



ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV
 Field: Doddridge
 Facility: James Webb Pad

Slot: Slot #09
 Well: Hunter Unit 1H
 Wellbore: Hunter Unit 1H PWB



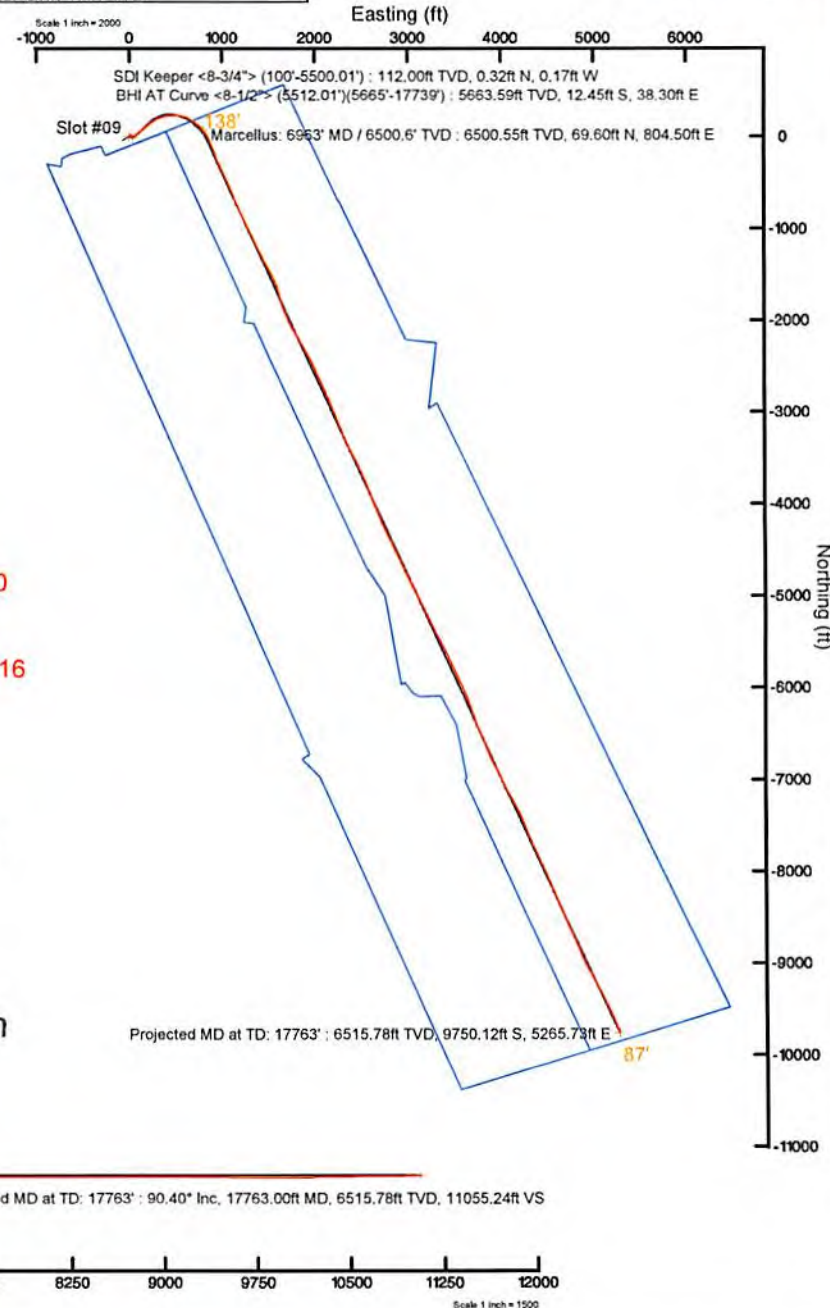
Plot reference wellpath is Hunter Unit 1H PWP EX-00	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 343 (RKB)	* Wellpath was transformed from a different geoidic datum
Measured depths are referenced to Patterson 343 (RKB)	North Reference: Grid north
Patterson 343 (RKB) to Mean Sea Level: 1016 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #09): -991 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: edriaryar on 2016-05-14
	Database: WA_MPL_EASTERNUS_Defn

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
James Webb Pad	1676270.820	14248823.840	39°14'18.837"N	80°52'24.137"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #09	18.58	34.69	1676305.500	14248842.410
			Latitude	Longitude
			39°14'19.020"N	80°52'23.695"W
Comment	Hunter Unit 1H			
Patterson 343 (RKB) to Mud line (At Slot: Slot #09)	25ft			
Mean Sea Level to Mud line (At Slot: Slot #09)	-991ft			
Patterson 343 (RKB) to Mean Sea Level	1016ft			

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #09	Hunter Unit 1H	Hunter Unit 1H AWP	Hunter Unit 1H AWP Proj: 17763'
Slot #09	Hunter Unit 1H	Hunter Unit 1H PWB	Hunter Unit 1H PWP EX-00

True Vertical Depth (ft)

Northing (ft)

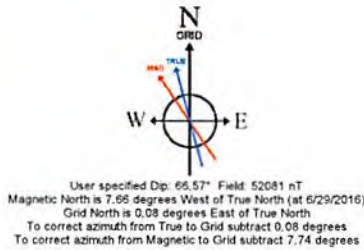


SDI Keeper <8-3/4"> (100'-5500.01') : 0.48° Inc, 112.00ft MD, 112.00ft TVD, -0.36ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #09	Hunter Unit 1H	Hunter Unit 1H AWP	Hunter Unit 1H AWP Proj: 17763'
Slot #09	Hunter Unit 1H	Hunter Unit 1H PWB	Hunter Unit 1H PWP EX-00

API: 47-017-06703-0000
 BHI Job #: 8015725
 Rig: Patterson 343
 Duration: 7/1/2016-7/6/2016

RECEIVED
 Office of Oil and Gas
 NOV 30 2017
 WV Department of
 Environmental Protection



BHI AT Curve <8-1/2"> (5512.01')(5665'-17739') : 3.03° Inc, 5665.00ft MD, 5663.59ft TVD, 27.18ft VS

Marcellus: 6963' MD / 6500.6' TVD : 78.15° Inc, 6963.00ft MD, 6500.55ft TVD, 269.63ft VS

Vertical Section (ft)
 Azimuth 155.55° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 1 of 16



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Edsaryar
Scale	0.999601	Report Generated	9/14/2016 at 5:06:00 PM
Convergence at slot	0.09° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Hunter_Unit_1H_AWP_Proj_17763_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	18.58	34.69	1676305.50	14248842.41	39°14'19.020"N	80°52'23.695"W
Facility Reference Pt			1676270.82	14248823.84	39°14'18.837"N	80°52'24.137"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 343 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 343 (RKB) to Mean Sea Level	1016.00ft
Vertical Reference Pt	Patterson 343 (RKB)	Patterson 343 (RKB) to Mud Line at Slot (Slot #09)	25.00ft
MD Reference Pt	Patterson 343 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	155.55°

