



# ANTERO RESOURCES CORPORATION



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

Slot: Slot #03  
 Well: Gribben Unit 1H  
 Wellbore: Gribben Unit 1H PWB

Plot reference wellpath is Gribben Unit 1H PWP Rev-B.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 wellpaths measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1338 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot #03): -1308 feet	Depths are in feet
Offset wellpath MDs are referenced to each plot's default MD datum	Created by: edesaryan on 2021-12-30; Database: WA_MPL_EASTERNUS_Deils

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Dogwood Pad	1718075.750	14353709.890	39°31'34.9750"N	80°43'28.5500"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #03	0.00	0.00	1718075.750	14353709.890	39°31'34.9750"N
Comment	Gribben Unit 1H				
H&P 519 (RKB) to Ground level (At Slot #03)					30ft
Mean Sea Level to Ground level (At Slot #03)					-1308ft
H&P 519 (RKB) to Mean Sea Level					1338ft

Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2573.00	16.490	268.250	2530.26	33.39	-342.70	0.17	-143.03
Proj. to Bottom	2646.00	16.490	268.250	2600.26	32.76	-363.41	0.00	-149.17
Drill Out	2726.00	16.490	268.250	2676.97	32.06	-386.10	0.00	-155.90
End of 3D Arc	2788.01	15.928	272.212	2736.52	32.12	-403.41	2.00	-161.58
Curve KOP	6569.78	15.928	272.212	6373.09	72.18	-1440.46	0.00	-536.75
POE	7578.87	74.514	161.019	7121.00	-476.12	-1416.58	8.00	-10.49
Landing Pt.	7772.44	80.000	161.019	7147.00	-856.94	-1354.38	8.00	180.73
BHL	21698.00	90.000	161.019	7147.00	-13925.29	3176.07	0.00	14106.29

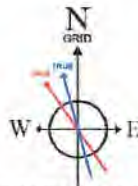
Gyrodatta MS Gyro <17-1/2"> (100'-840') : 0.17" Inc, 100.00ft MD, 100.00ft TVD, 0.10ft VS

APS EM <12-1/4"> (840')(969'-2573') : 1.24" Inc, 969.00ft MD, 968.98ft TVD, 2.02ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #03	Gribben Unit 1H	Gribben Unit 1H AWB	Gribben Unit 1H AWP Proj. 21698'
Slot #03	Gribben Unit 1H	Gribben Unit 1H PWB	Gribben Unit 1H PWP Rev-B.0

APS EM <8-3/4"> (2573')(2665'-7023') : 16.79" Inc, 2665.00ft MD, 2618.41ft TVD, -150.46ft VS

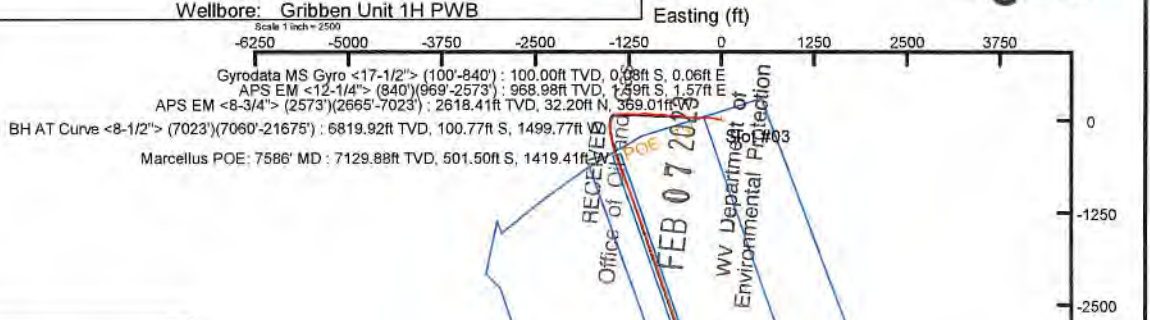
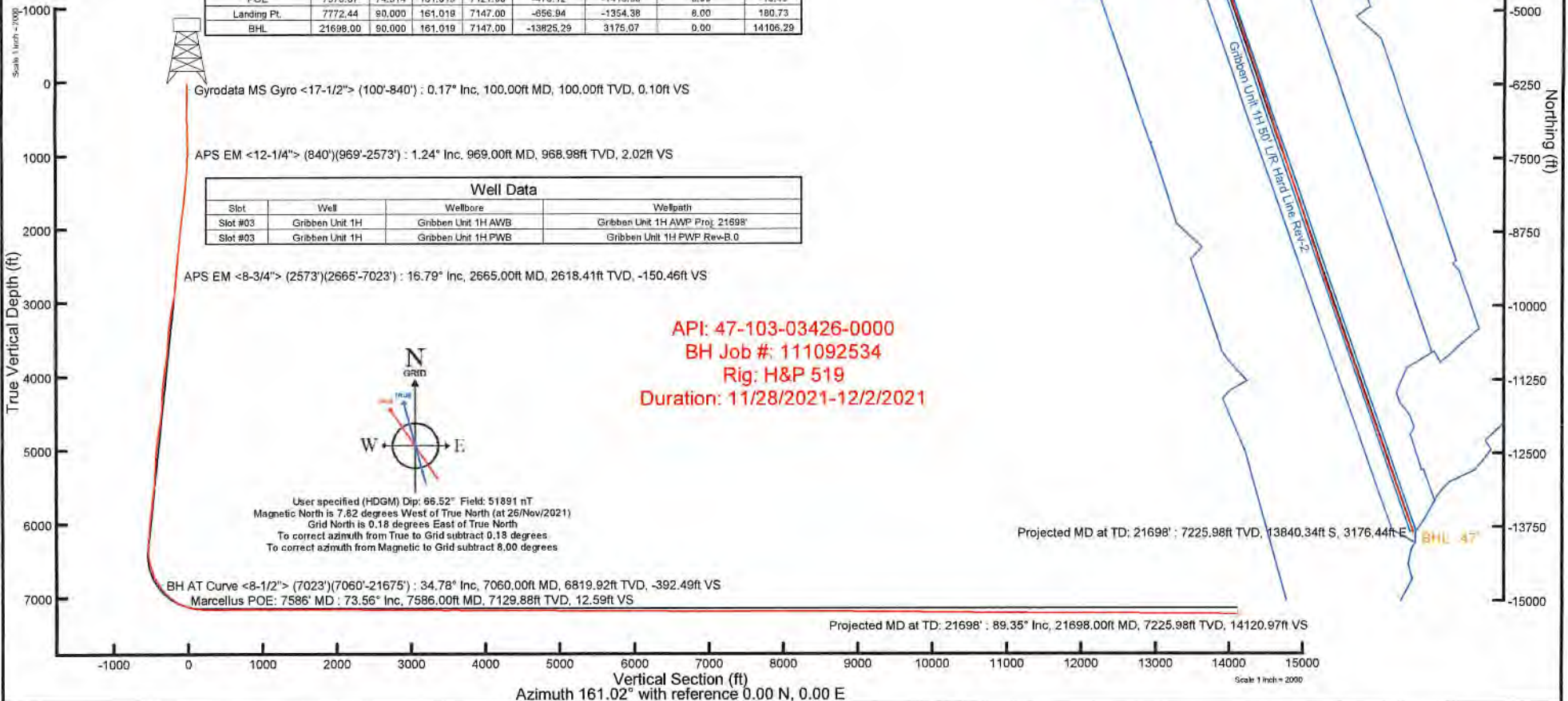
API: 47-103-03426-0000  
 BH Job #: 111092534  
 Rig: H&P 519  
 Duration: 11/28/2021-12/2/2021



User specified (HDGM) Dip: 66.52° Field: 51891 nT  
 Magnetic North is 7.82 degrees West of True North (at 26/Nov/2021)  
 Grid North is 0.18 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.18 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.00 degrees

BH AT Curve <8-1/2"> (7023')(7060'-21675') : 34.78" Inc, 7060.00ft MD, 6819.92ft TVD, -392.49ft VS  
 Marcellus POE: 7586' MD : 73.55" Inc, 7586.00ft MD, 7129.88ft TVD, 12.59ft VS

Projected MD at TD: 21698' : 89.35" Inc, 21698.00ft MD, 7225.98ft TVD, 14120.97ft VS





# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999607	Report Generated	30/Dec/2021 at 20:00
Convergence at slot	0.18° 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	0.00	0.00	1718075.75	14353709.89	39°31'34.9750"N	80°43'28.5500"W
Facility Reference Pt			1718075.75	14353709.89	39°31'34.9750"N	80°43'28.5500"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	1338.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1338.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #03)	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	161.02°



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 stations) † = interpolated, ‡ = extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00	0.000	142.320	0.00	0.00	0.00	0.00	1718075.75	14353709.89	39°31'34.9750"N	80°43'28.5500"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	142.320	30.00	0.00	0.00	0.00	1718075.75	14353709.89	39°31'34.9750"N	80°43'28.5500"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.170	142.320	100.00	0.10	-0.08	0.06	1718075.81	14353709.81	39°31'34.9742"N	80°43'28.5492"W	0.10	142.320	0.24	0.24	0.00	Gyrodata MS Gyro <17-1/2"> (100'-840')
200.00	0.230	108.140	200.00	0.36	-0.26	0.34	1718076.09	14353709.63	39°31'34.9724"N	80°43'28.5457"W	0.43	127.232	0.13	0.06	-34.18	
300.00	0.310	119.710	300.00	0.68	-0.46	0.77	1718076.52	14353709.43	39°31'34.9705"N	80°43'28.5402"W	0.90	120.781	0.10	0.08	11.57	
400.00	0.300	96.910	400.00	1.00	-0.62	1.27	1718077.01	14353709.27	39°31'34.9688"N	80°43'28.5339"W	1.41	116.256	0.12	-0.01	-22.80	
500.00	0.180	92.170	500.00	1.17	-0.66	1.68	1718077.43	14353709.23	39°31'34.9685"N	80°43'28.5286"W	1.81	111.470	0.12	-0.12	-4.74	
600.00	0.180	108.150	600.00	1.32	-0.72	1.99	1718077.74	14353709.17	39°31'34.9679"N	80°43'28.5247"W	2.11	109.816	0.05	0.00	15.98	
700.00	0.220	138.550	699.99	1.60	-0.91	2.26	1718078.01	14353708.98	39°31'34.9660"N	80°43'28.5212"W	2.44	111.876	0.11	0.04	30.40	
800.00	0.320	148.560	799.99	2.05	-1.29	2.54	1718078.29	14353708.80	39°31'34.9622"N	80°43'28.5177"W	2.85	116.974	0.11	0.10	10.01	
840.00	0.340	133.900	839.99	2.26	-1.47	2.68	1718078.43	14353708.42	39°31'34.9604"N	80°43'28.5159"W	3.06	118.718	0.22	0.05	-36.65	
969.00	1.240	275.770	968.98	2.02	-1.59	1.57	1718077.32	14353708.30	39°31'34.9592"N	80°43'28.5301"W	2.24	135.467	1.18	0.70	109.98	APS EM <12-1/4"> (840')(969'-2573')
1153.00	6.230	283.390	1152.54	-4.16	0.92	-10.13	1718065.62	14353710.81	39°31'34.9844"N	80°43'28.6793"W	10.17	275.186	2.72	2.71	4.14	
1248.00	8.130	287.010	1246.79	-10.87	4.08	-21.57	1718054.19	14353713.97	39°31'35.0160"N	80°43'28.8252"W	21.95	280.707	2.05	2.00	3.81	
1342.00	9.680	283.410	1339.65	-19.01	7.86	-35.62	1718040.15	14353717.74	39°31'35.0538"N	80°43'29.0042"W	36.47	282.439	1.75	1.65	-3.83	
1437.00	11.250	283.410	1433.07	-28.26	11.86	-52.40	1718023.37	14353721.74	39°31'35.0938"N	80°43'29.2183"W	53.73	282.751	1.65	1.65	0.00	
1531.00	10.880	280.470	1525.32	-37.53	15.60	-70.04	1718005.73	14353725.48	39°31'35.1313"N	80°43'29.4433"W	71.76	282.553	0.72	-0.39	-3.13	
1626.00	12.140	280.520	1618.41	-46.86	19.05	-88.68	1717987.10	14353728.93	39°31'35.1660"N	80°43'29.6810"W	90.70	282.123	1.33	1.33	0.05	
1720.00	13.250	279.200	1710.11	-56.81	22.58	-109.03	1717966.76	14353732.46	39°31'35.2015"N	80°43'29.9406"W	111.35	281.698	1.22	1.18	-1.40	
1815.00	16.040	277.970	1802.02	-67.90	26.14	-132.78	1717943.02	14353736.02	39°31'35.2374"N	80°43'30.2436"W	135.33	281.136	2.95	2.94	-1.29	
1910.00	16.070	276.040	1893.31	-79.41	29.34	-158.86	1717916.96	14353739.22	39°31'35.2698"N	80°43'30.5762"W	161.54	280.465	0.56	0.03	-2.03	
2004.00	15.910	273.400	1983.68	-89.82	31.47	-184.66	1717891.17	14353741.35	39°31'35.2917"N	80°43'30.9053"W	187.32	279.673	0.79	-0.17	-2.81	
2099.00	16.030	273.160	2075.01	-99.72	32.97	-210.75	1717865.08	14353742.85	39°31'35.3073"N	80°43'31.2383"W	213.32	278.891	0.14	0.13	-0.25	
2194.00	15.880	271.460	2166.35	-109.20	34.02	-236.84	1717839.00	14353743.90	39°31'35.3185"N	80°43'31.5712"W	239.27	278.175	0.52	-0.16	-1.79	
2289.00	15.980	270.600	2257.70	-118.13	34.49	-262.91	1717812.94	14353744.37	39°31'35.3239"N	80°43'31.9038"W	265.16	277.474	0.27	0.11	-0.91	
2383.00	16.260	269.410	2348.01	-126.61	34.49	-289.01	1717786.86	14353744.37	39°31'35.3247"N	80°43'32.2369"W	291.06	276.806	0.46	0.30	-1.27	
2478.00	16.460	268.820	2439.16	-134.92	34.08	-315.76	1717760.11	14353743.95	39°31'35.3214"N	80°43'32.5783"W	317.60	276.160	0.27	0.21	-0.62	
2573.00	16.490	268.250	2530.26	-143.03	33.39	-342.70	1717733.19	14353743.27	39°31'35.3154"N	80°43'32.9221"W	344.32	275.565	0.17	0.03	-0.60	
