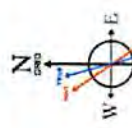


ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Edna Monroe Pad
 Slot: Slot #09
 Well: Bead Unit 1H
 Wellbore: Bead Unit 1H PWB



API: 47-095-02370-0000
 BHI Job #: 8381897
 Rig: Patterson 343
 Duration: 02/05/2017-02/09/2017



Use specified (NAD83) Ell. 68.76" Feet 52116.07
 Magnetic North is 7.59 degrees West of True North (at 03.Feb.2017)
 Grid North is 0.05 degrees East of True North
 To convert from Magnetic to Grid subtract 1.67 degrees
 To correct azimuth from Magnetic to Grid subtract 1.67 degrees

Plot reference wellbore is Bead Unit 1H PWB Rev-A.0

True vertical depths are referenced to Patterson 343 (RKB)

Measured depths are referenced to Patterson 343 (RKB)

Patterson 343 (RKB) to Mean Sea Level: 1069 feet

Mean Sea Level to Mud line (At Slot Slot #09) - 1044 feet

Coordinates are in feet referenced to Slot

Grid System: NAD27 / UTM Zone 17 North, US feet

* Wellbore was transformed from a different geoidetic datum

North Reference: Grid north

Scale: True distance

Drifts are in feet

Created by: delmont on 2017-02-15

Databases: WA, MPL, ELEMUS, Deth

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Edna Monroe Pad	1676162.158	14315855.438	39°25'21.620"N	80°52'24.070"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Grid East (US ft)
Slot #09	-39.45	5.54	14315816.000	39°25'21.230"N
Comment	Bead Unit 1H			
Patterson 343 (RKB) to Mud line (At Slot Slot #09)				
Mean Sea Level to Mud line (At Slot Slot #09)				
Patterson 343 (RKB) to Mean Sea Level				

Well Profile Data

Design Comment	MD (ft)	Az (°)	Inc (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
The Ch	5583.00	9.250	295.660	5585.80	183.13	-519.66	0.00	-346.69
Prop. to Bottom	5753.00	10.040	296.220	5705.40	196.21	-544.95	0.52	-387.49
End of Tangent	5801.75	10.040	296.220	5751.40	199.96	-552.58	0.00	-373.58
End of 3D Arc	6039.73	13.036	199.180	5966.11	182.49	-580.63	7.50	-366.52
POE	6764.29	73.792	160.415	6492.00	-273.43	-481.78	8.75	96.16
Landing Pt.	6943.81	89.500	160.415	6518.00	-440.24	-422.43	8.75	273.22
BHL	19398.81	89.500	160.415	6626.69	-12174.20	3752.45	0.00	12727.75

Well Data

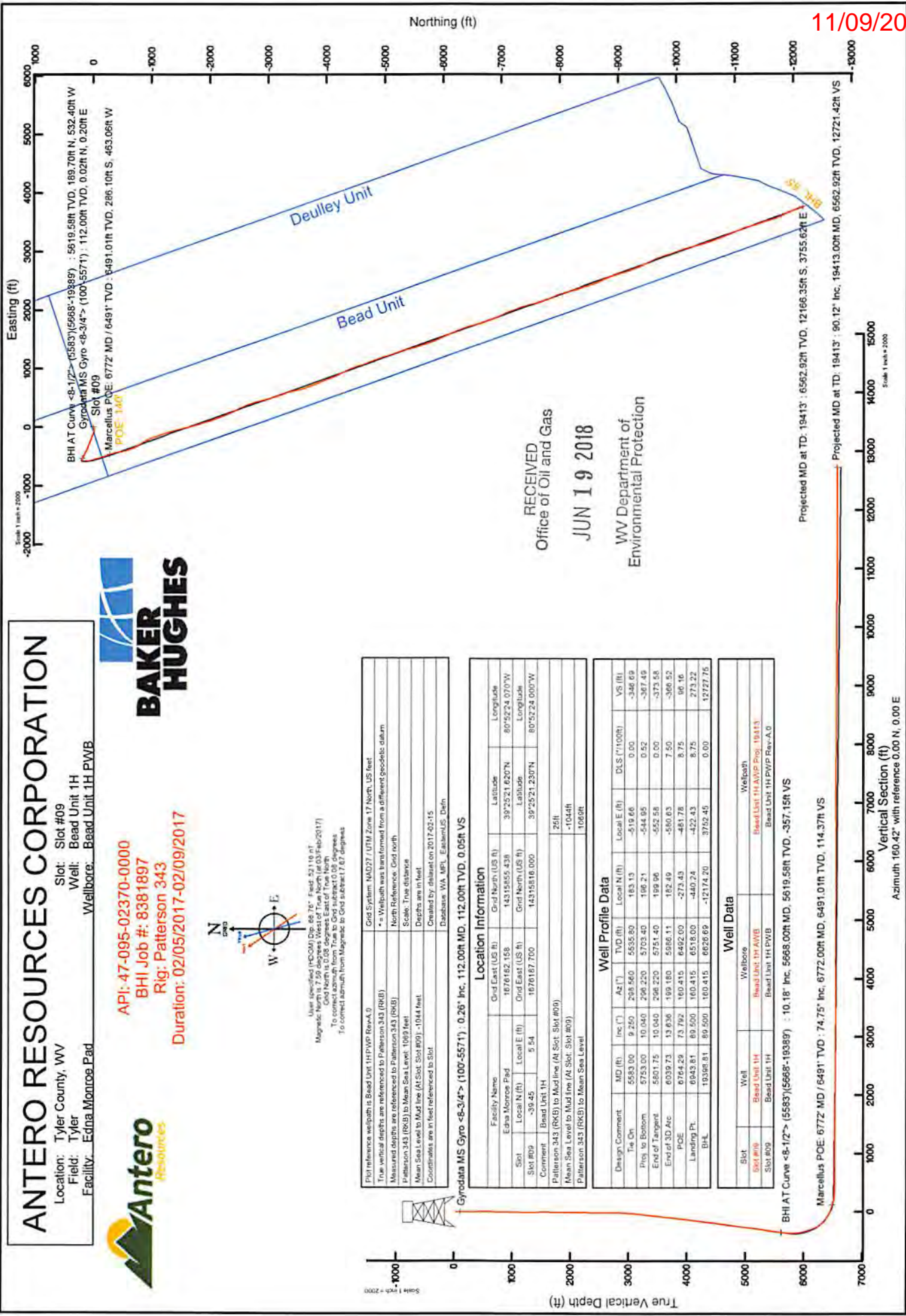
Slot	Well	Wellbore
Slot #09	Bead Unit 1H	Bead Unit 1H AWP Prop. 19413
Slot #09	Bead Unit 1H	Bead Unit 1H PWB Rev-A.0

BHI AT Curve <8-1/2"> (5583)(5668-19389) : 10.18" Inc, 5668.00ft MD, 5619.58ft TVD, -357.15ft VS

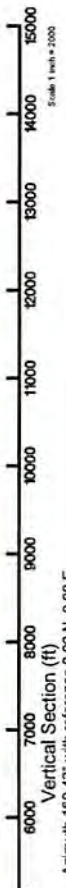
Marcellus POE: 6772' MD / 6491' TVD, 74.75" Inc, 6772.00ft MD, 6491.01ft TVD, 114.37ft VS

Projected MD at TD: 19413' : 6562.92ft TVD, 12166.35ft S, 3755.62ft E

Projected MD at TD: 19413' : 90.12" Inc, 19413.00ft MD, 6562.92ft TVD, 12721.42ft VS



