



# ANTERO RESOURCES CORPORATION



Location: Tyler County, WV  
Field: Tyler  
Facility: Grand Pad

Slot: Slot #07  
Well: Toroweap Unit 2H  
Wellbore: Toroweap Unit 2H PWB

Easting (ft)

Plot reference wellpath to Toroweap Unit 2H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1268.5 feet	Coordinates are in feet referenced to S&M
Mean Sea Level to Ground level (At Slot: Slot #07): -1243 feet	Depth is in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: adstaylor on 2022-06-10, Database: WA_MPL_EASTERNUS_Delta



BH AT Curve [OH] <8-1/2"> (6547)(6597-18905) : 6513.62ft TVD, 474.84ft N, 694.13ft E  
 APS EM <12-1/4"> (468)(503-2503) : 502.99ft TVD, 0.91ft S, 1.80ft E  
 Marcellus POE: 7198' MD : 6853.03ft TVD, 71.12ft N, 945.23ft E  
 Gyrodatta MS Gyro <12-1/4"> (300)(400-468) : 400.00ft TVD, 0.32ft S, 1.04ft E  
 Gyrodatta MS Gyro <17-1/2"> (100-300) : 100.00ft TVD, 0.02ft N, 0.07ft E

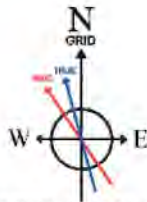
Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Grand Pad	1693813.970	14346849.540	39°30'25.7868"N	80°48'38.4804"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #07	182.02	-60.78	1693753.210	14346831.490
Comment	Toroweap Unit 2H			
H&P 317 (RKB) to Ground level (At Slot: Slot #07)	25.5ft			
Mean Sea Level to Ground level (At Slot: Slot #07)	-1243ft			
H&P 317 (RKB) to Mean Sea Level	1268.5ft			

Gyrodatta MS Gyro <17-1/2"> (100-300) : 0.11° Inc, 100.00ft MD, 100.00ft TVD, 0.00ft VS  
 Gyrodatta MS Gyro <12-1/4"> (300)(400-468) : 0.40° Inc, 400.00ft MD, 400.00ft TVD, 0.64ft VS  
 APS EM <12-1/4"> (468)(503-2503) : 0.59° Inc, 503.00ft MD, 502.99ft TVD, 1.44ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)
Tie On	2503.00	9.990	45.240	2483.18	186.62	182.67	0.34
Proj. to Bottom	2580.00	9.990	45.240	2559.01	196.02	192.15	0.00
Drill Out	2860.00	9.990	45.240	2637.80	205.80	202.01	0.00
End of 3D Arc	2755.50	8.229	49.930	2732.10	216.03	213.12	2.00
Curve KOP	6193.34	8.229	49.930	6134.54	532.77	589.65	0.00
POE	7148.40	74.817	150.000	6840.00	113.61	923.37	8.00
Landing Pt.	7338.19	90.000	150.000	6885.00	-48.84	1017.16	8.00
On AZI	7709.64	90.000	161.144	6865.00	-386.51	1170.53	3.00
BHL	18944.00	90.000	161.144	6865.00	-11017.94	4801.43	0.00

APS EM [OH] <8-3/4"> (2503)(2564-6547) : 8.86° Inc, 2564.00ft MD, 2543.36ft TVD, -121.97ft VS

API: 47-095-02766-0100  
 BH Job #: 111277225  
 Rig: H&P 317  
 Duration: 4/8/2022-4/12/2022



User specified (HDGM) Dip: 66.41° Field: 51729 nT  
 Magnetic North is 7.46 degrees West of True North (at 4/18/2022)  
 Grid North is 0.12 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.12 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.58 degrees

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Toroweap Unit 2H	Toroweap Unit 2H AWB	Toroweap Unit 2H AWP Proj: 18930'
Slot #07	Toroweap Unit 2H	Toroweap Unit 2H PWB	Toroweap Unit 2H PWP Rev-B.0

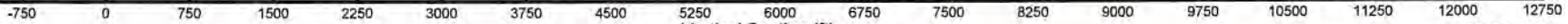
BH AT Curve [OH] <8-1/2"> (6547)(6597-18905) : 32.03° Inc, 6597.00ft MD, 6513.62ft TVD, -224.96ft VS  
 Marcellus POE: 7198' MD : 77.34° Inc, 7198.00ft MD, 6853.03ft TVD, 238.25ft VS

Projected MD at TD: 18930' : 89.11° Inc, 18930.00ft MD, 6919.79ft TVD, 11962.56ft VS

Scale 1 inch = 1500

True Vertical Depth (ft)

Northing (ft)



Azimuth 161.14° with reference 0.00 N, 0.00 E

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999603	Report Generated	6/10/2022 at 1:35:33 PM
Convergence at slot	0.12° 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	182.02	-60.78	1693753.21	14346831.49	39°30'27.5870"N	80°48'39.2510"W
Facility Reference Pt			1693813.97	14346649.54	39°30'25.7868"N	80°48'38.4804"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 317 (RKB) to Facility Vertical Datum	1268.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1268.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #07)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.14°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

