



# ANTERO RESOURCES CORPORATION

Location: Tyler County, WV  
Field: Tyler  
Facility: Dry Run Pad

Slot: Slot A  
Well: Ringnus Unit 1H  
Wellbore: Ringnus Unit 1H PWB

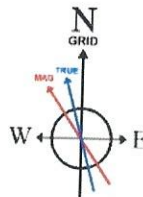


Plot reference wellpath is Ringnus Unit 1H PWP Rev-C.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1032.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot A): -1007 feet	Depths are in feet
Official wellpath MDs are referenced to each path's default MD datum	Created by: edstaryar on 2023-06-04, Database: WA_MPL_EASTERNUS_Delta

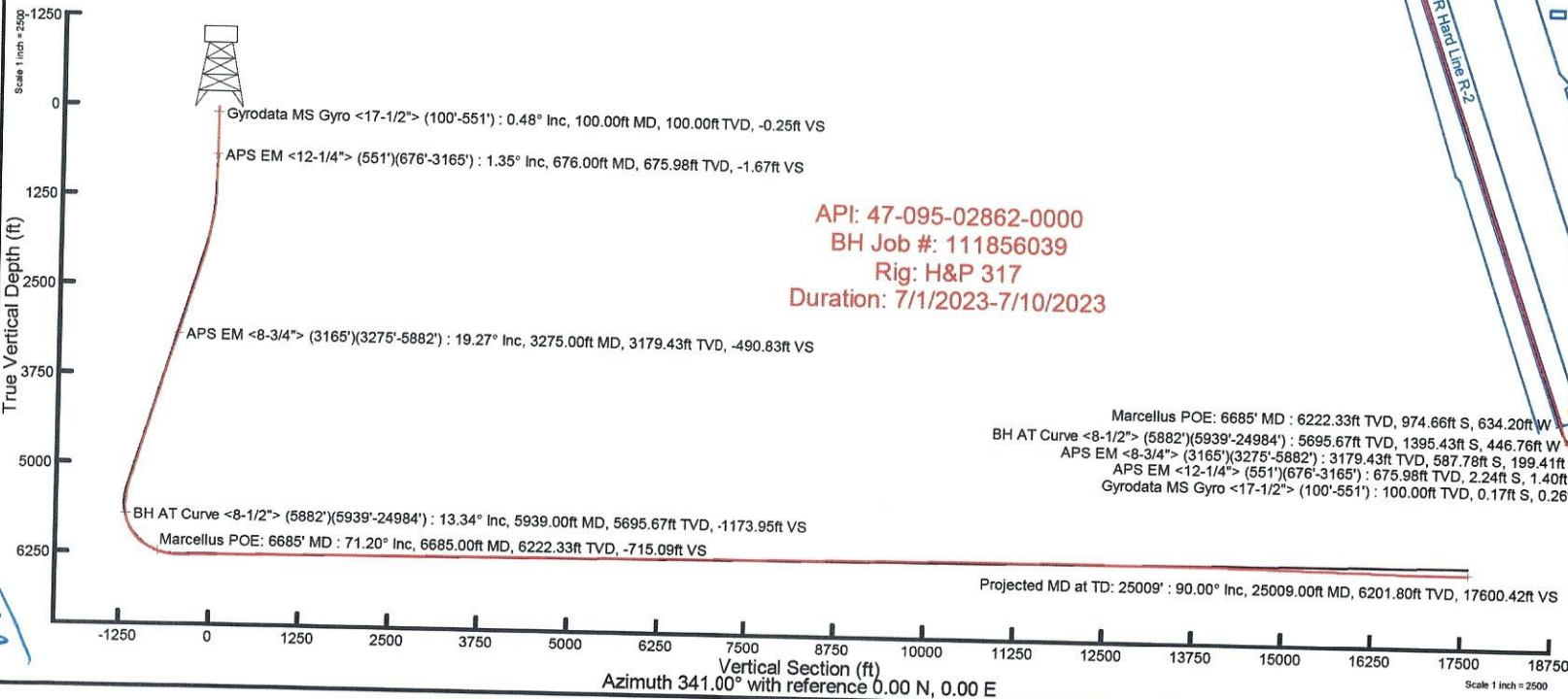
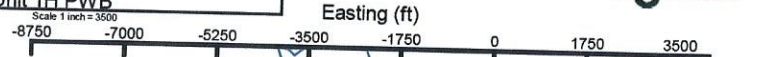
Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Dry Run Pad	1665236.690	14362894.350	39°33'6.8386"N	80°54'43.0140"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot A	0.00	0.00	1665236.690	14362894.350
Comment	Ringnus Unit 1H			
H&P 317 (RKB) to Ground level (At Slot: Slot A)	25.5ft			
Mean Sea Level to Ground level (At Slot: Slot A)	-1007ft			
H&P 317 (RKB) to Mean Sea Level	1032.5ft			

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	25.50	0.000	225.200	25.50	0.00	0.00	0.00	0.00
KOP 1	675.00	0.000	225.200	675.00	0.00	0.00	0.00	0.00
End of Build	925.00	5.000	225.200	924.66	-7.68	-7.74	2.00	-4.74
Hold	1225.00	5.000	225.200	1223.54	-26.11	-26.29	0.00	-16.12
End of 3D Arc	2025.33	20.094	194.226	2003.07	-184.98	-85.21	2.00	-147.16
Curve KOP	5587.51	20.094	194.226	5348.42	-1371.28	-385.97	0.00	-1170.91
POE	6585.13	70.754	341.000	6223.00	-985.50	-656.04	8.00	-718.22
Landing Pt.	6931.95	90.500	341.000	6263.00	-756.38	-734.94	8.00	-475.90
BHL	25002.00	90.500	341.000	6105.31	16328.55	-6617.70	0.00	17593.46

Well Data			
Slot	Well	Wellbore	Wellpath
Slot A	Ringnus Unit 1H	Ringnus Unit 1H AWP	Ringnus Unit 1H AWP Proj: 25009'
Slot A	Ringnus Unit 1H	Ringnus Unit 1H PWB	Ringnus Unit 1H PWP Rev-C.0



User specified (HDGM) Dip: 66.20° Field: 51417 nT  
Magnetic North is 7.38 degrees West of True North (at 6/30/2023)  
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 7.44 degrees



API: 47-095-02862-0000  
BH Job #: 111856039  
Rig: H&P 317  
Duration: 7/1/2023-7/10/2023

Marcellus POE: 6685' MD : 6222.33ft TVD, 974.66ft S, 634.20ft W  
BH AT Curve <8-1/2"> (5882')(5939°-24984') : 5695.67ft TVD, 1395.43ft S, 446.76ft W  
APS EM <8-3/4"> (3165')(3275°-5882') : 3179.43ft TVD, 587.78ft S, 199.41ft W  
APS EM <12-1/4"> (551')(676°-3165') : 675.98ft TVD, 2.24ft S, 1.40ft W  
Gyrodata MS Gyro <17-1/2"> (100°-551') : 100.00ft TVD, 0.17ft S, 0.26ft E



# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION		Well	Ringnus Unit 1H
Field	Tyler		API	47-095-02862-0000
Facility	Dry Run Pad		Wellbore	Ringnus Unit 1H AWB
Slot	Slot A			

## REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet		Software System	WellArchitect® 6.0
North Reference	Grid		User	Edsaryar
Scale	0.999601		Report Generated	8/4/2023 at 1:35:39 PM
Convergence at slot	0.06° East		Database	WA_MPL_EASTERNUS_Defn

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1665236.69	14362894.35	39°33'6.8386"N	80°54'43.0140"W
Facility Reference Pt			1665236.69	14362894.35	39°33'6.8386"N	80°54'43.0140"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	1032.50ft
Horizontal Reference Pt	Slot		H&P 317 (RKB) to Mean Sea Level	1032.50ft
Vertical Reference Pt	H&P 317 (RKB)		H&P 317 (RKB) to Ground Level at Slot (Slot A)	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	341.00°





