



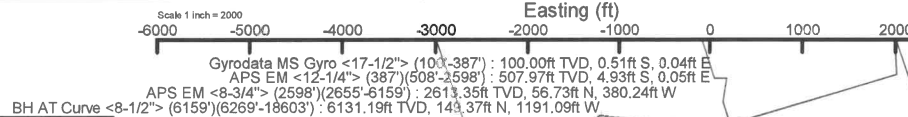
# ANTERO RESOURCES CORPORATION

Location: Wetzel County, WV  
 Field: Wetzel  
 Facility: Gadd Pad

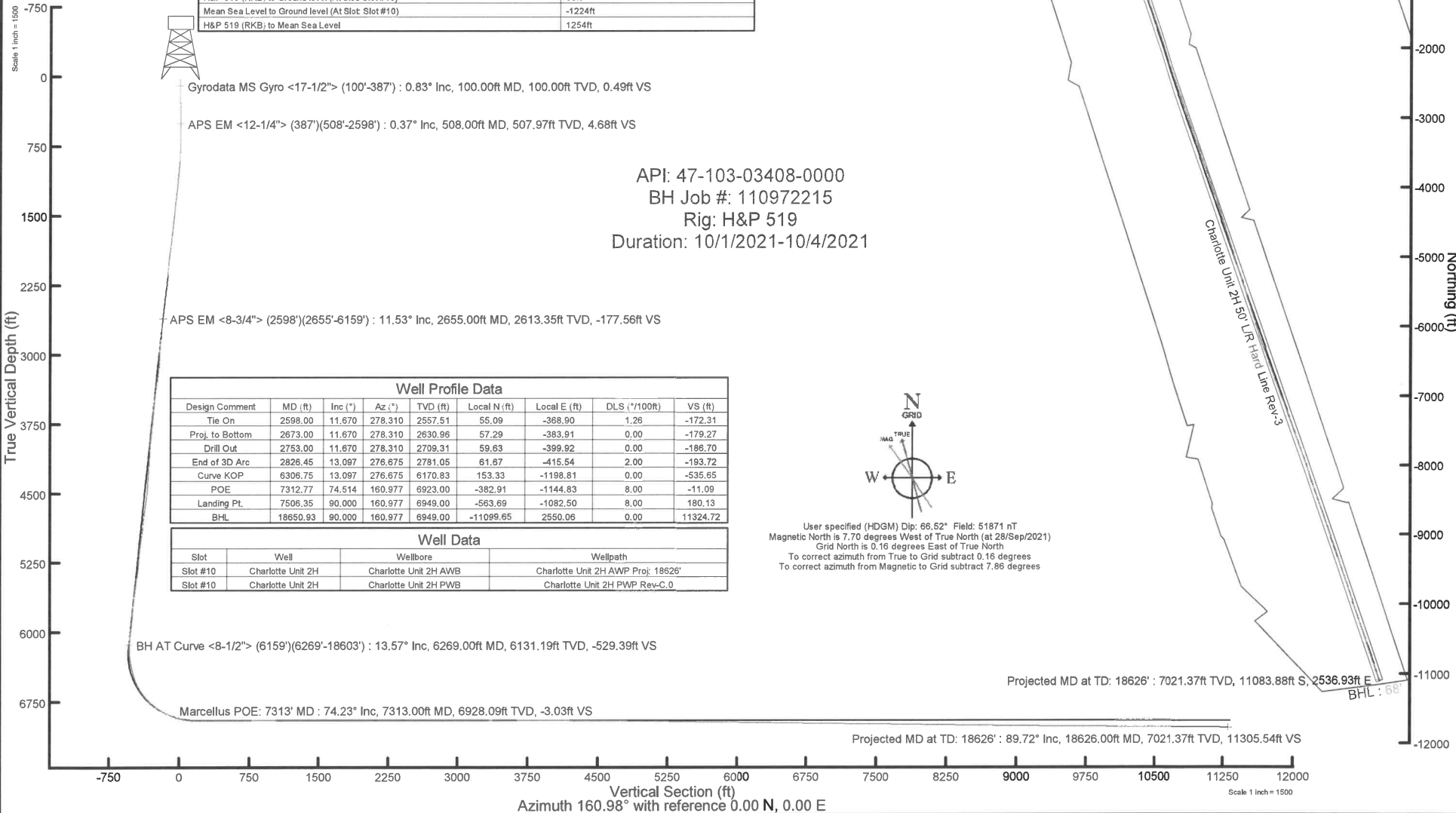
Slot: Slot #10  
 Well: Charlotte Unit 2H  
 Wellbore: Charlotte Unit 2H PWB



Plot reference wellpath is Charlotte Unit 2H PWP Rev-C.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1254 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #10): -1224 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edsanyar on 2021-10-21; Database: WA_MPL_EASTERLUS_Defn



Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Gadd Pad	1709411.160	14362271.230	39°32'59.8700"N	80°45'18.8700"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #10	-24.73	-127.30	1709283.910	14362246.510
			Latitude	Longitude
			39°32'59.8290"N	80°45'20.4960"W
Comment	Charlotte Unit 2H			
H&P 519 (RKB) to Ground level (At Slot: Slot #10)	30ft			
Mean Sea Level to Ground level (At Slot: Slot #10)	-1224ft			
H&P 519 (RKB) to Mean Sea Level	1254ft			



Gyrodata MS Gyro <17-1/2"> (100'-387') : 0.83° Inc, 100.00ft MD, 100.00ft TVD, 0.49ft VS

APS EM <12-1/4"> (387')(508'-2598') : 0.37° Inc, 508.00ft MD, 507.97ft TVD, 4.68ft VS

APS EM <8-3/4"> (2598')(2655'-6159') : 11.53° Inc, 2655.00ft MD, 2613.35ft TVD, -177.56ft VS

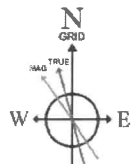
BH AT Curve <8-1/2"> (6159')(6269'-18603') : 13.57° Inc, 6269.00ft MD, 6131.19ft TVD, -529.39ft VS

Marcellus POE: 7313' MD : 74.23° Inc, 7313.00ft MD, 6928.09ft TVD, -3.03ft VS

API: 47-103-03408-0000  
 BH Job #: 110972215  
 Rig: H&P 519  
 Duration: 10/1/2021-10/4/2021

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2698.00	11.670	278.310	2557.51	56.09	-368.90	1.26	-172.31
Proj. to Bottom	2673.00	11.670	278.310	2630.96	57.29	-383.91	0.00	-179.27
Drill Out	2753.00	11.670	278.310	2709.31	59.63	-399.92	0.00	-186.70
End of 3D Arc	2826.45	13.097	276.675	2781.05	61.87	-415.54	2.00	-193.72
Curve KOP	6306.75	13.097	276.675	6170.83	153.33	-1198.81	0.00	-535.65
POE	7312.77	74.514	160.977	6923.00	-382.91	-1144.83	8.00	-11.09
Landing Pt.	7506.35	90.000	160.977	6949.00	-563.69	-1082.50	8.00	180.13
BHL	18650.93	90.000	160.977	6949.00	-11099.65	2550.06	0.00	11324.72

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #10	Charlotte Unit 2H	Charlotte Unit 2H AWP	Charlotte Unit 2H AWP Proj: 18626'
Slot #10	Charlotte Unit 2H	Charlotte Unit 2H PWB	Charlotte Unit 2H PWP Rev-C.0



User specified (HDGM) Dip: 66.52° Field: 51871 nT  
 Magnetic North is 7.70 degrees West of True North (at 28/Sep/2021)  
 Grid North is 0.16 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.16 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.86 degrees

