



ANTERO RESOURCES CORPORATION

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

Slot: Slot C
Well: Harlan Unit 2H
Wellbore: Harlan Unit 2H PWB



Plot reference wellpath is Harlan Unit 2H PWP Rev-B.0

True vertical depths are referenced to H&P 519 (RKB)

Reference wellpath measured depths are referenced to H&P 519 (RKB)

H&P 519 (RKB) to Mean Sea Level 1191 feet

Mean Sea Level to Ground level (At Slot Slot C) : -1161 feet

Official wellpath MDs are referenced to each path's default MD datum

Grid System: NAD27 / UTM Zone 17 North, US feet

North Reference: Grid north

Scale: True distance

Coordinates are in feet referenced to Slot

Depths are in feet

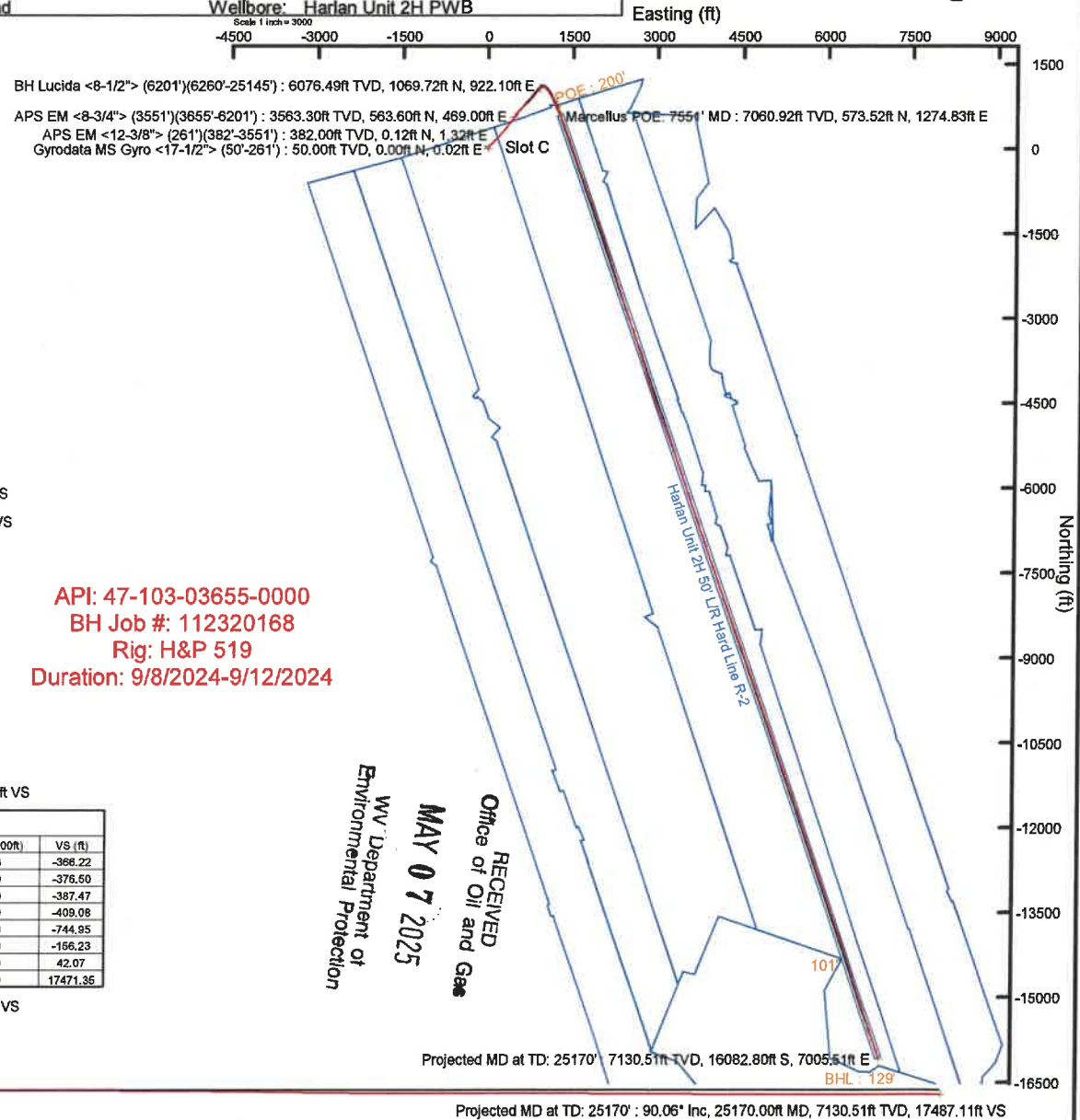
Created by: wellbore on 2024-10-04; Database: WA MPL, EASTERNUS Data

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Galmish Pad	1726216.430	14372266.790	39°34'38.1900"N	80°41'43.8200"W
Slot	Local N (ft)	Local E (ft)	Latitude	Longitude
Slot C	-51.41	55.77	39°34'37.6800"N	80°41'43.1100"W
Comment	Harlan Unit 2H			
H&P 519 (RKB) to Ground level (At Slot Slot C)	30ft			
Mean Sea Level to Ground level (At Slot Slot C)	-1161ft			
H&P 519 (RKB) to Mean Sea Level	1191ft			

Well Data

Slot	Well	Wellbore	Wellpath
Slot C	Harlan Unit 2H	Harlan Unit 2H AWB	Harlan Unit 2H AWP Proj: 25170'
Slot C	Harlan Unit 2H	Harlan Unit 2H PWB	Harlan Unit 2H PWP Rev-B.0



Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tim On	3551.00	12.720	32.500	3491.67	544.75	457.53	-366.22
Proj. to Bottom	3626.00	12.720	32.500	3534.83	558.67	466.41	-376.50
Drill Out	3706.00	12.720	32.500	3612.87	573.53	475.87	-387.47
End of 3D Arc	3864.78	15.297	40.206	3766.93	604.28	498.79	-409.08
Curve KOP	6350.89	15.297	40.206	6164.96	1105.18	922.18	-744.95
POE	7523.89	73.926	161.006	7050.00	601.09	1266.55	-156.23
Landing Pt.	7724.82	90.000	161.006	7078.00	413.58	1331.09	42.07
BHL	25154.10	90.000	161.006	-16066.71	7003.79	0.00	17471.36



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999608	Report Generated	10/4/2024 at 11:21:10 AM
Convergence at slot	0.19° 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	-51.41	55.77	1726272.18	14372215.40	39°34'37.6800"N	80°41'43.1100"W
Facility Reference Pt			1726216.43	14372266.79	39°34'38.1900"N	80°41'43.8200"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	1191.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1191.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot C)	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	161.01°