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## WELLPATH DATA (269 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	124.050	0.00	0.00	0.00	0.00	1665236.69	14362894.35	39°33'6.8386"N	80°54'43.0140"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	124.050	25.50	0.00	0.00	0.00	1665236.69	14362894.35	39°33'6.8386"N	80°54'43.0140"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.480	124.050	100.00	-0.25	-0.17	0.26	1665236.95	14362894.18	39°33'6.8369"N	80°54'43.0107"W	0.31	124.050	0.64	0.64	0.00	
200.00	0.220	137.990	200.00	-0.76	-0.55	0.73	1665237.42	14362893.80	39°33'6.8332"N	80°54'43.0047"W	0.92	126.937	0.27	-0.26	13.94	Gyrodata MS Gyro <17-1/2"> (100'-551')
300.00	0.130	221.650	300.00	-0.99	-0.78	0.79	1665237.48	14362893.57	39°33'6.8309"N	80°54'43.0040"W	1.11	134.712	0.24	-0.09	83.66	
400.00	0.130	239.650	400.00	-1.07	-0.92	0.61	1665237.30	14362893.43	39°33'6.8295"N	80°54'43.0062"W	1.11	146.326	0.04	0.00	18.00	
500.00	0.210	229.160	500.00	-1.16	-1.10	0.38	1665237.07	14362893.25	39°33'6.8278"N	80°54'43.0092"W	1.16	161.042	0.09	0.08	-10.49	
551.00	0.370	224.900	551.00	-1.27	-1.28	0.19	1665236.88	14362893.07	39°33'6.8260"N	80°54'43.0116"W	1.29	171.514	0.32	0.31	-8.35	
676.00	1.350	242.400	676.00	-1.67	-2.24	-1.40	1665235.29	14362892.11	39°33'6.8165"N	80°54'43.0319"W	2.65	211.944	0.80	0.78	14.00	APS EM <12-1/4"> (551')(676'-3165')
765.00	2.880	257.050	764.92	-1.59	-3.23	-4.51	1665232.18	14362891.12	39°33'6.8068"N	80°54'43.0716"W	5.55	234.366	1.81	1.72	16.46	
855.00	4.120	248.080	854.75	-1.51	-4.95	-9.71	1665226.98	14362889.41	39°33'6.7899"N	80°54'43.1381"W	10.90	243.013	1.50	1.38	-9.97	
943.00	4.700	239.630	942.49	-2.39	-7.95	-15.75	1665220.94	14362886.41	39°33'6.7602"N	80°54'43.2153"W	17.65	243.229	0.99	0.66	-9.60	
1033.00	4.690	237.110	1032.19	-4.00	-11.81	-22.03	1665214.67	14362882.54	39°33'6.7221"N	80°54'43.2954"W	24.99	241.799	0.23	-0.01	-2.80	
1127.00	4.750	237.270	1125.87	-5.84	-16.00	-28.53	1665208.18	14362878.36	39°33'6.6808"N	80°54'43.3784"W	32.71	240.710	0.07	0.06	0.17	
1222.00	5.320	229.990	1220.50	-8.36	-20.96	-35.21	1665201.50	14362873.40	39°33'6.6318"N	80°54'43.4638"W	40.97	239.235	0.90	0.60	-7.66	
1316.00	7.130	220.060	1313.95	-12.92	-28.23	-42.30	1665194.41	14362866.13	39°33'6.5601"N	80°54'43.5544"W	50.85	236.285	2.23	1.93	-10.56	
1411.00	9.190	214.340	1407.98	-20.48	-39.00	-50.38	1665186.33	14362855.36	39°33'6.4536"N	80°54'43.6576"W	63.71	232.250	2.33	2.17	-6.02	
1506.00	11.250	208.100	1501.47	-31.32	-53.45	-59.02	1665177.69	14362840.93	39°33'6.3110"N	80°54'43.7682"W	79.62	227.839	2.46	2.17	-6.57	
1601.00	13.010	200.810	1594.35	-45.84	-71.62	-67.19	1665169.53	14362822.76	39°33'6.1315"N	80°54'43.8726"W	98.20	223.171	2.45	1.85	-7.67	
1695.00	14.340	198.390	1685.69	-63.22	-92.56	-74.62	1665162.10	14362801.83	39°33'5.9246"N	80°54'43.9678"W	118.89	218.876	1.54	1.41	-2.57	
1790.00	14.250	196.230	1777.75	-82.12	-114.95	-81.60	1665155.12	14362779.45	39°33'5.7034"N	80°54'44.0572"W	140.96	215.370	0.57	-0.09	-2.27	
1885.00	13.890	195.510	1869.90	-101.06	-137.16	-87.91	1665148.81	14362757.25	39°33'5.4839"N	80°54'44.1381"W	162.92	212.659	0.42	-0.38	-0.76	
1979.00	15.730	194.640	1960.77	-120.97	-160.36	-94.15	1665142.57	14362734.05	39°33'5.2547"N	80°54'44.2180"W	185.96	210.418	1.97	1.96	-0.93	
2074.00	18.150	195.090	2051.64	-143.95	-187.11	-101.26	1665135.47	14362707.31	39°33'4.9904"N	80°54'44.3091"W	212.75	208.421	2.55	2.55	0.47	
2169.00	20.140	191.810	2141.38	-170.25	-217.41	-108.46	1665128.27	14362677.03	39°33'4.6910"N	80°54'44.4014"W	242.96	206.514	2.38	2.09	-3.45	
2264.00	20.230	190.450	2230.55	-198.60	-249.57	-114.79	1665121.95	14362644.88	39°33'4.3732"N	80°54'44.4825"W	274.70	204.699	0.50	0.09	-1.43	
2358.00	20.470	192.490	2318.68	-226.77	-281.60	-121.29	1665115.45	14362612.86	39°33'4.0567"N	80°54'44.5660"W	306.61	203.302	0.80	0.26	2.17	
2453.00	20.710	194.820	2407.62	-254.89	-314.06	-129.18	1665107.56	14362580.42	39°33'3.7359"N	80°54'44.6671"W	339.59	202.358	0.90	0.25	2.45	
2548.00	20.500	193.180	2496.54	-282.93	-346.50	-137.27	1665099.48	14362547.99	39°33'3.4154"N	80°54'44.7708"W	372.70	201.612	0.65	-0.22	-1.73	
2643.00	20.100	191.520	2585.64	-311.07	-378.69	-144.32	1665092.43	14362515.81	39°33'3.0974"N	80°54'44.8612"W	405.26	200.862	0.74	-0.42	-1.75	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

### WELLPATH DATA (269 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
2737.00	19.410	192.230	2674.11	-338.34	-409.78	-150.86	1665085.89	14362484.73	39°33'2.7901"N	80°54'44.9450"W	436.67	200.211	0.78	-0.73	0.76	
2832.00	19.880	194.820	2763.58	-365.26	-440.82	-158.33	1665078.42	14362453.70	39°33'2.4834"N	80°54'45.0408"W	468.40	199.757	1.04	0.49	2.73	
2927.00	20.750	197.720	2852.67	-392.17	-472.47	-167.59	1665069.17	14362422.07	39°33'2.1707"N	80°54'45.1593"W	501.31	199.530	1.40	0.92	3.05	
3021.00	20.580	197.260	2940.62	-418.84	-504.11	-177.56	1665059.20	14362390.44	39°33'1.8581"N	80°54'45.2870"W	534.47	199.403	0.25	-0.18	-0.49	
3116.00	20.080	195.530	3029.71	-445.74	-535.77	-186.88	1665049.89	14362358.80	39°33'1.5453"N	80°54'45.4064"W	567.42	199.229	0.82	-0.53	-1.82	
3165.00	19.820	194.380	3075.77	-459.60	-551.92	-191.19	1665045.57	14362342.65	39°33'1.3857"N	80°54'45.4617"W	584.10	199.107	0.96	-0.53	-2.35	
3275.00	19.270	191.400	3179.43	-490.83	-587.78	-199.41	1665037.36	14362306.81	39°33'1.0314"N	80°54'45.5671"W	620.68	198.740	1.03	-0.50	-2.71	APS EM <8-3/4"> (3165')(3275'-5882')
3370.00	19.940	190.180	3268.92	-518.50	-619.09	-205.37	1665031.40	14362275.51	39°33'0.7220"N	80°54'45.6436"W	652.27	198.352	0.83	0.71	-1.28	
3464.00	21.630	194.320	3356.81	-546.97	-651.66	-212.49	1665024.28	14362242.95	39°33'0.4002"N	80°54'45.7348"W	685.43	198.060	2.38	1.80	4.40	
3559.00	21.900	193.990	3445.03	-576.46	-685.81	-221.11	1665015.67	14362208.81	39°33'0.0627"N	80°54'45.8452"W	720.57	197.869	0.31	0.28	-0.35	
3654.00	21.120	192.500	3533.42	-605.92	-719.71	-229.09	1665007.69	14362174.92	39°32'59.7277"N	80°54'45.9476"W	755.30	197.657	1.00	-0.82	-1.57	
3750.00	19.770	189.360	3623.37	-634.95	-752.62	-235.48	1665001.31	14362142.03	39°32'59.4025"N	80°54'46.0295"W	788.60	197.374	1.81	-1.41	-3.27	
3845.00	19.520	191.570	3712.84	-662.76	-784.02	-241.27	1664995.51	14362110.64	39°32'59.0922"N	80°54'46.1039"W	820.31	197.105	0.83	-0.26	2.33	
3939.00	19.330	196.610	3801.50	-688.93	-814.32	-248.87	1664987.92	14362080.36	39°32'58.7929"N	80°54'46.2013"W	851.50	196.994	1.79	-0.20	5.36	
4034.00	19.140	200.150	3891.20	-713.79	-844.01	-258.73	1664978.06	14362050.68	39°32'58.4996"N	80°54'46.3275"W	882.78	197.043	1.24	-0.20	3.73	
4128.00	19.980	194.760	3979.78	-739.10	-874.01	-268.13	1664968.66	14362020.69	39°32'58.2032"N	80°54'46.4479"W	914.21	197.055	2.12	0.89	-5.73	
4223.00	21.720	196.310	4068.56	-766.94	-906.58	-277.21	1664959.60	14361988.14	39°32'57.8814"N	80°54'46.5641"W	948.01	197.002	1.92	1.83	1.63	
4318.00	21.190	192.930	4156.98	-795.85	-940.18	-285.98	1664950.82	14361954.54	39°32'57.5493"N	80°54'46.6766"W	982.72	196.919	1.42	-0.56	-3.56	
4413.00	19.910	194.010	4245.93	-823.99	-972.61	-293.74	1664943.07	14361922.13	39°32'57.2289"N	80°54'46.7760"W	1016.00	196.805	1.41	-1.35	1.14	
4508.00	19.730	196.680	4335.30	-850.58	-1003.67	-302.26	1664934.55	14361891.08	39°32'56.9220"N	80°54'46.8852"W	1048.20	196.760	0.97	-0.19	2.81	
4603.00	19.410	193.250	4424.82	-876.96	-1034.40	-310.48	1664926.33	14361860.37	39°32'56.6184"N	80°54'46.9905"W	1079.99	196.708	1.26	-0.34	-3.61	
4698.00	20.100	192.210	4514.23	-904.27	-1065.72	-317.55	1664919.26	14361829.06	39°32'56.3089"N	80°54'47.0811"W	1112.02	196.593	0.82	0.73	-1.09	
4792.00	20.500	191.470	4602.39	-932.27	-1097.64	-324.24	1664912.58	14361797.16	39°32'55.9935"N	80°54'47.1669"W	1144.52	196.457	0.51	0.43	-0.79	
4887.00	19.160	193.580	4691.76	-959.75	-1129.09	-331.21	1664905.61	14361765.71	39°32'55.6827"N	80°54'47.2563"W	1176.67	196.349	1.60	-1.41	2.22	
4982.00	18.680	196.510	4781.62	-985.27	-1158.83	-339.20	1664897.63	14361735.98	39°32'55.3888"N	80°54'47.3586"W	1207.46	196.315	1.12	-0.51	3.08	
5077.00	19.140	197.240	4871.50	-1010.21	-1188.30	-348.13	1664888.70	14361706.53	39°32'55.0977"N	80°54'47.4730"W	1238.24	196.329	0.54	0.48	0.77	
5171.00	20.020	197.300	4960.06	-1035.61	-1218.38	-357.49	1664879.35	14361676.46	39°32'54.8005"N	80°54'47.5928"W	1269.74	196.352	0.94	0.94	0.06	
5266.00	20.210	196.280	5049.27	-1062.11	-1249.65	-366.92	1664869.91	14361645.20	39°32'54.4915"N	80°54'47.7136"W	1302.41	196.363	0.42	0.20	-1.07	
5361.00	20.910	193.630	5138.22	-1089.79	-1281.88	-375.52	1664861.32	14361612.98	39°32'54.1731"N	80°54'47.8238"W	1335.75	196.328	1.23	0.74	-2.79	
5456.00	21.530	195.020	5226.78	-1118.51	-1315.19	-384.03	1664852.81	14361579.68	39°32'53.8439"N	80°54'47.9328"W	1370.12	196.278	0.84	0.65	1.46	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

