



ANTERO RESOURCES CORPORATION

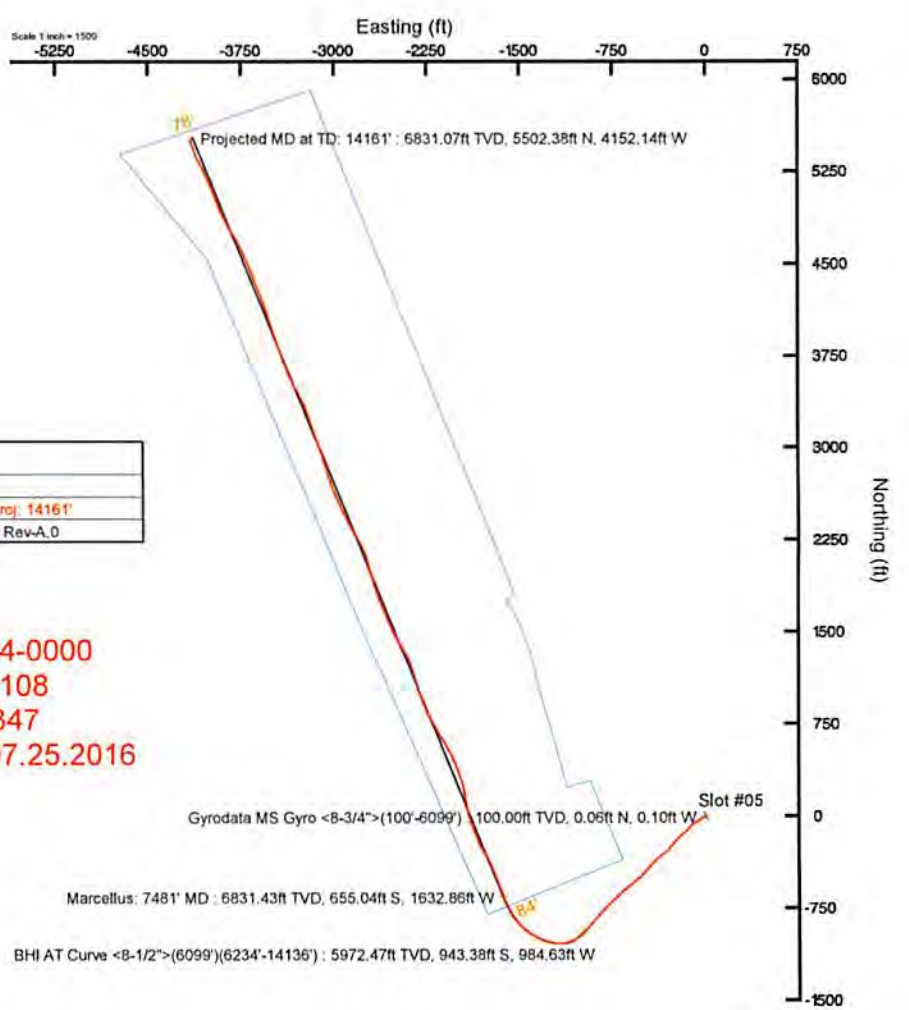
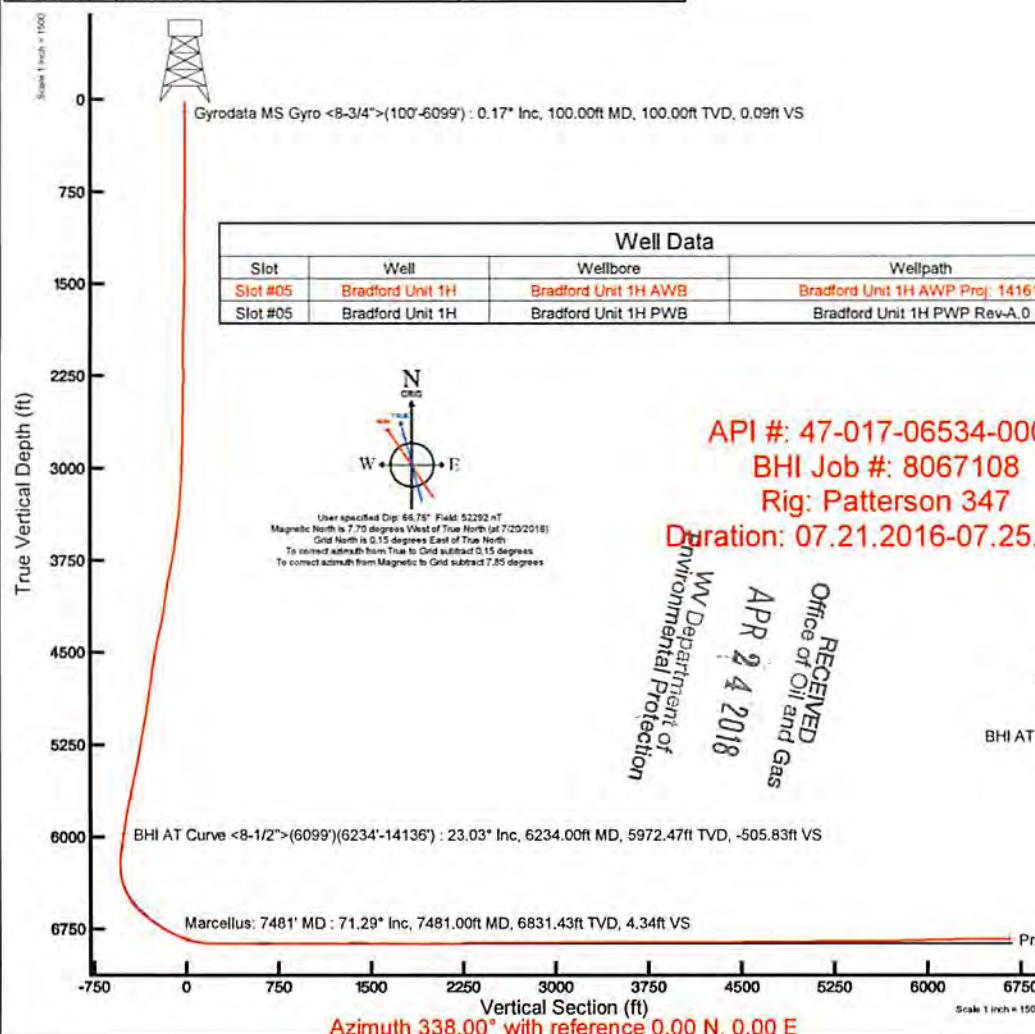
Location: Doddridge Co., WV
 Field: Doddridge
 Facility: Melody Pad

