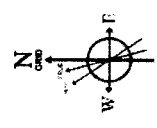




ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
Field: Ritchie
Facility: Zinn Pad

Slot: Slot #01
Well: Piedmont Unit 1H
Wellbore: Piedmont Unit 1H PWB



BGM (1900.0 to 2016.0) Dip: 86.66° Field: 52118.31°
Magnetic North is 8.33 degrees West of True North (at 12/2016)
To correct azimuth from True to Grid subtract 0.94 degrees
To correct azimuth from Magnetic to Grid subtract 8.57 degrees

SDI Slot Keeper Gyro (112-5812) : 0.21° Inc, 112.00ft MD, 112.00ft TVD, -0.15ft VS

Plot reference wellpath is Piedmont Unit 1H PWB Rev-A.0		Grid System: NAD27 / UTM Zone 17 North, US feet	
True vertical depths are referenced to Patterson 343 (RT)		* Wellpath was transformed from a different geoidetic datum	
Measured depths are referenced to Patterson 343 (RT)		North Reference: Grid north	
Patterson 343 (RT) to Mean Sea Level: 1144 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: Slot #01): -1119 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: harslik on 2016-07-12	
		Database: WA_MPL_EASTERNUS_Datn	

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Zinn Pad	1657862.100	14276491.400	39°19'12.370"N	80°56'17.680"W
Slot #01	41.45	-27.51	Grid East (US ft)	Grid North (US ft)
Patterson 343 (RT) to Mud line (At Slot: Slot #01)	1657854.600	14276532.830	39°19'12.780"N	80°56'18.030"W
Mean Sea Level to Mud line (At Slot: Slot #01)		25ft		
Patterson 343 (RT) to Mean Sea Level		-1119ft		
		1144ft		

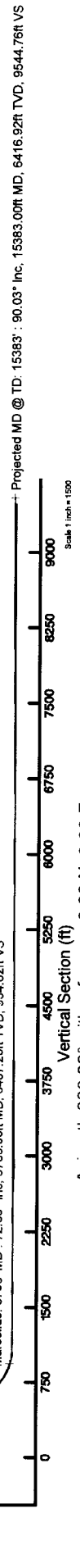
Well Data

Slot	Well	Wellbore
Slot #01	Piedmont Unit 1H	Piedmont Unit 1H AVWB
Slot #01	Piedmont Unit 1H	Piedmont Unit 1H PWB
Slot #01	Piedmont Unit 1H	Piedmont Unit 1H PWB Rev-A.0

API: 47-085-10171-0000
BHI Job #: 8009777
Rig: Patterson 343
Duration: 6.16.16-6.18.16

BHI AT Curve <8-1/2">(5812)(5885-15358) : 13.99° Inc, 5885.00ft MD, 5738.50ft TVD, 480.19ft VS

Marcellus: 6756° MD : 72.55° Inc, 6756.00ft MD, 6407.23ft TVD, 934.82ft VS



Vertical Section (ft)
Azimuth 336.86° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'

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REFERENCE WELLPATH IDENTIFICATION		
Operator	ANTERO RESOURCES CORPORATION	Slot #01
Area	Ritchie County, WV	Piedmont Unit 1H
Field	Ritchie	Piedmont Unit 1H AWB
Facility	Zinn Pad	

REPORT SETUP INFORMATION		
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System
North Reference	Grid	User
Scale	0.999600	Report Generated
Convergence at slot	0.04° East	Database/Source file
		WA_MPL_EASTERNUS_Defn\Piedmont_Unit_1H_AWP_Proj_15383_.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	41.45	-27.51	1657854.60	14278532.83	39°19'12.780"N	80°56'18.030"W
Facility Reference Pt			1657882.10	14278491.40	39°19'12.370"N	80°56'17.680"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM		
Calculation method	Minimum curvature	Patterson 343 (RT) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Patterson 343 (RT) to Mean Sea Level
Vertical Reference Pt	Patterson 343 (RT)	Patterson 343 (RT) to Mud Line at Slot (Slot #01)
MD Reference Pt	Patterson 343 (RT)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth
		25.00ft
		1144.00ft
		25.00ft
		N 0.00, E 0.00 ft
		336.86°



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Piedmont Unit 1H
Area	Ritchie County, WV	Wellbore	Piedmont Unit 1H AWB
Field	Ritchie		
Facility	Zlinn Pad		

