



# ANTERO RESOURCES CORPORATION



Location: Wetzel County, WV  
 Field: Wetzel  
 Facility: Furbee Pad

Slot: Slot F  
 Well: Lenny Unit 1H  
 Wellbore: Lenny Unit 1H PWB

Easting (ft) Scale 1 inch = 2500

Gyrodata MS Gyro <17-1/2"> (100'-588') : 100.00ft TVD, 0.04ft N, 0.17ft E  
 APS EM <12-1/4"> (588')(777'-3404') : 776.92ft TVD, 3.23ft S, 1.12ft E  
 APS EM <8-3/4"> (3404')(3500'-6141') : 3495.83ft TVD, 66.72ft S, 73.32ft W  
 BH AT Curve <8-1/2"> (6141')(6196'-22547') : 6081.58ft TVD, 204.93ft N, 731.16ft W

Marcellus POE: 7376' MD : 6995.21ft TVD, 321.29ft S, 759.23ft W

Plot reference wellpath is Lenny Unit 1H FWP 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: 1242 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot F) : -1272 feet	Depths are in feet
Global wellpath MDs are referenced to each path's default MD datum	Created by: wdayar on 2022-10-19, Database: WA_MPL_EASTERNUS_Det

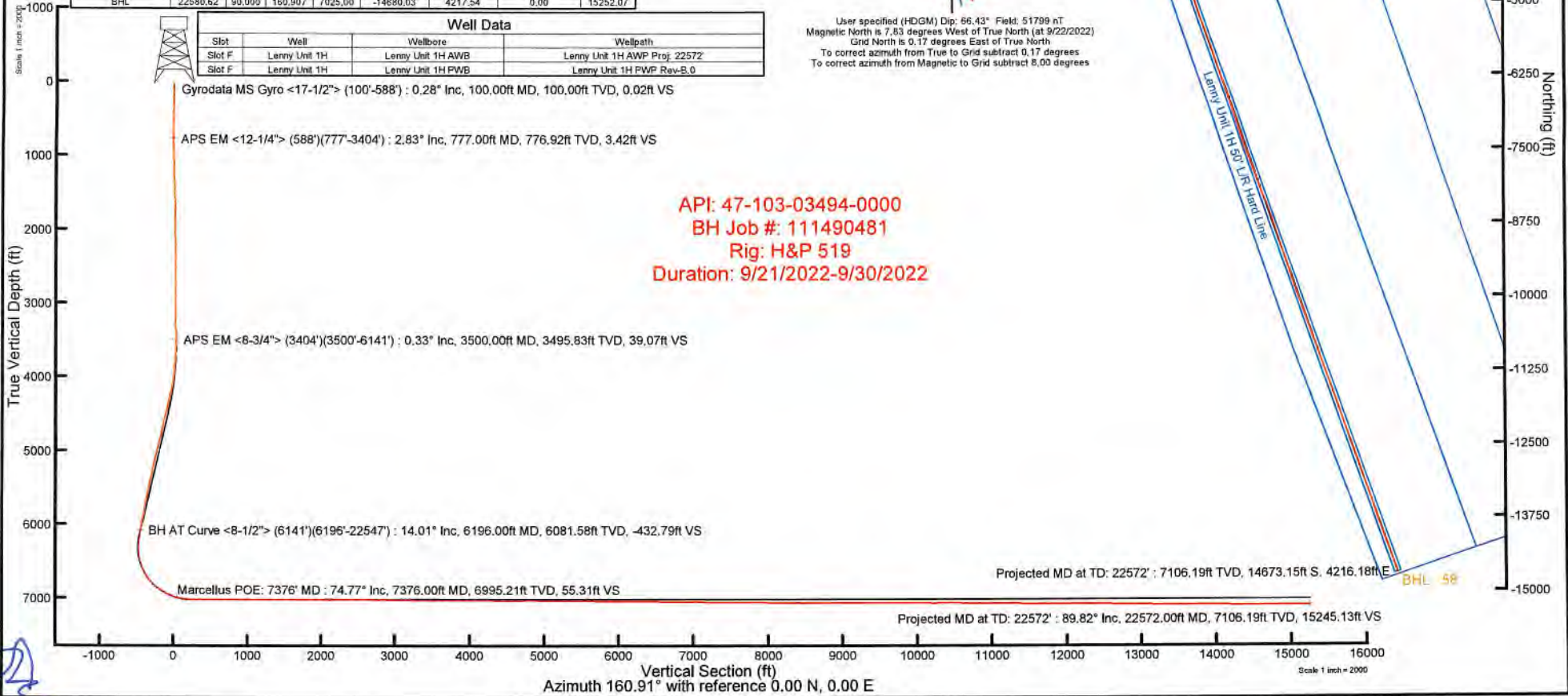
Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Furbee Pad	1716103.700	14364954.390	39°33'26.2100"N	80°43'53.2980"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot F	-72.05	20.72	1716124.410	14364982.370
Comment	Lenny Unit 1H			
H&P 519 (RKB) to Ground level (At Slot: Slot F)	30ft			
Mean Sea Level to Ground level (At Slot: Slot F)	-1272ft			
H&P 519 (RKB) to Mean Sea Level	1242ft			

Well Profile Data								
Design Comment	MD (ft)	Incl. (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3404.00	0.380	209.550	3399.83	-66.17	-73.10	0.79	38.63
Proj. to Bottom	3477.00	0.380	209.550	3472.83	-66.59	-73.34	0.00	38.94
KOP 1	3557.00	0.380	209.550	3552.82	-67.05	-73.60	0.00	39.30
End of 3D Arc	4519.25	19.287	292.716	4496.95	-7.91	-223.17	2.00	-65.51
Curve KOP	6286.66	19.287	292.716	6165.17	217.52	-761.65	0.00	-454.66
POE	7376.00	73.926	160.907	6997.00	-314.31	-755.08	8.00	50.08
Landing Pt.	7576.93	90.000	160.907	7025.00	-501.71	-590.21	8.00	248.38
BHL	22580.62	90.000	160.907	7025.00	-14680.03	4217.54	0.00	15252.07

Well Data			
Slot	Well	Wellbore	Wellpath
Slot F	Lenny Unit 1H	Lenny Unit 1H AWB	Lenny Unit 1H AWP Proj: 22572
Slot F	Lenny Unit 1H	Lenny Unit 1H PWB	Lenny Unit 1H FWP Rev-B.0



User specified (HDGM) Dip: 66.43° Field: 51799 nT  
 Magnetic North is 7.53 degrees West of True North (at 9/22/2022)  
 Grid North is 0.17 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.17 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.00 degrees



API: 47-103-03494-0000  
 BH Job #: 111490481  
 Rig: H&P 519  
 Duration: 9/21/2022-9/30/2022

Handwritten initials/signature



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

## REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999607	Report Generated	10/14/2022 at 11:59:25 PM
Convergence at slot	0.17° 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	-72.05	20.72	1716124.41	14364882.37	39°33'25.4974"N	80°43'53.0362"W
Facility Reference Pt			1716103.70	14364954.39	39°33'26.2100"N	80°43'53.2980"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	1242.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1242.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot F)	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	160.91°



