



ANTERO RESOURCES CORPORATION

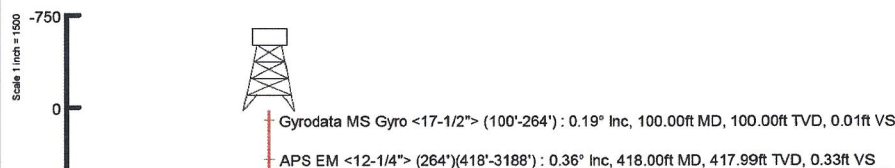
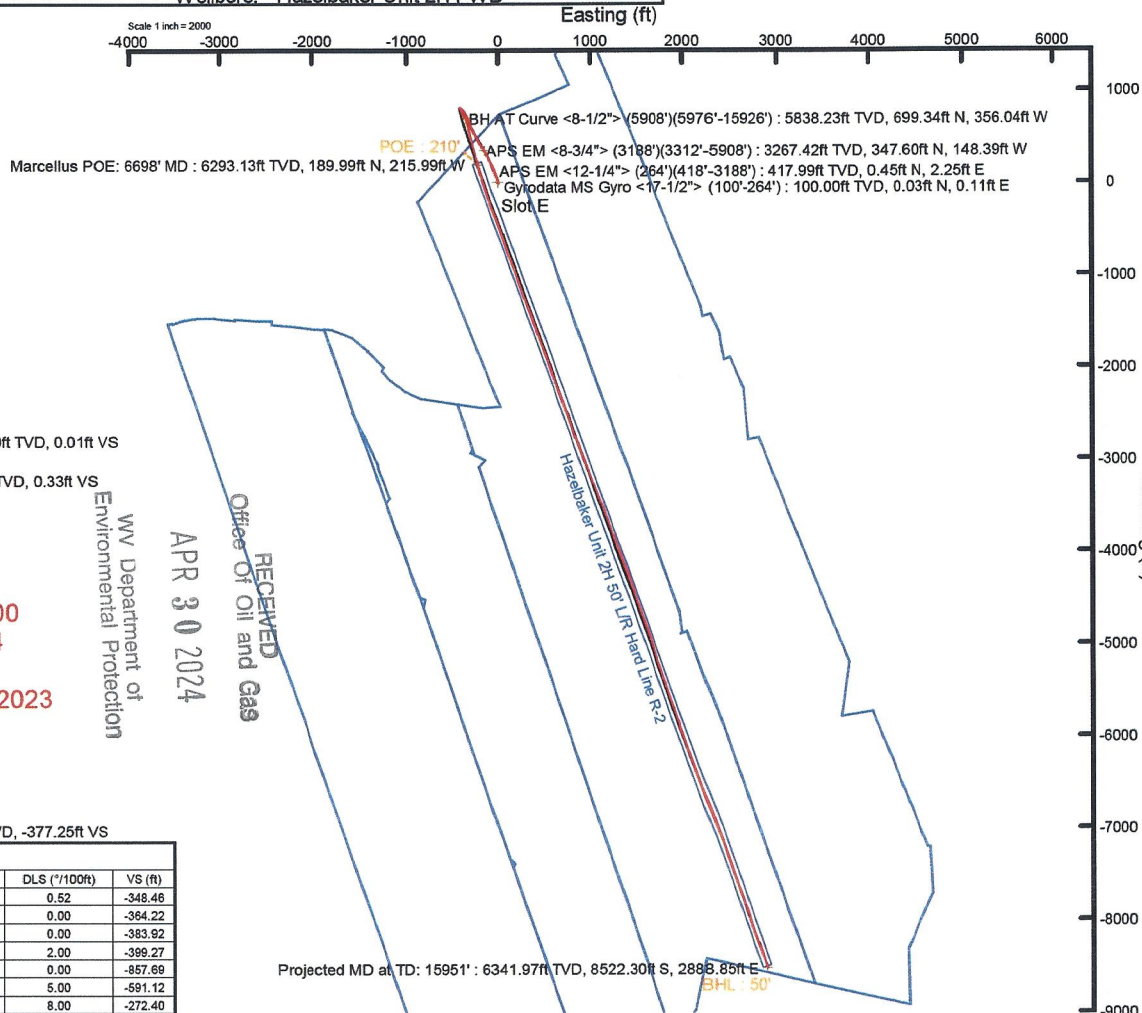
Location: Ritchie County, WV
Field: Ritchie
Facility: Jackson Pad

Slot: Slot E
Well: Hazelbaker Unit 2H
Wellbore: Hazelbaker Unit 2H PWB



Plot reference wellpath is Hazelbaker Unit 2H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1065 feet	Coordinates are in feet referenced to Sikt
Mean Sea Level to Ground level (At Slot: Slot E): -1035 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edsanyar on 2023-08-04; Database: WA_MPL_EASTERNUS_Deft

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Jackson Pad	1645046.400	14267246.330	39°17'21.2374"N	80°59'1.0934"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot E	-15.00	0.46	1645046.860	14267231.340	39°17'21.0892"N 80°59'1.0876"W
Comment: Hazelbaker Unit 2H					
H&P 519 (RKB) to Ground level (At Slot: Slot E)					30ft
Mean Sea Level to Ground level (At Slot: Slot E)					-1035ft
H&P 519 (RKB) to Mean Sea Level					1065ft

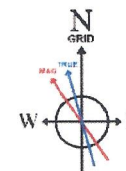
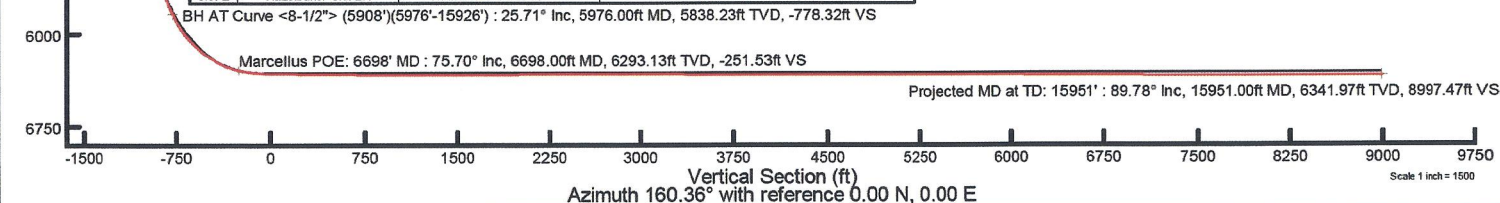


API: 47-085-10484-0000
BH Job #: 111872734
Rig: H&P 519
Duration: 7/23/2023-7/27/2023

