



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine 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	0.999608	Report Generated	8/29/2024 at 11:10:24 PM
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	-21.17	22.00	1726238.42	14372245.63	39°34'37.9800"N	80°41'43.5400"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 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	160.99°



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WELLPATH DATA (247 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	326.540	0.00	0.00	0.00	0.00	1726238.42	14372245.63	39°34'37.9800"N	80°41'43.5400"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	326.540	30.00	0.00	0.00	0.00	1726238.42	14372245.63	39°34'37.9800"N	80°41'43.5400"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.420	326.540	100.00	-0.25	0.21	-0.14	1726238.28	14372245.84	39°34'37.9821"N	80°41'43.5418"W	0.26	326.540	0.60	0.60	0.00	Gyrodata MS Gyro <17-1/2"> (100'-260')
200.00	0.150	8.850	200.00	-0.72	0.65	-0.32	1726238.10	14372246.28	39°34'37.9864"N	80°41'43.5441"W	0.73	333.518	0.33	-0.27	42.31	
260.00	0.050	357.440	260.00	-0.81	0.75	-0.31	1726238.11	14372246.38	39°34'37.9875"N	80°41'43.5440"W	0.82	337.460	0.17	-0.17	-19.02	
471.00	1.360	274.930	470.98	-1.92	1.06	-2.81	1726235.61	14372246.69	39°34'37.9906"N	80°41'43.5759"W	3.00	290.660	0.64	0.62	-39.10	APS EM <12-3/8"> (260')(471'-3495')
560.00	2.800	276.790	559.92	-3.29	1.41	-6.02	1726232.40	14372247.04	39°34'37.9941"N	80°41'43.6169"W	6.18	283.158	1.62	1.62	2.09	
649.00	4.140	281.410	648.75	-5.87	2.30	-11.33	1726227.09	14372247.93	39°34'38.0031"N	80°41'43.6846"W	11.56	281.477	1.54	1.51	5.19	
738.00	4.330	281.350	737.51	-9.19	3.80	-17.77	1726220.65	14372249.23	39°34'38.0162"N	80°41'43.7668"W	18.13	281.442	0.21	0.21	-0.07	
827.00	4.990	285.590	826.21	-13.09	5.30	-24.80	1726213.63	14372250.93	39°34'38.0332"N	80°41'43.8565"W	25.36	282.062	0.84	0.74	4.76	
919.00	6.170	289.520	917.78	-18.44	8.03	-33.31	1726205.12	14372253.65	39°34'38.0604"N	80°41'43.9651"W	34.26	283.547	1.35	1.28	4.27	
1009.00	7.480	292.600	1007.14	-25.34	11.89	-43.28	1726195.16	14372257.52	39°34'38.0990"N	80°41'44.0922"W	44.88	285.367	1.51	1.46	3.42	
1103.00	8.800	294.550	1100.19	-34.36	17.23	-55.47	1726182.97	14372262.86	39°34'38.1522"N	80°41'44.2476"W	58.08	287.259	1.43	1.40	2.07	
1198.00	9.760	298.370	1193.95	-45.29	24.08	-69.16	1726169.28	14372269.70	39°34'38.2203"N	80°41'44.4222"W	73.23	289.195	1.20	1.01	4.02	
1292.00	11.070	300.280	1286.40	-58.00	32.41	-83.97	1726154.49	14372278.03	39°34'38.3032"N	80°41'44.6109"W	90.01	291.109	1.44	1.39	2.03	
1386.00	12.210	300.900	1378.46	-72.44	42.07	-100.29	1726138.17	14372287.68	39°34'38.3991"N	80°41'44.8190"W	108.76	292.757	1.22	1.21	0.66	
1481.00	13.670	298.790	1471.05	-88.45	52.64	-118.75	1726119.72	14372298.25	39°34'38.5042"N	80°41'45.0543"W	129.89	293.906	1.62	1.54	-2.22	
1575.00	14.150	296.840	1562.29	-104.92	63.17	-138.74	1726099.74	14372308.78	39°34'38.6090"N	80°41'45.3091"W	152.44	294.482	0.71	0.51	-2.07	
1670.00	13.730	294.480	1654.49	-121.01	73.09	-159.36	1726079.12	14372318.89	39°34'38.7077"N	80°41'45.5720"W	175.32	294.638	0.74	-0.44	-2.48	
1764.00	13.000	292.940	1745.95	-135.76	81.83	-179.25	1726059.24	14372327.43	39°34'38.7948"N	80°41'45.8256"W	197.04	294.538	0.86	-0.78	-1.64	
1859.00	13.920	289.180	1838.34	-149.96	89.75	-199.88	1726038.62	14372335.35	39°34'38.8737"N	80°41'46.0888"W	219.11	294.181	1.34	0.97	-3.96	
1953.00	14.470	287.730	1929.47	-163.98	97.04	-221.75	1726016.76	14372342.63	39°34'38.9465"N	80°41'46.3677"W	242.05	293.635	0.70	0.59	-1.54	
2047.00	13.900	283.850	2020.60	-177.13	103.32	-243.90	1725994.62	14372348.91	39°34'39.0093"N	80°41'46.6503"W	264.88	292.959	1.18	-0.61	-4.13	
2141.00	13.590	283.510	2111.91	-189.19	108.60	-265.60	1725972.93	14372354.19	39°34'39.0622"N	80°41'46.9272"W	286.94	292.240	0.34	-0.33	-0.36	
2236.00	13.440	284.630	2204.28	-201.31	114.00	-287.13	1725951.40	14372359.59	39°34'39.1163"N	80°41'47.2020"W	308.93	291.655	0.32	-0.16	1.18	
2330.00	13.920	288.490	2295.62	-214.25	120.35	-308.42	1725930.12	14372365.93	39°34'39.1797"N	80°41'47.4737"W	331.07	291.315	1.10	0.51	4.11	
2424.00	14.170	291.010	2386.81	-228.53	128.06	-329.89	1725908.66	14372373.64	39°34'39.2566"N	80°41'47.7474"W	353.87	291.215	0.70	0.27	2.68	
2519.00	13.980	289.860	2478.95	-243.21	136.12	-351.54	1725887.02	14372381.70	39°34'39.3371"N	80°41'48.0236"W	376.97	291.168	0.36	-0.20	-1.21	
2613.00	14.030	289.180	2570.16	-257.38	143.72	-372.98	1725865.59	14372389.30	39°34'39.4129"N	80°41'48.2970"W	399.71	291.074	0.18	0.05	-0.72	
2707.00	14.050	289.120	2661.35	-271.47	151.20	-394.52	1725844.06	14372396.78	39°34'39.4876"N	80°41'48.5718"W	422.50	290.970	0.03	0.02	-0.06	



