



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999604	Report Generated	1/16/2020 at 10:41:02 AM
Convergence at slot	0.13° 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	16.96	-10.68	1700246.00	14308717.51	39°24'10.5980"N	80°47'17.5250"W
Facility Reference Pt			1700256.68	14308700.56	39°24'10.4301"N	80°47'17.3894"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	768.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	768.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #03)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.74°



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WELLPATH DATA (209 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	0.00	325.470	0.00	0.00	0.00	0.00	1700246.00	14308717.51	39°24'10.5980"N	80°47'17.5250"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.00	325.470	25.00	0.00	0.00	0.00	1700246.00	14308717.51	39°24'10.5980"N	80°47'17.5250"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.330	325.470	100.00	-0.21	0.18	-0.12	1700245.88	14308717.69	39°24'10.5997"N	80°47'17.5265"W	0.22	325.470	0.44	0.44	0.00	Gyrodata MS Gyro <17-1/2"> (100'-388')
125.00	0.230	351.170	125.00	-0.33	0.29	-0.17	1700245.83	14308717.80	39°24'10.6008"N	80°47'17.5271"W	0.33	329.207	0.63	-0.40	102.80	
150.00	0.230	18.980	150.00	-0.42	0.38	-0.16	1700245.84	14308717.89	39°24'10.6018"N	80°47'17.5270"W	0.42	337.078	0.44	0.00	111.24	
175.00	0.240	10.250	175.00	-0.50	0.48	-0.14	1700245.86	14308717.99	39°24'10.6028"N	80°47'17.5267"W	0.50	344.194	0.15	0.04	-34.92	
200.00	0.150	11.190	200.00	-0.58	0.57	-0.12	1700245.88	14308718.08	39°24'10.6036"N	80°47'17.5265"W	0.58	347.941	0.36	-0.36	3.76	
225.00	0.170	32.040	225.00	-0.63	0.63	-0.09	1700245.91	14308718.14	39°24'10.6042"N	80°47'17.5262"W	0.64	351.426	0.24	0.08	83.40	
250.00	0.140	31.170	250.00	-0.67	0.69	-0.06	1700245.94	14308718.20	39°24'10.6048"N	80°47'17.5257"W	0.69	355.054	0.12	-0.12	-3.48	
275.00	0.100	43.050	275.00	-0.70	0.73	-0.03	1700245.97	14308718.24	39°24'10.6052"N	80°47'17.5253"W	0.73	357.739	0.19	-0.16	47.52	
300.00	0.100	75.280	300.00	-0.71	0.75	0.01	1700246.01	14308718.26	39°24'10.6054"N	80°47'17.5249"W	0.75	0.548	0.22	0.00	128.92	
325.00	0.160	85.680	325.00	-0.70	0.76	0.06	1700246.06	14308718.27	39°24'10.6055"N	80°47'17.5241"W	0.76	4.750	0.26	0.24	41.60	
350.00	0.250	97.910	350.00	-0.67	0.75	0.15	1700246.15	14308718.26	39°24'10.6054"N	80°47'17.5230"W	0.77	11.386	0.40	0.36	48.92	
375.00	0.300	111.610	375.00	-0.60	0.72	0.27	1700246.27	14308718.23	39°24'10.6051"N	80°47'17.5215"W	0.77	20.259	0.33	0.20	54.80	
388.00	0.330	98.120	388.00	-0.56	0.71	0.34	1700246.34	14308718.21	39°24'10.6049"N	80°47'17.5207"W	0.78	25.449	0.61	0.23	-103.77	
476.00	0.420	110.360	476.00	-0.25	0.56	0.89	1700246.89	14308718.07	39°24'10.6035"N	80°47'17.5136"W	1.05	57.924	0.14	0.10	13.91	Gyrodata MS Gyro <12-1/4"> (388')(476'-835')
567.00	0.840	109.840	566.99	0.37	0.21	1.83	1700247.83	14308717.72	39°24'10.6001"N	80°47'17.5017"W	1.84	83.309	0.46	0.46	-0.57	
655.00	1.570	77.800	654.97	0.89	0.25	3.61	1700249.61	14308717.76	39°24'10.6004"N	80°47'17.4789"W	3.62	86.037	1.10	0.83	-36.41	
743.00	3.100	60.460	742.90	0.56	1.68	6.86	1700252.86	14308719.19	39°24'10.6144"N	80°47'17.4375"W	7.06	76.257	1.90	1.74	-19.70	
835.00	4.280	61.080	834.70	-0.57	4.57	12.03	1700258.03	14308722.07	39°24'10.6428"N	80°47'17.3716"W	12.87	69.222	1.28	1.28	0.67	
961.00	4.210	50.940	960.36	-3.08	9.75	19.74	1700265.73	14308727.26	39°24'10.6939"N	80°47'17.2732"W	22.02	63.705	0.60	-0.06	-8.05	APS EM <12-1/4"> (835')(961'-2550')
1055.00	3.830	40.820	1054.13	-5.92	14.30	24.47	1700270.46	14308731.81	39°24'10.7388"N	80°47'17.2128"W	28.34	59.693	0.85	-0.40	-10.77	
1150.00	4.550	47.540	1148.88	-9.09	19.25	29.32	1700275.31	14308736.75	39°24'10.7875"N	80°47'17.1508"W	35.08	56.719	0.92	0.76	7.07	
1245.00	4.650	48.560	1243.57	-12.15	24.34	34.99	1700280.98	14308741.84	39°24'10.8377"N	80°47'17.0785"W	42.62	55.176	0.14	0.11	1.07	
1339.00	3.200	46.840	1337.35	-14.76	28.66	39.76	1700285.75	14308746.16	39°24'10.8803"N	80°47'17.0176"W	49.01	54.218	1.55	-1.54	-1.83	
1434.00	1.970	44.340	1432.25	-16.62	31.64	42.84	1700288.82	14308749.14	39°24'10.9097"N	80°47'16.9783"W	53.25	53.551	1.30	-1.29	-2.63	
1528.00	0.640	50.140	1526.22	-17.56	33.13	44.37	1700290.35	14308750.63	39°24'10.9244"N	80°47'16.9588"W	55.37	53.251	1.42	-1.41	6.17	