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Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS ("/100ft)	VS (ft)
Tie On	3188.00	14.530	329.340	3147.01	322.78	-132.27	0.52	-348.46
Proj. to Bottom	3252.00	14.530	329.340	3208.96	336.80	-140.46	0.00	-364.22
Drill Out	3332.00	14.530	329.340	3286.40	353.86	-150.69	0.00	-383.82
End of 3D Arc	3391.88	15.704	330.237	3344.19	367.35	-158.54	2.00	-399.27
Curve KOP	5112.28	15.704	330.237	5000.39	771.60	-389.70	0.00	-857.69
End of 3D Arc	6282.01	43.000	181.000	6087.22	508.64	-333.45	5.00	-591.12
POE	6661.64	73.358	160.357	6285.00	207.96	-227.71	8.00	-272.40
Landing Pt.	8889.57	90.000	160.357	6315.00	14.78	-158.76	8.00	-67.28
BHL	15920.03	90.000	160.357	6315.00	-8508.98	2883.66	0.00	8983.18

Well Data			
Slot	Well	Wellbore	Wellpath
Slot E	Hazelbaker Unit 2H	Hazelbaker Unit 2H AWB	Hazelbaker Unit 2H AWP Proj: 15951'
Slot E	Hazelbaker Unit 2H	Hazelbaker Unit 2H PWB	Hazelbaker Unit 2H PWP Rev-B.0



User specified (HDGM) Dip: 65.86° Field: 51200 nT
Magnetic North is 7.67 degrees West of True North (at 7/21/2023)
Grid North is 0.01 degrees East of True North
To correct azimuth from True to Grid subtract 0.01 degrees
To correct azimuth from Magnetic to Grid subtract 7.68 degrees



Actual Wellpath Report

Hazelbaker Unit 2H AWP Proj: 15951'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Hazelbaker Unit 2H
Field	Ritchie	API	47-085-10484-0000
Facility	Jackson Pad	Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E		

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	8/4/2023 at 3:19:12 PM
Convergence at slot	0.01° 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	-15.00	0.46	1645046.86	14267231.34	39°17'21.0892"N	80°59'1.0876"W
Facility Reference Pt			1645046.40	14267246.33	39°17'21.2374"N	80°59'1.0934"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM

Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	1065.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1065.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot E)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.36°

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Field	Ritchie		API	47-085-10484-0000
Facility	Jackson Pad		Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E			

WELLPATH DATA (178 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	74.930	0.00	0.00	0.00	0.00	1645046.86	14267231.34	39°17'21.0892"N	80°59'1.0876"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	74.930	30.00	0.00	0.00	0.00	1645046.86	14267231.34	39°17'21.0892"N	80°59'1.0876"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.190	74.930	100.00	0.01	0.03	0.11	1645046.97	14267231.37	39°17'21.0895"N	80°59'1.0862"W	0.12	74.930	0.27	0.27	0.00	Gyrodata MS Gyro <17-1/2"> (100'-264')
200.00	0.390	82.660	200.00	0.09	0.12	0.61	1645047.47	14267231.46	39°17'21.0904"N	80°59'1.0798"W	0.62	79.159	0.20	0.20	7.73	
264.00	0.510	79.410	264.00	0.19	0.20	1.11	1645047.97	14267231.54	39°17'21.0912"N	80°59'1.0735"W	1.12	79.901	0.19	0.19	-5.08	
418.00	0.360	74.830	417.99	0.33	0.45	2.25	1645049.11	14267231.79	39°17'21.0937"N	80°59'1.0590"W	2.29	78.685	0.10	-0.10	-2.97	APS EM <12-1/4"> (264')(418'-3188')
596.00	0.350	112.260	595.99	0.61	0.50	3.23	1645050.09	14267231.84	39°17'21.0942"N	80°59'1.0466"W	3.27	81.187	0.21	0.06	36.20	
686.00	0.470	105.640	685.99	1.01	0.30	3.84	1645050.70	14267231.64	39°17'21.0921"N	80°59'1.0388"W	3.85	85.579	0.14	0.13	-7.36	
776.00	0.450	115.740	775.98	1.47	0.04	4.51	1645051.37	14267231.38	39°17'21.0896"N	80°59'1.0302"W	4.51	89.446	0.09	-0.02	11.22	
865.00	0.570	139.780	864.98	2.14	-0.45	5.11	1645051.97	14267230.89	39°17'21.0848"N	80°59'1.0226"W	5.13	94.989	0.27	0.13	27.01	
954.00	0.720	151.120	953.97	3.10	-1.27	5.67	1645052.52	14267230.07	39°17'21.0766"N	80°59'1.0155"W	5.81	102.668	0.22	0.17	12.74	
1045.00	0.910	150.250	1044.97	4.38	-2.40	6.30	1645053.16	14267228.94	39°17'21.0655"N	80°59'1.0074"W	6.74	110.864	0.21	0.21	-0.96	
1139.00	1.030	154.370	1138.95	5.96	-3.81	7.04	1645053.89	14267227.53	39°17'21.0515"N	80°59'0.9981"W	8.00	118.440	0.15	0.13	4.38	
1233.00	1.280	158.070	1232.93	7.84	-5.55	7.80	1645054.65	14267225.79	39°17'21.0344"N	80°59'0.9885"W	9.57	125.437	0.28	0.27	3.94	
1328.00	1.300	154.460	1327.91	9.98	-7.50	8.66	1645055.51	14267223.84	39°17'21.0150"N	80°59'0.9775"W	11.46	130.922	0.09	0.02	-3.80	
1423.00	0.480	345.500	1422.90	10.65	-8.09	9.02	1645055.88	14267223.25	39°17'21.0092"N	80°59'0.9729"W	12.12	131.889	1.87	-0.86	-177.85	
1517.00	2.790	340.780	1516.86	7.97	-5.55	8.17	1645055.03	14267225.79	39°17'21.0344"N	80°59'0.9837"W	9.88	124.188	2.46	2.46	-5.02	
1611.00	5.750	341.060	1610.59	0.97	1.07	5.89	1645052.74	14267232.41	39°17'21.0997"N	80°59'1.0127"W	5.98	79.734	3.15	3.15	0.30	
1705.00	8.310	340.410	1703.87	-10.53	11.92	2.08	1645048.94	14267243.26	39°17'21.2070"N	80°59'1.0611"W	12.10	9.900	2.72	2.72	-0.69	
1800.00	10.240	341.290	1797.63	-25.84	26.39	-2.93	1645043.93	14267257.72	39°17'21.3500"N	80°59'1.1248"W	26.55	353.664	2.04	2.03	0.93	
1894.00	12.550	341.490	1889.77	-44.41	43.99	-8.85	1645038.01	14267275.31	39°17'21.5240"N	80°59'1.2001"W	44.87	348.620	2.46	2.46	0.21	
1989.00	13.000	340.510	1982.42	-65.41	63.85	-15.70	1645031.17	14267295.16	39°17'21.7203"N	80°59'1.2871"W	65.75	346.190	0.53	0.47	-1.03	
2084.00	12.670	342.290	2075.04	-86.51	83.85	-22.43	1645024.44	14267315.15	39°17'21.9180"N	80°59'1.3727"W	86.80	345.024	0.54	-0.35	1.87	
2179.00	12.140	341.090	2167.82	-106.91	103.22	-28.84	1645018.04	14267334.52	39°17'22.1095"N	80°59'1.4541"W	107.17	344.392	0.62	-0.56	-1.26	
2273.00	13.470	338.780	2259.48	-127.74	122.78	-36.00	1645010.87	14267354.07	39°17'22.3028"N	80°59'1.5452"W	127.95	343.657	1.52	1.41	-2.46	
2368.00	13.620	337.370	2351.84	-149.97	143.42	-44.31	1645002.57	14267374.70	39°17'22.5068"N	80°59'1.6508"W	150.11	342.831	0.38	0.16	-1.48	
2462.00	13.410	336.930	2443.24	-171.90	163.66	-52.84	1644994.04	14267394.94	39°17'22.7069"N	80°59'1.7593"W	171.98	342.106	0.25	-0.22	-0.47	
2556.00	13.200	335.800	2534.72	-193.48	183.48	-61.51	1644985.37	14267414.75	39°17'22.9028"N	80°59'1.8695"W	193.52	341.466	0.36	-0.22	-1.20	
2651.00	12.870	334.820	2627.27	-214.82	202.95	-70.46	1644976.43	14267434.21	39°17'23.0952"N	80°59'1.9833"W	214.83	340.854	0.42	-0.35	-1.03	