WELLPATH DATA (215 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	73.820	0.00	0.00	0.00	0.00	1693753.21	14346831.49	39°30'27.5870"N	80°48'39.2510"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	73.820	25.50	0.00	0.00	0.00	1693753.21	14346831.49	39°30'27.5870"N	80°48'39.2510"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.110	73.820	100.00	0.00	0.02	0.07	1693753.28	14346831.51	39°30'27.5872"N	80°48'39.2501"W	0.07	73.820	0.15	0.15	0.00	Gyrodota MS Gyro <17-1/2"> (100'-300')
200.00	0.170	106.710	200.00	0.09	0.00	0.30	1693753.51	14346831.49	39°30'27.5871"N	80°48'39.2471"W	0.30	89.239	0.10	0.06	32.89	
300.00	0.180	107.610	300.00	0.27	-0.09	0.59	1693753.80	14346831.40	39°30'27.5862"N	80°48'39.2434"W	0.60	98.242	0.01	0.01	0.90	
400.00	0.400	122.230	400.00	0.64	-0.32	1.04	1693754.25	14346831.17	39°30'27.5839"N	80°48'39.2377"W	1.09	107.098	0.23	0.22	14.62	Gyrodota MS Gyro <12-1/4"> (300')(400'-468')
468.00	0.610	127.990	468.00	1.13	-0.67	1.53	1693754.74	14346830.82	39°30'27.5804"N	80°48'39.2315"W	1.67	113.682	0.32	0.31	8.47	
503.00	0.590	133.570	502.99	1.44	-0.91	1.80	1693755.01	14346830.58	39°30'27.5780"N	80°48'39.2280"W	2.02	116.730	0.18	-0.06	15.94	APS EM <12-1/4"> (468')(503'-2503')
592.00	1.810	93.640	591.97	2.39	-1.31	3.54	1693756.75	14346830.18	39°30'27.5740"N	80°48'39.2059"W	3.77	110.363	1.58	1.37	-44.87	
683.00	2.970	80.250	682.89	3.31	-1.01	7.30	1693760.50	14346830.49	39°30'27.5770"N	80°48'39.1679"W	7.36	97.845	1.41	1.27	-14.71	
774.00	3.500	73.620	773.75	3.80	0.18	12.28	1693765.49	14346831.67	39°30'27.5885"N	80°48'39.0943"W	12.29	89.173	0.71	0.58	-7.29	
864.00	3.930	65.310	863.56	3.61	2.24	17.72	1693770.93	14346833.73	39°30'27.6088"N	80°48'39.0248"W	17.86	82.795	0.76	0.48	-9.23	
953.00	5.330	54.480	952.27	2.11	5.92	23.86	1693777.06	14346837.40	39°30'27.6450"N	80°48'38.9465"W	24.58	76.073	1.85	1.57	-12.17	
1043.00	7.160	51.780	1041.73	-0.94	11.82	31.67	1693784.87	14346843.30	39°30'27.7032"N	80°48'38.8467"W	33.80	69.539	2.06	2.03	-3.00	
1138.00	9.590	47.430	1135.71	-6.09	20.83	42.15	1693795.34	14346852.31	39°30'27.7921"N	80°48'38.7127"W	47.02	63.698	2.64	2.56	-4.58	
1233.00	10.200	41.320	1229.30	-13.45	32.50	53.53	1693806.72	14346863.98	39°30'27.9072"N	80°48'38.5672"W	62.63	58.734	1.28	0.84	-6.43	
1328.00	9.880	41.300	1322.85	-21.69	44.94	64.46	1693817.65	14346876.42	39°30'28.0299"N	80°48'38.4274"W	78.58	55.115	0.34	-0.34	-0.02	
1422.00	9.580	39.120	1415.49	-29.85	57.07	74.72	1693827.90	14346888.54	39°30'28.1495"N	80°48'38.2962"W	94.02	52.628	0.51	-0.32	-2.32	
1517.00	9.100	34.810	1509.24	-38.50	69.37	84.00	1693837.17	14346900.84	39°30'28.2709"N	80°48'38.1775"W	108.94	50.447	0.89	-0.51	-4.54	
1612.00	8.480	34.460	1603.12	-47.13	81.32	92.25	1693845.42	14346912.77	39°30'28.3888"N	80°48'38.0719"W	122.97	48.604	0.66	-0.65	-0.37	
1706.00	8.210	39.030	1696.12	-54.84	92.25	100.40	1693853.57	14346923.70	39°30'28.4966"N	80°48'37.9676"W	136.34	47.423	0.76	-0.29	4.86	
1801.00	8.430	41.390	1790.13	-61.90	102.74	109.27	1693862.44	14346934.19	39°30'28.6002"N	80°48'37.8541"W	149.99	46.766	0.43	0.23	2.48	
1896.00	8.760	37.860	1884.06	-69.32	113.67	118.32	1693871.48	14346945.12	39°30'28.7081"N	80°48'37.7384"W	164.08	46.147	0.65	0.35	-3.72	
1991.00	8.960	42.660	1977.93	-76.82	124.83	127.77	1693880.93	14346956.27	39°30'28.8181"N	80°48'37.6175"W	178.63	45.668	0.81	0.21	5.05	
2085.00	8.930	43.030	2070.78	-83.75	135.54	137.71	1693890.87	14346966.98	39°30'28.9238"N	80°48'37.4904"W	193.22	45.454	0.07	-0.03	0.39	
2180.00	8.830	39.600	2164.65	-91.04	146.55	147.39	1693900.54	14346977.98	39°30'29.0324"N	80°48'37.3667"W	207.85	45.163	0.57	-0.11	-3.61	
2275.00	9.410	36.420	2258.44	-99.28	158.42	156.65	1693909.80	14346989.85	39°30'29.1495"N	80°48'37.2482"W	222.79	44.678	0.81	0.61	-3.35	
2369.00	9.550	42.820	2351.16	-107.35	170.32	166.51	1693919.65	14347001.74	39°30'29.2669"N	80°48'37.1221"W	238.19	44.352	1.13	0.15	6.81	
2464.00	10.050	45.910	2444.78	-114.62	181.87	177.82	1693930.96	14347013.29	39°30'29.3808"N	80°48'36.9775"W	254.36	44.355	0.76	0.53	3.25	
2503.00	9.990	45.240	2483.18	-117.55	186.62	182.67	1693935.80	14347018.03	39°30'29.4277"N	80°48'36.9155"W	261.14	44.387	0.34	-0.15	-1.72	

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Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

