

# ANTERO RESOURCES CORPORATION

Location: Tyler County, WV  
 Field: Tyler  
 Facility: Colorado West Pad

Slot: Slot #08  
 Well: Bronco Unit 2H  
 Wellbore: Bronco Unit 2H PWB

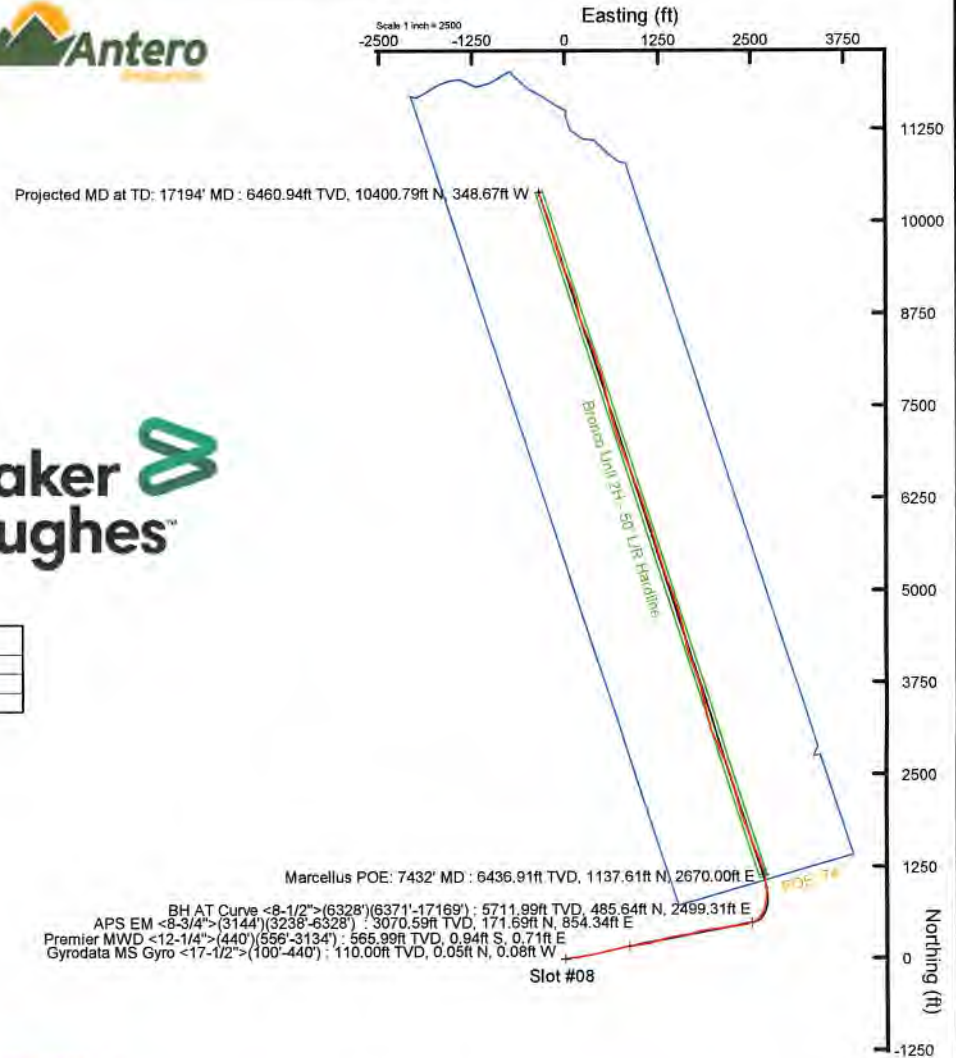
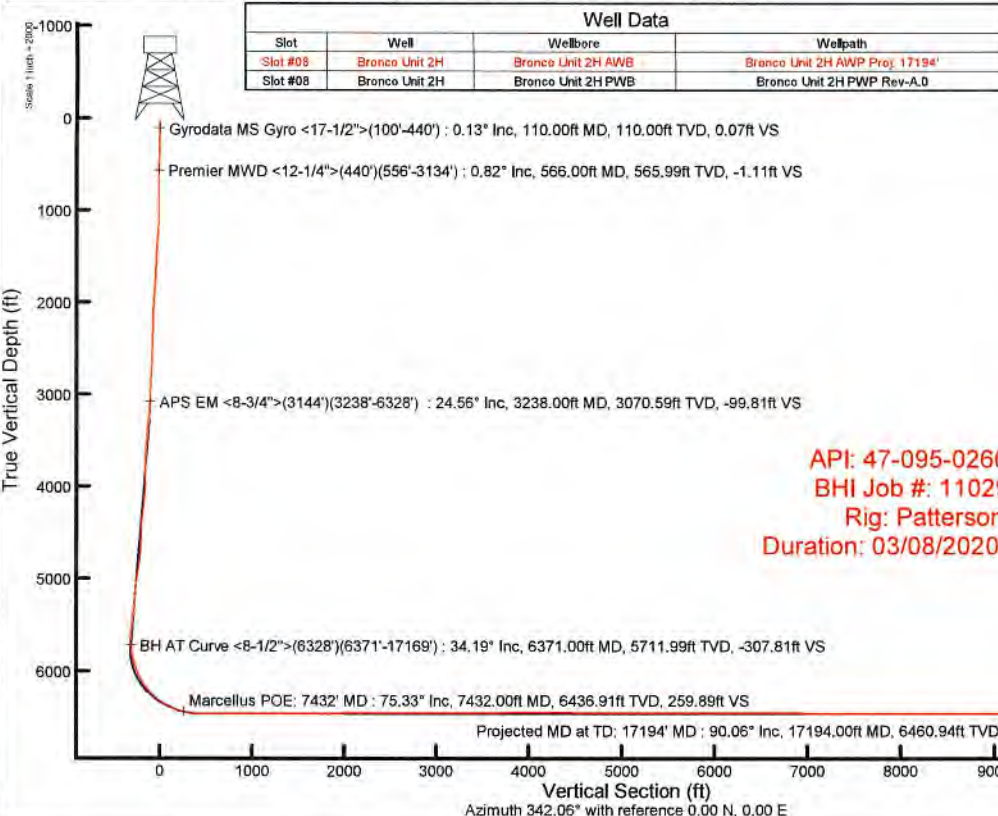


Scale 1 inch = 2500  
 Easting (ft)  
 -2500 -1250 0 1250 2500 3750

Plot reference wellpath is Bronco Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 773.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #08): -748.5 feet	Depths are in feet
Other wellpath MDs are referenced to each path's detail MD datum	Created by: uelast on 2/20/2020-03-23; Database: WA_MPL_EasternUS_Debr

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Colorado West Pad	1699843.950	14308473.940	39°24'8.1990"N	80°47'22.6560"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #08	-10.76	27.67	1699871.910	14308483.180	80°47'22.3000"W
Patterson 342 (RKB) to Ground level (At Slot: Slot #08)	25ft				
Mean Sea Level to Ground level (At Slot: Slot #08)	-748.5ft				
Patterson 342 (RKB) to Mean Sea Level	773.5ft				