1622.00	0.530	229.640	1620.22	-17.59	33.19	44.44	1700290.42	14308750.68	39°24'10.9250"N	80°47'16.9578"W	55.46	53.250	1.24	-0.12	190.96	
1716.00	1.660	201.560	1714.20	-16.38	31.64	43.61	1700289.59	14308749.14	39°24'10.9097"N	80°47'16.9685"W	53.88	54.039	1.30	1.20	-29.87	
1811.00	1.390	201.060	1809.17	-14.43	29.28	42.69	1700288.67	14308746.78	39°24'10.8864"N	80°47'16.9803"W	51.77	55.552	0.28	-0.28	-0.53	



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Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (209 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	("/100ft)	("/100ft)	("/100ft)	
1906.00	1.180	277.500	1904.15	-13.97	28.34	41.31	1700287.29	14308745.83	39°24'10.8771"N	80°47'16.9979"W	50.09	55.550	1.68	-0.22	80.46	
2001.00	3.710	314.370	1999.06	-17.12	30.61	38.14	1700284.12	14308748.11	39°24'10.8997"N	80°47'17.0382"W	48.90	51.246	3.01	2.66	38.81	
2095.00	7.000	322.330	2092.64	-25.23	37.28	32.46	1700278.45	14308754.77	39°24'10.9656"N	80°47'17.1103"W	49.43	41.052	3.58	3.50	8.47	
2190.00	7.290	316.810	2186.90	-36.15	46.25	24.80	1700270.79	14308763.74	39°24'11.0545"N	80°47'17.2077"W	52.48	28.199	0.78	0.31	-5.81	
2285.00	6.710	310.590	2281.19	-46.37	54.26	16.46	1700262.45	14308771.75	39°24'11.1339"N	80°47'17.3137"W	56.70	16.875	1.00	-0.61	-6.55	
2379.00	7.120	312.040	2374.51	-56.13	61.73	7.96	1700253.96	14308779.22	39°24'11.2079"N	80°47'17.4217"W	62.24	7.349	0.47	0.44	1.54	
2474.00	6.640	324.400	2468.83	-66.49	70.14	0.39	1700246.39	14308787.62	39°24'11.2912"N	80°47'17.5179"W	70.14	0.320	1.63	-0.51	13.01	
2550.00	7.070	336.520	2544.29	-75.34	78.00	-4.03	1700241.97	14308795.48	39°24'11.3690"N	80°47'17.5740"W	78.11	357.043	1.98	0.57	15.95	
2644.00	7.680	340.920	2637.51	-87.38	89.25	-8.39	1700237.62	14308806.72	39°24'11.4802"N	80°47'17.6292"W	89.64	354.631	0.88	0.65	4.68	BHI NaviTrak <8-3/4">(2550')(2644'-3783')
2739.00	11.450	336.740	2731.18	-103.13	103.91	-14.19	1700231.82	14308821.38	39°24'11.6253"N	80°47'17.7026"W	104.88	352.225	4.03	3.97	-4.40	
2834.00	11.560	339.100	2824.27	-122.03	121.47	-21.31	1700224.70	14308838.93	39°24'11.7990"N	80°47'17.7928"W	123.32	350.050	0.51	0.12	2.48	
2929.00	10.580	334.880	2917.50	-140.20	138.26	-28.41	1700217.60	14308855.71	39°24'11.9651"N	80°47'17.8827"W	141.15	348.390	1.34	-1.03	-4.44	
3023.00	9.440	331.330	3010.07	-156.35	152.84	-35.77	1700210.25	14308870.29	39°24'12.1094"N	80°47'17.9761"W	156.97	346.828	1.38	-1.21	-3.78	
3118.00	11.040	343.640	3103.57	-173.10	168.40	-42.07	1700203.95	14308885.85	39°24'12.2634"N	80°47'18.0559"W	173.58	345.974	2.84	1.68	12.96	
3213.00	14.610	359.560	3196.21	-193.61	189.12	-44.73	1700201.29	14308906.56	39°24'12.4682"N	80°47'18.0891"W	194.34	346.695	5.25	3.76	16.76	
3308.00	15.520	349.710	3287.96	-217.61	213.62	-47.09	1700198.93	14308931.04	39°24'12.7103"N	80°47'18.1184"W	218.74	347.569	2.86	0.96	-10.37	
3402.00	14.880	332.530	3378.72	-241.99	236.71	-54.91	1700191.12	14308954.13	39°24'12.9388"N	80°47'18.2173"W	242.99	346.941	4.82	-0.68	-18.28	
3497.00	11.870	325.070	3471.14	-263.40	255.55	-66.13	1700179.90	14308972.96	39°24'13.1252"N	80°47'18.3598"W	263.97	345.491	3.65	-3.17	-7.85	
3593.00	10.140	335.760	3565.38	-281.27	271.35	-75.25	1700170.78	14308988.75	39°24'13.2816"N	80°47'18.4755"W	281.59	344.500	2.78	-1.80	11.14	
3688.00	8.080	341.460	3659.18	-296.26	285.31	-80.81	1700165.22	14309002.70	39°24'13.4197"N	80°47'18.5459"W	296.53	344.186	2.36	-2.17	6.00	
3783.00	8.420	333.310	3753.20	-309.82	297.85	-86.06	1700159.98	14309015.24	39°24'13.5438"N	80°47'18.6124"W	310.04	343.884	1.28	0.36	-8.58	
3891.00	7.960	337.650	3860.10	-325.10	311.83	-92.45	1700153.58	14309029.22	39°24'13.6821"N	80°47'18.6934"W	325.25	343.486	0.71	-0.43	4.02	BH AT Curve <8-1/2">(3783')(3891'-17886')
3985.00	8.180	330.660	3953.17	-338.15	323.68	-98.21	1700147.83	14309041.06	39°24'13.7994"N	80°47'18.7664"W	338.25	343.122	1.07	0.23	-7.44	
4079.00	8.290	321.450	4046.20	-351.07	334.81	-105.71	1700140.34	14309052.19	39°24'13.9096"N	80°47'18.8616"W	351.10	342.478	1.41	0.12	-9.80	
4173.00	8.140	318.180	4139.24	-363.53	345.07	-114.37	1700131.68	14309062.45	39°24'14.0112"N	80°47'18.9716"W	363.53	341.663	0.52	-0.16	-3.48	
4268.00	7.700	317.030	4233.33	-375.48	354.74	-123.19	1700122.86	14309072.11	39°24'14.1069"N	80°47'19.0837"W	375.52	340.850	0.49	-0.46	-1.21	