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Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
2801.00	13.600	286.360	2752.63	-284.91	158.06	-415.90	1725822.68	14372403.62	39°34'39.5560"N	80°41'48.8447"W	444.92	290.808	0.85	-0.48	-2.94	
2896.00	13.370	284.410	2845.01	-297.42	163.93	-437.26	1725801.33	14372409.50	39°34'39.6148"N	80°41'49.1171"W	466.98	290.552	0.54	-0.24	-2.05	
2990.00	12.960	289.690	2936.54	-310.00	170.19	-457.71	1725780.89	14372415.75	39°34'39.6773"N	80°41'49.3780"W	488.33	290.397	1.35	-0.44	5.62	
3085.00	13.830	292.730	3028.96	-324.22	178.17	-478.21	1725760.39	14372423.73	39°34'39.7568"N	80°41'49.6395"W	510.33	290.434	1.18	0.92	3.20	
3179.00	13.170	291.240	3120.36	-338.62	186.39	-498.58	1725740.06	14372431.95	39°34'39.8388"N	80°41'49.8990"W	532.26	290.499	0.79	-0.70	-1.59	
3273.00	12.620	290.740	3211.99	-352.11	193.90	-518.14	1725720.48	14372439.46	39°34'39.9137"N	80°41'50.1488"W	553.24	290.517	0.60	-0.59	-0.53	
3368.00	12.000	289.320	3304.81	-364.87	200.85	-537.17	1725701.46	14372446.40	39°34'39.9829"N	80°41'50.3915"W	573.49	290.501	0.73	-0.65	-1.49	
3462.00	11.730	288.680	3396.80	-376.77	207.14	-555.44	1725683.20	14372452.69	39°34'40.0457"N	80°41'50.6246"W	592.81	290.452	0.32	-0.29	-0.68	
3495.00	11.660	289.530	3429.11	-380.90	209.33	-561.76	1725676.88	14372454.88	39°34'40.0676"N	80°41'50.7052"W	599.50	290.437	0.56	-0.21	2.58	
3558.00	11.000	288.250	3490.89	-388.50	213.34	-573.47	1725665.17	14372458.89	39°34'40.1076"N	80°41'50.8545"W	611.87	290.406	1.12	-1.05	-2.03	APS EM <8-3/4"> (3495')(3558'-6483')
3652.00	12.610	288.990	3582.89	-400.25	219.49	-591.69	1725646.96	14372465.03	39°34'40.1690"N	80°41'51.0870"W	631.09	290.352	1.72	1.71	0.79	
3746.00	13.680	288.660	3674.43	-413.36	226.38	-611.93	1725626.74	14372471.92	39°34'40.2378"N	80°41'51.3451"W	652.46	290.302	1.14	1.14	-0.35	
3841.00	14.950	291.200	3766.48	-428.14	234.41	-633.99	1725604.68	14372479.95	39°34'40.3179"N	80°41'51.6266"W	675.94	290.291	1.49	1.34	2.67	
3934.00	15.550	292.710	3856.20	-444.18	243.56	-656.68	1725582.00	14372489.09	39°34'40.4091"N	80°41'51.9159"W	700.39	290.350	0.77	0.65	1.62	
4031.00	15.020	288.270	3949.78	-460.45	252.52	-680.61	1725558.08	14372498.05	39°34'40.4984"N	80°41'52.2211"W	725.94	290.356	1.32	-0.55	-4.58	
4125.00	14.790	293.040	4040.62	-475.86	261.04	-703.22	1725535.48	14372506.56	39°34'40.5833"N	80°41'52.5095"W	750.10	290.365	1.33	-0.24	5.07	
4219.00	14.140	294.680	4131.64	-491.83	270.53	-724.69	1725514.01	14372516.05	39°34'40.6778"N	80°41'52.7833"W	773.54	290.470	0.82	-0.69	1.74	
4314.00	13.340	290.840	4223.92	-506.87	279.27	-745.48	1725493.24	14372524.79	39°34'40.7649"N	80°41'53.0484"W	796.07	290.537	1.28	-0.84	-4.04	
4408.00	13.360	294.330	4315.38	-521.27	287.60	-765.51	1725473.21	14372533.12	39°34'40.8479"N	80°41'53.3039"W	817.75	290.591	0.88	0.02	3.71	
4502.00	12.870	293.190	4406.93	-535.75	296.20	-785.03	1725453.70	14372541.71	39°34'40.9335"N	80°41'53.5528"W	839.05	290.672	0.59	-0.52	-1.21	
4597.00	11.470	288.330	4499.79	-548.59	303.34	-803.72	1725435.02	14372548.85	39°34'41.0047"N	80°41'53.7912"W	859.06	290.677	1.82	-1.47	-5.12	
4691.00	11.940	288.560	4591.84	-560.19	309.37	-821.81	1725416.93	14372554.88	39°34'41.0649"N	80°41'54.0220"W	878.11	290.629	0.50	0.50	0.24	
4786.00	14.320	284.740	4684.35	-572.71	315.49	-842.49	1725396.26	14372560.99	39°34'41.1261"N	80°41'54.2858"W	899.63	290.529	2.67	2.51	-4.02	
4880.00	14.500	281.500	4775.39	-585.14	320.79	-865.27	1725373.49	14372566.30	39°34'41.1793"N	80°41'54.5764"W	922.82	290.342	0.88	0.19	-3.45	
4975.00	13.480	286.770	4867.58	-597.66	326.36	-887.52	1725351.25	14372571.86	39°34'41.2350"N	80°41'54.8604"W	945.63	290.189	1.72	-1.07	5.55	
5069.00	13.490	296.770	4959.00	-611.92	334.46	-907.81	1725330.97	14372579.96	39°34'41.3158"N	80°41'55.1191"W	967.46	290.225	2.48	0.01	10.64	
5163.00	12.760	294.810	5050.54	-626.97	343.75	-927.02	1725311.77	14372589.25	39°34'41.4082"N	80°41'55.3641"W	988.70	290.346	0.91	-0.78	-2.09	
5257.00	11.510	289.540	5142.45	-640.00	351.25	-945.28	1725293.51	14372596.74	39°34'41.4829"N	80°41'55.5970"W	1008.43	290.384	1.78	-1.33	-5.61	
5352.00	12.120	290.110	5235.43	-652.20	357.85	-963.58	1725275.22	14372603.34	39°34'41.5487"N	80°41'55.8304"W	1027.88	290.374	0.65	0.64	0.60	
5446.00	14.030	285.090	5326.99	-664.81	364.21	-983.85	1725254.96	14372609.69	39°34'41.6123"N	80°41'56.0890"W	1049.10	290.314	2.36	2.03	-5.34	



