



ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
Field: Ritchie
Facility: Minear Pad

Slot: Slot D
Well: Aft Unit 1H
Wellbore: Aft Unit 1H PWB

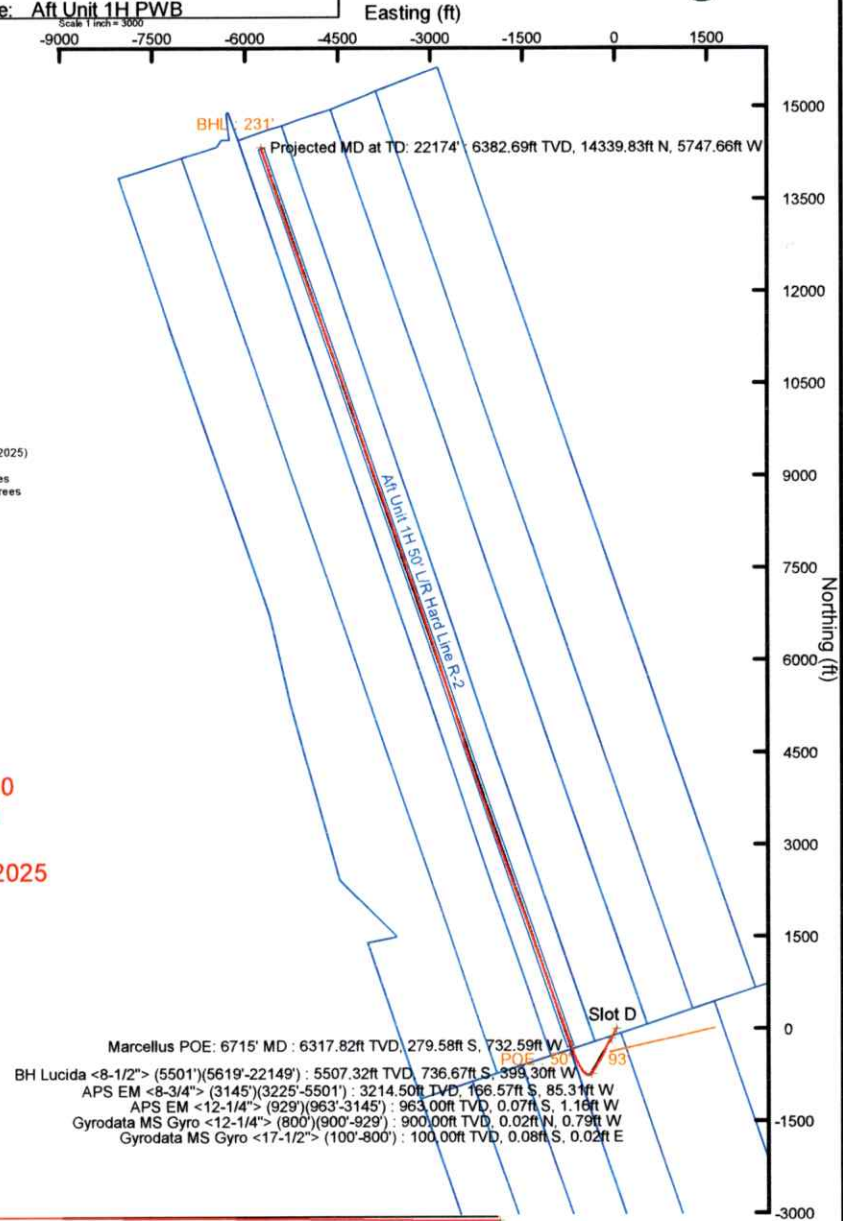
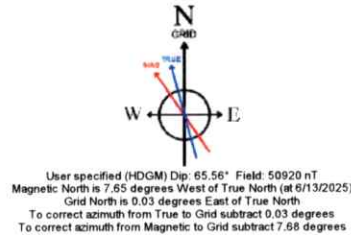
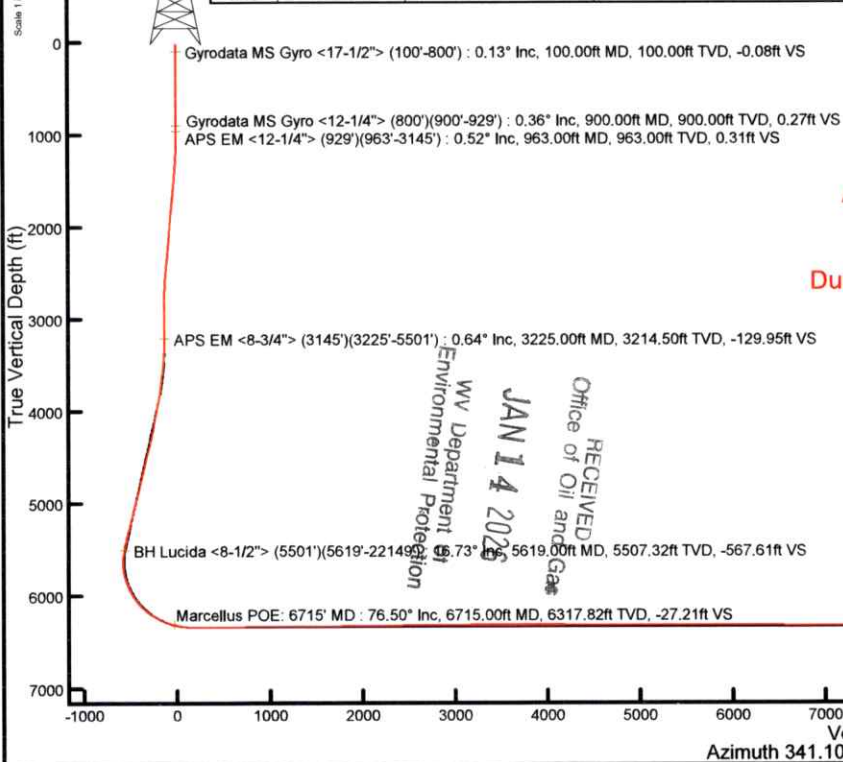


Plot reference wellpath is Aft Unit 1H PWB Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1122.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot D): -1097 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edgar on 2025-07-06; Database: WA_MPL_EASTERNUS_Delta

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Minear Pad	1652230.170	14234535.980	39°11'57.7821"N	80°57'29.8821"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot D	-44.14	-8.79	1652221.380	14234491.860
Comment	Aft Unit 1H			
H&P 317 (RKB) to Ground level (At Slot: Slot D)	25.5ft			
Mean Sea Level to Ground level (At Slot: Slot D)	-1097ft			
H&P 317 (RKB) to Mean Sea Level	1122.5ft			

Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3145.00	0.680	245.830	3134.51	-165.99	-84.65	2.28	-129.63
Proj. to Bottom	3220.00	0.680	245.830	3209.50	-166.36	-85.46	0.00	-129.71
KOP 1	3300.00	0.680	245.830	3289.49	-166.75	-86.32	0.00	-129.79
End of 3D Arc	3909.73	18.838	209.920	3887.96	-254.29	-139.18	3.00	-195.50
Curve KOP	5598.76	18.838	209.920	5486.52	-726.99	-411.21	0.00	-554.60
POE	6704.64	75.762	341.101	6318.00	-282.68	-742.45	8.00	-26.95
Landing Pt.	6882.62	90.000	341.101	6340.00	-116.03	-799.50	8.00	149.20
BHL	22140.00	90.000	341.101	6340.00	14318.84	-5741.40	0.00	15406.58

Well Data				
Slot	Well	Wellbore	Wellpath	
Slot D	Aft Unit 1H	Aft Unit 1H AWB	Aft Unit 1H AWP Proj: 22174'	
Slot D	Aft Unit 1H	Aft Unit 1H PWB	Aft Unit 1H PWB Rev-B.0	



API: 47-085-10549-0000
BH Job #: 112660885
Rig: H&P 317
Duration: 6/15/2025-6/20/2025

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Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 1 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999600	Report Generated	7/6/2025 at 4:19:34 PM
Convergence at slot	0.03° 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	-44.14	-8.79	1652221.38	14234491.86	39°11'57.3459"N	80°57'29.9940"W
Facility Reference Pt			1652230.17	14234535.98	39°11'57.7821"N	80°57'29.8821"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 317 (RKB) to Facility Vertical Datum	1122.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1122.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot D)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.10°

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Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 2 of 12



