



# Actual Wellpath Report

Clipper Unit 2H AWP Proj: 21109'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #11
Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

## REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999607	Report Generated	10/25/2019 at 11:26:15 AM
Convergence at slot	0.17° East	Database/Source file	WA_MPL_EasternUS_Defn/Clipper_Unit_2H_AWP_Proj_21109_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-18.82	67.42	1715872.09	14274014.41	39°18'27.062"N	80°43'59.691"W
Facility Reference Pt			1715804.69	14274033.23	39°18'27.250"N	80°44'00.548"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

## WELLPATH DATUM

Calculation method	Minimum curvature	H&P 317 (RKB) to Facility Vertical Datum	1308.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1308.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #11)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.43°

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Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

WELLPATH DATA (248 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.00	205.580	0.00	0.00	0.00	0.00	1715872.09	14274014.41	39°18'27.062"N	80°43'59.691"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.00	205.580	25.50	0.00	0.00	0.00	1715872.09	14274014.41	39°18'27.062"N	80°43'59.691"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.360	205.580	50.00	0.06	-0.07	-0.03	1715872.06	14274014.34	39°18'27.061"N	80°43'59.691"W	0.08	205.580	1.47	1.47	-630.29	Gyrodata MS Gyro <17-1/2">(50'-539')
75.00	0.360	207.050	75.00	0.17	-0.21	-0.10	1715871.99	14274014.20	39°18'27.060"N	80°43'59.692"W	0.23	206.073	0.04	0.00	5.88	
100.00	0.440	212.160	100.00	0.28	-0.36	-0.19	1715871.90	14274014.05	39°18'27.058"N	80°43'59.693"W	0.41	207.690	0.35	0.32	-20.44	
125.00	0.350	199.850	125.00	0.40	-0.51	-0.27	1715871.82	14274013.90	39°18'27.057"N	80°43'59.694"W	0.58	207.400	0.49	-0.36	-49.24	
150.00	0.330	184.980	150.00	0.53	-0.66	-0.30	1715871.79	14274013.75	39°18'27.055"N	80°43'59.695"W	0.72	204.427	0.36	-0.08	-59.48	
175.00	0.300	173.220	175.00	0.66	-0.79	-0.30	1715871.79	14274013.62	39°18'27.054"N	80°43'59.695"W	0.85	200.516	0.28	-0.12	-47.04	
200.00	0.310	192.550	200.00	0.78	-0.93	-0.30	1715871.79	14274013.48	39°18'27.053"N	80°43'59.695"W	0.97	198.199	0.41	0.04	77.32	
225.00	0.360	199.830	225.00	0.90	-1.07	-0.35	1715871.74	14274013.34	39°18'27.051"N	80°43'59.695"W	1.12	197.973	0.26	0.20	29.12	
250.00	0.290	193.860	250.00	1.02	-1.20	-0.39	1715871.70	14274013.21	39°18'27.050"N	80°43'59.696"W	1.26	197.883	0.31	-0.28	-23.88	
275.00	0.360	177.350	275.00	1.14	-1.34	-0.40	1715871.69	14274013.07	39°18'27.049"N	80°43'59.696"W	1.40	196.573	0.46	0.28	-66.04	
300.00	0.170	167.030	300.00	1.26	-1.46	-0.39	1715871.70	14274012.96	39°18'27.048"N	80°43'59.696"W	1.51	194.893	0.78	-0.76	-41.28	
325.00	0.280	162.410	325.00	1.35	-1.55	-0.36	1715871.73	14274012.86	39°18'27.047"N	80°43'59.696"W	1.59	193.087	0.45	0.44	-18.48	
350.00	0.310	165.110	349.99	1.48	-1.67	-0.32	1715871.77	14274012.74	39°18'27.045"N	80°43'59.695"W	1.70	190.973	0.13	0.12	10.80	
375.00	0.250	162.920	374.99	1.60	-1.79	-0.29	1715871.80	14274012.62	39°18'27.044"N	80°43'59.695"W	1.81	189.231	0.24	-0.24	-8.76	
400.00	0.340	162.630	399.99	1.73	-1.91	-0.25	1715871.84	14274012.50	39°18'27.043"N	80°43'59.694"W	1.93	187.527	0.36	0.36	-1.16	
425.00	0.340	161.760	424.99	1.88	-2.06	-0.21	1715871.88	14274012.36	39°18'27.042"N	80°43'59.694"W	2.07	185.766	0.02	0.00	-3.48	
450.00	0.470	155.450	449.99	2.06	-2.22	-0.14	1715871.95	14274012.19	39°18'27.040"N	80°43'59.693"W	2.22	183.654	0.55	0.52	-25.24	
475.00	0.490	164.380	474.99	2.27	-2.42	-0.07	1715872.02	14274012.00	39°18'27.038"N	80°43'59.692"W	2.42	181.668	0.31	0.08	35.72	
539.00	0.490	155.890	538.99	2.81	-2.93	0.12	1715872.21	14274011.48	39°18'27.033"N	80°43'59.690"W	2.93	177.748	0.11	0.00	-13.27	
664.00	2.000	77.720	663.96	3.58	-2.95	2.47	1715874.55	14274011.46	39°18'27.033"N	80°43'59.660"W	3.85	140.140	1.57	1.21	-62.54	APS EM <12-1/4">(539')(664'-2674')
755.00	3.530	76.840	754.85	4.02	-1.98	6.74	1715878.83	14274012.43	39°18'27.042"N	80°43'59.605"W	7.03	106.334	1.68	1.68	-0.97	
931.00	5.510	77.510	930.30	5.43	1.08	20.27	1715892.35	14274015.49	39°18'27.072"N	80°43'59.433"W	20.30	86.937	1.13	1.13	0.38	
1031.00	8.140	81.940	1029.58	7.23	3.12	31.97	1715904.05	14274017.52	39°18'27.092"N	80°43'59.284"W	32.12	84.434	2.68	2.63	4.43	
1126.00	10.400	70.110	1123.34	8.26	6.98	46.70	1715918.77	14274021.38	39°18'27.130"N	80°43'59.097"W	47.21	81.502	3.10	2.38	-12.45	
1221.00	11.900	68.060	1216.55	7.48	13.55	63.85	1715935.91	14274027.96	39°18'27.194"N	80°43'58.878"W	65.27	78.014	1.63	1.58	-2.16	
1316.00	14.680	67.450	1308.99	6.07	21.83	84.05	1715956.11	14274036.23	39°18'27.275"N	80°43'58.621"W	86.84	75.440	2.93	2.93	-0.64	
1411.00	19.090	70.180	1399.88	4.90	31.72	109.80	1715981.84	14274046.12	39°18'27.372"N	80°43'58.293"W	114.29	73.886	4.72	4.64	2.87	
1505.00	22.420	70.920	1487.76	4.40	42.80	141.21	1716013.24	14274057.19	39°18'27.481"N	80°43'57.893"W	147.55	73.140	3.55	3.54	0.79	

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Area	Doddridge Co., WV		Well	Clipper Unit 2H
Field	Doddridge		Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad			

