

ANTERO RESOURCES CORPORATION

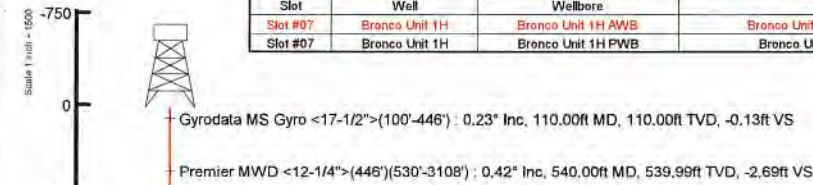
Location: Tyler County, WV
 Field: Tyler
 Facility: Colorado West Pad

Slot: Slot #07
 Well: Bronco Unit 1H
 Wellbore: Bronco Unit 1H PWB

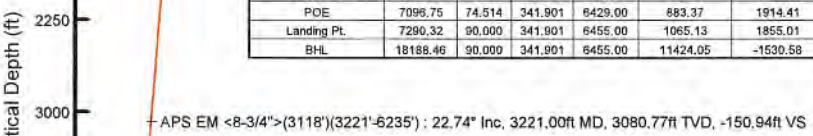
First reference wellpath is Bronco Unit 1H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 773.5 feet	Coordinates are in feet referenced to SK1
Mean Sea Level to Ground level (At Slot: Slot #07): -748.5 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: dskent on 2020-03-10; Database: WA_MPL_EasternUS_Defn

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)	Latitude	Longitude
Slot #07	-5.43	13.99	1699857.930	14308468.510	39°24'8.1450"N	80°47'22.4780"W
Patterson 342 (RKB) to Ground level (At Slot: Slot #07)			25ft			
Mean Sea Level to Ground level (At Slot: Slot #07)			-748.5ft			
Patterson 342 (RKB) to Mean Sea Level			773.5ft			

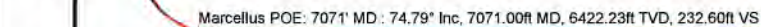
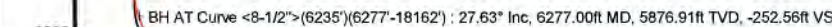
Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Bronco Unit 1H	Bronco Unit 1H AWB	Bronco Unit 1H AWP Proj: 18186'
Slot #07	Bronco Unit 1H	Bronco Unit 1H PWB	Bronco Unit 1H PWP Rev-A.0



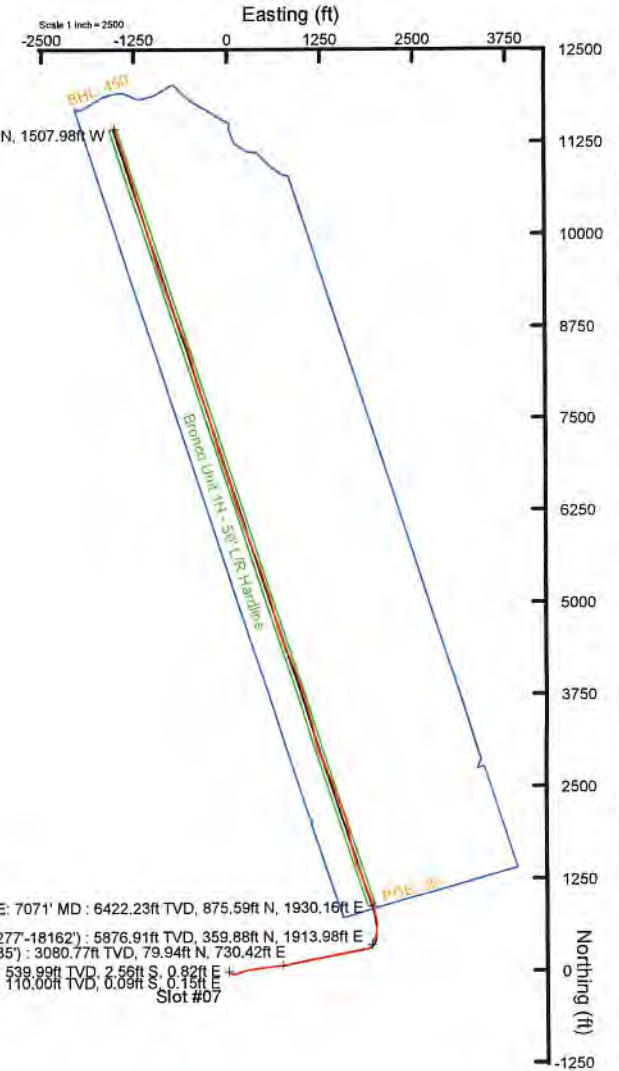
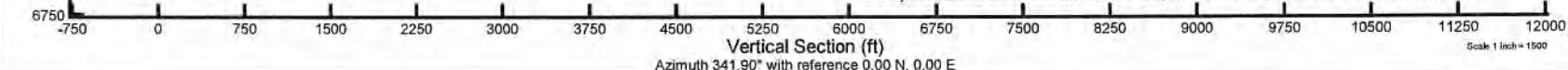
Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3118.00	23.760	82.520	2988.13	74.39	690.14	1.06	-143.70
Proj. To Bottom	3205.00	23.760	82.520	3065.76	78.96	724.90	0.00	-150.16
Drill Out Csg.	3305.00	23.760	82.520	3157.28	84.20	764.85	0.00	-157.58
Hold Tangnet	3356.63	23.436	78.736	3204.60	87.58	785.23	3.00	-160.72
Curve KOP	6115.49	23.436	78.736	5735.87	301.89	1861.35	0.00	-291.32
POE	7096.75	74.514	341.901	6429.00	883.37	1914.41	8.00	244.90
Landing Pt.	7290.32	90.000	341.901	6455.00	1065.13	1855.01	8.00	436.12
BHL	18188.46	90.000	341.901	6455.00	11424.05	-1530.58	0.00	11334.26



User specified (HDGM) Dip: 66.44° Field: 51885 rT
 Magnetic North is 7.55 degrees West of True North (at 2/25/2020)
 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



Projected MD at TD: 18186' MD : 90.31° Inc, 18186.00ft MD, 6450.56ft TVD, 11329.45ft VS



API: 47-095-02660-0000
 BHI Job #: 110283382A
 Rig: Patterson 342
 Duration: 02/29/2020-03/05/2020



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999604	Report Generated	3/10/2020 at 3:14:23 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	-5.43	13.99	1699857.93	14308468.51	39°24'8.1450"N	80°47'22.4780"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 #07)	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	341.90°



