ANTERO RESOURCES CORPORATION

Area: Wetzel County, WV
Field: Wetzel
Facility: Harbour Pad
Slot: Slot K

Well: Twain Unit 3H
UWI: 47-103-03794-0000
Wellbore: Twain Unit 3H PWB
Wellpath: Twain Unit 3H PWP Rev-B.0

Plot reference wellpath is Twain Unit 3H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1440 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot K): -1410 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: adsaryar on 2026-03-04, Database: WA_MPL_EASTERNUS_Defn

Easting (ft) — Scale 1 inch = 2000

BH Lucida <8-1/2"> (7001')(7055'-18169') : 6613.75ft TVD, 633.74ft N, 2225.16ft E
APS EM <8-3/4"> (3824')(3975'-7001') : 3762.28ft TVD, 320.55ft N, 1106.86ft E
APS EM <12-1/4"> (374')(503'-3824') : 502.99ft TVD, 0.93ft S, 1.84ft W
Gyrodata MS Gyro <17-1/2"> (100'-374') : 100.00ft TVD, 0.03ft S, 0.29ft W

POE : 573'
POE : 375'
Marcellus POE: 8071' MD : 7356.11ft TVD, 207.24ft N, 2627.52ft E
Slot K
Twain Unit 3H 50' L/R Hard Line

Well Data

Slot	Well	Wellbore	Wellpath
Slot K	Twain Unit 3H	Twain Unit 3H AWB	Twain Unit 3H AWP Proj: 18194'
Slot K	Twain Unit 3H	Twain Unit 3H PWB	Twain Unit 3H PWP Rev-B.0

Gyrodata MS Gyro <17-1/2"> (100'-374') : 0.47° Inc, 100.00ft MD, 100.00ft TVD, -0.06ft VS

APS EM <12-1/4"> (374')(503'-3824') : 0.17° Inc, 503.00ft MD, 502.99ft TVD, 0.28ft VS

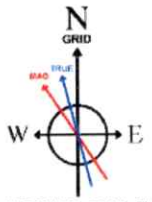
Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Harbour Pad			1724986.450	14383874.430	39°36'32.9960N	80°41'59.0388W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot K	2.35	14.81	1725001.250	14383876.780	39°36'33.0188N	80°41'58.8495W
Comment	Twain Unit 3H					
H&P 519 (RKB) to Ground level (At Slot: Slot K)					30ft	
Mean Sea Level to Ground level (At Slot: Slot K)					-1410ft	
H&P 519 (RKB) to Mean Sea Level					1440ft	

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3824.00	20.130	70.850	3620.68	303.52	1057.25	1.45	58.57
Proj. to Bottom	3901.00	20.130	70.850	3692.98	312.21	1082.29	0.00	58.53
Drill Out	3981.00	20.130	70.850	3768.09	321.24	1108.29	0.00	58.49
Turn	4063.56	22.204	74.606	3845.08	330.04	1136.76	3.00	59.47
Curve KOP	7163.51	22.204	74.606	6715.16	641.01	2266.20	0.00	134.58
POE	8070.77	72.640	160.934	7359.00	219.35	2621.78	8.00	649.29
Landing Pt.	8263.66	90.000	160.934	7388.00	39.81	2683.83	9.00	839.24
BHL	18218.36	90.000	160.934	7388.00	-9368.81	5935.59	0.00	10793.94

APS EM <8-3/4"> (3824')(3975'-7001') : 20.52° Inc, 3975.00ft MD, 3762.28ft TVD, 58.68ft VS



User specified (HDGM) Dip: 66.13° Field: 51449 nT
Magnetic North is 8.12 degrees West of True North (at 2026-02-11)
Grid North is 0.19 degrees East of True North
To correct azimuth from True to Grid subtract 0.19 degrees
To correct azimuth from Magnetic to Grid subtract 8.31 degrees

API: 47-103-03794-0000
BH Job #: 112930779
Rig: H&P 519
Duration: 2/13/2026-2/16/2026

BH Lucida <8-1/2"> (7001')(7055'-18169') : 21.23° Inc, 7055.00ft MD, 6613.75ft TVD, 128.05ft VS

Marcellus POE: 8071' MD : 74.55° Inc, 8071.00ft MD, 7356.11ft TVD, 662.61ft VS

Projected MD at TD: 18194' : 89.63° Inc, 18194.00ft MD, 7364.19ft TVD, 10779.16ft VS

Projected MD at TD: 18194' : 7364.19ft TVD, 9355.12ft S, 5929.93ft E

BHL : 64'

True Vertical Depth (ft) — Scale 1 inch = 1500

Northing (ft)

Vertical Section (ft) — Scale 1 inch = 1500
Azimuth 160.930° with reference 0.00 N, 0.00 E

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Actual Wellpath Report

Twain Unit 3H AWP Proj: 18194'