WELLPATH DATA (248 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
1600.00	24.050	69.430	1575.06	3.57	55.52	176.46	1716048.48	14274069.91	39°18'27.606"N	80°43'57.444"W	184.98	72.534	1.82	1.72	-1.57	
1695.00	27.450	71.750	1660.61	3.01	69.18	215.39	1716087.39	14274083.57	39°18'27.739"N	80°43'56.948"W	226.22	72.193	3.73	3.58	2.44	
1790.00	28.590	71.020	1744.48	2.97	83.43	257.68	1716129.67	14274097.81	39°18'27.879"N	80°43'56.410"W	270.85	72.059	1.25	1.20	-0.77	
1885.00	27.660	69.410	1828.26	2.03	98.58	299.82	1716171.79	14274112.95	39°18'28.028"N	80°43'55.873"W	315.61	71.799	1.26	-0.98	-1.69	
1980.00	27.830	66.100	1912.34	-0.81	115.32	340.73	1716212.69	14274129.69	39°18'28.192"N	80°43'55.352"W	359.72	71.802	1.63	0.18	-3.48	
2074.00	26.200	60.620	1996.10	-6.74	134.40	378.89	1716250.83	14274148.75	39°18'28.379"N	80°43'54.866"W	402.02	70.470	3.16	-1.73	-5.83	
2169.00	27.150	58.490	2080.99	-15.52	156.01	415.64	1716287.57	14274170.36	39°18'28.592"N	80°43'54.397"W	443.96	69.426	1.42	1.00	-2.24	
2264.00	28.420	57.510	2165.03	-25.82	179.49	453.19	1716325.10	14274193.83	39°18'28.823"N	80°43'53.919"W	487.44	68.394	1.42	1.34	-1.03	
2359.00	26.430	54.840	2249.35	-37.29	203.81	489.55	1716361.44	14274218.14	39°18'29.062"N	80°43'53.455"W	530.28	67.397	2.46	-2.09	-2.81	
2454.00	24.400	53.000	2335.16	-49.54	227.80	522.51	1716394.39	14274242.11	39°18'29.298"N	80°43'53.035"W	570.01	66.445	2.29	-2.14	-1.94	
2549.00	22.420	51.240	2422.33	-61.99	250.95	552.31	1716424.18	14274265.26	39°18'29.526"N	80°43'52.655"W	606.65	65.565	2.21	-2.08	-1.85	
2643.00	21.560	50.580	2509.49	-74.33	273.14	579.63	1716451.49	14274287.44	39°18'29.745"N	80°43'52.307"W	640.76	64.769	0.95	-0.91	-0.70	
2674.00	20.400	50.420	2538.44	-78.29	280.20	588.19	1716460.05	14274294.50	39°18'29.814"N	80°43'52.198"W	651.52	64.528	3.75	-3.74	-0.52	
2760.00	18.380	44.030	2619.57	-89.91	299.50	609.18	1716481.02	14274313.79	39°18'30.004"N	80°43'51.930"W	678.82	63.819	3.40	-2.35	-7.43	APS EM <8-3/4">(2674')(2760'-4642')
2837.00	18.790	49.200	2692.56	-100.19	316.33	627.00	1716498.84	14274330.62	39°18'30.170"N	80°43'51.702"W	702.28	63.228	2.20	0.53	6.71	
2932.00	25.160	67.090	2780.71	-107.52	334.23	657.25	1716529.08	14274348.51	39°18'30.346"N	80°43'51.317"W	737.35	63.045	9.66	6.71	18.83	
3030.00	26.280	75.000	2869.02	-107.74	347.96	697.41	1716569.22	14274362.23	39°18'30.481"N	80°43'50.806"W	779.39	63.484	3.68	1.14	8.07	
3125.00	26.900	75.280	2953.97	-104.99	358.86	738.51	1716610.31	14274373.13	39°18'30.587"N	80°43'50.282"W	821.08	64.083	0.67	0.65	0.29	
3219.00	27.630	74.120	3037.53	-102.54	370.23	780.04	1716651.82	14274384.49	39°18'30.698"N	80°43'49.754"W	863.44	64.610	0.96	0.78	-1.23	
3314.00	28.210	69.880	3121.48	-102.11	383.98	822.32	1716694.08	14274398.24	39°18'30.833"N	80°43'49.215"W	907.55	64.970	2.18	0.61	-4.46	
3409.00	26.650	66.080	3205.80	-104.71	400.35	862.88	1716734.63	14274414.60	39°18'30.994"N	80°43'48.698"W	951.23	65.110	2.47	-1.64	-4.00	
3504.00	27.400	66.400	3290.43	-108.61	417.74	902.39	1716774.12	14274431.98	39°18'31.164"N	80°43'48.195"W	994.39	65.159	0.80	0.79	0.34	
3599.00	27.100	63.210	3374.89	-113.62	436.24	941.74	1716813.45	14274450.48	39°18'31.346"N	80°43'47.694"W	1037.87	65.145	1.57	-0.32	-3.36	
3694.00	27.460	60.670	3459.33	-120.81	456.73	980.15	1716851.85	14274470.96	39°18'31.547"N	80°43'47.204"W	1081.34	65.016	1.28	0.38	-2.67	
3789.00	25.640	55.890	3544.32	-130.40	478.99	1016.27	1716887.96	14274493.21	39°18'31.766"N	80°43'46.744"W	1123.49	64.765	2.95	-1.92	-5.03	
3883.00	26.130	59.070	3628.89	-140.28	501.03	1050.87	1716922.54	14274515.24	39°18'31.983"N	80°43'46.303"W	1164.20	64.509	1.57	0.52	3.38	
3978.00	27.260	60.450	3713.76	-148.91	522.52	1087.74	1716959.40	14274536.72	39°18'32.194"N	80°43'45.833"W	1206.73	64.342	1.36	1.19	1.45	
4073.00	25.090	57.530	3799.02	-157.89	544.06	1123.67	1716995.31	14274558.26	39°18'32.406"N	80°43'45.375"W	1248.45	64.164	2.66	-2.28	-3.07	
4168.00	23.130	60.430	3885.73	-166.29	564.09	1156.89	1717028.52	14274578.27	39°18'32.603"N	80°43'44.952"W	1287.09	64.007	2.41	-2.06	3.05	
4263.00	22.920	64.960	3973.17	-171.94	581.13	1189.88	1717061.50	14274595.31	39°18'32.771"N	80°43'44.532"W	1324.21	63.970	1.88	-0.22	4.77	

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Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