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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	120.680	0.00	0.00	0.00	0.00	1699857.93	14308468.51	39°24'8.1450"N	80°47'22.4780"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	120.680	25.00	0.00	0.00	0.00	1699857.93	14308468.51	39°24'8.1450"N	80°47'22.4780"W	0.00	0.000	0.00	0.00	0.00	
110.00	0.230	120.680	110.00	-0.13	-0.09	0.15	1699858.08	14308468.42	39°24'8.1441"N	80°47'22.4761"W	0.17	120.680	0.27	0.27	0.00	Gyrodata MS Gyro <17-1/2">(100'-446')
135.00	0.410	129.970	135.00	-0.24	-0.17	0.26	1699858.19	14308468.34	39°24'8.1433"N	80°47'22.4747"W	0.31	123.355	0.75	0.72	37.16	
160.00	0.460	135.650	160.00	-0.41	-0.30	0.40	1699858.33	14308468.21	39°24'8.1420"N	80°47'22.4729"W	0.50	127.007	0.26	0.20	22.72	
185.00	0.440	142.790	185.00	-0.59	-0.45	0.53	1699858.46	14308468.06	39°24'8.1406"N	80°47'22.4713"W	0.69	130.429	0.24	-0.08	28.56	
210.00	0.360	143.190	210.00	-0.75	-0.59	0.63	1699858.56	14308467.92	39°24'8.1392"N	80°47'22.4699"W	0.86	132.950	0.32	-0.32	1.60	
235.00	0.440	147.520	235.00	-0.92	-0.73	0.73	1699858.66	14308467.78	39°24'8.1378"N	80°47'22.4687"W	1.03	135.066	0.34	0.32	17.32	
260.00	0.450	143.780	260.00	-1.11	-0.89	0.84	1699858.77	14308467.62	39°24'8.1362"N	80°47'22.4673"W	1.22	136.732	0.12	0.04	-14.96	
285.00	0.440	160.970	285.00	-1.30	-1.06	0.93	1699858.86	14308467.45	39°24'8.1345"N	80°47'22.4662"W	1.41	138.824	0.53	-0.04	68.76	
310.00	0.450	161.990	309.99	-1.49	-1.24	0.99	1699858.92	14308467.27	39°24'8.1327"N	80°47'22.4654"W	1.59	141.520	0.05	0.04	4.08	
335.00	0.250	152.120	334.99	-1.64	-1.39	1.05	1699858.98	14308467.12	39°24'8.1313"N	80°47'22.4647"W	1.74	142.984	0.83	-0.80	-39.48	
360.00	0.380	184.390	359.99	-1.77	-1.52	1.06	1699858.99	14308466.99	39°24'8.1300"N	80°47'22.4644"W	1.85	144.947	0.86	0.52	129.08	
385.00	0.370	192.760	384.99	-1.92	-1.68	1.04	1699858.97	14308466.83	39°24'8.1284"N	80°47'22.4648"W	1.98	148.212	0.22	-0.04	33.48	
410.00	0.320	186.200	409.99	-2.05	-1.83	1.02	1699858.94	14308466.68	39°24'8.1269"N	80°47'22.4651"W	2.09	150.943	0.25	-0.20	-26.24	
435.00	0.280	199.020	434.99	-2.16	-1.95	0.99	1699858.92	14308466.56	39°24'8.1257"N	80°47'22.4654"W	2.19	153.188	0.31	-0.16	51.28	
456.00	0.310	206.930	455.99	-2.25	-2.05	0.95	1699858.87	14308466.46	39°24'8.1247"N	80°47'22.4660"W	2.26	155.283	0.24	0.14	37.67	
540.00	0.420	184.510	539.99	-2.69	-2.56	0.82	1699858.75	14308465.95	39°24'8.1196"N	80°47'22.4676"W	2.69	162.297	0.21	0.13	-26.69	Premier MWD <12-1/4">(446')(530'-3108')
632.00	1.170	139.750	631.98	-3.87	-3.62	1.40	1699859.33	14308464.90	39°24'8.1092"N	80°47'22.4603"W	3.88	158.856	1.00	0.82	-48.65	
725.00	2.670	137.790	724.93	-6.73	-5.95	3.47	1699861.40	14308462.57	39°24'8.0862"N	80°47'22.4340"W	6.88	149.748	1.61	1.61	-2.11	
817.00	4.260	140.550	816.76	-11.87	-10.17	7.08	1699865.01	14308458.34	39°24'8.0443"N	80°47'22.3881"W	12.39	145.165	1.74	1.73	3.00	
909.00	5.830	142.110	908.40	-19.45	-16.50	12.12	1699870.04	14308452.02	39°24'7.9817"N	80°47'22.3241"W	20.47	143.698	1.71	1.71	1.70	
1004.00	7.270	130.830	1002.78	-29.14	-24.24	19.63	1699877.55	14308444.28	39°24'7.9050"N	80°47'22.2286"W	31.19	140.992	2.03	1.52	-11.87	
1098.00	8.400	121.830	1095.90	-39.49	-31.75	29.97	1699887.88	14308436.78	39°24'7.8305"N	80°47'22.0972"W	43.66	136.652	1.77	1.20	-9.57	
1193.00	9.140	112.830	1189.80	-49.74	-38.33	42.82	1699900.73	14308430.19	39°24'7.7651"N	80°47'21.9337"W	57.47	131.838	1.64	0.78	-9.47	
1288.00	9.790	102.750	1283.51	-58.82	-43.04	57.65	1699915.56	14308425.48	39°24'7.7182"N	80°47'21.7449"W	71.95	126.747	1.87	0.68	-10.61	
1382.00	9.610	88.550	1376.18	-65.17	-44.61	73.29	1699931.19	14308423.92	39°24'7.7024"N	80°47'21.5457"W	85.80	121.328	2.55	-0.19	-15.11	
1477.00	10.450	74.260	1469.74	-67.80	-42.07	89.51	1699947.41	14308426.46	39°24'7.7271"N	80°47'21.3389"W	98.91	115.174	2.76	0.88	-15.04	
1572.00	12.270	66.680	1562.88	-67.24	-35.74	107.08	1699964.96	14308432.79	39°24'7.7893"N	80°47'21.1150"W	112.88	108.457	2.47	1.92	-7.98	
1666.00	14.420	66.100	1654.34	-65.14	-27.04	126.95	1699984.83	14308441.48	39°24'7.8748"N	80°47'20.8615"W	129.80	102.024	2.29	2.29	-0.62	



