



# ANTERO RESOURCES CORPORATION

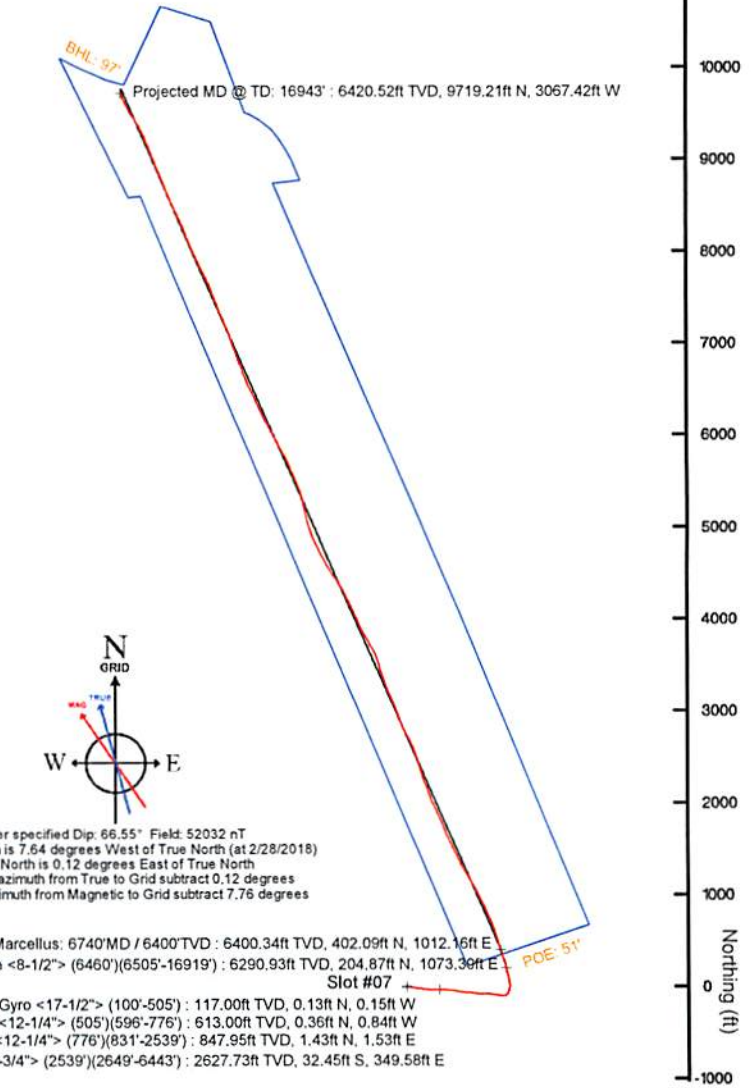
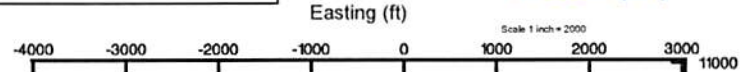
Location: Doddridge Co., WV  
 Field: Doddridge  
 Facility: Middle Pad

Slot: Slot #07  
 Well: Jay Unit 1H  
 Wellbore: Jay Unit 1H PWB



Plot reference wellpath is Jay 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 #07): -843 feet	Created by: mccreid on 2018-05-14
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)
Slot #07	-21.13	55.84	1695146.811	14279396.570
Comment	Jay Unit 1H		Latitude	Longitude
			39°19'20.800"N	80°48'23.310"W
Frontier 32 (RKB) to Ground level (At Slot: Slot #07)			32ft	
Mean Sea Level to Ground level (At Slot: Slot #07)			-843ft	
Frontier 32 (RKB) to Mean Sea Level			875ft	



Gyrodata MS Gyro <17-1/2'> (100'-505') : 0.27° Inc, 117.00ft MD, 117.00ft TVD, 0.18ft VS

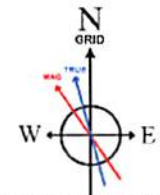
Gyrodata MS Gyro <12-1/4'> (505')(596'-776') : 0.17° Inc, 613.00ft MD, 613.00ft TVD, 0.67ft VS

Directional ONE MWD <12-1/4'> (776')(831'-2539') : 3.12° Inc, 848.00ft MD, 847.95ft TVD, 0.70ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6460.00	47.870	348.990	6261.87	171.58	1081.85	10.30	-274.78
Proj. to Bottom	6527.00	54.770	348.990	6303.72	222.51	1070.09	10.30	-223.38
End of 3D Arc	6567.10	56.480	343.138	6326.37	254.48	1061.55	9.00	-190.67
POE	6717.05	69.773	340.500	6394.00	381.20	1019.74	9.00	-57.80
Landing Pt.	6945.93	90.000	336.462	6434.00	589.60	937.30	9.00	166.18
BHL	16952.23	90.000	336.462	6434.00	9763.33	-3058.78	0.00	10172.48

Directional ONE MWD <8-3/4'> (2539')(2649'-6443') : 15.04° Inc, 2666.00ft MD, 2627.73ft TVD, -169.37ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Jay Unit 1H	Jay Unit 1H AWB	Jay Unit 1H AWP Proj: 16943'
Slot #07	Jay Unit 1H	Jay Unit 1H PWB	Jay Unit 1H PWP Rev-A.0



User specified Dip: 66.55° Field: 52032 nT  
 Magnetic North is 7.64 degrees West of True North (at 2/28/2018)  
 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

POE Marcellus: 6740' MD / 6400' TVD : 6400.34ft TVD, 402.09ft N, 1012.16ft E  
 BH ATCurve <8-1/2'> (6460')(6505'-16919') : 6290.93ft TVD, 204.87ft N, 1073.36ft E  
 Slot #07  
 Gyrodata MS Gyro <17-1/2'> (100'-505') : 117.00ft TVD, 0.13ft N, 0.15ft W  
 Gyrodata MS Gyro <12-1/4'> (505')(596'-776') : 613.00ft TVD, 0.36ft N, 0.84ft W  
 Directional ONE MWD <12-1/4'> (776')(831'-2539') : 847.95ft TVD, 1.43ft N, 1.53ft E  
 Directional ONE MWD <8-3/4'> (2539')(2649'-6443') : 2627.73ft TVD, 32.45ft S, 349.58ft E

BH ATCurve <8-1/2'> (6460')(6505'-16919') : 51.68° Inc, 6505.00ft MD, 6290.93ft TVD, -240.88ft VS  
 POE Marcellus: 6740' MD / 6400' TVD : 72.85° Inc, 6740.00ft MD, 6400.34ft TVD, -35.62ft VS

Projected MD @ TD: 16943' : 89.97° Inc, 16943.00ft MD, 6420.52ft TVD, 10135.48ft VS

API: 47-017-06822-0000  
 BH Job #: 9047129  
 Rig: Frontier 32  
 Duration: 03/05/18 - 03/08/18

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Vertical Section (ft)  
 Azimuth 336.46° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



## Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay 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	5/14/2018 at 3:58:07 PM
Convergence at slot	0.12° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Jay_Unit_1H_AWP_Proj_16943_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-21.13	55.84	1695146.81	14279396.57	39°19'20.800"N	80°48'23.310"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 #07)	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	336.46°

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot #07	Jay Unit 1H
Well	Jay Unit 1H AWB
Wellbore	Jay Unit 1H AWB

WELLPATH DATA (207 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
0.00H	0.000	311.170	0.00	0.00	0.00	0.00	1695146.81	14279396.57	39°19'20.800"N	80°48'23.310"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.000	311.170	32.00	0.00	0.00	0.00	1695146.81	14279396.57	39°19'20.800"N	80°48'23.310"W	0.00	0.000	0.00	0.00	0.00	
117.00	0.270	311.170	117.00	0.18	0.13	-0.15	1695146.66	14279396.70	39°19'20.801"N	80°48'23.312"W	0.20	311.170	0.32	0.32	-57.45	Gyrodata MS Gyro <17-1/2"> (100'-505')
217.00	0.130	285.490	217.00	0.47	0.32	-0.44	1695146.37	14279396.89	39°19'20.803"N	80°48'23.316"W	0.54	305.950	0.16	-0.14	-25.68	
317.00	0.190	296.230	317.00	0.66	0.42	-0.70	1695146.12	14279396.99	39°19'20.804"N	80°48'23.319"W	0.81	301.177	0.07	0.06	10.74	
417.00	0.050	22.270	417.00	0.82	0.53	-0.83	1695145.98	14279397.10	39°19'20.805"N	80°48'23.321"W	0.99	302.852	0.19	-0.14	86.04	
517.00	0.130	153.030	517.00	0.74	0.47	-0.76	1695146.05	14279397.04	39°19'20.805"N	80°48'23.320"W	0.90	301.947	0.17	0.08	130.76	
522.00	0.130	153.360	522.00	0.73	0.46	-0.75	1695146.06	14279397.03	39°19'20.805"N	80°48'23.320"W	0.89	301.567	0.01	0.00	6.60	
613.00	0.170	266.020	613.00	0.67	0.36	-0.84	1695145.97	14279396.93	39°19'20.804"N	80°48'23.321"W	0.92	293.239	0.28	0.04	123.80	Gyrodata MS Gyro <12-1/4"> (505')(596'-776')
703.00	0.360	299.880	703.00	0.94	0.49	-1.22	1695145.59	14279397.06	39°19'20.805"N	80°48'23.326"W	1.32	292.005	0.26	0.21	37.62	
793.00	1.280	69.700	792.99	1.11	0.98	-0.52	1695146.29	14279397.55	39°19'20.810"N	80°48'23.317"W	1.11	331.960	1.71	1.02	144.24	
848.00	3.120	81.160	847.95	0.70	1.43	1.53	1695148.34	14279398.00	39°19'20.814"N	80°48'23.290"W	2.09	47.038	3.42	3.35	20.84	Directional ONE MWD <12-1/4"> (776')(831'-2539')
938.00	4.340	76.320	937.76	-0.51	2.61	7.26	1695154.07	14279399.18	39°19'20.826"N	80°48'23.218"W	7.72	70.241	1.40	1.36	-5.38	
1026.00	4.610	91.260	1025.49	-2.56	3.32	14.03	1695160.84	14279399.89	39°19'20.832"N	80°48'23.131"W	14.42	76.696	1.36	0.31	16.98	
1114.00	6.100	103.610	1113.11	-6.87	-2.14	22.11	1695168.91	14279398.71	39°19'20.821"N	80°48'23.029"W	22.22	84.473	2.13	1.69	14.03	
1202.00	5.870	100.070	1200.63	-12.18	0.25	31.09	1695177.89	14279396.82	39°19'20.802"N	80°48'22.914"W	31.09	89.534	0.49	-0.26	-4.02	
1291.00	6.620	97.250	1289.10	-17.33	-1.19	40.66	1695187.45	14279395.38	39°19'20.787"N	80°48'22.793"W	40.68	91.677	0.91	0.84	-3.17	
1379.00	8.800	101.350	1376.30	-23.78	-3.16	52.29	1695199.08	14279393.42	39°19'20.768"N	80°48'22.645"W	52.39	93.453	2.55	2.48	4.66	
1467.00	11.430	100.670	1462.92	-32.53	-6.10	67.46	1695214.25	14279390.48	39°19'20.738"N	80°48'22.452"W	67.74	95.163	2.99	2.99	-0.77	
1555.00	12.910	100.990	1548.94	-43.01	-9.58	85.68	1695232.46	14279386.99	39°19'20.703"N	80°48'22.220"W	86.22	96.382	1.68	1.68	0.36	
1643.00	13.710	98.640	1634.58	-54.13	-13.02	105.64	1695252.41	14279383.55	39°19'20.669"N	80°48'21.966"W	106.44	97.029	1.10	0.91	-2.67	
1731.00	14.420	95.970	1719.94	-65.08	-15.73	126.85	1695273.61	14279380.84	39°19'20.642"N	80°48'21.696"W	127.82	97.069	1.09	0.81	-3.03	
1819.00	14.870	94.760	1805.08	-75.84	-17.81	149.00	1695295.75	14279378.77	39°19'20.621"N	80°48'21.415"W	150.06	96.815	0.62	0.51	-1.37	
1907.00	15.020	94.950	1890.11	-86.63	-19.73	171.61	1695318.36	14279376.85	39°19'20.601"N	80°48'21.127"W	172.74	96.558	0.18	0.17	0.22	
1995.00	14.320	96.870	1975.24	-97.58	-22.01	193.78	1695340.51	14279374.56	39°19'20.578"N	80°48'20.845"W	195.03	96.481	0.97	-0.80	2.18	
2084.00	14.070	98.110	2061.52	-108.82	-24.86	215.42	14279371.72	14279371.72	39°19'20.550"N	80°48'20.570"W	216.85	96.582	0.44	-0.28	1.39	
2172.00	14.200	94.370	2146.86	-119.49	-27.19	236.77	1695393.43	14279369.39	39°19'20.526"N	80°48'20.298"W	238.33	96.551	1.05	0.15	-4.25	
2260.00	13.690	93.540	2232.26	-129.28	-28.65	257.93	1695404.63	14279367.93	39°19'20.511"N	80°48'20.029"W	259.51	96.339	0.62	-0.58	-0.94	
2348.00	12.800	96.390	2317.92	-138.89	-30.38	278.01	1695424.71	14279366.20	39°19'20.494"N	80°48'19.773"W	279.66	96.237	1.25	-1.01	3.24	
2437.00	12.810	92.200	2404.71	-148.09	-31.86	297.66	1695444.36	14279364.72	39°19'20.479"N	80°48'19.523"W	299.36	96.109	1.04	0.01	-4.71	

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**Actual Wellpath Report**  
 Jay Unit 1H AWP Proj: 16943  
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Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot	Slot #07
Jay Unit 1H	Jay Unit 1H
Jay Unit 1H AWB	Jay Unit 1H AWB

