



# ANTERO RESOURCES CORPORATION

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

Slot: Slot B  
 Well: Rapids Unit 2H  
 Wellbore: Rapids Unit 2H PWB

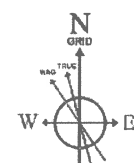
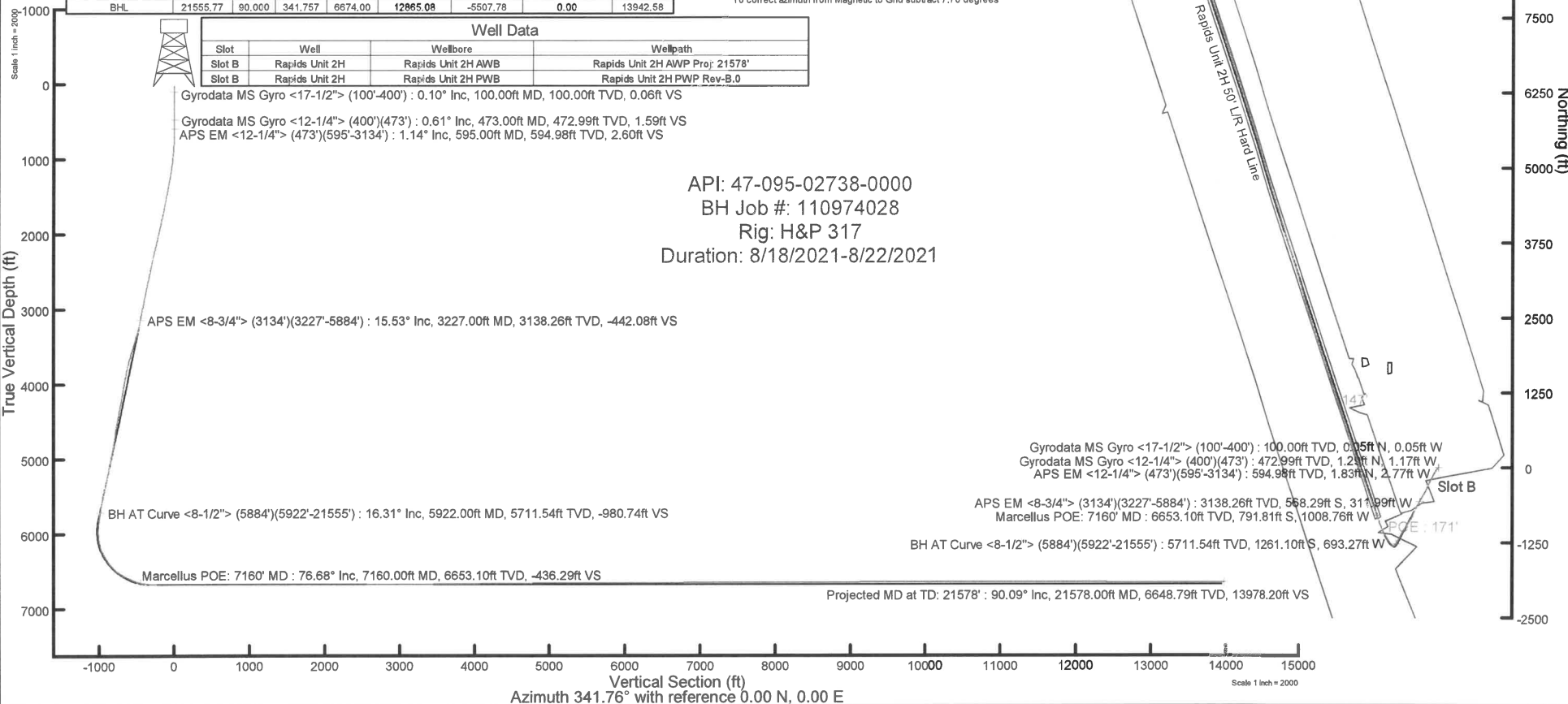


Plot reference wellpath is Rapids Unit 2H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level 990.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot B) -935 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edsanyar on 2021-09-03; Database: WA_MPL_EASTERN_US_Defn

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Shepherd Pad	1707846.620	14305279.260	39°23'36.4150"N	80°45'40.7780"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot B	14.98	0.67	1707847.290	14305294.230
H&P 317 (RKB) to Ground level (At Slot: Slot B)			25.5ft	
Mean Sea Level to Ground level (At Slot: Slot B)			-935ft	
H&P 317 (RKB) to Mean Sea Level			960.5ft	

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	3134.00	15.910	208.420	3048.73	-546.03	-300.19	-424.63
Proj. to Bottom	3226.00	15.910	208.420	3137.21	-568.21	-312.19	-441.94
Drill Out	3306.00	15.910	208.420	3214.15	-587.49	-322.63	-456.99
End of 3D Arc	3357.86	16.925	207.668	3263.90	-600.43	-329.52	-467.12
Curve KOP	6033.27	16.925	207.668	5823.42	-1290.25	-691.19	-1009.08
POE	7126.43	75.440	341.757	6651.00	-837.16	-991.36	-484.80
Landing Pt.	7308.43	90.000	341.757	6674.00	-866.16	-1047.72	-304.76
BHL	21555.77	90.000	341.757	6674.00	<b>12865.08</b>	-5507.78	0.00

Well Data			
Slot	Well	Wellbore	Wellpath
Slot B	Rapids Unit 2H	Rapids Unit 2H AWB	Rapids Unit 2H AWP Proj: 21578'
Slot B	Rapids Unit 2H	Rapids Unit 2H PWB	Rapids Unit 2H PWP Rev-B.0



User specified (HDGM) Dip: 66.40° Field: 51906 nT  
 Magnetic North is 7.55 degrees West of True North (at 18/Aug/2021)  
 Grid North is 0.15 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.15 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.70 degrees



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999605	Report Generated	03/Sep/2021 at 13:50
Convergence at slot	0.15° 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	14.98	0.67	1707847.29	14305294.23	39°23'36.5630"N	80°45'40.7689"W
Facility Reference Pt			1707846.62	14305279.26	39°23'36.4150"N	80°45'40.7780"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	960.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	960.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot B)	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	341.76°