Slot: Slot #05
 Well: Bradford Unit 1H
 Wellbore: Bradford Unit 1H PWB



Plot reference wellpath is Bradford Unit 1H PWP Rev-A.0	Grid System NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 347 (RKB)	* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to Patterson 347 (RKB)	North Reference: Grid north
Patterson 347 (RKB) to Mean Sea Level 1160 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot #05): -1135 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hankk on 2016-08-01
	Database: WA_MPL_EASTERNUS_Colts

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Melody Pad		1708455.400	14292537.540	39°21'30.416"N	80°45'33.453"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #05	-8.66	5.00	1708460.400	14292528.880	39°21'30.330"N
Comment: Bradford Unit 1H					
Patterson 347 (RKB) to Mud line (At Slot #05)					25ft
Mean Sea Level to Mud line (At Slot #05)					-1135ft
Patterson 347 (RKB) to Mean Sea Level					1160ft



Well Data			
Slot	Well	Wellbore	Wellpath
Slot #05	Bradford Unit 1H	Bradford Unit 1H AWB	Bradford Unit 1H AWP Proj: 14161'
Slot #05	Bradford Unit 1H	Bradford Unit 1H PWB	Bradford Unit 1H PWP Rev-A.0

API #: 47-017-06534-0000
 BHI Job #: 8067108
 Rig: Patterson 347
 Duration: 07.21.2016-07.25.2016

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Azimuth 338.00° with reference 0.00 N, 0.00 E



