



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'

Page 1 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999600	Report Generated	5/22/2019 at 5:04:05 PM
Convergence at slot	0.03° East	Database/Source file	WA_MPL_EasternUS_Defn/Buzzard_Run_Unit_2H_AWB_Proj_18164_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-25.30	-15.73	1655908.50	14239800.76	39°12'49.820"N	80°56'43.100"W
Facility Reference Pt			1655924.22	14239826.05	39°12'50.070"N	80°56'42.900"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	1174.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #02)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.12°

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 2 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 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	84.840	0.00	0.00	0.00	0.00	1655908.50	14239800.76	39°12'49.820"N	80°56'43.100"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	84.840	25.00	0.00	0.00	0.00	1655908.50	14239800.76	39°12'49.820"N	80°56'43.100"W	0.00	0.000	0.00	0.00	0.00	
110.00	0.260	84.840	110.00	-0.05	0.02	0.19	1655908.69	14239800.77	39°12'49.820"N	80°56'43.098"W	0.19	84.840	0.31	0.31	99.81	Gyrodata SS Gyro <17-1/2">(100'-575')
135.00	0.150	63.800	135.00	-0.06	0.04	0.28	1655908.78	14239800.79	39°12'49.820"N	80°56'43.096"W	0.28	82.438	0.53	-0.44	-84.16	
160.00	0.210	80.640	160.00	-0.06	0.06	0.35	1655908.85	14239800.81	39°12'49.821"N	80°56'43.096"W	0.36	80.531	0.32	0.24	67.36	
185.00	0.150	90.860	185.00	-0.08	0.07	0.43	1655908.93	14239800.82	39°12'49.821"N	80°56'43.095"W	0.44	81.314	0.27	-0.24	40.88	
210.00	0.090	55.850	210.00	-0.08	0.08	0.48	1655908.98	14239800.83	39°12'49.821"N	80°56'43.094"W	0.49	80.958	0.37	-0.24	-140.04	
235.00	0.220	71.410	235.00	-0.08	0.10	0.54	1655909.04	14239800.86	39°12'49.821"N	80°56'43.093"W	0.55	79.263	0.54	0.52	62.24	
260.00	0.260	95.780	260.00	-0.10	0.11	0.64	1655909.14	14239800.87	39°12'49.821"N	80°56'43.092"W	0.65	80.103	0.43	0.16	97.48	
285.00	0.320	85.160	285.00	-0.14	0.11	0.77	1655909.27	14239800.87	39°12'49.821"N	80°56'43.090"W	0.78	81.687	0.32	0.24	-42.48	
310.00	0.290	91.540	310.00	-0.18	0.12	0.90	1655909.40	14239800.87	39°12'49.821"N	80°56'43.089"W	0.91	82.635	0.18	-0.12	25.52	
335.00	0.340	105.990	335.00	-0.25	0.09	1.04	1655909.54	14239800.85	39°12'49.821"N	80°56'43.087"W	1.04	84.794	0.37	0.20	57.80	
337.00	0.330	129.600	337.00	-0.25	0.09	1.05	1655909.55	14239800.84	39°12'49.821"N	80°56'43.087"W	1.05	85.132	6.87	-0.50	1180.50	
360.00	0.200	26.240	360.00	-0.28	0.08	1.12	1655909.62	14239800.84	39°12'49.821"N	80°56'43.086"W	1.12	85.749	1.84	-0.57	-449.39	
385.00	0.180	71.540	385.00	-0.25	0.13	1.17	1655909.67	14239800.89	39°12'49.821"N	80°56'43.085"W	1.18	83.454	0.59	-0.08	181.20	
410.00	0.180	37.900	410.00	-0.23	0.18	1.23	1655909.73	14239800.93	39°12'49.822"N	80°56'43.084"W	1.25	81.791	0.42	0.00	-134.56	
435.00	0.210	49.580	435.00	-0.19	0.24	1.29	1655909.79	14239800.99	39°12'49.822"N	80°56'43.084"W	1.31	79.539	0.20	0.12	46.72	
460.00	0.250	64.230	460.00	-0.17	0.29	1.38	1655909.88	14239801.05	39°12'49.823"N	80°56'43.083"W	1.41	78.021	0.28	0.16	58.60	
485.00	0.160	28.320	485.00	-0.14	0.35	1.44	1655909.94	14239801.10	39°12'49.823"N	80°56'43.082"W	1.48	76.490	0.61	-0.36	-143.64	
510.00	0.210	30.180	510.00	-0.09	0.42	1.48	1655909.98	14239801.17	39°12'49.824"N	80°56'43.081"W	1.54	74.287	0.20	0.20	7.44	
535.00	0.150	21.880	535.00	-0.03	0.49	1.52	1655910.02	14239801.24	39°12'49.825"N	80°56'43.081"W	1.59	72.207	0.26	-0.24	-33.20	
560.00	0.180	48.400	560.00	0.01	0.54	1.56	1655910.06	14239801.30	39°12'49.825"N	80°56'43.080"W	1.65	70.782	0.32	0.12	106.08	
585.00	0.180	21.050	585.00	0.06	0.61	1.60	1655910.10	14239801.36	39°12'49.826"N	80°56'43.080"W	1.71	69.279	0.34	0.00	-109.40	
629.00	0.180	282.510	629.00	0.14	0.69	1.56	1655910.06	14239801.44	39°12'49.827"N	80°56'43.080"W	1.70	66.270	0.62	0.00	-223.95	WFT EM <12-1/4">(575')(619'-2578')
722.00	1.110	104.720	721.99	-0.28	0.49	2.29	1655910.79	14239801.24	39°12'49.825"N	80°56'43.071"W	2.34	77.955	1.39	1.00	-191.17	
815.00	3.880	96.850	814.89	-2.14	-0.12	6.28	1655914.78	14239800.64	39°12'49.819"N	80°56'43.020"W	6.28	91.059	2.99	2.98	-8.46	
912.00	6.410	92.470	911.50	-5.54	-0.74	14.95	1655923.45	14239800.01	39°12'49.813"N	80°56'42.910"W	14.97	92.837	2.64	2.61	-4.52	
1006.00	8.780	89.410	1004.67	-9.70	-0.89	27.37	1655935.86	14239799.86	39°12'49.811"N	80°56'42.752"W	27.39	91.869	2.56	2.52	-3.26	
1101.00	10.410	89.940	1098.33	-14.75	-0.81	43.21	1655951.69	14239799.95	39°12'49.812"N	80°56'42.551"W	43.21	91.074	1.72	1.72	0.56	
1195.00	11.350	89.260	1190.64	-20.37	-0.68	60.95	1655969.42	14239800.07	39°12'49.813"N	80°56'42.326"W	60.95	90.640	1.01	1.00	-0.72	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Affairs



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 3 of 12



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Ritchie County, WV		Well	Buzzard Run Unit 2H
Field	Ritchie		Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad			