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH DATA (235 stations) † = interpolated, ‡ = extrapolated station																
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]	
0.00	0.00	314.540	0.00	0.00	0.00	0.00	1707847.29	14305294.23	39°23'36.5630"N	80°45'40.7689"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	314.540	25.50	0.00	0.00	0.00	1707847.29	14305294.23	39°23'36.5630"N	80°45'40.7689"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.100	314.540	100.00	0.06	0.05	-0.05	1707847.24	14305294.28	39°23'36.5635"N	80°45'40.7695"W	0.07	314.540	0.13	0.13	0.00	Gyrodata MS Gyro <17-1/2"> (100'-400')
200.00	0.110	296.930	200.00	0.20	0.15	-0.19	1707847.10	14305294.38	39°23'36.5645"N	80°45'40.7714"W	0.25	307.746	0.03	0.01	-17.61	
300.00	0.170	321.070	300.00	0.41	0.31	-0.37	1707846.92	14305294.54	39°23'36.5661"N	80°45'40.7737"W	0.48	309.660	0.08	0.06	24.14	
400.00	0.480	319.610	400.00	0.94	0.74	-0.74	1707846.55	14305294.97	39°23'36.5704"N	80°45'40.7783"W	1.05	315.233	0.31	0.31	-1.46	
473.00	0.610	323.430	472.99	1.59	1.29	-1.17	1707846.12	14305295.52	39°23'36.5758"N	80°45'40.7838"W	1.74	317.829	0.18	0.18	5.23	Gyrodata MS Gyro <12-1/4"> (400')(473')
595.00	1.140	270.880	594.98	2.60	1.83	-2.77	1707844.52	14305296.06	39°23'36.5812"N	80°45'40.8041"W	3.32	303.456	0.74	0.43	-43.07	APS EM <12-1/4"> (473')(595'-3134')
685.00	2.980	230.070	684.92	2.03	0.34	-5.46	1707841.84	14305294.57	39°23'36.5665"N	80°45'40.8384"W	5.47	273.574	2.49	2.04	-45.34	
776.00	5.500	226.370	775.67	-0.71	-4.19	-10.43	1707836.87	14305290.04	39°23'36.5219"N	80°45'40.9019"W	11.24	248.123	2.78	2.77	-4.07	
867.00	7.670	220.140	866.06	-5.77	-11.84	-17.50	1707829.80	14305282.39	39°23'36.4464"N	80°45'40.9923"W	21.13	235.920	2.51	2.38	-6.85	
957.00	8.960	215.060	955.12	-13.10	-22.17	-25.40	1707821.90	14305272.07	39°23'36.3446"N	80°45'41.0932"W	33.71	228.885	1.65	1.43	-5.64	
1047.00	10.080	212.590	1043.88	-22.27	-34.54	-33.67	1707813.64	14305259.70	39°23'36.2225"N	80°45'41.1989"W	48.24	224.265	1.32	1.24	-2.74	
1142.00	11.910	210.870	1137.13	-33.94	-49.96	-43.18	1707804.13	14305244.29	39°23'36.0703"N	80°45'41.3206"W	66.03	220.833	1.96	1.93	-1.81	
1237.00	13.880	208.960	1229.73	-48.10	-68.35	-53.72	1707793.59	14305225.91	39°23'35.8889"N	80°45'41.4555"W	86.93	218.169	2.12	2.07	-2.01	
1332.00	15.120	208.740	1321.70	-64.29	-89.18	-65.20	1707782.12	14305205.08	39°23'35.6833"N	80°45'41.6024"W	110.47	216.170	1.31	1.31	-0.23	
1427.00	15.550	209.990	1413.32	-81.23	-111.07	-77.52	1707769.80	14305183.20	39°23'35.4672"N	80°45'41.7601"W	135.45	214.912	0.57	0.45	1.32	
1522.00	16.170	208.300	1504.70	-98.81	-133.75	-90.16	1707757.17	14305160.53	39°23'35.2434"N	80°45'41.9218"W	161.30	213.983	0.81	0.65	-1.78	
1617.00	16.780	210.570	1595.80	-116.94	-157.21	-103.40	1707743.93	14305137.09	39°23'35.0120"N	80°45'42.0913"W	188.17	213.335	0.93	0.64	2.39	
1712.00	16.820	208.930	1686.75	-135.32	-181.04	-117.03	1707730.31	14305113.26	39°23'34.7767"N	80°45'42.2656"W	215.57	212.879	0.50	0.04	-1.73	
1806.00	16.920	206.970	1776.70	-154.20	-205.14	-129.81	1707717.53	14305089.17	39°23'34.5389"N	80°45'42.4293"W	242.76	212.326	0.61	0.11	-2.09	
1901.00	16.890	205.670	1867.60	-173.88	-229.90	-142.06	1707705.29	14305064.42	39°23'34.2945"N	80°45'42.5861"W	270.25	211.713	0.40	-0.03	-1.37	
1996.00	17.030	205.320	1958.47	-193.90	-254.91	-153.99	1707693.37	14305039.42	39°23'34.0476"N	80°45'42.7389"W	297.81	211.135	0.18	0.15	-0.37	
2091.00	17.220	204.970	2049.25	-214.23	-280.23	-165.87	1707681.48	14305014.11	39°23'33.7977"N	80°45'42.8911"W	325.64	210.622	0.23	0.20	-0.37	
2186.00	16.920	203.210	2140.07	-234.85	-305.69	-177.26	1707670.10	14304988.67	39°23'33.5464"N	80°45'43.0370"W	353.36	210.108	0.63	-0.32	-1.85	
2281.00	16.900	202.290	2230.96	-255.70	-331.17	-187.94	1707659.42	14304963.19	39°23'33.2948"N	80°45'43.1739"W	380.78	209.575	0.28	-0.02	-0.97	
2376.00	16.760	204.340	2321.89	-276.28	-356.42	-198.82	1707648.54	14304937.95	39°23'33.0455"N	80°45'43.3134"W	408.13	209.154	0.64	-0.15	2.16	
2470.00	16.750	206.260	2411.90	-295.92	-380.92	-210.40	1707636.97	14304913.46	39°23'32.8037"N	80°45'43.4617"W	435.17	208.914	0.59	-0.01	2.04	
2565.00	16.660	208.490	2502.90	-315.02	-405.17	-222.96	1707624.42	14304889.23	39°23'32.5644"N	80°45'43.6224"W	462.46	208.823	0.68	-0.09	2.35	
2660.00	16.790	210.330	2593.88	-333.44	-428.98	-236.38	1707611.00	14304865.42	39°23'32.3294"N	80°45'43.7942"W	489.79	208.856	0.57	0.14	1.94	