WELLPATH DATA (207 stations)													
MD	Inclination	Azimuth	TVD	Vert Sec	North	East	East	Grid East	Grid North	Grid North	Latitude	Longitude	Closure Dist
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2525.00	12.670	89.620	2490.55	-156.12	-32.17	317.06	1695463.75	14279364.41	39°19'20.475"N	80°48'19.276"W	318.69	318.69	318.69
2556.00	12.150	90.870	2520.82	-158.81	-32.20	323.73	1695470.41	14279364.39	39°19'20.475"N	80°48'19.192"W	325.32	325.32	325.32
2666.00	15.040	90.330	2627.73	-169.37	-32.45	349.58	1695466.25	14279364.13	39°19'20.472"N	80°48'18.863"W	351.08	351.08	351.08
2755.00	14.380	82.930	2713.82	-177.18	-31.16	372.09	1695518.76	14279365.42	39°19'20.464"N	80°48'18.576"W	373.40	373.40	373.40
2843.00	12.980	90.430	2799.33	-184.29	-29.89	392.82	1695539.48	14279366.69	39°19'20.496"N	80°48'18.312"W	393.96	393.96	393.96
2931.00	12.850	95.300	2885.10	-193.03	-30.87	412.45	1695559.10	14279366.72	39°19'20.486"N	80°48'18.063"W	413.60	413.60	413.60
3019.00	14.950	99.110	2970.52	-203.87	-33.57	433.41	1695580.04	14279363.01	39°19'20.459"N	80°48'17.796"W	434.70	434.70	434.70
3107.00	14.620	94.220	3055.61	-215.17	-36.18	455.69	1695602.32	14279360.02	39°19'20.433"N	80°48'17.513"W	457.12	457.12	457.12
3195.00	13.420	87.560	3140.99	-224.02	-36.57	476.97	1695623.59	14279360.02	39°19'20.428"N	80°48'17.242"W	478.37	478.37	478.37
3284.00	12.150	92.690	3227.80	-232.59	-37.38	496.57	1695643.19	14279359.21	39°19'20.420"N	80°48'16.992"W	497.98	497.98	497.98
3372.00	13.520	104.130	3313.60	-243.68	-41.13	515.73	1695662.33	14279355.46	39°19'20.383"N	80°48'16.749"W	517.37	517.37	517.37
3460.00	13.360	101.010	3399.19	-255.74	-45.58	535.68	1695682.28	14279351.01	39°19'20.338"N	80°48'16.495"W	537.62	537.62	537.62
3548.00	14.190	98.970	3484.66	-267.30	-49.21	556.32	1695702.91	14279347.38	39°19'20.302"N	80°48'16.233"W	558.49	558.49	558.49
3636.00	13.520	97.500	3570.10	-278.44	-52.28	577.17	1695723.75	14279344.32	39°19'20.271"N	80°48'15.967"W	579.53	579.53	579.53
3725.00	13.960	99.090	3656.55	-289.63	-55.37	598.08	1695744.65	14279341.22	39°19'20.240"N	80°48'15.701"W	600.63	600.63	600.63
3813.00	15.040	99.360	3741.75	-301.66	-59.03	619.80	1695766.37	14279337.57	39°19'20.203"N	80°48'15.425"W	622.61	622.61	622.61
3901.00	14.250	97.100	3828.89	-313.48	-62.34	641.80	1695788.35	14279333.25	39°19'20.170"N	80°48'15.145"W	644.82	644.82	644.82
3989.00	12.950	92.250	3912.42	-323.29	-64.07	662.40	1695808.95	14279332.53	39°19'20.153"N	80°48'14.883"W	665.49	665.49	665.49
4077.00	12.980	93.990	3998.18	-331.92	-64.88	682.13	1695828.66	14279332.74	39°19'20.144"N	80°48'14.632"W	685.20	685.20	685.20
4166.00	12.830	92.100	4084.93	-340.58	-65.68	701.99	1695848.52	14279330.92	39°19'20.136"N	80°48'14.379"W	705.05	705.05	705.05
4254.00	13.300	94.700	4170.66	-350.03	-67.36	721.79	1695868.31	14279329.24	39°19'20.119"N	80°48'14.128"W	724.92	724.92	724.92
4342.00	13.160	98.700	4256.32	-360.60	-70.20	741.72	1695888.24	14279326.40	39°19'20.090"N	80°48'13.874"W	745.04	745.04	745.04
4430.00	12.140	97.080	4342.19	-370.65	-72.86	760.81	1695907.32	14279323.74	39°19'20.064"N	80°48'13.631"W	764.29	764.29	764.29
4518.00	12.540	94.990	4428.15	-379.93	-74.83	779.51	1695926.01	14279321.77	39°19'20.044"N	80°48'13.393"W	783.09	783.09	783.09
4607.00	11.940	93.350	4515.13	-388.71	-76.21	798.33	1695944.82	14279320.39	39°19'20.030"N	80°48'13.154"W	801.95	801.95	801.95
4695.00	13.520	91.490	4600.96	-397.18	-77.01	817.70	1695964.18	14279319.59	39°19'20.021"N	80°48'12.907"W	821.32	821.32	821.32
4783.00	12.550	86.130	4686.70	-404.75	-76.63	837.52	1695984.00	14279319.97	39°19'20.025"N	80°48'12.655"W	841.02	841.02	841.02
4871.00	13.990	93.100	4772.35	-412.74	-76.56	857.68	1696004.15	14279320.04	39°19'20.025"N	80°48'12.399"W	861.09	861.09	861.09
4960.00	13.160	90.290	4858.87	-421.65	-77.19	878.56	1696025.02	14279319.41	39°19'20.018"N	80°48'12.133"W	881.94	881.94	881.94
5048.00	11.400	98.490	4944.86	-430.32	-78.53	897.18	1696043.63	14279318.07	39°19'20.005"N	80°48'11.896"W	900.61	900.61	900.61

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #07
Area	Doddridge Co., WV		Well	Jay Unit 1H
Field	Doddridge		Wellbore	Jay Unit 1H AWB
Facility	Middle Pad			