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5541.00	13.920	281.080	5419.18	-677.00	369.40	-1006.18	1725232.64	14372614.88	39°34'41.6643"N	80°41'56.3740"W	1071.85	290.160	1.03	-0.12	-4.22	
5635.00	12.420	276.030	5510.71	-686.95	372.64	-1027.33	1725211.49	14372618.12	39°34'41.6970"N	80°41'56.6439"W	1092.82	289.937	2.01	-1.60	-5.37	
5729.00	12.920	276.130	5602.42	-695.69	374.82	-1047.83	1725191.00	14372620.30	39°34'41.7193"N	80°41'56.9057"W	1112.85	289.683	0.53	0.53	0.11	
5824.00	14.990	281.870	5694.62	-706.51	378.48	-1070.42	1725168.42	14372623.96	39°34'41.7562"N	80°41'57.1940"W	1135.36	289.473	2.62	2.18	6.04	
5918.00	16.200	287.940	5785.16	-720.63	385.02	-1094.79	1725144.06	14372630.50	39°34'41.8216"N	80°41'57.5050"W	1160.52	289.376	2.16	1.29	6.46	
6012.00	14.580	286.210	5875.79	-735.34	392.36	-1118.63	1725120.23	14372637.84	39°34'41.8950"N	80°41'57.8091"W	1185.45	289.328	1.79	-1.72	-1.84	
6107.00	12.850	290.600	5968.08	-748.97	399.42	-1140.00	1725098.87	14372644.89	39°34'41.9654"N	80°41'58.0817"W	1207.95	289.309	2.12	-1.82	4.62	
6201.00	10.580	289.430	6060.12	-761.00	405.97	-1157.93	1725080.95	14372651.44	39°34'42.0308"N	80°41'58.3104"W	1227.03	289.321	2.43	-2.41	-1.24	
6295.00	10.450	293.000	6152.54	-772.07	412.17	-1173.91	1725064.97	14372657.64	39°34'42.0926"N	80°41'58.5143"W	1244.17	289.347	0.71	-0.14	3.80	
6389.00	11.740	285.910	6244.78	-783.25	418.12	-1190.96	1725047.93	14372663.59	39°34'42.1520"N	80°41'58.7317"W	1262.22	289.345	2.00	1.37	-7.54	
6483.00	17.860	276.590	6335.63	-794.97	422.40	-1214.50	1725024.40	14372667.87	39°34'42.1951"N	80°41'59.0322"W	1285.86	289.178	6.97	6.51	-9.91	
6567.00	22.510	269.020	6414.47	-805.52	423.61	-1243.39	1724995.52	14372669.07	39°34'42.2079"N	80°41'59.4011"W	1313.57	288.813	6.34	5.54	-9.01	BH Lucida <8-1/2"> (6483')(6567'-22359')
6634.00	21.090	246.960	6476.78	-808.65	418.66	-1267.35	1724971.57	14372664.13	39°34'42.1598"N	80°41'59.7073"W	1334.71	288.281	12.34	-2.12	-32.93	
6728.00	20.180	198.500	6565.37	-794.50	396.51	-1288.21	1724950.72	14372641.98	39°34'41.9416"N	80°41'59.9746"W	1347.85	287.108	17.72	-0.97	-51.55	
6822.00	24.330	177.470	6652.49	-763.00	361.72	-1292.51	1724946.42	14372607.21	39°34'41.5979"N	80°42'0.0310"W	1342.17	285.635	9.49	4.41	-22.37	
6854.00†	26.769	174.117	6681.36	-749.66	347.96	-1291.48	1724947.45	14372593.46	39°34'41.4619"N	80°42'0.0184"W	1337.53	285.079	8.86	7.62	-10.48	Sycamore: 6854' MD
6917.00	31.750	168.950	6736.31	-719.41	317.56	-1286.84	1724952.09	14372563.06	39°34'41.1612"N	80°41'59.9605"W	1325.44	283.862	8.86	7.91	-8.20	
7011.00	41.150	164.180	6811.85	-663.90	263.40	-1273.64	1724965.28	14372508.92	39°34'40.6255"N	80°41'59.7942"W	1300.59	281.684	10.44	10.00	-5.07	
7014.00†	41.485	164.038	6814.11	-661.92	261.49	-1273.09	1724965.83	14372507.02	39°34'40.6067"N	80°41'59.7873"W	1299.67	281.607	11.59	11.16	-4.73	Middlesex: 7014' MD
7057.00	46.300	162.190	6845.09	-632.14	232.98	-1264.42	1724974.50	14372478.52	39°34'40.3246"N	80°41'59.6777"W	1285.70	280.440	11.59	11.20	-4.30	
7105.00	48.940	161.020	6877.44	-596.69	199.34	-1253.22	1724985.69	14372444.89	39°34'39.9918"N	80°41'59.5362"W	1268.98	279.038	5.79	5.50	-2.44	
7161.00†	53.349	161.075	6912.56	-553.09	158.11	-1239.06	1724999.84	14372403.68	39°34'39.5838"N	80°41'59.3571"W	1249.11	277.272	7.87	7.87	0.10	Burkett: 7161' MD
7200.00	56.420	161.110	6934.99	-521.19	127.93	-1228.73	1725010.18	14372373.51	39°34'39.2852"N	80°41'59.2264"W	1235.37	275.944	7.87	7.87	0.09	
7219.00†	57.830	160.534	6945.31	-505.23	112.86	-1223.49	1725015.42	14372358.45	39°34'39.1361"N	80°41'59.1601"W	1228.68	275.270	7.85	7.42	-3.03	Tully: 7219' MD
7294.00	63.420	158.420	6982.08	-439.93	51.69	-1200.55	1725038.34	14372297.30	39°34'38.5308"N	80°41'58.8698"W	1201.66	272.465	7.85	7.45	-2.82	
7389.00	70.480	158.600	7019.26	-352.65	-29.60	-1168.55	1725070.33	14372216.04	39°34'37.7263"N	80°41'58.4646"W	1168.93	268.549	7.43	7.43	0.19	
7443.00†	74.708	158.542	7035.41	-301.18	-77.55	-1149.73	1725089.14	14372168.11	39°34'37.2518"N	80°41'58.2263"W	1152.34	266.141	7.83	7.83	-0.11	Marcellus POE: 7443' MD
7483.00	77.840	158.500	7044.90	-262.37	-113.71	-1135.50	1725103.36	14372131.97	39°34'36.8940"N	80°41'58.0462"W	1141.18	264.282	7.83	7.83	-0.10	
7577.00	85.260	159.350	7058.70	-169.51	-200.41	-1102.10	1725136.75	14372045.30	39°34'36.0360"N	80°41'57.6233"W	1120.17	259.694	7.94	7.89	0.90	
7672.00	89.910	160.620	7062.70	-74.64	-289.56	-1069.62	1725169.22	14371956.18	39°34'35.1538"N	80°41'57.2124"W	1108.13	254.852	5.07	4.89	1.34	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
7766.00	90.000	160.630	7062.77	19.36	-378.24	-1038.44	1725200.39	14371867.54	39°34'34.2763"N	80°41'56.8179"W	1105.18	249.986	0.10	0.10	0.01	
7860.00	90.000	160.690	7062.77	113.36	-466.94	-1007.31	1725231.51	14371778.88	39°34'33.3987"N	80°41'56.4241"W	1110.27	245.130	0.06	0.00	0.06	
7954.00	89.970	160.270	7062.80	207.35	-555.53	-975.90	1725262.90	14371690.32	39°34'32.5221"N	80°41'56.0268"W	1122.94	240.349	0.45	-0.03	-0.45	
8049.00	89.940	160.780	7062.87	302.35	-645.10	-944.23	1725294.56	14371600.79	39°34'31.6358"N	80°41'55.6262"W	1143.56	235.659	0.54	-0.03	0.54	
8143.00	89.850	160.260	7063.05	396.34	-733.72	-912.88	1725325.90	14371512.20	39°34'30.7590"N	80°41'55.2297"W	1171.19	231.210	0.56	-0.10	-0.55	