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3144.00	25.510	77.840	2985.42	163.40	815.44	0.54	-95.72
End of Tangent	3228.00	25.510	77.840	3061.23	171.02	850.80	0.00	-99.36
KOP 1	3328.00	25.510	77.840	3151.48	180.09	892.90	0.00	-103.70
Hold	3695.22	32.822	79.276	3471.93	215.31	1098.23	2.00	-124.19
Curve KOP	6414.65	32.822	79.276	5757.24	489.59	2516.48	0.00	-309.34
POE	7425.48	74.514	342.057	6433.00	1110.63	2660.30	8.00	237.20
Landing Pt.	7619.05	90.000	342.057	6459.00	1292.55	2601.39	8.00	428.43
BHL	17201.48	90.000	342.057	6459.00	10408.94	-350.64	0.00	10010.86



User specified (HDGM) Dip: 66.44° Field: 51881 nT  
 Magnetic North is 7.65 degrees West of True North (at 3/8/2020)  
 Grid North is 0.13 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.13 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.78 degrees



# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999604	Report Generated	3/23/2020 at 2:52:02 PM
Convergence at slot	0.13° East	Database	WA_MPL_EasternUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-10.76	27.97	1699871.91	14308463.18	39°24'8.0920"N	80°47'22.3000"W
Facility Reference Pt			1699843.95	14308473.94	39°24'8.1990"N	80°47'22.6560"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	773.50ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	773.50ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #08)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	342.06°





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH DATA (204 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.000	300.790	0.00	0.00	0.00	0.00	1699871.91	14308463.18	39°24'8.0920"N	80°47'22.3000"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	300.790	25.00	0.00	0.00	0.00	1699871.91	14308463.18	39°24'8.0920"N	80°47'22.3000"W	0.00	0.000	0.00	0.00	0.00	
110.00	0.130	300.790	110.00	0.07	0.05	-0.08	1699871.83	14308463.23	39°24'8.0925"N	80°47'22.3010"W	0.10	300.790	0.15	0.15	0.00	Gyrodata MS Gyro <17-1/2">(100'-440')
135.00	0.110	263.910	135.00	0.10	0.06	-0.13	1699871.78	14308463.24	39°24'8.0926"N	80°47'22.3016"W	0.14	295.078	0.31	-0.08	-147.52	
160.00	0.130	273.720	160.00	0.11	0.06	-0.18	1699871.73	14308463.24	39°24'8.0926"N	80°47'22.3023"W	0.19	288.309	0.11	0.08	39.24	
185.00	0.110	169.560	185.00	0.10	0.04	-0.21	1699871.70	14308463.22	39°24'8.0924"N	80°47'22.3026"W	0.21	280.625	0.76	-0.08	-416.64	
210.00	0.190	122.860	210.00	0.04	-0.01	-0.17	1699871.74	14308463.17	39°24'8.0919"N	80°47'22.3021"W	0.17	267.538	0.56	0.32	-186.80	
235.00	0.220	122.140	235.00	-0.02	-0.06	-0.09	1699871.82	14308463.12	39°24'8.0914"N	80°47'22.3011"W	0.11	239.165	0.12	0.12	-2.88	
260.00	0.190	128.690	260.00	-0.10	-0.11	-0.02	1699871.89	14308463.07	39°24'8.0909"N	80°47'22.3002"W	0.11	190.388	0.15	-0.12	26.20	
285.00	0.150	178.280	285.00	-0.16	-0.17	0.01	1699871.92	14308463.01	39°24'8.0903"N	80°47'22.2998"W	0.17	175.236	0.59	-0.16	198.36	
310.00	0.190	196.530	310.00	-0.23	-0.24	0.00	1699871.91	14308462.94	39°24'8.0896"N	80°47'22.2999"W	0.24	179.285	0.27	0.16	73.00	
335.00	0.190	202.270	335.00	-0.29	-0.32	-0.02	1699871.89	14308462.86	39°24'8.0888"N	80°47'22.3003"W	0.32	184.442	0.08	0.00	22.96	
360.00	0.140	184.790	360.00	-0.35	-0.38	-0.04	1699871.87	14308462.80	39°24'8.0882"N	80°47'22.3005"W	0.39	186.348	0.28	-0.20	-69.92	
385.00	0.140	178.900	385.00	-0.41	-0.45	-0.04	1699871.87	14308462.73	39°24'8.0876"N	80°47'22.3005"W	0.45	185.736	0.06	0.00	-23.56	
410.00	0.090	153.490	410.00	-0.46	-0.49	-0.04	1699871.87	14308462.69	39°24'8.0871"N	80°47'22.3004"W	0.50	184.102	0.28	-0.20	-101.64	
435.00	0.090	201.500	435.00	-0.49	-0.53	-0.03	1699871.88	14308462.65	39°24'8.0867"N	80°47'22.3004"W	0.53	183.656	0.29	0.00	192.04	
450.00	0.140	195.260	450.00	-0.52	-0.56	-0.04	1699871.87	14308462.62	39°24'8.0865"N	80°47'22.3005"W	0.56	184.403	0.34	0.33	-41.60	
566.00	0.820	106.810	565.99	-1.11	-0.94	0.71	1699872.62	14308462.25	39°24'8.0827"N	80°47'22.2909"W	1.18	142.621	0.71	0.59	-76.25	Premier MWD <12-1/4">(440')(556'-3134')
657.00	2.450	91.050	656.95	-2.11	-1.16	3.28	1699875.19	14308462.02	39°24'8.0804"N	80°47'22.2582"W	3.48	109.447	1.84	1.79	-17.32	
749.00	5.230	79.930	748.74	-3.33	-0.46	9.38	1699881.28	14308462.72	39°24'8.0872"N	80°47'22.1805"W	9.39	92.818	3.11	3.02	-12.09	
840.00	8.670	75.250	839.06	-4.28	2.01	20.10	1699892.00	14308465.19	39°24'8.1114"N	80°47'22.0439"W	20.20	84.287	3.83	3.78	-5.14	
933.00	11.320	71.000	930.64	-4.50	6.77	35.51	1699907.41	14308469.94	39°24'8.1580"N	80°47'21.8474"W	36.15	79.210	2.96	2.85	-4.57	
1030.00	13.240	70.950	1025.42	-4.11	13.49	55.01	1699926.90	14308476.67	39°24'8.2241"N	80°47'21.5988"W	56.64	76.219	1.98	1.98	-0.05	
1124.00	14.390	78.160	1116.70	-5.14	19.40	76.62	1699948.50	14308482.58	39°24'8.2820"N	80°47'21.3233"W	79.04	75.789	2.20	1.22	7.67	
1219.00	15.230	86.820	1208.56	-9.57	22.52	100.64	1699972.51	14308485.69	39°24'8.3122"N	80°47'21.0173"W	103.13	77.387	2.49	0.88	9.12	
1314.00	14.670	93.500	1300.35	-17.15	22.48	125.11	1699996.97	14308485.65	39°24'8.3112"N	80°47'20.7056"W	127.11	79.815	1.91	-0.59	7.03	
1408.00	13.120	86.910	1391.60	-24.24	22.32	147.64	1700019.49	14308485.50	39°24'8.3092"N	80°47'20.4185"W	149.32	81.401	2.35	-1.65	-7.01	
1503.00	16.110	80.390	1483.52	-28.91	25.11	171.41	1700043.25	14308488.28	39°24'8.3362"N	80°47'20.1156"W	173.24	81.667	3.59	3.15	-6.86	
1598.00	19.280	78.230	1574.02	-32.51	30.51	199.77	1700071.60	14308493.68	39°24'8.3889"N	80°47'19.7542"W	202.08	81.317	3.41	3.34	-2.27	
1693.00	22.160	78.250	1662.86	-36.13	37.36	232.67	1700104.49	14308500.52	39°24'8.4558"N	80°47'19.3349"W	235.65	80.878	3.03	3.03	0.02	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