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH DATA (235 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]	
2755.00	16.660	208.250	2684.86	-351.89	-452.82	-249.76	1707597.63	14304841.59	39°23'32.0941"N	80°45'43.9653"W	517.13	208.879	0.64	-0.14	-2.19	
2850.00	16.420	206.720	2775.93	-370.77	-476.81	-262.24	1707585.16	14304817.61	39°23'31.8573"N	80°45'44.1251"W	544.16	208.810	0.52	-0.25	-1.61	
2944.00	16.180	209.430	2866.15	-388.99	-500.08	-274.65	1707572.75	14304794.35	39°23'31.6276"N	80°45'44.2840"W	570.54	208.776	0.85	-0.26	2.88	
3039.00	16.080	209.210	2957.41	-406.80	-523.09	-287.57	1707559.83	14304771.35	39°23'31.4005"N	80°45'44.4494"W	596.93	208.800	0.12	-0.11	-0.23	
3134.00	15.910	208.420	3048.73	-424.63	-546.03	-300.19	1707547.22	14304748.42	39°23'31.1742"N	80°45'44.6109"W	623.10	208.801	0.29	-0.18	-0.83	
3227.00	15.530	207.430	3138.26	-442.08	-568.29	-311.99	1707535.42	14304726.17	39°23'30.9545"N	80°45'44.7619"W	648.30	208.767	0.50	-0.41	-1.06	APS EM <8-3/4"> (3134')(3227'-5884')
3322.00	18.680	208.640	3229.04	-461.37	-592.93	-325.15	1707522.27	14304701.53	39°23'30.7112"N	80°45'44.9303"W	676.23	208.739	3.34	3.32	1.27	
3416.00	21.840	208.820	3317.22	-483.58	-621.47	-340.79	1707506.63	14304673.00	39°23'30.4296"N	80°45'45.1306"W	708.78	208.739	3.36	3.36	0.19	
3511.00	22.820	206.980	3405.09	-508.59	-653.37	-357.67	1707489.76	14304641.12	39°23'30.1147"N	80°45'45.3466"W	744.87	208.697	1.27	1.03	-1.94	
3608.00	22.340	206.250	3494.66	-534.99	-686.67	-374.36	1707473.08	14304607.83	39°23'29.7860"N	80°45'45.5602"W	782.09	208.598	0.57	-0.49	-0.75	
3703.00	23.080	202.670	3582.29	-561.95	-720.05	-389.52	1707457.92	14304574.47	39°23'29.4566"N	80°45'45.7545"W	818.65	208.412	1.65	0.78	-3.77	
3798.00	20.520	201.650	3670.49	-588.80	-752.71	-402.84	1707444.61	14304541.82	39°23'29.1341"N	80°45'45.9253"W	853.73	208.155	2.72	-2.69	-1.07	
3893.00	17.420	202.660	3760.32	-612.33	-781.32	-414.47	1707432.99	14304513.22	39°23'28.8517"N	80°45'46.0743"W	884.44	207.945	3.28	-3.26	1.06	
3988.00	16.510	203.360	3851.19	-633.17	-806.83	-425.30	1707422.16	14304487.72	39°23'28.5998"N	80°45'46.2131"W	912.06	207.795	0.98	-0.96	0.74	
4082.00	15.370	206.810	3941.57	-651.96	-830.21	-436.21	1707411.25	14304464.35	39°23'28.3690"N	80°45'46.3529"W	937.84	207.719	1.58	-1.21	3.67	
4177.00	14.980	210.270	4033.26	-668.99	-852.05	-448.08	1707399.39	14304442.51	39°23'28.1534"N	80°45'46.5048"W	962.69	207.739	1.04	-0.41	3.64	
4272.00	15.970	214.980	4124.82	-684.95	-873.37	-461.76	1707385.71	14304421.21	39°23'27.9431"N	80°45'46.6798"W	987.92	207.866	1.68	1.04	4.96	
4367.00	15.780	211.010	4216.20	-701.21	-895.15	-475.91	1707371.57	14304399.44	39°23'27.7282"N	80°45'46.8607"W	1013.79	207.998	1.16	-0.20	-4.18	
4462.00	15.490	211.490	4307.69	-717.84	-917.04	-489.19	1707358.29	14304377.56	39°23'27.5122"N	80°45'47.0306"W	1039.36	208.078	0.33	-0.31	0.51	
4557.00	15.260	209.520	4399.29	-734.45	-938.73	-501.98	1707345.51	14304355.87	39°23'27.2981"N	80°45'47.1942"W	1064.52	208.135	0.60	-0.24	-2.07	
4651.00	14.180	210.960	4490.20	-750.29	-959.37	-514.00	1707333.50	14304335.24	39°23'27.0944"N	80°45'47.3479"W	1088.39	208.181	1.21	-1.15	1.53	
4746.00	14.920	213.480	4582.15	-765.47	-979.55	-526.73	1707320.77	14304315.07	39°23'26.8953"N	80°45'47.5108"W	1112.19	208.268	1.02	0.78	2.65	
4841.00	14.620	216.210	4674.02	-780.01	-999.42	-540.56	1707306.94	14304295.20	39°23'26.6992"N	80°45'47.6876"W	1136.25	208.408	0.80	-0.32	2.87	
4936.00	16.140	214.450	4765.61	-794.99	-1019.99	-555.11	1707292.40	14304274.65	39°23'26.4964"N	80°45'47.8736"W	1161.26	208.557	1.67	1.60	-1.85	
5031.00	15.400	212.990	4857.04	-810.89	-1041.46	-569.45	1707278.07	14304253.19	39°23'26.2846"N	80°45'48.0570"W	1186.97	208.669	0.88	-0.78	-1.54	
5126.00	15.930	208.420	4948.51	-827.74	-1063.50	-582.52	1707265.00	14304231.15	39°23'26.0670"N	80°45'48.2242"W	1212.59	208.711	1.41	0.56	-4.81	
5221.00	16.390	207.500	5039.76	-846.04	-1086.86	-594.92	1707252.61	14304207.80	39°23'25.8365"N	80°45'48.3829"W	1239.03	208.695	0.55	0.48	-0.97	
5315.00	16.100	210.640	5130.01	-863.87	-1109.84	-607.68	1707239.85	14304184.83	39°23'25.6097"N	80°45'48.5462"W	1265.31	208.703	0.98	-0.31	3.34	
5410.00	15.730	208.320	5221.37	-881.39	-1132.51	-620.51	1707227.03	14304162.17	39°23'25.3860"N	80°45'48.7103"W	1291.36	208.719	0.77	-0.39	-2.44	
5505.00	16.590	208.920	5312.61	-899.46	-1155.71	-633.18	1707214.37	14304138.97	39°23'25.1569"N	80°45'48.8724"W	1317.80	208.717	0.92	0.91	0.63	



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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Slot	Slot B		

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[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
5600.00	17.880	209.450	5403.34	-918.50	-1180.29	-646.90	1707200.64	14304114.41	39°23'24.9145"N	80°45'49.0481"W	1345.94	208.727	1.37	1.36	0.56	
5695.00	17.150	206.210	5493.94	-938.32	-1205.55	-660.26	1707187.29	14304089.16	39°23'24.6651"N	80°45'49.2191"W	1374.52	208.709	1.28	-0.77	-3.41	
5789.00	16.510	212.130	5583.92	-956.73	-1229.30	-673.49	1707174.07	14304065.42	39°23'24.4307"N	80°45'49.3883"W	1401.70	208.717	1.95	-0.68	6.30	
5884.00	16.260	211.660	5675.06	-973.91	-1252.05	-687.65	1707159.92	14304042.68	39°23'24.2062"N	80°45'49.5694"W	1428.46	208.776	0.30	-0.26	-0.49	
5922.00	16.310	212.080	5711.54	-980.74	-1261.10	-693.27	1707154.29	14304033.63	39°23'24.1169"N	80°45'49.6414"W	1439.10	208.799	0.34	0.13	1.11	BH AT Curve <8-1/2"> (5884')(5922'-21555')
5993.00	11.570	212.660	5780.43	-991.60	-1275.55	-702.42	1707145.15	14304019.19	39°23'23.9743"N	80°45'49.7583"W	1456.17	208.841	6.68	-6.68	0.82	
6087.00	11.680	219.780	5872.50	-1002.59	-1290.80	-713.59	1707133.98	14304003.94	39°23'23.8239"N	80°45'49.9012"W	1474.92	208.935	1.53	0.12	7.57	
6182.00	11.510	248.650	5965.64	-1008.20	-1301.65	-728.58	1707118.99	14303993.10	39°23'23.7171"N	80°45'50.0925"W	1491.69	209.237	6.05	-0.18	30.39	
6277.00	12.030	285.180	6058.77	-1003.26	-1302.51	-746.99	1707100.59	14303992.24	39°23'23.7090"N	80°45'50.3270"W	1501.51	209.834	7.73	0.55	38.45	
6372.00	16.660	315.590	6150.91	-985.55	-1290.17	-766.11	1707081.48	14304004.58	39°23'23.8315"N	80°45'50.5701"W	1500.49	210.702	9.15	4.87	32.01	
6467.00	24.890	326.730	6239.69	-953.95	-1263.67	-786.65	1707060.95	14304031.06	39°23'24.0940"N	80°45'50.8308"W	1488.51	211.903	9.57	8.66	11.73	
6501.00†	27.281	326.817	6270.23	-939.51	-1251.16	-794.84	1707052.76	14304043.57	39°23'24.2178"N	80°45'50.9347"W	1482.29	212.427	7.03	7.03	0.26	Sycamore: 6501' MD
6561.00	31.500	326.940	6322.49	-911.06	-1226.50	-810.93	1707036.68	14304068.21	39°23'24.4619"N	80°45'51.1388"W	1470.35	213.471	7.03	7.03	0.21	
6656.00	38.050	327.250	6400.48	-858.67	-1181.03	-840.34	1707007.29	14304113.67	39°23'24.9121"N	80°45'51.5118"W	1449.48	215.433	6.90	6.89	0.33	
6712.00†	43.076	328.978	6443.01	-823.29	-1150.11	-859.54	1706988.09	14304144.58	39°23'25.2182"N	80°45'51.7554"W	1435.81	216.773	9.20	8.98	3.09	Middlesex: 6712' MD
6751.00	46.590	330.000	6470.67	-796.42	-1126.42	-873.49	1706974.14	14304168.26	39°23'25.4527"N	80°45'51.9323"W	1425.42	217.792	9.20	9.01	2.62	
6846.00	56.270	334.870	6529.85	-723.22	-1060.59	-907.62	1706940.03	14304234.06	39°23'26.1042"N	80°45'52.3647"W	1395.93	220.556	10.94	10.19	5.13	
6937.00†	64.180	339.079	6575.02	-644.59	-987.93	-938.37	1706909.29	14304306.69	39°23'26.8231"N	80°45'52.7540"W	1362.55	223.526	9.57	8.69	4.63	Burkett: 6937' MD
6941.00	64.530	339.250	6576.75	-640.98	-984.56	-939.65	1706908.01	14304310.06	39°23'26.8564"N	80°45'52.7703"W	1361.00	223.663	9.57	8.76	4.27	
7006.00†	66.609	340.167	6603.63	-581.85	-929.06	-960.17	1706887.50	14304365.54	39°23'27.4055"N	80°45'53.0298"W	1336.07	225.943	3.45	3.20	1.41	Tully: 7006' MD
7036.00	67.570	340.580	6615.31	-554.22	-903.03	-969.45	1706878.22	14304391.56	39°23'27.6630"N	80°45'53.1471"W	1324.88	227.032	3.45	3.20	1.38	
7130.00	74.700	340.500	6645.68	-465.35	-819.22	-999.07	1706848.62	14304475.34	39°23'28.4922"N	80°45'53.5215"W	1292.00	230.649	7.59	7.59	-0.09	
7160.00†	76.680	340.567	6653.10	-436.29	-791.81	-1008.76	1706838.94	14304502.73	39°23'28.7633"N	80°45'53.6440"W	1282.40	231.870	6.60	6.60	0.22	Marcellus POE: 7160' MD
7225.00	80.970	340.710	6665.69	-372.55	-731.66	-1029.89	1706817.81	14304562.86	39°23'29.3583"N	80°45'53.9112"W	1263.33	234.609	6.60	6.60	0.22	
7319.00	86.670	340.290	6675.81	-279.15	-643.61	-1061.07	1706786.64	14304650.88	39°23'30.2294"N	80°45'54.3055"W	1241.01	238.761	6.08	6.06	-0.45	
7413.00	89.660	339.760	6678.82	-185.26	-555.32	-1093.17	1706754.56	14304739.13	39°23'31.1028"N	80°45'54.7113"W	1226.13	243.070	3.23	3.18	-0.56	
7507.00	89.940	340.630	6679.15	-91.29	-466.88	-1125.01	1706722.72	14304827.54	39°23'31.9777"N	80°45'55.1140"W	1218.05	247.462	0.97	0.30	0.93	
7601.00	89.940	340.800	6679.25	2.69	-378.15	-1156.06	1706691.89	14304916.23	39°23'32.8555"N	80°45'55.5065"W	1216.34	251.887	0.18	0.00	0.18	
7699.00	90.090	341.380	6679.22	100.68	-285.44	-1187.82	1706659.94	14305008.90	39°23'33.7726"N	80°45'55.9080"W	1221.64	256.488	0.61	0.15	0.59	
7794.00	89.940	340.810	6679.19	195.68	-195.57	-1218.60	1706629.17	14305098.74	39°23'34.6617"N	80°45'56.2971"W	1234.19	260.883	0.62	-0.16	-0.60	