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet [32067]	Software System	WellArchitect® 7.0.1
North Reference	Grid	Report Generated By	Edsaryar on 2026-03-04 at 9:48:54 PM
Scale	0.999608	Last Updated	2026-03-04
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	2.35	14.81	1725001.25	14383876.78	39°36'33.0188"N	80°41'58.8495"W
Facility Reference Pt			1724986.45	14383874.43	39°36'32.9960"N	80°41'59.0388"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	1440.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1440.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot K)	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	160.930°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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	263.340	0.00	0.00	0.00	0.00	1725001.25	14383876.78	39°36'33.0188"N	80°41'58.8495"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	263.340	30.00	0.00	0.00	0.00	1725001.25	14383876.78	39°36'33.0188"N	80°41'58.8495"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.470	263.340	100.00	-0.06	-0.03	-0.29	1725000.96	14383876.75	39°36'33.0184"N	80°41'58.8531"W	0.29	263.340	0.67	0.67	0.00	Gyrodata MS Gyro <17-1/2"> (100'-374')
200.00	0.350	251.890	200.00	-0.15	-0.18	-0.98	1725000.27	14383876.60	39°36'33.0171"N	80°41'58.8621"W	1.00	259.859	0.14	-0.12	-11.45	
300.00	0.300	234.050	300.00	-0.08	-0.42	-1.49	1724999.77	14383876.36	39°36'33.0146"N	80°41'58.8685"W	1.54	254.050	0.11	-0.05	-17.84	
374.00	0.290	228.580	373.99	0.04	-0.66	-1.78	1724999.47	14383876.12	39°36'33.0123"N	80°41'58.8723"W	1.90	249.622	0.04	-0.01	-7.39	
503.00	0.170	106.070	502.99	0.28	-0.93	-1.84	1724999.41	14383875.85	39°36'33.0096"N	80°41'58.8731"W	2.07	243.202	0.32	-0.09	-94.97	APS EM <12-1/4"> (374')(503'-3824')
591.00	3.000	72.760	590.95	0.43	-0.28	0.48	1725001.73	14383876.50	39°36'33.0159"N	80°41'58.8434"W	0.56	120.555	3.25	3.22	-37.85	
680.00	5.900	72.040	679.67	0.59	1.82	7.06	1725008.31	14383878.60	39°36'33.0365"N	80°41'58.7592"W	7.29	75.568	3.26	3.26	-0.81	
769.00	8.890	71.960	767.92	0.80	5.36	17.95	1725019.19	14383882.14	39°36'33.0711"N	80°41'58.6199"W	18.73	73.383	3.36	3.36	-0.09	
860.00	11.910	72.730	857.42	1.22	10.32	33.61	1725034.84	14383887.10	39°36'33.1197"N	80°41'58.4197"W	35.16	72.924	3.32	3.32	0.85	
949.00	14.120	75.340	944.13	2.35	15.80	52.88	1725054.11	14383892.57	39°36'33.1732"N	80°41'58.1732"W	55.19	73.367	2.57	2.48	2.93	
1039.00	16.140	77.430	1031.00	4.61	21.30	75.72	1725076.94	14383898.07	39°36'33.2268"N	80°41'57.8812"W	78.65	74.288	2.32	2.24	2.32	
1133.00	18.120	74.630	1120.83	7.03	28.02	102.57	1725103.77	14383904.79	39°36'33.2923"N	80°41'57.5379"W	106.32	74.721	2.28	2.11	-2.98	
1228.00	20.410	73.740	1210.51	8.80	36.57	132.72	1725133.91	14383913.34	39°36'33.3758"N	80°41'57.1523"W	137.66	74.593	2.43	2.41	-0.94	
1322.00	21.920	77.930	1298.17	11.74	44.83	165.61	1725166.80	14383921.59	39°36'33.4564"N	80°41'56.7316"W	171.57	74.853	2.27	1.61	4.46	
1417.00	21.560	78.110	1386.41	16.08	52.14	200.03	1725201.20	14383928.90	39°36'33.5274"N	80°41'56.2915"W	206.72	75.391	0.39	-0.38	0.19	
1512.00	22.020	79.130	1474.62	20.80	59.09	234.60	1725235.76	14383935.85	39°36'33.5950"N	80°41'55.8495"W	241.93	75.863	0.63	0.48	1.07	
1606.00	21.760	76.710	1561.85	25.07	66.42	268.87	1725270.01	14383943.17	39°36'33.6663"N	80°41'55.4114"W	276.95	76.124	1.00	-0.28	-2.57	
1701.00	21.000	74.220	1650.31	27.82	75.10	302.39	1725303.52	14383951.85	39°36'33.7510"N	80°41'54.9828"W	311.57	76.053	1.25	-0.80	-2.62	
1795.00	21.700	74.630	1737.86	29.91	84.28	335.35	1725336.47	14383961.03	39°36'33.8407"N	80°41'54.5612"W	345.78	75.892	0.76	0.74	0.44	
1890.00	22.370	75.230	1825.92	32.40	93.55	369.77	1725370.87	14383970.29	39°36'33.9311"N	80°41'54.1211"W	381.42	75.803	0.74	0.71	0.63	
1984.00	21.830	72.120	1913.02	34.10	103.47	403.70	1725404.79	14383980.21	39°36'34.0281"N	80°41'53.6871"W	416.75	75.624	1.37	-0.57	-3.31	
2079.00	22.510	73.220	2000.99	35.20	114.15	437.92	1725439.00	14383990.88	39°36'34.1324"N	80°41'53.2494"W	452.55	75.390	0.84	0.72	1.16	
2174.00	22.680	74.480	2088.70	37.06	124.30	472.98	1725474.04	14384001.03	39°36'34.2316"N	80°41'52.8011"W	489.04	75.276	0.54	0.18	1.33	
2268.00	21.780	70.240	2175.72	37.97	135.04	506.86	1725507.91	14384011.77	39°36'34.3366"N	80°41'52.3678"W	524.54	75.081	1.96	-0.96	-4.51	
2363.00	21.070	67.020	2264.16	36.59	147.67	539.17	1725540.20	14384024.39	39°36'34.4603"N	80°41'51.9544"W	559.02	74.683	1.45	-0.75	-3.39	
2457.00	20.820	64.240	2351.95	33.49	161.53	569.77	1725570.79	14384038.24	39°36'34.5963"N	80°41'51.5628"W	592.22	74.172	1.09	-0.27	-2.96	
2552.00	21.230	65.400	2440.62	29.87	176.03	600.61	1725601.63	14384052.74	39°36'34.7385"N	80°41'51.1681"W	625.88	73.665	0.61	0.43	1.22	
2647.00	22.760	72.460	2528.72	28.70	188.73	633.78	1725634.78	14384065.43	39°36'34.8630"N	80°41'50.7437"W	661.28	73.418	3.21	1.61	7.43	

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Actual Wellpath Report

Twain Unit 3H AWP Proj: 18194'