## WELLPATH DATA (269 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
5550.00	17.420	196.090	5315.38	-1144.33	-1345.39	-392.40	1664844.44	14361549.50	39°32'53.5456"N	80°54'48.0401"W	1401.44	196.260	4.39	-4.37	1.14	
5645.00	12.630	209.620	5407.13	-1162.85	-1368.10	-401.49	1664835.36	14361526.80	39°32'53.3212"N	80°54'48.1563"W	1425.79	196.355	6.22	-5.04	14.24	
5742.00	10.100	226.290	5502.25	-1173.42	-1383.20	-412.88	1664823.98	14361511.70	39°32'53.1721"N	80°54'48.3020"W	1443.51	196.620	4.25	-2.61	17.19	
5837.00	9.940	245.370	5595.82	-1177.71	-1392.38	-426.36	1664810.50	14361502.53	39°32'53.0815"N	80°54'48.4741"W	1456.19	197.025	3.48	-0.17	20.08	
5882.00	11.760	261.780	5640.03	-1177.23	-1394.65	-434.43	1664802.43	14361500.26	39°32'53.0591"N	80°54'48.5772"W	1460.75	197.302	7.93	4.04	36.47	
5939.00	13.340	270.460	5695.67	-1173.95	-1395.43	-446.76	1664790.11	14361499.48	39°32'53.0515"N	80°54'48.7346"W	1465.20	197.753	4.31	2.77	15.23	BH AT Curve <8-1/2"> (5882')(5939'-24984')
6000.00	16.670	289.260	5754.62	-1166.19	-1392.48	-462.07	1664774.81	14361502.42	39°32'53.0808"N	80°54'48.9300"W	1467.15	198.357	9.60	5.46	30.82	
6094.00	23.660	315.790	5842.98	-1140.69	-1374.46	-488.03	1664748.85	14361520.44	39°32'53.2592"N	80°54'49.2612"W	1458.53	199.549	12.07	7.44	28.22	
6189.00	31.330	330.560	5927.28	-1099.04	-1339.19	-513.53	1664723.37	14361555.70	39°32'53.6080"N	80°54'49.5863"W	1434.28	200.980	10.75	8.07	15.55	
6278.00†	38.085	339.138	6000.45	-1048.76	-1293.31	-534.72	1664702.19	14361601.56	39°32'54.0616"N	80°54'49.8562"W	1399.49	202.463	9.35	7.59	9.64	Sycamore: 6278' MD
6284.00	38.560	339.620	6005.16	-1045.04	-1289.83	-536.03	1664700.88	14361605.04	39°32'54.0960"N	80°54'49.8728"W	1396.78	202.567	9.35	7.91	8.04	
6378.00	47.640	341.870	6073.72	-980.89	-1229.23	-557.08	1664679.83	14361665.61	39°32'54.6952"N	80°54'50.1409"W	1349.57	204.380	9.80	9.66	2.39	
6426.00†	52.123	342.909	6104.65	-944.21	-1194.25	-568.17	1664668.75	14361700.58	39°32'55.0410"N	80°54'50.2820"W	1322.52	205.443	9.48	9.34	2.16	Middlesex: 6426' MD
6473.00	56.520	343.810	6132.05	-906.07	-1157.68	-579.09	1664657.83	14361737.14	39°32'55.4025"N	80°54'50.4210"W	1294.44	206.575	9.48	9.36	1.92	
6568.00	64.680	344.420	6178.65	-823.50	-1078.14	-601.71	1664635.22	14361816.65	39°32'56.1889"N	80°54'50.7088"W	1234.68	209.166	8.61	8.59	0.64	
6598.00†	66.429	343.413	6191.06	-796.23	-1051.90	-609.28	1664627.66	14361842.87	39°32'56.4483"N	80°54'50.8051"W	1215.61	210.080	6.58	5.83	-3.36	Burkett: 6598' MD
6662.00	70.180	341.350	6214.72	-736.79	-995.24	-627.29	1664609.65	14361899.51	39°32'57.0084"N	80°54'51.0343"W	1176.43	212.223	6.58	5.86	-3.22	
6685.00†	71.199	341.503	6222.33	-715.09	-974.66	-634.20	1664602.74	14361920.08	39°32'57.2118"N	80°54'51.1223"W	1162.83	213.052	4.47	4.43	0.66	Marcellus POE: 6685' MD
6757.00	74.390	341.970	6243.62	-646.32	-909.36	-655.75	1664581.20	14361985.36	39°32'57.8575"N	80°54'51.3966"W	1121.13	215.796	4.47	4.43	0.65	
6852.00	79.790	343.350	6264.84	-553.80	-821.00	-683.33	1664553.64	14362073.68	39°32'58.7310"N	80°54'51.7475"W	1068.16	219.771	5.86	5.68	1.45	
6947.00	90.800	342.290	6272.62	-459.32	-730.69	-711.25	1664525.72	14362163.96	39°32'59.6239"N	80°54'52.1030"W	1019.70	224.228	11.64	11.59	-1.12	
7042.00	90.280	337.500	6271.73	-364.37	-641.51	-743.90	1664493.09	14362253.10	39°33'0.5056"N	80°54'52.5186"W	982.30	229.227	5.07	-0.55	-5.04	
7137.00	91.660	340.450	6270.12	-269.45	-552.86	-777.97	1664459.03	14362341.72	39°33'1.3820"N	80°54'52.9525"W	954.41	234.601	3.43	1.45	3.11	
7231.00	90.370	338.410	6268.45	-175.51	-464.87	-810.99	1664426.02	14362429.67	39°33'2.2519"N	80°54'53.3730"W	934.78	240.178	2.57	-1.37	-2.17	
7326.00	92.680	340.940	6265.92	-80.58	-375.83	-843.98	1664393.05	14362518.67	39°33'3.1323"N	80°54'53.7930"W	923.87	245.996	3.61	2.43	2.66	
7421.00	90.180	340.120	6263.55	14.38	-286.30	-875.63	1664361.41	14362608.17	39°33'4.0174"N	80°54'54.1960"W	921.24	251.894	2.77	-2.63	-0.86	
7516.00	92.160	340.740	6261.61	109.35	-196.81	-907.44	1664329.61	14362697.62	39°33'4.9021"N	80°54'54.6010"W	928.54	257.763	2.18	2.08	0.65	
7611.00	90.950	340.320	6259.03	204.31	-107.28	-939.09	1664297.97	14362787.12	39°33'5.7873"N	80°54'55.0040"W	945.20	263.483	1.35	-1.27	-0.44	
7705.00	90.860	340.360	6257.55	298.29	-18.77	-970.72	1664266.36	14362875.59	39°33'6.6624"N	80°54'55.4066"W	970.90	268.892	0.10	-0.10	0.04	
7792.00	90.590	340.900	6256.45	385.28	63.30	-999.57	1664237.52	14362957.63	39°33'7.4737"N	80°54'55.7740"W	1001.57	273.624	0.69	-0.31	0.62	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