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Bradford Unit 1H AWP Proj: 14161'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999605	Report Generated	8/1/2016 at 3:26:18 PM
Convergence at slot	0.16° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Bradford_Unit_1H_AWP_Proj_14161_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-8.66	5.00	1708460.40	14292528.88	39°21'30.330"N	80°45'33.390"W
Facility Reference Pt			1708455.40	14292537.54	39°21'30.416"N	80°45'33.453"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 347 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 347 (RKB) to Mean Sea Level	1160.00ft
Vertical Reference Pt	Patterson 347 (RKB)	Patterson 347 (RKB) to Mud Line at Slot (Slot #05)	25.00ft
MD Reference Pt	Patterson 347 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	338.00°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (171 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	0.000	300.470	0.00	0.00	0.00	0.00	1708460.40	14292528.88	39°21'30.330"N	80°45'33.390"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	300.470	25.00	0.00	0.00	0.00	1708460.40	14292528.88	39°21'30.330"N	80°45'33.390"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.170	300.470	100.00	0.09	0.06	-0.10	1708460.30	14292528.94	39°21'30.331"N	80°45'33.391"W	0.11	300.470	0.23	0.23	-79.37	Gyrodata MS Gyro <8-3/4">(100'-6099')
200.00	0.080	216.410	200.00	0.17	0.08	-0.27	1708460.13	14292528.96	39°21'30.331"N	80°45'33.393"W	0.28	285.884	0.18	-0.09	-84.06	
300.00	0.080	217.280	300.00	0.10	-0.04	-0.35	1708460.05	14292528.84	39°21'30.330"N	80°45'33.394"W	0.35	264.065	0.00	0.00	0.87	
400.00	0.090	225.560	400.00	0.03	-0.15	-0.45	1708459.95	14292528.73	39°21'30.329"N	80°45'33.396"W	0.47	251.829	0.02	0.01	8.28	
500.00	0.210	234.270	500.00	-0.04	-0.31	-0.65	1708459.75	14292528.57	39°21'30.327"N	80°45'33.398"W	0.72	244.660	0.12	0.12	8.71	
600.00	0.990	238.690	599.99	-0.23	-0.86	-1.54	1708458.86	14292528.02	39°21'30.321"N	80°45'33.410"W	1.77	240.668	0.78	0.78	4.42	
700.00	2.760	241.210	699.94	-0.65	-2.47	-4.39	1708456.01	14292526.41	39°21'30.306"N	80°45'33.446"W	5.04	240.588	1.77	1.77	2.52	
800.00	3.570	237.970	799.78	-1.48	-5.28	-9.14	1708451.27	14292523.60	39°21'30.278"N	80°45'33.507"W	10.55	239.958	0.83	0.81	-3.24	
900.00	3.650	235.930	899.58	-2.68	-8.72	-14.41	1708445.99	14292520.16	39°21'30.244"N	80°45'33.574"W	16.84	238.830	0.15	0.08	-2.04	
1000.00	3.630	239.330	999.38	-3.83	-12.12	-19.77	1708440.64	14292516.77	39°21'30.211"N	80°45'33.642"W	23.19	238.500	0.22	-0.02	3.40	
1100.00	3.890	242.910	1099.17	-4.61	-15.28	-25.52	1708434.89	14292513.61	39°21'30.180"N	80°45'33.715"W	29.74	239.091	0.35	0.26	3.58	
1200.00	4.090	243.570	1198.92	-5.18	-18.41	-31.73	1708428.68	14292510.48	39°21'30.149"N	80°45'33.795"W	36.68	239.879	0.21	0.20	0.66	
1300.00	4.230	242.380	1298.66	-5.82	-21.71	-38.19	1708422.23	14292507.18	39°21'30.116"N	80°45'33.877"W	43.93	240.388	0.16	0.14	-1.19	
1400.00	4.450	242.660	1398.37	-6.54	-25.20	-44.90	1708415.51	14292503.69	39°21'30.082"N	80°45'33.963"W	51.49	240.702	0.22	0.22	0.28	
1500.00	4.180	237.450	1498.09	-7.57	-28.94	-51.42	1708409.00	14292499.95	39°21'30.045"N	80°45'34.046"W	59.01	240.630	0.48	-0.27	-5.21	
1600.00	4.090	234.310	1597.83	-9.08	-32.98	-57.39	1708403.03	14292495.91	39°21'30.006"N	80°45'34.122"W	66.19	240.115	0.24	-0.09	-3.14	
1700.00	3.880	227.640	1697.59	-11.10	-37.34	-62.79	1708397.64	14292491.55	39°21'29.963"N	80°45'34.191"W	73.05	239.259	0.51	-0.21	-6.67	
1800.00	3.700	233.640	1797.37	-13.08	-41.53	-67.89	1708392.54	14292487.36	39°21'29.921"N	80°45'34.256"W	79.58	238.541	0.44	-0.18	6.00	
1900.00	3.850	238.640	1897.15	-14.43	-45.19	-73.35	1708387.08	14292483.70	39°21'29.885"N	80°45'34.325"W	86.16	238.362	0.36	0.15	5.00	
2000.00	3.730	254.540	1996.94	-14.60	-47.81	-79.35	1708381.08	14292481.09	39°21'29.860"N	80°45'34.402"W	92.64	238.932	1.05	-0.12	15.90	
2100.00	3.990	258.800	2096.71	-13.58	-49.35	-85.90	1708374.53	14292479.55	39°21'29.844"N	80°45'34.485"W	99.07	240.122	0.39	0.26	4.26	
2200.00	4.190	252.540	2196.46	-12.64	-51.12	-92.80	1708367.64	14292477.78	39°21'29.827"N	80°45'34.573"W	105.95	241.150	0.49	0.20	-6.26	
2300.00	3.670	243.050	2296.22	-12.62	-53.67	-99.14	1708361.30	14292475.23	39°21'29.802"N	80°45'34.654"W	112.73	241.570	0.83	-0.52	-9.49	
2400.00	2.340	227.650	2396.09	-13.61	-56.50	-103.50	1708356.94	14292472.41	39°21'29.774"N	80°45'34.710"W	117.91	241.372	1.54	-1.33	-15.40	
2500.00	1.510	171.200	2496.04	-15.60	-59.17	-104.81	1708355.64	14292469.73	39°21'29.748"N	80°45'34.726"W	120.36	240.551	1.96	-0.83	-56.45	
2600.00	1.550	159.910	2596.00	-18.24	-61.74	-104.14	1708356.30	14292467.16	39°21'29.722"N	80°45'34.718"W	121.07	239.336	0.30	0.04	-11.28	