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Harlan Unit 2H AWP Proj: 25170'
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Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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	83.480	0.00	0.00	0.00	0.00	1726272.18	14372215.40	39°34'37.6800"N	80°41'43.1100"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	83.480	30.00	0.00	0.00	0.00	1726272.18	14372215.40	39°34'37.6800"N	80°41'43.1100"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.110	83.480	50.00	0.00	0.00	0.02	1726272.20	14372215.40	39°34'37.6800"N	80°41'43.1098"W	0.02	83.480	0.55	0.55	0.00	Gyrodata MS Gyro <17-1/2"> (50'-261')
100.00	0.090	104.980	100.00	0.04	0.00	0.10	1726272.28	14372215.40	39°34'37.6800"N	80°41'43.1087"W	0.10	91.379	0.08	-0.04	43.00	
150.00	0.130	89.650	150.00	0.08	-0.01	0.20	1726272.38	14372215.39	39°34'37.6799"N	80°41'43.1075"W	0.20	93.538	0.10	0.08	-30.66	
200.00	0.170	60.550	200.00	0.08	0.02	0.32	1726272.50	14372215.42	39°34'37.6802"N	80°41'43.1059"W	0.32	85.632	0.17	0.08	-58.20	
250.00	0.220	81.780	250.00	0.09	0.07	0.48	1726272.66	14372215.47	39°34'37.6807"N	80°41'43.1039"W	0.49	81.161	0.17	0.10	42.46	
261.00	0.230	83.500	261.00	0.09	0.08	0.52	1726272.70	14372215.48	39°34'37.6808"N	80°41'43.1033"W	0.53	81.283	0.11	0.09	15.64	
382.00	0.530	88.940	382.00	0.32	0.12	1.32	1726273.50	14372215.52	39°34'37.6811"N	80°41'43.0931"W	1.33	84.905	0.25	0.25	4.50	APS EM <12-3/8"> (261')(382'-3551')
472.00	1.900	55.100	471.97	0.04	0.98	2.96	1726275.14	14372216.38	39°34'37.6896"N	80°41'43.0721"W	3.12	71.714	1.65	1.52	-37.80	
562.00	3.850	42.000	561.86	-1.84	4.08	6.21	1726278.39	14372219.48	39°34'37.7201"N	80°41'43.0305"W	7.43	56.701	2.27	2.17	-14.56	
651.00	4.160	40.290	650.64	-4.93	8.76	10.30	1726282.47	14372224.16	39°34'37.7662"N	80°41'42.9781"W	13.52	49.604	0.37	0.35	-1.92	
740.00	5.400	35.630	739.33	-9.01	14.63	14.82	1726287.00	14372230.02	39°34'37.8241"N	80°41'42.9201"W	20.83	45.381	1.46	1.39	-5.24	
829.00	7.890	29.990	827.73	-15.44	23.32	20.32	1726292.49	14372238.71	39°34'37.9098"N	80°41'42.8495"W	30.93	41.059	2.89	2.80	-6.34	
920.00	10.100	29.020	917.60	-24.88	35.71	27.31	1726299.48	14372251.10	39°34'38.0320"N	80°41'42.7597"W	44.96	37.407	2.43	2.43	-1.07	
1010.00	11.750	34.400	1005.97	-35.63	50.18	36.32	1726308.48	14372265.56	39°34'38.1747"N	80°41'42.6440"W	61.94	35.897	2.15	1.83	5.98	
1105.00	12.630	43.290	1098.83	-46.23	65.72	48.91	1726321.07	14372281.09	39°34'38.3279"N	80°41'42.4826"W	81.92	36.655	2.18	0.93	9.36	
1199.00	14.680	48.010	1190.18	-55.66	81.17	64.81	1726336.96	14372296.54	39°34'38.4800"N	80°41'42.2789"W	103.87	38.604	2.48	2.18	5.02	
1293.00	15.340	47.980	1280.97	-65.18	97.46	82.90	1726355.04	14372312.82	39°34'38.6404"N	80°41'42.0471"W	127.95	40.383	0.70	0.70	-0.03	
1388.00	14.200	45.350	1372.83	-75.14	114.06	100.52	1726372.66	14372329.42	39°34'38.8039"N	80°41'41.8213"W	152.04	41.390	1.39	-1.20	-2.77	
1482.00	13.810	44.540	1464.03	-85.14	130.16	116.59	1726388.73	14372345.51	39°34'38.9625"N	80°41'41.6154"W	174.75	41.853	0.46	-0.41	-0.86	
1576.00	14.990	46.390	1555.08	-95.20	146.54	133.27	1726405.39	14372361.89	39°34'39.1238"N	80°41'41.4017"W	198.08	42.283	1.35	1.26	1.97	
1671.00	15.740	46.350	1646.68	-105.70	163.91	151.49	1726423.61	14372379.25	39°34'39.2949"N	80°41'41.1683"W	223.19	42.744	0.79	0.79	-0.04	
1765.00	15.200	43.160	1737.28	-116.77	181.70	169.14	1726441.25	14372397.03	39°34'39.4701"N	80°41'40.9421"W	248.24	42.950	1.07	-0.57	-3.39	
1860.00	15.070	41.200	1828.98	-128.73	200.08	185.79	1726457.90	14372415.40	39°34'39.6512"N	80°41'40.7286"W	273.04	42.880	0.56	-0.14	-2.06	
1954.00	15.230	38.920	1919.72	-141.37	218.88	201.60	1726473.70	14372434.19	39°34'39.8365"N	80°41'40.5259"W	297.58	42.647	0.66	0.17	-2.43	
2048.00	15.510	37.430	2010.36	-154.88	238.47	217.00	1726489.09	14372453.77	39°34'40.0295"N	80°41'40.3285"W	322.42	42.301	0.51	0.30	-1.59	
2142.00	14.960	38.630	2101.05	-168.33	257.92	232.21	1726504.30	14372473.22	39°34'40.2213"N	80°41'40.1333"W	347.05	41.997	0.67	-0.59	1.28	
2237.00	15.170	42.880	2192.79	-180.75	276.61	248.32	1726520.41	14372491.90	39°34'40.4055"N	80°41'39.9267"W	371.72	41.915	1.18	0.22	4.47	
2332.00	15.650	42.840	2284.38	-192.66	295.12	265.49	1726537.57	14372510.40	39°34'40.5878"N	80°41'39.7066"W	396.96	41.975	0.51	0.51	-0.04	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
2426.00	16.140	41.410	2374.78	-205.10	314.21	282.76	1726554.83	14372529.49	39°34'40.7759"N	80°41'39.4853"W	422.71	41.984	0.67	0.52	-1.52	
2520.00	16.030	39.610	2465.10	-218.32	334.01	299.67	1726571.74	14372549.28	39°34'40.9710"N	80°41'39.2684"W	448.74	41.898	0.54	-0.12	-1.91	
2615.00	15.740	37.190	2556.48	-232.32	354.38	315.83	1726587.88	14372569.64	39°34'41.1718"N	80°41'39.0613"W	474.69	41.708	0.76	-0.31	-2.55	
2709.00	16.020	35.530	2646.89	-246.95	375.09	331.07	1726603.12	14372590.35	39°34'41.3760"N	80°41'38.8657"W	500.30	41.433	0.57	0.30	-1.77	
2803.00	16.220	32.820	2737.19	-262.59	396.68	345.72	1726617.77	14372611.93	39°34'41.5889"N	80°41'38.6776"W	526.20	41.073	0.83	0.21	-2.88	
2897.00	15.600	36.060	2827.59	-277.95	417.93	360.28	1726632.32	14372633.17	39°34'41.7984"N	80°41'38.4908"W	551.79	40.763	1.15	-0.66	3.45	
2992.00	14.540	37.330	2919.33	-291.88	437.74	375.03	1726647.06	14372652.97	39°34'41.9937"N	80°41'38.3016"W	576.43	40.588	1.17	-1.12	1.34	
3086.00	14.760	40.750	3010.27	-304.46	456.20	390.00	1726662.03	14372671.42	39°34'42.1756"N	80°41'38.1095"W	600.18	40.527	0.95	0.23	3.64	
3180.00	14.590	41.180	3101.21	-316.38	474.18	405.61	1726677.63	14372689.39	39°34'42.3528"N	80°41'37.9094"W	623.99	40.544	0.21	-0.18	0.46	
3275.00	14.210	38.100	3193.22	-328.67	492.36	420.69	1726692.70	14372707.57	39°34'42.5320"N	80°41'37.7161"W	647.61	40.512	0.90	-0.40	-3.24	
3369.00	13.640	35.980	3284.46	-341.30	510.41	434.32	1726706.33	14372725.61	39°34'42.7099"N	80°41'37.5412"W	670.19	40.395	0.81	-0.61	-2.26	
3463.00	13.140	33.770	3375.90	-354.13	528.26	446.77	1726718.77	14372743.45	39°34'42.8859"N	80°41'37.3814"W	691.85	40.222	0.76	-0.53	-2.35	
3551.00	12.720	32.500	3461.67	-366.22	544.75	457.53	1726729.53	14372759.93	39°34'43.0484"N	80°41'37.2432"W	711.40	40.027	0.58	-0.48	-1.44	
3655.00	11.790	30.010	3563.30	-380.32	563.60	469.00	1726741.00	14372778.78	39°34'43.2344"N	80°41'37.0960"W	733.22	39.765	1.03	-0.89	-2.39	APS EM <8-3/4"> (3551')(3655'-6201')
3750.00	12.880	29.920	3656.11	-393.64	581.19	479.14	1726751.13	14372796.36	39°34'43.4079"N	80°41'36.9658"W	753.23	39.503	1.15	1.15	-0.09	
3844.00	13.340	31.710	3747.66	-407.40	599.49	490.06	1726762.05	14372814.66	39°34'43.5884"N	80°41'36.8254"W	774.31	39.265	0.65	0.49	1.90	
3939.00	13.940	36.930	3839.98	-420.75	617.96	502.70	1726774.68	14372833.12	39°34'43.7705"N	80°41'36.6632"W	796.61	39.128	1.44	0.63	5.49	
4033.00	15.670	43.250	3930.86	-433.01	636.26	518.20	1726790.18	14372851.41	39°34'43.9509"N	80°41'36.4645"W	820.59	39.161	2.52	1.84	6.72	
4127.00	17.410	45.990	4020.97	-444.87	655.28	537.02	1726808.98	14372870.42	39°34'44.1362"N	80°41'36.2234"W	847.22	39.335	2.03	1.85	2.91	
4221.00	16.640	43.690	4110.85	-457.00	674.78	556.43	1726828.39	14372889.92	39°34'44.3303"N	80°41'35.9746"W	874.61	39.509	1.09	-0.82	-2.45	
4315.00	15.580	39.350	4201.16	-469.80	694.28	573.73	1726845.68	14372909.41	39°34'44.5224"N	80°41'35.7528"W	900.66	39.569	1.71	-1.13	-4.62	
4410.00	15.610	43.170	4292.67	-482.47	713.47	590.56	1726862.51	14372928.59	39°34'44.7115"N	80°41'35.5370"W	926.18	39.616	1.08	0.03	4.02	
4504.00	16.390	48.100	4383.03	-493.54	731.55	609.09	1726881.03	14372946.66	39°34'44.8895"N	80°41'35.2996"W	951.92	39.781	1.67	0.83	5.24	
4598.00	14.300	44.070	4473.68	-503.96	748.75	627.04	1726898.97	14372963.85	39°34'45.0589"N	80°41'35.0696"W	976.63	39.944	2.49	-2.22	-4.29	
4693.00	14.650	47.970	4565.66	-513.98	765.22	644.12	1726916.05	14372980.32	39°34'45.2212"N	80°41'34.8507"W	1000.23	40.089	1.09	0.37	4.11	
4787.00	14.370	48.880	4656.67	-523.02	780.85	661.74	1726933.66	14372995.95	39°34'45.3750"N	80°41'34.6250"W	1023.54	40.280	0.38	-0.30	0.97	
4881.00	12.350	44.430	4748.12	-531.92	795.70	677.56	1726949.48	14373010.79	39°34'45.5213"N	80°41'34.4223"W	1045.10	40.415	2.41	-2.15	-4.73	
4975.00	12.590	45.700	4839.90	-540.79	810.04	691.93	1726963.84	14373025.12	39°34'45.6625"N	80°41'34.2381"W	1065.33	40.504	0.39	0.26	1.35	
5070.00	15.500	52.380	4932.06	-549.28	825.02	709.40	1726981.30	14373040.10	39°34'45.8100"N	80°41'34.0144"W	1088.08	40.691	3.50	3.06	7.03	
5164.00	15.310	49.110	5022.68	-557.92	840.81	728.73	1727000.83	14373055.88	39°34'45.9654"N	80°41'33.7668"W	1112.66	40.916	0.95	-0.20	-3.48	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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Slot	Slot C		