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH DATA (235 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
7889.00	90.370	341.000	6678.94	290.67	-105.80	-1249.68	1706598.11	14305188.48	39°23'35.5497"N	80°45'56.6899"W	1254.15	265.161	0.49	0.45	0.20	
7983.00	89.880	340.700	6678.73	384.65	-17.00	-1280.51	1706567.29	14305277.24	39°23'36.4281"N	80°45'57.0798"W	1280.63	269.239	0.61	-0.52	-0.32	
8078.00	90.090	341.270	6678.76	479.64	72.82	-1311.47	1706536.35	14305367.02	39°23'37.3166"N	80°45'57.4711"W	1313.49	273.178	0.64	0.22	0.60	
8173.00	89.720	341.010	6678.92	574.64	162.72	-1342.17	1706505.65	14305456.88	39°23'38.2059"N	80°45'57.8592"W	1352.00	276.912	0.48	-0.39	-0.27	
8267.00	90.220	340.850	6678.96	668.63	251.56	-1372.89	1706474.95	14305545.69	39°23'39.0848"N	80°45'58.2475"W	1395.74	280.383	0.56	0.53	-0.17	
8361.00	89.970	341.760	6678.81	762.62	340.60	-1403.02	1706444.83	14305634.69	39°23'39.9656"N	80°45'58.6283"W	1443.77	283.645	1.00	-0.27	0.97	
8455.00	89.970	341.650	6678.86	856.62	429.85	-1432.52	1706415.34	14305723.90	39°23'40.8484"N	80°45'59.0012"W	1495.62	286.702	0.12	0.00	-0.12	
8549.00	89.850	341.240	6679.01	950.62	518.96	-1462.44	1706385.44	14305812.98	39°23'41.7299"N	80°45'59.3793"W	1551.78	289.538	0.45	-0.13	-0.44	
8644.00	90.400	341.470	6678.80	1045.62	608.97	-1492.81	1706355.08	14305902.96	39°23'42.6204"N	80°45'59.7632"W	1612.24	292.192	0.63	0.58	0.24	
8738.00	89.880	341.950	6678.57	1139.62	698.22	-1522.31	1706325.59	14305992.18	39°23'43.5032"N	80°46'0.1360"W	1674.79	294.639	0.75	-0.55	0.51	
8832.00	90.060	341.330	6678.62	1233.62	787.44	-1551.91	1706295.99	14306081.35	39°23'44.3857"N	80°46'0.5102"W	1740.26	296.903	0.69	0.19	-0.66	
8926.00	89.660	340.670	6678.85	1327.61	876.31	-1582.52	1706265.40	14306170.20	39°23'45.2649"N	80°46'0.8971"W	1808.95	298.975	0.82	-0.43	-0.70	
9021.00	89.540	343.690	6679.51	1422.59	966.74	-1611.59	1706236.34	14306260.59	39°23'46.1594"N	80°46'1.2644"W	1879.31	300.958	3.18	-0.13	3.18	
9115.00	90.060	341.360	6679.84	1516.58	1056.40	-1639.81	1706208.13	14306350.21	39°23'47.0463"N	80°46'1.6210"W	1950.63	302.790	2.54	0.55	-2.48	
9210.00	90.060	342.450	6679.74	1611.57	1146.70	-1669.32	1706178.63	14306440.47	39°23'47.9395"N	80°46'1.9939"W	2025.23	304.486	1.15	0.00	1.15	
9305.00	90.180	341.850	6679.54	1706.57	1237.13	-1698.44	1706149.53	14306530.86	39°23'48.8340"N	80°46'2.3618"W	2101.23	306.069	0.64	0.13	-0.63	
9399.00	89.690	341.430	6679.65	1800.57	1326.34	-1728.05	1706119.93	14306620.04	39°23'49.7165"N	80°46'2.7360"W	2178.38	307.508	0.69	-0.52	-0.45	
9494.00	90.060	341.520	6679.85	1895.57	1416.42	-1758.23	1706089.76	14306710.09	39°23'50.6075"N	80°46'3.1176"W	2257.79	308.855	0.40	0.39	0.09	
9588.00	89.420	339.460	6680.28	1989.54	1505.01	-1789.62	1706058.38	14306798.65	39°23'51.4840"N	80°46'3.5145"W	2338.33	310.063	2.29	-0.68	-2.19	
9683.00	89.780	340.680	6680.94	2084.49	1594.32	-1822.00	1706026.01	14306887.92	39°23'52.3675"N	80°46'3.9241"W	2421.06	311.187	1.34	0.38	1.28	
9778.00	89.660	341.830	6681.41	2179.49	1684.28	-1852.53	1705995.50	14306977.84	39°23'53.2573"N	80°46'4.3100"W	2503.73	312.276	1.22	-0.13	1.21	
9872.00	90.860	341.700	6680.98	2273.49	1773.56	-1881.94	1705966.09	14307067.08	39°23'54.1404"N	80°46'4.6817"W	2585.96	313.302	1.28	1.28	-0.14	
9967.00	90.180	341.170	6680.12	2368.48	1863.61	-1912.19	1705935.86	14307157.10	39°23'55.0312"N	80°46'5.0640"W	2670.11	314.263	0.91	-0.72	-0.56	
10061.00	90.090	341.710	6679.90	2462.48	1952.72	-1942.11	1705905.95	14307246.17	39°23'55.9127"N	80°46'5.4423"W	2754.07	315.156	0.58	-0.10	0.57	
10156.00	91.660	341.090	6678.45	2557.46	2042.74	-1972.40	1705875.67	14307336.16	39°23'56.8033"N	80°46'5.8252"W	2839.57	316.004	1.78	1.65	-0.65	
10250.00	90.280	340.630	6676.86	2651.43	2131.53	-2003.22	1705844.87	14307424.92	39°23'57.6816"N	80°46'6.2149"W	2925.12	316.777	1.55	-1.47	-0.49	
10345.00	90.000	341.460	6676.62	2746.42	2221.38	-2034.08	1705814.02	14307514.73	39°23'58.5704"N	80°46'6.6050"W	3011.97	317.520	0.92	-0.29	0.87	
10439.00	90.340	342.230	6676.35	2840.42	2310.70	-2063.37	1705784.74	14307604.01	39°23'59.4539"N	80°46'6.9752"W	3097.87	318.236	0.90	0.36	0.82	
10534.00	90.310	342.570	6675.81	2935.42	2401.25	-2092.09	1705756.03	14307694.53	39°24'0.3496"N	80°46'7.3381"W	3184.78	318.936	0.36	-0.03	0.36	
10628.00	91.200	344.340	6674.57	3029.36	2491.34	-2118.86	1705729.28	14307784.59	39°24'1.2407"N	80°46'7.6761"W	3270.53	319.619	2.11	0.95	1.88	