## WELLPATH DATA (269 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
7886.00	90.650	341.180	6255.43	479.27	152.20	-1030.11	1664207.00	14363046.49	39°33'8.3526"N	80°54'56.1628"W	1041.29	278.405	0.30	0.06	0.30	
7981.00	90.520	340.880	6254.46	574.27	242.03	-1060.99	1664176.13	14363136.28	39°33'9.2408"N	80°54'56.5560"W	1088.24	282.850	0.34	-0.14	-0.32	
8075.00	90.180	340.700	6253.89	668.27	330.80	-1091.92	1664145.21	14363225.01	39°33'10.1183"N	80°54'56.9497"W	1140.92	286.854	0.41	-0.36	-0.19	
8170.00	90.710	340.560	6253.15	763.26	420.42	-1123.42	1664113.72	14363314.60	39°33'11.0043"N	80°54'57.3509"W	1199.51	290.517	0.58	0.56	-0.15	
8265.00	90.370	340.340	6252.25	858.25	509.93	-1155.21	1664081.94	14363404.08	39°33'11.8894"N	80°54'57.7557"W	1262.75	293.818	0.43	-0.36	-0.23	
8360.00	91.020	340.670	6251.10	953.24	599.48	-1186.91	1664050.25	14363493.59	39°33'12.7747"N	80°54'58.1593"W	1329.71	296.797	0.77	0.68	0.35	
8454.00	90.460	340.440	6249.89	1047.23	688.11	-1218.20	1664018.98	14363582.19	39°33'13.6509"N	80°54'58.5577"W	1399.11	299.460	0.64	-0.60	-0.24	
8549.00	91.050	341.020	6248.64	1142.22	777.78	-1249.55	1663987.64	14363671.82	39°33'14.5374"N	80°54'58.9569"W	1471.84	301.900	0.87	0.62	0.61	
8644.00	91.420	341.260	6246.59	1237.20	867.66	-1280.25	1663956.95	14363761.66	39°33'15.4260"N	80°54'59.3478"W	1546.57	304.126	0.46	0.39	0.25	
8738.00	90.920	341.670	6244.67	1331.17	956.76	-1310.13	1663927.09	14363850.73	39°33'16.3069"N	80°54'59.7281"W	1622.29	306.140	0.69	-0.53	0.44	
8833.00	90.580	341.160	6243.43	1426.16	1046.80	-1340.40	1663896.82	14363940.73	39°33'17.1971"N	80°55'0.1136"W	1700.73	307.988	0.65	-0.36	-0.54	
8928.00	90.030	339.940	6242.92	1521.16	1136.38	-1372.04	1663865.20	14364030.27	39°33'18.0827"N	80°55'0.5164"W	1781.53	309.633	1.41	-0.58	-1.28	
9022.00	90.250	340.410	6242.69	1615.15	1224.81	-1403.92	1663833.34	14364118.66	39°33'18.9569"N	80°55'0.9223"W	1863.10	311.102	0.55	0.23	0.50	
9117.00	90.310	340.650	6242.23	1710.14	1314.37	-1435.58	1663801.69	14364208.19	39°33'19.8424"N	80°55'1.3255"W	1946.40	312.476	0.26	0.06	0.25	
9212.00	90.400	340.810	6241.64	1805.14	1404.05	-1466.93	1663770.35	14364297.83	39°33'20.7290"N	80°55'1.7247"W	2030.58	313.745	0.19	0.09	0.17	
9306.00	90.030	340.870	6241.28	1899.14	1492.84	-1497.78	1663739.51	14364386.59	39°33'21.6068"N	80°55'2.1176"W	2114.69	314.905	0.40	-0.39	0.06	
9401.00	90.460	341.110	6240.88	1994.14	1582.66	-1528.73	1663708.58	14364476.37	39°33'22.4948"N	80°55'2.5116"W	2200.41	315.993	0.52	0.45	0.25	
9496.00	91.050	340.810	6239.63	2089.13	1672.45	-1559.72	1663677.60	14364566.13	39°33'23.3825"N	80°55'2.9062"W	2286.88	316.998	0.70	0.62	-0.32	
9590.00	90.000	340.750	6238.77	2183.12	1761.21	-1590.66	1663646.67	14364654.85	39°33'24.2600"N	80°55'3.3002"W	2373.19	317.913	1.12	-1.12	-0.06	
9685.00	90.520	341.350	6238.33	2278.12	1851.06	-1621.51	1663615.83	14364744.66	39°33'25.1483"N	80°55'3.6930"W	2460.83	318.782	0.84	0.55	0.63	
9780.00	90.950	341.380	6237.12	2373.11	1941.07	-1651.86	1663585.49	14364834.64	39°33'26.0382"N	80°55'4.0795"W	2548.80	319.602	0.45	0.45	0.03	
9874.00	91.170	341.510	6235.38	2467.09	2030.17	-1681.77	1663555.60	14364923.70	39°33'26.9190"N	80°55'4.4603"W	2636.27	320.362	0.27	0.23	0.14	
9969.00	90.620	341.140	6233.89	2562.08	2120.15	-1712.18	1663525.19	14365013.65	39°33'27.8087"N	80°55'4.8475"W	2725.18	321.077	0.70	-0.58	-0.39	
10064.00	91.350	343.050	6232.26	2657.04	2210.54	-1741.38	1663496.00	14365104.00	39°33'28.7022"N	80°55'5.2193"W	2814.05	321.770	2.15	0.77	2.01	
10158.00	90.680	341.250	6230.59	2751.00	2299.99	-1770.19	1663467.21	14365193.42	39°33'29.5866"N	80°55'5.5861"W	2902.33	322.416	2.04	-0.71	-1.91	
10253.00	90.490	340.920	6229.62	2846.00	2389.86	-1800.99	1663436.43	14365283.25	39°33'30.4750"N	80°55'5.9782"W	2992.49	322.998	0.40	-0.20	-0.35	
10348.00	90.430	341.100	6228.86	2941.00	2479.68	-1831.90	1663405.53	14365373.04	39°33'31.3631"N	80°55'6.3718"W	3082.97	323.544	0.20	-0.06	0.19	
10442.00	90.650	340.970	6227.98	3034.99	2568.58	-1862.45	1663374.99	14365461.90	39°33'32.2419"N	80°55'6.7608"W	3172.74	324.055	0.27	0.23	-0.14	
10537.00	91.110	342.030	6226.52	3129.97	2658.66	-1892.59	1663344.86	14365551.94	39°33'33.1324"N	80°55'7.1446"W	3263.49	324.555	1.22	0.48	1.12	
10632.00	90.490	340.660	6225.19	3224.96	2748.65	-1922.97	1663314.49	14365641.90	39°33'34.0222"N	80°55'7.5315"W	3354.54	325.023	1.58	-0.65	-1.44	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

