

ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV
 Field: Doddridge
 Facility: Middle Pad
 Slot: Slot #02
 Well: Caboose Unit 2H
 Wellbore: Caboose Unit 2H PWB

Plot reference wellpath is Caboose Unit 2H 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 #02): -843 feet	Created by: microsmith on 2018-05-16
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERLUS_Data

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Middle Pad	1695090.990	14279417.689	80°48'24.020"W
Slot	Local N (ft)	Grid East (US ft)	Longitude
Slot #02	-3.02	1695100.423	80°48'23.900"W
Comment	9.44	14279414.875	
Caboose Unit 2H			
Frontier 32 (RKB) to Ground level (At Slot, Slot #02)	32ft		
Mean Sea Level to Ground level (At Slot, Slot #02)	-843ft		
Frontier 32 (RKB) to Mean Sea Level	875ft		

Gyrodatta MS Gyro <17-14> (100-503) : 0.20° Inc, 117.00ft TVD, 0.03ft VS

Gyrodatta MS Gyro <12-14> (503)(528-824) : 0.25° Inc, 545.00ft MD, 545.00ft TVD, 0.05ft VS

Directional ONE MWD <12-14> (824)(771-2508) : 1.42° Inc, 788.00ft MD, 787.98ft TVD, 0.12ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #02	Caboose Unit 2H	Caboose Unit 2H PWB	Caboose Unit 2H PWB
Slot #02	Caboose Unit 2H	Caboose Unit 2H PWB	Caboose Unit 2H PWP Rev-A.0

Directional ONE MWD <8-3/4> (2508)(2648-5825) : 9.09° Inc, 2666.00ft MD, 2640.56ft TVD, -25.11ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*100ft)	VS (ft)
The On	5842.00	9.550	240.950	5772.50	-394.01	-707.04	6.22	-78.13
Proj. to Bottom	5925.00	9.000	258.360	5854.43	-398.66	-719.42	3.43	-77.44
End of 3D Arc	5483.14	66.602	338.302	6296.82	-136.33	-878.76	11.50	225.94
End of Tangent	6638.32	66.602	338.302	6354.48	-12.52	-928.02	0.00	369.11
POE	6694.78	70.761	336.409	6375.00	36.00	-946.28	8.00	411.68
Landing Pt.	6935.27	90.000	336.409	6415.00	262.27	-1040.73	8.00	647.68
BHL	15276.09	90.000	336.409	6415.00	7896.00	-4378.81	0.00	8988.50

BH AT Curve <8-1/2> (5842)(5902-15270) : 10.28° Inc, 5602.00ft MD, 5831.64ft TVD, -76.70ft VS

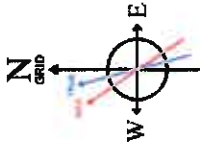
POE Marcellus: 6679 MD / 6371 TVD : 67.96° Inc, 6678.00ft MD, 6371.44ft TVD, 406.14ft VS

Projected MD @ TD: 15270 ; 89.94° Inc, 15270.00ft MD, 6411.77ft TVD, 8981.33ft VS

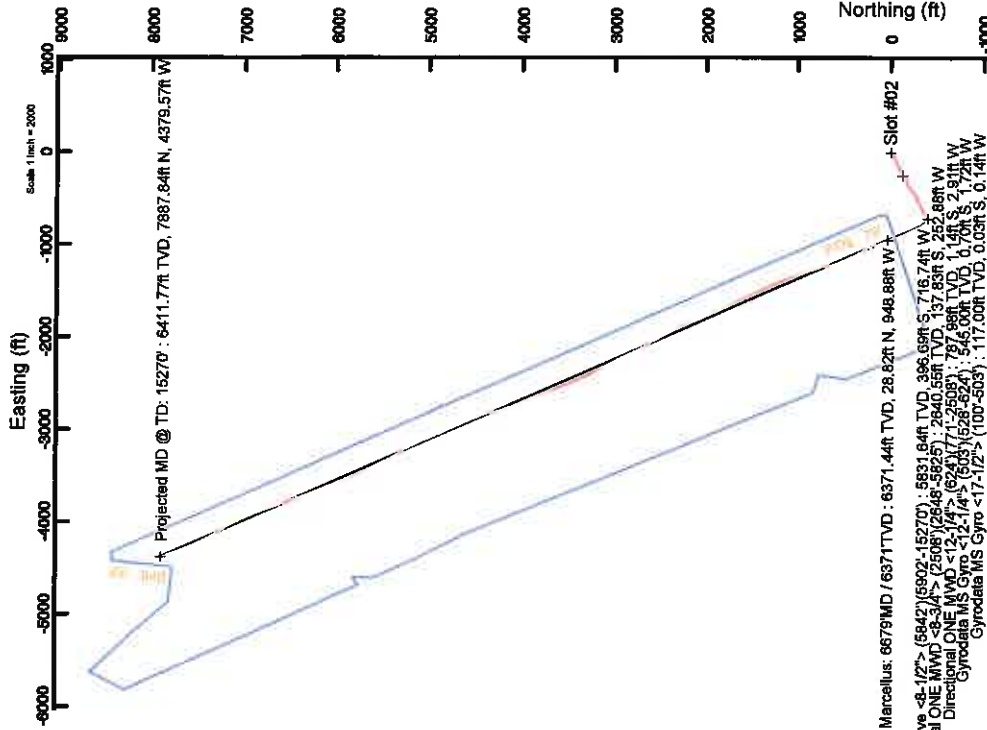
BH AT Curve <8-3/4> (2508)(2648-5825) : 28.40° Inc, 2640.56ft TVD, 137.83ft VS, 252.88ft W

Directional ONE MWD <12-14> (824)(771-2508) : 787.98ft TVD, 1.41ft S, 2.31ft W

Gyrodatta MS Gyro <17-14> (100-503) : 117.00ft TVD, 0.03ft S, 0.14ft W



User specified Dip: 66.56° Field: 52022 NT
 Magnetic North is 7.54 degrees West of True North (at 3/28/2018)
 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



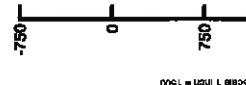
02/08/2019

API: 47-017-06817-0000

BH Job #: 9084096

Rig: Frontier 32

Duration: 3/31/18 - 04/03/18



POE Marcellus: 6679 MD / 6371 TVD : 67.96° Inc, 6678.00ft MD, 6371.44ft TVD, 406.14ft VS
 BH AT Curve <8-1/2> (5842)(5902-15270) : 5831.64ft TVD, 396.08ft S, 716.74ft W
 Directional ONE MWD <8-3/4> (2508)(2648-5825) : 2840.56ft TVD, 137.83ft S, 252.88ft W
 Directional ONE MWD <12-14> (824)(771-2508) : 787.98ft TVD, 1.41ft S, 2.31ft W
 Gyrodatta MS Gyro <17-14> (100-503) : 545.00ft TVD, 0.03ft S, 0.14ft W
 Gyrodatta MS Gyro <17-14> (100-503) : 117.00ft TVD, 0.03ft S, 0.14ft W