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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Bead Unit 1H
Field	Tyler	Wellbore	Bead Unit 1H AWB
Facility	Edna Monroe Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	15/Feb/2017 at 11:09
Convergence at slot	0.09° East	Database/Source file	WA_MPL_EasternUS_Defn/Bead_Unit_1H_AWP_Proj_19413_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-39.45	5.54	1676187.70	14315816.00	39°25'21.230"N	80°52'24.000"W
Facility Reference Pt			1676182.16	14315855.44	39°25'21.620"N	80°52'24.070"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 343 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 343 (RKB) to Mean Sea Level	1069.00ft
Vertical Reference Pt	Patterson 343 (RKB)	Patterson 343 (RKB) to Mud Line at Slot (Slot #09)	25.00ft
MD Reference Pt	Patterson 343 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.42°

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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Slot	Slot #09
Well	Bead Unit 1H
Wellbore	Bead Unit 1H AWB

WELLPATH DATA (222 stations) † = interpolated/extrapolated station												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Dir
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
0.00	85.030	0.00	0.00	0.00	0.00	0.00	1676187.70	14315816.00	39°25'21.230"N	80°52'24.000"W	0.00	0.00
25.00	0.000	85.030	25.00	0.00	0.00	0.00	1676187.70	14315816.00	39°25'21.230"N	80°52'24.000"W	0.00	0.00
112.00	0.260	85.030	112.00	0.05	0.02	0.20	1676187.90	14315816.02	39°25'21.230"N	80°52'23.998"W	0.20	85.030
212.00	0.130	158.770	212.00	0.22	-0.07	0.46	1676188.16	14315815.93	39°25'21.229"N	80°52'23.994"W	0.47	98.461
312.00	0.140	171.930	312.00	0.45	-0.30	0.52	1676188.22	14315815.70	39°25'21.227"N	80°52'23.993"W	0.60	119.530
412.00	0.280	170.100	412.00	0.81	-0.66	0.58	1676188.28	14315815.34	39°25'21.223"N	80°52'23.993"W	0.88	138.521
512.00	0.210	179.130	512.00	1.23	-1.08	0.63	1676188.33	14315814.92	39°25'21.219"N	80°52'23.992"W	1.25	149.934
612.00	1.390	259.020	611.99	1.22	-1.50	0.56	1676187.14	14315814.51	39°25'21.215"N	80°52'24.007"W	1.37	200.599
712.00	3.340	266.920	711.90	0.21	-1.88	-4.66	1676183.04	14315814.12	39°25'21.211"N	80°52'24.059"W	5.03	248.009
812.00	4.450	265.410	811.66	-1.62	-2.35	-11.44	1676176.27	14315813.65	39°25'21.207"N	80°52'24.146"W	11.68	258.391
912.00	4.650	262.580	911.35	-3.48	-3.18	-19.32	1676168.38	14315812.82	39°25'21.199"N	80°52'24.246"W	19.59	260.646
1012.00	4.830	258.620	1011.01	-4.93	-4.54	-27.47	1676160.24	14315811.46	39°25'21.186"N	80°52'24.350"W	27.84	260.620
1112.00	4.990	255.480	1110.64	-5.91	-6.46	-35.81	1676151.91	14315809.54	39°25'21.167"N	80°52'24.456"W	36.39	259.775
1212.00	5.160	252.680	1210.25	-6.48	-8.89	-44.31	1676143.41	14315807.12	39°25'21.143"N	80°52'24.565"W	45.19	258.658
1312.00	5.260	251.660	1309.84	-6.75	-11.67	-52.96	1676134.77	14315804.34	39°25'21.115"N	80°52'24.675"W	54.23	257.573
1412.00	4.060	245.090	1409.50	-8.52	-14.60	-60.52	1676127.21	14315801.40	39°25'21.086"N	80°52'24.771"W	62.25	256.434
1512.00	2.230	230.800	1509.35	-5.54	-17.32	-65.24	1676122.49	14315798.69	39°25'21.060"N	80°52'24.832"W	67.50	255.128
1612.00	0.490	3.270	1609.33	-5.28	-18.13	-66.72	1676121.01	14315797.88	39°25'21.052"N	80°52'24.851"W	69.14	254.801
1712.00	2.050	29.220	1709.30	-6.85	-16.14	-65.82	1676121.90	14315799.87	39°25'21.071"N	80°52'24.839"W	67.77	256.224
1812.00	1.230	12.420	1809.26	-8.94	-13.53	-64.72	1676123.01	14315802.48	39°25'21.097"N	80°52'24.825"W	66.12	258.193
1912.00	0.650	282.580	1909.25	-10.15	-12.36	-65.04	1676122.68	14315803.65	39°25'21.109"N	80°52'24.829"W	66.20	259.242
2012.00	0.670	283.590	2009.24	-10.78	-12.10	-66.16	1676121.56	14315803.91	39°25'21.111"N	80°52'24.843"W	67.26	259.639
2112.00	0.690	283.590	2109.24	-11.43	-11.82	-67.32	1676120.41	14315804.19	39°25'21.114"N	80°52'24.858"W	68.35	260.043
2212.00	0.710	281.960	2209.23	-12.08	-11.55	-68.51	1676119.22	14315804.46	39°25'21.117"N	80°52'24.873"W	69.47	260.432
2312.00	0.710	270.360	2309.22	-12.61	-11.42	-69.73	1676117.99	14315804.59	39°25'21.118"N	80°52'24.889"W	70.66	260.703
2412.00	0.900	271.140	2409.21	-13.10	-11.40	-71.14	1676116.59	14315804.61	39°25'21.118"N	80°52'24.907"W	72.05	260.899
2512.00	1.040	267.820	2509.20	-13.65	-11.41	-72.83	1676114.90	14315804.59	39°25'21.118"N	80°52'24.928"W	73.72	261.092
2612.00	1.020	269.170	2609.18	-14.21	-11.46	-74.63	1676113.10	14315804.54	39°25'21.118"N	80°52'24.951"W	75.50	261.268
2712.00	0.950	277.970	2709.17	-14.88	-11.36	-76.34	1676111.39	14315804.64	39°25'21.119"N	80°52'24.973"W	77.18	261.536
2812.00	1.780	304.290	2809.14	-15.52	-10.37	-78.44	1676109.29	14315805.63	39°25'21.129"N	80°52'25.000"W	79.13	262.469

† = Interpolated/extrapolated station

MD Inclination Azimuth TVD Vert Sect North East Grid East Grid North Latitude Longitude Closure Dist Closure Dir DLS Build Rate Turn Rate Comments

ft ° ° ft ft ft ft ft ft ft ft ft ft ft

0.00 85.030 0.00 0.00 0.00 0.00 0.00 1676187.70 14315816.00 39°25'21.230"N 80°52'24.000"W 0.00 0.00

25.00 0.000 85.030 25.00 0.00 0.00 0.00 1676187.90 14315816.02 39°25'21.230"N 80°52'23.998"W 0.20 85.030

112.00 0.260 85.030 112.00 0.05 0.02 0.20 1676187.90 14315816.02 39°25'21.230"N 80°52'23.998"W 0.20 85.030

212.00 0.130 158.770 212.00 0.22 -0.07 0.46 1676188.16 14315815.93 39°25'21.229"N 80°52'23.994"W 0.47 98.461

312.00 0.140 171.930 312.00 0.45 -0.30 0.52 1676188.22 14315815.70 39°25'21.227"N 80°52'23.993"W 0.60 119.530

412.00 0.280 170.100 412.00 0.81 -0.66 0.58 1676188.28 14315815.34 39°25'21.223"N 80°52'23.993"W 0.88 138.521

512.00 0.210 179.130 512.00 1.23 -1.08 0.63 1676188.33 14315814.92 39°25'21.219"N 80°52'23.992"W 1.25 149.934

612.00 1.390 259.020 611.99 1.22 -1.50 0.56 1676187.14 14315814.51 39°25'21.215"N 80°52'24.007"W 1.37 200.599

712.00 3.340 266.920 711.90 0.21 -1.88 -4.66 1676183.04 14315814.12 39°25'21.211"N 80°52'24.059"W 5.03 248.009

812.00 4.450 265.410 811.66 -1.62 -2.35 -11.44 1676176.27 14315813.65 39°25'21.207"N 80°52'24.146"W 11.68 258.391

912.00 4.650 262.580 911.35 -3.48 -3.18 -19.32 1676168.38 14315812.82 39°25'21.199"N 80°52'24.246"W 19.59 260.646

1012.00 4.830 258.620 1011.01 -4.93 -4.54 -27.47 1676160.24 14315811.46 39°25'21.186"N 80°52'24.350"W 27.84 260.620

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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Slot	Slot #09
Bead Unit 1H	Well
Bead Unit 1H AWB	Wellbore