2700.00	1.530	204.610	2695.97	-20.51	-64.23	-104.23	1708356.21	14292464.68	39°21'29.698"N	80°45'34.719"W	122.43	238.358	1.17	-0.02	44.70	
2800.00	4.550	231.820	2795.82	-22.53	-67.90	-107.91	1708352.54	14292461.01	39°21'29.662"N	80°45'34.766"W	127.49	237.821	3.26	3.02	27.21	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (171 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
2900.00	4.880	225.560	2895.48	-25.26	-73.33	-114.06	1708346.38	14292455.58	39°21'29.608"N	80°45'34.845"W	135.60	237.264	0.61	0.33	-6.26	
3000.00	4.460	223.300	2995.15	-28.51	-79.13	-119.76	1708340.68	14292449.78	39°21'29.551"N	80°45'34.917"W	143.55	236.546	0.46	-0.42	-2.26	
3100.00	6.230	225.680	3094.71	-32.19	-85.75	-126.31	1708334.14	14292443.16	39°21'29.486"N	80°45'35.001"W	152.67	235.827	1.78	1.77	2.38	
3200.00	8.820	223.950	3193.84	-37.38	-95.07	-135.52	1708324.94	14292433.85	39°21'29.394"N	80°45'35.119"W	165.54	234.950	2.60	2.59	-1.73	
3300.00	11.470	223.540	3292.27	-44.62	-107.80	-147.69	1708312.77	14292421.13	39°21'29.268"N	80°45'35.274"W	182.84	233.875	2.65	2.65	-0.41	
3400.00	16.180	225.090	3389.34	-54.17	-124.85	-164.42	1708296.05	14292404.08	39°21'29.100"N	80°45'35.487"W	206.45	232.789	4.72	4.71	1.55	
3500.00	19.400	228.240	3484.55	-65.21	-145.75	-186.68	1708273.80	14292383.18	39°21'28.894"N	80°45'35.772"W	236.84	232.018	3.36	3.22	3.15	
3600.00	19.500	224.950	3578.85	-77.36	-168.63	-210.86	1708249.62	14292360.32	39°21'28.669"N	80°45'36.080"W	269.99	231.350	1.10	0.10	-3.29	
3700.00	22.230	224.130	3672.28	-91.55	-194.02	-235.83	1708224.67	14292334.94	39°21'28.419"N	80°45'36.399"W	305.38	230.555	2.75	2.73	-0.82	
3800.00	24.730	222.750	3764.00	-108.13	-222.96	-263.20	1708197.30	14292306.01	39°21'28.133"N	80°45'36.748"W	344.95	229.731	2.56	2.50	-1.38	
3900.00	22.570	217.530	3855.60	-126.79	-253.55	-289.10	1708171.42	14292275.43	39°21'27.832"N	80°45'37.079"W	384.53	228.748	3.01	-2.16	-5.22	
4000.00	22.350	226.480	3948.04	-143.50	-281.87	-314.58	1708145.94	14292247.12	39°21'27.552"N	80°45'37.404"W	422.39	228.139	3.42	-0.22	8.95	
4100.00	25.500	229.590	4039.44	-157.28	-308.92	-344.77	1708115.77	14292220.08	39°21'27.286"N	80°45'37.790"W	462.92	228.139	3.39	3.15	3.11	
4200.00	26.760	231.050	4129.22	-170.64	-337.03	-378.67	1708081.88	14292191.98	39°21'27.009"N	80°45'38.222"W	506.93	228.329	1.41	1.26	1.46	
4300.00	27.060	227.020	4218.40	-185.35	-366.69	-412.82	1708047.75	14292162.33	39°21'26.717"N	80°45'38.658"W	552.16	228.386	1.85	0.30	-4.03	
4400.00	25.940	219.210	4307.92	-204.03	-399.16	-443.30	1708017.28	14292129.88	39°21'26.397"N	80°45'39.047"W	596.52	227.999	3.66	-1.12	-7.81	
4500.00	23.720	218.470	4398.67	-224.48	-431.86	-469.64	1707990.95	14292097.19	39°21'26.074"N	80°45'39.384"W	638.01	227.400	2.24	-2.22	-0.74	
4600.00	23.150	220.190	4490.42	-243.57	-462.62	-494.84	1707965.76	14292066.44	39°21'25.771"N	80°45'39.705"W	677.41	226.927	0.89	-0.57	1.72	
4700.00	23.600	229.290	4582.25	-259.16	-490.70	-522.71	1707937.90	14292038.37	39°21'25.494"N	80°45'40.061"W	716.94	226.809	3.64	0.45	9.10	
4800.00	25.380	230.520	4673.25	-272.02	-517.39	-554.42	1707906.20	14292011.70	39°21'25.231"N	80°45'40.466"W	758.34	226.979	1.85	1.78	1.23	
4900.00	26.160	229.120	4763.30	-285.59	-545.44	-587.63	1707873.00	14291983.66	39°21'24.955"N	80°45'40.889"W	801.76	227.133	0.99	0.78	-1.40	
5000.00	25.770	230.470	4853.21	-299.27	-573.70	-621.07	1707839.58	14291955.40	39°21'24.676"N	80°45'41.316"W	845.49	227.270	0.71	-0.39	1.35	
5100.00	25.590	229.730	4943.33	-312.59	-601.50	-654.31	1707806.35	14291927.62	39°21'24.402"N	80°45'41.740"W	888.78	227.408	0.37	-0.18	-0.74	
5200.00	25.610	226.620	5033.52	-327.24	-630.30	-686.50	1707774.17	14291898.83	39°21'24.118"N	80°45'42.151"W	931.97	227.444	1.34	0.02	-3.11	
5300.00	26.220	226.090	5123.46	-343.36	-660.47	-718.12	1707742.56	14291868.67	39°21'23.821"N	80°45'42.555"W	975.66	227.395	0.65	0.61	-0.53	
5400.00	26.010	225.110	5213.25	-360.14	-691.27	-749.57	1707711.13	14291837.89	39°21'23.517"N	80°45'42.956"W	1019.66	227.317	0.48	-0.21	-0.98	
5500.00	24.890	226.590	5303.55	-376.35	-721.20	-780.39	1707680.32	14291807.96	39°21'23.222"N	80°45'43.349"W	1062.61	227.257	1.22	-1.12	1.48	
5600.00	24.980	223.810	5394.23	-392.68	-750.90	-810.30	1707650.42	14291778.28	39°21'22.930"N	80°45'43.731"W	1104.74	227.179	1.18	0.09	-2.78	
5700.00	25.820	221.140	5484.57	-411.17	-782.54	-839.25	1707621.49	14291748.85	39°21'22.618"N	80°45'44.101"W	1147.48	227.002	1.42	0.84	-2.67	
5800.00	24.470	221.670	5575.09	-430.20	-814.42	-867.34	1707593.40	14291718.79	39°21'22.303"N	80°45'44.459"W	1189.77	226.803	1.37	-1.35	0.53	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Melody Pad
Well	Bradford Unit 1H AWP
Wellbore	Bradford Unit 1H AWP
Slot	Slot #05