WELLPATH DATA (348 stations) † = interpolated/extrapolated station																	
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert (ft)	Sec (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 (°/100ft)	Comments
0.00	0.00	176.490	0.00	0.00	0.00	0.00	0.00	1657854.60	14278532.83	39°19'12.780"N	80°56'18.030"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.00	176.490	25.00	0.00	0.00	0.00	0.00	1657854.60	14278532.83	39°19'12.780"N	80°56'18.030"W	0.00	0.000	0.00	0.00	0.00	
112.00	0.210	176.490	112.00	-0.15	-0.16	0.01	0.01	1657854.61	14278532.87	39°19'12.778"N	80°56'18.030"W	0.16	176.490	0.24	0.24	202.86	SDI Std. Keeper Gyro (112'-5812')
137.00	0.210	197.390	137.00	-0.23	-0.25	0.00	0.00	1657854.60	14278532.58	39°19'12.778"N	80°56'18.030"W	0.25	180.260	0.30	0.00	0.00	83.60
182.00	0.220	184.390	182.00	-0.31	-0.34	0.00	0.00	1657854.60	14278532.49	39°19'12.777"N	80°56'18.030"W	0.34	180.322	0.49	0.04	-132.00	
187.00	0.180	173.240	187.00	-0.40	-0.42	0.02	0.02	1657854.62	14278532.41	39°19'12.776"N	80°56'18.030"W	0.42	177.887	0.20	-0.16	35.40	
212.00	0.200	173.610	212.00	-0.48	-0.51	0.03	0.03	1657854.63	14278532.32	39°19'12.775"N	80°56'18.030"W	0.51	177.159	0.08	0.08	1.48	
237.00	0.120	160.770	237.00	-0.54	-0.57	0.04	0.04	1657854.64	14278532.26	39°19'12.774"N	80°56'18.029"W	0.58	176.155	0.35	-0.32	-51.36	
262.00	0.120	132.220	262.00	-0.59	-0.62	0.07	0.07	1657854.67	14278532.21	39°19'12.774"N	80°56'18.029"W	0.62	173.834	0.24	0.00	-114.20	
312.00	0.150	122.930	312.00	-0.64	-0.66	0.11	0.11	1657854.71	14278532.18	39°19'12.773"N	80°56'18.029"W	0.66	170.127	0.15	0.12	-37.16	
337.00	0.140	120.470	337.00	-0.74	-0.71	0.22	0.22	1657854.82	14278532.15	39°19'12.773"N	80°56'18.028"W	0.74	162.364	0.10	0.00	40.80	
362.00	0.180	113.930	362.00	-0.79	-0.74	0.29	0.29	1657854.89	14278532.09	39°19'12.773"N	80°56'18.026"W	0.79	158.758	0.18	0.16	-26.16	
387.00	0.240	106.150	387.00	-0.85	-0.77	0.37	0.37	1657854.97	14278532.06	39°19'12.772"N	80°56'18.025"W	0.85	154.105	0.27	0.24	-31.12	
412.00	0.250	119.790	412.00	-0.93	-0.81	0.47	0.47	1657855.07	14278532.02	39°19'12.772"N	80°56'18.024"W	0.94	149.842	0.24	0.04	54.56	
437.00	0.320	123.600	437.00	-1.03	-0.88	0.58	0.58	1657855.18	14278531.95	39°19'12.771"N	80°56'18.023"W	1.05	146.660	0.29	0.28	15.24	
462.00	0.290	124.090	462.00	-1.14	-0.95	0.69	0.69	1657855.29	14278531.88	39°19'12.771"N	80°56'18.021"W	1.17	144.135	0.12	-0.12	1.96	
487.00	0.350	128.080	487.00	-1.26	-1.03	0.80	0.80	1657855.40	14278531.80	39°19'12.770"N	80°56'18.020"W	1.31	142.256	0.26	0.24	15.96	
512.00	0.310	130.990	512.00	-1.39	-1.12	0.91	0.91	1657855.51	14278531.71	39°19'12.769"N	80°56'18.018"W	1.45	140.991	0.17	-0.16	11.64	
537.00	0.320	136.060	537.00	-1.52	-1.22	1.01	1.01	1657855.61	14278531.61	39°19'12.768"N	80°56'18.017"W	1.58	140.349	0.12	0.04	20.26	
562.00	0.260	143.210	562.00	-1.64	-1.31	1.09	1.09	1657855.69	14278531.52	39°19'12.767"N	80°56'18.016"W	1.71	140.269	0.28	-0.24	28.60	
587.00	0.170	148.220	587.00	-1.73	-1.39	1.15	1.15	1657855.75	14278531.44	39°19'12.766"N	80°56'18.015"W	1.80	140.524	0.37	-0.36	20.04	
612.00	0.130	350.360	612.00	-1.74	-1.39	1.16	1.16	1657855.76	14278531.44	39°19'12.766"N	80°56'18.015"W	1.81	140.235	1.18	-0.16	-631.44	
637.00	0.240	325.560	637.00	-1.66	-1.32	1.13	1.13	1657855.73	14278531.51	39°19'12.767"N	80°56'18.016"W	1.74	139.606	0.53	0.44	-99.20	
662.00	0.300	326.060	662.00	-1.54	-1.23	1.06	1.06	1657855.66	14278531.60	39°19'12.768"N	80°56'18.016"W	1.62	139.153	0.24	0.24	2.08	
687.00	0.620	328.360	687.00	-1.35	-1.06	0.95	0.95	1657855.55	14278531.77	39°19'12.770"N	80°56'18.018"W	1.42	137.963	1.28	1.28	9.12	
712.00	0.920	334.130	712.00	-1.01	-0.76	0.79	0.79	1657855.39	14278532.07	39°19'12.772"N	80°56'18.020"W	1.10	133.776	1.24	1.20	23.08	
737.00	1.230	333.360	737.00	-0.54	-0.34	0.59	0.59	1657855.19	14278532.49	39°19'12.777"N	80°56'18.023"W	0.68	120.142	1.24	1.24	-3.08	
762.00	1.310	333.320	762.00	0.01	0.15	0.34	0.34	1657855.94	14278532.98	39°19'12.782"N	80°56'18.026"W	0.37	65.346	0.32	0.32	-0.16	
787.00	1.370	334.580	787.00	0.59	0.68	0.68	0.68	1657854.66	14278533.51	39°19'12.787"N	80°56'18.029"W	0.68	6.779	0.27	0.24	5.04	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
812.00	1.510	330.710	811.97	1.22	1.24	-0.21	1657854.39	14278534.07	39°19'12.792"N	80°56'18.033"W	1.25	350.431	0.68	0.56	-15.48	
837.00	1.790	324.110	836.96	1.93	1.84	-0.60	1657854.00	14278534.67	39°19'12.796"N	80°56'18.038"W	1.94	341.987	1.35	1.12	-26.40	
862.00	2.080	318.750	861.94	2.74	2.50	-1.13	1657853.33	14278535.33	39°19'12.805"N	80°56'18.044"W	2.74	335.727	1.37	1.16	-21.44	
887.00	2.340	313.260	886.92	3.64	3.19	-1.80	1657852.80	14278536.02	39°19'12.812"N	80°56'18.053"W	3.66	330.594	1.34	1.04	-21.96	
912.00	2.580	310.490	911.90	4.61	3.90	-2.60	1657852.00	14278536.73	39°19'12.819"N	80°56'18.063"W	4.69	326.369	1.07	0.96	-11.08	
937.00	2.810	304.030	936.87	5.63	4.61	-3.53	1657851.07	14278537.44	39°19'12.826"N	80°56'18.075"W	5.81	322.551	1.52	0.92	-25.84	
962.00	3.240	297.560	961.84	6.69	5.28	-4.67	1657849.93	14278538.11	39°19'12.833"N	80°56'18.089"W	7.05	318.540	2.19	1.72	-25.88	
987.00	3.770	293.030	986.79	7.83	5.93	-6.05	1657848.55	14278538.76	39°19'12.839"N	80°56'18.107"W	8.47	314.432	2.39	2.12	-18.12	
1012.00	4.460	288.910	1011.73	9.08	6.57	-7.73	1657848.88	14278539.39	39°19'12.845"N	80°56'18.128"W	10.14	310.367	3.00	2.76	-16.48	
1037.00	4.970	286.840	1036.64	10.42	7.20	-9.66	1657844.92	14278540.02	39°19'12.851"N	80°56'18.153"W	12.06	306.622	2.15	2.04	-8.28	
1062.00	5.710	285.600	1061.53	11.90	7.84	-11.92	1657842.69	14278540.67	39°19'12.858"N	80°56'18.182"W	14.27	303.357	3.00	2.96	-4.96	
1087.00	6.640	286.020	1086.39	13.59	8.58	-14.50	1657840.10	14278541.40	39°19'12.865"N	80°56'18.214"W	16.85	300.601	3.72	3.72	1.68	
1112.00	7.060	286.380	1111.21	15.48	9.41	-17.37	1657837.24	14278542.24	39°19'12.873"N	80°56'18.251"W	19.75	298.450	1.69	1.88	1.44	
1137.00	7.530	286.830	1136.01	17.51	10.32	-20.41	1657834.20	14278543.14	39°19'12.882"N	80°56'18.290"W	22.87	296.819	1.89	1.88	1.80	
1162.00	7.960	285.800	1160.78	19.65	11.26	-23.84	1657830.97	14278544.09	39°19'12.891"N	80°56'18.331"W	26.19	295.473	1.81	1.72	-4.12	
1187.00	8.730	284.680	1185.51	21.90	12.22	-27.14	1657827.47	14278545.04	39°19'12.901"N	80°56'18.375"W	29.77	294.229	3.15	3.08	-4.48	
1212.00	9.130	283.230	1210.21	24.24	13.15	-30.91	1657823.70	14278545.97	39°19'12.910"N	80°56'18.423"W	33.59	293.047	1.84	1.60	-5.80	
1237.00	9.720	282.170	1234.87	26.63	14.05	-34.90	1657819.71	14278546.87	39°19'12.919"N	80°56'18.474"W	37.62	291.925	2.46	2.36	-4.24	
1262.00	10.200	280.390	1259.50	29.08	14.89	-39.14	1657815.47	14278547.72	39°19'12.927"N	80°56'18.528"W	41.88	290.830	2.28	1.92	-7.12	
1287.00	10.670	277.760	1284.08	31.49	15.61	-43.61	1657811.00	14278548.43	39°19'12.935"N	80°56'18.585"W	46.32	289.686	2.67	1.88	-10.44	
1312.00	11.200	274.400	1308.63	33.80	16.10	-48.33	1657806.29	14278549.33	39°19'12.939"N	80°56'18.645"W	50.94	288.430	3.33	2.12	-13.52	
1337.00	11.910	272.440	1333.12	36.04	16.40	-53.33	1657801.30	14278549.22	39°19'12.942"N	80°56'18.708"W	55.79	287.096	3.24	2.84	-7.84	
1362.00	12.580	271.230	1357.55	38.27	16.57	-58.63	1657796.00	14278549.39	39°19'12.944"N	80°56'18.776"W	60.92	285.782	2.87	2.68	-4.84	
1387.00	13.090	270.130	1381.93	40.52	16.63	-64.18	1657790.45	14278549.46	39°19'12.945"N	80°56'18.846"W	66.30	284.531	2.26	2.04	-4.40	
1412.00	13.760	269.060	1406.25	42.76	16.59	-69.99	1657784.84	14278549.42	39°19'12.944"N	80°56'18.920"W	71.93	283.337	2.93	2.76	-4.28	
1437.00	14.140	267.200	1430.51	44.95	16.39	-76.01	1657778.62	14278549.22	39°19'12.943"N	80°56'19.000"W	77.76	282.171	2.30	1.44	-7.44	
1462.00	14.670	264.690	1454.72	46.98	15.95	-82.22	1657772.42	14278548.78	39°19'12.938"N	80°56'19.076"W	83.75	280.980	3.28	2.12	-10.04	
1487.00	15.080	262.980	1478.88	48.85	15.26	-88.60	1657766.04	14278548.09	39°19'12.931"N	80°56'19.157"W	89.90	279.774	2.40	1.64	-6.84	
1512.00	15.440	260.950	1503.00	50.56	14.34	-95.11	1657759.53	14278547.16	39°19'12.922"N	80°56'19.240"W	96.18	278.574	2.58	1.44	-8.12	
1537.00	15.820	258.330	1527.08	52.06	13.13	-101.73	1657752.91	14278546.95	39°19'12.910"N	80°56'19.324"W	102.58	277.353	3.21	1.52	-10.48	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Piedmont Unit 1H
Area	Ritchie County, WV	Wellbore	Piedmont Unit 1H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (348 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
1562.00	16.590	256.110	1551.08	53.30	11.58	-108.54	1657746.11	14278544.41	39°19'12.895"N	80°56'19.411"W	109.15	276.091	3.95	3.08	-8.88	
1587.00	17.170	254.390	1575.01	54.36	9.73	-115.55	1657739.09	14278542.56	39°19'12.877"N	80°56'19.500"W	115.96	274.814	3.06	2.32	-6.88	
1612.00	17.860	251.400	1598.85	55.15	7.52	-122.74	1657731.91	14278540.34	39°19'12.855"N	80°56'19.592"W	122.97	273.504	4.53	2.76	-11.96	
1637.00	18.230	249.650	1622.62	55.64	4.93	-130.04	1657724.61	14278537.76	39°19'12.830"N	80°56'19.685"W	130.14	272.172	2.63	1.48	-7.00	
1662.00	18.490	249.350	1646.36	56.00	2.18	-137.42	1657717.24	14278535.00	39°19'12.802"N	80°56'19.778"W	137.43	270.907	1.11	1.04	-1.20	
1687.00	18.290	248.780	1670.07	56.31	-0.64	-144.78	1657709.87	14278532.19	39°19'12.775"N	80°56'19.872"W	144.79	269.746	1.08	-0.80	-2.28	
1712.00	17.740	249.820	1693.84	56.63	-3.38	-152.02	1657702.65	14278529.45	39°19'12.748"N	80°56'19.964"W	152.05	268.728	2.55	-2.20	4.16	
1737.00	16.740	253.120	1717.72	57.22	-5.74	-159.04	1657695.63	14278527.10	39°19'12.721"N	80°56'20.054"W	159.14	267.934	5.59	-4.00	13.20	
1762.00	16.180	257.530	1741.70	58.26	-7.53	-165.88	1657688.78	14278525.30	39°19'12.707"N	80°56'20.141"W	166.05	267.400	5.48	-2.24	17.64	
1787.00	15.460	262.760	1765.75	59.82	-6.71	-172.59	1657682.08	14278524.13	39°19'12.695"N	80°56'20.226"W	172.81	267.112	6.39	-2.88	20.92	
1812.00	15.680	263.430	1789.83	61.70	-9.51	-179.25	1657675.42	14278523.32	39°19'12.687"N	80°56'20.311"W	179.50	266.962	1.14	0.88	2.68	
1837.00	16.040	263.590	1813.88	63.65	-10.28	-186.04	1657668.63	14278522.55	39°19'12.680"N	80°56'20.397"W	186.32	266.836	1.45	1.44	0.64	
1862.00	15.840	263.480	1837.92	65.62	-11.06	-192.86	1657661.92	14278521.78	39°19'12.672"N	80°56'20.484"W	193.18	266.719	0.81	-0.80	-0.44	
1887.00	15.330	261.780	1862.00	67.45	-11.92	-199.52	1657655.16	14278520.92	39°19'12.664"N	80°56'20.569"W	199.88	266.582	2.74	-2.04	-6.80	
1912.00	15.120	260.250	1886.13	69.06	-12.94	-206.01	1657648.68	14278519.83	39°19'12.653"N	80°56'20.651"W	206.41	266.405	1.81	-0.84	-6.12	
1937.00	15.270	259.770	1910.25	70.55	-14.08	-212.46	1657642.23	14278518.76	39°19'12.642"N	80°56'20.733"W	212.93	266.209	0.78	0.60	-1.92	
1962.00	15.280	258.330	1934.37	71.94	-15.33	-218.93	1657635.76	14278517.51	39°19'12.630"N	80°56'20.816"W	219.46	265.995	1.52	0.04	-5.76	
1987.00	15.280	257.560	1958.48	73.20	-16.71	-225.37	1657629.32	14278516.13	39°19'12.616"N	80°56'20.898"W	225.99	265.761	0.81	0.00	-3.08	
2012.00	15.370	257.460	1982.60	74.42	-18.13	-231.82	1657622.87	14278514.70	39°19'12.602"N	80°56'20.980"W	232.53	265.527	0.38	0.36	-0.40	
2037.00	15.730	257.810	2006.68	75.66	-19.57	-238.37	1657616.33	14278513.27	39°19'12.588"N	80°56'21.063"W	239.17	265.307	1.49	1.44	1.40	
2062.00	15.850	258.260	2030.74	77.00	-20.98	-245.02	1657609.68	14278511.86	39°19'12.574"N	80°56'21.148"W	245.92	265.106	0.69	0.48	1.80	
2087.00	15.970	258.550	2054.78	78.37	-22.36	-251.73	1657602.97	14278510.48	39°19'12.561"N	80°56'21.233"W	252.73	264.925	0.58	0.48	1.16	
2112.00	15.900	258.610	2078.82	79.76	-23.72	-258.46	1657596.24	14278509.12	39°19'12.547"N	80°56'21.319"W	259.55	264.757	0.29	-0.28	0.24	
2137.00	15.640	259.680	2102.88	81.21	-25.00	-265.14	1657589.57	14278507.84	39°19'12.535"N	80°56'21.404"W	266.31	264.614	1.56	-1.04	4.28	
2162.00	14.950	261.360	2126.99	82.76	-26.08	-271.84	1657583.07	14278506.76	39°19'12.524"N	80°56'21.487"W	272.99	264.515	3.28	-2.76	6.80	
2187.00	14.640	262.260	2151.16	84.41	-26.99	-278.61	1657576.75	14278505.85	39°19'12.515"N	80°56'21.567"W	279.27	264.453	1.53	-1.24	3.52	
2212.00	14.280	263.020	2175.37	86.11	-27.79	-284.15	1657570.87	14278505.05	39°19'12.507"N	80°56'21.646"W	285.50	264.414	1.63	-1.44	3.04	
2237.00	13.660	264.260	2199.63	87.85	-28.46	-290.15	1657564.57	14278504.38	39°19'12.501"N	80°56'21.722"W	291.54	264.397	2.75	-2.48	4.96	
2262.00	12.960	265.080	2223.96	89.61	-29.00	-295.88	1657558.84	14278503.84	39°19'12.495"N	80°56'21.795"W	297.29	264.403	2.90	-2.80	3.28	
2287.00	12.630	265.630	2248.34	91.36	-29.45	-301.39	1657553.33	14278503.40	39°19'12.491"N	80°56'21.866"W	302.83	264.420	1.41	-1.32	2.20	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Piedmont Unit 1H
Area	Ritchie County, WV	Wellbore	Piedmont Unit 1H AWB
Field	Ritchie		
Facility	Zlinn Pad		

