



ANTERO RESOURCES CORPORATION



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

Slot: Slot #08
Well: Busch Unit 2H
Wellbore: Busch Unit 2H PWB

Easting (ft)

Plot reference wellpath is Busch Unit 2H PWP Rev-B.1	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 #08): -1224 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edsaryar on 2021-10-19; Database: WA MPL_EASTERN_US_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)	Latitude
Slot #08	-19.09	-97.87	1709313.330	14362252.150	39°32'59.6840"N
Comment	Busch Unit 2H				
H&P 519 (RKB) to Ground level (At Slot: Slot #08)	30ft				
Mean Sea Level to Ground level (At Slot: Slot #08)	-1224ft				
H&P 519 (RKB) to Mean Sea Level	1254ft				

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2565.00	10.620	225.480	2543.17	-154.90	-204.74	0.77	-80.70
Proj. to Bottom	2651.00	10.620	225.480	2627.70	-166.01	-216.04	0.00	-87.58
Drill Out	2731.00	10.620	225.480	2706.33	-176.35	-226.56	0.00	-93.98
End of 3D Arc	2801.57	11.320	231.926	2775.61	-185.18	-236.65	2.00	-99.09
Curve KOP	6326.14	11.320	231.926	6231.61	-611.84	-781.29	0.00	-327.58
POE	7267.74	73.358	330.345	6932.00	-218.47	-1128.78	8.00	156.76
Landing Pt.	7475.77	90.000	330.345	6962.00	-40.22	-1230.26	8.00	358.19
On AZI	7837.82	90.000	341.207	6962.00	289.46	-1378.59	3.00	718.08
BHL	18895.67	90.000	341.207	6962.00	10757.78	-4940.96	0.00	11775.93

Scale 1 inch = 200'

True Vertical Depth (ft)

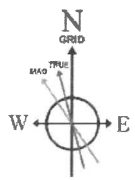


Gyrodata MS Gyro <17-1/2"> (100'-388') : 0.19° Inc, 100.00ft MD, 100.00ft TVD, -0.06ft VS

APS EM <12-1/4"> (388')(509'-2565') : 0.50° Inc, 509.00ft MD, 509.00ft TVD, 0.08ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #08	Busch Unit 2H	Busch Unit 2H AWB	Busch Unit 2H AWP Prop: 18868'
Slot #08	Busch Unit 2H	Busch Unit 2H PWB	Busch Unit 2H PWP Rev-B.1

APS EM <8-3/4"> (2565')(2656'-6633') : 10.60° Inc, 2656.00ft MD, 2632.62ft TVD, -88.42ft VS



User specified (HDGM) Dip: 66.52° Field: 51875 nT
Magnetic North is 7.70 degrees West of True North (at 13/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

API: 47-103-03405-0000
BH Job #: 110972235
Rig: H&P 519
Duration: 9/15/2021-9/19/2021

BH AT Curve <8-1/2"> (6633')(6741'-18843') : 32.84° Inc, 6741.00ft MD, 6615.83ft TVD, -224.66ft VS
Marcellus POE: 7254' MD : 71.94° Inc, 7254.00ft MD, 6927.68ft TVD, 158.87ft VS

Marcellus POE: 7254' MD : 6927.68ft TVD, 215.22ft S, 1125.80ft W
BH AT Curve <8-1/2"> (6633')(6741'-18843') : 6615.83ft TVD, 548.34ft S, 814.18ft W
APS EM <8-3/4"> (2565')(2656'-6633') : 2632.62ft TVD, 167.00ft S, 216.32ft W
APS EM <12-1/4"> (388')(509'-2565') : 509.00ft TVD, 0.55ft N, 0.37ft E
Gyrodata MS Gyro <17-1/2"> (100'-388') : 100.00ft TVD, 0.02ft S, 0.11ft E

Projected MD at TD: 18868' : 90.31° Inc, 18868.00ft MD, 6950.41ft TVD, 11761.47ft VS

Scale 1 inch = 200'

Projected MD at TD: 18868' : 6950.41ft TVD, 10740.12ft N, 4947.95ft W

BPL 51'

Busch Unit 2H 50' LR Hard Line

POE : 100'

Slot #09

Scale 1 inch = 200'

Vertical Section (ft)
Azimuth 341.21° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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	19/Oct/2021 at 18:02
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	-19.09	-97.87	1709313.33	14362252.15	39°32'59.6840"N	80°45'20.1200"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 #08)	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	341.21°