WELLPATH DATA (232 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
1290.00	11.730	85.900	1283.72	-25.74	0.13	79.93	1655988.40	14239800.89	39°12'49.821"N	80°56'42.085"W	79.93	89.907	0.81	0.40	-3.54	
1385.00	12.650	85.710	1376.58	-30.82	1.60	99.93	1656008.39	14239802.35	39°12'49.835"N	80°56'41.830"W	99.94	89.084	0.97	0.97	-0.20	
1480.00	13.210	87.550	1469.17	-36.51	2.84	121.15	1656029.60	14239803.60	39°12'49.847"N	80°56'41.561"W	121.18	88.657	0.73	0.59	1.94	
1574.00	14.850	90.000	1560.36	-43.45	3.30	143.93	1656052.37	14239804.05	39°12'49.852"N	80°56'41.271"W	143.97	88.687	1.86	1.74	2.61	
1669.00	17.240	91.030	1651.66	-52.19	3.05	170.18	1656078.62	14239803.80	39°12'49.849"N	80°56'40.938"W	170.21	88.974	2.53	2.52	1.08	
1763.00	18.380	87.980	1741.15	-61.23	3.32	198.92	1656107.34	14239804.07	39°12'49.852"N	80°56'40.573"W	198.95	89.044	1.57	1.21	-3.24	
1858.00	19.990	87.770	1830.87	-70.23	4.48	230.12	1656138.53	14239805.23	39°12'49.863"N	80°56'40.176"W	230.16	88.885	1.70	1.69	-0.22	
1953.00	20.890	88.180	1919.89	-79.85	5.65	263.27	1656171.67	14239806.40	39°12'49.874"N	80°56'39.755"W	263.33	88.771	0.96	0.95	0.43	
2047.00	20.640	87.490	2007.79	-89.43	6.91	296.57	1656204.96	14239807.66	39°12'49.886"N	80°56'39.332"W	296.66	88.666	0.37	-0.27	-0.73	
2142.00	22.120	89.360	2096.25	-99.75	7.84	331.19	1656239.56	14239808.59	39°12'49.895"N	80°56'38.892"W	331.28	88.644	1.72	1.56	1.97	
2237.00	21.450	88.880	2184.46	-110.65	8.38	366.44	1656274.80	14239809.13	39°12'49.901"N	80°56'38.444"W	366.54	88.690	0.73	-0.71	-0.51	
2332.00	20.300	86.970	2273.23	-120.45	9.59	400.27	1656308.61	14239810.34	39°12'49.912"N	80°56'38.015"W	400.38	88.628	1.41	-1.21	-2.01	
2426.00	20.190	87.640	2361.42	-129.51	11.12	432.76	1656341.09	14239811.87	39°12'49.927"N	80°56'37.602"W	432.90	88.528	0.27	-0.12	0.71	
2521.00	20.570	88.720	2450.47	-139.22	12.17	465.82	1656374.14	14239812.92	39°12'49.937"N	80°56'37.182"W	465.98	88.504	0.56	0.40	1.14	
2588.00	19.330	87.230	2513.45	-145.86	12.97	488.67	1656396.97	14239813.72	39°12'49.945"N	80°56'36.891"W	488.84	88.480	2.00	-1.85	-2.22	
2692.00	18.070	83.410	2611.96	-154.07	15.65	521.88	1656430.18	14239816.40	39°12'49.972"N	80°56'36.469"W	522.12	88.282	1.69	-1.21	-3.67	WFT EM <8-3/4">(2578')(2682'-6252')
2787.00	19.730	89.050	2701.84	-162.14	17.61	552.56	1656460.84	14239818.35	39°12'49.991"N	80°56'36.080"W	552.84	88.175	2.60	1.75	5.94	
2881.00	21.890	90.890	2789.68	-172.98	17.60	586.02	1656494.29	14239818.34	39°12'49.990"N	80°56'35.655"W	586.29	88.280	2.50	2.40	1.96	
2976.00	22.820	90.160	2877.51	-185.01	17.27	622.23	1656530.48	14239818.02	39°12'49.987"N	80°56'35.195"W	622.47	88.410	0.92	0.87	-0.77	
3071.00	23.650	88.830	2964.80	-196.81	17.61	659.71	1656567.94	14239818.35	39°12'49.990"N	80°56'34.718"W	659.94	88.471	1.03	0.87	-1.40	
3168.00	23.170	87.820	3053.82	-208.22	18.73	698.23	1656606.45	14239819.48	39°12'50.001"N	80°56'34.229"W	698.48	88.464	0.64	-0.49	-1.04	
3263.00	22.990	89.730	3141.21	-219.51	19.53	735.45	1656643.66	14239820.27	39°12'50.009"N	80°56'33.756"W	735.71	88.479	0.81	-0.19	2.01	
3358.00	21.240	87.130	3229.22	-230.17	20.48	771.20	1656679.39	14239821.22	39°12'50.018"N	80°56'33.302"W	771.47	88.479	2.11	-1.84	-2.74	
3453.00	19.100	89.970	3318.39	-239.94	21.35	803.93	1656712.11	14239822.09	39°12'50.026"N	80°56'32.886"W	804.21	88.479	2.48	-2.25	2.99	
3547.00	19.280	91.480	3407.17	-250.31	20.95	834.82	1656742.99	14239821.70	39°12'50.022"N	80°56'32.494"W	835.09	88.562	0.56	0.19	1.61	
3642.00	19.640	91.960	3496.75	-261.45	20.00	866.46	1656774.61	14239820.75	39°12'50.012"N	80°56'32.092"W	866.69	88.678	0.41	0.38	0.51	
3737.00	18.920	91.380	3586.42	-272.46	19.09	897.81	1656805.95	14239819.83	39°12'50.003"N	80°56'31.693"W	898.01	88.782	0.78	-0.76	-0.61	
3831.00	19.160	93.010	3675.27	-283.49	17.91	928.45	1656836.58	14239818.66	39°12'49.991"N	80°56'31.304"W	928.62	88.895	0.62	0.26	1.73	
3926.00	20.130	92.680	3764.74	-295.31	16.33	960.35	1656868.47	14239817.07	39°12'49.975"N	80°56'30.899"W	960.49	89.026	1.03	1.02	-0.35	
4021.00	20.640	91.280	3853.79	-307.09	15.19	993.42	1656901.52	14239815.94	39°12'49.964"N	80°56'30.479"W	993.54	89.124	0.74	0.54	-1.47	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 4 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
4115.00	21.310	89.210	3941.57	-318.10	15.05	1027.06	1656935.15	14239815.80	39°12'49.962"N	80°56'30.051"W	1027.17	89.160	1.06	0.71	-2.20	