8237.00	89.480	160.340	7063.60	490.34	-822.21	-881.20	1725357.57	14371423.74	39°34'29.8833"N	80°41'54.8288"W	1205.21	226.983	0.40	-0.39	0.09	
8332.00	89.780	160.590	7064.21	585.33	-911.74	-849.43	1725389.32	14371334.25	39°34'28.9974"N	80°41'54.4270"W	1246.12	222.974	0.41	0.32	0.26	
8426.00	89.510	159.920	7064.79	679.32	-1000.21	-817.67	1725421.07	14371245.81	39°34'28.1220"N	80°41'54.0252"W	1291.90	219.266	0.77	-0.29	-0.71	
8520.00	89.570	160.450	7065.55	773.31	-1088.64	-785.81	1725452.92	14371157.41	39°34'27.2469"N	80°41'53.6221"W	1342.63	215.823	0.57	0.06	0.56	
8615.00	89.600	160.440	7066.23	868.30	-1178.16	-754.01	1725484.70	14371067.93	39°34'26.3811"N	80°41'53.2199"W	1398.79	212.619	0.03	0.03	-0.01	
8709.00	89.820	160.670	7066.71	962.30	-1266.80	-722.72	1725515.98	14370979.33	39°34'25.4841"N	80°41'52.8241"W	1458.46	209.705	0.34	0.23	0.24	
8804.00	89.720	160.520	7067.09	1057.29	-1356.40	-691.16	1725547.53	14370889.76	39°34'24.5975"N	80°41'52.4249"W	1522.34	207.001	0.19	-0.11	-0.16	
8898.00	89.850	160.700	7067.44	1151.29	-1445.07	-659.95	1725578.73	14370801.13	39°34'23.7201"N	80°41'52.0302"W	1588.64	204.546	0.24	0.14	0.19	
8992.00	89.880	160.340	7067.67	1245.29	-1533.69	-628.60	1725610.06	14370712.54	39°34'22.8432"N	80°41'51.6337"W	1657.51	202.287	0.38	0.03	-0.38	
9087.00	89.940	160.580	7067.81	1340.28	-1623.22	-596.83	1725641.82	14370623.05	39°34'21.9574"N	80°41'51.2317"W	1729.46	200.188	0.26	0.06	0.25	
9181.00	90.060	160.500	7067.81	1434.28	-1711.85	-565.51	1725673.13	14370534.46	39°34'21.0804"N	80°41'50.8356"W	1802.84	198.281	0.15	0.13	-0.09	
9276.00	89.880	160.300	7067.86	1529.27	-1801.34	-533.65	1725704.98	14370445.00	39°34'20.1948"N	80°41'50.4325"W	1878.73	196.502	0.28	-0.19	-0.21	
9370.00	89.910	160.270	7068.04	1623.27	-1889.83	-501.94	1725736.68	14370356.54	39°34'19.3192"N	80°41'50.0314"W	1955.35	194.874	0.05	0.03	-0.03	
9464.00	89.820	160.870	7068.26	1717.26	-1978.48	-470.67	1725767.94	14370267.93	39°34'18.4421"N	80°41'49.6359"W	2033.69	193.382	0.65	-0.10	0.64	
9559.00	89.820	160.350	7068.56	1812.26	-2068.09	-439.13	1725799.46	14370178.35	39°34'17.5554"N	80°41'49.2370"W	2114.20	191.988	0.55	0.00	-0.55	
9653.00	89.780	160.370	7068.88	1906.26	-2156.62	-407.53	1725831.05	14370089.86	39°34'16.6793"N	80°41'48.8374"W	2194.79	190.701	0.05	-0.04	0.02	
9747.00	89.880	160.280	7069.16	2000.25	-2245.13	-375.89	1725862.68	14370001.38	39°34'15.8035"N	80°41'48.4370"W	2276.38	189.504	0.14	0.11	-0.10	
9842.00	89.720	159.870	7069.50	2095.24	-2334.44	-343.51	1725895.04	14369912.10	39°34'14.9197"N	80°41'48.0275"W	2359.58	188.371	0.46	-0.17	-0.43	
9936.00	89.910	159.980	7069.80	2189.22	-2422.73	-311.25	1725927.30	14369823.85	39°34'14.0461"N	80°41'47.6193"W	2442.64	187.321	0.23	0.20	0.12	
10030.00	89.750	160.070	7070.08	2283.20	-2511.08	-279.13	1725959.40	14369735.54	39°34'13.1719"N	80°41'47.2130"W	2526.54	186.343	0.20	-0.17	0.10	
10124.00	89.880	160.410	7070.38	2377.20	-2599.54	-247.36	1725991.16	14369647.11	39°34'12.2965"N	80°41'46.8110"W	2611.28	185.436	0.39	0.14	0.36	
10218.00	89.910	159.930	7070.55	2471.19	-2687.97	-215.47	1726023.04	14369558.72	39°34'11.4215"N	80°41'46.4077"W	2696.59	184.583	0.51	0.03	-0.51	
10312.00	90.060	160.090	7070.58	2565.17	-2776.30	-183.33	1726055.16	14369470.42	39°34'10.5474"N	80°41'46.0011"W	2782.35	183.778	0.23	0.16	0.17	
10407.00	89.940	160.160	7070.58	2660.16	-2865.65	-151.04	1726087.44	14369381.11	39°34'9.6634"N	80°41'45.5926"W	2869.62	183.017	0.15	-0.13	0.07	
10501.00	89.850	161.130	7070.75	2754.16	-2954.33	-119.88	1726118.58	14369292.46	39°34'8.7858"N	80°41'45.1986"W	2956.76	182.324	1.04	-0.10	1.03	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
10594.00	89.880	160.880	7070.97	2847.16	-3042.27	-89.61	1726148.84	14369204.56	39°34'7.9157"N	80°41'44.8159"W	3043.59	181.687	0.27	0.03	-0.27	
10689.00	89.540	160.980	7071.45	2942.16	-3132.05	-58.57	1726179.87	14369114.81	39°34'7.0273"N	80°41'44.4234"W	3132.60	181.071	0.37	-0.36	0.11	
10783.00	89.660	160.750	7072.11	3036.15	-3220.86	-27.76	1726210.67	14369026.04	39°34'6.1486"N	80°41'44.0338"W	3220.98	180.494	0.28	0.13	-0.24	
10877.00	89.820	162.190	7072.53	3130.15	-3309.98	2.11	1726240.53	14368936.95	39°34'5.2668"N	80°41'43.6562"W	3309.98	179.963	1.54	0.17	1.53	
10971.00	90.000	163.120	7072.68	3224.11	-3399.71	30.13	1726268.54	14368847.26	39°34'4.3791"N	80°41'43.3023"W	3399.84	179.492	1.01	0.19	0.99	
11065.00	89.940	162.940	7072.73	3318.05	-3489.61	57.57	1726295.97	14368757.39	39°34'3.4896"N	80°41'42.9558"W	3490.09	179.055	0.20	-0.06	-0.19	
11159.00	90.060	162.100	7072.73	3412.01	-3579.27	85.80	1726324.19	14368667.77	39°34'2.6026"N	80°41'42.5992"W	3580.30	178.627	0.90	0.13	-0.89	
11253.00	90.150	160.650	7072.56	3506.01	-3668.35	115.82	1726354.20	14368578.73	39°34'1.7212"N	80°41'42.2197"W	3670.17	178.192	1.55	0.10	-1.54	
11347.00	90.280	161.430	7072.21	3600.01	-3757.24	146.36	1726384.73	14368489.86	39°34'0.8416"N	80°41'41.8336"W	3760.09	177.769	0.84	0.14	0.83	
11441.00	90.030	160.610	7071.95	3694.01	-3846.13	176.94	1726415.29	14368401.01	39°33'59.9621"N	80°41'41.4470"W	3850.20	177.366	0.91	-0.27	-0.87	
11535.00	90.150	160.850	7071.80	3788.00	-3934.87	207.96	1726446.30	14368312.31	39°33'59.0841"N	80°41'41.0548"W	3940.36	176.975	0.29	0.13	0.26	
11629.00	89.880	160.390	7071.78	3882.00	-4023.54	239.15	1726477.48	14368223.67	39°33'58.2066"N	80°41'40.6603"W	4030.64	176.598	0.57	-0.29	-0.49	