WELLPATH DATA (348 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
2312.00	12.430	266.040	2272.74	93.13	-29.84	-306.80	1657547.92	14278503.00	39°19'12.487"N	80°56'21.934"W	308.25	264.445	0.88	-0.80	1.64	
2337.00	12.080	266.840	2297.17	94.91	-30.17	-312.10	1657542.62	14278502.67	39°19'12.484"N	80°56'22.001"W	313.56	264.478	1.56	-1.40	3.20	
2362.00	11.950	268.140	2321.63	96.74	-30.40	-317.30	1657537.43	14278502.44	39°19'12.482"N	80°56'22.068"W	318.75	264.527	1.20	-0.52	5.20	
2387.00	12.550	270.240	2346.06	98.76	-30.47	-322.60	1657532.13	14278502.37	39°19'12.481"N	80°56'22.135"W	324.04	264.604	2.99	2.40	8.40	
2412.00	12.950	272.230	2370.46	101.01	-30.35	-328.05	1657528.88	14278502.49	39°19'12.482"N	80°56'22.204"W	329.46	264.714	1.78	0.40	7.96	
2437.00	12.450	273.970	2394.86	103.41	-30.06	-333.48	1657521.26	14278502.78	39°19'12.485"N	80°56'22.273"W	334.83	264.849	1.71	-0.80	6.96	
2462.00	12.750	275.460	2419.26	105.96	-29.61	-338.91	1657515.82	14278503.23	39°19'12.490"N	80°56'22.343"W	340.20	265.007	1.77	1.20	5.96	
2487.00	12.870	275.670	2443.63	108.62	-29.07	-344.43	1657510.31	14278503.77	39°19'12.495"N	80°56'22.413"W	345.55	265.175	0.51	0.48	0.84	
2512.00	12.760	275.800	2468.01	111.30	-28.52	-349.95	1657504.79	14278504.32	39°19'12.500"N	80°56'22.483"W	351.11	265.341	0.45	-0.44	0.52	
2537.00	12.360	275.940	2492.41	113.93	-27.96	-355.35	1657499.33	14278504.88	39°19'12.506"N	80°56'22.552"W	356.45	265.501	1.60	-1.60	0.56	
2562.00	12.200	275.670	2516.84	116.51	-27.43	-360.84	1657494.10	14278505.42	39°19'12.511"N	80°56'22.619"W	361.69	265.651	0.68	-0.64	-1.08	
2587.00	11.950	275.280	2541.29	119.01	-26.93	-365.85	1657488.90	14278505.91	39°19'12.516"N	80°56'22.685"W	366.84	265.791	1.05	-1.00	-1.56	
2612.00	11.960	275.030	2565.75	121.47	-26.46	-371.01	1657483.74	14278506.38	39°19'12.521"N	80°56'22.751"W	371.95	265.920	0.21	0.04	-1.00	
2637.00	12.450	275.350	2590.18	123.97	-25.98	-376.27	1657478.48	14278506.86	39°19'12.526"N	80°56'22.818"W	377.17	266.050	1.98	1.96	1.28	
2662.00	12.690	275.710	2614.58	126.58	-25.46	-381.59	1657473.07	14278507.38	39°19'12.531"N	80°56'22.887"W	382.54	266.184	1.01	0.96	1.44	
2687.00	12.600	275.600	2638.97	129.22	-24.92	-387.13	1657467.62	14278507.92	39°19'12.536"N	80°56'22.956"W	387.93	266.317	0.37	-0.36	-0.44	
2712.00	13.030	275.580	2663.35	131.89	-24.38	-392.65	1657462.11	14278508.46	39°19'12.542"N	80°56'23.026"W	393.41	266.447	1.72	1.72	-0.08	
2737.00	12.910	275.530	2687.71	134.58	-23.84	-398.24	1657456.52	14278509.00	39°19'12.547"N	80°56'23.097"W	398.95	266.575	0.48	-0.48	-0.20	
2762.00	13.310	275.580	2712.06	137.30	-23.29	-403.88	1657450.88	14278509.55	39°19'12.553"N	80°56'23.169"W	404.55	266.700	1.60	1.60	0.20	
2787.00	13.530	275.810	2736.36	140.10	-22.71	-409.65	1657445.11	14278510.13	39°19'12.558"N	80°56'23.243"W	410.28	266.827	0.91	0.88	0.92	
2812.00	13.950	276.500	2760.66	143.01	-22.07	-415.56	1657439.21	14278510.76	39°19'12.565"N	80°56'23.318"W	416.14	266.959	1.80	1.68	2.76	
2837.00	14.020	276.480	2784.92	145.99	-21.39	-421.56	1657433.21	14278511.45	39°19'12.571"N	80°56'23.394"W	422.10	267.095	0.28	0.28	-0.08	
2862.00	14.100	277.010	2809.17	149.02	-20.68	-427.58	1657427.18	14278512.16	39°19'12.578"N	80°56'23.471"W	428.09	267.231	0.61	0.32	2.12	
2887.00	14.580	278.360	2833.40	152.19	-19.85	-433.73	1657421.05	14278512.93	39°19'12.587"N	80°56'23.549"W	434.18	267.380	2.34	1.92	5.40	
2912.00	14.620	278.770	2857.59	155.51	-18.91	-439.96	1657414.82	14278513.93	39°19'12.596"N	80°56'23.628"W	440.36	267.539	0.44	0.16	1.64	
2937.00	14.770	278.660	2881.77	158.85	-17.95	-446.23	1657408.55	14278514.89	39°19'12.606"N	80°56'23.708"W	446.59	267.697	0.61	0.60	-0.44	
2962.00	14.740	278.660	2905.95	162.21	-16.99	-452.52	1657402.28	14278515.85	39°19'12.615"N	80°56'23.788"W	452.84	267.850	0.12	-0.12	0.00	
2987.00	14.570	278.080	2930.13	165.51	-16.07	-458.78	1657396.00	14278516.77	39°19'12.624"N	80°56'23.868"W	459.06	267.994	0.90	-0.68	-2.32	
3012.00	14.200	275.140	2954.35	168.60	-15.35	-464.95	1657389.84	14278517.48	39°19'12.631"N	80°56'23.946"W	465.20	268.109	3.27	-1.48	-11.76	
3037.00	13.910	273.380	2978.60	171.39	-14.90	-471.00	1657383.78	14278517.93	39°19'12.636"N	80°56'24.023"W	471.24	268.188	2.07	-1.16	-7.04	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #01
ANTERO RESOURCES CORPORATION	Piedmont Unit 1H
Area	Well
Ritchie County, WV	Piedmont Unit 1H AWB
Field	Wellbore
Ritchie	
Facility	Zinn Pad

WELLPATH DATA (348 stations)