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH DATA (235 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	
10722.00	89.570	343.250	6673.94	3123.30	2581.60	-2145.09	1705703.05	14307874.81	39°24'2.1335"N	80°46'8.0074"W	3356.50	320.276	2.09	-1.73	-1.16		
10817.00	90.860	343.580	6673.58	3218.25	2672.65	-2172.20	1705675.95	14307965.82	39°24'3.0340"N	80°46'8.3498"W	3444.05	320.897	1.40	1.36	0.35		
10911.00	90.220	342.590	6672.69	3312.22	2762.58	-2199.55	1705648.61	14308055.71	39°24'3.9235"N	80°46'8.6952"W	3531.27	321.473	1.25	-0.68	-1.05		
11005.00	90.520	343.590	6672.09	3406.19	2852.51	-2226.89	1705621.28	14308145.61	39°24'4.8130"N	80°46'9.0406"W	3618.82	322.022	1.11	0.32	1.06		
11100.00	90.650	344.520	6671.12	3501.11	2943.85	-2252.99	1705595.20	14308236.91	39°24'5.7164"N	80°46'9.3701"W	3707.05	322.572	0.99	0.14	0.98		
11194.00	90.430	342.170	6670.23	3595.06	3033.89	-2279.93	1705568.27	14308326.92	39°24'6.6071"N	80°46'9.7103"W	3795.07	323.076	2.51	-0.23	-2.50		
11288.00	90.550	343.030	6669.43	3689.05	3123.59	-2308.03	1705540.17	14308416.58	39°24'7.4943"N	80°46'10.0654"W	3883.79	323.539	0.92	0.13	0.91		
11382.00	90.370	342.720	6668.67	3783.03	3213.42	-2335.71	1705512.51	14308506.37	39°24'8.3828"N	80°46'10.4151"W	3972.61	323.988	0.38	-0.19	-0.33		
11477.00	90.650	342.760	6667.83	3878.01	3304.14	-2363.90	1705484.33	14308597.06	39°24'9.2801"N	80°46'10.7712"W	4062.68	324.419	0.30	0.29	0.04		
11571.00	90.890	343.300	6666.56	3971.98	3394.03	-2391.33	1705456.91	14308686.92	39°24'10.1694"N	80°46'11.1178"W	4151.86	324.833	0.63	0.26	0.57		
11665.00	90.740	342.540	6665.23	4065.95	3483.88	-2418.94	1705429.31	14308776.73	39°24'11.0580"N	80°46'11.4665"W	4241.31	325.227	0.82	-0.16	-0.81		
11760.00	90.770	342.860	6663.97	4160.93	3574.57	-2447.18	1705401.08	14308867.39	39°24'11.9551"N	80°46'11.8234"W	4332.01	325.604	0.34	0.03	0.34		
11854.00	90.520	342.720	6662.92	4254.91	3664.36	-2475.00	1705373.28	14308957.14	39°24'12.8432"N	80°46'12.1748"W	4421.89	325.964	0.30	-0.27	-0.15		
11948.00	90.680	343.060	6661.93	4348.88	3754.19	-2502.65	1705345.63	14309046.93	39°24'13.7318"N	80°46'12.5242"W	4511.90	326.311	0.40	0.17	0.36		
12043.00	90.800	343.200	6660.70	4443.85	3845.10	-2530.22	1705318.08	14309137.80	39°24'14.6309"N	80°46'12.8724"W	4602.91	326.654	0.19	0.13	0.15		
12137.00	90.520	343.510	6659.62	4537.81	3935.15	-2557.14	1705291.17	14309227.82	39°24'15.5217"N	80°46'13.2125"W	4693.01	326.983	0.44	-0.30	0.33		
12231.00	90.120	342.830	6659.10	4631.78	4025.12	-2584.35	1705263.96	14309317.76	39°24'16.4116"N	80°46'13.5562"W	4783.36	327.297	0.84	-0.43	-0.72		
12326.00	90.280	342.860	6658.77	4726.76	4115.90	-2612.38	1705235.95	14309408.49	39°24'17.3094"N	80°46'13.9103"W	4874.95	327.597	0.17	0.17	0.03		
12420.00	90.550	343.390	6658.08	4820.73	4205.85	-2639.66	1705208.68	14309498.41	39°24'18.1991"N	80°46'14.2550"W	4965.58	327.887	0.63	0.29	0.56		
12514.00	90.430	342.030	6657.28	4914.71	4295.59	-2667.60	1705180.75	14309588.12	39°24'19.0869"N	80°46'14.6079"W	5056.50	328.159	1.45	-0.13	-1.45		
12703.00	90.460	342.040	6655.81	5103.70	4475.37	-2725.89	1705122.48	14309767.83	39°24'20.8652"N	80°46'15.3447"W	5240.18	328.655	0.02	0.02	0.01		
12797.00	90.370	342.460	6655.13	5197.70	4564.90	-2754.55	1705093.84	14309857.32	39°24'21.7507"N	80°46'15.7069"W	5331.59	328.892	0.46	-0.10	0.45		
12892.00	90.310	342.090	6654.57	5292.69	4655.39	-2783.47	1705064.93	14309947.77	39°24'22.6458"N	80°46'16.0725"W	5424.05	329.125	0.39	-0.06	-0.39		
12986.00	90.460	342.230	6653.94	5386.69	4744.86	-2812.27	1705036.14	14310037.21	39°24'23.5308"N	80°46'16.4364"W	5515.67	329.345	0.22	0.16	0.15		
13081.00	90.090	342.410	6653.48	5481.68	4835.37	-2841.12	1705007.30	14310127.69	39°24'24.4261"N	80°46'16.8011"W	5608.28	329.563	0.43	-0.39	0.19		
13175.00	90.150	342.220	6653.28	5575.67	4924.93	-2869.67	1704978.76	14310217.21	39°24'25.3120"N	80°46'17.1620"W	5700.00	329.771	0.21	0.06	-0.20		
13270.00	90.120	342.030	6653.06	5670.67	5015.35	-2898.83	1704949.61	14310307.59	39°24'26.2063"N	80°46'17.5305"W	5792.83	329.972	0.20	-0.03	-0.20		
13364.00	90.000	342.470	6652.96	5764.67	5104.87	-2927.49	1704920.96	14310397.08	39°24'27.0919"N	80°46'17.8927"W	5884.72	330.167	0.49	-0.13	0.47		
13459.00	89.630	341.640	6653.27	5859.67	5195.25	-2956.76	1704891.70	14310487.42	39°24'27.9858"N	80°46'18.2627"W	5977.71	330.355	0.96	-0.39	-0.87		
13554.00	89.690	342.060	6653.83	5954.66	5285.52	-2986.35	1704862.12	14310577.65	39°24'28.8788"N	80°46'18.6368"W	6070.83	330.533	0.45	0.06	0.44		