2665.00	16.790	266.570	2618.41	-150.46	32.20	-369.01	1717706.88	14353742.07	39°31'35.3044"N	80°43'33.2579"W	370.41	274.986	0.62	0.33	-1.83	APS EM <8-3/4"> (2573')(2665'-7023')
2760.00	16.800	261.410	2709.36	-156.62	29.32	-396.28	1717679.62	14353739.20	39°31'35.2768"N	80°43'33.6061"W	397.37	274.232	1.57	0.01	-5.43	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 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
2854.00	16.260	271.670	2799.49	-163.71	27.68	-422.88	1717653.04	14353737.56	39°31'35.2613"N	80°43'33.9455"W	423.78	273.745	3.15	-0.57	10.91	
2949.00	17.310	286.110	2890.48	-176.53	31.99	-449.76	1717626.17	14353741.87	39°31'35.3048"N	80°43'34.2884"W	450.90	274.068	4.51	1.11	15.20	
3043.00	17.880	283.720	2980.09	-192.36	39.29	-477.22	1717598.72	14353749.17	39°31'35.3778"N	80°43'34.6385"W	478.83	274.707	0.98	0.61	-2.54	
3138.00	18.430	281.570	3070.36	-207.88	45.76	-506.10	1717569.85	14353755.63	39°31'35.4426"N	80°43'35.0068"W	508.16	275.167	0.91	0.58	-2.26	
3233.00	19.170	277.900	3160.29	-222.56	50.92	-536.26	1717539.70	14353760.79	39°31'35.4944"N	80°43'35.3915"W	538.67	275.424	1.47	0.78	-3.86	
3330.00	16.460	277.490	3252.63	-235.89	54.90	-565.66	1717510.31	14353764.77	39°31'35.5347"N	80°43'35.7667"W	568.32	275.543	2.80	-2.79	-0.42	
3425.00	16.240	274.710	3343.79	-247.23	57.75	-592.25	1717483.74	14353767.61	39°31'35.5636"N	80°43'36.1058"W	595.06	275.569	0.86	-0.23	-2.93	
3520.00	16.600	269.000	3434.92	-256.75	58.60	-619.06	1717456.94	14353768.47	39°31'35.5728"N	80°43'36.4479"W	621.82	275.407	1.74	0.38	-6.01	
3614.00	16.530	265.990	3525.03	-264.35	57.43	-645.82	1717430.18	14353767.30	39°31'35.5621"N	80°43'36.7895"W	648.37	275.082	0.92	-0.07	-3.20	
3709.00	15.340	260.930	3616.38	-270.01	54.50	-671.71	1717404.30	14353764.37	39°31'35.5339"N	80°43'37.1200"W	673.92	274.639	1.92	-1.25	-5.33	
3804.00	14.170	271.260	3708.26	-276.19	52.78	-695.75	1717380.27	14353762.65	39°31'35.5176"N	80°43'37.4269"W	697.75	274.338	3.03	-1.23	10.87	
3899.00	15.870	282.240	3800.03	-286.95	55.79	-720.08	1717355.95	14353765.66	39°31'35.5481"N	80°43'37.7372"W	722.24	274.430	3.48	1.79	11.56	
3993.00	16.590	282.760	3890.28	-300.67	61.48	-745.73	1717330.32	14353771.34	39°31'35.6051"N	80°43'38.0643"W	748.26	274.713	0.78	0.77	0.55	
4088.00	15.990	277.090	3981.47	-313.56	66.09	-771.94	1717304.11	14353775.95	39°31'35.6514"N	80°43'38.3986"W	774.77	274.893	1.79	-0.63	-5.97	
4182.00	16.160	273.910	4071.80	-324.34	68.58	-797.84	1717278.22	14353778.44	39°31'35.6768"N	80°43'38.7291"W	800.78	274.913	0.95	0.18	-3.38	
4277.00	15.930	268.310	4163.11	-333.36	69.09	-824.06	1717252.01	14353778.96	39°31'35.6827"N	80°43'39.0637"W	826.96	274.793	1.65	-0.24	-5.89	
4372.00	15.200	264.710	4254.62	-340.18	67.56	-849.50	1717226.59	14353777.43	39°31'35.6683"N	80°43'39.3883"W	852.18	274.547	1.27	-0.77	-3.79	
4466.00	13.930	257.810	4345.61	-344.43	64.04	-872.83	1717203.26	14353773.90	39°31'35.6342"N	80°43'39.6862"W	875.18	274.196	2.29	-1.35	-7.34	
4561.00	12.270	267.450	4438.14	-348.64	61.17	-894.10	1717182.01	14353771.04	39°31'35.6065"N	80°43'39.9577"W	896.19	273.914	2.88	-1.75	10.15	
4655.00	13.540	279.610	4529.78	-356.73	62.57	-914.93	1717161.18	14353772.43	39°31'35.6209"N	80°43'40.2235"W	917.07	273.912	3.18	1.35	12.94	
4750.00	15.950	287.240	4621.66	-369.77	68.29	-938.37	1717137.76	14353778.15	39°31'35.6782"N	80°43'40.5224"W	940.85	274.162	3.25	2.54	8.03	
4845.00	15.440	283.410	4713.12	-384.26	75.09	-963.13	1717113.00	14353784.95	39°31'35.7462"N	80°43'40.8382"W	966.06	274.458	1.22	-0.54	-4.03	
4939.00	14.320	278.660	4803.97	-396.36	79.75	-986.80	1717089.34	14353789.60	39°31'35.7928"N	80°43'41.1400"W	990.02	274.620	1.76	-1.19	-5.05	
5034.00	16.200	278.490	4895.61	-407.92	83.47	-1011.52	1717064.63	14353793.33	39°31'35.8304"N	80°43'41.4554"W	1014.96	274.717	1.98	1.98	-0.18	
5129.00	15.660	271.340	4986.97	-418.49	85.73	-1037.45	1717038.71	14353795.58	39°31'35.8535"N	80°43'41.7862"W	1040.99	274.724	2.14	-0.57	-7.53	
5224.00	14.210	265.040	5078.77	-425.76	85.02	-1061.89	1717014.28	14353794.88	39°31'35.8472"N	80°43'42.0981"W	1065.29	274.578	2.29	-1.53	-6.63	
5318.00	15.570	264.270	5169.61	-431.45	82.76	-1085.94	1716990.24	14353792.62	39°31'35.8256"N	80°43'42.4051"W	1089.09	274.358	1.46	1.45	-0.82	
5413.00	18.160	259.490	5260.52	-436.55	78.79	-1113.18	1716963.01	14353788.65	39°31'35.7871"N	80°43'42.7529"W	1115.97	274.049	3.09	2.73	-5.03	
5507.00	16.480	260.310	5350.25	-440.87	73.87	-1140.73	1716935.47	14353783.73	39°31'35.7394"N	80°43'43.1047"W	1143.12	273.705	1.81	-1.79	0.87	
5602.00	15.720	268.200	5441.54	-446.84	71.20	-1166.88	1716909.33	14353781.06	39°31'35.7137"N	80°43'43.4385"W	1169.05	273.492	2.44	-0.80	8.31	