MID	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)	(US ft)	(US ft)	(°)	(ft)	(ft)	(°)	("/100ft)	("/100ft)	(°/100ft)	
3062.00	13.770	272.220	3002.88	174.01	-14.61	-476.97	1657377.82	14278518.23	39°19'12.639"N	80°56'24.099"W	477.20	268.246	1.24	-0.56	-4.64	
3087.00	13.490	271.440	3027.17	176.49	-14.42	-482.86	1657371.93	14278518.42	39°19'12.641"N	80°56'24.174"W	483.08	268.289	1.34	-1.12	-3.12	
3112.00	13.510	271.380	3051.48	178.92	-14.28	-488.70	1657366.10	14278518.56	39°19'12.642"N	80°56'24.248"W	488.90	268.327	0.10	0.08	-0.24	
3137.00	13.740	271.310	3075.78	181.36	-14.14	-494.58	1657360.22	14278518.70	39°19'12.644"N	80°56'24.323"W	494.79	268.363	0.92	0.92	-0.28	
3162.00	13.910	271.770	3100.05	183.85	-13.98	-500.56	1657354.25	14278518.86	39°19'12.645"N	80°56'24.399"W	500.75	268.400	0.81	0.68	1.84	
3187.00	14.070	271.840	3124.31	186.40	-13.79	-506.60	1657348.21	14278519.05	39°19'12.647"N	80°56'24.476"W	506.78	268.441	0.64	0.64	0.28	
3212.00	14.520	272.460	3148.54	189.04	-13.56	-512.76	1657342.04	14278519.28	39°19'12.649"N	80°56'24.554"W	512.94	268.486	1.90	1.80	2.48	
3237.00	14.590	272.490	3172.73	191.76	-13.28	-519.04	1657335.77	14278519.55	39°19'12.652"N	80°56'24.634"W	519.21	268.534	0.28	0.28	0.12	
3262.00	14.620	272.300	3196.93	194.47	-13.02	-525.34	1657329.47	14278519.81	39°19'12.655"N	80°56'24.715"W	525.50	268.580	0.23	0.12	-0.76	
3287.00	14.620	272.380	3221.12	197.19	-12.76	-531.64	1657323.17	14278520.07	39°19'12.657"N	80°56'24.795"W	531.80	268.625	0.08	0.00	0.32	
3312.00	14.400	272.240	3245.32	199.88	-12.51	-537.90	1657316.91	14278520.32	39°19'12.660"N	80°56'24.874"W	538.05	268.668	0.89	-0.88	-0.56	
3337.00	13.850	272.310	3269.56	202.50	-12.27	-544.00	1657310.82	14278520.57	39°19'12.662"N	80°56'24.952"W	544.14	268.708	2.20	-2.20	0.28	
3362.00	13.700	272.310	3293.84	205.06	-12.03	-549.95	1657304.87	14278520.81	39°19'12.665"N	80°56'25.028"W	550.08	268.747	0.60	-0.60	0.00	
3387.00	13.350	272.390	3318.15	207.57	-11.79	-555.79	1657299.03	14278521.05	39°19'12.667"N	80°56'25.102"W	555.91	268.785	1.40	-1.40	0.32	
3412.00	13.020	272.470	3342.49	210.03	-11.55	-561.49	1657293.34	14278521.29	39°19'12.670"N	80°56'25.174"W	561.80	268.822	1.32	-1.32	0.32	
3437.00	13.150	272.440	3366.84	212.48	-11.30	-567.14	1657287.69	14278521.53	39°19'12.672"N	80°56'25.246"W	567.25	268.858	0.52	0.52	-0.12	
3462.00	13.200	272.570	3391.19	214.95	-11.06	-572.83	1657282.00	14278521.78	39°19'12.675"N	80°56'25.319"W	572.94	268.894	0.23	0.20	0.52	
3487.00	13.770	272.600	3415.50	217.48	-10.79	-578.66	1657276.17	14278522.04	39°19'12.677"N	80°56'25.393"W	578.76	268.932	2.28	2.28	0.12	
3512.00	14.320	272.570	3439.75	220.11	-10.52	-584.72	1657270.12	14278522.32	39°19'12.680"N	80°56'25.470"W	584.81	268.969	2.20	2.20	-0.12	
3537.00	14.490	272.530	3463.96	222.81	-10.24	-590.93	1657263.91	14278522.59	39°19'12.683"N	80°56'25.549"W	591.02	268.007	0.68	0.68	-0.16	
3562.00	14.490	272.620	3488.17	225.52	-9.96	-597.18	1657257.66	14278522.87	39°19'12.686"N	80°56'25.629"W	597.26	269.044	0.09	0.00	0.36	
3587.00	14.500	272.550	3512.37	228.24	-9.68	-603.43	1657251.41	14278523.16	39°19'12.688"N	80°56'25.708"W	603.51	269.081	0.08	0.04	-0.28	
3612.00	14.510	272.480	3536.57	230.95	-9.40	-609.69	1657245.16	14278523.43	39°19'12.691"N	80°56'25.788"W	609.76	269.116	0.08	0.04	-0.28	
3637.00	14.490	272.520	3560.78	233.66	-9.13	-615.94	1657238.91	14278523.70	39°19'12.694"N	80°56'25.867"W	616.01	269.151	0.09	-0.08	0.16	
3662.00	14.550	272.530	3584.98	236.37	-8.85	-622.20	1657232.65	14278523.98	39°19'12.697"N	80°56'25.947"W	622.27	269.185	0.24	0.24	0.04	
3687.00	14.340	272.890	3609.18	239.11	-8.56	-628.48	1657226.37	14278524.28	39°19'12.700"N	80°56'26.027"W	628.54	269.220	0.38	0.12	1.44	
3712.00	14.340	272.980	3633.38	241.86	-8.24	-634.72	1657220.14	14278524.60	39°19'12.703"N	80°56'26.106"W	634.77	269.256	0.96	-0.96	0.36	
3737.00	14.070	273.320	3657.62	244.57	-7.90	-640.84	1657214.02	14278524.93	39°19'12.706"N	80°56'26.184"W	640.89	269.294	1.13	-1.08	1.36	
3762.00	14.000	273.560	3681.87	247.29	-7.54	-646.89	1657207.97	14278525.30	39°19'12.710"N	80°56'26.261"W	646.94	269.332	0.36	-0.28	0.96	
3787.00	14.020	273.580	3706.13	250.01	-7.16	-652.93	1657201.93	14278525.67	39°19'12.714"N	80°56'26.339"W	652.97	269.372	0.08	0.08	0.08	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
3812.00	14.030	274.060	3730.38	252.75	-6.76	-658.98	1657195.88	14278526.08	39°19'12.718"N	80°56'26.415"W	659.01	269.413	0.47	0.04	1.92	
3837.00	13.810	274.160	3754.65	255.51	-6.33	-664.98	1657189.89	14278526.51	39°19'12.722"N	80°56'26.491"W	665.01	269.455	0.89	-0.88	0.40	
3862.00	13.580	274.090	3778.94	258.22	-5.90	-670.88	1657183.99	14278526.93	39°19'12.726"N	80°56'26.568"W	670.91	269.496	0.92	-0.92	-0.28	
3887.00	13.410	274.010	3803.25	260.88	-5.49	-676.70	1657178.17	14278527.34	39°19'12.730"N	80°56'26.640"W	676.72	269.535	0.68	-0.68	-0.32	
3912.00	13.520	273.930	3827.56	263.54	-5.08	-682.51	1657172.37	14278527.75	39°19'12.734"N	80°56'26.714"W	682.53	269.573	0.45	0.44	-0.32	
3937.00	14.120	273.970	3851.84	266.26	-4.67	-688.47	1657166.41	14278528.16	39°19'12.738"N	80°56'26.790"W	688.48	269.611	2.40	2.40	0.16	
3962.00	13.730	274.080	3876.10	269.00	-4.25	-694.47	1657160.41	14278528.58	39°19'12.743"N	80°56'26.866"W	694.48	269.649	1.56	-1.56	0.44	
3987.00	13.640	274.230	3900.39	271.71	-3.82	-700.37	1657154.51	14278529.01	39°19'12.747"N	80°56'26.941"W	700.38	269.687	0.39	-0.36	0.60	
4012.00	13.740	274.130	3924.68	274.43	-3.39	-706.27	1657148.62	14278529.44	39°19'12.751"N	80°56'27.017"W	706.28	269.725	0.41	0.40	-0.40	
4037.00	13.840	274.470	3948.96	277.19	-2.94	-712.23	1657142.65	14278529.89	39°19'12.755"N	80°56'27.092"W	712.24	269.763	0.86	0.80	1.36	
4062.00	13.980	274.940	3973.22	280.00	-2.45	-718.24	1657136.65	14278530.38	39°19'12.761"N	80°56'27.169"W	718.25	269.805	0.48	0.16	1.88	
4087.00	13.670	275.180	3997.50	282.83	-1.92	-724.19	1657130.70	14278530.91	39°19'12.766"N	80°56'27.245"W	724.20	269.848	1.26	-1.24	0.96	
4112.00	13.530	275.480	4021.79	285.63	-1.38	-730.05	1657124.85	14278531.46	39°19'12.771"N	80°56'27.319"W	730.05	269.892	0.63	-0.56	1.20	
4137.00	13.790	275.470	4046.09	288.46	-0.81	-735.92	1657118.97	14278532.02	39°19'12.777"N	80°56'27.394"W	735.92	269.937	1.04	1.04	-0.04	
4162.00	13.460	275.990	4070.38	291.27	-0.25	-741.79	1657113.11	14278532.58	39°19'12.782"N	80°56'27.468"W	741.79	269.980	1.32	-1.32	-0.32	
4187.00	13.990	275.160	4094.67	294.09	0.29	-747.69	1657107.21	14278533.12	39°19'12.788"N	80°56'27.544"W	747.69	270.022	2.13	2.12	-0.92	
4212.00	13.750	274.810	4118.94	296.92	0.81	-753.56	1657101.24	14278533.64	39°19'12.793"N	80°56'27.620"W	753.56	270.062	1.02	-0.96	-1.40	
4237.00	13.690	274.860	4143.22	299.71	1.31	-759.59	1657095.31	14278534.14	39°19'12.798"N	80°56'27.695"W	759.60	270.099	0.21	0.20	0.20	
4262.00	13.800	274.960	4167.51	302.51	1.82	-765.51	1657089.40	14278534.65	39°19'12.803"N	80°56'27.770"W	765.51	270.136	0.45	-0.44	0.40	
4287.00	14.050	275.770	4191.78	305.37	2.38	-771.48	1657083.43	14278535.21	39°19'12.809"N	80°56'27.846"W	771.48	270.177	1.64	1.44	3.24	
4312.00	14.130	276.630	4216.02	308.35	3.04	-777.53	1657077.38	14278535.87	39°19'12.815"N	80°56'27.923"W	777.53	270.224	0.90	0.32	3.44	
4337.00	14.360	276.800	4240.26	311.41	3.76	-783.64	1657071.28	14278536.59	39°19'12.822"N	80°56'28.001"W	783.65	270.275	0.94	0.92	0.68	
4362.00	14.150	277.010	4264.49	314.49	4.50	-789.75	1657065.17	14278537.32	39°19'12.830"N	80°56'28.079"W	789.76	270.326	0.87	-0.84	0.84	
4387.00	14.340	277.060	4288.72	317.58	5.25	-795.86	1657059.06	14278538.08	39°19'12.837"N	80°56'28.156"W	795.87	270.378	0.76	0.76	0.20	
4412.00	14.940	277.010	4312.92	320.73	6.02	-802.06	1657052.86	14278538.85	39°19'12.845"N	80°56'28.235"W	802.09	270.430	1.20	1.20	-0.20	
4437.00	14.720	276.990	4337.11	323.91	6.79	-808.35	1657046.57	14278539.62	39°19'12.852"N	80°56'28.315"W	808.38	270.481	0.32	0.32	-0.08	
4462.00	14.860	276.810	4361.28	327.10	7.56	-814.69	1657040.24	14278540.39	39°19'12.860"N	80°56'28.396"W	814.72	270.531	0.59	0.56	-0.72	
4487.00	14.360	276.530	4385.47	330.24	8.29	-820.95	1657033.98	14278541.12	39°19'12.867"N	80°56'28.476"W	820.99	270.579	2.02	-2.00	-1.12	
4512.00	14.200	275.730	4409.70	333.25	8.95	-827.08	1657027.85	14278541.78	39°19'12.874"N	80°56'28.554"W	827.13	270.620	1.02	-0.84	-3.20	
4537.00	14.190	274.680	4433.93	336.17	9.50	-833.19	1657021.75	14278542.33	39°19'12.879"N	80°56'28.631"W	833.24	270.664	1.03	-0.04	-4.20	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zlinn Pad		