## WELLPATH DATA (248 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
4358.00	26.410	76.080	4059.53	-172.31	594.05	1227.18	1717098.79	14274608.22	39°18'32.897"N	80°43'44.056"W	1363.40	64.170	6.10	3.67	11.71	
4452.00	27.010	74.750	4143.50	-169.38	604.69	1268.07	1717139.66	14274618.86	39°18'33.001"N	80°43'43.536"W	1404.87	64.505	0.90	0.64	-1.41	
4547.00	26.450	69.510	4228.36	-168.84	617.77	1308.70	1717180.28	14274631.94	39°18'33.129"N	80°43'43.018"W	1447.19	64.730	2.55	-0.59	-5.52	
4642.00	22.780	64.880	4314.72	-171.64	632.99	1345.19	1717216.75	14274647.15	39°18'33.279"N	80°43'42.554"W	1486.68	64.800	4.36	-3.86	-4.87	
4694.00	20.730	62.020	4363.02	-174.30	641.59	1362.44	1717233.99	14274655.74	39°18'33.363"N	80°43'42.334"W	1505.94	64.784	4.44	-3.94	-5.50	BH AT Curve <8-1/2">(4642')(4694'-21076')
4779.00	21.420	60.980	4442.33	-179.57	656.17	1389.29	1717260.83	14274670.32	39°18'33.507"N	80°43'41.992"W	1536.46	64.718	0.92	0.81	-1.22	
4874.00	23.490	57.950	4530.13	-187.13	674.64	1420.52	1717292.04	14274688.78	39°18'33.688"N	80°43'41.594"W	1572.58	64.596	2.50	2.18	-3.19	
4969.00	25.590	55.850	4616.54	-197.06	696.21	1453.55	1717325.06	14274710.34	39°18'33.900"N	80°43'41.173"W	1611.68	64.407	2.39	2.21	-2.21	
5064.00	27.290	54.120	4701.61	-209.05	720.49	1488.17	1717359.68	14274734.61	39°18'34.139"N	80°43'40.731"W	1653.41	64.166	1.96	1.79	-1.82	
5158.00	27.260	54.010	4785.15	-221.91	745.77	1523.05	1717394.54	14274759.88	39°18'34.388"N	80°43'40.287"W	1695.84	63.911	0.06	-0.03	-0.12	
5253.00	27.140	57.620	4869.65	-233.59	770.16	1558.96	1717430.43	14274784.27	39°18'34.628"N	80°43'39.829"W	1738.82	63.710	1.74	-0.13	3.80	
5348.00	27.230	58.770	4954.16	-243.53	793.03	1595.84	1717467.30	14274807.13	39°18'34.853"N	80°43'39.359"W	1782.02	63.575	0.56	0.09	1.21	
5443.00	27.180	61.660	5038.66	-251.97	814.60	1633.52	1717504.97	14274828.69	39°18'35.065"N	80°43'38.879"W	1825.37	63.496	1.39	-0.05	3.04	
5538.00	27.180	63.100	5123.17	-258.80	834.72	1671.97	1717543.40	14274848.80	39°18'35.263"N	80°43'38.389"W	1868.75	63.470	0.69	0.00	1.52	
5633.00	27.300	64.150	5207.63	-264.70	854.04	1710.93	1717582.34	14274868.11	39°18'35.453"N	80°43'37.892"W	1912.24	63.473	0.52	0.13	1.11	
5728.00	24.130	62.630	5293.21	-270.44	872.47	1747.79	1717619.19	14274886.53	39°18'35.634"N	80°43'37.423"W	1953.45	63.472	3.41	-3.34	-1.60	
5822.00	25.730	62.840	5378.45	-276.42	890.61	1783.01	1717654.39	14274904.67	39°18'35.812"N	80°43'36.974"W	1993.07	63.458	1.70	1.70	0.22	
5917.00	25.630	64.840	5464.07	-281.86	908.76	1819.95	1717691.32	14274922.81	39°18'35.990"N	80°43'36.503"W	2034.23	63.466	0.92	-0.11	2.11	
6012.00	25.210	64.480	5549.87	-286.67	926.22	1856.81	1717728.16	14274940.26	39°18'36.162"N	80°43'36.034"W	2075.00	63.489	0.47	-0.44	-0.38	
6107.00	25.160	63.480	5635.84	-291.91	943.95	1893.14	1717764.48	14274957.99	39°18'36.336"N	80°43'35.571"W	2115.42	63.498	0.45	-0.05	-1.05	
6201.00	25.230	62.860	5720.90	-297.66	962.01	1928.84	1717800.17	14274976.04	39°18'36.513"N	80°43'35.116"W	2155.43	63.492	0.29	0.07	-0.66	
6296.00	25.220	63.570	5806.84	-303.44	980.25	1964.99	1717836.30	14274994.28	39°18'36.692"N	80°43'34.655"W	2195.92	63.487	0.32	-0.01	0.75	
6391.00	25.150	63.160	5892.81	-309.11	998.38	2001.12	1717872.42	14275012.39	39°18'36.870"N	80°43'34.195"W	2236.35	63.485	0.20	-0.07	-0.43	
6486.00	25.130	62.100	5978.81	-315.29	1016.93	2036.96	1717908.25	14275030.94	39°18'37.053"N	80°43'33.738"W	2276.70	63.470	0.47	-0.02	-1.12	
6581.00	25.130	62.720	6064.82	-321.61	1035.62	2072.72	1717943.99	14275049.62	39°18'37.236"N	80°43'33.283"W	2317.04	63.451	0.28	0.00	0.65	
6676.00	25.150	63.110	6150.82	-327.59	1053.99	2108.65	1717979.91	14275067.99	39°18'37.417"N	80°43'32.825"W	2357.39	63.442	0.18	0.02	0.41	
6771.00	25.070	63.170	6236.84	-333.40	1072.21	2144.61	1718015.86	14275086.19	39°18'37.596"N	80°43'32.367"W	2397.71	63.437	0.09	-0.08	0.06	
6865.00	25.830	80.780	6321.84	-332.94	1084.49	2182.65	1718053.88	14275098.48	39°18'37.716"N	80°43'31.882"W	2437.23	63.579	8.06	0.81	18.73	
6960.00	21.620	95.280	6408.87	-322.48	1086.20	2220.56	1718091.77	14275100.18	39°18'37.732"N	80°43'31.400"W	2471.99	63.934	7.54	-4.43	15.26	
7055.00	23.590	112.830	6496.67	-302.81	1077.20	2255.55	1718126.75	14275091.19	39°18'37.642"N	80°43'30.955"W	2499.58	64.472	7.37	2.07	18.47	

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# Actual Wellpath Report

Clipper Unit 2H AWP Proj: 21109'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #11
Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

