



ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV
 Field: Doddridge
 Facility: Middle Pad

Slot: Slot #01
 Well: Caboose Unit 1H
 Wellbore: Caboose Unit 1H PWB



Plot reference wellpath is Caboose Unit 1H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 32 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 32 (RKB)	Scale: True distance
Frontier 32 (RKB) to Mean Sea Level: 875 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #01): -843 feet	Created by: mccerib on 2018-05-15
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERNUS_Defn

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Middle Pad		1695090.990	14279417.689	39°19'21.010"N	80°48'24.020"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #01	0.00	0.00	1695090.990	14279417.689	80°48'24.020"W
Comment		Caboose Unit 1H			
Frontier 32 (RKB) to Ground level (At Slot: Slot #01)					32ft
Mean Sea Level to Ground level (At Slot: Slot #01)					-843ft
Frontier 32 (RKB) to Mean Sea Level					875ft

Gyrodatta MS Gyro <17-1/2"> (100'-500') : 0.80° Inc, 117.00ft MD, 117.00ft TVD, 0.03ft VS

Directional ONE MWD <12-1/4"> (500')(559'-2575') : 0.27° Inc, 576.00ft MD, 575.98ft TVD, 1.56ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6488.00	47.460	327.880	6219.33	-390.02	-1450.63	10.86	224.66
Proj. to Bottom	6570.00	56.090	327.880	6270.02	-335.51	-1484.85	10.52	288.31
End of 3D Arc	6678.83	62.616	330.314	6325.47	-255.19	-1532.85	6.30	381.14
POE	6779.10	68.464	336.351	6367.00	-173.67	-1573.67	8.00	472.19
Landing Pt.	6994.46	90.000	336.351	6407.00	18.99	-1658.04	10.00	682.52
BHL	15696.93	90.000	336.351	6407.00	7990.61	-5148.92	0.00	9384.99

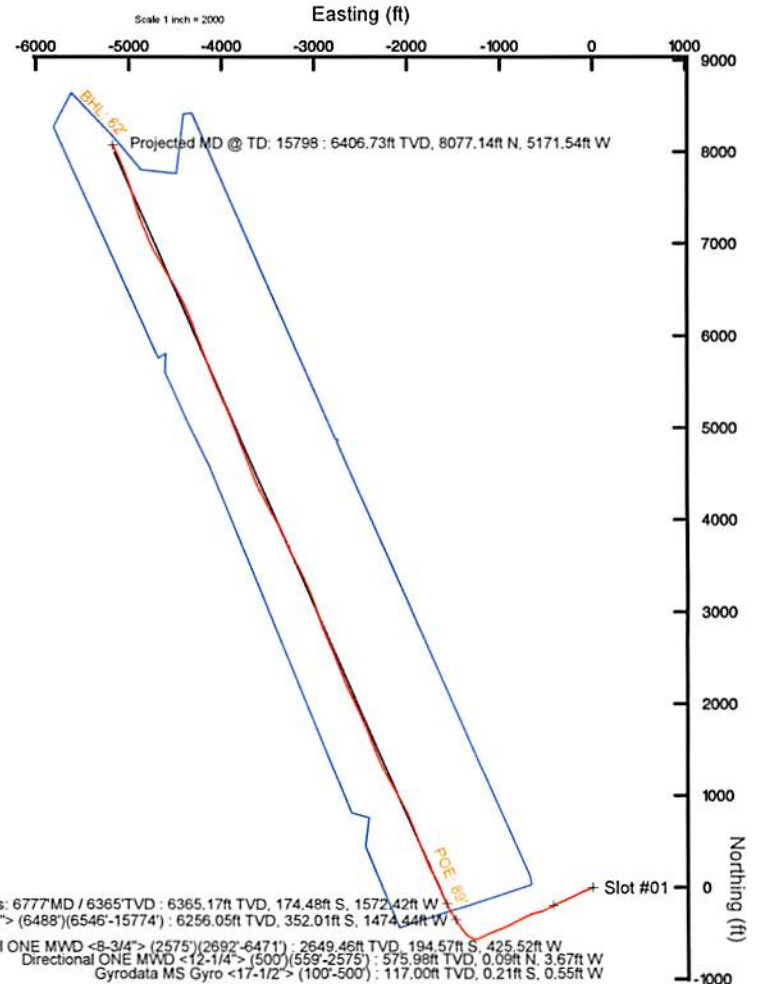
Directional ONE MWD <8-3/4"> (2575')(2692'-6471') : 16.42° Inc, 2709.00ft MD, 2649.46ft TVD, -7.54ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #01	Caboose Unit 1H	Caboose Unit 1H AWB	Caboose Unit 1H AWP Proj: 15798'
Slot #01	Caboose Unit 1H	Caboose Unit 1H PWB	Caboose Unit 1H PWP Rev-A.0

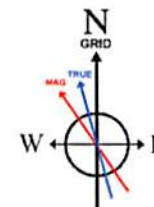
BH AT Curve <8-1/2"> (6488')(6546'-15774') : 53.92° Inc, 6546.00ft MD, 6256.05ft TVD, 269.03ft VS
 POE Marcellus: 6777 MD / 6365 TVD : 70.02° Inc, 6777.00ft MD, 6365.17ft TVD, 470.94ft VS

Projected MD @ TD: 15798 : 90.00° Inc, 15798.00ft MD, 6406.73ft TVD, 9473.32ft VS

Vertical Section (ft)
 Azimuth 336.35° with reference 0.00 N, 0.00 E



POE Marcellus: 6777 MD / 6365 TVD : 6365.17ft TVD, 174.48ft S, 1572.42ft W
 BH AT Curve <8-1/2"> (6488')(6546'-15774') : 6256.05ft TVD, 352.01ft S, 1474.44ft W
 Directional ONE MWD <8-3/4"> (2575')(2692'-6471') : 2649.46ft TVD, 194.57ft S, 425.52ft W
 Directional ONE MWD <12-1/4"> (500')(559'-2575') : 575.98ft TVD, 0.09ft N, 3.67ft W
 Gyrodatta MS Gyro <17-1/2"> (100'-500') : 117.00ft TVD, 0.21ft S, 0.55ft W



User specified Dip: 66.54° Field: 52020 nT
 Magnetic North is 7.64 degrees West of True North (at 4/4/2018)
 Grid North is 0.12 degrees East of True North
 To correct azimuth from True to Grid subtract 0.12 degrees
 To correct azimuth from Magnetic to Grid subtract 7.76 degrees

Scale 1 inch = 1500
 True Vertical Depth (ft)