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (248 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	77.320	0.00	0.00	0.00	0.00	1716124.41	14364882.37	39°33'25.4974"N	80°43'53.0362"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	77.320	30.00	0.00	0.00	0.00	1716124.41	14364882.37	39°33'25.4974"N	80°43'53.0362"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.280	77.320	100.00	0.02	0.04	0.17	1716124.58	14364882.41	39°33'25.4977"N	80°43'53.0341"W	0.17	77.320	0.40	0.40	0.00	Gyrodata MS Gyro <17-1/2"> (100'-588')
200.00	0.330	77.300	200.00	0.08	0.15	0.69	1716125.10	14364882.52	39°33'25.4989"N	80°43'53.0275"W	0.70	77.312	0.05	0.05	-0.02	
300.00	0.360	91.780	300.00	0.22	0.21	1.28	1716125.69	14364882.58	39°33'25.4994"N	80°43'53.0199"W	1.30	80.776	0.09	0.09	0.03	14.48
400.00	0.640	105.920	399.99	0.65	0.05	2.13	1716126.54	14364882.42	39°33'25.4977"N	80°43'53.0090"W	2.13	88.788	0.30	0.28	14.14	
500.00	0.430	91.090	499.99	1.10	-0.12	3.04	1716127.45	14364882.25	39°33'25.4961"N	80°43'52.9974"W	3.05	92.168	0.25	-0.21	-14.83	
588.00	0.480	86.400	587.99	1.32	-0.10	3.74	1716128.15	14364882.27	39°33'25.4963"N	80°43'52.9885"W	3.74	91.506	0.07	0.06	-5.33	
777.00	2.830	227.040	776.92	3.42	-3.23	1.12	1716125.53	14364879.14	39°33'25.4654"N	80°43'53.0221"W	3.42	160.912	1.70	1.24	74.41	APS EM <12-1/4"> (588')(777'-3404')
867.00	4.860	232.080	866.71	5.55	-7.09	-3.52	1716120.89	14364875.29	39°33'25.4274"N	80°43'53.0814"W	7.91	206.392	2.28	2.26	5.60	
958.00	6.050	234.940	957.30	8.11	-12.21	-10.48	1716113.93	14364870.16	39°33'25.3770"N	80°43'53.1706"W	16.09	220.647	1.34	1.31	3.14	
1048.00	6.350	233.440	1046.77	10.91	-17.90	-18.36	1716106.05	14364864.48	39°33'25.3210"N	80°43'53.2714"W	25.64	225.732	0.38	0.33	-1.67	
1143.00	6.620	238.740	1141.16	13.64	-23.87	-27.26	1716097.16	14364858.51	39°33'25.2622"N	80°43'53.3852"W	36.24	228.797	0.69	0.28	5.58	
1238.00	6.940	239.950	1235.50	15.89	-29.59	-36.91	1716087.51	14364852.80	39°33'25.2060"N	80°43'53.5087"W	47.31	231.287	0.37	0.34	1.27	
1332.00	5.180	234.600	1328.97	18.16	-34.89	-45.29	1716079.14	14364847.50	39°33'25.1539"N	80°43'53.6158"W	57.17	232.390	1.96	-1.87	-5.69	
1427.00	4.520	232.980	1423.63	20.52	-39.63	-51.77	1716072.66	14364842.76	39°33'25.1072"N	80°43'53.6988"W	65.20	232.570	0.71	-0.69	-1.71	
1521.00	4.300	225.610	1517.35	23.16	-44.32	-57.25	1716067.18	14364838.07	39°33'25.0610"N	80°43'53.7688"W	72.40	232.253	0.65	-0.23	-7.84	
1616.00	4.230	226.270	1612.09	26.14	-49.24	-62.33	1716062.11	14364833.15	39°33'25.0126"N	80°43'53.8338"W	79.43	231.692	0.09	-0.07	0.69	
1710.00	2.500	218.390	1705.92	28.69	-53.24	-66.10	1716058.33	14364829.15	39°33'24.9731"N	80°43'53.8822"W	84.88	231.152	1.90	-1.84	-8.38	
1805.00	0.670	213.960	1800.88	30.14	-55.32	-67.70	1716056.74	14364827.07	39°33'24.9526"N	80°43'53.9027"W	87.43	230.745	1.93	-1.93	-4.66	
1899.00	0.420	199.680	1894.88	30.74	-56.10	-68.12	1716056.31	14364826.29	39°33'24.9449"N	80°43'53.9081"W	88.25	230.526	0.30	-0.27	-15.19	
1994.00	0.430	239.890	1989.88	31.08	-56.61	-68.55	1716055.89	14364825.78	39°33'24.9399"N	80°43'53.9136"W	88.90	230.449	0.31	0.01	42.33	
2088.00	0.420	193.560	2083.87	31.44	-57.12	-68.94	1716055.50	14364825.27	39°33'24.9348"N	80°43'53.9185"W	89.53	230.353	0.36	-0.01	-49.29	
2182.00	0.400	201.340	2177.87	31.98	-57.76	-69.14	1716055.30	14364824.63	39°33'24.9285"N	80°43'53.9211"W	90.09	230.121	0.06	-0.02	8.28	
2277.00	0.410	192.460	2272.87	32.52	-58.40	-69.33	1716055.11	14364823.99	39°33'24.9222"N	80°43'53.9236"W	90.65	229.889	0.07	0.01	-9.35	
2372.00	0.410	226.440	2367.87	32.95	-58.97	-69.65	1716054.79	14364823.42	39°33'24.9166"N	80°43'53.9277"W	91.26	229.746	0.25	0.00	35.77	
2466.00	0.280	226.710	2461.87	33.18	-59.36	-70.06	1716054.38	14364823.03	39°33'24.9128"N	80°43'53.9330"W	91.83	229.727	0.14	-0.14	0.29	
2560.00	0.210	233.020	2555.86	33.33	-59.62	-70.37	1716054.07	14364822.77	39°33'24.9102"N	80°43'53.9369"W	92.23	229.725	0.08	-0.07	6.71	
2655.00	0.200	215.560	2650.86	33.48	-59.86	-70.60	1716053.84	14364822.53	39°33'24.9078"N	80°43'53.9399"W	92.56	229.706	0.07	-0.01	-18.38	
2750.00	0.530	212.240	2745.86	33.85	-60.37	-70.93	1716053.51	14364822.03	39°33'24.9028"N	80°43'53.9441"W	93.14	229.600	0.35	0.35	-3.49	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