4362.00	7.650	316.820	4326.49	-386.87	363.91	-131.76	1700114.29	14309081.28	39°24'14.1978"N	80°47'19.1926"W	387.03	340.096	0.06	-0.05	-0.22	
4457.00	7.760	316.880	4420.63	-398.42	373.19	-140.49	1700105.57	14309090.55	39°24'14.2897"N	80°47'19.3035"W	398.76	339.371	0.12	0.12	-0.15	
4552.00	7.530	319.840	4514.79	-410.00	382.61	-148.91	1700097.15	14309099.97	39°24'14.3830"N	80°47'19.4105"W	410.57	338.735	0.50	-0.24	3.33	
4646.00	7.260	327.670	4608.01	-421.48	392.34	-156.05	1700090.01	14309109.69	39°24'14.4793"N	80°47'19.5012"W	422.23	338.310	1.11	-0.29	8.33	



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Slot	Slot #03		

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4740.00	7.210	335.830	4701.26	-433.11	402.74	-161.65	1700084.42	14309120.09	39°24'14.5822"N	80°47'19.5722"W	433.97	338.131	1.09	-0.05	8.68	
4835.00	9.460	338.630	4795.25	-446.83	415.45	-166.93	1700079.13	14309132.79	39°24'14.7080"N	80°47'19.6391"W	447.73	338.109	2.41	2.37	2.95	
4929.00	10.010	333.260	4887.90	-462.63	429.94	-173.42	1700072.65	14309147.28	39°24'14.8513"N	80°47'19.7214"W	463.60	338.033	1.13	0.59	-5.71	
5024.00	10.040	327.920	4981.45	-478.84	444.33	-181.54	1700064.54	14309161.66	39°24'14.9937"N	80°47'19.8243"W	479.98	337.777	0.98	0.03	-5.62	
5119.00	9.960	324.970	5075.01	-494.74	458.07	-190.65	1700055.43	14309175.40	39°24'15.1298"N	80°47'19.9400"W	496.16	337.403	0.55	-0.08	-3.11	
5213.00	9.870	328.500	5167.61	-510.37	471.60	-199.53	1700046.55	14309188.92	39°24'15.2637"N	80°47'20.0527"W	512.07	337.068	0.65	-0.10	3.76	
5307.00	9.950	332.920	5260.21	-526.24	485.70	-207.43	1700038.65	14309203.02	39°24'15.4032"N	80°47'20.1530"W	528.14	336.874	0.81	0.09	4.70	
5402.00	9.980	332.670	5353.77	-542.48	500.32	-214.95	1700031.14	14309217.63	39°24'15.5479"N	80°47'20.2483"W	544.54	336.751	0.06	0.03	-0.26	
5498.00	9.870	329.230	5448.34	-558.72	514.78	-222.98	1700023.11	14309232.09	39°24'15.6910"N	80°47'20.3501"W	561.00	336.580	0.63	-0.11	-3.58	
5592.00	9.930	324.730	5540.94	-574.34	528.32	-231.78	1700014.31	14309245.62	39°24'15.8250"N	80°47'20.4619"W	576.93	336.313	0.83	0.06	-4.79	
5687.00	6.010	294.250	5635.04	-585.54	537.06	-241.05	1700005.05	14309254.35	39°24'15.9116"N	80°47'20.5797"W	588.67	335.828	5.93	-4.13	-32.08	
5782.00	5.870	182.900	5729.76	-584.37	534.24	-245.84	1700000.26	14309251.54	39°24'15.8839"N	80°47'20.6409"W	588.09	335.290	10.32	-0.15	-117.21	
5877.00	12.200	171.080	5823.54	-569.92	519.46	-244.53	1700001.57	14309236.76	39°24'15.7377"N	80°47'20.6246"W	574.14	334.792	6.91	6.66	-12.44	
5971.00	17.360	167.570	5914.40	-546.15	495.93	-239.97	1700006.13	14309213.25	39°24'15.5051"N	80°47'20.5672"W	550.94	334.179	5.57	5.49	-3.73	
6066.00	24.430	165.780	6003.10	-512.41	463.01	-232.08	1700014.01	14309180.33	39°24'15.1795"N	80°47'20.4677"W	517.92	333.378	7.47	7.44	-1.88	
6161.00	32.000	164.630	6086.75	-467.61	419.63	-220.57	1700025.52	14309136.97	39°24'14.7505"N	80°47'20.3223"W	474.07	332.273	7.99	7.97	-1.21	
6256.00	39.050	159.990	6164.03	-412.48	367.17	-203.63	1700042.45	14309084.53	39°24'14.2316"N	80°47'20.1081"W	419.85	330.987	7.94	7.42	-4.88	
6278.00†	41.193	159.705	6180.86	-398.31	353.86	-198.75	1700047.33	14309071.23	39°24'14.0999"N	80°47'20.0463"W	405.85	330.679	9.78	9.74	-1.29	Middlesex: 6278' MD
6350.00	48.210	158.920	6232.00	-347.75	306.52	-180.85	1700065.23	14309023.90	39°24'13.6316"N	80°47'19.8196"W	355.89	329.459	9.78	9.75	-1.09	
6445.00	56.410	161.830	6290.04	-272.67	235.74	-155.72	1700090.34	14308953.16	39°24'12.9316"N	80°47'19.5017"W	282.53	326.553	8.96	8.63	3.06	
6491.00†	59.718	163.681	6314.37	-233.64	198.47	-144.16	1700101.89	14308915.90	39°24'12.5629"N	80°47'19.3556"W	245.30	324.006	7.96	7.19	4.02	Burkett: 6491' MD
6492.00	59.790	163.720	6314.88	-232.78	197.64	-143.92	1700102.14	14308915.07	39°24'12.5547"N	80°47'19.3525"W	244.49	323.937	7.96	7.22	3.88	
6539.00	62.760	164.560	6337.46	-191.61	157.99	-132.66	1700113.39	14308875.44	39°24'12.1626"N	80°47'19.2103"W	206.30	319.981	6.51	6.32	1.79	
6550.00†	63.827	164.425	6342.41	-181.79	148.53	-130.04	1700116.02	14308865.98	39°24'12.0689"N	80°47'19.1771"W	197.41	318.797	9.76	9.70	-1.23	Tully: 6550' MD
6586.00	67.320	164.000	6357.29	-149.05	116.99	-121.12	1700124.93	14308834.45	39°24'11.7571"N	80°47'19.0644"W	168.39	314.006	9.76	9.70	-1.18	