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Actual Wellpath Report

Hazlebaker Unit 2H AWP Proj: 15951'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Hazlebaker Unit 2H
Field	Ritchie		API	47-085-10484-0000
Facility	Jackson Pad		Wellbore	Hazlebaker Unit 2H AWB
Slot	Slot E			

WELLPATH DATA (178 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
2745.00	14.020	334.060	2718.69	-236.56	222.66	-79.89	1644967.00	14267453.91	39°17'23.2901"N	80°59'2.1032"W	236.56	340.261	1.24	1.22	-0.81	
2840.00	13.940	331.990	2810.88	-259.32	243.11	-90.30	1644956.59	14267474.36	39°17'23.4922"N	80°59'2.2355"W	259.34	339.623	0.53	-0.08	-2.18	
2935.00	15.360	333.940	2902.79	-283.15	264.52	-101.20	1644945.70	14267495.75	39°17'23.7038"N	80°59'2.3742"W	283.22	339.063	1.58	1.49	2.05	
3029.00	15.510	333.280	2993.40	-307.99	286.93	-112.32	1644934.58	14267518.15	39°17'23.9253"N	80°59'2.5155"W	308.13	338.621	0.25	0.16	-0.70	
3123.00	14.810	330.090	3084.13	-332.28	308.57	-123.97	1644922.94	14267539.79	39°17'24.1393"N	80°59'2.6636"W	332.54	338.112	1.16	-0.74	-3.39	
3188.00	14.530	329.340	3147.01	-348.46	322.78	-132.27	1644914.65	14267554.00	39°17'24.2798"N	80°59'2.7691"W	348.83	337.718	0.52	-0.43	-1.15	
3312.00	13.110	324.390	3267.42	-377.25	347.60	-148.39	1644898.53	14267578.80	39°17'24.5251"N	80°59'2.9741"W	377.95	336.883	1.49	-1.15	-3.99	APS EM <8-3/4"> (3188')(3312'-5908')
3406.00	14.730	325.940	3358.66	-399.08	366.17	-161.29	1644885.63	14267597.36	39°17'24.7086"N	80°59'3.1381"W	400.12	336.227	1.77	1.72	1.65	
3501.00	15.490	324.900	3450.37	-423.00	386.55	-175.35	1644871.58	14267617.74	39°17'24.9101"N	80°59'3.3169"W	424.47	335.600	0.85	0.80	-1.09	
3595.00	16.030	330.270	3540.84	-447.88	408.10	-189.00	1644857.93	14267639.27	39°17'25.1231"N	80°59'3.4905"W	449.74	335.149	1.65	0.57	5.71	
3690.00	16.590	330.950	3632.02	-474.17	431.34	-202.09	1644844.85	14267662.51	39°17'25.3528"N	80°59'3.6570"W	476.34	334.896	0.62	0.59	0.72	
3784.00	16.610	334.260	3722.10	-500.77	455.18	-214.45	1644832.50	14267686.33	39°17'25.5884"N	80°59'3.8140"W	503.16	334.774	1.01	0.02	3.52	
3878.00	16.450	335.210	3812.22	-527.39	479.36	-225.86	1644821.09	14267710.51	39°17'25.8275"N	80°59'3.9591"W	529.91	334.772	0.33	-0.17	1.01	
3973.00	15.870	330.730	3903.47	-553.59	502.90	-237.85	1644809.10	14267734.04	39°17'26.0602"N	80°59'4.1116"W	556.31	334.688	1.45	-0.61	-4.72	
4067.00	16.260	334.360	3993.80	-579.35	525.98	-249.83	1644797.13	14267757.11	39°17'26.2883"N	80°59'4.2639"W	582.30	334.593	1.15	0.41	3.86	
4160.00	16.990	335.610	4082.91	-605.84	550.09	-261.08	1644785.89	14267781.21	39°17'26.5266"N	80°59'4.4069"W	608.90	334.611	0.87	0.78	1.34	
4254.00	16.010	331.620	4173.04	-632.34	574.01	-272.91	1644774.06	14267805.12	39°17'26.7630"N	80°59'4.5573"W	635.58	334.572	1.59	-1.04	-4.24	
4349.00	16.780	333.850	4264.18	-658.91	597.84	-285.18	1644761.79	14267828.94	39°17'26.9986"N	80°59'4.7133"W	662.38	334.498	1.05	0.81	2.35	
4443.00	18.660	340.480	4353.72	-687.44	624.20	-296.19	1644750.79	14267855.29	39°17'27.2592"N	80°59'4.8533"W	690.91	334.615	2.93	2.00	7.05	
4537.00	17.820	339.140	4443.00	-716.86	651.82	-306.33	1644740.65	14267882.90	39°17'27.5321"N	80°59'4.9823"W	720.21	334.828	1.00	-0.89	-1.43	
4633.00	15.490	334.080	4534.97	-744.29	677.08	-317.17	1644729.82	14267908.15	39°17'27.7818"N	80°59'5.1200"W	747.68	334.900	2.86	-2.43	-5.27	
4727.00	16.080	334.180	4625.43	-769.71	700.09	-328.33	1644718.67	14267931.15	39°17'28.0092"N	80°59'5.2619"W	773.25	334.874	0.63	0.63	0.11	
4822.00	15.180	331.120	4716.91	-795.07	722.82	-340.06	1644706.93	14267953.87	39°17'28.2340"N	80°59'5.4111"W	798.82	334.805	1.28	-0.95	-3.22	
4916.00	14.960	329.500	4807.68	-819.13	744.05	-352.17	1644694.84	14267975.09	39°17'28.4438"N	80°59'5.5650"W	823.19	334.671	0.51	-0.23	-1.72	
5010.00	14.390	327.700	4898.62	-842.44	764.38	-364.57	1644682.44	14267995.41	39°17'28.6448"N	80°59'5.7227"W	846.87	334.502	0.78	-0.61	-1.91	
5104.00	12.820	322.370	4989.98	-863.76	782.51	-377.18	1644669.84	14268013.54	39°17'28.8240"N	80°59'5.8830"W	868.67	334.266	2.14	-1.67	-5.67	
5199.00	10.640	314.560	5083.00	-881.69	797.02	-389.86	1644657.15	14268028.04	39°17'28.9674"N	80°59'6.0443"W	887.26	333.934	2.83	-2.29	-8.22	
5293.00	8.630	309.260	5175.67	-895.54	807.57	-401.51	1644645.51	14268038.59	39°17'29.0717"N	80°59'6.1924"W	901.87	333.564	2.34	-2.14	-5.64	
5387.00	5.430	292.140	5268.96	-904.54	813.71	-411.09	1644635.93	14268044.72	39°17'29.1324"N	80°59'6.3143"W	911.66	333.197	4.03	-3.40	-18.21	
5482.00	4.130	192.610	5363.75	-904.65	812.07	-416.01	1644631.02	14268043.08	39°17'29.1162"N	80°59'6.3769"W	912.42	332.875	7.73	-1.37	-104.77	