4210.00	20.810	88.630	4030.22	-328.54	15.69	1061.19	1656969.27	14239816.44	39°12'49.969"N	80°56'29.618"W	1061.31	89.153	0.57	-0.53	-0.61	
4305.00	19.710	88.720	4119.34	-338.46	16.46	1094.08	1657002.14	14239817.20	39°12'49.976"N	80°56'29.200"W	1094.20	89.138	1.16	-1.16	0.09	
4400.00	19.870	87.070	4208.73	-347.74	17.64	1126.22	1657034.27	14239818.39	39°12'49.987"N	80°56'28.791"W	1126.36	89.103	0.61	0.17	-1.74	
4494.00	20.510	87.440	4296.96	-356.76	19.19	1158.63	1657066.66	14239819.94	39°12'50.003"N	80°56'28.380"W	1158.78	89.051	0.69	0.68	0.39	
4591.00	20.590	86.980	4387.78	-366.19	20.85	1192.63	1657100.66	14239821.60	39°12'50.019"N	80°56'27.948"W	1192.82	88.999	0.19	0.08	-0.47	
4685.00	20.260	87.470	4475.87	-375.29	22.44	1225.40	1657133.41	14239823.18	39°12'50.034"N	80°56'27.531"W	1225.60	88.951	0.40	-0.35	0.52	
4780.00	19.850	86.990	4565.11	-384.33	24.01	1257.94	1657165.94	14239824.76	39°12'50.050"N	80°56'27.118"W	1258.17	88.907	0.47	-0.43	-0.51	
4875.00	20.280	87.020	4654.35	-393.26	25.71	1290.49	1657198.47	14239826.46	39°12'50.066"N	80°56'26.704"W	1290.74	88.859	0.45	0.45	0.03	
4969.00	20.160	88.810	4742.55	-402.64	26.90	1322.95	1657230.92	14239827.64	39°12'50.078"N	80°56'26.292"W	1323.22	88.835	0.67	-0.13	1.90	
5064.00	20.270	88.540	4831.70	-412.54	27.66	1355.77	1657263.73	14239828.40	39°12'50.085"N	80°56'25.875"W	1356.05	88.831	0.15	0.12	-0.28	
5158.00	20.450	88.900	4919.83	-422.43	28.39	1388.46	1657296.41	14239829.13	39°12'50.092"N	80°56'25.460"W	1388.75	88.829	0.23	0.19	0.38	
5253.00	21.550	89.160	5008.52	-432.90	28.96	1422.50	1657330.43	14239829.70	39°12'50.097"N	80°56'25.027"W	1422.80	88.834	1.16	1.16	0.27	
5347.00	20.720	89.000	5096.19	-443.35	29.50	1456.39	1657364.31	14239830.25	39°12'50.103"N	80°56'24.597"W	1456.69	88.839	0.89	-0.88	-0.17	
5442.00	21.280	89.320	5184.88	-453.90	30.00	1490.43	1657398.34	14239830.74	39°12'50.107"N	80°56'24.164"W	1490.74	88.847	0.60	0.59	0.34	
5537.00	21.280	88.310	5273.41	-464.38	30.71	1524.90	1657432.79	14239831.46	39°12'50.114"N	80°56'23.726"W	1525.21	88.846	0.39	0.00	-1.06	
5631.00	21.740	87.620	5360.86	-474.36	31.94	1559.35	1657467.22	14239832.68	39°12'50.126"N	80°56'23.289"W	1559.67	88.827	0.56	0.49	-0.73	
5725.00	21.720	87.980	5448.18	-484.35	33.28	1594.12	1657501.98	14239834.02	39°12'50.139"N	80°56'22.847"W	1594.47	88.804	0.14	-0.02	0.38	
5820.00	20.680	88.070	5536.75	-494.34	34.46	1628.46	1657536.30	14239835.20	39°12'50.150"N	80°56'22.410"W	1628.82	88.788	1.10	-1.09	0.09	
5915.00	19.350	86.360	5626.01	-503.37	36.03	1660.93	1657568.76	14239836.77	39°12'50.166"N	80°56'21.998"W	1661.32	88.757	1.53	-1.40	-1.80	
5946.00	17.880	80.150	5655.39	-505.47	37.17	1670.75	1657578.58	14239837.91	39°12'50.177"N	80°56'21.873"W	1671.16	88.726	7.95	-4.74	-20.03	
5978.00	16.210	73.010	5685.99	-506.38	39.31	1679.86	1657587.69	14239840.05	39°12'50.198"N	80°56'21.757"W	1680.32	88.659	8.36	-5.22	-22.31	
6009.00	15.820	64.570	5715.79	-506.05	42.39	1687.81	1657595.64	14239843.13	39°12'50.228"N	80°56'21.656"W	1688.35	88.561	7.61	-1.26	-27.23	
6041.00	15.800	55.430	5746.58	-504.37	46.74	1695.34	1657603.16	14239847.47	39°12'50.271"N	80°56'21.561"W	1695.99	88.421	7.77	-0.06	-28.56	
6072.00	16.440	49.040	5776.37	-501.58	52.01	1702.13	1657609.95	14239852.74	39°12'50.323"N	80°56'21.474"W	1702.92	88.250	6.08	2.06	-20.61	
6104.00	16.840	41.630	5807.03	-497.59	58.44	1708.63	1657616.45	14239859.17	39°12'50.387"N	80°56'21.392"W	1709.63	88.041	6.74	1.25	-23.16	
6135.00	17.000	32.110	5836.69	-492.53	65.64	1714.02	1657621.84	14239866.37	39°12'50.458"N	80°56'21.323"W	1715.28	87.807	8.94	0.52	-30.71	
6167.00	18.500	25.350	5867.17	-485.95	74.19	1718.68	1657626.50	14239874.91	39°12'50.542"N	80°56'21.264"W	1720.28	87.528	7.96	4.69	-21.12	
6199.00	20.410	23.730	5897.35	-478.20	83.89	1723.10	1657630.91	14239884.61	39°12'50.638"N	80°56'21.208"W	1725.14	87.213	6.20	5.97	-5.06	
6230.00	22.380	22.020	5926.21	-469.76	94.31	1727.49	1657635.30	14239895.02	39°12'50.741"N	80°56'21.152"W	1730.06	86.875	6.67	6.35	-5.52	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 5 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 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
6262.00	24.200	17.580	5955.80	-459.88	106.21	1731.76	1657639.56	14239906.92	39°12'50.859"N	80°56'21.097"W	1735.01	86.490	7.90	5.69	-13.87	