## WELLPATH DATA (248 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
2844.00	0.500	188.740	2839.86	34.48	-61.14	-71.23	1716053.21	14364821.25	39°33'24.8952"N	80°43'53.9479"W	93.87	229.357	0.23	-0.03	-25.00	
2939.00	0.310	267.940	2934.86	34.77	-61.56	-71.55	1716052.89	14364820.84	39°33'24.8911"N	80°43'53.9520"W	94.38	229.291	0.56	-0.20	83.37	
3033.00	0.600	202.500	3028.85	35.07	-62.02	-71.99	1716052.45	14364820.37	39°33'24.8865"N	80°43'53.9577"W	95.02	229.253	0.58	0.31	-69.62	
3128.00	0.500	192.170	3123.85	35.79	-62.89	-72.27	1716052.17	14364819.51	39°33'24.8780"N	80°43'53.9613"W	95.80	228.969	0.15	-0.11	-10.87	
3223.00	0.640	195.840	3218.84	36.58	-63.80	-72.50	1716051.94	14364818.59	39°33'24.8689"N	80°43'53.9643"W	96.58	228.650	0.15	0.15	3.86	
3317.00	1.040	191.060	3312.83	37.75	-65.15	-72.80	1716051.63	14364817.25	39°33'24.8557"N	80°43'53.9682"W	97.70	228.178	0.43	0.43	-5.09	
3404.00	0.380	209.550	3399.83	38.63	-66.17	-73.10	1716051.34	14364816.22	39°33'24.8455"N	80°43'53.9720"W	98.60	227.848	0.79	-0.76	21.25	
3500.00	0.330	194.400	3495.83	39.07	-66.72	-73.32	1716051.11	14364815.68	39°33'24.8402"N	80°43'53.9749"W	99.13	227.702	0.11	-0.05	-15.78	APS EM <8-3/4"> (3404')(3500'-6141')
3594.00	2.870	273.170	3589.78	38.40	-66.85	-75.74	1716048.70	14364815.55	39°33'24.8389"N	80°43'54.0058"W	101.02	228.569	3.00	2.70	83.80	
3689.00	6.660	283.590	3684.44	34.52	-65.42	-83.47	1716040.97	14364816.97	39°33'24.8532"N	80°43'54.1045"W	106.06	231.913	4.08	3.99	10.97	
3783.00	7.280	284.830	3777.75	28.26	-62.62	-94.53	1716029.92	14364819.78	39°33'24.8813"N	80°43'54.2455"W	113.39	236.480	0.68	0.66	1.32	
3878.00	6.770	280.830	3872.03	22.10	-60.02	-105.85	1716018.60	14364822.37	39°33'24.9073"N	80°43'54.3899"W	121.68	240.444	0.74	-0.54	-4.21	
3972.00	7.300	300.540	3965.34	14.79	-55.95	-116.44	1716008.02	14364826.44	39°33'24.9479"N	80°43'54.5249"W	129.18	244.336	2.62	0.56	20.97	
4066.00	9.510	305.740	4058.32	3.89	-48.38	-127.88	1715996.58	14364834.01	39°33'25.0230"N	80°43'54.6708"W	136.73	249.279	2.48	2.35	5.53	
4160.00	13.120	308.030	4150.48	-11.42	-37.26	-142.60	1715981.87	14364845.12	39°33'25.1333"N	80°43'54.8582"W	147.38	255.355	3.87	3.84	2.44	
4255.00	16.130	307.680	4242.39	-31.52	-22.55	-161.54	1715962.94	14364859.83	39°33'25.2792"N	80°43'55.0995"W	163.10	262.053	3.17	3.17	-0.37	
4349.00	15.330	305.970	4332.87	-52.63	-7.27	-181.93	1715942.55	14364875.10	39°33'25.4309"N	80°43'55.3592"W	182.07	267.711	0.98	-0.85	-1.82	
4443.00	16.930	306.390	4423.17	-74.09	8.15	-203.00	1715921.49	14364890.51	39°33'25.5839"N	80°43'55.6277"W	203.17	272.298	1.71	1.70	0.45	
4538.00	18.780	298.510	4513.60	-96.79	23.66	-227.58	1715896.92	14364906.02	39°33'25.7379"N	80°43'55.9409"W	228.81	275.935	3.20	1.95	-8.29	
4632.00	21.460	286.930	4601.89	-118.08	35.89	-257.34	1715867.17	14364918.25	39°33'25.8597"N	80°43'56.3204"W	259.84	277.940	5.09	2.85	-12.32	
4726.00	20.650	281.630	4689.63	-136.67	44.24	-290.03	1715834.49	14364926.60	39°33'25.9432"N	80°43'56.7375"W	293.39	278.673	2.20	-0.86	-5.64	
4820.00	20.780	285.930	4777.55	-154.70	52.16	-322.30	1715802.23	14364934.51	39°33'26.0224"N	80°43'57.1492"W	326.50	279.193	1.62	0.14	4.57	
4915.00	21.540	295.140	4866.17	-176.55	64.20	-354.31	1715770.24	14364946.54	39°33'26.1423"N	80°43'57.5573"W	360.07	280.270	3.59	0.80	9.69	
5009.00	20.420	298.990	4953.94	-200.79	79.48	-384.27	1715740.29	14364961.82	39°33'26.2942"N	80°43'57.9393"W	392.41	281.686	1.89	-1.19	4.10	
5103.00	18.890	293.720	5042.47	-223.33	93.55	-412.55	1715712.02	14364975.88	39°33'26.4341"N	80°43'58.2998"W	423.02	282.776	2.49	-1.63	-5.61	
5197.00	19.140	295.400	5131.34	-244.47	106.28	-440.40	1715684.18	14364988.61	39°33'26.5607"N	80°43'58.6549"W	453.05	283.568	0.64	0.27	1.79	
5292.00	17.670	292.180	5221.48	-264.90	118.40	-467.82	1715656.77	14365000.73	39°33'26.6813"N	80°43'59.0045"W	482.58	284.203	1.88	-1.55	-3.39	
5386.00	18.500	287.690	5310.84	-283.24	128.32	-495.25	1715629.36	14365010.64	39°33'26.7802"N	80°43'59.3543"W	511.60	284.526	1.73	0.88	-4.78	
5481.00	18.860	289.900	5400.84	-301.92	138.13	-524.04	1715600.57	14365020.44	39°33'26.8779"N	80°43'59.7215"W	541.94	284.766	0.84	0.38	2.33	
5575.00	20.050	289.350	5489.47	-321.50	148.64	-553.53	1715571.10	14365030.95	39°33'26.9827"N	80°44'00.0977"W	573.14	285.031	1.28	1.27	-0.59	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
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Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

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5669.00	18.550	285.870	5578.19	-340.09	158.07	-583.12	1715541.52	14365040.38	39°33'27.0767"N	80°44'0.4751"W	604.17	285.167	2.01	-1.60	-3.70	
5763.00	18.840	287.260	5667.23	-357.65	166.66	-612.00	1715512.65	14365048.97	39°33'27.1625"N	80°44'0.8434"W	634.28	285.234	0.57	0.31	1.48	
5858.00	17.750	283.550	5757.43	-374.55	174.61	-640.73	1715483.94	14365056.91	39°33'27.2419"N	80°44'1.2099"W	664.09	285.244	1.68	-1.15	-3.91	
5952.00	17.870	287.350	5846.93	-390.85	182.26	-668.42	1715456.25	14365064.56	39°33'27.3183"N	80°44'1.5632"W	692.83	285.252	1.24	0.13	4.04	
6047.00	16.290	292.160	5937.74	-408.29	191.64	-694.68	1715430.01	14365073.93	39°33'27.4118"N	80°44'1.8981"W	720.63	285.422	2.23	-1.66	5.06	
6141.00	14.780	289.590	6028.30	-424.48	200.63	-718.19	1715406.51	14365082.92	39°33'27.5013"N	80°44'2.1978"W	745.68	285.608	1.77	-1.61	-2.73	
6196.00	14.010	286.970	6081.58	-432.79	204.93	-731.16	1715393.54	14365087.21	39°33'27.5442"N	80°44'2.3634"W	759.34	285.657	1.83	-1.40	-4.76	BH AT Curve <8-1/2"> (6141')(6196'-22547')
6263.00	14.560	292.080	6146.51	-443.10	210.46	-746.72	1715377.98	14365092.75	39°33'27.5993"N	80°44'2.5618"W	775.82	285.740	2.05	0.82	7.63	
6358.00	16.150	278.970	6238.14	-457.18	217.01	-770.85	1715353.87	14365099.29	39°33'27.6647"N	80°44'2.8696"W	800.81	285.723	4.01	1.67	-13.80	
6452.00	16.910	254.420	6328.37	-484.18	215.37	-796.96	1715327.76	14365097.66	39°33'27.6493"N	80°44'3.2031"W	825.55	285.123	7.42	0.81	-26.12	
6546.00	17.480	222.190	6418.37	-458.22	201.21	-819.66	1715305.07	14365083.50	39°33'27.5100"N	80°44'3.4934"W	844.00	283.792	10.03	0.61	-34.29	
6640.00	20.830	206.190	6507.21	-439.66	175.73	-836.54	1715288.20	14365058.03	39°33'27.2587"N	80°44'3.7098"W	854.80	281.863	6.59	3.56	-17.02	
6735.00	25.850	190.760	6594.49	-409.76	140.17	-847.88	1715276.87	14365022.48	39°33'26.9076"N	80°44'3.8559"W	859.39	279.387	8.29	5.28	-16.24	
6813.00†	31.384	183.617	6662.96	-376.24	103.15	-852.34	1715272.41	14364985.48	39°33'26.5419"N	80°44'3.9143"W	858.56	276.901	8.33	7.10	-9.16	Sycamore: 6813' MD
6829.00†	32.560	182.430	6676.53	-368.39	94.69	-852.78	1715271.96	14364977.03	39°33'26.4583"N	80°44'3.9203"W	858.03	276.336	8.33	7.35	-7.42	
6924.00	38.970	175.770	6753.60	-315.66	39.28	-851.66	1715273.08	14364921.64	39°33'25.9106"N	80°44'3.9081"W	852.57	272.641	7.89	6.75	-7.01	
6967.00†	42.470	173.108	6786.19	-288.39	11.38	-848.92	1715275.82	14364893.74	39°33'25.6347"N	80°44'3.8741"W	849.00	270.768	9.08	8.14	-6.19	Middlesex: 6967' MD
7018.00	46.690	170.380	6822.51	-253.24	-24.03	-843.75	1715280.99	14364858.35	39°33'25.2846"N	80°44'3.8095"W	844.09	268.369	9.08	8.27	-5.35	
7113.00	54.270	167.750	6882.93	-180.75	-95.90	-829.77	1715294.97	14364786.51	39°33'24.5739"N	80°44'3.6337"W	835.30	263.407	8.26	7.98	-2.77	
7114.00†	54.353	167.700	6883.51	-179.94	-96.70	-829.60	1715295.14	14364785.71	39°33'24.5660"N	80°44'3.6315"W	835.22	263.352	9.22	8.27	-5.04	Burkett: 7114' MD
7168.00†	58.845	165.122	6913.23	-135.09	-140.49	-818.99	1715305.75	14364741.93	39°33'24.1329"N	80°44'3.4977"W	830.95	260.266	9.22	8.32	-4.77	Tully: 7168' MD
7207.00	62.120	163.410	6932.45	-101.21	-173.15	-809.78	1715314.95	14364709.29	39°33'23.8098"N	80°44'3.3813"W	828.08	257.931	9.22	8.40	-4.39	
7258.00†	65.618	161.750	6954.91	-55.45	-216.83	-796.06	1715328.66	14364665.63	39°33'23.3778"N	80°44'3.2079"W	825.06	254.764	7.46	6.86	-3.26	Hamilton: 7258' MD
7302.00	68.650	160.390	6972.00	-14.92	-255.17	-782.91	1715341.81	14364627.30	39°33'22.9985"N	80°44'3.0414"W	823.44	251.948	7.46	6.89	-3.09	
7376.00†	74.775	160.207	6995.21	55.31	-321.29	-759.23	1715365.48	14364561.21	39°33'22.3443"N	80°44'2.7416"W	824.41	247.063	8.28	8.28	-0.25	Marcellus POE: 7376' MD
7396.00	76.430	160.160	7000.18	74.68	-339.51	-752.66	1715372.04	14364542.99	39°33'22.1640"N	80°44'2.6584"W	825.69	245.721	8.28	8.28	-0.24	
7491.00	83.310	160.270	7016.88	168.13	-427.46	-721.03	1715403.67	14364455.08	39°33'21.2939"N	80°44'2.2579"W	838.21	239.339	7.24	7.24	0.12	
7585.00	89.480	159.720	7022.79	261.89	-515.57	-688.95	1715435.73	14364367.01	39°33'20.4221"N	80°44'1.8516"W	860.50	233.191	6.59	6.56	-0.59	
7680.00	90.310	160.860	7022.96	356.88	-605.00	-656.91	1715467.76	14364277.61	39°33'19.5373"N	80°44'1.4460"W	893.06	227.356	1.48	0.87	1.20	
7774.00	89.720	160.840	7022.94	450.88	-693.80	-626.07	1715498.58	14364188.85	39°33'18.8588"N	80°44'1.0556"W	934.52	222.063	0.63	-0.63	-0.02	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWP
Slot	Slot F		

