

ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Slot: Slot #01
 Field: Tyler
 Facility: Meredith Pad
 Well: Sterling Unit 1H
 Wellbore: Sterling Unit 1H PWB

Plot reference wellbore is Sterling Unit 1H PWB Rev-A.0
True vertical depths are referenced to H&P 317 (RKB)
Measured depths are referenced to H&P 317 (RKB)
H&P 317 (RKB) to Mean Sea Level: 1136.5 feet
Mean Sea Level to Ground level (At Slot: Slot #01): -1111 feet
Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Meredith Pad	14288874.298	3920254.830	80°52'12.070"W
Slot	Local N (ft)	Local E (ft)	Local S (ft)
Slot #01	-42.89	-133.49	1877028.804
H&P 317 (RKB) to Ground level (At Slot: Slot #01)	25.59		
Mean Sea Level to Ground level (At Slot: Slot #01)	-1111 ft		
H&P 317 (RKB) to Mean Sea Level	1136.5 ft		



Well Data			
Slot	Well	Wellbore	Wellbore
Slot #01	Sterling Unit 1H	Sterling Unit 1H AWB	Sterling Unit 1H PWB
Slot #01	Sterling Unit 1H	Sterling Unit 1H PWB	Sterling Unit 1H PWB Rev-A.0



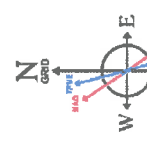
Gyrodata MS Gyro <17-1/2">(60-800') : 0.18° Inc, 60.50R MD, 60.50R TVD, -0.02ft VS

Panther EM <12-1/4">(800)(869-2559) : 0.91° Inc, 879.50R MD, 879.48R TVD, -1.93R VS

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)
Tie On	6185.50	20.660	237.950	5764.37	-924.69	-1722.22
Proj. To Bottom	6246.50	21.060	243.070	5921.39	-935.36	-1741.12
End of 9D Arc	6916.58	57.983	330.465	6865.63	-724.53	-2012.91
POE	7294.59	76.005	341.739	6494.00	-452.54	-2131.09
Landing PL	7458.54	90.000	341.739	6520.00	-251.38	-2197.46
BHL	17661.04	90.000	341.739	6520.00	9927.23	-5457.09
						10852.31

Panther EM <8-3/4">(2559)(2694-6175) : 31.18° Inc, 2704.50R MD, 2584.70R TVD, -91.74R VS

API: 47-095-02520-0000
 BHI Job #: 109621691
 Rig: H&P 317
 Duration: 01/25/2019-01/31/2019

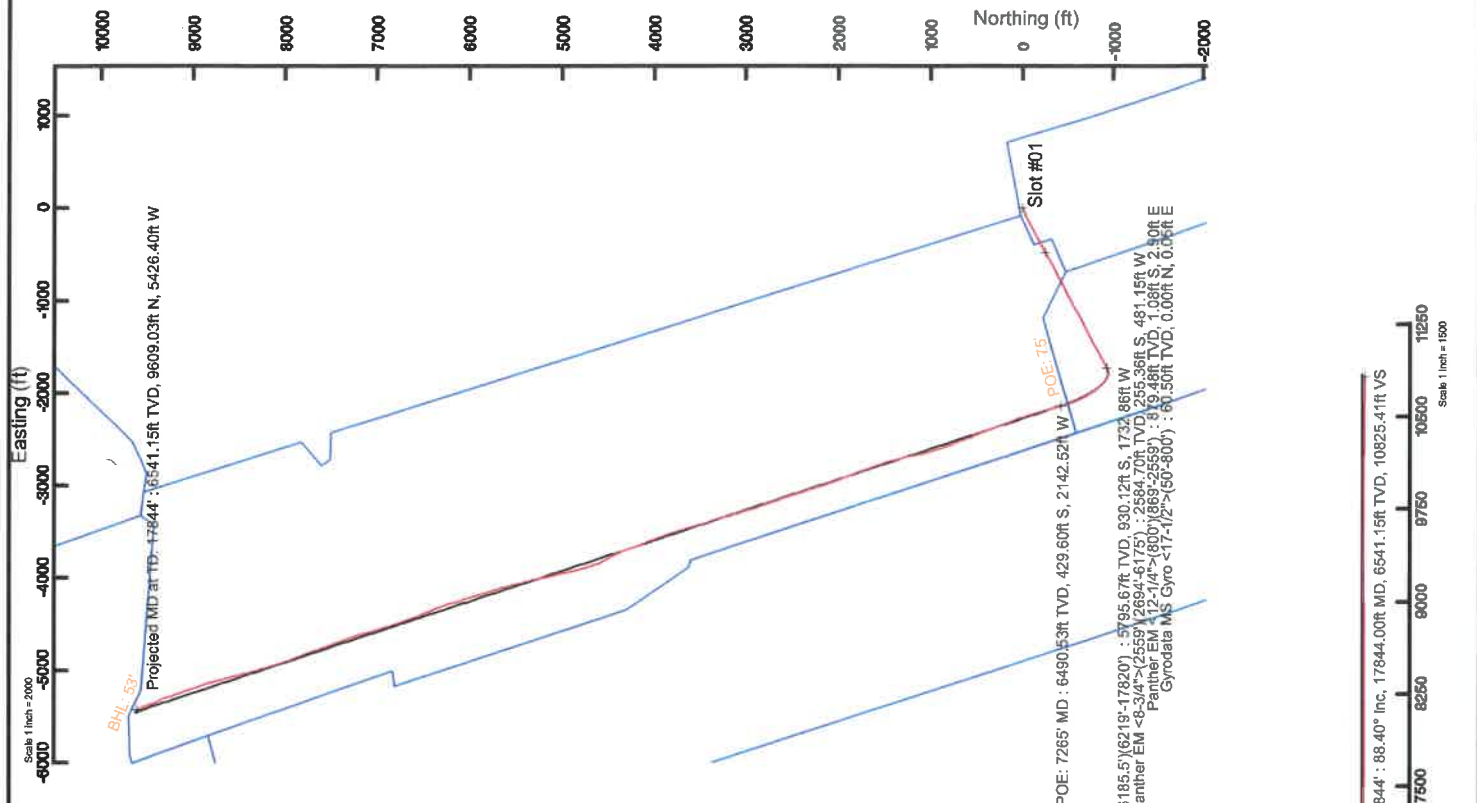


User specified (HDCM) Dip: 68.48° Field: 51683 NT
 Magnetic North is 7.63 degrees West of True North (at 1/15/2019)
 Grid North is 0.06 degrees East of True North
 To correct azimuth from Magnetic to Grid subtract 7.71 degrees
 To correct azimuth from Grid to True subtract 0.06 degrees

BH AT Curve <8-1/2">(6185.5)(6219-17820) : 21.26° Inc, 6219.00R MD, 6490.53R TVD, 263.35R VS

Marcellus POE: 7265' MD : 77.62° Inc, 7265.00R MD, 6490.53R TVD, 263.35R VS

Projected MD at TD: 17844' : 88.40° Inc, 17844.00R MD, 6541.15R TVD, 10825.41ft VS



Azimuth 341.74° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Meredith Pad
Slot	Slot #01
Well	Sterling Unit 1H
Wellbore	Sterling Unit 1H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999602
Convergence at slot	0.08° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	2/11/2019 at 3:10:30 PM
Database/Source file	WA_MPL_EasternUS_Defn/Sterling_Unit_1H_AWP_Proj_17844_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-42.69	-133.49	1677028.90	14288831.63	39°20'54.410"N	80°52'13.770"W
Facility Reference Pt			1677162.34	14288874.30	39°20'54.830"N	80°52'12.070"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	H&P 317 (RKB)
MD Reference Pt	H&P 317 (RKB)
Field Vertical Reference	Mean Sea Level
	H&P 317 (RKB) to Facility Vertical Datum
	H&P 317 (RKB) to Mean Sea Level
	H&P 317 (RKB) to Ground Level at Slot (Slot #01)
	Section Origin
	Section Azimuth
	25.50ft
	1136.50ft
	25.50ft
	N 0.00, E 0.00 ft
	341.74°