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
1761.00	17.310	68.680	1745.71	-63.15	-17.11	150.94	1700008.81	14308451.41	39°24'7.9724"N	80°47'20.5557"W	151.91	96.466	3.13	3.04	2.72	
1855.00	19.300	71.780	1834.95	-62.34	-7.16	178.72	1700036.58	14308461.35	39°24'8.0701"N	80°47'20.2014"W	178.87	92.296	2.36	2.12	3.30	
1950.00	21.450	73.670	1924.00	-62.84	2.63	210.31	1700068.16	14308471.14	39°24'8.1661"N	80°47'19.7988"W	210.33	89.284	2.37	2.26	1.99	
2044.00	23.370	77.630	2010.90	-65.23	11.46	245.02	1700102.85	14308479.96	39°24'8.2526"N	80°47'19.3563"W	245.29	87.323	2.60	2.04	4.21	
2139.00	25.290	80.370	2097.47	-70.10	18.89	283.44	1700141.25	14308487.39	39°24'8.3251"N	80°47'18.8667"W	284.06	86.187	2.34	2.02	2.88	
2233.00	26.050	82.520	2182.19	-76.86	24.93	323.70	1700181.50	14308493.43	39°24'8.3840"N	80°47'18.3537"W	324.66	85.595	1.28	0.81	2.29	
2328.00	24.850	82.390	2267.97	-84.34	30.29	364.17	1700221.95	14308498.79	39°24'8.4360"N	80°47'17.8380"W	365.42	85.245	1.26	-1.26	-0.14	
2422.00	26.470	82.010	2352.70	-91.62	35.82	404.49	1700262.26	14308504.32	39°24'8.4897"N	80°47'17.3241"W	406.08	84.939	1.73	1.72	-0.40	
2517.00	25.660	82.000	2438.03	-98.94	41.63	445.83	1700303.58	14308510.12	39°24'8.5461"N	80°47'16.7973"W	447.77	84.666	0.85	-0.85	-0.01	
2612.00	24.230	81.750	2524.17	-105.88	47.29	485.49	1700343.23	14308515.78	39°24'8.6011"N	80°47'16.2919"W	487.79	84.437	1.51	-1.51	-0.26	
2707.00	24.360	81.580	2610.76	-112.51	52.95	524.17	1700381.89	14308521.44	39°24'8.6562"N	80°47'15.7991"W	526.83	84.231	0.16	0.14	-0.18	
2802.00	23.940	82.650	2697.44	-119.40	58.29	562.66	1700420.37	14308526.78	39°24'8.7081"N	80°47'15.3085"W	565.67	84.086	0.64	-0.44	1.13	
2896.00	23.590	83.250	2783.47	-126.66	62.94	600.26	1700457.95	14308531.42	39°24'8.7532"N	80°47'14.8295"W	603.55	84.014	0.45	-0.37	0.64	
2991.00	24.390	82.670	2870.26	-134.07	67.68	638.59	1700496.27	14308536.16	39°24'8.7991"N	80°47'14.3410"W	642.17	83.951	0.88	0.84	-0.61	
3086.00	24.100	82.520	2956.88	-141.31	72.70	677.27	1700534.94	14308541.18	39°24'8.8479"N	80°47'13.8481"W	681.17	83.873	0.31	-0.31	-0.16	
3118.00	23.760	82.520	2986.13	-143.70	74.39	690.14	1700547.80	14308542.87	39°24'8.8643"N	80°47'13.6841"W	694.14	83.848	1.06	-1.06	0.00	
3221.00	22.740	81.780	3080.77	-150.94	79.94	730.42	1700588.06	14308548.42	39°24'8.9182"N	80°47'13.1708"W	734.78	83.754	1.03	-0.99	-0.72	APS EM <8-3/4">(3118')(3221'-6235')
3297.00	23.320	81.990	3150.71	-156.10	84.14	759.86	1700617.48	14308552.61	39°24'8.9589"N	80°47'12.7957"W	764.50	83.681	0.77	0.76	0.28	
3392.00	24.020	80.390	3237.72	-162.24	89.99	797.54	1700655.15	14308558.46	39°24'9.0159"N	80°47'12.3155"W	802.60	83.563	1.00	0.74	-1.68	
3489.00	22.790	77.060	3326.74	-166.85	97.49	835.32	1700692.92	14308565.96	39°24'9.0891"N	80°47'11.8340"W	840.99	83.343	1.86	-1.27	-3.43	
3584.00	23.640	80.010	3414.05	-171.19	104.91	872.01	1700729.59	14308573.38	39°24'9.1617"N	80°47'11.3664"W	878.30	83.140	1.52	0.89	3.11	
3679.00	24.310	81.180	3500.85	-177.03	111.22	910.09	1700767.66	14308579.68	39°24'9.2231"N	80°47'10.8810"W	916.86	83.033	0.86	0.71	1.23	
3773.00	24.350	78.990	3586.51	-182.54	117.88	948.24	1700805.79	14308586.35	39°24'9.2881"N	80°47'10.3949"W	955.53	82.913	0.96	0.04	-2.33	
3868.00	25.370	81.980	3672.71	-188.52	124.46	987.61	1700845.15	14308592.92	39°24'9.3522"N	80°47'9.8931"W	995.43	82.817	1.70	1.07	3.15	
3963.00	25.330	79.060	3758.56	-194.62	131.16	1027.72	1700885.24	14308599.62	39°24'9.4174"N	80°47'9.3820"W	1036.06	82.727	1.32	-0.04	-3.07	
4057.00	23.060	72.540	3844.31	-197.33	140.50	1065.04	1700922.54	14308608.96	39°24'9.5089"N	80°47'8.9063"W	1074.27	82.485	3.73	-2.41	-6.94	
4151.00	23.040	73.180	3930.81	-197.95	151.35	1100.21	1700957.70	14308619.80	39°24'9.6153"N	80°47'8.4580"W	1110.57	82.167	0.27	-0.02	0.68	
4245.00	24.530	78.230	4016.83	-200.51	160.65	1136.92	1700994.40	14308629.10	39°24'9.7064"N	80°47'7.9900"W	1148.22	81.957	2.68	1.59	5.37	
4340.00	23.510	79.400	4103.61	-205.16	168.16	1174.86	1701032.32	14308636.61	39°24'9.7797"N	80°47'7.5065"W	1186.83	81.854	1.18	-1.07	1.23	
4434.00	23.370	83.590	4189.85	-211.38	173.69	1211.81	1701069.26	14308642.13	39°24'9.8335"N	80°47'7.0355"W	1224.20	81.843	1.78	-0.15	4.46	