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot	Slot #02
Well	Caboose Unit 2H
Wellbore	Caboose Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999603
Convergence at slot	0.12° East
Software System	WellArchitect® 5.1
User	Miccrerlb
Report Generated	5/15/2018 at 3:31:35 PM
Database/Source file	WA_MPL_EASTERNUS_Defn/Caboose_Unit_2H_AWP_Proj_15294_.xml

WELLPATH LOCATION				
	Local coordinates		Grid coordinates	
	North[ft]	East[ft]	Northing[US ft]	Longitude
Slot Location	-3.02	9.44	14279414.68	80°48'23.900"W
Facility Reference Pt			14279417.69	80°48'24.020"W
Field Reference Pt			0.00	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 32 (RKB)
MD Reference Pt	Frontier 32 (RKB) to Ground Level at Slot (Slot #02)
Field Vertical Reference	Mean Sea Level
	Section Origin
	Section Azimuth
	875.00ft
	875.00ft
	32.00ft
	N 0.00, E 0.00 ft
	336.41°

02/08/2019



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Doddridge Co., WV	Well	Caboose Unit 2H
Field	Doddridge	Wellbore	Caboose Unit 2H AWB
Facility	Middle Pad		

WELLPATH DATA (186 stations) t = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US M]	Grid North [US M]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [1/100ft]	Build Rate [ft/100ft]	Turn Rate [°/100ft]	Comments
0.00	0.00	257.710	0.00	0.00	0.00	0.00	1695100.42	14279414.68	39°19'20.980"N	80°48'23.900"W	0.00	0.00	0.00	0.00	0.00	
32.00	0.00	257.710	32.00	0.00	0.00	0.00	1695100.42	14279414.68	39°19'20.980"N	80°48'23.900"W	0.00	0.00	0.00	0.00	0.00	
117.00	0.20	257.710	117.00	0.03	-0.03	-0.14	1695100.28	14279414.64	39°19'20.980"N	80°48'23.902"W	0.15	257.710	0.24	0.24	-120.34	Syrodata MS Gyro <17-1/2"> (100-503)
217.00	0.32	236.050	217.00	0.18	-0.09	-0.59	1695099.83	14279414.59	39°19'20.979"N	80°48'23.908"W	0.60	261.577	0.13	0.12	8.34	
317.00	0.42	238.740	317.00	0.20	-0.30	-1.19	1695098.24	14279414.38	39°19'20.977"N	80°48'23.915"W	1.22	255.923	0.20	0.10	-27.31	
417.00	0.09	231.160	417.00	0.13	-0.34	-1.56	1695098.86	14279414.14	39°19'20.975"N	80°48'23.920"W	1.65	251.015	0.33	-0.33	-7.58	
517.00	0.18	211.930	517.00	0.02	-0.72	-1.70	1695098.72	14279413.98	39°19'20.973"N	80°48'23.922"W	1.85	247.119	0.10	0.09	-19.23	
520.00	0.14	216.620	520.00	0.02	-0.73	-1.71	1695098.71	14279413.95	39°19'20.973"N	80°48'23.922"W	1.86	246.978	1.40	-1.33	156.33	
545.00	0.25	9.380	545.00	0.05	-0.70	-1.72	1695098.70	14279413.98	39°19'20.973"N	80°48'23.922"W	1.85	247.924	1.52	0.44	611.04	Syrodata MS Gyro <12-1/4"> (503)(528-624)
641.00	0.30	5.720	640.99	0.44	-0.24	-1.66	1695098.76	14279414.43	39°19'20.978"N	80°48'23.921"W	1.68	261.759	0.06	0.05	-3.81	
788.00	1.42	225.020	787.98	0.12	-1.14	-2.91	1695097.51	14279413.53	39°19'20.969"N	80°48'23.955"W	3.13	248.520	1.13	0.76	-95.71	Directional ONE MWD <12-1/4"> (624)(771-2508)
848.00	2.19	228.460	847.95	-0.51	-2.43	-4.29	1695096.13	14279412.25	39°19'20.956"N	80°48'23.955"W	4.93	240.485	1.30	1.28	5.73	
938.00	3.20	236.920	937.85	-1.45	-4.94	-7.69	1695092.74	14279409.73	39°19'20.931"N	80°48'23.998"W	9.14	237.257	1.20	1.12	9.40	
1028.00	4.77	237.220	1025.63	-2.44	-8.26	-12.82	1695087.61	14279406.41	39°19'20.899"N	80°48'24.063"W	15.25	237.194	1.78	1.78	0.34	
1114.00	6.43	235.280	1113.21	-3.98	-13.05	-19.95	1695080.48	14279401.63	39°19'20.851"N	80°48'24.154"W	23.84	236.802	1.90	1.89	-2.20	
1202.00	7.84	237.630	1200.53	-5.85	-19.07	-29.07	1695071.37	14279395.61	39°19'20.792"N	80°48'24.270"W	34.77	236.729	1.64	1.60	2.67	
1290.00	8.42	239.390	1287.64	-7.55	-25.57	-39.68	1695060.76	14279389.12	39°19'20.728"N	80°48'24.408"W	47.20	237.207	0.72	0.66	2.00	
1378.00	9.43	239.980	1374.58	-8.15	-32.46	-51.47	1695048.98	14279382.23	39°19'20.660"N	80°48'24.556"W	60.85	237.764	1.15	1.15	0.65	
1467.00	10.03	240.480	1462.30	-10.77	-39.92	-64.52	1695035.93	14279374.77	39°19'20.587"N	80°48'24.722"W	75.88	238.252	0.68	0.67	0.56	
1555.00	10.89	239.850	1548.83	-12.51	-47.87	-78.37	1695022.08	14279366.82	39°19'20.509"N	80°48'24.899"W	91.84	238.583	0.87	0.97	-0.72	
1643.00	10.99	239.900	1635.24	-14.41	-56.25	-92.81	1695007.65	14279358.45	39°19'20.426"N	80°48'25.083"W	108.53	238.781	0.13	0.12	0.08	
1731.00	12.05	244.880	1721.47	-15.60	-64.36	-108.39	1694992.08	14279350.34	39°19'20.346"N	80°48'25.281"W	126.05	239.300	1.65	1.20	5.66	
1819.00	12.52	246.020	1807.45	-15.91	-72.13	-125.42	1694975.05	14279342.57	39°19'20.270"N	80°48'25.498"W	144.68	240.095	0.60	0.53	1.30	
1907.00	12.95	246.330	1893.28	-15.99	-79.87	-143.16	1694957.32	14279334.74	39°19'20.193"N	80°48'25.724"W	163.98	240.814	0.49	0.49	0.35	
1995.00	12.26	245.930	1978.16	-16.08	-87.74	-160.73	1694939.78	14279326.97	39°19'20.116"N	80°48'25.948"W	183.11	241.371	0.79	-0.78	-0.45	
2083.00	11.25	245.520	2065.32	-16.28	-95.09	-177.08	1694923.42	14279319.62	39°19'20.044"N	80°48'26.166"W	200.99	241.764	1.15	-1.15	-0.35	
2172.00	10.95	246.530	2152.65	-16.09	-101.77	-192.85	1694907.65	14279312.95	39°19'19.978"N	80°48'26.357"W	218.06	242.179	0.71	-0.34	3.27	
2260.00	8.77	244.150	2239.35	-16.04	-107.75	-206.67	1694893.84	14279306.96	39°19'19.919"N	80°48'26.533"W	233.07	242.463	2.62	-2.48	-4.98	
2348.00	7.56	235.980	2326.46	-17.36	-113.93	-217.52	1694882.99	14279300.78	39°19'19.859"N	80°48'26.671"W	245.55	242.356	1.89	-1.39	-9.27	
2436.00	7.35	231.390	2413.71	-18.87	-120.69	-228.73	1694873.79	14279294.04	39°19'19.792"N	80°48'26.788"W	256.85	241.974	0.73	-0.26	-5.23	