WELLPATH DATA (171 stations) † = Interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	Vert	North	East	Grid East	Grid North	Latitude	Longitude	Closure	Closure	Dir	DLS	Build	Turn	Comments
(m)	[°]	[°]	(m)	(m)	(m)	(m)	(us m)	(us m)			(m)	(m)	(m)	(%/100ft)	(m)	(m)	
5900.00	221.090	666.10	448.77	-845.51	-894.74	1707566.02	14291683.85	1429121.997	N	80°45'44.809"	W	1231.03	226.620	0.24	-0.58		
5800.00	220.860	657.21	467.50	-876.63	-921.77	1707539.00	14291652.60	89°21'21.690"	N	80°45'45.154"	W	1272.06	226.438	0.31	-0.23		
5099.00	222.370	658.05	485.00	-906.06	-947.89	1707512.89	14291623.18	89°21'21.400"	N	80°45'45.488"	W	1311.28	226.292	1.68	-1.57		
5234.00	226.710	659.27	505.83	-943.38	-984.63	1707476.16	14291585.88	89°21'21.032"	N	80°45'45.957"	W	1363.62	226.226	1.28	0.28	BHI AT Curve <8-1/2">(6099)/(6234-.14136)	
5281.00	225.890	650.68	512.67	-956.15	-998.00	1707462.80	14291573.11	89°21'20.906"	N	80°45'46.127"	W	1382.10	226.227	0.88	-1.74		
5328.00	227.810	650.58	519.71	-969.51	-1012.28	1707448.53	14291559.75	89°21'20.774"	N	80°45'46.310"	W	1401.66	226.236	5.81	5.55		
5375.00	231.060	650.99	526.66	-983.75	-1028.96	1707431.84	14291545.53	89°21'20.634"	N	80°45'46.523"	W	1423.56	226.287	8.84	8.23	6.91	
5422.00	235.960	651.26	532.67	-998.10	-1048.44	1707412.38	14291531.17	89°21'20.493"	N	80°45'46.771"	W	1447.56	226.409	7.53	5.28	10.43	
5469.00	242.770	651.80	536.42	-1010.80	-1069.86	1707380.96	14291518.48	89°21'20.368"	N	80°45'47.044"	W	1471.84	226.626	7.73	-0.85	14.49	
5516.00	249.950	652.24	537.14	-1020.62	-1092.24	1707368.59	14291508.67	89°21'20.271"	N	80°45'47.329"	W	1494.88	226.942	8.19	-1.96	15.28	
5630.00	256.830	652.60	534.87	-1027.52	-1115.40	1707345.45	14291501.76	89°21'20.204"	N	80°45'47.624"	W	1516.55	227.348	7.54	0.23	14.64	
5611.00	261.090	653.01	530.11	-1032.30	-1139.91	1707320.94	14291496.99	89°21'20.157"	N	80°45'47.937"	W	1537.86	227.836	4.82	1.38	8.87	
5658.00	266.300	653.41	523.20	-1035.06	-1165.18	1707295.68	14291494.23	89°21'20.130"	N	80°45'48.258"	W	1558.52	228.385	7.56	4.60	11.09	
5705.00	271.090	653.79	513.63	-1035.64	-1192.16	1707269.71	14291493.65	89°21'20.125"	N	80°45'48.602"	W	1579.17	229.019	7.79	5.15	10.19	
5752.00	275.660	654.16	501.21	-1033.69	-1220.51	1707240.38	14291494.66	89°21'20.145"	N	80°45'48.963"	W	1599.42	229.738	8.24	4.06	11.85	
5791.00	281.066	654.47	488.66	-1029.91	-1244.65	1707216.24	14291499.38	89°21'20.183"	N	80°45'49.270"	W	1615.51	230.393	7.80	3.28	11.30	
5799.00	287.360	654.90	466.55	-1020.69	-1280.84	1707180.06	14291508.60	89°21'20.275"	N	80°45'49.730"	W	1637.79	231.449	9.42	5.98	11.06	
5848.00	290.840	655.22	445.93	-1010.41	-1310.48	1707150.46	14291518.87	89°21'20.378"	N	80°45'50.107"	W	1654.76	232.367	8.59	6.69	7.73	
5898.00	298.330	655.84	393.82	-980.54	-1375.64	1707085.31	14291548.72	89°21'20.675"	N	80°45'50.936"	W	1689.33	234.519	7.71	4.50	8.10	
5988.00	302.840	656.13	364.31	-961.63	-1407.61	1707053.34	14291567.63	89°21'20.862"	N	80°45'51.342"	W	1704.73	235.661	8.05	2.70	9.60	
7046.00	303.948	656.20	357.07	-956.79	-1414.95	1707046.01	14291572.47	89°21'20.910"	N	80°45'51.435"	W	1708.08	235.933	8.30	2.03	10.08	
7048.00	307.430	656.41	333.30	-940.38	-1437.80	1707023.18	14291588.87	89°21'21.073"	N	80°45'51.726"	W	1718.01	236.814	8.30	2.22	9.96	
7128.00	312.270	656.68	299.60	-915.88	-1467.13	1706993.86	14291613.36	89°21'21.316"	N	80°45'52.098"	W	1729.54	238.025	8.69	2.30	10.30	
7175.00	317.080	656.95	264.03	-888.64	-1494.66	1706966.33	14291640.59	89°21'21.586"	N	80°45'52.448"	W	1738.88	239.267	8.76	2.36	10.23	
7222.00	321.440	657.20	226.66	-858.74	-1520.39	1706940.61	14291670.48	89°21'21.882"	N	80°45'52.775"	W	1746.15	240.542	8.92	4.34	9.28	
7270.00	325.220	657.45	186.75	-825.64	-1545.02	1706915.99	14291703.87	89°21'22.210"	N	80°45'53.087"	W	1751.79	241.881	8.34	4.87	7.88	
7283.00	326.581	657.61	146.01	-816.24	-1561.38	1706909.63	14291717.26	89°21'22.303"	N	80°45'53.168"	W	1753.01	242.250	10.75	5.66	10.47	
7317.00	330.050	657.75	146.01	-790.65	-1567.17	1706893.85	14291722.55	89°21'22.566"	N	80°45'53.368"	W	1755.32	243.229	10.75	5.84	10.20	