Gyrodata MS Gyro <17-1/2"> (100'-387') : 100.00ft TVD, 0.51ft S, 0.04ft E  
 APS EM <12-1/4"> (387')(508'-2598') : 507.97ft TVD, 4.93ft S, 0.05ft E  
 APS EM <8-3/4"> (2598')(2655'-6159') : 2613.35ft TVD, 56.73ft N, 380.24ft W  
 BH AT Curve <8-1/2"> (6159')(6269'-18603') : 6131.19ft TVD, 149.37ft N, 1191.09ft W

Marcellus POE: 7313' MD : 6928.09ft TVD, 388.26ft S, 1135.62ft W

Projected MD at TD: 18626' : 7021.37ft TVD, 11083.88ft S, 2536.93ft E

Projected MD at TD: 18626' : 89.72° Inc, 18626.00ft MD, 7021.37ft TVD, 11305.54ft VS

Scale 1 inch = 1500



**Actual Wellpath Report**  
 Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999605	Report Generated	21/Oct/2021 at 13:54
Convergence at slot	0.16° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-24.73	-127.30	1709283.91	14362246.51	39°32'59.6290"N	80°45'20.4960"W
Facility Reference Pt			1709411.16	14362271.23	39°32'59.8700"N	80°45'18.8700"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	1254.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1254.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #10)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.98°