6633.00	72.530	163.430	6373.42	-104.95	74.63	-108.74	1700137.30	14308792.11	39°24'11.3381"N	80°47'18.9080"W	131.89	304.463	11.14	11.09	-1.21	
6651.00†	73.610	163.144	6378.66	-87.73	58.14	-103.79	1700142.25	14308775.63	39°24'11.1750"N	80°47'18.8454"W	118.96	299.256	6.19	6.00	-1.59	Hamilton: 6651' MD
6680.00	75.350	162.690	6386.42	-59.80	31.43	-95.58	1700150.46	14308748.93	39°24'10.9109"N	80°47'18.7416"W	100.62	288.203	6.19	6.00	-1.57	
6692.00†	75.957	162.637	6389.39	-48.17	20.33	-92.12	1700153.92	14308737.84	39°24'10.8011"N	80°47'18.6978"W	94.33	282.448	5.08	5.06	-0.44	Marcellus POE: 6692' MD
6728.00	77.780	162.480	6397.57	-13.12	-13.11	-81.61	1700164.42	14308704.40	39°24'10.4703"N	80°47'18.5650"W	82.65	260.872	5.08	5.06	-0.44	



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (209 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
6823.00	84.920	161.700	6411.85	80.74	-102.42	-52.74	1700193.28	14308615.13	39°24'9.5869"N	80°47'18.1999"W	115.20	207.245	7.56	7.52	-0.82	
6918.00	90.430	161.930	6415.70	175.62	-192.57	-23.13	1700222.88	14308525.02	39°24'8.6953"N	80°47'17.8253"W	193.95	186.848	5.81	5.80	0.24	
7013.00	89.850	158.570	6415.47	270.58	-281.96	8.97	1700254.97	14308435.66	39°24'7.8110"N	80°47'17.4191"W	282.11	178.178	3.59	-0.61	-3.54	
7108.00	89.600	157.380	6415.93	365.37	-370.03	44.60	1700290.58	14308347.63	39°24'6.9398"N	80°47'16.9679"W	372.71	173.128	1.28	-0.26	-1.25	
7203.00	89.570	156.960	6416.61	460.06	-457.58	81.45	1700327.42	14308260.11	39°24'6.0736"N	80°47'16.5010"W	464.78	169.907	0.44	-0.03	-0.44	
7297.00	89.260	159.340	6417.57	553.87	-544.82	116.43	1700362.39	14308172.91	39°24'5.2106"N	80°47'16.0580"W	557.12	167.937	2.55	-0.33	2.53	
7392.00	89.820	161.210	6418.34	648.83	-634.24	148.50	1700394.44	14308083.52	39°24'4.3260"N	80°47'15.6523"W	651.39	166.823	2.05	0.59	1.97	
7487.00	90.400	158.530	6418.15	743.77	-723.43	181.19	1700427.11	14307994.37	39°24'3.4438"N	80°47'15.2385"W	745.77	165.939	2.89	0.61	-2.82	
7581.00	89.600	158.290	6418.15	837.61	-810.83	215.77	1700461.69	14307907.00	39°24'2.5791"N	80°47'14.8005"W	839.05	165.098	0.89	-0.85	-0.26	
7676.00	89.570	159.540	6418.84	932.49	-899.47	249.95	1700495.85	14307818.40	39°24'1.7023"N	80°47'14.3679"W	933.55	164.470	1.32	-0.03	1.32	
7771.00	89.690	160.380	6419.46	1027.44	-988.71	282.50	1700528.39	14307729.19	39°24'0.8195"N	80°47'13.9559"W	1028.28	164.054	0.89	0.13	0.88	
7866.00	89.690	157.760	6419.97	1122.33	-1077.43	316.44	1700562.31	14307640.50	39°23'59.9418"N	80°47'13.5263"W	1122.94	163.633	2.76	0.00	-2.76	
7961.00	89.510	158.790	6420.63	1217.15	-1165.68	351.60	1700597.46	14307552.29	39°23'59.0688"N	80°47'13.0810"W	1217.55	163.215	1.10	-0.19	1.08	
8056.00	89.350	161.240	6421.58	1312.10	-1254.95	384.06	1700629.91	14307463.06	39°23'58.1857"N	80°47'12.6701"W	1312.41	162.984	2.58	-0.17	2.58	
8151.00	89.450	162.260	6422.57	1407.09	-1345.17	413.81	1700659.65	14307372.88	39°23'57.2934"N	80°47'12.2939"W	1407.38	162.901	1.08	0.11	1.07	
8245.00	89.260	161.220	6423.63	1501.08	-1434.43	443.26	1700689.09	14307283.65	39°23'56.4105"N	80°47'11.9214"W	1501.35	162.828	1.12	-0.20	-1.11	
8340.00	89.140	161.460	6424.96	1596.07	-1524.42	473.66	1700719.47	14307193.69	39°23'55.5203"N	80°47'11.5370"W	1596.31	162.739	0.28	-0.13	0.25	
8435.00	88.920	161.270	6426.57	1691.05	-1614.43	504.01	1700749.81	14307103.72	39°23'54.6300"N	80°47'11.1531"W	1691.27	162.662	0.31	-0.23	-0.20	
8529.00	89.230	164.710	6428.08	1785.01	-1704.29	531.50	1700777.29	14307013.90	39°23'53.7412"N	80°47'10.8056"W	1785.25	162.679	3.67	0.33	3.66	
8624.00	90.030	165.640	6428.70	1879.83	-1796.13	555.80	1700801.58	14306922.10	39°23'52.8330"N	80°47'10.4988"W	1880.16	162.806	1.29	0.84	0.98	
8718.00	90.890	164.190	6427.94	1973.88	-1886.88	580.27	1700826.04	14306831.38	39°23'51.9355"N	80°47'10.1899"W	1974.09	162.906	1.79	0.91	-1.54	
8813.00	90.000	159.050	6427.20	2068.64	-1977.00	610.21	1700855.97	14306741.30	39°23'51.0441"N	80°47'9.8112"W	2069.03	162.847	5.49	-0.94	-5.41	
8907.00	89.600	160.350	6427.53	2162.58	-2065.16	642.82	1700888.57	14306653.17	39°23'50.1720"N	80°47'9.3984"W	2162.89	162.710	1.45	-0.43	1.38	
9002.00	89.260	163.810	6428.48	2257.56	-2155.53	672.05	1700917.78	14306562.83	39°23'49.2781"N	80°47'9.0289"W	2257.87	162.684	3.66	-0.36	3.64	