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Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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	169.420	0.00	0.00	0.00	0.00	1652221.38	14234491.86	39°11'57.3459"N	80°57'29.9940"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	169.420	25.50	0.00	0.00	0.00	1652221.38	14234491.86	39°11'57.3459"N	80°57'29.9940"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.130	169.420	100.00	-0.08	-0.08	0.02	1652221.40	14234491.78	39°11'57.3451"N	80°57'29.9938"W	0.08	169.420	0.17	0.17	0.00	Gyrodata MS Gyro <17-1/2"> (100'-800')
200.00	0.070	312.490	200.00	-0.14	-0.15	-0.01	1652221.37	14234491.71	39°11'57.3444"N	80°57'29.9941"W	0.15	183.246	0.19	-0.06	143.07	
300.00	0.070	297.310	300.00	-0.04	-0.08	-0.11	1652221.27	14234491.78	39°11'57.3451"N	80°57'29.9954"W	0.14	232.114	0.02	0.00	-15.18	
400.00	0.080	316.150	400.00	0.06	-0.01	-0.21	1652221.17	14234491.85	39°11'57.3458"N	80°57'29.9967"W	0.21	268.457	0.03	0.01	18.84	
500.00	0.100	330.370	500.00	0.21	0.12	-0.30	1652221.08	14234491.98	39°11'57.3471"N	80°57'29.9979"W	0.33	291.745	0.03	0.02	14.22	
600.00	0.050	317.350	600.00	0.34	0.23	-0.37	1652221.01	14234492.09	39°11'57.3481"N	80°57'29.9988"W	0.44	301.361	0.05	-0.05	-13.02	
700.00	0.050	85.760	700.00	0.37	0.26	-0.36	1652221.02	14234492.12	39°11'57.3485"N	80°57'29.9986"W	0.45	306.162	0.09	0.00	128.41	
800.00	0.140	221.890	800.00	0.30	0.18	-0.40	1652220.98	14234492.04	39°11'57.3476"N	80°57'29.9991"W	0.44	293.811	0.18	0.09	136.13	
900.00	0.360	257.710	900.00	0.27	0.02	-0.79	1652220.59	14234491.88	39°11'57.3461"N	80°57'30.0040"W	0.79	271.327	0.26	0.22	35.82	Gyrodata MS Gyro <12-1/4"> (800')(900'-929')
929.00	0.260	264.410	929.00	0.30	-0.01	-0.94	1652220.44	14234491.85	39°11'57.3458"N	80°57'30.0060"W	0.94	269.541	0.37	-0.34	23.10	
963.00	0.520	248.700	963.00	0.31	-0.07	-1.16	1652220.22	14234491.79	39°11'57.3452"N	80°57'30.0088"W	1.16	266.500	0.82	0.76	-46.21	APS EM <12-1/4"> (929')(963'-3145')
1052.00	1.810	216.700	1051.98	-0.50	-1.34	-2.38	1652219.00	14234490.52	39°11'57.3326"N	80°57'30.0243"W	2.73	240.520	1.57	1.45	-35.96	
1147.00	3.280	211.640	1146.88	-3.08	-4.86	-4.70	1652216.68	14234487.00	39°11'57.2979"N	80°57'30.0538"W	6.76	224.039	1.56	1.55	-5.33	
1241.00	4.930	212.430	1240.64	-7.31	-10.56	-8.28	1652213.11	14234481.30	39°11'57.2415"N	80°57'30.0992"W	13.42	218.092	1.76	1.76	0.84	
1336.00	6.160	211.790	1335.19	-13.09	-18.34	-13.15	1652208.23	14234473.53	39°11'57.1647"N	80°57'30.1612"W	22.57	215.648	1.30	1.29	-0.67	
1431.00	6.210	211.370	1429.64	-19.60	-27.06	-18.51	1652202.87	14234464.81	39°11'57.0785"N	80°57'30.2293"W	32.79	214.379	0.07	0.05	-0.44	
1525.00	7.750	211.930	1522.94	-26.86	-36.78	-24.51	1652196.88	14234455.10	39°11'56.9825"N	80°57'30.3056"W	44.20	213.682	1.64	1.64	0.60	
1620.00	8.030	211.070	1617.04	-35.17	-47.90	-31.32	1652190.07	14234443.98	39°11'56.8726"N	80°57'30.3922"W	57.23	213.183	0.32	0.29	-0.91	
1714.00	7.870	208.140	1710.14	-43.78	-59.20	-37.75	1652183.65	14234432.69	39°11'56.7610"N	80°57'30.4739"W	70.21	212.524	0.46	-0.17	-3.12	
1809.00	7.480	206.780	1804.28	-52.53	-70.45	-43.60	1652177.80	14234421.44	39°11'56.6497"N	80°57'30.5483"W	82.85	211.752	0.45	-0.41	-1.43	
1904.00	7.470	205.200	1898.48	-61.29	-81.56	-49.02	1652172.38	14234410.33	39°11'56.5400"N	80°57'30.6171"W	95.16	211.005	0.22	-0.01	-1.66	
1998.00	6.160	204.150	1991.81	-69.36	-91.69	-53.68	1652167.72	14234400.21	39°11'56.4399"N	80°57'30.6764"W	106.25	210.347	1.40	-1.39	-1.12	
2093.00	6.130	202.400	2086.27	-76.90	-101.03	-57.70	1652163.70	14234390.87	39°11'56.3476"N	80°57'30.7275"W	116.35	209.731	0.20	-0.03	-1.84	
2188.00	7.140	203.940	2180.63	-85.04	-111.12	-62.03	1652159.38	14234380.79	39°11'56.2479"N	80°57'30.7826"W	127.26	209.171	1.08	1.06	1.62	
2282.00	7.230	205.250	2273.89	-93.56	-121.81	-66.92	1652154.48	14234370.10	39°11'56.1423"N	80°57'30.8448"W	138.98	208.785	0.20	0.10	1.39	
2377.00	7.180	203.180	2368.14	-102.26	-132.67	-71.81	1652149.60	14234359.24	39°11'56.0349"N	80°57'30.9069"W	150.86	208.425	0.28	-0.05	-2.18	
2472.00	6.990	203.320	2462.41	-110.95	-143.44	-76.43	1652144.98	14234348.48	39°11'55.9285"N	80°57'30.9657"W	162.53	208.052	0.20	-0.20	0.15	
2566.00	4.810	197.470	2555.91	-118.36	-152.45	-79.88	1652141.53	14234339.47	39°11'55.8394"N	80°57'31.0096"W	172.11	207.654	2.40	-2.32	-6.22	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 3 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Minear Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
2661.00	3.570	186.630	2650.66	-124.23	-159.19	-81.42	1652139.99	14234332.74	39°11'55.7729"N	80°57'31.0292"W	178.80	207.088	1.54	-1.31	-11.41	
2756.00	2.060	180.640	2745.54	-128.51	-163.83	-81.78	1652139.63	14234328.09	39°11'55.7269"N	80°57'31.0338"W	183.11	206.527	1.62	-1.59	-6.31	
2850.00	0.270	231.540	2839.52	-130.18	-165.66	-81.97	1652139.44	14234326.27	39°11'55.7089"N	80°57'31.0362"W	184.83	206.327	2.02	-1.90	54.15	
2945.00	0.560	273.210	2934.52	-130.08	-165.77	-82.61	1652138.80	14234326.15	39°11'55.7078"N	80°57'31.0443"W	185.22	206.489	0.42	0.31	43.86	
3040.00	0.600	258.860	3029.51	-129.84	-165.84	-83.56	1652137.85	14234326.08	39°11'55.7071"N	80°57'31.0564"W	185.71	206.742	0.16	0.04	-15.11	
3134.00	0.590	267.180	3123.51	-129.64	-165.96	-84.53	1652136.89	14234325.96	39°11'55.7059"N	80°57'31.0687"W	186.25	206.991	0.09	-0.01	8.85	
3145.00	0.680	245.830	3134.51	-129.63	-165.99	-84.65	1652136.77	14234325.93	39°11'55.7056"N	80°57'31.0702"W	186.33	207.018	2.28	0.82	-194.09	
3225.00	0.640	211.510	3214.50	-129.95	-166.57	-85.31	1652136.10	14234325.36	39°11'55.6999"N	80°57'31.0786"W	187.14	207.120	0.49	-0.05	-42.90	APS EM <8-3/4"> (3145')(3225'-5501')
3320.00	2.750	235.800	3309.45	-130.89	-168.30	-87.47	1652133.94	14234323.63	39°11'55.6828"N	80°57'31.1061"W	189.68	207.463	2.30	2.22	25.57	
3417.00	7.630	222.990	3406.03	-134.54	-174.32	-93.79	1652127.62	14234317.61	39°11'55.6233"N	80°57'31.1864"W	197.95	208.282	5.14	5.03	-13.21	
3512.00	12.010	214.430	3499.62	-143.42	-187.10	-103.69	1652117.73	14234304.84	39°11'55.4971"N	80°57'31.3122"W	213.91	208.995	4.85	4.61	-9.01	
3606.00	11.910	215.330	3591.58	-154.93	-203.08	-114.83	1652106.60	14234288.87	39°11'55.3392"N	80°57'31.4538"W	233.29	209.485	0.23	-0.11	0.96	
3701.00	10.530	208.300	3684.77	-166.56	-218.72	-124.61	1652096.82	14234273.23	39°11'55.1847"N	80°57'31.5781"W	251.73	209.672	2.04	-1.45	-7.40	
3796.00	10.670	204.950	3778.15	-178.80	-234.34	-132.44	1652089.00	14234257.62	39°11'55.0303"N	80°57'31.6776"W	269.17	209.473	0.67	0.15	-3.53	
3891.00	12.960	203.780	3871.13	-192.98	-252.06	-140.44	1652080.99	14234239.90	39°11'54.8552"N	80°57'31.7794"W	288.55	209.126	2.42	2.41	-1.23	
3985.00	15.100	203.650	3962.32	-209.75	-272.92	-149.61	1652071.83	14234219.05	39°11'54.6490"N	80°57'31.8959"W	311.24	208.730	2.28	2.28	-0.14	
4080.00	15.660	204.340	4053.91	-228.21	-295.94	-159.85	1652061.59	14234196.04	39°11'54.4216"N	80°57'32.0262"W	336.35	208.376	0.62	0.59	0.73	
4175.00	15.290	207.120	4145.47	-246.24	-318.77	-170.85	1652050.60	14234173.22	39°11'54.1959"N	80°57'32.1660"W	361.67	208.190	0.87	-0.39	2.93	
4269.00	14.870	206.390	4236.23	-263.34	-340.61	-181.86	1652039.59	14234151.39	39°11'53.9802"N	80°57'32.3060"W	386.12	208.099	0.49	-0.45	-0.78	
4364.00	16.670	202.500	4327.66	-282.14	-364.12	-192.49	1652028.96	14234127.89	39°11'53.7478"N	80°57'32.4412"W	411.87	207.863	2.20	1.89	-4.09	
4459.00	18.890	201.870	4418.11	-304.01	-390.98	-203.44	1652018.02	14234101.03	39°11'53.4824"N	80°57'32.5804"W	440.74	207.489	2.35	2.34	-0.66	
4554.00	18.300	205.260	4508.16	-326.35	-418.74	-215.53	1652005.94	14234073.29	39°11'53.2080"N	80°57'32.7342"W	470.96	207.235	1.30	-0.62	3.57	
4649.00	18.540	208.890	4598.29	-347.20	-445.46	-229.19	1651992.28	14234046.58	39°11'52.9441"N	80°57'32.9078"W	500.96	207.226	1.23	0.25	3.82	
4743.00	19.580	208.560	4687.14	-367.89	-472.38	-243.94	1651977.53	14234019.67	39°11'52.6781"N	80°57'33.0954"W	531.65	207.313	1.11	1.11	-0.35	
4838.00	19.070	208.760	4776.79	-389.11	-499.96	-259.02	1651962.46	14233992.10	39°11'52.4055"N	80°57'33.2870"W	563.08	207.388	0.54	-0.54	0.21	
4933.00	20.550	211.940	4866.16	-410.09	-527.72	-275.31	1651946.18	14233964.35	39°11'52.1312"N	80°57'33.4941"W	595.22	207.551	1.93	1.56	3.35	
5028.00	22.220	212.700	4954.62	-431.78	-556.99	-293.84	1651927.66	14233935.10	39°11'51.8420"N	80°57'33.7296"W	629.74	207.814	1.78	1.76	0.80	
5122.00	21.710	211.880	5041.80	-453.81	-586.71	-312.62	1651908.88	14233905.39	39°11'51.5483"N	80°57'33.9683"W	664.80	208.051	0.63	-0.54	-0.87	
5217.00	21.900	211.410	5130.00	-476.24	-616.75	-331.13	1651890.38	14233875.36	39°11'51.2515"N	80°57'34.2037"W	700.02	208.232	0.27	0.20	-0.49	
5312.00	21.920	212.090	5218.14	-498.71	-646.89	-349.79	1651871.73	14233845.23	39°11'50.9537"N	80°57'34.4408"W	735.40	208.401	0.27	0.02	0.72	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'
Page 4 of 12