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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
0.00†	0.000	99.930	0.00	0.00	0.00	0.00	1709313.33	14362252.15	39°32'59.6840"N	80°45'20.1200"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	99.930	30.00	0.00	0.00	0.00	1709313.33	14362252.15	39°32'59.6840"N	80°45'20.1200"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.190	99.930	100.00	-0.06	-0.02	0.11	1709313.44	14362252.13	39°32'59.6838"N	80°45'20.1186"W	0.12	99.930	0.27	0.27	0.00	Gyrodata MS Gyro <17-1/2"> (100'-388')
200.00	0.090	76.600	200.00	-0.14	-0.03	0.35	1709313.68	14362252.12	39°32'59.6837"N	80°45'20.1155"W	0.36	94.909	0.11	-0.10	-23.33	
300.00	0.140	51.720	300.00	-0.11	0.06	0.53	1709313.86	14362252.21	39°32'59.6846"N	80°45'20.1133"W	0.53	83.123	0.07	0.05	-24.88	
388.00	0.190	51.000	388.00	-0.02	0.22	0.72	1709314.05	14362252.37	39°32'59.6862"N	80°45'20.1108"W	0.76	72.963	0.06	0.06	-0.82	
509.00	0.500	67.480	509.00	0.08	0.55	1.37	1709314.70	14362252.70	39°32'59.6894"N	80°45'20.1026"W	1.47	68.080	0.27	0.26	13.82	APS EM <12-1/4"> (388')(509'-2565')
599.00	0.340	71.250	598.99	0.11	0.79	1.98	1709315.31	14362252.94	39°32'59.6917"N	80°45'20.0947"W	2.13	68.366	0.18	-0.18	4.19	
689.00	1.040	230.390	688.99	-0.18	0.35	1.61	1709314.94	14362252.50	39°32'59.6874"N	80°45'20.0995"W	1.65	77.655	1.51	0.78	176.82	
780.00	1.380	232.080	779.97	-0.84	-0.85	0.11	1709313.44	14362251.30	39°32'59.6756"N	80°45'20.1187"W	0.85	172.857	0.38	0.37	1.86	
871.00	1.510	237.240	870.94	-1.49	-2.17	-1.77	1709311.56	14362249.98	39°32'59.6626"N	80°45'20.1427"W	2.80	219.140	0.20	0.14	5.67	
961.00	1.590	234.630	960.91	-2.13	-3.53	-3.78	1709309.55	14362248.62	39°32'59.6491"N	80°45'20.1684"W	5.18	226.932	0.12	0.09	-2.90	
1052.00	2.960	227.660	1051.83	-3.43	-5.85	-6.55	1709306.78	14362246.30	39°32'59.6264"N	80°45'20.2038"W	8.78	228.231	1.53	1.51	-7.66	
1146.00	4.870	227.830	1145.61	-5.98	-10.16	-11.30	1709302.03	14362241.99	39°32'59.5838"N	80°45'20.2646"W	15.20	228.034	2.03	2.03	0.18	
1241.00	6.420	230.130	1240.15	-9.49	-16.27	-18.37	1709294.97	14362235.88	39°32'59.5236"N	80°45'20.3551"W	24.54	228.454	1.65	1.63	2.42	
1336.00	7.640	230.900	1334.43	-13.59	-23.66	-27.34	1709286.00	14362228.50	39°32'59.4509"N	80°45'20.4699"W	36.16	229.127	1.29	1.28	0.81	
1430.00	9.170	232.060	1427.42	-18.22	-32.21	-38.10	1709275.25	14362219.95	39°32'59.3667"N	80°45'20.6075"W	49.89	229.790	1.64	1.63	1.23	
1525.00	10.250	238.130	1521.06	-22.62	-41.33	-51.25	1709262.10	14362210.84	39°32'59.2769"N	80°45'20.7757"W	65.84	231.118	1.56	1.14	6.39	
1620.00	11.610	240.300	1614.33	-26.34	-50.53	-66.73	1709246.63	14362201.64	39°32'59.1864"N	80°45'20.9737"W	83.70	232.869	1.50	1.43	2.28	
1714.00	11.690	239.850	1706.40	-30.00	-60.00	-83.18	1709230.18	14362192.18	39°32'59.0933"N	80°45'21.1840"W	102.56	234.199	0.13	0.09	-0.48	
1809.00	11.390	237.660	1799.48	-34.10	-69.85	-99.43	1709213.94	14362182.33	39°32'58.9963"N	80°45'21.3918"W	121.51	234.913	0.56	-0.32	-2.31	
1903.00	10.710	236.220	1891.73	-38.53	-79.67	-114.53	1709198.84	14362172.51	39°32'58.8997"N	80°45'21.5849"W	139.52	235.177	0.78	-0.72	-1.53	
1998.00	10.580	235.200	1985.10	-43.22	-89.55	-129.03	1709184.35	14362162.63	39°32'58.8024"N	80°45'21.7703"W	157.06	235.237	0.24	-0.14	-1.07	
2093.00	10.260	233.430	2078.53	-48.21	-99.57	-142.99	1709170.40	14362152.62	39°32'58.7037"N	80°45'21.9488"W	174.24	235.148	0.48	-0.34	-1.86	
2187.00	10.150	231.760	2171.05	-53.52	-109.69	-156.22	1709157.18	14362142.51	39°32'58.6041"N	80°45'22.1181"W	190.88	234.925	0.34	-0.12	-1.78	
2282.00	10.100	229.050	2264.57	-59.45	-120.33	-169.08	1709144.32	14362131.87	39°32'58.4993"N	80°45'22.2827"W	207.53	234.562	0.50	-0.05	-2.85	
2376.00	10.040	226.250	2357.12	-66.02	-131.40	-181.23	1709132.18	14362120.81	39°32'58.3902"N	80°45'22.4381"W	223.85	234.056	0.52	-0.06	-2.98	
2471.00	9.940	224.140	2450.68	-73.25	-143.01	-192.92	1709120.49	14362109.20	39°32'58.2758"N	80°45'22.5877"W	240.14	233.451	0.40	-0.11	-2.22	
2565.00	10.620	225.480	2543.17	-80.70	-154.90	-204.74	1709108.67	14362097.31	39°32'58.1585"N	80°45'22.7391"W	256.74	232.890	0.77	0.72	1.43	
2656.00	10.600	222.000	2632.62	-88.42	-167.00	-216.32	1709097.09	14362085.21	39°32'58.0393"N	80°45'22.8874"W	273.29	232.332	0.70	-0.02	-3.82	APS EM <8-3/4"> (2565')(2656'-6633')