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5258.00	15.590	43.590	5113.29	-568.37	858.09	746.83	1727018.71	14373073.15	39°34'46.1355"N	80°41'33.5350"W	1137.57	41.034	1.59	0.30	-5.87	
5353.00	17.780	41.220	5204.29	-581.45	878.25	765.19	1727037.07	14373093.30	39°34'46.3341"N	80°41'33.2996"W	1164.83	41.065	2.41	2.31	-2.49	
5447.00	17.940	39.840	5293.76	-596.08	900.16	783.92	1727055.79	14373115.20	39°34'46.5500"N	80°41'33.0594"W	1193.66	41.052	0.48	0.17	-1.47	
5542.00	16.200	35.670	5384.57	-611.32	922.16	801.02	1727072.89	14373137.20	39°34'46.7669"N	80°41'32.8400"W	1221.48	40.979	2.24	-1.83	-4.39	
5636.00	14.250	31.850	5475.27	-626.21	942.64	814.78	1727086.63	14373157.67	39°34'46.9689"N	80°41'32.6635"W	1245.97	40.839	2.33	-2.07	-4.06	
5730.00	14.690	33.410	5566.29	-640.79	962.42	827.44	1727099.30	14373177.44	39°34'47.1639"N	80°41'32.5008"W	1269.22	40.687	0.63	0.47	1.66	
5824.00	17.000	42.400	5656.73	-654.64	982.52	843.28	1727115.12	14373197.53	39°34'47.3620"N	80°41'32.2978"W	1294.78	40.639	3.58	2.46	9.56	
5919.00	17.430	44.400	5747.47	-667.67	1002.94	862.60	1727134.44	14373217.95	39°34'47.5632"N	80°41'32.0501"W	1322.86	40.698	0.77	0.45	2.11	
6013.00	15.380	39.830	5837.64	-680.43	1022.58	880.43	1727152.27	14373237.57	39°34'47.7566"N	80°41'31.8215"W	1349.38	40.728	2.58	-2.18	-4.86	
6107.00	14.860	42.110	5928.39	-692.71	1041.09	896.50	1727168.33	14373256.08	39°34'47.9391"N	80°41'31.6155"W	1373.89	40.732	0.84	-0.55	2.43	
6201.00	14.720	42.550	6019.27	-704.22	1058.83	912.66	1727184.48	14373273.81	39°34'48.1139"N	80°41'31.4083"W	1397.88	40.760	0.19	-0.15	0.47	
6260.00	13.570	39.170	6076.49	-711.45	1069.72	922.10	1727193.92	14373284.70	39°34'48.2212"N	80°41'31.2873"W	1412.29	40.761	2.40	-1.95	-5.73	BH Lucida <8-1/2"> (6201')(6260'-25145')
6354.00	13.080	35.500	6167.96	-723.44	1086.93	935.24	1727207.05	14373301.90	39°34'48.3908"N	80°41'31.1187"W	1433.91	40.710	1.04	-0.52	-3.90	
6449.00	9.730	55.770	6261.10	-731.80	1100.21	948.13	1727219.94	14373315.17	39°34'48.5216"N	80°41'30.9535"W	1452.38	40.754	5.45	-3.53	21.34	
6543.00	11.070	96.470	6353.68	-730.01	1103.66	963.69	1727235.49	14373318.63	39°34'48.5552"N	80°41'30.7547"W	1465.18	41.127	7.77	1.43	43.30	
6637.00	13.480	117.130	6445.57	-718.23	1097.65	982.42	1727254.21	14373312.61	39°34'48.4951"N	80°41'30.5157"W	1473.08	41.829	5.29	2.56	21.98	
6732.00	18.280	130.970	6536.95	-697.33	1082.81	1003.54	1727275.32	14373297.79	39°34'48.3478"N	80°41'30.2466"W	1476.34	42.824	6.40	5.05	14.57	
6826.00	25.010	139.470	6624.29	-666.04	1058.01	1027.62	1727299.39	14373272.99	39°34'48.1019"N	80°41'29.9402"W	1474.92	44.165	7.88	7.16	9.04	
6912.00†	31.433	145.009	6700.04	-627.53	1025.78	1052.32	1727324.09	14373240.78	39°34'47.7825"N	80°41'29.6261"W	1469.56	45.732	8.06	7.47	6.44	Sycamore: 6912' MD
6920.00	32.040	145.420	6706.84	-623.48	1022.33	1054.72	1727326.49	14373237.32	39°34'47.7483"N	80°41'29.5956"W	1468.87	45.894	8.06	7.59	5.14	
7015.00	37.100	148.510	6785.05	-571.19	977.11	1084.01	1727355.76	14373192.13	39°34'47.3004"N	80°41'29.2235"W	1459.39	47.969	5.64	5.33	3.25	
7078.00†	42.181	150.239	6833.55	-531.84	942.52	1104.45	1727376.19	14373157.55	39°34'46.9579"N	80°41'28.9640"W	1451.95	49.523	8.25	8.07	2.75	Middlesex: 7078' MD
7109.00	44.690	150.970	6856.06	-510.88	923.96	1114.91	1727386.65	14373138.99	39°34'46.7740"N	80°41'28.8313"W	1448.00	50.350	8.25	8.09	2.36	
7203.00	52.780	155.270	6918.02	-440.95	860.94	1146.66	1727418.39	14373076.00	39°34'46.1501"N	80°41'28.4284"W	1433.89	53.100	9.26	8.61	4.57	
7227.00†	54.972	155.871	6932.17	-421.66	843.29	1154.68	1727426.41	14373058.36	39°34'45.9754"N	80°41'28.3268"W	1429.83	53.859	9.35	9.13	2.51	Burkett: 7227' MD
7288.00†	60.555	157.268	6964.70	-370.23	795.96	1175.17	1727446.89	14373011.05	39°34'45.5070"N	80°41'28.0672"W	1419.36	55.890	9.35	9.15	2.29	Tully: 7288' MD
7297.00	61.380	157.460	6969.06	-362.38	788.70	1178.20	1727449.92	14373003.79	39°34'45.4351"N	80°41'28.0289"W	1417.81	56.201	9.35	9.17	2.14	
7391.00	66.010	155.590	7010.71	-278.40	711.44	1211.78	1727483.48	14372926.56	39°34'44.6704"N	80°41'27.6034"W	1405.19	59.583	5.24	4.93	-1.99	
7485.00	72.700	155.390	7043.84	-190.90	631.45	1248.25	1727519.94	14372846.60	39°34'43.8786"N	80°41'27.1411"W	1398.88	63.167	7.12	7.12	-0.21	
7551.00†	77.278	155.327	7060.92	-127.48	573.52	1274.83	1727546.51	14372788.70	39°34'43.3052"N	80°41'26.8043"W	1397.90	65.778	6.94	6.94	-0.10	Marcellus POE: 7551' MD



