

ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV Slot: Slot #06
 Field: Ritchie Well: Buffalo Unit 2H
 Facility: Bison Pad Wellbore: Buffalo Unit 2H PWB



Plot reference wellpath is Buffalo Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US Feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1250.5 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #06): -1220.5 feet	Created by: delaset on 2018-10-24
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn

Location Information

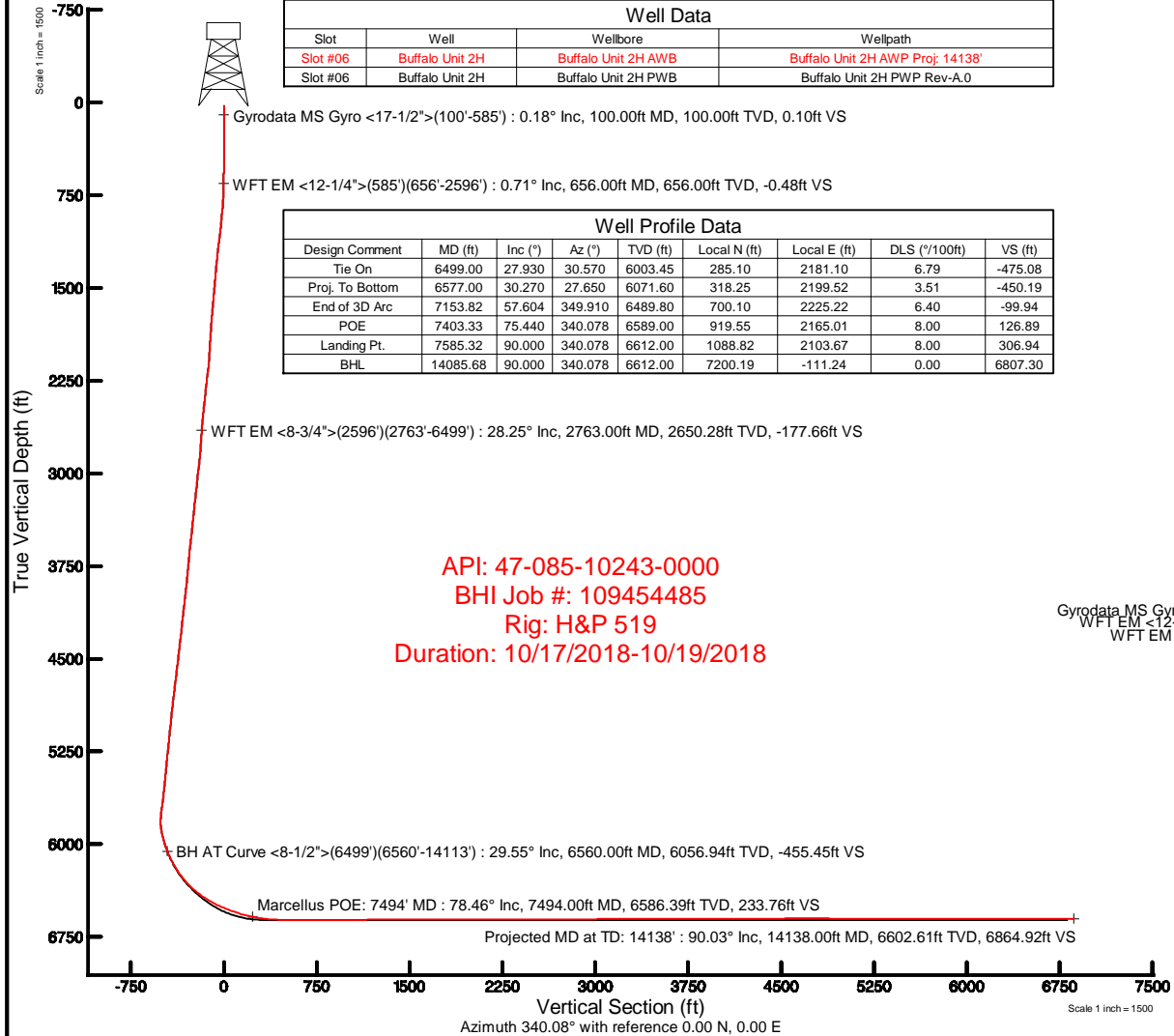
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Bison Pad		1668323.988	14269435.805	39°17'42.740"N	80°54'04.890"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #06	-0.02	-20.44	1668303.555	14269435.783	39°17'42.740"N	80°54'05.150"W
H&P 519 (RKB) to Ground level (At Slot: Slot #06)				30ft		
Mean Sea Level to Ground level (At Slot: Slot #06)				-1220.5ft		
H&P 519 (RKB) to Mean Sea Level				1250.5ft		

Well Data

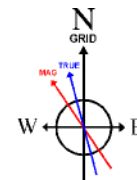
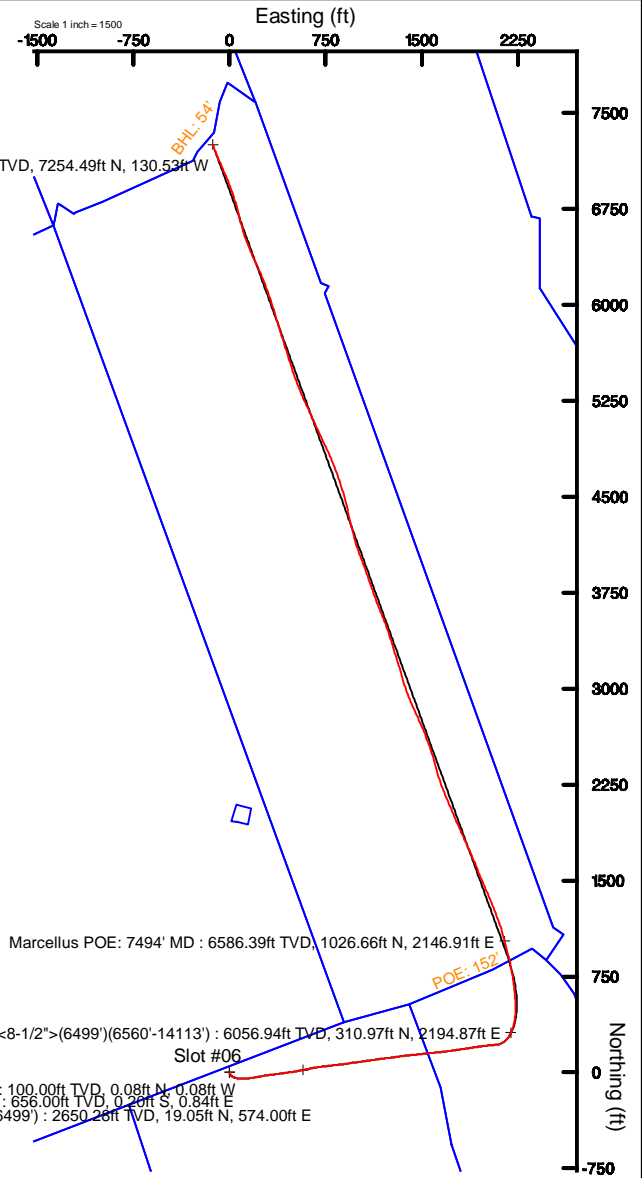
Slot	Well	Wellbore	Wellpath
Slot #06	Buffalo Unit 2H	Buffalo Unit 2H AWB	Buffalo Unit 2H AWP Proj: 14138'
Slot #06	Buffalo Unit 2H	Buffalo Unit 2H PWB	Buffalo Unit 2H PWP Rev-A.0