WELLPATH DATA (248 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
7869.00	90.120	160.870	7023.07	545.88	-783.54	-594.92	1715529.73	14364099.14	39°33'17.7709"N	80°44'0.6613"W	983.80	217.208	0.42	0.42	0.03	
7963.00	90.770	160.490	7022.34	639.88	-872.24	-563.82	1715560.81	14364010.47	39°33'16.8934"N	80°44'0.2676"W	1038.61	212.879	0.80	0.69	-0.40	
8058.00	89.510	160.960	7022.11	734.87	-961.92	-532.46	1715592.16	14363920.83	39°33'16.0062"N	80°43'59.8707"W	1099.45	208.966	1.42	-1.33	0.49	
8153.00	89.780	160.250	7022.70	829.87	-1051.52	-500.91	1715623.69	14363831.26	39°33'15.1197"N	80°43'59.4713"W	1164.74	205.472	0.80	0.28	-0.75	
8247.00	89.910	160.250	7022.95	923.86	-1139.99	-469.15	1715655.45	14363742.83	39°33'14.2444"N	80°43'59.0691"W	1232.76	202.369	0.14	0.14	0.00	
8341.00	90.000	160.550	7023.03	1017.86	-1228.55	-437.62	1715686.97	14363654.31	39°33'13.3682"N	80°43'58.6699"W	1304.16	199.606	0.33	0.10	0.32	
8435.00	89.600	160.250	7023.35	1111.85	-1317.10	-406.09	1715718.49	14363565.79	39°33'12.4921"N	80°43'58.2707"W	1378.28	197.135	0.53	-0.43	-0.32	
8530.00	90.860	159.080	7022.97	1206.83	-1406.17	-373.07	1715751.48	14363476.75	39°33'11.6108"N	80°43'57.8527"W	1454.82	194.859	1.81	1.33	-1.23	
8625.00	89.540	157.170	7022.64	1301.71	-1494.33	-337.68	1715786.86	14363388.63	39°33'10.7385"N	80°43'57.4042"W	1532.01	192.734	2.44	-1.39	-2.01	
8719.00	89.170	160.050	7023.70	1395.62	-1581.84	-303.40	1715821.13	14363301.16	39°33'9.8726"N	80°43'56.9699"W	1610.67	190.858	3.09	-0.39	3.06	
8814.00	89.600	160.160	7024.72	1490.60	-1671.16	-271.08	1715853.44	14363211.87	39°33'8.9889"N	80°43'56.5606"W	1693.01	189.214	0.47	0.45	0.12	
8908.00	89.540	158.080	7025.43	1584.55	-1758.98	-237.58	1715886.93	14363124.08	39°33'8.1199"N	80°43'56.1363"W	1774.95	187.692	2.21	-0.06	-2.21	
9003.00	90.120	157.990	7025.71	1679.43	-1847.09	-202.04	1715922.45	14363036.01	39°33'7.2482"N	80°43'55.6860"W	1858.10	186.242	0.62	0.61	-0.09	
9097.00	90.680	156.260	7025.05	1773.22	-1933.69	-165.51	1715958.97	14362949.45	39°33'6.3912"N	80°43'55.2228"W	1940.76	184.892	1.93	0.60	-1.84	
9192.00	89.230	158.240	7025.13	1868.02	-2021.29	-128.77	1715995.69	14362861.88	39°33'5.5243"N	80°43'54.7572"W	2025.39	183.645	2.58	-1.53	2.08	
9286.00	89.630	162.170	7026.06	1961.99	-2109.71	-96.95	1716027.50	14362773.49	39°33'4.6495"N	80°43'54.3543"W	2111.94	182.631	4.20	0.43	4.18	
9394.74	89.510	161.480	7026.88	2070.71	-2213.02	-63.03	1716061.41	14362670.22	39°33'3.6274"N	80°43'53.9252"W	2213.92	181.631	0.64	-0.11	-0.63	
9476.00	90.520	162.800	7026.86	2151.95	-2290.37	-38.11	1716086.32	14362592.91	39°33'2.8623"N	80°43'53.6100"W	2290.68	180.953	2.05	1.24	1.62	
9570.00	93.570	162.270	7023.50	2245.84	-2379.96	-9.92	1716114.50	14362503.35	39°33'1.9759"N	80°43'53.2536"W	2379.99	180.239	3.29	3.24	-0.56	
9665.00	88.520	160.680	7021.77	2340.78	-2469.99	20.25	1716144.65	14362413.35	39°33'1.0853"N	80°43'52.8719"W	2470.08	179.530	5.57	-5.32	-1.67	
9760.00	89.320	161.450	7023.56	2435.76	-2559.84	51.07	1716175.46	14362323.55	39°33'0.1964"N	80°43'52.4818"W	2560.35	178.857	1.17	0.84	0.81	
9855.00	89.540	161.040	7024.51	2530.76	-2649.79	81.61	1716205.99	14362233.63	39°32'59.3065"N	80°43'52.0954"W	2651.04	178.236	0.49	0.23	-0.43	
9950.00	89.480	160.370	7025.32	2625.75	-2739.45	113.00	1716237.37	14362144.01	39°32'58.4194"N	80°43'51.6981"W	2741.78	177.638	0.71	-0.06	-0.71	
10044.00	89.140	161.510	7026.45	2719.74	-2828.29	143.70	1716268.05	14362055.20	39°32'57.5405"N	80°43'51.3096"W	2831.93	177.091	1.27	-0.36	1.21	
10138.00	90.830	162.030	7026.47	2813.73	-2917.56	173.10	1716297.44	14361965.98	39°32'56.6573"N	80°43'50.9377"W	2922.70	176.605	1.88	1.80	0.55	
10233.00	88.620	161.010	7026.93	2908.72	-3007.66	203.21	1716327.54	14361875.90	39°32'55.7660"N	80°43'50.5567"W	3014.52	176.135	2.56	-2.33	-1.07	
10328.00	88.740	161.690	7029.12	3003.69	-3097.65	233.58	1716357.90	14361785.95	39°32'54.8757"N	80°43'50.1725"W	3106.44	175.688	0.73	0.13	0.72	
10423.00	88.860	161.160	7031.11	3098.66	-3187.68	263.84	1716388.15	14361695.95	39°32'53.9850"N	80°43'49.7897"W	3198.58	175.268	0.57	0.13	-0.56	
10518.00	89.200	161.660	7032.72	3193.65	-3277.71	294.12	1716418.41	14361605.96	39°32'53.0944"N	80°43'49.4066"W	3290.88	174.872	0.64	0.36	0.53	
10613.00	88.830	158.010	7034.35	3288.60	-3366.85	326.86	1716451.14	14361516.85	39°32'52.2123"N	80°43'48.9921"W	3382.88	174.455	3.86	-0.39	-3.84	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWP
Slot	Slot F		