9097.00	90.030	165.290	6429.07	2352.44	-2247.09	697.35	1700943.07	14306471.31	39°23'48.3725"N	80°47'8.7093"W	2352.81	162.759	1.76	0.81	1.56	
9191.00	90.490	162.770	6428.64	2446.36	-2337.46	723.21	1700968.92	14306380.98	39°23'47.4788"N	80°47'8.3827"W	2446.78	162.808	2.73	0.49	-2.68	
9285.00	90.650	160.400	6427.70	2540.35	-2426.63	752.90	1700998.60	14306291.84	39°23'46.5968"N	80°47'8.0072"W	2540.75	162.763	2.53	0.17	-2.52	
9380.00	90.120	157.810	6427.07	2635.24	-2515.38	786.78	1701032.47	14306203.13	39°23'45.7189"N	80°47'7.5783"W	2635.55	162.631	2.78	-0.56	-2.73	
9475.00	89.750	159.250	6427.17	2730.08	-2603.78	821.55	1701067.22	14306114.76	39°23'44.8443"N	80°47'7.1381"W	2730.32	162.488	1.57	-0.39	1.52	
9570.00	88.890	162.920	6428.30	2825.05	-2693.63	852.34	1701098.00	14306024.95	39°23'43.9556"N	80°47'6.7486"W	2825.27	162.441	3.97	-0.91	3.86	



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (209 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
9664.00	89.850	165.430	6429.34	2918.95	-2784.05	877.97	1701123.62	14305934.56	39°23'43.0613"N	80°47'6.4249"W	2919.21	162.497	2.86	1.02	2.67	
9759.00	89.600	163.680	6429.79	3013.83	-2875.62	903.27	1701148.91	14305843.04	39°23'42.1557"N	80°47'6.1055"W	3014.15	162.562	1.86	-0.26	-1.84	
9853.00	88.650	164.060	6431.23	3107.76	-2965.91	929.38	1701175.01	14305752.78	39°23'41.2627"N	80°47'5.7756"W	3108.11	162.601	1.09	-1.01	0.40	
9947.00	89.540	163.570	6432.71	3201.68	-3056.17	955.58	1701201.20	14305662.56	39°23'40.3700"N	80°47'5.4446"W	3202.08	162.637	1.08	0.95	-0.52	
10042.00	89.820	164.100	6433.24	3296.62	-3147.41	982.03	1701227.63	14305571.35	39°23'39.4676"N	80°47'5.1105"W	3297.05	162.672	0.63	0.29	0.56	
10137.00	90.220	162.920	6433.21	3391.57	-3238.50	1008.99	1701254.59	14305480.30	39°23'38.5667"N	80°47'4.7698"W	3392.04	162.695	1.31	0.42	-1.24	
10231.00	88.890	161.910	6433.94	3485.56	-3328.10	1037.39	1701282.98	14305390.73	39°23'37.6804"N	80°47'4.4109"W	3486.03	162.687	1.78	-1.41	-1.07	
10327.00	89.660	165.030	6435.15	3581.49	-3420.12	1064.70	1701310.27	14305298.76	39°23'36.7703"N	80°47'4.0658"W	3582.01	162.708	3.35	0.80	3.25	
10422.00	89.290	163.710	6436.02	3676.39	-3511.60	1090.29	1701335.86	14305207.31	39°23'35.8656"N	80°47'3.7426"W	3676.96	162.751	1.44	-0.39	-1.39	
10516.00	89.600	163.260	6436.94	3770.34	-3601.71	1117.01	1701362.56	14305117.23	39°23'34.9743"N	80°47'3.4050"W	3770.95	162.770	0.58	0.33	-0.48	
10611.00	89.140	160.800	6437.98	3865.32	-3692.07	1146.31	1701391.86	14305026.91	39°23'34.0806"N	80°47'3.0345"W	3865.93	162.751	2.63	-0.48	-2.59	
10706.00	88.400	160.330	6440.02	3960.28	-3781.63	1177.92	1701423.45	14304937.38	39°23'33.1946"N	80°47'2.6347"W	3960.84	162.699	0.92	-0.78	-0.49	
10800.00	88.830	165.270	6442.29	4054.21	-3871.37	1205.70	1701451.22	14304847.68	39°23'32.3070"N	80°47'2.2836"W	4054.78	162.701	5.27	0.46	5.26	
10895.00	89.020	165.040	6444.07	4149.02	-3963.19	1230.03	1701475.54	14304755.90	39°23'31.3990"N	80°47'1.9765"W	4149.68	162.758	0.31	0.20	-0.24	
10989.00	90.340	162.550	6444.60	4242.95	-4053.44	1256.26	1701501.76	14304665.68	39°23'30.5063"N	80°47'1.6451"W	4243.65	162.781	3.00	1.40	-2.65	
11084.00	91.260	159.650	6443.27	4337.93	-4143.30	1287.03	1701532.51	14304575.86	39°23'29.6175"N	80°47'1.2560"W	4338.59	162.744	3.20	0.97	-3.05	
11178.00	90.520	155.340	6441.81	4431.63	-4230.11	1322.99	1701568.47	14304489.08	39°23'28.7586"N	80°47'0.8005"W	4432.17	162.633	4.65	-0.79	-4.59	
11273.00	88.860	154.900	6442.33	4526.00	-4316.29	1362.96	1701608.42	14304402.94	39°23'27.9059"N	80°47'0.2941"W	4526.37	162.475	1.81	-1.75	-0.46	
11368.00	88.650	156.480	6444.39	4620.44	-4402.84	1402.06	1701647.50	14304316.42	39°23'27.0496"N	80°46'59.7988"W	4620.69	162.336	1.68	-0.22	1.66	
11463.00	88.550	159.800	6446.71	4715.21	-4490.97	1437.42	1701682.84	14304228.32	39°23'26.1777"N	80°46'59.3511"W	4715.40	162.252	3.50	-0.11	3.49	
11557.00	89.420	163.890	6448.38	4809.18	-4580.26	1466.69	1701712.11	14304139.07	39°23'25.2945"N	80°46'58.9810"W	4809.36	162.244	4.45	0.93	4.35	
11652.00	89.940	167.700	6448.91	4903.92	-4672.34	1490.00	1701735.41	14304047.03	39°23'24.3839"N	80°46'58.6869"W	4904.16	162.313	4.05	0.55	4.01	
11747.00	90.180	168.160	6448.81	4998.36	-4765.24	1509.87	1701755.26	14303954.17	39°23'23.4653"N	80°46'58.4368"W	4998.72	162.419	0.55	0.25	0.48	