## WELLPATH DATA (269 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
10727.00	90.800	341.490	6224.12	3319.95	2838.51	-1953.78	1663283.69	14365731.72	39°33'34.9106"N	80°55'7.9238"W	3445.93	325.460	0.93	0.33	0.87	
10821.00	90.490	340.420	6223.06	3413.95	2927.36	-1984.45	1663253.04	14365820.53	39°33'35.7889"N	80°55'8.3144"W	3536.59	325.867	1.19	-0.33	-1.14	
10916.00	90.060	340.670	6222.61	3508.94	3016.93	-2016.09	1663221.41	14365910.07	39°33'36.6745"N	80°55'8.7173"W	3628.57	326.247	0.52	-0.45	0.26	
11011.00	90.180	341.100	6222.41	3603.94	3106.70	-2047.20	1663190.31	14365999.80	39°33'37.5619"N	80°55'9.1135"W	3720.56	326.617	0.47	0.13	0.45	
11105.00	90.060	341.030	6222.21	3697.94	3195.61	-2077.70	1663159.82	14366088.68	39°33'38.4409"N	80°55'9.5019"W	3811.66	326.969	0.15	-0.13	-0.07	
11200.00	90.460	341.300	6221.78	3792.94	3285.52	-2108.37	1663129.16	14366178.55	39°33'39.3298"N	80°55'9.8925"W	3903.83	327.311	0.51	0.42	0.28	
11295.00	91.380	342.130	6220.25	3887.92	3375.71	-2138.17	1663099.37	14366268.71	39°33'40.2215"N	80°55'10.2719"W	3995.90	327.650	1.30	0.97	0.87	
11389.00	90.220	341.410	6218.94	3981.90	3464.98	-2167.58	1663069.98	14366357.94	39°33'41.1040"N	80°55'10.6463"W	4087.11	327.971	1.45	-1.23	-0.77	
11484.00	91.790	341.830	6217.28	4076.87	3555.12	-2197.53	1663040.05	14366448.04	39°33'41.9951"N	80°55'11.0277"W	4179.47	328.279	1.71	1.65	0.44	
11578.00	90.000	341.300	6215.81	4170.85	3644.28	-2227.25	1663010.34	14366537.17	39°33'42.8766"N	80°55'11.4062"W	4271.00	328.568	1.99	-1.90	-0.56	
11673.00	90.370	341.050	6215.50	4265.85	3734.20	-2257.90	1662979.69	14366627.05	39°33'43.7655"N	80°55'11.7965"W	4363.75	328.841	0.47	0.39	-0.26	
11768.00	90.430	341.530	6214.84	4360.85	3824.17	-2288.37	1662949.23	14366716.99	39°33'44.6551"N	80°55'12.1846"W	4456.56	329.104	0.51	0.06	0.51	
11862.00	90.090	340.870	6214.41	4454.85	3913.16	-2318.67	1662918.95	14366805.94	39°33'45.5348"N	80°55'12.5704"W	4548.52	329.352	0.79	-0.36	-0.70	
11957.00	90.980	341.140	6213.52	4549.84	4002.98	-2349.59	1662888.05	14366895.72	39°33'46.4228"N	80°55'12.9641"W	4641.59	329.589	0.98	0.94	0.28	
12052.00	90.860	341.260	6212.00	4644.83	4092.90	-2380.20	1662857.45	14366985.61	39°33'47.3118"N	80°55'13.3540"W	4734.68	329.820	0.18	-0.13	0.13	
12146.00	90.280	341.520	6211.06	4738.82	4181.98	-2410.19	1662827.46	14367074.65	39°33'48.1924"N	80°55'13.7360"W	4826.80	330.044	0.68	-0.62	0.28	
12241.00	90.150	341.450	6210.71	4833.82	4272.06	-2440.36	1662797.31	14367164.70	39°33'49.0830"N	80°55'14.1201"W	4919.95	330.263	0.16	-0.14	-0.07	
12336.00	90.920	341.290	6209.82	4928.81	4362.08	-2470.71	1662766.97	14367254.68	39°33'49.9729"N	80°55'14.5066"W	5013.20	330.473	0.83	0.81	-0.17	
12431.00	91.110	342.100	6208.14	5023.79	4452.26	-2500.54	1662737.15	14367344.82	39°33'50.8644"N	80°55'14.8865"W	5106.40	330.680	0.88	0.20	0.85	
12525.00	90.280	341.290	6207.00	5117.77	4541.49	-2530.06	1662707.65	14367434.02	39°33'51.7466"N	80°55'15.2624"W	5198.69	330.878	1.23	-0.88	-0.86	
12620.00	90.680	341.700	6206.20	5212.77	4631.58	-2560.21	1662677.51	14367524.07	39°33'52.6372"N	80°55'15.6464"W	5292.09	331.067	0.60	0.42	0.43	
12715.00	90.740	341.640	6205.02	5307.75	4721.75	-2590.09	1662647.64	14367614.21	39°33'53.5287"N	80°55'16.0268"W	5385.49	331.253	0.09	0.06	-0.06	
12810.00	90.400	340.270	6204.08	5402.74	4811.54	-2621.08	1662616.66	14367703.96	39°33'54.4164"N	80°55'16.4216"W	5479.14	331.421	1.49	-0.36	-1.44	
12904.00	90.770	339.990	6203.12	5496.73	4899.94	-2653.03	1662584.72	14367792.33	39°33'55.2903"N	80°55'16.8286"W	5572.07	331.567	0.49	0.39	-0.30	
12999.00	90.370	340.940	6202.17	5591.72	4989.47	-2684.79	1662552.97	14367881.82	39°33'56.1754"N	80°55'17.2332"W	5665.94	331.716	1.08	-0.42	1.00	
13094.00	90.370	340.180	6201.56	5686.71	5079.05	-2716.41	1662521.37	14367971.36	39°33'57.0610"N	80°55'17.6359"W	5759.83	331.861	0.80	0.00	-0.80	
13188.00	90.770	340.610	6200.63	5780.70	5167.60	-2747.95	1662489.84	14368059.87	39°33'57.9364"N	80°55'18.0376"W	5852.80	331.997	0.62	0.43	0.46	
13283.00	90.370	340.220	6199.68	5875.69	5257.09	-2779.79	1662458.01	14368149.33	39°33'58.8212"N	80°55'18.4432"W	5946.79	332.131	0.59	-0.42	-0.41	
13377.00	90.620	340.310	6198.87	5969.68	5345.57	-2811.53	1662426.29	14368237.77	39°33'59.6959"N	80°55'18.8475"W	6039.85	332.258	0.28	0.27	0.10	
13472.00	91.320	341.630	6197.26	6064.66	5435.36	-2842.50	1662395.33	14368327.53	39°34'0.5836"N	80°55'19.2420"W	6133.76	332.392	1.57	0.74	1.39	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWP
Slot	Slot A		

## WELLPATH DATA (269 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	90.400	340.240	6195.83	6159.65	5525.14	-2873.53	1662364.31	14368417.27	39°34'1.4712"N	80°55'19.6372"W	6227.71	332.522	1.75	-0.97	-1.46	
13662.00	90.550	340.430	6195.05	6254.64	5614.59	-2905.50	1662332.36	14368506.69	39°34'2.3556"N	80°55'20.0444"W	6321.83	332.639	0.25	0.16	0.20	
13756.00	90.650	340.260	6194.06	6348.63	5703.11	-2937.11	1662300.76	14368595.17	39°34'3.2307"N	80°55'20.4471"W	6414.99	332.751	0.21	0.11	-0.18	
13851.00	90.740	340.680	6192.91	6443.62	5792.64	-2968.87	1662269.01	14368684.67	39°34'4.1158"N	80°55'20.8516"W	6509.14	332.864	0.45	0.09	0.44	
13945.00	90.250	340.440	6192.10	6537.61	5881.28	-3000.15	1662237.74	14368773.27	39°34'4.9921"N	80°55'21.2501"W	6602.30	332.973	0.58	-0.52	-0.26	
14040.00	90.620	340.610	6191.38	6632.61	5970.84	-3031.82	1662206.08	14368862.79	39°34'5.8775"N	80°55'21.6535"W	6696.48	333.080	0.43	0.39	0.18	
14135.00	90.860	340.650	6190.15	6727.60	6060.45	-3063.33	1662174.59	14368952.37	39°34'6.7635"N	80°55'22.0549"W	6790.66	333.185	0.26	0.25	0.04	
14230.00	90.770	340.860	6188.80	6822.59	6150.14	-3094.64	1662143.29	14369042.02	39°34'7.6501"N	80°55'22.4537"W	6884.84	333.289	0.24	-0.09	0.22	
14324.00	90.490	340.630	6187.76	6916.58	6238.87	-3125.64	1662112.31	14369130.72	39°34'8.5273"N	80°55'22.8485"W	6978.05	333.389	0.39	-0.30	-0.24	
14419.00	90.550	340.470	6186.90	7011.57	6328.45	-3157.27	1662080.69	14369220.26	39°34'9.4129"N	80°55'23.2515"W	7072.31	333.485	0.18	0.06	-0.17	
14514.00	90.460	340.420	6186.06	7106.56	6417.96	-3189.07	1662048.90	14369309.74	39°34'10.2979"N	80°55'23.6565"W	7166.62	333.577	0.11	-0.09	-0.05	
14609.00	90.550	340.390	6185.23	7201.55	6507.46	-3220.92	1662017.06	14369399.20	39°34'11.1827"N	80°55'24.0624"W	7260.95	333.666	0.10	0.09	-0.03	
14703.00	90.550	340.230	6184.33	7295.54	6595.96	-3252.59	1661985.40	14369487.66	39°34'12.0576"N	80°55'24.4658"W	7354.32	333.751	0.17	0.00	-0.17	
14798.00	90.430	340.420	6183.51	7390.53	6685.41	-3284.58	1661953.43	14369577.08	39°34'12.9419"N	80°55'24.8733"W	7448.70	333.835	0.24	-0.13	0.20	
14892.00	90.860	340.710	6182.45	7484.52	6774.05	-3315.85	1661922.17	14369665.68	39°34'13.8182"N	80°55'25.2717"W	7542.06	333.919	0.55	0.46	0.31	
14987.00	90.680	340.710	6181.18	7579.51	6863.71	-3347.23	1661890.80	14369755.30	39°34'14.7046"N	80°55'25.6714"W	7636.39	334.003	0.19	-0.19	0.00	
15082.00	90.400	340.340	6180.28	7674.51	6953.27	-3378.90	1661859.14	14369844.83	39°34'15.5900"N	80°55'26.0749"W	7730.78	334.083	0.49	-0.29	-0.39	
15176.00	90.950	340.260	6179.18	7768.49	7041.76	-3410.59	1661827.47	14369933.28	39°34'16.4648"N	80°55'26.4785"W	7824.22	334.157	0.59	0.59	-0.09	
15271.00	90.580	340.440	6177.91	7863.48	7131.22	-3442.53	1661795.54	14370022.71	39°34'17.3493"N	80°55'26.8855"W	7918.67	334.231	0.43	-0.39	0.19	
15365.00	90.430	340.620	6177.08	7957.47	7219.84	-3473.86	1661764.22	14370111.29	39°34'18.2254"N	80°55'27.2846"W	8012.10	334.305	0.25	-0.16	0.19	
15460.00	90.490	340.650	6176.32	8052.47	7309.46	-3505.36	1661732.73	14370200.88	39°34'19.1114"N	80°55'27.6859"W	8106.53	334.379	0.07	0.06	0.03	
15555.00	90.400	340.500	6175.58	8147.46	7399.05	-3536.96	1661701.15	14370290.43	39°34'19.9971"N	80°55'28.0884"W	8200.98	334.451	0.18	-0.09	-0.16	
15650.00	90.550	340.520	6174.79	8242.45	7488.60	-3568.65	1661669.47	14370379.95	39°34'20.8824"N	80°55'28.4922"W	8295.45	334.520	0.16	0.16	0.02	
15744.00	90.620	340.430	6173.83	8336.44	7577.19	-3600.07	1661638.07	14370468.50	39°34'21.7583"N	80°55'28.8924"W	8388.94	334.587	0.12	0.07	-0.10	
15839.00	90.950	340.480	6172.53	8431.43	7666.71	-3631.84	1661606.30	14370557.99	39°34'22.6432"N	80°55'29.2972"W	8483.44	334.652	0.35	0.35	0.05	
15933.00	90.710	340.620	6171.17	8525.42	7755.34	-3663.14	1661575.02	14370646.58	39°34'23.5194"N	80°55'29.6960"W	8576.94	334.717	0.30	-0.26	0.15	
16028.00	90.710	340.370	6169.99	8620.41	7844.88	-3694.86	1661543.31	14370736.08	39°34'24.4046"N	80°55'30.1000"W	8671.45	334.780	0.26	0.00	-0.26	
16123.00	90.920	340.380	6168.64	8715.39	7934.35	-3726.76	1661511.42	14370825.52	39°34'25.2892"N	80°55'30.5065"W	8766.00	334.841	0.22	0.22	0.01	
16218.00	90.620	340.570	6167.36	8810.38	8023.88	-3758.51	1661479.69	14370915.01	39°34'26.1743"N	80°55'30.9110"W	8860.53	334.901	0.37	-0.32	0.20	
16312.00	90.520	340.410	6166.43	8904.37	8112.48	-3789.90	1661448.31	14371003.57	39°34'27.0502"N	80°55'31.3109"W	8954.09	334.959	0.20	-0.11	-0.17	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