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Actual Wellpath Report

Caboose Unit 1H AWP Proj: 15798'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Mccrerib
Scale	0.999603	Report Generated	5/15/2018 at 4:38:32 PM
Convergence at slot	0.12° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Caboose_Unit_1H_AWP_Proj_15798_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W
Facility Reference Pt			1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 32 (RKB) to Facility Vertical Datum	875.00ft
Horizontal Reference Pt	Slot	Frontier 32 (RKB) to Mean Sea Level	875.00ft
Vertical Reference Pt	Frontier 32 (RKB)	Frontier 32 (RKB) to Ground Level at Slot (Slot #01)	32.00ft
MD Reference Pt	Frontier 32 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	336.35°



Actual Wellpath Report

Caboose Unit 1H AWP Proj: 15798'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (192 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sec (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	0.00	249.210	0.00	0.00	0.00	0.00	1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.00	249.210	32.00	0.00	0.00	0.00	1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W	0.00	0.000	0.00	0.00	0.00	
117.00	0.800	249.210	117.00	0.03	-0.21	-0.55	1695090.44	14279417.48	39°19'21.008"N	80°48'24.027"W	0.59	249.210	0.94	0.94	-130.34	Gyrodata MS Gyro <17-1/2"> (100'-500')
217.00	0.440	270.200	216.99	0.22	-0.46	-1.59	1695089.40	14279417.23	39°19'21.006"N	80°48'24.040"W	1.66	253.975	0.42	-0.36	20.99	
317.00	0.730	279.040	316.99	0.72	-0.36	-2.60	1695088.39	14279417.33	39°19'21.007"N	80°48'24.053"W	2.63	262.224	0.30	0.29	8.84	
417.00	0.050	339.770	416.98	1.11	-0.21	-3.25	1695087.74	14279417.47	39°19'21.008"N	80°48'24.061"W	3.26	266.221	0.71	-0.68	60.73	
517.00	0.270	291.800	516.98	1.32	-0.09	-3.48	1695087.51	14279417.60	39°19'21.009"N	80°48'24.064"W	3.48	268.583	0.24	0.22	-47.97	
576.00	0.270	334.780	575.98	1.56	0.09	-3.67	1695087.32	14279417.78	39°19'21.011"N	80°48'24.067"W	3.67	271.424	0.34	0.00	72.85	Directional ONE MWD <12-1/4"> (500')(559'-2575')
666.00	1.120	266.070	665.98	2.06	0.22	-4.64	1695086.35	14279417.91	39°19'21.012"N	80°48'24.079"W	4.64	272.750	1.17	0.94	-76.34	
757.00	2.720	253.860	756.92	2.65	-0.44	-7.60	1695083.39	14279417.25	39°19'21.006"N	80°48'24.117"W	7.61	266.698	1.80	1.76	-13.42	
847.00	4.790	246.740	846.72	2.95	-2.52	-13.10	1695077.89	14279415.17	39°19'20.985"N	80°48'24.187"W	13.34	259.131	2.35	2.30	-7.91	
937.00	6.970	247.060	936.25	3.05	-6.13	-21.59	1695069.41	14279411.56	39°19'20.950"N	80°48'24.295"W	22.44	254.149	2.42	2.42	0.36	
1025.00	8.940	246.710	1023.39	3.15	-10.91	-32.79	1695058.22	14279406.78	39°19'20.903"N	80°48'24.437"W	34.55	251.588	2.24	2.24	-0.40	
1113.00	10.320	246.210	1110.15	3.18	-16.80	-46.28	1695044.73	14279400.90	39°19'20.845"N	80°48'24.609"W	49.23	250.051	1.57	1.57	-0.57	
1202.00	12.280	248.750	1197.42	3.55	-23.44	-62.40	1695028.62	14279394.25	39°19'20.780"N	80°48'24.815"W	66.66	249.407	2.27	2.20	2.85	
1290.00	14.180	248.470	1283.08	4.35	-30.79	-81.15	1695009.88	14279386.91	39°19'20.707"N	80°48'25.053"W	86.79	249.220	2.16	2.16	-0.32	
1378.00	15.900	247.750	1368.07	5.04	-39.31	-102.33	1694988.70	14279378.39	39°19'20.624"N	80°48'25.323"W	109.62	248.985	1.97	1.95	-0.82	
1466.00	16.470	243.760	1452.58	4.77	-49.39	-124.68	1694966.36	14279368.32	39°19'20.524"N	80°48'25.608"W	134.11	248.388	1.42	0.65	-4.53	
1554.00	17.270	242.420	1536.79	3.31	-60.96	-147.45	1694943.60	14279356.76	39°19'20.411"N	80°48'25.898"W	159.55	247.539	1.01	0.91	-1.52	
1642.00	16.640	242.820	1620.97	1.64	-72.76	-170.23	1694920.82	14279344.96	39°19'20.294"N	80°48'26.188"W	185.13	246.857	0.73	-0.72	0.45	
1730.00	16.340	244.120	1705.35	0.38	-83.92	-192.58	1694898.49	14279333.80	39°19'20.185"N	80°48'26.473"W	210.07	246.454	0.54	-0.34	1.48	
1819.00	17.040	245.840	1790.60	-0.22	-94.72	-215.74	1694875.33	14279323.01	39°19'20.078"N	80°48'26.768"W	235.62	246.296	0.96	0.79	1.93	
1907.00	17.880	246.970	1874.54	-0.19	-105.28	-239.94	1694851.15	14279312.45	39°19'19.974"N	80°48'27.076"W	262.02	246.309	1.03	0.95	1.28	
1995.00	15.610	242.240	1958.81	-0.89	-116.08	-262.85	1694828.24	14279301.65	39°19'19.868"N	80°48'27.368"W	287.34	246.172	3.01	-2.58	-5.37	
2083.00	14.530	242.390	2043.78	-2.50	-126.72	-283.11	1694807.99	14279291.02	39°19'19.764"N	80°48'27.626"W	310.18	245.888	1.23	-1.23	0.17	
2171.00	14.320	244.560	2129.01	-3.61	-136.51	-302.72	1694788.39	14279281.24	39°19'19.667"N	80°48'27.876"W	332.08	245.728	0.66	-0.24	2.47	
2259.00	14.940	248.480	2214.16	-3.52	-145.34	-323.10	1694768.02	14279272.40	39°19'19.580"N	80°48'28.135"W	354.29	245.780	1.33	0.70	4.45	
2348.00	13.420	249.410	2300.44	-2.55	-153.18	-343.44	1694747.68	14279264.57	39°19'19.503"N	80°48'28.394"W	376.06	245.962	1.73	-1.71	1.04	
2436.00	13.680	246.760	2386.00	-1.93	-160.88	-362.57	1694728.57	14279256.87	39°19'19.428"N	80°48'28.638"W	396.66	246.072	0.76	0.30	-3.01	
2524.00	14.680	241.390	2471.32	-2.82	-170.33	-381.92	1694709.22	14279247.43	39°19'19.335"N	80°48'28.884"W	418.18	245.964	1.88	1.14	-6.10	