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWP
Slot	Slot C		

WELLPATH DATA (275 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
7580.00	79.290	155.300	7066.81	-99.22	547.72	1286.69	1727558.36	14372762.91	39°34'43.0498"N	80°41'26.6539"W	1398.41	66.941	6.94	6.94	-0.09	
7674.00	85.590	157.200	7079.17	-6.41	462.48	1324.18	1727595.84	14372677.69	39°34'42.2060"N	80°41'26.1788"W	1402.62	70.748	6.99	6.70	2.02	
7768.00	87.260	159.130	7085.04	87.28	375.40	1359.07	1727630.72	14372590.65	39°34'41.3442"N	80°41'25.7371"W	1409.97	74.559	2.71	1.78	2.05	
7862.00	89.170	160.820	7087.96	181.21	287.13	1391.24	1727662.88	14372502.42	39°34'40.4708"N	80°41'25.3301"W	1420.56	78.339	2.71	2.03	1.80	
7957.00	89.970	162.380	7088.68	276.20	196.99	1421.23	1727692.85	14372412.31	39°34'39.5789"N	80°41'24.9511"W	1434.81	82.109	1.85	0.84	1.64	
8051.00	89.690	161.330	7088.96	370.19	107.67	1450.50	1727722.11	14372323.03	39°34'38.6951"N	80°41'24.5812"W	1454.49	85.755	1.16	-0.30	-1.12	
8145.00	89.320	160.300	7089.77	464.18	18.89	1481.39	1727752.99	14372234.29	39°34'37.8167"N	80°41'24.1907"W	1481.51	89.269	1.16	-0.39	-1.10	
8239.00	88.980	160.430	7091.16	558.17	-69.63	1512.97	1727784.56	14372145.80	39°34'36.9407"N	80°41'23.7912"W	1514.57	92.635	0.39	-0.36	0.14	
8334.00	89.850	161.720	7092.13	653.16	-159.49	1543.78	1727815.35	14372055.97	39°34'36.0516"N	80°41'23.4017"W	1552.00	95.898	1.64	0.92	1.36	
8428.00	89.940	161.540	7092.31	747.15	-248.70	1573.41	1727844.97	14371966.80	39°34'35.1689"N	80°41'23.0273"W	1592.94	98.982	0.21	0.10	-0.19	
8523.00	90.280	161.340	7092.12	842.15	-338.76	1603.64	1727875.19	14371876.78	39°34'34.2778"N	80°41'22.6451"W	1639.03	101.928	0.42	0.36	-0.21	
8617.00	91.320	159.200	7090.81	936.13	-427.22	1635.37	1727906.91	14371788.34	39°34'33.4024"N	80°41'22.2439"W	1690.25	104.641	2.53	1.11	-2.28	
8711.00	89.820	158.200	7089.88	1030.04	-514.79	1669.51	1727941.04	14371700.81	39°34'32.5357"N	80°41'21.8117"W	1747.08	107.137	1.92	-1.60	-1.06	
8806.00	89.970	161.410	7090.05	1125.01	-603.94	1702.31	1727973.82	14371611.69	39°34'31.6536"N	80°41'21.3969"W	1806.26	109.534	3.38	0.16	3.38	
8900.00	90.180	161.520	7089.93	1219.01	-693.07	1732.19	1728003.68	14371522.61	39°34'30.7717"N	80°41'21.0192"W	1865.69	111.807	0.25	0.22	0.12	
8994.00	89.880	159.300	7089.88	1312.99	-781.62	1763.70	1728035.19	14371434.09	39°34'29.8954"N	80°41'20.6207"W	1929.14	113.902	2.38	-0.32	-2.36	
9089.00	89.690	159.060	7090.23	1407.95	-870.42	1797.47	1728068.94	14371345.33	39°34'29.0167"N	80°41'20.1934"W	1997.13	115.838	0.32	-0.20	-0.25	
9182.00	90.180	158.070	7090.34	1500.86	-956.98	1831.45	1728102.91	14371258.79	39°34'28.1600"N	80°41'19.7632"W	2066.41	117.588	1.19	0.53	-1.06	
9277.00	90.340	160.940	7089.91	1595.82	-1045.96	1864.71	1728136.16	14371169.85	39°34'27.2795"N	80°41'19.3424"W	2138.03	119.289	3.03	0.17	3.02	
9371.00	90.400	161.960	7089.30	1689.81	-1135.07	1894.61	1728166.05	14371080.77	39°34'26.3977"N	80°41'18.9645"W	2208.61	120.926	1.09	0.06	1.09	
9466.00	90.250	161.190	7088.76	1784.80	-1225.20	1924.64	1728196.06	14370990.68	39°34'25.5060"N	80°41'18.5850"W	2281.52	122.480	0.83	-0.16	-0.81	
9560.00	90.180	160.300	7088.41	1878.80	-1313.94	1955.64	1728227.05	14370901.98	39°34'24.6279"N	80°41'18.1931"W	2356.05	123.896	0.95	-0.07	-0.95	
9655.00	89.630	160.440	7088.57	1973.79	-1403.42	1987.55	1728258.95	14370812.53	39°34'23.7424"N	80°41'17.7895"W	2433.09	125.226	0.60	-0.58	0.15	
9749.00	90.550	161.210	7088.42	2067.79	-1492.20	2018.43	1728289.81	14370723.79	39°34'22.8639"N	80°41'17.3992"W	2510.12	126.475	1.28	0.98	0.82	
9843.00	90.000	160.690	7087.97	2161.79	-1581.05	2049.11	1728320.48	14370634.97	39°34'21.9848"N	80°41'17.0113"W	2588.16	127.653	0.81	-0.59	-0.55	
9938.00	90.550	162.880	7087.51	2256.77	-1671.28	2078.80	1728350.16	14370544.77	39°34'21.0920"N	80°41'16.6361"W	2667.32	128.798	2.38	0.58	2.31	
10032.00	90.310	161.900	7086.81	2350.74	-1760.88	2107.24	1728378.59	14370455.22	39°34'20.2055"N	80°41'16.2770"W	2746.11	129.883	1.07	-0.26	-1.04	
10126.00	90.430	162.330	7086.20	2444.72	-1850.33	2136.10	1728407.44	14370365.80	39°34'19.3204"N	80°41'15.9123"W	2826.07	130.900	0.47	0.13	0.46	
10221.00	90.430	162.440	7085.49	2539.69	-1940.87	2164.85	1728436.18	14370275.29	39°34'18.4246"N	80°41'15.5492"W	2907.50	131.877	0.12	0.00	0.12	
10315.00	90.830	162.960	7084.45	2633.65	-2030.62	2192.80	1728464.12	14370185.58	39°34'17.5367"N	80°41'15.1963"W	2988.61	132.801	0.70	0.43	0.55	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
10409.00	90.060	162.190	7083.72	2727.61	-2120.30	2220.95	1728492.26	14370095.94	39°34'16.6494"N	80°41'14.8408"W	3070.55	133.672	1.16	-0.82	-0.82	
10503.00	92.060	161.940	7081.98	2821.57	-2209.71	2249.89	1728521.19	14370006.56	39°34'15.7647"N	80°41'14.4752"W	3153.54	134.484	2.14	2.13	-0.27	
10598.00	90.030	161.740	7080.25	2916.54	-2299.96	2279.49	1728550.78	14369916.35	39°34'14.8718"N	80°41'14.1012"W	3238.19	135.256	2.15	-2.14	-0.21	
10692.00	90.340	162.540	7079.95	3010.52	-2389.43	2308.32	1728579.59	14369826.91	39°34'13.9865"N	80°41'13.7370"W	3322.31	135.989	0.91	0.33	0.85	
10786.00	90.030	162.120	7079.64	3104.49	-2478.99	2336.85	1728608.11	14369737.38	39°34'13.1004"N	80°41'13.3767"W	3408.80	136.591	0.56	-0.33	-0.45	
10880.00	90.030	161.940	7079.60	3198.48	-2568.41	2365.86	1728637.10	14369648.00	39°34'12.2157"N	80°41'13.0103"W	3491.99	137.351	0.19	0.00	-0.19	
10975.00	90.370	161.900	7079.26	3293.47	-2658.71	2395.34	1728666.58	14369557.73	39°34'11.3221"N	80°41'12.6379"W	3578.60	137.983	0.36	0.36	-0.04	
11069.00	90.000	161.890	7078.96	3387.45	-2748.06	2424.55	1728695.77	14369468.42	39°34'10.4381"N	80°41'12.2688"W	3664.73	138.579	0.39	-0.39	-0.01	
11163.00	90.060	161.400	7078.91	3481.45	-2837.28	2454.15	1728725.36	14369379.24	39°34'9.5553"N	80°41'11.8948"W	3751.40	139.141	0.53	0.06	-0.52	
11257.00	90.520	161.320	7078.44	3575.44	-2926.35	2484.19	1728755.40	14369290.21	39°34'8.6740"N	80°41'11.5151"W	3838.58	139.672	0.50	0.49	-0.09	