## WELLPATH DATA (269 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
16407.00	90.710	340.630	6165.41	8999.36	8202.04	-3821.58	1661416.64	14371093.09	39°34'27.9355"N	80°55'31.7145"W	9048.64	335.018	0.31	0.20	0.23	
16502.00	90.830	340.670	6164.13	9094.35	8291.66	-3853.05	1661385.18	14371182.68	39°34'28.8216"N	80°55'32.1155"W	9143.18	335.076	0.13	0.13	0.04	
16597.00	90.520	340.650	6163.01	9189.34	8381.29	-3884.51	1661353.73	14371272.28	39°34'29.7077"N	80°55'32.5163"W	9237.72	335.133	0.33	-0.33	-0.02	
16692.00	90.740	340.480	6161.97	9284.33	8470.88	-3916.12	1661322.14	14371361.83	39°34'30.5933"N	80°55'32.9190"W	9332.30	335.189	0.29	0.23	-0.18	
16786.00	90.550	340.360	6160.91	9378.32	8559.43	-3947.62	1661290.65	14371450.35	39°34'31.4688"N	80°55'33.3204"W	9425.90	335.241	0.24	-0.20	-0.13	
16881.00	90.400	340.300	6160.12	9473.31	8648.89	-3979.60	1661258.69	14371539.77	39°34'32.3532"N	80°55'33.7278"W	9520.53	335.292	0.17	-0.16	-0.06	
16975.00	90.580	340.930	6159.32	9567.31	8737.56	-4010.80	1661227.50	14371628.40	39°34'33.2297"N	80°55'34.1253"W	9614.12	335.343	0.70	0.19	0.67	
17070.00	90.830	340.470	6158.15	9662.30	8827.21	-4042.19	1661196.12	14371718.02	39°34'34.1161"N	80°55'34.5253"W	9708.70	335.396	0.55	0.26	-0.48	
17165.00	90.770	340.130	6156.82	9757.28	8916.64	-4074.21	1661164.11	14371807.41	39°34'35.0002"N	80°55'34.9333"W	9803.35	335.443	0.36	-0.06	-0.36	
17259.00	90.890	340.840	6155.46	9851.27	9005.23	-4105.61	1661132.73	14371895.97	39°34'35.8760"N	80°55'35.3333"W	9896.98	335.491	0.77	0.13	0.76	
17354.00	90.490	340.650	6154.32	9946.26	9094.91	-4136.94	1661101.41	14371985.61	39°34'36.7626"N	80°55'35.7324"W	9991.58	335.541	0.47	-0.42	-0.20	
17448.00	90.550	340.490	6153.46	10040.25	9183.55	-4168.21	1661070.16	14372074.22	39°34'37.6389"N	80°55'36.1308"W	10085.22	335.588	0.18	0.06	-0.17	
17543.00	90.340	340.440	6152.73	10135.25	9273.08	-4199.97	1661038.40	14372163.71	39°34'38.5240"N	80°55'36.5356"W	10179.87	335.633	0.23	-0.22	-0.05	
17637.00	90.250	340.400	6152.24	10229.24	9361.64	-4231.47	1661006.92	14372252.24	39°34'39.3995"N	80°55'36.9370"W	10273.55	335.677	0.10	-0.10	-0.04	
17732.00	90.280	340.280	6151.80	10324.23	9451.11	-4263.43	1660974.97	14372341.66	39°34'40.2840"N	80°55'37.3442"W	10368.23	335.720	0.13	0.03	-0.13	
17827.00	90.280	340.340	6151.34	10419.23	9540.55	-4295.44	1660942.97	14372431.07	39°34'41.1682"N	80°55'37.7521"W	10462.93	335.761	0.06	0.00	0.06	
17921.00	90.340	340.700	6150.83	10513.22	9629.17	-4326.79	1660911.64	14372519.65	39°34'42.0443"N	80°55'38.1515"W	10556.61	335.804	0.39	0.06	0.38	
18016.00	90.180	340.490	6150.40	10608.22	9718.77	-4358.35	1660880.09	14372609.22	39°34'42.9301"N	80°55'38.5536"W	10651.28	335.846	0.28	-0.17	-0.22	
18110.00	90.340	340.390	6149.97	10702.21	9807.34	-4389.82	1660848.63	14372697.76	39°34'43.8058"N	80°55'38.9546"W	10744.98	335.886	0.20	0.17	-0.11	
18205.00	90.550	340.670	6149.23	10797.21	9896.91	-4421.48	1660816.98	14372787.29	39°34'44.6912"N	80°55'39.3581"W	10839.66	335.927	0.37	0.22	0.29	
18299.00	90.180	340.590	6148.63	10891.20	9985.59	-4452.66	1660785.82	14372875.93	39°34'45.5679"N	80°55'39.7553"W	10933.35	335.967	0.40	-0.39	-0.09	
18394.00	90.370	340.620	6148.18	10986.20	10075.19	-4484.21	1660754.28	14372965.50	39°34'46.4537"N	80°55'40.1573"W	11028.04	336.007	0.20	0.20	0.03	
18583.00	90.280	339.940	6147.11	11175.18	10253.11	-4547.98	1660690.54	14373143.34	39°34'48.2126"N	80°55'40.9700"W	11216.52	336.079	0.36	-0.05	-0.36	
18678.00	90.250	340.150	6146.67	11270.16	10342.40	-4580.40	1660658.13	14373232.60	39°34'49.0954"N	80°55'41.3831"W	11311.29	336.113	0.22	-0.03	0.22	
18772.00	90.180	341.100	6146.31	11364.16	10431.08	-4611.58	1660626.96	14373321.24	39°34'49.9720"N	80°55'41.7805"W	11405.00	336.150	1.01	-0.07	1.01	
18867.00	90.460	341.460	6145.78	11459.16	10521.05	-4642.07	1660596.48	14373411.18	39°34'50.8615"N	80°55'42.1689"W	11499.62	336.192	0.48	0.29	0.38	
18962.00	90.280	341.580	6145.17	11554.15	10611.15	-4672.19	1660566.38	14373501.24	39°34'51.7522"N	80°55'42.5526"W	11594.21	336.236	0.23	-0.19	0.13	
19056.00	90.220	341.400	6144.76	11648.15	10700.28	-4702.03	1660536.55	14373590.34	39°34'52.6333"N	80°55'42.9328"W	11687.82	336.278	0.20	-0.06	-0.19	
19151.00	90.220	341.610	6144.40	11743.14	10790.38	-4732.16	1660506.43	14373680.40	39°34'53.5240"N	80°55'43.3168"W	11782.43	336.320	0.22	0.00	0.22	
19245.00	90.150	341.410	6144.09	11837.14	10879.52	-4761.97	1660476.63	14373769.51	39°34'54.4053"N	80°55'43.6966"W	11876.04	336.361	0.23	-0.07	-0.21	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