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Actual Wellpath Report

Caboose Unit 1H AWP Proj: 15798'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #01
Area	Doddridge Co., WV		Well	Caboose Unit 1H
Field	Doddridge		Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad			

WELLPATH DATA (192 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
2592.00	15.510	240.350	2536.97	-4.51	-178.95	-397.38	1694693.76	14279238.81	39°19'19.250"N	80°48'29.081"W	435.82	245.757	1.28	1.22	-1.53	
2709.00	16.420	241.530	2649.46	-7.54	-194.57	-425.52	1694665.64	14279223.19	39°19'19.096"N	80°48'29.440"W	467.89	245.427	0.83	0.78	1.01	Directional ONE MWD <8-3/4"> (2575')(2692'-6471')
2797.00	16.800	240.720	2733.78	-9.83	-206.72	-447.54	1694643.63	14279211.05	39°19'18.976"N	80°48'29.720"W	492.98	245.208	0.51	0.43	-0.92	
2885.00	17.380	241.900	2817.90	-12.10	-219.13	-470.23	1694620.95	14279198.64	39°19'18.854"N	80°48'30.009"W	518.78	245.014	0.77	0.66	1.34	
2973.00	16.550	245.490	2902.07	-13.30	-230.52	-493.23	1694597.96	14279187.26	39°19'18.742"N	80°48'30.302"W	544.44	244.950	1.52	-0.94	4.08	
3062.00	15.910	241.340	2987.53	-14.56	-241.63	-515.47	1694575.73	14279176.15	39°19'18.633"N	80°48'30.586"W	569.29	244.884	1.49	-0.72	-4.66	
3150.00	18.110	243.360	3071.67	-16.33	-253.55	-538.28	1694552.93	14279164.24	39°19'18.515"N	80°48'30.876"W	595.01	244.778	2.59	2.50	2.30	
3238.00	17.660	252.970	3155.44	-15.50	-263.60	-563.27	1694527.94	14279154.20	39°19'18.417"N	80°48'31.194"W	621.90	244.922	3.39	-0.51	10.92	
3326.00	17.440	257.090	3239.35	-11.50	-270.45	-588.89	1694502.33	14279147.35	39°19'18.349"N	80°48'31.521"W	648.02	245.333	1.43	-0.25	4.68	
3414.00	18.310	257.390	3323.10	-6.40	-276.42	-615.23	1694476.00	14279141.38	39°19'18.291"N	80°48'31.856"W	674.48	245.806	0.99	0.99	0.34	
3503.00	17.410	254.940	3407.81	-1.73	-282.93	-641.74	1694449.51	14279134.87	39°19'18.227"N	80°48'32.193"W	701.34	246.208	1.32	-1.01	-2.75	
3591.00	16.770	247.740	3491.93	0.54	-291.16	-666.20	1694425.05	14279126.65	39°19'18.146"N	80°48'32.505"W	727.05	246.393	2.51	-0.73	-8.18	
3679.00	14.790	241.360	3576.62	-0.13	-301.35	-687.81	1694403.45	14279116.46	39°19'18.046"N	80°48'32.780"W	750.93	246.340	2.99	-2.25	-7.25	
3768.00	15.210	243.920	3662.59	-1.61	-311.93	-708.27	1694383.00	14279105.88	39°19'17.942"N	80°48'33.041"W	773.91	246.231	0.88	0.47	2.88	
3856.00	15.840	244.760	3747.37	-2.43	-322.13	-729.50	1694361.78	14279095.69	39°19'17.842"N	80°48'33.311"W	797.46	246.175	0.76	0.72	0.95	
3944.00	16.870	244.590	3831.81	-3.16	-332.73	-751.90	1694339.39	14279085.09	39°19'17.737"N	80°48'33.596"W	822.23	246.130	1.17	1.17	-0.19	
4032.00	16.540	243.770	3916.10	-4.12	-343.74	-774.67	1694316.63	14279074.08	39°19'17.629"N	80°48'33.886"W	847.51	246.072	0.46	-0.38	-0.93	
4120.00	16.220	241.740	4000.53	-5.67	-355.10	-796.73	1694294.58	14279062.73	39°19'17.517"N	80°48'34.167"W	872.28	245.978	0.75	-0.36	-2.31	
4209.00	15.580	244.700	4086.12	-7.01	-366.09	-818.48	1694272.83	14279051.74	39°19'17.409"N	80°48'34.445"W	896.63	245.902	1.16	-0.72	3.33	
4297.00	15.880	245.150	4170.83	-7.60	-376.20	-840.09	1694251.23	14279041.64	39°19'17.309"N	80°48'34.720"W	920.48	245.877	0.37	0.34	0.51	
4385.00	17.010	239.530	4255.23	-9.38	-387.79	-862.11	1694229.22	14279030.05	39°19'17.195"N	80°48'35.000"W	945.31	245.781	2.22	1.28	-6.39	
4474.00	17.680	240.290	4340.18	-12.36	-401.09	-885.07	1694206.27	14279016.76	39°19'17.064"N	80°48'35.293"W	971.71	245.621	0.79	0.75	0.85	
4562.00	17.020	244.290	4424.18	-14.23	-413.30	-908.28	1694183.07	14279004.55	39°19'16.944"N	80°48'35.588"W	997.90	245.533	1.55	-0.75	4.55	
4650.00	16.150	247.290	4508.52	-14.49	-423.61	-931.18	1694160.18	14278994.25	39°19'16.843"N	80°48'35.880"W	1023.01	245.538	1.39	-0.99	3.41	
4739.00	15.680	246.580	4594.11	-14.24	-433.17	-953.63	1694137.74	14278984.69	39°19'16.749"N	80°48'36.166"W	1047.40	245.571	0.57	-0.53	-0.80	
4827.00	16.020	246.790	4678.76	-14.10	-442.68	-975.70	1694115.67	14278975.18	39°19'16.655"N	80°48'36.447"W	1071.43	245.596	0.39	0.39	0.24	
4915.00	17.770	250.230	4762.97	-13.10	-452.01	-999.50	1694091.88	14278965.86	39°19'16.563"N	80°48'36.750"W	1096.96	245.666	2.29	1.99	3.91	
5003.00	18.180	250.000	4846.67	-11.32	-461.25	-1025.04	1694066.36	14278956.62	39°19'16.473"N	80°48'37.075"W	1124.04	245.773	0.47	0.47	-0.26	
5092.00	16.560	244.420	4931.61	-10.86	-471.48	-1049.53	1694041.88	14278946.40	39°19'16.372"N	80°48'37.387"W	1150.57	245.809	2.61	-1.82	-6.27	