WELLPATH DATA (348 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
4582.00	14.060	273.940	4458.18	338.98	9.96	-839.27	1657015.67	14278542.79	39°19'12.884"N	80°56'28.709"W	839.33	270.680	0.89	-0.52	-2.96	
4587.00	14.160	273.410	4482.42	341.73	10.35	-845.35	1657009.59	14278543.18	39°19'12.868"N	80°56'28.786"W	845.42	270.702	0.65	0.40	-2.12	
4612.00	14.040	272.770	4506.67	344.42	10.68	-851.43	1657003.51	14278543.51	39°19'12.891"N	80°56'28.864"W	851.50	270.719	0.79	-0.48	-2.56	
4637.00	14.280	272.550	4530.91	347.08	10.97	-857.54	1656997.40	14278543.79	39°19'12.894"N	80°56'28.941"W	857.61	270.733	0.98	0.96	-0.88	
4662.00	14.460	272.600	4555.13	349.77	11.24	-863.74	1656991.21	14278544.07	39°19'12.897"N	80°56'29.020"W	863.81	270.746	0.72	0.72	0.20	
4687.00	14.830	272.510	4579.32	352.51	11.53	-870.06	1656984.89	14278544.35	39°19'12.900"N	80°56'29.100"W	870.13	270.759	1.48	1.48	-0.36	
4712.00	14.470	272.260	4603.50	355.24	11.79	-876.37	1656978.58	14278544.62	39°19'12.902"N	80°56'29.181"W	876.45	270.771	1.46	-1.44	-1.00	
4737.00	15.030	271.570	4627.68	357.93	12.00	-882.73	1656972.22	14278544.83	39°19'12.904"N	80°56'29.262"W	882.82	270.779	2.35	2.24	-2.76	
4762.00	15.390	271.260	4651.80	360.66	12.16	-889.29	1656965.67	14278545.11	39°19'12.906"N	80°56'29.345"W	889.37	270.784	1.48	1.44	-1.24	
4787.00	15.570	270.860	4675.99	363.39	12.28	-895.96	1656959.00	14278545.41	39°19'12.907"N	80°56'29.430"W	896.05	270.786	0.84	0.72	-1.50	
4812.00	15.790	270.980	4699.97	366.15	12.40	-902.72	1656952.24	14278545.72	39°19'12.908"N	80°56'29.516"W	902.80	270.787	0.89	0.88	0.48	
4837.00	15.610	271.040	4724.03	368.92	12.51	-909.48	1656945.48	14278545.34	39°19'12.910"N	80°56'29.602"W	909.57	270.788	0.72	-0.72	0.24	
4862.00	15.020	270.890	4748.15	371.61	12.63	-916.08	1656938.88	14278545.45	39°19'12.911"N	80°56'29.686"W	916.17	270.790	2.37	-2.36	-0.60	
4887.00	14.840	270.790	4772.30	374.23	12.72	-922.52	1656932.45	14278545.55	39°19'12.912"N	80°56'29.768"W	922.61	270.790	0.73	-0.72	-0.40	
4912.00	14.870	270.980	4796.47	376.84	12.82	-928.93	1656926.04	14278545.64	39°19'12.913"N	80°56'29.850"W	929.02	270.791	0.23	0.12	0.76	
4937.00	14.800	270.930	4820.63	379.45	12.93	-935.33	1656919.64	14278545.75	39°19'12.914"N	80°56'29.931"W	935.42	270.792	0.28	-0.28	-0.20	
4962.00	14.760	271.300	4844.81	382.07	13.05	-941.71	1656913.27	14278545.88	39°19'12.915"N	80°56'30.012"W	941.80	270.794	0.41	-0.16	1.48	
4987.00	14.450	271.460	4869.00	384.69	13.20	-948.01	1656906.97	14278546.03	39°19'12.917"N	80°56'30.092"W	948.10	270.798	1.25	-1.24	0.64	
5012.00	14.520	271.440	4893.20	387.29	13.36	-954.26	1656900.72	14278546.18	39°19'12.918"N	80°56'30.172"W	954.36	270.802	0.28	0.28	-0.08	
5037.00	14.770	271.360	4917.39	389.92	13.51	-960.58	1656894.40	14278546.34	39°19'12.920"N	80°56'30.252"W	960.66	270.806	1.00	1.00	-0.36	
5062.00	15.150	271.270	4941.54	392.59	13.66	-967.03	1656887.95	14278546.49	39°19'12.921"N	80°56'30.334"W	967.13	270.809	1.52	1.52	-0.32	
5087.00	15.490	271.320	4965.66	395.32	13.81	-973.64	1656881.35	14278546.64	39°19'12.923"N	80°56'30.418"W	973.74	270.813	1.36	1.36	0.20	
5112.00	15.850	271.430	4989.73	398.12	13.97	-980.39	1656874.61	14278546.81	39°19'12.925"N	80°56'30.504"W	980.49	270.817	1.44	1.44	0.44	
5137.00	16.050	271.670	5013.76	400.99	14.16	-987.26	1656867.74	14278546.98	39°19'12.926"N	80°56'30.592"W	987.36	270.822	0.84	0.80	0.96	
5162.00	15.960	272.270	5037.79	403.92	14.40	-994.14	1656860.86	14278547.22	39°19'12.928"N	80°56'30.679"W	994.25	270.830	0.75	-0.36	2.40	
5187.00	16.030	272.480	5061.83	406.88	14.68	-1001.03	1656853.98	14278547.51	39°19'12.932"N	80°56'30.767"W	1001.13	270.840	0.36	0.28	0.84	
5212.00	16.010	273.220	5085.86	409.91	15.02	-1007.92	1656847.09	14278547.85	39°19'12.935"N	80°56'30.855"W	1008.03	270.854	0.82	-0.08	2.96	
5237.00	15.710	273.700	5109.90	412.97	15.44	-1014.74	1656840.27	14278548.26	39°19'12.939"N	80°56'30.941"W	1014.85	270.872	1.31	-1.20	1.92	
5262.00	14.490	275.060	5134.04	415.97	15.93	-1021.23	1656833.78	14278548.75	39°19'12.944"N	80°56'31.024"W	1021.35	270.894	5.08	-4.88	5.40	
5287.00	14.140	275.790	5158.26	418.93	16.51	-1027.38	1656827.63	14278549.34	39°19'12.950"N	80°56'31.102"W	1027.52	270.921	1.58	-1.40	2.96	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
5312.00	14.010	275.97	182.51	421.87	17.14	-1033.43	165682.158	14278549.96	39°19'12.956"N	80°56'31.179"W	1033.57	270.950	0.55	-0.52	0.72	
5337.00	14.170	276.64	206.76	424.87	17.80	-1039.48	1656815.54	14278550.63	39°19'12.963"N	80°56'31.256"W	1039.63	270.981	0.91	0.64	2.68	
5362.00	14.350	276.69	230.99	427.88	18.47	-1045.60	1656809.42	14278551.29	39°19'12.969"N	80°56'31.334"W	1045.77	271.012	1.18	0.72	-3.80	
5387.00	14.560	274.56	255.20	430.84	19.02	-1051.82	1656803.20	14278551.85	39°19'12.975"N	80°56'31.413"W	1051.99	271.036	1.41	0.84	-4.52	
5412.00	14.500	272.06	279.40	433.63	19.39	-1058.08	1656796.95	14278552.21	39°19'12.979"N	80°56'31.493"W	1058.26	271.050	2.52	-0.24	-10.00	
5437.00	14.400	271.12	303.61	436.24	19.56	-1064.31	1656790.71	14278552.38	39°19'12.980"N	80°56'31.572"W	1064.49	271.053	1.02	-0.40	-3.76	
5462.00	14.270	270.36	327.83	438.74	19.64	-1070.50	1656784.53	14278552.46	39°19'12.981"N	80°56'31.651"W	1070.68	271.051	0.91	-0.52	-3.04	
5487.00	14.070	269.77	352.07	441.16	19.65	-1076.62	1656778.41	14278552.47	39°19'12.981"N	80°56'31.729"W	1076.80	271.045	0.99	-0.80	-2.36	
5512.00	13.900	269.78	376.33	443.51	19.62	-1082.67	1656772.37	14278552.44	39°19'12.981"N	80°56'31.806"W	1082.84	271.038	0.68	-0.68	0.04	
5537.00	13.930	269.73	400.60	445.85	19.60	-1088.68	1656766.36	14278552.42	39°19'12.981"N	80°56'31.882"W	1088.85	271.031	0.13	0.12	-0.20	
5562.00	13.920	269.70	424.86	448.18	19.57	-1094.69	1656760.35	14278552.39	39°19'12.981"N	80°56'31.959"W	1094.86	271.024	0.12	-0.12	0.00	
5587.00	13.920	269.85	449.13	450.53	19.55	-1100.70	1656754.34	14278552.37	39°19'12.980"N	80°56'32.035"W	1100.87	271.017	0.14	0.08	0.48	
5612.00	13.920	269.77	473.40	452.87	19.53	-1106.71	1656748.33	14278552.35	39°19'12.980"N	80°56'32.112"W	1106.89	271.011	0.08	0.00	-0.32	
5637.00	13.950	269.70	497.66	455.21	19.50	-1112.73	1656742.31	14278552.32	39°19'12.979"N	80°56'32.188"W	1112.90	271.004	0.12	0.12	-0.04	
5662.00	13.920	269.14	521.92	457.53	19.44	-1118.75	1656736.30	14278552.27	39°19'12.979"N	80°56'32.265"W	1118.92	270.996	0.61	-0.12	-2.48	
5687.00	14.130	269.30	546.18	459.83	19.36	-1124.81	1656730.24	14278552.18	39°19'12.979"N	80°56'32.342"W	1124.98	270.986	0.85	0.84	0.64	
5712.00	13.120	272.65	561.89	467.21	19.65	-1142.93	1656712.13	14278552.28	39°19'12.980"N	80°56'32.419"W	1131.05	270.980	1.25	-0.64	4.44	
5737.00	14.360	271.36	584.67	464.69	19.44	-1137.00	1656718.06	14278552.26	39°19'12.980"N	80°56'32.497"W	1137.16	270.980	1.82	1.56	3.80	
5762.00	13.300	272.92	603.29	469.71	19.92	-1148.64	1656706.42	14278552.75	39°19'12.982"N	80°56'32.572"W	1143.10	270.985	5.11	-4.96	5.16	
5787.00	13.610	273.54	626.67	472.30	20.25	-1154.45	1656700.62	14278553.07	39°19'12.983"N	80°56'32.645"W	1148.81	270.994	0.76	0.72	1.08	
5812.00	13.990	274.10	649.80	480.19	21.41	-1171.82	1656688.25	14278554.23	39°19'12.999"N	80°56'33.376"W	1154.62	271.005	1.37	1.24	2.48	
5837.00	14.360	274.64	672.84	490.82	23.17	-1194.77	1656666.31	14278555.99	39°19'13.017"N	80°56'33.232"W	1172.02	271.047	0.55	0.52	0.77	BHI AT Curve <-8-1/2"> (5812)-(5885--15358)
5862.00	15.290	285.09	697.15	497.10	25.16	-1206.06	1656649.02	14278557.98	39°19'13.037"N	80°56'33.376"W	1195.00	271.111	0.42	0.39	0.57	
5887.00	17.860	299.72	721.09	507.30	30.69	-1219.10	1656635.99	14278558.60	39°19'13.091"N	80°56'33.376"W	1206.33	271.195	6.28	5.17	23.22	
5912.00	19.950	307.25	746.55	520.02	39.11	-1231.74	1656623.35	14278571.93	39°19'13.175"N	80°56'33.702"W	1232.36	271.819	6.93	4.45	16.02	
5937.00	23.110	311.71	760.99	535.34	50.11	-1245.01	1656610.09	14278582.39	39°19'13.283"N	80°56'33.871"W	1246.02	272.305	7.57	6.72	9.49	
5962.00	26.220	314.78	780.05	553.32	63.56	-1259.27	1656595.83	14278596.37	39°19'13.416"N	80°56'34.052"W	1260.88	272.890	7.15	6.62	6.53	
5987.00	29.610	316.95	800.94	574.30	79.70	-1274.90	1656580.21	14278612.50	39°19'13.576"N	80°56'34.251"W	1277.39	273.577	7.37	7.06	4.52	
6012.00	33.090	319.17	813.92	596.49	97.13	-1290.53	1656564.59	14278629.92	39°19'13.748"N	80°56'34.450"W	1294.18	274.304	8.15	7.73	4.93	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	ZInn Pad		