WELLPATH DATA (215 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
2564.00	8.860	44.460	2543.36	-121.97	193.70	189.71	1693942.85	14347025.11	39°30'29.4975"N	80°48'36.8254"W	271.13	44.405	1.86	-1.85	-1.28	APS EM [OH] <8-3/4"> (2503')(2564'-6547')
2658.00	10.400	47.040	2636.03	-128.69	204.65	200.99	1693954.12	14347036.06	39°30'29.6055"N	80°48'36.6812"W	286.84	44.484	1.70	1.64	2.74	
2753.00	10.340	46.100	2729.48	-135.80	216.40	213.41	1693966.54	14347047.81	39°30'29.7214"N	80°48'36.5224"W	303.93	44.601	0.19	-0.06	-0.99	
2848.00	8.970	42.430	2823.13	-142.96	227.78	224.55	1693977.67	14347059.18	39°30'29.8336"N	80°48'36.3800"W	319.86	44.591	1.58	-1.44	-3.86	
2942.00	9.060	38.960	2915.97	-150.43	238.95	234.15	1693987.27	14347070.34	39°30'29.9437"N	80°48'36.2572"W	334.55	44.419	0.59	0.10	-3.69	
3037.00	8.080	42.200	3009.91	-157.64	249.71	243.34	1693996.45	14347081.10	39°30'30.0499"N	80°48'36.1397"W	348.67	44.260	1.15	-1.03	3.41	
3132.00	8.300	55.680	3103.95	-162.70	258.52	253.49	1694006.60	14347089.91	39°30'30.1368"N	80°48'36.0100"W	362.06	44.437	2.03	0.23	14.19	
3226.00	7.900	53.860	3197.01	-166.43	266.16	264.31	1694017.41	14347097.54	39°30'30.2120"N	80°48'35.8718"W	375.10	44.800	0.51	-0.43	-1.94	
3323.00	8.870	63.280	3292.98	-169.43	273.45	276.37	1694029.47	14347104.83	39°30'30.2839"N	80°48'35.7176"W	388.79	45.305	1.73	1.00	9.71	
3418.00	8.470	61.830	3386.89	-171.56	280.05	289.08	1694042.18	14347111.42	39°30'30.3488"N	80°48'35.5553"W	402.49	45.910	0.48	-0.42	-1.53	
3512.00	8.120	59.100	3479.91	-174.07	286.72	300.88	1694053.97	14347118.10	39°30'30.4146"N	80°48'35.4046"W	415.62	46.380	0.56	-0.37	-2.90	
3607.00	7.990	54.270	3573.97	-177.38	294.02	312.00	1694065.08	14347125.40	39°30'30.4865"N	80°48'35.2626"W	428.71	46.699	0.73	-0.14	-5.08	
3701.00	7.120	52.230	3667.16	-181.17	301.41	321.91	1694074.99	14347132.78	39°30'30.5593"N	80°48'35.1359"W	440.99	46.884	0.97	-0.93	-2.17	
3796.00	8.110	52.600	3761.32	-185.21	309.08	331.88	1694084.96	14347140.45	39°30'30.6349"N	80°48'35.0084"W	453.52	47.037	1.04	1.04	0.39	
3891.00	8.980	50.060	3855.26	-190.00	317.91	342.89	1694095.97	14347149.28	39°30'30.7220"N	80°48'34.8678"W	467.60	47.165	1.00	0.92	-2.67	
3986.00	7.640	43.440	3949.27	-195.61	327.26	352.92	1694105.99	14347158.62	39°30'30.8141"N	80°48'34.7396"W	481.30	47.160	1.73	-1.41	-6.97	
4081.00	8.770	48.600	4043.29	-201.32	336.64	362.70	1694115.76	14347167.99	39°30'30.9066"N	80°48'34.6146"W	494.84	47.134	1.42	1.19	5.43	
4175.00	8.600	44.210	4136.22	-207.25	346.41	372.97	1694126.03	14347177.76	39°30'31.0030"N	80°48'34.4832"W	509.03	47.114	0.73	-0.18	-4.67	
4270.00	8.260	39.530	4230.19	-214.04	356.77	382.27	1694135.33	14347188.11	39°30'31.1051"N	80°48'34.3644"W	522.89	46.976	0.81	-0.36	-4.93	
4365.00	8.170	53.540	4324.23	-219.66	366.04	392.04	1694145.09	14347197.39	39°30'31.1966"N	80°48'34.2394"W	536.36	46.964	2.10	-0.09	14.75	
4459.00	8.400	52.810	4417.24	-223.84	374.16	402.88	1694155.93	14347205.50	39°30'31.2766"N	80°48'34.1009"W	549.83	47.117	0.27	0.24	-0.78	
4554.00	8.380	49.940	4511.23	-228.52	382.81	413.71	1694166.75	14347214.15	39°30'31.3619"N	80°48'33.9625"W	563.65	47.221	0.44	-0.02	-3.02	
4649.00	7.410	46.410	4605.33	-233.59	391.49	423.44	1694176.49	14347222.83	39°30'31.4475"N	80°48'33.8381"W	576.69	47.245	1.14	-1.02	-3.72	
4744.00	8.860	53.980	4699.37	-238.31	400.02	433.80	1694186.84	14347231.35	39°30'31.5315"N	80°48'33.7057"W	590.08	47.320	1.89	1.53	7.97	
4839.00	9.150	57.150	4793.20	-242.30	408.42	446.06	1694199.09	14347239.74	39°30'31.6143"N	80°48'33.5490"W	604.80	47.523	0.60	0.31	3.34	
4933.00	9.200	53.460	4886.00	-246.39	416.95	458.38	1694211.41	14347248.27	39°30'31.6983"N	80°48'33.3917"W	619.64	47.710	0.63	0.05	-3.93	
5028.00	9.150	49.150	4979.79	-251.52	426.41	470.19	1694223.22	14347257.73	39°30'31.7916"N	80°48'33.2407"W	634.75	47.796	0.73	-0.05	-4.54	
5123.00	8.880	41.670	5073.61	-257.96	436.83	480.78	1694233.80	14347268.14	39°30'31.8943"N	80°48'33.1053"W	649.59	47.743	1.27	-0.28	-7.87	
5217.00	10.020	42.170	5166.34	-265.49	448.31	491.10	1694244.11	14347279.62	39°30'32.0076"N	80°48'32.9734"W	664.95	47.608	1.22	1.21	0.53	
5312.00	9.710	43.750	5259.93	-273.18	460.22	502.19	1694255.20	14347291.53	39°30'32.1251"N	80°48'32.8316"W	681.17	47.497	0.43	-0.33	1.66	

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Toroweap Unit 2H
Field	Tyler		API	47-095-02766-0100
Facility	Grand Pad		Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07			