WELLPATH DATA (222 stations)																
MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N)	(W)	(ft)	(°)	(ft/100ft)	(°/100ft)	(°/100ft)	
2912.00	3.640	302.560	2909.02	-20.28	-7.79	-82.40	1676105.33	14315808.22	39°25'21.154"N	80°52'25.050"W	82.77	264.602	1.86	-1.73	-2.25	
3012.00	5.660	299.310	3008.69	-26.50	-3.66	-89.38	1676098.36	14315812.34	39°25'21.195"N	80°52'25.139"W	89.45	267.653	2.04	-2.02	-3.25	
3112.00	7.890	295.060	3107.98	-35.04	1.66	-99.90	1676087.84	14315817.66	39°25'21.248"N	80°52'25.273"W	99.91	270.951	2.28	-2.23	-4.25	
3212.00	9.340	292.090	3206.85	-45.26	7.62	-113.63	1676074.11	14315823.61	39°25'21.307"N	80°52'25.448"W	113.89	273.835	1.52	-1.45	-2.97	
3312.00	9.790	291.780	3305.46	-56.27	13.82	-129.05	1676058.70	14315829.82	39°25'21.368"N	80°52'25.644"W	129.79	276.114	0.45	-0.45	-0.31	
3412.00	9.400	290.240	3404.06	-67.12	19.80	-144.61	1676043.15	14315835.80	39°25'21.428"N	80°52'25.842"W	145.95	277.798	0.47	-0.39	-1.54	
3512.00	10.060	291.520	3502.62	-78.09	25.83	-160.39	1676027.37	14315841.82	39°25'21.488"N	80°52'26.043"W	162.46	279.149	0.69	0.66	1.28	
3612.00	9.760	289.370	3601.13	-89.16	31.85	-176.51	1676011.26	14315847.83	39°25'21.547"N	80°52'26.249"W	179.36	280.228	0.48	-0.30	-2.15	
3712.00	9.960	289.440	3699.66	-99.93	37.54	-192.67	1675995.11	14315853.52	39°25'21.604"N	80°52'26.454"W	196.29	281.025	0.20	0.20	0.07	
3812.00	10.290	289.580	3798.10	-111.02	43.41	-209.24	1675978.55	14315859.39	39°25'21.662"N	80°52'26.665"W	213.69	281.720	0.33	0.33	0.14	
3912.00	10.600	291.630	3896.44	-122.72	49.79	-226.20	1675961.59	14315865.77	39°25'21.725"N	80°52'26.882"W	231.62	282.414	0.48	0.31	2.05	
4012.00	10.510	293.540	3994.75	-135.01	56.82	-243.11	1675944.69	14315872.80	39°25'21.795"N	80°52'27.097"W	249.66	283.156	0.36	-0.09	1.91	
4112.00	10.890	295.430	4093.01	-147.93	64.52	-260.00	1675927.80	14315880.50	39°25'21.871"N	80°52'27.312"W	267.89	283.937	0.52	0.38	1.89	
4212.00	10.950	292.740	4191.20	-161.00	72.25	-277.29	1675910.52	14315888.22	39°25'21.948"N	80°52'27.532"W	286.55	284.604	0.51	0.06	-2.69	
4312.00	11.060	290.550	4287.96	-173.58	79.29	-299.04	1675892.78	14315895.26	39°25'22.018"N	80°52'27.758"W	305.60	285.043	0.43	0.11	-2.19	
4412.00	11.660	289.570	4387.40	-186.29	86.21	-313.49	1675874.33	14315902.18	39°25'22.086"N	80°52'27.993"W	325.13	285.377	0.62	0.02	-3.59	
4512.00	11.660	286.980	4485.33	-198.83	92.72	-332.64	1675855.20	14315908.68	39°25'22.151"N	80°52'28.237"W	345.32	285.576	0.73	-0.02	-3.59	
4612.00	11.740	290.380	4583.26	-211.39	99.21	-351.84	1675836.00	14315915.18	39°25'22.215"N	80°52'28.482"W	365.56	285.748	0.69	0.08	3.40	
4712.00	12.160	295.230	4681.09	-225.34	107.25	-370.90	1675816.95	14315923.20	39°25'22.295"N	80°52'28.724"W	386.10	286.127	1.09	0.42	4.85	
4812.00	10.980	297.370	4779.06	-239.73	116.12	-388.89	1675798.97	14315932.07	39°25'22.383"N	80°52'28.963"W	405.85	286.625	1.26	-1.18	2.14	
4912.00	10.400	300.450	4877.32	-253.60	125.07	-405.13	1675782.74	14315941.02	39°25'22.472"N	80°52'29.160"W	423.99	287.156	0.81	-0.58	3.08	
5012.00	10.280	296.730	4975.70	-266.97	133.66	-420.88	1675766.99	14315949.60	39°25'22.557"N	80°52'29.361"W	441.59	287.618	0.68	-0.12	-3.72	
5112.00	10.830	294.520	5074.01	-279.96	141.57	-437.39	1675750.48	14315957.51	39°25'22.635"N	80°52'29.571"W	459.73	287.935	0.68	0.55	-2.21	
5212.00	11.760	293.580	5172.07	-293.47	149.54	-455.28	1675732.60	14315965.48	39°25'22.714"N	80°52'29.799"W	479.21	288.183	0.95	-0.94	-2.21	
5312.00	12.560	297.660	5269.83	-308.43	158.67	-474.25	1675713.64	14315974.60	39°25'22.805"N	80°52'30.040"W	500.09	288.498	1.17	0.80	4.08	
5412.00	12.150	296.920	5367.51	-324.04	168.48	-493.27	1675694.63	14315984.41	39°25'22.902"N	80°52'30.283"W	521.25	288.858	0.44	-0.41	-0.74	
5512.00	9.400	300.810	5465.74	-337.97	177.43	-509.67	1675678.24	14315993.36	39°25'22.991"N	80°52'30.491"W	539.67	289.194	2.84	-2.75	3.89	
5583.00	9.250	298.560	5535.80	-346.69	183.13	-519.66	1675668.25	14315999.05	39°25'23.047"N	80°52'30.619"W	550.98	289.412	0.56	-0.21	-3.17	
5668.00	10.180	296.110	5619.58	-357.15	189.70	-532.40	1675655.51	14316005.62	39°25'23.112"N	80°52'30.781"W	565.19	289.611	1.20	-2.88	-2.49	BH AT Curve <8-1/2"> (5583)(5668-19389)
5762.00	10.120	293.770	5712.11	-368.76	196.68	-547.42	1675640.50	14316012.60	39°25'23.181"N	80°52'30.972"W	581.68	289.763	0.44	-0.06	-2.49	

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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Slot	Slot #09
Bead Unit 1H	Well
Bead Unit 1H AWB	Wellbore