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Facility	Jackson Pad	Wellbore	Hazlebaker Unit 2H AWB
Slot	Slot E		

WELLPATH DATA (178 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
5578.00	9.820	154.410	5459.04	-893.57	801.29	-413.22	1644633.80	14268032.31	39°17'29.0097"N	80°59'6.3415"W	901.57	332.720	7.34	5.93	-39.79	
5672.00	14.210	154.560	5550.96	-874.11	783.64	-404.80	1644642.22	14268014.66	39°17'28.8352"N	80°59'6.2344"W	882.02	332.681	4.67	4.67	0.16	
5767.00	16.070	157.540	5642.66	-849.37	760.95	-394.77	1644652.25	14267991.99	39°17'28.6110"N	80°59'6.1068"W	857.26	332.581	2.12	1.96	3.14	
5861.00	19.210	145.840	5732.26	-821.39	736.12	-381.11	1644665.91	14267967.16	39°17'28.3655"N	80°59'5.9331"W	828.92	332.628	5.02	3.34	-12.45	
5908.00	22.530	144.220	5776.17	-805.25	722.41	-371.50	1644675.51	14267953.46	39°17'28.2300"N	80°59'5.8109"W	812.34	332.786	7.17	7.06	-3.45	
5976.00	25.710	147.930	5838.23	-778.32	699.34	-356.04	1644690.96	14267930.40	39°17'28.0019"N	80°59'5.6144"W	784.76	333.019	5.18	4.68	5.46	BH AT Curve <8-1/2"> (5908')(5976'-15926')
6071.00	29.270	163.590	5922.60	-734.94	659.53	-338.51	1644708.48	14267890.61	39°17'27.6084"N	80°59'5.3915"W	741.33	332.830	8.45	3.75	16.48	
6165.00	37.320	165.560	6001.11	-683.54	609.81	-324.89	1644722.10	14267840.91	39°17'27.1170"N	80°59'5.2184"W	690.96	331.952	8.64	8.56	2.10	
6236.00†	41.346	165.389	6056.01	-638.72	566.26	-313.61	1644733.38	14267797.37	39°17'26.6865"N	80°59'5.0749"W	647.30	331.021	5.67	5.67	-0.24	Sycamore: 6236' MD
6259.00	42.650	165.340	6073.11	-623.39	551.37	-309.72	1644737.27	14267782.49	39°17'26.5393"N	80°59'5.0255"W	632.40	330.676	5.67	5.67	-0.22	
6354.00	51.200	165.680	6137.93	-554.34	484.24	-292.38	1644754.59	14267715.39	39°17'25.8758"N	80°59'4.8052"W	565.67	328.876	9.00	9.00	0.36	
6375.00†	52.657	166.030	6150.87	-537.89	468.21	-288.35	1644758.63	14267699.36	39°17'25.7174"N	80°59'4.7539"W	549.88	328.373	7.06	6.94	1.67	Middlesex: 6375' MD
6448.00	57.730	167.150	6192.53	-478.33	409.92	-274.47	1644772.50	14267641.10	39°17'25.1413"N	80°59'4.5775"W	493.32	326.195	7.06	6.95	1.53	
6542.00	62.800	164.410	6239.15	-397.10	330.85	-254.38	1644792.58	14267562.06	39°17'24.3597"N	80°59'4.3222"W	417.34	322.445	5.96	5.39	-2.91	
6572.00†	65.573	164.607	6252.21	-370.17	304.83	-247.17	1644799.79	14267536.04	39°17'24.1025"N	80°59'4.2305"W	392.44	320.964	9.26	9.24	0.66	Burkett: 6572' MD
6636.00	71.490	165.000	6275.62	-310.81	247.37	-231.56	1644815.39	14267478.62	39°17'23.5346"N	80°59'4.0322"W	338.85	316.891	9.26	9.25	0.61	
6646.00†	72.169	164.940	6278.74	-301.34	238.20	-229.10	1644817.85	14267469.44	39°17'23.4439"N	80°59'4.0009"W	330.49	316.115	6.81	6.79	-0.60	Tully: 6646' MD
6698.00†	75.698	164.634	6293.13	-251.53	189.99	-215.99	1644830.96	14267421.25	39°17'22.9674"N	80°59'3.8342"W	287.66	311.336	6.81	6.79	-0.59	Marcellus POE: 6698' MD
6730.00	77.870	164.450	6300.44	-220.46	159.97	-207.69	1644839.26	14267391.24	39°17'22.6706"N	80°59'3.7287"W	262.15	307.604	6.81	6.79	-0.57	
6824.00	84.980	164.580	6314.45	-127.82	70.45	-182.89	1644864.05	14267301.76	39°17'21.7858"N	80°59'3.4135"W	195.99	291.066	7.57	7.56	0.14	
6919.00	88.620	161.060	6319.75	-33.08	-20.14	-154.87	1644892.05	14267211.21	39°17'20.8904"N	80°59'3.0574"W	156.18	262.590	5.33	3.83	-3.71	
7013.00	88.860	161.670	6321.82	60.88	-109.19	-124.84	1644922.07	14267122.19	39°17'20.0102"N	80°59'2.6757"W	165.86	228.826	0.70	0.26	0.65	
7107.00	89.200	161.770	6323.41	154.84	-198.43	-95.36	1644951.53	14267032.98	39°17'19.1281"N	80°59'2.3009"W	220.16	205.668	0.38	0.36	0.11	
7202.00	88.830	160.170	6325.05	249.81	-288.23	-64.39	1644982.49	14266943.23	39°17'18.2406"N	80°59'1.9072"W	295.33	192.594	1.73	-0.39	-1.68	
7296.00	88.890	159.110	6326.92	343.79	-376.34	-31.70	1645015.18	14266855.16	39°17'17.3697"N	80°59'1.4916"W	377.67	184.814	1.13	0.06	-1.13	
7391.00	89.320	160.490	6328.40	438.77	-465.48	1.10	1645047.96	14266766.05	39°17'16.4886"N	80°59'1.0747"W	465.48	179.864	1.52	0.45	1.45	
7485.00	90.150	161.210	6328.83	532.76	-554.27	31.94	1645078.78	14266677.29	39°17'15.6109"N	80°59'0.6827"W	555.19	176.702	1.17	0.88	0.77	
7580.00	89.660	160.550	6328.99	627.76	-644.03	63.05	1645109.89	14266587.57	39°17'14.7237"N	80°59'0.2872"W	647.11	174.408	0.87	-0.52	-0.69	
7674.00	89.290	159.840	6329.85	721.75	-732.47	94.90	1645141.72	14266499.17	39°17'13.8495"N	80°58'59.8823"W	738.59	172.618	0.85	-0.39	-0.76	
7768.00	90.370	160.440	6330.13	815.75	-820.88	126.83	1645173.64	14266410.79	39°17'12.9757"N	80°58'59.4764"W	830.62	171.217	1.31	1.15	0.64	