11842.00	90.890	166.740	6447.92	5092.89	-4857.96	1530.51	1701775.90	14303861.48	39°23'22.5484"N	80°46'58.1767"W	5093.35	162.513	1.67	0.75	-1.49	
11936.00	91.380	161.830	6446.06	5186.75	-4948.40	1555.95	1701801.33	14303771.08	39°23'21.6539"N	80°46'57.8554"W	5187.26	162.545	5.25	0.52	-5.22	
12031.00	90.120	159.070	6444.82	5281.70	-5037.90	1587.74	1701833.11	14303681.61	39°23'20.7685"N	80°46'57.4533"W	5282.18	162.507	3.19	-1.33	-2.91	
12126.00	90.150	156.610	6444.59	5376.48	-5125.88	1623.57	1701868.92	14303593.67	39°23'19.8981"N	80°46'56.9996"W	5376.86	162.425	2.59	0.03	-2.59	
12221.00	90.400	152.570	6444.14	5470.72	-5211.67	1664.32	1701909.66	14303507.91	39°23'19.0493"N	80°46'56.4832"W	5470.97	162.289	4.26	0.26	-4.25	
12315.00	89.510	151.810	6444.21	5563.41	-5294.81	1708.18	1701953.50	14303424.80	39°23'18.2265"N	80°46'55.9272"W	5563.53	162.120	1.25	-0.95	-0.81	
12410.00	90.030	157.180	6444.59	5657.62	-5380.52	1749.07	1701994.37	14303339.13	39°23'17.3784"N	80°46'55.4091"W	5657.67	161.992	5.68	0.55	5.65	



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (209 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
12504.00	89.970	163.500	6444.59	5751.54	-5469.00	1780.68	1702025.97	14303250.69	39°23'16.5032"N	80°46'55.0092"W	5751.59	161.965	6.72	-0.06	6.72	
12599.00	90.060	167.170	6444.57	5846.34	-5560.89	1804.72	1702050.00	14303158.84	39°23'15.5944"N	80°46'54.7058"W	5846.41	162.020	3.86	0.09	3.86	
12693.00	90.150	168.850	6444.39	5939.77	-5652.83	1824.25	1702069.52	14303066.93	39°23'14.6852"N	80°46'54.4599"W	5939.90	162.114	1.79	0.10	1.79	
12787.00	91.510	165.870	6443.03	6033.30	-5744.53	1844.81	1702090.08	14302975.26	39°23'13.7784"N	80°46'54.2008"W	6033.49	162.196	3.48	1.45	-3.17	
12881.00	89.780	161.730	6441.97	6127.21	-5834.77	1871.03	1702116.29	14302885.06	39°23'12.8859"N	80°46'53.8697"W	6127.42	162.221	4.77	-1.84	-4.40	
12976.00	89.350	163.740	6442.69	6222.19	-5925.48	1899.22	1702144.47	14302794.38	39°23'11.9887"N	80°46'53.5134"W	6222.41	162.228	2.16	-0.45	2.12	
13070.00	90.060	168.950	6443.18	6315.85	-6016.79	1921.41	1702166.64	14302703.11	39°23'11.0657"N	80°46'53.2337"W	6316.14	162.290	5.59	0.76	5.54	
13164.00	90.340	169.930	6442.85	6409.00	-6109.20	1938.63	1702183.86	14302610.74	39°23'10.1720"N	80°46'53.0171"W	6409.42	162.394	1.08	0.30	1.04	
13259.00	90.740	168.950	6441.96	6503.14	-6202.58	1956.04	1702201.26	14302517.39	39°23'9.2486"N	80°46'52.7983"W	6503.70	162.497	1.11	0.42	-1.03	
13353.00	91.200	165.010	6440.36	6596.71	-6294.14	1977.21	1702222.43	14302425.88	39°23'8.3432"N	80°46'52.5315"W	6597.39	162.561	4.22	0.49	-4.19	
13448.00	91.380	160.340	6438.22	6691.65	-6384.78	2005.49	1702250.69	14302335.27	39°23'7.4467"N	80°46'52.1742"W	6692.34	162.562	4.92	0.19	-4.92	
13542.00	90.310	157.910	6436.84	6785.53	-6472.59	2038.98	1702284.17	14302247.49	39°23'6.5780"N	80°46'51.7504"W	6786.15	162.515	2.82	-1.14	-2.59	
13637.00	90.620	159.610	6436.07	6880.40	-6561.13	2073.39	1702318.57	14302158.99	39°23'5.7020"N	80°46'51.3149"W	6880.94	162.463	1.82	0.33	1.79	
13732.00	90.710	156.520	6434.96	6975.18	-6649.24	2108.87	1702354.03	14302070.92	39°23'4.8304"N	80°46'50.8657"W	6975.65	162.403	3.25	0.09	-3.25	
13826.00	89.690	155.950	6434.64	7068.75	-6735.27	2146.75	1702391.90	14301984.92	39°23'3.9792"N	80°46'50.3859"W	7069.11	162.321	1.24	-1.09	-0.61	
13921.00	89.080	159.250	6435.66	7163.48	-6823.08	2182.95	1702428.08	14301897.15	39°23'3.1105"N	80°46'49.9277"W	7163.77	162.259	3.53	-0.64	3.47	
14015.00	90.650	163.110	6435.88	7257.46	-6912.03	2213.26	1702458.38	14301808.23	39°23'2.2305"N	80°46'49.5443"W	7257.74	162.245	4.43	1.67	4.11	
14110.00	91.200	165.690	6434.34	7352.33	-7003.51	2238.80	1702483.91	14301716.78	39°23'1.3258"N	80°46'49.2219"W	7352.65	162.273	2.78	0.58	2.72	
14204.00	90.710	162.170	6432.78	7446.24	-7093.81	2264.82	1702509.92	14301626.52	39°23'0.4327"N	80°46'48.8934"W	7446.58	162.293	3.78	-0.52	-3.74	
14298.00	91.820	157.720	6430.70	7540.14	-7182.07	2297.03	1702542.12	14301538.30	39°22'59.5596"N	80°46'48.4858"W	7540.46	162.264	4.88	1.18	-4.73	
14393.00	90.250	153.850	6428.98	7634.59	-7268.68	2335.99	1702581.06	14301451.73	39°22'58.7027"N	80°46'47.9925"W	7634.82	162.184	4.40	-1.65	-4.07	
14487.00	90.150	156.010	6428.65	7727.92	-7353.82	2375.81	1702620.87	14301366.62	39°22'57.8603"N	80°46'47.4879"W	7728.07	162.096	2.30	-0.11	2.30	