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6499.00	27.930	30.570	6003.45	285.10	2181.10	6.79	-475.08
Proj. To Bottom	6577.00	30.270	27.650	6071.60	318.25	2199.52	3.51	-450.19
End of 3D Arc	7153.82	57.604	349.910	6489.80	700.10	2225.22	6.40	-99.94
POE	7403.33	75.440	340.078	6589.00	919.55	2165.01	8.00	126.89
Landing Pt.	7585.32	90.000	340.078	6612.00	1088.82	2103.67	8.00	306.94
BHL	14085.68	90.000	340.078	6612.00	7200.19	-111.24	0.00	6807.30



Projected MD at TD: 14138' : 6602.61ft TVD, 7254.49ft N, 130.53ft W



User specified (HDMG) Dip: 66.41° Field: 51833 nT
 Magnetic North is 7.67 degrees West of True North (at 16/Oct/2018)
 Grid North is 0.06 degrees East of True North
 To correct azimuth from True to Grid subtract 0.06 degrees
 To correct azimuth from Magnetic to Grid subtract 7.73 degrees



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	23/Oct/2018 at 17:05
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Buffalo_Unit_2H_AWP_Proj_14138_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.02	-20.44	1668303.56	14269435.78	39°17'42.740"N	80°54'05.150"W
Facility Reference Pt			1668323.99	14269435.81	39°17'42.740"N	80°54'04.890"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	30.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1250.50ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #06)	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	340.08°



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

WELLPATH DATA (187 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	313.530	0.00	0.00	0.00	0.00	1668303.56	14269435.78	39°17'42.740"N	80°54'05.150"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	313.530	30.00	0.00	0.00	0.00	1668303.56	14269435.78	39°17'42.740"N	80°54'05.150"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.180	313.530	100.00	0.10	0.08	-0.08	1668303.48	14269435.86	39°17'42.741"N	80°54'05.151"W	0.11	313.530	0.26	0.26	-66.39	Gyrodata MS Gyro <17-1/2">(100'-585')
125.00	0.060	320.900	125.00	0.15	0.11	-0.12	1668303.44	14269435.90	39°17'42.741"N	80°54'05.151"W	0.16	314.123	0.48	-0.48	29.48	
150.00	0.030	216.780	150.00	0.15	0.12	-0.13	1668303.43	14269435.90	39°17'42.741"N	80°54'05.152"W	0.17	312.498	0.29	-0.12	-416.48	
175.00	0.020	317.970	175.00	0.16	0.12	-0.14	1668303.42	14269435.90	39°17'42.741"N	80°54'05.152"W	0.18	310.538	0.16	-0.04	404.76	
200.00	0.070	282.200	200.00	0.17	0.12	-0.15	1668303.40	14269435.91	39°17'42.741"N	80°54'05.152"W	0.20	308.585	0.22	0.20	-143.08	
225.00	0.020	347.800	225.00	0.18	0.13	-0.17	1668303.39	14269435.91	39°17'42.741"N	80°54'05.152"W	0.21	307.502	0.26	-0.20	262.40	
250.00	0.100	290.240	250.00	0.20	0.14	-0.19	1668303.36	14269435.92	39°17'42.741"N	80°54'05.152"W	0.24	306.621	0.36	0.32	-230.24	
275.00	0.110	310.560	275.00	0.23	0.16	-0.23	1668303.33	14269435.95	39°17'42.742"N	80°54'05.153"W	0.28	305.707	0.15	0.04	81.28	
300.00	0.110	351.070	300.00	0.28	0.20	-0.25	1668303.30	14269435.99	39°17'42.742"N	80°54'05.153"W	0.32	309.091	0.30	0.00	162.04	
325.00	0.110	325.350	325.00	0.32	0.25	-0.27	1668303.29	14269436.03	39°17'42.742"N	80°54'05.153"W	0.37	312.665	0.20	0.00	-102.88	
350.00	0.130	103.660	350.00	0.33	0.26	-0.25	1668303.30	14269436.04	39°17'42.743"N	80°54'05.153"W	0.36	315.658	0.90	0.08	553.24	
375.00	0.120	109.110	375.00	0.30	0.25	-0.20	1668303.35	14269436.03	39°17'42.742"N	80°54'05.153"W	0.32	320.480	0.06	-0.04	21.80	
400.00	0.030	80.750	400.00	0.28	0.24	-0.17	1668303.38	14269436.02	39°17'42.742"N	80°54'05.152"W	0.29	324.253	0.38	-0.36	-113.44	
425.00	0.110	114.370	425.00	0.26	0.23	-0.14	1668303.41	14269436.01	39°17'42.742"N	80°54'05.152"W	0.27	328.038	0.35	0.32	134.48	
450.00	0.150	106.420	450.00	0.23	0.21	-0.09	1668303.47	14269435.99	39°17'42.742"N	80°54'05.151"W	0.23	336.873	0.18	0.16	-31.80	
475.00	0.130	120.830	475.00	0.19	0.19	-0.03	1668303.52	14269435.97	39°17'42.742"N	80°54'05.150"W	0.19	349.684	0.16	-0.08	57.64	
500.00	0.180	104.780	500.00	0.14	0.16	0.03	1668303.58	14269435.94	39°17'42.742"N	80°54'05.150"W	0.16	10.000	0.26	0.20	-64.20	
525.00	0.260	100.740	525.00	0.09	0.14	0.12	1668303.68	14269435.92	39°17'42.741"N	80°54'05.148"W	0.19	40.935	0.33	0.32	-16.16	
550.00	0.210	123.000	550.00	0.03	0.11	0.22	1668303.77	14269435.89	39°17'42.741"N	80°54'05.147"W	0.24	64.036	0.41	-0.20	89.04	
575.00	0.210	109.290	575.00	-0.04	0.07	0.30	1668303.85	14269435.85	39°17'42.741"N	80°54'05.146"W	0.31	77.649	0.20	0.00	-54.84	
585.00	0.210	104.790	585.00	-0.06	0.05	0.33	1668303.89	14269435.84	39°17'42.741"N	80°54'05.146"W	0.34	80.702	0.16	0.00	-45.00	
656.00	0.710	120.510	656.00	-0.48	-0.20	0.84	1668304.39	14269435.58	39°17'42.738"N	80°54'05.139"W	0.86	103.558	0.72	0.70	22.14	WFT EM <12-1/4">(585')(656'-2596')
746.00	2.620	161.570	745.96	-2.96	-2.44	1.97	1668305.52	14269433.35	39°17'42.716"N	80°54'05.125"W	3.13	141.067	2.37	2.12	45.62	
837.00	4.780	167.030	836.76	-8.81	-8.11	3.48	1668307.03	14269427.68	39°17'42.660"N	80°54'05.106"W	8.82	156.780	2.40	2.37	6.00	
931.00	5.390	150.150	930.40	-17.04	-15.75	6.55	1668310.11	14269420.04	39°17'42.584"N	80°54'05.067"W	17.06	157.409	1.71	0.65	-17.96	
1025.00	7.000	135.070	1023.85	-26.58	-23.64	12.80	1668316.35	14269412.16	39°17'42.506"N	80°54'04.988"W	26.88	151.568	2.42	1.71	-16.04	
1120.00	8.150	127.050	1118.02	-37.48	-31.79	22.26	1668325.81	14269404.00	39°17'42.426"N	80°54'04.867"W	38.81	145.001	1.64	1.21	-8.44	
1214.00	9.430	115.130	1210.92	-48.51	-39.08	34.55	1668338.09	14269396.72	39°17'42.353"N	80°54'04.711"W	52.16	138.518	2.36	1.36	-12.68	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