WELLPATH DATA (207 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
5136.00	12.920	97.960	5030.88	-440.07	-81.17	915.53	1696061.97	14279315.43	39°19'19.978"N	80°48'11.663"W	919.12	95.067	1.73	1.73	-0.60	
5225.00	13.100	96.660	5117.59	-450.34	-83.72	935.40	1696081.84	14279312.88	39°19'19.953"N	80°48'11.410"W	939.14	95.115	0.39	0.20	-1.46	
5313.00	13.210	100.220	5203.29	-460.95	-86.66	955.20	1696101.63	14279309.94	39°19'19.923"N	80°48'11.158"W	959.12	95.184	0.93	0.12	4.05	
5401.00	12.540	99.080	5289.07	-471.68	-89.95	974.53	1696120.95	14279306.65	39°19'19.890"N	80°48'10.912"W	978.67	95.274	0.81	-0.76	-1.30	
5489.00	13.680	95.960	5374.78	-481.96	-92.54	994.31	1696140.73	14279304.07	39°19'19.864"N	80°48'10.661"W	998.61	95.317	1.52	1.30	-3.55	
5578.00	13.550	96.530	5461.28	-492.36	-94.82	1015.14	1696161.54	14279301.79	39°19'19.841"N	80°48'10.396"W	1019.56	95.336	0.21	-0.15	0.64	
5666.00	12.870	95.200	5546.95	-502.24	-96.88	1035.14	1696181.54	14279299.73	39°19'19.820"N	80°48'10.141"W	1039.66	95.347	0.85	-0.77	-1.51	
5710.00	14.080	94.910	5589.74	-507.15	-97.78	1045.35	1696191.75	14279298.83	39°19'19.811"N	80°48'10.011"W	1049.92	95.344	2.75	2.75	-0.66	
5754.00	13.770	82.880	5632.45	-511.18	-97.59	1055.88	1696202.27	14279299.02	39°19'19.813"N	80°48'09.877"W	1060.38	95.281	6.61	-0.70	-27.34	
5798.00	13.390	64.980	5675.24	-512.53	-94.79	1065.70	1696212.09	14279301.82	39°19'19.840"N	80°48'09.752"W	1069.91	95.083	9.55	-0.86	-40.68	
5842.00	13.660	49.790	5718.04	-510.91	-89.28	1074.29	1696220.67	14279307.33	39°19'19.895"N	80°48'09.643"W	1077.99	94.751	8.07	0.61	-34.52	
5886.00	13.800	39.490	5760.79	-507.03	-81.87	1081.59	1696227.97	14279314.73	39°19'19.968"N	80°48'09.550"W	1084.69	94.329	5.56	0.32	-23.41	
5931.00	14.160	35.620	5804.45	-501.78	-73.25	1088.21	1696234.59	14279323.34	39°19'20.053"N	80°48'09.465"W	1090.68	93.851	2.23	0.80	-8.60	
5975.00	15.530	26.130	5846.99	-495.21	-63.59	1093.94	1696240.32	14279333.01	39°19'20.148"N	80°48'09.392"W	1095.79	93.327	6.33	3.11	-21.57	
6019.00	17.870	18.360	5889.14	-486.37	-51.89	1098.66	1696245.04	14279344.70	39°19'20.264"N	80°48'09.332"W	1099.89	92.704	7.34	5.32	-17.66	
6063.00	20.130	13.340	5930.74	-475.28	-38.11	1102.54	1696248.91	14279358.47	39°19'20.400"N	80°48'09.282"W	1103.20	91.980	6.33	5.14	-11.41	
6107.00	22.370	9.620	5971.75	-462.22	-22.49	1105.69	1696252.06	14279374.09	39°19'20.554"N	80°48'09.241"W	1105.91	91.165	5.94	5.09	-8.45	
6151.00	25.600	4.580	6011.95	-446.82	-4.75	1107.84	1696254.21	14279391.82	39°19'20.729"N	80°48'09.213"W	1107.85	90.246	8.69	7.34	-11.45	
6195.00	29.070	359.590	6051.03	-428.60	15.42	1108.53	1696254.90	14279411.99	39°19'20.929"N	80°48'09.204"W	1108.63	89.203	9.44	7.89	-11.34	
6240.00	31.950	354.570	6089.80	-407.22	38.22	1107.32	1696253.69	14279434.77	39°19'21.154"N	80°48'09.219"W	1107.98	88.023	8.54	6.40	-11.16	
6284.00	33.440	351.050	6126.84	-384.42	61.78	1104.33	1696250.70	14279458.33	39°19'21.387"N	80°48'09.256"W	1106.06	86.798	5.49	3.39	-8.00	
6328.00	35.540	349.160	6163.10	-360.21	86.32	1100.04	1696246.41	14279482.86	39°19'21.630"N	80°48'09.310"W	1103.42	85.513	5.36	4.77	-4.30	
6372.00	39.220	348.090	6198.06	-334.10	112.50	1094.76	1696241.14	14279509.03	39°19'21.889"N	80°48'09.377"W	1100.53	84.133	8.49	8.36	-2.43	
6416.00	43.380	347.850	6231.11	-305.65	140.90	1088.71	1696235.09	14279537.41	39°19'22.169"N	80°48'09.453"W	1097.79	82.626	9.46	9.45	-0.55	
6460.00	47.870	346.990	6261.87	-274.78	171.58	1081.85	1696228.23	14279568.09	39°19'22.473"N	80°48'09.539"W	1095.38	80.988	10.30	10.20	-1.95	
6505.00	51.680	344.560	6290.93	-240.88	204.87	1073.39	1696219.78	14279601.36	39°19'22.802"N	80°48'09.646"W	1092.77	79.194	9.42	8.47	-5.40	BH ATCurve <8-1/2"> (6460')(6505'-16919')
6552.00	55.860	342.660	6318.70	-203.27	241.23	1062.68	1696209.07	14279637.70	39°19'23.162"N	80°48'09.781"W	1089.72	77.211	9.47	8.89	-4.04	
6570.00†	57.443	342.516	6328.60	-188.32	255.58	1058.18	1696204.57	14279652.04	39°19'23.303"N	80°48'09.838"W	1088.61	76.422	8.82	8.80	-0.80	Burket: 6570MD / 6329TVD
6601.00	60.170	342.280	6344.65	-161.95	280.85	1050.16	1696196.56	14279677.31	39°19'23.553"N	80°48'09.939"W	1087.07	75.028	8.82	8.80	-0.76	
6632.00†	62.947	342.641	6359.41	-134.84	306.84	1041.95	1696188.35	14279703.29	39°19'23.810"N	80°48'10.043"W	1086.19	73.591	9.01	8.96	1.16	Tully: 6632MD / 6359TVD