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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]	
2751.00	10.020	216.150	2726.08	-97.44	-180.17	-227.05	1709086.37	14362072.05	39°32'57.9094"N	80°45'23.0247"W	289.85	231.567	1.26	-0.61	-6.16	
2845.00	10.980	226.490	2818.52	-105.88	-192.94	-238.36	1709075.06	14362059.29	39°32'57.7835"N	80°45'23.1696"W	306.66	231.013	2.25	1.02	11.00	
2940.00	10.690	221.460	2911.83	-114.03	-205.77	-250.76	1709062.67	14362046.46	39°32'57.6570"N	80°45'23.3283"W	324.38	230.628	1.04	-0.31	-5.29	
3037.00	11.420	229.140	3007.03	-122.11	-218.79	-263.98	1709049.46	14362033.44	39°32'57.5287"N	80°45'23.4975"W	342.86	230.347	1.69	0.75	7.92	
3132.00	11.730	233.310	3100.10	-128.61	-230.72	-278.84	1709034.60	14362021.52	39°32'57.4112"N	80°45'23.6876"W	361.91	230.395	0.94	0.33	4.39	
3227.00	10.990	225.580	3193.24	-135.49	-242.83	-293.05	1709020.40	14362009.42	39°32'57.2919"N	80°45'23.8694"W	380.58	230.354	1.78	-0.78	-8.14	
3322.00	10.590	222.530	3286.56	-143.60	-255.60	-305.42	1709008.03	14361996.65	39°32'57.1660"N	80°45'24.0278"W	398.26	230.075	0.73	-0.42	-3.21	
3416.00	10.500	234.350	3378.99	-150.23	-266.96	-318.22	1708995.24	14361985.30	39°32'57.0541"N	80°45'24.1916"W	415.36	230.006	2.30	-0.10	12.57	
3511.00	12.290	243.260	3472.12	-154.14	-276.55	-334.28	1708979.18	14361975.71	39°32'56.9597"N	80°45'24.3970"W	433.85	230.399	2.64	1.88	9.38	
3605.00	13.200	244.550	3563.80	-156.77	-285.67	-352.91	1708960.56	14361966.60	39°32'56.8701"N	80°45'24.6351"W	454.04	231.011	1.01	0.97	1.37	
3700.00	12.390	237.220	3656.45	-160.49	-295.85	-371.27	1708942.20	14361956.42	39°32'56.7700"N	80°45'24.8699"W	474.73	231.451	1.91	-0.85	-7.72	
3795.00	11.960	233.060	3749.31	-166.02	-307.28	-387.71	1708925.77	14361944.99	39°32'56.6574"N	80°45'25.0801"W	494.71	231.602	1.03	-0.45	-4.38	
3889.00	11.940	239.770	3841.28	-170.98	-318.03	-403.90	1708909.59	14361934.25	39°32'56.5516"N	80°45'25.2871"W	514.08	231.783	1.48	-0.02	7.14	
3984.00	11.560	237.240	3934.29	-175.23	-328.13	-420.39	1708893.10	14361924.15	39°32'56.4523"N	80°45'25.4980"W	533.29	232.027	0.67	-0.40	-2.66	
4078.00	11.240	233.700	4026.44	-180.26	-338.65	-435.70	1708877.81	14361913.64	39°32'56.3487"N	80°45'25.6937"W	551.83	232.144	0.82	-0.34	-3.77	
4173.00	10.680	230.410	4119.70	-186.17	-349.74	-449.94	1708863.57	14361902.55	39°32'56.2395"N	80°45'25.8760"W	569.88	232.142	0.88	-0.59	-3.46	
4268.00	9.560	223.990	4213.23	-192.91	-361.03	-462.21	1708851.31	14361891.27	39°32'56.1282"N	80°45'26.0329"W	586.49	232.007	1.67	-1.18	-6.76	
4363.00	10.910	230.870	4306.72	-199.64	-372.38	-474.66	1708838.86	14361879.92	39°32'56.0164"N	80°45'26.1923"W	603.30	231.885	1.91	1.42	7.24	
4457.00	11.740	237.970	4398.89	-204.92	-383.06	-489.67	1708823.86	14361869.24	39°32'55.9112"N	80°45'26.3843"W	621.70	231.964	1.72	0.88	7.55	
4552.00	11.610	234.360	4491.93	-209.91	-393.76	-505.63	1708807.90	14361858.55	39°32'55.8059"N	80°45'26.5884"W	640.87	232.091	0.78	-0.14	-3.80	
4646.00	10.790	233.450	4584.14	-215.33	-404.51	-520.39	1708793.15	14361847.80	39°32'55.7000"N	80°45'26.7771"W	659.11	232.141	0.89	-0.87	-0.97	
4741.00	10.310	224.050	4677.54	-221.93	-415.92	-533.44	1708780.10	14361836.40	39°32'55.5876"N	80°45'26.9442"W	676.42	232.057	1.88	-0.51	-9.89	
4836.00	11.580	239.250	4770.83	-227.79	-426.90	-547.55	1708766.00	14361825.41	39°32'55.4794"N	80°45'27.1247"W	694.31	232.058	3.31	1.34	16.00	
4930.00	12.490	244.380	4862.76	-230.95	-436.12	-564.83	1708748.73	14361816.20	39°32'55.3888"N	80°45'27.3455"W	713.61	232.327	1.49	0.97	5.46	
5025.00	12.570	243.860	4955.50	-233.49	-445.12	-583.37	1708730.19	14361807.21	39°32'55.3003"N	80°45'27.5825"W	733.79	232.656	0.15	0.08	-0.55	
5119.00	11.990	235.270	5047.36	-237.48	-455.19	-600.58	1708712.99	14361797.14	39°32'55.2013"N	80°45'27.8026"W	753.59	232.841	2.04	-0.62	-9.14	
5214.00	10.590	226.510	5140.52	-243.84	-466.82	-615.02	1708698.55	14361785.51	39°32'55.0867"N	80°45'27.9874"W	772.12	232.800	2.33	-1.47	-9.22	
5308.00	12.000	234.200	5232.70	-250.31	-478.48	-629.22	1708684.36	14361773.86	39°32'54.9718"N	80°45'28.1689"W	790.48	232.749	2.19	1.50	8.18	
5403.00	12.490	229.210	5325.55	-257.05	-490.97	-645.00	1708668.58	14361761.37	39°32'54.8488"N	80°45'28.3709"W	810.61	232.722	1.23	0.52	-5.25	
5497.00	12.490	223.840	5417.32	-265.53	-504.94	-659.74	1708653.85	14361747.41	39°32'54.7111"N	80°45'28.5595"W	830.80	232.571	1.24	0.00	-5.71	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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
5592.00	11.820	226.400	5510.19	-274.34	-519.06	-673.90	1708639.69	14361733.29	39°32'54.5719"N	80°45'28.7408"W	850.63	232.395	0.91	-0.71	2.69	
5687.00	11.360	218.350	5603.26	-283.50	-533.11	-686.75	1708626.85	14361719.25	39°32'54.4334"N	80°45'28.9053"W	869.39	232.179	1.77	-0.48	-8.47	
5781.00	11.190	224.060	5695.45	-292.68	-546.93	-698.84	1708614.77	14361705.44	39°32'54.2972"N	80°45'29.0601"W	887.42	231.953	1.20	-0.18	6.07	
5876.00	12.380	237.450	5788.47	-299.31	-559.03	-713.84	1708599.77	14361693.34	39°32'54.1780"N	80°45'29.2520"W	906.69	231.934	3.13	1.25	14.09	
5971.00	13.220	232.210	5881.11	-305.27	-571.17	-731.01	1708582.61	14361681.21	39°32'54.0585"N	80°45'29.4716"W	927.69	231.998	1.51	0.88	-5.52	
6065.00	10.690	231.630	5973.06	-311.69	-583.17	-746.34	1708567.28	14361669.21	39°32'53.9403"N	80°45'29.6677"W	947.16	231.997	2.69	-2.69	-0.62	
6160.00	10.750	227.210	6066.40	-318.25	-594.66	-759.75	1708553.88	14361657.73	39°32'53.8271"N	80°45'29.8393"W	964.80	231.950	0.87	0.06	-4.65	
6255.00	11.330	238.010	6159.66	-323.98	-605.62	-774.17	1708539.47	14361646.77	39°32'53.7191"N	80°45'30.0237"W	982.91	231.964	2.26	0.61	11.37	
6349.00	12.390	270.620	6251.75	-322.74	-610.41	-792.11	1708521.54	14361641.98	39°32'53.6723"N	80°45'30.2528"W	1000.02	232.382	7.12	1.13	34.69	
6444.00	16.630	286.100	6343.73	-311.57	-606.53	-815.38	1708498.28	14361645.86	39°32'53.7113"N	80°45'30.5498"W	1016.22	233.356	6.01	4.46	16.29	
6539.00	19.920	287.970	6433.93	-294.10	-597.76	-843.84	1708469.83	14361654.63	39°32'53.7987"N	80°45'30.9128"W	1034.11	234.687	3.52	3.46	1.97	
6633.00	24.410	303.880	6521.04	-269.04	-581.97	-875.24	1708438.44	14361670.41	39°32'53.9556"N	80°45'31.3132"W	1051.06	236.379	7.94	4.78	16.93	
6727.00†	31.693	314.857	6604.00	-231.39	-553.67	-908.94	1708404.75	14361698.70	39°32'54.2362"N	80°45'31.7423"W	1064.29	238.653	9.47	7.75	11.68	Sycamore: 6727' MD
6741.00	32.840	316.100	6615.83	-224.66	-548.34	-914.18	1708399.52	14361704.03	39°32'54.2890"N	80°45'31.8090"W	1066.02	239.044	9.47	8.20	8.88	BH AT Curve <8-1/2"> (6633')(6741'-18843')
6835.00	40.140	323.620	6691.39	-172.60	-505.50	-949.89	1708363.82	14361746.85	39°32'54.7133"N	80°45'32.2634"W	1076.02	241.979	9.10	7.77	8.00	
6884.00†	43.928	325.559	6727.78	-141.17	-478.76	-968.88	1708344.84	14361773.58	39°32'54.9781"N	80°45'32.5049"W	1080.71	243.704	8.17	7.73	3.96	Middlesex: 6884' MD
6930.00	47.510	327.150	6759.90	-109.34	-451.34	-987.11	1708326.61	14361800.99	39°32'55.2496"N	80°45'32.7367"W	1085.40	245.428	8.17	7.79	3.46	
7025.00	51.940	328.050	6821.29	-38.91	-390.15	-1025.92	1708287.82	14361862.15	39°32'55.8554"N	80°45'33.2301"W	1097.60	249.179	4.72	4.66	0.95	
7027.00†	52.122	328.103	6822.52	-37.37	-388.81	-1026.75	1708286.98	14361863.49	39°32'55.8686"N	80°45'33.2407"W	1097.90	249.259	9.32	9.08	2.65	Burkett: 7027' MD
7085.00†	57.399	329.537	6855.98	8.88	-348.29	-1051.25	1708262.50	14361904.00	39°32'56.2698"N	80°45'33.5520"W	1107.45	251.669	9.32	9.10	2.47	Tully: 7085' MD