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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
2741.00	22.860	72.980	2615.37	29.84	199.55	668.58	1725669.56	14384076.25	39°36'34.9688"N	80°41'50.2987"W	697.72	73.381	0.24	0.11	0.55	
2836.00	23.080	74.800	2702.84	31.76	209.83	704.19	1725705.17	14384086.53	39°36'35.0692"N	80°41'49.8432"W	734.79	73.407	0.78	0.23	1.92	
2930.00	22.940	74.980	2789.36	34.29	219.41	739.67	1725740.62	14384096.11	39°36'35.1627"N	80°41'49.3896"W	771.52	73.478	0.17	-0.15	0.19	
3025.00	22.110	72.650	2877.11	36.14	229.54	774.61	1725775.56	14384106.23	39°36'35.2617"N	80°41'48.9426"W	807.91	73.494	1.28	-0.87	-2.45	
3119.00	21.900	75.470	2964.27	38.06	239.22	808.47	1725809.40	14384115.90	39°36'35.3561"N	80°41'48.5096"W	843.12	73.517	1.15	-0.22	3.00	
3214.00	21.280	77.190	3052.60	41.34	247.48	842.43	1725843.35	14384124.17	39°36'35.4367"N	80°41'48.0754"W	878.03	73.629	0.93	-0.65	1.81	
3308.00	20.700	75.530	3140.37	44.53	255.42	875.15	1725876.06	14384132.10	39°36'35.5140"N	80°41'47.6570"W	911.66	73.730	0.88	-0.62	-1.77	
3403.00	21.390	76.940	3229.03	47.69	263.53	908.28	1725909.18	14384140.20	39°36'35.5931"N	80°41'47.2333"W	945.74	73.821	0.90	0.73	1.48	
3498.00	22.400	77.590	3317.18	51.61	271.33	942.84	1725943.72	14384148.01	39°36'35.6691"N	80°41'46.7914"W	981.10	73.945	1.09	1.06	0.68	
3592.00	22.030	76.060	3404.20	55.26	279.43	977.44	1725978.31	14384156.10	39°36'35.7479"N	80°41'46.3490"W	1016.60	74.046	0.73	-0.39	-1.63	
3687.00	21.190	72.920	3492.52	57.45	288.76	1011.15	1726012.00	14384165.43	39°36'35.8391"N	80°41'45.9179"W	1051.57	74.062	1.50	-0.88	-3.31	
3781.00	20.530	72.220	3580.36	58.41	298.79	1043.08	1726043.92	14384175.45	39°36'35.9370"N	80°41'45.5094"W	1085.03	74.016	0.75	-0.70	-0.74	
3824.00	20.130	70.850	3620.68	58.57	303.52	1057.25	1726058.09	14384180.18	39°36'35.9833"N	80°41'45.3282"W	1099.96	73.982	1.45	-0.93	-3.19	
3975.00	20.520	71.250	3762.28	58.68	320.55	1106.86	1726107.67	14384197.20	39°36'36.1500"N	80°41'44.6936"W	1152.34	73.849	0.27	0.26	0.26	APS EM <8-3/4"> (3824')(3975'-7001')
4070.00	21.810	71.990	3850.87	59.10	331.36	1139.41	1726140.21	14384208.01	39°36'36.2557"N	80°41'44.2773"W	1186.61	73.785	1.39	1.36	0.78	
4165.00	22.130	74.150	3938.97	60.43	341.70	1173.41	1726174.20	14384218.35	39°36'36.3568"N	80°41'43.8424"W	1222.15	73.764	0.91	0.34	2.27	
4259.00	22.790	76.040	4025.84	63.05	350.93	1208.11	1726208.88	14384227.57	39°36'36.4468"N	80°41'43.3987"W	1258.04	73.803	1.04	0.70	2.01	
4353.00	21.840	73.770	4112.81	65.54	360.21	1242.57	1726243.33	14384236.85	39°36'36.5374"N	80°41'42.9580"W	1293.72	73.834	1.36	-1.01	-2.41	
4448.00	23.060	74.810	4200.60	67.67	370.02	1277.49	1726278.24	14384246.66	39°36'36.6332"N	80°41'42.5114"W	1330.00	73.846	1.35	1.28	1.09	
4543.00	24.210	76.180	4287.64	70.71	379.55	1314.36	1726315.09	14384256.18	39°36'36.7262"N	80°41'42.0399"W	1368.07	73.893	1.34	1.21	1.44	
4637.00	23.330	73.320	4373.66	73.25	389.50	1350.91	1726351.63	14384266.12	39°36'36.8232"N	80°41'41.5725"W	1405.94	73.917	1.54	-0.94	-3.04	
4732.00	23.210	75.000	4460.94	75.36	399.74	1387.01	1726387.72	14384276.36	39°36'36.9233"N	80°41'41.1107"W	1443.47	73.923	0.71	-0.13	1.77	
4827.00	22.230	76.760	4548.56	78.52	408.70	1422.59	1726423.28	14384285.32	39°36'37.0106"N	80°41'40.6558"W	1480.13	73.971	1.26	-1.03	1.85	
4921.00	19.940	72.150	4636.27	80.67	417.69	1455.16	1726455.84	14384294.31	39°36'37.0984"N	80°41'40.2392"W	1513.92	73.984	3.01	-2.44	-4.90	
5016.00	19.130	70.140	4725.80	80.80	427.94	1485.22	1726485.89	14384304.56	39°36'37.1987"N	80°41'39.8547"W	1545.64	73.926	1.11	-0.85	-2.12	
5110.00	20.470	70.190	4814.24	80.37	438.75	1515.17	1726515.83	14384315.36	39°36'37.3045"N	80°41'39.4716"W	1577.42	73.851	1.43	1.43	0.05	
5205.00	19.960	69.160	4903.39	79.66	450.15	1545.96	1726546.60	14384326.75	39°36'37.4161"N	80°41'39.0777"W	1610.16	73.766	0.65	-0.54	-1.08	
5299.00	22.490	73.360	4991.01	79.92	461.00	1578.18	1726578.81	14384337.60	39°36'37.5223"N	80°41'38.6655"W	1644.14	73.716	3.14	2.69	4.47	
5394.00	21.700	72.920	5079.04	81.30	471.37	1612.38	1726613.00	14384347.96	39°36'37.6236"N	80°41'38.2281"W	1679.87	73.704	0.85	-0.83	-0.46	
5489.00	21.080	72.780	5167.49	82.47	481.58	1645.49	1726646.09	14384358.17	39°36'37.7234"N	80°41'37.8047"W	1714.51	73.687	0.65	-0.65	-0.15	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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