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (207 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6648.00	64.380	342.820	6366.51	-120.59	320.53	1037.70	1696184.09	14279716.97	39°19'23.946"N	80°48'10.097"W	1086.07	72.835	9.01	8.96	1.12	
6696.00	68.380	342.480	6385.74	-76.87	362.50	1024.58	1696170.98	14279758.93	39°19'24.361"N	80°48'10.263"W	1086.82	70.516	8.36	8.33	-0.71	
6711.00†	69.906	342.555	6391.08	-62.94	375.87	1020.37	1696166.77	14279772.29	39°19'24.493"N	80°48'10.316"W	1087.40	69.778	10.18	10.17	0.50	Hamilton: 6711'MD / 6391'TVD
6740.00†	72.855	342.696	6400.34	-35.62	402.09	1012.16	1696158.57	14279798.50	39°19'24.753"N	80°48'10.420"W	1089.11	68.334	10.18	10.17	0.49	POE Marcellus: 6740'MD / 6400'TVD
6743.00	73.160	342.710	6401.22	-32.76	404.83	1011.31	1696157.72	14279801.24	39°19'24.780"N	80°48'10.430"W	1089.33	68.184	10.18	10.17	0.48	
6791.00	76.520	344.110	6413.77	13.22	449.23	998.09	1696144.50	14279845.62	39°19'25.219"N	80°48'10.597"W	1094.53	65.768	7.54	7.00	2.92	
6838.00	80.540	344.360	6423.11	58.85	493.55	985.58	1696132.00	14279889.92	39°19'25.657"N	80°48'10.755"W	1102.25	63.400	8.57	8.55	0.53	
6886.00	83.180	344.020	6429.91	105.93	539.26	972.63	1696119.06	14279935.62	39°19'26.109"N	80°48'10.919"W	1112.12	60.994	5.54	5.50	-0.71	
6933.00	83.960	341.450	6435.17	152.35	583.86	958.77	1696105.20	14279980.20	39°19'26.550"N	80°48'11.094"W	1122.56	58.660	5.68	1.66	-5.47	
6981.00	86.860	339.920	6439.01	200.06	629.00	942.95	1696089.38	14280025.32	39°19'26.997"N	80°48'11.294"W	1133.49	56.294	6.83	6.04	-3.19	
7028.00	90.710	338.740	6440.01	246.98	672.96	926.36	1696072.81	14280069.26	39°19'27.432"N	80°48'11.504"W	1145.00	54.003	8.57	8.19	-2.51	
7077.00	90.220	336.300	6439.61	295.96	718.23	907.63	1696054.08	14280114.52	39°19'27.879"N	80°48'11.741"W	1157.43	51.645	5.08	-1.00	-4.98	
7172.00	90.030	335.640	6439.40	390.96	805.00	868.95	1696015.41	14280201.25	39°19'28.738"N	80°48'12.231"W	1184.52	47.188	0.72	-0.20	-0.69	
7266.00	89.940	334.160	6439.43	484.92	890.12	829.07	1695975.55	14280286.33	39°19'29.580"N	80°48'12.736"W	1216.42	42.966	1.58	-0.10	-1.57	
7361.00	89.970	333.490	6439.50	579.82	975.38	787.17	1695933.66	14280371.56	39°19'30.423"N	80°48'13.267"W	1253.39	38.905	0.71	0.03	-0.71	
7456.00	90.030	332.860	6439.50	674.66	1060.15	744.30	1695890.81	14280456.30	39°19'31.262"N	80°48'13.810"W	1295.34	35.071	0.67	0.06	-0.66	
7552.00	90.120	329.850	6439.38	770.27	1144.39	698.28	1695844.81	14280540.51	39°19'32.096"N	80°48'14.393"W	1340.61	31.391	3.14	0.09	-3.14	
7646.00	90.120	327.770	6439.18	863.43	1224.80	649.60	1695796.16	14280620.88	39°19'32.892"N	80°48'15.010"W	1386.41	27.940	2.21	0.00	-2.21	
7741.00	90.120	331.540	6438.98	957.74	1306.77	601.62	1695748.19	14280702.82	39°19'33.703"N	80°48'15.619"W	1438.61	24.721	3.97	0.00	3.97	
7836.00	90.280	335.550	6438.65	1052.60	1391.81	559.30	1695705.89	14280787.82	39°19'34.544"N	80°48'16.155"W	1499.98	21.893	4.22	0.17	4.22	
7931.00	90.280	333.260	6438.19	1147.53	1477.48	518.27	1695664.87	14280873.46	39°19'35.392"N	80°48'16.675"W	1565.74	19.330	2.41	0.00	-2.41	
8026.00	90.150	334.860	6437.83	1242.45	1562.90	476.71	1695623.33	14280958.85	39°19'36.237"N	80°48'17.201"W	1633.99	16.963	1.69	-0.14	1.68	
8121.00	89.780	336.940	6437.89	1337.44	1649.62	437.92	1695584.56	14281045.53	39°19'37.095"N	80°48'17.692"W	1706.75	14.867	2.22	-0.39	2.19	
8217.00	90.180	339.000	6437.92	1433.40	1738.60	401.92	1695548.57	14281134.48	39°19'37.975"N	80°48'18.148"W	1784.45	13.017	2.19	0.42	2.15	
8312.00	90.150	336.800	6437.65	1528.36	1826.62	366.18	1695512.84	14281222.46	39°19'38.846"N	80°48'18.601"W	1862.96	11.336	2.32	-0.03	-2.32	
8407.00	90.220	332.790	6437.34	1623.30	1912.55	325.73	1695472.41	14281308.36	39°19'39.696"N	80°48'19.113"W	1940.09	9.665	4.22	0.07	-4.22	
8502.00	89.780	336.570	6437.34	1718.24	1998.41	285.11	1695431.81	14281394.18	39°19'40.546"N	80°48'19.627"W	2018.65	8.119	4.01	-0.46	3.98	
8597.00	90.220	339.490	6437.34	1813.19	2086.50	249.57	1695396.28	14281482.24	39°19'41.417"N	80°48'20.077"W	2101.38	6.821	3.11	0.46	3.07	
8692.00	90.150	339.550	6437.03	1908.05	2175.50	216.33	1695363.06	14281571.20	39°19'42.297"N	80°48'20.498"W	2186.23	5.679	0.10	-0.07	0.06	
8788.00	89.720	340.390	6437.14	2003.87	2265.69	183.45	1695330.19	14281661.36	39°19'43.189"N	80°48'20.914"W	2273.10	4.629	0.98	-0.45	0.88	