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
4528.00	23.420	83.250	4276.13	-218.84	177.97	1248.89	1701106.32	14308646.41	39°24'9.8749"N	80°47'6.5631"W	1261.51	81.890	0.15	0.05	-0.36	
4623.00	21.930	76.960	4383.79	-224.12	184.19	1284.93	1701142.35	14308652.63	39°24'9.9355"N	80°47'6.1038"W	1298.07	81.842	2.99	-1.57	-6.62	
4718.00	22.490	76.460	4451.75	-227.13	192.45	1319.88	1701177.28	14308660.88	39°24'10.0163"N	80°47'5.6583"W	1333.83	81.704	0.62	0.59	-0.53	
4813.00	24.530	77.940	4538.86	-230.65	200.83	1356.83	1701214.22	14308669.26	39°24'10.0982"N	80°47'5.1873"W	1371.61	81.581	2.24	2.15	1.56	
4908.00	24.040	76.050	4625.45	-234.12	209.61	1394.90	1701252.27	14308678.04	39°24'10.1842"N	80°47'4.7021"W	1410.56	81.454	0.97	-0.52	-1.99	
5003.00	23.630	74.930	4712.35	-236.53	219.23	1432.06	1701289.42	14308687.65	39°24'10.2783"N	80°47'4.2284"W	1448.75	81.296	0.64	-0.43	-1.18	
5097.00	23.970	82.200	4798.37	-240.94	226.72	1469.18	1701326.52	14308695.14	39°24'10.3515"N	80°47'3.7554"W	1486.57	81.228	3.14	0.36	7.73	
5191.00	24.230	84.950	4884.18	-248.71	231.01	1507.31	1701364.64	14308699.42	39°24'10.3930"N	80°47'3.2694"W	1524.91	81.287	1.23	0.28	2.93	
5286.00	23.150	77.700	4971.19	-255.00	236.70	1544.99	1701402.30	14308705.12	39°24'10.4484"N	80°47'2.7894"W	1563.01	81.290	3.27	-1.14	-7.63	
5380.00	22.980	79.310	5057.68	-259.23	244.04	1581.07	1701438.37	14308712.46	39°24'10.5201"N	80°47'2.3295"W	1599.79	81.225	0.69	-0.18	1.71	
5474.00	22.680	78.400	5144.32	-263.65	251.09	1616.85	1701474.14	14308719.50	39°24'10.5889"N	80°47'1.8734"W	1636.23	81.173	0.49	-0.32	-0.97	
5569.00	22.230	79.630	5232.11	-268.14	258.01	1652.47	1701509.74	14308726.42	39°24'10.6564"N	80°47'1.4194"W	1672.49	81.126	0.68	-0.47	1.29	
5664.00	22.370	80.920	5320.01	-273.39	264.10	1688.00	1701545.26	14308732.50	39°24'10.7157"N	80°47'0.9667"W	1708.53	81.108	0.54	0.15	1.36	
5759.00	23.330	82.110	5407.55	-279.56	269.53	1724.49	1701581.73	14308737.93	39°24'10.7686"N	80°47'0.5017"W	1745.42	81.117	1.12	1.01	1.25	
5856.00	23.230	80.150	5496.66	-285.71	275.44	1762.36	1701619.59	14308743.84	39°24'10.8261"N	80°47'0.0190"W	1783.75	81.117	0.81	-0.10	-2.02	
5951.00	23.830	75.010	5583.77	-289.44	283.61	1799.36	1701656.57	14308752.01	39°24'10.9060"N	80°46'59.5474"W	1821.57	81.043	2.25	0.63	-5.41	
6046.00	24.670	72.180	5670.39	-290.58	294.64	1836.78	1701693.97	14308763.03	39°24'11.0141"N	80°46'59.0705"W	1860.26	80.887	1.51	0.88	-2.98	
6141.00	26.440	53.600	5756.23	-284.03	313.29	1872.73	1701729.92	14308781.68	39°24'11.1976"N	80°46'58.6118"W	1898.76	80.503	8.61	1.86	-19.56	
6235.00	28.330	37.630	5839.81	-264.87	343.42	1903.24	1701760.41	14308811.79	39°24'11.4946"N	80°46'58.2223"W	1933.98	79.772	8.05	2.01	-16.99	
6277.00	27.630	28.510	5876.91	-252.56	359.88	1913.98	1701771.15	14308828.24	39°24'11.6570"N	80°46'58.0850"W	1947.52	79.351	10.31	-1.67	-21.71	BH AT Curve <8-1/2">(6235')(6277'-18162')
6371.00	24.910	26.420	5961.20	-223.47	396.77	1933.20	1701790.36	14308865.12	39°24'12.0212"N	80°46'57.8390"W	1973.49	78.402	3.06	-2.89	-2.22	
6466.00	28.440	20.420	6046.09	-191.49	435.90	1950.00	1701807.15	14308904.24	39°24'12.4076"N	80°46'57.6238"W	1998.12	77.399	4.67	3.72	-6.32	
6561.00	32.690	14.720	6127.89	-152.20	481.95	1964.42	1701821.57	14308950.26	39°24'12.8623"N	80°46'57.4387"W	2022.67	76.215	5.41	4.47	-6.00	
6655.00	38.980	8.460	6204.08	-104.36	535.81	1975.23	1701832.38	14309004.11	39°24'13.3944"N	80°46'57.2992"W	2046.62	74.823	7.74	6.69	-6.66	
6664.00†	39.826	7.758	6211.04	-99.23	541.47	1976.04	1701833.18	14309009.76	39°24'13.4503"N	80°46'57.2888"W	2048.88	74.676	10.62	9.40	-7.80	Middlesex: 6664' MD
6750.00	48.080	2.100	6272.92	-44.31	600.86	1980.94	1701838.08	14309069.13	39°24'14.0371"N	80°46'57.2246"W	2070.06	73.126	10.62	9.60	-6.58	
6845.00	55.450	351.090	6331.78	27.72	675.07	1976.16	1701833.30	14309143.31	39°24'14.7707"N	80°46'57.2832"W	2088.28	71.140	11.94	7.76	-11.59	
6869.00†	57.897	350.021	6344.97	47.54	694.85	1972.87	1701830.01	14309163.08	39°24'14.9663"N	80°46'57.3245"W	2091.65	70.598	10.85	10.20	-4.45	Burkett: 6869' MD
6892.00	60.250	349.050	6356.79	67.09	714.25	1969.28	1701826.43	14309182.47	39°24'15.1581"N	80°46'57.3696"W	2094.81	70.065	10.85	10.23	-4.22	
6927.00†	63.756	348.017	6373.22	97.79	744.53	1963.13	1701820.28	14309212.74	39°24'15.4576"N	80°46'57.4470"W	2099.58	69.231	10.35	10.02	-2.95	Tully: 6927' MD