5583.00	24.290	78.120	5254.22	85.43	490.57	1680.57	1726681.15	14384367.16	39°36'37.8111"N	80°41'37.3561"W	1750.70	73.727	4.05	3.41	5.68	
5678.00	23.510	78.180	5341.07	90.27	498.47	1718.23	1726718.81	14384375.06	39°36'37.8879"N	80°41'36.8744"W	1789.08	73.822	0.82	-0.82	0.06	
5773.00	22.900	76.030	5428.39	94.30	506.82	1754.72	1726755.28	14384383.40	39°36'37.9691"N	80°41'36.4079"W	1826.45	73.890	1.10	-0.64	-2.26	
5867.00	22.850	72.980	5515.00	96.58	516.58	1789.92	1726790.46	14384393.15	39°36'38.0644"N	80°41'35.9577"W	1862.97	73.902	1.26	-0.05	-3.24	
5962.00	22.370	72.840	5602.70	97.84	527.31	1824.83	1726825.36	14384403.88	39°36'38.1693"N	80°41'35.5112"W	1899.49	73.883	0.51	-0.51	-0.15	
6057.00	22.830	73.710	5690.40	99.34	537.81	1859.79	1726860.31	14384414.38	39°36'38.2719"N	80°41'35.0640"W	1935.99	73.871	0.60	0.48	0.92	
6152.00	22.320	74.990	5778.12	101.51	547.65	1894.91	1726895.41	14384424.22	39°36'38.3680"N	80°41'34.6150"W	1972.46	73.880	0.75	-0.54	1.35	
6246.00	24.120	79.660	5864.51	105.69	555.72	1931.05	1726931.54	14384432.29	39°36'38.4466"N	80°41'34.1528"W	2009.42	73.945	2.74	1.91	4.97	
6341.00	23.120	80.250	5951.55	111.66	562.37	1968.53	1726969.00	14384438.93	39°36'38.5109"N	80°41'33.6737"W	2047.28	74.056	1.08	-1.05	0.62	
6435.00	23.350	76.680	6037.93	116.51	569.79	2004.85	1727005.31	14384446.34	39°36'38.5830"N	80°41'33.2093"W	2084.24	74.135	1.52	0.24	-3.80	
6530.00	23.470	73.940	6125.12	119.39	579.36	2041.35	1727041.79	14384455.91	39°36'38.6764"N	80°41'32.7425"W	2121.97	74.155	1.15	0.13	-2.88	
6625.00	21.000	70.190	6213.05	120.17	590.36	2075.55	1727075.98	14384466.91	39°36'38.7840"N	80°41'32.3051"W	2157.87	74.122	3.00	-2.60	-3.95	
6719.00	20.130	70.860	6301.06	119.93	601.37	2106.68	1727107.10	14384477.92	39°36'38.8918"N	80°41'31.9069"W	2190.83	74.068	0.96	-0.93	0.71	
6814.00	20.570	75.060	6390.13	121.11	611.04	2138.25	1727138.65	14384487.58	39°36'38.9862"N	80°41'31.5031"W	2223.84	74.052	1.61	0.46	4.42	
6908.00	22.260	76.890	6477.64	124.15	619.33	2171.54	1727171.94	14384495.87	39°36'39.0671"N	80°41'31.0772"W	2258.14	74.082	1.93	1.80	1.95	
7001.00	22.510	74.370	6563.64	127.05	628.12	2205.84	1727206.23	14384504.66	39°36'39.1528"N	80°41'30.6386"W	2293.53	74.105	1.07	0.27	-2.71	
7055.00	21.230	73.180	6613.75	128.05	633.74	2225.16	1727225.53	14384510.27	39°36'39.2076"N	80°41'30.3916"W	2313.65	74.103	2.51	-2.37	-2.20	BH Lucida <8-1/2"> (7001')(7055'-18169')
7126.00	22.660	79.230	6679.61	130.53	640.02	2250.90	1727251.27	14384516.54	39°36'39.2688"N	80°41'30.0624"W	2340.13	74.128	3.77	2.01	8.52	
7220.00	23.000	98.240	6766.37	141.59	640.77	2286.92	1727287.27	14384517.30	39°36'39.2750"N	80°41'29.6022"W	2374.99	74.348	7.82	0.36	20.22	
7315.00	23.140	116.250	6853.88	163.40	629.84	2322.07	1727322.41	14384506.37	39°36'39.1658"N	80°41'29.1535"W	2405.97	74.824	7.40	0.15	18.96	
7409.00	27.910	126.150	6938.72	194.64	608.67	2356.44	1727356.76	14384485.21	39°36'38.9554"N	80°41'28.7154"W	2433.78	75.517	6.79	5.07	10.53	
7491.00†	32.605	131.904	7009.54	229.74	582.57	2388.40	1727388.71	14384459.12	39°36'38.6964"N	80°41'28.3081"W	2458.42	76.292	6.72	5.73	7.02	Sycamore: 7491' MD
7504.00	33.370	132.680	7020.45	235.96	577.81	2393.64	1727393.94	14384454.36	39°36'38.6492"N	80°41'28.2414"W	2462.39	76.429	6.72	5.89	5.97	
7599.00	39.390	136.320	7096.90	286.43	538.26	2433.70	1727433.99	14384414.83	39°36'38.2569"N	80°41'27.7312"W	2492.51	77.529	6.73	6.34	3.83	
7654.00†	43.082	140.466	7138.27	319.91	511.14	2457.72	1727458.01	14384387.71	39°36'37.9880"N	80°41'27.4255"W	2510.31	78.252	8.35	6.71	7.54	Middlesex: 7654' MD
7693.00	45.780	143.070	7166.12	345.70	489.69	2474.60	1727474.88	14384366.27	39°36'37.7755"N	80°41'27.2108"W	2522.59	78.807	8.35	6.92	6.68	
7788.00	51.810	148.200	7228.69	414.60	430.67	2514.78	1727515.04	14384307.28	39°36'37.1908"N	80°41'26.7000"W	2551.39	80.282	7.53	6.35	5.40	
7797.00†	52.496	148.551	7234.21	421.54	424.62	2518.51	1727518.77	14384301.23	39°36'37.1309"N	80°41'26.6527"W	2554.05	80.430	8.22	7.62	3.90	Burkett: 7797' MD
7846.00†	56.248	150.354	7262.75	460.57	390.32	2538.73	1727538.98	14384266.94	39°36'36.7912"N	80°41'26.3957"W	2568.56	81.260	8.22	7.66	3.68	Tully: 7846' MD
7882.00	59.020	151.580	7282.02	490.51	363.73	2553.48	1727553.73	14384240.37	39°36'36.5280"N	80°41'26.2084"W	2579.26	81.893	8.22	7.70	3.41	