5180.00	18.810	245.570	5015.45	-11.47	-482.76	-1073.76	1694017.65	14278935.12	39°19'16.261"N	80°48'37.696"W	1177.30	245.792	2.59	2.56	1.31	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (192 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
5269.00	18.770	248.360	5099.71	-11.17	-493.97	-1100.14	1693991.29	14278923.91	39°19'16.151"N	80°48'38.032"W	1205.95	245.819	1.01	-0.04	3.13	
5357.00	16.920	245.500	5183.47	-10.86	-504.51	-1124.95	1693966.49	14278913.38	39°19'16.047"N	80°48'38.348"W	1232.90	245.845	2.33	-2.10	-3.25	
5445.00	16.880	244.800	5267.67	-11.40	-515.26	-1148.17	1693943.28	14278902.64	39°19'15.941"N	80°48'38.643"W	1258.48	245.831	0.24	-0.05	-0.80	
5534.00	14.660	243.700	5353.32	-12.27	-525.75	-1169.96	1693921.50	14278892.15	39°19'15.838"N	80°48'38.921"W	1282.66	245.802	2.52	-2.49	-1.24	
5622.00	12.780	241.720	5438.80	-13.57	-535.30	-1188.51	1693902.95	14278882.61	39°19'15.744"N	80°48'39.157"W	1303.50	245.754	2.20	-2.14	-2.25	
5710.00	13.350	244.960	5524.53	-14.60	-544.21	-1206.29	1693885.18	14278873.70	39°19'15.656"N	80°48'39.384"W	1323.36	245.718	1.05	0.65	3.68	
5799.00	14.330	244.390	5610.94	-15.23	-553.32	-1225.53	1693865.95	14278864.59	39°19'15.567"N	80°48'39.629"W	1344.65	245.701	1.11	1.10	-0.64	
5887.00	15.560	253.990	5695.98	-14.03	-561.28	-1246.70	1693844.79	14278856.63	39°19'15.489"N	80°48'39.898"W	1367.22	245.762	3.14	1.40	10.91	
5931.00	16.270	267.790	5738.31	-10.99	-563.15	-1258.54	1693832.96	14278854.77	39°19'15.470"N	80°48'40.049"W	1378.78	245.893	8.73	1.61	31.36	
5975.00	17.430	283.780	5780.44	-4.73	-561.81	-1271.10	1693820.39	14278856.10	39°19'15.484"N	80°48'40.209"W	1389.73	246.155	10.82	2.64	36.34	
6019.00	19.350	293.580	5822.20	4.63	-557.33	-1284.19	1693807.31	14278860.58	39°19'15.528"N	80°48'40.375"W	1399.91	246.540	8.26	4.36	22.27	
6063.00	22.120	294.950	5863.35	16.20	-550.92	-1298.38	1693793.12	14278866.99	39°19'15.592"N	80°48'40.556"W	1410.43	247.008	6.39	6.30	3.11	
6107.00	22.440	295.620	5904.06	28.78	-543.79	-1313.47	1693778.05	14278874.12	39°19'15.663"N	80°48'40.748"W	1421.58	247.510	0.93	0.73	1.52	
6152.00	23.640	299.800	5945.47	42.53	-535.59	-1329.04	1693762.48	14278882.31	39°19'15.744"N	80°48'40.945"W	1432.90	248.051	4.51	2.67	9.29	
6196.00	26.580	308.750	5985.33	58.35	-525.04	-1344.38	1693747.14	14278892.86	39°19'15.849"N	80°48'41.140"W	1443.27	248.667	10.90	6.68	20.34	
6240.00	30.080	316.250	6024.06	77.44	-510.90	-1359.69	1693731.84	14278906.99	39°19'15.989"N	80°48'41.335"W	1452.51	249.406	11.33	7.95	17.05	
6284.00	33.100	320.540	6061.54	99.37	-493.66	-1374.96	1693716.58	14278924.23	39°19'16.160"N	80°48'41.529"W	1460.89	250.250	8.55	6.86	9.75	
6328.00	34.720	322.210	6098.06	123.08	-474.48	-1390.27	1693701.27	14278943.40	39°19'16.349"N	80°48'41.723"W	1469.01	251.156	4.25	3.68	3.80	
6372.00	37.580	321.670	6133.58	148.22	-454.05	-1406.28	1693685.27	14278963.82	39°19'16.552"N	80°48'41.926"W	1477.76	252.106	6.54	6.50	-1.23	
6416.00	41.130	324.670	6167.60	175.38	-431.70	-1422.97	1693668.58	14278986.16	39°19'16.773"N	80°48'42.138"W	1487.02	253.123	9.15	8.07	6.82	
6460.00	44.510	326.860	6199.87	204.77	-406.98	-1439.78	1693651.78	14279010.87	39°19'17.018"N	80°48'42.351"W	1496.19	254.216	8.39	7.68	4.98	
6488.00	47.460	327.880	6219.33	224.66	-390.02	-1450.63	1693640.94	14279027.83	39°19'17.185"N	80°48'42.489"W	1502.15	254.951	10.86	10.54	3.64	
6546.00	53.920	327.990	6256.05	269.03	-352.01	-1474.44	1693617.14	14279065.82	39°19'17.562"N	80°48'42.791"W	1515.88	256.573	11.14	11.14	0.18	BH AT Curve <8-1/2"> (6488')(6546'-15774')
6599.00	58.340	329.020	6285.58	312.61	-314.49	-1497.42	1693594.17	14279103.33	39°19'17.933"N	80°48'43.082"W	1530.08	258.139	8.49	8.34	1.94	
6618.00†	59.381	329.611	6295.41	328.75	-300.50	-1505.71	1693585.87	14279117.31	39°19'18.071"N	80°48'43.187"W	1535.41	258.713	6.09	5.48	3.11	Burket: 6618'MD / 6295'TVD
6646.00	60.920	330.460	6309.34	352.89	-279.46	-1517.84	1693573.75	14279138.34	39°19'18.280"N	80°48'43.341"W	1543.36	259.568	6.09	5.50	3.03	
6679.00†	62.259	331.532	6325.05	381.79	-254.08	-1531.91	1693559.69	14279163.71	39°19'18.531"N	80°48'43.519"W	1552.84	260.583	4.96	4.06	3.25	Tully: 6679'MD / 6325'TVD
6694.00	62.870	332.010	6331.96	395.06	-242.35	-1538.21	1693553.39	14279175.44	39°19'18.647"N	80°48'43.599"W	1557.19	261.046	4.96	4.07	3.19	
6741.00	66.820	333.310	6351.93	437.50	-204.56	-1557.74	1693533.87	14279213.21	39°19'19.021"N	80°48'43.847"W	1571.11	262.519	8.77	8.40	2.77	
6755.00†	68.064	333.841	6357.30	450.41	-192.99	-1563.49	1693528.12	14279224.78	39°19'19.135"N	80°48'43.920"W	1575.36	262.963	9.55	8.88	3.79	Hamilton: 6755'D / 6357'TVD