WELLPATH DATA (215 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
5407.00	10.830	42.060	5353.41	-281.20	472.63	513.70	1694266.71	14347303.94	39°30'32.2475"N	80°48'32.6843"W	698.05	47.384	1.22	1.18	-1.78	
5504.00	9.910	41.680	5448.82	-289.73	485.63	525.36	1694278.36	14347316.93	39°30'32.3758"N	80°48'32.5353"W	715.43	47.250	0.95	-0.95	-0.39	
5599.00	9.920	48.960	5542.41	-296.84	497.11	536.97	1694289.96	14347328.40	39°30'32.4890"N	80°48'32.3868"W	731.75	47.207	1.32	0.01	7.66	
5693.00	7.960	56.030	5635.27	-301.60	508.07	548.47	1694301.47	14347337.35	39°30'32.5772"N	80°48'32.2398"W	746.28	47.303	2.39	-2.09	7.52	
5788.00	6.540	58.980	5729.50	-304.45	512.53	558.57	1694311.55	14347343.82	39°30'32.6409"N	80°48'32.1109"W	758.08	47.461	1.54	-1.49	3.08	
5883.00	6.740	57.250	5823.87	-306.93	518.34	567.89	1694320.87	14347349.62	39°30'32.6981"N	80°48'31.9918"W	768.88	47.612	0.30	0.21	-1.80	
5977.00	7.790	56.250	5917.11	-309.90	524.86	577.83	1694330.81	14347356.14	39°30'32.7624"N	80°48'31.8648"W	780.62	47.750	1.13	1.12	-1.06	
6072.00	8.400	53.120	6011.16	-313.70	532.60	588.73	1694341.71	14347363.88	39°30'32.8386"N	80°48'31.7255"W	793.89	47.866	0.79	0.64	-3.29	
6168.00	9.020	60.870	6106.06	-317.21	540.47	600.91	1694353.88	14347371.75	39°30'32.9162"N	80°48'31.5698"W	808.21	48.031	1.38	0.65	8.07	
6262.00	11.920	91.510	6198.55	-315.14	543.81	617.07	1694370.03	14347375.08	39°30'32.9488"N	80°48'31.3636"W	822.50	48.611	6.57	3.09	32.60	
6357.00	12.290	114.750	6291.50	-304.75	539.31	636.07	1694389.03	14347370.59	39°30'32.9040"N	80°48'31.1213"W	833.93	49.706	5.11	0.39	24.46	
6452.00	19.210	134.750	6382.94	-283.73	524.05	656.39	1694409.34	14347355.33	39°30'32.7527"N	80°48'30.8625"W	839.93	51.397	9.16	7.28	21.05	
6547.00	27.300	143.980	6470.18	-248.84	495.37	680.35	1694433.29	14347326.66	39°30'32.4687"N	80°48'30.5576"W	841.59	53.941	9.32	8.52	9.72	
6597.00	32.030	147.980	6513.62	-224.96	474.84	694.13	1694447.07	14347306.14	39°30'32.2655"N	80°48'30.3823"W	841.01	55.625	10.25	9.46	8.00	BH AT Curve [OH] <8-1/2"> (6547°)(6597°-18905°)
6643.00†	34.628	148.189	6552.05	-200.34	453.39	707.49	1694460.42	14347284.70	39°30'32.0532"N	80°48'30.2124"W	840.30	57.347	5.65	5.65	0.48	Sycamore: 6643' MD
6665.00	35.870	148.280	6570.01	-187.97	442.59	714.18	1694467.10	14347273.90	39°30'31.9464"N	80°48'30.1274"W	840.20	58.213	5.65	5.65	0.41	
6760.00	42.240	148.220	6643.75	-129.65	391.72	745.66	1694498.57	14347223.05	39°30'31.4430"N	80°48'29.7272"W	842.29	62.286	6.71	6.71	-0.06	
6792.00†	45.532	148.081	6666.81	-108.04	372.88	757.36	1694510.27	14347204.22	39°30'31.2565"N	80°48'29.5783"W	844.18	63.787	10.29	10.29	-0.44	Middlesex: 6792' MD
6854.00	51.910	147.850	6707.69	-62.69	333.40	782.07	1694534.97	14347164.76	39°30'30.8658"N	80°48'29.2642"W	850.17	66.911	10.29	10.29	-0.37	
6901.00	56.160	148.200	6735.29	-25.66	301.14	802.21	1694555.10	14347132.51	39°30'30.5465"N	80°48'29.0082"W	856.87	69.424	9.06	9.04	0.74	
6948.00†	59.323	147.857	6760.37	13.05	267.43	823.25	1694576.13	14347098.81	39°30'30.2129"N	80°48'28.7406"W	865.60	72.004	6.76	6.73	-0.73	Burkett: 6948' MD
6949.00	59.390	147.850	6760.88	13.89	266.70	823.71	1694576.59	14347098.09	39°30'30.2057"N	80°48'28.7348"W	865.81	72.059	6.76	6.73	-0.70	
6996.00	63.230	148.010	6783.44	54.02	231.77	845.59	1694598.47	14347063.17	39°30'29.8600"N	80°48'28.4565"W	876.78	74.672	8.18	8.17	0.34	
7022.00†	64.703	147.901	6794.85	76.76	211.97	857.99	1694610.86	14347043.37	39°30'29.6640"N	80°48'28.2989"W	883.79	76.123	5.68	5.67	-0.42	Tully: 7022' MD
7044.00	65.950	147.810	6804.03	96.22	195.04	868.63	1694621.49	14347026.45	39°30'29.4965"N	80°48'28.1637"W	890.25	77.345	5.68	5.67	-0.41	
7091.00	68.490	148.540	6822.23	138.45	158.22	891.47	1694644.33	14346989.65	39°30'29.1322"N	80°48'27.8732"W	905.41	79.936	5.59	5.40	1.55	
7139.00	72.990	147.900	6838.06	182.60	119.72	915.33	1694668.18	14346951.16	39°30'28.7511"N	80°48'27.5698"W	923.13	82.549	9.46	9.37	-1.33	
7186.00	76.710	148.690	6850.34	226.82	81.13	939.17	1694692.01	14346912.58	39°30'28.3692"N	80°48'27.2667"W	942.67	85.063	8.08	7.91	1.68	
7198.00†	77.340	148.912	6853.03	238.25	71.12	945.23	1694698.06	14346902.58	39°30'28.2702"N	80°48'27.1897"W	947.90	85.697	5.55	5.25	1.85	Marcellus POE: 7198' MD
7234.00	79.230	149.570	6860.34	272.74	40.83	963.25	1694716.08	14346872.31	39°30'27.9704"N	80°48'26.9606"W	964.12	87.573	5.55	5.25	1.83	

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Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

WELLPATH DATA (215 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
7329.00	85.780	150.580	6872.73	365.12	-40.76	1010.21	1694763.02	14346790.75	39°30'27.1631"N	80°48'26.3637"W	1011.03	92.310	6.97	6.89	1.06	
7425.00	89.420	151.920	6876.75	459.60	-124.83	1056.33	1694809.12	14346706.71	39°30'26.3311"N	80°48'25.7776"W	1063.68	96.740	4.04	3.79	1.40	
7520.00	89.450	154.980	6877.68	553.73	-209.80	1098.79	1694851.56	14346621.77	39°30'25.4905"N	80°48'25.2382"W	1118.64	100.810	3.22	0.03	3.22	
7615.00	89.450	158.780	6878.60	648.44	-297.15	1136.08	1694888.84	14346534.46	39°30'24.6264"N	80°48'24.7648"W	1174.30	104.658	4.00	0.00	4.00	
7710.00	89.450	159.870	6879.51	743.38	-386.03	1169.62	1694922.37	14346445.62	39°30'23.7473"N	80°48'24.3394"W	1231.68	108.265	1.15	0.00	1.15	
7805.00	89.720	162.360	6880.20	838.38	-475.90	1200.37	1694953.10	14346355.78	39°30'22.8583"N	80°48'23.9496"W	1291.27	111.627	2.64	0.28	2.62	
7900.00	89.750	160.000	6880.64	933.37	-565.82	1231.01	1694983.73	14346265.90	39°30'21.9690"N	80°48'23.5611"W	1354.82	114.685	2.48	0.03	-2.48	
7995.00	89.970	161.680	6880.87	1028.37	-655.55	1262.19	1695014.90	14346176.20	39°30'21.0815"N	80°48'23.1658"W	1422.28	117.446	1.78	0.23	1.77	
8090.00	90.520	161.240	6880.46	1123.36	-745.62	1292.40	1695045.09	14346086.17	39°30'20.1907"N	80°48'22.7829"W	1492.06	119.982	0.74	0.58	-0.46	
8184.00	90.590	161.600	6879.55	1217.36	-834.72	1322.35	1695075.03	14345997.11	39°30'19.3095"N	80°48'22.4033"W	1563.76	122.262	0.39	0.07	0.38	
8279.00	90.030	160.990	6879.04	1312.36	-924.70	1352.81	1695105.48	14345907.16	39°30'18.4195"N	80°48'22.0171"W	1638.65	124.354	0.87	-0.59	-0.64	
8373.00	90.180	161.200	6878.87	1406.36	-1013.62	1383.27	1695135.93	14345818.27	39°30'17.5400"N	80°48'21.6310"W	1714.90	126.233	0.27	0.16	0.22	
8468.00	91.110	161.570	6877.80	1501.35	-1103.65	1413.59	1695166.24	14345728.28	39°30'16.6496"N	80°48'21.2466"W	1793.40	127.981	1.05	0.98	0.39	
8562.00	90.550	162.620	6876.43	1595.32	-1193.08	1442.49	1695195.12	14345638.88	39°30'15.7651"N	80°48'20.8804"W	1871.96	129.594	1.27	-0.60	1.12	
8657.00	89.940	161.410	6876.03	1690.31	-1283.44	1471.82	1695224.44	14345548.56	39°30'14.8714"N	80°48'20.5087"W	1952.81	131.089	1.43	-0.64	-1.27	
8752.00	90.030	160.140	6876.05	1785.30	-1373.14	1503.10	1695255.71	14345458.90	39°30'13.9842"N	80°48'20.1121"W	2035.88	132.413	1.34	0.09	-1.34	
8846.00	90.150	161.720	6875.91	1879.30	-1461.98	1533.81	1695286.41	14345370.09	39°30'13.1055"N	80°48'19.7228"W	2118.95	133.626	1.69	0.13	1.68	
8940.00	90.220	160.810	6875.60	1973.30	-1551.00	1564.00	1695316.59	14345281.11	39°30'12.2251"N	80°48'19.3400"W	2202.66	134.761	0.97	0.07	-0.97	
9035.00	90.650	160.920	6874.88	2068.30	-1640.74	1595.14	1695347.72	14345191.40	39°30'11.3374"N	80°48'18.9453"W	2288.34	135.807	0.47	0.45	0.12	
9129.00	91.510	162.020	6873.11	2162.27	-1729.85	1625.01	1695377.57	14345102.33	39°30'10.4561"N	80°48'18.5667"W	2373.40	136.790	1.49	0.91	1.17	
9223.00	89.970	161.470	6871.89	2256.26	-1819.11	1654.45	1695407.00	14345013.10	39°30'9.5733"N	80°48'18.1936"W	2458.94	137.714	1.74	-1.64	-0.59	
9318.00	90.030	161.510	6871.89	2351.26	-1909.20	1684.61	1695437.15	14344923.05	39°30'8.6823"N	80°48'17.8113"W	2546.16	138.576	0.08	0.06	0.04	
9412.00	89.880	161.300	6871.97	2445.26	-1998.29	1714.58	1695467.11	14344834.00	39°30'7.8011"N	80°48'17.4314"W	2633.05	139.370	0.27	-0.16	-0.22	
9507.00	89.750	160.880	6872.28	2540.25	-2088.16	1745.37	1695497.89	14344744.16	39°30'6.9122"N	80°48'17.0411"W	2721.53	140.110	0.46	-0.14	-0.44	
9601.00	89.720	160.880	6872.71	2634.25	-2176.98	1776.16	1695528.66	14344655.38	39°30'6.0338"N	80°48'16.6508"W	2809.62	140.790	0.03	-0.03	0.00	
9695.00	89.940	161.800	6872.99	2728.25	-2266.03	1806.24	1695558.73	14344566.36	39°30'5.1530"N	80°48'16.2696"W	2897.83	141.442	1.01	0.23	0.98	
9789.00	89.510	161.030	6873.44	2822.25	-2355.13	1836.19	1695588.67	14344477.30	39°30'4.2718"N	80°48'15.8899"W	2986.34	142.058	0.94	-0.46	-0.82	
9884.00	89.850	160.830	6873.97	2917.25	-2444.91	1867.23	1695619.70	14344387.55	39°30'3.3837"N	80°48'15.4964"W	3076.39	142.630	0.42	0.36	-0.21	
9978.00	90.120	161.350	6874.00	3011.24	-2533.84	1897.70	1695650.15	14344298.66	39°30'2.5042"N	80°48'15.1102"W	3165.69	143.169	0.62	0.29	0.55	
10072.00	89.720	161.900	6874.13	3105.24	-2623.05	1927.33	1695679.77	14344209.49	39°30'1.6219"N	80°48'14.7347"W	3254.99	143.693	0.72	-0.43	0.59	

