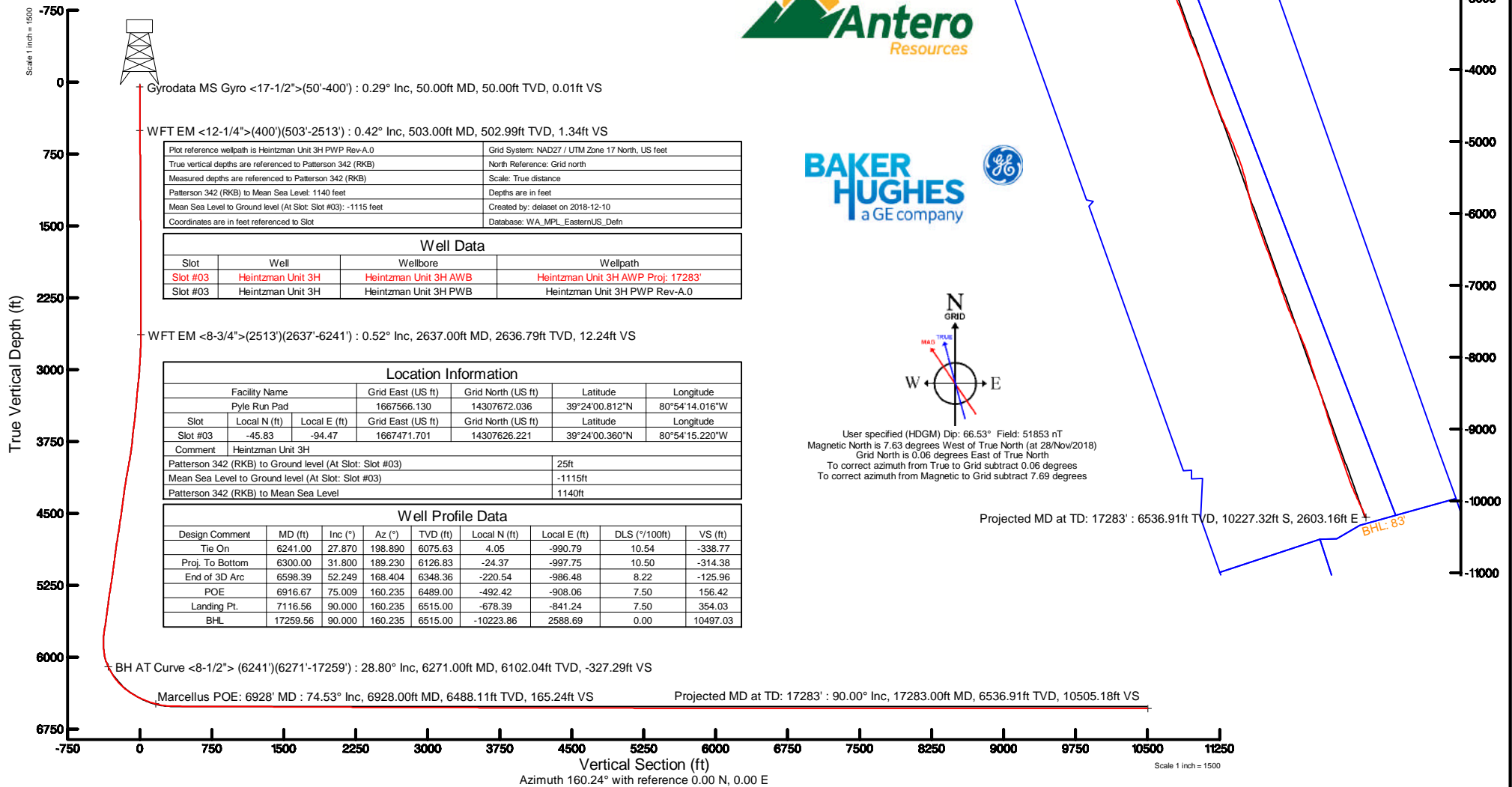


ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Pyle Run Pad

Slot: Slot #03
 Well: Heintzman Unit 3H
 Wellbore: Heintzman Unit 3H PWB

API: 47-095-02528-0000
 BHI Job #: 109523470
 Rig: Patterson 342
 Duration: 12/01/2018-12/06/2018

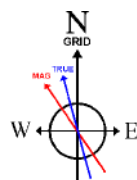


Plot reference wellpath is Heintzman Unit 3H PWP Rev-A.0		Grid System: NAD27 / UTM Zone 17 North, US feet	
True vertical depths are referenced to Patterson 342 (RKB)		North Reference: Grid north	
Measured depths are referenced to Patterson 342 (RKB)		Scale: True distance	
Patterson 342 (RKB) to Mean Sea Level: 1140 feet		Depths are in feet	
Mean Sea Level to Ground level (At Slot: Slot #03): -1115 feet		Created by: delaset on 2018-12-10	
Coordinates are in feet referenced to Slot		Database: WA_MPL_EasternUS_Defn	

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #03	Heintzman Unit 3H	Heintzman Unit 3H AWB	Heintzman Unit 3H AWP Proj: 17283'
Slot #03	Heintzman Unit 3H	Heintzman Unit 3H PWB	Heintzman Unit 3H PWP Rev-A.0

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Pyle Run Pad	1667566.130	14307672.036	39°24'00.812"N	80°54'14.016"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #03	-45.83	-94.47	1667471.701	14307626.221
Comment	Heintzman Unit 3H		Latitude	Longitude
			39°24'00.360"N	80°54'15.220"W
Patterson 342 (RKB) to Ground level (At Slot: Slot #03)			25ft	
Mean Sea Level to Ground level (At Slot: Slot #03)			-1115ft	
Patterson 342 (RKB) to Mean Sea Level			1140ft	

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	6241.00	27.870	198.890	6075.63	4.05	-990.79	-338.77
Proj. To Bottom	6300.00	31.800	189.230	6126.83	-24.37	-997.75	-314.38
End of 3D Arc	6598.39	52.249	168.404	6348.36	-220.54	-986.48	-125.96
POE	6916.67	75.009	160.235	6489.00	-492.42	-908.06	156.42
Landing Pt.	7116.56	90.000	160.235	6515.00	-678.39	-841.24	354.03
BHL	17259.56	90.000	160.235	6515.00	-10223.86	2588.69	10497.03



User specified (HDGM) Dip: 66.53° Field: 51853 nT
 Magnetic North is 7.63 degrees West of True North (at 28/Nov/2018)
 Grid North is 0.06 degrees East of True North
 To correct azimuth from True to Grid subtract 0.06 degrees
 To correct azimuth from Magnetic to Grid subtract 7.69 degrees



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	10/Dec/2018 at 13:46
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Heintzman_Unit_3H_AWP_Proj_17283_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-45.83	-94.47	1667471.70	14307626.22	39°24'00.360"N	80°54'15.220"W
Facility Reference Pt			1667566.13	14307672.04	39°24'00.812"N	80°54'14.016"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	1140.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #03)	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	160.24°