14582.00	90.180	159.700	6428.38	7822.69	-7441.79	2411.62	1702656.66	14301278.68	39°22'56.9899"N	80°46'47.0346"W	7822.80	162.044	3.88	0.03	3.88	
14676.00	90.220	163.490	6428.05	7916.67	-7530.97	2441.29	1702686.32	14301189.54	39°22'56.1078"N	80°46'46.6595"W	7916.78	162.039	4.03	0.04	4.03	
14771.00	89.910	163.400	6427.95	8011.63	-7622.03	2468.36	1702713.38	14301098.51	39°22'55.2071"N	80°46'46.3176"W	8011.75	162.056	0.34	-0.33	-0.09	
14866.00	89.850	159.370	6428.14	8106.61	-7712.04	2498.68	1702743.68	14301008.54	39°22'54.3168"N	80°46'45.9343"W	8106.72	162.048	4.24	-0.06	-4.24	
14961.00	89.600	162.980	6428.60	8201.58	-7801.94	2529.33	1702774.32	14300918.67	39°22'53.4275"N	80°46'45.5468"W	8201.70	162.038	3.81	-0.26	3.80	
15055.00	89.970	165.420	6428.95	8295.49	-7892.38	2554.92	1702799.90	14300828.27	39°22'52.5330"N	80°46'45.2237"W	8295.62	162.062	2.63	0.39	2.60	
15150.00	90.090	167.320	6428.90	8390.18	-7984.70	2577.31	1702822.28	14300735.98	39°22'51.6200"N	80°46'44.9415"W	8390.35	162.111	2.00	0.13	2.00	
15244.00	90.120	166.580	6428.73	8483.79	-8076.28	2598.53	1702843.50	14300644.45	39°22'50.7144"N	80°46'44.6740"W	8484.02	162.164	0.79	0.03	-0.79	



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (209 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
15339.00	89.970	164.580	6428.66	8578.57	-8168.28	2622.19	1702867.14	14300552.48	39°22'49.8046"N	80°46'44.3756"W	8578.85	162.202	2.11	-0.16	-2.11	
15433.00	89.850	163.750	6428.80	8672.48	-8258.71	2647.84	1702892.78	14300462.09	39°22'48.9101"N	80°46'44.0518"W	8672.79	162.224	0.89	-0.13	-0.88	
15528.00	90.800	161.280	6428.27	8767.46	-8349.31	2676.38	1702921.31	14300371.52	39°22'48.0140"N	80°46'43.6912"W	8767.78	162.227	2.79	1.00	-2.60	
15622.00	89.380	161.950	6428.12	8861.46	-8438.51	2706.02	1702950.95	14300282.36	39°22'47.1317"N	80°46'43.3164"W	8861.77	162.220	1.67	-1.51	0.71	
15716.00	90.250	162.170	6428.42	8955.46	-8527.94	2734.98	1702979.89	14300192.96	39°22'46.2471"N	80°46'42.9505"W	8955.77	162.219	0.95	0.93	0.23	
15810.00	89.820	160.660	6428.36	9049.45	-8617.03	2764.93	1703009.83	14300103.91	39°22'45.3658"N	80°46'42.5718"W	9049.76	162.210	1.67	-0.46	-1.61	
15905.00	90.280	156.630	6428.28	9144.30	-8705.49	2799.52	1703044.41	14300015.48	39°22'44.4907"N	80°46'42.1341"W	9144.56	162.173	4.27	0.48	-4.24	
15999.00	89.140	155.070	6428.76	9237.79	-8791.26	2837.98	1703082.85	14299929.75	39°22'43.6421"N	80°46'41.6470"W	9237.99	162.109	2.06	-1.21	-1.66	
16094.00	89.690	159.600	6429.73	9332.48	-8878.90	2874.57	1703119.43	14299842.15	39°22'42.7750"N	80°46'41.1838"W	9332.63	162.060	4.80	0.58	4.77	
16189.00	89.540	160.020	6430.37	9427.43	-8968.06	2907.36	1703152.20	14299753.02	39°22'41.8930"N	80°46'40.7690"W	9427.55	162.038	0.47	-0.16	0.44	
16285.00	89.570	156.450	6431.11	9523.23	-9057.20	2942.95	1703187.78	14299663.92	39°22'41.0111"N	80°46'40.3186"W	9523.33	161.999	3.72	0.03	-3.72	
16378.00	89.570	157.930	6431.81	9615.93	-9142.92	2979.00	1703223.82	14299578.23	39°22'40.1630"N	80°46'39.8622"W	9616.00	161.953	1.59	0.00	1.59	
16473.00	89.380	160.920	6432.68	9710.84	-9231.84	3012.38	1703257.18	14299489.34	39°22'39.2833"N	80°46'39.4399"W	9710.89	161.928	3.15	-0.20	3.15	
16567.00	89.720	161.550	6433.42	9804.83	-9320.84	3042.62	1703287.41	14299400.37	39°22'38.4029"N	80°46'39.0576"W	9804.88	161.922	0.76	0.36	0.67	
16661.00	89.970	162.280	6433.67	9898.83	-9410.20	3071.80	1703316.58	14299311.05	39°22'37.5191"N	80°46'38.6888"W	9898.88	161.922	0.82	0.27	0.78	
16756.00	90.220	162.570	6433.51	9993.82	-9500.77	3100.48	1703345.25	14299220.53	39°22'36.6233"N	80°46'38.3264"W	9993.88	161.926	0.40	0.26	0.31	
16850.00	90.650	162.040	6432.80	10087.81	-9590.31	3129.06	1703373.81	14299131.01	39°22'35.7375"N	80°46'37.9654"W	10087.87	161.930	0.73	0.46	-0.56	
16945.00	89.880	158.300	6432.36	10182.76	-9679.66	3161.28	1703406.02	14299041.70	39°22'34.8536"N	80°46'37.5579"W	10182.81	161.914	4.02	-0.81	-3.94	
17040.00	89.940	160.120	6432.51	10277.66	-9768.47	3194.99	1703439.72	14298952.92	39°22'33.9750"N	80°46'37.1313"W	10277.70	161.889	1.92	0.06	1.92	
17134.00	89.660	164.440	6432.84	10371.64	-9857.99	3223.60	1703468.31	14298863.44	39°22'33.0896"N	80°46'36.7699"W	10371.67	161.892	4.61	-0.30	4.60	