11723.00	90.030	161.040	7071.85	3976.00	-4112.26	270.20	1726508.51	14368134.98	39°33'57.3287"N	80°41'40.2678"W	4121.13	176.241	0.71	0.16	0.69	
11818.00	89.450	160.390	7072.28	4071.00	-4201.93	301.57	1726539.87	14368045.35	39°33'56.4414"N	80°41'39.8710"W	4212.74	175.895	0.92	-0.61	-0.68	
11912.00	90.150	160.910	7072.61	4164.99	-4290.62	332.72	1726571.00	14367956.70	39°33'55.5639"N	80°41'39.4772"W	4303.50	175.566	0.93	0.74	0.55	
12006.00	90.090	160.630	7072.41	4258.99	-4379.38	363.68	1726601.95	14367867.98	39°33'54.6857"N	80°41'39.0857"W	4394.45	175.253	0.30	-0.06	-0.30	
12100.00	90.090	161.440	7072.27	4352.99	-4468.27	394.22	1726632.49	14367779.12	39°33'53.8060"N	80°41'38.6995"W	4485.63	174.958	0.86	0.00	0.86	
12194.00	90.430	161.380	7071.84	4446.99	-4557.37	424.19	1726662.44	14367690.06	39°33'52.9245"N	80°41'38.3208"W	4577.07	174.682	0.37	0.36	-0.06	
12288.00	90.460	160.400	7071.11	4540.98	-4646.18	454.96	1726693.20	14367601.28	39°33'52.0457"N	80°41'37.9317"W	4668.40	174.407	1.04	0.03	-1.04	
12381.00	90.460	159.140	7070.36	4633.96	-4733.44	487.12	1726725.35	14367514.05	39°33'51.1822"N	80°41'37.5249"W	4758.44	174.124	1.35	0.00	-1.35	
12476.00	90.650	160.460	7069.44	4728.93	-4822.59	519.92	1726758.14	14367424.94	39°33'50.3000"N	80°41'37.1100"W	4850.54	173.847	1.40	0.20	1.39	
12569.00	90.250	160.990	7068.71	4821.93	-4910.38	550.62	1726788.82	14367337.19	39°33'49.4314"N	80°41'36.7218"W	4941.15	173.602	0.71	-0.43	0.57	
12664.00	89.820	161.180	7068.66	4916.93	-5000.24	581.41	1726819.61	14367247.35	39°33'48.5422"N	80°41'36.3325"W	5033.93	173.368	0.49	-0.45	0.20	
12758.00	89.910	161.290	7068.88	5010.93	-5089.25	611.65	1726849.83	14367158.38	39°33'47.6615"N	80°41'35.9503"W	5125.87	173.147	0.15	0.10	0.12	
12852.00	90.030	160.740	7068.93	5104.92	-5178.13	642.23	1726880.40	14367069.53	39°33'46.7820"N	80°41'35.5637"W	5217.81	172.930	0.60	0.13	-0.59	
12947.00	88.830	158.680	7069.87	5199.89	-5267.23	675.17	1726913.33	14366980.47	39°33'45.9003"N	80°41'35.1470"W	5310.33	172.695	2.51	-1.26	-2.17	
13040.00	89.540	161.100	7071.19	5292.86	-5354.54	707.14	1726945.28	14366893.19	39°33'45.0363"N	80°41'34.7427"W	5401.04	172.477	2.71	0.76	2.60	
13135.00	89.480	161.610	7072.01	5387.85	-5444.55	737.51	1726975.64	14366803.22	39°33'44.1457"N	80°41'34.3588"W	5494.28	172.286	0.54	-0.06	0.54	
13229.00	89.510	161.580	7072.83	5481.84	-5533.74	767.19	1727005.31	14366714.07	39°33'43.2632"N	80°41'33.9838"W	5586.67	172.107	0.05	0.03	-0.03	
13323.00	89.420	161.700	7073.71	5575.83	-5622.95	796.80	1727034.90	14366624.89	39°33'42.3805"N	80°41'33.6096"W	5679.13	171.935	0.16	-0.10	0.13	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
13417.00	89.540	161.560	7074.57	5669.82	-5712.16	826.42	1727064.52	14366535.72	39°33'41.4979"N	80°41'33.2353"W	5771.63	171.768	0.20	0.13	-0.15	
13512.00	89.850	162.200	7075.07	5764.81	-5802.45	855.97	1727094.05	14366445.47	39°33'40.6046"N	80°41'32.8620"W	5865.24	171.608	0.75	0.33	0.67	
13605.00	89.850	161.880	7075.31	5857.79	-5890.91	884.64	1727122.71	14366357.03	39°33'39.7293"N	80°41'32.4997"W	5956.97	171.460	0.34	0.00	-0.34	
13700.00	89.690	161.410	7075.70	5952.78	-5981.08	914.56	1727152.62	14366266.90	39°33'38.8371"N	80°41'32.1217"W	6050.60	171.306	0.52	-0.17	-0.49	
13793.00	89.820	161.630	7076.09	6045.78	-6069.28	944.04	1727182.09	14366178.74	39°33'37.9644"N	80°41'31.7492"W	6142.26	171.159	0.27	0.14	0.24	
13887.00	89.780	161.680	7076.42	6139.77	-6158.51	973.62	1727211.66	14366089.55	39°33'37.0816"N	80°41'31.3753"W	6234.99	171.016	0.07	-0.04	0.05	
13981.00	89.850	161.600	7076.73	6233.77	-6247.72	1003.23	1727241.26	14366000.37	39°33'36.1989"N	80°41'31.0012"W	6327.75	170.878	0.11	0.07	-0.09	
14075.00	89.660	161.490	7077.13	6327.76	-6336.89	1032.99	1727271.00	14365911.24	39°33'35.3166"N	80°41'30.6252"W	6420.53	170.742	0.23	-0.20	-0.12	
14170.00	89.780	161.380	7077.59	6422.76	-6426.94	1063.23	1727301.23	14365821.22	39°33'34.4256"N	80°41'30.2430"W	6514.29	170.606	0.17	0.13	-0.12	
14264.00	89.820	161.630	7077.92	6516.75	-6516.08	1093.05	1727331.04	14365732.11	39°33'33.5435"N	80°41'29.8662"W	6607.13	170.477	0.27	0.04	0.27	
14358.00	89.940	161.490	7078.12	6610.75	-6605.26	1122.78	1727360.76	14365642.97	39°33'32.6612"N	80°41'29.4904"W	6700.01	170.353	0.20	0.13	-0.15	
14453.00	89.720	161.880	7078.40	6705.74	-6695.45	1152.64	1727390.60	14365552.82	39°33'31.7689"N	80°41'29.1132"W	6793.94	170.232	0.47	-0.23	0.41	
14547.00	89.940	161.510	7078.68	6799.73	-6784.69	1182.16	1727420.11	14365463.61	39°33'30.8858"N	80°41'28.7402"W	6886.91	170.116	0.46	0.23	-0.39	
14641.00	89.880	161.450	7078.83	6893.73	-6873.82	1212.02	1727449.96	14365374.52	39°33'30.0039"N	80°41'28.3629"W	6979.86	170.000	0.09	-0.06	-0.06	
14735.00	89.880	162.200	7079.02	6987.72	-6963.13	1241.34	1727479.27	14365285.24	39°33'29.1203"N	80°41'27.9925"W	7072.91	169.892	0.80	0.00	0.80	
14830.00	89.820	161.990	7079.27	7082.70	-7053.53	1270.54	1727508.46	14365194.88	39°33'28.2259"N	80°41'27.6236"W	7167.05	169.789	0.23	-0.06	-0.22	
14924.00	89.820	161.540	7079.57	7176.69	-7142.81	1299.96	1727537.87	14365105.63	39°33'27.3425"N	80°41'27.2520"W	7260.14	169.685	0.48	0.00	-0.48	
15018.00	89.750	161.710	7079.92	7270.68	-7232.01	1329.59	1727567.49	14365016.46	39°33'26.4598"N	80°41'26.8776"W	7353.22	169.583	0.20	-0.07	0.18	