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Doddridge Co., WV	Well	Caboose Unit 2H
Field	Doddridge	Wellbore	Caboose Unit 2H AWB
Facility	Middle Pad		

WELLPATH DATA (186 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	DLS ft/100ft	Build Rate ft/100ft	Turn Rate ft/100ft	Comments	
2525.00	7.310	236.130	2501.98	-22.35	-127.39	-235.88	1694864.64	14279287.33	39°19'19.726"N	80°48'28.905"W	286.08	241.627	0.68	-0.04	5.33	
2665.00	9.080	240.330	2640.55	-25.11	-137.83	-252.88	1694847.64	14279276.90	39°19'19.623"N	80°48'27.122"W	286.01	241.408	1.34	1.27	3.00	Directional ONE MWWD <8-3/4"> (2508')(2648'-5825')
2753.00	9.260	233.030	2727.43	-27.49	-145.53	-264.58	1694835.95	14279269.20	39°19'19.547"N	80°48'27.271"W	301.96	241.187	1.34	0.19	-8.30	
2841.00	8.920	233.690	2814.32	-30.63	-153.83	-275.73	1694824.60	14279260.91	39°19'19.485"N	80°48'27.413"W	315.74	240.843	0.40	-0.39	0.75	
2929.00	8.480	236.010	2901.31	-33.08	-161.31	-286.74	1694813.80	14279253.43	39°19'19.392"N	80°48'27.553"W	328.98	240.639	0.89	-0.50	4.91	
3018.00	7.700	245.390	2989.42	-34.14	-167.27	-297.72	1694802.82	14279247.48	39°19'19.333"N	80°48'27.693"W	341.49	240.672	1.48	-0.88	8.28	
3108.00	7.710	253.880	3076.63	-33.48	-171.36	-308.75	1694791.79	14279243.38	39°19'19.293"N	80°48'27.833"W	353.12	240.969	1.29	0.01	9.65	
3194.00	9.200	257.220	3163.67	-31.39	-174.56	-321.29	1694779.27	14279240.19	39°19'19.282"N	80°48'27.993"W	365.84	241.485	1.78	1.69	3.80	
3282.00	9.200	256.440	3250.54	-28.85	-177.76	-334.98	1694765.57	14279236.98	39°19'19.230"N	80°48'28.167"W	379.23	242.047	0.14	0.00	-0.99	
3370.00	8.700	254.250	3337.47	-26.72	-181.22	-348.23	1694752.33	14279233.53	39°19'19.196"N	80°48'28.336"W	392.56	242.508	0.69	-0.57	-2.49	
3459.00	8.270	253.090	3425.50	-25.05	-184.91	-360.83	1694739.74	14279229.84	39°19'19.160"N	80°48'28.496"W	405.45	242.867	0.52	-0.48	-1.30	
3547.00	8.990	237.050	3512.51	-25.44	-190.49	-372.66	1694727.91	14279224.26	39°19'19.105"N	80°48'28.647"W	418.52	242.926	0.84	0.82	-18.23	
3723.00	8.060	230.760	3686.56	-31.16	-205.93	-393.71	1694706.87	14279208.83	39°19'19.030"N	80°48'28.787"W	431.82	242.689	0.80	-0.50	-4.13	
3812.00	10.860	230.090	3774.34	-35.21	-215.27	-405.00	1694685.59	14279189.49	39°19'18.861"N	80°48'29.059"W	444.31	242.389	0.71	-0.56	-3.02	
3900.00	11.460	223.410	3860.67	-40.96	-226.95	-417.38	1694668.21	14279187.81	39°19'18.746"N	80°48'29.217"W	475.09	241.484	1.61	0.65	-7.59	
3988.00	11.410	222.750	3946.93	-47.87	-239.70	-429.30	1694671.30	14279175.07	39°19'18.620"N	80°48'29.369"W	491.68	240.823	0.16	-0.08	-0.79	
4077.00	9.920	232.360	4034.39	-53.28	-250.94	-441.34	1694659.25	14279163.93	39°19'18.510"N	80°48'29.523"W	507.65	240.388	2.60	-1.67	10.80	
4165.00	9.140	237.720	4121.18	-56.16	-259.21	-453.26	1694647.35	14279155.57	39°19'18.428"N	80°48'29.674"W	522.14	240.236	1.34	-0.89	6.09	
4253.00	9.220	232.820	4208.05	-58.87	-267.20	-464.78	1694635.83	14279147.58	39°19'18.349"N	80°48'29.821"W	536.11	240.106	0.89	0.08	-5.57	
4342.00	10.120	242.930	4295.80	-61.02	-275.07	-477.43	1694623.19	14279139.72	39°19'18.271"N	80°48'29.982"W	551.00	240.052	2.18	1.01	11.38	
4430.00	11.630	252.910	4382.22	-60.49	-281.19	-492.79	1694607.83	14279133.59	39°19'18.211"N	80°48'30.178"W	567.37	240.290	2.74	1.72	11.34	
4518.00	11.760	249.390	4468.39	-59.01	-286.96	-509.68	1694590.95	14279127.83	39°19'18.154"N	80°48'30.393"W	584.91	240.619	0.83	0.17	-4.00	
4607.00	9.550	244.870	4555.81	-58.75	-293.39	-525.08	1694575.56	14279121.40	39°19'18.091"N	80°48'30.589"W	601.48	240.805	2.37	-2.17	-5.08	
4695.00	8.440	245.780	4642.69	-58.02	-299.24	-537.78	1694562.86	14279115.55	39°19'18.034"N	80°48'30.751"W	615.43	240.907	1.61	-1.60	1.03	
4783.00	8.300	247.480	4729.75	-58.97	-304.32	-549.54	1694551.10	14279110.47	39°19'17.984"N	80°48'30.901"W	628.17	241.023	0.32	-0.16	1.93	
4871.00	8.420	245.830	4816.81	-58.92	-309.39	-561.28	1694539.36	14279105.41	39°19'17.934"N	80°48'31.050"W	640.91	241.135	0.30	0.14	-1.87	
4960.00	7.900	243.500	4904.81	-59.29	-314.79	-572.70	1694527.95	14279100.01	39°19'17.881"N	80°48'31.196"W	653.51	241.204	0.69	-0.58	-2.62	
5048.00	8.110	237.670	4992.06	-60.55	-320.81	-583.36	1694517.30	14279093.99	39°19'17.822"N	80°48'31.332"W	665.75	241.192	0.95	0.24	-6.62	
5136.00	7.960	234.210	5079.19	-62.78	-327.69	-593.55	1694507.11	14279087.11	39°19'17.754"N	80°48'31.461"W	678.00	241.097	0.58	-0.17	-3.93	