WELLPATH DATA (348 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6357.00	35.790	321.870	6173.23	623.05	118.52	-1308.12	1656547.00	14278651.31	39°19'13.960"N	80°56'34.674"W	1313.48	275.177	6.33	5.51	5.51	
6404.00	39.490	324.650	6210.44	650.95	141.53	-1325.26	1656529.87	14278674.31	39°19'14.187"N	80°56'34.891"W	1332.80	276.096	8.66	7.87	5.91	
6452.00	42.710	327.130	6246.61	681.92	167.66	-1342.93	1656512.21	14278700.43	39°19'14.446"N	80°56'35.116"W	1353.36	277.116	7.52	6.71	5.17	
6497.00	43.147	327.361	6250.27	685.28	170.53	-1344.78	1656510.36	14278707.28	39°19'14.471"N	80°56'35.140"W	1355.54	277.227	9.29	8.74	4.61	Middlesex: 6457' MD
6546.00	51.860	329.970	6310.57	750.00	226.52	-1378.44	1656476.71	14278759.26	39°19'15.028"N	80°56'35.588"W	1396.93	279.332	10.70	10.61	1.82	
6591.00	57.050	331.420	6336.72	786.39	258.45	-1396.35	1656458.81	14278791.17	39°19'15.343"N	80°56'35.795"W	1420.06	280.486	11.83	11.53	3.22	
6628.00†	60.378	332.498	6355.93	817.89	286.35	-1411.20	1656443.96	14278819.07	39°19'15.619"N	80°56'35.984"W	1439.96	281.470	9.33	9.00	2.91	Burkett: 6628' MD
6641.00	61.550	332.860	6362.24	829.22	296.45	-1416.42	1656438.75	14278829.16	39°19'15.719"N	80°56'36.050"W	1447.11	281.821	9.33	9.01	2.78	
6688.00	66.120	335.010	6382.98	871.34	334.34	-1434.93	1656420.24	14278867.03	39°19'16.094"N	80°56'36.265"W	1473.37	283.116	10.55	9.72	4.57	
6691.00†	66.371	335.100	6384.17	874.08	336.83	-1436.09	1656419.08	14278869.52	39°19'16.118"N	80°56'36.300"W	1475.06	283.200	8.81	8.37	3.02	Jully: 6691' MD
6735.00	70.060	336.390	6400.50	914.93	374.07	-1452.87	1656402.32	14278906.75	39°19'16.487"N	80°56'36.513"W	1500.25	284.439	8.81	8.38	2.93	
6756.00†	72.546	337.218	6407.23	934.82	392.36	-1460.70	1656394.48	14278925.03	39°19'16.687"N	80°56'36.613"W	1512.48	285.035	12.41	11.84	3.93	Marcellus: 6756' MD
6781.00	75.510	338.170	6414.11	958.85	414.59	-1469.82	1656385.37	14278947.25	39°19'16.887"N	80°56'36.729"W	1527.17	285.752	12.41	11.86	3.82	
6830.00	80.820	339.800	6424.15	1006.75	459.34	-1487.01	1656388.19	14278991.99	39°19'17.330"N	80°56'36.947"W	1556.34	287.166	11.31	10.84	3.33	
6877.00	84.110	342.700	6430.32	1053.20	503.46	-1501.98	1656353.23	14279036.08	39°19'17.766"N	80°56'37.137"W	1584.11	288.531	9.30	7.00	6.17	
6924.00	88.180	344.370	6433.48	1099.76	548.42	-1515.26	1656339.95	14279081.03	39°19'18.210"N	80°56'37.306"W	1611.45	289.897	9.36	8.66	3.55	
7019.00	91.290	339.300	6433.92	1194.36	638.64	-1544.87	1656310.35	14279171.21	39°19'19.102"N	80°56'37.662"W	1671.67	292.460	6.26	3.27	-5.34	
7113.00	90.030	333.070	6432.83	1288.30	724.59	-1582.80	1656272.43	14279257.12	39°19'19.952"N	80°56'38.164"W	1740.77	294.598	6.76	-1.34	-6.63	
7208.00	89.750	334.980	6433.02	1383.18	809.99	-1624.41	1656230.85	14279342.49	39°19'20.796"N	80°56'38.693"W	1815.15	296.502	2.03	-0.29	2.01	
7302.00	89.880	333.840	6433.32	1477.09	894.76	-1665.01	1656190.26	14279427.23	39°19'21.634"N	80°56'39.209"W	1890.20	298.253	1.22	0.14	-1.21	
7397.00	89.570	338.270	6433.78	1572.06	981.56	-1703.55	1656151.73	14279514.00	39°19'22.492"N	80°56'39.698"W	1966.10	299.950	4.67	-0.33	4.66	
7491.00	89.780	342.680	6434.31	1665.84	1070.13	-1734.96	1656120.33	14279602.54	39°19'23.368"N	80°56'40.097"W	2038.45	301.667	4.70	0.22	4.69	
7586.00	90.650	342.270	6433.95	1760.39	1160.72	-1763.57	1656091.74	14279693.09	39°19'24.263"N	80°56'40.461"W	2111.27	303.352	1.01	0.92	-0.43	
7680.00	90.250	335.350	6433.21	1854.27	1248.31	-1797.52	1656057.80	14279780.64	39°19'25.129"N	80°56'40.892"W	2188.46	304.779	7.37	-0.43	-7.36	
7774.00	90.180	333.760	6432.86	1948.19	1333.19	-1837.91	1656017.43	14279865.49	39°19'25.989"N	80°56'41.405"W	2270.53	305.937	1.99	-0.07	-1.69	
7869.00	90.460	334.970	6432.33	2043.10	1418.84	-1879.19	1655976.35	14279951.10	39°19'26.815"N	80°56'41.928"W	2354.52	307.056	1.31	0.29	1.27	
7963.00	90.180	335.900	6431.80	2137.07	1504.33	-1918.09	1655937.29	14280036.55	39°19'27.660"N	80°56'42.424"W	2437.93	308.107	1.03	-0.30	0.99	
8057.00	90.650	333.660	6431.12	2231.00	1589.36	-1958.13	1655897.25	14280121.55	39°19'28.501"N	80°56'42.933"W	2521.97	309.065	2.43	0.50	-2.38	
8152.00	91.480	330.160	6429.36	2325.61	1673.14	-2002.85	1655852.55	14280205.30	39°19'29.329"N	80°56'43.501"W	2609.75	309.875	3.79	0.87	-3.68	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
8246.00	89.600	328.730	6428.47	2418.81	1754.08	-2050.63	1655804.79	14280286.20	39°19'30.130"N	80°56'44.109"W	2698.50	310.543	2.51	-2.00	-1.52	
8341.00	89.140	333.600	6429.52	2513.31	1837.27	-2096.43	1655759.01	14280369.36	39°19'30.952"N	80°56'44.691"W	2787.58	311.231	5.15	-0.48	5.13	
8436.00	87.690	338.830	6432.15	2608.23	1924.13	-2134.72	1655720.74	14280456.19	39°19'31.811"N	80°56'45.178"W	2873.90	312.030	5.71	-1.53	5.51	
8530.00	86.800	343.850	6436.67	2701.81	2013.06	-2164.75	1655680.72	14280545.08	39°19'32.690"N	80°56'45.559"W	2956.70	312.921	5.42	-0.95	5.34	
8625.00	90.120	345.350	6439.22	2795.89	2104.90	-2189.96	1655695.51	14280636.58	39°19'33.595"N	80°56'45.879"W	3037.32	313.881	3.83	3.48	1.56	
8719.00	89.910	339.750	6439.20	2889.39	2194.24	-2218.14	1655637.35	14280726.19	39°19'34.481"N	80°56'46.237"W	3120.07	314.690	5.96	-0.22	-5.96	
8814.00	90.310	336.160	6439.01	2984.36	2282.28	-2253.79	1655601.71	14280814.19	39°19'35.351"N	80°56'46.690"W	3207.55	315.360	3.80	0.42	-3.78	
8909.00	90.150	337.310	6438.63	3079.35	2369.55	-2291.31	1655564.21	14280901.43	39°19'36.214"N	80°56'47.167"W	3296.19	315.962	1.22	-0.17	1.21	
9003.00	90.800	336.560	6437.85	3173.35	2456.03	-2328.14	1655527.40	14280987.88	39°19'37.069"N	80°56'47.635"W	3384.13	316.531	1.06	0.69	-0.80	
9098.00	90.370	329.550	6436.88	3268.08	2540.67	-2371.15	1655484.40	14281072.48	39°19'37.906"N	80°56'48.182"W	3475.25	316.977	7.38	-0.45	-7.37	
9192.00	89.940	325.350	6436.63	3360.79	2619.89	-2421.71	1655433.86	14281151.66	39°19'38.689"N	80°56'48.824"W	3567.70	317.251	4.50	-0.46	-4.48	
9287.00	89.380	333.030	6437.19	3454.87	2701.42	-2470.33	1655385.26	14281233.16	39°19'39.495"N	80°56'49.442"W	3660.63	317.558	8.11	-0.59	8.08	
9381.00	90.310	341.720	6437.45	3548.77	2788.10	-2506.46	1655349.15	14281319.81	39°19'40.352"N	80°56'49.901"W	3749.11	318.045	9.30	0.99	9.24	
9475.00	90.650	340.370	6436.66	3642.52	2877.00	-2536.99	1655318.63	14281408.67	39°19'41.231"N	80°56'50.289"W	3835.81	318.594	1.48	0.36	-1.44	
9570.00	90.370	334.720	6435.81	3737.47	2964.75	-2573.26	1655282.38	14281496.39	39°19'42.099"N	80°56'50.750"W	3925.74	319.044	5.95	-0.29	-5.95	
9664.00	90.400	335.320	6435.18	3831.42	3049.96	-2612.95	1655242.70	14281581.56	39°19'42.941"N	80°56'51.255"W	4016.19	319.413	0.64	0.03	0.64	
9759.00	90.520	336.960	6434.42	3926.40	3136.83	-2651.38	1655204.29	14281668.40	39°19'43.800"N	80°56'51.743"W	4107.25	319.794	1.73	0.13	1.73	
9853.00	90.620	338.020	6433.48	4020.39	3223.67	-2687.36	1655188.32	14281755.20	39°19'44.658"N	80°56'52.200"W	4196.90	320.184	1.13	0.11	1.13	
9948.00	90.370	336.360	6432.66	4115.38	3311.23	-2724.19	1655131.50	14281842.73	39°19'45.524"N	80°56'52.668"W	4287.83	320.555	1.77	-0.26	-1.75	
10042.00	90.430	337.210	6432.01	4209.38	3397.82	-2761.24	1655084.47	14281929.08	39°19'46.378"N	80°56'53.139"W	4378.16	320.899	0.91	0.06	0.90	
10137.00	90.220	338.330	6431.44	4304.36	3485.55	-2797.18	1655058.54	14282016.98	39°19'47.247"N	80°56'53.596"W	4469.15	321.253	1.19	-0.19	1.18	
10232.00	90.270	339.490	6431.05	4399.30	3574.19	-2831.36	1655024.37	14282105.58	39°19'48.124"N	80°56'54.030"W	4559.76	321.615	1.22	-0.03	1.22	
10326.00	90.120	339.230	6430.77	4493.21	3662.15	-2864.50	1654991.25	14282193.51	39°19'48.993"N	80°56'54.451"W	4649.38	321.968	0.30	-0.11	-0.28	
10421.00	90.180	338.280	6430.52	4588.16	3750.70	-2898.92	1654956.84	14282282.02	39°19'49.869"N	80°56'54.889"W	4740.41	322.299	1.00	0.06	-1.00	
10515.00	90.250	338.440	6430.17	4682.13	3838.07	-2933.99	1654922.19	14282369.36	39°19'50.732"N	80°56'55.329"W	4830.81	322.608	0.19	0.07	0.17	
10610.00	90.220	341.080	6429.78	4776.99	3927.19	-2966.45	1654889.34	14282458.45	39°19'51.613"N	80°56'55.747"W	4921.65	322.934	2.78	-0.03	2.78	
10704.00	90.220	341.070	6429.42	4870.74	4016.11	-2996.94	1654858.87	14282547.33	39°19'52.492"N	80°56'56.134"W	5011.07	323.269	0.01	0.00	-0.01	
10799.00	90.340	337.640	6428.96	4965.63	4105.00	-3030.43	1654825.39	14282636.18	39°19'53.371"N	80°56'56.560"W	5102.40	323.564	3.61	0.13	-3.61	
10893.00	89.910	335.480	6428.75	5059.63	4191.24	-3067.81	1654788.02	14282722.32	39°19'54.224"N	80°56'57.035"W	5194.03	323.797	2.34	-0.46	-2.30	
10986.00	89.880	336.830	6428.93	5154.62	4276.12	-3106.22	1654749.63	14282808.08	39°19'55.083"N	80°56'57.523"W	5286.87	324.018	1.42	-0.03	1.42	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
11082.00	89.880	336.980	6429.12	5248.62	4364.59	-3143.09	1654712.77	14282895.67	39°19'55.937"N	80°56'57.992"W	5378.54	324.241	0.16	0.00	0.16	
11177.00	89.750	337.020	6429.43	5343.62	4452.04	-3180.21	1654675.67	14282983.08	39°19'56.802"N	80°56'58.463"W	5471.23	324.461	0.14	-0.14	0.04	
11271.00	89.850	334.820	6429.76	5437.78	4537.78	-3218.71	1654637.18	14283068.79	39°19'57.650"N	80°56'58.953"W	5563.41	324.651	2.56	0.11	-2.55	
11366.00	90.430	335.110	6429.53	5532.53	4623.79	-3259.06	1654596.85	14283154.76	39°19'58.500"N	80°56'59.466"W	5656.93	324.822	0.80	0.61	0.52	
11460.00	89.940	334.800	6429.22	5626.48	4708.95	-3298.85	1654557.07	14283239.89	39°19'59.342"N	80°56'59.972"W	5749.49	324.987	0.62	-0.52	-0.33	
11555.00	90.370	336.930	6428.96	5721.46	4795.64	-3337.70	1654518.24	14283326.54	39°20'00.199"N	80°57'00.465"W	5842.80	325.163	2.29	0.45	2.24	
11649.00	90.120	334.730	6428.56	5815.44	4881.39	-3376.18	1654479.78	14283412.26	39°20'01.047"N	80°57'00.954"W	5935.20	325.331	2.36	-0.27	-2.34	
11744.00	90.060	332.790	6428.41	5910.30	4966.60	-3418.18	1654437.79	14283497.43	39°20'01.889"N	80°57'01.488"W	6028.18	325.463	2.04	0.03	-2.04	
11838.00	90.090	333.810	6428.29	6004.11	5050.57	-3460.42	1654395.57	14283581.37	39°20'02.719"N	80°57'02.025"W	6122.32	325.583	1.09	0.06	1.08	
11933.00	89.480	331.000	6428.65	6088.82	5134.76	-3504.42	1654351.59	14283665.52	39°20'03.551"N	80°57'02.565"W	6216.64	325.687	3.03	-0.64	-2.96	
12027.00	89.820	335.280	6429.22	6182.59	5218.59	-3546.88	1654309.15	14283749.33	39°20'04.380"N	80°57'03.124"W	6309.84	325.798	4.57	0.36	4.55	
12122.00	90.030	338.760	6429.35	6287.58	5306.04	-3583.96	1654272.08	14283836.74	39°20'05.245"N	80°57'03.596"W	6403.03	325.963	3.67	0.22	3.66	
12217.00	89.970	338.590	6429.35	6382.53	5394.54	-3618.51	1654237.55	14283925.20	39°20'06.120"N	80°57'04.035"W	6495.74	326.147	0.19	-0.06	-0.18	
12311.00	89.970	343.220	6429.40	6476.27	5483.34	-3649.25	1654206.82	14284013.97	39°20'06.997"N	80°57'04.425"W	6586.66	326.356	4.93	0.00	4.93	
12406.00	90.280	341.930	6428.19	6570.80	5573.98	-3677.70	1654178.38	14284104.57	39°20'07.893"N	80°57'04.787"W	6677.93	326.583	1.40	0.33	-1.36	
12500.00	90.180	336.890	6428.81	6664.67	5661.95	-3710.74	1654145.35	14284192.50	39°20'08.763"N	80°57'05.207"W	6769.58	326.760	5.36	-0.11	-5.36	
12595.00	90.000	331.700	6428.66	6759.54	5747.51	-3751.94	1654104.17	14284278.04	39°20'09.609"N	80°57'05.731"W	6863.74	326.864	5.47	-0.19	-5.46	
12784.00	90.120	334.760	6428.43	6853.20	5830.49	-3796.11	1654060.02	14284360.98	39°20'10.429"N	80°57'06.292"W	6957.37	326.933	0.65	0.30	0.57	
12878.00	90.340	337.260	6427.72	7042.01	6001.37	-3876.71	1653979.45	14284445.95	39°20'11.270"N	80°57'06.831"W	7051.75	327.021	2.66	-0.17	2.65	
13067.00	90.250	338.560	6427.23	7136.99	6089.40	-3912.43	1653943.74	14284531.79	39°20'12.119"N	80°57'07.371"W	7144.60	327.139	2.67	0.23	2.66	
13256.00	90.580	337.990	6426.55	7230.96	6176.72	-3947.23	1653908.96	14284619.78	39°20'12.989"N	80°57'07.911"W	7237.95	327.279	1.37	-0.09	1.37	
13161.00	90.490	339.500	6425.67	7324.90	6264.32	-3981.30	1653874.90	14284704.07	39°20'13.852"N	80°57'08.213"W	7330.24	327.419	0.70	0.35	-0.61	
13256.00	90.460	340.330	6424.89	7419.76	6353.53	-4013.92	1653842.29	14284794.67	39°20'14.718"N	80°57'08.646"W	7422.43	327.562	1.61	-0.10	1.61	
13350.00	90.920	338.930	6423.76	7513.66	6441.56	-4046.87	1653809.35	14284883.81	39°20'15.600"N	80°57'09.061"W	7515.25	327.717	0.87	-0.03	0.87	
13445.00	90.550	336.120	6422.54	7608.64	6529.23	-4083.41	1653772.83	14284971.80	39°20'16.470"N	80°57'09.480"W	7607.29	327.861	1.87	0.49	-1.81	
13539.00	90.820	335.730	6421.58	7702.62	6615.05	-4121.75	1653734.50	14285059.44	39°20'17.337"N	80°57'09.944"W	7700.98	327.978	2.67	-0.39	-2.64	
13634.00	90.490	334.270	6420.66	7797.56	6701.15	-4161.90	1653699.37	14285145.23	39°20'18.185"N	80°57'10.431"W	7794.09	328.073	0.42	0.07	-0.41	
13728.00	90.370	333.610	6419.95	7891.44	6785.59	-4203.19	1653663.09	14285231.28	39°20'19.037"N	80°57'10.942"W	7888.39	328.157	1.54	-0.14	-1.54	
13823.00	90.340	336.830	6419.36	7986.38	6871.83	-4243.01	1653613.30	14285315.69	39°20'19.871"N	80°57'11.467"W	7981.92	328.225	0.71	-0.13	-0.70	
									39°20'20.724"N	80°57'11.973"W	8076.21	328.307	3.39	-0.03	3.39	