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Bradford Unit 1H AWP Proj: 14161

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddrige Co., WV	Well	Bradford Unit 1H
Field	Doddrige	Wellbore	Bradford Unit 1H AWP
Facility	Melody Pad		

WELLPATH DATA (171 stations) † = Interpolated/extrapolated station												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N)	(E)	(ft)	(ft)
7344.00	64.400	331.868	679.18	-121.97	-769.47	-1578.93	1706882.10	14291759.71	39°21'22.766"N	80°45'53.517"W	1756.44	244.018
7344.00	65.310	333.190	678.67	-103.94	-753.41	-1587.26	1706873.75	14291775.77	39°21'22.925"N	80°45'53.623"W	1757.01	244.608
7364.00	66.310	334.270	6806.60	-61.04	-714.83	-1606.32	1706854.72	14291814.33	39°21'23.307"N	80°45'53.864"W	1758.19	246.010
7411.00	67.210	334.270	6806.60	-61.04	-714.83	-1606.32	1706854.72	14291814.33	39°21'23.307"N	80°45'53.864"W	1758.19	246.010
7446.00	69.202	336.118	6819.59	-28.59	-685.33	-1619.95	1706841.10	14291843.82	39°21'23.599"N	80°45'54.036"W	1758.95	247.069
7458.00	69.890	338.740	6823.78	-17.35	-675.03	-1624.44	1706836.60	14291854.12	39°21'23.701"N	80°45'54.093"W	1759.11	247.435
7481.00	71.293	337.579	6831.43	4.34	-655.04	-1632.86	1706828.19	14291874.10	39°21'23.898"N	80°45'54.200"W	1759.35	248.141
7505.00	72.760	338.440	6838.83	27.17	-633.87	-1641.41	1706819.64	14291895.26	39°21'24.108"N	80°45'54.308"W	1759.55	248.885
7529.00	77.410	338.610	6850.99	72.57	-591.62	-1658.03	1706803.03	14291937.50	39°21'24.526"N	80°45'54.518"W	1760.42	250.363
7599.00	81.230	339.270	6859.63	118.74	-548.52	-1674.62	1706786.44	14291980.58	39°21'24.922"N	80°45'54.728"W	1762.17	251.864
7646.00	84.640	338.660	6865.41	165.37	-504.99	-1691.36	1706769.71	14292024.09	39°21'25.383"N	80°45'54.939"W	1765.14	253.376
7693.00	88.830	339.160	6868.09	212.28	-461.22	-1708.24	1706752.84	14292067.84	39°21'25.816"N	80°45'55.153"W	1768.41	254.890
7740.00	89.660	338.270	6868.71	259.27	-417.43	-1725.30	1706735.75	14292111.61	39°21'26.249"N	80°45'55.369"W	1775.08	256.399
7834.00	89.940	329.130	6869.04	352.91	-333.25	-1766.91	1706694.19	14292195.76	39°21'27.082"N	80°45'55.895"W	1798.06	259.319
7928.00	90.000	333.400	6869.09	446.24	-250.85	-1812.09	1706649.03	14292278.13	39°21'27.898"N	80°45'56.468"W	1829.37	262.119
8021.00	89.880	337.610	6869.43	634.14	-76.91	-1883.18	1706577.97	14292452.00	39°21'29.619"N	80°45'57.367"W	1884.75	267.661
8116.00	89.880	337.610	6869.43	634.14	-76.91	-1883.18	1706577.97	14292452.00	39°21'29.619"N	80°45'57.367"W	1884.75	267.661
8210.00	90.830	344.730	6868.85	727.94	12.00	-1913.50	1706547.66	14292540.88	39°21'30.488"N	80°45'57.750"W	1913.54	270.359
8304.00	90.090	351.740	6868.10	820.38	103.97	-1932.65	1706528.51	14292632.80	39°21'31.408"N	80°45'57.991"W	1935.45	273.079
8398.00	90.800	349.850	6867.37	912.04	196.75	-1947.69	1706513.48	14292725.55	39°21'32.325"N	80°45'58.179"W	1957.60	275.768
8493.00	90.250	342.540	6866.49	1006.00	288.94	-1970.34	1706490.84	14292817.70	39°21'33.237"N	80°45'58.465"W	1991.41	278.343
8587.00	90.150	340.120	6866.17	1099.83	377.98	-2000.43	1706460.76	14292906.71	39°21'34.118"N	80°45'58.845"W	2035.83	280.700
8681.00	90.890	335.040	6865.31	1193.80	464.84	-2036.27	1706424.94	14292995.54	39°21'34.977"N	80°45'59.298"W	2088.65	282.859
8775.00	90.220	331.030	6864.40	1287.42	548.60	-2078.88	1429382.34	14293077.27	39°21'35.806"N	80°45'59.838"W	2150.05	284.783
8869.00	90.150	329.890	6864.10	1380.60	630.38	-2125.23	1706336.02	14293169.01	39°21'36.616"N	80°46'00.425"W	2216.75	286.521
8963.00	89.600	329.250	6864.30	1473.59	711.44	-2172.83	1706288.43	14293240.04	39°21'37.418"N	80°46'01.029"W	2286.33	288.130
9057.00	89.970	330.840	6864.66	1566.68	792.88	-2219.75	1706241.53	14293321.45	39°21'38.224"N	80°46'01.624"W	2357.11	289.656
9151.00	89.290	337.650	6865.26	1660.42	877.49	-2260.57	1706200.72	14293406.02	39°21'39.061"N	80°46'02.140"W	2424.91	291.215
9245.00	90.180	341.950	6865.70	1754.35	965.69	-2293.02	1706168.29	14293494.18	39°21'39.934"N	80°46'02.551"W	2488.07	292.838
9340.00	90.060	341.970	6865.50	1849.12	1056.02	-2322.44	1706134.88	14293584.48	39°21'40.827"N	80°46'02.922"W	2551.26	294.451
9434.00	90.060	342.370	6865.40	1942.88	1145.50	-2351.23	1706112.11	14293673.93	39°21'41.712"N	80°46'03.286"W	2615.42	295.975