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Doddridge Co., WV	Well	Caboose Unit 2H
Field	Doddridge	Wellbore	Caboose Unit 2H AWB
F-facility	Middle Pad		

WELLPATH DATA (186 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)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
5224.00	8.660	246.310	5166.28	-64.08	-333.92	-604.56	1694496.11	14279080.89	39°19'17.892"N	80°48'31.602"W	690.64	241.087	2.14	0.80	13.75
5313.00	10.140	250.780	5254.08	-63.49	-339.19	-618.09	1694482.58	14279075.62	39°19'17.841"N	80°48'31.774"W	705.04	241.243	1.85	1.66	5.02
5401.00	11.270	243.920	5340.55	-63.27	-345.52	-633.13	1694467.55	14279069.29	39°19'17.578"N	80°48'31.986"W	721.27	241.377	1.93	1.28	-7.80
5489.00	10.790	242.210	5426.93	-64.25	-353.14	-648.14	1694452.54	14279063.82	39°19'17.503"N	80°48'32.157"W	738.10	241.416	1.96	-0.55	-1.94
5578.00	12.080	239.150	5514.16	-66.04	-361.80	-663.51	1694437.18	14279057.08	39°19'17.418"N	80°48'32.352"W	755.74	241.397	1.60	1.45	-3.44
5666.00	11.360	233.460	5600.33	-69.14	-371.68	-678.38	1694422.32	14279043.14	39°19'17.321"N	80°48'32.542"W	773.53	241.282	1.55	-0.82	-6.47
5754.00	13.270	229.380	5686.30	-74.04	-383.42	-693.01	1694407.69	14279031.41	39°19'17.205"N	80°48'32.728"W	792.00	241.046	2.38	2.17	-4.62
5798.00	11.700	231.720	5729.26	-76.85	-389.47	-700.34	1694400.36	14279025.36	39°19'17.145"N	80°48'32.822"W	801.35	240.921	3.75	-3.57	5.30
5842.00	9.550	240.950	5772.50	-78.13	-394.01	-707.04	1694393.67	14279020.83	39°19'17.101"N	80°48'32.907"W	809.41	240.871	6.22	-4.89	20.98
5902.00	10.280	267.190	5831.64	-76.70	-395.69	-716.74	1694383.97	14279018.15	39°19'17.074"N	80°48'33.031"W	819.19	241.037	7.56	1.22	43.73
5935.00	11.730	276.290	5864.03	-73.99	-396.46	-723.02	1694377.69	14279018.37	39°19'17.077"N	80°48'33.111"W	824.58	241.262	6.84	4.39	27.58
5982.00	14.370	293.210	5909.83	-67.35	-393.64	-733.13	1694367.58	14279021.19	39°19'17.105"N	80°48'33.239"W	832.13	241.767	9.82	5.62	36.00
6030.00	18.000	307.210	5955.94	-56.53	-386.80	-744.52	1694356.20	14279028.03	39°19'17.173"N	80°48'33.384"W	839.01	242.547	11.05	7.56	29.17
6077.00	22.220	315.690	6000.07	-41.87	-376.05	-756.52	1694344.20	14279038.78	39°19'17.279"N	80°48'33.536"W	844.83	243.569	10.89	8.98	18.04
6125.00	27.060	322.400	6043.70	-22.77	-360.89	-769.53	1694331.20	14279053.93	39°19'17.428"N	80°48'33.702"W	849.95	244.875	11.63	10.08	13.98
6172.00	32.280	327.910	6084.53	0.03	-341.77	-782.74	1694318.00	14279073.04	39°19'17.619"N	80°48'33.869"W	854.10	246.412	12.82	11.11	11.72
6221.00	37.180	331.110	6124.79	27.74	-317.70	-796.85	1694303.89	14279097.10	39°19'17.857"N	80°48'34.048"W	857.85	248.263	10.67	10.00	6.53
6268.00	42.160	332.720	6160.96	57.84	-291.23	-810.95	1694289.80	14279123.56	39°19'18.119"N	80°48'34.227"W	861.66	250.245	10.82	10.60	3.43
6291.00†	44.283	333.051	6177.72	73.36	-277.21	-818.13	1694282.62	14279137.57	39°19'18.257"N	80°48'34.318"W	863.82	251.282	9.28	9.23	1.44
6315.00	46.500	333.370	6194.57	90.42	-261.96	-825.83	1694274.93	14279152.82	39°19'18.408"N	80°48'34.415"W	866.38	252.400	9.28	9.24	1.33
6362.00	51.640	334.420	6225.35	125.88	-230.08	-841.43	1694258.32	14279184.69	39°19'18.724"N	80°48'34.613"W	872.32	254.707	11.07	10.84	2.23
6411.00	56.810	335.460	6253.99	165.61	-194.08	-858.26	1694242.51	14279220.88	39°19'19.080"N	80°48'34.826"W	879.93	257.266	10.69	10.55	2.12
6458.00	62.580	336.880	6277.69	206.16	-157.00	-874.70	1694226.08	14279257.74	39°19'19.447"N	80°48'35.034"W	888.67	259.824	12.48	12.28	2.60
6506.00	64.810	337.670	6298.96	249.19	-117.34	-891.38	1694209.39	14279297.38	39°19'19.839"N	80°48'35.245"W	899.07	262.501	5.00	4.65	2.06
6515.00†	64.824	338.007	6302.79	257.33	-109.80	-894.46	1694206.32	14279304.92	39°19'19.914"N	80°48'35.284"W	901.17	263.002	3.39	0.15	3.75
6553.00	64.890	339.430	6318.94	291.70	-77.75	-906.94	1694193.84	14279336.96	39°19'20.231"N	80°48'35.442"W	910.27	265.100	3.39	0.17	3.74
6585.00†	64.943	339.257	6332.51	320.64	-50.63	-917.16	1694183.62	14279364.07	39°19'20.499"N	80°48'35.572"W	918.56	266.841	0.52	0.17	-0.54
6601.00	64.970	339.170	6339.28	335.12	-37.07	-922.31	1694178.48	14279377.82	39°19'20.833"N	80°48'35.637"W	923.05	267.688	0.52	0.17	-0.54
6648.00	65.130	337.700	6359.11	377.71	2.56	-937.97	1694162.83	14279417.23	39°19'21.025"N	80°48'35.835"W	937.87	270.156	2.86	0.34	-3.13
6659.00†	66.136	337.521	6363.64	387.73	11.82	-941.79	1694159.01	14279426.49	39°19'21.117"N	80°48'35.883"W	941.86	270.719	9.26	9.14	-1.62