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #03
Area	Tyler County, WV		Well
Field	Tyler		Wellbore
Facility	Pyle Run Pad		Heintzman Unit 3H AWB

WELLPATH DATA (211 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	81.760	0.00	0.00	0.00	0.00	1667471.70	14307626.22	39°24'00.360"N	80°54'15.220"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	81.760	25.00	0.00	0.00	0.00	1667471.70	14307626.22	39°24'00.360"N	80°54'15.220"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.290	81.760	50.00	0.01	0.01	0.06	1667471.76	14307626.23	39°24'00.360"N	80°54'15.219"W	0.06	81.760	1.16	1.16	327.04	Gyrodata MS Gyro <17-1/2">(50'-400')
75.00	0.360	90.650	75.00	0.05	0.02	0.20	1667471.90	14307626.24	39°24'00.360"N	80°54'15.217"W	0.20	85.163	0.34	0.28	35.56	
100.00	0.380	83.660	100.00	0.10	0.03	0.36	1667472.07	14307626.25	39°24'00.360"N	80°54'15.215"W	0.37	85.999	0.20	0.08	-27.96	
125.00	0.450	83.050	125.00	0.14	0.05	0.54	1667472.24	14307626.27	39°24'00.360"N	80°54'15.213"W	0.55	85.115	0.28	0.28	-2.44	
150.00	0.320	96.910	150.00	0.19	0.05	0.71	1667472.41	14307626.27	39°24'00.360"N	80°54'15.211"W	0.71	85.977	0.64	-0.52	55.44	
175.00	0.260	118.320	175.00	0.27	0.01	0.83	1667472.53	14307626.24	39°24'00.360"N	80°54'15.209"W	0.83	88.985	0.49	-0.24	85.64	
200.00	0.320	115.150	200.00	0.36	-0.04	0.94	1667472.64	14307626.18	39°24'00.360"N	80°54'15.208"W	0.94	92.540	0.25	0.24	-12.68	
225.00	0.220	126.670	225.00	0.45	-0.10	1.05	1667472.75	14307626.12	39°24'00.359"N	80°54'15.207"W	1.05	95.475	0.45	-0.40	46.08	
250.00	0.230	118.400	250.00	0.53	-0.15	1.13	1667472.83	14307626.07	39°24'00.358"N	80°54'15.206"W	1.14	97.711	0.14	0.04	-33.08	
275.00	0.180	121.340	275.00	0.59	-0.20	1.21	1667472.91	14307626.02	39°24'00.358"N	80°54'15.205"W	1.22	99.281	0.20	-0.20	11.76	
300.00	0.190	128.680	300.00	0.66	-0.24	1.27	1667472.97	14307625.98	39°24'00.358"N	80°54'15.204"W	1.29	100.834	0.10	0.04	29.36	
325.00	0.130	175.920	325.00	0.72	-0.30	1.31	1667473.01	14307625.92	39°24'00.357"N	80°54'15.203"W	1.34	102.835	0.56	-0.24	188.96	
350.00	0.180	201.850	350.00	0.78	-0.36	1.29	1667472.99	14307625.86	39°24'00.356"N	80°54'15.204"W	1.34	105.648	0.34	0.20	103.72	
375.00	0.180	215.570	375.00	0.83	-0.43	1.26	1667472.96	14307625.79	39°24'00.356"N	80°54'15.204"W	1.33	108.928	0.17	0.00	54.88	
400.00	0.210	215.930	400.00	0.88	-0.50	1.21	1667472.91	14307625.72	39°24'00.355"N	80°54'15.205"W	1.31	112.504	0.12	0.12	1.44	
503.00	0.420	178.720	502.99	1.34	-1.03	1.10	1667472.80	14307625.19	39°24'00.350"N	80°54'15.206"W	1.51	133.017	0.27	0.20	-36.13	WFT EM <12-1/4">(400')(503'-2513')
594.00	0.740	169.050	593.99	2.24	-1.94	1.22	1667472.92	14307624.28	39°24'00.341"N	80°54'15.204"W	2.29	147.779	0.37	0.35	-10.63	
685.00	0.760	161.810	684.98	3.42	-3.09	1.52	1667473.22	14307623.13	39°24'00.329"N	80°54'15.201"W	3.45	153.768	0.11	0.02	-7.96	
775.00	1.040	165.540	774.97	4.83	-4.45	1.91	1667473.61	14307621.77	39°24'00.316"N	80°54'15.196"W	4.84	156.729	0.32	0.31	4.14	
869.00	1.420	168.520	868.95	6.84	-6.42	2.36	1667474.06	14307619.81	39°24'00.297"N	80°54'15.190"W	6.84	159.821	0.41	0.40	3.17	
964.00	0.710	193.910	963.93	8.49	-8.14	2.45	1667474.15	14307618.08	39°24'00.280"N	80°54'15.189"W	8.50	163.246	0.88	-0.75	26.73	
1058.00	0.420	250.980	1057.93	8.97	-8.82	1.99	1667473.68	14307617.41	39°24'00.273"N	80°54'15.195"W	9.04	167.314	0.63	-0.31	60.71	
1153.00	0.550	270.130	1152.92	8.81	-8.93	1.20	1667472.90	14307617.29	39°24'00.272"N	80°54'15.205"W	9.01	172.348	0.22	0.14	20.16	
1248.00	0.870	247.960	1247.92	8.68	-9.20	0.08	1667471.78	14307617.02	39°24'00.269"N	80°54'15.219"W	9.20	179.530	0.44	0.34	-23.34	
1343.00	1.140	238.390	1342.90	8.91	-9.97	-1.40	1667470.30	14307616.26	39°24'00.262"N	80°54'15.238"W	10.06	187.984	0.33	0.28	-10.07	
1438.00	0.460	157.160	1437.90	9.48	-10.81	-2.05	1667469.65	14307615.41	39°24'00.253"N	80°54'15.246"W	11.01	190.759	1.22	-0.72	-85.51	
1533.00	1.030	124.750	1532.89	10.56	-11.65	-1.21	1667470.50	14307614.57	39°24'00.245"N	80°54'15.236"W	11.71	185.905	0.72	0.60	-34.12	
1627.00	0.490	124.880	1626.88	11.57	-12.36	-0.18	1667471.52	14307613.86	39°24'00.238"N	80°54'15.222"W	12.36	180.840	0.57	-0.57	0.14	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #03
Area	Tyler County, WV		Well	Heintzman Unit 3H
Field	Tyler		Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad			