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Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

WELLPATH DATA (215 stations)																
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10166.00	89.820	161.260	6874.50	3199.24	-2712.23	1957.03	1695709.46	14344120.34	39°30'0.7398"N	80°48'14.3583"W	3344.57	144.187	0.69	0.11	-0.68	
10261.00	90.460	161.600	6874.27	3294.23	-2802.28	1987.28	1695739.70	14344030.32	39°29'59.8492"N	80°48'13.9749"W	3435.42	144.657	0.76	0.67	-0.36	
10356.00	89.750	160.800	6874.10	3389.23	-2892.21	2017.90	1695770.30	14343940.43	39°29'58.9597"N	80°48'13.5868"W	3526.59	145.097	1.13	-0.75	-0.84	
10450.00	90.060	161.750	6874.25	3483.23	-2981.24	2048.07	1695800.47	14343851.44	39°29'58.0792"N	80°48'13.2043"W	3616.96	145.511	1.06	0.33	1.01	
10544.00	89.820	160.830	6874.35	3577.23	-3070.27	2078.23	1695830.61	14343762.45	39°29'57.1986"N	80°48'12.8222"W	3707.50	145.906	1.01	-0.26	-0.98	
10639.00	90.280	162.200	6874.27	3672.23	-3160.36	2108.35	1695860.72	14343672.39	39°29'56.3075"N	80°48'12.4405"W	3799.08	146.292	1.52	0.48	1.44	
10734.00	90.280	161.410	6873.80	3767.22	-3250.61	2138.01	1695890.37	14343582.17	39°29'55.4149"N	80°48'12.0646"W	3890.70	146.666	0.83	0.00	-0.83	
10828.00	89.600	161.420	6873.90	3861.22	-3339.71	2167.97	1695920.31	14343493.11	39°29'54.5337"N	80°48'11.6849"W	3981.68	147.010	0.72	-0.72	-0.61	
10923.00	91.350	160.810	6873.12	3956.21	-3429.59	2198.71	1695951.05	14343403.27	39°29'53.6447"N	80°48'11.2952"W	4073.87	147.336	1.95	1.84	-0.64	
11017.00	90.060	161.170	6871.96	4050.20	-3518.45	2229.33	1695981.65	14343314.44	39°29'52.7658"N	80°48'10.9071"W	4165.26	147.641	1.42	-1.37	0.38	
11112.00	90.090	161.870	6871.83	4145.20	-3608.55	2259.44	1696011.75	14343224.37	39°29'51.8746"N	80°48'10.5255"W	4257.55	147.948	0.74	0.03	0.74	
11206.00	89.940	161.560	6871.81	4239.19	-3697.81	2288.93	1696041.23	14343135.16	39°29'50.9919"N	80°48'10.1518"W	4348.91	148.243	0.37	-0.16	-0.33	
11301.00	90.000	161.720	6871.86	4334.19	-3787.97	2318.86	1696071.14	14343045.03	39°29'50.1001"N	80°48'9.7726"W	4441.38	148.527	0.18	0.06	0.17	
11396.00	90.000	161.510	6871.86	4429.18	-3878.12	2348.82	1696101.09	14342954.91	39°29'49.2085"N	80°48'9.3929"W	4533.96	148.798	0.22	0.00	-0.22	
11490.00	89.940	161.060	6871.91	4523.18	-3967.15	2378.98	1696131.24	14342865.92	39°29'48.3279"N	80°48'9.0106"W	4625.78	149.050	0.48	-0.06	-0.48	
11584.00	90.090	161.130	6871.88	4617.18	-4056.08	2409.44	1696161.69	14342777.03	39°29'47.4483"N	80°48'8.6246"W	4717.75	149.288	0.18	0.16	0.07	
11679.00	89.940	160.810	6871.86	4712.18	-4145.89	2440.41	1696192.65	14342687.25	39°29'46.5600"N	80°48'8.2320"W	4810.82	149.517	0.37	-0.16	-0.34	
11774.00	89.380	160.250	6872.42	4807.17	-4235.45	2472.08	1696224.30	14342597.72	39°29'45.6742"N	80°48'7.8306"W	4904.11	149.729	0.83	-0.59	-0.59	
11868.00	89.600	160.250	6873.26	4901.16	-4323.92	2503.84	1696256.05	14342509.29	39°29'44.7991"N	80°48'7.4279"W	4996.55	149.926	0.23	0.23	0.00	
11963.00	89.940	161.400	6873.64	4996.16	-4413.65	2535.04	1696287.24	14342419.60	39°29'43.9116"N	80°48'7.0324"W	5089.87	150.128	1.26	0.36	1.21	
12058.00	89.850	161.000	6873.82	5091.16	-4503.58	2565.66	1696317.85	14342329.71	39°29'43.0221"N	80°48'6.6444"W	5183.13	150.330	0.43	-0.09	-0.42	
12153.00	89.750	161.290	6874.15	5186.15	-4593.48	2596.36	1696348.53	14342239.84	39°29'42.1329"N	80°48'6.2553"W	5276.47	150.524	0.32	-0.11	0.31	
12247.00	89.570	161.300	6874.71	5280.15	-4682.52	2626.50	1696378.67	14342150.84	39°29'41.2523"N	80°48'5.8733"W	5368.84	150.711	0.19	-0.19	0.01	
12341.00	89.600	161.350	6875.39	5374.15	-4771.56	2656.60	1696408.75	14342061.83	39°29'40.3716"N	80°48'5.4919"W	5461.26	150.893	0.06	0.03	0.05	
12436.00	89.570	160.820	6876.07	5469.15	-4861.43	2687.40	1696439.54	14341972.00	39°29'39.4827"N	80°48'5.1016"W	5554.78	151.066	0.56	-0.03	-0.56	
12531.00	89.380	160.710	6876.94	5564.14	-4951.12	2718.69	1696470.82	14341882.34	39°29'38.5956"N	80°48'4.7049"W	5648.44	151.229	0.23	-0.20	-0.12	
12626.00	89.630	161.000	6877.77	5659.14	-5040.87	2749.85	1696501.96	14341792.63	39°29'37.7080"N	80°48'4.3101"W	5742.12	151.387	0.40	0.26	0.31	
12720.00	89.260	160.580	6878.68	5753.13	-5129.63	2780.78	1696532.88	14341703.91	39°29'36.8300"N	80°48'3.9181"W	5834.88	151.538	0.60	-0.39	-0.45	
12815.00	90.030	161.260	6879.26	5848.13	-5219.41	2811.83	1696563.92	14341614.17	39°29'35.9420"N	80°48'3.5245"W	5928.62	151.688	1.08	0.81	0.72	
12910.00	90.060	161.340	6879.19	5943.12	-5309.39	2842.29	1696594.36	14341524.22	39°29'35.0520"N	80°48'3.1385"W	6022.31	151.838	0.09	0.03	0.08	