## WELLPATH DATA (204 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
1787.00	24.240	79.450	1749.26	-40.52	44.50	269.00	1700140.80	14308507.66	39°24'8.5256"N	80°47'18.8719"W	272.66	80.606	2.27	2.21	1.28	
1882.00	25.880	81.320	1835.31	-46.37	51.20	308.67	1700180.46	14308514.36	39°24'8.5909"N	80°47'18.3663"W	312.89	80.582	1.92	1.73	1.97	
1977.00	25.690	80.820	1920.85	-52.84	57.62	349.50	1700221.27	14308520.77	39°24'8.6533"N	80°47'17.8461"W	354.21	80.639	0.30	-0.20	-0.53	
2072.00	23.260	78.020	2007.31	-57.92	64.80	388.18	1700259.93	14308527.95	39°24'8.7234"N	80°47'17.3531"W	393.55	80.523	2.83	-2.56	-2.95	
2166.00	23.480	76.270	2093.60	-61.22	73.09	424.53	1700296.27	14308536.24	39°24'8.8046"N	80°47'16.8898"W	430.77	80.231	0.77	0.23	-1.86	
2261.00	23.700	75.730	2180.67	-63.84	82.29	461.42	1700333.14	14308545.44	39°24'8.8946"N	80°47'16.4196"W	468.70	79.888	0.32	0.23	-0.57	
2355.00	23.320	74.950	2266.86	-65.98	91.78	497.69	1700369.40	14308554.92	39°24'8.9875"N	80°47'15.9572"W	506.08	79.552	0.52	-0.40	-0.83	
2450.00	24.600	75.620	2353.67	-68.16	101.57	535.01	1700406.70	14308564.71	39°24'9.0835"N	80°47'15.4815"W	544.56	79.250	1.38	1.35	0.71	
2545.00	24.900	77.410	2439.95	-71.25	110.84	573.68	1700445.36	14308573.98	39°24'9.1742"N	80°47'14.9886"W	584.29	79.064	0.85	0.32	1.88	
2639.00	24.230	76.720	2525.44	-74.66	119.59	611.76	1700483.43	14308582.72	39°24'9.2597"N	80°47'14.5032"W	623.34	78.939	0.78	-0.71	-0.73	
2734.00	23.530	76.510	2612.31	-77.72	128.49	649.18	1700520.83	14308591.62	39°24'9.3468"N	80°47'14.0263"W	661.77	78.804	0.74	-0.74	-0.22	
2828.00	23.860	77.860	2698.38	-81.10	136.86	686.01	1700557.65	14308599.99	39°24'9.4288"N	80°47'13.5568"W	699.53	78.717	0.68	0.35	1.44	
2923.00	24.240	79.090	2785.14	-85.42	144.60	723.95	1700595.57	14308607.72	39°24'9.5043"N	80°47'13.0734"W	738.24	78.705	0.66	0.40	1.29	
3018.00	24.850	78.480	2871.55	-90.04	152.27	762.65	1700634.26	14308615.39	39°24'9.5793"N	80°47'12.5800"W	777.71	78.709	0.70	0.64	-0.64	
3112.00	25.680	77.890	2956.56	-94.32	160.49	801.92	1700673.51	14308623.61	39°24'9.6596"N	80°47'12.0795"W	817.82	78.683	0.92	0.88	-0.63	
3144.00	25.510	77.840	2985.42	-95.72	163.40	815.44	1700687.02	14308626.51	39°24'9.6880"N	80°47'11.9073"W	831.65	78.669	0.54	-0.53	-0.16	
3238.00	24.560	78.100	3070.59	-99.81	171.69	854.34	1700725.91	14308634.80	39°24'9.7690"N	80°47'11.4114"W	871.42	78.637	1.02	-1.01	0.28	APS EM <8-3/4">(3144')(3238'-6328')
3295.00	24.300	76.250	3122.49	-101.92	176.92	877.33	1700748.89	14308640.03	39°24'9.8202"N	80°47'11.1185"W	894.99	78.599	1.42	-0.46	-3.25	
3390.00	27.340	83.790	3208.01	-107.78	183.93	918.02	1700789.56	14308647.04	39°24'9.8885"N	80°47'10.5999"W	936.26	78.671	4.71	3.20	7.94	
3484.00	29.100	84.520	3290.84	-117.10	188.45	962.24	1700833.76	14308651.55	39°24'9.9321"N	80°47'10.0365"W	980.52	78.919	1.91	1.87	0.78	
3579.00	27.350	82.310	3374.54	-125.97	193.57	1006.86	1700878.37	14308656.68	39°24'9.9818"N	80°47'9.4678"W	1025.30	79.117	2.15	-1.84	-2.33	
3673.00	28.950	79.640	3457.42	-132.82	200.56	1050.64	1700922.14	14308663.66	39°24'10.0497"N	80°47'8.9099"W	1069.62	79.193	2.17	1.70	-2.84	
3771.00	32.200	78.610	3541.79	-138.92	209.98	1099.59	1700971.06	14308673.08	39°24'10.1417"N	80°47'8.2861"W	1119.46	79.189	3.36	3.32	-1.05	
3866.00	34.010	77.880	3621.36	-144.51	220.56	1150.38	1701021.83	14308683.65	39°24'10.2451"N	80°47'7.6387"W	1171.33	79.147	1.95	1.91	-0.77	
3961.00	32.610	71.950	3700.78	-147.15	234.07	1200.71	1701072.14	14308697.16	39°24'10.3775"N	80°47'6.9971"W	1223.31	78.969	3.73	-1.47	-6.24	
4056.00	32.700	74.210	3780.76	-148.07	248.99	1249.75	1701121.16	14308712.07	39°24'10.5237"N	80°47'6.3720"W	1274.31	78.732	1.29	0.09	2.38	
4151.00	31.660	72.330	3861.17	-149.15	263.54	1298.20	1701169.59	14308726.61	39°24'10.6664"N	80°47'5.7544"W	1324.68	78.525	1.52	-1.09	-1.98	
4245.00	32.250	72.230	3940.92	-149.34	278.68	1345.59	1701216.96	14308741.75	39°24'10.8150"N	80°47'5.1502"W	1374.14	78.299	0.63	0.63	-0.11	
4339.00	35.750	76.080	4018.85	-151.34	292.95	1396.14	1701267.50	14308756.01	39°24'10.9548"N	80°47'4.5057"W	1426.55	78.150	4.37	3.72	4.10	
4434.00	37.220	82.660	4095.26	-158.57	303.30	1451.60	1701322.93	14308766.36	39°24'11.0558"N	80°47'3.7988"W	1482.95	78.198	4.40	1.55	6.93	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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Slot	Slot #08		