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Slot	Slot D		

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5407.00	21.450	209.710	5306.42	-521.36	-677.00	-367.82	1651853.71	14233815.13	39°11'50.6561"N	80°57'34.6700"W	770.47	208.515	1.05	-0.49	-2.51	
5501.00	18.340	205.070	5394.80	-543.37	-705.33	-382.61	1651838.93	14233786.81	39°11'50.3762"N	80°57'34.8580"W	802.42	208.478	3.71	-3.31	-4.94	
5619.00	16.730	211.310	5507.32	-567.61	-736.67	-399.30	1651822.24	14233755.49	39°11'50.0666"N	80°57'35.0702"W	837.92	208.459	2.10	-1.36	5.29	BH Lucida <8-1/2"> (5501')(5619'-22149')
5714.00	15.630	237.320	5598.68	-579.42	-755.28	-417.20	1651804.34	14233736.88	39°11'49.8826"N	80°57'35.2977"W	862.85	208.915	7.65	-1.16	27.38	
5809.00	15.590	265.180	5690.30	-579.36	-763.28	-440.73	1651780.83	14233728.89	39°11'49.8037"N	80°57'35.5965"W	881.38	210.003	7.82	-0.04	29.33	
5903.00	19.150	288.850	5780.11	-566.83	-759.35	-467.95	1651753.62	14233732.81	39°11'49.8426"N	80°57'35.9423"W	891.96	211.643	8.34	3.79	25.18	
5998.00	24.180	306.050	5868.46	-541.32	-742.84	-498.48	1651723.10	14233749.32	39°11'50.0060"N	80°57'36.3299"W	894.59	213.863	8.48	5.29	18.11	
6092.00	29.970	318.340	5952.19	-503.85	-713.92	-529.70	1651691.89	14233778.23	39°11'50.2919"N	80°57'36.7263"W	888.97	216.574	8.54	6.16	13.07	
6172.00†	35.066	324.370	6019.65	-463.38	-680.28	-556.39	1651665.21	14233811.85	39°11'50.6245"N	80°57'37.0652"W	878.84	219.279	7.54	6.37	7.54	Sycamore: 6172' MD
6187.00	36.050	325.330	6031.85	-455.01	-673.15	-561.41	1651660.19	14233818.98	39°11'50.6950"N	80°57'37.1290"W	876.54	219.828	7.54	6.56	6.40	
6282.00	43.010	329.880	6105.09	-396.24	-622.06	-593.62	1651628.00	14233870.05	39°11'51.2001"N	80°57'37.5378"W	859.85	223.660	7.93	7.33	4.79	
6371.00†	50.715	333.006	6165.91	-332.26	-565.02	-624.54	1651597.09	14233927.07	39°11'51.7640"N	80°57'37.9301"W	842.20	227.864	9.03	8.66	3.51	Middlesex: 6371' MD
6376.00	51.150	333.160	6169.06	-328.42	-561.56	-626.29	1651595.34	14233930.53	39°11'51.7983"N	80°57'37.9524"W	841.19	228.119	9.03	8.70	3.08	
6471.00	58.380	338.210	6223.86	-251.24	-490.87	-658.07	1651563.58	14234001.19	39°11'52.4971"N	80°57'38.3556"W	820.98	233.280	8.76	7.61	5.32	
6564.00†	64.919	340.863	6268.00	-169.48	-414.22	-686.61	1651535.05	14234077.81	39°11'53.2548"N	80°57'38.7177"W	801.88	238.898	7.47	7.03	2.85	Burkett: 6564' MD
6565.00	64.990	340.890	6268.42	-168.58	-413.36	-686.90	1651534.75	14234078.66	39°11'53.2633"N	80°57'38.7215"W	801.69	238.961	7.47	7.06	2.69	
6646.00†	71.197	341.379	6298.63	-93.46	-342.28	-711.19	1651510.48	14234149.72	39°11'53.9659"N	80°57'39.0295"W	789.27	244.299	7.68	7.66	0.60	Tully: 6646' MD
6660.00	72.270	341.460	6303.02	-80.17	-329.68	-715.42	1651506.25	14234162.31	39°11'54.0905"N	80°57'39.0833"W	787.73	245.259	7.68	7.66	0.58	
6715.00†	76.501	340.715	6317.82	-27.21	-279.58	-732.59	1651489.09	14234212.39	39°11'54.5857"N	80°57'39.3011"W	784.13	249.111	7.80	7.69	-1.35	Marcellus POE: 6715' MD
6755.00	79.580	340.190	6326.11	11.91	-242.71	-745.68	1651476.00	14234249.25	39°11'54.9502"N	80°57'39.4671"W	784.19	251.970	7.80	7.70	-1.31	
6850.00	85.930	340.550	6338.08	106.10	-153.99	-777.32	1651444.37	14234337.93	39°11'55.8273"N	80°57'39.8686"W	792.43	258.794	6.69	6.68	0.38	
6944.00	90.280	340.610	6341.19	200.02	-65.41	-808.55	1651413.15	14234426.48	39°11'56.7029"N	80°57'40.2648"W	811.19	265.375	4.63	4.63	0.06	
7038.00	90.220	340.660	6340.78	294.02	23.27	-839.72	1651382.00	14234515.12	39°11'57.5796"N	80°57'40.6602"W	840.04	271.587	0.08	-0.06	0.05	
7133.00	90.250	340.480	6340.39	389.01	112.86	-871.32	1651350.41	14234604.67	39°11'58.4652"N	80°57'41.0611"W	878.60	277.380	0.19	0.03	-0.19	
7228.00	90.280	340.720	6339.95	484.01	202.47	-902.88	1651318.86	14234694.24	39°11'59.3510"N	80°57'41.4615"W	925.30	282.639	0.25	0.03	0.25	
7322.00	90.370	340.530	6339.42	578.00	291.14	-934.06	1651287.69	14234782.88	39°12'0.2276"N	80°57'41.8571"W	978.38	287.312	0.22	0.10	-0.20	
7417.00	90.250	340.450	6338.90	673.00	380.68	-965.79	1651255.98	14234872.39	39°12'1.1127"N	80°57'42.2596"W	1038.11	291.513	0.15	-0.13	-0.08	
7512.00	90.280	340.540	6338.46	767.99	470.23	-997.51	1651224.27	14234961.90	39°12'1.9979"N	80°57'42.6621"W	1102.79	295.239	0.10	0.03	0.09	
7606.00	90.280	340.420	6338.00	861.98	558.83	-1028.92	1651192.88	14235050.46	39°12'2.8737"N	80°57'43.0605"W	1170.88	298.507	0.13	0.00	-0.13	
7701.00	90.430	341.180	6337.41	956.98	648.54	-1060.16	1651161.65	14235140.14	39°12'3.7606"N	80°57'43.4569"W	1242.80	301.456	0.82	0.16	0.80	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 5 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
7795.00	90.280	340.740	6336.83	1050.98	737.40	-1090.82	1651131.00	14235228.96	39°12'4.6389"N	80°57'43.8460"W	1316.68	304.059	0.49	-0.16	-0.47	
7890.00	90.250	340.610	6336.39	1145.97	827.04	-1122.26	1651099.57	14235318.57	39°12'5.5251"N	80°57'44.2448"W	1394.08	306.388	0.14	-0.03	-0.14	
7985.00	90.280	341.090	6335.95	1240.97	916.78	-1153.42	1651068.42	14235408.28	39°12'6.4123"N	80°57'44.6402"W	1473.39	308.479	0.51	0.03	0.51	
8079.00	90.280	340.660	6335.49	1334.97	1005.60	-1184.22	1651037.63	14235497.05	39°12'7.2902"N	80°57'45.0309"W	1553.58	310.337	0.46	0.00	-0.46	
8174.00	90.340	340.540	6334.98	1429.96	1095.20	-1215.78	1651006.09	14235586.62	39°12'8.1759"N	80°57'45.4313"W	1636.33	312.013	0.14	0.06	-0.13	