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (207 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
8883.00	90.150	343.360	6437.25	2098.44	2355.97	153.90	1695300.65	14281751.60	39°19'44.082"N	80°48'21.287"W	2360.99	3.737	3.16	0.45	3.13	
8978.00	90.460	343.390	6436.74	2192.75	2446.99	126.72	1695273.48	14281842.59	39°19'44.983"N	80°48'21.631"W	2450.27	2.965	0.33	0.33	0.03	
9073.00	89.600	341.440	6436.69	2287.23	2537.55	98.02	1695244.79	14281933.11	39°19'45.878"N	80°48'21.993"W	2539.44	2.212	2.24	-0.91	-2.05	
9168.00	90.120	336.510	6436.93	2382.11	2626.20	63.95	1695210.73	14282021.72	39°19'46.755"N	80°48'22.425"W	2626.97	1.395	5.22	0.55	-5.19	
9264.00	90.060	330.770	6436.78	2477.95	2712.18	21.34	1695168.14	14282107.67	39°19'47.606"N	80°48'22.965"W	2712.26	0.451	5.98	-0.06	-5.98	
9359.00	90.030	332.100	6436.70	2572.58	2795.61	-24.08	1695122.74	14282191.07	39°19'48.431"N	80°48'23.540"W	2795.72	359.506	1.40	-0.03	1.40	
9454.00	90.150	340.360	6436.55	2667.50	2882.48	-62.34	1695084.50	14282277.90	39°19'49.291"N	80°48'24.025"W	2883.15	358.761	8.70	0.13	8.69	
9549.00	90.250	343.930	6436.22	2762.02	2972.89	-91.46	1695055.38	14282368.27	39°19'50.185"N	80°48'24.393"W	2974.29	358.238	3.76	0.11	3.76	
9644.00	90.280	335.380	6435.78	2856.78	3061.88	-124.46	1695022.40	14282457.23	39°19'51.065"N	80°48'24.810"W	3064.41	357.672	9.00	0.03	-9.00	
9739.00	90.120	335.920	6435.45	2951.77	3148.43	-163.63	1694983.25	14282543.74	39°19'51.921"N	80°48'25.307"W	3152.67	357.025	0.59	-0.17	0.57	
9834.00	90.030	338.130	6435.32	3046.76	3235.88	-200.71	1694946.18	14282631.16	39°19'52.787"N	80°48'25.776"W	3242.10	356.451	2.33	-0.09	2.33	
9929.00	89.690	341.120	6435.56	3141.60	3324.93	-233.78	1694913.12	14282720.17	39°19'53.667"N	80°48'26.195"W	3333.14	355.978	3.17	-0.36	3.15	
10025.00	90.310	342.130	6435.56	3237.21	3416.03	-264.04	1694882.87	14282811.24	39°19'54.568"N	80°48'26.577"W	3426.22	355.580	1.23	0.65	1.05	
10120.00	90.340	343.360	6435.02	3331.64	3506.75	-292.22	1694854.71	14282901.93	39°19'55.466"N	80°48'26.933"W	3518.91	355.237	1.30	0.03	1.29	
10214.00	90.310	339.580	6434.48	3425.26	3595.86	-322.09	1694824.85	14282991.00	39°19'56.347"N	80°48'27.311"W	3610.26	354.882	4.02	-0.03	-4.02	
10309.00	90.030	330.450	6434.20	3520.13	3681.88	-362.17	1694784.78	14283076.98	39°19'57.198"N	80°48'27.819"W	3699.65	354.382	9.61	-0.29	-9.61	
10404.00	90.180	330.730	6434.03	3614.63	3764.64	-408.82	1694738.15	14283159.71	39°19'58.017"N	80°48'28.410"W	3786.77	353.802	0.33	0.16	0.29	
10499.00	89.850	331.020	6434.00	3709.18	3847.63	-455.06	1694691.93	14283242.66	39°19'58.838"N	80°48'28.996"W	3874.44	353.255	0.46	-0.35	0.31	
10594.00	90.150	335.060	6434.00	3803.99	3932.28	-498.12	1694648.89	14283327.29	39°19'59.676"N	80°48'29.542"W	3963.71	352.781	4.26	0.32	4.25	
10689.00	90.060	338.180	6433.83	3898.98	4019.47	-535.81	1694611.21	14283414.44	39°20'00.538"N	80°48'30.019"W	4055.03	352.407	3.29	-0.09	3.28	
10784.00	90.090	333.830	6433.70	3993.95	4106.24	-574.44	1694572.60	14283501.18	39°20'01.397"N	80°48'30.509"W	4146.23	352.036	4.58	0.03	-4.58	
10879.00	90.250	333.930	6433.42	4088.85	4191.54	-616.26	1694530.80	14283586.44	39°20'02.241"N	80°48'31.039"W	4236.60	351.636	0.20	0.17	0.11	
10974.00	90.580	333.360	6432.73	4183.74	4276.66	-658.43	1694488.64	14283671.53	39°20'03.083"N	80°48'31.573"W	4327.05	351.247	0.69	0.35	-0.60	
11069.00	90.000	328.460	6432.25	4278.26	4359.65	-704.61	1694442.49	14283754.49	39°20'03.904"N	80°48'32.158"W	4416.23	350.819	5.19	-0.61	-5.16	
11164.00	89.880	325.930	6432.35	4372.01	4439.50	-756.07	1694391.04	14283834.30	39°20'04.694"N	80°48'32.811"W	4503.42	350.335	2.67	-0.13	-2.66	
11259.00	89.940	327.310	6432.50	4465.61	4518.82	-808.34	1694338.80	14283913.59	39°20'05.479"N	80°48'33.474"W	4590.55	349.858	1.45	0.06	1.45	
11354.00	89.940	332.830	6432.60	4559.99	4601.12	-855.72	1694291.43	14283995.86	39°20'06.294"N	80°48'34.075"W	4680.02	349.464	5.81	0.00	5.81	
11449.00	90.000	332.740	6432.65	4654.79	4685.60	-899.17	1694248.00	14284080.31	39°20'07.130"N	80°48'34.626"W	4771.10	349.137	0.11	0.06	-0.09	
11545.00	89.720	334.020	6432.89	4750.65	4771.43	-942.18	1694205.01	14284166.09	39°20'07.979"N	80°48'35.171"W	4863.56	348.830	1.36	-0.29	1.33	
11640.00	89.820	333.120	6433.27	4845.53	4856.50	-984.46	1694162.74	14284251.13	39°20'08.820"N	80°48'35.707"W	4955.27	348.541	0.95	0.11	-0.95	