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

WELLPATH DATA (231 stations) † = interpolated/extrapolated station

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00	0.000	93.810	0.00	0.00	0.00	0.00	1677028.90	14288831.63	39°20'54.410"N	80°52'13.770"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	93.810	25.50	0.00	0.00	0.00	1677028.90	14288831.63	39°20'54.410"N	80°52'13.770"W	0.00	0.000	0.00	0.00	0.00	
60.50	0.180	93.810	60.50	-0.02	0.00	0.05	1677028.96	14288831.63	39°20'54.410"N	80°52'13.769"W	0.05	93.810	0.51	0.51	268.03	Gyrodata MS Gyro <17-1/2">(50'-800')
85.50	0.210	135.880	85.50	-0.08	-0.04	0.13	1677029.03	14288831.59	39°20'54.410"N	80°52'13.768"W	0.13	107.270	0.57	0.57	168.28	
110.50	0.060	110.230	110.50	-0.13	-0.08	0.17	1677029.07	14288831.56	39°20'54.409"N	80°52'13.768"W	0.19	114.233	0.63	-0.60	-102.60	
135.50	0.160	121.120	135.50	-0.16	-0.10	0.21	1677029.12	14288831.53	39°20'54.409"N	80°52'13.767"W	0.23	115.033	0.41	0.40	43.56	
160.50	0.220	123.470	160.50	-0.22	-0.14	0.28	1677029.19	14288831.49	39°20'54.409"N	80°52'13.766"W	0.32	116.977	0.24	0.24	9.40	
185.50	0.230	118.120	185.50	-0.30	-0.19	0.37	1677029.27	14288831.46	39°20'54.408"N	80°52'13.765"W	0.41	117.866	0.09	0.04	-21.40	
210.50	0.230	165.820	210.50	-0.39	-0.27	0.42	1677029.33	14288831.34	39°20'54.407"N	80°52'13.765"W	0.50	122.168	0.74	0.00	190.80	
235.50	0.290	101.080	235.50	-0.47	-0.33	0.50	1677029.40	14288831.30	39°20'54.407"N	80°52'13.764"W	0.60	123.311	1.13	0.24	-258.96	
260.50	0.210	138.860	260.50	-0.54	-0.37	0.59	1677029.49	14288831.26	39°20'54.406"N	80°52'13.763"W	0.70	122.354	0.71	-0.32	151.12	
285.50	0.220	165.480	285.50	-0.63	-0.45	0.63	1677029.54	14288831.17	39°20'54.405"N	80°52'13.762"W	0.78	125.729	0.40	0.04	106.48	
310.50	0.170	172.430	310.50	-0.71	-0.54	0.65	1677029.55	14288831.09	39°20'54.405"N	80°52'13.762"W	0.84	129.655	0.22	-0.20	27.80	
335.50	0.180	160.510	335.50	-0.79	-0.61	0.67	1677029.57	14288831.02	39°20'54.404"N	80°52'13.762"W	0.90	132.527	0.15	0.04	-47.68	
360.50	0.300	189.550	360.50	-0.89	-0.71	0.67	1677029.57	14288830.92	39°20'54.403"N	80°52'13.761"W	0.98	136.828	0.67	0.48	116.16	
385.50	0.290	182.130	385.50	-1.00	-0.84	0.66	1677029.56	14288830.79	39°20'54.402"N	80°52'13.762"W	1.07	142.050	0.16	-0.04	-29.68	
410.50	0.300	200.430	410.50	-1.11	-0.97	0.63	1677029.53	14288830.66	39°20'54.400"N	80°52'13.762"W	1.15	146.849	0.38	0.04	73.20	
435.50	0.250	224.680	435.50	-1.19	-1.07	0.57	1677029.47	14288830.56	39°20'54.399"N	80°52'13.763"W	1.21	151.862	0.50	-0.20	97.00	
460.50	0.340	217.310	460.50	-1.26	-1.16	0.49	1677029.39	14288830.47	39°20'54.398"N	80°52'13.764"W	1.26	157.323	0.39	0.36	-29.48	
510.50	0.120	193.120	510.50	-1.39	-1.33	0.38	1677029.29	14288830.30	39°20'54.397"N	80°52'13.765"W	1.39	163.912	0.47	-0.44	-48.38	
535.50	0.120	197.960	535.50	-1.43	-1.38	0.37	1677029.27	14288830.25	39°20'54.396"N	80°52'13.765"W	1.43	165.005	0.04	0.00	18.16	
560.50	0.110	176.130	560.50	-1.47	-1.43	0.36	1677029.27	14288830.20	39°20'54.396"N	80°52'13.765"W	1.48	165.733	0.18	-0.04	-86.12	
585.50	0.130	88.310	585.50	-1.50	-1.45	0.39	1677029.30	14288830.17	39°20'54.396"N	80°52'13.765"W	1.51	164.845	0.67	0.08	-351.28	
610.50	0.140	96.400	610.50	-1.53	-1.46	0.45	1677029.36	14288830.15	39°20'54.396"N	80°52'13.764"W	1.53	162.742	0.09	0.04	32.36	
635.50	0.360	105.790	635.50	-1.58	-1.48	0.56	1677029.46	14288830.15	39°20'54.395"N	80°52'13.763"W	1.58	159.347	0.89	0.88	37.56	
660.50	0.210	52.620	660.50	-1.61	-1.48	0.67	1677029.57	14288830.15	39°20'54.395"N	80°52'13.761"W	1.62	155.560	1.15	-0.60	-212.68	
685.50	0.300	83.670	685.50	-1.61	-1.44	0.77	1677029.68	14288830.19	39°20'54.396"N	80°52'13.760"W	1.63	151.811	0.65	0.36	124.20	
710.50	0.410	88.850	710.49	-1.65	-1.43	0.93	1677029.83	14288830.20	39°20'54.396"N	80°52'13.758"W	1.71	147.088	0.46	0.44	20.72	
735.50	0.420	87.390	735.49	-1.70	-1.43	1.11	1677030.01	14288830.24	39°20'54.396"N	80°52'13.756"W	1.81	142.157	0.06	0.04	-5.84	
760.50	0.480	73.570	760.49	-1.73	-1.39	1.30	1677030.20	14288830.24	39°20'54.396"N	80°52'13.753"W	1.90	136.965	0.49	0.24	-55.28	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