8268.00	90.460	340.520	6334.32	1523.96	1183.82	-1247.11	1650974.77	14235675.21	39°12'9.0520"N	80°57'45.8288"W	1719.51	313.509	0.13	0.13	-0.02	
8363.00	90.580	340.710	6333.46	1618.95	1273.43	-1278.64	1650943.26	14235764.78	39°12'9.9378"N	80°57'46.2289"W	1804.59	314.883	0.24	0.13	0.20	
8457.00	90.650	340.650	6332.45	1712.94	1362.13	-1309.73	1650912.17	14235853.45	39°12'10.8147"N	80°57'46.6235"W	1889.66	316.124	0.10	0.07	-0.06	
8552.00	90.460	340.290	6331.53	1807.93	1451.66	-1341.49	1650880.43	14235942.94	39°12'11.6997"N	80°57'47.0264"W	1976.60	317.259	0.43	-0.20	-0.38	
8646.00	90.620	340.670	6330.65	1901.92	1540.26	-1372.90	1650849.03	14236031.50	39°12'12.5755"N	80°57'47.4249"W	2063.31	318.288	0.44	0.17	0.40	
8836.00	90.680	341.150	6328.49	2091.91	1719.80	-1435.03	1650786.92	14236210.97	39°12'14.3503"N	80°57'48.2133"W	2239.87	320.158	0.25	0.03	0.25	
8930.00	90.580	340.710	6327.46	2185.90	1808.63	-1465.74	1650756.22	14236299.77	39°12'15.2284"N	80°57'48.6029"W	2327.99	320.978	0.48	-0.11	-0.47	
9024.00	90.490	340.480	6326.58	2279.89	1897.29	-1496.97	1650725.01	14236388.39	39°12'16.1048"N	80°57'48.9992"W	2416.74	321.726	0.26	-0.10	-0.24	
9119.00	90.550	340.650	6325.72	2374.89	1986.87	-1528.58	1650693.41	14236477.93	39°12'16.9904"N	80°57'49.4003"W	2506.84	322.427	0.19	0.06	0.18	
9214.00	90.430	340.740	6324.90	2469.88	2076.53	-1559.99	1650662.02	14236567.55	39°12'17.8766"N	80°57'49.7988"W	2597.22	323.084	0.16	-0.13	0.09	
9308.00	90.520	340.740	6324.13	2563.87	2165.26	-1590.99	1650631.03	14236656.25	39°12'18.7538"N	80°57'50.1922"W	2686.94	323.692	0.10	0.10	0.00	
9403.00	90.550	340.590	6323.24	2658.87	2254.90	-1622.45	1650599.59	14236745.85	39°12'19.6399"N	80°57'50.5913"W	2777.93	324.264	0.16	0.03	-0.16	
9498.00	90.520	340.470	6322.35	2753.86	2344.46	-1654.11	1650567.94	14236835.38	39°12'20.5253"N	80°57'50.9931"W	2869.25	324.796	0.13	-0.03	-0.13	
9592.00	90.490	340.490	6321.52	2847.85	2433.06	-1685.52	1650536.54	14236923.94	39°12'21.4010"N	80°57'51.3916"W	2959.86	325.287	0.04	-0.03	0.02	
9687.00	90.550	340.550	6320.66	2942.84	2522.62	-1717.20	1650504.87	14237013.46	39°12'22.2863"N	80°57'51.7936"W	3051.62	325.756	0.09	0.06	0.06	
9782.00	90.490	340.780	6319.80	3037.83	2612.25	-1748.65	1650473.43	14237103.07	39°12'23.1724"N	80°57'52.1927"W	3143.51	326.202	0.25	-0.06	0.24	
9876.00	90.490	340.810	6318.99	3131.83	2701.02	-1779.57	1650442.53	14237191.80	39°12'24.0499"N	80°57'52.5850"W	3234.56	326.621	0.03	0.00	0.03	
9971.00	90.430	340.530	6318.23	3226.82	2790.66	-1811.01	1650411.09	14237281.40	39°12'24.9360"N	80°57'52.9841"W	3326.79	327.018	0.30	-0.06	-0.29	
10066.00	90.370	340.370	6317.57	3321.81	2880.18	-1842.80	1650379.32	14237370.89	39°12'25.8210"N	80°57'53.3875"W	3419.27	327.388	0.18	-0.06	-0.17	
10160.00	90.090	340.820	6317.19	3415.81	2968.84	-1874.03	1650348.10	14237459.51	39°12'26.6974"N	80°57'53.7838"W	3510.84	327.739	0.56	-0.30	0.48	
10255.00	89.880	340.570	6317.22	3510.81	3058.50	-1905.44	1650316.71	14237549.13	39°12'27.5837"N	80°57'54.1823"W	3603.49	328.077	0.34	-0.22	-0.26	
10350.00	89.820	340.530	6317.46	3605.80	3148.08	-1937.07	1650285.09	14237638.67	39°12'28.4692"N	80°57'54.5837"W	3696.30	328.395	0.08	-0.06	-0.04	
10444.00	89.820	340.710	6317.76	3699.80	3236.75	-1968.26	1650253.91	14237727.31	39°12'29.3457"N	80°57'54.9795"W	3788.22	328.696	0.19	0.00	0.19	
10539.00	89.940	340.840	6317.96	3794.80	3326.45	-1999.55	1650222.64	14237816.98	39°12'30.2324"N	80°57'55.3765"W	3881.17	328.990	0.19	0.13	0.14	
10634.00	89.910	340.730	6318.08	3889.80	3416.16	-2030.81	1650191.38	14237906.65	39°12'31.1192"N	80°57'55.7733"W	3974.21	329.270	0.12	-0.03	-0.12	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 6 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
10728.00	89.880	340.720	6318.26	3983.79	3504.89	-2061.84	1650160.37	14237995.34	39°12'31.9963"N	80°57'56.1670"W	4066.38	329.533	0.03	-0.03	-0.01	
10823.00	89.910	340.730	6318.43	4078.79	3594.57	-2093.20	1650129.02	14238084.98	39°12'32.8828"N	80°57'56.5650"W	4159.62	329.787	0.03	0.03	0.01	
10918.00	89.910	341.030	6318.58	4173.79	3684.33	-2124.32	1650097.92	14238174.71	39°12'33.7701"N	80°57'56.9599"W	4252.88	330.033	0.32	0.00	0.32	
11012.00	89.910	341.080	6318.73	4267.79	3773.23	-2154.84	1650067.41	14238263.58	39°12'34.6489"N	80°57'57.3472"W	4345.18	330.270	0.05	0.00	0.05	
11107.00	89.660	340.550	6319.08	4362.79	3862.96	-2186.05	1650036.20	14238353.26	39°12'35.5359"N	80°57'57.7433"W	4438.61	330.494	0.62	-0.26	-0.56	
11202.00	89.570	340.780	6319.72	4457.78	3952.60	-2217.51	1650004.76	14238442.87	39°12'36.4220"N	80°57'58.1425"W	4532.15	330.706	0.26	-0.09	0.24	
11296.00	89.660	340.510	6320.35	4551.78	4041.28	-2248.66	1649973.62	14238531.52	39°12'37.2986"N	80°57'58.5378"W	4624.76	330.907	0.30	0.10	-0.29	
11391.00	89.690	341.820	6320.89	4646.77	4131.19	-2279.33	1649942.97	14238621.39	39°12'38.1874"N	80°57'58.9270"W	4718.27	331.113	1.38	0.03	1.38	
11486.00	89.750	342.600	6321.36	4741.75	4221.65	-2308.35	1649913.95	14238711.81	39°12'39.0815"N	80°57'59.2953"W	4811.53	331.331	0.82	0.06	0.82	
11580.00	89.540	340.860	6321.94	4835.74	4310.90	-2337.82	1649884.50	14238801.03	39°12'39.9639"N	80°57'59.6693"W	4904.01	331.529	1.86	-0.22	-1.85	
11675.00	90.030	341.740	6322.30	4930.74	4400.89	-2368.28	1649854.05	14238890.98	39°12'40.8533"N	80°58'0.0558"W	4997.65	331.714	1.06	0.52	0.93	
11770.00	90.220	342.120	6322.09	5025.73	4491.20	-2397.75	1649824.60	14238981.26	39°12'41.7461"N	80°58'0.4297"W	5091.18	331.903	0.45	0.20	0.40	