RECEIVED
Office of Oil and Gas
NOV 30 2017
WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 2 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 stations) † = interpolated/extrapolated station																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
0.00	0.000	332.230	0.00	0.00	0.00	0.00	1676305.50	14248842.41	39°14'19.020"N	80°52'23.695"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	332.230	25.00	0.00	0.00	0.00	1676305.50	14248842.41	39°14'19.020"N	80°52'23.695"W	0.00	0.000	0.00	0.00	0.00	
112.00	0.480	332.230	112.00	-0.36	0.32	-0.17	1676305.33	14248842.73	39°14'19.023"N	80°52'23.698"W	0.36	332.230	0.55	0.55	-31.92	SDI Keeper <8-3/4"> (100'-5500.01')
137.00	0.330	333.520	137.00	-0.54	0.48	-0.25	1676305.25	14248842.89	39°14'19.025"N	80°52'23.699"W	0.54	332.402	0.60	-0.60	5.16	
162.00	0.260	328.520	162.00	-0.67	0.59	-0.31	1676305.19	14248843.00	39°14'19.026"N	80°52'23.699"W	0.67	332.193	0.30	-0.28	-20.00	
187.00	0.150	264.140	187.00	-0.74	0.64	-0.37	1676305.13	14248843.05	39°14'19.026"N	80°52'23.700"W	0.74	329.558	0.95	-0.44	-257.52	
212.00	0.060	226.860	212.00	-0.74	0.63	-0.42	1676305.08	14248843.03	39°14'19.026"N	80°52'23.701"W	0.75	326.313	0.43	-0.36	-149.12	
237.00	0.150	275.570	237.00	-0.75	0.62	-0.46	1676305.04	14248843.03	39°14'19.026"N	80°52'23.701"W	0.77	323.469	0.48	0.36	194.84	
262.00	0.200	285.330	262.00	-0.80	0.63	-0.53	1676304.97	14248843.07	39°14'19.026"N	80°52'23.702"W	0.83	319.924	0.23	0.20	39.04	
287.00	0.120	304.950	287.00	-0.85	0.66	-0.60	1676304.90	14248843.07	39°14'19.027"N	80°52'23.703"W	0.89	317.894	0.38	-0.32	78.48	
312.00	0.160	321.820	312.00	-0.90	0.70	-0.64	1676304.86	14248843.11	39°14'19.027"N	80°52'23.704"W	0.95	317.685	0.23	0.16	67.48	
337.00	0.120	353.400	337.00	-0.96	0.76	-0.66	1676304.84	14248843.17	39°14'19.028"N	80°52'23.704"W	1.01	318.698	0.34	-0.16	126.32	
362.00	0.090	119.190	362.00	-0.97	0.77	-0.65	1676304.85	14248843.18	39°14'19.028"N	80°52'23.704"W	1.01	319.915	0.75	-0.12	503.16	
387.00	0.120	86.370	387.00	-0.95	0.76	-0.61	1676304.89	14248843.17	39°14'19.028"N	80°52'23.703"W	0.98	321.558	0.26	0.12	-131.28	
412.00	0.090	91.320	412.00	-0.93	0.77	-0.56	1676304.94	14248843.18	39°14'19.028"N	80°52'23.703"W	0.95	323.766	0.13	-0.12	19.80	
437.00	0.050	52.050	437.00	-0.92	0.77	-0.53	1676304.97	14248843.18	39°14'19.028"N	80°52'23.702"W	0.94	325.382	0.24	-0.16	-157.08	
462.00	0.090	34.140	462.00	-0.94	0.80	-0.51	1676304.99	14248843.21	39°14'19.028"N	80°52'23.702"W	0.95	327.148	0.18	0.16	-71.64	
487.00	0.280	48.790	487.00	-0.96	0.85	-0.46	1676305.04	14248843.26	39°14'19.028"N	80°52'23.701"W	0.97	331.808	0.78	0.76	58.60	
512.00	0.480	47.010	512.00	-1.02	0.96	-0.33	1676305.17	14248843.37	39°14'19.030"N	80°52'23.700"W	1.02	340.877	0.80	0.80	-7.12	
537.00	0.630	47.170	537.00	-1.09	1.13	-0.16	1676305.34	14248843.54	39°14'19.031"N	80°52'23.697"W	1.14	352.095	0.60	0.60	0.64	
562.00	0.740	47.280	561.99	-1.19	1.33	0.06	1676305.56	14248843.74	39°14'19.033"N	80°52'23.695"W	1.33	2.697	0.44	0.44	0.44	
587.00	0.900	44.920	586.99	-1.31	1.58	0.32	1676305.82	14248843.99	39°14'19.036"N	80°52'23.691"W	1.61	11.449	0.65	0.64	-9.44	
612.00	1.050	46.640	611.99	-1.45	1.88	0.63	1676306.12	14248844.29	39°14'19.039"N	80°52'23.687"W	1.98	18.428	0.61	0.60	6.88	
637.00	1.210	47.220	636.98	-1.61	2.21	0.99	1676306.49	14248844.62	39°14'19.042"N	80°52'23.683"W	2.42	24.005	0.64	0.64	2.32	
662.00	1.370	48.300	661.98	-1.78	2.59	1.40	1676306.90	14248845.00	39°14'19.046"N	80°52'23.678"W	2.95	28.425	0.65	0.64	4.32	
687.00	1.730	48.160	686.97	-1.98	3.04	1.91	1676307.41	14248845.45	39°14'19.050"N	80°52'23.671"W	3.59	32.083	1.44	1.44	-0.56	
712.00	2.240	46.030	711.95	-2.26	3.63	2.54	1676308.04	14248846.04	39°14'19.056"N	80°52'23.663"W	4.43	34.958	2.06	2.04	-8.52	
737.00	2.570	45.030	736.93	-2.62	4.37	3.29	1676308.79	14248846.78	39°14'19.063"N	80°52'23.654"W	5.47	36.969	1.33	1.32	-4.00	
762.00	2.840	42.370	761.90	-3.06	5.22	4.10	1676309.60	14248847.63	39°14'19.072"N	80°52'23.643"W	6.64	38.150	1.19	1.08	-10.64	
787.00	3.180	41.430	786.87	-3.58	6.20	4.98	1676310.48	14248848.61	39°14'19.081"N	80°52'23.632"W	7.95	38.765	1.37	1.36	-3.76	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 3 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
812.00	3.420	41.850	811.83	-4.17	7.27	5.93	1676311.43	14248849.68	39°14'19.092"N	80°52'23.620"W	9.39	39.206	0.96	0.96	1.68	
837.00	3.640	42.980	836.78	-4.77	8.41	6.97	1676312.47	14248850.82	39°14'19.103"N	80°52'23.607"W	10.92	39.661	0.92	0.88	4.52	
862.00	3.840	42.720	861.73	-5.40	9.61	8.08	1676313.58	14248852.01	39°14'19.115"N	80°52'23.593"W	12.55	40.074	0.80	0.80	-1.04	
887.00	3.840	43.310	886.67	-6.04	10.83	9.22	1676314.72	14248853.24	39°14'19.127"N	80°52'23.578"W	14.23	40.420	0.16	0.00	2.36	
912.00	3.800	43.510	911.61	-6.67	12.04	10.37	1676315.86	14248854.45	39°14'19.139"N	80°52'23.563"W	15.89	40.734	0.17	-0.16	0.80	
937.00	3.910	42.060	936.56	-7.32	13.27	11.51	1676317.00	14248855.68	39°14'19.151"N	80°52'23.549"W	17.57	40.929	0.59	0.44	-5.80	
962.00	3.840	43.630	961.50	-7.97	14.51	12.66	1676318.15	14248856.92	39°14'19.163"N	80°52'23.534"W	19.26	41.096	0.51	-0.28	6.28	
987.00	3.630	44.690	986.45	-8.57	15.68	13.79	1676319.29	14248858.08	39°14'19.175"N	80°52'23.520"W	20.88	41.334	0.88	-0.84	4.24	
1012.00	3.380	44.380	1011.40	-9.11	16.77	14.86	1676320.36	14248859.17	39°14'19.186"N	80°52'23.506"W	22.41	41.552	1.00	-1.00	-1.24	
1037.00	3.000	43.540	1036.36	-9.63	17.77	15.83	1676321.32	14248860.17	39°14'19.195"N	80°52'23.494"W	23.80	41.695	1.53	-1.52	-3.36	
1062.00	2.700	44.960	1061.33	-10.08	18.66	16.70	1676322.19	14248861.06	39°14'19.204"N	80°52'23.483"W	25.04	41.820	1.23	-1.20	5.68	
1087.00	2.410	45.060	1086.31	-10.47	19.45	17.49	1676322.98	14248861.85	39°14'19.212"N	80°52'23.473"W	26.15	41.955	1.16	-1.16	0.40	
1112.00	2.350	42.510	1111.28	-10.85	20.20	18.20	1676323.70	14248862.60	39°14'19.219"N	80°52'23.464"W	27.19	42.026	0.49	-0.24	-10.20	
1137.00	2.120	45.340	1136.26	-11.21	20.90	18.88	1676324.37	14248863.30	39°14'19.226"N	80°52'23.455"W	28.17	42.089	1.02	-0.92	11.32	
1162.00	1.920	46.250	1161.25	-11.51	21.52	19.51	1676325.00	14248863.92	39°14'19.232"N	80°52'23.447"W	29.05	42.201	0.81	-0.80	3.64	
1187.00	1.660	44.280	1186.24	-11.78	22.07	20.07	1676325.56	14248864.47	39°14'19.238"N	80°52'23.440"W	29.82	42.283	1.07	-1.04	-7.88	
1212.00	1.370	42.250	1211.23	-12.03	22.55	20.52	1676326.01	14248864.95	39°14'19.243"N	80°52'23.434"W	30.49	42.306	1.18	-1.16	-8.12	
1237.00	1.130	43.860	1236.22	-12.24	22.94	20.89	1676326.38	14248865.35	39°14'19.247"N	80°52'23.430"W	31.03	42.318	0.97	-0.96	6.44	
1262.00	1.030	41.310	1261.22	-12.42	23.29	21.21	1676326.70	14248865.69	39°14'19.250"N	80°52'23.425"W	31.50	42.323	0.44	-0.40	-10.20	
1287.00	0.700	48.680	1286.22	-12.56	23.56	21.47	1676326.96	14248865.96	39°14'19.253"N	80°52'23.422"W	31.88	42.346	1.39	-1.32	29.48	
1312.00	0.630	51.890	1311.21	-12.64	23.75	21.70	1676327.19	14248866.15	39°14'19.254"N	80°52'23.419"W	32.17	42.417	0.32	-0.28	12.84	
1337.00	0.520	49.970	1336.21	-12.70	23.90	21.89	1676327.38	14248866.30	39°14'19.256"N	80°52'23.417"W	32.41	42.483	0.45	-0.44	-7.68	
1362.00	0.490	42.980	1361.21	-12.77	24.06	22.05	1676327.54	14248866.46	39°14'19.258"N	80°52'23.415"W	32.63	42.511	0.27	-0.12	-27.96	
1387.00	0.380	47.920	1386.21	-12.84	24.19	22.19	1676327.68	14248866.59	39°14'19.259"N	80°52'23.413"W	32.82	42.526	0.46	-0.44	19.76	
1412.00	0.290	58.940	1411.21	-12.87	24.28	22.30	1676327.79	14248866.68	39°14'19.260"N	80°52'23.412"W	32.97	42.570	0.44	-0.36	44.08	
1437.00	0.270	65.270	1436.21	-12.88	24.33	22.41	1676327.90	14248866.74	39°14'19.260"N	80°52'23.410"W	33.08	42.641	0.15	-0.08	25.32	
1462.00	0.230	71.250	1461.21	-12.87	24.38	22.51	1676328.00	14248866.78	39°14'19.261"N	80°52'23.409"W	33.18	42.721	0.19	-0.16	23.92	
1487.00	0.270	69.980	1486.21	-12.86	24.41	22.61	1676328.10	14248866.81	39°14'19.261"N	80°52'23.408"W	33.28	42.809	0.16	0.16	-5.08	
1512.00	0.290	62.660	1511.21	-12.86	24.46	22.72	1676328.22	14248866.86	39°14'19.262"N	80°52'23.406"W	33.39	42.892	0.16	0.08	-29.28	
1537.00	0.260	59.580	1536.21	-12.87	24.52	22.83	1676328.32	14248866.92	39°14'19.262"N	80°52'23.405"W	33.50	42.956	0.13	-0.12	-12.32	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 4 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
1562.00	0.270	74.460	1561.21	-12.87	24.56	22.94	1676328.43	14248866.96	39°14'19.263"N	80°52'23.404"W	33.61	43.037	0.28	0.04	59.52	
1587.00	0.240	63.450	1586.21	-12.86	24.60	23.04	1676328.53	14248867.00	39°14'19.263"N	80°52'23.402"W	33.71	43.120	0.23	-0.12	-44.04	
1612.00	0.190	81.520	1611.21	-12.85	24.63	23.13	1676328.62	14248867.03	39°14'19.263"N	80°52'23.401"W	33.79	43.194	0.33	-0.20	72.28	
1637.00	0.190	34.010	1636.21	-12.86	24.67	23.19	1676328.68	14248867.07	39°14'19.264"N	80°52'23.400"W	33.86	43.227	0.61	0.00	-190.04	
1662.00	0.150	83.350	1661.21	-12.87	24.71	23.25	1676328.74	14248867.11	39°14'19.264"N	80°52'23.400"W	33.93	43.251	0.59	-0.16	197.36	
1687.00	0.190	112.720	1686.21	-12.83	24.70	23.32	1676328.81	14248867.10	39°14'19.264"N	80°52'23.399"W	33.97	43.352	0.38	0.16	117.48	
1712.00	0.140	135.330	1711.21	-12.77	24.66	23.38	1676328.87	14248867.06	39°14'19.263"N	80°52'23.398"W	33.98	43.469	0.32	-0.20	90.44	
1737.00	0.070	159.440	1736.21	-12.73	24.62	23.40	1676328.89	14248867.02	39°14'19.263"N	80°52'23.398"W	33.97	43.544	0.33	-0.28	96.44	
1762.00	0.120	211.490	1761.21	-12.70	24.59	23.40	1676328.89	14248866.99	39°14'19.263"N	80°52'23.398"W	33.94	43.576	0.38	0.20	208.20	
1787.00	0.100	232.570	1786.21	-12.68	24.55	23.36	1676328.86	14248866.95	39°14'19.262"N	80°52'23.398"W	33.89	43.579	0.18	-0.08	84.32	
1812.00	0.130	254.820	1811.21	-12.68	24.53	23.32	1676328.81	14248866.93	39°14'19.262"N	80°52'23.399"W	33.85	43.549	0.21	0.12	89.00	
1837.00	0.210	266.210	1836.21	-12.70	24.52	23.25	1676328.74	14248866.92	39°14'19.262"N	80°52'23.400"W	33.79	43.471	0.35	0.32	45.56	
1862.00	0.310	269.530	1861.21	-12.74	24.52	23.13	1676328.62	14248866.92	39°14'19.262"N	80°52'23.401"W	33.71	43.336	0.40	0.40	13.28	
1887.00	0.320	273.190	1886.21	-12.80	24.52	23.00	1676328.49	14248866.92	39°14'19.262"N	80°52'23.403"W	33.62	43.161	0.09	0.04	14.64	
1912.00	0.420	295.490	1911.21	-12.91	24.56	22.84	1676328.33	14248866.95	39°14'19.263"N	80°52'23.405"W	33.54	42.921	0.69	0.40	89.20	
1937.00	0.330	288.810	1936.21	-13.03	24.63	22.69	1676328.18	14248867.03	39°14'19.263"N	80°52'23.407"W	33.49	42.659	0.40	-0.36	-26.72	
1962.00	0.360	285.060	1961.21	-13.13	24.67	22.55	1676328.04	14248867.07	39°14'19.264"N	80°52'23.408"W	33.42	42.427	0.15	0.12	-15.00	
1987.00	0.350	286.680	1986.20	-13.23	24.71	22.40	1676327.89	14248867.11	39°14'19.264"N	80°52'23.410"W	33.35	42.189	0.06	-0.04	6.48	
2012.00	0.350	282.060	2011.20	-13.32	24.75	22.25	1676327.74	14248867.15	39°14'19.264"N	80°52'23.412"W	33.28	41.956	0.11	0.00	-18.48	
2037.00	0.340	290.650	2036.20	-13.42	24.79	22.11	1676327.60	14248867.19	39°14'19.265"N	80°52'23.414"W	33.22	41.723	0.21	-0.04	34.36	
2062.00	0.320	275.160	2061.20	-13.51	24.83	21.97	1676327.46	14248867.23	39°14'19.265"N	80°52'23.416"W	33.15	41.507	0.36	-0.08	-61.96	
2087.00	0.290	264.960	2086.20	-13.56	24.83	21.84	1676327.33	14248867.23	39°14'19.265"N	80°52'23.417"W	33.06	41.334	0.25	-0.12	-40.80	
2112.00	0.270	292.790	2111.20	-13.63	24.84	21.72	1676327.21	14248867.24	39°14'19.265"N	80°52'23.419"W	33.00	41.161	0.54	-0.08	111.32	
2137.00	0.230	288.160	2136.20	-13.70	24.88	21.62	1676327.11	14248867.28	39°14'19.266"N	80°52'23.420"W	32.96	40.983	0.18	-0.16	-18.52	
2162.00	0.160	283.150	2161.20	-13.76	24.91	21.54	1676327.03	14248867.31	39°14'19.266"N	80°52'23.421"W	32.93	40.849	0.29	-0.28	-20.04	
2187.00	0.130	279.000	2186.20	-13.80	24.92	21.47	1676326.96	14248867.32	39°14'19.266"N	80°52'23.422"W	32.89	40.753	0.13	-0.12	-16.60	
2212.00	0.090	283.940	2211.20	-13.82	24.93	21.43	1676326.92	14248867.33	39°14'19.266"N	80°52'23.423"W	32.87	40.681	0.16	-0.16	19.76	
2237.00	0.080	247.140	2236.20	-13.84	24.93	21.39	1676326.88	14248867.33	39°14'19.266"N	80°52'23.423"W	32.85	40.637	0.22	-0.04	-147.20	
2262.00	0.080	250.590	2261.20	-13.84	24.91	21.36	1676326.85	14248867.31	39°14'19.266"N	80°52'23.424"W	32.81	40.608	0.02	0.00	13.80	
2287.00	0.090	249.570	2286.20	-13.84	24.90	21.32	1676326.82	14248867.30	39°14'19.266"N	80°52'23.424"W	32.78	40.576	0.04	0.04	-4.08	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 5 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWP
Facility	James Webb Pad		