6317.00	26.730	8.870	6005.27	-439.86	129.19	1737.07	1657644.88	14239929.89	39°12'51.086"N	80°56'21.030"W	1741.87	85.747	8.21	4.60	-15.84	BH AT Curve <8-1/2">(6262')-(6317'-18139')
6377.00	29.720	2.800	6058.14	-414.08	157.39	1739.88	1657647.68	14239958.08	39°12'51.365"N	80°56'20.994"W	1746.98	84.831	6.90	4.98	-10.12	
6424.00	32.760	3.350	6098.32	-391.48	181.72	1741.19	1657649.00	14239982.41	39°12'51.605"N	80°56'20.977"W	1750.65	84.042	6.50	6.47	1.17	
6472.00	37.020	4.530	6137.89	-366.19	209.11	1743.09	1657650.90	14240009.78	39°12'51.876"N	80°56'20.953"W	1755.59	83.159	8.99	8.88	2.46	
6519.00	41.540	4.090	6174.06	-338.84	238.77	1745.32	1657653.13	14240039.43	39°12'52.169"N	80°56'20.924"W	1761.58	82.210	9.64	9.62	-0.94	
6566.00	45.720	2.770	6208.07	-308.84	271.14	1747.25	1657655.05	14240071.78	39°12'52.489"N	80°56'20.899"W	1768.16	81.179	9.10	8.89	-2.81	
6613.00	50.310	359.850	6239.51	-276.05	306.05	1748.02	1657655.82	14240106.68	39°12'52.834"N	80°56'20.889"W	1774.61	80.069	10.80	9.77	-6.21	
6623.00†	51.112	359.322	6245.84	-268.71	313.79	1747.96	1657655.76	14240114.42	39°12'52.910"N	80°56'20.890"W	1775.90	79.823	9.00	8.02	-5.28	Middlesex: 6623' MD
6661.00	54.180	357.420	6268.89	-239.87	343.97	1747.09	1657654.89	14240144.59	39°12'53.209"N	80°56'20.901"W	1780.63	78.862	9.00	8.07	-5.01	
6708.00	57.640	355.830	6295.23	-202.37	382.82	1744.79	1657652.59	14240183.42	39°12'53.593"N	80°56'20.930"W	1786.29	77.625	7.88	7.36	-3.38	
6755.00	61.100	354.710	6319.18	-163.16	423.12	1741.45	1657649.25	14240223.70	39°12'53.991"N	80°56'20.972"W	1792.11	76.344	7.64	7.36	-2.38	
6802.00	64.410	354.130	6340.69	-122.50	464.70	1737.38	1657645.19	14240265.27	39°12'54.402"N	80°56'21.023"W	1798.46	75.026	7.13	7.04	-1.23	
6819.00†	65.547	354.051	6347.88	-107.49	480.02	1735.80	1657643.60	14240280.58	39°12'54.554"N	80°56'21.043"W	1800.95	74.542	6.70	6.69	-0.47	Burkett: 6819' MD
6850.00	67.620	353.910	6360.20	-79.75	508.31	1732.81	1657640.62	14240308.86	39°12'54.833"N	80°56'21.081"W	1805.83	73.651	6.70	6.69	-0.45	
6897.00	71.250	352.950	6376.71	-36.77	552.02	1727.77	1657635.58	14240352.55	39°12'55.265"N	80°56'21.144"W	1813.82	72.282	7.96	7.72	-2.04	
6901.00†	71.530	352.793	6377.98	-33.06	555.78	1727.30	1657635.11	14240356.31	39°12'55.302"N	80°56'21.150"W	1814.52	72.164	7.93	7.00	-3.92	Tully: 6901' MD
6945.00	74.620	351.100	6390.79	8.28	597.45	1721.40	1657629.21	14240397.97	39°12'55.714"N	80°56'21.225"W	1822.14	70.860	7.93	7.02	-3.85	
6973.00†	76.507	350.154	6397.77	35.03	624.20	1716.99	1657624.80	14240424.71	39°12'55.979"N	80°56'21.281"W	1826.93	70.021	7.49	6.74	-3.38	Marcellus POE: 6973' MD
6992.00	77.790	349.520	6402.00	53.33	642.44	1713.72	1657621.53	14240442.93	39°12'56.159"N	80°56'21.322"W	1830.18	69.450	7.49	6.75	-3.33	
7039.00	81.290	347.850	6410.53	99.14	687.75	1704.65	1657612.46	14240488.23	39°12'56.607"N	80°56'21.437"W	1838.16	68.028	8.23	7.45	-3.55	
7086.00	84.360	346.600	6416.40	145.50	733.22	1694.34	1657602.16	14240533.68	39°12'57.056"N	80°56'21.568"W	1846.18	66.600	7.04	6.53	-2.66	
7135.00	87.660	344.890	6419.81	194.22	780.59	1682.30	1657590.13	14240581.03	39°12'57.525"N	80°56'21.720"W	1854.57	65.109	7.58	6.73	-3.49	
7182.00	90.310	342.900	6420.64	241.15	825.73	1669.27	1657577.10	14240626.15	39°12'57.971"N	80°56'21.885"W	1862.33	63.680	7.05	5.64	-4.23	
7229.00	90.370	340.540	6420.36	288.14	870.35	1654.52	1657562.36	14240670.76	39°12'58.412"N	80°56'22.072"W	1869.48	62.254	5.02	0.13	-5.02	
7324.00	90.430	337.410	6419.70	383.06	959.01	1620.45	1657528.30	14240759.38	39°12'59.289"N	80°56'22.504"W	1882.96	59.382	3.30	0.06	-3.29	
7418.00	90.310	334.900	6419.09	476.70	1044.98	1582.45	1657490.32	14240845.32	39°13'00.139"N	80°56'22.986"W	1896.35	56.561	2.67	-0.13	-2.67	
7513.00	90.340	333.310	6418.55	570.98	1130.44	1540.96	1657448.85	14240930.74	39°13'00.983"N	80°56'23.513"W	1911.14	53.737	1.67	0.03	-1.67	
7607.00	90.430	332.200	6417.92	663.98	1214.01	1497.93	1657405.83	14241014.27	39°13'01.810"N	80°56'24.059"W	1928.11	50.977	1.18	0.10	-1.18	
7702.00	93.420	333.410	6414.73	757.92	1298.45	1454.54	1657362.46	14241098.68	39°13'02.645"N	80°56'24.609"W	1949.78	48.245	3.39	3.15	1.27	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 6 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 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