11864.00	89.940	340.450	6321.96	5119.73	4580.23	-2427.91	1649794.45	14239070.25	39°12'42.6261"N	80°58'0.8125"W	5183.94	332.073	1.80	-0.30	-1.78	
11959.00	90.180	345.280	6321.86	5214.65	4670.98	-2455.89	1649766.48	14239160.97	39°12'43.5233"N	80°58'1.1676"W	5277.26	332.266	5.09	0.25	5.08	
12054.00	89.940	344.020	6321.76	5309.47	4762.59	-2481.03	1649741.34	14239252.54	39°12'44.4288"N	80°58'1.4866"W	5370.09	332.483	1.35	-0.25	-1.33	
12148.00	90.060	342.170	6321.76	5403.41	4852.53	-2508.37	1649714.02	14239342.44	39°12'45.3178"N	80°58'1.8334"W	5462.50	332.665	1.97	0.13	-1.97	
12243.00	90.030	341.630	6321.68	5498.40	4942.83	-2537.88	1649684.52	14239432.70	39°12'46.2104"N	80°58'2.2080"W	5556.29	332.822	0.57	-0.03	-0.57	
12337.00	90.000	341.710	6321.66	5592.39	5032.06	-2567.44	1649654.97	14239521.89	39°12'47.0924"N	80°58'2.5832"W	5649.19	332.969	0.09	-0.03	0.09	
12432.00	90.000	341.570	6321.66	5687.39	5122.22	-2597.37	1649625.06	14239612.02	39°12'47.9837"N	80°58'2.9629"W	5743.12	333.111	0.15	0.00	-0.15	
12527.00	89.970	341.740	6321.68	5782.38	5212.39	-2627.27	1649595.17	14239702.16	39°12'48.8751"N	80°58'3.3424"W	5837.08	333.250	0.18	-0.03	0.18	
12621.00	89.690	341.610	6321.96	5876.38	5301.62	-2656.82	1649565.63	14239791.35	39°12'49.7571"N	80°58'3.7175"W	5930.09	333.383	0.33	-0.30	-0.14	
12716.00	89.750	341.890	6322.43	5971.37	5391.84	-2686.57	1649535.89	14239881.54	39°12'50.6490"N	80°58'4.0950"W	6024.09	333.515	0.30	0.06	0.29	
12810.00	89.660	341.760	6322.91	6065.36	5481.15	-2715.89	1649506.58	14239970.81	39°12'51.5318"N	80°58'4.4671"W	6117.12	333.642	0.17	-0.10	-0.14	
12905.00	89.750	341.820	6323.40	6160.36	5571.39	-2745.58	1649476.91	14240061.02	39°12'52.4238"N	80°58'4.8439"W	6211.17	333.766	0.11	0.09	0.06	
13000.00	89.690	341.870	6323.86	6255.35	5661.66	-2775.18	1649447.32	14240151.25	39°12'53.3161"N	80°58'5.2196"W	6305.24	333.887	0.08	-0.06	0.05	
13094.00	89.720	341.630	6324.35	6349.34	5750.93	-2804.62	1649417.89	14240240.48	39°12'54.1986"N	80°58'5.5932"W	6398.37	334.002	0.26	0.03	-0.26	
13189.00	89.750	341.690	6324.79	6444.33	5841.11	-2834.51	1649388.01	14240330.62	39°12'55.0899"N	80°58'5.9725"W	6492.53	334.114	0.07	0.03	0.06	
13283.00	89.750	341.920	6325.20	6538.33	5930.41	-2863.86	1649358.67	14240419.88	39°12'55.9727"N	80°58'6.3451"W	6585.70	334.224	0.24	0.00	0.24	
13378.00	89.690	341.720	6325.66	6633.32	6020.66	-2893.50	1649329.04	14240510.10	39°12'56.8648"N	80°58'6.7212"W	6679.87	334.331	0.22	-0.06	-0.21	
13473.00	89.850	341.800	6326.04	6728.31	6110.89	-2923.23	1649299.32	14240600.29	39°12'57.7567"N	80°58'7.0986"W	6774.09	334.435	0.19	0.17	0.08	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 7 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
13567.00	89.750	341.800	6326.37	6822.30	6200.19	-2952.59	1649269.97	14240689.55	39°12'58.6394"N	80°58'7.4713"W	6867.32	334.536	0.11	-0.11	0.00	
13662.00	89.750	341.770	6326.79	6917.29	6290.43	-2982.29	1649240.29	14240779.76	39°12'59.5314"N	80°58'7.8481"W	6961.57	334.634	0.03	0.00	-0.03	
13756.00	89.780	341.540	6327.17	7011.29	6379.65	-3011.87	1649210.72	14240868.94	39°13'0.4134"N	80°58'8.2236"W	7054.88	334.728	0.25	0.03	-0.24	
13851.00	89.750	341.700	6327.56	7106.28	6469.80	-3041.83	1649180.77	14240959.06	39°13'1.3045"N	80°58'8.6038"W	7149.20	334.819	0.17	-0.03	0.17	
13946.00	89.750	341.460	6327.98	7201.28	6559.93	-3071.85	1649150.77	14241049.16	39°13'2.1955"N	80°58'8.9848"W	7243.54	334.908	0.25	0.00	-0.25	
14040.00	89.820	341.660	6328.33	7295.28	6649.10	-3101.58	1649121.05	14241138.29	39°13'3.0770"N	80°58'9.3622"W	7336.92	334.993	0.23	0.07	0.21	
14135.00	89.820	341.510	6328.63	7390.27	6739.24	-3131.59	1649091.05	14241228.39	39°13'3.9679"N	80°58'9.7431"W	7431.30	335.077	0.16	0.00	-0.16	
14229.00	89.780	341.680	6328.95	7484.27	6828.43	-3161.27	1649061.38	14241317.55	39°13'4.8496"N	80°58'10.1198"W	7524.70	335.158	0.19	-0.04	0.18	
14324.00	89.630	341.880	6329.44	7579.26	6918.67	-3190.97	1649031.69	14241407.75	39°13'5.7416"N	80°58'10.4968"W	7619.07	335.240	0.26	-0.16	0.21	
14419.00	89.850	342.250	6329.87	7674.25	7009.05	-3220.22	1649002.45	14241498.09	39°13'6.6350"N	80°58'10.8681"W	7713.40	335.324	0.45	0.23	0.39	
14513.00	89.660	341.560	6330.28	7768.23	7098.40	-3249.42	1648973.27	14241587.41	39°13'7.5182"N	80°58'11.2387"W	7806.79	335.403	0.76	-0.20	-0.73	
14608.00	89.260	340.200	6331.17	7863.23	7188.15	-3280.53	1648942.16	14241677.12	39°13'8.4054"N	80°58'11.6337"W	7901.36	335.469	1.49	-0.42	-1.43	
14703.00	89.260	340.630	6332.40	7958.21	7277.65	-3312.38	1648910.34	14241766.58	39°13'9.2901"N	80°58'12.0379"W	7996.00	335.528	0.45	0.00	0.45	
14797.00	89.260	340.500	6333.61	8052.20	7366.28	-3343.65	1648879.07	14241855.18	39°13'10.1663"N	80°58'12.4349"W	8089.63	335.586	0.14	0.00	-0.14	
14892.00	89.320	340.750	6334.79	8147.19	7455.90	-3375.16	1648847.57	14241944.76	39°13'11.0521"N	80°58'12.8349"W	8184.26	335.645	0.27	0.06	0.26	
14987.00	91.540	342.660	6334.08	8242.17	7546.08	-3404.98	1648817.77	14242034.91	39°13'11.9436"N	80°58'13.2134"W	8278.72	335.714	3.08	2.34	2.01	
15081.00	89.820	340.470	6332.96	8336.15	7635.24	-3434.70	1648788.06	14242124.04	39°13'12.8249"N	80°58'13.5906"W	8372.22	335.779	2.96	-1.83	-2.33	
15176.00	89.850	340.670	6333.24	8431.15	7724.83	-3466.30	1648756.47	14242213.59	39°13'13.7105"N	80°58'13.9918"W	8466.90	335.833	0.21	0.03	0.21	