Actual Wellpath Report

Caboose Unit 1H AWP Proj: 15798

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REFERENCE WELLPATH IDENTIFICATION		Slot
Operator	ANTERO RESOURCES CORPORATION	Slot #01
Area	Doddridge Co., WV	Caboose Unit 1H
Field	Doddridge	Caboose Unit 1H AWB
Facility	Middle Pad	

WELLPATH DATA (192 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 (ft)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
6777.00	70.021	334.657	6365.17	470.94	-174.48	-1572.42	16933519.20	14279243.28	39°19'19.318"N	80°48'44.033"W	1582.07	263.668	9.55	8.90	3.71	POE Marcellus: 6777 MD / 6365 TVD
6790.00	71.180	335.130	6369.49	483.20	-163.38	-1577.62	16933514.00	14279254.38	39°19'19.428"N	80°48'44.099"W	1586.06	264.087	9.55	8.91	3.64	
6837.00	76.080	336.870	6382.73	528.28	-122.19	-1595.95	16933495.68	14279295.54	39°19'19.836"N	80°48'44.331"W	1600.62	265.622	11.01	10.43	3.70	
6885.00	79.920	338.150	6392.71	575.21	-78.82	-1613.90	16933477.73	14279338.90	39°19'20.265"N	80°48'44.558"W	1615.82	267.204	8.41	8.00	2.67	
6932.00	81.200	339.100	6400.42	621.54	-35.65	-1630.80	16933460.84	14279382.06	39°19'20.692"N	80°48'44.772"W	1631.18	268.748	3.38	2.72	2.02	
6980.00	85.320	338.430	6406.05	669.15	8.77	-1648.06	16933443.59	14279426.46	39°19'21.131"N	80°48'44.990"W	1648.08	270.305	8.69	8.58	-1.40	
7023.00	90.120	336.480	6407.78	712.10	48.44	-1664.53	16933427.13	14279466.11	39°19'21.523"N	80°48'45.199"W	1665.23	271.667	12.05	11.16	-4.53	
7075.00	89.880	331.830	6407.76	764.04	95.23	-1687.19	16933404.47	14279512.88	39°19'21.986"N	80°48'45.486"W	1689.87	273.230	8.95	-0.46	-8.94	
7170.00	89.480	331.640	6408.29	858.73	178.90	-1732.18	16933359.50	14279596.52	39°19'22.814"N	80°48'46.056"W	1741.39	275.897	0.47	-0.42	-0.20	
7265.00	90.370	337.720	6408.42	953.65	264.73	-1772.79	16933318.91	14279682.32	39°19'23.663"N	80°48'46.571"W	1792.44	278.493	6.47	0.94	6.40	
7361.00	89.970	338.300	6408.13	1049.61	353.75	-1808.73	16933282.98	14279771.29	39°19'24.544"N	80°48'47.026"W	1843.00	281.066	0.73	-0.42	0.60	
7456.00	90.030	338.070	6408.13	1144.56	441.94	-1844.03	16933247.69	14279859.46	39°19'25.416"N	80°48'47.473"W	1896.25	283.477	0.25	0.06	-0.24	
7551.00	90.030	338.700	6408.08	1239.50	530.26	-1879.03	16933212.71	14279947.74	39°19'26.290"N	80°48'47.916"W	1952.42	285.759	0.66	0.00	0.66	
7646.00	90.370	339.320	6407.75	1334.39	618.96	-1913.06	1693178.69	14280036.40	39°19'27.167"N	80°48'48.346"W	2010.70	287.929	0.74	0.36	0.65	
7741.00	90.310	338.150	6407.19	1429.31	707.49	-1947.51	1693144.25	14280124.89	39°19'28.043"N	80°48'48.782"W	2072.04	289.965	1.23	-0.06	-1.23	
7837.00	90.060	335.890	6406.88	1525.29	795.86	-1984.99	1693106.79	14280213.23	39°19'28.917"N	80°48'49.257"W	2138.59	291.848	2.37	-0.26	-2.35	
7932.00	89.940	333.140	6406.88	1620.24	881.61	-2025.86	1693065.94	14280298.95	39°19'29.766"N	80°48'49.775"W	2209.38	293.518	2.90	-0.13	-2.89	
8026.00	89.940	331.880	6406.97	1714.02	964.99	-2069.25	1693022.56	14280382.30	39°19'30.591"N	80°48'50.325"W	2283.20	295.002	1.34	0.00	-1.34	
8122.00	89.910	331.250	6407.10	1809.69	1049.41	-2114.96	1692976.87	14280466.68	39°19'31.425"N	80°48'50.904"W	2361.00	296.390	0.66	-0.03	-0.66	
8217.00	89.940	331.350	6407.22	1904.32	1132.74	-2160.58	1692931.27	14280549.98	39°19'32.250"N	80°48'51.483"W	2439.51	297.667	0.11	0.03	0.11	
8311.00	90.000	331.770	6407.27	1997.99	1215.40	-2205.35	1692886.52	14280632.60	39°19'33.068"N	80°48'52.050"W	2518.08	298.860	0.45	0.06	0.45	
8407.00	89.940	334.190	6407.32	2093.82	1300.91	-2248.96	1692842.93	14280718.08	39°19'33.914"N	80°48'52.603"W	2598.11	300.047	2.52	-0.06	2.52	
8502.00	90.220	336.690	6407.19	2189.80	1387.31	-2288.44	1692803.46	14280804.45	39°19'34.769"N	80°48'53.103"W	2676.12	301.225	2.65	0.29	2.63	
8597.00	90.520	337.690	6406.58	2283.79	1474.88	-2325.27	1692766.65	14280891.98	39°19'35.635"N	80°48'53.569"W	2753.57	302.386	1.10	0.32	1.05	
8691.00	90.000	337.770	6406.15	2377.76	1561.86	-2360.89	1692731.04	14280978.93	39°19'36.496"N	80°48'54.020"W	2830.77	303.487	0.56	-0.55	0.08	
8786.00	90.000	339.330	6406.15	2472.68	1650.28	-2395.63	1692696.31	14281067.31	39°19'37.370"N	80°48'54.460"W	2909.03	304.562	1.64	0.00	1.64	
8881.00	89.940	337.780	6406.20	2567.61	1738.70	-2430.36	1692661.60	14281155.70	39°19'38.245"N	80°48'54.900"W	2988.27	305.580	1.63	-0.06	-1.63	
8976.00	89.820	335.780	6406.40	2662.60	1826.00	-2467.82	1692624.16	14281242.96	39°19'39.109"N	80°48'55.374"W	3069.92	306.499	2.11	-0.13	-2.11	
9071.00	89.940	334.670	6406.60	2757.58	1912.26	-2507.63	1692584.36	14281329.18	39°19'39.962"N	80°48'55.878"W	3153.56	307.328	1.18	0.13	-1.17	
9167.00	89.950	334.390	6406.78	2853.53	1998.93	-2548.91	1692543.10	14281415.82	39°19'40.819"N	80°48'56.402"W	3239.24	308.105	0.31	-0.09	-0.28	