7797.00	90.740	330.930	6411.28	851.68	1382.39	1410.23	1657318.16	14241182.59	39°13'03.475"N	80°56'25.172"W	1974.78	45.571	3.84	-2.82	-2.81	
7892.00	90.580	334.370	6410.19	945.62	1466.75	1366.59	1657274.55	14241266.92	39°13'04.309"N	80°56'25.725"W	2004.73	42.975	3.62	-0.17	3.62	
7986.00	90.710	337.640	6409.13	1039.23	1552.61	1328.37	1657236.34	14241352.74	39°13'05.157"N	80°56'26.210"W	2043.32	40.549	3.48	0.14	3.48	
8080.00	90.680	341.220	6407.99	1133.17	1640.60	1295.36	1657203.34	14241440.69	39°13'06.027"N	80°56'26.629"W	2090.33	38.293	3.81	-0.03	3.81	
8174.00	90.860	345.010	6406.72	1227.09	1730.52	1268.06	1657176.05	14241530.58	39°13'06.916"N	80°56'26.975"W	2145.38	36.233	4.04	0.19	4.03	
8269.00	90.090	344.290	6405.94	1321.90	1822.13	1242.91	1657150.92	14241622.15	39°13'07.822"N	80°56'27.294"W	2205.67	34.299	1.11	-0.81	-0.76	
8363.00	88.580	341.430	6407.03	1415.84	1911.93	1215.22	1657123.23	14241711.92	39°13'08.710"N	80°56'27.645"W	2265.44	32.440	3.44	-1.61	-3.04	
8458.00	90.310	342.650	6407.95	1510.82	2002.29	1185.93	1657093.95	14241802.25	39°13'09.603"N	80°56'28.017"W	2327.14	30.638	2.23	1.82	1.28	
8553.00	89.720	340.310	6407.92	1605.81	2092.37	1155.75	1657063.79	14241892.28	39°13'10.493"N	80°56'28.399"W	2390.35	28.915	2.54	-0.62	-2.46	
8648.00	89.600	341.410	6408.49	1700.80	2182.11	1124.61	1657032.66	14241981.99	39°13'11.381"N	80°56'28.794"W	2454.86	27.265	1.16	-0.13	1.16	
8742.00	90.120	342.810	6408.72	1794.79	2271.57	1095.73	1657003.79	14242071.41	39°13'12.265"N	80°56'29.160"W	2522.03	25.751	1.59	0.55	1.49	
8836.00	89.940	343.450	6408.67	1888.73	2361.52	1068.45	1656976.52	14242161.33	39°13'13.154"N	80°56'29.506"W	2591.98	24.344	0.71	-0.19	0.68	
8931.00	90.060	342.310	6408.67	1983.68	2452.31	1040.49	1656948.57	14242252.08	39°13'14.052"N	80°56'29.861"W	2663.91	22.991	1.21	0.13	-1.20	
9025.00	90.030	342.010	6408.59	2077.67	2541.79	1011.69	1656919.78	14242341.52	39°13'14.936"N	80°56'30.226"W	2735.73	21.704	0.32	-0.03	-0.32	
9119.00	90.550	343.330	6408.12	2171.63	2631.52	983.69	1656891.80	14242431.22	39°13'15.823"N	80°56'30.581"W	2809.37	20.496	1.51	0.55	1.40	
9214.00	90.490	343.270	6407.26	2266.56	2722.51	956.39	1656864.51	14242522.17	39°13'16.723"N	80°56'30.927"W	2885.61	19.356	0.09	-0.06	-0.06	
9308.00	90.490	342.720	6406.45	2360.50	2812.39	928.90	1656837.03	14242612.02	39°13'17.612"N	80°56'31.276"W	2961.83	18.278	0.59	0.00	-0.59	
9402.00	90.890	342.510	6405.32	2454.46	2902.09	900.82	1656808.96	14242701.68	39°13'18.498"N	80°56'31.632"W	3038.69	17.244	0.48	0.43	-0.22	
9496.00	90.490	341.330	6404.19	2548.44	2991.44	871.65	1656779.80	14242791.00	39°13'19.382"N	80°56'32.002"W	3115.85	16.245	1.33	-0.43	-1.26	
9592.00	90.620	342.670	6403.26	2644.43	3082.74	841.98	1656750.15	14242882.26	39°13'20.284"N	80°56'32.378"W	3195.66	15.277	1.40	0.14	1.40	
9686.00	90.550	345.080	6402.30	2738.31	3173.03	815.88	1656724.06	14242972.51	39°13'21.177"N	80°56'32.709"W	3276.24	14.420	2.56	-0.07	2.56	
9780.00	90.710	344.600	6401.26	2832.10	3263.75	791.30	1656699.48	14243063.20	39°13'22.074"N	80°56'33.020"W	3358.31	13.628	0.54	0.17	-0.51	
9874.00	90.580	343.480	6400.21	2925.97	3354.12	765.46	1656673.65	14243153.53	39°13'22.967"N	80°56'33.348"W	3440.36	12.856	1.20	-0.14	-1.19	
9969.00	91.020	342.800	6398.88	3020.90	3445.03	737.91	1656646.11	14243244.40	39°13'23.866"N	80°56'33.697"W	3523.17	12.090	0.85	0.46	-0.72	
10063.00	90.830	340.190	6397.36	3114.88	3534.15	708.08	1656616.29	14243333.48	39°13'24.747"N	80°56'34.076"W	3604.38	11.329	2.78	-0.20	-2.78	
10157.00	90.740	338.170	6396.07	3208.81	3622.00	674.67	1656582.90	14243421.30	39°13'25.615"N	80°56'34.499"W	3684.30	10.552	2.15	-0.10	-2.15	
10252.00	90.770	334.130	6394.82	3303.43	3708.86	636.27	1656544.52	14243508.13	39°13'26.474"N	80°56'34.987"W	3763.04	9.735	4.25	0.03	-4.25	
10346.00	90.770	332.500	6393.56	3396.55	3792.84	594.06	1656502.32	14243592.07	39°13'27.304"N	80°56'35.522"W	3839.08	8.902	1.73	0.00	-1.73	
10441.00	90.800	330.560	6392.26	3490.21	3876.34	548.78	1656457.06	14243675.54	39°13'28.130"N	80°56'36.097"W	3914.99	8.058	2.04	0.03	-2.04	
10536.00	90.580	334.350	6391.11	3584.10	3960.55	504.86	1656413.16	14243759.71	39°13'28.962"N	80°56'36.654"W	3992.60	7.264	4.00	-0.23	3.99	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 7 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 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