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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	
6940.00	65.060	347.650	6378.83	109.45	755.99	1960.66	1701817.81	14309224.20	39°24'15.5709"N	80°46'57.4781"W	2101.36	68.914	10.35	10.03	-2.83		
6987.00	70.410	346.930	6396.63	152.74	798.40	1951.09	1701808.25	14309266.59	39°24'15.9903"N	80°46'57.5987"W	2108.13	67.745	11.47	11.38	-1.53		
7020.00†	71.658	345.164	6407.36	183.86	828.69	1943.57	1701800.72	14309296.87	39°24'16.2898"N	80°46'57.6937"W	2112.86	66.908	6.32	3.78	-5.35	Hamilton: 7020' MD	
7035.00	72.230	344.370	6412.01	198.10	842.45	1939.82	1701796.98	14309310.62	39°24'16.4259"N	80°46'57.7410"W	2114.86	66.525	6.32	3.82	-5.29		
7071.00†	74.794	343.149	6422.23	232.60	875.59	1930.16	1701787.33	14309343.75	39°24'16.7536"N	80°46'57.8630"W	2119.48	65.599	7.83	7.12	-3.39	Marcellus POE: 7071' MD	
7130.00	79.010	341.210	6435.60	290.05	930.28	1912.57	1701769.74	14309398.42	39°24'17.2946"N	80°46'58.0854"W	2126.82	64.062	7.83	7.15	-3.29		
7224.00	86.090	339.610	6447.78	383.16	1018.02	1881.33	1701738.52	14309486.13	39°24'18.1626"N	80°46'58.4807"W	2139.11	61.581	7.72	7.53	-1.70		
7319.00	90.770	337.830	6450.38	477.95	1106.49	1846.88	1701704.07	14309574.55	39°24'19.0377"N	80°46'58.9169"W	2152.97	59.074	5.27	4.93	-1.87		
7413.00	90.580	339.170	6449.27	571.78	1193.94	1812.43	1701669.64	14309661.97	39°24'19.9029"N	80°46'59.3531"W	2170.34	56.625	1.44	-0.20	1.43		
7508.00	90.710	339.400	6448.20	666.67	1282.79	1778.83	1701636.05	14309750.79	39°24'20.7818"N	80°46'59.7784"W	2193.12	54.203	0.28	0.14	0.24		
7604.00	91.480	338.320	6446.37	762.52	1372.31	1744.21	1701601.45	14309840.27	39°24'21.6674"N	80°47'0.2167"W	2219.35	51.805	1.38	0.80	-1.12		
7699.00	90.890	341.990	6444.40	857.44	1461.63	1711.98	1701569.23	14309929.56	39°24'22.5510"N	80°47'0.6246"W	2251.05	49.510	3.91	-0.62	3.86		
7793.00	90.580	344.440	6443.20	951.40	1551.61	1684.84	1701542.10	14310019.51	39°24'23.4410"N	80°47'0.9676"W	2290.45	47.357	2.63	-0.33	2.61		
7888.00	90.310	345.940	6442.46	1046.23	1643.45	1660.55	1701517.82	14310111.31	39°24'24.3493"N	80°47'1.2742"W	2336.32	45.297	1.60	-0.28	1.58		
7982.00	90.220	347.240	6442.02	1139.92	1734.89	1638.75	1701496.03	14310202.71	39°24'25.2535"N	80°47'1.5491"W	2386.49	43.368	1.39	-0.10	1.38		
8077.00	90.550	348.910	6441.38	1234.36	1827.83	1619.13	1701476.41	14310295.61	39°24'26.1725"N	80°47'1.7963"W	2441.83	41.535	1.79	0.35	1.76		
8170.00	90.280	350.660	6440.71	1326.47	1919.35	1602.63	1701459.93	14310387.10	39°24'27.0775"N	80°47'2.0036"W	2500.47	39.861	1.90	-0.29	1.88		
8265.00	90.310	348.820	6440.22	1420.58	2012.83	1585.71	1701443.01	14310480.54	39°24'28.0017"N	80°47'2.2164"W	2562.41	38.231	1.94	0.03	-1.94		
8360.00	90.460	343.040	6439.58	1515.30	2104.94	1562.63	1701419.94	14310572.61	39°24'28.9126"N	80°47'2.5076"W	2621.56	36.589	6.09	0.16	-6.08		
8454.00	90.370	338.550	6438.90	1609.26	2193.68	1531.72	1701389.04	14310661.32	39°24'29.7905"N	80°47'2.8988"W	2675.52	34.924	4.78	-0.10	-4.78		
8549.00	90.250	337.020	6438.39	1704.01	2281.62	1495.80	1701353.13	14310749.23	39°24'30.6605"N	80°47'3.3537"W	2728.23	33.248	1.62	-0.13	-1.61		
8643.00	89.910	339.780	6438.26	1797.82	2369.01	1461.20	1701318.55	14310836.58	39°24'31.5250"N	80°47'3.7918"W	2783.40	31.666	2.96	-0.36	2.94		
8738.00	90.090	341.410	6438.26	1892.80	2458.61	1429.64	1701287.00	14310926.15	39°24'32.4114"N	80°47'4.1912"W	2844.06	30.177	1.73	0.19	1.72		
8833.00	89.910	338.660	6438.26	1987.74	2547.90	1397.20	1701254.58	14311015.39	39°24'33.2945"N	80°47'4.6017"W	2905.85	28.739	2.90	-0.19	-2.89		
8927.00	90.090	336.370	6438.26	2081.46	2634.74	1361.26	1701218.64	14311102.21	39°24'34.1537"N	80°47'5.0570"W	2965.62	27.323	2.44	0.19	-2.44		
9022.00	90.000	337.440	6438.18	2176.09	2722.13	1323.99	1701181.40	14311189.56	39°24'35.0183"N	80°47'5.5291"W	3027.04	25.937	1.13	-0.09	1.13		
9117.00	89.720	337.530	6438.41	2270.81	2809.89	1287.61	1701145.03	14311277.28	39°24'35.8865"N	80°47'5.9899"W	3090.86	24.619	0.31	-0.29	0.09		
9211.00	89.660	336.900	6438.92	2364.50	2896.55	1251.21	1701108.64	14311363.91	39°24'36.7439"N	80°47'6.4511"W	3155.24	23.363	0.67	-0.06	-0.67		
9306.00	89.690	338.120	6439.46	2459.21	2984.32	1214.87	1701072.32	14311451.65	39°24'37.6122"N	80°47'6.9114"W	3222.13	22.151	1.28	0.03	1.28		
9401.00	90.460	344.220	6439.34	2554.16	3074.20	1184.23	1701041.68	14311541.48	39°24'38.5012"N	80°47'7.2991"W	3294.40	21.067	6.47	0.81	6.42		



