



ANTERO RESOURCES CORPORATION



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

Slot: Slot C
 Well: Mamba Unit 1H
 Wellbore: Mamba Unit 1H PWB

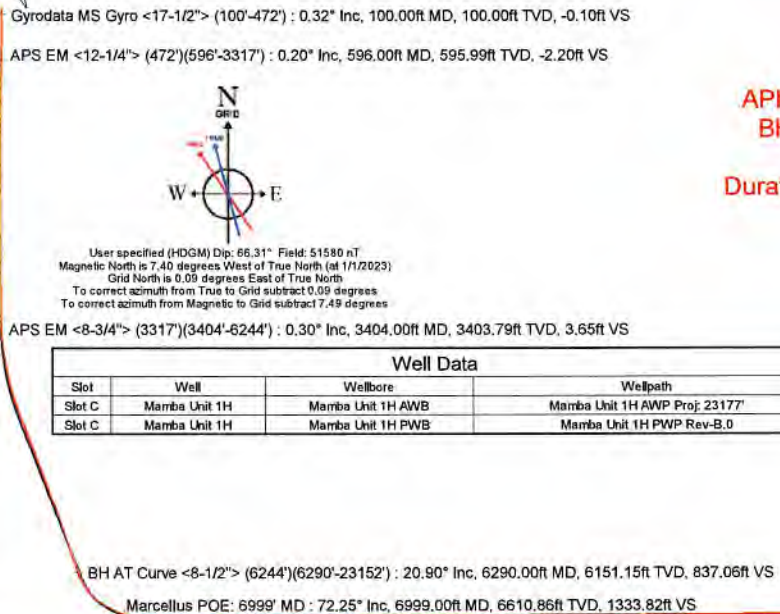
Plot reference wellpath is Mamba Unit 1H PWP Rev-B.0	Grid System: NAD27/UTM Zone 17 North, US Feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1223 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot C): -1193 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: redhays on 2023-01-09, Database: WA_NPL_EASTERNUS_Dat

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Heintzman Pad	1681067.630	14359649.490	39°32'34.5540"N	80°51'20.8980"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot C	0.04	0.03	1681067.660	14359649.530	39°32'34.5544"N 80°51'20.8976"W
Comment	Mamba Unit 1H		30R		
H&P 519 (RKB) to Ground level (At Slot: Slot C)			-1193ft		
Mean Sea Level to Ground level (At Slot: Slot C)			-1193ft		
H&P 519 (RKB) to Mean Sea Level			1223ft		

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3317.00	0.330	18.220	3316.79	-1.98	-15.90	0.09	3.26
Proj. to Bottom	3402.00	0.330	18.220	3401.79	-1.52	-15.75	0.00	3.66
Drill Out	3482.00	0.330	18.220	3481.79	-1.08	-15.60	0.00	4.02
End of 3D Arc	4544.18	21.502	340.052	4516.90	186.97	-81.82	2.00	203.38
Curve KOP	6341.08	21.502	340.052	6190.75	806.08	-306.52	0.00	861.89
POE	6981.09	72.537	333.528	6613.00	1217.33	-495.35	8.00	1312.10
Landing Pt.	7203.14	90.300	333.528	6646.00	1413.08	-592.83	8.00	1528.84
On AZI	7456.76	90.300	341.137	6644.67	1646.94	-690.50	3.00	1781.72
BHL	23193.36	90.300	341.137	6562.28	16538.18	-5778.20	0.00	17516.11

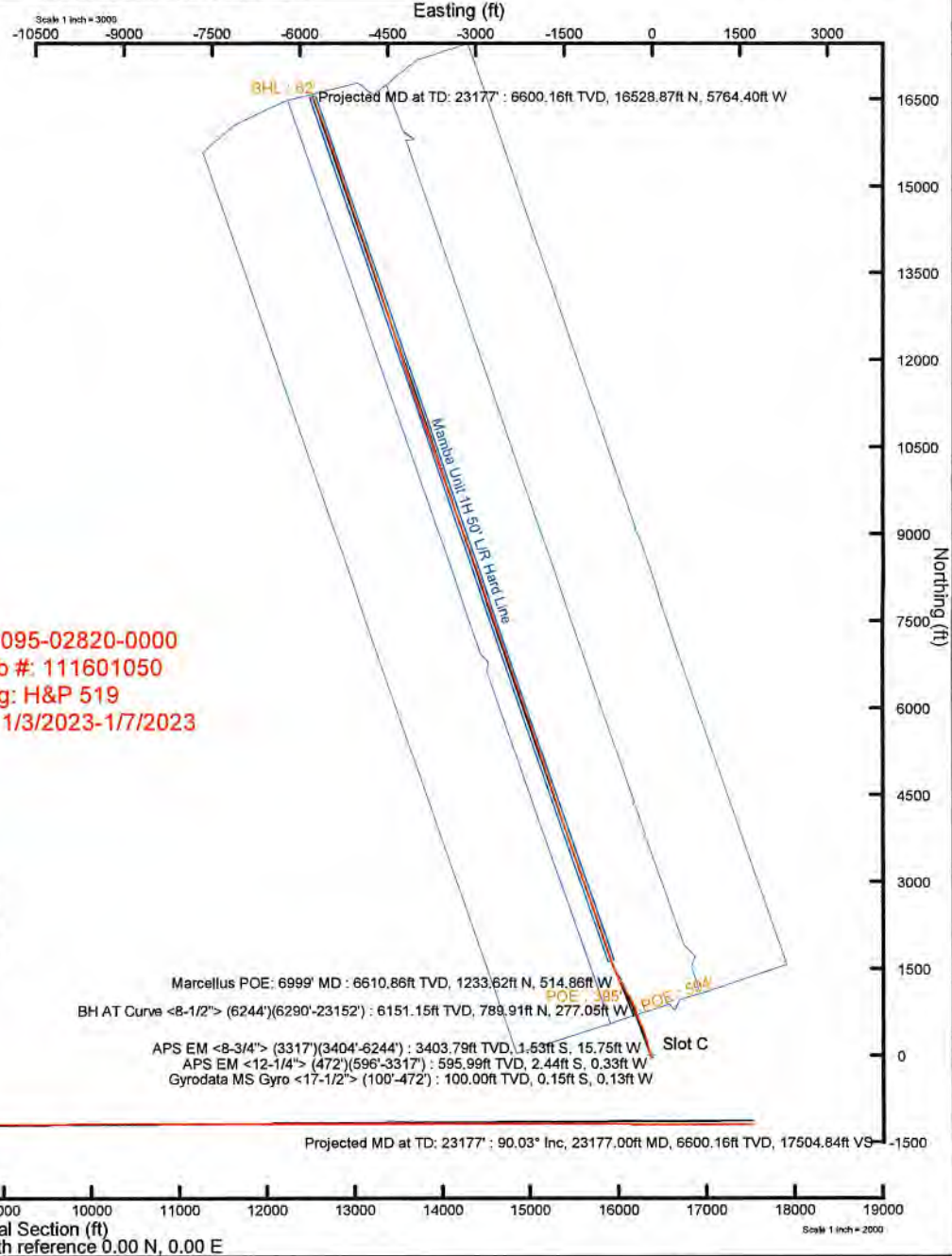
Scale 1 inch = 200'

True Vertical Depth (ft)



Well Data			
Slot	Well	Wellbore	Wellpath
Slot C	Mamba Unit 1H	Mamba Unit 1H AWB	Mamba Unit 1H AWP Proj: 23177'
Slot C	Mamba Unit 1H	Mamba Unit 1H PWB	Mamba Unit 1H PWP Rev-B.0

API: 47-095-02820-0000
 BH Job #: 111601050
 Rig: H&P 519
 Duration: 1/3/2023-1/7/2023





Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999602	Report Generated	1/9/2023 at 11:21:36 AM
Convergence at slot	0.09° 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	0.04	0.03	1681067.66	14359649.53	39°32'34.5544"N	80°51'20.8976"W
Facility Reference Pt			1681067.63	14359649.49	39°32'34.5540"N	80°51'20.8980"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	1223.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1223.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot C)	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	341.14°