15113.00	89.780	161.610	7080.31	7365.68	-7322.19	1359.48	1727597.37	14364926.32	39°33'25.5676"N	80°41'26.4999"W	7447.32	169.482	0.11	0.03	-0.11	
15207.00	89.750	162.100	7080.69	7459.66	-7411.51	1388.76	1727626.83	14364837.04	39°33'24.8838"N	80°41'26.1301"W	7540.50	169.387	0.52	-0.03	0.52	
15301.00	89.720	161.540	7081.13	7553.65	-7500.82	1418.08	1727655.95	14364747.76	39°33'23.8002"N	80°41'25.7596"W	7633.69	169.294	0.60	-0.03	-0.60	
15396.00	89.850	161.780	7081.49	7648.65	-7590.99	1447.98	1727685.83	14364657.63	39°33'22.9080"N	80°41'25.3819"W	7727.86	169.201	0.29	0.14	0.25	
15490.00	89.720	161.160	7081.84	7742.64	-7680.12	1477.85	1727715.69	14364568.54	39°33'22.0261"N	80°41'25.0044"W	7821.01	169.108	0.67	-0.14	-0.66	
15584.00	89.910	161.180	7082.14	7836.64	-7769.09	1508.19	1727746.01	14364479.60	39°33'21.1458"N	80°41'24.6210"W	7914.12	169.014	0.20	0.20	0.02	
15679.00	90.030	161.940	7082.19	7931.63	-7859.21	1538.24	1727776.05	14364389.52	39°33'20.2541"N	80°41'24.2413"W	8008.33	168.926	0.81	0.13	0.80	
15773.00	90.090	161.940	7082.09	8025.62	-7948.58	1567.38	1727805.18	14364300.18	39°33'19.3698"N	80°41'23.8732"W	8101.64	168.845	0.06	0.06	0.00	
15867.00	89.880	161.590	7082.12	8119.61	-8037.86	1596.79	1727834.58	14364210.94	39°33'18.4864"N	80°41'23.5016"W	8194.93	168.764	0.43	-0.22	-0.37	
15961.00	89.660	159.400	7082.49	8213.60	-8126.46	1628.18	1727865.95	14364122.37	39°33'17.6097"N	80°41'23.1048"W	8287.96	168.671	2.34	-0.23	-2.33	
16056.00	90.220	159.920	7082.59	8308.58	-8215.53	1661.20	1727898.96	14364033.33	39°33'16.7283"N	80°41'22.6872"W	8381.80	168.569	0.80	0.59	0.55	
16150.00	90.340	161.370	7082.13	8402.57	-8304.21	1692.35	1727930.10	14363944.68	39°33'15.8507"N	80°41'22.2934"W	8474.91	168.481	1.55	0.13	1.54	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
16244.00	90.030	159.300	7081.83	8496.56	-8392.73	1723.98	1727961.72	14363856.21	39°33'14.9748"N	80°41'21.8935"W	8567.96	168.392	2.23	-0.33	-2.20	
16339.00	90.280	160.200	7081.57	8591.54	-8481.85	1756.86	1727994.59	14363767.11	39°33'14.0929"N	80°41'21.4776"W	8661.89	168.298	0.98	0.26	0.95	
16433.00	90.370	161.130	7081.04	8685.53	-8570.55	1787.98	1728025.70	14363678.45	39°33'13.2152"N	80°41'21.0842"W	8755.07	168.216	0.99	0.10	0.99	
16528.00	90.370	161.310	7080.43	8780.53	-8660.49	1818.57	1728056.27	14363588.55	39°33'12.3253"N	80°41'20.6978"W	8849.37	168.141	0.19	0.00	0.19	
16622.00	90.250	161.740	7079.92	8874.52	-8749.64	1848.35	1728086.04	14363499.43	39°33'11.4431"N	80°41'20.3214"W	8942.74	168.072	0.47	-0.13	0.46	
16716.00	90.150	161.300	7079.59	8968.52	-8838.80	1878.15	1728115.83	14363410.31	39°33'10.5610"N	80°41'19.9450"W	9036.14	168.004	0.48	-0.11	-0.47	
16811.00	90.250	161.380	7079.26	9063.52	-8928.80	1908.54	1728146.21	14363320.34	39°33'9.6704"N	80°41'19.5609"W	9130.50	167.935	0.13	0.11	0.08	
16905.00	90.150	161.300	7078.93	9157.51	-9017.86	1938.62	1728176.28	14363231.32	39°33'8.7892"N	80°41'19.1809"W	9223.88	167.867	0.14	-0.11	-0.09	
17000.00	89.480	160.400	7079.24	9252.51	-9107.60	1969.78	1728207.43	14363141.61	39°33'7.9012"N	80°41'18.7870"W	9318.18	167.796	1.18	-0.71	-0.95	
17094.00	89.540	160.900	7080.04	9346.51	-9196.29	2000.93	1728238.56	14363052.96	39°33'7.0236"N	80°41'18.3933"W	9411.45	167.725	0.54	0.06	0.53	
17189.00	89.780	161.450	7080.61	9441.50	-9286.20	2031.58	1728269.20	14362963.08	39°33'6.1339"N	80°41'18.0060"W	9505.84	167.660	0.63	0.25	0.58	
17283.00	89.720	161.740	7081.02	9535.50	-9375.39	2061.26	1728298.87	14362873.93	39°33'5.2514"N	80°41'17.6310"W	9599.31	167.600	0.32	-0.06	0.31	
17378.00	89.750	161.410	7081.46	9630.49	-9465.52	2091.28	1728328.88	14362783.83	39°33'4.3596"N	80°41'17.2517"W	9693.79	167.541	0.35	0.03	-0.35	
17472.00	89.820	161.580	7081.81	9724.49	-9554.66	2121.12	1728358.70	14362694.73	39°33'3.4776"N	80°41'16.8748"W	9787.27	167.483	0.20	0.07	0.18	
17566.00	89.750	161.290	7082.16	9818.48	-9643.77	2151.05	1728388.62	14362605.65	39°33'2.5959"N	80°41'16.4967"W	9880.75	167.426	0.32	-0.07	-0.31	
17661.00	89.750	161.600	7082.58	9913.48	-9733.83	2181.28	1728418.84	14362515.63	39°33'1.7048"N	80°41'16.1148"W	9975.24	167.369	0.33	0.00	0.33	
17755.00	89.750	161.370	7082.99	10007.47	-9822.97	2211.13	1728448.68	14362426.53	39°33'0.8228"N	80°41'15.7377"W	10068.75	167.314	0.24	0.00	-0.24	
17850.00	89.780	161.600	7083.37	10102.47	-9913.05	2241.29	1728478.83	14362336.48	39°32'59.9315"N	80°41'15.3565"W	10163.26	167.260	0.24	0.03	0.24	
17944.00	89.780	161.460	7083.74	10196.47	-10002.20	2271.07	1728508.60	14362247.36	39°32'59.0493"N	80°41'14.9803"W	10256.80	167.207	0.15	0.00	-0.15	
18038.00	89.540	160.930	7084.29	10290.46	-10091.19	2301.37	1728538.89	14362158.42	39°32'58.1689"N	80°41'14.5975"W	10350.28	167.153	0.62	-0.26	-0.56	
18133.00	89.570	160.430	7085.03	10385.46	-10180.83	2332.80	1728570.30	14362068.80	39°32'57.2818"N	80°41'14.2002"W	10444.68	167.094	0.53	0.03	-0.53	
18227.00	89.690	162.150	7085.64	10479.45	-10269.86	2362.95	1728600.44	14361979.81	39°32'56.4009"N	80°41'13.8193"W	10538.20	167.043	1.83	0.13	1.83	
18322.00	89.720	161.510	7086.13	10574.44	-10360.12	2392.58	1728630.06	14361889.59	39°32'55.5078"N	80°41'13.4451"W	10632.80	166.996	0.67	0.03	-0.67	
18417.00	89.350	161.410	7086.90	10669.43	-10450.19	2422.78	1728660.25	14361799.56	39°32'54.6166"N	80°41'13.0635"W	10727.36	166.947	0.40	-0.39	-0.11	