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Actual Wellpath Report

Caboose Unit 1H AWP Proj: 15798'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (192 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
9262.00	89.940	335.280	6406.95	2948.50	2084.91	-2589.31	1692502.72	14281501.77	39°19'41.670"N	80°48'56.913"W	3324.36	308.841	0.94	0.09	0.94	
9357.00	89.940	335.100	6407.05	3043.48	2171.14	-2629.17	1692462.87	14281587.96	39°19'42.523"N	80°48'57.418"W	3409.75	309.550	0.19	0.00	-0.19	
9451.00	89.660	336.810	6407.38	3137.47	2256.98	-2667.47	1692424.59	14281673.77	39°19'43.372"N	80°48'57.904"W	3494.19	310.235	1.84	-0.30	1.82	
9546.00	89.880	339.830	6407.76	3232.41	2345.25	-2702.56	1692389.51	14281762.00	39°19'44.245"N	80°48'58.348"W	3578.27	310.951	3.19	0.23	3.18	
9641.00	90.000	339.190	6407.86	3327.26	2434.24	-2735.81	1692356.27	14281850.96	39°19'45.126"N	80°48'58.769"W	3661.99	311.662	0.69	0.13	-0.67	
9736.00	90.030	337.980	6407.83	3422.19	2522.68	-2770.50	1692321.60	14281939.36	39°19'46.000"N	80°48'59.208"W	3746.94	312.319	1.27	0.03	-1.27	
9831.00	89.970	337.110	6407.83	3517.17	2610.47	-2806.78	1692285.32	14282027.12	39°19'46.869"N	80°48'59.667"W	3833.09	312.925	0.92	-0.06	-0.92	
9926.00	89.910	336.450	6407.93	3612.16	2697.78	-2844.24	1692247.88	14282114.39	39°19'47.732"N	80°49'00.142"W	3920.17	313.486	0.70	-0.06	-0.69	
10021.00	90.090	338.200	6407.93	3707.14	2785.43	-2880.86	1692211.28	14282202.01	39°19'48.599"N	80°49'00.605"W	4007.24	314.035	1.85	0.19	1.84	
10116.00	90.060	339.790	6407.81	3802.04	2874.12	-2914.91	1692177.24	14282290.66	39°19'49.477"N	80°49'01.037"W	4093.56	314.596	1.67	-0.03	1.67	
10210.00	90.060	339.860	6407.71	3895.87	2962.35	-2947.33	1692144.83	14282378.86	39°19'50.349"N	80°49'01.447"W	4178.79	315.146	0.07	0.00	0.07	
10305.00	90.370	340.580	6407.35	3990.65	3051.74	-2979.48	1692112.70	14282468.21	39°19'51.234"N	80°49'01.854"W	4265.02	315.686	0.83	0.33	0.76	
10398.00	90.370	339.280	6406.75	4083.46	3139.09	-3011.39	1692080.80	14282555.53	39°19'52.098"N	80°49'02.258"W	4349.99	316.189	1.40	0.00	-1.40	
10492.00	89.940	337.040	6406.50	4177.41	3226.34	-3046.36	1692045.84	14282642.74	39°19'52.961"N	80°49'02.700"W	4437.29	316.643	2.43	-0.46	-2.38	
10586.00	90.090	335.930	6406.47	4271.41	3312.53	-3083.86	1692008.35	14282728.90	39°19'53.813"N	80°49'03.175"W	4525.82	317.047	1.19	0.16	-1.18	
10680.00	89.940	334.680	6406.45	4365.39	3397.93	-3123.14	1691969.10	14282814.27	39°19'54.658"N	80°49'03.673"W	4615.18	317.413	1.34	-0.16	-1.33	
10774.00	90.000	333.180	6406.50	4459.30	3482.37	-3164.44	1691927.81	14282898.67	39°19'55.493"N	80°49'04.196"W	4705.38	317.738	1.60	0.06	-1.60	
10867.00	89.970	332.190	6406.52	4552.11	3564.99	-3207.12	1691885.15	14282981.26	39°19'56.311"N	80°49'04.737"W	4795.29	318.025	1.07	-0.03	-1.06	
10961.00	89.910	334.250	6406.62	4645.97	3648.91	-3249.47	1691842.81	14283065.14	39°19'57.141"N	80°49'05.274"W	4886.06	318.314	2.19	-0.06	2.19	
11055.00	90.580	338.900	6406.22	4739.94	3735.14	-3286.83	1691805.47	14283151.34	39°19'57.994"N	80°49'05.747"W	4975.39	318.653	5.00	0.71	4.95	
11148.00	89.910	338.510	6405.82	4832.86	3821.78	-3320.60	1691771.71	14283237.95	39°19'58.851"N	80°49'06.175"W	5062.85	319.014	0.83	-0.72	-0.42	
11242.00	89.940	332.620	6405.94	4926.81	3907.33	-3359.47	1691732.86	14283323.46	39°19'59.697"N	80°49'06.668"W	5152.98	319.311	6.27	0.03	-6.27	
11336.00	90.060	330.190	6405.94	5020.45	3989.86	-3404.46	1691687.89	14283405.95	39°20'00.514"N	80°49'07.238"W	5244.93	319.527	2.59	0.13	-2.59	
11430.00	90.030	330.700	6405.87	5113.95	4071.62	-3450.82	1691641.54	14283487.69	39°20'01.323"N	80°49'07.826"W	5337.26	319.718	0.54	-0.03	0.54	
11524.00	90.000	333.500	6405.85	5207.69	4154.69	-3494.80	1691597.58	14283570.72	39°20'02.145"N	80°49'08.384"W	5429.10	319.930	2.98	-0.03	2.98	
11618.00	89.910	333.400	6405.92	5301.57	4238.78	-3536.82	1691555.58	14283654.78	39°20'02.977"N	80°49'08.916"W	5520.54	320.159	0.14	-0.10	-0.11	
11712.00	89.970	333.710	6406.02	5395.45	4322.94	-3578.68	1691513.73	14283738.91	39°20'03.810"N	80°49'09.447"W	5612.02	320.381	0.34	0.06	0.33	
11805.00	89.970	335.950	6406.07	5488.41	4407.11	-3618.23	1691474.20	14283823.04	39°20'04.642"N	80°49'09.948"W	5702.12	320.614	2.41	0.00	2.41	
11899.00	90.000	338.660	6406.09	5582.39	4493.82	-3654.50	1691437.95	14283909.72	39°20'05.500"N	80°49'10.407"W	5792.22	320.881	2.88	0.03	2.88	
11993.00	89.970	339.000	6406.12	5676.30	4581.47	-3688.44	1691404.02	14283997.34	39°20'06.367"N	80°49'10.837"W	5881.71	321.163	0.36	-0.03	0.36	