11351.00	89.940	161.770	7078.06	3669.44	-3015.51	2513.95	1728785.14	14369201.08	39°34'7.7918"N	80°41'11.1391"W	3925.97	140.183	0.78	-0.62	0.48	
11445.00	90.740	162.120	7077.50	3763.42	-3104.88	2543.08	1728814.26	14369111.74	39°34'6.9075"N	80°41'10.7711"W	4013.42	140.680	0.93	0.85	0.37	
11539.00	89.720	162.030	7077.12	3857.41	-3194.31	2572.01	1728843.18	14369022.34	39°34'6.0226"N	80°41'10.4057"W	4101.08	141.160	1.09	-1.09	-0.10	
11633.00	90.090	161.670	7077.28	3951.39	-3283.64	2601.29	1728872.45	14368933.06	39°34'5.1388"N	80°41'10.0358"W	4189.15	141.614	0.55	0.39	-0.38	
11727.00	90.060	161.670	7077.16	4045.39	-3372.87	2630.86	1728902.00	14368843.86	39°34'4.2559"N	80°41'9.6623"W	4277.57	142.046	0.03	-0.03	0.00	
11821.00	90.220	162.550	7076.93	4139.37	-3462.32	2659.73	1728930.86	14368754.44	39°34'3.3708"N	80°41'9.2975"W	4365.99	142.469	0.95	0.17	0.94	
11915.00	90.120	161.960	7076.65	4233.35	-3551.85	2688.38	1728959.50	14368664.95	39°34'2.4850"N	80°41'8.9357"W	4454.55	142.878	0.64	-0.11	-0.63	
12010.00	89.850	162.090	7076.67	4328.33	-3642.21	2717.70	1728988.81	14368574.62	39°34'1.5910"N	80°41'8.5654"W	4544.40	143.271	0.32	-0.28	0.14	
12104.00	89.110	161.680	7077.52	4422.32	-3731.55	2746.92	1729018.02	14368485.32	39°34'0.7070"N	80°41'8.1962"W	4633.58	143.642	0.90	-0.79	-0.44	
12198.00	89.540	161.880	7078.63	4516.30	-3820.83	2776.31	1729047.40	14368396.08	39°33'59.8236"N	80°41'7.8249"W	4722.99	143.997	0.50	0.46	0.21	
12292.00	89.570	162.020	7079.36	4610.29	-3910.20	2805.44	1729076.51	14368306.74	39°33'58.9394"N	80°41'7.4570"W	4812.50	144.342	0.15	0.03	0.15	
12386.00	89.660	163.640	7079.99	4704.23	-4000.00	2833.18	1729104.25	14368216.97	39°33'58.0508"N	80°41'7.1067"W	4901.73	144.690	1.73	0.10	1.72	
12480.00	90.060	163.430	7080.22	4798.14	-4090.15	2859.83	1729130.88	14368126.86	39°33'57.1590"N	80°41'6.7706"W	4990.78	145.039	0.48	0.43	-0.22	
12574.00	89.690	162.000	7080.43	4892.10	-4179.90	2887.76	1729158.80	14368037.14	39°33'56.2710"N	80°41'6.4180"W	5080.42	145.361	1.57	-0.39	-1.52	
12668.00	89.850	162.500	7080.81	4986.07	-4269.43	2916.41	1729187.44	14367947.65	39°33'55.3852"N	80°41'6.0561"W	5170.44	145.663	0.56	0.17	0.53	
12763.00	89.660	162.060	7081.21	5081.05	-4359.92	2945.33	1729216.35	14367857.20	39°33'54.4899"N	80°41'5.6909"W	5261.54	145.959	0.50	-0.20	-0.46	
12857.00	89.910	160.140	7081.57	5175.04	-4448.84	2975.77	1729246.78	14367768.31	39°33'53.6099"N	80°41'5.3061"W	5352.33	146.222	2.06	0.27	-2.04	
12951.00	89.350	159.050	7082.17	5269.01	-4536.94	3008.55	1729279.54	14367680.24	39°33'52.7381"N	80°41'4.8916"W	5443.82	146.451	1.30	-0.60	-1.16	
13046.00	89.660	158.480	7082.99	5363.93	-4625.49	3042.95	1729313.93	14367591.73	39°33'51.8618"N	80°41'4.4563"W	5536.67	146.660	0.68	0.33	-0.60	
13140.00	89.660	159.740	7083.55	5457.88	-4713.31	3076.47	1729347.44	14367503.95	39°33'50.9927"N	80°41'4.0322"W	5628.49	146.867	1.34	0.00	1.34	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
13234.00	89.630	159.770	7084.13	5551.85	-4801.50	3109.00	1729379.95	14367415.79	39°33'50.1200"N	80°41'3.6209"W	5720.16	147.077	0.05	-0.03	0.03	
13328.00	89.750	159.900	7084.64	5645.83	-4889.73	3141.40	1729412.34	14367327.59	39°33'49.2468"N	80°41'3.2111"W	5811.88	147.281	0.19	0.13	0.14	
13422.00	90.090	159.910	7084.77	5739.82	-4978.01	3173.70	1729444.63	14367239.35	39°33'48.3732"N	80°41'2.8027"W	5903.64	147.481	0.36	0.36	0.01	
13517.00	90.250	159.570	7084.49	5834.79	-5067.13	3206.59	1729477.51	14367150.26	39°33'47.4913"N	80°41'2.3866"W	5996.51	147.673	0.40	0.17	-0.36	
13610.00	89.910	159.950	7084.36	5927.77	-5154.39	3238.77	1729509.67	14367063.04	39°33'46.6278"N	80°41'1.9798"W	6087.47	147.857	0.55	-0.37	0.41	
13704.00	90.030	160.020	7084.41	6021.75	-5242.71	3270.94	1729541.83	14366974.75	39°33'45.7537"N	80°41'1.5729"W	6179.41	148.040	0.15	0.13	0.07	
13799.00	90.060	159.780	7084.34	6116.74	-5331.93	3303.59	1729574.47	14366885.57	39°33'44.8709"N	80°41'1.1601"W	6272.41	148.218	0.25	0.03	-0.25	
13893.00	89.910	159.760	7084.36	6210.71	-5420.13	3336.09	1729606.96	14366797.40	39°33'43.9980"N	80°41'0.7490"W	6364.53	148.388	0.16	-0.16	-0.02	
13987.00	89.820	160.690	7084.58	6304.70	-5508.58	3367.89	1729638.75	14366708.98	39°33'43.1227"N	80°41'0.3470"W	6456.56	148.559	0.99	-0.10	0.99	
14082.00	89.910	161.090	7084.81	6399.70	-5598.35	3398.99	1729669.84	14366619.26	39°33'42.2345"N	80°40'59.9539"W	6549.40	148.736	0.43	0.08	0.42	
14176.00	89.820	161.010	7085.03	6493.70	-5687.25	3429.52	1729700.35	14366530.38	39°33'41.3547"N	80°40'59.5681"W	6641.27	148.909	0.13	-0.10	-0.09	
14270.00	89.910	160.890	7085.25	6587.70	-5776.11	3460.20	1729731.02	14366441.57	39°33'40.4755"N	80°40'59.1804"W	6733.23	149.076	0.16	0.10	-0.13	
14364.00	89.910	161.030	7085.40	6681.70	-5864.96	3490.87	1729761.67	14366352.75	39°33'39.5963"N	80°40'58.7929"W	6825.24	149.239	0.15	0.00	0.15	
14459.00	89.940	161.060	7085.52	6776.70	-5954.81	3521.72	1729792.52	14366262.93	39°33'38.7072"N	80°40'58.4029"W	6918.26	149.400	0.04	0.03	0.03	
14553.00	90.030	161.320	7085.55	6870.70	-6043.79	3552.03	1729822.82	14366173.99	39°33'37.8268"N	80°40'58.0199"W	7010.30	149.557	0.29	0.10	0.28	
14647.00	89.940	160.910	7085.57	6964.70	-6132.73	3582.46	1729853.23	14366085.08	39°33'36.9467"N	80°40'57.6355"W	7102.42	149.708	0.45	-0.10	-0.44	
14741.00	90.090	160.960	7085.55	7058.70	-6221.57	3613.16	1729883.92	14365996.27	39°33'36.0676"N	80°40'57.2475"W	7194.65	149.854	0.17	0.16	0.05	
14836.00	89.910	160.760	7085.55	7153.70	-6311.32	3644.31	1729915.06	14365906.56	39°33'35.1795"N	80°40'56.8538"W	7287.92	149.997	0.28	-0.19	-0.21	
14930.00	89.850	161.160	7085.74	7247.70	-6400.18	3674.98	1729945.71	14365817.74	39°33'34.3002"N	80°40'56.4663"W	7380.23	150.136	0.43	-0.06	0.43	
15024.00	89.820	160.980	7086.01	7341.70	-6489.10	3705.47	1729976.19	14365728.86	39°33'33.4204"N	80°40'56.0810"W	7472.54	150.272	0.19	-0.03	-0.19	