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Toroweap Unit 2H
Field	Tyler		API	47-095-02766-0100
Facility	Grand Pad		Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07			

WELLPATH DATA (215 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
13004.00	89.880	161.650	6879.24	6037.12	-5398.53	2872.12	1696624.19	14341435.11	39°29'34.1704"N	80°48'2.7605"W	6115.00	151.986	0.38	-0.19	0.33	
13099.00	89.750	161.720	6879.55	6132.12	-5488.72	2901.97	1696654.03	14341344.96	39°29'33.2784"N	80°48'2.3822"W	6208.66	152.134	0.16	-0.14	0.07	
13194.00	89.690	160.840	6880.01	6227.12	-5578.69	2932.46	1696684.50	14341255.02	39°29'32.3885"N	80°48'1.9959"W	6302.47	152.271	0.93	-0.06	-0.93	
13289.00	89.780	161.650	6880.45	6322.11	-5668.64	2963.01	1696715.04	14341165.11	39°29'31.4987"N	80°48'1.6088"W	6396.32	152.404	0.86	0.09	0.85	
13383.00	89.880	161.930	6880.73	6416.11	-5757.94	2992.38	1696744.40	14341075.85	39°29'30.6156"N	80°48'1.2367"W	6489.08	152.539	0.32	0.11	0.30	
13478.00	89.660	161.380	6881.11	6511.10	-5848.11	3022.28	1696774.29	14340985.72	39°29'29.7238"N	80°48'0.8578"W	6582.90	152.670	0.62	-0.23	-0.58	
13572.00	89.820	160.650	6881.54	6605.10	-5936.99	3052.86	1696804.85	14340896.87	39°29'28.8446"N	80°48'0.4703"W	6675.91	152.787	0.80	0.17	-0.78	
13667.00	89.630	160.460	6881.99	6700.09	-6026.57	3084.49	1696836.47	14340807.32	39°29'27.9586"N	80°48'0.0695"W	6770.05	152.896	0.28	-0.20	-0.20	
13761.00	89.690	161.760	6882.55	6794.09	-6116.51	3114.92	1696866.89	14340718.42	39°29'27.0789"N	80°47'59.6838"W	6863.10	153.008	1.38	0.06	1.38	
13856.00	89.260	160.620	6883.42	6889.08	-6205.43	3145.55	1696897.50	14340628.54	39°29'26.1895"N	80°47'59.2957"W	6957.14	153.119	1.28	-0.45	-1.20	
13951.00	89.660	161.080	6884.32	6984.08	-6295.17	3176.71	1696928.65	14340538.84	39°29'25.3019"N	80°47'58.9008"W	7051.28	153.223	0.64	0.42	0.48	
14045.00	89.780	161.350	6884.78	7078.08	-6384.16	3206.98	1696958.91	14340449.88	39°29'24.4217"N	80°47'58.5172"W	7144.38	153.328	0.31	0.13	0.29	
14139.00	89.850	162.170	6885.08	7172.07	-6473.43	3236.40	1696988.32	14340360.64	39°29'23.5387"N	80°47'58.1445"W	7237.38	153.437	0.88	0.07	0.87	
14234.00	89.600	160.990	6885.53	7267.07	-6563.56	3266.42	1697018.33	14340270.54	39°29'22.6473"N	80°47'57.7642"W	7331.43	153.542	1.27	-0.26	-1.24	
14329.00	89.540	161.940	6886.25	7362.06	-6653.63	3296.62	1697048.51	14340180.51	39°29'21.7564"N	80°47'57.3816"W	7425.53	153.643	1.00	-0.06	1.00	
14423.00	89.660	161.240	6886.90	7456.05	-6742.82	3326.30	1697078.18	14340091.36	39°29'20.8743"N	80°47'57.0055"W	7518.63	153.742	0.76	0.13	-0.74	
14518.00	89.380	160.880	6887.70	7551.05	-6832.67	3357.13	1697109.01	14340001.54	39°29'19.9856"N	80°47'56.6147"W	7612.87	153.833	0.48	-0.29	-0.38	
14612.00	89.720	161.320	6888.44	7645.05	-6921.60	3387.58	1697139.44	14339912.65	39°29'19.1060"N	80°47'56.2289"W	7706.12	153.922	0.59	0.36	0.47	
14707.00	90.090	161.790	6888.60	7740.04	-7011.72	3417.64	1697169.49	14339822.57	39°29'18.2147"N	80°47'55.8481"W	7800.29	154.015	0.63	0.39	0.49	
14801.00	89.660	161.320	6888.80	7834.04	-7100.89	3447.38	1697199.22	14339733.43	39°29'17.3327"N	80°47'55.4713"W	7893.48	154.104	0.68	-0.46	-0.50	
14896.00	90.250	160.710	6888.88	7929.04	-7190.72	3478.29	1697230.11	14339643.64	39°29'16.4442"N	80°47'55.0797"W	7987.80	154.186	0.89	0.62	-0.64	
14990.00	89.570	159.960	6889.02	8023.03	-7279.24	3509.92	1697261.73	14339555.16	39°29'15.5687"N	80°47'54.6788"W	8081.26	154.257	1.08	-0.72	-0.80	
15085.00	89.570	160.000	6889.74	8118.01	-7368.49	3542.44	1697294.24	14339465.93	39°29'14.6858"N	80°47'54.2665"W	8175.79	154.324	0.04	0.00	0.04	
15179.00	89.110	159.880	6890.82	8211.98	-7456.79	3574.68	1697326.46	14339377.68	39°29'13.8125"N	80°47'53.8578"W	8269.34	154.388	0.51	-0.49	-0.13	
15274.00	89.600	159.610	6891.89	8306.95	-7545.90	3607.57	1697359.34	14339288.59	39°29'12.9309"N	80°47'53.4409"W	8363.92	154.448	0.59	0.52	-0.28	
15368.00	89.880	160.290	6892.31	8400.92	-7634.21	3639.79	1697391.55	14339200.33	39°29'12.0575"N	80°47'53.0324"W	8457.49	154.509	0.78	0.30	0.72	
15463.00	89.570	160.710	6892.77	8495.92	-7723.76	3671.50	1697423.25	14339110.81	39°29'11.1718"N	80°47'52.6305"W	8551.98	154.576	0.55	-0.33	0.44	
15558.00	89.380	160.450	6893.64	8590.91	-7813.35	3703.09	1697454.82	14339021.26	39°29'10.2856"N	80°47'52.2303"W	8646.46	154.642	0.34	-0.20	-0.27	
15652.00	89.570	160.640	6894.50	8684.90	-7901.98	3734.40	1697486.12	14338932.66	39°29'9.4089"N	80°47'51.8335"W	8739.96	154.705	0.29	0.20	0.20	
15747.00	89.380	160.090	6895.37	8779.89	-7991.45	3766.32	1697518.03	14338843.23	39°29'8.5240"N	80°47'51.4289"W	8834.50	154.766	0.61	-0.20	-0.58	