WELLPATH DATA (370 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
2312.00	0.100	244.830	2311.20	-13.84	24.88	21.29	1676326.78	14248867.28	39°14'19.266"N	80°52'23.424"W	32.75	40.544	0.05	0.04	-18.95	
2337.00	0.050	299.850	2336.20	-13.85	24.88	21.26	1676326.75	14248867.28	39°14'19.266"N	80°52'23.425"W	32.72	40.509	0.33	-0.20	220.08	
2362.00	0.130	313.980	2361.20	-13.89	24.91	21.23	1676326.72	14248867.31	39°14'19.266"N	80°52'23.425"W	32.72	40.441	0.33	0.32	56.52	
2387.00	0.050	274.100	2386.20	-13.92	24.93	21.20	1676326.69	14248867.33	39°14'19.266"N	80°52'23.426"W	32.72	40.376	0.39	-0.32	-159.52	
2412.00	0.100	258.910	2411.20	-13.93	24.92	21.16	1676326.65	14248867.32	39°14'19.266"N	80°52'23.426"W	32.70	40.337	0.21	0.20	-60.76	
2437.00	0.120	261.150	2436.20	-13.94	24.91	21.12	1676326.61	14248867.31	39°14'19.266"N	80°52'23.427"W	32.66	40.283	0.08	0.08	8.96	
2462.00	0.020	141.920	2461.20	-13.94	24.91	21.09	1676326.58	14248867.31	39°14'19.266"N	80°52'23.427"W	32.64	40.260	0.52	-0.40	-476.92	
2487.00	0.060	249.460	2486.20	-13.94	24.90	21.08	1676326.57	14248867.30	39°14'19.266"N	80°52'23.427"W	32.63	40.257	0.27	0.16	430.16	
2512.01	0.080	237.370	2511.21	-13.94	24.88	21.06	1676326.55	14248867.28	39°14'19.266"N	80°52'23.427"W	32.60	40.236	0.10	0.08	-48.34	
2537.01	0.040	231.510	2536.21	-13.93	24.87	21.03	1676326.53	14248867.27	39°14'19.266"N	80°52'23.428"W	32.57	40.224	0.16	-0.16	-23.44	
2562.01	0.130	236.300	2561.21	-13.93	24.85	21.00	1676326.50	14248867.25	39°14'19.265"N	80°52'23.428"W	32.54	40.207	0.36	0.36	19.16	
2587.01	0.220	226.900	2586.21	-13.91	24.80	20.95	1676326.44	14248867.20	39°14'19.265"N	80°52'23.429"W	32.46	40.184	0.38	0.36	-37.60	
2612.01	0.190	239.280	2611.21	-13.89	24.75	20.87	1676326.37	14248867.15	39°14'19.264"N	80°52'23.430"W	32.37	40.150	0.21	-0.12	49.52	
2637.01	0.180	242.430	2636.21	-13.88	24.71	20.80	1676326.30	14248867.11	39°14'19.264"N	80°52'23.431"W	32.30	40.099	0.06	-0.04	12.60	
2662.01	0.190	239.800	2661.21	-13.87	24.67	20.73	1676326.23	14248867.07	39°14'19.264"N	80°52'23.431"W	32.22	40.048	0.05	0.04	-10.52	
2687.01	0.250	242.730	2686.21	-13.87	24.62	20.65	1676326.14	14248867.02	39°14'19.263"N	80°52'23.433"W	32.13	39.985	0.24	0.24	11.72	
2712.01	0.250	249.130	2711.21	-13.87	24.58	20.55	1676326.04	14248866.98	39°14'19.263"N	80°52'23.434"W	32.04	39.900	0.11	0.00	25.60	
2737.01	0.290	249.810	2736.21	-13.88	24.54	20.44	1676325.93	14248866.94	39°14'19.262"N	80°52'23.435"W	31.93	39.796	0.16	0.16	2.72	
2762.01	0.260	252.920	2761.21	-13.89	24.50	20.33	1676325.82	14248866.90	39°14'19.262"N	80°52'23.437"W	31.83	39.683	0.13	-0.12	12.44	
2787.01	0.240	252.660	2786.21	-13.90	24.47	20.22	1676325.71	14248866.87	39°14'19.262"N	80°52'23.438"W	31.74	39.575	0.08	-0.08	-1.04	
2812.01	0.260	239.040	2811.21	-13.90	24.42	20.12	1676325.61	14248866.82	39°14'19.261"N	80°52'23.439"W	31.64	39.489	0.25	0.08	-54.48	
2837.01	0.270	241.100	2836.21	-13.89	24.36	20.02	1676325.51	14248866.76	39°14'19.261"N	80°52'23.441"W	31.53	39.416	0.06	0.04	8.24	
2862.01	0.350	242.690	2861.21	-13.88	24.30	19.90	1676325.40	14248866.70	39°14'19.260"N	80°52'23.442"W	31.41	39.321	0.32	0.32	6.36	
2887.01	0.350	241.660	2886.21	-13.87	24.23	19.77	1676325.26	14248866.63	39°14'19.259"N	80°52'23.444"W	31.27	39.212	0.03	0.00	-4.12	
2912.01	0.270	243.140	2911.21	-13.87	24.17	19.65	1676325.14	14248866.57	39°14'19.259"N	80°52'23.445"W	31.15	39.115	0.32	-0.32	5.92	
2937.01	0.370	251.440	2936.21	-13.87	24.11	19.52	1676325.01	14248866.51	39°14'19.258"N	80°52'23.447"W	31.02	38.991	0.44	0.40	33.20	
2962.01	0.270	245.420	2961.21	-13.88	24.06	19.39	1676324.88	14248866.46	39°14'19.258"N	80°52'23.449"W	30.90	38.862	0.42	-0.40	-24.08	
2987.01	0.320	249.870	2986.21	-13.88	24.01	19.27	1676324.76	14248866.41	39°14'19.257"N	80°52'23.450"W	30.79	38.746	0.22	0.20	17.80	
3012.01	0.300	254.480	3011.21	-13.90	23.97	19.14	1676324.63	14248866.37	39°14'19.257"N	80°52'23.452"W	30.68	38.607	0.13	-0.08	18.44	
3037.01	0.270	246.380	3036.21	-13.91	23.93	19.02	1676324.52	14248866.33	39°14'19.256"N	80°52'23.453"W	30.57	38.484	0.20	-0.12	-32.40	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 6 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
3062.01	0.160	232.140	3061.21	-13.90	23.89	18.94	1676324.44	14248866.29	39°14'19.256"N	80°52'23.454"W	30.49	38.416	0.49	-0.44	-56.96	
3087.01	0.270	238.040	3086.21	-13.89	23.83	18.87	1676324.36	14248866.23	39°14'19.255"N	80°52'23.455"W	30.40	38.363	0.45	0.44	23.60	
3112.01	0.220	236.160	3111.21	-13.87	23.78	18.78	1676324.27	14248866.18	39°14'19.255"N	80°52'23.456"W	30.30	38.298	0.20	-0.20	-7.52	
3137.01	0.220	230.020	3136.21	-13.85	23.72	18.70	1676324.19	14248866.12	39°14'19.254"N	80°52'23.457"W	30.20	38.252	0.09	0.00	-24.56	
3162.01	0.170	236.780	3161.21	-13.83	23.67	18.63	1676324.12	14248866.07	39°14'19.254"N	80°52'23.458"W	30.12	38.211	0.22	-0.20	27.04	
3187.01	0.250	235.110	3186.21	-13.82	23.62	18.56	1676324.05	14248866.02	39°14'19.253"N	80°52'23.459"W	30.03	38.158	0.32	0.32	-6.68	
3212.01	0.230	245.040	3211.21	-13.81	23.56	18.47	1676323.96	14248865.96	39°14'19.253"N	80°52'23.460"W	29.94	38.084	0.18	-0.08	39.72	
3237.01	0.220	238.840	3236.21	-13.80	23.52	18.38	1676323.87	14248865.92	39°14'19.252"N	80°52'23.461"W	29.85	38.008	0.11	-0.04	-24.80	
3262.01	0.230	239.570	3261.20	-13.79	23.47	18.29	1676323.79	14248865.87	39°14'19.252"N	80°52'23.463"W	29.76	37.939	0.04	0.04	2.92	
3287.01	0.190	240.870	3286.20	-13.78	23.42	18.21	1676323.71	14248865.82	39°14'19.251"N	80°52'23.464"W	29.67	37.872	0.16	-0.16	5.20	
3312.01	0.190	235.780	3311.20	-13.77	23.38	18.14	1676323.64	14248865.78	39°14'19.251"N	80°52'23.464"W	29.59	37.816	0.07	0.00	-20.36	
3337.01	0.160	239.390	3336.20	-13.76	23.34	18.08	1676323.57	14248865.74	39°14'19.250"N	80°52'23.465"W	29.52	37.767	0.13	-0.12	14.44	
3362.01	0.140	228.060	3361.20	-13.75	23.30	18.03	1676323.52	14248865.70	39°14'19.250"N	80°52'23.466"W	29.46	37.731	0.14	-0.08	-45.32	
3387.01	0.210	224.780	3386.20	-13.72	23.25	17.97	1676323.47	14248865.65	39°14'19.250"N	80°52'23.467"W	29.38	37.709	0.28	0.28	-13.12	
3412.01	0.180	218.910	3411.20	-13.69	23.18	17.92	1676323.41	14248865.58	39°14'19.249"N	80°52'23.467"W	29.30	37.697	0.14	-0.12	-23.48	
3437.01	0.170	233.770	3436.20	-13.66	23.13	17.86	1676323.35	14248865.53	39°14'19.248"N	80°52'23.468"W	29.22	37.675	0.19	-0.04	59.44	
3462.01	0.190	224.610	3461.20	-13.64	23.08	17.80	1676323.29	14248865.48	39°14'19.248"N	80°52'23.469"W	29.15	37.645	0.14	0.08	-36.64	
3487.01	0.220	226.540	3486.20	-13.61	23.02	17.74	1676323.23	14248865.42	39°14'19.247"N	80°52'23.470"W	29.06	37.620	0.12	0.12	7.72	
3512.01	0.180	239.770	3511.20	-13.59	22.96	17.67	1676323.16	14248865.36	39°14'19.247"N	80°52'23.470"W	28.97	37.576	0.24	-0.16	52.92	
3537.01	0.210	238.430	3536.20	-13.58	22.92	17.60	1676323.09	14248865.32	39°14'19.246"N	80°52'23.471"W	28.90	37.515	0.12	0.12	-5.36	
3562.01	0.140	225.140	3561.20	-13.56	22.87	17.54	1676323.03	14248865.27	39°14'19.246"N	80°52'23.472"W	28.82	37.474	0.32	-0.28	-53.16	
3587.01	0.170	211.150	3586.20	-13.53	22.82	17.49	1676322.99	14248865.22	39°14'19.245"N	80°52'23.473"W	28.76	37.474	0.19	0.12	-55.96	
3612.01	0.120	211.310	3611.20	-13.50	22.77	17.46	1676322.95	14248865.17	39°14'19.245"N	80°52'23.473"W	28.69	37.488	0.20	-0.20	0.64	
3637.01	0.090	209.440	3636.20	-13.47	22.73	17.44	1676322.93	14248865.13	39°14'19.244"N	80°52'23.473"W	28.65	37.499	0.12	-0.12	-7.48	
3662.01	0.140	149.770	3661.20	-13.43	22.68	17.44	1676322.94	14248865.08	39°14'19.244"N	80°52'23.473"W	28.62	37.561	0.49	0.20	-238.68	
3687.01	0.150	142.750	3686.20	-13.37	22.63	17.48	1676322.97	14248865.03	39°14'19.244"N	80°52'23.473"W	28.60	37.681	0.08	0.04	-28.08	
3712.01	0.120	136.610	3711.20	-13.31	22.59	17.52	1676323.01	14248864.99	39°14'19.243"N	80°52'23.472"W	28.58	37.796	0.13	-0.12	-24.56	
3737.01	0.180	133.940	3736.20	-13.25	22.54	17.56	1676323.06	14248864.94	39°14'19.243"N	80°52'23.472"W	28.57	37.926	0.24	0.24	-10.68	
3762.01	0.180	135.340	3761.20	-13.18	22.48	17.62	1676323.11	14248864.89	39°14'19.242"N	80°52'23.471"W	28.57	38.083	0.02	0.00	5.60	
3787.01	0.250	136.540	3786.20	-13.09	22.42	17.68	1676323.18	14248864.82	39°14'19.241"N	80°52'23.470"W	28.55	38.269	0.28	0.28	4.80	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 7 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 stations)																	
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments	
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]		
3812.01	0.270	134.730	3811.20	-12.98	22.34	17.76	1676323.26	14248864.74	39°14'19.241"N	80°52'23.469"W	28.54	38.495	0.09	0.08	-7.24		
3837.01	0.290	135.110	3836.20	-12.87	22.25	17.85	1676323.34	14248864.65	39°14'19.240"N	80°52'23.468"W	28.53	38.739	0.08	0.08	1.52		
3862.01	0.270	140.530	3861.20	-12.75	22.16	17.93	1676323.43	14248864.56	39°14'19.239"N	80°52'23.467"W	28.51	38.981	0.13	-0.08	21.68		
3887.01	0.250	138.640	3886.20	-12.64	22.07	18.01	1676323.50	14248864.47	39°14'19.238"N	80°52'23.466"W	28.49	39.205	0.09	-0.08	-7.56		
3912.01	0.280	132.000	3911.20	-12.53	21.99	18.09	1676323.58	14248864.39	39°14'19.237"N	80°52'23.465"W	28.47	39.437	0.17	0.12	-26.56		
3937.01	0.270	135.070	3936.20	-12.42	21.91	18.17	1676323.67	14248864.31	39°14'19.236"N	80°52'23.464"W	28.47	39.677	0.07	-0.04	12.28		
3962.01	0.270	148.800	3961.20	-12.31	21.82	18.25	1676323.74	14248864.22	39°14'19.235"N	80°52'23.463"W	28.44	39.908	0.26	0.00	54.92		
3987.01	0.210	165.550	3986.20	-12.20	21.72	18.29	1676323.78	14248864.12	39°14'19.235"N	80°52'23.463"W	28.40	40.095	0.37	-0.24	67.00		
4012.01	0.200	182.230	4011.20	-12.12	21.63	18.30	1676323.79	14248864.04	39°14'19.234"N	80°52'23.462"W	28.33	40.225	0.24	-0.04	66.72		
4037.01	0.260	190.430	4036.20	-12.03	21.53	18.29	1676323.78	14248863.94	39°14'19.233"N	80°52'23.463"W	28.25	40.336	0.27	0.24	32.80		
4062.01	0.320	165.610	4061.20	-11.92	21.41	18.29	1676323.79	14248863.81	39°14'19.231"N	80°52'23.463"W	28.16	40.510	0.55	0.24	-99.28		
4087.01	0.370	160.470	4086.20	-11.77	21.27	18.34	1676323.83	14248863.67	39°14'19.230"N	80°52'23.462"W	28.08	40.769	0.24	0.20	-20.56		
4112.01	0.420	145.420	4111.20	-11.60	21.12	18.42	1676323.91	14248863.52	39°14'19.229"N	80°52'23.461"W	28.02	41.094	0.46	0.20	-60.20		
4137.01	0.530	144.210	4136.20	-11.40	20.95	18.54	1676324.03	14248863.35	39°14'19.227"N	80°52'23.459"W	27.97	41.506	0.44	0.44	-4.84		
4162.01	0.610	134.580	4161.20	-11.16	20.76	18.70	1676324.19	14248863.16	39°14'19.225"N	80°52'23.457"W	27.94	42.010	0.50	0.32	-38.52		
4187.01	0.580	139.000	4186.20	-10.91	20.57	18.88	1676324.37	14248862.97	39°14'19.223"N	80°52'23.455"W	27.92	42.541	0.22	-0.12	17.68		
4212.01	0.640	133.030	4211.19	-10.66	20.38	19.06	1676324.55	14248862.78	39°14'19.221"N	80°52'23.453"W	27.90	43.086	0.35	0.24	-23.88		
4237.01	0.740	151.230	4236.19	-10.37	20.14	19.24	1676324.73	14248862.55	39°14'19.219"N	80°52'23.451"W	27.86	43.688	0.96	0.40	72.80		
4262.01	0.850	137.620	4261.19	-10.04	19.86	19.44	1676324.94	14248862.27	39°14'19.216"N	80°52'23.448"W	27.80	44.387	0.87	0.44	-54.44		
4287.01	0.860	146.790	4286.19	-9.67	19.57	19.67	1676325.16	14248861.97	39°14'19.213"N	80°52'23.445"W	27.75	45.148	0.55	0.04	36.68		
4312.01	0.950	139.700	4311.18	-9.29	19.26	19.91	1676325.40	14248861.66	39°14'19.210"N	80°52'23.442"W	27.70	45.955	0.57	0.36	-28.36		
4337.01	1.060	145.290	4336.18	-8.86	18.91	20.17	1676325.67	14248861.31	39°14'19.207"N	80°52'23.439"W	27.65	46.857	0.59	0.44	22.36		
4362.01	1.120	141.090	4361.18	-8.40	18.53	20.46	1676325.95	14248860.93	39°14'19.203"N	80°52'23.435"W	27.60	47.837	0.40	0.24	-16.80		
4387.01	1.310	148.020	4386.17	-7.88	18.09	20.76	1676326.26	14248860.50	39°14'19.199"N	80°52'23.431"W	27.54	48.930	0.96	0.76	27.72		
4412.01	1.370	149.050	4411.16	-7.30	17.60	21.07	1676326.56	14248860.00	39°14'19.194"N	80°52'23.427"W	27.45	50.133	0.26	0.24	4.12		
4437.01	1.380	147.700	4436.16	-6.70	17.09	21.38	1676326.88	14248859.49	39°14'19.189"N	80°52'23.423"W	27.37	51.376	0.14	0.04	-5.40		
4462.01	1.380	151.210	4461.15	-6.10	16.57	21.69	1676327.18	14248858.97	39°14'19.184"N	80°52'23.419"W	27.29	52.627	0.34	0.00	14.04		
4487.01	1.350	155.060	4486.14	-5.51	16.04	21.96	1676327.45	14248858.44	39°14'19.178"N	80°52'23.416"W	27.19	53.860	0.39	-0.12	15.40		
4512.01	1.370	151.320	4511.13	-4.92	15.51	22.23	1676327.72	14248857.91	39°14'19.173"N	80°52'23.413"W	27.10	55.097	0.36	0.08	-14.96		
4537.01	1.430	154.030	4536.13	-4.31	14.96	22.51	1676328.00	14248857.37	39°14'19.168"N	80°52'23.409"W	27.03	56.381	0.36	0.24	10.84		