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #02
Operator	ANTERO RESOURCES CORPORATION	Well	Caboose Unit 2H
Area	Doddridge Co., WV	Wellbore	Caboose Unit 2H AWB
Field	Doddridge		
F-acility	Middle Pad		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US IN)	Grid North (US IN)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
6679.00	67.865	337.204	6371.44	406.14	28.82	-948.88	1694151.92	14278443.48	39°19'21.285"N	80°48'35.973"W	949.31	271.740	9.26	9.15	-1.59	POE Marcellus: 6679MD / 6371 TVD
6696.00	69.520	336.940	6377.61	421.98	43.41	-865.05	1694145.75	14279458.07	39°19'21.429"N	80°48'36.051"W	956.03	272.602	9.26	9.15	-1.55	
6743.00	74.770	338.030	6392.01	466.69	84.72	-972.17	1694128.64	14279499.36	39°19'21.838"N	80°48'36.268"W	975.85	274.981	11.39	11.17	2.32	
6791.00	78.820	339.040	6402.97	513.38	128.20	-889.26	1694111.56	14278964.83	39°19'22.268"N	80°48'36.484"W	997.53	277.384	8.68	8.44	2.10	
6838.00	82.100	338.430	6410.76	559.69	171.39	-1006.07	1694094.75	14278586.00	39°19'22.695"N	80°48'36.697"W	1020.56	279.668	7.10	6.98	-1.30	
6887.00	85.310	335.490	6414.86	608.48	218.29	-1025.17	1694075.66	14278930.88	39°19'23.139"N	80°48'36.939"W	1047.74	281.914	14.01	12.67	-6.00	
6982.00	89.780	333.290	6416.44	703.40	301.94	-1066.23	1694034.62	14278716.50	39°19'23.987"N	80°48'37.459"W	1108.16	285.811	2.78	1.55	-2.32	
7077.00	89.970	336.160	6416.90	893.23	472.89	-1149.10	1693995.78	14278987.42	39°19'25.678"N	80°48'38.509"W	1242.60	292.369	2.75	0.13	2.75	
7267.00	89.870	338.970	6416.95	988.20	560.89	-1185.35	1693915.55	14279975.14	39°19'26.546"N	80°48'38.968"W	1311.27	295.315	2.96	0.00	2.96	
7362.00	90.000	341.160	6416.46	1078.99	650.02	-1217.65	1693883.26	14280064.44	39°19'27.430"N	80°48'39.377"W	1380.29	298.095	2.45	0.36	2.42	
7458.00	90.030	342.020	6416.43	1273.27	831.05	-1278.57	1693822.36	14280245.39	39°19'28.329"N	80°48'39.768"W	1451.85	300.685	0.34	-0.32	-0.11	
7553.00	90.120	342.030	6416.31	1367.81	921.41	-1307.89	1693793.06	14280355.72	39°19'29.220"N	80°48'40.147"W	1524.92	303.023	0.91	0.03	0.91	
7648.00	90.150	341.480	6415.08	1462.40	1011.83	-1337.63	1693731.55	14280425.91	39°19'30.114"N	80°48'40.518"W	1599.86	305.165	0.10	0.03	0.01	
7743.00	90.060	339.420	6415.91	1557.16	1101.15	-1369.42	1693731.55	14280515.39	39°19'31.007"N	80°48'40.894"W	1677.10	307.100	0.58	0.03	-0.58	
7838.00	89.970	337.060	6415.88	1652.10	1189.39	-1404.61	1693696.37	14280603.59	39°19'31.892"N	80°48'41.296"W	1757.22	308.803	2.17	-0.09	-2.17	
8028.00	90.080	334.720	6415.86	1747.09	1276.10	-1443.39	1693657.61	14280690.27	39°19'33.623"N	80°48'41.741"W	1840.53	310.257	2.45	-0.09	-2.45	
8123.00	90.000	334.670	6415.81	1842.05	1361.98	-1484.00	1693617.02	14280776.12	39°19'34.472"N	80°48'42.232"W	1926.61	311.480	2.50	0.09	-2.48	
8218.00	89.910	335.540	6415.88	1937.02	1448.16	-1523.99	1693577.04	14280862.26	39°19'35.325"N	80°48'42.747"W	2014.26	312.545	0.08	-0.06	-0.05	
8313.00	90.060	335.640	6415.96	2032.01	1534.67	-1563.25	1693537.80	14280948.73	39°19'36.181"N	80°48'43.254"W	2102.31	313.539	0.92	-0.09	0.92	
8408.00	89.970	334.540	6415.98	2126.99	1620.83	-1603.26	1693497.80	14281034.86	39°19'37.033"N	80°48'43.751"W	2190.65	314.471	0.14	0.09	0.11	
8503.00	90.060	333.950	6415.96	2221.92	1706.39	-1644.54	1693456.54	14281120.38	39°19'37.880"N	80°48'44.258"W	2279.81	315.312	1.16	-0.03	-1.16	
8598.00	90.060	334.750	6415.86	2316.86	1792.03	-1685.66	1693415.43	14281205.99	39°19'38.727"N	80°48'44.781"W	2369.87	316.057	0.63	0.03	-0.62	
8692.00	90.000	333.900	6415.81	2410.79	1876.75	-1726.39	1693374.72	14281290.67	39°19'39.565"N	80°48'45.302"W	2460.25	316.752	0.84	0.00	0.84	
8787.00	90.090	335.730	6415.73	2505.75	1962.71	-1766.81	1693334.31	14281376.60	39°19'40.415"N	80°48'45.818"W	2550.02	317.390	0.91	-0.06	-0.80	
8883.00	89.970	337.990	6415.66	2601.74	2050.98	-1804.54	1693296.61	14281464.84	39°19'41.289"N	80°48'46.330"W	2640.81	318.007	1.93	0.09	1.93	
8978.00	89.940	338.130	6415.76	2696.70	2139.10	-1840.03	1693261.12	14281552.92	39°19'42.160"N	80°48'46.806"W	2731.83	318.657	2.36	-0.13	2.35	
9073.00	90.030	337.920	6415.78	2791.67	2227.20	-1876.58	1693225.59	14281640.99	39°19'43.032"N	80°48'47.257"W	2821.81	319.298	0.15	-0.03	0.15	
9168.00	89.840	335.520	6415.81	2886.66	2314.46	-1913.12	1693188.06	14281728.21	39°19'43.895"N	80°48'47.707"W	2911.74	319.898	0.24	0.09	-0.22	
											3002.79	320.423	2.53	-0.09	-2.53	