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION				
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Field	Tyler		API	47-095-02820-0000
Facility	Heintzman Pad		Wellbore	Mamba Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (253 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	221.680	0.00	0.00	0.00	0.00	1681067.66	14359649.53	39°32'34.5544"N	80°51'20.8976"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.00	221.680	30.00	0.00	0.00	0.00	1681067.66	14359649.53	39°32'34.5544"N	80°51'20.8976"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.32	221.680	100.00	-0.10	-0.15	-0.13	1681067.53	14359649.38	39°32'34.5529"N	80°51'20.8992"W	0.20	221.680	0.46	0.46	0.00	Gyrodata MS Gyro <17-1/2"> (100'-472')
200.00	0.11	211.700	200.00	-0.29	-0.44	-0.37	1681067.29	14359649.09	39°32'34.5501"N	80°51'20.9023"W	0.57	220.006	0.21	-0.21	-9.98	
300.00	0.35	162.680	300.00	-0.66	-0.81	-0.33	1681067.33	14359648.72	39°32'34.5464"N	80°51'20.9018"W	0.87	201.914	0.29	0.24	-49.02	
400.00	0.46	168.820	400.00	-1.36	-1.49	-0.16	1681067.50	14359648.04	39°32'34.5396"N	80°51'20.8996"W	1.50	185.991	0.12	0.11	6.14	
472.00	0.34	183.010	471.99	-1.85	-1.99	-0.11	1681067.55	14359647.54	39°32'34.5347"N	80°51'20.8991"W	1.99	183.220	0.21	-0.17	19.71	
596.00	0.20	249.140	595.99	-2.20	-2.44	-0.33	1681067.33	14359647.09	39°32'34.5303"N	80°51'20.9019"W	2.46	187.797	0.26	-0.11	53.33	APS EM <12-1/4"> (472')(596'-331')
775.00	0.40	241.640	774.99	-2.31	-2.84	-1.18	1681066.49	14359646.69	39°32'34.5263"N	80°51'20.9126"W	3.08	202.453	0.11	0.11	-4.19	
866.00	0.44	234.970	865.99	-2.46	-3.20	-1.74	1681065.92	14359646.34	39°32'34.5228"N	80°51'20.9199"W	3.64	208.581	0.07	0.04	-7.33	
956.00	0.50	231.880	955.98	-2.69	-3.64	-2.33	1681065.33	14359645.89	39°32'34.5185"N	80°51'20.9274"W	4.32	212.682	0.07	0.07	-3.43	
1047.00	0.60	240.740	1046.98	-2.90	-4.11	-3.06	1681064.60	14359645.42	39°32'34.5138"N	80°51'20.9367"W	5.13	216.647	0.14	0.11	9.74	
1142.00	0.67	246.830	1141.97	-3.04	-4.58	-4.01	1681063.66	14359644.96	39°32'34.5092"N	80°51'20.9488"W	6.08	221.196	0.10	0.07	6.41	
1236.00	0.80	264.530	1235.97	-2.92	-4.85	-5.16	1681062.50	14359644.68	39°32'34.5065"N	80°51'20.9636"W	7.09	226.767	0.28	0.14	18.83	
1331.00	1.04	266.620	1330.95	-2.54	-4.97	-6.68	1681060.98	14359644.56	39°32'34.5054"N	80°51'20.9830"W	8.33	233.376	0.26	0.25	2.20	
1425.00	1.18	264.340	1424.94	-2.09	-5.11	-8.50	1681059.16	14359644.42	39°32'34.5040"N	80°51'21.0062"W	9.92	238.962	0.16	0.15	-2.43	
1520.00	0.68	195.090	1519.93	-2.34	-5.76	-9.62	1681058.04	14359643.78	39°32'34.4976"N	80°51'21.0205"W	11.21	239.108	1.19	-0.53	-72.89	
1615.00	0.97	258.800	1614.92	-2.70	-6.46	-10.56	1681057.11	14359643.08	39°32'34.4907"N	80°51'21.0324"W	12.37	238.549	0.95	0.31	67.06	
1709.00	0.97	255.160	1708.91	-2.54	-6.81	-12.11	1681055.56	14359642.72	39°32'34.4872"N	80°51'21.0522"W	13.89	240.623	0.07	0.00	-3.87	
1804.00	0.92	268.420	1803.89	-2.25	-7.04	-13.64	1681054.02	14359642.49	39°32'34.4850"N	80°51'21.0719"W	15.35	242.704	0.24	-0.05	13.96	
1898.00	0.87	270.160	1897.88	-1.80	-7.06	-15.11	1681052.55	14359642.47	39°32'34.4848"N	80°51'21.0906"W	16.68	244.960	0.06	-0.05	1.85	
1993.00	0.70	276.220	1992.87	-1.31	-7.00	-16.41	1681051.26	14359642.54	39°32'34.4855"N	80°51'21.1072"W	17.84	246.914	0.20	-0.18	6.38	
2087.00	0.71	282.430	2086.86	-0.77	-6.81	-17.55	1681050.12	14359642.73	39°32'34.4874"N	80°51'21.1217"W	18.82	248.799	0.08	0.01	6.61	
2182.00	0.81	287.450	2181.86	-0.07	-6.48	-18.77	1681048.90	14359643.05	39°32'34.4906"N	80°51'21.1373"W	19.85	250.951	0.13	0.11	5.28	
2276.00	0.71	294.250	2275.85	0.73	-6.04	-19.93	1681047.74	14359643.49	39°32'34.4950"N	80°51'21.1521"W	20.83	253.137	0.14	-0.11	7.23	
2371.00	0.71	268.810	2370.84	1.31	-5.81	-21.06	1681046.61	14359643.72	39°32'34.4973"N	80°51'21.1665"W	21.84	254.570	0.33	0.00	-26.78	
2465.00	0.56	274.800	2464.84	1.67	-5.79	-22.10	1681045.57	14359643.75	39°32'34.4975"N	80°51'21.1797"W	22.84	255.328	0.17	-0.16	6.37	
2560.00	0.64	78.630	2559.83	1.79	-5.64	-22.04	1681045.63	14359643.89	39°32'34.4990"N	80°51'21.1790"W	22.75	255.641	1.25	0.08	172.45	
2654.00	0.96	69.680	2653.82	1.74	-5.26	-20.79	1681046.88	14359644.27	39°32'34.5027"N	80°51'21.1630"W	21.44	255.786	0.36	0.34	-9.52	
2749.00	0.71	75.570	2748.81	1.71	-4.84	-19.47	1681048.20	14359644.69	39°32'34.5068"N	80°51'21.1462"W	20.06	256.034	0.28	-0.26	6.20	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Mamba Unit 1H
Field	Tyler		API	47-095-02820-0000
Facility	Heintzman Pad		Wellbore	Mamba Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (253 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	
2843.00	0.610	68.520	2842.81	1.69	-4.51	-18.44	1681049.23	14359645.02	39°32'34.5101"N	80°51'21.1330"W	18.98	256.246	0.14	-0.11	-7.50		
2938.00	0.660	52.460	2937.80	1.89	-3.99	-17.53	1681050.13	14359645.54	39°32'34.5152"N	80°51'21.1215"W	17.98	257.165	0.19	0.05	-16.91		
3033.00	0.530	40.340	3032.80	2.29	-3.33	-16.82	1681050.85	14359646.20	39°32'34.5218"N	80°51'21.1123"W	17.14	258.810	0.19	-0.14	-12.76		
3127.00	0.200	69.090	3126.79	2.52	-2.94	-16.38	1681051.28	14359646.59	39°32'34.5256"N	80°51'21.1067"W	16.64	259.837	0.39	-0.35	30.59		
3222.00	0.410	20.730	3221.79	2.78	-2.56	-16.11	1681051.56	14359646.97	39°32'34.5293"N	80°51'21.1032"W	16.31	260.970	0.33	0.22	-50.91		
3317.00	0.330	18.220	3316.79	3.26	-1.98	-15.90	1681051.77	14359647.55	39°32'34.5350"N	80°51'21.1006"W	16.02	262.895	0.09	-0.08	-2.64		
3404.00	0.300	17.230	3403.79	3.65	-1.53	-15.75	1681051.91	14359648.00	39°32'34.5395"N	80°51'21.0987"W	15.83	264.466	0.04	-0.03	-1.14	APS EM <8-3/4"> (3317')(3404'-6244')	
3501.00	2.450	334.010	3500.76	5.91	0.58	-16.59	1681051.08	14359650.11	39°32'34.5604"N	80°51'21.1093"W	16.60	272.003	2.31	2.22	-44.56		
3595.00	4.160	329.610	3594.60	11.25	5.33	-19.19	1681048.47	14359654.86	39°32'34.6073"N	80°51'21.1425"W	19.92	285.512	1.84	1.82	-4.68		
3690.00	7.890	341.910	3689.06	21.15	14.50	-22.96	1681044.71	14359664.03	39°32'34.6981"N	80°51'21.1904"W	27.16	302.273	4.13	3.93	12.95		
3785.00	10.280	345.670	3782.86	36.12	28.91	-27.09	1681040.58	14359678.43	39°32'34.8406"N	80°51'21.2427"W	39.62	316.870	2.59	2.52	3.96		
3879.00	10.900	343.450	3875.26	53.36	45.56	-31.69	1681035.98	14359695.07	39°32'35.0052"N	80°51'21.3012"W	55.50	325.176	0.79	0.66	-2.36		
3974.00	10.470	340.610	3968.61	70.97	62.31	-37.12	1681030.56	14359711.82	39°32'35.1708"N	80°51'21.3701"W	72.53	329.219	0.72	-0.45	-2.99		
4068.00	11.890	343.570	4060.83	89.18	79.66	-42.69	1681024.98	14359729.16	39°32'35.3423"N	80°51'21.4409"W	90.38	331.811	1.63	1.51	3.15		
4163.00	14.410	346.990	4153.33	110.72	100.57	-48.12	1681019.56	14359750.06	39°32'35.5491"N	80°51'21.5098"W	111.49	334.428	2.78	2.65	3.60		
4257.00	16.910	347.670	4243.84	135.95	125.32	-53.68	1681014.00	14359774.80	39°32'35.7938"N	80°51'21.5802"W	136.33	336.814	2.67	2.66	0.72		
4352.00	18.800	348.150	4334.26	164.87	153.80	-59.77	1681007.91	14359803.27	39°32'36.0754"N	80°51'21.6574"W	165.01	338.763	2.00	1.99	0.51		
4447.00	20.690	348.730	4423.67	196.70	185.25	-66.19	1681001.49	14359834.70	39°32'36.3863"N	80°51'21.7387"W	196.72	340.337	2.00	1.99	0.61		
4542.00	22.510	346.190	4511.99	231.45	219.37	-73.82	1680993.87	14359868.81	39°32'36.7236"N	80°51'21.8353"W	231.46	341.402	2.15	1.92	-2.67		
4636.00	21.390	343.140	4599.18	266.51	253.25	-83.08	1680984.61	14359902.68	39°32'37.0586"N	80°51'21.9529"W	266.53	341.837	1.70	-1.19	-3.24		
4731.00	19.880	339.400	4688.09	299.97	284.95	-93.79	1680973.91	14359934.37	39°32'37.3721"N	80°51'22.0890"W	299.99	341.781	2.11	-1.59	-3.94		
4826.00	19.910	341.970	4777.42	332.29	315.45	-104.48	1680963.22	14359964.86	39°32'37.6737"N	80°51'22.2248"W	332.31	341.674	0.92	0.03	2.71		
4921.00	21.760	345.970	4866.21	366.02	347.92	-113.76	1680953.95	14359997.31	39°32'37.9948"N	80°51'22.3426"W	366.05	341.894	2.46	1.95	4.21		
5015.00	21.750	343.160	4953.52	400.79	381.50	-123.03	1680944.68	14360030.87	39°32'38.3268"N	80°51'22.4602"W	400.84	342.126	1.11	-0.01	-2.99		
5110.00	20.130	338.690	5042.24	434.71	413.58	-134.07	1680933.64	14360062.94	39°32'38.6440"N	80°51'22.6005"W	434.77	342.039	2.39	-1.71	-4.71		
5205.00	20.930	339.600	5131.21	468.01	444.71	-145.93	1680921.79	14360094.06	39°32'38.9519"N	80°51'22.7512"W	468.04	341.833	0.91	0.84	0.96		
5300.00	20.220	338.940	5220.15	501.38	475.94	-157.74	1680909.98	14360125.28	39°32'39.2607"N	80°51'22.9014"W	501.40	341.663	0.79	-0.75	-0.69		
5394.00	20.640	336.850	5308.24	534.13	506.33	-170.09	1680897.64	14360155.66	39°32'39.5613"N	80°51'23.0584"W	534.14	341.431	0.90	0.45	-2.22		
5489.00	20.710	334.390	5397.12	567.51	536.87	-183.93	1680883.80	14360186.19	39°32'39.8633"N	80°51'23.2345"W	567.51	341.088	0.92	0.07	-2.59		
5583.00	20.390	338.460	5485.14	600.37	567.09	-197.13	1680870.61	14360216.40	39°32'40.1622"N	80°51'23.4023"W	600.38	340.832	1.56	-0.34	4.33		