10631.00	90.830	338.270	6389.94	3678.74	4047.52	466.70	1656375.02	14243846.65	39°13'29.822"N	80°56'37.139"W	4074.34	6.577	4.13	0.26	4.13	
10725.00	90.650	339.720	6388.73	3772.66	4135.26	433.01	1656341.34	14243934.36	39°13'30.690"N	80°56'37.566"W	4157.87	5.978	1.55	-0.19	1.54	
10820.00	90.740	341.900	6387.58	3867.65	4224.97	401.79	1656310.13	14244024.03	39°13'31.577"N	80°56'37.962"W	4244.03	5.432	2.30	0.09	2.29	
10916.00	90.430	344.100	6386.60	3963.59	4316.77	373.72	1656282.08	14244115.79	39°13'32.484"N	80°56'38.318"W	4332.91	4.948	2.31	-0.32	2.29	
11010.00	90.490	345.830	6385.84	4057.37	4407.54	349.34	1656257.70	14244206.53	39°13'33.381"N	80°56'38.627"W	4421.36	4.532	1.84	0.06	1.84	
11104.00	90.650	347.150	6384.91	4150.95	4498.93	327.38	1656235.75	14244297.88	39°13'34.285"N	80°56'38.905"W	4510.83	4.162	1.41	0.17	1.40	
11199.00	90.220	347.450	6384.19	4245.39	4591.61	306.50	1656214.88	14244390.52	39°13'35.201"N	80°56'39.170"W	4601.83	3.819	0.55	-0.45	0.32	
11294.00	90.370	347.670	6383.70	4339.79	4684.38	286.03	1656194.42	14244483.25	39°13'36.118"N	80°56'39.429"W	4693.10	3.494	0.28	0.16	0.23	
11389.00	90.310	348.450	6383.13	4434.09	4777.32	266.38	1656174.77	14244576.15	39°13'37.037"N	80°56'39.678"W	4784.74	3.191	0.82	-0.06	0.82	
11484.00	90.340	348.790	6382.59	4528.28	4870.45	247.63	1656156.04	14244669.25	39°13'37.957"N	80°56'39.916"W	4876.74	2.911	0.36	0.03	0.36	
11578.00	90.550	345.030	6381.86	4621.78	4961.99	226.35	1656134.76	14244760.75	39°13'38.862"N	80°56'40.186"W	4967.15	2.612	4.01	0.22	-4.00	
11673.00	90.430	341.730	6381.05	4716.69	5053.00	199.18	1656107.60	14244851.73	39°13'39.762"N	80°56'40.530"W	5056.93	2.257	3.48	-0.13	-3.47	
11767.00	88.770	338.780	6381.71	4810.66	5141.46	167.43	1656075.87	14244940.15	39°13'40.636"N	80°56'40.933"W	5144.19	1.865	3.60	-1.77	-3.14	
11862.00	89.420	338.810	6383.21	4905.57	5230.02	133.07	1656041.52	14245028.67	39°13'41.512"N	80°56'41.369"W	5231.71	1.458	0.68	0.68	0.03	
11957.00	89.420	339.800	6384.17	5000.52	5318.88	99.50	1656007.97	14245117.50	39°13'42.390"N	80°56'41.795"W	5319.81	1.072	1.04	0.00	1.04	
12052.00	89.420	339.720	6385.13	5095.49	5408.01	66.64	1655975.12	14245206.59	39°13'43.272"N	80°56'42.212"W	5408.42	0.706	0.08	0.00	-0.08	
12147.00	89.320	340.020	6386.18	5190.46	5497.20	33.95	1655942.44	14245295.75	39°13'44.153"N	80°56'42.626"W	5497.31	0.354	0.33	-0.11	0.32	
12242.00	89.850	340.320	6386.86	5285.44	5586.57	1.72	1655910.22	14245385.08	39°13'45.037"N	80°56'43.035"W	5586.57	0.018	0.64	0.56	0.32	
12337.00	89.690	339.220	6387.24	5380.41	5675.70	-31.13	1655877.39	14245474.18	39°13'45.918"N	80°56'43.452"W	5675.79	359.686	1.17	-0.17	-1.16	
12432.00	90.060	339.820	6387.45	5475.38	5764.70	-64.37	1655844.16	14245563.14	39°13'46.798"N	80°56'43.874"W	5765.06	359.360	0.74	0.39	0.63	
12526.00	89.940	339.940	6387.45	5569.35	5852.96	-96.70	1655811.84	14245651.37	39°13'47.670"N	80°56'44.284"W	5853.76	359.053	0.18	-0.13	0.13	
12621.00	91.970	342.860	6385.87	5664.32	5942.97	-126.99	1655781.56	14245741.34	39°13'48.560"N	80°56'44.668"W	5944.33	358.776	3.74	2.14	3.07	
12715.00	90.030	341.680	6384.23	5758.28	6032.49	-155.61	1655752.95	14245830.82	39°13'49.445"N	80°56'45.031"W	6034.49	358.522	2.42	-2.06	-1.26	
12810.00	90.000	343.300	6384.20	5853.25	6123.08	-184.20	1655724.38	14245921.38	39°13'50.341"N	80°56'45.394"W	6125.85	358.277	1.71	-0.03	1.71	
12904.00	89.880	343.230	6384.30	5947.19	6213.10	-211.26	1655697.32	14246011.36	39°13'51.231"N	80°56'45.737"W	6216.69	358.053	0.15	-0.13	-0.07	
12999.00	89.940	341.930	6384.45	6042.16	6303.74	-239.70	1655668.90	14246101.97	39°13'52.127"N	80°56'46.098"W	6308.30	357.822	1.37	0.06	-1.37	
13093.00	90.000	337.770	6384.50	6136.11	6391.97	-272.08	1655636.54	14246190.16	39°13'52.999"N	80°56'46.509"W	6397.76	357.563	4.43	0.06	-4.43	
13187.00	89.820	336.420	6384.65	6229.88	6478.56	-308.66	1655599.97	14246276.71	39°13'53.855"N	80°56'46.973"W	6485.90	357.272	1.45	-0.19	-1.44	
13282.00	90.000	336.640	6384.80	6324.57	6565.70	-346.50	1655562.15	14246363.81	39°13'54.716"N	80°56'47.453"W	6574.83	356.979	0.30	0.19	0.23	
13376.00	89.970	336.090	6384.82	6418.25	6651.81	-384.18	1655524.48	14246449.89	39°13'55.568"N	80°56'47.931"W	6662.90	356.695	0.59	-0.03	-0.59	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 8 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH DATA (232 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