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #02
Operator	ANTERO RESOURCES CORPORATION		
Area	Doddridge Co., WV		
Field	Doddridge		
Facility	Middle Pad		
	Well	Caboose Unit 2H	
	Wellbore	Caboose Unit 2H AWB	

WELLPATH DATA (186 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
9283.00	89.970	330.730	6415.88	2981.47	2399.17	-1956.06	1693145.15	14281812.89	39°19'44.733"N	80°48'48.727"W	3095.51	320.809	5.04	0.03	-5.04	
9358.00	90.000	331.850	6415.91	3076.09	2482.49	-2001.89	1693099.53	14281896.18	39°19'45.558"N	80°48'49.305"W	3188.97	321.120	1.18	0.03	1.18	
9452.00	90.030	331.890	6415.88	3169.80	2565.43	-2045.94	1693055.30	14281979.08	39°19'46.378"N	80°48'49.866"W	3281.35	321.428	0.15	0.03	0.15	
9547.00	90.180	333.690	6415.71	3264.62	2649.95	-2089.31	1693011.95	14282063.56	39°19'47.214"N	80°48'50.416"W	3374.53	321.747	1.79	0.16	1.78	
9642.00	90.090	335.550	6415.49	3359.56	2735.77	-2130.03	1692971.24	14282149.35	39°19'48.064"N	80°48'50.932"W	3467.20	322.096	1.97	-0.08	1.97	
9737.00	90.060	335.920	6415.36	3454.56	2822.38	-2169.07	1692932.21	14282235.93	39°19'48.920"N	80°48'51.426"W	3559.59	322.457	0.39	-0.03	0.39	
9832.00	90.080	334.300	6415.28	3549.53	2908.55	-2209.06	1692892.25	14282322.07	39°19'48.773"N	80°48'51.933"W	3652.34	322.783	1.71	0.00	-1.71	
9927.00	89.910	332.100	6415.29	3644.37	2993.34	-2251.89	1692849.43	14282406.82	39°19'50.612"N	80°48'52.476"W	3745.81	323.046	2.32	-0.16	-2.32	
10022.00	89.850	330.970	6415.49	3739.03	3078.95	-2297.18	1692804.17	14282490.30	39°19'51.438"N	80°48'53.050"W	3839.79	323.255	1.19	-0.06	-1.19	
10117.00	89.940	330.780	6415.66	3833.59	3159.84	-2343.40	1692757.95	14282573.26	39°19'52.259"N	80°48'53.636"W	3933.97	323.439	0.22	0.09	-0.20	
10211.00	89.940	332.320	6415.76	3927.25	3242.49	-2388.18	1692713.19	14282656.87	39°19'53.077"N	80°48'54.204"W	4027.05	323.627	1.64	0.00	1.64	
10305.00	89.970	333.750	6415.83	4021.08	3326.27	-2430.81	1692670.59	14282739.61	39°19'53.906"N	80°48'54.744"W	4119.81	323.841	1.52	0.03	1.52	
10399.00	89.870	336.980	6415.88	4115.05	3411.70	-2469.98	1692631.42	14282825.01	39°19'54.751"N	80°48'55.240"W	4211.95	324.096	3.44	0.00	3.44	
10493.00	89.940	338.790	6415.95	4209.02	3498.78	-2505.37	1692586.05	14282912.06	39°19'55.612"N	80°48'55.688"W	4303.28	324.395	1.93	-0.03	1.93	
10586.00	90.150	339.190	6415.88	4301.92	3585.60	-2538.71	1692542.72	14283007.07	39°19'56.471"N	80°48'56.111"W	4393.35	324.700	0.49	0.23	0.43	
10680.00	90.220	340.570	6415.58	4395.75	3673.86	-2571.05	1692500.40	14283097.07	39°19'57.344"N	80°48'56.520"W	4484.14	325.015	1.47	0.07	1.47	
10774.00	89.840	338.830	6415.45	4489.59	3762.02	-2603.66	1692457.80	14283175.19	39°19'58.216"N	80°48'56.932"W	4575.13	325.313	1.87	-0.30	-1.86	
10867.00	89.850	338.360	6415.62	4582.52	3849.60	-2637.60	1692413.88	14283261.74	39°19'59.073"N	80°48'57.362"W	4665.69	325.576	0.51	-0.10	-0.51	
10961.00	89.910	336.840	6415.81	4676.50	3935.50	-2673.42	1692368.07	14283348.61	39°19'59.932"N	80°48'57.816"W	4757.66	325.811	1.62	0.08	-1.62	
11055.00	89.840	336.760	6415.94	4770.48	4021.80	-2710.45	1692323.27	14283434.98	39°20'00.787"N	80°48'58.285"W	4849.97	326.023	0.92	0.03	-0.08	
11150.00	90.000	340.070	6415.99	4865.42	4110.23	-2745.39	1692278.13	14283523.27	39°20'01.661"N	80°48'58.727"W	4942.79	326.269	3.48	0.06	3.48	
11244.00	90.120	342.010	6415.89	4959.11	4199.12	-2775.93	1692235.60	14283612.13	39°20'02.540"N	80°48'59.114"W	5033.73	326.532	2.07	0.13	2.06	
11338.00	90.400	341.220	6415.46	5052.72	4288.33	-2805.58	1692192.99	14283701.29	39°20'03.422"N	80°48'59.489"W	5124.55	326.806	0.99	0.30	-0.84	
11431.00	90.120	339.520	6415.04	5145.50	4375.92	-2836.82	1692149.71	14283788.85	39°20'04.288"N	80°48'59.894"W	5215.00	327.045	1.85	-0.30	-1.83	
11525.00	90.030	336.830	6414.92	5239.41	4463.55	-2870.70	1692104.71	14283876.44	39°20'05.155"N	80°49'00.314"W	5307.06	327.252	1.55	-0.10	-1.54	
11619.00	89.910	336.830	6414.97	5333.39	4550.36	-2908.87	1692061.29	14283963.22	39°20'06.014"N	80°49'00.771"W	5399.60	327.429	1.33	-0.13	-1.32	
11713.00	90.000	335.970	6415.04	5427.39	4636.50	-2944.50	1692018.81	14284049.32	39°20'06.866"N	80°49'01.248"W	5492.47	327.582	0.92	0.10	-0.91	
11806.00	90.150	335.360	6414.92	5520.39	4721.24	-2982.81	1691975.04	14284134.03	39°20'07.704"N	80°49'01.793"W	5584.55	327.716	0.85	0.16	-0.83	
11900.00	90.250	336.110	6414.59	5614.38	4806.94	-3021.42	1691930.21	14284219.70	39°20'08.552"N	80°49'02.222"W	5677.65	327.848	0.78	0.11	0.78	
11994.00	90.310	336.410	6414.13	5708.38	4892.99	-3059.26	1691885.71	14284305.71	39°20'09.403"N	80°49'02.702"W	5770.65	327.985	0.93	0.06	0.92	