## WELLPATH DATA (248 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
7150.00	28.200	125.710	6592.17	-271.98	1056.70	2291.34	1718162.53	14275070.69	39°18'37.438"N	80°43'30.500"W	2523.27	65.242	7.63	4.85	13.56	
7244.00	33.260	132.820	6662.97	-231.27	1026.19	2328.32	1718199.49	14275040.19	39°18'37.136"N	80°43'30.031"W	2544.43	66.215	6.62	5.38	7.56	
7338.00†	39.483	136.853	6738.64	-181.41	986.82	2367.71	1718238.86	14275000.84	39°18'36.745"N	80°43'29.532"W	2565.12	67.375	7.09	6.62	4.29	Middlesex: 7338' MD
7339.00	39.550	136.890	6739.41	-180.83	986.35	2368.14	1718239.30	14275000.37	39°18'36.741"N	80°43'29.526"W	2565.35	67.388	7.09	6.69	3.70	
7434.00	45.760	142.240	6809.26	-121.10	937.30	2409.71	1718280.84	14274951.34	39°18'36.255"N	80°43'28.999"W	2585.58	68.745	7.56	6.54	5.63	
7529.00	53.280	149.290	6870.94	-51.59	877.54	2450.08	1718321.20	14274891.60	39°18'35.663"N	80°43'28.488"W	2602.49	70.294	9.71	7.92	7.42	
7548.00†	54.642	150.561	6882.12	-36.53	864.24	2457.78	1718328.89	14274878.31	39°18'35.531"N	80°43'28.390"W	2605.30	70.627	8.98	7.17	6.69	Burkett: 7548' MD
7599.00†	58.360	153.771	6910.26	5.43	826.64	2477.60	1718348.71	14274840.72	39°18'35.159"N	80°43'28.140"W	2611.87	71.549	8.98	7.29	6.29	Tully: 7599' MD
7624.00	60.210	155.250	6923.03	26.76	807.24	2486.85	1718357.96	14274821.33	39°18'34.967"N	80°43'28.023"W	2614.58	72.016	8.98	7.40	5.92	
7671.00	62.820	157.870	6945.45	67.92	769.34	2503.27	1718374.37	14274783.44	39°18'34.592"N	80°43'27.815"W	2618.82	72.916	7.41	5.55	5.57	
7718.00	66.550	159.590	6965.54	110.35	729.75	2518.67	1718389.76	14274743.87	39°18'34.200"N	80°43'27.621"W	2622.25	73.842	8.60	7.94	3.66	
7765.00	70.930	160.020	6982.58	154.12	688.65	2533.78	1718404.87	14274702.79	39°18'33.793"N	80°43'27.430"W	2625.70	74.795	9.36	9.32	0.91	
7766.00†	70.986	160.063	6982.91	155.06	687.76	2534.10	1718405.19	14274701.90	39°18'33.784"N	80°43'27.426"W	2625.78	74.816	6.91	5.58	4.31	Marcellus POE: 7766' MD
7813.00	73.620	162.060	6997.20	199.83	645.42	2548.63	1718419.71	14274659.57	39°18'33.365"N	80°43'27.243"W	2629.08	75.789	6.91	5.60	4.25	
7860.00	77.630	162.090	7008.86	245.35	602.11	2562.64	1718433.72	14274616.28	39°18'32.937"N	80°43'27.067"W	2632.42	76.778	8.53	8.53	0.06	
7908.00	81.440	162.660	7017.58	292.53	557.13	2576.93	1718448.00	14274571.32	39°18'32.492"N	80°43'26.887"W	2636.46	77.801	8.02	7.94	1.19	
7955.00	84.730	161.750	7023.24	339.18	512.71	2591.18	1718462.25	14274526.92	39°18'32.053"N	80°43'26.707"W	2641.42	78.808	7.26	7.00	-1.94	
8003.00	88.180	161.530	7026.20	387.08	467.25	2606.27	1718477.33	14274481.47	39°18'31.603"N	80°43'26.517"W	2647.83	79.836	7.20	7.19	-0.46	
8050.00	89.940	161.950	7026.98	434.07	422.62	2621.00	1718492.05	14274436.86	39°18'31.161"N	80°43'26.331"W	2654.85	80.840	3.85	3.74	0.89	
8097.00	90.150	162.640	7026.94	481.07	377.85	2635.29	1718506.34	14274392.11	39°18'30.718"N	80°43'26.151"W	2662.24	81.841	1.53	0.45	1.47	
8192.00	90.120	161.960	7026.71	576.06	287.35	2664.17	1718535.21	14274301.64	39°18'29.823"N	80°43'25.787"W	2679.62	83.844	0.72	-0.03	-0.72	
8287.00	90.340	161.660	7026.33	671.05	197.09	2693.83	1718564.85	14274211.43	39°18'28.930"N	80°43'25.413"W	2701.03	85.815	0.39	0.23	-0.32	
8381.00	90.460	158.570	7025.68	765.01	108.71	2725.80	1718596.81	14274123.08	39°18'28.056"N	80°43'25.010"W	2727.96	87.716	3.29	0.13	-3.29	
8476.00	90.400	157.210	7024.96	859.83	20.70	2761.55	1718632.55	14274035.10	39°18'27.185"N	80°43'24.559"W	2761.63	89.570	1.43	-0.06	-1.43	
8571.00	90.430	158.740	7024.28	954.65	-67.36	2797.18	1718668.16	14273947.08	39°18'26.313"N	80°43'24.109"W	2797.99	91.380	1.61	0.03	1.61	
8665.00	90.340	159.780	7023.64	1048.58	-155.27	2830.46	1718701.43	14273859.21	39°18'25.443"N	80°43'23.689"W	2834.72	93.140	1.11	-0.10	1.11	
8760.00	90.430	160.030	7023.01	1143.54	-244.48	2863.10	1718734.06	14273770.03	39°18'24.561"N	80°43'23.277"W	2873.52	94.881	0.28	0.09	0.26	
8855.00	90.310	161.220	7022.39	1238.53	-334.10	2894.62	1718765.56	14273680.45	39°18'23.674"N	80°43'22.880"W	2913.83	96.584	1.26	-0.13	1.25	
8950.00	90.400	163.100	7021.80	1333.52	-424.52	2923.72	1718794.65	14273590.05	39°18'22.779"N	80°43'22.513"W	2954.38	98.262	1.98	0.09	1.98	
9045.00	90.400	163.950	7021.14	1428.45	-515.62	2950.66	1718821.58	14273498.99	39°18'21.878"N	80°43'22.174"W	2995.37	99.912	0.89	0.00	0.89	

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Clipper Unit 2H AWP Proj: 21109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #11
Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