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Actual Wellpath Report

Hazlebaker Unit 2H AWP Proj: 15951'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Hazlebaker Unit 2H
Field	Ritchie		API	47-085-10484-0000
Facility	Jackson Pad		Wellbore	Hazlebaker Unit 2H AWB
Slot	Slot E			

WELLPATH DATA (178 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
7863.00	90.250	160.540	6329.62	910.75	-910.42	158.56	1645205.36	14266321.29	39°17'12.0906"N	80°58'59.0731"W	924.12	170.120	0.16	-0.13	0.11	
7957.00	89.850	160.210	6329.54	1004.75	-998.96	190.13	1645236.92	14266232.78	39°17'11.2154"N	80°58'58.6718"W	1016.89	169.224	0.55	-0.43	-0.35	
8051.00	89.600	160.000	6329.99	1098.75	-1087.35	222.12	1645268.89	14266144.43	39°17'10.3418"N	80°58'58.2652"W	1109.80	168.455	0.35	-0.27	-0.22	
8146.00	89.850	160.440	6330.44	1193.74	-1176.74	254.27	1645301.03	14266055.07	39°17'9.4582"N	80°58'57.8566"W	1203.90	167.807	0.53	0.26	0.46	
8240.00	89.780	160.020	6330.75	1287.74	-1265.20	286.06	1645332.81	14265966.65	39°17'8.5838"N	80°58'57.4524"W	1297.14	167.260	0.45	-0.07	-0.45	
8334.00	89.750	159.720	6331.13	1381.74	-1353.46	318.41	1645365.14	14265878.43	39°17'7.7114"N	80°58'57.0412"W	1390.41	166.761	0.32	-0.03	-0.32	
8429.00	89.910	160.340	6331.41	1476.74	-1442.74	350.86	1645397.58	14265789.18	39°17'6.8289"N	80°58'56.6288"W	1484.79	166.332	0.67	0.17	0.65	
8523.00	89.690	160.380	6331.74	1570.74	-1531.28	382.45	1645429.16	14265700.68	39°17'5.9538"N	80°58'56.2272"W	1578.31	165.977	0.24	-0.23	0.04	
8618.00	90.250	160.820	6331.79	1665.73	-1620.88	414.01	1645460.70	14265611.11	39°17'5.0681"N	80°58'55.8262"W	1672.92	165.672	0.75	0.59	0.46	
8712.00	90.340	159.970	6331.31	1759.73	-1709.43	445.55	1645492.23	14265522.60	39°17'4.1928"N	80°58'55.4253"W	1766.54	165.391	0.91	0.10	-0.90	
8807.00	90.680	160.120	6330.46	1854.73	-1798.72	477.97	1645524.63	14265433.34	39°17'3.3102"N	80°58'55.0132"W	1861.14	165.119	0.39	0.36	0.16	
8901.00	90.280	160.040	6329.68	1948.72	-1887.09	509.99	1645556.65	14265345.00	39°17'2.4367"N	80°58'54.6061"W	1954.79	164.877	0.43	-0.43	-0.09	
8996.00	90.150	160.150	6329.32	2043.72	-1976.42	542.34	1645588.98	14265255.72	39°17'1.5538"N	80°58'54.1950"W	2049.48	164.656	0.18	-0.14	0.12	
9091.00	90.120	160.380	6329.09	2138.72	-2065.84	574.41	1645621.04	14265166.33	39°17'0.6699"N	80°58'53.7873"W	2144.21	164.461	0.24	-0.03	0.24	
9185.00	89.880	160.110	6329.09	2232.72	-2154.31	606.19	1645652.80	14265077.90	39°16'59.7955"N	80°58'53.3835"W	2237.97	164.284	0.38	-0.26	-0.29	
9280.00	90.340	159.680	6328.91	2327.72	-2243.52	638.84	1645685.44	14264988.73	39°16'58.9137"N	80°58'52.9684"W	2332.70	164.106	0.66	0.48	-0.45	
9374.00	90.400	159.780	6328.31	2421.71	-2331.69	671.41	1645718.00	14264900.58	39°16'58.0421"N	80°58'52.5545"W	2426.43	163.936	0.12	0.06	0.11	
9469.00	89.880	159.910	6328.07	2516.70	-2420.88	704.14	1645750.72	14264811.44	39°16'57.1606"N	80°58'52.1385"W	2521.20	163.782	0.56	-0.55	0.14	
9563.00	89.630	159.970	6328.48	2610.70	-2509.17	736.38	1645782.95	14264723.18	39°16'56.2878"N	80°58'51.7287"W	2615.00	163.644	0.27	-0.27	0.06	
9658.00	89.970	160.210	6328.81	2705.70	-2598.49	768.73	1645815.28	14264633.89	39°16'55.4049"N	80°58'51.3175"W	2709.82	163.520	0.44	0.36	0.25	
9752.00	90.180	159.730	6328.68	2799.70	-2686.81	800.93	1645847.47	14264545.61	39°16'54.5320"N	80°58'50.9083"W	2803.64	163.401	0.56	0.22	-0.51	
9847.00	89.940	158.660	6328.58	2894.67	-2775.61	834.67	1645881.20	14264456.84	39°16'53.6542"N	80°58'50.4794"W	2898.39	163.263	1.15	-0.25	-1.13	
9941.00	89.970	159.900	6328.66	2988.66	-2863.53	867.93	1645914.44	14264368.96	39°16'52.7852"N	80°58'50.0568"W	2992.17	163.138	1.32	0.03	1.32	
10035.00	89.570	158.080	6329.04	3082.62	-2951.28	901.63	1645948.13	14264281.25	39°16'51.9178"N	80°58'49.6284"W	3085.93	163.012	1.98	-0.43	-1.94	
10130.00	90.150	159.080	6329.27	3177.58	-3039.71	936.32	1645982.80	14264192.85	39°16'51.0437"N	80°58'49.1875"W	3180.65	162.880	1.22	0.61	1.05	
10224.00	90.000	159.780	6329.14	3271.56	-3127.72	969.35	1646015.82	14264104.88	39°16'50.1738"N	80°58'48.7677"W	3274.49	162.781	0.76	-0.16	0.74	
10319.00	89.510	158.680	6329.55	3366.54	-3216.54	1003.04	1646049.49	14264016.09	39°16'49.2958"N	80°58'48.3396"W	3369.31	162.681	1.27	-0.52	-1.16	
10413.00	89.940	158.290	6330.00	3460.49	-3303.99	1037.51	1646083.95	14263928.68	39°16'48.4314"N	80°58'47.9014"W	3463.06	162.567	0.62	0.46	-0.41	
10507.00	89.910	160.030	6330.12	3554.47	-3391.84	1070.95	1646117.38	14263840.87	39°16'47.5631"N	80°58'47.4764"W	3556.89	162.477	1.85	-0.03	1.85	
10602.00	89.420	156.110	6330.68	3649.37	-3479.94	1106.42	1646152.84	14263752.79	39°16'46.6922"N	80°58'47.0256"W	3651.60	162.362	4.16	-0.52	-4.13	