7119.00	60.500	330.300	6873.51	37.44	-323.09	-1065.85	1708247.91	14361929.19	39°32'56.5192"N	80°45'33.7375"W	1113.74	253.137	9.32	9.12	2.24	
7214.00	68.720	331.190	6914.21	121.77	-248.26	-1107.73	1708206.04	14362003.99	39°32'57.2598"N	80°45'34.2696"W	1135.21	257.368	8.69	8.65	0.94	
7254.00†	71.941	331.466	6927.68	158.87	-215.22	-1125.80	1708187.98	14362037.02	39°32'57.5869"N	80°45'34.4992"W	1146.19	259.177	8.08	8.05	0.69	Marcellus POE: 7254' MD
7309.00	76.370	331.830	6942.69	211.03	-168.67	-1150.92	1708162.87	14362083.55	39°32'58.0476"N	80°45'34.8182"W	1163.21	261.663	8.08	8.05	0.66	
7404.00	85.100	331.540	6957.97	303.41	-86.21	-1195.35	1708118.45	14362165.98	39°32'58.8638"N	80°45'35.3826"W	1193.46	265.875	9.19	9.19	-0.31	
7498.00	91.050	331.930	6961.13	396.04	-3.50	-1239.82	1708074.00	14362248.65	39°32'59.6824"N	80°45'35.9475"W	1239.82	269.838	6.34	6.33	0.41	
7593.00	89.910	334.300	6960.33	490.08	81.22	-1282.77	1708031.07	14362333.34	39°33'0.5209"N	80°45'36.4930"W	1285.34	273.623	2.77	-1.20	2.49	
7688.00	89.690	335.380	6960.66	584.49	167.21	-1323.16	1707990.69	14362419.29	39°33'1.3717"N	80°45'37.0056"W	1333.68	277.202	1.16	-0.23	1.14	
7783.00	90.030	340.330	6960.89	679.30	255.17	-1358.96	1707954.91	14362507.22	39°33'2.2420"N	80°45'37.4596"W	1382.71	280.635	5.22	0.36	5.21	
7877.00	89.170	339.240	6961.55	773.26	343.38	-1391.44	1707922.44	14362595.39	39°33'3.1147"N	80°45'37.8713"W	1433.18	283.862	1.48	-0.91	-1.16	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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
7972.00	90.310	340.430	6961.98	868.23	432.55	-1424.19	1707889.71	14362684.53	39°33'3.9968"N	80°45'38.2863"W	1488.43	286.895	1.73	1.20	1.25	
8066.00	88.430	337.700	6963.01	962.15	520.33	-1457.77	1707856.14	14362772.27	39°33'4.8652"N	80°45'38.7120"W	1547.85	289.643	3.53	-2.00	-2.90	
8161.00	89.720	338.820	6964.55	1057.00	608.56	-1492.95	1707820.97	14362860.47	39°33'5.7382"N	80°45'39.1581"W	1612.22	292.177	1.80	1.36	1.18	
8256.00	88.680	337.820	6965.87	1151.87	696.83	-1528.04	1707785.90	14362948.70	39°33'6.6115"N	80°45'39.6031"W	1679.43	294.514	1.52	-1.09	-1.05	
8351.00	89.510	338.620	6967.38	1246.73	785.03	-1563.28	1707750.67	14363036.87	39°33'7.4841"N	80°45'40.0501"W	1749.32	296.664	1.21	0.87	0.84	
8445.00	89.450	339.370	6968.23	1340.65	872.78	-1596.98	1707716.99	14363124.59	39°33'8.3523"N	80°45'40.4772"W	1819.91	298.658	0.80	-0.06	0.80	
8539.00	89.850	339.660	6968.80	1434.61	960.84	-1629.87	1707684.10	14363212.61	39°33'9.2234"N	80°45'40.8942"W	1892.01	300.520	0.53	0.43	0.31	
8634.00	90.460	342.340	6968.55	1529.60	1050.65	-1660.80	1707653.19	14363302.38	39°33'10.1119"N	80°45'41.2860"W	1965.23	302.318	2.89	0.64	2.82	
8729.00	89.910	342.100	6968.24	1624.59	1141.11	-1689.81	1707624.19	14363392.81	39°33'11.0067"N	80°45'41.6532"W	2039.02	304.031	0.63	-0.58	-0.25	
8823.00	90.220	342.010	6968.13	1718.58	1230.54	-1718.77	1707595.24	14363482.20	39°33'11.8913"N	80°45'42.0200"W	2113.86	305.600	0.34	0.33	-0.10	
8918.00	90.220	342.470	6967.77	1813.56	1321.01	-1747.75	1707566.28	14363572.64	39°33'12.7862"N	80°45'42.3868"W	2190.82	307.083	0.48	0.00	0.48	
9012.00	90.990	341.660	6966.77	1907.54	1410.44	-1776.69	1707537.34	14363662.03	39°33'13.6708"N	80°45'42.7533"W	2268.47	308.445	1.19	0.82	-0.86	
9107.00	90.250	341.470	6965.75	2002.53	1500.56	-1806.73	1707507.32	14363752.11	39°33'14.5622"N	80°45'43.1338"W	2348.60	309.711	0.80	-0.78	-0.20	
9202.00	90.490	343.010	6965.13	2097.51	1591.02	-1835.71	1707478.35	14363842.54	39°33'15.4571"N	80°45'43.5007"W	2429.23	310.916	1.64	0.25	1.62	
9297.00	90.740	342.410	6964.11	2192.47	1681.73	-1863.94	1707450.13	14363933.21	39°33'16.3542"N	80°45'43.8580"W	2510.47	312.058	0.68	0.26	-0.63	
9391.00	90.120	341.860	6963.41	2286.46	1771.19	-1892.78	1707421.31	14364022.64	39°33'17.2392"N	80°45'44.2232"W	2592.24	313.099	0.88	-0.66	-0.59	
9486.00	89.750	341.600	6963.52	2381.45	1861.40	-1922.56	1707391.54	14364112.81	39°33'18.1315"N	80°45'44.6003"W	2676.01	314.074	0.48	-0.39	-0.27	
9580.00	89.970	341.330	6963.75	2475.45	1950.52	-1952.44	1707361.67	14364201.90	39°33'19.0132"N	80°45'44.9788"W	2759.81	314.972	0.37	0.23	-0.29	
9675.00	89.720	342.690	6964.00	2570.44	2040.88	-1981.78	1707332.34	14364292.22	39°33'19.9069"N	80°45'45.3504"W	2844.75	315.842	1.46	-0.26	1.43	
9770.00	89.260	340.780	6964.85	2665.43	2131.08	-2011.55	1707302.58	14364382.39	39°33'20.7992"N	80°45'45.7274"W	2930.50	316.653	2.07	-0.48	-2.01	
9864.00	89.570	342.450	6965.81	2759.42	2220.28	-2041.19	1707272.94	14364471.55	39°33'21.6815"N	80°45'46.1029"W	3015.98	317.406	1.81	0.33	1.78	
9959.00	90.400	342.630	6965.83	2854.39	2310.90	-2069.70	1707244.45	14364562.13	39°33'22.5779"N	80°45'46.4637"W	3102.24	318.152	0.89	0.87	0.19	
10053.00	89.020	342.660	6966.31	2948.36	2400.62	-2097.74	1707216.43	14364651.81	39°33'23.4653"N	80°45'46.8187"W	3188.02	318.852	1.47	-1.47	0.03	
10148.00	91.290	342.580	6966.05	3043.32	2491.27	-2126.11	1707188.06	14364742.44	39°33'24.3620"N	80°45'47.1779"W	3275.18	319.522	2.39	2.39	-0.08	
10243.00	89.320	342.560	6965.55	3138.29	2581.91	-2154.57	1707159.62	14364833.03	39°33'25.2585"N	80°45'47.5381"W	3362.80	320.155	2.07	-2.07	-0.02	
10337.00	89.350	342.260	6966.64	3232.26	2671.50	-2182.97	1707131.22	14364922.59	39°33'26.1448"N	80°45'47.8978"W	3449.97	320.747	0.32	0.03	-0.32	
10432.00	89.820	342.990	6967.33	3327.23	2762.17	-2211.34	1707102.87	14365013.22	39°33'27.0415"N	80°45'48.2569"W	3538.30	321.320	0.91	0.49	0.77	
10526.00	90.090	342.610	6967.40	3421.20	2851.96	-2239.14	1707075.08	14365102.98	39°33'27.9297"N	80°45'48.6088"W	3625.94	321.864	0.50	0.29	-0.40	
10620.00	89.600	342.110	6967.65	3515.18	2941.54	-2267.62	1707046.61	14365192.52	39°33'28.8158"N	80°45'48.9695"W	3714.13	322.372	0.74	-0.52	-0.53	
10715.00	89.480	339.840	6968.42	3610.17	3031.34	-2298.59	1707015.66	14365282.29	39°33'29.7041"N	80°45'49.3618"W	3804.28	322.828	2.39	-0.13	-2.39	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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
10810.00	90.550	342.850	6968.39	3705.15	3121.34	-2328.97	1706985.28	14365372.25	39°33'30.5944"N	80°45'49.7467"W	3894.47	323.272	3.36	1.13	3.17	
10905.00	90.060	342.520	6967.89	3800.12	3212.03	-2357.24	1706957.02	14365462.91	39°33'31.4915"N	80°45'50.1046"W	3984.19	323.726	0.62	-0.52	-0.35	
10999.00	90.400	343.530	6967.51	3894.07	3301.94	-2384.69	1706929.59	14365552.78	39°33'32.3807"N	80°45'50.4520"W	4073.02	324.163	1.13	0.36	1.07	
11094.00	89.570	338.730	6967.53	3989.04	3391.80	-2415.40	1706898.88	14365642.61	39°33'33.2697"N	80°45'50.8412"W	4163.95	324.544	5.13	-0.87	-5.05	
11188.00	90.060	342.090	6967.84	4083.02	3480.35	-2446.92	1706867.39	14365731.12	39°33'34.1456"N	80°45'51.2405"W	4254.44	324.890	3.61	0.52	3.57	
11283.00	89.570	336.650	6968.14	4177.93	3569.22	-2480.37	1706833.94	14365819.96	39°33'35.0248"N	80°45'51.6648"W	4346.45	325.203	5.75	-0.52	-5.73	
11378.00	89.540	336.820	6968.88	4272.64	3656.50	-2517.90	1706796.43	14365907.20	39°33'35.8883"N	80°45'52.1409"W	4439.57	325.448	0.18	-0.03	0.18	
11473.00	90.030	340.060	6969.24	4367.52	3744.84	-2552.80	1706761.54	14365995.50	39°33'36.7623"N	80°45'52.5836"W	4532.17	325.718	3.45	0.52	3.41	
11567.00	89.350	336.210	6969.75	4461.36	3832.06	-2587.80	1706726.55	14366082.69	39°33'37.6253"N	80°45'53.0276"W	4624.00	325.969	4.16	-0.72	-4.10	
11662.00	89.230	338.900	6970.92	4556.15	3919.84	-2624.07	1706690.30	14366170.44	39°33'38.4938"N	80°45'53.4877"W	4717.09	326.200	2.83	-0.13	2.83	