WELLPATH DATA (248 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
9140.00	91.480	164.470	7019.58	1523.32	-607.02	2976.51	1718847.42	14273407.63	39°18'20.974"N	80°43'21.849"W	3037.77	101.527	1.28	1.14	0.55	
9234.00	90.490	163.760	7017.97	1617.20	-697.42	3002.23	1718873.13	14273317.27	39°18'20.080"N	80°43'21.525"W	3082.17	103.078	1.30	-1.05	-0.76	
9329.00	90.340	162.960	7017.28	1712.15	-788.43	3029.43	1718900.33	14273226.29	39°18'19.179"N	80°43'21.182"W	3130.35	104.588	0.86	-0.16	-0.84	
9424.00	90.400	162.690	7016.66	1807.12	-879.20	3057.49	1718928.37	14273135.56	39°18'18.281"N	80°43'20.829"W	3181.38	106.043	0.29	0.06	-0.28	
9519.00	90.710	161.390	7015.74	1902.11	-969.56	3086.78	1718957.65	14273045.23	39°18'17.387"N	80°43'20.460"W	3235.47	107.438	1.41	0.33	-1.37	
9614.00	90.680	159.880	7014.59	1997.09	-1059.18	3118.27	1718989.13	14272955.65	39°18'16.501"N	80°43'20.063"W	3293.25	108.761	1.59	-0.03	-1.59	
9708.00	90.520	157.480	7013.61	2090.97	-1146.73	3152.45	1719023.29	14272868.13	39°18'15.634"N	80°43'19.631"W	3354.54	109.989	2.56	-0.17	-2.55	
9803.00	91.140	156.210	7012.23	2185.65	-1234.07	3189.80	1719060.63	14272780.83	39°18'14.770"N	80°43'19.160"W	3420.20	111.150	1.49	0.65	-1.34	
9898.00	90.830	156.660	7010.60	2280.27	-1321.13	3227.77	1719098.59	14272693.80	39°18'13.908"N	80°43'18.680"W	3487.68	112.259	0.58	-0.33	0.47	
9993.00	90.950	159.850	7009.12	2375.11	-1409.35	3262.96	1719133.76	14272605.62	39°18'13.035"N	80°43'18.236"W	3554.32	113.361	3.36	0.13	3.36	
10088.00	90.680	161.380	7007.77	2470.08	-1498.95	3294.49	1719165.27	14272516.05	39°18'12.149"N	80°43'17.838"W	3619.46	114.465	1.64	-0.28	1.61	
10183.00	90.620	163.100	7006.69	2565.06	-1589.42	3323.46	1719194.24	14272425.62	39°18'11.254"N	80°43'17.473"W	3683.97	115.559	1.81	-0.06	1.81	
10277.00	90.220	162.840	7006.00	2659.03	-1679.29	3350.99	1719221.75	14272335.78	39°18'10.365"N	80°43'17.127"W	3748.22	116.617	0.51	-0.43	-0.28	
10372.00	90.220	161.120	7005.64	2754.02	-1769.63	3380.38	1719251.13	14272245.48	39°18'09.471"N	80°43'16.756"W	3815.56	117.632	1.81	0.00	-1.81	
10467.00	90.090	161.490	7005.38	2849.02	-1859.62	3410.83	1719281.57	14272155.53	39°18'08.581"N	80°43'16.372"W	3884.83	118.600	0.41	-0.14	0.39	
10562.00	89.910	162.340	7005.38	2944.01	-1949.92	3440.32	1719311.05	14272065.26	39°18'07.687"N	80°43'16.001"W	3954.49	119.544	0.91	-0.19	0.89	
10657.00	90.620	163.310	7004.94	3038.98	-2040.68	3468.37	1719339.09	14271974.53	39°18'06.789"N	80°43'15.648"W	4024.17	120.471	1.27	0.75	1.02	
10752.00	90.000	163.280	7004.43	3133.93	-2131.67	3495.68	1719366.38	14271883.58	39°18'05.889"N	80°43'15.304"W	4094.36	121.375	0.65	-0.65	-0.03	
10847.00	89.880	162.760	7004.53	3228.89	-2222.53	3523.42	1719394.12	14271792.76	39°18'04.990"N	80°43'14.954"W	4165.83	122.243	0.56	-0.13	-0.55	
10941.00	89.690	162.350	7004.88	3322.87	-2312.21	3551.60	1719422.28	14271703.12	39°18'04.103"N	80°43'14.600"W	4237.94	123.065	0.48	-0.20	-0.44	
11036.00	89.970	161.650	7005.16	3417.87	-2402.56	3580.96	1719451.63	14271612.81	39°18'03.209"N	80°43'14.230"W	4312.25	123.859	0.79	0.29	-0.74	
11131.00	89.970	162.410	7005.21	3512.86	-2492.92	3610.26	1719480.93	14271522.48	39°18'02.315"N	80°43'13.860"W	4387.33	124.625	0.80	0.00	0.80	
11226.00	90.550	164.900	7004.78	3607.78	-2584.07	3637.00	1719507.65	14271431.36	39°18'01.413"N	80°43'13.524"W	4461.52	125.394	2.69	0.61	2.62	
11321.00	90.400	165.480	7003.99	3702.57	-2675.91	3661.28	1719531.92	14271339.56	39°18'00.505"N	80°43'13.219"W	4534.92	126.162	0.63	-0.16	0.61	
11416.00	90.280	165.400	7003.43	3797.34	-2767.86	3685.16	1719555.79	14271247.64	39°17'59.595"N	80°43'12.918"W	4608.85	126.910	0.15	-0.13	-0.08	
11511.00	90.620	165.360	7002.68	3892.11	-2859.78	3709.14	1719579.76	14271155.76	39°17'58.686"N	80°43'12.617"W	4683.60	127.633	0.36	0.36	-0.04	
11605.00	90.920	163.890	7001.42	3985.95	-2950.41	3734.06	1719604.67	14271065.17	39°17'57.790"N	80°43'12.304"W	4759.00	128.313	1.60	0.32	-1.56	
11700.00	90.340	162.960	7000.38	4080.89	-3041.45	3761.16	1719631.76	14270974.16	39°17'56.889"N	80°43'11.963"W	4837.02	128.961	1.15	-0.61	-0.98	
11795.00	90.370	161.620	6999.79	4175.87	-3131.95	3790.06	1719660.65	14270883.70	39°17'55.994"N	80°43'11.599"W	4916.67	129.569	1.41	0.03	-1.41	
11890.00	90.620	160.860	6998.97	4270.87	-3221.89	3820.61	1719691.19	14270793.79	39°17'55.104"N	80°43'11.213"W	4997.76	130.141	0.84	0.26	-0.80	

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #11
Area	Doddridge Co., WV		Well	Clipper Unit 2H
Field	Doddridge		Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad			