### WELLPATH DATA (269 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
19340.00	90.000	341.570	6143.97	11932.14	10969.61	-4792.13	1660446.48	14373859.56	39°34'55.2959"N	80°55'44.0809"W	11970.67	336.402	0.23	-0.16	0.17	
19435.00	90.060	341.270	6143.92	12027.13	11059.66	-4822.40	1660416.22	14373949.57	39°34'56.1861"N	80°55'44.4666"W	12065.31	336.441	0.32	0.06	-0.32	
19529.00	89.850	341.560	6143.99	12121.13	11148.76	-4852.36	1660386.27	14374038.63	39°34'57.0669"N	80°55'44.8483"W	12158.95	336.479	0.38	-0.22	0.31	
19624.00	90.000	341.300	6144.12	12216.13	11238.81	-4882.62	1660356.03	14374128.65	39°34'57.9571"N	80°55'45.2338"W	12253.60	336.518	0.32	0.16	-0.27	
19719.00	89.720	341.570	6144.35	12311.12	11328.87	-4912.86	1660325.80	14374218.67	39°34'58.8474"N	80°55'45.6192"W	12348.26	336.556	0.41	-0.29	0.28	
19813.00	89.940	341.210	6144.63	12405.12	11417.95	-4942.86	1660295.81	14374307.72	39°34'59.7281"N	80°55'46.0015"W	12441.92	336.592	0.45	0.23	-0.38	
19908.00	89.880	341.110	6144.78	12500.12	11507.86	-4973.54	1660265.15	14374397.59	39°35'0.6169"N	80°55'46.3924"W	12536.62	336.627	0.12	-0.06	-0.11	
20003.00	89.910	341.860	6144.95	12595.12	11597.94	-5003.71	1660234.99	14374487.64	39°35'1.5074"N	80°55'46.7768"W	12631.28	336.663	0.79	0.03	0.79	
20098.00	90.000	341.460	6145.03	12690.11	11688.12	-5033.60	1660205.11	14374577.78	39°35'2.3989"N	80°55'47.1577"W	12725.92	336.700	0.43	0.09	-0.42	
20192.00	90.000	341.410	6145.03	12784.11	11777.22	-5063.52	1660175.20	14374666.85	39°35'3.2798"N	80°55'47.5390"W	12819.61	336.735	0.05	0.00	-0.05	
20287.00	89.940	341.460	6145.08	12879.10	11867.28	-5093.77	1660144.96	14374756.87	39°35'4.1701"N	80°55'47.9244"W	12914.29	336.770	0.08	-0.06	0.05	
20381.00	90.000	341.620	6145.12	12973.10	11956.44	-5123.54	1660115.21	14374846.00	39°35'5.0515"N	80°55'48.3037"W	13007.97	336.804	0.18	0.06	0.17	
20476.00	89.970	341.450	6145.15	13068.10	12046.55	-5153.62	1660085.13	14374936.07	39°35'5.9423"N	80°55'48.6871"W	13102.64	336.838	0.18	-0.03	-0.18	
20571.00	89.940	341.750	6145.22	13163.09	12136.70	-5183.61	1660055.16	14375026.18	39°35'6.8335"N	80°55'49.0692"W	13197.32	336.873	0.32	-0.03	0.32	
20665.00	89.940	341.590	6145.32	13257.08	12225.93	-5213.17	1660025.61	14375115.37	39°35'7.7156"N	80°55'49.4459"W	13290.99	336.906	0.17	0.00	-0.17	
20760.00	89.940	341.640	6145.42	13352.08	12316.08	-5243.14	1659995.66	14375205.49	39°35'8.6068"N	80°55'49.8277"W	13385.67	336.940	0.05	0.00	0.05	
20854.00	89.600	341.660	6145.80	13446.07	12405.30	-5272.73	1659966.08	14375294.67	39°35'9.4888"N	80°55'50.2048"W	13479.36	336.973	0.36	-0.36	0.02	
20949.00	89.600	341.750	6146.46	13541.06	12495.49	-5302.55	1659936.27	14375384.83	39°35'10.3804"N	80°55'50.5848"W	13574.03	337.006	0.09	0.00	0.09	
21138.00	89.600	341.370	6147.78	13730.05	12674.78	-5362.33	1659876.51	14375564.05	39°35'12.1529"N	80°55'51.3466"W	13762.44	337.068	0.20	0.00	-0.20	
21233.00	89.540	341.310	6148.49	13825.04	12764.79	-5392.73	1659846.13	14375654.02	39°35'13.0426"N	80°55'51.7339"W	13857.18	337.097	0.09	-0.06	-0.06	
21327.00	89.170	341.780	6149.55	13919.03	12853.95	-5422.48	1659816.39	14375743.14	39°35'13.9240"N	80°55'52.1131"W	13950.89	337.127	0.64	-0.39	0.50	
21422.00	89.480	341.590	6150.67	14014.02	12944.13	-5452.33	1659786.55	14375833.28	39°35'14.8155"N	80°55'52.4935"W	14045.58	337.158	0.38	0.33	-0.20	
21517.00	89.350	341.590	6151.64	14109.01	13034.26	-5482.33	1659756.56	14375923.38	39°35'15.7066"N	80°55'52.8758"W	14140.30	337.188	0.14	-0.14	0.00	
21611.00	89.380	341.590	6152.68	14203.00	13123.45	-5512.02	1659726.89	14376012.53	39°35'16.5882"N	80°55'53.2541"W	14234.01	337.217	0.03	0.03	0.00	
21706.00	89.380	341.480	6153.71	14297.99	13213.55	-5542.10	1659696.81	14376102.60	39°35'17.4790"N	80°55'53.6375"W	14328.74	337.246	0.12	0.00	-0.12	
21895.00	89.080	341.640	6156.25	14486.96	13392.83	-5601.88	1659637.06	14376281.80	39°35'19.2513"N	80°55'54.3993"W	14517.19	337.302	0.18	-0.16	0.08	
21990.00	88.950	341.570	6157.88	14581.94	13482.96	-5631.86	1659607.09	14376371.90	39°35'20.1423"N	80°55'54.7813"W	14611.91	337.330	0.16	-0.14	-0.07	
22085.00	89.420	341.850	6159.24	14676.93	13573.15	-5661.67	1659577.30	14376462.06	39°35'21.0339"N	80°55'55.1612"W	14706.63	337.358	0.58	0.49	0.29	
22179.00	88.830	341.160	6160.67	14770.91	13662.29	-5691.48	1659547.49	14376551.15	39°35'21.9150"N	80°55'55.5412"W	14800.37	337.384	0.97	-0.63	-0.73	
22274.00	89.170	341.700	6162.33	14865.89	13752.33	-5721.73	1659517.26	14376641.16	39°35'22.8051"N	80°55'55.9267"W	14895.12	337.410	0.67	0.36	0.57	