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Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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
7976.00	66.880	153.940	7324.74	573.31	289.34	2591.72	1727591.95	14384166.00	39°36'35.7914"N	80°41'25.7232"W	2607.82	83.630	8.65	8.36	2.51	
8071.00	74.550	158.820	7356.11	662.61	207.24	2627.52	1727627.74	14384083.93	39°36'34.9788"N	80°41'25.2694"W	2635.68	85.490	9.42	8.07	5.14	Marcellus POE: 8071' MD
8165.00	80.980	161.790	7376.03	754.41	120.79	2658.43	1727658.64	14383997.52	39°36'34.1234"N	80°41'24.8782"W	2661.18	87.398	7.50	6.84	3.16	
8260.00	89.850	161.920	7383.61	849.00	30.89	2687.89	1727688.09	14383907.66	39°36'33.2339"N	80°41'24.5058"W	2688.07	89.341	9.34	9.34	0.14	
8354.00	90.090	162.030	7383.66	942.98	-58.49	2716.98	1727717.16	14383818.31	39°36'32.3495"N	80°41'24.1381"W	2717.61	91.233	0.28	0.26	0.12	
8448.00	90.490	162.010	7383.19	1036.96	-147.90	2746.00	1727746.17	14383728.94	39°36'31.4649"N	80°41'23.7713"W	2749.98	93.083	0.43	0.43	-0.02	
8543.00	90.060	161.280	7382.73	1131.95	-238.07	2775.91	1727776.07	14383638.81	39°36'30.5728"N	80°41'23.3931"W	2786.10	94.902	0.89	-0.45	-0.77	
8637.00	89.750	160.200	7382.89	1225.95	-326.80	2806.92	1727807.06	14383550.11	39°36'29.6947"N	80°41'23.0008"W	2825.88	96.641	1.20	-0.33	-1.15	
8731.00	90.060	160.730	7383.04	1319.95	-415.39	2838.35	1727838.48	14383461.55	39°36'28.8181"N	80°41'22.6031"W	2868.58	98.326	0.65	0.33	0.56	
8826.00	88.830	156.500	7383.96	1414.84	-503.83	2872.98	1727873.10	14383373.15	39°36'27.9429"N	80°41'22.1646"W	2916.82	99.947	4.64	-1.29	-4.45	
8920.00	90.180	162.060	7384.78	1508.76	-591.71	2906.22	1727906.33	14383285.31	39°36'27.0732"N	80°41'21.7438"W	2965.84	101.508	6.09	1.44	5.91	
9015.00	90.250	161.520	7384.42	1603.75	-681.95	2935.91	1727936.00	14383195.10	39°36'26.1804"N	80°41'21.3685"W	3014.07	103.077	0.57	0.07	-0.57	
9109.00	89.970	161.930	7384.24	1697.74	-771.21	2965.38	1727965.47	14383105.88	39°36'25.2972"N	80°41'20.9958"W	3064.03	104.578	0.53	-0.30	0.44	
9204.00	91.350	160.060	7383.14	1792.73	-861.01	2996.32	1727996.39	14383016.10	39°36'24.4085"N	80°41'20.6046"W	3117.57	106.032	2.45	1.45	-1.97	
9298.00	89.660	154.340	7382.32	1886.48	-947.63	3032.73	1728032.78	14382929.53	39°36'23.5513"N	80°41'20.1432"W	3177.33	107.352	6.34	-1.80	-6.09	
9393.00	89.750	156.050	7382.80	1981.00	-1033.86	3072.58	1728072.62	14382843.33	39°36'22.6977"N	80°41'19.6379"W	3241.85	108.597	1.80	0.09	1.80	
9488.00	90.250	159.110	7382.80	2075.83	-1121.67	3108.81	1728108.83	14382755.56	39°36'21.8286"N	80°41'19.1789"W	3304.97	109.840	3.26	0.53	3.22	
9582.00	89.910	161.640	7382.67	2169.82	-1210.20	3140.38	1728140.39	14382667.06	39°36'20.9526"N	80°41'18.7795"W	3365.49	111.075	2.72	-0.36	2.69	
9677.00	90.310	162.920	7382.49	2264.79	-1300.69	3169.29	1728169.29	14382576.60	39°36'20.0573"N	80°41'18.4141"W	3425.81	112.313	1.41	0.42	1.35	
9771.00	90.180	162.820	7382.09	2358.73	-1390.52	3196.98	1728196.97	14382486.81	39°36'19.1685"N	80°41'18.0644"W	3486.29	113.507	0.17	-0.14	-0.11	
9866.00	90.250	161.970	7381.73	2453.70	-1481.07	3225.71	1728225.69	14382396.30	39°36'18.2726"N	80°41'17.7013"W	3549.47	114.662	0.90	0.07	-0.89	
9960.00	89.230	160.390	7382.16	2547.69	-1570.04	3256.03	1728256.00	14382307.36	39°36'17.3923"N	80°41'17.3178"W	3614.80	115.743	2.00	-1.09	-1.68	
10055.00	90.180	162.380	7382.65	2642.68	-1660.06	3286.35	1728286.31	14382217.37	39°36'16.5016"N	80°41'16.9344"W	3681.84	116.800	2.32	1.00	2.09	
10150.00	89.720	162.470	7382.73	2737.65	-1750.63	3315.04	1728314.98	14382126.84	39°36'15.6055"N	80°41'16.5720"W	3748.89	117.838	0.49	-0.48	0.09	
10244.00	90.280	162.400	7382.73	2831.62	-1840.24	3343.41	1728343.34	14382037.26	39°36'14.7188"N	80°41'16.2135"W	3816.39	118.829	0.60	0.60	-0.07	
10339.00	90.680	162.680	7381.94	2926.58	-1930.86	3371.91	1728371.83	14381946.68	39°36'13.8223"N	80°41'15.8534"W	3885.62	119.797	0.51	0.42	0.29	
10433.00	89.940	159.160	7381.43	3020.56	-2019.68	3402.63	1728402.54	14381857.89	39°36'12.9434"N	80°41'15.4649"W	3956.90	120.692	3.83	-0.79	-3.74	
10528.00	89.850	156.280	7381.60	3115.40	-2107.58	3438.65	1728438.54	14381770.03	39°36'12.0734"N	80°41'15.0087"W	4033.14	121.505	3.03	-0.09	-3.03	
10623.00	90.060	158.020	7381.68	3210.19	-2195.12	3475.53	1728475.42	14381682.52	39°36'11.2070"N	80°41'14.5413"W	4110.71	122.276	1.84	0.22	1.83	
10717.00	89.480	160.080	7382.05	3304.13	-2282.90	3509.14	1728509.01	14381594.78	39°36'10.3383"N	80°41'14.1158"W	4186.37	123.046	2.28	-0.62	2.19	