WELLPATH DATA (231 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 (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)	Turn Rate Comments
785.50	0.750	75.700	785.49	-1.74	-1.32	1.56	1677030.46	14288830.31	39°20'54.39"N	80°52'13.750"W	2.04	130.302	1.08	1.03	8.52	
810.50	0.810	73.770	810.49	-1.76	-1.23	1.89	1677030.79	14288830.40	39°20'54.398"N	80°52'13.746"W	2.25	123.144	0.26	0.24	-7.72	
879.50	0.910	87.920	879.48	-1.93	-1.08	2.90	1677031.81	14288830.55	39°20'54.399"N	80°52'13.733"W	3.10	110.336	0.34	0.14	20.51	Panther EM <12-1/4">(80C)(869'-2559')
971.50	0.830	166.250	971.47	-2.80	-1.70	3.79	1677032.69	14288829.93	39°20'54.393"N	80°52'13.722"W	4.15	114.109	1.20	-0.03	85.14	
1065.50	2.300	222.780	1065.44	-4.39	-3.74	2.67	1677031.57	14288827.89	39°20'54.373"N	80°52'13.736"W	4.60	144.478	2.09	1.56	60.14	
1159.50	4.450	238.090	1159.27	-6.17	-7.05	-1.71	1677027.20	14288824.58	39°20'54.340"N	80°52'13.792"W	7.26	193.591	2.46	2.29	16.29	
1254.50	6.590	243.660	1253.83	-7.80	-11.42	-9.72	1677019.19	14288820.21	39°20'54.297"N	80°52'13.894"W	15.00	220.398	2.32	2.25	5.83	
1348.50	8.820	248.210	1346.97	-9.00	-16.49	-21.25	1677007.66	14288815.14	39°20'54.247"N	80°52'14.041"W	26.90	232.183	2.46	2.37	4.84	
1442.50	10.660	249.820	1439.62	-9.74	-22.17	-36.10	1676992.82	14288809.47	39°20'54.191"N	80°52'14.230"W	42.36	238.460	1.98	1.96	1.71	
1536.50	12.540	247.700	1531.69	-10.75	-29.04	-53.70	1676975.22	14288802.60	39°20'54.124"N	80°52'14.454"W	61.05	241.600	2.05	2.00	-2.28	
1630.50	14.990	246.720	1622.99	-12.53	-37.72	-74.32	1676954.62	14288793.93	39°20'54.038"N	80°52'14.717"W	83.34	243.092	2.62	2.61	-1.04	
1725.50	16.040	242.000	1714.53	-15.83	-48.73	-97.19	1676931.75	14288782.91	39°20'53.930"N	80°52'15.008"W	108.73	243.370	1.73	1.11	-4.97	
1819.50	17.300	240.820	1804.57	-20.72	-61.69	-120.84	1676908.11	14288769.97	39°20'53.802"N	80°52'15.309"W	135.67	242.955	1.40	1.34	-1.47	
1913.50	17.310	241.030	1894.32	-26.01	-75.32	-145.25	1676883.71	14288756.34	39°20'53.668"N	80°52'15.620"W	163.62	242.591	0.13	0.01	0.44	
2004.50	20.070	242.890	1980.51	-30.93	-88.99	-171.00	1676867.97	14288742.67	39°20'53.533"N	80°52'15.948"W	192.77	242.506	3.10	3.03	2.04	
2098.50	28.020	243.060	2066.29	-36.76	-106.38	-205.09	1676823.89	14288725.30	39°20'53.362"N	80°52'16.383"W	231.04	242.586	8.46	8.46	0.18	
2192.50	31.450	242.290	2147.90	-44.12	-127.79	-246.50	1676782.50	14288703.89	39°20'53.150"N	80°52'16.910"W	277.66	242.597	3.67	3.65	-0.82	
2286.50	31.740	241.740	2227.97	-52.44	-150.90	-289.99	1676739.03	14288680.79	39°20'52.923"N	80°52'17.464"W	326.90	242.509	0.43	0.31	-0.59	
2380.50	31.060	240.610	2308.20	-61.41	-174.51	-332.90	1676696.14	14288657.19	39°20'52.690"N	80°52'18.011"W	375.86	242.336	0.96	-0.72	-1.21	
2475.50	31.210	240.580	2389.51	-70.91	-198.62	-375.69	1676653.37	14288633.09	39°20'52.452"N	80°52'18.556"W	424.96	242.135	0.16	0.16	-0.03	
2569.50	31.880	241.200	2469.62	-80.16	-222.54	-418.65	1676610.42	14288609.17	39°20'52.216"N	80°52'19.103"W	474.13	242.006	0.79	0.71	0.63	
2704.50	31.180	243.420	2584.70	-91.74	-255.36	-481.15	1676547.95	14288576.37	39°20'51.893"N	80°52'19.899"W	544.71	242.044	1.00	-0.52	1.64	Panther EM <8-3/4">(2559')(2694'-6175')
2798.50	29.570	238.550	2665.80	-100.55	-278.35	-522.71	1676506.41	14288553.39	39°20'51.666"N	80°52'20.429"W	592.20	241.964	3.13	-1.71	-5.18	
2893.50	26.460	237.110	2749.66	-111.25	-302.08	-560.49	1676468.64	14288529.67	39°20'51.432"N	80°52'20.910"W	636.71	241.677	3.35	-3.27	-1.52	
2988.50	26.430	239.670	2834.72	-121.02	-324.25	-596.51	1676432.63	14288507.51	39°20'51.214"N	80°52'21.369"W	678.94	241.472	1.20	-0.03	2.68	
3082.50	25.460	242.980	2919.25	-128.47	-344.00	-632.57	1676396.59	14288487.77	39°20'51.019"N	80°52'21.828"W	720.05	241.462	1.85	-1.03	3.52	
3176.50	23.830	245.730	3004.69	-133.54	-360.98	-667.88	1676361.29	14288470.79	39°20'50.852"N	80°52'22.278"W	759.19	241.609	2.12	-1.73	2.93	
3276.50	24.710	243.460	3095.85	-138.66	-378.62	-705.00	1676324.19	14288453.16	39°20'50.678"N	80°52'22.751"W	800.24	241.762	1.28	0.88	-2.27	
3371.50	22.730	239.170	3182.83	-145.52	-396.91	-738.53	1676290.67	14288434.88	39°20'50.497"N	80°52'23.178"W	838.43	241.745	2.76	-2.08	-4.52	
3467.50	21.910	240.370	3271.64	-152.90	-415.10	-770.11	1676259.10	14288416.69	39°20'50.318"N	80°52'23.580"W	874.86	241.675	1.11	-0.85	1.88	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Sterling Unit 1H
Area	Tyler County, WV	Wellbore	Sterling Unit 1H AWB
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (231 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 (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)	Comments
3562.50	22.270	243.790	3359.67	-158.70	-431.66	-801.76	1676227.46	14288400.15	39°20'50.155"N	80°52'23.983"W	910.58	241.703	1.18	0.38	2.97	
3656.50	22.670	244.530	3446.53	-163.44	-447.31	-834.10	1676195.14	14288384.50	39°20'50.001"N	80°52'24.395"W	946.47	241.796	0.92	0.43	0.79	
3751.50	23.620	246.040	3533.89	-167.63	-462.91	-868.02	1676161.23	14288368.90	39°20'49.847"N	80°52'24.827"W	983.74	241.929	1.18	1.00	1.59	
3845.50	25.410	244.140	3619.41	-172.17	-479.36	-903.38	1676125.89	14288352.46	39°20'49.685"N	80°52'25.278"W	1022.68	242.048	2.08	1.90	-2.02	
3940.50	25.560	240.750	3705.17	-178.77	-498.26	-939.60	1676089.68	14288333.56	39°20'49.498"N	80°52'25.739"W	1063.54	242.063	1.54	0.16	-3.57	
4035.50	24.510	242.870	3791.25	-185.71	-517.27	-975.02	1676054.27	14288314.57	39°20'49.311"N	80°52'26.190"W	1103.74	242.053	1.45	-1.11	2.23	
4129.50	22.690	245.730	3876.83	-190.75	-534.12	-1010.04	1676019.26	14288297.72	39°20'49.145"N	80°52'26.636"W	1142.57	242.130	1.27	-0.17	3.04	
4225.50	23.030	241.160	4052.40	-203.03	-569.02	-1076.62	1675952.71	14288262.84	39°20'48.977"N	80°52'27.073"W	1180.85	242.174	2.58	-1.73	-4.81	
4320.50	21.780	235.880	4140.24	-211.26	-587.87	-1107.50	1675921.85	14288243.99	39°20'48.615"N	80°52'27.878"W	1233.85	242.040	2.49	-1.32	-5.56	
4415.50	21.480	237.840	4227.62	-220.16	-606.82	-1136.50	1675892.86	14288225.05	39°20'48.428"N	80°52'28.247"W	1288.36	241.901	0.83	-0.32	2.09	
4604.50	20.930	238.880	4316.19	-228.12	-624.85	-1165.75	1675863.62	14288207.03	39°20'48.251"N	80°52'28.620"W	1322.65	241.809	0.70	-0.58	1.09	
4699.50	20.870	240.300	4404.94	-235.25	-642.00	-1194.98	1675834.40	14288189.89	39°20'48.081"N	80°52'28.992"W	1366.52	241.753	0.54	-0.06	1.49	
4795.50	22.170	246.400	4494.25	-240.33	-657.73	-1226.44	1675802.96	14288174.17	39°20'47.926"N	80°52'29.393"W	1391.67	241.796	2.69	1.35	6.35	
4890.50	23.500	245.960	4581.81	-243.90	-672.62	-1260.16	1675769.25	14288159.28	39°20'47.780"N	80°52'29.823"W	1428.43	241.909	1.41	1.40	-0.46	
4985.50	24.150	246.500	4668.71	-247.59	-688.08	-1295.28	1675734.14	14288143.82	39°20'47.627"N	80°52'30.270"W	1466.70	242.022	0.72	0.68	0.57	
5080.50	22.220	243.090	4756.04	-252.06	-703.97	-1329.13	1675700.31	14288127.95	39°20'47.471"N	80°52'30.701"W	1504.04	242.092	2.47	-2.03	-3.59	
5174.50	22.990	239.970	4842.82	-258.48	-721.20	-1360.87	1675668.58	14288110.72	39°20'47.301"N	80°52'31.105"W	1540.16	242.079	1.52	0.82	-3.32	
5269.50	25.350	240.560	4929.48	-266.21	-740.48	-1394.65	1675634.82	14288091.45	39°20'47.111"N	80°52'31.536"W	1579.03	242.034	2.50	2.48	0.62	
5364.50	26.960	244.220	5014.76	-272.97	-759.84	-1431.75	1675597.72	14288072.09	39°20'46.920"N	80°52'32.008"W	1620.89	242.045	2.40	1.69	3.85	
5459.50	25.810	241.140	5099.87	-279.59	-779.19	-1469.26	1675560.23	14288052.75	39°20'46.729"N	80°52'32.486"W	1663.09	242.062	1.88	-1.21	-3.24	
5553.50	24.120	235.360	5185.09	-288.78	-799.99	-1502.99	1675526.51	14288031.96	39°20'46.524"N	80°52'32.916"W	1702.64	241.975	3.16	-1.80	-6.15	
5648.50	23.870	236.940	5271.88	-299.16	-821.51	-1535.07	1675494.45	14288010.45	39°20'46.312"N	80°52'33.325"W	1741.07	241.846	0.73	-0.26	1.66	
5742.50	25.180	245.340	5357.43	-306.25	-840.24	-1569.20	1675460.34	14287991.73	39°20'46.127"N	80°52'33.759"W	1779.99	241.833	3.96	1.39	8.94	
5837.50	23.620	242.290	5443.94	-311.63	-857.52	-1604.42	1675425.13	14287974.45	39°20'45.957"N	80°52'34.208"W	1819.20	241.877	2.11	-1.64	-3.21	
5932.50	22.970	241.240	5531.20	-318.13	-875.29	-1637.52	1675392.04	14287956.69	39°20'45.782"N	80°52'34.629"W	1856.77	241.874	0.81	-0.68	-1.11	
6027.50	23.700	241.940	5618.43	-324.76	-893.19	-1670.61	1675358.96	14287938.80	39°20'45.605"N	80°52'35.051"W	1894.40	241.869	0.82	0.77	0.74	
6121.50	22.570	236.770	5704.88	-332.64	-911.96	-1702.38	1675327.21	14287920.03	39°20'45.420"N	80°52'35.456"W	1931.26	241.822	2.47	-1.20	-5.50	
6185.50	20.660	237.950	5764.37	-338.50	-924.69	-1722.22	1675307.37	14287907.31	39°20'45.295"N	80°52'35.709"W	1954.76	241.768	3.06	-2.98	1.84	
6219.00	21.260	247.830	5795.67	-340.32	-930.42	-1732.86	1675296.74	14287901.88	39°20'45.241"N	80°52'35.844"W	1966.70	241.775	10.69	1.79	29.49	BH AT Curve <8'-1/2"> (6185.5')(6219.-17820')