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (171 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
9528.00	90.280	340.500	6865.12	2036.70	1234.61	-2381.15	1706080.19	14293763.00	39°21'42.594"N	80°46'03.664"W	2682.19	297.406	2.00	0.23	-1.99	
9622.00	90.310	331.130	6864.64	2130.53	1320.26	-2419.62	1706041.74	14293848.62	39°21'43.441"N	80°46'04.151"W	2756.38	298.619	9.97	0.03	-9.97	
9716.00	90.120	329.210	6864.28	2223.65	1401.80	-2466.37	1705995.00	14293930.12	39°21'44.249"N	80°46'04.743"W	2836.91	299.612	2.05	-0.20	-2.04	
9810.00	90.150	333.250	6864.06	2316.97	1484.18	-2511.61	1705949.79	14294012.47	39°21'45.064"N	80°46'05.317"W	2917.35	300.580	4.30	0.03	4.30	
9904.00	90.180	337.800	6863.79	2410.86	1569.71	-2550.54	1705910.87	14294099.97	39°21'45.910"N	80°46'05.810"W	2994.87	301.610	4.84	0.03	4.84	
9998.00	90.340	336.540	6863.36	2504.85	1656.34	-2587.01	1705874.42	14294184.57	39°21'46.767"N	80°46'06.271"W	3071.82	302.630	1.35	0.17	-1.34	
10092.00	90.150	338.280	6862.96	2598.84	1743.13	-2623.12	1705838.32	14294271.32	39°21'47.626"N	80°46'06.728"W	3149.48	303.605	1.86	-0.20	1.85	
10186.00	90.180	340.830	6862.69	2692.79	1831.20	-2655.95	1705805.50	14294359.35	39°21'48.497"N	80°46'07.143"W	3226.04	304.585	2.71	0.03	2.71	
10280.00	90.340	342.890	6862.27	2786.57	1920.52	-2685.21	1705776.25	14294448.64	39°21'49.381"N	80°46'07.513"W	3301.33	305.573	2.20	0.17	2.19	
10374.00	90.890	345.990	6861.26	2879.96	2011.06	-2710.43	1705751.05	14294539.14	39°21'50.276"N	80°46'07.831"W	3375.02	306.574	3.35	0.59	3.30	
10469.00	90.800	343.670	6859.85	2974.27	2102.73	-2735.26	1705726.20	14294630.78	39°21'51.183"N	80°46'08.144"W	3450.11	307.551	2.44	-0.09	-2.44	
10562.00	90.220	331.700	6859.02	3067.10	2188.61	-2770.53	1705690.97	14294716.62	39°21'52.033"N	80°46'08.590"W	3530.70	308.307	12.89	-0.62	-12.87	
10657.00	90.340	331.080	6858.56	3161.47	2272.01	-2816.02	1705645.50	14294799.98	39°21'52.858"N	80°46'09.167"W	3618.28	308.897	0.66	0.13	-0.65	
10751.00	90.280	331.060	6858.05	3254.78	2354.27	-2861.49	1705600.05	14294882.22	39°21'53.672"N	80°46'09.743"W	3705.50	309.446	0.07	-0.06	-0.02	
10845.00	90.430	332.480	6857.47	3348.22	2437.09	-2905.95	1705555.60	14294965.00	39°21'54.492"N	80°46'10.306"W	3792.62	309.985	1.52	0.16	1.51	
10939.00	90.120	336.860	6857.02	3442.04	2522.03	-2946.15	1705515.41	14295049.91	39°21'55.333"N	80°46'10.815"W	3878.20	310.565	4.67	-0.33	4.66	
11033.00	89.940	336.960	6856.97	3536.02	2608.50	-2983.02	1705478.56	14295136.35	39°21'56.188"N	80°46'11.282"W	3962.66	311.168	0.22	-0.19	0.11	
11127.00	89.940	339.230	6857.07	3630.01	2695.71	-3018.09	1705443.51	14295223.52	39°21'57.051"N	80°46'11.726"W	4046.69	311.771	2.41	0.00	2.41	
11221.00	89.910	343.030	6857.19	3723.85	2784.64	-3048.48	1705413.13	14295312.42	39°21'57.931"N	80°46'12.110"W	4128.86	312.410	4.04	-0.03	4.04	
11315.00	90.030	344.280	6857.24	3817.40	2874.84	-3074.93	1705386.69	14295402.58	39°21'58.823"N	80°46'12.444"W	4209.50	313.074	1.34	0.13	1.33	
11409.00	89.940	342.370	6857.26	3910.99	2964.88	-3101.91	1705359.72	14295492.59	39°21'59.713"N	80°46'12.784"W	4290.96	313.706	2.03	-0.10	-2.03	
11503.00	90.060	340.460	6857.26	4004.81	3053.98	-3131.86	1705329.78	14295581.64	39°22'00.595"N	80°46'13.163"W	4374.40	314.279	2.04	0.13	-2.03	
11597.00	90.150	340.880	6857.09	4098.71	3142.68	-3162.98	1705298.68	14295670.31	39°22'01.472"N	80°46'13.556"W	4458.79	314.816	0.46	0.10	0.45	
11691.00	90.280	342.000	6856.74	4192.54	3231.79	-3192.90	1705268.77	14295759.38	39°22'02.354"N	80°46'13.934"W	4543.02	315.347	1.20	0.14	1.19	
11786.00	90.740	339.490	6855.89	4287.42	3321.46	-3224.22	1705237.46	14295849.02	39°22'03.241"N	80°46'14.330"W	4629.01	315.851	2.69	0.48	-2.64	
11879.00	90.460	330.280	6854.92	4380.18	3405.57	-3263.65	1705198.04	14295933.10	39°22'04.073"N	80°46'14.829"W	4716.92	316.219	9.91	-0.30	-9.90	
11973.00	90.280	331.660	6854.31	4473.47	3487.76	-3309.26	1705152.45	14296015.26	39°22'04.887"N	80°46'15.407"W	4807.88	316.504	1.48	-0.19	1.47	
12067.00	90.400	337.430	6853.75	4567.25	3572.60	-3349.65	1705112.08	14296100.06	39°22'05.726"N	80°46'15.919"W	4897.30	316.845	6.14	0.13	6.14	
12162.00	90.340	339.040	6853.14	4662.25	3660.82	-3384.87	1705076.87	14296188.25	39°22'06.599"N	80°46'16.365"W	4985.88	317.243	1.70	-0.06	1.69	
12255.00	90.430	339.970	6852.51	4755.21	3747.93	-3417.43	1705044.32	14296275.32	39°22'07.461"N	80°46'16.776"W	5072.06	317.641	1.00	0.10	1.00	

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Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