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations) † = interpolated, ‡ = extrapolated station																
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]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
0.00†	0.000	175.410	0.00	0.00	0.00	0.00	1709283.91	14362246.51	39°32'59.6290"N	80°45'20.4960"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	175.410	30.00	0.00	0.00	0.00	1709283.91	14362246.51	39°32'59.6290"N	80°45'20.4960"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.830	175.410	100.00	0.49	-0.51	0.04	1709283.95	14362246.00	39°32'59.6240"N	80°45'20.4955"W	0.51	175.410	1.19	1.19	0.00	Gyrodata MS Gyro <17-1/2"> (100'-387')
200.00	0.830	180.520	199.99	1.88	-1.95	0.09	1709284.00	14362244.56	39°32'59.6097"N	80°45'20.4948"W	1.95	177.302	0.07	0.00	5.11	
300.00	0.660	186.030	299.98	3.08	-3.25	0.02	1709283.93	14362243.26	39°32'59.5969"N	80°45'20.4957"W	3.25	179.561	0.18	-0.17	5.51	
387.00	0.440	178.720	386.97	3.85	-4.08	-0.02	1709283.89	14362242.43	39°32'59.5887"N	80°45'20.4964"W	4.08	180.285	0.26	-0.25	-8.40	
508.00	0.370	170.760	507.97	4.68	-4.93	0.05	1709283.96	14362241.58	39°32'59.5803"N	80°45'20.4955"W	4.93	179.386	0.07	-0.06	-6.58	APS EM <12-1/4"> (387')(508'-2598')
598.00	0.370	177.630	597.97	5.24	-5.51	0.11	1709284.02	14362241.00	39°32'59.5746"N	80°45'20.4947"W	5.51	178.840	0.05	0.00	7.63	
688.00	1.360	264.940	687.96	5.26	-5.89	-0.94	1709282.97	14362240.62	39°32'59.5708"N	80°45'20.5082"W	5.97	189.067	1.55	1.10	97.01	
779.00	3.240	279.260	778.88	3.79	-5.57	-4.55	1709279.36	14362240.94	39°32'59.5740"N	80°45'20.5543"W	7.20	219.252	2.14	2.07	15.74	
870.00	5.020	285.590	869.64	0.31	-4.09	-10.93	1709272.99	14362242.42	39°32'59.5889"N	80°45'20.6356"W	11.67	249.480	2.02	1.96	6.96	
960.00	6.320	291.590	959.20	-5.16	-1.21	-19.33	1709264.59	14362245.30	39°32'59.6176"N	80°45'20.7427"W	19.37	266.420	1.59	1.44	6.67	
1051.00	8.070	290.040	1049.48	-12.44	2.82	-29.99	1709253.94	14362249.33	39°32'59.6577"N	80°45'20.8787"W	30.12	275.378	1.93	1.92	-1.70	
1145.00	9.910	283.830	1142.33	-20.99	7.02	-44.04	1709239.89	14362253.53	39°32'59.6996"N	80°45'21.0579"W	44.60	279.054	2.21	1.96	-6.61	
1240.00	11.450	278.290	1235.68	-29.75	10.33	-61.31	1709222.62	14362256.84	39°32'59.7328"N	80°45'21.2783"W	62.18	279.566	1.95	1.62	-5.83	
1334.00	12.840	280.310	1327.57	-39.15	13.55	-80.82	1709203.12	14362260.05	39°32'59.7651"N	80°45'21.5272"W	81.95	279.515	1.55	1.55	2.15	
1429.00	12.790	278.200	1420.21	-49.13	16.94	-101.61	1709182.34	14362263.44	39°32'59.7991"N	80°45'21.7926"W	103.02	279.462	0.50	-0.05	-2.22	
1524.00	12.530	276.430	1512.90	-58.37	19.59	-122.26	1709161.70	14362266.09	39°32'59.8259"N	80°45'22.0561"W	123.82	279.103	0.49	-0.27	-1.86	
1618.00	12.830	277.760	1604.61	-67.45	22.14	-142.74	1709141.23	14362268.64	39°32'59.8517"N	80°45'22.3173"W	144.44	278.817	0.45	0.32	1.41	
1713.00	13.600	281.150	1697.09	-77.82	25.73	-164.15	1709119.83	14362272.22	39°32'59.8877"N	80°45'22.5905"W	166.15	278.907	1.15	0.81	3.57	
1808.00	13.960	280.820	1789.36	-89.13	30.04	-186.36	1709097.82	14362276.53	39°32'59.9309"N	80°45'22.8740"W	188.77	279.156	0.39	0.38	-0.35	
1902.00	13.810	279.420	1880.61	-100.12	34.00	-208.57	1709075.43	14362280.50	39°32'59.9706"N	80°45'23.1573"W	211.32	279.259	0.39	-0.16	-1.49	
1997.00	13.920	278.760	1972.84	-110.84	37.60	-231.04	1709052.96	14362284.09	39°33'0.0068"N	80°45'23.4441"W	234.08	279.243	0.20	0.12	-0.69	
2091.00	13.680	277.350	2064.13	-121.05	40.74	-253.24	1709030.77	14362287.23	39°33'0.0384"N	80°45'23.7274"W	256.50	279.139	0.44	-0.26	-1.50	
2186.00	13.860	276.980	2156.40	-131.03	43.56	-275.68	1709008.34	14362290.05	39°33'0.0669"N	80°45'24.0137"W	279.10	278.979	0.21	0.19	-0.39	
2280.00	14.370	276.030	2247.56	-140.90	46.15	-298.45	1708985.57	14362292.65	39°33'0.0932"N	80°45'24.3044"W	302.00	278.791	0.60	0.54	-1.01	
2375.00	12.430	277.050	2339.97	-150.39	48.65	-320.33	1708963.71	14362295.14	39°33'0.1184"N	80°45'24.5835"W	324.00	278.635	2.06	-2.04	1.07	
2470.00	13.430	277.680	2432.56	-159.84	51.38	-341.41	1708942.64	14362297.87	39°33'0.1459"N	80°45'24.8523"W	345.25	278.558	1.06	1.05	0.66	
2564.00	12.070	277.560	2524.24	-169.14	54.13	-361.97	1708922.08	14362300.62	39°33'0.1737"N	80°45'25.1149"W	365.99	278.505	1.45	-1.45	-0.13	
2598.00	11.670	278.310	2557.51	-172.31	55.09	-368.90	1708915.16	14362301.58	39°33'0.1834"N	80°45'25.2033"W	372.99	278.494	1.26	-1.18	2.21	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 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]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
2655.00	11.530	276.150	2613.35	-177.56	56.73	-380.24	1708903.82	14362303.22	39°33'0.1999"N	80°45'25.3481"W	384.45	278.486	0.25	-0.25	-0.28	APS EM <8-3/4"> (2598')(2655'-6159')
2750.00	12.440	272.700	2706.28	-185.68	58.56	-399.86	1708884.21	14362305.05	39°33'0.2185"N	80°45'25.5985"W	404.13	278.332	1.53	0.96	-5.74	
2845.00	13.600	272.960	2798.84	-193.65	59.62	-421.24	1708862.84	14362306.11	39°33'0.2295"N	80°45'25.8713"W	425.43	278.056	1.22	1.22	0.27	
2939.00	14.390	271.730	2890.05	-201.92	60.54	-443.95	1708840.14	14362307.03	39°33'0.2393"N	80°45'26.1612"W	448.06	277.766	0.90	0.84	-1.31	
3034.00	15.870	259.470	2981.77	-208.02	58.53	-468.53	1708815.57	14362305.01	39°33'0.2200"N	80°45'26.4751"W	472.17	277.120	3.70	1.56	-12.91	
3128.00	14.820	260.720	3072.42	-211.95	54.24	-493.03	1708791.08	14362300.73	39°33'0.1782"N	80°45'26.7880"W	496.00	276.278	1.17	-1.12	1.33	
3225.00	12.130	278.640	3166.78	-218.79	53.77	-515.36	1708768.75	14362300.26	39°33'0.1742"N	80°45'27.0731"W	518.16	275.956	5.09	-2.77	18.47	
3320.00	12.380	290.980	3259.64	-229.97	58.92	-534.74	1708749.38	14362305.40	39°33'0.2256"N	80°45'27.3203"W	537.98	276.287	2.76	0.26	12.99	
3414.00	13.680	289.240	3351.21	-243.33	66.19	-554.64	1708729.49	14362312.67	39°33'0.2980"N	80°45'27.5742"W	558.58	276.805	1.44	1.38	-1.85	
3509.00	14.150	280.950	3443.43	-256.09	72.10	-576.65	1708707.49	14362318.58	39°33'0.3569"N	80°45'27.8549"W	581.14	277.126	2.15	0.49	-8.73	
3604.00	11.310	279.530	3536.09	-266.34	75.84	-597.24	1708686.90	14362322.32	39°33'0.3945"N	80°45'28.1177"W	602.04	277.237	3.01	-2.99	-1.49	
3698.00	9.060	284.610	3628.60	-274.85	79.24	-613.50	1708670.65	14362325.72	39°33'0.4285"N	80°45'28.3251"W	618.59	277.359	2.58	-2.39	5.40	
3793.00	9.720	282.790	3722.33	-283.22	82.90	-628.56	1708655.60	14362329.38	39°33'0.4651"N	80°45'28.5172"W	634.00	277.513	0.76	0.69	-1.92	
3887.00	11.760	281.040	3814.68	-292.20	86.49	-645.70	1708638.47	14362332.97	39°33'0.5011"N	80°45'28.7359"W	651.47	277.629	2.20	2.17	-1.86	
3982.00	12.530	277.180	3907.55	-301.60	89.63	-665.43	1708618.75	14362336.11	39°33'0.5326"N	80°45'28.9876"W	671.44	277.672	1.18	0.81	-4.06	