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

WELLPATH DATA (231 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
6295.00	20.730	259.880	5866.65	-339.36	-937.68	-1758.88	1675270.73	14287894.32	39°20'45.167"N	80°52'36.175"W	1993.21	241.937	5.71	-0.70	15.86	
6342.00	21.330	268.720	5910.53	-335.68	-939.34	-1775.61	1675254.00	14287892.67	39°20'45.150"N	80°52'36.388"W	2008.77	242.120	6.86	1.28	18.81	
6389.00	22.720	277.240	5954.11	-329.28	-938.38	-1793.17	1675236.45	14287893.62	39°20'45.160"N	80°52'36.612"W	2023.86	242.376	7.41	2.96	18.13	
6436.00	24.460	286.330	5997.20	-319.84	-934.50	-1811.52	1675218.11	14287897.53	39°20'45.199"N	80°52'36.845"W	2038.36	242.712	8.57	3.70	19.34	
6484.00	26.490	294.480	6040.54	-306.93	-927.27	-1830.81	1675198.83	14287904.73	39°20'45.271"N	80°52'37.091"W	2052.24	243.139	8.43	4.23	16.98	
6531.00	28.680	301.030	6082.21	-291.26	-917.11	-1850.02	1675179.63	14287914.89	39°20'45.371"N	80°52'37.335"W	2064.86	243.631	7.95	4.66	13.94	
6579.00	31.120	306.760	6123.82	-272.36	-903.74	-1869.83	1675159.82	14287928.25	39°20'45.504"N	80°52'37.587"W	2076.78	244.204	7.82	5.08	11.94	
6626.00	34.330	311.320	6163.37	-250.97	-887.72	-1889.52	1675140.14	14287944.27	39°20'45.662"N	80°52'37.837"W	2087.66	244.835	8.61	6.83	9.70	
6674.00	38.110	315.110	6202.09	-226.05	-868.28	-1910.15	1675119.52	14287963.70	39°20'46.071"N	80°52'38.100"W	2098.23	245.555	9.15	7.87	7.90	
6721.00	41.400	318.320	6238.22	-198.81	-846.39	-1930.73	1675098.95	14287985.58	39°20'46.319"N	80°52'38.361"W	2108.10	246.328	8.25	7.00	6.83	
6769.00	45.440	320.450	6273.08	-168.30	-821.34	-1952.18	1675077.50	14288010.62	39°20'46.577"N	80°52'38.634"W	2117.93	247.182	8.95	8.42	4.44	
6816.00	49.320	322.800	6304.90	-135.83	-794.22	-1973.63	1675056.07	14288037.73	39°20'46.587"N	80°52'38.906"W	2127.44	248.079	9.04	8.26	5.00	
6863.00†	51.221	324.363	6319.60	-119.02	-779.98	-1984.13	1675045.57	14288051.96	39°20'46.728"N	80°52'39.040"W	2131.93	248.540	9.78	8.27	6.80	Middlesex: 6839' MD
6864.00	53.310	325.970	6334.90	-100.07	-763.75	-1995.42	1675034.29	14288068.18	39°20'46.889"N	80°52'39.183"W	2136.59	249.055	9.78	8.36	6.43	
6911.00	57.390	328.790	6361.62	-62.62	-731.19	-2016.23	1675013.48	14288100.73	39°20'47.211"N	80°52'39.447"W	2144.72	250.067	9.98	8.68	6.00	
6959.00	61.090	332.120	6386.17	-22.18	-695.31	-2036.54	1674993.18	14288136.60	39°20'47.566"N	80°52'39.705"W	2151.96	251.149	9.74	7.71	6.94	
7006.00	64.360	334.010	6407.71	19.11	-658.07	-2055.45	1674974.28	14288173.83	39°20'47.934"N	80°52'39.945"W	2158.22	252.247	7.82	6.98	4.02	
7054.00	67.620	336.090	6427.24	62.65	-618.32	-2073.93	1674955.80	14288213.56	39°20'48.327"N	80°52'40.180"W	2164.14	253.399	7.86	6.79	4.33	
7057.00†	67.718	336.205	6428.38	65.41	-615.78	-2075.06	1674954.68	14288216.10	39°20'48.352"N	80°52'40.194"W	2164.50	253.472	4.84	3.28	3.83	Burkett: 7057' MD
7101.00	69.170	337.880	6444.54	106.19	-578.10	-2091.01	1674938.73	14288253.76	39°20'48.725"N	80°52'40.397"W	2169.46	254.546	4.84	3.30	3.81	
7147.00†	71.274	340.102	6460.11	149.42	-537.69	-2106.53	1674923.22	14288294.15	39°20'49.125"N	80°52'40.594"W	2174.07	255.681	6.45	4.57	4.81	Tully: 7147' MD
7148.00	71.320	340.150	6460.43	150.37	-536.80	-2106.85	1674922.90	14288295.04	39°20'49.133"N	80°52'40.598"W	2174.16	255.706	6.45	4.60	4.77	
7195.00	74.860	341.190	6474.10	195.32	-494.37	-2121.73	1674908.03	14288337.45	39°20'49.553"N	80°52'40.786"W	2178.56	256.884	7.82	7.53	2.21	
7243.00	77.120	342.640	6485.72	241.89	-450.11	-2136.18	1674893.58	14288381.70	39°20'49.991"N	80°52'40.969"W	2183.08	258.101	5.55	4.71	3.02	
7265.00†	77.616	342.992	6490.53	263.35	-429.60	-2142.52	1674887.24	14288402.20	39°20'50.193"N	80°52'41.050"W	2185.17	258.662	2.74	2.25	1.60	Marcellus POE: 7265' MD
7290.00	78.180	343.390	6495.77	287.79	-406.20	-2149.59	1674880.17	14288425.59	39°20'50.425"N	80°52'41.139"W	2187.63	259.299	2.74	2.26	1.59	
7338.00	79.420	344.000	6505.10	334.84	-361.01	-2162.81	1674866.96	14288470.77	39°20'50.872"N	80°52'41.307"W	2192.73	260.524	2.87	2.58	1.27	
7385.00	82.090	345.770	6512.65	381.16	-316.23	-2174.90	1674854.87	14288515.53	39°20'51.314"N	80°52'41.460"W	2197.77	261.727	6.79	5.68	3.77	
7433.00	86.020	346.070	6517.62	426.76	-269.93	-2186.51	1674843.27	14288601.81	39°20'51.772"N	80°52'41.607"W	2203.11	262.962	8.21	8.19	0.62	
7480.00	90.370	344.970	6519.10	475.63	-224.46	-2198.26	1674831.53	14288667.26	39°20'52.222"N	80°52'41.756"W	2209.69	264.170	9.55	9.26	-2.34	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #01
ANTERO RESOURCES CORPORATION	Well	Sterling Unit 1H
Tyler County, WV	Wellbore	Sterling Unit 1H AWB
Tyler		
Meredith Pad		