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (253 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
5678.00	19.880	337.900	5574.34	633.03	597.45	-209.29	1680858.46	14360246.75	39°32'40.4625"N	80°51'23.5569"W	633.05	340.695	0.57	-0.54	-0.59	
5773.00	19.950	337.450	5663.66	665.33	627.39	-221.58	1680846.17	14360276.67	39°32'40.7585"N	80°51'23.7132"W	665.37	340.548	0.18	0.07	-0.47	
5867.00	18.520	336.580	5752.41	696.22	655.90	-233.66	1680834.09	14360305.17	39°32'41.0405"N	80°51'23.8668"W	696.28	340.392	1.55	-1.52	-0.93	
5962.00	18.180	337.250	5842.58	726.04	683.41	-245.39	1680822.37	14360332.67	39°32'41.3126"N	80°51'24.0160"W	726.13	340.249	0.42	-0.36	0.71	
6056.00	20.070	345.190	5931.40	756.77	712.53	-255.19	1680812.58	14360361.78	39°32'41.6006"N	80°51'24.1404"W	756.85	340.296	3.42	2.01	8.45	
6151.00	19.860	344.910	6020.69	789.13	743.87	-263.55	1680804.21	14360393.11	39°32'41.9104"N	80°51'24.2466"W	789.18	340.491	0.24	-0.22	-0.29	
6244.00	20.180	342.910	6108.07	820.93	774.46	-272.38	1680795.39	14360423.68	39°32'42.2129"N	80°51'24.3587"W	820.96	340.623	0.81	0.34	-2.15	
6290.00	20.900	343.410	6151.15	837.06	789.91	-277.05	1680790.72	14360439.12	39°32'42.3656"N	80°51'24.4180"W	837.09	340.672	1.61	1.57	1.09	BH AT Curve <8-1/2"> (6244')(6290'-23152')
6355.00	23.530	340.810	6211.32	861.62	813.28	-284.63	1680783.14	14360462.48	39°32'42.5967"N	80°51'24.5143"W	861.65	340.711	4.32	4.05	-4.00	
6450.00	32.110	337.950	6295.26	905.88	854.67	-300.37	1680767.41	14360503.86	39°32'43.0060"N	80°51'24.7144"W	905.91	340.636	9.14	9.03	-3.01	
6512.00†	37.453	336.063	6346.17	941.14	887.20	-314.22	1680753.57	14360536.37	39°32'43.3277"N	80°51'24.8904"W	941.20	340.497	8.79	8.62	-3.04	Sycamore: 6512' MD
6544.00	40.220	335.260	6371.09	961.11	905.48	-322.49	1680745.30	14360554.64	39°32'43.5085"N	80°51'24.9957"W	961.19	340.396	8.79	8.65	-2.51	
6639.00	49.510	332.070	6438.36	1027.45	965.39	-352.32	1680715.48	14360614.53	39°32'44.1011"N	80°51'25.3752"W	1027.67	339.950	10.06	9.78	-3.36	
6660.00†	51.189	331.103	6451.76	1043.39	979.61	-360.01	1680707.79	14360628.75	39°32'44.2418"N	80°51'25.4731"W	1043.67	339.821	8.75	8.00	-4.61	Middlesex: 6660' MD
6733.00	57.080	328.060	6494.52	1101.30	1030.56	-390.00	1680677.82	14360679.68	39°32'44.7458"N	80°51'25.8549"W	1101.89	339.272	8.75	8.07	-4.17	
6824.00†	61.831	327.100	6540.75	1177.46	1096.69	-432.01	1680635.82	14360745.78	39°32'45.4000"N	80°51'26.3899"W	1178.71	338.499	5.30	5.22	-1.05	Burkett: 6824' MD
6828.00	62.040	327.060	6542.63	1180.88	1099.65	-433.93	1680633.90	14360748.74	39°32'45.4294"N	80°51'26.4143"W	1182.17	338.465	5.30	5.22	-1.00	
6865.00†	63.707	327.615	6559.50	1212.86	1127.37	-451.70	1680616.14	14360776.45	39°32'45.7036"N	80°51'26.6406"W	1214.50	338.166	4.70	4.51	1.50	Tully: 6865' MD
6922.00	66.280	328.440	6583.60	1263.17	1171.19	-479.05	1680588.80	14360820.25	39°32'46.1371"N	80°51'26.9888"W	1265.38	337.754	4.70	4.51	1.45	
6999.00†	72.247	331.816	6610.86	1333.82	1233.62	-514.86	1680553.01	14360882.65	39°32'46.7547"N	80°51'27.4446"W	1336.75	337.347	8.77	7.75	4.38	Marcellus POE: 6999' MD
7017.00	73.650	332.570	6616.13	1350.82	1248.84	-522.88	1680544.98	14360897.87	39°32'46.9052"N	80°51'27.5468"W	1353.89	337.281	8.77	7.80	4.19	
7112.00	81.630	335.770	6636.46	1442.85	1332.30	-563.24	1680504.64	14360981.30	39°32'47.7307"N	80°51'28.0603"W	1446.47	337.083	9.02	8.40	3.37	
7206.00	91.050	337.970	6642.45	1536.28	1418.47	-600.04	1680467.86	14361067.44	39°32'48.5830"N	80°51'28.5283"W	1540.17	337.071	10.29	10.02	2.34	
7301.00	90.680	338.090	6641.02	1631.13	1506.56	-635.58	1680432.34	14361155.49	39°32'49.4541"N	80°51'28.9801"W	1635.14	337.126	0.41	-0.39	0.13	
7395.00	89.820	341.540	6640.61	1725.09	1594.78	-668.01	1680399.92	14361243.67	39°32'50.3265"N	80°51'29.3923"W	1729.03	337.273	3.78	-0.91	3.67	
7490.00	90.090	340.720	6640.68	1820.09	1684.67	-698.73	1680369.21	14361333.53	39°32'51.2154"N	80°51'29.7827"W	1823.82	337.473	0.91	0.28	-0.86	
7584.00	90.370	341.030	6640.31	1914.09	1773.48	-729.53	1680338.42	14361422.30	39°32'52.0936"N	80°51'30.1741"W	1917.67	337.640	0.44	0.30	0.33	
7679.00	91.050	342.570	6639.13	2009.07	1863.72	-759.20	1680308.77	14361512.50	39°32'52.9859"N	80°51'30.5510"W	2012.42	337.836	1.77	0.72	1.62	
7774.00	90.220	341.410	6638.08	2104.05	1954.05	-788.57	1680279.41	14361602.80	39°32'53.8792"N	80°51'30.9241"W	2107.17	338.023	1.50	-0.87	-1.22	
7868.00	90.370	341.630	6637.59	2198.05	2043.21	-818.36	1680249.63	14361691.92	39°32'54.7608"N	80°51'31.3027"W	2201.00	338.172	0.28	0.16	0.23	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (253 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
7963.00	89.570	340.870	6637.64	2293.05	2133.16	-848.90	1680219.10	14361781.84	39°32'55.6503"N	80°51'31.6907"W	2295.87	338.300	1.16	-0.84	-0.80	
8057.00	90.520	340.700	6637.57	2387.05	2221.93	-879.83	1680188.18	14361870.57	39°32'56.5280"N	80°51'32.0838"W	2389.78	338.397	1.03	1.01	-0.18	
8152.00	89.690	341.900	6637.39	2482.04	2311.91	-910.29	1680157.73	14361960.51	39°32'57.4178"N	80°51'32.4709"W	2484.66	338.508	1.54	-0.87	1.26	
8247.00	90.650	340.790	6637.11	2577.04	2401.91	-940.68	1680127.36	14362050.48	39°32'58.3079"N	80°51'32.8570"W	2579.55	338.613	1.54	1.01	-1.17	
8341.00	90.250	338.450	6636.37	2671.00	2490.02	-973.41	1680094.84	14362138.55	39°32'59.1791"N	80°51'33.2730"W	2673.52	338.648	2.53	-0.43	-2.49	
8436.00	88.610	341.430	6637.32	2765.96	2579.24	-1005.99	1680062.07	14362227.74	39°33'0.0614"N	80°51'33.6872"W	2768.48	338.693	3.58	-1.73	3.14	
8531.00	91.200	341.380	6637.48	2860.95	2669.27	-1036.28	1680031.79	14362317.73	39°33'0.9517"N	80°51'34.0721"W	2863.37	338.783	2.73	2.73	-0.05	
8626.00	89.600	340.910	6636.81	2955.94	2759.17	-1066.98	1680001.11	14362407.60	39°33'1.8407"N	80°51'34.4622"W	2958.29	338.858	1.76	-1.66	-0.49	
8720.00	90.920	342.220	6636.39	3049.93	2848.34	-1096.70	1679971.39	14362496.73	39°33'2.7224"N	80°51'34.8399"W	3052.18	338.942	1.98	1.40	1.39	
8815.00	90.030	340.760	6635.60	3144.93	2938.42	-1126.86	1679941.25	14362586.77	39°33'3.6132"N	80°51'35.2231"W	3147.08	339.019	1.80	-0.94	-1.54	