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 8 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
4562.01	1.390	157.090	4561.12	-3.69	14.40	22.76	1676328.25	14248856.81	39°14'19.162"N	80°52'23.406"W	26.94	57.672	0.34	-0.16	12.24	
4587.01	1.410	153.820	4586.11	-3.08	13.85	23.01	1676328.51	14248856.25	39°14'19.157"N	80°52'23.403"W	26.86	58.963	0.33	0.08	-13.08	
4612.01	1.460	150.530	4611.10	-2.46	13.30	23.31	1676328.80	14248855.70	39°14'19.151"N	80°52'23.399"W	26.83	60.297	0.39	0.20	-13.16	
4637.01	1.430	152.870	4636.10	-1.83	12.74	23.61	1676329.10	14248855.15	39°14'19.146"N	80°52'23.395"W	26.83	61.643	0.26	-0.12	9.36	
4662.01	1.470	155.800	4661.09	-1.20	12.17	23.88	1676329.37	14248854.58	39°14'19.140"N	80°52'23.392"W	26.80	62.993	0.34	0.16	11.72	
4687.01	1.470	157.090	4686.08	-0.55	11.58	24.14	1676329.63	14248853.99	39°14'19.134"N	80°52'23.388"W	26.77	64.364	0.13	0.00	5.16	
4712.01	1.520	156.920	4711.07	0.10	10.98	24.39	1676329.88	14248853.39	39°14'19.128"N	80°52'23.385"W	26.75	65.759	0.20	0.20	-0.68	
4737.01	1.520	157.390	4736.06	0.76	10.37	24.65	1676330.14	14248852.78	39°14'19.122"N	80°52'23.382"W	26.74	67.180	0.05	0.00	1.88	
4762.01	1.570	159.340	4761.05	1.43	9.74	24.90	1676330.39	14248852.15	39°14'19.116"N	80°52'23.379"W	26.74	68.624	0.29	0.20	7.80	
4787.01	1.500	159.440	4786.04	2.10	9.12	25.13	1676330.62	14248851.52	39°14'19.110"N	80°52'23.376"W	26.74	70.059	0.28	-0.28	0.40	
4812.01	1.550	159.070	4811.04	2.77	8.50	25.37	1676330.86	14248850.90	39°14'19.104"N	80°52'23.373"W	26.75	71.484	0.20	0.20	-1.48	
4837.01	1.640	159.600	4836.03	3.46	7.84	25.61	1676331.10	14248850.25	39°14'19.097"N	80°52'23.370"W	26.79	72.972	0.36	0.36	2.12	
4862.01	1.640	160.990	4861.02	4.17	7.17	25.85	1676331.34	14248849.58	39°14'19.091"N	80°52'23.367"W	26.83	74.498	0.16	0.00	5.56	
4887.01	1.590	158.490	4886.01	4.88	6.51	26.10	1676331.59	14248848.92	39°14'19.084"N	80°52'23.364"W	26.90	75.993	0.35	-0.20	-10.00	
4912.01	1.600	158.860	4911.00	5.57	5.86	26.35	1676331.84	14248848.27	39°14'19.078"N	80°52'23.360"W	27.00	77.458	0.06	0.04	1.48	
4937.01	1.680	157.460	4935.99	6.29	5.20	26.62	1676332.11	14248847.61	39°14'19.071"N	80°52'23.357"W	27.12	78.950	0.36	0.32	-5.60	
4962.01	1.650	158.470	4960.98	7.01	4.52	26.89	1676332.38	14248846.93	39°14'19.064"N	80°52'23.354"W	27.27	80.448	0.17	-0.12	4.04	
4987.01	1.700	159.710	4985.96	7.74	3.84	27.15	1676332.64	14248846.25	39°14'19.058"N	80°52'23.350"W	27.42	81.945	0.25	0.20	4.96	
5012.01	1.730	161.660	5010.95	8.49	3.14	27.40	1676332.89	14248845.54	39°14'19.051"N	80°52'23.347"W	27.58	83.470	0.26	0.12	7.80	
5037.01	1.720	159.160	5035.94	9.23	2.43	27.65	1676333.14	14248844.84	39°14'19.044"N	80°52'23.344"W	27.76	84.983	0.30	-0.04	-10.00	
5062.01	1.810	157.030	5060.93	10.00	1.71	27.94	1676333.43	14248844.12	39°14'19.037"N	80°52'23.340"W	27.99	86.491	0.45	0.36	-8.52	
5087.01	1.880	160.600	5085.92	10.81	0.96	28.23	1676333.72	14248843.37	39°14'19.029"N	80°52'23.337"W	28.25	88.046	0.54	0.28	14.28	
5112.01	1.750	157.090	5110.90	11.60	0.22	28.51	1676334.00	14248842.63	39°14'19.022"N	80°52'23.333"W	28.51	89.549	0.68	-0.52	-14.04	
5137.01	1.860	157.050	5135.89	12.38	-0.50	28.82	1676334.31	14248841.91	39°14'19.015"N	80°52'23.329"W	28.82	90.995	0.44	0.44	-0.16	
5162.01	1.880	162.010	5160.88	13.20	-1.26	29.11	1676334.59	14248841.15	39°14'19.007"N	80°52'23.326"W	29.13	92.487	0.65	0.08	19.84	
5187.01	1.900	158.630	5185.87	14.02	-2.04	29.38	1676334.87	14248840.37	39°14'18.999"N	80°52'23.322"W	29.45	93.972	0.45	0.08	-13.52	
5212.01	1.890	156.720	5210.85	14.84	-2.80	29.70	1676335.18	14248839.61	39°14'18.992"N	80°52'23.318"W	29.83	95.396	0.26	-0.04	-7.64	
5237.01	1.840	158.960	5235.84	15.66	-3.56	30.00	1676335.49	14248838.85	39°14'18.984"N	80°52'23.314"W	30.21	96.763	0.35	-0.20	8.96	
5262.01	1.800	160.180	5260.83	16.45	-4.30	30.28	1676335.77	14248838.11	39°14'18.977"N	80°52'23.311"W	30.59	98.086	0.22	-0.16	4.88	
5287.01	1.740	156.150	5285.81	17.22	-5.02	30.57	1676336.06	14248837.39	39°14'18.970"N	80°52'23.307"W	30.98	99.324	0.55	-0.24	-16.12	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 9 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #09
Area	Doddridge Co., WV		Well Hunter Unit 1H
Field	Doddridge		Wellbore Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
5312.01	1.710	157.780	5310.80	17.97	-5.71	30.86	1676336.35	14248836.70	39°14'18.963"N	80°52'23.303"W	31.39	100.484	0.23	-0.12	6.52	
5337.01	1.810	157.290	5335.79	18.74	-6.42	31.16	1676336.64	14248835.99	39°14'18.956"N	80°52'23.300"W	31.81	101.645	0.40	0.40	-1.96	
5362.01	1.800	155.090	5360.78	19.53	-7.14	31.47	1676336.96	14248835.27	39°14'18.949"N	80°52'23.296"W	32.27	102.783	0.28	-0.04	-8.80	
5387.01	1.750	154.930	5385.77	20.30	-7.84	31.80	1676337.29	14248834.57	39°14'18.942"N	80°52'23.291"W	32.75	103.854	0.20	-0.20	-0.64	
5412.01	1.810	155.490	5410.75	21.08	-8.55	32.13	1676337.61	14248833.87	39°14'18.935"N	80°52'23.287"W	33.24	104.900	0.25	0.24	2.24	
5437.01	1.830	157.860	5435.74	21.87	-9.28	32.44	1676337.93	14248833.14	39°14'18.928"N	80°52'23.283"W	33.74	105.959	0.31	0.08	9.48	
5462.01	1.870	154.860	5460.73	22.68	-10.02	32.76	1676338.25	14248832.40	39°14'18.921"N	80°52'23.279"W	34.26	106.998	0.42	0.16	-12.00	
5487.01	1.830	153.890	5485.72	23.49	-10.74	33.11	1676338.60	14248831.67	39°14'18.913"N	80°52'23.275"W	34.81	107.976	0.20	-0.16	-3.88	
5512.01	1.710	155.210	5510.70	24.26	-11.44	33.45	1676338.93	14248830.97	39°14'18.907"N	80°52'23.271"W	35.35	108.884	0.51	-0.48	5.28	
5665.00	3.030	74.690	5663.59	27.18	-12.45	38.30	1676343.79	14248829.97	39°14'18.897"N	80°52'23.209"W	40.27	108.000	2.11	0.86	-52.63	BHI AT Curve <8-1/2"> (5512.01')(5665'-17739')
5710.00	8.890	50.680	5708.34	26.48	-9.93	42.14	1676347.63	14248832.49	39°14'18.921"N	80°52'23.160"W	43.30	103.253	13.88	13.02	-53.36	
5759.00	13.620	45.190	5756.38	23.50	-3.46	49.17	1676354.65	14248838.95	39°14'18.985"N	80°52'23.071"W	49.29	94.022	9.89	9.65	-11.20	
5805.00	17.230	46.430	5800.72	19.38	5.06	57.95	1676363.43	14248847.47	39°14'19.069"N	80°52'22.959"W	58.17	85.011	7.88	7.85	2.70	
5854.00	20.400	48.210	5847.09	14.46	15.75	69.58	1676375.05	14248858.16	39°14'19.175"N	80°52'22.811"W	71.34	77.242	6.57	6.47	3.63	
5900.00	24.520	49.910	5889.59	9.49	27.25	82.87	1676388.33	14248869.65	39°14'19.288"N	80°52'22.642"W	87.23	71.797	9.07	8.96	3.70	
5949.00	29.380	49.700	5933.26	3.47	41.58	99.82	1676405.28	14248883.97	39°14'19.430"N	80°52'22.426"W	108.14	67.386	9.92	9.92	-0.43	
5994.00	33.620	51.420	5971.62	-2.59	56.50	117.99	1676423.44	14248898.88	39°14'19.577"N	80°52'22.195"W	130.82	64.414	9.63	9.42	3.82	
6043.00	38.030	51.930	6011.34	-9.46	74.27	140.49	1676445.93	14248916.65	39°14'19.752"N	80°52'21.909"W	158.91	62.136	9.02	9.00	1.04	
6090.00	42.100	51.110	6047.30	-16.80	93.10	164.16	1676469.59	14248935.47	39°14'19.938"N	80°52'21.607"W	188.72	60.441	8.73	8.66	-1.74	
6137.00	45.380	50.720	6081.26	-25.02	113.58	189.37	1676494.80	14248955.95	39°14'20.140"N	80°52'21.287"W	220.83	59.045	7.00	6.98	-0.83	
6182.00	49.750	49.180	6111.61	-33.96	134.96	214.78	1676520.19	14248977.32	39°14'20.351"N	80°52'20.963"W	253.66	57.856	10.03	9.71	-3.42	
6232.00	53.340	51.130	6142.71	-44.34	160.03	244.85	1676550.25	14249002.37	39°14'20.598"N	80°52'20.581"W	292.50	56.832	7.80	7.18	3.90	
6274.00	53.210	58.850	6167.84	-50.50	179.32	272.38	1676577.77	14249021.66	39°14'20.789"N	80°52'20.230"W	326.11	56.642	14.73	-0.31	18.38	
6326.00	52.230	67.670	6199.38	-52.17	197.92	309.26	1676614.64	14249040.25	39°14'20.972"N	80°52'19.761"W	367.17	57.381	13.62	-1.88	16.96	
6373.00	50.900	72.300	6228.61	-49.34	210.53	343.83	1676649.19	14249052.85	39°14'21.096"N	80°52'19.322"W	403.16	58.521	8.22	-2.83	9.85	
6421.00	51.350	75.390	6258.74	-43.95	220.92	379.72	1676685.06	14249063.24	39°14'21.198"N	80°52'18.866"W	439.31	59.809	5.10	0.94	6.44	
6467.00	52.560	80.210	6287.10	-36.25	228.56	415.11	1676720.44	14249070.88	39°14'21.273"N	80°52'18.416"W	473.87	61.163	8.66	2.63	10.48	
6515.00	53.790	84.690	6315.87	-25.08	233.59	453.18	1676758.50	14249075.91	39°14'21.323"N	80°52'17.932"W	509.84	62.731	7.90	2.56	9.33	
6531.00†	54.359	86.528	6325.26	-20.63	234.59	466.10	1676771.41	14249076.90	39°14'21.332"N	80°52'17.767"W	521.80	63.284	9.96	3.56	11.49	Middlesex: 6531' MD / 6325.3' TVD
6559.00	55.420	89.680	6341.37	-11.84	235.34	488.99	1676794.29	14249077.65	39°14'21.339"N	80°52'17.477"W	542.67	64.299	9.96	3.79	11.26	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 10 of 16