# Actual Wellpath Report

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 WV Department of Environment & Protection

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 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]	
5697.00	16.540	278.050	5532.82	-456.79	72.69	-1193.14	1716883.08	14353782.55	39°31'35.7292"N	80°43'43.7735"W	1195.35	273.486	3.00	0.86	10.37	
5791.00	16.370	276.310	5622.97	-468.53	76.02	-1219.55	1716856.68	14353785.88	39°31'35.7629"N	80°43'44.1105"W	1221.92	273.567	0.55	-0.18	-1.85	
5886.00	16.100	267.920	5714.19	-478.08	77.01	-1246.03	1716830.22	14353786.87	39°31'35.7735"N	80°43'44.4483"W	1248.40	273.537	2.48	-0.28	-8.83	
5981.00	16.740	275.970	5805.33	-487.68	77.96	-1272.80	1716803.45	14353787.82	39°31'35.7837"N	80°43'44.7899"W	1275.19	273.505	2.49	0.67	8.47	
6076.00	16.350	276.320	5896.39	-499.17	80.85	-1299.70	1716776.56	14353790.71	39°31'35.8131"N	80°43'45.1331"W	1302.21	273.560	0.42	-0.41	0.37	
6171.00	15.400	270.660	5987.78	-509.12	82.47	-1325.60	1716750.67	14353792.33	39°31'35.8298"N	80°43'45.4636"W	1328.17	273.560	1.91	-1.00	-5.96	
6266.00	15.180	265.290	6079.42	-516.43	81.59	-1350.62	1716725.67	14353791.45	39°31'35.8219"N	80°43'45.7828"W	1353.08	273.457	1.51	-0.23	-5.65	
6361.00	16.880	267.600	6170.72	-523.43	79.99	-1376.79	1716699.50	14353789.85	39°31'35.8069"N	80°43'46.1170"W	1379.12	273.325	1.91	1.79	2.43	
6455.00	16.670	264.320	6260.72	-530.43	78.09	-1403.85	1716672.46	14353787.95	39°31'35.7889"N	80°43'46.4623"W	1406.02	273.184	1.03	-0.22	-3.49	
6550.00	16.510	249.290	6351.81	-533.16	71.96	-1430.04	1716646.27	14353781.82	39°31'35.7291"N	80°43'46.7968"W	1431.85	272.881	4.51	-0.17	-15.82	
6645.00	19.860	227.290	6442.16	-526.24	56.22	-1454.56	1716621.76	14353766.09	39°31'35.5743"N	80°43'47.1103"W	1455.65	272.213	7.98	3.53	-23.16	
6739.00	20.720	212.400	6530.38	-509.43	31.33	-1475.22	1716601.11	14353741.21	39°31'35.3289"N	80°43'47.3749"W	1475.55	271.217	5.55	0.91	-15.84	
6834.00	20.950	196.360	6619.25	-485.06	0.82	-1489.02	1716587.32	14353710.71	39°31'35.0278"N	80°43'47.5522"W	1489.02	270.032	5.99	0.24	-16.88	
6929.00	24.640	187.270	6706.84	-453.43	-35.14	-1496.31	1716580.03	14353674.76	39°31'34.6725"N	80°43'47.6466"W	1496.73	268.655	5.36	3.88	-9.57	
7012.00†	31.904	181.907	6779.90	-417.36	-74.28	-1499.24	1716577.10	14353635.64	39°31'34.2858"N	80°43'47.6854"W	1501.08	267.163	9.26	8.75	-6.46	Sycamore: 7012' MD
7023.00	32.880	181.360	6789.19	-411.85	-80.17	-1499.41	1716576.94	14353629.75	39°31'34.2276"N	80°43'47.6878"W	1501.55	266.939	9.26	8.87	-4.97	
7060.00	34.780	180.660	6819.92	-392.49	-100.77	-1499.77	1716576.58	14353609.16	39°31'34.0240"N	80°43'47.6932"W	1503.15	266.156	5.24	5.14	-1.89	BH AT Curve <8-1/2"> (7023')(7060'-21675')
7124.00	36.280	179.250	6872.01	-357.31	-137.96	-1499.73	1716576.61	14353571.99	39°31'33.6565"N	80°43'47.6941"W	1506.06	264.744	2.67	2.34	-2.20	
7183.00†	41.471	175.134	6917.93	-321.76	-174.91	-1497.84	1716578.50	14353535.05	39°31'33.2912"N	80°43'47.6715"W	1508.02	263.340	9.82	8.80	-6.98	Middlesex: 7183' MD
7219.00	44.700	173.020	6944.22	-297.80	-199.36	-1495.29	1716581.05	14353510.61	39°31'33.0495"N	80°43'47.6399"W	1508.52	262.406	9.82	8.97	-5.87	
7314.00	51.630	167.610	7007.57	-228.01	-269.01	-1483.22	1716593.12	14353440.98	39°31'32.3607"N	80°43'47.4885"W	1507.42	259.720	8.43	7.29	-5.69	
7334.00†	53.690	167.654	7019.70	-212.22	-284.54	-1479.81	1716596.52	14353425.46	39°31'32.2071"N	80°43'47.4456"W	1506.92	259.116	10.30	10.30	0.22	Burkett: 7334' MD
7397.00†	60.177	167.780	7054.06	-159.81	-336.10	-1468.59	1716607.74	14353373.92	39°31'31.6972"N	80°43'47.3044"W	1506.56	257.109	10.30	10.30	0.20	Tully: 7397' MD
7408.00	61.310	167.800	7059.43	-150.28	-345.48	-1466.56	1716609.77	14353364.54	39°31'31.6045"N	80°43'47.2788"W	1506.70	256.744	10.30	10.30	0.18	
7503.00	66.280	161.870	7101.40	-65.31	-427.65	-1444.19	1716632.13	14353282.41	39°31'30.7917"N	80°43'46.9965"W	1506.18	253.505	7.66	5.23	-6.24	
7586.00†	73.558	161.044	7129.88	12.59	-501.50	-1419.41	1716656.90	14353208.59	39°31'30.0611"N	80°43'46.6830"W	1505.40	250.541	8.82	8.77	-1.00	Marcellus POE: 7586' MD
7598.00	74.610	160.930	7133.17	24.13	-512.41	-1415.65	1716660.66	14353197.68	39°31'29.9531"N	80°43'46.6355"W	1505.53	250.102	8.82	8.77	-0.95	
7692.00	83.610	159.900	7150.91	116.34	-599.28	-1384.73	1716691.57	14353110.84	39°31'29.0936"N	80°43'46.2442"W	1508.84	246.598	9.63	9.57	-1.10	
7787.00	89.780	159.490	7156.39	211.11	-688.19	-1351.83	1716724.46	14353021.97	39°31'28.2140"N	80°43'45.8278"W	1516.92	243.020	6.51	6.49	-0.43	
7882.00	89.820	159.360	7156.72	306.07	-777.13	-1318.44	1716757.83	14352933.07	39°31'27.3340"N	80°43'45.4052"W	1530.43	239.484	0.14	0.04	-0.14	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWP
Slot	Slot #03		

WELLPATH DATA (237 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
7977.00	89.630	159.310	7157.17	401.03	-866.02	-1284.92	1716791.34	14352844.22	39°31'26.4545"N	80°43'44.9808"W	1549.51	236.021	0.21	-0.20	-0.05	
8071.00	89.780	159.740	7157.66	494.99	-954.08	-1252.04	1716824.21	14352756.19	39°31'25.5832"N	80°43'44.5646"W	1574.12	232.692	0.48	0.16	0.46	
8166.00	89.750	159.830	7158.05	589.97	-1043.22	-1219.21	1716857.02	14352667.08	39°31'24.7012"N	80°43'44.1491"W	1604.61	229.448	0.10	-0.03	0.09	
8261.00	89.940	160.260	7158.30	684.96	-1132.52	-1186.79	1716889.43	14352577.82	39°31'23.8177"N	80°43'43.7388"W	1640.45	226.340	0.49	0.20	0.45	
8355.00	90.120	160.470	7158.25	778.95	-1221.05	-1155.20	1716921.00	14352489.32	39°31'22.9417"N	80°43'43.3391"W	1680.91	223.413	0.29	0.19	0.22	
8450.00	90.400	160.510	7157.82	873.95	-1310.60	-1123.48	1716952.72	14352399.81	39°31'22.0558"N	80°43'42.9377"W	1726.23	220.604	0.30	0.29	0.04	
8545.00	89.970	160.590	7157.52	968.94	-1400.18	-1091.84	1716984.34	14352310.27	39°31'21.1695"N	80°43'42.5375"W	1775.56	217.947	0.46	-0.45	0.08	
8639.00	89.570	160.440	7157.89	1062.94	-1488.79	-1060.49	1717015.68	14352221.69	39°31'20.2928"N	80°43'42.1408"W	1827.88	215.463	0.45	-0.43	-0.16	
8734.00	89.750	160.580	7158.46	1157.93	-1578.35	-1028.79	1717047.36	14352132.17	39°31'19.4067"N	80°43'41.7398"W	1884.04	213.097	0.24	0.19	0.15	
8829.00	89.290	159.940	7159.25	1252.92	-1667.76	-996.71	1717079.44	14352042.79	39°31'18.5221"N	80°43'41.3338"W	1942.90	210.864	0.83	-0.48	-0.67	
8924.00	90.150	159.260	7159.72	1347.89	-1756.80	-963.59	1717112.54	14351953.79	39°31'17.6411"N	80°43'40.9147"W	2003.71	208.745	1.15	0.91	-0.72	
9018.00	89.910	159.700	7159.67	1441.85	-1844.83	-930.64	1717145.47	14351865.79	39°31'16.7700"N	80°43'40.4976"W	2066.28	206.769	0.53	-0.26	0.47	
9113.00	90.150	161.640	7159.62	1536.85	-1934.47	-899.20	1717176.91	14351776.18	39°31'15.8831"N	80°43'40.0998"W	2133.25	204.930	2.06	0.25	2.04	
9208.00	90.340	161.190	7159.21	1631.84	-2024.52	-868.92	1717207.17	14351686.17	39°31'14.9923"N	80°43'39.7170"W	2203.11	203.229	0.51	0.20	-0.47	
9302.00	89.970	161.910	7158.96	1725.84	-2113.69	-839.17	1717236.91	14351597.04	39°31'14.1101"N	80°43'39.3408"W	2274.18	201.654	0.86	-0.39	0.77	
9397.00	89.600	161.100	7159.32	1820.83	-2203.78	-809.04	1717267.03	14351506.98	39°31'13.2188"N	80°43'38.9597"W	2347.59	200.159	0.94	-0.39	-0.85	
9491.00	89.480	160.960	7160.07	1914.83	-2292.67	-778.48	1717297.58	14351418.13	39°31'12.3394"N	80°43'38.5733"W	2421.23	198.755	0.20	-0.13	-0.15	
9586.00	89.820	160.950	7160.65	2009.83	-2382.47	-747.48	1717328.56	14351328.36	39°31'11.4509"N	80°43'38.1812"W	2496.98	197.419	0.36	0.36	-0.01	
9681.00	90.030	160.970	7160.77	2104.83	-2472.27	-716.49	1717359.54	14351238.60	39°31'10.5625"N	80°43'37.7892"W	2574.00	196.162	0.22	0.22	0.02	
9775.00	89.170	161.000	7161.43	2198.82	-2561.14	-685.87	1717390.15	14351149.76	39°31'9.6832"N	80°43'37.4018"W	2651.38	194.992	0.92	-0.91	0.03	
9870.00	89.850	160.710	7162.24	2293.82	-2650.88	-654.71	1717421.30	14351060.06	39°31'8.7954"N	80°43'37.0078"W	2730.53	193.873	0.78	0.72	-0.31	
9965.00	89.510	161.310	7162.77	2388.82	-2740.71	-623.80	1717452.20	14350970.27	39°31'7.9067"N	80°43'36.6168"W	2810.80	192.822	0.73	-0.36	0.63	
10059.00	89.510	160.500	7163.58	2482.81	-2829.53	-593.05	1717482.93	14350881.48	39°31'7.0279"N	80°43'36.2279"W	2891.01	191.837	0.86	0.00	-0.86	
10154.00	89.940	161.740	7164.03	2577.81	-2919.42	-562.31	1717513.66	14350791.63	39°31'6.1386"N	80°43'35.8391"W	2973.08	190.902	1.38	0.45	1.31	
10249.00	89.540	161.400	7164.46	2672.80	-3009.54	-532.28	1717543.68	14350701.54	39°31'5.2469"N	80°43'35.4594"W	3056.25	190.030	0.55	-0.42	-0.36	
10343.00	90.680	160.740	7164.28	2766.80	-3098.46	-501.78	1717574.17	14350612.66	39°31'4.3672"N	80°43'35.0737"W	3138.83	189.199	1.40	1.21	-0.70	
10438.00	89.820	161.010	7163.87	2861.80	-3188.21	-470.66	1717605.28	14350522.94	39°31'3.4792"N	80°43'34.6800"W	3222.77	188.398	0.95	-0.91	0.28	
10532.00	89.750	161.130	7164.22	2955.80	-3277.13	-440.16	1717635.76	14350434.06	39°31'2.5995"N	80°43'34.2944"W	3306.56	187.650	0.15	-0.07	0.13	
10627.00	88.980	160.300	7165.28	3050.79	-3366.79	-408.79	1717667.12	14350344.43	39°31'1.7124"N	80°43'33.8975"W	3391.52	186.923	1.19	-0.81	-0.87	
10722.00	89.660	160.660	7166.40	3145.78	-3456.32	-377.05	1717698.85	14350254.93	39°31'0.8266"N	80°43'33.4960"W	3476.83	186.226	0.81	0.72	0.38	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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Office of Oil and Gas  
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WV Department of Environmental Protection