8909.00	90.830	341.150	6634.89	3238.92	3027.27	-1157.53	1679910.59	14362675.59	39°33'4.4918"N	80°51'35.6129"W	3241.03	339.075	0.95	0.85	0.41	
9004.00	90.340	341.150	6633.92	3333.92	3117.17	-1188.23	1679879.91	14362765.45	39°33'5.3807"N	80°51'36.0029"W	3335.96	339.134	0.52	-0.52	0.00	
9099.00	90.310	340.970	6633.38	3428.91	3207.03	-1219.06	1679849.09	14362855.27	39°33'6.2693"N	80°51'36.3947"W	3430.91	339.187	0.19	-0.03	-0.19	
9193.00	90.250	341.220	6632.92	3522.91	3295.95	-1249.52	1679818.64	14362944.17	39°33'7.1487"N	80°51'36.7818"W	3524.86	339.238	0.27	-0.06	0.27	
9288.00	90.120	340.330	6632.62	3617.91	3385.66	-1280.80	1679787.38	14363033.83	39°33'8.0357"N	80°51'37.1793"W	3619.82	339.278	0.95	-0.14	-0.94	
9382.00	90.060	341.890	6632.47	3711.91	3474.59	-1311.23	1679756.96	14363122.73	39°33'8.9151"N	80°51'37.5661"W	3713.77	339.325	1.66	-0.06	1.66	
9477.00	91.080	340.770	6631.52	3806.90	3564.58	-1341.64	1679726.56	14363212.69	39°33'9.8050"N	80°51'37.9525"W	3808.71	339.375	1.59	1.07	-1.18	
9571.00	90.710	343.070	6630.06	3900.87	3653.92	-1370.80	1679697.40	14363301.99	39°33'10.6884"N	80°51'38.3231"W	3902.60	339.436	2.48	-0.39	2.45	
9666.00	90.580	340.150	6628.99	3995.85	3744.06	-1400.77	1679667.45	14363392.09	39°33'11.5797"N	80°51'38.7039"W	3997.51	339.488	3.08	-0.14	-3.07	
9760.00	90.220	340.670	6628.33	4089.84	3832.61	-1432.29	1679635.95	14363480.61	39°33'12.4554"N	80°51'39.1045"W	4091.50	339.509	0.67	-0.38	0.55	
9855.00	90.310	341.450	6627.89	4184.84	3922.47	-1463.12	1679605.13	14363570.43	39°33'13.3439"N	80°51'39.4964"W	4186.46	339.544	0.83	0.09	0.82	
9950.00	90.400	340.810	6627.30	4279.84	4012.36	-1493.84	1679574.41	14363660.29	39°33'14.2328"N	80°51'39.8868"W	4281.43	339.579	0.68	0.09	-0.67	
10045.00	89.970	340.380	6627.00	4374.83	4101.96	-1525.41	1679542.86	14363749.85	39°33'15.1189"N	80°51'40.2880"W	4376.41	339.601	0.64	-0.45	-0.45	
10139.00	90.650	343.300	6626.49	4468.81	4191.27	-1554.70	1679513.58	14363839.12	39°33'16.0020"N	80°51'40.6602"W	4470.33	339.648	3.19	0.72	3.11	
10234.00	89.540	339.550	6626.33	4563.79	4281.30	-1584.96	1679483.34	14363929.12	39°33'16.8922"N	80°51'41.0447"W	4565.27	339.685	4.12	-1.17	-3.95	
10329.00	90.340	344.090	6626.43	4658.76	4371.54	-1614.59	1679453.72	14364019.32	39°33'17.7845"N	80°51'41.4213"W	4660.18	339.729	4.85	0.84	4.78	
10423.00	89.970	341.790	6626.17	4752.71	4461.39	-1642.16	1679426.15	14364109.14	39°33'18.6730"N	80°51'41.7715"W	4754.02	339.792	2.48	-0.39	-2.45	
10518.00	90.060	341.860	6626.15	4847.70	4551.65	-1671.80	1679396.53	14364199.36	39°33'19.5655"N	80°51'42.1481"W	4848.97	339.832	0.12	0.09	0.07	
10613.00	89.720	342.400	6626.33	4942.69	4642.07	-1700.95	1679367.39	14364289.74	39°33'20.4596"N	80°51'42.5185"W	4943.89	339.876	0.67	-0.36	0.57	
10708.00	89.850	341.770	6626.69	5037.67	4732.46	-1730.17	1679338.18	14364380.10	39°33'21.3534"N	80°51'42.8898"W	5038.82	339.918	0.68	0.14	-0.66	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (253 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
10802.00	89.850	341.710	6626.93	5131.67	4821.73	-1759.62	1679308.74	14364469.33	39°33'22.2361"N	80°51'43.2641"W	5132.77	339.951	0.06	0.00	-0.06	
10897.00	89.510	341.720	6627.47	5226.66	4911.93	-1789.43	1679278.95	14364559.50	39°33'23.1280"N	80°51'43.6428"W	5227.73	339.983	0.36	-0.36	0.01	
10992.00	89.820	342.470	6628.02	5321.65	5002.33	-1818.63	1679249.75	14364649.86	39°33'24.0219"N	80°51'44.0139"W	5322.66	340.021	0.85	0.33	0.79	
11086.00	90.000	341.390	6628.17	5415.63	5091.69	-1847.79	1679220.61	14364739.18	39°33'24.9055"N	80°51'44.3844"W	5416.61	340.054	1.16	0.19	-1.15	
11181.00	89.940	340.970	6628.22	5510.63	5181.61	-1878.44	1679189.97	14364829.07	39°33'25.7947"N	80°51'44.7739"W	5511.59	340.073	0.45	-0.06	-0.44	
11276.00	91.170	343.500	6627.30	5605.60	5272.07	-1907.42	1679161.00	14364919.49	39°33'26.6891"N	80°51'45.1422"W	5606.51	340.110	2.96	1.29	2.66	
11371.00	89.170	341.290	6627.02	5700.57	5362.61	-1936.15	1679132.29	14365009.99	39°33'27.5844"N	80°51'45.5072"W	5701.42	340.148	3.14	-2.11	-2.33	
11465.00	90.180	341.550	6627.55	5794.57	5451.71	-1966.10	1679102.35	14365099.05	39°33'28.4654"N	80°51'45.8879"W	5795.40	340.169	1.11	1.07	0.28	
11560.00	89.820	342.020	6627.55	5889.56	5541.94	-1995.79	1679072.66	14365189.26	39°33'29.3577"N	80°51'46.2652"W	5890.36	340.195	0.62	-0.38	0.49	
11655.00	89.880	341.040	6627.80	5984.56	5632.05	-2025.89	1679042.58	14365279.33	39°33'30.2487"N	80°51'46.6477"W	5985.33	340.216	1.03	0.06	-1.03	
11749.00	90.520	342.800	6627.47	6078.54	5721.40	-2055.06	1679013.42	14365368.64	39°33'31.1322"N	80°51'47.0184"W	6079.29	340.242	1.99	0.68	1.87	
11844.00	90.220	341.430	6626.86	6173.52	5811.81	-2084.23	1678984.26	14365459.01	39°33'32.0262"N	80°51'47.3892"W	6174.23	340.271	1.48	-0.32	-1.44	
11939.00	90.250	342.300	6626.47	6268.51	5902.09	-2113.80	1678954.70	14365549.26	39°33'32.9189"N	80°51'47.7649"W	6269.20	340.295	0.92	0.03	0.92	
12033.00	89.480	340.610	6626.69	6362.51	5991.20	-2143.70	1678924.82	14365638.34	39°33'33.8001"N	80°51'48.1449"W	6363.17	340.312	1.98	-0.82	-1.80	
12128.00	90.430	340.090	6626.76	6457.50	6080.67	-2175.64	1678892.89	14365727.77	39°33'34.6848"N	80°51'48.5510"W	6458.17	340.313	1.14	1.00	-0.55	
12222.00	90.280	341.000	6626.18	6551.49	6169.30	-2206.95	1678861.59	14365816.36	39°33'35.5612"N	80°51'48.9490"W	6552.17	340.316	0.98	-0.16	0.97	
12317.00	89.850	340.370	6626.07	6646.49	6258.95	-2238.37	1678830.18	14365905.98	39°33'36.4477"N	80°51'49.3485"W	6647.16	340.322	0.80	-0.45	-0.66	
12412.00	90.430	339.960	6625.84	6741.47	6348.31	-2270.61	1678797.96	14365995.30	39°33'37.3314"N	80°51'49.7583"W	6742.16	340.319	0.75	0.61	-0.43	
12506.00	90.710	341.290	6624.91	6835.46	6436.98	-2301.79	1678766.79	14366083.94	39°33'38.2082"N	80°51'50.1547"W	6836.16	340.324	1.45	0.30	1.41	
12601.00	90.860	341.110	6623.60	6930.45	6526.91	-2332.40	1678736.19	14366173.83	39°33'39.0974"N	80°51'50.5439"W	6931.14	340.336	0.25	0.16	-0.19	
12695.00	90.830	340.710	6622.22	7024.44	6615.73	-2363.14	1678705.46	14366262.61	39°33'39.9757"N	80°51'50.9346"W	7025.12	340.343	0.43	-0.03	-0.43	