WELLPATH DATA (248 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
11985.00	90.310	160.210	6998.20	4365.85	-3311.46	3852.26	1719722.83	14270704.26	39°17'54.218"N	80°43'10.814"W	5079.93	130.683	0.76	-0.33	-0.68	
12080.00	91.230	159.450	6996.92	4460.81	-3400.63	3885.02	1719755.57	14270615.13	39°17'53.335"N	80°43'10.401"W	5163.10	131.196	1.26	0.97	-0.80	
12174.00	90.950	157.470	6995.13	4554.66	-3488.04	3919.52	1719790.06	14270527.75	39°17'52.470"N	80°43'09.966"W	5246.81	131.666	2.13	-0.30	-2.11	
12269.00	90.280	156.710	6994.11	4649.38	-3575.54	3956.50	1719827.02	14270440.28	39°17'51.604"N	80°43'09.499"W	5332.76	132.105	1.07	-0.71	-0.80	
12364.00	90.310	158.550	6993.62	4744.17	-3663.39	3992.65	1719863.16	14270352.47	39°17'50.735"N	80°43'09.042"W	5418.64	132.537	1.94	0.03	1.94	
12459.00	90.220	159.900	6993.18	4839.09	-3752.21	4026.35	1719896.85	14270263.69	39°17'49.856"N	80°43'08.617"W	5503.68	132.982	1.42	-0.09	1.42	
12554.00	90.520	160.240	6992.57	4934.06	-3841.51	4058.73	1719929.22	14270174.41	39°17'48.972"N	80°43'08.209"W	5588.43	133.425	0.48	0.32	0.36	
12648.00	90.370	160.370	6991.84	5028.04	-3930.01	4090.41	1719960.88	14270085.95	39°17'48.097"N	80°43'07.810"W	5672.43	133.854	0.21	-0.16	0.14	
12743.00	90.430	160.410	6991.18	5123.02	-4019.50	4122.29	1719992.75	14269996.50	39°17'47.211"N	80°43'07.408"W	5757.58	134.277	0.08	0.06	0.04	
12838.00	90.370	160.360	6990.51	5218.01	-4108.99	4154.18	1720024.63	14269907.05	39°17'46.326"N	80°43'07.005"W	5843.03	134.687	0.08	-0.06	-0.05	
12933.00	90.400	160.580	6989.87	5312.99	-4198.52	4185.94	1720056.37	14269817.55	39°17'45.440"N	80°43'06.605"W	5928.71	135.086	0.23	0.03	0.23	
13028.00	90.490	160.440	6989.14	5407.98	-4288.07	4217.63	1720088.06	14269728.03	39°17'44.554"N	80°43'06.205"W	6014.65	135.474	0.18	0.09	-0.15	
13123.00	90.400	159.540	6988.40	5502.94	-4377.33	4250.14	1720120.55	14269638.81	39°17'43.671"N	80°43'05.796"W	6101.21	135.845	0.95	-0.09	-0.95	
13218.00	90.770	160.860	6987.43	5597.91	-4466.71	4282.32	1720152.71	14269549.47	39°17'42.786"N	80°43'05.390"W	6187.87	136.207	1.44	0.39	1.39	
13312.00	90.680	161.870	6986.24	5691.90	-4555.77	4312.35	1720182.74	14269460.44	39°17'41.905"N	80°43'05.011"W	6273.07	136.572	1.08	-0.10	1.07	
13407.00	90.550	162.730	6985.22	5786.89	-4646.27	4341.23	1720211.61	14269369.98	39°17'41.010"N	80°43'04.648"W	6358.78	136.944	0.92	-0.14	0.91	
13502.00	90.520	162.830	6984.33	5881.86	-4737.01	4369.36	1720239.72	14269279.28	39°17'40.112"N	80°43'04.293"W	6444.42	137.312	0.11	-0.03	0.11	
13597.00	90.580	163.190	6983.42	5976.81	-4827.86	4397.11	1720267.47	14269188.46	39°17'39.213"N	80°43'03.944"W	6530.15	137.673	0.38	0.06	0.38	
13692.00	90.460	163.110	6982.56	6071.77	-4918.78	4424.65	1720294.99	14269097.58	39°17'38.314"N	80°43'03.597"W	6616.03	138.027	0.15	-0.13	-0.08	
13787.00	89.820	162.170	6982.33	6166.75	-5009.45	4453.00	1720323.32	14269006.94	39°17'37.417"N	80°43'03.240"W	6702.52	138.365	1.20	-0.67	-0.99	
13882.00	90.430	162.640	6982.12	6261.73	-5100.00	4481.71	1720352.03	14268916.43	39°17'36.521"N	80°43'02.879"W	6789.39	138.692	0.81	0.64	0.49	
13977.00	90.490	162.900	6981.36	6356.70	-5190.73	4509.85	1720380.16	14268825.73	39°17'35.623"N	80°43'02.524"W	6876.23	139.015	0.28	0.06	0.27	
14071.00	90.340	162.830	6980.68	6450.67	-5280.56	4537.55	1720407.84	14268735.94	39°17'34.735"N	80°43'02.176"W	6962.30	139.328	0.18	-0.16	-0.07	
14166.00	90.520	163.300	6979.96	6545.63	-5371.44	4565.22	1720435.50	14268645.10	39°17'33.835"N	80°43'01.827"W	7049.36	139.639	0.53	0.19	0.49	
14261.00	90.400	163.000	6979.20	6640.58	-5462.36	4592.75	1720463.03	14268554.21	39°17'32.936"N	80°43'01.481"W	7136.58	139.943	0.34	-0.13	-0.32	
14356.00	90.060	161.490	6978.82	6735.57	-5552.83	4621.72	1720491.98	14268463.78	39°17'32.041"N	80°43'01.116"W	7224.56	140.229	1.63	-0.36	-1.59	
14451.00	90.490	162.880	6978.36	6830.56	-5643.27	4650.79	1720521.04	14268373.37	39°17'31.146"N	80°43'00.750"W	7312.75	140.507	1.53	0.45	1.46	
14546.00	90.310	162.350	6977.70	6925.53	-5733.93	4679.17	1720549.41	14268282.75	39°17'30.249"N	80°43'00.393"W	7400.85	140.784	0.59	-0.19	-0.56	
14640.00	90.650	163.600	6976.91	7019.49	-5823.80	4706.69	1720576.92	14268192.91	39°17'29.360"N	80°43'00.046"W	7487.96	141.055	1.38	0.36	1.33	
14735.00	90.400	162.890	6976.04	7114.44	-5914.76	4734.08	1720604.29	14268101.98	39°17'28.460"N	80°42'59.701"W	7576.01	141.327	0.79	-0.26	-0.75	

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# Actual Wellpath Report

Clipper Unit 2H AWP Proj: 21109'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #11
Area	Doddridge Co., WV		Well	Clipper Unit 2H
Field	Doddridge		Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad			

WELLPATH DATA (248 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
14830.00	90.400	162.350	6975.38	7209.42	-6005.42	4762.45	1720632.66	14268011.36	39°17'27.563"N	80°42'59.344"W	7664.60	141.585	0.57	0.00	-0.57	
14925.00	90.430	161.920	6974.69	7304.41	-6095.84	4791.60	1720661.79	14267920.98	39°17'26.669"N	80°42'58.977"W	7753.62	141.831	0.45	0.03	-0.45	
15020.00	90.180	161.280	6974.18	7399.41	-6185.98	4821.58	1720691.76	14267830.87	39°17'25.777"N	80°42'58.599"W	7843.09	142.066	0.72	-0.26	-0.67	
15114.00	90.000	160.900	6974.04	7493.40	-6274.91	4852.04	1720722.22	14267741.98	39°17'24.897"N	80°42'58.215"W	7932.01	142.287	0.45	-0.19	-0.40	
15209.00	90.430	160.980	6973.68	7588.40	-6364.70	4883.07	1720753.23	14267652.23	39°17'24.009"N	80°42'57.824"W	8022.08	142.504	0.46	0.45	0.08	
15304.00	89.970	160.430	6973.35	7683.39	-6454.36	4914.46	1720784.60	14267562.60	39°17'23.121"N	80°42'57.429"W	8112.38	142.714	0.75	-0.48	-0.58	
15399.00	90.400	160.340	6973.04	7778.37	-6543.85	4946.35	1720816.48	14267473.15	39°17'22.236"N	80°42'57.027"W	8202.95	142.915	0.46	0.45	-0.09	
15494.00	90.370	158.860	6972.40	7873.32	-6632.89	4979.46	1720849.58	14267384.15	39°17'21.355"N	80°42'56.609"W	8293.99	143.104	1.56	-0.03	-1.56	
15589.00	90.340	156.970	6971.81	7968.14	-6720.91	5015.18	1720885.28	14267296.16	39°17'20.484"N	80°42'56.158"W	8385.86	143.270	1.99	-0.03	-1.99	
15684.00	89.480	153.650	6971.96	8062.58	-6807.21	5054.85	1720924.95	14267209.89	39°17'19.630"N	80°42'55.657"W	8478.78	143.403	3.61	-0.91	-3.49	
15778.00	89.880	155.180	6972.49	8155.87	-6891.99	5095.45	1720965.52	14267125.14	39°17'18.790"N	80°42'55.144"W	8571.06	143.523	1.68	0.43	1.63	
15873.00	89.880	157.720	6972.69	8250.51	-6979.07	5133.40	1721003.46	14267038.10	39°17'17.929"N	80°42'54.665"W	8663.67	143.664	2.67	0.00	2.67	
15968.00	90.030	161.240	6972.76	8345.44	-7068.03	5166.70	1721036.74	14266949.18	39°17'17.048"N	80°42'54.245"W	8755.10	143.833	3.71	0.16	3.71	
16063.00	90.370	161.400	6972.43	8440.44	-7158.02	5197.12	1721067.16	14266859.22	39°17'16.158"N	80°42'53.862"W	8845.76	144.018	0.40	0.36	0.17	
16158.00	90.340	160.730	6971.84	8535.43	-7247.88	5227.95	1721097.97	14266769.39	39°17'15.269"N	80°42'53.473"W	8936.62	144.197	0.71	-0.03	-0.71	
16252.00	90.280	160.580	6971.33	8629.42	-7336.57	5259.09	1721129.10	14266680.74	39°17'14.391"N	80°42'53.081"W	9026.81	144.366	0.17	-0.06	-0.16	
16347.00	90.250	160.590	6970.89	8724.41	-7426.17	5290.66	1721160.66	14266591.18	39°17'13.505"N	80°42'52.683"W	9118.07	144.533	0.03	-0.03	0.01	
16442.00	90.340	160.600	6970.40	8819.40	-7515.77	5322.23	1721192.21	14266501.61	39°17'12.618"N	80°42'52.285"W	9209.39	144.696	0.10	0.09	0.01	
16537.00	90.220	161.110	6969.94	8914.39	-7605.52	5353.38	1721223.36	14266411.90	39°17'11.730"N	80°42'51.892"W	9300.68	144.859	0.55	-0.13	0.54	
16632.00	90.280	161.810	6969.53	9009.39	-7695.59	5383.59	1721253.55	14266321.87	39°17'10.839"N	80°42'51.512"W	9391.76	145.025	0.74	0.06	0.74	
16726.00	90.370	161.720	6968.99	9103.39	-7784.86	5413.00	1721282.95	14266232.63	39°17'09.956"N	80°42'51.141"W	9481.81	145.188	0.14	0.10	-0.10	
16821.00	90.370	162.030	6968.38	9198.38	-7875.15	5442.56	1721312.49	14266142.38	39°17'09.062"N	80°42'50.769"W	9572.84	145.351	0.33	0.00	0.33	
16916.00	90.310	162.370	6967.82	9293.37	-7965.60	5471.60	1721341.52	14266051.96	39°17'08.168"N	80°42'50.404"W	9663.80	145.515	0.36	-0.06	0.36	
17011.00	90.310	164.060	6967.30	9388.32	-8056.55	5499.03	1721368.94	14265961.05	39°17'07.268"N	80°42'50.058"W	9754.35	145.684	1.78	0.00	1.78	
17106.00	90.150	164.730	6966.92	9483.19	-8148.04	5524.58	1721394.49	14265869.59	39°17'06.363"N	80°42'49.737"W	9844.37	145.862	0.73	-0.17	0.71	
17201.00	90.430	165.070	6966.44	9578.02	-8239.76	5549.33	1721419.23	14265777.91	39°17'05.455"N	80°42'49.426"W	9934.22	146.040	0.46	0.29	0.36	
17295.00	90.580	164.350	6965.61	9671.86	-8330.43	5574.12	1721444.00	14265687.27	39°17'04.558"N	80°42'49.114"W	10023.32	146.212	0.78	0.16	-0.77	
17390.00	90.400	162.790	6964.80	9766.79	-8421.54	5600.99	1721470.86	14265596.20	39°17'03.657"N	80°42'48.776"W	10114.02	146.373	1.65	-0.19	-1.64	
17485.00	90.370	164.020	6964.16	9861.73	-8512.58	5628.12	1721497.98	14265505.19	39°17'02.756"N	80°42'48.435"W	10204.89	146.529	1.30	-0.03	1.29	
17580.00	90.460	163.800	6963.47	9956.63	-8603.86	5654.45	1721524.30	14265413.95	39°17'01.853"N	80°42'48.104"W	10295.59	146.687	0.25	0.09	-0.23	