WELLPATH DATA (248 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
10708.00	89.260	161.890	7035.93	3383.55	-3456.07	359.42	1716483.69	14361427.67	39°32'51.3296"N	80°43'48.5798"W	3474.71	174.063	4.11	0.45	4.08	
10802.00	90.340	163.440	7036.26	3477.50	-3545.79	387.42	1716511.68	14361337.98	39°32'50.4420"N	80°43'48.2258"W	3566.90	173.764	2.01	1.15	1.65	
10897.00	89.820	163.220	7036.13	3572.42	-3636.80	414.68	1716538.92	14361247.01	39°32'49.5418"N	80°43'47.8814"W	3660.37	173.495	0.59	-0.55	-0.23	
10991.00	89.230	161.340	7036.91	3666.38	-3726.33	443.28	1716567.52	14361157.51	39°32'48.6560"N	80°43'47.5196"W	3752.61	173.216	2.10	-0.63	-2.00	
11086.00	89.820	162.480	7037.70	3761.36	-3816.83	472.78	1716597.00	14361067.25	39°32'47.7627"N	80°43'47.1465"W	3845.80	172.939	1.35	0.62	1.20	
11180.00	89.540	162.220	7038.22	3855.33	-3906.21	501.28	1716625.49	14360977.71	39°32'46.8766"N	80°43'46.7862"W	3938.24	172.687	0.41	-0.30	-0.28	
11275.00	89.940	163.680	7038.65	3950.27	-3997.03	529.13	1716653.33	14360886.92	39°32'45.9782"N	80°43'46.4341"W	4031.90	172.459	1.59	0.42	1.54	
11369.00	90.460	162.720	7038.32	4044.19	-4087.01	556.30	1716680.49	14360796.97	39°32'45.0880"N	80°43'46.0907"W	4124.70	172.249	1.16	0.55	-1.02	
11464.00	89.880	162.060	7038.04	4139.16	-4177.56	585.04	1716709.22	14360706.46	39°32'44.1923"N	80°43'45.7273"W	4218.33	172.028	0.92	-0.61	-0.69	
11558.00	89.260	160.970	7038.75	4233.15	-4266.71	614.84	1716739.01	14360617.35	39°32'43.3103"N	80°43'45.3503"W	4310.78	171.800	1.33	-0.66	-1.16	
11653.00	89.510	160.820	7039.77	4328.14	-4356.47	645.94	1716770.09	14360527.62	39°32'42.4223"N	80°43'44.9569"W	4404.09	171.566	0.31	0.26	-0.16	
11748.00	89.750	160.930	7040.38	4423.14	-4446.22	677.06	1716801.20	14360437.91	39°32'41.5343"N	80°43'44.5631"W	4497.48	171.342	0.28	0.25	0.12	
11842.00	89.780	160.710	7040.77	4517.14	-4535.00	707.94	1716832.07	14360349.16	39°32'40.6559"N	80°43'44.1723"W	4589.93	171.127	0.24	0.03	-0.23	
11937.00	89.940	160.220	7041.00	4612.14	-4624.54	739.71	1716863.83	14360259.66	39°32'39.7701"N	80°43'43.7702"W	4683.32	170.912	0.54	0.17	-0.52	
12032.00	90.990	160.720	7040.23	4707.13	-4714.06	771.47	1716895.57	14360170.17	39°32'38.8843"N	80°43'43.3683"W	4776.77	170.706	1.22	1.11	0.53	
12126.00	90.000	161.250	7039.42	4801.12	-4802.93	802.09	1716926.18	14360081.34	39°32'38.0051"N	80°43'42.9808"W	4869.45	170.519	1.19	-1.05	0.56	
12221.00	89.510	160.660	7039.82	4896.12	-4892.73	833.09	1716957.17	14359991.58	39°32'37.1167"N	80°43'42.5886"W	4963.15	170.337	0.81	-0.52	-0.62	
12316.00	89.940	161.360	7040.28	4991.12	-4982.56	864.00	1716988.07	14359901.78	39°32'36.2280"N	80°43'42.1974"W	5056.91	170.162	0.86	0.45	0.74	
12411.00	89.970	160.450	7040.35	5086.12	-5072.33	895.08	1717019.14	14359812.05	39°32'35.3398"N	80°43'41.8042"W	5150.70	169.992	0.96	0.03	-0.96	
12506.00	89.320	160.290	7040.94	5181.11	-5161.81	926.99	1717051.04	14359722.61	39°32'34.4545"N	80°43'41.4003"W	5244.38	169.819	0.70	-0.68	-0.17	
12600.00	89.450	160.570	7041.95	5275.10	-5250.37	958.48	1717082.51	14359634.08	39°32'33.5783"N	80°43'41.0018"W	5337.14	169.654	0.33	0.14	0.30	
12695.00	89.260	161.310	7043.02	5370.10	-5340.16	989.50	1717113.52	14359544.33	39°32'32.6900"N	80°43'40.6093"W	5431.06	169.502	0.80	-0.20	0.78	
12790.00	89.480	160.250	7044.06	5465.09	-5429.85	1020.77	1717144.78	14359454.66	39°32'31.8026"N	80°43'40.2136"W	5524.97	169.353	1.14	0.23	-1.12	
12884.00	89.630	160.540	7044.79	5559.08	-5518.40	1052.31	1717176.30	14359366.15	39°32'30.9265"N	80°43'39.8144"W	5617.84	169.204	0.35	0.16	0.31	
12979.00	89.080	160.160	7045.86	5654.07	-5607.86	1084.25	1717208.23	14359276.72	39°32'30.0413"N	80°43'39.4102"W	5711.72	169.057	0.70	-0.58	-0.40	
13073.00	89.540	160.360	7047.00	5748.06	-5696.33	1116.00	1717239.97	14359188.29	39°32'29.1660"N	80°43'39.0084"W	5804.62	168.915	0.53	0.49	0.21	
13168.00	89.480	161.330	7047.81	5843.05	-5786.07	1147.17	1717271.13	14359098.59	39°32'28.2782"N	80°43'38.6140"W	5898.69	168.786	1.02	-0.06	1.02	
13263.00	89.290	162.320	7048.83	5938.04	-5876.32	1176.80	1717300.75	14359008.37	39°32'27.3853"N	80°43'38.2392"W	5993.00	168.676	1.06	-0.20	1.04	
13357.00	89.910	161.970	7049.48	6032.01	-5965.79	1205.62	1717329.55	14358918.94	39°32'26.5002"N	80°43'37.8748"W	6086.39	168.575	0.76	0.66	-0.37	
13452.00	89.880	162.150	7049.66	6126.99	-6056.17	1234.88	1717358.80	14358828.59	39°32'25.6061"N	80°43'37.5048"W	6180.79	168.475	0.19	-0.03	0.19	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWP
Slot	Slot F		