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Caboose Unit 1H AWP Proj: 15798'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (192 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
12087.00	89.940	338.650	6406.19	5770.22	4669.13	-3722.40	1691370.08	14284084.96	39°20'07.234"N	80°49'11.267"W	5971.35	321.437	0.37	-0.03	-0.37	
12181.00	89.630	338.490	6406.54	5864.15	4756.63	-3756.74	1691335.74	14284172.42	39°20'08.099"N	80°49'11.702"W	6061.24	321.699	0.37	-0.33	-0.17	
12275.00	89.850	338.610	6406.97	5958.07	4844.12	-3791.12	1691301.38	14284259.88	39°20'08.965"N	80°49'12.137"W	6151.26	321.952	0.27	0.23	0.13	
12368.00	89.880	338.540	6407.19	6051.00	4930.69	-3825.09	1691267.43	14284346.41	39°20'09.821"N	80°49'12.567"W	6240.43	322.197	0.08	0.03	-0.08	
12462.00	89.940	339.050	6407.34	6144.92	5018.33	-3859.09	1691233.44	14284434.01	39°20'10.688"N	80°49'12.998"W	6330.57	322.440	0.55	0.06	0.54	
12556.00	90.090	337.480	6407.31	6238.86	5105.64	-3893.90	1691198.65	14284521.29	39°20'11.552"N	80°49'13.439"W	6421.06	322.668	1.68	0.16	-1.67	
12650.00	90.120	336.220	6407.14	6332.86	5192.07	-3930.85	1691161.71	14284607.69	39°20'12.407"N	80°49'13.907"W	6512.23	322.871	1.34	0.03	-1.34	
12743.00	90.180	334.790	6406.90	6425.84	5276.70	-3969.41	1691123.16	14284692.28	39°20'13.244"N	80°49'14.395"W	6603.01	323.048	1.54	0.06	-1.54	
12836.00	89.880	335.430	6406.85	6518.82	5361.06	-4008.55	1691084.04	14284776.61	39°20'14.078"N	80°49'14.891"W	6693.98	323.214	0.76	-0.32	0.69	
12930.00	90.030	336.540	6406.92	6612.82	5446.92	-4046.80	1691045.80	14284862.44	39°20'14.928"N	80°49'15.376"W	6785.69	323.389	1.19	0.16	1.18	
13024.00	90.030	337.960	6406.87	6706.80	5533.60	-4083.15	1691009.46	14284949.09	39°20'15.785"N	80°49'15.836"W	6876.99	323.577	1.51	0.00	1.51	
13117.00	90.340	339.940	6406.57	6799.70	5620.39	-4116.56	1690976.07	14285035.84	39°20'16.644"N	80°49'16.259"W	6966.70	323.780	2.15	0.33	2.13	
13211.00	90.340	339.840	6406.01	6893.52	5708.66	-4148.88	1690943.77	14285124.07	39°20'17.517"N	80°49'16.668"W	7057.05	323.992	0.11	0.00	-0.11	
13305.00	90.220	339.740	6405.55	6987.35	5796.87	-4181.35	1690911.31	14285212.25	39°20'18.389"N	80°49'17.080"W	7147.55	324.197	0.17	-0.13	-0.11	
13398.00	90.090	338.970	6405.30	7080.22	5883.90	-4214.14	1690878.53	14285299.24	39°20'19.250"N	80°49'17.495"W	7237.35	324.389	0.84	-0.14	-0.83	
13492.00	90.310	338.250	6404.97	7174.15	5971.42	-4248.42	1690844.26	14285386.73	39°20'20.116"N	80°49'17.929"W	7328.50	324.570	0.80	0.23	-0.77	
13586.00	90.120	339.030	6404.62	7268.07	6058.96	-4282.66	1690810.04	14285474.24	39°20'20.982"N	80°49'18.362"W	7419.72	324.746	0.85	-0.20	0.83	
13679.00	90.030	339.600	6404.50	7360.95	6145.97	-4315.51	1690777.20	14285561.21	39°20'21.842"N	80°49'18.778"W	7509.76	324.925	0.62	-0.10	0.61	
13773.00	90.030	337.650	6404.45	7454.87	6233.50	-4349.77	1690742.96	14285648.70	39°20'22.708"N	80°49'19.212"W	7601.12	325.092	2.07	0.00	-2.07	
13867.00	89.910	335.060	6404.50	7548.86	6319.60	-4387.46	1690705.27	14285734.77	39°20'23.560"N	80°49'19.690"W	7693.32	325.229	2.76	-0.13	-2.76	
13960.00	89.910	333.180	6404.65	7641.79	6403.27	-4428.06	1690664.70	14285818.41	39°20'24.387"N	80°49'20.204"W	7785.21	325.335	2.02	0.00	-2.02	
14054.00	89.850	332.370	6404.84	7735.60	6486.86	-4471.06	1690621.71	14285901.96	39°20'25.214"N	80°49'20.750"W	7878.43	325.423	0.86	-0.06	-0.86	
14148.00	89.750	329.790	6405.17	7829.20	6569.13	-4516.51	1690576.28	14285984.20	39°20'26.028"N	80°49'21.326"W	7971.97	325.490	2.75	-0.11	-2.74	
14241.00	89.970	328.840	6405.40	7921.49	6649.10	-4563.97	1690528.84	14286064.14	39°20'26.820"N	80°49'21.928"W	8064.76	325.534	1.05	0.24	-1.02	
14335.00	89.970	329.720	6405.45	8014.78	6729.91	-4611.99	1690480.84	14286144.92	39°20'27.619"N	80°49'22.537"W	8158.56	325.577	0.94	0.00	0.94	
14429.00	89.880	330.590	6405.57	8108.23	6811.44	-4658.77	1690434.08	14286226.42	39°20'28.426"N	80°49'23.131"W	8252.27	325.629	0.93	-0.10	0.93	
14523.00	89.880	329.680	6405.77	8201.68	6892.96	-4705.58	1690387.29	14286307.90	39°20'29.233"N	80°49'23.724"W	8345.98	325.680	0.97	0.00	-0.97	
14616.00	89.910	334.610	6405.94	8294.40	6975.16	-4749.02	1690343.87	14286390.07	39°20'30.046"N	80°49'24.275"W	8438.36	325.751	5.30	0.03	5.30	
14710.00	89.910	338.460	6406.09	8388.38	7061.37	-4786.44	1690306.46	14286476.24	39°20'30.899"N	80°49'24.749"W	8530.70	325.869	4.10	0.00	4.10	
14803.00	89.940	337.400	6406.21	8481.34	7147.55	-4821.38	1690271.53	14286562.39	39°20'31.751"N	80°49'25.192"W	8621.67	325.998	1.14	0.03	-1.14	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWP
Facility	Middle Pad		