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Actual Wellpath Report

Hazlebaker Unit 2H AWP Proj: 15951'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Hazlebaker Unit 2H
Field	Ritchie	API	47-085-10484-0000
Facility	Jackson Pad	Wellbore	Hazlebaker Unit 2H AWB
Slot	Slot E		

WELLPATH DATA (178 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
10696.00	89.820	159.450	6331.30	3743.26	-3566.95	1141.96	1646188.36	14263665.82	39°16'45.8322"N	80°58'46.5739"W	3745.29	162.247	3.58	0.43	3.55	
10790.00	90.030	159.960	6331.43	3837.25	-3655.11	1174.57	1646220.95	14263577.70	39°16'44.9607"N	80°58'46.1595"W	3839.20	162.185	0.59	0.22	0.54	
10885.00	90.460	161.270	6331.02	3932.25	-3744.72	1206.10	1646252.47	14263488.12	39°16'44.0749"N	80°58'45.7588"W	3934.16	162.147	1.45	0.45	1.38	
10980.00	89.320	158.590	6331.20	4027.24	-3833.95	1238.70	1646285.06	14263398.94	39°16'43.1930"N	80°58'45.3445"W	4029.08	162.095	3.07	-1.20	-2.82	
11074.00	89.910	160.010	6331.84	4121.21	-3921.87	1271.92	1646318.27	14263311.04	39°16'42.3239"N	80°58'44.9223"W	4122.97	162.031	1.64	0.63	1.51	
11168.00	90.430	160.580	6331.56	4215.21	-4010.37	1303.61	1646349.95	14263222.58	39°16'41.4492"N	80°58'44.5195"W	4216.93	161.993	0.82	0.55	0.61	
11263.00	89.720	159.450	6331.43	4310.21	-4099.64	1336.08	1646382.40	14263133.34	39°16'40.5667"N	80°58'44.1069"W	4311.87	161.949	1.40	-0.75	-1.19	
11358.00	91.110	159.630	6330.74	4405.19	-4188.65	1369.29	1646415.60	14263044.38	39°16'39.6869"N	80°58'43.6849"W	4406.78	161.897	1.48	1.46	0.19	
11452.00	87.410	160.370	6331.96	4499.17	-4276.95	1401.43	1646447.73	14262956.10	39°16'38.8140"N	80°58'43.2764"W	4500.71	161.858	4.01	-3.94	0.79	
11547.00	92.740	164.580	6331.83	4594.05	-4367.49	1430.02	1646476.30	14262865.60	39°16'37.9191"N	80°58'42.9132"W	4595.64	161.870	7.15	5.61	4.43	
11641.00	89.290	159.690	6330.17	4687.95	-4456.90	1458.84	1646505.11	14262776.23	39°16'37.0353"N	80°58'42.5469"W	4689.59	161.876	6.37	-3.67	-5.20	
11736.00	89.320	161.000	6331.32	4782.94	-4546.36	1490.79	1646537.05	14262686.81	39°16'36.1511"N	80°58'42.1409"W	4784.54	161.845	1.38	0.03	1.38	
11830.00	89.850	159.740	6332.00	4876.93	-4634.89	1522.37	1646568.62	14262598.31	39°16'35.2760"N	80°58'41.7396"W	4878.51	161.817	1.45	0.56	-1.34	
11924.00	91.020	160.500	6331.29	4970.93	-4723.29	1554.33	1646600.57	14262509.95	39°16'34.4023"N	80°58'41.3335"W	4972.46	161.785	1.48	1.24	0.81	
12019.00	90.620	160.820	6329.93	5065.91	-4812.92	1585.79	1646632.01	14262420.36	39°16'33.5163"N	80°58'40.9337"W	5067.43	161.764	0.54	-0.42	0.34	
12113.00	89.780	161.040	6329.60	5159.91	-4901.76	1616.50	1646662.71	14262331.55	39°16'32.6382"N	80°58'40.5435"W	5161.42	161.748	0.92	-0.89	0.23	
12208.00	89.850	160.280	6329.91	5254.91	-4991.39	1647.96	1646694.16	14262241.95	39°16'31.7521"N	80°58'40.1437"W	5256.41	161.729	0.80	0.07	-0.80	
12302.00	90.250	161.010	6329.82	5348.90	-5080.08	1679.12	1646725.30	14262153.30	39°16'30.8755"N	80°58'39.7478"W	5350.39	161.710	0.89	0.43	0.78	
12396.00	90.060	161.130	6329.57	5442.90	-5169.00	1709.61	1646755.78	14262064.42	39°16'29.9966"N	80°58'39.3603"W	5444.38	161.699	0.24	-0.20	0.13	
12491.00	89.820	161.330	6329.67	5537.88	-5258.94	1740.18	1646786.34	14261974.51	39°16'29.1075"N	80°58'38.9719"W	5539.38	161.691	0.33	-0.25	0.21	
12585.00	89.380	161.220	6330.33	5631.87	-5347.97	1770.35	1646816.50	14261885.52	39°16'28.2276"N	80°58'38.5885"W	5633.37	161.684	0.48	-0.47	-0.12	
12680.00	89.420	160.610	6331.32	5726.86	-5437.74	1801.41	1646847.55	14261795.79	39°16'27.3402"N	80°58'38.1938"W	5728.36	161.671	0.64	0.04	-0.64	
12774.00	89.750	161.010	6332.00	5820.85	-5526.51	1832.31	1646878.44	14261707.05	39°16'26.4627"N	80°58'37.8012"W	5822.35	161.657	0.55	0.35	0.43	
12868.00	88.890	160.420	6333.12	5914.84	-5615.23	1863.35	1646909.47	14261618.37	39°16'25.5857"N	80°58'37.4068"W	5916.33	161.642	1.11	-0.91	-0.63	
12963.00	90.000	161.110	6334.04	6009.84	-5704.92	1894.65	1646940.75	14261528.71	39°16'24.6992"N	80°58'37.0091"W	6011.31	161.628	1.38	1.17	0.73	
13057.00	89.630	161.680	6334.34	6103.82	-5794.01	1924.64	1646970.73	14261439.66	39°16'23.8186"N	80°58'36.6281"W	6105.31	161.625	0.72	-0.39	0.61	
13152.00	90.030	161.520	6334.62	6198.80	-5884.15	1954.63	1647000.70	14261349.55	39°16'22.9276"N	80°58'36.2471"W	6200.31	161.624	0.45	0.42	-0.17	
13246.00	89.570	161.350	6334.95	6292.78	-5973.26	1984.55	1647030.61	14261260.48	39°16'22.0468"N	80°58'35.8668"W	6294.30	161.621	0.52	-0.49	-0.18	
13340.00	89.510	161.020	6335.71	6386.77	-6062.23	2014.87	1647060.92	14261171.54	39°16'21.1673"N	80°58'35.4817"W	6388.30	161.615	0.36	-0.06	-0.35	
13435.00	89.230	160.880	6336.75	6481.76	-6152.02	2045.87	1647091.91	14261081.79	39°16'20.2798"N	80°58'35.0877"W	6483.29	161.605	0.33	-0.29	-0.15	