WELLPATH DATA (211 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
1722.00	0.150	151.730	1721.88	12.03	-12.70	0.21	1667471.91	14307613.52	39°24'00.234"N	80°54'15.217"W	12.71	179.049	0.38	-0.36	28.26	
1816.00	0.260	187.810	1815.88	12.34	-13.02	0.24	1667471.94	14307613.20	39°24'00.231"N	80°54'15.217"W	13.03	178.943	0.18	0.12	38.38	
1911.00	0.510	196.710	1910.87	12.87	-13.64	0.09	1667471.79	14307612.58	39°24'00.225"N	80°54'15.219"W	13.64	179.625	0.27	0.26	9.37	
2006.00	0.590	211.350	2005.87	13.52	-14.47	-0.29	1667471.41	14307611.76	39°24'00.217"N	80°54'15.224"W	14.47	181.135	0.17	0.08	15.41	
2100.00	0.700	208.880	2099.86	14.20	-15.38	-0.82	1667470.89	14307610.85	39°24'00.208"N	80°54'15.231"W	15.40	183.036	0.12	0.12	-2.63	
2194.00	0.970	286.730	2193.86	14.11	-15.66	-1.86	1667469.85	14307610.57	39°24'00.205"N	80°54'15.244"W	15.77	186.758	1.14	0.29	82.82	
2288.00	1.610	306.540	2287.83	12.53	-14.64	-3.68	1667468.02	14307611.59	39°24'00.215"N	80°54'15.267"W	15.10	194.102	0.82	0.68	21.07	
2383.00	1.200	273.090	2382.81	11.04	-13.79	-5.74	1667465.96	14307612.43	39°24'00.224"N	80°54'15.293"W	14.94	202.609	0.95	-0.43	-35.21	
2478.00	0.430	193.810	2477.80	10.95	-14.08	-6.82	1667464.88	14307612.14	39°24'00.221"N	80°54'15.307"W	15.65	205.844	1.26	-0.81	-83.45	
2513.00	0.470	148.480	2512.80	11.20	-14.33	-6.78	1667464.92	14307611.89	39°24'00.218"N	80°54'15.307"W	15.86	205.308	1.00	0.11	-129.51	
2637.00	0.520	146.600	2636.79	12.24	-15.24	-6.20	1667465.50	14307610.99	39°24'00.209"N	80°54'15.299"W	16.45	202.150	0.04	0.04	-1.52	WFT EM <8-3/4">(2513')(2637'-6241')
2733.00	4.320	276.290	2732.71	11.08	-15.21	-9.56	1667462.15	14307611.02	39°24'00.210"N	80°54'15.342"W	17.96	212.155	4.86	3.96	135.09	
2827.00	6.950	277.870	2826.24	6.89	-14.04	-18.71	1667453.00	14307612.19	39°24'00.221"N	80°54'15.459"W	23.39	233.123	2.80	2.80	1.68	
2922.00	5.630	283.320	2920.67	1.68	-12.18	-28.94	1667442.77	14307614.05	39°24'00.240"N	80°54'15.589"W	31.40	247.180	1.52	-1.39	5.74	
3018.00	5.850	298.000	3016.19	-4.52	-8.80	-37.84	1667433.87	14307617.43	39°24'00.273"N	80°54'15.702"W	38.85	256.915	1.54	0.23	15.29	
3112.00	8.030	293.250	3109.50	-12.54	-3.95	-48.11	1667423.61	14307622.27	39°24'00.321"N	80°54'15.833"W	48.27	265.301	2.40	2.32	-5.05	
3211.00	9.360	291.340	3207.36	-22.55	1.70	-61.96	1667409.77	14307627.93	39°24'00.377"N	80°54'16.009"W	61.98	271.576	1.37	1.34	-1.93	
3306.00	11.090	276.840	3300.86	-31.72	5.61	-78.23	1667393.50	14307631.82	39°24'00.416"N	80°54'16.216"W	78.43	274.098	3.25	1.82	-15.26	
3400.00	11.460	275.110	3393.05	-39.70	7.51	-96.51	1667375.23	14307633.73	39°24'00.435"N	80°54'16.449"W	96.80	274.452	0.53	0.39	-1.84	
3495.00	12.940	277.930	3485.90	-48.61	9.82	-116.44	1667355.30	14307636.04	39°24'00.458"N	80°54'16.703"W	116.86	274.821	1.68	1.56	2.97	
3590.00	16.010	278.970	3577.88	-59.85	13.33	-139.93	1667331.83	14307639.55	39°24'00.493"N	80°54'17.002"W	140.56	275.443	3.24	3.23	1.09	
3685.00	17.500	268.760	3668.86	-70.69	15.07	-167.15	1667304.61	14307641.28	39°24'00.511"N	80°54'17.349"W	167.83	275.151	3.47	1.57	-10.75	
3779.00	19.470	266.500	3758.01	-79.57	13.80	-196.92	1667274.86	14307640.02	39°24'00.498"N	80°54'17.728"W	197.41	274.010	2.23	2.10	-2.40	
3874.00	18.580	275.650	3847.84	-90.50	14.33	-227.80	1667244.00	14307640.54	39°24'00.504"N	80°54'18.122"W	228.25	273.599	3.27	-0.94	9.63	
3969.00	20.280	278.980	3937.43	-104.91	18.39	-259.12	1667212.68	14307644.60	39°24'00.544"N	80°54'18.521"W	259.77	274.059	2.14	1.79	3.51	
4064.00	21.490	279.030	4026.18	-121.21	23.69	-292.57	1667179.25	14307649.90	39°24'00.597"N	80°54'18.947"W	293.53	274.629	1.27	1.27	0.05	
4159.00	20.570	277.040	4114.86	-137.11	28.47	-326.32	1667145.51	14307654.68	39°24'00.645"N	80°54'19.376"W	327.56	274.986	1.23	-0.97	-2.09	
4254.00	19.060	274.810	4204.23	-151.09	31.81	-358.34	1667113.50	14307658.02	39°24'00.678"N	80°54'19.784"W	359.75	275.073	1.78	-1.59	-2.35	
4349.00	19.620	274.190	4293.87	-164.01	34.28	-389.71	1667082.15	14307660.49	39°24'00.703"N	80°54'20.184"W	391.21	275.027	0.63	0.59	-0.65	
4443.00	20.550	273.230	4382.15	-176.86	36.36	-421.92	1667049.95	14307662.57	39°24'00.724"N	80°54'20.594"W	423.48	274.926	1.05	0.99	-1.02	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
4538.00	19.230	270.420	4471.48	-188.77	37.42	-454.21	1667017.67	14307663.62	39°24'00.735"N	80°54'21.006"W	455.75	274.709	1.72	-1.39	-2.96	
4632.00	19.860	275.240	4560.07	-200.86	38.99	-485.60	1666986.30	14307665.19	39°24'00.750"N	80°54'21.405"W	487.16	274.590	1.84	0.67	5.13	
4727.00	19.710	275.740	4649.47	-214.58	42.06	-517.60	1666954.30	14307668.27	39°24'00.781"N	80°54'21.813"W	519.31	274.646	0.24	-0.16	0.53	
4822.00	18.580	277.030	4739.21	-228.30	45.52	-548.57	1666923.35	14307671.72	39°24'00.816"N	80°54'22.207"W	550.45	274.743	1.27	-1.19	1.36	
4916.00	19.390	276.570	4828.10	-241.97	49.14	-578.93	1666893.00	14307675.34	39°24'00.852"N	80°54'22.594"W	581.01	274.851	0.88	0.86	-0.49	
5011.00	18.120	272.750	4918.05	-254.62	51.65	-609.36	1666862.59	14307677.85	39°24'00.877"N	80°54'22.982"W	611.54	274.845	1.86	-1.34	-4.02	
5106.00	19.620	270.970	5007.95	-265.92	52.63	-640.06	1666831.90	14307678.83	39°24'00.887"N	80°54'23.373"W	642.22	274.701	1.69	1.58	-1.87	
5200.00	20.930	272.460	5096.12	-277.86	53.62	-672.62	1666799.35	14307679.82	39°24'00.897"N	80°54'23.787"W	674.75	274.558	1.50	1.39	1.59	
5295.00	21.590	272.120	5184.65	-290.79	54.99	-707.04	1666764.95	14307681.19	39°24'00.911"N	80°54'24.226"W	709.17	274.447	0.71	0.69	-0.36	
5390.00	19.690	276.690	5273.56	-304.43	57.50	-740.40	1666731.60	14307683.70	39°24'00.936"N	80°54'24.651"W	742.63	274.441	2.62	-2.00	4.81	
5484.00	18.710	275.920	5362.33	-318.02	60.90	-771.13	1666700.88	14307687.10	39°24'00.970"N	80°54'25.042"W	773.53	274.516	1.08	-1.04	-0.82	
5579.00	17.260	272.520	5452.69	-329.97	63.09	-800.37	1666671.66	14307689.29	39°24'00.992"N	80°54'25.415"W	802.85	274.507	1.88	-1.53	-3.58	
5673.00	17.960	273.800	5542.28	-341.05	64.67	-828.76	1666643.27	14307690.86	39°24'01.008"N	80°54'25.776"W	831.28	274.462	0.85	0.74	1.36	
5768.00	19.970	276.230	5632.12	-354.01	67.40	-859.50	1666612.54	14307693.59	39°24'01.035"N	80°54'26.168"W	862.14	274.484	2.27	2.12	2.56	
5863.00	21.300	274.880	5721.03	-368.32	70.63	-892.82	1666579.24	14307696.82	39°24'01.067"N	80°54'26.592"W	895.61	274.523	1.49	1.40	-1.42	
5957.00	15.950	258.000	5810.13	-377.19	69.39	-922.51	1666549.56	14307695.59	39°24'01.055"N	80°54'26.971"W	925.12	274.302	8.03	-5.69	-17.96	