WELLPATH DATA (222 stations) † = interpolated/extrapolated station											
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	
ft	°	°	ft	°	ft	ft	ft	ft	°	°	
5809.00	9.410	266.880	5758.46	-372.69	198.14	-555.04	1675632.88	14316014.06	39°25'23.196"N	80°52'31.069"W	589.35
5857.00	9.980	242.610	5805.79	-373.24	196.01	-562.66	1675625.27	14316011.93	39°25'23.175"N	80°52'31.166"W	595.82
5904.00	10.730	222.700	5852.04	-370.65	190.92	-569.24	1675618.69	14316006.84	39°25'23.125"N	80°52'31.250"W	600.40
5951.00	11.760	207.180	5898.15	-365.33	183.44	-574.40	1675613.53	14315999.37	39°25'23.051"N	80°52'31.316"W	602.98
5998.00	12.540	183.510	5944.10	-357.77	174.22	-577.78	1675610.15	14315990.15	39°25'22.960"N	80°52'31.359"W	603.47
6045.00	12.260	184.660	5990.01	-348.95	164.28	-579.38	1675608.56	14315980.22	39°25'22.862"N	80°52'31.380"W	602.22
6092.00	14.210	180.280	6035.76	-338.97	153.54	-579.81	1675608.12	14315989.48	39°25'22.755"N	80°52'31.386"W	599.79
6140.00	17.600	180.250	6081.91	-326.58	140.37	-579.87	1675608.06	14315956.32	39°25'22.625"N	80°52'31.387"W	596.62
6187.00	21.380	178.510	6120.84	-311.73	124.68	-579.68	1675608.25	14315940.63	39°25'22.470"N	80°52'31.384"W	592.93
6234.00	25.460	175.320	6169.33	-293.82	106.04	-578.63	1675609.30	14315922.00	39°25'22.286"N	80°52'31.371"W	588.27
6281.00	30.400	170.520	6210.84	-272.33	84.22	-575.85	1675612.09	14315900.19	39°25'22.070"N	80°52'31.336"W	581.97
6329.00	35.730	165.830	6261.06	-246.40	58.63	-570.41	1675617.52	14315874.61	39°25'21.817"N	80°52'31.268"W	573.41
6376.00	39.600	163.190	6288.26	-217.76	30.98	-562.71	1675625.21	14315846.96	39°25'21.544"N	80°52'31.170"W	563.57
6423.00	44.320	162.550	6323.20	-186.38	0.96	-553.45	1675634.47	14315816.96	39°25'21.247"N	80°52'31.052"W	553.45
6470.00	49.020	163.530	6355.45	-152.24	-31.74	-543.49	1675644.42	14315784.28	39°25'20.924"N	80°52'30.926"W	544.42
6517.00	53.470	164.520	6384.86	-115.67	-66.97	-533.42	1675654.49	14315749.06	39°25'20.575"N	80°52'30.798"W	537.61
6564.00	59.030	163.840	6410.96	-76.69	-104.55	-522.76	1675665.15	14315711.49	39°25'20.204"N	80°52'30.663"W	533.11
6594.00†	61.165	162.669	6425.92	-50.71	-129.45	-515.27	1675672.64	14315686.60	39°25'19.958"N	80°52'30.568"W	531.28
6612.00	62.450	161.990	6434.42	-34.86	-144.56	-510.45	1675677.45	14315671.49	39°25'19.808"N	80°52'30.507"W	530.53
6659.00	66.260	161.460	6454.76	7.49	-184.79	-497.16	1675690.73	14315631.28	39°25'19.410"N	80°52'30.338"W	530.40
6662.00†	66.546	161.461	6455.96	10.24	-187.40	-496.29	1675691.61	14315628.68	39°25'19.365"N	80°52'30.327"W	530.49
6706.00	70.740	161.480	6471.98	51.20	-226.24	-483.27	1675704.62	14315589.85	39°25'19.001"N	80°52'30.162"W	533.61
6753.00	74.580	161.160	6485.99	96.05	-268.73	-468.90	1675718.98	14315547.37	39°25'18.580"N	80°52'29.980"W	540.45
6772.00†	74.745	161.625	6491.01	114.37	-286.10	-463.06	1675724.83	14315530.02	39°25'18.409"N	80°52'29.906"W	544.31
6800.00	74.990	162.310	6498.32	141.39	-311.80	-454.69	1675733.19	14315504.32	39°25'18.165"N	80°52'29.799"W	551.33
6895.00	80.010	167.990	6518.89	233.75	-401.39	-430.98	1675756.89	14315444.77	39°25'17.269"N	80°52'29.499"W	588.95
6942.00	83.680	169.720	6525.56	279.76	-447.03	-421.99	1675765.88	14315389.15	39°25'16.181"N	80°52'29.385"W	614.75
6989.00	88.950	168.660	6528.58	326.10	-493.08	-413.20	1675774.67	14315323.11	39°25'16.362"N	80°52'29.274"W	643.32
7036.00	90.800	167.030	6528.68	372.70	-539.03	-403.30	1675784.56	14315277.19	39°25'15.908"N	80°52'29.149"W	673.20
7093.00	90.770	165.350	6528.04	419.46	-584.66	-392.09	1675795.77	14315231.57	39°25'15.457"N	80°52'29.007"W	703.96

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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Bead Unit 1H
Field	Tyler	Wellbore	Bead Unit 1H AWP
Facility	Edna Monroe Pad		