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# Actual Wellpath Report

Clipper Unit 2H AWP Proj: 21109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #11
Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

WELLPATH DATA (248 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
17675.00	90.400	163.980	6962.76	10051.54	-8695.13	5680.81	1721550.65	14265322.72	39°17'00.951"N	80°42'47.772"W	10386.38	146.842	0.20	-0.06	0.19	
17770.00	90.680	162.910	6961.86	10146.48	-8786.18	5707.87	1721577.71	14265231.70	39°17'00.050"N	80°42'47.432"W	10477.44	146.991	1.16	0.29	-1.13	
17864.00	90.620	161.490	6960.80	10240.46	-8875.67	5736.61	1721606.43	14265142.25	39°16'59.164"N	80°42'47.070"W	10568.17	147.124	1.51	-0.06	-1.51	
17959.00	90.030	157.890	6960.26	10335.40	-8964.75	5769.58	1721639.38	14265053.20	39°16'58.283"N	80°42'46.654"W	10660.90	147.235	3.84	-0.62	-3.79	
18054.00	90.340	158.510	6959.95	10430.25	-9052.96	5804.85	1721674.65	14264965.03	39°16'57.410"N	80°42'46.209"W	10754.18	147.332	0.73	0.33	0.65	
18149.00	90.370	161.140	6959.36	10525.20	-9142.12	5837.62	1721707.40	14264875.91	39°16'56.528"N	80°42'45.796"W	10846.94	147.440	2.77	0.03	2.77	
18243.00	90.310	161.760	6958.80	10619.20	-9231.23	5867.52	1721737.29	14264786.83	39°16'55.646"N	80°42'45.419"W	10938.16	147.559	0.66	-0.06	0.66	
18338.00	90.340	163.790	6958.27	10714.17	-9321.97	5895.65	1721765.41	14264696.13	39°16'54.748"N	80°42'45.065"W	11029.86	147.689	2.14	0.03	2.14	
18433.00	90.370	165.340	6957.68	10809.02	-9413.54	5920.93	1721790.68	14264604.60	39°16'53.842"N	80°42'44.748"W	11120.79	147.831	1.63	0.03	1.63	
18528.00	90.220	166.120	6957.19	10903.75	-9505.60	5944.35	1721814.09	14264512.57	39°16'52.932"N	80°42'44.453"W	11211.23	147.980	0.84	-0.16	0.82	
18623.00	90.220	165.710	6956.82	10998.46	-9597.75	5967.47	1721837.20	14264420.46	39°16'52.020"N	80°42'44.163"W	11301.65	148.128	0.43	0.00	-0.43	
18718.00	90.180	166.540	6956.49	11093.14	-9689.97	5990.25	1721859.97	14264328.27	39°16'51.108"N	80°42'43.877"W	11392.04	148.276	0.87	-0.04	0.87	
18812.00	90.490	166.230	6955.94	11186.79	-9781.33	6012.38	1721882.09	14264236.95	39°16'50.204"N	80°42'43.600"W	11481.42	148.422	0.47	0.33	-0.33	
18907.00	91.540	163.180	6954.26	11281.60	-9872.94	6037.43	1721907.13	14264145.38	39°16'49.298"N	80°42'43.285"W	11572.62	148.554	3.39	1.11	-3.21	
19002.00	90.030	159.220	6952.96	11376.57	-9962.84	6068.03	1721937.72	14264055.51	39°16'48.409"N	80°42'42.899"W	11665.30	148.656	4.46	-1.59	-4.17	
19097.00	90.120	156.630	6952.83	11471.39	-10050.87	6103.73	1721973.41	14263967.52	39°16'47.538"N	80°42'42.449"W	11759.06	148.730	2.73	0.09	-2.73	
19192.00	90.180	156.170	6952.58	11566.02	-10137.92	6141.77	1722011.43	14263880.50	39°16'46.676"N	80°42'41.969"W	11853.22	148.792	0.49	0.06	-0.48	
19287.00	90.120	158.210	6952.34	11660.75	-10225.49	6178.59	1722048.24	14263792.97	39°16'45.809"N	80°42'41.504"W	11947.20	148.858	2.15	-0.06	2.15	
19382.00	90.120	160.510	6952.14	11755.69	-10314.38	6212.08	1722081.71	14263704.11	39°16'44.930"N	80°42'41.082"W	12040.62	148.941	2.42	0.00	2.42	
19476.00	90.220	161.040	6951.86	11849.68	-10403.14	6243.03	172212.65	14263615.38	39°16'44.051"N	80°42'40.692"W	12132.63	149.032	0.57	0.11	0.56	
19571.00	90.000	160.480	6951.67	11944.67	-10492.83	6274.33	1722143.94	14263525.73	39°16'43.164"N	80°42'40.297"W	12225.66	149.122	0.63	-0.23	-0.59	
19666.00	90.060	163.270	6951.63	12039.66	-10583.11	6303.89	1722173.48	14263435.48	39°16'42.271"N	80°42'39.925"W	12318.33	149.220	2.94	0.06	2.94	
19761.00	89.940	161.850	6951.63	12134.64	-10673.74	6332.36	1722201.94	14263344.89	39°16'41.374"N	80°42'39.567"W	12410.78	149.321	1.50	-0.13	-1.49	
19856.00	90.090	158.420	6951.60	12229.60	-10763.08	6364.63	1722234.21	14263255.59	39°16'40.490"N	80°42'39.160"W	12504.09	149.402	3.61	0.16	-3.61	
19951.00	90.000	159.250	6951.53	12324.50	-10851.67	6398.93	1722268.49	14263167.03	39°16'39.613"N	80°42'38.727"W	12597.82	149.473	0.88	-0.09	0.87	
20045.00	90.150	159.610	6951.40	12418.44	-10939.67	6431.96	1722301.51	14263079.06	39°16'38.743"N	80°42'38.311"W	12690.41	149.547	0.41	0.16	0.38	
20140.00	90.180	160.300	6951.13	12513.41	-11028.92	6464.52	1722334.06	14262989.85	39°16'37.859"N	80°42'37.900"W	12783.86	149.624	0.73	0.03	0.73	
20235.00	90.250	160.490	6950.77	12608.40	-11118.41	6496.40	1722365.92	14262900.40	39°16'36.974"N	80°42'37.499"W	12877.20	149.703	0.21	0.07	0.20	
20330.00	90.520	161.460	6950.13	12703.39	-11208.22	6527.36	1722396.87	14262810.63	39°16'36.085"N	80°42'37.109"W	12970.37	149.785	1.06	0.28	1.02	
20424.00	90.620	161.900	6949.20	12797.38	-11297.45	6556.91	1722426.41	14262721.43	39°16'35.202"N	80°42'36.737"W	13062.37	149.870	0.48	0.11	0.47	