6052.00	19.440	242.840	5900.67	-376.92	59.45	-949.37	1666522.71	14307685.65	39°24'00.957"N	80°54'27.313"W	951.23	273.583	6.06	3.67	-15.96	
6146.00	20.980	216.700	5989.06	-365.58	38.78	-973.39	1666498.70	14307664.98	39°24'00.753"N	80°54'27.619"W	974.16	272.281	9.67	1.64	-27.81	
6241.00	27.870	198.890	6075.63	-338.77	4.05	-990.79	1666481.31	14307630.26	39°24'00.410"N	80°54'27.841"W	990.80	270.234	10.54	7.25	-18.75	
6271.00	28.800	194.070	6102.04	-327.29	-9.60	-994.82	1666477.28	14307616.62	39°24'00.275"N	80°54'27.893"W	994.86	269.447	8.23	3.10	-16.07	BH AT Curve <8-1/2"> (6241')(6271'-17259')
6318.00	30.560	186.490	6142.88	-307.16	-32.46	-998.92	1666473.18	14307593.77	39°24'00.049"N	80°54'27.945"W	999.45	268.139	8.81	3.74	-16.13	
6366.00	34.470	182.700	6183.35	-283.65	-58.17	-1000.94	1666471.16	14307568.07	39°23'59.795"N	80°54'27.971"W	1002.63	266.674	9.18	8.15	-7.90	
6413.00	38.700	180.880	6221.09	-257.60	-86.16	-1001.79	1666470.31	14307540.10	39°23'59.519"N	80°54'27.982"W	1005.49	265.084	9.29	9.00	-3.87	
6460.00	42.810	178.600	6256.68	-228.68	-116.83	-1001.63	1666470.47	14307509.44	39°23'59.216"N	80°54'27.981"W	1008.42	263.347	9.30	8.74	-4.85	
6514.00	46.380	176.690	6295.13	-192.51	-154.70	-1000.05	1666472.05	14307471.58	39°23'58.841"N	80°54'27.961"W	1011.95	261.206	7.06	6.61	-3.54	
6555.00	50.100	173.900	6322.44	-162.98	-185.17	-997.52	1666474.58	14307441.13	39°23'58.540"N	80°54'27.929"W	1014.56	259.484	10.39	9.07	-6.80	
6578.00†	52.101	172.778	6336.88	-145.54	-202.95	-995.44	1666476.66	14307423.36	39°23'58.364"N	80°54'27.903"W	1015.92	258.477	9.49	8.70	-4.88	Middlesex: 6578' MD
6602.00	54.200	171.670	6351.27	-126.76	-221.97	-992.84	1666479.26	14307404.34	39°23'58.176"N	80°54'27.870"W	1017.35	257.397	9.49	8.75	-4.62	
6650.00	58.290	170.470	6377.94	-87.57	-261.39	-986.64	1666485.46	14307364.94	39°23'57.787"N	80°54'27.792"W	1020.68	255.162	8.77	8.52	-2.50	
6697.00	61.270	169.060	6401.59	-47.52	-301.35	-979.42	1666492.68	14307325.00	39°23'57.392"N	80°54'27.700"W	1024.73	252.898	6.85	6.34	-3.00	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
6745.00	64.020	167.340	6423.65	-5.30	-343.07	-970.69	1666501.40	14307283.29	39°23'56.979"N	80°54'27.590"W	1029.53	250.535	6.55	5.73	-3.58	
6762.00†	65.077	166.672	6430.95	9.94	-358.03	-967.24	1666504.85	14307268.34	39°23'56.831"N	80°54'27.546"W	1031.38	249.688	7.16	6.22	-3.93	Burkett: 6762' MD
6792.00	66.950	165.520	6443.15	37.20	-384.63	-960.65	1666511.43	14307241.75	39°23'56.568"N	80°54'27.462"W	1034.79	248.180	7.16	6.24	-3.84	
6839.00	69.600	164.060	6460.55	80.72	-426.76	-949.19	1666522.89	14307199.64	39°23'56.152"N	80°54'27.317"W	1040.72	245.791	6.33	5.64	-3.11	
6845.00†	69.903	163.849	6462.62	86.34	-432.17	-947.64	1666524.44	14307194.23	39°23'56.098"N	80°54'27.297"W	1041.53	245.485	6.03	5.05	-3.51	Tully: 6845' MD
6886.00	71.980	162.430	6476.01	125.04	-469.25	-936.40	1666535.68	14307157.16	39°23'55.732"N	80°54'27.154"W	1047.39	243.384	6.03	5.07	-3.46	
6928.00†	74.535	161.492	6488.11	165.24	-507.49	-923.94	1666548.13	14307118.94	39°23'55.354"N	80°54'26.996"W	1054.14	241.222	6.45	6.08	-2.23	Marcellus POE: 6928' MD
6934.00	74.900	161.360	6489.69	171.02	-512.97	-922.10	1666549.97	14307113.45	39°23'55.300"N	80°54'26.973"W	1055.18	240.912	6.45	6.09	-2.20	
6981.00	79.200	160.500	6500.22	216.81	-556.25	-907.13	1666564.93	14307070.19	39°23'54.872"N	80°54'26.783"W	1064.10	238.483	9.32	9.15	-1.83	
7029.00	83.000	159.990	6507.64	264.23	-600.87	-891.11	1666580.95	14307025.59	39°23'54.430"N	80°54'26.579"W	1074.77	236.008	7.99	7.92	-1.06	
7076.00	87.200	160.590	6511.66	311.05	-644.95	-875.32	1666596.73	14306981.53	39°23'53.995"N	80°54'26.379"W	1087.26	233.617	9.03	8.94	1.28	
7123.00	89.480	160.860	6513.02	358.02	-689.29	-859.81	1666612.24	14306937.20	39°23'53.556"N	80°54'26.182"W	1102.00	231.281	4.88	4.85	0.57	
7217.00	89.820	161.630	6513.59	452.00	-778.30	-829.59	1666642.45	14306848.23	39°23'52.676"N	80°54'25.798"W	1137.53	226.827	0.90	0.36	0.82	
7312.00	89.880	161.790	6513.84	546.97	-868.50	-799.77	1666672.25	14306758.07	39°23'51.784"N	80°54'25.419"W	1180.65	222.641	0.18	0.06	0.17	
7407.00	89.690	160.230	6514.20	641.96	-958.33	-768.86	1666703.15	14306668.28	39°23'50.896"N	80°54'25.027"W	1228.63	218.740	1.65	-0.20	-1.64	
7502.00	89.660	158.360	6514.74	736.94	-1047.19	-735.28	1666736.72	14306579.46	39°23'50.018"N	80°54'24.600"W	1279.54	215.074	1.97	-0.03	-1.97	
7597.00	90.060	156.630	6514.97	831.83	-1134.95	-698.92	1666773.07	14306491.73	39°23'49.150"N	80°54'24.138"W	1332.89	211.625	1.87	0.42	-1.82	
7692.00	90.550	154.330	6514.46	926.49	-1221.37	-659.49	1666812.47	14306405.34	39°23'48.295"N	80°54'23.637"W	1388.05	208.367	2.48	0.52	-2.42	
7787.00	89.690	153.510	6514.27	1020.91	-1306.70	-617.73	1666854.22	14306320.05	39°23'47.452"N	80°54'23.106"W	1445.35	205.302	1.25	-0.91	-0.86	
7882.00	88.980	152.960	6515.37	1115.20	-1391.51	-574.95	1666896.98	14306235.27	39°23'46.613"N	80°54'22.562"W	1505.62	202.450	0.95	-0.75	-0.58	
7976.00	89.010	155.990	6517.02	1208.70	-1476.32	-534.46	1666937.46	14306150.50	39°23'45.774"N	80°54'22.048"W	1570.08	199.901	3.22	0.03	3.22	
8071.00	89.720	159.960	6518.07	1303.60	-1564.36	-498.84	1666973.06	14306062.49	39°23'44.904"N	80°54'21.595"W	1641.97	197.686	4.24	0.75	4.18	
8166.00	89.720	160.500	6518.53	1398.59	-1653.76	-466.71	1667005.18	14305973.13	39°23'44.020"N	80°54'21.187"W	1718.35	195.760	0.57	0.00	0.57	
8261.00	89.720	160.620	6519.00	1493.59	-1743.34	-435.09	1667036.79	14305883.58	39°23'43.134"N	80°54'20.786"W	1796.81	194.013	0.13	0.00	0.13	
8356.00	89.690	161.250	6519.49	1588.58	-1833.13	-404.06	1667067.80	14305793.83	39°23'42.246"N	80°54'20.392"W	1877.13	192.430	0.66	-0.03	0.66	
8450.00	89.630	160.920	6520.05	1682.57	-1922.05	-373.59	1667098.26	14305704.94	39°23'41.367"N	80°54'20.005"W	1958.02	190.999	0.36	-0.06	-0.35	
8545.00	89.570	161.280	6520.71	1777.56	-2011.93	-342.82	1667129.02	14305615.10	39°23'40.479"N	80°54'19.614"W	2040.92	189.670	0.38	-0.06	0.38	
8640.00	89.630	161.090	6521.37	1872.54	-2101.85	-312.18	1667159.65	14305525.22	39°23'39.590"N	80°54'19.225"W	2124.90	188.448	0.21	0.06	-0.20	
8735.00	89.660	161.260	6521.96	1967.53	-2191.76	-281.53	1667190.29	14305435.34	39°23'38.701"N	80°54'18.836"W	2209.77	187.319	0.18	0.03	0.18	
8829.00	89.630	162.070	6522.54	2061.50	-2280.99	-251.96	1667219.85	14305346.15	39°23'37.818"N	80°54'18.460"W	2294.86	186.303	0.86	-0.03	0.86	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