4077.00	13.320	270.490	4000.15	-309.81	91.01	-686.60	1708597.59	14362337.49	39°33'0.5469"N	80°45'29.2578"W	692.60	277.551	1.78	0.83	-7.04	
4171.00	13.600	261.900	4091.58	-315.52	89.55	-708.37	1708575.82	14362336.02	39°33'0.5330"N	80°45'29.5358"W	714.01	277.205	2.15	0.30	-9.14	
4266.00	12.600	265.170	4184.11	-320.17	87.10	-729.75	1708554.45	14362333.58	39°33'0.5094"N	80°45'29.8088"W	734.93	276.807	1.31	-1.05	3.44	
4360.00	11.630	271.760	4276.02	-326.05	86.53	-749.44	1708534.77	14362333.01	39°33'0.5042"N	80°45'30.0602"W	754.42	276.586	1.80	-1.03	7.01	
4455.00	10.460	266.250	4369.26	-331.72	86.26	-767.62	1708516.60	14362332.74	39°33'0.5020"N	80°45'30.2923"W	772.45	276.412	1.66	-1.23	-5.80	
4550.00	11.610	269.950	4462.50	-337.10	85.69	-785.78	1708498.44	14362332.16	39°33'0.4969"N	80°45'30.5242"W	790.44	276.223	1.42	1.21	3.89	
4644.00	13.430	285.250	4554.29	-346.32	88.55	-805.78	1708478.45	14362335.03	39°33'0.5257"N	80°45'30.7794"W	810.63	276.271	4.01	1.94	16.28	
4738.00	14.230	285.730	4645.56	-359.05	94.56	-827.43	1708456.81	14362341.03	39°33'0.5856"N	80°45'31.0556"W	832.82	276.519	0.86	0.85	0.51	
4833.00	13.600	280.690	4737.78	-371.24	99.79	-849.65	1708434.60	14362346.26	39°33'0.6380"N	80°45'31.3390"W	855.49	276.699	1.44	-0.66	-5.31	
4928.00	13.720	275.500	4830.09	-381.46	102.95	-871.84	1708412.42	14362349.41	39°33'0.6697"N	80°45'31.6222"W	877.89	276.734	1.30	0.13	-5.46	
5022.00	14.240	284.400	4921.32	-392.45	106.89	-894.13	1708390.13	14362353.36	39°33'0.7093"N	80°45'31.9067"W	900.50	276.817	2.35	0.55	9.47	
5117.00	14.640	284.020	5013.32	-405.43	112.70	-917.10	1708367.17	14362359.17	39°33'0.7673"N	80°45'32.1996"W	924.00	277.006	0.43	0.42	-0.40	
5212.00	13.840	279.060	5105.40	-417.33	117.40	-939.97	1708344.31	14362363.87	39°33'0.8144"N	80°45'32.4914"W	947.27	277.119	1.54	-0.84	-5.22	
5307.00	12.350	270.270	5197.94	-426.03	119.24	-961.35	1708322.94	14362365.70	39°33'0.8331"N	80°45'32.7643"W	968.72	277.070	2.61	-1.57	-9.25	
5401.00	11.640	277.060	5289.89	-433.52	120.45	-980.82	1708303.48	14362366.91	39°33'0.8456"N	80°45'33.0128"W	988.19	277.001	1.68	-0.76	7.22	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations) † = interpolated, ‡ = extrapolated station																
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)	(US ft)	(US ft)			(ft)	(°)	("/100ft)	("/100ft)	("/100ft)	
5496.00	14.090	285.800	5382.51	-444.34	124.78	-1001.46	1708282.85	14362371.24	39°33'0.8889"N	80°45'33.2762"W	1009.20	277.102	3.29	2.58	9.20	
5591.00	15.380	283.730	5474.38	-457.76	130.92	-1024.83	1708259.49	14362377.38	39°33'0.9502"N	80°45'33.5742"W	1033.15	277.280	1.47	1.36	-2.18	
5686.00	15.060	277.610	5566.06	-470.11	135.54	-1049.30	1708235.03	14362382.00	39°33'0.9966"N	80°45'33.8865"W	1058.02	277.360	1.72	-0.34	-6.44	
5780.00	15.200	274.190	5656.80	-480.44	138.06	-1073.69	1708210.64	14362384.52	39°33'1.0221"N	80°45'34.1978"W	1082.53	277.327	0.96	0.15	-3.64	
5875.00	14.700	268.150	5748.59	-488.91	138.58	-1098.16	1708186.18	14362385.04	39°33'1.0279"N	80°45'34.5102"W	1106.87	277.192	1.72	-0.53	-6.36	
5970.00	13.770	269.840	5840.67	-496.12	138.16	-1121.52	1708162.84	14362384.62	39°33'1.0243"N	80°45'34.8083"W	1130.00	277.023	1.07	-0.98	1.78	
6064.00	13.790	283.010	5931.99	-505.68	140.65	-1143.63	1708140.74	14362387.11	39°33'1.0495"N	80°45'35.0905"W	1152.24	277.012	3.33	0.02	14.01	
6159.00	13.710	284.490	6024.27	-517.90	146.02	-1165.56	1708118.82	14362392.47	39°33'1.1032"N	80°45'35.3703"W	1174.67	277.141	0.38	-0.08	1.56	
6269.00	13.570	270.380	6131.19	-529.39	149.37	-1191.09	1708093.29	14362395.82	39°33'1.1369"N	80°45'35.6961"W	1200.42	277.148	3.02	-0.13	-12.83	BH AT Curve <8-1/2"> (6159')(6269'-18603')
6364.00	12.860	231.800	6223.85	-529.62	142.89	-1210.58	1708073.81	14362389.34	39°33'1.0734"N	80°45'35.9452"W	1218.98	276.732	9.15	-0.75	-40.61	
6458.00	15.500	208.950	6315.05	-517.76	125.41	-1224.89	1708059.50	14362371.87	39°33'0.9011"N	80°45'36.1285"W	1231.30	275.846	6.53	2.81	-24.31	
6553.00	16.240	201.010	6406.44	-499.08	101.90	-1235.80	1708048.60	14362348.37	39°33'0.6690"N	80°45'36.2685"W	1240.00	274.714	2.41	0.78	-8.36	
6647.00	21.630	189.710	6495.35	-473.80	72.52	-1243.45	1708040.96	14362319.01	39°33'0.3788"N	80°45'36.3671"W	1245.56	273.338	6.91	5.73	-12.02	
6742.00	28.910	174.810	6581.29	-436.06	32.30	-1244.32	1708040.08	14362278.80	39°32'59.9813"N	80°45'36.3797"W	1244.74	271.487	10.12	7.66	-15.68	
6776.00†	31.372	171.349	6610.69	-419.37	15.36	-1242.25	1708042.15	14362261.87	39°32'59.8139"N	80°45'36.3538"W	1242.34	270.709	8.86	7.24	-10.18	Sycamore: 6776' MD
6837.00	35.980	166.240	6661.45	-385.88	-17.76	-1235.59	1708048.81	14362228.75	39°32'59.4863"N	80°45'36.2699"W	1235.72	269.176	8.86	7.55	-8.37	
6927.00†	43.352	165.219	6730.69	-328.67	-73.39	-1221.40	1708062.99	14362173.15	39°32'58.9362"N	80°45'36.0907"W	1223.61	266.562	8.22	8.19	-1.13	Middlesex: 6927' MD
6931.00	43.680	165.180	6733.59	-325.93	-76.05	-1220.70	1708063.69	14362170.49	39°32'58.9098"N	80°45'36.0818"W	1223.07	266.435	8.22	8.20	-0.97	
7026.00	51.470	165.320	6797.63	-256.05	-143.81	-1202.86	1708081.52	14362102.75	39°32'58.2397"N	80°45'35.8564"W	1211.43	263.182	8.20	8.20	0.15	
7078.00†	55.613	165.567	6828.52	-214.36	-184.29	-1192.36	1708092.03	14362062.30	39°32'57.8394"N	80°45'35.7237"W	1206.51	261.214	7.98	7.97	0.48	Burkett: 7078' MD
7120.00	58.960	165.750	6851.21	-179.15	-218.52	-1183.61	1708100.77	14362028.08	39°32'57.5008"N	80°45'35.6131"W	1203.61	259.540	7.98	7.97	0.43	
7127.00†	59.493	165.606	6854.80	-173.15	-224.35	-1182.12	1708102.26	14362022.25	39°32'57.4432"N	80°45'35.5943"W	1203.22	259.254	7.81	7.61	-2.06	fully: 7127' MD
7215.00	66.200	163.910	6894.94	-95.07	-299.84	-1161.51	1708122.86	14361946.79	39°32'56.6966"N	80°45'35.3339"W	1199.59	255.525	7.81	7.62	-1.93	
7310.00	73.970	163.470	6927.27	-5.92	-385.49	-1136.44	1708147.92	14361861.17	39°32'55.8493"N	80°45'35.0167"W	1200.04	251.263	8.19	8.18	-0.46	
7313.00†	74.229	163.434	6928.09	-3.03	-388.26	-1135.62	1708148.74	14361858.41	39°32'55.8220"N	80°45'35.0063"W	1200.16	251.125	8.72	8.65	-1.19	Marcellus POE: 7313' MD
7404.00	82.100	162.390	6946.74	85.91	-473.32	-1109.46	1708174.89	14361773.38	39°32'54.9806"N	80°45'34.6752"W	1206.20	246.896	8.72	8.65	-1.15	
7499.00	90.150	160.800	6953.16	180.61	-563.18	-1079.55	1708204.79	14361683.56	39°32'54.0917"N	80°45'34.2965"W	1217.62	242.450	8.64	8.47	-1.67	
7594.00	90.220	161.220	6952.85	275.60	-653.01	-1048.64	1708235.69	14361593.76	39°32'53.2031"N	80°45'33.9050"W	1235.34	238.089	0.45	0.07	0.44	
7688.00	89.750	160.240	6952.88	369.60	-741.74	-1017.62	1708266.70	14361505.07	39°32'52.3253"N	80°45'33.5120"W	1259.25	233.912	1.16	-0.50	-1.04	