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (207 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
11735.00	90.000	340.930	6433.42	4940.45	4943.89	-1021.52	1694125.70	14284338.49	39°20'09.685"N	80°48'36.176"W	5048.32	348.326	8.22	0.19	8.22	
11831.00	90.060	344.330	6433.37	5035.88	5035.50	-1050.17	1694097.06	14284430.06	39°20'10.591"N	80°48'36.538"W	5143.84	348.220	3.54	0.06	3.54	
11926.00	90.180	345.490	6433.17	5129.85	5127.22	-1074.90	1694072.34	14284521.75	39°20'11.498"N	80°48'36.851"W	5238.69	348.160	1.23	0.13	1.22	
12021.00	90.180	348.180	6432.87	5223.28	5219.72	-1096.54	1694050.71	14284614.21	39°20'12.413"N	80°48'37.123"W	5333.65	348.136	2.83	0.00	2.83	
12116.00	91.260	348.610	6431.67	5316.22	5312.77	-1115.65	1694031.61	14284707.22	39°20'13.333"N	80°48'37.364"W	5428.64	348.141	1.22	1.14	0.45	
12211.00	89.970	336.970	6430.65	5410.47	5403.35	-1143.70	1694003.56	14284797.77	39°20'14.229"N	80°48'37.719"W	5523.06	348.049	12.33	-1.36	-12.25	
12306.00	89.970	337.400	6430.70	5505.47	5490.92	-1180.54	1693966.74	14284885.30	39°20'15.095"N	80°48'38.185"W	5616.39	347.866	0.45	0.00	0.45	
12402.00	90.120	336.800	6430.63	5601.46	5579.35	-1217.90	1693929.40	14284973.70	39°20'15.970"N	80°48'38.658"W	5710.73	347.686	0.64	0.16	-0.63	
12497.00	90.000	337.700	6430.53	5696.45	5666.96	-1254.63	1693892.68	14285061.27	39°20'16.836"N	80°48'39.124"W	5804.18	347.516	0.96	-0.13	0.95	
12592.00	90.030	331.840	6430.50	5791.37	5752.86	-1295.11	1693852.22	14285147.13	39°20'17.686"N	80°48'39.636"W	5896.84	347.313	6.17	0.03	-6.17	
12687.00	90.090	331.070	6430.40	5886.00	5836.31	-1340.51	1693806.84	14285230.55	39°20'18.512"N	80°48'40.212"W	5988.28	347.064	0.81	0.06	-0.81	
12782.00	89.910	332.890	6430.40	5980.71	5920.17	-1385.13	1693762.23	14285314.38	39°20'19.342"N	80°48'40.778"W	6080.05	346.831	1.93	-0.19	1.92	
12877.00	89.750	333.610	6430.68	6075.56	6005.00	-1427.89	1693719.49	14285399.18	39°20'20.181"N	80°48'41.320"W	6172.43	346.624	0.78	-0.17	0.76	
12972.00	90.680	332.130	6430.33	6170.37	6089.55	-1471.21	1693676.19	14285483.69	39°20'21.018"N	80°48'41.869"W	6264.74	346.418	1.84	0.98	-1.56	
13067.00	90.310	331.600	6429.51	6265.06	6173.32	-1516.01	1693631.41	14285567.43	39°20'21.846"N	80°48'42.437"W	6356.74	346.203	0.68	-0.39	-0.56	
13162.00	90.830	337.070	6428.56	6359.95	6258.91	-1557.13	1693590.30	14285652.98	39°20'22.693"N	80°48'42.958"W	6449.70	346.029	5.78	0.55	5.76	
13257.00	90.280	335.210	6427.64	6454.94	6345.78	-1595.56	1693551.89	14285739.82	39°20'23.553"N	80°48'43.445"W	6543.30	345.886	2.04	-0.58	-1.96	
13352.00	90.250	334.050	6427.20	6549.89	6431.62	-1636.26	1693511.20	14285825.62	39°20'24.402"N	80°48'43.960"W	6636.49	345.726	1.22	-0.03	-1.22	
13447.00	90.250	334.140	6426.79	6644.81	6517.07	-1677.76	1693469.71	14285911.04	39°20'25.247"N	80°48'44.486"W	6729.57	345.563	0.09	0.00	0.09	
13542.00	90.400	337.450	6426.25	6739.79	6603.70	-1716.71	1693430.79	14285997.64	39°20'26.104"N	80°48'44.980"W	6823.19	345.428	3.49	0.16	3.48	
13637.00	90.400	342.110	6425.58	6834.60	6692.82	-1749.53	1693397.97	14286086.72	39°20'26.986"N	80°48'45.395"W	6917.71	345.350	4.91	0.00	4.91	
13732.00	90.460	338.210	6424.87	6929.38	6782.16	-1781.77	1693365.75	14286176.03	39°20'27.869"N	80°48'45.803"W	7012.31	345.280	4.11	0.06	-4.11	
13827.00	90.340	338.190	6424.21	7024.33	6870.37	-1817.05	1693330.49	14286264.20	39°20'28.742"N	80°48'46.250"W	7106.59	345.186	0.13	-0.13	-0.02	
13922.00	90.310	341.990	6423.67	7119.13	6959.67	-1849.39	1693298.15	14286353.47	39°20'29.625"N	80°48'46.659"W	7201.20	345.119	4.00	-0.03	4.00	
14017.00	90.460	342.610	6423.03	7213.63	7050.17	-1878.28	1693269.28	14286443.93	39°20'30.520"N	80°48'47.024"W	7296.08	345.082	0.67	0.16	0.65	
14112.00	90.370	335.850	6422.34	7308.46	7138.94	-1911.94	1693235.63	14286532.67	39°20'31.398"N	80°48'47.451"W	7390.54	345.007	7.12	-0.09	-7.12	
14206.00	89.970	337.230	6422.06	7402.46	7225.17	-1949.36	1693198.22	14286618.86	39°20'32.251"N	80°48'47.925"W	7483.52	344.901	1.53	-0.43	1.47	
14302.00	90.180	336.990	6421.94	7498.45	7313.61	-1986.71	1693160.90	14286707.27	39°20'33.126"N	80°48'48.398"W	7578.65	344.803	0.33	0.22	-0.25	
14396.00	90.310	339.550	6421.53	7592.40	7400.92	-2021.50	1693126.11	14286794.54	39°20'33.990"N	80°48'48.838"W	7672.04	344.723	2.73	0.14	2.72	
14491.00	90.150	340.800	6421.15	7687.19	7490.29	-2053.72	1693093.91	14286883.87	39°20'34.874"N	80°48'49.246"W	7766.74	344.667	1.33	-0.17	1.32	