8924.00	89.630	163.280	6523.16	2156.41	-2371.68	-223.67	1667248.12	14305255.50	39°23'36.922"N	80°54'18.101"W	2382.20	185.388	1.27	0.00	1.27	
9019.00	89.630	164.600	6523.77	2251.21	-2462.96	-197.39	1667274.39	14305164.24	39°23'36.019"N	80°54'17.767"W	2470.86	184.582	1.39	0.00	1.39	
9113.00	89.780	165.570	6524.25	2344.87	-2553.80	-173.19	1667298.58	14305073.45	39°23'35.121"N	80°54'17.461"W	2559.66	183.880	1.04	0.16	1.03	
9208.00	89.780	164.840	6524.62	2439.51	-2645.64	-148.93	1667322.83	14304981.64	39°23'34.213"N	80°54'17.153"W	2649.83	183.222	0.77	0.00	-0.77	
9302.00	89.820	163.590	6524.95	2533.28	-2736.10	-123.36	1667348.39	14304891.22	39°23'33.319"N	80°54'16.828"W	2738.88	182.582	1.33	0.04	-1.33	
9397.00	89.750	163.550	6525.30	2628.12	-2827.22	-96.49	1667375.24	14304800.14	39°23'32.418"N	80°54'16.487"W	2828.86	181.955	0.08	-0.07	-0.04	
9492.00	89.970	161.740	6525.54	2723.03	-2917.89	-68.16	1667403.57	14304709.50	39°23'31.522"N	80°54'16.128"W	2918.68	181.338	1.92	0.23	-1.91	
9587.00	90.030	157.230	6525.54	2818.00	-3006.84	-34.87	1667436.84	14304620.59	39°23'30.642"N	80°54'15.705"W	3007.04	180.665	4.75	0.06	-4.75	
9681.00	89.850	157.110	6525.63	2911.86	-3093.48	1.60	1667473.30	14304533.99	39°23'29.785"N	80°54'15.241"W	3093.48	179.970	0.23	-0.19	-0.13	
9776.00	89.350	157.780	6526.30	3006.75	-3181.21	38.04	1667509.72	14304446.29	39°23'28.918"N	80°54'14.779"W	3181.43	179.315	0.88	-0.53	0.71	
9870.00	89.660	162.250	6527.11	3100.72	-3269.52	70.15	1667541.83	14304358.01	39°23'28.045"N	80°54'14.371"W	3270.27	178.771	4.77	0.33	4.76	
9965.00	90.060	161.000	6527.34	3195.69	-3359.68	100.10	1667571.76	14304267.89	39°23'27.153"N	80°54'13.990"W	3361.17	178.293	1.38	0.42	-1.32	
10060.00	89.630	160.010	6527.60	3290.69	-3449.23	131.80	1667603.45	14304178.38	39°23'26.268"N	80°54'13.588"W	3451.74	177.812	1.14	-0.45	-1.04	
10154.00	89.850	159.110	6528.03	3384.68	-3537.31	164.63	1667636.26	14304090.33	39°23'25.397"N	80°54'13.171"W	3541.14	177.335	0.99	0.23	-0.96	
10249.00	89.820	156.850	6528.30	3479.60	-3625.37	200.25	1667671.87	14304002.30	39°23'24.526"N	80°54'12.719"W	3630.90	176.839	2.38	-0.03	-2.38	
10344.00	89.750	156.760	6528.66	3574.43	-3712.69	237.66	1667709.27	14303915.02	39°23'23.663"N	80°54'12.243"W	3720.29	176.337	0.12	-0.07	-0.09	
10438.00	89.820	158.710	6529.01	3668.33	-3799.68	273.28	1667744.87	14303828.07	39°23'22.803"N	80°54'11.791"W	3809.49	175.886	2.08	0.07	2.07	
10533.00	89.780	159.910	6529.34	3763.32	-3888.55	306.84	1667778.42	14303739.23	39°23'21.924"N	80°54'11.364"W	3900.64	175.488	1.26	-0.04	1.26	
10627.00	89.820	161.940	6529.67	3857.30	-3977.38	337.56	1667809.12	14303650.43	39°23'21.046"N	80°54'10.974"W	3991.68	175.149	2.16	0.04	2.16	
10722.00	89.910	162.130	6529.89	3952.26	-4067.75	366.86	1667838.41	14303560.10	39°23'20.152"N	80°54'10.602"W	4084.26	174.847	0.22	0.09	0.20	
10817.00	89.850	161.130	6530.09	4047.23	-4157.91	396.80	1667868.34	14303469.98	39°23'19.261"N	80°54'10.222"W	4176.80	174.549	1.05	-0.06	-1.05	
10911.00	89.820	159.510	6530.36	4141.22	-4246.41	428.45	1667899.98	14303381.51	39°23'18.386"N	80°54'09.820"W	4267.97	174.238	1.72	-0.03	-1.72	
11006.00	89.820	159.060	6530.66	4236.21	-4335.27	462.06	1667933.57	14303292.69	39°23'17.507"N	80°54'09.394"W	4359.83	173.916	0.47	0.00	-0.47	
11100.00	89.850	157.390	6530.93	4330.15	-4422.56	496.92	1667968.43	14303205.43	39°23'16.644"N	80°54'08.951"W	4450.39	173.589	1.78	0.03	-1.78	
11195.00	89.720	155.950	6531.29	4424.96	-4509.79	534.55	1668006.03	14303118.24	39°23'15.782"N	80°54'08.473"W	4541.36	173.240	1.52	-0.14	-1.52	
11290.00	89.780	157.340	6531.70	4519.77	-4597.00	572.21	1668043.68	14303031.06	39°23'14.919"N	80°54'07.994"W	4632.48	172.905	1.46	0.06	1.46	
11384.00	89.880	157.840	6531.98	4613.67	-4683.90	608.04	1668079.50	14302944.20	39°23'14.060"N	80°54'07.539"W	4723.21	172.604	0.54	0.11	0.53	
11479.00	89.690	156.320	6532.34	4708.52	-4771.40	645.04	1668116.48	14302856.73	39°23'13.195"N	80°54'07.069"W	4814.80	172.301	1.61	-0.20	-1.60	
11574.00	89.820	156.090	6532.74	4803.28	-4858.32	683.37	1668154.79	14302769.85	39°23'12.335"N	80°54'06.582"W	4906.15	171.993	0.28	0.14	-0.24	
11668.00	89.660	157.530	6533.17	4897.11	-4944.73	720.38	1668191.79	14302683.48	39°23'11.481"N	80°54'06.112"W	4996.93	171.711	1.54	-0.17	1.53	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
11763.00	90.030	158.650	6533.43	4992.04	-5032.86	755.83	1668227.23	14302595.38	39°23'10.609"N	80°54'05.662"W	5089.30	171.459	1.24	0.39	1.18	
11857.00	89.970	158.470	6533.43	5086.00	-5120.36	790.19	1668261.57	14302507.92	39°23'09.744"N	80°54'05.225"W	5180.97	171.227	0.20	-0.06	-0.19	
11952.00	89.850	158.220	6533.58	5180.95	-5208.65	825.24	1668296.61	14302419.66	39°23'08.871"N	80°54'04.780"W	5273.62	170.997	0.29	-0.13	-0.26	
12047.00	89.570	160.470	6534.06	5275.93	-5297.54	858.75	1668330.11	14302330.81	39°23'07.992"N	80°54'04.355"W	5366.69	170.792	2.39	-0.29	2.37	
12141.00	89.880	163.100	6534.51	5369.89	-5386.82	888.13	1668359.48	14302241.56	39°23'07.110"N	80°54'03.982"W	5459.54	170.638	2.82	0.33	2.80	
12236.00	89.820	164.500	6534.76	5464.70	-5478.05	914.64	1668385.97	14302150.37	39°23'06.208"N	80°54'03.645"W	5553.88	170.521	1.48	-0.06	1.47	
12330.00	89.850	166.610	6535.03	5558.29	-5569.07	938.08	1668409.41	14302059.39	39°23'05.308"N	80°54'03.348"W	5647.52	170.439	2.24	0.03	2.24	
12425.00	89.880	167.590	6535.25	5652.61	-5661.67	959.29	1668430.61	14301966.82	39°23'04.392"N	80°54'03.079"W	5742.36	170.383	1.03	0.03	1.03	
12519.00	89.850	166.670	6535.47	5745.93	-5753.31	980.23	1668451.54	14301875.22	39°23'03.486"N	80°54'02.814"W	5836.21	170.331	0.98	-0.03	-0.98	
12613.00	90.060	166.180	6535.55	5839.38	-5844.68	1002.29	1668473.59	14301783.89	39°23'02.583"N	80°54'02.534"W	5930.00	170.269	0.57	0.22	-0.52	
12708.00	90.120	161.960	6535.40	5934.15	-5936.01	1028.36	1668499.65	14301692.59	39°23'01.680"N	80°54'02.203"W	6024.43	170.172	4.44	0.06	-4.44	
12802.00	89.720	160.410	6535.53	6028.13	-6024.99	1058.67	1668529.95	14301603.65	39°23'00.800"N	80°54'01.819"W	6117.29	170.034	1.70	-0.43	-1.65	
12897.00	89.820	161.250	6535.91	6123.13	-6114.72	1089.87	1668561.13	14301513.96	39°22'59.913"N	80°54'01.423"W	6211.08	169.894	0.89	0.11	0.88	
12991.00	89.750	161.280	6536.26	6217.11	-6203.74	1120.06	1668591.31	14301424.97	39°22'59.033"N	80°54'01.039"W	6304.04	169.766	0.08	-0.07	0.03	
13086.00	89.880	160.760	6536.57	6312.10	-6293.57	1150.96	1668622.20	14301335.18	39°22'58.145"N	80°54'00.647"W	6397.95	169.636	0.56	0.14	-0.55	