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# Actual Wellpath Report

Clipper Unit 2H AWP Proj: 21109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #11
Area	Doddridge Co., WV	Well	Clipper Unit 2H
Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

WELLPATH DATA (248 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
20519.00	90.520	163.020	6948.25	12892.36	-11388.03	6585.54	1722455.02	14262630.89	39°16'34.306"N	80°42'36.376"W	13155.09	149.960	1.18	-0.11	1.18	
20614.00	90.650	163.760	6947.28	12987.30	-11479.06	6612.69	1722482.17	14262539.89	39°16'33.406"N	80°42'36.035"W	13247.51	150.055	0.79	0.14	0.78	
20709.00	90.400	162.280	6946.41	13082.26	-11569.91	6640.43	1722509.90	14262449.08	39°16'32.507"N	80°42'35.686"W	13340.10	150.147	1.58	-0.26	-1.56	
20804.00	90.180	159.450	6945.93	13177.24	-11659.65	6671.57	1722541.02	14262359.37	39°16'31.619"N	80°42'35.293"W	13433.44	150.222	2.99	-0.23	-2.98	
20895.00	90.370	158.450	6945.50	13268.15	-11744.57	6704.26	1722573.69	14262274.48	39°16'30.779"N	80°42'34.881"W	13523.39	150.281	1.12	0.21	-1.10	
20984.00	90.370	160.940	6944.92	13357.10	-11828.04	6735.14	1722604.56	14262191.05	39°16'29.953"N	80°42'34.492"W	13611.19	150.342	2.80	0.00	2.80	
21076.00	90.370	163.400	6944.33	13449.09	-11915.61	6763.30	1722632.72	14262103.51	39°16'29.086"N	80°42'34.137"W	13701.24	150.421	2.67	0.00	2.67	
21109.00	90.370	163.400	6944.11	13482.07	-11947.23	6772.73	1722642.14	14262071.90	39°16'28.773"N	80°42'34.019"W	13733.40	150.452	0.00	0.00	0.00	Projected MD at TD: 21109'

HOLE & CASING SECTIONS - Ref Wellbore: Clipper Unit 2H AWB Ref Wellpath: Clipper Unit 2H AWP Proj: 21109'									
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start E/W (ft)	End N/S (ft)	End E/W (ft)
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.40	-0.21
17.5in Open Hole	105.50	561.70	456.20	105.50	561.69	-0.40	-0.21	-3.07	0.26
13.375in Casing Surface	25.50	561.70	536.20	25.50	561.69	0.00	0.00	-3.07	0.26
12.25in Open Hole	561.70	2743.00	2181.30	561.69	2603.45	-3.07	0.26	295.65	605.37
9.625in Casing Intermediate	25.50	2723.30	2697.80	25.50	2584.82	0.00	0.00	291.22	600.74
8.75in Open Hole	2743.00	4712.00	1969.00	2603.45	4379.85	295.65	605.37	644.60	1368.08
8.5in Open Hole	4712.00	21109.00	16397.00	4379.85	6944.11	644.60	1368.08	-11947.23	6772.73
5.5in Casing Production	25.50	21109.00	21083.50	25.50	6944.11	0.00	0.00	-11947.23	6772.73

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Field	Doddridge	Wellbore	Clipper Unit 2H AWB
Facility	George Scott Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Clipper Unit 2H - POE - Rev-1	6979.00	697.86	2531.91	1718403.00	14274712.00	39°18'33.884"N	80°43'27.454"W	point
Clipper Unit 2H - LP - Rev-1	7023.00	463.57	2610.62	1718481.68	14274477.80	39°18'31.566"N	80°43'26.461"W	point
Clipper Unit 2H - BHL - Rev-1	7023.00	-11955.14	6782.60	1722652.00	14262064.00	39°16'28.695"N	80°42'33.894"W	point

WELLPATH COMPOSITION - Ref Wellbore: Clipper Unit 2H AWB Ref Wellpath: Clipper Unit 2H AWP Proj: 21109'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.50	539.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">(50'-539')	Clipper Unit 2H AWB
539.00	2674.00	BHI NaviTrak (Axial)	02 APS EM <12-1/4">(539')(664'-2674')	Clipper Unit 2H AWB
2674.00	4642.00	BHI NaviTrak (Axial)	03 APS EM <8-3/4">(2674')(2760'-4642')	Clipper Unit 2H AWB
4642.00	21076.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(4642')(4694'-21076')	Clipper Unit 2H AWB
21076.00	21109.00	Blind Drilling (std)	Projection to bit	Clipper Unit 2H AWB

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COMMENTS
<p><b>Wellpath general comments</b> API: 47-017-06888-0000 BHI Job #: 110080299A Rig: H&amp;P 317 Duration: 10/14/2019-10/23/2019 Gyrodata MS Gyro &lt;17-1/2"&gt;(50'-539') APS EM &lt;12-1/4"&gt;(539')(664'-2674') APS EM &lt;8-3/4"&gt;(2674')(2760'-4642') BH AT Curve &lt;8-1/2"&gt;(4642')(4694'-21076') Middlesex: 7338' MD Burkett: 7548' MD Tully: 7599' MD Marcellus POE: 7766' MD Projected MD at TD: 21109'</p>

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