.04	14293153.95	39°21'37.391"N	80°58'05.933"W	2016.18	78.751	8.31	8.17	-1.57	Marcellus POE: 7084' MD
7118.00	77.710	152.850	6437.25	411.77	363.85	1992.38	1649385.97	14293124.51	39°21'37.100"N	80°58'05.763"W	2025.33	79.651	8.31	8.17	-1.55	
7166.00	80.100	155.370	6446.49	458.76	321.48	2012.94	1649406.53	14293082.15	39°21'36.681"N	80°58'05.502"W	2038.45	80.926	7.16	4.98	5.25	
7213.00	83.180	156.750	6453.32	505.23	278.99	2031.81	1649425.38	14293039.67	39°21'36.261"N	80°58'05.262"W	2050.87	82.182	7.17	6.55	2.94	
7260.00	82.940	156.850	6459.00	551.88	236.10	2050.19	1649443.75	14292996.81	39°21'35.837"N	80°58'05.028"W	2063.74	83.431	0.55	-0.51	0.21	
7307.00	84.120	156.320	6464.29	598.57	193.25	2068.74	1649462.31	14292953.97	39°21'35.414"N	80°58'04.792"W	2077.75	84.663	2.75	2.51	-1.13	
7355.00	87.750	156.900	6467.70	646.42	149.31	2087.75	1649481.30	14292910.05	39°21'34.979"N	80°58'04.550"W	2093.08	85.909	7.66	7.56	1.21	
7450.00	89.690	155.220	6469.82	741.34	62.51	2126.28	1649519.82	14292823.29	39°21'34.121"N	80°58'04.060"W	2127.20	86.316	2.70	2.04	-1.77	
7546.00	89.880	154.950	6470.18	837.22	-24.55	2166.73	1649560.25	14292736.26	39°21'33.261"N	80°58'03.545"W	2166.87	90.649	0.34	0.20	-0.28	
7640.00	89.880	155.080	6470.37	931.10	-109.75	2206.43	1649599.94	14292651.09	39°21'32.418"N	80°58'03.040"W	2209.16	92.848	0.14	0.00	0.14	
7735.00	89.780	155.910	6470.66	1026.02	-196.20	2245.83	1649639.32	14292564.68	39°21'31.564"N	80°58'02.539"W	2254.39	94.993	0.88	-0.11	0.87	
7830.00	90.180	157.760	6470.69	1121.00	-283.53	2283.20	1649676.68	14292477.38	39°21'30.701"N	80°58'02.064"W	2300.74	97.079	1.99	0.42	1.95	
7926.00	90.090	161.120	6470.46	1216.95	-373.40	2316.91	1649710.37	14292387.55	39°21'29.812"N	80°58'01.635"W	2346.81	99.155	3.50	-0.09	3.50	
8021.00	90.150	161.240	6470.26	1311.79	-463.33	2347.56	1649741.01	14292297.66	39°21'28.923"N	80°58'01.245"W	2382.84	101.165	0.14	0.06	0.13	
8117.00	90.060	159.850	6470.09	1407.70	-553.79	2379.89	1649773.13	14292207.24	39°21'28.029"N	80°58'00.836"W	2443.28	103.100	1.66	-0.09	-1.66	
8212.00	89.910	159.700	6470.11	1502.65	-642.87	2412.59	1649806.11	14292118.19	39°21'27.148"N	80°58'00.417"W	2496.87	104.920	0.17	-0.16	0.05	
8306.00	90.030	160.010	6470.16	1596.60	-731.12	2445.06	1649838.47	14292029.97	39°21'26.276"N	80°58'00.005"W	2552.03	106.648	0.35	0.13	0.33	
8401.00	90.180	161.160	6469.99	1691.49	-820.72	2476.64	1649870.04	14291940.41	39°21'25.390"N	80°57'59.603"W	2609.08	108.334	1.22	0.16	1.21	
8495.00	90.150	161.620	6469.72	1785.32	-909.80	2506.84	1649900.02	14291851.37	39°21'24.510"N	80°57'59.222"W	2666.64	109.949	0.49	-0.03	0.49	
8590.00	90.150	160.200	6469.47	1880.19	-999.57	2537.11	1649931.08	14291761.63	39°21'23.623"N	80°57'58.827"W	2727.47	111.499	1.49	0.00	-1.49	
8685.00	90.120	158.620	6469.25	1975.15	-1088.50	2571.11	1649964.47	14291672.74	39°21'22.743"N	80°57'58.402"W	2792.03	112.948	1.66	-0.03	-1.66	
8780.00	90.120	158.670	6469.05	2070.15	-1176.98	2605.71	1649999.05	14291584.29	39°21'21.869"N	80°57'57.962"W	2859.19	114.308	0.05	0.00	0.05	