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

## WELLPATH DATA (215 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
15841.00	89.720	160.320	6896.11	8873.87	-8079.89	3798.15	1697549.85	14338754.82	39°29'7.6491"N	80°47'51.0255"W	8928.08	154.823	0.44	0.36	0.24	
15936.00	89.480	160.330	6896.77	8968.86	-8169.34	3830.13	1697581.82	14338665.41	39°29'6.7643"N	80°47'50.6201"W	9022.64	154.881	0.25	-0.25	0.01	
16031.00	89.750	160.480	6897.41	9063.85	-8258.84	3861.99	1697613.66	14338575.94	39°29'5.8791"N	80°47'50.2164"W	9117.20	154.938	0.33	0.28	0.16	
16125.00	89.690	160.120	6897.87	9157.84	-8347.34	3893.68	1697645.34	14338487.48	39°29'5.0038"N	80°47'49.8148"W	9210.80	154.993	0.39	-0.06	-0.38	
16220.00	89.230	159.680	6898.77	9252.81	-8436.54	3926.33	1697677.97	14338398.31	39°29'4.1213"N	80°47'49.4010"W	9305.45	155.043	0.67	-0.48	-0.46	
16314.00	89.420	160.180	6899.87	9346.78	-8524.83	3958.58	1697710.21	14338310.06	39°29'3.2481"N	80°47'48.9921"W	9399.10	155.092	0.57	0.20	0.53	
16408.00	89.720	161.130	6900.58	9440.77	-8613.52	3989.72	1697741.34	14338221.41	39°29'2.3708"N	80°47'48.5976"W	9492.66	155.147	1.06	0.32	1.01	
16503.00	89.600	160.580	6901.14	9535.77	-8703.26	4020.87	1697772.48	14338131.70	39°29'1.4832"N	80°47'48.2028"W	9587.19	155.203	0.59	-0.13	-0.58	
16597.00	89.940	161.400	6901.52	9629.77	-8792.13	4051.49	1697803.09	14338042.86	39°29'0.6041"N	80°47'47.8149"W	9680.71	155.259	0.94	0.36	0.87	
16691.00	89.750	160.360	6901.78	9723.77	-8880.95	4082.28	1697833.86	14337954.08	39°28'59.7257"N	80°47'47.4247"W	9774.26	155.313	1.12	-0.20	-1.11	
16786.00	89.380	159.900	6902.50	9818.75	-8970.29	4114.57	1697866.14	14337864.78	39°28'58.8420"N	80°47'47.0155"W	9868.93	155.360	0.62	-0.39	-0.48	
16880.00	90.060	160.590	6902.96	9912.73	-9058.75	4146.34	1697897.90	14337776.35	39°28'57.9669"N	80°47'46.6129"W	9962.59	155.406	1.03	0.72	0.73	
16975.00	89.020	159.650	6903.72	10007.71	-9148.09	4178.64	1697930.19	14337687.05	39°28'57.0833"N	80°47'46.2035"W	10057.27	155.450	1.48	-1.09	-0.99	
17069.00	89.510	160.880	6904.92	10101.69	-9236.56	4210.38	1697961.91	14337598.62	39°28'56.2082"N	80°47'45.8013"W	10150.93	155.495	1.41	0.52	1.31	
17163.00	89.600	160.660	6905.65	10195.69	-9325.31	4241.34	1697992.86	14337509.90	39°28'55.3303"N	80°47'45.4090"W	10244.53	155.543	0.25	0.10	-0.23	
17258.00	89.290	160.140	6906.58	10290.68	-9414.80	4273.21	1698024.71	14337420.44	39°28'54.4451"N	80°47'45.0052"W	10339.19	155.588	0.64	-0.33	-0.55	
17352.00	89.320	160.390	6907.72	10384.66	-9503.27	4304.94	1698056.44	14337332.01	39°28'53.5700"N	80°47'44.6030"W	10432.87	155.630	0.27	0.03	0.27	
17447.00	89.510	160.820	6908.69	10479.65	-9592.88	4336.49	1698087.97	14337242.44	39°28'52.6837"N	80°47'44.2032"W	10527.51	155.675	0.49	0.20	0.45	
17542.00	89.480	160.400	6909.52	10574.64	-9682.49	4368.03	1698119.50	14337152.87	39°28'51.7974"N	80°47'43.8036"W	10622.16	155.719	0.44	-0.03	-0.44	
17636.00	89.570	160.880	6910.30	10668.63	-9771.17	4399.19	1698150.65	14337064.22	39°28'50.9202"N	80°47'43.4088"W	10715.81	155.762	0.52	0.10	0.51	
17731.00	89.350	160.380	6911.20	10763.62	-9860.79	4430.70	1698182.14	14336974.64	39°28'50.0338"N	80°47'43.0096"W	10810.46	155.804	0.57	-0.23	-0.53	
17825.00	89.630	160.560	6912.03	10857.61	-9949.37	4462.12	1698213.55	14336886.08	39°28'49.1575"N	80°47'42.6114"W	10904.15	155.845	0.35	0.30	0.19	
17920.00	89.570	160.570	6912.70	10952.61	-10038.96	4493.73	1698245.15	14336796.53	39°28'48.2714"N	80°47'42.2109"W	10998.83	155.885	0.06	-0.06	0.01	
18014.00	89.540	161.260	6913.43	11046.60	-10127.79	4524.46	1698275.87	14336707.74	39°28'47.3928"N	80°47'41.8215"W	11092.47	155.928	0.73	-0.03	0.73	
18108.00	89.880	161.870	6913.90	11140.60	-10216.96	4554.19	1698305.58	14336618.60	39°28'46.5108"N	80°47'41.4450"W	11186.02	155.975	0.74	0.36	0.65	
18202.00	89.540	161.850	6914.38	11234.59	-10306.29	4583.45	1698334.84	14336529.31	39°28'45.6273"N	80°47'41.0744"W	11279.52	156.024	0.36	-0.36	-0.02	
18297.00	89.600	161.220	6915.09	11329.58	-10396.40	4613.54	1698364.91	14336439.24	39°28'44.7360"N	80°47'40.6933"W	11374.08	156.070	0.67	0.06	-0.66	
18392.00	89.820	161.090	6915.57	11424.58	-10486.30	4644.23	1698395.58	14336349.37	39°28'43.8468"N	80°47'40.3046"W	11468.71	156.112	0.27	0.23	-0.14	
18486.00	89.720	161.480	6915.95	11518.58	-10575.33	4674.39	1698425.73	14336260.38	39°28'42.9662"N	80°47'39.9225"W	11562.33	156.154	0.43	-0.11	0.41	
18581.00	89.350	160.450	6916.72	11613.58	-10665.13	4705.37	1698456.70	14336170.61	39°28'42.0780"N	80°47'39.5300"W	11657.00	156.193	1.15	-0.39	-1.08	