12790.00	90.770	341.180	6620.89	7119.43	6705.51	-2394.15	1678674.46	14366352.36	39°33'40.8635"N	80°51'51.3289"W	7120.11	340.351	0.50	-0.06	0.49	
12884.00	90.620	340.730	6619.75	7213.42	6794.36	-2424.83	1678643.80	14366441.17	39°33'41.7421"N	80°51'51.7188"W	7214.09	340.359	0.50	-0.16	-0.48	
12979.00	90.680	340.760	6618.67	7308.41	6884.04	-2456.15	1678612.49	14366530.82	39°33'42.6289"N	80°51'52.1170"W	7309.08	340.364	0.07	0.06	0.03	
13073.00	90.950	341.370	6617.34	7402.40	6972.95	-2486.65	1678582.00	14366619.69	39°33'43.5080"N	80°51'52.5047"W	7403.07	340.373	0.71	0.29	0.65	
13168.00	89.320	337.950	6617.11	7497.36	7062.01	-2519.67	1678549.00	14366708.71	39°33'44.3887"N	80°51'52.9245"W	7498.04	340.364	3.99	-1.72	-3.60	
13262.00	91.140	341.160	6616.73	7591.30	7150.07	-2552.50	1678516.19	14366796.74	39°33'45.2595"N	80°51'53.3420"W	7592.02	340.354	3.93	1.94	3.41	
13357.00	90.490	340.480	6615.38	7686.29	7239.79	-2583.70	1678484.99	14366886.42	39°33'46.1467"N	80°51'53.7388"W	7687.00	340.360	0.99	-0.68	-0.72	
13451.00	90.740	341.550	6614.37	7780.28	7328.67	-2614.28	1678454.43	14366975.26	39°33'47.0255"N	80°51'54.1275"W	7780.99	340.368	1.17	0.27	1.14	
13546.00	90.770	340.420	6613.12	7875.27	7418.47	-2645.23	1678423.49	14367065.03	39°33'47.9136"N	80°51'54.5209"W	7875.97	340.375	1.19	0.03	-1.19	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Mamba Unit 1H
Field	Tyler		API	47-095-02820-0000
Facility	Heintzman Pad		Wellbore	Mamba Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (253 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	
13640.00	91.290	340.840	6611.43	7969.25	7507.14	-2676.40	1678392.33	14367153.66	39°33'48.7903"N	80°51'54.9172"W	7969.96	340.378	0.71	0.55	0.45		
13735.00	90.030	341.310	6610.34	8064.24	8064.24	7596.99	-2707.21	1678361.53	14367243.48	39°33'49.6789"N	80°51'55.3089"W	8064.94	340.386	1.42	-1.33	0.49	
13830.00	90.310	340.490	6610.06	8159.24	7686.76	-2738.30	1678330.46	14367333.22	39°33'50.5665"N	80°51'55.7041"W	8159.94	340.392	0.91	0.29	-0.86		
13924.00	90.890	340.480	6609.07	8253.23	7775.36	-2769.69	1678299.07	14367421.78	39°33'51.4426"N	80°51'56.1033"W	8253.93	340.393	0.62	0.62	-0.01		
14019.00	90.580	339.820	6607.85	8348.21	7864.70	-2801.95	1678266.83	14367511.09	39°33'52.3261"N	80°51'56.5135"W	8348.92	340.391	0.77	-0.33	-0.69		
14113.00	91.260	340.450	6606.34	8442.18	7953.10	-2833.89	1678234.91	14367599.45	39°33'53.2002"N	80°51'56.9196"W	8442.91	340.388	0.99	0.72	0.67		
14208.00	90.060	342.560	6605.25	8537.17	8043.18	-2864.02	1678204.79	14367689.49	39°33'54.0910"N	80°51'57.3026"W	8537.88	340.400	2.55	-1.26	2.22		
14303.00	91.450	342.960	6604.00	8632.12	8133.90	-2892.17	1678176.65	14367780.18	39°33'54.9880"N	80°51'57.6604"W	8632.79	340.426	1.52	1.46	0.42		
14397.00	89.260	338.540	6603.42	8726.08	8222.62	-2923.15	1678145.68	14367868.86	39°33'55.8652"N	80°51'58.0543"W	8726.75	340.430	5.25	-2.33	-4.70		
14492.00	90.740	343.210	6603.42	8821.05	8312.35	-2954.27	1678114.57	14367958.55	39°33'56.7525"N	80°51'58.4499"W	8821.72	340.434	5.16	1.56	4.92		
14587.00	89.420	339.220	6603.28	8916.03	8402.27	-2984.85	1678084.00	14368048.43	39°33'57.6417"N	80°51'58.8387"W	8916.69	340.443	4.42	-1.39	-4.20		
14681.00	91.390	340.260	6602.62	9010.00	8490.44	-3017.40	1678051.47	14368136.57	39°33'58.5136"N	80°51'59.2526"W	9010.68	340.435	2.37	2.10	1.11		
14776.00	90.520	341.940	6601.03	9104.98	8580.30	-3048.17	1678020.71	14368226.40	39°33'59.4022"N	80°51'59.6438"W	9105.65	340.442	1.99	-0.92	1.77		
14870.00	89.850	340.960	6600.73	9198.97	8669.42	-3078.07	1677990.82	14368315.48	39°34'0.2834"N	80°52'0.0239"W	9199.64	340.453	1.26	-0.71	-1.04		
14965.00	90.620	339.060	6600.34	9293.95	8758.69	-3110.54	1677958.36	14368404.71	39°34'1.1661"N	80°52'0.4369"W	9294.63	340.448	2.16	0.81	-2.00		
15060.00	90.550	342.430	6599.37	9388.93	8848.36	-3141.87	1677927.05	14368494.35	39°34'2.0528"N	80°52'0.8351"W	9389.61	340.451	3.55	-0.07	3.55		
15154.00	89.690	338.100	6599.17	9482.90	8936.81	-3173.60	1677895.33	14368582.77	39°34'2.9275"N	80°52'1.2387"W	9483.58	340.449	4.70	-0.91	-4.61		
15249.00	90.400	340.020	6599.10	9577.83	9025.53	-3207.55	1677861.39	14368671.45	39°34'3.8048"N	80°52'1.6705"W	9578.55	340.435	2.15	0.75	2.02		
15344.00	90.800	340.980	6598.11	9672.82	9115.08	-3239.26	1677829.70	14368760.96	39°34'4.6903"N	80°52'2.0737"W	9673.55	340.436	1.09	0.42	1.01		
15438.00	90.580	340.830	6596.97	9766.81	9203.90	-3270.01	1677798.96	14368849.75	39°34'5.5686"N	80°52'2.4647"W	9767.54	340.441	0.28	-0.23	-0.16		
15533.00	89.910	340.590	6596.57	9861.80	9293.57	-3301.39	1677767.59	14368939.38	39°34'6.4552"N	80°52'2.8637"W	9862.53	340.443	0.75	-0.71	-0.25		
15628.00	89.880	340.840	6596.74	9956.80	9383.23	-3332.77	1677736.23	14369029.01	39°34'7.3419"N	80°52'3.2627"W	9957.53	340.446	0.27	-0.03	0.26		
15723.00	89.820	340.180	6596.99	10051.79	9472.79	-3364.46	1677704.54	14369118.53	39°34'8.2275"N	80°52'3.6657"W	10052.53	340.446	0.70	-0.06	-0.69		
15818.00	89.880	338.790	6597.24	10146.75	9561.76	-3397.75	1677671.27	14369207.47	39°34'9.1073"N	80°52'4.0892"W	10147.51	340.437	1.46	0.06	-1.46		
15912.00	90.980	341.650	6596.53	10240.73	9650.20	-3429.56	1677639.47	14369295.87	39°34'9.9818"N	80°52'4.4937"W	10241.50	340.435	3.26	1.17	3.04		
16007.00	89.480	342.100	6596.15	10335.71	9740.49	-3459.11	1677609.93	14369386.12	39°34'10.8745"N	80°52'4.8694"W	10336.47	340.449	1.65	-1.58	0.47		
16101.00	91.540	340.580	6595.31	10429.70	9829.53	-3489.18	1677579.87	14369475.13	39°34'11.7551"N	80°52'5.2517"W	10430.44	340.457	2.72	2.19	-1.62		
16196.00	90.030	340.700	6594.01	10524.69	9919.15	-3520.67	1677548.40	14369564.71	39°34'12.6412"N	80°52'5.6521"W	10525.43	340.458	1.59	-1.59	0.13		
16290.00	89.910	340.660	6594.06	10618.68	10007.86	-3551.77	1677517.31	14369653.38	39°34'13.5184"N	80°52'6.0476"W	10619.43	340.460	0.13	-0.13	-0.04		
16385.00	89.850	340.480	6594.26	10713.68	10097.45	-3583.37	1677485.72	14369742.94	39°34'14.4043"N	80°52'6.4494"W	10714.43	340.461	0.20	-0.06	-0.19		