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #09
Operator	ANTERO RESOURCES CORPORATION	Well	Hunter Unit 1H
Area	Doddridge Co., WV	Wellbore	Hunter Unit 1H AWB
Field	Doddridge		
Facility	James Webb Pad		

WELLPATH DATA (370 stations) † = interpolated/extrapolated station																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(°)	(°)	(ft)	(°)	("/100ft)	("/100ft)	("/100ft)	
6609.00	57.520	97.340	6369.01	7.70	232.76	530.53	1678835.82	14249075.07	39°14'21.313"N	80°52'16.949"W	579.35	66.312	13.44	4.20	15.32	
6657.00	59.900	104.900	6393.97	31.56	224.82	570.73	1678876.00	14249067.14	39°14'21.234"N	80°52'16.438"W	613.41	68.499	14.34	4.96	15.75	
6704.00	62.770	110.830	6416.53	59.33	212.15	609.94	1678915.20	14249054.48	39°14'21.108"N	80°52'15.940"W	645.78	70.821	12.64	6.11	12.62	
6750.00	65.910	115.980	6436.46	90.07	195.67	647.96	1678953.20	14249038.00	39°14'20.945"N	80°52'15.457"W	676.86	73.197	12.18	6.83	11.20	
6772.00†	67.470	118.670	6445.16	105.94	186.39	665.91	1678971.14	14249028.73	39°14'20.853"N	80°52'15.229"W	691.50	74.363	13.28	7.09	12.23	Burkett: 6772' MD / 6445.2' TVD
6798.00	69.370	121.770	6454.73	125.66	174.22	686.79	1678992.02	14249016.56	39°14'20.732"N	80°52'14.964"W	708.54	75.766	13.28	7.31	11.92	
6842.00	72.050	126.470	6469.27	161.09	150.93	721.15	1677026.36	14248993.28	39°14'20.502"N	80°52'14.527"W	736.77	78.179	11.78	6.09	10.68	
6852.00†	72.524	127.736	6472.31	169.47	145.18	728.75	1677033.95	14248987.53	39°14'20.445"N	80°52'14.431"W	743.07	78.733	12.96	4.74	12.66	Jully: 6852' MD / 6472.3' TVD
6893.00	74.550	132.860	6483.94	205.02	119.75	758.72	1677063.91	14248952.12	39°14'20.193"N	80°52'14.051"W	768.11	81.031	12.96	4.94	12.50	
6938.00	76.265	137.805	6493.01	237.70	94.98	783.19	1677088.38	14248937.35	39°14'19.948"N	80°52'13.740"W	788.93	83.085	14.12	4.77	13.74	Hamilton: 6929' MD / 6493.0' TVD
6983.00†	78.154	142.076	6500.55	269.63	69.60	804.50	1677109.68	14248911.98	39°14'19.697"N	80°52'13.470"W	807.50	85.056	13.22	5.77	12.18	Marcellus: 6963' MD / 6500.6' TVD
6987.00	79.570	144.970	6505.19	292.66	50.66	818.50	1677123.67	14248893.05	39°14'19.509"N	80°52'13.292"W	820.06	86.458	13.22	5.90	12.06	
7035.00	82.900	150.360	6512.51	339.62	10.59	843.85	1677149.01	14248853.00	39°14'19.113"N	80°52'12.971"W	843.91	89.281	13.09	6.94	11.23	
7081.00	85.600	154.850	6517.12	385.32	-30.03	864.90	1677170.05	14248812.39	39°14'18.711"N	80°52'12.704"W	865.42	91.988	11.35	5.87	9.76	
7128.00	89.320	158.740	6519.20	432.24	-73.17	883.39	1677188.53	14248769.27	39°14'18.285"N	80°52'12.470"W	886.41	94.735	11.45	7.91	8.28	
7176.00	91.140	159.460	6519.01	480.15	-118.01	900.51	1677205.65	14248724.45	39°14'17.841"N	80°52'12.253"W	908.21	97.466	4.08	3.79	1.50	
7271.00	92.150	159.220	6516.28	574.90	-206.86	934.01	1677239.14	14248653.63	39°14'16.962"N	80°52'11.829"W	956.65	102.488	1.09	1.06	-0.25	
7365.00	89.690	155.390	6514.77	668.82	-293.55	970.27	1677275.38	14248548.98	39°14'16.105"N	80°52'11.369"W	1013.70	106.833	4.84	-2.62	-4.07	
7450.00	89.720	154.870	6515.26	763.81	-379.74	1010.22	1677315.32	14248462.82	39°14'15.253"N	80°52'10.863"W	1079.23	110.601	0.55	0.03	-0.55	
7554.00	89.600	154.570	6515.82	857.80	-464.73	1050.36	1677355.44	14248377.86	39°14'14.412"N	80°52'10.355"W	1148.58	113.867	0.34	-0.13	-0.32	
7649.00	89.690	156.830	6516.41	952.79	-551.31	1089.45	1677394.52	14248291.32	39°14'13.556"N	80°52'09.859"W	1221.00	116.841	2.38	0.09	2.38	
7743.00	89.970	157.460	6517.10	1141.67	-726.06	1161.45	1677466.48	14248116.65	39°14'11.828"N	80°52'08.948"W	1369.71	122.011	0.68	0.23	-0.64	
7833.00	90.310	156.040	6516.87	1236.64	-813.34	1198.95	1677503.97	14248029.40	39°14'10.964"N	80°52'08.473"W	1448.79	124.162	1.54	0.36	-1.49	
8027.00	89.600	154.310	6516.94	1330.64	-898.65	1238.41	1677543.42	14247944.12	39°14'10.121"N	80°52'07.973"W	1530.11	125.966	1.99	-0.76	-1.84	
8122.00	89.600	153.930	6517.61	1425.60	-984.12	1279.88	1677584.86	14247858.69	39°14'09.275"N	80°52'07.447"W	1614.49	127.557	0.40	0.00	-0.40	
8216.00	89.690	154.370	6518.19	1519.58	-1068.89	1320.49	1677625.46	14247773.95	39°14'08.437"N	80°52'06.933"W	1698.89	128.989	1.00	0.10	1.00	
8310.00	89.630	154.470	6518.75	1613.57	-1153.85	1360.71	1677665.66	14247689.02	39°14'07.596"N	80°52'06.423"W	1784.07	130.297	0.43	-0.06	-0.43	
8405.00	89.660	154.830	6519.34	1708.56	-1239.70	1401.38	1677706.32	14247603.21	39°14'06.747"N	80°52'05.908"W	1871.02	131.497	0.38	0.03	0.38	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection

01/05/2018



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 11 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
8499.00	90.650	152.320	6519.08	1802.49	-1323.87	1443.21	1677748.13	14247519.07	39°14'05.915"N	80°52'05.378"W	1958.44	132.530	2.87	1.05	-2.67	
8594.00	89.880	150.700	6518.64	1897.25	-1407.36	1488.52	1677793.43	14247435.61	39°14'05.089"N	80°52'04.803"W	2048.50	133.395	1.89	-0.81	-1.71	
8689.00	88.890	151.790	6519.66	1991.97	-1490.64	1534.22	1677839.10	14247352.37	39°14'04.265"N	80°52'04.224"W	2139.12	134.175	1.55	-1.04	1.15	
8783.00	88.650	155.870	6521.68	2085.89	-1574.97	1575.66	1677880.53	14247268.08	39°14'03.431"N	80°52'03.699"W	2227.83	134.987	4.35	-0.26	4.34	
8878.00	90.280	163.610	6522.57	2180.56	-1664.01	1608.53	1677913.38	14247179.06	39°14'02.551"N	80°52'03.283"W	2314.37	135.971	8.33	1.72	8.15	
8972.00	90.310	165.230	6522.08	2273.43	-1754.56	1633.77	1677938.62	14247088.56	39°14'01.655"N	80°52'02.964"W	2397.43	137.042	1.72	0.03	1.72	
9067.00	90.740	160.340	6521.21	2367.64	-1845.27	1661.88	1677966.71	14246997.88	39°14'00.758"N	80°52'02.609"W	2483.32	137.993	5.17	0.45	-5.15	
9162.00	90.400	158.220	6520.27	2462.43	-1934.11	1695.49	1678000.31	14246909.07	39°13'59.880"N	80°52'02.183"W	2572.06	138.761	2.26	-0.36	-2.23	
9256.00	90.920	154.130	6519.19	2556.40	-2020.08	1733.45	1678038.25	14246823.14	39°13'59.029"N	80°52'01.702"W	2661.87	139.367	4.39	0.55	-4.35	
9350.00	90.310	149.870	6518.18	2650.19	-2103.05	1777.56	1678082.35	14246740.20	39°13'58.209"N	80°52'01.143"W	2753.64	139.794	4.58	-0.65	-4.53	
9445.00	90.180	150.430	6517.77	2744.77	-2185.45	1824.85	1678129.62	14246657.84	39°13'57.394"N	80°52'00.544"W	2847.15	140.138	0.61	-0.14	0.59	
9539.00	89.940	149.530	6517.67	2838.32	-2266.84	1871.88	1678176.63	14246576.48	39°13'56.589"N	80°51'59.948"W	2939.81	140.451	0.99	-0.26	-0.96	
9634.00	90.180	150.400	6517.57	2932.87	-2349.08	1919.43	1678224.16	14246494.27	39°13'55.775"N	80°51'59.345"W	3033.54	140.748	0.95	0.25	0.92	
9728.00	89.880	153.390	6517.52	3026.67	-2431.99	1963.70	1678268.42	14246411.40	39°13'54.955"N	80°51'58.784"W	3125.81	141.081	3.20	-0.32	3.18	
9822.00	90.060	156.920	6517.57	3120.65	-2517.27	2003.19	1678307.89	14246326.15	39°13'54.111"N	80°51'58.284"W	3217.05	141.488	3.76	0.19	3.76	
9917.00	90.120	155.550	6517.42	3215.64	-2604.21	2041.47	1678346.16	14246239.24	39°13'53.251"N	80°51'57.799"W	3309.01	141.907	1.44	0.06	-1.44	
10011.00	90.180	154.820	6517.18	3309.64	-2689.53	2080.92	1678385.59	14246153.95	39°13'52.408"N	80°51'57.299"W	3400.57	142.270	0.78	0.06	-0.78	
10105.00	89.940	156.900	6517.08	3403.63	-2775.31	2119.37	1678424.02	14246068.21	39°13'51.559"N	80°51'56.812"W	3492.00	142.633	2.23	-0.26	2.21	
10200.00	90.060	158.890	6517.08	3498.55	-2863.32	2155.11	1678459.75	14245980.24	39°13'50.689"N	80°51'56.359"W	3583.73	143.033	2.10	0.13	2.09	
10294.00	90.150	158.100	6516.91	3592.42	-2950.78	2189.57	1678494.19	14245892.81	39°13'49.824"N	80°51'55.923"W	3674.41	143.423	0.85	0.10	-0.84	
10388.00	90.250	158.510	6516.58	3686.31	-3038.12	2224.32	1678528.93	14245805.51	39°13'48.960"N	80°51'55.483"W	3765.34	143.791	0.45	0.11	0.44	
10483.00	90.180	157.610	6516.22	3781.22	-3126.24	2259.81	1678564.41	14245717.43	39°13'48.089"N	80°51'55.034"W	3857.47	144.139	0.95	-0.07	-0.95	
10577.00	90.180	157.300	6515.93	3875.17	-3213.05	2295.85	1678600.43	14245630.64	39°13'47.230"N	80°51'54.578"W	3949.01	144.453	0.33	0.00	-0.33	
10671.00	90.220	156.400	6515.60	3969.14	-3299.48	2332.81	1678637.37	14245544.25	39°13'46.375"N	80°51'54.110"W	4040.86	144.739	0.96	0.04	-0.96	
10766.00	90.180	154.630	6515.27	4064.14	-3385.93	2372.18	1678676.73	14245457.83	39°13'45.520"N	80°51'53.611"W	4134.22	144.985	1.86	-0.04	-1.86	
10860.00	90.310	152.890	6514.86	4158.09	-3470.24	2413.74	1678718.27	14245373.56	39°13'44.686"N	80°51'53.084"W	4227.14	145.179	1.86	0.14	-1.85	
10955.00	90.180	153.980	6514.46	4253.02	-3555.21	2456.22	1678760.74	14245288.62	39°13'43.846"N	80°51'52.546"W	4321.18	145.360	1.16	-0.14	1.15	
11049.00	90.220	156.730	6514.13	4347.01	-3640.64	2495.42	1678799.92	14245203.23	39°13'43.001"N	80°51'52.050"W	4413.77	145.572	2.93	0.04	2.93	
11143.00	90.490	156.520	6513.55	4440.99	-3726.92	2532.71	1678837.20	14245116.98	39°13'42.148"N	80°51'51.577"W	4506.06	145.801	0.36	0.29	-0.22	
11238.00	90.180	157.400	6512.99	4535.96	-3814.34	2569.89	1678874.36	14245029.59	39°13'41.283"N	80°51'51.107"W	4599.30	146.030	0.98	-0.33	0.93	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 12 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
11332.00	89.820	157.960	6512.99	4629.89	-3901.30	2605.59	1678910.04	14244942.67	39°13'40.423"N	80°51'50.655"W	4691.40	146.262	0.71	-0.38	0.60	
11427.00	89.780	158.740	6513.32	4724.78	-3989.60	2640.64	1678945.08	14244854.41	39°13'39.550"N	80°51'50.211"W	4784.33	146.500	0.82	-0.04	0.82	
11521.00	89.880	159.650	6513.60	4818.59	-4077.47	2674.02	1678978.45	14244766.58	39°13'38.681"N	80°51'49.788"W	4876.08	146.743	0.97	0.11	0.97	
11616.00	90.060	158.050	6513.65	4913.43	-4166.06	2708.30	1679012.72	14244678.01	39°13'37.805"N	80°51'49.355"W	4969.00	146.973	1.69	0.19	-1.68	
11710.00	89.880	155.250	6513.70	5007.40	-4252.36	2745.55	1679049.95	14244591.76	39°13'36.951"N	80°51'48.883"W	5061.68	147.152	2.98	-0.19	-2.98	
11805.00	89.780	153.560	6513.98	5102.38	-4338.03	2786.59	1679090.98	14244506.12	39°13'36.104"N	80°51'48.363"W	5155.93	147.285	1.78	-0.11	-1.78	
11899.00	89.970	154.510	6514.19	5196.34	-4422.54	2827.75	1679132.11	14244421.64	39°13'35.268"N	80°51'47.842"W	5249.29	147.405	1.03	0.20	1.01	
11993.00	89.850	154.720	6514.34	5290.33	-4507.47	2868.04	1679172.40	14244336.75	39°13'34.428"N	80°51'47.331"W	5342.56	147.532	0.26	-0.13	0.22	
12088.00	89.820	155.950	6514.61	5385.33	-4593.80	2907.69	1679212.02	14244250.45	39°13'33.574"N	80°51'46.829"W	5436.69	147.668	1.30	-0.03	1.29	
12182.00	89.850	155.610	6514.88	5479.33	-4679.52	2946.25	1679250.57	14244164.76	39°13'32.726"N	80°51'46.341"W	5529.77	147.805	0.36	0.03	-0.36	
12277.00	89.820	154.110	6515.15	5574.32	-4765.52	2986.61	1679290.91	14244078.80	39°13'31.876"N	80°51'45.830"W	5624.06	147.924	1.58	-0.03	-1.58	
12371.00	89.880	153.300	6515.40	5668.27	-4849.79	3028.25	1679332.54	14243994.56	39°13'31.042"N	80°51'45.302"W	5717.58	148.019	0.86	0.06	-0.86	
12465.00	89.820	153.450	6515.65	5762.20	-4933.82	3070.37	1679374.64	14243910.56	39°13'30.211"N	80°51'44.768"W	5811.18	148.106	0.17	-0.06	0.16	
12560.00	89.850	153.380	6515.92	5857.13	-5018.78	3112.89	1679417.14	14243825.64	39°13'29.370"N	80°51'44.230"W	5905.78	148.191	0.08	0.03	-0.07	
12654.00	90.220	154.110	6515.86	5951.08	-5103.08	3154.47	1679458.71	14243741.37	39°13'28.537"N	80°51'43.703"W	5999.34	148.278	0.87	0.39	0.78	