WELLPATH DATA (231 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 [1/100ft]	Build Rate [1/100ft]	Turn Rate [1/100ft]	Comments
7528.00	90.340	344.440	6518.80	523.56	-178.16	-2210.92	1674818.87	14288663.54	39°20'52.680"N	80°52'41.916"W	2218.08	266.393	1.11	-0.06	-1.10	
7628.00	90.620	342.630	618.51	713.50	-87.06	-2237.84	1674781.96	14288744.60	39°20'53.580"N	80°52'42.257"W	2239.54	267.772	1.93	0.29	-1.91	
7718.00	90.710	341.400	6516.90	713.50	3.29	-2267.17	1674762.64	14288834.92	39°20'54.474"N	80°52'42.629"W	2267.18	270.083	1.30	0.09	-1.29	
7813.00	90.120	339.950	6516.21	808.48	92.93	-2288.61	1674731.22	14288924.52	39°20'55.360"N	80°52'43.028"W	2300.49	272.315	1.65	-0.62	-1.53	
7908.00	90.090	339.110	6516.04	903.40	181.93	-2331.83	1674698.01	14289013.49	39°20'56.240"N	80°52'43.449"W	2338.92	274.461	0.88	-0.03	-0.88	
8003.00	89.940	339.040	6516.01	998.30	270.67	-2365.76	1674664.09	14289102.19	39°20'57.118"N	80°52'43.879"W	2381.19	276.527	0.17	-0.16	-0.07	
8098.00	89.880	339.090	6516.16	1093.20	359.40	-2399.70	1674630.16	14289190.88	39°20'57.995"N	80°52'44.310"W	2426.47	278.518	0.08	-0.06	0.05	
8193.00	89.910	337.490	6516.34	1188.02	447.66	-2434.84	1674595.03	14289279.10	39°20'58.868"N	80°52'44.756"W	2475.65	280.418	1.68	0.03	-1.68	
8289.00	89.850	338.260	6516.54	1283.80	536.59	-2471.00	1674558.89	14289368.00	39°20'59.747"N	80°52'45.215"W	2528.59	282.252	0.80	-0.06	0.80	
8384.00	89.480	338.690	6517.09	1378.65	624.96	-2505.86	1674524.05	14289456.34	39°21'00.621"N	80°52'45.657"W	2582.61	284.004	0.60	-0.39	0.45	
8479.00	89.510	339.110	6517.93	1473.53	713.58	-2540.05	1674489.87	14289544.93	39°21'01.498"N	80°52'46.091"W	2638.39	285.692	0.44	0.03	0.44	
8574.00	89.690	340.040	6518.59	1568.45	802.61	-2573.21	1674456.73	14289633.92	39°21'02.378"N	80°52'46.511"W	2696.47	287.323	1.00	0.19	0.98	
8669.00	89.660	341.740	6519.13	1663.44	892.37	-2604.31	1674425.64	14289723.64	39°21'03.265"N	80°52'46.905"W	2752.95	288.914	1.79	-0.03	1.79	
8764.00	89.450	343.640	6519.87	1758.42	983.06	-2632.57	1674397.39	14289814.29	39°21'04.162"N	80°52'47.264"W	2810.13	290.477	2.01	-0.22	2.00	
8859.00	90.150	345.040	6520.20	1853.32	1074.53	-2658.21	1674371.76	14289905.73	39°21'05.067"N	80°52'47.589"W	2867.18	292.010	1.65	0.74	1.47	
8953.00	91.260	351.070	6519.05	1946.70	1166.44	-2677.66	1674352.32	14289997.61	39°21'05.975"N	80°52'47.835"W	2920.69	293.539	6.52	1.18	6.41	
9048.00	89.970	346.840	6518.03	2040.91	1259.65	-2695.85	1674334.13	14290090.78	39°21'06.897"N	80°52'48.065"W	2975.63	295.045	4.65	-1.36	-4.45	
9143.00	90.520	344.960	6517.62	2135.66	1351.79	-2719.00	1674311.00	14290182.88	39°21'07.808"N	80°52'48.358"W	3036.49	296.435	2.06	0.58	-1.98	
9238.00	90.370	343.050	6516.88	2230.58	1443.10	-2745.17	1674284.83	14290274.15	39°21'08.710"N	80°52'48.689"W	3101.37	297.730	2.02	-0.16	-2.01	
9333.00	90.060	341.600	6516.52	2325.57	1533.61	-2774.01	1674256.00	14290364.63	39°21'09.605"N	80°52'49.055"W	3169.72	298.936	1.56	-0.33	-1.53	
9428.00	89.850	340.000	6516.60	2420.55	1623.33	-2805.25	1674224.77	14290454.31	39°21'10.493"N	80°52'49.451"W	3241.09	300.057	1.70	-0.22	-1.68	
9523.00	89.780	339.710	6516.91	2515.50	1712.52	-2837.97	1674192.07	14290543.46	39°21'11.374"N	80°52'49.866"W	3314.63	301.108	0.31	-0.07	-0.31	
9618.00	89.450	339.130	6517.54	2610.42	1801.45	-2871.37	1674158.69	14290632.36	39°21'12.254"N	80°52'50.290"W	3389.68	302.104	0.70	-0.35	-0.61	
9713.00	89.480	340.070	6518.43	2705.35	1890.49	-2904.48	1674125.59	14290721.36	39°21'13.134"N	80°52'50.710"W	3465.53	303.060	0.99	0.03	0.99	
9807.00	89.820	340.100	6519.01	2799.31	1978.86	-2936.50	1674093.58	14290809.70	39°21'14.008"N	80°52'51.116"W	3541.03	303.975	0.36	0.36	0.03	
9902.00	89.450	340.310	6519.61	2894.27	2068.25	-2968.67	1674061.43	14290899.05	39°21'14.892"N	80°52'51.524"W	3618.10	304.865	0.45	-0.39	0.22	
9997.00	89.630	340.880	6520.37	2989.25	2157.85	-3000.22	1674029.88	14290988.62	39°21'15.778"N	80°52'51.924"W	3695.63	305.725	0.64	0.19	0.61	
10092.00	89.480	342.160	6521.11	3084.24	2247.95	-3030.32	1673996.79	14291078.68	39°21'16.669"N	80°52'52.306"W	3773.08	306.569	1.35	-0.16	1.34	
10187.00	88.800	341.840	6522.94	3179.23	2338.29	-3059.68	1673970.45	14291168.98	39°21'17.562"N	80°52'52.678"W	3850.87	307.388	0.79	-0.72	-0.34	
10282.00	89.350	342.160	6524.07	3274.22	2428.63	-3089.03	1673941.11	14291259.28	39°21'18.456"N	80°52'53.050"W	3929.42	308.175	0.67	0.58	0.34	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #01
ANTERO RESOURCES CORPORATION	Well	Sterling Unit 1H
Tyler County, WV	Wellbore	Sterling Unit 1H AWB
Tyler		
Meredith Pad		