Actual Wellpath Report

Caboose Unit 2H AWP Proj: 15294'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #02
Operator	ANTERO RESOURCES CORPORATION		
Area	Doddridge Co., WY		
Field	Doddridge		
F-acility	Middle Pad		
Well	Caboose Unit 2H		
Wellbore	Caboose Unit 2H AWB		

WELLPATH DATA (186 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
12088.00	89.970	337.670	6413.90	5802.37	4979.64	-3095.93	1692005.73	14284392.23	39°20'10.260"N	80°49'03.166"W	5863.50	328.130	1.39	-0.36	1.34	
12181.00	89.820	336.370	6414.07	5895.36	5066.16	-3132.24	1691969.43	14284477.81	39°20'11.106"N	80°49'03.626"W	5955.39	328.268	1.41	-0.16	-1.40	
12275.00	89.850	335.000	6414.34	5989.35	5150.81	-3170.94	1691930.74	14284563.44	39°20'11.954"N	80°49'04.116"W	6048.62	328.383	1.46	0.03	-1.48	
12368.00	89.750	333.690	6414.67	6082.29	5234.64	-3211.21	1691890.50	14284647.23	39°20'12.783"N	80°49'04.627"W	6141.12	328.473	1.41	-0.11	-1.41	
12462.00	90.030	332.980	6414.85	6176.15	5318.65	-3253.39	1691848.33	14284731.20	39°20'13.614"N	80°49'05.161"W	6234.78	328.546	0.81	0.30	-0.78	
12556.00	90.150	331.590	6414.70	6269.91	5401.86	-3297.11	1691804.63	14284814.36	39°20'14.438"N	80°49'05.716"W	6328.62	328.602	1.48	0.13	-1.48	
12650.00	90.950	333.930	6413.80	6363.70	5485.42	-3340.13	1691761.63	14284897.91	39°20'15.264"N	80°49'06.281"W	6422.33	328.662	2.63	0.85	2.48	
12743.00	90.220	333.240	6412.85	6458.58	5568.71	-3381.50	1691720.27	14284981.16	39°20'16.088"N	80°49'06.785"W	6514.99	328.733	1.08	-0.78	-0.74	
12836.00	90.650	334.740	6412.14	6549.50	5652.29	-3422.28	1691679.51	14285064.71	39°20'16.915"N	80°49'07.302"W	6607.59	328.806	1.88	0.46	1.61	
12930.00	90.120	333.840	6411.51	6643.43	5736.98	-3463.05	1691638.75	14285149.36	39°20'17.753"N	80°49'07.819"W	6701.17	328.883	1.11	-0.36	-0.96	
13024.00	90.000	339.160	6411.22	6830.36	5808.68	-3502.19	1691599.62	14285234.78	39°20'18.598"N	80°49'08.315"W	6794.56	328.973	3.30	0.00	3.30	
13117.00	89.970	339.250	6411.24	6924.25	5906.56	-3570.33	1691564.88	14285321.00	39°20'19.452"N	80°49'08.755"W	6888.40	329.065	2.39	-0.13	2.38	
13211.00	89.880	337.450	6411.36	7018.18	6083.92	-3605.01	1691496.85	14285408.84	39°20'20.321"N	80°49'08.178"W	6978.96	329.231	0.10	-0.03	0.10	
13305.00	89.970	337.930	6411.49	7111.16	6169.98	-3640.31	1691461.56	14285496.17	39°20'21.185"N	80°49'08.617"W	7071.79	329.351	1.92	-0.10	-1.91	
13398.00	90.060	339.230	6411.46	7205.10	6257.46	-3674.64	1691427.25	14285582.18	39°20'22.036"N	80°49'10.064"W	7163.82	329.459	0.53	0.10	0.52	
13492.00	90.460	339.040	6411.03	7298.99	6345.30	-3708.12	1691393.78	14285669.65	39°20'22.902"N	80°49'10.499"W	7256.64	329.577	1.39	0.10	1.38	
13586.00	90.030	338.080	6410.64	7391.92	6431.86	-3742.11	1691359.80	14285757.45	39°20'23.770"N	80°49'10.923"W	7349.35	329.698	0.47	0.43	-0.20	
13679.00	90.000	337.970	6410.61	7485.88	6519.03	-3777.29	1691324.64	14285843.97	39°20'24.627"N	80°49'11.353"W	7441.25	329.809	1.13	-0.46	-1.03	
13773.00	90.000	337.960	6410.61	7578.85	6609.24	-3812.78	1691289.76	14285931.11	39°20'25.489"N	80°49'11.799"W	7534.30	329.911	0.12	-0.03	-0.12	
13866.00	90.180	339.580	6410.46	7672.77	6692.86	-3846.21	1691255.74	14286017.28	39°20'26.342"N	80°49'12.240"W	7626.39	330.009	0.01	0.00	-0.01	
13950.00	90.090	339.570	6410.24	7765.62	6780.01	-3878.67	1691223.30	14286104.86	39°20'27.208"N	80°49'12.671"W	7719.31	330.115	1.73	0.19	1.72	
14043.00	90.060	338.340	6410.12	7859.53	6867.74	-3912.42	1691189.56	14286191.98	39°20'28.070"N	80°49'13.082"W	7811.06	330.227	0.10	-0.10	-0.01	
14147.00	90.000	337.030	6410.07	7953.50	6954.70	-3948.12	1691153.88	14286278.68	39°20'28.938"N	80°49'13.510"W	7903.98	330.331	1.31	-0.03	-1.31	
14241.00	89.720	334.280	6410.30	8046.49	7039.42	-3986.45	1691115.56	14286366.60	39°20'29.798"N	80°49'13.962"W	7997.21	330.417	1.40	-0.06	-1.39	
14334.00	89.850	332.470	6410.65	8140.35	7123.45	-4028.57	1691073.46	14286451.29	39°20'30.636"N	80°49'14.448"W	8089.82	330.477	2.97	0.30	-2.96	
14428.00	89.820	332.670	6410.92	8234.11	7209.15	-4072.21	1691029.84	14286535.28	39°20'31.468"N	80°49'14.982"W	8183.70	330.510	1.93	0.14	-1.93	
14522.00	89.940	332.670	6411.12	8326.89	7289.15	-4115.24	1690986.82	14286618.51	39°20'32.291"N	80°49'15.535"W	8277.65	330.531	0.28	-0.03	-0.28	
14615.00	89.940	332.970	6411.40	8420.70	7372.77	-4158.78	1690943.90	14286700.92	39°20'33.107"N	80°49'16.081"W	8370.60	330.562	0.51	0.13	0.48	
14709.00	89.880	333.140	6411.73	8514.54	7456.56	-4200.77	1690901.33	14286784.51	39°20'33.934"N	80°49'16.625"W	8464.52	330.577	0.40	-0.23	0.32	
14803.00	89.880	333.140	6411.73	8514.54	7456.56	-4200.77	1690901.33	14286868.27	39°20'34.763"N	80°49'17.165"W	8558.44	330.605	0.25	0.17	0.18	