13180.00	89.910	159.440	6536.74	6406.10	-6381.95	1182.95	1668654.18	14301246.83	39°22'57.271"N	80°54'00.241"W	6490.66	169.499	1.40	0.03	-1.40	
13274.00	89.850	158.390	6536.94	6500.07	-6469.66	1216.77	1668687.98	14301159.16	39°22'56.404"N	80°53'59.811"W	6583.09	169.349	1.12	-0.06	-1.12	
13368.00	90.090	159.710	6536.99	6594.05	-6557.44	1250.38	1668721.58	14301071.41	39°22'55.536"N	80°53'59.385"W	6675.59	169.204	1.43	0.26	1.40	
13462.00	89.970	159.200	6536.94	6688.04	-6645.46	1283.37	1668754.55	14300983.42	39°22'54.666"N	80°53'58.966"W	6768.25	169.070	0.56	-0.13	-0.54	
13558.00	89.970	159.390	6536.99	6784.03	-6735.26	1317.31	1668788.48	14300893.66	39°22'53.778"N	80°53'58.535"W	6862.88	168.934	0.20	0.00	0.20	
13652.00	90.090	160.030	6536.94	6878.02	-6823.43	1349.91	1668821.06	14300805.53	39°22'52.906"N	80°53'58.121"W	6955.68	168.809	0.69	0.13	0.68	
13746.00	90.060	160.350	6536.82	6972.02	-6911.87	1381.76	1668852.91	14300717.13	39°22'52.031"N	80°53'57.717"W	7048.63	168.695	0.34	-0.03	0.34	
13841.00	90.000	162.760	6536.77	7066.99	-7001.98	1411.82	1668882.95	14300627.05	39°22'51.140"N	80°53'57.335"W	7142.90	168.600	2.54	-0.06	2.54	
13936.00	90.090	162.350	6536.69	7161.91	-7092.61	1440.30	1668911.42	14300536.46	39°22'50.244"N	80°53'56.974"W	7237.37	168.521	0.44	0.09	-0.43	
14031.00	90.150	160.570	6536.49	7256.89	-7182.68	1470.50	1668941.61	14300446.43	39°22'49.354"N	80°53'56.590"W	7331.66	168.430	1.87	0.06	-1.87	
14126.00	90.120	158.190	6536.27	7351.87	-7271.58	1503.96	1668975.05	14300357.55	39°22'48.475"N	80°53'56.166"W	7425.48	168.314	2.51	-0.03	-2.51	
14220.00	90.000	157.260	6536.17	7445.78	-7358.57	1539.59	1669010.67	14300270.60	39°22'47.615"N	80°53'55.713"W	7517.90	168.183	1.00	-0.13	-0.99	
14315.00	90.000	156.790	6536.17	7540.63	-7446.03	1576.67	1669047.74	14300183.18	39°22'46.750"N	80°53'55.242"W	7611.13	168.044	0.49	0.00	-0.49	
14410.00	90.000	155.500	6536.17	7635.38	-7532.91	1615.09	1669086.14	14300096.33	39°22'45.891"N	80°53'54.754"W	7704.11	167.899	1.36	0.00	-1.36	
14504.00	90.000	154.850	6536.17	7729.02	-7618.23	1654.55	1669125.59	14300011.05	39°22'45.047"N	80°53'54.253"W	7795.83	167.747	0.69	0.00	-0.69	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
14599.00	89.850	156.990	6536.30	7823.74	-7704.96	1693.31	1669164.33	14299924.36	39°22'44.189"N	80°53'53.760"W	7888.83	167.605	2.26	-0.16	2.25	
14694.00	89.940	158.190	6536.47	7918.64	-7792.78	1729.53	1669200.53	14299836.57	39°22'43.321"N	80°53'53.300"W	7982.40	167.487	1.27	0.09	1.26	
14788.00	89.750	159.040	6536.72	8012.60	-7880.31	1763.80	1669234.80	14299749.08	39°22'42.456"N	80°53'52.865"W	8075.29	167.384	0.93	-0.20	0.90	
14883.00	90.000	160.950	6536.93	8107.59	-7969.57	1796.30	1669267.28	14299659.85	39°22'41.573"N	80°53'52.453"W	8169.50	167.298	2.03	0.26	2.01	
14978.00	89.940	163.320	6536.98	8202.53	-8059.98	1825.44	1669296.41	14299569.47	39°22'40.679"N	80°53'52.083"W	8264.11	167.239	2.50	-0.06	2.49	
15072.00	90.030	162.920	6537.01	8296.42	-8149.93	1852.74	1669323.69	14299479.56	39°22'39.790"N	80°53'51.736"W	8357.87	167.193	0.44	0.10	-0.43	
15167.00	90.060	161.380	6536.93	8391.36	-8240.36	1881.86	1669352.80	14299389.17	39°22'38.896"N	80°53'51.367"W	8452.51	167.136	1.62	0.03	-1.62	
15261.00	89.970	161.160	6536.91	8485.34	-8329.38	1912.04	1669382.97	14299300.18	39°22'38.015"N	80°53'50.984"W	8546.02	167.072	0.25	-0.10	-0.23	
15356.00	90.090	161.000	6536.86	8580.33	-8419.25	1942.84	1669413.77	14299210.35	39°22'37.127"N	80°53'50.593"W	8640.51	167.006	0.21	0.13	-0.17	
15451.00	89.970	162.460	6536.81	8675.30	-8509.45	1972.63	1669443.53	14299120.18	39°22'36.235"N	80°53'50.215"W	8735.11	166.948	1.54	-0.13	1.54	
15545.00	89.940	162.700	6536.88	8769.22	-8599.14	2000.77	1669471.66	14299030.53	39°22'35.348"N	80°53'49.858"W	8828.84	166.902	0.26	-0.03	0.26	
15639.00	90.060	162.340	6536.88	8863.15	-8688.80	2029.00	1669499.89	14298940.90	39°22'34.462"N	80°53'49.500"W	8922.56	166.856	0.40	0.13	-0.38	
15734.00	89.910	162.540	6536.91	8958.08	-8779.38	2057.66	1669528.54	14298850.37	39°22'33.566"N	80°53'49.136"W	9017.28	166.809	0.26	-0.16	0.21	
15828.00	89.940	162.680	6537.03	9052.00	-8869.08	2085.76	1669556.62	14298760.70	39°22'32.679"N	80°53'48.780"W	9111.03	166.766	0.15	0.03	0.15	
15923.00	90.000	161.960	6537.08	9146.93	-8959.59	2114.61	1669585.46	14298670.22	39°22'31.784"N	80°53'48.413"W	9205.75	166.720	0.76	0.06	-0.76	
16018.00	89.910	161.110	6537.15	9241.91	-9049.70	2144.70	1669615.54	14298580.15	39°22'30.893"N	80°53'48.032"W	9300.36	166.667	0.90	-0.09	-0.89	
16112.00	90.090	161.330	6537.15	9335.89	-9138.70	2174.96	1669645.79	14298491.19	39°22'30.014"N	80°53'47.648"W	9393.94	166.613	0.30	0.19	0.23	
16206.00	90.000	160.640	6537.08	9429.89	-9227.57	2205.59	1669676.40	14298402.36	39°22'29.135"N	80°53'47.259"W	9487.50	166.557	0.74	-0.10	-0.73	
16300.00	90.030	160.370	6537.05	9523.88	-9316.18	2236.96	1669707.76	14298313.78	39°22'28.259"N	80°53'46.861"W	9580.98	166.498	0.29	0.03	-0.29	
16396.00	90.060	160.320	6536.98	9619.88	-9406.58	2269.25	1669740.04	14298223.41	39°22'27.365"N	80°53'46.451"W	9676.43	166.437	0.06	0.03	-0.05	
16490.00	89.970	160.700	6536.95	9713.88	-9495.20	2300.61	1669771.39	14298134.83	39°22'26.489"N	80°53'46.053"W	9769.93	166.380	0.42	-0.10	0.40	
16585.00	89.970	161.920	6537.00	9808.86	-9585.18	2331.05	1669801.82	14298044.88	39°22'25.599"N	80°53'45.666"W	9864.56	166.331	1.28	0.00	1.28	
16679.00	90.060	160.610	6536.98	9902.85	-9674.20	2361.24	1669831.99	14297955.90	39°22'24.719"N	80°53'45.283"W	9958.20	166.284	1.40	0.10	-1.39	
16774.00	90.060	158.880	6536.88	9997.84	-9763.32	2394.13	1669864.87	14297866.81	39°22'23.838"N	80°53'44.866"W	10052.58	166.222	1.82	0.00	-1.82	
16869.00	90.090	156.630	6536.76	10092.74	-9851.25	2430.09	1669900.82	14297778.93	39°22'22.968"N	80°53'44.409"W	10146.55	166.143	2.37	0.03	-2.37	
16964.00	90.060	155.540	6536.63	10187.49	-9938.09	2468.60	1669939.31	14297692.12	39°22'22.109"N	80°53'43.920"W	10240.10	166.050	1.15	-0.03	-1.15	
17058.00	89.910	154.990	6536.66	10281.14	-10023.47	2507.93	1669978.63	14297606.78	39°22'21.265"N	80°53'43.421"W	10332.45	165.953	0.61	-0.16	-0.59	
17153.00	89.910	154.940	6536.81	10375.74	-10109.54	2548.13	1670018.81	14297520.74	39°22'20.414"N	80°53'42.910"W	10425.73	165.853	0.05	0.00	-0.05	
17247.00	89.970	154.930	6536.90	10469.33	-10194.69	2587.96	1670058.62	14297435.62	39°22'19.572"N	80°53'42.404"W	10518.04	165.756	0.06	0.06	-0.01	
17259.00	90.000	155.040	6536.91	10481.28	-10205.56	2593.03	1670063.69	14297424.75	39°22'19.464"N	80°53'42.340"W	10529.83	165.744	0.95	0.25	0.92	