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4528.00	36.470	80.820	4170.49	-168.06	311.39	1507.38	1701378.69	14308774.44	39°24'11.1344"N	80°47'3.0881"W	1539.21	78.328	1.42	-0.80	-1.96	
4622.00	34.060	82.720	4247.23	-177.18	319.18	1561.08	1701432.37	14308782.24	39°24'11.2102"N	80°47'2.4038"W	1593.37	78.444	2.82	-2.56	2.02	
4717.00	33.230	84.560	4326.32	-187.74	325.02	1613.38	1701484.65	14308788.07	39°24'11.2666"N	80°47'1.7374"W	1645.79	78.610	1.38	-0.87	1.94	
4811.00	33.410	78.620	4404.89	-196.27	332.57	1664.41	1701535.65	14308795.62	39°24'11.3400"N	80°47'1.0871"W	1697.31	78.700	3.48	0.19	-6.32	
4906.00	32.040	72.820	4484.83	-199.59	345.18	1714.14	1701585.36	14308808.22	39°24'11.4635"N	80°47'0.4532"W	1748.55	78.615	3.60	-1.44	-6.11	
5000.00	33.070	72.390	4564.06	-200.07	360.30	1762.40	1701633.61	14308823.34	39°24'11.6118"N	80°46'59.8379"W	1798.86	78.446	1.12	1.10	-0.46	
5095.00	34.170	78.230	4643.19	-203.09	373.59	1813.24	1701684.43	14308836.62	39°24'11.7419"N	80°46'59.1899"W	1851.33	78.358	3.59	1.16	6.15	
5189.00	33.540	74.330	4721.26	-206.96	385.99	1864.09	1701735.26	14308849.02	39°24'11.8633"N	80°46'58.5417"W	1903.64	78.301	2.41	-0.67	-4.15	
5286.00	33.810	83.420	4802.03	-213.34	396.33	1916.74	1701787.89	14308859.35	39°24'11.9642"N	80°46'57.8707"W	1957.28	78.317	5.20	0.28	9.37	
5381.00	34.170	87.960	4880.81	-225.85	400.31	1969.67	1701840.79	14308863.33	39°24'12.0023"N	80°46'57.1963"W	2009.93	78.512	2.70	0.38	4.78	
5476.00	33.610	82.810	4959.69	-238.07	404.55	2022.42	1701893.53	14308867.57	39°24'12.0429"N	80°46'56.5241"W	2062.49	78.688	3.08	-0.59	-5.42	
5571.00	33.250	83.360	5038.97	-248.08	410.85	2074.38	1701945.46	14308873.87	39°24'12.1040"N	80°46'55.8620"W	2114.68	78.797	0.50	-0.38	0.58	
5666.00	32.450	79.460	5118.79	-256.46	418.53	2125.31	1701996.38	14308881.54	39°24'12.1786"N	80°46'55.2130"W	2166.13	78.860	2.38	-0.84	-4.11	
5761.00	32.610	75.740	5198.89	-261.39	429.49	2175.18	1702046.23	14308892.50	39°24'12.2858"N	80°46'54.5773"W	2217.18	78.831	2.11	0.17	-3.92	
5855.00	32.950	81.610	5277.95	-267.26	439.47	2225.04	1702096.06	14308902.47	39°24'12.3832"N	80°46'53.9419"W	2268.02	78.827	3.40	0.36	6.24	
5950.00	32.430	87.210	5357.92	-278.21	444.48	2276.05	1702147.05	14308907.48	39°24'12.4315"N	80°46'53.2919"W	2319.04	78.950	3.23	-0.55	5.89	
6044.00	32.070	82.590	5437.43	-289.35	448.92	2325.98	1702196.96	14308911.92	39°24'12.4742"N	80°46'52.6557"W	2368.90	79.076	2.65	-0.38	-4.91	
6139.00	31.990	81.590	5517.97	-298.13	455.86	2375.88	1702246.85	14308918.85	39°24'12.5416"N	80°46'52.0198"W	2419.22	79.139	0.56	-0.08	-1.05	
6233.00	33.050	77.750	5597.23	-304.79	464.94	2425.57	1702296.51	14308927.93	39°24'12.6301"N	80°46'51.3865"W	2469.73	79.149	2.47	1.13	-4.09	
6328.00	34.090	73.310	5676.40	-307.94	478.08	2476.40	1702347.32	14308941.07	39°24'12.7588"N	80°46'50.7386"W	2522.12	79.073	2.81	1.09	-4.67	
6371.00	34.190	70.170	5711.99	-307.81	485.64	2499.31	1702370.22	14308948.63	39°24'12.8330"N	80°46'50.4466"W	2546.05	79.004	4.10	0.23	-7.30	BH AT Curve <8-1/2">(6328')(6371'-17169')
6466.00	30.200	55.860	5792.49	-300.25	508.15	2544.28	1702415.17	14308971.13	39°24'13.0544"N	80°46'49.8730"W	2594.52	78.705	9.03	-4.20	-15.06	
6561.00	30.860	45.960	5874.37	-282.85	538.51	2581.59	1702452.47	14309001.48	39°24'13.3536"N	80°46'49.3967"W	2637.16	78.217	5.33	0.69	-10.42	
6655.00	32.000	38.400	5954.61	-258.43	574.81	2614.41	1702485.27	14309037.76	39°24'13.7115"N	80°46'48.9775"W	2676.85	77.600	4.36	1.21	-8.04	
6750.00	34.110	29.120	6034.28	-226.31	617.84	2643.02	1702513.88	14309080.77	39°24'14.1361"N	80°46'48.6116"W	2714.28	76.843	5.77	2.22	-9.77	
6845.00	37.060	18.680	6111.60	-185.14	668.28	2665.18	1702536.03	14309131.20	39°24'14.6342"N	80°46'48.3278"W	2747.69	75.924	7.10	3.11	-10.99	
6939.00	41.460	11.830	6184.40	-135.35	725.63	2680.65	1702551.49	14309188.52	39°24'15.2006"N	80°46'48.1290"W	2777.12	74.853	6.57	4.68	-7.29	
6991.00†	45.278	9.063	6222.20	-103.93	760.74	2687.09	1702557.93	14309223.62	39°24'15.5474"N	80°46'48.0458"W	2792.70	74.193	8.20	7.34	-5.32	Middlesex: 6991' MD
7034.00	48.480	7.040	6251.59	-75.72	791.81	2691.47	1702562.31	14309254.67	39°24'15.8544"N	80°46'47.9890"W	2805.53	73.607	8.20	7.45	-4.71	
7128.00	54.420	1.490	6310.17	-7.68	865.05	2696.79	1702567.62	14309327.88	39°24'16.5781"N	80°46'47.9191"W	2832.13	72.215	7.82	6.32	-5.90	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH DATA (204 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
7175.00	57.870	359.240	6336.35	29.37	904.07	2697.02	1702567.86	14309366.89	39°24'16.9638"N	80°46'47.9149"W	2844.51	71.468	8.35	7.34	-4.79	
7219.00†	61.471	357.106	6358.57	65.85	942.02	2695.79	1702566.63	14309404.82	39°24'17.3388"N	80°46'47.9293"W	2855.64	70.739	9.19	8.18	-4.85	Burkett: 7219' MD
7223.00	61.800	356.920	6360.47	69.25	945.53	2695.61	1702566.45	14309408.34	39°24'17.3736"N	80°46'47.9315"W	2856.63	70.671	9.19	8.23	-4.66	
7270.00	64.790	355.160	6381.59	109.99	987.41	2692.70	1702563.54	14309450.20	39°24'17.7876"N	80°46'47.9673"W	2868.04	69.862	7.19	6.36	-3.74	
7283.00†	65.687	354.670	6387.03	121.50	999.17	2691.66	1702562.50	14309461.95	39°24'17.9038"N	80°46'47.9802"W	2871.12	69.635	7.70	6.90	-3.77	Tully: 7283' MD
7317.00	68.040	353.420	6400.39	152.08	1030.26	2688.41	1702559.25	14309493.03	39°24'18.2112"N	80°46'48.0206"W	2879.06	69.032	7.70	6.92	-3.68	
7383.00†	71.930	349.799	6422.99	213.22	1091.58	2679.34	1702550.19	14309554.33	39°24'18.8175"N	80°46'48.1343"W	2893.17	67.834	7.83	5.89	-5.49	Hamilton: 7383' MD
7412.00	73.660	348.260	6431.56	240.71	1118.78	2674.07	1702544.91	14309581.51	39°24'19.0864"N	80°46'48.2006"W	2898.67	67.297	7.83	5.97	-5.31	
7432.00†	75.326	347.342	6436.91	259.89	1137.61	2670.00	1702540.84	14309600.34	39°24'19.2726"N	80°46'48.2519"W	2902.25	66.922	9.43	8.33	-4.59	Marcellus POE: 7432' MD