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Caboose Unit 2H AWP Proj: 15294'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Doddridge Co., WV	Well	Caboose Unit 2H
Field	Doddridge	Wellbore	Caboose Unit 2H AWB
Facility	Middle Pad		

WELLPATH DATA (186 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
14896.00	90.000	337.200	6411.82	8607.50	7540.95	-4239.82	1690862.30	14288952.62	39°20'35.598"N	80°49'17.660"W	8651.13	330.654	4.37	0.13	4.37	
14989.00	90.030	338.500	6411.80	8700.47	7627.08	-4274.88	1690827.25	14287038.72	39°20'36.450"N	80°49'18.104"W	8743.40	330.730	1.40	0.03	1.40	
15083.00	90.000	338.610	6411.77	8794.40	7714.58	-4309.25	1690792.89	14287126.18	39°20'37.316"N	80°49'18.539"W	8886.53	330.813	0.12	-0.03	0.12	
15177.00	90.030	338.130	6411.75	8888.35	7801.96	-4343.90	1690758.28	14287213.52	39°20'38.180"N	80°49'18.978"W	8929.72	330.892	0.51	0.03	-0.51	
15270.00	89.940	336.750	6411.77	8981.33	7887.84	-4379.57	1690722.59	14287299.37	39°20'39.029"N	80°49'19.430"W	9022.12	330.980	1.48	-0.10	-1.48	Projected MD @ TD 15270'
15294.00	89.840	336.750	6411.80	9005.33	7909.89	-4389.05	1690713.12	14287321.41	39°20'39.248"N	80°49'19.550"W	9046.00	330.975	0.00	0.00	0.00	

HOLE & CASING SECTIONS - Ref Wellbore: Caboose Unit 2H AWB Ref Wellpath: Caboose Unit 2H AWP Proj: 15294'

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	32.00	112.00	80.00	32.00	112.00	0.00	0.00	-0.03	-0.13
17.5in Open Hole	112.00	550.30	438.30	112.00	550.30	-0.03	-0.13	-0.67	-1.71
13.375in Casing Surface	32.00	550.30	518.30	32.00	550.30	0.00	0.00	-0.67	-1.71
12.25in Open Hole	550.30	2615.60	2065.30	550.30	2591.73	-0.67	-1.71	-134.03	-246.38
9.625in Casing Intermediate	32.00	2615.60	2583.60	32.00	2591.73	0.00	0.00	-134.03	-246.38
8.75in Open Hole	2615.60	5925.00	3309.40	2591.73	5854.23	-134.03	-246.38	-396.64	-721.03
8.5in Open Hole	5925.00	15294.00	9369.00	5854.23	6411.80	-396.64	-721.03	7909.89	-4389.05
5.5in Casing Production	32.00	15294.00	15262.00	32.00	6411.80	0.00	0.00	7909.89	-4389.05



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Caboose Unit 2H AWP Proj: 15294'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Doddridge Co., WV		Well	Caboose Unit 2H
Field	Doddridge		Wellbore	Caboose Unit 2H 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 2H POE Plat	6375.00	36.00	-946.28	1694154.52	14279450.66	39°19'21.356"N	80°48'35.940"W	point
Caboose Unit 2H BHL Plat	6415.00	7896.00	-4378.81	1690723.36	14287307.53	39°20'39.110"N	80°49'19.420"W	point
Caboose Unit 2H LP Rev-1	6415.00	252.28	-1040.73	1694060.11	14279666.85	39°19'23.495"N	80°48'37.136"W	point

WELLPATH COMPOSITION - Ref Wellbore: Caboose Unit 2H AWB Ref Wellpath: Caboose Unit 2H AWP Proj: 15294'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	520.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2"> (100'-503')	Caboose Unit 2H AWB
520.00	641.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4"> (503')(528'-624')	Caboose Unit 2H AWB
641.00	2525.00	ISCVSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4"> (624')(771'-2508')	Caboose Unit 2H AWB
2525.00	5842.00	ISCVSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4"> (2508')(2648'-5825')	Caboose Unit 2H AWB
5842.00	15270.00	BHI AutoTrak Curve (Short)	05 BH AT Curve <8-1/2"> (6842')(5802'-15270')	Caboose Unit 2H AWB
15270.00	15294.00	Blind Drilling (std)	Projection to bit	Caboose Unit 2H AWB

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Caboose Unit 2H AWP Proj: 15294'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Doddridge Co., WV	Well	Caboose Unit 2H
Field	Doddridge	Wellbore	Caboose Unit 2H AWB
Facility	Middle Pad		

COMMENTS
<p>Wellpath general comments API: 47-017-06817-0000 BH Job #: 9084096 Rig: Frontier 32 Duration: 3/31/18 - 04/03/18 Gyrodatta MS Gyro <17-1/2"> (100'-503') Gyrodatta MS Gyro <12-1/4"> (503')(528'-624') Directional ONE MWD <12-1/4"> (624')(771'-2508') Directional ONE MWD <8-3/4"> (2508')(2648'-5825') BH AT Curve <8-1/2"> (5842')(5902'-15270') Middlesex: 6291'MD / 6178'TVD Burket: 6515'MD / 6303'TVD Tully: 6585'MD / 6333'TVD Hamilton: 6659'MD / 6364'TVD POE Marcellus: 6679'MD / 6371'TVD Projected MD @ TD: 15270'</p>

02/08/2019