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH DATA (348 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
13917.00	90.400	338.140	6418.75	8080.37	6958.66	-4279.00	1653577.32	14285488.69	39°20'21.582"N	80°57'12.430"W	8169.01	328.412	1.40	0.06	1.39	
14012.00	90.370	338.710	6418.12	8175.34	7047.00	-4313.93	1653542.40	14285577.00	39°20'22.456"N	80°57'12.875"W	8262.58	328.526	0.60	-0.03	0.60	
14106.00	90.150	338.310	6417.89	8259.29	7134.46	-4348.37	1653507.98	14285664.43	39°20'23.320"N	80°57'13.312"W	8355.17	328.638	0.49	-0.23	-0.43	
14201.00	90.180	337.870	6417.42	8364.27	7222.60	-4383.82	1653472.54	14285752.53	39°20'24.192"N	80°57'13.763"W	8448.59	328.744	0.46	0.03	-0.46	
14295.00	89.970	335.610	6417.29	8466.27	7308.96	-4420.93	1653435.44	14285838.85	39°20'25.045"N	80°57'14.235"W	8541.98	328.832	2.41	-0.22	-2.40	
14389.00	89.940	335.640	6417.37	8552.24	7394.58	-4459.73	1653396.66	14285924.44	39°20'25.892"N	80°57'14.728"W	8635.33	328.905	0.05	-0.03	0.03	
14484.00	90.030	334.240	6417.39	8647.19	7480.63	-4499.97	1653356.44	14286010.46	39°20'26.742"N	80°57'15.239"W	8729.81	328.971	1.48	0.09	-1.47	
14579.00	89.880	336.790	6417.47	8742.15	7567.08	-4539.34	1653317.09	14286096.87	39°20'27.597"N	80°57'15.740"W	8824.19	329.041	2.69	-0.16	2.68	
14673.00	89.820	341.010	6417.71	8836.07	7654.76	-4573.17	1653283.27	14286184.51	39°20'28.464"N	80°57'16.241"W	8916.79	329.145	4.49	-0.06	4.49	
14768.00	90.180	341.930	6417.77	8930.76	7744.83	-4603.96	1653253.09	14286274.55	39°20'29.354"N	80°57'16.742"W	9009.83	329.274	1.04	0.38	0.97	
14862.00	90.000	340.990	6417.57	9024.46	7833.95	-4633.25	1653223.21	14286363.64	39°20'30.235"N	80°57'17.243"W	9101.53	329.399	1.02	-0.19	-1.00	
14957.00	90.150	338.870	6417.44	9119.32	7923.18	-4665.85	1653190.63	14286452.83	39°20'31.117"N	80°57'17.744"W	9194.94	329.507	2.24	0.16	-2.23	
15051.00	90.090	336.290	6417.24	9213.30	8010.07	-4701.70	1653154.79	14286539.68	39°20'31.976"N	80°57'18.245"W	9288.01	329.588	2.75	-0.06	-2.74	
15146.00	90.120	331.400	6417.07	9308.14	8095.31	-4743.56	1653112.95	14286624.89	39°20'32.819"N	80°57'18.746"W	9382.72	329.631	5.15	0.03	-5.15	
15240.00	90.000	333.580	6416.97	9401.86	8178.87	-4786.99	1653069.53	14286708.22	39°20'33.643"N	80°57'19.247"W	9476.60	329.659	2.30	-0.13	2.30	
15335.00	90.030	335.140	6416.95	9496.77	8264.31	-4828.11	1653028.43	14286793.82	39°20'34.490"N	80°57'19.748"W	9571.28	329.706	1.66	0.03	1.66	
15358.00	90.030	335.870	6416.93	9519.76	8285.24	-4837.65	1653018.90	14286814.74	39°20'34.696"N	80°57'19.532"W	9594.16	329.720	3.17	0.00	3.17	
15383.00	90.030	335.870	6416.92	9544.76	8308.05	-4847.87	1653008.68	14286837.55	39°20'34.922"N	80°57'19.662"W	9619.02	329.736	0.00	0.00	0.00	Projected MD @ TD: 15383'