WELLPATH DATA (222 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
7177.00	88.310	154.940	6528.79	513.32	-672.94	-360.21	1675827.64	14315143.33	39°25'14.584"N	80°52'28.602"W	763.29	208.159	11.38	-2.62	-11.07	
7271.00	89.050	151.350	6530.96	606.52	-756.77	-317.76	1675870.06	14315059.53	39°25'13.755"N	80°52'28.063"W	820.78	202.777	3.90	0.79	-3.82	
7366.00	88.770	146.010	6532.77	699.48	-837.88	-268.41	1675919.40	14314978.45	39°25'12.952"N	80°52'27.435"W	879.82	197.762	5.63	-0.29	-5.62	
7460.00	92.890	150.470	6531.41	791.31	-917.76	-218.96	1675968.83	14314898.61	39°25'12.162"N	80°52'26.806"W	943.52	193.419	6.46	4.38	4.74	
7554.00	89.880	159.770	6529.13	884.77	-1002.91	-179.47	1676008.30	14314813.49	39°25'11.320"N	80°52'26.305"W	1018.84	190.146	10.40	-3.20	9.89	
7649.00	90.030	161.850	6529.20	979.76	-1092.63	-148.25	1676039.51	14314723.81	39°25'10.433"N	80°52'25.909"W	1102.64	187.727	2.20	0.16	2.19	
7743.00	90.060	160.630	6529.13	1073.75	-1181.63	-118.02	1676069.73	14314634.84	39°25'09.553"N	80°52'25.525"W	1187.51	185.704	1.30	0.03	-1.30	
7837.00	89.880	162.690	6529.18	1167.72	-1270.85	-88.44	1676099.29	14314545.66	39°25'08.671"N	80°52'25.150"W	1273.92	183.981	2.20	-0.19	2.19	
7931.00	90.120	165.720	6529.18	1261.51	-1361.29	-62.86	1676124.87	14314455.25	39°25'07.777"N	80°52'24.825"W	1362.74	182.644	3.23	0.26	3.22	
8025.00	90.030	165.280	6529.06	1355.14	-1452.30	-39.32	1676148.39	14314364.29	39°25'06.877"N	80°52'24.527"W	1452.83	181.551	0.48	-0.10	-0.47	
8120.00	89.660	167.690	6529.31	1449.60	-1544.66	-17.12	1676170.58	14314271.96	39°25'05.964"N	80°52'24.246"W	1544.75	180.635	2.57	-0.39	2.54	
8214.00	89.600	167.270	6529.92	1542.88	-1636.42	3.25	1676190.95	14314180.23	39°25'05.056"N	80°52'23.988"W	1636.42	179.886	0.45	-0.06	-0.45	
8308.00	89.750	161.980	6530.45	1636.60	-1727.02	28.17	1676215.86	14314089.67	39°25'04.161"N	80°52'23.672"W	1727.25	179.066	5.63	0.16	-5.63	
8403.00	89.600	162.280	6530.99	1731.55	-1817.44	57.32	1676245.00	14313999.29	39°25'03.267"N	80°52'23.302"W	1818.34	178.194	0.35	-0.16	0.32	
8497.00	89.600	163.220	6531.65	1825.47	-1907.21	85.19	1676272.86	14313909.56	39°25'02.379"N	80°52'22.949"W	1909.11	177.442	1.00	0.00	1.00	
8591.00	89.690	162.880	6532.23	1919.37	-1997.12	112.60	1676300.25	14313819.68	39°25'01.490"N	80°52'22.601"W	2000.29	176.773	0.37	0.10	-0.36	
8685.00	89.720	159.910	6532.72	2013.35	-2086.20	142.58	1676330.23	14313730.64	39°25'00.609"N	80°52'22.221"W	2091.07	176.090	3.16	0.03	-3.16	
8780.00	89.600	160.290	6533.28	2108.34	-2175.52	174.92	1676362.55	14313641.35	39°24'59.726"N	80°52'21.810"W	2182.54	175.403	0.42	-0.13	0.40	
8873.00	90.030	158.600	6533.58	2201.32	-2262.60	207.57	1676395.19	14313554.31	39°24'58.865"N	80°52'21.396"W	2272.10	174.758	1.88	0.46	-1.82	
8968.00	89.600	154.130	6533.89	2296.06	-2349.61	245.65	1676433.25	14313467.33	39°24'58.004"N	80°52'20.912"W	2362.41	174.032	4.73	-0.45	-4.71	
9061.00	89.600	152.890	6534.54	2388.38	-2432.84	287.13	1676474.71	14313384.13	39°24'57.181"N	80°52'20.385"W	2449.73	173.269	1.33	0.00	-1.33	
9156.00	89.570	154.270	6535.22	2482.70	-2517.91	329.39	1676516.96	14313299.09	39°24'56.340"N	80°52'19.848"W	2539.37	172.547	1.45	-0.03	1.45	
9250.00	89.660	155.930	6535.86	2576.29	-2603.17	368.97	1676556.52	14313213.87	39°24'55.496"N	80°52'19.345"W	2629.19	171.933	1.77	0.10	1.77	
9344.00	89.690	158.940	6536.39	2670.15	-2689.96	405.04	1676592.57	14313127.11	39°24'54.638"N	80°52'18.888"W	2720.29	171.437	3.20	0.03	3.20	
9439.00	89.600	165.780	6536.98	2765.04	-2780.44	433.81	1676621.33	14313036.67	39°24'53.743"N	80°52'18.523"W	2814.08	171.132	7.20	-0.09	7.20	
9533.00	89.720	166.770	6537.54	2858.55	-2871.75	456.11	1676643.63	14312945.40	39°24'52.841"N	80°52'18.240"W	2907.75	170.975	1.06	0.13	1.05	
9627.00	89.660	163.480	6538.05	2952.21	-2962.59	480.23	1676667.74	14312854.60	39°24'51.943"N	80°52'17.934"W	3001.26	170.792	3.50	-0.05	-3.50	
9722.00	89.630	163.970	6538.63	3047.05	-3053.78	506.86	1676694.35	14312763.44	39°24'51.041"N	80°52'17.597"W	3095.56	170.576	0.52	-0.03	0.52	
9816.00	89.660	162.880	6539.22	3140.92	-3143.87	533.67	1676721.16	14312673.39	39°24'50.150"N	80°52'17.257"W	3188.85	170.366	1.16	0.03	-1.16	
9910.00	89.690	159.750	6539.75	3234.90	-3232.91	563.78	1676751.26	14312584.39	39°24'49.270"N	80°52'16.875"W	3281.70	170.108	3.33	0.03	-3.33	

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Bead Unit 1H AWP Proj: 19413'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Bead Unit 1H
Field	Tyler	Wellbore	Bead Unit 1H AWB
Facility	Edna Monroe Pad		

WELLPATH DATA (222 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
10005.00	89.720	161.070	6540.24	3329.89	-3322.40	595.63	1676783.10	14312494.93	39°24'48.385"N	80°52'16.471"W	3375.37	169.836	1.39	0.03	1.39	
10099.00	89.750	166.630	6540.67	3423.69	-3412.66	621.77	1676809.22	14312404.71	39°24'47.492"N	80°52'16.139"W	3468.84	169.674	5.91	0.03	5.91	
10194.00	90.030	169.700	6540.86	3517.81	-3505.63	641.25	1676828.69	14312311.78	39°24'46.573"N	80°52'15.893"W	3563.79	169.634	3.24	0.29	3.23	
10288.00	90.060	160.950	6540.78	3611.37	-3596.47	665.04	1676852.48	14312220.97	39°24'45.675"N	80°52'15.591"W	3657.44	169.523	9.31	0.03	-9.31	
10382.00	90.280	160.120	6540.50	3705.37	-3685.10	696.36	1676883.79	14312132.38	39°24'44.799"N	80°52'15.194"W	3750.32	169.299	0.91	0.23	-0.88	
10477.00	89.970	161.100	6540.30	3800.37	-3774.71	727.90	1676915.31	14312042.80	39°24'43.912"N	80°52'14.794"W	3844.25	169.085	1.08	-0.33	1.03	
10571.00	90.060	156.160	6540.27	3894.30	-3862.22	762.15	1676949.54	14311955.33	39°24'43.047"N	80°52'14.359"W	3936.70	168.837	5.26	0.10	-5.26	
10665.00	90.000	157.930	6540.22	3988.13	-3948.77	798.81	1676986.19	14311868.81	39°24'42.191"N	80°52'13.893"W	4028.76	168.564	1.88	-0.06	1.88	
10759.00	90.180	159.720	6540.07	4082.09	-4036.42	832.76	1677020.12	14311781.20	39°24'41.324"N	80°52'13.462"W	4121.43	168.343	1.91	0.19	1.90	
10853.00	90.220	158.710	6539.75	4176.07	-4124.30	866.11	1677053.47	14311693.35	39°24'40.455"N	80°52'13.039"W	4214.26	168.140	1.08	0.04	-1.07	
10947.00	90.090	152.640	6539.49	4269.70	-4209.92	904.82	1677092.15	14311607.77	39°24'39.609"N	80°52'12.548"W	4306.05	167.870	6.46	-0.14	-6.46	
11041.00	89.660	152.570	6539.70	4362.83	-4293.37	948.07	1677135.39	14311524.35	39°24'38.783"N	80°52'11.998"W	4396.80	167.548	0.46	-0.46	-0.07	
11136.00	88.890	155.090	6540.90	4457.18	-4378.62	989.96	1677177.26	14311439.13	39°24'37.940"N	80°52'11.466"W	4489.14	167.260	2.77	-0.81	2.65	
11230.00	89.660	161.270	6542.09	4551.06	-4465.84	1024.88	1677212.17	14311351.95	39°24'37.077"N	80°52'11.023"W	4581.93	167.075	6.62	0.82	6.57	
11324.00	89.780	163.360	6542.55	4645.00	-4555.39	1053.43	1677240.71	14311262.44	39°24'36.192"N	80°52'10.660"W	4675.60	166.979	2.23	0.13	2.22	
11419.00	89.690	159.930	6542.99	4739.96	-4645.54	1083.34	1677270.61	14311172.32	39°24'35.301"N	80°52'10.281"W	4770.19	166.873	3.61	-0.09	-3.61	
11513.00	89.540	157.310	6543.62	4833.91	-4733.06	1117.61	1677304.86	14311084.83	39°24'34.435"N	80°52'09.846"W	4863.22	166.714	2.79	-0.16	-2.79	
11607.00	89.570	158.690	6544.35	4927.82	-4820.21	1152.82	1677340.06	14310997.72	39°24'33.573"N	80°52'09.399"W	4956.15	166.550	1.47	0.03	1.47	
11701.00	89.780	162.630	6544.88	5021.80	-4908.89	1183.94	1677371.17	14310909.08	39°24'32.696"N	80°52'09.004"W	5049.64	166.440	4.20	0.22	4.19	
11795.00	89.660	163.620	6545.34	5115.69	-4998.84	1211.23	1677398.44	14310819.16	39°24'31.807"N	80°52'08.658"W	5143.49	166.380	1.06	-0.13	1.05	
11890.00	89.660	161.470	6545.91	5210.62	-5089.46	1239.72	1677426.92	14310728.58	39°24'30.911"N	80°52'08.297"W	5238.27	166.310	2.26	0.00	-2.26	
11984.00	89.720	160.710	6546.42	5304.61	-5178.38	1270.18	1677457.38	14310639.69	39°24'30.032"N	80°52'07.910"W	5331.89	166.218	0.81	0.06	-0.81	
12078.00	89.600	160.960	6546.97	5398.60	-5267.17	1301.04	1677488.22	14310550.94	39°24'29.154"N	80°52'07.519"W	5425.48	166.125	0.30	-0.13	0.27	
12172.00	89.850	164.350	6547.42	5492.52	-5356.88	1329.06	1677516.23	14310461.26	39°24'28.266"N	80°52'07.164"W	5519.29	166.066	3.62	0.27	3.61	
12267.00	89.720	167.190	6547.78	5587.09	-5448.96	1352.41	1677539.57	14310369.22	39°24'27.356"N	80°52'06.868"W	5614.28	166.061	2.99	-0.14	2.99	
12361.00	89.600	162.420	6548.34	5680.79	-5539.64	1377.04	1677564.19	14310278.57	39°24'26.459"N	80°52'06.556"W	5708.23	166.040	5.08	-0.13	-5.07	
12455.00	89.600	163.570	6549.00	5774.69	-5629.53	1404.53	1677591.67	14310188.72	39°24'25.571"N	80°52'06.207"W	5802.10	165.991	1.22	0.00	1.22	
12549.00	89.690	161.940	6549.58	5868.61	-5719.30	1432.40	1677619.52	14310098.99	39°24'24.683"N	80°52'05.854"W	5895.94	165.940	1.74	0.10	-1.73	
12643.00	90.150	159.980	6549.71	5962.60	-5808.15	1463.06	1677650.18	14310010.17	39°24'23.804"N	80°52'05.465"W	5989.59	165.861	2.14	0.49	-2.09	
12737.00	90.180	155.990	6549.44	6056.49	-5895.28	1498.29	1677685.39	14309923.08	39°24'22.943"N	80°52'05.018"W	6082.70	165.740	4.24	0.03	-4.24	