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

## WELLPATH DATA (235 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
13648.00	89.720	341.970	6654.32	6048.66	5374.93	-3015.37	1704833.11	14310667.02	39°24'29.7631"N	80°46'19.0037"W	6162.98	330.707	0.10	0.03	-0.10	
13742.00	89.970	341.400	6654.57	6142.66	5464.16	-3044.91	1704803.59	14310756.22	39°24'30.6458"N	80°46'19.3771"W	6255.28	330.871	0.66	0.27	-0.61	
13837.00	90.030	342.600	6654.57	6237.66	5554.51	-3074.27	1704774.24	14310846.54	39°24'31.5395"N	80°46'19.7482"W	6348.52	331.037	1.26	0.06	1.26	
13931.00	91.010	343.780	6653.72	6331.62	5644.49	-3101.45	1704747.07	14310936.48	39°24'32.4295"N	80°46'20.0916"W	6440.44	331.213	1.63	1.04	1.26	
14025.00	90.310	341.900	6652.63	6425.59	5734.29	-3129.18	1704719.35	14311026.25	39°24'33.3178"N	80°46'20.4421"W	6532.53	331.379	2.13	-0.74	-2.00	
14119.00	89.880	341.740	6652.48	6519.59	5823.60	-3158.51	1704690.03	14311115.52	39°24'34.2012"N	80°46'20.8128"W	6624.99	331.526	0.49	-0.46	-0.17	
14214.00	89.940	342.520	6652.63	6614.59	5914.02	-3187.66	1704660.89	14311205.90	39°24'35.0955"N	80°46'21.1813"W	6718.39	331.675	0.82	0.06	0.82	
14308.00	90.220	342.560	6652.50	6708.58	6003.69	-3215.87	1704632.70	14311295.53	39°24'35.9825"N	80°46'21.5378"W	6810.73	331.824	0.30	0.30	0.04	
14402.00	91.380	340.650	6651.18	6802.57	6092.87	-3245.52	1704603.05	14311384.68	39°24'36.8646"N	80°46'21.9128"W	6903.37	331.957	2.38	1.23	-2.03	
14496.00	90.060	341.500	6650.00	6896.55	6181.78	-3276.01	1704572.58	14311473.55	39°24'37.7441"N	80°46'22.2983"W	6996.18	332.079	1.67	-1.40	0.90	
14591.00	90.370	342.040	6649.65	6991.55	6272.01	-3305.73	1704542.88	14311563.75	39°24'38.6367"N	80°46'22.6740"W	7089.85	332.208	0.66	0.33	0.57	
14685.00	90.060	341.870	6649.29	7085.55	6361.38	-3334.84	1704513.77	14311653.09	39°24'39.5207"N	80°46'23.0421"W	7182.51	332.335	0.38	-0.33	-0.18	
14779.00	90.030	342.150	6649.22	7179.55	6450.79	-3363.88	1704484.75	14311742.46	39°24'40.4051"N	80°46'23.4091"W	7275.19	332.459	0.30	-0.03	0.30	
14873.00	90.150	342.120	6649.07	7273.54	6540.26	-3392.71	1704455.92	14311831.89	39°24'41.2901"N	80°46'23.7737"W	7367.87	332.582	0.13	0.13	-0.03	
14968.00	90.280	342.420	6648.72	7368.54	6630.74	-3421.64	1704427.00	14311922.34	39°24'42.1851"N	80°46'24.1394"W	7461.53	332.705	0.34	0.14	0.32	
15063.00	90.400	342.980	6648.15	7463.52	6721.44	-3449.89	1704398.77	14312013.01	39°24'43.0822"N	80°46'24.4964"W	7555.10	332.830	0.60	0.13	0.59	
15157.00	90.090	342.230	6647.75	7557.51	6811.14	-3477.99	1704370.68	14312102.67	39°24'43.9695"N	80°46'24.8516"W	7647.75	332.950	0.86	-0.33	-0.80	
15251.00	90.370	341.290	6647.37	7651.51	6900.42	-3507.42	1704341.27	14312191.91	39°24'44.8526"N	80°46'25.2235"W	7740.65	333.056	1.04	0.30	-1.00	
15345.00	90.030	341.120	6647.04	7745.51	6989.40	-3537.70	1704310.99	14312280.86	39°24'45.7328"N	80°46'25.6066"W	7833.72	333.154	0.40	-0.36	-0.18	
15440.00	90.060	340.990	6646.97	7840.50	7079.26	-3568.54	1704280.16	14312370.68	39°24'46.6216"N	80°46'25.9966"W	7927.82	333.248	0.14	0.03	-0.14	
15534.00	89.940	341.090	6646.97	7934.49	7168.16	-3599.08	1704249.63	14312459.54	39°24'47.5010"N	80°46'26.3829"W	8020.97	333.339	0.17	-0.13	0.11	
15628.00	90.090	341.250	6646.94	8028.49	7257.13	-3629.42	1704219.31	14312548.48	39°24'48.3811"N	80°46'26.7667"W	8114.10	333.430	0.23	0.16	0.17	
15723.00	90.220	340.870	6646.69	8123.48	7346.98	-3660.26	1704188.48	14312638.30	39°24'49.2700"N	80°46'27.1566"W	8208.27	333.518	0.42	0.14	-0.40	
15817.00	90.250	341.350	6646.30	8217.47	7435.92	-3690.69	1704158.06	14312727.20	39°24'50.1497"N	80°46'27.5416"W	8301.45	333.603	0.51	0.03	0.51	
15911.00	90.150	341.130	6645.97	8311.47	7524.92	-3720.92	1704127.84	14312816.17	39°24'51.0302"N	80°46'27.9239"W	8394.63	333.689	0.26	-0.11	-0.23	
16006.00	90.060	340.940	6645.80	8406.46	7614.77	-3751.80	1704096.98	14312905.98	39°24'51.9189"N	80°46'28.3144"W	8488.86	333.771	0.22	-0.09	-0.20	
16101.00	90.000	340.920	6645.75	8501.45	7704.55	-3782.83	1704065.96	14312995.73	39°24'52.8070"N	80°46'28.7070"W	8583.12	333.850	0.07	-0.06	-0.02	
16195.00	90.090	341.370	6645.68	8595.44	7793.51	-3813.21	1704035.59	14313084.65	39°24'53.6870"N	80°46'29.0912"W	8676.37	333.928	0.49	0.10	0.48	
16289.00	90.280	341.670	6645.37	8689.44	7882.66	-3843.01	1704005.81	14313173.76	39°24'54.5689"N	80°46'29.4680"W	8769.55	334.010	0.38	0.20	0.32	
16384.00	89.750	341.070	6645.35	8784.44	7972.68	-3873.36	1703975.47	14313263.75	39°24'55.4593"N	80°46'29.8518"W	8863.78	334.088	0.84	-0.56	-0.63	





# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH DATA (235 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
16478.00	90.150	341.400	6645.43	8878.43	8061.69	-3903.59	1703945.24	14313352.72	39°24'56.3397"N	80°46'30.2343"W	8957.06	334.163	0.55	0.43	0.35	
16573.00	90.030	341.260	6645.28	8973.43	8151.69	-3934.01	1703914.85	14313442.68	39°24'57.2300"N	80°46'30.6189"W	9051.32	334.238	0.19	-0.13	-0.15	
16667.00	90.120	341.380	6645.16	9067.43	8240.74	-3964.11	1703884.75	14313531.70	39°24'58.1109"N	80°46'30.9997"W	9144.61	334.311	0.16	0.10	0.13	
16762.00	90.000	341.050	6645.06	9162.42	8330.67	-3994.70	1703854.17	14313621.60	39°24'59.0005"N	80°46'31.3866"W	9238.93	334.381	0.37	-0.13	-0.35	
16856.00	90.000	341.000	6645.06	9256.42	8419.57	-4025.27	1703823.62	14313710.46	39°24'59.8798"N	80°46'31.7732"W	9332.30	334.448	0.05	0.00	-0.05	
16950.00	90.460	341.050	6644.68	9350.41	8508.46	-4055.83	1703793.07	14313799.31	39°25'0.7591"N	80°46'32.1598"W	9425.69	334.514	0.49	0.49	0.05	
17045.00	90.430	341.400	6643.94	9445.40	8598.40	-4086.41	1703762.50	14313889.22	39°25'1.6488"N	80°46'32.5466"W	9520.04	334.580	0.37	-0.03	0.37	
17139.00	90.000	340.580	6643.59	9539.39	8687.27	-4117.03	1703731.90	14313978.06	39°25'2.5279"N	80°46'32.9339"W	9613.46	334.643	0.98	-0.46	-0.87	
17234.00	90.000	341.160	6643.59	9634.38	8777.03	-4148.16	1703700.78	14314067.77	39°25'3.4158"N	80°46'33.3277"W	9707.90	334.704	0.61	0.00	0.61	
17328.00	90.370	341.380	6643.29	9728.37	8866.05	-4178.34	1703670.60	14314156.76	39°25'4.2964"N	80°46'33.7095"W	9801.29	334.767	0.46	0.39	0.23	
17423.00	90.280	341.430	6642.75	9823.37	8956.09	-4208.64	1703640.32	14314246.76	39°25'5.1870"N	80°46'34.0926"W	9895.66	334.830	0.11	-0.09	0.05	
17517.00	90.220	341.130	6642.34	9917.37	9045.11	-4238.80	1703610.17	14314335.75	39°25'6.0676"N	80°46'34.4742"W	9989.07	334.891	0.33	-0.06	-0.32	
17611.00	90.150	341.770	6642.03	10011.36	9134.23	-4268.71	1703580.28	14314424.83	39°25'6.9491"N	80°46'34.8524"W	10082.46	334.952	0.68	-0.07	0.68	
17706.00	90.180	341.650	6641.76	10106.36	9224.43	-4298.52	1703550.47	14314515.00	39°25'7.8414"N	80°46'35.2295"W	10176.81	335.015	0.13	0.03	-0.13	
17800.00	90.090	341.170	6641.54	10200.36	9313.52	-4328.49	1703520.52	14314604.06	39°25'8.7227"N	80°46'35.6085"W	10270.22	335.073	0.52	-0.10	-0.51	
17894.00	90.250	341.390	6641.26	10294.36	9402.55	-4358.66	1703490.36	14314693.05	39°25'9.6033"N	80°46'35.9901"W	10363.68	335.129	0.29	0.17	0.23	
17988.00	90.000	341.030	6641.06	10388.35	9491.54	-4388.93	1703460.10	14314782.00	39°25'10.4836"N	80°46'36.3731"W	10457.15	335.184	0.47	-0.27	-0.38	
18082.00	90.060	341.280	6641.01	10482.35	9580.50	-4419.30	1703429.75	14314870.93	39°25'11.3636"N	80°46'36.7572"W	10550.65	335.237	0.27	0.06	0.27	
18177.00	90.220	341.500	6640.77	10577.35	9670.53	-4449.61	1703399.44	14314960.93	39°25'12.2541"N	80°46'37.1406"W	10645.11	335.292	0.29	0.17	0.53	
18271.00	89.880	340.990	6640.69	10671.34	9759.54	-4479.84	1703369.23	14315049.90	39°25'13.1346"N	80°46'37.5229"W	10738.60	335.344	0.65	-0.36	-0.24	
18366.00	90.060	340.950	6640.74	10766.33	9849.35	-4510.81	1703338.27	14315139.67	39°25'14.0229"N	80°46'37.9148"W	10833.15	335.393	0.19	0.19	-0.04	
18460.00	90.030	340.810	6640.67	10860.32	9938.16	-4541.60	1703307.49	14315228.45	39°25'14.9015"N	80°46'38.3043"W	10926.72	335.440	0.15	-0.03	-0.15	
18554.00	89.970	341.380	6640.67	10954.31	10027.09	-4572.06	1703277.05	14315317.34	39°25'15.7812"N	80°46'38.6896"W	11020.27	335.488	0.61	-0.06	0.61	
18648.00	90.090	341.240	6640.62	11048.31	10116.14	-4602.18	1703246.94	14315406.35	39°25'16.6620"N	80°46'39.0706"W	11113.79	335.538	0.20	0.13	-0.15	
18742.00	90.120	341.380	6640.45	11142.31	10205.18	-4632.30	1703216.83	14315495.36	39°25'17.5427"N	80°46'39.4517"W	11207.31	335.586	0.15	0.03	0.15	
18837.00	90.090	341.330	6640.27	11237.31	10295.19	-4662.67	1703186.47	14315585.34	39°25'18.4331"N	80°46'39.8359"W	11301.84	335.634	0.06	-0.03	-0.05	
18931.00	90.030	341.180	6640.17	11331.30	10384.21	-4692.88	1703156.27	14315674.32	39°25'19.3136"N	80°46'40.2180"W	11395.39	335.681	0.17	-0.06	-0.16	
19026.00	90.150	341.410	6640.02	11426.30	10474.19	-4723.35	1703125.82	14315764.26	39°25'20.2037"N	80°46'40.6034"W	11489.94	335.727	0.27	0.13	0.24	
19120.00	89.820	341.500	6640.05	11520.30	10563.31	-4753.24	1703095.93	14315853.35	39°25'21.0852"N	80°46'40.9815"W	11583.47	335.773	0.36	-0.35	0.10	
19214.00	89.880	341.540	6640.30	11614.30	10652.46	-4783.04	1703066.15	14315942.46	39°25'21.9671"N	80°46'41.3584"W	11677.00	335.820	0.08	0.06	0.04	



**Actual Wellpath Report**  
 Rapids Unit 2H AWP Proj: 21578'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Rapids Unit 2H
Field	Tyler		API	47-095-02738-0000
Facility	Shepherd Pad		Wellbore	Rapids Unit 2H AWB
Slot	Slot B			