11757.00	91.720	340.390	6970.14	4651.10	4008.90	-2657.11	1706657.28	14366259.46	39°33'39.3748"N	80°45'53.9065"W	4809.52	326.464	3.05	2.62	1.57	
11851.00	89.820	340.310	6968.87	4745.08	4097.41	-2688.71	1706625.68	14366347.94	39°33'40.2505"N	80°45'54.3071"W	4900.81	326.727	2.02	-2.02	-0.09	
11946.00	89.320	341.040	6969.59	4840.07	4187.06	-2720.15	1706594.26	14366437.55	39°33'41.1372"N	80°45'54.7055"W	4993.06	326.990	0.93	-0.53	0.77	
12041.00	90.400	341.890	6969.82	4935.07	4277.13	-2750.35	1706564.07	14366527.58	39°33'42.0282"N	80°45'55.0881"W	5085.10	327.258	1.45	1.14	0.89	
12136.00	89.940	343.500	6969.54	5030.03	4367.82	-2778.60	1706535.83	14366618.24	39°33'42.9253"N	80°45'55.4459"W	5176.73	327.537	1.76	-0.48	1.69	
12230.00	89.350	339.830	6970.12	5124.01	4457.03	-2808.17	1706506.28	14366707.42	39°33'43.8077"N	80°45'55.8204"W	5267.92	327.787	3.95	-0.63	-3.90	
12325.00	90.460	342.090	6970.28	5219.00	4546.83	-2839.16	1706475.30	14366797.18	39°33'44.6960"N	80°45'56.2131"W	5360.45	328.018	2.65	1.17	2.38	
12420.00	89.940	341.680	6969.95	5313.99	4637.12	-2868.69	1706445.77	14366887.43	39°33'45.5891"N	80°45'56.5872"W	5452.73	328.258	0.70	-0.55	-0.43	
12514.00	90.220	341.600	6969.81	5407.99	4726.33	-2898.30	1706416.18	14366976.61	39°33'46.4716"N	80°45'56.9623"W	5544.22	328.482	0.31	0.30	-0.09	
12609.00	89.970	342.640	6969.66	5502.98	4816.74	-2927.47	1706387.02	14367066.98	39°33'47.3659"N	80°45'57.3317"W	5636.59	328.710	1.13	-0.26	1.09	
12703.00	90.000	342.000	6969.68	5596.96	4906.30	-2956.02	1706358.48	14367156.51	39°33'48.2518"N	80°45'57.6932"W	5727.99	328.931	0.68	0.03	-0.68	
12797.00	90.060	342.210	6969.63	5690.95	4995.76	-2984.90	1706329.61	14367245.93	39°33'49.1366"N	80°45'58.0590"W	5819.55	329.142	0.23	0.06	0.22	
12892.00	90.400	341.520	6969.25	5785.94	5086.04	-3014.47	1706300.06	14367336.17	39°33'50.0296"N	80°45'58.4336"W	5912.26	329.345	0.81	0.36	-0.73	
12987.00	90.550	342.070	6968.46	5880.93	5176.28	-3044.15	1706270.39	14367426.37	39°33'50.9223"N	80°45'58.8095"W	6005.06	329.540	0.60	0.16	0.58	
13081.00	90.120	341.500	6967.91	5974.93	5265.57	-3073.53	1706241.02	14367515.63	39°33'51.8055"N	80°45'59.1817"W	6096.95	329.728	0.76	-0.46	-0.61	
13176.00	89.780	339.530	6968.00	6069.91	5355.12	-3105.22	1706209.34	14367605.15	39°33'52.6914"N	80°45'59.5834"W	6190.29	329.892	2.10	-0.36	-2.07	
13270.00	90.000	340.070	6968.18	6163.88	5443.34	-3137.68	1706176.90	14367693.33	39°33'53.5641"N	80°45'59.9949"W	6282.91	330.040	0.62	0.23	0.57	
13365.00	90.030	340.730	6968.15	6258.87	5532.83	-3169.54	1706145.04	14367782.79	39°33'54.4494"N	80°46'0.3988"W	6376.38	330.193	0.70	0.03	0.69	
13554.00	90.090	340.540	6967.95	6447.86	5711.14	-3232.21	1706082.40	14367961.02	39°33'56.2132"N	80°46'1.1931"W	6562.34	330.492	0.11	0.03	-0.10	
13649.00	90.180	340.200	6967.73	6542.85	5800.62	-3264.13	1706050.50	14368050.47	39°33'57.0984"N	80°46'1.5977"W	6655.95	330.633	0.37	0.09	-0.36	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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]	
13744.00	90.740	342.770	6966.97	6637.84	5890.69	-3294.29	1706020.35	14368140.50	39°33'57.9894"N	80°46'1.9799"W	6749.27	330.784	2.77	0.59	2.71	
13838.00	89.850	341.180	6966.48	6731.83	5980.07	-3323.38	1705991.27	14368229.85	39°33'58.8735"N	80°46'2.3483"W	6841.50	330.937	1.94	-0.95	-1.69	
13933.00	90.220	341.250	6966.43	6826.83	6070.01	-3353.97	1705960.69	14368319.75	39°33'59.7632"N	80°46'2.7359"W	6934.99	331.077	0.40	0.39	0.07	
14028.00	89.880	339.250	6966.34	6921.81	6159.42	-3386.07	1705928.60	14368409.13	39°34'0.6476"N	80°46'3.1429"W	7028.79	331.201	2.14	-0.36	-2.11	
14122.00	90.550	342.540	6965.99	7015.79	6248.23	-3416.83	1705897.86	14368497.90	39°34'1.5261"N	80°46'3.5327"W	7121.45	331.328	3.57	0.71	3.50	
14217.00	89.690	341.340	6965.79	7110.78	6338.54	-3446.28	1705868.42	14368588.18	39°34'2.4195"N	80°46'3.9058"W	7214.85	331.467	1.55	-0.91	-1.26	
14312.00	89.850	340.530	6966.17	7205.78	6428.33	-3477.31	1705837.40	14368677.93	39°34'3.3077"N	80°46'4.2991"W	7308.57	331.589	0.87	0.17	-0.85	
14406.00	90.400	340.750	6965.97	7299.78	6517.02	-3508.47	1705806.25	14368766.58	39°34'4.1849"N	80°46'4.6941"W	7401.41	331.704	0.63	0.59	0.23	
14501.00	90.340	341.870	6965.35	7394.77	6607.00	-3538.91	1705775.82	14368856.53	39°34'5.0751"N	80°46'5.0798"W	7495.09	331.825	1.18	-0.06	1.18	
14595.00	90.180	341.860	6964.93	7488.76	6696.33	-3568.17	1705746.57	14368945.83	39°34'5.9587"N	80°46'5.4505"W	7587.67	331.949	0.17	-0.17	-0.01	
14690.00	90.310	341.800	6964.52	7583.76	6786.59	-3597.80	1705716.96	14369036.05	39°34'6.8515"N	80°46'5.8258"W	7681.28	332.070	0.15	0.14	-0.06	
14785.00	90.340	341.580	6963.98	7678.75	6876.78	-3627.64	1705687.13	14369126.21	39°34'7.7436"N	80°46'6.2039"W	7774.95	332.187	0.23	0.03	-0.23	
14880.00	90.430	341.630	6963.34	7773.75	6966.93	-3657.62	1705657.16	14369216.31	39°34'8.6353"N	80°46'6.5837"W	7868.69	332.301	0.11	0.09	0.05	
14974.00	90.370	341.730	6962.69	7867.74	7056.16	-3687.16	1705627.63	14369305.51	39°34'9.5180"N	80°46'6.9581"W	7961.44	332.411	0.12	-0.06	0.11	
15069.00	90.400	342.080	6962.05	7962.73	7146.46	-3716.67	1705598.13	14369395.78	39°34'10.4112"N	80°46'7.3319"W	8055.15	332.522	0.37	0.03	0.37	
15164.00	90.310	341.790	6961.46	8057.72	7236.78	-3746.13	1705568.69	14369486.06	39°34'11.3045"N	80°46'7.7051"W	8148.89	332.632	0.32	-0.09	-0.31	
15258.00	90.340	342.120	6960.93	8151.71	7326.15	-3775.24	1705539.58	14369575.39	39°34'12.1886"N	80°46'8.0740"W	8241.66	332.737	0.35	0.03	0.35	
15353.00	90.060	342.740	6960.60	8246.69	7416.72	-3803.92	1705510.92	14369665.93	39°34'13.0844"N	80°46'8.4372"W	8335.32	332.847	0.72	-0.29	0.65	
15448.00	89.970	341.460	6960.57	8341.68	7507.12	-3833.12	1705481.73	14369756.29	39°34'13.9786"N	80°46'8.8071"W	8429.09	332.951	1.35	-0.09	-1.35	
15542.00	89.970	341.820	6960.62	8435.68	7596.33	-3862.73	1705452.13	14369845.47	39°34'14.8611"N	80°46'9.1823"W	8522.03	333.047	0.38	0.00	0.38	
15637.00	89.880	342.170	6960.74	8530.67	7686.68	-3892.09	1705422.78	14369935.78	39°34'15.7547"N	80°46'9.5543"W	8615.88	333.145	0.38	-0.09	0.37	
15731.00	90.000	341.220	6960.84	8624.66	7775.92	-3921.62	1705393.27	14370024.99	39°34'16.6375"N	80°46'9.9284"W	8708.85	333.237	1.02	0.13	-1.01	
15826.00	89.600	340.790	6961.17	8719.66	7865.75	-3952.54	1705362.36	14370114.78	39°34'17.5260"N	80°46'10.3203"W	8802.98	333.320	0.62	-0.42	-0.45	
15920.00	89.750	340.460	6961.71	8813.65	7954.42	-3983.72	1705331.19	14370203.42	39°34'18.4032"N	80°46'10.7156"W	8896.23	333.397	0.39	0.16	-0.35	
16015.00	90.000	340.700	6961.91	8908.65	8044.02	-4015.31	1705299.61	14370292.98	39°34'19.2895"N	80°46'11.1160"W	8990.49	333.473	0.36	0.26	0.25	
16110.00	90.120	340.980	6961.82	9003.65	8133.75	-4046.49	1705268.45	14370382.68	39°34'20.1772"N	80°46'11.5112"W	9084.71	333.550	0.32	0.13	0.29	
16205.00	91.020	340.870	6960.87	9098.64	8223.53	-4077.53	1705237.42	14370472.42	39°34'21.0653"N	80°46'11.9047"W	9178.93	333.626	0.95	0.95	-0.12	
16299.00	90.950	340.810	6959.25	9192.62	8312.31	-4108.38	1705206.58	14370561.17	39°34'21.9435"N	80°46'12.2958"W	9272.18	333.699	0.10	-0.07	-0.06	
16394.00	91.050	341.080	6957.60	9287.61	8402.09	-4139.39	1705175.58	14370650.91	39°34'22.8316"N	80°46'12.6888"W	9366.41	333.772	0.30	0.11	0.28	
16489.00	90.710	340.330	6956.14	9382.59	8491.75	-4170.78	1705144.21	14370740.53	39°34'23.7184"N	80°46'13.0867"W	9460.71	333.842	0.87	-0.36	-0.79	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