Actual Wellpath Report

Tamarind Unit 2H AWP Proj: 14242'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Tamarind Unit 2H
Tyler County, WV	Wellbore	Tamarind Unit 2H AWB
Tyler		
Richie Petroleum Pad		

WELLPATH DATA (179 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
8875.00	90.000	159.290	6468.95	2165.13	-1265.66	2639.78	1650033.11	14291495.65	39°21'20.992"N	80°57'57.529"W	2927.51	115.616	0.66	-0.13	0.65	
8970.00	90.030	158.180	6468.92	2260.12	-1354.19	2674.24	1650067.56	14291407.16	39°21'20.117"N	80°57'57.090"W	2997.56	116.857	1.17	0.03	-1.17	
9065.00	89.940	154.400	6468.95	2355.06	-1441.15	2712.43	1650105.73	14291320.23	39°21'19.257"N	80°57'56.605"W	3071.51	117.982	3.98	-0.09	-3.98	
9160.00	90.000	153.090	6469.00	2449.81	-1526.35	2754.45	1650147.74	14291235.06	39°21'18.415"N	80°57'56.070"W	3149.09	118.993	1.38	0.06	-1.38	
9255.00	90.310	153.250	6468.74	2544.48	-1611.12	2797.33	1650190.60	14291150.33	39°21'17.577"N	80°57'55.525"W	3228.12	119.940	0.37	0.33	0.17	
9350.00	90.120	155.060	6468.38	2639.27	-1786.62	2838.74	1650232.00	14291064.87	39°21'16.732"N	80°57'54.998"W	3307.11	120.865	1.92	-0.20	1.91	
9445.00	90.060	153.300	6468.23	2734.07	-1872.13	2880.12	1650273.35	14290979.39	39°21'15.887"N	80°57'54.472"W	3386.90	121.748	1.85	-0.06	-1.85	
9540.00	89.850	153.000	6468.31	2828.74	-1866.89	2923.03	1650316.24	14290894.66	39°21'15.049"N	80°57'53.926"W	3468.34	122.566	0.39	-0.22	-0.32	
9635.00	90.030	156.790	6468.41	2923.59	-1952.90	2963.33	1650356.53	14290808.69	39°21'14.199"N	80°57'53.413"W	3548.96	123.386	3.99	0.19	3.99	
9730.00	90.000	161.450	6468.38	3018.54	-2041.63	2997.18	1650390.36	14290719.99	39°21'13.321"N	80°57'52.983"W	3626.48	124.262	4.91	-0.03	4.91	
9825.00	90.030	162.440	6468.36	3113.30	-2131.95	3026.62	1650419.79	14290629.70	39°21'12.429"N	80°57'52.608"W	3702.11	125.161	1.04	0.03	1.04	
9920.00	90.060	164.860	6468.28	3207.82	-2223.11	3053.36	1650448.52	14290538.59	39°21'11.528"N	80°57'52.268"W	3776.93	126.058	2.55	0.03	2.55	
10015.00	90.090	165.450	6468.16	3302.07	-2314.93	3077.70	1650470.85	14290446.80	39°21'10.620"N	80°57'51.959"W	3851.12	126.949	0.62	0.03	0.62	
10110.00	90.310	162.880	6467.83	3396.49	-2406.32	3103.62	1650496.76	14290355.45	39°21'09.717"N	80°57'51.630"W	3927.19	127.787	2.72	0.23	-2.71	