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10812.00	90.620	163.100	7381.97	3399.12	-2373.03	3539.14	1728539.00	14381504.69	39°36'9.4465"N	80°41'13.7366"W	4261.08	123.842	3.40	1.20	3.18	
10907.00	89.480	162.360	7381.89	3494.07	-2463.74	3567.34	1728567.19	14381414.01	39°36'8.5490"N	80°41'13.3803"W	4335.43	124.630	1.43	-1.20	-0.78	
11001.00	90.370	163.400	7382.01	3588.01	-2553.58	3595.01	1728594.85	14381324.21	39°36'7.6602"N	80°41'13.0308"W	4409.63	125.387	1.46	0.95	1.11	
11095.00	90.150	162.210	7381.58	3681.96	-2643.37	3622.80	1728622.63	14381234.45	39°36'6.7718"N	80°41'12.6798"W	4484.65	126.116	1.29	-0.23	-1.27	
11190.00	90.400	162.960	7381.13	3776.92	-2734.02	3651.23	1728651.05	14381143.84	39°36'5.8750"N	80°41'12.3206"W	4561.40	126.826	0.83	0.26	0.79	
11285.00	90.280	162.510	7380.56	3871.87	-2824.73	3679.43	1728679.23	14381053.16	39°36'4.9774"N	80°41'11.9645"W	4638.68	127.514	0.49	-0.13	-0.47	
11379.00	90.460	162.590	7379.96	3965.83	-2914.41	3707.62	1728707.41	14380963.52	39°36'4.0902"N	80°41'11.6083"W	4715.95	128.169	0.21	0.19	0.09	
11474.00	90.220	161.380	7379.39	4060.81	-3004.74	3737.00	1728736.77	14380873.22	39°36'3.1964"N	80°41'11.2371"W	4795.17	128.801	1.30	-0.25	-1.27	
11569.00	90.520	163.560	7378.78	4155.76	-3095.33	3765.61	1728765.37	14380782.67	39°36'2.3002"N	80°41'10.8756"W	4874.51	129.420	2.32	0.32	2.29	
11663.00	90.150	162.760	7378.23	4249.69	-3185.29	3792.84	1728792.59	14380692.74	39°36'1.4101"N	80°41'10.5317"W	4952.95	130.024	0.94	-0.39	-0.85	
11758.00	90.400	162.860	7377.77	4344.64	-3276.05	3820.91	1728820.66	14380602.02	39°36'0.5122"N	80°41'10.1771"W	5033.08	130.610	0.28	0.26	0.11	
11852.00	89.170	159.450	7378.13	4438.62	-3364.99	3851.27	1728851.01	14380513.11	39°35'59.6321"N	80°41'9.7932"W	5114.24	131.145	3.86	-1.31	-3.63	
11947.00	90.430	163.460	7378.46	4533.60	-3455.04	3881.48	1728881.20	14380423.10	39°35'58.7411"N	80°41'9.4113"W	5196.46	131.673	4.42	1.33	4.22	
12042.00	90.340	162.610	7377.82	4628.53	-3545.90	3909.20	1728908.91	14380332.27	39°35'57.8421"N	80°41'9.0613"W	5277.81	132.210	0.90	-0.09	-0.89	
12137.00	90.280	162.440	7377.31	4723.49	-3636.52	3937.73	1728937.42	14380241.70	39°35'56.9456"N	80°41'8.7009"W	5360.03	132.723	0.19	-0.06	-0.18	
12231.00	90.460	161.490	7376.70	4817.47	-3725.89	3966.83	1728966.51	14380152.35	39°35'56.0612"N	80°41'8.3331"W	5442.24	133.206	1.03	0.19	-1.01	
12326.00	90.550	161.670	7375.86	4912.46	-3816.02	3996.84	1728996.52	14380062.26	39°35'55.1694"N	80°41'7.9537"W	5526.01	133.674	0.21	0.09	0.19	
12421.00	90.250	162.470	7375.20	5007.44	-3906.41	4026.09	1729025.75	14379971.91	39°35'54.2752"N	80°41'7.5841"W	5609.76	134.136	0.90	-0.32	0.84	
12515.00	90.030	162.510	7374.97	5101.40	-3996.05	4054.37	1729054.02	14379882.30	39°35'53.3882"N	80°41'7.2269"W	5692.66	134.585	0.24	-0.23	0.04	
12610.00	90.400	161.690	7374.61	5196.38	-4086.45	4083.57	1729083.21	14379791.94	39°35'52.4938"N	80°41'6.8579"W	5777.08	135.020	0.95	0.39	-0.86	
12704.00	89.200	157.190	7374.94	5290.33	-4174.44	4116.57	1729116.20	14379703.98	39°35'51.6230"N	80°41'6.4403"W	5862.77	135.400	4.95	-1.28	-4.79	
12799.00	90.460	162.960	7375.22	5385.27	-4263.71	4148.93	1729148.55	14379614.75	39°35'50.7396"N	80°41'6.0309"W	5949.19	135.782	6.22	1.33	6.07	
12893.00	90.430	162.880	7374.49	5479.21	-4353.56	4176.54	1729176.14	14379524.93	39°35'49.8507"N	80°41'5.6822"W	6032.99	136.189	0.09	-0.03	-0.09	
12988.00	90.250	162.740	7373.93	5574.16	-4444.32	4204.62	1729204.21	14379434.21	39°35'48.9527"N	80°41'5.3276"W	6118.07	136.588	0.24	-0.19	-0.15	
13082.00	90.000	161.400	7373.72	5668.14	-4533.75	4233.55	1729233.14	14379344.81	39°35'48.0679"N	80°41'4.9620"W	6203.05	136.961	1.45	-0.27	-1.43	
13177.00	90.120	159.920	7373.62	5763.14	-4623.39	4265.01	1729264.58	14379255.21	39°35'47.1809"N	80°41'4.5641"W	6290.16	137.309	1.56	0.13	-1.56	
13271.00	89.880	157.290	7373.62	5857.05	-4710.90	4299.30	1729298.86	14379167.73	39°35'46.3148"N	80°41'4.1300"W	6377.82	137.616	2.81	-0.26	-2.80	
13366.00	90.030	156.300	7373.70	5951.80	-4798.22	4336.73	1729336.28	14379080.45	39°35'45.4505"N	80°41'3.6558"W	6467.62	137.892	1.05	0.16	-1.04	
13461.00	90.180	158.980	7373.52	6046.64	-4886.06	4372.87	1729372.40	14378992.64	39°35'44.5811"N	80°41'3.1981"W	6557.10	138.172	2.83	0.16	2.82	
13555.00	90.340	160.470	7373.10	6140.61	-4974.24	4405.44	1729404.96	14378904.50	39°35'43.7085"N	80°41'2.7860"W	6644.62	138.470	1.59	0.17	1.59	