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Piedmont Unit 1H POE Rev-1	6409.00	380.60	-1453.00	1656402.18	14278913.28	39°19'16.551"N	80°56'36.515"W	point
Piedmont Unit 1H BHL - Plat	6433.00	8248.17	-4815.45	1653041.09	14286777.69	39°20'34.330"N	80°57'19.250"W	point
Piedmont Unit 1H Landing Pt Rev-1	6433.00	518.05	-1511.74	1656343.46	14279050.67	39°19'17.910"N	80°56'37.261"W	point

WELLPATH COMPOSITION - Ref Wellbores: Piedmont Unit 1H AWB Ref Wellpath: Piedmont Unit 1H AWP Proj: 15383'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
25.00	5812.00	SDI Keeper v1.04	01_SDI Std. Keeper Gyro (100'-5800')
5812.00	15358.00	BHI AutoTrak Curve (Short)	02_BHI AT Curve <8-1/2">(5812')(5885'-15358')
15358.00	15383.00	Blind Drilling (std)	Projection to bit
			Wellbore
			Piedmont Unit 1H AWB
			Piedmont Unit 1H AWB



Actual Wellpath Report

Piedmont Unit 1H AWP Proj: 15383'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Ritchie County, WV	Well	Piedmont Unit 1H
Field	Ritchie	Wellbore	Piedmont Unit 1H AWB
Facility	Zinn Pad		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
112.00	0.210	176.490	112.00	SDI Std. Keeper Gyro (112'-5812')
5885.00	13.990	274.100	5738.50	BHI AT Curve <8-1/2">(5812')(5885'-15358')
6457.00	43.147	327.361	6250.27	Middlesex: 6457' MD
6628.00	60.379	332.498	6355.93	Burkett: 6628' MD
6691.00	66.371	335.100	6384.17	Tully: 6691' MD
6756.00	72.546	337.216	6407.23	Marcellus: 6756' MD
15383.00	90.030	335.870	6416.92	Projected MD @ TD: 15383'

COMMENTS

Wellpath general comments
 API: 47-085-10171-0000
 BHI Job #: 8009777
 Rig: Patterson 343
 Duration: 6.16.16-6.18.16
 SDI Std. Keeper Gyro (112'-5812')
 BHI AT Curve <8-1/2">(5812')(5885'-15358')
 Middlesex: 6457' MD
 Burkett: 6628' MD
 Tully: 6691' MD
 Marcellus: 6756' MD
 Projected MD @ TD: 15383'