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Operator	ANTERO RESOURCES CORPORATION	Area	Tyler County, WV
Field	Tyler	Facility	Edna Monroe Pad
Slot	Slot #09	Wellbore	Bead Unit 1H AWP
Well	Bead Unit 1H		

WELLPATH DATA (222 stations)																
MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/100ft)	(°/100ft)	(ft/100ft)
12832.00	90.150	155.040	6549.17	6151.14	-5981.74	1537.66	1677724.75	14309836.66	39°24'22.08"N	80°52'04.51"W	6176.21	165.584	1.00	-0.03	-1.00	
12926.00	90.250	155.690	6548.84	6244.78	-6067.18	1576.84	1677763.91	14309751.25	39°24'21.24"N	80°52'04.02"W	6268.74	165.431	0.70	0.11	0.69	
13020.00	90.180	156.520	6548.48	6338.51	-6153.12	1614.92	167801.97	14309665.34	39°24'20.39"N	80°52'03.53"W	6361.51	165.294	0.89	-0.07	0.88	
13115.00	90.340	158.250	6548.05	6433.37	-6240.81	1651.45	167838.49	14309577.69	39°24'19.52"N	80°52'03.07"W	6455.62	165.178	1.83	0.17	1.82	
13209.00	90.400	159.100	6547.45	6527.33	-6328.37	1685.63	167872.66	14309490.16	39°24'18.66"N	80°52'02.63"W	6549.02	165.085	0.91	0.06	0.90	
13304.00	90.400	163.640	6546.78	6622.29	-6418.37	1715.97	167902.98	14309400.20	39°24'17.77"N	80°52'02.25"W	6643.80	165.032	4.78	0.00	4.78	
13398.00	90.430	163.470	6546.10	6716.14	-6508.52	1742.58	167929.58	14309310.08	39°24'16.78"N	80°52'01.91"W	6737.76	165.011	0.18	0.03	-0.18	
13493.00	90.120	163.700	6545.65	6811.00	-6599.65	1769.43	167956.42	14309218.99	39°24'15.97"N	80°52'01.57"W	6832.73	164.991	0.41	-0.33	0.24	
13587.00	90.310	162.010	6545.29	6904.91	-6689.47	1797.14	167984.12	14309129.21	39°24'15.08"N	80°52'01.22"W	6926.66	164.962	1.81	0.20	-1.80	
13681.00	90.250	160.370	6544.83	6998.89	-6778.44	1827.44	168014.41	14309040.27	39°24'14.20"N	80°52'00.84"W	7020.46	164.912	1.75	-0.06	-1.74	
13776.00	90.220	157.990	6544.44	7093.86	-6867.23	1861.21	168048.16	14308951.52	39°24'13.33"N	80°52'00.41"W	7114.98	164.836	2.51	-0.03	-2.51	
13870.00	90.280	155.120	6544.03	7187.64	-6953.46	1898.60	168085.54	14308865.32	39°24'12.47"N	80°51'59.93"W	7208.00	164.728	3.05	0.06	-3.05	
13964.00	89.940	154.950	6543.85	7281.22	-7038.68	1938.28	168125.20	14308780.14	39°24'11.63"N	80°51'59.43"W	7300.68	164.604	0.40	-0.36	-0.18	
14058.00	89.780	158.460	6544.08	7375.01	-7125.00	1975.44	168162.35	14308693.85	39°24'10.78"N	80°51'58.96"W	7393.78	164.504	3.74	-0.17	3.73	
14153.00	89.940	160.690	6544.32	7470.00	-7214.02	2008.60	168195.49	14308604.87	39°24'09.90"N	80°51'58.54"W	7488.43	164.441	2.35	0.17	2.35	
14247.00	89.880	159.110	6544.46	7563.99	-7302.30	2040.90	168227.78	14308516.63	39°24'09.02"N	80°51'58.12"W	7582.14	164.385	1.68	-0.06	-1.68	
14341.00	89.320	162.360	6545.12	7657.97	-7391.02	2071.91	168258.78	14308427.94	39°24'08.15"N	80°51'57.73"W	7675.93	164.340	3.51	-0.60	3.46	
14435.00	89.660	166.170	6545.96	7751.70	-7481.60	2096.94	168283.80	14308337.40	39°24'07.25"N	80°51'57.42"W	7769.91	164.343	4.67	0.36	4.66	
14529.00	89.480	166.170	6546.66	7845.18	-7572.98	2118.96	168305.81	14308246.06	39°24'06.35"N	80°51'57.14"W	7863.84	164.368	0.64	-0.19	-0.61	
14623.00	89.540	163.230	6547.47	7938.90	-7663.63	2143.76	168330.60	14308155.44	39°24'05.45"N	80°51'56.82"W	7957.82	164.372	3.13	0.06	-3.13	
14717.00	89.480	158.510	6548.27	8032.87	-7752.41	2174.55	168361.38	14308066.69	39°24'04.57"N	80°51'56.43"W	8051.62	164.331	5.02	-0.06	-5.02	
14812.00	89.510	156.620	6549.11	8127.74	-7840.22	2210.80	168397.62	14307978.92	39°24'03.77"N	80°51'55.97"W	8145.96	164.252	1.99	0.03	-1.99	
14906.00	89.540	157.740	6549.89	8221.59	-7926.85	2247.26	168434.06	14307892.32	39°24'02.85"N	80°51'55.51"W	8239.25	164.172	1.19	0.03	1.19	
15000.00	89.750	161.800	6550.47	8315.66	-8015.04	2279.76	168466.54	14307804.17	39°24'01.98"N	80°51'55.10"W	8332.95	164.122	4.32	0.22	4.32	
15094.00	89.650	164.950	6550.80	8409.42	-8105.09	2306.65	168493.42	14307714.15	39°24'01.09"N	80°51'54.76"W	8426.93	164.114	3.35	0.11	3.35	
15188.00	89.780	164.620	6551.10	8503.15	-8195.80	2331.32	168518.08	14307623.48	39°24'00.19"N	80°51'54.44"W	8520.92	164.121	0.36	-0.07	-0.35	
15283.00	89.820	162.270	6551.43	8598.01	-8286.85	2358.38	168545.14	14307532.47	39°23'59.29"N	80°51'54.10"W	8615.91	164.114	2.47	0.04	-2.47	
15377.00	89.780	161.710	6551.76	8691.97	-8376.25	2387.45	168574.19	14307443.11	39°23'58.40"N	80°51'53.73"W	8709.85	164.091	0.60	-0.04	-0.60	
15471.00	89.750	164.020	6552.15	8785.88	-8466.07	2415.14	168601.87	14307353.32	39°23'57.52"N	80°51'53.38"W	8803.82	164.078	2.46	-0.03	2.46	
15566.00	89.650	163.040	6552.48	8880.74	-8557.17	2442.07	168628.79	14307262.26	39°23'56.62"N	80°51'53.04"W	8898.81	164.072	1.04	0.11	-1.03	