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
9495.00	90.220	350.080	6438.78	2647.72	3165.80	1163.33	1701020.80	14311633.05	39°24'39.4071"N	80°47'7.5626"W	3372.78	20.177	6.24	-0.26	6.23	
9590.00	90.340	348.770	6438.31	2741.90	3259.18	1145.90	1701003.37	14311726.40	39°24'40.3304"N	80°47'7.7818"W	3454.76	19.371	1.38	0.13	-1.38	
9684.00	89.850	342.270	6438.16	2835.66	3350.15	1122.40	1700979.89	14311817.32	39°24'41.2300"N	80°47'8.0784"W	3533.17	18.522	6.93	-0.52	-6.91	
9779.00	89.970	341.940	6438.31	2930.66	3440.55	1093.21	1700950.71	14311907.69	39°24'42.1242"N	80°47'8.4476"W	3610.06	17.627	0.37	0.13	-0.35	
9873.00	89.510	344.860	6438.73	3024.62	3530.82	1066.36	1700923.87	14311997.73	39°24'43.0151"N	80°47'8.7869"W	3688.15	16.806	3.14	-0.49	3.11	
9968.00	90.430	347.250	6438.78	3119.36	3622.82	1043.47	1700900.98	14312089.88	39°24'43.9268"N	80°47'9.0758"W	3770.10	16.068	2.70	0.97	2.52	
10063.00	89.850	345.540	6438.55	3214.07	3715.15	1021.12	1700878.65	14312182.18	39°24'44.8399"N	80°47'9.3577"W	3852.92	15.368	1.90	-0.81	-1.80	
10158.00	90.220	342.150	6438.49	3309.00	3806.38	994.70	1700852.23	14312273.38	39°24'45.7422"N	80°47'9.6917"W	3934.20	14.645	3.59	0.39	-3.57	
10253.00	90.340	339.940	6438.03	3403.98	3896.22	963.84	1700821.39	14312363.18	39°24'46.6309"N	80°47'10.0821"W	4013.67	13.895	2.33	0.13	-2.33	
10348.00	90.400	339.900	6437.42	3498.92	3985.45	931.22	1700788.78	14312452.37	39°24'47.5135"N	80°47'10.4950"W	4092.79	13.152	0.08	0.06	-0.04	
10443.00	90.430	338.470	6436.73	3593.81	4074.24	897.47	1700755.04	14312541.13	39°24'48.3919"N	80°47'10.9224"W	4171.92	12.423	1.51	0.03	-1.51	
10538.00	90.520	338.060	6435.94	3688.61	4162.48	862.29	1700719.88	14312629.34	39°24'49.2649"N	80°47'11.3679"W	4250.86	11.704	0.44	0.09	-0.43	
10633.00	90.620	337.640	6435.00	3783.37	4250.47	826.47	1700684.07	14312717.29	39°24'50.1353"N	80°47'11.8216"W	4330.07	11.003	0.45	0.11	-0.44	
10727.00	90.490	337.380	6434.08	3877.09	4337.32	790.52	1700648.13	14312804.10	39°24'50.9945"N	80°47'12.2771"W	4408.77	10.329	0.31	-0.14	-0.28	
10822.00	90.490	337.120	6433.27	3971.78	4424.92	753.78	1700611.41	14312891.67	39°24'51.8612"N	80°47'12.7425"W	4488.67	9.667	0.27	0.00	-0.27	
10917.00	90.580	340.120	6432.39	4066.60	4513.37	719.15	1700576.80	14312980.08	39°24'52.7362"N	80°47'13.1810"W	4570.31	9.053	3.16	0.09	3.16	
11011.00	90.650	343.330	6431.38	4160.59	4602.61	689.68	1700547.34	14313069.29	39°24'53.6189"N	80°47'13.5539"W	4654.00	8.522	3.42	0.07	3.41	
11105.00	90.520	344.870	6430.42	4254.51	4693.01	663.93	1700521.60	14313159.65	39°24'54.5129"N	80°47'13.8792"W	4739.74	8.052	1.64	-0.14	1.64	
11200.00	90.430	345.050	6429.63	4349.37	4784.75	639.28	1700496.96	14313251.36	39°24'55.4202"N	80°47'14.1906"W	4827.27	7.610	0.21	-0.09	0.19	
11295.00	89.720	345.310	6429.50	4444.21	4876.59	614.98	1700472.67	14313343.16	39°24'56.3285"N	80°47'14.4974"W	4915.21	7.188	0.80	-0.75	0.27	
11390.00	89.260	345.220	6430.35	4539.05	4968.46	590.82	1700448.52	14313434.99	39°24'57.2370"N	80°47'14.8025"W	5003.47	6.781	0.49	-0.48	-0.09	
11484.00	89.480	342.860	6431.38	4632.97	5058.83	564.98	1700422.68	14313525.32	39°24'58.1308"N	80°47'15.1291"W	5090.28	6.372	2.52	0.23	-2.51	
11579.00	89.510	341.420	6432.22	4727.96	5149.24	535.84	1700393.56	14313615.70	39°24'59.0251"N	80°47'15.4976"W	5177.05	5.941	1.52	0.03	-1.52	
11674.00	89.420	340.580	6433.11	4822.94	5239.06	504.92	1700362.65	14313705.49	39°24'59.9135"N	80°47'15.8889"W	5263.34	5.505	0.89	-0.09	-0.88	
11769.00	89.480	342.480	6434.02	4917.93	5329.16	474.82	1700332.56	14313795.55	39°25'0.8047"N	80°47'16.2697"W	5350.27	5.092	2.00	0.06	2.00	
11864.00	89.380	341.840	6434.96	5012.93	5419.59	445.72	1700303.47	14313885.94	39°25'1.6991"N	80°47'16.6378"W	5437.88	4.702	0.68	-0.11	-0.67	
11958.00	89.350	340.700	6436.01	5106.92	5508.60	415.54	1700273.30	14313974.92	39°25'2.5796"N	80°47'17.0197"W	5524.25	4.314	1.21	-0.03	-1.21	
12053.00	89.450	339.980	6437.00	5201.87	5598.06	383.58	1700241.36	14314064.34	39°25'3.4645"N	80°47'17.4242"W	5611.18	3.920	0.77	0.11	-0.76	
12147.00	89.260	339.680	6438.06	5295.81	5686.29	351.17	1700208.96	14314152.54	39°25'4.3372"N	80°47'17.8345"W	5697.12	3.534	0.38	-0.20	-0.32	
12242.00	89.290	339.450	6439.26	5390.72	5775.30	318.00	1700175.81	14314241.51	39°25'5.2178"N	80°47'18.2545"W	5784.05	3.152	0.24	0.03	-0.24	



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
12336.00	89.350	339.210	6440.38	5484.62	5863.25	284.82	1700142.64	14314329.42	39°25'6.0877"N	80°47'18.6746"W	5870.16	2.781	0.26	0.06	-0.26	
12431.00	90.060	338.620	6440.87	5579.49	5951.88	250.65	1700108.48	14314418.02	39°25'6.9646"N	80°47'19.1074"W	5957.16	2.411	0.97	0.75	-0.62	
12526.00	89.940	339.260	6440.87	5674.36	6040.54	216.51	1700074.35	14314506.64	39°25'7.8416"N	80°47'19.5397"W	6044.42	2.053	0.69	-0.13	0.67	
12621.00	89.820	340.950	6441.07	5769.31	6129.86	184.18	1700042.04	14314595.93	39°25'8.7252"N	80°47'19.9490"W	6132.63	1.721	1.78	-0.13	1.78	
12716.00	89.690	341.490	6441.47	5864.30	6219.80	153.60	1700011.47	14314685.84	39°25'9.6148"N	80°47'20.3360"W	6221.70	1.415	0.58	-0.14	0.57	
12810.00	89.970	342.700	6441.75	5958.30	6309.25	124.70	1699982.58	14314775.25	39°25'10.4995"N	80°47'20.7016"W	6310.48	1.132	1.32	0.30	1.29	
12905.00	89.850	344.740	6441.90	6053.25	6400.44	98.07	1699955.96	14314866.40	39°25'11.4014"N	80°47'21.0382"W	6401.19	0.878	2.15	-0.13	2.15	
12999.00	89.780	344.000	6442.20	6147.16	6490.96	72.75	1699930.65	14314956.89	39°25'12.2966"N	80°47'21.3582"W	6491.37	0.642	0.79	-0.07	-0.79	
13094.00	90.090	341.890	6442.31	6242.14	6581.78	44.89	1699902.80	14315047.67	39°25'13.1948"N	80°47'21.7105"W	6581.93	0.391	2.24	0.33	-2.22	
13188.00	89.600	341.490	6442.57	6336.13	6671.02	15.35	1699873.28	14315136.87	39°25'14.0775"N	80°47'22.0841"W	6671.03	0.132	0.67	-0.52	-0.43	
13283.00	89.970	341.490	6442.92	6431.13	6761.10	-14.80	1699843.13	14315226.92	39°25'14.9686"N	80°47'22.4657"W	6761.12	359.875	0.39	0.39	0.00	
13378.00	90.120	341.190	6442.85	6526.13	6851.11	-45.20	1699812.75	14315316.89	39°25'15.8588"N	80°47'22.8504"W	6851.26	359.622	0.35	0.16	-0.32	
13472.00	89.540	340.770	6443.13	6620.11	6939.97	-75.83	1699782.13	14315405.72	39°25'16.7379"N	80°47'23.2381"W	6940.39	359.374	0.76	-0.62	-0.45	
13567.00	89.450	341.150	6443.96	6715.10	7029.77	-106.82	1699751.15	14315495.48	39°25'17.6261"N	80°47'23.6303"W	7030.58	359.129	0.41	-0.09	0.40	
13661.00	89.660	342.180	6444.69	6809.09	7119.00	-136.39	1699721.59	14315584.67	39°25'18.5086"N	80°47'24.0044"W	7120.30	358.902	1.12	0.22	1.10	
13756.00	89.850	344.100	6445.10	6904.06	7209.91	-163.94	1699694.05	14315675.55	39°25'19.4078"N	80°47'24.3528"W	7211.77	358.697	2.03	0.20	2.02	
13851.00	89.600	345.450	6445.56	6998.94	7301.57	-188.89	1699669.11	14315767.17	39°25'20.3143"N	80°47'24.6680"W	7304.01	358.518	1.45	-0.26	1.42	
13945.00	89.600	345.430	6446.21	7092.76	7392.55	-212.52	1699645.49	14315858.12	39°25'21.2140"N	80°47'24.9664"W	7395.60	358.353	0.02	0.00	-0.02	
14040.00	89.820	343.870	6446.69	7187.65	7484.16	-237.67	1699620.36	14315949.69	39°25'22.1200"N	80°47'25.2841"W	7487.93	358.181	1.66	0.23	-1.64	
14134.00	89.540	341.280	6447.22	7281.63	7573.83	-265.82	1699592.22	14316039.33	39°25'23.0070"N	80°47'25.6401"W	7578.50	357.990	2.77	-0.30	-2.76	
14229.00	89.290	338.190	6448.19	7376.55	7662.94	-298.71	1699559.33	14316128.40	39°25'23.8884"N	80°47'26.0567"W	7668.76	357.768	3.26	-0.26	-3.25	
14323.00	89.570	338.520	6449.12	7470.36	7750.30	-333.38	1699524.68	14316215.73	39°25'24.7527"N	80°47'26.4959"W	7757.47	357.537	0.46	0.30	0.35	
14418.00	89.630	340.280	6449.79	7565.26	7839.22	-366.81	1699491.27	14316304.62	39°25'25.6323"N	80°47'26.9192"W	7847.80	357.321	1.85	0.06	1.85	
14512.00	89.540	342.220	6450.47	7659.25	7928.23	-397.02	1699461.07	14316393.58	39°25'26.5126"N	80°47'27.3016"W	7938.16	357.133	2.07	-0.10	2.06	
14607.00	89.570	343.820	6451.21	7754.23	8019.08	-424.76	1699433.34	14316484.40	39°25'27.4112"N	80°47'27.6524"W	8030.32	356.968	1.68	0.03	1.68	
14701.00	90.490	347.330	6451.16	7848.02	8110.10	-448.17	1699409.93	14316575.39	39°25'28.3114"N	80°47'27.9481"W	8122.48	356.837	3.86	0.98	3.73	
14796.00	90.150	348.440	6450.63	7942.50	8202.99	-468.11	1699390.00	14316668.23	39°25'29.2298"N	80°47'28.1994"W	8216.33	356.734	1.22	-0.36	1.17	
14890.00	89.660	346.740	6450.78	8036.03	8294.78	-488.31	1699369.81	14316759.99	39°25'30.1376"N	80°47'28.4541"W	8309.15	356.631	1.88	-0.52	-1.81	
14985.00	90.060	344.270	6451.01	8130.84	8386.75	-512.09	1699346.05	14316851.93	39°25'31.0471"N	80°47'28.7543"W	8402.37	356.506	2.63	0.42	-2.60	
15080.00	89.940	341.220	6451.01	8225.81	8477.47	-540.26	1699317.88	14316942.60	39°25'31.9443"N	80°47'29.1107"W	8494.67	356.353	3.21	-0.13	-3.21	