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Toroweap Unit 2H
Field	Tyler		API	47-095-02766-0100
Facility	Grand Pad		Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07			

WELLPATH DATA (215 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
18675.00	89.540	161.120	6917.63	11707.57	-10753.89	4736.30	1698487.63	14336081.89	39°28'41.2000"N	80°47'39.1381"W	11750.69	156.230	0.74	0.20	0.71	
18770.00	89.480	161.040	6918.44	11802.57	-10843.75	4767.11	1698518.42	14335992.06	39°28'40.3112"N	80°47'38.7479"W	11845.35	156.269	0.11	-0.06	-0.08	
18864.00	89.820	161.270	6919.02	11896.57	-10932.71	4797.47	1698548.77	14335903.14	39°28'39.4313"N	80°47'38.3633"W	11939.01	156.307	0.44	0.36	0.24	
18905.00	89.110	160.810	6919.40	11937.56	-10971.49	4810.79	1698562.08	14335864.38	39°28'39.0477"N	80°47'38.1946"W	11979.87	156.323	2.06	-1.73	-1.12	
18930.00‡	89.110	160.810	6919.79	11962.56	-10995.10	4819.01	1698570.29	14335840.78	39°28'38.8142"N	80°47'38.0905"W	12004.79	156.333	0.00	0.00	0.00	Projected MD at TD: 18930'

HOLE & CASING SECTIONS - Ref Wellbore: Toroweap Unit 2H AWB Ref Wellpath: Toroweap Unit 2H AWP Proj: 18930'									
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	25.50	105.50	80.00	25.50	105.50	0.00	0.00	0.02	0.08
17.5in Open Hole	105.50	346.00	240.50	105.50	346.00	0.02	0.08	-0.16	0.76
13.375in Casing Surface	25.50	326.00	300.50	25.50	326.00	0.00	0.00	-0.12	0.68
12.25in Open Hole	346.00	2580.00	2234.00	346.00	2559.16	-0.16	0.76	195.47	191.47
9.625in Casing Intermediate	25.50	2560.00	2534.50	25.50	2539.41	0.00	0.00	193.26	189.28
8.75in Open Hole	2580.00	6621.00	4041.00	2559.16	6533.81	195.47	191.47	463.84	701.00
8.5in Open Hole	6621.00	18930.00	12309.00	6533.81	6919.79	463.84	701.00	-10995.10	4819.01

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Toroweap Unit 2H POE Rev-3	6840.00	113.61	923.37	1694676.21	14346945.05	39°30'28.6905"N	80°48'27.4675"W	point
Toroweap Unit 2H AZI Rev-3	6865.00	-386.51	1170.53	1694923.27	14346445.13	39°30'23.7425"N	80°48'24.3278"W	point
Toroweap Unit 2H BHL Rev-3	6865.00	-11017.94	4801.43	1698552.73	14335817.94	39°28'38.5889"N	80°47'38.3152"W	point
Toroweap Unit 2H LP Rev-3	6865.00	-48.84	1017.16	1694769.96	14346782.67	39°30'27.0830"N	80°48'26.2753"W	point
Toroweap Unit 2H 50' L/R Hard Line Rev-2	7000.00	-5702.22	2985.98	1696738.00	14341131.54	39°29'31.1664"N	80°48'1.3167"W	rectangle
2D Rectangle 11234.4 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Toroweap Unit 2H AWB Ref Wellpath: Toroweap Unit 2H AWP Proj: 18930'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	300.00	Gyrodata 2015 - GC+WR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-300')	Toroweap Unit 2H AWB	3/23/2022
300.00	468.00	Gyrodata 2015 - GC+WR+DPIPE	02 Gyrodata MS Gyro <12-1/4"> (300')(400'-468')	Toroweap Unit 2H AWB	3/25/2022
468.00	2503.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <12-1/4"> (468')(503'-2503')	Toroweap Unit 2H AWB	3/23/2022
2503.00	6547.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04 APS EM <8-3/4"> (2503')(2564'-6547')	Toroweap Unit 2H AWB	4/5/2022
6547.00	18930.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05 BH AT Curve <8-1/2"> (6547')(6597'-18905')	Toroweap Unit 2H AWB	4/5/2022

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# Actual Wellpath Report

Toroweap Unit 2H AWP Proj: 18930'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Toroweap Unit 2H
Field	Tyler	API	47-095-02766-0100
Facility	Grand Pad	Wellbore	Toroweap Unit 2H AWB
Slot	Slot #07		

## COMMENTS

### Wellpath general comments

API: 47-095-02766-0100  
 BH Job #: 111277225  
 Rig: H&P 317  
 Duration: 4/8/2022-4/12/2022  
 Gyrodata MS Gyro <17-1/2"> (100'-300')  
 Gyrodata MS Gyro <12-1/4"> (300')(400'-468')  
 APS EM <12-1/4"> (468')(503'-2503')  
 APS EM [OH] <8-3/4"> (2503')(2564'-6547')  
 BH AT Curve [OH] <8-1/2"> (6547')(6597'-18905')  
 Sycamore: 6643' MD  
 Middlesex: 6792' MD  
 Burkett: 6948' MD  
 Tully: 7022' MD  
 Marcellus POE: 7198' MD  
 Projected MD at TD: 18930'

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