13471.00	89.880	336.170	6384.95	6512.89	6738.69	-422.62	1655486.05	14246536.73	39°13'56.427"N	80°56'48.419"W	6751.92	356.411	0.13	-0.09	0.08	
13565.00	89.820	336.390	6385.19	6606.55	6824.74	-460.44	1655448.25	14246622.76	39°13'57.277"N	80°56'48.899"W	6840.26	356.140	0.24	-0.06	0.23	
13660.00	89.660	338.840	6385.62	6701.37	6912.58	-496.61	1655412.09	14246710.56	39°13'58.146"N	80°56'49.358"W	6930.39	355.891	2.58	-0.17	2.58	
13754.00	89.480	343.490	6386.33	6795.34	7001.52	-526.95	1655381.76	14246799.46	39°13'59.025"N	80°56'49.743"W	7021.32	355.696	4.95	-0.19	4.95	
13848.00	90.060	345.010	6386.71	6889.19	7091.98	-552.46	1655356.26	14246889.89	39°13'59.919"N	80°56'50.066"W	7113.47	355.546	1.73	0.62	1.62	
13943.00	89.880	343.010	6386.76	6984.07	7183.30	-578.63	1655330.10	14246981.17	39°14'00.822"N	80°56'50.398"W	7206.57	355.395	2.11	-0.19	-2.11	
14038.00	90.000	342.330	6386.86	7079.03	7273.99	-606.93	1655301.81	14247071.82	39°14'01.718"N	80°56'50.757"W	7299.27	355.230	0.73	0.13	-0.72	
14133.00	89.880	341.520	6386.96	7174.02	7364.30	-636.41	1655272.35	14247162.10	39°14'02.611"N	80°56'51.131"W	7391.75	355.061	0.86	-0.13	-0.85	
14227.00	90.150	340.170	6386.93	7268.02	7453.10	-667.25	1655241.52	14247250.86	39°14'03.489"N	80°56'51.523"W	7482.90	354.884	1.46	0.29	-1.44	
14321.00	89.780	340.770	6386.99	7362.01	7541.69	-698.67	1655210.11	14247339.41	39°14'04.365"N	80°56'51.921"W	7573.98	354.707	0.75	-0.39	0.64	
14416.00	89.690	340.740	6387.43	7457.01	7631.38	-729.99	1655178.81	14247429.07	39°14'05.252"N	80°56'52.319"W	7666.21	354.536	0.10	-0.09	-0.03	
14511.00	89.660	345.200	6387.97	7551.93	7722.19	-757.80	1655151.01	14247519.84	39°14'06.149"N	80°56'52.671"W	7759.28	354.395	4.69	-0.03	4.69	
14606.00	89.690	349.230	6388.51	7646.38	7814.81	-778.82	1655130.00	14247612.43	39°14'07.065"N	80°56'52.938"W	7853.52	354.309	4.24	0.03	4.24	
14700.00	90.150	349.960	6388.64	7739.35	7907.26	-795.80	1655113.03	14247704.84	39°14'07.979"N	80°56'53.153"W	7947.21	354.253	0.92	0.49	0.78	
14794.00	90.220	345.820	6388.33	7832.67	7999.15	-815.51	1655093.32	14247796.69	39°14'08.887"N	80°56'53.403"W	8040.61	354.179	4.40	0.07	-4.40	
14889.00	89.050	341.300	6388.94	7927.56	8090.24	-842.39	1655066.45	14247887.75	39°14'09.787"N	80°56'53.744"W	8133.98	354.056	4.91	-1.23	-4.76	
14984.00	88.580	338.370	6390.90	8022.50	8179.39	-875.13	1655033.73	14247976.86	39°14'10.669"N	80°56'54.159"W	8226.07	353.893	3.12	-0.49	-3.08	
15079.00	89.380	339.890	6392.59	8117.43	8268.14	-908.96	1654999.90	14248065.57	39°14'11.546"N	80°56'54.589"W	8317.95	353.726	1.81	0.84	1.60	
15173.00	89.570	339.470	6393.46	8211.39	8356.28	-941.61	1654967.28	14248153.68	39°14'12.418"N	80°56'55.003"W	8409.17	353.571	0.49	0.20	-0.45	
15268.00	89.290	338.750	6394.40	8306.33	8445.04	-975.48	1654933.42	14248242.40	39°14'13.295"N	80°56'55.433"W	8501.19	353.411	0.81	-0.29	-0.76	
15362.00	89.350	337.340	6395.52	8400.19	8532.21	-1010.62	1654898.29	14248329.54	39°14'14.157"N	80°56'55.879"W	8591.85	353.245	1.50	0.06	-1.50	
15456.00	89.200	336.400	6396.71	8493.92	8618.65	-1047.54	1654861.38	14248415.94	39°14'15.011"N	80°56'56.347"W	8682.07	353.070	1.01	-0.16	-1.00	
15551.00	89.540	337.010	6397.75	8588.63	8705.90	-1085.11	1654823.83	14248503.15	39°14'15.874"N	80°56'56.824"W	8773.26	352.895	0.74	0.36	0.64	
15645.00	89.540	337.500	6398.51	8682.41	8792.58	-1121.45	1654787.50	14248589.81	39°14'16.731"N	80°56'57.285"W	8863.81	352.731	0.52	0.00	0.52	
15740.00	89.450	338.920	6399.34	8777.29	8880.79	-1156.71	1654752.26	14248677.98	39°14'17.603"N	80°56'57.733"W	8955.80	352.579	1.50	-0.09	1.49	
15835.00	89.260	340.170	6400.41	8872.24	8969.79	-1189.91	1654719.07	14248766.94	39°14'18.483"N	80°56'58.154"W	9048.37	352.443	1.33	-0.20	1.32	
15929.00	89.600	342.620	6401.35	8966.23	9058.87	-1219.89	1654689.10	14248855.98	39°14'19.363"N	80°56'58.534"W	9140.64	352.331	2.63	0.36	2.61	
16024.00	89.600	343.290	6401.96	9061.18	9149.69	-1247.74	1654661.26	14248946.77	39°14'20.261"N	80°56'58.888"W	9234.38	352.234	0.71	0.06	0.71	
16117.00	89.510	343.710	6402.63	9154.09	9238.86	-1274.15	1654634.86	14249035.90	39°14'21.143"N	80°56'59.223"W	9326.31	352.148	0.48	-0.16	0.45	
16212.00	89.540	344.050	6403.42	9248.98	9330.12	-1300.53	1654608.50	14249127.13	39°14'22.045"N	80°56'59.557"W	9420.33	352.065	0.36	0.03	0.36	