15271.00	89.850	340.610	6333.48	8526.14	7814.46	-3497.80	1648724.99	14242303.18	39°13'14.5965"N	80°58'14.3916"W	8561.56	335.886	0.06	0.00	-0.06	
15365.00	89.970	340.950	6333.63	8620.14	7903.22	-3528.74	1648694.06	14242391.91	39°13'15.4739"N	80°58'14.7844"W	8655.23	335.940	0.38	0.13	0.36	
15460.00	90.800	341.880	6332.99	8715.14	7993.26	-3559.02	1648663.79	14242481.91	39°13'16.3639"N	80°58'15.1687"W	8749.79	335.999	1.31	0.87	0.98	
15555.00	90.460	340.620	6331.95	8810.13	8083.21	-3589.55	1648633.27	14242571.83	39°13'17.2531"N	80°58'15.5563"W	8844.39	336.055	1.37	-0.36	-1.33	
15649.00	90.430	340.950	6331.22	8904.12	8171.97	-3620.49	1648602.35	14242660.55	39°13'18.1305"N	80°58'15.9490"W	8938.07	336.105	0.35	-0.03	0.35	
15744.00	90.460	340.740	6330.48	8999.12	8261.71	-3651.66	1648571.19	14242750.25	39°13'19.0175"N	80°58'16.3447"W	9032.75	336.155	0.22	0.03	-0.22	
15838.00	90.430	340.570	6329.75	9093.12	8350.40	-3682.80	1648540.06	14242838.91	39°13'19.8942"N	80°58'16.7400"W	9126.46	336.201	0.18	-0.03	-0.18	
15933.00	90.030	340.310	6329.37	9188.11	8439.92	-3714.60	1648508.27	14242928.39	39°13'20.7791"N	80°58'17.1438"W	9221.20	336.245	0.50	-0.42	-0.27	
16027.00	89.570	340.500	6329.70	9282.10	8528.47	-3746.13	1648476.76	14243016.91	39°13'21.6544"N	80°58'17.5440"W	9314.95	336.287	0.53	-0.49	0.20	
16122.00	89.110	340.800	6330.79	9377.09	8618.10	-3777.60	1648445.30	14243106.50	39°13'22.5404"N	80°58'17.9436"W	9409.67	336.331	0.58	-0.48	0.32	
16217.00	88.620	340.610	6332.67	9472.07	8707.75	-3808.99	1648413.93	14243196.11	39°13'23.4265"N	80°58'18.3420"W	9504.38	336.374	0.55	-0.52	-0.20	
16311.00	88.680	340.620	6334.89	9566.04	8796.39	-3840.18	1648382.75	14243284.72	39°13'24.3028"N	80°58'18.7380"W	9598.10	336.416	0.06	0.06	0.01	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 8 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
16406.00	89.170	340.400	6336.67	9661.02	8885.93	-3871.87	1648351.07	14243374.22	39°13'25.1879"N	80°58'19.1403"W	9692.84	336.456	0.57	0.52	-0.23	
16500.00	89.660	340.730	6337.63	9755.01	8974.57	-3903.14	1648319.81	14243462.83	39°13'26.0641"N	80°58'19.5374"W	9786.60	336.495	0.63	0.52	0.35	
16595.00	89.660	340.710	6338.19	9850.00	9064.24	-3934.51	1648288.45	14243552.46	39°13'26.9505"N	80°58'19.9356"W	9881.34	336.536	0.02	0.00	-0.02	
16690.00	89.600	340.490	6338.81	9945.00	9153.85	-3966.06	1648256.91	14243642.03	39°13'27.8362"N	80°58'20.3362"W	9976.10	336.574	0.24	-0.06	-0.23	
16784.00	89.230	340.490	6339.77	10038.99	9242.45	-3997.46	1648225.53	14243730.59	39°13'28.7120"N	80°58'20.7347"W	10069.88	336.611	0.39	-0.39	0.00	
16879.00	89.660	341.370	6340.69	10133.98	9332.23	-4028.49	1648194.51	14243820.34	39°13'29.5995"N	80°58'21.1288"W	10164.61	336.651	1.03	0.45	0.93	
16974.00	89.260	341.210	6341.58	10228.98	9422.20	-4058.96	1648164.05	14243910.28	39°13'30.4889"N	80°58'21.5156"W	10259.29	336.694	0.45	-0.42	-0.17	
17068.00	89.820	341.200	6342.34	10322.97	9511.19	-4089.25	1648133.77	14243999.23	39°13'31.3685"N	80°58'21.9001"W	10353.00	336.735	0.60	0.60	-0.01	
17163.00	89.110	340.340	6343.22	10417.97	9600.88	-4120.54	1648102.50	14244088.88	39°13'32.2551"N	80°58'22.2973"W	10447.76	336.772	1.17	-0.75	-0.91	
17257.00	89.420	341.590	6344.43	10511.96	9689.73	-4151.19	1648071.86	14244177.70	39°13'33.1333"N	80°58'22.6865"W	10541.50	336.809	1.37	0.33	1.33	
17352.00	90.090	342.240	6344.84	10606.95	9780.04	-4180.68	1648042.38	14244267.97	39°13'34.0260"N	80°58'23.0609"W	10636.13	336.855	0.98	0.71	0.68	
17446.00	89.320	341.990	6345.32	10700.93	9869.49	-4209.55	1648013.52	14244357.39	39°13'34.9102"N	80°58'23.4274"W	10729.73	336.901	0.86	-0.82	-0.27	
17541.00	89.450	343.420	6346.34	10795.88	9960.19	-4237.79	1647985.29	14244448.05	39°13'35.8068"N	80°58'23.7859"W	10824.24	336.952	1.51	0.14	1.51	
17635.00	89.420	341.000	6347.27	10889.85	10049.68	-4266.50	1647956.59	14244537.51	39°13'36.6914"N	80°58'24.1505"W	10917.84	336.997	2.57	-0.03	-2.57	
17730.00	89.230	339.670	6348.39	10984.84	10139.13	-4298.47	1647924.64	14244626.92	39°13'37.5756"N	80°58'24.5563"W	11012.67	337.026	1.41	-0.20	-1.40	
17829.00	89.260	340.680	6349.69	11083.81	10232.26	-4332.04	1647891.08	14244720.01	39°13'38.4961"N	80°58'24.9826"W	11111.51	337.054	1.02	0.03	1.02	
17919.00	89.600	340.770	6350.59	11173.81	10317.21	-4361.75	1647861.38	14244804.92	39°13'39.3358"N	80°58'25.3598"W	11201.32	337.083	0.39	0.38	0.10	
18014.00	89.570	340.730	6351.27	11268.80	10406.89	-4393.07	1647830.07	14244894.57	39°13'40.2224"N	80°58'25.7575"W	11296.13	337.114	0.05	-0.03	-0.04	
18108.00	89.570	340.910	6351.98	11362.80	10495.67	-4423.95	1647799.21	14244983.32	39°13'41.0999"N	80°58'26.1496"W	11389.93	337.144	0.19	0.00	0.19	
18203.00	89.480	340.480	6352.77	11457.79	10585.33	-4455.36	1647767.81	14245072.94	39°13'41.9862"N	80°58'26.5483"W	11484.75	337.174	0.46	-0.09	-0.45	
18298.00	89.570	340.770	6353.56	11552.79	10674.95	-4486.87	1647736.31	14245162.52	39°13'42.8720"N	80°58'26.9485"W	11579.57	337.202	0.32	0.09	0.31	
18392.00	89.600	340.860	6354.24	11646.78	10763.72	-4517.76	1647705.43	14245251.26	39°13'43.7495"N	80°58'27.3407"W	11673.39	337.231	0.10	0.03	0.10	
18487.00	89.820	340.670	6354.72	11741.78	10853.42	-4549.06	1647674.15	14245340.92	39°13'44.6362"N	80°58'27.7380"W	11768.20	337.260	0.31	0.23	-0.20	
18582.00	89.780	340.700	6355.05	11836.78	10943.07	-4580.48	1647642.74	14245430.53	39°13'45.5224"N	80°58'28.1370"W	11863.04	337.287	0.05	-0.04	0.03	