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH DATA (211 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
17283.00	90.000	155.040	6536.91	10505.18	-10227.32	2603.16	1670073.81	14297403.00	39°22'19.249"N	80°53'42.211"W	10553.41	165.720	0.00	0.00	0.00	Projected MD at TD: 17283'

HOLE & CASING SECTIONS - Ref Wellbore: Heintzman Unit 3H AWB Ref Wellpath: Heintzman Unit 3H AWP Proj: 17283'

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	0.03	0.40
17.5in Open Hole	105.00	436.10	331.10	105.00	436.10	0.03	0.40	-0.63	1.14
13.375in Casing Surface	25.00	436.10	411.10	25.00	436.10	0.00	0.00	-0.63	1.14
12.25in Open Hole	436.10	2561.20	2125.10	436.10	2560.99	-0.63	1.14	-14.68	-6.57
9.625in Casing Intermediate	25.00	2561.20	2536.20	25.00	2560.99	0.00	0.00	-14.68	-6.57
8.75in Open Hole	2561.20	6300.00	3738.80	2560.99	6127.32	-14.68	-6.57	-23.50	-997.68
8.5in Open Hole	6300.00	17283.00	10983.00	6127.32	6536.91	-23.50	-997.68	-10227.32	2603.16
5.5in Casing Production	25.00	17283.00	17258.00	25.00	6536.91	0.00	0.00	-10227.32	2603.16