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
16584.00	90.950	340.540	6954.76	9477.57	8581.25	-4202.59	1705112.41	14370830.00	39°34'24.6038"N	80°46'13.4900"W	9555.08	333.907	0.34	0.25	0.22	
16678.00	90.220	340.880	6953.80	9571.56	8669.97	-4233.64	1705081.37	14370918.68	39°34'25.4814"N	80°46'13.8837"W	9648.42	333.973	0.86	-0.78	0.36	
16773.00	90.220	341.060	6953.44	9666.56	8759.78	-4264.61	1705050.41	14371008.45	39°34'26.3698"N	80°46'14.2763"W	9742.72	334.041	0.19	0.00	0.19	
16868.00	90.340	342.000	6952.97	9761.56	8849.88	-4294.71	1705020.32	14371098.52	39°34'27.2611"N	80°46'14.6577"W	9836.92	334.113	1.00	0.13	0.99	
16962.00	90.280	340.430	6952.46	9855.55	8938.87	-4324.98	1704990.07	14371187.47	39°34'28.1413"N	80°46'15.0413"W	9930.20	334.180	1.67	-0.06	-1.67	
17057.00	90.460	341.320	6951.85	9950.55	9028.62	-4356.10	1704958.96	14371277.19	39°34'29.0292"N	80°46'15.4359"W	10024.55	334.244	0.96	0.19	0.94	
17152.00	90.400	342.030	6951.14	10045.54	9118.80	-4385.97	1704929.10	14371367.34	39°34'29.9212"N	80°46'15.8144"W	10118.76	334.313	0.75	-0.06	0.75	
17246.00	89.110	340.420	6951.54	10139.54	9207.80	-4416.22	1704898.86	14371456.29	39°34'30.8015"N	80°46'16.1978"W	10212.08	334.377	2.19	-1.37	-1.71	
17341.00	89.940	341.560	6952.33	10234.53	9297.61	-4447.16	1704867.93	14371546.07	39°34'31.6899"N	80°46'16.5901"W	10306.44	334.438	1.48	0.87	1.20	
17436.00	89.970	340.570	6952.40	10329.53	9387.47	-4477.99	1704837.12	14371635.89	39°34'32.5788"N	80°46'16.9808"W	10400.81	334.498	1.04	0.03	-1.04	
17531.00	89.820	340.730	6952.58	10424.52	9477.10	-4509.47	1704805.65	14371725.49	39°34'33.4654"N	80°46'17.3799"W	10495.27	334.554	0.23	-0.16	0.17	
17625.00	89.940	341.410	6952.77	10518.52	9566.02	-4539.96	1704775.17	14371814.37	39°34'34.3449"N	80°46'17.7664"W	10588.67	334.611	0.73	0.13	0.72	
17720.00	89.880	340.590	6952.92	10613.52	9655.84	-4570.89	1704744.25	14371904.16	39°34'35.2335"N	80°46'18.1585"W	10683.08	334.668	0.87	-0.06	-0.86	
17815.00	89.750	340.630	6953.23	10708.52	9745.45	-4602.43	1704712.73	14371993.74	39°34'36.1199"N	80°46'18.5584"W	10777.58	334.720	0.14	-0.14	0.04	
17909.00	90.340	340.810	6953.15	10802.51	9834.18	-4633.47	1704681.70	14372082.43	39°34'36.9976"N	80°46'18.9519"W	10871.07	334.772	0.66	0.63	0.19	
18004.00	89.910	340.920	6952.95	10897.51	9923.93	-4664.61	1704650.57	14372172.14	39°34'37.8854"N	80°46'19.3467"W	10965.53	334.825	0.47	-0.45	0.12	
18098.00	90.280	340.170	6952.79	10991.50	10012.56	-4695.92	1704619.28	14372260.74	39°34'38.7622"N	80°46'19.7436"W	11059.07	334.873	0.89	0.39	-0.80	
18193.00	90.520	341.410	6952.13	11086.50	10102.27	-4727.17	1704588.03	14372350.41	39°34'39.6495"N	80°46'20.1399"W	11153.56	334.924	1.33	0.25	1.31	
18288.00	89.750	341.120	6951.90	11181.49	10192.23	-4757.68	1704557.53	14372440.34	39°34'40.5394"N	80°46'20.5267"W	11247.98	334.977	0.87	-0.81	-0.31	
18382.00	89.880	340.540	6952.21	11275.49	10281.02	-4788.55	1704526.68	14372529.09	39°34'41.4177"N	80°46'20.9180"W	11341.50	335.025	0.63	0.14	-0.62	
18477.00	89.850	340.480	6952.43	11370.48	10370.58	-4820.25	1704494.99	14372618.61	39°34'42.3036"N	80°46'21.3199"W	11436.07	335.071	0.07	-0.03	-0.06	
18571.00	90.430	340.820	6952.20	11464.48	10459.26	-4851.39	1704463.86	14372707.27	39°34'43.1809"N	80°46'21.7148"W	11529.62	335.116	0.72	0.62	0.36	
18666.00	90.250	340.830	6951.64	11559.48	10548.99	-4882.60	1704432.67	14372796.96	39°34'44.0685"N	80°46'22.1104"W	11624.15	335.163	0.19	-0.19	0.01	
18761.00	90.430	341.110	6951.07	11654.47	10638.80	-4913.57	1704401.71	14372886.73	39°34'44.9568"N	80°46'22.5031"W	11718.67	335.210	0.35	0.19	0.29	
18843.00	90.310	341.350	6950.54	11736.47	10716.44	-4939.96	1704375.33	14372964.34	39°34'45.7248"N	80°46'22.8375"W	11800.22	335.252	0.33	-0.15	0.29	
18868.00	90.310	341.350	6950.41	11761.47	10740.12	-4947.95	1704367.34	14372988.01	39°34'45.9591"N	80°46'22.9389"W	11825.08	335.265	0.00	0.00	0.00	Projected MD at TD: 18868'