7783.00	90.400	160.710	6952.75	464.60	-831.27	-985.87	1708298.43	14361415.57	39°32'51.4396"N	80°45'33.1098"W	1289.55	229.863	0.84	0.68	0.49	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
7878.00	90.430	161.520	6952.06	559.59	-921.16	-955.12	1708329.17	14361325.72	39°32'50.5504"N	80°45'32.7203"W	1326.94	226.037	0.85	0.03	0.85	
7972.00	89.480	159.240	6952.14	653.58	-1009.69	-923.56	1708360.72	14361237.22	39°32'49.6746"N	80°45'32.3205"W	1368.37	222.449	2.63	-1.01	-2.43	
8067.00	91.290	160.530	6951.50	748.56	-1098.89	-890.89	1708393.37	14361148.06	39°32'48.7922"N	80°45'31.9065"W	1414.65	219.032	2.34	1.91	1.36	
8162.00	90.680	162.010	6949.87	843.54	-1188.84	-860.39	1708423.86	14361058.14	39°32'47.9023"N	80°45'31.5202"W	1467.52	215.894	1.68	-0.64	1.56	
8257.00	91.480	159.340	6948.08	938.51	-1278.47	-828.96	1708455.28	14360968.55	39°32'47.0157"N	80°45'31.1221"W	1523.70	212.959	2.93	0.84	-2.81	
8352.00	91.050	159.060	6945.98	1033.44	-1367.25	-795.23	1708488.99	14360879.80	39°32'46.1373"N	80°45'30.6946"W	1581.70	210.184	0.54	-0.45	-0.29	
8446.00	90.120	160.690	6945.02	1127.41	-1455.50	-762.89	1708521.32	14360791.58	39°32'45.2643"N	80°45'30.2848"W	1643.32	207.661	2.00	-0.99	1.73	
8541.00	90.000	160.450	6944.92	1222.41	-1545.09	-731.29	1708552.91	14360702.03	39°32'44.3780"N	80°45'29.8845"W	1709.42	205.328	0.28	-0.13	-0.25	
8635.00	90.220	160.920	6944.74	1316.41	-1633.80	-700.20	1708583.99	14360613.36	39°32'43.5004"N	80°45'29.4906"W	1777.52	203.199	0.55	0.23	0.50	
8730.00	90.710	160.330	6943.97	1411.40	-1723.42	-668.69	1708615.49	14360523.77	39°32'42.6139"N	80°45'29.0914"W	1848.60	201.206	0.81	0.52	-0.62	
8824.00	90.150	161.130	6943.26	1505.40	-1812.15	-637.67	1708646.50	14360435.08	39°32'41.7361"N	80°45'28.6985"W	1921.07	199.386	1.04	-0.60	0.85	
8919.00	89.690	160.370	6943.39	1600.40	-1901.84	-606.35	1708677.81	14360345.43	39°32'40.8489"N	80°45'28.3018"W	1996.16	197.683	0.94	-0.48	-0.80	
9013.00	89.450	160.900	6944.10	1694.39	-1990.52	-575.18	1708708.96	14360256.78	39°32'39.9716"N	80°45'27.9070"W	2071.95	196.117	0.62	-0.26	0.56	
9108.00	90.030	160.470	6944.53	1789.39	-2080.17	-543.76	1708740.37	14360167.17	39°32'39.0847"N	80°45'27.5090"W	2150.06	194.649	0.76	0.61	-0.45	
9203.00	89.780	161.400	6944.69	1884.39	-2169.95	-512.72	1708771.39	14360077.42	39°32'38.1965"N	80°45'27.1160"W	2229.71	193.294	1.01	-0.26	0.98	
9297.00	89.170	159.800	6945.55	1978.38	-2258.61	-481.50	1708802.60	14359988.80	39°32'37.3195"N	80°45'26.7205"W	2309.37	192.035	1.82	-0.65	-1.70	
9392.00	91.360	159.490	6945.11	2073.35	-2347.67	-448.46	1708835.63	14359899.77	39°32'36.4384"N	80°45'26.3018"W	2390.12	190.815	2.33	2.31	-0.33	
9486.00	89.880	161.360	6944.09	2167.33	-2436.23	-416.97	1708867.10	14359811.25	39°32'35.5623"N	80°45'25.9029"W	2471.65	189.712	2.54	-1.57	1.99	
9581.00	89.850	160.510	6944.32	2262.33	-2526.02	-385.94	1708898.12	14359721.50	39°32'34.6741"N	80°45'25.5099"W	2555.33	188.687	0.90	-0.03	-0.89	
9676.00	90.150	160.100	6944.32	2357.32	-2615.46	-353.93	1708930.12	14359632.09	39°32'33.7893"N	80°45'25.1043"W	2639.30	187.707	0.53	0.32	-0.43	
9771.00	91.010	160.480	6943.36	2452.31	-2704.89	-321.89	1708962.15	14359542.70	39°32'32.9046"N	80°45'24.6984"W	2723.97	186.786	0.99	0.91	0.40	
9865.00	89.910	160.800	6942.60	2546.30	-2793.57	-290.73	1708993.30	14359454.05	39°32'32.0273"N	80°45'24.3037"W	2808.65	185.941	1.22	-1.17	0.34	
9959.00	89.820	160.000	6942.82	2640.30	-2882.12	-259.20	1709024.82	14359365.53	39°32'31.1513"N	80°45'23.9043"W	2893.75	185.139	0.86	-0.10	-0.85	
10054.00	90.060	160.150	6942.92	2735.29	-2971.43	-226.82	1709057.18	14359276.26	39°32'30.2677"N	80°45'23.4942"W	2980.08	184.365	0.30	0.25	0.16	
10148.00	90.120	161.780	6942.77	2829.28	-3060.29	-196.17	1709087.82	14359187.43	39°32'29.3887"N	80°45'23.1059"W	3066.57	183.668	1.74	0.06	1.73	
10243.00	90.340	161.160	6942.39	2924.28	-3150.36	-165.97	1709118.00	14359097.40	39°32'28.4976"N	80°45'22.7237"W	3154.73	183.016	0.69	0.23	-0.65	
10338.00	89.750	161.060	6942.32	3019.28	-3240.25	-135.22	1709148.75	14359007.55	39°32'27.6085"N	80°45'22.3342"W	3243.07	182.390	0.63	-0.62	-0.11	
10432.00	89.970	160.190	6942.55	3113.27	-3328.92	-104.03	1709179.92	14358918.91	39°32'26.7312"N	80°45'21.9392"W	3330.55	181.790	0.95	0.23	-0.93	
10527.00	88.770	160.430	6943.59	3208.26	-3418.36	-72.03	1709211.91	14358829.51	39°32'25.8465"N	80°45'21.5338"W	3419.12	181.207	1.29	-1.26	0.25	
10622.00	88.950	160.830	6945.48	3303.24	-3507.96	-40.53	1709243.40	14358739.94	39°32'24.9600"N	80°45'21.1348"W	3508.20	180.662	0.46	0.19	0.42	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
10716.00	90.650	162.020	6945.81	3397.23	-3597.06	-10.58	1709273.33	14358650.87	39°32'24.0786"N	80°45'20.7557"W	3597.08	180.169	2.21	1.81	1.27	
10811.00	90.490	158.490	6944.87	3492.20	-3686.46	21.50	1709305.40	14358561.51	39°32'23.1943"N	80°45'20.3492"W	3686.52	179.666	3.72	-0.17	-3.72	
10906.00	89.230	160.770	6945.10	3587.17	-3775.51	54.57	1709338.46	14358472.50	39°32'22.3133"N	80°45'19.9303"W	3775.90	179.172	2.74	-1.33	2.40	
11000.00	89.320	161.240	6946.29	3681.16	-3864.38	85.16	1709369.04	14358383.66	39°32'21.4341"N	80°45'19.5429"W	3865.32	178.738	0.51	0.10	0.50	
11095.00	88.980	160.680	6947.70	3776.15	-3954.18	116.15	1709400.01	14358293.90	39°32'20.5458"N	80°45'19.1505"W	3955.88	178.317	0.69	-0.36	-0.59	
11190.00	89.600	160.300	6948.87	3871.14	-4043.71	147.87	1709431.73	14358204.40	39°32'19.6600"N	80°45'18.7486"W	4046.42	177.906	0.77	0.65	-0.40	
11285.00	89.540	159.980	6949.59	3966.12	-4133.06	180.15	1709463.99	14358115.09	39°32'18.7761"N	80°45'18.3398"W	4136.98	177.504	0.34	-0.06	-0.34	
11379.00	90.280	162.400	6949.73	4060.12	-4222.03	210.45	1709494.28	14358026.15	39°32'17.8960"N	80°45'17.9561"W	4227.27	177.146	2.69	0.79	2.57	
11474.00	89.110	162.210	6950.24	4155.09	-4312.54	239.33	1709523.14	14357935.68	39°32'17.0007"N	80°45'17.5907"W	4319.17	176.824	1.25	-1.23	-0.20	
11569.00	89.660	163.460	6951.26	4250.03	-4403.30	267.36	1709551.17	14357844.96	39°32'16.1029"N	80°45'17.2360"W	4411.41	176.525	1.44	0.58	1.32	
11663.00	89.380	161.940	6952.05	4343.98	-4493.04	295.31	1709579.11	14357755.25	39°32'15.2153"N	80°45'16.8824"W	4502.73	176.240	1.64	-0.30	-1.62	
11758.00	89.780	162.700	6952.74	4438.95	-4583.55	324.16	1709607.94	14357664.78	39°32'14.3199"N	80°45'16.5173"W	4595.00	175.955	0.90	0.42	0.80	
11853.00	90.060	162.670	6952.88	4533.91	-4674.24	352.44	1709636.21	14357574.12	39°32'13.4228"N	80°45'16.1596"W	4687.51	175.688	0.30	0.29	-0.03	
11947.00	89.880	162.950	6952.93	4627.86	-4764.04	380.22	1709663.98	14357484.36	39°32'12.5345"N	80°45'15.8081"W	4779.19	175.437	0.35	-0.19	0.30	
12042.00	88.710	162.260	6954.09	4722.81	-4854.69	408.62	1709692.36	14357393.75	39°32'11.6379"N	80°45'15.4488"W	4871.86	175.189	1.43	-1.23	-0.73	