12748.00	89.690	155.270	6515.94	6045.07	-5188.06	3194.66	1679498.88	14243656.43	39°13'27.696"N	80°51'43.194"W	6092.76	148.376	1.36	-0.56	1.23	
12843.00	89.420	154.290	6516.67	6140.06	-5274.00	3235.13	1679539.34	14243570.53	39°13'26.846"N	80°51'42.681"W	6187.18	148.475	1.07	-0.28	-1.03	
12937.00	89.260	152.080	6517.76	6233.97	-5357.88	3277.53	1679581.72	14243486.68	39°13'26.016"N	80°51'42.144"W	6280.85	148.545	2.36	-0.17	-2.35	
13032.00	89.420	151.700	6518.85	6328.77	-5441.67	3322.29	1679626.46	14243402.92	39°13'25.188"N	80°51'41.577"W	6375.68	148.595	0.43	0.17	-0.40	
13126.00	89.350	151.910	6519.86	6422.56	-5524.51	3366.70	1679670.85	14243320.11	39°13'24.368"N	80°51'41.015"W	6469.53	148.641	0.24	-0.07	0.22	
13221.00	89.420	153.920	6520.88	6517.45	-5609.08	3409.95	1679714.09	14243235.58	39°13'23.532"N	80°51'40.467"W	6564.26	148.703	2.12	0.07	2.12	
13315.00	89.450	155.240	6521.81	6611.43	-5693.97	3450.30	1679754.42	14243150.72	39°13'22.692"N	80°51'39.956"W	6657.77	148.786	1.40	0.03	1.40	
13410.00	89.750	156.370	6522.47	6706.42	-5780.63	3489.23	1679793.33	14243064.10	39°13'21.835"N	80°51'39.463"W	6752.06	148.884	1.23	0.32	1.19	
13504.00	89.750	154.640	6522.88	6800.42	-5866.16	3528.20	1679832.29	14242978.60	39°13'20.989"N	80°51'38.969"W	6845.44	148.975	1.84	0.00	-1.84	
13599.00	89.750	154.310	6523.29	6895.40	-5951.89	3569.14	1679873.21	14242892.91	39°13'20.141"N	80°51'38.451"W	6940.01	149.050	0.35	0.00	-0.35	
13693.00	89.780	156.560	6523.68	6989.40	-6037.37	3608.21	1679912.27	14242807.45	39°13'19.295"N	80°51'37.956"W	7033.43	149.136	2.39	0.03	2.39	
13787.00	89.780	158.820	6524.04	7083.32	-6124.33	3643.90	1679947.94	14242720.53	39°13'18.435"N	80°51'37.504"W	7126.39	149.248	2.40	0.00	2.40	
13882.00	89.690	161.010	6524.48	7178.04	-6213.55	3676.52	1679980.54	14242631.35	39°13'17.553"N	80°51'37.091"W	7219.76	149.387	2.31	-0.09	2.31	
13977.00	89.750	161.390	6524.94	7272.58	-6303.48	3707.13	1680011.15	14242541.46	39°13'16.664"N	80°51'36.704"W	7312.77	149.540	0.40	0.06	0.40	
14071.00	89.910	158.710	6525.22	7366.28	-6391.83	3739.20	1680043.20	14242453.14	39°13'15.790"N	80°51'36.298"W	7405.21	149.672	2.86	0.17	-2.85	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 13 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 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
14166.00	89.910	157.600	6525.37	7461.18	-6480.00	3774.55	1680078.54	14242365.00	39°13'14.918"N	80°51'35.851"W	7499.18	149.780	1.17	0.00	-1.17	
14260.00	89.880	157.860	6525.55	7555.11	-6566.99	3810.17	1680114.15	14242278.05	39°13'14.058"N	80°51'35.400"W	7592.29	149.878	0.28	-0.03	0.28	
14355.00	89.880	155.140	6525.74	7650.09	-6654.11	3848.05	1680152.01	14242190.97	39°13'13.196"N	80°51'34.921"W	7686.65	149.959	2.86	0.00	-2.86	
14449.00	89.720	158.340	6526.07	7744.06	-6740.45	3885.17	1680189.11	14242104.66	39°13'12.342"N	80°51'34.451"W	7779.99	150.041	3.41	-0.17	3.40	
14544.00	89.940	151.430	6526.35	7838.99	-6826.42	3925.46	1680229.39	14242018.72	39°13'11.492"N	80°51'33.940"W	7874.60	150.099	7.28	0.23	-7.27	
14638.00	89.970	151.960	6526.43	7932.78	-6909.18	3970.04	1680273.95	14241936.00	39°13'10.673"N	80°51'33.376"W	7968.56	150.118	0.56	0.03	0.56	
14733.00	90.090	155.620	6526.38	8027.72	-6994.40	4011.99	1680315.88	14241850.81	39°13'09.830"N	80°51'32.844"W	8063.35	150.161	3.85	0.13	3.85	
14827.00	90.150	154.930	6526.18	8121.72	-7079.78	4051.30	1680355.18	14241765.47	39°13'08.986"N	80°51'32.346"W	8156.98	150.220	0.74	0.06	-0.73	
14922.00	90.150	152.740	6525.93	8216.67	-7165.04	4093.19	1680397.05	14241680.24	39°13'08.142"N	80°51'31.816"W	8251.79	150.262	2.31	0.00	-2.31	
15016.00	90.120	149.460	6525.71	8310.37	-7247.32	4138.61	1680442.46	14241597.99	39°13'07.328"N	80°51'31.240"W	8345.76	150.271	3.49	-0.03	-3.49	
15110.00	90.000	152.230	6525.61	8404.04	-7329.40	4184.40	1680488.23	14241515.94	39°13'06.516"N	80°51'30.660"W	8439.75	150.278	2.95	-0.13	2.95	
15204.00	89.940	157.680	6525.66	8498.00	-7414.53	4224.18	1680527.99	14241430.85	39°13'05.674"N	80°51'30.157"W	8533.41	150.329	5.80	-0.06	5.80	
15299.00	90.000	159.630	6525.71	8592.86	-7503.01	4258.76	1680562.55	14241342.40	39°13'04.799"N	80°51'29.719"W	8627.41	150.420	2.05	0.06	2.05	
15393.00	90.060	158.040	6525.66	8686.70	-7590.67	4292.70	1680596.48	14241254.78	39°13'03.932"N	80°51'29.289"W	8720.41	150.511	1.69	0.06	-1.69	
15487.00	89.970	156.210	6525.64	8780.66	-7677.27	4329.23	1680633.00	14241168.21	39°13'03.076"N	80°51'28.827"W	8813.78	150.581	1.95	-0.10	-1.95	
15581.00	90.000	153.930	6525.66	8874.65	-7762.51	4368.85	1680672.60	14241083.01	39°13'02.233"N	80°51'28.325"W	8907.49	150.629	2.43	0.03	-2.43	
15676.00	90.680	154.990	6525.10	8969.63	-7848.22	4409.81	1680713.54	14240997.33	39°13'01.385"N	80°51'27.807"W	9002.28	150.669	1.33	0.72	1.12	
15771.00	90.120	155.750	6524.44	9064.63	-7934.58	4449.40	1680753.12	14240911.01	39°13'00.531"N	80°51'27.305"W	9096.96	150.718	0.99	-0.59	0.80	
15865.00	90.090	156.320	6524.26	9158.62	-8020.47	4487.58	1680791.28	14240825.15	39°12'59.681"N	80°51'26.822"W	9190.56	150.772	0.61	-0.03	0.61	
15959.00	89.540	157.060	6524.57	9252.60	-8106.80	4524.78	1680828.46	14240738.86	39°12'58.827"N	80°51'26.351"W	9284.06	150.832	0.98	-0.59	0.79	
16073.00	89.510	156.970	6525.51	9366.56	-8211.74	4569.29	1680872.96	14240633.95	39°12'57.789"N	80°51'25.788"W	9397.40	150.907	0.08	-0.03	-0.08	
16148.00	89.720	157.170	6526.02	9441.53	-8280.82	4598.51	1680902.17	14240564.91	39°12'57.106"N	80°51'25.418"W	9471.97	150.956	0.39	0.28	0.27	
16242.00	89.320	157.590	6526.80	9535.48	-8367.58	4634.66	1680938.31	14240478.18	39°12'56.248"N	80°51'24.960"W	9565.38	151.019	0.62	-0.43	0.45	
16336.00	89.480	157.460	6527.79	9629.42	-8454.44	4670.60	1680974.23	14240391.36	39°12'55.389"N	80°51'24.505"W	9658.78	151.082	0.22	0.17	-0.14	
16431.00	89.540	156.900	6528.60	9724.38	-8542.00	4707.44	1681011.05	14240303.83	39°12'54.523"N	80°51'24.039"W	9753.24	151.141	0.59	0.06	-0.59	
16525.00	89.350	156.040	6529.51	9818.36	-8628.18	4744.96	1681048.56	14240217.69	39°12'53.671"N	80°51'23.564"W	9846.83	151.192	0.94	-0.20	-0.91	
16619.00	89.480	155.660	6530.47	9912.36	-8713.95	4783.42	1681087.00	14240131.95	39°12'52.822"N	80°51'23.077"W	9940.52	151.236	0.43	0.14	-0.40	
16715.00	90.860	157.570	6530.19	10008.33	-8802.05	4821.52	1681125.09	14240043.88	39°12'51.951"N	80°51'22.595"W	10036.09	151.287	2.45	1.44	1.99	
16809.00	91.110	159.700	6528.57	10102.18	-8889.58	4855.76	1681159.31	14239956.40	39°12'51.085"N	80°51'22.162"W	10129.31	151.355	2.28	0.27	2.27	
16904.00	90.950	153.580	6526.86	10197.10	-8976.73	4893.40	1681196.94	14239869.27	39°12'50.223"N	80°51'21.685"W	10223.85	151.404	6.44	-0.17	-6.44	