WELLPATH DATA (248 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
13547.00	89.600	161.910	7050.09	6221.97	-6146.54	1264.19	1717388.10	14358738.26	39°32'24.7121"N	80°43'37.1342"W	6275.20	168.378	0.39	-0.29	-0.25	
13641.00	89.540	161.920	7050.80	6315.96	-6235.89	1293.37	1717417.27	14358648.94	39°32'23.8281"N	80°43'36.7652"W	6368.61	168.283	0.06	-0.06	0.01	
13736.00	89.320	161.750	7051.74	6410.94	-6326.15	1322.99	1717446.87	14358558.72	39°32'22.9352"N	80°43'36.3907"W	6463.01	168.188	0.29	-0.23	-0.18	
13831.00	89.480	161.890	7052.74	6505.92	-6416.40	1352.63	1717476.50	14358468.50	39°32'22.0423"N	80°43'36.0159"W	6557.43	168.096	0.22	0.17	0.15	
13926.00	89.570	161.920	7053.52	6600.90	-6506.70	1382.13	1717505.99	14358378.24	39°32'21.1490"N	80°43'35.6428"W	6651.88	168.008	0.10	0.09	0.03	
14020.00	88.950	159.360	7054.74	6694.89	-6595.37	1413.29	1717537.14	14358289.61	39°32'20.2717"N	80°43'35.2486"W	6745.10	167.905	2.80	-0.66	-2.72	
14115.00	89.540	161.950	7055.99	6789.87	-6684.99	1444.75	1717568.59	14358200.02	39°32'19.3850"N	80°43'34.8505"W	6839.33	167.805	2.80	0.62	2.73	
14210.00	89.320	161.830	7056.93	6884.85	-6775.28	1474.28	1717598.11	14358109.77	39°32'18.4918"N	80°43'34.4771"W	6933.83	167.724	0.26	-0.23	-0.13	
14304.00	89.510	162.120	7057.89	6978.83	-6864.66	1503.36	1717627.18	14358020.42	39°32'17.6075"N	80°43'34.1093"W	7027.36	167.647	0.37	0.20	0.31	
14399.00	89.140	161.330	7059.01	7073.81	-6954.87	1533.15	1717656.95	14357930.25	39°32'16.7151"N	80°43'33.7326"W	7121.85	167.568	0.92	-0.39	-0.83	
14493.00	89.570	161.960	7060.07	7167.80	-7044.08	1562.75	1717686.54	14357841.08	39°32'15.8325"N	80°43'33.3583"W	7215.35	167.491	0.81	0.46	0.67	
14588.00	89.200	161.320	7061.09	7262.78	-7134.24	1592.67	1717716.45	14357750.96	39°32'14.9406"N	80°43'32.9799"W	7309.85	167.415	0.78	-0.39	-0.67	
14683.00	89.820	162.070	7061.90	7357.77	-7224.42	1622.51	1717746.28	14357660.80	39°32'14.0483"N	80°43'32.6026"W	7404.38	167.342	1.02	0.65	0.79	
14777.00	89.660	162.690	7062.33	7451.74	-7314.01	1650.96	1717774.72	14357571.25	39°32'13.1620"N	80°43'32.2429"W	7498.03	167.280	0.68	-0.17	0.66	
14872.00	89.540	160.420	7062.99	7546.72	-7404.12	1681.02	1717804.76	14357481.17	39°32'12.2705"N	80°43'31.8628"W	7592.55	167.209	2.39	-0.13	-2.39	
14966.00	89.570	159.600	7063.72	7640.71	-7492.46	1713.15	1717836.88	14357392.88	39°32'11.3965"N	80°43'31.4561"W	7685.82	167.121	0.87	0.03	-0.87	
15060.00	89.510	159.960	7064.48	7734.69	-7580.66	1745.64	1717869.36	14357304.71	39°32'10.5238"N	80°43'31.0449"W	7779.05	167.032	0.39	-0.06	0.38	
15155.00	89.660	159.960	7065.17	7829.67	-7669.91	1778.19	1717901.90	14357215.50	39°32'9.6408"N	80°43'30.6329"W	7873.34	166.947	0.16	0.16	0.00	
15249.00	89.420	160.040	7065.92	7923.66	-7758.24	1810.34	1717934.03	14357127.20	39°32'8.7669"N	80°43'30.2260"W	7966.65	166.865	0.27	-0.26	0.09	
15343.00	89.660	159.490	7066.68	8017.63	-7846.43	1842.85	1717966.53	14357039.04	39°32'7.8942"N	80°43'29.8145"W	8059.94	166.783	0.64	0.26	-0.59	
15437.00	90.000	160.640	7066.95	8111.62	-7934.80	1874.90	1717998.57	14356950.71	39°32'7.0199"N	80°43'29.4089"W	8153.30	166.706	1.28	0.36	1.22	
15532.00	89.750	159.710	7067.16	8206.61	-8024.16	1907.12	1718030.77	14356861.38	39°32'6.1357"N	80°43'29.0012"W	8247.69	166.630	1.01	-0.26	-0.98	
15626.00	90.000	160.190	7067.37	8300.60	-8112.47	1939.34	1718062.99	14356773.11	39°32'5.2620"N	80°43'28.5933"W	8341.05	166.555	0.58	0.27	0.51	
15720.00	89.910	159.460	7067.44	8394.58	-8200.70	1971.76	1718095.39	14356684.91	39°32'4.3890"N	80°43'28.1830"W	8434.41	166.481	0.78	-0.10	-0.78	
15815.00	89.940	157.180	7067.56	8489.48	-8288.97	2006.86	1718130.47	14356596.67	39°32'3.5155"N	80°43'27.7386"W	8528.45	166.390	2.40	0.03	-2.40	
15909.00	89.750	157.100	7067.82	8583.27	-8375.59	2043.37	1718166.97	14356510.09	39°32'2.6584"N	80°43'27.2759"W	8621.25	166.290	0.22	-0.20	-0.09	
16004.00	88.400	158.900	7069.35	8678.13	-8463.65	2078.95	1718202.54	14356422.06	39°32'1.7869"N	80°43'26.8252"W	8715.25	166.199	2.37	-1.42	1.89	
16098.00	89.910	161.600	7070.74	8772.10	-8552.10	2110.71	1718234.29	14356333.65	39°32'0.9118"N	80°43'26.4234"W	8808.72	166.136	3.29	1.61	2.87	
16193.00	89.690	160.830	7071.07	8867.10	-8642.04	2141.30	1718264.86	14356243.74	39°32'0.0220"N	80°43'26.0365"W	8903.37	166.084	0.84	-0.23	-0.81	
16287.00	90.150	160.900	7071.20	8961.10	-8730.85	2172.11	1718295.67	14356154.97	39°31'59.1433"N	80°43'25.6467"W	8996.99	166.029	0.49	0.49	0.07	





# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Lenny Unit 1H
Field	Wetzel		API	47-103-03494-0000
Facility	Furbee Pad		Wellbore	Lenny Unit 1H AWP
Slot	Slot F			