7507.00	81.600	344.010	6451.91	333.18	1208.76	2651.80	1702522.66	14309671.46	39°24'19.9763"N	80°46'48.4814"W	2914.30	65.495	9.43	8.37	-4.44	
7602.00	90.090	339.910	6458.79	427.82	1298.75	2622.48	1702493.34	14309761.41	39°24'20.8663"N	80°46'48.8522"W	2926.45	63.654	9.92	8.94	-4.32	
7697.00	89.940	337.710	6458.76	522.66	1387.32	2588.14	1702459.02	14309849.95	39°24'21.7426"N	80°46'49.2869"W	2936.52	61.807	2.32	-0.16	-2.32	
7791.00	90.030	337.270	6458.79	616.37	1474.16	2552.15	1702423.05	14309936.75	39°24'22.6017"N	80°46'49.7427"W	2947.31	59.989	0.48	0.10	-0.47	
7886.00	89.970	339.530	6458.79	711.17	1562.48	2517.18	1702388.09	14310025.04	39°24'23.4755"N	80°46'50.1855"W	2962.69	58.171	2.38	-0.06	2.38	
7981.00	89.750	340.010	6459.02	806.09	1651.62	2484.33	1702355.26	14310114.14	39°24'24.3573"N	80°46'50.6012"W	2983.25	56.384	0.56	-0.23	0.51	
8075.00	89.820	339.730	6459.37	900.02	1739.88	2451.98	1702322.92	14310202.36	39°24'25.2303"N	80°46'51.0106"W	3006.56	54.641	0.31	0.07	-0.30	
8170.00	89.630	337.670	6459.83	994.85	1828.38	2417.48	1702288.43	14310290.83	39°24'26.1059"N	80°46'51.4475"W	3031.03	52.899	2.18	-0.20	-2.17	
8264.00	89.820	340.330	6460.28	1088.71	1916.13	2383.79	1702254.76	14310378.55	39°24'26.9740"N	80°46'51.8739"W	3058.43	51.207	2.84	0.20	2.83	
8359.00	90.310	343.740	6460.17	1183.69	2006.48	2354.50	1702225.47	14310468.86	39°24'27.8677"N	80°46'52.2443"W	3093.48	49.563	3.63	0.52	3.59	
8454.00	90.800	346.560	6459.25	1278.54	2098.30	2330.15	1702201.14	14310560.64	39°24'28.7757"N	80°46'52.5516"W	3135.68	47.997	3.01	0.52	2.97	
8549.00	90.520	347.200	6458.16	1373.20	2190.81	2308.59	1702179.58	14310653.12	39°24'29.6906"N	80°46'52.8235"W	3182.65	46.500	0.74	-0.29	0.67	
8644.00	90.430	344.890	6457.37	1467.96	2283.00	2285.68	1702156.68	14310745.27	39°24'30.6022"N	80°46'53.1125"W	3230.54	45.034	2.43	-0.09	-2.43	
8739.00	90.030	343.050	6456.99	1562.90	2374.30	2259.45	1702130.46	14310836.53	39°24'31.5052"N	80°46'53.4439"W	3277.56	43.580	1.98	-0.42	-1.94	
8834.00	90.400	341.830	6456.63	1657.89	2464.87	2230.79	1702101.81	14310927.07	39°24'32.4011"N	80°46'53.8062"W	3324.45	42.146	1.34	0.39	-1.28	
8928.00	90.460	341.330	6455.93	1751.89	2554.05	2201.09	1702072.12	14311016.21	39°24'33.2832"N	80°46'54.1819"W	3371.64	40.755	0.54	0.06	-0.53	
9023.00	90.250	338.760	6455.34	1846.82	2643.34	2168.67	1702039.72	14311105.46	39°24'34.1665"N	80°46'54.5921"W	3419.12	39.366	2.71	-0.22	-2.71	
9117.00	90.000	336.410	6455.13	1940.53	2730.23	2132.83	1702003.89	14311192.32	39°24'35.0261"N	80°46'55.0461"W	3464.55	37.997	2.51	-0.27	-2.50	
9211.00	90.250	334.470	6454.93	2033.89	2815.72	2093.76	1701964.84	14311277.78	39°24'35.8720"N	80°46'55.5412"W	3508.86	36.634	2.08	0.27	-2.06	
9306.00	90.370	332.110	6454.41	2127.78	2900.57	2051.06	1701922.16	14311362.60	39°24'36.7117"N	80°46'56.0825"W	3552.49	35.265	2.49	0.13	-2.48	
9401.00	90.000	334.530	6454.11	2221.67	2985.45	2008.41	1701879.52	14311447.44	39°24'37.5516"N	80°46'56.6233"W	3598.14	33.930	2.58	-0.39	2.55	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH DATA (204 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
9496.00	90.250	338.370	6453.90	2316.19	3072.52	1970.46	1701841.59	14311534.48	39°24'38.4131"N	80°46'57.1042"W	3650.08	32.673	4.05	0.26	4.04	
9591.00	90.280	345.320	6453.46	2411.13	3162.74	1940.88	1701812.02	14311624.66	39°24'39.3054"N	80°46'57.4783"W	3710.78	31.536	7.32	0.03	7.32	
9685.00	90.030	345.190	6453.20	2504.99	3253.64	1916.96	1701788.10	14311715.53	39°24'40.2044"N	80°46'57.7803"W	3776.36	30.505	0.30	-0.27	-0.14	
9781.00	90.060	346.400	6453.13	2600.78	3346.70	1893.40	1701764.55	14311808.55	39°24'41.1248"N	80°46'58.0776"W	3845.18	29.499	1.26	0.03	1.26	
9875.00	90.180	347.700	6452.93	2694.42	3438.31	1872.33	1701743.50	14311900.12	39°24'42.0307"N	80°46'58.3432"W	3915.05	28.571	1.39	0.13	1.38	
9970.00	90.310	349.770	6452.53	2788.77	3531.48	1853.78	1701724.95	14311993.25	39°24'42.9519"N	80°46'58.5767"W	3988.46	27.696	2.18	0.14	2.18	
10064.00	90.490	347.280	6451.87	2882.16	3623.59	1835.08	1701706.26	14312085.32	39°24'43.8627"N	80°46'58.8121"W	4061.76	26.859	2.66	0.19	-2.65	
10159.00	90.340	342.310	6451.18	2977.02	3715.23	1810.17	1701681.36	14312176.93	39°24'44.7691"N	80°46'59.1267"W	4132.75	25.977	5.23	-0.16	-5.23	
10253.00	90.250	340.420	6450.70	3071.01	3804.30	1780.14	1701651.34	14312265.96	39°24'45.6501"N	80°46'59.5066"W	4200.19	25.076	2.01	-0.10	-2.01	
10348.00	90.250	339.310	6450.28	3165.94	3893.49	1747.43	1701618.65	14312355.12	39°24'46.5324"N	80°46'59.9205"W	4267.64	24.171	1.17	0.00	-1.17	
10442.00	90.340	340.410	6449.80	3259.87	3981.74	1715.07	1701586.30	14312443.33	39°24'47.4053"N	80°47'0.3302"W	4335.40	23.303	1.17	0.10	1.17	
10537.00	90.430	342.130	6449.16	3354.85	4071.70	1684.57	1701555.81	14312533.26	39°24'48.2952"N	80°47'0.7161"W	4406.42	22.476	1.81	0.09	1.81	
10632.00	90.150	343.290	6448.68	3449.84	4162.41	1656.33	1701527.58	14312623.93	39°24'49.1924"N	80°47'1.0730"W	4479.85	21.699	1.26	-0.29	1.22	
10727.00	89.880	345.940	6448.65	3544.74	4253.99	1631.13	1701502.39	14312715.48	39°24'50.0982"N	80°47'1.3913"W	4555.99	20.979	2.80	-0.28	2.79	
10821.00	90.120	347.580	6448.65	3638.42	4345.49	1609.60	1701480.87	14312806.94	39°24'51.0030"N	80°47'1.6628"W	4634.02	20.325	1.76	0.26	1.74	
10916.00	90.150	347.000	6448.43	3733.02	4438.16	1588.70	1701459.98	14312899.58	39°24'51.9194"N	80°47'1.9263"W	4713.94	19.696	0.61	0.03	-0.61	
11011.00	90.000	348.220	6448.31	3827.58	4530.95	1568.32	1701439.60	14312992.33	39°24'52.8369"N	80°47'2.1832"W	4794.70	19.093	1.29	-0.16	1.28	
11105.00	90.460	345.760	6447.93	3921.22	4622.53	1547.16	1701418.45	14313083.87	39°24'53.7425"N	80°47'2.4500"W	4874.57	18.505	2.66	0.49	-2.62	
11199.00	90.280	342.400	6447.32	4015.15	4712.91	1521.38	1701392.68	14313174.21	39°24'54.6364"N	80°47'2.7757"W	4952.38	17.891	3.58	-0.19	-3.57	
11293.00	90.000	342.040	6447.09	4109.15	4802.42	1492.67	1701363.99	14313263.69	39°24'55.5218"N	80°47'3.1387"W	5029.04	17.266	0.49	-0.30	-0.38	