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Bead Unit 1H AWP Proj: 19413
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Slot	Slot #09
Bead Unit 1H	Well
Bead Unit 1H AWB	Wellbore

WELLPATH DATA (222 stations)

MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
15660.00	89.780	156.590	6552.78	8974.68	-8645.35	2474.49	1678661.20	14307174.11	39°23'55.748"N	80°51'52.634"W	8992.50	164.028	6.86	-0.07	-6.86	
15754.00	89.720	152.720	6553.19	9068.19	-8730.28	2514.72	1678701.41	14307089.21	39°23'54.908"N	80°51'52.123"W	9085.24	163.931	4.12	-0.06	-4.12	
15849.00	89.690	157.670	6553.68	9162.76	-8816.49	2554.56	1678741.24	14307003.04	39°23'54.055"N	80°51'51.617"W	9179.12	163.841	5.21	-0.03	-5.21	
15943.00	89.750	161.610	6554.14	9256.74	-8904.60	2587.26	1678773.92	14306914.97	39°23'53.184"N	80°51'51.202"W	9272.85	163.799	4.19	0.06	4.19	
16037.00	89.780	163.700	6554.53	9350.66	-8994.32	2615.28	1678801.93	14306825.28	39°23'52.297"N	80°51'50.847"W	9366.83	163.787	4.19	0.03	2.22	
16131.00	89.820	162.580	6554.86	9444.55	-9084.28	2642.54	1678829.19	14306735.36	39°23'51.407"N	80°51'50.502"W	9460.82	163.781	1.19	0.04	-1.19	
16226.00	89.850	161.380	6555.13	9539.51	-9174.61	2671.93	1678858.56	14306645.06	39°23'50.514"N	80°51'50.129"W	9555.77	163.763	1.26	0.03	-1.26	
16320.00	89.880	160.340	6555.35	9633.51	-9263.42	2702.75	1678889.37	14306556.29	39°23'49.656"N	80°51'49.738"W	9649.65	163.735	1.11	0.03	-1.11	
16414.00	89.690	157.940	6556.70	9727.48	-9351.25	2736.22	1678922.82	14306468.50	39°23'48.767"N	80°51'49.313"W	9743.34	163.690	2.56	-0.20	-2.56	
16508.00	89.690	154.530	6556.21	9821.21	-9437.26	2774.10	1678960.68	14306382.52	39°23'47.917"N	80°51'48.833"W	9836.54	163.619	3.63	0.00	-3.63	
16602.00	89.660	153.400	6556.74	9914.61	-9521.72	2815.35	1679001.92	14306298.09	39°23'47.081"N	80°51'48.309"W	9929.22	163.528	1.20	-0.03	-1.20	
16696.00	89.690	155.790	6557.28	10008.12	-9606.63	2855.68	1679042.23	14306213.22	39°23'46.242"N	80°51'47.797"W	10022.08	163.445	2.54	0.03	2.54	
16791.00	89.720	158.440	6557.77	10102.95	-9694.14	2892.62	1679079.16	14306125.74	39°23'45.376"N	80°51'47.328"W	10116.50	163.386	2.79	0.03	2.79	
16885.00	89.750	162.790	6558.20	10196.93	-9782.79	2923.81	1679110.34	14306037.13	39°23'44.500"N	80°51'46.832"W	10210.37	163.360	4.63	0.03	4.63	
16979.00	89.910	163.860	6558.48	10290.80	-9872.83	2950.78	1679137.30	14305947.12	39°23'43.609"N	80°51'46.590"W	10304.36	163.360	0.17	1.14	-1.14	
17073.00	89.480	161.230	6558.98	10384.73	-9962.50	2978.97	1679165.48	14305857.50	39°23'42.723"N	80°51'46.233"W	10398.35	163.352	2.83	-0.46	-2.80	
17167.00	89.480	160.560	6559.83	10478.72	-10051.31	3009.74	1679196.23	14305768.71	39°23'41.844"N	80°51'45.843"W	10492.26	163.330	0.71	0.00	-0.71	
17261.00	89.320	161.690	6560.83	10573.71	-10141.20	3040.47	1679226.95	14305678.86	39°23'40.955"N	80°51'45.453"W	10587.18	163.311	1.20	-0.17	1.19	
17356.00	89.350	164.700	6561.92	10667.58	-10231.17	3067.64	1679254.11	14305588.93	39°23'40.066"N	80°51'45.109"W	10681.16	163.310	3.20	0.03	3.20	
17451.00	89.420	166.370	6562.94	10762.19	-10323.15	3091.37	1679277.83	14305498.99	39°23'39.156"N	80°51'44.808"W	10776.08	163.329	1.76	0.07	1.76	
17545.00	89.380	164.730	6563.93	10855.81	-10414.17	3114.82	1679301.27	14305406.01	39°23'38.256"N	80°51'44.511"W	10870.00	163.348	1.75	-0.04	-1.74	
17639.00	89.850	162.210	6564.56	10949.67	-10504.27	3141.56	1679328.01	14305315.94	39°23'37.365"N	80°51'44.173"W	10963.99	163.349	2.73	0.50	-2.68	
17733.00	89.850	160.630	6564.80	11043.65	-10593.37	3171.51	1679357.94	14305226.87	39°23'36.484"N	80°51'43.793"W	11057.94	163.333	1.68	0.00	-1.68	
17827.00	89.880	158.590	6565.02	11137.63	-10681.47	3204.26	1679390.68	14305138.80	39°23'35.613"N	80°51'43.377"W	11151.74	163.302	2.17	0.03	-2.17	
17921.00	89.970	158.530	6565.15	11231.58	-10768.97	3238.62	1679425.03	14305051.34	39°23'34.748"N	80°51'42.942"W	11245.42	163.262	0.12	-0.10	-0.06	
18015.00	90.000	158.520	6565.17	11325.53	-10856.44	3273.04	1679459.42	14304963.90	39°23'33.883"N	80°51'42.505"W	11339.10	163.223	0.03	0.03	-0.01	
18109.00	89.720	158.260	6565.40	11419.47	-10943.84	3307.65	1679494.03	14304876.55	39°23'33.018"N	80°51'42.066"W	11432.77	163.183	0.41	-0.30	-0.28	
18202.00	89.910	158.190	6565.70	11512.40	-11030.20	3342.15	1679528.51	14304790.22	39°23'32.164"N	80°51'41.628"W	11525.42	163.143	0.22	0.20	-0.08	
18297.00	89.940	158.310	6565.83	11607.34	-11118.44	3377.36	1679563.70	14304702.02	39°23'31.292"N	80°51'41.181"W	11620.08	163.103	0.13	0.03	0.13	
18390.00	90.090	161.750	6565.80	11700.32	-11205.83	3409.11	1679595.45	14304614.66	39°23'30.428"N	80°51'40.778"W	11712.93	163.079	3.70	0.16	3.70	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Well	Bead Unit 1H AWP
Slot	Bead Unit 1H
Slot #09	