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Actual Wellpath Report

Hazelbaker Unit 2H AWP Proj: 15951'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Hazelbaker Unit 2H
Field	Ritchie		API	47-085-10484-0000
Facility	Jackson Pad		Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E			

WELLPATH DATA (178 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
13529.00	89.110	160.330	6338.11	6575.74	-6240.68	2077.09	1647123.11	14260993.17	39°16'19.4034"N	80°58'34.6911"W	6577.26	161.591	0.60	-0.13	-0.59	
13623.00	89.630	159.680	6339.14	6669.74	-6329.01	2109.23	1647155.24	14260904.88	39°16'18.5303"N	80°58'34.2828"W	6671.22	161.569	0.89	0.55	-0.69	
13718.00	90.550	161.300	6339.00	6764.73	-6418.55	2140.95	1647186.95	14260815.37	39°16'17.6452"N	80°58'33.8797"W	6766.20	161.554	1.96	0.97	1.71	
13812.00	89.780	161.400	6338.72	6858.72	-6507.61	2171.01	1647217.00	14260726.34	39°16'16.7649"N	80°58'33.4978"W	6860.20	161.551	0.83	-0.82	0.11	
13906.00	90.310	161.680	6338.65	6952.70	-6596.78	2200.77	1647246.75	14260637.22	39°16'15.8835"N	80°58'33.1196"W	6954.20	161.551	0.64	0.56	0.30	
14001.00	89.050	160.250	6339.18	7047.68	-6686.58	2231.76	1647277.72	14260547.45	39°16'14.9959"N	80°58'32.7260"W	7049.19	161.543	2.01	-1.33	-1.51	
14095.00	89.630	158.860	6340.26	7141.67	-6774.65	2264.59	1647310.54	14260459.42	39°16'14.1253"N	80°58'32.3088"W	7143.12	161.517	1.60	0.62	-1.48	
14189.00	90.550	161.240	6340.12	7235.66	-6863.00	2296.66	1647342.60	14260371.10	39°16'13.2520"N	80°58'31.9013"W	7237.08	161.498	2.71	0.98	2.53	
14284.00	89.170	161.570	6340.35	7330.64	-6953.04	2326.95	1647372.88	14260281.10	39°16'12.3620"N	80°58'31.5165"W	7332.08	161.496	1.49	-1.45	0.35	
14378.00	89.660	159.210	6341.31	7424.63	-7041.57	2358.50	1647404.41	14260192.60	39°16'11.4869"N	80°58'31.1157"W	7426.05	161.482	2.56	0.52	-2.51	
14473.00	89.780	160.940	6341.77	7519.62	-7130.88	2390.87	1647436.77	14260103.33	39°16'10.6041"N	80°58'30.7044"W	7521.02	161.465	1.83	0.13	1.82	
14567.00	91.350	160.880	6340.85	7613.61	-7219.70	2421.61	1647467.50	14260014.54	39°16'9.7261"N	80°58'30.3138"W	7615.01	161.458	1.67	1.67	-0.06	
14662.00	89.080	159.430	6340.49	7708.60	-7309.05	2453.86	1647499.73	14259925.22	39°16'8.8429"N	80°58'29.9041"W	7709.97	161.442	2.84	-2.39	-1.53	
14756.00	90.710	159.410	6340.66	7802.58	-7397.05	2486.90	1647532.76	14259837.26	39°16'7.9730"N	80°58'29.4843"W	7803.91	161.417	1.73	1.73	-0.02	
14851.00	89.050	160.900	6340.86	7897.58	-7486.40	2519.15	1647564.99	14259747.94	39°16'7.0898"N	80°58'29.0746"W	7898.88	161.402	2.35	-1.75	1.57	
14945.00	89.420	160.500	6342.12	7991.57	-7575.11	2550.21	1647596.05	14259659.27	39°16'6.2129"N	80°58'28.6800"W	7992.87	161.394	0.58	0.39	-0.43	
15040.00	90.150	159.610	6342.47	8086.56	-7664.41	2582.62	1647628.44	14259570.01	39°16'5.3302"N	80°58'28.2682"W	8087.84	161.378	1.21	0.77	-0.94	
15134.00	89.720	161.260	6342.58	8180.56	-7752.98	2614.09	1647659.90	14259481.47	39°16'4.4547"N	80°58'27.8683"W	8181.82	161.367	1.81	-0.46	1.76	
15229.00	89.820	158.900	6342.96	8275.55	-7842.29	2646.46	1647692.25	14259392.20	39°16'3.5719"N	80°58'27.4572"W	8276.79	161.353	2.49	0.11	-2.48	
15324.00	90.520	161.600	6342.68	8370.54	-7931.69	2678.56	1647724.34	14259302.83	39°16'2.6882"N	80°58'27.0494"W	8371.76	161.340	2.94	0.74	2.84	
15418.00	89.880	161.260	6342.35	8464.52	-8020.80	2708.49	1647754.26	14259213.77	39°16'1.8074"N	80°58'26.6691"W	8465.76	161.341	0.77	-0.68	-0.36	
15513.00	89.570	160.100	6342.81	8559.52	-8110.45	2739.92	1647785.68	14259124.15	39°16'0.9213"N	80°58'26.2698"W	8560.75	161.334	1.26	-0.33	-1.22	
15607.00	91.380	161.060	6342.03	8653.51	-8199.09	2771.17	1647816.92	14259035.55	39°16'0.0451"N	80°58'25.8728"W	8654.74	161.325	2.18	1.93	1.02	
15702.00	89.020	158.800	6341.70	8748.49	-8288.31	2803.77	1647849.50	14258946.36	39°15'59.1632"N	80°58'25.4587"W	8749.70	161.310	3.44	-2.48	-2.38	
15795.00	90.310	159.930	6342.24	8841.47	-8375.34	2836.54	1647882.26	14258859.37	39°15'58.3029"N	80°58'25.0423"W	8842.64	161.290	1.84	1.39	1.22	
15891.00	90.150	160.570	6341.85	8937.47	-8465.69	2868.98	1647914.69	14258769.05	39°15'57.4098"N	80°58'24.6302"W	8938.62	161.279	0.69	-0.17	0.67	
15926.00	89.780	160.700	6341.88	8972.47	-8498.71	2880.59	1647926.29	14258736.05	39°15'57.0834"N	80°58'24.4828"W	8973.62	161.276	1.12	-1.06	0.37	
15951.00†	89.780	160.700	6341.97	8997.47	-8522.30	2888.85	1647934.55	14258712.46	39°15'56.8502"N	80°58'24.3778"W	8998.62	161.275	0.00	0.00	0.00	Projected MD at TD: 15951'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Hazelbaker Unit 2H
Field	Ritchie	API	47-085-10484-0000
Facility	Jackson Pad	Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E		