11388.00	89.750	341.040	6447.30	4204.14	4892.53	1462.59	1701333.92	14313353.76	39°24'56.4131"N	80°47'3.5192"W	5106.47	16.644	1.09	-0.26	-1.05	
11483.00	89.940	339.230	6447.56	4299.08	4981.87	1430.31	1701301.65	14313443.07	39°24'57.2969"N	80°47'3.9278"W	5183.13	16.019	1.92	0.20	-1.91	
11577.00	89.630	338.090	6447.91	4392.92	5069.42	1396.11	1701267.46	14313530.59	39°24'58.1630"N	80°47'4.3609"W	5258.15	15.397	1.26	-0.33	-1.21	
11672.00	89.720	339.110	6448.45	4487.74	5157.87	1361.45	1701232.81	14313619.00	39°24'59.0380"N	80°47'4.7999"W	5334.53	14.786	1.08	0.09	1.07	
11766.00	89.660	340.930	6448.96	4581.68	5246.21	1329.33	1701200.71	14313707.30	39°24'59.9118"N	80°47'5.2064"W	5412.01	14.219	1.94	-0.06	1.94	
11861.00	89.690	342.160	6449.50	4676.67	5336.32	1299.26	1701170.65	14313797.38	39°25'0.8031"N	80°47'5.5868"W	5492.21	13.684	1.30	0.03	1.29	
11955.00	90.060	344.280	6449.70	4770.64	5426.31	1272.12	1701143.52	14313887.33	39°25'1.6932"N	80°47'5.9299"W	5573.43	13.194	2.29	0.39	2.26	
12050.00	89.910	343.840	6449.73	4865.58	5517.66	1246.03	1701117.45	14313978.64	39°25'2.5967"N	80°47'6.2595"W	5656.60	12.725	0.49	-0.16	-0.46	
12145.00	89.750	343.830	6450.01	4960.54	5608.90	1219.58	1701091.01	14314069.85	39°25'3.4991"N	80°47'6.5937"W	5739.96	12.267	0.17	-0.17	-0.01	
12239.00	89.720	342.550	6450.44	5054.52	5698.88	1192.40	1701063.83	14314159.80	39°25'4.3890"N	80°47'6.9374"W	5822.29	11.818	1.36	-0.03	-1.36	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH DATA (204 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
12334.00	89.880	342.490	6450.77	5149.51	5789.50	1163.86	1701035.31	14314250.37	39°25'5.2853"N	80°47'7.2982"W	5905.32	11.367	0.18	0.17	-0.06	
12428.00	89.820	342.260	6451.02	5243.51	5879.08	1135.40	1701006.86	14314339.92	39°25'6.1714"N	80°47'7.6582"W	5987.72	10.931	0.25	-0.06	-0.24	
12522.00	89.970	341.110	6451.19	5337.51	5968.32	1105.86	1700977.33	14314429.12	39°25'7.0540"N	80°47'8.0318"W	6069.91	10.497	1.23	0.16	-1.22	
12617.00	89.780	341.310	6451.40	5432.50	6058.26	1075.26	1700946.75	14314519.03	39°25'7.9436"N	80°47'8.4190"W	6152.94	10.064	0.29	-0.20	0.21	
12712.00	89.940	342.300	6451.63	5527.49	6148.50	1045.60	1700917.09	14314609.24	39°25'8.8363"N	80°47'8.7942"W	6236.78	9.651	1.06	0.17	1.04	
12806.00	90.090	341.250	6451.61	5621.49	6237.79	1016.20	1700887.71	14314698.49	39°25'9.7194"N	80°47'9.1661"W	6320.02	9.253	1.13	0.16	-1.12	
12901.00	89.940	340.700	6451.58	5716.47	6327.60	985.23	1700856.75	14314788.26	39°25'10.6078"N	80°47'9.5580"W	6403.84	8.850	0.60	-0.16	-0.58	
12995.00	89.850	339.850	6451.75	5810.43	6416.08	953.51	1700825.04	14314876.71	39°25'11.4831"N	80°47'9.9596"W	6486.55	8.453	0.91	-0.10	-0.90	
13089.00	89.600	338.790	6452.21	5904.32	6504.02	920.31	1700791.86	14314964.61	39°25'12.3530"N	80°47'10.3799"W	6568.81	8.054	1.16	-0.27	-1.13	
13184.00	90.090	339.560	6452.46	5999.20	6592.82	886.54	1700758.10	14315053.37	39°25'13.2314"N	80°47'10.8076"W	6652.15	7.659	0.96	0.52	0.81	
13278.00	89.970	339.410	6452.41	6093.10	6680.85	853.60	1700725.17	14315141.37	39°25'14.1023"N	80°47'11.2247"W	6735.16	7.281	0.20	-0.13	-0.16	
13373.00	89.970	339.240	6452.46	6187.99	6769.74	820.06	1700691.64	14315230.22	39°25'14.9815"N	80°47'11.6494"W	6819.22	6.907	0.18	0.00	-0.18	
13467.00	89.850	339.060	6452.61	6281.87	6857.58	786.60	1700658.20	14315318.03	39°25'15.8505"N	80°47'12.0731"W	6902.55	6.544	0.23	-0.13	-0.19	
13562.00	89.660	340.230	6453.02	6376.79	6946.65	753.56	1700625.17	14315407.06	39°25'16.7315"N	80°47'12.4914"W	6987.40	6.191	1.25	-0.20	1.23	
13657.00	89.820	341.450	6453.45	6471.76	7036.38	722.38	1700594.00	14315496.76	39°25'17.6192"N	80°47'12.8860"W	7073.36	5.862	1.30	0.17	1.28	
13752.00	89.910	342.510	6453.67	6566.76	7126.72	692.99	1700564.62	14315587.06	39°25'18.5127"N	80°47'13.2578"W	7160.33	5.554	1.12	0.09	1.12	
13846.00	89.850	343.050	6453.87	6660.75	7216.50	665.16	1700536.81	14315676.81	39°25'19.4008"N	80°47'13.6097"W	7247.09	5.266	0.58	-0.06	0.57	
13940.00	89.940	344.020	6454.04	6754.72	7306.65	638.52	1700510.18	14315766.92	39°25'20.2923"N	80°47'13.9464"W	7334.50	4.994	1.04	0.10	1.03	
14035.00	89.570	346.110	6454.45	6849.58	7398.43	614.04	1700485.70	14315858.67	39°25'21.2000"N	80°47'14.2556"W	7423.87	4.744	2.23	-0.39	2.20	
14130.00	89.820	346.540	6454.95	6944.32	7490.74	591.58	1700463.25	14315950.94	39°25'22.1129"N	80°47'14.5391"W	7514.06	4.516	0.52	0.26	0.45	
14224.00	89.750	346.660	6455.31	7038.02	7582.18	569.80	1700441.48	14316042.34	39°25'23.0171"N	80°47'14.8139"W	7603.56	4.298	0.15	-0.07	0.13	
14319.00	90.150	346.440	6455.39	7132.73	7674.57	547.70	1700419.39	14316134.70	39°25'23.9308"N	80°47'15.0927"W	7694.09	4.082	0.48	0.42	-0.23	
14413.00	89.850	346.460	6455.39	7226.45	7765.96	525.68	1700397.38	14316226.05	39°25'24.8345"N	80°47'15.3706"W	7783.73	3.872	0.32	-0.32	0.02	
14508.00	89.720	345.980	6455.75	7321.20	7858.22	503.05	1700374.76	14316318.27	39°25'25.7469"N	80°47'15.6562"W	7874.31	3.663	0.52	-0.14	-0.51	
14602.00	89.750	344.090	6456.18	7415.07	7949.03	478.77	1700350.49	14316409.04	39°25'26.6450"N	80°47'15.9628"W	7963.43	3.447	2.01	0.03	-2.01	
14697.00	89.780	342.450	6456.57	7510.05	8040.00	451.43	1700323.16	14316499.98	39°25'27.5448"N	80°47'16.3085"W	8052.67	3.214	1.73	0.03	-1.73	
14791.00	89.750	341.480	6456.96	7604.04	8129.38	422.33	1700294.07	14316589.33	39°25'28.4288"N	80°47'16.6767"W	8140.35	2.974	1.03	-0.03	-1.03	
14886.00	90.030	340.940	6457.14	7699.03	8219.32	391.73	1700263.48	14316679.23	39°25'29.3184"N	80°47'17.0639"W	8228.65	2.729	0.64	0.29	-0.57	
14981.00	90.030	339.640	6457.09	7793.98	8308.75	359.69	1700231.46	14316768.62	39°25'30.2030"N	80°47'17.4695"W	8316.53	2.479	1.37	0.00	-1.37	
15075.00	89.690	337.920	6457.32	7887.83	8396.37	325.67	1700197.45	14316856.21	39°25'31.0699"N	80°47'17.9004"W	8402.69	2.221	1.87	-0.36	-1.83	