18676.00	89.780	340.430	6355.41	11930.77	11031.71	-4611.76	1647611.47	14245519.14	39°13'46.3986"N	80°58'28.5342"W	11956.88	337.313	0.29	0.00	-0.29	
18771.00	89.850	340.610	6355.72	12025.77	11121.28	-4643.44	1647579.81	14245608.67	39°13'47.2839"N	80°58'28.9364"W	12051.73	337.338	0.20	0.07	0.19	
18866.00	89.850	340.730	6355.96	12120.76	11210.92	-4674.88	1647548.37	14245698.28	39°13'48.1700"N	80°58'29.3357"W	12146.57	337.364	0.13	0.00	0.13	
18960.00	89.820	340.660	6356.24	12214.76	11299.63	-4705.96	1647517.31	14245786.95	39°13'49.0469"N	80°58'29.7303"W	12240.42	337.390	0.08	-0.03	-0.07	
19055.00	89.780	340.610	6356.57	12309.76	11389.26	-4737.46	1647485.82	14245876.54	39°13'49.9328"N	80°58'30.1303"W	12335.26	337.415	0.07	-0.04	-0.05	
19150.00	89.630	340.450	6357.06	12404.75	11478.83	-4769.13	1647454.17	14245966.07	39°13'50.8182"N	80°58'30.5324"W	12430.12	337.439	0.23	-0.16	-0.17	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 9 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
19244.00	89.480	340.520	6357.79	12498.74	11567.42	-4800.53	1647422.78	14246054.63	39°13'51.6940"N	80°58'30.9311"W	12523.99	337.461	0.18	-0.16	0.07	
19339.00	89.320	340.130	6358.78	12593.73	11656.87	-4832.51	1647390.81	14246144.05	39°13'52.5781"N	80°58'31.3372"W	12618.87	337.483	0.44	-0.17	-0.41	
19434.00	89.480	340.480	6359.78	12688.71	11746.31	-4864.52	1647358.81	14246233.45	39°13'53.4622"N	80°58'31.7437"W	12713.75	337.504	0.41	0.17	0.37	
19528.00	89.290	340.050	6360.78	12782.70	11834.78	-4896.26	1647327.09	14246321.89	39°13'54.3367"N	80°58'32.1468"W	12807.63	337.524	0.50	-0.20	-0.46	
19623.00	89.540	340.930	6361.75	12877.69	11924.32	-4927.99	1647295.37	14246411.39	39°13'55.2218"N	80°58'32.5496"W	12902.50	337.546	0.96	0.26	0.93	
19718.00	89.570	340.540	6362.49	12972.68	12014.00	-4959.33	1647264.04	14246501.03	39°13'56.1083"N	80°58'32.9477"W	12997.35	337.569	0.41	0.03	-0.41	
19812.00	89.540	340.340	6363.22	13066.67	12102.57	-4990.80	1647232.59	14246589.57	39°13'56.9838"N	80°58'33.3473"W	13091.23	337.590	0.22	-0.03	-0.21	
19907.00	89.450	340.940	6364.06	13161.67	12192.20	-5022.29	1647201.11	14246679.16	39°13'57.8697"N	80°58'33.7472"W	13186.09	337.612	0.64	-0.09	0.63	
20001.00	89.850	341.010	6364.63	13255.66	12281.06	-5052.93	1647170.48	14246767.98	39°13'58.7481"N	80°58'34.1363"W	13279.93	337.636	0.43	0.43	0.07	
20191.00	89.140	340.540	6366.31	13445.65	12460.46	-5115.49	1647107.94	14246947.31	39°14'0.5214"N	80°58'34.9307"W	13469.64	337.680	0.45	-0.37	-0.25	
20285.00	89.380	341.300	6367.52	13539.64	12549.28	-5146.22	1647077.23	14247036.10	39°14'1.3994"N	80°58'35.3209"W	13563.48	337.702	0.85	0.26	0.81	
20380.00	89.540	340.560	6368.42	13634.64	12639.07	-5177.25	1647046.21	14247125.85	39°14'2.2869"N	80°58'35.7150"W	13658.33	337.725	0.80	0.17	-0.78	
20474.00	89.420	340.580	6369.27	13728.63	12727.71	-5208.52	1647014.95	14247214.45	39°14'3.1631"N	80°58'36.1121"W	13752.21	337.744	0.13	-0.13	0.02	
20569.00	89.230	340.870	6370.39	13823.62	12817.38	-5239.88	1646983.61	14247304.09	39°14'4.0494"N	80°58'36.5103"W	13847.07	337.765	0.36	-0.20	0.31	
20664.00	89.260	340.700	6371.64	13918.61	12907.08	-5271.14	1646952.35	14247393.75	39°14'4.9361"N	80°58'36.9073"W	13941.94	337.785	0.18	0.03	-0.18	
20758.00	89.290	340.720	6372.83	14012.60	12995.79	-5302.19	1646921.32	14247482.43	39°14'5.8130"N	80°58'37.3016"W	14035.81	337.805	0.04	0.03	0.02	
20853.00	89.350	341.110	6373.96	14107.59	13085.56	-5333.25	1646890.27	14247572.17	39°14'6.7004"N	80°58'37.6961"W	14130.66	337.826	0.42	0.06	0.41	
20948.00	89.170	341.110	6375.19	14202.59	13175.44	-5364.01	1646859.53	14247662.01	39°14'7.5888"N	80°58'38.0866"W	14225.50	337.848	0.19	-0.19	0.00	
21043.00	89.260	341.760	6376.49	14297.57	13265.49	-5394.25	1646829.30	14247752.02	39°14'8.4789"N	80°58'38.4707"W	14320.30	337.871	0.69	0.09	0.68	
21137.00	89.420	341.840	6377.57	14391.56	13354.78	-5423.61	1646799.95	14247841.27	39°14'9.3615"N	80°58'38.8435"W	14414.08	337.897	0.19	0.17	0.09	
21232.00	89.290	341.700	6378.64	14486.55	13445.00	-5453.33	1646770.25	14247931.46	39°14'10.2533"N	80°58'39.2209"W	14508.86	337.922	0.20	-0.14	-0.15	
21326.00	89.690	341.730	6379.48	14580.54	13534.25	-5482.82	1646740.77	14248020.68	39°14'11.1355"N	80°58'39.5954"W	14602.65	337.947	0.43	0.43	0.03	
21421.00	89.570	341.870	6380.09	14675.53	13624.50	-5512.49	1646711.11	14248110.89	39°14'12.0276"N	80°58'39.9722"W	14697.43	337.972	0.19	-0.13	0.15	
21516.00	89.970	341.830	6380.47	14770.52	13714.77	-5542.08	1646681.53	14248201.12	39°14'12.9199"N	80°58'40.3480"W	14792.22	337.997	0.42	0.42	-0.04	
21610.00	89.850	342.020	6380.62	14864.51	13804.13	-5571.24	1646652.37	14248290.45	39°14'13.8032"N	80°58'40.7184"W	14886.00	338.021	0.24	-0.13	0.20	
21705.00	89.820	341.580	6380.89	14959.50	13894.38	-5600.92	1646622.71	14248380.66	39°14'14.6952"N	80°58'41.0952"W	14980.79	338.045	0.46	-0.03	-0.46	
21800.00	89.720	342.010	6381.27	15054.50	13984.62	-5630.60	1646593.05	14248470.86	39°14'15.5872"N	80°58'41.4722"W	15075.59	338.069	0.46	-0.11	0.45	
21894.00	89.660	341.660	6381.78	15148.49	14073.94	-5659.90	1646563.75	14248560.14	39°14'16.4701"N	80°58'41.8443"W	15169.38	338.092	0.38	-0.06	-0.37	
21989.00	89.880	341.630	6382.16	15243.48	14164.10	-5689.82	1646533.85	14248650.27	39°14'17.3613"N	80°58'42.2242"W	15264.20	338.114	0.23	0.23	-0.03	
22084.00	89.780	341.810	6382.45	15338.48	14254.31	-5719.61	1646504.07	14248740.44	39°14'18.2530"N	80°58'42.6027"W	15359.01	338.137	0.22	-0.11	0.19	