WELLPATH DATA (231 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 (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)	Comments
10377.00	89.380	341.870	6525.12	3369.21	2518.98	-3118.36	1673911.79	14291349.60	39°21'19.349"N	80°52'53.422"W	4008.67	308.931	0.31	0.03	-0.31	
10472.00	89.380	341.570	6526.15	3464.21	2609.18	-3148.16	1673882.01	14291439.77	39°21'20.241"N	80°52'53.800"W	4088.85	309.652	0.32	0.00	-0.32	
10567.00	89.450	340.560	6527.12	3559.19	2699.03	-3178.98	1673851.19	14291529.58	39°21'21.129"N	80°52'54.191"W	4170.22	310.332	1.07	0.07	-1.05	
10662.00	89.750	341.030	6527.78	3654.18	2788.74	-3210.23	1673819.96	14291619.26	39°21'22.016"N	80°52'54.587"W	4252.37	310.981	0.59	0.32	0.49	
10756.00	89.750	341.410	6528.19	3748.17	2877.74	-3240.49	1673789.71	14291708.22	39°21'22.896"N	80°52'54.971"W	4333.84	311.607	0.40	0.00	0.40	
10851.00	90.030	342.590	6528.38	3843.17	2968.09	-3269.85	1673760.36	14291798.53	39°21'23.790"N	80°52'55.343"W	4416.05	312.230	1.28	0.29	1.24	
10946.00	90.030	342.900	6528.33	3938.15	3058.81	-3298.03	1673732.20	14291889.22	39°21'24.687"N	80°52'55.700"W	4498.15	312.845	0.00	0.00	0.33	
11040.00	90.000	344.620	6528.30	4032.09	3149.06	-3324.32	1673705.92	14291979.43	39°21'25.579"N	80°52'56.033"W	4579.04	313.449	1.83	-0.03	1.83	
11135.00	90.310	345.850	6528.05	4126.91	3240.92	-3348.53	1673681.72	14292071.25	39°21'26.487"N	80°52'56.340"W	4660.06	314.064	1.34	0.33	1.29	
11230.00	90.150	342.030	6527.66	4221.82	3332.19	-3374.80	1673655.45	14292162.49	39°21'27.390"N	80°52'56.673"W	4742.66	314.636	4.02	-0.17	-4.02	
11324.00	90.460	342.480	6527.16	4315.82	3421.72	-3403.45	1673626.82	14292251.98	39°21'28.275"N	80°52'57.036"W	4826.14	315.153	0.58	0.33	0.48	
11419.00	90.400	343.640	6526.45	4410.79	3512.59	-3431.13	1673599.15	14292342.82	39°21'29.173"N	80°52'57.387"W	4910.29	315.672	1.22	-0.06	1.22	
11514.00	90.430	343.920	6525.76	4505.73	3603.81	-3457.67	1673572.62	14292434.00	39°21'30.075"N	80°52'57.724"W	4994.29	316.186	0.30	0.03	0.29	
11609.00	90.430	343.620	6525.05	4600.66	3695.02	-3484.22	1673546.08	14292525.17	39°21'30.977"N	80°52'58.060"W	5078.68	316.682	0.32	0.00	-0.32	
11703.00	90.430	342.320	6524.34	4694.64	3784.90	-3511.75	1673518.56	14292615.01	39°21'31.866"N	80°52'58.409"W	5163.12	317.144	1.38	0.00	-1.38	
11798.00	90.340	340.350	6523.71	4789.63	3874.89	-3542.15	1673488.18	14292704.97	39°21'32.756"N	80°52'58.795"W	5249.91	317.569	2.08	-0.09	-2.07	
11893.00	90.430	339.440	6523.07	4884.58	3964.10	-3574.80	1673455.53	14292794.14	39°21'33.638"N	80°52'59.209"W	5337.91	317.956	0.96	0.09	-0.96	
11988.00	90.550	339.510	6522.26	4979.50	4053.07	-3608.11	1673422.24	14292883.07	39°21'34.518"N	80°52'59.631"W	5426.40	318.324	0.15	0.13	0.07	
12082.00	90.620	339.810	6521.30	5073.43	4141.20	-3640.78	1673389.58	14292971.17	39°21'35.389"N	80°53'00.046"W	5514.06	318.679	0.33	0.07	0.32	
12177.00	90.250	339.620	6520.57	5168.37	4230.31	-3673.71	1673356.66	14293060.24	39°21'36.270"N	80°53'00.464"W	5602.83	319.028	0.44	-0.39	-0.20	
12272.00	90.150	338.340	6520.24	5263.26	4318.98	-3707.79	1673322.60	14293148.88	39°21'37.147"N	80°53'00.896"W	5692.21	319.354	1.35	-0.11	-1.35	
12366.00	90.220	335.540	6519.94	5356.92	4405.46	-3744.61	1673285.80	14293235.33	39°21'38.002"N	80°53'01.363"W	5781.88	319.636	2.98	0.07	-2.98	
12461.00	90.000	330.020	6519.76	5450.72	4489.91	-3788.04	1673242.38	14293319.74	39°21'38.837"N	80°53'01.915"W	5874.40	319.846	5.82	-0.23	-5.81	
12556.00	90.460	336.050	6519.37	5544.58	4574.54	-3831.10	1673199.34	14293404.34	39°21'39.674"N	80°53'02.462"W	5966.89	320.054	6.37	0.48	6.35	
12650.00	90.060	340.890	6518.95	5638.40	4661.95	-3865.59	1673164.87	14293491.72	39°21'40.539"N	80°53'02.899"W	6056.12	320.335	6.17	-0.43	5.15	
12745.00	89.970	343.690	6518.92	5733.39	4752.44	-3894.48	1673135.98	14293582.17	39°21'41.434"N	80°53'03.266"W	6144.32	320.666	2.95	-0.09	2.95	
12840.00	89.880	345.170	6519.05	5828.28	4843.95	-3919.98	1673110.49	14293673.64	39°21'42.338"N	80°53'03.589"W	6231.38	321.018	1.56	-0.09	1.56	
12934.00	89.910	347.030	6519.22	5922.00	4935.20	-3942.56	1673087.92	14293764.85	39°21'43.240"N	80°53'03.875"W	6316.64	321.380	1.98	0.03	1.98	
13029.00	89.940	347.320	6519.34	6016.56	5027.86	-3963.49	1673067.01	14293857.48	39°21'44.157"N	80°53'04.140"W	6402.24	321.751	0.52	0.03	0.52	
13124.00	89.660	348.020	6519.66	6111.03	5120.71	-3983.61	1673046.89	14293950.28	39°21'45.074"N	80°53'04.395"W	6487.74	322.119	0.60	-0.29	0.53	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Sterling Unit 1H
Area	Tyler County, WV	Wellbore	Sterling Unit 1H AWB
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (231 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 [1/100ft]	Build Rate [1/100ft]	Turn Rate [1/100ft]	Comments
13218.00	89.380	347.790	6520.46	6204.49	5212.62	-4003.31	167307.20	142940.16	39°21'45.983"N	80°53'04.644"W	6572.51	322.476	0.39	-0.30	-0.24	
13313.00	89.230	347.060	6521.62	6299.01	5305.33	-4023.99	1673006.53	14294134.83	39°21'46.900"N	80°53'04.906"W	6658.75	322.820	0.78	-0.16	-0.77	
13408.00	89.200	345.310	6522.92	6393.71	5397.57	-4046.67	1672983.86	14294227.04	39°21'47.612"N	80°53'05.193"W	6746.06	323.140	1.84	-0.03	-1.84	
13502.00	89.540	347.140	6523.95	6487.42	5488.86	-4069.05	1672961.48	14294318.29	39°21'48.714"N	80°53'05.476"W	6832.62	323.449	1.98	0.38	1.95	
13597.00	88.980	344.060	6525.18	6582.18	5580.85	-4092.67	1672937.87	14294410.25	39°21'49.624"N	80°53'05.776"W	6920.68	323.746	3.29	-0.59	-3.24	
13692.00	89.170	343.880	6526.71	6677.10	5672.15	-4118.90	1672911.65	14294501.50	39°21'50.526"N	80°53'06.108"W	7009.89	324.014	0.28	0.20	-0.19	
13787.00	89.200	343.740	6528.06	6772.02	5763.37	-4145.38	1672895.18	14294592.69	39°21'51.428"N	80°53'06.444"W	7099.34	324.274	0.15	0.03	-0.15	
13882.00	89.230	343.450	6529.36	6866.97	5854.49	-4172.21	1672858.36	14294683.78	39°21'52.329"N	80°53'06.784"W	7189.05	324.524	0.31	0.03	-0.31	
13976.00	89.880	342.600	6530.09	6960.94	5944.39	-4199.66	1672830.93	14294773.64	39°21'53.218"N	80°53'07.132"W	7278.25	324.769	1.14	0.69	-0.90	
14071.00	89.820	342.800	6530.34	7055.92	6035.10	-4227.91	1672802.69	14294864.31	39°21'54.115"N	80°53'07.490"W	7368.69	324.987	0.22	-0.06	0.21	
14166.00	89.780	342.930	6530.67	7150.91	6125.88	-4255.89	1672774.71	14294955.06	39°21'55.013"N	80°53'07.845"W	7459.16	325.211	0.14	-0.04	0.14	
14261.00	89.940	342.500	6530.91	7245.89	6216.59	-4284.12	1672746.50	14295045.73	39°21'55.909"N	80°53'08.203"W	7549.81	325.428	0.48	0.17	-0.45	
14356.00	89.880	340.560	6531.06	7340.89	6306.69	-4314.22	1672716.41	14295135.79	39°21'56.800"N	80°53'08.585"W	7641.13	325.625	2.04	-0.06	-2.04	
14451.00	89.780	338.040	6531.34	7435.79	6395.55	-4347.79	1672682.85	14295224.62	39°21'57.679"N	80°53'09.011"W	7733.46	325.792	2.65	-0.11	-2.65	
14546.00	89.750	336.250	6531.73	7530.48	6483.09	-4384.69	1672645.97	14295312.12	39°21'58.545"N	80°53'09.479"W	7826.62	325.928	1.88	-0.03	-1.88	
14641.00	89.750	337.900	6532.14	7625.16	6570.58	-4421.69	1672608.98	14295399.58	39°21'59.410"N	80°53'09.949"W	7919.84	326.061	1.74	0.00	1.74	
14736.00	89.720	339.750	6532.58	7720.03	6659.16	-4456.01	1672574.68	14295488.12	39°22'00.286"N	80°53'10.384"W	8012.52	326.211	1.95	-0.03	1.95	
14831.00	89.820	341.790	6532.96	7815.01	6748.86	-4487.29	1672543.41	14295577.78	39°22'01.173"N	80°53'10.781"W	8104.50	326.380	2.15	0.11	2.15	
14926.00	89.850	342.860	6533.24	7910.01	6839.37	-4516.14	1672514.57	14295668.26	39°22'02.068"N	80°53'11.147"W	8195.88	326.563	1.13	0.03	1.13	
15021.00	89.970	342.710	6533.39	8004.99	6930.11	-4544.25	1672486.47	14295758.97	39°22'02.965"N	80°53'11.504"W	8287.14	326.746	0.20	0.13	-0.16	
15115.00	90.090	344.970	6533.34	8098.92	7020.39	-4570.41	1672460.32	14295849.21	39°22'03.857"N	80°53'11.835"W	8377.03	326.935	2.41	0.13	2.40	
15210.00	89.880	343.970	6533.36	8193.81	7111.92	-4595.85	1672434.89	14295940.70	39°22'04.762"N	80°53'12.158"W	8467.66	327.129	1.08	-0.22	-1.05	
15305.00	90.220	342.040	6533.28	8288.79	7202.77	-4623.62	1672407.14	14296031.51	39°22'05.661"N	80°53'12.510"W	8559.07	327.303	2.06	0.36	-2.03	
15400.00	90.220	341.240	6532.91	8383.78	7292.93	-4653.54	1672377.23	14296121.64	39°22'06.552"N	80°53'12.889"W	8651.14	327.459	0.84	0.00	-0.84	
15495.00	90.030	340.820	6532.71	8478.78	7382.77	-4684.42	1672346.36	14296211.45	39°22'07.440"N	80°53'13.281"W	8743.52	327.605	0.49	-0.20	-0.44	
15590.00	90.090	337.590	6532.61	8573.67	7471.57	-4718.14	1672312.65	14296300.21	39°22'08.319"N	80°53'13.709"W	8836.59	327.728	3.40	0.06	-3.40	
15685.00	90.340	341.170	6532.25	8668.57	7560.47	-4751.59	1672279.21	14296389.07	39°22'09.198"N	80°53'14.134"W	8929.63	327.852	3.78	0.26	3.77	
15780.00	90.090	341.140	6531.89	8763.57	7650.38	-4782.28	1672248.54	14296478.94	39°22'10.087"N	80°53'14.523"W	9022.11	327.990	0.27	-0.26	-0.03	
15874.00	90.030	340.270	6531.80	8857.55	7739.10	-4813.34	1672217.49	14296567.63	39°22'10.964"N	80°53'14.917"W	9113.83	328.120	0.93	-0.06	-0.93	
15969.00	90.060	339.210	6531.72	8952.49	7828.22	-4846.24	1672184.61	14296656.71	39°22'11.845"N	80°53'15.334"W	9206.90	328.239	1.12	0.03	-1.12	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #01
ANTERO RESOURCES CORPORATION	Sterling Unit 1H
Area	Tyler County, WV
Field	Tyler
Well	Sterling Unit 1H AWB
Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad

WELLPATH DATA (231 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
16064.00	90.490	340.510	6531.27	9047.44	7917.41	-4878.94	1672151.91	14296745.86	39°22'12.727"N	80°53'15.750"W	9299.97	328.357	1.44	0.45	1.37	
16159.00	90.400	340.300	6530.53	9142.41	8006.90	-4910.80	1672120.07	142966835.32	39°22'13.612"N	80°53'16.154"W	9392.89	328.478	0.24	-0.03	-0.22	
16254.00	90.520	342.290	6529.76	9237.40	8096.88	-4941.27	1672089.62	14296925.26	39°22'14.502"N	80°53'16.540"W	9485.54	328.606	2.10	0.13	2.08	
16349.00	90.430	343.320	6528.98	9332.38	8187.63	-4969.35	1672061.54	14297015.98	39°22'15.399"N	80°53'16.896"W	9577.67	328.745	1.09	-0.03	1.08	
16444.00	90.460	344.300	6528.24	9427.31	8278.85	-4995.84	1672035.07	14297107.17	39°22'16.301"N	80°53'17.232"W	9669.43	328.891	1.03	0.03	1.03	
16538.00	90.400	345.130	6527.53	9521.18	8369.53	-5020.62	1672010.30	14297197.80	39°22'17.197"N	80°53'17.546"W	9759.90	329.042	0.89	-0.06	0.88	
16633.00	89.750	345.430	6527.41	9616.00	8461.41	-5044.76	1671986.17	14297289.65	39°22'18.106"N	80°53'17.852"W	9851.14	329.196	0.75	-0.63	0.32	
16728.00	89.540	346.370	6528.00	9710.75	8553.54	-5067.90	1671963.03	14297381.75	39°22'19.017"N	80°53'18.145"W	9942.17	329.354	1.01	-0.22	0.99	
16823.00	89.510	346.710	6528.79	9805.48	8645.73	-5090.82	1671940.13	14297473.90	39°22'19.928"N	80°53'18.436"W	10033.20	329.509	0.70	-0.03	-0.69	
16918.00	89.570	345.120	6529.55	9900.28	8737.67	-5114.74	1671916.21	14297565.80	39°22'20.837"N	80°53'18.739"W	10124.59	329.657	0.62	0.06	-0.62	
17013.00	89.570	343.420	6530.26	9995.18	8829.10	-5140.49	1671890.47	14297657.20	39°22'21.741"N	80°53'19.065"W	10216.54	329.791	1.79	0.01	-1.79	
17107.00	89.660	340.920	6530.89	10089.17	8918.58	-5169.27	1671861.70	14297746.64	39°22'22.626"N	80°53'19.431"W	10308.37	329.903	2.66	0.10	-2.66	
17202.00	89.450	340.670	6531.63	10184.15	9008.29	-5200.52	1671830.47	14297836.31	39°22'23.513"N	80°53'19.827"W	10401.67	330.002	0.34	-0.22	-0.26	
17297.00	89.600	341.520	6532.42	10279.14	9098.16	-5231.30	1671799.70	14297926.15	39°22'24.401"N	80°53'20.218"W	10494.91	330.102	0.91	0.16	0.89	
17391.00	89.480	339.800	6533.17	10373.12	9186.95	-5262.43	1671768.59	14298014.80	39°22'25.278"N	80°53'20.613"W	10587.32	330.195	1.83	-0.13	-1.83	
17486.00	89.110	339.040	6534.34	10468.03	9275.78	-5295.82	1671735.21	14298103.70	39°22'26.158"N	80°53'21.036"W	10681.10	330.277	0.89	-0.39	-0.80	
17580.00	89.170	338.830	6535.75	10561.91	9363.49	-5329.60	1671701.44	14298191.37	39°22'27.025"N	80°53'21.465"W	10774.02	330.352	0.23	0.06	-0.22	
17675.00	89.320	338.930	6537.00	10656.78	9452.10	-5363.83	1671667.22	14298279.94	39°22'27.901"N	80°53'21.900"W	10867.97	330.426	0.19	0.16	0.11	
17770.00	88.250	338.010	6539.02	10751.60	9540.45	-5398.68	1671632.38	14298369.26	39°22'28.775"N	80°53'22.342"W	10962.02	330.496	1.49	-1.13	-0.97	
17820.00	88.400	337.990	6540.48	10801.47	9586.79	-5417.40	1671613.67	14298414.58	39°22'29.233"N	80°53'22.580"W	11011.58	330.530	0.30	0.30	-0.04	
17844.00	88.400	337.990	6541.15	10825.41	9609.03	-5426.40	1671604.68	14298436.81	39°22'29.453"N	80°53'22.694"W	11035.36	330.546	0.00	0.00	0.00	Projected MD at TD: 17844'