WELLPATH DATA (192 stations)																
MD (ft)	Inclination (ft)	Azimuth (ft)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (ft)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
14897.00	89.940	337.670	6406.31	857.52	7234.42	-4857.30	1690235.63	14286649.22	39°20'32.610"N	80°49'25.647"W	8713.79	326.122	0.29	0.00	0.29	
14990.00	89.750	340.300	6406.56	8668.21	7321.23	-4890.65	1690202.29	14286736.00	39°20'33.469"N	80°49'26.069"W	8804.48	326.257	2.84	-0.20	2.83	
15084.00	90.060	343.130	6406.71	8761.79	7410.47	-4820.14	1690172.81	14286825.21	39°20'34.352"N	80°49'26.442"W	8895.10	326.418	3.03	0.33	3.01	
15178.00	90.030	344.640	6406.64	8854.98	7500.77	-4946.23	1690146.73	14286915.47	39°20'35.245"N	80°49'26.772"W	8984.81	326.598	1.61	-0.03	1.61	
15271.00	90.060	343.210	6406.57	8947.16	7590.14	-4871.98	1690120.99	14287004.80	39°20'36.128"N	80°49'27.098"W	9073.63	326.773	1.54	0.03	-1.54	
15365.00	90.000	340.460	6406.52	9040.72	7679.44	-5001.28	1690091.70	14287094.07	39°20'37.012"N	80°49'27.468"W	9164.42	326.926	2.93	-0.06	-2.93	
15459.00	89.940	338.200	6406.57	9134.59	7767.39	-5034.46	1690058.54	14287181.98	39°20'37.882"N	80°49'27.889"W	9256.24	327.051	2.41	-0.06	-2.40	
15554.00	90.000	338.980	6406.62	9229.52	7855.83	-5069.14	1690023.87	14287270.39	39°20'38.756"N	80°49'28.328"W	9349.34	327.167	0.82	0.06	0.82	
15647.00	89.970	335.720	6406.64	9322.49	7941.64	-5104.95	1689988.08	14287356.17	39°20'39.605"N	80°49'28.782"W	9440.88	327.267	3.51	-0.03	-3.51	
15741.00	89.940	333.140	6406.71	9416.43	8026.43	-5145.51	1689947.53	14287440.92	39°20'40.444"N	80°49'29.296"W	9534.14	327.337	2.74	-0.03	-2.74	
15774.00	90.000	332.700	6406.73	9449.37	8055.81	-5160.54	1689932.51	14287470.29	39°20'40.735"N	80°49'29.486"W	9566.99	327.356	1.35	0.18	-1.33	
15798.00	90.000	332.700	6406.73	9473.32	8077.14	-5171.54	1689921.51	14287491.61	39°20'40.946"N	80°49'29.626"W	9590.88	327.370	0.00	0.00	0.00	Projected MD @ TD: 15798

HOLE & CASING SECTIONS - Ref Wellbore: Caboose Unit 1H AWP Proj: 15798													
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start EW (ft)	End N/S (ft)	End EW (ft)				
20in Conductor	32.00	112.00	80.00	32.00	112.00	112.00	0.00	0.00	-0.19				
17.5in Open Hole	112.00	551.00	439.00	112.00	550.98	550.98	0.00	0.00	0.00				
13.375in Casing Intermediate	32.00	551.00	519.00	32.00	550.98	550.98	0.00	0.00	0.00				
12.25in Open Hole	551.00	2666.00	2115.00	550.98	2608.17	2608.17	0.00	0.00	-3.61				
9.625in Casing Intermediate	32.00	2666.00	2634.00	32.00	2608.17	2608.17	0.00	0.00	-188.80				
8.75in Open Hole	2666.00	6570.00	3904.00	2608.17	6269.84	6269.84	-188.80	-141.96	-335.31				
8.5in Open Hole	6570.00	15798.00	9228.00	6269.84	6406.73	6406.73	-335.31	-1484.78	-5171.54				
5.5in Casing Production	32.00	15798.00	15766.00	32.00	6406.73	6406.73	0.00	0.00	8077.14				

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Caboose Unit 1H POE Rev-1	6367.00	-173.67	-1573.67	1693517.95	14279244.09	39°19'19.326"N	80°48'44.049"W	point
Caboose Unit 1H BHL Rev-1	6407.00	7990.61	-5148.92	1689944.12	14287405.12	39°20'40.090"N	80°49'29.340"W	point
Caboose Unit 1H LP Rev-1	6407.00	18.99	-1658.04	1693433.61	14279436.67	39°19'21.232"N	80°48'45.117"W	point

WELLPATH COMPOSITION - Ref Wellbore: Caboose Unit 1H AWB Ref Wellpath: Caboose Unit 1H AWP Proj: 15798'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	517.00	Gyrodatta standard - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <17-1/2"> (100'-500')	Caboose Unit 1H AWB
517.00	2592.00	ISCWSA MWD, Rev. 4 (Standard)	02 Directional ONE MWD <12-1/4"> (500')(559'-2575')	Caboose Unit 1H AWB
2592.00	6488.00	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <8-3/4"> (2575')(2692'-6471')	Caboose Unit 1H AWB
6488.00	15774.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2"> (6488')(6546'-15774')	Caboose Unit 1H AWB
15774.00	15798.00	Blind Drilling (std)	Projection to bit	Caboose Unit 1H AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Doddridge Co., WV	Well	Caboose Unit 1H
Field	Doddridge	Wellbore	Caboose Unit 1H AWB
Facility	Middle Pad		

COMMENTS
<p>Wellpath general comments API: 47-017-06816-0000 BH Job #: 9091793 Rig: Frontier 32 Duration: 04/05/18 - 04/08/18 Gyrodata MS Gyro <17-1/2"> (100'-500') Directional ONE MWD <12-1/4"> (500')(559'-2575') Directional ONE MWD <8-3/4"> (2575')(2692'-6471') BH AT Curve <8-1/2"> (6488')(6546'-15774') Burket: 6618'MD / 6295'TVD Tully: 6679'MD / 6325'TVD Hamilton: 6755'D / 6357'TVD POE Marcellus: 6777'MD / 6365'TVD Projected MD @ TD: 15798</p>

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