WELLPATH DATA (235 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
19308.00	89.820	341.620	6640.54	11708.30	10741.64	-4812.74	1703036.46	14316031.61	39°25'22.8493"N	80°46'41.7341"W	11770.53	335.865	0.11	-0.06	0.09	
19403.00	89.780	341.370	6640.87	11803.29	10831.73	-4842.89	1703006.32	14316121.66	39°25'23.7404"N	80°46'42.1155"W	11865.08	335.910	0.27	-0.04	-0.26	
19498.00	89.630	341.460	6641.36	11898.29	10921.78	-4873.17	1702976.05	14316211.67	39°25'24.6311"N	80°46'42.4985"W	11959.64	335.954	0.18	-0.16	0.09	
19592.00	89.570	341.620	6642.02	11992.29	11010.94	-4902.93	1702946.30	14316300.80	39°25'25.5130"N	80°46'42.8750"W	12053.19	335.998	0.18	-0.06	0.17	
19687.00	89.600	341.320	6642.71	12087.28	11101.01	-4933.12	1702916.12	14316390.83	39°25'26.4040"N	80°46'43.2569"W	12147.76	336.040	0.32	0.03	-0.32	
19782.00	89.660	341.510	6643.32	12182.28	11191.05	-4963.40	1702885.86	14316480.84	39°25'27.2947"N	80°46'43.6399"W	12242.35	336.082	0.21	0.06	0.20	
19877.00	89.540	341.520	6643.98	12277.28	11281.15	-4993.52	1702855.75	14316570.90	39°25'28.1858"N	80°46'44.0209"W	12336.92	336.124	0.13	-0.13	0.01	
20067.00	89.600	341.190	6645.41	12467.27	11461.17	-5054.26	1702795.03	14316750.86	39°25'29.9666"N	80°46'44.7893"W	12526.13	336.203	0.18	0.03	-0.17	
20161.00	89.630	341.420	6646.04	12561.26	11550.21	-5084.39	1702764.92	14316839.86	39°25'30.8473"N	80°46'45.1704"W	12619.76	336.241	0.25	0.03	0.24	
20256.00	89.570	341.420	6646.70	12656.26	11640.26	-5114.66	1702734.66	14316929.87	39°25'31.7380"N	80°46'45.5534"W	12714.38	336.280	0.06	-0.06	0.00	
20351.00	89.630	341.390	6647.37	12751.25	11730.30	-5144.95	1702704.38	14317019.87	39°25'32.6286"N	80°46'45.9366"W	12809.00	336.318	0.07	0.06	-0.03	
20446.00	89.570	342.070	6648.03	12846.25	11820.50	-5174.73	1702674.61	14317110.04	39°25'33.5209"N	80°46'46.3133"W	12903.57	336.357	0.72	-0.06	0.72	
20541.00	89.420	341.980	6648.87	12941.25	11910.86	-5204.05	1702645.30	14317200.37	39°25'34.4147"N	80°46'46.6840"W	12998.11	336.399	0.18	-0.16	-0.09	
20636.00	89.570	342.190	6649.71	13036.24	12001.25	-5233.27	1702616.09	14317290.72	39°25'35.3088"N	80°46'47.0536"W	13092.64	336.440	0.27	0.16	0.22	
20731.00	90.060	342.470	6650.01	13131.23	12091.77	-5262.11	1702587.27	14317381.20	39°25'36.2041"N	80°46'47.4182"W	13187.14	336.482	0.59	0.52	0.29	
20825.00	89.940	341.930	6650.01	13225.23	12181.27	-5290.84	1702558.55	14317470.67	39°25'37.0893"N	80°46'47.7816"W	13280.68	336.523	0.59	-0.13	-0.57	
20920.00	90.180	342.440	6649.91	13320.23	12271.72	-5319.91	1702529.49	14317561.08	39°25'37.9840"N	80°46'48.1492"W	13375.22	336.563	0.59	0.25	0.54	
21015.00	89.970	342.240	6649.79	13415.22	12362.24	-5348.73	1702500.69	14317651.56	39°25'38.8793"N	80°46'48.5137"W	13469.74	336.603	0.31	-0.22	-0.21	
21110.00	90.150	342.230	6649.69	13510.22	12452.71	-5377.71	1702471.71	14317742.00	39°25'39.7742"N	80°46'48.8802"W	13564.28	336.643	0.19	0.19	-0.01	
21205.00	90.120	342.290	6649.46	13605.22	12543.19	-5406.66	1702442.78	14317832.44	39°25'40.6692"N	80°46'49.2463"W	13658.83	336.682	0.07	-0.03	0.06	
21300.00	90.150	342.390	6649.24	13700.21	12633.71	-5435.48	1702413.97	14317922.93	39°25'41.5645"N	80°46'49.6108"W	13753.37	336.721	0.11	0.03	0.11	
21394.00	90.120	342.440	6649.02	13794.20	12723.32	-5463.88	1702385.58	14318012.50	39°25'42.4508"N	80°46'49.9699"W	13846.91	336.759	0.06	-0.03	0.05	
21489.00	90.030	342.070	6648.89	13889.20	12813.80	-5492.83	1702356.64	14318102.95	39°25'43.3458"N	80°46'50.3361"W	13941.47	336.797	0.40	-0.09	-0.39	
21555.00	90.090	342.420	6648.83	13955.20	12876.66	-5512.96	1702336.52	14318165.78	39°25'43.9675"N	80°46'50.5906"W	14007.18	336.822	0.54	0.09	0.53	
21578.00‡	90.090	342.420	6648.79	13978.20	12898.58	-5519.91	1702329.57	14318187.69	39°25'44.1844"N	80°46'50.6785"W	14030.07	336.832	0.00	0.00	0.00	Projected MD at TD: 21578'



**Actual Wellpath Report**  
 Rapids Unit 2H AWP Proj: 21578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

HOLE & CASING SECTIONS - Ref Wellbore: Rapids Unit 2H AWB Ref Wellpath: Rapids Unit 2H AWP Proj: 21578'										
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	126.00	100.50	25.50	126.00	0.00	0.00	0.08	-0.08	
17.5in Open Hole	126.00	412.00	286.00	126.00	412.00	0.08	-0.08	0.82	-0.80	
13.375in Casing Surface	25.50	392.00	366.50	25.50	392.00	0.00	0.00	0.69	-0.70	
12.25in Open Hole	412.00	3226.00	2814.00	412.00	3137.29	0.82	-0.80	-568.05	-311.87	
9.625in Casing Intermediate	25.50	3206.00	3180.50	25.50	3118.03	0.00	0.00	-563.29	-309.38	
8.75in Open Hole	3226.00	5947.00	2721.00	3137.29	5735.63	-568.05	-311.87	-1266.75	-696.82	
8.5in Open Hole	5947.00	21578.00	15631.00	5735.63	6648.79	-1266.75	-696.82	12898.58	-5519.91	
5.5in Casing Production	25.50	21578.00	21552.50	25.50	6648.79	0.00	0.00	12898.58	-5519.91	

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Rapids Unit 2H POE Rev-1	6651.00	-837.16	-991.36	1706856.32	14304457.40	39°23'28.3146"N	80°45'53.4240"W	point
Rapids Unit 2H BHL Rev-2	6674.00	12865.08	-5507.78	1702341.70	14318154.21	39°25'43.8530"N	80°46'50.5250"W	point
Rapids Unit 2H LP Rev-2	6674.00	-666.17	-1047.72	1706799.98	14304628.33	39°23'30.0061"N	80°45'54.1362"W	point
Rapids Unit 2H 50' L/R Hard Line	7000.00	6013.96	-3249.57	1704599.01	14311305.80	39°24'36.0849"N	80°46'21.9668"W	rectangle
	2D Rectangle 14427.4 x 100.							



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

WELLPATH COMPOSITION - Ref Wellbore: Rapids Unit 2H AWB Ref Wellpath: Rapids Unit 2H AWP Proj: 21578'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
25.50	400.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-400')	Rapids Unit 2H AWB	27/Jul/2021	
400.00	473.00	Gyrodata 2015 - GC+WIR+DPIPE	02 Gyrodata MS Gyro 12-1/4"> (400')(473')	Rapids Unit 2H AWB	29/Jul/2021	
473.00	3134.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <12-1/4"> (473')(595'-3134')	Rapids Unit 2H AWB	27/Jul/2021	
3134.00	5884.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04 APS EM <8-3/4"> (3134')(3227'-5884')	Rapids Unit 2H AWB	16/Aug/2021	
5884.00	7601.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05 BH AT Curve <8-1/2"> (5884')(5922'-7601')	Rapids Unit 2H AWB	16/Aug/2021	
7601.00	21578.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	07 BH AT Curve <8-1/2"> (7601')(7699'-21555')	Rapids Unit 2H AWB	22/Aug/2021	



# Actual Wellpath Report

Rapids Unit 2H AWP Proj: 21578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Rapids Unit 2H
Field	Tyler	API	47-095-02738-0000
Facility	Shepherd Pad	Wellbore	Rapids Unit 2H AWB
Slot	Slot B		

## COMMENTS

### Wellpath general comments

API: 47-095-02738-0000  
BH Job #: 110974028  
Rig: H&P 317  
Duration: 8/18/2021-8/22/2021  
Gyrodatta MS Gyro <17-1/2"> (100'-400')  
Gyrodatta MS Gyro <12-1/4"> (400')(473')  
APS EM <12-1/4"> (473')(595'-3134')  
APS EM <8-3/4"> (3134')(3227'-5884')  
BH AT Curve <8-1/2"> (5884')(5922'-21555')  
Sycamore: 6501' MD  
Middlesex: 6712' MD  
Burkett: 6937' MD  
Tully: 7006' MD  
Marcellus POE: 7160' MD  
Projected MD at TD: 21578'