WELLPATH DATA (248 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
16381.00	90.430	162.380	7070.73	9055.09	-8820.06	2201.72	1718325.26	14356065.80	39°31'58.2607"N	80°43'25.2723"W	9090.71	165.984	1.60	0.30	1.57	
16476.00	89.660	161.700	7070.65	9150.07	-8910.43	2231.01	1718354.54	14355975.46	39°31'57.3667"N	80°43'24.9020"W	9185.49	165.943	1.08	-0.81	-0.72	
16570.00	90.950	163.070	7070.15	9244.03	-9000.02	2259.46	1718382.98	14355885.91	39°31'56.4804"N	80°43'24.5425"W	9279.30	165.907	2.00	1.37	1.46	
16665.00	89.940	161.110	7069.41	9339.00	-9090.41	2288.67	1718412.18	14355795.56	39°31'55.5862"N	80°43'24.1732"W	9374.09	165.868	2.32	-1.06	-2.06	
16759.00	90.220	161.880	7069.28	9433.00	-9179.54	2318.51	1718442.00	14355706.46	39°31'54.7043"N	80°43'23.7960"W	9467.81	165.825	0.87	0.30	0.82	
16854.00	89.510	161.140	7069.51	9527.99	-9269.64	2348.63	1718472.11	14355616.40	39°31'53.8130"N	80°43'23.4150"W	9562.55	165.782	1.08	-0.75	-0.78	
16948.00	88.920	160.040	7070.79	9621.98	-9358.29	2379.87	1718503.34	14355527.78	39°31'52.9359"N	80°43'23.0198"W	9656.15	165.732	1.33	-0.63	-1.17	
17043.00	89.880	165.240	7071.79	9716.90	-9448.92	2408.20	1718531.66	14355437.18	39°31'52.0393"N	80°43'22.6618"W	9750.98	165.702	5.57	1.01	5.47	
17138.00	90.340	164.140	7071.61	9811.69	-9540.55	2433.29	1718556.73	14355345.59	39°31'51.1329"N	80°43'22.3453"W	9845.96	165.692	1.26	0.48	-1.16	
17232.00	89.510	162.870	7071.73	9905.59	-9630.68	2459.97	1718583.41	14355255.50	39°31'50.2414"N	80°43'22.0082"W	9939.89	165.671	1.61	-0.88	-1.35	
17327.00	89.540	162.330	7072.52	10000.55	-9721.33	2488.38	1718611.81	14355164.89	39°31'49.3446"N	80°43'21.6492"W	10034.75	165.642	0.57	0.03	-0.57	
17421.00	89.910	160.270	7072.97	10094.54	-9810.36	2518.52	1718641.93	14355075.89	39°31'48.4637"N	80°43'21.2681"W	10128.48	165.602	2.23	0.39	-2.19	
17516.00	89.720	159.740	7073.28	10189.52	-9899.63	2551.00	1718674.40	14354986.65	39°31'47.5804"N	80°43'20.8571"W	10223.03	165.550	0.59	-0.20	-0.56	
17611.00	90.400	160.420	7073.18	10284.51	-9988.95	2583.37	1718706.76	14354897.37	39°31'46.6967"N	80°43'20.4475"W	10317.60	165.500	1.01	0.72	0.72	
17706.00	90.150	160.310	7072.72	10379.51	-10078.42	2615.29	1718738.67	14354807.93	39°31'45.8115"N	80°43'20.0436"W	10412.22	165.453	0.29	-0.26	-0.12	
17800.00	89.720	160.350	7072.83	10473.50	-10166.94	2646.93	1718770.29	14354719.45	39°31'44.9357"N	80°43'19.6433"W	10505.85	165.407	0.46	-0.46	0.04	
17895.00	89.850	160.960	7073.18	10568.50	-10256.57	2678.40	1718801.75	14354629.85	39°31'44.0488"N	80°43'19.2452"W	10600.52	165.365	0.66	0.14	0.64	
17990.00	89.690	160.010	7073.56	10663.50	-10346.11	2710.13	1718833.47	14354540.35	39°31'43.1629"N	80°43'18.8438"W	10695.18	165.321	1.01	-0.17	-1.00	
18084.00	89.350	160.500	7074.35	10757.49	-10434.58	2741.89	1718865.22	14354451.91	39°31'42.2876"N	80°43'18.4420"W	10788.81	165.277	0.63	-0.36	0.52	
18179.00	89.320	160.780	7075.45	10852.48	-10524.20	2773.38	1718896.69	14354362.33	39°31'41.4008"N	80°43'18.0437"W	10883.50	165.237	0.30	-0.03	0.29	
18273.00	89.510	160.580	7076.41	10946.47	-10612.91	2804.48	1718927.78	14354273.66	39°31'40.5232"N	80°43'17.6503"W	10977.20	165.198	0.29	0.20	-0.21	
18367.00	89.420	160.280	7077.29	11040.46	-10701.47	2835.96	1718959.25	14354185.13	39°31'39.6470"N	80°43'17.2520"W	11070.87	165.157	0.33	-0.10	-0.32	
18462.00	89.450	159.940	7078.23	11135.45	-10790.80	2868.28	1718991.56	14354095.84	39°31'38.7631"N	80°43'16.8431"W	11165.50	165.115	0.36	0.03	-0.36	
18557.00	89.970	160.620	7078.71	11230.44	-10880.23	2900.34	1719023.60	14354006.45	39°31'37.8783"N	80°43'16.4376"W	11260.16	165.074	0.90	0.55	0.72	
18651.00	89.450	160.320	7079.19	11324.44	-10968.82	2931.76	1719055.01	14353917.89	39°31'37.0018"N	80°43'16.0400"W	11353.86	165.036	0.64	-0.55	-0.32	
18746.00	89.380	160.810	7080.16	11419.43	-11058.40	2963.37	1719086.61	14353828.34	39°31'36.1154"N	80°43'15.6402"W	11448.57	164.999	0.52	-0.07	0.52	
18841.00	90.090	161.310	7080.59	11514.43	-11148.25	2994.20	1719117.43	14353738.52	39°31'35.2264"N	80°43'15.2503"W	11543.34	164.966	0.91	0.75	0.53	
18935.00	89.910	160.430	7080.59	11608.43	-11237.06	3025.01	1719148.22	14353649.75	39°31'34.3478"N	80°43'14.8607"W	11637.11	164.933	0.96	-0.19	-0.94	
19030.00	89.720	160.850	7080.90	11703.43	-11326.69	3056.50	1719179.70	14353560.16	39°31'33.4610"N	80°43'14.4623"W	11731.84	164.898	0.49	-0.20	0.44	
19124.00	89.570	160.270	7081.48	11797.42	-11415.33	3087.78	1719210.97	14353471.56	39°31'32.5840"N	80°43'14.0666"W	11825.57	164.864	0.64	-0.16	-0.62	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Lenny Unit 1H
Field	Wetzel		API	47-103-03494-0000
Facility	Furbee Pad		Wellbore	Lenny Unit 1H AWP
Slot	Slot F			

WELLPATH DATA (248 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
19219.00	90.060	160.720	7081.79	11892.42	-11504.88	3119.50	1719242.68	14353382.04	39°31'31.6980"N	80°43'13.6654"W	11920.30	164.829	0.70	0.52	0.47	
19314.00	89.600	160.690	7082.07	11987.42	-11594.54	3150.89	1719274.06	14353292.42	39°31'30.8109"N	80°43'13.2683"W	12015.05	164.797	0.49	-0.48	-0.03	
19408.00	89.290	160.400	7082.98	12081.41	-11683.17	3182.20	1719305.35	14353203.82	39°31'29.9340"N	80°43'12.8723"W	12108.79	164.764	0.45	-0.33	-0.31	
19503.00	90.310	161.040	7083.31	12176.41	-11772.84	3213.57	1719336.71	14353114.19	39°31'29.0468"N	80°43'12.4756"W	12203.55	164.732	1.27	1.07	0.67	
19597.00	89.690	162.050	7083.31	12270.40	-11862.00	3243.32	1719366.45	14353025.06	39°31'28.1646"N	80°43'12.0994"W	12297.41	164.708	1.26	-0.66	1.07	
19692.00	89.170	160.870	7084.26	12365.39	-11952.06	3273.53	1719396.64	14352935.03	39°31'27.2736"N	80°43'11.7176"W	12392.25	164.683	1.36	-0.55	-1.24	
19787.00	89.540	160.760	7085.33	12460.38	-12041.78	3304.74	1719427.85	14352845.35	39°31'26.3859"N	80°43'11.3228"W	12487.03	164.654	0.41	0.39	-0.12	
19882.00	89.630	160.770	7086.02	12555.38	-12131.48	3336.04	1719459.13	14352755.69	39°31'25.4985"N	80°43'10.9270"W	12581.81	164.624	0.10	0.09	0.01	
19976.00	89.110	160.290	7087.05	12649.37	-12220.10	3367.37	1719490.45	14352667.11	39°31'24.6217"N	80°43'10.5307"W	12675.56	164.594	0.75	-0.55	-0.51	
20071.00	89.750	159.800	7088.00	12744.36	-12309.39	3399.79	1719522.86	14352577.85	39°31'23.7382"N	80°43'10.1205"W	12770.26	164.560	0.85	0.67	-0.52	
20166.00	89.260	159.700	7088.82	12839.33	-12398.51	3432.67	1719555.72	14352488.76	39°31'22.8563"N	80°43'9.7045"W	12864.93	164.525	0.53	-0.52	-0.11	
20261.00	89.320	160.040	7089.99	12934.31	-12487.70	3465.36	1719588.40	14352399.61	39°31'21.9738"N	80°43'9.2909"W	12959.61	164.491	0.36	0.06	0.36	
20355.00	89.260	161.750	7091.16	13028.30	-12576.51	3496.12	1719619.15	14352310.83	39°31'21.0951"N	80°43'8.9018"W	13053.41	164.465	1.82	-0.06	1.82	
20450.00	88.830	161.170	7092.74	13123.28	-12666.57	3526.33	1719649.34	14352220.81	39°31'20.2042"N	80°43'8.5200"W	13148.27	164.443	0.76	-0.45	-0.61	
20544.00	89.450	161.390	7094.15	13217.27	-12755.59	3556.49	1719679.50	14352131.83	39°31'19.3235"N	80°43'8.1388"W	13242.12	164.421	0.70	0.66	0.23	
20639.00	89.450	160.930	7095.07	13312.26	-12845.49	3587.17	1719710.16	14352041.96	39°31'18.4339"N	80°43'7.7508"W	13336.96	164.397	0.48	0.00	-0.48	
20733.00	89.660	161.870	7095.80	13406.25	-12934.58	3617.15	1719740.13	14351952.91	39°31'17.5525"N	80°43'7.3717"W	13430.83	164.376	1.02	0.22	1.00	
20827.00	89.540	161.120	7096.45	13500.25	-13023.72	3646.98	1719769.95	14351863.80	39°31'16.6707"N	80°43'6.9946"W	13524.71	164.356	0.81	-0.13	-0.80	
20922.00	89.230	161.680	7097.47	13595.24	-13113.75	3677.28	1719800.24	14351773.81	39°31'15.7799"N	80°43'6.6116"W	13619.57	164.336	0.87	-0.33	0.59	
21017.00	90.180	161.640	7097.96	13690.23	-13203.92	3707.17	1719830.12	14351683.67	39°31'14.9878"N	80°43'6.2337"W	13714.47	164.317	1.00	1.00	-0.04	
21111.00	89.690	161.610	7098.07	13784.22	-13293.13	3736.81	1719859.74	14351594.50	39°31'14.0052"N	80°43'5.8592"W	13808.37	164.299	0.52	-0.52	-0.03	
21206.00	89.750	161.270	7098.53	13879.21	-13383.19	3767.04	1719889.96	14351504.48	39°31'13.1142"N	80°43'5.4769"W	13903.25	164.279	0.36	0.06	-0.36	
21301.00	89.750	161.670	7098.95	13974.21	-13473.26	3797.23	1719920.14	14351414.44	39°31'12.2231"N	80°43'5.0953"W	13998.13	164.260	0.42	0.00	0.42	
21396.00	89.570	161.320	7099.51	14069.20	-13563.35	3827.39	1719950.28	14351324.39	39°31'11.3318"N	80°43'4.7141"W	14093.02	164.242	0.41	-0.19	-0.37	
21490.00	89.940	161.670	7099.91	14163.20	-13652.49	3857.22	1719980.10	14351235.28	39°31'10.4499"N	80°43'4.3370"W	14186.91	164.223	0.54	0.39	0.37	
21585.00	89.850	161.760	7100.09	14258.19	-13742.69	3887.03	1720009.90	14351145.12	39°31'9.5574"N	80°43'3.9603"W	14281.82	164.207	0.13	-0.09	0.09	
21679.00	89.540	160.410	7100.59	14352.18	-13831.61	3917.50	1720040.36	14351056.23	39°31'8.6777"N	80°43'3.5750"W	14375.68	164.186	1.47	-0.33	-1.44	
21774.00	89.290	160.230	7101.56	14447.17	-13921.05	3949.49	1720072.33	14350966.82	39°31'7.7927"N	80°43'3.1704"W	14470.46	164.161	0.32	-0.26	-0.19	
21868.00	89.510	160.410	7102.54	14541.16	-14009.56	3981.14	1720103.98	14350878.35	39°31'6.9170"N	80°43'2.7700"W	14564.24	164.136	0.30	0.23	0.19	
21963.00	89.200	160.590	7103.61	14636.15	-14099.10	4012.85	1720135.67	14350788.84	39°31'6.0310"N	80°43'2.3690"W	14659.05	164.113	0.38	-0.33	0.19	