17230.00	89.850	167.050	6433.25	10467.39	-9951.03	3247.23	1703491.94	14298770.44	39°22'32.1695"N	80°46'36.4718"W	10467.45	161.927	2.73	0.20	2.72	
17324.00	90.920	169.730	6432.62	10560.75	-10043.09	3266.15	1703510.85	14298678.41	39°22'31.2591"N	80°46'36.2338"W	10560.84	161.985	3.07	1.14	2.85	
17419.00	90.520	168.020	6431.42	10655.00	-10136.30	3284.48	1703529.17	14298585.25	39°22'30.3375"N	80°46'36.0034"W	10655.15	162.046	1.85	-0.42	-1.80	
17513.00	90.520	166.170	6430.57	10748.58	-10227.91	3305.47	1703550.15	14298493.67	39°22'29.4314"N	80°46'35.7390"W	10748.78	162.090	1.97	0.00	-1.97	
17608.00	90.370	164.700	6429.83	10843.38	-10319.86	3329.36	1703574.03	14298401.76	39°22'28.5221"N	80°46'35.4377"W	10843.62	162.119	1.56	-0.16	-1.55	
17702.00	90.740	161.610	6428.92	10937.34	-10409.81	3356.59	1703601.26	14298311.84	39°22'27.6324"N	80°46'35.0937"W	10937.59	162.128	3.31	0.39	-3.29	
17797.00	90.060	158.510	6428.26	11032.28	-10499.10	3388.99	1703633.64	14298222.59	39°22'26.7491"N	80°46'34.6840"W	11032.51	162.111	3.34	-0.72	-3.26	
17886.00	89.880	159.490	6428.31	11121.18	-10582.19	3420.88	1703665.52	14298139.53	39°22'25.9272"N	80°46'34.2805"W	11121.38	162.086	1.12	-0.20	1.10	
17910.00	89.880	159.490	6428.36	11145.16	-10604.67	3429.29	1703673.93	14298117.06	39°22'25.7048"N	80°46'34.1741"W	11145.36	162.080	0.00	0.00	0.00	Projected MD at TD: 17910'

HOLE & CASING SECTIONS - Ref Wellbore: Avalanche Unit 1H AWB Ref Wellpath: Avalanche Unit 1H AWP Proj: 17910'									
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start E/W (ft)	End N/S (ft)	End E/W (ft)
20in Conductor	25.00	105.00	80.00	25.00	105.00	0.00	0.00	0.20	-0.14
17.5in Open Hole	105.00	428.90	323.90	105.00	428.90	0.20	-0.14	0.66	0.58
13.375in Casing Surface	25.00	428.90	403.90	25.00	428.90	0.00	0.00	0.66	0.58
12.25in Open Hole	428.90	2620.00	2191.10	428.90	2613.73	0.66	0.58	86.26	-7.32
9.625in Casing Intermediate	25.00	2596.20	2571.20	25.00	2590.13	0.00	0.00	83.37	-6.23
8.75in Open Hole	2620.00	3889.00	1269.00	2613.73	3858.11	86.26	-7.32	311.58	-92.35
8.5in Open Hole	3889.00	17910.00	14021.00	3858.11	6428.36	311.58	-92.35	-10604.67	3429.29
5.5in Casing Production	25.00	17910.00	17885.00	25.00	6428.36	0.00	0.00	-10604.67	3429.29



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Avalanche Unit 1H - POE - Rev-2	6386.00	45.13	-82.08	1700163.95	14308762.62	39°24'11.0460"N	80°47'18.5692"W	point
Avalanche Unit 1H - BHL - Rev-2	6412.00	-10716.21	3468.59	1703713.21	14298005.56	39°22'24.6014"N	80°46'33.6772"W	point
Avalanche Unit 1H - BHL - Rev-3	6412.00	-10615.26	3435.28	1703679.91	14298106.48	39°22'25.6000"N	80°46'34.0982"W	point
Avalanche Unit 1H - LP - Rev-2	6412.00	-136.46	-22.16	1700223.85	14308581.10	39°24'9.2498"N	80°47'17.8114"W	point
Avalanche Unit 1H - 50' L/R Hardline	6450.00	-5285.06	1676.60	1701921.93	14303434.55	39°23'18.3236"N	80°46'56.3291"W	rectangle
2D Rectangle 11228 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Avalanche Unit 1H AWB Ref Wellpath: Avalanche Unit 1H AWP Proj: 17910'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.00	388.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-388')	Avalanche Unit 1H AWB	
388.00	835.00	Gyrodata 2015 - GC+WIR+DPIPE	02 Gyrodata MS Gyro <12-1/4"> (388')(476'-835')	Avalanche Unit 1H AWB	
835.00	2550.00	BH NaviTrak (Axial)	03 APS EM <12-1/4"> (835')(961'-2550')	Avalanche Unit 1H AWB	
2550.00	3783.00	BH NaviTrak (2019) (Axial)	04 BHI NaviTrak <8-3/4"> (2550')(2644'-3783')	Avalanche Unit 1H AWB	12/31/2019
3783.00	17910.00	BH AutoTrak Curve (2019) (Short spacing)	05 BH AT Curve <8-1/2"> (3783')(3891'-17886')	Avalanche Unit 1H AWB	



Actual Wellpath Report

Avalanche Unit 1H AWP Proj: 17910'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Avalanche Unit 1H
Field	Tyler	API	47-095-02603-0000
Facility	Colorado East Pad	Wellbore	Avalanche Unit 1H AWB
Slot	Slot #03		

COMMENTS
<p>Wellpath general comments API: 47-095-02603-0000 BHI Job #: 110091996B Rig: Patterson 342 Duration: 11/11/2019-01/07/2019 Gyrodatta MS Gyro <17-1/2"> (100'-388') Gyrodatta MS Gyro <12-1/4"> (388')(476'-835') APS EM <12-1/4"> (835')(961'-2550') BHI NaviTrak <8-3/4">(2550')(2644'-3783') BH AT Curve <8-1/2"> (3783')(3891'-17886') Middlesex: 6278' MD Burkett: 6491' MD Tully: 6550' MD Hamilton: 6651' MD Marcellus POE: 6692' MD Projected MD at TD: 17910'</p>