WELLPATH DATA (187 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
1309.00	10.320	101.180	1304.53	-58.42	-44.03	49.95	1668353.48	14269391.77	39°17'42.304"N	80°54'04.515"W	66.59	131.400	2.68	0.94	-14.68	
1403.00	11.190	96.950	1396.88	-66.89	-46.77	67.26	1668370.79	14269389.03	39°17'42.277"N	80°54'04.295"W	81.93	124.813	1.25	0.93	-4.50	
1498.00	12.120	91.190	1489.92	-74.65	-48.09	86.39	1668389.91	14269387.71	39°17'42.264"N	80°54'04.052"W	98.87	119.106	1.57	0.98	-6.06	
1593.00	15.420	89.060	1582.18	-82.35	-48.09	108.99	1668412.50	14269387.71	39°17'42.263"N	80°54'03.764"W	119.13	113.810	3.51	3.47	-2.24	
1687.00	17.300	87.380	1672.37	-90.57	-47.25	135.45	1668438.95	14269388.55	39°17'42.272"N	80°54'03.428"W	143.45	109.230	2.06	2.00	-1.79	
1782.00	18.870	82.280	1762.68	-98.02	-44.54	164.79	1668468.28	14269391.26	39°17'42.298"N	80°54'03.055"W	170.70	105.125	2.35	1.65	-5.37	
1876.00	20.520	80.570	1851.18	-104.23	-39.80	196.11	1668499.58	14269396.00	39°17'42.345"N	80°54'02.656"W	200.10	101.472	1.86	1.76	-1.82	
1971.00	21.740	79.260	1939.79	-110.07	-33.79	229.82	1668533.28	14269402.01	39°17'42.404"N	80°54'02.227"W	232.29	98.365	1.38	1.28	-1.38	
2065.00	22.220	78.510	2026.96	-115.45	-27.01	264.34	1668567.79	14269408.79	39°17'42.470"N	80°54'01.788"W	265.72	95.833	0.59	0.51	-0.80	
2159.00	23.320	82.080	2113.63	-121.93	-20.90	300.19	1668603.62	14269414.89	39°17'42.530"N	80°54'01.332"W	300.92	93.983	1.88	1.17	3.80	
2254.00	27.040	84.570	2199.59	-131.24	-16.27	340.33	1668643.74	14269419.52	39°17'42.576"N	80°54'00.821"W	340.71	92.736	4.07	3.92	2.62	
2348.00	26.330	82.270	2283.58	-140.99	-11.44	382.25	1668685.66	14269424.35	39°17'42.623"N	80°54'00.288"W	382.43	91.714	1.33	-0.76	-2.45	
2443.00	26.910	81.330	2368.51	-149.64	-5.37	424.38	1668727.77	14269430.42	39°17'42.682"N	80°53'59.752"W	424.42	90.724	0.75	0.61	-0.99	
2537.00	28.350	82.780	2451.79	-158.69	0.65	467.56	1668770.92	14269436.43	39°17'42.741"N	80°53'59.203"W	467.56	89.921	1.69	1.53	1.54	
2596.00	28.870	81.480	2503.59	-164.59	4.52	495.54	1668798.90	14269440.30	39°17'42.779"N	80°53'58.847"W	495.56	89.478	1.37	0.88	-2.20	
2763.00	28.250	77.500	2650.28	-177.66	19.05	574.00	1668877.33	14269454.82	39°17'42.922"N	80°53'57.849"W	574.32	88.100	1.20	-0.37	-2.38	WFT EM <8-3/4">(2596')(2763'-6499')
2857.00	25.420	78.200	2734.15	-183.38	27.99	615.48	1668918.79	14269463.76	39°17'43.010"N	80°53'57.321"W	616.12	87.396	3.03	-3.01	0.74	
2952.00	24.470	80.250	2820.29	-189.74	35.49	654.83	1668958.12	14269471.26	39°17'43.084"N	80°53'56.820"W	655.79	86.898	1.35	-1.00	2.16	
3046.00	25.380	81.520	2905.53	-197.17	41.76	693.94	1668997.22	14269477.52	39°17'43.145"N	80°53'56.323"W	695.20	86.556	1.12	0.97	1.35	
3145.00	26.730	84.790	2994.47	-207.04	46.91	737.11	1669040.37	14269482.67	39°17'43.196"N	80°53'55.774"W	738.60	86.359	1.99	1.36	3.30	
3239.00	25.360	82.410	3078.93	-216.70	51.49	778.12	1669081.36	14269487.25	39°17'43.240"N	80°53'55.252"W	779.82	86.214	1.83	-1.46	-2.53	
3334.00	25.960	83.710	3164.56	-225.95	56.45	818.95	1669122.18	14269492.21	39°17'43.289"N	80°53'54.733"W	820.89	86.057	0.87	0.63	1.37	
3428.00	26.060	83.190	3249.04	-235.48	61.16	859.90	1669163.11	14269496.91	39°17'43.335"N	80°53'54.212"W	862.07	85.932	0.26	0.11	-0.55	
3523.00	26.270	81.730	3334.31	-244.46	66.65	901.43	1669204.62	14269502.41	39°17'43.389"N	80°53'53.683"W	903.89	85.771	0.71	0.22	-1.54	
3617.00	26.510	81.460	3418.51	-252.80	72.76	942.76	1669245.94	14269508.52	39°17'43.449"N	80°53'53.158"W	945.56	85.587	0.29	0.26	-0.29	
3712.00	26.460	83.560	3503.54	-261.91	78.28	984.76	1669287.92	14269514.04	39°17'43.503"N	80°53'52.623"W	987.87	85.455	0.99	-0.05	2.21	
3806.00	26.720	81.840	3587.60	-271.10	83.63	1026.49	1669329.63	14269519.38	39°17'43.555"N	80°53'52.092"W	1029.89	85.342	0.86	0.28	-1.83	
3901.00	25.490	80.390	3672.91	-279.12	90.08	1067.79	1669370.91	14269525.82	39°17'43.619"N	80°53'51.567"W	1071.58	85.178	1.46	-1.29	-1.53	
3995.00	25.600	81.990	3757.72	-286.93	96.28	1107.84	1669410.95	14269532.03	39°17'43.679"N	80°53'51.057"W	1112.02	85.033	0.74	0.12	1.70	
4090.00	25.420	82.400	3843.46	-295.51	101.84	1148.37	1669451.47	14269537.58	39°17'43.734"N	80°53'50.542"W	1152.88	84.932	0.27	-0.19	0.43	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Ritchie County, WV		Well	Buffalo Unit 2H
Field	Ritchie		Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad			