10205.00	90.180	159.390	6467.42	3491.33	-2496.20	3134.33	1650527.46	14290265.60	39°21'08.828"N	80°57'51.239"W	4006.88	128.534	3.68	-0.14	-3.67	
10299.00	90.060	155.880	6467.22	3585.31	-2583.12	3170.09	1650563.21	14290178.72	39°21'07.969"N	80°57'50.784"W	4089.25	129.175	3.74	-0.13	-3.73	
10394.00	90.060	157.760	6467.12	3680.29	-2670.45	3207.48	1650600.97	14290091.43	39°21'07.106"N	80°57'50.309"W	4173.64	129.780	1.98	0.00	1.98	
10489.00	90.090	159.780	6467.00	3775.28	-2758.99	3241.88	1650634.97	14290002.92	39°21'06.230"N	80°57'49.871"W	4256.98	130.399	2.13	0.03	2.13	
10584.00	90.150	159.070	6466.80	3870.24	-2847.93	3275.27	1650668.35	14289914.01	39°21'05.351"N	80°57'49.447"W	4340.29	131.008	0.75	0.06	-0.75	
10679.00	90.090	158.240	6466.60	3965.23	-2936.42	3309.85	1650702.91	14289825.57	39°21'04.477"N	80°57'49.007"W	4424.66	131.579	0.88	-0.06	-0.87	
10773.00	90.090	156.810	6466.45	4059.23	-3023.27	3345.78	1650738.83	14289738.74	39°21'03.618"N	80°57'48.550"W	4509.37	132.101	1.52	0.00	-1.52	
10869.00	90.250	154.320	6466.17	4155.14	-3110.67	3385.49	1650778.52	14289651.38	39°21'02.794"N	80°57'48.045"W	4597.58	132.578	2.60	0.17	-2.59	
10964.00	90.150	154.420	6465.84	4249.96	-3196.32	3426.58	1650819.60	14289565.77	39°21'01.907"N	80°57'47.522"W	4685.93	133.009	0.15	-0.11	0.11	
11059.00	90.150	154.650	6465.59	4344.79	-3282.09	3467.43	1650860.43	14289480.03	39°21'01.059"N	80°57'47.003"W	4774.43	133.427	0.24	0.00	0.24	
11154.00	90.060	154.590	6465.42	4439.63	-3367.92	3508.15	1650901.13	14289394.23	39°21'00.211"N	80°57'46.485"W	4863.12	133.832	0.11	-0.09	-0.06	
11249.00	90.030	155.130	6465.34	4534.50	-3453.92	3548.51	1650941.47	14289308.27	39°20'59.361"N	80°57'45.972"W	4951.91	134.226	0.57	-0.03	0.57	
11344.00	90.060	156.310	6465.27	4629.42	-3540.52	3587.57	1650980.52	14289221.71	39°20'58.505"N	80°57'45.475"W	5040.43	134.622	1.24	0.03	1.24	
11440.00	90.060	156.630	6465.17	4725.39	-3628.63	3625.89	1651018.83	14289133.72	39°20'57.635"N	80°57'44.987"W	5129.66	135.021	0.33	0.00	0.33	
11535.00	89.970	157.190	6465.14	4820.38	-3715.92	3663.15	1651056.17	14289046.37	39°20'56.771"N	80°57'44.514"W	5217.93	135.410	0.60	-0.09	-0.59	
11630.00	89.880	156.710	6465.27	4915.36	-3803.34	3700.35	1651093.25	14288958.99	39°20'55.907"N	80°57'44.041"W	5306.41	135.786	0.51	-0.09	-0.51	