MD	Inclination	Azimuth	TVD	Vert Sect	East	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
12550.00	339.870	6851.73	4850.16	3837.15	-3450.05	1705011.72	14296364.51	39°22'08.34"N	80°46'17.18"W	5160.09	171000H	0.14	0.09	-0.11	1.67	
90.800	341.420	6850.65	4943.05	3924.89	-3480.87	1704980.92	14296452.21	39°22'09.21"N	80°46'17.57"W	5246.06	171000H	1.69	0.30	1.67		
12537.00	342.240	6849.65	5036.83	4014.19	-3510.18	1704951.62	14296541.48	39°22'10.09"N	80°46'17.94"W	5332.46	171000H	3.18	-0.39	0.87		
12631.00	341.820	6849.04	5130.60	4103.61	-3539.18	1704922.63	14296630.86	39°22'10.97"N	80°46'18.31"W	5418.98	171000H	3.19	-0.13	-0.45		
12725.00	340.340	6848.18	5224.45	4192.52	-3569.65	1704892.16	14296719.74	39°22'11.85"N	80°46'18.70"W	5506.33	171000H	3.19	0.48	-1.57		
12819.00	337.070	6847.24	5318.43	4280.09	-3603.79	1704858.04	14296807.27	39°22'12.72"N	80°46'19.13"W	5595.21	171000H	3.19	3.50	-3.48		
12913.00	339.500	6848.73	5412.42	4367.41	-3638.56	1704823.28	14296894.56	39°22'13.58"N	80°46'19.57"W	5684.49	171000H	3.20	2.59	-2.59		
13007.00	337.700	6846.30	5506.41	4454.92	-3672.86	1704789.00	14297068.61	39°22'14.45"N	80°46'20.06"W	5773.75	171000H	3.20	1.92	-1.91		
13101.00	336.560	6845.92	5600.40	4541.53	-3709.39	1704752.48	14297236.93	39°22'15.31"N	80°46'20.46"W	5863.88	171000H	3.20	-0.17	-1.21		
13195.00	333.950	6845.29	5694.28	4626.89	-3748.73	1704713.16	14297485.61	39°22'16.15"N	80°46'20.96"W	5954.92	171000H	3.20	0.50	-2.78		
13289.00	330.200	6843.75	5787.75	4709.92	-3792.74	1704669.17	14297738.26	39°22'16.97"N	80°46'21.52"W	6047.17	171000H	3.21	4.05	-3.99		
13383.00	329.730	6841.73	5880.80	4791.28	-3839.78	1704622.15	14297917.09	39°22'17.78"N	80°46'22.12"W	6140.05	171000H	3.21	0.50	-0.50		
13478.00	329.320	6839.61	5975.07	4874.36	-3885.78	1704576.16	14298140.31	39°22'18.60"N	80°46'22.70"W	6233.67	171000H	3.21	2.73	2.73		
13571.00	337.990	6837.45	6067.89	4958.70	-3924.83	1704537.13	14298485.61	39°22'19.44"N	80°46'23.18"W	6324.00	171000H	3.21	6.10	6.10		
13665.00	340.310	6835.23	6161.84	5046.51	-3958.28	1704503.69	14298753.39	39°22'20.30"N	80°46'23.62"W	6413.67	171000H	3.21	2.47	2.47		
13759.00	336.400	6832.96	6255.79	5133.84	-3992.93	1704469.05	14299060.68	39°22'21.17"N	80°46'24.06"W	6503.83	171000H	4.16	0.01	-4.16		
13854.00	336.450	6832.78	6350.75	5220.90	-4030.92	1704431.07	14299374.71	39°22'22.03"N	80°46'24.54"W	6595.92	171000H	3.22	2.70	0.05		
13948.00	331.130	6833.15	6444.45	5305.20	-4072.42	1704389.59	14299781.98	39°22'22.86"N	80°46'25.06"W	6688.03	171000H	6.00	2.00	-5.66		
14042.00	338.930	6832.17	6538.25	5390.35	-4112.07	1704349.96	14299917.09	39°22'23.71"N	80°46'25.56"W	6779.75	171000H	6.00	8.30	8.30		
14136.00	341.230	6831.31	6632.18	5478.71	-4144.10	1704317.95	14298005.42	39°22'24.58"N	80°46'25.97"W	6869.48	171000H	3.22	2.45	2.45		
14161.00	341.230	6831.07	6657.14	5502.38	-4152.14	1704309.91	14298029.08	39°22'24.81"N	80°46'26.07"W	6893.22	171000H	3.22	0.00	0.00		Projected MD at TD: 14161'

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Actual Wellpath Report

Bradford Unit 1H AWP Proj: 14161'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Bradford Unit 1H AWB Ref Wellpath: Bradford Unit 1H AWP Proj: 14161'									
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	25.00	40.00	15.00	25.00	40.00	0.00	0.00	0.00	0.00
13.375in Casing Surface	25.00	546.00	521.00	25.00	546.00	0.00	0.00	-0.48	-0.91
9.625in Casing Intermediate	25.00	2575.00	2550.00	25.00	2571.01	0.00	0.00	-61.11	-104.36

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Bradford Unit 1H POE Rev-1	6825.00	-678.42	-1626.99	1706834.06	14291850.73	39°21'23.667"N	80°45'54.126"W	point
Bradford Unit 1H BHL Rev-1	6865.00	5528.37	-4134.24	1704327.80	14298055.06	39°22'25.076"N	80°46'25.847"W	point
Bradford Unit 1H LP Rev-1	6865.00	-488.28	-1703.80	1706757.28	14292040.80	39°21'25.548"N	80°45'55.097"W	point

WELLPATH COMPOSITION - Ref Wellbore: Bradford Unit 1H AWB Ref Wellpath: Bradford Unit 1H AWP Proj: 14161'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	6099.00	Gyrodatta relative depth - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <8-3/4">(100'-6099')	Bradford Unit 1H AWB
6099.00	14136.00	BHI AutoTrak Curve (Short)	02 BHI AT Curve <8-1/2">(6099')(6234'-14136')	Bradford Unit 1H AWB
14136.00	14161.00	Blind Drilling (std)	Projection to bit	Bradford Unit 1H AWB

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Bradford Unit 1H AWP Proj: 14161'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Bradford Unit 1H
Field	Doddridge	Wellbore	Bradford Unit 1H AWB
Facility	Melody Pad		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
100.00	0.170	300.470	100.00	Gyrodata MS Gyro <8-3/4">(100'-6099')	
6234.00	23.030	226.710	5972.47	BHI AT Curve <8-1/2">(6099')(6234'-14136')	
6791.00	39.468	281.066	6447.35	Sycamore: 6791' MD	
7046.00	53.123	303.948	6620.25	Middlesex: 7046' MD	
7283.00	61.205	326.581	6751.39	Burkett: 7283' MD	
7344.00	64.400	331.868	6779.18	Tully: 7344' MD	
7446.00	69.202	336.118	6819.59	Hamilton: 7446' MD	
7481.00	71.293	337.579	6831.43	Marcellus: 7481' MD	
14161.00	90.550	341.230	6831.07	Projected MD at TD: 14161'	

COMMENTS
<p>Wellpath general comments</p> <p>API #: 47-017-06534-0000</p> <p>BHI Job #: 8067108</p> <p>Rig: Patterson 347</p> <p>Duration: 07.21.2016-07.25.2016</p> <p>Gyrodata MS Gyro <8-3/4">(100'-6099')</p> <p>BHI AT Curve <8-1/2">(6099')(6234'-14136')</p> <p>Sycamore: 6791' MD</p> <p>Middlesex: 7046' MD</p> <p>Burkett: 7283' MD</p> <p>Tully: 7344' MD</p> <p>Hamilton: 7446' MD</p> <p>Marcellus: 7481' MD</p> <p>Projected MD at TD: 14161'</p>

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