WELLPATH DATA (187 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
4184.00	25.810	83.560	3928.22	-304.59	106.80	1188.71	1669491.78	14269542.54	39°17'43.783"N	80°53'50.029"W	1193.49	84.866	0.68	0.41	1.23	
4279.00	26.510	83.230	4013.49	-314.23	111.62	1230.31	1669533.37	14269547.36	39°17'43.830"N	80°53'49.499"W	1235.36	84.816	0.75	0.74	-0.35	
4373.00	26.950	82.530	4097.44	-323.60	116.87	1272.26	1669575.31	14269552.60	39°17'43.881"N	80°53'48.966"W	1277.62	84.752	0.58	0.47	-0.74	
4468.00	26.390	82.120	4182.34	-332.64	122.56	1314.52	1669617.55	14269558.29	39°17'43.937"N	80°53'48.428"W	1320.22	84.673	0.62	-0.59	-0.43	
4562.00	26.690	81.870	4266.43	-341.31	128.41	1356.11	1669659.13	14269564.14	39°17'43.994"N	80°53'47.899"W	1362.18	84.591	0.34	0.32	-0.27	
4657.00	26.990	84.590	4351.20	-351.07	133.46	1398.70	1669701.69	14269569.19	39°17'44.044"N	80°53'47.357"W	1405.05	84.550	1.33	0.32	2.86	
4751.00	26.520	83.630	4435.14	-361.34	137.80	1440.79	1669743.77	14269573.53	39°17'44.086"N	80°53'46.822"W	1447.36	84.537	0.68	-0.50	-1.02	
4846.00	25.340	83.450	4520.57	-371.01	142.47	1482.07	1669785.03	14269578.20	39°17'44.132"N	80°53'46.297"W	1488.90	84.509	1.24	-1.24	-0.19	
4940.00	25.550	84.610	4605.45	-380.74	146.67	1522.23	1669825.18	14269582.39	39°17'44.173"N	80°53'45.786"W	1529.28	84.496	0.58	0.22	1.23	
5034.00	26.810	84.170	4689.81	-390.99	150.73	1563.50	1669866.43	14269586.45	39°17'44.212"N	80°53'45.261"W	1570.75	84.494	1.36	1.34	-0.47	
5129.00	26.820	83.830	4774.59	-401.30	155.21	1606.13	1669909.04	14269590.93	39°17'44.256"N	80°53'44.719"W	1613.61	84.480	0.16	0.01	-0.36	
5223.00	25.170	84.030	4859.08	-411.16	159.56	1647.09	1669949.99	14269595.28	39°17'44.299"N	80°53'44.197"W	1654.80	84.467	1.76	-1.76	0.21	
5318.00	25.600	83.130	4944.91	-420.66	164.12	1687.56	1669990.44	14269599.84	39°17'44.343"N	80°53'43.683"W	1695.52	84.445	0.61	0.45	-0.95	
5412.00	25.750	82.000	5029.63	-429.47	169.39	1727.94	1670030.81	14269605.11	39°17'44.395"N	80°53'43.169"W	1736.23	84.401	0.54	0.16	-1.20	
5506.00	26.650	80.820	5113.97	-437.61	175.60	1768.98	1670071.82	14269611.31	39°17'44.456"N	80°53'42.647"W	1777.67	84.331	1.11	0.96	-1.26	
5601.00	26.530	83.080	5198.92	-446.36	181.55	1811.07	1670113.90	14269617.26	39°17'44.514"N	80°53'42.111"W	1820.15	84.275	1.07	-0.13	2.38	
5695.00	26.310	81.220	5283.11	-455.10	187.26	1852.50	1670155.31	14269622.97	39°17'44.570"N	80°53'41.584"W	1861.94	84.228	0.91	-0.23	-1.98	
5790.00	26.160	80.880	5368.32	-463.10	193.79	1893.99	1670196.78	14269629.50	39°17'44.634"N	80°53'41.057"W	1903.87	84.158	0.22	-0.16	-0.36	
5884.00	26.680	82.370	5452.51	-471.47	199.88	1935.36	1670238.14	14269635.58	39°17'44.694"N	80°53'40.530"W	1945.66	84.103	0.90	0.55	1.59	
5979.00	25.640	81.660	5537.77	-480.14	205.69	1976.84	1670279.60	14269641.39	39°17'44.751"N	80°53'40.003"W	1987.51	84.060	1.14	-1.09	-0.75	
6073.00	25.320	83.610	5622.63	-488.92	210.88	2016.94	1670319.68	14269646.58	39°17'44.802"N	80°53'39.492"W	2027.93	84.031	0.96	-0.34	2.07	
6168.00	27.320	86.710	5707.78	-499.92	214.39	2058.90	1670361.63	14269650.09	39°17'44.836"N	80°53'38.959"W	2070.03	84.055	2.55	2.11	3.26	
6215.00	27.230	83.900	5749.56	-505.57	216.16	2080.36	1670383.08	14269651.85	39°17'44.853"N	80°53'38.686"W	2091.56	84.068	2.75	-0.19	-5.98	
6262.00	26.890	76.500	5791.43	-509.33	219.78	2101.39	1670404.10	14269655.48	39°17'44.889"N	80°53'38.418"W	2112.85	84.029	7.20	-0.72	-15.74	
6309.00	26.470	64.460	5833.45	-509.49	226.78	2121.19	1670423.90	14269662.47	39°17'44.958"N	80°53'38.166"W	2133.28	83.898	11.52	-0.89	-25.62	
6357.00	26.060	53.790	5876.52	-505.48	237.63	2139.36	1670442.06	14269673.32	39°17'45.065"N	80°53'37.935"W	2152.52	83.662	9.86	-0.85	-22.23	
6404.00	26.230	45.200	5918.73	-498.22	251.05	2155.07	1670457.76	14269686.73	39°17'45.197"N	80°53'37.735"W	2169.64	83.355	8.06	0.36	-18.28	
6452.00	26.790	37.060	5961.69	-487.86	267.16	2169.12	1670471.80	14269702.84	39°17'45.356"N	80°53'37.556"W	2185.51	82.978	7.65	1.17	-16.96	
6499.00	27.930	30.570	6003.45	-475.08	285.10	2181.10	1670483.78	14269720.77	39°17'45.533"N	80°53'37.403"W	2199.66	82.553	6.79	2.43	-13.81	
6560.00	29.550	25.620	6056.94	-455.45	310.97	2194.87	1670497.55	14269746.63	39°17'45.789"N	80°53'37.228"W	2216.79	81.936	4.72	2.66	-8.11	BH AT Curve <8-1/2">(6499')(6560'-14113')