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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

HOLE & CASING SECTIONS - Ref Wellbore: Busch Unit 2H AWB Ref Wellpath: Busch Unit 2H AWP Proj: 18868'									
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	-0.03	0.20
17.5in Open Hole	130.00	491.00	361.00	130.00	491.00	-0.03	0.20	0.49	1.23
13.375in Casing Surface	30.00	468.00	438.00	30.00	468.00	0.00	0.00	0.42	1.08
12.25in Open Hole	491.00	2651.00	2160.00	491.00	2627.70	0.49	1.23	-166.32	-215.71
9.625in Casing Intermediate	30.00	2621.00	2591.00	30.00	2598.21	0.00	0.00	-162.27	-211.96
8.75in Open Hole	2651.00	6697.00	4046.00	2627.70	6578.14	-166.32	-215.71	-564.13	-897.89
8.5in Open Hole	6697.00	18868.00	12171.00	6578.14	6950.41	-564.13	-897.89	10740.12	-4947.95
5.5in Casing Production	30.00	18848.00	18818.00	30.00	6950.52	0.00	0.00	10721.17	-4941.55



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Busch Unit 2H AWP Proj: 18868'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Busch Unit 2H POE Rev-2	6934.00	-218.47	-1128.78	1708185.00	14362033.77	39°32'57.5549"N	80°45'34.5373"W	point
Busch Unit 2H POE Plat	6936.00	-242.32	-1197.33	1708116.47	14362009.93	39°32'57.3210"N	80°45'35.4133"W	point
Busch Unit 2H AZI Rev-2	6964.00	289.46	-1378.59	1707935.28	14362541.50	39°33'2.5814"N	80°45'37.7091"W	point
Busch Unit 2H BHL Rev-2	6964.00	10757.78	-4940.96	1704374.33	14373005.66	39°34'46.1334"N	80°46'22.8490"W	point
Busch Unit 2H LP Rev-2	6964.00	-40.22	-1230.26	1708083.55	14362211.95	39°32'59.3192"N	80°45'35.8267"W	point
Busch Unit 2H 50' L/R Hard Line	7252.00	5520.71	-3158.79	1706155.79	14367770.67	39°33'54.3293"N	80°46'0.2619"W	rectangle
	2D Rectangle 11064 x 100.							