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (253 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
16480.00	89.480	340.410	6594.82	10808.67	10186.97	-3615.17	1677453.93	14369832.42	39°34'15.2895"N	80°52'6.8538"W	10809.43	340.461	0.40	-0.39	-0.07	
16575.00	89.540	340.460	6595.63	10903.66	10276.48	-3646.98	1677422.14	14369921.90	39°34'16.1746"N	80°52'7.2584"W	10904.43	340.461	0.08	0.06	0.05	
16669.00	89.910	339.180	6596.08	10997.63	10364.70	-3679.41	1677389.72	14370010.09	39°34'17.0470"N	80°52'7.6708"W	10998.42	340.455	1.42	0.39	-1.36	
16764.00	91.140	340.490	6595.21	11092.60	10453.87	-3712.16	1677356.99	14370099.22	39°34'17.9288"N	80°52'8.0873"W	11093.40	340.450	1.89	1.29	1.38	
16858.00	90.280	341.410	6594.05	11186.59	10542.72	-3742.83	1677326.32	14370188.03	39°34'18.8073"N	80°52'8.4774"W	11187.39	340.454	1.34	-0.91	0.98	
16953.00	89.820	340.320	6593.96	11281.59	10632.47	-3773.97	1677295.20	14370277.74	39°34'19.6947"N	80°52'8.8734"W	11282.39	340.458	1.25	-0.48	-1.15	
17048.00	89.780	340.380	6594.29	11376.58	10721.93	-3805.92	1677263.26	14370367.17	39°34'20.5794"N	80°52'9.2797"W	11377.39	340.457	0.08	-0.04	0.06	
17142.00	89.910	339.710	6594.55	11470.56	10810.29	-3838.00	1677231.20	14370455.49	39°34'21.4531"N	80°52'9.6877"W	11471.38	340.454	0.73	0.14	-0.71	
17236.00	89.780	340.090	6594.80	11564.54	10898.56	-3870.30	1677198.90	14370543.73	39°34'22.3260"N	80°52'10.0986"W	11565.38	340.449	0.43	-0.14	0.40	
17331.00	90.340	340.890	6594.70	11659.53	10988.11	-3902.03	1677167.19	14370633.24	39°34'23.2115"N	80°52'10.5021"W	11660.38	340.449	1.03	0.59	0.84	
17426.00	90.090	340.520	6594.35	11754.52	11077.77	-3933.42	1677135.81	14370722.87	39°34'24.0981"N	80°52'10.9013"W	11755.37	340.451	0.47	-0.26	-0.39	
17520.00	89.290	339.970	6594.86	11848.51	11166.24	-3965.19	1677104.05	14370811.30	39°34'24.9728"N	80°52'11.3054"W	11849.37	340.450	1.03	-0.85	-0.59	
17615.00	90.090	339.570	6595.37	11943.48	11255.37	-3998.04	1677071.22	14370900.40	39°34'25.8543"N	80°52'11.7232"W	11944.36	340.444	0.94	0.84	-0.42	
17709.00	89.540	340.710	6595.67	12037.46	11343.78	-4029.97	1677039.30	14370988.77	39°34'26.7285"N	80°52'12.1294"W	12038.36	340.442	1.35	-0.59	1.21	
17804.00	90.150	342.050	6595.93	12132.46	11433.81	-4060.31	1677008.98	14371078.76	39°34'27.6186"N	80°52'12.5151"W	12133.34	340.449	1.55	0.64	1.41	
17898.00	89.690	341.660	6596.06	12226.45	11523.13	-4089.58	1676979.72	14371168.05	39°34'28.5019"N	80°52'12.8873"W	12227.31	340.460	0.64	-0.49	-0.41	
17993.00	90.490	341.880	6595.91	12321.45	11613.36	-4119.30	1676950.01	14371258.24	39°34'29.3941"N	80°52'13.2651"W	12322.29	340.470	0.87	0.84	0.23	
18087.00	90.830	344.500	6594.83	12415.37	11703.33	-4146.48	1676922.84	14371348.18	39°34'30.2837"N	80°52'13.6106"W	12416.17	340.491	2.81	0.36	2.79	
18182.00	89.450	342.000	6594.60	12510.30	11794.29	-4173.85	1676895.48	14371439.10	39°34'31.1830"N	80°52'13.9585"W	12511.05	340.512	3.01	-1.45	-2.63	
18277.00	89.910	342.450	6595.13	12605.28	11884.75	-4202.86	1676866.49	14371529.53	39°34'32.0775"N	80°52'14.3272"W	12606.01	340.525	0.68	0.48	0.47	
18371.00	90.220	342.790	6595.02	12699.25	11974.46	-4230.93	1676838.42	14371619.20	39°34'32.9645"N	80°52'14.6841"W	12699.94	340.540	0.49	0.33	0.36	
18466.00	90.000	342.760	6594.84	12794.21	12065.20	-4259.07	1676810.30	14371709.90	39°34'33.8617"N	80°52'15.0417"W	12794.87	340.557	0.23	-0.23	-0.03	
18560.00	89.880	342.260	6594.94	12888.18	12154.85	-4287.32	1676782.06	14371799.52	39°34'34.7482"N	80°52'15.4009"W	12888.82	340.571	0.55	-0.13	-0.53	
18655.00	89.750	342.290	6595.24	12983.16	12245.34	-4316.24	1676753.15	14371889.97	39°34'35.6429"N	80°52'15.7686"W	12983.77	340.583	0.14	-0.14	0.03	
18749.00	89.320	341.460	6596.01	13077.15	12334.68	-4345.48	1676723.92	14371979.27	39°34'36.5262"N	80°52'16.1404"W	13077.75	340.593	0.99	-0.46	-0.88	
18844.00	91.600	342.630	6595.24	13172.13	12425.04	-4374.76	1676694.65	14372069.60	39°34'37.4197"N	80°52'16.5127"W	13172.70	340.603	2.70	2.40	1.23	
18938.00	89.140	341.720	6594.64	13266.10	12514.52	-4403.53	1676665.89	14372159.04	39°34'38.3044"N	80°52'16.8785"W	13266.66	340.614	2.79	-2.62	-0.97	
19033.00	89.690	341.840	6595.61	13361.09	12604.75	-4433.24	1676636.20	14372249.24	39°34'39.1966"N	80°52'17.2561"W	13361.63	340.623	0.59	0.58	0.13	
19127.00	89.970	341.270	6595.89	13455.09	12693.92	-4462.98	1676606.47	14372338.37	39°34'40.0783"N	80°52'17.6343"W	13455.62	340.629	0.68	0.30	-0.61	
19222.00	90.120	341.840	6595.81	13550.08	12784.04	-4493.03	1676576.42	14372428.45	39°34'40.9694"N	80°52'18.0166"W	13550.61	340.636	0.62	0.16	0.60	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Mamba Unit 1H
Field	Tyler		API	47-095-02820-0000
Facility	Heintzman Pad		Wellbore	Mamba Unit 1H AWB
Slot	Slot C			