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

WELLPATH DATA (187 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
6603.00	30.400	22.180	6094.19	-439.95	330.60	2203.57	1670506.24	14269766.25	39°17'45.983"N	80°53'37.117"W	2228.23	81.467	4.46	1.98	-8.00	
6650.00	32.850	16.210	6134.22	-420.82	353.87	2211.62	1670514.29	14269789.51	39°17'46.213"N	80°53'37.014"W	2239.75	80.910	8.45	5.21	-12.70	
6698.00	35.170	12.460	6174.01	-398.63	379.87	2218.24	1670520.90	14269815.50	39°17'46.470"N	80°53'36.929"W	2250.53	80.282	6.51	4.83	-7.81	
6745.00	37.660	10.400	6211.83	-374.80	407.22	2223.75	1670526.41	14269842.84	39°17'46.740"N	80°53'36.859"W	2260.73	79.623	5.90	5.30	-4.38	
6792.00	39.750	6.770	6248.51	-348.97	436.27	2228.11	1670530.78	14269871.88	39°17'47.027"N	80°53'36.803"W	2270.42	78.922	6.56	4.45	-7.72	
6839.00	41.940	2.830	6284.07	-321.05	466.89	2230.66	1670533.32	14269902.48	39°17'47.330"N	80°53'36.770"W	2279.00	78.178	7.19	4.66	-8.38	
6887.00	44.470	359.540	6319.06	-290.40	499.73	2231.32	1670533.98	14269935.31	39°17'47.654"N	80°53'36.761"W	2286.59	77.376	7.06	5.27	-6.85	
6934.00	47.830	357.740	6351.61	-258.27	533.61	2230.50	1670533.16	14269969.17	39°17'47.989"N	80°53'36.771"W	2293.44	76.546	7.66	7.15	-3.83	
6982.00	51.370	356.100	6382.72	-223.29	570.10	2228.52	1670531.18	14270005.65	39°17'48.350"N	80°53'36.796"W	2300.29	75.650	7.82	7.38	-3.42	
7029.00	54.480	355.300	6411.05	-187.18	607.49	2225.71	1670528.37	14270043.03	39°17'48.719"N	80°53'36.831"W	2307.12	74.734	6.75	6.62	-1.70	
7034.00†	54.815	355.140	6413.94	-183.24	611.55	2225.37	1670528.03	14270047.09	39°17'48.759"N	80°53'36.835"W	2307.87	74.634	7.19	6.71	-3.19	Middlesex: 7034' MD
7076.00	57.640	353.850	6437.29	-149.43	646.30	2222.01	1670524.68	14270081.82	39°17'49.103"N	80°53'36.877"W	2314.09	73.782	7.19	6.73	-3.07	
7123.00	61.190	352.790	6461.20	-110.05	686.47	2217.30	1670519.96	14270121.98	39°17'49.500"N	80°53'36.937"W	2321.13	72.798	7.80	7.55	-2.26	
7171.00	63.630	351.940	6483.43	-68.48	728.63	2211.64	1670514.31	14270164.13	39°17'49.917"N	80°53'37.008"W	2328.58	71.765	5.32	5.08	-1.77	
7218.00	65.740	350.500	6503.53	-26.80	770.62	2205.15	1670507.83	14270206.09	39°17'50.332"N	80°53'37.090"W	2335.93	70.737	5.27	4.49	-3.06	
7265.00	68.300	348.860	6521.87	15.86	813.18	2197.40	1670500.07	14270248.64	39°17'50.753"N	80°53'37.188"W	2343.04	69.692	6.32	5.45	-3.49	
7277.00†	68.902	348.602	6526.25	26.90	824.14	2195.21	1670497.89	14270259.59	39°17'50.861"N	80°53'37.216"W	2344.82	69.423	5.40	5.02	-2.15	Burkett: 7277' MD
7312.00	70.660	347.860	6538.35	59.41	856.29	2188.51	1670491.19	14270291.73	39°17'51.179"N	80°53'37.300"W	2350.07	68.631	5.40	5.02	-2.12	
7360.00	72.850	346.980	6553.38	104.62	900.78	2178.58	1670481.27	14270336.20	39°17'51.619"N	80°53'37.426"W	2357.46	67.536	4.88	4.56	-1.83	
7379.00†	73.670	346.764	6558.85	122.69	918.50	2174.45	1670477.13	14270353.91	39°17'51.794"N	80°53'37.478"W	2360.48	67.101	4.45	4.32	-1.13	Tully: 7379' MD
7407.00	74.880	346.450	6566.44	149.47	944.72	2168.21	1670470.89	14270380.12	39°17'52.053"N	80°53'37.557"W	2365.08	66.457	4.45	4.32	-1.12	
7455.00	77.000	345.360	6578.10	195.79	989.87	2156.87	1670459.56	14270425.26	39°17'52.499"N	80°53'37.701"W	2373.17	65.348	4.94	4.42	-2.27	
7494.00†	78.460	344.347	6586.39	233.76	1026.66	2146.91	1670449.60	14270462.03	39°17'52.863"N	80°53'37.827"W	2379.76	64.443	4.52	3.74	-2.60	Marcellus POE: 7494' MD
7502.00	78.760	344.140	6587.97	241.58	1034.20	2144.78	1670447.48	14270469.57	39°17'52.938"N	80°53'37.854"W	2381.11	64.257	4.52	3.75	-2.58	
7549.00	79.730	343.710	6596.74	287.65	1078.57	2132.00	1670434.70	14270513.92	39°17'53.376"N	80°53'38.016"W	2389.29	63.165	2.25	2.06	-0.91	
7596.00	82.840	342.580	6603.86	334.04	1123.03	2118.53	1670421.23	14270558.36	39°17'53.816"N	80°53'38.187"W	2397.78	62.072	7.03	6.62	-2.40	
7644.00	85.720	341.190	6608.64	381.77	1168.42	2103.68	1670406.39	14270603.73	39°17'54.265"N	80°53'38.375"W	2406.38	60.952	6.66	6.00	-2.90	
7739.00	90.030	338.470	6612.16	476.67	1257.50	2070.95	1670373.67	14270692.78	39°17'55.146"N	80°53'38.790"W	2422.84	58.734	5.36	4.54	-2.86	
7833.00	89.940	337.830	6612.19	570.62	1344.74	2035.96	1670338.70	14270779.99	39°17'56.008"N	80°53'39.234"W	2439.98	56.555	0.69	-0.10	-0.68	
7928.00	89.910	335.690	6612.31	665.45	1432.03	1998.48	1670301.24	14270867.24	39°17'56.871"N	80°53'39.709"W	2458.58	54.376	2.25	-0.03	-2.25	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #06
Area	Ritchie County, WV		Well	Buffalo Unit 2H
Field	Ritchie		Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad			