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

### WELLPATH DATA (269 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
22369.00	88.800	341.240	6164.01	14960.87	13842.39	-5751.92	1659487.08	14376731.18	39°35'23.6954"N	80°55'56.3114"W	14989.87	337.436	0.62	-0.39	-0.48	
22463.00	89.200	341.260	6165.65	15054.86	13931.38	-5782.13	1659456.88	14376820.14	39°35'24.5753"N	80°55'56.6964"W	15083.65	337.459	0.43	0.43	0.02	
22558.00	88.860	341.150	6167.26	15149.84	14021.31	-5812.73	1659426.29	14376910.03	39°35'25.4642"N	80°55'57.0865"W	15178.43	337.483	0.38	-0.36	-0.12	
22653.00	89.050	341.210	6168.99	15244.83	14111.21	-5843.37	1659395.66	14376999.90	39°35'26.3530"N	80°55'57.4770"W	15273.22	337.506	0.21	0.20	0.06	
22747.00	88.800	341.310	6170.76	15338.81	14200.21	-5873.57	1659365.48	14377088.86	39°35'27.2328"N	80°55'57.8618"W	15367.00	337.529	0.29	-0.27	0.11	
22842.00	88.980	341.270	6172.60	15433.79	14290.18	-5904.03	1659335.03	14377178.79	39°35'28.1222"N	80°55'58.2502"W	15461.78	337.552	0.19	0.19	-0.04	
22937.00	89.020	341.600	6174.26	15528.77	14380.22	-5934.28	1659304.80	14377268.80	39°35'29.0123"N	80°55'58.6356"W	15556.55	337.576	0.35	0.04	0.35	
23031.00	89.020	341.400	6175.86	15622.76	14469.35	-5964.10	1659274.99	14377357.89	39°35'29.8934"N	80°55'59.0157"W	15650.32	337.599	0.21	0.00	-0.21	
23126.00	89.110	341.250	6177.41	15717.74	14559.33	-5994.51	1659244.58	14377447.84	39°35'30.7830"N	80°55'59.4033"W	15745.11	337.622	0.18	0.09	-0.16	
23221.00	88.770	341.410	6179.17	15812.72	14649.32	-6024.92	1659214.19	14377537.79	39°35'31.6725"N	80°55'59.7909"W	15839.89	337.644	0.40	-0.36	0.17	
23315.00	89.020	341.460	6180.98	15906.70	14738.41	-6054.84	1659184.28	14377626.85	39°35'32.5533"N	80°56'0.1723"W	15933.67	337.666	0.27	0.27	0.05	
23410.00	88.950	341.750	6182.67	16001.68	14828.54	-6084.81	1659154.32	14377716.94	39°35'33.4443"N	80°56'0.5543"W	16028.43	337.689	0.31	-0.07	0.31	
23505.00	89.350	341.790	6184.08	16096.66	14918.76	-6114.53	1659124.61	14377807.13	39°35'34.3362"N	80°56'0.9330"W	16123.18	337.713	0.42	0.42	0.04	
23599.00	88.920	341.920	6185.49	16190.64	15008.08	-6143.80	1659095.35	14377896.41	39°35'35.2191"N	80°56'1.3061"W	16216.93	337.737	0.48	-0.46	0.14	
23694.00	88.710	341.350	6187.46	16285.62	15098.22	-6173.73	1659065.44	14377986.51	39°35'36.1102"N	80°56'1.6875"W	16311.69	337.760	0.64	-0.22	-0.60	
23789.00	89.170	341.610	6189.22	16380.60	15188.29	-6203.90	1659035.28	14378076.54	39°35'37.0006"N	80°56'2.0720"W	16406.47	337.782	0.56	0.48	0.27	
23978.00	88.150	341.140	6193.64	16569.54	15367.34	-6264.24	1658974.96	14378255.52	39°35'38.7706"N	80°56'2.8412"W	16595.05	337.823	0.59	-0.54	-0.25	
24072.00	88.770	341.330	6196.16	16663.50	15456.31	-6294.47	1658944.75	14378344.45	39°35'39.6501"N	80°56'3.2265"W	16688.85	337.842	0.69	0.66	0.20	
24167.00	88.770	341.450	6198.20	16758.48	15546.32	-6324.78	1658914.45	14378434.43	39°35'40.5399"N	80°56'3.6128"W	16783.65	337.862	0.13	0.00	0.13	
24262.00	89.880	342.010	6199.32	16853.46	15636.52	-6354.56	1658884.68	14378524.60	39°35'41.4317"N	80°56'3.9924"W	16878.42	337.884	1.31	1.17	0.59	
24356.00	89.290	341.600	6200.00	16947.45	15725.82	-6383.91	1658855.34	14378613.86	39°35'42.3144"N	80°56'4.3665"W	16972.20	337.905	0.76	-0.63	-0.44	
24451.00	89.110	341.370	6201.33	17042.44	15815.89	-6414.07	1658825.19	14378703.90	39°35'43.2048"N	80°56'4.7509"W	17067.01	337.925	0.31	-0.19	-0.24	
24545.00	90.090	341.310	6201.98	17136.43	15904.95	-6444.15	1658795.13	14378792.92	39°35'44.0852"N	80°56'5.1343"W	17160.84	337.944	1.04	1.04	-0.06	
24640.00	90.030	341.580	6201.89	17231.43	15995.01	-6474.38	1658764.91	14378882.94	39°35'44.9755"N	80°56'5.5196"W	17255.66	337.963	0.29	-0.06	0.28	
24735.00	90.000	341.310	6201.86	17326.43	16085.07	-6504.61	1658734.69	14378972.97	39°35'45.8658"N	80°56'5.9050"W	17350.49	337.982	0.29	-0.03	-0.28	
24830.00	90.060	341.450	6201.81	17421.42	16175.10	-6534.94	1658704.37	14379062.96	39°35'46.7558"N	80°56'6.2916"W	17445.32	338.001	0.16	0.06	0.15	
24924.00	89.970	341.390	6201.79	17515.42	16264.20	-6564.89	1658674.43	14379152.02	39°35'47.6366"N	80°56'6.6734"W	17539.16	338.019	0.12	-0.10	-0.06	
24984.00	90.000	341.650	6201.80	17575.42	16321.11	-6583.91	1658655.42	14379208.91	39°35'48.1992"N	80°56'6.9158"W	17599.04	338.031	0.44	0.05	0.43	
25009.00	90.000	341.650	6201.80	17600.42	16344.83	-6591.78	1658647.56	14379232.63	39°35'48.4337"N	80°56'7.0162"W	17623.99	338.036	0.00	0.00	0.00	Projected MD at TD: 25009'

### HOLE & CASING SECTIONS - Ref Wellbore: Ringnus Unit 1H AWB Ref Wellpath: Ringnus Unit 1H AWP Proj: 25009'

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	-0.29	0.42
17.5in Open Hole	125.50	651.00	525.50	125.50	650.99	-0.29	0.42	-1.99	-0.92
13.375in Casing Surface	25.50	631.00	605.50	25.50	630.99	0.00	0.00	-1.80	-0.59
12.25in Open Hole	651.00	3239.00	2588.00	650.99	3145.47	-1.99	-0.92	-576.10	-196.95
9.625in Casing Intermediate	25.50	3219.00	3193.50	25.50	3126.61	0.00	0.00	-569.59	-195.49
8.75in Open Hole	3239.00	5957.00	2718.00	3145.47	5713.16	-576.10	-196.95	-1395.15	-451.02
8.5in Open Hole	5957.00	25009.00	19052.00	5713.16	6201.80	-1395.15	-451.02	16344.83	-6591.78
5.5in Casing Production	25.50	24989.00	24963.50	25.50	6201.80	0.00	0.00	16325.85	-6585.48





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Ringnus Unit 1H BHL Rev-4	6100.07	16896.27	-6813.18	1658426.24	14379783.84	39°35'53.8853"N	80°56'9.8395"W	point
Ringnus Unit 1H BHL Rev-5	6105.31	16328.55	-6617.70	1658621.64	14379216.35	39°35'48.2730"N	80°56'7.3475"W	point
Ringnus Unit 1H POE Rev-4	6223.00	-985.50	-656.04	1664580.91	14361909.24	39°32'57.1049"N	80°54'51.4012"W	point
Ringnus Unit 1H LP Rev-4	6263.00	-756.38	-734.94	1664502.05	14362138.28	39°32'59.3702"N	80°54'52.4056"W	point
Ringnus Unit 1H 50' L/R Hard Line R-2	6650.00	7671.53	-3636.87	1661601.27	14370562.80	39°34'22.6909"N	80°55'29.3614"W	rectangle
2D Rectangle 18311.7 x 100.								

### WELLPATH COMPOSITION - Ref Wellbore: Ringnus Unit 1H AWB Ref Wellpath: Ringnus Unit 1H AWP Proj: 25009'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	551.00	Gyrodatta 2015 - GC+WIR+DPIPE			
551.00	3165.00	BH NaviTrak (2019) (Axial Corr+HRGM)	01 Gyrodatta MS Gyro <17-1/2"> (100'-551')	Ringnus Unit 1H AWB	6/30/2023
3165.00	5882.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (551')(676'-3165')	Ringnus Unit 1H AWB	6/30/2023
5882.00	25009.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03 APS EM <8-3/4"> (3165')(3275'-5882')	Ringnus Unit 1H AWB	6/30/2023
			04 BH AT Curve <8-1/2"> (5882')(5939'-24984')	Ringnus Unit 1H AWB	6/30/2023





# Actual Wellpath Report

Ringnus Unit 1H AWP Proj: 25009'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ringnus Unit 1H
Field	Tyler	API	47-095-02862-0000
Facility	Dry Run Pad	Wellbore	Ringnus Unit 1H AWB
Slot	Slot A		

## COMMENTS

### Wellpath general comments

API: 47-095-02862-0000  
BH Job #: 111856039  
Rig: H&P 317  
Duration: 7/1/2023-7/10/2023  
Gyrodata MS Gyro <17-1/2"> (100'-551')  
APS EM <12-1/4"> (551')(676'-3165')  
APS EM <8-3/4"> (3165')(3275'-5882')  
BH AT Curve <8-1/2"> (5882')(5939'-24984')  
Sycamore: 6278' MD  
Middlesex: 6426' MD  
Burkett: 6598' MD  
Marcellus POE: 6685' MD  
Projected MD at TD: 25009'

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