Actual Wellpath Report

Twain Unit 3H AWP Proj: 18194'

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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
13650.00	89.450	158.320	7373.27	6235.57	-5063.15	4438.87	1729438.37	14378815.62	39°35'42.8286"N	80°41'2.3629"W	6733.43	138.759	2.45	-0.94	-2.26	
13744.00	90.280	161.810	7373.49	6329.54	-5151.51	4470.92	1729470.41	14378727.30	39°35'41.9543"N	80°41'1.9575"W	6821.08	139.046	3.82	0.88	3.71	
13839.00	90.370	161.630	7372.95	6424.53	-5241.71	4500.71	1729500.19	14378637.13	39°35'41.0617"N	80°41'1.5810"W	6908.83	139.349	0.21	0.09	-0.19	
13934.00	90.400	161.150	7372.32	6519.53	-5331.74	4531.03	1729530.50	14378547.14	39°35'40.1709"N	80°41'1.1978"W	6996.98	139.641	0.51	0.03	-0.51	
14028.00	90.180	160.710	7371.84	6613.53	-5420.58	4561.74	1729561.20	14378458.33	39°35'39.2918"N	80°41'0.8094"W	7084.64	139.917	0.52	-0.23	-0.47	
14123.00	90.120	160.780	7371.59	6708.53	-5510.27	4593.07	1729592.51	14378368.68	39°35'38.4044"N	80°41'0.4133"W	7173.52	140.187	0.10	-0.06	0.07	
14218.00	88.550	158.360	7372.69	6803.48	-5599.28	4626.22	1729625.65	14378279.71	39°35'37.5235"N	80°40'59.9938"W	7263.18	140.436	3.04	-1.65	-2.55	
14312.00	90.250	161.440	7373.68	6897.45	-5687.53	4658.52	1729657.94	14378191.49	39°35'36.6501"N	80°40'59.5852"W	7351.86	140.680	3.74	1.81	3.28	
14407.00	90.370	161.600	7373.17	6992.44	-5777.63	4688.63	1729688.04	14378101.42	39°35'35.7586"N	80°40'59.2046"W	7440.72	140.940	0.21	0.13	0.17	
14501.00	90.310	161.700	7372.61	7086.43	-5866.85	4718.23	1729717.62	14378012.24	39°35'34.8758"N	80°40'58.8306"W	7528.72	141.193	0.12	-0.06	0.11	
14596.00	90.280	161.840	7372.12	7181.42	-5957.08	4747.94	1729747.33	14377922.05	39°35'33.9830"N	80°40'58.4551"W	7617.73	141.444	0.15	-0.03	0.15	
14691.00	90.430	161.510	7371.53	7276.41	-6047.26	4777.81	1729777.18	14377831.90	39°35'33.0907"N	80°40'58.0776"W	7706.94	141.688	0.38	0.16	-0.35	
14785.00	90.180	161.300	7371.03	7370.41	-6136.35	4807.79	1729807.14	14377742.84	39°35'32.2092"N	80°40'57.6987"W	7795.49	141.922	0.35	-0.27	-0.22	
14880.00	90.150	161.480	7370.76	7465.40	-6226.39	4838.10	1729837.45	14377652.85	39°35'31.3183"N	80°40'57.3156"W	7885.12	142.152	0.19	-0.03	0.19	
14974.00	90.310	161.710	7370.38	7559.39	-6315.58	4867.78	1729867.12	14377563.69	39°35'30.4358"N	80°40'56.9405"W	7973.82	142.376	0.30	0.17	0.24	
15069.00	90.400	161.570	7369.79	7654.39	-6405.74	4897.71	1729897.03	14377473.56	39°35'29.5437"N	80°40'56.5623"W	8063.56	142.599	0.18	0.09	-0.15	
15164.00	90.280	161.430	7369.23	7749.38	-6495.83	4927.85	1729927.16	14377383.51	39°35'28.6523"N	80°40'56.1814"W	8153.49	142.815	0.19	-0.13	-0.15	
15258.00	90.280	161.710	7368.77	7843.37	-6585.01	4957.57	1729956.86	14377294.37	39°35'27.7699"N	80°40'55.8058"W	8242.56	143.025	0.30	0.00	0.30	
15353.00	90.280	161.750	7368.30	7938.36	-6675.22	4987.35	1729986.63	14377204.19	39°35'26.8773"N	80°40'55.4295"W	8332.59	143.235	0.04	0.00	0.04	
15447.00	90.220	161.170	7367.89	8032.36	-6764.34	5017.24	1730016.51	14377115.11	39°35'25.9954"N	80°40'55.0517"W	8421.93	143.435	0.62	-0.06	-0.62	
15542.00	90.120	161.710	7367.61	8127.35	-6854.39	5047.47	1730046.74	14377025.09	39°35'25.1043"N	80°40'54.6695"W	8512.33	143.633	0.58	-0.11	0.57	
15637.00	90.180	161.410	7367.36	8222.35	-6944.52	5077.52	1730076.77	14376935.00	39°35'24.2126"N	80°40'54.2898"W	8602.76	143.827	0.32	0.06	-0.32	
15731.00	90.310	161.830	7366.96	8316.34	-7033.72	5107.16	1730106.40	14376845.83	39°35'23.3299"N	80°40'53.9152"W	8692.31	144.017	0.47	0.14	0.45	
15826.00	90.280	161.590	7366.47	8411.33	-7123.92	5136.98	1730136.20	14376755.67	39°35'22.4374"N	80°40'53.5385"W	8782.87	144.205	0.25	-0.03	-0.25	
15920.00	90.250	161.530	7366.04	8505.32	-7213.09	5166.71	1730165.92	14376666.53	39°35'21.5551"N	80°40'53.1628"W	8872.63	144.386	0.07	-0.03	-0.06	
16014.00	90.400	160.180	7365.50	8599.32	-7301.89	5197.54	1730196.74	14376577.77	39°35'20.6764"N	80°40'52.7730"W	8962.81	144.556	1.44	0.16	-1.44	
16109.00	90.280	160.110	7364.94	8694.31	-7391.24	5229.80	1730228.99	14376488.45	39°35'19.7922"N	80°40'52.3650"W	9054.35	144.718	0.15	-0.13	-0.07	
16204.00	90.280	160.320	7364.47	8789.30	-7480.63	5261.96	1730261.14	14376399.09	39°35'18.9076"N	80°40'51.9583"W	9145.93	144.877	0.22	0.00	0.22	
16298.00	90.220	160.390	7364.06	8883.29	-7569.16	5293.56	1730292.72	14376310.60	39°35'18.0316"N	80°40'51.5586"W	9236.55	145.033	0.10	-0.06	0.07	
16393.00	90.120	160.470	7363.78	8978.29	-7658.67	5325.38	1730324.53	14376221.13	39°35'17.1458"N	80°40'51.1563"W	9328.18	145.188	0.13	-0.11	0.08	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

WELLPATH DATA (200 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
16487.00	90.250	160.210	7363.48	9072.28	-7747.19	5357.01	1730356.15	14376132.64	39°35'16.2698"N	80°40'50.7563"W	9418.94	145.337	0.31	0.14	-0.28	
16582.00	90.550	160.390	7362.82	9167.27	-7836.63	5389.03	1730388.16	14376043.24	39°35'15.3848"N	80°40'50.3514"W	9510.75	145.485	0.37	0.32	0.19	
16677.00	90.150	160.340	7362.24	9262.27	-7926.10	5420.95	1730420.07	14375953.80	39°35'14.4994"N	80°40'49.9477"W	9602.59	145.630	0.42	-0.42	-0.05	
16771.00	90.430	160.260	7361.76	9356.26	-8014.60	5452.64	1730451.74	14375865.34	39°35'13.6236"N	80°40'49.5470"W	9693.56	145.771	0.31	0.30	-0.09	
16866.00	89.750	159.150	7361.61	9451.24	-8103.70	5485.59	1730484.68	14375776.27	39°35'12.7419"N	80°40'49.1302"W	9785.79	145.905	1.37	-0.72	-1.17	
16960.00	90.000	160.440	7361.82	9545.22	-8191.91	5518.05	1730517.13	14375688.09	39°35'11.8689"N	80°40'48.7195"W	9877.06	146.036	1.40	0.27	1.37	
17055.00	89.780	160.500	7362.00	9640.21	-8281.45	5549.81	1730548.88	14375598.59	39°35'10.9829"N	80°40'48.3180"W	9969.09	146.172	0.24	-0.23	0.06	
17149.00	90.150	160.490	7362.06	9734.21	-8370.05	5581.20	1730580.25	14375510.02	39°35'10.1061"N	80°40'47.9211"W	10060.19	146.304	0.39	0.39	-0.01	
17244.00	90.550	160.510	7361.48	9829.21	-8459.60	5612.91	1730611.95	14375420.51	39°35'9.2200"N	80°40'47.5202"W	10152.32	146.436	0.42	0.42	0.02	
17338.00	90.400	160.210	7360.70	9923.20	-8548.13	5644.50	1730643.53	14375332.02	39°35'8.3439"N	80°40'47.1207"W	10243.58	146.562	0.36	-0.16	-0.32	
17433.00	90.030	160.350	7360.34	10018.19	-8637.56	5676.56	1730675.57	14375242.62	39°35'7.4590"N	80°40'46.7153"W	10335.89	146.687	0.42	-0.39	0.15	
17527.00	89.570	160.340	7360.67	10112.18	-8726.08	5708.17	1730707.17	14375154.14	39°35'6.5830"N	80°40'46.3155"W	10427.26	146.809	0.49	-0.49	-0.01	
17622.00	89.510	160.540	7361.43	10207.18	-8815.59	5739.98	1730738.97	14375064.66	39°35'5.6972"N	80°40'45.9134"W	10519.60	146.931	0.22	-0.06	0.21	
17717.00	89.850	160.480	7361.96	10302.17	-8905.15	5771.67	1730770.65	14374975.14	39°35'4.8110"N	80°40'45.5126"W	10611.97	147.052	0.36	0.36	-0.06	
17811.00	89.480	160.450	7362.51	10396.17	-8993.74	5803.10	1730802.07	14374886.59	39°35'3.9344"N	80°40'45.1152"W	10703.43	147.168	0.39	-0.39	-0.03	
17906.00	89.970	160.630	7362.97	10491.17	-9083.31	5834.75	1730833.70	14374797.05	39°35'3.0480"N	80°40'44.7151"W	10795.87	147.285	0.55	0.52	0.19	
18001.00	89.570	160.670	7363.35	10586.16	-9172.94	5866.23	1730865.17	14374707.45	39°35'2.1610"N	80°40'44.3172"W	10888.32	147.400	0.42	-0.42	0.04	
18095.00	89.940	160.680	7363.75	10680.16	-9261.64	5897.34	1730896.26	14374618.78	39°35'1.2833"N	80°40'43.9239"W	10979.83	147.513	0.39	0.39	0.01	
18169.00	89.630	160.840	7364.03	10754.16	-9331.51	5921.72	1730920.64	14374548.94	39°35'0.5919"N	80°40'43.6157"W	11051.87	147.601	0.47	-0.42	0.22	
18194.00‡	89.630	160.840	7364.19	10779.16	-9355.12	5929.93	1730928.84	14374525.34	39°35'0.3582"N	80°40'43.5119"W	11076.21	147.631	0.00	0.00	0.00	Projected MD at TD: 18194'