HOLE & CASING SECTIONS - Ref Wellbore: Hazelbaker Unit 2H AWB Ref Wellpath: Hazelbaker Unit 2H AWP Proj: 15951'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	30.00	130.00	100.00	30.00	130.00	0.00	0.00	0.06	0.22
17.5in Open Hole	130.00	376.00	246.00	130.00	375.99	0.06	0.22	0.38	1.98
13.375in Casing Surface	30.00	356.00	326.00	30.00	355.99	0.00	0.00	0.35	1.84
12.25in Open Hole	376.00	3252.00	2876.00	375.99	3209.06	0.38	1.98	336.08	-140.52
9.625in Casing Intermediate	30.00	3222.00	3192.00	30.00	3179.95	0.00	0.00	329.98	-136.64
8.75in Open Hole	3252.00	5980.00	2728.00	3209.06	5841.83	336.08	-140.52	697.86	-355.13
8.5in Open Hole	5980.00	15951.00	9971.00	5841.83	6341.97	697.86	-355.13	-8522.30	2888.85
5.5in Casing Production	30.00	15931.00	15901.00	30.00	6341.89	0.00	0.00	-8503.43	2882.24

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Hazelbaker Unit 2H
Field	Ritchie		API	47-085-10484-0000
Facility	Jackson Pad		Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E			

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hazelbaker Unit 2H POE Rev-1	6285.00	360.80	-282.26	1644764.71	14267591.99	39°17'24.6557"N	80°59'4.6768"W	point
Hazelbaker Unit 2H POE Rev-2	6285.00	207.96	-227.71	1644819.24	14267439.22	39°17'23.1450"N	80°59'3.9833"W	point
Hazelbaker Unit 2H BHL Rev-3	6315.00	-8508.98	2883.66	1647929.36	14258725.78	39°15'56.9819"N	80°58'24.4438"W	point
Hazelbaker Unit 2H LP Rev-2	6315.00	14.78	-158.76	1644888.16	14267246.12	39°17'21.2356"N	80°59'3.1067"W	point
Hazelbaker Unit 2H 50' L/R Hard Line R-2	6750.00	-4150.51	1327.97	1646374.30	14263082.50	39°16'40.0640"N	80°58'44.2101"W	rectangle
2D Rectangle 9255.58 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Hazelbaker Unit 2H AWB Ref Wellpath: Hazelbaker Unit 2H AWP Proj: 15951'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	264.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-264')	Hazelbaker Unit 2H AWB	7/12/2023
264.00	3188.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (264')(418'-3188')	Hazelbaker Unit 2H AWB	7/12/2023
3188.00	5908.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3188')(3312'-5908')	Hazelbaker Unit 2H AWB	7/21/2023
5908.00	15951.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (5908')(5976'-15926')	Hazelbaker Unit 2H AWB	7/21/2023

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Hazelbaker Unit 2H
Field	Ritchie	API	47-085-10484-0000
Facility	Jackson Pad	Wellbore	Hazelbaker Unit 2H AWB
Slot	Slot E		

COMMENTS

Wellpath general comments

API: 47-085-10484-0000
BH Job #: 111872734
Rig: H&P 519
Duration: 7/23/2023-7/27/2023
Gyrodata MS Gyro <17-1/2"> (100'-264')
APS EM <12-1/4"> (264')(418'-3188')
APS EM <8-3/4"> (3188')(3312'-5908')
BH AT Curve <8-1/2"> (5908')(5976'-15926')
Sycamore: 6236' MD
Middlesex: 6375' MD
Burkett: 6572' MD
Tully: 6646' MD
Marcellus POE: 6698' MD
Projected MD at TD: 15951'

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