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 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
10816.00	89.320	160.460	7167.24	3239.77	-3544.96	-345.77	1717730.12	14350166.33	39°30'59.9496"N	80°43'33.1003"W	3561.78	185.571	0.42	-0.36	-0.21	
10911.00	89.450	160.730	7168.26	3334.76	-3634.56	-314.21	1717761.67	14350076.77	39°30'59.0632"N	80°43'32.7011"W	3648.11	184.941	0.32	0.14	0.28	
11006.00	89.350	160.710	7169.25	3429.76	-3724.23	-282.84	1717793.02	14349987.14	39°30'58.1760"N	80°43'32.3043"W	3734.95	184.343	0.11	-0.11	-0.02	
11101.00	90.980	161.380	7168.98	3524.75	-3814.07	-251.98	1717823.87	14349897.33	39°30'57.2871"N	80°43'31.9141"W	3822.39	183.780	1.86	1.72	0.71	
11195.00	89.290	160.560	7168.76	3618.75	-3902.93	-221.33	1717854.50	14349808.50	39°30'56.4080"N	80°43'31.5265"W	3909.20	183.246	2.00	-1.80	-0.87	
11290.00	89.350	160.400	7169.89	3713.74	-3992.46	-189.59	1717886.23	14349719.00	39°30'55.5221"N	80°43'31.1250"W	3996.96	182.719	0.18	0.06	-0.17	
11385.00	89.940	161.300	7170.47	3808.73	-4082.20	-158.43	1717917.38	14349629.30	39°30'54.6343"N	80°43'30.7308"W	4085.28	182.223	1.13	0.62	0.95	
11480.00	90.030	160.930	7170.50	3903.73	-4172.09	-127.68	1717948.12	14349539.45	39°30'53.7450"N	80°43'30.3420"W	4174.04	181.753	0.40	0.09	-0.39	
11575.00	89.200	160.000	7171.14	3998.73	-4261.62	-95.92	1717979.87	14349449.96	39°30'52.8592"N	80°43'29.9402"W	4262.70	181.289	1.31	-0.87	-0.98	
11669.00	90.060	160.220	7171.75	4092.71	-4350.01	-63.94	1718011.84	14349361.60	39°30'51.9846"N	80°43'29.5356"W	4350.48	180.842	0.94	0.91	0.23	
11764.00	91.230	161.980	7170.68	4187.70	-4439.87	-33.17	1718042.59	14349271.77	39°30'51.0955"N	80°43'29.1465"W	4440.00	180.428	2.22	1.23	1.85	
11858.00	89.140	160.520	7170.37	4281.69	-4528.88	-2.96	1718072.80	14349182.80	39°30'50.2150"N	80°43'28.7645"W	4528.88	180.037	2.71	-2.22	-1.55	
11953.00	89.450	160.380	7171.54	4376.68	-4618.39	28.83	1718104.57	14349093.32	39°30'49.3293"N	80°43'28.3624"W	4618.48	179.642	0.36	0.33	-0.15	
12048.00	89.600	160.840	7172.33	4471.67	-4708.00	60.37	1718136.10	14349003.75	39°30'48.4427"N	80°43'27.9635"W	4708.39	179.265	0.51	0.16	0.48	
12142.00	88.520	159.250	7173.87	4566.64	-4796.34	92.44	1718168.16	14348915.44	39°30'47.5687"N	80°43'27.5577"W	4797.23	178.896	2.04	-1.15	-1.69	
12237.00	90.280	160.750	7174.87	4660.61	-4885.60	124.93	1718200.63	14348826.22	39°30'46.6855"N	80°43'27.1467"W	4887.20	178.535	2.43	1.85	1.58	
12332.00	89.780	160.400	7174.82	4755.61	-4975.19	156.53	1718232.21	14348736.66	39°30'45.7991"N	80°43'26.7471"W	4977.66	178.198	0.64	-0.53	-0.37	
12427.00	89.720	160.800	7175.23	4850.61	-5064.80	188.08	1718263.76	14348647.09	39°30'44.9125"N	80°43'26.3480"W	5068.29	177.873	0.43	-0.06	0.42	
12521.00	89.720	160.040	7175.69	4944.60	-5153.36	219.58	1718295.25	14348558.56	39°30'44.0363"N	80°43'25.9495"W	5158.04	177.560	0.81	0.00	-0.81	
12616.00	89.780	161.060	7176.10	5039.60	-5242.94	251.22	1718326.87	14348469.02	39°30'43.1500"N	80°43'25.5494"W	5248.95	177.257	1.08	0.06	1.07	
12711.00	89.660	159.950	7176.57	5134.59	-5332.49	282.92	1718358.56	14348379.51	39°30'42.2640"N	80°43'25.1484"W	5339.99	176.963	1.18	-0.13	-1.17	
12806.00	89.510	161.250	7177.26	5229.58	-5422.09	314.47	1718390.10	14348289.94	39°30'41.3775"N	80°43'24.7494"W	5431.20	176.681	1.38	-0.16	1.37	
12900.00	89.820	161.440	7177.81	5323.58	-5511.15	344.54	1718420.15	14348200.92	39°30'40.4963"N	80°43'24.3692"W	5521.91	176.423	0.39	0.33	0.20	
12995.00	89.750	161.610	7178.16	5418.57	-5601.25	374.64	1718450.25	14348110.85	39°30'39.6049"N	80°43'23.9887"W	5613.77	176.173	0.19	-0.07	0.18	
13089.00	89.780	161.570	7178.55	5512.57	-5690.44	404.33	1718479.92	14348021.70	39°30'38.7225"N	80°43'23.6134"W	5704.79	175.936	0.05	0.03	-0.04	
13184.00	89.600	161.480	7179.06	5607.56	-5780.55	434.43	1718510.01	14347931.63	39°30'37.8311"N	80°43'23.2329"W	5796.85	175.702	0.21	-0.19	-0.09	
13279.00	89.940	161.890	7179.44	5702.56	-5870.73	464.29	1718539.85	14347841.48	39°30'36.9389"N	80°43'22.8555"W	5889.06	175.478	0.56	0.36	0.43	
13373.00	89.750	161.820	7179.70	5796.55	-5960.06	493.56	1718569.11	14347752.19	39°30'36.0552"N	80°43'22.4855"W	5980.46	175.266	0.22	-0.20	-0.07	
13468.00	89.380	161.550	7180.42	5891.54	-6050.24	523.41	1718598.96	14347662.04	39°30'35.1629"N	80°43'22.1082"W	6072.84	175.056	0.48	-0.39	-0.28	
13563.00	89.720	161.020	7181.17	5986.53	-6140.22	553.89	1718629.42	14347572.10	39°30'34.2728"N	80°43'21.7229"W	6165.15	174.845	0.66	0.36	-0.56	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 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
13657.00	90.120	161.580	7181.30	6080.53	-6229.25	584.03	1718659.55	14347483.10	39°30'33.3919"N	80°43'21.3418"W	6256.57	174.644	0.73	0.43	0.60	
13752.00	89.940	161.660	7181.25	6175.53	-6319.41	613.99	1718689.49	14347392.98	39°30'32.4999"N	80°43'20.9632"W	6349.16	174.451	0.21	-0.19	0.08	
13847.00	89.720	161.550	7181.53	6270.52	-6409.55	643.96	1718719.46	14347302.87	39°30'31.6081"N	80°43'20.5843"W	6441.82	174.263	0.26	-0.23	-0.12	
13942.00	89.690	161.070	7182.02	6365.52	-6499.54	674.41	1718749.89	14347212.92	39°30'30.7178"N	80°43'20.1994"W	6534.44	174.076	0.51	-0.03	-0.51	
14037.00	89.600	161.260	7182.61	6460.51	-6589.45	705.08	1718780.55	14347123.04	39°30'29.8282"N	80°43'19.8117"W	6627.07	173.893	0.22	-0.09	0.20	
14131.00	89.510	161.690	7183.34	6554.51	-6678.58	734.94	1718810.40	14347033.95	39°30'28.9464"N	80°43'19.4342"W	6718.89	173.720	0.47	-0.10	0.46	
14226.00	90.430	160.720	7183.39	6649.51	-6768.51	765.55	1718840.99	14346944.05	39°30'28.0567"N	80°43'19.0472"W	6811.67	173.547	1.41	0.97	-1.02	
14321.00	90.060	162.820	7182.98	6744.49	-6858.74	795.26	1718870.70	14346853.86	39°30'27.1640"N	80°43'18.6717"W	6904.69	173.386	2.24	-0.39	2.21	
14415.00	89.690	161.680	7183.19	6838.47	-6948.26	823.92	1718899.34	14346764.38	39°30'26.2784"N	80°43'18.3096"W	6996.94	173.237	1.28	-0.39	-1.21	
14510.00	90.340	161.650	7183.16	6933.46	-7038.44	853.80	1718929.22	14346674.23	39°30'25.3862"N	80°43'17.9319"W	7090.03	173.083	0.68	0.68	-0.03	
14605.00	89.540	161.270	7183.26	7028.46	-7128.50	884.01	1718959.41	14346584.20	39°30'24.4951"N	80°43'17.5500"W	7183.11	172.931	0.93	-0.84	-0.40	
14700.00	90.310	161.890	7183.38	7123.45	-7218.64	914.03	1718989.42	14346494.11	39°30'23.6034"N	80°43'17.1706"W	7276.27	172.784	1.04	0.81	0.65	
14794.00	90.060	162.400	7183.08	7217.43	-7308.11	942.85	1719018.23	14346404.67	39°30'22.7183"N	80°43'16.8065"W	7368.68	172.649	0.60	-0.27	0.54	
14889.00	90.250	162.290	7182.82	7312.41	-7398.63	971.66	1719047.03	14346314.18	39°30'21.8227"N	80°43'16.4425"W	7462.16	172.518	0.23	0.20	-0.12	
14984.00	89.600	162.480	7182.95	7407.38	-7489.18	1000.41	1719075.77	14346223.67	39°30'20.9269"N	80°43'16.0793"W	7555.70	172.391	0.71	-0.68	0.20	
15079.00	89.720	161.680	7183.51	7502.36	-7579.57	1029.64	1719104.98	14346133.32	39°30'20.0327"N	80°43'15.7099"W	7649.18	172.264	0.85	0.13	-0.84	
15173.00	89.820	161.540	7183.89	7596.35	-7668.77	1059.30	1719134.63	14346044.15	39°30'19.1502"N	80°43'15.3351"W	7741.58	172.135	0.18	0.11	-0.15	
15268.00	89.690	161.590	7184.30	7691.35	-7758.89	1089.34	1719164.66	14345954.07	39°30'18.2586"N	80°43'14.9554"W	7834.99	172.008	0.15	-0.14	0.05	
15363.00	89.820	161.800	7184.70	7786.34	-7849.08	1119.17	1719194.48	14345863.91	39°30'17.3663"N	80°43'14.5784"W	7928.47	171.885	0.26	0.14	0.22	
15457.00	89.970	161.820	7184.87	7880.33	-7938.38	1148.52	1719223.81	14345774.64	39°30'16.4828"N	80°43'14.2075"W	8021.04	171.768	0.16	0.16	0.02	
15552.00	89.720	161.640	7185.13	7975.33	-8028.59	1178.30	1719253.58	14345684.47	39°30'15.5903"N	80°43'13.8312"W	8114.60	171.651	0.32	-0.26	-0.19	
15647.00	90.000	161.790	7185.36	8070.32	-8118.80	1208.10	1719283.38	14345594.30	39°30'14.6978"N	80°43'13.4545"W	8208.19	171.536	0.33	0.29	0.16	
15741.00	89.780	161.660	7185.54	8164.31	-8208.06	1237.58	1719312.84	14345505.08	39°30'13.8148"N	80°43'13.0820"W	8300.83	171.426	0.27	-0.23	-0.14	
15836.00	89.690	161.370	7185.98	8259.31	-8298.15	1267.70	1719342.95	14345415.01	39°30'12.9234"N	80°43'12.7013"W	8394.43	171.314	0.32	-0.09	-0.31	
15931.00	89.540	161.440	7186.62	8354.30	-8388.19	1297.99	1719373.23	14345325.01	39°30'12.0326"N	80°43'12.3184"W	8488.02	171.204	0.17	-0.16	0.07	
16025.00	89.750	161.970	7187.20	8448.29	-8477.44	1327.50	1719402.73	14345235.80	39°30'11.1496"N	80°43'11.9455"W	8580.75	171.100	0.61	0.22	0.58	
16120.00	89.750	161.630	7187.62	8543.28	-8567.69	1357.17	1719432.39	14345145.59	39°30'10.2568"N	80°43'11.5706"W	8674.51	170.999	0.36	0.00	-0.36	
16215.00	89.940	161.710	7187.88	8638.28	-8657.86	1387.05	1719462.25	14345055.45	39°30'9.3646"N	80°43'11.1930"W	8768.27	170.898	0.22	0.20	0.08	
16310.00	89.880	161.850	7188.02	8733.27	-8748.10	1416.75	1719491.94	14344965.24	39°30'8.4718"N	80°43'10.8177"W	8862.08	170.801	0.16	-0.06	0.15	
16405.00	89.690	161.350	7188.38	8828.26	-8838.24	1446.74	1719521.92	14344875.14	39°30'7.5800"N	80°43'10.4387"W	8955.87	170.704	0.56	-0.20	-0.53	





# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWP
Slot	Slot #03		

WELLPATH DATA (237 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
16499.00	89.630	161.110	7188.94	8922.26	-8927.24	1476.98	1719552.15	14344786.17	39°30'6.6995"N	80°43'10.0564"W	9048.60	170.606	0.26	-0.06	-0.26	
16594.00	89.290	161.730	7189.83	9017.25	-9017.29	1507.25	1719582.41	14344696.17	39°30'5.8086"N	80°43'9.6739"W	9142.39	170.511	0.74	-0.36	0.65	
16689.00	89.750	161.040	7190.63	9112.25	-9107.31	1537.58	1719612.72	14344606.18	39°30'4.9179"N	80°43'9.2906"W	9236.19	170.417	0.87	0.48	-0.73	
16783.00	89.720	161.730	7191.06	9206.24	-9196.39	1567.58	1719642.71	14344517.13	39°30'4.0366"N	80°43'8.9114"W	9329.04	170.327	0.73	-0.03	0.73	
16878.00	89.970	161.530	7191.32	9301.24	-9286.55	1597.52	1719672.64	14344427.01	39°30'3.1446"N	80°43'8.5330"W	9422.96	170.239	0.34	0.26	-0.21	
16973.00	89.910	161.780	7191.42	9396.23	-9376.72	1627.42	1719702.53	14344336.87	39°30'2.2525"N	80°43'8.1552"W	9516.90	170.154	0.27	-0.06	0.26	
17068.00	89.290	161.900	7192.08	9491.22	-9466.99	1657.03	1719732.12	14344246.64	39°30'1.3594"N	80°43'7.7811"W	9610.91	170.072	0.66	-0.65	0.13	
17163.00	89.110	161.400	7193.41	9586.20	-9557.15	1686.93	1719762.02	14344156.52	39°30'0.4674"N	80°43'7.4032"W	9704.89	169.990	0.56	-0.19	-0.53	
17258.00	89.480	161.860	7194.58	9681.19	-9647.30	1716.87	1719791.94	14344066.40	39°29'59.5755"N	80°43'7.0249"W	9798.88	169.909	0.62	0.39	0.48	
17352.00	89.630	160.720	7195.31	9775.18	-9736.33	1747.02	1719822.08	14343977.41	39°29'58.6947"N	80°43'6.6438"W	9891.83	169.827	1.22	0.16	-1.21	
17446.00	89.540	161.050	7195.99	9869.18	-9825.14	1777.80	1719852.85	14343888.63	39°29'57.8160"N	80°43'6.2547"W	9984.69	169.744	0.36	-0.10	0.35	
17541.00	89.450	160.950	7196.83	9964.18	-9914.97	1808.73	1719883.77	14343798.84	39°29'56.9273"N	80°43'5.8637"W	10078.59	169.662	0.14	-0.09	-0.11	
17636.00	89.260	160.770	7197.90	10059.17	-10004.71	1839.88	1719914.90	14343709.13	39°29'56.0394"N	80°43'5.4700"W	10172.48	169.580	0.28	-0.20	-0.19	
17731.00	89.450	160.720	7198.97	10154.16	-10094.39	1871.20	1719946.21	14343619.49	39°29'55.1520"N	80°43'5.0740"W	10266.36	169.498	0.21	0.20	-0.05	
17825.00	89.540	160.950	7199.80	10248.16	-10183.17	1902.06	1719977.06	14343530.74	39°29'54.2736"N	80°43'4.6839"W	10359.29	169.420	0.26	0.10	0.24	
17920.00	89.450	160.850	7200.63	10343.16	-10272.94	1933.15	1720008.13	14343441.01	39°29'53.3854"N	80°43'4.2909"W	10453.25	169.343	0.14	-0.09	-0.11	
18014.00	89.750	160.640	7201.29	10437.15	-10361.68	1964.14	1720039.12	14343352.30	39°29'52.5074"N	80°43'3.8991"W	10546.20	169.266	0.39	0.32	-0.22	
18109.00	89.350	160.810	7202.03	10532.15	-10451.35	1995.50	1720070.46	14343262.67	39°29'51.6202"N	80°43'3.5026"W	10640.15	169.190	0.46	-0.42	0.18	
18204.00	89.480	160.910	7203.00	10627.14	-10541.10	2026.65	1720101.60	14343172.96	39°29'50.7323"N	80°43'3.1089"W	10734.15	169.117	0.17	0.14	0.11	
18298.00	89.380	160.890	7203.94	10721.14	-10629.92	2057.41	1720132.34	14343084.17	39°29'49.8535"N	80°43'2.7201"W	10827.19	169.046	0.11	-0.11	-0.02	
18393.00	89.480	160.720	7204.89	10816.13	-10719.63	2088.64	1720163.56	14342994.49	39°29'48.9658"N	80°43'2.3253"W	10921.21	168.974	0.21	0.11	-0.18	
18487.00	89.350	160.460	7205.84	10910.13	-10808.28	2119.88	1720194.79	14342905.88	39°29'48.0887"N	80°43'1.9304"W	11014.21	168.903	0.31	-0.14	-0.28	
18582.00	89.540	160.780	7206.76	11005.12	-10897.90	2151.40	1720226.30	14342816.30	39°29'47.2020"N	80°43'1.5319"W	11108.23	168.833	0.39	0.20	0.34	
18677.00	89.510	161.040	7207.55	11100.11	-10987.67	2182.47	1720257.35	14342726.56	39°29'46.3138"N	80°43'1.1391"W	11202.32	168.766	0.28	-0.03	0.27	
18771.00	89.540	160.800	7208.33	11194.11	-11076.50	2213.19	1720288.07	14342637.76	39°29'45.4349"N	80°43'0.7508"W	11295.45	168.701	0.26	0.03	-0.26	
18866.00	89.420	160.660	7209.19	11289.11	-11166.18	2244.54	1720319.41	14342548.13	39°29'44.5477"N	80°43'0.3545"W	11389.53	168.634	0.19	-0.13	-0.15	
18961.00	89.660	161.240	7209.96	11384.10	-11255.97	2275.55	1720350.40	14342458.37	39°29'43.6592"N	80°42'59.9625"W	11483.68	168.571	0.66	0.25	0.61	
19055.00	89.850	160.960	7210.36	11478.10	-11344.90	2306.00	1720380.84	14342369.47	39°29'42.7794"N	80°42'59.5777"W	11576.89	168.510	0.36	0.20	-0.30	
19150.00	89.660	161.040	7210.76	11573.10	-11434.72	2336.93	1720411.75	14342279.68	39°29'41.8906"N	80°42'59.1868"W	11671.08	168.449	0.22	-0.20	0.08	
19245.00	90.310	160.910	7210.79	11668.10	-11524.53	2367.89	1720442.71	14342189.91	39°29'41.0021"N	80°42'58.7954"W	11765.28	168.389	0.70	0.68	-0.14	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (237 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]	
19340.00	90.400	160.810	7210.20	11763.10	-11614.28	2399.04	1720473.84	14342100.20	39°29'40.1141"N	80°42'58.4017"W	11859.47	168.329	0.14	0.09	-0.11	
19434.00	89.380	160.930	7210.38	11857.10	-11703.09	2429.85	1720504.64	14342011.43	39°29'39.2354"N	80°42'58.0123"W	11952.68	168.271	1.09	-1.09	0.13	
19529.00	89.690	161.180	7211.15	11952.09	-11792.94	2460.69	1720535.47	14341921.61	39°29'38.3464"N	80°42'57.6225"W	12046.93	168.214	0.42	0.33	0.26	
19623.00	89.660	160.690	7211.69	12046.09	-11881.78	2491.39	1720566.16	14341832.80	39°29'37.4674"N	80°42'57.2345"W	12140.17	168.158	0.52	-0.03	-0.52	
19718.00	89.720	160.880	7212.20	12141.09	-11971.49	2522.66	1720597.41	14341743.13	39°29'36.5798"N	80°42'56.8393"W	12234.39	168.101	0.21	0.06	0.20	
19813.00	89.850	160.740	7212.56	12236.09	-12061.21	2553.88	1720628.63	14341653.45	39°29'35.6921"N	80°42'56.4446"W	12328.63	168.045	0.20	0.14	-0.15	
19907.00	89.630	161.000	7212.98	12330.09	-12150.02	2584.69	1720659.42	14341564.67	39°29'34.8135"N	80°42'56.0552"W	12421.90	167.990	0.36	-0.23	0.28	
20002.00	89.630	160.700	7213.60	12425.08	-12239.76	2615.85	1720690.57	14341474.97	39°29'33.9255"N	80°42'55.6613"W	12516.16	167.936	0.32	0.00	-0.32	
20097.00	89.660	160.550	7214.18	12520.08	-12329.38	2647.37	1720722.07	14341385.39	39°29'33.0388"N	80°42'55.2630"W	12610.39	167.881	0.16	0.03	-0.16	
20191.00	89.630	160.960	7214.77	12614.08	-12418.12	2678.35	1720753.04	14341296.68	39°29'32.1608"N	80°42'54.8713"W	12703.67	167.829	0.44	-0.03	0.44	
20286.00	89.720	160.870	7215.31	12709.07	-12507.90	2709.41	1720784.09	14341206.93	39°29'31.2725"N	80°42'54.4788"W	12797.98	167.778	0.13	0.09	-0.09	
20380.00	89.600	160.460	7215.86	12803.07	-12596.59	2740.53	1720815.20	14341118.27	39°29'30.3949"N	80°42'54.0854"W	12891.26	167.726	0.45	-0.13	-0.44	
20475.00	89.720	161.020	7216.43	12898.07	-12686.28	2771.87	1720846.52	14341028.63	39°29'29.5076"N	80°42'53.6893"W	12985.56	167.675	0.60	0.13	0.59	
20569.00	89.450	160.580	7217.11	12992.06	-12775.04	2802.78	1720877.42	14340939.89	39°29'28.6293"N	80°42'53.2986"W	13078.89	167.626	0.55	-0.29	-0.47	
20664.00	89.750	160.770	7217.77	13087.06	-12864.69	2834.22	1720908.85	14340850.28	39°29'27.7423"N	80°42'52.9012"W	13173.19	167.576	0.37	0.32	0.20	
20758.00	89.970	161.080	7218.00	13181.06	-12953.53	2864.94	1720939.56	14340761.48	39°29'26.8633"N	80°42'52.5130"W	13266.56	167.529	0.40	0.23	0.33	
20853.00	89.480	160.890	7218.46	13276.06	-13043.34	2895.89	1720970.50	14340671.70	39°29'25.9747"N	80°42'52.1218"W	13360.95	167.482	0.55	-0.52	-0.20	
20948.00	89.450	159.870	7219.34	13371.05	-13132.82	2927.79	1721002.38	14340582.26	39°29'25.0894"N	80°42'51.7186"W	13455.22	167.432	1.07	-0.03	-1.07	
21043.00	90.620	161.570	7219.29	13466.04	-13222.49	2959.15	1721033.73	14340492.63	39°29'24.2022"N	80°42'51.3222"W	13549.57	167.385	2.17	1.23	1.79	
21138.00	89.600	160.440	7219.10	13561.04	-13312.31	2990.07	1721064.64	14340402.84	39°29'23.3134"N	80°42'50.9314"W	13643.98	167.341	1.60	-1.07	-1.19	
21232.00	89.540	161.240	7219.81	13655.03	-13401.10	3020.92	1721095.48	14340314.08	39°29'22.4349"N	80°42'50.5415"W	13737.38	167.297	0.85	-0.06	0.85	
21327.00	89.320	160.660	7220.75	13750.03	-13490.89	3051.93	1721126.47	14340224.33	39°29'21.5465"N	80°42'50.1497"W	13831.79	167.253	0.65	-0.23	-0.61	
21422.00	89.080	160.080	7222.08	13845.01	-13580.36	3083.84	1721158.37	14340134.89	39°29'20.6612"N	80°42'49.7463"W	13926.10	167.206	0.66	-0.25	-0.61	
21517.00	89.020	160.530	7223.66	13939.99	-13669.79	3115.85	1721190.37	14340045.50	39°29'19.7764"N	80°42'49.3416"W	14020.41	167.160	0.48	-0.06	0.47	
21611.00	89.350	160.270	7224.99	14033.98	-13758.34	3147.38	1721221.89	14339956.99	39°29'18.9003"N	80°42'48.9431"W	14113.75	167.115	0.45	0.35	-0.28	
21675.00	89.350	160.610	7225.72	14097.97	-13818.64	3168.81	1721243.31	14339896.71	39°29'18.3036"N	80°42'48.6722"W	14177.31	167.085	0.53	0.00	0.53	
21698.00†	89.350	160.610	7225.98	14120.97	-13840.34	3176.44	1721250.94	14339875.02	39°29'18.0890"N	80°42'48.5757"W	14200.16	167.074	0.00	0.00	0.00	Projected MD at TD: 21698'