WELLPATH DATA (253 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
19317.00	90.460	342.140	6595.33	13645.07	12874.38	-4522.41	1676547.06	14372518.76	39°34'41.8627"N	80°52'18.3900"W	13645.58	340.645	0.48	0.36	0.32	
19411.00	90.030	342.090	6594.93	13739.06	12963.84	-4551.27	1676518.21	14372608.18	39°34'42.7473"N	80°52'18.7571"W	13739.55	340.655	0.46	-0.46	-0.05	
19506.00	90.180	342.240	6594.75	13834.04	13054.27	-4580.37	1676489.12	14372698.58	39°34'43.6415"N	80°52'19.1270"W	13834.52	340.665	0.22	0.16	0.16	
19600.00	90.180	341.520	6594.46	13928.03	13143.61	-4609.60	1676459.90	14372787.88	39°34'44.5248"N	80°52'19.4987"W	13928.49	340.674	0.77	0.00	-0.77	
19694.00	89.970	341.370	6594.34	14022.03	13232.72	-4639.52	1676430.00	14372876.96	39°34'45.4060"N	80°52'19.8791"W	14022.49	340.679	0.27	-0.22	-0.16	
19789.00	89.750	341.400	6594.57	14117.03	13322.75	-4669.84	1676399.69	14372966.95	39°34'46.2962"N	80°52'20.2648"W	14117.48	340.684	0.23	-0.23	0.03	
19883.00	89.820	340.850	6594.92	14211.03	13411.70	-4700.25	1676369.29	14373055.86	39°34'47.1756"N	80°52'20.6515"W	14211.47	340.687	0.59	0.07	-0.59	
19978.00	89.910	341.390	6595.14	14306.03	13501.59	-4730.99	1676338.56	14373145.71	39°34'48.0645"N	80°52'21.0425"W	14306.47	340.689	0.58	0.09	0.57	
20073.00	90.180	341.440	6595.07	14401.03	13591.63	-4761.27	1676308.30	14373235.72	39°34'48.9548"N	80°52'21.4276"W	14401.46	340.694	0.29	0.28	0.05	
20168.00	89.910	341.240	6594.99	14496.03	13681.64	-4791.66	1676277.91	14373325.69	39°34'49.8448"N	80°52'21.8141"W	14496.46	340.698	0.35	-0.28	-0.21	
20263.00	90.370	341.380	6594.76	14591.03	13771.63	-4822.11	1676247.48	14373415.65	39°34'50.7346"N	80°52'22.2013"W	14591.45	340.702	0.51	0.48	0.15	
20357.00	90.090	342.020	6594.39	14685.02	13860.87	-4851.62	1676217.98	14373504.86	39°34'51.6171"N	80°52'22.5767"W	14685.44	340.709	0.74	-0.30	0.68	
20452.00	89.910	340.890	6594.39	14780.02	13950.94	-4881.84	1676187.78	14373594.89	39°34'52.5076"N	80°52'22.9609"W	14780.43	340.714	1.20	-0.19	-1.19	
20547.00	90.340	340.800	6594.18	14875.01	14040.68	-4913.01	1676156.62	14373684.59	39°34'53.3950"N	80°52'23.3574"W	14875.42	340.714	0.46	0.45	-0.09	
20641.00	90.030	341.030	6593.87	14969.01	14129.51	-4943.74	1676125.90	14373773.39	39°34'54.2733"N	80°52'23.7483"W	14969.42	340.716	0.41	-0.33	0.24	
20736.00	89.910	341.610	6593.92	15064.01	14219.51	-4974.17	1676095.48	14373863.35	39°34'55.1632"N	80°52'24.1353"W	15064.42	340.719	0.62	-0.13	0.61	
20830.00	90.250	341.710	6593.79	15158.01	14308.73	-5003.75	1676065.92	14373952.54	39°34'56.0455"N	80°52'24.5115"W	15158.41	340.725	0.38	0.36	0.11	
20925.00	90.370	341.890	6593.28	15253.00	14398.98	-5033.42	1676036.26	14374042.75	39°34'56.9378"N	80°52'24.8888"W	15253.39	340.732	0.23	0.13	0.19	
21020.00	89.910	341.750	6593.05	15347.99	14489.23	-5063.06	1676006.63	14374132.97	39°34'57.8302"N	80°52'25.2658"W	15348.37	340.739	0.51	-0.48	-0.15	
21114.00	89.910	341.660	6593.19	15441.99	14578.48	-5092.56	1675977.13	14374222.18	39°34'58.7127"N	80°52'25.6410"W	15442.36	340.745	0.10	0.00	-0.10	
21209.00	89.380	341.430	6593.78	15536.98	14668.59	-5122.64	1675947.07	14374312.26	39°34'59.6037"N	80°52'26.0235"W	15537.34	340.750	0.61	-0.56	-0.24	
21304.00	89.480	341.340	6594.73	15631.98	14758.62	-5152.96	1675916.76	14374402.25	39°35'0.4939"N	80°52'26.4092"W	15632.33	340.753	0.14	0.11	-0.09	
21398.00	89.820	341.610	6595.30	15725.97	14847.75	-5182.83	1675886.91	14374491.34	39°35'1.3752"N	80°52'26.7890"W	15726.32	340.758	0.46	0.36	0.29	
21493.00	89.630	341.530	6595.76	15820.97	14937.87	-5212.86	1675856.89	14374581.43	39°35'2.2663"N	80°52'27.1710"W	15821.31	340.763	0.22	-0.20	-0.08	
21587.00	89.540	341.690	6596.44	15914.97	15027.07	-5242.51	1675827.24	14374670.59	39°35'3.1483"N	80°52'27.5482"W	15915.30	340.768	0.20	-0.10	0.17	
21682.00	89.820	341.580	6596.97	16009.96	15117.23	-5272.44	1675797.32	14374760.71	39°35'4.0398"N	80°52'27.9288"W	16010.29	340.773	0.32	0.29	-0.12	
21776.00	89.820	341.750	6597.27	16103.96	15206.46	-5302.01	1675767.77	14374849.90	39°35'4.9220"N	80°52'28.3049"W	16104.28	340.778	0.18	0.00	0.18	
21871.00	89.110	341.600	6598.15	16198.95	15296.64	-5331.88	1675737.91	14374940.05	39°35'5.8137"N	80°52'28.6848"W	16199.26	340.783	0.76	-0.75	-0.16	
21966.00	89.420	341.630	6599.37	16293.94	15386.78	-5361.84	1675707.96	14375030.15	39°35'6.7050"N	80°52'29.0658"W	16294.24	340.788	0.33	0.33	0.03	
22060.00	89.850	341.450	6599.97	16387.93	15475.94	-5391.61	1675678.21	14375119.28	39°35'7.5866"N	80°52'29.4444"W	16388.23	340.792	0.50	0.46	-0.19	