15118.00	89.820	161.130	7086.31	7435.70	-6578.00	3735.99	1730006.70	14365639.99	39°33'32.5406"N	80°40'55.6954"W	7564.90	150.406	0.16	0.00	0.16	
15212.00	89.780	161.120	7086.64	7529.70	-6666.95	3766.40	1730037.10	14365551.08	39°33'31.6605"N	80°40'55.3111"W	7657.28	150.536	0.04	-0.04	-0.01	
15307.00	89.820	161.260	7086.97	7624.70	-6756.87	3797.03	1730067.71	14365461.19	39°33'30.7707"N	80°40'54.9241"W	7750.66	150.666	0.15	0.04	0.15	
15401.00	89.660	160.900	7087.39	7718.70	-6845.79	3827.51	1730098.18	14365372.30	39°33'29.8908"N	80°40'54.5390"W	7843.13	150.790	0.42	-0.17	-0.38	
15495.00	89.910	160.880	7087.75	7812.70	-6934.61	3858.28	1730128.94	14365283.52	39°33'29.0119"N	80°40'54.1501"W	7935.69	150.909	0.27	0.27	-0.02	
15590.00	89.750	160.770	7088.03	7907.69	-7024.34	3889.48	1730160.13	14365193.82	39°33'28.1240"N	80°40'53.7558"W	8029.29	151.026	0.20	-0.17	-0.12	
15684.00	89.570	161.000	7088.59	8001.69	-7113.16	3920.27	1730190.90	14365105.04	39°33'27.2451"N	80°40'53.3668"W	8121.91	151.140	0.31	-0.19	0.24	
15778.00	89.690	160.890	7089.19	8095.69	-7202.00	3950.95	1730221.58	14365016.23	39°33'26.3660"N	80°40'52.9790"W	8214.55	151.251	0.17	0.13	-0.12	
15873.00	89.720	160.820	7089.68	8190.69	-7291.75	3982.11	1730252.72	14364926.52	39°33'25.4779"N	80°40'52.5853"W	8308.24	151.361	0.08	0.03	-0.07	
15967.00	89.660	160.980	7090.19	8284.69	-7380.57	4012.87	1730283.47	14364837.73	39°33'24.5990"N	80°40'52.1966"W	8400.95	151.467	0.18	-0.06	0.17	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
16061.00	89.690	160.900	7090.72	8378.69	-7469.42	4043.56	1730314.15	14364748.92	39°33'23.7198"N	80°40'51.8088"W	8493.68	151.571	0.09	0.03	-0.09	
16156.00	89.600	160.800	7091.31	8473.68	-7559.16	4074.73	1730345.30	14364659.22	39°33'22.8318"N	80°40'51.4150"W	8587.45	151.673	0.14	-0.09	-0.11	
16250.00	89.690	160.840	7091.90	8567.68	-7647.94	4105.61	1730376.17	14364570.47	39°33'21.9533"N	80°40'51.0247"W	8680.27	151.772	0.10	0.10	0.04	
16344.00	89.630	160.850	7092.45	8661.68	-7736.73	4136.45	1730407.00	14364481.71	39°33'21.0746"N	80°40'50.6350"W	8773.10	151.869	0.06	-0.06	0.01	
16438.00	89.200	160.440	7093.41	8755.67	-7825.42	4167.60	1730438.14	14364393.06	39°33'20.1971"N	80°40'50.2413"W	8866.01	151.961	0.63	-0.46	-0.44	
16533.00	89.880	159.610	7094.18	8850.65	-7914.70	4200.05	1730470.58	14364303.82	39°33'19.3136"N	80°40'49.8310"W	8960.07	152.047	1.13	0.72	-0.87	
16627.00	89.140	160.880	7094.98	8944.64	-8003.16	4231.82	1730502.34	14364215.39	39°33'18.4382"N	80°40'49.4294"W	9053.12	152.131	1.56	-0.79	1.35	
16721.00	89.660	160.970	7095.96	9038.63	-8091.99	4262.54	1730533.05	14364126.59	39°33'17.5591"N	80°40'49.0413"W	9146.02	152.222	0.56	0.55	0.10	
16815.00	89.380	160.860	7096.75	9132.63	-8180.82	4293.28	1730563.77	14364037.80	39°33'16.6801"N	80°40'48.6529"W	9238.94	152.310	0.32	-0.30	-0.12	
16910.00	89.020	160.390	7098.08	9227.62	-8270.43	4324.79	1730595.27	14363948.22	39°33'15.7934"N	80°40'48.2547"W	9332.95	152.394	0.62	-0.38	-0.49	
17005.00	88.980	159.770	7099.74	9322.59	-8359.74	4357.15	1730627.62	14363858.95	39°33'14.9096"N	80°40'47.8456"W	9427.09	152.471	0.65	-0.04	-0.65	
17099.00	90.030	160.750	7100.55	9416.58	-8448.21	4388.90	1730659.35	14363770.52	39°33'14.0342"N	80°40'47.4443"W	9520.22	152.548	1.53	1.12	1.04	
17194.00	89.170	160.510	7101.21	9511.57	-8537.83	4420.41	1730690.85	14363680.93	39°33'13.1473"N	80°40'47.0462"W	9614.28	152.627	0.94	-0.91	-0.25	
17288.00	89.320	160.790	7102.45	9605.56	-8626.51	4451.55	1730721.98	14363592.29	39°33'12.2698"N	80°40'46.6526"W	9707.36	152.705	0.34	0.16	0.30	
17477.00	89.140	161.020	7104.99	9794.54	-8805.09	4513.37	1730783.78	14363413.77	39°33'10.5026"N	80°40'45.8715"W	9894.45	152.861	0.15	-0.10	0.12	
17571.00	89.110	161.060	7106.43	9888.53	-8893.98	4543.91	1730814.30	14363324.92	39°33'9.6230"N	80°40'45.4857"W	9987.49	152.938	0.05	-0.03	0.04	
17666.00	89.200	160.900	7107.83	9983.52	-8983.79	4574.87	1730845.25	14363235.15	39°33'8.7344"N	80°40'45.0945"W	10081.56	153.013	0.19	0.09	-0.17	
17760.00	89.140	161.000	7109.19	10077.51	-9072.63	4605.54	1730875.91	14363146.34	39°33'7.8552"N	80°40'44.7069"W	10174.66	153.086	0.12	-0.06	0.11	
17854.00	89.170	160.490	7110.57	10171.50	-9161.36	4636.54	1730906.89	14363057.65	39°33'6.9772"N	80°40'44.3153"W	10267.81	153.156	0.54	0.03	-0.54	
17949.00	89.280	160.660	7111.88	10266.49	-9250.94	4668.13	1730938.47	14362968.10	39°33'6.0907"N	80°40'43.9161"W	10362.02	153.224	0.20	0.09	0.18	
18043.00	89.140	160.980	7113.19	10360.48	-9339.72	4699.01	1730969.34	14362879.36	39°33'5.2123"N	80°40'43.5259"W	10455.19	153.292	0.36	-0.13	0.34	
18137.00	89.720	160.950	7114.12	10454.47	-9428.57	4729.67	1730999.98	14362790.54	39°33'4.3330"N	80°40'43.1386"W	10548.35	153.360	0.62	0.62	-0.03	
18232.00	89.660	160.540	7114.64	10549.47	-9518.26	4760.99	1731031.30	14362700.89	39°33'3.4455"N	80°40'42.7428"W	10642.57	153.426	0.44	-0.06	-0.43	
18326.00	89.690	160.700	7115.17	10643.47	-9606.93	4792.19	1731062.48	14362612.25	39°33'2.5681"N	80°40'42.3486"W	10735.83	153.489	0.17	0.03	0.17	
18420.00	89.660	161.100	7115.70	10737.47	-9695.75	4822.94	1731093.23	14362523.46	39°33'1.6891"N	80°40'41.9600"W	10829.05	153.553	0.43	-0.03	0.43	
18514.00	89.680	160.750	7116.26	10831.46	-9784.59	4853.66	1731123.93	14362434.66	39°33'0.8100"N	80°40'41.5719"W	10922.28	153.616	0.37	0.00	-0.37	
18703.00	90.060	160.740	7116.72	11020.46	-9963.02	4915.99	1731186.24	14362256.30	39°32'59.0444"N	80°40'40.7844"W	11109.84	153.737	0.21	0.21	-0.01	
18797.00	90.090	160.900	7116.60	11114.46	-10051.80	4946.87	1731217.11	14362167.56	39°32'58.1659"N	80°40'40.3942"W	11203.13	153.796	0.17	0.03	0.17	
18892.00	90.030	160.820	7116.50	11209.46	-10141.55	4978.02	1731248.24	14362077.84	39°32'57.2776"N	80°40'40.0007"W	11297.42	153.856	0.11	-0.06	-0.08	
18986.00	89.970	160.660	7116.50	11303.46	-10230.29	5009.03	1731279.24	14361989.14	39°32'56.3996"N	80°40'39.6089"W	11390.75	153.912	0.18	-0.06	-0.17	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWP
Slot	Slot C		