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

## HOLE & CASING SECTIONS - Ref Wellbore: Gribben Unit 1H AWB Ref Wellpath: Gribben Unit 1H AWP Proj: 21698'

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	130.00	0.00	0.00	-0.15	0.13
17.5in Open Hole	130.00	683.00	553.00	130.00	682.99	-0.15	0.13	-0.86	2.22
13.375in Casing Surface	30.00	624.00	594.00	30.00	624.00	0.00	0.00	-0.75	2.06
12.25in Open Hole	683.00	2646.00	1963.00	682.99	2600.21	-0.86	2.22	32.51	-363.54
9.625in Casing Intermediate	30.00	2626.00	2596.00	30.00	2581.06	0.00	0.00	32.80	-357.80
8.75in Open Hole	2646.00	7084.00	4438.00	2600.21	6839.57	32.51	-363.54	-114.55	-1499.86
8.5in Open Hole	7084.00	21698.00	14614.00	6839.57	7225.98	-114.55	-1499.86	-13840.34	3176.44
5.5in Casing Production	30.00	21678.00	21648.00	30.00	7225.75	0.00	0.00	-13821.47	3169.80



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Gribben Unit 1H POE Rev-2	7121.00	-476.12	-1416.58	1716659.73	14353233.96	39°31'30.3119"N	80°43'46.6460"W	point
Gribben Unit 1H BHL Rev-1	7138.00	-13999.64	3235.04	1721309.51	14339715.78	39°29'16.5126"N	80°42'47.8348"W	point
Gribben Unit 1H BHL Rev-2	7147.00	-13825.29	3175.07	1721249.56	14339890.06	39°29'18.2377"N	80°42'48.5927"W	point
Gribben Unit 1H LP Rev-2	7147.00	-656.94	-1354.38	1716721.90	14353053.21	39°31'28.5229"N	80°43'45.8592"W	point
Gribben Unit 1H 50' L/R Hard Line Rev-2	7500.00	-7150.70	879.24	1718954.65	14346562.01	39°30'24.2759"N	80°43'17.6117"W	rectangle
2D Rectangle 14116.8 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Gribben Unit 1H AWB Ref Wellpath: Gribben Unit 1H AWP Proj: 21698'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
30.00	840.00	Gyrodata 2015 - GC+WIR+DPIPE	02_Gyrodata MS Gyro <12-1/4"> (100'-840')	Gribben Unit 1H AWB	01/Nov/2021	
840.00	2573.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03_APS EM <12-1/4"> (840')(969'-2573')	Gribben Unit 1H AWB	30/Oct/2021	
2573.00	7023.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04_APS EM <8-3/4"> (2573')(2665'-7023')	Gribben Unit 1H AWB	24/Nov/2021	
7023.00	21698.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05_BH AT Curve <8-1/2"> (7023')(7060'-21675')	Gribben Unit 1H AWB	24/Nov/2021	



# Actual Wellpath Report

Gribben Unit 1H AWP Proj: 21698'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Gribben Unit 1H
Field	Wetzel	API	47-103-03426-0000
Facility	Dogwood Pad	Wellbore	Gribben Unit 1H AWB
Slot	Slot #03		

## COMMENTS

### Wellpath general comments

API: 47-103-03426-0000  
BH Job #: 111092534  
Rig: H&P 519  
Duration: 11/28/2021-12/2/2021  
Gyrodata MS Gyro <12-1/4"> (100'-840')  
APS EM <12-1/4"> (840')(969'-2573')  
APS EM <8-3/4"> (2573')(2665'-7023')  
BH AT Curve <8-1/2"> (7023')(7060'-21675')  
Sycamore: 7012' MD  
Middlesex: 7183' MD  
Burkett: 7334' MD  
Tully: 7397' MD  
Marcellus POE: 7586' MD  
Projected MD at TD: 21698'

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