12136.00	89.020	162.420	6955.96	4816.77	-4944.24	437.13	1709720.86	14357304.23	39°32'10.7521"N	80°45'15.0881"W	4963.53	174.948	0.37	0.33	0.17	
12231.00	89.260	162.870	6957.38	4911.72	-5034.91	465.46	1709749.19	14357213.60	39°32'9.8552"N	80°45'14.7296"W	5056.38	174.718	0.54	0.25	0.47	
12325.00	89.940	163.300	6958.04	5005.65	-5124.84	492.81	1709776.52	14357123.71	39°32'8.9657"N	80°45'14.3837"W	5148.48	174.507	0.86	0.72	0.46	
12420.00	89.350	161.840	6958.63	5100.61	-5215.47	521.27	1709804.97	14357033.11	39°32'8.0692"N	80°45'14.0236"W	5241.46	174.292	1.66	-0.62	-1.54	
12515.00	89.170	162.570	6959.85	5195.58	-5305.92	550.30	1709833.99	14356942.70	39°32'7.1745"N	80°45'13.6563"W	5334.38	174.079	0.79	-0.19	0.77	
12609.00	88.710	162.070	6961.59	5289.54	-5395.46	578.84	1709862.52	14356853.19	39°32'6.2887"N	80°45'13.2951"W	5426.42	173.877	0.72	-0.49	-0.53	
12704.00	88.980	162.050	6963.51	5384.50	-5485.82	608.09	1709891.76	14356762.86	39°32'5.3948"N	80°45'12.9249"W	5519.42	173.675	0.28	0.28	-0.02	
12798.00	89.290	162.640	6964.93	5478.46	-5575.39	636.80	1709920.26	14356673.33	39°32'4.5089"N	80°45'12.5642"W	5611.61	173.486	0.71	0.33	0.63	
12893.00	89.200	162.710	6966.18	5573.41	-5666.07	664.89	1709948.53	14356582.69	39°32'3.6119"N	80°45'12.2063"W	5704.95	173.307	0.12	-0.09	0.07	
12988.00	89.290	162.630	6967.43	5668.36	-5756.75	693.18	1709976.82	14356492.05	39°32'2.7149"N	80°45'11.8484"W	5798.33	173.134	0.13	0.09	-0.08	
13082.00	90.220	162.590	6967.83	5762.32	-5846.45	721.28	1710004.90	14356402.38	39°32'1.8276"N	80°45'11.4929"W	5890.77	172.967	0.99	0.99	-0.04	
13177.00	88.860	162.230	6968.60	5857.29	-5937.00	749.98	1710033.60	14356311.86	39°32'0.9319"N	80°45'11.1297"W	5984.19	172.800	1.48	-1.43	-0.38	
13272.00	89.290	163.090	6970.13	5952.24	-6027.67	778.29	1710061.90	14356221.23	39°32'0.0350"N	80°45'10.7716"W	6077.71	172.643	1.01	0.45	0.91	
13366.00	89.450	162.640	6971.16	6046.18	-6117.49	805.99	1710089.58	14356131.44	39°31'59.1465"N	80°45'10.4213"W	6170.36	172.494	0.51	0.17	-0.48	
13461.00	89.010	160.010	6972.44	6141.16	-6207.48	836.40	1710119.98	14356041.50	39°31'58.2564"N	80°45'10.0363"W	6263.57	172.326	2.81	-0.46	-2.77	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations)																	
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments	
13555.00	89.140	159.900	6973.96	6235.13	-6295.77	868.62	1710152.18	14355953.24	39°31'57.3829"N	80°45'9.6282"W	6355.41	172.145	0.18	0.14	-0.12		
13650.00	89.260	160.550	6975.28	6330.11	-6385.16	900.75	1710184.31	14355863.88	39°31'56.4986"N	80°45'9.2212"W	6448.38	171.970	0.70	0.13	0.68		
13745.00	89.010	159.900	6976.72	6425.09	-6474.55	932.89	1710216.43	14355774.53	39°31'55.6142"N	80°45'8.8142"W	6541.41	171.801	0.73	-0.26	-0.68		
13839.00	88.980	160.360	6978.37	6519.07	-6562.94	964.84	1710248.36	14355686.18	39°31'54.7398"N	80°45'8.4096"W	6633.48	171.637	0.49	-0.03	0.49		
13934.00	89.420	159.280	6979.69	6614.04	-6652.09	997.60	1710281.12	14355597.05	39°31'53.8577"N	80°45'7.9945"W	6726.48	171.471	1.23	0.46	-1.14		
14028.00	89.230	160.110	6980.80	6708.01	-6740.25	1030.22	1710313.72	14355508.94	39°31'52.9856"N	80°45'7.5813"W	6818.52	171.310	0.91	-0.20	0.88		
14123.00	89.350	160.000	6981.98	6802.99	-6829.54	1062.62	1710346.11	14355419.68	39°31'52.1022"N	80°45'7.1709"W	6911.71	171.156	0.17	0.13	-0.12		
14218.00	89.260	160.670	6983.13	6897.97	-6918.99	1094.59	1710378.07	14355330.26	39°31'51.2173"N	80°45'6.7661"W	7005.04	171.010	0.71	-0.09	-0.71		
14313.00	89.660	158.990	6984.03	6992.95	-7008.16	1127.35	1710410.81	14355241.13	39°31'50.3351"N	80°45'6.3512"W	7098.25	170.862	1.82	0.42	-1.77		
14407.00	89.200	159.920	6984.96	7086.91	-7096.18	1160.33	1710443.78	14355153.15	39°31'49.4643"N	80°45'5.9333"W	7190.42	170.713	1.10	-0.49	0.99		
14502.00	89.350	160.330	6986.16	7181.89	-7185.51	1192.63	1710476.06	14355063.85	39°31'48.5805"N	80°45'5.5243"W	7283.81	170.576	0.46	0.16	0.43		
14597.00	89.630	160.890	6987.01	7276.88	-7275.12	1224.16	1710507.59	14354974.28	39°31'47.6941"N	80°45'5.1250"W	7377.39	170.448	0.66	0.29	0.59		
14691.00	89.230	160.630	6987.94	7370.88	-7363.86	1255.14	1710538.55	14354885.57	39°31'46.8161"N	80°45'4.7328"W	7470.06	170.327	0.51	-0.43	-0.28		
14786.00	89.820	159.550	6988.73	7465.86	-7453.18	1287.49	1710570.89	14354796.29	39°31'45.9325"N	80°45'4.3231"W	7563.56	170.199	1.30	0.62	-1.14		
14881.00	89.380	161.290	6989.39	7560.85	-7542.68	1319.32	1710602.71	14354706.82	39°31'45.0471"N	80°45'3.9200"W	7657.19	170.079	1.89	-0.46	1.83		
14975.00	88.890	159.500	6990.81	7654.83	-7631.22	1350.86	1710634.23	14354618.32	39°31'44.1712"N	80°45'3.5207"W	7749.86	169.962	1.97	-0.52	-1.90		
15070.00	89.140	160.450	6992.45	7749.80	-7720.46	1383.38	1710666.74	14354529.11	39°31'43.2883"N	80°45'3.1087"W	7843.42	169.841	1.03	0.26	1.00		
15164.00	89.380	160.430	6993.66	7843.79	-7809.03	1414.85	1710698.20	14354440.58	39°31'42.4121"N	80°45'2.7103"W	7936.16	169.730	0.26	0.26	-0.02		
15259.00	89.140	160.760	6994.89	7938.78	-7898.62	1446.41	1710729.75	14354351.02	39°31'41.5257"N	80°45'2.3107"W	8029.97	169.623	0.43	-0.25	0.35		
15354.00	88.950	160.740	6996.47	8033.77	-7988.30	1477.73	1710761.05	14354261.38	39°31'40.6386"N	80°45'1.9142"W	8123.83	169.520	0.20	-0.20	-0.02		
15448.00	89.200	161.050	6997.99	8127.75	-8077.11	1508.49	1710791.80	14354172.60	39°31'39.7600"N	80°45'1.5247"W	8216.77	169.421	0.42	0.27	0.33		
15543.00	89.630	161.690	6998.96	8222.74	-8167.13	1538.84	1710822.14	14354082.62	39°31'38.8695"N	80°45'1.1407"W	8310.83	169.330	0.81	0.45	0.67		
15638.00	88.980	161.270	7000.11	8317.73	-8257.20	1569.01	1710852.30	14353992.59	39°31'37.9784"N	80°45'0.7588"W	8404.95	169.241	0.81	-0.68	-0.44		
15732.00	88.710	159.920	7002.01	8411.71	-8345.84	1600.23	1710883.51	14353903.98	39°31'37.1015"N	80°45'0.3635"W	8497.87	169.146	1.46	-0.29	-1.44		
15827.00	90.430	161.110	7002.72	8506.70	-8435.39	1631.92	1710915.18	14353814.46	39°31'36.2156"N	80°44'59.9623"W	8591.80	169.051	2.20	1.81	1.25		
15922.00	88.770	161.820	7003.38	8601.69	-8525.46	1662.12	1710945.37	14353724.43	39°31'35.3246"N	80°44'59.5801"W	8685.97	168.968	1.90	-1.75	0.75		
16016.00	89.320	161.180	7004.95	8695.67	-8614.59	1691.94	1710975.18	14353635.34	39°31'34.4429"N	80°44'59.2027"W	8779.17	168.888	0.90	0.59	-0.68		
16111.00	88.710	161.040	7006.58	8790.66	-8704.46	1722.69	1711005.92	14353545.51	39°31'33.5538"N	80°44'58.8134"W	8873.29	168.805	0.66	-0.64	-0.15		
16206.00	89.570	160.400	7008.01	8885.64	-8794.12	1754.05	1711037.27	14353455.88	39°31'32.6668"N	80°44'58.4164"W	8967.34	168.720	1.13	0.91	-0.67		
16301.00	89.350	161.400	7008.90	8980.64	-8883.88	1785.14	1711068.34	14353366.15	39°31'31.7788"N	80°44'58.0229"W	9061.46	168.638	1.08	-0.23	1.05		





# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH DATA (206 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
16395.00	89.690	160.670	7009.69	9074.63	-8972.78	1815.69	1711098.88	14353277.29	39°31'30.8994"N	80°44'57.6362"W	9154.64	168.560	0.86	0.36	-0.78	
16490.00	89.600	160.890	7010.28	9169.63	-9062.48	1846.96	1711130.14	14353187.63	39°31'30.0120"N	80°44'57.2403"W	9248.77	168.481	0.25	-0.09	0.23	
16584.00	<b>89.540</b>	160.520	7010.98	9263.63	-9151.20	1878.02	1711161.18	<b>14353098.94</b>	39°31'29.1343"N	80°44'56.8471"W	9341.91	168.403	0.40	-0.06	<b>-0.39</b>	
16679.00	89.570	160.950	7011.72	9358.62	-9240.87	1909.36	1711192.51	14353009.30	39°31'28.2472"N	80°44'56.4503"W	9436.07	168.326	0.45	0.03	0.45	
16774.00	89.630	<b>160.890</b>	<b>7012.39</b>	<b>9453.62</b>	<b>-9330.65</b>	<b>1940.41</b>	<b>1711223.56</b>	<b>14352919.56</b>	39°31'27.3590"N	80°44'56.0573"W	9530.28	<b>168.252</b>	<b>0.09</b>	<b>0.06</b>	<b>-0.06</b>	
16868.00	89.600	160.600	7013.02	9547.62	-9419.39	1971.41	1711254.54	14352830.85	39°31'26.4811"N	80°44'55.6648"W	9623.48	168.179	0.31	-0.03	-0.31	
16963.00	89.480	160.810	7013.78	9642.61	-9509.05	2002.80	1711285.92	14352741.23	39°31'25.5941"N	80°44'55.2675"W	9717.68	168.106	0.25	-0.13	0.22	
17057.00	89.850	161.530	7014.33	9736.61	-9598.02	2033.14	1711316.25	14352652.30	39°31'24.7140"N	80°44'54.8835"W	9811.00	168.040	0.86	0.39	0.77	
17152.00	<b>90.060</b>	161.460	7014.40	9831.61	-9688.11	2063.29	1711346.38	14352562.24	39°31'23.8228"N	80°44'54.5019"W	9905.38	167.977	0.23	0.22	-0.07	
17247.00	<b>88.980</b>	<b>161.210</b>	<b>7015.20</b>	<b>9926.60</b>	<b>-9778.11</b>	<b>2093.69</b>	<b>1711376.77</b>	<b>14352472.28</b>	39°31'22.9324"N	80°44'54.1172"W	9999.75	<b>167.914</b>	<b>1.17</b>	<b>-1.14</b>	<b>-0.26</b>	
17341.00	<b>89.820</b>	161.410	7016.18	10020.59	-9867.14	2123.82	1711406.88	14352383.28	39°31'22.0516"N	80°44'53.7360"W	10093.12	167.853	0.92	0.89	0.21	
17436.00	89.600	160.990	7016.66	10115.59	-9957.07	2154.43	1711437.49	14352293.39	39°31'21.1620"N	80°44'53.3485"W	10187.49	167.791	0.50	-0.23	-0.44	
17531.00	89.630	161.100	7017.30	10210.59	-10046.92	2185.29	1711468.33	14352203.57	39°31'20.2732"N	80°44'52.9580"W	10281.83	167.729	0.12	0.03	0.12	
17625.00	89.750	161.140	7017.81	10304.59	-10135.86	2215.70	1711498.74	14352114.67	39°31'19.3933"N	80°44'52.5730"W	10375.21	167.669	0.13	0.13	0.04	
17720.00	<b>88.890</b>	<b>160.990</b>	<b>7018.94</b>	<b>10399.58</b>	<b>-10225.71</b>	<b>2246.53</b>	<b>1711529.55</b>	<b>14352024.85</b>	39°31'18.5044"N	80°44'52.1829"W	10469.58	<b>167.609</b>	<b>0.92</b>	<b>-0.91</b>	<b>-0.16</b>	
17815.00	89.820	161.220	7020.01	10494.57	-10315.59	2277.29	1711560.30	14351935.01	39°31'17.6153"N	80°44'51.7936"W	10563.97	167.551	1.01	0.98	<b>0.24</b>	
17909.00	90.280	161.970	7019.93	10588.57	-10404.78	2306.97	1711589.96	14351845.86	39°31'16.7330"N	80°44'51.4180"W	10657.46	167.499	0.94	0.49	0.80	
18004.00	89.540	161.140	7020.08	10683.56	-10494.90	2337.03	1711620.01	14351755.78	39°31'15.8415"N	80°44'51.0377"W	10751.96	167.446	1.17	-0.78	<b>-0.87</b>	
18099.00	90.860	161.700	7019.74	10778.55	-10584.94	2367.29	1711650.27	14351665.77	39°31'14.9507"N	80°44'50.6547"W	10846.43	167.393	1.51	1.39	0.59	
<b>18193.00</b>	<b>89.750</b>	<b>161.320</b>	<b>7019.24</b>	<b>10872.55</b>	<b>-10674.09</b>	<b>2397.11</b>	<b>1711680.06</b>	<b>14351576.66</b>	39°31'14.0688"N	80°44'50.2775"W	10939.94	<b>167.343</b>	<b>1.25</b>	<b>-1.18</b>	<b>-0.40</b>	
18288.00	89.750	161.130	7019.66	10967.54	-10764.03	2427.68	1711710.63	14351486.75	39°31'13.1790"N	80°44'49.8905"W	11034.40	167.290	0.20	0.00	-0.20	
18382.00	89.910	161.220	7019.94	11061.54	-10853.00	2458.01	1711740.95	14351397.81	39°31'12.2989"N	80°44'49.5067"W	11127.87	167.239	0.20	0.17	0.10	
18477.00	89.480	160.960	7020.44	11156.54	-10942.87	2488.80	1711771.72	14351307.98	39°31'11.4098"N	80°44'49.1171"W	11222.33	167.187	0.53	-0.45	-0.27	
18572.00	89.720	161.220	7021.11	11251.54	-11032.74	2519.59	1711802.50	14351218.14	39°31'10.5207"N	80°44'48.7274"W	11316.79	167.136	0.37	0.25	0.27	
<b>18603.00</b>	89.720	<b>161.280</b>	<b>7021.26</b>	<b>11282.54</b>	<b>-11062.10</b>	<b>2529.55</b>	<b>1711812.46</b>	<b>14351188.80</b>	39°31'10.2303"N	80°44'48.6013"W	<b>11347.63</b>	<b>167.120</b>	<b>0.19</b>	<b>0.00</b>	<b>0.19</b>	
18626.00†	89.720	161.280	7021.37	11305.54	-11083.88	2536.93	1711819.84	14351167.02	39°31'10.0148"N	80°44'48.5079"W	11370.51	167.108	0.00	0.00	0.00	Projected MD at TD: 18626'