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

WELLPATH DATA (253 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
22155.00	89.420	341.340	6600.58	16482.93	15565.97	-5421.91	1675647.92	14375209.28	39°35'8.4768"N	80°52'29.8299"W	16483.23	340.796	0.47	-0.45	-0.12	
22249.00	89.600	340.200	6601.38	16576.92	15654.72	-5452.87	1675616.97	14375297.99	39°35'9.3544"N	80°52'30.2237"W	16577.22	340.796	1.23	0.19	-1.21	
22344.00	90.220	340.470	6601.53	16671.91	15744.18	-5484.84	1675585.01	14375387.41	39°35'10.2390"N	80°52'30.6305"W	16672.22	340.793	0.71	0.65	0.28	
22439.00	90.030	340.450	6601.32	16766.90	15833.71	-5516.62	1675553.25	14375476.91	39°35'11.1242"N	80°52'31.0347"W	16767.21	340.791	0.20	-0.20	-0.02	
22533.00	90.220	340.570	6601.12	16860.90	15922.33	-5547.98	1675521.90	14375565.49	39°35'12.0005"N	80°52'31.4337"W	16861.21	340.790	0.24	0.20	0.13	
22627.00	89.880	340.320	6601.03	16954.89	16010.90	-5579.44	1675490.45	14375654.03	39°35'12.8763"N	80°52'31.8340"W	16955.21	340.788	0.45	-0.36	-0.27	
22722.00	90.180	340.350	6600.98	17049.88	16100.36	-5611.41	1675458.50	14375743.45	39°35'13.7609"N	80°52'32.2408"W	17050.21	340.785	0.32	0.32	0.03	
22817.00	90.090	340.360	6600.76	17144.87	16189.83	-5643.35	1675426.57	14375832.89	39°35'14.6456"N	80°52'32.6472"W	17145.21	340.783	0.10	-0.09	0.01	
22911.00	89.850	340.490	6600.81	17238.86	16278.40	-5674.84	1675395.09	14375921.42	39°35'15.5214"N	80°52'33.0479"W	17239.20	340.781	0.29	-0.26	0.14	
23006.00	90.280	340.170	6600.70	17333.85	16367.86	-5706.82	1675363.12	14376010.84	39°35'16.4059"N	80°52'33.4547"W	17334.20	340.778	0.56	0.45	-0.34	
23100.00	90.220	340.180	6600.29	17427.84	16456.28	-5738.70	1675331.26	14376099.23	39°35'17.2803"N	80°52'33.8603"W	17428.19	340.775	0.06	-0.06	0.01	
23152.00	90.030	340.670	6600.18	17479.84	16505.28	-5756.12	1675313.84	14376148.20	39°35'17.7647"N	80°52'34.0820"W	17480.19	340.774	1.01	-0.37	0.94	
23177.00‡	90.030	340.670	6600.16	17504.84	16528.87	-5764.40	1675305.57	14376171.79	39°35'17.9980"N	80°52'34.1873"W	17505.19	340.774	0.00	0.00	0.00	Projected MD at TD: 23177'

HOLE & CASING SECTIONS - Ref Wellbore: Mamba Unit 1H AWB Ref Wellpath: Mamba Unit 1H AWP Proj: 23177'									
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	-0.26	-0.23
17.5in Open Hole	130.00	581.00	451.00	130.00	580.99	-0.26	-0.23	-2.41	-0.29
13.375in Casing Surface	30.00	540.00	510.00	30.00	539.99	0.00	0.00	-2.31	-0.19
12.25in Open Hole	581.00	3402.00	2821.00	580.99	3401.79	-2.41	-0.29	-1.54	-15.76
9.625in Casing Intermediate	30.00	3376.00	3346.00	30.00	3375.79	0.00	0.00	-1.67	-15.80
8.75in Open Hole	3402.00	6315.00	2913.00	3401.79	6174.42	-1.54	-15.76	798.63	-279.74
8.5in Open Hole	6315.00	23177.00	16862.00	6174.42	6600.16	798.63	-279.74	16528.87	-5764.40
5.5in Casing Production	30.00	23157.00	23127.00	30.00	6600.18	0.00	0.00	16510.00	-5757.78



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Mamba Unit 1H BHL Rev-2	6562.28	16538.18	-5778.20	1675291.77	14376181.09	39°35'18.0902"N	80°52'34.3635"W	point
Mamba Unit 1H POE Rev-2	6613.00	1217.33	-495.35	1680572.51	14360866.37	39°32'46.5933"N	80°51'27.1959"W	point
Mamba Unit 1H AZI Rev-2	6644.67	1646.93	-690.50	1680377.44	14361295.81	39°32'50.8423"N	80°51'29.6784"W	point
Mamba Unit 1H LP Rev-2	6646.00	1413.08	-592.83	1680475.07	14361062.04	39°32'48.5295"N	80°51'28.4363"W	point
Mamba Unit 1H 50' L/R Hard Line	7000.00	9086.11	-3232.15	1677836.80	14368732.01	39°34'4.4039"N	80°52'1.9835"W	rectangle
2D Rectangle 15750 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Mamba Unit 1H AWB Ref Wellpath: Mamba Unit 1H AWP Proj: 23177'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	472.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata MS Gyro <17-1/2"> (100'-472')	Mamba Unit 1H AWB	12/7/2022
472.00	3317.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02_APS EM <12-1/4"> (472')(596'-3317')	Mamba Unit 1H AWB	12/7/2022
3317.00	6244.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03_APS EM <8-3/4"> (3317')(3404'-6244')	Mamba Unit 1H AWB	1/1/2023
6244.00	23177.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_BH AT Curve <8-1/2"> (6244')(6290'-23152')	Mamba Unit 1H AWB	1/1/2023



Actual Wellpath Report

Mamba Unit 1H AWP Proj: 23177'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mamba Unit 1H
Field	Tyler	API	47-095-02820-0000
Facility	Heintzman Pad	Wellbore	Mamba Unit 1H AWB
Slot	Slot C		

COMMENTS
<p>Wellpath general comments API: 47-095-02820-0000 BH Job #: 111601050 Rig: H&P 519 Duration: 1/3/2023-1/7/2023 Gyrodatta MS Gyro <17-1/2"> (100'-472') APS EM <12-1/4"> (472')(596'-3317') APS EM <8-3/4"> (3317')(3404'-6244') BH AT Curve <8-1/2"> (6244')(6290'-23152') Sycamore: 6512' MD Middlesex: 6660' MD Burkett: 6824' MD Tully: 6865' MD Marcellus POE: 6999' MD Projected MD at TD: 23177'</p>