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
15174.00	89.880	338.080	6451.16	8319.73	8565.59	-572.95	1699285.21	14317030.69	39°25'32.8160"N	80°47'29.5246"W	8584.73	356.173	3.34	-0.06	-3.34	
15269.00	89.720	336.020	6451.49	8414.38	8653.06	-609.99	1699248.18	14317118.13	39°25'33.6814"N	80°47'29.9941"W	8674.54	355.968	2.17	-0.17	-2.17	
15364.00	89.720	336.030	6451.96	8508.88	8739.87	-648.59	1699209.60	14317204.90	39°25'34.5402"N	80°47'30.4834"W	8763.90	355.756	0.01	0.00	0.01	
15459.00	90.220	339.950	6452.01	8603.64	8827.93	-684.19	1699174.01	14317292.92	39°25'35.4113"N	80°47'30.9345"W	8854.40	355.568	4.16	0.53	4.13	
15553.00	90.150	341.230	6451.70	8697.62	8916.58	-715.43	1699142.79	14317381.54	39°25'36.2882"N	80°47'31.3299"W	8945.24	355.413	1.36	-0.07	1.36	
15648.00	89.820	341.050	6451.73	8792.61	9006.48	-746.14	1699112.09	14317471.41	39°25'37.1775"N	80°47'31.7186"W	9037.33	355.264	0.40	-0.35	-0.19	
15743.00	89.820	339.990	6452.03	8887.58	9096.04	-777.81	1699080.42	14317560.93	39°25'38.0634"N	80°47'32.1197"W	9129.24	355.112	1.12	0.00	-1.12	
15837.00	89.660	339.030	6452.45	8981.49	9184.09	-810.72	1699047.53	14317648.95	39°25'38.9343"N	80°47'32.5364"W	9219.80	354.955	1.04	-0.17	-1.02	
15933.00	90.090	339.620	6452.66	9077.40	9273.91	-844.61	1699013.65	14317738.73	39°25'39.8228"N	80°47'32.9657"W	9312.29	354.796	0.76	0.45	0.61	
16027.00	89.910	341.260	6452.66	9171.38	9362.48	-876.08	1698982.20	14317827.26	39°25'40.6989"N	80°47'33.3642"W	9403.38	354.654	1.76	-0.19	1.74	
16121.00	90.180	341.780	6452.59	9265.36	9451.63	-905.88	1698952.41	14317916.38	39°25'41.5807"N	80°47'33.7412"W	9494.94	354.525	0.62	0.29	0.55	
16217.00	89.750	342.920	6452.65	9361.36	9543.11	-934.98	1698923.32	14318007.82	39°25'42.4855"N	80°47'34.1095"W	9588.81	354.404	1.27	-0.45	1.19	
16311.00	90.310	344.010	6452.60	9455.32	9633.22	-961.74	1698896.58	14318097.90	39°25'43.3768"N	80°47'34.4478"W	9681.11	354.299	1.30	0.60	1.16	
16406.00	89.780	344.470	6452.52	9550.24	9724.65	-987.54	1698870.78	14318189.29	39°25'44.2810"N	80°47'34.7739"W	9774.66	354.201	0.74	-0.56	0.48	
16500.00	90.120	344.620	6452.61	9644.14	9815.25	-1012.59	1698845.75	14318279.86	39°25'45.1770"N	80°47'35.0905"W	9867.35	354.110	0.40	0.36	0.16	
16594.00	89.780	344.120	6452.69	9738.05	9905.78	-1037.91	1698820.43	14318370.34	39°25'46.0722"N	80°47'35.4106"W	9960.00	354.018	0.64	-0.36	-0.53	
16689.00	89.820	343.330	6453.02	9833.00	9996.97	-1064.54	1698793.82	14318461.50	39°25'46.9741"N	80°47'35.7472"W	10053.49	353.922	0.83	0.04	-0.83	
16784.00	89.880	343.030	6453.27	9927.98	10087.90	-1092.03	1698766.34	14318552.40	39°25'47.8735"N	80°47'36.0949"W	10146.84	353.822	0.32	0.06	-0.32	
16879.00	89.780	342.730	6453.55	10022.96	10178.69	-1119.99	1698738.38	14318643.15	39°25'48.7715"N	80°47'36.4486"W	10240.13	353.721	0.33	-0.11	-0.32	
16973.00	90.000	342.930	6453.73	10116.95	10268.50	-1147.74	1698710.65	14318732.93	39°25'49.6597"N	80°47'36.7996"W	10332.45	353.622	0.32	0.23	0.21	
17068.00	89.970	342.960	6453.76	10211.93	10359.33	-1175.60	1698682.79	14318823.71	39°25'50.5580"N	80°47'37.1521"W	10425.82	353.526	0.04	-0.03	0.03	
17162.00	90.030	343.930	6453.76	10305.90	10449.43	-1202.39	1698656.02	14318913.78	39°25'51.4491"N	80°47'37.4908"W	10518.38	353.436	1.03	0.06	1.03	
17257.00	89.820	344.910	6453.88	10400.81	10540.94	-1227.90	1698630.52	14319005.25	39°25'52.3541"N	80°47'37.8133"W	10612.21	353.356	1.05	-0.22	1.03	
17351.00	90.180	345.020	6453.88	10494.67	10631.72	-1252.29	1698606.14	14319096.00	39°25'53.2519"N	80°47'38.1214"W	10705.22	353.282	0.40	0.38	0.12	
17446.00	90.430	343.780	6453.37	10589.58	10723.22	-1277.83	1698580.61	14319187.46	39°25'54.1568"N	80°47'38.4443"W	10799.08	353.204	1.33	0.26	-1.31	
17541.00	90.280	343.100	6452.79	10684.54	10814.27	-1304.91	1698553.54	14319278.48	39°25'55.0574"N	80°47'38.7867"W	10892.72	353.120	0.73	-0.16	-0.72	
17635.00	90.250	342.930	6452.35	10778.52	10904.17	-1332.37	1698526.09	14319368.34	39°25'55.9465"N	80°47'39.1341"W	10985.27	353.034	0.18	-0.03	-0.18	
17730.00	90.120	342.350	6452.04	10873.51	10994.84	-1360.71	1698497.76	14319458.98	39°25'56.8433"N	80°47'39.4927"W	11078.72	352.945	0.63	-0.14	-0.61	
17825.00	90.180	341.690	6451.80	10968.51	11085.20	-1390.04	1698468.44	14319549.30	39°25'57.7370"N	80°47'39.8638"W	11172.02	352.853	0.70	0.06	-0.69	
17920.00	90.310	341.090	6451.39	11063.51	11175.23	-1420.36	1698438.14	14319639.30	39°25'58.6275"N	80°47'40.2475"W	11265.14	352.757	0.65	0.14	-0.63	