WELLPATH COMPOSITION - Ref Wellbore: Busch Unit 2H AWB Ref Wellpath: Busch Unit 2H AWP Proj: 18868'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
30.00	388.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-388')	Busch Unit 2H AWB	22/Jul/2021	
388.00	2565.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (388')(509'-2565')	Busch Unit 2H AWB	22/Jul/2021	
2565.00	6633.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (2565')(2656'-6633')	Busch Unit 2H AWB	13/Sep/2021	
6633.00	18868.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6633')(6741'-18843')	Busch Unit 2H AWB	13/Sep/2021	



Actual Wellpath Report

Busch Unit 2H AWP Proj: 18868'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Busch Unit 2H
Field	Wetzel	API	47-103-03405-0000
Facility	Gadd Pad	Wellbore	Busch Unit 2H AWB
Slot	Slot #08		

COMMENTS

Wellpath general comments

API: 47-103-03405-0000

BH Job #: 110972235

Rig: H&P 519

Duration: 9/15/21-9/19/21

Gyrodata MS Gyro <17-1/2"> (100'-388')

APS EM <12-1/4"> (388')(509'-2565')

APS EM <8-3/4"> (2565')(2656'-6633')

BH AT Curve <8-1/2"> (6633')(6741'-18843')

Sycamore: 6727' MD

Middlesex: 6884' MD

Burkett: 7027' MD

Tully: 7085' MD

Marcellus POE: 7254' MD

Projected MD at TD: 18868'