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 10 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

WELLPATH DATA (242 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
22149.00	89.880	341.860	6382.64	15403.47	14316.07	-5739.88	1646483.81	14248802.18	39°14'18.8634"N	80°58'42.8600"W	15423.88	338.152	0.17	0.15	0.08	
22174.00‡	89.880	341.860	6382.69	15428.47	14339.83	-5747.66	1646476.03	14248825.92	39°14'19.0983"N	80°58'42.9589"W	15448.83	338.158	0.00	0.00	0.00	Projected MD at TD: 22174'

DIRECTIONAL DIFFICULTY INDEX

Directional Difficulty Index @ TD = 7.15						Reference: IADC/SPE 59196					
Values	Wellpath characterized as:					Values	Wellpath characterized as:				
< 6.0	Relatively short or simple profiles with low tortuosity					6.4-6.8	Longer with relatively tortuous well paths				
< 6.0-6.4	Shorter with high tortuosity or longer with lower tortuosity					> 6.8	Long tortuous profiles, high degree of difficulty				

HOLE & CASING SECTIONS - Ref Wellbore: Aft Unit 1H AWB Ref Wellpath: Aft Unit 1H AWP Proj: 22174'

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	25.50	125.50	100.00	25.50	125.50	0.00	0.00	-0.13	0.02
17.5in Open Hole	125.50	890.00	764.50	125.50	890.00	-0.13	0.02	0.03	-0.73
13.375in Casing Surface	25.50	870.00	844.50	25.50	870.00	0.00	0.00	0.06	-0.62
12.25in Open Hole	890.00	3220.00	2330.00	890.00	3209.50	0.03	-0.73	-166.52	-85.28
9.625in Casing Intermediate	25.50	3190.00	3164.50	25.50	3179.50	0.00	0.00	-166.27	-85.07
8.75in Open Hole	3220.00	5577.00	2357.00	3209.50	5467.16	-166.52	-85.28	-726.04	-393.14
8.5in Open Hole	5577.00	22174.00	16597.00	5467.16	6382.69	-726.04	-393.14	14339.83	-5747.66
5.5in Casing Production	25.50	22154.00	22128.50	25.50	6382.65	0.00	0.00	14320.82	-5741.43



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 11 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Aft Unit 1H POE Rev-3	6318.00	-282.68	-742.45	1651479.23	14234209.29	39°11'54.5551"N	80°57'39.4263"W	point
Aft Unit 1H BHL Rev-3	6340.00	14501.27	-5803.85	1646419.86	14248987.30	39°14'20.6941"N	80°58'43.6726"W	point
Aft Unit 1H BHL Rev-4	6340.00	14318.84	-5741.40	1646482.29	14248804.95	39°14'18.8908"N	80°58'42.8793"W	point
Aft Unit 1H LP Rev-3	6340.00	-116.03	-799.50	1651422.20	14234375.88	39°11'56.2026"N	80°57'40.1501"W	point
Aft Unit 1H 50' L/R Hard Line R-2	6500.00	7018.08	-3241.92	1648980.76	14241507.12	39°13'6.7243"N	80°58'11.1438"W	rectangle
2D Rectangle 15433.5 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Aft Unit 1H AWB Ref Wellpath: Aft Unit 1H AWP Proj: 22174'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	800.00	Gyrodata 2015 - GC+VMR+DPIPE	01_Gyrodata MS Gyro <17-1/2"> (100'-800')	Aft Unit 1H AWB	5/13/2025
800.00	929.00	Gyrodata 2015 - GC+VMR+DPIPE	02_Gyrodata MS Gyro <12-1/4"> (800')(900'-929')	Aft Unit 1H AWB	5/14/2025
929.00	3145.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03_APS EM <12-1/4"> (929')(963'-3145')	Aft Unit 1H AWB	5/13/2025
3145.00	5501.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04_APS EM <8-3/4"> (3145')(3225'-5501')	Aft Unit 1H AWB	6/13/2025
5501.00	22174.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05_BH Lucida <8-1/2"> (5501')(5619'-22149')	Aft Unit 1H AWB	6/13/2025



Actual Wellpath Report

Aft Unit 1H AWP Proj: 22174'

Page 12 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aft Unit 1H
Field	Ritchie	API	47-085-10549-0000
Facility	Miner Pad	Wellbore	Aft Unit 1H AWB
Slot	Slot D		

COMMENTS

Wellpath general comments

API: 47-085-10549-0000

BH Job #: 112660885

Rig: H&P 317

Duration: 6/15/2025-6/20/2025

Gyrodata MS Gyro <17-1/2"> (100'-800')

Gyrodata MS Gyro <12-1/4"> (800')(900'-929')

APS EM <12-1/4"> (929')(963'-3145')

APS EM <8-3/4"> (3145')(3225'-5501')

BH Lucida <8-1/2"> (5501')(5619'-22149')

Sycamore: 6172' MD

Middlesex: 6371' MD

Burkett: 6564' MD

Tully: 6646' MD

Marcellus POE: 6715' MD

Projected MD at TD: 22174'