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Heintzman Unit 3H POE Rev-1	6489.00	-492.42	-908.06	1666564.00	14307134.00	39°23'55.503"N	80°54'26.794"W	point
Heintzman Unit 3H BHL Rev-2	6515.00	-10223.86	2588.69	1670059.35	14297406.46	39°22'19.284"N	80°53'42.395"W	point
Heintzman Unit 3H LP Rev-1	6515.00	-678.39	-841.24	1666630.80	14306948.11	39°23'53.664"N	80°54'25.945"W	point



Actual Wellpath Report

Heintzman Unit 3H AWP Proj: 17283'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

WELLPATH COMPOSITION - Ref Wellbore: Heintzman Unit 3H AWB Ref Wellpath: Heintzman Unit 3H AWP Proj: 17283'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	400.00	Gyrodatta standard - Drop gyro or Multi-shot	01_Gyrodatta MS Gyro <17-1/2">(50'-400')	Heintzman Unit 3H AWB
400.00	2513.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(400')(503'-2513')	Heintzman Unit 3H AWB
2513.00	6241.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2513')(2637'-6241')	Heintzman Unit 3H AWB
6241.00	17259.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (6241')(6271'-17259')	Heintzman Unit 3H AWB
17259.00	17283.00	Blind Drilling (std)	Projection to bit	Heintzman Unit 3H AWB



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Heintzman Unit 3H AWP Proj: 17283'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Heintzman Unit 3H
Field	Tyler	Wellbore	Heintzman Unit 3H AWB
Facility	Pyle Run Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02528-0000 BHI Job #: 109523470 Rig: Patterson 342 Duration: 12/01/2018-12/06/2018 Gyrodata MS Gyro <17-1/2">(50'-400') WFT EM <12-1/4">(400')(503'-2513') WFT EM <8-3/4">(2513')(2637'-6241') BH AT Curve <8-1/2"> (6241')(6271'-17259') Middlesex: 6578' MD Burkett: 6762' MD Tully: 6845' MD Marcellus POE: 6928' MD Projected MD at TD: 17283'</p>