WELLPATH DATA (222 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Buidl Rate	Turn Rate	Comments
18485.00	165.020	6565.65	11795.18	-11296.85	3436.27	1679622.60	14304523.67	39°23'28.527"N	80°51'40.434"W	11807.92	163.081	3.44	0.00	3.44	0.00	
18579.00	90.090	162.450	6565.51	11889.01	-11387.08	3462.60	1679648.91	14304433.48	39°23'28.635"N	80°51'40.101"W	11901.90	163.086	2.73	0.00	-2.73	
18673.00	90.150	160.740	6565.31	11982.99	-11476.27	3492.28	1679678.58	14304344.33	39°23'27.753"N	80°51'39.725"W	11995.87	163.075	1.82	0.06	-1.82	
18767.00	90.280	164.760	6564.96	12076.89	-11566.02	3520.15	1679706.44	14304254.61	39°23'26.866"N	80°51'39.371"W	12089.84	163.072	4.28	0.14	4.28	
18861.00	90.120	163.540	6564.63	12170.69	-11656.45	3545.82	1679732.10	14304164.22	39°23'25.972"N	80°51'39.046"W	12183.83	163.081	1.31	-0.17	-1.30	
18955.00	90.180	156.410	6564.38	12264.63	-11744.71	3577.99	1679764.25	14304076.00	39°23'25.099"N	80°51'38.638"W	12277.63	163.057	7.59	0.06	-7.59	
19049.00	90.180	153.950	6564.09	12358.23	-11830.02	3617.44	1679803.69	14303990.72	39°23'24.255"N	80°51'38.137"W	12370.74	162.997	2.62	0.00	-2.62	
19144.00	90.180	156.220	6563.79	12452.73	-11915.82	3658.21	1679844.45	14303904.95	39°23'23.407"N	80°51'37.620"W	12464.72	162.933	1.34	0.00	1.34	
19238.00	90.250	157.300	6563.43	12546.48	-12001.86	3696.05	1679882.27	14303818.94	39°23'22.556"N	80°51'37.139"W	12558.09	162.883	2.21	0.07	2.21	
19332.00	90.150	160.470	6563.11	12640.43	-12089.54	3729.91	1679916.12	14303731.30	39°23'21.688"N	80°51'36.710"W	12651.85	162.854	3.37	-0.11	3.37	
19389.00	90.120	162.050	6562.97	12697.43	-12143.52	3748.22	1679934.42	14303677.35	39°23'21.155"N	80°51'36.478"W	12708.82	162.847	2.77	-0.05	2.77	
19413.00	90.120	162.050	6562.92	12721.42	-12166.35	3755.62	1679941.81	14303654.53	39°23'20.929"N	80°51'36.384"W	12732.82	162.845	0.00	0.00	0.00	Projected MD at TD: 19413'

HOLE & CASING SECTIONS - Ref Wellbore: Bead Unit 1H AWP Proj: 19413'

String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	End N/S	Start EW	End EW
20in Conductor	25.00	100.00	75.00	25.00	100.00	0.00	0.00	0.00	0.00
17.5in Open Hole	100.00	622.00	422.00	100.00	522.00	0.01	0.15	-1.12	-1.12
13.375in Casing Surface	25.00	622.00	497.00	25.00	522.00	0.00	0.00	0.61	-1.12
12.25in Open Hole	622.00	2564.00	2042.00	2561.19	522.00	-1.12	0.61	-11.44	-73.77
9.625in Casing Intermediate	25.00	2564.00	2539.00	25.00	2561.19	0.00	0.00	-11.44	-73.77
8.75in Open Hole	2564.00	5753.00	3189.00	2561.19	5703.25	-11.44	-73.77	196.04	-545.97
8.5in Open Hole	5753.00	19413.00	13660.00	5703.25	6562.92	196.04	-545.97	-12166.35	-3755.62
5.5in Casing Production	25.00	19412.90	19387.90	25.00	6562.92	0.00	0.00	-12166.25	3755.59

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Bead Unit 1H AWP Proj: 19413'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Bead Unit 1H
Field	Tyler	Wellbore	Bead Unit 1H AWB
Facility	Edna Monroe Pad		

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
Bead Unit 1H POE Rev-2	6492.00	-273.43	-481.78	1675706.11	14315542.68	39°25'18.534"N	80°52'30.144"W	point	
Bead Unit 1H LP Rev-2	6518.00	-440.24	-422.43	1675765.44	14315375.93	39°25'16.885"N	80°52'29.391"W	point	
Bead Unit 1H BHL Rev-2	6626.69	-12174.20	3752.45	1679938.65	14303646.68	39°23'20.851"N	80°51'36.424"W	point	

WELLPATH COMPOSITION - Ref Wellbore: Bead Unit 1H AWB Ref Wellpath: Bead Unit 1H AWP Proj: 19413'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
25.00	5583.00	Gyrodata standard - Drop gyro or Multi-shot	03 Gyrodata MS Gyro <8-3/4"> (100-5571')	Bead Unit 1H AWB	
5583.00	19389.00	BHI AutoTrak Curve (Short)	04 BHI AT Curve <8-1/2"> (5583')(5668'-19389')	Bead Unit 1H AWB	
19389.00	19413.00	Blind Drilling (std)	Projection to bit	Bead Unit 1H AWB	

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Actual Wellpath Report

Bead Unit 1H AWP Proj: 19413'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Bead Unit 1H
Field	Tyler	Wellbore	Bead Unit 1H AWB
Facility	Edna Monroe Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02370-0000 BHI Job #: 8381897 Rig: Patterson 343 Duration: 02/05/2017-02/09/2017 Gyrodatta MS Gyro <8-3/4"> (100'-5571') BHI AT Curve <8-1/2"> (5583')(5668'-19389') Middlesex: 6423' MD / 6323' TVD Burket: 6594' MD / 6426' TVD Tully: 6662' MD / 6456' TVD Marcellus POE: 6772' MD / 6491' TVD Projected MD at TD: 19413'</p>

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Environmental Protection