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (248 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
22058.00	89.780	160.420	7104.46	14731.15	-14188.65	4044.55	1720167.36	14350699.33	39°31'5.1450"N	80°43'1.9681"W	14753.86	164.090	0.64	0.61	-0.18	
22152.00	89.570	160.410	7104.99	14825.14	-14277.21	4076.06	1720198.86	14350610.80	39°31'4.2687"N	80°43'1.5696"W	14847.66	164.066	0.22	-0.22	-0.01	
22247.00	89.820	160.670	7105.49	14920.14	-14366.79	4107.71	1720230.50	14350521.27	39°31'3.3825"N	80°43'1.1693"W	14942.48	164.044	0.38	0.26	0.27	
22341.00	89.750	160.390	7105.85	15014.13	-14455.41	4139.04	1720261.81	14350432.68	39°31'2.5056"N	80°43'0.7731"W	15036.31	164.022	0.31	-0.07	-0.30	
22436.00	90.090	160.640	7105.98	15109.13	-14544.97	4170.73	1720293.49	14350343.15	39°31'1.6195"N	80°43'0.3724"W	15131.13	164.000	0.44	0.36	0.26	
22530.00	89.820	160.420	7106.05	15203.13	-14633.59	4202.06	1720324.81	14350254.56	39°31'0.7426"N	80°42'59.9761"W	15224.96	163.978	0.37	-0.29	-0.23	
22547.00	89.820	160.340	7106.11	15220.13	-14649.61	4207.77	1720330.52	14350238.56	39°31'0.5842"N	80°42'59.9039"W	15241.93	163.974	0.47	0.00	-0.47	
22572.00‡	89.820	160.340	7106.19	15245.13	-14673.15	4216.18	1720338.92	14350215.02	39°31'0.3512"N	80°42'59.7976"W	15266.87	163.969	0.00	0.00	0.00	Projected MD at TD: 22572'

HOLE & CASING SECTIONS - Ref Wellbore: Lenny Unit 1H AWB Ref Wellpath: Lenny Unit 1H AWP Proj: 22572'									
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	0.07	0.31
17.5in Open Hole	130.00	693.00	563.00	130.00	692.98	0.07	0.31	-1.04	3.32
13.375in Casing Surface	30.00	673.00	643.00	30.00	672.98	0.00	0.00	-0.71	3.60
12.25in Open Hole	693.00	3477.00	2784.00	692.98	3472.83	-1.04	3.32	-66.59	-73.29
9.625in Casing Intermediate	30.00	3457.00	3427.00	30.00	3452.83	0.00	0.00	-66.47	-73.25
8.75in Open Hole	3477.00	6215.00	2738.00	3472.83	6100.01	-66.59	-73.29	206.33	-735.57
8.5in Open Hole	6215.00	22572.00	16357.00	6100.01	7106.19	206.33	-735.57	-14673.15	4216.18
5.5in Casing Production	30.00	22552.00	22522.00	30.00	7106.12	0.00	0.00	-14654.31	4209.45



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Lenny Unit 1H POE Rev-2	6997.00	-314.31	-755.08	1715369.63	14364568.18	39°33'22.4131"N	80°44'2.6883"W	point
Lenny Unit 1H BHL Rev-2	7025.00	-14680.03	4217.54	1720340.28	14350208.15	39°31'0.2832"N	80°42'59.7805"W	point
Lenny Unit 1H LP Rev-2	7025.00	-501.71	-690.21	1715434.47	14364380.86	39°33'20.5592"N	80°44'1.8673"W	point
Lenny Unit 1H 50' L/R Hard Line	7250.00	-7497.17	1731.23	1717854.96	14357388.16	39°32'11.3494"N	80°43'31.2255"W	rectangle
2D Rectangle 15202 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Lenny Unit 1H AWB Ref Wellpath: Lenny Unit 1H AWP Proj: 22572'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	588.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-588')	Lenny Unit 1H AWB	9/20/2022
588.00	3404.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (588')(777'-3404')	Lenny Unit 1H AWB	9/20/2022
3404.00	6141.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3404')(3500'-6141')	Lenny Unit 1H AWB	9/20/2022
6141.00	22572.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6141')(6196'-22547')	Lenny Unit 1H AWB	9/20/2022



# Actual Wellpath Report

Lenny Unit 1H AWP Proj: 22572'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Lenny Unit 1H
Field	Wetzel	API	47-103-03494-0000
Facility	Furbee Pad	Wellbore	Lenny Unit 1H AWB
Slot	Slot F		

## COMMENTS

### Wellpath general comments

API: 47-103-03494-0000  
BH Job #: 111490481  
Rig: H&P 519  
Duration: 9/21/2022-9/30/2022  
Gyrodata MS Gyro <17-1/2"> (100'-588')  
APS EM <12-1/4"> (588')(777'-3404')  
APS EM <8-3/4"> (3404')(3500'-6141')  
BH AT Curve <8-1/2"> (6141')(6196'-22547')  
Sycamore: 6813' MD  
Middlesex: 6967' MD  
Burkett: 7114' MD  
Tully: 7168' MD  
Hamilton: 7258' MD  
Marcellus POE: 7376' MD  
Projected MD at TD: 22572'

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