WELLPATH DATA (275 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
19081.00	90.030	160.780	7116.50	11398.46	-10319.96	5040.39	1731310.59	14361899.50	39°32'55.5123"N	80°40'39.2126"W	11485.08	153.969	0.14	0.06	0.13	
19175.00	90.030	160.720	7116.45	11492.46	-10408.70	5071.39	1731341.57	14361810.79	39°32'54.6341"N	80°40'38.8211"W	11578.43	154.023	0.06	0.00	-0.06	
19270.00	90.060	160.940	7116.38	11587.46	-10498.43	5102.58	1731372.75	14361721.10	39°32'53.7462"N	80°40'38.4269"W	11672.77	154.079	0.23	0.03	0.23	
19365.00	90.180	160.990	7116.18	11682.46	-10588.24	5133.56	1731403.72	14361631.33	39°32'52.8575"N	80°40'38.0355"W	11767.09	154.134	0.14	0.13	0.05	
19460.00	90.000	160.970	7116.03	11777.46	-10678.05	5164.52	1731434.67	14361541.55	39°32'51.9687"N	80°40'37.6444"W	11861.41	154.189	0.19	-0.19	-0.02	
19555.00	89.850	160.830	7116.15	11872.46	-10767.82	5195.61	1731465.75	14361451.82	39°32'51.0804"N	80°40'37.2517"W	11955.77	154.242	0.22	-0.16	-0.15	
19649.00	90.120	160.700	7116.18	11966.45	-10856.57	5226.58	1731496.70	14361363.10	39°32'50.2022"N	80°40'36.8605"W	12049.16	154.293	0.32	0.29	-0.14	
19744.00	89.940	160.620	7116.13	12061.45	-10946.21	5258.04	1731528.15	14361273.49	39°32'49.3151"N	80°40'36.4630"W	12143.58	154.343	0.21	-0.19	-0.08	
19838.00	90.060	161.000	7116.13	12155.45	-11034.99	5288.94	1731559.04	14361184.75	39°32'48.4366"N	80°40'36.0726"W	12236.99	154.392	0.42	0.13	0.40	
19933.00	89.970	160.950	7116.10	12250.45	-11124.80	5319.91	1731589.99	14361094.98	39°32'47.5479"N	80°40'35.6814"W	12331.37	154.443	0.11	-0.09	-0.05	
20027.00	89.940	160.650	7116.18	12344.45	-11213.57	5350.82	1731620.89	14361006.24	39°32'46.6695"N	80°40'35.2909"W	12424.79	154.491	0.32	-0.03	-0.32	
20122.00	90.090	160.670	7116.15	12439.45	-11303.21	5382.28	1731652.34	14360916.64	39°32'45.7824"N	80°40'34.8934"W	12519.25	154.537	0.16	0.16	0.02	
20216.00	89.350	160.130	7116.61	12533.44	-11391.76	5413.81	1731683.86	14360828.12	39°32'44.9061"N	80°40'34.4949"W	12612.76	154.581	0.97	-0.79	-0.57	
20311.00	89.750	160.940	7117.36	12628.43	-11481.33	5445.47	1731715.50	14360738.59	39°32'44.0198"N	80°40'34.0950"W	12707.24	154.626	0.95	0.42	0.85	
20406.00	89.630	160.790	7117.87	12723.43	-11571.08	5476.61	1731746.63	14360648.87	39°32'43.1317"N	80°40'33.7016"W	12801.68	154.672	0.20	-0.13	-0.16	
20500.00	89.720	161.090	7118.41	12817.43	-11659.92	5507.30	1731777.32	14360560.06	39°32'42.2525"N	80°40'33.3139"W	12895.12	154.717	0.33	0.10	0.32	
20595.00	89.720	161.150	7118.87	12912.43	-11749.81	5538.04	1731808.04	14360470.21	39°32'41.3631"N	80°40'32.9256"W	12989.54	154.764	0.06	0.00	0.06	
20690.00	89.720	161.040	7119.33	13007.43	-11839.69	5568.82	1731838.81	14360380.37	39°32'40.4737"N	80°40'32.5368"W	13083.96	154.810	0.12	0.00	-0.12	
20784.00	89.780	160.900	7119.74	13101.43	-11928.55	5599.47	1731869.45	14360291.55	39°32'39.5944"N	80°40'32.1497"W	13177.42	154.854	0.16	0.06	-0.15	
20879.00	89.600	161.020	7120.28	13196.43	-12018.35	5630.46	1731900.43	14360201.78	39°32'38.7057"N	80°40'31.7582"W	13271.88	154.897	0.23	-0.19	0.13	
20973.00	89.690	161.020	7120.84	13290.42	-12107.24	5661.04	1731930.99	14360112.93	39°32'37.8262"N	80°40'31.3721"W	13365.35	154.940	0.10	0.10	0.00	
21067.00	89.720	161.000	7121.32	13384.42	-12196.12	5691.62	1731961.56	14360024.08	39°32'36.9466"N	80°40'30.9857"W	13458.82	154.983	0.04	0.03	-0.02	
21162.00	89.660	161.140	7121.84	13479.42	-12285.98	5722.44	1731992.37	14359934.25	39°32'36.0574"N	80°40'30.5965"W	13553.29	155.025	0.16	-0.06	0.15	
21257.00	89.630	161.200	7122.43	13574.42	-12375.89	5753.10	1732023.02	14359844.38	39°32'35.1677"N	80°40'30.2092"W	13647.75	155.068	0.07	-0.03	0.06	
21351.00	89.600	161.030	7123.06	13668.42	-12464.83	5783.53	1732053.43	14359755.47	39°32'34.2876"N	80°40'29.8250"W	13741.22	155.109	0.18	-0.03	-0.18	
21445.00	89.720	160.980	7123.62	13762.42	-12553.71	5814.12	1732084.02	14359666.63	39°32'33.4081"N	80°40'29.4385"W	13834.73	155.149	0.14	0.13	-0.05	
21540.00	89.780	161.040	7124.03	13857.41	-12643.54	5845.04	1732114.92	14359576.83	39°32'32.5192"N	80°40'29.0481"W	13929.24	155.189	0.09	0.06	0.06	
21634.00	89.690	160.760	7124.47	13951.41	-12732.37	5875.79	1732145.66	14359488.05	39°32'31.6402"N	80°40'28.6596"W	14022.77	155.227	0.31	-0.10	-0.30	
21729.00	89.720	160.800	7124.95	14046.41	-12822.07	5907.07	1732176.92	14359398.38	39°32'30.7525"N	80°40'28.2646"W	14117.33	155.265	0.05	0.03	0.04	
21917.00	89.690	160.720	7125.92	14234.41	-12999.57	5969.02	1732238.85	14359220.95	39°32'28.9961"N	80°40'27.4820"W	14304.47	155.337	0.05	-0.02	-0.04	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
22011.00	89.690	160.730	7126.43	14328.40	-13088.30	6000.05	1732269.87	14359132.26	39°32'28.1180"N	80°40'27.0900"W	14398.06	155.372	0.01	0.00	0.01	
22105.00	89.660	160.920	7126.96	14422.40	-13177.08	6030.92	1732300.73	14359043.51	39°32'27.2395"N	80°40'26.7001"W	14491.63	155.407	0.20	-0.03	0.20	
22200.00	89.630	160.740	7127.55	14517.40	-13266.81	6062.12	1732331.91	14358953.81	39°32'26.3515"N	80°40'26.3060"W	14586.21	155.443	0.19	-0.03	-0.19	
22294.00	89.690	160.690	7128.11	14611.40	-13355.53	6093.16	1732362.94	14358865.12	39°32'25.4735"N	80°40'25.9139"W	14679.81	155.476	0.08	0.06	-0.05	
22388.00	89.720	161.070	7128.59	14705.40	-13444.35	6123.95	1732393.72	14358776.34	39°32'24.5947"N	80°40'25.5250"W	14773.40	155.511	0.41	0.03	0.40	
22483.00	89.660	161.120	7129.11	14800.39	-13534.22	6154.73	1732424.49	14358686.51	39°32'23.7053"N	80°40'25.1363"W	14867.95	155.546	0.08	-0.06	0.05	
22577.00	89.880	160.830	7129.49	14894.39	-13623.09	6185.37	1732455.12	14358597.68	39°32'22.8260"N	80°40'24.7493"W	14961.53	155.580	0.39	0.23	-0.31	
22671.00	89.660	160.960	7129.86	14988.39	-13711.91	6216.14	1732485.87	14358508.89	39°32'21.9470"N	80°40'24.3607"W	15055.12	155.613	0.27	-0.23	0.14	
22765.00	89.480	160.370	7130.57	15082.39	-13800.60	6247.26	1732516.98	14358420.23	39°32'21.0693"N	80°40'23.9676"W	15148.76	155.645	0.66	-0.19	-0.63	
22860.00	89.970	160.760	7131.02	15177.38	-13890.19	6278.87	1732548.58	14358330.68	39°32'20.1828"N	80°40'23.5683"W	15243.41	155.675	0.66	0.52	0.41	
22954.00	89.820	160.590	7131.20	15271.38	-13978.89	6309.98	1732579.67	14358242.01	39°32'19.3050"N	80°40'23.1754"W	15337.05	155.706	0.24	-0.16	-0.18	
23048.00	89.820	160.530	7131.49	15365.38	-14067.53	6341.26	1732610.94	14358153.40	39°32'18.4278"N	80°40'22.7802"W	15430.72	155.735	0.06	0.00	-0.06	
23143.00	90.000	160.550	7131.64	15460.37	-14157.10	6372.91	1732642.58	14358063.87	39°32'17.5414"N	80°40'22.3804"W	15525.39	155.765	0.19	0.19	0.02	
23237.00	90.090	160.820	7131.57	15554.37	-14245.81	6404.00	1732673.66	14357975.19	39°32'16.6636"N	80°40'21.9876"W	15619.04	155.794	0.30	0.10	0.29	
23331.00	90.030	160.600	7131.47	15648.37	-14334.54	6435.05	1732704.70	14357886.51	39°32'15.7856"N	80°40'21.5954"W	15712.70	155.824	0.24	-0.06	-0.23	
23520.00	90.030	162.060	7131.37	15837.36	-14513.59	6495.55	1732765.18	14357707.53	39°32'14.0138"N	80°40'20.8315"W	15900.83	155.889	0.77	0.00	0.77	
23614.00	90.090	161.850	7131.27	15931.35	-14602.96	6524.67	1732794.28	14357618.18	39°32'13.1294"N	80°40'20.4640"W	15994.31	155.925	0.23	0.06	-0.22	
23708.00	90.090	161.870	7131.12	16025.34	-14692.29	6553.94	1732823.54	14357528.89	39°32'12.2455"N	80°40'20.0946"W	16087.81	155.959	0.02	0.00	0.02	
23803.00	90.060	162.030	7131.00	16120.33	-14782.62	6583.37	1732852.96	14357438.60	39°32'11.3518"N	80°40'19.7231"W	16182.29	155.994	0.17	-0.03	0.17	
23897.00	90.090	162.110	7130.88	16214.31	-14872.05	6612.31	1732881.89	14357349.20	39°32'10.4668"N	80°40'19.3580"W	16275.76	156.029	0.09	0.03	0.09	
23991.00	90.000	161.930	7130.80	16308.30	-14961.46	6641.33	1732910.89	14357259.83	39°32'9.5821"N	80°40'18.9918"W	16369.25	156.064	0.21	-0.10	-0.19	
24085.00	90.060	161.960	7130.75	16402.28	-15050.83	6670.46	1732940.02	14357170.49	39°32'8.6978"N	80°40'18.6241"W	16462.76	156.097	0.07	0.06	0.03	
24179.00	89.970	162.230	7130.73	16496.27	-15140.28	6699.36	1732968.90	14357081.08	39°32'7.8128"N	80°40'18.2594"W	16556.25	156.131	0.30	-0.10	0.29	
24274.00	90.030	162.100	7130.73	16591.25	-15230.71	6728.46	1732997.99	14356990.68	39°32'6.9179"N	80°40'17.8923"W	16650.73	156.166	0.15	0.06	-0.14	
24368.00	89.970	162.100	7130.73	16685.23	-15320.16	6757.35	1733026.87	14356901.27	39°32'6.0328"N	80°40'17.5277"W	16744.23	156.199	0.06	-0.06	0.00	
24462.00	90.000	161.870	7130.75	16779.22	-15409.55	6786.42	1733055.93	14356811.91	39°32'5.1483"N	80°40'17.1608"W	16837.75	156.231	0.25	0.03	-0.24	
24556.00	89.970	162.210	7130.78	16873.20	-15498.97	6815.40	1733084.90	14356722.53	39°32'4.2635"N	80°40'16.7950"W	16931.27	156.263	0.36	-0.03	0.36	
24651.00	90.000	162.110	7130.80	16968.18	-15589.41	6844.51	1733113.99	14356632.13	39°32'3.3687"N	80°40'16.4278"W	17025.77	156.296	0.11	0.03	-0.11	
24745.00	90.090	162.080	7130.73	17062.17	-15678.85	6873.41	1733142.88	14356542.72	39°32'2.4836"N	80°40'16.0631"W	17119.29	156.328	0.10	0.10	-0.03	
24840.00	90.120	161.840	7130.56	17157.15	-15769.18	6902.83	1733172.29	14356452.42	39°32'1.5898"N	80°40'15.8919"W	17213.84	156.359	0.25	0.03	-0.25	