WELLPATH DATA (187 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
8023.00	89.910	337.980	6612.46	760.29	1519.37	1961.11	1670263.88	14270954.54	39°17'57.735"N	80°53'40.183"W	2480.81	52.233	2.41	0.00	2.41	
8117.00	90.120	338.640	6612.44	854.25	1606.71	1926.37	1670229.15	14271041.85	39°17'58.599"N	80°53'40.624"W	2508.47	50.170	0.74	0.22	0.70	
8212.00	90.220	336.310	6612.16	949.14	1694.46	1889.98	1670192.78	14271129.56	39°17'59.466"N	80°53'41.085"W	2538.35	48.122	2.45	0.11	-2.45	
8306.00	90.220	335.440	6611.79	1042.89	1780.24	1851.56	1670154.37	14271215.31	39°18'00.315"N	80°53'41.573"W	2568.57	46.125	0.93	0.00	-0.93	
8401.00	90.220	335.430	6611.43	1137.58	1866.64	1812.07	1670114.90	14271301.68	39°18'01.169"N	80°53'42.074"W	2601.53	44.150	0.01	0.00	-0.01	
8496.00	90.180	337.210	6611.10	1232.37	1953.64	1773.92	1670076.76	14271388.64	39°18'02.030"N	80°53'42.558"W	2638.84	42.240	1.87	-0.04	1.87	
8590.00	90.150	336.920	6610.83	1326.24	2040.21	1737.28	1670040.14	14271475.18	39°18'02.886"N	80°53'43.023"W	2679.67	40.415	0.31	-0.03	-0.31	
8685.00	90.090	337.220	6610.63	1421.11	2127.70	1700.27	1670003.15	14271562.63	39°18'03.751"N	80°53'43.492"W	2723.61	38.629	0.32	-0.06	0.32	
8779.00	90.150	337.910	6610.43	1515.01	2214.59	1664.40	1669967.29	14271649.48	39°18'04.610"N	80°53'43.947"W	2770.31	36.927	0.74	0.06	0.73	
8874.00	90.150	343.910	6610.18	1609.96	2304.32	1633.34	1669936.24	14271739.18	39°18'05.497"N	80°53'44.341"W	2824.48	35.330	6.32	0.00	6.32	
8969.00	90.220	344.880	6609.88	1704.69	2395.82	1607.79	1669910.70	14271830.64	39°18'06.402"N	80°53'44.665"W	2885.30	33.865	1.02	0.07	1.02	
9063.00	90.310	341.830	6609.44	1798.52	2485.87	1580.87	1669883.79	14271920.65	39°18'07.292"N	80°53'45.006"W	2945.96	32.454	3.25	0.10	-3.24	
9158.00	90.090	340.470	6609.11	1893.50	2575.77	1550.17	1669853.11	14272010.52	39°18'08.181"N	80°53'45.395"W	3006.27	31.041	1.45	-0.23	-1.43	
9253.00	90.120	337.250	6608.94	1988.47	2664.37	1515.92	1669818.86	14272099.08	39°18'09.057"N	80°53'45.829"W	3065.43	29.638	3.39	0.03	-3.39	
9347.00	90.150	336.430	6608.71	2082.32	2750.79	1478.95	1669781.91	14272185.47	39°18'09.912"N	80°53'46.298"W	3123.16	28.264	0.87	0.03	-0.87	
9441.00	89.940	335.530	6608.64	2176.08	2836.65	1440.68	1669743.66	14272271.29	39°18'10.761"N	80°53'46.784"W	3181.53	26.925	0.98	-0.22	-0.96	
9536.00	90.000	337.400	6608.69	2270.88	2923.74	1402.75	1669705.74	14272358.35	39°18'11.622"N	80°53'47.265"W	3242.83	25.631	1.97	0.06	1.97	
9631.00	90.120	342.170	6608.59	2365.86	3012.86	1369.93	1669672.94	14272447.44	39°18'12.503"N	80°53'47.681"W	3309.69	24.451	5.02	0.13	5.02	
9725.00	90.030	344.290	6608.47	2459.71	3102.86	1342.81	1669645.83	14272537.40	39°18'13.393"N	80°53'48.025"W	3380.96	23.401	2.26	-0.10	2.26	
9820.00	90.340	343.060	6608.16	2554.52	3194.03	1316.11	1669619.14	14272628.53	39°18'14.294"N	80°53'48.363"W	3454.56	22.394	1.34	0.33	-1.29	
9914.00	90.370	342.470	6607.58	2648.41	3283.81	1288.26	1669591.30	14272718.27	39°18'15.182"N	80°53'48.716"W	3527.46	21.420	0.63	0.03	-0.63	
10009.00	90.280	342.820	6607.04	2743.32	3374.48	1259.92	1669562.97	14272808.91	39°18'16.078"N	80°53'49.076"W	3602.02	20.474	0.38	-0.09	0.37	
10103.00	90.090	341.210	6606.74	2837.26	3463.88	1230.90	1669533.96	14272898.28	39°18'16.962"N	80°53'49.443"W	3676.09	19.563	1.72	-0.20	-1.71	
10198.00	90.120	338.670	6606.56	2932.25	3553.11	1198.32	1669501.39	14272987.47	39°18'17.845"N	80°53'49.857"W	3749.74	18.637	2.67	0.03	-2.67	
10293.00	90.180	337.910	6606.31	3027.20	3641.37	1163.18	1669466.27	14273075.70	39°18'18.717"N	80°53'50.302"W	3822.64	17.715	0.80	0.06	-0.80	
10387.00	90.090	340.280	6606.09	3121.18	3729.18	1129.64	1669432.74	14273163.47	39°18'19.586"N	80°53'50.728"W	3896.52	16.853	2.52	-0.10	2.52	
10482.00	90.150	340.570	6605.89	3216.18	3818.69	1097.81	1669400.92	14273252.94	39°18'20.471"N	80°53'51.131"W	3973.36	16.039	0.31	0.06	0.31	
10576.00	90.090	340.930	6605.70	3310.17	3907.43	1066.82	1669369.95	14273341.65	39°18'21.348"N	80°53'51.524"W	4050.45	15.271	0.39	-0.06	0.38	
10671.00	90.060	340.060	6605.57	3405.17	3996.98	1035.10	1669338.24	14273431.16	39°18'22.234"N	80°53'51.927"W	4128.83	14.519	0.92	-0.03	-0.92	
10765.00	90.060	339.000	6605.47	3499.16	4085.04	1002.23	1669305.38	14273519.19	39°18'23.104"N	80°53'52.344"W	4206.19	13.785	1.13	0.00	-1.13	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