18511.00	89.260	161.410	7088.04	10763.42	-10539.28	2452.75	1728690.20	14361710.50	39°32'53.7351"N	80°41'12.6850"W	10820.92	166.899	0.10	-0.10	0.00	
18606.00	89.660	161.340	7088.93	10858.42	-10629.30	2483.09	1728720.53	14361620.52	39°32'52.8444"N	80°41'12.3017"W	10915.48	166.851	0.43	0.42	-0.07	
18700.00	89.420	161.300	7089.69	10952.41	-10718.34	2513.19	1728750.62	14361531.51	39°32'51.9633"N	80°41'11.9213"W	11009.04	166.804	0.26	-0.26	-0.04	
18795.00	89.260	161.360	7090.78	11047.40	-10808.34	2543.60	1728781.02	14361441.55	39°32'51.0728"N	80°41'11.5372"W	11103.61	166.757	0.18	-0.17	0.06	
18889.00	89.050	161.550	7092.17	11141.39	-10897.45	2573.49	1728810.90	14361352.47	39°32'50.1911"N	80°41'11.1595"W	11197.20	166.713	0.30	-0.22	0.20	
18983.00	89.230	161.500	7093.58	11235.38	-10986.59	2603.28	1728840.67	14361263.36	39°32'49.3090"N	80°41'10.7833"W	11290.80	166.670	0.20	0.19	-0.05	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
19077.00	89.110	161.490	7094.94	11329.36	-11075.72	2633.11	1728870.49	14361174.27	39°32'48.4271"N	80°41'10.4064"W	11384.41	166.627	0.13	-0.13	-0.01	
19172.00	89.110	161.190	7096.42	11424.35	-11165.72	2663.50	1728900.87	14361084.31	39°32'47.5366"N	80°41'10.0225"W	11479.00	166.583	0.32	0.00	-0.32	
19268.00	88.950	161.460	7098.01	11518.33	-11254.76	2693.60	1728930.96	14360995.30	39°32'46.6556"N	80°41'9.6423"W	11572.60	166.541	0.33	-0.17	0.29	
19361.00	88.920	161.440	7099.77	11613.31	-11344.80	2723.81	1728961.16	14360905.29	39°32'45.7645"N	80°41'9.2606"W	11667.21	166.499	0.04	-0.03	-0.02	
19455.00	88.950	161.420	7101.52	11707.30	-11433.89	2753.74	1728991.08	14360816.24	39°32'44.8830"N	80°41'8.8825"W	11760.83	166.459	0.04	0.03	-0.02	
19550.00	88.980	161.910	7103.24	11802.27	-11524.06	2783.62	1729020.95	14360726.11	39°32'43.9909"N	80°41'8.5051"W	11855.48	166.420	0.52	0.03	0.52	
19644.00	88.920	161.320	7104.96	11896.25	-11613.24	2813.27	1729050.58	14360636.96	39°32'43.1084"N	80°41'8.1307"W	11949.14	166.383	0.63	-0.06	-0.63	
19739.00	89.230	161.440	7106.49	11991.24	-11703.26	2843.59	1729080.90	14360546.98	39°32'42.2177"N	80°41'7.7476"W	12043.77	166.343	0.35	0.33	0.13	
19833.00	89.230	161.690	7107.76	12085.22	-11792.43	2873.32	1729110.61	14360457.84	39°32'41.3354"N	80°41'7.3721"W	12137.43	166.308	0.27	0.00	0.27	
19927.00	89.290	160.360	7108.97	12179.21	-11881.31	2903.88	1729141.16	14360369.00	39°32'40.4559"N	80°41'6.9860"W	12231.03	166.266	1.42	0.06	-1.41	
20022.00	89.110	159.980	7110.30	12274.19	-11970.67	2936.10	1729173.37	14360279.67	39°32'39.5717"N	80°41'6.5786"W	12325.49	166.219	0.44	-0.19	-0.40	
20116.00	89.510	160.620	7111.43	12368.18	-12059.16	2967.79	1729205.04	14360191.22	39°32'38.6960"N	80°41'6.1782"W	12418.98	166.174	0.80	0.43	0.68	
20210.00	89.510	160.320	7112.23	12462.17	-12147.75	2999.21	1729236.45	14360102.66	39°32'37.8194"N	80°41'5.7810"W	12512.51	166.131	0.32	0.00	-0.32	
20305.00	89.450	159.880	7113.10	12557.16	-12237.07	3031.54	1729268.77	14360013.38	39°32'36.9354"N	80°41'5.3723"W	12606.99	166.086	0.47	-0.06	-0.46	
20399.00	89.480	160.230	7113.97	12651.14	-12325.43	3063.81	1729300.82	14359925.05	39°32'36.0611"N	80°41'4.9669"W	12700.47	166.041	0.37	0.03	0.37	
20493.00	89.540	160.480	7114.78	12745.13	-12413.95	3095.21	1729332.41	14359836.56	39°32'35.1851"N	80°41'4.5675"W	12794.01	166.000	0.27	0.06	0.27	
20587.00	89.480	160.440	7115.58	12839.12	-12502.54	3126.65	1729363.84	14359748.01	39°32'34.3085"N	80°41'4.1702"W	12887.57	165.959	0.08	-0.06	-0.04	
20682.00	89.540	160.120	7116.39	12934.11	-12591.96	3158.70	1729395.88	14359658.62	39°32'33.4236"N	80°41'3.7650"W	12982.10	165.918	0.34	0.06	-0.34	
20776.00	89.570	160.700	7117.12	13028.10	-12680.52	3190.22	1729427.38	14359570.10	39°32'32.5473"N	80°41'3.3667"W	13075.67	165.878	0.62	0.03	0.62	
20871.00	89.480	159.990	7117.91	13123.09	-12769.98	3222.17	1729459.32	14359480.68	39°32'31.6620"N	80°41'2.9629"W	13170.22	165.839	0.75	-0.09	-0.75	
20965.00	89.720	160.590	7118.57	13217.08	-12858.47	3253.87	1729491.01	14359392.22	39°32'30.7863"N	80°41'2.5622"W	13263.78	165.799	0.69	0.26	0.64	
21059.00	89.570	160.430	7119.15	13311.08	-12947.08	3285.23	1729522.36	14359303.64	39°32'29.9095"N	80°41'2.1658"W	13357.38	165.762	0.23	-0.16	-0.17	
21153.00	89.380	160.390	7120.01	13405.07	-13035.64	3316.75	1729553.86	14359215.12	39°32'29.0332"N	80°41'1.7675"W	13450.97	165.725	0.21	-0.20	-0.04	
21248.00	89.540	160.330	7120.91	13500.06	-13125.11	3348.68	1729585.78	14359125.69	39°32'28.1478"N	80°41'1.3640"W	13545.55	165.687	0.18	0.17	-0.06	
21342.00	89.350	160.440	7121.82	13594.05	-13213.65	3380.23	1729617.32	14359037.18	39°32'27.2716"N	80°41'0.9652"W	13639.15	165.651	0.23	-0.20	0.12	
21436.00	89.570	160.580	7122.70	13688.04	-13302.26	3411.59	1729648.67	14358948.61	39°32'26.3948"N	80°41'0.5689"W	13732.77	165.616	0.28	0.23	0.15	
21530.00	89.480	160.560	7123.48	13782.04	-13390.90	3442.86	1729679.93	14358860.00	39°32'25.5176"N	80°41'0.1738"W	13826.41	165.581	0.10	-0.10	-0.02	
21624.00	89.480	160.380	7124.34	13876.03	-13479.49	3474.28	1729711.34	14358771.45	39°32'24.6410"N	80°40'59.7767"W	13920.03	165.547	0.19	0.00	-0.19	
21718.00	89.450	160.190	7125.21	13970.02	-13567.97	3505.99	1729743.03	14358683.00	39°32'23.7654"N	80°40'59.3759"W	14013.63	165.512	0.20	-0.03	-0.20	
21813.00	89.540	160.600	7126.05	14065.01	-13657.48	3537.87	1729774.89	14358593.54	39°32'22.8798"N	80°40'58.9731"W	14108.25	165.477	0.44	0.09	0.43	