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 9 of 12



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Ritchie County, WV		Well	Buzzard Run Unit 2H
Field	Ritchie		Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad			

WELLPATH DATA (232 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
16306.00	89.600	344.200	6404.13	9342.85	9420.53	-1326.24	1654582.79	14249217.51	39°14'22.939"N	80°56'59.884"W	9513.43	351.986	0.17	0.06	0.16	
16401.00	89.570	344.570	6404.82	9437.69	9512.03	-1351.81	1654557.23	14249308.96	39°14'23.843"N	80°57'00.208"W	9607.60	351.912	0.39	-0.03	0.39	
16496.00	89.540	345.380	6405.55	9532.47	9603.77	-1376.44	1654532.62	14249400.67	39°14'24.750"N	80°57'00.520"W	9701.91	351.844	0.85	-0.03	0.85	
16590.00	89.480	344.610	6406.36	9626.25	9694.56	-1400.77	1654508.29	14249491.43	39°14'25.647"N	80°57'00.829"W	9795.24	351.778	0.82	-0.06	-0.82	
16684.00	89.570	343.070	6407.14	9720.14	9784.85	-1426.93	1654482.14	14249581.67	39°14'26.540"N	80°57'01.161"W	9888.34	351.703	1.64	0.10	-1.64	
16779.00	89.600	341.890	6407.83	9815.11	9875.43	-1455.53	1654453.55	14249672.22	39°14'27.435"N	80°57'01.524"W	9982.12	351.616	1.24	0.03	-1.24	
16874.00	89.570	341.130	6408.51	9910.11	9965.53	-1485.66	1654423.44	14249762.28	39°14'28.326"N	80°57'01.906"W	10075.66	351.521	0.80	-0.03	-0.80	
16969.00	89.820	341.480	6409.02	10005.10	10055.51	-1516.11	1654393.00	14249852.23	39°14'29.216"N	80°57'02.292"W	10169.17	351.426	0.45	0.26	0.37	
17063.00	89.820	341.390	6409.31	10099.10	10144.62	-1546.04	1654363.09	14249941.30	39°14'30.096"N	80°57'02.672"W	10261.75	351.335	0.10	0.00	-0.10	
17158.00	89.780	339.060	6409.65	10194.08	10234.01	-1578.18	1654330.96	14250030.66	39°14'30.980"N	80°57'03.080"W	10354.98	351.234	2.45	-0.04	-2.45	
17253.00	89.910	337.810	6409.90	10288.98	10322.36	-1613.09	1654296.06	14250118.97	39°14'31.854"N	80°57'03.523"W	10447.64	351.118	1.32	0.14	-1.32	
17347.00	89.780	336.670	6410.16	10382.76	10409.04	-1649.46	1654259.71	14250205.61	39°14'32.710"N	80°57'03.985"W	10538.92	350.996	1.22	-0.14	-1.21	
17441.00	89.630	336.000	6410.64	10476.43	10495.13	-1687.19	1654221.99	14250291.67	39°14'33.562"N	80°57'04.464"W	10629.88	350.887	0.73	-0.16	-0.71	
17536.00	89.660	335.350	6411.23	10571.00	10581.70	-1726.32	1654182.88	14250378.20	39°14'34.417"N	80°57'04.960"W	10721.59	350.734	0.68	0.03	-0.68	
17631.00	89.380	335.010	6412.03	10665.49	10667.92	-1766.19	1654143.02	14250464.39	39°14'35.270"N	80°57'05.467"W	10813.14	350.599	0.46	-0.29	-0.36	
17725.00	89.750	336.940	6412.74	10759.10	10753.77	-1804.46	1654104.76	14250550.20	39°14'36.119"N	80°57'05.952"W	10904.11	350.475	2.09	0.39	2.05	
17820.00	88.890	340.620	6413.87	10854.00	10842.31	-1838.84	1654070.40	14250638.71	39°14'36.994"N	80°57'06.389"W	10997.13	350.374	3.98	-0.91	3.87	
17915.00	89.720	344.550	6415.02	10948.94	10932.93	-1867.26	1654041.99	14250729.29	39°14'37.890"N	80°57'06.749"W	11091.24	350.308	4.23	0.87	4.14	
18009.00	89.690	344.040	6415.50	11042.79	11023.41	-1892.71	1654016.55	14250819.74	39°14'38.784"N	80°57'07.072"W	11184.72	350.257	0.54	-0.03	-0.54	
18104.00	89.570	343.140	6416.12	11137.70	11114.54	-1919.55	1653989.73	14250910.83	39°14'39.685"N	80°57'07.413"W	11279.08	350.201	0.96	-0.13	-0.95	
18139.00	89.660	343.330	6416.35	11172.68	11148.05	-1929.64	1653979.64	14250944.33	39°14'40.016"N	80°57'07.541"W	11313.82	350.180	0.60	0.26	0.54	
18164.00	89.660	343.330	6416.50	11197.66	11172.00	-1936.81	1653972.47	14250968.27	39°14'40.253"N	80°57'07.632"W	11338.65	350.165	0.00	0.00	0.00	Projected MD at TD: 18164'

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'

Page 10 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Buzzard Run Unit 2H AWB Ref Wellpath: Buzzard Run Unit 2H AWB Proj: 18164'

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	25.00	105.00	80.00	25.00	105.00	0.00	0.00	0.02	0.17
17.5in Open Hole	105.00	591.00	486.00	105.00	591.00	0.02	0.17	0.62	1.61
13.375in Casing Surface	25.00	591.00	566.00	25.00	591.00	0.00	0.00	0.62	1.61
12.25in Open Hole	591.00	2670.00	2079.00	591.00	2591.06	0.62	1.61	14.91	515.05
9.625in Casing Intermediate	25.00	2670.00	2645.00	25.00	2591.06	0.00	0.00	14.91	515.05
8.75in Open Hole	2670.00	6335.00	3665.00	2591.06	6021.29	14.91	515.05	137.33	1738.20
8.5in Open Hole	6335.00	18164.00	11829.00	6021.29	6416.50	137.33	1738.20	11172.00	-1936.81
5.5in Casing Production	25.00	18164.00	18139.00	25.00	6416.50	0.00	0.00	11172.00	-1936.81

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Buzzard Run Unit 2H - POE - Rev-1	6399.00	612.49	1690.18	1657598.00	14240413.00	39°12'55.863"N	80°56'21.621"W	point
Buzzard Run Unit 2H - BHL - Rev-1	6424.00	11200.74	-1930.28	1653979.00	14250997.00	39°14'40.537"N	80°57'07.549"W	point
Buzzard Run Unit 2H - LP - Rev-1	6424.00	787.98	1630.17	1657538.02	14240588.42	39°12'57.598"N	80°56'22.382"W	point

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'
Page 11 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

WELLPATH COMPOSITION - Ref Wellbore: Buzzard Run Unit 2H AWB Ref Wellpath: Buzzard Run Unit 2H AWB Proj: 18164'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	585.00	Gyrodatta standard - Single-shot	01 Gyrodatta SS Gyro <17-1/2">(100'-575')	Buzzard Run Unit 2H AWB
585.00	2588.00	OWSG MWD rev2 + HRGM	02 WFT EM <12-1/4">(575')(619'-2578')	Buzzard Run Unit 2H AWB
2588.00	6262.00	OWSG MWD rev2 + HRGM	03 WFT EM <8-3/4">(2578')(2682'-6252')	Buzzard Run Unit 2H AWB
6262.00	18139.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(6262')(6317'-18139')	Buzzard Run Unit 2H AWB
18139.00	18164.00	Blind Drilling (std)	Projection to bit	Buzzard Run Unit 2H AWB

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection



Actual Wellpath Report

Buzzard Run Unit 2H AWB Proj: 18164'

Page 12 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Buzzard Run Unit 2H
Field	Ritchie	Wellbore	Buzzard Run Unit 2H AWB
Facility	Lynn Camp Pad		

COMMENTS

Wellpath general comments

API: 47-085-10380-0000
 BHI Job #: 109803256
 Rig: Patterson 342
 Duration: 05/07/2019-05/11/2019
 Gyrodata SS Gyro <17-1/2">(100'-575')
 WFT EM <12-1/4">(575')(619'-2578')
 WFT EM <8-3/4">(2578')(2682'-6252')
 BH AT Curve <8-1/2">(6262')(6317'-18139')
 Middlesex: 6623' MD
 Burkett: 6819' MD
 Tully: 6901' MD
 Marcellus POE: 6973' MD
 Projected MD at TD: 18164'

RECEIVED
 Office of Oil and Gas
 AUG 31 2020
 WV Department of
 Environmental Protection