WELLPATH DATA (187 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
10860.00	90.220	344.840	6605.24	3594.07	4175.31	972.76	1669275.92	14273609.42	39°18'23.997"N	80°53'52.717"W	4287.13	13.115	6.15	0.17	6.15	
10955.00	90.030	347.440	6605.03	3688.53	4267.54	950.00	1669253.18	14273701.61	39°18'24.909"N	80°53'53.005"W	4372.00	12.550	2.74	-0.20	2.74	
11050.00	90.180	347.480	6604.86	3782.75	4360.27	929.38	1669232.56	14273794.31	39°18'25.825"N	80°53'53.266"W	4458.22	12.032	0.16	0.16	0.04	
11144.00	90.180	346.310	6604.56	3876.08	4451.82	908.06	1669211.25	14273885.82	39°18'26.731"N	80°53'53.536"W	4543.49	11.529	1.24	0.00	-1.24	
11239.00	90.250	343.100	6604.21	3970.76	4543.44	883.01	1669186.21	14273977.40	39°18'27.636"N	80°53'53.854"W	4628.45	10.998	3.38	0.07	-3.38	
11333.00	90.150	341.560	6603.88	4064.68	4633.01	854.47	1669157.69	14274066.93	39°18'28.522"N	80°53'54.215"W	4711.14	10.450	1.64	-0.11	-1.64	
11428.00	90.280	339.040	6603.52	4159.67	4722.44	822.45	1669125.68	14274156.33	39°18'29.406"N	80°53'54.621"W	4793.52	9.879	2.66	0.14	-2.65	
11523.00	90.310	336.520	6603.03	4254.59	4810.37	786.53	1669089.77	14274244.23	39°18'30.276"N	80°53'55.077"W	4874.25	9.286	2.65	0.03	-2.65	
11617.00	90.310	334.770	6602.52	4348.30	4896.00	747.77	1669051.02	14274329.82	39°18'31.122"N	80°53'55.569"W	4952.78	8.684	1.86	0.00	-1.86	
11712.00	89.880	335.010	6602.37	4442.91	4982.03	707.45	1669010.73	14274415.81	39°18'31.973"N	80°53'56.081"W	5032.01	8.082	0.52	-0.45	0.25	
11807.00	91.380	335.790	6601.32	4537.59	5068.40	667.91	1668971.20	14274502.14	39°18'32.827"N	80°53'56.583"W	5112.21	7.507	1.78	1.58	0.82	
11901.00	89.540	335.260	6600.57	4631.28	5153.94	628.97	1668932.27	14274587.66	39°18'33.673"N	80°53'57.077"W	5192.18	6.958	2.04	-1.96	-0.56	
11996.00	89.880	335.100	6601.05	4725.93	5240.17	589.09	1668892.41	14274673.85	39°18'34.526"N	80°53'57.583"W	5273.17	6.414	0.40	0.36	-0.17	
12090.00	89.910	337.440	6601.22	4819.72	5326.21	551.27	1668854.60	14274759.86	39°18'35.377"N	80°53'58.063"W	5354.66	5.909	2.49	0.03	2.49	
12185.00	89.910	340.170	6601.37	4914.69	5414.78	516.92	1668820.27	14274848.39	39°18'36.252"N	80°53'58.499"W	5439.40	5.453	2.87	0.00	2.87	
12280.00	89.970	341.930	6601.47	5009.67	5504.62	486.08	1668789.44	14274938.20	39°18'37.141"N	80°53'58.890"W	5526.04	5.046	1.85	0.06	1.85	
12374.00	89.880	342.610	6601.59	5103.60	5594.16	457.45	1668760.82	14275027.70	39°18'38.026"N	80°53'59.253"W	5612.83	4.675	0.73	-0.10	0.72	
12469.00	89.880	343.040	6601.79	5198.49	5684.92	429.40	1668732.78	14275118.43	39°18'38.923"N	80°53'59.608"W	5701.12	4.320	0.45	0.00	0.45	
12563.00	89.910	342.850	6601.96	5292.37	5774.79	401.83	1668705.22	14275208.26	39°18'39.812"N	80°53'59.958"W	5788.75	3.980	0.20	0.03	-0.20	
12658.00	89.910	342.970	6602.11	5387.26	5865.59	373.91	1668677.32	14275299.02	39°18'40.710"N	80°54'00.312"W	5877.50	3.647	0.13	0.00	0.13	
12753.00	90.000	343.290	6602.19	5482.12	5956.51	346.34	1668649.76	14275389.90	39°18'41.609"N	80°54'00.661"W	5966.57	3.328	0.35	0.09	0.34	
12848.00	89.880	341.690	6602.29	5577.03	6047.10	317.76	1668621.19	14275480.46	39°18'42.504"N	80°54'01.023"W	6055.44	3.008	1.69	-0.13	-1.68	
12943.00	89.880	338.900	6602.49	5672.02	6136.53	285.73	1668589.17	14275569.85	39°18'43.388"N	80°54'01.430"W	6143.18	2.666	2.94	0.00	-2.94	
13038.00	89.880	337.900	6602.68	5766.98	6224.86	250.76	1668554.21	14275658.14	39°18'44.262"N	80°54'01.873"W	6229.90	2.307	1.05	0.00	-1.05	
13132.00	89.850	335.270	6602.91	5860.80	6311.11	213.41	1668516.88	14275744.36	39°18'45.115"N	80°54'02.347"W	6314.71	1.937	2.80	-0.03	-2.80	
13227.00	89.940	335.610	6603.08	5955.49	6397.51	173.92	1668477.41	14275830.73	39°18'45.969"N	80°54'02.849"W	6399.88	1.557	0.37	0.09	0.36	
13322.00	90.090	338.900	6603.06	6050.36	6485.11	137.20	1668440.70	14275918.29	39°18'46.835"N	80°54'03.315"W	6486.56	1.212	3.47	0.16	3.46	
13417.00	89.970	342.910	6603.01	6145.33	6574.87	106.13	1668409.64	14276008.01	39°18'47.723"N	80°54'03.709"W	6575.72	0.925	4.22	-0.13	4.22	
13511.00	90.060	345.880	6602.98	6239.05	6665.39	80.84	1668384.36	14276098.50	39°18'48.618"N	80°54'04.029"W	6665.88	0.695	3.16	0.10	3.16	
13605.00	90.060	345.920	6602.88	6332.57	6756.56	57.94	1668361.47	14276189.63	39°18'49.519"N	80°54'04.319"W	6756.81	0.491	0.04	0.00	0.04	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