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH DATA (204 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
15169.00	89.570	335.610	6457.92	7981.42	8482.74	288.59	1700160.38	14316942.55	39°25'31.9243"N	80°47'18.3703"W	8487.65	1.948	2.46	-0.13	-2.46	
15264.00	89.750	336.140	6458.49	8075.86	8569.44	249.76	1700121.57	14317029.21	39°25'32.7821"N	80°47'18.8625"W	8573.08	1.669	0.59	0.19	0.56	
15359.00	90.000	341.530	6458.70	8170.68	8658.00	215.47	1700087.30	14317117.74	39°25'33.6582"N	80°47'19.2968"W	8660.68	1.426	5.68	0.26	5.67	
15453.00	90.000	345.970	6458.70	8264.61	8748.22	189.17	1700061.01	14317207.92	39°25'34.5505"N	80°47'19.6293"W	8750.27	1.239	4.72	0.00	4.72	
15548.00	89.850	348.510	6458.82	8359.22	8840.87	168.19	1700040.04	14317300.53	39°25'35.4667"N	80°47'19.8938"W	8842.47	1.090	2.68	-0.16	2.67	
15643.00	90.280	347.580	6458.71	8453.70	8933.81	148.52	1700020.37	14317393.43	39°25'36.3857"N	80°47'20.1418"W	8935.04	0.952	1.08	0.45	-0.98	
15738.00	90.150	343.260	6458.36	8548.51	9025.73	124.61	1699996.47	14317485.31	39°25'37.2947"N	80°47'20.4438"W	9026.59	0.791	4.55	-0.14	-4.55	
15832.00	89.690	338.180	6458.49	8642.45	9114.43	93.58	1699965.45	14317573.98	39°25'38.1721"N	80°47'20.8365"W	9114.91	0.588	5.43	-0.49	-5.40	
15927.00	89.820	336.190	6458.89	8737.10	9201.99	56.74	1699928.63	14317661.51	39°25'39.0383"N	80°47'21.3033"W	9202.16	0.353	2.10	0.14	-2.09	
16022.00	90.220	336.200	6458.86	8831.61	9288.91	18.40	1699890.30	14317748.39	39°25'39.8983"N	80°47'21.7894"W	9288.92	0.113	0.42	0.42	0.01	
16117.00	89.970	336.530	6458.70	8926.14	9375.94	-19.69	1699852.23	14317835.38	39°25'40.7593"N	80°47'22.2721"W	9375.96	359.880	0.44	-0.26	0.35	
16211.00	90.000	339.960	6458.73	9019.92	9463.23	-54.52	1699817.41	14317922.64	39°25'41.6229"N	80°47'22.7135"W	9463.39	359.670	3.65	0.03	3.65	
16306.00	90.120	343.090	6458.63	9114.90	9553.32	-84.62	1699787.32	14318012.70	39°25'42.5140"N	80°47'23.0944"W	9553.70	359.492	3.30	0.13	-3.29	
16401.00	89.780	344.040	6458.71	9209.87	9644.44	-111.50	1699760.46	14318103.78	39°25'43.4151"N	80°47'23.4342"W	9645.08	359.338	1.06	-0.36	1.00	
16496.00	90.000	344.660	6458.89	9304.79	9735.92	-137.13	1699734.84	14318195.22	39°25'44.3198"N	80°47'23.7581"W	9736.88	359.193	0.69	0.23	0.65	
16590.00	89.690	344.470	6459.15	9398.70	9826.52	-162.14	1699709.83	14318285.79	39°25'45.2160"N	80°47'24.0742"W	9827.86	359.055	0.39	-0.33	-0.20	
16685.00	89.780	344.230	6459.59	9493.62	9918.00	-187.77	1699684.21	14318377.23	39°25'46.1207"N	80°47'24.3981"W	9919.78	358.915	0.27	0.09	-0.25	
16780.00	89.850	343.200	6459.89	9588.58	10009.19	-214.41	1699657.59	14318468.39	39°25'47.0225"N	80°47'24.7349"W	10011.48	358.773	1.09	0.07	-1.08	
16874.00	89.750	340.800	6460.22	9682.57	10098.58	-243.45	1699628.55	14318557.74	39°25'47.9067"N	80°47'25.1024"W	10101.51	358.619	2.56	-0.11	-2.55	
16968.00	89.820	340.820	6460.57	9776.55	10187.36	-274.35	1699597.67	14318646.48	39°25'48.7848"N	80°47'25.4935"W	10191.05	358.457	0.08	0.07	0.02	
17063.00	89.850	340.710	6460.85	9871.53	10277.05	-305.65	1699566.38	14318736.14	39°25'49.6720"N	80°47'25.8897"W	10281.60	358.296	0.12	0.03	-0.12	
17157.00	90.000	340.700	6460.97	9965.50	10365.77	-336.71	1699535.33	14318824.83	39°25'50.5496"N	80°47'26.2829"W	10371.24	358.140	0.16	0.16	-0.01	
17169.00	90.060	341.220	6460.96	9977.50	10377.12	-340.62	1699531.42	14318836.17	39°25'50.6618"N	80°47'26.3324"W	10382.71	358.120	4.36	0.50	4.33	
17194.00†	90.060	341.220	6460.94	10002.49	10400.79	-348.67	1699523.38	14318859.83	39°25'50.8959"N	80°47'26.4343"W	10406.63	358.080	0.00	0.00	0.00	Projected MD at TD: 17194' MD