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

HOLE & CASING SECTIONS - Ref Wellbore: Charlotte Unit 2H AWB Ref Wellpath: Charlotte Unit 2H AWP Proj: 18626'										
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	30.00	130.00	100.00	30.00	129.99	0.00	0.00	-0.94	0.07	
17.5in Open Hole	130.00	491.00	361.00	129.99	490.97	-0.94	0.07	-4.82	0.04	
13.375in Casing Surface	30.00	471.00	441.00	30.00	470.97	0.00	0.00	-4.69	0.02	
12.25in Open Hole	491.00	2673.00	2182.00	490.97	2630.98	-4.82	0.04	57.21	-383.83	
9.625in Casing Intermediate	30.00	2643.00	2613.00	30.00	2601.59	0.00	0.00	56.39	-377.86	
8.75in Open Hole	2673.00	6285.00	3612.00	2630.98	6146.76	57.21	-383.83	149.20	-1194.77	
8.5in Open Hole	6285.00	18626.00	12341.00	6146.76	7021.37	149.20	-1194.77	-11083.88	2536.93	
5.5in Casing Production	30.00	18606.00	18576.00	30.00	7021.27	0.00	0.00	-11064.94	2530.51	

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Charlotte Unit 2H POE Rev-4	6923.00	-382.91	-1144.83	1708139.53	14361863.75	39°32'55.8751"N	80°45'35.1237"W	point
Charlotte Unit 2H BHL Rev-5	6949.00	-11099.64	2550.06	1711832.96	14351151.27	39°31'9.8587"N	80°44'48.3410"W	point
Charlotte Unit 2H LP Rev-4	6949.00	-563.69	-1082.50	1708201.84	14361683.04	39°32'54.0867"N	80°45'34.3342"W	point
Charlotte Unit 2H 50' L/R Hard Line Rev-3	7250.00	-5741.28	702.61	1709986.25	14356507.51	39°32'2.8676"N	80°45'11.7275"W	rectangle
2D Rectangle 11335.8 x 100.								



**Actual Wellpath Report**  
 Charlotte Unit 2H AWP Proj: 18626'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

WELLPATH COMPOSITION - Ref Wellbore: Charlotte Unit 2H AWB    Ref Wellpath: Charlotte Unit 2H AWP Proj: 18626'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
30.00	387.00	Gyrodatta 2015 - GC+WIR+DPIPE	01_Gyrodatta MS Gyro <17-1/2"> (100'-387')	Charlotte Unit 2H AWB	18/Jul/2021	
387.00	2598.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02_APS EM <12-1/4"> (387')(508'-2598')	Charlotte Unit 2H AWB	18/Jul/2021	
2598.00	6159.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03_APS EM <8-3/4"> (2598')(2655'-6159')	Charlotte Unit 2H AWB	28/Sep/2021	
6159.00	18626.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_BH AT Curve <8-1/2"> (6159')(6269'-18603')	Charlotte Unit 2H AWB	28/Sep/2021	



# Actual Wellpath Report

Charlotte Unit 2H AWP Proj: 18626'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Charlotte Unit 2H
Field	Wetzel	API	47-103-03408-0000
Facility	Gadd Pad	Wellbore	Charlotte Unit 2H AWB
Slot	Slot #10		

## COMMENTS

### Wellpath general comments

API: 47-103-03408-0000

BH Job #: 110972215

Rig: H&P 519

Duration: 10/1/2021-10/4/2021

Gyrodatta MS Gyro <17-1/2"> (100'-387')

APS EM <12-1/4"> (387')(508'-2598')

APS EM <8-3/4"> (2598')(2655'-6159')

BH AT Curve <8-1/2"> (6159')(6269'-18603')

Sycamore: 6776' MD

Middlesex: 6927' MD

Burkett: 7078' MD

Tully: 7127' MD

Marcellus POE: 7313' MD

Projected MD at TD: 18626'