Actual Wellpath Report

Tamarind Unit 2H AWP Proj: 14242'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #03
ANTERO RESOURCES CORPORATION	Tamarind Unit 2H
Area	Well
Tyler	Tamarind Unit 2H AWB
Field	Wellbore
Facility	Ritchie Petroleum Pad

WELLPATH DATA (179 stations)

MD	Inclination	Azimuth	TVD	Vert.Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft/100ft)	(°/100ft)	(°/100ft)	
11725.00	90.000	157.620	6465.36	5010.36	-3890.89	3737.21	1651130.10	14288871.47	39°20'55.04"N	80°57'43.57"W	5394.98	136.154	0.97	0.13	0.96	
11820.00	90.030	157.450	6465.34	5105.35	-3978.68	3773.51	1651166.39	14288789.72	39°20'54.17"N	80°57'43.11"W	5483.55	136.516	0.18	0.03	-0.18	
11915.00	90.060	157.980	6465.27	5200.35	-4066.59	3809.54	1651202.40	14288695.85	39°20'53.30"N	80°57'42.65"W	5572.23	136.869	0.56	0.03	0.56	
12010.00	90.180	158.240	6465.07	5295.35	-4154.74	3844.96	1651237.81	14288607.73	39°20'52.43"N	80°57'42.20"W	5660.88	137.218	0.30	0.13	0.27	
12105.00	90.680	163.830	6464.35	5390.17	-4244.54	3875.82	1651268.65	14288517.96	39°20'51.54"N	80°57'41.80"W	5747.88	137.600	5.91	0.53	5.88	
12199.00	90.030	164.950	6463.77	5483.57	-4335.07	3901.11	1651293.94	14288427.47	39°20'50.65"N	80°57'41.48"W	5831.94	138.016	1.38	-0.69	1.19	
12294.00	89.750	162.280	6463.95	5578.09	-4426.20	3927.91	1651320.72	14288336.38	39°20'49.75"N	80°57'41.14"W	5917.75	138.413	2.83	-0.29	-2.81	
12389.00	89.600	160.810	6464.49	5672.90	-4516.31	3957.98	1651350.78	14288246.30	39°20'48.85"N	80°57'40.76"W	6005.22	138.770	1.56	-0.16	-1.55	
12484.00	89.660	157.960	6465.11	5767.85	-4605.22	3991.42	1651384.21	14288157.43	39°20'47.98"N	80°57'40.34"W	6094.22	139.084	3.00	0.06	-3.00	
12579.00	89.690	157.350	6465.67	5862.85	-4693.09	4027.54	1651420.32	14288069.60	39°20'47.11"N	80°57'39.88"W	6184.35	139.364	0.64	0.00	-0.64	
12674.00	89.690	154.760	6466.21	5957.79	-4779.90	4066.09	1651458.85	14287982.82	39°20'46.25"N	80°57'39.39"W	6275.39	139.613	2.73	0.03	-2.73	
12769.00	89.780	152.320	6466.65	6052.50	-4864.94	4108.42	1651501.16	14287897.81	39°20'45.41"N	80°57'38.85"W	6367.63	139.819	2.57	0.09	-2.57	
12863.00	89.540	152.820	6467.21	6146.09	-4948.37	4151.72	1651544.45	14287814.42	39°20'44.58"N	80°57'38.30"W	6459.35	140.003	0.59	-0.26	0.53	
12958.00	89.630	151.090	6467.89	6240.57	-5032.21	4196.38	1651589.09	14287730.61	39°20'43.75"N	80°57'37.73"W	6552.31	140.175	1.82	0.09	-1.82	
13054.00	89.720	155.230	6468.44	6336.22	-5117.85	4239.72	1651632.41	14287645.01	39°20'42.91"N	80°57'37.18"W	6645.87	140.361	4.31	0.09	4.31	
13148.00	89.970	159.850	6468.69	6430.19	-5204.69	4275.62	1651688.29	14287558.20	39°20'42.05"N	80°57'36.72"W	6735.71	140.597	4.92	0.27	4.91	
13243.00	89.940	157.950	6468.77	6525.17	-5293.32	4309.82	1651702.48	14287469.61	39°20'41.17"N	80°57'36.29"W	6825.96	140.848	2.00	-0.03	-2.00	
13337.00	90.060	160.300	6468.77	6619.15	-5381.14	4343.31	1651735.96	14287381.82	39°20'40.30"N	80°57'35.86"W	6915.28	141.092	2.50	0.13	2.50	
13432.00	89.880	160.020	6468.82	6714.07	-5470.51	4375.55	1651768.19	14287292.49	39°20'39.42"N	80°57'35.45"W	7005.13	141.346	0.35	-0.19	-0.29	
13527.00	89.940	155.230	6468.97	6808.04	-5558.33	4411.71	1651804.33	14287204.71	39°20'38.58"N	80°57'34.98"W	7096.35	141.561	5.04	0.06	-5.04	
13622.00	89.880	155.090	6469.12	6903.93	-5644.54	4451.61	1651844.22	14287118.53	39°20'37.70"N	80°57'34.48"W	7188.72	141.739	0.16	-0.06	-0.15	
13717.00	89.880	157.610	6469.31	6998.89	-5731.55	4489.72	1651882.31	14287031.55	39°20'36.84"N	80°57'33.57"W	7280.68	141.927	2.65	0.00	2.65	
13813.00	90.000	161.270	6469.41	7094.84	-5821.42	4523.43	1651916.00	14286941.72	39°20'35.95"N	80°57'33.06"W	7372.27	142.152	3.81	0.13	3.81	
13908.00	89.630	160.940	6469.72	7189.69	-5911.30	4554.19	1651946.75	14286851.87	39°20'35.06"N	80°57'33.18"W	7462.18	142.389	0.52	-0.39	-0.35	
14003.00	89.600	161.010	6470.36	7284.55	-6001.11	4585.16	1651977.71	14286762.10	39°20'34.18"N	80°57'32.79"W	7552.29	142.618	0.08	-0.03	0.07	
14098.00	89.540	160.530	6471.07	7379.43	-6090.81	4616.45	1652008.99	14286672.44	39°20'33.29"N	80°57'32.39"W	7642.61	142.840	0.51	-0.06	-0.51	
14193.00	89.660	160.720	6471.74	7474.33	-6180.43	4647.96	1652040.49	14286582.86	39°20'32.40"N	80°57'31.99"W	7733.13	143.055	0.24	0.13	0.20	
14288.00	89.720	160.950	6471.87	7499.29	-6204.04	4666.17	1652048.69	14286559.25	39°20'32.17"N	80°57'31.88"W	7756.93	143.112	0.95	0.24	0.92	
14242.00	89.720	160.950	6471.99	7523.26	-6226.73	4664.00	1652056.52	14286536.58	39°20'31.95"N	80°57'31.78"W	7779.78	143.166	0.00	0.00	0.00	Projected MD at TD: 14242'