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

String/Diameter	STERLING UNIT 1H AWB				STERLING UNIT 1H AWP PROJ: 17844'					
	Start MD [ft]	End MD [ft]	Interval [ft]	End TVD [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
20in Conductor	25.50	105.50	80.00	25.50	105.50	105.50	0.00	0.00	0.00	0.16
17.5in Open Hole	105.50	808.50	703.00	105.50	808.49	808.49	-0.07	0.16	0.16	1.86
13.375in Casing Surface	25.50	808.50	783.00	25.50	808.49	808.49	0.00	0.00	0.00	1.86
12.25in Open Hole	808.50	2683.50	1875.00	808.49	2566.74	2566.74	-1.24	1.86	1.86	-471.43
9.625in Casing Intermediate	25.50	2683.50	2658.00	25.50	2566.74	2566.74	0.00	0.00	0.00	-471.43
8.75in Open Hole	2683.50	6246.50	3563.00	2566.74	5821.32	5821.32	-250.45	-471.43	-471.43	-1742.16
8.5in Open Hole	6246.50	17844.00	11597.50	5821.32	6541.15	6541.15	-933.51	-1742.16	-1742.16	-5426.40
5.5in Casing Production	25.50	17844.00	17818.50	25.50	6541.15	6541.15	0.00	0.00	0.00	-5426.40

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
Sterling Unit 1H - POE - Rev-2	6494.00	-452.54	-2131.09	1674898.67	14286379.27	39°20'49.967"N	80°52'40.905"W	point	
Sterling Unit 1H - BHL - Rev-2	6520.00	9627.23	-5457.09	1671574.00	14298455.00	39°22'29.633"N	80°53'23.085"W	point	
Sterling Unit 1H - LP - Rev-2	6520.00	-251.38	-2197.46	1674832.32	14288580.35	39°20'51.956"N	80°52'41.746"W	point	



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

WELLPATH COMPOSITION - Ref Wellbores: Sterling Unit 1H AWB Ref Wellpath: Sterling Unit 1H AWP Proj: 17844'

Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.50	810.50	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">(50'-800')	Sterling Unit 1H AWB
810.50	2569.50	ISCWISA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">(800')(669'-2559')	Sterling Unit 1H AWB
2569.50	6185.50	ISCWISA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">(2559')(2694'-6175')	Sterling Unit 1H AWB
6185.50	17820.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(6185.5')(6219'-17820')	Sterling Unit 1H AWB
17820.00	17844.00	Blind Drilling (std)	Projection to bit	Sterling Unit 1H AWB



Actual Wellpath Report

Sterling Unit 1H AWP Proj: 17844'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Sterling Unit 1H
Field	Tyler	Wellbore	Sterling Unit 1H AWB
Facility	Meredith Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02520-0000 BHI Job #: 109621691 Rig: H&P 317 Duration: 01/25/2019-01/31/2019 Gyrodatta MS Gyro <17-1/2">(50'-800') Panther EM <12-1/4">(800')(869'-2559') Panther EM <8-3/4">(2559')(2694'-6175') BH AT Curve <8-1/2">(6185.5')(6219'-17820') Middlesex: 6839' MD Burkett: 7057' MD Tully: 7147' MD Marcellus POE: 7265' MD Projected MD at TD: 17844'</p>