WELLPATH DATA (187 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
13700.00	89.970	342.390	6602.86	6427.31	6847.94	32.01	1668335.55	14276280.97	39°18'50.423"N	80°54'04.648"W	6848.01	0.268	3.72	-0.09	-3.72	
13794.00	90.030	338.070	6602.86	6521.29	6936.37	0.22	1668303.78	14276369.37	39°18'51.297"N	80°54'05.051"W	6936.37	0.002	4.60	0.06	-4.60	
13889.00	89.940	337.270	6602.88	6616.21	7024.25	-35.87	1668267.70	14276457.21	39°18'52.166"N	80°54'05.509"W	7024.34	359.707	0.85	-0.09	-0.84	
13983.00	90.120	335.950	6602.83	6710.03	7110.52	-73.19	1668230.39	14276543.45	39°18'53.019"N	80°54'05.983"W	7110.90	359.410	1.42	0.19	-1.40	
14078.00	90.090	338.900	6602.66	6804.92	7198.23	-109.66	1668193.94	14276631.13	39°18'53.886"N	80°54'06.445"W	7199.07	359.127	3.11	-0.03	3.11	
14113.00	90.030	339.950	6602.62	6839.92	7231.00	-121.96	1668181.65	14276663.88	39°18'54.210"N	80°54'06.601"W	7232.03	359.034	3.00	-0.17	3.00	
14138.00	90.030	339.950	6602.61	6864.92	7254.49	-130.53	1668173.08	14276687.36	39°18'54.442"N	80°54'06.710"W	7255.66	358.969	0.00	0.00	0.00	Projected MD at TD: 14138'

HOLE & CASING SECTIONS - Ref Wellbore: Buffalo Unit 2H AWB Ref Wellpath: Buffalo Unit 2H AWP Proj: 14138'

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	110.00	80.00	30.00	110.00	0.00	0.00	0.09	-0.10
17.5in Open Hole	110.00	594.40	484.40	110.00	594.40	0.09	-0.10	0.04	0.37
13.375in Casing Surface	30.00	594.40	564.40	30.00	594.40	0.00	0.00	0.04	0.37
12.25in Open Hole	594.40	2678.90	2084.50	594.40	2576.30	0.04	0.37	11.08	534.81
9.625in Casing Intermediate	30.00	2678.90	2648.90	30.00	2576.30	0.00	0.00	11.08	534.81
8.75in Open Hole	2678.90	6577.00	3898.10	2576.30	6071.70	11.08	534.81	318.61	2198.43
8.5in Open Hole	6577.00	14138.00	7561.00	6071.70	6602.61	318.61	2198.43	7254.49	-130.53
5.5in Casing Production	30.00	14138.00	14108.00	30.00	6602.61	0.00	0.00	7254.49	-130.53



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Buffalo Unit 2H POE Rev-2	6589.00	919.55	2165.01	1670467.70	14270354.96	39°17'51.804"N	80°53'37.598"W	point
Buffalo Unit 2H BHL Rev-2	6612.00	7200.19	-111.24	1668192.36	14276633.08	39°18'53.906"N	80°54'06.465"W	point
Buffalo Unit 2H LP Rev-2	6612.00	1088.82	2103.67	1670406.38	14270524.17	39°17'53.478"N	80°53'38.376"W	point

WELLPATH COMPOSITION - Ref Wellbore: Buffalo Unit 2H AWB Ref Wellpath: Buffalo Unit 2H AWP Proj: 14138'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
30.00	585.00	Gyrodata standard - Drop gyro or Multi-shot	01_Gyrodata MS Gyro <17-1/2">(100'-585')	Buffalo Unit 2H AWB	
585.00	2596.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(585')(656'-2596')	Buffalo Unit 2H AWB	
2596.00	6499.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2596')(2763'-6499')	Buffalo Unit 2H AWB	
6499.00	14113.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2">(6499')(6560'-14113')	Buffalo Unit 2H AWB	
14113.00	14138.00	Blind Drilling (std)	Projection to bit	Buffalo Unit 2H AWB	



Actual Wellpath Report

Buffalo Unit 2H AWP Proj: 14138'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Buffalo Unit 2H
Field	Ritchie	Wellbore	Buffalo Unit 2H AWB
Facility	Bison Pad		

COMMENTS

Wellpath general comments

API: 47-085-10243-0000

BHI Job #: 109454485

Rig: H&P 519

Duration: 10/17/2018-10/19/2018

Gyrodata MS Gyro <17-1/2">(100'-585')

WFT EM <12-1/4">(585')(656'-2596')

WFT EM <8-3/4">(2596')(2763'-6499')

BH AT Curve <8-1/2">(6499')(6560'-14113')

Middlesex: 7034' MD

Burkett: 7277' MD

Tully: 7379' MD

Marcellus POE: 7494' MD

Projected MD at TD: 14138'