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

HOLE & CASING SECTIONS - Ref Wellbore: Bronco Unit 2H AWB Ref Wellpath: Bronco Unit 2H AWP Proj: 17194'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.00	105.00	80.00	25.00	105.00	0.00	0.00	0.04	-0.07
17.5in Open Hole	105.00	446.00	341.00	105.00	446.00	0.04	-0.07	-0.55	-0.04
13.375in Casing Surface	25.00	446.00	421.00	25.00	446.00	0.00	0.00	-0.55	-0.04
12.25in Open Hole	446.00	3228.00	2782.00	446.00	3061.50	-0.55	-0.04	170.83	850.27
9.625in Casing Intermediate	25.00	3189.60	3164.60	25.00	3026.65	0.00	0.00	167.48	834.48
8.75in Open Hole	3228.00	6395.00	3167.00	3061.50	5731.98	170.83	850.27	490.50	2511.67
8.5in Open Hole	6395.00	17194.00	10799.00	5731.98	6460.94	490.50	2511.67	10400.79	-348.67
5.5in Casing Production	25.00	17194.00	17169.00	25.00	6460.94	0.00	0.00	10400.79	-348.67

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Bronco Unit 2H POE Rev-2	6433.00	1110.63	2660.30	1702531.15	14309573.37	39°24'19.0062"N	80°46'48.3762"W	point
Bronco Unit 2H - BHL - Rev-3	6459.00	10408.94	-350.64	1699521.41	14318867.98	39°25'50.9766"N	80°47'26.4592"W	point
Bronco Unit 2H - 50' L/R Hardline	6500.00	5759.79	1154.83	1701026.28	14314220.67	39°25'4.9919"N	80°47'7.4143"W	rectangle
	2D Rectangle 9776 x 100.							





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

WELLPATH COMPOSITION - Ref Wellbore: Bronco Unit 2H AWB Ref Wellpath: Bronco Unit 2H AWP Proj: 17194'					
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.00	450.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2">(100'-440')	Bronco Unit 2H AWB	1/31/2020
450.00	3144.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12-1/4">(440')(556'-3134')	Bronco Unit 2H AWB	1/31/2020
3144.00	6328.00	BH NaviTrak (2019) (Axial)	03 APS EM <8-3/4">(3144')(3238'-6328')	Bronco Unit 2H AWB	3/6/2020
6328.00	17194.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8-1/2">(6328')(6371'-17169')	Bronco Unit 2H AWB	3/6/2020





# Actual Wellpath Report

Bronco Unit 2H AWP Proj: 17194'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 2H
Field	Tyler	API	47-095-02661-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 2H AWB
Slot	Slot #08		

COMMENTS
<p><b>Wellpath general comments</b> API: 47-095-02661-0000 BHI Job #: 110293487A Rig: Patterson 342 Duration: 03/08/2020-03/11/2020 Gyrodatta MS Gyro &lt;17-1/2"&gt;(100'-440') Premier MWD &lt;12-1/4"&gt;(440')(556'-3134') APS EM &lt;8-3/4"&gt;(3144')(3238'-6328') BH AT Curve &lt;8-1/2"&gt;(6328')(6371'-17169') Middlesex: 6991' MD Burkett: 7219' MD Tully: 7283' MD Hamilton: 7383' MD Marcellus POE: 7432' MD Projected MD at TD: 17194' MD</p>