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

WELLPATH DATA (275 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
24934.00	89.970	161.880	7130.48	17251.14	-15858.51	6932.09	1733201.55	14356363.13	39°32'0.7059"N	80°40'15.3225"W	17307.40	156.389	0.17	-0.16	0.04	
25029.00	90.030	161.840	7130.48	17346.13	-15948.79	6961.67	1733231.11	14356272.89	39°31'59.8126"N	80°40'14.9492"W	17401.97	156.419	0.08	0.06	-0.04	
25123.00	89.910	161.930	7130.53	17440.12	-16038.13	6990.90	1733260.33	14356183.58	39°31'58.9286"N	80°40'14.5804"W	17495.55	156.448	0.16	-0.13	0.10	
25145.00	90.060	161.870	7130.54	17462.12	-16059.04	6997.73	1733267.16	14356162.68	39°31'58.7216"N	80°40'14.4941"W	17517.45	156.455	0.73	0.68	-0.27	
25170.00‡	90.060	161.870	7130.51	17487.11	-16082.80	7005.51	1733274.93	14356138.93	39°31'58.4865"N	80°40'14.3960"W	17542.34	156.463	0.00	0.00	0.00	Projected MD at TD: 25170'

HOLE & CASING SECTIONS - Ref Wellbore: Harlan Unit 2H AWB Ref Wellpath: Harlan Unit 2H AWP Proj: 25170'

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	-0.01	0.16
17.5in Open Hole	130.00	362.00	232.00	130.00	362.00	-0.01	0.16	0.11	1.15
13.375in Casing Surface	30.00	342.00	312.00	30.00	342.00	0.00	0.00	0.11	0.99
12.375in Open Hole	362.00	3626.00	3264.00	362.00	3534.93	0.11	1.15	558.44	465.97
9.625in Casing Intermediate	30.00	3595.00	3565.00	30.00	3504.63	0.00	0.00	552.84	462.59
8.75in Open Hole	3626.00	6276.00	2650.00	3534.93	6092.04	558.44	465.97	1072.63	924.45
8.5in Open Hole	6276.00	25170.00	18894.00	6092.04	7130.51	1072.63	924.45	-16082.80	7005.51
5.5in Casing Production	30.00	25150.00	25120.00	30.00	7130.53	0.00	0.00	-16063.79	6999.29



Actual Wellpath Report

Harlan Unit 2H AWP Proj: 25170'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Harlan Unit 2H BHL Rev-2	7044.00	-16161.27	7036.34	1733305.75	14356060.49	39°31'57.7099"N	80°40'14.0062"W	point
Harlan Unit 2H POE Rev-3	7050.00	601.09	1266.55	1727538.23	14372816.25	39°34'43.5779"N	80°41'26.9088"W	point
Harlan Unit 2H BHL Rev-3	7078.00	-16066.71	7003.79	1733273.22	14356155.01	39°31'58.6456"N	80°40'14.4172"W	point
Harlan Unit 2H LP Rev-3	7078.00	413.58	1331.09	1727602.75	14372628.82	39°34'41.7226"N	80°41'26.0928"W	point
Harlan Unit 2H 50' L/R Hard Line R-2	7500.00	-7732.81	4135.17	1730405.72	14364485.63	39°33'21.1134"N	80°40'50.6511"W	rectangle
2D Rectangle 17627.6 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Harlan Unit 2H AWB Ref Wellpath: Harlan Unit 2H AWP Proj: 25170'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	261.00	Gyrodatta 2015 - GC+WR+DPIPE	01 Gyrodatta MS Gyro <17-1/2"> (50'-261')	Harlan Unit 2H AWB	7/15/2024
261.00	3551.00	BH NaviTrak (2019) (Axial Cor+HRGM)	02 APS EM <12-3/8"> (261')(382'-3551')	Harlan Unit 2H AWB	7/15/2024
3551.00	6201.00	BH NaviTrak (2019) (Axial Cor+HRGM)	03 APS EM <8-3/4"> (3551')(3655'-6201')	Harlan Unit 2H AWB	9/5/2024
6201.00	25170.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH Lucida <8-1/2"> (6201')(6260'-25145')	Harlan Unit 2H AWB	9/5/2024



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Harlan Unit 2H AWP Proj: 25170'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Harlan Unit 2H
Field	Wetzel	API	47-103-03655-0000
Facility	Galmish Pad	Wellbore	Harlan Unit 2H AWB
Slot	Slot C		

COMMENTS

Wellpath general comments

API: 47-103-03655-0000

BH Job #: 112320168

Rig: H&P 519

Duration: 9/8/2024-9/12/2024

Gyrodata MS Gyro <17-1/2"> (50'-261')

APS EM <12-3/8"> (261')(382'-3551')

APS EM <8-3/4"> (3551')(3655'-6201')

BH Lucida <8-1/2"> (6201')(6260'-25145')

Sycamore: 6912' MD

Middlesex: 7078' MD

Burkett: 7227' MD

Tully: 7288' MD

Marcellus POE: 7551' MD

Projected MD at TD: 25170'