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (207 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
14587.00	90.770	339.400	6420.38	7782.99	7580.55	-2086.40	1693061.25	14286974.10	39°20'35.767"N	80°48'49.659"W	7862.43	344.611	1.59	0.65	-1.46	
14682.00	90.150	334.120	6419.62	7877.96	7667.81	-2123.87	1693023.79	14287061.32	39°20'36.630"N	80°48'50.134"W	7956.51	344.518	5.60	-0.65	-5.56	
14777.00	90.000	333.580	6419.50	7972.86	7753.09	-2165.74	1692981.94	14287146.57	39°20'37.474"N	80°48'50.665"W	8049.89	344.393	0.59	-0.16	-0.57	
14872.00	89.820	334.220	6419.64	8067.76	7838.40	-2207.53	1692940.16	14287231.84	39°20'38.318"N	80°48'51.195"W	8143.32	344.271	0.70	-0.19	0.67	
14968.00	89.910	335.040	6419.87	8163.71	7925.14	-2248.66	1692899.05	14287318.55	39°20'39.176"N	80°48'51.716"W	8237.98	344.159	0.86	0.09	0.85	
15063.00	89.880	334.890	6420.04	8258.68	8011.21	-2288.86	1692858.86	14287404.59	39°20'40.027"N	80°48'52.225"W	8331.77	344.055	0.16	-0.03	-0.16	
15158.00	89.750	337.770	6420.35	8353.67	8098.21	-2327.00	1692820.74	14287491.55	39°20'40.888"N	80°48'52.708"W	8425.91	343.968	3.03	-0.14	3.03	
15253.00	90.220	338.920	6420.38	8448.61	8186.50	-2362.05	1692785.70	14287579.81	39°20'41.761"N	80°48'53.152"W	8520.46	343.906	1.31	0.49	1.21	
15348.00	89.850	336.030	6420.32	8543.59	8274.25	-2398.44	1692749.32	14287667.52	39°20'42.629"N	80°48'53.613"W	8614.85	343.835	3.07	-0.39	-3.04	
15443.00	89.780	335.080	6420.62	8638.58	8360.73	-2437.76	1692710.03	14287753.97	39°20'43.485"N	80°48'54.111"W	8708.87	343.745	1.00	-0.07	-1.00	
15538.00	89.820	331.890	6420.96	8733.44	8445.73	-2480.16	1692667.64	14287838.93	39°20'44.326"N	80°48'54.649"W	8802.36	343.635	3.36	0.04	-3.36	
15634.00	89.850	335.880	6421.23	8829.32	8531.91	-2522.41	1692625.41	14287925.08	39°20'45.178"N	80°48'55.184"W	8896.97	343.530	4.16	0.03	4.16	
15729.00	90.000	339.510	6421.36	8924.28	8619.79	-2558.46	1692589.37	14288012.92	39°20'46.048"N	80°48'55.641"W	8991.46	343.468	3.82	0.16	3.82	
15823.00	90.090	337.430	6421.28	9018.22	8707.22	-2592.95	1692554.89	14288100.32	39°20'46.913"N	80°48'56.078"W	9085.10	343.417	2.21	0.10	-2.21	
15918.00	90.150	337.270	6421.08	9113.21	8794.89	-2629.54	1692518.32	14288187.96	39°20'47.780"N	80°48'56.541"W	9179.58	343.354	0.18	0.06	-0.17	
16013.00	90.150	336.220	6420.84	9208.20	8882.18	-2667.05	1692480.83	14288275.20	39°20'48.643"N	80°48'57.016"W	9273.95	343.287	1.11	0.00	-1.11	
16108.00	90.060	337.990	6420.66	9303.19	8969.69	-2704.00	1692443.88	14288362.68	39°20'49.509"N	80°48'57.484"W	9368.40	343.224	1.87	-0.09	1.86	
16203.00	90.220	339.230	6420.43	9398.12	9058.14	-2738.65	1692409.25	14288451.10	39°20'50.384"N	80°48'57.923"W	9463.09	343.178	1.32	0.17	1.31	
16298.00	89.970	337.480	6420.27	9493.07	9146.44	-2773.69	1692374.23	14288539.36	39°20'51.257"N	80°48'58.367"W	9557.76	343.130	1.86	-0.26	-1.84	
16393.00	90.000	337.200	6420.30	9588.06	9234.11	-2810.29	1692337.64	14288627.00	39°20'52.124"N	80°48'58.831"W	9652.28	343.073	0.30	0.03	-0.29	
16489.00	90.090	332.040	6420.22	9683.97	9320.81	-2851.42	1692296.52	14288713.67	39°20'52.982"N	80°48'59.352"W	9747.21	342.990	5.38	0.09	-5.37	
16583.00	89.910	326.940	6420.22	9777.25	9401.77	-2899.13	1692248.84	14288794.59	39°20'53.783"N	80°48'59.957"W	9838.61	342.862	5.43	-0.19	-5.43	
16678.00	89.660	328.260	6420.58	9871.11	9481.98	-2950.03	1692197.95	14288874.77	39°20'54.577"N	80°49'00.603"W	9930.29	342.718	1.41	-0.26	1.39	
16773.00	90.150	332.510	6420.74	9965.56	9564.55	-2996.97	1692151.04	14288957.31	39°20'55.394"N	80°49'01.198"W	10023.09	342.602	4.50	0.52	4.47	
16869.00	90.090	336.590	6420.53	10061.48	9651.21	-3038.21	1692109.81	14289043.94	39°20'56.251"N	80°49'01.721"W	10118.14	342.526	4.25	-0.06	4.25	
16919.00	89.970	336.840	6420.51	10111.48	9697.14	-3057.98	1692090.05	14289089.85	39°20'56.706"N	80°49'01.971"W	10167.88	342.497	0.55	-0.24	0.50	
16943.00	89.970	336.840	6420.52	10135.48	9719.21	-3067.42	1692080.62	14289111.90	39°20'56.924"N	80°49'02.091"W	10191.76	342.484	0.00	0.00	0.00	Projected MD @ TD: 16943'

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# Actual Wellpath Report

Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Jay Unit 1H AWB Ref Wellpath: Jay Unit 1H AWP Proj: 16943'									
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	0.12	-0.13
17.5in Open Hole	112.00	548.00	436.00	112.00	548.00	0.12	-0.13	0.42	-0.74
13.375in Casing Surface	32.00	548.00	516.00	32.00	548.00	0.00	0.00	0.42	-0.74
12.25in Open Hole	548.00	2628.00	2080.00	548.00	2590.95	0.42	-0.74	-32.39	340.04
9.625in Casing Intermediate	32.00	2628.00	2596.00	32.00	2590.95	0.00	0.00	-32.39	340.04
8.75in Open Hole	2628.00	6527.00	3899.00	2590.95	6304.27	-32.39	340.04	221.69	1068.60
8.5in Open Hole	6527.00	16943.00	10416.00	6304.27	6420.52	221.69	1068.60	9719.21	-3067.42
5.5in Casing Production	32.00	16943.00	16911.00	32.00	6420.52	0.00	0.00	9719.21	-3067.42

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jay Unit 1H POE Rev-2	6394.00	381.20	1019.74	1696166.15	14279777.61	39°19'24.546"N	80°48'10.324"W	point
Jay Unit 1H BHL Rev-2	6434.00	9763.33	-3058.78	1692089.25	14289156.01	39°20'57.360"N	80°49'01.980"W	point
Jay Unit 1H LP Rev-1	6434.00	589.60	937.30	1696083.74	14279985.93	39°19'26.607"N	80°48'11.367"W	point

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Jay Unit 1H AWP Proj: 16943'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

WELLPATH COMPOSITION - Ref Wellbore: Jay Unit 1H AWB Ref Wellpath: Jay Unit 1H AWP Proj: 16943'				
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	522.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2"> (100'-505')	Jay Unit 1H AWB
522.00	793.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4"> (505')(596'-776')	Jay Unit 1H AWB
793.00	2556.00	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4"> (776')(831'-2539')	Jay Unit 1H AWB
2556.00	6460.00	ISCWSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4"> (2539')(2649'-6443')	Jay Unit 1H AWB
6460.00	16919.00	BHI AutoTrak Curve (Short)	05 BH ATCurve <8-1/2"> (6460')(6505'-16919')	Jay Unit 1H AWB
16919.00	16943.00	Blind Drilling (std)	Projection to bit	Jay Unit 1H AWB





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Area	Doddridge Co., WV	Well	Jay Unit 1H
Field	Doddridge	Wellbore	Jay Unit 1H AWB
Facility	Middle Pad		

COMMENTS
<p><b>Wellpath general comments</b>                      API: 47-017-06822-0000                      BH Job #: 9047129                      Rig: Frontier 32                      Duration: 03/05/18 - 03/08/18                      Gyrodata MS Gyro &lt;17-1/2"&gt; (100'-505')                      Gyrodata MS Gyro &lt;12-1/4"&gt; (505')(596'-776')                      Directional ONE MWD &lt;12-1/4"&gt; (776')(831'-2539')                      Directional ONE MWD &lt;8-3/4"&gt; (2539')(2649'-6443')                      BH ATCurve &lt;8-1/2"&gt; (6460')(6505'-16919')                      Burket: 6570'MD / 6329'TVD                      Tully: 6632'MD / 6359'TVD                      Hamilton: 6711'MD / 6391'TVD                      POE Marcellus: 6740'MD / 6400'TVD                      Projected MD @ TD: 16943'</p>

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