DIRECTIONAL DIFFICULTY INDEX

Directional Difficulty Index @ TD = **7.00**

Values	Wellpath characterized as:
< 6.0	Relatively short or simple profiles with low tortuosity
< 6.0-6.4	Shorter with high tortuosity or longer with lower tortuosity

Reference: IADC/SPE 59196

Values	Wellpath characterized as:
6.4-6.8	Longer with relatively tortuous well paths
> 6.8	Long tortuous profiles, high degree of difficulty

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Actual Wellpath Report

Twain Unit 3H AWP Proj: 18194'

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Twain Unit 3H
Field	Wetzel	UWI	47-103-03794-0000
Facility	Harbour Pad	Wellbore	Twain Unit 3H AWB
Slot	Slot K		

HOLE & CASING SECTIONS - Ref Wellbore: Twain Unit 3H AWB Ref Wellpath: Twain Unit 3H AWP Proj: 18194'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	30.00	130.00	100.00	30.00	130.00	0.00	0.00	-0.07	-0.52
17 1/2in Open Hole	130.00	504.00	374.00	130.00	503.99	-0.07	-0.52	-0.93	-1.84
13 3/8in Casing Surface	30.00	484.00	454.00	30.00	483.99	0.00	0.00	-0.91	-1.89
12 1/4in Open Hole	504.00	3901.00	3397.00	503.99	3692.93	-0.93	-1.84	312.21	1082.42
9 5/8in Casing Intermediate	30.00	3871.00	3841.00	30.00	3664.80	0.00	0.00	308.82	1072.58
8 3/4in Open Hole	3901.00	7077.00	3176.00	3692.93	6634.23	312.21	1082.42	635.93	2232.89
8 1/2in Open Hole	7077.00	18194.00	11117.00	6634.23	7364.19	635.93	2232.89	-9355.12	5929.93
5 1/2in Casing Production	30.00	18174.00	18144.00	30.00	7364.06	0.00	0.00	-9336.23	5923.36

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Twain Unit 3H POE Rev-1	7300.50	219.35	2621.78	1727622.00	14384096.04	39°36'35.0987"N	80°41'25.3422"W	point
Twain Unit 3H POE Rev-2	7310.00	219.35	2621.78	1727622.00	14384096.04	39°36'35.0987"N	80°41'25.3422"W	point
Twain Unit 3H BHL Rev-1	7325.50	-9368.81	5935.59	1730934.50	14374511.66	39°35'0.2228"N	80°40'43.4403"W	point
Twain Unit 3H BHL Rev-2	7338.00	-9368.81	5935.59	1730934.50	14374511.66	39°35'0.2228"N	80°40'43.4403"W	point
Twain Unit 3H LP Rev-2	7338.00	42.86	2682.78	1727682.97	14383919.63	39°36'33.3524"N	80°41'24.5706"W	point
Twain Unit 3H POE Rev-3	7359.00	219.35	2621.78	1727622.00	14384096.04	39°36'35.0987"N	80°41'25.3422"W	point
Twain Unit 3H BHL Rev-3	7388.00	-9368.81	5935.59	1730934.50	14374511.66	39°35'0.2228"N	80°40'43.4403"W	point
Twain Unit 3H LP Rev-3	7388.00	39.81	2683.83	1727684.02	14383916.58	39°36'33.3222"N	80°41'24.5573"W	point

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TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Twain Unit 3H 50' L/R Hard Line	7500.00	-4574.73	4278.68	1729278.25	14379303.85	39°35'47.6613"N	80°41'4.3873"W	rectangle
	2D Rectangle: 10144.6 x 100.							

WELLPATH COMPOSITION - Ref Wellbore: Twain Unit 3H AWB Ref Wellpath: Twain Unit 3H AWP Proj: 18194'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	374.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata MS Gyro <17-1/2"> (100'-374')	Twain Unit 3H AWB	2026-01-04
374.00	3824.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02_APS EM <12-1/4"> (374')(503'-3824')	Twain Unit 3H AWB	2026-01-04
3824.00	7001.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03_APS EM <8-3/4"> (3824')(3975'-7001')	Twain Unit 3H AWB	2026-02-12
7001.00	18194.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_BH Lucida <8-1/2"> (7001')(7055'-18169')	Twain Unit 3H AWB	2026-02-12

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANTERO RESOURCES CORPORATION**	Well	**Twain Unit 3H**
Field	**Wetzel**	UWI	**47-103-03794-0000**
Facility	**Harbour Pad**	Wellbore	**Twain Unit 3H AWB**
Slot	**Slot K**		

COMMENTS

Wellpath general comments

API: 47-103-03794-0000
BH Job #: 112930779
Rig: H&P 519
Duration: 2/13/2026-2/16/2026
Gyrodata MS Gyro <17-1/2"> (100'-374')
APS EM <12-1/4"> (374')(503'-3824')
APS EM <8-3/4"> (3824')(3975'-7001')
BH Lucida <8-1/2"> (7001')(7055'-18169')
Sycamore: 7491' MD
Middlesex: 7654' MD
Burkett: 7797' MD
Tully: 7846' MD
Marcellus POE: 8071' MD
Projected MD at TD: 18194'

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