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (214 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
18015.00	90.090	340.900	6451.06	11158.49	11265.06	-1451.29	1698407.22	14319729.08	39°25'59.5160"N	80°47'40.6392"W	11358.16	352.659	0.31	-0.23	-0.20	
18109.00	90.120	340.480	6450.89	11252.47	11353.77	-1482.38	1698376.14	14319817.76	39°26'0.3934"N	80°47'41.0328"W	11450.13	352.561	0.45	0.03	-0.45	
18162.00	90.310	340.630	6450.69	11305.46	11403.74	-1500.02	1698358.51	14319867.72	39°26'0.8878"N	80°47'41.2562"W	11501.97	352.506	0.46	0.36	0.28	
18186.00‡	90.310	340.630	6450.56	11329.45	11426.38	-1507.98	1698350.55	14319890.35	39°26'1.1117"N	80°47'41.3570"W	11525.46	352.482	0.00	0.00	0.00	Projected MD at TD: 18186' MD

HOLE & CASING SECTIONS - Ref Wellbore: Bronco Unit 1H AWB Ref Wellpath: Bronco Unit 1H AWP Proj: 18186'									
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	-0.08	0.13
17.5in Open Hole	105.00	446.00	341.00	105.00	445.99	-0.08	0.13	-2.01	0.97
13.375in Casing Surface	25.00	446.00	421.00	25.00	445.99	0.00	0.00	-2.01	0.97
12.25in Open Hole	446.00	3205.00	2759.00	445.99	3066.02	-2.01	0.97	79.06	724.28
9.625in Casing Intermediate	25.00	3205.00	3180.00	25.00	3066.02	0.00	0.00	79.06	724.28
8.75in Open Hole	3205.00	6303.00	3098.00	3066.02	5900.03	79.06	724.28	370.36	1919.61
8.5in Open Hole	6303.00	18186.00	11883.00	5900.03	6450.56	370.36	1919.61	11426.38	-1507.98
5.5in Casing Production	25.00	18186.00	18161.00	25.00	6450.56	0.00	0.00	11426.38	-1507.98



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Bronco Unit 1H - POE - Rev-2	6429.00	883.37	1914.41	1701771.58	14309351.53	39°24'16.8310"N	80°46'58.0634"W	point
Bronco Unit 1H - BHL - Rev-4	6455.00	11424.05	-1530.58	1698327.96	14319888.01	39°26'1.0892"N	80°47'41.6451"W	point
Bronco Unit 1H - LP - Rev-3	6455.00	1065.13	1855.01	1701712.20	14309533.22	39°24'18.6288"N	80°46'58.8146"W	point
Bronco Unit 1H - 50' L/R Hardline	6500.00	6153.71	191.92	1700049.77	14314619.77	39°25'8.9607"N	80°47'19.8497"W	rectangle
2D Rectangle 11091.7 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Bronco Unit 1H AWB Ref Wellpath: Bronco Unit 1H AWP Proj: 18186'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.00	456.00	Gyrodata 2015 - GC+WMR+DPIPE	01 Gyrodata MS Gyro <17-1/2">(100'-446')	Bronco Unit 1H AWB	1/30/2020
456.00	3118.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12-1/4">(446')(530'-3108')	Bronco Unit 1H AWB	1/30/2020
3118.00	6235.00	BH NaviTrak (2019) (Axial)	03 APS EM <8-3/4">(3118')(3221'-6235')	Bronco Unit 1H AWB	2/25/2020
6235.00	18186.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8-1/2">(6235')(6277'-18162')	Bronco Unit 1H AWB	2/25/2020



Actual Wellpath Report

Bronco Unit 1H AWP Proj: 18186'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Bronco Unit 1H
Field	Tyler	API	47-095-02660-0000
Facility	Colorado West Pad	Wellbore	Bronco Unit 1H AWB
Slot	Slot #07		

COMMENTS
<p>Wellpath general comments API: 47-095-02660-0000 BHI Job #: 110283382A Rig: Patterson 342 Duration: 02/29/2020-03/05/2020 Gyrodatta MS Gyro <17-1/2">(100'-446') Premier MWD <12-1/4">(446')(530'-3108') APS EM <8-3/4">(3118')(3221'-6235') BH AT Curve <8-1/2">(6235')(6277'-18162') Middlesex: 6664' MD Burkett: 6869' MD Tully: 6927' MD Hamilton: 7020' MD Marcellus POE: 7071' MD Projected MD at TD: 18186' MD</p>