HOLE & CASING SECTIONS - Ref Wellbore: Tamarind Unit 2H AWB Ref Wellpath: Tamarind Unit 2H AWP Proj: 14242'

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	32.00	112.00	80.00	32.00	112.00	0.00	0.00	0.08	-0.17
17.5in Open Hole	112.00	369.00	257.00	112.00	368.99	0.08	-0.17	-0.33	-0.91
13.375in Casing Surface	32.00	369.00	337.00	32.00	368.99	0.00	0.00	-0.33	-0.91
12.25in Open Hole	369.00	2592.00	2223.00	368.99	2564.96	-0.33	-0.91	73.18	225.13
9.625in Casing Intermediate	32.00	2592.00	2560.00	32.00	2564.96	0.00	0.00	73.18	225.13
8.75in Open Hole	2592.00	6819.00	4227.00	2564.86	6309.03	73.18	225.13	602.85	1874.41
8.5in Open Hole	6819.00	14242.00	7423.00	6309.03	6471.99	602.85	1874.41	-6226.73	4664.00
5.5in Casing Production	32.00	14242.00	14210.00	32.00	6471.99	0.00	0.00	-6226.73	4664.00

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Tamarind Unit 2H POE - Rev-2	6425.00	428.12	1968.31	1649361.91	14293188.75	39°21'37.735"N	80°58'06.069"W	point
Tamarind Unit 2H BHL - Rev-2	6462.00	-6242.34	4674.89	1652067.40	14286520.97	39°20'31.796"N	80°57'31.650"W	point
Tamarind Unit 2H LP - Rev-1	6462.00	240.43	2044.47	1649438.04	14293001.13	39°21'35.880"N	80°58'05.101"W	point



Actual Wellpath Report

Tamarind Unit 2H AWP Proj: 14242'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Tamarind Unit 2H
Area Tyler County, WV	Wellbore	Tamarind Unit 2H AWB
Field Tyler		
Facility Ritchie Petroleum Pad		

COMMENTS

Wellpath general comments

API: 47-095-02320-0000
 BHI Job #: 8804138
 Rig: Frontier 32
 Duration: 10/09/2017-10/15/2017
 Gyrodatta MS Gyro <17-1/2"> (100'-325')
 Gyrodatta MS Gyro <12-1/4"> (325')(386'-745')
 Gyrodatta MS Gyro <12-1/4"> (745')(802'-2511')
 Directional ONE MWD <12-1/4"> (745')(802'-2511')
 Directional ONE MWD <8-3/4"> (2511')(2609'-6715')
 BHI AT Curve <8-1/2"> (6732')(6786'-14218')
 Middlesex: 6811' MD
 Burkett: 6990' MD
 Tully: 7059' MD
 Marcellus POE: 7084' MD
 Projected MD at TD: 14242'