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'
Page 14 of 16



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

WELLPATH DATA (370 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
16999.00	90.980	151.870	6525.26	10291.97	-9061.16	4936.93	1681240.45	14239784.88	39°12'49.388"N	80°51'21.134"W	10318.81	151.416	1.80	0.03	-1.80	
17094.00	90.860	152.480	6523.73	10386.79	-9145.16	4981.27	1681284.77	14239700.91	39°12'48.557"N	80°51'20.572"W	10413.79	151.423	0.65	-0.13	0.64	
17188.00	90.950	152.260	6522.25	10480.63	-9228.43	5024.86	1681328.34	14239617.68	39°12'47.734"N	80°51'20.020"W	10507.76	151.432	0.25	0.10	-0.23	
17282.00	91.050	153.000	6520.61	10574.50	-9311.89	5068.06	1681371.53	14239534.25	39°12'46.908"N	80°51'19.473"W	10601.73	151.442	0.79	0.11	0.79	
17377.00	90.800	154.130	6519.08	10669.42	-9396.95	5110.35	1681413.80	14239449.23	39°12'46.067"N	80°51'18.937"W	10696.65	151.461	1.22	-0.26	1.19	
17472.00	90.400	154.630	6518.08	10764.40	-9482.60	5151.43	1681454.86	14239363.61	39°12'45.219"N	80°51'18.417"W	10791.52	151.487	0.67	-0.42	0.53	
17567.00	90.400	155.960	6517.42	10859.39	-9568.90	5191.13	1681494.55	14239277.34	39°12'44.366"N	80°51'17.915"W	10886.31	151.520	1.40	0.00	1.40	
17662.00	90.580	159.090	6516.61	10954.32	-9656.67	5227.44	1681530.85	14239189.60	39°12'43.498"N	80°51'17.455"W	10980.78	151.572	3.30	0.19	3.29	
17739.00	90.400	156.870	6515.95	11031.25	-9728.05	5256.31	1681559.70	14239118.26	39°12'42.792"N	80°51'17.090"W	11057.29	151.617	2.89	-0.23	-2.88	
17763.00	90.400	156.870	6515.78	11055.24	-9750.12	5265.73	1681569.12	14239096.20	39°12'42.574"N	80°51'16.971"W	11081.19	151.628	0.00	0.00	0.00	Projected MD at TD: 17763'

HOLE & CASING SECTIONS - Ref Wellbore: Hunter Unit 1H AWB Ref Wellpath: Hunter Unit 1H AWP Proj: 17763'									
String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start E/W	End N/S	End E/W
	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
20in Conductor	25.00	65.00	40.00	25.00	65.00	0.00	0.00	0.07	-0.04
13.375in Casing Surface	25.00	455.00	430.00	25.00	455.00	0.00	0.00	0.79	-0.52
9.625in Casing Intermediate	25.00	2575.00	2550.00	25.00	2574.20	0.00	0.00	24.83	20.98

RECEIVED
Office of Oil and Gas

NOV 30 2017

WV Department of
Environmental Protection



Actual Wellpath Report

Hunter Unit 1H AWP Proj: 17763'

Page 15 of 16



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Hunter Unit 1H
Field	Doddridge	Wellbore	Hunter Unit 1H AWB
Facility	James Webb Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hunter Unit 1H POE Rev-1	6486.00	-62.01	857.29	1677162.45	14248780.42	39°14'18.395"N	80°52'12.801"W	point
Hunter Unit 1H BHL - Plat	6507.00	-9727.23	5251.57	1681554.97	14239119.08	39°12'42.800"N	80°51'17.150"W	point
Hunter Unit 1H LP Rev-1	6507.00	-62.24	857.40	1677162.55	14248780.19	39°14'18.393"N	80°52'12.800"W	point

WELLPATH COMPOSITION - Ref Wellbore: Hunter Unit 1H AWB Ref Wellpath: Hunter Unit 1H AWP Proj: 17763'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	5512.01	SDI Keeper v1.04	01 SDI Std. Keeper Gyro (100' - 5500.01)	Hunter Unit 1H AWB
5512.01	17739.00	BHI AutoTrak Curve (Short)	02_BHI AT Curve <8-1/2">(5512.01')(5665'-17739')	Hunter Unit 1H AWB
17739.00	17763.00	Blind Drilling (std)	Projection to bit	Hunter Unit 1H AWB

RECEIVED
Office of Oil and Gas
NOV 30 2017
WV Department of
Environmental Protection