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

WELLPATH DATA (247 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
21907.00	89.570	160.420	7126.78	14159.00	-13746.07	3569.23	1729806.24	14358504.97	39°32'22.0030"N	80°40'58.5768"W	14201.90	165.444	0.19	0.03	-0.19	
22001.00	89.420	160.250	7127.61	14252.99	-13834.59	3600.86	1729837.86	14358416.49	39°32'21.1271"N	80°40'58.1770"W	14295.52	165.411	0.24	-0.16	-0.18	
22095.00	89.690	160.820	7128.34	14346.99	-13923.21	3632.18	1729869.17	14358327.90	39°32'20.2501"N	80°40'57.7812"W	14389.18	165.379	0.67	0.29	0.61	
22190.00	89.600	160.610	7128.93	14441.98	-14012.88	3663.56	1729900.54	14358238.26	39°32'19.3628"N	80°40'57.3848"W	14483.87	165.348	0.24	-0.09	-0.22	
22284.00	89.540	160.870	7129.63	14535.98	-14101.62	3694.56	1729931.53	14358149.56	39°32'18.4847"N	80°40'56.9930"W	14577.56	165.319	0.28	-0.06	0.28	
22359.00	89.420	159.950	7130.31	14610.97	-14172.27	3719.71	1729956.66	14358078.94	39°32'17.7855"N	80°40'56.6753"W	14652.29	165.294	1.24	-0.16	-1.23	
22384.00†	89.420	159.950	7130.57	14635.97	-14195.76	3728.28	1729965.23	14358055.46	39°32'17.5531"N	80°40'56.5669"W	14677.18	165.285	0.00	0.00	0.00	Projected MD at TD: 22384'

HOLE & CASING SECTIONS - Ref Wellbore: Pine Unit 1H AWB Ref Wellpath: Pine Unit 1H AWP Proj: 22384'

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	0.38	-0.24
17.5in Open Hole	130.00	384.00	254.00	130.00	383.99	0.38	-0.24	0.90	-1.18
13.375in Casing Surface	30.00	364.00	334.00	30.00	364.00	0.00	0.00	0.87	-0.92
12.375in Open Hole	384.00	3568.00	3184.00	383.99	3500.70	0.90	-1.18	213.94	-575.30
9.625in Casing Intermediate	30.00	3538.00	3508.00	30.00	3471.26	0.00	0.00	212.12	-569.82
8.75in Open Hole	3568.00	6592.00	3024.00	3500.70	6437.64	213.94	-575.30	422.82	-1252.74
8.5in Open Hole	6592.00	22384.00	15792.00	6437.64	7130.57	422.82	-1252.74	-14195.76	3728.28
5.5in Casing Production	30.00	22364.00	22334.00	30.00	7130.36	0.00	0.00	-14176.97	3721.42



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine 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
Pine Unit 1H POE Rev-3	7039.00	-119.21	-1128.09	1725110.77	14372126.47	39°34'36.8394"N	80°41'57.9518"W	point
Pine Unit 1H BHL Rev-2	7044.00	-14447.17	3807.52	1730044.44	14357804.15	39°32'15.0656"N	80°40'55.5669"W	point
Pine Unit 1H BHL Rev-3	7067.00	-14210.80	3726.10	1729963.05	14358040.42	39°32'17.4045"N	80°40'56.5955"W	point
Pine Unit 1H LP Rev-3	7067.00	-306.69	-1063.51	1725175.33	14371939.06	39°34'34.9843"N	80°41'57.1350"W	point
Pine Unit 1H 50' L/R Hard Line R-2	7500.00	-7165.00	1299.00	1727536.91	14365083.45	39°33'27.1232"N	80°41'27.2652"W	rectangle
2D Rectangle 14904.2 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Pine Unit 1H AWB Ref Wellpath: Pine Unit 1H AWP Proj: 22384'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	260.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-260')	Pine Unit 1H AWB	7/20/2024
260.00	3495.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-3/8"> (260')(471'-3495')	Pine Unit 1H AWB	7/20/2024
3495.00	6483.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3495')(3558'-6483')	Pine Unit 1H AWB	8/12/2024
6483.00	22384.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH Lucida <8-1/2"> (6483')(6567'-22359')	Pine Unit 1H AWB	8/12/2024



Actual Wellpath Report

Pine Unit 1H AWP Proj: 22384'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Pine Unit 1H
Field	Wetzel	API	47-103-03648-0000
Facility	Galmish Pad	Wellbore	Pine Unit 1H AWB
Slot	Slot F		

COMMENTS

Wellpath general comments

API: 47-103-03648-0000

BH Job #: 112320214

Rig: H&P 519

Duration: 8/14/2024-8/19/2024

Gyrodata MS Gyro <17-1/2"> (100'-260')

APS EM <12-3/8"> (260')(471'-3495')

APS EM <8-3/4"> (3495')(3558'-6483')

BH Lucida <8-1/2"> (6483')(6567'-22359')

Sycamore: 6854' MD

Middlesex: 7014' MD

Burkett: 7161' MD

Tully: 7219' MD

Marcellus POE: 7443' MD

Projected MD at TD: 22384'